WIGGENS

THE MAGIC MOTION

The Magic Motion

About
WIGGENS

What Does Wiggens Stand for?

Wide Product Range
International Orientation
Great Quality
Great Service
Energetic Team
New Technology
Solutions

Wiggens was established in 2005 with the goal of delivering the best laboratory equipment and service for reliable results. Since then Wiggens has been producing top-quality general laboratory equipment, analysis apparatus and chemical reaction and purification solutions. Our brand Wiggens stands for high quality, durability and remarkable performance.

Wiggens is your reliable laboratory companion and provides products that can be used in different kinds of laboratory environments. The Wiggens product range includes:

ChemVak Pumps	ChemTron Reaction & Purification System
Wiggens General Lab Equipment	Reactor
Life Science Equipment	Rotary Evaporator
	Thin film evaporator
	Molecular distillation device
ChemTron Gas	
H$_2$ Generators	
N$_2$ Generators	ChemTron Analytics
O$_2$ Generators	Viscometer
Zero Air Generators	Titrator
	Density

ChemVak®

ChemVak, a brand of Wiggens, is specialized in pump technology offering an extensive range of vacuum pumps, vacuum filtrat and liquid pumps for various applications, including chemical-resistant diaphragm pumps, oil-free pumps and rotary vane vacuum pumps, vacuum filtration equipment for a wide range of different applications. In addition, peristaltic pumps, piston Liquid pumps, solvent recovery systems and bio-suction systems are part of the product range.

ChemTron®

ChemTron is our product brand focusing on analysis apparatus, gas generators, chemical reaction solutions, chemical process separation and purification solutions, includeing efficient chemical separation tools-rotary evaporator, thin film evaporator, molecular distillation device, automatic distillation system, crystalization system etc...

Thinking the unusual is usual for us.

Innovation

New concepts and solutions
Customers as generator of ideas
Friendly and modern working atmosphere

Competence

Specialists in all teams
Expert knowledge and experience

Quality

Reliability
ISO 9001
Strong After Sales Service
Made in Germany, China, Switzerland & USA

Flexibility

Special Design, customized products
Constant feedback from subsidiaries and customers

The Magic Motion

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Up to 2L

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Rotary Evaporator

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Rotary Evaporator

Large Rotary Evaporator
6L、10L、20L

ST20
Pilot Scale Rotary Evaporator

ST20 CRE
Continuous Distallation Rotary Evaporator
Reliable PLC controlling system

ST20 ATEX
Explosion-Proof Rotary Evaporator

Atex

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Rotary Evaporator
Strike 185

Wiggens Strike series rotary evaporators are specially designed for standard distillations, concentration, purification, powder drying and separation of one or several solvents, with maximum safety, efficiency and ease of use. All functions can be viewed and monitored on the large and clear touch screen display, the parameters can be set by touch screen, the turning knob or using both the same time for fast adjustment, the user can reduce the process time by using the programs for automatic distillation with the integrated temperature controller, vacuum controller, timer and other special features.

Features

● Sealing system

> The unique sealing system allows a perfect vacuum-tight and anti-corrosion

> With chemically resistant gasket, suitable for various samples

> This sealing system is a standard feature in all strike models and can be used with all types of glassware set.

● Mechanical structure

> With electric lifting device, adjustable stroke, and it can also stop at any position

> With powerful rotation motor, the speed up to 300 rpm

> Adjustable angle of the evaporating flask can be individually set according to your needs

● Glassware set

> All glassware sets are also available with a transparent plastic coating for added safety.

> Four types of condensers

> Different volumes of evaporating and receiving flasks

> Standard package includes one 1, 000 ml evaporating flask and one 1, 000 ml receiving flask

> Other accessories are optional, such as adapters, anti-sprinkling bubbles, vapor tubes...

● Vapor tube

> Evaporating flasks and vapor tubes come with a standard NS 29/32 joint

> PTFE sleeves provide a tight seal while preventing the glassware from sticking together

> Easy to disassemble, clean and replace the parts

● Thread locking design

> The easy clamp is made of highly durable materials, ensuring long-lasting performance

> The easy clamp can't get lost due to a direct connection to the drive

> The integrated screw thread allows an easy removal of the evaporation flasks

● Display and operation

> Touch screen with multi-language user interface

> Easy to operate using the turn & push knob

> Multifunction display, for bath temperature, stirring speed, vacuum, vapor and condenser cooling water temperature

● Function

> Custom method, one-click start, after booting to save the last settings

> Up to 9 steps programmable distillation conditions

> Timing function distillation: the distillation program will be closed automatically when the setting time is reached

● Safety

> A safety heating bath with overheating and dry running protection

> In case of a power outage, the electric lifting device removes the flask from the heating bath to prevent the safety issues and potential thermal damage to your sample

● Heating bath

> With the same thermostat bath, you can choose the water or oil bath fluid in the MENU

> Two bath fluid modes: up to 85℃ with water; up to 180℃ with oil

> High quality stainless steel (304) bath tank

> With high quality protective shell, prevent scald

> The position of the bath can be easily adjusted to fix the evaporation position for different volume evaporating flasks

● Optional accessories and peripheral modules

> Vacuum controller: the vacuum can be set and displayed directly on the touch screen

> Vapor temperature sensor with glass sleeve

> Vacuum pumps, vacuum solvent recovery system, chillers, adapters and tubes

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Rotary Evaporator
STRIKE 285

The rotary evaporator STRIKE 285 combines excellent operating characteristics and high performance levels, all in an ergonomic design, offering excellent separation, concentration and purification solutions. All Functions can be viewed and monitored on the large and clear Touch Screen display, the parameters can be set by touch screen, the turning knob or using both the same time for fast adjustment, the user can reduce the process time by using the programs for automatic distillation with the integrated temperature controller, vacuum controller, timer and other special features.

The evaporation flask is connected to vapor tube via coupling ring for easy fixing and removal of the flask, and the flask ejector design allows you to remove the sticking flasks from vapor tube in easy way by just turning the ejector

Features
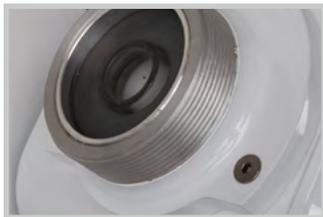
● Sealing system

> The unique sealing system allows a perfect vacuum-tight and anti-corrosion

> With chemically resistant gasket, suitable for various samples

> This sealing system is a standard feature in all strike models and can be used with all types of glassware sets

● Mechanical structure

> With electric lifting device, adjustable stroke, and it can also stop at any position

> With powerful rotation motor, the speed up to 280 rpm

> Adjustable angle of the evaporating flask can be individually set according to your needs

● Glassware set

> All glassware sets are also available with a transparent plastic coating for added safety.

> Four types of condensers

> Different volumes of evaporating and receiving flasks

> Standard package includes one 1,000 ml evaporating flask and one 1,000 ml receiving flask

> Other accessories are optional, such as adapters, anti-sprinkling bubbles, vapor tubes...

● Vapor tube

> Evaporating flasks and vapor tubes come with a standard NS 29/32 joint

> PTFE sleeves provide a tight seal while preventing the glassware from sticking together

> Easy to disassemble, clean and replace the parts

● Thread locking design

> With screw thread locking function, screw cap is fixed by clip spring to prevent loss

> The screw cap can be removed for installing other evaporating flasks with different connectors

> Made of corrosion-resistant material

● Display and operation

> Touch screen with multi-language user interface

> Easy to operate using the turn & push knob

> Multifunction display, for bath temperature, rotation speed, vacuum, vapor and condenser cooling water temperature

● Function

> Custom method, one-click start, after booting to save the last settings

> Up to 9 steps programmable distillation conditions

> Timing function distillation: The distillation program will be closed automatically when the setting time is reached

● Safety

> A safety heating bath with overheating and dry running protection

> In case of a power outage, electric lifting device remove the flask from the heating bath to prevent the safety issues and potential thermal damage to your sample

> The shield is standard for all models. It can be removed by the operator and fitted beside the instrument

● Heating bath

> With the same thermostat bath, you can choose the water or oil bath fluid in the MENU

> Two bath fluid modes:up to 85℃ with water, up to 185℃ with oil

> High strength stamped inner bath and anti-corrosion PTFE coating

> With high quality protective shell, prevent scald

> The position of the bath can be easily adjusted to fix the evaporation position for different volume evaporating flasks

● Optional accessories and peripheral modules

> Vacuum controller: the vacuum can be set and displayed directly on the touch screen

> Vapor temperature sensor with glass sleeve

> Vacuum pumps, vacuum solvent recovery system, chillers, adapters and tubes

Rotary Evaporator
Strike 185 / 285

Display and operation

①

During the experiment, all information can be displayed on the same screen

① Main interface

Click the touch screen, select the setting icon, set the parameters through the knob, press the knob to save the value
> Rotation switch and speed knob
> Bath temperature switch and settings
> Vacuum switch and settings
> Vapor temperature display, when connected to a vapor temperature sensor
> Cooling temperature display, when connected to a cooling temperature sensor

② Menu

> Safety temperature settings for the bath
> Temperature unit
> Vaccum unit
> Delta of vaccum
> Language
> Timer

②

④

③ Program

All the parameters:
Up to 9 steps programmable distillation conditions including the bath temperature, rotation speed, vacuum, vacuum delta and can be set separately in each step

③

⑤

④ Bath temperature calibration (two points)

⑤ Vacuum calibration (two points)

BEST PERFORMANCE IN SEPARATION & PURIFICATION

From universities to research institutes, laboratories around the world require high-performance rotary evaporators for demanding applications. The new Strike 385 has been specially developed by Wiggens, incorporating pioneering technologies to meet these requirements, and is manufactured to the highest quality standards.

The new Strike 385 is available with a heating bath, rotational device, vacuum system, as well as vapor and cooling temperature monitoring.

The new Strike 385 is intelligent. Operate your Strike 385 intuitively via the touch screen. Its large display offers programming options and is exceptionally easy to read.

Contact us for more information
or quotation on new version of Strike 385

www.wiggens.com

Specifications

Model	STRIKE 185	STRIKE 285	STRIKE 385
Type of condenser	4 types: Diagonal condenser / Vertical condenser (Steam rises or steam sinks) / Dry ice condenser		
Plastic coated saftey glassware	Possible for condenser and receiving flask		
Condensing area	1500 cm^2 (standard) / 2000 cm^2(optional)		
Available evaporation flasks	50/100/250/500/1000/2000/3000 ml	50/100/250/500/1000/2000 ml	50/100/250/500/1000/2000 ml
Available receiving flasks	250/500/1000/2000 ml	250/500/1000/2000 ml	250/500/1000/2000 ml
Motor	DC	DC	AC
Speed range	20-300 rpm	20-300 rpm	20-280 rpm
Lifting system	Electric drive, the evaporation flask leaves the heating bath automatically after power failure		
Stroke	130mm, adjustable, and can be stopped at any position		
Bath temperature range	Up to 180 ℃	Up to 180 ℃	Up to 185 ℃
Heating power	1400 W	1400 W	1400 W
Set temperature resolution	0.1 ℃	0.1 ℃	0.1 ℃
Bath volume	5L (round opening)	5L (pear-shaped opening)	5L (pear-shaped opening)
Material of heating bath	Stainless steel	PTFE coated aluminum	PTFE coated aluminum
Vacuum controller	ST280 (optional)	ST280 (optional)	ST280 (optional)
Vacuum range	1~1014 mbar (ultimate vacuum depends on the performance of the vacuum pump)		
Vacuum accuracy	1 mbar	1 mbar	1 mbar
Vapor temperature sensor	Optional	Optional	Optional
Cooling temperature senor	Optional	Optional	Optional
Timer	Yes	Yes	Yes
Storage method	None	None	21
Distillation procedure	1x9 steps	1x9 steps	21x5 steps (manually) 21x5 steps (Automatically)
Vapor temperature detection	Yes (vapor temp. sensor is needed)	Yes (vapor temp. sensor is needed)	Yes (vapor temp. sensor is needed)
Vapor temperature protection	No	No	Vapor range / Vapor min / Vapor max
Dimensions	790x410x700mm (M1/M4) 650x410x610mm (M2/M5) 650x410x890mm (M3/M6) 650x410x890mm (M7)	690x700x430mm (vertical version) 690x790x430mm (slanting version)	790x410x700mm (M1/M4) 650x410x610mm (M2/M5) 650x410x890mm (M3/M6) 650x410x890mm (M7)
Weight	30 kg	26 kg	30 kg
Permissible ambient temperature	5~40 ℃	5~40 ℃	5~40 ℃
Permissible relative humidity	80%	80%	80%
Protection class	IP20	—	IP20
RS 232 interface	Yes, for firmware update only	Yes, for firmware update only	Yes, USB disk, PC software
Material of cover	Powder coated stainless steel	Plastic	Powder coated stainless steel
Power supply	230VAC, 50/60Hz	230VAC, 50/60Hz	230VAC, 50/60Hz

Models of STRIKE 185

STRIKE 185 M1 / M4   STRIKE 185 M2 / M5   STRIKE 185 M3 / M6   STRIKE 185 M7

Best-seller!

	Model	Order No.	Model	Order No.
	With standard glassware		With plastic coated safety glassware	
Diagonal condenser	Strike 185 M1	SQED148113	Strike 185 M4	SQED148419
Vertical condenser (steam sinks)	Strike 185 M2	SQED148112	Strike 185 M5	SQED148418
Vertical condenser (steam rises)	Strike 185 M3	SQED148111	Strike 185 M6	SQED148417
Dry ice condenser			Strike 185 M7	SQED148420

Models of STRIKE 285

STRIKE 285 M1 / M4   STRIKE 285 M2 / M5   STRIKE 285 M3 / M6   STRIKE 285 M7

	Model	Order No.	Model	Order No.
	With standard glassware		With plastic coated safety glassware	
Diagonal condenser	STRIKE 285 M1	SQED158113	STRIKE 285 M4	SQED158419
Vertical condenser (steam sinks)	STRIKE 285 M2	SQED158112	STRIKE 285 M5	SQED158418
Vertical condenser (steam rises)	STRIKE 285 M3	SQED158111	STRIKE 285 M6	SQED158417
Dry ice condenser			STRIKE 285 M7	SQED158420

Models of STRIKE 385

STRIKE 385 M3 / M6

	Model	Order No.	Model	Order No.
	With standard glassware		With plastic coated safety glassware	
Diagonal condenser	Strike 385 M1	SQED160113	Strike 385 M4	SQED160419
Vertical condenser (steam sinks)	Strike 385 M2	SQED160112	Strike 385 M5	SQED160418
Vertical condenser (steam rises)	Strike 385 M3	SQED160111	Strike 385 M6	SQED160417
Dry ice condenser			Strike 385 M7	SQED160420

Standard delivery: Basic unit Strike, Heating bath, Guard shield, Condenser, 1L Evaporation flask, 1L Receving flask and tube set

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Five steps to building up your rotary evaporator

Step 1

STRIKE 185 / 285 / 385
Slanting glassware

STRIKE 185 / 285 / 385
Vertical glassware (Vapor sinking)

Best-seller!

STRIKE 185 / 285 / 385
Vertical glassware (Vapor rising)

Rotary evaporator STRIKE 185 / 285 / 385
> Three sets of glassware available
> Two kinds of glass materials available: Borosilicate glass / Borosilicate glass with safety coating
> Evaporating flasks: 1000ml (optional 50~2000ml)
> Collecting flasks:1000ml (optional 250~2000ml)

Step 2

Recirculating chiller
-10 ~ +40℃

Recirculating chiller
-20 ~ +40℃

Chiller
* Various chillers available for different applications

	0.5-1 L	up to 2 L	
STRIKE 185 / 285 / 385	1	2	3-4
Chiller	FL300	F500 FL601	F1000 FL1201

Step 3

C420 / C520
Vacuum pump

CSH420 / CSH520
Solvent Recovery System

CSC420 / CSC520
Vacuum solvent recovery system

Vacuum system
Different vacuum systems are optional according to different experimental requirements

	C series	CSH series	CSC series
Vacuum pump	●	●	●
Vacuum controller	○	○	●
Condensers	○	●	●
Separator	○	●	●
Collecting flasks	○	●	●

Step 4

ST280
Vacuum controller

DVR480
Vacuum controller

Vacuum controller
> If a vacuum controller is selected, different vacuum can be controlled
> ST280 is a mounting vacuum control accessory for Wiggens rotary evaporator, the vacuum setting and display are through the touch screen of rotary evaporator
> DVR480 can set and display the vacuum value directly.
> CSC Vacuum solvent recovery system series already contain the vacuum controller.

Step 5

Possible to operate according to vapor temperature (if optional probe is present)

Temperature sensor
> Possible to operate according to vapor temperature (if optional probe is present)
> STRIKE285 can also display cooling water temperature (if optional probe is present)
> Glass temperature sensor, corrosion resistant
> Vapor temperature can be displayed on the screen of rotary evaporators

Accessories

Chemical Resistant Pump
Chemical resistant diaphragm pump with double stage

Model	A410	A510	C410	C510	C520	C610
Order No.			169410	169510	169520	169610
Max.power(W)	95	245	95	245	150	245
Max.vacuum (mbar)	13	8	13	8	8	2-4
Max.Flow Rate (l/min)	25	40	25	34	50	37
Outlet (mm)	10	10	10	10	10	10

The above are the specifications of 220V models. Suitable for Strike 185/285/385

A Pump

C Pump

Solvent recovery system, *without vacuum control*
Included Chemical resistant diaphragm pump, glassware and support stand

Model	CSH410	CSH510	CSH520
Order No.	900512	900513	900515
Power (W)	95	245	150
Ultimate Vacuum (mbar)	13	8	8
Max. Flow Rate (l/min)	25	34	50
Outlet Size (outer diameter in mm)	10	10	10

The above are the specifications of 220V models. Suitable for Strike 185/285/385

Solvent recovery system, *with vacuum control*
Fully controllable stand-alone vacuum pump including vacuum controller

Model	CSC 410	CSC 510	CSC 520
Order No.	900522	900523	900525
Power (W)	95	245	150
Ultimate Vacuum (mbar)	13	8	8
Max. Flow Rate (l/min)	25	34	50
Outlet Size (outer diameter in mm)	10	10	10

The above are the specifications of 220V models. Suitable for Strike 185/285/385

Solvent recovery system, *with vacuum control*
Fully controllable stand-alone vacuum pump including vacuum controller

Model	CSP410	CSP510	CSP520
Order No.	900542	900543	900545
Power (W)	95	245	150
Ultimate Vacuum (mbar)	13	8	8
Max. Flow Rate (l/min)	25	34	50
Outlet Size (outer diameter in mm)	10	10	10

The above are the specifications of 220V models, Suitable for Strike 185/285/385

Vacuum controller

ST280 is a mounting vacuum control accessory for Wiggens rotary evaporator, the vacuum setting and display are through the touch screen of rotary evaporator

For accurate vacuum control of Strike 185 Strike 285 and Strike 385 or valve regulated vacuum pumps.

Vacuum reange: 1~1014 mbar

Vacuum accuracy: 1 mbar

Description	Model	Order No.
Vacuum controler of Strike 185 /285 /385	ST280	SQEF059422

Compact recirculating coolers

The compact recirculating coolers in the F Series are economic models for routine applications in laboratories. The instruments cool in a temperature range of -10 or 0 °C to +40 °C and achieve a stability of ±0.5℃ .

Model	F250	F500	F1000
Order No.	9620025	9620050	9620100
Working temperature range (℃)	-10...+40	0...+40	0...+40
Temperature stability (℃)	±0.5	±0.5	±0.5
Cooling capacity (kW)	0.25	0.5	1.0
Pump capacity flow pressure (l/min)	15	24	23
Pump capacity pressure (bar)	0.35	0.5	1.0

FL Recirculating coolers

The FL series offers a new generation of chillers for routine cooling applications within the laboratory and industry. The temperature stability of the PID control is ±0.5℃ . All units can easily be cleaned and are provided with a splash water proof keypad with LED temperature indication. On the front of the units there is an RS232 interface as well as an alarm shutdown. The filling port is easily accessible placed on the top under a lift-up cover.

Model	FL300	FL601	FL1201
Order No.	9660003	9661006	9661012
Working temperature range (℃)	-20...+40	-20...+40	-20...+40
Temperature stability (℃)	±0.5	±0.5	±0.5
Cooling capacity (kW)	0.3	0.6	1.2
Pump capacity flow pressure (l/min)	15	23	23
Pump capacity pressure (bar)	0.35	1.0	1.0

Tubing and clamps

Description	Order No.
Vacuum tube, Viton, OD=14mm, ID=8mm	168001-01
Vacuum tube, PTFE, OD=12mm, ID=10mm	016.1712.01
Cooling water tube	8930008
2 Tube clamps, size 1, tubing 8 mm inner dia.	8970480
2 Tube clamps, size 2, tubing 10~12 mm inner dia.	8970481

Glassware sets

Included condenser, evaporation flask and receiving flask in each glassware set, the ventilation and replenishment valve, clamp and adapter

GS1 / GS4

GS2 / GS5

GS3 / GS6

GS7

Model	Condenser	Evaporation flask	Receiving flask	Order No.
GS1	SQEF059799	SQFY015937	SQUA015796	SQED159113GS
GS2	SQEF059796	SQFY015937	SQUA015796	SQED159112GS
GS3	SQEF059794	SQFY015937	SQUA015796	SQED159111GS
GS4	SQEF059798	SQFY015937	SQUA015789	SQED159419GS
GS5	SQEF059797	SQFY015937	SQUA015789	SQED159418GS
GS6	SQEF059792	SQFY015937	SQUA015789	SQED159417GS
GS7	SQEF059793	SQFY015937	SQUA015789	SQED159420GS

Condensers

Made of high quality borosilicate glass or plastic coated saftey glassware

Type of condenser	Order No.	Order No.
	Standard	Coated
Diagonal condenser	SQEF059799	SQEF059798
Vertical condenser (steam sinks)	SQEF059796	SQEF059797
Vertical condenser (steam rises) ,1500cm2	SQEF059794	SQEF059792
Vertical condenser (steam rises), 2000cm2	SQEF059894	SQEF059892
Dry ice condenser		SQEF059793

Diagonal

Vertical (steam sinks)

Vertical (steam rises)

Dry ice

Evaporation flasks

The flask is made of high quality borosilicate glass

Volume	Order No.	Order No.
	NS 29/32	NS 24/40
50 ml	SQFY051171	SQFY051181
100 ml	SQFY015948	SQFY015958
250 ml	SQFY015949	SQFY015959
500 ml	SQFY015941	SQFY015951
1000 ml	SQFY015937	SQFY015947
2000 ml	SQFY015946	SQFY015956
3000 ml (for Strike 185 only)	SQFY015947	SQFY015957

Powder flasks

The flask is made of high quality borosilicate glass

Volume	Order No.	Order No.
	NS 29/32	NS 24/40
500 ml	SQFY146060	SQFY146070
1000 ml	SQFY146062	SQFY146072
2000 ml	SQFY146061	SQFY146071
3000 ml (for Strike 185 / 385 only)	SQFY146063	SQFY146073

Receiving flasks, *Spherical joint 35/20*

The flask is made of high quality borosilicate glass or plastic coated saftey glassware

Volume	Order No.	Order No.
	Standard	Coated
250 ml	SQUA015797	SQUA015788
500 ml	SQUA015798	SQUA015791
1000 ml	SQUA015796	SQUA015789
2000 ml	SQUA015792	SQUA015790
Accessories		
Spherical joint clamp, 35/20, stainless steel		FLMM016694

Spider

Made of high quality borosilicate glass

Inner joint	Outer joint	Order No.
NS 29/32	3xNS 24/29	SQUA162436
NS 29/32	4xNS 24/29	SQUA162437
NS 29/32	3xNS 29/32	SQUA162434
NS 29/32	4xNS 29/32	SQUA162435
Accessories		
Joint clip, PTFE, 24/29		JRS-7596-24
Joint clip, PTFE, 29/32		JRS-7596-29

Foam brake

The rising foam produces bursts in the glass ball extension. This stops foam from entering the receiving flask. Made of high quality borosilicate glass, the maximum recommended load is 1.5 kg

Bubble volume	Top Outer	Bottom Inner	Order No.
50 ml	NS 29/32	NS 29/32	SQFW126450
100 ml	NS 29/32	NS 29/32	SQFW126451
100 ml	NS 29/32	NS 24/29	SQFW126452
250 ml	NS 29/32	NS 29/32	SQFW126453
250 ml	NS 29/32	NS 24/29	SQFW126454

Vapor temperature sensor

Vapor temperature can be dispalyed on the screen of Strike 185/285/385 when the vapor temperature sensor is connected. But only vapor temperature can be connected with Strike 385, in addition to monitoring the vapor temperature, safety vapor temperature can be set (vapor max./vapor min./vapor range)

Description	Order No.
Vapor temperature sensor, for Strike 185/285/385. With glass dip tube	SQEF059420

Cooling water temperature sensor

Cooling water temperature can be dispalyed on the screen of Strike 185 / 285 when the following temperature sensor is connected, not for Strike 385

Description	Order No.
M+R in-lin temperature sensor, for Strike 185/285	SQEF059424

Spare vapor tube, PTFE filling tube, Sealing gasket

Description	Order No.
Glass vapor tube, 29/32	SQEF082902
Glass vapor tube, 24/40	SQEF087532
PTFE filling tube	BQRY024329
Sealing gasket	VAJS285022

Ventilation and Replenishment Valve

Used for release the vacuum and refilling during the process

Description	Order No.
Ventilation and replenishment valve	SQEF162449

PTFE sleeves

PTFE sleeves are for use with glass adapters to prevent the joint from freezing, as well as allow ease of removal for ground glass joints. These sleeves are sturdy and reusable.

Joint size	Order No.
NS 29/32	KAMY011542
NS 24/29	KAMY011544
NS 19/22	KAMY011546
NS 14/23	KAMY011547

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Spherical joint clamp

Description	Order No.
Spherical joint clamp, 35/20, stainless steel	FLMM016694

Bath fluid

Thermal H20S is a silicone-based bath fluid, working temperature: 0 ℃ … +220 ℃
- Additional stabilizer
- Excellent heat conductivity
- Minimum odor
- Long fluid life

Description	Order No.
Silicone-based bath fluid Thermal H20S, 10L	8940108
Silicone-based bath fluid Thermal H20S, 5L	8940109

Helpful Hints for rotary evaporator

The graph shows the relationship between the pressure and boiling temperature of a selection of solvents.

The temperature difference between the vapor temperature and the cooling medium shoud be at 20℃ to result in sufficient condensation.

The temperature difference between the heating bath and vapor temperature should be at 20K to result in a sufficient Distillation reat (dT)

i.e.: Set a vacuum for a boiling point at 40℃, set the heating bath temperature at 60℃ .

Solvent data

Solvent	Total formula	Boiling point (℃) at Atm.	Vacuum for a boiling at 40℃	
Dichloroethane	CH_2Cl_2	40.7	Atm.	Atm.
Diethyl ether	$C_4H_{10}O$	34.6	Atm.	Atm.
Pentane	C_5H_{12}	36.1	Atm.	Atm.
1,2 Dichloroethane(trans)	$C_2H_2Cl_2$	47.8	751	563
Acetone	C_3H_6O	56.5	556	387
Trichloromethane (chloroform)	$CHCl_3$	61.3	474	356
Diisopropyl ether	$C_6H_{14}O$	67.5	375	281
Tetrahydrofuran (THF)	C_4H_8O	66	357	268
Methanol	CH_4O	64.7	337	253
Hexane	C_6H_{14}	68.7	335	251
1,1,1-Trichloroethane	$C_2H_3Cl_3$	74.1	300	225
Tetrachloroethylene	CCl_4	76.7	271	203
2-Butanone	C_4H_8O	79.6	243	182
Ethyl acetate	$C_4H_8O_2$	77.1	240	180
Benzene	C_6H_6	80.1	236	177
Cyclohexane	C_6H_{12}	80.7	235	176
Acetonitrile	C_2H_3N	81.8	230	173
1,2 Dichloroethane	$C_2H_4Cl_2$	82.4	210	158
Trichloroethylene	C_2HCl_3	86.7	183	137

Solvent	Total formula	Boiling point (℃) at Atm.	Vacuum for a boiling at 40℃	
1,2 Dichloroethane(cis)	$C_2H_2Cl_2$	59	479	134
Ethanol	C_2H_6O	78.4	175	131
Isopropyl alcohol	C_3H_8O	82.5	137	103
Tert.-butanol	$C_4H_{10}O$	82.9	130	98
Heptane	C_7H_{16}	98.4	120	90
1,4-Dioxane	$C_4H_8O_2$	101.1	107	80
Toluene	C_7H_8	110.6	77	58
Water	H_2O	100	72	54
N-propyl alcohol	C_3H_8O	97.8	67	50
Tetrachloroethylene	C_2Cl_4	120.8	53	40
Chlorobenzene	C_6H_5Cl	132.2	36	27
1,1,2,2-Tetrachloroethane	$C_2H_2Cl_4$	145.9	35	26
Xylene (isomers mixture)	C_8H_{10}	137-143	25	19
N-butanol	$C_4H_{10}O$	117.5	25	19
Isoamyl alcohol	$C_5H_{12}O$	130.6	14	11
Pentachlorinated Ethane	C_2HCl_5	160.5	13	10
Dimethyl formamide	C_3H_7NO	153	11	8
Amyl alcohol	$C_5H_{12}O$	137.8	11	8

ST20

The highest performance proposal for your evaporation processes!

3 Options Available

* Standard Rotary Evaporator
* ATEX Version
* Continuous Rotary Evaporator

Each option is available in 6L, 10L, and 20L configurations.

Following on Industrial Relation System Design Concept
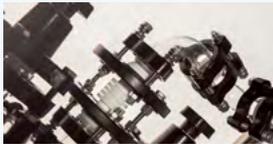
Vertical glassware (Vapor sinking)

ST20 - Large-capacity rotary evaporator

ST20 has both industrial and laboratory rotary evaporation features. It meets all the process needs by using borosilicate glass and PTFE permitting aggressive substance treatment. The plant allows for evaporation of volatile components (low boiling point) so as to separate them from the residual ones (high boiling point) due to the difference of their boiling points. Easy and totally safe startup, check and stop procedures of the process: ST20 is provided with a transparent protection shield for the evaporation flask and the thermostatic bath.

① **Heating bath**
The heating bath is lifted by means of a hydraulic system which, in case of power failure, goes automatically down to avoid fluid overheating and bumping.

② **Sealing system**
A great feature of ST20 is its sealing system made of self-lubricating material which guarantees perfect vacuum tightness. This sealing system does not require any maintenance.

③ **Pressure and temperature**
ST20 runs under atmospheric pressure conditions or vacuum. It guarantees perfect vacuum tightness up to 5 mbar. The perfect sealing up to 5 mbar allows for reduced process time due to low evaporation temperature of the fluid. The thermostatic bath can run both with water and oil, and the maximum temperature can reach 150℃ ; it also permits evaporation of any solvent under atmospheric pressure conditions. The heating bath is supplied with 3KW electric heaters.

④ **Measurement, visual display and recording of the following parameters:**
> Bath pre-set and real temperature
> Vapor pre-set and real temperature
> Pre-set and real rotation speed
> Pre-set and real vacuum reading and setting

Display and operation

Main interface

Timing function distillation

Vapor temperature protection
> Max. vapor temperature settings
> Min. vapor temperature settings
> Vapor temperature range

Rotation settings
> Rotation switch
> Speed settings

Bath temperature settings
> Bath temperature switch
> Temperature settings
> Temperature Delta

Vacuum settings
> Vacuum switch
> Vacuum settings
> Vacuum Delta

Calibration interface

Bath temperature calibration

Vacuum calibration

Vapor temperature calibration

Display

The process operating parameters can be set and monitored on a 7" touch-screen display.

Measurement, display and data recording of the following parameters:

- Set and actual temperature value of the bath
- Set and actual vapour temperature value
- Set and actual rotation speed value of the evaporation flask
- Set and actual vacuum value (vacuum controller included as standard)

ST20

Vertical glassware (Vapor sinking)

ST20 CRE

Continuous distillation rotary evaporator
ST20 CRE

Reliable PLC controlling system

All standard functions of the ST20 are included, in addition to an automatic continuous distillation feature.

Order information of ST20 CRE

Order No.	Model	Configuration
SQFU079747	ST20 CRE	ST20 CRE descending glassware (Vapor sinking), 20L evaporating flask, 1x10L collecting flask, 4 x Liquid level sensors, Solenoid valve set
SQFU079745	ST20 CRE	ST20 CRE reflux glassware (Vapor rising), 20L evaporating flask 1x10L collecting flask, 4 x Liquid level sensors, Solenoid valve set

● Parameter

> Bath temperature： RT+5~+150℃

> Rotation speed： 10~150rpm

> Vacuum： 8mbar

● Display

> Touch screen

> Bath temperature, speed, vacuum, vapor temperature and safety features

> The distillation mode can be switched by one button

● Process mode

> Batch distillation (Conventional mode)

> Continuous distillation (Cascade mode)

● Glassware

> Vapor sinking type

> Vapor rising type

> Evaporating flask: 6/10/20L

> Collection flask: 2x6L or 1x10L

● Liquid level sensors

> Monitoring the liquid level in evaporation flasks

> Monitoring the liquid level in collection flasks

> Low level alarm for the reservoir of solutions which have to be evaporated;

> High level alarm for the reservoir of the distilled solvent

● Solenoid valve set

> Vacuum control valve

> Nitrogen gas valve to have inert atmosphere protection for sample

> Refill valve

> Discharge valve

● Safety

> Over temperature protection

> Automatic liquid level monitoring and alarm function

> Standard protective cover

WIGGENS
The Magic Motion

ST20 ATEX

**Large-Capacity rotary evaporator
Explosion-proof type - ST20 ATEX**

ATEX version for process and environment safety

For more detailed information, please contact WIGGNES

Order information

Order No.	Model	Configuration
SQFU079757	ST20 ATEX	ST20 ATEX descending glassware (Vapor sinking), 20L evaporating flask 1x10L collecting flask
SQFU079758	ST20 ATEX	ST20 ATEX descending glassware (Vapor sinking), 20L evaporating flask, 2x6L collecting flasks
SQFU079755	ST20 ATEX	ST20 ATEX reflux glassware (Vapor rising), 20L evaporating flask 1x10L collecting flask
SQFU079756	ST20 ATEX	ST20 ATEX reflux glassware (Vapor rising), 20L evaporating flask, 2x6L collecting flasks

Specifications

Model	ST20	ST20 ATEX	ST20 CRE
	Batch processing	Batch processing	Batch or Continuous processing
Type of condenser	2 types: Vertical condenser (Steam rises or steam sinks)		
Plastic coated saftey glassware	Possible for condenser and receiving flask		
Condensing area	0.6 m2 (standard) / 1.2 m2(optional)		
Available evaporation flasks	6/10/20 L	6/10/20 L	6/10/20 L
Available receiving flasks	1x10L or 2x6L	1x10L or 2x6L	1x10L
Motor	AC	AC, EX	AC
Speed range	10~150 rpm	10~150 rpm	10~150 rpm
Lifting system	Electric drive	Pneumatic drive	Electric drive
Stroke	190mm	190mm	225mm
Max. bath temperature	150 ℃ (standard) 180 ℃ (option)	150 ℃ , EX	150 ℃ (standard) 180 ℃ (option)
Heating power	3 kW	3 kW	3 kW
Set temperature resolution	0.1 ℃	0.1 ℃	0.1 ℃
Bath volume	25	25	25
Material of heating bath	Stainless steel	Stainless steel	Stainless steel
Vacuum controller	Integrated	Integrated, EX	Integrated
Vacuum range	0~999mbar	0~1014mbar	0~1014mbar
Vacuum accuracy	1 mbar	1 mbar	1 mbar
Vapor temperature sensor	Integrated	Integrated	Integrated
Timer	0~999min	0~999min	0~999min
Vapor temperature detection	Yes	Yes	Yes
Vapor temperature protection	Yes	Yes	Yes
Dimensions	1355x725x2070 mm	1355x725x2070 mm	1355x725x2070 mm
Weight	160 kg	160 kg	163 kg
Permissible ambient temperature	5~40 ℃	5~40 ℃	5~40 ℃
Permissible relative humidity	80%	80%	80%
Protection class	IP20	IP20	IP20
Interface	USB-B	Without	USB-A / Ethernet
Solenoid valve group	—	—	Integrated
Sample level sensor	—	—	Integrated
Power supply	230VAC, 50/60Hz	230VAC, 50/60Hz	230VAC, 50/60Hz

Accessories

Vacuum pumps
Chemical resistant diaphragm pump with triple stage

Model	C960T	C960T EX
Order No.	169960	
Max.power	370 kW	550 kW
Ultimate vacuum	<2 mbar	<3 mbar
Max. pumping speed	60 L/min	60 L/min
Inlet connection	10 mm	KF DN 25
Outlet connection	10 mm	KF DN 16
Suitable for	ST20, ST20CRE	ST20 ATEX

FL Recirculating coolers
The FL series offers a new generation of chillers for routine cooling applications within the laboratory and industry. The temperature stability of the PID control is ±0.5℃ . All units can easily be cleaned and are provided with a splash water proof keypad with LED temperature indication. On the front of the units there is an RS232 interface as well as an alarm shutdown. The filling port is easily accessible placed on the top under a lift-up cover.

Model	FL2503	FL4003
Order No.		
Working temperature range (℃)	-20...+40	-20...+40
Temperature stability (℃)	±0.5	±0.5
Cooling capacity (kW)	2.5	4.0
Pump capacity flow pressure (l/min)	40	40
Pump capacity pressure (bar)	0.5~3.0	0.5~3.0

Glassware set
GS10 andGS 20 suitable for high-boiling distillation
GS30 andGS 40 suitable for liquids with a boiling point up to 100 ℃ and/or foaming liquids.
GS50 andGS 60 suitable for for low-boiling solvents; refrigerated with dry ice
GS11 and GS22 suitable for very high rates of distillation, especially for foaming liquids

Model	Condenser	Evaporation flask	Receiving flask	Order No.
GS10	Vertical condenser (steam rises)	20L	10L	
GS20	Vertical condenser (steam rises)	20L	2x6L	
GS30	Vertical condenser (steam sinks)	20L	10L	
GS40	Vertical condenser (steam sinks)	20L	2x6L	
GS50	Cold trap	20L	10L	
GS60	Cold trap	20L	2x6L	
GS11	2pcs of vertical condensers (steam rises & steam sinks)	20L	10L	
GS22	2pcs of vertical condensers (steam rises & steam sinks)	20L	2x6L	
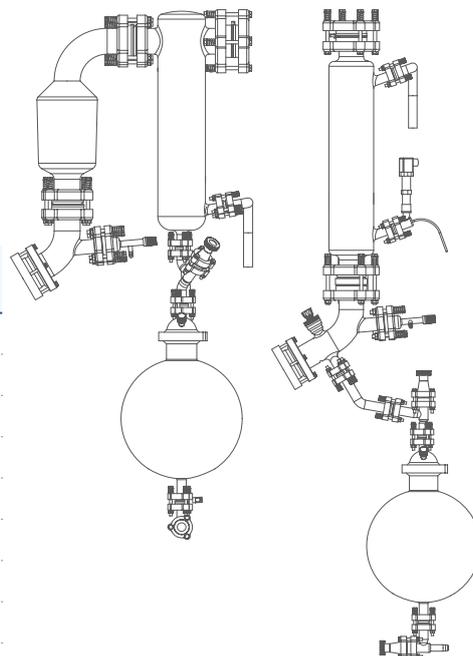
Evaporation flasks

Replacement borosilicate glass for Wiggens ST20, ST20 CRE and ST20 ATEX rotary evaporators. Evaporation flasks are designed to fit all large capacity rotary evaporators.

Volume	Order No.
6 L	SQFY080951
10 L	SQFY080952
20 L	SQFY080953

Evaporation flasks

The flask is made of plastic coated saftey glassware , Plastic coated flasks are clear and will withstand temperatures up to 100℃ .

Volume	Order No.
6 L	SQFY080971
10 L	SQFY080972
20 L	SQFY080973

Evaporation flasks

The flask is made of high quality glassware with an amber coating to protect light-sensitive contents
Note: Flasks can be plastic-coated upon request.

Volume	Order No.
6 L	SQFY080961
10 L	SQFY080962
20 L	SQFY080963

Powder flasks

Also referred to as drying flasks, particularly suited for drying of powdered samples. The baffles, indented into the glass provide better circulation and mixing of the powders while rotating.

Volume	Order No.
10 L	SQFY080982
20 L	SQFY080983

Receiving flasks

Replacement borosilicate glass for Wiggens ST20, ST20 CRE and ST20 ATEX rotary evaporators. Receiving flasks are designed to fit all large capacity rotary evaporators. Now available in coated, non-coated, amberized, and jacketed versions

Volume	Order No.	Order No.	Order No.	Order No.
	Standard	Coated	Jacketed	Amberized
6 L	SQFY080954	SQFY080964	SQFY080974	SQFY080984
10 L	SQFY080955	SQFY080965	SQFY080975	SQFY080985
Replacement parts and accessories				
Glass lid of receiving flask				SQEG083572
Bottom valve of receiving flask				20-227-001
Open ring supports with long extension arms for supporting receiving flask				KC29429

Condenser

Replacement borosilicate glass components for Wiggens ST20, ST20 CRE and ST20 ATEX rotary evaporators. Condensers are designed to fit all large capacity rotary evaporators.. Available poly-coated or non-coated.

Description	Order No.	Order No.
	Standard	Coated
Vertical condenser (steam rises), A	SQQE083567	SQQE083667
Vertical condenser (steam sinks), B	SQQE083578	SQQE083678

A   B
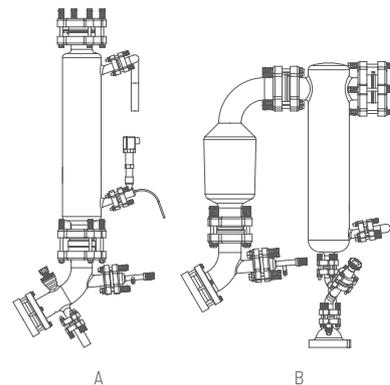
Cold trap

Replacement borosilicate glass components for Wiggens ST20, ST20 CRE and ST20 ATEX rotary evaporators. Inner and outer cold trap components for glassware set. Available poly-coated or non-coated.

Description	Order No.	Order No.
	Standard	Coated
Inner cold trap	SQFY080956	–
Outer cold trap	SQFY080957	–
Outer cold trap	–	SQFY080967

Expansion vessel *for steam sinks version only*

Replacement borosilicate glass components for Wiggens ST20, ST20 CRE and ST20 ATEX rotary evaporators. Upper expansion tanks for glass sets available in either poly-coated or non-coated versions

Volume	Order No.	Order No.
	Standard	Coated

Distillation head

Replacement components for ST20, ST20 CRE and ST20 ATEX rotary evaporators, available poly-coated or non-coated

Description	Order No.	Order No.
	Standard	Coated
For ST20 and ST20 ATEX, steam rises version (A)		
For ST20 and ST20 ATEX, steam sinks version (B)		
For ST20 CRE, steam rises version		
For ST20 CRE, steam sinks version		

A   B
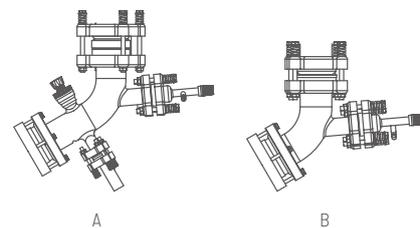
Glass tube set

Replacement components for ST20, ST20 ATEX rotary evaporators, available poly-coated or non-coated

Description	Order No.	Order No.
	Standard	Coated
Glass tube set for connect condenser and 2pcs of 6L receiving flask, for ST20 and ST20 ATEX		
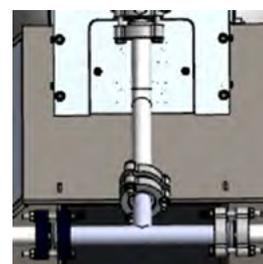
Vacuum sensor and vapor temperature sensor

Description	Order No.
Vacuum sensor for ST20 and ST20 CRE	VAJQ081056
Vacuum sensor for ST20 ATEX	VAJQ070992
Vapor temperature sensor	KC29481

Level sensor and Solenoid valve *for ST20 CRE only*

Monitoring of low liquid level in evaporation flask and evaporation tank
Monitoring of heigh liquid level in receiving flask and receiving tank
The solenoid valve group can switch automatically according to the program:

Description	Order No.
Level sensor in 20L evaporation flask, quartz	20-0623-04
Level sensor in the receiving flask, quartz	20-0623-05
Level sensor in the sample tank	SQAF2000-05
Level sensor in the receiving tank	SQAF2000-06
Solenoid valve (N/O), DN8, G1/4″	20-0623-07
Solenoid valve (N/C) , DN15, G1/2″	20-0623-09

Bath fluid

Thermal H20S is a silicone-based bath fluid, working temperature: 0 ℃ … +220 ℃
- Additional stabilizer
- Excellent heat conductivity
- Minimum odor
- Long fluid life

Description	Order No.
Silicone-based bath fluid Thermal H20S, 10L	8940108
Silicone-based bath fluid Thermal H20S, 5L	8940109

Flange clamp

Flange size	Coupling	Insert ring	PTFE gasket	Bolt, compression spring, washer and nut
DN15			SQQIO11682	
DN25			SQQIO11688	
DN50			SQQIO11696	

WIGGENS
THE MAGIC MOTION

Rupture disc and Nitrogen solenoid valve

Material: SS316L
Size: DN50
Discharge area: 1781 mm^2
Burst pressure: 0.46±0.25 bar (20 ℃)

Description	Order No.
Rupture disc	VAJQ077020
Holder of rupture disc	VAJQ077021
Nitrogen solenoid valve, for protect oxygen-sensitive substances	VAJQ077022

Tubing and clamps

Material: SS316L
Size: DN50
Discharge area: 1781 mm^2
Burst pressure: 0.46±0.25 bar (20 ℃)

Description	Order No.
Vacuum tube (ID=19 mm)	8930319
Reinforced tubing for cooling water (ID=12 mm)	8930312
Tubing insulation (ID=23 mm), for 8930312	8930413
2 Tube clamps, size 3, for Reinforced tubing 12 mm or 1/2〞ID	8970482
2 Tube clamps, size 4, for Reinforced tubing 3/4〞ID	8970483

Guard shield

with safety design, the distillation process can be started only when the guard shield of heating bath is closed

Description	Order No.
Guard shield of heating bath	8930319
Guard shield of condenser and receiving flask	8930312

Trolley

for evaporaing flask handling

Description	Order No.
Stainless steel trolley for evaporaing flask handling, for ST20, ST20 CRE	SQFW080270
Stainless steel trolley for evaporaing flask handling, for ST20 ATEX	SQFW080271

Industrial Rotary Evaporator
STRIKE100 / STRIKE100 ATEX

STRIKE100 is a large capacity rotary evaporator designed for industrial plants. It meets all the process needs by using Borosilicate glass and PTFE permitting aggressive substances treatment.

The unit works under vacuum or atmosphere conditions. The rotation of the 50 or 100L evaporation flask in the heating bath results in a forced convection and homogenous distribution of the product, thus preventing sedimentation. Moreover, it ensures high evaporating exchange surface. The sealing system guarantees the perfect vacuum tightness and maintenance-free operation. Possibility to customize glassware as for Clients needs.

**The highest performance proposal
For your evaporation processes!**

Safety

STRIKE100 series is supplied with an optional transparent protection shield for the evaporation flask.
The special shaped and robust shield ensures utmost protection from evaporation flask breakage and spray during process at high temperature.

> The heating bath and the protective shield are lifted by an electronically monitored system.
> An automatic system lowers the heating bath in case of power failure, overheating and any other bad occurrences.
> STRIKE100 series is supplied with a rupture disk, a safety device, positioned on the glassware to prevent overpressure.

Vacuum sealing system

> Made of lubrificating material allowing perfect vacuum tightness.
> No maintenance required

Heating bath

Lifted by means of a powered system, the heating bath, in case of power failure or alarms, goes automatically down to prevent fluid overheating, and the process will immediately stop.
Its electric heater enhanced to 8Kw ensures continuous evaporation of a wide range of products even in critical working conditions.

Measurement, display and data recording of the following parameters:

> Set and actual temperature value of the bath
> Set and actual vapor temperature value
> Set and actual rotation speed value of the evaporation flask
> Set and actual vacuum value (vacuum controller included as standard)
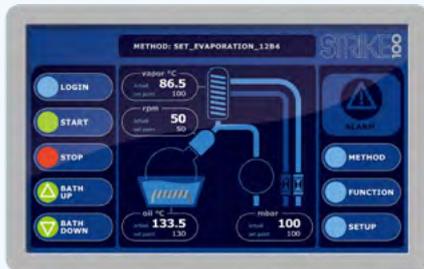
Screen of STRIKE 100

Parameters measurement, visual display and recording of the following:

- Bath pre-set and real temperature
- Vapor pre-set and real temperature
- Pre-set and real rotation speed
- Pre-set and real vacuum reading and setting

Specifications

Model	STRIKE 100	STRIKE 100 ATEX
	Batch processing	Batch processing
Type of condenser	2 types: Vertical condenser (Steam rises or steam sinks)	2 types: Vertical condenser (Steam rises or steam sinks)
Plastic coated saftey glassware	Possible for condenser and receiving flask	Possible for condenser and receiving flask
Condensing area	0.6 m^2 (50L system) / 1.43 m^2(100L system)	0.6 m^2 (50L system) / 1.43 m^2(100L system)
Available evaporation flasks	50/100 L	50/100 L
Available receiving flasks	20L, 2x20L, 50L(optional) , 100L(optional)	20L, 2x20L, 50L(optional) , 100L(optional)
Motor	AC	AC, EX
Speed range	5~100 rpm	5~100 rpm
Lifting system	Electric drive	Pneumatic drive
Stroke	300mm, adjustable, and can be stopped at any position	300mm, adjustable, and can be stopped at any position
Max. bath temperature	150 ℃ (standard)	150 ℃ , EX
Temperature accuracy	±2 ℃	±2 ℃
Heating power	8 kW	8 kW
Set temperature resolution	0.1 ℃	0.1 ℃
Bath volume	110L	110L
Material of heating bath	Stainless steel	Stainless steel
Vacuum controller	Integrated	Integrated, EX
Vacuum range	0-999mbar	0-1014mbar
Vacuum accuracy	1 mbar	1 mbar
Vapor temperature sensor	Integrated	Integrated
Timer	Yes	Yes
Vapor temperature detection	Yes	Yes
Vapor temperature protection	Yes	Yes
Dimensions	1830x890x2110 mm	1830x890x2110 mm
Weight		
Permissible ambient temperature	5~40 ℃	5~40 ℃
Permissible relative humidity	80%	80%
Interface	USB-B	Without
RS 232 interface	Yes, for firmware update only	Yes, for firmware update only
Power supply	400V/3PNPE/50Hz	400V/3PNPE/50Hz

Accessories

Vacuum pumps

Chemical resistant diaphragm pump with triple stage

Model	C2000T
Order No.	W032002
Max.power	750 kW
Ultimate vacuum	<2 mbar
Max. pumping speed	180 L/min
Inlet connection	KF25
Outlet connection	G1/2

FL Recirculating coolers

The FL series offers a new generation of chillers for routine cooling applications within the laboratory and industry. The temperature stability of the PID control is ±0.5℃ . All units can easily be cleaned and are provided with a splash water proof keypad with LED temperature indication. On the front of the units there is an RS232 interface as well as an alarm shutdown. The filling port is easily accessible placed on the top under a lift-up cover.

Model	FL7006	FL11006
Order No.	9666070	9666110
Working temperature range (℃)	-20...+40	-20...+40
Temperature stability (℃)	±0.5	±0.5
Cooling capacity (kW)	7	11
Pump capacity flow pressure (l/min)	60	60
Pump capacity pressure (bar)	0.5~6.0	0.5~6.0

Evaporation flasks

Replacement borosilicate glass for Wiggens STRIKE 100 and STRIKE 100 ATEX rotary evaporators. Evaporation flasks are designed to fit all large capacity rotary evaporators.

Volume	Order No.
50 L	SQEG034290
100 L	SQEG034291

Evaporation flasks

The flask is made of plastic coated saftey glassware , Plastic coated flasks are clear and will withstand temperatures up to 100℃ .

Volume	Order No.
50 L	SQEG034280
100 L	SQEG034281

Evaporation flasks

The flask is made of high quality glassware with an amber coating to protect light-sensitive contents
Note: Flasks can be plastic-coated upon request.

Volume	Order No.
50 L	SQEG034270
100 L	SQEG034271

Powder flasks

Also referred to as drying flasks, particularly suited for drying of powdered samples. The baffles, indented into the glass provide better circulation and mixing of the powders while rotating.

Volume	Order No.
50 L	SQEG034260
100 L	SQEG034261

Receiving flasks

Replacement borosilicate glass for Wiggens STRIKE 100 and STRIKE 100 ATEX rotary evaporators. Receiving flasks are designed to fit all large capacity rotary evaporators. Now available in coated, non-coated, amberized, and jacketed

Volume	Order No.	Order No.	Order No.	Order No.
	Standard	Coated	Jacketed	Amberized
20 L	SQEG036866	SQEG036856	SQEG036846	SQEG036836
Replacement parts and accessories				
Glass lid of receiving flask				SQEG083572
Bottom valve of receiving flask				20-227-001
Open ring supports with long extension arms for supporting receiving flask				KC29429

Condenser

Replacement borosilicate glass components for Wiggens STRIKE 100 and STRIKE 100 ATEX rotary evaporators. Condensers are designed to fit all large capacity rotary evaporators.. Available poly-coated or non-coated.

Description	Order No.	Order No.
	Standard	Coated
Vertical condenser (steam rises), A	SQEG034294	SQEG034284
Vertical condenser (steam sinks), B	SQEG034293	SQEG034283

A   B

Expansion vessel *for steam sinks version only*

Replacement borosilicate glass components for Wiggens STRIKE 100 and STRIKE 100 ATEX rotary evaporators. Upper expansion tanks for glass sets available in either poly-coated or non-coated versions

Volume	Order No.	Order No.
	Standard	Coated

Distillation head

Replacement components for STRIKE 100, STRIKE 100 ATEX rotary evaporators, available poly-coated or non-coated

Description	Order No.	Order No.
	Standard	Coated
For STRIKE 100 and STRIKE 100 ATEX, steam rises version (A)		
For STRIKE 100 and STRIKE 100 ATEX, steam sinks version (B)		
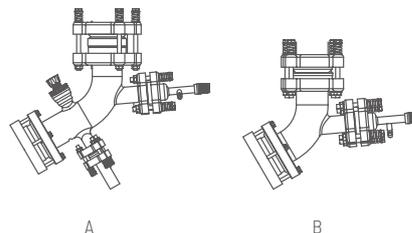
A   B

Glass tube set

Replacement components for STRIKE 100, STRIKE 100 ATEX rotary evaporators, available poly-coated or non-coated

Description	Order No.	Order No.
	Standard	Coated
Glass tube set for connect condenser and 2pcs of 20L receiving flask, for STRIKE 100 and STRIKE 100 ATEX		
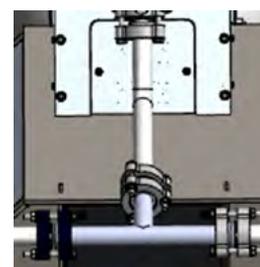
Vacuum sensor and vapor temperature sensor

Description	Order No.
Vacuum sensor for STRIKE 100	VAJQ081056
Vacuum sensor for STRIKE 100 ATEX	VAJQ070992
Vapor temperature sensor	KC29481

Bath fluid

Thermal H20S is a silicone-based bath fluid, working temperature: 0 ℃ ... +220 ℃
- Additional stabilizer
- Excellent heat conductivity
- Minimum odor
- Long fluid life

Description	Order No.
Silicone-based bath fluid Thermal H20S, 10L	8940108
Silicone-based bath fluid Thermal H20S, 5L	8940109

Flange clamp

Flange size	Coupling	Insert ring	PTFE gasket	Bolt, compression spring, washer and nut
DN15			SQQI011682	
DN25			SQQI011688	
DN50			SQQI011696	

Rupture disc and Nitrogen solenoid valve

Material: SS316L
Size: DN50
Discharge area: 1781 mm^2
Burst pressure: 0.46±0.25 bar (20 ℃)

Description	Order No.
Rupture disc	VAJQ077020
Holder of rupture disc	VAJQ077021
Nitrogen solenoid valve, for protect oxygen-sensitive substances	VAJQ077022

Tubing and clamps

Material: SS316L
Size: DN50
Discharge area: 1781 mm^2
Burst pressure: 0.46±0.25 bar (20 ℃)

Description	Order No.
Vacuum tube (ID=19 mm)	8930319
Reinforced tubing for cooling water (ID=12 mm)	8930312
Tubing insulation (ID=23 mm), for 8930312	8930413
2 Tube clamps, size 3, for Reinforced tubing 12 mm or 1/2 ″ ID	8970482
2 Tube clamps, size 4, for Reinforced tubing 3/4 ″ ID	8970483

Guard shield

with safety design, the distillation process can be started only when the guard shield of heating bath is closed

Description	Order No.
Guard shield of heating bath	
Guard shield of condenser and receiving flask	

Trolley

for evaporaing flask handling

Description	Order No.
Stainless steel trolley for evaporaing flask handling, for STRIKE 100	SQFW078521
Stainless steel trolley for evaporaing flask handling, for STRIKE 100 ATEX`	SQFW078522
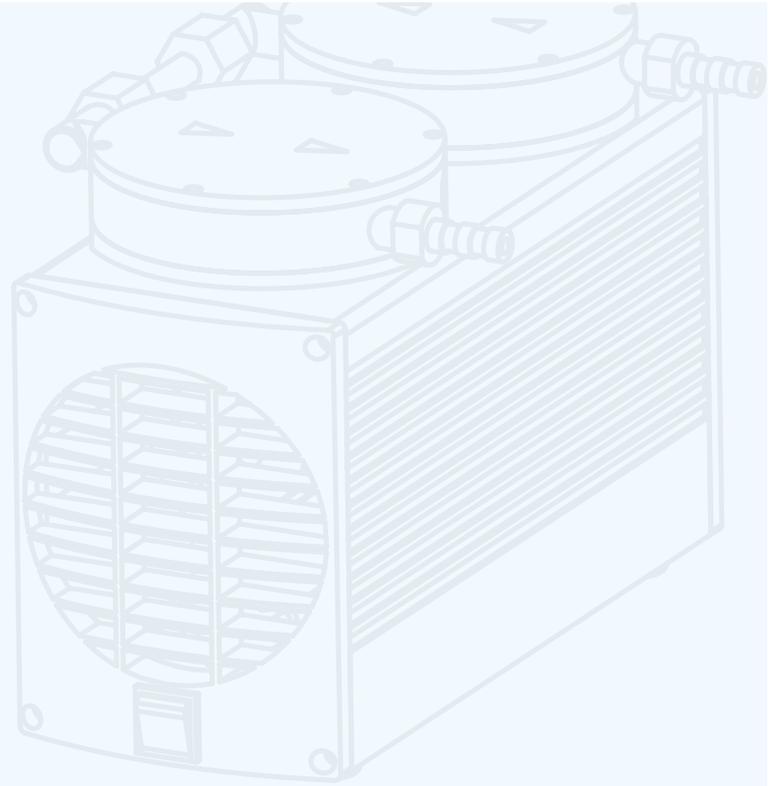
Vacuum Pump
Vacuum Solvent Recovery System
Vacuum Meter and Controller
Vacuum Filtration

Vacuum Pump

The ability to handle difficult and different vacuum challenges quickly.

Wiggens is your general laboratory companion and provides products that can be used in all kinds of laboratory environments. ChemVak is a product line in vacuum technology offering an extensive range of vacuum pumps for all applications,Including :

Chemical resistant diaphragm vacuum pumps which can be used in the chemical, pharmaceutical, petrochemical and other industries

Chemical resistant diaphragm pump
Frequency conversion chemical resistant vacuum pump

Chemical resistant diaphragm pump

Vacuum solvent recovery, which can be utilized to achieve the correct vacuum conditions for diverse applications.

Vacuum solvent recovery system

Oil-free piston vacuum pump, no pollution, no need for oil changes

Oil-free piston vacuum pump

Oil-sealed rotary vane vacuum pumps are widely used traditional vacuum pumps in research and production

Rotary vane vacuum pump

ChemVak
A brand of Wiggens

Vacuum pump selection guide

Before selecting a vacuum pump,
please let us introduce a few basic concepts about vacuum.

▶ Vacuum

The degree of vacuum refers to the pressure level in a vacuum state. The value shown on the vacuum gauge represents the degree of vacuum, which indicates how much lower the system pressure is compared to atmospheric pressure. This value is also called gauge pressure or ultimate relative pressure.
In other words:
Vacuum = Atmospheric Pressure - Absolute Pressure
(Note: Atmospheric pressure is generally taken as 1013.25 mbar.)
The ultimate vacuum of an oil-free piston pump can reach approximately 30 mbar.
The ultimate vacuum of a chemical-resistant diaphragm pump can reach 1 mbar.
The ultimate vacuum of a rotary vane oil pump can reach about 0.0004 mbar.

▶ Ultimate relative pressure

Relative pressure refers to how much lower the measured internal pressure is compared to atmospheric pressure, indicating that the internal pressure of the system is lower than the atmospheric pressure. As the air inside the container is evacuated, the pressure inside the container remains lower than the pressure outside the container. Therefore, when expressing relative pressure or gauge pressure, a negative sign is typically used to indicate that the internal pressure is lower than the external pressure.

▶ Ultimate absolute pressure

Absolute pressure refers to how much higher the measured internal pressure is compared to the theoretical vacuum, where the theoretical vacuum pressure value is 0 Pa. The comparison is made with the absolute vacuum pressure value in the theoretical state. Due to technological limitations, it is impossible to reduce the internal pressure to an absolute vacuum of 0 Pa. As a result, the vacuum level achieved by the vacuum pump will always be higher than the theoretical vacuum value. Therefore, when expressed in terms of absolute pressure, the value is always positive, and no negative sign is used.

▶ Pumping speed

The pumping speed is a measure of the vacuum pump's ability to evacuate air from a container, typically expressed in units of liters per minute (l/min) or cubic meters per hour (m^3/h). It serves as a parameter to compensate for air leakage. To understand this concept, consider that when evacuating a container of the same volume, a vacuum pump with a higher pumping capacity can achieve the desired vacuum more easily, while a pump with a lower pumping capacity may be slow or even unable to reach the required vacuum level. This is because it is impossible for the pipeline or container to be completely air-free. The larger pumping capacity compensates for the loss of vacuum caused by air leakage, allowing the pump to reach the ideal vacuum level more efficiently. Therefore, it is recommended to select a vacuum pump with a higher pumping capacity when calculating theoretical pumping requirements. The specific formula for calculating pumping volume will be introduced below.

After understanding the basic parameters of vacuum pumps such as vacuum degree, absolute pressure and relative pressure, we can enter the formal selection of vacuum pumps.

The required vacuum of the experimental process

The operating pressure of the vacuum pump should meet the pressure requirements of the process.

The required pumping speed of the experimental process

The vacuum pump requires the pumping rate (that is, the ability of the vacuum pump to discharge gas, liquid, and solid under its working pressure), the general unit: m^3/h, l/min, L/s, etc. The specific calculation method can refer to the following formula to calculate and select by yourself. Of course, the selection of vacuum pumps is a comprehensive process involving relevant experience and other factors.

$S=(V/t)\times\ln(P1/P2)$

S is the pumping rate of the vacuum pump (L/s)

V is the volume of the vacuum chamber (L)

t is the time required to reach the required vacuum (s)

P1 is the initial pressure (Pa)

P2 is the required pressure (Pa)

Determine the composition of the gas being pumped

1. Gas, Liquid, or Particulate Matter:

If the pumped substance is a gas, liquid, or contains particles (e.g., dust), and the gas includes water vapor or impurities such as dust and small particles, a rotary vane vacuum pump should be carefully considered. If high vacuum levels are required, a filter device must be added. The rotary vane vacuum pump can only be used effectively as a vacuum generation device if the impurities are properly filtered.

2. Corrosive Properties of the Gas:

Please inform us if the pumped gas is corrosive, either acidic or alkaline (including its pH value). If the gas contains corrosive acid-base or organic compounds, appropriate filtration or neutralization should be performed before selecting a rotary vane vacuum pump. If the vacuum meets the required specifications, it is recommended to use an anti-corrosion diaphragm pump for better resistance to such gases.

3. Contamination of Rubber or Oil:

If the pumped gas or liquid may contaminate rubber or oil, the appropriate vacuum equipment must be selected based on the nature of the pumped media. For gases that contain large amounts of vapor, particles, or corrosive elements, attention should be given to the pump's intake. Corresponding auxiliary equipment should be installed on the pipeline, such as a condenser, filter, etc. (Please contact WIGGENS for further details).

