

# EDP CHEMICAL DRY VACUUM PUMP

Giving you a clear edge

## PRODUCT DATASHEET

**Edwards, a world leader in dry vacuum pump technology, successfully pioneered the use of environmentally friendly dry vacuum pumps in the early 1980s. With hundreds of thousands of systems installed worldwide, Edwards dry pumps create significant benefits for customers in many applications and industries.**

This expertise is incorporated in our chemical dry pumps to satisfy the demanding requirements of the chemical, petrochemical and pharmaceutical industries.

We offer a range of four pumps with 80 - 400 m<sup>3</sup>h<sup>-1</sup> capacity, and ultimate vacuums of less than 1 mbar.

Our chemical dry pumps meet the highest safety and performance standards.

EDP pumps are based on Edwards' oil-free, non-contacting, award-winning, reverse claw mechanism. They provide consistent vacuum at high efficiencies and low costs of ownership. Dry pumps completely eliminate all problems of process contamination and the creation of polluted effluent, which are experienced with traditional wet vacuum pump technologies.

## Features and benefits

### Industry proven, tried and tested

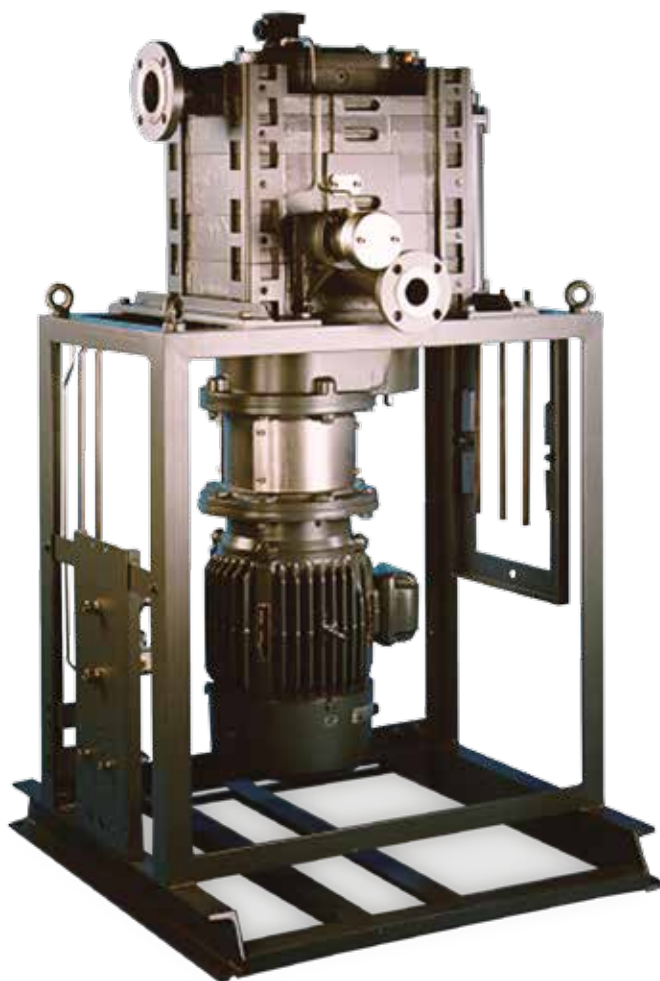
Specifically designed for chemical applications

### Designed and tested for safety and reliability

Stable operation, even during process upsets

### Low cost of ownership

Easy maintenance, low utilities consumption and no cooling gas injection required



