

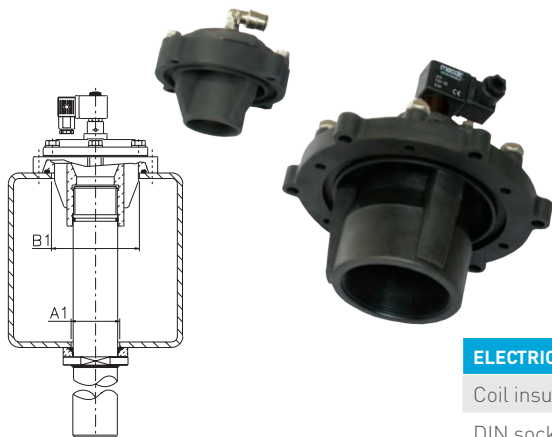


mecalr 400 SERIES

MANIFOLD MOUNT VALVES

PENTAIR CLEAN AIR SYSTEMS

MECAIR MANIFOLD MOUNT VALVES 400 SERIES



DESCRIPTION

The **400 SERIES** valves are suitable for low-pressure systems (0.5 ÷ 1.5 bar), and high-pressure systems (0.5 ÷ 7.5 bar). The Series 400 is a range of diaphragm valves suitable for dust collector applications, in particular for reverse pulse-jet filter cleaning of filter bags, cartridges, envelope filters, ceramic filters and sintered metal fibre filters. These valves have been designed to be installed on flat surfaces or square/rectangular tanks. They are called "full immersion" because they draw the compressed air directly from the tank, with higher pneumatic performance. Upon request they can be supplied complete with the blowtube and counter flange. The valve is fixed to the tank with a special counter flange and fixing screws. The 2, 2½ and 3" are all double diaphragm valves; the 1½" model can be a single or double diaphragm valve. The valves are constructed in diecast aluminium and have an anodised protection treatment which protects them from corrosive and environmental agents. Bolts and screws are in stainless steel.

The 400 Series is available in the following versions:

- **VNP**, with integrated solenoid pilot
- **VEM**, with remote pneumatic connection.

GENERAL CHARACTERISTICS

Fluids	Filtered air and oil free
Diaphragm	Standard NBR: -20°C/+120°C Optional Viton: -30°C/+200°C Nitrile: -40°C/+120°C
Pressure range	From 0.5 to 7.5 bar

CONSTRUCTION FEATURES - VALVE

Cover	Diecast aluminium (anodised)
Body	Diecast aluminium (anodised)
Pilot	Stainless steel
Diaphragm	NBR
Bolts and screws	Stainless steel
Diaphragm backing disk	Stainless steel
Diaphragm spring	Stainless steel

ELECTRICAL CHARACTERISTICS - SOLENOID

Coil insulation	Class H
DIN socket connector	Pg9 connection (cable entry)
DIN socket standard	EN175301 - 803 (previously DIN 43650A) / A/ISO 4400
DIN socket optional	94/9/CE ATEX II 3GD T6
Isolation class DIN socket	VDE 0110 - 1/89
DIN socket protection	IP65 EN60529
Voltage range	12 V DC (supply +10% max.) 18 W 24 V DC (supply +10% max.) 18 W 48 V DC (supply +10% max.) 18 W 110 V DC (supply +10% max.) 18 W 24 V 50/60 Hz (supply +10% max.) 38/31 VA 48 V 50/60 Hz (supply +10% max.) 41/32 VA 115 V 50/60 Hz (supply +10% max.) 63/53 VA 220/240 V 50/60 Hz (supply +10% max.) 46/37 VA
Ambient temperature	-30°C/+40°C

TYPE	PORT SIZE Ø	No. DIAPH	PRESSURE RANGE (BAR)		WEIGHT KG	COIL	KV	CV
			MIN.	MAX.				
VNP408	1"	1	0,5	7,5	0,7	YES	26,3	30,6
VNP412	1½"	1	0,5	7,5	1,4	YES	56,2	65,3
VNP414	1½"	2	0,5	7,5	1,45	YES	61,3	71,3
VNP416	2"	2	0,5	7,5	2,3	YES	110	128
VNP420	2½"	2	0,5	7,5	3,3	YES	210	240
VNP424	3"	2	0,5	7,5	3,3	YES	260	300
VEM408	1"	1	0,5	7,5	0,4	NO	26,3	30,6
VEM412*	1½"	1	0,5	7,5	1,1	NO	56,2	65,3
VEM414	1½"	2	0,5	7,5	1,6	NO	61,3	71,3
VEM416	2"	2	0,5	7,5	2	NO	110	128
VEM420	2½"	2	0,5	7,5	3	NO	210	240
VEM424	3"	2	0,5	7,5	3	NO	260	300

