# **Tunnel hydrant**

## with 2 outlets on top of each other

#### **Construction characteristics**

- Working pressure: max. 16 bar (PN 16)
- Complete drainage residual water zero (RW 0)
- All internal parts made of corrosion-resistant material and can be removed upwards without excavating the hydrant
- Through their vulcanised elastomer sealing profile, the valve plug ensure under pressure protection and tightness in the brass seal seating ring; with the opening stroke of the valve plug (50 mm), the function of the drainage with under pressure protection is positivelycontrolled
- The head with the outlets can be rotated 360° by loosening the 4 stainless steel bolts
- Flange sized and drilled according to EN 1092-2 | PN 16

### Material | Technical features

Head and hand wheel: made of ductile iron, epoxy powder-

coated on all sides + external powder-coating on polyester base (UV-resistant) in RAL 3000 (fire red)

**Stand pipe: SGG made of steel,** hot-dip gal-

vanised on all sides + external zinc

pigment coating

NGG from stainless steel, polished

**Hydrant base:** made of ductile iron, epoxy powder-

coated on all sides

Operating pipe: made of stainless steel

Valve plug: made of brass / elastomer

**Spindle:** made of stainless steel

Rate of flow: Q (m<sup>3</sup>/h) at a

Kv[m³/h] differential pressure of 1 bar is higher

than requested by EN14384

Standard: ÖNORM (Austrian standard)

F 2010 - EN 14384, EN 1074-6

Max. working pressure: 16 bar (PN 16) Residual water: < EN 1074-6 EURO-SV sgg, Ngg No. KR275







Fig.: NGG version

| Order no. | DN | Outlet |   | Version |     |
|-----------|----|--------|---|---------|-----|
|           |    | В      | С | SGG     | NGG |
| KR275     | 80 | 2      |   |         |     |
|           |    | 1      | 1 |         |     |
|           |    |        | 2 |         |     |

Suitable accessories see page 6 Outlet **B** = System Storz 2½" Outlet **C** = System Storz 2"

#### Optional:

- Intermediate piece for additional outlet 21/2"
- Other couplings of different national standards on request
- All outlets can be provided with fire cocks

