## **ROTARY EVAPORATOR**

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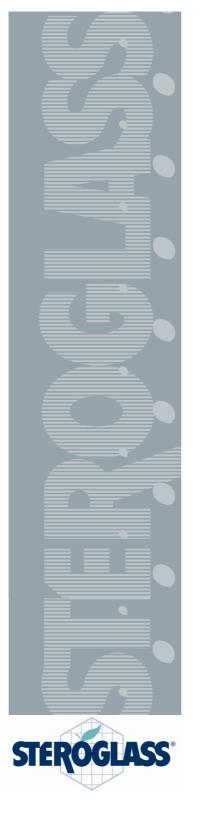


COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV STEROGLASS s.r.l. Via Romano di Sopra, 2/C

06132 - S.Martino in Campo PERUGIA - ITALY Tel. +39 075 60 90 91 Fax +39 075 60 90 950

http: www.steroglass.it e-mail: info@steroglass.it

Authorized Dealer					





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

The unit works under vacuum or atmosphere conditions. The rotation of the 50 or 100 lt evaporation flask in the thermostatic 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.

## **APPLICATIONS**

- -Distillation (continuous and discontinuous)
- -Solvent recycling
- -Reflux process reactions
- -Component drying
- -Fine chemical synthesis
- -Crystallization

### **FIELDS**

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



## **TOTAL SAFETY SYSTEM**

The industrial safety rotary evaporators are able to <u>safeguard the user from any risk during work</u>. 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 an hydraulic system electronically controlled. An automatic system lowers the thermostatic bath when a 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 allows a perfect vacuum-tight. 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.

<u>Electric heater enhanced to 8Kw</u> to ensure a 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 STRIKE100 ATEX version is a "LCD display anti-reflectio coating glass panel". For version STRIKE100 is a graphical color display 7" touch-screen

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Strike100 e STRIKE100ATEX 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.

<u>Client could acquire on an external PC through serial communication all the process parameters</u> through special software for data acquisition and management.
Client could remotely control the instrument from an external PC via serial communication. Client could save and recall up to 20 methods or "recipes" work that the customer can customize over time (NOT ON ATEX VERSION). In addition, the instrument has control algorithms that allow you to finish the process of evaporation / distillation or separation of solvents automatically by reading the temperature of the vapors.



### 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



## **HOW TO ORDER**

Code	STRIKE 100
	100 lt version
SQFU069840	100lt reflux glassware 1,43m <sup>2</sup> 2x20lt
SQFU069841	100lt reflux glassware 1,43m <sup>2</sup> 1x20lt
SQFU069842	100lt discending glassware 100lt 1,43m <sup>2</sup> 2x20lt
SQFU069843	100lt discending glassware 100lt 1,43m <sup>2</sup> 1x20lt
	50 It version
SQFU069844	50lt reflux glassware 1,43m <sup>2</sup> 2x20lt
SQFU069845	50lt reflux glassware 1,43m <sup>2</sup> 1x20lt
SQFU069846	50lt discending glassware 1,43m <sup>2</sup> 2x20lt
SQFU069847	50lt discending glassware 1,43m <sup>2</sup> 1x20lt

Code	STRIKE 100 ATEX *	
	100 lt version	
SQFU069848	100lt reflux glassware 1,43m <sup>2</sup> 2x20lt	
SQFU069849	100lt reflux glassware 1,43m <sup>2</sup> 1x20lt	
SQFU069850	100lt discending glassware 100lt 1,43m <sup>2</sup> 2x20lt	
SQFU069851	100lt discending glassware 1,43m <sup>2</sup> 1x20lt	
	50 lt version	
SQFU069852	50lt reflux glassware 1,43m <sup>2</sup> 2x20lt	
SQFU069853	50lt reflux glassware 1,43m <sup>2</sup> 1x20lt	
SQFU069854	50lt discending glassware 1,43m <sup>2</sup> 2x20lt	
SQFU069855	50lt discending glassware 1,43m <sup>2</sup> 1x20lt	

Code	SUGGESTED ACCESSORIES
IMNM017503	PTFE Diaphragm pump MPC 601 T-4.5 m3/h-ultimate pressure <mbar 2-oil="" free<="" td=""></mbar>
IMNM079980	PTFE Diaphragm pump MPC 601 Tp EX –4.5 m3/h– ultimate pressure <mbar 2g="" 2–="" c="" free-atex="" ii="" iib="" oil="" t4="" td="" x<=""></mbar>
SQEG034290	50 It evaporation vessel
SQEG034291	100 lt evaporation vessel
SQEG034292	20 It evaporation vessel
SQEG036866	20lt receiving vessel
SQEG034294	1.43 m2 glass exchanger
SQFW039025	TROLLEY for evaporating flask mounting and dismounting
JU 9.666.110	Chiller FL 11006—Julabo







