Rotary Evaporator

Laboratory Rotary Evaporator
Up to 2L

STRIKE 285
Rotary Evaporator

STRIKE 385
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

ROTARY EVAPORATOR STRIKE A GENERATION AHEAD

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 transparent plastic coating for added safety
> Four types of condensers
> Different volumes of evaporating and receiving flasks
> Standard package includes one 1,000ml evaporating flask and one 1,000ml 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 ensure tight sealing while preventing the glass 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

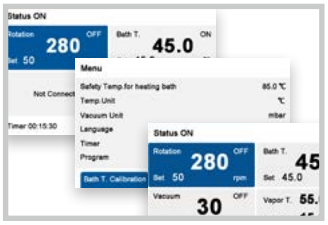
> Multifunction display, for bath temperature, rotation speed, vacuum, vapor and condenser cooling water temperature

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



NEW!

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°C with water, up to 185°C 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

Display and operation

① Main interface

Click the touch screen, select the setting icon, set the parameters through the knob, press the knob to save the value

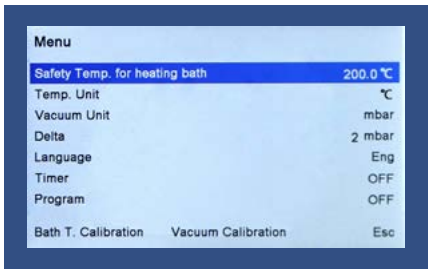
> Rotation switch and speed knob
> Bath temperature switch and settings
> Vacuum switch and settings
> Vapor temperature display, when connected to a vapor temperature sensor
> Cooling temperature display, when connected to a cooling temperature sensor

①

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

② Menu

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



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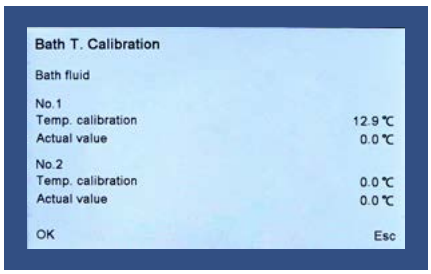
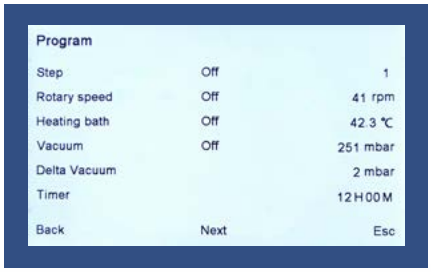


④

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



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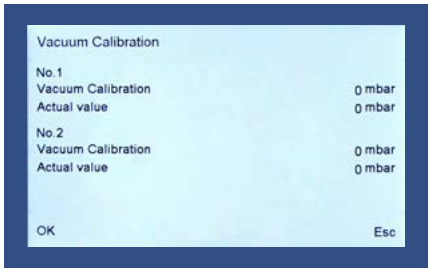


⑤

④ Bath temperature calibration (two points)

⑤ Vacuum calibration (two points)

Specifications

Technical data	STRIKE 285
Models	Slanting glassware, Vertical glassware (Vapor sinking), Vertical glassware (Vapor rising), Dry ice condensation type
Glassware	Standard or plastic-coated glassware
Rotation speed	20 to 300 rpm (DC motor)
Screen	4.3" monochromatic LCD touch screen
Sealing	PTFE and carbon graphite seals
Connection	Coupling ring and ejector of evaporation flask
Bath temperature	180℃ (combination with water or oil)
Bath heater	1400W
Bath capacity	5 liters
Temperature stability	±2℃
Bath material	PTFE coated molded aluminum tank
Left and right moving distance	90mm
Draining	Removable bath for emptying
Stroke displacement	13cm, adjustable, and can be stopped at any position
Head angle adjustable	0~15°
Cooling surface	1500cm^2
Evaporating flasks	1000ml (optional 50 to 2000ml)
Collecting flasks	1000ml (optional 250 to 2000ml)
Weight	26,5 Kg (vertical version), 26 Kg (slanting version)
Overall dimensions	690x700x430mm (vertical version,HxDxL) 690x790x430mm (slanting version,HxDxL)
Voltage	230 VAC, 50Hz/60Hz
Options	Vapor temperature probe, condenser cooling water temperature probe, vacuum pump and controller, chiller...
Protective shield	Glassware lifting up possible with or without the protective shield
Other features	Powered glassware lifting up device with safety release (in case of power failure) Quick start/stop control and parameter selector

Models of STRIKE 285

STRIKE 285 M1 / M4
Slanting glassware

STRIKE 285 M2 / M5
Vertical glassware (Vapor sinking)

STRIKE 285 M3 / M6
Vertical glassware (Vapor rising)

STRIKE 285 M7
Dry ice condensation type

Configurations in standard glassware

Order Number	Model	Type	Voltage	Version
SQED158113	STRIKE 285 M1	Slanting glassware	220V	O
SQED158112	STRIKE 285 M2	Vertical glassware (Vapor sinking)	220V	V
SQED158111	STRIKE 285 M3	Vertical glassware (Vapor rising)	220V	U

