

TURBOLAB

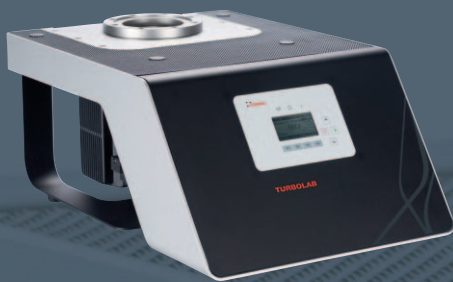
Turbomolecular
Pump Systems
for researchers
relying on vacuum



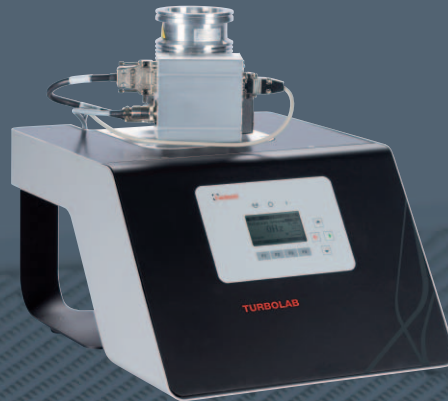
TURBOLAB

Compact Turbomolecular Pump Systems

One basic design ... various options



TURBOLAB 350 / 450



TURBOLAB 80



TURBOLAB 350 Cart

Basic Equipment

■ Turbomolecular pump

TURBOVAC i models from 80 l/s to 450 l/s including frequency converter

■ Backing pump

Dry or oil-sealed,
1 m³/h - 30 m³/h,
24 V DC/110-230 V AC

■ Backlight Display

Every TURBOLAB comes with the Turbo Power Unit TPU for control, configuration and monitoring of the pump system

■ Built-in support for accessories

- Purge
- Vent
- Air or water cooling unit
- Flange heater
- Two pressure gauges (1000 mbar to 1x10⁻⁹ mbar)
- Foreline safety valve

■ Built-in Webserver

- Condition monitoring
- Data analysis
- Software updates
- Control, monitor and configure your TURBOLAB system

■ Easily relocate pump

away from the frame and on your chamber

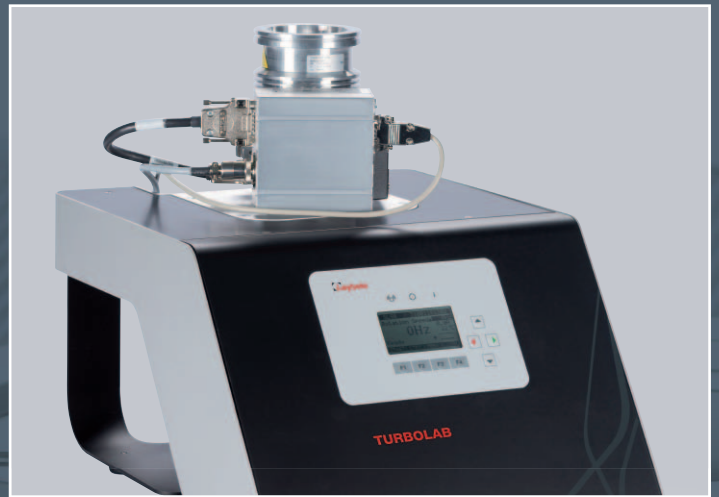
■ Remote Control

via the X1 Interface

- Configurable X1 Digital/Analog I/O
- Start/Stop
- Error
- Warning
- Analog Output

■ Wide range voltage coverage

High-performance turbomolecular pumps & proven backing pumps,



Typical Applications

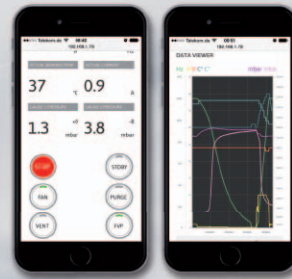
- Research and development
- High energy physics / accelerators
- High vacuum and ultra high vacuum systems
- Analytics
- Surface physics
- Industrial vacuum applications and coating processes

Accessories / Options

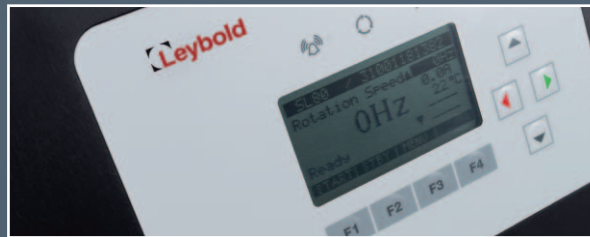
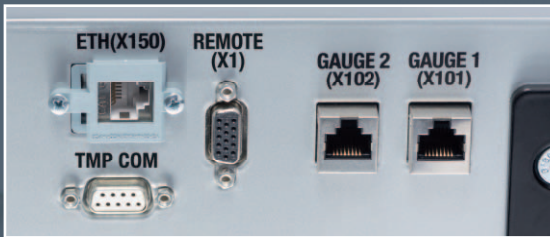
- Opportunity to equip the TURBOLAB pump system with 6 accessories, like
 - Purge gas or venting valve
 - Air or water cooling unit
 - Flange heaterband
 - Safety valve
 - Adsorption trap
 - Exhaust filter
- Complete the system with two vacuum pressure gauges
 - High vacuum sensor PENNINGVAC PTR 90 N
 - Fore-vacuum sensor THERMOVAC TTR 91 N or THERMOVAC TTR 101 N
- Alternatively ISO-K or CF connection
- The Cart version comprises a baseplate, mounting column and castors
- Relocation kits available to operate the turbomolecular pump at your chamber

Whatever you desire
Plug & Play

Leybold



TPU display, vacuum measurement and accessories!



