

# Smart Choice for High-Performance Separation and Purification

From universities to research institutes, laboratories worldwide demand high-performance rotary evaporators for complex applications. The new Strike Univ integrates advanced technologies to meet these needs and is built to the highest quality standards.

The Strike Univ includes a heating bath and rotation unit by default, with optional vacuum system and vapor/cooling temperature monitoring.

Designed with intelligence and usability in mind, the Strike Univ features an intuitive touchscreen interface. Its large, easy-to-read display allows convenient programming and operation.



[www.wiggins.com](http://www.wiggins.com)

## Specifications

Model	STRIKE Univ
Type of condenser	2 types: Diagonal condenser / Vertical condenser (Steam rises)
Plastic coated safety glassware	Possible for condenser and receiving flask
Condensing area	1500 cm <sup>2</sup> (standard) / 2000 cm <sup>2</sup> (optional)
Available evaporation flasks	50/100/250/500/1000/2000 ml
Available receiving flasks	250/500/1000/2000 ml
Motor	DC
Speed range	20-300 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 °C
Heating power	1400 W
Set temperature resolution	0.1 °C
Bath volume	5L (pear-shaped opening)
Material of heating bath	PTFE coated aluminum
Vacuum controller	ST280 (optional)
Vacuum range	1-1014 mbar (ultimate vacuum depends on the performance of the vacuum pump)
Vacuum accuracy	1 mbar
Vapor temperature sensor	Optional
Cooling temperature sensor	Optional
Timer	Yes
Storage method	None
Distillation procedure	1x9 steps
Vapor temperature detection	Yes (vapor temp. sensor is needed)
Vapor temperature protection	No
Dimensions	690x700x430mm (vertical version) 690x790x430mm (slanting version)
Weight	26 kg
Permissible ambient temperature	5~40 °C
Permissible relative humidity	80%
RS 232 interface	Yes, for firmware update only
Material of cover	Plastic
Power supply	230VAC, 50/60Hz



STRIKE Univ M1 / M4



STRIKE Univ M3 / M6

## Models of STRIKE Univ

	Model	Order No.	Model	Order No.
	With standard glassware		With plastic coated safety glassware	
Diagonal condenser	STRIKE Univ M1	CRE158113U	STRIKE Univ M4	CRE158419U
Vertical condenser (steam rises)	STRIKE Univ M3	CRE158111U	STRIKE Univ M6	CRE158417U

# Five steps to building up your rotary evaporator

Step 1



STRIKE Univ  
Slanting glassware



STRIKE Univ  
Vertical glassware (Vapor rising)

Best-seller!

## Rotary evaporator STRIKE Univ

- > Two 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°C



Recirculating chiller  
-20 ~ +40°C

## Chiller

\* Various chillers available for different applications

	0.5-1 L	up to 2 L	
STRIKE Univ	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 Wiggins 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)
- > STRIKE Univ 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 Univ



### Solvent recovery system, *without vacuum controller*

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 Univ



### Solvent recovery system, *with vacuum controller*

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 Univ



### Solvent recovery system, *with vacuum controller*

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 Univ



## Vacuum controller

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

For accurate vacuum control of Strike Univ or valve regulated vacuum pumps.

Vacuum range: 1~1014 mbar

Vacuum accuracy: 1 mbar



Description	Model	Order No.
Vacuum controller of Strike Univ	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°C .

Model	F250	F500	F1000
Order No.	9620025	9620050	9620100
Working temperature range (°C )	-10...+40	0...+40	0...+40
Temperature stability (°C )	±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°C . 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 (°C )	-20...+40	-20...+40	-20...+40
Temperature stability (°C )	±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

Model	Condenser	Evaporation flask	Receiving flask	Order No.
GS1	SQEF059799	SQFY015937	SQUA015796	SQED159113GS
GS3	SQEF059794	SQFY015937	SQUA015796	SQED159111GS
GS4	SQEF059798	SQFY015937	SQUA015789	SQED159419GS
GS6	SQEF059792	SQFY015937	SQUA015789	SQED159417GS



GS1 / GS4

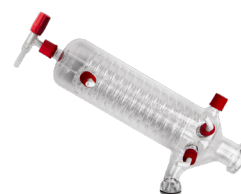


GS3 / GS6

## Condensers

Made of high quality borosilicate glass or plastic coated safety glassware

Type of condenser	Order No.	Order No.
	Standard	Coated
Diagonal condenser	SQEF059799	SQEF059798
Vertical condenser (steam rises), 1500cm <sup>2</sup>	SQEF059794	SQEF059792
Vertical condenser (steam rises), 2000cm <sup>2</sup>	SQEF059894	SQEF059892



Diagonal



Vertical (steam rises)

## 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



## 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



## Receiving flasks, Spherical joint 35/20

The flask is made of high quality borosilicate glass or plastic coated safety 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 displayed on the screen of Strike Univ when the vapor temperature sensor is connected.