Configurations in plastic coated saftey glassware

Order Number	Model	Type	Voltage	Version
SQED158419	STRIKE 285 M4	Slanting glassware	220V	O/P
SQED158418	STRIKE 285 M5	Vertical glassware (Vapor sinking)	220V	V/P
SQED158417	STRIKE 285 M6	Vertical glassware(Vapor rising)	220V	U/P
SQED158420	STRIKE 285 M7	Dry ice condensation type	220V	C

NOTE: Other glassware versions are available upon specific request

WIGGENS
THE MAGIC MOTION

Rotary Evaporator

STRIKE 385

Features

STRIKE 385 almost has all of the features and functions as STRIKE 285, but also with the following characteristics, which is ideal for more complex distillation and experimental needs.

Display

> Touch screen with multi-language user interface, and it can be locked

> Easy to operate only using the turn & push knob

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

Features

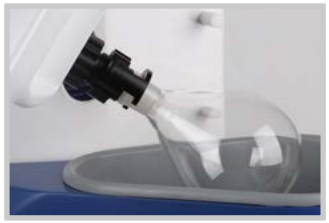
> Custom method, one-click start, after booting to save the last settings

> Standard method: customers can save the current settings as a standard method, easy to quickly call in the future; Up to 21 methods can be stored

> Manual multistage distillation. At the end of each step, it needs to be confirmed by the operator, and then move on to the next step. Up to 21 methods can be stored, and 5 steps can be set for each of them.

> Automatic multistage distillation. At the end of each step, it automatically moves to the next step (application examples: concentration). Up to 21 methods can be stored, and 5 steps can be set for each of them.

> 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

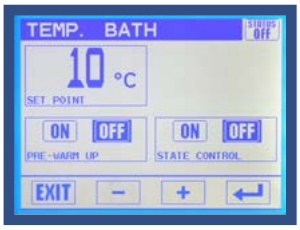
> In case of a power outage, the electric lifting device removes the flask from the heating bath to prevent the safety issues and potential thermal damage to your sample

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

> High vapor temperature protection, low vapor temperature protection and vapor temperature range settings

Display and operation

General Settings



Bath temperature settings

> Bath temperature switch
> Temperature settings
> Pre-warm up switch (After the main power switch is turned on, the bath can be heated to a set temperature)

Rotation settings

> Rotation switch
> Speed settings

Vacuum settings

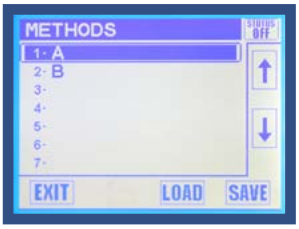
> Vacuum switch
> Vacuum settings
> Vacuum Delta (Permissible vacuum fluctuation range and control valve opening and closing frequency)
> If optional ST380 vacuum controller is present

Vapor temperature monitoring and protection

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

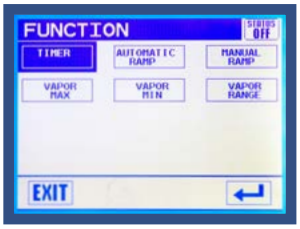
Advanced settings

Unique function



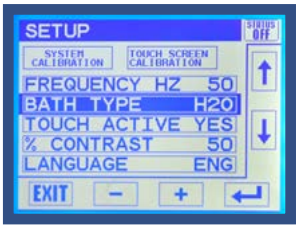
Method

Customers can save the current settings as a standard method, easy to quickly call in the future. Up to 21 methods can be stored



Function

> Manual multistage distillation. At the end of each step, it need to be onfirmed by the operator, then move on to the next step. Up to 21 methods can be stored, and 5 steps can be set for each of them.
> Automatic multistage distillation. At the end of each step, it automatically moves to the next step (Application examples: concentration). Up to 21 methods can be stored, and 5 steps can be set for each of them.
> Timed distillation. When the time is over, the distillation will automatically end



Setup

> Frequency (50 / 60Hz)
> Bath type (Water / Oil)
> Touch active (Yes / No)
> Contrast
> Language

Password for calibration

Bath temperature sensor
Vapor temperature sensor
Cooling temperature sensor
Vacuum