## **Technical features**

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/cm2           Over-temperature protection         YES           Temperature Sensor         Three-wire PT100           Level sensor         Yes -Manual           Vapour Temperature         Yes -Manual           Working Range °C         [0; 150]           Accuracy °C         +/- 2           Resolution °C         0.1           Temperature sensor         Three-wire PT100           Rotation         (0; 150]           Accuracy PC         +/- 2           Resolution         YES           Rotation         [5; 100]           Accuracy Rpm         1/- 2           Resolution speed reading         YES           Resolution Rpm         1           Engine 0,18KW, 380Vac         YES           Vacuum Control         YES           Working Range mbar         [0; 1000]           Accuracy mbar </th <th>Thermic Bath</th> <th></th>	Thermic Bath	
Resolution °C  Set point  Type of control  Maximum oscillation during checkout °C  Power resistor KW  Heater power density  Over-temperature protection  Level sensor  Filling Level  Vapour Temperature  Working Range °C  Resolution °C  Temperature sensor  Three-wire PT100  Accuracy °C  Temperature sensor  Working Range Rpm  Accuracy Rpm  Accuracy Rpm  Resolution Rpm  Ingine 0,18KW, 380Vac  Vacuum Control  Working Range mbar  Resolution mbar  Absolute vacuum reading  Display  Lifting  Lifting  Lifting  Lifting Control ON/OFF  PID  YES (1°C step)  PID  YES (1°C step)  YES (1°C step)  PID  YES (1°C step)  Three-wire PT100  Free-wire PT	Working Range °C	[0; 150]
Set point Type of control Maximum oscillation during checkout °C Power resistor KW Reater power density Over-temperature protection Level sensor Filling Level Vapour Temperature Working Range °C Resolution °C Temperature sensor Three-wire PT100 Rotation Working Range Rpm Accuracy Rpm Accuracy Rpm Resolution Rpm Engine 0,18KW, 380Vac Vacuum Control Working Range mbar Resolution megulation Resolution Resolution myes Resolution megulation Resolution myes Resolution mbar Resolu	Accuracy °C	+/- 2
Type of control PID  Maximum oscillation during checkout °C +/- 3  Power resistor KW 8  Heater power density 3W/cm2  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  Lifting control ON/OFF YES	Resolution °C	0.1
Maximum oscillation during checkout °C +/- 3 Power resistor KW 8 Heater power density 3W/cm2 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 Resolution mbar 1 Absolute vacuum reading YES Display Digital Vacuum regulation YES Lifting Lifting control ON/OFF YES	Set point	YES (1°C step)
Power resistor KW Heater power density Over-temperature protection Temperature Sensor Level sensor Filling Level Vapour Temperature Working Range °C Resolution °C Temperature sensor Three-wire PT100 Accuracy °C Accuracy °C Temperature sensor Three-wire PT100 Rotation Working Range Rpm Fig. 100] Accuracy Range Rpm Fig. 100] Accuracy Rom Fig. 1	Type of control	PID
Heater power density Over-temperature protection Temperature Sensor Level sensor Filling Level Vapour Temperature Working Range °C Resolution °C Temperature sensor Working Range Rpm Rotation Working Range Rpm Filling Level Working Range Rpm Filling Resolution Rpm Filling Liting Control ON/OFF Filling	Maximum oscillation during checkout °C	+/- 3
Over-temperature protection Temperature Sensor Level sensor Filling Level Vapour Temperature Working Range °C Resolution °C Temperature sensor Working Range Rpm Rotation Working Range Rpm Accuracy Rpm Rotation speed reading Resolution Rpm Engine 0,18KW, 380Vac Vacuum Control Working Range mbar Resolution mbar Resolut	Power resistor KW	8
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	Heater power density	3W/cm2
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	Over-temperature protection	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	Temperature Sensor	Three-wire PT100
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	Level sensor	YES
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	Filling Level	Yes -Manual
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	Vapour Temperature	
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		[0; 150]
Temperature sensor  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	Accuracy °C	+/- 2
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	Resolution °C	0.1
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	Temperature sensor	Three-wire PT100
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	Rotation	
Rotation speed reading  Resolution Rpm  1 Engine 0,18KW, 380Vac  Vacuum Control  Working Range mbar  Accuracy mbar  Resolution mbar  Absolute vacuum reading  Display  Vacuum regulation  Lifting  Lifting control ON/OFF  YES	Working Range Rpm	[5; 100]
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	Accuracy Rpm	+/- 2
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	Rotation speed reading	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	Resolution Rpm	1
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	Engine 0,18KW, 380Vac	YES
Accuracy mbar ±5mbar  Resolution mbar 1  Absolute vacuum reading YES  Display Digital  Vacuum regulation YES  Lifting  Lifting control ON/OFF YES	Vacuum Control	
Resolution mbar 1 Absolute vacuum reading YES Display Digital Vacuum regulation YES  Lifting Lifting control ON/OFF YES	Working Range mbar	[0; 1000]
Absolute vacuum reading  Display  Digital  Vacuum regulation  YES  Lifting  Lifting control ON/OFF  YES	Accuracy mbar	±5mbar
Display Digital Vacuum regulation YES  Lifting Lifting control ON/OFF YES	Resolution mbar	1
Vacuum regulation YES  Lifting  Lifting control ON/OFF YES	Absolute vacuum reading	YES
Lifting Control ON/OFF YES	Display	Digital
Lifting control ON/OFF YES	Vacuum regulation	YES
	Lifting	
Hydraulic lifting YES	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 disk	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	

\*Strike 100 Atex version is in compliance with the Atex European Directives that regulate explosion-proof manufacturing materials. Strike 100 Atex is T3 or T4 certificated. T3 or T4 protectionlevel can be chiose according to the applications needed.



#### STEROGLASS S.r.l.

Strada Romano di Sopra 2/C, 06132 San Martino in Campo (PG), Italia Tel. +3907560909-1 fax. +390756090950 e-mail. info@steroglass.it