

# EV rotary vane pumps

Edwards' range of EV rotary vane pumps are designed to be used in a wide range of industrial and scientific applications. They can be used individually or with mechanical booster pumps to increase both performance and ultimate vacuum. They can operate continuously from atmosphere to ultimate.

With reliability and ease of service in mind, the EV range of pumps are designed for the industrial and scientific markets. Edwards Applications Specialists have unrivalled knowledge and can advise on pump selection, configuration and operation to suit any customers requirements.



## Features and benefits

- Continuous operation from atmosphere to ultimate vacuum
- High pumping speed at low pressure
- Gas ballast valve fitted as standard
- Low noise and vibration
- Air cooled - only power is required; no cooling water is needed
- Good water vapour tolerance
- Integral anti-suckback valve
- Low maintenance and simple service
- Backed by Edwards global service network
- Efficient mist filter for economical operation and environmental protection
- Dual frequency, wide band motor operates in most countries worldwide

## Applications

The EV series of rotary vane pumps are ideally suited to a wide range of industrial and scientific applications, including, but not limited to, the following:

- Furnaces and metallurgy industries
- Food processing and packaging
- Lifting
- Vacuum coating
- Vacuum transporting
- Conveying and handling
- Automotive industry
- Thermoforming
- Vacuum drying
- Power industry
- Medical technology
- Central vacuum systems

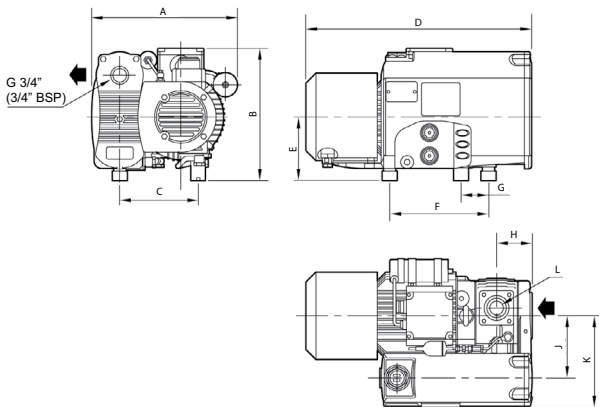
Edwards' applications specialists throughout the world are able to advise on the most suitable vacuum equipment for your application.

# Specification

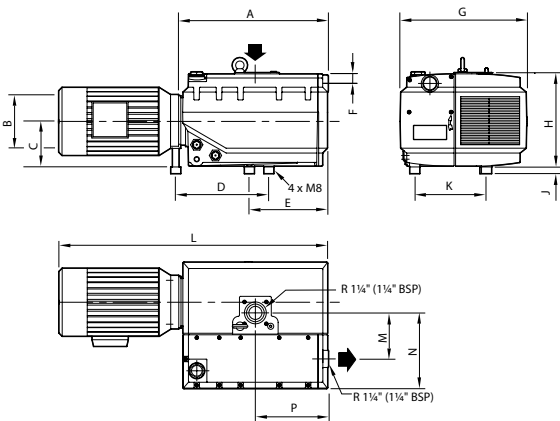
Ordering Number	A35010940	A35015940	A35020940	A35025940	A35030940	A35035934
Product description	EV20 dual frequency motor	EV40 dual frequency motor	EV70 dual frequency motor	EV100 dual frequency motor	EV160 dual frequency motor	EV200 200V 50/60 Hz motor
<b>Pumping Speed</b>						
50 Hz	m <sup>3</sup> /h cfm	18/11	41/25	58/35	100/60	160/96
60 Hz	m <sup>3</sup> /h/cfm	21/13	48/29	73/44	117/70	192/116
<b>Ultimate total pressure without gas ballast</b>						
	mbar/Torr	0.5/0.4	0.5/0.4	0.5/0.4	0.5/0.4	0.5/0.4
<b>Ultimate comparative partial pressure (DIN 28426) without gas ballast</b>						
	mbar/Torr	0.08/0.06	0.08/0.06	0.08/0.06	0.08/0.06	0.08/0.06
<b>Water vapor capacity</b>						
	@ 10 mbar kg/h / lbs/h	0.4/0.9	0.3/0.7	0.57/1.3	0.36/0.8	1.2/2.6
	@ 4 mbar kg/h / lbs/h					1.33/2.9
<b>Electrical supply (3-phase) Volts *</b>						
50 Hz		175-260/ 300-450	190-255/ 330-440	190-255/ 330-440	190-255/ 330-440	200
60 Hz		190-290/ 330-500	190-290/ 330-500	190-290/ 330-500	190-290/ 330-500	200
<b>Motor Power</b>						
50 Hz	kW/hp	0.55/0.75	1.5/2.0	2.4/3.25	2.4/3.25	4/5.5
60 Hz	kW/hp	0.66/1.0	1.8/2.5	3.0/4.0	3.0/4.0	4.8/6.5
<b>Noise</b>						
50 Hz	dB(A)	63	69	67	67.5	71
60 Hz	dB(A)	67	71	68.5	69	74
<b>Weight</b>						
	kg/lbs	20/44	38/84	62/136	65/143	129/284
<b>Oil capacity (Ultragrade 20)</b>						
	liters/US gal	0.5/0.13	1/0.26	2/0.53	2/0.53	7/1.84

