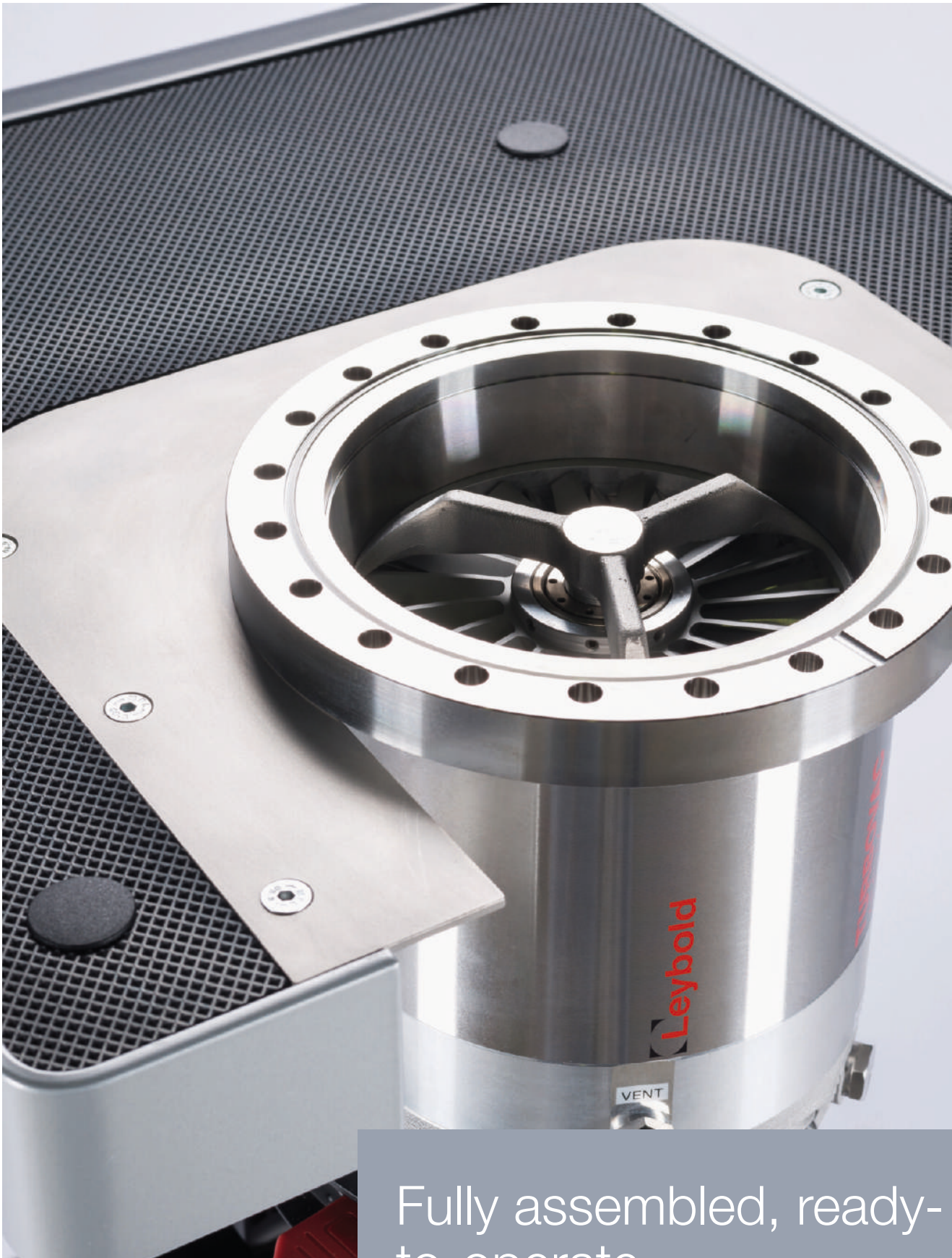


TURBOLAB Pumping Stations

Versatile turbomolecular vacuum systems





Fully assembled, ready-to-operate, turbomolecular pumping systems.

One simple platform, multiple variants. customized for your process

Our TURBOLAB pumping stations bring together all of the core components of an advanced vacuum system into an easy-to-use, preconfigured, portable unit.

Each version can be customized to your individual needs with a choice of vacuum measurement devices and accessories such as valves and heaters.

Key features

- Available in either workbench or cart variants
- A choice of primary pumps to match the environmental requirements of your process
- A range of turbomolecular pumps depending on your speed/pump-down demands
- Compact units with small footprint
- Easy to relocate pumps out and away from the frame
- Monitored data such as: frequency, temperature, current/pressure are automatically stored to an internal data log file
- User-friendly backlit display controller
- Portable, mobile, ideal for multipurpose use
- Supplied fully assembled and ready to operate from the box

Applications

The wide choice of the range, reliability and ready-to-go functionality makes the TURBOLAB system ideal for use across a range of functions from light-industrial, R&D and scientific research:

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

One basic design, multiple variations

Create your ideal pumping station, perfectly matched to your application.

