Zurcon® Glyd Ring® D

Double-acting

Rubber-energized plastic-faced seal

High Extrusion Resistance

Material:
Zurcon® and Elastomer

Zurcon Glyd Ring® D

Description

Glyd Ring® D is a double-acting seal consisting of a premium polyurethane Zurcon® Z13 seal ring and an O-Ring as energizing element (Figure 112).
The innovative D-shape design optimizes contact pressure and the two special grooves incorporated keep an oil reservoir for an adequate lubrication that minimizes heat generated by friction forces. The above features give the perfect combination of sealing performance and service life.

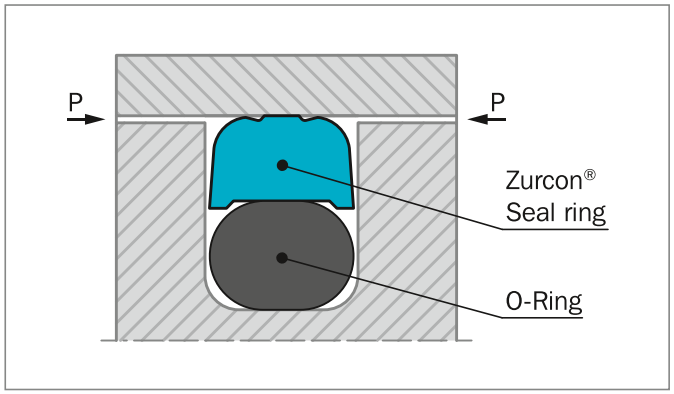

Figure 112: Zurcon® Glyd Ring® D

Zurcon® Z13 polyurethane material is the perfect partner for this innovative design. It is the latest advanced polyurethane development matching the requirements of modern hydraulic medias and cylinder bore surfaces.

Zurcon® Z13 is a 60 ShD polyurethane able to combine excellent mechanical and elastic material properties that makes it suitable to work in high pressure and temperature environment without losing performance.

It has been developed in order to have an excellent hydrolysis resistance making it compatible with a wide range of hydraulic fluids not only mineral base, but also the new environmentally friendly fluids (HEES, HEPG and HEPR) and also with fire resistant fluids both water based and water free (HFA, HFC and HFD) .

ADVANTAGES

- Extended service life in heavy duty applications
- High static and dynamic sealing effect
- Excellent abrasion and extrusion resistance
- Simple groove design, one piece piston possible, easy installation
- Grooves according to ISO 7425-1

APPLICATION EXAMPLES

Glyd Ring® D is the recommended element for double acting pistons of hydraulic components such as:

- Construction machinery
- Mobile hydraulic
- Truck cranes
- Fork lift
- Accumulators

It is particularly recommended for medium and heavy duty applications.

RECOMMENDED MATERIALS

Glyd Ring® D:	Zurcon® Z13	
O-Ring:	NBR, 70 Share A	N
	HNBR, 70 Share A	H
Set code:	Z13N or Z13H	

OPERATING CONDITIONS

Pressure:	Up to 40 MPa
Velocity:	Up to 0.5 m/s 0.8 m/s for limited time
Frequency:	Up to 5 Hz
Temperature:	-30° C to +110° C depending on O-Ring Material
Media:	Hydraulic fluids based on mineral oil, environmentally friendly and fire resistance fluids (always check O-Ring material compatibility)
Clearance:	The maximum permissible radial clearance S_{max} is shown in Table 95 as a function of the operating pressure and diameter

IMPORTANT NOTE

The above started limits for presuure ad speed are maximum values individually. Friction heat generated by the combination of pressure and speed may cause local heat built-up. Care should be taken not to apply high values for pressure and speed at the same time.