Specifications

Technical data	STRIKE 385
Models	Slanting glassware, Vertical glassware (Vapor sinking), Vertical glassware (Vapor rising), Dry ice condensation type
Glassware	Standard or plastic-coated glassware
Rotation speed	20 to 280 rpm (150W induction motor)
Screen	3.5" monochromatic LCD touch screen
Sealing	The exclusive sealing system guarantees perfect vacuum tightness and anti-corrosiveness
Connection	The easy clamp is made of highly resistant material which ensures a long life performance
Bath temperature	185℃ (2 possible settings: water and oil)
Bath heater	1400W
Bath capacity	5 liters
Temperature stability	±0.2℃
Bath material	PTFE coated molded aluminum tank
Left and right moving distance	90mm
Draining	Removable bath for emptying
Stroke displacement	13cm, adjustable, and can be stopped at any position
Head angle adjustable	0~15°
Cooling surface	1500cm^2
Evaporating flasks	1000ml (optional 50 to 2000ml)
Collecting flasks	1000ml (optional 250 to 2000ml)
Weight	26,5 Kg (vertical version), 26 Kg (slanting version)
Overall dimensions	690x700x430mm (vertical version,HxDxL) 690x790x430mm (slanting version,HxDxL)
Voltage	230 VAC, 50/60Hz
Options	Vapor temperature probe, vacuum controller
Protective shield	Glassware lifting up possible with or without the protective shield
Other features	Powered glassware lifting up device with safety release (in case of power failure) Quick start/stop control and parameter selector

Models of STRIKE 385

STRIKE 385 M1 / M4
Slanting glassware

STRIKE 385 M2 / M5
Vertical glassware (Vapor sinking)

STRIKE 385 M3 / M6
Vertical glassware (Vapor rising)

STRIKE 385 M7
Dry ice condensation type

Configurations in standard glassware

Order Number	Model	Type	Voltage	Version
SQED160113	STRIKE 385 M1	Slanting glassware	220V	O
SQED160112	STRIKE 385 M2	Vertical glassware (Vapor sinking)	220V	V
SQED160111	STRIKE 385 M3	Vertical glassware (Vapor rising)	220V	U

Configurations in plastic coated safety glassware

Order Number	Model	Type	Voltage	Version
SQED160419	STRIKE 385 M4	Slanting glassware	220V	O/P
SQED160418	STRIKE 385 M5	Vertical glassware (Vapor sinking)	220V	V/P
SQED160417	STRIKE 385 M6	Vertical glassware(Vapor rising)	220V	U/P
SQED160420	STRIKE 385 M7	Dry ice condensation type	220V	C

NOTE: Other glassware versions are available upon specific request

Five steps to building up your rotary evaporator

Step 1

STRIKE285 / 385
Slanting glassware

Best-seller!

STRIKE285 / 385
Vertical glassware (Vapor sinking)

STRIKE285 / 385
Vertical glassware (Vapor rising)

Rotary evaporator STRIKE285 / 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	
STRIKE285 / 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

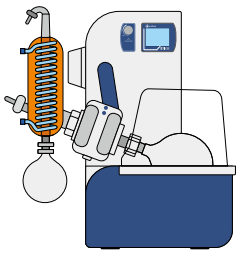
ST380
Vacuum controller

DVR480
Vacuum controller

Vacuum controller

> If a vacuum controller is selected, different vacuum can be controlled
> ST280 and ST380 can display vacuum values on the screen of rotary evaporators
> 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

Vacuum pump, vacuum controller and vacuum solvent recovery system

Chemical Resistant Pump

Model	A410	A510	C410	C510	C520	C610
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 STIRKE285/385

A Pump

C Pump

Vacuum solvent recovery system - CSH series

The inlet of the CSH System is connected to a segregation bottle, whereas the outlet is connected to a condenser, which is used to condensate and recover the solvent.

Model	CSH410	CSH510	CSH520
Build in Pump Type	C410	C510	C520
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
Order No.	900512	900513	900515
Suitable for	STIRKE285/385	STIRKE285/385	STIRKE285/385

CSH Series

Vacuum controller

DVR480 is a complete controller with integrated display, control panel, valve as well as hose connections, which is ready for use for any vacuum control scenario.

ST280/380 is a mounting vacuum control accessory for Wiggens rotary evaporator, the vacuum setting and display are through the touch screen of rotary evaporator

Model	DVR480 / DVR480-Pro	ST280	ST380
Voltage	900414-1 / 900414-2	SQEF059422	SQEF059421
Voltage	100-240V, 50/60Hz	12VDC	12VDC
Displayed Vacuum Accuracy (mbar)	0.1	1	1
Controllable Range (mbar)	0.1~1000	1~1000	1~1000
Measurement Accuracy	0.25%F.S / 0.1%F.S	1%F.S	1%F.S
Display	LED	Display on the STRIKE 280	Display on the STRIKE 380
Control Mode	On-Touch	Controlled by STRIKE 280	Controlled by STRIKE 380
Timer / Program	Yes / Up to 5 Steps	-	-
Pressure Release Feature	Yes	No	No
Electrical Control of the Pump	Yes	Yes	Yes
Protection Category	IP40	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.		
Suitable for	STIRKE285/385	STIRKE285	STIRKE385

DVR 480 Series

ST280 / ST380

PTFE needle valve (W1019001) is recommend If precise vacuum control is needed for very small external system

Vacuum solvent recovery system - CSC series

The inlet of the CSC System is connected to a segregation bottle, whereas the outlet is connected to a condenser, which is used to condensate and recover the solvent. In addition, the system contains a vacuum controller to set, display, and control the vacuum.

Fully automated vacuum generation system comprising chemical resistant diaphragm vacuum pump, base plate, high performance condenser, segregation bottle, vacuum control device, valves and control unit.

