

# LOCKABLE ISOLATION 3/2-WAY VALVES

## SERIES MD

Ports with interchangeable cartridges: threaded (1/8, 1/4, 3/8) or integrated with super-rapid fitting for tube with  $\varnothing$  6, 8 and 10 mm  
 Modular  
 Manual, electro-pneumatic, servo-pilot and pneumatic control



- Standard tamperproof lock-out (manual valve)
- 24 V, 110 V or 230 V coils
- Solenoid valve with or without manual override available in different types
- Additional air intakes with the same characteristics of the inlet air (line)

The Series MD offers multi-sector solutions that ensure saving in terms of installation time, space and costs.  
 Series MD lockable isolation valves allow the inlet and exhaust of compressed air from the plant and can meet several application requirements.

The electric version can be equipped with different options of manual override (Push & Turn, Push-in, retaining lever).  
 Moreover, a version without override is also available.  
 The manually operated valve can be locked thanks to the use of padlocks.

### General Data

|   |  |
|---|--|
| <b>Construction</b>   | Modular, compact, spool-type   |
| <b>Materials</b>  | See table of materials on the following page   |
| <b>Ports</b>  | With interchangeable cartridges: 1/8, 1/4 and 3/8 threaded, integrated with super-rapid fitting for tube with $\varnothing$ 6, 8 and 10 mm             |
| <b>Fixing</b>   | In-line;<br>Wall-mounting by means of through holes in the body or with a support bracket;<br>Panel-mounting (for manually operated version only)      |
| <b>Operating temperature</b>  | -5°C ÷ 50°C up to 16 bar   |
| <b>Operating pressure</b>   | Manual valve: -0.8 bar ÷ 10 bar<br>Electro-pneumatic valve: 2 bar ÷ 10 bar<br>Servopilot or pneumatic valve: -0.8 bar ÷ 10 bar (with pilot 2 ÷ 10 bar) |
| <b>Nominal flow</b>   | See flow diagrams on the following pages   |
| <b>Nominal exhaust flow at 6 bar with <math>\Delta p = 1</math> bar</b> | 850 NI/min   |
| <b>Fluid</b>  | Compressed air   |

**LOCKABLE ISOLATION 3/2-WAY VALVES**  
**SERIES MD - CODING EXAMPLES**
**Coding example**

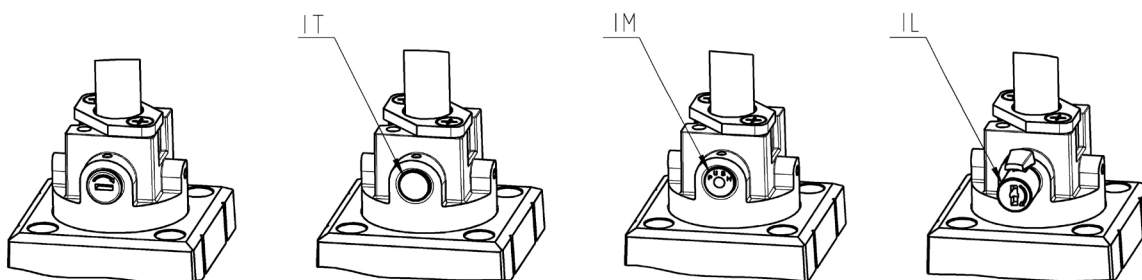
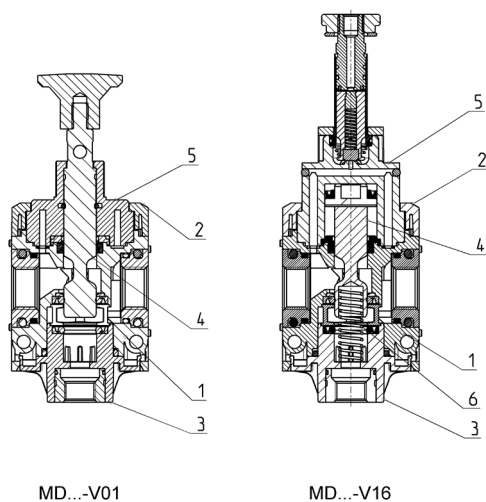
| MD         | 1   | V | 01   | 1/8 |
|------------|---|---|--|-----|
| <b>MD</b>  | SERIES  |   |  |     |
| <b>1</b>   | DIMENSION:<br>1 = 42 mm   |   |  |     |
| <b>V</b>   | 3/2-WAY VALVE   |   |  |     |
| <b>01</b>  | DESIGN TYPE:<br>01 = lockable manual control<br>16 = electro-pneumatic control, Push & Turn manual override<br>16IL = electro-pneumatic control, bistable manual override, lever type |   | 16IM = electro-pneumatic control, monostable manual override<br>16IT = electro-pneumatic control without manual override<br>36 = pneumatic control |     |
| <b>1/8</b> | PORTS (IN - OUT) *:<br>= without cartridges<br>1/8 = G1/8<br>1/4 = G1/4<br>3/8 = G3/8<br>6 = tube Ø6<br>8 = tube Ø8<br>10 = tube Ø10  |   |  |     |

