Turcon® Roto Glyd Ring®



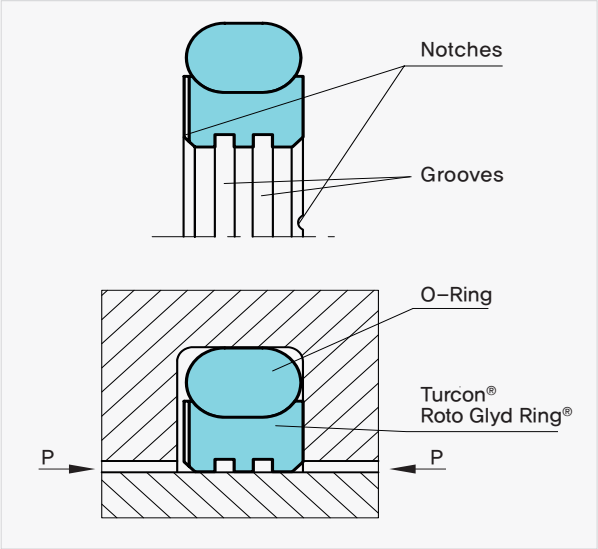
Double-Acting
Rubber Energized Plastic Faced Seal

Materials: Turcon®, Zurcon® & Elastomer



개요

Turcon® Roto Glyd Ring®은 회전체에 적용되는 복동형 Seal로서, 고체 Turcon® 재질로 탄성체인 O-Ring으로 조합되어 효과적인 Sealing 작용을 한다.



Turcon® Roto Glyd Ring®

특징

Turcon® Ring의 습동되는 부분에 하나, 또는 두 개의 오일 홈이 있어 높은 압력과 지속에 적합한 형상이다.

즉, 오일 홈은 뛰어난 윤활 효과를 가져오며 그로 인해 마찰이 지어지고, 표면 압력과 접촉 압력의 균형으로 더 나은 Sealing 효과를 가져온다.

Turcon® Ring의 뒤쪽 부분 즉, O-Ring과 접촉되는 부분은 오목하게 되어 접촉 표면을 넓게 하므로, Turcon® Ring이 축과 함께 회전될 위험을 감소시킨다.

장점

- 내, 외부 Seal의 완벽한 균형.
- 마찰계수가 낮다.
- Stick-Slip 현상이나 눌러붙음 현상이 없어, 정밀기계에 사용할 수 있다.
- 오일 홈 구성이 간단하고, 내부 공간이 적다.
- 윤활성이 뛰어나다.
- 최대 Ø2,500mm까지 적용 가능.

적용 범위

- 압력 : 최대 30MPa (300bar)
- 속도 : 최대 2 m/s
- 온도 : −45℃ ~ +200℃*
  (O-Ring 재질에 따라서)
- 매체 : 광물 베이스의 유압 작동유,
  친환경 유압유 (Bio-oils),
  기타.

※ 주의사항

- 위에 제시된 최대 수치는 같은 동작 시간대에 동시에 유효할 수는 없다.
- 최대 속도는 재질, 타입, 압력, 온도, 틈새 크기에 따라 좌우된다.
- 온도 범위 또한, 매체 조건에 따라 영향을 받는다.

*0℃ 이하의 가압이 되지 않는 적용에서는 반드시 엔지니어와 상의한다.

