

DESCRIPTION

200 Series AISI

The **200 SERIES** in Stainless Steel is a range of diaphragm valve 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. The 200 Series valve has the inlet port at 90° to the outlet port. The range includes two models, which comprises a 1" valve and the 1 1/2" size valve. Both models have a single diaphragm. The inlet and outlet ports have threaded female gas connections. The 200 Series valves in Stainless Steel, are manufactured in AISI316L. These valves are particularly appropriate for installation in aggressive environments where there is risk of corrosion. Chemical processes, off-shore refineries and plants, and in nuclear environments are just some typical applications where the series 200 valve in stainless steel can be mounted. With a special diaphragm which has FDA Accreditation/Approval, the stainless steel valve can also be installed in special environments including, pharmaceutical, food and grain, wheat and flour, and in any other environment where food grade or medical is required. The Series 200 in Stainless Steel is available in 2 versions:

- **VXP**, with solenoid pilot mounted on board
- **VXM**, which can be utilised with a remote pneumatic connection



- only 1" valve using a CSN or CXD Enclosure, or alternatively for both models, 1" and 1 1/2" valves, with explosion proof pilot mounted on board. Explosion proof pilot with ATEX Certification is also available in stainless steel - AISI316L.

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
	FDA
	PTFE/Gylon: -260°C / +260°C
	EPDM: -40°C / +160°C
Pressure range	From 0,5 to 7,5 bar

CONSTRUCTIVE FEATURES - VALVE	
Cover	AISI 316L
Body	AISI 316L
Pilot	Stainless steel
Spring	Stainless steel
Bolts and screws	Stainless steel
Diaphragm Backing disk	Stainless steel

TYPE	Port size Ø	N° Diaph.	Pressure range (bar)		Weight Kg.	Coil	Kv	Cv
			min.	max				
VXP208	1"	1	0,5	7,5	1,13	YES	21	24,4
VXP212	1 1/2"	1	0,5	7,5	2,67	YES	37	43,0
VXM208	1"	1	0,5	7,5	0,85	NO	21	24,4
VXM212	1 1/2"	1	0,5	7,5	2,39	NO	37	43,0

ELECTRICAL CHARACTERISTICS - SOLENOID	
Coil insulation	Class H
Din Socket Connector	Pg9 Connection
Din Socket Standard	EN175301 - 803 / A/ISO 4400
Din Socket Optional	94/9/CE ATEX II 2GD T4 IP67
Isolation class Din socket	VDE 0110 - 1/89
Electrical protection	IP65 EN60529
Voltage Range	24V AC - 50Hz
	24V AC - 60Hz
	110/220V AC - 50/60Hz
	24/110V DC
Power absorption	19 VA / AC
	15 W / DC
Ambient temperature	-20°C / +60°C

HOW TO ORDER:

VXM/VXP 2 08 110/50

VNP: with integral pilot
VEM: without pilot

2: "200 SERIES"

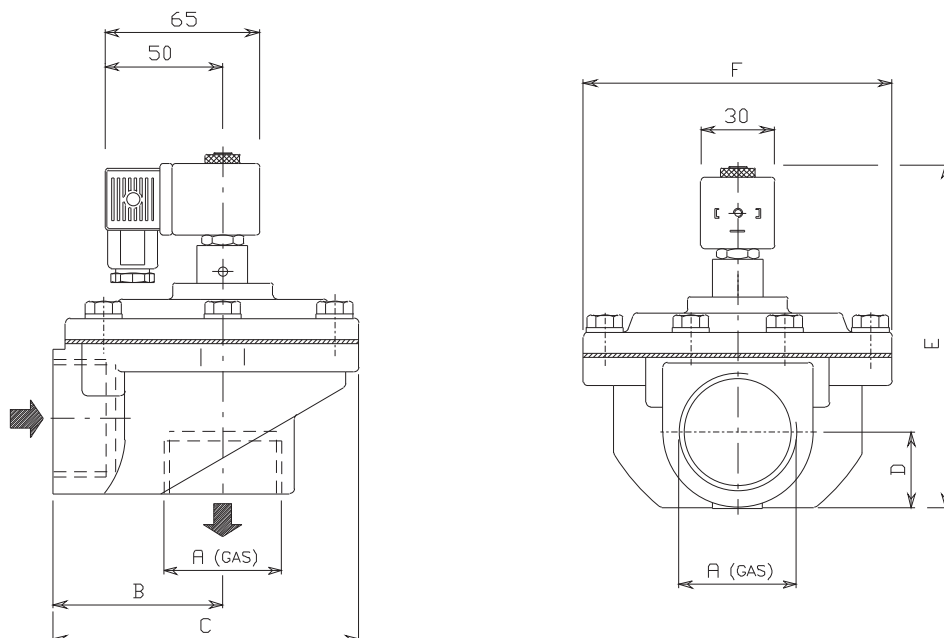
VALVE CONNECTION DIAMETER:
 • 08 = 1"
 • 12 = 1 1/2"