\* Note - other voltages can be supplied on application

# Dimensions - mm (inch)

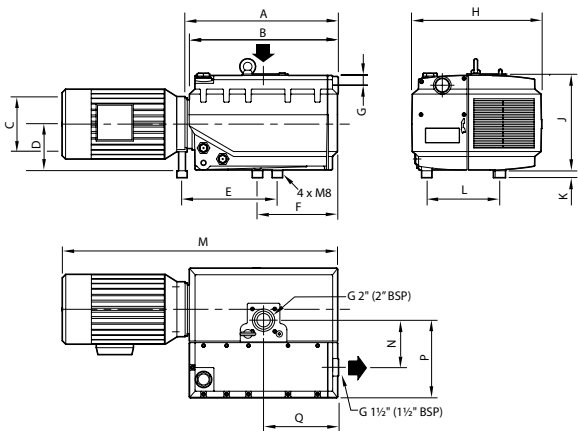


	EV20	EV40
A	305 (12.0)	301 (11.85)
B	208 (8.19)	268 (10.55)
C	148 (5.83)	158 (6.22)
D	336 (13.23)	462 (18.19)
E	107 (4.21)	127 (5.0)
F	172 (6.77)	200 (7.87)
G	26 (1.02)	55 (2.16)
H	64 (2.52)	71.5 (2.81)
J	114 (4.49)	140 (5.51)
K	165 (6.5)	197 (7.75)
L	G ½" (½" BSP)	G 1" (1" BSP)

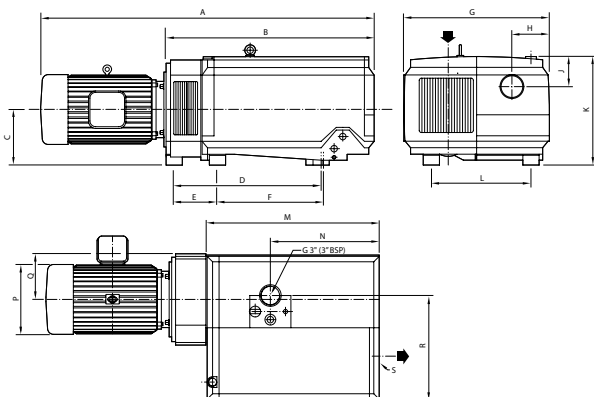


	EV70	EV100
A	413 (16.26)	468 (18.43)
B	160 (6.30)	160 (6.30)
C	135 (5.31)	135 (5.31)
D	291 (11.46)	291 (11.46)
E	304 (11.97)	304 (11.97)
F	30 (1.18)	30 (1.18)
G	374 (14.72)	374 (14.72)
H	280 (11.02)	280 (11.02)
J	20 (0.79)	20 (0.79)
K	213 (8.36)	213 (8.36)
L	725 (28.54)	780 (30.71)
M	136.5 (5.37)	136.5 (5.37)
N	222.5 (8.76)	222.5 (8.76)
P	217 (8.54)	217 (8.54)

A35035940	A35040934	A35040940	A35045934	A35045940	A35050934	A35050940
EV200 dual frequency motor	EV300 200V 50/60 Hz motor	EV300 dual frequency motor	EV400 200V 50/60 Hz motor	EV400 dual frequency motor	EV630 200V 50/60 Hz motor	EV630 dual frequency motor
184/111	240/145	240/145	400/241	400/241	630/380	630/380
221/133	274/165	274/165	480/289	480/289	750/452	750/452
0.5/0.4	0.5/0.4	0.5/0.4	0.5/0.4	0.5/0.4	0.5/0.4	0.5/0.4
0.08/0.06	0.08/0.06	0.08/0.06	0.08/0.06	0.08/0.06	0.08/0.06	0.08/0.06
1.33/2.9	1.4/3.1	1.4/3.1	6.0/13.2	6.0/13.2	10.4/22.9	10.4/22.9
340-430/ 588-745	200	340-430/ 588-745	200	340-430/ 588/745	200	400/690
340-500/ 590/865	200	340-500/ 590/865	200	340-500/ 590/865	200	400/690
5.5/7.5	7.8/10.5	7.8/10.5	11.0/15.0	11.0/15.0	15.0/20.0	15.0/20.0
6.4/8.5	9.3/12.5	9.3/12.5	12.5/17.0	12.5/17.0	18.5/25.0	18.5/25.0
73	73	73	78	78	80	80
76	76	76	81	81	83	83
163/359	178/392	178/392	400/880	400/880	525/1155	525/1155
7/1.84	7/1.84	7/1.84	14/3.68	14/3.68	14/3.68	14/3.68