Model	CSC 410	CSC 510	CSC 520
Build in Pump Type	C410	C510	C520
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
Order No.	900522	900523	900525
Suitable for	STIRKE285/385	STIRKE285/385	STIRKE285/385

CSC Series

Note: CSC Solvent Recovery Systems already contain a vacuum controller.

Accessories and spare parts

GS1 / GS4

GS2 / GS5

GS3 / GS6

GS7

Glassware set

Order No.	Type	Description
SQED159113GS	GS1	Glassware set, Slanting type, including SQFY015937 evaporating flask, SQEF159799 condenser, SQUA015796 collection flask, FLMM016694 Clamp, PTFE refill pipe and valve, 8mm vacuum tubing, cooling water tubing etc.
SQED159112GS	GS2	Glassware set, Vapor sinking, including SQFY015937 evaporating flask, SQEF159796 condenser, SQUA015796 collection flask, FLMM016694 Clamp, PTFE refill pipe and valve, 8mm vacuum tubing, cooling water tubing etc.
SQED159111GS	GS3	Glassware set, Vapor rising, including SQFY015937 evaporating flask, SSQEF159794 condenser, SQUA015796 collection flask, FLMM016694 Clamp, PTFE refill pipe and valve, 8mm vacuum tubing, cooling water tubing etc.
SQED159419GS	GS4	Glassware set, Slanting type, including SQFY015937 evaporating flask, SQEF059798 condenser, SQUA015789 collection flask, FLMM016694 Clamp, PTFE refill pipe and valve, 8mm vacuum tubing, cooling water tubing etc.
SQED159418GS	GS5	Glassware set, Vapor sinking, including SQFY015937 evaporating flask, SQEF059797 condenser, SQUA015789 collection flask, FLMM016694 Clamp, PTFE refill pipe and valve, 8mm vacuum tubing, cooling water tubing etc.
SQED159417GS	GS6	Glassware set, Vapor rising, including SQFY015937 evaporating flask, SQEF159792 condenser, SQUA015789 collection flask, FLMM016694 Clamp, PTFE refill pipe and valve, 8mm vacuum tubing, cooling water tubing etc.
SQED159420GS	GS7	Glassware set, Dry ice condensation type, including SQFY015937 evaporating flask, SQEF159793 condenser, SQUA015796 collection flask, FLMM016694 Clamp, PTFE refill pipe and valve, 8mm vacuum tubing, cooling water tubing etc.

Slanting type

Vapor sinking

Vapor rising

Dry ice condensation type

Condenser

Order No.	Order No.	Description
High Quality borosilicate glass	Plastic coated saftey glassware	
SQEF159799	SQEF159798	Slanting type
SQEF159796	SQEF159797	Vapor sinking
SQEF159794	SQEF159792	Vapor rising
SQEF159793		Dry ice condensation type

Borosilicate glass evaporating flask

Order No.	Order No.	Order No.	Order No.	Volume
NS29/32	NS29/32	NS24/40	NS24/40	
High Quality borosilicate glass	Plastic coated saftey glassware	High Quality borosilicate glass	Plastic coated saftey glassware	
SQFY051171	SQFY051171S	SQFY051181	SQFY051181S	50mL
SQFY015948	SQFY015948S	SQFY015958	SQFY015958S	100mL
SQFY015949	SQFY015949S	SQFY015959	SQFY015959S	250mL
SQFY015941	SQFY015941S	SQFY015951	SQFY015951S	500mL
SQFY015937	SQFY015937S	SQFY015947	SQFY015947S	1000mL
SQFY015946	SQFY015946S	SQFY015956	SQFY015956S	2000mL

Evaporating flask for powder

Order No.	Order No.	Order No.	Order No.	Volume
NS29/32	NS29/32	NS24/40	NS24/40	
High Quality borosilicate glass	Plastic coated saftey glassware	High Quality borosilicate glass	Plastic coated saftey glassware	
SQFY146060	SQFY146060S	SQFY146070	SQFY146070S	500mL
SQFY146062	SQFY146062S	SQFY146072	SQFY146072S	1000mL
SQFY146061	SQFY146061S	SQFY146071	SQFY146071S	2000mL

Borosilicate glass collecting flask

Order No.	Order No.	Volume	Connection	Clamp
High Quality borosilicate glass	Plastic coated saftey glassware			
SQUA015797	SQUA015788	250mL	35/20 (Spherical Joint)	FLMM016694
SQUA015798	SQUA015791	500mL	35/20 (Spherical Joint)	FLMM016694
SQUA015796	SQUA015789	1000mL	35/20 (Spherical Joint)	FLMM016694
SQUA015792	SQUA015790	2000mL	35/20 (Spherical Joint)	FLMM016694

Borosilicate glass adapter for collecting flask

Order No.	Inner joint	Outer joint	Clamp
SQFW129300	NS29/32	4×NS14/23	FLMU016723
SQFW129301	NS29/32	4×NS19/32	FLMU016722
SQUA162434	NS29/32	3×NS29/32	FLMU016720
SQUA162435	NS29/32	4×NS29/32	FLMU016720

