

# TECHNICAL SPECIFICATION

## *Diaphragm Valves – 400 Series*



**Product Description**



**Features**



**Performance**



**Dimensional Details**



**Part Identification**



**How to Order**



## PRODUCT DESCRIPTION

The Series 400, are only suitable for low pressure systems, and are principally used for the cleaning of dust collector filters with compressed air. These valves have been designed to be assembled on filters and to be mounted onto a square header tank. They are called "full immersion" because they draw the compressed air directly from the tank, with higher pneumatic yield. By request they can be supplied complete with the blow tube. The valve is fixed to the tank with a special counter flange and fixing screws. The 2", 2 1/2" and 3" are all double diaphragm valves; the 1 1/2" model can be single or double diaphragm valve. The valves are constructed in anodized die-cast aluminium, to protect them from environmental and corrosive agents.

The 400 Series is available in the following versions:

- VEP, with integrated solenoid pilot
- VEM, with remote solenoid pilot mounted in enclosures



## FEATURES

### General Features

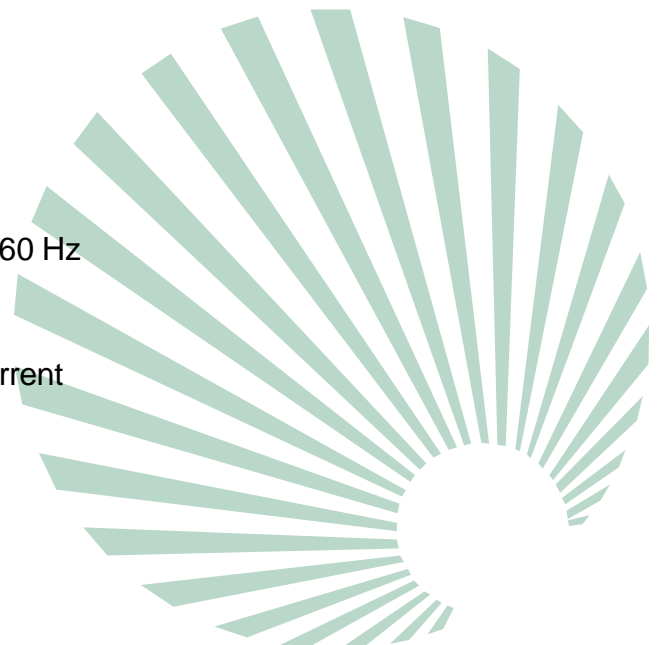
Fluids	Filtered and oil free air
Diaphragm	Standard: -20°C/+120°C Viton -30°C/+200°C Nitrite -40°C/+120°C
Operating pressure	From 0.5 to 7.5 bar

### Constructive Features

Cover	Die-cast aluminium
Body	Die-cast aluminium
Core	Stainless steel
Core spring	Stainless steel
Sealing	NBR
Bolts and screws	Stainless steel
Diaphragm disc	Stainless steel
Diaphragm spring	Stainless steel

### Electrical features

Coil insulation	Class H
Connector	Connection Pg9
connector specification	DIN 43650 - ISO 4400
Conector insulation class	VDE 0110 - 1/89
Electrical protection	IP65
Standard voltages	24 V AC - 50 Hz 24 V AC - 60 Hz 110/220 V AC - 50/60 Hz 24/110 V DC
Power consumption	19VA alternative current 15 W direct current
Ambient temperature	-20°C/+60°C



## PERFORMANCE

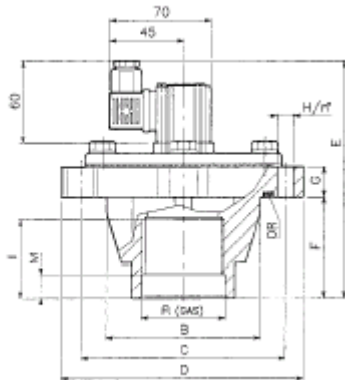
Type	L Ø	No. diaph.	Operating Pressure (bar)		Weight kg	Coil
			min	max		
VEP408	1"	1	0.5	1.5	0.7	yes
VEP412	1 1/2"	1	0.5	1.5	1.4	yes
VEP414	1 1/2"	2	0.5	1.5	1.45	yes
VEP416	2"	2	0.5	1.5	2.3	yes
VEP420	2 1/2"	2	0.6	1.5	3.3	yes
VEP424	3"	2	0.6	1.5	3.3	yes
VEM408	1"	1	0.5	1.5	0.4	no
VEM412*	1 1/2"	1	0.5	1.5	1.1	no
VEM414	1 1/2"	2	0.5	1.5	1.6	no
VEM418	2"	2	0.5	1.5	2	no
VEM420	2 1/2"	2	0.6	1.5	3	no
VEM424	3"	2	0.6	1.5	3	no

\* available with Mecair explosion proof solenoid pilot only.