— **TURBOLAB bench-top variant: ideal for smaller laboratories or where versatile deployment is key**

- Rubber feet for added stability
- Lighter weight
- Easy to relocate



— **TURBOLAB cart variant is perfect for applications where easy manoeuvrability is a must**

- Cart with 4 x lockable wheels to ultimate mobility
- Easy to relocate pumps out and away from frame

— **Backing pump: ECODRY 25/35
Cart version only**

- Dry, multistage roots vacuum pump
- Ideal for clean environments, with minimal noise and pumping speeds of up to 35 m³/h



— **Backing pump: SCROLLVAC SC
7 or 15 plus scroll pump**

- Oil-free scroll vacuum pumps operating on scroll compressor principle.
- Ideal for both laboratories and light industrial, pumping speeds up to 14.5 m³/h

— **Backing pump: TRIVAC 8B rotary
vane pump**

- Oil-sealed double stage vane pump
- Robust, sturdy, ideal for industrial settings, pumping speeds up to 8.5 m³/h





— The Turbomolecular pump

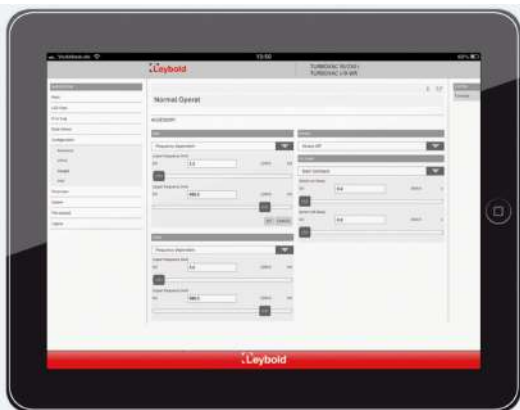
Choose from 4 variants from our popular **TURBOVAC i** range:

- TURBOVAC i 90 with pumping speeds of 90 l/s
- TURBOVAC i 250 with pumping speeds of 250 l/s
- TURBOVAC i 350 with pumping speeds of 350 l/s
- TURBOVAC i 450 with pumping speeds of 450 l/s

Compact, versatile, reliable

— Standard Equipment: Built-in support for accessories

- Purge
- Vent
- Air cooling
- Flange heater
- 2 pressure gauges



— Standard Equipment: Built in webserver

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

- **Backlit display: Every TURBOLAB comes with a Turbo Power unit for control, configuration and monitoring of you pump system**

Cart version – baseplate, mounting column and castors

Remote Control (via the X1 interface):

- Configurable X1 digital/analogue I/O
- Start/stop
- Error
- Warning
- Analogue output



— Accessories/Options

Finetune your TURBOLAB vacuum system with our bespoke accessories:

- Purge gas or venting valve
- Air or water cooling unit
- Flange heaterband
- Safety valve
- Adsorption trap
- Exhaust filter
- Relocation kit to operate your turbomolecular pumps at your chamber

- **Complete your system with 2 x vacuum pressure gauges**

High vacuum sensor:

- PENNINGVAC PTR 90 RN

Fore-vacuum sensor:

- THERMOVAC TTR 91 RN or
- THERMOVAC TTR 101 RN

Alternatively, ISO-K or CF connection.



System control, software, and accessories

Software tools

— System control, monitoring and data analysis

All our TURBOLAB systems are available with software tools making managing all aspects of your vacuum process simple. All critical parameters and conditions (errors, warnings, frequency, temperature, etc.) are logged to an internal memory automatically based on a default time interval which you have 24/7 access to.



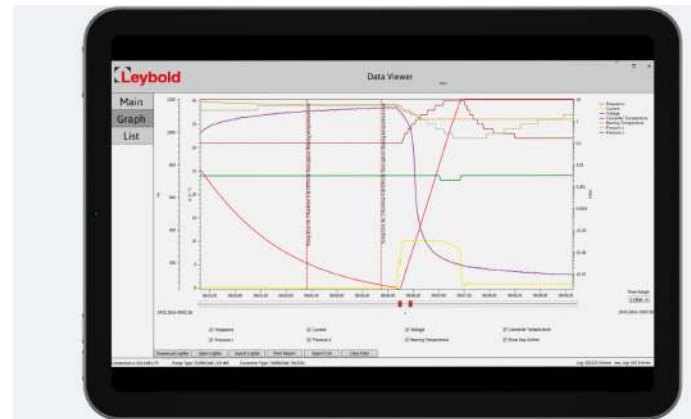
— TURBOLAB webserver: a multi-platform browser instrument for configuring, operating, controlling, and monitoring your system.