System Control, Monitoring and Data Analysis

We understand data is critical for research and data management can be challenging.

Along with the TURBOLAB systems, new tools are available to make system configuration, operation, monitoring and control extremely easy.

- TURBOLAB Webserver
Multi-platform browser instrument for configuration, operation, monitoring and control via PC or mobile devices
- DataViewer trend display
of the log data on a PC (Windows)
- CMS Widget
Central Management Software Control window for a permanent system condition status indication on a PC (Windows)

All critical parameters and conditions (like errors, warnings, frequency, temperature, etc.) are logged to an internal memory automatically based on a default time interval which you the user can change very easily.

A built-in Webserver allows remote controlling, monitoring and configuring your TURBOLAB system from your mobile device or computer using your browser.

The PC based software tool TURBOLAB Data Viewer analyzes the data log and event log files and monitors the status and the key parameters in real-time from multiple TURBOLAB systems.

The trend view displays the events of projected parameters and enables a quick diagnosis of your system events.

The software tool can be downloaded for free from the website.

This new TURBOLAB generation is built on one basic design platform with the opportunity to create various different variants.

Each version can be customized to individual needs regarding add-ons like vacuum measurement devices, a choice of accessories, e.g. valves and heaters.

The all new smart high vacuum TURBOLAB systems are compact, fully assembled and ready-to-operate!

Highlights

- Enhanced pump performance
- Compact mobile design
- Small foot print
- Easy to relocate pumps out and away from the frame
- Backlight display (control/monitoring/configuration)
- Monitored data like frequency, temperature, current or pressure are automatically stored to a data log file in the TURBOLAB. Users can easily view the log file with the TURBOLAB data viewer software tool which can be downloaded for free from our website. Alternatively, the last 512 data points can be viewed from the TURBOLAB data viewer in the web server
- Covering a wide span of applications with a full range of high vacuum and dry or wet forevacuum pumps
- Innovative turbostation offering dedicated ports for the connection of
 - six different accessories
 - two gauges
- Benchmark functionality, reliability and design
- Prepared for worldwide voltage coverage
- Excellent price-to-performance ratio



Technical Data

Ordering Information

Technical Data

Pump systems			TURBOLAB 80 / Cart	TURBOLAB 350 / Cart	TURBOLAB 450 / Cart
High vacuum connection	DN		63 ISO-K or 63 CF	100 ISO-K or 100 CF	160 ISO-K or 160 CF
Forevacuum connection	DN		16 KF	25 KF	25 KF
Pumping speed for N ₂	l/s		65	290	430
Ultimate pressure	ISO/CF	mbar	10 ⁻⁷ / 10 ⁻⁷	< 10 ⁻⁸ / < 10 ⁻¹⁰	< 10 ⁻⁸ / < 10 ⁻¹⁰
Mains supply	V		110 / 230 ±10 %	110 / 230 ±10 %	110 / 230 ±10 %
Power consumption, max.	VA		350	240	240
Weight	ISO	kg	14,5	22	22
Accessories			6	6	6
Gauges			2	2	2
System condition monitoring (CBM)			Internal condition monitoring		
Software	Webserver		Access via the IP address of the TURBOLAB (no software installation required) Multi-platform browser (InternetExplorer, Safari, Chrome, Fire Fox) for system configuration, control, operation, monitoring		
	DataViewer		Analysing and assessing of the recorded system data. Display as graph and in a table (PC Windows)		
	CMS Widget		Control window for permanent system condition monitoring (PC Windows)		

Ordering Information

Type of backing pump	TURBOLAB 80		TURBOLAB 350		TURBOLAB 450	
	Bench-top unit DN 63 ISO-K	Cart DN 63 ISO-K	Bench-top unit DN 100 ISO-K	Cart DN 100 ISO-K	Bench-top unit DN 160 ISO-K	Cart DN 160 ISO-K
Diaphragm pumps						
DIVAC 0.8 T	501592V02000000	–	–	–	–	–
DIVAC 3.0	501592V02001000	–	501592V04001000	–	501592V06001000	–
Scroll pumps						
SCROLLVAC SC 5 D	–	501592V02020000	–	501592V04020000	–	501592V06020000
SCROLLVAC SC 15 D	–	501592V02040000	–	501592V04040000	–	501592V06040000
SCROLLVAC SC 30 D	–	501592V02060000	–	501592V04060000	–	501592V06060000
Rotary vane pumps						
TRIVAC D 4 B	–	501592V02120000	–	501592V04120000	–	501592V06120000
TRIVAC D 8 B	–	501592V02130000	–	501592V04130000	–	501592V06130000
SOGEVAC SV 16 D	–	501592V02100000	–	501592V04100000	–	501592V06100000
Accessories						
LEYASSIST Software for Turbomolecular pumps		230439V01		230439V01		230439V01

All order numbers refer to wide range motors 230 V, 50/60 Hz

Ordering information on 110 V, 50/60 Hz voltage models, CF versions, and the full range of accessories are available on request or can be taken from the Leybold main catalogue.



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