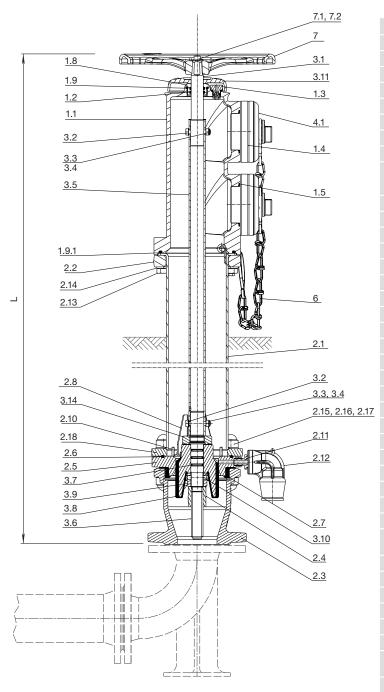




Fig.: SGG version



Material



| 1.2         O-ring 25x3,5         Elastomer           1.3         Air valve         POM           1.4         Coupling DIN 14317 - C1 52 mm         Al           1.5         O-ring 60x5         Elastomer           1.8         O-ring bush         Brass           1.9         O-ring 38x4         Elastomer           1.9.1         O-ring 152x4         Elastomer           2.1         Stand pipe NGG         Stainless steel galvanised           2.1         Stand pipe NGG         Stainless steel           2.2         Flange pair top         Ductile iron           2.3         Base         Ductile iron           2.4         Stem nut         Brass           2.5         Sealing seat ring         Stainless steel           2.6         O-ring 135x5         Elastomer           2.7         Sealing seat ring         Elastomer           2.8         Guide bracket         Stainless steel           2.10         Dowel pin 5x27         Stainless steel           2.10         Dowel pin 5x27         Stainless steel           2.11         Drain fitting         POM           2.13         Hexagonal bolt M16x45         Stainless steel           2.14   | 1.1   | Hydrant head Ductile iron                   |                  |  |  |
|--|-------|---|------------------|--|--|
| 1.4         Coupling DIN 14317 - C1 52 mm         AI           1.5         O-ring 60x5         Elastomer           1.8         O-ring bush         Brass           1.9         O-ring 38x4         Elastomer           1.9.1         O-ring 152x4         Elastomer           2.1         Stand pipe SGG         Stainless steel, galvanised           2.1         Stand pipe NGG         Stainless steel           2.2         Flange pair top         Ductile iron           2.3         Base         Ductile iron           2.4         Stem nut         Brass           2.5         Sealing seat ring         Stainless steel           2.6         O-ring 135x5         Elastomer           2.7         Sealing seat ring         Elastomer           2.8         Guide bracket         Stainless steel           2.10         Dowel pin 5x27         Stainless steel           2.10         Dowel pin 5x27         Stainless steel           2.11         Drain fitting         POM           2.13         Hexagonal bolt M16x45         Stainless steel           2.14         Washer M16         Stainless steel           2.15         Hexagonal bolt M16x90         Stainless steel  | 1.2   | O-ring 25x3,5 Elastomer                     |                  |  |  |
| 1.5 O-ring 60x5 Elastomer  1.8 O-ring bush Brass  1.9 O-ring 38x4 Elastomer  1.9.1 O-ring 152x4 Elastomer  2.1 Stand pipe SGG Stainless steel, galvanised Stainless steel, galvanised Stainless steel Ductile iron  2.3 Base Ductile iron  2.4 Stem nut Brass  2.5 Sealing seat ring Stainless steel Elastomer  2.6 O-ring 135x5 Elastomer  2.7 Sealing ring Elastomer  2.8 Guide bracket Stainless steel  2.10 Dowel pin 5x27 Stainless steel  2.11 Drain nipple Brass  2.12 Drain fitting POM  2.13 Hexagonal bolt M16x45 Stainless steel  2.14 Washer M16 Stainless steel  2.15 Hexagonal nut M16 Stainless steel  2.16 Hexagonal bolt M16x90 Stainless steel  2.17 Cap Elastomer  2.18 Flange pair bottom Ductile iron  3.1 Square connection Brass  3.2 Hexagonal bolt M8x45 Stainless steel  3.3 Lock nut Stainless steel  3.4 Serrated lock washer Stainless steel  3.5 Operating pipe Stainless steel  3.6 Spindle Duplex  3.7 O-ring 20,2x3,5 Elastomer  3.8 Valve plug Brass, Elastomer  3.9 Circlip Brass  3.10 Securing pin Brass  3.11 Cap Al  3.14 Piston nut Brass  4.1 Cap DIN 14318-C4  Cap DIN 14319-B4 Al  6 Chain Stainless steel  7 Hand wheel  7.1 Hex. socket head bolt M8x16 Stainless steel  | 1.3   | Air valve POM                               |                  |  |  |
