

# T-Station Turbomolecular Pumping Stations





# Compact, powerful and reliable performance... wherever you need it

Our comprehensive range of T-Station vacuum pumping systems have been developed to bring advanced plug-and-go vacuum technology to market sectors where simplicity and versatility are key.

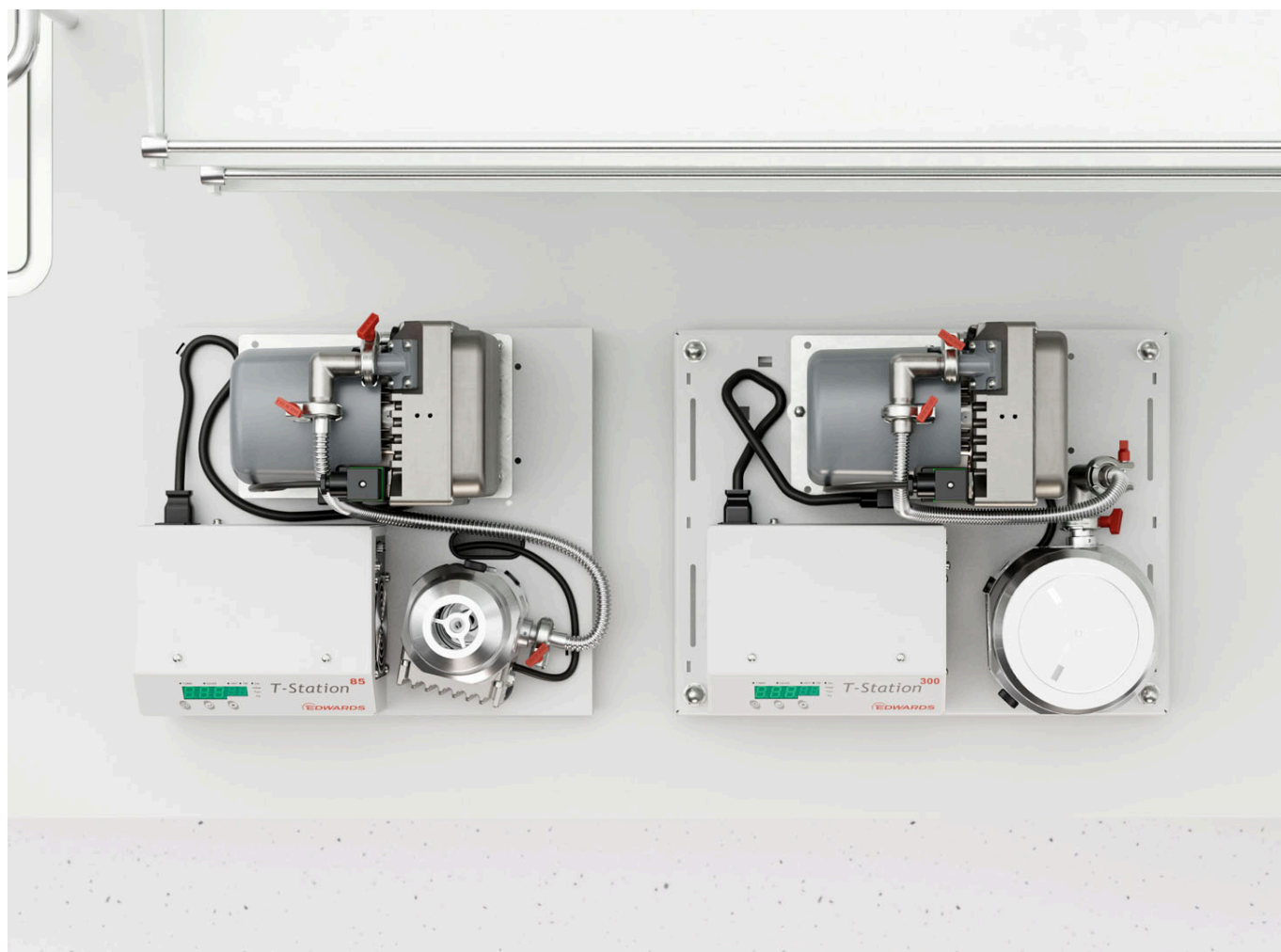
At Edwards we have a deep understanding of science, R&D, and the critical role that vacuum plays in delivering results. From small school laboratories to international research projects we understand that dependable vacuum technology is an essential foundation for scientific progress.

