# ROTARY EVAPORATION SOLUTIONS



# **EVAPORATION SOLUTIONS**

The LabTech evaporation solutions introduce a new concept in routine distillation/evaporation processes: safety, efficiency and durability to support the lab user work!

With an innovative and ergonomic design, the EV series rotary evaporators include color digital display to monitor and control rotation speed and temperature, motorized vertical lift, evaporation flasks, on line sample adding through PTFE valve and can be completed with the LabTech vacuum and cooling accessories to reach top efficiency of process.

The stand alone heating bath guarantees maximum safety in operations and easy maintenance.



- Total solution
- Programmable operations
- Anticorrosion sealing system
- Integrated vacuum control
- Maximum safety
- Quite operation
- Excellent price/performance ratio

## **MAIN APPLICATIONS**

- Solvent recycling
- Solvent distillation
- Powder drying
- Chemical synthesis
- Extraction
- Research

- Active agent concentration
- Vacuum distillation of sensitive substances
- Liquid mixture separation

## THE IDEAL PARTNER FOR LABORATORY EVAPORATIONS





## **Technology & Design**

- Digital rotation speed control and temperature display ensure accurate and stable unit operations.
- Trouble free operation and long lifetime
- PTFE seal loop ensures excellent elasticity and resistance at high temperature acid/ solvent corrosion.
- Online sample addition by PTFE valve ensures high efficiency and easy operation.
- Automatic lift-up protection in case of electric power failure.
- Pre-loaded solvents library.

### Safety & Easy to use

- Stand alone heating bath guarantees maximum safety and easy maintenance.
- Motorized vertical lift (depending on model).
- Wide range of evaporation flasks.
- Self calibration function and wide temperature range control from room temperature up to 230°C.
- Automatic stop heating in dry bath condition
- Innovative design to prevent corrosion and splashing.
- Removable front panel.

## **OPTIONS FOR A COMPLETE PACKAGE**

## **CHILLERS**

The LabTech's state-of-the-art water chillers ensure accurate and constant cooling conditions of instruments even in the harsh laboratory conditions.

#### H50-500

• Temp. Control Range: -5° to +35°C

• Temp. Stability: ±0.3°C (PID/LCD)

• Refrigeration Capacity: 500W

• Pump Capacity: 3.5L/min@10psi

Dimensions (L x W x H mm): 480x250x470





## **VACUUM CONTROLLER**

Commonly used solvents have different boiling points and vacuum evaporation levels, if the vacuum is not properly controlled, a risk of too rapid or too slow evaporation could occur reducing recovery of vapors. To optimize the whole process, an electronic vacuum controller connected to the pump is recommended. LabTech offers a light, compact and extremely easy to use vacuum controller without any extra cost for accessories.

#### LV6010

Large LCD display

Vacuum control range: 0~999mbar

Vacuum control precision: ±1mbar

• Step vacuum control (different vacuum pressure with different holding time)

• Built-in gas release valve ensures high efficient and stable vacuum control

Built-in anticorrosive vacuum sensor with high precision

Fully anticorrosion design

ON/OFF control of vacuum pump to extend the pump working life

• Alarm when the vacuum control fails to reach the desired value

Dimensions (L x W x H mm): 200x200x125



# **OPTIONS** FOR A COMPLETE PACKAGE

## **VACUUM PUMPS**

Totally oil free, mechanical vacuum pumps with features of advanced design, low noise level, high efficiency and long lifespan.

The LabTech vacuum pumps are specially designed for laboratory operations to meet the highest expectations of precision, reliability and ease of use. They can be used in a multitude of applications, such as vacuum filtration, degassing, impregnation, drying chambers, rotary evaporations, distillation, gel dryers, gas analytical systems and roughing of wide-range turbo molecular pumps.



|                            | VP30        | VP18R PLUS  | VP50        | VP50 PLUS   |
|----------------------------|-------------|-------------|-------------|-------------|
| Power (W)                  | 80          | 30          | 100         | 100         |
| Pumping Speed (L/min)      | 30          | 18          | 50          | 50          |
| Vacuum Pressure (mbar/psi) | 250/3,62    | 20/0,29     | 150/2,17    | 150/2,17    |
| Vacuum Controller          | -           | Manual      | -           | Manual      |
| Noise (db)                 | <b>≤</b> 50 | <b>≤42</b>  | <b>≤</b> 58 | <b>≤</b> 58 |
| Dimensions (LxWxH mm)      | 294x164x240 | 294z164x240 | 350x180x240 | 350x180x240 |
| Weight (Kg)                | 3           | 3           | 6           | 6           |
| Ordering information       | LV5010      | LV5080P     | LV5050      | LV5060      |

