

MECAIR



MM & MR SERIES

MANIFOLD MOUNT VALVES

GOYEN - MM/MR SERIES MANIFOLD MOUNT VALVES

PRODUCT LEAFLET

MM SERIES - PULSE JET VALVES



MM Series

DESCRIPTION

Very high performance diaphragm valve designed to be mounted directly into the compressed air manifold. 1" and 1.5" models are supplied with outlet pipes to length specified; 3" and 3.5" models are supplied without outlet pipes.

SUITABLE FOR

Dust collector applications, in particular for reverse pulse jet filter cleaning and its variations, including bag filters, cartridge filters and envelope filters, ceramic filters and sintered metal fibre filters.

CONSTRUCTION

Body and Dresser Nuts: Aluminium (diecast)

Ferrule: 305 SS

Armature: 430FR SS

Diaphragm and seals: Nitrile or Viton

Spring: 304 SS

Screws: 302 or 304 SS

Outlet pipe: Schedule 40 wrought steel zinc passivated

Diaphragm Seat: PA-66 (25 & 40MM standard), Nitrile-coated mild steel (76MM standard), Acetal (102MM standard) or Viton-coated mild steel

Refer to Q Series Solenoid product data sheet for solenoid construction details.

OPERATION

Recommended on-time range: 50–500 ms

Recommended time between pulses:

1 minute or greater

MAINTENANCE

Before conducting any maintenance activity on the system, ensure that components are fully isolated from pressure and power supplies. Pressure and power should not be reapplied until the valve has been fully assembled.

Diaphragm and pilot inspection should be conducted annually.

APPROVALS

- ATEX II 3 GD (RCA/RCAC only)
- CSA [C, US] [C22.2 No 139–10 and UL 429:2009] (CA & RCA)
- C-Tick (CA)
- EMC 2004/108/EC (CA)
- Low Voltage Directive 2006/95/EC (CA)
- 76MM CRN – Alberta, Quebec, Ontario (to 779 kPa/113.1 psi, 76°C/170°F), British Columbia
- 102MM CRN – Alberta, Quebec, Ontario (to 76°C/170°F)

WEIGHTS

SIZE	INTEGRAL PILOT (CA) KG (LB)	REMOTE PILOT (RCA) KG (LB)
25	0.720 (1.59)	0.500 (1.10)
40	1.120 (2.47)	0.900 (1.98)
76	3.900 (8.60)	3.680 (8.11)
102	3.900 (8.60)	3.680 (8.11)

INSTALLATION

1. MM valves are installed through the tank; refer to the appropriate template listed below.
2. To avoid any potential operational problems it is preferable that the valves are not mounted underneath the tank where condensation may collect. All O-rings should be coated with a silicone-based lubricant or similar.
3. Dresser nut seals where used are a pressure seal only, not a structural component. Do not rely on dresser seals to retain either the tanks or blowtubes. Tanks and blowtubes must be independently restrained.
4. Tighten dresser nuts to 20 Nm (15 ftlbs) max.
5. Tighten pipe outlets to 20 Nm (15 ftlbs).
6. Make electrical connections to solenoid or connect RCA pilot port to pilot valve (RCA valves only).
7. Ensure compressed-air supply is dry and free from oil and dirt.
8. Check all cleaning system components are secure before applying pressure.
9. Apply moderate pressure and check for leaks.
10. Fully pressurise system.
11. Test fire and listen for proper actuation and crisp pulse noises.

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MAINTENANCE KITS AND ACCESSORIES

MODEL	NITRILE	VITON	INCLUDES
CA/RCA25MM Diaphragm kit	K2501	K4503	
CA/RCA40MM Diaphragm kit	K4000	K4511	
CA/RCA76MM Diaphragm kit	K7600	K0384	
CA/RCA102MM Diaphragm kit	K10200		
CA/RCA102MM Diaphragm kit for sulphur-rich environments (coal-fired boiler applications)	K10203		
Pilot repair kit (all models)	K0380		O-ring, armature assembly, armature spring, ferrule
CA/RCA25MM*P Installation template	Drawing 690048		Installation templates are available free of charge
CA/RCA25MM*D Installation template	Drawing 690046		
CA/RCA40MM*P Installation template	Drawing 690045		
CA/RCA40MM*D Installation template	Drawing 609999		
CA/RCA76MM Installation template	Drawing 690151 RCA and 690051 CA		
CA/RCA102MM Installation template	Drawing 691055 CA and 691056 RCA		Suitable for 102MM hose