**Designed with our partners in mind, the T-Station combines a backing pump, turbomolecular pump, and a simple controller into one compact vacuum cart that can be deployed across your laboratory or R&D function with ease.**

The evolution of our T-Station range has seen a wider choice of both primary and turbomolecular pumping options introduced, further expanding the applications it can be used for and improving operational performance.

All of our turbomolecular pumping stations are supplied fully assembled and ready to use straight from the box, making it an ideal choice if you're looking for true turnkey functionality.

There are 2 models in the range, with variants within each model. The entry level T-Station 85, and the higher capacity T-Station 300.



# Main benefits



## — Push button vacuum stations ready to go

Designed to be used straight from the box our T-Station's do not require systemisation or complex configuration.

## — Controller

start/stop button, digital display, automatic venting option





## — Backing pump

mXDS3s oil-free dry scroll pump with pumping speeds of  $3 \text{ m}^3/\text{h}$  and ultimate vacuum of 0.1 mbar. Also available are the E2M1.5 oil sealed backing pump ( $1.6 \text{ m}^3/\text{h}$ ) or the XDD1 dry diaphragm backing pump ( $1.2 \text{ m}^3/\text{h}$ )

## — Turbomolecular pump

nEXT 85 with pumping speeds of 85 l/s, or the nEXT 300 TMP with pumping speeds of 300 l/s



## — All metal plate

Low profile sturdy base plate with rubber feet for added stability, and side cut outs for manual handling

## **Inlet flange**

Available as either NW40, IOS63 or CF63 (T-Station 85) or ISO100, CF100 (T-Station 300)







## T-STATION 85

The T-Station 85 is a low cost, entry level, compact pumping station. Popular within universities and R&D worldwide as it offers a simple press-button and hassle-free solution for smaller scale research. This model delivers pumping speeds between 47 to 85 l/s.



## The backing pump

Fore vacuum performance is achieved with a choice of:

- mXDS3s dry scroll pump
- E2M1.5 oil sealed backing pump
- XDD1 dry diaphragm backing pump

The principal difference is the newer mXDS3s dry scroll pump delivers higher pumping speeds of 3 m<sup>3</sup>/h and better ultimate pressure of 0.1 mbar, significantly reducing the pump down time and improving efficiency. It also comes with a fitted inlet valve to protect the pump in the event of power failure, and an exhaust filter making it more compact, ideal for smaller laboratories or where space is restricted.

## The turbomolecular pump

The nEXT85 turbomolecular pump provides the high-vacuum (HV) pressure ranges once primary vacuum has been achieved. This latest breed of TMP technology provides reliable performance with speeds of up to 85 l/s, reliability, and low maintenance intervals.

## The controller

Power and manage your vacuum system with the integrated controller. Features in include:

- Simple dedicated start/stop button
- Accurate and easy to read digital display
- Option to select 'vent mode' for fully automated venting

## Benefits:

- Powerful compact performance with pumping speeds up to 85 litres per second
- Rugged all metal frame built for durability and to withstand the varied demands of R&D laboratory testing conditions
- Stable design enhanced by the use of rubber feet on the baseplate and resulting in lower profile and robust structure
- Cut offs in the sides for manual handling
- Integrated air cooler acts to cool internal power supply and pump/controller for quiet operation avoiding multiple fans.
- Option of inlet flanges choose from an NW40, ISO63 or CF63 inlet flange to suit your application
- Modular design means replacements can be carried out inhouse extending the life of your product and minimising downtime

## Ideal Applications

It's compact design and mobile versatility make the T-Station 85 a perfect fit for:

- Academic research laboratories
- R&D
- Universities
- Surface physics



## T-STATION 300

The T-Station 300 is a higher capacity pumping station purpose built for more demanding applications. Its robust design and versatile performance have made it popular across science and industry and those looking for a powerful, user-friendly, vacuum system. This model delivers pumping speeds up to 300 l/s dependent on the variant selected.