Borosilicate glass adapter for connection / extension

Order No.	Inner joint	Outer joint	Clamp
SWAD160001	NS29/32	NS24/29	FLMU016721
SWAD160002	NS29/32	NS19/26	FLMU016722
SWAD160003	NS29/32	NS14/23	FLMU016723

Anti-sprinkling bubble in borosilicate glass

Order No.	Bubble volume	Inner joint	Outer joint	Clamp
SQFW126450	50mL	NS29/32	NS29/32	FLMU016720
SQFW126451	100mL	NS29/32	NS29/32	FLMU016720
SQFW126452	100mL	NS29/32	NS24/29	FLMU016721
SQFW126453	250mL	NS29/32	NS29/32	FLMU016720
SQFW126454	250mL	NS29/32	NS24/29	FLMU016721

PT100 probe

Order No.	Description
SQEF059420	Complete with glass trap for vapour temperature monitoring
SQEF059424	Used to detect the temperature of cooling water, the value can be displayed on the screen of rotary evaporator directly.

Joint clip, plastic

Keck type clips made from polymethylene acetal resin, snap on and off with ease. These will not scratch the glass, and are resistant to concentrated alkalies and dilute acids. Adaptable temperature range:-40˚C to 140˚C.

Order No.		Description
FLMU016720	JRS-7598-29	For 29/32, pk/1
FLMU016721	JRS-7598-24	For 24/29, pk/1
FLMU016722	JRS-7598-19	For 19/26, pk/1
FLMU016723	JRS-7598-14	For 14/23, pk/1

Discharge valve, vapor tube, sample filling tube

Order No.	Description	
SQEF162449	Discharge valve	Used for liquid sample filling or vacuum release
SQEF059795	Vapor tube	Glass tube for vapor steam from evaporation flask to condenser, 29/32
SQEG087532	Vapor tube	Glass tube for vapor steam from evaporation flask to condenser, 24/40
BQRY024329	Sample filling tube	PTFE filling tube from discharge valve to the evaporating flask

Tightening clamp

Order No.	Description
FLMM016694	Tightening clamp for flasks with spherical joint to fix the collecting flask

Sleeves, PTFE

Designed for use withinner member regular joints with only slight mismatch. Treated on inner surface so that it may be cemented to glass. Sleeves may also be used uncemented to replace lubricant at low pressure differentials.

Order No.		Description
KAMY011542	7551-14	For 29/42, pk/1
KAMY011544	7551-12	For 24/29, pk/1
KAMY011546	7551-09	For 19/22, pk/1
KAMY011547	7551-06	For 14/23, pk/1

Rubber vacuum resistant tube, to connect condensers with chillers

Order No.	Description
168001-01	Outer diameter: 14mm, Inner diameter: 8mm, Thickness: 3mm, Length: 1m
016.1712.01	Outer diameter: 12mm, Inner diameter: 10mm, Thickness: 1mm, Length: 1m
016.1712.02	Adapter, suitable for the tube with 8mm or 10mm inner diameter

Tube clamp

Order No.	Description
8 970 480	2 Tube clamps, size 1, tubing 8 mm inner dia.
8 970 481	2 Tube clamps, size 2, tubing 10 - 12 mm inner dia.

WIGGENS
THE MAGIC MOTION

ST20

The highest performance proposal for your evaporation processes!

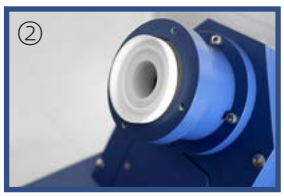
3 Options

Standard rotary evaporator
ATEX version
Continuous Rotary Evaporator
Each option with 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°C ; 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:

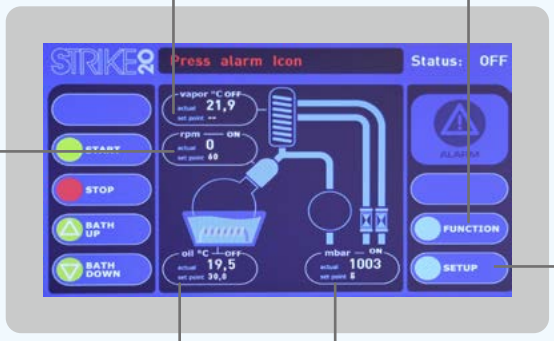
> Bath pre-set and real temperature
> Vapor pre-set and real temperature
> Pre-set and real rotation speed
> Pre-set and real vacuum reading and setting

Display and Operation

Timing Function Distillation

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

Main interface



Rotation settings
> Rotation switch
> Speed settings

Calibration interface

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

Vacuum settings
> Vacuum switch
> Vacuum settings
> Vacuum Delta

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)

Vertical glassware (Vapor sinking)

