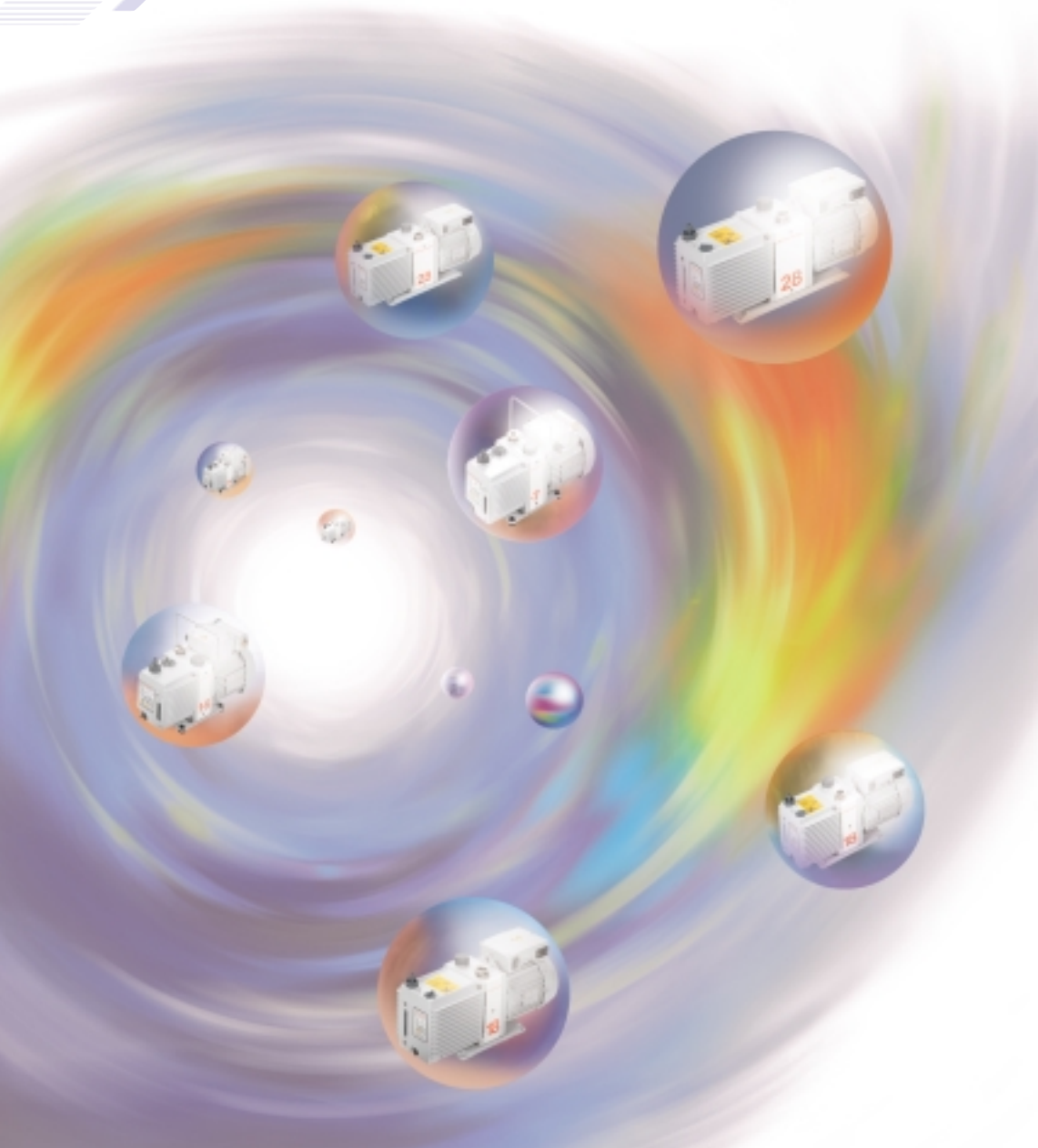




EM Rotary Vane Pumps





Proven performance th

BOC Edwards' 30 years of experience in scientific applications affords us a deep understanding of research practices and the critical role that vacuum plays within them. From this platform, and through collaboration with the major analytical instrument manufacturers, we develop and support innovative vacuum products that underpin the customer's entire research process.

