

2/2 way cartridge valve type URZS 32 can be used to build hydraulic systems as a pilot operated check valve or by combination several elements as a multiple directional control block.

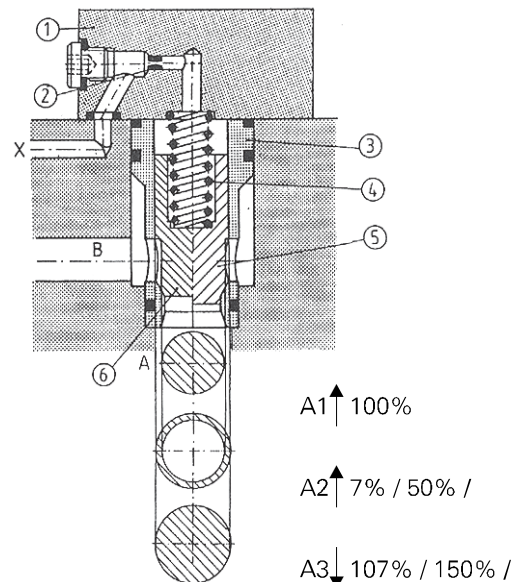


DESCRIPTION OF OPERATION

2/2 way cartridge valves - inserts comprise the cartridge assembly and the cover 1 with the control bores. The cartridge assembly is composed of the sleeve 3, the spring 4 and poppet with an optional dumping nose 5 or without it 6.

The valve poppet is held on its seat by means of the spring 4. There is free flow from A to B or reversely from B to A. The valve poppet is graded, so that there are three important surfaces for the operation. The area of the seat A1 is assumed as 100 %. The annulus area A2, resulting from the grading is 7 % or 50 % of area A1, depending on the version. The area ratio A1 : A2 is therefore either 14.3 : 1 or 2 : 1. The area A3 is A1 + A2 and can be either 107 % or 150 % of area A1. The area A3 remains unchanged. When the annulus area changes, then the surface area A1, which is regarded as 100 % also changes. The valves opens in both flow directions (port X is unpressurized) if surface A3 is not affected by pressure force affecting the adequate surfaces A1 and A2 exceeds the spring force. If control pressure affects surface A3, the valve poppet is pushed onto its seat, irrespective of the spring force.

The valve may be opened by unloading surface A3 or by suitably high pressure in port A or B. An orifice 2 fitted in port X allows to select the opening curve and the valve opening time.



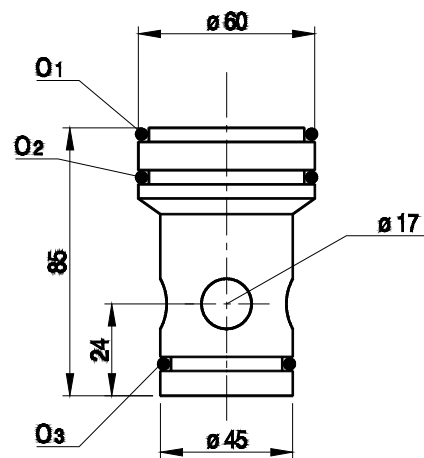
TECHNICAL DATA

Hydraulic fluid	Mineral oil or phosphate ester
Working pressure at port A, B, X	up to 42 MPa
Maximum flow	700 dm ³ /s
Working temperature (fluid in a tank)	313 - 328 K
Fluid temperature range	243 - 343 K
Nominal fluid viscosity	37 mm ² /s at the temperature of 328 K
Viscosity range	2.8 to 380 mm ² /s
Required filtration	16 μm
Recommended filtration	10 μm