Technical Features

Heating bath	
Working range ℃	ambient ... 150
Accuracy ℃	± 2
Resolution ℃	0.1
Set point	YES (1℃ step)
Type of control	PID
Maximum oscillation during checkout ℃	± 3
Power resistor KW	3
Heater power density	≤3W/cm^2
Over-temperature protection	YES
Temperature sensor	PT100
Filling level	Manual
Vapour temperature	
Working range ℃	ambient ... 150
Accuracy ℃	± 2
Resolution ℃	0.1
Temperature sensor	PT100
Rotation	
Working range rpm	10-150
Accuracy rpm	± 2
Rotation speed reading	YES
Resolution rpm	1
Vacuum control	
Working range mbar	8~atmospheric
Accuracy mbar	±5mbar
Resolution mbar	1
Absolute vacuum reading	√
Display	Digital
Vacuum setting	√
Lifting system	
On/off	√
Electric driven	√
Interface	
Export data	√
Remote control	√
Alarms and controls	
Heating bath overheating	√
Bath temperature exceeding set point	√
Soft start rotation	√
Rotation speed monitoring	√
Safety status (rotation, lifting, heating=off)	√
Evaporation flask protection	√
Glassware	
20 lt evaporation flask	√
10 lt evaporation flask	√
6 lt evaporation flask	√
Collecting flasks: 2x6 lt or 1x10lt	√
Glassware configuration	Descending, reflux, customized
General features	
Cooler exchange surface (sqm)	0.5
Over-pressure protection	√
Protection with rupture disc	√
Quick closing	√
Dimensions (WxDxH mm)	1240x580x2060
Power supply	230V, 3.2 kW
Weight	160Kg
Vapours cycle maximum temperature	√
Vapours cycle minimum temperature	√
Vapours cycle Temp range	√
Receipt/methods in memory	√
Recipes customization	√
Data acquisition on PC	√
Remote control	√
Bath lowering in case of alarm	√
Optional accessories	
Plastic coated glassware	√
Evaporation flask protection shield	√

Vertical glassware (Vapor rising)

Application

- Distillation(continuous and discontinuous)
- Solvent recycling
- Reflux process reaction
- Component drying
- Fine chemical synthesis
- Crystallization
- Extraction
- Purification
- R&D study
- Scale-down processe

Industries

- Pharmaceutical
- Chemical
- Cosmetic
- Herb extraction
- Food
- Research
- Petrochemical

Order information

Order No.	Configuration
SQFU079737	ST20 descending glassware (Vapor sinking), 20L evaporating flask, 1x10L collecting flask
SQFU079738	ST20 descending glassware (Vapor sinking), 20L evaporating flask, 2x6L collecting flasks
SQFU079735	ST20 reflux glassware (Vapor rising), 20L evaporating flask, 1x10L collecting flask
SQFU079736	ST20 reflux glassware (Vapor rising), 20L evaporating flask, 2x6L collecting flasks

Accessories for ST20

Order No.	Description
SQFW080270	Stainless steel trolley for evaporating flask handling
SQFY080951	6L Evaporation vessel for ST20
SQFY080952	10L Evaporation vessel for ST20
SQFY080953	20L Evaporation vessel for ST20
SQFY080954	6L Plastic-coated collecting vessel for ST20
SQFY080955	10L Plastic-coated collecting vessel for ST20

ST20 CRE

Continuous Distillation Rotary Evaporator ST20 CRE

Reliable PLC controlling system

All the standard functions of ST20 included, Plus automatic continuous distillation function included.

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

Accessories

Order No.	Configuration
SQFY080951	6L Evaporation vessel for ST20 CRE / ST20 ATEX
SQFY080952	10L Evaporation vessel for ST20 CRE / ST20 ATEX
SQFY080953	20L Evaporation vessel for ST20 CRE / ST20 ATEX
SQFY080954	6L Plastic-coated collecting vessel for ST20 CRE / ST20 ATEX
SQFY080955	10L Plastic-coated collecting vessel for ST20 CRE / ST20 ATEX
SQFW080270	Aluminium trolley for evaporating flask handling, for ST20 CRE / ST20 ATEX

STRIKE 100 - Industrial Rotary Evaporator

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 substance treatment.
The unit works under vacuum or atmosphere conditions. The rotation of the 50 or 100L evaporation flask in the thermostatic bath results in 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 for client needs.

Application

- Distillation (continuous and discontinuous)
- Solvent recycling
- Reflux reaction process
- Component drying
- Fine chemical synthesis
- Crystallization
- Extraction
- Purification
- Scale-up process

Fields

- Pharmaceutical
- Chemical
- Cosmetic
- Herb extraction
- Petrochemical
- Food

STRIKE100

The highest performance proposal
For your evaporation processes!

Atex

Total safety system

The industrial safety rotary evaporators are able to safeguard the user from any risk during work. The thermostatic bath is covered by a transparent shield providing the operator with utmost protection from glass breaking and spray at high temperature. The thermostatic bath and the protective shield are lifted by means of a hydraulic system electronically controlled. An automatic system lowers the thermostatic bath when power failure, door opening and overheating occur. It is also inserted on glassware a brake disc in order to avoid sudden overpressure.