PRODUCT CHARACTERISTICS AND PERFORMANCE

NOM. SIZE	PORT SIZE		NUMBER OF DIAPHRAGMS	FLOW		PRESSURE RANGE* KPA (PSI)	TEMPERATURE RANGE °C °(F)*	
	MM	INCH		KV	CV		NITRILE SEALS	VITON SEALS
25	25	1	1	26	30	30(5)-860(125)	-40[-40] to 82(179.6)	-29[-20.2] to 232(449.6)
40	40	1.5	2	44	51	30(5)-860(125)	-40[-40] to 82(179.6)	-29[-20.2] to 232(449.6)
76	76	3	2	200	233	30(5)-860(125)	-40[-40] to 82(179.6)	-29[-20.2] to 232(449.6)
102	102	3.5	2	238	277	30(5)-860(125)	-40[-40] to 82(179.6)	-29[-20.2] to 232(449.6)

* Unless limited by CRN.

ORDER CODE

1" and 1.5" Models

RCA 25 MM F P 4 0 1 0 301

Pilot type

RCA=remotely piloted
CA=integral pilot

Valve size

25 mm
40 mm

Tank shape (omit if ordering valve only)

F=Flat face only

Outlet pipe type (omit if ordering valve only)

P=Pipe flange
D=Dresser nut

Tank width (omit if ordering valve only)

4"
5"
6"
8"+

*25 mm only, †40 mm only

Solenoid type

Coil type for CA only.
See the RCA3 Solenoid Pilot Valves
brochure for coil options.

Diaphragm material

0=Nitrile
1=Viton

Pilot thread type (RCA)

0=NPT
1=RC

Exhaust thread type (CA)

0=NPT
1=RC

Thread and bleed size (RCA)

0=1/8", 0.062" bleed diameter
1=1/4", 0.062" bleed diameter
2=1/8", 0.047" bleed diameter
3=1/4", 0.047" bleed diameter

Bleed size (CA)

0=0.062"
1=0.047"

EXAMPLES

CA40MMFD6000-300

1.5" mm valve to suit a foil flat-faced tank with a dresser nut outlet, NPT exhaust port, Ø 0.062" bleed, nitrile seals and 220/240 V AC integral pilot with DIN socket terminals.

RCA25MM001

1" m valve only, 1 8" NPT remote pilot, Ø 0.062" bleed and viton seals.

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3" and 3.5" Models

RCA 76 MM 1 0 1 301

Pilot type

RCA=remotely piloted
CA=integral pilot

Valve size

76 mm
102 mm

Remote pilot size (specify 0 for CA models)

0=1/8" or CA
1=1/4"

Solenoid type

Coil type for CA only.
See the RCA3 Solenoid Pilot Valves
brochure for coil options.

Diaphragm material

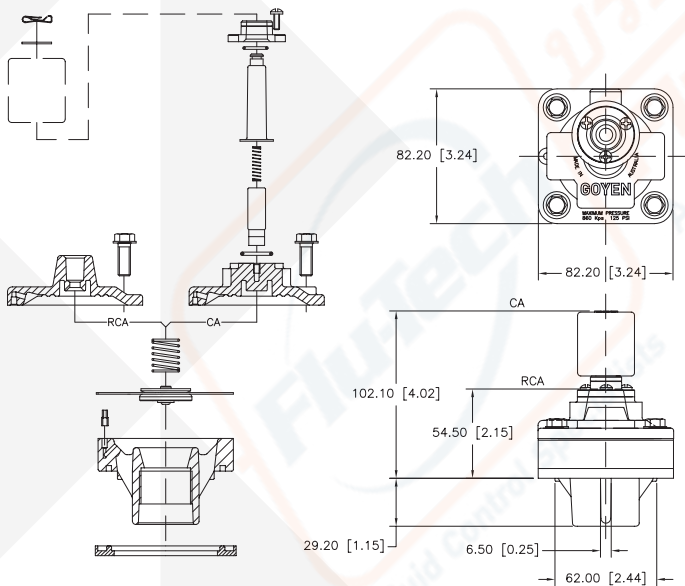
0=Nitrile
1=Viton

Thread type (specify 4 for CA models)