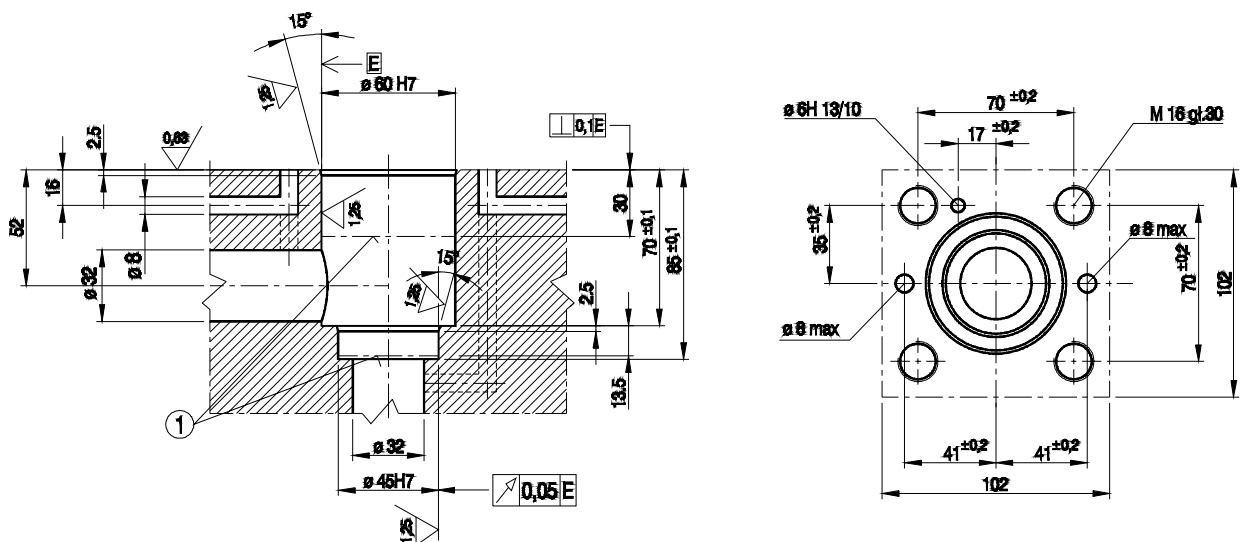
OVERALL DIMENSIONS FOR URZS 32

O₁ - O-ring 54,2 × 3 - 1 piece
 O₂ - O-ring 54,2 × 3 - 1 piece
 O₃ - O-ring 40 × 3 - 1 piece

Weight of URZS 32 - 0.12 kg



VALVE SEAT DIMENSIONS FOR URZS 32



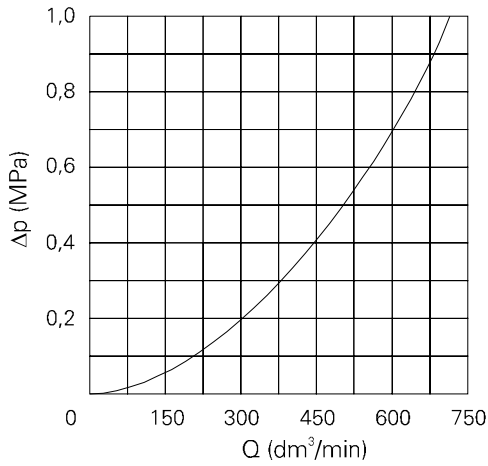
1 - fit depth

Cover is mounted to the valve seat by means of 4 bolts M16 x 60 - 10,9 PN - 87 / M-82302 (DIN 912 - 10,9)

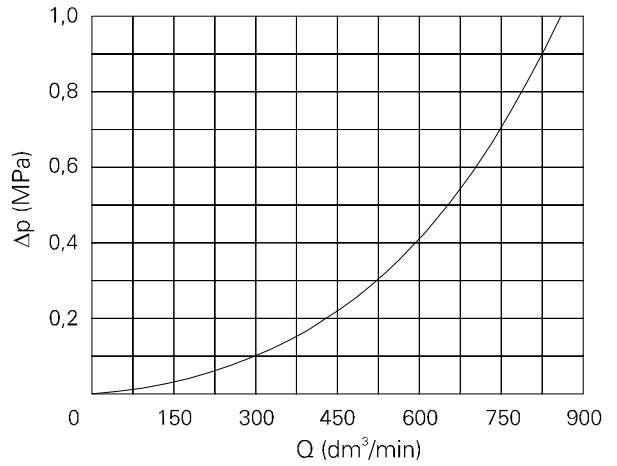
Tightening torque $M_d=270$ Nm.