Vacuum sealing system

A great feature of these rotary evaporators is its sealing system made of self-lubricating material which guarantees perfect vacuum tightness. This sealing system does not require any maintenance.

Heating bath

The heating bath is lifted by means of a hydraulic system which, in case of power failure or doors opening, goes automatically down to avoid fluid overheating and the process will immediately stop. Electric heater is enhanced to 8Kw to ensure continuous evaporation of the product even in the worst conditions.

Display

The process operating conditions can be set and displayed: any value error or anomalous temperature will block the electric power. For version STRIKE100 ATEX is a "LCD display anti-reflection coating glass panel" . For version STRIKE100 is a graphical color display 7" touch-screen.

Electronic controller

STRIKE100 & STRIKE100 ATEX are fully controlled by a PLC (Programmable Logic Controller) which allows for controlling the parameters as well as setting them directly by means of the keys.
Clients could acquire on an external PC through serial communication all the process parameters through special software for data acquisition and management. Clients could remotely control the instrument from an external PC via serial communication. Clients could save and recall up to 20 methods or "recipes" work that the customer can customize at any time (NOT ON ATEX VERSION). In addition, the instrument has control algorithm that allow you to finish the process of evaporation / distillation or separation of solvents automatically by reading the temperature of the vapors.

Technical features

Thermic Bath	
Working range °C	0~150
Accuracy °C	± 2
Resolution °C	0.1
Set point	YES (1°C step)
Type of control	PID
Maximum oscillation during checkout °C	± 3
Power resistor KW	8
Heater power density	3W/cm^2
Over-temperature protection	YES
Temperature sensor	Three-wire PT100
Level sensor	YES
Filling level	Yes -Manual
Vapour Temperature	
Working range °C	0~150
Accuracy °C	± 2
Resolution °C	0.1
Temperature sensor	Three-wire PT100
Rotation	
Working range rpm	5~100
Accuracy rpm	± 2
Rotation speed reading	YES
Resolution rpm	1
Engine 0,18KW, 380Vac	YES
Vacuum Control	
Working range mbar	0~1000
Accuracy mbar	±5mbar
Resolution mbar	1
Absolute vacuum reading	YES
Display	Digital
Vacuum regulation	YES
Lifting	
Lifting control ON/OFF	YES
Hydraulic lifting	YES
Interface	
PLC controlled	YES
Export data interface	YES
Remote control interface	YES
Alarms	
Thermal bath overheat	YES
Bath temperature exceeding set point	YES
Soft start rotation	YES
Rotation speed monitoring	YES
Security status (rotation,lifting, heating=off)	YES
Evaporation flask protection opening	YES
General	
100Lt evaporation flask	YES
50Lt evaporation flask	YES
20L evaporation flask	YES
20Lt collecting flask	2
Cooler exchange surface (mq)	0.6/1.4/custom
Over-pressure protection	YES
Protection with rupture disc	YES
Quick closing	YES
ATEX certification	YES
Dimensions (WxDxH mm)	1830x890x2110
Operation	
Vapours cycle maximum temperature	YES
Vapours cycle minimum temperature	YES
Vapours cycle temp range	YES
Receipt/methods in memory	YES
Recipes customization	YES
Data acquisition on PC	YES
Remote Control	YES
lowering bath in case of alarm	YES
Optional	
Plastic coated glassware	

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

Order information

STRIKE 100	Order No.
100L version	
100L reflux glassware 1.43m^2 2x20L	SQFU082237
100L reflux glassware 1.43m^2 1x20L	SQFU083070
100L descending glassware 100lt 1.43m^2 2x20L	SQFU081873
100L descending glassware 100lt 1.43m^2 1x20L	SQFU083071
50L version	
50L reflux glassware 0.6m^2 2x20L	SQFU083073
50L reflux glassware 0.6m^2 1x20L	SQFU081309
50L descending glassware 0.6m^2 2x20L	SQFU083074
50L descending glassware 0.6m^2 1x20L	SQFU083075

STRIKE 100 ATEX	Order No.
100L version	
100L reflux glassware 1.43m^2 2x20L	SQFU083077
100L reflux glassware 1.43m^2 1x20L	SQFU083078
100L descending glassware 100lt 1.43m^2 2x20L	SQFU083079
100L descending glassware 100lt 1.43m^2 1x20L	SQFU083080
50L version	
50L reflux glassware 0.6m^2 2x20L	SQFU083084
50L reflux glassware 0.6m^2 1x20L	SQFU083085
50L descending glassware 0.6m^2 2x20L	SQFU080799
50L descending glassware 0.6m^2 1x20L	SQFU083086

Accessories for STRIKE 100

Description	Order No.
Aluminum trolley for evaporating flask handling	SQFW078521
50L Evaporation vessel for STRIKE 100	SQEG034290
100L Evaporation vessel for STRIKE 100	SQEG034291
20L Plastic-coated collecting vessel	SQEG036866
Graduated collecting vessel 20L for Strike 100	SQEG085790
Heat exchanger 1.43m2 for Strike 100, stainless steel coils	SQQE083087
Heat exchanger 1, 43m2 for Strike 100	SQEG034294

Chemical Resistant Diaphragm Pumps For industrial rotary evaporator

High chemical resistant

All wetted parts of Chemvak C series pump is made of PTFE material which is ideal for extremely aggressive / corrosive gases and vapors.