\* NOTE: if the inlet (IN) cartridge is different from the outlet (OUT) cartridge, both dimensions shall be indicated.  
 Example: MD1-V01-1/4-1/8

**Types of manual override**

Push &amp; Turn manual override

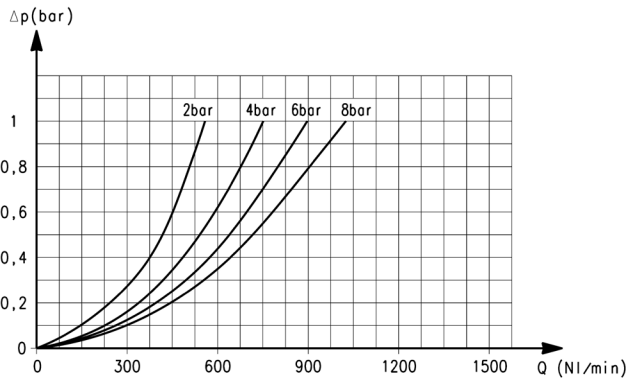
- IT = without manual override
- IL = bistable manual override, lever type
- IM = monostable manual override


**Series MD lockable isolation 3/2-way valves - materials**


| PARTS            | Materials          |
|------------------|--------------------|
| 1 = Body         | Polyamide          |
| 2 = Covering     | Polyamide          |
| 3 = Plug         | Polyamide          |
| 4 = Spool        | Anodized aluminium |
| 5 = End-cover    | Polyamide          |
| 6 = Lower spring | Stainless steel    |
| Seals            | NBR                |

## Flow diagrams for manually operated models

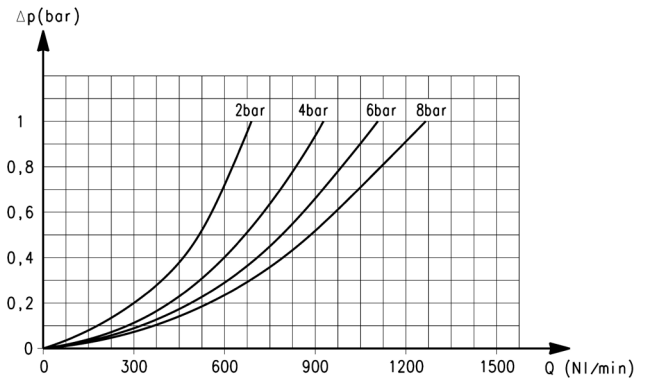
### MD1-V01...-1/8



Ports with interchangeable G1/8 threaded cartridges

$\Delta p$  = Pressure drop (bar)  
 $Q$  = Flow (NI/min)

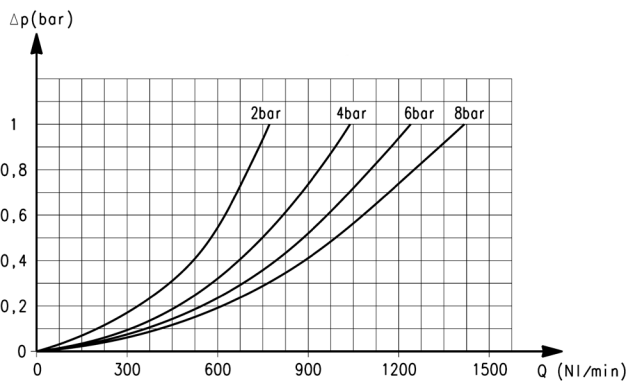
### MD1-V01...-1/4



Ports with interchangeable G1/4 threaded cartridges

$\Delta p$  = Pressure drop (bar)  
 $Q$  = Flow (NI/min)