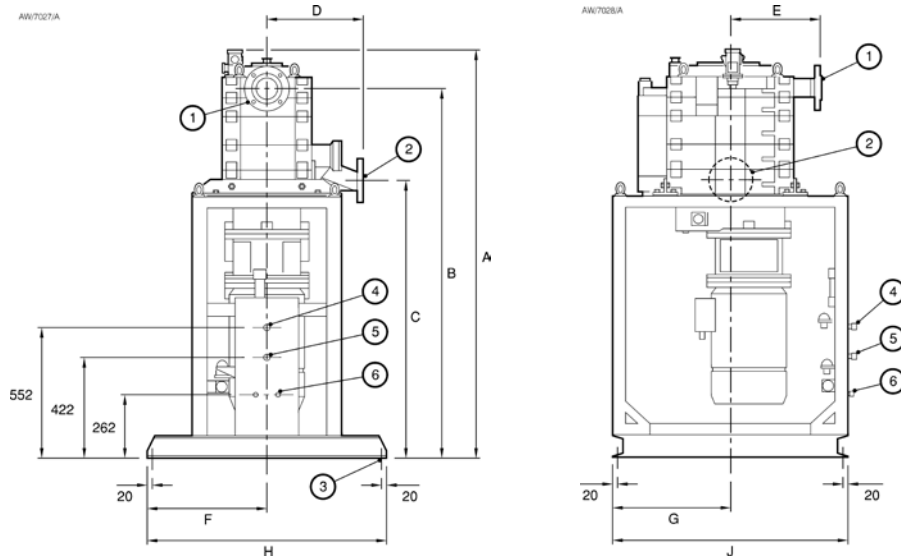
# Specifications

		Units	EDP80		EDP160		EDP250		EDP400	
			50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
Maximum pumping speed	m <sup>3</sup> h <sup>-1</sup>	83	102	163	202	260	320	377	427	
	ft <sup>3</sup> min <sup>-1</sup>	49	60	96	119	153	188	222	251	
Capacity at 10 mbar (7.5 Torr)	m <sup>3</sup> h <sup>-1</sup>	75	102	153	198	255	315	377	422	
	ft <sup>3</sup> min <sup>-1</sup>	44	60	90	117	150	185	222	248	
Ultimate vacuum	mbar	0.5	0.3	0.5	0.3	0.5	0.2	0.4	0.2	
	Torr	0.4	0.2	0.4	0.2	0.4	0.2	0.3	0.2	
Maximum back pressure - standard (optional*)	mbar	1150 (1300*)		1150 (1300*)		1150 (1300*)		1150		
	psig	2.2 (4.4*)		2.2 (4.4*)		2.2 (4.4*)		2.2		
Power consumption at 10 mbar (7.5 Torr)	kW	3.3	4.0	4.9	4.9	6.0	6.0	7.0	7.0	
	hp	4.4	5.4	6.6	6.6	8.0	8.0	9.4	9.4	
Standard motor (380 - 400V, 3 ph, 50 Hz)	kW	5.5	5.5	7.5	11.0	11.0	15.0	18.5	25.0	
Standard motor (200 - 460V, 3 ph, 60 Hz)	hp	7.5	7.5	10.0	15.0	15.0	20.0	25.0	30.0	
Cooling water flow rate (adjustable)	l min <sup>-1</sup>	1 - 8	1 - 10	1 - 8	1 - 10	1 - 10	1 - 10	1 - 10	1 - 10	
	gal min <sup>-1</sup>	0.3 - 2.1	0.3 - 2.6	0.3 - 2.1	0.3 - 2.6	0.3 - 2.6	0.3 - 2.7	0.3 - 2.6	0.3 - 2.7	
Cooling water supply pressure	barg	2 - 10								
	psig	29 - 145								
Seal purge flow (maximum), regulated to 0.3 - 0.5 barg (5 - 7 psig)	l min <sup>-1</sup>	20								
	ft <sup>3</sup> min <sup>-1</sup>	0.7								
Seal purge supply pressure (minimum - maximum)	barg	2 - 10								
	psig	29 - 145								
Noise (max. with exhaust silencer)	dB(A)	73	73	77	78	79	79	82	82	
Weight (with frame and standard motor)	kg	648	650	747	756	848	860	918	960	
	lbs	1429	1433	1647	1667	1870	1909	2024	2116	
Process connection, inlet	ANSI/DIN	2"/DN50		3"/DN80		3"/DN80		3"/DN80		
Process connection, outlet	ANSI/DIN	1.5"/DN40		1.5"/DN40		2"/DN50		2"/DN50		
Pumping mechanism		3 stage reversed claw								
* Consult Edwards										

Data shown here refers to dry pumps only. Higher capacities and deeper vacuum levels are available by combining one or more dry mechanical boosters with EDP pumps. A wide range of systemisation accessories is also available, including condensers for enhanced performance and a number of safety, instrumentation and control options.

Although every care has been taken in the preparation of data and dimensional drawings, please discuss your individual requirements with Edwards.

## Dimensions - mm (inch)

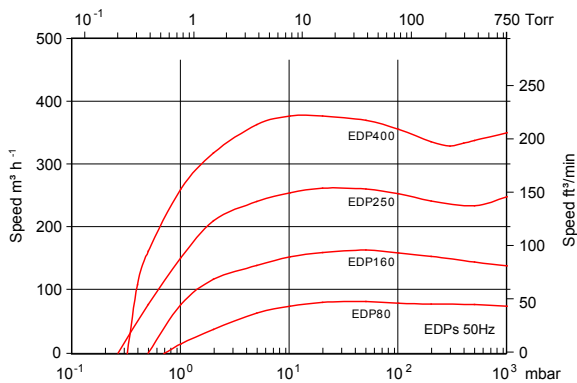


1. Pump inlet
2. Pump outlet
3. Fixing hole:  $\varnothing 18$  mm (4 off)
4. Cooling water outlet connection
5. Cooling water inlet connection
6. Nitrogen supply inlet connection