# TECHNICAL **SPECIFICATIONS**

|                             | EV400H                         | EV400                          | EV400 Touch                    | EV400VAC                       |
|-----------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| = MAIN UNIT                 |                                |                                |                                |                                |
| Rotation speed range (rpm)  | 20-300                         | 20-300                         | 20-300                         | 20-300                         |
| Display                     | LCD                            | LCD                            | Color Touch                    | Color Touch                    |
| Lift                        | Manual                         | Motor                          | Motor                          | Motor                          |
| Lift stroke (mm)            | 150                            | 160                            | 160                            | 160                            |
| Head tilt angle (°)         | 0-60                           | 0-60                           | 0-60                           | 0-60                           |
| Condenser                   | Vertical <i>or</i> Diagonal    | Vertical <i>or</i> Diagonal    | Vertical <i>or</i> Diagonal    | Vertical <i>or</i> Diagonal    |
| Cooling surface (cm²)       | 1200 standard<br>1500 optional | 1200 standard<br>1500 optional | 1200 standard<br>1500 optional | 1200 standard<br>1500 optional |
| Clockwise counter/rotation  | Yes                            | -                              | Yes                            | Yes                            |
| Gradient distillation       | -                              | -                              | -                              | Yes                            |
| Built-in vacuum controller  | -                              | -                              | -                              | Yes                            |
| Solvents library            | -                              | -                              | -                              | Yes                            |
| Vapor temperature           | -                              | -                              | Optional                       | Optional                       |
| Auto distillation           | -                              | -                              | -                              | Optional                       |
| HEATING DATH                |                                |                                |                                |                                |
| = HEATING BATH              | Ambient-230                    | Ambient-230                    | Ambient-230                    | Ambient-230                    |
| Temperature controller mode |                                |                                |                                |                                |
| Temperature controller mode | P.I.D.                         | P.I.D.                         | P.I.D.                         | P.I.D.                         |
| Bath material               | SS with PTFE coating           |
| Temp. control accuracy (°C) | ±1 (Water)                     | ±1 (Water)                     | ±1 (Water)                     | ±1 (Water)                     |
| 11 040                      | ±2 (Oil)                       | ±2 (Oil)                       | ±2 (Oil)                       | ±2 (Oil)                       |
| Heating power (W)           | 1300                           | 1300                           | 1300                           | 1300                           |
| Bath capacity (L)           | 5                              | 5                              | 5                              | 5                              |
| - GENERAL                   |                                |                                |                                |                                |
| Protection class            | IP21                           | IP21                           | IP21                           | IP21                           |
| Dimensions* (LxWxH cm)      | 38x56x90                       | 44x56x90                       | 44x56x90                       | 44x56x90                       |
| Gross weight* (Kg)          | 23                             | 29                             | 29                             | 29                             |
| Power supply voltage        | 230V, 50/60Hz<br>110V, 60Hz    | 230V, 50/60Hz<br>110V, 60Hz    | 230V, 50/60Hz<br>110V, 60Hz    | 230V, 50/60Hz<br>110V, 60Hz    |
| Ordering information        | LEV400H                        | LEV400                         | LEV400T                        | LEV400V                        |
|                             |                                |                                |                                |                                |

<sup>\*</sup> Including glassware

# ROTARY EVAPORATOR **ACCESSORIES**

| Item | Part number | Description                           |
|------|-------------|---------------------------------------|
| 1    | 50103-V     | Vertical Condenser                    |
| 1    | 50103-L     | Diagonal Condenser                    |
| 1    | 50103-I     | Dry Ice Condenser                     |
| 1    | 50104 T-V   | Vertical Condenser Vapour Sensor Hole |
| 1    | 50104 T-L   | Diagonal Condenser Vapour Sensor Hole |
| 2    | 50103-NC    | Hose Nipple                           |
| 3    | 50103-A     | Stop Cock                             |
| 4    | 50103-CS    | Ball Joint Clamp                      |
| 5    | 50103-SR3   | Lock Handwheel                        |

| Item | Part number | Description                |  |  |
|------|-------------|----------------------------|--|--|
| 6    | 50103-SR9   | Lock Spring                |  |  |
| 7    | 50103-SR1   | Seal Ring Set              |  |  |
| 8    | 50103-NS    | Lock and Push-off nuts Set |  |  |
| 9    | 50103-GA    | Vapor Tube                 |  |  |
| 10   | 50103-C1    | Clip 19 mm                 |  |  |
| 10   | 50103-C2    | Clip 24 mm                 |  |  |
| 10   | 50103-C3    | Clip 29 mm                 |  |  |
| 11   | 50103-1000  | Evaporating Flask 1L       |  |  |
| 12   | 50103-C1    | Receiving Flask 1L         |  |  |

