# **ROTARY EVAPORATOR**



**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 <u>50 or 100 lt evaporation flask</u> 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 maintenancefree operation. <u>Possibility to customize glassware as</u> for Clients needs.

### APPLICATIONS

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

-Extractions -Purifications -Scale-up processes

# FIELDS

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



#### **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 rupture 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. <u>This sealing system does not require any maintenance</u>.



#### **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 enhanced to 8Kw 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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Atex



# ELECTRONIC CONTROLLER

Strike100 e STRIKE100ATEX are <u>fully controlled by a</u> <u>PLC</u> (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</u> <u>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, <u>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.</u>

# 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



STRIKE

#### HOW TO ORDER

| Code       | STRIKE 100   | Code       | STRIKE 100 ATEX *  |
|------------|--|------------|--|
|            | 100 lt version   |            | 100 lt version   |
| SQFU069840 | 100lt reflux glassware 1,43m <sup>2</sup> 2x20lt           | SQFU069848 | 100lt reflux glassware 1,43m <sup>2</sup> 2x20lt           |
| SQFU069841 | 100lt reflux glassware 1,43m <sup>2</sup> 1x20lt           | SQFU069849 | 100lt reflux glassware 1,43m <sup>2</sup> 1x20lt           |
| SQFU069842 | 100lt discending glassware 100lt 1,43m <sup>2</sup> 2x20lt | SQFU069850 | 100lt discending glassware 100lt 1,43m <sup>2</sup> 2x20lt |
| SQFU069843 | 100lt discending glassware 100lt 1,43m <sup>2</sup> 1x20lt | SQFU069851 | 100lt discending glassware 1,43m <sup>2</sup> 1x20lt       |
|            | 50 lt version  |            | 50 lt version  |
| SQFU069844 | 50lt reflux glassware 1,43m <sup>2</sup> 2x20lt            | SQFU069852 | 50lt reflux glassware 1,43m <sup>2</sup> 2x20lt            |
| SQFU069845 | 50lt reflux glassware 1,43m <sup>2</sup> 1x20lt            | SQFU069853 | 50lt reflux glassware 1,43m <sup>2</sup> 1x20lt            |
| SQFU069846 | 50lt discending glassware 1,43m <sup>2</sup> 2x20lt        | SQFU069854 | 50lt discending glassware 1,43m <sup>2</sup> 2x20lt        |
| SQFU069847 | 50lt discending glassware 1,43m <sup>2</sup> 1x20lt        | SQFU069855 | 50lt discending glassware 1,43m <sup>2</sup> 1x20lt        |

| IMNM017503PTFE Diaphragm pump MPC 601 T-4.5 m3/h-ultimate pressure <mbar 2-oil="" free<="" th="">IMNM079980PTFE Diaphragm pump MPC 601 Tp EX -4.5 m3/h- ultimate pressure <mbar 2-="" 2g="" c="" free-atex="" ii="" iib="" oil="" t4="" td="" x<="">SQE603429050 It evaporation vesselSQE6034291100 It evaporation vesselSQE603429220 It evaporation vesselSQE603429420 It eceiving vesselSQE60342941.43 m2 glass exchangerSQFW039025TROLLEY for evaporating flask mounting and dismountingJUCG080963Chiller FL 7006 Julabo -20+40°C heating power 7 kWat 20°C, 1,55 kW at -20°CJUCG078728Chiller FL 11006 Julabo -20+40°C heating power 11 kWat 20°C, 3 kW at -20°C</mbar></mbar> | Code       | SUGGESTED ACCESSORIES  |  |
|--|------------|--|--|
| SQEG03429050 It evaporation vesselSQEG034291100 It evaporation vesselSQEG03429220 It evaporation vesselSQEG03686620It receiving vesselSQEG0342941.43 m2 glass exchangerSQFW039025TROLLEY for evaporating flask mounting and dismountingJUCG080963Chiller FL 7006 Julabo -20+40°C heating power 7 kWat 20°C, 1,55 kW at -20°C   | IMNM017503 | PTFE Diaphragm pump MPC 601 T-4.5 m3/h-ultimate pressure <mbar 2-oil="" free<="" th=""></mbar>   |  |
| SQEG034291100 It evaporation vesselSQEG03429220 It evaporation vesselSQEG03686620 It receiving vesselSQEG0342941.43 m2 glass exchangerSQFW039025TROLLEY for evaporating flask mounting and dismountingJUCG080963Chiller FL 7006 Julabo -20+40°C heating power 7 kWat 20°C, 1,55 kW at -20°C  | IMNM079980 | PTFE Diaphragm pump MPC 601 Tp EX –4.5 m3/h– ultimate pressure <mbar 2g="" 2–="" c="" free-atex="" ii="" iib="" oil="" t4="" th="" x<=""></mbar> |  |
| SQE6034292 20 It evaporation vessel   SQE6036866 20It receiving vessel   SQE6034294 1.43 m2 glass exchanger   SQFW039025 TROLLEY for evaporating flask mounting and dismounting   JUC6080963 Chiller FL 7006 Julabo –20+40°C heating power 7 kWat 20°C, 1,55 kW at –20°C   | SQEG034290 | 50 It evaporation vessel   |  |
| SQE60368666 20lt receiving vessel   SQE6034294 1.43 m2 glass exchanger   SQFW039025 TROLLEY for evaporating flask mounting and dismounting   JUC6080963 Chiller FL 7006 Julabo -20+40°C heating power 7 kWat 20°C, 1,55 kW at -20°C  | SQEG034291 | 100 lt evaporation vessel  |  |
| SQEG034294 1.43 m2 glass exchanger   SQFW039025 TROLLEY for evaporating flask mounting and dismounting   JUCG080963 Chiller FL 7006 Julabo -20+40°C heating power 7 kWat 20°C, 1,55 kW at -20°C  | SQEG034292 | 20 It evaporation vessel   |  |
| SQFW039025TROLLEY for evaporating flask mounting and dismountingJUCG080963Chiller FL 7006 Julabo -20+40°C heating power 7 kWat 20°C, 1,55 kW at -20°C  | SQEG036866 | 20lt receiving vessel  |  |
| JUCG080963 Chiller FL 7006 Julabo –20+40°C heating power 7 kWat 20°C, 1,55 kW at –20°C   | SQEG034294 | 1.43 m2 glass exchanger  |  |
|  | SQFW039025 | TROLLEY for evaporating flask mounting and dismounting   |  |
| JUCG078728 Chiller FL 11006 Julabo –20+40°C heating power 11 kWat 20°C, 3 kW at –20°C  | JUCG080963 |  |  |
|  | JUCG078728 | Chiller FL 11006 Julabo –20+40°C heating power 11 kWat 20°C, 3 kW at –20°C   |  |



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# **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/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                                |                  |
| Litting                                |                  |
| Lifting control ON/OFF                 | 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)                    | 1.43/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.