### MD1-V01...-3/8



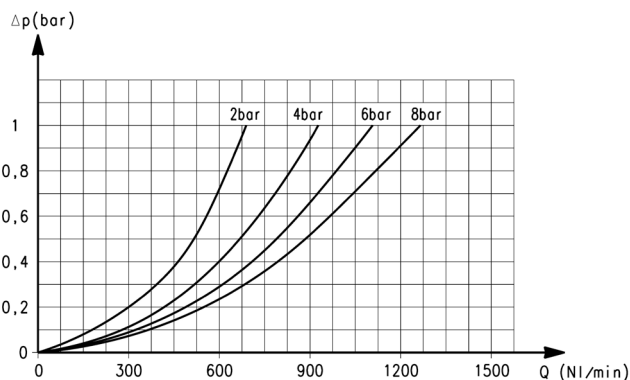
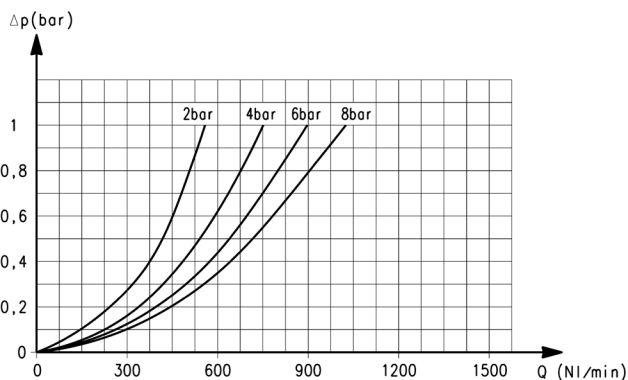
Ports with interchangeable G3/8 threaded cartridges

$\Delta p$  = Pressure drop (bar)  
 $Q$  = Flow (NI/min)

**Flow diagrams for electro-pneumatically or pneumatically operated models**

**MD1-V16...-1/8, MD1-V36...-1,8**

**MD1-V16...-1/4, MD1-V36...-1,4**



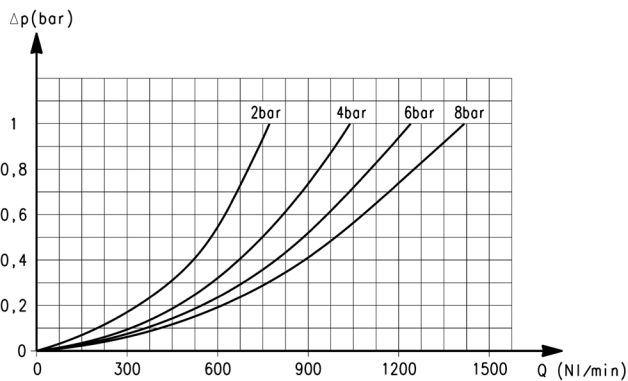
Ports with interchangeable G1/8 threaded cartridges

$\Delta p$  = Pressure drop (bar)  
 $Q$  = Flow (NI/min)

Ports with interchangeable G1/4 threaded cartridges

$\Delta p$  = Pressure drop (bar)  
 $Q$  = Flow (NI/min)

**MD1-V16...-3/8, MD1-V36...-3,8**



Ports with interchangeable G3/8 threaded cartridges

$\Delta p$  = Pressure drop (bar)  
 $Q$  = Flow (NI/min)

AIR TREATMENT

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### Manually operated valves - dimensions

VN27 = Lockable bistable manual valve 3/2

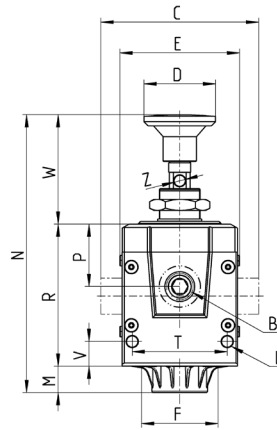
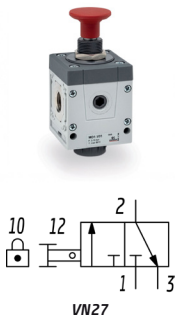


