



# Extinguishing technology CO<sub>2</sub> HP

## Cylinder valve CO<sub>2</sub>

### Quick release valve QRV-TD CO<sub>2</sub> 190 bar



### Approvals / CE marking



- 1) Listed system:
  - CO<sub>2</sub> HP LCP (UL-File EX27301)
- 2) Part of the system approval:
  - CO<sub>2</sub> HP LCP (FM23FPUS0180)

### SAP designation

part no. 914039: Quick release valve QRV-TD CO<sub>2</sub> 190 bar

### Maintenance

see technical description quick release valve QRV  
part no. 915150

### Spare parts

Burst disk 190 bar QRV .....	914012
Closure screw G1/8 QRV .....	914007
Locking nut W21 complete QRV .....	914048

Designation	Part no.	Weight approx.
Quick release valve QRV-TD CO <sub>2</sub> 190 bar	914039	1.69 kg (3.73 lbs)

### Technical data

Extinguishing agent .....	CO <sub>2</sub>
Type .....	QVR-TD CO <sub>2</sub> 190 bar
Nominal diameter .....	DN12
Minimum flow cross-sectional area ..	102.5 mm <sup>2</sup> (0.1589 sq.inch)
Max. working pressure at 50 °C (122 °F) .....	360 bar (5221 psi)
Max. working pressure at 15 °C (59 °F) .....	300 bar (4351 psi)
Burst disk .....	190 bar (2755 psi)
Reponse pressure of burst disk at 50 °C (122 °F) .....	200 bar ±15 bar (2901 psi ±218 psi)
Permissible pilot pressure of the integrated pneumatic release device .....	8 to 360 bar (116 to 5221 psi)
Pilot pressure nominal .....	25 bar (363 psi)
Temperature range:	
- according to VdS and CE ...	-20 °C to +50 °C (-4 °F to 122 °F)
- during transport and storage in depressurized state .....	-20 °C to +65 °C (-4 °F to 149 °F)
Valve type according to EN 12094-4 .....	type 2
according to ATR D2/11 .....	type C
CE conformity .....	acc. to Construction Products Regulation (EU) No. 305/2011
Pi conformity .....	acc. to Directive 2010/35/EU (TPED)

### Material / Surface

Housing, caps, plugs, several parts .....	brass
Pilot valve, closing piston, springs .....	stainless steel
Elastomer seal .....	EPDM / NBR
Burst disk device .....	nickel, copper alloy
Seating seal, damper .....	PA 6

### Functional description

The quick release valve type QRV-TD („Total Discharge“) remains open after activation, until the entire extinguishing agent cylinder is empty.

The valve operates according to the differential pressure system. By activating the release device, the pilot valve integrated in the valve opens and the upper pressure chamber is ventilated in a flash. This pressure drop causes the pressure in the extinguishing agent cylinder to push the closing piston into an open position. The valve is now open.

By default, the valve is equipped with an integrated pneumatic release device. In addition, an electrical release device and/or a manual release device can be installed.

The extinguishing agent cylinder is filled via the valve outlet. As a protection against in-admissible high pressure, each valve is fitted with a burst disk device.

Each valve is equipped with a pilot connection. As soon as the pressure in the extinguishing agent cylinder is around 1.5 bar (22 psi), the valve closes automatically. This means that there always remains a residual pressure in the extinguishing agent cylinder.

**Caution:** After opening the valve a residual pressure remains in the extinguishing agent cylinder. If extinguishing agent escapes uncontrollably there is danger of severe injuries. Close the valve outlet with a locking nut. If the connection to the fire extinguishing system at the valve outlet (W21.8x1/14") is disconnected.



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## Quick release valve QRV-TD CO<sub>2</sub> 190 bar