## The backing pump

Fore vacuum performance is achieved with a choice of:

- mXDS3s dry scroll pump  
The mXDS3s dry scroll pump delivers the higher pumping speeds of 3 m<sup>3</sup>/h, and ultimate pressure of 0.1 mbar significantly reducing pump down time and improving efficiency. In addition it comes fitted with an inlet valve to protect the pump in the event of power failure, and an exhaust filter making it a perfect choice for general and smaller scale R&D applications.
- E2M1.5 oil sealed backing pump
- XDD1 dry diaphragm backing pump

## The turbomolecular pump

The nEXT300 turbomolecular pump provides the high-vacuum (HV) pressure ranges once primary vacuum has been achieved. Our latest breed of TMP technology provides outstanding performance up to 300 l/s, robust reliability, and low maintenance intervals.

## The controller

Power and manage your vacuum system with our integrated controller. Features in include:

- Simple dedicated start/stop button
- Accurate and easy to read digital display
- Option to select 'vent mode' for fully automated venting

## Benefits:

- Rugged all metal frame built for durability and to withstand the varied demands of R&D laboratory testing conditions
- Stable design enhanced by the use of rubber feet on the baseplate and resulting in lower profile and robust structure
  - Cut offs in the sides for manual handling
  - Integrated air cooler acts to cool internal power supply and pump/controller for quiet operation avoiding multiple fans.
  - Range of inlet flanges choose from either an ISO100 or CF100 inlet flange to suit your application
  - Easily self-serviceable pumps lowering the cost of ownership

## Ideal Applications

It's compact design and mobile versatility make the T-Station 300 a perfect fit for:

- Research and development
- High and ultra-high vacuum systems
- Analytics
- Surface physics
- High energy physics/accelerators

# Ordering Information

## T-Station 85

Description	Part number
T-Station 85H Dry NW40 mXDS3s 230V	TS85M1003
T-Station 85H Dry NW40 mXDS3s 115V	TS85M1006
T-Station 85H Dry ISO63 mXDS3s 230V	TS85M2003
T-Station 85H Dry ISO63 mXDS3s 115V	TS85M2006
T-Station 85H Dry CF63 mXDS3s 230V	TS85M3003
T-Station 85H Dry CF63 mXDS3s 115V	TS85M3006
T-Station 85H Dry NW40 200-230V	TS85D1001
T-Station 85H Dry NW40 100-120V	TS85D1002
T-Station 85H Dry ISO63 200-230V	TS85D2001
T-Station 85H Dry ISO63 100-120V	TS85D2002
T-Station 85H Dry CF63 200-230V	TS85D3001
T-Station 85H Dry CF63 100-120V	TS85D3002
T-Station 85H Wet NW40 200-230V	TS85W1001
T-Station 85H Wet NW40 100-120V	TS85W1002
T-Station 85H Wet ISO63 200-230V	TS85W2001
T-Station 85H Wet ISO63 100-120V	TS85W2002
T-Station 85H Wet CF63 200-230V	TS85W3001
T-Station 85H Wet CF63 100-120V	TS85W3002
EMF3 mist filter for E2M1.5 pump	A46220000
N/C TAV5 vent valve connector fitted	B8G200835
N/O TAV5 vent valve connector fitted	B8G200834
2m electrical supply cable UK plug	A50505000
2m electrical supply cable EU plug	A50506000
2m electrical supply cable USA/Japan plug	A50507000
2m electrical supply cable no plug	A50508000
APG200-XLC active Pirani gauge NW16	D1G2011100
APGX-H active linear convection gauge NW16	D02391000
AIM200-X-active inverted magnetron gauge NW25	D2G0021100

