



Profile	Reference	Load (N/mm²) *	Temp. (°C) *	Speed (m/s) *	Material	Dimensions (mm)	mm	inch	Page
6a Piston guide rings									
	10E/GT	25°C: ≤ 15 120°C: ≤ 8	-60 +150	15	PTFE + additives	21 ... 255	●		840 - 843
	10WR	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	POM + glass fibers	25 ... 330	●		844 - 847
	10WR/I	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	POM + glass fibers	1"1/2 ... 10"1/2		●	848 - 849
	10E/DWR	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	POM + glass fibers	16 ... 300	●		850 - 853
	10WP	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	POM + glass fibers	25 ... 95	●		854 - 855
	10FET	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	PA + glass fibers	40 ... 250	●		856 - 857
	12FA HUNGER Dichtungen	25°C: ≤ 78 60°C: ≤ 40	-55 +120	3	POM + PTFE	50 ... 600	●		858 - 861
	10E/GTP	25°C: ≤ 90 60°C: ≤ 45	-30 +120	1	PF-C	24 ... 480	●	●	862 - 867
	10E/GTP1	25°C: ≤ 100 60°C: ≤ 50	-30 +120	1	PF-S + PTFE	25 ... 550	●		868 - 871
	10E/GTP-HT	25°C: ≤ 120 60°C: ≤ 60	-40 +200	1	PF-A + graphite	25 ... 180	●		872 - 873
	10E/GTN	25°C: ≤ 110 60°C: ≤ 55	-30 +120	1	Polyester + PTFE	25 ... 475	●		874 - 877

* See page 8

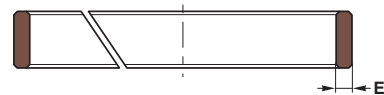
Profile	Reference	Load (N/mm²) *	Temp. (°C) *	Speed (m/s) *	Material	Dimensions (mm)	mm	inch	Page
6b Rod guide rings									
	10I/GT	25°C: ≤ 15 120°C: ≤ 8	-60 +150	15	PTFE + additives	16 ... 250	●		878 - 881
	10WR	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	POM + glass fibers	16 ... 260	●		882 - 885
	10WR/I	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	POM + glass fibers	1"1/4 ... 10"1/4	●		886 - 887
	10I/DWR	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	POM + glass fibers	12 ... 290	●		888 - 891
	10FIL	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	POM + glass fibers	60 ... 207	●		892 - 893
	10FIT	25°C: ≤ 40 60°C: ≤ 25	-40 +110	0,8	POM + glass fibers	30 ... 194,5	●		894 - 895
	12FAI 	25°C: ≤ 78 60°C: ≤ 40	-55 +120	3	POM + PTFE	22 ... 500	●		896 - 899
	12FI 	25°C: ≤ 78 60°C: ≤ 40	-55 +120	3	POM + PTFE	22 ... 500	●		900 - 903
	10I/GTP	25°C: ≤ 90 60°C: ≤ 45	-30 +120	1	PF-C	20 ... 470	●	●	904 - 909
	10I/GTP1	25°C: ≤ 100 60°C: ≤ 50	-30 +120	1	PF-S + PTFE	18 ... 530	●		910 - 913
	10I/GTP-HT	25°C: ≤ 120 60°C: ≤ 60	-40 +200	1	PF-A + graphite	20 ... 175	●		914 - 915
	10I/GTN	25°C: ≤ 110 60°C: ≤ 55	-30 +120	1	Polyester + PTFE	20 ... 470	●		916 - 919

* See page 8

Profile	Reference	Load (N/mm²) *	Temp. (°C) *	Speed (m/s) *	Material	Dimensions (mm)	mm	inch	Page
6c Rolls									
	10GT-PT15 10GT-PT30/44 10GT-PT55	25°C: ≤ 15 120°C: ≤ 8	-60 +150	15	PTFE + glass PTFE + carbon PTFE + bronze	Length 10 m	●		920 - 921
	10GTH	25°C: ≤ 100 60°C: ≤ 50	-30 +120	1	Polyester + graphite	Length 10 m	●	●	922 - 923
	10GTN	25°C: ≤ 100 60°C: ≤ 50	-30 +120	1	Polyester + PTFE	Length 10 m	●	●	924 - 925
	10GTP-HT	25°C: ≤ 120 60°C: ≤ 60	-40 +200	1	PF-A + graphite	Length 2 m	●		926 - 927
	10GTH-SPIRAL	25°C: ≤ 100 60°C: ≤ 50	-30 +120	1	Polyester + graphite	Length 5 m	●		928 - 929

6d Rolls TSS									
	17GM...-M12 17GM...-T05 17GM...-T47 17GM...-T51 17GM...-Z80 Slydring®	25°C: ≤ 15 120°C: ≤ 8	-60 +150	15	Turcite® M12 Turcite® T05 Turcite® T47 Turcite® T51 Zurcon® Z80	Length 4,5 ... 25 m	●		930 - 931
	17GL...-TB Slydway®	25°C: ≤ 15 120°C: ≤ 8	-60 +150	15	Turcite® B	Length 11 ... 18,5 m	●		932 - 933
	17GM...-C320 17GM...-C380 Slydring®	25°C: ≤ 100 60°C: ≤ 50	-40 +120	1	Orkot® C320 Orkot® C380	Length 2 ... 10 m	●		934 - 935

* See page 8

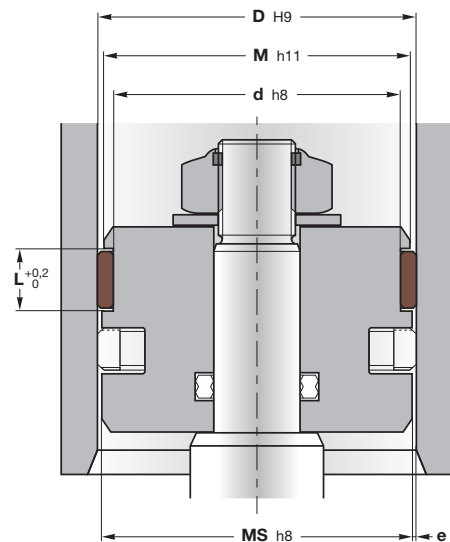
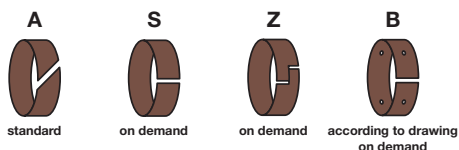


10E/GT

Example of item code

10E/GT - 25 097 - 1050 - 55 A
 Sealtech code L (mm x 10) Material
 E (mm x 10) D (mm x 10) Type of cut

Type of cut



✕ Machining of housings: see pages 45-49

10E/GT guide rings are made of PTFE compounds and serve to guide pistons, prevent metallic contact of the machine parts and absorb the transverse force that occurs. Guide elements made of PTFE compounds are characterised by outstanding friction behaviour **which minimises the stick-slip effect**.

In addition, they exhibit **high thermal and chemical resistance**. PTFE guide rings are only suitable for low surface pressures.



Our **10E/GT** guide rings have **diamond streaked surface** to improve the self-lubricating effect and have **chamfers** for easy installation into the groove.

Operating conditions

✕ see page 8

Max. permissible radial load at 25°C: ≤ 15 N/mm²
 120°C: ≤ 8 N/mm²

Temperature -60°C to 150°C

Speed ≤ 15 m/s

Fluids ✕ see pages 22-45

Materials

✕ see pages 10-19

Guide ring PT55

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Supplied cut to length or by the meter ✕ see p. 59

Low static and dynamic friction

No stick-slip

Reduce vibrations, good damping effect

High chemical compatibility

Large temperature range from -60 to 150 °C

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)

p = maximum permissible loading for material (N/mm²)

D x L = diameter x width of the ring (mm²)

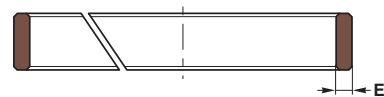
n = number of rings

s = safety factor

E (mm)	M (mm)
1,5	D - 0,8
2	D - 1,2
2,5	D - 1,6
3	D - 2
4	D - 2,5

D	d	L	ISO 10766	Reference
21	16	6,3		10E/GT-25063-0210-55A
27	22	6,3		10E/GT-25063-0270-55A
30	25	5,6		10E/GT-25056-0300-55A
	25	9,7		10E/GT-25097-0300-55A
32	27	6,3		10E/GT-25063-0320-55A
33	28	6,3		10E/GT-25063-0330-55A
	28	9,7		10E/GT-25097-0330-55A
35	30	6,3		10E/GT-25063-0350-55A
	30	9,7		10E/GT-25097-0350-55A
	32	5,6		10E/GT-15056-0350-55A
36	32	8,1		10E/GT-20081-0360-55A
37	32	9,7		10E/GT-25097-0370-55A
40	35	5,6	•	10E/GT-25056-0400-55A
	35	6,3		10E/GT-25063-0400-55A
	35	9,7		10E/GT-25097-0400-55A
	36	8,1		10E/GT-20081-0400-55A
41	36	6,3		10E/GT-25063-0410-55A
	36	9,7		10E/GT-25097-0410-55A
45	40	9,7		10E/GT-25097-0450-55A
	40	15		10E/GT-25150-0450-55A
50	45	5,6	•	10E/GT-25056-0500-55A
	45	6,3		10E/GT-25063-0500-55A
	45	8,1		10E/GT-25081-0500-55A
	45	9,7		10E/GT-25097-0500-55A
	45	15		10E/GT-25150-0500-55A
	46	9,7		10E/GT-20097-0500-55A
55	50	8,1		10E/GT-25081-0550-55A
	50	9,7		10E/GT-25097-0550-55A
	50	15		10E/GT-25150-0550-55A
60	55	6,3		10E/GT-25063-0600-55A
	55	9,7		10E/GT-25097-0600-55A
	55	15		10E/GT-25150-0600-55A
	56	9,7		10E/GT-20097-0600-55A
61	56	9,7		10E/GT-25097-0610-55A
	56	15		10E/GT-25150-0610-55A

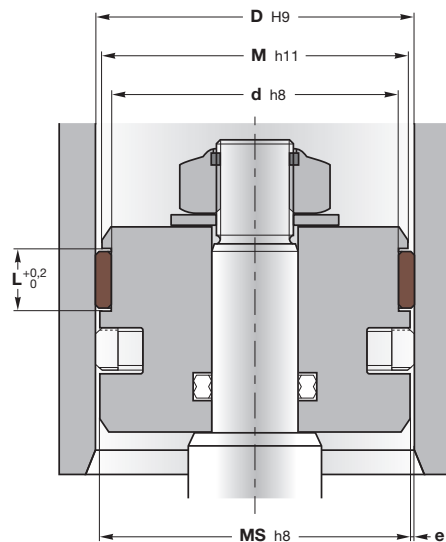
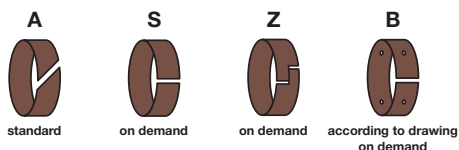
D	d	L	ISO 10766	Reference
63	58	5,6	•	10E/GT-25056-0630-55A
	58	9,7	•	10E/GT-25097-0630-55A
	58	15		10E/GT-25150-0630-55A
65	60	8,1		10E/GT-25081-0650-55A
	60	9,7		10E/GT-25097-0650-55A
	60	15		10E/GT-25150-0650-55A
68	63	8,1		10E/GT-25081-0680-55A
	63	9,7		10E/GT-25097-0680-55A
70	65	9,7		10E/GT-25097-0700-55A
	65	15		10E/GT-25150-0700-55A
75	70	9,7		10E/GT-25097-0750-55A
	70	15		10E/GT-25150-0750-55A
80	75	5,6	•	10E/GT-25056-0800-55A
	75	8,1		10E/GT-25081-0800-55A
	75	9,7	•	10E/GT-25097-0800-55A
	75	15		10E/GT-25150-0800-55A
85	80	9,7		10E/GT-25097-0850-55A
	80	15		10E/GT-25150-0850-55A
90	85	9,7		10E/GT-25097-0900-55A
	85	15		10E/GT-25150-0900-55A
95	90	5,6		10E/GT-25056-0950-55A
	90	6,3		10E/GT-25063-0950-55A
	90	9,7		10E/GT-25097-0950-55A
	90	15		10E/GT-25150-0950-55A
100	95	9,7	•	10E/GT-25097-1000-55A
	95	15		10E/GT-25150-1000-55A
105	100	9,7		10E/GT-25097-1050-55A
	100	15		10E/GT-25150-1050-55A
110	105	9,7		10E/GT-25097-1100-55A
	105	15		10E/GT-25150-1100-55A
115	110	9,7		10E/GT-25097-1150-55A
	110	15		10E/GT-25150-1150-55A
120	112	9,7		10E/GT-40097-1200-55A
	115	9,7		10E/GT-25097-1200-55A
	115	15		10E/GT-25150-1200-55A
125	120	9,7	•	10E/GT-25097-1250-55A
	120	15		10E/GT-25150-1250-55A
	120	20		10E/GT-25200-1250-55A

**10E/GT**

Example of item code

10E/GT - 25 097 - 1050 - 55 A
 Sealtech code L (mm x 10) Material
 E (mm x 10) D (mm x 10) Type of cut

Type of cut



✕ Machining of housings: see pages 45-49

10E/GT guide rings are made of PTFE compounds and serve to guide pistons, prevent metallic contact of the machine parts and absorb the transverse force that occurs. Guide elements made of PTFE compounds are characterised by outstanding friction behaviour **which minimises the stick-slip effect**.

In addition, they exhibit **high thermal and chemical resistance**. PTFE guide rings are only suitable for low surface pressures.



Our **10E/GT** guide rings have **diamond streaked surface** to improve the self-lubricating effect and have **chamfers** for easy installation into the groove.

Operating conditions

✕ see page 8

Max. permissible radial load at 25°C: ≤ 15 N/mm²
 120°C: ≤ 8 N/mm²

Temperature -60°C to 150°C

Speed ≤ 15 m/s

Fluids ✕ see pages 22-45

Materials

✕ see pages 10-19

Guide ring PT55

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Supplied cut to length or by the meter ✕ see p. 59

Low static and dynamic friction

No stick-slip

Reduce vibrations, good damping effect

High chemical compatibility

Large temperature range from -60 to 150 °C

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)

p = maximum permissible loading for material (N/mm²)

D x L = diameter x width of the ring (mm²)

n = number of rings

s = safety factor

D	d	L	ISO 10766	Reference
130	125	9,7		10E/GT-25097-1300-55A
	125	15		10E/GT-25150-1300-55A
	125	25		10E/GT-25250-1300-55A
135	130	15		10E/GT-25150-1350-55A
140	132	9,7		10E/GT-40097-1400-55A
	135	9,7	•	10E/GT-25097-1400-55A
	135	15	•	10E/GT-25150-1400-55A
	135	20		10E/GT-25200-1400-55A
145	140	15		10E/GT-25150-1450-55A
	140	25		10E/GT-25250-1450-55A
150	145	15		10E/GT-25150-1500-55A
155	150	15		10E/GT-25150-1550-55A
160	155	15	•	10E/GT-25150-1600-55A

D	d	L	ISO 10766	Reference
165	160	15		10E/GT-25150-1650-55A
180	175	5,6		10E/GT-25056-1800-55A
	175	15	•	10E/GT-25150-1800-55A
185	180	15		10E/GT-25150-1850-55A
200	195	15	•	10E/GT-25150-2000-55A
	195	20		10E/GT-25200-2000-55A
210	205	15		10E/GT-25150-2100-55A
225	220	25		10E/GT-25250-2250-55A
230	225	15		10E/GT-25150-2300-55A
240	235	15		10E/GT-25150-2400-55A
245	240	15		10E/GT-25150-2450-55A
250	245	15	•	10E/GT-25150-2500-55A
255	250	15		10E/GT-25150-2550-55A

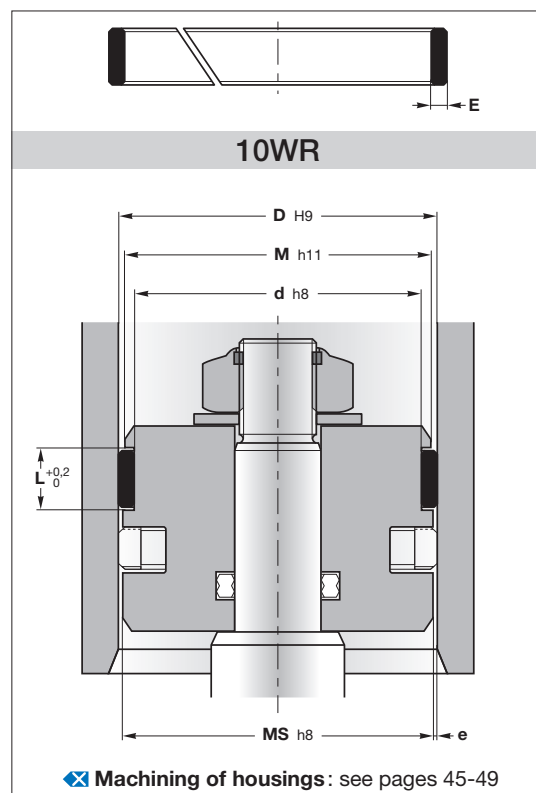
The cutting angle of 10E/GT is 30°.