The mounting bolts must be ordered separately.

PERFORMANCE CURVES FOR URZS 32 measured at $v = 41 \text{ mm}^2/\text{s}$ and $T = 323 \text{ K}$

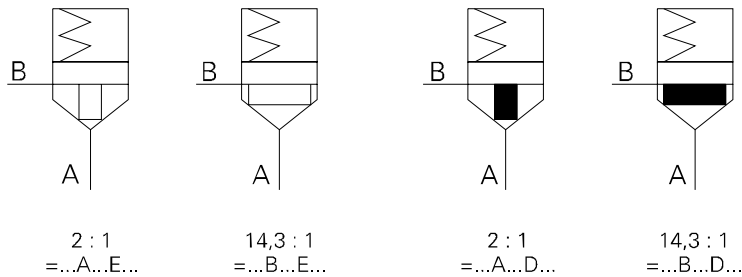


With dumping nose



Without dumping nose

HYDRAULIC DIAGRAM



HOW TO ORDER URZS 32

Orders coded in the way showed below should be forwarded to the manufacturer.



Area ratio
 2 : 1 (50 %) = A
 13.4 : 1 (7 %) = B

Cracking pressure
 0 MPa (without spring) = 00
 0.05 MPa = 05
 0.10 MPa = 10
 0.20 MPa = 20
 0.40 MPa = 40

Valve poppet
 without dumping nose = E
 with dumping nose = D

Further requirements in clear text
 (to be agreed with the manufacturer)

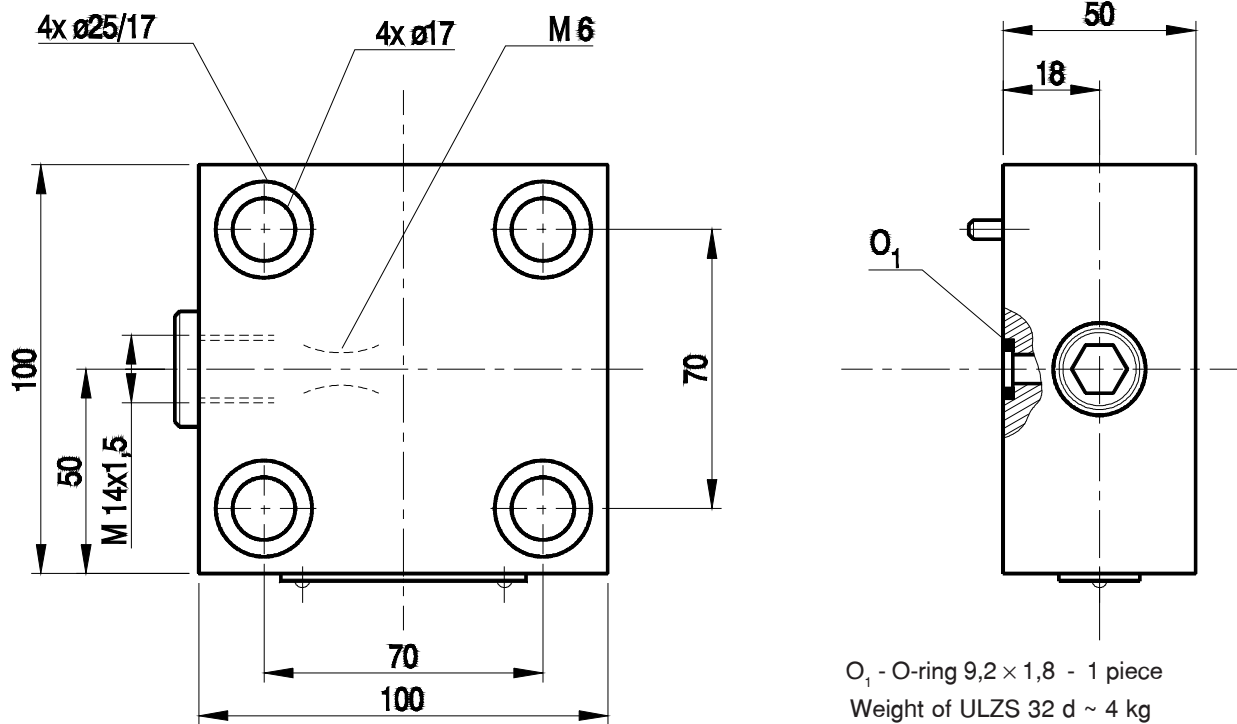
Sealing
 Mineral oil = with no code
 Phosphate ester = V