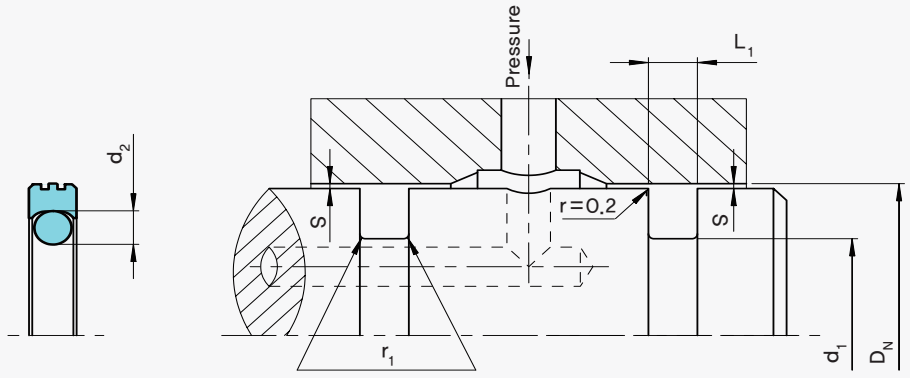
Turcon® Roto Glyd Ring®

재질 / Materials for Turcon® Roto Glyd Ring®

Material, Application Properties	Code	O-Ring Material Shore A	Code	O-Ring Operating Temp. °C*	Mating Surface Material	Mpa max.
Turcon® T40 • For all Lubricating & Non-Lubricating Hydraulic Fluids. • Water Hydraulics. • Soft Mating surfaces. • Carbon Fiber filled. Colour : Grey.	T40	NBR-70	N	-30 ~ (+100)	Steel Steel Chrome-plated (Rod) Cast iron Stainless Steel Aluminium	20
		NBR-70 Low Temp.	T	-45 ~ +80		
		FKM-70	V	-10 ~ +200		
		EPDM-70	E**	-45 ~ (+145)		
Turcon® T10 • Hydraulic and Pneumatics for all Lubricating & Non-Lubricating Fluids. • High Extrusion Resistance. • Good Chemical Resistance. • BAM Tested. • Carbon & Graphite filled. Colour : Black.	T10	NBR-70	N	-30 ~ +100	Steel Steel Chrome-plated (Rod) Stainless Steel	30
		NBR-70 Low Temp.	T	-45 ~ +80		
		FKM-70	V	-10 ~ +200		
		EPDM-70	E**	-45 ~ +145		

* The O-Ring Operating Temperature is only valid in Mineral Hydraulic Oil. (except EPDM) Highlighted Materials are standard.
** Material NOT suitable for Mineral oils. BAM : Approved by "Bundesantalt Materialprufung, Germany."

Installation Recommendation – External Sealing



Installation drawing

Installation Dimensions – Standard Recommendations

Series No.	Bore Diameter D_N h9		Groove Diameter	Groove Width	Radial Clearance S max.*		Radius	O-Ring Cross section	Number of Grooves in the Sealing Surface
	Standard Range	Available Range	d_1 h9	L_1 +0.2	10 MPa	20 MPa	r_1	d_2	
TG40	8 – 39.9	8 – 135.0	D_N – 4.9	2.20	0.15	0.10	0.40	1.78	0
TG41	40 – 79.9	14 – 250.0	D_N – 7.5	3.20	0.20	0.15	0.60	2.62	1
TG42	80 – 132.9	22 – 460.0	D_N – 11.0	4.20	0.25	0.20	1.00	3.53	1
TG43	133 – 329.9	40 – 675.0	D_N – 15.5	6.30	0.30	0.25	1.30	5.33	2
TG44	330 – 669.9	133 – 690.0	D_N – 21.0	8.10	0.30	0.25	1.80	7.00	2
TG45	670 – 999.9	670 – 999.9	D_N – 28.0	9.50	0.45	0.30	2.50	8.40	2

Provide Split Housing Grooves, according to diameter.
* At Pressures **> 10 MPa**, it is recommended that for the the Cross-section you choose the next larger profile, according to the column; "Available Range". i.e) for Bore Ø80mm : TG40 00 800-.
* At Pressures **> 30 MPa**, Use Diameter Tolerance H8/f8 (Bore/Rod) in area of seal.

주문 예

Turcon® Roto Glyd Ring®과 함께 적용되는 O-Ring 규격과 재질 선택은, 표를 참고하시기 바랍니다.

- Bore diameter : D_N = 80.0mm
- TSS Part No. TG4200800

TSS Article No. TG42 0 0800 – T40 N
- TSS Series No.
- Type (Standard)
- Bore diameter x 10**
- Quality Index (Standard)
- Material Code (Seal Ring)
- Material Code (O-Ring)

** For diameters ≥ 1000.0mm multiply only by factor 1.
Example : TG45 for diameter 1200.0mm
TSS Article No. : TG45 **X1200** – T40N.

