

MECAIR



12" TANKS WITH 2½" AND 3" VALVES

HEADER TANK SOLUTIONS

MECAIR - 12" TANKS WITH 2½" AND 3" VALVES

HEADER TANK SOLUTIONS

PRODUCT LEAFLET



DESCRIPTION

The 3" CA76MR, RCA76MR and the 2½" 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.

APPROVALS

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

INSTALLATION

1. The valves are installed through the tank.
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. Tighten pipe outlets to 340 Nm (251 ft-lbs).
4. Make electrical connections to solenoid or connect RCA pilot port to pilot valve (RCA valves only).
5. Ensure compressed air supply is dry and free from oil and dirt.
6. Check all cleaning system components are secure before applying pressure.
7. Apply moderate pressure and check for leaks.
8. Fully pressurise system.
9. Test fire and listen for proper actuation and crisp pulse noises.

Note: Minimum valve-to-valve separation distance must be considered with due regard to the applicable pressure vessel design code (e.g. ASME, PED) and the required tank

CONSTRUCTION AND SPECIFICATIONS

| | |
|---------------------|--|
| TOP COVER | Diecast aluminium |
| BODY | 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 |

WEIGHTS

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

PRODUCT CHARACTERISTICS AND PERFORMANCE

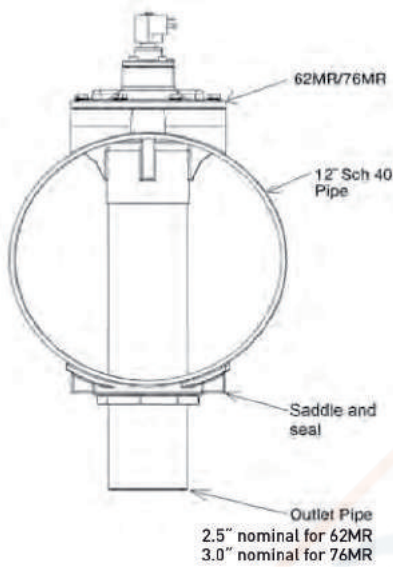
| SIZE | FLOW KV (CV) | PRESSURE RANGE KPA (PSI)* | TEMPERATURE RANGE °C (°F)* | |
|-------|---------------|---------------------------------|---------------------------------|------------------------------------|
| | | | NITRILE SEALS | VITON SEALS |
| 76MR | 200 (233) | 30 kPa/5 psi to 860 kPa/125 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 | 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) |

MECAIR - 12" TANKS WITH 2½" AND 3" VALVES

HEADER TANK SOLUTIONS

PRODUCT LEAFLET

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



ORDER CODE

| | | | | | | |
|--|-----------------------------------|----------------------------------|--|--|---|---|
| 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

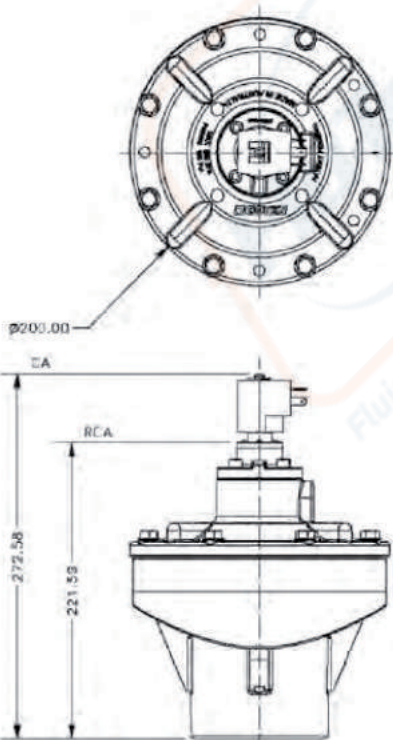
Before conducting any maintenance activity on the system ensure that components are fully isolated from pressure and power supplies. Pressure and power should not be reapplied until the valve has been fully assembled. Diaphragm and pilot inspection should be conducted annually.