E (mm)	M (mm)
1,5	D - 0,8
2	D - 1,2
2,5	D - 1,6
3	D - 2
4	D - 2,5



10WR

Acetal resin piston guide ring

**SEALTECH**
Hydraulic Seals Technology

The **10WR** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions ✕ see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring	POM + glass fibers
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Assembly ✕ see pages 54-59

Install in the groove

Advantages

- Suitable for rod and piston
- Simple groove design, easy fitting
- Low break-out and low coefficient of friction
- Excellent wear resistance
- Good load capacity
- Reduce vibrations
- Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
D x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

D (mm)	M (mm)
8 - 20	D - 0,5
21 - 100	D - 0,7
101 - 250	D - 0,9
251 - 300	D - 1,2

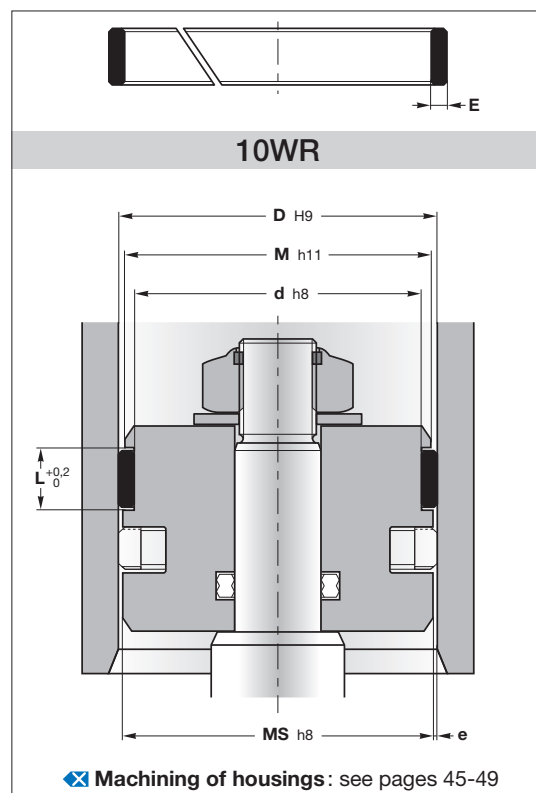
D	d	L	ISO 10766	Reference
25	20	5,6	•	10WR 20
	20	9,7		10WR 20/1
27	22	5,6		10WR 22
	22	9,7		10WR 22/1
30	25	5,6		10WR 25
	25	9,7		10WR 25/1
32	27	5,6	•	10WR 27
	27	9,7		10WR 27/1
33	28	5,6		10WR 28
	28	9,7		10WR 28/1
35	30	5,6		10WR 30
	30	9,7		10WR 30/1
37	32	5,6		10WR 32
	32	9,7		10WR 32/1
	32	15		10WR 32/2
38	33	5,6		10WR 33
40	35	5,6	•	10WR 35
	35	9,7		10WR 35/1
	35	19,7		10WR 35/2
41	36	5,6		10WR 36
	36	9,7		10WR 36/1
45	40	5,6		10WR 40
	40	9,7		10WR 40/1
	40	15		10WR 40/2
48	43	5,6		10WR 43
50	45	5,6	•	10WR 45
	45	9,7		10WR 45/1
	45	15		10WR 45/2
52	47	5,6		10WR 47
	47	9,7		10WR 47/1
55	50	5,6		10WR 50
	50	9,7		10WR 50/1
	50	15		10WR 50/2
	50	20		10WR 50/3
57	52	9,7		10WR 52/1

D	d	L	ISO 10766	Reference
60	55	5,6		10WR 55
	55	9,7		10WR 55/1
	55	15		10WR 55/2
61	56	5,6		10WR 56
	56	9,7		10WR 56/1
63	58	5,6	•	10WR 58
	58	9,7	•	10WR 58/1
	58	15		10WR 58/2
65	60	5,6		10WR 60
	60	9,7		10WR 60/1
	60	15		10WR 60/2
	60	20		10WR 60/3
68	63	5,6		10WR 63
	63	9,7		10WR 63/1
70	65	5,6	•	10WR 65
	65	9,7	•	10WR 65/1
	65	15		10WR 65/2
72	67	5,6		10WR 67
75	70	5,6		10WR 70
	70	9,7		10WR 70/1
	70	15		10WR 70/2
80	75	5,6	•	10WR 75
	75	9,7	•	10WR 75/1
	75	15	•	10WR 75/2
85	80	5,6		10WR 80
	80	9,7		10WR 80/1
	80	15		10WR 80/2
	80	25		10WR 80/4
90	85	5,6		10WR 85
	85	9,7		10WR 85/1
	85	15		10WR 85/2
95	90	5,6		10WR 90
	90	9,7		10WR 90/1
	90	15		10WR 90/2



10WR

Acetal resin piston guide ring

**SEALTECH**
Hydraulic Seals Technology

The **10WR** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions ✕ see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring	POM + glass fibers
------------	--------------------

Assembly ✕ see pages 54-59

Install in the groove

Advantages

- Suitable for rod and piston
- Simple groove design, easy fitting
- Low break-out and low coefficient of friction
- Excellent wear resistance
- Good load capacity
- Reduce vibrations
- Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

D (mm)	M (mm)
8 - 20	D - 0,5
21 - 100	D - 0,7
101 - 250	D - 0,9
251 - 300	D - 1,2

Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
D x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

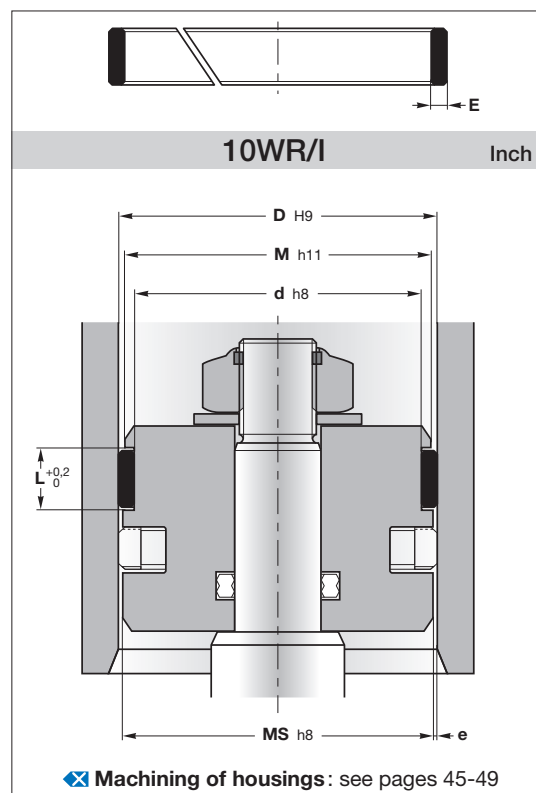
D	d	L	ISO 10766	Reference
100	95	5,6	•	10WR 95
	95	9,7	•	10WR 95/1
	95	15	•	10WR 95/2
	95	20		10WR 95/3
	95	25		10WR 95/4
105	100	5,6		10WR 100
	100	9,7		10WR 100/1
	100	15		10WR 100/2
110	100	20		10WR 100/3
	100	25		10WR 100/4
	105	20		10WR 105/3
	105	9,7		10WR 105/1
115	105	15		10WR 105/2
	105	25		10WR 105/4
	110	9,7		10WR 110/1
	110	15		10WR 110/2
120	110	20		10WR 110/3
	110	25		10WR 110/4
	115	9,7		10WR 115/1
	115	15		10WR 115/2
125	115	20		10WR 115/3
	115	25		10WR 115/4
	120	5,6	•	10WR 120
	120	9,7	•	10WR 120/1
130	120	15	•	10WR 120/2
	120	20		10WR 120/3
	120	25		10WR 120/4
135	125	15		10WR 125/2
	125	20		10WR 125/3
	125	25		10WR 125/4
140	130	15		10WR 130/2
	130	20		10WR 130/3
	130	25		10WR 130/4
145	135	15	•	10WR 135/2
	135	20		10WR 135/3
	135	25		10WR 135/4

D	d	L	ISO 10766	Reference
145	140	15		10WR 140/2
	140	20		10WR 140/3
	140	25		10WR 140/4
150	145	15		10WR 145/2
	145	20		10WR 145/3
	145	25		10WR 145/4
160	155	15	•	10WR 155/2
170	165	15		10WR 165/2/
175	170	25		10WR 170/4
180	175	9,7		10WR 175/1
	175	15		10WR 175/2
	175	25		10WR 175/4
200	195	15	•	10WR 195/2
205	200	15		10WR 200/2
	200	25		10WR 200/4
215	210	15		10WR 210/2
220	215	20		10WR 215/3
230	225	15		10WR 225/2
	225	25		10WR 225/4
240	235	15		10WR 235/2
250	245	15		10WR 245/2
	245	25		10WR 245/4
255	250	15		10WR 250/2
265	260	15		10WR 260/2
280	275	15		10WR 275/2
287	282	15		10WR 282/2
330	325	15		10WR 325/2



10WR/I

Acetal resin piston guide ring Inch dimensions


SEALTECH
Hydraulic Seals Technology


The **10WR/I** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	see pages 22-45

Materials see pages 10-19

Guide ring	POM + glass fibers
------------	--------------------

Assembly see pages 54-59

Install in the groove

Advantages

- Suitable for rod and piston
- Simple groove design, easy fitting
- Low break-out and low coefficient of friction
- Excellent wear resistance
- Good load capacity
- Reduce vibrations

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

see pages 50-53

D (mm)	M (mm)
8 - 20	D - 0,5
21 - 100	D - 0,7
101 - 250	D - 0,9
251 - 300	D - 1,2

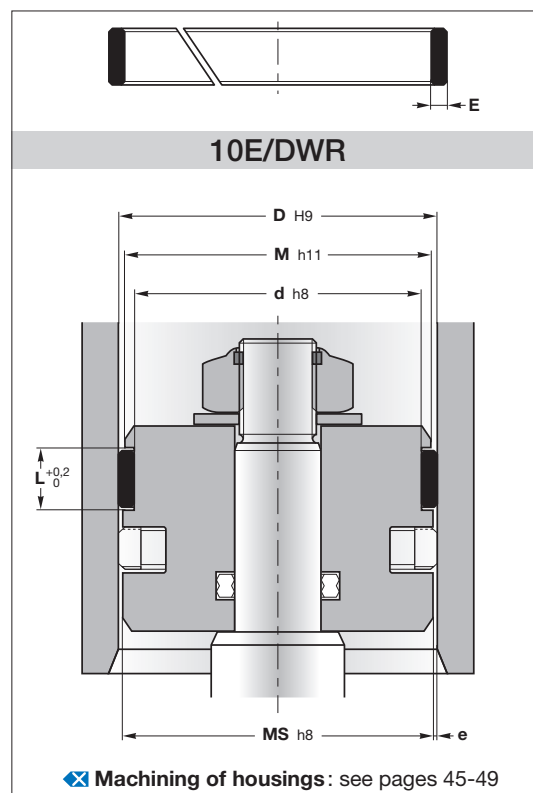
Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
D x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

D	d	L	Reference
38,1	31,75	12,83	10WR/I 12501500
44,45	38,1	9,65	10WR/I 15001750
	38,1	12,83	10WR/I 15001750/1
	38,1	19,18	10WR/I 15001750/2
47,62	41,27	12,83	10WR/I 16251875/1
	41,27	19,18	10WR/I 16251875
50,8	44,45	6,48	10WR/I 17502000/2
	44,45	12,83	10WR/I 17502000
	44,45	19,18	10WR/I 17502000/1
53,97	47,62	19,18	10WR/I 18752125
57,15	50,8	12,83	10WR/I 20002250/1
	50,8	19,18	10WR/I 20002250
63,5	57,15	12,83	10WR/I 22502500
	57,15	19,18	10WR/I 22502500/1
65,07	60,32	38,23	10WR/I 23752562
66,67	60,32	12,83	10WR/I 23752625/1
	60,32	19,18	10WR/I 23752625
	63,5	31,88	10WR/I 25002625
69,85	63,5	9,65	10WR/I 25002750/2
	63,5	12,83	10WR/I 25002750
	63,5	19,18	10WR/I 25002750/1
	63,5	25,53	10WR/I 25002750/3
76,2	69,85	9,65	10WR/I 27503000/1
	69,85	12,83	10WR/I 27503000
	69,85	19,18	10WR/I 27503000/2

D	d	L	Reference
82,55	76,2	9,65	10WR/I 30003250/9
	76,2	12,83	10WR/I 30003250/2
	76,2	19,18	10WR/I 30003250
	76,2	38,23	10WR/I 30003250/1
88,9	82,55	19,18	10WR/I 32503500
	82,55	25,53	10WR/I 32503500/1
95,25	88,9	9,65	10WR/I 35003750
	88,9	19,18	10WR/I 35003750/1
101,6	95,25	19,18	10WR/I 37504000
107,95	101,6	12,83	10WR/I 40004250
114,3	107,95	9,65	10WR/I 42504500
	107,95	19,18	10WR/I 42504500/1
120,65	114,3	19,18	10WR/I 45004750
	114,3	25,53	10WR/I 45004750/1
127	120,65	9,65	10WR/I 47505000/1
	120,65	12,83	10WR/I 47505000
	120,65	19,18	10WR/I 47505000/3
	120,65	25,53	10WR/I 47505000/2
152,4	146,05	12,83	10WR/I 57506000/1
	146,05	38,23	10WR/I 57506000
165,1	158,75	12,83	10WR/I 62506500
177,8	171,45	12,83	10WR/I 67507000
	171,45	25,53	10WR/I 67507000/1
266,7	260,35	12,83	10WR/I 1025010500



The **10E/DWR** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	 see pages 22-45

Materials see pages 10-19

Guide ring	POM + glass fibers
------------	--------------------

Assembly see pages 54-59

Install in the groove

Advantages

- Simple groove design, easy fitting
- Low break-out, low friction
- Excellent wear resistance
- High mechanical strength
- Good load capacity
- Reduce vibrations
- Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal. The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

 see pages 50-53

D (mm)	M (mm)
8 - 20	D - 0,5
21 - 100	D - 0,7
101 - 250	D - 0,9
251 - 300	D - 1,2

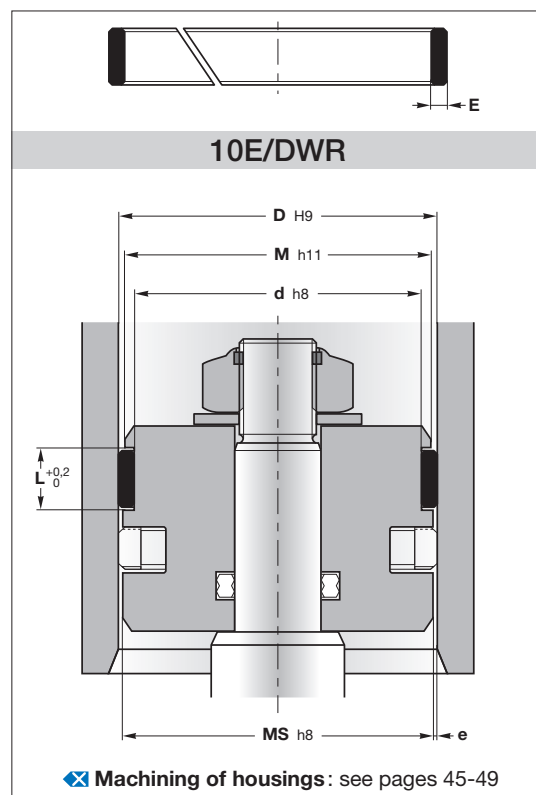
Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
D x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

D	d	L	Reference
16	12	9,6	10E/DWR 16/2-9,6
18	14	9,6	10E/DWR 18/2-9,6
20	16	9,6	10E/DWR 20/2-9,6
22	18	9,6	10E/DWR 22/2-9,6
25	21	9,6	10E/DWR 25/2-9,6
28	24	9,6	10E/DWR 28/2-9,6
30	26	9,6	10E/DWR 30/2-9,6
32	28	9,6	10E/DWR 32/2-9,6
34	30	9,6	10E/DWR 34/2-9,6
35	29	9,6	10E/DWR 35/3-9,6
	31	9,6	10E/DWR 35/2-9,6
36	32	9,6	10E/DWR 36/2-9,6
40	34	9,6	10E/DWR 40/3-9,6
	36	9,6	10E/DWR 40/2-9,6
45	39	9,6	10E/DWR 45/3-9,6
	41	9,6	10E/DWR 45/2-9,6
48	42	9,6	10E/DWR 48/3-9,6
49	43	9,6	10E/DWR 49/3-9,6
50	44	9,6	10E/DWR 50/3-9,6
	44	12,8	10E/DWR 50/3-12,8
	46	10,2	10E/DWR 50/2-10,2
55	49	9,6	10E/DWR 55/3-9,6
	49	12,8	10E/DWR 55/3-12,8
56	50	12,8	10E/DWR 56/3-12,8
60	54	12,8	10E/DWR 60/3-12,8
	56	10,2	10E/DWR 60/2-10,2
63	57	12,8	10E/DWR 63/3-12,8
	59	10	10E/DWR 63/2-10,0
65	59	12,8	10E/DWR 65/3-12,8
70	64	12,8	10E/DWR 70/3-12,8
	66	10,2	10E/DWR 70/2-10,2

D	d	L	Reference
74	68	12,8	10E/DWR 74/3-12,8
75	69	12,8	10E/DWR 75/3-12,8
80	74	12,8	10E/DWR 80/3-12,8
	76	10	10E/DWR 80/2-10,0
85	79	12,8	10E/DWR 85/3-12,8
90	84	10	10E/DWR 90/3-10
	84	12,8	10E/DWR 90/3-12,8
94	88	12,8	10E/DWR 94/3-12,8
95	89	12,8	10E/DWR 95/3-12,8
100	94	12,8	10E/DWR 100/3-12,8
	96	10	10E/DWR 100/2-10
	96	10,8	10E/DWR 100/2-10,0
105	99	12,8	10E/DWR 105/3-12,8
110	104	12,8	10E/DWR 110/3-12,8
115	109	12,8	10E/DWR 115/3-12,8
	109	19,2	10E/DWR 115/3-19,2
120	114	12,8	10E/DWR 120/3-12,8
125	119	12,8	10E/DWR 125/3-12,8
	119	19,2	10E/DWR 125/3-19,2
130	124	12,8	10E/DWR 130/3-12,8
	124	19,2	10E/DWR 130/3-19,2
135	129	12,8	10E/DWR 135/3-12,8
	129	19,2	10E/DWR 135/3-19,2
140	134	12,8	10E/DWR 140/3-12,8
	134	19,2	10E/DWR 140/3-19,2
145	139	12,8	10E/DWR 145/3-12,8
	139	19,2	10E/DWR 145/3-19,2
150	144	12,8	10E/DWR 150/3-12,8
	144	19,2	10E/DWR 150/3-19,2
155	149	19,2	10E/DWR 155/3-19,2
160	154	19,2	10E/DWR 160/3-19,2
165	159	19,2	10E/DWR 165/3-19,2