Series number
 10 = 10
 (10 - 19) - installation and connection dimensions unchanged

COVERS

1. COVER ULZS 32 D

DIMENSIONS FOR COVER ULZS 32 D



Mounting the cover by means of 4 bolts M16 x 60-10.9 PN - 87/M-82302 (DIN 912-10.9).
Tightening torque $M_d = 270$ Nm
Mounting bolts must be ordered separately.

OPERATING CURVES FOR COVER ULZS 32 D

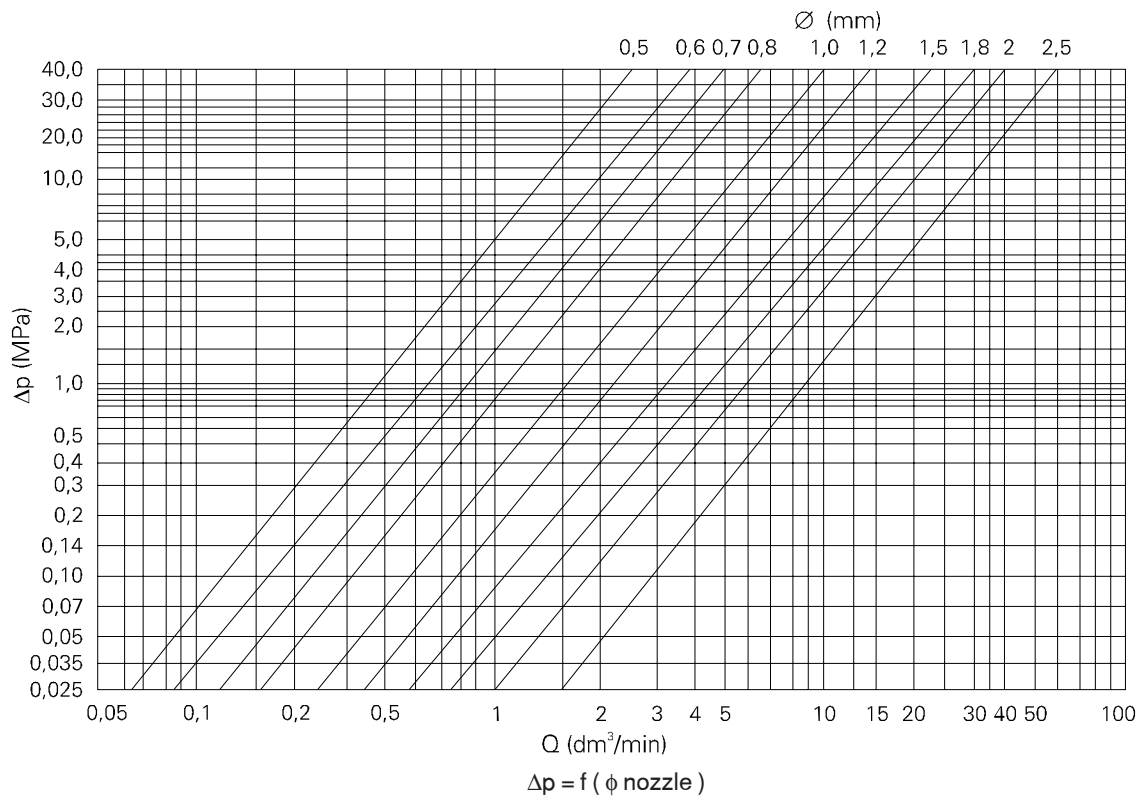
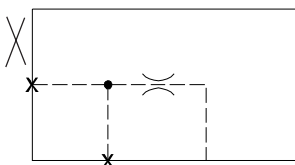