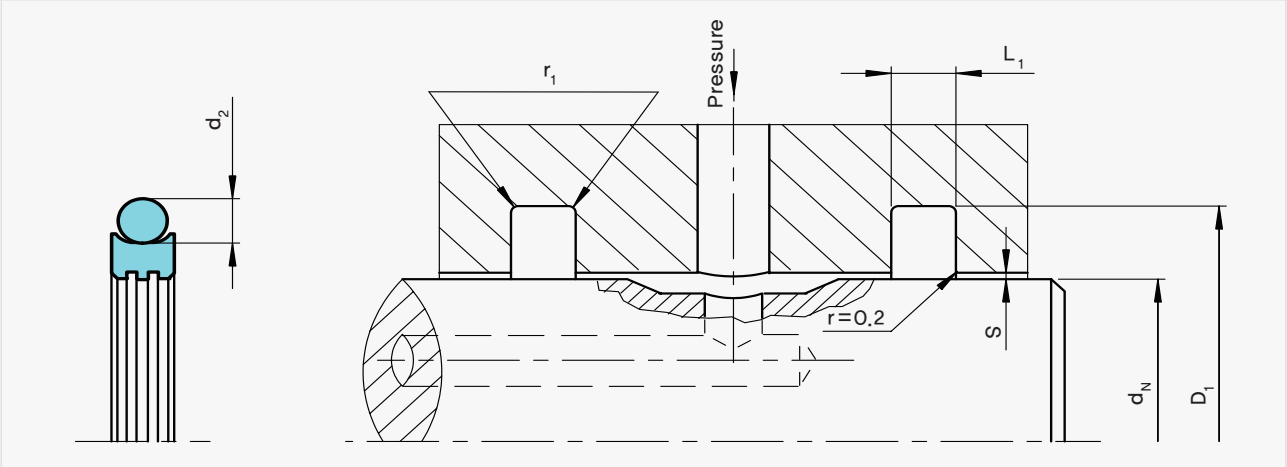
Installation Dimensions / TSS Part No.

Bore Diameter	Groove Diameter	Groove Width	TSS Part No.	O-Ring Dimensions
D_N H9	d_1 h9	L_1 +0.2		
8.0	3.1	2.2	TG4000080	2.90 × 1.78
10.0	5.1	2.2	TG4000100	4.80 × 1.80
12.0	7.1	2.2	TG4000120	6.70 × 1.80
14.0	9.1	2.2	TG4000140	8.75 × 1.80
15.0	10.1	2.2	TG4000150	9.25 × 1.78
16.0	11.1	2.2	TG4000160	10.82 × 1.78
18.0	13.1	2.2	TG4000180	12.42 × 1.78
20.0	15.1	2.2	TG4000200	14.00 × 1.78
22.0	17.1	2.2	TG4000220	17.17 × 1.78
25.0	20.1	2.2	TG4000250	18.77 × 1.78
28.0	23.1	2.2	TG4000280	21.95 × 1.78
30.0	25.1	2.2	TG4000300	25.12 × 1.78
32.0	27.1	2.2	TG4000320	26.70 × 1.78
35.0	30.1	2.2	TG4000350	29.87 × 1.78
40.0	32.5	3.2	TG4100400	31.42 × 2.62
42.0	34.5	3.2	TG4100420	32.99 × 2.62
45.0	37.5	3.2	TG4100450	36.17 × 2.62
48.0	40.5	3.2	TG4100480	39.34 × 2.62
50.0	42.5	3.2	TG4100500	40.94 × 2.62
52.0	44.5	3.2	TG4100520	44.12 × 2.62
55.0	47.5	3.2	TG4100550	45.69 × 2.62
60.0	52.5	3.2	TG4100600	52.07 × 2.62
63.0	55.5	3.2	TG4100630	53.64 × 2.62
65.0	57.5	3.2	TG4100650	56.82 × 2.62
70.0	62.5	3.2	TG4100700	61.60 × 2.62
75.0	67.5	3.2	TG4100750	66.34 × 2.62
80.0	69.0	4.2	TG4200800	66.27 × 3.53