| 1.8 O-ring bush 1.9 O-ring 38x4 Elastomer 1.9.1 O-ring 152x4 Elastomer 2.1 Stand pipe SGG Stainless steel, galvanised Stainless steel, galvanised Stainless steel, galvanised Stainless steel 2.2 Flange pair top Ductile iron 2.3 Base Ductile iron 2.4 Stem nut Brass 2.5 Sealing seat ring Stainless steel 2.6 O-ring 135x5 Elastomer 2.7 Sealing ring Elastomer 2.8 Guide bracket Stainless steel 2.10 Dowel pin 5x27 Stainless steel 2.11 Drain nipple Brass 2.12 Drain fitting POM 2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.6 Spindle Spindle Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.8 Valve plug Brass, Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap Al 3.14 Piston nut Brass 4.1 Cap DIN 14319-B4 6 Chain Stainless steel 7 Hand wheel 7.1 Hex. socket head bolt M8x16 Stainless steel  | 1.4   | Coupling DIN 14317 - C1 52 mm Al            |                  |  |  |
| 1.9 O-ring 38x4 Elastomer 1.9.1 O-ring 152x4 Elastomer  Stand pipe SGG Stainless steel, galvanised Stand pipe NGG Stainless steel galvanised Stainless steel galvanised Stainless steel galvanised Stainless steel Ductile iron Ductile iron  2.3 Base Ductile iron  2.4 Stem nut Brass 2.5 Sealing seat ring Stainless steel 2.6 O-ring 135x5 Elastomer 2.7 Sealing ring Elastomer 2.8 Guide bracket Stainless steel 2.10 Dowel pin 5x27 Stainless steel 2.11 Drain nipple Brass 2.12 Drain fitting POM 2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.6 Spindle Duplex Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap 3.10 Securing pin Brass 3.11 Cap 3.11 Piston nut 4.1 Piston nut 5 Stainless steel Al 6 Chain Stainless steel 7 Hand wheel 7.1 Hex. socket head bolt M8x16 Stainless steel  | 1.5   | O-ring 60x5                                 | Elastomer        |  |  |
| 1.9.1 O-ring 152x4  Stand pipe SGG Stainless steel, galvanised Stand pipe NGG Stainless steel, galvanised Stainless steel Ductile iron Ductile iron  2.3 Base Ductile iron  2.4 Stem nut Brass 2.5 Sealing seat ring Stainless steel 2.6 O-ring 135x5 Elastomer  2.7 Sealing ring Elastomer  2.8 Guide bracket Stainless steel 2.10 Dowel pin 5x27 Stainless steel Drain nipple Brass  2.12 Drain fitting POM  2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 3.11 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.6 Spindle 3.7 O-ring 20,2x3,5 Elastomer Brass 3.10 Securing pin Brass 3.11 Cap 3.11 Piston nut Brass 3.11 Cap 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 6 Chain 7 Hand wheel 7.1 Hex. socket head bolt M8x16 Stainless steel Stainless steel Al Flandess steel  | 1.8   | O-ring bush                                 | Brass            |  |  |
| Stand pipe SGG Stand pipe NGG Stand pipe NGG Stand pipe NGG Stand pipe NGG Stainless steel  2.2 Flange pair top Ductile iron  2.3 Base Ductile iron  Brass  2.5 Sealing seat ring Stainless steel  2.6 O-ring 135x5 Elastomer  2.8 Guide bracket Stainless steel  2.10 Dowel pin 5x27 Stainless steel  2.11 Drain nipple Brass  2.12 Drain fitting POM  2.13 Hexagonal bolt M16x45 Stainless steel  2.14 Washer M16 Stainless steel  2.15 Hexagonal nut M16 Stainless steel  2.16 Hexagonal bolt M16x90 Stainless steel  2.17 Cap Elastomer  2.18 Flange pair bottom Ductile iron  3.1 Square connection Brass  3.2 Hexagonal bolt M8x45 Stainless steel  3.4 Serrated lock washer Stainless steel  3.5 Operating pipe Stainless steel  3.6 Spindle  3.7 O-ring 20,2x3,5 Elastomer  3.8 Valve plug Brass  3.10 Securing pin Brass  3.11 Cap 3.14 Piston nut Brass  3.11 Cap 3.14 Piston nut Brass  4.1 Cap DIN 14318-C4 Cap DIN 14319-B4  6 Chain Fland wheel Fland stainless steel Al  7.1 Hex. socket head bolt M8x16 Stainless steel  | 1.9   | O-ring 38x4                                 | Elastomer        |  |  |