0=NPT
1=RC
4=CA valve

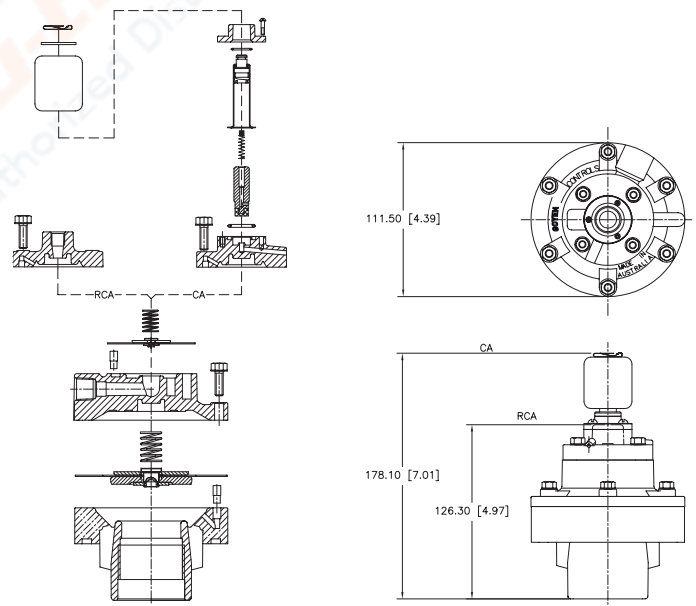
DIMENSIONS IN MM (AND INCHES)

CA/RCA25MM



Note: Pipe outlet not shown

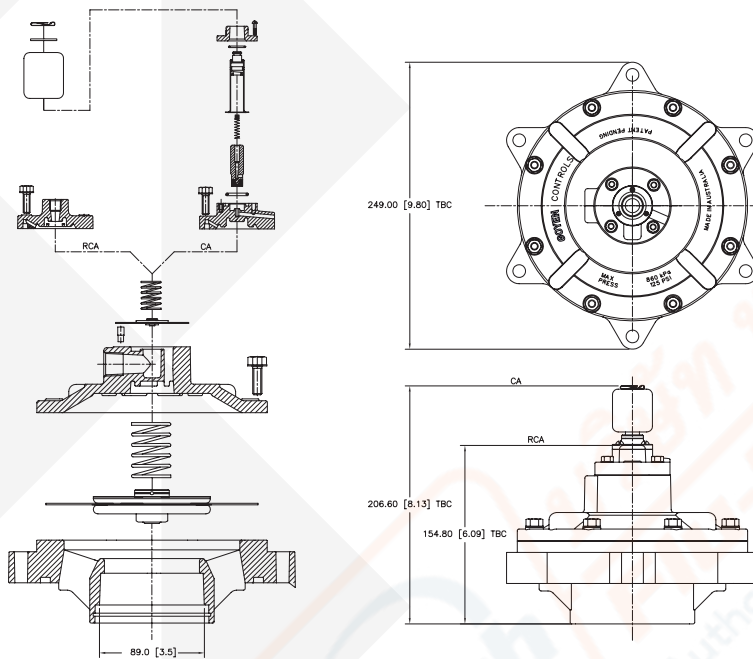
CA/RCA40MM



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CA/RCA76MM

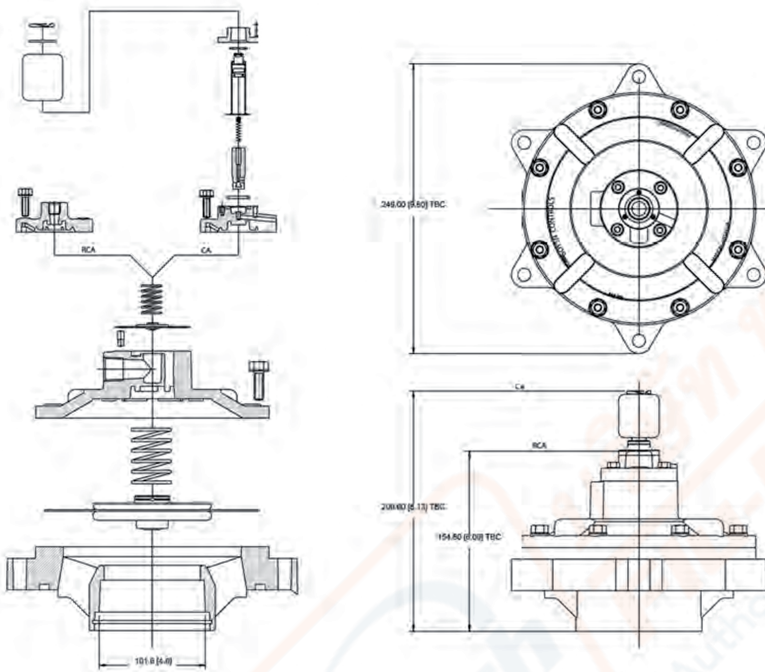


Note: Suggested pipe size is 3" NB Schedule 40 pipe (OD=89.0 mm, 3.5")