4. Noise and Vibration Considerations:

If the noise and vibration produced by the vacuum pump could have an impact on the surrounding environment or equipment, it is crucial to assess these factors during the selection process.
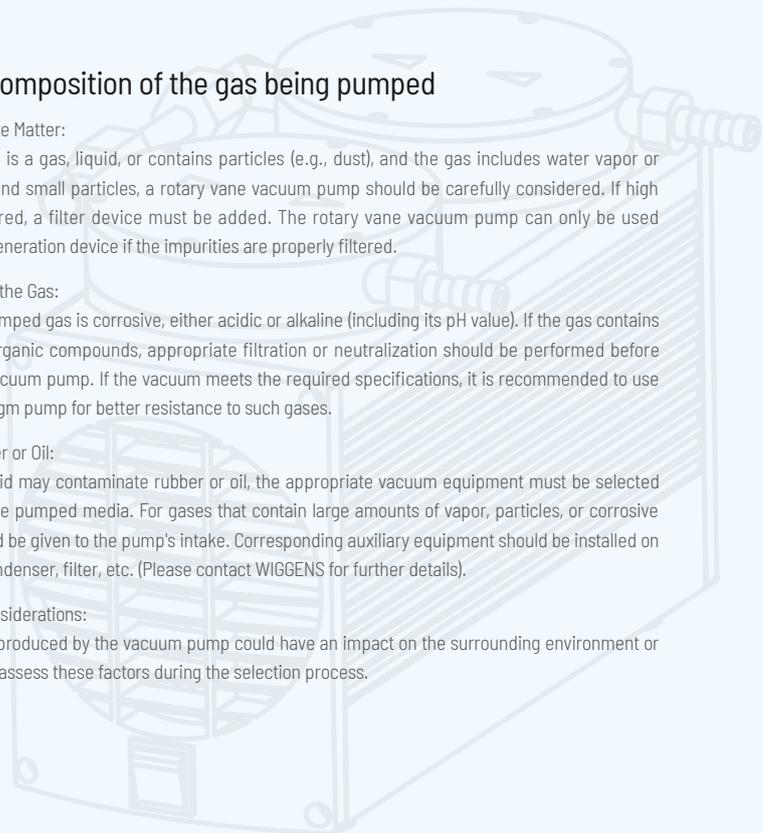
Application Guide

Application	Picture	Description	Pump speed / Vacuum	Recommended vacuum pump
Conventional vacuum requirements		Compact, portable, with certain corrosion resistance	25l/min 13mbar	A410
Vacuum filtration system		The filtered sample is non-corrosive	34l/min 100mbar	V400
		The filtered sample is corrosive and requires high corrosion resistance of the vacuum pump	34l/min 120mbar	C400
Glass vacuum dryer		It is recommended to use a chemical resistant diaphragm vacuum pump. In addition, a vacuum gauge and a vacuum regulating valve are also required	35 l/min 13mbar	C420
Vacuum drying oven		The samples are usually aqueous, acidic or alkaline solutions, so chemical resistant diaphragm vacuum pumps are often recommended	37l/min 2-4mbar	C920Z
Vacuum centrifugal concentrator		A vacuum centrifugal concentrator speeds up sample concentration by using a vacuum to lower solvent boiling points, avoiding high heat. This method often deals with harsh chemicals that can become vapors, requiring careful handling. Chemical resistant diaphragm pumps, recommended for this, reach vacuum of 1-2 mbar.	37l/min 2-4mbar	C920Z
		For extremely low vacuum levels, a rotary vane oil pump is used due to its ability to achieve deeper vacuums. However, it must be paired with a cold trap to prevent vapors from entering and damaging the pump.	180l/min 4×10^{-4}mbar	R-8D
Freeze dryer		Rotary vane oil pump is usually used, equipped with oil mist filter and cold trap	180l/min 4×10^{-4}mbar	R-8D

| Application	Picture	Description	Pump speed / Vacuum	Recommended vacuum pump
Rotary evaporator		0.5~3L evaporating flask, which requires high corrosion resistance of the vacuum pump, and usually needs to be used with a vacuum controller	35 l/min 13mbar	C420	
		A 6–20L evaporating flask requires a vacuum pump with high corrosion resistance and is typically used in conjunction with a vacuum controller.	60l/min 2mbar	C960T	
		A 50–100L evaporating flask has high corrosion resistance requirements for the vacuum pump and is typically used with a vacuum controller.	180l/min 2mbar	C2000T	
Multi-channel vacuum applications		The rotary vane oil pump can provide a sufficiently high pumping rate, but it requires a matching cold trap.	360l/min 4×10^{-4}mbar	R-24D	
Biochemical liquid suction pump		After biochemical culture, it is used to separate tissues from the culture medium.	25~40l/min 100mbar	BioVac series	
Vacuum controller		Able to set and control the system's vacuum level	Vacuum control range: 0.1~1000mbar	DVR series	
Digital vacuum gauge		Able to display the system's vacuum level in real time.	Vacuum measurement range: 0.1~1000mbar	VDM series	

New Entry Level for Anti-corrosion Pumps

A410

A510

Chemical Resistant Diaphragm Pump (A Series)

> Chemvak A series are chemical resistant diaphragm vacuum pumps which can be used in the chemical, pharmaceutical, petrochemical and other industries, such as suction filtration, vacuum distillation, rotary evaporator, vacuum concentration, centrifugal concentration, solid phase extraction and so on.
> A series pumps can be widely used for hard acidic, basic and solvent vapors by utilizing corrosion proof PTFE on all the wetted surfaces.The vacuum chamber and the drive chamber are separated and sealed, ensuring a longer working life of mechanical components
> Chemvak A series pumps are driven by diaphragm, without the need of lubricant, regular oil changes and maintenance; with no oil pollution.
> Driven direct by motor with no additional belt-driven transmission; the quality vibration-proof assembly makes Chemvak A series run at the lowest noise level among all other equivalent pumps.
> Cost-effective, reliable, unique structural design, noise less than 50dB.
> A variety of models are available to meet the various needs of the laboratory, with a minimum vacuum of up to 8 mbar.
> Every motor of Chemvak A series pumps has a built-in thermal protection device to shut off the pump automatically when overheated and then resume working when the temperature cools down.

Features

> No pollution when working
> Overheat protection and power insurance
> Chemical resistant design
> Suitable for corrosive gases and steam media
> Environmentally friendly design
> Strong tightness
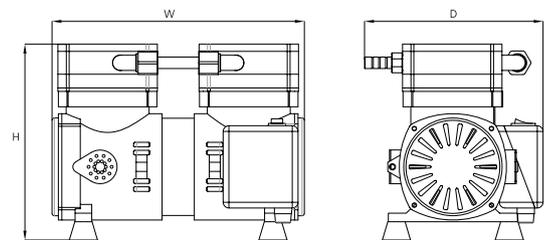
Model / Specifications	A410	A510
Order No.	170410	170510
Flow rate [m^3/h] at atm. pressure	1.5	2.4
Flow rate [l/min] at atm. pressure	25	40
Ultimate vacuum [mbar]	13	8
Max. Power P [W]	95	245
Max. current [A]	0.6	1
Motor speed [rpm]	1450	1450
Pump head	Double stage	Double stage
Hose connections [mm]	10	10
IP code	IP20	IP20
Sound pressure level [dB]	50	60
Dimensions W x D x H [mm]	230×155×173	290×190×210
Weight [kg]	4.5	10
Power supply	220V/50Hz	220V/50Hz

Chemical Resistant Diaphragm Pumps Flow curve

Note: Above data is based on the 220V/50Hz instrument

C300

C400 / C410 / C420

C510 / C520

C600

C610

Chemical Resistant Diaphragm Pump (C Series)

C series construction with PTFE makes them very resistant to chemical vapors from inlet to exhaust and very tolerant to condensates. Pumping chambers are hermetical ensuring long lifetimes of mechanical parts.

Most importantly, diaphragm pumps are oil-free, with vastly reduced service demands compared with oil sealed pumps. They eliminate the cost of water and its contamination well-known from water-jet aspirators, and the waste-oil disposal of rotary vane pumps.

They are chemical resistant diaphragm vacuum pumps which can be widely used for hard acidic, basic and solvent vapors by utilizing corrosion proof PTFE on all the wetted surfaces. Through innovative mechanical technology and human considerations, we have made C series to be quiet, safe, maintenance-free and cost effective vacuum pumps.

Features

High chemical resistant
All wetted parts of C series pump are made of PTFE which is ideal for extremely aggressive / corrosive gases and vapors.

Long-term durable
Head cover and diaphragm made of PTFE/PTFE-coated with stability core for unsurpassed long-term performance

No air pollution, maintenance free
Chemvak C series pumps are driven by diaphragm, without the need of lubricant, regular oil changes and maintenance; with no oil pollution.

Practical
> smooth surfaces for easy cleaning
> sealing system provides reduced leakage rates for improved ultimate vacuum

Quiet and low vibration
Driven direct by motor with no additional belt-driven transmission; the quality vibration-proof assembly makes Chemvak C series run at the lowest noise level among all other equivalent pumps.

Thermal protection device
Every motor of Chemvak C series pumps has a built-in thermal protection device to shut off the pump automatically when overheated and then resume working when the temperature cools down.
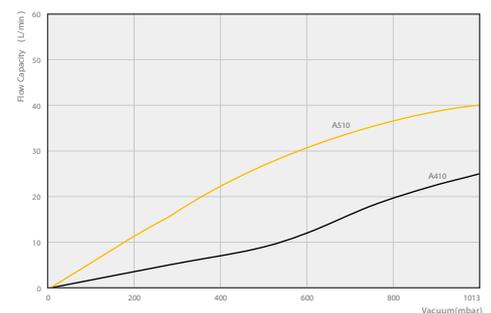
The stability core principle:
for unprecedented long-term performance
chemistry diaphragm pumps provide optimum performance and unsurpassed service intervals even in harsh chemical applications. We achieve this unmatched reliability by manufacturing the most highly stressed components – the head cover and clamping disk.
> high quality PTFE coated EPDM provides long term chemical resistance
> this thick-walled, diffusion resistant, molded fluoroplastic is supported by a stable metallic core for durability
> mechanical precision finishing ensures reproducible WIGGENS quality

Application

> Chemical and petrochemical Industry
> Pharma Industry
> Filtration processes
> Vacuum distillation
> Rotary evaporation
> Vacuum and centrifugal concentration
> Solid phase extraction
> Conventional drying and gel drying
> Advanced substitute for water-jet pumps

Chemical Resistant Diaphragm Pumps Flow curve
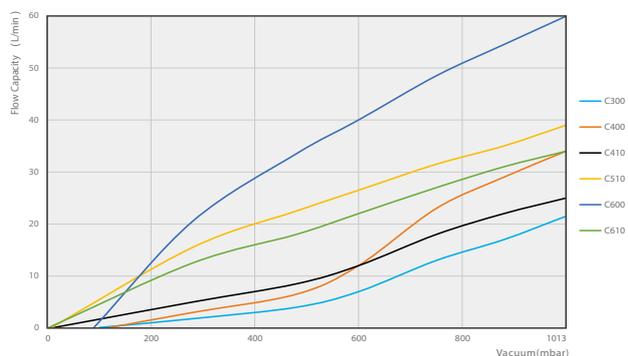
Note: Above data is based on the 220V/50Hz instrument

Vacuum display and control

Set 1

Order No. :169311-06
Included vacuum trap, regulator and vacuum gauge

Set2

Order No.: 169312-06
Included vacuum trap, regulator and digital meter DVM150C

Set 3

Order No. : 169314-06
Included vacuum trap, regulator, chemical resistantvacuum controller DVR480

Model / Specifications	C300	C400	C410	C420	C510	C520	C600	C602	C610
Order No.	169300	169400	169410	169420	169510	169520	169600	169602	169610
Flow rate [m³/h] at atm. pressure	1.32	2.04	1.5	1.5	2.04	3.0	3.6	4.2	2.22
Flow rate [l/min] at atm. pressure	22	34	25	35	34	50	60	70	37
Ultimate vacuum [mbar]	100	120	13	13	8	8	90	80	2~4
Max. Power P [W]	60	95	95	95	245	245	270	270	270
Motor speed [rpm]	1450	1450	1450	1450	1450	1450	1450	1450	1450
Pump head	Single stage	Single stage	Double stage	Double stage	Double stage	Double stage	Single stage	Single stage	Double stage
Hose connections [mm]	10	10	10	10	10	10	10	10	10
IP code	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	50	50	60	55	60	55	60
Dimensions W x D x H [mm]	233×110×210	294×156×195	294×156×195	294×156×195	380×156×226	380×156×226	380×162×226	380×156×226	380×171×226
Weight [kg]	6	8.5	8.5	8.5	13.2	14.5	13.2	14.5	13.8
Power supply	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

WIGGENS
The Magic Motion

Chemical Resistant Diaphragm Pump
Fast pumping speed

The C900 series chemical resistant diaphragm pumps are specifically designed for handling aggressive gases and vapors, offering a vacuum range down to 1 mbar and a pumping speed of up to 95 l/min.

Features

> All wetted parts are made of chemical resistant materials
> Fast pumping speed
> Low noise
> Overheat protection
> Vacuum can be controlled by manual valve, vacuum controller
> Easy and convenient for maintenance

The motor drives the pump head to vacuum
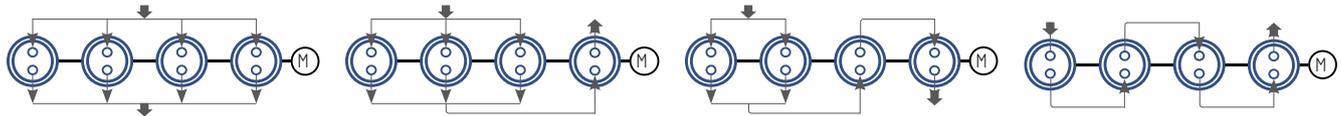
C900E with single stage of pump head

C920Z with double stage of pump head

C960T with Triple stage of pump head

C980V with quadruple stage of pump head

Order No. :169311-06
Included vacuum trap, regulator and vacuum gauge

Set 1

Order No.: 169312-06
Included vacuum trap, regulator and digital meter DVM150C

Set 2

Order No. : 169314-06
Included vacuum trap, regulator, chemical resistantvacuum controller DVR480

Set 3

Model / Specifications	C900E	C920Z	C960T	C980V
Order No.	169900	169920	169960	169980
Flow rate [m³/h] at atm. pressure	5.7	4.5	3.6	2.4
Flow rate [l/min] at atm. pressure	95	75	60	40
Ultimate vacuum [mbar]	< 30	< 8	< 2	< 1
Max. Power P [W]	370	370	370	370
Motor speed [rpm]	1425	1425	1425	1425
Pump head	Single stage	Double stage	Triple stage	Quadruple stage
Hose connections [mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	50	50
Dimensions W x D x H [mm]	440×270×240	440×270×240	440×270×240	440×270×240
Weight [kg]	21.5	21.5	21.5	21.5
Power supply	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

Chemical Resistant Diaphragm Pump

Variable-frequency vacuum pump, fast pumping speed

The chemical resistant diaphragm pumps are specifically designed for handling aggressive gases and vapors, offering a vacuum range down to 1 mbar and a pumping speed of up to 95 l/min.

The variable-frequency pump must be connected to a variable-frequency controller to regulate the vacuum by adjusting the motor speed. This setup is particularly suitable for vacuum control in large-capacity systems, ensuring both faster pumping speeds and stable vacuum levels.

Features

> All wetted parts are made of chemical resistant materials
> Variable frequency motor for fast pumping speed
> Low noise
> Overheat protection
> Vacuum can be controlled by manual valve, vacuum controller or variable frequency controller
> Easy and convenient for maintenance

Variable-frequency vacuum pump without frequency controller
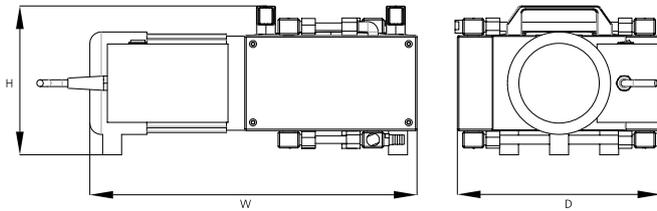
Variable-frequency vacuum pump with frequency controller

The motor drives the pump head to vacuum
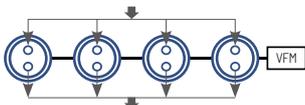
C900EF with variable frequency motor and single stage of pump head
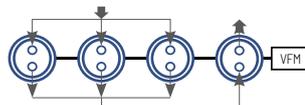
C920ZF with variable frequency motor and double stage of pump head
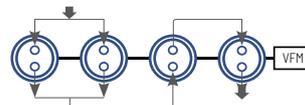
C960TF with variable frequency motor and triple stage of pump head
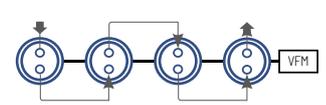
C980VF with variable frequency motor and quadruple stage of pump head

Model / Specifications	C900EF	C920ZF	C960TF	C980VF
Order No. (w/o frequency controller)	169900B	169920B	169960B	169980B
Order No. (w/ frequency controller)	169901B	169921B	169961B	169981B
Flow rate [m^3/h] at atm. pressure	5.7	4.5	3.6	2.4
Flow rate [l/min] at atm. pressure	95	75	60	40
Ultimate vacuum [mbar]	< 30	< 8	< 2	< 1
Max. Power P [W]	370	370	370	370
Motor speed [rpm]	0~1380/0~1680 [1]	0~1380/0~1680 [1]	0~1380/0~1680 [1]	0~1380/0~1680 [1]
Pump head	Single stage	Double stage	Triple stage	Quadruple stage
Hose connections [mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	50	50
Dimensions W x D x H [mm]	440×270×240	440×270×240	440×270×240	440×270×240
Weight [kg]	21.5	21.5	21.5	21.5
Power supply	200 - 240V, 50/60Hz	200 - 240V, 50/60Hz	200 - 240V, 50/60Hz	200 - 240V, 50/60Hz

[1] means the motor speed range of 50Hz and 60Hz models respectively

![WIGGENS The Magic Motion]

Frequency Conversion Chemical Resistant Vacuum Systems

Integrated variable frequency controller

> A new generation of intelligent vacuum technology features a modular design with integrated variable-frequency pumps and control units. Its compact and lightweight structure makes it highly efficient. The system adjusts the diaphragm pump's speed using a frequency conversion motor and controller, enabling more precise vacuum pressure control.
> PID self-turing for vacuum cotronl, the controller automatically changes the PID value according to the artificial intelligence logic algorithm, accurately adjusting the motor speed and stabilizing the precise vacuum degree.
> This series of chemical resistant vacuum pumps are suitable for the treatment of corrosive gases in the chemical, pharmaceutical, petrochemical and other industries, such as extraction, vacuum distillation, rotary evaporator, vacuum concentration, centrifugal concentration, solid phase extraction and other uses.
> All parts in contact with gas and condensate are made of high-quality PTFE. The gas chamber and drive chamber are separated and sealed to ensure a long life of the mechanical parts
> Overheat protection, automatic shutdown when the temperature is too high, and automatic start when it goes back to the normal temperature, to ensure the security and stability of the system.

Features

> Vacuum stability, easy to control, high control precision
> Excellent chemical and vapour resistance
> In the high vacuum degree, the performance is still very good.
> Long life, simple and convenient for maintenance.
> Simple and convenient to work in a stable and lasting way
> Small structural size, energy conservation and environmental protection
> High level of protection for motor, suitable for various environments

Application

> Vacuum distillation for large volume
> Large capacity reaction kettle
> Large capacity vacuum filtration
> Vacuum enrichment
> Vacuum drying
> Various applications in the semiconductor industry

C960TEF

Standard Configuration:
The vacuum system integrated variable frequency controller, and also includes vacuum trap, regulator and vacuum gauge (Order No. 169311-06)

Model / Specifications	C900EEF	C920ZEF	C960TEF	C980VEF
Order No.	169900C	169920C	169960C	169980C
Flow rate [m³/h] at atm. pressure	5.7	4.5	3.6	2.4
Flow rate [l/min] at atm. pressure	95	75	60	40
Ultimate vacuum [mbar]	< 30	< 8	< 2	< 1
Vacuum setting range [mbar]	0.1~1000	0.1~1000	0.1~1000	0.1~1000
Max. Power P [W]	400	400	400	400
Motor speed [rpm] @50Hz	0~1380	0~1380	0~1380	0~1380
Motor speed [rpm]@60Hz	0~1680	0~1680	0~1680	0~1680
Pump head	Single stage	Double stage	Triple stage	Quadruple stage
Hose connections [mm]	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	50	50
Dimensions W x D x H [mm]	220×400×495	220×400×495	220×400×495	220×400×495
Weight [kg]	21.5	21.5	21.5	21.5
Power supply	200 - 240V, 50/60Hz	200 - 240V, 50/60Hz	200 - 240V, 50/60Hz	200 - 240V, 50/60Hz

Chemical Resistant Diaphragm Pump

Fast pumping speed for industrial applications

The C1200 series chemical resistant diaphragm pumps are specifically designed for handling aggressive gases and vapors, offering a vacuum range down to 1 mbar and a pumping speed of up to 120 l/min.

Features

> All wetted parts are made of chemical resistant materials
> Fast pumping speed
> Low noise
> Overheat protection
> Vacuum can be controlled by manual valve, vacuum controller
> Easy and convenient for maintenance

The pump with chemical resistant vacuum controller DVR480

Package

Outlet,OD 16mm barbed fitting
Inlet,KF25 flange

The motor drives the pump head to vacuum

C1200E with single stage of pump head

C1200Z with double stage of pump head

C1200T with triple stage of pump head

C1200V with quadruple stage of pump head

Model / Specifications	C1200E	C1200Z	C1200T	C1200V
Order No.	W1031201	W1031202	W1031203	W1031204
Flow rate [m^3/h] at atm. pressure	7.2	5.7	4.2	3
Flow rate [l/min] at atm. pressure	120	95	70	50
Ultimate vacuum [mbar]	< 80	< 8	< 2	< 1
Max. Power P [W]	370	370	370	370
Max. current [A]	2	2	2	2
Motor speed [rpm]	1380	1380	1380	1380
Pump head	Single stage	Double stage	Triple stage	Quadruple stage
Hose connections of inlet	KF25 [1]	KF25 [1]	KF25 [1]	KF25 [1]
Hose connections of outlet	G1/2 [1]	G1/2 [1]	G1/2 [1]	G1/2 [1]
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	50	50
Dimensions W x D x H [mm]	440×270×240	440×270×240	440×270×240	440×270×240
Weight [kg]	21.5	21.5	21.5	21.5
Power supply	220~240V/50Hz	220~240V/50Hz	220~240V/50Hz	220~240V/50Hz

1) Included : KF25 flange clamp, with sealing ring and barbed fitting OD16mm for tubing

WIGGENS
The Magic Motion

Chemical Resistant Diaphragm Pump
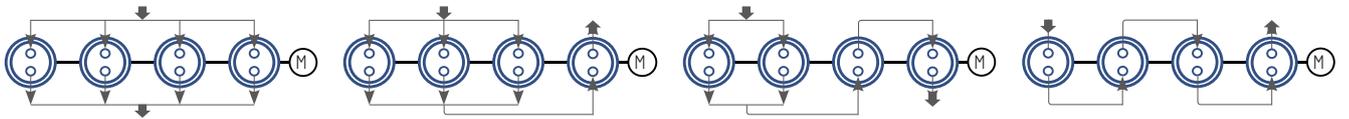## Fast pumping speed for industrial applications

The C2000 series chemical resistant diaphragm pumps are specifically designed for handling aggressive gases and vapors, offering a vacuum range down to 1 mbar and a pumping speed of up to 245 l/min.

Features

> All wetted parts are made of chemical resistant materials
> Fast pumping speed
> Low noise
> Overheat protection
> Vacuum can be controlled by manual valve, vacuum controller
> Easy and convenient for maintenance

The pump with chemical resistant vacuum controller DVR480

Package

Outlet,OD 16mm barbed fitting
Inlet,KF25 flange

The motor drives the pump head to vacuum

C2000E with single stage of pump head   C2000T with triple stage of pump head   C2000V with quadruple stage of pump head

Model / Specifications	C2000E	C2000T	C2000V
Order No.	W1032003	W1032001	W1032002
Flow rate [m^3/h] at atm. pressure	14.7	10.8	9.0
Flow rate [l/min] at atm. pressure	245	180	150
Ultimate vacuum [mbar]	< 70	< 2	< 1
Max. Power P [W]	750	750	750
Motor speed [rpm]	1380	1380	1380
Pump head	Single stage	Triple stage	Quadruple stage
Hose connections of inlet	KF25 [1]	KF25 [1]	KF25 [1]
Hose connections of outlet	G1/2 [1]	G1/2 [1]	G1/2 [1]
IP code	IP20	IP20	IP20
Sound pressure level [dB]	60	60	60
Dimensions W x D x H [mm]	615×285×386	615×285×386	615×285×386
Weight [kg]	41	41	41
Power supply	220~240V/50Hz	220~240V/50Hz	220~240V/50Hz

1) Included : KF25 flange clamp, with sealing ring and barbed fitting OD16mm for tubing

Chemical Resistant Diaphragm Pump

Variable-frequency vacuum pump, fast pumping speed
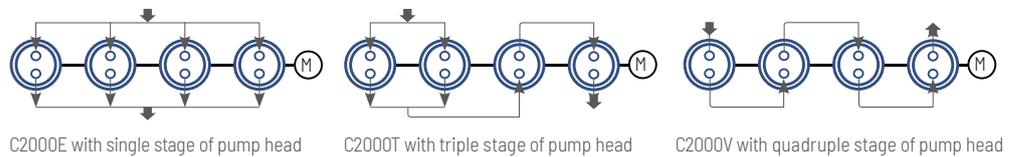
The chemical resistant diaphragm pumps are ideally suited for handling aggressive gases and vapors, offering a vacuum range down to 1 mbar.

Features

> All wetted parts are made of chemical resistant materials
> Variable frequency motor for fast pumping speed
> Low noise
> Overheat protection
> Vacuum can be controlled by manual valve, vacuum controller or variable frequency controller
> Easy and convenient for maintenance

The motor drives the pump head to vacuum
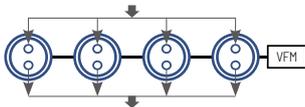
C2000EEF with variable frequency motor and single stage of pump head
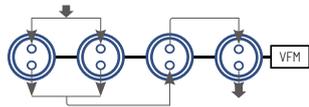
C2000TEF with variable frequency motor and triple stage of pump head
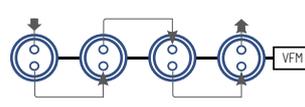
C2000VEF with variable frequency motor and quadruple stage of pump head

The variable-frequency pump must be connected to a variable-frequency controller to regulate the vacuum by adjusting the motor speed. This setup is particularly suitable for vacuum control in large-capacity systems, ensuring both faster pumping speeds and stable vacuum levels.

C1450TEF

Model / Specifications	C2000EEF	C2000TEF	C2000VEF	C1450TEF
Order No. (w/ frequency controller)	W1032013	W1032011	W1032012	1691450C
Flow rate [m³/h] at atm. pressure	16.2	12.6	9.6	
Flow rate [l/min] at atm. pressure	270	210	160	145
Ultimate vacuum [mbar]	< 70	< 2	< 1	< 8
Max. Power P [W]	750	750	750	600
Motor speed [rpm]	0~1380	0~1380	0~1380	0~1400
Pump head	Single stage	Triple stage	Quadruple stage	Triple stage
Hose connections of inlet	KF25 [1]	KF25 [1]	KF25 [1]	10mm
Hose connections of outlet	G1/2 [1]	G1/2 [1]	G1/2 [1]	G1/2
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	60	60	60	65
Dimensions W x D x H [mm]	615×285×386	615×285×386	615×285×386	635×280×200
Weight [kg]	41	41	41	36.5
Power supply	200 - 240V, 50/60Hz	200 - 240V, 50/60Hz	200 - 240V, 50/60Hz	200 - 240V, 50/60Hz

1) Included : 2 barbed fittings for tubing 16 mm inner dia.

![WIGGENS - The Magic Motion]

Vacuum Solvent Recovery System

This chemical vacuum system offers a wide range of applications, including evacuation, evaporation, and the handling of gases and vapors in chemical, biological, and pharmaceutical laboratories. It is particularly suited for high vacuum requirements involving high-boiling-point solvents. Typical applications include rotary evaporators and drying ovens.

The inlet separator, made of glass with a protective coating, effectively retains particles and liquid droplets, ensuring system efficiency and reliability. At the outlet, the waste vapor condenser is both highly efficient and compact. It enables effective solvent recycling and provides active environmental protection. Additionally, the system features exceptional chemical resistance and superior vapor tolerance.

> exceptionally high performance even at low vacuum
> excellent ultimate vacuum even with gas ballast
> whisper quiet and very low vibration
> excellent environmental friendliness due to efficient solvent recovery

> Sealed system to enable a good distillation environment
> Precise control of the evaporation process
> Compact and environmental friendly design
> Low noise

> Buffer bottle prevents particles from damaging the pump
> Direct electric connection
> Ultimate vacuum range: 1-30 mbar
> Flow rate range: 25-95 l/min

Gas out OD 8mm
Condenser
Connect the water hoses OD 8mm
Gas inlet OD 10mm
Condensate flask
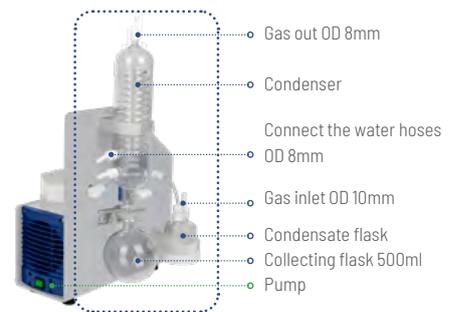Collecting flask 500ml
Pump

CSH System

The inlet of the CSH System is connected to a segregation bottle, while the outlet is connected to a condenser designed to condense and recover the solvent.

Model	CSH410	CSH510	CSH520	CSH610
Power (W)	95	245	150	245
Ultimate Vacuum (mbar)	13	8	8	2
Max. Flow Rate (l/min)	25	34	50	34
Outlet Size (outer diameter in mm)	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Dimensions W x D x H [mm]	341 x 255 x 545	341 x 255 x 545	341 x 255 x 545	341 x 255 x 545
Weight (kg)	12.5	15.8	17.1	16.6
Order No.	900512	900513	900515	900514

CSH System
Standard package includes: Includes chemical resistant diaphragm pump, separator, condenser

CSC System

The inlet of the CSC System is connected to a segregation flask, while the outlet is connected to a condenser that condenses and recovers solvents. Additionally, the system includes a vacuum controller to set, display, and regulate the vacuum.

This fully automated vacuum generation system features a chemical-resistant diaphragm vacuum pump, a base plate, a high-performance condenser, a segregation flask, a vacuum control device, and integrated valves.

Model	CSC410	CSC510	CSC520	CSC610
Power (W)	95	245	150	245
Ultimate Vacuum (mbar)	13	8	8	2
Max. Flow Rate (l/min)	25	34	50	34
Outlet Size (outer diameter in mm)	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Dimensions W x D x H [mm]	323 x 267 x 545	323 x 267 x 545	323 x 267 x 545	323 x 267 x 545
Weight (kg)	16	19.3	20.6	20.1
Order No.	900522	900523	900525	900524

OD 8mm
OD 8mm
OD 10mm

CSC System
Standard package includes: Includes chemical resistant diaphragm pump, vacuum controller, separator, condenser

CSP System

The inlet of the CSP System is connected to a segregation bottle, while the outlet is connected to a condenser designed to condense and recover solvents. Additionally, the system is equipped with a vacuum controller to set, monitor, and regulate the vacuum.

Model	CSP410	CSP510	CSP520	CSP610
Power (W)	95	245	150	245
Ultimate Vacuum (mbar)	13	8	8	2
Max. Flow Rate (l/min)	25	34	50	34
Outlet Size (outer diameter in mm)	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Dimensions W x D x H [mm]	320 x 425 x 500	320 x 425 x 500	320 x 425 x 500	320 x 425 x 500
Weight (kg)	16	19.3	20.6	20.1
Order No.	900542	900543	900545	900544

OD 8mm
OD 10mm
OD 8mm
OD 8mm

CSP System
Standard package includes: Includes chemical resistant diaphragm pump, vacuum controller, separator, condenser

CSC Systems (Frequency conversion model)

A new generation of intelligent vacuum technology featuring a modular design with integrated variable-frequency pumps and control units, offering a compact and lightweight structure.
> PID self-turing for vacuum cotronl,the controller automatically changes the PID value according to the artificial intelligence logic algorithm, accurately adjusting the motor speed to get the precise vacuum value.
> All parts in contact with gas and condensate are made of high-quality PTFE. The gas chamber and drive chamber are separated and sealed to ensure a long life of the mechanical parts
> It can be directly connected to the power supply and working system.
> Recovery flasks at air inlet to prevent solid particles and liquid water from entering the pump chamber.

Model	CSC900E	CSC920Z	CSC960T	CSC980V
Power (W)	400	400	400	400
Resolution (mbar)	0.1	0.1	0.1	0.1
Setting range (mbar)	0.1-1000	0.1-1000	0.1-1000	0.1-1000
Max. vacuum (mbar)	< 30	< 8	< 2	< 1
Max. Flow Rate (l/min)	95	75	60	40
Outlet (mm)	10	10	10	10
IP code	IP20	IP20	IP20	IP20
Dimensions W x D x H [mm]	220 x 400 x 495	220 x 400 x 495	220 x 400 x 495	220 x 400 x 495
Weight (kg)	25	25	25	25
Sound pressure level Level (dB)	50	50	50	50
Order No.	900532	900533	900534	900535

OD 8mm
OD 10mm
OD 8mm

CSC System (Frequency conversion)
Standard package includes: Includes chemical resistant diaphragm pump, variable frequency controller, separator, condenser
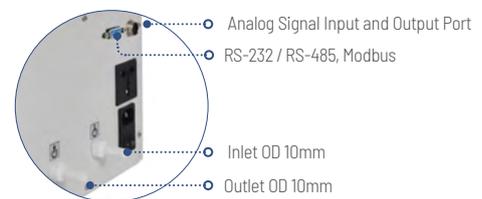
Chemical Resistant Vacuum Controller

> Wide measurement and control range
> Control the vacuum down to 0.1 mbar
> Up to 5-step program control
> All parts that come into contact with gases and vapors are made of PTFE or highly durable ceramic to ensure high chemical resistance
> Bright LED display and convenient on-touch control
> RS-232 and analog connection available
> Pressure release feature for easy vacuum system installation
> Direct electric control of the vacuum pump
> Energy saving and environmental friendly
> Suitable for continuous operation

DVR480

Analog Signal Input and Output Port
RS-232 / RS-485, Modbus

Inlet OD 10mm
Outlet OD 10mm

Model	DVR480	DVR480-Pro
Order No.	900414-1	900414-2
Voltage	100-240V, 50/60Hz	100-240V, 50/60Hz
Displayed Vacuum Accuracy (mbar)	0.1	0.1
Controllable Range (mbar)	0.1...1000	0.1...1000
Measurement Accuracy	0.25%F.S	0.1%F.S
Display	LED	LED
Control Mode	On-Touch	On-Touch
Timer / Program	Yes / Up to 5 Steps	Yes / Up to 5 Steps
Pressure Release Feature	Yes	Yes
Electrical Control of the Pump	Yes	Yes
Protection Category	IP40	IP40
Corrosion resistance	All parts that come into contact with gases are made of PTFE or highly durable ceramic to ensure the resistance to various acid, base, or organic solvent gases.	

Chemical Resistant Vacuum Controller

Wiggens introduces the DVR580, a new-generation vacuum controller featuring innovative vacuum control technology. Designed for demanding vacuum applications, it simplifies the management of complex processes with precision and ease. The DVR580 is the ideal solution for laboratories requiring precise, reliable, and user-friendly vacuum control. Its advanced design and innovative technology make it perfect for a wide range of applications.

> Continuously adjustable
> Large, high-resolution TFT touch display with multilingual user interface
> Parts being in contact with the medium made of chemical resistant material
> Integrated programmer
> USB connection
> RS232 / RS485 interface for communication
> Integrated two vacuum control modes, valve control and frequency conversion control

Model	DVR580
Order No.	900580
Voltage	100~240V / 50Hz
Hose connections of inlet / outlet (mm)	OD 10
Displayed Vacuum Accuracy (mbar)	0.1
Controllable Range (mbar)	0.1~1010
Measurement Accuracy	0.25%F.S
Display	Touch screen
Control Mode	Turning knob
Timer / Program	Yes, Max. 6 steps
Pressure Release Feature	Continuous / intermittent pressure relief
Protection Category	IP40
Communicate interface.	RS232, RS485, USB
Corrosion resistance	All parts that come into contact with gases are made of PTFE or highly durable ceramic to ensure the resistance to various acid, base, or organic solvent gases.

Accessories for chemical resistant diaphragm pumps

General purpose valves

A range of plug valves for applications with demand for pressure and temperature, with max. pressure at 1 bar and max. vacuum at 7mbar.

Note: Rapid changes in temperature in excess of 25℃ /min may cause these valves to leak due to the expansion properties of PTFE. It can be sterilised at 135℃ .

Straight Through Bayonet

Order No.	Outer Diameter [mm]	Inner Diameter [mm]
016.702.5.2	4.5	2
016.702.2	6.0	2
016.703.7.2	6.8	3
016.703.2	8.0	3
016.704.9.2	9.0	4
016.704.2	10.0	4
016.705.2	11.0	5
016.706.2	16	10

Straight Through Screw

Order No.	Outer Diameter [mm]	Inner Diameter [mm]
016.1202.6.2	6	2
016.1203.2	8	3
016.1204.2	8	4

T-Shape Bayonet

Order No.	Outer Diameter [mm]	Inner Diameter [mm]
016.802.5.2	4.5	2
016.802.2	6.0	2
016.803.7.2	6.8	3
016.803.2	8.0	3
016.804.9.2	9.0	4
016.804.2	10.0	4
016.805.2	11.0	5

T-Shape Screw

Order No.	Outer Diameter [mm]	Inner Diameter [mm]
016.1302.6.2	6	2
016.1303.2	8	3
016.1304.2	8	4

Straight Through Connector

Order No.	Outer Diameter [mm]	Inner Diameter [mm]
016.902.5.2	4.5	2
016.902.2	6.0	2
016.903.7.2	6.8	3
016.903.2	8.0	3
016.904.9.2	9.0	4
016.904.2	10.0	4
016.905.2	11.0	5
016.907.2	16	10

L-Shape Connector

Order No.	Outer Diameter [mm]	Inner Diameter [mm]
016.1002.5.2	4.5	2
016.1002.2	6.0	2
016.1003.7.2	6.8	3
016.1003.2	8.0	3
016.1004.9.2	9.0	4
016.1004.2	10.0	4
016.1005.2	11.0	5
016.1006.2	16	10

T-Shape Connector

Order No.	Outer Diameter [mm]	Inner Diameter [mm]
016.1102.5.2	4.5	2
016.1102.2	6.0	2
016.1103.7.2	6.8	3
016.1103.2	8.0	3
016.1104.9.2	9.0	4
016.1104.2	10.0	4
016.1105.2	11.0	5
016.1106.2	16	10

4-Way Connector

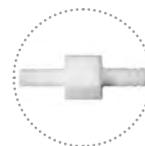| Order No.	Outer Diameter [mm]	Inner Diameter [mm]
016.1112.5.2	4.5	2
016.1112.2	6.0	2
016.1113.7.2	6.8	3
016.1113.2	8.0	3
016.1114.9.2	9.0	4
016.1114.2	10.0	4
016.1115.2	11.0	5
016.1116.2	16	10

Accessories For Chemical Resistant Diaphragm Pumps

PTFE Connector

Order No.	Description
C410015	Barbed fitting for tubing 10 mm ID, M10x1, suitable for C300 / 400 / 500 / 600 / 900 series

PTFE Connector with O-ring

Adapter

Order No.	Description
C410055	Barbed fitting for tubing 10 mm to KF25 adapter, suitable for C300 / 400 / 510 / 600 / 900 series
C410056	Barbed fitting for tubing 12 mm ID, KF25, suitable for C1200 / 2000 series
C410057	Barbed fitting for tubing 19 mm ID, KF25 , suitable for C1200 / 2000 series
C410058	Barbed fitting for tubing 25 mm ID, KF25, suitable for C1200 / 2000 series
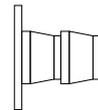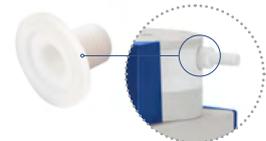
C410056   C410055

Silencer

The use of silencer will slightly effect the flow rate.

Order No.	Description
C900E030	Suitable for chemical resistant diaphragm pumps

Outlet
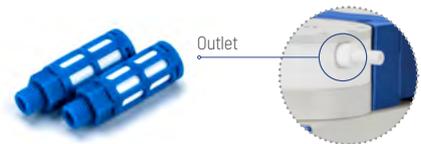
Silencer

Diaphragm and Valve Plate Sets

Suitable for	diaphragm	valve plates	Number of pump heads *
C300	C410005	C510013	1
C400/410	C410005	C510013	2
C510/600/610/	C510011	C510013	2
C420	C2000005	C2000013	2
C520/602	C2000006	C2000013	2
C 900E/Z/T/V	C510011	C510013	4
C1200 E/Z/T/V	C2000005	C2000013	4
C2000 E/Z/T/V	C2000005	C2000013	8

*Notes. Replacement of consumables for one pump head requires replacement of one diaphragm and two valve plates

Diaphragm

Valve Plate

Diaphragm and valve plates set

Order No.	Description
410001	Diaphragm and valve plates set , 1 diaphraqm and 2 valve plate, Suitable for C300/400/410
510001	Diaphragm and valve plates set, 1 diaphraqm and 2 valve plates, Suitable for C500/510/600/610/900
1200001	Diaphragm and valve plates set, 1 diaphraqm and 2 valve plate, Suitable for 420
1200002	Diaphragm and valve plates set, 1 diaphraqm and 2 valve plate, Suitable for 520/602
1200003	Diaphragm and valve plates set, 1 diaphraqm and 2 valve plate, Suitable for C1200 series
1200004	Diaphragm and valve plates set, 1 diaphraqm and 2 valve plate, Suitable for C2000 series

Diaphragm and valve plates set

Tubing

Order No.	Outer Diameter, mm	Inner Diameter, mm	Thickness, mm	Length, m
PTFE Tubing				
016.1706.01	6	4	1	1
016.1708.01	8	6	1	1
016.1712.01	12	10	1	1
016.1714.01	14	12	1	1
016.1716.01	20	18	1	1
016.1718.01	28	25	1.5	1
Viton Tubing				
168000-01	12	6	3	1
168001-01	14	8	3	1
168002-01	16	10	3	1
168003-01	18	12	3	1
168004-01	25	19	3	1
168005-01	31	25	3	1

Length upon request (min. 1 m)

PTFE Tubing

Viton Tubing

Chemical Resistant Vacuum Regulator / Filter Equipment

Order No.	Description
169311-06	Set 1 (Includes vacuum trap, regulator and vacuum gauge)
169312-06	Set 2 (Includes vacuum trap, regulator and digital meter DVM150C)
169313-06	Basic model without vacuum gauge, includes vacuum trap and regulator

Part	Material	Part	Material
Pressure Regulating Valve	PVDF	Filter Bottle	Borosilicate Glass
Filter cartridge	PTFE	Adapter	PTFE
Filter Bracket	ABS	Vacuum Sensor	Stainless Steel

Connect the external system OD 10mm

Connect the inlet of the pump

Vacuum gauge

Vacuum trap

Regulator

Set 1

Regulator

Digital meter

Vacuum trap

Set 2

Digital Vacuum Meter

> Designed for chemical resistant diaphragm pumps
> Compact design, flange connector, strong tightness
> TFT high brightness screen, easy for observation from multiple angles or long distance
> Can be directly connected to a vacuum pump via a flange connection

Models	DVM150C
Voltage	100-240V, 50/60Hz
Display screen	High brightness TFT
Display resolution	0.1mbar
Testing range	0.1-1000mbar
Material of sensor	Ceramic
Material for contact parts of the gas	PTFE and Ceramic
Connection	KF25 or 1/4NPT female
Size of the meter	100*65*55mm
Order No.	15060-01

DVM150C

1/4 NPT

KF25

![WIGGENS - The Magic Motion]
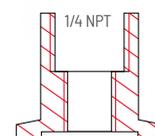
Application Guide

For rotary evaporator

Pump models	Max. vacuum (mbar)	Flow Rate (l/min)	Suitable for
C420	13 mbar	35 l/min	1 L / 2.5 L
C520	8 mbar	50 l/min	5 L
C600	90 mbar	60 l/min	10 L
C610	2 mbar	34 l/min	5 L
C920Z	8 mbar	75 l/min	50 L, 100 L

For vacuum oven

Pump models	Max. vacuum (mbar)	Flow Rate (l/min)	Suitable for
C420	13 mbar	35 l/min	15L
C520	8 mbar	50 l/min	45L
C600	90 mbar	60 l/min	60L
C610	2 mbar	34 l/min	30L

For vacuum centrifugal concentrator

Pump models	Max. vacuum (mbar)	Flow Rate (l/min)
C420	13 mbar	35 l/min
C520	8 mbar	50 l/min
C600	90 mbar	60 l/min
C610	2 mbar	34 l/min

For vacuum freeze dryer

Pump models	Max. vacuum (mbar)	Flow Rate (l/min)
R-8D	4×10^{-4} mbar	180 l/min
R-17D	4×10^{-4} mbar	283 l/min
R-24D	4×10^{-4} mbar	360 l/min
R-36D	4×10^{-4} mbar	540 l/min

Oil-free piston vacuum pump

The Chemvak V Series vacuum pump is a piston-powered, oil-free pump. It combines innovative electronic and mechanical technology with a user-friendly design concept, offering a compact, lightweight structure that is clean, maintenance-free, safe, and comfortable to use.

Features

No air pollution, maintenance free
The Chemvak V Series pumps are piston-driven, requiring no lubrication or oil changes, ensuring maintenance-free operation and no risk of oil contamination.

Moisture trap with filter cartridge
The Chemvak V Series pumps are equipped with a filter cartridge at the air inlet to remove particles and moisture, effectively extending the pump's lifespan.

Oil-free
The oil-free piston vacuum pump provides continuous, reliable, high flow vacuum for your container.

Vacuum regulator
The ChemVak V series pumps are equipped with vacuum regulator to adjust vacuum.

Thermal protection device
Each motor in the Chemvak V Series pumps features built-in thermal protection, which automatically shuts off the pump when it overheats and resumes operation once the temperature cools down.

Application

> Biology laboratories
> Food industry
> Microbiological detection
> Vacuum extraction
> Liquid filtration
> Vacuum drying
> Suspended solids measurement

Oil-Free Piston Vacuum Pumps flow curve
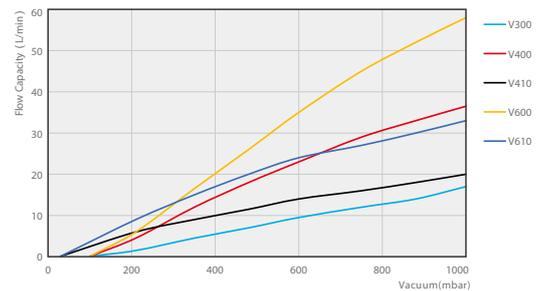
Note: Above data is based on the 220V/50Hz instrument
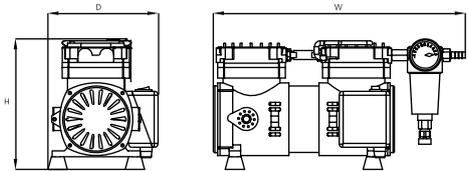
Model / Specifications	V300DC	V300	V400	V410	V430	V600	V610	V800	V810
Order No.	167330	167300	167400	167410	167430	167600	167610	167800	167810
Flow rate [m³/h] at atm. pressure	1.02	1.02	2.04	1.14	1.68	3.6	2.4	4.8	3
Flow rate [l/min] at atm. pressure	17	17	34	19	28	60	40	80	50
Ultimate vacuum [mbar]	150	100	100	30	150/5500	120	30	100	30
Max. Power P [W]	35	60	80	80	125	190	210	220	220
Max. current [A]	3	0.3	0.4	0.4	0.6	1	1	1	1
Motor speed [rpm]	1450	1450	1450	1450	1450	1450	1450	1450	1450
Hose connections [OD mm]	9	9	9	9	9	9	9	9	9
IP code	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Sound pressure level [dB]	50	50	60	50	50	52	65	75	75
Dimensions W x D x H [mm]	272x142x165	272x142x165	310x152x165	310x152x165	247x235x200	350x170x195	350x170x195	350x170x195	350x170x195
Weight [kg]	4.4	4.4	5.4	5.4	5.5	8.6	8.6	8.6	8.6
Power supply	DC12	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

WIGGENS
THE MAGIC MOTION

Accessories For Oil-Free Piston Pumps

Connector
Replace the inlet port on the pump

Description	Suitable for	Order No.
Connectors		
Outlet Diameter 9.5 mm	Oil-Free Piston Pumps	167300-20
Outlet Diameter 8 mm	Oil-Free Piston Pumps	167300-21
Outlet Diameter 6.4 mm	Oil-Free Piston Pumps	167300-26
Outlet Diameter 4.8 mm	Oil-Free Piston Pumps	167300-23
Outlet Diameter 3.2 mm	Oil-Free Piston Pumps	167300-24
L- Shape Connector		
Outlet Diameter 8 mm	Oil-Free Piston Pumps	167300-25
Quick Connection Outlet		
Outlet Diameter 12 mm	Oil-Free Piston Pumps	168100-12
Outlet Diameter 10 mm	Oil-Free Piston Pumps	168100-10
Outlet Diameter 8 mm	Oil-Free Piston Pumps	168100-08
Outlet Diameter 6 mm	Oil-Free Piston Pumps	168100-06
Outlet Diameter 4 mm	Oil-Free Piston Pumps	168100-04

Silencer
Replace the outlet silencer on the pump

Description	Suitable for	Order No.
Silencer	V300/400/410/V430	167300-42
Silencer	V600/610/V800/V810	167600-42

Tubing

Outer Diameter mm	Inner Diameter mm	Thickness mm	Length m	Suitable for	Order No.
PER Tubes					
6	4	1	1	A,C,V Pumps	168010-01
8	6	1	1	A,C,V Pumps	168011-01
10	8	1	1	A,C,V Pumps	168012-01
12	10	1	1	A,C,V Pumps	168013-01
Silicon Tubes					
12	6	3	1	V Pumps	168020-01
14	8	3	1	V Pumps	168021-01
16	10	3	1	V Pumps	168022-01

Length upon request (min. 1m)
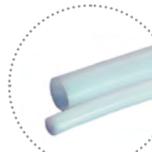
Foot switch

Description	Suitable for	Order No.
Foot switch*	Applicable to C and V Series Vacuum Pumps	167200-41

*Factory installation

Non-Chemical-Resistant Filtration Device

Description	Suitable for	Order No.
Non-Chemical-Resistant Filtration Device Set 1(incl. pressure gauge)	V300/400/410/V430	167300-05
Non-Chemical-Resistant Filtration Device Set 1(incl. pressure gauge)	V600/610	167300-06
Non-Chemical-Resistant Filtration Device Set 1(incl. pressure gauge)	V800/V810	167300-09

Connect the inlet of the pump
Connect the external system
Vacuum gauge
Vacuum trap
Regulator
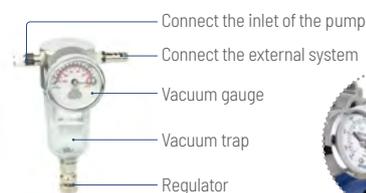
167300-05/06   167300-09

Rotary Vane Vacuum Pump

Oil-sealed Rotary Vane vacuum pumps are widely used traditional vacuum pumps in research and production, which can be used independently, or serve as backing pumps for molecular pumps or diffusion pumps. Wiggens' direct driven rotary vane pumps are available as one and two-stage versions, covering the range from desktop lab pumps to production line pumps, with low noise and stable working temperature for common voltages and frequencies, long lifespan, and outstanding reliability for chemical applications. Various application areas may include vacuum distillation, vacuum filtration, vacuum inspection, vacuum freeze drying, vacuum coating, vacuum leak detection, vacuum packaging, vacuum adsorption, etc.

R-4SN

R-8SN

R-16SN

Oil level indication

Connector and adapter

Inlet, UNF 7/16"-20
SAE 3/8"
Outlet, KF25
Oil Mist Filter

Pumping rate curve
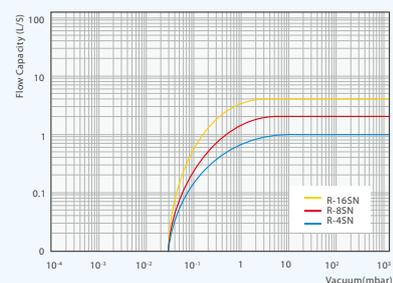
Note: Above data is based on the 220V/50Hz instrument

Model / Specifications	R-4SN	R-8SN	R-16SN
Order No.	900101	900102	900104
Flow rate [m^3/h] at atm. pressure	3	7.2	14.4
Flow rate [l/min] at atm. pressure	50	120	240
Ultimate vacuum [mbar]	2.5×10^{-2}	2.5×10^{-2}	2.5×10^{-2}
Max. Power P [W]	180	250	550
Motor speed [rpm]	1400	1400	1400
Hose connections of inlet	SAE 3/8'' / UNF 7/16-20	SAE 3/8'' / UNF 7/16-20	DN25KF
Hose connections of outlet	DN25KF	DN25KF	DN25KF
Oil filling volume [L]	0.25	0.33	1
IP code	IP20	IP20	IP20
Sound pressure level [dB]	54	54	54
Dimensions W x D x H [mm]	314×280×122	314×288×142	512×300×158
Weight [kg]	9	11	22
Power supply	220V/50Hz	220V/50Hz	220V/50Hz

DVM Vacuum Digital Meter
DVM150Pro

KF16 flange clamp

Inlet, KF25

Connector, KF16 to KF25

Outlet, KF25

KF25 flange clamp

R-24D
with DVM Vacuum Digital Meter

Features

> Compact structure
> Very good sealing
> No returning throughput
> Oil-spout prevention
> Low noise
> Oil-observation window
> Handle for easy transportation
> High flow rate
> Low and stable ultimate vacuum
> High evaporation resistance
> Comparatively high chemical resistance
> High longevity
> Low maintenance rate
> Low oil mist
> Gas ballast valve
> Overcurrent protection

Application

> Vacuum distillation
> Vacuum filtration
> Vacuum testing
> Vacuum freeze drying
> Vacuum plating
> Leak detection
> Vacuum packaging
> Vacuum sorption
> As a backing pump for turbo-molecular pumps or diffusion pumps

Pumping rate curve

Flow Capacity (L/S)

R-36D
R-17D
R-24D
R-8D

Vacuum(mbar)
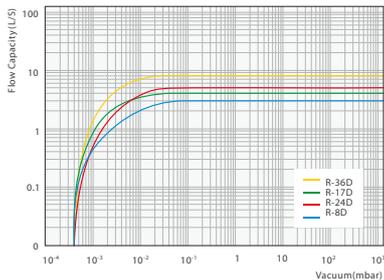
Note: Above data is based on the 220V/50Hz instrument

Model / Specifications	R-8D	R-17D	R-24D	R-36D
Order No.	900111	900112	900025	900035
Flow rate [m^3/h] at atm. pressure	10.8	16.8	21.6	32.4
Flow rate [l/min] at atm. pressure	180	280	360	540
Ultimate vacuum [mbar]	4.0×10^{-4}	4.0×10^{-4}	4.0×10^{-4}	4.0×10^{-4}
Max. Power P [W]	550	750	750	1100
Motor speed [rpm]	1400	1400	1400	1400
Hose connections of inlet	DN25KF	DN25KF	DN25KF	DN25KF
Hose connections of outlet	DN25KF	DN25KF	DN25KF	DN25KF
Oil filling volume [L]	1.1	1.4	1.9	2.1
IP code	IP20	IP20	IP20	IP20
Sound pressure level [dB]	54	54	56	56
Dimensions W x D x H [mm]	485 x 252 x 165	510 x 252 x 165	570 x 288 x 205	600 x 288 x 205
Weight [kg]	29	31	37	39
Power supply	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

Chemical Hybrid Vacuum Pump

The Wiggens chemical hybrid vacuum pump is an optimized, corrosion-resistant combination of a two-stage rotary vane pump and a chemistry diaphragm pump. The diaphragm pump continuously maintains the oil reservoir of the rotary vane pump under vacuum, preventing condensation in the oil-sealed components under specific pressure and temperature conditions.

This design significantly reduces oxidation and the condensation of corrosive gases, thereby extending the overall service life of the pump while retaining the high vacuum performance characteristic of rotary vane pumps.

The chemical hybrid vacuum pump is ideal for high-vacuum experiments involving chemical reagents. Typical applications include lyophilization, distillation, vacuum drying ovens, and concentrators.

Features

> Ultra-high vacuum up to 4×10^{-3} mbar, max. flow rate 75 l/min
> High vacuum and chemical-resistant design
> Integrated gas-liquid separator to collect oil mist condensation
> Spy glass for easy monitoring of oil level and quality
> Cost-effective design eliminates the need for a cold trap
> DN25 vacuum inlet with multiple adapter options
> Integrated safety vacuum gauge for real-time oil chamber monitoring
> Available accessories: vacuum tubes, adapters, valves, and digital vacuum meter

Structure introduction

Gas-liquid separator   Gas ballast

Side drain port   Main drain port

Safety vacuum gauge   Vacuum inlet   Power box
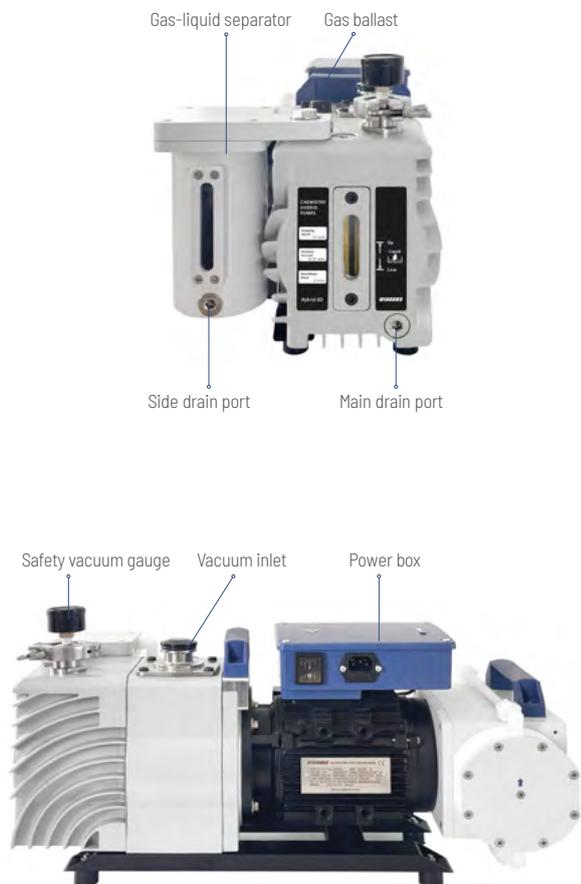
Model / Specifications	Hybrid-6D	Hybrid-8D
Order No.	W1062010	W1062020
Pump head	2 + 2	2 + 2
Flow rate [m3/h] at atm. pressure	4.5	10.8
Flow rate [l/min] at atm. pressure	75	180
Ultimate vacuum [mbar abs.]	4×10^{-4}	4×10^{-4}
Ultimate vacuum with gas ballast [mbar]	4×10^{-2}	4×10^{-2}
Water vapor tolerance with gas ballast [mbar]	50	50
Oil filling volume [L]	0.65~0.85	0.65~0.9
Max. outlet pressure [bar]	1.1	1.1
Hose connections of inlet [mm]	KF DN 25	KF DN 25
Hose connections of outlet [mm]	12	12
Max. Power [kW]	0.55	0.75
Motor speed [rpm]	1400	1400
IP code	IP 40	IP 40
Dimensions W x D x H [mm]	600 x 310 x 305	680 x 310 x 310
Weight [kg]	37.5	45.5
Sound pressure level [dB]	55	60
Power supply	AC230V 50Hz	AC230V 50Hz

Accessories for Rotary Vane Vacuum Pumps

Oil Mist Filter

The gas discharged from the outlet often contains oil mist, which can affect the surrounding environment and may sometimes pose health risks. ChemVak's exhaust filter effectively eliminates nearly all oil mist, redirecting it back into the pump to minimize environmental impact. Additionally, it helps to reduce operational noise for a quieter working environment.

Name	Suitable for	Order No.
Oil mist trap	R-4SN, R-8SN (Direct connection,outlet DN25KF)	900101-1
Oil mist trap	R-16SN, R-8D, R-17D, R-24D, R-36D (Direct connection,outlet DN25KF)	900111-1

900111-1   900101-1

Condensate Separator, Dust Filter

Name	Suitable for	Order No.
Filter element for oil mist trap	Replacement for 900111-1 oil mist trap	900111-2
Condensate separator	R-16SN, R-8D, R-17D, R-24D, R-36D	900111-3
Dust filter	R-16SN, R-8D, R-17D, R-24D, R-36D	900111-4

Dust Filter

Adapter

Name	Description	Order No.
Adapter	Barbed fitting for tubing 8mm ID, 3/8 SAE. Suitable for R-4SN / R-8SN	168900-82
Adapter	Barbed fitting for tubing 10mm ID, 3/8 SAE. Suitable for R-4SN / R-8SN	168900-83
Adapter	Barbed fitting for tubing 12mm ID, 3/8 SAE. Suitable for R-4SN / R-8SN	168900-84

7/16-20 UNF
3/8 SAE
Adapter

Flange adapter

Name	Description	Order No.
Flange adapter	Barbed fitting for tubing 8mm ID, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-08
Flange adapter	Barbed fitting for tubing 10mm ID, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-10
Flange adapter	Barbed fitting for tubing 12mm ID, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-12
Flange adapter	Barbed fitting for tubing 19mm ID, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-19
Flange adapter	Barbed fitting for tubing 25mm ID, KF25. Suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	168900-25

OD

KF25 to pump
KF16 to DVM 150 Pro
KF25 inlet
SAE 3/8"
①
②
④③
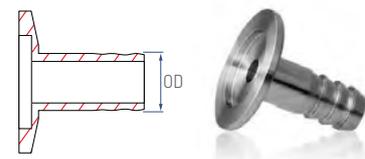
Adapter

No.	Description	Order No.
①	Connector, KF16 to KF25, suitable for R-16SN, R-8D, R-17D, R-24D, R-36D	DVM150BJFL001
②	Connector, KF16 to threaded connector, suitable for R-4SN, R-8SN	DVM150BJFL002
③	KF16 flange clamp, with sealing ring	BJFL003
④	KF25 flange clamp, with sealing ring	BJFL004

Highspeed Pump Oil

ChemVak highspeed oil offers excellent lubrication performance with superior resistance to emulsification and oxidation. It enhances system durability and helps achieve a stable ultimate vacuum, ensuring reliable and long-lasting operation.

	Order No.
500 ml	900100-04
1 L	900100-05
5 L	900100-02
10 L	900100-03

Thick Vacuum Tubing

Thick rubber tubing designed for use in very high-vacuum applications, offering excellent durability, flexibility, and airtight performance to ensure reliable operation under extreme conditions.

Inner Diameter(mm)	Thickness (mm)	Length(m)	Order No.
8	5	1	22690-06
10	9.5	1	22690-11
12	9.5	1	22690-13
19	9.5	1	22690-21
25	9.5	1	22690-26
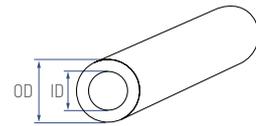
Krytox LVP High-Vacuum Grease

Highly inert, nonflammable grease with exceptionally low vapor pressure, specifically designed for high-vacuum systems. Delivers superior performance as both a lubricant and sealant for stopcocks, valves, fittings, and O-rings operating in high-vacuum or hostile environments. Ideal for use in laboratory and pilot plant equipment.

	Order No.
50g	8116-10

Digital Vacuum Meter

> Designed for rotary vane pumps

> Compact design with flange connection, ensuring strong sealing performance

> High-brightness TFT screen for easy observation from multiple angles or long distances

> Direct flange connection to vacuum pumps, with stainless steel materials for gas-contacting parts

> Standard KF16 connection

Model	Display resolution	Testing range	Material of sensor	Size of the meter	Order No.
DVM150Pro	0.001mbar	0.001-9.999mbar	PIRANI	100*65*55mm	15060-02

KF16 Flange adapter

DVM150Pro

COLD TRAP with refrigerated system

Cold traps are designed to capture condensation from humidity or solvents by providing a low-temperature surface where vapors condense into liquids or solids. Commonly used alongside vacuum pumps, they play a critical role in protecting pumps and maintaining system integrity.

These devices are essential in applications involving vacuum distillation, freeze-drying, and volatile compound separation. They are particularly effective in high-vacuum setups, such as those using oil diffusion or turbo-molecular pumps, where they prevent contamination and reduce pump load. Cold traps are also widely employed in systems with rotating evaporators to efficiently collect solvent vapors.

Features

> Compact design with a small footprint

> Cooling temperature reaches -40℃

> State-of-the-art control technology for fast and precise results

> User-friendly and intuitive operation

> Extra-bright display, easy to read from a distance

> Removable venting grid for quick and easy cleaning

> Two glass cold traps can be configured in series or parallel
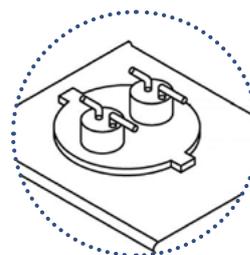
Bath lid

Additional advantages of CTB-40C

Comfortable and easy to operate (3 keys)
Protective functions, adjustable high temperature cut-off or dry-running protection
With just three keys, the CTB-40C allows for easy temperature settings. Additionally, it features protective functions such as an adjustable high-temperature cut-off and dry-running protection for enhanced safety and reliability.

Specifications

Model	CTB-40	CTB-40C
Working temperature range	Up to -40℃	-40℃ ~+20℃
Temperature display resolution	0.1℃	0.1℃
Temperature control model	Without control	PID control
Bath volume	4.8L	4.8L
Dimensions (W × L × H)	360x465x555mm	360x465x555mm
Power supply	220V/50Hz, 3A	220V/50Hz, 3A
Tube connection	Barbed fittings for tubing 10mm inner dia	Barbed fittings for tubing 10mm inner dia
Scope of delivery	Standard with two glass cold traps	Standard with two glass cold traps

Accessories

Order No.	Part	Description
W8603040	CTB-40	Refrigerated system with cold trap, without temperature control
W8603041	CTB-40C	Refrigerated system with cold trap, with temperature control
W01110	Glass cold trap	Borosilicate glass material, 2 each barbed fittings for tubing 10mm inner dia

Electrical aspirator pump

Portable dual-channel, water-jet aspirator pump.

VE-11 creates a vacuum using an aspirator pump that is dependent on the vapor pressure of water.
Ideal for rotary vacuum evaporators, decompressing distillatories, vacuum dryers, and vacuum filtering units.

Features

> Economic use of resources
> High flow rate up to 36 l/min
> Vacuum can be regulated between 20 mmHg and 74 mmHg
> Employs two water flow and gas suction devices, a check valve, and an upstream prevention device
> Housing is made of PP to enhance longevity
> Small amounts of liquid in the machine don't harm the system. Built-in circulating pump and water tank makes this unit portable and eliminates water waste.
> Circulating pump continuously forces water quietly across a set of aspirators, and therefore clean and efficient.
> Included (2) metal aspirators to create a vacuum with a built-in check valve to prevent backflow of water into the aspirator pump.
> Submerged parts: 304 stainless steel, polypropylene silicone, and nickel-coated brass.
> Tank features a drain port and spigot for easy water changes.
> Unlike other vacuum pumps the VE-11 can suck a little bit of solvent. (water)

Standard

> Tank / Aspirating pump / Tank closure.
> Two aspirators.
> Two ø6mm (0.02˝) silicone rubber tube 20cm (0.7 ft) in length and an additional ø6mm (0.02˝) silicone rubber tube 100cm (3.3 ft)in length.
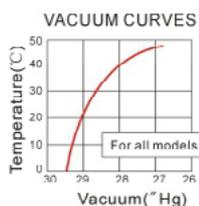
VE-11

Vacuum gauge / regulator are optional

Specifications & Ordering Information

Model		VE-11
Max. Flow Rate		36 l/min (18 l/min*2)
Water Tank Capacity(L)		9.5 L
Motor Power(W)		150 W
Material (Water Tank)		Polypropylene
Dimensions	Water Tank(WxDxH mm)	298 x 210 x 227
	Case(WxDxH mm)	330 x 265 x 390
	Absorption nozzle (mm)	Ø9.5 x 2
	Overflow nozzle (mm)	Ø17
Safety Devices		Fuse, check valve, overheat protection
IP code		IP20
Weight (kg)		5.7
Order No.		900701

Application Area

> Filtration
> Distillation
> Rotary evaporation

Vacuum Gauge / Regulator (Option)

Optional Accessories

> Vacuum gauge / regulator: to monitor and control the vacuum pressure. (between 0.0267~0.0998MPa / 7.9~29.5˝ Hg)
> Cooling coil: to prevent vacuum from decreasing due to temperature increase.

