

# VP30 - VP18 Plus VP50 Plus - VP20 Plus

## VACUUM PUMPS



**USER MANUAL – Version 202111VP**

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## DISCLAIMER

Thank you for selecting our products.

We are sure that you will be completely satisfied with the performance of this new unit entering your laboratory. We invite you to carefully read this user manual and to keep it close to the instrument for convenient and fast consulting. For any possible clarification or any request for assistance please contact either your local Representative or LabTech at the following address:

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## INTRODUCTION

### About your system

LabTech develops and produces innovative Vacuum Pump systems used whenever high precise vacuum condition.

LabTech follows the “Green Lab Conditions” regulations by using eco-friendly materials.

By adapting new technologies and innovations to maintain top reliability level worldwide, all production steps are focused to offer high quality and customized solutions to meet any requirement.

### Compliance

Products tested and found compliant with the requirements defined in the EC Council Directive for Electromagnetic Compatibility defined by 2014/30/EU as well as Low Voltage Directive (LVD) 2014/35/EU can be identified by the CE mark on the rear of the unit. The testing has demonstrated compliance with the following directives:

- EN 61010-1:2010
- EN 61326-1:2013
- 2014/35/EC
- 2014/30/EC
- 2011/65/EC

### WEEE/RoHS

This product is required to comply with the European Union’s Waste Electrical & Electronic Equipment (WEEE) Directive 2011/65/EC. It is marked with the following symbol:



## Warranties and Liabilities

Seller warrants the products manufactured and sold by it, to be, for the period of warranty coverage, free from defects of materials or workmanship under normal prior use and service. The period of warranty coverage is specified for the respective products in the respective Seller instruction manuals for those products but shall in no event exceed 1 year from the date of shipment thereof by Seller. Seller's liability under this warranty is limited to such of the above products or parts thereof as are returned, prepaid transportation to Seller's plant, not later than 10 days after the expiration of the period of warranty coverage in respect thereof and are found by Seller's examination to have failed to function properly because of defective workmanship or materials and not because of improper installation or misuse and is limited to, at Seller's election, either (a) repairing and returning the product or part thereof, or (b) improper installation or misuse and is limited to, at Seller's election, either (a) repairing and returning the product or part thereof, or (b) furnishing a replacement product or part thereof, prepaid transportation by Seller in either case. In a event Buyer discovers or learns that a product does not conform to warranty, Buyer shall immediately notify Seller in writing of such non-conformity, specifying in reasonable detail the nature of such non-conformity. If Seller is not provided with such written notification, Seller shall not be liable for any further damages which could have been avoided if Seller had been provided with immediate written notification, this warranty is made and accepted in lieu of all other warranties, express or implied. All other obligations and liabilities of Seller, whether in contract or tort (including negligence) or otherwise, are expressly excluded. In no event shall Seller be liable for any costs, expenses, or damages, whether direct or indirect, special, incidental, consequential, or other, on any claim of any defective product, more than the price paid by Buyer for the product including prepaid return transportation charges.

No warranty is made by Seller of any Seller product which has been installed, used or operated contrary to Seller's written instruction manual or which has been subjected to misuse, negligence or accident or has been repaired or altered by anyone other than Seller or which has been used in a manner or for a purpose for which the Seller product was not designed nor against any defects due to plans or instructions supplied to Seller by or for Buyer.

## Conventions

All safety symbols are followed by **WARNING** or **CAUTION**, which indicates the degree of risk for personal injury and/or instrument damage. Cautions and warnings are followed by a description. A **WARNING** is intended to prevent improper actions that could cause personal injury. A **CAUTION** is intended to prevent improper actions that may cause personal injury and/or instrument damage. The following safety symbols may be found on your instrument and/or in this guide.



**Electrical Shock Hazard:** This symbol indicates that an electrical shock could or may occur.



**Fire Hazard:** This symbol indicates a risk of fire or flammability could or may occur.



**Chemical safety:** This symbol indicates a risk of chemical substance could or may occur.

## Contact us

There are several ways to contact LabTech Srl.

To contact Technical Support:

Phone +39 035 576614

E-mail [customer.care@labtechsrl.com](mailto:customer.care@labtechsrl.com)

To contact Application Department:

Phone +39 035 576614

E-mail [customer.care@labtechsrl.com](mailto:customer.care@labtechsrl.com)

To contact Sales Department:

Phone +39 035 576614

E-mail [marketing@labtechsrl.com](mailto:marketing@labtechsrl.com)

To suggest changes to documentation:

Send an e-mail with subject: Technical Publications Editor at [customer.care@labtechsrl.com](mailto:customer.care@labtechsrl.com)

## Safety Rules

### General Information

Please carefully read this user manual before starting to use the instrument and follow its prescriptions with the utmost care. This user manual is part of the delivery, hence must be always kept together with the instrument on its working place.