The **10E/DWR** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions ✕ see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring	POM + glass fibers
------------	--------------------

Assembly ✕ see pages 54-59

Install in the groove

Advantages

- Simple groove design, easy fitting
- Low break-out, low friction
- Excellent wear resistance
- High mechanical strength
- Good load capacity
- Reduce vibrations
- Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal. The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

D (mm)	M (mm)
8 - 20	D - 0,5
21 - 100	D - 0,7
101 - 250	D - 0,9
251 - 300	D - 1,2

Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
D x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

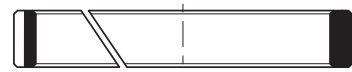
D	d	L	Reference
170	164	19,2	10E/DWR 170/3-19,2
180	174	19,2	10E/DWR 180/3-19,2
185	179	19,2	10E/DWR 185/3-19,2
190	184	19,2	10E/DWR 190/3-19,2
200	194	19,2	10E/DWR 200/3-19,2
205	199	19,2	10E/DWR 205/3-19,2
210	204	19,2	10E/DWR 210/3-19,2
215	209	19,2	10E/DWR 215/3-19,2
220	214	19,2	10E/DWR 220/3-19,2
225	219	19,2	10E/DWR 225/3-19,2

D	d	L	Reference
230	224	12	10E/DWR 230/3-12
	224	19,2	10E/DWR 230/3-19,2
240	234	19,2	10E/DWR 240/3-19,2
245	239	19,2	10E/DWR 245/3-19,2
250	244	19,2	10E/DWR 250/3-19,2
260	254	19,2	10E/DWR 260/3-19,2
265	259	19,2	10E/DWR 265/3-19,2
270	264	19,2	10E/DWR 270/3-19,2
280	274	19,2	10E/DWR 280/3-19,2
290	284	19,2	10E/DWR 290/3-19,2
295	289	19,2	10E/DWR 295/3-19,2
300	294	19,2	10E/DWR 300/3-19,2

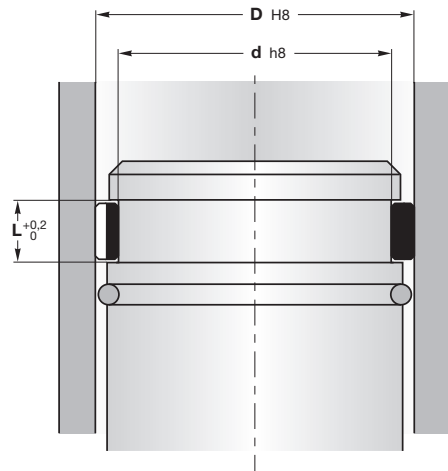
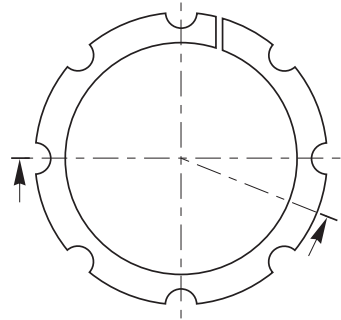


10WP

Acetal resin guide ring for plunger cylinder



10WP



✕ Machining of housings: see pages 45-49

The **10WP** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod of a plunger cylinder and assure, due to the channels on the outside diameter, a continuous overflow of the fluid to the both sides of the ring.

The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions ✕ see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring	POM + glass fibers
------------	--------------------

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple groove design, easy fitting
Good load capacity
Low break-out, low friction
Excellent wear resistance
High mechanical strength
For plunger cylinder

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

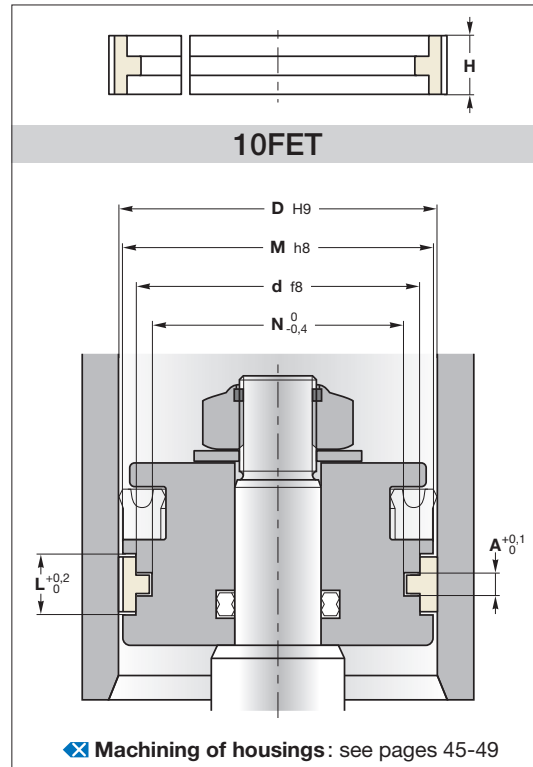
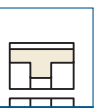
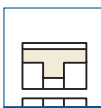
D	d	L	Reference
25	16	13	10 WP 25
30	20	13	10 WP 30
35	25	13	10 WP 35
40	30	13	10 WP 40
45	35	13	10 WP 45
49	41	8	10 WP 49
50	40	16	10 WP 50
54,5	45	20	10 WP 54.5
55	45	16	10 WP 55
60	45 50	16 16	10 WP 60 10 WP 60/1
65	55 57	16 8	10 WP 65 10 WP 65/1
75	65 65	16 13	10 WP 75 10 WP 75/1
80	71	11	10 WP 80
85	75	16	10 WP 85
95	86	11	10 WP 95

Pay attention:
can not be used as a mechanical stop

Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
D x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor



The **10FET** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. It has a T-shaped cross-section and is split.

The compound used for these guides is a glass fibre reinforced polyamid characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions see page 8

Max. permissible radial load	at 25°C: $\leq 40 \text{ N/mm}^2$ 60°C: $\leq 25 \text{ N/mm}^2$
Temperature	-40°C to 110°C
Speed	$\leq 0,8 \text{ m/s}$
Fluids	see pages 22-45

Materials see pages 10-19

Guide ring	PA + glass fibers
------------	-------------------

Assembly see pages 54-59

Install in the groove

Advantages

- Simple assembly
- Low break-out, low friction
- Excellent wear resistance
- High mechanical strength
- Good load capacity
- Reduce vibrations

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = [p \times D \times (L-A) \times n] / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
D x (L-A)	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

D	H	M	N	d	L	A	Reference
40	9,8	39,5	32,5	36,8	10,5	3,6	10FET 40
50	9,8	49,5	42,5	46,8	10,5	3,6	10FET 50
60	9,8	59,5	52,5	56,9	10,5	3,6	10FET 60
63	14,3	62,4	54	59,5	15	5	10FET 63
70	14,3	69,4	61	66,5	15	5	10FET 70
80	14,3	79,4	71	76,5	15	5	10FET 80
90	14,3	89,4	81	86,5	15	5	10FET 90
100	14,3	99,3	91	96,5	15	5	10FET 100
110	14,3	109,3	101	106,5	15	5	10FET 110
125	14,3	124,3	116	121,5	15	5	10FET 125
140	14,3	139,3	131	136,5	15	5	10FET 140
160	19,8	159,2	144	152,9	20,3	8	10FET 160
180	19,8	179,2	164	172,9	20,3	8	10FET 180
200	19,8	199,2	184	192,9	20,3	8	10FET 200
250	24,5	249,1	233	242,5	25	8	10FET 250



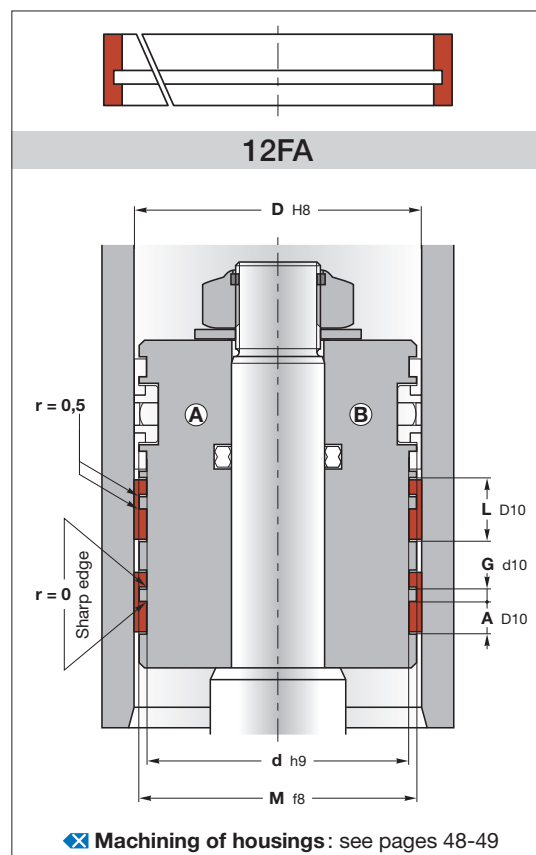
12FA

U-shaped
piston guide ring

HUNGER
Dichtungen



SEALTECH
Hydraulic Seals Technology



Hunger bearing ring type **12FA** is mainly used on pistons. They guide the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

It has a U-shaped cross-section and is split. The groove design secures the guide ring against axial movement. The compound used for these guides is an extremely abrasion-resistant and low friction POM-PTFE Bronze material. They can be used as single rings or multiple rings arranged adjacent to each other.

Operating conditions see page 8

Max. permissible radial load at 25°C: ≤ 78 N/mm²
60°C: ≤ 40 N/mm²
Temperature -55°C to 120°C
Speed ≤ 3 m/s
Fluids  see pages 22-45

Materials see pages 10-19

Guide ring POM-PTFE bronze compound

Assembly see pages 54-59

Install in the groove

Advantages

Simple assembly
Low break-out
Low coefficient of friction (between 0,2 and 0,3)
Excellent wear resistance
High mechanical strength
Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = [p \times D \times (L-G) \times n] / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x (L-G) = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

D	d	L	M	G	A	HUNGER reference	Reference
40	32	12	36	3,5	4,7	012102	12FA 40
45	37	12	41	3	4,7	012106	12FA 45
50	42	12	46	3	6,2	012108	12FA 50
56	48	12	52	3	6,2	012110	12FA 56
63	55	12	59	3	6,2	012112	12FA 63
65	57	12	61	3	6,2	012113	12FA 65
70	62	12	66	3	6,2	012114	12FA 70
75	67	12	71	3	6,2	012115	12FA 75
80	72	10,6	76	3	3,5	019820	12FA 80/1
80	72	14	76	3	7,2	012117	12FA 80
85	77	14	81	3	7,2	012118	12FA 85
90	82	14	86	3	7,2	012120	12FA 90
95	87	14	91	3	7,2	012121	12FA 95
100	92	10,6	96	3	3,8	019821	12FA 100/1
100	92	14	96	3	7,2	012122	12FA 100
105	97	14	101	3	7,2	012123	12FA 105
110	102	14	106	3	7,2	012124	12FA 110
115	107	14	111	3	7,2	012125	12FA 115
120	112	14	116	3	7,2	012126	12FA 120
125	115	12,6	121	4	4,3	021927	12FA 125/1
125	115	17,5	121	4	9,2	012127	12FA 125
130	120	17,5	126	4	9,2	012128	12FA 130
135	125	17,5	131	4	9,2	012129	12FA 135
140	130	17,5	136	4	9,2	012130	12FA 140
150	140	17,5	146	4	9,2	012132	12FA 150
155	145	17,5	151	4	9,2	012133	12FA 155
160	150	17,5	156	4	9,2	012134	12FA 160
170	160	20	166	6	9,2	012136	12FA 170
180	170	20	176	6	9,2	012137	12FA 180
180	170	24	175	7	9,2	0198828	12FA 180/1
190	180	20	186	4,5	11,7	012139	12FA 190
200	190	20	196	4,5	11,7	012140	12FA 200
210	200	25	206	8	11,7	012141	12FA 210
220	210	25	216	8	11,7	012142	12FA 220
225	215	25	221	8	11,7	012143	12FA 225
235	225	33	231	15	11,7	012144	12FA 235
240	230	33	236	15	11,7	012145	12FA 240
250	240	33	246	15	11,7	012147	12FA 250
265	255	33	261	15	11,7	012149	12FA 265

Further dimensions on request

For prices and availability: www.sealtech-business.be

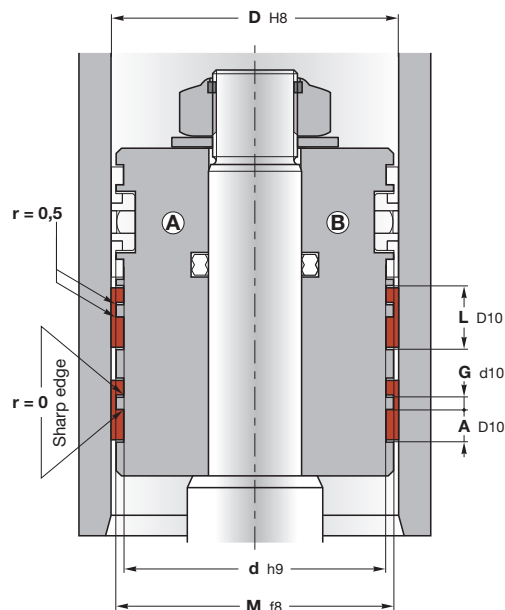


**U-shaped
piston guide ring**

HUNGER
Dichtungen



SEALTECH
Hydraulic Seals Technology



 **Machining of housings:** see pages 48-49

Hunger bearing ring type **12FA** is mainly used on pistons. They guide the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

It has a U-shaped cross-section and is split. The groove design secures the guide ring against axial movement. The compound used for these guides is an extremely abrasion-resistant and low friction POM-PTFE Bronze material. They can be used as single rings or multiple rings arranged adjacent to each other.

Operating conditions

 see page 8

Max. permissible radial load

at 25°C:	$\leq 78 \text{ N/mm}^2$
60°C:	$\leq 40 \text{ N/mm}^2$

Temperature -55°C to 120°C

Speed ≤ 3 m/s

Fluids **see pages 22-45**

Materials

 see pages 10-19

Guide ring POM-PTFE bronze compound

Assembly

 see pages 54-59

Install in the groove

Advantages

Simple assembly

Low break-out

Low coefficient of friction (between 0,2 and 0,3)

Excellent wear resistance

High mechanical strength

Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = [p \times D \times (L-G) \times n] / s$$

F = maximum radial force (N)

p = maximum permissible loading for material (N/mm²)

D x (L-G)= diameter x width of the ring (mm²)

n = number of rings

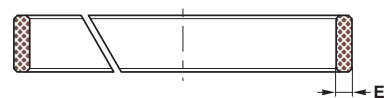
s = safety factor

D	d	L	M	G	A	HUNGER reference	Reference
280	270	33	276	15	11,7	012152	12FA 280
290	280	33	286	15	11,7	012153	12FA 290
300	290	33	296	15	11,7	012154	12FA 300
310	298	35	304	8,5	13,25	012155	12FA 310
320	308	35	314	8,5	13,25	012156	12FA 320
350	338	35	344	8,5	13,25	012158	12FA 350
360	348	35	354	8,5	13,25	012159	12FA 360
380	368	35	374	8,5	13,25	012160	12FA 380
400	388	35	394	8,5	13,25	012162	12FA 400
420	408	35	414	8,5	13,25	012164	12FA 420
425	413	35	419	8,5	13,25	012165	12FA 425
450	438	35	444	8,5	13,25	012168	12FA 450
460	448	35	454	8,5	13,25	038215	12FA 460
480	468	35	474	8,5	13,25	012170	12FA 480
500	488	35	494	8,5	13,25	012171	12FA 500
560	548	35	554	8,5	13,25	012174	12FA 560
580	568	35	570	8,5	13,25	023428	12FA 580
600	588	35	594	8,5	13,25	012176	12FA 600
630	618	35	624	8,5	13,25	012177	12FA 630
650	638	35	644	8,5	13,25	012179	12FA 650
700	688	35	694	8,5	13,25	012181	12FA 700
750	738	35	744	8,5	13,25	012182	12FA 750
780	768	35	774	8,5	13,25	012183	12FA 780
800	788	35	794	8,5	13,25	012184	12FA 800
850	838	35	844	8,5	13,25	012185	12FA 850
900	888	35	894	8,5	13,25	012186	12FA 900
950	938	35	944	8,5	13,25	012187	12FA 950

Further dimensions on request

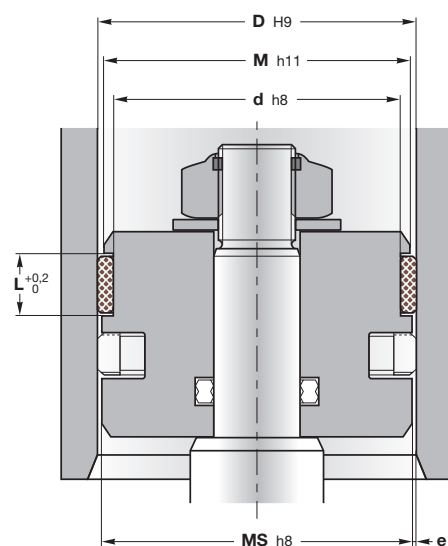
For prices and availability: **www.sealtech-business.be**

6a Piston GUIDE RINGS

**10E/GTP**

Example of item code

10E/GTP 85 / 2,5 - 9,7
Sealtech code E (mm) L (mm)
Diameter D (mm)



✕ Machining of housings : see pages 45-49

The cutting angle of 10E/GTP is 30°, not to confuse with the 10E/GTP1 which is 45°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

E (mm)	M (mm)
E ≤ 2	D - 1
2 < E < 4	D - 1,8
E ≥ 4	D - 3

10E/GTP guide rings are made of cotton fabric reinforced phenolic resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

Guide rings are **easier to install** than guide strips and are therefore recommended by Sealtech.