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CA/RCA102MM



Note: Suggested pipe size is 3.5" NB Schedule 30 pipe (OD=101.6 mm, 4")

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MR SERIES - PULSE JET VALVES



MR Series

DESCRIPTION

The 3" CA76MR, RCA76MR and the 2.5" CA62MR and RCA62MR pulse jet valves are designed for direct mounting to nominal 12" diameter cylindrical manifolds. The 40MMR is designed for nominal 6" diameter manifolds. The 62MR, 76MR and 40MMR valves deliver very high flow performance and are suited to reverse pulse jet dust collector applications for a wide range of installations. The MR range is built to an exceptional quality standard and is supported by dedicated and experienced applications engineers.

SUITABLE FOR

Mounting to 12" nominal diameter pipe schedule steel or stainless steel manifolds in dust collector applications in reverse pulse jet filter cleaning. Typical applications include bag filters, cartridge filters, envelope filters, ceramic filters and sintered metal fibre filters.

The MR Series valves are available for purchase in three configurations – as a stand-alone valve, with an outlet pipe, or assembled to a manifold as part of a complete filter cleaning solution.

CONSTRUCTION AND SPECIFICATIONS

Body and top cover: Diecast aluminium
Ferrule: 305 SS
Armature: 430FR SS
Diaphragm and seals: Nitrile or Viton
Spring: 304 SS
Screws: 302 SS and 304 SS
Outlet pipe: Schedule 40 wrought steel with surface protection (other materials on request)
Diaphragm seat: Nitrile encapsulated mild steel or Viton encapsulated mild steel

APPROVALS

- 76MR CRN – Alberta (to 632 kPa/91.1 psi, 80°C/176°F)

INSTALLATION

1. The valves are installed through the tank.

WEIGHTS

SIZE	INTEGRAL PILOT (CA) KG (LB)	REMOTE PILOT (RCA) KG (LB)
76MR	4.27 (9.41)	4.05 (8.93)
62MR	4.58 (9.41)	4.36 (8.93)
40MMR	1.63 (3.59)	1.41 (3.11)

PRODUCT CHARACTERISTICS AND PERFORMANCE

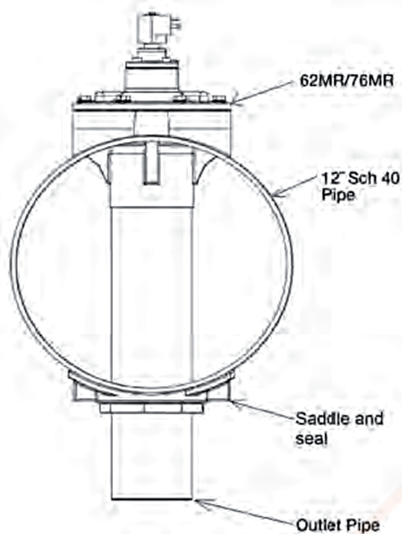
NOMINAL PORT SIZE MM (INCH)	FLOW		PRESSURE RANGE* KPA (PSI)	TEMPERATURE RANGE °C °(F)*	
	KV	CV		NITRILE SEALS	VITON SEALS
76MR	200	233	30 kPa/5 psi to 860 kPa/125 psi	-40°C [-40°F] to 82°C (179.6°F)	-29°C [-20.2°F] to 232°C (449.6°F)
62MR	150.7	175.2	30 kPa/5 psi to 860 kPa/125 psi	-40°C [-40°F] to 82°C (179.6°F)	-29°C [-20.2°F] to 232°C (449.6°F)
40MMR	52	61	30 kPa/5 psi to 860 kPa/125 psi	-40°C [-40°F] to 82°C (179.6°F)	-29°C [-20.2°F] to 232°C (449.6°F)

* Unless limited by CRN.