The EM range of oil-sealed rotary pumps - renowned for its high ultimate vacuum, rapid pumping speed, quiet operation and ability to handle vapor - has become the industry standard for laboratory applications. All pumps in the range are independently approved to UL and CSA standards and backed by BOC Edwards worldwide service and support.

Typical Applications

Instrumentation	E2M0.7	E1M18	
	E2M1.5	E2M18	E2M28
Analytical instruments - GCMS	●		
Analytical instruments - LCMS		●	●
Automotive		●	●
Beam lines and high energy physics		●	●
Centrifuges, ultra-high speed		●	●
Coating		●	●
Cryogenics		●	●
Degassing/curing - oil, epoxy resin	●	●	●
Distillation/extraction/filtration		●	●
Freeze drying		●	●
Furnaces		●	●
Gas bottle filling/emptying			●
Gel drying		●	●
Glove boxes, ovens		●	●
Laboratory bench top vacuum	●	●	●
General			
Lasers, gas recovery and re-circulation			●
Leak detectors, Helium	●	●	●
Load locks and transfer chambers		●	●
Refrigeration manufacture		●	●
Research and development	●	●	●
Rotary, centrifugal evaporators		●	●
Scanning electron microscopes - SEM		●	●
SEM/FIB (ion beam repair)		●	●
Solvent recovery		●	●
Surface science instruments		●	●
Turbomolecular backing pumps	●	●	●
TV manufacturing / light bulb manufacture		●	

Wide voltage motors

All major countries covered with less variants needed in stock

Integral IEC 60320 connector

No customer wiring

Pressure die-cast oil box

Integrated oil-seals, no oil leaks

Easy controls

Motor on/off switch

Gas ballast valve

Large water vapor handling capacity

Forced air cooling

Low pump surface temperature



that sets the industry standard

Pressurized oil feed
Excellent pump lifetime

All pumps externally
approved to EN61010,
CSA C22.2 1010, UL61010 standards
Safe product

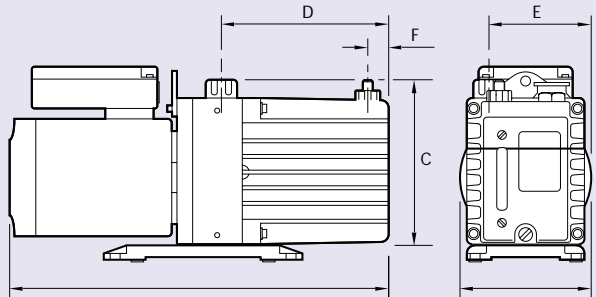


Manufactured under ISO 9001 standard
High quality product

Manufactured under ISO 14001 standard
Environmentally friendly processes

Dimensions

Part nr	A	B	C	D	E	F	
E2M0.7	A371 31 919	320	124	171	123	81	24
	A371 31 902	320	124	200	123	81	24
E2M1.5	A371 22 919	320	124	171	123	81	24
	A371 22 902	320	124	200	123	81	24
E1M18	A343 17 984	501	162	251	184	120	25
	A343 15 904	515	162	251	184	120	25
	A343 10 940	471	162	251	184	120	25
E2M18	A363 17 984	549	162	251	232	120	25
	A363 15 904	608	162	251	232	120	25
	A363 10 940	519	162	251	232	120	25
E2M28	A373 17 984	582	180	251	266	129	25
	A373 15 904	608	180	251	266	129	25
	A373 10 940	553	180	251	266	129	25



All dimensions in mm

Specifications

	Hz	Units	E2M0.7	E2M1.5	E1M18	E2M18	E2M28
VACUUM DATA							
Peak pumping speed ¹	60	cfm	0.95	0.8	12.1	12.1	19.5
	50	m ³ /h	0.75	1.6	17	17	27.5
Ultimate pressure (Total)	60	Torr	5.3x10 ⁻⁴	1.1x10 ⁻³	3.2x10 ⁻²	7.5x10 ⁻⁴	7.5x10 ⁻⁴
	50	mbar	3.0x10 ⁻³	2.5x10 ⁻³	3.0x10 ⁻²	1.0x10 ⁻³	1.0x10 ⁻³
Ultimate pressure GB I (Total)	50/60	Torr	1.5x10 ⁻¹	1.9x10 ⁻²	4.8x10 ⁻¹	1.1x10 ⁻²	1.1x10 ⁻²
		mbar	2.0x10 ⁻¹	2.2x10 ⁻²	6.5x10 ⁻¹	1.5x10 ⁻²	1.5x10 ⁻²
Water vapor tolerance		Torr	11	11	38	15	23
		mbar	15	15	50	20	30
Water vapor capacity - GB I		g/h	8	8	650	300	700