Operating conditions ✕ see page 8

Compressive strength DIN 53454 290 N/mm²
Max. permissible radial load at 25°C : ≤ 90 N/mm²
60°C : ≤ 45 N/mm²
Temperature -30°C to 120°C
Speed ≤ 1 m/s
Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring cotton fabric reinforced phenolic resin
Colour light brown

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple groove design and assembly
High load capacity
Wide range of sizes
High wear capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

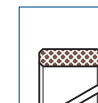
Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

D	d	L	ISO 10766	Reference
24	20	6,3		10E/GTP 24/2-6,3
25	20	4,2		10E/GTP 25/2,5- 4,2
	20	5,6	•	10E/GTP 25/2,5- 5,6
	20	6,3		10E/GTP 25/2,5- 6,3
	20	9,7		10E/GTP 25/2,5- 9,7
	21	4,2		10E/GTP 25/2-4,2
26	22	4,2		10E/GTP 26/2-4,2
27	22	5,6		10E/GTP 27/2,5- 5,6
	22	6,3		10E/GTP 27/2,5- 6,3
28	24	9,7		10E/GTP 28/2-9,7
29	24	6,3		10E/GTP 29/2,5- 6,3
30	25	5,6		10E/GTP 30/2,5- 5,6
	25	6,3		10E/GTP 30/2,5- 6,3
	25	9,7		10E/GTP 30/2,5- 9,7
32	27	4,2		10E/GTP 32/2,5- 4,2
	27	5,6	•	10E/GTP 32/2,5- 5,6
	27	6,3		10E/GTP 32/2,5- 6,3
	27	9,7		10E/GTP 32/2,5- 9,7
	28	4,2		10E/GTP 32/2-4,2
	28	6,3		10E/GTP 32/2-6,3
33	28	5,6		10E/GTP 33/2,5- 5,6
	28	6,3		10E/GTP 33/2,5- 6,3
	28	9,7		10E/GTP 33/2,5- 9,7
	28	15		10E/GTP 33/2,5-15
35	30	5,6		10E/GTP 35/2,5- 5,6
	30	6,3		10E/GTP 35/2,5- 6,3
	30	9,7		10E/GTP 35/2,5- 9,7
	30	15		10E/GTP 35/2,5-15
	30	20		10E/GTP 35/2,5-20
36	32	6,3		10E/GTP 36/2-6,3
37	32	5,6		10E/GTP 37/2,5- 5,6
	32	6,3		10E/GTP 37/2,5- 6,3
	32	9,7		10E/GTP 37/2,5- 9,7
38	33	9,7		10E/GTP 38/2,5- 9,7
39	35	6,3		10E/GTP 39/2-6,3
40	35	5,6	•	10E/GTP 40/2,5- 5,6
	35	6,3		10E/GTP 40/2,5- 6,3
	35	9,7		10E/GTP 40/2,5- 9,7

D	d	L	ISO 10766	Reference
40	35	15		10E/GTP 40/2,5-15
	35	20		10E/GTP 40/2,5-20
	36	6,3		10E/GTP 40/2-6,3
	36	13		10E/GTP 40/2-13
41	36	5,6		10E/GTP 41/2,5- 5,6
	36	6,3		10E/GTP 41/2,5- 6,3
	36	9,7		10E/GTP 41/2,5- 9,7
	36	15		10E/GTP 41/2,5-15
42	37	9,7		10E/GTP 42/2,5- 9,7
43	38	5,6		10E/GTP 43/2,5- 5,6
	38	9,7		10E/GTP 43/2,5- 9,7
44	40	6,3		10E/GTP 44/2-6,3
	40	10		10E/GTP 44/2-10
45	40	5,6		10E/GTP 45/2,5- 5,6
	40	6,3		10E/GTP 45/2,5- 6,3
	40	9,7		10E/GTP 45/2,5- 9,7
	40	10		10E/GTP 45/2,5-10
	40	15		10E/GTP 45/2,5-15
	40	20		10E/GTP 45/2,5-20
	41	8,1		10E/GTP 45/2-8,1
	41	15		10E/GTP 45/2-15
	41	20		10E/GTP 45/2-20
46	40	9,7		10E/GTP 46/3-9,7
47	42	5,6		10E/GTP 47/2,5- 5,6
49	45	25		10E/GTP 49/2-25
50	45	5,6	•	10E/GTP 50/2,5- 5,6
	45	6,3		10E/GTP 50/2,5- 6,3
	45	9,7		10E/GTP 50/2,5- 9,7
	45	12,7		10E/GTP 50/2,5-12,8
	45	15		10E/GTP 50/2,5-15
	45	20		10E/GTP 50/2,5-20
	45	25		10E/GTP 50/2,5-25
	46	6,3		10E/GTP 50/2-6,3
	46	10		10E/GTP 50/2- 10
	46	15		10E/GTP 50/2- 15
50,8	44,45	12,7		10E/GTP 50,8/3,1-12,7
53	50	8		10E/GTP 53/1,5- 8,0

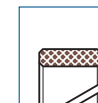


D	d	L	ISO 10766	Reference
53,9	49	9,7		10E/GTP 53,9/2,5- 9,7
54	50	6,3		10E/GTP 54/2-6,3
55	49	16		10E/GTP 55/3-16
	50	5,6		10E/GTP 55/2,5- 5,6
	50	6,3		10E/GTP 55/2,5- 6,3
	50	9,7		10E/GTP 55/2,5- 9,7
	50	15		10E/GTP 55/2,5-15
	50	20		10E/GTP 55/2,5-20
	50	30		10E/GTP 55/2,5-30
56	50	9,7		10E/GTP 56/3-9,7
60	55	5,6		10E/GTP 60/2,5- 5,6
	55	6,3		10E/GTP 60/2,5- 6,3
	55	9,7		10E/GTP 60/2,5- 9,7
	55	15		10E/GTP 60/2,5-15
	55	20		10E/GTP 60/2,5-20
	55	25		10E/GTP 60/2,5-25
	55,4	6,35		10E/GTP 60/2,3- 6,3
61	56	5,6		10E/GTP 61/2,5- 5,6
	56	9,7		10E/GTP 61/2,5- 9,7
	56	15		10E/GTP 61/2,5-15
62	57	15		10E/GTP 62/2,5-15
63	58	5,6	•	10E/GTP 63/2,5- 5,6
	58	6,3		10E/GTP 63/2,5- 6,3
	58	9,7	•	10E/GTP 63/2,5- 9,7
	58	12,7		10E/GTP 63/2,5-12,8
	58	15		10E/GTP 63/2,5-15
	58	20		10E/GTP 63/2,5-20
	58	25		10E/GTP 63/2,5-25
	59	10		10E/GTP 63/2- 10
63,5	57,15	12,7		10E/GTP 63,5/3,1-12,7
	58,5	9,7		10E/GTP 63,5/2,5- 9,7
65	60	5,6		10E/GTP 65/2,5- 5,6
	60	6,3		10E/GTP 65/2,5- 6,3
	60	9,7		10E/GTP 65/2,5- 9,7
	60	13		10E/GTP 65/2,5-13
	60	15		10E/GTP 65/2,5-15
	60	16		10E/GTP 65/2,5-16

D	d	L	ISO 10766	Reference
65	60	20		10E/GTP 65/2,5-20
	60	25		10E/GTP 65/2,5-25
	60	31,8		10E/GTP 65/2,5-31,8
	60	35		10E/GTP 65/2,5-35
67	63	6,3		10E/GTP 67/2-6,3
68	63	6,3		10E/GTP 68/2,5- 6,3
	63	9,7		10E/GTP 68/2,5- 9,7
	63	15		10E/GTP 68/2,5-15
	63	25		10E/GTP 68/2,5-25
69	65	35		10E/GTP 69/2-35
69,85	63,5	12,7		10E/GTP 69,8/3,1-12,7
70	64	12,7		10E/GTP 70/3-12,7
	64	16		10E/GTP 70/3-16
	65	5,6		10E/GTP 70/2,5- 5,6
	65	6,3		10E/GTP 70/2,5- 6,3
	65	9,7		10E/GTP 70/2,5- 9,7
	65	15		10E/GTP 70/2,5-15
	65	16		10E/GTP 70/2,5-16
	65	20		10E/GTP 70/2,5-20
	65	25		10E/GTP 70/2,5-25
	65	30		10E/GTP 70/2,5-30
	66	10,2		10E/GTP 70/2-10,2
	66	25,4		10E/GTP 70/2-25,4
71	65	12,7		10E/GTP 71/3-12,7
	66	10,2		10E/GTP 71/2,5-10,2
75	69	20		10E/GTP 75/3-20
	70	5,6		10E/GTP 75/2,5- 5,6
	70	9,7		10E/GTP 75/2,5- 9,7
	70	15		10E/GTP 75/2,5-15
	70	16		10E/GTP 75/2,5-16
	70	20		10E/GTP 75/2,5-20
	70	25		10E/GTP 75/2,5-25
76	70	12,7		10E/GTP 76/3-12,7
79	75	8,1		10E/GTP 79/2- 8,1
80	74	12,7		10E/GTP 80/3-12,7
	74	20		10E/GTP 80/3-20
	74	25		10E/GTP 80/3-25

D	d	L	ISO 10766	Reference
80	75	5,6	•	10E/GTP 80/2,5- 5,6
	75	6,3		10E/GTP 80/2,5- 6,3
	75	8,1		10E/GTP 80/2,5- 8,1
	75	9,7	•	10E/GTP 80/2,5- 9,7
	75	13		10E/GTP 80/2,5-13
	75	15		10E/GTP 80/2,5-15
	75	20		10E/GTP 80/2,5-20
	75	25	•	10E/GTP 80/2,5-25
	75	30		10E/GTP 80/2,5-30
81,2	76,2	13		10E/GTP 81,2/2,5-13
84	80	8,1		10E/GTP 84/2- 8,1
85	79	10		10E/GTP 85/3-10
	80	5,6		10E/GTP 85/2,5- 5,6
	80	9,7		10E/GTP 85/2,5- 9,7
	80	15		10E/GTP 85/2,5-15
	80	16		10E/GTP 85/2,5-16
	80	20		10E/GTP 85/2,5-20
	80	25		10E/GTP 85/2,5-25
	80	50		10E/GTP 85/2,5-50
86	80	12,7		10E/GTP 86/3-12,7
	80	19,2		10E/GTP 86/3-19,2
90	84	12,7		10E/GTP 90/3-12,7
	84	25		10E/GTP 90/3-25
	85	5,6		10E/GTP 90/2,5- 5,6
	85	9,7		10E/GTP 90/2,5- 9,7
	85	15		10E/GTP 90/2,5-15
	85	20		10E/GTP 90/2,5-20
	85	25		10E/GTP 90/2,5-25
	86	15		10E/GTP 90/2-15
91	85	25		10E/GTP 91/3-25
93	88	9,7		10E/GTP 93/2,5- 9,7
95	90	9,7		10E/GTP 95/2,5- 9,7
	90	15		10E/GTP 95/2,5-15
	90	20		10E/GTP 95/2,5-20
	90	25		10E/GTP 95/2,5-25
95,25	88,9	12,7		10E/GTP 95,2/3,1-12,7
96	90	12,7		10E/GTP 96/3-12,7
	90	19,2		10E/GTP 96/3-19,2

D	d	L	ISO 10766	Reference
99	94	9,7		10E/GTP 99/2,5- 9,7
100	90	15		10E/GTP 100/5-15
	90	16,2		10E/GTP 100/5-16,2
	94	12,7		10E/GTP 100/3-12,7
	94	25		10E/GTP 100/3-25
	95	5,6	•	10E/GTP 100/2,5- 5,6
	95	9,7	•	10E/GTP 100/2,5- 9,7
	95	12,8		10E/GTP 100/2,5-12,8
	95	15	•	10E/GTP 100/2,5-15
	95	20		10E/GTP 100/2,5-20
	95	25	•	10E/GTP 100/2,5-25
	96	6,3		10E/GTP 100/2-6,3
	96	15		10E/GTP 100/2-15
	96	20		10E/GTP 100/2-20
105	100	9,7		10E/GTP 105/2,5- 9,7
	100	15		10E/GTP 105/2,5-15
	100	20		10E/GTP 105/2,5-20
	100	25		10E/GTP 105/2,5-25
	100	30		10E/GTP 105/2,5-30
106	100	9,7		10E/GTP 106/3-9,7
	100	12,7		10E/GTP 106/3-12,7
110	100	15		10E/GTP 110/5-15
	100	16,2		10E/GTP 110/5-16,2
	104	12,7		10E/GTP 110/3-12,7
	104	25		10E/GTP 110/3-25
	105	9,7		10E/GTP 110/2,5- 9,7
	105	15		10E/GTP 110/2,5-15
	105	20		10E/GTP 110/2,5-20
	105	25		10E/GTP 110/2,5-25
115	110	9,7		10E/GTP 115/2,5- 9,7
	110	15		10E/GTP 115/2,5-15
	110	20		10E/GTP 115/2,5-20
	110	25		10E/GTP 115/2,5-25
116	110	9,7		10E/GTP 116/3-9,7
	110	25,4		10E/GTP 116/3-25,4
120	110	15		10E/GTP 120/5-15
	110	16,2		10E/GTP 120/5-16,2
	114	30		10E/GTP 120/3-30

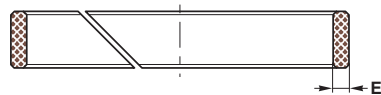


D	d	L	ISO 10766	Reference
120	115	9,7		10E/GTP 120/2,5- 9,7
	115	15		10E/GTP 120/2,5-15
	115	16		10E/GTP 120/2,5-16
	115	20		10E/GTP 120/2,5-20
	115	25		10E/GTP 120/2,5-25
	115	25		10E/GTP 120/2,5-25
125	119	20		10E/GTP 125/3-20
	120	9,7	•	10E/GTP 125/2,5- 9,7
	120	10		10E/GTP 125/2,5-10
	120	15	•	10E/GTP 125/2,5-15
	120	16		10E/GTP 125/2,5-16
	120	20		10E/GTP 125/2,5-20
	120	25	•	10E/GTP 125/2,5-25
	120	25		10E/GTP 125/2,5-25
	120	25		10E/GTP 125/2,5-25
	120	25		10E/GTP 125/2,5-25
126	120	12,7		10E/GTP 126/3-12,7
130	120	15		10E/GTP 130/5-15
	120	16,2		10E/GTP 130/5-16,2
	123	30		10E/GTP 130/3,5-30
	125	9,7		10E/GTP 130/2,5- 9,7
	125	15		10E/GTP 130/2,5-15
	125	16		10E/GTP 130/2,5-16
	125	20		10E/GTP 130/2,5-20
	125	25		10E/GTP 130/2,5-25
	125	25		10E/GTP 130/2,5-25
	125	25		10E/GTP 130/2,5-25
131	125	15		10E/GTP 131/3-15
133	125	25		10E/GTP 133/4-25
135	130	9,7		10E/GTP 135/2,5- 9,7
	130	15		10E/GTP 135/2,5-15
	130	20		10E/GTP 135/2,5-20
	130	25		10E/GTP 135/2,5-25
136	130	19,2		10E/GTP 136/3-19,2
140	130	16,2		10E/GTP 140/5-16,2
	133	35		10E/GTP 140/3,5-35
	134	30		10E/GTP 140/3-30
	135	9,7	•	10E/GTP 140/2,5- 9,7
	135	15	•	10E/GTP 140/2,5-15
	135	16		10E/GTP 140/2,5-16
	135	20		10E/GTP 140/2,5-20
	135	25	•	10E/GTP 140/2,5-25
	135	25		10E/GTP 140/2,5-25
	135	25		10E/GTP 140/2,5-25
143	138	15		10E/GTP 143/2,5-15

D	d	L	ISO 10766	Reference
145	140	9,7		10E/GTP 145/2,5- 9,7
	140	15		10E/GTP 145/2,5-15
	140	20		10E/GTP 145/2,5-20
	140	25		10E/GTP 145/2,5-25
	140	25		10E/GTP 145/2,5-25
	140	25		10E/GTP 145/2,5-25
146	140	12,7		10E/GTP 146/3-12,7
150	140	15		10E/GTP 150/5-15
	140	16,2		10E/GTP 150/5-16,2
	143	35		10E/GTP 150/3,5-35
	144	30		10E/GTP 150/3-30
	145	9,7		10E/GTP 150/2,5- 9,7
	145	15		10E/GTP 150/2,5-15
152,4	145	20		10E/GTP 150/2,5-20
	145	25		10E/GTP 150/2,5-25
	145	25		10E/GTP 150/2,5-25
	145	25		10E/GTP 150/2,5-25
155	150	9,7		10E/GTP 155/2,5- 9,7
	150	15		10E/GTP 155/2,5-15
	150	20		10E/GTP 155/2,5-20
	150	25		10E/GTP 155/2,5-25
	150	30		10E/GTP 155/2,5-30
	150	30		10E/GTP 155/2,5-30
160	150	23,2		10E/GTP 160/5-23,2
	155	9,7	•	10E/GTP 160/2,5- 9,7
	155	15	•	10E/GTP 160/2,5-15
	155	16		10E/GTP 160/2,5-16
	155	20		10E/GTP 160/2,5-20
	155	25	•	10E/GTP 160/2,5-25
165	160	9,7		10E/GTP 165/2,5- 9,7
	160	15		10E/GTP 165/2,5-15
	160	20		10E/GTP 165/2,5-20
	160	25		10E/GTP 165/2,5-25
168	160	25		10E/GTP 168/4-25
170	165	9,7		10E/GTP 170/2,5- 9,7
	165	15		10E/GTP 170/2,5-15
	165	20		10E/GTP 170/2,5-20
	165	25		10E/GTP 170/2,5-25
175	170	6,3		10E/GTP 175/2,5- 6,3
	170	9,7		10E/GTP 175/2,5- 9,7
	170	15		10E/GTP 175/2,5-15
	170	15		10E/GTP 175/2,5-15
178	170	20		10E/GTP 175/2,5-20
	170	25		10E/GTP 175/2,5-25
	170	25		10E/GTP 175/2,5-25
	170	25		10E/GTP 175/2,5-25

