

## 2 TECHNICAL DATA

### 2.1 Operating and storage conditions

Ambient operating temperature range	13 to 40 °C
Ambient storage temperature range	-30 to 70 °C
Maximum ambient operating humidity	90% RH
Normal surface temperature of the pump-body at ultimate vacuum (ambient temperature of 20 °C)	45 to 65 °C
Noise level at 1 metre	57 dB(A) (at 50 Hz)

Table 1 - Operating and storage conditions

### 2.2 Performance

*Note: Where total pressures are shown in the following technical data tables, measurements were taken using an untrapped total pressure capacitance diaphragm gauge on a header, as specified by Pneurop standards.*

	<b>E2M28</b>	<b>E2M30</b>
Maximum displacement		
50 Hz electrical supply	32.2 m <sup>3</sup> h <sup>-1</sup>	19 cfm
60 Hz electrical supply	38.9 m <sup>3</sup> h <sup>-1</sup>	23 cfm
Maximum speed - Pneurop		
50 Hz electrical supply	27.5 m <sup>3</sup> h <sup>-1</sup>	16.2 cfm
60 Hz electrical supply	33.0 m <sup>3</sup> h <sup>-1</sup>	19.4 cfm
Motor rotational speed		
50 Hz electrical supply	1440 r min <sup>-1</sup>	1440 r min <sup>-1</sup>
60 Hz electrical supply	1720 r min <sup>-1</sup>	1720 r min <sup>-1</sup>
Ultimate vacuum		
Without gas-ballast (partial pressure)	1 × 10 <sup>-4</sup> mbar 1 × 10 <sup>-2</sup> Pa	7 × 10 <sup>-5</sup> torr
Without gas-ballast (total pressure)	1 × 10 <sup>-3</sup> mbar 1 × 10 <sup>-1</sup> Pa	7 × 10 <sup>-4</sup> torr
With full gas-ballast (partial pressure)	2 × 10 <sup>-1</sup> mbar 2 × 10 <sup>1</sup> Pa	1.5 × 10 <sup>-1</sup> torr
Maximum water vapour inlet pressure	30 mbar 3 × 10 <sup>3</sup> Pa	22.5 torr
Maximum water vapour pumping rate	0.7 kg h <sup>-1</sup>	0.7 kg h <sup>-1</sup>
Maximum permitted outlet pressure (at full pump throughput)	0.5 bar gauge 1.5 bar absolute 1.5 × 10 <sup>5</sup> Pa	0.5 bar gauge 1.5 bar absolute 1.5 × 10 <sup>5</sup> Pa

Table 2 - Performance data

### 2.3 Mechanical data

Mass (approximate)	44 kg
Dimensions	See Figure 2
Degree of protection	
Single-phase motors	IP44
Three-phase motors	IP54
Pump inlet-port	NW25 (the flange can be removed from the 1 inch BSP threaded hole)
Pump outlet-port	15 mm external diameter nozzle (the nozzle can be removed from the 3/4 inch BSP threaded hole)

Table 3 - Mechanical data

### 2.4 Electrical data

Refer to Tables 4 and 5. The motor start-up current is drawn for less than one second, so you must use slow-blow fuses to prevent unnecessary fuse failure when the pump starts. Fuses should be to EN60269 Section 2.2. For conformance with CSA standards only CSA certified fuses are to be used. If you use the pump at temperatures lower than 13 °C, the start-up current will be drawn for longer; this may cause the motor thermal overload device to open.

Pump Item Number	Voltage (V)	Frequency (Hz)	Full load current (A)	Start current (A)	Maximum fuse rating (A)
A373-10-940, A374-10-940	200-220	50	3.8	22.8	16
	380-415	50	2.3	14.3	10
	200-230	60	3.9	22.0	16
	460	60	2.3	14.6	10
Motor output rating (continuous)					
50 Hz operation		0.75 kW			
60 Hz operation		0.90 kW			

Table 4 - Electrical data: three-phase motors

Pump Item Number	Voltage (V)	Frequency (Hz)	Full load current (A)	Start current (A)	Maximum fuse rating (A)
A373-15-903, A373-16-903, A374-15-903	220-240	50	4.8	33	15
	230-240	60	5.0	33	15
A373-15-981, A374-15-981	115	60	11.0	71	40
	230	60	5.5	36	20
A373-15-904, A374-15-904	100	50	12.0	80	30
	100-105	60	12.0	80	30
	200	50	6.5	40	20
	200-210	60	5.5	40	20
A373-17-984	110	50	12.0	36	30
	115-120	60	12.0	50	30
	200-240	50	6.0	27	15
	200-230	60	6.5	32	15
Motor output rating (continuous)					
50 Hz operation		0.75 kW			
60 Hz operation		0.90 kW			

Table 5 - Electrical data: single-phase motors