### Marking

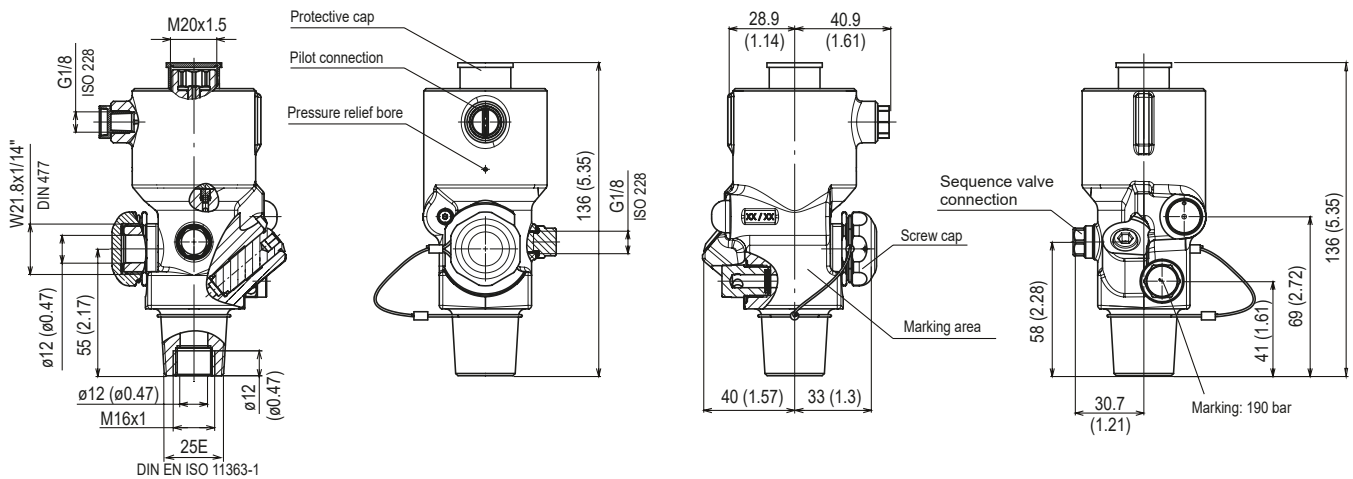
Minimax type / part no. .... QRV-TD CO2 190bar / 914039  
 Manufacturer Logo / part no. .... Logo / F2001001  
 Valve thread ..... 25E / W21,8x1/14"  
 Test pressure according to ATR ..... TP 360bar  
 Min. / max. pilot pressure ..... pmin 8bar / pmax 360bar  
 Manufacture date ..... YYYY-WW  
 Aproval ..... π 0589 ATR D 2/11 Typ C  
 Aproval ..... VdS, CE 0786

### Not included in delivery

Release device:  
 - electrical QRV .....914027, see ad-on part cylinder  
 - manual QRV .....914028, see ad-on part cylinder  
 Unions and hoses for pilot connection / sequence valve connection, see installation example.

### Dimension drawing

Dimensions in mm (inch)



### Installation example: Pilot connection / Sequence valve connection

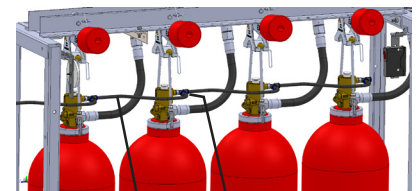
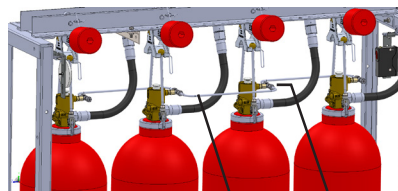
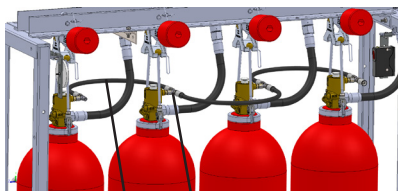
#### System: CO<sub>2</sub> HP / CO<sub>2</sub> HP LCP

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Hose DN4 MX PH300

Precision steel pipe 6x1

PTS-10 (max. 10 bar)



A B+C

A B+C

A B

- A: Pilot hose e.g. hose DN4x... MX PH300 (PS 211-210\_005)
- B: Union GE 6-PLR-ED A3C (Part no. 125566)
- C: Union ET06LOMDCF 365bar (Part no. 912487)

- A: Pilot pipe e.g. pilot pipe 1 cylinder rack BAS (PS 211-210\_008)
- B: Union GE 6-PLR-ED A3C (Part no. 125566)
- C: Union ET06LOMDCF 365bar (Part no. 912487)

- A: Pneumatic pilot hose PTS-10 (Part no. 920947, PS 280-310\_002)
- B: Plug-in union LE rotary G1/8 (Part no. 921495, PS 280-320\_003)

<sup>3)</sup> The use of PTS-10 is not permitted in UL/FM systems.