Fig.1

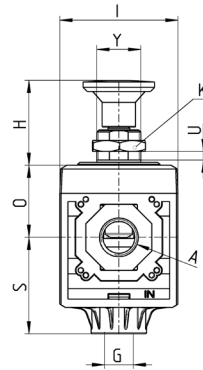


Fig.2

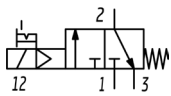
Fig. 1 = closed valve  
 Fig. 2 = open valve

| Mod.        | A    | B    | C  | D   | E  | F    | G    | H  | I  | K  | L  | M   | N   | O    | P    | R    | S    | T    | U   | V | W    | Y     | Z    | Weight [kg] |
|-------------|------|------|----|-----|----|------|------|----|----|----|----|-----|-----|------|------|------|------|------|-----|---|------|-------|------|-------------|
| MD1-V01     | -    | G1/8 | 42 | Ø26 | 42 | 28,5 | G1/8 | 31 | 43 | 19 | Ø4 | 9,5 | 101 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 0-8 | 9 | 39,8 | M16x1 | Ø4,5 | 0,2         |
| MD1-V01-1/8 | G1/8 | G1/8 | 42 | Ø26 | 42 | 28,5 | G1/8 | 31 | 43 | 19 | Ø4 | 9,5 | 101 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 0-8 | 9 | 39,8 | M16x1 | Ø4,5 | 0,2         |
| MD1-V01-1/4 | G1/4 | G1/8 | 42 | Ø26 | 42 | 28,5 | G1/8 | 31 | 43 | 19 | Ø4 | 9,5 | 101 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 0-8 | 9 | 39,8 | M16x1 | Ø4,5 | 0,2         |
| MD1-V01-3/8 | G3/8 | G1/8 | 42 | Ø26 | 42 | 28,5 | G1/8 | 31 | 43 | 19 | Ø4 | 9,5 | 101 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 0-8 | 9 | 39,8 | M16x1 | Ø4,5 | 0,2         |
| MD1-V01-6   | Ø6   | G1/8 | 47 | Ø26 | 42 | 28,5 | G1/8 | 31 | 43 | 19 | Ø4 | 9,5 | 101 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 0-8 | 9 | 39,8 | M16x1 | Ø4,5 | 0,2         |
| MD1-V01-8   | Ø8   | G1/8 | 62 | Ø26 | 42 | 28,5 | G1/8 | 31 | 43 | 19 | Ø4 | 9,5 | 101 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 0-8 | 9 | 39,8 | M16x1 | Ø4,5 | 0,2         |
| MD1-V01-10  | Ø10  | G1/8 | 67 | Ø26 | 42 | 28,5 | G1/8 | 31 | 43 | 19 | Ø4 | 9,5 | 101 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 0-8 | 9 | 39,8 | M16x1 | Ø4,5 | 0,2         |

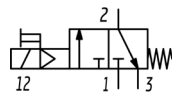
### Electro-pneumatically operated valves - dimensions

\* = add:

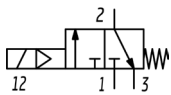
- IL for the version with bistable manual override, lever type (EV10)
- IM for the version with monostable manual override (EV54)
- IT for the version without manual override (EV55)