## T-Station 85

Description	Part number
WRG200-X-active wide range gauge NW25	D3G0021100
0.5m active gauge cable	D40001005
1m active gauge cable	D40001010

## T-Station 300

Description	Part number
T-Station 300 Dry ISO100 mXDS3s 230V	TS300M2003
T-Station 300 Dry ISO100 mXDS3s 115V	TS300M2006
T-Station 300 Dry CF100 mXDS3s 230V	TS300M3003
T-Station 300 Dry CF100 mXDS3s 115V	TS300M3006
T-Station 300D Dry ISO100 200-230V	TS300D4001
T-Station 300D Dry ISO100 100-120V	TS300D4002
T-Station 300D Dry CF100 200-230V	TS300D5001
T-Station 300D Dry CF100 100-120V	TS300D5002
T-Station 300D Wet ISO100 200-230V	TS300W4001
T-Station 300D Wet ISO100 100-120V	TS300W4002
T-Station 300D Wet CF100 200-230V	TS300W5001
T-Station 300D Wet CF100 100-120V	TS300W5002
EMF3 mist filter for E2M1.5 pump	A46220000
TAV5 Vent Valve 24V DC 1/8 Bsp	B58066010
2m electrical supply cable UK plug	A50505000
2m electrical supply cable EU plug	A50506000
2m electrical supply cable USA/Japan plug	A50507000
2m electrical supply cable no plug	A50508000
APG200-XLC active Pirani gauge NW16	D1G2011100
APGX-H active linear convection gauge NW16	D02391000
AIM200-X-active inverted magnetron gauge NW25	D2G0021100
WRG200-X-active wide range gauge NW25	D3G0021100
0.5m active gauge cable	D40001005
1m active gauge cable	D40001010

# Technical Data

## Technical Data

Unit	Unit	T-Station 85	T-Station 300
<b>Pumping speed no N<sub>2</sub></b>			
NW40	l/s	47	N/A
ISO63/CF63	l/s	84	N/A
ISO100/CF100	l/s	N/A	300
<b>Compression ratio for N<sub>2</sub></b>		> 1 x 10 <sup>11</sup>	
<b>Backing pump speed @50 Hz</b>			
E2M1.5	m <sup>3</sup> /h	1,6	
XDD1	m <sup>3</sup> /h	1,2	
<b>Ultimate vacuum</b>			
T-Station 85H dry ISO63	mbar	<5x10 <sup>-8</sup>	N/A
T-Station 85H dry CF63	mbar	<5x10 <sup>-9</sup>	N/A
T-station 300 ISO100	mbar	N/A	<6x10 <sup>-8</sup>
T-station 300 CF100	mbar	N/A	<5x10 <sup>-10</sup>
T-Station 85H wet ISO63	mbar	<5x10 <sup>-9</sup>	N/A
T-Station 85H wet CF63	mbar	<5x10 <sup>-10</sup>	N/A
<b>Mass</b>			
mXDS3s	kg	19 max	26 max
E2M1.5	kg	21 max	N/A
XDD1	kg	18 max	N/A
E2M1.5 CF100	kg	N/A	29 max
XDD1 CF100	kg	N/A	24 max
<b>Inlet flange</b>		DN 16 ISO - KF	
<b>Exhaust flange</b>			
mXDS3s		1/8 BSP or 6x8mm	
E2M1.5		11 mm OD nozzle or 3/8 inch BSP	
XDD1		Fitted silencer or 1/8 inch BSP	

## Technical Data

Unit	Unit	T-Station 85	T-Station 300
<b>Noise level</b>	dB(A)	54.0 +/- 2.5	
<b>Operating temperature range</b>			
Dry Vacuum pumps	°C	+5 to +40	
Wet Vacuum pumps	°C	+12 to +40	



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