Installation Recommendation

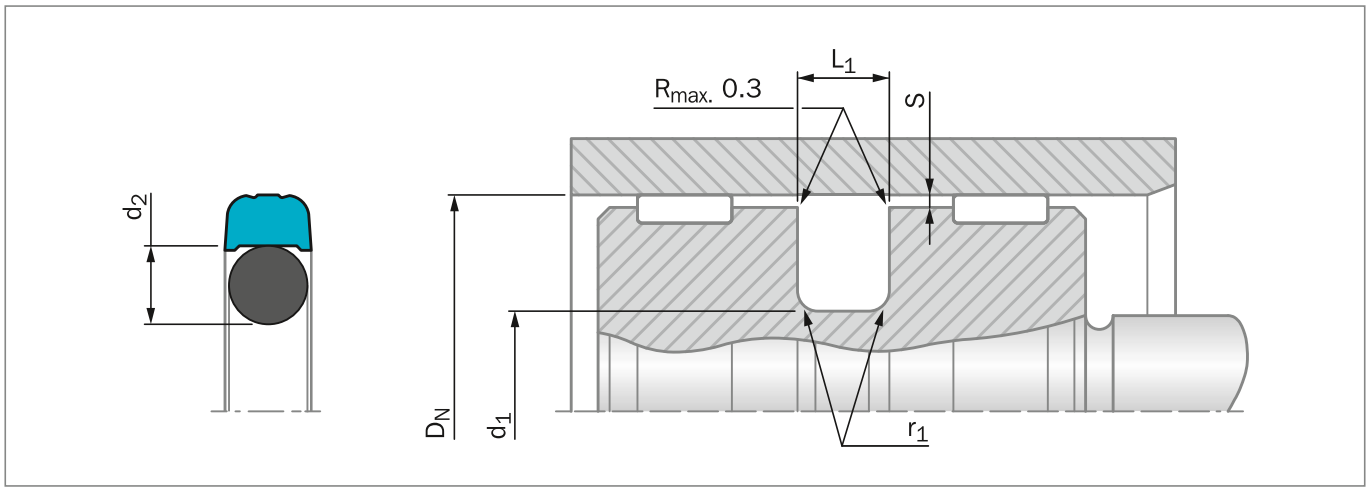

Figure 113: Installation Drawing

Table 95: Installation Dimensions – Standard Recommendations

Series No.	Diameter Range	Groove Diameter	Groove Width	Radius	Radial Clearance S_{max} @ 110°C				O-Ring Cross Section
	D_N H9	d_1 h9	L_1 +0.2	r_1	16 MPa	26 MPa	32 MPa	40 MPa	d_2
PH41	15 - 39.9	DN - 7.5	3.2	0.6	0.3	0.2	-	-	2.62
PH42	40 - 79.9	DN - 11.0	4.2	1.0	0.4	0.3	0.2	-	3.53
PH43	80 - 132.9	DN - 15.5	6.3	1.3	0.5	0.4	0.3	0.25	5.33
PH44	133 - 329.9	DN - 21.0	8.1	1.8	0.6	0.5	0.4	0.35	7.00

ORDERING EXAMPLE

Glyd Ring D for ISO groove

Series:	PH42 from Table 95
Bore Diameter:	D_N = 63.0 mm
TSS Part No.:	PH4200630 from Table 96

Material Z13

Material code	Z13
O-Ring material code	N
Set code:	Z13N

TSS Article No. **PH42 0 0630 - Z13 N**

- TSS Series No.
- Type (Standard)
- Bore Diameter x 10
- Quality Index (Standard)
- Material Code (Seal Ring)
- Material Code (O-Ring)

Table 96: Installation Dimensions / TSS Part No.

Bore Diameter	Groove Diameter	Groove Width	TSS Part No.	O-Ring Dimensions
D_N H9	d_1 h9	L_1 +0.2		
25.00	17.50	3.20	PH4100250-Z13	17.12 x 2.62
30.00	22.50	3.20	PH4100300-Z13	21.89 x 2.62
32.00	**21.00**	**4.20**	**PH4200320-Z13**	**20.22 x 3.53**
40.00	**29.00**	**4.20**	**PH4200400-Z13**	**28.17 x 3.53**
45.00	34.00	4.20	PH4200450-Z13	32.92 x 3.53
50.00	**39.00**	**4.20**	**PH4200500-Z13**	**37.70 x 3.53**
55.00	44.00	4.20	PH4200550-Z13	44.04 x 3.53
60.00	49.00	4.20	PH4200600-Z13	47.22 x 3.53
63.00	**52.00**	**4.20**	**PH4200630-Z13**	**50.39 x 3.53**
65.00	54.00	4.20	PH4200650-Z13	53.57 x 3.53
70.00	59.00	4.20	PH4200700-Z13	56.74 x 3.53
75.00	64.00	4.20	PH4200750-Z13	63.09 x 3.53
80.00	**64.50**	**6.30**	**PH4300800-Z13**	**62.87 x 5.33**
85.00	69.50	6.30	PH4300850-Z13	69.22 x 5.33
90.00	74.50	6.30	PH4300900-Z13	72.39 x 5.33
100.00	**84.50**	**6.30**	**PH4301000-Z13**	**81.92 x 5.33**
105.00	89.50	6.30	PH4301050-Z13	88.27 x 5.33
110.00	94.50	6.30	PH4301100-Z13	91.44 x 5.33
115.00	94.00	8.10	PH4401150-Z13	94.00 x 7.0
120.00	104.50	6.30	PH4301200-Z13	100.97 x 5.33
125.00	**104.00**	**8.10**	**PH4401250-Z13**	**103.00 x 7.0**
130.00	109.00	8.10	PH4401300-Z13	108.00 x 7.0
140.00	119.00	8.10	PH4401400-Z13	116.84 x 7.0
160.00	**139.00**	**8.10**	**PH4401600-Z13**	**135.89 x 7.0**
200.00	**179.00**	**8.10**	**PH4402000-Z13**	**177.17 x 7.0**
250.00	**229.00**	**8.10**	**PH4402500-Z13**	**227.97 x 7.0**

All dimensions in **bold** type are suitable for installation in grooves to ISO 7425-1, bore dia. in accordance with ISO 3320.
Additional dimensions can be delivered on request.