D	d	L	ISO 10766	Reference
180	170	23,2		10E/GTP 180/5-23,2
	174	19,2		10E/GTP 180/3-19,2
	175	9,7	•	10E/GTP 180/2,5- 9,7
	175	15	•	10E/GTP 180/2,5-15
	175	16		10E/GTP 180/2,5-16
	175	20		10E/GTP 180/2,5-20
185	175	25	•	10E/GTP 180/2,5-25
	175	25		10E/GTP 180/2,5-25
	175	25		10E/GTP 180/2,5-25
	175	25		10E/GTP 180/2,5-25
	175	25		10E/GTP 180/2,5-25
	175	25		10E/GTP 180/2,5-25
186	180	9,7		10E/GTP 185/2,5- 9,7
	180	15		10E/GTP 185/2,5-15
	180	20		10E/GTP 185/2,5-20
	180	25		10E/GTP 185/2,5-25
	180	25		10E/GTP 185/2,5-25
	180	25		10E/GTP 185/2,5-25
188	180	15		10E/GTP 186/3-15
	180	19,2		10E/GTP 186/3-19,2
	180	30		10E/GTP 188/4-30
	180	30		10E/GTP 188/4-30
	180	30		10E/GTP 188/4-30
	180	30		10E/GTP 188/4-30
190	184	19,2		10E/GTP 190/3-19,2
	185	9,7		10E/GTP 190/2,5- 9,7
	185	15		10E/GTP 190/2,5-15
	185	20		10E/GTP 190/2,5-20
	185	25		10E/GTP 190/2,5-25
	185	25		10E/GTP 190/2,5-25
195	190	9,7		10E/GTP 195/2,5- 9,7
	190	15		10E/GTP 195/2,5-15
	190	20		10E/GTP 195/2,5-20
	190	25		10E/GTP 195/2,5-25
	190	25		10E/GTP 195/2,5-25
	190	25		10E/GTP 195/2,5-25
200	192	25		10E/GTP 200/4-25
	194	20		10E/GTP 200/3-20
	195	9,7	•	10E/GTP 200/2,5- 9,7
	195	15	•	10E/GTP 200/2,5-15
	195	20	•	10E/GTP 200/2,5-20
	195	25	•	10E/GTP 200/2,5-25
203	198	20		10E/GTP 203/2,5-20
203,2	196,85	12,7		10E/GTP 203,2/3,1-12,7
205	200	15		10E/GTP 205/2,5-15
	200	20		10E/GTP 205/2,5-20
	200	25		10E/GTP 205/2,5-25
	200	25		10E/GTP 205/2,5-25
210	204	19,2		10E/GTP 210/3-19,2
	205	15		10E/GTP 210/2,5-15
	205	20		10E/GTP 210/2,5-20
	205	25		10E/GTP 210/2,5-25

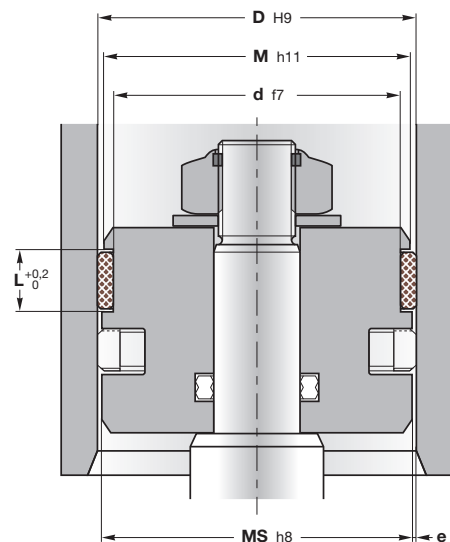
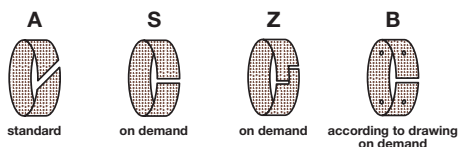
D	d	L	ISO 10766	Reference
215	210	15		10E/GTP 215/2,5-15
	210	20		10E/GTP 215/2,5-20
	210	25		10E/GTP 215/2,5-25
220	210	30		10E/GTP 220/5-30
	214	20		10E/GTP 220/3-20
	215	15	•	10E/GTP 220/2,5-15
	215	20		10E/GTP 220/2,5-20
	215	25	•	10E/GTP 220/2,5-25
225	220	15		10E/GTP 225/2,5-15
	220	20		10E/GTP 225/2,5-20
	220	25		10E/GTP 225/2,5-25
230	225	15		10E/GTP 230/2,5-15
	225	20		10E/GTP 230/2,5-20
	225	25		10E/GTP 230/2,5-25
235	230	15		10E/GTP 235/2,5-15
	230	20		10E/GTP 235/2,5-20
240	235	15		10E/GTP 240/2,5-15
	235	20		10E/GTP 240/2,5-20
	235	25		10E/GTP 240/2,5-25
245	240	15		10E/GTP 245/2,5-15
	240	25		10E/GTP 245/2,5-25
250	245	15	•	10E/GTP 250/2,5-15
	245	20		10E/GTP 250/2,5-20
	245	25	•	10E/GTP 250/2,5-25
255	250	20		10E/GTP 255/2,5-20
	250	25		10E/GTP 255/2,5-25
	250	30		10E/GTP 255/2,5-30
260	250	30		10E/GTP 260/5-30
	255	9,7		10E/GTP 260/2,5- 9,7
	255	15		10E/GTP 260/2,5-15
	255	25		10E/GTP 260/2,5-25
265	260	25		10E/GTP 265/2,5-25
280	275	25	•	10E/GTP 280/2,5-25
285	280	15		10E/GTP 285/2,5-15
300	295	20		10E/GTP 300/2,5-20
	295	25		10E/GTP 300/2,5-25
320	315	25	•	10E/GTP 320/2,5-25
325	320	15		10E/GTP 325/2,5-15
480	470	30		10E/GTP 480/5-30

**10E/GTP1**

Example of item code

10E/GTP1 - 25 097 - 1050 - A
 Sealtech code L (mm x 10) Type of cut
 E (mm x 10) D (mm x 10)

Type of cut



✕ Machining of housings: see pages 45-49

The cutting angle of 10E/GTP1 is 45°, not to confuse with the 10E/GTP which is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal. The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

E (mm)	M (mm)
E ≤ 2	D - 1
2 < E < 4	D - 1,8
E ≥ 4	D - 3

10E/GTP1 guide rings are made of synthetic fabric reinforced phenolic resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

An increased sliding ability which results in reduction of stick-slip effects is achieved by **inclusion of PTFE** in the compound.

Guide rings are **easier to install** than guide strips and are therefore recommended by Sealtech.

Operating conditions

✕ see page 8

Compressive strength DIN 53454 320 N/mm²
 Max. permissible radial load at 25°C: ≤ 100 N/mm²
 60°C: ≤ 50 N/mm²
 Temperature -30°C to 120°C
 Speed ≤ 1 m/s
 Fluids ✕ see pages 22-45

Materials

✕ see pages 10-19

Guide ring synthetic fabric reinforced
 phenolic resin + PTFE
 Colour light brown

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Simple groove, easy fitting
 Very high load capacity
 Reduced friction (PTFE)
 No water absorption
 High wear capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

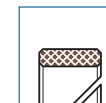
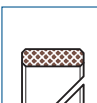
Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

D	d	L	ISO 10766	Reference
25	20	5,6	•	10E/GTP1-25056-0250-A
	20	6,3		10E/GTP1-25063-0250-A
30	25	5,6		10E/GTP1-25056-0300-A
	25	6,3		10E/GTP1-25063-0300-A
	25	9,7		10E/GTP1-25097-0300-A
32	27	6,3		10E/GTP1-25063-0320-A
	27	9,7		10E/GTP1-25097-0320-A
35	30	5,6		10E/GTP1-25056-0350-A
	30	9,7		10E/GTP1-25097-0350-A
	30	15		10E/GTP1-25150-0350-A
36	32	6,3		10E/GTP1-20063-0360-A
40	35	5,6	•	10E/GTP1-25056-0400-A
	35	6,3		10E/GTP1-25063-0400-A
	35	9,7		10E/GTP1-25097-0400-A
	35	15		10E/GTP1-25150-0400-A
	36	9,7		10E/GTP1-20097-0400-A
42	37	5,6		10E/GTP1-25056-0420-A
45	39	9,7		10E/GTP1-30097-0450-A
	40	5,6		10E/GTP1-25056-0450-A
	40	6,3		10E/GTP1-25063-0450-A
45	40	9,7		10E/GTP1-25097-0450-A
	40	15		10E/GTP1-25150-0450-A
	40	20		10E/GTP1-25200-0450-A
	40	25		10E/GTP1-25250-0450-A
48	43	9,7		10E/GTP1-25097-0480-A
50	44	9,7		10E/GTP1-30097-0500-A
	45	5,6	•	10E/GTP1-25056-0500-A
	45	6,3		10E/GTP1-25063-0500-A
	45	9,7		10E/GTP1-25097-0500-A
	45	15		10E/GTP1-25150-0500-A
	45	20		10E/GTP1-25200-0500-A
	45	25		10E/GTP1-25250-0500-A
	46	9,7		10E/GTP1-20097-0500-A
52	47	5,6		10E/GTP1-25056-0520-A

D	d	L	ISO 10766	Reference
55	50	5,6		10E/GTP1-25056-0550-A
	50	9,7		10E/GTP1-25097-0550-A
	50	15		10E/GTP1-25150-0550-A
	50	20		10E/GTP1-25200-0550-A
57	52	6,3		10E/GTP1-25063-0570-A
60	55	5,6		10E/GTP1-25056-0600-A
	55	9,7		10E/GTP1-25097-0600-A
	55	15		10E/GTP1-25150-0600-A
	55	20		10E/GTP1-25200-0600-A
63	58	5,6	•	10E/GTP1-25056-0630-A
	58	6,3		10E/GTP1-25063-0630-A
	58	9,7	•	10E/GTP1-25097-0630-A
	58	15		10E/GTP1-25150-0630-A
	58	20		10E/GTP1-25200-0630-A
	58	25		10E/GTP1-25250-0630-A
	59	6,3		10E/GTP1-20063-0630-A
	59	8,1		10E/GTP1-20081-0630-A
	59	9,7		10E/GTP1-20097-0630-A
65	60	5,6		10E/GTP1-25056-0650-A
	60	9,7		10E/GTP1-25097-0650-A
	60	15		10E/GTP1-25150-0650-A
	60	20		10E/GTP1-25200-0650-A
	60	25		10E/GTP1-25250-0650-A
70	65	5,6		10E/GTP1-25056-0700-A
	65	6,3		10E/GTP1-25063-0700-A
	65	9,7		10E/GTP1-25097-0700-A
	65	15		10E/GTP1-25150-0700-A
	65	20		10E/GTP1-25200-0700-A
	65	25		10E/GTP1-25250-0700-A
75	70	5,6		10E/GTP1-25056-0750-A
	70	6,3		10E/GTP1-25063-0750-A
	70	9,7		10E/GTP1-25097-0750-A
	70	15		10E/GTP1-25150-0750-A
	70	20		10E/GTP1-25200-0750-A
	70	25		10E/GTP1-25250-0750-A
80	75	5,6	•	10E/GTP1-25056-0800-A
	75	6,3		10E/GTP1-25063-0800-A
	75	9,7	•	10E/GTP1-25097-0800-A

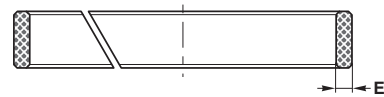


D	d	L	ISO 10766	Reference
80	75	15	•	10E/GTP1-25150-0800-A
	75	20		10E/GTP1-25200-0800-A
	75	25	•	10E/GTP1-25250-0800-A
	76	9,7		10E/GTP1-20097-0800-A
85	80	5,6		10E/GTP1-25056-0850-A
	80	9,7		10E/GTP1-25097-0850-A
	80	15		10E/GTP1-25150-0850-A
	80	20		10E/GTP1-25200-0850-A
90	85	5,6		10E/GTP1-25056-0900-A
	85	9,7		10E/GTP1-25097-0900-A
	85	15		10E/GTP1-25150-0900-A
	85	20		10E/GTP1-25200-0900-A
95	90	5,6		10E/GTP1-25056-0950-A
	90	9,7		10E/GTP1-25097-0950-A
	90	15		10E/GTP1-25150-0950-A
	90	20		10E/GTP1-25200-0950-A
100	95	5,6	•	10E/GTP1-25056-1000-A
	95	9,7	•	10E/GTP1-25097-1000-A
	95	15	•	10E/GTP1-25150-1000-A
	95	20		10E/GTP1-25200-1000-A
105	100	9,7		10E/GTP1-25097-1050-A
	100	15		10E/GTP1-25150-1050-A
	100	20		10E/GTP1-25200-1050-A
	100	25		10E/GTP1-25250-1050-A
110	105	9,7		10E/GTP1-25097-1100-A
	105	15		10E/GTP1-25150-1100-A
	105	20		10E/GTP1-25200-1100-A
	105	25		10E/GTP1-25250-1100-A
115	110	9,7		10E/GTP1-25097-1150-A
	110	15		10E/GTP1-25150-1150-A
	110	20		10E/GTP1-25200-1150-A
	110	25		10E/GTP1-25250-1150-A

D	d	L	ISO 10766	Reference
120	115	9,7		10E/GTP1-25097-1200-A
	115	15		10E/GTP1-25150-1200-A
	115	20		10E/GTP1-25200-1200-A
	115	25		10E/GTP1-25250-1200-A
125	120	9,7	•	10E/GTP1-25097-1250-A
	120	15	•	10E/GTP1-25150-1250-A
	120	20		10E/GTP1-25200-1250-A
	120	25	•	10E/GTP1-25250-1250-A
130	125	9,7		10E/GTP1-25097-1300-A
	125	15		10E/GTP1-25150-1300-A
	125	20		10E/GTP1-25200-1300-A
	125	25		10E/GTP1-25250-1300-A
135	130	9,7		10E/GTP1-25097-1350-A
	130	15		10E/GTP1-25150-1350-A
	130	20		10E/GTP1-25200-1350-A
	130	25		10E/GTP1-25250-1350-A
140	135	9,7		10E/GTP1-25097-1400-A
	135	15		10E/GTP1-25150-1400-A
	135	20		10E/GTP1-25200-1400-A
	135	25		10E/GTP1-25250-1400-A
145	140	9,7		10E/GTP1-25097-1450-A
	140	15		10E/GTP1-25150-1450-A
	140	20		10E/GTP1-25200-1450-A
	140	25		10E/GTP1-25250-1450-A
150	145	9,7		10E/GTP1-25097-1500-A
	145	15		10E/GTP1-25150-1500-A
	145	20		10E/GTP1-25200-1500-A
	145	25		10E/GTP1-25250-1500-A
155	150	15		10E/GTP1-25150-1550-A
	150	20		10E/GTP1-25200-1550-A
	150	25		10E/GTP1-25250-1550-A
	155	9,7	•	10E/GTP1-25097-1600-A
160	155	15	•	10E/GTP1-25150-1600-A
	155	20		10E/GTP1-25200-1600-A
	155	25	•	10E/GTP1-25250-1600-A
	160	9,7		10E/GTP1-25097-1650-A
165	160	15		10E/GTP1-25150-1650-A
	160	25		10E/GTP1-25250-1650-A

D	d	L	ISO 10766	Reference
170	165	9,7		10E/GTP1-25097-1700-A
	165	15		10E/GTP1-25150-1700-A
	165	20		10E/GTP1-25200-1700-A
	165	25		10E/GTP1-25250-1700-A
175	170	25		10E/GTP1-25250-1750-A
	175	9,7	•	10E/GTP1-25097-1800-A
	175	15	•	10E/GTP1-25150-1800-A
	175	20		10E/GTP1-25200-1800-A
185	180	15		10E/GTP1-25150-1850-A
	180	20		10E/GTP1-25200-1850-A
	180	25		10E/GTP1-25250-1850-A
	185	9,7		10E/GTP1-25097-1900-A
190	185	15		10E/GTP1-25150-1900-A
	195	9,7	•	10E/GTP1-25097-2000-A
	195	15	•	10E/GTP1-25150-2000-A
	195	20		10E/GTP1-25200-2000-A
200	195	25	•	10E/GTP1-25250-2000-A
	200	9,7		10E/GTP1-25097-2050-A
	200	15		10E/GTP1-25150-2050-A
	200	20		10E/GTP1-25200-2050-A
210	200	25		10E/GTP1-25250-2050-A
	205	20		10E/GTP1-25200-2100-A
	205	25		10E/GTP1-25250-2100-A
215	210	9,7		10E/GTP1-25097-2150-A
	210	15		10E/GTP1-25150-2150-A
	215	15	•	10E/GTP1-25150-2200-A
	215	20		10E/GTP1-25200-2200-A
220	215	25	•	10E/GTP1-25250-2200-A
	220	25		10E/GTP1-25250-2250-A
230	225	20		10E/GTP1-25200-2300-A
	225	25		10E/GTP1-25250-2300-A
240	235	15		10E/GTP1-25150-2400-A
	235	20		10E/GTP1-25200-2400-A
	235	25		10E/GTP1-25250-2400-A