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		
85.0	74.0	4.2	TG4200850	72.62 × 3.53
90.0	79.0	4.2	TG4200900	78.97 × 3.53
95.0	84.0	4.2	TG4200950	82.14 × 3.53
100.0	89.0	4.2	TG4201000	88.49 × 3.53
105.0	94.0	4.2	TG4201050	91.67 × 3.53
110.0	99.0	4.2	TG4201100	98.02 × 3.53
115.0	104.0	4.2	TG4201150	101.19 × 3.53
120.0	109.0	4.2	TG4201200	107.54 × 3.53
125.0	114.0	4.2	TG4201250	113.89 × 3.53
130.0	119.0	4.2	TG4201300	117.07 × 3.53
135.0	119.5	6.3	TG4301350	116.84 × 5.33
140.0	124.5	6.3	TG4301400	123.19 × 5.33
150.0	134.5	6.3	TG4301500	132.72 × 5.33
160.0	144.5	6.3	TG4301600	142.24 × 5.33
170.0	154.5	6.3	TG4301700	151.77 × 5.33
180.0	164.5	6.3	TG4301800	164.47 × 5.33
190.0	174.5	6.3	TG4301900	170.82 × 5.33
200.0	184.5	6.3	TG4302000	183.52 × 5.33
210.0	194.5	6.3	TG4302100	189.87 × 5.33
220.0	204.5	6.3	TG4302200	202.57 × 5.33
230.0	214.5	6.3	TG4302300	208.92 × 5.33
240.0	224.5	6.3	TG4302400	221.62 × 5.33
250.0	234.5	6.3	TG4302500	234.32 × 5.33
280.0	264.5	6.3	TG4302800	266.07 × 5.33
300.0	284.5	6.3	TG4303000	278.77 × 5.33
320.0	304.5	6.3	TG4303200	304.17 × 5.33
350.0	329.0	8.1	TG4403500	329.57 × 7.00
400.0	379.0	8.1	TG4404000	267.67 × 7.00
420.0	399.0	8.1	TG4404200	393.07 × 7.00
450.0	429.0	8.1	TG4404500	417.96 × 7.00
480.0	459.0	8.1	TG4404800	456.06 × 7.00
500.0	479.0	8.1	TG4405000	468.76 × 7.00
600.0	579.0	8.1	TG4406000	582.68 × 7.00
700.0	672.0	9.5	TG4507000	670.00 × 8.40

Installation Recommendation – Internal Sealing



Installation drawing

Installation Dimensions – Standard Recommendations

Series No.	Rod Diameter d_N f8/h9		Groove Diameter	Groove Width	Radial Clearance S max.*		Radius	O-Ring Cross section	Number of Grooves in the Sealing Surface
	Standard Range	Available Range	D_1 h9	L_1 +0.2	10 MPa	20 MPa	r_1	d_2	
TG30	6 – 18.9	6 – 130.0	d_N + 4.9	2.20	0.15	0.10	0.40	1.78	0
TG31	19 – 37.9	10 – 245.0	d_N + 7.5	3.20	0.20	0.15	0.60	2.62	1
TG32	38 – 199.9	19 – 455.0	d_N + 11.0	4.20	0.25	0.20	1.00	3.53	1
TG33	200 – 255.9	38 – 655.0	d_N + 15.5	6.30	0.30	0.25	1.30	5.33	2
TG34	256 – 649.9	120 – 655.0	d_N + 21.0	8.10	0.30	0.25	1.80	7.00	2
TG35	650 – 999.9	650 – 999.9	d_N + 28.0	9.50	0.45	0.30	2.50	8.40	2

Provide Split Housing Grooves, according to diameter; see Table LXX.

*At Pressures **> 10 MPa**, it is recommended that for the the Cross-section you choose the next larger profile, according to the column; "Available Range". i.e) for Bore Ø80mm : TG33 00 800-.

*At Pressures **> 30 MPa**, Use Diameter Tolerance H8/f8 (Bore/Rod) in area of seal.

주문 예

Turcon® Roto Glyd Ring®과 함께 적용되는 O-Ring 규격과 재질 선택은, 표를 참고하시기 바랍니다.

- Rod diameter : d_N = 80.0mm
- TSS Part No. TG3200800

TSS Article No. TG32 0 0800 – T40 N
- TSS Series No.
- Type (Standard)
- Rod diameter x 10**
- Quality Index (Standard)
- Material Code (Seal Ring)
- Material Code (O-Ring)

** For diameters ≥1000.0mm multiply only by factor 1.
Example : TG35 for diameter 1200.0mm
TSS Article No. : TG35 **X1200** – T40N.

Installation Dimensions / TSS Part No.