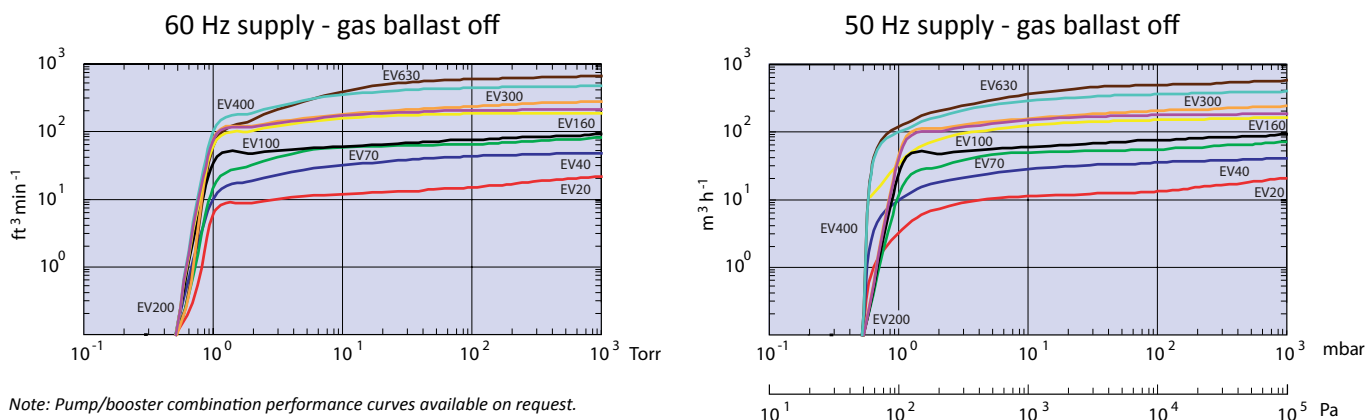


	EV160	EV200	EV300
A	528 (20.79)	624 (24.57)	667 (26.26)
B	486 (19.13)	486 (19.13)	486 (19.13)
C	250 (9.84)	300 (11.81)	300 (11.81)
D	180 (7.09)	180 (7.09)	180 (7.09)
E	302.5 (11.91)	362.5 (14.27)	422 (16.61)
F	445.5 (17.54)	445.5 (17.54)	445.5 (17.54)
G	49 (1.93)	49 (1.93)	49 (1.93)
H	531 (20.90)	531 (20.90)	531 (20.90)
J	385 (15.16)	385 (15.16)	385 (15.16)
K	3 (1.18)	3 (1.18)	3 (1.18)
L	309 (12.16)	309 (12.16)	309 (12.16)
M	900 (35.43)	998 (39.29)	1084 (42.68)
N	261.5 (10.29)	261.5 (10.29)	261.5 (10.29)
P	393 (15.47)	393 (15.47)	393 (15.47)
Q	278 (10.94)	278 (10.94)	278 (10.94)



	EV400	EV630
A	1312 (51.65)	1540 (60.63)
B	789 (31.06)	959 (37.75)
C	257 (10.12)	257 (10.12)
D	486 (19.13)	646 (25.43)
E	200 (7.87)	200 (7.87)
F	479 (18.86)	479 (18.86)
G	672 (26.46)	672 (26.46)
H	173 (6.81)	173 (6.81)
J	136 (5.35)	136 (5.35)
K	501 (19.72)	501 (19.72)
L	475 (18.70)	475 (18.70)
M	625 (24.61)	795 (31.30)
N	333 (13.11)	503 (19.80)
P	393 (15.47)	393 (15.47)
Q	205 (8.07)	205 (8.07)
R	485 (19.09)	485 (19.09)
S	G 3" (3" BSP)	G 4" (4" BSP)

## Performance curves



## Accessories

### Oil level switch

An oil level switch is available to order as a separate item that can be fitted to give an indication or warning of low oil level in the pump. This allows the user to remotely monitor the oil level and add oil or plan maintenance to prevent potentially serious damage occurring to the pump.

### Inlet filter

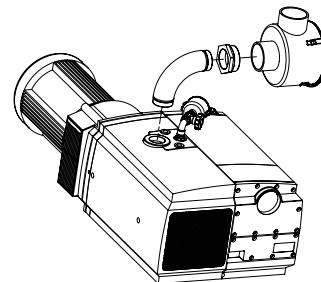
A full range of inlet filters for all models are available for use when there is the possibility of harmful dust or debris entering the pump during operation and potentially causing damage or increased wear to the pump mechanism. Inlet filters are supplied as kits comprising - Filter body; Paper filter; Pipework to couple to pump; PTFE thread joint sealer

### Temperature control

On the EV100 and larger pump a PT100 is fitted as standard. This allows the oil temperature to be monitored and can be used to give an indication of low oil level as well as monitoring pump operating temperature.

### Pump maintenance

- A full range of maintenance kits are available.
- The filter kit contains: oil separation elements, seals and washers
- The service kit contains: appropriate filter kit plus vanes, coupling disc and oil
- The overhaul kit contains: appropriate service kit plus bearings, shaft seals and filter



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