HOW TO ORDER

Part Number Code: **VEM/VNP 4 08 110/50**

Valve

- N** VNP - with integral pilot
- E** VEM - without pilot

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400 Series

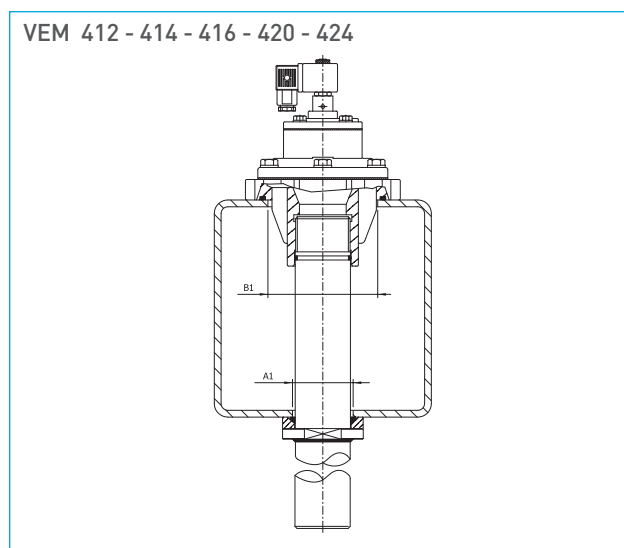
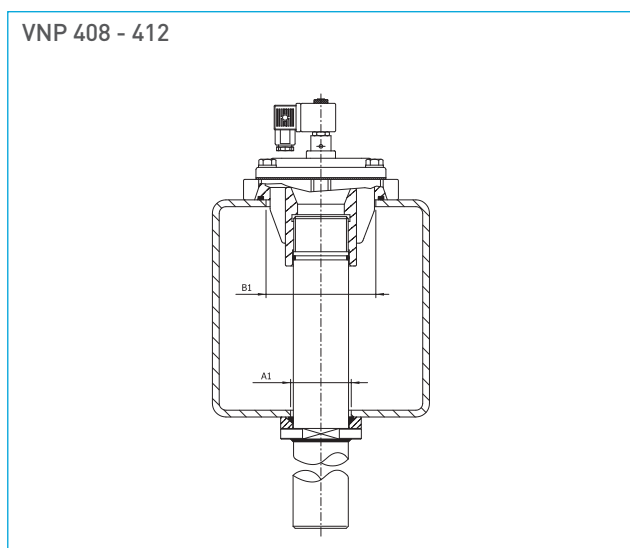
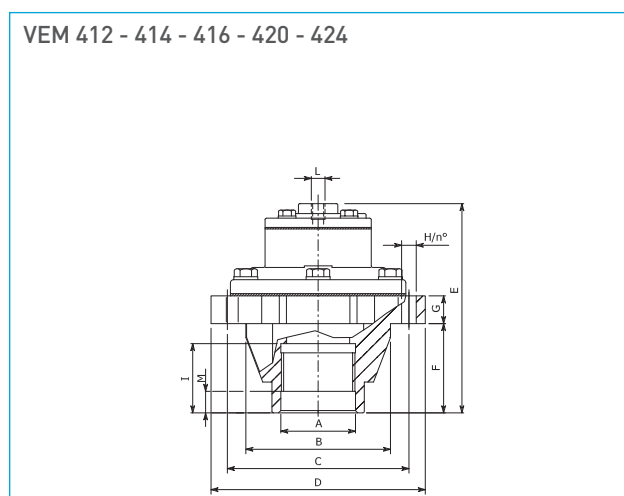
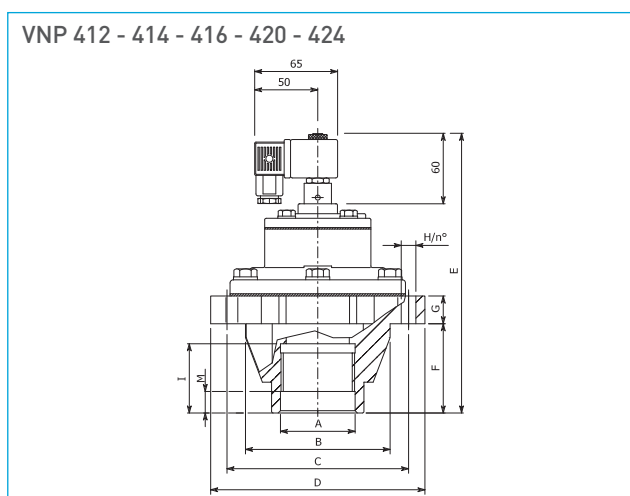
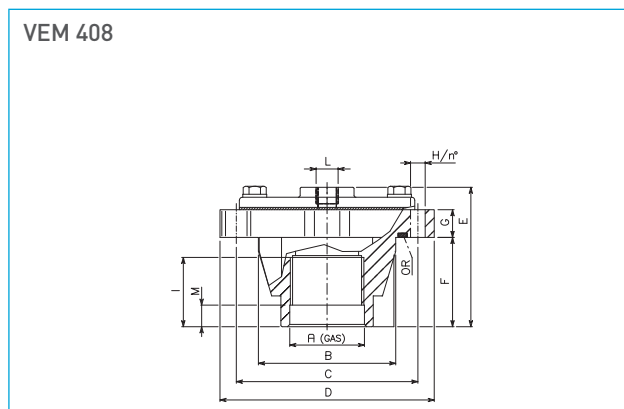
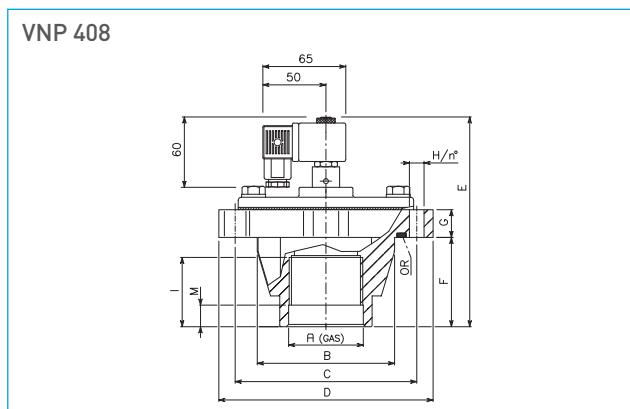
Voltage and frequency required