Rod Diameter	Groove Diameter	Groove Width	TSS Part No.	O-Ring Dimensions
d_N f8/h9	D_1 H9	L_1 +0.2		
6.0	10.9	2.2	TG3000060	7.65 × 1.78
8.0	12.9	2.2	TG3000080	9.50 × 1.80
10.0	14.9	2.2	TG3000100	11.80 × 1.80
12.0	16.9	2.2	TG3000120	14.00 × 1.78
14.0	18.9	2.2	TG3000140	15.60 × 1.78
15.0	19.9	2.2	TG3000150	17.17 × 1.78
16.0	20.9	2.2	TG3000160	17.17 × 1.78
18.0	22.9	2.2	TG3000180	18.77 × 1.78
20.0	27.5	3.2	TG3100200	21.89 × 2.62
22.0	29.5	3.2	TG3100220	25.07 × 2.62
25.0	32.5	3.2	TG3100250	28.24 × 2.62
28.0	35.5	3.2	TG3100280	31.42 × 2.62
30.0	37.5	3.2	TG3100300	32.99 × 2.62
32.0	39.5	3.2	TG3100320	34.59 × 2.62
35.0	42.5	3.2	TG3100350	37.77 × 2.62
36.0	43.5	3.2	TG3100360	39.34 × 2.62
40.0	51.0	4.2	TG3200400	44.04 × 3.53
42.0	53.0	4.2	TG3200420	47.22 × 3.53
45.0	56.0	4.2	TG3200450	50.39 × 3.53
48.0	59.0	4.2	TG3200480	53.57 × 3.53
50.0	61.0	4.2	TG3200500	53.57 × 3.53
52.0	63.0	4.2	TG3200520	56.74 × 3.53
55.0	66.0	4.2	TG3200550	59.92 × 3.53
56.0	67.0	4.2	TG3200560	59.92 × 3.53
60.0	71.0	4.2	TG3200600	63.09 × 3.53
63.0	74.0	4.2	TG3200630	66.27 × 3.53
65.0	76.0	4.2	TG3200650	69.44 × 3.53

Installation Dimensions / TSS Part No.

Rod Diameter	Groove Diameter	Groove Width	TSS Part No.	O-Ring Dimensions
d_N f8/h9	D_1 H9	L_1 +0.2		
70.0	81.0	4.2	TG3200700	75.79 × 3.53
75.0	86.0	4.2	TG3200750	78.97 × 3.53
80.0	91.0	4.2	TG3200800	85.32 × 3.53
85.0	96.0	4.2	TG3200850	88.49 × 3.53
90.0	101.0	4.2	TG3200900	94.84 × 3.53
95.0	106.0	4.2	TG3200950	101.19 × 3.53
100.0	111.0	4.2	TG3201000	104.37 × 3.53
105.0	116.0	4.2	TG3201050	110.72 × 3.53
110.0	121.0	4.2	TG3201100	113.89 × 3.53
115.0	126.0	4.2	TG3201150	120.24 × 3.53
120.0	131.0	4.2	TG3201200	123.42 × 3.53
125.0	136.0	4.2	TG3201250	129.77 × 3.53
130.0	141.0	4.2	TG3201300	136.12 × 3.53
135.0	146.0	4.2	TG3201350	139.29 × 3.53
140.0	151.0	4.2	TG3201400	145.64 × 3.53
150.0	161.0	4.2	TG3201500	151.99 × 3.53
160.0	171.0	4.2	TG3201600	164.69 × 3.53
170.0	181.0	4.2	TG3201700	177.39 × 3.53
180.0	191.0	4.2	TG3201800	183.74 × 3.53
190.0	201.0	4.2	TG3201900	196.44 × 3.53
200.0	215.5	6.3	TG3302000	208.92 × 5.33
210.0	225.5	6.3	TG3302100	215.27 × 5.33
220.0	235.5	6.3	TG3302200	227.97 × 5.33
240.0	255.5	6.3	TG3302400	247.02 × 5.33
250.0	265.5	6.3	TG3302500	253.37 × 5.33
280.0	301.0	8.1	TG3402800	291.47 × 7.00
300.0	321.0	8.1	TG3403000	304.17 × 7.00
320.0	341.0	8.1	TG3403200	329.57 × 7.00
350.0	371.0	8.1	TG3403500	354.97 × 7.00
360.0	381.0	8.1	TG3403600	367.67 × 7.00
400.0	421.0	8.1	TG3404000	405.26 × 7.00
420.0	441.0	8.1	TG3404200	430.66 × 7.00
450.0	471.0	8.1	TG3404500	456.06 × 7.00
480.0	501.0	8.1	TG3404800	494.16 × 7.00
500.0	521.0	8.1	TG3405000	506.86 × 7.00
600.0	621.0	8.1	TG3406000	608.08 × 7.00
700.0	728.0	9.5	TG3507000	713.00 × 8.40