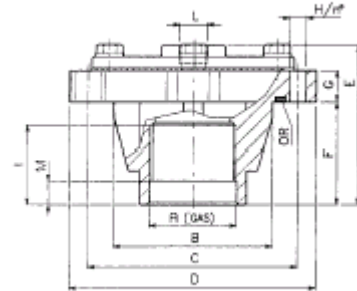


## DIMENSIONAL DETAILS

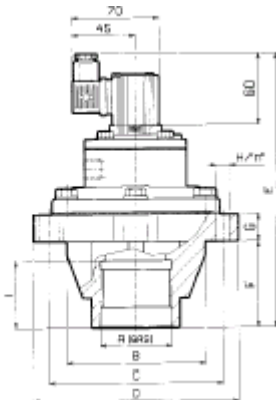
### VEP 408



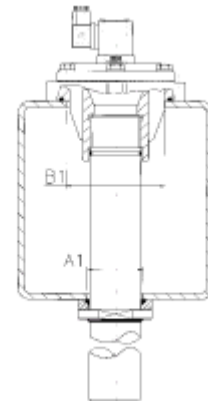
### VEM 408 - 412



### VEP 414 - 416 - 420 - 424

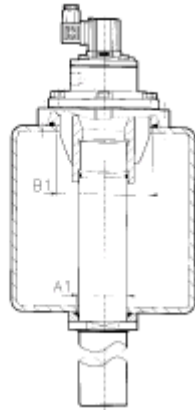


### VEM 408 - 412



Type	A Ø	B Ø	C Ø	D Ø	E	F	g	h Ø	n°	l	m	Weight kg
VEP408	1"	63	25	94	136	32	18	7	4	25	10	0.7
VEP412	1 1/2"	94	25	140	155	45	18	11	6	39	14	1.1
VEP414	1 1/2"	94	25	140	188	45	18	11	6	39	14	1.9
VEP416	2"	105	165	195	210	62	18	11	6	45	14	2.3
VEP420	2 1/2"	128	200	220	228	80	20	11	6	40	14	3.3
VEP424	3"	128	200	220	228	80	20	11	6	50	14	3.3

**VEP 414 - 416 - 420 - 424**

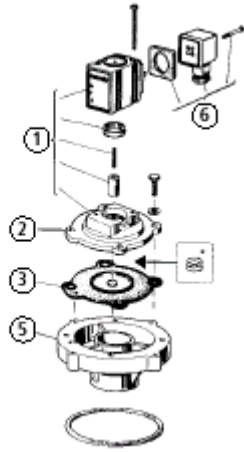


Type	E	L Ø	A1	B1	Weight kg	No diaph	OR
VEM408	76	1/8"	36	64	0.4	1	M330370
VEM412	128	1/8"	50	95	1.1	1	M330341
VEM414	128	1/8"	50	95	1.6	2	M330341
VEM416	150	1/8"	63	107	2	2	M330342
VEM420	168	1/8"	78	130	3	2	M330343
VEM424	168	1/8"	90	130	3	2	M330343

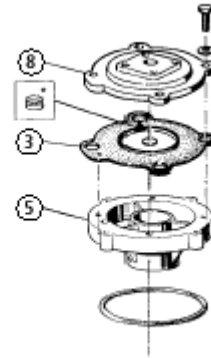


## PART IDENTIFICATION

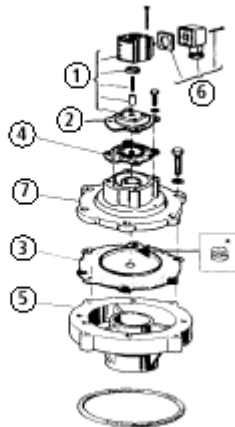
### VEP 408 - 412



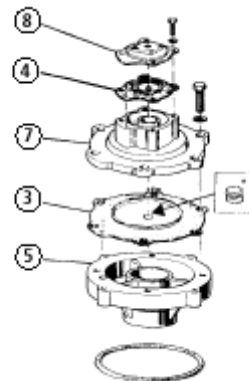
### VEM 408 - 412



### VEP 414 - 416 - 420 - 424



### VEM 414 - 416 - 420 - 424



\* Spring code M470161 only for VEM/VEP 412-414-416-420-424



Pos	Description parts	VEP408	VEP412	VEP414	VEP416	VEP420	VEP424
1	Pilot group complete with coil (* ) cover and anchor screws. (* ) Specify voltage and frequency (or DC)	PDM08- .../.. (* )	PDM12- .../.. (* )	PDM06 .../.. (* )	PDM06- .../.. (* )	PDM06- .../.. (* )	PDM08- .../.. (* )
2	Top cover	M310196	M310250	M310197	M310197	M310197	M310101
3	Diaphragm	DB18	DB112	DB16	DB16	DB16	DB16
4	Diaphragm	-	-	DB114	DB116	DB120	DB120
5	Body	M300207	M300214	M300214	M300220	M300235	M300239
6	Connector DIN IP65	PLG9	PLG9	PLG9	PLG9	PLG9	PLG9
7	Intermediate cover (double diaphragm)	-	-	M310098	M3100100	M3100101	M3100197

Pos	Description parts	VEM408	VEM412	VEM414	VEM416	VEM420	VEM424
8	Top cover	M310086	M310092	M310082	M310082	M310082	M310086
2-7	See VEP description	See above	See above	See above	See above	See above	See above



## HOW TO ORDER

### VEP 408 – 110/50

VE – Diaphragm valve

P – Integrated pilot

or

M – Remote pilot

4 – 400 Series

08 – Valve connection diameter

08 = 1"

12 = 1 1/2" (single diaphragm)

14 = 1 1/2" (double diaphragm)

16 = 2"

20 = 2 1/2"

24 = 3"

110/50 – Voltage and frequency (specify for VEP models only):

24V AC – 50Hz

24V AC – 60Hz

110/220V AC – 50/60 Hz

24/110V DC