DIAGRAM FOR ULZS 32 D



HOW TO ORDER ULZS 32 D

Orders coded as below should be forwarded to the manufacturer..



Series number
 10 = 10
 (10 - 19) - Connection and mounting dimensions unchanged

Further details in clear text (to be agreed with the manufacturer)

Pilot supply
 Internal pilot supply = no code
 External pilot supply = F

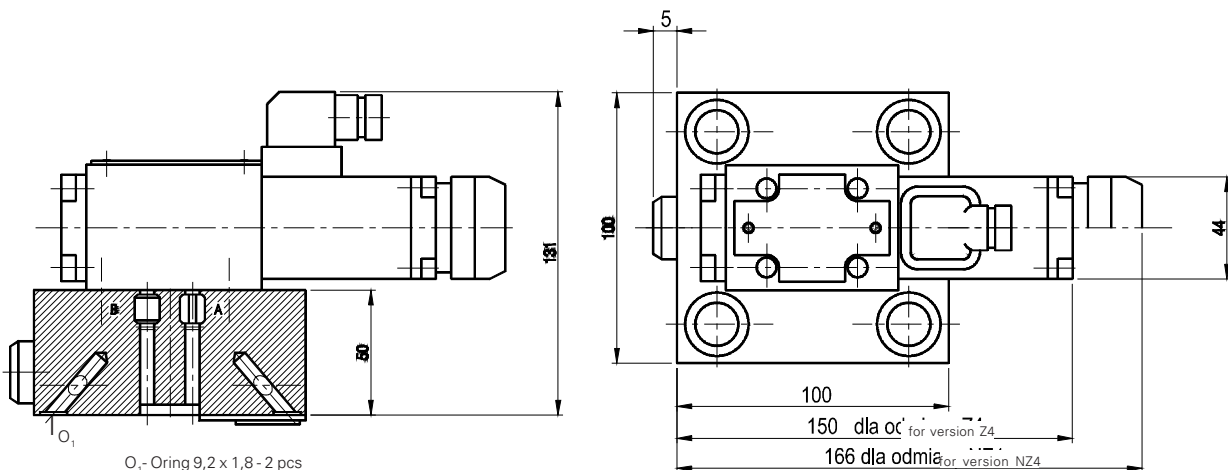
Sealing
 Mineral oils. = no code
 Phosphate ester = V

Control port
 Without nozzle = no code
 With nozzle = X

Nozzle diameter
 Dia. 0.6 mm = 06
 Dia. 0.8 mm = 08
 Dia. 1.0 mm = 10
 Dia. 1.2 mm = 12
 Dia. 1.5 mm = 15
 Dia. 2.0 mm = 20
 Dia. 2.5 mm = 25

In case of ordering the cover together with the valve, please, quote the codes of the both elements.
 Example : ULZS 32D / 10 - X - 07 + URZS 32 - A -10 - E - 10

**2. COVER ULZS 32 WE
 OVERALL DIMENSIONS FOR COVER ULZS 32 WE**



HOW TO ORDER ULZS 32 WE

Orders coded as below should be forwarded to the manufacturer.