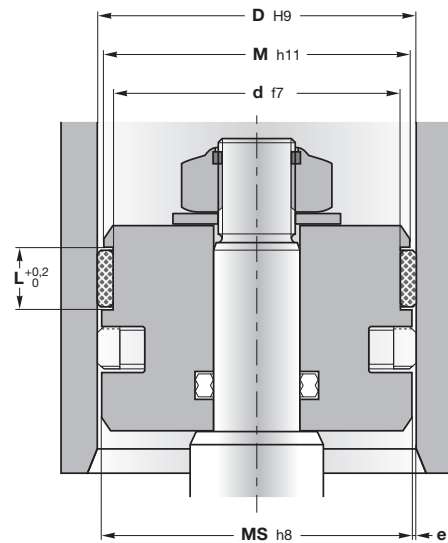
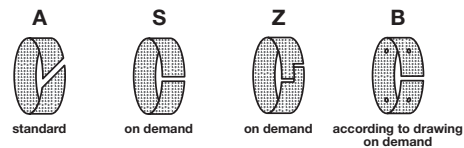
D	d	L	ISO 10766	Reference
245	240	15		10E/GTP1-25150-2450-A
	240	25		10E/GTP1-25250-2450-A
	245	15	•	10E/GTP1-25150-2500-A
	245	25	•	10E/GTP1-25250-2500-A
250	245	20		10E/GTP1-25200-2500-A
	255	25		10E/GTP1-25250-2550-A
255	250	25		10E/GTP1-25250-2550-A
	255	15		10E/GTP1-25150-2600-A
260	255	25		10E/GTP1-25250-2600-A
	275	20		10E/GTP1-25200-2800-A
280	275	25	•	10E/GTP1-25250-2800-A
	285	25		10E/GTP1-25250-2850-A
285	280	25		10E/GTP1-25250-2850-A
	285	25		10E/GTP1-25250-2900-A
290	285	25		10E/GTP1-25250-2900-A
	295	25		10E/GTP1-25250-3000-A
300	295	25		10E/GTP1-25250-3000-A
	305	15		10E/GTP1-25150-3050-A
305	300	25		10E/GTP1-25250-3050-A
	310	25		10E/GTP1-25250-3150-A
315	310	25		10E/GTP1-25250-3150-A
	315	15		10E/GTP1-25150-3200-A
320	315	25	•	10E/GTP1-25250-3200-A
	320	25		10E/GTP1-25250-3250-A
325	320	25		10E/GTP1-25250-3250-A
	330	25		10E/GTP1-25250-3350-A
335	330	25		10E/GTP1-25250-3350-A
	335	25		10E/GTP1-25250-3400-A
340	335	25		10E/GTP1-25250-3400-A
	355	20		10E/GTP1-25200-3600-A
360	355	25	•	10E/GTP1-25250-3600-A
	360	25		10E/GTP1-25250-3650-A
365	360	25		10E/GTP1-25250-3650-A
	380	25		10E/GTP1-25250-3850-A
385	380	25		10E/GTP1-25250-3850-A
	395	25	•	10E/GTP1-25250-4000-A
400	395	25		10E/GTP1-25250-4000-A
	405	25		10E/GTP1-25250-4050-A
405	400	25		10E/GTP1-25250-4050-A
	445	25	•	10E/GTP1-25250-4500-A
450	445	25		10E/GTP1-25250-4500-A
	495	25	•	10E/GTP1-25250-5000-A
500	495	25		10E/GTP1-25250-5000-A
	530	25		10E/GTP1-25250-5350-A
535	530	25		10E/GTP1-25250-5350-A
	545	25		10E/GTP1-25250-5500-A
550	545	25		10E/GTP1-25250-5500-A

**10E/GTP-HT**

Example of item code

10E/GTP-HT - 25 150 - 1050 - A
 Sealtech code L (mm x 10) Type of cut
 E (mm x 10) D (mm x 10)

Type of cut



✕ Machining of housings: see pages 45-49

10E/GTP-HT guide rings are made of aramid fabric reinforced phenolic resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

An increased sliding ability which results in reduction of the stick-slip effects is achieved by **inclusion of graphite** in the compound.

Guide rings are **easier to install** than guide strips and are therefore recommended by Sealtech.

The **10E/GTP-HT** guide rings can be used for applications at **high temperatures** (up to 200°C).

Operating conditions

✕ see page 8

Compressive strength DIN 53454 380 N/mm²
 Max. permissible radial load at 25°C: ≤ 120 N/mm²
 60°C: ≤ 60 N/mm²

Temperature -40°C to 200°C

Speed ≤ 1 m/s

Fluids ✕ see pages 22-45

Materials

✕ see pages 10-19

Guide ring aramid fabric reinforced
 high temperature phenolic resin
 + graphite

Colour grey

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Simple groove, easy fitting
 Very high load capacity
 Reduced friction (graphite)
 For high temperature applications
 No water absorption
 High wear capacity

Please contact us for applications approaching maximum values.

Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

D	d	L	ISO 10766	Reference
25	20	5,6	•	10E/GTP-HT-25056-0250-A
30	25	5,6		10E/GTP-HT-25056-0300-A
35	30	5,6		10E/GTP-HT-25056-0350-A
40	35	5,6	•	10E/GTP-HT-25056-0400-A
	35	9,7		10E/GTP-HT-25097-0400-A
45	40	9,7		10E/GTP-HT-25097-0450-A
50	45	9,7		10E/GTP-HT-25097-0500-A
55	50	9,7		10E/GTP-HT-25097-0550-A
60	55	9,7		10E/GTP-HT-25097-0600-A
63	58	9,7	•	10E/GTP-HT-25097-0630-A
65	60	9,7		10E/GTP-HT-25097-0650-A
70	65	9,7		10E/GTP-HT-25097-0700-A
75	70	9,7		10E/GTP-HT-25097-0750-A
	70	15		10E/GTP-HT-25150-0750-A
80	75	9,7	•	10E/GTP-HT-25097-0800-A
	75	15	•	10E/GTP-HT-25150-0800-A
85	80	9,7		10E/GTP-HT-25097-0850-A
	80	15		10E/GTP-HT-25150-0850-A

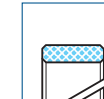
D	d	L	ISO 10766	Reference
90	85	9,7		10E/GTP-HT-25097-0900-A
	85	15		10E/GTP-HT-25150-0900-A
95	90	9,7		10E/GTP-HT-25097-0950-A
	90	15		10E/GTP-HT-25150-0950-A
100	95	9,7	•	10E/GTP-HT-25097-1000-A
	95	15	•	10E/GTP-HT-25150-1000-A
105	100	15		10E/GTP-HT-25150-1050-A
110	105	15		10E/GTP-HT-25150-1100-A
115	110	15		10E/GTP-HT-25150-1150-A
120	115	15		10E/GTP-HT-25150-1200-A
125	120	15	•	10E/GTP-HT-25150-1250-A
130	125	15		10E/GTP-HT-25150-1300-A
140	135	15	•	10E/GTP-HT-25150-1400-A
	135	25	•	10E/GTP-HT-25250-1400-A
145	140	15		10E/GTP-HT-25150-1450-A
	140	25		10E/GTP-HT-25250-1450-A
150	145	15		10E/GTP-HT-25150-1500-A
160	155	15	•	10E/GTP-HT-25150-1600-A
	155	25	•	10E/GTP-HT-25250-1600-A
165	160	25		10E/GTP-HT-25250-1650-A
180	175	25	•	10E/GTP-HT-25250-1800-A

The cutting angle of 10E/GTP-HT is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
 The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

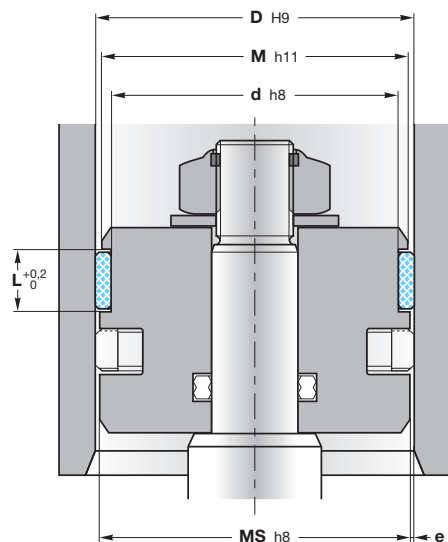
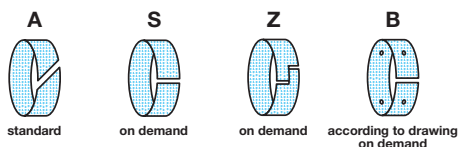
E (mm)	M (mm)
E ≤ 2	D - 1
2 < E < 4	D - 1,8
E ≥ 4	D - 3



Example of item code

10E/GTN - 25 097 - 1050 - A
 Dealtech code L (mm x 10) Type of cut
 E (mm x 10) D (mm x 10)

Type of cut



 Machining of housings: see pages 45-49

The cutting angle of 10E/GTN is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e value** of the seal used.

 see pages 50-53

E (mm)	M (mm)
E ≤ 2	D - 1
2 < E < 4	D - 1,8
E ≥ 4	D - 3

10E/GTN guide rings are made of fabric reinforced polyester resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

An increased sliding ability which results in reduction of the stick-slip effects is achieved by **inclusion of PTFE** in the compound.

Guide rings are **easier to install** than guide strips and are therefore recommended by Sealtech.

Operating conditions see page 8

Compressive strength DIN 53454 340 N/mm²
 Max. permissible radial load at 25°C: ≤ 110 N/mm²
 ≥ 60°C: ≤ 55 N/mm²
 Temperature -30°C to 120°C
 Speed ≤ 1 m/s
 Fluids  see pages 22-45

Materials see pages 10-19

Guide ring	polyester fabric reinforced polyester resin + PTFE
Colour	light blue

Assembly see pages 54-59

Install in the groove

Advantages

- Supplied preformed or by the meter (rolls 10GTN)
- Simple groove design and assembly
- Reduced friction
- High load capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

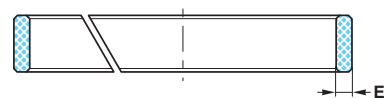
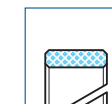
$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

D	d	L	ISO 10766	Reference
25	20	4,2	•	10E/GTN-25042-0250-A
	20	5,6		10E/GTN-25056-0250-A
	20	9,7		10E/GTN-25097-0250-A
32	27	4,2		10E/GTN-25042-0320-A
	27	5,6		10E/GTN-25056-0320-A
35	30	5,6		10E/GTN-25056-0350-A
36	32	5,6		10E/GTN-20056-0360-A
37	32	6,3		10E/GTN-25063-0370-A
40	35	5,6	•	10E/GTN-25056-0400-A
	35	8,1		10E/GTN-25081-0400-A
	35	9,7		10E/GTN-25097-0400-A
41	36	9,7		10E/GTN-25097-0410-A
45	40	5,6		10E/GTN-25056-0450-A
	40	9,7		10E/GTN-25097-0450-A
	40	15		10E/GTN-25150-0450-A
49	45	9,7		10E/GTN-20097-0490-A
50	45	5,6	•	10E/GTN-25056-0500-A
	45	6,3		10E/GTN-25063-0500-A
	45	9,7		10E/GTN-25097-0500-A
	45	15	10E/GTN-25150-0500-A	
55	50	5,6		10E/GTN-25056-0550-A
	50	9,7		10E/GTN-25097-0550-A
	51	9,7		10E/GTN-20097-0550-A
60	55	5,6		10E/GTN-25056-0600-A
	55	9,7		10E/GTN-25097-0600-A
61	56	9,7		10E/GTN-25097-0610-A
	56	15		10E/GTN-25150-0610-A
63	58	9,7	•	10E/GTN-25097-0630-A
65	60	9,7		10E/GTN-25097-0650-A
68,5	63,5	25		10E/GTN-25250-0685-A
70	65	9,7		10E/GTN-25097-0700-A
	65	15		10E/GTN-25150-0700-A
75	70	9,7		10E/GTN-25097-0750-A
	70	40		10E/GTN-25400-0750-A

D	d	L	ISO 10766	Reference
80	75	9,7	•	10E/GTN-25097-0800-A
	75	15		10E/GTN-25150-0800-A
85	80	9,7		10E/GTN-25097-0850-A
	80	15		10E/GTN-25150-0850-A
90	85	5,6		10E/GTN-25056-0900-A
	85	9,7		10E/GTN-25097-0900-A
95	90	9,7		10E/GTN-25097-0950-A
	90	15		10E/GTN-25150-0950-A
	90	25		10E/GTN-25250-0950-A
100	95	5,6	•	10E/GTN-25056-1000-A
	95	9,7		10E/GTN-25097-1000-A
	95	15		10E/GTN-25150-1000-A
105	100	9,7		10E/GTN-25097-1050-A
	100	15		10E/GTN-25150-1050-A
110	105	20		10E/GTN-25200-1100-A
112	107	9,7		10E/GTN-25097-1120-A
115	110	9,7		10E/GTN-25097-1150-A
	110	15		10E/GTN-25150-1150-A
120	115	9,7		10E/GTN-25097-1200-A
	115	15		10E/GTN-25150-1200-A
	115	20		10E/GTN-25200-1200-A
	115	25		10E/GTN-25250-1200-A
125	120	9,7	•	10E/GTN-25097-1250-A
	120	15		10E/GTN-25150-1250-A
	120	20		10E/GTN-25200-1250-A
	120	25	•	10E/GTN-25250-1250-A
130	125	9,7		10E/GTN-25097-1300-A
	125	15		10E/GTN-25150-1300-A
135	130	9,7		10E/GTN-25097-1350-A
	130	15		10E/GTN-25150-1350-A
140	135	9,7	•	10E/GTN-25097-1400-A
	135	25		10E/GTN-25250-1400-A
145	140	9,7		10E/GTN-25097-1450-A
	140	15		10E/GTN-25150-1450-A
155	150	15		10E/GTN-25150-1550-A

10E/GTN guide rings with diameters between 20 and 500 mm can be manufactured within short delivery time.
For prices and availability: www.sealtech-business.be

**10E/GTN**

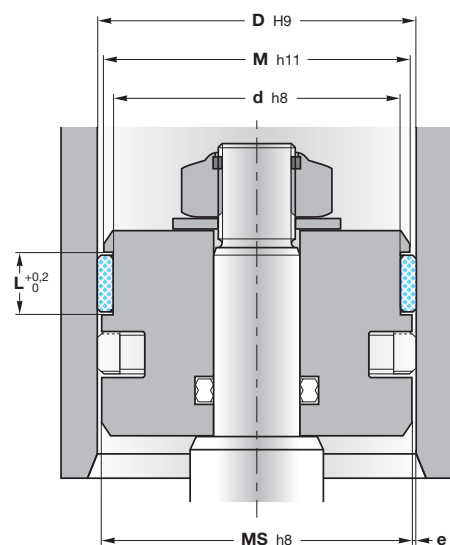
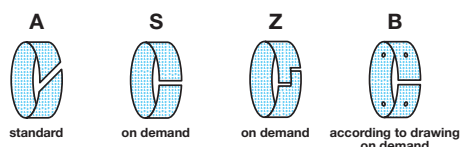
Example of item code

10E/GTN - 25 097 - 1050 - A

Sealtech code L (mm x 10) D (mm x 10) Type of cut

E (mm x 10)

Type of cut



✕ Machining of housings: see pages 45-49

10E/GTN guide rings are made of fabric reinforced polyester resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

An increased sliding ability which results in reduction of the stick-slip effects is achieved by **inclusion of PTFE** in the compound.

Guide rings are **easier to install** than guide strips and are therefore recommended by Sealtech.

Operating conditions ✕ see page 8

Compressive strength DIN 53454 340 N/mm²
 Max. permissible radial load at 25°C: ≤ 110 N/mm²
 ≥ 60°C: ≤ 55 N/mm²
 Temperature -30°C to 120°C
 Speed ≤ 1 m/s
 Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring polyester fabric reinforced
 polyester resin + PTFE
 Colour light blue

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Supplied preformed or by the meter (rolls 10GTN)
 Simple groove design and assembly
 Reduced friction
 High load capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

D	d	L	ISO 10766	Reference
160	155	9,7	•	10E/GTN-25097-1600-A
	155	15	•	10E/GTN-25150-1600-A
165	160	9,7		10E/GTN-25097-1650-A
	160	15		10E/GTN-25150-1650-A
	160	25		10E/GTN-25250-1650-A
170	165	15		10E/GTN-25150-1700-A
	165	25		10E/GTN-25250-1700-A
172	167	15		10E/GTN-25150-1720-A
175	170	15		10E/GTN-25150-1750-A
180	175	9,7	•	10E/GTN-25097-1800-A
	175	15	•	10E/GTN-25150-1800-A
185	180	15		10E/GTN-25150-1850-A
195	190	15		10E/GTN-25150-1950-A
200	195	15	•	10E/GTN-25150-2000-A
	195	25	•	10E/GTN-25250-2000-A
205	200	15		10E/GTN-25150-2050-A
	200	25		10E/GTN-25250-2050-A
208	200	25		10E/GTN-40250-2080-A
215	210	15		10E/GTN-25150-2150-A

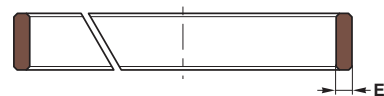
D	d	L	ISO 10766	Reference
220	215	15	•	10E/GTN-25150-2200-A
225	220	15		10E/GTN-25150-2250-A
229	224	15		10E/GTN-25150-2290-A
230	225	15		10E/GTN-25150-2300-A
235	230	15		10E/GTN-25150-2350-A
240	232	25		10E/GTN-40250-2400-A
250	244	20		10E/GTN-30200-2500-A
	245	25	•	10E/GTN-25250-2500-A
280	275	25		10E/GTN-25250-2800-A
285	280	25		10E/GTN-25250-2850-A
320	315	25	•	10E/GTN-25250-3200-A
330	322	25		10E/GTN-40250-3300-A
365	360	25		10E/GTN-25250-3650-A
380	375	25		10E/GTN-25250-3800-A
455	450	25		10E/GTN-25250-4550-A
475	470	25		10E/GTN-25250-4750-A

The cutting angle of 10E/GTN is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
 The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

E (mm)	M (mm)
E ≤ 2	D - 1
2 < E < 4	D - 1,8
E ≥ 4	D - 3

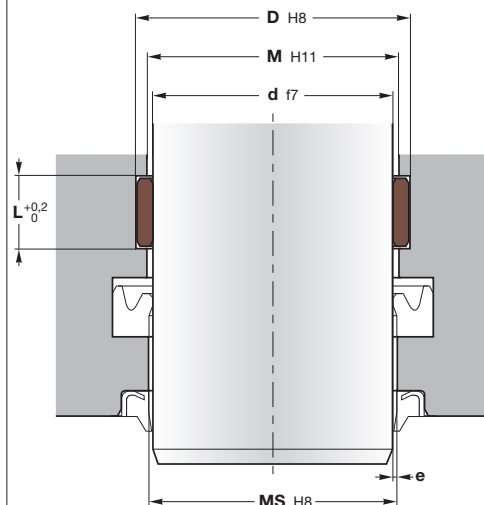
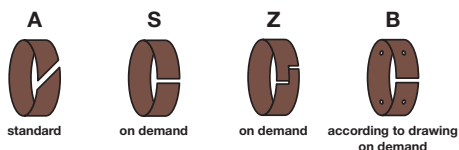


10I/GT

Example of item code

10I/GT - 25 097 - 1050 - 55 A
Sealtech code L (mm x 10) d (mm x 10) Material Type of cut

Type of cut



✕ Machining of housings: see pages 45-49

The cutting angle of 10I/GT is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

E (mm)	M (mm)
1,5	d + 0,8
2	d + 1,2
2,5	d + 1,6
3	d + 2
4	d + 2,5

10I/GT guide rings are made of PTFE compounds and serve to guide pistons, prevent metallic contact of the machine parts and absorb the transverse force that occurs. Guide elements made of PTFE compounds are characterised by outstanding friction behaviour **which minimises the stick-slip effect**.