| Stand pipe NGG  2.2 Flange pair top  2.3 Base  2.4 Stem nut  2.5 Sealing seat ring  2.6 O-ring 135x5  2.7 Sealing ring  2.8 Guide bracket  2.10 Dowel pin 5x27  2.11 Drain nipple  2.12 Drain fitting  2.13 Hexagonal bolt M16x45  2.14 Washer M16  2.15 Hexagonal nut M16  2.16 Hexagonal bolt M16x90  2.17 Cap  2.18 Flange pair bottom  3.1 Square connection  3.1 Square connection  3.2 Hexagonal bolt M8x45  3.3 Lock nut  3.4 Serrated lock washer  3.5 Operating pipe  3.6 Spindle  3.7 O-ring 20,2x3,5  3.8 Valve plug  3.9 Circlip  3.10 Securing pin  3.11 Cap  3.14 Piston nut  4.1 Cap DIN 14318-C4  Cap DIN 14319-B4  6 Chain  7 Hand wheel  7.1 Hex. socket head bolt M8x16  Stainless steel  Ductile iron  Brass  Stainless steel  Al  Al  Stainless steel  Al  Al  Stainless steel  Al  Al  Stainless steel  Al  Al  Stainless steel  | 1.9.1 | O-ring 152x4                                | Elastomer        |  |  |
| 2.2 Flange pair top 2.3 Base Ductile iron 2.4 Stem nut Brass 2.5 Sealing seat ring Stainless steel 2.6 O-ring 135x5 Elastomer 2.7 Sealing ring Elastomer 2.8 Guide bracket Stainless steel 2.10 Dowel pin 5x27 Stainless steel 2.11 Drain nipple Brass 2.12 Drain fitting POM 2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 6 Chain T.1 Hex. socket head bolt M8x16 Stainless steel  | 2.1   | • •   | galvanised       |  |  |
| 2.3 Base Ductile iron 2.4 Stem nut Brass 2.5 Sealing seat ring Stainless steel 2.6 O-ring 135x5 Elastomer 2.7 Sealing ring Elastomer 2.8 Guide bracket Stainless steel 2.10 Dowel pin 5x27 Stainless steel 2.11 Drain nipple Brass 2.12 Drain fitting POM 2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.6 Spindle Duplex Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap Al 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 Al 6 Chain Stainless steel 7 Hand wheel 7.1 Hex. socket head bolt M8x16 Stainless steel  | 22    |   |                  |  |  |
| 2.4 Stem nut 2.5 Sealing seat ring 2.6 O-ring 135x5 Elastomer 2.7 Sealing ring Elastomer 2.8 Guide bracket 2.10 Dowel pin 5x27 Stainless steel 2.11 Drain nipple Brass 2.12 Drain fitting POM 2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.6 Spindle Duplex Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.8 Valve plug Brass, Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 Chain Stainless steel Al Chain Stainless steel Al Chain Stainless steel   |       | . 3. 1                                      |                  |  |  |
| 2.5 Sealing seat ring 2.6 O-ring 135x5 Elastomer 2.7 Sealing ring Elastomer 2.8 Guide bracket 2.10 Dowel pin 5x27 Stainless steel 2.11 Drain nipple Brass 2.12 Drain fitting POM 2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer 3.5 Operating pipe Stainless steel 3.6 Spindle 3.7 O-ring 20,2x3,5 Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap 3.14 Piston nut Brass 3.15 Cap DIN 14318-C4 Cap DIN 14319-B4 Chain Stainless steel Chain Chain Stainless steel Chain Chain Stainless steel Chain Chain Stainless steel Chain Chai |       |   |                  |  |  |
| 2.6 O-ring 135x5 Elastomer 2.7 Sealing ring Elastomer 2.8 Guide bracket Stainless steel 2.10 Dowel pin 5x27 Stainless steel 2.11 Drain nipple Brass 2.12 Drain fitting POM 2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.6 Spindle Duplex Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.8 Valve plug Brass, Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap Al 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 6 Chain Stainless steel 7 Hand wheel 7.1 Hex. socket head bolt M8x16 Stainless steel  |       |   |                  |  |  |