Accessories

Description	Order No.
Vacuum Gauge / Regulator	900701-1
VC-10 Cooling Coil	900701-2
ET-02 Aspirator	900701-3

VC-10 Cooling Coil   ET-02 Aspirator

Vacuum Filtration

Single position vacuum filtration system

Portable vacuum filtration system

P64

VF203A   VF203B   VF205A

VF205B   VF204   VF214

Bench-top vacuum filtration system

P65

V300A   V300B

V300SS   C300A

Vacuum pump and filtration sets

P66

VF1   VF2   VF3   VF5   VF6   VF7   VF8   VF9   VF10   VF11   VF12   VF30   VF32   VF33

P54   P39

V300   V400   C300

Multi-position vacuum filtration system

Spin-lock type

P71

BioVac 330B

Quick installation, easy to clean

BioVac 630B

Quick-insert type

P71

BioVac 320A

Suitable for magnetic funnel, glass funnel, quick installation

BioVac 320B

Vacuum pump and filtration sets

Spin-lock type of Manifold P72

Step 1. Manifold selection

P72 Quick-insert type of Manifold

BioVac 330

BioVac 630

BioVac 320

BioVac 620

Filter cup P76

Step 2. Funnels and filter cup selection

P75 Funnels

Stainless Steel Filter Cup
(Cylinder Type)

Stainless Steel Filter Cup
(Cone Type)

PES magnetic funnels

Glass funnels

PS funnels

Step 2. Vacuum pump selection

P54

V400

V600
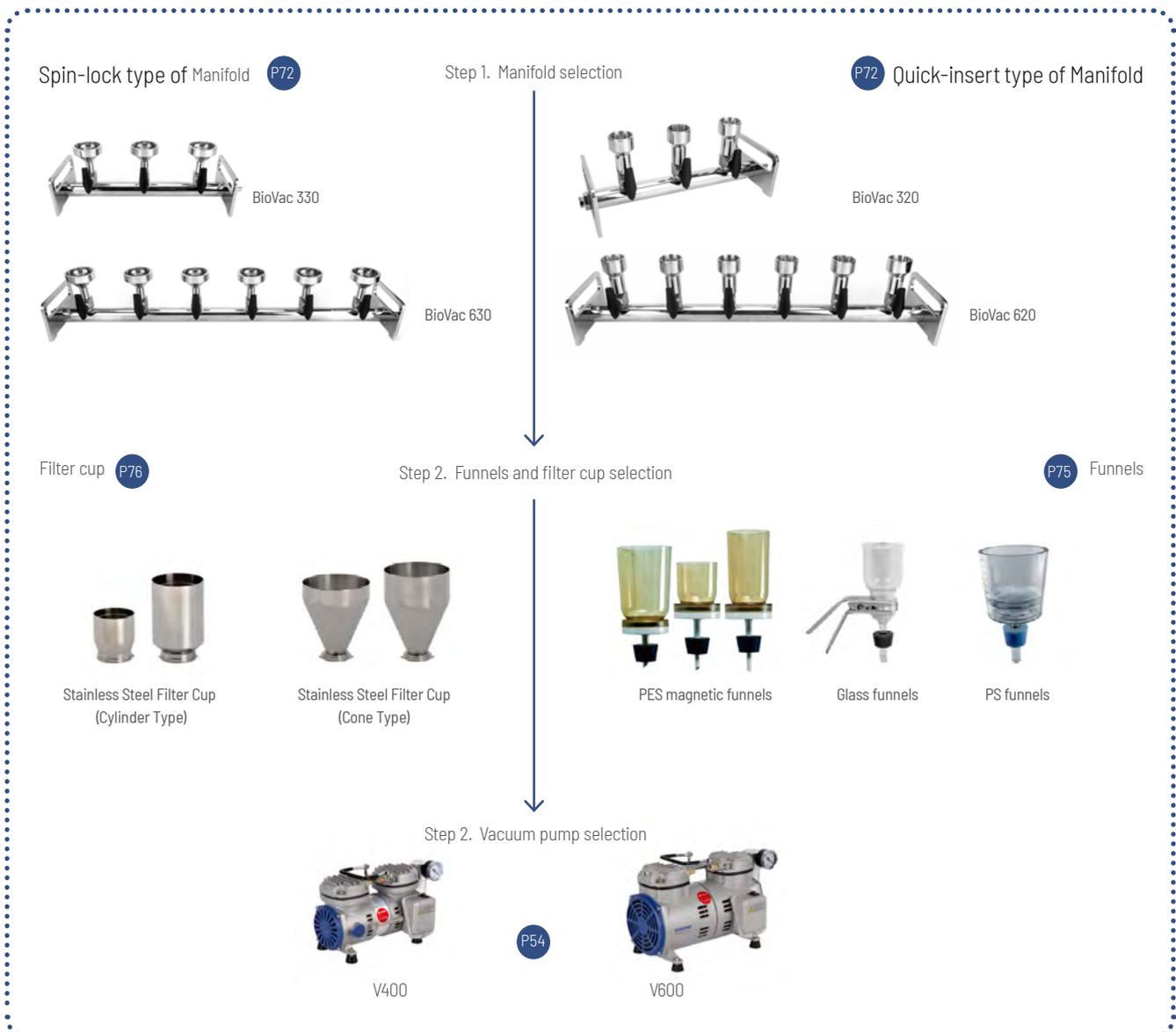
Portable vacuum filtration system

All-In-One Systems

> Compact and portable design
> Combines all necessary items for filtration
> Large varieties of filtration flasks
> Oil-free vacuum provision
> Easy maintenance
> Low noise level
> Manual pressure control
> Availability of chemical resistant systems

Product	Standard	Application	Contained Filtration Glass Set
VF203A	> Oil-free vacuum pump > VF6 filtration flask set > Silicone tube > 0.2 μm water-blocking filter > Fiberglass filter membrane fiberglass filter membrane (47mm / 1 μm)	Normal filtration Suspended solids measurement	
VF203B	> Oil-free vacuum pump > VF2 filtration flask set > Dragon 100 lab burner > Silicone tube > 0.2 μm water-blocking filter > Fiberglass filter membrane fiberglass filter membrane (47mm / 1 μm)	Normal filtration Microorganism determination	
VF205A	> Strong oil-free vacuum pump > VF6 filtration flask set > Silicone tube > 0.2 μm water-blocking filter > Fiberglass filter membrane fiberglass filter membrane (47mm / 1 μm)	Normal filtration Suspended solids measurement	
VF205B	> Strong Oil-free vacuum pump > VF2 filtration flask set > Dragon 100 lab burner > Silicone tubee > 0.2 μm water-blocking filter > Fiberglass filter membrane fiberglass filter membrane (47mm / 1 μm)	Normal filtration Microorganism determination	
VF204	> Chemical resistant vacuum pump > VF3 filtration flask set > High-pressure resistant tube > 0.2 μm water-blocking filter	HPLC Gas chromatography AA micro-analysis Mobile phase decontamination	
VF214	> Strong chemical resistant vacuum pump > VF3 filtration flask set > High-pressure resistant tube > 0.2 μm water-blocking filter	HPLC Gas chromatography AA micro-analysis Mobile phase decontamination	

Specifications

Model	VF 203A	VF 203B	VF 205A	VF 205B	VF 204	VF 214
Working mode	All-In-One Filtration System		All-In-One Filtration System		Chemical Resistant Vacuum Filtration System	
Power (W)	60	60	80	80	60	95
Ultimate vacuum(mbar)	150	150	150	150	100	13
Max. Flow Rate(l/min)	17	17	34	34	22	25
Tube I.D. (mm)	8	8	8	8	8	8
Motor Speed (rpm)	1450	1450	1450	1450	1450	1450
Weight (kg)	7.1	7.1	7.5	7.5	7.1	8.3
Sound pressure level (dB)	50	50	60	60	50	50
Contained Filtration Glass Set	VF6	VF2	VF6	VF2	VF3	VF3
Order No.	167203A	167203B	167205A	167205B	169204	169214

Bench-top vacuum filtration system

Features
> Wide range of pumps and filtration flasks
> High quality components
> Quick filtration results
> Easily exchangeable elements

Application
> Suspended solids measurement
> HPLC
> Gas chromatography
> AA micro-analysis
> Mobile phase decontamination
> Food and beverages industry
> Pharma industry

V300A   V300B   V300SS   C300A

Product	Features	Standard content	Application
V300A	> Modular design > Environmental friendly > Maintenance-free > Low noise > Added filters for enhanced pump longevity	> Oil-free vacuum pump > VF6 filtration flask set > Silicone tube > Fiberglass filter membranes (47mm / 1 µm) > PTFE disc filter	Water quality measurement Normal liquid filtration
V300B	> Modular design > Magnetic Stability Cup > Environmental friendly > Maintenance-free > Low noise > Added filters for enhanced pump longevity	> Oil-free vacuum pump > VF1 magnetic filtration flask set > Silicone tube > Fiberglass filter membranes (47mm / 1 µm) > PTFE disc filter	Suspended solids measurement Normal liquid filtration
V300SS	> Modular design > Flame-sterilizable > Spin-Lock system > Environmental friendly > Maintenance-free > Low noise > Added filters for enhanced pump longevity	> Oil-free vacuum pump > VF2 filtration flask set > Dragon 100 lab burner > Silicone tube > Fiberglass filter membranes (47mm / 1 µm) > PTFE disc filter	Microbiological detection All kinds of liquid filtration
C300A	> Chemical Resistance > Modular design > Environmental friendly > Low maintenance > Low noise > Added filters for enhanced pump longevity	> Chemical resistant vacuum pump > VF3 filtration flask set > High-pressure resistant tube > PTFE disc filter	Sample pretreatment for HPLC, GC, and AA analysis All kinds of solvent purification (mobile phase)

Specifications

Model	V300A	V300B	V300SS	C300A
Flow Rate of the Pump(l/min)	17	17	17	22
Ultimate Vacuum(mbar)	150	150	150	210
Filtration Glass Set	VF6	VF1	VF2	VF3
Suction Bottle Capacity (ml)	1000	1000	1000	1000
Filter Diameter (mm)	47/50	47/50	47/50	47/50
Filter Flask Capacity (ml) Filter Flask Material	300 (Glass Filter Cup)	300 (Magnetic Filter Cup)	100 (Stainless Steel Filter Cup)	300 (Glass Filter Cup)
Effective Filtration Area (cm^2)	8	9.6	9.6	8
Tube I.D. (mm)	8	8	8	8
Order No.	167301	167302	167303	169301

Filtration set

> Vacuum filtration technique is widely used in liquid filtration in microbiological detection, suspended solid detection, sample pre-process or solvent purification, mostly for microanalysis of HPLC, GC, or AA in food, medicine, beverage, drinking water, etc.

> This unique design combines a filtration funnel with a receiver flask with drain, together with magnetic weighted base, guaranteeing the efficiency and stability.

Model		VF1	VF2	VF3	VF5	VF6	VF7	VF8
Material	Funnel	PES	SUS316	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass
	Funnel Base	PES	SUS316	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass
	Membrane Support	PP	SUS316	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Stainless Steel Micro-Strainer	Stainless Steel Micro-Strainer
	Stopper	Silicon	Silicon	—	Silicon	Silicon	Silicon	Silicon
	Receiver Flask with Drain	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass
Funnel Capacity (ml)		300	100	250	15	250	250	15
Filtration Flask Capacity (ml)		1000	1000	1000	125	1000	1000	125
Filter Diameter (mm)		47	47	47	25	47	47	25
Effective Filtration Area (cm^2)		9.6	9.6	8	2.2	8	8	2.2
Tube I.D. (mm)		8	8	8	8	8	8	8

Drawing for filtration principle

Fibreglass filter membrane

Filter membrane support
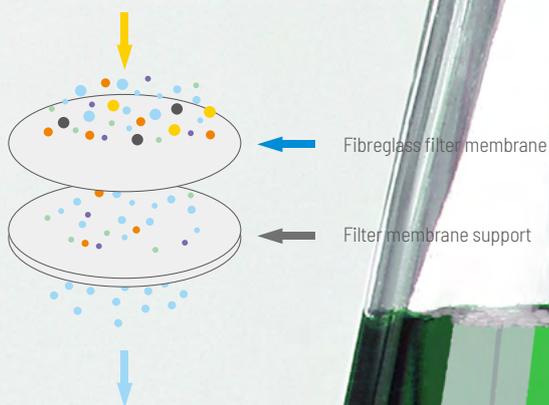
Model		VF9	VF10	VF11	VF12	VF30	VF32	VF33
Material	Funnel	SUS316	Borosilicate Glass	SUS316	Borosilicate Glass	PES	SUS316	SUS316
	Funnel Base	SUS316	Borosilicate Glass	SUS316	Borosilicate Glass	PES	SUS316	SUS316
	Membrane Support	SUS316	Borosilicate Glass	SUS316	Borosilicate Glass	PP	SUS316	SUS316
	Stopper	Silicon	—	Silicon	Silicon	Silicon	Silicon	Silicon
	Receiver Flask with Drain	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass	Borosilicate Glass
Funnel Capacity (ml)		300	1000	500	250	300	100	300
Filtration Flask Capacity (ml)		1000	4000	2000	1000	1000	1000	1000
Filter Diameter (mm)		47	47	47	47	47	47	47
Effective Filtration Area (cm^2)		9.6	9.6	9.6	9.6	9.6	9.6	9.6
Tube I.D. (mm)		8	8	8	8	8	8	8

Order Information

300ml Magnetic Filtration set

47mm, PP membrane support

For solvent purification, general filtration and waste inhalation
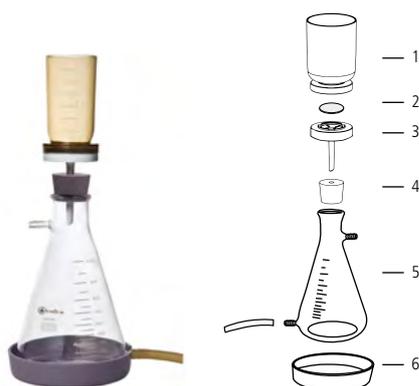
VF1	167200-01
Magnetic filter funnel 300 ml （1+2+3+4)	167100-18
1 300 ml Magnetic filter cup	167000-34
2 PP Membrane support	167000-37
3 PES Filtration base	167000-35
4 Silicone stopper	167110-17
5 Receiver flask with drain, 1000 ml	167300-08
6 Weighted base	167200-04

100ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.

VF2	167200-02
100ml Stainless steel filter set （1+2+3+4)	167103-10
1 Stainless steel funnel, 100 ml	167103-61
2 Stainless steel support screen	167100-31
3 Stainless steel support base	167103-60
4 Silicone stopper	167110-16
5 Receiver flask with drain, 1000 ml	167300-08
6 Weighted base	167200-04

300ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.

VF9		167200-09
300ml Stainless steel filter set（1+2+3+4）		167103-30
1	Stainless steel funnel, 300 ml	167103-63
2	Stainless steel membrane support	167100-31
3	Stainless steel support base	167103-60
4	Silicone stopper	167110-16
5	Receiver flask with drain, 1000 ml	167300-08
6	Weighted base	167200-04

500ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.

VF11		167200-11
500ml Stainless steel filter set（1+2+3+4）		167103-50
1	Stainless steel funnel, 500 ml	167103-65
2	Stainless steel membrane support	167100-31
3	Stainless steel support base	167103-60
4	Silicone stopper	167110-16
5	Receiver flask with drain, 2000 ml	167200-13

250ml Glass Filtration Set

47mm, Sintered glass membrane support

Ideal for the purification of organic, corrosive liquid such as solvent (mobile phase) for HPLC analysis.

VF3		167200-03
250ml Glass filter set（1+2+3）		167120-30
1	Glass funnel, 250 ml	167210-03
2	Aluminum magnesium alloy clamp	167240-01
3	Glass support base & tubulated cap	167230-01
4	Ground joint flask, 1000 ml	167250-01

1000ml Glass Filtration Set

47mm, Sintered glass membrane support

Ideal for the purification of organic, corrosive liquid such as solvent (mobile phase) for HPLC analysis.
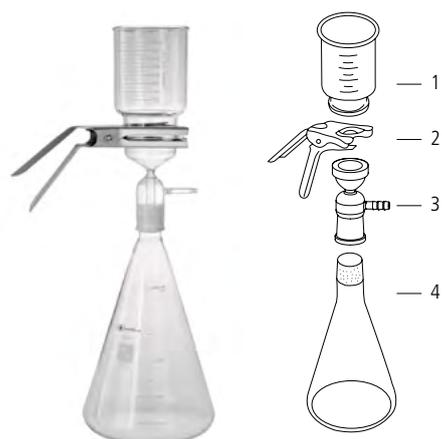
VF10		167200-10
1000ml Glass filter set（1+2+3）		167210-35
1	Glass funnel, 1000 ml	167210-10
2	Anodized aluminum clamp	167240-01
3	Glass support base & tubulated cap	167230-01
4	Ground joint flask, 4000 ml	167250-06

15ml Small Volume Glass Filtration Set

25mm, Sintered glass membrane support
Ideal for small volume vacuum filtration for biological analysis or particulate contamination analysis.
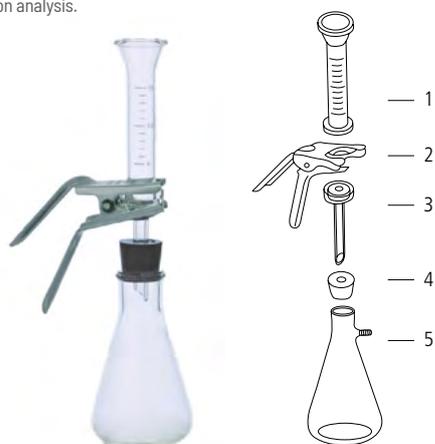
VF5		167200-05
15 ml Glass filter set（1+2+3+4）		167120-32
1	Glass funnel, 15 ml	167220-15
2	Anodized aluminum clamp	167240-05
3	Glass support base	167230-04
4	Silicone stopper	167110-18
5	125 ml Receiver flask	167250-05

15ml Small Volume Glass Filtration Set

25mm, Stainless steel membrane support
Ideal for small volume vacuum filtration for biological analysis or particulate contamination analysis.

VF8		167200-08
15 ml Glass filter set（1+2+3+4+5）		167120-40
1	Glass funnel, 15 ml	167220-15
2	Anodized aluminum clamp	167240-05
3	Stainless steel support screen	167230-32
4	Glass support base	167230-08
5	Silicone stopper	167110-18
6	125 ml Receiver flask	167250-05

250ml Glass Filtration Set

47mm, Sintered glass membrane support
Ideal for solvent purification and general filtration for microbiology, suspended solid analysis etc.

VF6		167200-06
250ml Glass filter set（1+2+3+4）		167120-31
1	Glass funnel, 250 ml	167210-03
2	Anodized aluminum clamp	167240-01
3	Glass support base	167230-03
4	Silicon stopper	167110-17
5	Receiver flask, 1000 ml	167250-03

250ml Glass Filtration Set

47mm, Stainless steel membrane support
Ideal for solvent purification and general filtration for microbiology, suspended solid analysis etc.

VF7		167200-07
250ml Glass filter set（1+2+3+4+5）		167120-33
1	250 ml Glass Filter Cup	167210-03
2	Anodized aluminum clamp	167240-01
3	Stainless steel support screen	167230-31
4	Glass support base	167230-07
5	Silicon stopper	167110-17
6	Receiver flask, 1000 ml	167250-03

250ml Glass Filtration Set

47mm, Sintered glass membrane support

Ideal for the purification of organic, corrosive liquid such as solvent (mobile phase) for HPLC analysis.

Unique filtration Adapter design can connect with GL45 storage bottle (1000ml, 2000ml, 5000ml…etc.)
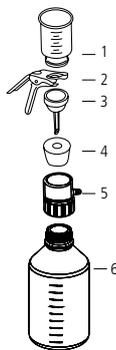
VF12	167200-12
250ml Glass filter set（1+2+3+4）	167120-31
1　　Glass funnel, 250 ml	167210-03
2　　Anodized aluminum clamp	167240-01
3　　Glass support base	167230-03
4　　Silicone stopper	167110-16
5　　Filtration adapter	167000-65
6　　1000ml Glass storage bottle（Duran）	21801545

300ml PES Magnetic Filtration set

47mm, PP membrane support, float to prevent overflow

For general filtration and waste inhalation
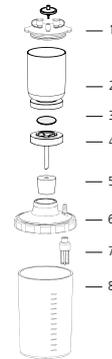
VF30	197010-30
Magnetic filter funnel 300 ml（2+3+4+5）	167100-18
1　　PP Funnel Lid	167130-32
2　　Magnetic filter cup, 300ml	167000-34
3　　PP Membrane support	167000-37
4　　PES support base	167000-35
5　　Silicone stopper	167110-17
PC waste bottle with cover,1000 ml（6+7+8）	197000-11-PC
6　　PC cover	197000-32-PC
7　　Overflow protection	197000-39
8　　PC bottle, 1000 ml	197000-31-PC

100ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support, float to prevent overflow

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.
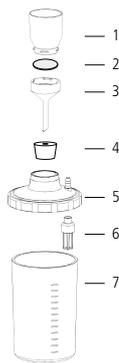
VF32	197010-32
100ml Stainless steel filter set（1+2+3+4）	167103-10
1　　Stainless steel funnel, 100 ml	167103-61
2　　Stainless steel membrane support	167100-31
3　　Stainless steel support base	167103-60
4　　Silicone stopper	167110-17
PC waste bottle with cover,1000 ml（5+6+7）	197000-11-PC
5　　PC cover	197000-32-PC
6　　Overflow protection	197000-39
7　　PC bottle, 1000 ml	197000-31-PC

300ml Stainless Steel Filtration Set

47mm, Stainless steel membrane support, float to prevent overflow

For filtration requiring the sterilization such as microbiology test or use for purification of corrosive liquid, solvent etc.

VF33	197010-33
300ml Stainless steel filter set（1+2+3+4）	167103-30
1　　Stainless steel funnel, 300 ml	167103-63
2　　Stainless steel membrane support	167100-31
3　　Stainless steel support base	167103-60
4　　Silicone stopper	167110-17
PC waste bottle with cover,1000 ml（5+6+7）	197000-11-PC
5　　PC cover	197000-32-PC
6　　Overflow protection	197000-39
7　　PC bottle, 1000 ml	197000-31-PC

Multi-position filtration system

Features

Durable SS316 construction
The entire manifold is made of SS316 stainless steel, providing excellent chemical resistance and compatibility with autoclave sterilization.

Spin-lock design
Features a spin-lock connection for quick, stable installation without the need for clamps.

Individual control valves
Each branch is equipped with an individual control valve for precise operation.

Versatile funnel compatibility
Supports 100 mL, 300 mL, and 500 mL funnels, offering flexibility for various applications.

Magnetic filter set
Allows one-handed operation, ensuring reliable and efficient performance while preventing potential twisting or tearing of the membrane.

Application

> Biological laboratories
> Chemical industry
> Microbiological detection
> All kinds of liquid filtration

BioVac330B

BioVac630B

BioVac320A

BioVac320B

Specifications

Model	BioVac330B	BioVac630B	BioVac320A	BioVac320B
Max. Flow Rate (l/min)	34	58	34	34
Ultimate Vacuum(mbar)	150	150	150	150
Waste Bottle (Capacity in ml/ Material)	3000 , PC	3000, PC	3000, PC	3000, PC
Number of Branches	3	6	3	3
Manifold Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Filter Diameter (mm)	47 / 50	47 / 50	47 / 50	47 / 50
IP code	IP20	IP20	IP20	IP20
Filter Cup (Capacity in ml/ Material)	100 Stainless Steel	100 Stainless Steel	300 Magnetic	250 Glass
Effective Filtration Area(cm^2)	9.6	9.6	9.6	9.6
Tube I.D. (mm)	8	8	8	8

configuration

	Model	Order No.	Model	Order No.	Model	Order No.	Model	Order No.
Model	BioVac330B	167403	BioVac630B	167601	BioVac320A	167405	BioVac320B	167406
Contains								
Pump	V400	167400	V600	167600	V400	167400	V400	167400
Manifold	BioVac330 3-branch Stainless steel	167103-23	BioVac630 6-branch Stainless steel	167103-26	BioVac320 3-branch Stainless steel	167110-23	BioVac320 3-branch Stainless steel	167110-23
Filter Cups	3 x 100 ml Stainless steel	167103-61	6 x 100 ml Stainless steel	167103-61	3 x 300 ml PES (magnetic base)	167100-18	3 x 250 ml Glass	167120-31
Waste Bottle	3000 ml / PC	167200-33	3000 ml / PC	167200-33	3000 ml / PC	167200-33	3000 ml / PC	167200-33
Bunsen Burner	Dragon 100	177100-00	Dragon 100	177100-00	Without	Without	Without	Without
Filter Membranes	Pall GN-6 MCE *	167100-52	Pall GN-6 MCE *	167100-52	Pall GN-6 MCE *	167100-52	Pall GN-6 MCE *	167100-52
Silicon Tube	2 x 1m	168021-01	2 x 1m	168021-01	2 x 1m	168021-01	2 x 1m	168021-01

* Pall GN-6 MCE / 0.45µm, 200 pcs

Multi-position manifolds

Vacuum filtration is widely used in laboratory for various tests such as microorganism test in food, pharmacy, beverage, drinking water industries and suspended solid test in environment protection field, sample or solution pretreatment before HPLC, GC, AA analysis etc.

WIGGENS is one of the leading suppliers of vacuum filtration apparatuses in the world. WIGGENS manufactures quality and cost effective vacuum pumps, compressors, manifolds as well as funnels and filters for different applications, wiggens offer you total solution for vacuum filtration.

Features

Manifold made of SS316
The BioVac 330 and 630 manifolds are constructed entirely from SS316 stainless steel, ensuring excellent chemical resistance. They are also designed for quick sterilization using either flame or steam.

Spin-Lock Design
The innovative spin-lock connection enables fast and secure installation without the need for clamps, enhancing ease of use and efficiency.

Individual control Valves
Each branch features an individual control valve, allowing for precise and independent operation.

Compatible with various funnel sizes
The BioVac 330 and 630 manifolds are compatible with 100 ml, 300 mL, and 500 ml funnels, offering flexibility to suit your application needs.

3-Branch stainless steel manifold BioVac330
Order No.: 167103-23

Stainless steel filter cup (Cylinder type)

3-Branch stainless steel manifold set （100ml, 300ml, 500ml）
Order No.: 167103-24, 167101-23, 167101-24

3-Branch stainless steel manifold set

Model	BioVac330	BioVac331	BioVac333	BioVac335
Order No.	167103-23	167103-24	167101-23	167101-24
Number of Branches	3	3	3	3
Filter Diameter (mm)	47/50	47/50	47/50	47/50
Effective Filtration Area (cm^2)	9.6	9.6	9.6	9.6
Tube I.D. (mm)	8	8	8	8
Dimensions(L×W×H) cm	50×15×15	80×15×20	50×15×23	50×15×26
Filter Cup Material	/	Stainless steel	Stainless steel	Stainless steel
Filter Cup Capacity (ml)	/	100	300	500
Product Description	3-Branch stainless steel manifold BioVac 330	3-Branch stainless steel manifold BioVac 330 + 3 x 100 ml stainless steel filter cups	3-Branch stainless steel manifold BioVac 330 +3 x 300 ml stainless steel filter cups	3-Branch stainless steel manifold BioVac 330+3 x 500 ml stainless steel filter cups

The 6-branch stainless steel manifold BioVac 630
Order No.: 167103-26

Stainless steel filter cup (Cylinder type)

6-Branch stainless steel manifold set BioVac 631
Order No.: 167103-27

6-Branch stainless steel manifold set

Model	BioVac630	BioVac631	BioVac633	BioVac635
Order No.	167103-26	167103-27	167101-26	167101-27
Number of Branches	6	6	6	6
Filter Diameter(mm)	47/50	47/50	47/50	47/50
Effective Filtration Area (cm^2)	9.6	9.6	9.6	9.6
Tube I.D. (mm)	8	8	8	8
Dimensions(L×W×H) cm	80×15×15	80×15×20	80×15×23	80×15×26
Filter Cup Material	/	Stainless steel	Stainless steel	Stainless steel
Filter Cup Capacity (ml)	/	100	300	500
Product Description	6-Branch stainless steel manifold BioVac 630	6-Branch stainless steel manifold BioVac 630 + 6 x 100 ml stainless steel filter cups	6-Branch stainless steel manifold BioVac 630 +6 x 300 ml stainless steel filter cups	6-Branch stainless steel manifold BioVac 630+6 x 500 ml stainless steel filter cups

Multi-position filtration manifolds

3-branch stainless steel manifold set

Manifold only

Model	BioVac320	BioVac341	BioVac343	BioVac345	BioVac351	BioVac353	BioVac355	BioVac363	BioVac364
Order No.	167110-23	167111-31	167111-33	167111-35	167112-31	167112-33	167112-35	167113-33	167113-34
Number of Branches	3	3	3	3	3	3	3	3	3
Filter Diameter(mm)	47/50	47/50	47/50	47/50	47/50	47/50	47/50	47/50	47/50
Effective Filtration Area (cm^2)	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Tube I.D. (mm)	8	8	8	8	8	8	8	8	8
Dimensions(L×W×H) cm	50×15×12	50×15×23	50×15×27	50×15×30	50×15×30	50×15×30	50×15×33	50×15×30	50×15×30
Filter Cup Material	Without	Stainless Steel	Stainless Steel	Stainless Steel	Magnetic	Magnetic	Magnetic	Borosilicate Glass	Glass funnel with Micro-Strainer
Filter Cup Capacity (ml)	Without	100	300	500	150	300	500	250	250

6-branch stainless steel manifold set

Manifold only

Model	BioVac620	BioVac641	BioVac643	BioVac645	BioVac651	BioVac653	BioVac655	BioVac663	BioVac664
Order No.	167110-26	167111-61	167111-63	167111-65	167112-61	167112-63	167112-65	167113-63	167113-64
Number of Branches	6	6	6	6	6	6	6	6	6
Filter Diameter(mm)	47/50	47/50	47/50	47/50	47/50	47/50	47/50	47/50	47/50
Effective Filtration Area (cm^2)	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Tube I.D. (mm)	8	8	8	8	8	8	8	8	8
Dimensions(L×W×H) cm	80×15×12	80×15×23	80×15×27	80×15×30	80×15×30	80×15×30	80×15×33	80×15×30	80×15×30
Filter Cup Material	Without	Stainless Steel	Stainless Steel	Stainless Steel	Magnetic	Magnetic	Magnetic	Borosilicate Glass	Glass funnel with Micro-Strainer
Filter Cup Capacity (ml)	Without	100	300	500	150	300	500	250	250

Customized assembling options for multi-position filtration system

Wiggens offers free assembling options, **allowing customers to design their own** filtration system based on different application requirements.

Filtration System Components Package Ⅰ

Vacuum pump ①、PP/PC Waste Bottle ②、Filter Membranes ④、Silicon Tubing ⑤、Filtration combination ⑥

① + ② + ④ + ⑤ + ⑥ = BioVac XXXA

Multi-Position Filtration System

Configuration table for multi-position filtration system

No.	Name				
1	Vacuum pump	V400	V600	V410	V610
	Order No.	167400	167600	167410	167610
2	Suction bottle	1000 ml	2000 ml	3000 ml	-
	Order No.	167200-31	167200-32	167200-33	-
4	Filter Membranes	Fiberglass Filter Membranes	MCE Filter Paper	-	-
	Order No.	167100-20	167100-52	-	-
5	Silicon Tubing	Outer Diameter 14 mm, Inner Diameter 8 mm, Length 1 m			-
	Order No.	167021-01			-
6	Combination	BioVac351, BioVac353, BioVac355, BioVac363, BioVac364, BioVac651, BioVac653, BioVac655, BioVac663, BioVac664, BioVac311, BioVac313, BioVac315, BioVac301, BioVac303, BioVac305, BioVac323, BioVac324,			

Filtration System Components Package Ⅱ

Vacuum pump ①、PP/PC Waste Bottle ②、Lab Burners ③、Filter Membranes ④、Silicon Tubing ⑤、Filtration combination ⑥

① + ② + ③ + ④ + ⑤ + ⑥ = BioVac XXXB

Multi-Position Filtration System

Configuration table for multi-position filtration system

No.	Name				
1	Vacuum pump	V400	V600	V410	V610
	Order No.	167400	167600	167410	167610
2	Suction bottle	1000 ml	2000 ml	3000 ml	-
	Order No.	167200-31	167200-32	167200-33	-
3	Lab Burners	Dragon 100	Dragon 220	-	-
	Order No.	177100-00	177220-00	-	-
4	Filter Membranes	Fiberglass Filter Membranes	MCE Filter Paper	-	-
	Order No.	167100-20	167100-52	-	-
5	Silicon Tubing	Outer Diameter 14 mm, Inner Diameter 8 mm, Length 1 m			-
	Order No.	167021-01			-
6	Combination	BioVac331, BioVac333, BioVac335, BioVac631, BioVac633, BioVac635, BioVac341, BioVac343, BioVac345, BioVac641, BioVac643, BioVac645			

Accessories for filtration system

47mm glass funnel holder

Features

> Made of chemical-resistant borosilicate glass
> High temperature resistant
> Autoclavable

Specifications

Name	Glass Funnel	Glass funnel with support screen
Funnel	Borosilicate Glass	Borosilicate Glass
Funnel Base	Borosilicate Glass	Borosilicate Glass
Membrane Support	Sintered Glass	Stainless Steel Support Screen + PTFE Gasket
Clamp	Aluminum	Aluminum

Type		
Funnel Capacity (ml)	250	250
Filter Diameter (mm)	47	47
Effective Filtration Area (cm2)	9.6	9.6

Ordering information

47mm Glass Funnel	167120-31
250ml Glass Filter Cup ①	167210-03
Aluminum Clamp ②	167240-01
47mm Glass Filter Base ③	167230-03
Silicon Stopper ④	167110-16

47mm glass funnel with micro strainer	167120-33
250ml Glass Filter Cup ①	167210-03
Aluminum Clamp ②	167240-01
Stainless Steel Support Screen ③	167230-31
47mm Glass Filter Base ④	167230-07
Silicon Stopper ⑤	167110-16

Glass Funnel

Glass funnel with support screen

PES funnels with magnetic base
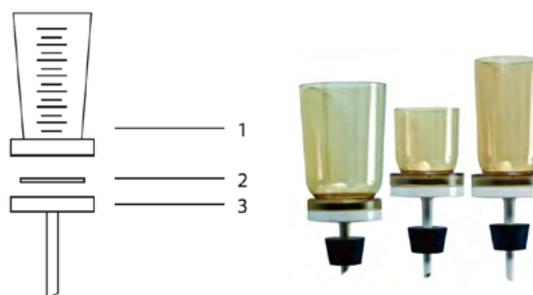
> Unique magnetic connection design
> No clamps needed
> High temperature sterilization possible

Name	Materious
Filter Cup	PES
Membrane Support	PP
Filter Base	PES
Rubber	Silicon

Specifications	
Magnetic filter funnel 150 ml	167130-15
Magnetic filter funnel 300 ml	167100-18
Magnetic filter funnel 500 ml	167130-50

47mm Stainless steel funnel

> Quick and effective spin-lock system
> No clamp needed
> SUS316 stainless steel
> Heat sterilization can be applied

167103-10   167103-30   167103-50

167103-10   167103-30   167103-50

Specification

Name	100 ml	300 ml	500 ml
Funnel	SUS316	SUS316	SUS316
Funnel base	SUS316	SUS316	SUS316
Membrance support	SUS316	SUS316	SUS316
Funnel lid	SUS316	SUS316	SUS316
Specifications			
Funnel capacity (ml)	100	300	500
Filter diameter (mm)	47 / 50	47 / 50	47 / 50
Effective filtration area (cm^2)	9.6	9.6	9.6
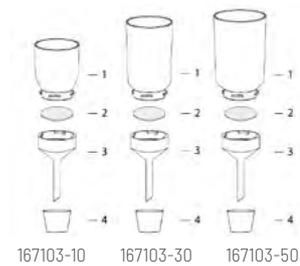
Odering Information

100 ml Stainless steel funnel	167103-10
100ml stainless steel filter cup ①	167103-61
Stainless steel support screen ②	167100-31
47mm stainless steel filter base ③	167103-60
Silicon stopper ④	167110-17
300 ml Stainless steel funnel	167103-30
300 ml ①	167103-63
Stainless steel support screen ②	167100-31
47mm stainless steel filter base ③	167103-60
Silicon stopper ④	167110-17
500 ml Stainless steel funnel	167103-50
500ml stainless steel filter base ①	167103-65
Stainless steel support screen ②	167100-31
47mm stainless steel filter base ③	167103-60
Silicon stopper ④	167110-17

Stainless steel filter cup (Cylinder type)

Order No.	167103-61	167103-63	167103-65
Filter cup	SUS316	SUS316	SUS316
Funnel capacity (ml)	100	300	500
Filter diameter (mm)	47 / 50	47 / 50	47 / 50
Effective filtration area (cm^2)	9.6	9.6	9.6
Suitable for	BioVac 330/630	BioVac 330/630	BioVac 330/630

Stainless steel filter cup (Cone type)

Order No.	167102-50	167102-75	167102-99
Filter cup	SUS316	SUS316	SUS316
Funnel capacity(ml)	500	700	1000
Filter diameter(mm)	47 / 50	47 / 50	47 / 50
Effective filtration area(cm^2)	9.6	9.6	9.6
Suitable for	BioVac 330/630	BioVac 330/630	BioVac 330/630

OD=10mm

Stainless steel funnel lid

Description	Order No.
100 ml stainless steel funnel lid, suitable for 100 ml stainless steel filter cup (Cylinder type)	167103-11
300 ml stainless steel funnel lid, suitable for 300 ml stainless steel filter cup (Cylinder type)	167103-13
500 ml stainless steel funnel lid, suitable for 500 ml stainless steel filter cup (Cylinder type)	167103-15
Stainless steel funnel lid, suitable for 500 ml / 750 ml / 1000 ml stainless steel filter cups (Cone type)	167110-20

PP Funnel lid

Order No.	167130-32		
Specification		Material	
Suitable for funnel	Pall 4242 / 167100-18	Main body	PP
Number of inlets	3	Cover	Silicon
Inlet type	Female luer slip	Filter material	PTFE
Filter diameter	25 mm	Pore size	0.2 µm
Package	1		

Filtration flask for liquid

Order No.	167100-13	167100-14
Includes		
Glass bottle	167300-08	167300-08
Rubber stopper	167110-16	167110-17
Weighted base	167200-04	167200-04
Specification		
Capacity (ml)	1000	1000
Inlet / outlet diameter (mm)	8	8
Water outlet	Yes	Yes
The diameter of hole in center of rubber stopper (mm)	Ø15	Ø9.5

Filtration Flask for Liquids

Weighted Base

Weighted base

Description	Order No.
1000ml Filtration flask base with a unique stabilization design	167200-04

Disc filter

Name	Pinhead filter	Small disc filter	Big disc filter
Order no.	194225-01	167200-35	167200-36
Brand	Pall	Pall	Pall
Filter diameter / pore size	25 mm / 0.2 µm	37 mm / 0.2 µm	50 mm / 0.2 µm
Outer diameter (mm)	30	45	63
Material	PTFE	PTFE	PTFE
Outer material	PP	PP	PP
Number of filters per package	1	1	1
Suitable for	PP Funnel Lid	BioVac 225 / 235	BioVac 240

Filter membrane

Name	Fiberglass filter membranes	MCE filter paper
Order no.	167100-20	167100-52
Brand	Pall	Pall
Filter diameter (mm)	47	47
Filter pore size (µm)	1	0.45
Material	Fiberglass	MCE
Number of filters per package	100	200

Silicon tubing

Order No.	Outer diameter (mm)	Inner diameter (mm)	Thickness (mm)	Length (m)
168020-01	12	6	3	1
168021-01	14	8	3	1
168022-01	16	10	3	1

Length upon request (min. 1 m)

167201-31 167200-31 167200-33

PP/PC Waste bottle

Material			
Order no.	167200-31	167200-32	167200-33
Bottle	PC	PC	PC
Bottle cover	PC	PC	PC
Spill-proof buoy	PP	PP	PP
Description			
Capacity (ml)	1000	2000	3000
Outlet (mm)	8	8	8
Spill-proof buoy	Yes	Yes	Yes
Autoclavability (121℃)	Yes	Yes	Yes

PC Waste bottle

Description		Material	
Order no.	167120-34		
Capacity (ml)	4000	Bottle	PC
Outlet (mm)	8	Bottle Lid	ABS
Spill-proof buoy	Yes	Float Switch	PP
Autoclavability (121℃)	Yes		

Stand for waste bottle

Description	Order No.
Stand for waste bottle designed for Stabilizing the bottle in filtration work	167200-39

Suitable for 1L, 2L, 3L waste bottle, please specify when ordering

Foot switch

Description	Order No.
Suitable for c series and v series vacuum pumps*	167200-41

*Factory installation

Silicon drainage tubing

Order No.	Outer diameter (mm)	Inner diameter (mm)	Thickness (mm)	Length (m)
168030-01	12	8	2	1

Length upon request (min. 1 m)

Hot Plate / Stirrer
Heating Element

WIGGENS
THE MAGIC MOTION

Laboratory Hotplate Stirrer

Attractive design for demanding heating & mixing application

Our new complete range
laboratory hotplate
stirrers will meet
your high demands
every day!

More Powerful Units

WH380 / WH385   WH390/ WH395-NH/ WH395

Intelligent heating technology
for your very demanding applications
UP to 1800W heating power

IR Heating
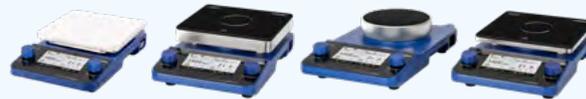
WH280-AH   WH280-H   WH280-R   WH280-NH

Elite series
High bright TFT touch screen
Intelligent Cascade Control
Two external sensors can be connected
RS485

IR Heating

WH260-AH   WH260-NH   WH260-R   WH420R-L

Pro series
large and clear LCD display
Intelligent PID
USB interface

IR Heating

WH200   WH210   WH420   WH620

New entry level for
lab heating & mixing

Why Infrared Radiation Heating?

Infrared radiation heating involves the emission and transmission of light waves within the spectrum range of 700 nm to 100 μm (0.7 μm to 100 μm), enabling noticeable and directional energy transfer. Unlike conduction or convection, this transfer does not require any medium and can occur even in a vacuum. Infrared heating specifically utilizes electromagnetic waves with wavelengths between 2.5 μm and 15 μm, a range commonly used in heating applications. These waves propagate at the speed of light, significantly faster than energy transfer via conduction or convection.

Wavelengths (nm) of Light

Ultraviolet	Visible Light	Infrared

nm 200   300   400   500   600   700   800   900   1000
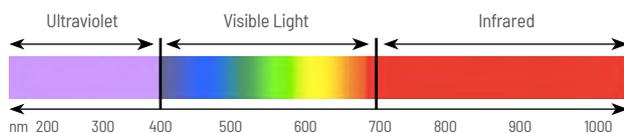
IR Heating

The magnetic heating stirrer incorporates advanced infrared radiation (IR) technology, providing direct, clean, and safe heating. This innovative heating method allows the WIGGENS hotplate-stirrer to quickly heat various shaped vessels, including round-bottom flasks, with the solution inside reaching a maximum temperature of 450℃ in a short time. Unlike oil heating, infrared radiation heating eliminates the need for bath oil, ensuring a direct and clean heating process without oil splashing.

The high infrared permeability facilitates fast and efficient transfer of heating energy with minimal loss, resulting in faster heating of liquids and significant time and energy savings. With PID control or advanced ICC technology, excellent temperature stability can be achieved. By connecting a Pt-100 sensor, temperature-controlled operations with a stability of ± 2 ℃ can be achieved in most applications.

WH260-R (Infrared Radiation heating)

t=32min, T=95℃

WH260-R (Oil heating)

t=21min, T=97℃

t=25min, T=95℃

Glass bath :
Used for sample splashing
or other accidents
occurring protection

Wiggens IR Heating

Oil bath

Dirty

Disadvantages of conventional heating method

Wiggens IR Heating (Oil Bath)

Digital Hot Plate / Stirrer   New entry level for lab heating & mixing

WH200 / WH210 / WH220

> Our laboratory hotplates and stirrers are designed and manufactured in compliance with high international quality standards to ensure superior performance and durability. Equipped with an advanced microprocessor control system, they offer exceptional reliability and precise temperature stability for consistent experimental results. A bright and clear LED digital display allows convenient monitoring and adjustment of the working temperature and stirring speed.

> The built-in memory function retains stirring speed and temperature settings, making it ideal for experiments requiring fixed conditions. A liquid drainage system above the control board prevents liquids from entering and damaging the system. Direct connection for the thermocouple sensor allows precise control of the sample temperature.

> The new entry level hot plate and stirrers are suitable for general laboratory applications, offering reliable performance across a variety of use cases. A hot-top indicator lights up above 60° C to ensure user safety.

Standard thermocouple sensor
Ensures accurate sample temperature control within ±1 ℃

Temperature and speed display
WH200 and WH210 simultaneously display temperature and speed while retaining the last operation settings.

Safety protection
A flashing high-temperature indicator provides a warning to prevent accidental contact and potential injury.

Liquid drainage
A groove above the control panel prevents solution splashes.

Top plate material
WH200 features an aluminum plate, while WH210 and WH220 are equipped with an SS304 plate coated with ceramic.

Specifications

Model	WH200	WH210	WH220
Order No.	400302	400402	400400
Maximum temperature setting [℃]	250	350	380
Maximum temperature setting with E-sensor [℃]	250	350	380
Safety temperature [℃]	280	380	50~430 adjustable
Temperature stability with E-sensor [℃]	±2	±2	±2
Heat output [W]	300	500	500
External temperature sensor	Thermocouple	Thermocouple	Pt100
PID parameter	1 set	1 set	2 sets
Speed setting range [rpm]	100~1500	100~1500	100~1500
Temperature and Speed display	LED display	LED display	LCD display
Temperature and Speed setting	Turning knob	Turning knob	Turning knob
IP code	IP21	IP21	IP21
Top plate material	Aluminium alloy	Stainless steel coated with ceramic	Stainless steel coated with ceramic
Top plate dimensions [mm]	165 x150	180 x145	180 x145
Dimensions W x D x H [mm]	230X200X100	270X230X100	230X200X100
Weight [kg]	1.5	3.0	3.1
Power supply	220V/50Hz	220V/50Hz	220V/50Hz

* Measured with 500ml water at 80 ℃

Standard package includes: Hot plate / stirrer, temperature sensor with holder and clamp, stirrer bar

![WIGGENS The Magic Motion]

Digital Hot Plate / Stirrer Multi-position heating & mixing

WH420 / WH620

> Advanced microprocessor controlling system guarantees the reliability and temperature stability
> Bright and clear LED digital display and setting for the working temperature, stirring speed, working time, and safety temperature
> Memory function for stirring speed and temperature setting, convenient for experiments with fixed conditions
> Liquid drainage above the control board to prevent liquids from accessing the system
> Direct connection for Pt100 temperature sensor for convenient solution temperature control
> Sealed outer shell and isolated critical parts design for enhanced longevity even in a harsh laboratory environment
> When the temperature of the top plate is above 60℃ , hot-top indicator will light up for the user's safety protection

Standard PT100 temperature sensor
Ensures accurate sample temperature control within ±1 ℃

LED selectable
Display temperature and speed at the same time, and remember the last working parameters

Ceramic top plate
Great anti-corrosive ability to acid, base, or organic solvents.

Safety protection
A flashing high-temperature indicator provides a warning to prevent accidental contact and potential injury.

Liquid drainage
A groove above the control panel prevents solution splashes.

Specifications

Model	WH420	WH620
Order No.	400315	400316
Number of stirring positions	4	6
Maximum temperature setting [℃]	300	300
Maximum temperature setting with E-sensor [℃]	300	300
Safety temperature [℃]	370	370
Temperature stability with E-sensor [℃]*	±1	±1
Total heating output [W]	1000	1500
External temperature sensor	Pt100	Pt100
PID parameter	1 set	1 set
Speed setting range [rpm]	150~1500	150~1500
Stirring quantity max [L / H_2O]	2	2
Temperature and Speed display	LED display	LED display
Temperature and Speed setting	Turning knob	Turning knob
Time setting	1~9959min / continuous	1~9959min / continuous
IP code	IP21	IP21
Top plate material	Aluminium coated with ceramic	Aluminium coated with ceramic
Top plate dimensions [mm]	(160×155) x4	(150×133) x6
RS 232 interface	Yes	Yes
Dimensions W x D x H [mm]	405x320x80	525x320x87
Weight [kg]	8.5	9.0
Power supply	220V/50Hz	220V/50Hz

*Measured with 500ml water at 80 ℃
Standard package includes: Hot plate / stirrer, temperature sensors (4 or 6 pcs) PT100-01 with holder and clamp， stirrer bars 4 or 6 pcs

Multi-position hot plate/stirrer

WH420R-L / 620R-L / WH420R-D / 620R-D

> WIGGENS multi-position heat magnetic stirrer, each position can work independently, ceramic glass plate has excellent chemical corrosion resistance, easy to clean. Efficient infrared heating technology ensures high efficiency and accuracy of temperature control. Ceramic glass plate are resistant to heat impact over 700℃ .

> The control panel is made of waterproof and anti-corrosion material, which protects the panel from damage caused by splashing or spilling of liquid.

> The WH420R /WH620R series is configured with three sets of PID parameters, which are optional from the menu. PID1 is suitable for small sample heating (small volume or small specific heat capacity), PID 3 is suitable for a large vol of samples for rapid heating.

> Each position is independent display, control system; Each of them is equipped with separate safety temperature control and monitoring.

WH420R-L

WH620R-D

Specifications

Model	WH420R-L	WH620R-L	WH420R-D	WH620R-D
Order no.	W3010415	W3010416	W3010425	W3010426
Maximum temperature setting [℃]	450	450	450	450
Maximum temperature setting with E-sensor [℃]	300	300	300	300
Safety temperature [℃]	50-500 adjustable	50-500 adjustable	50-500 adjustable	50-500 adjustable
High temperature protection [℃]	10-50 adjustable	10-50 adjustable	10-50 adjustable	10-50 adjustable
Temperature stability with E-sensor [℃]*	±1	±1	±1	±1
Heat output, each position/set [W]	500W/2000W	500W/3000W	500W/2000W	500W/3000W
External temperature sensor	Pt100	Pt100	Pt100	Pt100
PID parameter	3 sets	3 sets	3 sets	3 sets
Speed setting range [rpm]	100-1500	100-1500	100-1500	100-1500
Stirring quantity max [L / H$_2$0]	20L	20L	20L	20L
Display/Control	Independent control LCD digital display/knob operation			
Time setting	1~1999min/continuous	1~1999min/continuous	1~1999min/continuous	1~1999min/continuous
Top plate material	Ceramic glass	Ceramic glass	Ceramic glass	Ceramic glass
Top plate dimension [mm]	Ø135	Ø135	Ø135	Ø135
Communicate interface.	USB-A	USB-A	USB-A	USB-A
Dimensions W*D*H（Sensor set's not included)	786*309*113mm	1180*309*113mm	388*473*138mm	582*473*138mm
Weight（Kg)	15.5	23.5	15.8	23.8
Power supply	220V/50Hz	220V/50Hz (2xpower plugs)	220V/50Hz	220V/50Hz (2xpower plugs)

*Measured with 500ml water at 80 ℃

Standard package includes: Hot plate / stirrer, temperature sensors (4 or 6 pcs) PT100-01 with holder and clamp， stirrer bars 4 or 6 pcs

Infrared Hot Plate / Stirrer
Attractive design for demanding heating & mixing

WH260-NH / WH260-H / WH260-R / WH260-RL

The WIGGENS new hotplate stirrer offers several advantages due to its ceramic glass top plate. It provides chemical resistance, high surface quality, and can withstand temperature shocks of over 700℃ , making it a superior choice compared to conventional heating surface materials. The high infrared permeability ensures efficient transfer of heating energy with minimal loss, resulting in fast heating of liquids and significant time and energy savings. PID control ensures good temperature stability, and when a Pt-100 sensor is connected, temperature-controlled work with a stability of ± 1℃ can be achieved in most applications.

The device features a large and clear LCD display that allows users to view and monitor essential parameters such as working temperature, stirring speed, working time, and safety temperature. It also includes a memory function for stirring speed and temperature settings, making it convenient for experiments with fixed conditions. To prevent liquids from reaching the touching board and electronics, there is liquid drainage above the control board. Additionally, a direct connection for a Pt100 temperature sensor enables easy solution temperature control.

The hotplate stirrer is designed with a sealed outer shell and isolated critical parts to enhance its longevity, even in harsh laboratory environments. It offers high safety protection, automatically shutting off the heating when exceeding the safety range of the hotplate (adjustable between 10-50℃) to ensure user safety. With three sets of PID parameters, it is suitable for accurate control of smallvolume samples, rapid heating, and stable temperature control of large-volume

Standard PT100 temperature sensor
Ensures accurate sample temperature control within ±1 ℃

LCD display
Simultaneously displaying various parameters, memory of the last working parameters.

Ceramic glass top plate
Great anti-corrosive ability to acid, base, or organic solvents.

Safety protection
A flashing high-temperature indicator provides a warning to prevent accidental contact and potential injury.

Liquid drainage
A groove above the control panel prevents solution splashes.

Intelligent PID
Suitable for different application, for accurately controlling the quick heating of small sample and the stable temprature control of large sample.

Overheating protection
If the internal temperature exceeds the permissible temperature that may damage the internal electronic components, the heating power will be reduced automatically.

RS232 interface
Enable the unit to be connected to a PC for operating

Safety temperature
The safety temperature is an adjustable circuit designed to prevent the unit from exceeding a specified set temperature. It can be adjusted using a special tool provided with the product.

Ceramic glass top plate
Ceramic Glass by Schott combines chemical resistance, top quality surfaces and resistance to temperature shocks of greater than 700℃ .

WH260-H / NH / AH
Plate dimension: 180x180mm

WH260-R / AR
Plate dimension: Ø135cm
Suitable for parallel application

Compact
Height: Only 85mm

Rotating knob
Easy to operate

Strong & Robust

WH260-R

WH260-NH

In addition to speedy heating up and good temperature control, WH260-NH also offers well controlled liquids mixing from gentle to intense, being suitable for big volume viscous media as well.

WH260-AH WH260-NH WH260-H WH260-R

Specifications

Model	WH260-AH	WH260-NH	WH260-H	WH260-R	WH260-RL
Order No.	W3012601	W3012602	W3012603	W3012605	W3012606
Maximum temperature setting [°C]	380	450	450	450	450
Maximum temperature setting with E-sensor [°C]	200	300	300	300	300
Safety temperature [°C]	50~430 adjustable	50~500 adjustable	50~500 adjustable	50~500 adjustable	50~500 adjustable
High temperature protection [°C]	10~50 adjustable	10~50 adjustable	10~50 adjustable	10~50 adjustable	10~50 adjustable
Temperature stability with E-sensor [°C]*	±1	±1	±1	±1	±1
Heat output [W]	800	1000	800	800	800
External temperature sensor	Pt100	Pt100	Pt100	Pt100	Pt100
PID parameter	3 sets	3 sets	3 sets	3 sets	3 sets
Speed setting range [rpm]	100~1500	100~1500	100~1500	100~1500	100~1500
Stirring quantity max [L / H_2O]	20	20	20	20	20
Temperature and Speed display	LCD display	LCD display	LCD display	LCD display	LCD display
Temperature and Speed setting	Turning knob	Turning knob	Turning knob	Turning knob	Turning knob
Time setting	1~1999min / continuous	1~1999min / continuous	1~1999min / continuous	1~1999min / continuous	1~1999min / continuous
IP code	IP21	IP21	IP21	IP21	IP21
Top plate material	Aluminium coated with ceramic	Ceramic glass	Ceramic glass	Ceramic glass	Ceramic glass
Top plate dimensions [mm]	180×180	180×180	180×180	Ø135	Ø145
RS232 interface	Yes	Yes	Yes	Yes	Yes
Dimensions W x D x H [mm]	190x320x70	190x320x70	190x320x85	190x320x90	190x320x90
Weight [kg]	2.8	2.8	3.1	3.0	3.0
Power supply	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

*Measured with 500ml water at 80 °C
Standard package includes: Hot plate / stirrer, temperature sensor PT100-01 with holder and clamp, stirrer bar

Infrared Hot Plate / Stirrer Attractive design for demanding heating & mixing

WH280-AH / WH280-NH / WH280-H / WH280-R / WH280-RL

The WIGGENS new hotplate stirrer enjoys the benefits of ceramic glass top plate, such as chemical resistance, a high surface quality, and a resistance to temperature shocks of more than700℃ , providing the users with optimal solution compared to conventional heating surface materials. The high infrared permeability ensures that the heating energy is transferred quickly and with very limited loss. i.e. it heats liquids fast and thus saves time and energy. PID control enables good temperature stability. If the Pt-100 sensor is connected, temperature-controlled work with stability of ± 1℃ can be reached in most applications.

All functions can be viewed and monitored on a large and clear LCD display, including most frequently used parameters like working temperature, stirring speed, working time, and safety temperature etc.

> Memory function for stirring speed and temperature setting, convenient for experiments with fixed conditions.

> Liquid drainage above the control board to prevent liquids from accessing the touching board and the electronics.

> Direct connection for Pt100 temperature sensor for convenient solution temperature control.

> Sealed outer shell and isolated critical parts design for enhanced longevity even in a harsh laboratory environment.

> High safety protection: When exceeding the safety range of the hotplate (10-50 ℃ adjustable) , the heating can be shut off immediately and automatically for the safety protection.

> ICC technology to self-optimize for optimal heating results.

TFT high-definition color touch screen
Synchronous display of set temperature, actual temperature, and rotational speed. Automatic memory of the last set working parameters.

Ceramic glass top plate
Great anti-corrosive ability to acid, base, or organic solvents.

Safety protection
A flashing high-temperature indicator provides a warning to prevent accidental contact and potential injury.

Liquid drainage
A groove above the control panel prevents solution splashes.

Intelligent Cascade Control
Self-optimizing technology ensures optimal performance with excellent temperature stability.

Overheating protection
If the internal temperature exceeds the permissible temperature that may damage the internal electronic components, the heating power will be reduced automatically.

RS 232/485 interface
Enable the unit to be connected to a PC for operating

Safety Temperature
The safety temperature is an adjustable circuit designed to prevent the unit from exceeding a specified set temperature. It can be adjusted using a special tool provided with the product.

Direction of rotation
Clockwise or counterclockwise

WH280-H / NH / AH
Plate dimension: 180x180mm

WH280-R / AR
Plate dimension: Ø135cm
Suitable for parallel application

Compact
Height: Only 85mm

Strong & Robust

WH280-R

WH280-NH

In addition to speedy heating up and good temperature control,
WH280-NH also offers well controlled liquids mixing from gentle to
intense, being suitable for big volume viscous media as well.

| WH280-AH | WH280-NH | WH280-H | WH280-R |

Specifications

Model	WH280-AH	WH280-NH	WH280-H	WH280-R	WH280-RL
Order no.	W3012801	W3012802	W3012803	W3012805	W3012806
Maximum temperature setting [℃]	380	450	450	450	450
Maximum temperature setting with E-sensor [℃]	200	300	300	300	300
Safety temperature [℃]	50~430 adjustable	50~500 adjustable	50~500 adjustable	50~500 adjustable	50~500 adjustable
High temperature protection [℃]	2~50 adjustable	2~50 adjustable	2~50 adjustable	2~50 adjustable	2~50 adjustable
Temperature stability with E-sensor [℃]*	±1	±1	±1	±1	±1
Heat output [W]	800	1000	800	800	800
External temperature sensor	Pt100	Pt100	Pt100	Pt100	Pt100
Temperature control	ICC	ICC	ICC	ICC	ICC
Speed setting range [rpm	100~1500	100~1500	100~1500	100~1500	100~1500
Stirring quantity max [L / H2O]	20	20	20	20	20
Display	TFT	TFT	TFT	TFT	TFT
Mixing direction	Clockwise or counterclockwise				
Time setting	1~1999min / continuous				
IP code	IP21	IP21	IP21	IP21	IP21
Top plate material	Aluminium coated with ceramic	Ceramic glass	Ceramic glass	Ceramic glass	Ceramic glass
Top plate dimensions [mm]	180×180	180×180	180×180	Ø135	Ø145
Communicate interface.	RS232/485	RS232/485	RS232/485	RS232/485	RS232/485
Dimensions W x D x H [mm]	190x320x90	190x320x85	190x320x85	190x320x90	190x320x90
Weight (Kg)	2.8	2.8	3.1	3.0	3.0
Power supply	220V/50HZ	220V/50HZ	220V/50HZ	220V/50HZ	220V/50HZ

*Measured with 500ml water at 80 ℃
Standard package includes: Hot plate / stirrer, temperature sensor PT100-01 with holder and clamp, stirrer bar

WIGGENS
THE MAGIC MOTION

Infrared Hot Plate / Stirrer
Intelligent heating technology for your very demanding applications

1.2kW

WH380 / WH385   UP to 1200W heating power

Standard PT100 temperature sensor
Ensures accurate sample temperature control within ±1 ℃ .

Ceramic glass top plate
Great anti-corrosive ability to acid, base, or organic solvents.

550℃
Rapid heating up speed.
Temperature can reach up to 550℃ , and one liter of water can be boiled in approx. 9 minutes
(Measured in 2L glass flask at 25℃ ambient temperature and 1bar air pressure)

Touch controller　（WH385）
with comfortable and easy operation

Heating power
1200W
With 1200W heating power, rapid heating speed.

Extra large heating plate
Top plate dimensions: 280×280mm
Heating zone: Ø190mm

WH380

WH385

Attractive designs for heating, stirring and controlling
WH380 presets 3 sets of PID for different volume heating application. WH385 uses advanced ICC technology to self-optimize for optimal results.   WH380 has LCD display and WH385 has TFT

Specifications

Model	WH380	WH385
Order no.	W3013803	W3013853
Maximum temperature setting [℃]	550	550
Maximum temperature setting with E-sensor [℃]	300	300
Safety temperature [℃]	50~600 adjustable	50~600 adjustable
High temperature protection [℃]	10~50 adjustable	2~50 adjustable
Temperature stability with E-sensor [℃]*	±1	±1
Heat output [W]	1200	1200
External temperature sensor	Pt100	Pt100
Temperature control	PID, 3 sets	ICC
Speed setting range [rpm	100~1500	100~1500
Stirring quantity max [L / H2O]	30	30
Display	LCD	TFT
Mixing direction	Clockwise	Clockwise or counterclockwise
Time setting	1~1999min / continuous	1~1999min / continuous
IP code	IP21	IP21
Top plate material	Ceramic glass	Ceramic glass
Top plate dimensions [mm]	280×280	280×280
Communicate interface.	RS232	RS232/485
Dimensions W x D x H [mm]	282x450x115	282x450x115
Weight（Kg）	4.0	4.0
Power supply	220V/50Hz	220V/50Hz

*Measured with 500ml water at 80 ℃
Standard package includes: Hot plate / stirrer, temperature sensor PT100-01 with holder and clamp, stirrer bar

Infrared Hot Plate / Stirrer
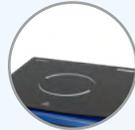**Intelligent heating technology for powerful heating**

WH390 / WH395-NH / WH395   UP to 1800W heating power

1.8kW

Standard PT100 temperature sensor
Ensures accurate sample temperature control within ±1 ℃ .

Ceramic glass top plate
Great anti-corrosive ability to acid, base, or organic solvents.

550℃ Rapid heating up speed.
Temperature can reach up to 550℃ , and one liter of water can be boiled in approx. 9 minutes
(Measured in 2L glass flask at 25℃ ambient temperature and 1bar air pressure)

PID — Intelligent PID (WH390)
Suitable for different application, for accurately controlling the quick heating of small samples and the temperature stability of large samples..

ICC — Intelligent Cascade Control (WH395)
Self-optimizing technology ensures optimal performance with excellent temperature stability.

Heating power
With 1800W heating power, rapid heating up speed. 2000W (WH390-NH)
1800W

WH390 presets 3 sets of PID for different volume heating application. WH395 uses advanced ICC technolgy to self-optimize for optimal results. WH390 has LCD display and WH395 has TFT

Specifications

Model	WH390	WH390-NH	WH395
Order no.	W3013902	W3013903	W3013953
Maximum temperature setting [℃]	550	450	450
Maximum temperature setting with E-sensor [℃]	300	300	300
Safety temperature [℃]	50~600 adjustable	50~500 adjustable	50~500 adjustable
High temperature protection [℃]	10~50 adjustable	10~50 adjustable	2~50 adjustable
Temperature stability with E-sensor [℃]*	±1	±1	±1
Heat output [W]	1800	2000	1800
External temperature sensor	Pt100	Pt100	Pt100
Temperature control	PID, 3 sets	PID, 3 sets	ICC
Speed setting range [rpm	100~1500	100~1500	100~1500
Stirring quantity max [L / H20]	30	30	30
Display	LCD	LCD	TFT
Mixing direction	Clockwise	Clockwise	Clockwise or counterclockwise
Time setting	1~1999min / continuous	1~1999min / continuous	1~1999min / continuous
IP code	IP21	IP21	IP21
Top plate material	Ceramic glass	Ceramic glass	Ceramic glass
Top plate dimensions [mm]	280×280	280×280	280×280
Communicate interface.	RS232	RS232	RS232/485
Dimensions W x D x H [mm]	290x450x120	290x450x80	290x450x120
Weight（Kg）	4.1	4.1	4.1
Power supply	220V/50HZ	220V/50HZ	220V/50HZ

*Measured with 500ml water at 80 ℃
Standard package includes: Hot plate / stirrer, temperature sensor PT100-01 with holder and clamp , stirrer bar

Soft Dry Bath -one for all shapes of vessels

Heating in reflux, distillation and rectification, Oil free heating, completely new experience

The Soft Dry Bath launched by Wiggens like a versatile heating solution for various vessel shapes in the laboratory. Its uniform heat transfer and fast heat conduction make it a suitable alternative to small oil baths, electric heating sleeves, and other heating methods commonly used in labs. The aluminum bottom aids in quick heat transfer to alloy particles, while the PTFE material provides insulation and anticorrosion properties. With infrared heating (IR) technology and ICC self-tuning temperature control, the Soft Dry Bath offers faster heating and improved temperature stability. It seems like a reliable and efficient tool for laboratory heating applications

The high-quality soft dry bath developed by Wiggens offers uniform heat transfer and fast heat conduction. This makes it a great replacement for small oil baths, dry bath modules, electric heating sleeves, and other heating methods commonly used in laboratories. The aluminum bottom of the bath facilitates rapid heat transfer to alloy particles, while the PTFE material surrounding it provides insulation and protects against corrosion.

Additionally, Wiggens has incorporated infrared heating (IR) technology and ICC self-tuning temperature control into their soft dry bath. This combination allows for faster heating and improved temperature stability, making it a reliable and efficient heating solution for laboratory applications.

