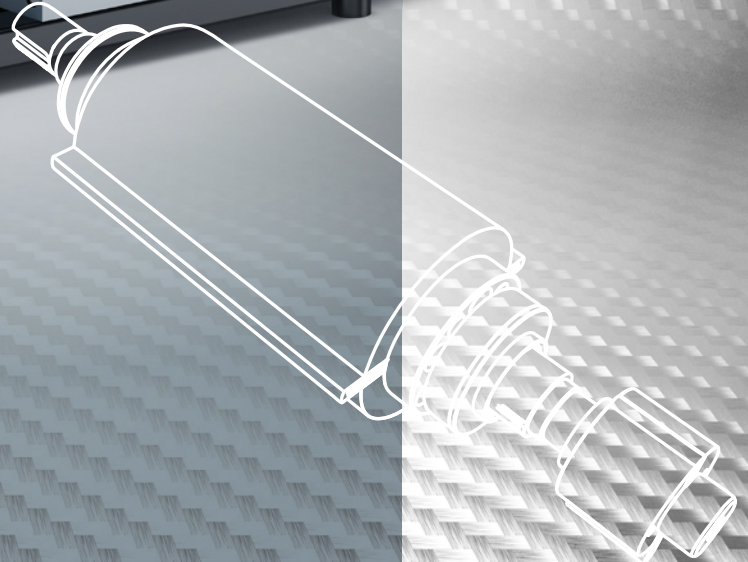


# E2S TWO-STAGE ROTARY VANE PUMPS



The background of the image is a close-up, grayscale photograph of a vacuum pump rotor. The rotor features a series of concentric, curved blades or vanes that create a complex, repeating geometric pattern. The lighting is dramatic, highlighting the texture and depth of the metal components. Overlaid on the lower right portion of this image is a solid red rectangular box containing white text.

# EDWARDS THE PARTNER OF CHOICE

Edwards is a world leader in the design, technology and manufacture of vacuum pumps for industrial applications with over 100 years' history.

We believe in delivering results that bring value to our customers by using our breadth of industry experience to identify and apply solutions. Using the most innovative and up-to-date modelling techniques, we can optimise the pumping configuration for customers to provide a system design giving the maximum performance in the most reliable and cost-effective way.

# SIMPLE, YET POWERFUL ROTARY VANE PUMP

E2S range - E2S45, E2S65 and E2S85 - is our modern series of industrial two-stage oil-sealed rotary vane vacuum pumps for medium vacuum. E2S perfectly balances performance, cost and usability. A reliable piece of engineering, simply made and well-suited for many standard applications. It pumps down fast, handles vapours and contributes to minimising noise level in your workplace.

## BOOST YOUR PRODUCTION NOT YOUR EXPENSES



### SPECIALISED PERFORMANCE

- High pumping speed to reduce cycle times and gain productivity
- Hydro mode with improved vapour handling capability to fit with humid applications
- Low noise level matching with lab environment expectations



### MODERN DESIGN MADE SIMPLE

- Economical product with clean layout
- Built-in oil filter to protect pump mechanism from contaminants and prevent oil leaks
- Innovative design to increase cooling performance keeping high vapour tolerance
- No complex mechanical arrangement to keep technology simple



### GREAT USABILITY

- Effective product design to accommodate users' needs
- Easy and pleasant to use and service. On-site cleaning to maximise uptime
- Efficient over-temperature protection and low oil level detection (optional features)
- Increased safety against operator misuse

## E2S VARIANTS

- E2S45
- E2S65
- E2S85



## WOULD YOU NEED MORE SPEED?

Standard combinations of E2S two-stage rotary pumps and EH mechanical boosters are available for high capacity demands.