ULZS 32WE		/								*
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De - energized position
 closed = A
 open = B

Series number
 10 = 10
 (10 - 19) - connection and mounting dimensions unchanged

Control port
 Without nozzle = no code
 With nozzle at port „A“ (only for valve A) = A
 With nozzle at port „B“ (only for valve B) = B
 With nozzle at port „T“ = T
 With nozzle at port „P“ = P

Nozzle diameter

Dia. 0.6 mm	= 06
Dia. 0.7 mm	= 07
Dia. 0.8 mm	= 08
Dia. 1.0 mm	= 10
Dia. 1.2 mm	= 12
Dia. 1.5 mm	= 15
Dia. 2.0 mm	= 20
Dia. 2.5 mm	= 25

Further requirements in clear text (to be agreed with the manufacturer)

Sealing
 Mineral oils = with no code
 Phosphate ester = V

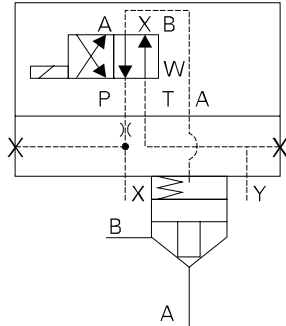
Electrical connection
 Plug-in connector = Z4
 Plug-in connector with lamp = Z4L

Version
 without emergency operator = no code
 with emergency operator = N

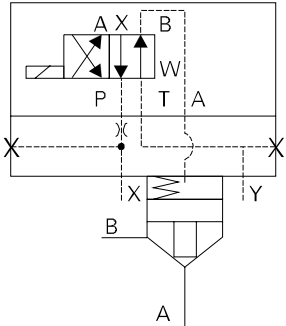
Voltage
 AC U = 220 V - 50 Hz = W220 - 50
 AC U = 110 V - 50 Hz = W110 - 50
 DC U = 110 V = G 110
 DC U = 24 V = G 24

Control valve version
 normal = no code
 without return spring = O
 with detent = OF

In case of ordering the cover together with the valve, please, quote the codes of the both elements.
 Example : ULZS 32 WEA / 10 - A - 08 W220 - 50 Z4 V + URZS 32 - A - 10 - E - 10