Suitable for **containers of any shape**

Replacement of Silicon oil

Replacement of thermostat module

High temperature

Safety

New experience

No cleaning required

Energy conservation and environmental protection

The exclusive technology

One For All

Suitable for **containers of any shape**

50ml	100ml	250ml	500ml	1000ml
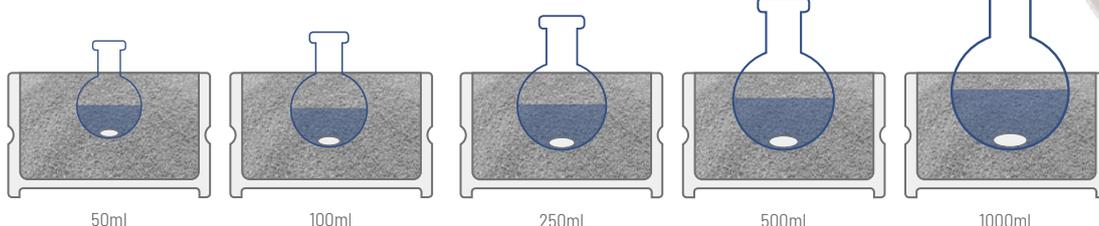
Suitable for containers of different volumes

Order information

Order No.	Model	Description
SDB-1	Dry bath tank and jacket	Usable bath opening Ø140×98mm
SDB-2	Alloy seeds	The alloy seeds, 2kg

Heating magnetic stirrer needs to be separately selected, recommended to use WH260 or 280

Accessories for Hot Plate / Stirrer

Thermometer

Order No.	Description
PR5500	Temperature resolution: 1℃ or 0.1℃ Standard package with two sensors: Pt100 (250×Ø4mm), temperature range: -50.0~ 400.0℃ ; Type K thermocouple (170×Ø4mm, temperature range: -50.0~ 500.0℃
PR5600	Temperature resolution: 0.01℃ or 0.001℃ Standard with two sensors: Pt100 (250×Ø4mm), temperature range: -50.0~ 400.0℃ ; Type K thermocouple (170×Ø4mm, temperature range: -50.0~ 500.0℃

Order No.	Description
PR5000-1	Pt100 (250×Ø4mm), temperature range: -50.0~ 400.0℃ ; Suitable for PR5500 or PR5600
PR5000-2	Type K thermocouple (170×Ø4mm, temperature range: -50.0~ 500.0℃ ; Suitable for PR5500 or PR5600

Protective Cover

Order No.	Description
400-0011	Silicone, suitable for WH260-NH and WH260-H
400-0012	Silicone, suitable for WH260-R and WH260-RL
400-0013	Silicone, suitable for WH280-NH and WH280-H
400-0014	Silicone, suitable for WH280-R and WH280-RL

Temperature sensor Suitable for all Hot Plate / Stirrer

Order No.	Description
PT100-01	PT100, Type I; -30~300℃ ; Length: 170 mm; Diameter: 4 mm; Material: Stainless steel;
PT100-02	PT100, Type II; -30~300℃ ; Length: 300 mm; Material: Stainless steel, Fig. ①
PT100-03	PT100, Type III; -30~250℃ ; Length: 170 mm; Material: Stainless steel, PTFE coated, Fig. ②
PT100-04	PT100, Type IV; -30~250℃ ; Length: 300 mm; Material: Stainless steel, PTFE coated
PT100-06	PT100, Type VI; -30~300℃ ; Length: 250 mm; Diameter: 4 mm; Material: Glass; Fig. ③
600.170.1	K type thermocouple 0-500℃ ; Length: 170 mm; Diameter: 4 mm; Material: Stainless steel;

① ② ③
Temperature sensor

Holder for temperature sensor Suitable for all Hot Plate / Stirrer

Order No.	Description
PT100-05	Holder and clamp for PT100 temperature sensor, Fixed temperature sensor
	PT100-05: ①②③
WH220017	① installation stand
WH220026	② Boss head clamp
WH220027	③ Sensor holde

Holder and clamp
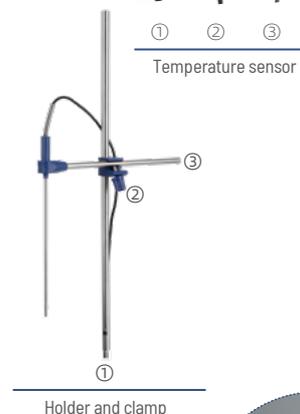
Clamps for oil bath

Order No.	Description
WA00-56	Suitable for oil bath with the diameter up to 160mm
WA00-56A	Suitable for oil bath with the diameter up to 280mm

Glass oil bath with spout

Order No.	Model	Description
213115407	G1000	Oil bath, Glass, 900 ml, inner Ø 140 mm, 75 mm height
213115904	G2000	Oil bath, Glass, 2 L, inner Ø 190 mm, 90 mm height
213116309	G3500	Oil bath, Glass, 3.5 L, inner Ø 230 mm, 100 mm height

Stainless steel oil bath
for WH260-R, WH280-R, Ø 135mm

Order No.	Model	Description
H220000	H1000	Oil Bath, stainless steel, 1.9L, inner Ø 177 mm, 83 mm height

Cylindrical heating block

Order No.	Description	For
13696-01W	Stainless T-shape handle, length: 20 cm, width：80 mm	All types of heating block
13696-02W	Stainless T-shape handle, length: 30 cm, width：80 mm	All types of heating block
13697-01W	28×30 (ID x H in mm) 11 Holes	WH260-R
13697-02W	28×50 (ID x H in mm) 11 Holes	WH260-R
13697-03W	26×30 (ID x H in mm) 11 Holes	WH260-R
13697-04W	26×50 (ID x H in mm) 11 Holes	WH260-R
13697-11W	28×30 (ID x H in mm) 15 Holes	WH260-R
13697-12W	28×50 (ID x H in mm) 15 Holes	WH260-R
13697-13W	26×30 (ID x H in mm) 15 Holes	WH260-R
13697-14W	26×50 (ID x H in mm) 15 Holes	WH260-R
13699-04W	60.3 mm Diameter, 4 holes	WH260-R
13699-03F	69 mm Diameter, 3 Holes	WH260-R
13699-05W	48.5 mm Diameter, 5 Holes	WH260-R
13699-150	62.2 mm Diameter, 4 Holes	WH260-R
13699-01W	100 ml round-bottom flask, 3 Holes	WH260-R
13699-02W	62.2 mm Diameter, 3 Holes	WH260-R
13707-250	250 ml round-bottom flask	WH260-R
13707-500	500 ml round-bottom flask	WH260-R
13707-1000	1000 ml round-bottom flask	WH260-R
13707-2000	2000 ml round-bottom flask	WH260-R

13696-01W / 02W

13697-01W 13697-02W 13697-03W 13697-04W

13697-11W 13697-12W 13697-13W 13697-14W

13699-04W

13699-03F 13699-05W 13699-150 13699-01W
13699-02W

13707-250 13707-500 13707-1000 13707-2000
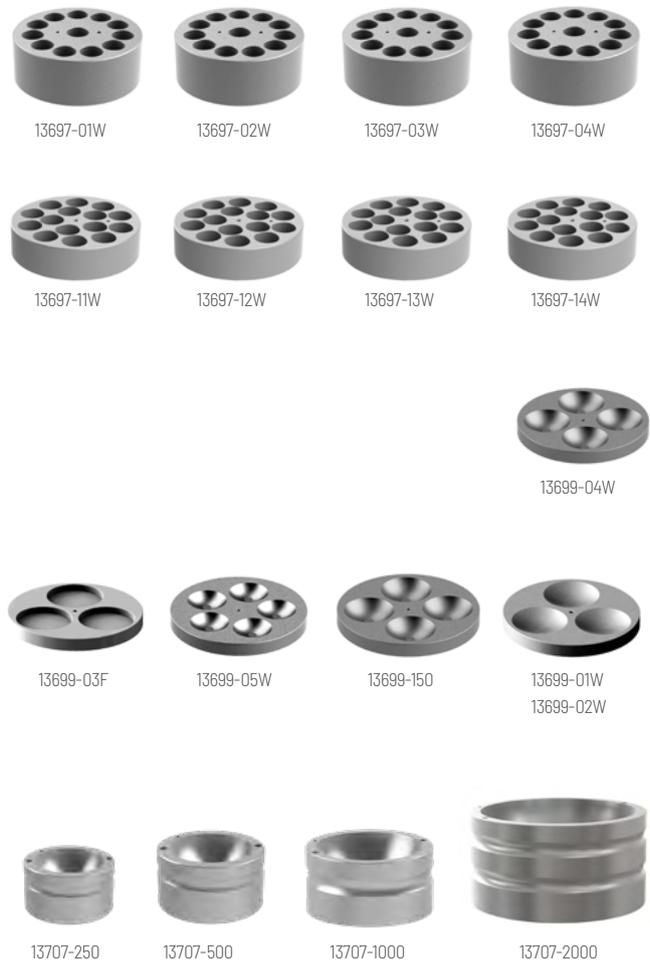
Magnetic Stirrer

> LED Display: Convenient control and real-time monitoring of stirring speed
> Microprocessor Technology: Accurate and stable stirring speed control
> Stirring Plate Surface: Powder-coated stainless steel for durability and corrosion resistance
> Speed Range: 150 to 1500 rpm, suitable for various applications
> Individual Plate Control: Independent operation for each plate

Best-seller!

Specifications

Model	WH-210D	WH-410D	WH-610D
Order No.	400214	400215	400216
Number of stirring positions	1	4	6
Stirring quantity max. per stirring position (H2O) [L]	3	2	2
Speed setting range [rpm]	150~1500	150~1500	150~1500
Speed display	LED display	LED display	LCD display
Speed setting	Turning knob	Turning knob	Turning knob
IP code	IP21	IP21	IP21
Top plate material	Powder coated stainless steel	Powder coated stainless steel	Powder coated stainless steel
Top plate dimensions [mm]	158 x143	(151 x156) x4	(151 x156) x6
Dimensions W x D x H [mm]	189 x 215 x 48	344 x 377 x 48	504 x 377 x 48
Weight [kg]	1.8	2.5	4.0
Power supply	220V/50Hz	220V/50Hz	220V/50Hz

Standard package includes: Stirrer, stirrer bar 4/6 (Corresponding to the mixing position Order No. 1.230.8)

Corrosion resistant mat for magnetic stirrer

> Corrosion Resistant: Protects the magnetic stirrer surface from wear and damage
> Non-Slip Design: Ensures stability during operation
> Reusable and Replaceable: Designed for repeated use and easy replacement when needed

Order No.	400214-PTFE	400215-PTFE	400216-PTFE
Suitable for	WH-210D	WH-410D	WH-610D
Material	PTFE	PTFE	PTFE
Thickness	0.18mm	0.18mm	0.18mm
Attachment strength	25N/100mm	25N/100mm	25N/100mm
Max temperature	260℃	260℃	260℃
Size	158mmx170mm	317mmx325mm	317mmx485mm
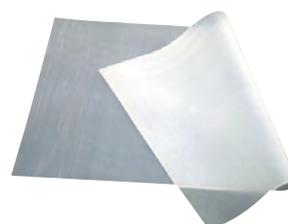
Magnetic Stirrer WH200-C series

The magnetic stirrer features a cycle stirring mode, enabling alternating active stirring and idle periods for a predefined number of cycles. This function is particularly beneficial for cell culture applications, especially in the initial stages, where cells require controlled idle periods within the growth cycle. Both active stirring and idle durations can be independently adjusted to meet specific experimental requirements.

> Designed for low-speed, shear-sensitive mixing to preserve delicate cells
> Available in single position and four positions stirring configurations
> Speed range from 5 RPM to 200 RPM
> Programmable settings for stirring speed and cycles
> The remote control design enables convenient and flexible operation.

Magnetic Stirrer WH1200-C series

Perfectly suited for biological culture, general mixing, and solutes that are challenging to dissolve, this device offers:

> Available in single position and four positions stirring configurations
> Speed range from 5 RPM to 200 RPM
> Programmable settings for stirring speed and cycles
> The remote control design enables convenient and flexible operation.

WH200-C1
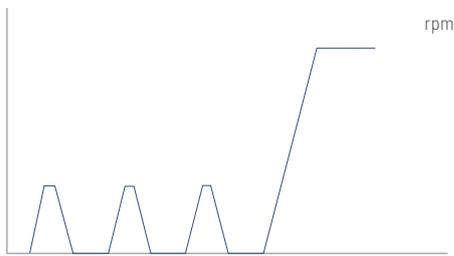
A stirring cycle consists of one running period and one idle period as shown above.
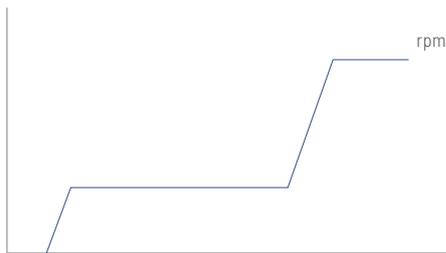
The device can be set to run in two speed stirring mode, as shown above.

WH200-C4

Specifications

Model	WH200-C1	WH200-C4	WH1200-C1	WH1200-C4
Order No.	W3022101	W3022104	W3022111	W3022114
Number of stirring positions	1	4	1	4
Speed setting range [rpm]	5-200	5-200	150-1200	150-1200
Stirring quantity max [L]	3	3	3	3
Power	15W	15W	15W	15W
Operating Temperature:	15 to 40℃	15 to 40℃	15 to 40℃	15 to 40℃
Humidity:	95% up to 37℃	95% up to 37℃	95% up to 37℃	95% up to 37℃
Dimensions W x D x H [mm] (Without controller)	203x249x92	203x249x92	203x249x92	203x249x92
Communicate interface	RS232	RS232	RS232	RS232
Weight [kg]	1.9	4.5	1.9	4.5
Operating Voltage	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz

Mixing culture flask for biological culture

> With magnetic coupling, suitable for culture in suspension cells or microcarriers
> Height adjustable blade and aseptic design, the mixing part is all in the flask
> Wide mouth design facilitates gas exchange
> The borosilicate glass meets the USP I and ASTM E 438I standards, Class A requirements
> Autoclavable

Order No.	Volume (ml)	Dia. x Height (mm)	Center neck	Side neck	MPQ
W3023125	125	65 x 155	51-400	33-430	1 pc
W3023250	250	85 x 175	51-400	33-430	1 pc
W3023500	500	110 x 190	100-400	45 mm	1 pc
W3023103	1000	130 x 250	100-400	45 mm	1 pc
W3023303	3000	178 x 341	100-400	45 mm	1 pc

Mixing culture flask for Microcarrier

> With simple and flexible coupling, suitable for culture in microcarriers
> Thanks to glass ball, it provides a very gentle mixing effect, reduces shear stress and protects cells
> Wide Mouth design facilitates gas exchange
> The borosilicate glass meets the USP I and ASTM E 438I standards, Class A requirements
> Autoclavable

Order No.	Volume (ml)	Dia. x Height (mm)	Center neck	Side neck	MPQ
W3023225	125	65 x 155	51-400	33-430	1 pc
W3023350	250	85 x 175	51-400	33-430	1 pc
W3023600	500	110 x 190	100-400	45 mm	1 pc
W3023203	1000	130 x 250	100-400	45 mm	1 pc
W3023403	3000	178 x 341	100-400	45 mm	1 pc

Accessories and spare parts

Stirring kit with PTFE paddle blades

Order No.	Description	Suitable for
W3023126	Lid for 125 ml Glass culture flask, glass shaft, magnetic coupling and magnetic paddle blades	125 ml Glass culture flask
W3023251	Lid for 250 ml Glass culture flask, glass shaft, magnetic coupling and magnetic paddle blades	250 ml Glass culture flask
W3023501	Lid for 500 ml Glass culture flask, glass shaft, magnetic coupling and magnetic paddle blades	500 ml Glass culture flask
W3023104	Lid for 1000 ml Glass culture flask, glass shaft, magnetic coupling and magnetic paddle blades	1000 ml Glass culture flask
W3023304	Lid for 3000 ml Glass culture flask, glass shaft, magnetic coupling and magnetic paddle blades	3000 ml Glass culture flask

W3023251   W3023501

Stirring kit with glass ball impeller

Order No.	Description	Suitable for
W3023226	Lid for 125 ml Glass culture flask, glass ball impeller and connecting tube	125 ml Glass culture flask
W3023351	Lid for 250 ml Glass culture flask, glass ball impeller and connecting tube	250 ml Glass culture flask
W3023601	Lid for 500 ml Glass culture flask, glass ball impeller and connecting tube	500 ml Glass culture flask
W3023204	Lid for 1000 ml Glass culture flask, glass ball impeller and connecting tube	1000 ml Glass culture flask
W3023404	Lid for 3000 ml Glass culture flask, glass ball impeller and connecting tube	3000 ml Glass culture flask

Glass culture flask

Order No.	Description	Suitable for
W3023127	125 ml glass Glass culture flask with three necks, 1 pc	125 ml Glass culture flask
W3023252	250 ml glass Glass culture flask with three necks, 1 pc	250 ml Glass culture flask
W3023502	500 ml glass Glass culture flask with three necks, 1 pc	500 ml Glass culture flask
W3023105	1000 ml glass Glass culture flask with three necks, 1 pc	1000 ml Glass culture flask
W3023305	3000 ml glass Glass culture flask with three necks, 1 pc	3000 ml Glass culture flask

Submersible Magnetic Stirrer

Fully encapsulated and hermetically sealed PP housing, and suitable for the use in incubators and ovens. water-,dust-, and germ proof, submersible in water. Suitable for working temperature range，0~60℃ .

Stirrer Model	S-1	B-1
Number of stirring positions	1	1
Stirring quantity max. per stirring position (H2O) [L]	1	3
IP code	IP60	IP60
Top plate material	PP housing	PP housing
Dimensions W x D x H [mm]	70 x70 x28	155 x155 x45
Power supply	The power supplied by remote controller	

Order No.	Description
S-1-01	Connection adapter to fix several stirrers together as one multi-position stirrer, Suitable for S-1
B-1-01	Connection adapter to fix stirrers together as one multi-position stirrer, Suitable for B-1
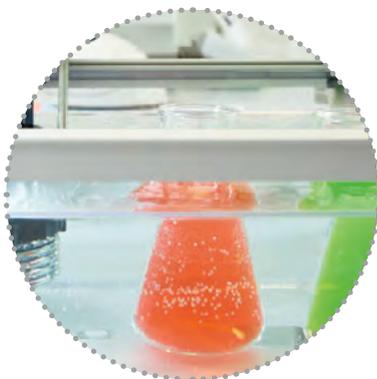
Working inside with the thermostatic bath

Same speed for all connected stirrers
CS-1 and CB-1 controller

Different speed for connected stirrers
CS-4 and CB-4 controller

Controller for submersible magnetic stirrers

Controller Model	CS-1	CS-4	CB-1	CB-4
Suitable for	S-1	S-1	B-1	B-1
Working mode	Same speed for all connected stirrers	Different speed for connected stirrers	Same speed for all connected stirrers	Different speed for connected stirrers
Maximum number of stirrer to connect	4	4	4	4
IP code	IP60	IP60	IP60	IP60
Speed setting range [rpm]	100~1500	100~1500	100~1500	100~1500
Speed setting	Turning knob	Turning knob	Turning knob	Turning knob
Power supply	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz

Stirrer Bar

Cylindrical Stirrer Bar

Cylindrical Stirrer Bars have a smooth round profile.
A popular general purpose stirrer for a wide varity of applications.

Order No.	Name	Description
1.110.6	Cylindrical Stir Bar	Length: 10 mm, Diameter: 6 mm
1.115.6	Cylindrical Stir Bar	Length: 15 mm, Diameter: 6 mm
1.120.7	Cylindrical Stir Bar	Length: 20 mm, Diameter: 7 mm
1.120.8	Cylindrical Stir Bar	Length: 20 mm, Diameter: 8 mm
1.125.8	Cylindrical Stir Bar	Length: 25 mm, Diameter: 8 mm
1.130.8	Cylindrical Stir Bar	Length: 30 mm, Diameter: 8 mm
1.140	Cylindrical Stir Bar	Length: 40 mm, Diameter: 8 mm
1.145	Cylindrical Stir Bar	Length: 45 mm, Diameter: 8 mm
1.150	Cylindrical Stir Bar	Length: 50 mm, Diameter: 8 mm
1.180	Cylindrical Stir Bar	Length: 80 mm, Diameter: 10 mm

Plain Stirrer Bar

Plain Stirrer Bars have similar functions as the cylindrical but give more turbulence at low speed.

Order No.	Name	Description
1.215.6	Plain Stir Bar	Length: 15 mm, Diameter: 6 mm
1.220.7	Plain Stir Bar	Length: 20 mm, Diameter: 7 mm
1.230.7	Plain Stir Bar	Length: 30 mm, Diameter: 7 mm
1.240	Plain Stir Bar	Length: 40 mm, Diameter: 8 mm
1.250	Plain Stir Bar	Length: 50 mm, Diameter: 8 mm
1.260	Plain Stir Bar	Length: 60 mm, Diameter: 10 mm
1.270	Plain Stir Bar	Length: 70 mm, Diameter: 10 mm
1.280	Plain Stir Bar	Length: 80 mm, Diameter: 10 mm

Glass Covered Stirrer Bar

For use with very abrasive media which may erode PTFE

Order No.	Name	Description
1.1212	Glass Covered Stir Bar	Length: 12 mm, Diameter: 5 mm
1.1225	Glass Covered Stir Bar	Length: 25 mm, Diameter: 6 mm
1.1245	Glass Covered Stir Bar	Length: 45 mm, Diameter: 8 mm
1.1260	Glass Covered Stir Bar	Length: 60 mm, Diameter: 8 mm

Cross Stirrer Bar

Cross Stirrer Bars are very stable general purpose stirrers.

Order No.	Name	Description
1.2402	Cross-Shaped Stir Bar	Length: 20 mm, Diameter: 8 mm
1.2405	Cross-Shaped Stir Bar	Length: 38 mm, Diameter: 11 mm
1.2407	Cross-Shaped Stir Bar	Length: 60 mm, Diameter: 20 mm

Oval Stirrer Bar

Oval Stirrer Bars are for round bottom flasks.

Order No.	Name	Description
1.620	Oval Stir Bar	Length: 20 mm, Diameter: 10 mm
1.625.10	Oval Stir Bar	Length: 25 mm, Diameter: 10 mm
1.630	Oval Stir Bar	Length: 30 mm, Diameter: 16 mm
1.635	Oval Stir Bar	Length: 35 mm, Diameter: 16 mm
1.640	Oval Stir Bar	Length: 40 mm, Diameter: 20 mm
1.650.17	Oval Stir Bar	Length: 50 mm, Diameter: 17 mm
1.650	Oval Stir Bar	Length: 50 mm, Diameter: 20 mm

Octahedral Stirrer Bar

Octahedral Stirrer Bars use have similar functions as Pivot Ring type but withincreased turbulence at low speeds.

Order No.	Name	Description
1.515	Octahedral Stir Bar	Length: 15 mm, Diameter: 8 mm
1.525	Octahedral Stir Bar	Length: 25 mm, Diameter: 8 mm
1.538.10	Octahedral Stir Bar	Length: 38 mm, Diameter: 10 mm
1.551.10	Octahedral Stir Bar	Length: 51 mm, Diameter: 10 mm
1.575.10	Octahedral Stir Bar	Length: 75 mm, Diameter: 13 mm

WIGGENS
THE MAGIC MOTION

Double Ended Stirrer Bar

Double Ended Stirrer Bars have a double paddle action for efficient stirring plus high stability.

Order No.	Name	Description
1.1335	Double Ended Stir Bar	Length: 35 mm, Diameter: 8 mm
1.1355	Double Ended Stir Bar	Length: 55 mm, Diameter: 8 mm
1.1335-R/B/Y	Double Ended Stir Bar	Length: 35 mm, Diameter: 8 mm
1.1355-R/B/Y	Double Ended Stir Bar	Length: 55 mm, Diameter: 8 mm

Micro Stirrer Bar

Micro Stirrer Bars are for the smallest containers. Note: Always use the largest stirrer bar possible.

Order No.	Name	Description
1.515-R,B/Y	Colored Octahedral Stir Bar	Length: 15 mm, Diameter: 8 mm
1.525-R,B/Y	Colored Octahedral Stir Bar	Length: 25 mm, Diameter: 8 mm
1.538-R,B/Y	Colored Octahedral Stir Bar	Length: 38 mm, Diameter: 8 mm
1.551.-R,B/Y	Colored Octahedral Stir Bar	Length: 51 mm, Diameter: 8 mm
1.575-R,B/Y	Colored Octahedral Stir Bar	Length: 75 mm, Diameter: 13 mm

Tube Stirrer Bar

Tube Stirrer Bars are designed for use with standard cuvettes.

Order No.	Name	Description
1.420	Triangular Stir Bar	Length: 20 mm, Diameter: 8 mm
1.440	Triangular Stir Bar	Length: 40 mm, Diameter: 14 mm
1.450	Triangular Stir Bar	Length: 50 mm, Diameter: 12 mm
1.480	Triangular Stir Bar	Length: 80 mm, Diameter: 14 mm
1.4136	Triangular Stir Bar	Length: 136 mm, Diameter: 36 mm

Turbo Cylindrical Bar

Exceptional strength coupled with almost total resistance to demagnetisation. Identified by an inert carbon black spot.

Order No.	Name	Description
1.802	Micro Stir Bar	Length: 2 mm, Diameter: 2 mm
1.806	Micro Stir Bar	Length: 6 mm, Diameter: 3 mm
1.808	Micro Stir Bar	Length: 8 mm, Diameter: 1.5 mm
1.813	Micro Stir Bar	Length: 13 mm, Diameter: 3 mm
001-350-8	Turbo Stir Bar	Length 35 mm, Diameter: 8 mm
1.160.RE	Turbo cylindrical	Length: 60 mm, Diameter: 10 mm

Colored Octahedral Stirrer Bar

Colored Octahedral Stirrer Bars are for use where identification is of prime importance.

Order No.	Name	Description
1.1609	Tube Stir Bar	Length: 6 mm, Diameter: 9 mm

Infrared Hot Plate

> Smooth and corrosion resistant ceramic glass top plate
> Excellent transmittance of the infrared light
> Material can resist a thermal shock of up to 700°C
> Corrosion-resistant, solid casing which is hermetically sealed
> Fast heating and excellent temperature stability
> Temperature can be externally controlled by the connection of a Pt100 temperature sensor
> Large LCD screen displays the set and actual temperature
> A high-temperature indicator warns the user and prevents burning injuries
> Rod holder can be conveniently used to connect diverse accessories such as a temperature sensor
> Can be connected to an external temperature sensor for direct and precise temperature control

SLK1-T / SLK2-T

SLK2-T heating up 1L water up to 80°C with external control mode in 15min
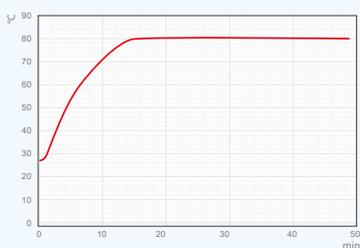
SLK2-T heating up 1L oil up to 160°C with external control mode in 18min
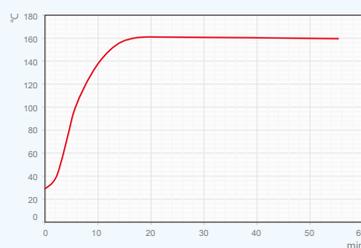
Note: Above data is based on the 220V/50Hz instrument with pure water (H_2O) and simethicone (Silicon Oil).

Specifications

Model	SLK1-T	SLK2-T
Order No.	W3032391	W3032392
Maximum temperature setting	550 [°C] / 24 steps	550 [°C] / 24 steps
Maximum temperature setting with E-sensor [°C]	300	300
Safety temperature [°C]	50~600 adjustable	50~600 adjustable
High temperature protection [°C]	10~50 adjustable	10~50 adjustable
Temperature stability with E-sensor [°C]*	±1	±1
Heat output [W]	1200	1800
External temperature sensor	Pt100	Pt100
PID parameter	3 sets	3 sets
Temperature display	LCD display	LCD display
Temperature setting	Turning knob	Turning knob
Time setting	1~1999min / continuous	1~1999min / continuous
IP code	IP21	IP21
Top plate material	Ceramic glass	Ceramic glass
Top plate dimensions [mm]	280×280	280×280
Heating zone [mm]	Ø190	Ø190
USB interface	Yes	Yes
Dimensions W x D x H [mm]	290x450x120	290x450x120
Weight [kg]	4.1	4.1
Power supply	220V/50Hz	220V/50Hz

*Measured with 500ml water at 80 °C
Standard package includes: hot plate, temperature sensor PT100-01 with holder and clamp

High power hot plate

The high-power hotplate features a ceramic glass top plate, offering exceptional chemical resistance, high surface quality, and the ability to withstand temperature shocks exceeding 700 ℃ . This provides an optimal solution compared to conventional heating surface materials.

> Nano-Coating Heating Technology: Ensures efficient energy transfer for rapid and consistent heating.

> Precise PID Control: Delivers excellent temperature stability, with the capability to achieve ±1 ℃ accuracy when paired with a Pt-100 sensor in most applications.

> User-Friendly LCD Display: A large, clear screen displays essential parameters such as working temperature, working time, and safety temperature, ensuring easy monitoring and operation.

> Memory Function: Retains temperature settings, ideal for experiments requiring fixed conditions.

> Liquid Drainage Design: Prevents liquids from reaching the touch panel and electronics by directing spills away from critical components.

> Direct Pt100 Sensor Connection: Allows precise and convenient solution temperature control.

> Durable Construction: Sealed outer shell and isolated critical components ensure longevity, even in harsh laboratory environments.

> Enhanced Safety Protection: Automatically shuts off heating if the safety range (adjustable between 10-50 ℃) is exceeded, providing robust safety measures.

> ICC Technology: Self-optimizes heating performance for consistent and efficient results.

For external temperature sensor Please refer to Page 113

Specifications

Model	WH500D-1K	WH500D-2K
Order No.	W3032501	W3032502
Temperature setting range	0-450	0-450
Maximum temperature setting with E-sensor [℃]	0-300	0-300
Safety temperature [℃]	500	500
High temperature protection [℃]	2-50	2-50
Temperature stability with E-sensor [℃]*	±1*	±1*
Heat output [W]	1000	2000
External temperature sensor	PT100	PT100
Temperature control	ICC	ICC
Temperature display	TFT	TFT
Time setting	1~1999min / continuous	
IP code	IP21	IP21
Top plate material	Ceramic glass	Ceramic glass
Top plate dimensions [mm]	180x180	280x287
Communicate interface.	RS232/485	RS232/485
Dimensions W x D x H [mm]	240x280x70	320x360x70
Power supply	220V/50Hz	220V/50Hz

*Measured with 500ml water at 80 ℃ .
Standard package includes: hot plate, temperature sensor PT100-01 with holder and clamp.

Digital Hot Plate

> PID temperature control technology for accurate and reliable results
> Suitable for complicated temperature control requirements
> Bright LED screen can display both set value and actual temperature
> Convenient temperature setting via on-touch control
> Timer function for automatic heating up to 100 hours
> Alarm signal output which can be applied to stop the operation of the hot plate and other connected devices
> External Pt100 temperature sensor connection for direct and precise control of the actual sample temperature

The data for H200D-2K heating up the high-temperature oil from 50 to 150℃ (with external temperature sensor)

The surface temperature stability data for WH200D-2K (250℃)
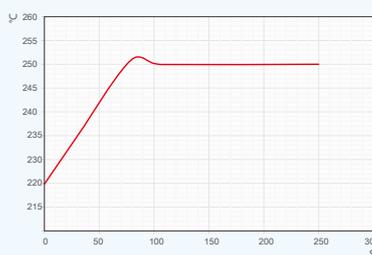
Note: Above data is based on the 220V/50Hz instrument with pure water (H_2O) and simethicone (Silicon Oil).

For external temperature sensor
Please refer to Page 113

WH200D-1K   WH200D-2K   WH200D-3K

Specifications

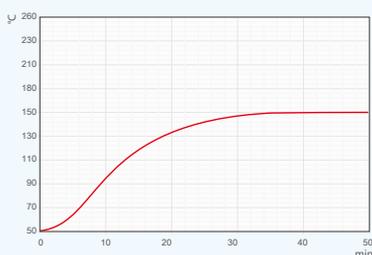| Model	WH200D-1K	WH200D-2K	WH200D-3K
Order No.	400110	400111	400112
Maximum temperature setting	300	300	300
Maximum temperature setting with E-sensor [℃]	300	300	300
Temperature stability [℃]*	±1	±1	±1
Heat output [W]	680	1000	1500
External temperature sensor	Pt100	Pt100	Pt100
Temperature display	LED display	LED display	LED display
Temperature setting	Turning knob	Turning knob	Turning knob
IP code	IP21	IP21	IP21
Top plate material	Aluminum coated with ceramic	Aluminum coated with ceramic	Aluminum coated with ceramic
Top plate dimensions [mm]	170×170	320×320	400×300
Dimensions W x D x H [mm]	240 x280 x70	320 x360 x70	470 x410 x70
Weight [kg]	2.5	7.5	9.0
Power supply	220V/50Hz	220V/50Hz	220V/50Hz

*Measured with 500ml water at 80 ℃
Standard package includes: hot plate, temperature sensor PT100-01 with holder and clamp

Multi-Purpose Heater / Dry Bath

WIGGENS dry block heaters are highly versatile suitable for broad range of applications.

> DNA extractions
> DNA analysis
> Melting point determination
> Nucleic acid hybridization
> Coagulation studies
> Biochemical processes
> Incubation and activation of cultures
> Blood examinations
> Fertile ground processing
> Restriction digest
> Denaturation
> Boiling point determination
> Enzymatic processes
> Enzyme activity studies
> Blood-urea-nitrogen determinations
> Immunoassays
> Enzyme reactions
> In situ hybridization

Picture	Model	Temperature setting range [°C]	Mountable Capacity of Blocks (block size W×L×Hmm)	Dimensions W x D x H [mm]
	WD310	50.0~150.0 °C Temperature setting range with E-sensor 40.0~150.0 °C	1 79×104×50	200 x270 x80
	WD320	50.0~150.0 °C Temperature setting range with E-sensor 40.0~150.0 °C	2 79×104×50	200 x270 x80
	WD325	Fixed 150.0 °C for COD, 60.0~200.0 °C adjustable	1 140×140×61.5	189 x315x116
	WB-350HC	4~95 °C	1 99 x 77.5 x 36	249×330×168
	WB-350T	Amb. +5 to 130 °C	2 98×76.5×51	249×330×250
	WB-350S	Amb. +5 to 130 °C	2 98×76.5×51	249×330×125

Multi-Purpose Heater / Dry Bath

Microprocessor control
The built-in unique microprocessor can provide precise temperature control for a variety of biochemical experiments.

Heating chamber in one piece
The heating tank is made of molded aluminum bath coated with PTFE

Various optional heating blocks
Various types of heating block are available for option, and customized block is optional.

Three types of timer modes
OFF, OFF-TIME, and WAIT-TIME

Certification
CE certification

Application
> Molecular biology
> Biochemistry

Precise temperature control!
> Rapid heat up speed
> Exceptional temperature uniformity
> External PT 100 temperature sensor included

Best-seller!

WD320

WD310

For external temperature sensor
Please refer to Page 113

Specifications

Model	WD310	WD320
Order No.	179310	179320
Temperature setting range [°C]	50.0~150.0	50.0~150.0
Temperature setting range with E-sensor [°C]	40.0~150.0	40.0~150.0
Safety temperature [°C]	Cut off at 170.0	Cut off at 170.0
Temperature stability [°C]	±0.1	±0.1
Temperature accuracy [°C]	±0.1	±0.1
Time setting [min]	1~9959 / off	1~9959 / off
External temperature sensor	Pt100	Pt100
IP code	IP21	IP21
Temperature display	LED display	LED display
Temperature setting	Touch button	Touch button
Number of heating blocks × (block size W×L×Hmm)	1×(79×104×50)	2×(79×104×50)
Dimensions W x D x H [mm]	200 x270 x80	200 x270 x80
Weight [kg]	2.6 (w/o the block)	2.8 (w/o the block)
Power supply	220V/50Hz,1A	220V/50Hz,2A

Standard package includes: Multi-Purpose Heater ,removing block rod, block need to be ordered separately.
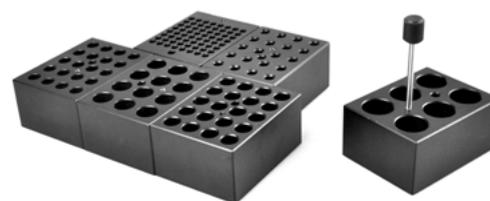
Heating Blocks for WD310 and WD320

Order No.	Size	Number of Holes	Ø x H (mm)
179300-01	0.2 ml	64	6x17 mm
179300-02	0.5 ml	20	8x25 mm
179300-03	1.5 ml(or 2.0)	20	11x35 mm
179300-04	10 ml	20	10x33 mm
179300-05	13 ml	20	13x36 mm
179300-06	20 ml	12	20x48 mm
179300-07	25 ml	6	25x45 mm
179300-10	17 ml	12	17x44 mm

COD Reactor

Features

Compliance with regulations

WD325 COD reactor is used to digest closed micro reflux COD vial and can meet USEPA 410. 4. It is easier and safer than traditional open macro reflux method.

Special COD program

Just press start/stop button, and the reactor will start to heat up to 150℃ and keep for 2-hour countdown then shut down automatically with 10-sec audio alarm.

3 additional program settings

Temperature range setting 60℃ - 200℃ and timer from 1 - 999. 3 Built-in additional heating program settings available for users to store and execute as needed.

Auto shut off and audio alarm

WD325 can stop heating, and then shut off automatically with audio alarm when every program is completed.

Application

> Waste water from factories
> Water quality in lake, pond and river

For external temperature sensor
Please refer to Page 113

Specifications

Model	WD325
Order No.	179200
Temperature setting range [℃]	Fixed 150.0 ℃ for COD, 60.0~200.0 ℃ adjustable
Temperature accuracy [℃]	±2 (at 150.0 ℃)
Hot top indicator	Flashing when block temperature is over 70.0 ℃
Automatic shutoff	The temperature of block is over 240.0 ℃
Time setting [min]	1~1999 with audible alarm and automatic shutoff or continuous operation
Heat output [W]	220
Temperature display	LED display
Temperature setting	Touch button
IP code	IP21
Number of heating block (block size)	1 (25 holes, Ø16.5×55 mm)
Housing material	Stainless steel with powder paint coating
Heating block material	Aluminium alloy
Dimensions W x D x H [mm]	189 x315x116
Weight [kg]	4.5
Power supply	110V/60Hz or 220V/50Hz

Standard package includes:COD Reactor, 1 block (25 holes, Ø16.5×55mm). Other heating blocks need to consult WIGGENS

Heating & Cooling Bath

Rapid cooling and heating in centrifuge tubes, sample vials, micro tubes within the broad temperature range of 4 to 95℃ .
Outstanding temperature compensation function guarantees precise temperature control.

Features

> Precision accuracy of ±0.1℃ is ensured by its PID controller.
> Wide temperature control range from 4 to 95℃ with rapid cool down and heat-up times.
> Maximum 9 temperature range-specific calibration.
> Memory function of programmed protocols allowing relevant parameters of each protocol step to be stored.
  - Up to 10 protocols allowed for memory storage.
  - Up to 10 steps allowed for each protocol.
> Two types of timer modes:
  - Timer 1 starts only after reaching the set temp.
  - Timer 2 starts right after the timer setting.

Convenience

> Cooling is controlled by Peltier elements for an energy efficient compact design.
> Bright VFD display with responsive touch buttons.
> Its polypropylene main body is highly chemical-resistant and easy-to-clean.
> Optimal heat transfer is achieved by the tight coupling design of the main body
  and the corrosion-resistant anodized aluminum blocks.
> Transparent lid allows easy sample monitoring and even temperature
  distribution.
> Blocks can be easily interchanged by the included block lifter.

Specifications

Model		WB-350HC
Order No.		W3033350
Control system		Feedback control PID
Display		VFD (0.1 ℃ resolution)
Temperature	Range (℃)	4 to 95
	Stability at 37℃ (±℃)	0.1
	Variation at 37℃ (±℃)	0.5
Safety	Over temp.	Heating plate
		PCB
	Over current	Current limit protection
Dimension (W×D×H)	Interior (mm)	99 x 77.5 x 36
	Exterior (mm)	249×330×168
	Net weight (kg)	5.0
IP code		IP21
Electrical requirements		230V, 50 / 60Hz/2A

Permissible environmental conditions: temperature (2-60℃) and relative humidity (up to 80%)
Standard package includes: Heating & Cooling bath, cover, removing block rod, block need to be ordered separately.

Multi-Purpose Heater / Dry Bath

Ideal for simultaneous sample heating of multiple vials or test tubes with uniform and precise temperature control.

Features

> Precision accuracy of ±0.1℃ is ensured by its PID controller from ambient + 5℃ to 130℃ .
> Its built-in temperature limit setting feature (with max. 0.2℃ overshooting) allows you to perform highly temp.
  sensitive reactions such as isothermal amplifications.
> Automatic power cut off.
   - If the temperature of the main body exceeds 150℃ .
   - If the internal circuit is overheated.
> Two types of timer modes:
   - Timer 1 starts only after reaching the set temp.
   - Timer 2 starts right after the timer setting.

Convenience

> Its polypropylene main body is highly chemical-resistant and easy-to-clean.
> Optimal heat transfer is achieved by the tight coupling design of the main
  body and the corrosion-resistant anodized aluminum blocks.
> Bright VFD display with responsive touch buttons.
> Transparent lid allows easy sample monitoring and even temperature
  distribution.
> Blocks can be easily interchanged by the included block lifter.

Specifications

Model		WB-350T	WB-350S
Order No.		W3033351	W3033352
Control system		Feedback control PID	Feedback control PID
Display		VFD (0.1℃ resolution)	VFD (0.1℃ resolution)
Temperature	Range (℃)	Amb. +5 to 130	Amb. +5 to 130
	Stability at 37℃ (±℃)	0.1	0.1
	Variation at 37℃ (±℃)	0.5	0.5
Safety	Over temp.	Heating plate	Heating plate
		PCB	PCB
	Over current	Current limit protection	Current limit protection
Dimension (W×D×H)	Interior (mm)	154×99×37	154×99×37
	Exterior (mm)	249×330×250	249×330×125
	Net weight (kg)	4.3	3.9
IP code		IP21	IP21
Electrical requirements		230V, 50 / 60Hz/2.8A	230V, 50 / 60Hz/2.8A

Standard package includes: Multi-Purpose Heater, cover,removing block rod, block need to be ordered separately.

Blocks for WB-350S / 350T / 350HC

Block	Order No.	Description	WxDxH (mm)	Mountable Capacity of Blocks		
				WB-350S	WB-350T	WB-350HC
	W3033001	0.2ml x 96 holes（microtube）	153×98×41	1	1	-
	W3033002	0.5ml x 48 holes（microtube）	98×76.5×41	2	2	1
	W3033003	1.5ml x 48 holes（microtube）	153×98×41	1	1	-
	W3033004	15ml x 15 holes（centrifuge tube）	98×76.5×51	2*	2	1*
	W3033005	50ml x 6 holes（centrifuge tube）	98×76.5×51	2*	2	1*
	W3033006	50ml x 6 holes（centrifuge tube）	98×76.5×87	2	2	1*
	W3033007	Ø10 x 35 holes	98×76.5×51	2*	2	1*
	W3033008	Ø12 x 24 holes	98×76.5×51	2*	2	1*
	W3033009	Ø13 x 24 holes	98×76.5×51	2*	2	1*
	W3033010	Ø15 x 20 holes	98×76.5×51	2*	2	1*
	W3033011	Ø16 x 16 holes	98×76.5×51	2*	2	1*
	W3033012	Ø18 x 12 holes	98×76.5×51	2*	2	1*
	W3033013	Ø20 x 12 holes	98×76.5×51	2*	2	1*

* Available to use only when the lid is opened.

WIGGENS
THE MAGIC MOTION

Soxhlet Extraction System (SES)

Wiggens Soxhlet Extraction System is based on the Soxhlet extraction principle and integrates such functions as soaking, extraction, leaching, heating, condensation and solvent recovery. It features sealed metal bath heating with automatic temperature control, ensuring uniform heating and safe operation; six samples can be tested at the same time, and optimal temperature can be selected according to the difference between reagent boiling point and RT so as to achieve quick analysis; reagents can also be recycled to reduce test cost; and soaking,extraction and solvent recovery can be done in one step. Therefore, this device is characterized by reasonable design, stable performance, good reproducibility, high accuracy, easy operation, saving time and effort, and so on.

SES can quickly separate one substance from solid or semi-solid mixtures, can determine the soluble organic compounds contained in foods, feeds,medicines, soil, sludge, polymers, fiber products, petrochemical products, detergent, rubbers, plastics and other materials.

LED display
The set temperature and actual temperature can be displayed simultaneously

450℃ Extremely high temperature
Temperature can reach up to 450℃
Display resolution is 0.1℃

Independent temperature control
According to the experimental requirements, different position can be run at the same or different temperature

Glassware
Both round and flat bottom flasks can be ordered with 300ml and 500ml volume

Cellulose fiber extraction thimbles
Optional, good retention. seamless, high quality extraction thimbles, single thickness.
Readily permeable to the flow of ether and other organic solvents.

Specifications

Order No.	Model	Temperature range	Heat output	Flask volume		Glass extraction thimbles	
		℃	Each position [W]	volume [ml]	Bottom	ID x H [mm]	Sintered glass
3-place Soxhlet Extraction System (Multi-position heating mantle with stand)							
W3030350	SES350	RT +5~450	180W	500	Flat	45 x 130	20-35µm / 100-200 µm
W3030355	SES355	RT +5~450	180W	500	Round	45 x 130	20-35µm / 100-200 µm
W3030395	SES395	RT +5~450	290W	1000	Round	45 x 130	20-35µm / 100-200 µm
6-place Soxhlet Extraction System (Multi-position heating mantle with stand)							
W6030630	SES630	RT +5~450	125W	300	Flat	45 x 130	20-35µm / 100-200 µm
W6030635	SES635	RT +5~450	125W	300	Round	45 x 130	20-35µm / 100-200 µm

Glassware need to be ordered seperately
Standard package includes: Multi-position heating mantle with stand

Multi-Position Heating Mantle

WIGGENS Multi-position heating mantle has always been the mantle of choice for repetitive extracting, refluxing, and distilling procedures in labs of the food, textile fiber, water and waste-water, petroleum, and many other industries. WIGGENS latest version offers safety and convenience never before available in a multi-place heating mantle.

> Lower profile for space-saving convenience
> Revolutionary heating element container system makes replacing burned-out elements a simple task
> Clear anodized aluminum cabinet with blue PTFE resin coated top for chemical resistance.
> Offered in two space-saving configurations; six-place for 100 - 300 ml flasks and three-place for 500 - 1,000 ml flasks
> Available in low-temperature (450℃ RX version) and high-temperature (650℃ RJ version) for greater versatility
> The ideal mantle for Kjeldahl, Soxhlet, and other extraction procedures.

LED display
The set temperature and actual temperature can be displayed at the same time

450℃ Extremely high temperature
Temperature can reach up to 450℃
Display resolution is 0.1℃

650℃ Extremely high temperature
Temperature can reach up to 650℃
Display resolution is 0.1℃

Independent temperature control
According to the experimental requirements, each position can be set at the same or different temperature

Replaceable element containers
The replaceable element containers provide spill containment and can be replaced in a matter of a few minutes.

Order No.	Model	Flask Size ml	Maximum Diameter mm	Bottom	Rating Per Position	Replacement Element Order No.
Three-Place - medium temperature						
W3031350	RX350	500	103	Flat	180W	RX50024E
W3031354	RX354	500	101	Round	180W	RX50224E
W3031394	RX394	1000	130	Round	290W	RX100024E
Three-Place - high temperature						
W3031356	RJ356	500	103	Flat	300W	RJ50024E
W3031358	RJ358	500	101	Round	300W	RJ50224E
Six-Place - medium temperature						
W3031630	RX630	250/300	87	Flat	125W	RX30024E
W3031634	RX634	250/300	87	Round	125W	RX30424E
Six-Place - high temperature						
W3031636	RJ636	250/300	87	Flat	210W	RJ30024E
W3031638	RJ638	250/300	87	Round	210W	RJ30424E

Standard package includes: Multi-position heating mantle

Table C - Soxhlet Lipid Extraction Apparatus (for Combo Mantles)

Size	Flask volume (ml)	Extractor Top Joint	Extractor Bottom Joint	Package Order No.	Condenser Order No.	Extractor Order No.	Extraction Thimbles Order No.	Flask volume Order No.
Suitable for Wiggens Combo Mantles (Six positions Flat Bottom)								
A	100	34 / 45	24 / 40	189100-11	189102-01	189101-01	189103-01	189105-01
A	100	34 / 45	24 / 40	189100-12	189102-01	189101-01	189103-02	189105-01
A	125	34 / 45	24 / 40	189100-01	189102-01	189101-01	189103-01	189105-02
A	125	34 / 45	24 / 40	189100-02	189102-01	189101-01	189103-02	189105-02
B	250	45 / 50	24 / 40	189100-03	189102-02	189101-02	189103-03	189105-03
B	250	45 / 50	24 / 40	189100-04	189102-02	189101-02	189103-04	189105-03
D	300	55 / 50	24 / 40	189100-05	189102-03	189101-04	189103-05	189105-04
D	300	55 / 50	24 / 40	189100-06	189102-03	189101-04	189103-06	189105-04
Suitable for Wiggens Combo Mantles (Six positions Round Bottom)								
A	100	34 / 45	24 / 40	189100-21	189102-01	189101-01	189103-01	189104-01
A	100	34 / 45	24 / 40	189100-22	189102-01	189101-01	189103-02	189104-01
A	125	34 / 45	24 / 40	189100-23	189102-01	189101-01	189103-01	189104-02
A	125	34 / 45	24 / 40	189100-24	189102-01	189101-01	189103-02	189104-02
B	250	45 / 50	24 / 40	189100-25	189102-02	189101-02	189103-03	189104-03
B	250	45 / 50	24 / 40	189100-26	189102-02	189101-02	189103-04	189104-03
D	300	55 / 50	24 / 40	189100-27	189102-03	189101-04	189103-05	189104-04
D	300	55 / 50	24 / 40	189100-28	189102-03	189101-04	189103-06	189104-04
Suitable for Wiggens Combo Mantles (Three positions Flat Bottom)								
D	500	55 / 50	24 / 40	189100-07	189102-03	189101-04	189103-05	189105-05
D	500	55 / 50	24 / 40	189100-08	189102-03	189101-04	189103-06	189105-05
Suitable for Wiggens Combo Mantles (Three positions Round Bottom)								
D	500	55 / 50	24 / 40	189100-41	189102-03	189101-04	189103-05	189104-05
D	500	55 / 50	24 / 40	189100-42	189102-03	189101-04	189103-06	189104-05
D	1000	55 / 50	24 / 40	189100-43	189102-03	189101-04	189103-05	189104-06
D	1000	55 / 50	24 / 40	189100-44	189102-03	189101-04	189103-06	189104-06

Soxhlet Extraction 6-position Heating Plate

The design concept of WH-106 is compactness, safety and efficiency. For compactness, the layout of hotplates has been changed from traditional 6 holes in one row to 3 each in 2 rows, so that we can save 50% operating space.

The distance between each hole is 55mm which is in accord with DIN 44548 and wide enough for users to handle the samples in back row conveniently. WH-106 contains six embedded heating plates with 85mm diameter, and its heating components are made in Germany, rugged and easy to maintain. Each plate with a heating indicator is controlled independently, and the temperature can reach 425℃ . For safety reason, each plate is surrounded by a rim for keeping electronics from spilling. The whole housing is made of stainless steel with paint coating.

Application

> COD digestion
> Lipid extraction
> Kinds of heating

Modle	WH-106
Heating plate	6×Ø85mm diameter cast-iron with embedded heating resistor
Safety	Each top plate is surrounded by a rim that protect electronics from spills. Spacing of 55mm between the heating plate is in accord with DIN 44548.
Max. Temperature	425℃
Control	Each heating plate is controlled independently
IP code	IP21
Power supply	6×450W
Order No.	178106

Standard package includes: Multi-position heating mantle with stand

Parallel reaction for Soxhlet extraction

Soxhlet Lipid Extraction Apparatus (Suitable for WH-106)

Size	Flask volume (ml)	Extractor Top Joint	Extractor Bottom Joint	Package Order No.	Condenser Order No.	Extractor Order No.	Extraction Thimbles Order No.	Flask volume Order No.
A	125	34 / 45	24 / 40	189100-01	189102-01	189101-01	189103-01	189105-02
A	125	34 / 45	24 / 40	189100-02	189102-01	189101-01	189103-02	189105-02
B	250	45 / 50	24 / 40	189100-03	189102-02	189101-02	189103-03	189105-03
B	250	45 / 50	24 / 40	189100-04	189102-02	189101-02	189103-04	189105-03
B	300	45 / 50	24 / 40	189100-05	189102-02	189101-02	189103-03	189105-04
B	300	45 / 50	24 / 40	189100-06	189102-02	189101-02	189103-04	189105-04
D	500	55 / 50	24 / 40	189100-07	189102-03	189101-04	189103-05	189105-05
D	500	55 / 50	24 / 40	189100-08	189102-03	189101-04	189103-06	189105-05

Extraction Thimbles - Glass

With a Wiggens fritted disc sealed in, it can be used in any standard Soxhlet extraction apparatus. The sizes below correspond to the size specifications of extraction bodies and will fit those units.

Size	A	A	B/C	B/C	D	D
ID x H (mm)	25 x 85	25 x 85	35 x 90	35 x 90	45 x 130	45 x 130
Sintered glass	20-35µm	100-200µm	20-35µm	100-200µm	20-35µm	100-200µm
Order No.	189103-01	189103-02	189103-03	189103-04	189103-05	189103-06

Specifications for Wiggens Extractor Bodies

Specification				
Size	A	B	C	D
Use Thimble Size (mm)	25 x 85	35 x 90	35 x 90	45 x 130
Extractor Top Joint	34 / 45	45 / 50	45 / 50	55 / 50
Extractor Bottom Joint	24 / 40	24 / 40	29 / 42	24 / 40
Condenser Bottom Joint	34 / 45	45 / 50	45 / 50	55 / 50
Length of Siphon (mm)	190	260	260	300

Extractor Body

Size	A	B	C	D
Extractor Top Joint	34 / 45	45 / 50	45 / 50	55 / 50
Extractor Bottom Joint	24 / 40	24 / 40	29 / 42	24 / 40
Order No.	189101-01	189101-02	189101-03	189101-04

Extraction Apparatus

Bulb type for use with regular extraction apparatus. Improved design permits greater condensing capacity.

Size	A	B/C	D
Extractor Top Joint	34/45	45/50	55/50
Tubing Size (mm)	190	260	300
Height (mm)	275	365	405
Order No.	189102-01	189102-02	189102-03

Extraction Thimbles

CELLULOSE FIBER. Good retention. Seamless, high quality extraction thimbles, single thickness.
Readily permeable to the flow of ether and other organic solvents. Packed 25 per box.

Size (Ø x H)	27 x 80	27 x 60	30 x 80	33 x 94	40 x 123
Order No.	6811-08	6811-14	6811-20	6811-22	6811-24

Flask

Round bottom with short neck and outer joint.

24/40 Joint

Capacity（ml）	100	125	250	300	500	1000
Order No.	189104-01	189104-02	189104-03	189104-04	189104-05	189104-06

29/42 Joint

Capacity（ml）	100	250	500	1000
Order No.	189104-11	189104-13	189104-15	189104-16

Flask

Single Neck, Flat Bottom

24/40 Joint

Capacity(ml)	100	125	250	300	500	1000
Order No.	189105-01	189105-02	189105-03	189105-04	189105-05	189105-06

29/42 Joint

Capacity（ml）	250	300	500	1000
Order No.	189105-13	189105-14	189105-15	189105-16

![WIGGENS The Magic Motion]

Temperature and stirring controller

for measuring, control and monitoring

WIGGENS temperature controllers measure, control and monitor applications in laboratories such as heating mantle and chemical reactors.

T Temp. C Control S Safety S Stirring

Ordering Information

Models / Specifications		TCSS	PL524 Pre	PL524 Pro-Stir	PL524 Pro	PC524
Name		Programmable controller for temperature and stirring	Programmable controller for temperature	Temperature and stirring controller	Temperature controller	Safety temperature protector
Screen	5" TFT touch screen	●	●			
	LED			●	●	●
Function	Heating	●	●	●	●	
	Cooling	●	●			
	Programming	●	●			
	Stirring	●		●		
	Safety temperature	●	●	●	●	●
Interface	RS485	●	●			
	RS232	●	●	●	●	
	Ethernet	●	●	●		
	USB-A	●	●			
	Alarm	●	●	●	●	
Options	Pt100	○	○	○	○	○
	Thermocouple	○	○	○	○	○
	heating mantle	○	○	○	○	
	matching unit	○ please reference Note 3		○ please reference Note 3		
	Solenoid valve for cooling	○				

Temperature,Stirring Speed,Cooling Valve Controller

Programmable temp. Control and security protection

Temp. and Stir. Controller

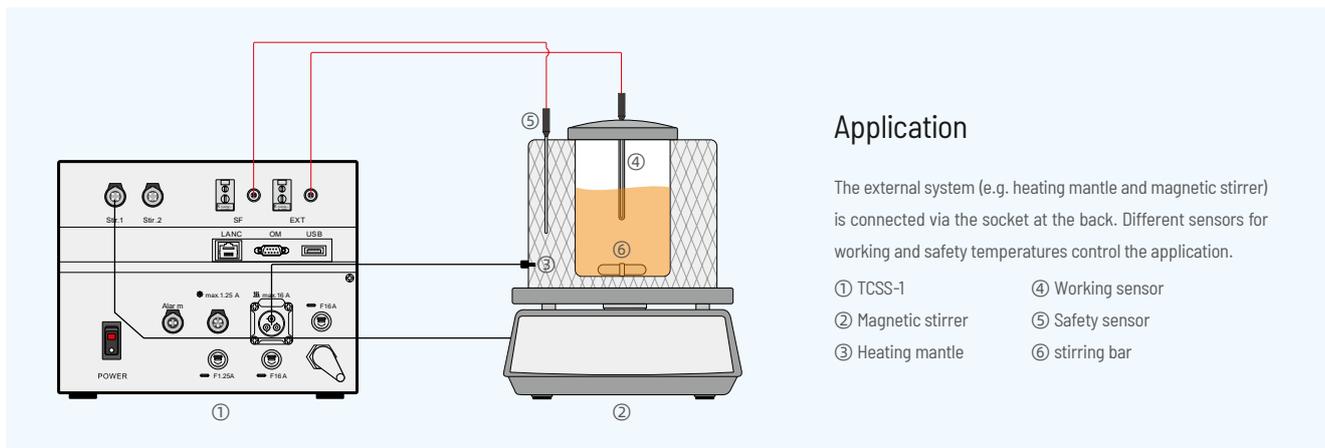Temp. Control and safety protection

Overheated safety protection

Note 1： ● Standard configuration ○ Options
Note 2： TCSS, PL524 Pre, PL524 Pro-Stir, PL524 Pro working with two temperature sensors；PC524 just need one temperature sensor
Note 3： TCSS-1 matching with heating-stirring mantle，PL524pro-Stir matching with heating-stirring mantle

Application

The external system (e.g. heating mantle and magnetic stirrer) is connected via the socket at the back. Different sensors for working and safety temperatures control the application.

① TCSS-1   ④ Working sensor
② Magnetic stirrer   ⑤ Safety sensor
③ Heating mantle   ⑥ stirring bar

Heating Mantle

Aluminum Housed Mantle

> Rigid housing provides strength and durability while supporting the weight of the vessel
> Fabric interior to softly nest glass vessels and reduce the chance of thermal shock
> Adaptable to most vessels including larger sizes
> With stands 450℃ internal operating temperature (650℃ for Series STM), enough power for most applications
> Can be adapted to special applications with custom sizes, bottom holes, and special electrical devices
> Feet on smaller sizes designed to provide stability and promote cooler exterior temperatures

Spherical Flask Mantle

> The Series TM spherical flask mantle covers only the flask's bottom half, letting you see its full contents. Larger sizes have multiple circuits for ease of temperature control when a flask is less than half full.
> Poncho Safety Shields can be used with sizes 500 ml (TM107) and larger.

Specifications

Complete System Order No.	Order No.	Flask Capacity ml	Max. Flask Diameter mm	Watts W	Depth mm	Outside Dia. mm	Height mm	Weight kg
WTM95	TM95	50	48	60	24	159	121	1.0
WTM97	TM97	100	60	80	30	159	121	1.0
WTM99	TM99	125	70	80	35	159	121	1.0
WTM101	TM101	200	76	100	38	159	121	1.0
WTM103	TM103	250	83	180	41	159	121	1.1
WTM105	TM105	300	86	180	43	159	121	1.1
WTM107	TM107	500	101	270	51	159	127	1.1
WTM109	TM109	1000	130	380	65	191	127	1.4
WTM111	TM111	2000	170	500	86	254	152	2.1
WTM113	TM113	3000	183	500	91	254	152	2.1
WTM115	TM115	5000	220	600	109	305	178	2.8
WTM117	TM117	12000	293	2@650	147	419	229	6.8
WTM119	TM119	22000	347	2@770	173	483	254	8.5
WTM121	TM121	50000	456	3@1000	228	610	330	18.6
WTM122	TM122	72000	522	3@2000	259	660	356	20.0

WTM series
Spherical flask mantle with temp. control and security protection, the flask is not included

TM series
Spherical flask mantle only, the flask is not included

![WIGGENS The Magic Motion]

Stir Mantle

> The Stir Mantle adds electromagnetic stirring capability (50-750 rpm) to the Series TM heating mantle for spherical flasks. Heating and stirring are independent, choosing either or both. Speed is easily adjusted by a single dial on the PL524pro-Stir.

> The PL524pro-Stir creates and synchronizes the magnetic field. When restarting (as for removal and reinsertion of the flask), Wiggens "Synchrostart" feature maintains linkage between the field and the bar. The PL524pro-Stir connects to the StirMantle by cord, so it may be placed outside corrosive hood atmospheres and is easily accessible.

> PL524pro-Stir connecting cords, and stir bar. Completely grounded and fused.

Specifications

Complete System Order No.	Order No.	Flask Capacity ml	Depth mm	Watts W	Outside Dia. mm	Height mm	Weight kg
EMS103P	EMS103	250	42	180	159	121	2.0
EMS105P	EMS105	300	43	180	159	121	2.0
EMS107P	EMS107	500	51	270	159	133	2.0
EMS109P	EMS109	1000	65	380	191	140	2.4
EMS111P	EMS111	2000	85	500	254	165	2.5
EMS113P	EMS113	3000	91	500	254	165	2.9

Complete system of stir mantle (EMS1XXP)

Temperature sensor

Order No.	Description	Suitable for
PT100-01	Type I, External Pt100 sensor, -30~300℃ ;Length: 170 mm; Diameter: 4 mm; Material: Stainless steel;	
PT100-02	Type II, External Pt100 sensor, -30~300℃ ; Length: 300 mm; Material: Stainless steel, Fig. ①	
8981003W	WP206S, External Pt100 sensor, 200 x Ø6 mm, stainless steel, 1.5 m cable.	
8981010W	WP306S, External Pt100 sensor, 300 x Ø6 mm, stainless steel, 1.5 m cable.	
PT100-03	Type III, External Pt100 sensor, -30~250℃ ; Length: 170 mm; Material: Stainless steel, PTFE coated, Fig. ②	
PT100-04	Type IV, External Pt100 sensor, -30~250℃ ;Length: 300 mm; Material: Stainless steel, PTFE coated	Wiggens hot plate stirrer (except WH200 and WH210), Hot plate, Heating block, Temperature controller
PT100-06	Type VI, External Pt100 sensor, -30~300℃ ; Length: 250 mm; Diameter: 4 mm; Material: Glass; Fig. ③	
PT100-07	Type 07, External Pt100 sensor, 240 x Ø3.15 mm, stainless steel, 1.5 m cable.	
8981017W	WP206P, External Pt100 sensor, 200 x Ø6 mm, stainless steel/PTFE coated, 3 m cable.	
8981015W	WP306P, External Pt100 sensor, 300 x Ø6 mm, stainless steel/PTFE coated, 3 m cable.	
W8981017W	WP206P, External Pt100 sensor, 200 x Ø6 mm, stainless steel/PFA coated, 3 m cable.	
W8981015W	WP306P, External Pt100 sensor, 300 x Ø6 mm, stainless steel/PFA coated, 3 m cable.	
600.170.1	K type thermocouple, Length: 170 mm; Diameter: 4 mm; Material: Stainless steel; Admissible temperature: 0-500℃	WH200 / WH210
PR5600-009	K type thermocouple, -50-1200℃；Length: 1m ④ The temperature tolerance of the protective cover shall not exceed 350 degrees Celsius	PL524, TCSS, PR series

① ② ③ ④
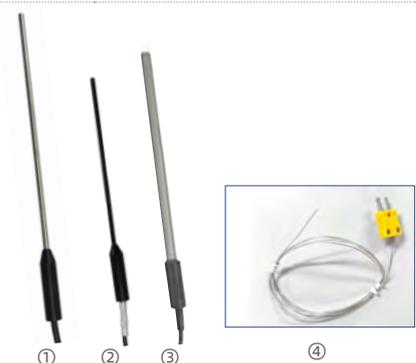
Overhead stirrer

Attractive design for demanding stirrers & mixing

Our new complete range of laboratory overhead stirrers will meet your high demands every day!

High Torque / High Speed Overhead Stirrer Pro series
WOHS-200 Pro, WOHS-400 Pro, WOHS-20H Pro

Remotely Controllable High Torque / High Speed Stirrers, Suitable for reaction
DF series
WB3000-DF, WB1800-DF, WB6000-DF

Remotely Controllable High Torque / High Speed Stirrers
C & EC Series
WB3000-C, WB1800-C, WB3000-EC, WB1800-EC

Overhead Stirrer 2000 series
WB2000-M, WB2000-C

Overhead Stirrer WOHS series
WOHS-10Pro, WOHS-15Pro

WB2000-C

WB2000-M

WOHS-10 Pro

Overhead Stirrer

WOHS-10 Pro / WOHS-15 Pro

Overhead Stirrers of the WOHS range are perfect for stirring and mixing applications. The devices are designed to surpass the requirements of laboratories and institutions around the world with their modern technology and high quality.

TFT Display
TFT display with vivid luminance is easy to read, even from a long distance.

Precise speed control
Easy operation of all parameters using the central turning knob and touch key

Working status indicator
Standby (blue) , Running (green) , Alarm (red)

Brushless DC motor
for long life span, low maintenance and quiet running

Keyless chuck
It allows you to quickly and easily remove the stirring elements without any tools.
Clamping range: 0.5-10mm

RS232 / RS485
The stirrer comes equipped with RS 232 and RS485 interface to control and document all parameters.

Timer
0~99hr99min
Automatic timing function, after start the stirring , the display will automatically start the function: countdown the running time

Temperature measurement
Temperature measuring range: -10~350°C
Temperature measurement resolution: 0.1°C

Direction of rotation
Clockwise or counterclockwise
(Only WOHS10/15 are available)

Specifications

Model	WOHS-10 Pro	WOHS-15 Pro
Order No.	W3041010	W3041015
Speed range [rpm]	40~2000	40~2000
Setting accuracy speed [rpm]	1	1
Deviation of speed measurement n > 300rpm	±3 %	±3 %
Speed Display	TFT display	TFT display
Clockwise or counterclockwise of stirring	Yes	Yes
Speed setting	Touch key and turning knob	Touch key and turning knob
Time setting range	99h59min59sec	99h59min59sec
Temperature measuring range	-10~350	-10~350
Stirring quantity max [L / H_2O]	15	50
Temperature measurement resolution	0.1	0.1
Working status indicator	Standby (blue) , Running (green) , Alarm (red)	Standby (blue) , Running (green) , Alarm (red)
Power [W]	30	60
Motor principle	Brushless DC motor	Brushless DC motor
IP code	IP42 | IP40	IP42 | IP40
Torque max. at stirring shaft [N-cm]	15	29
Stirring element fastening	Keyless chuck, easy to install and replace the shaft	Keyless chuck, easy to install and replace the shaft
Chuck range diameter [mm]	0.5~10	0.5~10
Hollow shaft, inner diameter [mm]	10.2	10.2
Fastening on stand	Extension arm	Extension arm
Housing material	Cast aluminum coating / thermoplastic polymer	Cast aluminum coating / thermoplastic polymer
Power supply	100~240VAC,50/60Hz	100~240VAC,50/60Hz

According to needs, it is convenient to choose different package:

Standard Package P1 includes

Overhead Stirrer, WF12 Support stand.

Standard Package P2 includes

Overhead Stirrer, WF12 Support stand, 9004 impeller

Standard Package P3 includes

Overhead Stirrer, includes WF12 Support stand, 5.240.8.2 PTFE impeller

Overhead Stirrer

WB2000-M / WB2000-C

WIGGENS offers overhead stirrers for your stirring and mixing tasks in the lab for low to high viscosities. Safety, power and intelligence are again at the core of the development of this product range. The powerful motors achieve homogeneous results with exact speed even under changing loads or high viscosity and produce little noise. Many reliable solutions are available, according to different requirements in terms of viscosity and volume.
WIGGENS overhead stirrers process stirring quantities of up to 100 liters.