### Maximum pumping speed of standard E2S/EH systems at 50Hz

	EH250	EH500	EH1200
E2S45	230	X	X
E2S65	240	365	X
E2S85	250	385	770

Ultimate vacuum:  $3 \times 10^{-4}$  mbar

Factory pre-assembled, these pumping systems are compact, mobile and easy to use. With a direct start from atmospheric pressure our E2S85-EH1200 stack provides up to 900 m<sup>3</sup>/h effective speed and allows to reach high vacuum range with an ultimate vacuum of  $3 \times 10^{-4}$  mbar.



# APPLICATIONS



- Vacuum degassing and drying
- Heat treatments and vacuum ovens
- Vacuum insulation
- Plasma treatments (except O2 plasma)
- Leak testing
- Gas production and handling
- Research and development
- Backing of high vacuum pumps or systems

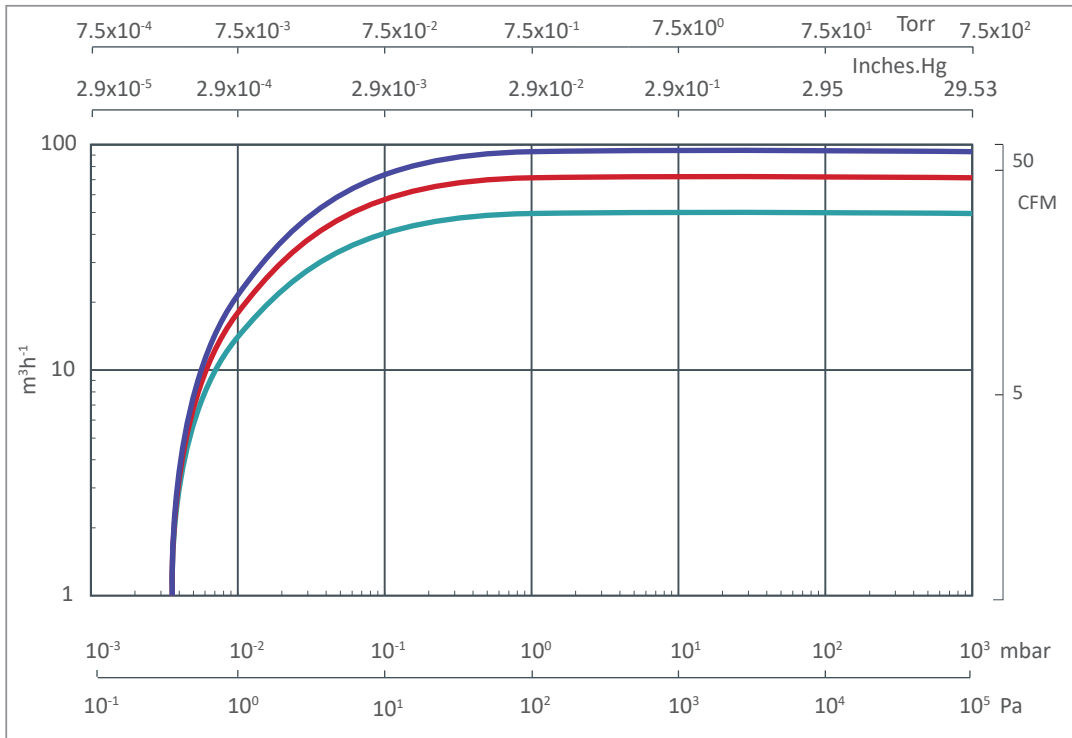


# TECHNICAL DATA

		E2S45	E2S65	E2S85
Max. displacement (50Hz)	m <sup>3</sup> h <sup>-1</sup>	47	64	87
	cfm	28	38	51
Max. displacement (60Hz)	m <sup>3</sup> h <sup>-1</sup>	56	77	105
	cfm	33	45	62
Pumping speed (50Hz)	m <sup>3</sup> h <sup>-1</sup>	42	57	78
	cfm	25	34	46
Pumping speed (60Hz)	m <sup>3</sup> h <sup>-1</sup>	50	69	94
	cfm	29	41	55
Ultimate total pressure without gas ballast	mbar	3.0E-03	3.0E-03	3.0E-03
	torr	2.25E-03	2.25E-03	2.25E-03
Ultimate vacuum with gas ballast (position 1)	mbar	6.0E-03	6.0E-03	6.0E-03
	torr	4.5E-03	4.5E-03	4.5E-03
Inlet connection	ISO-F / NW	40	40	40
Outlet connection	mm	25	25	25
Max. permitted outlet pressure	bar (g)	0.5	0.5	0.5
	psi (g)	7.3	7.3	7.3
Max. water vapour tolerance	mbar	20	15	13
	torr	15	11	10
Max. water vapour capacity (50Hz)	kg h <sup>-1</sup>	0.62	0.66	0.73
	lb h <sup>-1</sup>	1.4	1.5	1.6
Max. water vapour capacity (60Hz)	kg h <sup>-1</sup>	0.74	0.8	0.87
	lb h <sup>-1</sup>	1.6	1.8	1.9
Weight Approximate	Kg	80	90	100
Motor protection rating	IP	55	55	55
Motor rated power (50Hz)	kW	1.1	1.5	2.2
	Hp	1.5	2	3
Motor rated power (60Hz)	kW	1.3	1.8	2.6
	Hp	1.7	2.4	3.5
Noise level (50Hz)	dB(A)	58	60	60
Noise level (60Hz)	dB(A)	60	62	62
Oil refill capacity (Max.)	litre	4.3	4.8	5.5
	gal	1.1	1.3	1.5
Cooling type	cooling	Air	Air	Air
Recommended oil		Ultragrade Performance 70		