Model	C900E	C920Z	C960T	C2000T
Max. vacuum (mbar)	30	8	2	8
Max. Flow Rate (L/min)	90	70	60	145
Outlet (mm)	10	10	10	10
Order No.	169900-22	169920-22	169960-22	W1032002
Suitable for	ST20	ST20	ST20	STRIKE 100

C2000T

Recirculating Coolers

- The compact FL models are suited for a wide variety of cooling tasks.
- Easy filling from above
- Feed pressure indicator and level indicator (all models)
- Large compensation volume
- Circulating pumps designed for continuous operation
- Permissible return temperature up to +80 °C
- Low liquid level protection with visual and acoustic signals
- May be used with water, water-glycol, thermal bath fluid
- Overload protection for pump motor and cooling machine

JULABO Order No.	Model	Working temp. range	Temp. stability	Cooling capacity (kW)					Pump capacity Flow rate/pressure		Filling volume liters	Suitable for
			°C	20	10	0	-10	-20°C	L/min	bar	L	
9 663 025	FL2503	-20~40	±0.5	2.5	2.2	1.5	--	0.55	40	0.5-3.0	24~30	ST20
9 663 040	FL4003	-20~40	±0.5	4.0	3.4	2.4	--	0.65	40	0.5-3.0	24~30	ST20

Rotary evaporator

Continuous Distillation Rotary Evaporator

Chemical Resistant Diaphragm Pump

Recirculating Cooler

Application guide

Model	Collection rate	Chemicals	Cooling capacity	Chiller	Vacuum pump
	mL/h		W		
STRIKE280 STRIKE300	50	Toluene	5.2	F250, FL300	C410, C510
		Acetone	7.3	F250, FL300	C410, C510
		Absolute alcohol	11.4	F250, FL300	C410, C510
		Water	37.6	F250, FL300	C410, C510
	100	Toluene	10.4	F250, FL300	C410, C510
		Acetone	17.6	F250, FL300	C410, C510
		Absolute alcohol	22.8	F250, FL300	C410, C510
		Water	75.2	F250, FL300	C410, C510
	250	Toluene	26.0	F250, FL300	C410, C510
		Acetone	36.5	F250, FL300	C410, C510
		Absolute alcohol	57.0	F250, FL300	C410, C510
		Water	188.0	F250, FL300	C410, C510
	500	Toluene	52.0	F250, FL300	C410, C510
		Acetone	73.0	F250, FL300	C410, C510
		Absolute alcohol	114.0	F250, FL300	C410, C510
		Water	376.0	F500, FL601	C410, C510
	1000	Toluene	104.0	F250, FL300	C410, C510
		Acetone	176.0	F250, FL300	C410, C510
		Absolute alcohol	228.0	F250, FL300	C410, C510
		Water	752.0	FL1701	C410, C510
	2000	Toluene	208.0	F250, FL300	C410, C510
		Acetone	252.0	F500, FL300	C410, C510
		Absolute alcohol	456.0	F500, FL601	C410, C510
		Water	1504.0	FL1701	C410, C510
STRIKE20	6000	Toluene	624.0	FL1701	C610, C960T
		Acetone	1056.0	FL1701	C610, C960T
		Absolute alcohol	1368.0	FL1701	C610, C960T
		Water	4512.0	FL7006	C960T
	10000	Toluene	1040.0	FL1701	C610, C960T
		Acetone	1760.0	FL2503	C610, C960T
		Absolute alcohol	2280.0	FL2503	C610, C960T
		Water	7520.0	FL11006	C960T
	20000	Toluene	2080.0	FL2503	C610, C960T
		Acetone	2520.0	FL2503	C610, C960T
		Absolute alcohol	4560.0	FL7006	C960T
		Water	15040.0	FL20006	C960T

Q = flow rate x heat of vaporization x density

Q = heat load in Watt
flow rate: in mL/h
heat of vaporization: in Kcal/g
density: in g/mL

Example

Collecting 300 mL of methylene chloride in 30 minutes
1. Convert volume to weight: 300 mL x density of 1.33 g/mL = 399 g
2. Convert minutes to hours: 399 g in 30 min = 798 g/h
3. Multiply by the latent heat of vaporization: 798 g/hr x 89 cal/g = 71022 cal/h
4. Divide by 1000 to get Kcal: 71022 / 1.000 = 71,022 kcal/h
5. Multiply by 1.16 to get Watts: 71,022 x 1.16 = 82 Watt

Add a security factor of at least 20% for loss of cooling capacity due to high ambient, long tubing, etc.: 82 x 1.2 = 98 Watt