> Brushless DC motor, which is very suitable for long-term experimental applications
> Stable and accurate stirring process due to latest micro-processor technology
> Slow ramp-up and speed limits protect you from splashes
> Totally enclosed and compact casing
> The high torque ensures maximum efficiency and minimal processing time even for high-viscosity media
> Stable and quiet working process
> Internal overload protection
> Adjustable impeller shaft for different heights
> Soft start at low speed guarantees a smooth and safe stirring process
> Suitable for applications in various environments
> The standard version package entails the overhead stirrer, a stand, rod, and clamp, as well as a stainless steel impeller
> Availability of a wide range of different optional impellers

Best-seller!

Features of the WB2000-C

> Employs all basic functions of the WB2000-M overhead stirrer
> The WB2000-C come with a reversible rotation function
> The WB2000-C employs button control and a bright LCD speed display
> Directly connectable to the computer via RS-232 cable for remote control
> Equipped with digital input/output ports and foot pedal port for various applications
> Suitable for stirring in reaction systems or stirring applications linked to other equipment

Clear LED Display

Easy-to-read screen, display the speed value.

Control Knob

Set the speed by rotating. Start / stop the stirrer function by pressing.

Keyless Chuck

It allows you to quickly and easily remove the stirring elements without any tools.
Clamping range: 0.5-10mm

WB2000-M

WB2000-C

Specifications

Model	WB2000-M	WB2000-C
Order No.	100300	100500
Speed range [rpm]	40~2000	40~2000
Setting accuracy speed [rpm]	1	1
Deviation of speed measurement n > 300rpm	±3 %	±3 %
Speed Display	LED display	LCD display
Clockwise or counterclockwise of stirring	No	Yes
Speed setting	Turning knob	Push button
Stirring quantity max [L / H_2O]	50	50
Input power [W]	70	70
Output power [W]	50	50
Motor principle	Brushless DC motor	Brushless DC motor
Torque max. at stirring shaft [N-cm]	66	70
Stirring element fastening	Keyless chuck, easy to install and replace the shaft.	
Chuck range diameter [mm]	0.5~10	0.5~10
Hollow shaft, inner diameter [mm]	10.2	10.2
Fastening on stand	Extension arm	Extension arm
IP code	IP42	IP40	IP42	IP40
Extension arm diameter [mm]	13	13
Extension arm length [mm]	124	124
Housing material	Cast aluminum coated	
RS232 interface	No	Yes
Dimensions (W x H x D)mm	105 x160 x185	105 x160 x185
Weight [kg]	3	3
Power supply	100~240VAC,50/60Hz	100~240VAC,50/60Hz

According to needs, it is convenient to choose different package:

Standard Package P1 includes

Overhead Stirrer, WF12 Support stand.

Standard Package P2 includes

Overhead Stirrer, WF12 Support stand, 9004 impeller

Standard Package P3 includes

Overhead Stirrer, includes WF12 Support stand, 5.240.8.2 PTFE impeller

WIGGENS
The Magic Motion

High Torque / High Speed Overhead Stirrer
Pro series

Designed for blending medium to high-viscosity liquids or solid-liquid mixtures. Primarily employed in chemical synthesis, pharmaceuticals, physicochemical analysis, petrochemicals, cosmetics, health products, food, biotechnology, and related areas.

> Ideal for stirring tasks involving large volumes and high-viscosity samples.
> Offers various mixing speeds or torque options.
> Utilizes microcomputer control technology for consistent speed.
> Features a maintenance-free brushless DC motor, designed for extended, high-load laboratory work.
> Provides two adjustable speed ranges, with low-speed torque exceeding five times the high-speed torque.
> Compatible with a broad selection of mixing impellers.

High Torque
High Speed

TFT Display

TFT display with vivid luminance is easy to read, even from a long

Precise speed control

Easy operation of all parameters using the central turning knob and touch key.
Accuracy ±1rpm

Working status indicator

Standby (blue) , Running (green) , Alarm (red)

Brushless DC motor

For long life span, low maintenance and quiet running.

Keyless chuck

It allows you to quickly and easily remove the stirring elements without any tools.
Clamping range: 0.5-10mm

RS232 / RS485

The stirrer comes equipped with RS 232 and RS485 interface to control and document all parameters.

Timer

99h59min59sec
Automatic timing function, after start the stirring, the display will automatically start the function: countdown the running time.

Temperature measurement

Temperature measuring range: -10~350℃
Temperature measurement resolution: 0.1℃

High Torque / High Speed

Offering the best mixing results, even for challenging applications.

Control mode switch among Local, ANA.U, ANA.I, Foot, Remote Control

Actual speed

Menu

Adjustable knob

Set speed

Timer, set operation time

Temperature display

Stirrer converts output current to torque, reflecting the load changing of motor.

Torque mode switch

The Pro Series stirrer can accomplish the most demanding tasks while providing the highest safety and increased performance life!

Sealed housing guarantees longevity and maintenance-free 24-hour operation in an aggressive environment

Specifications

Model	WOHS-200 Pro	WOHS-400 Pro	WOHS-20 HPro
Order No.	W3041030	W3041018	W3041060
Speed Range (rpm)	30~600(I)	20~360(I)	60~1200(I)
	601~3000(II)	361~1800(II)	1201~6000(II)
Torque max. at stirring shaft [N-cm]	339(I)	565(I)	170(I)
	68(II)	113(II)	34(II)
Maximum Stirring volume(L)H_2O	100	100	100
Maximum stirring viscosity (cps)	100000	150000	70000
Maximum Torque [N-cm]	339	565	170
Setting accuracy speed [rpm]	1	1	1
Deviation of speed measurement n > 300rpm	±3 %	±3 %	±3 %
Speed Display	TFT	TFT	TFT
Speed setting	Touch key and turning knob		
Time setting range	99h59min59sec	99h59min59sec	99h59min59sec
Temperature measuring range[°C]	-10~350	-10~350	-10~350
Temperature measurement resolution[°C]	0.1	0.1	0.1
IP code	IP42	IP40	IP42	IP40	IP42	IP40
Working status indicator	Standby (blue) , Running (green) , Alarm (red)		
Interface RS-232/485 and analog connection	Yes	Yes	Yes
Power [W]	150	150	150
Motor principle	Brushless DC motor	Brushless DC motor	Brushless DC motor
Stirring element fastening	Keyless chuck, easy to install and replace the shaft	Keyless chuck, easy to install and replace the shaft	Keyless chuck, easy to install and replace the shaft
Chuck range diameter [mm]	0.5~10	0.5~10	0.5~10
Hollow shaft, inner diameter [mm]	10.2	10.2	10.2
Power supply	100~240VAC,50/60Hz	100~240VAC,50/60Hz	100~240VAC,50/60Hz

According to needs, it is convenient to choose different package:

Standard Package P1 includes

Overhead Stirrer, WF25-D Support stand.

Standard Package P2 includes

Overhead Stirrer, WF25-D Support stand, 9004 impeller

Standard Package P3 includes

Overhead Stirrer, WF25-D Support stand, 5.240.8.2 PTFE impeller

![WIGGENS The Magic Motion]

Remotely Controllable High Torque / High Speed Stirrer

WB3000-DF / WB1800-DF / WB6000-DF

Ideally perform your professional stirring tasks requiring high functionality, safety, and longevity. Prestige touch TFT controller, especially for applications where the remote controller is needed

Features

> Equipped with a maintenance-free BLDC motor to generate smooth, quiet, and yet powerful stirring.
> Powerful torque capable of handling high viscosity tasks.
> Maintenance of constant motor speed by control system even under conditions of changing viscosity.
> Best effort function intelligently manages its stirring speed to keep stirring even if the workload is out of its capacity.
> Prevention of accidental spills or splashes thanks to microprocessor controlled smooth start and stop functions.

A through-shaft design allows for adjusting the impeller position to make height adjustment more convenient

Keyless chuck
It allows you to quickly and easily remove the stirring elements without any tools.
Clamping range: 0.5-10mm

Specifications

Model	WB3000-DF	WB1800-DF	WB6000-DF
Order No.	100400F	100600F	100800F
Speed range [rpm] [1]	30~600 (I) 601~3000 (II)	20~360 (I) 361~1800 (II)	60~1200 (I) 1201~6000 (II)
Setting accuracy speed [rpm]	1	1	1
Deviation of speed measurement n > 300rpm	±3 %	±3 %	±3 %
Speed Display	TFT display	TFT display	TFT display
Clockwise or counterclockwise of stirring	No	No	No
Speed setting	Touch key and turning knob	Touch key and turning knob	Touch key and turning knob
Power [W]	150	150	150
Stirring quantity max [L / H_2O]	100	100	100
Motor principle	Brushless DC motor	Brushless DC motor	Brushless DC motor
Torque max. at stirring shaft [N-cm] [2]	339(I) / 68(II)	563(I) / 113(II)	170(I) / 34(II)
Stirring element fastening	Keyless chuck, easy to install and replace the shaft.	Keyless chuck, easy to install and replace the shaft.	Keyless chuck, easy to install and replace the shaft.
Chuck range diameter [mm]	0.5~10	0.5~10	0.5~10
Hollow shaft, inner diameter [mm]	10.2	10.2	10.2
Fastening on stand	Extension arm	Extension arm	Extension arm
Extension arm diameter [mm]	13	13	13
Extension arm length [mm]	124	124	124
IP code	IP42	IP40	IP42	IP40	IP42	IP40
Housing material	Cast aluminum coating	Cast aluminum coating	Cast aluminum coating
Interface RS-232/485 and analog connection	Yes	Yes	Yes
Dimensions of motor (W x H x D)	200 x 95 x 230	200 x 95 x 230	200 x 95 x 230
Weight	4.5	4.5	4.5
Power supply	100~240VAC,50/60Hz	100~240VAC,50/60Hz	100~240VAC,50/60Hz

1) Two grades of stirring speed are for this series. The low-speed has more torque, and is suitable for chemical reaction system. And the high-speed is suitable for sample pretreatment. According to the set speed, it can be switched automatically between them.
2) The two speed ranges correspond to different maximum torque.
Standard package includes: Overhead Stirrer, remote controller

Remotely Controllable High Torque / High Speed Stirrer

WB3000-C / WB1800-C / WB3000-EC / WB1800-EC

> Suitable for reaction systems and other high torque / high speed applications
> Brushless DC motor made in Germany, for high performance stirring processes
> Maintenance-free
> Quiet and reliable
> Digitally adjustable rotation speed and direction
> Remote controller can display actual speed and actual torque as well as the set speed
> Digital (RS-232/485) and analog communication available for remote PC or PLC control

Features

> Powerful torque capable of handling high viscosity tasks.
> Maintenance of constant motor speed by control system even under conditions of changing viscosity.
> Best effort function intelligently manages its stirring speed to keep stirring even if the workload is out of its capacity.
> Prevention of accidental spills or splashes thanks to microprocessor-controlled smooth start and stop functions.

Practical external controller.

> Intuitive and easy control with touch TFT.
> It enables convenient and safe external control without opening the sash of the fume hood or safety cabinet.
> Compact and slim head design for diverse flexibility in configuring other test equipment and accessories. (optional)

Safety

> Sturdy aluminum main body efficiently absorbing and emitting the heat generated by the motor.
> Separated adapter from the main body minimizes the risks of electrical hazards to the users.

Specifications

Model	WB3000-C	WB1800-C	WB3000-EC	WB1800-EC
Order No.	100401	100601	100402	100602
Speed range [rpm]	70~3000	20~800	70~3000	20~800
Setting accuracy speed [rpm]	1	1	1	1
Deviation of speed measurement n > 300rpm	±3 %	±3 %	±3 %	±3 %
Speed Display	TFT display	TFT display	TFT display	TFT display
Clockwise or counterclockwise of stirring	Yes	Yes	Yes	Yes
Speed setting	Touch key and turning knob	Touch key and turning knob	Touch key and turning knob	Touch key and turning knob
Stirring quantity max [L / H_2O]	100	100	100	100
Power [W]	150	150	250	250
Motor principle	Brushless DC motor	Brushless DC motor	Brushless DC motor	Brushless DC motor
Torque max. at stirring shaft [N-cm]	330	1320	410	1640
Housing material	Powered coated SS housing	Powered coated SS housing	Powered coated SS housing	Powered coated SS housing
IP code	IP42	IP42	IP42	IP42
Interface RS-232/485 and analog connection	Yes	Yes	Yes	Yes
Dimensions of motor (W x H x D) [mm]	95 x 215 x 150	95 x 215 x 150	95 x 215 x 150	95 x 215 x 150
Weight (Stirrer / Controller) [kg]	3.4 / 0.5	3.4 / 0.5	3.4 / 0.5	3.4 / 0.5
Power supply	100~240VAC,50/60Hz	100~240VAC,50/60Hz	100~240VAC,50/60Hz	100~240VAC,50/60Hz

Standard package includes: Overhead Stirrer, remote controller

Accessories for Overhead Stirrer

Magnetic stirrer guides

Magnetic drives are designed for agitating a fully vacuumed flask.
Multi-functional and easy to replace impeller.

> Use of rare-earth elements which is Neodymium (Nd), Samarium (Sm-Co) magnet.
> High-speed rpm, vibration free.
> Specifically designed with permanent magnets which has a dynamic torque rating.
> Small size and powerful rotating magnetic drive is useful both for laboratory and manufacturing applications.

Specifications

Model	MD-24	MD-29	MD-45	MD-15	MD-25
Ground Joint	24/40	29/42	34/45	Thread #15	Thread #25
Body / Housing	SUS316L / CR-PLATE				
Bushing / Seal	PTFE/Viton				
Vacuum	1.4×10^{-4} mmHg				
Pressure	5 bar				
Temp	Max. 70℃ (without cooling), Max. 300℃ (with cooling)				
Shaft Size (Ø, mm)	8 mm				
Cooling in / out Size (Ø, mm)	3.2 mm				
Dimension (Ø×L, mm)	50×200mm				
Weight (kg)	1.02	1.04	1.08	1.00	1.02
Order No.	511001	511002	511003	511004	511005

Application of Magnetic Drive

Stirrer guides

Universal stirrer seal
Material : PTFE (Polytetrafluoroethylene)

| Order No.	Joint Size	Shaft Size (Ø, mm)	Height　(mm)
KA22-02	24/40	8	60
KA22-03	29/42	8	60
KA22-04	34/45	8	60

Best-seller!

Universal stirrer guide For standard taper ground glass joints

Universal stirrer guides for use with standard taper ground glass joints can be used with PTFE Shaft Stirrers, glass and metal shaft stirrers. Unique features of the design are a permanently loaded Composite PTFE/PEEK Seal, a Glass Ball-Bearing for rigidity and smoothness of operation.

> Exceptional chemical resistance
> Anti-whip and reduced vibration
> Vaccum (6.6mbar) and pressure (0.2~0.35Bar) performance

> No shedding
> Maximum recommended speeds: continuous 500rpm, intermittent 800rpm

Order No.	ShaftØ (mm)	Joint Size	Height (mm) excl.joint	GuideØ (mm)
5.101.1.7	6	19/22	96	45
5.102.7	6	24/40	96	45
5.104.7	8	24/40	96	45
5.105.7	10	24/40	96	45
5.106.7	10	29/42	96	45
5.108.7	12	29/42	110	55

Best-seller!
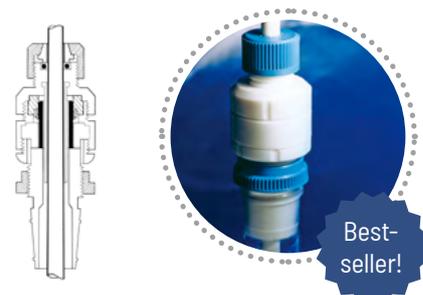
## High performance stirrer guide For standard taper ground glass joints

This product is designed to provide an effective guide for Glass and Metal Shaft stirrers over a range of temperatures without shedding particles from the seal, whilst maintaining a vacuum. The seal is manufactured from a specially formulated PTFE-PEEK composite and is permanently pressure loaded.

Features:

> High level of chemical resistance
> Anti-whip and reduced vibration
> Vaccum (6.6mbar) and pressure (0.2~0.35Bar) performance

> No shedding
> Self-releasing joint ring
> Maximum recommended speeds: continuous 500rpm, intermittent 800rpm

Note： PEEK has a very high level of chemical resistance with some susceptibility only to strong mineral acids

Order No.	ShaftØ(mm)	Joint Size	Height (mm) excl.joint	GuideØ (mm)
5.0.0619	6	19/22	60	42
5.0.0624	6	24/40	60	42
5.0.0819	8	19/38	60	42
5.0.0824	8	24/40	60	42
5.0.1024	10	24/40	60	42
5.0.1029	10	29/42	60	50
5.0.1034	10	34/45	60	50
5.0.1045	10	45/50	60	58
5.0.1229	12	29/42	70	50
5.0.1945	19	45/50	70	58
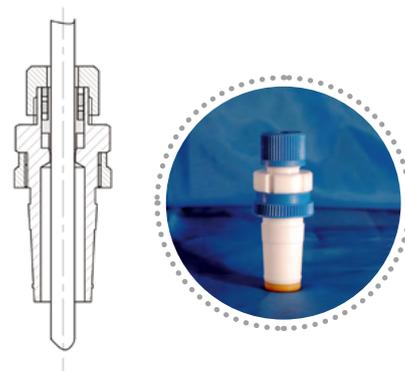
High vacuum stirrer guide

The newest design of mechanical stirring seals with all parts that are in contact with liquid or vapor being made of PTFE, RULON, or PEEK material. It doesn't harm the stirring rod and is highly chemical resistant. It can be used with vacuum of up to 0.8mbar. The highest recommended stirring speed is 400 rpm.

Order No.	ShaftØ (mm)	Joint Size	Replace O-Ring
8050-02	10	24/40	7859-526
8050-04	10	29/42	7859-534
8050-14	10	29/32	7859-534
8050-10	10	#15 Ace-Thred	7859-530
8050-12	10	#25 Ace-Thred	7859-534
8050-06	19	45/50	7859-573
8050-16	25.4	45/50	7859-573
8050-08	28	45/50	7859-573
8050-18	30	45/50	7859-573

Motor shaft connector

Stirring Shaft connector

Coupling

The universal swivel coupling is designed for connection to a metal chuck. The compression connection is secured via Allen screw, and attaches to various O.D. glass stirring shafts. When used with pass-through assemblies, the coupling allows for easy, flexible height adjustment.

Motor shaft (OD)	Shaft size (OD)	Order No.
6mm	6mm	8126-05
6mm	10mm	8126-10
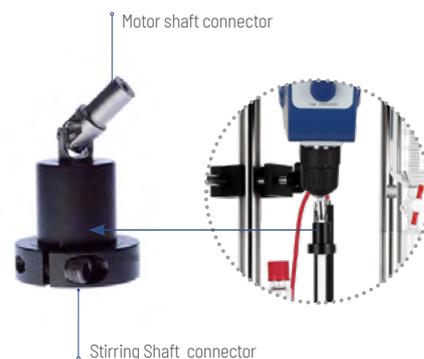
PTFE Impeller

> Stainless steel core surrounded by PTFE mantle
> Chemical resistant
> Economically friendly
> Strong structure which doesn't break easily
> Can be used up to a max. temperature of 280°C
> The stainless steel core is revealed at the upper part and can be plugged into the stirrer
> The length of the revealed part is 50mm

EX = Exposed Shaft.

Shafts of 650mm, 750mm & 1000mm in length are produced with a stainless steel core with an exposed end for more rigid clamping to the chuck drive
Shafts up to 12mm diameter have an exposed end of 50mm long and 6.5mm diameter.
Shafts of 16mm diameter have an exposed end of 50mm long and 8.5mm diameter.

Screw Propeller, 4-Bladed (PTFE Coated)

Creates shearing force. Used for mixing media in an up-to-down axial flow, for mid and high-speed stirring, and for mid and low viscosity.

Order No.	Shaft Ø(mm)	Length(mm)	Rotor Ø(mm)
005.230.2	6	300	40
005.240.2	6	400	40
005.250.2	6	500	50
005.230.8.2	8	300	40
005.240.8.2	8	400	40
005.250.8.2	8	500	50
005.255.10.2	10	550	70
005.0265.10.2	10	650EX	70
005.0275.10.2	10	750EX	70
005.0265.12.2	12	650EX	80
005.0275.12.2	12	750EX	80
005.02100.12.2	12	1000EX	80
005.0275.16.2	16	750EX	80
005.0275.16.1.2	16	750EX	100
005.02100.16.2	16	1000EX	100
005.02100.16.1.2	16	1000EX	120
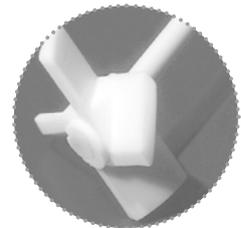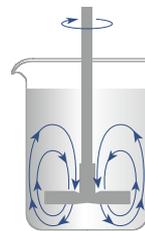
Anchor Impeller (PTFE Coated)

Produces tangential flow and strong shearing force. Used for slow-speed stirring, for high viscosity mixtures.

Order No.	Shaft Ø(mm)	Length(mm)	Rotor Ø(mm)
005.330.2	6	300	80
005.340.2	6	400	80
005.350.2	6	500	80
005.330.8.2	8	300	80
005.340.8.2	8	400	80
005.350.8.2	8	500	80
005.355.10.2	10	550	100
005.0365.10.2	10	650EX	140
005.0375.10.2	10	750EX	140
005.0365.12.2	12	650EX	140
005.0375.12.2	12	750EX	140
005.03100.12.2	12	1000EX	140
005.0375.16.2	16	750EX	140
005.0375.16.1.2	16	750EX	180
005.03100.16.2	16	1000EX	140
005.03100.16.1.2	16	1000EX	180
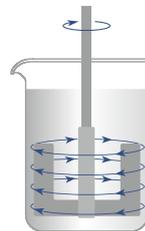
Centrifugal Stirrer, 2-Bladed (PTFE Coated)

2-Blade Impeller which will open up depending on the stirring speed. Used for round vessels with narrow openings, for mixing media in an up-to-down axial flow, for mid and high-speed stirring

Order No.	Shaft Ø(mm)	Length(mm)	Rotor Ø(mm)
005.430.2	6	300	40
005.440.2	6	400	40
005.450.2	6	500	50
005.430.8.2	8	300	40
005.440.8.2	8	400	40
005.450.8.2	8	500	50
005.455.10.2	10	550	70
005.0465.10.2	10	650EX	70
005.0475.10.2	10	750EX	70
005.0465.12.2	12	650EX	80
005.0475.12.2	12	750EX	80
005.04100.12.2	12	1000EX	80
005.0475.16.2	16	750EX	80
005.04100.16.2	16	1000EX	80

Retreat Curve Impeller (PTFE Coated)

The blades are formed in a 30° angle. It creates tangential and axial flow as well as high shearing force. Used for mid- and slow-speed stirring, and for all levels of viscosity.

Order No.	Shaft Ø(mm)	Length(mm)	RotorØ(mm)	Blade Ht(mm)
005.80850.300	8	300	50	10
005.80875.300	8	300	75	15
005.80850.400	8	400	50	10
005.80875.400	8	400	75	15
005.81050.400	10	400	50	10
005.81075.400	10	400	75	15
005.81050.500	10	500	50	10
005.81075.500	10	500	75	15

Impeller Shafts for Blades (PTFE Coated)

Shafts with a stainless steel core, PTFE coating, an exposed stainless steel end, as well as a hook for mounting blades
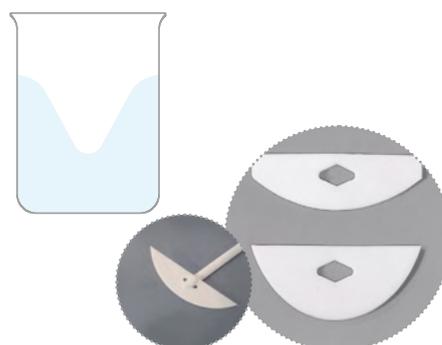
Order No.	Shaft Ø (mm)	Length (mm)	Order No.	ShaftØ (mm)	Length (mm)
005.530.1	6	300	005.0565.10.1	10	650EX
005.540.1	6	400	005.0575.10.1	10	750EX
005.550.1	6	500	005.05100.10.1	10	1000EX
005.530.8.1	8	300	005.0565.12.1	12	650EX
005.540.8.1	8	400	005.0575.12.1	12	750EX
005.550.8.1	8	500	005.05100.12.1	12	1000EX
			005.0575.16.1	16	750EX
			005.05100.16.1	16	1000EX

Blades (PTFE Coated)

Impeller blades that fit to "Impeller Shaft, with Hook (PTFE Coated)". Completely inert and highly scratch-resistant. (Hole diameter: 6.5 mm)

Order No.	W(mm)	H(mm)	Order No.	W(mm)	H(mm)
002.052.1	52	14	002.1065.1	65	25
002.076.1	76	19	002.1075.1	75	25
002.090.1	90	28	002.1105.1	105	25
			002.1125.1	125	25
			002.1150.1	150	25

![WIGGENS The Magic Motion]

Plain Impeller Shafts (PTFE Coated)

Plain shafts with a stainless steel core and PTFE coating, as well as an exposed stainless steel end.

Order No.	Shaft Ø(mm)	End Ø(mm)	LengthØ(mm)
005.100830EX	8	5	300
005.100850EX	8	5	500
005.101030EX	10	6.35	300
005.101050EX	10	6.35	500
005.101065EX	10	6.35	650
005.101250EX	12	6.35	500
005.101265EX	12	6.35	650
005.101275EX	12	6.35	750
005.1016750EX	16	10	750
005.1016100EX	16	10	1000

4 Blade Angled Type 45° Metric

Pitched impeller for use on PTFE coated shafts.

Order No.	Shaft Ø(mm)	RotorØ(mm)
005.606040	6	40
005.608040	8	40
005.610060	10	60
005.610090	10	90
005.612070	12	70
005.612090	12	90
005.616100	16	100
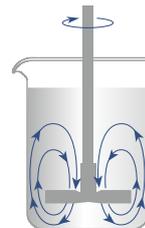
Flat Impeller

Flat impeller for use on PTFE coated shafts.

Order No.	Shaft Ø(mm)	RotorØ(mm)
005.706070	6	70
005.708070	8	70
005.710070	10	70
005.710100	10	100
005.712100	12	100
005.712150	12	150
005.716100	16	100
005.716150	16	150

Adjustable Turbine

Flat impeller for use on PTFE coated shafts.

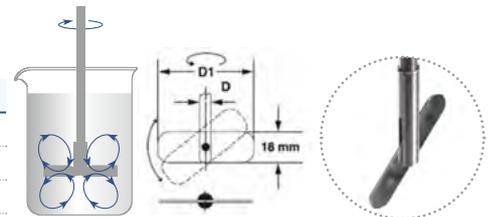| Order No.	Shaft Ø(mm)	RotorØ(mm)
005.90850	8	50
005.90875	8	75
005.91075	10	75
005.9100100	10	100
005.91275	12	75
005.912100	12	100
005.016100	16	100
005.916150	16	150
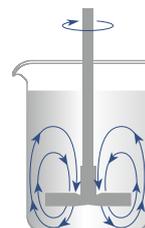
Stainless Steel Impellers

Pivoting Blade Impeller

For mixing media from coarse to liquid, for mid-speed stirring, and for mid to low viscosity mixtures.
Blade Height: 18 mm

Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) D	Length(mm)
9603	60	8	300
9604	60	8	400
9605	60	8	500

Straight 2-Blade Impeller

For mixing media from coarse to liquid, for mid-speed stirring, and for mid to low viscosity mixtures.
Blade Height: 12 mm

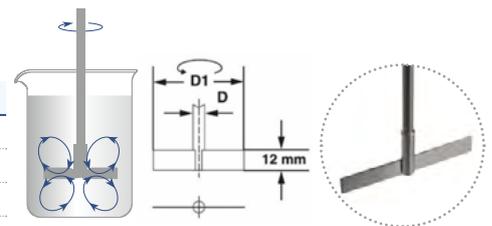| Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) D	Length(mm)
9703	50	8	300
9704	50	8	400
9705	50	8	500

Straight 4-Blade Impeller

For mixing media from coarse to liquid, for mid-speed stirring, and for mid to low viscosity mixtures.
Blade Height: 12 mm

Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) D	Length(mm)
9053	50	8	300
9054	50	8	400
9055	50	8	500
9056	100	10	300
9057	100	10	400
9058	100	10	500
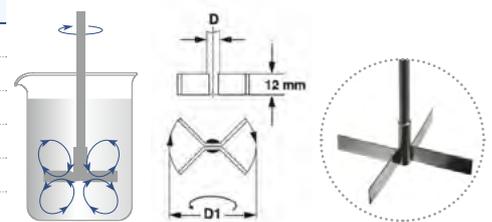
Centrifugal Impeller

2-Blade Impeller which will open up depending on the stirring speed. Used for round vessels with narrow openings, for mixing media in an up-to-down axial flow, for mid- and high-speed stirring.
Blade Height: 10 mm

Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) D	Length(mm)
9209	90/15	8	300
9210	90/15	8	400
9211	90/15	8	500
9212	90/15	10	300
9213	90/15	10	400
9214	90/15	10	500
9215	90/15	10	650

3-Hole Blade Impeller

For mixing media from coarse to liquid, for mid-speed stirring, and for mid to low viscosity mixtures.

| Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) D	Length(mm)
9403	50	8	300
9404	50	8	400
9405	50	8	500
9406	100	10	300
9407	100	10	400
9408	100	10	500

6-Hole Blade Impeller

For mixing media from coarse to liquid, for mid-speed stirring, and for mid to low viscosity mixtures.

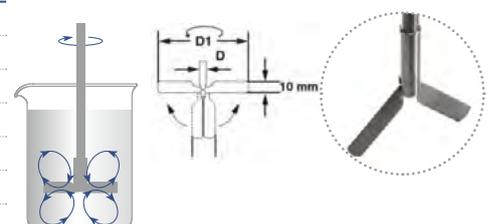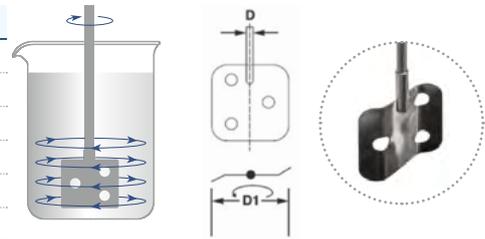| Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) D	Length(mm)
9503	50	8	300
9504	50	8	400
9505	50	8	500
9506	100	10	300
9507	100	10	400
9508	100	10	500
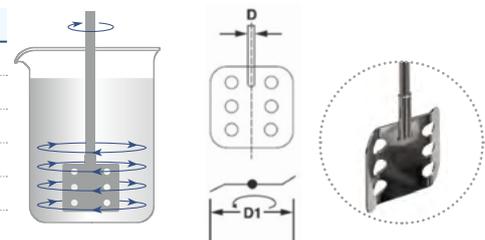
Pitched Leaf Impeller and Pitched Blade Impeller

Employs small shearing force. Used for mixing media in an up-to-down axial flow, for mid- and high-speed stirring, for mid to low viscosity mixtures.
Blade Height：12 mm

Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) D	Length(mm)
9003	50	8	300
9004	50	8	400
9005	50	8	500
9009	100	8	300
9010	100	8	400
9011	100	8	500
9012	70	8	500
9013	100	10	650
9014	100	10	800
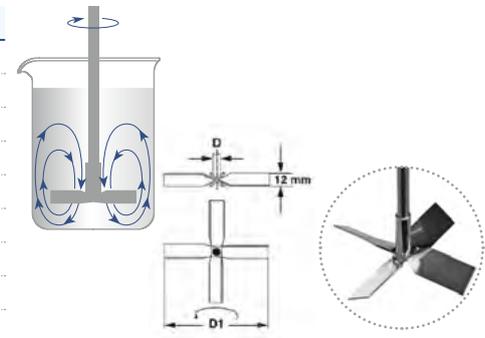
Propeller Stirrers, 3 Fix Blades

> rpm-range middle
> Mixing of media with low and middle viscosity
> Ideal for homogenising and suspensioning
> Axial flow
Blade Height：12 mm

Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) D	Length(mm)
9103	50	8	300
9104	50	8	400
9105	50	8	500
9109	70	8	300
9110	70	8	400
9111	70	8	500
9112	100	10	300
9113	100	10	400
9114	100	10	500
9115	70	10	650
9116	100	10	800
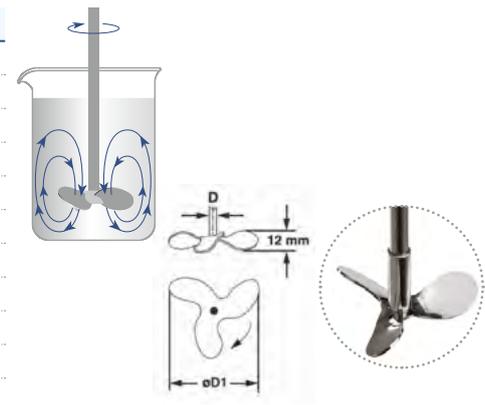
Anchor Impeller

Produces tangential flow and strong shearing force. Used for slow-speed stirring, for high viscosity mixtures.

Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) d	Length(mm) A
9610	70	8	500
9611	90	10	650
9612	140	10	800
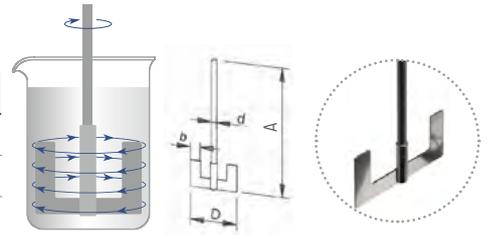
Turbine Impeller

Creates shearing force. Used for mixing media in an up-to-down axial flow, for mid and high-speed stirring, for mid to low viscosity mixtures.

Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) d	Length(mm) A
9025	45	7	400
9026	65	7	400
9025A	45	8	400
9026A	65	8	400
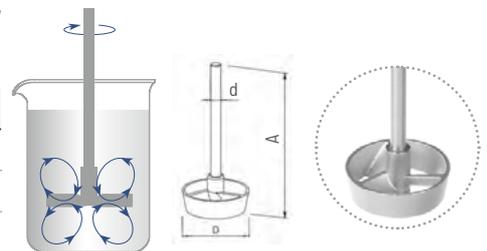
Radial Flow Impeller

Creates a strong flow and shearing force. Used for mixing media in an up-to-down axial flow, for mid-speed stirring, for mid viscosity under 500mpas. Especially useful for aerating.

Order No.	Rotor Ø (mm) D1	Shaft Ø (mm) D	Length(mm) A
9030	50	8	400
9031	50	10	400
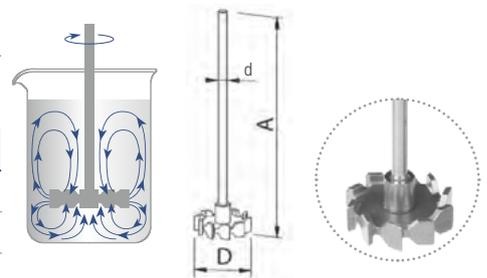
Multi-Purpose Impeller

Can generally be used in low to high viscosity mixtures. Even with slow stirring speed, it will produce a very good radial stirring outcome.

Order No.	Rotor Ø (mm) D	Shaft Ø (mm) d	Length(mm) A	rpm
9020	80	10	500	200-700
9021	120	10	500	120-500

![WIGGENS - The Magic Motion]
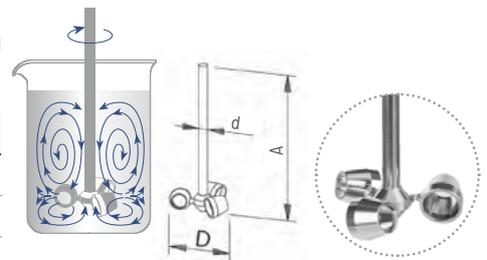
Lifting platform

Laboratory Lifting platform

> Material : S/T stainless(#204), A/L Aluminium
> Available to support experiment tools such as stirrers, water baths, flasks etc. in height control
> Smoothly works with a little force
> Max Height : 270mm

Description (W x L) cm	Height range (mm)	Order No.
S/T (15 * 15)	60~270	KA11-91
S/T (20 * 20)	60~270	KA11-93
S/T (25 * 25)	60~270	KA11-94
S/T (30 * 30)	60~270	KA11-95
S/T (15 * 15)	60~270	KA11-91N
S/T (20 * 20)	60~270	KA11-93N
A/L (15 * 15)	60~270	KA11-91B
A/L (20 * 20)	60~270	KA11-92

Foot switch

Order No.	Description	Suitable for
W1672041	Overhead stirrer is controlled by the foot switch in "FOOT Mode"	WOHS series

External temperature sensor Suitable for WOHS series

Order No.	Model	Description
PT100-01	Type I	External Pt100 sensor, 170 x Ø4 mm, stainless steel, 1.5 m cable.
PT100-02	Type II	External Pt100 sensor, 300 x Ø4 mm, stainless steel, 1.5 m cable.
8981003W	WP206S	External Pt100 sensor, 200 x Ø6 mm, stainless steel, 1.5 m cable.
8981010W	WP306S	External Pt100 sensor, 300 x Ø6 mm, stainless steel, 1.5 m cable.
PT100-03	Type III	External Pt100 sensor, 170 x Ø4 mm, stainless steel, 1.5 m cable.
PT100-04	Type IV	External Pt100 sensor, 300 x Ø4 mm, stainless steel, 1.5 m cable.
PT100-06	Type VI	External Pt100 sensor, 250 x Ø4 mm, stainless steel, 1.5 m cable.
8981017W	WP206P	External Pt100 sensor, 200 x Ø6 mm, stainless steel/PTFE coated, 3 m cable.
8981015W	WP306P	External Pt100 sensor, 300 x Ø6 mm, stainless steel/PTFE coated, 3 m cable.
8981114W	WP406P	External Pt100 sensor, 400 x Ø6 mm, stainless steel/PTFE coated, 3 m cable.
8981116W	WP506P	External Pt100 sensor, 500 x Ø6 mm, stainless steel/PTFE coated, 3 m cable.
8981013W	WP606P	External Pt100 sensor, 600 x Ø6 mm, stainless steel/PTFE coated, 3 m cable.
8981016W	WP906P	External Pt100 sensor, 900 x Ø6 mm, stainless steel/PTFE coated, 3 m cable.
8981014W	WP1206P	External Pt100 sensor, 1200 x Ø6 mm, stainless steel/PTFE coated, 3 m cable.
W8981017W	WP206P	External Pt100 sensor, 200 x Ø6 mm, stainless steel/PFA coated, 3 m cable.
W8981015W	WP306P	External Pt100 sensor, 300 x Ø6 mm, stainless steel/PFA coated, 3 m cable.
W8981114W	WP406P	External Pt100 sensor, 400 x Ø6 mm, stainless steel/PFA coated, 3 m cable.
W8981116W	WP506P	External Pt100 sensor, 500 x Ø6 mm, stainless steel/PFA coated, 3 m cable.
W8981013W	WP606P	External Pt100 sensor, 600 x Ø6 mm, stainless steel/PFA coated, 3 m cable.
W8981016W	WP906P	External Pt100 sensor, 900 x Ø6 mm, stainless steel/PFA coated, 3 m cable.
W8981014W	WP1206P	External Pt100 sensor, 1200 x Ø6 mm, stainless steel/PFA coated, 3 m cable.

Clamps

For installing the PT100 sensor for WOHS series

Description	Order No.
WH2S01 set contains Clamping (WH2), Sensor holder(WH220027), Extension rod(WH220095)	WH2S01

Three-Prong Clamp

	Overall length（mm）	Maximum grip size(mm)	Order No.
Large Clamp	270	80	KA00-52
Medium Clamp	245	60	KA00-53
Small Clamp	210	30	KA00-54
Large Clamp	615（Rod：500）	80	KA00-52A

Two-Prong Clamp

Two-Prong Clamp, or dual adjustment clamp has a maximum grip size of 73mm. Two-prong design is ideal for beakers, flasks, and test tubes. Jaws adjust independently. Overall length is 255mm. Clamp extends 127mm.

	Overall length（mm）	Maximum grip size(mm)	Order No.
Medium Clamp	255	60	KA00-50
Medium Clamp	605（Rod：500）	60	KA00-50A

Utility Clamp Flat

Grips rods up to 3/4 in. diameter (19mm). The holding angle of the jaws is adjustable. It can be locked with a wingnut. Wingnut also allows length adjustment. Two-prong flat jaws are for test tubes. Three-prong are for irregular shapes. Vinyl and fiber glass sleeves are included. Replacement sleeves are available: Contact your Fisher Customer Service Representative.

	Overall length（mm）	Maximum grip size(mm)	Order No.
Medium Clamp	170	60	KA00-57
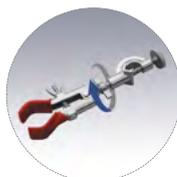
Utility Clamp, 3 Prong

Grips rods up to 3/4 in. diameter (19mm). The holding angle of the jaws is adjustable. It can be locked with a wingnut. Wingnut also allows length adjustment. Two-prong flat jaws are for test tubes. Three-prong ones are for irregular shapes. Vinyl and fiber glass sleeves are included.

	Overall length（mm）	Maximum grip size(mm)	Order No.
Medium Clamp	170	60	KA00-58

Clamp Swivel Holder

Material : Brass (Chromium plating)
Adjustable angle holder, different from other holders fixed at 90 degrees

Description (Max Grip)	Order No.
Ø13mm	KA00-71B

Extension-Type Ring

Material : Stainless Steel (Chromium plating)
Separatory Funnel Size : 250ml-70mm / 500ml-90mm / 1,000ml-100mm

Description（ID x OD)	Order No.
Ø50 x Ø60mm	KA00-67F
Ø70 x Ø80mm	KA00-67A
Ø90 x Ø100mm	KA00-67B
Ø110 x Ø120mm	KA00-67C
Ø130 x Ø140mm	KA00-67D
Ø150 x Ø160mm	KA00-67E

Have other specifications to order for you
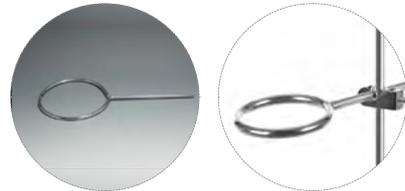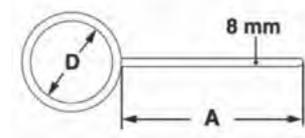
Jumbo Clamp Holder

Heavy-Duty Clamp Holder, or Jumbo clamp holder has a maximum grip size of 22mm. The heavy duty version of the regular holder is for use wherever clamping at 90° angle is required.

Content	Order No.
22mm	KA00-70A

Chain Clamp

Material : Stainless Steel / Vinyl Coating

Overall length(mm)	Maximum grip size(mm)	Order No.
180	165mm	KA00-56
180	280mm	KA00-56A

Frame Holder

Lab frame hook connectors allow one-handed assembly of two components with one adjustment screw.
Material : Die Casting (Chromium plating)
Pipe Diameter : Ø12.7mm

Pipe Diameter	Order No.
12.7mm	KA00-69
12.7mm	KA00-70C

Clamp Holder All-Position

All-position holder connects at any angle in any plane. It consists of two holders connected by double plate-joint which sets holders 90^0 from each other. Each holder can be rotated 360^0. It grips rods up to 19mm in diameter.

	Order No.
All-Position	11090-17

Clamp Universal Swivel, "Power Hold"

Universal swivel clamp allows positioning of stirrer at any compound angle for best stirring action.
① One knob — Lets you lower or raise the stirrer
② One knob — Locks stirrer the on the support rod, tilts right/left
③ One knob — Controls swivel setting, forward/backward
It fits support stands with diameters from 3/8 inch to 5/8 inch (9.5mm to 16 mm). It holds stirrer mounting rods with diameters from 3/8 inch to 5/8 inch. It is fabricated of precision-machined aluminum.

	Order No.
Universal Swivel, "Power Hold"	11084-11
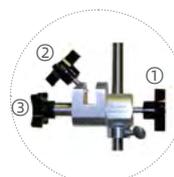
Flexible Arm fixture

Suitable for use when space is limited, or when multiple adjustments are required to position the fixture, especially for use in fume hood, which can be easily installed on any laboratory support stand, there are two types of connection design for flexible arm fixture.

Description (Max Grip×Length)	Order No.
60 x 360mm, 2P	KA00-50B
60 x 360mm, 3P	KA00-50C

KA00-50B

KA00-50C

Ultraflex clampling system

Talboys UltraFlex clamping system features a 30cm or 40cm flex arm and is ideal for working within hoods. The system mounts to any lab frame or support stand with a 19mm or less diameter. An optional base plate or bench clamp gives increased versatility. Complete units, codes -10 and -12, include the flex arm, a two-prong head, a three-prong head, a spring head and lab frame connector.

Package Order No.	type	A(mm)	D(mm)	Max Grip (mm)	Material quality	Order No.
11058-10	II	300	120	Three-Prong Clamp 580 Two-Prong Clamp 650	Stainless steel	11058-22
11058-12	II	400	120	Three-Prong Clamp 580 Two-Prong Clamp 650	Stainless steel	11058-22

Support stand need to be ordered from Wiggens

Extension Rod

Extend the rod to the expected the height of the stand

Order No.	Diameter（mm）	Height（mm）
WE-11	16	200
WE-12	16	400
WE-13	16	550

Clamp Holder

For Single Rod Stand

Model	WH1
Clamping range - stand	6~16mm
Clamping range - extension arm	6~16mm
Material	Cast aluminium

Clamp Holder

For Single Rod Stand

Model	WH2
Clamping range - stand	6~30mm
Clamping range - extension arm	6~16mm
Material	Cast aluminium

Stand
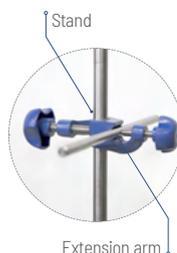
Extension arm

Clamp Holder

For double rod stand

Model	WH4	WH6	WH6-1
Clamping range - stand	16mm	16mm	16mm
Clamping range - extension arm	10~13mm	10~13mm	13~16mm
Material	Cast aluminium	Cast aluminium	Cast aluminium

Extension arm
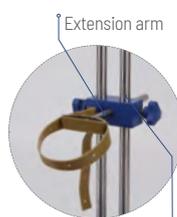
Stand

Support stand

Plate stand with Ø16mm single-rod

Particularly stable position with plate base to prevent tilting of the position backward, single-rod provide stability. Used for supporting overhead stirrer and accessories.

Model	Base	Shaft	Container area (W x D mm)	Dimensions (W x D x Hmm)
WF11	Cast Iron coated powder	Stainless steel, OD16mm	315 x 200	315 x 200 x 550
WF12	Cast Iron coated powder	Stainless steel, OD16mm	315 x 200	315 x 200 x 750
WF13	Cast Iron coated powder	Stainless steel, OD16mm	315 x 200	315 x 200 x 950

WF12

WH-stand with Ø16mm single-rod

Particularly stable position with H-shaped base to prevent tilting of the position backward, single-rod provide stability. Used for supporting overhead stirrer and accessories.

Model	Base	Shaft	Container area (W x D mm)	Dimensions (W x D x Hmm)
WH11-S	Aluminum	Stainless steel	252 x 208	340 x 300 x 550
WH12-S	Aluminum	Stainless steel	252 x 208	340 x 300 x 750
WH13-S	Aluminum	Stainless steel	252 x 208	340 x 300 x 950

WH12-S

Plate stand with Ø16mm double-rod

Particularly stable position with H-shaped base to prevent tilting of the position backward, double-rod provide optimum stability, standard with security position ring and fixing clamp for containers. Used for supporting high torque / high speed overhead stirrer and accessories, or for high speed homogenizer.

Model	Base	Shaft	Container area (W x D mm)	Dimensions (W x D x Hmm)
WF11-D	Cast Iron coated powder	Stainless steel	315 x 200	315 x 200 x 550
WF12-D	Cast Iron coated powder	Stainless steel	315 x 200	315 x 200 x 750
WF13-D	Cast Iron coated powder	Stainless steel	315 x 200	315 x 200 x 950

Security position ring

Fixing clamp

WF12-D

H-stand with Ø16mm single-rod

Particularly stable position with H-shaped base to prevent tilting of the position backward, double-rod provide optimum stability. Used for supporting high torque / high speed overhead stirrer and accessories, or for large volume of containers.

Model	Base	Shaft	Container area (W x D mm)	Dimensions (W x D x Hmm)
WH23-DS *	Stainless steel	Stainless steel	635 x 600	635 x 600 x 1010
WH24-DS **	Stainless steel	Stainless steel	635 x 600	635 x 600 x 1010

* For WB series nd WOHS 10/15 overhead stirrer.
** For WOHS High Torque / High Speed Overhead Stirrer.

H-stand with Ø20mm double-rod

Particularly stable position with H-shaped base to prevent tilting of the position backward, double-rod provide optimum stability, Used for supporting high torque / high speed overhead stirrer and accessories

Model	Base	Shaft	Container area (W x D mm)	Dimensions (W x D x Hmm)
WH21-D*	Aluminum	Stainless steel	226 x 220	340 x 300 x 550
WH22-D*	Aluminum	Stainless steel	226 x 220	340 x 300 x 750
WH23-D*	Aluminum	Stainless steel	226 x 220	340 x 300 x 950
WH24-D**	Aluminum	Stainless steel	226 x 220	340 x 300 x 550
WH25-D**	Aluminum	Stainless steel	226 x 220	340 x 300 x 750
WH26-D**	Aluminum	Stainless steel	226 x 220	340 x 300 x 950

* With clamp holder WH6, suitable for WB series nd WOHS 10/15 overhead stirrer.
** With clamp holder WH6-1, suitable for WOHS High Torque / High Speed Overhead Stirrer.

WH22-D

Electric H-stand with Ø16mm double-rod

Particularly stable position with H-shaped base to prevent tilting of the position backward, double-rod provide optimum stability, integrated electric putter and controller. Used for supporting high torque / high speed overhead stirrer and accessories, even can be used as a stand for bench-top reaction system.

Model	Base	Shaft	Stroke (mm)	Container area (W x D mm)	Dimensions (W x D x Hmm)
WH30*	Aluminum	Stainless steel	250	370 x 320	450 x 500 x 890
WH31**	Aluminum	Stainless steel	250	370 x 320	450 x 500 x 890

* For WB series nd WOHS 10/15 overhead stirrer.
** For WOHS High Torque / High Speed Overhead Stirrer.

WH-stand

With Ø32mm single-rod
Height range: 602 - 1082 mm
Leg distance: 370 mm
Stability adjustment

Model	Base	Shaft	Container area (W x D mm)	Dimensions (W x D x Hmm)
WH33-S	Aluminum	Stainless steel	320 x 370	450×500/602~1082
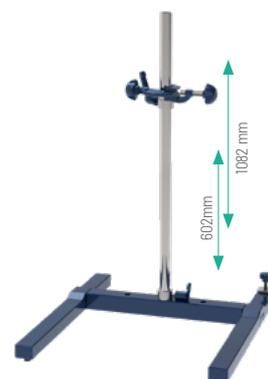
WH mobile floor stand with Ø32mm single-rod.

Mobile floor stand with strong Foma wheels, specially designed for the application with big vessels

Model	Base	Shaft	Container area (W x D mm)	Dimensions (W x D x Hmm)
WH43-S	Stainless steel	Stainless steel	614×385	786×692/1319

Homogenizer

Handheld Homogenizer
D-130

When speed & high quality meet creating power to disperse

Features
> Use for mixing, emulsification, shredding, or chopping.
> Practical answer for small samples.
> Easy to hold and light weight for one hand operation.
> Autoclavable stainless steel shafts. Inert to aggressive solutions.
> All shafts are interchangable shafts and are easily removed for cleanup.
> High speed motor. Speed control from 8,000 to 30,000 rpm.

Application
> General homogenization applications (dispersion and emulsification)
> Homogenising of tumour tissue sample, for research of diverse tissue diseases
> Fast dissolving of pills, sugar-coated tablets for quality control purposes
> Sample preparation for subsequent extraction of pharmaceutical agents (API)
> Cell disruption, RNA / DNA isolation from tissue
> Dispersion of small quantities from plants, animals or human tissue
> Solving of solid materials

Stand
Order No. : 1710130-01

Recommend purchasing the set.
The standard package includes: homogenizer, dispersing shaft, stand.

Specifications

Model	D-130
Order No.	1710130
Speed range with zero-load [rpm]	8000~30000
Sample volume H$_2$O [ml]	0.1~50 / 1~250
Power [W]	130
Dispersing shaft	DS-130/5, DS-130/7, DS-130/10, DS-130/14
The wet part for dispersing shaft	316L stainless steel and PTFE
Dimensions without dispersing shaft (W x H x D) [mm]	60×70×240
IP code	IP30
Weight [kg]	1
Power supply	110V/60Hz or 230V/50~60Hz

Shaft for D-130

Model	DS-130/5	DS-130/7	DS-130/10	DS-130/14
Length (mm)	90	160	150	170
Rotor diameter (OD mm)	5	7	10	14
Volume Range (ml)	0.1-50	0.3-50	1-250	2-250

High speed homogenizer
D-500 / D-500 Pro / D-600

Used for homogenizing, emulsifying or suspending. There is a broad spectrum of dispersing tools to choose from.

Features

> Continuosly adjustable speeds for better results
> Light-weighted and small-dimensioned for better handling
> Triple safety of the drive (overload protection. Smooth start – against jerky work, safety switch)
> High quality dispersing tools as standard for better resistance to corrosion (SS 316 L steel)
> Quick-change system of the dispersing tools for a short changing time between preparations
> Viscosities up to 10,000 cps
> High quality lab dispersing unit, at a competitive price!
> D-500pro can maintain constant motor speed by feedback control even under changing loads

D-600

D-600 Pro

Specifications

Model	D-500	D-500 Pro	D-600	D-600 Pro
Speed setting	Knob	Knob	Knob	Knob
Speed display	Scale	LED	LED	LCD
Process Range H20(ml)	10~40,000ml	10~40,000ml	10~40,000ml	10~40,000ml
Speed with Zero-Load (rpm)	10,000~30,000 rpm	500~30,000 rpm	500~30,000 rpm	500~30,000 rpm
Applicable aggregates	Ø4~Ø23 mm	Ø4~Ø23 mm	Ø4~Ø23 mm	Ø4~Ø23 mm
Sound pressure level (dB)	72 dB (30,000 rpm)	66 dB (2500 rpm); 72 dB (30,000 rpm)	66 dB (2500 rpm); 72 dB (30,000 rpm)	66 dB (2500 rpm); 72 dB (30,000 rpm)
Motor	AC	AC	AC	AC
Input / Output Power (W)	500 W	500 W	600 W	600 W
Supply voltage (V)	220V/50~60Hz	220V/50Hz	220V/50Hz	220V/50Hz
Relative humidity (max.)	80% RH	80% RH	80% RH	80% RH
Operating temperature	0~40°C	0~40°C	0~40°C	0~40°C
Communicate interface				RS232/485
IP Code	IP30	IP30	IP30	IP30
Dimensions (W x L x H in mm)	Drive:70×70×255 mm	Drive:76×157×236 mm	Drive:95×163×236 mm	Drive:95×163×236 mm

Recommend purchasing package. The standard set includes: homogenizer, dispersing shaft, stand.

Shaft Selection Guide for High Speed Homogenizer

Shaft — S S20C SR20 — Standard rotor 20mm

Stator 20mm coarse
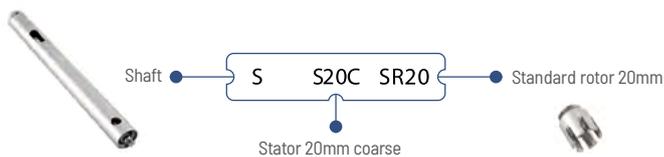
Shaft 5
Includes: Shaft, PTFE bearing, 5 mm stator, 4 mm rotor

SS20CSR20
Includes: Shaft, PTFE bearing, 20 mm stator, standard rotor SR20

SS20FER20
Includes: Shaft, PTFE bearing, 20 mm stator, emulsification rotor ER20

SS30CSR30
Includes: Shaft, PTFE bearing, 30 mm stator, standard rotor SR30

SS30FER30
Includes: Shaft, PTFE bearing, 30 mm stator, emulsification rotor ER30

SS40CMR30
Includes: Shaft, PTFE bearing, 40 mm stator, mixing rotor MR30

Composition diagram

Component	Label
	5mm Shaft
	Motor Unit
	Shaft

Stators

| 20 Coarse S20C | 20 Fine S20F | 30 Coarse S30C | 30 Fine S30F | | 40 Coarse S40C |

Rotors

Standard Rotor SR20 | Cutter Rotor CR20 | Mixing Rotor MR20 | Standard Rotor SR30 | Cutter Rotor CR30 | Mixing Rotor MR30 | Mixing Rotor MR20 | Mixing Rotor MR30

Emulsifying Rotor ER20 | Standard Rotor SR20 | Cutter Rotor CR20 | Mixing Rotor MR20 | Emulsifying Rotor ER30 | Standard Rotor SR30 | Cutter Rotor CR30 | Mixing Rotor MR30

Shaft / Order Table

Rotor Name	Function Description	Process Volume	Linear Velocity	Rotor Diameter	Stator Diameter	Min. / Max.	Ultimate Fineness (in microns)		Disinfection Method	Application*
Order No.		ml	m/s	mm	mm	Immersion Depth	suspension	emulsion		
SS20CSR20(C)	Solid-Liquid Mixing Material	10-5000	23.5	15	20	40/170	10-50	1-10		P,CI,PC,SD
SS20CCR20(C)	Fiber Material	10-5000	23.5	15	20	40/170	10-50	1-10		SP,M,F,PT,TI
SS20CMR20(C)	Solid-Liquid Mixing Material	10-5000	23.5	15	20	40/170	10-50	1-10		CI,PI
SS20FER20(C)	Latices	10-5000	23.5	15	20	40/170	10-50	1-10		SP,PI,PT,P
SS20FCR20(C)	Fiber Material	10-5000	23.5	15	20	40/170	10-50	1-10		SP,BT,M,F,PT,TI
SS20FMR20(C)	Solid-Liquid Mixing Material	10-5000	23.5	15	20	40/170	10-50	1-10		CI,C,PI,F,PT,PC
SS30CMR20(C)	Stirring Paddle Function	250-20000	36.1	15	30	40/170	High-speed mixer			CI,F,SP
SS30CSR30(C)	Solid-Liquid Mixing Material	100-8000	36.1	23	30	40/170	5-25	1-5		SP,M,F,PT,P
SS30CCR30(C)	Fiber Material	100-8000	36.1	23	30	40/170	5-25	1-5		SP,M,F,PT,P
SS30CMR30(C)	Solid-Liquid Mixing	100-8000	36.1	23	30	40/170	5-25	1-5	all methods	CI,PI
SS30FSR30(C)	Solid-Liquid Mixing Material	100-8000	36.1	23	30	40/170	5-25	1-5		SP,PI,PT,P
SS30FER30(C)	Latices	100-8000	36.1	23	30	40/170	5-25	1-5		SP,PI,PT,P
SS30FCR30(C)	Fiber Material	100-8000	36.1	23	30	40/170	5-25	1-5		SP,PI,PT,P
SS30FMR30(C)	Solid-Liquid Mixing Material	100-8000	36.1	23	30	40/170	5-25	1-5		CI,C,P,F,DT,TI
SS40CMR30(C)	Stirring Paddle	1000-40000	36.1	23	40	40/170	High-speed mixer			CI,F,SP
Shaft 5(C)	Solid-Liquid Mixing Material	0.2-50	6.3	4	5	40/60	10~50	1~10		BT,M
Shaft 10 (C)	Solid-Liquid Mixing Material	1-250	6.3	9	10	10/60	10-50	1-10		BT,M
Shaft 14(C)	Solid-Liquid Mixing Material	100-1000ml	6.3	13	14	10/60	10-50	1-10		BT,M

Note: BT = Biology; F = Food Industry; P = Pharmaceutical Industry; C = Cosmetic Industry; M = Medical Analysis; PC = Petrochemical Industry;
PT = Paper Production Industry; SP = Wastewater Analysis; CI = Ceramic Industry; CH = Chemical Industry; PI = Paint Industry; TI = Tabacco Industry
(C)C for D-600Pro

Batch Lab & Pilot Plant Homogenizer
D1500 / 1800

Batch homogenizer for lab and pilot plant cover working volumes from about 0.1 ml up to about 50 liters.
D1500/1800 with communication interface, can be controlled by PC or SCADA.
The batch homogenizers are classified into lab handheld, small, medium and large benchtop units and pilot plant versions.

D1500/1800 homogenizers to convince with the following features:
> Quick coupling for the dispersing shafts
> Powerful and safe drive systems
> TFT display screen, intelligent control
> Long working life

Multiple dispersed shafts are exchangeable. The optimum for each specific homogenizing application can be chosen.

The efficiency of WIGGENS dispersing shafts is unrivalled. Thanks to optimized shear forces and bounce effects the processed medium will be treated at finest level in shortest time.
Dispersing shafts can be disassembled, cleaned easily and can be sterilized / autoclaved according to all current methods.

D-1500   D-1800

Specifications

Model	D-1500	D-1800
Order No.	3050104	3050105
Display screen	TFT	TFT
Motor	AC	AC
Speed with Zero-Load (rpm)	500~30000rpm	500~26500rpm
For volumes Range	100~40,000ml	100~40,000ml
Applicable shafts	Ø5~Ø36mm	Ø5~Ø65mm
Power (W)	1500W	1800W
Operating temperature	0~40℃	0~40℃
Relative humidity (max.)	80% RH	80% RH
IP Code	IP20	IP20
Interface	RS 232/485	RS 232/485
Supply voltage (V)	220V/50~60Hz	220V/50~60Hz
Dimensions (Excluding dispersing shaft) (W x H x D)	95×163×236 mm	95×163×236 mm

Composite Structure of rotor and stator

Picture	Shaft series	Description
	WG Shaft series	Purpose: The general shafts with two rows of teeth. Applications: –For general laboratory applications, and it is reliable and efficient. –All standard dispersing, emulsifying and suspending tasks – Dispersing of plant, human or animal tissues, resins in a variety of buffers and volumes – Sample preparation for the extraction and dissolution of organic materials –Mixing, dissolving solids
	WK Shaft series	Purpose: – Rotor with knives for pre-cruting lager samples than the rotors diameter. Applications: – Outside blades pre-crush samples. Subsequently, they can be dispersed inside. – Dispersing of samples with larger diameters made simple – Standard dispersing, emulsifying and suspending tasks
	WB Shaft series	Purpose: The rotor has a tilted internal angle design for breaking up of hard samples. Applications: – For open and dispersing of pills, capsules and hard large grains, corns breaking – Hard and brittle material – Standard dispersing, emulsifying and suspending tasks
	WV Shaft series	Purpose: – Special design to prevent clogging of the teeth. Applications –Dispersing for fibrous / stringy materials, solid samples – Standard dispersing, emulsifying and suspending tasks
	WM Shaft series	Purpose: –High-turbulence mixing with low shear forces and energy inputs –Time saving with improved results compared to stirrers and dissolvers of up to 90%. Applications –Fast dissolving and suspending of solid particles into liquid –Mixing at higher viscosities –Mixing of shear sensitive samples
	WP Shaft series	Purpose: –Dissolver shaft – High-speed dissolver Applications –Efficient mixing –Fast mixing, dissolving – Processing of highly viscous products
	WF Shaft series	Purpose: Multiple rows of teeth for more shear. Applications – Fine emulsions and suspensions – Mixes and reduces highly intensive solids into fluids – Extractions – Gasses solutions – Separates fibre and cellular material into very small particles

Two types of shaft

Picture	Shaft type	Description
	C Shaft	C (Easy Clean) Design This is all you need for popular applications in the preparation of samples, formulation development and small scale production.
	G Shaft	G (GAS TIGHT) Design GAS TIGHT - Integrated mechanical seals FOR PRESSURE / VACUUM （0-3bar） . For under pressure or vacuum; Preventing air from being added to emulsions; Corrosive acid mixtures.

Shaft information

WD02FG-250WG30C2/1

- 1: Subdivision numbers for similar shaft.
- 2: Number of teeth rows of rotor and stator
- C: Types of shaft. C (Easy Clean) Design; G (GAS TIGHT) Design
- 30: Diameter of the stator in mm
- WG: Composite Structure of rotor and stator
- 250: Length of shaft / stator tube in mm
- FG: Adapt to disperser models
- 02: Quick-coupling shaft
- WD: WIGGENS dispersal shaft
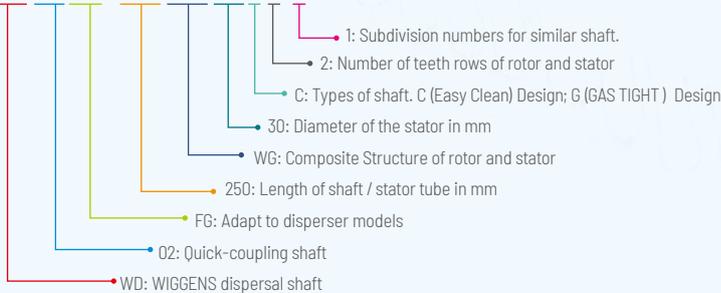
Order No.	Description	ø / length (mm)	Volume range (ml)	max. Tip speed m/s
WD02FG-250WG30C2/1	WG Shaft	30/250	100-4000	30
WD02FG-250WG36C2/1	WG Shaft	36/250	200-4500	34
WD02FG-250WG40C2/1	WG Shaft	40/250	200-5000	36
WD02FG-250WG45C2/1	WG Shaft	45/250	200-8000	40
WD02FG-250WG50C2/1	WG Shaft	50/250	300-10000	44
WD02FG -250WG60C2/1	WG Shaft	60/250	300-30000	50
WD02FG-250WV30C2/1	WV Shaft	30/250	100-4000	30
WD02FG-250WV36C2/1	WV Shaft	36/250	200-4500	34
WD02FG-250WK30C2/1	WK shaft	30/250	100-4000	30
WD02FG-250WK36C2/1	WK shaft	36/250	200-4500	34
WD02FG-250WK30C2/2	WK shaft (With WV stator)	30/250	100-4000	30
WD02FG-250WK36C2/2	WK shaft (With WV stator)	36/250	200-4500	34
WD02FG-250WB30C2/1	WB shaft	30/250	100-4000	30
WD02FG-250WF30C4/1	WF shaft	30/250	100-4000	30
WD02FG-250WFG36C4/1	WF shaft	36/250	200-4500	34
WD02FG-250WM36C2/1	WM shaft	36/250	500-10000	34
WD02FG-250WP30C2/1	WP shaft	30/250	500 – 10000	30
Shafts with gas tight				
WD02FG-273WG30G2/1	WG shaft	30/273	100-4000	30
WD02FG-273WG36G2/1	WG shaft	36/273	200-4500	34
WD02FG-273WF30G4/1	WF shaft	30/273	100-4000	30
WD02FG-273WK30G2/1	WF shaft	30/273	100-4000	30

Dispersing Vessel

> Deep baffles improve aeration and mixing, which is crucial for good homogenization. The Wiggens dispersing vessels help to get better experiment result.

> The flasks or beakers in traditional homogenization or mixing experiment without baffles can easily create a vortex. Since the process will increase the surface between the liquid and air so that there is extra air introducing to the sample. The efficiency of the mixing or homogenization decreases to some extent. Prolonging dispersing time and changing dispersing shaft have to be considered to get optimal result.

> WIGGENS vessels designed with deep baffles make the mixing procedure easier. The baffles decrease the vortex when the high dispersing speed happens. At higher dispersing speeds, the baffles interrupt the flow in the radial direction and increases counteracting forces. The turbulent liquid flow will get high performance.