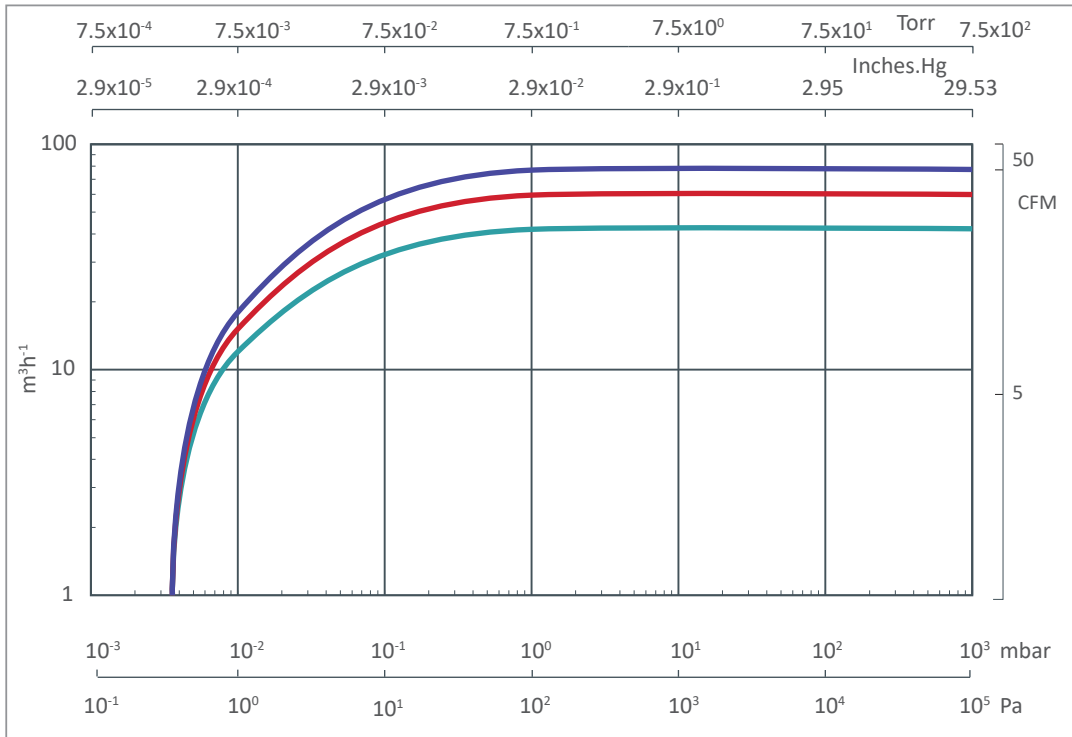
# PERFORMANCE CURVES

**60Hz**



■ E2S45    ■ E2S65    ■ E2S85

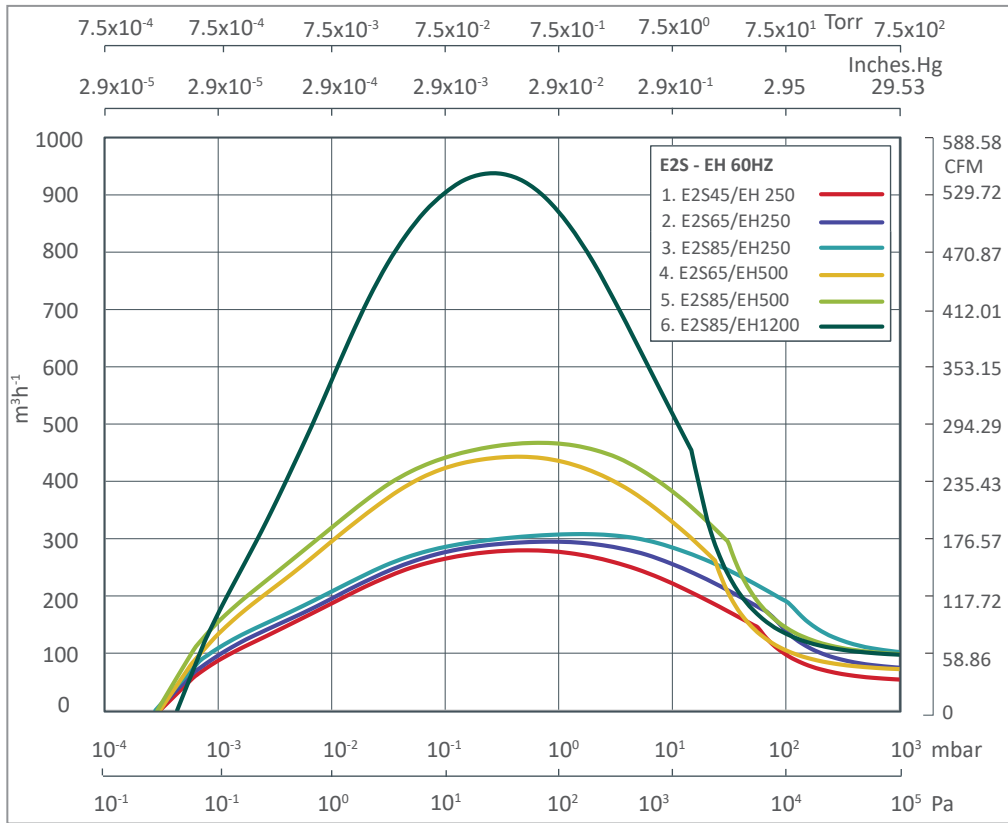
**50Hz**



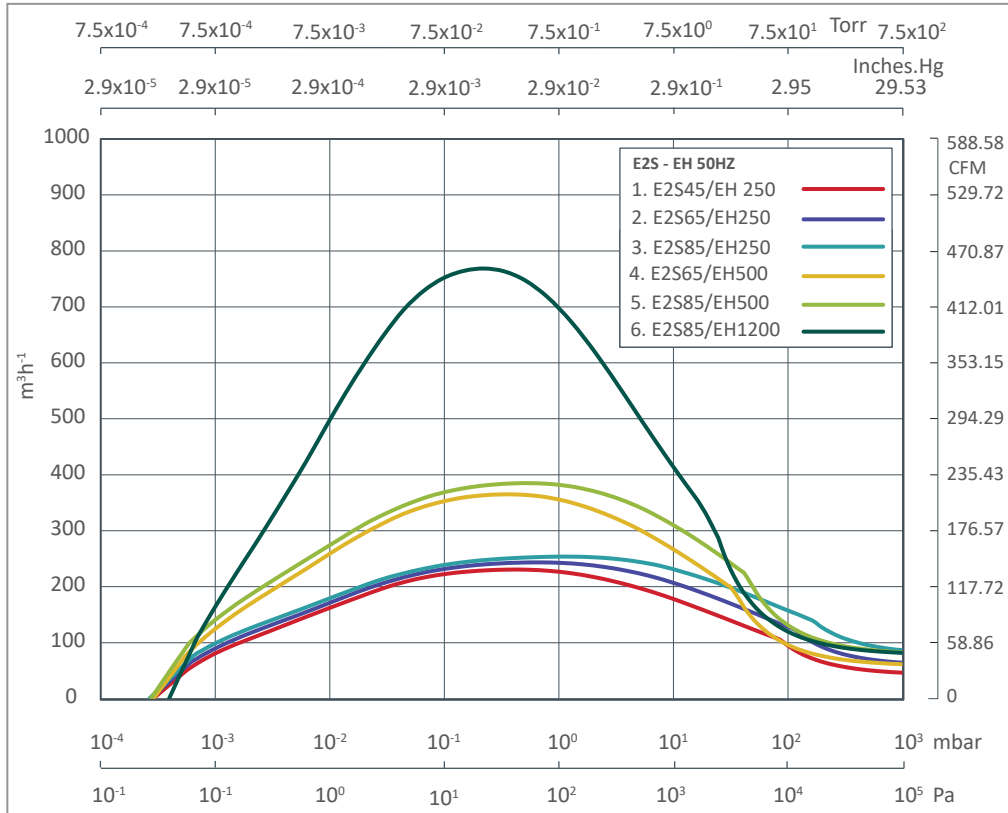
■ E2S45    ■ E2S65    ■ E2S85

# PERFORMANCE CURVES | E2S PUMP+EH BOOSTER COMBINATION

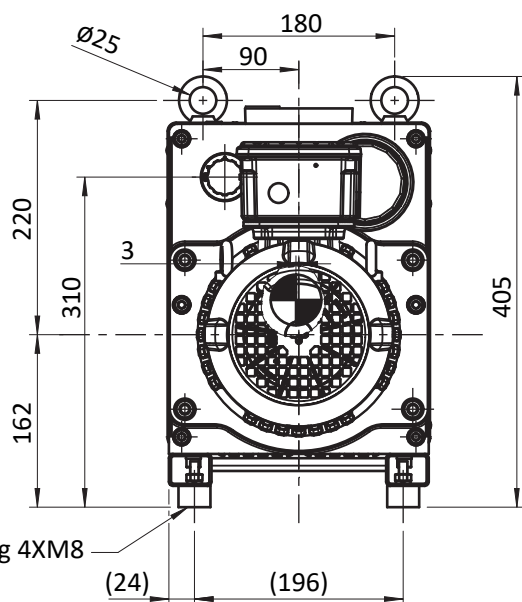