| 2.7 Sealing ring 2.8 Guide bracket 2.10 Dowel pin 5x27 Stainless steel 2.11 Drain nipple 2.12 Drain fitting 2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.6 Spindle Duplex Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.8 Valve plug Brass, Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap Al 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 6 Chain Stainless steel 7 Hand wheel 7.1 Hex. socket head bolt M8x16 Stainless steel   |       | 3   |                  |  |  |
| 2.8 Guide bracket 2.10 Dowel pin 5x27 Stainless steel 2.11 Drain nipple Brass 2.12 Drain fitting POM 2.13 Hexagonal bolt M16x45 Stainless steel 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.6 Spindle Duplex Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.8 Valve plug Brass, Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap Al 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 6 Chain Stainless steel 7 Hand wheel 7 Hand wheel 7 Hex. socket head bolt M8x16 Stainless steel   |       |   |                  |  |  |
| 2.10 Dowel pin 5x27  2.11 Drain nipple  2.12 Drain fitting  2.13 Hexagonal bolt M16x45  2.14 Washer M16  2.15 Hexagonal nut M16  2.16 Hexagonal bolt M16x90  2.17 Cap  2.18 Flange pair bottom  3.1 Square connection  3.1 Square connection  3.2 Hexagonal bolt M8x45  3.3 Lock nut  3.4 Serrated lock washer  3.5 Operating pipe  3.6 Spindle  3.7 O-ring 20,2x3,5  3.8 Valve plug  3.9 Circlip  3.10 Securing pin  3.11 Cap  3.14 Piston nut  Cap DIN 14318-C4 Cap DIN 14319-B4  6 Chain  7.1 Hex. socket head bolt M8x16  Stainless steel  Stainless steel  Al  Stainless steel  Stainless steel  Al  Stainless steel  Al  Stainless steel  Al  Stainless steel  Stainless steel  Al  Stainless steel  |       | 0 0   |                  |  |  |
| 2.11 Drain nipple 2.12 Drain fitting 2.13 Hexagonal bolt M16x45 2.14 Washer M16 2.15 Hexagonal nut M16 2.16 Hexagonal bolt M16x90 2.17 Cap 2.18 Flange pair bottom 3.1 Square connection 3.1 Square connection 3.2 Hexagonal bolt M8x45 3.3 Lock nut 3.4 Serrated lock washer 3.5 Operating pipe 3.6 Spindle 3.7 O-ring 20,2x3,5 3.8 Valve plug 3.9 Circlip 3.10 Securing pin 3.11 Cap 3.11 Cap 3.12 Cap DIN 14318-C4 Cap DIN 14319-B4 4.1 Cap DIN 14319-B4 6 Chain 7 Hand wheel 7.1 Hex. socket head bolt M8x16 Stainless steel Stainless steel Al Stainless steel   |       |   |                  |  |  |
| 2.12 Drain fitting 2.13 Hexagonal bolt M16x45 2.14 Washer M16 2.15 Hexagonal nut M16 2.16 Hexagonal bolt M16x90 2.17 Cap 2.18 Flange pair bottom 3.1 Square connection 3.1 Square connection 3.2 Hexagonal bolt M8x45 3.3 Lock nut 3.4 Serrated lock washer 3.5 Operating pipe 3.6 Spindle 3.7 O-ring 20,2x3,5 3.8 Valve plug 3.9 Circlip 3.10 Securing pin 3.11 Cap 3.11 Cap 3.12 Al 3.14 Piston nut 3.17 Cap III 3.18 Pass 3.19 Circlip 3.10 Securing pin 3.11 Cap 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 4.1 Cap DIN 14319-B4 5 Chain 7 Hand wheel 7 Hand wheel 7.1 Hex. socket head bolt M8x16 5 Stainless steel  |       |   | _                |  |  |
| 2.13 Hexagonal bolt M16x45  2.14 Washer M16  2.15 Hexagonal nut M16  2.16 Hexagonal bolt M16x90  2.17 Cap  2.18 Flange pair bottom  3.1 Square connection  3.2 Hexagonal bolt M8x45  3.3 Lock nut  3.4 Serrated lock washer  3.5 Operating pipe  3.6 Spindle  3.7 O-ring 20,2x3,5  3.8 Valve plug  3.9 Circlip  3.10 Securing pin  3.11 Cap  3.11 Cap  3.12 Al  3.14 Piston nut  4.1 Cap DIN 14318-C4 Cap DIN 14319-B4  6 Chain  7 Hand wheel  7.1 Hex. socket head bolt M8x16  Stainless steel  Stainless steel  Atainless steel  Atainless steel  Atainless steel  Atainless steel  Atainless steel  Atainless steel  Stainless steel  Stainless steel  Atainless steel  |       |   |                  |  |  |