Model	Dim. (mm) Ø / H	Working Vol.	Shape	Material	Features	Order No.
DV500	80 / 200	500 ml	Cloverleaf shaped	Borosilicate glass	Top open without cover	W3050100

Stand

> Strong base for optimal weight distribution
> Base made of cast iron and shafts made of stainless steel
> Different heights available
> Designed for D-500/600 series homogenizers
> High quality clamp and fixing set included in the package of stand.

Order No.	Description	Suitable for
WF11-D	Extendable flat bracket (double rod design)	D-500, D-500Pro, D-600
11045011	Vessel holder (without boss head clamp) for WF11-D	WF11-D, WH11-D
11045030	Safety ring for stand WF	WF11-D, WH11-D
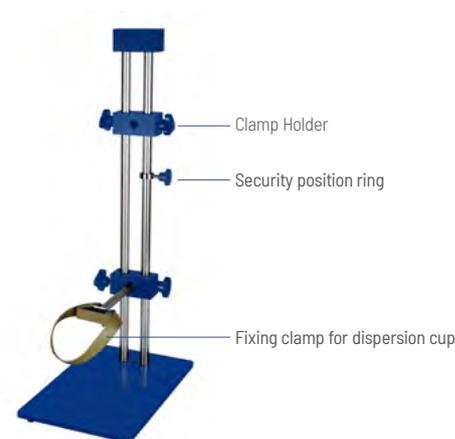
Clamp Holder

Security position ring

Fixing clamp for dispersion cup

Dispersing tests D-130

No.	Material	Amount	Pregrinded	Liquid	Vessel	Speed	Duration	Result	Shaft	Test okay? Yes/no	Sample before Dispersing	Sample after Dispersing
1	Rose flower	0.2g	no	5ml water	10ml Conical Tube	level 4	4 min	homogeneous suspension	DS-130/7	yes		
2	Rose flower	0.2g	no	5ml water	10ml Conical Tube	level 6	3 min	homogeneous suspension	DS-130/7	yes		
3	Rose flower	0.1g	no	5ml water	10ml Conical Tube	level 4	1 min	homogeneous suspension	DS-130/10	yes		
4	Rose flower	0.1g	no	5ml water	10ml Conical Tube	level 4	1 min	homogeneous suspension	DS-130/10	yes		
5	Rose stamens	0.05g	no	1.5ml water	2ml Conical Tube	level 4	1 min	homogeneous suspension	DS-130/5	yes		
6	Rose stamens	0.1g	no	2ml water	10ml Conical Tube	level 4	2 min	homogeneous suspension	DS-130/10	yes		
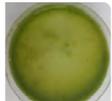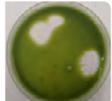
Dispersing tests D-130

No.	Material	Amount	Pregrinded	Liquid	Vessel	Speed	Duration	Result	Remarks	Recommended or not	Sample before Dispersing	Sample after Dispersing
1	Rape oil	20 drops	no	10 ml water	test tube 16 mm	max.	1 min	stable emulsion		yes		
2	Chicken liver	1 g	5 mm pieces	10 ml water	test tube 16 mm	max.	30 s	homogeneous suspension	sample completely homogenized	yes		
3	Rice	1g	no	10 ml water	test tube 16 mm	max.	1 min	homogeneous suspension	only very small pieces of rice left	yes		
4	Basil leaf	1 piece	5 mm pieces	10 ml water	test tube 16 mm	max.	1 min	homogeneous suspension	only small pieces of leaves left	yes		
5	Spelt flakes	2 g	no	15 ml water	test tube 16 mm	max.	1 min	homogeneous pulp		yes		
6	Cooked ham	2 g	5 mm pieces	50 ml water	150 ml beaker	max.	30 s	homogeneous suspension	only very small pieces of leaves left	yes		
7	Confetti	about 20 pieces	no	10 ml water	test tube 16 mm	max.	1 min	homogeneous cellulose suspension		yes		
8	Wood	1 toothpick	5 mm pieces	10 ml water	test tube 16 mm	max.	1 min	The pick was not grinded	slight abrasion of the wood pieces	no		
9	Tobacco	0,5 cigarettes	no	10 ml water	test tube 16 mm	max.	30 s	homogeneous Pulp	a few fibres stick in the gaps of the stator	yes		
10	Cloves	5 pieces	no	10 ml water	test tube 16 mm	max.	1 min	no grinding effect	no cloves was grinded	no		
11	Mustard seeds	1 g	no	10 ml water	test tube 16 mm	max.	1 min	homogeneous suspension	all seeds were grinded	yes		
12	Herbal tea	0,5 g	no	10 ml water	test tube 16 mm	max.	1 min	homogeneous suspension	the herbal tea was completely Grinded	yes		
13	Sunflower seeds	2 g	no	15 ml water	test tube 16 mm	max.	1,5 min	homogeneous suspension	all seeds were grinded	yes		
14	Dragee	1 piece	no	10 ml water	test tube 16 mm	max.	1 min	homogeneous suspension	the dragee was completely grinded	yes		
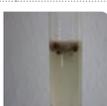
Dispersing tests D-130

No.	Material	Amount	Pregrinded	Liquid	Vessel	Speed	Duration	Result	Remarks	Recommended or not	Sample before Dispersing	Sample after Dispersing
15	Chicken meat	2 g	5 mm pieces	10 ml water	test tube 16 mm	max.	20 s	homogeneous suspension	part of tendons wrapped around the rotor	yes		
16	Ivy	2 leaves	5 mm pieces	10 ml water	test tube 16 mm	max.	2 min	inhomogeneous suspension	20 % of the leaves were not grinded	no		
17	Rose blossom	2 leaves	5 mm pieces	10 ml water	test tube 16 mm	max.	1 min	homogeneous suspension	some fibres stick in the gaps of the stator	yes		
18	Whole grain Bread	2 g	5 mm pieces	15 ml water	test tube 16 mm	max.	30 s	homogeneous suspension		yes		
19	Carrot	2 g	5 mm pieces	10 ml water	test tube 16 mm	max.	2 min	no grinding effect	carrots are too hard	no		
20	Harzer cheese	2 g	5 mm pieces	10 ml water	test tube 16 mm	max.	10 s	homogeneous sample		yes		
21	Rapes with Kernels	5 pieces	5 mm pieces	10 ml water	test tube 16 mm	max.	1 min	homogeneous suspension	only very small pieces of rapes left	yes		
22	Coffee beans	1 piece	quartered	10 ml water	test tube 16 mm	max.	1 min	homogeneous suspension	only very small pieces of coffee left	yes		
23	Soil sample	1 g	no	10 ml water	test tube 16 mm	max.	30 s	homogeneous suspension	only very small pieces of stones left	yes		
24	Pork meat (fat and sinewy)	1 g	5 mm pieces	10 ml water	test tube 16 mm	max.	1 min	homogeneous suspension	part of tendons wrapped around the rotor	yes		
25	Pet food	1 g	5 mm pieces	10 ml water	test tube 16 mm	max.	30 s	homogeneous suspension	part of tendons wrapped around the rotor	yes		
26	Styrofoam	0,5 cm^3	5 mm pieces	10 ml water	test tube 16 mm	max.	1 min	no grinding effect		no		
27	Berries mix	2 g	no	10 ml water	test tube 16 mm	max.	30 s	homogeneous suspension	all berries are grinded	yes		
28	Tomatoes	15 g	10 mm pieces	without	50 ml beaker	max.	2 min	homogeneous tomato pulp	parts of the bowl are not grinded	yes		

Dispersing tests D-500 / D-500Pro / D-600

No.	Material	Amount	Pregrinded	Liquid	Vessel	Speed	Duration	Result	Remarks	Recommended or not	Sample before Dispersing	Sample after Dispersing
1	Rape oil	5 ml	no	80 ml water	100ml measuring cylinder	max.	1 min	stable emulsion		yes		
2	Liver	20 g	10 mm pieces	200 ml water	500 ml beaker	max.	30 s	homogeneous suspension	sample completely homogenized	yes		
3	Rice	20 g	no	80 ml water	100ml measuring cylinder	max.	1 min	homogeneous suspension	only small pieces of rice left	yes		
4	Basil leaf	10 pieces	10 mm pieces	200 ml water	500 ml beaker	max.	1 min	homogeneous suspension	only small pieces of leaves left	yes		
5	Spelt flakes	25 g	no	80 ml water	100ml measuring cylinder	max.	1 min	homogeneous Pulp		yes		
6	Cooked ham	20 g	1 cm pieces	200 ml water	500 ml beaker	max.	30 s	homogeneous suspension	only very small pieces of fibres left	yes		
7	Confetti	about 200 pieces	no	70 ml water	100ml measuring cylinder	max.	1 min	homogeneous cellulose suspension	a very small part stick between the rotor and the stator	yes		
8	Wood	5 toothpicks	1 cm pieces	200 ml water	500 ml beaker	max.	1 min	about 60 % of the picks are grinded	some psrts of the Picks are not grinded and stick	yes		
9	Tobacco	1 cigarette	no	150 ml water	250 ml beaker	max.	1 min	bad homogenizing Most of the tobacco floats ungrinded on the surface	a few fibres stick in the gaps between the rotor and the stator	no		
10	Cloves	30 pieces	no	200 ml water	500 ml beaker	max.	1 min	homogeneous suspension	all cloves were grinded	yes		
11	Mustard seeds	10 g	no	150 ml water	500 ml beaker	max.	1 min	homogeneous suspension	all seeds were grinded	yes		
12	Herbal tea	2 g	no	500 ml water	2 l beaker	max.	1 min	homogeneous suspension	the herbal tea was completely Grinded	yes		
13	Sunflower seeds	20 g	no	150 ml water	500 ml beaker	max.	1 min	homogeneous suspension	all seeds were grinded	yes		
14	Dragees	5 pieces	no	60 ml water	100ml measuring cylinder	max.	1 min	homogeneous suspension	the dragee was completely grinded	yes		

Dispersing tests D-500 / D-500Pro / D-600

No.	Material	Amount	Pregrinded	Liquid	Vessel	Speed	Duration	Result	Remarks	Recommended or not	Sample before Dispersing	Sample after Dispersing
15	Chicken meat	10 g	10 mm pieces	200 ml water	500 ml beaker	max.	20 s	homogeneous suspension	part of tendons wrapped around the rotor	yes		
16	Ivy	10 leaves	10 mm pieces	200 ml water	500 ml beaker	max.	2 min	homogeneous suspension	only very small pieces of leaves left	yes		
17	Rose blossom	10 leaves	10 mm pieces	200 ml water	500 ml beaker	max.	2 min	homogeneous suspension	only very small pieces of leaves left	yes		
18	Whole grain Bread	20 g	10 mm pieces	200 ml water	500 ml beaker	max.	2 min	homogeneous suspension	the vessel must be moved	yes		
19	Carrot	10 g	10 mm pieces	200 ml water	500 ml beaker	max.	2 min	homogeneous suspension	the vessel must be moved	yes		
20	Harzer cheese	20 g	10 mm pieces	200 ml water	500 ml beaker	max.	20 s	homogeneous suspension	the vessel must be moved	yes		
21	Rapes with Kernels	5 pieces	10 mm pieces	200 ml water	500 ml beaker	max.	1 min	homogeneous suspension	only very small pieces of rapes left	yes		
22	Coffee beans	10 pieces	no	60 ml water	100ml measuring cylinder	max.	1 min	homogeneous suspension	only very small pieces of coffee left	yes		
23	Soil sample	20 g	no	200 ml water	500 ml beaker	max.	1 min	homogeneous suspension	only very small pieces of stones left	yes		
24	Pork meat (fat and sinewy)	10 g	10 mm pieces	200 ml water	500 ml beaker	max.	1 min	homogeneous suspension	part of tendons wrapped around the rotor	yes		
25	Pet food	20 g	10 mm pieces	200 ml water	500 ml beaker	max.	30 s	homogeneous suspension	part of tendons wrapped around the rotor	yes		
26	Styrofoam	2 cm³	10 mm pieces	200 ml water	500 ml beaker	max.	1 min	no grinding effect		no		
27	Berries mix	20 g	no	200 ml water	500 ml beaker	max.	30 s	homogeneous suspension	all berries were grinded	yes		
28	Tomatoes	50 g	10 mm pieces	without	250 ml beaker	max.	2 min	homogeneous tomato pulp	the vessel must be moved	yes		

Flapping Homogenizer

From sample preparation......to microbiological analysis

WIGGENS provides a complete solution

3 Homogenizing the sample
The sample is homogenized with the Flapping Homogenizer. There is no contact between the sample and the machine to avoid cross-contamination.

2 Diluting the sample
Add the right amount of diluent into the sterile bag

1 Collecting the sample
Place the sample in sterile filter bag. The bag stands upright.

5 Pipetting the filtered sample
Preparation of diluted inoculation fluid (gradient) with precision pipetting device from Socorex.

4 Organizing the samples
It is easy to absorb and transfer because the filter bag integrates the filtering effect

Flat plate crossed inoculation
Please choose automatic sterilization device from WIGGENS for automatic sterilization of inoculation rings

7 Plating
Diluting coating method
Please choose Petri dish automatic turntable from WIGGENS

6 Preparing your media
Preparation and subpackage of medium with peristaltic pump from WIGGENS

8 Counting the colonies
It is very fast for counting when using the colony counter from WIGGENS

Flapping Homogenizer (Stomacher)

> Flapping Homogenizer is also called Sterile Homogenizer, and can be used to abstract bacteria from solid samples. Put the original samples and the diluents into the sterile bag, then put the bag into the homogenizer. Through the flapping of the paddles, the material in the bag can rapidly reach a homogenized state by the pressure, shaking and vibration.

> To guarantee the uniformity of the effective extraction of the microorganism inside and on the surface of the solid sample, make sure to include all the material in the sterile bag. The homogenized sample then can be used for the following analysis, and the sterile bag avoids the cross contamination.

> Using disposable sterile homogeneous bags to guarantee the sample safety and non-contamination, leakless process omits cleaning of the instrument. The advantage of the flapping homogenization is convenient, quick, mild, accurate and good repeatability. Samples will not be contaminated, damaged, heated, and no sterilization as well as no container is needed, thus no container cleaning process either.

Application:

> Food microbiological analysis

> Homogenization of animal tissues, biological samples, and cosmetics

> Homogenization of meats, fish, vegetables, and fruits

> Medicines, clinics, molecules, detection of toxins and bacteria

Tight closure

Visible window door for observation of the process

Low noise blending

Robust and compact stainless steel

Adjustable blending power

Both paddles always stop at the same parallel position HG400 Pro

Features

> Samples in sterilize bag are homogenized by paddles without the risk of cross-contamination.

> Optimal bacterial extraction without destruction.

> Leading microprocessor technology for flap control

> Adjustable flapping speed

> Working time can be set on continuous or pre-set time

> Maintenance-free brushless DC motor

> Stainless steel housing with plastic coating for HG40VW or full stainless for HG400Pro

> Employ digital setting and display of the working time

> Digital and analog interface for remote control

HG400 Pro

> Paralleled paddles stop ease the procession.

> Tight closure secure bag seal.

> Quick paddles remove and installation allow you to clean the chamber

> Illumination unit observation of observing the whole process clearly.
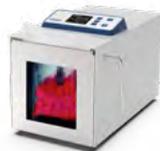
HG400 Pro

> Useful volume :50-400ml

> Variable speed :1-10strokes/s

> Variable blending time : 1s - 59min 59S

> Paralleled paddles stop

> Safety drip tray

> Adjustable blending power

Sterile bag for sampling and samples homogenization.

Easy transportation of the sample

Specifications

Mode	HG400VW	HG400 Pro
Door	SS-Door with Observation Window	SS-Door with Observation Window
Blending volume (ml)	50-400	50-400
Speed (rpm)	10~300	60~360
Variable blending time	1 min to 24h	1 second to 59min 59 s
IP code	IP30	IP30
Exterior dimension (W x D x H, mm)	250 x 460 x 260	300 x 420 x 310
Interior dimension (W x D x H, mm)	190 x 100 x 220	190 x 100 x 220
Sound pressure level [dB]	≤ 50	≤ 50
Weight [kg]	16	16
Power	100-240V /50-60Hz	100-240V /50-60Hz

Accessories for flapping homogenize

Dilution pipette Acura® manual 810

Air displacement pipette with two pre-calibrated steps allows subsequent pipetting of 1 and 0.1 ml of the same liquid. Metal nozzle fits long straw tips to aspirate from narrow or deep reservoirs (i.e. Stomacher®bags). Ideal alternative to the graduated glass pipettes when performing serial 1:10 dilutions in bacteriology.

Features

> Two pre-calibrated fixed volumes – no setting required
> Smooth activation, excellent ergonomics
> Interchangeable PE nozzle protection filter
> JustipTM system for height adjustment of the tip ejector
> Independent calibration for each volume
> Easy maintenance, cleaning and disinfection
> Fully autoclavable 121°C / 250 °F
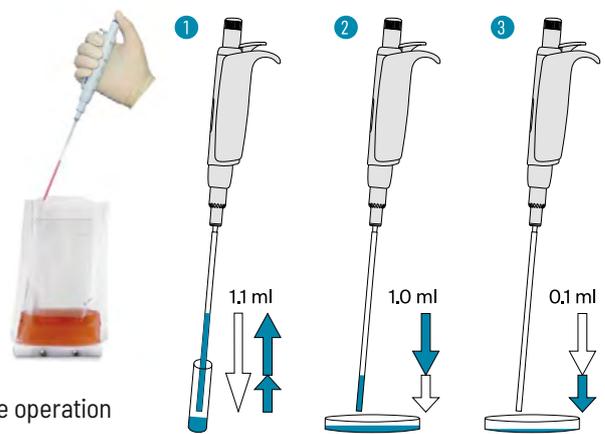
Simple operation

1. Depress plunger button in full, then release slowly to aspirate 1.1 ml
2. Depress plunger button to first stop, thus dispensing 1 ml in Petri dish
3. Depress plunger button to second stop, thus dispensing residual 0.1 ml in next Petri dish

Ordering information

Order No.	Packaging	Description
810.1100	1 / pk	1 ml / 0.1 ml ①
313.1119.40	40 x 25 / pk	Straw tips, polypropylene, sterilized (L: 190 mm, Ø:4 mm) ②
322.810	100 / pk	Nozzle protection filter, PE material ③

Order information

Order No.	Name	Capacity	Content
2125C25	Standard bag	400 ml	25 per bag ①
2150C25	Standard bag	400 ml	50 per bag ①
4125C15	Full-page filter bag	400 ml	25 per bag ②
6125C15	Lateral filter bag	400 ml	25 per bag ③
SMCLIP	Clip for sterilization bags		④
9125R15	Rack for sterilization bags		Position: 10 ⑤

Laboratory mixer

WMA550 / WMA800

WMB series are ideal for intense mixing, grinding, dispersing, homogenizing, emulsifying, mincing operations, for routine analyses and easy to work with. Grinding results are achieved up to 1 μm particle size or 0.25 mm defined ultimate fineness. Simple handling, high user safety and efficiency are just the advantages offered by these mixers.

Working Volumes

There are four different attachments for the WMA550 with the volumes 125 ml, 250 ml, 500 ml and 1000 ml. Larger volumes up to 2 liters can be processed using the WMA800 with the associated stainless steel mixing cups. The robust design allows for high stability and a long service life.

Features

> Smooth rotational speed adjustment with integrated on- and off switch, speed ranging up to 17 000 rpm and a 800 W max output.
> operating mixing attachment and protection cover without tools
> various sample volumes with different mixing attachments
> Operation only possible when security cover and lid in place
> Variety of sample container designs for different sample volumes.
> Dampening quick coupling for reduce work vibration
> Very quiet motor with integrated load, heat and blockage protection
> Results are crucia, production of very fine particle sizes in both liquid and dry mediums: precise analyses require homogeneous samples

![WIGGENS - The Magic Motion]

Specification

Model	WMA550	WMA800
Display	Graduation	Graduation
Speed range	1000-15000rpm	1000 ~17'000 rpm
Useable volume max.	1000ml	4000ml
Sound level	ca. 72 dB(A) at 17,000 rpm	ca. 72 dB(A) at 17,000 rpm
Protection Class according to DIN	IP 20	IP 20
Supply voltage	230V / 50Hz or 100-120V / 60 Hz	
Drive power	550W	800W
Drive dimensions (H/Ø)	245 mm / Ø 190 mm	245 mm / Ø 190 mm
Operating temperature	0 – 40℃	
Maximum relative humidity	Maximum relative humidity 80 %	
Order no.（Without mixing attachments）	W3053110	W3053111

Borosilicate glass mixing attachments and protection covers (for WMA550)

Mixing attachments

After sample preparation the mixing attachments from heat resistant borosilicate glass MBA 125 to MBA 1000 can be used for further laboratory tasks without the need to transfer contents. The vessels are simply screwed to the blade head with a glass thread and spacer ring.

Protection cover

The protection covers are for the various MBA mixing attachments. For safety reasons, it is not possible to start the WMA550 mixer without a protection cover. The 5 mm thick Plexiglas cover also protects the operator in case of glass breakage when stones or similar solid materials are accidentally mixed.

Mixing attachments of stainless steel (for WMA800)

Mixing attachments

MBA 2000 (For WMA800), made of stainless steel, allow processing of larger amounts. Due to safety reasons, it is not possible to start the machine when the lid is open or open the machine when it is running. Additional sample material can be added during operation only via the integrated opening in the lid.

The blade head can be easily unscrewed for cleaning purposes.

High-performance stainless steel cutting blade assembly

The cutting blade assembly

The six polished premium steel rotor blades have been optimized for intense and quick processing for all types of samples. All parts that touch the product are made from stainless steel and can be easily detached and cleaned. Integrated stainless steel ball bearings ensure ease of movement and a perfectly true run. Power transmission occurs via a rubber cushioned plug coupling.

Gaskets

The standard gaskets are made from NBR material. Upon request, gaskets from EPDM, or viton are also available.

Order information and accessories

Laboratory mixer

Order no.	Product	Description
W3053110	WMA550	Without mixing attachments
W3053111	WMA800	Without mixing attachments

Mixing attachments (for WMA550)

Mixing attachments MTG125 to MTG1000 consist of Stainless steel / borosilicate glass container, gasket and blade head.

Order no.	Product	Description
W3053601SS	MTS125	Working volumes: 125 ml, Stainless steel container body
W3053602SS	MTS250	Working volumes: 250 ml, Stainless steel container body
W3053603SS	MTS500	Working volumes: 500 ml, Stainless steel container body
W3053601	MTG125	Working volumes: 125 ml, borosilicate glass container body
W3053602	MTG250	Working volumes: 250 ml, borosilicate glass container body
W3053603	MTG500	Working volumes: 500 ml, borosilicate glass container body
W3053604	MTG1000	Working volumes: 1000 ml, borosilicate glass container body

MTS125   MTS250   MTS500

MTG125   MTG250   MTG500   MTG1000

Protective covers (for WMA550)

Plexiglass protection glass is absolutely required when using MTG mixing attachment.

Order no.	Product	Description
W3053606	MTH125	Height: 86 mm
W3053607	MTH250	Height: 128 mm
W3053608	MTH500	Height:149mm
W3053609	MTH1000	Height:228mm

MTH125   MTH250   MTH500   MTH1000

Mixing attachments (for WMA800)

Mixing attachments MTS2000 to MTS4000 consist of Stainless steel container, gasket, blade head. as well as lid with opening for material addition.

Order no.	Product	Description
W3053605	MTS2000	Working volumes: 2000 ml, Stainless steel container body
W3053606	MTS4000	Working volumes: 4000 ml, Stainless steel container body

MTS2000   MTS4000

Laboratory Mill

Laboratory mill WMF10 for crushing dry sample preparation.

In some analysis or quality control experiments require finely ground samples. WIGGENS Laboratory mill is easy to change grinding attachments and sieves extend the range of any samples that can be processed. Excellent crushing performance is guaranteed by a combination of variable rotational speeds ranging from 50 rpm to 6 000 rpm.

Laboratory crushing Expert

This laboratory mill is characterized by a very robust design using solid milled parts and hardened components. The mill can perform a wide range of crushing tasks involving coarse and fine crushing. The mill has been designed for high wear and tear found with such processes as grinding of stones which can have a hardness of up to 6 on the Mohs scale.

Features

> Dust protected main safety switch

> Funnel with hinged lid prevent dust splashing

> If necessary, samples can be refilling during operation

> The sample chamber is equipped with a safety lock, and the mill can only be started by closing the door of the grind chamber

> Grinding attachment variants can be easily changed.

> Motor stop when opening grind chamber

> Simple cleaning process

APPLICATION RANGES

– Grinding of solids for general sample preparation

– Grinding samples for dry analysis or analysis in liquids

– Sample preparation in content analysis and preparation for QC

Technical information

Model	WMF10
Operating principle	Cutting / Impact
Speed range	50 to 6000 rpm
Feed hardness	6 Mohs (MF 10.2)
Funnel volume	300 ml
Product discharge	For collection tubes with norm grinding NS29
Sieves mesh size (mm)	0.2 to 6 mm
Grinding attachments (convertible)	Hammer grinding attachment Blade grinding attachment
Motor	Wear-free three-phase motor; Gearless direct drive; Security system auto-off
Drive power	1000W
Results are crucial	Attainable particle sizes: < 40μm (depending on product)
Sound level (without load)	70 dB(A) for 6000 rpm
Supply voltage	100 – 230 V ± 10 %, 50Hz / 60Hz
Maximum relative humidity	80 % in storage; 80 % during operation
Operating temperature	0 – 40 °C
Protection class according to DIN	IP 20
Measurements (L x W x H)	325 x 251 x 480 mm
Weight	12 kg

Standard package includes: mill, Intercepting tubes (3508004), Rack for tubes (3508003), disassemble tools, brush. Grinding and sieve attachments need to be need to be ordered separately.

Grinding attachments.

Blade grinding or hammer grinding? You have the choice.

If there are questions regarding the use of our mill for your application after speaking with a specialist, our application lab will be happy to run your sample and send the results for your inspection.

NOTE ABOUT GRINDING ATTACHMENTS

Wet samples or samples with high fat content gum up the sieve and chamber, producing a useless grinding result. For these types of samples Wiggens provides the WHF40 homogenizers. They cover a broad range of samples.

BLADE GRINDING ATTACHMENT

Technology Consists of a rotor with three hardened cutting knives and stator with 3 cutting bars. During the cutting process, the sample is spun around the grinding chamber and cut until the desired particle size has been achieved. The ground sample passe s through the sieve into the collection container. Particles that are larger than the sieves diameter remain in the mill and can be removed by opening the grinding chamber.

Ideal for processing of dry, stringy, fibrous and fat-free materials such as:
Wood, bark, roots, leaves, straw, corks, dried fruit, dried fat- free meat, fish fins, fish bones, feathers, leather, leather skin, wool, cotton, linen, paper, coals, turf, grass, dried resins, synthetic materials, fiber glass, plastic pellets, various textiles, felt, etc.

Before   After   Before   After

HAMMER GRINDING ATTACHMENT Technology

Consists of a rotor with three hardened strike hammers and a grooved stator. During the grinding process, the sample is spun around the grinding chamber and struck until the desired particle size has been achieved. The ground sample passes through the sieve into the collection container. Particles that are larger than the sieve diameter remain in the mill and can be easily removed by opening the grinding chamber.

Ideal for processing of dried, brittle and fat-free materials such as:
Dried grains, oats, malt, pectin, raw and roasted coffee beans, dry beans, fish skeletons, nut shells, bones, pebbles, rock, amber, ceramics, etc.

Before   After   Before   After

Accessories

Grinding attachments

Order No.	Product	Description
W3050411	Hammer grinding attachment	Ideal for processing of dried, brittle and fat-free materials, such as: Dried grains, oats, malt, pectin, raw and roasted coffee beans, dry beans, fish skeletons, nut shells, bones, pebbles, rock, amber, ceramics, etc. Consists of 3-armed rotor and grooved stator / tool included.
W3050421	Blade grinding attachment	Ideal for processing of dry, stringy, fibrous and fat-free materials such as: Wood, bark, roots, leaves, straw, corks, dried fruit, dried fat- free meat, fish fins, fish bones, feathers, leather, leather skin, wool, cotton, linen, paper, coals, turf, grass, dried resins, synthetic materials, fiber glass, plastic pellets, various textiles, felt, etc. Consists of 3-armed rotor with cutting knives and stator with 3 cutting bars / tool included.

W3050411

W3050421

Grinding attachments

Order No.	Product	Description
W3050402	Sieve 0.2	Hole diameter 0.2 mm
W3050405	Sieve 0.5	Hole diameter 0.5 mm
W3050408	Sieve 0.8	Hole diameter 0.8 mm
W3050409	Sieve 1.0	Hole diameter 1.0 mm
W3050415	Sieve 1.5	Hole diameter 1.5 mm
W3050419	Sieve 2.0	Hole diameter 2.0 mm
W3050430	Sieve 3.0	Hole diameter 3.0 mm
W3050440	Sieve 4.0	Hole diameter 4.0 mm
W3050450	Sieve 5.0	Hole diameter 5.0 mm
W3050460	Sieve 6.0	Hole diameter 6.0 mm

Depending on the sample, even finer results can be achieved by grinding with two or more sieves with progressively smaller

hole sizes. Each mill includes a 2.0 mm sieve attachment.

Hole diameter: Depending on the product, 1 / 5 of sieve diameter is the approximately attainable particle size.

Example: Sieve 0.2 mm / 5 = 0.04 mm (40µm)

Stodger

Order No.	Product	Description
W3050401	Stodger	For active insertion of fibrous materials, which do not reach the grinding chamber due to their weight.

Other accessories

Order No.	Product	Description
W3050404	Intercepting tubes	12 intercepting tubes for WHF40
W3050406	Rack for tubes	Rack with a drawer for 12 intercepting tubes

Shaker

WIGGENS
The Magic Motion

Orbital Shaker

> Two different shaking functions: reciprocal and orbital
> Adjustable shaking speed and range
> Timer function for maximum flexibility
> Corrosion-resistant power-coated stainless steel housing
> Easy to clean and maintain
> Large mounting surface and big load capacity of up to 12 kg
> Suitable for various vessels, like round flasks, Erlenmeyer flasks, culture flasks, or culture bottles
> Widely used for bacterial cultures, fermentation, hybridization, biochemical reactions, enzyme or tissue research
> Shaking motion can be set in up to 6 different ways
> Wide range of accessories are available.

The distinctive and economical models offer the most felicitous shaking motion
Two types of shaking motions (orbital or reciprocal). Three varieties of orbital or reciprocal shaking throw available. The compact and interchangeable platform design accommodates various types and sizes of vessels and suitable for use in chambers.

Model	WS-50D	WS-50DR
Motion Type	Orbital	Reciprocal
Speed Range (rpm)	10 to 300	10 to 250
Accuracy (rpm)	±2 (100 rpm)	±2 (100 rpm)
Timer	1min to 99 hrs 59 min	1min to 99 hrs 59 min
Shaking Throw	8 / 14 / 20 Available - Standard 20	8 / 14 / 20 Available - Standard 20
Maximum Load (kg)	7	7
IP code	IP21	IP21
Power (W)	80	80
Platform (W×D) (mm)	320x260	320x260
Overall (WxDxH) (mm)	355x375x140	355x375x140
Weight(kg)	20	20
Order No.	3A126C	3A226C

Standard package includes only shaker, tray need to be ordered separately.

Multi-function Shaking System

Intensive multi-function shaking system surpasses all the previous levels of shaker units. Mix and match clockwise, counterclockwise, start, and stop motions.
(Making 6 possible combinations - refer to each model spec.)

Dual-Action Shakers

Benchtop platform shakers with advanced dual-shaking features, for flasks up to maximum 6L.
Performances: Orbital or reciprocal action and variable-speed control provide gentle to vigorous agitation. It offers user-friendly operating and safety features for reliable shaking of lab glassware.

Multi-function Shaking System

Specifications

Model	WS-100D	WS-150D	WS-200D
Display and Control	TFT Digital Display / On-Touch Control	TFT Digital Display / On-Touch Control	TFT Digital Display / On-Touch Control
Motion Type	Orbital or reciprocal motion selectable	Orbital or reciprocal motion selectable	Orbital or reciprocal motion selectable
Accuracy(rpm)	±1 (100rpm)	±1 (100rpm)	±1 (100rpm)
Speed Range (rpm)	10~300	10~300	10~300
Shaking Throw (mm)	20, 30, 40 Available - Standard 30	20, 30, 40 Available - Standard 30	30, 40, 50, 60, 70 Available - Standard 30
Timer	1min to 99 hrs 59 min		
Maximum Load (kg)	7	15	30
IP code	IP21	IP21	IP21
Power (W)	100	110	130
Platform (W×D) (mm)	350×350	450×450	755×481
Overall (W×D×H) (mm)	410×490×150	510×595×150	820×610×166
Weight (Kg)	24	29	50
Order No.	200200C	200300C	200400C

Standard package includes only shaker, tray need to be ordered separately.

Accessories for Shaker

Sticky Tray

The Wiggens Sticky Plate can be loaded with any kind of vessels with a smooth base. Even at a speed of up to 220 rpm the vessel sticks to the plate. Other vessels, like microtitre plates can be shaken on the Wiggens Sticky Plate as well.

Suitable for	WS-50D/50DR	WS-100D	WS-150D	WS-200D
Order No.	3A901	31901	31902	31903
Dimensions(W x D in mm)	320x260	350x350	450x450	755x481
Sticky (singal piece) (need 4 pieces for replacement on the tray)	3A901 -1	31901 -1	31902 -1	31903-1
Tray (Without sticky pieces)	3A901 -2	31901 -2	31902 -2	31903-2

Multi-Purpose Spring Tray

The multi-purpose tray is made of stainless steel and can be used for a diverse range of unusual specifications.

Suitable for	WS-50D/50DR	WS-100D	WS-150D	WS-200D
Order No.	3A521	31521	31522	31523-W
Dimensions(W x D x H mm)	320*260*120	350*350*120	450*450*120	754*478*97
Max. Load of Flasks				
50ml	12	16	25	40
100ml	6	9	16	28
250ml	3	4	9	15
300ml	3	4	9	15
500ml	3	4	5	10
1L	2	2	4	8
2L	-	1	2	4
2.8L	-	1	2	4

Bar OD 23mm

Adjustable Bar Tray

Suitable for	WS-50D/50DR	WS-100D	WS-150D	WS-200D
Order No.	3A511	31511	31512	31513
Dimensions(W x D x H mm)	320x260x97	350x350x97	450x450x97	754x478x97
Number of bar	3	3	3	6
Order No. of bar	3A511-05	31511-05	31512-05	31513-05
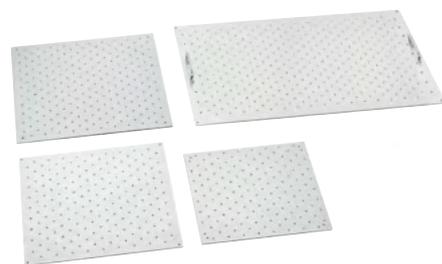
Universal Tray

The Universal Trays have a drilled grid for individual loadings of text tube holders with clamps, molds for microtitre plates, and deep-well plates.

Suitable for	WS-50D/50DR	WS-100D	WS-150D	WS-200D
Order No.	3A501	31501	31502	31503
Dimensions(W x D in mm)	320x260	350x350	450x450	755x481
Max. Load of Flask Clamps				
50ml	20	32	49	96
100ml	9	25	36	65
250ml	9	13	25	40
300ml	6	13	25	40
500ml	4	9	13	24
1L	2	4	8	12
2L	1	2	5	11
4L	-	2	2	4
Max. Load of Separatory Funnel Clamps				
250ml	4	4	6	11
500ml	3	3	4	9
1L	2	2	3	5
2L	-	1	2	4

Erlenmeyer flask clamp

Size of flask	Order No.
25ml	23549
50ml	23550
100ml	23551
250ml	23552
300ml	23556
500ml	23553
1000ml	23554
2000ml	23555
3000ml	23560
4000ml	23558
5000ml	23561
6000ml	23559

Separatory Funnel Clamp

Funnel Volumes	250ml	500ml	1L	2L
Order No.	23562	23563	23564	23565
Dimensions(W x D in mm)	152x60	165x70	230x80	255x90

Multi-Pore Holder

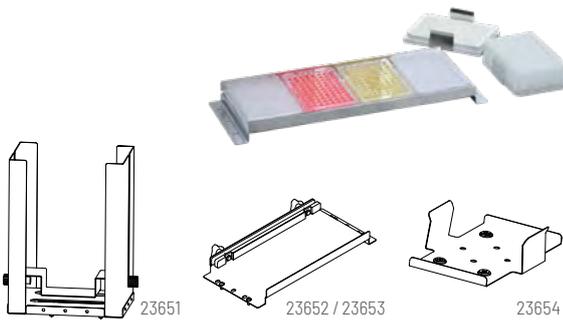The Wiggens multi-pore holders can be installed on the Wiggens sticky plates or the Wiggens universal trays. All holders can be installed on small pores and deeper holes In total, four different multi-pore holders are available:
1. Multi-Layer Holder
2. Single-Layer Single-Position Holder
3. Single-Layer Three-Position Holder
4. Single-Layer Four-Position Holder

Max. No. of Mountable Holders	Multi-Layer	Four-Position	Three-Position	Single-Position
Order No.	23651	23652	23653	23654
Dimensions(W x D x H mm)	131x91x181	380x161x48	300x161x48	129x89x31
Max. mountable holders				
WS-50D/50DR	4	–	1	6
WS-100D	6	–	2	8
WS-150D	10	2	3	15
WS-200D	16	3	5	25

Rubber Mat

Designed for low-speed applications, non-skid rubber mats allow quick addition or removal of flasks, plates or tubes.

Suitable for	WS-50D/50DR	WS-100D	WS-150D	WS-200D
Order No.	3A531	31531	31532	31533
Dimensions(W x D x H mm)	350x290x23	352x352x23	450x450x23	775x478x90

Plastic clamps for Erlenmeyer flask

Order No.	Description	Order No.	Description
31285	100ml	31287	500ml
31286	250ml		

Stainless steel clamps for Fernbach flask

Order No.	Description	Order No.	Description
31283	1.8L	31284	2.8L

Test tube rack for long type

Order No.	Description	Order No.	Description
31342	144 x Ø8mm	31356	39 x Ø18mm
31343	100 x Ø10mm	31358	36 x Ø20mm
31347	72 x Ø12mm	31359	33 x Ø22mm
31352	64 x Ø14mm	31360	20 x Ø25mm
31354	36 x Ø16mm	31361	16 x Ø30mm

Test tube rack for short type

Order No.	Description
31348	72 x Ø12mm
31353	64 x Ø14mm
31357	39 x Ø18mm（Suitable for Greiner Bio-one tube）

Rack for plastic test tube

Order No.	Description
31355	36x Ø16mm（15ml）
31362	16x Ø30mm（50ml）

187mm test tube rack for short type

Order No.	Description	Order No.	Description
31344	44 x Ø12mm	31349	21 x Ø20mm
31346	24 x Ø18mm		

Shaker for CO$_2$ Incubator

This is Compact Shaker with benefits such as small foot print and easy to move. The non-belt magnetic drive provides low noise, low vibration. Despite compact size, shaking is powerful and the workplace is large to load various vessels.

Celshak®

Features

Gentle magnetic drive
The non-belt magnetic drive design affows for high performance of water resistance. This most gentle drive unit has exceptionally smooth start-up and braking behavior, and is specifically good for cell cultures.

Made of stainless steel
The entire housing of shaker is made of stainless steel (SUS304), meeting the demand of GMP's cleaning requirements. It is easy for the removal of any unwanted liquids and can be cleaned with chemicals.

No gas leaks
The thin Wire Cable connection between the shaker and the control box can pass through the sealing part of the inner glass door although no access port is in your incubator.

Placing remote controller with Magnet
Depending on the material type of the incubator or the situation of the lab, placing remote controller is available with integrated magnets.

Specification

Model	SRC	CRC	MRC
Motion		Orbital	
Control		Microprocessor Digital	
Motor		Plate BLDC motor	
Drive System		Direct Magnetic Drive	
Display		LED display	
Speed Range (rpm)	30 ~ 300	30 ~ 300	30 ~ 300
Accuracy (rpm)	±1	±1	±1
Shaking Throw (mm)	25 / 50	25 / 50	25 / 50
Time Range		Continuous or up to 99 hours 59min	
Time Increment		1min	
Shaker size(W x L x H mm)	344 x 324 x 90	496 x 415 x 120	487 x 519 x 132
Weight (25/50mm) Kg	7.5 / 11.5	20 / 20	25 / 25
Platform Size(W x L mm)	300 x 330	440x370	455 x 455
IP code	IP21	IP21	IP21
Control box Size(W x L x H mm)		155 x 95 x 25 / 0.5	
Power		100-240V 50/60HZ	
Load Capacity	100ml x 16 250ml x 9 500ml x 5 1000ml x 4 2000ml x 1	100ml x 23 250ml x 10 500ml x 6 1000ml x 5 2000ml x 2	100ml x 36 250ml x 23 500ml x 16 1000ml x 9 2000ml x 4
Order No. (25mm)	W6100100	W6100200	W6100300
Order No. (50mm)	W6100150	W6100250	W6100350

Standard package includes only shaker, tray need to be ordered separately.

Accessories

Order No.	Name
Suitable for SRC	
W6100101	Sticky Plate
W6100102	Universal Tray
W6100103	Multi-Purpose Tray
W6100104	Microplate Rack
Suitable for CRC	
W6100201	Sticky Plate
W6100202	Universal Tray
W6100203	Multi-Purpose Tray
W6100204	Microplate Rack
Suitable for MRC	
W6100301	Sticky Plate
W6100302	Universal Tray
W6100303	Multi-Purpose Tray
W6100304	Microplate Rack

Sticky Plate

Universal Tray

Multi-Purpose Tray

Microplate Rack

Microplate Rack

Rocking Shaker

Simple Adjustments for Rocking Speed

WIGGENS Rocking Shaker is innovatively designed for use in a wide range of lab applications. WS-350R provides controlled seesaw-like motion, while the Shakers offer a smooth, low-foaming, 3D wave motion. Each unit includes a dimpled mat and universal harness
It can be used in the incubator because the unit is designed for ambient temperature between 2 ℃ to 50℃

Advantages

> Working speeds range from 5rpm to 100rpm
> Bright TFT with display resolution 1rpm, easy to operate with the knob and control keys
> Tilt Angle ranges from 7° to 13°
> Smooth Starting function to protect sample spilling out
> Users can set the timer from 1 min to 99 hour 59 min, with the count-down timer.
> BLDC motor provides low noise and strong durability
> During overload situation, it shows overload sign, make alarm and stop the running

Application

Mixing blood samples, DNA extractions, blotting techniques, staining and destaining gels, hybridizations

Specifications

Model		WS-350R
Shaking System	Speed range(rpm)	5~ 100
	Speed control type	Feedback Control
	Tilt Angle	Easy adjustable from 7° to 13°
	Timer	1min to 99 hrs 59 min, Count-down time
Safety device		Over current protection
Max. Load including attachment (kg)		5
Motor type		BLDC motor
Control panel		TFT, Delete touch keys and the control knob
Dimension	Overall Dimension (W×D×H, mm)	276 x 343 x 150
	Tray dimension (W x D, mm)	276x 276
	Net Weight (kg)	6.9
Materials		PP, PET, Powder coated steel (Housing)
IP code		IP21
Electrical requirement		100 ~ 240VAC, 50/60 Hz
Order No.		W5011001

Standard package includes: shaker and tray (Order No.W5011102)

Accessories

Order No.	Part	Description
W5011101	Removable tray	Included tray, black rubber mate and universal harness (6ea)
W5011102	Removable tray (Standard)	Included tray, white rubber mat and universal harness (6ea)
W5011201	Tray	Tray only
W5011202	Rubber mat	Rubber mat
W5011203	Dimpled mat	Dimpled mat
W5011204	Universal harness, 6ea	Universal harness, 6ea

W5011101   W5011102

Waving Shaker

Simple Adjustments for Tilt Angle and Speed

WIGGENS Waving Shaker is innovatively designed for use in a wide range of lab applications. WS-350W provides controlled orbital motion, while the Shakers offer a smooth, low-foaming, 3D wave motion. Each unit includes a dimpled mat and universal harness
It can be used in the incubator because the unit is designed for ambient temperature between 2 ℃ and 50℃

Advantages

> Working speeds range from 8rpm to 100rpm
> Bright TFT with display resolution 1rpm, easy to operate with the knob and control keys
> Tilt Angle ranges from 0° to 13°
> Smooth starting function to protect sample from spilling out
> Users can set the timer from 1 min to 99 hour 59 min, with the count-down timer.
> BLDC motor provides low noise and strong durability
> During overload situation, it shows overload sign, make alarm and stop the running

Application

Mixing blood samples, DNA extractions, blotting techniques, staining and destaining gels, hybridizations

Specifications

Model		WS-350W
Shaking System	Speed range(rpm)	8~ 100
	Speed control type	Feedback Control
	Tilt Angle	Easy adjustable from 0° to 13°
	Timer	1min to 99 hrs 59 min, Count-down time
Safety device		Over current protection
Max. Load including attachment (kg)		5
Motor type		BLDC motor
Control panel		TFT, Delete touch keys and the control knob
Dimension	Overall Dimension (W×D×H, mm)	276 x 343 x 150
	Tray dimension (W x D, mm)	276x 276
	Net Weight (kg)	7.3
Materials		PP, PET, Powder coated steel (Housing)
IP code		IP21
Electrical requirement		100 ~ 240VAC, 50/60 Hz
Order No.		W5011002

Standard package includes: shaker and tray (Order No.W5011102)

Accessories

Order No.	Part	Description
W5011101	Removable tray	Included tray, black rubber mate and universal harness (6ea)
W5011102	Removable tray (Standard)	Included tray, white rubber mat and universal harness (6ea)
W5011201	Tray	Tray only
W5011202	Rubber mat	Rubber mat
W5011203	Dimpled mat	Dimpled mat
W5011204	Universal harness, 6ea	Universal harness, 6ea

W5011101   W5011102

WIGGENS
THE MAGIC MOTION

Microplate Shaker

Suitable for Microplate, Micro-tube and Conical tube

The microplate shaker is driven by brushless DC motor. It is mainly used in the mixed oscillation of enzyme label plate (96-well / 384-well plate) , cell culture plate (24-well plate, 48-well plate, 96-well plate) , micro tube and conical tube. It can be used in immunoassays, staining and other experiments. It has compact design and ensures, simple and convenient operation, safety, stability and no noise.

Advantages

> Working speeds range from 150rpm to 1200rpm
> Bright TFT with display resolution 1rpm, easy to operate with the knob and control keys
> Rotational motion with shaker throw of 3mm
> Smooth starting function to protect the sample from spilling out
> Users can set the timer from 1 min to 99 hour 59 min, with the count-down timer.
> Possible to use 1.5ml Micro-tube, 15ml, 50ml conical tube.
> BLDC motor provides low noise and strong durability
> During overload situation, it shows overload sign, make alarm and stop the running

Specifications

Model		WS-350P	
Shaking System	Speed range(rpm)	150~1,200 (No-load running)*	
	Speed control type	Feedback Control	
	Orbital diameter（mm)	3	
	Timer	1min to 99 hrs 59 min, Count-down time	
Safety device		Over current protection	
Max. Load including attachment (kg)		4	
Motor type		BLDC motor	
Control panel		TFT, Delete touch keys and the control knob	
Dimension	Overall Dimension (W×D×H, mm)	249 x 329 x 127	
	Tray dimension (W x D, mm)	267x 183	
	Net Weight (kg)	10.3	
Materials		PP, PET, Powder coated steel (Housing)	
IP code		IP21	
Electrical requirement		100 ~ 240VAC, 50/60 Hz	
Order No.		W5011003	

* Maximum speed at full load is 600 rpm
Standard package includes: shaker and tray for 4 SBS micro-plates

1.5ml Tube rack

Accessories

Order No.	Part	Description
W5011301	Tube rack	1.5ml Tube rack
W5011302	Tube rack	15ml Tube rack
W5011303	Tube rack	50ml Tube rack

15ml Tube rack

50ml Tube rack

Rotator

for rotates tubes and flasks from 1.5 ml to 300 ml

Variable speed adjusts mixing action from a gentle slosh to rapid agitation, Driven by a continuously working motor, it can withstand demanding schedules and long hours of operation. It can be used for Immunoprecipitation reaction, prevention of clotting, latex diagnosis, tissue culture specimens, blood cell suspensions, sediment washing, disintegrating tablets, extraction, slow-dissolving samples, and homogenizing blood solids in plasma, and a rotating airtight container for a dialysis bag.

> Compact design and flexible combination
> Suitable for different glass containers from 1.5 ml to 300 ml
> Variable speed motor drives to make the process faster, safer, and more thorough
> Stepper motor for durability and smooth operation
> Interchangeable tray for most rotating processes
> Replaceable tray design to allow for customizing to meet special applications
> Motors and controls designed for use in fume hoods and incubators

Specifications

Model	WT-350R
Order No.	W5013350
Speed range [rpm]	2~70
Adjustable tilt angle [°]	0~90, the tray can be adjusted from horizontal to vertical rotation
Display	VFD comfort display
Max. load [kg]	4
Timer	1 minute to 99 hours and 59 minutes
Dimensions W x D x H [mm]	250x360x480
Weight [kg]	7.5
Power supply	100~240V, 50/60Hz

Please note that the trays and clamps needs to be ordered separately

Easy to adjust the rotation angle

Easy to stack and replace the tray

Accessories

Stack adapter

with this adapter, two tube trays can be stacked together

Order No.	Description
W5013006	Stack adapter, with this adapter, two tube trays can be stacked together

Tube tray and stack adapter

This aluminum tray is equipped with spring clamp to hold test tubes for such operations as blood agitations, isotopic competitive protein binding assays, and similar procedures. A clutch permits stopping the head to insert and remove tubes without turning off the motor. The spring clamp permit the tubes to be inserted radially from the side of the clip rather than the top. The clamps are adjustable

Order No.	Description	Max. load
W5013001	Base tube tray with tube clamps for 1.5ml / Φ10mm tube	60
W5013002	Base tube tray with tube clamps for 5ml / Φ12mm tube	18
W5013003	Base tube tray with tube clamps for 15ml / Φ16.5mm tube	18
W5013004	Base tube tray with tube clamps for 50ml / Φ29mm tube	12
W5013005	Stack adapter, with this adapter, two tube trays can be stacked together	/

Customized tube tray is also possible

Base tray and spring clamps for Erlenmeyer flasks

Suitable for rotates several erlenmeyer flasks at the same time, simple but durable design, there are already many threaded holes in the tray, we can fix the different spring clamp on it according to the size of the container. Please note that the spring clamp need to be ordered separately

Order No.	Description	Max. load
W5013010	Base tray for assembling spring clamps on a mix and match basis	/
W5013011	Spring clamp for 50 ml flasks, stainless steel	13
W5013012	Spring clamp for 100 ml flasks, stainless steel	8
W5013013	Spring clamp for 300 ml flasks, stainless steel	6
W5013014	Spring clamp for 50 ml flasks, plastic	13
W5013015	Spring clamp for 100 ml flasks, plastic	8
W5013016	Spring clamp for 300 ml flasks, plastic	6

WIGGENS
THE MAGIC MOTION

Heating Shaker

Useful for a variety of molecular biology applications.

Interval mix function in program mode can be properly set according to users' test condition.

Features

> Microprocessor PID control ensuring consistent shaking motion and precision accuracy.
> Speed range from 150 to max. of 1500 rpm (depending on the choice of interchangeable blocks)
> Maximum 9 temperature range-specific calibration.
> Memory function of programmed protocols allowing relevant parameters (such as temp., rpm, time) of each protocol step to be stored.
>   -Up to 10 protocols allowed for memory storage.
>   -Up to 10 steps allowed for each protocol.
>   -Interval Mix function (continuous switching between shaking and phasing)
> Two types of timer modes:
>   -Timer 1 starts only after reaching the set temp.
>   -Timer 2 starts right after the timer setting.

> 96-Well Tube Block Set with Covers
> 0.5ml / 1.5ml / 50ml Tube Block Set with Covers

Specifications

Mode		WS-350B	
Order No.		W5012350	
Control		Feedback control PID	
Display		VFD (0.1℃ resolution)	
Temperature	Range (℃)	Amb.+5-100℃	
	Stability at 80℃ (±℃)	0.3	
	Variation at 80℃ (±℃)	0.7	
	Heating power (W)	360	
Safety	OverTemp.	Heating plate	
		PCB	
	Over Current	Current limit protection	
Shaking System Dimension (WxDxH)	Motion Type	Orbital	
	Speed range (rpm)	96-well tube block	150 -1500
		0.5ml tube block	150- 1000
		1.5 ml tube block	150-1000
		50 ml tube block	150-800
	Orbit Size（mm）	2	
IP code		IP21	
Overall(WxDxH) (mm)		276 x 334 x 170	
Weight（kg）		8.3	
Electrical requirements		230V, 50/60 Hz，1.7A	

Standard package includes only heating shaker, block need to be ordered separately.

Constructional

> Bright VFD display with responsive touch buttons.
> Its powder coated stainless steel body is highly chemical-resistant and easy-to-clean.
> Optimal heat transfer is achieved by the tight coupling design of the main body and the corrosion-resistant anodized aluminum blocks.
> Low-profile design with rubber feet for minimal vibration and noise.
> Blocks can be easily interchanged by the included block lifter.

Accessories

Order No.	Description	Max. Mountable Tube
W5012451	0.5 ml Tube Block Set with Cover	0.5ml x 48 holes (microtube)
W5012452	1.5 ml Tube Block Set with Cover	1.5ml x 24 holes (microtube)
W5012453	50 ml Tube Block Set with Cover	50ml x 6 holes (centrifuge tube)
W5012454	96-well Tube Block Set with Cover	0.2ml x 96 holes (microtube)

W5012454   W5012451

W5012452   W5012453

Vortex Shaker -Vortex3000 Elite

Low profile design and highly touch sensitive sensor reduce wrist stress when pushing and holding experiment tools resulting in less fatigue and unpleasant feeling.

Features

> Elaborate design for safe and reliable vortex shaking
> Variable speed is from 100 to 3000 rpm
> Very suitable for work in fume hoods and on sterile workbenches
> Excellent vortex mixing of test tubes and cap vials
> Shaking operation can be switched between continuous and on-touch operation
> Two modes of time: 1s~99min59s and 1min~99hr59min
> Countdown in timer mode allows to calculate the experiment time.
> LED light shows set mixing speed.
> Rubber feet guarantee stability of the shaker
> Power cut-off function in case of electrical overload or excess current.
> Chemically resistant PP (polypropylene) housing.
> A wide range of accessories available (the rubber platform comes standard).

Specifications

Mode	Vortex3000 Elite
Order No.	W3060215
Motion	Orbital
Shaking throw (mm / inch, Ø)	4/1.6
Operation mode	Touch/Continuous
Timer	Yes
Interface	RS232, USB (B)
Display	Dual LED
Operation panel	Glass
Control mode	Knob/Button
Speed range (rpm)	100-3000
Speed increment (rpm)	10
Speed resolution (rpm)	1
Time increment (min/s)	1
Time (min/s)	1
Time range	1s-99min:59s or 1min-99hr:59min
Max. Load (kg) - incl. attachment	0.5
IP code	IP21
Power （V）	DC24V, 0.75A
Dimension (WxDxH/mm):	147x173x92
Output （W）	15
Net weight	2.8kg

Standard package includes: vortex shaker and Platform (VO058)

Tube holder with tray

④ ⑤ ⑥   ⑦ ⑧ ⑨

③ ⑩

① ②

Platform

Microplate tray

Accessories application

Vortex Shaker

Low profile design and touch sensitive sensor reduce wrist stress when pushing and holding experiment tools resulting in less fatigue and unpleasant feeling.
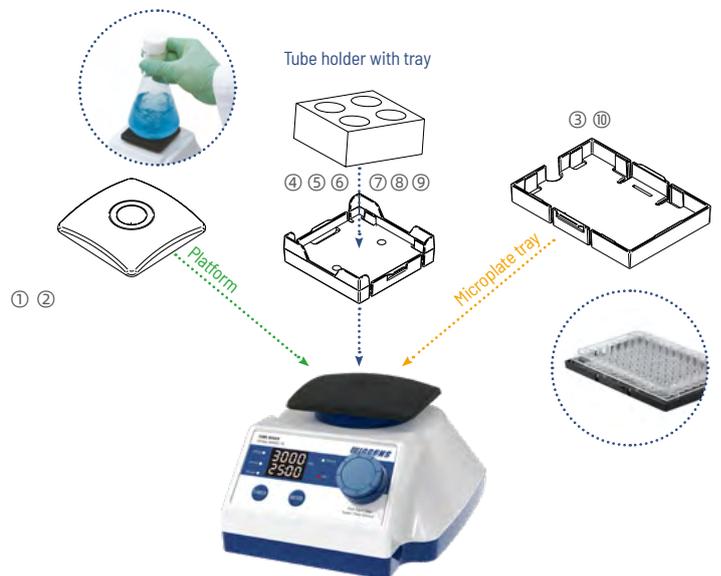
Features

> Elaborate design for safe and reliable vortex shaking
> Speed can be set between 0 and 3000 rpm (Scale)
> Suitable for work under fume hoods, and on sterile workbenches
> Excellent vortex mixing of test tubes and capped vials
> Shaking operation can be switched between continuous and on-touch operation
> LED light shows the actual shaking operation method
> Rubber feet guarantee stability of the shaker
> Power cut-off function in case of electrical overload or excess current.
> Chemically resistant PP (polypropylene) molded exterior.
> A wide range of accessories available.(the rubber platform comes standard)

Specifications

Model		Vortex3000
Technical Data	Motion	Orbital
	Speed Range (rpm)	0 - 3,000 (Turning knob scale display)
	Control	Scale
	Shaking Throw (mm / inch, Ø)	4 / 0.16
	Operating Mode	Touch, Continuous
	Motor Rating Input / Output (W)	12 / 6
	Motor	BLDC motor
	Max. Load (kg / lbs) - incl. attachment	0.5 / 1.1
General Data	Material — Body	Polypropylene
	Material — Platform	Silicone rubber
	Dimension (mm / inch, W×D×H)*	148×159×77 / 5.8×7.4×3
	Net Weight (kg / lbs)	2.6 / 5.7
	Safety Device	Current limit protection
	IP code	IP 21
Order No.		360115

Standard package includes: vortex shaker and Platform (V0058)

Accessories for Vortex 3000 Series
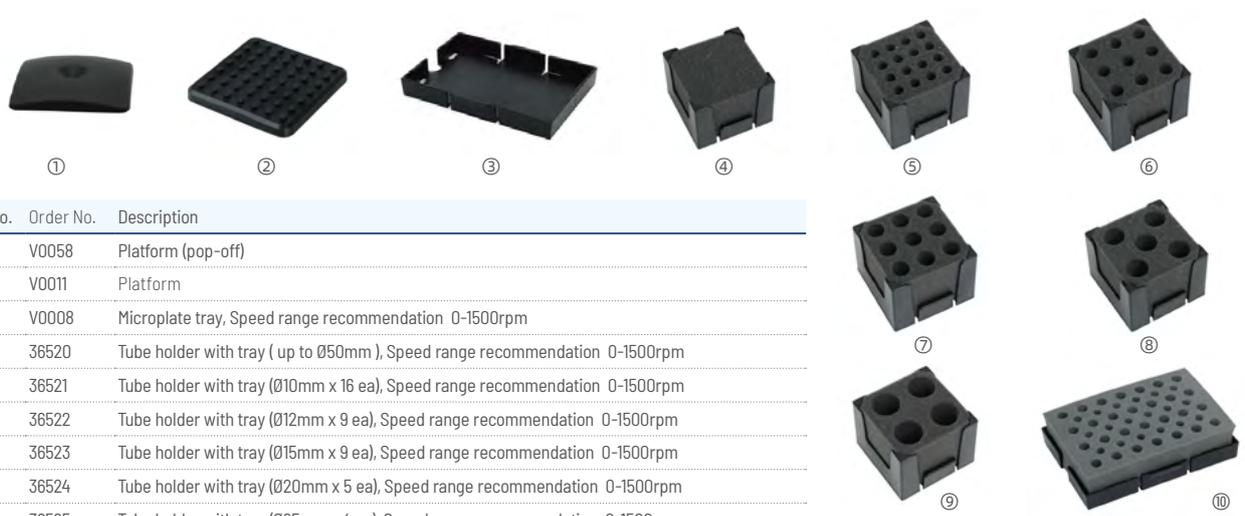
| No.	Order No.	Description
1	V0058	Platform (pop-off)
2	V0011	Platform
3	V0008	Microplate tray, Speed range recommendation 0-1500rpm
4	36520	Tube holder with tray (up to Ø50mm), Speed range recommendation 0-1500rpm
5	36521	Tube holder with tray (Ø10mm x 16 ea), Speed range recommendation 0-1500rpm
6	36522	Tube holder with tray (Ø12mm x 9 ea), Speed range recommendation 0-1500rpm
7	36523	Tube holder with tray (Ø15mm x 9 ea), Speed range recommendation 0-1500rpm
8	36524	Tube holder with tray (Ø20mm x 5 ea), Speed range recommendation 0-1500rpm
9	36525	Tube holder with tray (Ø25mm x 4 ea), Speed range recommendation 0-1500rpm
10	36526	Tube holder with tray (Ø8mm x 18 ea & Ø10mm x 28 ea), Speed range recommendation 0-1500rpm

TM Series Vortex Shaker

> Very accurate shaking speed due to the micro-chip speed controller
> Stable and reliable performance
> High shaking speed of up to 2500 rpm
> Shaking operation can be switched between continuous and on-touch operation
> Suitable for shaking test tubes or other small volume vials
> Large range of platforms and other accessories
> Aluminum housing
> Suitable for deep well titer plates
> Can be used as a stirrer and flask shaker when choosing the right accessories.

TM-1F

TM-1
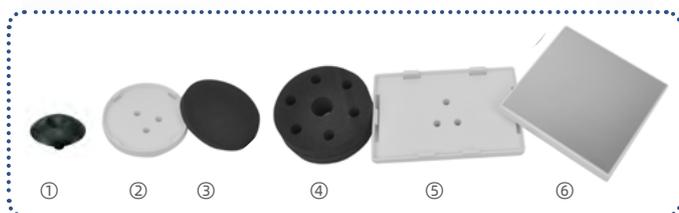
TM-1F / 2F Accessories

TM-1F/2F 6 in 1 Package

① ② ③ ④ ⑤ ⑥

Platform (standard) ①

One-hand insert ③
Order No.: 3601-06

Universal Tray ②
Order No.: 3601-01

Test Tube Platform (6 Holes) ④
Order No.: 3601-04

Universal Tray ②
Order No.: 3601-01

Elisa Plate Tray ⑤
Order No.: 3601-03

Magnetic Stirring Plate ⑥
Stirring Speed 0~1500rpm
Order No.: 3601-02

TM-1F / 2F

Specifications

Model	TM-1	TM-1F	TM-2	TM-2F
Shaking Speed(rpm)	0-2500	0-2500	0-2500	0-2500
Max. Volume (L) in Stirring Mode	2	2	2	2
Housing Material	Plastic-Aluminum	Plastic-Aluminum	Plastic-Aluminum	Plastic-Aluminum
Shaking Throw (mm)	4.5	4.5	4.5	4.5
Speed Control/Display	Turning Knob Scale Display	Turning Knob Scale Display	Turning Knob LED Display	Turning Knob LED Display
Operation Mode	Continuous / On-Touch	Continuous / On-Touch	Continuous / On-Touch	Continuous / On-Touch
Accessories	Shaker Tray	Accessory Pack	Shaker Tray	Accessory Pack
IP code	IP21	IP21	IP21	IP21
Power (W)	17.3	17.3	17.3	17.3
Dimension (mm)	115X230X60	115X230X60	115X230X60	115X230X60
Order No.	360110	36011F	360120	36012F

Standard package includes: vortex shaker and Platform (3601-00)

Accessories for TM Series
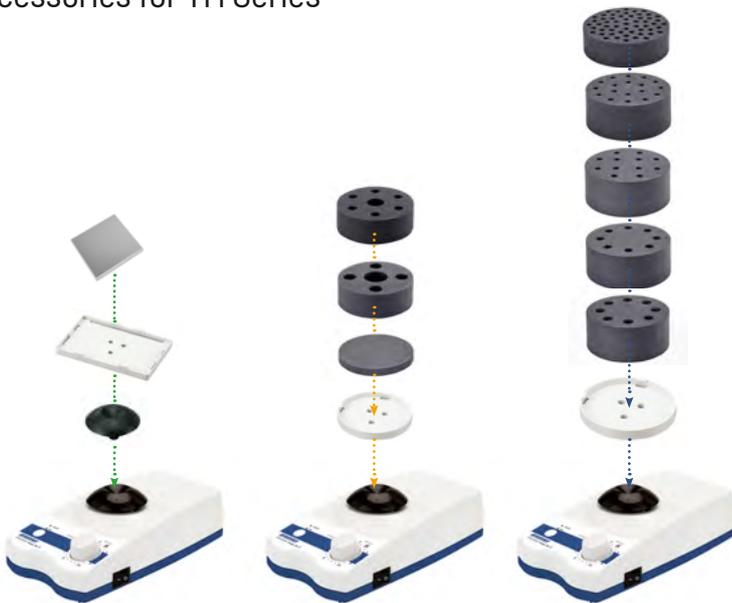
Universal Tray
Can be used with different foam plastic platforms for simultaneous shaking of several test tubes
Order No.: 3601-01

Magnetic Stirring Plate
Can be directly installed on the shaker and used for stirring of smaller samples
Stirring speed: 0-1500rpm
Order No.: 3601-02

Elisa Plate Tray
Can be used with an ELISA Plate
Speed range recommendation: 0-1500rpm
Order No.: 3601-03

Test Tube Platform (6 Holes)
Can be used in combination with the universal tray for shaking operation of 6 test tubes with 12 mm diameter
Speed range recommendation: 0-2000rpm
Order No.: 3601-04

Test Tube Platform (4 Holes)
Can be used in combination with the universal tray for shaking operation of 4 test tubes with 16 mm diameter
Speed range recommendation: 0-2000rpm
Order No.: 3601-05

One-hand insert
80mm
Speed range recommendation: 0-800rpm
Order No.: 3601-06

Universal Base Plate
Base plate for foam plastic platforms with 120 mm diameter
Speed range recommendation: 0-1500rpm
Order No.: 3602-01

Test Tube Platform (54 Holes)
Can be used in combination with the universal base plate for shaking operation of 54 Eppendorf tubes
Speed range recommendation: 0-1500rpm
Order No.: 3602-02

Test Tube Platform (18 Holes)
Can be used in combination with the universal base plate for shaking operation of 18 test tubes with 10 mm diameter
Speed range recommendation: 0-1500rpm
Order No.: 3602-03

Test Tube Platform (12 Holes)
Can be used in combination with the universal base plate for shaking operation of 12 test tubes with 12 mm diameter
Speed range recommendation: 0-1500rpm
Order No.: 3602-04

Test Tube Platform (8 Holes)
Can be used in combination with the universal base plate for shaking operation of 8 test tubes with 16 mm diameter
Speed range recommendation: 0-1500rpm
Order No.: 3602-05

Test Tube Platform (8 Holes)
Can be used in combination with the universal base plate for shaking operation of 8 test tubes with 20 mm diameter
Speed range recommendation: 0-1500rpm
Order No.: 3602-06

Flask Holder
Can be used in combination with the universal base plate for shaking operation of Erlenmeyer or round flasks with a volume between 100 and 250 ml
Order No.: 3602-07

Digital Pulse Mixer

Performing high or low speed pulse vortexing/mixing for most applications

WIGGENS Digital Pulse Mixer is capable of performing high or low speed pulse vortexing/mixing for most applications. This unit is able to accommodate a wide variety of glassware, racks, well plates or reactor blocks for accurate, repeatable results.The microprocessor-based control technology allows for display of speed, multi-function timer, and pulse profiling.