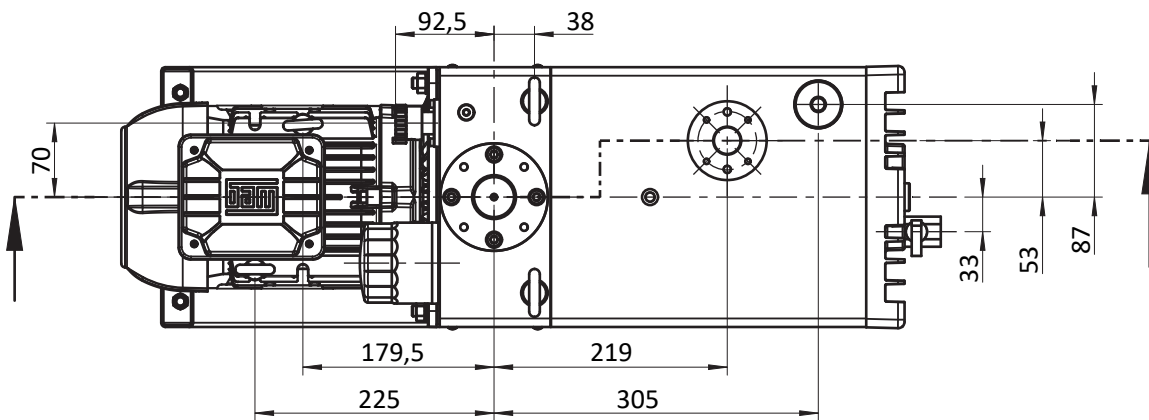
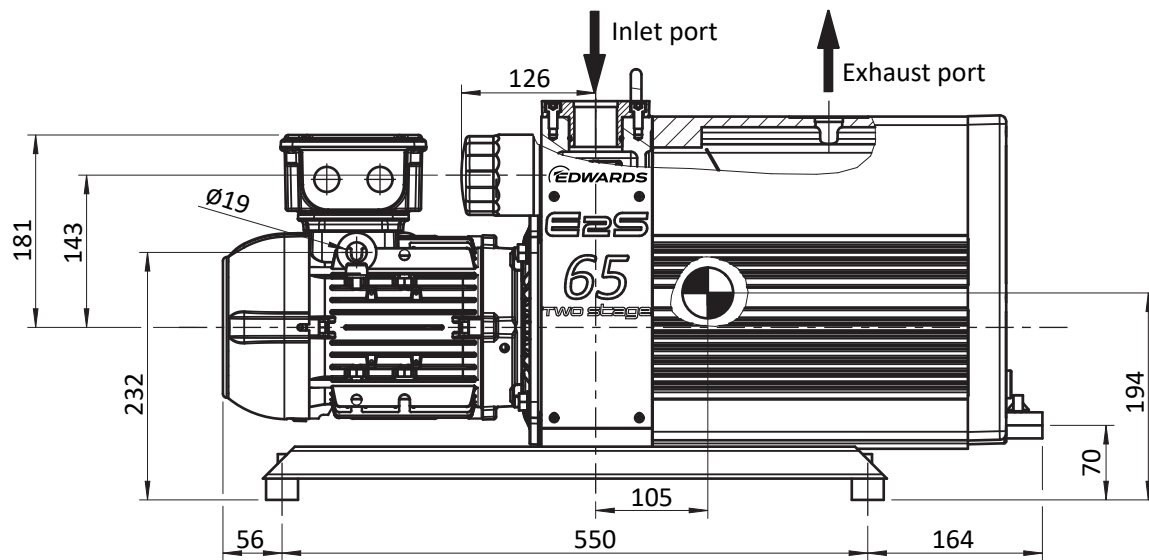
## E2S-EH 60HZ



## E2S-EH 50HZ



# DIMENSIONS



	Length (mm)	Width (mm)	Height (mm)
E2S45	740	244	405
E2S65	770	244	405
E2S85	857	244	405

## SERVICE AND SUPPORT

To ensure your pump maintains optimal performance and reliability, we offer a wide range of service solutions, tailored to meet your needs. From Field Service intervention to Managed Maintenance agreements, we will take care of your pump to ensure that it continues to deliver clean, consistent, efficient performance, with lower running cost and optimum total cost of ownership for its entire operating life.

Selecting original spare parts, maintenance kits and grease, means that every critical part performs as it was intended. Form, fit and function are guaranteed. Our services engineers only fit 100% genuine parts to ensure you receive the best result from each and every service.