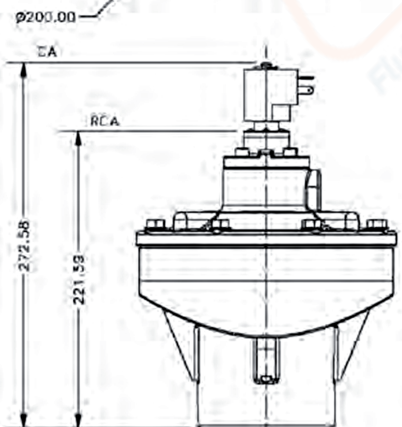
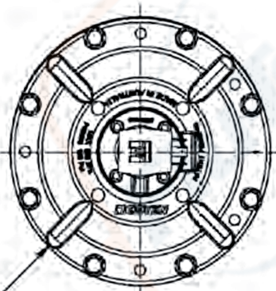
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62MR/76MR CONFIGURATIONS WITH OUTLET PIPE, WITHOUT MANIFOLD



2.5" nominal for 62MR
3.0" nominal for 76MR



RCA 76MR 12 0 0 0 00

Pilot type

RCA=remotely piloted
CA=integral pilot

Valve size

62MR
76MR

Nominal tank width

12"

Remote pilot size

0=1/8"
1=1/4"
Specify 0 for CA models.

Solenoid type

Solenoid order code for CA valve, drop the 'K-'. Refer to Q Series Solenoid product specification.

Diaphragm material

0=Nitrile
1=Viton

Pilot thread type

0=NPT
1=RC
Specify 4 for CA models.

OPERATION

Recommended on-time range: 50 to 500 ms
Recommended time between pulses: 1 minute or greater

MAINTENANCE

Before conducting any maintenance activity on the system ensure that components are fully isolated from pressure and power supplies. Pressure and power should not be reapplied until the valve has been fully assembled. Diaphragm and pilot inspection should be conducted annually.

MAINTENANCE KITS

MODEL	NITRILE	VITON
CA/RCA76MR Diaphragm Kit	K7600	K7601
Pilot Repair Kit for all models	K0380	K0384
CA/RCA62MR Diaphragm Kit	K7604	K7602
CA/RCA40MMR Diaphragm Kit	K4502	K4503

- Diaphragm kits include main and secondary diaphragms and all diaphragm springs.
- Pilot repair kit includes O-ring, armature assembly, armature spring and ferrule.

TYPE	NOMINAL PORT SIZE	NUMBER OF DIAPHRAGMS	PRESSURE RANGE (BAR)		COIL	KV	CV
			MIN.	MAX.			
CA62MR	2.5"	2	0.3	8.6	YES	150.7	175.2
RCA62MR	2.5"	2	0.3	8.6	NO	150.7	175.2

RCA 40MMR 6 - 1 2 0 -

Pilot type

RCA=remotely piloted
CA=integral pilot

40 MM

Nominal tank size

6"

Remote pilot size

0=1/8"

Solenoid type

Solenoid order code for CA valve, drop the 'K-'. Refer to Q Series Solenoid product specification.

Diaphragm material

0=Nitrile
1=Viton

Pilot thread type

0=NPT
1=RC
2=G

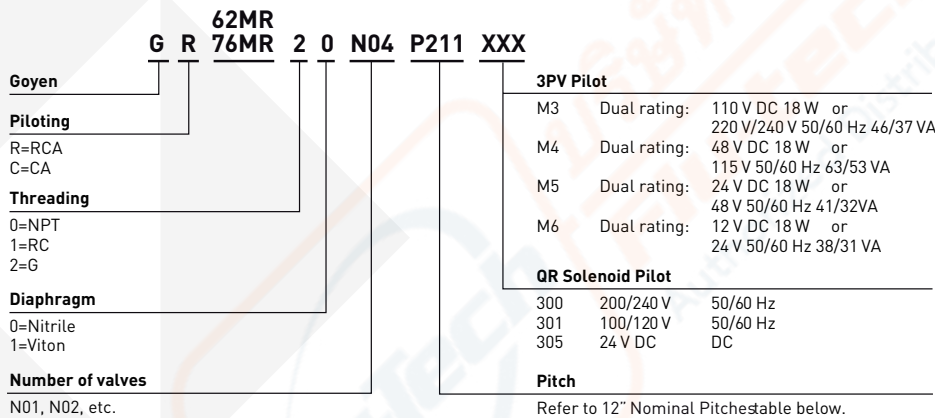
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INFORMATION WHEN ORDERING 62/76MR COMPLETE WITH MANIFOLD



ORDER CODE



More options available below. See 'Voltage Range QR Series' table.