In addition, they exhibit **high thermal and chemical resistance**. PTFE guide rings are only suitable for medium surface pressures.



Our **10I/GT** guide rings have **diamond streaked surface** to improve the self-lubricating effect and have **chamfers** for easy installation into the groove.

Operating conditions

✕ see page 8

Max. permissible radial load at 25°C: ≤ 15 N/mm²
120°C: ≤ 8 N/mm²

Temperature -60°C to 150°C

Speed ≤ 15 m/s

Fluids ✕ see pages 22-45

Materials

✕ see pages 10-19

Guide ring PT55

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Supplied cut to length or by the meter ✕ see p. 59

Low static and dynamic friction

No stick-slip

Reduce vibrations, good damping effect

High chemical compatibility

Large temperature range from -60 to 150 °C

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F = maximum radial force (N)

p = maximum permissible loading for material (N/mm²)

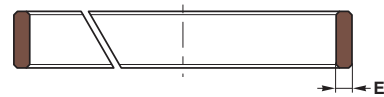
d x L = diameter x width of the ring (mm²)

n = number of rings

s = safety factor

d	D	L	ISO 10766	Reference
16	21	6,3		10I/GT-25063-0160-55A
22	27	6,3		10I/GT-25063-0220-55A
25	30	5,6	•	10I/GT-25056-0250-55A
	30	9,7		10I/GT-25097-0250-55A
27	32	6,3		10I/GT-25063-0270-55A
28	33	6,3		10I/GT-25063-0280-55A
	33	9,7		10I/GT-25097-0280-55A
30	35	6,3		10I/GT-25063-0300-55A
	35	9,7		10I/GT-25097-0300-55A
32	36	8,1		10I/GT-20081-0320-55A
	37	9,7	•	10I/GT-25097-0320-55A
35	40	5,6		10I/GT-25056-0350-55A
	40	6,3		10I/GT-25063-0350-55A
	40	9,7		10I/GT-25097-0350-55A
36	40	8,1		10I/GT-20081-0360-55A
	41	6,3		10I/GT-25063-0360-55A
	41	9,7	•	10I/GT-25097-0360-55A
40	45	9,7	•	10I/GT-25097-0400-55A
	45	15		10I/GT-25150-0400-55A
45	50	5,6	•	10I/GT-25056-0450-55A
	50	6,3		10I/GT-25063-0450-55A
	50	8,1		10I/GT-25081-0450-55A
	50	9,7	•	10I/GT-25097-0450-55A
	50	15		10I/GT-25150-0450-55A
46	50	9,7		10I/GT-20097-0460-55A
50	55	8,1		10I/GT-25081-0500-55A
	55	9,7	•	10I/GT-25097-0500-55A
	55	15		10I/GT-25150-0500-55A
55	60	6,3		10I/GT-25063-0550-55A
	60	9,7		10I/GT-25097-0550-55A
	60	15		10I/GT-25150-0550-55A
56	60	9,7	•	10I/GT-20097-0560-55A
	61	9,7		10I/GT-25097-0560-55A
	61	15		10I/GT-25150-0560-55A
58	63	5,6		10I/GT-25056-0580-55A
	63	9,7		10I/GT-25097-0580-55A
	63	15		10I/GT-25150-0580-55A

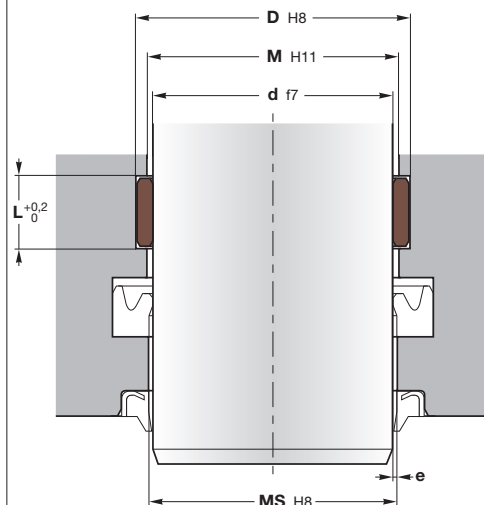
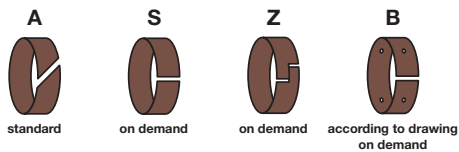
d	D	L	ISO 10766	Reference
60	65	8,1		10I/GT-25081-0600-55A
	65	9,7		10I/GT-25097-0600-55A
	65	15		10I/GT-25150-0600-55A
63	68	8,1		10I/GT-25081-0630-55A
	68	9,7		10I/GT-25097-0630-55A
65	70	9,7		10I/GT-25097-0650-55A
	70	15		10I/GT-25150-0650-55A
70	75	9,7	•	10I/GT-25097-0700-55A
	75	15		10I/GT-25150-0700-55A
75	80	5,6		10I/GT-25056-0750-55A
	80	8,1		10I/GT-25081-0750-55A
	80	9,7		10I/GT-25097-0750-55A
	80	15		10I/GT-25150-0750-55A
80	85	9,7	•	10I/GT-25097-0800-55A
	85	15	•	10I/GT-25150-0800-55A
85	90	9,7		10I/GT-25097-0850-55A
	90	15		10I/GT-25150-0850-55A
90	95	5,6		10I/GT-25056-0900-55A
	95	6,3		10I/GT-25063-0900-55A
	95	9,7	•	10I/GT-25097-0900-55A
	95	15	•	10I/GT-25150-0900-55A
95	100	9,7		10I/GT-25097-0950-55A
	100	15		10I/GT-25150-0950-55A
100	105	9,7	•	10I/GT-25097-1000-55A
	105	15	•	10I/GT-25150-1000-55A
105	110	9,7		10I/GT-25097-1050-55A
	110	15		10I/GT-25150-1050-55A
110	115	9,7	•	10I/GT-25097-1100-55A
	115	15	•	10I/GT-25150-1100-55A
115	120	9,7		10I/GT-25097-1150-55A
	120	15		10I/GT-25150-1150-55A
120	125	9,7		10I/GT-25097-1200-55A
	125	15		10I/GT-25150-1200-55A
	125	20		10I/GT-25200-1200-55A
125	130	15	•	10I/GT-25150-1250-55A
	130	25		10I/GT-25250-1250-55A
130	135	15		10I/GT-25150-1300-55A

**10I/GT**

Example of item code

10I/GT - 25 097 - 1050 - 55 A
 Sealtech code L (mm x 10) Material
 E (mm x 10) d (mm x 10) Type of cut

Type of cut



✕ Machining of housings: see pages 45-49

10I/GT guide rings are made of PTFE compounds and serve to guide pistons, prevent metallic contact of the machine parts and absorb the transverse force that occurs. Guide elements made of PTFE compounds are characterised by outstanding friction behaviour **which minimises the stick-slip effect**.

In addition, they exhibit **high thermal and chemical resistance**. PTFE guide rings are only suitable for medium surface pressures.



Our **10I/GT** guide rings have **diamond streaked surface** to improve the self-lubricating effect and have **chamfers** for easy installation into the groove.

Operating conditions

✕ see page 8

Max. permissible radial load at 25°C: ≤ 15 N/mm²
 120°C: ≤ 8 N/mm²

Temperature -60°C to 150°C

Speed ≤ 15 m/s

Fluids ✕ see pages 22-45

Materials

✕ see pages 10-19

Guide ring PT55

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Supplied cut to length or by the meter ✕ see p. 59

Low static and dynamic friction

No stick-slip

Reduce vibrations, good damping effect

High chemical compatibility

Large temperature range from -60 to 150 °C

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F = maximum radial force (N)

p = maximum permissible loading for material (N/mm²)

d x L = diameter x width of the ring (mm²)

n = number of rings

s = safety factor

d	D	L	ISO 10766	Reference
135	140	9,7		10I/GT-25097-1350-55A
	140	15		10I/GT-25150-1350-55A
	140	20		10I/GT-25200-1350-55A
140	145	15	•	10I/GT-25150-1400-55A
	145	25		10I/GT-25250-1400-55A
145	150	15		10I/GT-25150-1450-55A
150	155	15		10I/GT-25150-1500-55A
155	160	15		10I/GT-25150-1550-55A
160	165	15	•	10I/GT-25150-1600-55A
175	180	15		10I/GT-25150-1750-55A

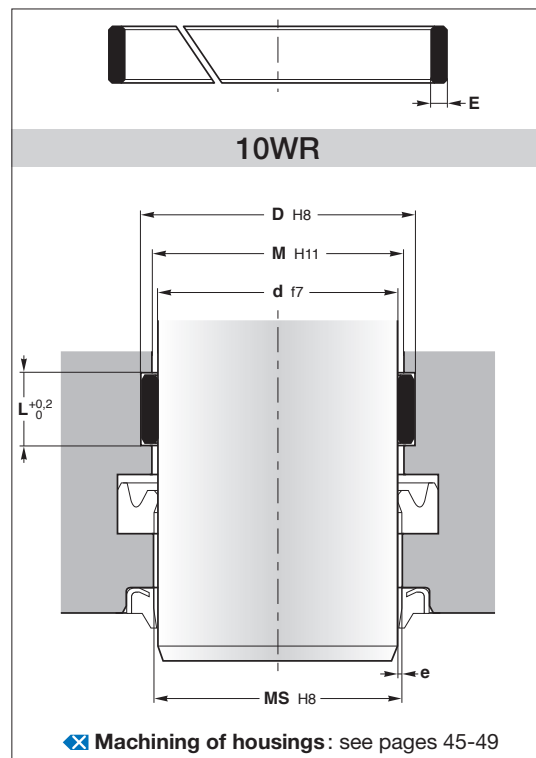
d	D	L	ISO 10766	Reference
180	185	15	•	10I/GT-25150-1800-55A
195	200	15		10I/GT-25150-1950-55A
	200	20		10I/GT-25200-1950-55A
205	210	15		10I/GT-25150-2050-55A
220	225	25	•	10I/GT-25250-2200-55A
225	230	15		10I/GT-25150-2250-55A
235	240	15		10I/GT-25150-2350-55A
240	245	15		10I/GT-25150-2400-55A
245	250	15		10I/GT-25150-2450-55A
250	255	15	•	10I/GT-25150-2500-55A

The cutting angle of 10I/GT is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
 The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

E (mm)	M (mm)
1,5	d + 0,8
2	d + 1,2
2,5	d + 1,6
3	d + 2
4	d + 2,5



The **10WR** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	see pages 22-45

Materials see pages 10-19

Guide ring	POM + glass fibers
------------	--------------------

Assembly see pages 54-59

Install in the groove

Advantages

- Suitable for rod and piston
- Simple groove design, easy fitting
- Low break-out and low coefficient of friction
- Excellent wear resistance
- Good load capacity
- Reduce vibrations
- Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal. The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

see pages 50-53

d (mm)	M (mm)
8 - 20	d + 0,5
21 - 100	d + 0,7
101 - 250	d + 0,9
251 - 300	d + 1,2

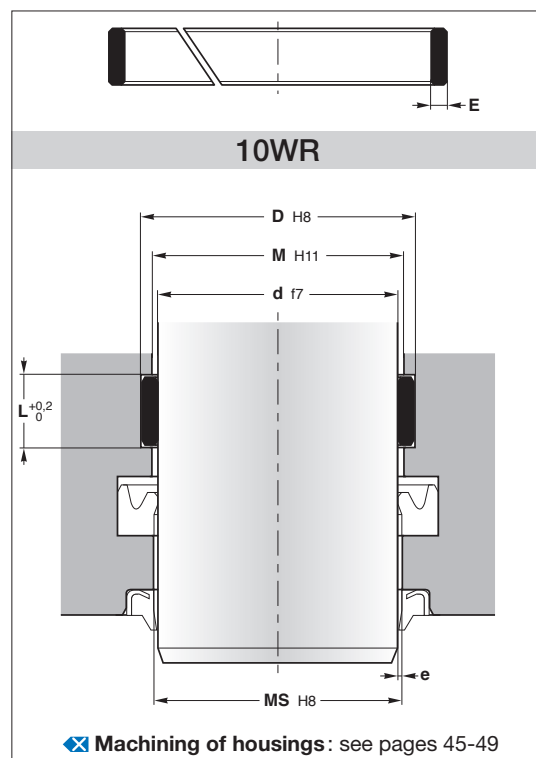
Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
d x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

d	D	L	ISO 10766	Reference
16	19,1	4		10WR 16/0
20	25	5,6		10WR 20
	23,1	4		10WR 20/0
	25	9,7		10WR 20/1
22	27	5,6		10WR 22
	27	9,7		10WR 22/1
25	30	5,6	•	10WR 25
	28,1	4		10WR 25/0
	30	9,7		10WR 25/1
27	32	5,6		10WR 27
	32	9,7		10WR 27/1
28	33	5,6	•	10WR 28
	31,1	4		10WR 28/0
	33	9,7		10WR 28/1
30	35	5,6		10WR 30
	35	9,7		10WR 30/1
32	37	5,6	•	10WR 32
	37	9,7	•	10WR 32/1
	37	15		10WR 32/2
33	38	5,6		10WR 33
35	40	5,6		10WR 35
	40	9,7		10WR 35/1
	40	19,7		10WR 35/2
36	41	5,6		10WR 36
	41	9,7		10WR 36/1
40	45	5,6	•	10WR 40
	45	9,7	•	10WR 40/1
	45	15		10WR 40/2
42	47	9,7		10WR 42/1
43	48	5,6		10WR 43
44	49	9,7		10WR 44/1
45	50	5,6	•	10WR 45
	50	9,7	•	10WR 45/1
	50	15		10WR 45/2
47	52	5,6		10WR 47
	52	9,7		10WR 47/1

d	D	L	ISO 10766	Reference
50	55	5,6	•	10WR 50
	55	9,7	•	10WR 50/1
	55	15		10WR 50/2
	55	20		10WR 50/3
52	57	9,7		10WR 52/1
53	58	9,7		10WR 53/1
55	60	5,6		10WR 55
	60	9,7		10WR 55/1
	60	15		10WR 55/2
56	61	5,6	•	10WR 56
	61	9,7	•	10WR 56/1
58	63	5,6		10WR 58
	63	9,7		10WR 58/1
	63	15		10WR 58/2
60	65	5,6		10WR 60
	65	9,7		10WR 60/1
	65	15		10WR 60/2
	65	20		10WR 60/3
61	66	9,7		10WR 61/1
63	68	5,6		10WR 63
	68	9,7	•	10WR 63/1
	68	15		10WR 63/2
65	70	5,6		10WR 65
	70	9,7		10WR 65/1
	70	15		10WR 65/2
67	72	5,6		10WR 67
	72	9,7		10WR 67/1
70	75	5,6	•	10WR 70
	75	9,7	•	10WR 70/1
	75	15		10WR 70/2
	75	20		10WR 70/3
72	77	9,7		10WR 72/1
	80	5,6		10WR 75
	80	9,7		10WR 75/1
	80	15		10WR 75/2



The **10WR** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions ⚙️ see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	⚙️ see pages 22-45

Materials ⚙️ see pages 10-19

Guide ring	POM + glass fibers
------------	--------------------

Assembly ⚙️ see pages 54-59

Install in the groove

Advantages

- Suitable for rod and piston
- Simple groove design, easy fitting
- Low break-out and low coefficient of friction
- Excellent wear resistance
- Good load capacity
- Reduce vibrations
- Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

⚙️ see pages 50-53

d (mm)	M (mm)
8 - 20	d + 0,5
21 - 100	d + 0,7
101 - 250	d + 0,9
251 - 300	d + 1,2

Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
d x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

