

## DATA SHEET



### Vacuum pumps

#### GENERAL DESCRIPTION

Vacuum pumps are used for a number of applications concerning, above all, De-Airing systems of water. Water vapour sucked by the vacuum pump and mixed with the oil, producing emulsion, may cause serious damage to the pump when in notable concentration. For this reason it is important, for such applications, to propose a suitable de-airing system as the Air drying unit 86-D2005 filled with the Silica gel (dessicator salt) 86-D0819 (see [Air drying unit](#)). Vacuum pumps can also be fit with a Vacuum gauge with pin regulating valve and bleed valve as our model 86-D2004/5 (see accessories) unless a similar gauge is not fit to the equipment to be connected as for example Large size pyknometer 75-D1122. For more detail about the de-airing systems see Additional information.

We propose two Vacuum pump models:

- 86-D2001 and 86-D2001/Z (110 V), for ultimate vacuum of 0.1 mbar
- 86-D2003 and 86-D2003/Z (110 V), for ultimate vacuum of 0.01 mbar

#### TECHNICAL SPECIFICATIONS

Models 86-	D2001 and D2001/Z	D2003 and D2003/Z
Free air displacement liter/min:	75	75
Ultimate vacuum mbar:	0.1	0.01
Power	180 W	240 W
Dimensions approx.:	300x150x240 mm	300x150x240 mm
Weight approx.:	8,5 kg	9,5 kg

#### ORDERING INFO

##### Vacuum pumps

- 86-D2001** Portable vacuum pump, free air displacement 75 l/min, ultimate vacuum 0.1 mbar. 230 V, 50-60 Hz, 1 ph  
**86-D2001/Z** Portable vacuum pump, free air displacement 75 l/min, ultimate vacuum 0.1 mbar. 110 V, 60 Hz, 1 ph  
**86-D2003** Portable vacuum pump, free air displacement 75 l/min, ultimate vacuum 0.01 mbar. 230 V, 50-60 Hz, 1 ph  
**86-D2003/Z** Portable vacuum pump, free air displacement 75 l/min, ultimate vacuum 0.01 mbar. 110 V, 60 Hz, 1 ph

#### ACCESSORIES

##### Vacuum gauge

- 86-D2004/5** Vacuum gauge, range 0-760 mm/hg, complete with pin regulating valve and bleed valve.

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### Description

Vacuum pumps can be fit, when needed, with a special made vacuum gauge complete with pin regulating valve and bleed valve which is very useful when disconnecting the tube from the system. It can be fit directly on top of vacuum pump.

### Specifications

- Dial diameter: 80 mm
- Range: 0 to 760 mm/hg
- Pin regulating valve
- Bleed/filter valve
- Weight approx.: 0.4 kg

### Oil and rubber tubes

**86-D2001/1** Special oil for vacuum pumps. 500 cc can.

**86-D2064** Rubber tube, ID 6.5 x OD 16.5 mm

## ADDITIONAL INFORMATION

### Buyer's Guide

The following table summarize the most common tests in which are required De-airing systems and Vacuum apparatus. These recommendations are our interpretation to perform efficiently the test. If in doubt we are at your disposal to give you all necessary information.

Standard	Test/Determination
1) ASTM, BS, EN, NF	De-airing water system for triaxial tests
2) ---	Falling head permeability (Cell 38-T0185/1)
3) EN 12697-4	Recovery of binder by the fractionating column method
4) EN 12697-3	Binder recovery by rotary evaporation
5) EN 12697-1	Binder recovery by vacuum pump method BS 598:102
6) ASTM D2041	Specific gravity and density of bituminous mixtures

Code	Description	Test 1)	Test 2)	Test 3)	Test 4)	Test 5)	Test 6)
86-D2001	Vacuum Pump Single stage	X	X			X	
86-D2003	Vacuum pump Double stage			X	X		X
86-D2004/5	Vacuum gauge with valve			X		X	
86-D2064	Rubber tubes	X (2)	X (2)	X (2)	X (2)	X (2)	X (2)
86-D2005	Air drying unit	X	X				X
86-D0819	Silica gel Dessicant	X (2)	X (2)				X (2)
86-2004/1D	Vacuum regulator				X		

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86-D2001, 86-D2003



86-D2004/5 fitted directly on top of vacuum pump



86-D2004/5



Vacuum gauge



One possible set-up option