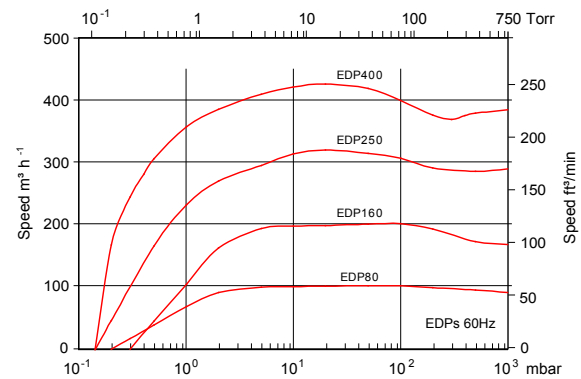
Key	EDP80	EDP160	EDP250	EDP400 50 Hz	EDP400 60 Hz
A	1423 (56.0)	1458 (57.4)	1681 (66.2)	1730 (68.1)	1721 (67.8)
B	1254 (49.4)	1289 (50.7)	1514 (59.6)	1562 (61.5)	1549 (61.0)
C	974 (38.3)	974 (38.3)	1148 (45.2)	1148 (45.2)	1149 (45.2)
D	353 (13.9)	353 (13.9)	377 (14.8)	377 (14.8)	349 (13.7)
E	443 (17.4)	448 (17.6)	359 (14.1)	359 (14.1)	362 (14.3)
F	350 (13.8)	350 (13.8)	500 (19.7)	500 (19.7)	476 (18.7)
G	350 (13.8)	350 (13.8)	475 (18.7)	475 (18.7)	476 (18.7)
H	700 (27.6)	700 (27.6)	1000 (39.4)	1000 (39.4)	997 (39.3)
J	850 (33.5)	850 (33.5)	950 (37.4)	950 (37.4)	946 (37.2)

## Performance

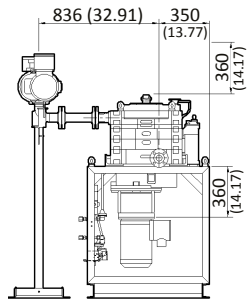
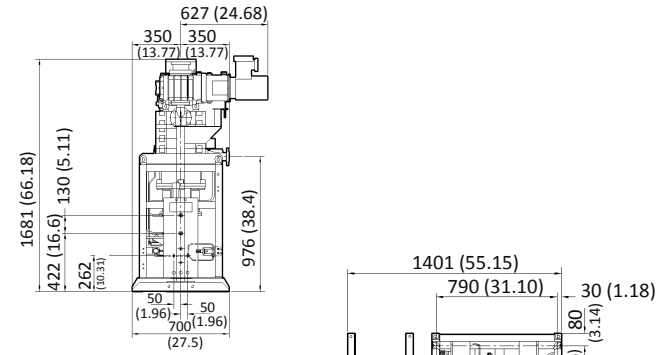
Performance curve - 50 Hz



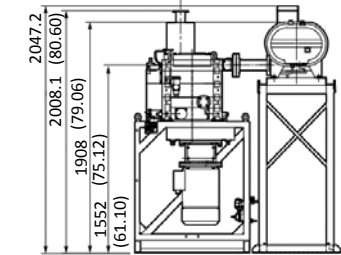
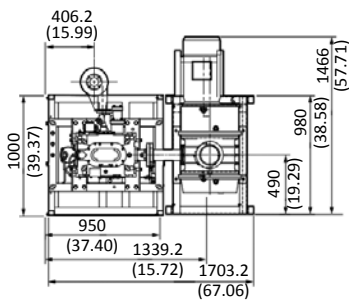
Performance curve - 60 Hz



# Standard Systems Dimensions - mm (inch)



**EDP + EH250/EH500**



**EDP + EH1200/EH2600/4200**

Other combinations available.  
Height and width dimensions will differ if using larger or smaller boosters.

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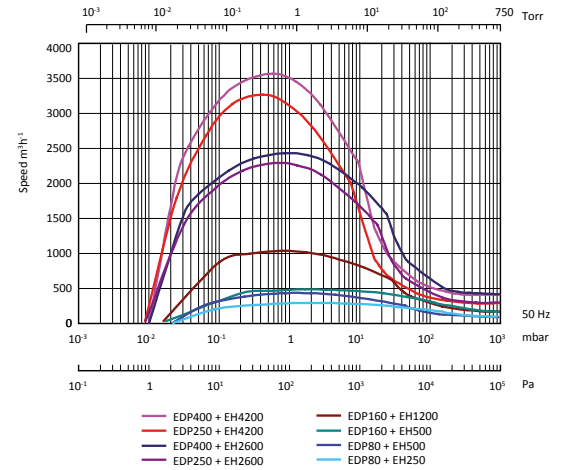
# Systemisation

- Custom systemisation design and build service
- Pre-engineered modules
- Tailored applications support to match performance to process

For performance with booster combinations, please refer to data below:

## Performance curves

**EDP/EH combinations - 50 Hz**



**EDP/EH combinations - 60 Hz**