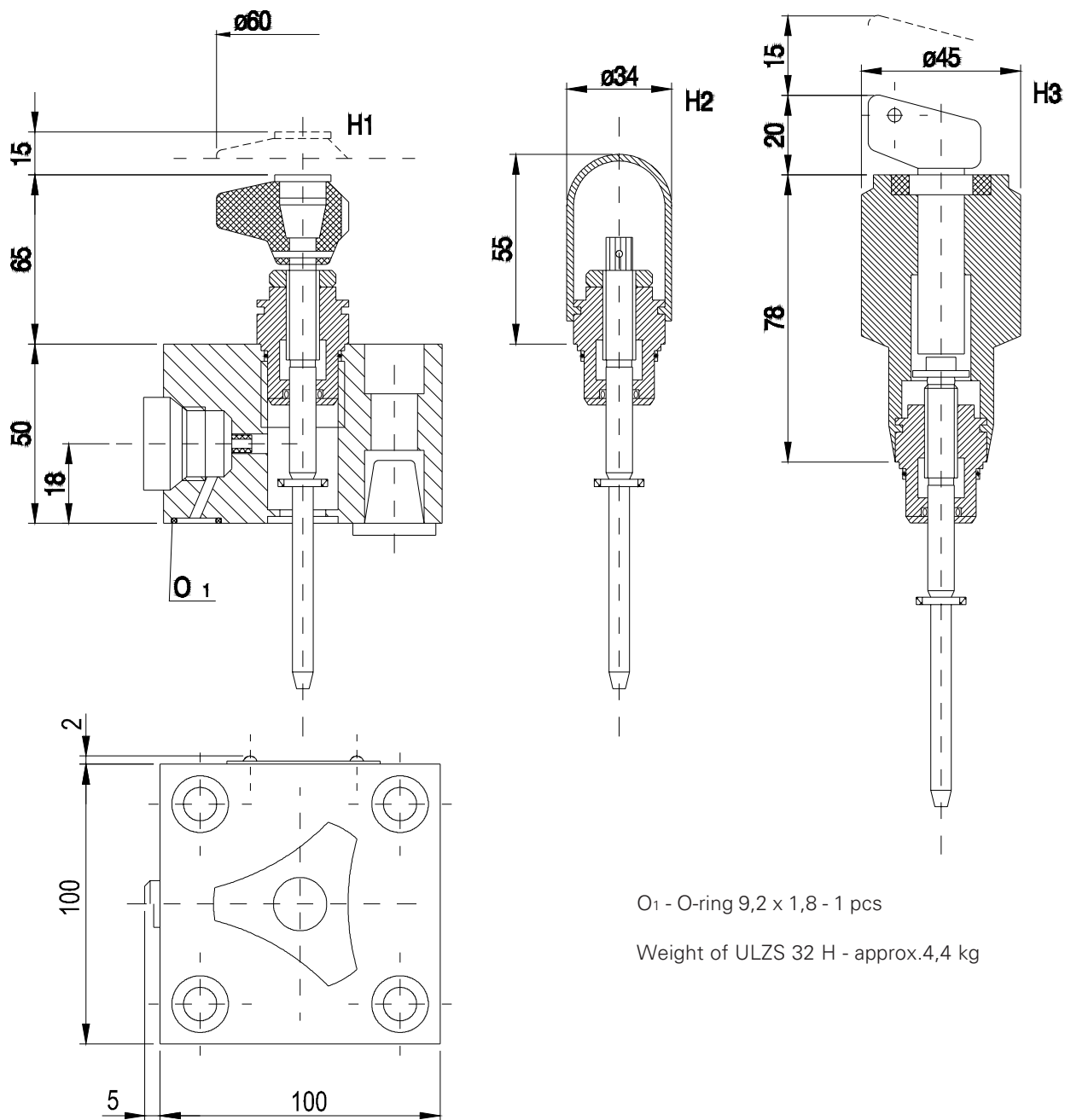


ULZS - 32WEA 10/P...



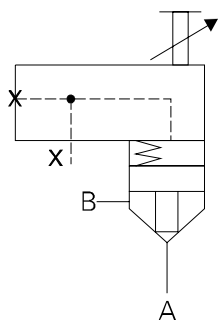
ULZS - 32WEB 10/P...

3. COVER ULZS - 32 H OVERALL DIMENSIONS FOR COVER ULZS 32 H

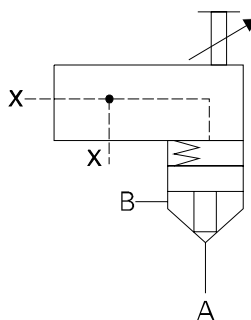


DIAGRAMS FOR ULZS 32 H

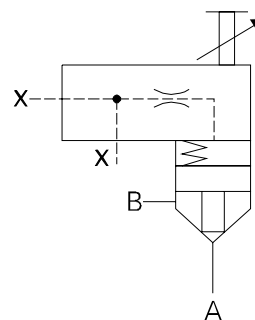
ULZS - 32H.../...



ULZS - 32H.../F



ULZS - 32H.../FX...



HOW TO ORDER ULZS 32 H

Orders coded as below should be forwarded to the manufacturer.

ULZS 32		/				*
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Adjustment	
Adjustment 1	= H1
Adjustment 2	= H2
Adjustment 3	= H3

Further requirements in clear text (to be agreed with the manufacturer)

Series number	
10	= 10
(10 - 19) - connection and mounting dimensions unchanged	

Sealing	
Mineral oils	= no code
Phosphate ester	= V

Pilot supply	
Internal pilot supply	= no code
External pilot supply	= F

Nozzle diameter	
Dia. 0.6 mm	= 06
Dia. 0.8 mm	= 08
Dia. 1.0 mm	= 10
Dia. 1.2 mm	= 12
Dia. 1.5 mm	= 15
Dia. 2.0 mm	= 20
Dia. 2.5 mm	= 25

Control port	
Without nozzle	= no code
With nozzle	= X

In case of ordering the cover together with the valve, please, quote the codes of the both elements.

Example : ULZS 32 H1 10/ FX - 08 + URZS 32 - A -10 - E - 10

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