MOTOR DATA							
Motor rating 1 phase (nominal)	60	W			750	750	900
	50	W	90	160	550	550	750
Motor rating 3 phase		W	-	-			
Nominal rotation speed	60	rpm	1800	3600	1800	1800	1800
	50	rpm	1500	3000	1500	1500	1500

PHYSICAL DATA							
Weight		lb	22	22	70	79	88
		kg	10	10	32	36	40
Length		inch	12.6	12.6	19.7	21.6	22.9
		mm	320	320	501	549	582
Width		inch	5.6	5.6	6.4	6.4	7.1
		mm	142	142	162	162	180
Height ²		inch	7.4	7.4	10.5	10.5	10.9
		mm	189	189	266	266	276
Oil capacity		liters	0.28	0.28	1.4	1.05	1.5
Oil type (Ultragrade)			15	15	19	19	19
Inlet flange			NW10 ³	NW10 ³	NW25 ⁴	NW25 ⁴	NW25 ⁴
Exhaust flange							
Noise level	50	dBA	43	54	57	57	57
Operating temperature range		°C	12 to 40	12 to 40	12 to 40	12 to 40	12 to 40

Notes: 1. Pumping speed measured to PNEUROP 6602. 3. Nozzle 11mm diameter, removable from 3/8 inch BSP tapped hole.
 2. Height varies with motor supply frequency, 60Hz shown, 50Hz is 29mm less. 4. Nozzle 15mm diameter, removable from 3/4 inch BSP tapped hole.

Ordering details

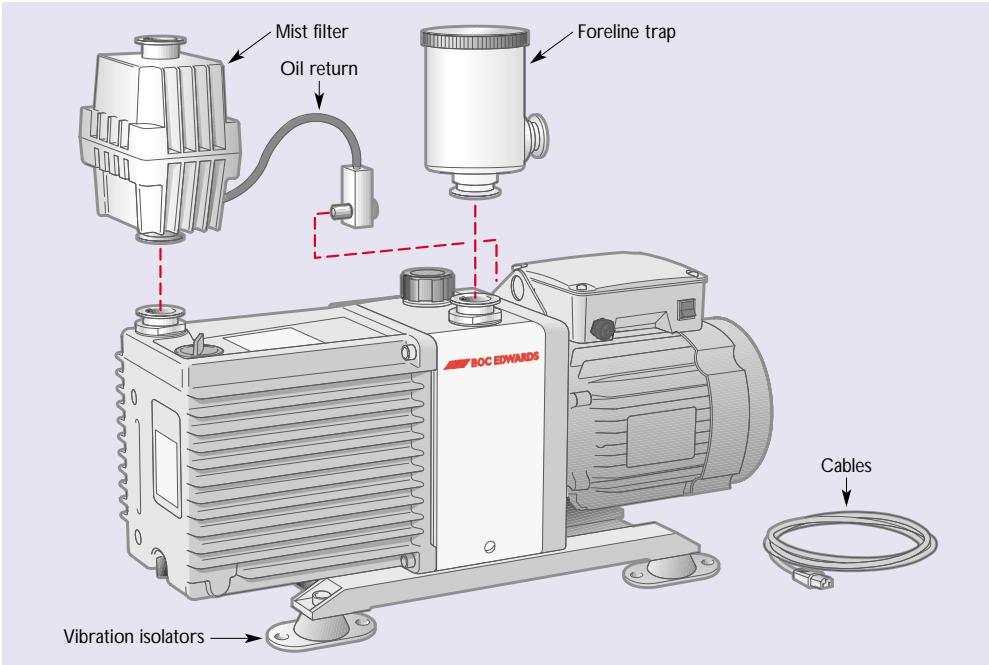
	Description	Ordering Number
E1M18	E1M18 Pump 1ph, 115V, 200 to 230V 50/60Hz	A34317984
	E1M18 Pump 1ph, 100/200V 50/60Hz	A34315904
	E1M18 3ph, 200-220/380-415V 50Hz 200-230/460V 60Hz	A34310940
E2M18	E2M18 Pump 1ph, 115V, 200 to 230V 50/60Hz	A36317984
	E2M18 Pump 1ph, 100/200V 50/60Hz	A36315904
	E2M18 3ph, 200-220/380-415V 50Hz 200-230/460V 60Hz	A36310940
E2M28	E2M28 Pump 1ph, 115V, 200 to 230V 50/60Hz	A37317984
	E2M28 Pump 1ph, 100/200V 50/60Hz	A37315904
	E2M28 3ph, 200-220/380-415V 50Hz 200-230/460V 60Hz	A37310940