### **EVAPORATION FLASK**

| P/N        | Volume  | Joint Size |
|------------|---------|------------|
| 50103-0050 | 50 mL   | 29/32      |
| 50103-0100 | 100 mL  | 29/32      |
| 50103-0250 | 250 mL  | 29/32      |
| 50103-0500 | 500 mL  | 29/32      |
| 50103-1000 | 1000 mL | 29/32      |
| 50103-2000 | 2000 mL | 29/32      |
| 50103-3000 | 3000 mL | 29/32      |
| 50103-0100 | 100 mL  | 24/29      |
| 50103-0250 | 250 mL  | 24/29      |
|            |         |            |

### HEART-SHAPED FLASK

| P/N         | Volume | Joint Size |
|-------------|--------|------------|
| 50102-0050J | 50 mL  | 24/29      |
| 50102-0100J | 100 mL | 24/29      |
| 50101-0050J | 50 mL  | 19/16      |

### **ADAPTOR**

| P/N         | Volume | Joint Size |
|-------------|--------|------------|
| 50103-29-24 | 29/32  | 24/29      |
| 50103-29-19 | 29/32  | 19/26      |
| 50103-24-19 | 24/29  | 19/26      |

### RECEIVING FLASK

| P/N      | Volume  | Joint Size |
|----------|---------|------------|
| 50103-C0 | 500 mL  | 35/20      |
| 50103-C1 | 1000 mL | 35/20      |
| 50103-C2 | 2000 mL | 35/20      |

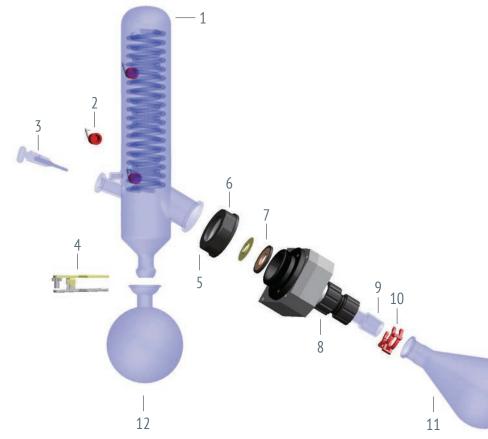
## TRAP BALL

| P/N        | Volume | Joint Size     |
|------------|--------|----------------|
| 50103-0001 | 100 mL | 29/32<br>24/29 |

### SPIDER WITH 5 FLASKS

| P/N         | Volume         | Joint Size     |
|-------------|----------------|----------------|
| 50104-29-24 | 50 mL<br>5 pcs | 29/32<br>24/29 |

- 1. Vertical/Diagonal/ Dry Ice Condenser
- 2. Hose Nipple
- 3. Stop Cock
- 4. Ball Joint Clamp
- 5. Lock Handwheel
- 6. Lock Spring
- 7. Seal Ring Set
- 8. Lock and Push-off Nuts Set
- 9. Vapor Tube Set
- 10. Clip 19/24/29 mm
- 11. Evaporating Flask 1L
- 12. Receiving Flask





#### LabTech, your reliable laboratory solution provider.

LabTech is a leading manufacturing company with skill and passion devoted to provide advanced laboratory solutions to the analytical community. We are located in Sorisole, northern Italy, with facilities in USA and China. Incorporated with global branches, LabTech is organized into R&D, production, marketing & sales and customer support. Major LabTech products include organic/inorganic sample preparation systems, laboratory cooling/heating/ temperature control equipments, analytical instruments and gas generators. With knowledgeable scientists and experienced engineers, our R&D team has developed and released a series of new lab equipments and instruments dedicated to the modern analytical laboratories. With all of these accomplishments and our endless research and development efforts, we are proud to be your professional partner.







## LabTech Srl

Via Fatebenefratelli, 1/5 - 24010 Sorisole (BG) - Italy Tel: +39 035 576614 - Fax: +39 035 4729414 www.labtechsrl.com - email: marketing@labtechsrl.com