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

— **DataViewer Trend displays the log data via a (windows) PC**

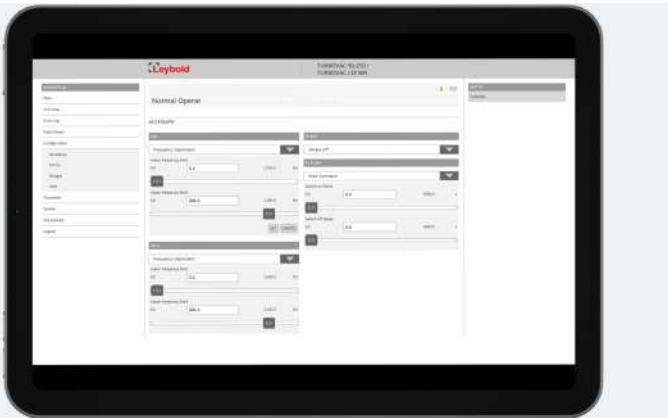
The PC based software tool **TURBOLAB Data Viewer** analyses the data log and event log files and monitors the status and the key parameters in real-time from multiple **TURBOLAB** systems

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



— **CMS Widget central management software/control window or real-time system condition status via (windows) PC**

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



Technical data and ordering information

Technical data

Parameter		TURBOVAC 90 / Cart	TURBOVAC 250 / Cart	TURBOVAC 350 / Cart	TURBOVAC 450 / Cart
High vacuum connection	DN	KF40	ISO63	CF63	ISO100
Fore vacuum connection		16 KF		25 KF	
Pumping speed for N ₂	l/s	90	225	290	430
Ultimate pressure ISO/CF	mbar	8 x 10 ⁻⁸ / 5 x 10 ⁻¹⁰			
Mains supply	V	110 / 230 ±10 %			
Power consumption max. 110 / 230	VA	1760 / 3680			
Weight ISO	Kg	20 / 100		35 / 110	
Accessories		6			
Gauges		2			

System condition monitoring (CBM)

Software - Access via the IP address of the TURBOLAB (no software installation required)

Webserver - Multi-platform browser (Internet Explorer, 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

	TURBOLAB 90 / Cart		TURBOLAB 250 / Cart		TURBOLAB 350 / Cart		TURBOLAB 450 / Cart	
Bench-top Version								
Type of backing pump	DN 63 ISO - K	DN 63 CF	DN 100 ISO - K	DN 100 CF	DN 100 ISO - K	DN 100 CF	DN 160 ISO - K	DN 160 CF
Diaphragm pump - DIVAC 3.0	501592V00001000	501592V01001000	501592V08001000	501592V09001000	501592V04001000	501592V05001000	501592V06001000	501592V07001000
No backing pump	501592V00200000	501592V01200000	501592V08200000	501592V09200000	501592V04200000	501592V05200000	501592V06200000	501592V07200000
Cart Version								
Type of backing pump	DN 63 ISO - K	DN 63 CF	DN 100 ISO - K	DN 100 CF	DN 100 ISO - K	DN 100 CF	DN 160 ISO - K	DN 160 CF
Multistage roots								
ECODRY 25	501592V00140000	501592V01140000						
ECODRY 35			501592V08150000	501592V09150000	501592V04150000	501592V05150000	501592V06150000	501592V07150000

Ordering information

	TURBOLAB 90 / Cart		TURBOLAB 250 / Cart		TURBOLAB 350 / Cart		TURBOLAB 450 / Cart	
Scroll pumps								
SCROLLVAC SC 7 plus	501592V00021000	501592V01021000	501592V08021000	501592V09021000	501592V04021000	501592V05021000	501592V06021000	501592V07021000
SCROLLVAC SC 15 plus	501592V00041000	501592V01041000	501592V08041000	501592V09041000	501592V04041000	501592V05041000	501592V06041000	501592V07041000
Rotary vane pump - TRIVAC D 8 B	501592V00130000	501592V01130000	501592V08130000	501592V09130000	501592V04130000	501592V05130000	501592V06130000	501592V07130000
No backing pump	501592V00210000	501592V01210000	501592V08210000	501592V09210000	501592V04210000	501592V05210000	501592V06210000	501592V07210000
Mains cables *								
230 V, 5 m	800103V0030							
110 V, 5M	800103V0031							
230 V, UK plug, 5 m	800103V0037							
Sensor cables **								
Type A, 1.5 m	800103V0032							
Type A, 5 m	12426							

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

* Mains cables must be ordered separately.

** Additional lengths or accessory cables on request.

For detailed information on 110 V, 50/60 Hz voltage models, and the full range of accessories, please contact us or visit our online webshop.

TURBOLAB Pumping Stations



Pioneering products. Passionately applied.

www.leybold.com

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