Voltage and frequency required.

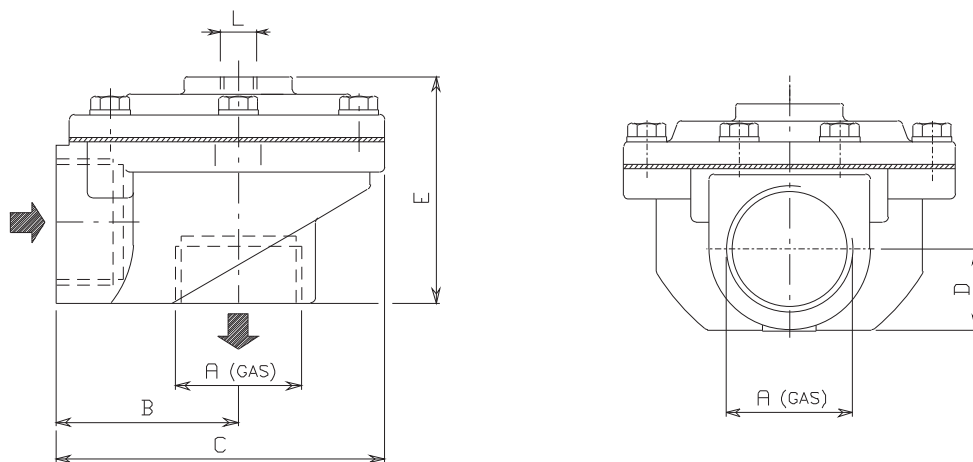
DIMENSIONS

200 Series AISI

VXP 208 - 212



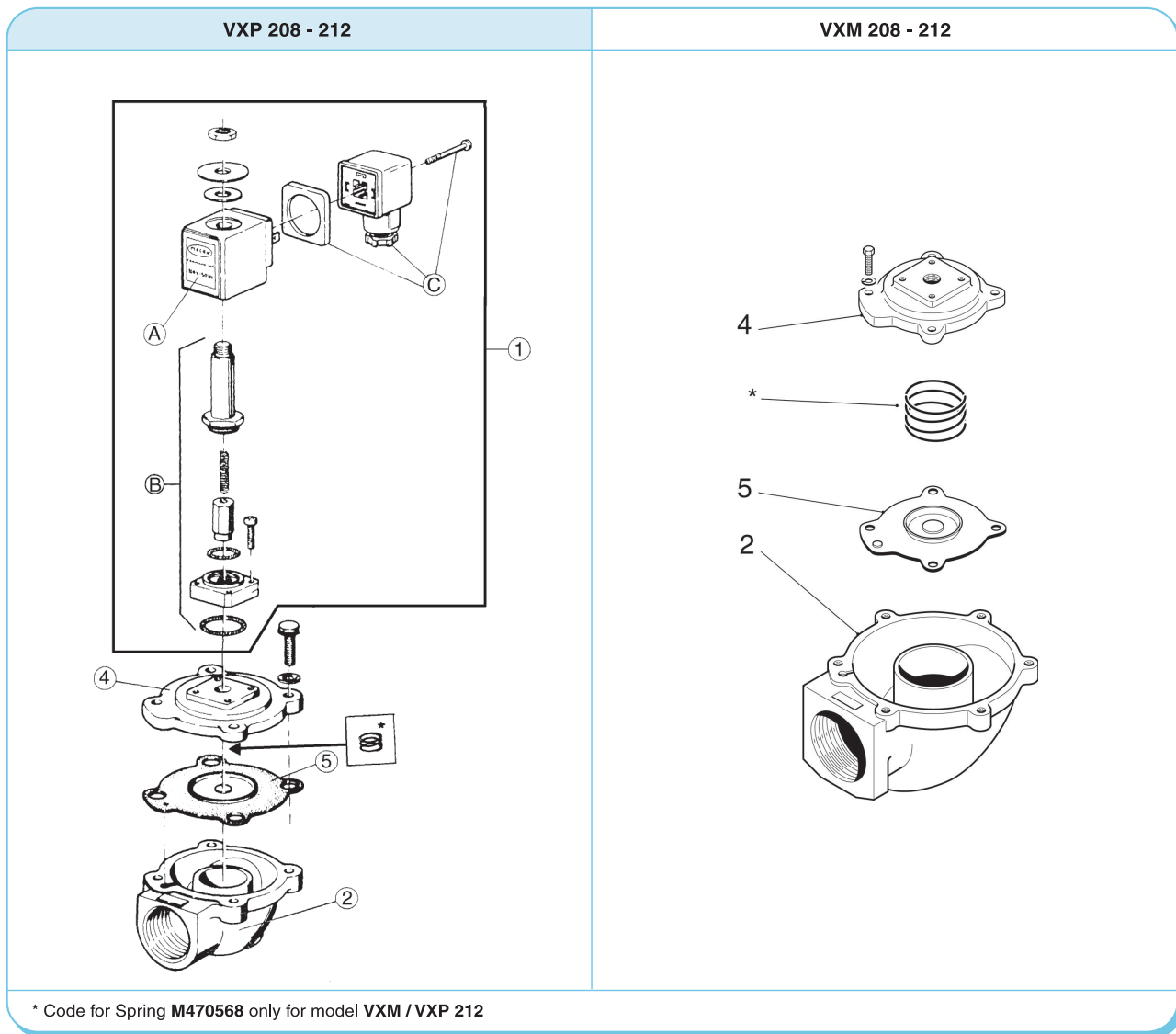
VXM 208 - 212



MODEL	Ø A	B	C	D	E	F	Weight Kg.	MODEL	E	Ø L	Weight Kg.	Pressure range (bar)		N° Diaph.
												min	max	
VXP 208	1"	52	90	23	135	74	1,13	VXM 208	60	1/4"	0,85	0,5	7,5	1
VXP 212	1 1/2"	72	130	31	60	135	2,67	VXM 212	85	1/4"	2,39	0,5	7,5	1

SPARE PARTS

200 Series AISI



STANDARD Version

Standard	POS	DESCRIPTION	CODE
	1	a) Solenoid (*)	a) SB3 - ..(*)
		b) Pilot group complete with fixing screws	b) ESL8V
		c) Din Connector PG9 EN175301-803 IP65	c) PLG9

(*) Specify Voltage and Frequency

POS	DESCRIPTION	CODE	
		VXM / VXP208	VXM / VXP212
1	(B) Pilot group complete with fixing screws	ESL8V	ESL8V
4	Top Cover	M310090	M310096
5	Diaphragm	DB181	DB1121
2	Valve Body	M300209	M300216

(*) Specify Voltage and Frequency

INSTRUCTIONS AND MAINTENANCE

200 Series AISI

1) - INSTALLATION INSTRUCTIONS

VALVE INLET: Mount valve inlet to tank stub pipe and ensure correctly connected. Valve reference "IN".
VALVE OUTLET: To be connected to blowpipe within the filter. Valve reference "OUT".

SEALING OF BLOWPIPE:

Suited to a threaded blowpipe only - The pipe must not enter entirely into the valve body, but must be blocked with a counter nut to properly fix the blowpipe to the valve outlet.