Description	Order No.
① Vapor temperature sensor, for Strike Univ. With glass dip tube	SQEF059420



### Cooling water temperature sensor

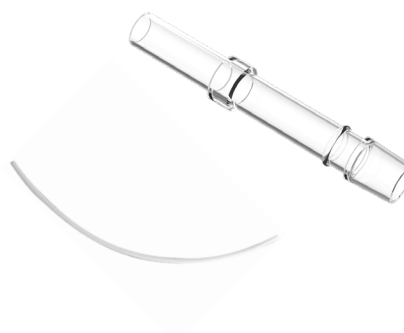
Cooling water temperature can be displayed on the screen of Strike Univ when the following temperature sensor is connected.

Description	Order No.
M+R in-lin temperature sensor, for Strike Univ	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	VAJSUniv022



### 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



## Spherical joint clamp

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



## Bath fluid

Thermal H2OS is a silicone-based bath fluid, working temperature: 0 °C ... +220 °C

- Additional stabilizer
- Excellent heat conductivity
- Minimum odor
- Long fluid life

Description	Order No.
Silicone-based bath fluid Thermal H2OS, 10L	8940108
Silicone-based bath fluid Thermal H2OS, 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 should be at 20°C 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°C, set the heating bath temperature at 60°C .



## Solvent data

Solvent	Total formula	Boiling point (°C) at Atm.	Vacuum for a boiling at 40°C	
Dichloroethane	CH <sub>2</sub> Cl <sub>2</sub>	40.7	Atm.	Atm.
Diethyl ether	C <sub>2</sub> H <sub>6</sub> O	34.6	Atm.	Atm.
Pentane	C <sub>2</sub> H <sub>12</sub>	36.1	Atm.	Atm.
1,2 Dichloroethane(trans)	C <sub>2</sub> H <sub>2</sub> Cl <sub>2</sub>	47.8	751	563
Acetone	C <sub>3</sub> H <sub>6</sub> O	56.5	556	387
Trichloromethane (chloroform)	CHCl <sub>3</sub>	61.3	474	356
Diisopropyl ether	C <sub>6</sub> H <sub>14</sub> O	67.5	375	281
Tetrahydrofuran (THF)	C <sub>4</sub> H <sub>8</sub> O	66	357	268
Methanol	CH <sub>4</sub> O	64.7	337	253
Hexane	C <sub>6</sub> H <sub>14</sub>	68.7	335	251
1,1,1-Trichloroethane	C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub>	74.1	300	225
Tetrachloroethylene	CCl <sub>4</sub>	76.7	271	203
2-Butanone	C <sub>4</sub> H <sub>8</sub> O	79.6	243	182
Ethyl acetate	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	77.1	240	180
Benzene	C <sub>6</sub> H <sub>6</sub>	80.1	236	177
Cyclohexane	C <sub>6</sub> H <sub>12</sub>	80.7	235	176
Acetonitrile	C <sub>2</sub> H <sub>3</sub> N	81.8	230	173
1,2 Dichloroethane	C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	82.4	210	158
Trichloroethylene	C <sub>2</sub> HCl <sub>3</sub>	86.7	183	137

Solvent	Total formula	Boiling point (°C) at Atm.	Vacuum for a boiling at 40°C	
1,2 Dichloroethane(cis)	C <sub>2</sub> H <sub>2</sub> Cl <sub>2</sub>	59	479	134
Ethanol	C <sub>2</sub> H <sub>6</sub> O	78.4	175	131
Isopropyl alcohol	C <sub>3</sub> H <sub>8</sub> O	82.5	137	103
Tert.-butanol	C <sub>4</sub> H <sub>10</sub> O	82.9	130	98
Heptane	C <sub>7</sub> H <sub>16</sub>	98.4	120	90
1,4-Dioxane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	101.1	107	80
Toluene	C <sub>7</sub> H <sub>8</sub>	110.6	77	58
Water	H <sub>2</sub> O	100	72	54
N-propyl alcohol	C <sub>3</sub> H <sub>8</sub> O	97.8	67	50
Tetrachloroethylene	C <sub>2</sub> Cl <sub>4</sub>	120.8	53	40
Chlorobenzene	C <sub>6</sub> H <sub>5</sub> Cl	132.2	36	27
1,1,2-Tetrachloroethane	C <sub>2</sub> H <sub>2</sub> Cl <sub>4</sub>	145.9	35	26
Xylene (isomers mixture)	C <sub>8</sub> H <sub>10</sub>	137-143	25	19
N-butanol	C <sub>4</sub> H <sub>10</sub> O	117.5	25	19
Isoamyl alcohol	C <sub>5</sub> H <sub>12</sub> O	130.6	14	11
Pentachlorinated Ethane	C <sub>2</sub> HCl <sub>5</sub>	160.5	13	10
Dimethyl formamide	C <sub>3</sub> H <sub>7</sub> NO	153	11	8
Amyl alcohol	C <sub>5</sub> H <sub>12</sub> O	137.8	11	8