Valve connection diameter

- 08 = 1"
- 12 = 1½" (single diameter)
- 14 = 1½" (double diameter)
- 16 = 2"
- 20 = 2½"
- 24 = 3"

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DIMENSIONS

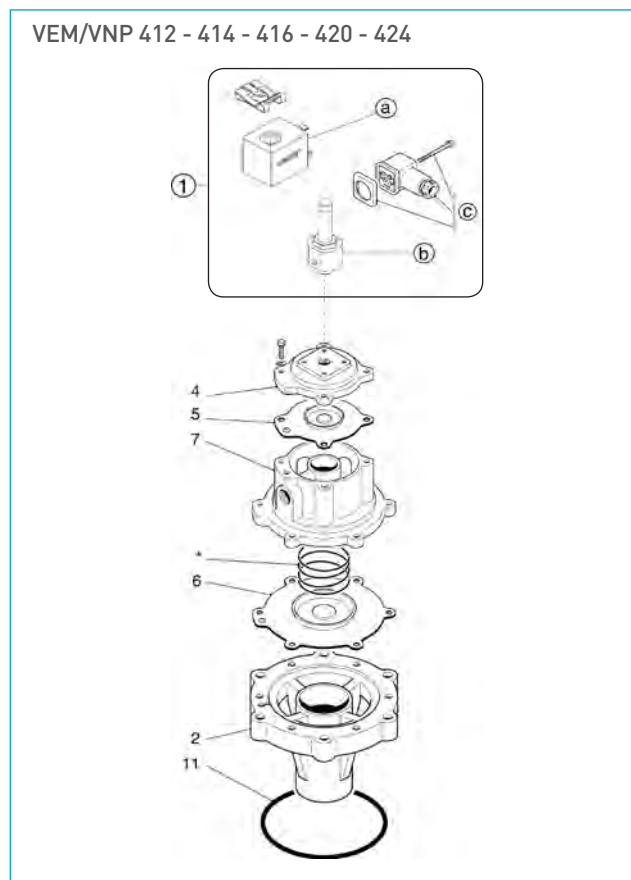
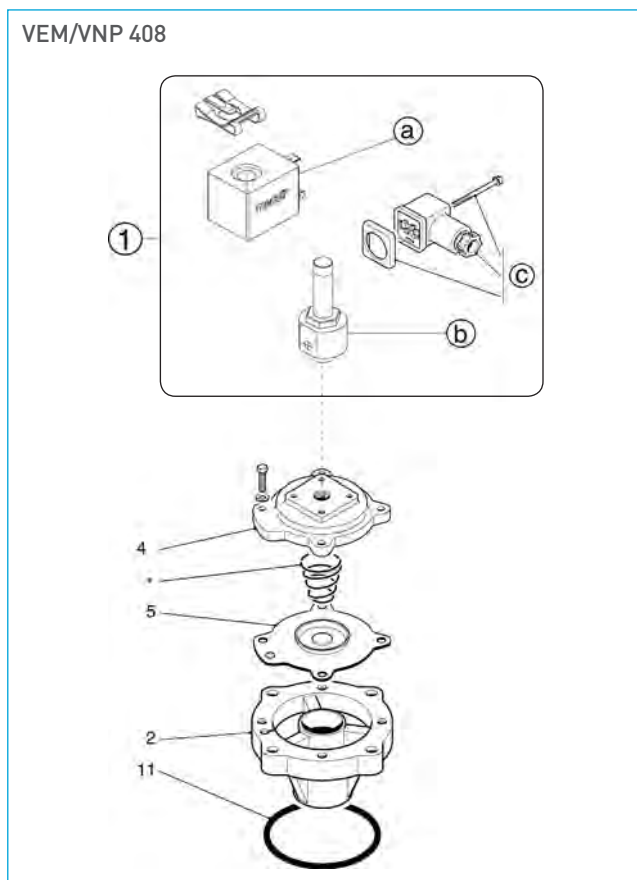