W D P M
Wiggens Digital Pulse Mixer

Advantages

> Working speed range from 100rpm to 1500rpm
> Bright TFT with display resolution 1rpm, easy to operate
> Built-in digital timer (seconds: 1-60, minutes 1-60, hours 1-24)
> Preset run times of 30, 60, 90 and 120 seconds
> User selectable pulse profile (Pulses-per-minute: 1-100), Ppm-duty-cycle: 1-99 %
> Timer and Pulse mode may be combined for timed-pulse mode
> Fail Safe Mode to prevent speed fluctuations
> BLDC motor provides low noise and strong durability
> User-friendly operating panel (4 buttons)
> Smooth Starting function to protect the sample from spilling out
> RS232 interface, optional software for real time data acquisition

Adjustable cover plate

Application

Solution phase synthesis, solid phase chemistry, bacteria cultivation

Specifications

Model	DPM-24
Order No.	W5021001
Working speed range(rpm)	100 ~1500
Speed control type	Feedback Control
Control panel	TFT, Push button
Motor type	BLDC motor
Quick timing mode	30s, 60s, 90s, 120s are available
Pulse mode	Pulses adjustment range(min): 1-100 Duty Cycle adjustment range(%): 1-100
Timer and Pulse mode	Timer: 00:00:00 to 24:60:60 Pulses adjustment range(min): 1-100 Duty Cycle adjustment range(%): 1-100
IP code	IP21
Electrical requirement	110 or 240VAC, 50/60 Hz

Standard package includes: Mixer and adjustable cover plate.

Sample Preparation

Our Digital Pulse Mixers are ideal for preparation work in volumetric flasks*.
Simply changing the chemical resistant bottom foam pad allows you to quickly switch flask sizes while using one standard hold down top.

Order No.	Description
W5021101	Hold down top with holes
W5021102	15mm pad for 25ml vol. flask, 49 Position
W5021103	15mm pad for 50ml vol. flask, 14 Position
W5021104	15mm pad for 100ml vol. flask, 14 Position
W5021105	15mm pad for 250ml vol. flask, 8 Position
W5021106	15mm pad for 500ml vol. flask, 6 Position

*To select the shaking attachment for a volumetric flask, top plate and pad both are necessary
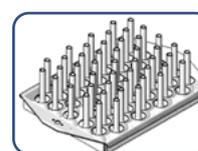
25ml Vol. Flasks
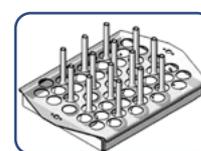
50ml Vol. Flasks
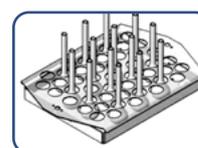
100ml Vol. Flasks
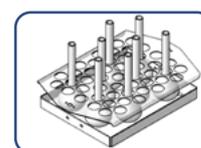
250ml Vol. Flasks
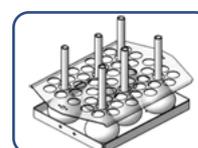
500ml Vol. Flasks

Digital Pulse Mixer Shown with 100ml Volumetric Flasks & Hold Down Top

WIGGENS
THE MAGIC MOTION

Separatory Funnel Shaker
WS-1 series

Intensive vertical reciprocal quick solvent extraction shaking unit.

The separatory funnel shaker is able to shake six samples under identical conditions for any series or comparative protocols in chemistry, biotech, and medical labs.

WS-1
Angle is not adjustable
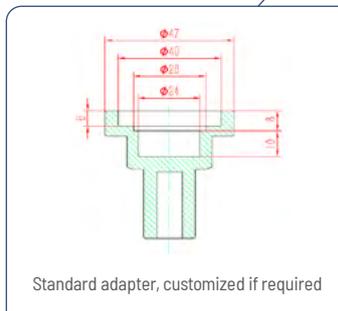
Standard adapter, customized if required

WS-1PLUS
0~20⁰ Angle adjustable

Accessories Included
500ml Separatory Funnel Holder (Order No.: 32500)
1L Separatory Funnel Holder (Order No.: 32501)
2L Separatory Funnel Holder (Order No.: 32502)

Features
> Intensive vertical shaking
> Shaking of 6 samples under identical conditions possible
> Mostly used in chemical, biotech, and medical laboratories
> The speed can be set between 50 and 300 rpm
> The timer can either be set on continuous or between 0 and 60 min
> Flasks of up to 40 mm width can be used
> Bright TFT display for convenient speed monitoring
> Wide speed range and high precision of the speed control
> Feedback loop to a digital controller
> At the end of a shaking session the device stops automatically with an audible alarm
> Easily adjustable flask holder (max. 5 flasks per side)
> It comes with six funnel holders as standard capable of accommodating up to 1000ml
> WS-1 PLUS entails a flask holder to adjust the shaking angle

Specifications

Model	WS-1	WS-1 PLUS
Motion Type	Vertical reciprocal	
Speed Range (rpm)	50 ~ 300	
Accuracy(± rpm)	±1	
Vertical Stroke Length (mm)	40	
Timer	60 min or continuous operation	
Overall (W×D×H) (mm)	445×730×505	
Max. Load per each Side (kg)	3	
Power (W)	90	
Fixture	6	
IP code	IP21	
Weight (Kg)	77	90
Shaking Angle	Fixed	Angle adjustable 0-16⁰
Order No.	32012KA	32012KB

Standard package includes: Shaker and six funnel holders capable of accommodating up to 1000ml

* Funnel Capacities (per each side)

Capacity	Round type funnel	Slim type funnel
under 500ml	3-5	5
500ml	3	3
1L	—	3
2L	—	2

Funnel Separatory, Glass or PTFE stopper

Order No.	Capacity（ml）	Joint	Plug Bore（mm）	Stopper
189111-05	50	14/20	2	PTFE stopper
189111-06	50	19/22	2	PTFE stopper
189111-07	100	14/20	2	PTFE stopper
189111-08	100	19/22	2	PTFE stopper
189111-09	125	14/20	2	PTFE stopper
189111-10	125	19/22	2	PTFE stopper
189111-11	125	24/40	2	PTFE stopper
189111-12	250	14/20	4	PTFE stopper
189111-13	250	19/22	4	PTFE stopper
189111-14	250	24/40	4	PTFE stopper

Order No.	Capacity（ml）	Joint	Plug Bore（mm）	Stopper
189111-19	50	14/20	2	Glass stopper
189111-20	50	19/22	2	Glass stopper
189111-21	100	14/20	2	Glass stopper
189111-22	125	14/20	2	Glass stopper
189111-23	100	19/22	2	Glass stopper
189111-24	125	19/22	2	Glass stopper
189111-25	125	24/40	2	Glass stopper
189111-26	250	14/20	4	Glass stopper
189111-27	250	19/22	4	Glass stopper
189111-28	250	24/40	4	Glass stopper

Optional accessories

Order No.	Description
189111-29	2mm PTFE locking stopper
189111-30	4mm PTFE locking stopper
189111-31	14/20 Glass stopper
189111-32	19/22 Glass stopper
189111-33	14/20 PTFE locking stopper
189111-34	19/22 PTFE locking stopper
189111-35	24/40 PTFE locking stopper

Funnel Separatory, PTFE locking stopper

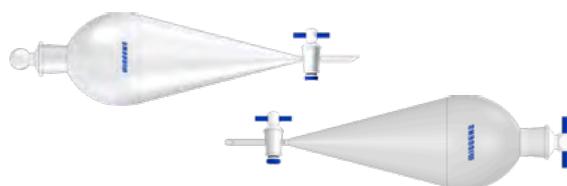| Order No.	Capacity（ml）	Stopper Size (mm)	Plug Bore（mm）	Stopper
189112-02	60	16	2	PTFE
189112-03	125	22	2	PTFE
189112-04	250	22	4	PTFE
189112-05	500	27	4	PTFE
189112-06	1000	27	4	PTFE

Optional accessories

Order No.	Description
189112-07	2mm Glass locking stopper
189112-08	4mm Glass locking stopper

Funnel Separatory, Glass or PTFE stopper

Order No.	Capacity（ml）	Joint	Plug Bore（mm）	Stopper
189113-06	50	14/20	2	Glass stopper
189113-07	50	19/22	2	Glass stopper
189113-08	60	NO.16	2	Glass stopper
189113-09	100	14/20	2	Glass stopper
189113-10	100	19/22	2	Glass stopper
189113-11	125	14/20	2	Glass stopper
189113-12	125	19/22	2	Glass stopper
189113-13	125	24/40	2	Glass stopper
189113-14	125	NO.22	2	Glass stopper
189113-15	250	19/22	4	Glass stopper
189113-16	250	24/40	4	Glass stopper
189113-17	250	29/42	4	Glass stopper
189113-18	250	NO.22	4	Glass stopper
189113-19	500	24/40	4	Glass stopper
189113-20	500	29/42	4	Glass stopper
189113-22	500	NO.27	4	Glass stopper
189113-23	1000	24/40	4	Glass stopper
189113-24	1000	NO.27	4	Glass stopper

Order No.	Capacity（ml）	Joint	Plug Bore（mm）	Stopper
189113-31	50	14/20	2	PTFE stopper
189113-32	50	19/22	2	PTFE stopper
189113-33	60	NO.16	2	PTFE stopper
189113-34	100	14/20	2	PTFE stopper
189113-35	100	19/22	2	PTFE stopper
189113-36	125	14/20	2	PTFE stopper
189113-37	125	19/22	2	PTFE stopper
189113-38	125	24/40	2	PTFE stopper
189113-39	125	NO.22	2	PTFE stopper
189113-40	250	19/22	4	PTFE stopper
189113-41	250	24/40	4	PTFE stopper
189113-42	250	29/42	4	PTFE stopper
189113-43	250	NO.22	4	PTFE stopper
189113-44	500	24/40	4	PTFE stopper
189113-45	500	29/42	4	PTFE stopper
189113-46	500	NO.27	4	PTFE stopper
189113-47	1000	24/40	4	PTFE stopper
189113-48	1000	NO.27	4	PTFE stopper

Optional accessories

Order No.	Description
189113-49	2mm PTFE locking stopper
189113-50	4mm PTFE locking stopper

Pressure Release Valves

These pressure release valves reduce the hazards of pressure build-up. They simply slip over the drain of a WIGGENS funnel and tighten down with a twist of the wrist. The valve can be easily removed when it is time to drain the funnel. Each valve is made of Teflon resin and is factory preset to release at 1 psi of pressure.

The valve can be adjusted to release at pressures up to 5 psi by turning the pressure release slug on the top of the valve with a screwdriver.

Order No.	Description
PRV6	For WIGGENS funnels SEP0060–SEP1000 or spout OD 7.5–9.5 mm
PRV10	For WIGGENS SEP2000 or spout OD 12.5–13.0 mm

WIGGENS
The Magic Motion

Incubator

Accurate temperature control technology
Compressor cooling system
Peltier cooling system
Internal circulation to ensure temperature uniformity

Incubator
RT +5~60 ℃ / 40 - 100 - 150 - 260 - 650 - 850 - 1200 L

Low temperature incubator
+4~60 ℃ / 150 - 250 - 400 L

Peltier-cooled incubator
+4~6 0 ℃ / 15 - 50 L
+15~60 ℃ / 100 - 150 L

CO_2 incubator
RT +5~60 ℃ / 40 - 120 - 180 - 260 - 650 - 850 - 1200 L

Peltier-cooled CO_2 incubator
20~60 ℃ / 40 - 120 - 180 - 260 - 650 - 850 L

Portable mini CO_2 incubator
+15~45 ℃ / 15 L

CO_2 incubator with copper chamber
RT +5~60 ℃ / 180 L

Tri-gas incubator [N_2 / O_2 / CO_2]
RT +5~60 ℃ / 40 - 180 - 850 L

Constant temperature and humidity chamber

Plant Growth Chamber

www.wiggens.com

Constant Temperature Incubator

Versatile air-jacketed incubators.
Specially designed for uniform temperature distribution and minimal sample contamination caused by external air intrusion.

Features

> Applicable in life science, pharmacy, medical science, chemistry, biology, and related fields for storage of samples which need constant temperature and incubation
> Digital temperature display and control
> PID controller for temperature stability and safety protection
> Very good heating characteristics
> Ecologically friendly
> Easy to clean
> Timer function
> Can be opened anytime when necessary
> When the temperature exceeds set levels and reaches the set safety value, an alarm activates, and the incubation process stops
> The material of the observation window is tempered glass, which has good safety and sealing characteristics
> The magnetic door and high-quality gasket can absorb external shocks and comprise excellent sealing characteristics
> Easy-to-clean stainless steel shelves with good air permeability and adjustable height
> Upon opening the incubator, the fan and heating device stop operation
> Alarm starts for sample protection when the door is open for more than 60 seconds

Specifications

Model	WH-05	WH-10	WH-15	WH-25
Order No.	W6031050	W6031100	W6031150	W6031250
Volume [L]	50	100	150	260
Temperature Range [℃]	RT + 5~65	RT + 5~65	RT + 5~65	RT + 5~65
Temperature uniformity of working area [℃]	<±0.2 at 37℃ and 25℃ RT	<±0.2 at 37℃ and 25℃ RT	<±0.2 at 37℃ and 25℃ RT	<±0.2 at 37℃ and 25℃ RT
Temperature Stability [℃]	±0.1 at 37℃	±0.1 at 37℃	±0.1 at 37℃	±0.1 at 37℃
Temperature Controller	Digital Display with PID automatic regulation, Button Control			
Timer	1 min ~ 99 hr 59 min	1 min ~ 99 hr 59 min	1 min ~ 99 hr 59 min	1 min ~ 99 hr 59 min
Safety	Independent safety temperature protection, Open door alarm function			
Heating Capacity [W]	340	340	340	610
Shelves [included / max.]	2/3	2/4	2/8	3/8
Inner Dimensions [WxDxH in mm]	345 x 368 x 375	480 x 480 x 495	500 x 480 x 620	530 x 590 x 900
Outer Dimensions [WxDxH in mm]	440 x 480 x 610	560 x 560 x 760	560 x 580 x 880	630 x 680 x 1125
IP code	IP20	IP20	IP20	IP20
Weight [kg]	35	50	65	115
Power supply	AC 220~240 V, 50/60 Hz	AC 220~240 V, 50/60 Hz	AC 220~240 V, 50/60 Hz	AC 220~240 V, 50/60 Hz
Number of internal power outlets	-	-	-	-

Standard package includes: incubator, shelves

Alarm System

Temperature Alarm, Independent safety temperature protection

Easy to Clean

Rounded Conner allows easy cleaning. The entire chamber is made of stainless steel (SUS304)

Perforated Shelves

Perforated Shelves are good for natural air flows and are made of stainless steel which is resistant to rust and contamination.

Materials	
Housing	Powder coated stainless steel
Interior	Stainless steel
Shelves	Stainless steel
Inner transparent door	High temperature resistant glass, Thickness: 5 mm

Only for WH-1200	
Temp. Recovery*	14 minutes at 37°C after door open for 5 minutes
Temperature Safety	5 Side direct heating with forced air flow by 4 circulation fans
Door	Front door (left open) with viewing glass window

Model	WH-400	WH-650	WH-850	WH-850X*	WH-1200*
Order No.	W6031400	W6031650	W6031850	W6031851	W6031122
Volume [L]	400	650	850	850	1200
Temperature Range [°C]	RT + 5~65	RT + 5~65	RT + 5~65	RT + 5~65	RT+7~+60°C at 25°C RT
Temperature uniformity of working area [°C] at 37°C and 25°C RT	<±0.5	<±0.5	<±0.5	<±0.5	±0.5~±0.7
Temperature Stability [°C]	±0.1 at 37 °C	±0.1 at 37 °C	±0.1 at 37 °C	±0.1 at 37 °C	±0.1 at 37 °C
Temperature Controller	Digital Display with PID automatic regulation, Button Control				
Timer	1 min ~ 99 hr 59 min	1 min ~ 99 hr 59 min	1 min ~ 99 hr 59 min	1 min ~ 99 hr 59 min	1 min ~ 99 hr 59 min
Safety	Independent safety temperature protection, Open door alarm function				
Heating Capacity [W]	700	1100	1400	1400	1600
Shelves [included / max.]	3/12	3/15	3/15	0/15	0/35
Inner Dimensions [WxDxH in mm]	600 x 630 x 1100	700 x 650 x 1430	700 x 800 x 1530	868 x 720 x 1530	868 x 720 x 1927
Outer Dimensions [WxDxH in mm]	750 x 730 x 1430	820 x 780 x 1740	820 x 930 x 1840	990 x 855 x 2030	990 x 855 x 2123
IP code	IP20	IP20	IP20	IP20	IP20
Weight [kg]	160	230	260	299	323
Power supply	AC 220~240 V, 50/60 Hz	AC 220~240 V, 50/60 Hz	AC 220~240 V, 50/60 Hz	AC 220~240 V, 50/60 Hz	AC 220~240 V, 50/60 Hz
Number of internal power outlets	-	-	-	-	3

Standard package includes: incubator, shelves

* WH-850X / 1200 Standard package includes: incubator only, shelves need to be ordered separately

Low Temperature Incubator

Superb low temperature incubator by noiseless compressor cooling system

Features

> Applicable in life science, pharmacy, medical science, chemistry, biology, and related fields for storage of samples which need a constant temperature and for incubation.
> Heating function start and duration can be pre-set
> Temperature control programs: Temperature programs can be divided into 9 sections and for every section temperature and duration can be set individually
> 3 pre-set often used temperatures can be recalled anytime when necessary
> Temperature measure unit can be set as either °C or ^{0}F
> When the temperature exceeds set levels and reaches the set safety value, an alarm activates, power is cut off, and the incubation process stops
> With tempered glass window, the examination of samples is easy and convenient, avoiding unnecessary disruptions of the incubation process
> The stainless steel shelves have a good air permeability, are easy to clean and can be adjusted in height
> In case of an unexpected power breakdown the incubator offers two working options: automatic re-operation and automatic stop
> When opening the incubator, the fan and heating device stop operation. After one minute without closing the door an alarm starts
> Incubators use heat transfer method for circulation. In a separated room outside the work space it uses heat exchange, In the working space it uses natural convection and forced circulation
> The circulation method will not induce air pollution and can guarantee exact temperature distribution

Options and Accessories

Order No.	Name	Description
W6052501	Stainless steel shelves	Perforated to improve uniformity, **Suitable for WH-11C / 21C**
W6052502	Stainless steel shelves	Perforated to improve uniformity, **Suitable for WH-40C**
W6011816	Holes for auxiliary monitoring	Diameter of 30mm, on the left side of the incubator
W6051502	Socket inside the chamber	Optional, factory installation
W6051503	LED light	At the top of the chamber*

*The temperature must not exceed 40°C when LED lamp is present

Specifications

Model	WH-11C	WH-21C	WH-40C
Order No.	W6055150	W6055250	W6055400
Temperature Control Method	Forced circulation method (fans integrated outside of the work space)		
Volume [L]	150	250	400
Temperature Range [°C]	+4 ~ 60	+4 ~ 60	+4 ~ 60
Temperature Stability [°C]	±0.1	±0.1	±0.1
Temperature uniformity of working area [°C]	±1.5 (37°C)	±1.5 (37°C)	±1.5 (37°C)
Temperature Controller	Digital Display with PID automatic regulation, push button		
Timer	1 min ~ 99 hr 59 min	1 min ~ 99 hr 59 min	1 min ~ 99 hr 59 min
Heating Capacity [W]	450	450	450
Max. Cooling Capacity [W]	350	350	400
Shelves [included / max.]	2/5	3/7	3/7
Inner Dimensions [W×D×H in mm]	550 x 500 x 610	550 x 500 x 1000	630 x 600 x 1100
Outer Dimensions [W×D×H in mm]	660 x 605 x 1020	660 x 605 x 1415	750 x 730 x 1550
IP code	IP20	IP20	IP20
Weight[kg]	95	120	160
Power supply	AC 220 ~ 240V, 50/60 Hz	AC 220 ~ 240V, 50/60 Hz	AC 220 ~ 240V, 50/60 Hz

Standard package includes: incubator, shelves

WIGGENS
The Magic Motion

Peltier-cooled Incubator

This series of incubators combines heating and peltier cooling systems, a perfect development from environmentally friendly and energy efficient heating and cooling technologies that facilitate excellent control accuracy and minimal fluctuations.

Features

> Applicable in life science, pharmacy, medical science, chemistry, biology, and related fields for storage of samples which need a constant temperature and for incubation.
> Heating function start and duration can be pre-set
> There are four temperature programs available for editing, and each program can be edited in 5 steps
> Four temperature can be preset for quick changeover
> Temperature measure unit can be set as either °C or ^{0}F
> When the temperature exceeds set levels and reaches the set safety value, an alarm activates, power is cut off, and the incubation process stops
> With tempered glass window, the examination of samples is easy and convenient, avoiding unnecessary disruptions of the incubation process
> The stainless steel shelves have a good air permeability, are easy to clean and can be adjusted in height
> When temperature deviation occurs, the BIAS function sets in, which makes operation convenient
> In the case of an unexpected power breakdown the incubator offers two working options: automatic re-operation and automatic stop
> When opening the incubator, the fan and heating device stop operation. After one minute without closing the door an alarm sets in
> Incubators use heat transfer method for circulation. In a separated room outside the work space it uses heat exchange, In the working space it uses natural convection and forced circulation
> The circulation method will not induce air pollution and can guarantee exact temperature distribution

Specifications

Model	WH-01	WH-02	WH-10P	WH-15P
Order No.	W6053015	W6053050	W6053100	W6053150
Temperature Control Method	Forced circulation			
Volume [L]	15	50	100	150
Temperature Range [°C]	+4 ~ 60 (at 20°C RT)	+4 ~ 60 (at 20°C RT)	+10 ~ 60 (at 20°C RT)	+10 ~ 60 (at 20°C RT)
Temperature Stability [°C]	±0.1	±0.1	±0.1	±0.1
Temperature Controller	Touch Control; Digital Display with PID automatic regulation			
Timer	1 min ~ 999hr 59 min / continuous			
Heating Capacity [W]	150	300	450	450
Max. Cooling Capacity [W]	350	350	350	350
Shelves [included / max.]	2/4	3/6	2/8	2/10
Inner Dimensions [W×D×H in mm]	315 x 200 x 240	335 x 370 x 380	480 x 478.5 x 500	480 x 500 x 625
Outer Dimensions [W×D×H in mm]	400 x 409.5 x 445	440 x 550 x 618	620 x 668.5 x 806	620 x 690 x 930
IP code	IP20	IP20	IP20	IP20
Weight[kg]	24	35	65	80
Power supply	AC 220 ~ 240V, 50/60 Hz	AC 220 ~ 240V, 50/60 Hz	AC 220 ~ 240V, 50/60 Hz	AC 220 ~ 240V, 50/60 Hz

Standard package includes: incubator, shelves.

Incubator Accessories

| Order No.	Item	Description	Suitable for
Incubator shelf for holding cultures in the chamber			
W6030501	Perforated Shelf kit		WH-05
W6031001	Perforated Shelf kit		WH-10
W6031501	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WH-15
W6032501	Perforated Shelf kit		WH-25
W60530151	Perforated Shelf kit		WH-01
W60530501	Perforated Shelf kit		WH-02
W60531001	Perforated Shelf kit		WH-10P
W60531501	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WH-15P
W6034001	Perforated Shelf kit		WH 400
W6036501	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WH-650
W6038501	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 50kg	WH-850
W6031221	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 25kg	WH-1200
W6031222	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 50kg	WH-1200
W6052501	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution	WH-11C/21C
W6052502	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution	WH-40C
Roller base：Placed at the bottom of the incubator for support and easy movement			
W6010402	Roller base	To move incubator easily	WH-05
W6031002	Roller base	To move incubator easily	WH-10
W6031502	Roller base	To move incubator easily	WH-15
Stacking kit: to stack and fix the incubator			
W6031003	Stacking kit	To stack and fix the incubator	WH-10
W6031503	Stacking kit	To stack and fix the incubator	WH-15
W6011806	UV lamp	A 4W UV lamp is placed at the top of the chamber, next to the circulating fan. UV rays do not radiate the sample and can be sterilized during culture.	All series incubator (Except dry heat sterilization incubators)
W6011816	Holes for auxiliary monitoring	Diameter of 30mm (40mm customizable), for sampling, experimental verification and penetration of additional equipment power or signal cables in the incubator	All series incubator
W6011809	Monitoring system	PC software, using Internet network connection, can monitor the working status of the incubator in real time remotely	All series incubator
W6011809-1	Connecting wire	With anti-shedding interface for PC to the incubator, unit/m	All series incubator
W6051502	Power socket in chamber	Three-jack socket, 220V, for power supply inside the chamber, not exceed 1000W	All series incubator
W6051503	LED lamp	Installed on the top of the chamber, with an independent lighting switch	All series incubator (Except dry heat sterilization incubators)

Roller base

Stacking kit
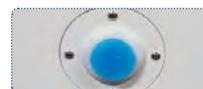
Humidity chamber

The humidity chamber replicates complex environments, including low temperature, high temperature, high humidity, and low humidity conditions, making it suitable for performance testing of products in materials, electronics, plastics, food, clothing, automotive, metals, chemicals, building materials, and other industries.

Features

> With PID temperature control, and single-stage refrigeration unit

> Large, high-resolution TFT touch display with multilingual user interface

> Integrated timer

> Parts being in contact with the medium made of stainless steel

> RS232/485 interface for remove control

> The real-time data can be recorded in real time after connected USB disk.

> With heavy duty Foma wheels, level adjustable, easy for transportation.

Safety

> Protection against overheating

> Early warning system for high/low temperature limits

> With autostart function. Then the humidity chamber will restart automatically after a power interruption

> The circulating fan and heater are stopped after the outerdoor is opened

Specifications

Model	WHT-150	WHT-260
Order No.	W6045150	W6045260
Volume [L]	150	260
Temperature Range [℃]	+4 ~ +60	+4 ~ +60
Resolution of temperature [℃]	0.1	0.1
Temperature uniformity of working area [℃]	<±0.5	<±0.5
Cooling mode	With compressor	With compressor
Humidity range [RH%],	10 ~ 85 (from 25℃ to 55℃)	10 ~ 85 (from 25℃ to 55℃)
Resolution of humidity [RH%]	1	1
Humidity accuracy [RH%]	<±3	<±3
Humidity control	Automatic (auto refill, vapor and condensation)	
Heating Capacity [W]	1350	1350
Max. Cooling Capacity [W]	300	550
Shelves [included / max.]	2/5	2/9
Max. load of each shelf	30Kg	30Kg
Timer	1 min ~ 999hr 59 min / continuous	
Interfaces	RS232/485	RS232/485
Operating temperature [℃]	10 ~ 35	10 ~ 35
Inner Dimensions [W×D×H in mm]	560 x 500 x 535	640 x 500 x 800
Outer Dimensions [W×D×H in mm]	740 x 752 x 1220	820 x 752 x 1485
Weight [kg]	145	175
Power supply	220V / 50 or 60Hz	220V / 50 or 60Hz

The WHT series can be custom-designed to meet specific volume requirement.
Standard package includes:Humidity chamber, shelves.

Accessories

Order No.	Part	Description	Suitable for
W 6041151	Perforated Shelf	Max. load up to 30kg	WHT-150
W 6041261	Perforated Shelf	Max. load up to 30kg	WHT-260
W 6041152	Reinforced perforated shelf	Max. load up to 60kg	WHT-150
W 6041262	Reinforced perforated shelf	Max. load up to 60kg	WHT-260
W 6041153	Illumination equipment	Cold white light, 0~100% adjustable, 10000 Lux, -20…+45℃	WHT series
W 6041154	Inner power socket	230V/2.6A output, IP68	WHT series
W6041158	Water storage tanks	Included the 2L storage tanks, with fiter lid and water tube	WHT series
W6041158	Water tube	Connect humidity controller and water storage tanks	WHT series

CO$_2$ Incubator

The incubator is ideal for the experiments of the cultivation of animal cells, sperm/ovum, anaerobic cells, all sorts of microbe cells, hatching/germinating and special tissues.

Features

Fast Heat-Up, Fast-Recovery, Stable Control

6 Sides Direct Heating System

Electric heating wire is covered on all sides of the chamber which makes stable uniformity and provides fast heat-up & temperature recovery.
3 parts of heating section are controlled and calibrated individually by 3 temperature sensors.

Dry Wall and Air Jacket

Warm air from heating wire is preserved in space between the chamber and the insulation layer. It helps temperature recover faster and minimize heat loss.
Dry wall with insulation requires no regular maintenance.

DUAL BEAM IR CO$_2$ Sensor

Fast & precise detection for CO$_2$ gas regardless of temperature and humidity.

Natural Humidification Using Water Tray

The heater on bottom side warms the water in tray and it makes humidification. The circulation fan delivers the moisture formed from the water in the entire chamber.

Specifications

Temp. Range:	RT +5~60°C
Temp. Resolution:	0.1°C
Dry Heat:	Up to 125°C
Temp. Control:	Digital PID
CO$_2$ Range:	0% ~ 20%
CO$_2$ Accuracy:	±0.1% (5% / 37°C)
CO$_2$ Resolution:	0.1%
CO$_2$ Sensor:	IR CO$_2$ Sensor
Display:	LED Display
IP code:	IP20
Operating panel:	Individual 2-Channel Touch Button
Jacket type:	Air Jacket Type (6 sides heat)
Chamber material:	Stainless Steel (304)

Model		WCI-40	WCI-120
Order No.	Standard	W6011040	W6011120
	Sterilization	W6012040	W6012120
Chamber volume [L]		40	120
Temperature Stability [°C]		±0.1 （37°C）	±0.1 （37°C）
Temp. Uniformity [°C]		±0.3 (37°C / RT20°C)	±0.3 (37°C / RT20°C)
Heating Capacity [W]		320	320
CO2 Inlet pressure range [bar]		0.3~0.5	0.3~0.5
Number of shelves [included / max.]		2/4	3/8
Chamber dimension [WxDxH] mm		320x350x375	480x470x520
Overall dimension [WxDxH] mm		420x460x570	580x560x765
Weight [kg]		38	72

Standard package includes: incubator, shelves, water tray.

Alarm System

Buzzer to alarm low or high deviation of CO_2, Temperature.

Gentle Air and Moisture Convection

Natural Air and Moisture Convection, Air and Moisture in chamber are distributed gentlely by 6-side heating and air circulation fan.

Easy to clean

Rounded corner allows easy cleaning. The entire chamber is made of stainless steel (SUS304)

Over Heating Limit

Heating is automatically cut by safety device when temperature control fails or there is excessive heating over set point.

Perforated Shelves

Perforated shelves are good for natural air flows and are made of stainless steel which is resistant to rust and contamination.

No Condensation

Heating by front door heater & frame heater prevents condensation in the chamber and on the glass door.

Microprocessor PID Control

Intelligence Control for CO_2 density, Temperature, Alarm, Automatic Decontamination (Optional).

HEPA filtration of the chamber

Options

Customize your incubator with these options

Access port

30mm Access Port is available at left side. (Upon ordering and additional charge)

UV sterilization

4W UV is placed on the chamber ceiling and beside the circulation fan. The UV light cannot reach sample and sterilization is operated during culturing.

HOT AIR DECON 125℃

Maximum 125℃ dry hot air sterilization
No need to remove IR CO_2 sensor

Monitoring System

Connection port has been designed to observe the status of equipments in real time even in the far distance.

SPLIT INNER DOOR

Reduce gas consumption and heat loss, enabling faster recovery—ideal for various samples
5 Split Door for WCI-40
6 Split Door for WCI-180

Model		WCI-180	WCI-260	WCI-650	WCI-850	WCI-850X*	WCI-1200*
Order No.	Standard	W6011180	W6011260	W6011650	W6011850	W6011851X	W6011122
	Sterilization	W6012180	W6012260	W6012650	W6012850	-	-
Chamber volume [L]		180	260	650	850	850	1200
Temperature Stability [℃]		±0.1 (37℃)	±0.1 (37℃)	±0.1 (37℃)	±0.1 (37℃)	±0.1 (37℃)	±0.5 (37℃)
Temp. Uniformity [℃]		±0.3 (37℃ / RT20℃)	±0.4 (37℃ / RT20℃)	±0.5 (37℃ / RT20℃)	±0.5 (37℃ / RT20℃)	±0.5	±0.5 (37℃ / RT20℃)
Heating Capacity [W]		320	610	1100	1400	1400	1600
CO2 Inlet pressure range [bar]		0.3~0.5	0.6~0.7	0.7~1.0	0.7~1.0	0.7~1.0	0.7~1.0
Number of shelves [included / max.]		3/8	3/8	3/15	3/15	0/15	0/15
Chamber dimension [WxDxH] mm		528x473x710	590x530x900	700x650x1430	700x800x1530	840x700x1590	868x720x1927
Overall dimension [WxDxH] mm		560x620x945	630x680x1125	820x780x1740	820x930x1840	993x887x1911	990x855x2123
Weight [kg]		80	115	230	260	299	323

Standard package includes: incubator, shelves, water tray.

* WCI-850X / 1200 Standard package includes: incubator only, shelves need to be ordered separately

Peltier-cooled CO$_2$ Incubator

This CO$_2$ incubator series integrates heating and Peltier cooling systems, representing an advancement in environmentally friendly and energy-efficient temperature management technologies. These innovations ensure exceptional control accuracy with minimal fluctuations

Specifications

Temp. Range:	+20~60 ℃
Temp. Resolution:	0.1 ℃
Dry Heat:	Up to 125 ℃
Temp. Control:	Digital PID
CO$_2$ Range:	0% ~ 20%
CO$_2$ Accuracy:	±0.1% (5% / 37 ℃)
CO$_2$ Resolution:	0.1%
CO$_2$ Sensor:	IR CO$_2$ Sensor
Display:	LED Display
IP code:	IP20
Operating panel:	Individual 2-Channel Touch Button
Jacket type:	Dry Wall Type (6 sides heat)
Chamber material:	Stainless Steel (304)

Model		WCI-40P	WCI-120P	WCI-180P
Order No.	Standard	W6013040	W6013120	W6013180
	Sterilization	W6014040	W6014120	W6014180
Chamber volume [L]		40	120	180
Temperature Stability [℃]		±0.1 （37℃)	±0.1 (37℃)	±0.1 (37℃)
Temp. Uniformity [℃]		±0.3 (37℃ / RT20℃)	±0.3 (37℃ / RT20℃)	±0.3 (37℃ / RT20℃)
Heating Capacity [W]		320	320	320
CO2 Inlet pressure range [bar]		0.3~0.5	0.3~0.5	0.3~0.5
Number of shelves [included / max.]		2/4	3/8	3/8
Chamber dimension [WxDxH] mm		320x350x375	480x470x520	528x473x710
Overall dimension [WxDxH] mm		420x520x570	580x560x765	560x680x945
Weight（kg）		46	82	88

Model	WCI-260P	WCI-650P	WCI-850P
Order No. Standard	W6013260	W6013650	W6013850
Chamber volume [L]	260	650	850
Temperature Stability [℃]	±0.1 (37℃)	±0.1 (37℃)	±0.1 (37℃)
Temp. Uniformity	±0.4 (37℃ / RT20℃)	±0.5 (37℃ / RT20℃)	±0.5 (37℃ / RT20℃)
Heating Capacity [W]	610	1100	1400
CO2 Inlet pressure range [bar]	0.6~0.7	0.7~1.0	0.7~1.0
Number of shelves [included / max.]	3/8	3/15	3/15
Chamber dimension [WxDxH] mm	590x530x900	700x650x1430	700x800x1530
Overall dimension [WxDxH] mm	630x760x1125	820x860x1740	820x930x1840
Weight [kg]	125	260	296

Standard package includes: incubator, shelves, water tray.

Portable Mini CO_2 Incubator

Compact & Economical Mini CO_2 Incubator

Features

> Portable Use with carrying handles (Car Plug available)
> Economical Price & Compact Design for Personal Use
> Suitable size to use in work station or Clean bench
> Digital control for Temperature & CO_2
> Forced Air Circulation by Fan
> Excellent Temperature Uniformity
> Quick recovery & Precise CO_2 control by IR Sensor
> Cooling with very low noise
> Two Stainless Steel Shelves (Standard)
> Natural Humidification by Water tray
> Cooling & Heating by peltier
> Stainless steel Water Tray
> Power Plug & Car Jack

Car Jack

Accessories & Options

Order No.	Name	Model
189231	Shelf (Stainless steel)	203M-SHELFSUS (220x162mm-WxD)
189232	Measuring opening (Ø12mm)	203M-Hole

Product Name		WCI-15R
Chamber Volume [L]		15.2
Temperature	Range [℃]	15~ 45 (at Ambient 25℃)
	Accuracy [℃]	±0.25
	Control	Digital
CO_2	Range	0 ~ 20%
	Sensor	Dual Beam IR Sensor
	Accuracy	±0.1% (5%)
	Gas Pressure	0.7Bar (Max.1Bar)
Humidity		Up to 80%
Display		LED Display
Cooling & Heating		By Peltier (thermoelectric elements)
Shelf		2, Stainless steel (standard) / Max (3ea)
In & Outside Material		ABS
IP code		IP20
Inside (W x D x H mm)		224x 200 x 340
Outside (W x Dx H mm)		292x 333x 433
Weight [kg]		6.8
Power / Frequency		220V , 50/60Hz
Power Consumption		DC-COLD: 46W, HOT: 48W
		AC-COLD: 63W, HOT: 63W
Order No.		189221

Standard package includes: incubator, 12V car power adapter, 220V power adapter, 2 Shelves, Water tray.

Copper Chamber CO_2 Incubator

copper plate inner chanler with better contamination effect, including all the features of the standard stainless steel version!

COPPER CHAMBER

Specifications

Temp. Range:	RT +5~60℃
Temp. Resolution:	0.1℃
Dry Heat:	Up to 125℃
Temp. Control:	Digital PID
CO_2 Range:	0% ~ 20%
CO_2 Accuracy:	±0.1% (5% / 37℃)
CO_2 Resolution:	0.1%
CO_2 Sensor:	IR CO_2 Sensor
Display:	LED Display
IP code:	IP20
Operating panel:	Individual 2-Channel Touch Button
Jacket type:	Dry Wall Type (6 sides heat)
Chamber material:	Stainless Steel (304)

Model		WCI-40Cu	WCI-180Cu
Order No.	Standard	W6028040	W6028180
	Sterilization	W6028041	W6028181
Chamber volume [L]		40	180
Temperature Stability [℃]		±0.1 (37℃)	±0.1 (37℃)
Temp. Uniformity[℃]		±0.3 (37℃ / RT20℃)	±0.3(37℃ / RT20℃)
Heating Capacity [W]		320	320
CO2 Inlet pressure range [bar]		0.3~0.5	0.3~0.5
IP code		IP20	IP20
Number of shelves [included / max.]		2/4	3/8
Chamber dimension [WxDxH]mm		320x350x375	528x473x710
Overall dimension [WxDxH]mm		420x460x570	560x620x945
Weight [kg]		38	80

Standard package includes: incubator, shelves, water tray.

WIGGENS
The Magic Motion

Tri-Gas Incubator $(CO_2 / O_2 / N_2)$

The Tri-Gas incubator is ideal for the experiments of the cultivation of animal cells, sperm/ovum, anaerobic cells, all sorts of microbe cells, hatching/germinating and special tissues.

Options

Customize your incubator with these options

ACCESS PORT

Access port
25mm Access Port is available at left side. (Upon ordering and additional charge)

UV STERILIZE

UV sterilization
4W UV is placed on the chamber ceiling and beside the circulation fan. The UV light cannot reach the sample and sterilization is operated during culturing.

COOLING CONTROL

Peltier cooling system
With Peltier cooling system in WCI-40T & WCI-180T, It can work below room temperature.

COPPER CHAMBER

Copper chamber
WIGGENS customize chamber with copper plate chamber for enhanced contamination protection.

MULTI GAS CONTROL

O_2 Control
Multi Gas Supply (N_2 & O_2) is available for all CO_2 incubators.

HOT AIR DECON

125℃

Hot air sterilization
Maximum 125℃ Dry Hot Air in WCI-40T, WCI-180T
No need to remove IR CO_2 sensor

MONITORING SYSTEM

Monitoring System
Connection port has been designed to observe the status of equipments in real time even in the far distance.

SPLIT INNER DOOR

Lower gas consumption. Lower heat loss.
Faster recovery easy classification for various samples.
5 Split Door for WCI-40T
6 Split Door for WCI-180T

Features

Fast heat-up, fast-recovery, reliable control

6 Sides Direct Heating System

The electric heating wire is covered on all sides of the chamber which makes good uniformity and provides fast heat-up & temperature recovery.
3 parts of heating section are controlled and calibrated individually by 3 individual temperature sensors.

Dry Wall and Air Jacket

Warm air from heating wire is preserved in space between the chamber and the insulation layer. It helps temperature recover faster and minimize heat loss. Drywall withinsulation requires no regular maintenance.

DUAL BEAM IR CO_2 Sensor

Fast & precise detection for CO_2 gas regardless of temperature and humidity.

Natural Humidification using Water Tray

The heater on bottom warms the water in tray and it makes humidification. The circulation fan delivers the moisture formed from the water to the entire chamber.

No Condensation

Heating by front door heater & frame heater prevents condensation in the chamber and on the glass door.
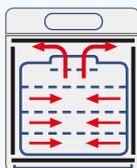
Microprocessor PID Control

Intelligence Control for CO_2 density, Temperature, Alarm, Automatic Decontamination (Optional).

HEPA filtration

Gentle Air and Moisture Convection

Gentle air and moisture convection air and moisture in the chamber are distributed naturally by 6 side heating and the air circulation fan.

Over Heating Limit

Heating is automatically cut by safety device when temperature control failed or there is excessive heating over set point.

Easy to clean

Rounded corner allows easy cleaning. The entire chamber is made of stainless steel (SUS304)

Perforated Shelves

Perforated shelves are good for natural air flows and are made of stainless steel which are resistant against rust and contamination.

Alarm System

Buzzer to alarm low or high deviation of CO_2, Temperature.

Specifications

Model		WCI-40T	WCI-120T	WCI-180T	WCI-260T	WCI-850T
Volume [L]		40	120	180	260	850
Temperature	Range [℃]	Ambient+5~60	Ambient+5~60	Ambient+5~60	Ambient+5~60	Ambient+5~60
	Accuracy [℃]	±0.1 (37℃)	±0.1 (37℃)	±0.1 (37℃)	±0.1 (37℃)	±0.1 (37℃)
	Resolution [℃]	0.1	0.1	0.1	0.1	0.1
	Control	Digital PID	Digital PID	Digital PID	Digital PID	Digital PID
CO_2	Range	0% ~ 20%	0% ~ 20%	0% ~ 20%	0% ~ 20%	0% ~ 20%
	Accuracy	±0.1% (5% / 37℃)	±0.1% (5% / 37℃)	±0.1% (5% / 37℃)	±0.1% (5% / 37℃)	±0.1% (5% / 37℃)
	Resolution	0.1%	0.1%	0.1%	0.1%	0.1%
	Sensor	IR CO_2 Sensor	IR CO_2 Sensor	IR CO_2 Sensor	IR CO_2 Sensor	IR CO_2 Sensor
	Control	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor
	Inlet pressure range [bar]	0.5~0.6	0.6~0.7	0.6~0.7	0.6~0.7	0.9~1.0
O_2	Range	0.6~85%	0.6~85%	0.6~85%	0.6~85%	0.6~85%
	Sensor	Zirconium dioxide sensor	Zirconium dioxide sensor	Zirconium dioxide sensor	Zirconium dioxide sensor	Zirconium dioxide sensor
Display		LED Display	LED Display	LED Display	LED Display	LED Display
Operating panel		Individual 2-Channel Touch Button				
Jacket type		Dry Wall Type (six-side gradient heating design)				
Chamber material		Stainless Steel (304)				
IP code		IP20				
Number of shelves [included / max.]		2/4	3/8	3/8	3/8	3/15
Chamber dimension [mm]		320x350x375	480x470x520	528x473x710	530x590x900	700x800x1530
Overall dimension [mm]		420x460x570	580x560x765	560x620x945	630x680x1125	820x930x1840
Weight [kg]		35	65	78	115	266
Order No. for standard version		W6021040	W6021120	W6021180	W6021260	W6021850
Order No. for dry heat sterilization version		W6022040	W6022120	W6022180	W6022260	W6022850

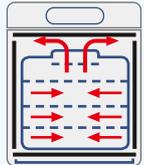Standard package includes: incubator, shelves, water tray.

CO$_2$ Incubator for cell factory

Realize your large scale cell culture needs with the great platform, WCI-850C.

Alarm System
Buzzer to alarm low or high deviation of CO$_2$, Temperature.

Gentle Air and Moisture Convection
Natural Air and Moisture Convection, Air and Moisture in chamber are distributed gently by 6-side heating and air circulation fan.

Easy to clean
Rounded corner allows easy cleaning. The entire chamber is made of stainless steel (SUS304)

Over Heating Limit
Heating is automatically cut by safety device when temperature control fails or there is excessive heating over set point.

Perforated Shelves
Perforated shelves are good for natural air flows and are made of stainless steel which is resistant to rust and contamination.

No Condensation
Heating by front door heater & frame heater prevents condensation in the chamber and on the glass door.

Microprocessor PID Control
Intelligence Control for CO$_2$ density, Temperature, Alarm, Automatic Decontamination (Optional).

> Five separate glass doors design, with independent compartments inside the incubator
> Each compartment can load 10 layers cell factories up to 6.
> Low gas consumption, low heat loss.
> Quick temperature recovery.
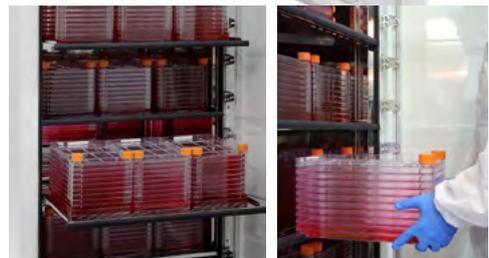
Specifications

Temp. Range :	RT +5~60°C
Temp. Resolution :	0.1°C
Dry Heat :	Up to 120°C
Temp. Control :	Digital PID
CO$_2$ Range :	0% ~ 20%
CO$_2$ Accuracy :	±0.1% (5% / 37°C)
CO$_2$ Resolution :	0.1%
CO$_2$ Sensor :	IR CO$_2$ Sensor
Display :	LED Display
IP code :	IP20
Operating panel :	Individual 2-Channel Touch Button
Jacket type :	Air Jacket Type (6 sides heat)
Chamber material :	Stainless Steel (304)

Model		WCI-850C
Order No.	Standard	W6011851
	Sterilization	W6012851
Chamber volume [L]		850
Temperature Stability [°C]		±0.1 (37°C)
Temp. Uniformity [°C]		±0.5 (37°C / RT.20°C)
Heating Capacity [W]		1400
CO2 Inlet pressure range [bar]		0.7~1.0
Number of shelves		5
Chamber dimension [WxDxH] mm		700x800x1530
Overall dimension [WxDxH] mm		820x930x1840
Weight [kg]		260

CO$_2$ Incubator Accessories

Order No.	Item	Description	Suitable for
Incubator shelf for holding cultures in the chamber			
189231	Stainless steel shelf		WCI15R
W6010401	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WCI-40 series
W6011201	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WCI-120 series
W6011801	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WCI-180 series
W6011801 -U	Reinforced perforated shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 50kg	WCI-180 series
W6011801-Cu	Perforated Shelf kit	Perforated shelf to improve uniformity, Copper material can effectively resist corrosion and pollution, load 15kg	WCI-180 Cu
W6011801-Cu-U	Reinforced perforated shelf kit	Perforated shelf to improve uniformity, Copper material can effectively resist corrosion and pollution, load 50kg	WCI-180 Cu
W6012601	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WCI-260
W6012601-U	Reinforced perforated shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 50kg	WCI-260
W6016501	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WCI-650
W6016501-U	Reinforced perforated shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 50kg	WCI-650
W6018501	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WCI-850
W6018501-U	Reinforced perforated shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 50kg	WCI-850
W6011851X1	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 15kg	WCI-850X
W6011851X1-U	Reinforced perforated shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 50kg	WCI-850X
W6031221	Perforated Shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 25kg	WCI-1200 / WH-1200
W6031222	Reinforced perforated shelf kit	Perforated shelf to improve uniformity, Stainless steel material can effectively resist corrosion and pollution, load 50kg	WCI-1200 / WH-1200
Roller base：Placed at the bottom of the incubator for support and easy movement			
W6010402	Roller base	To move incubator easily	WCI-40 series
W6010602	Roller base	To move incubator easily	WCI-120 series
W6011802	Roller base	To move incubator easily	WCI-180 series
Stacking kit: to stack and fix the incubator			
W6011803	Stacking kit	To stack and fix the incubator	WCI-180
W6012603	Stacking kit	To stack and fix the incubator	WCI-260
W6012603Z	Stacking kit	To stack and fix the incubator	WCI-260Z
HEPA: Filter of gas circulation			
W6011804	HEPA	Set at the gas supply inlet to ensure the cleanliness of the gas in the incubator	WCI-40 / 120 / 180
W60112604	HEPA	Set at the gas supply inlet to ensure the cleanliness of the gas in the incubator	WCI-260
W6018504	HEPA	Set at the gas supply inlet to ensure the cleanliness of the gas in the incubator	WCI-650 / 850
Water tray: Used for humidification during culture to reduce medium evaporation			
W6010405	Water tray	Moisture is generated by heating the Water tray at the bottom, which is filled throughout the chamber by a circulating fan	WCI-40 / 120
W6011805	Water tray	Moisture is generated by heating the Water tray at the bottom, which is filled throughout the chamber by a circulating fan	WCI-180 / 180T / 180R/S
W6012605	Water tray	Moisture is generated by heating the Water tray at the bottom, which is filled throughout the chamber by a circulating fan	WCI-260
W6016505	Water tray	Moisture is generated by heating the Water tray at the bottom, which is filled throughout the chamber by a circulating fan	WCI-650 / 850

Roller base

Stacking kit

HEPA

Water tray

Order No.	Item	Description	Suitable for

UV lamp

W6011806	UV lamp	A 4W UV lamp is placed at the top of the chamber, next to the circulating fan. UV rays do not radiate the sample and can be sterilized during culture.	All series incubator (The operating temperature should not exceed 60℃)

UV lamp

Software

W6011809	Monitoring system	PC software, using Internet network connection, can monitor the working status of the incubator in real time remotely	All series incubator
W6011809-01	Connecting wire	With anti-shedding interface for PC to the incubator, unit/m	All series incubator

Airway

W6011810	Gas regulator	For pressure regulation from the air supply to the chamber	All series incubator
W6011816	Holes for auxiliary monitoring	Diameter of 30mm (40mm customizable), for sampling, experimental verification and penetration of additional equipment power or signal cables in the incubator	All series incubator
189232	Measuring hole	Used for measure sensor access on the side of the incubator	WCI-15R
WCI180065	Tubing	Outer diameter 6mm, inner diameter 4mm for CO2 tubing. Unit/meter	All series incubator
ZFC100-06	Filter	For incubator inlet air filtration, CO2 filter	All series incubator

Gas regulator

Holes for auxiliary monitoring

Divided door: to Reduce chamber's environmental changes when the door is opened

W6011812	Divided door	5-divided door glass door for easy individual experimental operations	WCI-40/40T
W6011813	Divided door	3-divided door glass door for easy individual experimental operations	WCI-180/180T
W6011814	Divided door	6-divided door glass door for easy individual experimental operations	WCI-180/180T
W6012606	Divided door	3-divided door glass door for easy individual experimental operations	WCI-260
W6012607	Divided door	6-divided door glass door for easy individual experimental operations	WCI-260
W6016506	Divided door	3-divided door glass door for easy individual experimental operations	WCI-650
W6016507	Divided door	5-divided door glass door for easy individual experimental operations	WCI-650
W6018506	Divided door	3-divided door glass door for easy individual experimental operations	WCI-850
W6018507	Divided door	5-divided door glass door for easy individual experimental operations	WCI-850

Printer/power supply / LED lamp

W6011815	stylus printer	To print incubator data	All series incubator
W6051502	Power socket in chamber	Three-jack socket, 220V, for power supply inside the chamber, not exceed 1000W	All series incubator
W6051503*	LED lamp	Installed on the top of the chamber, with an independent lighting switch	All series incubator

*The temperature must not exceed 40℃ when LED lamp is present

Shaker Incubator
Shaker CO_2 Incubator
# Roller Rack CO_2 Incubator

Shaker Incubator

Combining a benchtop incubator/refrigerator with a dual-action (orbital and reciprocal) shaker, WS series shaking incubators offer versatility for a variety of biological and biotech applications.

Shaking Features

> Dual shaking modes: orbital or reciprocal.
> Speed range: 30 to 300 rpm.
> Programmable shaking motion.
  - Timer range: 10 sec to 999 hr 59 min 59 sec.
  - Forward & Backward, Pause: 10 sec to 59 min 59 sec.
> Selectable shaker throw: 20, 30, 40mm.

Operating Features

> Temperature control:
  +5℃ above ambient to 60℃ . (for WS-300 and WS-600)
  +15℃ to 60℃ . (for WS-300R and WS-600R)
> Microprocessor PID control.
> Simple calibration and auto-tuning functions.
> Digital timer with delayed ON/OFF function: 1 min to 99 hr 59 min.
> High temperature limit setting and open door alarm.
> Convenient preset function for 3 most commonly used temperature settings.
> Up to 9 temperature steps and maximum 200 cycles of repetition and programmable for each profile.
> Intuitive control panel with bright LED display (0.1℃ resolution) and push button keypad.
> RS-232 interface.
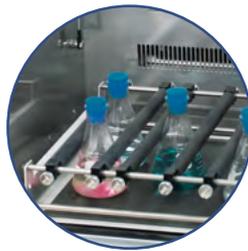
Optional Accessories

> Universal / Dedicated Platforms, Rubber Mats, Universal Attachments
> Flask Clamps, Funnel Clamps
> Test Tube Racks, Spring Wire Racks
> Microplate Holders (three styles)

Constructional Features

> Maintenance-free and durable BLDC motor.
> High-velocity fan ensuring uniform temperature distribution and rapid thermal recovery.
> Convenient sample monitoring thanks to the transparent acryl lid and the fluorescent lamp.
> Gas spring lid supports providing soft closing, smooth motion, and stopping.
> Environment-friendly CFC-free refrigerant.

Specifications

Product Name		WS-300	WS-300R	WS-600	WS-600R
Volume (L)		53	53	83	83
Temperature	Range(℃)	Ambient +5 ~ 60	15~60	Ambient +5 ~ 60	15 ~ 60
	Accuracy(℃)	±0.1 (37℃)	±0.1 (37℃)	±0.1 (37℃)	±0.1 (37℃)
	Stability(℃)	±1.0 (37℃)	±1.0 (37℃)	±1.0 (37℃)	±1.0 (37℃)
	Controller	Push button keypad.; Digital Display with PID automatic regulation			
	Heater	Heating Plate, 800W			
	Timer	Start / Stop / Duration setting; 10sec ~999hr 59min 59sec			
Shaker	Controller	PID automatic regulation			
	Power Unit	Brushless motor			
	Methods	Orbital(clockwise, counterclockwise, pause):Standard, Reciprocating : Option			
	Shaking Throw (mm)	20, 30 (standard), 40	20, 30 (standard), 40	20, 30 (standard), 40	20, 30 (standard), 40
	Speed (rpm)	30 ~ 300	30 ~ 300	30 ~ 300	30 ~ 300
	Stability (rpm)	± 1 (at 150rpm)	± 1 (at 150rpm)	± 1 (at 150rpm)	± 1 (at 150rpm)
Dimensions	Platform (W × D in mm)	350 × 350	350 × 350	450 × 450	450 × 450
	Inside (W × D × H in mm)	410 × 410 × 320	410 × 410 × 320	510 × 510 × 320	510 × 510 × 320
	Outside (W × D × H in mm)	440 × 740 × 625	440 × 740 × 625	540 × 850 × 625	540 × 850 × 625
IP code		IP30	IP30	IP30	IP30
Net Weight (kg)		74	85	91	102
Max. Load (kg)		10	10	15	15
Order No.		W6091050	W6095050	W6091080	W6095080

Standard package includes only shaker, tray need to be ordered separately.

Accessories for Shaker Incubator

Sticky Plate

The Wiggens Sticky Plate can be loaded with any kind of vessels with a smooth base. Even at a speed of up to 220 rpm the vessel sticks to the plate.

Suitable for	WS-300/300R	WS-600/600R
Order No.	31901	31902
Dimensions (W x D in mm)	350x350	450x450
Sticky (singal piece) (need 4 pieces for replacement on the tray)	31901 -1	31902 -1
Tray (Without sticky pieces)	31901 -2	31902 -2

Sticky plate includes: tray and 4 pieces of stickies

Multi-Purpose Tray

The multi-purpose tray is made of stainless steel and can be used for a diverse range of unusual specifications.

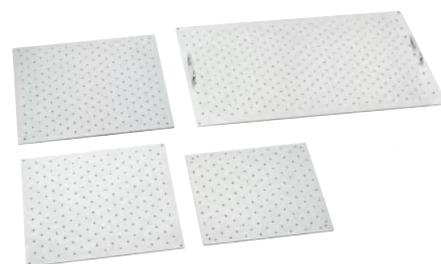| Suitable for	WS-300/300R	WS-600/600R
Order No.	31521	31522
Dimensions (W × D in mm)	350x350	450x450
Max. Load of Flasks		
50ml	16	25
100ml	9	16
250ml	4	9
300ml	4	9
500ml	4	5
1L	2	4
2L	1	2
2.8L	1	2

Multi-Purpose Tray includes: tray and springs

Bar OD 23mm

Adjustable bar tray

Suitable for	WS-300/300R	WS-600/600R
Order No.	31514	31515
Dimensions (W x D in mm)	300x300	400x400
Number of bar	3	3
Order No. of bar	31514-05	31515-05

Adjustable Tray includes: tray and 3 pieces of bars

Universal Tray

The Universal Trays employ a drilled grid for individual loadings of test tube holders, microtitre plates, and deep well plates.

Suitable for	WS-300/300R	WS-600/600R
Order No.	31501	31502
Dimensions (W × D in mm)	350x350	450x450
Max. Load of Flask Clamps		
50ml	28	45
100ml	24	36
250ml	13	18
300ml	13	18
500ml	10	13
1L	5	7
2L	4	5
2.8L	1	2
4L	–	–
Max. Load of Separatory Funnel Clamps		
250ml	4	6
500ml	2	3
1L	–	2
2L	–	–

Standard package includes only tray, clamps need to be ordered separately.

Multi-Pore Holders

The Wiggens multi-pore holders can be installed on the Wiggens sticky plates or the Wiggens universal trays. All holders can be installed on small pores and deeper holes. In total, four different multi-pore holders are available:
1. Multi-Layer Holder
2. Single-Layer Single-Position Holder
3. Single-Layer Three-Position Holder
4. Single-Layer Four-Position Holder

23651   23652 / 23653   23654
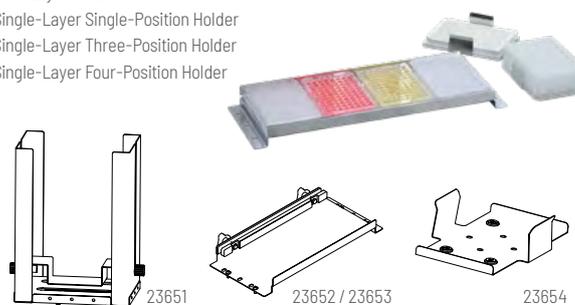
Max. No. of Mountable Holders	Multi-Layer	Four-Position	Three-Position	Single-Position
Order No.	23651	23652	23653	23654
Max. mountable holders				
WS-300/300R	6	—	2	8
WS-600/600R	10	2	3	15

Rubber mat

Designed for low-speed applications, non-skid rubber mats allow quick addition or removal of flasks, plates or tubes.

Suitable for	WS-300/300R	WS-600/600R
Order No.	31531	31532
Dimensions(W x D x H mm)	352x352x23	450x450x23

Separatory funnel clamp

Funnel Volumes	250ml	500ml	1L	2L
Order No.	23562	23563	23564	23565
	152x60	165x70	230x80	255x90

Erlenmeyer flask clamp
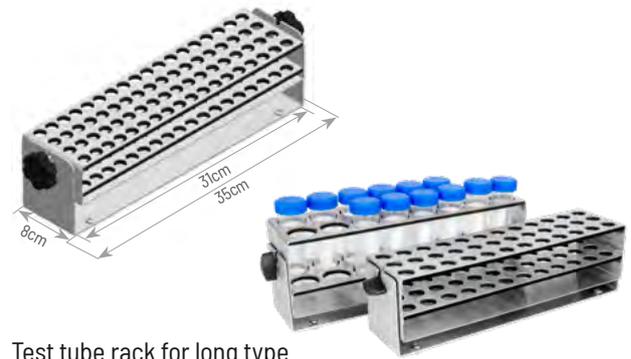
Size of flask	Order No.
25ml	23549
50ml	23550
100ml	23551
250ml	23552
300ml	23556
500ml	23553
1000ml	23554
2000ml	23555
2800ml Fernbach	23557
3000ml	23560
4000ml	23558
5000ml	23561
6000ml	23559

Plastic clamps for erlenmeyer flask

Order No.	Description	Order No.	Description
31285	100ml	31287	500ml
31286	250ml		

Stainless steel clamps for fernbach flask

Order No.	Description	Order No.	Description
31283	1.8L	31284	2.8L

Test tube rack for long type

Order No.	Description	Order No.	Description
31342	144 x Ø8mm	31356	39 x Ø18mm
31343	100 x Ø10mm	31358	36 x Ø20mm
31347	72 x Ø12mm	31359	33 x Ø22mm
31352	64 x Ø14mm	31360	20 x Ø25mm
31354	36 x Ø16mm	31361	16 x Ø30mm

Test tube rack for short type

Order No.	Description
31348	72 x Ø12mm
31353	64 x Ø14mm
31357	39 x Ø18mm（Suitable for Greiner Bio-one tube）

Rack for plastic test tube

Order No.	Description
31355	36x Ø16mm（15ml）
31362	16x Ø30mm（50ml）

187mm test tube rack for short type

Order No.	Description	Order No.	Description
31344	44 x Ø12mm	31349	21 x Ø20mm
31346	24 x Ø18mm		

Shaker Incubator

Laboratory space is both scarce and expensive, WSI series successfully combines flexibility, user friendly operation and operational safety with the optimum utilization of space. Thanks to its modular construction and downwards-opening door, can either be a single unit for use on or under the laboratory bench,or operate as part of a stacked system.

Features

> Easy to completed the stacking process
> With electromagnetic drive technology, shaking stable and low noise
> Integrated shaking unit, the volume of flask up to 2L
> Opening direction of the out door can be switched option
> Built-in circulation fan to ensure the uniformity of temperature field
> Stainless steel chamber, easy to clean
> Alarm for temperature deviation, speed deviation or open the door.
> Independent safety temperature control to prevent overheating
> A variety of accessories are optional
> The built-in shaker is SRC, please refer to SRC for optional accessories

Specifications

Model		WSI-50	WSI-50R
Temperature	Range (25℃) ℃	RT+7~60	RT-10~60
	Accuracy [℃]	±0.1	±0.1
	Uniformity [℃]	±0.5	±0.5
Shaking (Optional)	Speed [rpm]	20-300	20-300
	Accuracy	± 1%FS	± 1%FS
	Amplitude [mm]	25	25
Chamber Volume		71L	71L
Platform (w x d) mm		300 x 330	300 x 330
Capacity		100ml x 16	100ml x 16
		250ml x 9	250ml x 9
		500ml x 5	500ml x 5
		1000ml x 4	1000ml x 4
		2000ml x 1	2000ml x 1
Dimensions (w x d x h) mm	1 deck	400 x 600 x 618	400 x 600 x 618
	2 decks	400 x 600 x 1236	400 x 600 x 1236
IP code		IP30	IP30
Two layers weight [kg]		110	140

Standard package includes: incubator, SRC shaker, tray need to be ordered separately.

Roller Rack CO_2 Incubator

WIGGENS CO_2 incubator with a roller apparatus or shaker inside the chamber, for adherent cells culture in the incubator. All operations and controls are on the external control panel. In addition to all the functions of the CO_2 incubator WCI-180, the roller rack CO_2 incubator has the following features:

> 180-litre CO_2 incubator with roller apparatus installed inside
> Low noise by using a low vibration DC brushless motor
> CO_2 concentration, humidity and temperature have good uniformity in the chamber
> The roller apparatus can be easily removed
> The external controller can control the internal rollers individually, and the speed displays on the TFT screen
> The temperature and CO_2 value are displayed and controlled on the LED screen

External controller

Four Dia.100-120mm roller bottles can be installed with speed controller on the outside
Controller outside can monitor and control speed without opening the door.

Specifications

Model		WCI-180R
Display of the incubator		LED
Capacity [L]		180
Temperature	Range [℃]	RT+5-60
	Display Precision [℃]	±0.1（37℃）
	Resolution [℃]	0.1
Speed control	Speed [rpm]	2~30
	Accuracy [rpm]	±1
	Resolution [rpm]	0.1
	Control	PID microprocessor
Humidity		≥70%（at 37℃）
CO_2	accuracy	±0.1%（5% / 37℃）
	Resolution	0.1%
	Sensor	Dual infrared CO_2 sensor
	Control	PID microprocessor
Timer (Roller)		Continuous or up to 99h 59min
Jacket style		Air（six-side heating）
Interior material		304 stainless steel
Shelf		One for roller apparatus, and above space for static culture
Order No.		W6026180

Standard package includes: incubator, water tray, shelf, roller.

More information about remote roller Celrol Mini, please refer to the page 189

Shaker CO$_2$ Incubator

In addition to all the functions of the WCI-180, the shaker CO$_2$ incubator has the following features:

> 180-litre CO$_2$ incubator with shaker installed inside
> Low noise by using a low vibration DC brushless motor
> CO$_2$ concentration, humidity and temperature have good uniformity in the chamber
> The shaker can be removed
> A variety of plate types (Erlenmeyer flasks: 100ml, 250ml, 500ml, 1000ml, test tube clamps, 96-well plates)
> The external controller can control the internal rollers individually
> The speed, temperature and CO$_2$ value are displayed and controlled on the LED screen

Flasks with volume of 100~1000ml can be put on the shaker inside. Brushless DC motor makes it low vibration, dust-free, low noise and very suitable for cell culture

Controller outside can monitor and control speed without opening the door.

More information, please refer to shaker SRC

WCI-180CH

Please note that the sticky plate in the picture needs to be ordered separately

Specifications

Model		WCI-180S	WCI-180CH
Application		Incubator and shaker can be separate for Independent use	Integrated version
Display		LED	LED
Capacity [L]		180	180
Platform Size (W x L mm)		300x330	300x330
Temperature	Range [℃]	RT+5-60	RT+5-60
	Display Precision [℃]	±0.1 (37℃)	±0.1 (37℃)
	Resolution [℃]	0.1	0.1
Speed control	Speed [rpm]	30-300	30-300
	Accuracy [rpm]	±1	±1
	Resolution [rpm]	1	1
	Control	PID microprocessor	PID microprocessor
Humidity		≥70%（at 37℃)	≥70%（at 37℃)
CO$_2$	Accuracy	±0.1%（5% / 37℃）	±0.1%（5% / 37℃）
	Resolution	0.1%	0.1%
	Sensor	Dual infrared CO$_2$ sensor	Dual infrared CO$_2$ sensor
	Control	Microprocessor	Microprocessor
Jacket style		Air（six-side heating）	Air（six-side heating）
Interior material		304 stainless steel	304 stainless steel
Shelf		One for shaker	One for shaker
Order No.		W6027180	W6027181

Standard package includes: incubator, water tray, shelf, shaker. The tray for shaker need to be ordered separately

Shaker CO$_2$ Incubator

The WIGGENS shaker CO2 incubator is ideal for use in the fields of biosimilar production, proteomics, crystallography, genomics, cell biology and new drug development. A large capacity CO$_2$ incubator with separable long life shakers provides the optimum solution for cell suspension culture.

