

Zurcon® U-Cup PUA



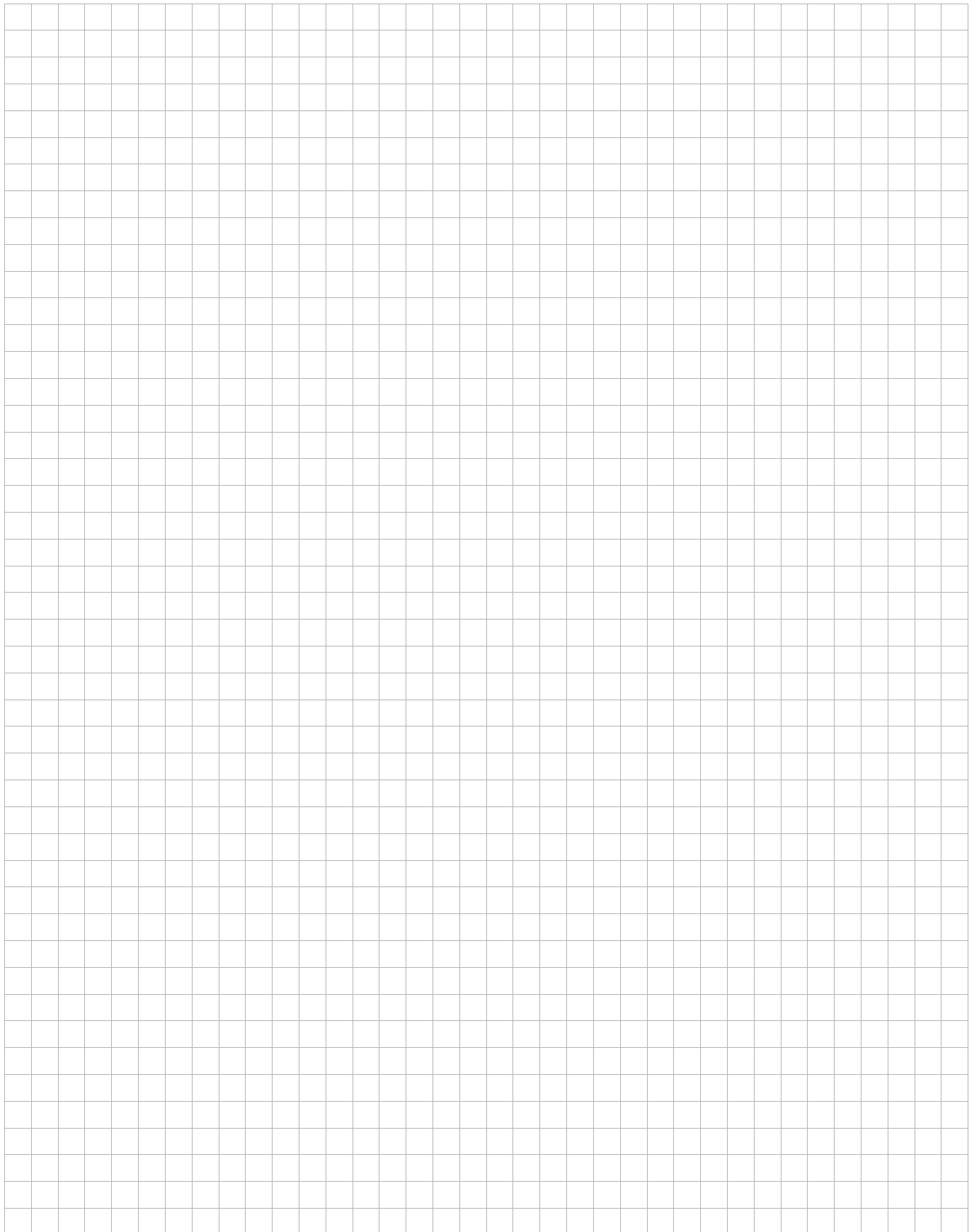
Single-acting

Asymmetric, Single Lip

For O-Ring Grooves

Material:
Zurcon®







■ Piston U-Cup PUA



■ Description

The U-Cup is a single-acting piston seal out of injection molded polyurethane. It is provided with a robust dynamic sealing lip and a wide contact area of the static lip, which guaranties an effective positioning in the groove.

The profile is suitable for pressures up to 40 MPa provided that the extrusion gap is adapted to the pressure level. Thanks to the elasticity of the polyurethane material the U-Cup can easily be installed in closed grooves.

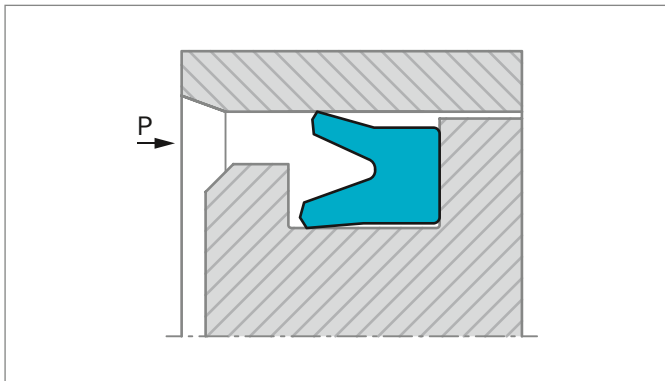


Figure 152: Piston U-Cup Type PUA

ADVANTAGES

- Simple groove design
- High abrasion resistance
- Long service life
- Effective sealing effect even with non excellent mating surface finish

APPLICATION EXAMPLES

The U-Cup is the recommended sealing element for single acting pistons of hydraulic components such as:

- Presses
- Lift platforms
- Aftermarket

OPERATING CONDITIONS

Pressure:	Up to 40 MPa
Speed:	Up to 0.5 m/s
Temperature:	from -35 °C to +110 °C
Media:	Mineral oil based hydraulic fluids
Clearance:	From Table 145 the maximum value of the radial clearance S_{max} can be selected for dimensioning the piston. The values indicated in this table must be reduced by 30% when temperature exceeds 80 °C.