It is imperative that every person operating with this system has read and fully understood this manual. The non-observance of the instructions contained herein, or improper use may involve damages/injuries that are not covered by product liability.

### Electrical safety

The instrument must be used within the rated voltage. Prior to use, please check if the wire is aged. In case of aged wires, please contact the after-sales service for inspection. It is forbidden to disassemble the instrument and to connect internal circuit parts, to avoid a short circuit or open circuit.

### Fire safety

Numerous reagents are flammable and explosive. When the solvent vapor concentration reaches a certain level, it becomes flammable and could cause fire. The instrument should be kept away from the sources of ignition and high temperature places. If there is solvent pungent smell, carefully check whether there is gas or liquid leakage, and turn off the power.

### Chemical safety

During the working of the unit, some solvents inside or outside of the unit may form peroxide or flammable and explosive gasses. Do pay enough attention to avoid explosion when processing hazardous or unknown substances.

### Recommendation

Make sure you read and understand all instructions and safety precautions list in this manual before installing or operating your unit. If you have any questions concerning the operation of your unit or the information in this manual, please contact our Customer Service Center.

## General Information

### SPECIFICATION

Model	VP30	VP18 PLUS	VP50 PLUS	VP20 PLUS
Voltage (V)	230/110V 50/60HZ	230/110V 50/60HZ	230/110V 50/60HZ	230/110V 50/60HZ
Power (W)	80	140	100	280
Pumping speed (L/min)	30	18	50	20
Vacuum Pressure (mbar)	250	20	150	5
Dimension (mm) (W×L×H)	315×180×240	315×180×240	315×180×240	350x200x380
Weight (kg)	6	7	8	14

### VP30





## VP18 PLUS



## VP50 PLUS



## VP20 Plus



## Installation

Please check all parts and accessories before installation and set up according to the following.

### Site Requirements

Ambient Temperature Range: 10°C to 40°C (50°F to 104°F)

Relative Humidity Range: 10% to 80% (non-condensing)

Operating Altitude: Sea Level to 8000 feet (2438 meters)

Never place the unit in a location where excessive heat, moisture, or corrosive materials are present.

Please put the equipment on a firm, strong bench. Avoid the resonance from the bench. This will decrease the risk of vibrations and noise.

### Dimensions and Weights

Unit	High (cm)	Width (cm)	Length (cm)	Weight (Kg)
VP30	24	31,5	18	6
VP18 PLUS	24	31,5	18	7
VP50 Plus	24	31,5	18	8
VP20 Plus	38	31,5	18	14

## Electrical Requirements

The unit provides extra protection against the risk of electrical shock by grounding appropriate metal parts. The extra protection may not function unless the power cord is connected to a properly grounded socket. It is the user's responsibility to assure a proper ground connection is provided. The unit is supplied with a European power cable. It is used to be connected with power supply. Plug the cord into socket and plug the rear into electric socket of the unit. Then the unit is ready to be used.

The following power options are available:

UNIT	Voltage (V)	Frequency (Hz)	IP Degree	Power Consumption (W)
VP30	230	50	21	80
	115	60	21	80
VP18 PLUS	230	50	21	140
	115	60	21	140
VP50 PLUS	230	50	21	100
	115	60	21	100
VP20 PLUS	230	50	21	280
	115	60	21	280

## Operation

Step 1: Use a rubber pipe to connect the instrument to the vacuum pump tightly after making sure the in and out connectors are connected. Please make sure the whole system does not leak and it is tightly connected. Then connect the power cord.



Step 2: Switch on the unit.



## Preventive Maintenance

### Aspiration of liquid

Avoid aspiration of solvent and liquid to inside of pump

### Surround space

Leave at least free 5 cm in each direction of vacuum pump.

## Troubleshooting

### **The Pump Does Not Start After Switching The Power On**

Check the power cord and ensure it is plugged in.

Check whether or not the system has higher negative pressure. This can be judged from the vacuum gauge. If negative the pressure is bigger than  $-0.05\text{MPa}$  the pump cannot start. The pump will work again as long as release the atmospheric pressure inside the system and back to regular level.