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 |

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

| MODEL | NOMINAL PORT SIZE | NO. DIAPH. | 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 |



| | | | | | | |
|--|----------------------------|--------------------------------|------------------------------------|--|---|--|
| Pilot type RCA=remotely piloted CA=integral pilot | Valve size 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 |
|--|----------------------------|--------------------------------|------------------------------------|--|---|--|

MECAIR - 12" TANKS WITH 2½" AND 3" VALVES

HEADER TANK SOLUTIONS

PRODUCT LEAFLET

INFORMATION WHEN ORDERING 62/76MR COMPLETE WITH MANIFOLD



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 |

TANK CERTIFICATIONS AVAILABLE



ORDER CODE

| | | | | | | | | |
|-------------------------|-------------|----------|-------------|----------|----------|------------|--|------------|
| | 62MR | | | | | | | |
| | G | R | 76MR | 2 | 0 | N04 | P211 | XXX |
| Goyen | | | | | | | | |
| Piloting | | | | | | | | |
| R=RCA | | | | | | | | |
| C=CA | | | | | | | | |
| Threading | | | | | | | | |
| 0=NPT | | | | | | | | |
| 1=RC | | | | | | | | |
| 2=G | | | | | | | | |
| Diaphragm | | | | | | | | |
| 0=Nitrite | | | | | | | | |
| 1=Viton | | | | | | | | |
| Number of valves | | | | | | | | |
| N01, N02, etc. | | | | | | | | |
| | | | | | | | 3PV pilot | |
| | | | | | | | M3 Dual rating: 110 V DC 18 W or 220 V/240 V 50/60 Hz 46/37 VA | |
| | | | | | | | M4 Dual rating: 48 V DC 18 W or 115 V 50/60 Hz 63/53 VA | |
| | | | | | | | M5 Dual rating: 24 V DC 18 W or 48 V 50/60 Hz 41/32 VA | |
| | | | | | | | M6 Dual rating: 12 V DC 18 W or 24 V 50/60 Hz 38/31 VA | |
| | | | | | | | QR solenoid pilot | |
| | | | | | | | 300 200/240 V 50/60 Hz | |
| | | | | | | | 301 100/120 V 50/60 Hz | |
| | | | | | | | 305 24 V DC DC | |
| | | | | | | | Pitch | |
| | | | | | | | Refer to 12" Nominal Pitchstable below. | |