Cables	Suitable for 984 variant	
	UK, three pin plug	A50505003
	North European plug	A50506003
	North American plug	A50507003
	Suitable for 100/200V variants	
	North American plug	U30003459
Oil	Ultragrade 19, 1 liter bottle	H11025015
Inlet accessories	FL20K - oil vapor (foreline) trap	A13305000
Outlet accessories	EMF20 - mist filter	A46229000
Oil returns	Clean application (no gas ballast)	A50420000
Vibration isolators	E1M18 and E2M18	A24801404
	E2M28	A24801412

	Description	Ordering Number
E2M0.7	E2M0.7 Pump 1ph, 200 to 230V 50/60Hz	A37131919
	E2M0.7 Pump 1ph, 100 to 115V 50/60Hz Fitted with North American cable	A37131902 A37131902P
	E2M1.5	E2M1.5 Pump 1ph, 200 to 230V 50/60Hz
	E2M1.5 Pump 1ph, 100 to 115V 50/60Hz fitted with N.A. cable	A37122902 A37122902P
Oil	Ultragrade 15, 1 liter bottle	H11026015
Inlet accessories	FL20K - oil vapor (foreline) trap	A13305000
Outlet accessories	EMF3 - mist filter	A46220000
Oil return	Clean application (no gas ballast)	A50419000
Mist filter	EMF3	A46220000
Vibration isolators	E2M0.7 and E2M1.5	A24801407

NB: All pumps supplied with initial charge of oil

Accessories





BOC Edwards is a world leader in process equipment, materials and services for electronics, industrial and scientific applications. Our aim is to offer customers solutions that result in a measurable improvement in productivity.

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WASTE MANAGEMENT

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THERMAL MANAGEMENT

INSTRUMENTATION

DESIGN & PROJECT MANAGEMENT

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CORPORATE HEADQUARTERS

BOC Edwards
Manor Royal
Crawley
West Sussex RH10 9LW
United Kingdom

T +44 (0) 1293 528 844

F +44 (0) 1293 533 453

EUROPE

UK Crawley +(44) 1293 528844

UK Clevedon +(44) 1275 337100

BELGIUM Brussels +(32) 2 363 0030

FRANCE Paris +(33) 1 47 98 24 01

FRANCE Roubaix +(33) 3 20 45 39 39

GERMANY Munich +(49) 89 99 19 18 0

ITALY Milan +(39) 02 48 4471

USA

WILMINGTON, MA +(1) 978 658 5410

TOLL FREE (USA only) +(1) 800 848 9800

SANTA CLARA, CA +(1) 408 496 1177

TEMPE, AZ +(1) 480 777 7007

AUSTIN, TX +(1) 512 416 0102

CANADA

MISSISSAUGA +(1) 800 387 4076

Visit the BOC Edwards website at:

www.bocedwards.com

Or email us at:

info@bocedwards.com

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BRAZIL

SAO PAULO +(55) 11 3952 5000

ASIA PACIFIC

CHINA Shanghai +(86) 21 5866 9618

CHINA Tianjin +(86) 22 2834 1981

TAIWAN Tufen Town, R.O.C +(886) 37 611 422

SINGAPORE +(65) 546 8408

KOREA

BUNDANG +(82) 31 716 7070

JAPAN

TOKYO (Vacuum/Abatement) +(81) 3 5470 6530

TOKYO (Electronic Gases) +(81) 3 3434 6789

OSAKA +(81) 6 384 7052

KYUSHU +(81) 96 326 7300

SENDAI +(81) 22 373 8525

INDIA

NEW DELHI +(91) 11 237 33087

ISRAEL

QIRYAT GAT +(972) 8 681 0633