| 2.14 Washer M16 Stainless steel 2.15 Hexagonal nut M16 Stainless steel 2.16 Hexagonal bolt M16x90 Stainless steel 2.17 Cap Elastomer 2.18 Flange pair bottom Ductile iron 3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel 3.6 Spindle Duplex Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.8 Valve plug Brass, Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap Al 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 6 Chain Stainless steel 7 Hand wheel 7.1 Hex. socket head bolt M8x16 Stainless steel  |       |   |                  |  |  |
| 2.15 Hexagonal nut M16 2.16 Hexagonal bolt M16x90 2.17 Cap 2.18 Flange pair bottom 3.1 Square connection 3.2 Hexagonal bolt M8x45 3.3 Lock nut 3.4 Serrated lock washer 3.5 Operating pipe 3.6 Spindle 3.7 O-ring 20,2x3,5 3.8 Valve plug 3.9 Circlip 3.10 Securing pin 3.11 Cap 3.11 Cap 3.12 Al 3.14 Piston nut 3.15 Cap DIN 14318-C4 Cap DIN 14319-B4 4 Chain 4 Hex. socket head bolt M8x16 5 Stainless steel 5 Stainless steel 5 Stainless steel 7 Hand wheel 7 Hex. socket head bolt M8x16 5 Stainless steel 6 Stainless steel 7 Stainless steel 7 Al 8 Stainless steel 9 Stainless steel   |       |   |                  |  |  |
| 2.16 Hexagonal bolt M16x90  2.17 Cap Elastomer  2.18 Flange pair bottom Ductile iron  3.1 Square connection Brass 3.2 Hexagonal bolt M8x45 Stainless steel 3.3 Lock nut Stainless steel 3.4 Serrated lock washer Stainless steel 3.5 Operating pipe Stainless steel Duplex Stainless steel 3.7 O-ring 20,2x3,5 Elastomer 3.8 Valve plug Brass, Elastomer 3.9 Circlip Brass 3.10 Securing pin Brass 3.11 Cap Al 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 Chain Final Manuel Final Ma |       |   |                  |  |  |
| 2.17 Cap  2.18 Flange pair bottom  3.1 Square connection  3.2 Hexagonal bolt M8x45  3.3 Lock nut  3.4 Serrated lock washer  3.5 Operating pipe  3.6 Spindle  3.7 O-ring 20,2x3,5  3.8 Valve plug  3.9 Circlip  3.10 Securing pin  3.11 Cap  3.11 Cap  3.14 Piston nut  4.1 Cap DIN 14318-C4 Cap DIN 14319-B4  6 Chain  7 Hand wheel  7.1 Hex. socket head bolt M8x16  Brass  Brass  Duplex Stainless steel  Duplex Stainless steel  Brass  Brass  Al  Al  Stainless steel  |       |   |                  |  |  |
| 2.18 Flange pair bottom 3.1 Square connection 3.2 Hexagonal bolt M8x45 3.3 Lock nut 3.4 Serrated lock washer 3.5 Operating pipe 3.6 Spindle 3.7 O-ring 20,2x3,5 3.8 Valve plug 3.9 Circlip 3.10 Securing pin 3.11 Cap 3.14 Piston nut 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 6 Chain 7 Hand wheel 7.1 Hex. socket head bolt M8x16  Stainless steel Brass Duplex Stainless steel Brass, Elastomer Brass Al Al Stainless steel Al Stainless steel Al Stainless steel Brass Al Stainless steel Al Stainless steel Stainless steel  |       | Hexagonal bolt M16x90                       |                  |  |  |
| 3.1 Square connection  3.2 Hexagonal bolt M8x45  3.3 Lock nut  3.4 Serrated lock washer  3.5 Operating pipe  3.6 Spindle  3.7 O-ring 20,2x3,5  3.8 Valve plug  3.9 Circlip  3.10 Securing pin  3.11 Cap  3.14 Piston nut  4.1 Cap DIN 14318-C4 Cap DIN 14319-B4  6 Chain  7 Hand wheel  7.1 Hex. socket head bolt M8x16  Stainless steel  Stainless steel  Brass  Alainless steel  Alainless steel  Alainless steel  Stainless steel  Alainless steel  Alainless steel  Stainless steel  Alainless steel  Stainless steel  Stainless steel   | 2.17  | Cap   | Elastomer        |  |  |