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

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" |

MECAIR

HEADER TANK SOLUTIONS

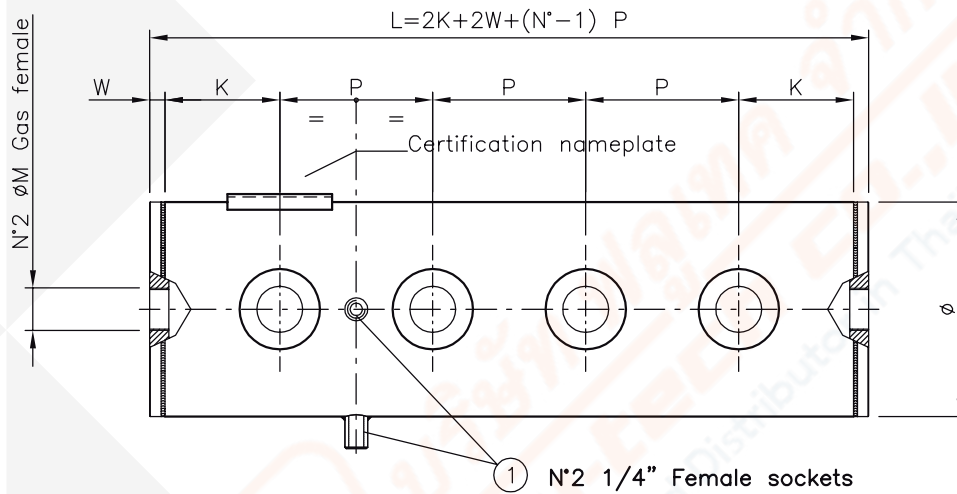
4

MECAIR - 12" TANKS WITH 2½" AND 3" VALVES

HEADER TANK SOLUTIONS

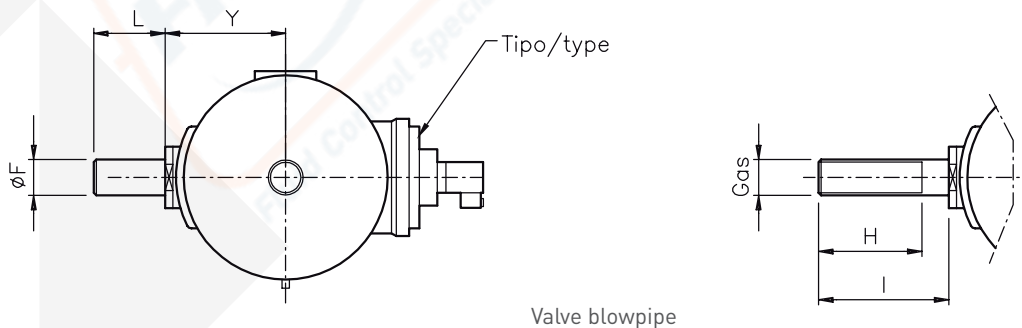
PRODUCT LEAFLET

TANK DIMENSIONS



| | | | | | | TO BE COMPLETED BY CUSTOMER | | |
|--------------------|---------------------|--------------|-------------|-------------|-----------------|-----------------------------|--------------------|------------|
| \varnothing TANK | \varnothing VALVE | P MIN. | K MIN. | W | \varnothing M | P DISTANCE REQUIRED | N NUMBER OF VALVES | K OPTIONAL |
| DN12" | 2.5" | 205 mm*/8.1" | 130 mm/5.1" | 25 mm/0.98" | 2" | | | |

* Refer to 12" Nominal Pitches table above.



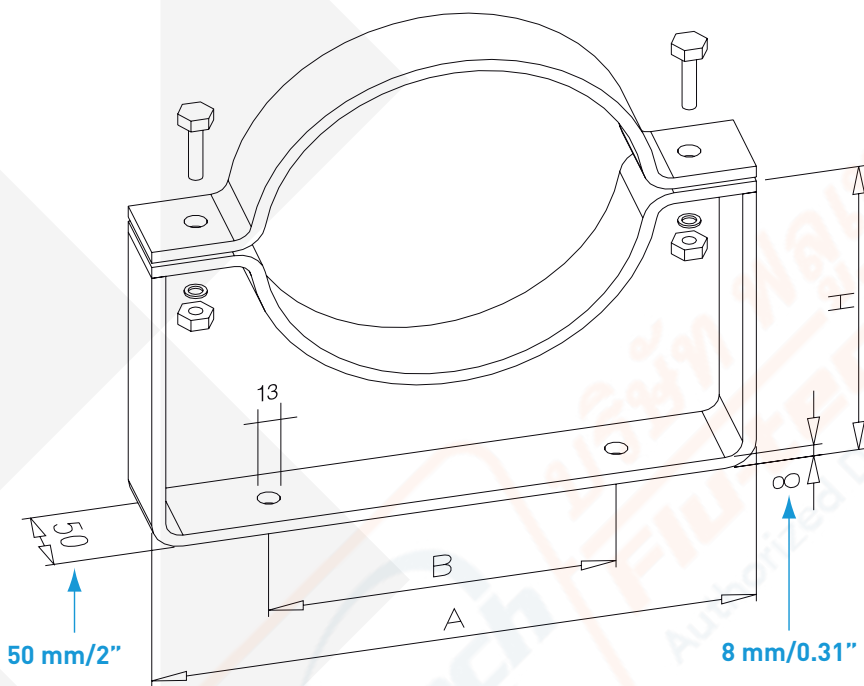
| \varnothing TANK | \varnothing F | Y | SHORT UNTHREADED | L | LONG UNTHREADED | L | SHORT THREADED | \varnothing G GAS | H | I |
|--------------------|-----------------|-------------|------------------|------------|-----------------|-------------|----------------|---------------------|-------------|-------------|
| 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" |

MECAIR - 12" TANKS WITH 2½" AND 3" VALVES

HEADER TANK SOLUTIONS

PRODUCT LEAFLET

BRACKET DIMENSIONS



| DN TANK | TYPE OF BRACKET | A | B | H |
|----------------|-----------------|------------|------------|-------------|
| 12" (323.9) | TH12 | 490 mm/19" | 300 mm/12" | 340 mm/13" |
| | TM12 | 490 mm/19" | 300 mm/12" | 288 mm/11" |
| | TB12 | 490 mm/19" | 300 mm/12" | 234 mm/9.2" |