Note: Fix the valve body to the tank using the appropriate eyelets in the valve body

MODEL	Ø A	B	C	D	E	F	G	I	Ø H	No.	M	WEIGHT KG	MODEL	E	Ø L	A1	B1	WEIGHT KG	No. DIAPH.	O-RING
VNP 408	1"	63	94	114	136	32	18	25	7	4	10	0,7	VEM 408	76	¼"	36	64	0,4	1	KIT M330370
VNP 412	1½"	94	140	160	155	58	18	39	9	6	14	1,1	VEM 412	95	¼"	50	95	1,4	1	KIT M330341
VNP 414	1½"	94	140	160	188	58	18	39	9	6	14	1,9	VEM 414	128	¼"	50	95	1,6	2	KIT M330341
VNP 416	2"	105	175	195	210	62	18	45	11	6	0	2,3	VEM 416	150	¼"	63	107	2	2	KIT M330342
VNP 420	2½"	128	200	220	228	80	20	40	11	6	0	3,3	VEM 420	168	¼"	78	130	3	2	KIT M330343
VNP 424	3"	128	200	220	228	80	20	40	11	6	0	3,3	VEM 424	168	¼"	90	130	3	2	KIT M330343

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SPARE PARTS



STANDARD VERSION

POS	DESCRIPTION	CODE
Standard 1	a) Solenoid (*)	a) KIT SB4 - ../.. (*)
	b) Pilot group complete with base and ferrule	b) KIT CP1/4
	c) DIN connector PG9EN175301-803 IP65	c) KIT PLG9

OPTIONAL VERSION

POS	DESCRIPTION	CODE
Optional 1	a) Solenoid	a) KIT SB4 -24/DCX
	b) Pilot group complete with base and ferrule	b) KIT CP1/4
	c) DIN connector (3GD IP65 T6)	c) KIT PLG11 - ATEX

(*) Specify voltage and frequency.

Version in conformity with European Directive 94/9/CE ATEX (cod. KIT PV-24/DCX)

POS	DESCRIPTION	CODE					
		VEM/VNP408	VEM/VNP412	VEM/VNP414	VEM/VNP416	VEM/VNP420	VEM/VNP424
1	Pilot group complete with solenoid (*) and DIN connector	KIT PV - ../.. (*)	KIT PV - ../.. (*)	KIT PV - ../.. (*)	KIT PV - ../.. (*)	KIT PV - ../.. (*)	KIT PV - ../.. (*)
a+b+4	Pilot group complete with solenoid (*), top cover and screws	KIT PVM08 - ../.. (*)	KIT PVM12 - ../.. (*)	KIT PVM06 - ../.. (*)	KIT PVM06 - ../.. (*)	KIT PVM06 - ../.. (*)	KIT PVM06 - ../.. (*)
2	Valve body	KIT M100207	KIT M100214	KIT M100214	KIT M100220	KIT M100235	KIT M100239
7	Intermediate cover (double diaphragm)	—	—	KIT M1100098	KIT M110100	KIT M110101	KIT M110101
4	Top cover	KIT M110086	KIT M110092	KIT M110082	KIT M110082	KIT M110082	KIT M110082
5	Diaphragm	KIT DB 18/G	KIT DB 112/G	—	—	—	—
5+6+Spring	Diaphragm (main and secondary)	—	—	KIT DB 114/C	KIT DB 116/C	KIT DB 120/C	KIT DB 120/C
11	O-rings	KIT M330370	KIT M330341	KIT M330341	KIT M330342	KIT M330343	KIT M330343

(*) Specify voltage and frequency.



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