| 3.2 Hexagonal bolt M8x45  3.3 Lock nut  3.4 Serrated lock washer  3.5 Operating pipe  3.6 Spindle  3.7 O-ring 20,2x3,5  3.8 Valve plug  3.9 Circlip  3.10 Securing pin  3.11 Cap  3.14 Piston nut  4.1 Cap DIN 14318-C4 Cap DIN 14319-B4  6 Chain  7 Hand wheel  7.1 Hex. socket head bolt M8x16  Stainless steel  Stainless steel  Stainless steel  Al stainless steel  Al stainless steel  Al Stainless steel  Stainless steel  Stainless steel  Al Stainless steel  Stainless steel   | 2.18  | Flange pair bottom                          | Ductile iron     |  |  |
| 3.3         Lock nut         Stainless steel           3.4         Serrated lock washer         Stainless steel           3.5         Operating pipe         Stainless steel           3.6         Spindle         Duplex Stainless steel           3.7         O-ring 20,2x3,5         Elastomer           3.8         Valve plug         Brass, Elastomer           3.9         Circlip         Brass           3.10         Securing pin         Brass           3.11         Cap         Al           3.14         Piston nut         Brass           4.1         Cap DIN 14318-C4 Cap DIN 14319-B4         Al           6         Chain         Stainless steel           7         Hand wheel         Al           7.1         Hex. socket head bolt M8x16         Stainless steel   | 3.1   | Square connection Brass                     |                  |  |  |
| 3.4         Serrated lock washer         Stainless steel           3.5         Operating pipe         Stainless steel           3.6         Spindle         Duplex Stainless steel           3.7         O-ring 20,2x3,5         Elastomer           3.8         Valve plug         Brass, Elastomer           3.9         Circlip         Brass           3.10         Securing pin         Brass           3.11         Cap         Al           3.14         Piston nut         Brass           4.1         Cap DIN 14318-C4 Cap DIN 14319-B4         Al           6         Chain         Stainless steel           7         Hand wheel         Al           7.1         Hex. socket head bolt M8x16         Stainless steel  | 3.2   | Hexagonal bolt M8x45 Stainless stee         |                  |  |  |
| 3.5         Operating pipe         Stainless steel           3.6         Spindle         Duplex Stainless steel           3.7         O-ring 20,2x3,5         Elastomer           3.8         Valve plug         Brass, Elastomer           3.9         Circlip         Brass           3.10         Securing pin         Brass           3.11         Cap         Al           3.14         Piston nut         Brass           4.1         Cap DIN 14318-C4 Cap DIN 14319-B4         Al           6         Chain         Stainless steel           7         Hand wheel         Al           7.1         Hex. socket head bolt M8x16         Stainless steel   | 3.3   | Lock nut                                    | Stainless steel  |  |  |
| 3.6         Spindle         Duplex Stainless steel           3.7         O-ring 20,2x3,5         Elastomer           3.8         Valve plug         Brass, Elastomer           3.9         Circlip         Brass           3.10         Securing pin         Brass           3.11         Cap         Al           3.14         Piston nut         Brass           4.1         Cap DIN 14318-C4 Cap DIN 14319-B4         Al           6         Chain         Stainless steel           7         Hand wheel         Al           7.1         Hex. socket head bolt M8x16         Stainless steel  | 3.4   | Serrated lock washer                        | Stainless steel  |  |  |