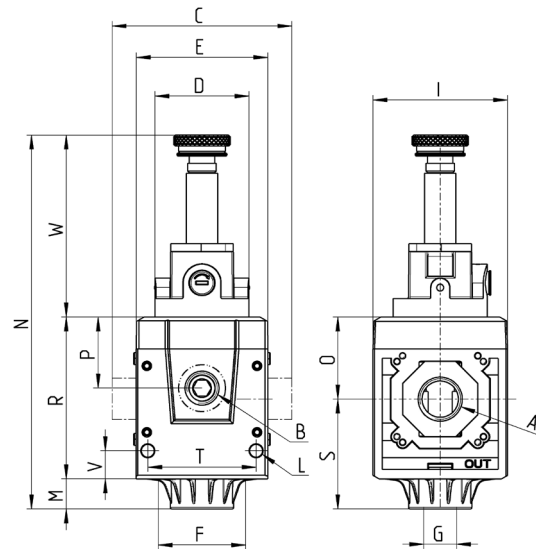
EV10



EV54



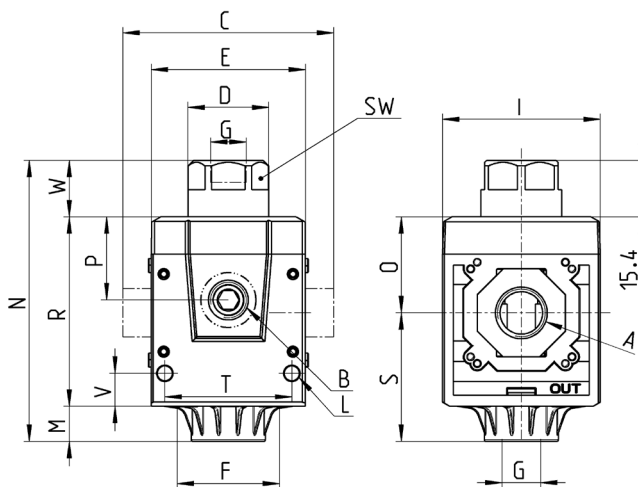
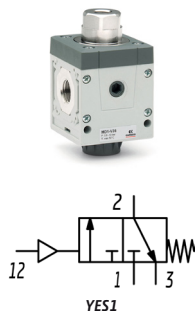
EV55



| Mod.         | A    | B    | C  | D   | E  | F    | G    | I  | L  | M   | N     | O    | P    | R    | S    | T    | V | W    | Weight [kg] |
|--------------|------|------|----|-----|----|------|------|----|----|-----|-------|------|------|------|------|------|---|------|-------------|
| MD1-V16*     | -    | G1/8 | 42 | Ø30 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 119,4 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 58,2 | 0,2         |
| MD1-V16*-1/8 | G1/8 | G1/8 | 42 | Ø30 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 119,4 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 58,2 | 0,2         |
| MD1-V16*-1/4 | G1/4 | G1/8 | 42 | Ø30 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 119,4 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 58,2 | 0,2         |
| MD1-V16*-3/8 | G3/8 | G1/8 | 42 | Ø30 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 119,4 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 58,2 | 0,2         |
| MD1-V16*-6   | Ø6   | G1/8 | 47 | Ø30 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 119,4 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 58,2 | 0,2         |
| MD1-V16*-8   | Ø8   | G1/8 | 62 | Ø30 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 119,4 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 58,2 | 0,2         |
| MD1-V16*-10  | Ø10  | G1/8 | 67 | Ø30 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 119,4 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 58,2 | 0,2         |

**LOCKABLE ISOLATION 3/2-WAY VALVES**  
**SERIES MD - DIMENSIONS**
**Pneumatically operated valves - dimensions**

YES1 = pneumatically operated valve, 3/2, monostable, mechanical spring



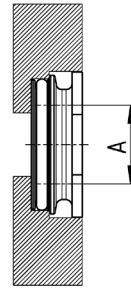
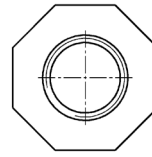
| Mod.        | A    | B    | C  | D   | E  | F    | G    | I  | L  | M   | N    | O    | P    | R    | S    | T    | V | W    | SW | Weight [kg] |
|-------------|------|------|----|-----|----|------|------|----|----|-----|------|------|------|------|------|------|---|------|----|-------------|
| MD1-V36     | -    | G1/8 | 42 | Ø22 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 76,6 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 15,4 | 20 | 0,2         |
| MD1-V36-1/8 | G1/8 | G1/8 | 42 | Ø22 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 76,6 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 15,4 | 20 | 0,2         |
| MD1-V36-1/4 | G1/4 | G1/8 | 42 | Ø22 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 76,6 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 15,4 | 20 | 0,2         |
| MD1-V36-3/8 | G3/8 | G1/8 | 42 | Ø22 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 76,6 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 15,4 | 20 | 0,2         |
| MD1-V36-6   | Ø6   | G1/8 | 47 | Ø22 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 76,6 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 15,4 | 20 | 0,2         |
| MD1-V36-8   | Ø8   | G1/8 | 62 | Ø22 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 76,6 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 15,4 | 20 | 0,2         |
| MD1-V36-10  | Ø10  | G1/8 | 67 | Ø22 | 42 | 28,5 | G1/8 | 43 | Ø4 | 9,5 | 76,6 | 26,2 | 22,7 | 51,7 | 35,1 | 34,6 | 9 | 15,4 | 20 | 0,2         |

## Threaded cartridges



**Supplied with:**

2x nickel-plated threaded cartridges  
 4x special white zinc-plated screws Ø4,5 TC/RC