The internal chamber is subdivided into 3 compartments each holding a separable orbital shaker which can hold Erlenmeyer, cylindrical flasks or deep well blocks. The dual beam Infrared sensor provides precise CO$_2$ control while the six side heating system ensures excellent temperature control and recovery and also humidity. An outstanding air circulation system ensures temperature uniformity within all compartments.

The unique patented orbital shakers are constructed with stainless steel to minimize contamination and cleaning. Well sealed plate type magnetic drive motor allows these shakers to be used in highly humid environment and operate without noise, vibration or particulate generation. These powerful shakers can be used for many years with reliability guaranteed.

Features

Cell suspension culture

The shaker CO$_2$ incubator is designed for the suspension culture of eukaryotic cells such as CHO, HEK, Hela etc. but can also be used as a static incubator if required.

Infrared sensor

Industry standard dual beam infrared sensor is used to maintain control of CO$_2$ density

Pullout shaker platform

The platform of each shakers can be pulled out for loading flasks on each shakers efficiently.

Sticky mat & various holders

The orbital shakers can be used with sticky mats or dedicated flask holder trays or universal flask/tube holder plates.

Individual shaker control

Each orbital shaker can be individually controlled by an external control panel.

Excellent temperature control

All 6 sides are directly heated and combined with PID control to ensure that temperatures are reached quickly and uniformity is maintained. Further the system combines forced air and natural convection to maintain the best temperature uniformity at all times.

High and natural humidification

A deep and wide humidity tray allows high and natural humidity to be generated.

Split inner glass doors

The internal chamber is separated into three compartments, each with its own shelf, shaker and glass door. This design prevents excessive loss of heat and CO$_2$ when removing flasks etc.

Humidity display (option)

LED display of actual humidity in the chambers informs the user of time to supplement the water in the humidity tray

Auto restart function

Each shaker has an autostart function so that if the glass inner door to each compartment is opened the shaker in that compartment stops and starts again when the door is closed. Auto start is also enabled if there is a power cut.

UV lamp

A UV lamp sited next to the circulation fan works to sterilize the air in the incubator even during cell culturing. The UV lamp can be turned on or off by a switch.

Stain resistant interior

The inner chamber and all orbital shakers are constructed with stainless steel SUS304 which is designed for use in GMP facility and is resistant to rust formation under high humidity conditions

Anti-bacterial filter

A HEPA filter, located in post circulation fan, traps microbes and helps to maintain a sterile environment.

Removable shelves

Larger growth vessels like 5 or 10 liter flasks can be accommodated by completely removing the shelves

Specifications

Model		WCI-650CH	WCI-850CH
Display		LED	LED
Chamber volume [L]		650L	850L
Temp.	Range [℃]	Ambient +5-60	Ambient +5-60
	Accuracy [℃]	±1 (at 37℃)	±1 (at 37℃)
Shaker	Shaking motion	Orbital	Orbital
	Speed range [rpm]	30-300	30-300
	Speed accuracy [rpm]	±1	±1
	Speed increment [rpm]	1	1
	Orbit diameter [mm]	25	25
Humidity		≥70% (at 37℃)	≥70% (at 37℃)
CO2	Range	0-20%	0-20%
	Accuracy	±0.3% (at 5% at 37℃)	±0.3% (at 5% at 37℃)
	Sensor	IR CO2 sensor	IR CO2 sensor
	Inlet pressure [bar]	0.7-1	0.7-1
Time	Time range	Continuous or up to 99h59min	Continuous or up to 99h59min
	Time accuracy	±1%	±1%
	Time increment [min]	1	1
Jacket type		Air jacket type (6-side heating)	Air jacket type (6-side heating)
Filter		Anti-Bacterial HEPA filter	Anti-Bacterial HEPA filter
Sterilization		U.V 4Wx1ea	U.V 4Wx1ea
Shelves		3ea	3ea
Dimension (WxDxH) [mm]	Chamber dimensions	700x650x1430mm	700x800x1530mm
	Platform size	520x520mm	520x520mm
	Each compartment dimension	Compartment 1 (Bottom): 700x650x430 Compartment 2, 3 (Middle,Top): 700x650x380	700x800x410
	Overall dimensions	820x780x1740	820x920x1840
IP code		IP20	IP20
Weight [kg]		323	393
Power		220V, 50/60Hz	
Order No.		W6027650	W6027850

Standard package includes: incubator, water tray, 3 shakers, 3 sticky plates.
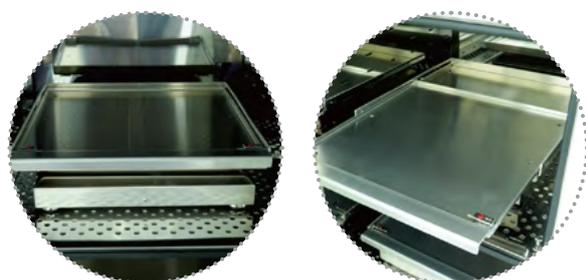
Maximum allowance for flask capacity

WCI-650CH	WCI-850CH
100ml x 156	100ml x 156
250ml x 90	250ml x 90
500ml x 60	500ml x 60
1000ml x 48	1000ml x 48
2000ml x 9	2000ml x 27

*Optimum performance for maximum allowance can be obtained at 150rpm.

Universal Tray

The Universal Trays employ a drilled grid for individual loadings of test tube holders, microtitre plates, and deep well plates.

Suitable for	WCI-650CH / WCI-850CH
Order No.	W6100402
Dimensions (W x D in mm)	520 x 520

Sticky Plate

The Wiggens Sticky Plate can be loaded with any kind of vessels with a smooth base. Even at a speed of up to 300 rpm the vessel sticks to the plate. Other vessels, like microtitre plates can be shaken on the Wiggens Sticky Plate as well. but, only up to a speed of 220 rpm.

Suitable for	WCI-650CH / WCI-850CH
Order No.	W6100401
Dimensions (W x D in mm)	520 x 520

Erlenmeyer Flask Clamp

Size of flask	Order No.
25ml	23549
50ml	23550
100ml	23551
250ml	23552
300ml	23556
500ml	23553
1000ml	23554
2000ml	23555
2800ml Fernbach	23557
3000ml	23560
4000ml	23558
5000ml	23561
6000ml	23559

Multi-Purpose Tray

The multi-purpose tray is made of stainless steel springs and can be used for a diverse range of unusual specifications.
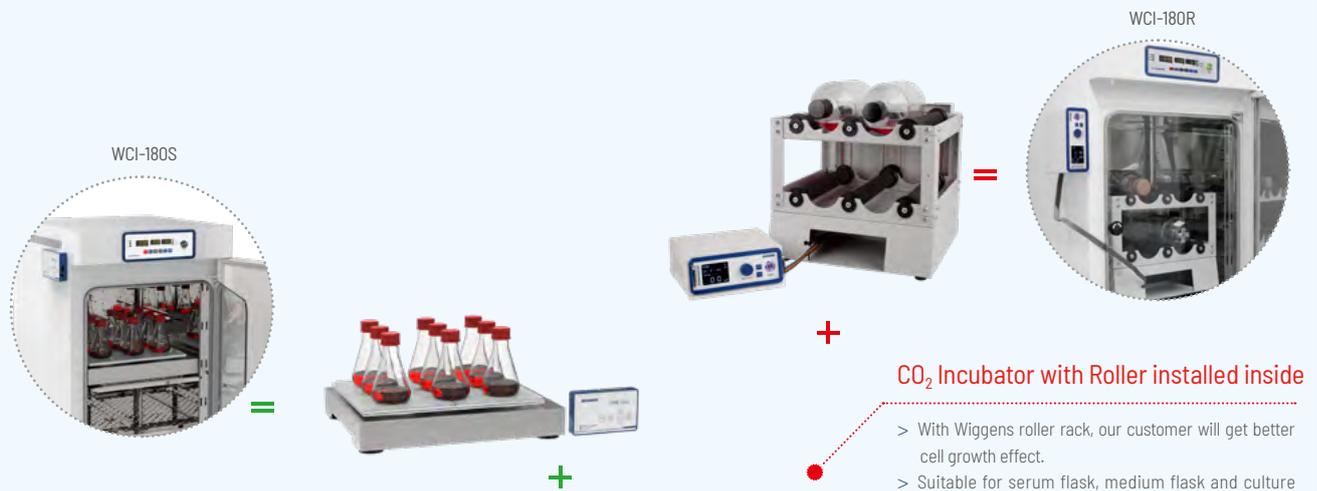

Suitable for	WCI-650CH / WCI-850CH
Order No.	W6100403
Dimensions (W x D in mm)	520 x 520

Biomix for CO$_2$ Incubators

WCI-180R

WCI-180S

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+

CO$_2$ Incubator with Roller installed inside

> With Wiggens roller rack, our customer will get better cell growth effect.
> Suitable for serum flask, medium flask and culture tube
> Suitable for cell culture or staining process
> Speed range from 0.2~8.1 rpm

CO$_2$ Incubator with Shaker installed inside

> With Wiggens shaker, our customer will get better cell growth effect.
> O$_2$ transfer rate is increased
> The problem of media gradients was eliminated by mixing media
> To avoid cell deposition and accumulation in suspension culture

CO$_2$ Incubator

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CO$_2$ Incubator with Biological culture

Biological culture that uses a semi-permeable membrane separation technique between cell compartment and medium compartment, which breaks through the constraints of conventional cell culture on cell growth by air, nutrients, and metabolic inhibitors. It largely mimics the environment in which cells grow in organisms. The aim of high density cell culture and high concentration product expression was realized.

> A disposable cell culture device that can be used at any time
> Reduce the use of consumables
> High cell density and product concentration
> Can be stacked to save space
> Save the time, no more external equipment is needed

CO$_2$ Incubator with Magnetic stirrer installed inside

> With special magnetic stirrer and vessel , our customer will get better cell growth effect.
> With IP 68 class, magnetic stirrer has a long service life
> Remote speed control system
> Low heat dissipation design, can not affect the temperature and CO$_2$ control of incubator

Cell Culture Roller Rack

The WIGGENS cell culture roller rack, available in the Celrol Mini and Celrol Mid models, offers high flexibility in its operation, both inside an incubator and on a work table. A remote control box can be conveniently attached to the incubator's surface, and the flat cable does not require special installation measures like an access poRT The Celrol Mini can accommodate up to four 2000ml bottles, while the Celrol Mid can handle six 2000ml bottles at a time. With a speed range from 0.2rpm to 8.1 rpm, these racks are designed to optimize the performance of adherent cell cultures.

Features
> Steel reinforced polyurethane timing belts
> Brushless DC Motor
> Powder coated aluminum for durability and cleanliness
> Non-slip rubber material for the best performance of rolling
> Designed for no idle roller by drive-belt

Specifications

Model	Celrol Mini	Celrol Mid
rpm Range [rpm]	0.2~8.1	0.2~8.1
Accuracy [rpm]	1	1
Increment [rpm]	0.1	0.1
Control	Microprocessor digital PID	Microprocessor digital PID
Time Range	Continuous or up to 999h 59min	Continuous or up to 999h 59min
Accuracy	±1%	±1%
Display	LED Display	LED Display
Motor type	Brushless DC motor	Brushless DC motor
Bottle diameter [mm]	110 to 120 4ea	110 to 120 6ea
Roller deck dimension [WxDxH][mm]	362×299×212	362×299×412
Overall dimension [WxDxH][mm]	375×370×345	375×370×545
Bottle Positions	4	6
Decks	2	3
Power	220V, 50/60Hz	220V, 50/60Hz
Weight [kg]	12.5	13.5
Order No.	W6110100	W6110200

*110V product available upon request

Can contain four Dia.100~120mm roller bottles.

Outside control
Controller can adjust speed without opening the door.

Cell Culture Roller Rack

Celrol Pro

> Smooth ramping digitally controlled rotation accurate to 0.01 rpm
> Maintenance-free precision brushless motor
> Bright TFT display for easy operation
> Can be directly connected to the printer

Specifications

Model	Celrol Pro
Display	TFT
Capacity	5~55 Positions
Bottle Speed (110mm Bottle) [rpm]	0.08~2.5
Diameter of roller bottles [mm]	108~121
Length of roller bottles [mm]	Max. 550
Accuracy [rpm]	0.01
Drive	Belt Driven
Motor Type	Brushless DC
Rotation Direction	Clockwise and Counter-Clockwise
Options	Temperature Alarm and Battery Backup
Remote Communication	RS232
Humidity	80% up to 37℃
Operating Temperature [℃]	10 to 40
Electrical	220 V, 50/60 Hz

Standard package includes: Roller, Belt break alarm

Celrol Elite

> Robust touch screen interface that is easy to view from a distance
> Readily recognizable icons for intuitive navigation
> Digitally controlled maintenance-free motor accurate to 0.01 rpm
> RS-422 Modbus RTU, RS-485 Modbus RTU, Modbus TCP and TCP/IP
> Can be directly connected to the printer

Specifications

Model	Celrol Elite / GMP
Display	SIMATIC HMI Touch Screen
Capacity	8~88 Positions 5~55 Positions
Bottle Speed (110mm Bottle) [rpm]	0.08~2.5
Diameter of roller bottles [mm]	108~121
Length of roller bottles [mm]	Max. 550
Accuracy [rpm]	0.01
Drive	Belt Driven
Motor Type	Brushless DC
Rotation Direction	Clockwise and Counter-Clockwise
Options	Temperature Alarm and Battery Backup
Remote Communication	RS-422 Modbus RTU, RS-485 Modbus RTU, Modbus TCP and TCP/IP
Humidity	80% up to 37℃
Operating Temperature [℃]	10 to 40
Electrical	220 V, 50/60 Hz

Standard package includes: Roller, Belt break alarm

Ordering Information

Order No.	Position	Deck distance	Decks	Width	Depth	Height	Bottle Positions	Rack material
Celrol Pro		cm		cm	cm	cm		
WPBWRA501	5	18	1	79	63	35	5	AL
WPBWRA503	5	18	3	79	63	71	15	AL
WPBWRA505	5	18	5	79	63	107	25	AL
WPBWRA508	5	18	8	79	63	161	40	AL
WPBWRA509	5	18	9	79	63	179	55	AL
WPBNRS501	5	15	1	79	63	35	5	SS304
WPBNRS503	5	15	3	79	63	65	15	SS304
WPBNRS505	5	15	5	79	63	95	25	SS304
WPBNRS508	5	15	8	79	63	140	40	SS304
WPBNRS509	5	15	9	79	63	155	45	SS304
WPBNRS510	5	15	10	79	63	170	50	SS304
WPBNRS511	5	15	11	79	63	185	55	SS304
Celrol Elite								
WEBNRS501	5	15	1	79	63	35	5	SS304
WEBNRS503	5	15	3	79	63	65	15	SS304
WEBNRS505	5	15	5	79	63	95	25	SS304
WEBNRS508	5	15	8	79	63	140	40	SS304
WEBNRS509	5	15	9	79	63	155	45	SS304
WEBNRS510	5	15	10	79	63	170	50	SS304
WEBNRS511	5	15	11	79	63	185	55	SS304
WEBNRS809	8	15	9	120	63	155	72	SS304
WEBNRS810	8	15	10	120	63	170	80	SS304
WEBNRS811	8	15	11	120	63	185	88	SS304

Forced Convection Oven
# Vacuum Oven
Muffle Furnace

Forced Convection Oven

Ideal for high-temperature storage with a user-friendly design, WF-G Models cater to all sterilization and drying tasks. They are perfect for drying applications that require a gentle airflow.

Features

> Microprocess PID control / Calibration.

> Over temperature limit protection / Door opening alarm.

> Conveniently preset 3 most commonly used temperature settings.

> Rounded inner chamber corners for easy cleaning and better air-flowing.

> Stainless steel interior.

> Two circular adjustable top slide vents help to control inner air vapor circulation (inside diameter 35mm)
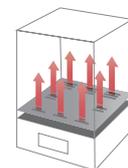
Simplifies operation
LED display, easy to operate

Venting valve
Regulate the air exchange between chamber and outside

High temperature protection
Alarm when the temperature exceeds the set point

Wide temperature range
Up to 250 ℃ , even 300 ℃ version is possible

Uniform distribution
Accurate temperature control and forced convection

RS232 interface
Remote control by PC software

Specifications

Model		WF-02G	WF-12G	WF-22G
Chamber Volume（L）		50	100	150
Temperature	Range（℃）	RT+10~250	RT+10~250	RT+10~250
	Stability at 100℃（℃）	0.5	0.6	0.8
Dimension (W×D×H)	Interior（mm）	400×420×420	480×460×500	500×480×625
	Exterior（mm）	540×620×780	600×690×810	660×750×920
Number of shelves [included / max.]		2/8	2/12	2/14
IP code		IP20	IP20	IP20
Weight（kg）		55	62	72.5
Power supply		230V, 50/60 Hz	230V, 50/60 Hz	230V, 50/60 Hz
Order No.	Without glass window	W6061050	W6061100	W6061150
	With glass window	W6061051	W6061101	W6061151

Model		WF-05G	WF-10G	WF-15G	WF-25G	WF-40G	WF-72G
Chamber Volume（L）		50	100	150	250	400	720
Temperature	Range（℃）	RT+10~300	RT+10~300	RT+10~300	RT+10~300	RT+10~300	RT+10~300
	Stability at 100℃（℃）	0.5	0.5	0.5	0.5	0.5	0.5
Dimension (W×D×H)	Interior（mm）	388×334×407	474×396×505	474×396×606	630×520×760	1080×574×840	1078×571×1200
	Exterior（mm）	602×573×732	652×689×831	694×652×930	810×788×1031	1240×792×1123	1240×834×1470
Number of shelves [included / max.]		2/4	2/12	2/14	2/14	3/10	3/10
IP code		IP20	IP20	IP20	IP20	IP20	IP20
Weight（kg）		55	62	72.5	78.5	100.5	110.5
Heating power（kW）		1.2	1.3	1.5	2.6	3.4	5.1
Power supply		230V, 50/60 Hz	230V, 50/60 Hz	230V, 50/60 Hz	380V	380V	380V
Order No.	Without glass window	W6062050	W6062100	W6062150	W6062250	W6062400	W6062720
	With glass window	W6062051	W6062101	W6062151	W6062251	–	–

Standard package includes: oven, shelves.

Accessories & Options

Perforated Shelves
Stainless steel shelves are easily removable without using tools for easy cleaning.

Order No.	Description W x L （mm）	Model
W6060501	365×315	WF-02G / 05G
W6061001	450×380	WF-10G / 12G
W6061501	465×400	WF-15G / 22G
W6062501	558×440	WF-25G
W6064001	988×490	WF-40G
W6067201	1068×565	WF-72G

Glass viewing window
Threefold tempered glass viewing window allows for easy monitoring of samples.

Vacuum Oven

Optimally constructed for separating solvents from solutions or other sample with high boiling points. With vacuum, the boiling point of the solvent can be reduced, protecting the sample and make the separation process easier. The vacuum oven is widely used in the fields of biochemistry, chemical industry, pharmacy, medical and health, agricultural research, environmental protection, etc. , for powder drying, baking and various types of glass containers for disinfection and sterilization. It is especially suitable for fast and efficient drying of heat-sensitive, easily decomposed, easily oxidized materials and articles with complex components.

Features

Display

> Large LED temperature display for actual value and setpoint(resolution on 0.1℃)
> The vacuum gauge displays the vacuum in the oven in real time

Operation

> Wiggens traditional operation panel, clear and simple
> Three common temperature points can be used to start the test quickly
> Ball valve used for open and close the vacuum in oven
> Need valve used for venting
> All connections as well vacuum and venting are located at the rear

Temperature control

> Wide temperature range that can be controlled up to 250℃
> Improved temperature distribution. (±3.7℃ at 100℃)
> Integrated programmer for the execution of time and temperature dependant profiles,
    1 temperature profile with 9 steps max. The selected steps can set up up to 200 loops

Structural and Safety

> Toughened glass doors allow easy access to the interior of the oven.
> Safety door cover to protect users and laboratories when toughened glass breaks
> Overcurrent and over temperature protection
> Different materials of O-ring are optional
> RS232 interface

> The chamber is made of stainless steel which smooth and even finishing
> There are 3 shelves inside the chamber
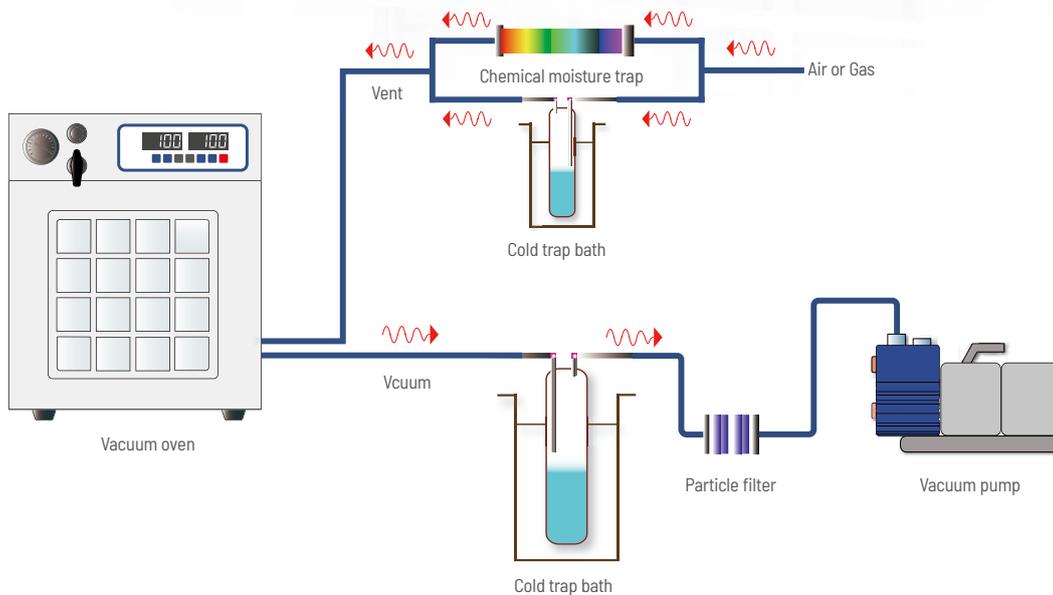> Power supply: 220-240 V, 50/60 Hz

Specifications

Model	WOV-30	WOV-65	WOV-120
Order No.	W6071030	W6071065	W6071120
Volume (L)	30	65	120
Temperature range (℃)	RT+5~250	RT+5~250	RT+5~250
Temperature resolution (℃)	0.1 (at100℃)	0.1 (at100℃)	0.1 (at100℃)
Temperature variation (℃)	±3.7 (at100℃)	±3.7 (at100℃)	±3.7 (at100℃)
Heating power (W)	2100	2100	2550
Vacuum range	0~1 atm	0~1 atm	0~1 atm
Timer	1min~99hr59min	1min~99hr59min	1min~99hr59min
Number of shelves	3	3	3
IP code	IP20	IP20	IP20
Vacuum connector (mm)	Ø10	Ø10	Ø10
Venting connector (mm)	Ø10	Ø10	Ø10
Inner size (mm)	323×323×323	400×410×400	500×500×500
Dimension (mm)	560×506×630	640×583×707	740×722×807
Weight (kg)	63	103	147

Standard package includes: oven, shelves
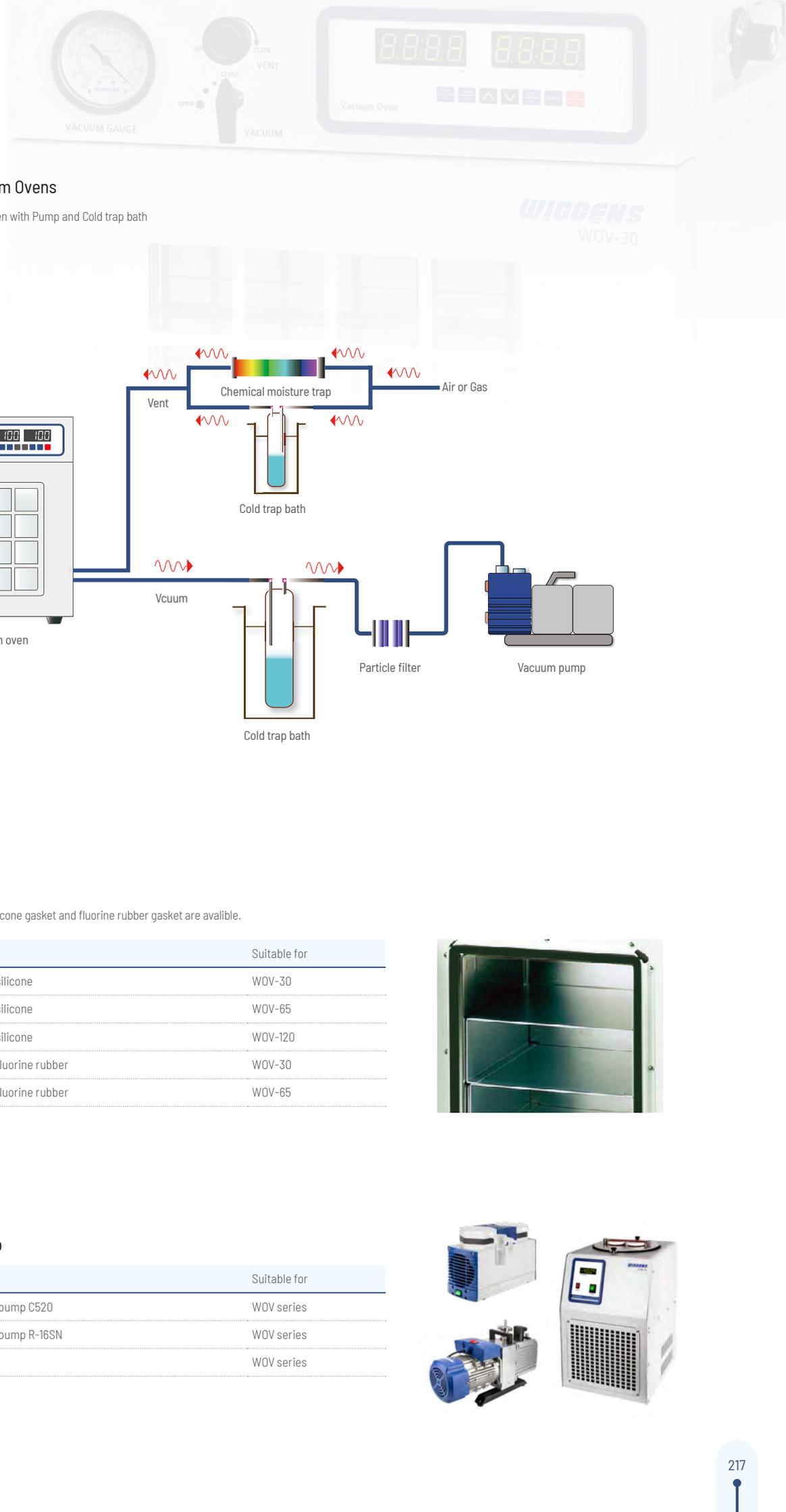
Related Products for Vacuum Ovens

Organization chart for use of Vacuum oven with Pump and Cold trap bath

Vent

Chemical moisture trap

Air or Gas

Cold trap bath

Vacuum oven

Vcuum

Cold trap bath

Particle filter

Vacuum pump

Accessories

Gasket

Installed between chamber and door, silicone gasket and fluorine rubber gasket are avalible.

Order No.	Part	Suitable for
W6071032	Gasket, silicone	WOV-30
W6071062	Gasket, silicone	WOV-65
W6071122	Gasket, silicone	WOV-120
W6071033	Gasket, fluorine rubber	WOV-30
W6071063	Gasket, fluorine rubber	WOV-65

Vacuum pump and cold trap

Order No.	Part	Suitable for
169520	Vacuum pump C520	WOV series
900104	Vacuum pump R-16SN	WOV series
W8603040	Cold trap	WOV series

Muffle Furnace

Standard version RT+15℃ ~1100℃

Hight temperature version RT+15℃ ~1500℃

Operation and Display

> Intelligent navigation operation, can be directly access into the settings

> The main interface shows setting temperature, actual temperature, output power, historical data, alarm records and other information, convenient to enter the destination menu directly.

Program

> Integrated temperature program, 10×30 steps

> Display the temperature curve in real-time

Data storage and connection

> Data storage, transfer, and invocation

> Experiment data and alarm information can be transfer by USB stick

> Communication interface included RS232, RS485, RJ45, can be remote controlled by PC and SCADA

Safety

> Overheat protection (Electronic and mechanical protection), Overload and leakage protection, Self-diagnosis

> With password protection to prevent the process of setting parameters are changed

> Standard with passive exhaust port, ensure gas pressure safety

> With high quality thermocouple, ensure accurate temperature control and long service time

Specification

Model	WMF-02	WMF-05	WMF-12	WMF-02H	WMF-05H	WMF-12H
Chamber volume（L）	2	4.5	12	3	4.5	12
Temperature range（℃）	RT+15~1100	RT+15~1100	RT+15~1100	RT+15~1600	RT+15~1600	RT+15~1600
Temperature stability（℃）	±1	±1	±1	±1.5	±1.5	±1.5
Heating — Heating	Heat on three sides					
Temperature control	PID					
Heating capacity (KW)	1.5	2.5	4	3	4.5	7
Program	Integrated temperature program, 10×30 steps					
Safety device	Overheat, Overload and leakage protection, Self-diagnosis, with password protection					
Temperature curve	Display the temperature curve in real-time					
Communication interface	RS232, RS485, RJ45, USB-A for data export					
Power supply	Aviation connector of the power supply, AC220, 50/60Hz					
IP code	IP20					
Dimensions(W×D×H mm)	445×460×570	475×460×640	525×560×690	640×530×980	650×580×990	700×680×1040
Chamber dimensions(W×D×H mm)	120×200×80	150×200×150	200×300×200	140×150×140	150×200×150	200×300×200
Weight (KG)	62	74	102	62	74	102
Order No.	W6121002	W6121005	W6121012	W6122002	W6122005	W6122012

*Recommended material tray for high-temperature heating

Standard package includes: oven only, material tray need to be ordered separately

Accessories & Options

Order No.	Name	Description	
W6121P0030	Material tray	Used to place materials	Suitable for WMF-02
W6121P0031	Material tray	Used to place materials	Suitable for WMF-02H
W6121P0032	Material tray	Used to place materials	Suitable for WMF-05/05H
W6121P0033	Material tray	Used to place materials	Suitable for WMF-12/12H

Ultrasonic Cleaner
Ultrasonic Shaker

Ultrasonic Cleaner

Ultrasonic Cleaning Technology

The cavitation phenomenon consists of formation and growth of millions of microscopic bubbles under a low-pressure stage, produced into the ultrasonic bath due to a high power transducer 37kHz. These bubbles break in all directions and attack every surface in contact with water, erasing dirt, impurities and pollutants when in contact with materials or pieces in the bath. This phenomenon allows cleaning all kinds of materials and products without the need of disassembling, due to all the surfaces being in contact with the liquid. The heating will accelerate this clearing process.

Eco Series

> Wide range of available capacities from 3L up to 22L
> Inner and outer parts made of stainless steel
> Features a digital timer with up to 99 min

Pro Series

> Entails all advantages of the Eco series
> LCD touch screen for simple and intuitive operation
> Features a digital timer with up to 199 min
> Heating ability between 20℃ and 80℃
> Stainless steel 304 tank and powder coated stainless steel, meet the requirements of antiseptic and hygienic lab environment
> Automatically save last parameters and recall when the unit is turned back on
> Non-slip feet and flexible surface contact for lower ultrasonic vibration
> Safety handles make the unit portable
> Maintain ultrasonic efficiency at different temperatures
> Frequency overload and thermal protection
> Ultrasonic baths with rapid degassing and power settings from 40 to 100 % .

Application

> Laboratories: laboratory material, precision instruments, pipettes, sieves, etc.
> Medicine: instrumentation in general, surgical material, etc.
> Odontology: dental prosthesis, instrumentation, etc.
> Optics: instrumentation, opticals, frames, etc.
> Industry: printed circuits, electronic components, etc.
> Jewellery: watches, jewels, etc.
> Automation: Injector clearing.
> Degasification or liquid dissolution
> Compact substances disgregation

Specifications

Order No.	Model	Capacity L	Internal Size (WxDxH) mm	Overall Size (WxDxH) mm	Ultrasonic Power W	Heater Power W	Temp. ℃	Frequency Khz	Timer min	Drainage outlet
Eco Series										
W3080303	UE03	3	240×140×100	270×160×240	90	–	–	40	1~99min	Without
W3080306	UE06	6	300×150×150	330×180×290	160	–	–	40	1~99min	With
W3080310	UE10	10	300×240×150	360×270×310	250	–	–	40	1~99min	With
W3080315	UE15	15	330×300×150	390×330×310	350	–	–	40	1~99min	With
W3080322	UE22	22	500×300×150	570×330×330	500	–	–	40	1~99min	With
Pro Series										
W3080403	UA03	3	240×137×103	301×163×342	Max 100 (Adjustable 40-100%)	88	20~80	37	1~199min	Without
W3080406	UA06	6	300×153×150	362×180×305	Max 150 (Adjustable 40-100%)	170	20~80	37	1~199min	With
W3080410	UA10	10	300×240×150	383×267×305	Max 200 (Adjustable 40-100%)	270	20~80	37	1~199min	With
W3080415	UA15	15	330×300×150	390×330×310	Max 350 (Adjustable 40-100%)	420	20~80	37	1~199min	With
W3080422	UA22	22	500×300×150	584×327×327	Max 400 (Adjustable 40-100%)	550	20~80	37	1~199min	With

Eco Series Standard package includes: Ultrasonic Cleaner, tray.
Pro Series Standard package includes: Ultrasonic Cleaner, tray, lid.

Accessories for Ultrasonic Cleaner

Some accessories are very suitable for the Ultrasonic Cleaner, protecting the tank body, and some small parts need special containers to ensure to be placed at the bottom of the tank.
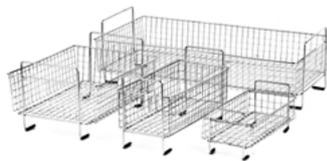
Lid for reducing the noise

Order No.	Name	Suitable for Volume
U10003	SS Lid	3L
U10006	SS Lid	6L
U10010	SS Lid	10L
U10015	SS Lid	15L
U10022	SS Lid	22L

Tray

Order No.	Name	Suitable for Volume
U10203	Tray	3L
U10206	Tray	6L
U10210	Tray	10L
U10215	Tray	15L
U10222	Tray	22L

SS Insert basket

Order No.	Name	Suitable for Volume
U10103	Insert basket	3L
U10106	Insert basket	6L
U10110	Insert basket	10L
U10115	Insert basket	15L
U10122	Insert basket	22L

Positioning lid

Order No.	Name	Suitable for Volume
U10403	Lid	3L
U10406	Lid	6L
U10410	Lid	10L
U10415	Lid	15L
U10422	Lid	22L

Application Tip

Insert capacity of test tube racks for each bath
3L bath: 1pc
6L bath: 1pc
10L bath: 2pcs
15L bath: 3pcs
20L bath: 4pcs

Test tube holder / Drain pipe

Order No.	Description
U10503	Test tube rack, for 24 test tubes, 16/17 mm dia. for 3L bath
U10504	Test tube rack, for 50 test tubes, 16/17 mm dia. for 6~22L bath
U10505	Test tube rack, for 90 test tubes, 12/13 mm dia. for 6~22L bath
U10506	Test tube rack, for 90 microliter tubes. 11/12 mm dia. for 6~22L bath
U10507	Test tube rack, for 21 test tubes, 30 mm dia. for 6~22L bath
U10606	Drain pipe,suitable for 3~22L Ultrasonic Cleaner

Stabilizing rings for Erlenmeyer

> PVC covered steel
> suitable for Erlenmeyers, flasks, etc.
> Application: The weight of the ring prevents flasks from floating when placed in a thermal bath.

Order No.	Model	Colour	Size（OD）x（ID）	Weight
5660	Type S	Red	Ø 70×Ø 27 mm	0.3 kg
5661	Type M	Yellow	Ø 105×Ø 52 mm	0.5 kg
5662	Type L	Blue	Ø 140×Ø 76 mm	1.2 kg

Ultrasonic Shaker

Ultrasonic bath with shaking device for sample preparation

Wiggens ultrasonic shaker combines the function of ultrasonic cleaner and shaking water bath. Both procedures can be carried out simultaneously or separately. This means that a sample can be pre-homogenized at a specified shaking frequency, and then final homogenization can be achieved in a very short time using ultrasound.

> Reciprocal shaker, standard 20 mm , 30mm and 40mm are optional
> Multi-Purpose Spring tray is easy to remove
> With drainage outlet
> With bath lid to reduce noise and prevent liquid losses due to evaporation
> Speed range [rpm] 20~200 rpm

Application

Biochemical research, material testing, enzyme and tissue studies, homogenization, routine laboratory tasks, corrosion tests, fermentation, incubation, blood plasma thawing, temperature tests of food and beverages

Max. Load of flasks

> 6 X 250ml
> 6 X 300ml
> 2 X 500ml
> 2 X 1L
> 1 X 2L

Specifications

Order No.	Model	Temp.	Frequency	Working Power	Heater Power	Timer	Drainage outlet	Capacity	Shaking stroke
		°C	Khz	W	W	min		L	mm
W3080122	WUS22	20-80	37	Max.400 (40-100% adjustable)	550	1~199min	With	20	20 （30 / 40）

Standard package includes: Ultrasonic shaker, Multi-Purpose Spring tray, lid.
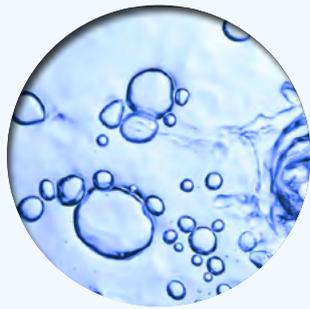
Liquid Handling Equipment

Peristaltic Pump

Advancing the Science of Liquid Handling

Advanced Control Features
> Icon Driven User Interface allows for easy setup and operation
> Large Backlit LCD Display is easy to view from a distance
> Durable Front Overlay is resistant to chemicals
> Polarized and Angled Screen allows for glare free viewing
> "Trouble-Free" Calibration Screen allows for accurate and quick calibration
> Ultra High Precision Stepper Motor ensures repeatability and accuracy

User-Friendly Design Features
> Low Profile Design reduces space required on the bench or in a hood
> Pump Settings can be saved and recalled saving time in multi-use settings. Nine quick retrieval setups are available
> Multi-Language Help Screens: English, Chinese, Deutsch, Francaise, Japanese, Korean, and Spanish

Vdose® ELITE Additional Features
> Multiple stacking pump heads allow for higher volumes and multiple fill applications with one pump
> Microcassette head is ideal for precision micro-dispensing of liquids in well plates, microtubes, or microcentrifuge tubes
> Works with 2, 3, 6 and 8mm tubing
> Pump allows for different ramping profiles to avoid splashing or foaming
> Accommodates a variety of dispensing and process applications

Suggested Application

Research, Development, and Quality Control
Transfer and distribution of fluids into smaller containers, serial dilutions, sample preparation, and media dispensing.

Pharmaceutical and Biotechnology
Dispensing microbiological media, pill coating, dilutions, transferring live cells, additions and harvests to and from bioreactors, packaging and filling.

Food and Beverage
Common uses include dispensing flavorings, colorings, vitamins, and other additives in processing applications, and simple dispensing of end products on production lines or into shelf packages.

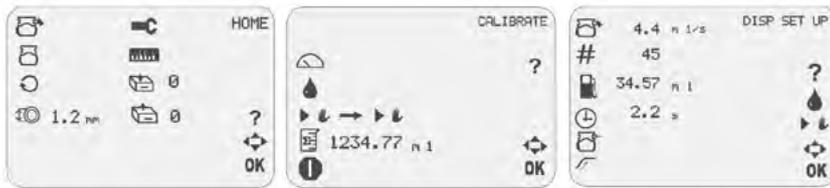### Waste Water and Sample Collection
Industrial and QC applications, environmental compliance hazardous/toxic materials evaluation and site sampling for liquids, sludge, earth/soil, water, etc. Ideal for sampling from barrels and drums.

International
The Icon Driven display and multi-language help screen work well in laboratories abroad.

Functionality	Vdose® PRO	Vdose® ELITE
Modes	Dispense Mode	Dispense Mode and Flow Mode
Motor	Dual Speed 75 and 150 rpm	Variable Speed 0.5 to 400 rpm
Direction	Unidirectional; Clockwise	Bidirectional; Clockwise and Counterclockwise
Ramp	Not Offered	User Ramp Control for Dispense and Flow Modes 5 Profiles
Drawback	Not Offered	For Filling into a Closed Container
Pump Heads	Single	Single, Dual, Microcassette
Order No.	W1100100	W1100200

Peristaltic pump standard package inclodes
Peristaltic pump, 2.3mm wall thickness single pump head; Silicone tube,ID 3mm, with built-in delivery nozzle and glass sinker, length 1.5m (Order NO. 374311); Silicone tube, iD 6mm, , with built-in delivery nozzle and glass sinker, length 1.5m (Order NO. 374313).

Technical Specification

Model Pump	Power supply V	Capacity W	Operating Speed rpm	Tubing Sizes Available (mm ID)	Dispense Ranges for Tubing ml	Flow Rate Ranges for Tubing ml/min	Accuracy Midrange	Delay Time / Sec	Weight kg	Dim. with Pump Head (HxWxD)	Optional Pump Head Support
Vdose® ELITE	100-240	37	0.5-400	2	0.01-9999.99	20.4-174	≤±1%	0.5-99.9	5.4	18×21×34cm	> Stack up to 2 Pump Heads > Stacking Pump Head for 2.3mm Wall Tubing > Pump Head for 1.6mm Wall Tubing > Stacking Pump Head for 1.6mm Wall Tubing > 5-Channel Pump Head for Small-Bore Tubing
				3	0.01-9999.99	60-330	≤±1%				
				6	0.01-9999.99	270-1080	≤±2.5%				
				8	0.01-9999.99	200-1746	≤±2.5%				
Vdose® PRO	100-240	37	75&150	2	0.01-9999.99	30&60	≤±1%	0.5-99.9	5.4	18×21×34cm	Pump Head for 1.6mm Wall Tubing Pump Head for 2.3mm Wall Tubing
				3	0.01-9999.99	60&120	≤±2%				
				6	0.01-9999.99	210&426	≤±2%				
				8	0.01-9999.99	540&1080	≤±2.5%				

Home Screen

Calibration Screen

Dispensing Screen

Single Pump

Optional Pump Heads

Order No.	Description	Qty/Case
W1100101	Single Pump Head for 2.3mm Wall Tubing	1
W1100102	Optional Pump Head for 1.6mm Wall Tubing	1

Peristaltic Pumps Accessories

Order No.	Description	Qty/Case
Tubing Accessories		
374322	Hose Barb/Luer Adapter (fits 2 and 3mm)	1
W1100104	Footswitch	1
374324	2 and 3mm Polypropylene Nozzle	6
374326	6mm Polypropylene Nozzle	6
374328	8mm Polypropylene Nozzle	6
374320	Small Glass Sinker (fits 2 and 3mm ID tubing)	6
374321	Large Glass Sinker (fits 6 and 8mm ID tubing)	6
Tubing Support Stand		
W1100105	Tubing Support Stand	1
Silicone Tubing Assembly, 2.3 mm wall thickness		
374310	2mm ID, 5 ft Section (1.5m)	1
374311	3mm ID, 5 ft Section (1.5m)	1
374313	6mm ID, 5 ft Section (1.5m)	1
374314	8mm ID, 5 ft Section (1.5m)	1
Silicone Tubing, 2.3mm wall thickness		
374304	2mm ID, 25 ft Section (7.62m)	1
374305	3mm ID, 25 ft Section (7.62m)	1
374306	6mm ID, 25 ft Section (7.62m)	1
374308	8mm ID, 25 ft Section (7.62m)	1
Microtest Manifolds		
851380	4 Position, Straight, 24 Well	1
851381	8 Position, Straight, 96 Well	1
851382	4 Position, Angular, 24 Well	1
851383	8 Position, Angular, 96 Well	1
851388	12 Position, Straight, 96 Well	1
851389	12 Position, Angular, 96 Well	1
Dispensing Cannulas w/Luer Lock		
851411	18 Gauge x 2 in	1
851412	14 Gauge x 4 in	1

Hose Barb/Luer Adapter
The luer adapter allows connection to equipment and components with a female luer connector.

Tubing Support Stand
Optional tubing support stand conveniently holds the tubing in place for filling operations.

Footswitch
Utilize the convenience of a handsfree pump by installing the optional footswitch.

Silicone Tubing
Assembly consists of 1.5m (5-foot) section of silicone tubing with a wall thickness of 2.3mm, a borosilicate glass sinker, and a polypropylene delivery nozzle. Bulk tubing is also available.

Polypropylene Nozzle & Glass Sinker
> The nozzle connects to the pump tubing for dispensing of liquids.
> The glass sinker is used to secure tubing when drawing from a container.

Microtest Manifolds & Dispensing Cannulas
Ideal for use with 24 and 96 well microplates. This unique dispensing system enables you to perform sample inoculations and cell feedings faster and more efficiently under sterile conditions.

Portable Suction Unit (Aspirator)

Adopts oil-free vacuum pump

No lubricant required, maintenance-free, low noise and durable.

Double overflow protection

A built-in float switch plus 0.2 μm PTFE hydrophobic disc filter between the suction bottle and the pump prevent the medium and bacteria from flowing into the pump.

Autoclavable

Only waste bottles, disc filters and pipeline between them are autoclavable. Suction pipeline, and suction head cannot be autoclave.
> The whole unit is made of of ABS plastic and aluminum alloy.
> Various precision elements are developed, and assembled through long time test.
> Piston pump inside offers low noise, and it is wear-resistant, polution-free, maintenance-free.

High-Temperature Sterilization
Waste bottle and disc filter can are autoclavable

Employment of an Oil-Free Vacuum Pump
The oil-free vacuum pump is maintenance-free, features a very low noise level

Double Protection Against Liquid Overflow
> Waste bottle, floating ball
> 0.2 μm PTFE disc filter
> Protection against liquid overflow
> Keeps liquid from entering the pump.

Vacuum Regulator
Deliver the correct vacuum for various applications

Stable and Durable Casing
The casing is made of ABS material, which is light and easy to clean

Wire Storage Box
The system provides a storage for the foot switch wire, which makes it easy and convenient to use
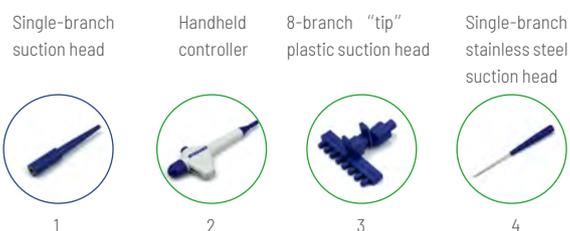
Foot Switch Interface

BioVac 225

BioVac 235

BioVac 240

Application
> Biochemical cultivation
> Separation of culture fluids
> Waste liquid suction in cell cultivation
> All kinds of waste liquid suction in laboratory environments

Single-branch suction head

Handheld controller

8-branch "tip" plastic suction head

Single-branch stainless steel suction head

1 2 3 4

Specifications

Order No.	Model series	Power	Ultimate Vacuum	Max. Flow Rate	Foot Switch	Dimensions	Suction bottle	Weight	Accessories included
		W	mbar	l/min		cm		kg	
W1080225	BioVac 225	60	100	25	-	37 × 15 × 25	1000ml X 1	4.3	4
W1080226	BioVac 225 PLUS	60	100	25	-	37 × 15 × 25	1000ml X 1	4.3	1.2.3.4
W1080235	BioVac 235	60	100	35	-	27 × 30 × 28	1500ml X 2	6.9	4
W1080236	BioVac 235 PLUS	60	100	35	-	27 × 30 × 28	1500ml X 2	6.9	1.2.3.4
W1080240	BioVac 240	80	80	40	yes	54 × 26 × 35	3000ml X 1	12	4
W1080241	BioVac 240 PLUS	80	80	40	yes	54 × 26 × 35	3000ml X 1	12	1.2.3.4

Accessories

Bio-Suction Kit
Successful removal of supernatants from lab containers by means of a vacuum aspiration system depends on applying the correct level of vacuum and on using an aspirator tip that matches the size and form of the container from which liquid is aspirated. The vacuum aspiration tool is produced by Wiggens to specifically match the diversity of laboratory containers. Different adapters fit on the hand operator so that your vacuum source is converted into a flexible system for aspirating liquids from tubes, dishes, bottles, T-flasks, 24-well and 96-well plates.

Quick-lock design
Ergonomic handle and friendly designed lock switch can keep continuous suction without pressing button all the time.

Single-handed tip ejection
The innovative tip ejection design enables tip ejection by a single hand easily.

Quick fitting change
Quick connection coupling between fitting and handle can make any fittings replaced quickly.

Vapor sterilization can be applied
The complete kit except the rack are made of POM and stainless steel material available for autoclave.

Specifications

No.	Order No.	Name	Quantity
1	167200-42	Single-branch suction head	1
2-1	167200-44	Single-branch stainless steel suction head, needle length 5cm	1
2-2	167200-44L	Suction Head Single-branch stainless steel suction head, needle length 11cm (Option)	1
3	167200-45	Single-branch "tip" plastic suction head	1
4	167200-46	Handheld controller	1
5	167200-47	8-branch stainless steel suction head	1
6	167200-48	8-branch "tip" plastic suction head	1
7	167200-49	ABS Depositing rack	1

Name	Bio-Suction Kit
Order No.	167200-37
Operation Form	Vacuum Suction
Outlet Diameter(mm)	5 mm

Disc Filter

Name	Small Disc Filter	Big Disc Filter
Order No.	167200-35	167200-36
Filter Diameter / Pore Size	37 mm / 0.2 μm	50 mm / 0.2 μm
Outer Diameter	45 mm	63 mm
Material	PTFE	PTFE
Outer Material	PP	PP
Number of Filters per Package	1	1
Suitable for	BioVac225 / BioVac235	BioVac240

Silicon Tube

Order No.	Outer Diameter mm	Inner Diameter mm	Thickness mm	Length m
168021-01	14	8	3	1
168022-01	16	10	3	1

Order No.	Name	Description
167200-50	Manual suction tube	The outer diameter of the connector is 8mm, The outer diameter of the PP tube is 5mm
167200-51	High pressure silicone tube	For the tube, the outer diameter is 10mm, and the inner diameter is 6mm,with hose joints at both ends

Order No.	Name	Description
167200-52	Plastic stoppers	Suitable for the tube of which the outer diameter is 10mm or 12mm

Spill-Proof Buoy

PP/PC Waste Bottle

Material				
Order No.	167200-31	167201-35	167201-36	167200-34
Bottle	PC	PC	PC	PC
Bottle Cover	PC	PC	PC	PC
Spill-Proof Buoy	PP	PP	PP	PP
Description				
Capacity (ml)	1000	1500	1500	3000
Outlet (mm)	8	8	8	8
Spill-Proof Buoy	With	Without	With	With
Autoclavable	Yes	Yes	Yes	Yes
Suitable for	BioVac225	BioVac235	BioVac235	BioVac240 / 350 / 650

If you need other bottles of different volumes, please choose 167200-39 below

Stand for Suction Bottle

Order No.	Description	
167200-39-1	Stand for suction bottles, designed for stabilizing the bottle in filtration work	1000ml
167200-39-2		1500ml
167200-39-3		3000ml

Foot switch

Order No.	Description
167200-40	Foot switch, Suitable for BioVac240
167200-54	Foot switch, Suitable for BioVac225 / BioVac235

Vdose Syringe Pump

The standard syringe pump includes injection element and controller, and the injection element can be single-channel or dual-channel. Vdose serial syringe pump can carry out accurate liquid transmission automatically. The system is also programmable with a PC to realize more complicated liquid dosing operations.

> Bright TFT display can show the dosing parameters clearly on one screen
> 9 types of syringes can be selected, from 50µl~25ml, it is easy to change the syringes
> Dosing speed: from 1.25ul/min to 375ml/min
> All parts contacted with the liquid are glass or PTFE, which guarantees the chemical resistance
> The three port valve can switch automatically to complete the repeating withdrawing and dosing
> The valve ports can be configured for convenient liquid recovery without taking part the tubing
> RS-232/485 digital communication ports available for remote PC or PLC control

Vdose4200

Specifications

Model		Vdose4200	Vdose4400
Number of dosing channel		Single Position	Dual Position
Flow Rate		1.25 µl/min~375 ml/min	1.25 µl/min~375 ml/min
Precision		≤ 5 ‰	≤ 5 ‰
Weight (kg)		5.5	9.1
Outer Dimensions (H x W x D mm)		305 x 89 x 330	305 x 178 x 330
Syringe	Size	50µl~25 ml	50µl~25ml
	Material	Glass and PTFE wetted	Glass and PTFE wetted
	Dispense Resolution	1/6000 of the syringe size in use	1/6000 of the syringe size in use
	Feature	Easily interchangeable	Easily interchangeable
Valve	Material	PTFE	PTFE
Interface Port		RS232 / 485	RS232 / 485
Power supply		110~240V,50/60Hz	110~240V,50/60Hz
Order No.		V900705	V900704

Vdose 4200 and Vdose 4400 are more suitable for corrosive solvents

Vdose4400

Order Information

Order No.	Description
V900705	Single Position Syringe pump, with dosing unit and controller (need to specify the valve ports and glass syringe volume)
V900704	Dual Position Syringe pump, with dosing unit and controller (need to specify the valve ports and glass syringe volume)
Accessories	
V900700-5	50µL glass syringe with Teflon plunger
V900700-6	100µL glass syringe with Teflon plunger
V900700-7	250µL glass syringe with Teflon plunger
V900700-8	500µL glass syringe with Teflon plunger
V900700-9	1ml glass syringe with Teflon plunger
V900700-10	2.5ml glass syringe with Teflon plunger
V900700-11	5ml glass syringe with Teflon plunger
V900700-12	10ml glass syringe with Teflon plunger
V900700-13	25ml glass syringe with Teflon plunger
PTFE Tubing and Fittings	
V900700-19	Tubing Length: 6m; Outer Diameter: 1/8″ ; Includes: 12 nuts and 6 ferrules
V900700-20	Tubing Length: 30m; Outer Diameter: 1/8″ ; Includes: 24 nuts and 6 ferrules
V900700-21	Tubing Length: 6m; Outer Diameter: 1/16″ ; Includes: 12 nuts and 6 ferrules
V900700-22	Tubing Length: 30m; Outer Diameter: 1/16″ ; Includes: 24 nuts and 6 ferrules

Glass syringe with PTFE plunger

Tube

Other Products

Refrigerator for Chemicals

for storing and cooling of chemicals and hazardous substances

Wiggens refrigerators for chemicals are designed for storing and cooling hazardous substances. The spark free interior prevents damage caused by spilled or evaporating chemicals.

Features

> With spark free interior

> Storing and cooling of hazardous substances

> Self-protecting control circuit

> Digital temperature display (LED)

> Overload protection for cooling compressor

> Working and safety sensors are protected against short circuits and disconnection

> With door lock to prevent unauthorized personnel from opening the refrigerator

> It can be equipped with thermometer or digital thermometer to solve the needs of accurate temperature measurement
   and long-term monitoring of samples in the refrigerator

Specifications

Order No.	Model	Working Temperature Range °C	Temperature selection / display	Temperature stability °C	Temperature resolution °C	Volumetric Capacity liters	Number of shelves	Inner dimensions W×L×H cm	Outer dimensions W×L×H cm
W6131050	WEL50	-2~+12°C	Digital / LED	±1	0.1	50	2	42×29/44	55×64/63
W6131180	WEL180	-2~+12°C	Digital / LED	±1	0.1	180	3	52×40/70	60×64/86
W6131260	WEL260	-2~+12°C	Digital / LED	±1	0.1	260	4	55×49/100	72×60/118
W6131360	WEL360	-2~+12°C	Digital / LED	±1	0.1	360	5	55×49/135	72×60/153
W6131540	WEL540	-2~+12°C	Digital / LED	±1	0.1	540	5	70×60/135	92×71/153

Standard package includes: Refrigerator, shelves, remote controller
Test conditions, room temperature 20-25 °C

Lab Burner

Features

> Automatic ignition due to piezo effect
> Max. Temperature: 1300℃
> Adjustable flame
> Refillable butane tank

Application

> Sterilizing
> Welding
> Heating
> Cooking

Dragon 200

Dragon 100

Dragon 220

Specifications

Model	Dragon 100	Dragon 200	Dragon 220
Max. temperature (℃)	1300	1300	1300
Fuel tanker capacity (g)	45	45	45
Working time (min)	60	60	60
Dim. H x W x D (mm)	161x137x79	92x115x79	94x115x78
weight (g)	380	407	425
Safety switch	yes	—	—
Order No.	177100-00	177200-00	177220-00

Colony Counter

> Adjustable dish-holder suitable for Petri-dishes of various sizes with diameters ranging from 90 mm to 150 mm or for special 60 mm dishes
> Pressure sensor allows the use of any marking pen, without the contamination of the sample
> Suitable for total bacteria and total coliform counting

Marker pen

It's used to mark the colony of culture dish
Marking pen 5 sets Order No.: 175200-48
Single marker Order No.: 175200-35

Specifications

Model	Galaxy 230
Display	4-Digit Bright Red 0.6'' LED Display
Magnification	2 ~ 3 Times
Petri Dish Diameter	60 mm, 90 - 150 mm Adjustable
Zero Reset	Yes
Illumination	Ring-Shaped Lamp
Pressure Sensitivity	Adjustable
Dimensions (W x L x H in mm)	313 x 360 x 346
Net Weight (kg)	5.2

Standard package includes: Colony Counter, marker pen

Ordering Information

Order No.	Product Description
175200	Galaxy 230 Colony Counter

Sensor-controlled turntable for Petri dishes

> The touch-free IR-Sensor technology guarantees extremely simple operation with movements of the hand. Alternatively the new Sensorturn / Sensorturn pro can be operated with a foot pedal.

> An extraordinarily low working height allows effortless work. The highest degree of sterility is ensured by the device's stainless steel construction.

> The Sensorturn / Sensorturn pro is a high-performance, UV resistant and flame- sterilizable device.

> For both options different operating modes are available:
  - Flexible Start-Stop functions or the second timer control with variable rotational periods from 1 - 25 seconds. For longer applications the time can be extended to
    125 seconds.
  - A continuously variable rotational speed control of 14 - 110 rpm (Sensorturn) or 14 - 210 rpm (Sensorturn pro) ensures uniform and individual plating of the Petri
    dishes up to a diameter of 100 mm (optional: up to 150 mm).

Others

Foot pedal/stainless steel ①
Order No. 6.000.402

Pedal mini/ plastic ②
Order No. 6.000.403

Benchtop switch / stainless steel ③
Order No. 6.000.405

Tray, right or left side, stainless steel ①
Order No. 8.000.340

triangle spatula / glass ②
Order No. 6.000.370

triangle spatula / stainless steel
Order No. 6.000.369

Inoculation loop holder
stainless steel, with sleeve nut, for
inoculation loops wire Ø 0.6 - 1 mm

length 245 mm
Order No. 6.000.360

length 215 mm
Order No. 6.000.365

Turntable
extra wide for Petri dishes up to 150 mm
with transparent silicone covering
Order No. 7.000.150

Specifications

> Stainless steel construction
> Variable rotational speed control:
> Sensorturn: 14 - 110 rpm; Sensorturn pro: 14 - 210 rpm
> Short time operation 1 - 125 seconds
> Turntable with silicone covering & centring ring (autoclavable)
> Switch on and off with movements of the hand or foot pedal*
> UV-resistant and flame-sterilizable
> Minimum space requirement
> Includes IR-Sensor and connector for foot pedal
> 5 operating modes:
> IR-Sensor: Time / Constant
> Foot pedal: Standard / Start-Stop / Time
> Turntable with transparent silicone covering & centring ring
> Screwdriver for IR-Sensor detection range
> Power connection

Specifications

Model	Sensorturn	Sensorturn Pro
Rotary speed range	14 - 110 rpm	14 - 210 rpm
Petri dish size	up to Ø 100 mm (Ø 150 mm optional)	
Rotational direction	clockwise	
Detection range IR-Sensor	5 - 50 mm, adjustable	
Connector for foot pedal	yes	
Timer range Time operation	1 - 25 sec or 5 - 125 sec, adjustable	
Constant operation	unlimited	
Operating voltage / input	9 V - 15 V DC / 1.5 VA	
Measurements (w x h x d)	160 x 74 x 109 mm	
Weight	980 g	
Order No.	7.001.000	7.002.000

WI-control software

WI-control is a software to control devices, automate processes, and to document your measurements and results. The software does not only integrate WIGGENS laboratory devices but also supports devices from other manufacturers. It can network up to 128 devices simultaneously via one PC, thus making the automation of your laboratory experiments and processes much more easy and efficient.

Save time and efficiency

On the PC, you can automate laboratory processes, store your own recipes and data, process flows or perform calculations during the experiments. All online devices can be woeked by cascade. When a cascading relationship is established, all machines will automatically work when the conditions are met.

Increase safety

Security conditions can be set, and if a security condition is triggered, alarm or shutdown can be processed according to the settings .In remote operation, you control demanding reactions from a safe distance. Countless possibilities to automate recipes and processes ensure increased process reliability, higher user safety and greater reproducibility of all processes.

Real time data recording and secure storage

Measurement data that are generated during a process can be output in XLS and PDF file formats for documentation and further analysis. All the operation and setting change will be recorded. Beneficial for repeating the experimental process.

System requirements

The WI-control software can be installed on any PC that meets the following system requirements:

System requirement	Minimum	Recommended
Operating system	Windows®7 or later 32-bit	Windows®7 or later, 64-bit
Memory	2 GB	4 GB
Processor	2.5 GHz dual-core processor	2.5 GHz 4-core processor
Interfaces	1×USB or 1×RS232	depending on the number of units controlled
Display	6,500 colors	16 million colors
Screen resolution	1.400 × 1.050 pixels	1.680 × 1.050 pixels
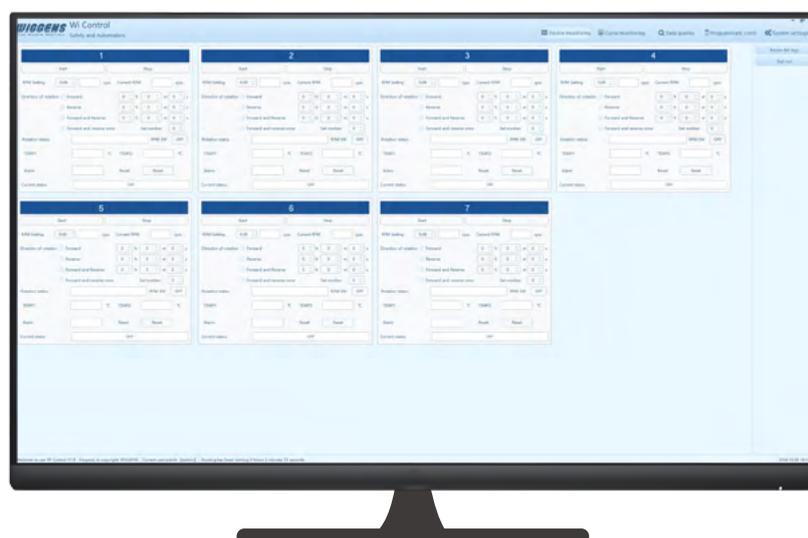
GAS GENERATORS

H$_2$, N$_2$, O$_2$,Compressor, Purified air and Zero air
> Hydrogen generator (PEM technology)
> Hydrogen and Zero air generator (Two-in-one)
> Nitrogen generator (PSA technology or Hollow fiber membrane)
> Nitrogen and Zero air generator (Two-in-one)
> Compressor and purified air system
> Zero air generator / Ultra zero air generator

H$_2$ GENERATOR

Purity : 99.9996% or 99.99996%
Flow rate : 100ml/min ~ 20L/min
General version, Flat version, Tower version and 19" Rack version

N$_2$ GENERATOR

Flow rate : 200ml/min - 2000L/min
Purity : 95 - 99.9999%

O$_2$ GENERATOR

Flow rate : 6L/min, 10L/min
Density : 95%

ZERO AIR GENERATOR

Flow rate : 1.5~30L/min
HC & CO Content : < 0.05ppm
CO$_2$ Content : < 1ppm
NO$_x$ SO$_x$ Content : < 0.1ppm

COMPRESSED AIR SYSTEM / PURIFIED AIR SYSTEM

Flow rate : 20 ~ 900L/min
Pressure : 5 - 10 bar

Product brochure
online at
www.wiggens.com

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CHEMTRON ANALYTICS

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Rotational viscometer

Achieve professional and accurate viscosity measurements, customized to your specific requirements.

Falling ball viscometer

The Viscoball precisely measures the viscosity of transparent Newtonian liquids and gases using a specialized ball.

Automatic viscosity measurement system
(Capillary viscometer)

Semi-automatic or automatic viscosity measurement system.

Density meter

Portable density/specific gravity/concentration meter.

pH / Cond. / DO meter

Precise - reliable - selective in lab and field

Refractometer

Scale handheld refractometer | Digital refractometer

Titrators, Auto sampler, software and electrodes

Chemtron titrator, with its broad performance range, stands as the perfect device for potentiometric titration, offering possibilities for expansion and automation. Its high-resolution, precise pH/mV, and "dead-stop" measurement interface enable swift, reliable, and accurate determinations of a multitude of parameters.
Chemtron titrators are typically known for their precision, ease of use, and capability to handle a wide range of titration applications.

> Burettes and Titrators
> Burettes and Titrators with interchangeable unit
> Karl Fischer Titration
> Sample changers and accessories
> Titration software
> Electrodes for Titration
> Related reagent

CHEMTRON REACTION & PURIFICATION SYSTEM

Featuring Reactors from Lab to Production Scale

Energy | Petrochemical | Life Sciences | Cosmetics | Pharmaceutical | Environmental

Glass Reactor and Peripherical Units

The essential tool for research, scale-up, or production across a wide range of scientific disciplines. Designed for maximum diversity and ease of use, we have developed a simple base system building platform which allows any reactor system to be customized.

> Bench-top glass reactor (250ml~5L)
> Pilot plant glass reactor (10~100L)
> Glass spherical reactor (up to 200L)
> Glass industrial production equipment
> Glass filter reactor (150ml~150L)
> Glass pressure reactor (up to 6L)
> Homogenization reactor
> Ultrasonic, photochemical and hydrogenation reactor
> Parallel reaction station
> Stirrer & Pump
> Dosing unit
> pH measurement and control
> Auto reaction software

Stainless Steel Reactor and Peripherical Units

The requirements of our customers for the reaction vessels are as varied as the respective processes which are carried out in them. In recent decades, we have developed a modular system with standardised connection components, in order to economically implement individual solutions. This greatly simplifies the design and construction of our custom-made products.

> High pressure reactor, up to 200bar
> Low pressure reactor , up to 25bar
> Stainless steel reactor for atmospheric pressure or vacuum
> Nutch filter reactor
> Temperature control system
> Stirre unit: mechanical or magnetic coupling
> Dosing unit
> Ball valve, needle valve, solenoid valve, pneumatic valve
> Auto reaction software

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