| 3.6         Spindle         Stainless steel           3.7         O-ring 20,2x3,5         Elastomer           3.8         Valve plug         Brass, Elastomer           3.9         Circlip         Brass           3.10         Securing pin         Brass           3.11         Cap         Al           3.14         Piston nut         Brass           4.1         Cap DIN 14318-C4<br>Cap DIN 14319-B4         Al           6         Chain         Stainless steel           7         Hand wheel         Al           7.1         Hex. socket head bolt M8x16         Stainless steel  | 3.5   | Operating pipe                              | Stainless steel  |  |  |
| 3.8         Valve plug         Brass, Elastomer           3.9         Circlip         Brass           3.10         Securing pin         Brass           3.11         Cap         Al           3.14         Piston nut         Brass           4.1         Cap DIN 14318-C4<br>Cap DIN 14319-B4         Al           6         Chain         Stainless steel           7         Hand wheel         Al           7.1         Hex. socket head bolt M8x16         Stainless steel  | 3.6   | Spindle                                     |                  |  |  |
| 3.9         Circlip         Brass           3.10         Securing pin         Brass           3.11         Cap         Al           3.14         Piston nut         Brass           4.1         Cap DIN 14318-C4<br>Cap DIN 14319-B4         Al           6         Chain         Stainless steel           7         Hand wheel         Al           7.1         Hex. socket head bolt M8x16         Stainless steel  | 3.7   | O-ring 20,2x3,5                             | Elastomer        |  |  |
| 3.10         Securing pin         Brass           3.11         Cap         Al           3.14         Piston nut         Brass           4.1         Cap DIN 14318-C4<br>Cap DIN 14319-B4         Al           6         Chain         Stainless steel           7         Hand wheel         Al           7.1         Hex. socket head bolt M8x16         Stainless steel  | 3.8   | Valve plug                                  | Brass, Elastomer |  |  |
| 3.11       Cap       Al         3.14       Piston nut       Brass         4.1       Cap DIN 14318-C4 Cap DIN 14319-B4       Al         6       Chain       Stainless steel         7       Hand wheel       Al         7.1       Hex. socket head bolt M8x16       Stainless steel   | 3.9   | Circlip                                     | Brass            |  |  |
| 3.14 Piston nut Brass 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4 6 Chain Stainless steel 7 Hand wheel Al 7.1 Hex. socket head bolt M8x16 Stainless steel  | 3.10  | Securing pin                                | Brass            |  |  |
| 4.1 Cap DIN 14318-C4 Cap DIN 14319-B4  6 Chain Stainless steel  7 Hand wheel Al  7.1 Hex. socket head bolt M8x16 Stainless steel   | 3.11  | Cap   |                  |  |  |
| 4.1 Cap DIN 14319-B4  6 Chain Stainless steel  7 Hand wheel Al  7.1 Hex. socket head bolt M8x16 Stainless steel  | 3.14  | Piston nut                                  | Brass            |  |  |
| 7 Hand wheel Al 7.1 Hex. socket head bolt M8x16 Stainless steel  | 4.1   |   | Al               |  |  |
| 7.1 Hex. socket head bolt M8x16 Stainless steel  | 6     | · ·   |                  |  |  |
|  | 7     | Hand wheel Al                               |                  |  |  |
| 7.2 Washer M8 Stainless steel  | 7.1   | Hex. socket head bolt M8x16 Stainless steel |                  |  |  |
|  | 7.2   | Washer M8                                   | Stainless steel  |  |  |

**Parts** 

On order, every height from L min. to max. 3000 can be delivered.

| DN | L min |
|----|-------|
| 80 | 700   |