TANK TEMPERATURE & PRESSURE RANGES

Carbon steel	-40°C to 110°C	-40°F to 230°F
Stainless steel	-50°C to 93°C	-58°F to 199°F
Pressure range	100 kPa to 800 kPa	14.5 psi to 116 psi

CERTIFICATIONS



12" MINIMAL PITCH DISTANCES

HEADER MATERIAL CALCULATION STANDARD WALL	CARBON STEEL ASME 6.35 MM	CARBON STEEL ASME 7.14 MM	STAINLESS STEEL ASME/PED AT TEMPERATURE DESIGN 70°C 4.57 MM
400 kPa	203 mm/8"	203 mm/8"	203 mm/8"
500 kPa	203 mm/8"	203 mm/8"	214 mm/8.4"
600 kPa	210 mm/8.3"	205 mm/8.1"	227 mm/8.9"
700 kPa	215 mm/8.5"	210 mm/8.3"	240 mm/9.4"
800 kPa	225 mm/8.9"	215 mm/8.5"	257 mm/10"
860 kPa	230 mm/9.1"	220 mm/8.7"	268 mm/11"

GOYEN

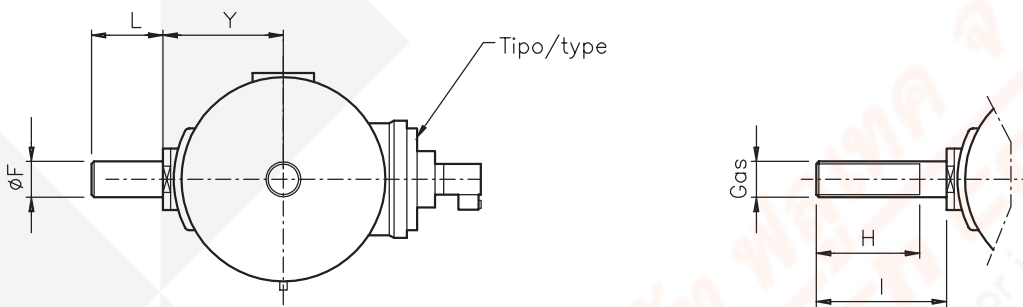
MANIFOLD MOUNT VALVES

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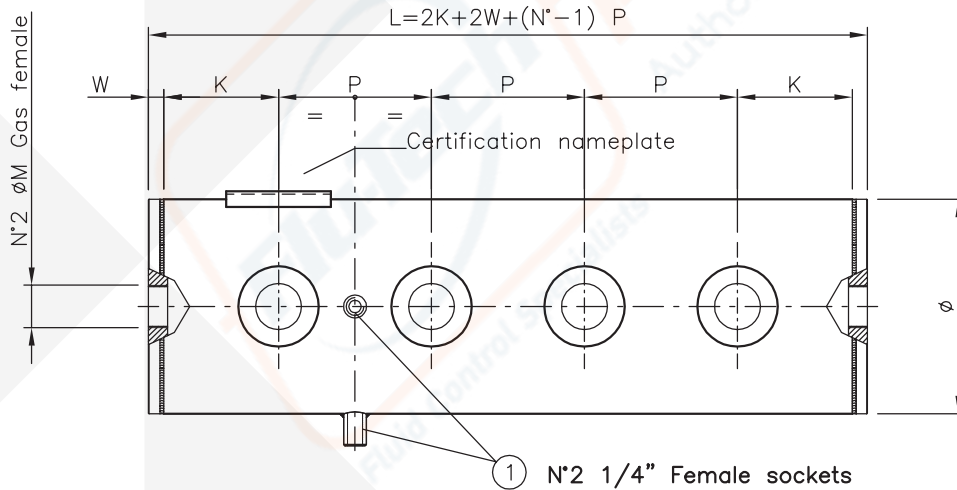
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MR SERIES - PULSE JET VALVES WITH MANIFOLD TANK DIMENSIONS



Ø TANK	Ø F	Y	SHORT UNTHREADED	L	LONG UNTHREADED	L	LONG THREADED	Ø G GAS	H	I
DN12"	88.9	187 mm/ 7.4"	TS520	80 mm/ 3.1"	TL520	140 mm/ 5.5"	TF520	2.5"	130 mm/ 5.1"	140 mm/ 5.5"



Ø TANK	Ø VALVE	P MIN.	K MIN.	W	Ø M
DN12"	2.5"	205 mm*/8.1"	130 mm/5.1"	25 mm/0.98"	2"

* Refer to 12" Nominal Pitches table above.

TO BE COMPLETED BY CUSTOMER

P DISTANCE REQUIRED	N NUMBER OF VALVES	K OPTIONAL