Table 145: Clearance

Operating Pressure MPa	Radial Clearance S_{max}	
	$d_N < 60$ mm	$d_N > 60$ mm
5	0.40	0.50
10	0.30	0.40
20	0.20	0.30
30	0.15	0.20
40	0.10	0.15

IMPORTANT NOTE

The above data are maximum values and cannot be used at the same time, e.g. the maximum operating speed depends on material type, pressure, temperature and gap value. Temperature range also depends on media.

MATERIALS

Standard Material:

For hydraulic components in mineral oils or medium with good lubricating performance, polyurethane 93 Shore A

Zurcon® Z20

Color: turquoise



■ Installation Recommendation

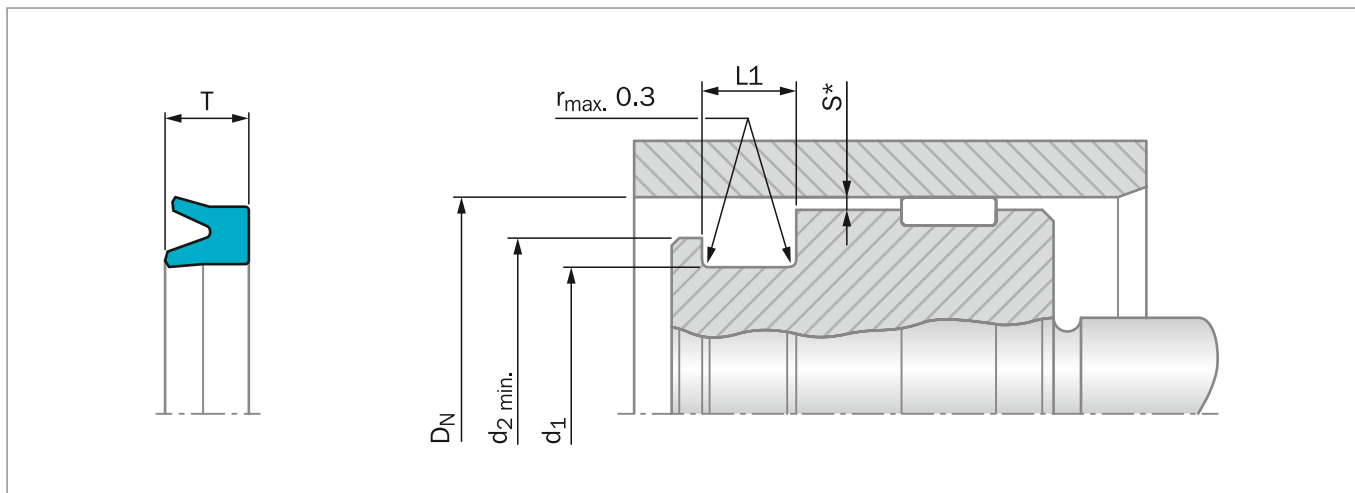


Figure 153: Installation Drawing

* Dimensions "S" see Table 145

ORDERING EXAMPLE

Bore Diameter:	$D_N = 80 \text{ mm}$
Groove Diameter:	$d_1 = 60 \text{ mm}$
Groove Width:	$L1 = 13 \text{ mm}$
TSS Part No.:	PUA000800 from Table 146
Material Code:	Z20

TSS Article No.	PUA 0 00800 - Z20
TSS Series No.	PUA
Execution Code	0
Bore Diameter x 10	00800
Quality Index (Standard)	-
Material Code	Z20

**Table 146: Installation Dimensions / TSS Part No.**

Bore Diameter	Groove Diameter	Seal Width	Groove Width	Fitting Diameter	TSS Part No.
D_N	d_1	T	L1	d_2	
H9	h9		+0.2	min	
14.0	8.0	6.3	6.8	11.0	PUA000140
16.0	8.0	6.0	5.5	13.0	PUA300160
25.0	15.0	8.0	9.0	19.0	PUA000250
30.0	22.0	6.5	7.0	26.0	PUA400300
32.0	26.0	5.0	6.0	28.0	PUA200320
35.0	25.0	8.0	9.0	29.0	PUA100350
40.0	32.0	5.5	6.5	36.0	PUA300400
50.0	40.0	10.0	11.0	44.0	PUA400500
50.0	42.0	5.5	6.0	45.0	PUA900500
52.0	42.0	5.7	6.5	46.0	PUA000520
55.0	40.0	10.0	11.0	45.0	PUA000550
60.0	50.0	7.0	8.0	54.0	PUA000600
60.0	50.0	10.0	11.0	54.0	PUA600600
63.0	53.0	7.0	8.0	57.0	PUA200630
70.0	60.0	7.0	8.0	64.0	PUA100700
80.0	60.0	12.0	13.0	65.0	PUA000800
80.0	68.0	8.5	9.5	72.0	PUA300800
80.0	70.0	12.0	13.0	74.0	PUA700800
85.0	70.0	12.0	13.0	75.0	PUA300850
110.0	95.0	12.0	13.0	100.0	PUA101100
110.0	100.0	7.0	8.0	104.0	PUA201100
125.0	100.0	15.0	16.0	105.0	PUA201250
125.0	105.0	12.0	13.0	110.0	PUA301250
125.0	110.0	10.0	11.0	115.0	PUA101250
140.0	120.0	12.0	13.0	125.0	PUA001400
160.0	140.0	11.5	12.5	145.0	PUA001600
200.0	175.0	15.0	16.0	180.0	PUA102000

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