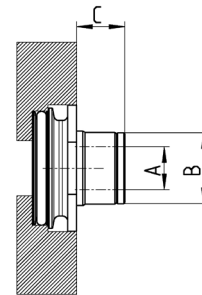
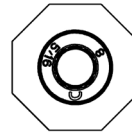
| Mod.        | A        |
|-------------|----------|
| MD1-A-1/8   | G1/8     |
| MD1-A-1/4   | G1/4     |
| MD1-A-3/8   | G3/8     |
| MD1-A-1/8TF | 1/8 NPTF |
| MD1-A-1/4TF | 1/4 NPTF |
| MD1-A-3/8TF | 3/8 NPTF |

## Integrated cartridges with super-rapid fitting



**Supplied with:**

2x integrated nickel-plated cartridges with super-rapid fitting  
 4x special white zinc-plated screws Ø4,5 TC/RC



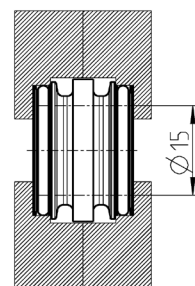
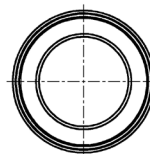
| Mod.       | A      | B    | C    |
|------------|--------|------|------|
| MD1-A-6    | Ø6     | 12,7 | 8,5  |
| MD1-A-8    | Ø8     | 14,2 | 10   |
| MD1-A-10   | Ø10    | 16,5 | 12,5 |
| MD1-A04TF  | Ø1/4"  | 12,7 | 8,5  |
| MD1-A-05TF | Ø5/16" | 14,2 | 10   |
| MD1-A-06TF | Ø3/8"  | 16,5 | 12,5 |

## Intermediate joining cartridge



**Supplied with:**

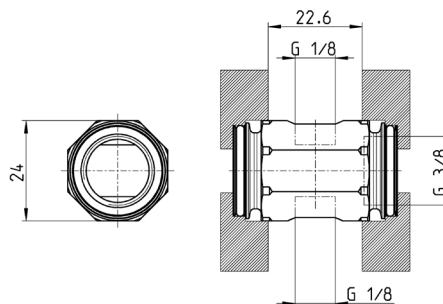
1x intermediate joining cartridge  
 4x special white zinc-plated screws Ø4,5 TC/RC



| Mod.  |
|-------|
| MD1-C |

## Screws for wall mounting

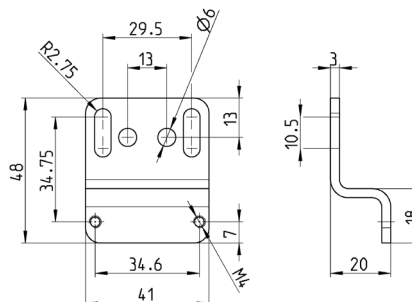

**Supplied with:**

 2x white zinc-plated screws  
 M4x50

**Mod.**

MD1-D

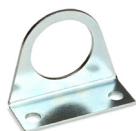
## Rear bracket


**Supplied with:**

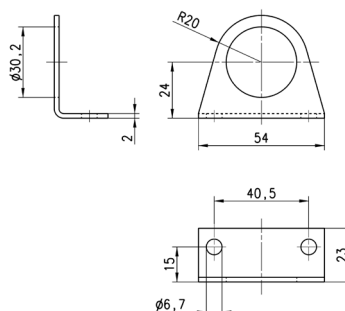
 1x zinc-plated bracket  
 2x white zinc-plated screws  
 M4x50

**Mod.**

MD1-ST/1

## Mounting bracket Mod. C114-ST


**For regulators and filter-regulators (G1/4 - G1/8)**

 Material:  
 zinc-plated steel

 Supplied with:  
 1x bracket

**Mod.**

C114-ST

### Mounting bracket Mod. C114-ST/1

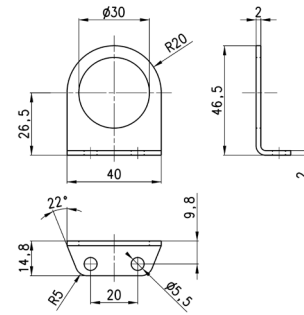


For regulators and filter-regulators (G1/4 - G1/8)

Material:  
zinc-plated steel

Supplied with:  
1x bracket

| Mod.      |
|-----------|
| C114-ST/1 |



### Mounting bracket Mod. C114-ST/2



For regulators and filter-regulators (G1/4 - G1/8)

Material:  
zinc-plated steel

Supplied with:  
1x bracket

| Mod.      |
|-----------|
| C114-ST/2 |