# ORDERING INFORMATION

Mat. Number	Description
<b>E2S</b>	
A35324950	E2S45 EU/US 50/60Hz
A35324934	E2S45 ASIA 50/60Hz
A35424950	E2S65 EU/US 50/60Hz
A35424934	E2S65 ASIA 50/60Hz
A35524950	E2S85 EU/US 50/60Hz
A35524934	E2S85 ASIA 50/60Hz

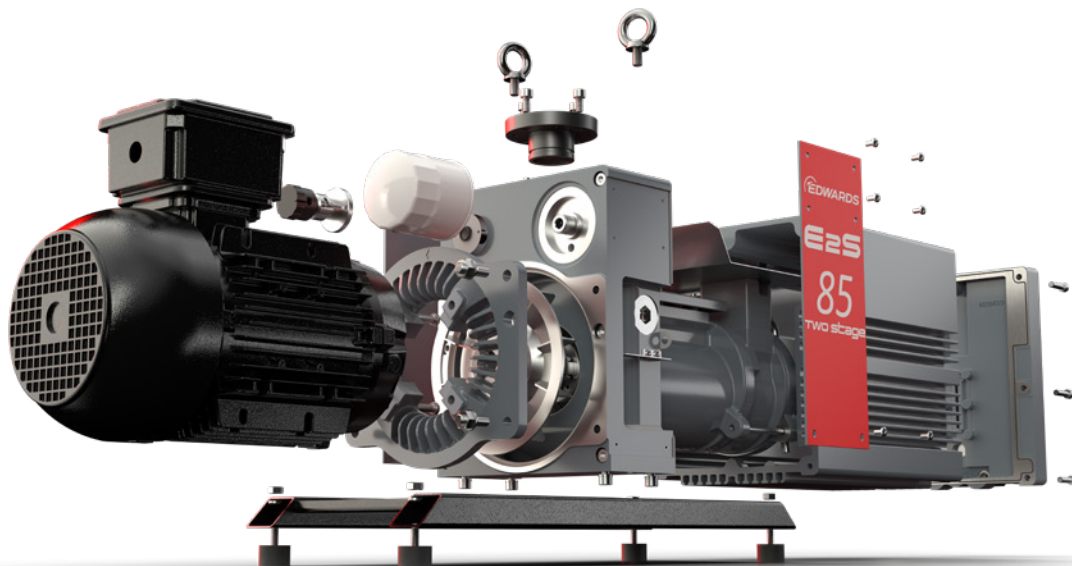
Mat. Number	Description	Cooling
<b>E2S-EH packages with 400V/50Hz EH booster</b>		
A35320250	E2S45/EH250 EU/CN 50Hz system	Air/Air
A35420250	E2S65/EH250 EU/CN 50Hz system	Air/Air
A35520250	E2S85/EH250 EU/CN 50Hz system	Air/Air
A35420500	E2S65/EH500 EU/CN 50Hz system	Air/Air
A35520500	E2S85/EH500 EU/CN 50Hz system	Air/Air
NRV355210	E2S85/EH1200 EU/CN 50Hz system	Air/Water

Mobility kit available separately.

## E2S ACCESSORIES

Instrumentation	
A35924247	Oil level monitor E2S
A35924246	Temperature switch E2S
Exhaust elements	
1019040A20	E2S45 exhaust oil mist filter
1019090A20	E2S 65-85 exhaust oil mist filter
Inlet elements	
A44202000	Inlet dust filter ITF100
A44302000	High capacity inlet dust filter ITM100
A44102000	Inlet catchpot ITO100
A44402000	Inlet chemical trap ITC100

Gas ballast	
A35924546	Electric gas ballast E2S with solenoid valve
A35924546	Permanent gas ballast E2S without solenoid valve
Booster fitting kits (spool + supporting bracket)	
A35924131	EH250 fitting kit for E2S 45-65-85
A35924142	EH500 fitting kit E2S 65-85
A35924153	EH1200 adapter spool E2S85
NRV355212	EH1200 frame for E2S85
Mobility kits	
NRV355222	Mobility kit for E2S 45-65-85 with EH250-500
NRV355232	Mobility kit for E2S85 with EH1200 (castors)





## GLOBAL CONTACTS

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