### **The Pressure Declines Rapidly**

Check whether or not the liquid, volatile solvent vapours or particles are inhaled into the pump. If so, please pull out the "IN" connection pipe and then switch the power on, and make pump working without loading for about 10 minutes to dry up or blow out the impurities inside the pump.

## Declaration of Conformity

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**EU/UE**  
**DICHIARAZIONE DI CONFORMITÀ**  
**DECLARATION OF CONFORMITY**  
**DÉCLARATION DE CONFORMITÉ**  
**KOFOMITÄTSEKRLÄRUNG**  
**DECLARACIÓN DE CONFORMIDAD**

Noi  
We  
Nous  
Wir  
Nosotros

**LabTech s.r.l.**

*(nome del produttore) (manufacturer's name) (nom du fournisseur) (Name des Anbieters) (Nombre del productor)*

**Via Fatebenefratelli, 1/5                      24010 SORISOLE (BG) – ITALY**

*(indirizzo) (address) (adresse) (Anschrift) (Dirección)*

dichiaro sotto la nostra unica responsabilità che il prodotto  
declare under our sole responsibility that the product/system  
déclarons sous notre seule responsabilité que le produit/système  
erklären in alleiniger Verantwortung, dass das Produkt/System  
declaramos bajo nuestra exclusiva responsabilidad que el producto/sistema

**Vacuum Pump series**

*(modello) (model) (modele) (Modell) (modelo)*

al quale questa dichiarazione fa riferimento, è conforme con le seguenti norme  
to which this declaration relates is in conformity with the following standards  
auquel se réfère cette déclaration est conforme aux normes  
auf das sich diese Erklärung bezieht, mit der/den folgenden Normen  
el modelo al que se refiere esta declaración, es conforme a las siguientes reglas

**EN 61010-1:2010 and EN 61326-1 :2013**

*(titolo e/o numero e data) (title and/or number and date) (titre et/ou no et date) (Titel und/oder Nummer und Datum) (título y/o el número y la fecha)*

Secondo le prescrizioni della(e) Direttiva(e):  
Following the provisions of Directive(s):  
conformément aux dispositions de(s) Directive(s):  
Gemäß den Bestimmungen der Richtlinie(n) :  
En conformidad con las especificaciones de las directivas:

**2014/35/EC, 2014/30/EC and 2011/65/EC**

*(titolo e/o numero della direttiva) (title and/or number of directive) (titre et/ou no du directive) (Titel und/oder Nummer von Anweisung) (título y/o número de la Directiva)*

LabTech s.r.l.

Mr. Diego Cortesi  
General Manager  
2017-11-30

## Spare Part List

<b>P/N</b>	<b>VP30</b>
DDL-ZKB008	Complete maintenance kit for LV5010 included (n°2 black chamber + n°4 seals gaskets + n°2 Yellow seal ring)
VP30-SG	Seal gasket for VP30 (LV5010)
DDL-ZKB005	VP30 Pump motor
MP-30	Internal yellow membrane of VP30 (2 Pcs)
DFL-ZKB002	Pressure gauge for (LV5010-LV5080-VP50)
50AS-26/-0.9B-BJ041	cylinder cover of old VP30(seal ring included)
VP-OR-RED	RED O RING FOR VP30
<b>P/N</b>	<b>VP18R</b>
E18	Seal gasket for VP18R (LV5080) (p/n Labtech China VP18-SG) 4 Pcs
E182	O RING FOR VP18R (LV5080P) - (2 Pcs)
E183	O RING FOR LV5080P – 4 Pcs
VP18-KIT	Complete maintenance kit included (N°4 E18 + n°2 E182 + n°1 GLQ-18R + n°2 MP-18R + n°4 E183)
GLQ-18R	Filter for VP18R (LV5080)
MP-18R	Yellow membrane for VP18R (LV5080) (2 Pcs)
DFL-ZKB002	Pressure gauge
GLQ-18R	Filter of VP18P (new design)
MP-18R	Internal yellow membrane of VP18 (new design)
CR-18R	Conduit ring of VP18P (new design)
DDL-ZKB012	VP18 pump motor
OR-18R	O-ring of VP18P (new design)
VP18P-KITND	VP18P kit for new design vacuum pumps (included: GLQ 18R - MP-18R - CR-18R - OR-18R)
<b>P/N</b>	<b>VP50</b>
E50	Sealing valve for VP50
DDL-ZKB004	VP50 Pump motor
MP-50	MAINTENANCE KIT FOR LV5050P
DFL-ZKB002	Pressure gauge