FLUID:

COMPRESSED AIR - Ensure air supply is clean and dry. (We recommend the installation of compressed air filter units to be installed directly before the pressure vessel, in order to ensure clean and dry is supplied to the diaphragm valve). Operating pressure min/max. 0.5 ÷ 7.5 bar.

AIR INLET PIPE TO HEADER TANK/PRESSURE VESSEL:

Minimum Ø 1" for tanks with a 1" valve or 1 1/2" valves.

COMPRESSOR:

With the appropriate compressor size being utilised, this ensures the tank can be refilled from 0-2 bar in a few seconds.

PROTECTION FROM RAIN:

Always ensure a small roof/lid is installed on top of the valves and/or electronic controllers as this protects the valves and controllers from exposure to harsh environmental conditions.

ELECTRICAL ON TIMES AND PULSE TIMES:

Average pulse times range from 100ms - 250ms depending on size of the valves being used.

2) - START UP

Before commencing to pulse the valves and to pressurise the tank/pressure vessel, it is important to eliminate all particulate, including dirt, rust, metal shavings, and other types of particulate, which may eventually enter the piping. The draining of any condensation or liquid within the tank/pressure vessel is also important and should be performed prior to pressurising the system. The drain valve should always be installed and should be used prior to start up. Minimum Ø of the drain valve socket is 1/4". If during the start phase, there is insufficient air in the airline, and you are unable to adequately fill the tank/pressure vessel, (the valves may remain slightly open), it is necessary to close the air inlet valve to the tank, wait for the pressure to reach 6-7 bar and then re-open the valve quickly. This will ensure that the tank fills quickly also providing significant pressure which ensures the valves remain properly closed.

3) - SPARE PART RECOMMENDATION

- 3.1 - FOR START UP - Minimum quantity of 5% of the supply (min. 1 piece).
 - Pilot Group (pos.1), complete with pilot body, solenoid coil, din connector.
- 3.2 - FOR THE FIRST TWO YEARS OF OPERATION - Minimum quantity of 10% of the supply (min. 2 pieces).
 - Pilot Group (pos.1), complete with pilot body, solenoid coil, din connector.
 - Diaphragms (pos.5) for single diaphragm valves.

4) - MAINTENANCE AND REPAIRS

4.1 - COMMON PROCESS FOR ALL CONTROLS, MAINTENANCE AND REPAIRS TO BE CONDUCTED:

- Before conducting any maintenance activity on the system ensure that the components are fully isolated from pressure and power supplies.
- Replacement or controls relating to diaphragms (pos.5), in reinstalling/re-positioning the diaphragm ensure that the diaphragm bleed is in the correct position lined up with the valve body position. The bleed should fit into the valve body eyelet.
- Secure the bolts on the top cover to the valve body without over tightening. We recommend the use of a torque wrench to properly secure the bolts: **1,6 kgm** for M6 (3/4" - 1"), **3,8 kgm** for M8 (1 1/2") and **7 kgm** for M10 (2" - 2 1/2" - 3").
- Substitution of or controls relating to the solenoid pilot: Prior to removing the solenoid pilot, ensure power supply is disconnected. Remove carefully din socket and then remove solenoid coil.

4.2 - PERIODICAL MAINTENANCE - Annually check: diaphragm and pilot inspection should be conducted annually

- In the case of VNP/VXP models, check the integrity of the electrical connections and the din socket connection to be properly fixed to the solenoid coil.
- In the case of VEM models, check the integrity of all pneumatic connections including pneumatic piping and all pneumatic connections.

4.3 - MALFUNCTION / TROUBLE SHOOTING: - Proceed with controls and checks below:

DEFECT / FAULT	CONTROL / CHECKS
The valve does not open or vibrates	<ul style="list-style-type: none"> - Verify integrity of the solenoid or that the wires are not damaged. - Verify that the electrical connections are properly connected to the valve and that the wiring has been performed correctly. - Verify that the outlets from the electronic controller are free from disturbances and within the specified tolerances of +/-10% of the nominal value.
The valve remains opens or loses air continuously	<ul style="list-style-type: none"> - Check that the bolts of the top cover are properly secured, in case of diaphragm substitution. - Remove the top cover and verify that there are no particulate underneath the diaphragm.