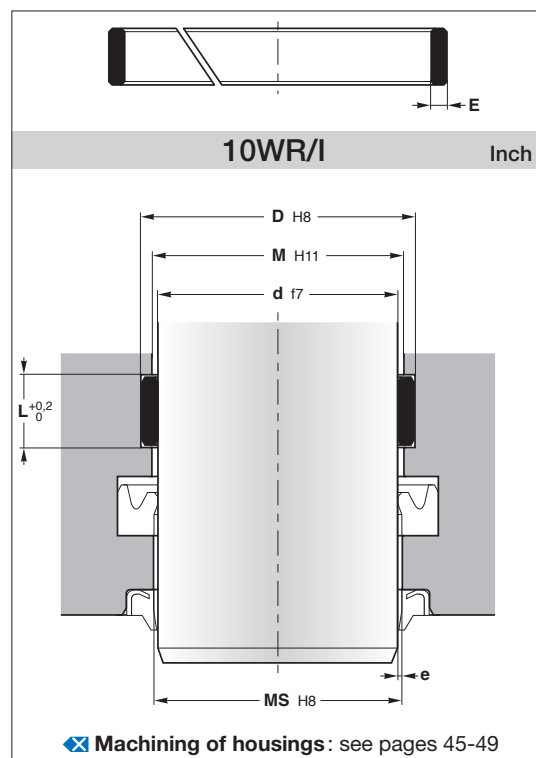
d	D	L	ISO 10766	Reference
80	85	5,6		10WR 80
	85	9,7	•	10WR 80/1
	85	15	•	10WR 80/2
	85	25	•	10WR 80/4
83	88	15		10WR 83/2
	90	5,6		10WR 85
		9,7		10WR 85/1
85	90	15		10WR 85/2
	95	5,6		10WR 90
		9,7		10WR 90/1
90	95	15		10WR 90/2
	97	25		10WR 92/4
92	100	5,6		10WR 95
	100	9,7		10WR 95/1
	100	15		10WR 95/2
	100	20		10WR 95/3
95	100	25		10WR 95/4
	105	5,6		10WR 100
		9,7	•	10WR 100/1
		15	•	10WR 100/2
100	105	20		10WR 100/3
	105	25		10WR 100/4
105	110	9,7		10WR 105/1
	110	15		10WR 105/2
	110	20		10WR 105/3
	110	25		10WR 105/4
110	115	9,7	•	10WR 110/1
	115	15	•	10WR 110/2
	115	20		10WR 110/3
	115	25		10WR 110/4
115	120	9,7		10WR 115/1
	120	15		10WR 115/2
	120	20		10WR 115/3
	120	25		10WR 115/4
120	125	5,6		10WR 120
	125	9,7		10WR 120/1
	125	15		10WR 120/2
	125	20		10WR 120/3
	125	25		10WR 120/4

d	D	L	ISO 10766	Reference
125	130	15	•	10WR 125/2
	130	20		10WR 125/3
	130	25		10WR 125/4
130	135	15		10WR 130/2
	135	20		10WR 130/3
	135	25		10WR 130/4
135	140	15		10WR 135/2
	140	20		10WR 135/3
	140	25		10WR 135/4
140	145	15	•	10WR 140/2
	145	20		10WR 140/3
	145	25		10WR 140/4
145	150	15		10WR 145/2
	150	20		10WR 145/3
	150	25		10WR 145/4
155	160	15		10WR 155/2
165	170	15		10WR 165/2
170	175	25		10WR 170/4
	175	9,7		10WR 175/1
		15		10WR 175/2
175	180	25		10WR 175/4
	195	15		10WR 195/2
		15		10WR 200/2
195	205	25		10WR 200/4
	210	15		10WR 210/2
215	220	15		10WR 215/2
	220	20		10WR 215/3
225	230	15		10WR 225/2
	230	25		10WR 225/4
235	240	15		10WR 235/2
245	250	15		10WR 245/2
	250	25		10WR 245/4
250	255	15		10WR 250/2
260	265	15		10WR 260/2



10WR/I

Acetal resin rod guide ring Inch dimensions


SEALTECH
Hydraulic Seals Technology


The **10WR/I** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions ✕ see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring	POM + glass fibers
------------	--------------------

Assembly ✕ see pages 54-59

Install in the groove

Advantages

- Suitable for rod and piston
- Simple groove design, easy fitting
- Low break-out and low coefficient of friction
- Excellent wear resistance
- Good load capacity
- Reduce vibrations

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

d (mm)	M (mm)
8 - 20	d + 0,5
21 - 100	d + 0,7
101 - 250	d + 0,9
251 - 300	d + 1,2

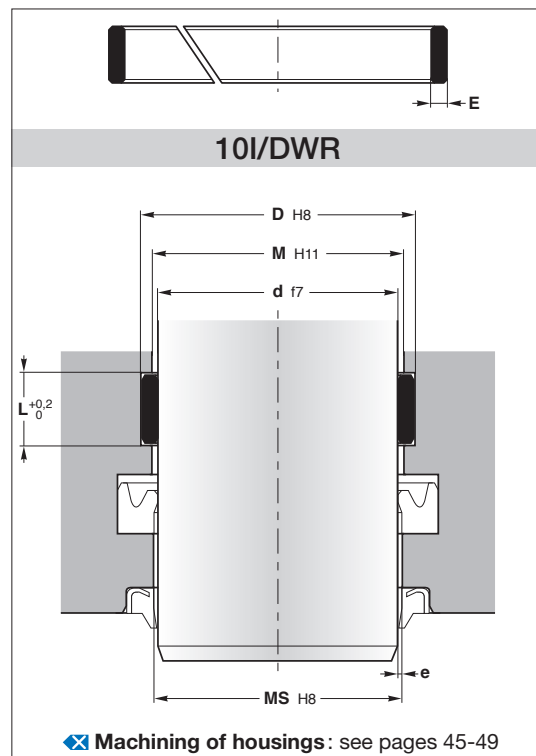
Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
d x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

d	D	L	Reference
31,75	38,1	12,83	10WR/I 12501500
38,1	44,45	9,65	10WR/I 15001750
	44,45	12,83	10WR/I 15001750/1
	44,45	19,18	10WR/I 15001750/2
41,27	47,62	12,83	10WR/I 16251875/1
	47,62	19,18	10WR/I 16251875
44,45	50,8	6,48	10WR/I 17502000/2
	50,8	12,83	10WR/I 17502000
	50,8	19,18	10WR/I 17502000/1
47,62	53,97	19,18	10WR/I 18752125
50,8	57,15	12,83	10WR/I 20002250/1
	57,15	19,18	10WR/I 20002250
57,15	63,5	12,83	10WR/I 22502500
	63,5	19,18	10WR/I 22502500/1
60,32	65,07	38,23	10WR/I 23752562
	66,67	12,83	10WR/I 23752625/1
	66,67	19,18	10WR/I 23752625
63,5	66,67	31,88	10WR/I 25002625
	69,85	9,65	10WR/I 25002750/2
	69,85	12,83	10WR/I 25002750
	69,85	19,18	10WR/I 25002750/1
	69,85	25,53	10WR/I 25002750/3
69,85	76,2	9,65	10WR/I 27503000/1
	76,2	12,83	10WR/I 27503000
	76,2	19,18	10WR/I 27503000/2

d	D	L	Reference
76,2	82,55	9,65	10WR/I 30003250/9
	82,55	12,83	10WR/I 30003250/2
	82,55	19,18	10WR/I 30003250
	82,55	38,23	10WR/I 30003250/1
82,55	88,9	19,18	10WR/I 32503500
	88,9	25,53	10WR/I 32503500/1
88,9	95,25	9,65	10WR/I 35003750
	95,25	19,18	10WR/I 35003750/1
95,25	101,6	19,18	10WR/I 37504000
101,6	107,95	12,83	10WR/I 40004250
107,95	114,3	9,65	10WR/I 42504500
	114,3	19,18	10WR/I 42504500/1
114,3	120,65	19,18	10WR/I 45004750
	120,65	25,53	10WR/I 45004750/1
120,65	127	9,65	10WR/I 47505000/1
	127	12,83	10WR/I 47505000
	127	19,18	10WR/I 47505000/3
	127	25,53	10WR/I 47505000/2
146,05	152,4	12,83	10WR/I 57506000/1
	152,4	38,23	10WR/I 57506000
158,75	165,1	12,83	10WR/I 62506500
171,45	177,8	12,83	10WR/I 67507000
	177,8	25,53	10WR/I 67507000/1
260,35	266,7	12,83	10WR/I 1025010500



The **10I/DWR** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	see pages 22-45

Materials see pages 10-19

Guide ring	POM + glass fibers
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Assembly see pages 54-59

Install in the groove

Advantages

- Simple groove design, easy fitting
- Low break-out and low coefficient of friction
- Excellent wear resistance
- Good load capacity
- Reduce vibrations
- Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

see pages 50-53

d (mm)	M (mm)
8 - 20	d + 0,5
21 - 100	d + 0,7
101 - 250	d + 0,9
251 - 300	d + 1,2

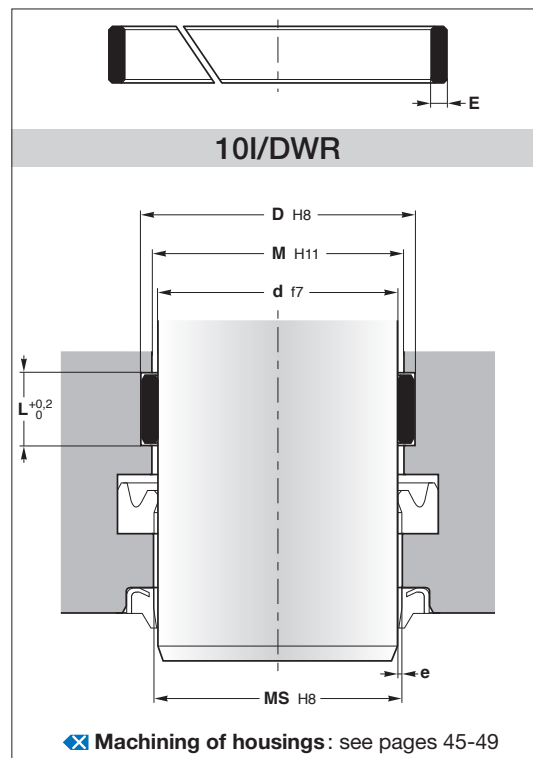
Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
d x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

d	D	L	Reference
12	16	9,6	10I/DWR 12/2-9,6
14	18	9,6	10I/DWR 14/2-9,6
16	20	9,6	10I/DWR 16/2-9,6
18	22	9,6	10I/DWR 18/2-9,6
20	24	9,6	10I/DWR 20/2-9,6
22	26	9,6	10I/DWR 22/2-9,6
24	28	9,6	10I/DWR 24/2-9,6
25	29	9,6	10I/DWR 25/2-9,6
26	30	9,6	10I/DWR 26/2-9,6
28	32	9,6	10I/DWR 28/2-9,6
30	34	9,6	10I/DWR 30/2-9,6
	36	9,6	10I/DWR 30/3-9,6
32	36	9,6	10I/DWR 32/2-9,6
	38	10	10I/DWR 32/3-10
34	38	9,6	10I/DWR 34/2-9,6
35	39	8,7	10I/DWR 35/2-8,7
	39	9,6	10I/DWR 35/2-9,6
	39	12,8	10I/DWR 35/2-12,8
	41	9,6	10I/DWR 35/3-9,6
36	40	9,6	10I/DWR 36/2-9,6
	42	9,6	10I/DWR 36/3-9,6
38	42	9,6	10I/DWR 38/2-9,6
40	44	8,7	10I/DWR 40/2-8,7
	44	9,6	10I/DWR 40/2-9,6
	46	9,6	10I/DWR 40/3-9,6
	46	12,8	10I/DWR 40/3-12,8
42	46	9,6	10I/DWR 42/2-9,6
44	50	9,6	10I/DWR 44/3-9,6
45	51	9,6	10I/DWR 45/3-9,6
	51	12,8	10I/DWR 45/3-12,8
46	52	9,6	10I/DWR 46/3-9,6

d	D	L	Reference
48	52	12,8	10I/DWR 48/2-12,8
	54	9,6	10I/DWR 48/3-9,6
50	56	9,6	10I/DWR 50/3-9,6
	56	12,8	10I/DWR 50/3-12,8
53	59	9,6	10I/DWR 53/3-9,6
55	61	9,6	10I/DWR 55/3-9,6
	61	12,8	10I/DWR 55/3-12,8
56	62	12,8	10I/DWR 56/3-12,8
60	66	12,8	10I/DWR 60/3-12,8
63	69	12,8	10I/DWR 63/3-12,8
65	71	12,8	10I/DWR 65/3-12,8
70	76	12,8	10I/DWR 70/3-12,8
	76	19,2	10I/DWR 70/3-19,2
	76	20	10I/DWR 70/3-20
72	78	12,8	10I/DWR 72/3-12,8
75	81	12,8	10I/DWR 75/3-12,8
	81	19,2	10I/DWR 75/3-19,2
76	82	12,8	10I/DWR 76/3-12,8
78	84	12,8	10I/DWR 78/3-12,8
80	86	12,8	10I/DWR 80/3-12,8
	86	19,2	10I/DWR 80/3-19,2
85	91	12,8	10I/DWR 85/3-12,8
86	92	12,8	10I/DWR 86/3-12,8
90	96	12,8	10I/DWR 90/3-12,8
	96	19,2	10I/DWR 90/3-19,2
95	101	12,8	10I/DWR 95/3-12,8
100	106	12,8	10I/DWR 100/3-12,8
105	111	12,8	10I/DWR 105/3-12,8
110	116	12,8	10I/DWR 110/3-12,8
	116	25,75	10I/DWR 110/3-25,75
115	121	12,8	10I/DWR 115/3-12,8



The **10I/DWR** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions ✕ see page 8

Max. permissible radial load	at 25°C: ≤ 40 N/mm ² 60°C: ≤ 25 N/mm ²
Temperature	-40°C to 110°C
Speed	≤ 0,8 m/s
Fluids	✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring	POM + glass fibers
------------	--------------------

Assembly ✕ see pages 54-59

Install in the groove

Advantages

- Simple groove design, easy fitting
- Low break-out and low coefficient of friction
- Excellent wear resistance
- Good load capacity
- Reduce vibrations
- Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

d (mm)	M (mm)
8 - 20	d + 0,5
21 - 100	d + 0,7
101 - 250	d + 0,9
251 - 300	d + 1,2

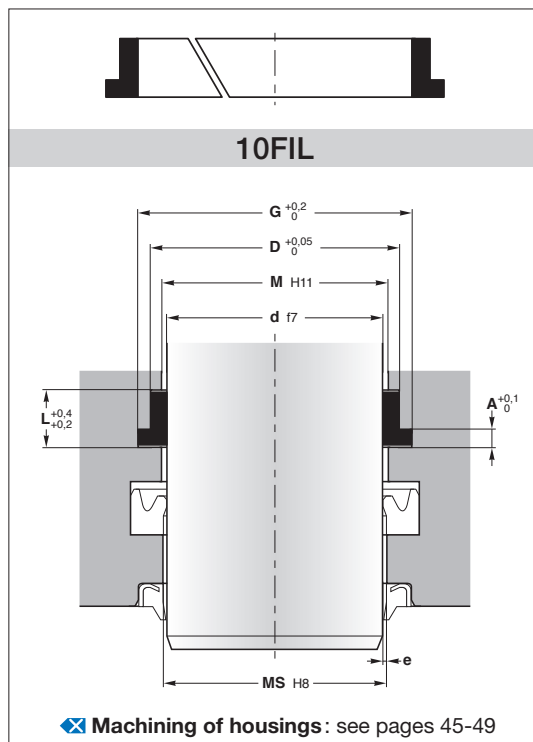
Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
d x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

d	D	L	Reference
116	122	19,2	10I/DWR 116/3-19,2
120	126	12,8	10I/DWR 120/3-12,8
	126	19,2	10I/DWR 120/3-19,2
	126	25,4	10I/DWR 120/3-25,4
125	131	12,8	10I/DWR 125/3-12,8
	131	19,2	10I/DWR 125/3-19,2
130	136	12,8	10I/DWR 130/3-12,8
	136	25,75	10I/DWR 130/3-25,75
135	141	12,8	10I/DWR 135/3-12,8
140	146	12,8	10I/DWR 140/3-12,8
142	148	12,8	10I/DWR 142/3-12,8
145	151	12,8	10I/DWR 145/3-12,8
150	156	12,8	10I/DWR 150/3-12,8
155	161	19,2	10I/DWR 155/3-19,2
160	166	19,2	10I/DWR 160/3-19,2
165	171	19,2	10I/DWR 165/3-19,2
170	176	19,2	10I/DWR 170/3-19,2
175	181	19,2	10I/DWR 175/3-19,2
180	186	19,2	10I/DWR 180/3-19,2
185	191	19,2	10I/DWR 185/3-19,2

d	D	L	Reference
190	196	19,2	10I/DWR 190/3-19,2
195	201	19,2	10I/DWR 195/3-19,2
200	206	19,2	10I/DWR 200/3-19,2
205	211	19,2	10I/DWR 205/3-19,2
210	216	19,2	10I/DWR 210/3-19,2
215	221	19,2	10I/DWR 215/3-19,2
220	226	19,2	10I/DWR 220/3-19,2
225	231	19,2	10I/DWR 225/3-19,2
230	236	19,2	10I/DWR 230/3-19,2
235	241	19,2	10I/DWR 235/3-19,2
240	246	19,2	10I/DWR 240/3-19,2
245	251	19,2	10I/DWR 245/3-19,2
250	256	19,2	10I/DWR 250/3-19,2
260	266	19,2	10I/DWR 260/3-19,2
265	271	19,2	10I/DWR 265/3-19,2
270	276	19,2	10I/DWR 270/3-19,2
275	281	19,2	10I/DWR 275/3-19,2
280	286	19,2	10I/DWR 280/3-19,2
290	296	19,2	10I/DWR 290/3-19,2



d (mm)	M (mm)
8 - 20	d + 0,5
21 - 100	d + 0,7
101 - 250	d + 0,9
251 - 300	d + 1,2

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

see pages 50-53

The **10FIL** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. It has a L-shaped cross-section and is split. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions

see page 8

Max. permissible radial load at 25°C: ≤ 40 N/mm²
60°C: ≤ 25 N/mm²

Temperature -40°C to 110°C

Speed ≤ 0,8 m/s

Fluids see pages 22-45

Materials

see pages 10-19

Guide ring POM + glass fibers

Assembly

see pages 54-59

Install in the groove

Advantages

- Simple assembly
- Low break-out and low coefficient of friction
- Excellent wear resistance
- High mechanical strength
- Good load capacity
- Reduce vibrations

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

d	D	L	G	A	Reference
60	66	16	71	5	10FIL 6066
78	84	16	89	5	10FIL 7884
99	105	16	110	5	10FIL 99105
120	126	16	131	5	10FIL 120126
141	147	16	152	5	10FIL 141147
162	168	16	173	5	10FIL 162168
183	189	16	194	5	10FIL 183189
207	213	16	218	5	10FIL 207213

Calculation of the permissible radial force

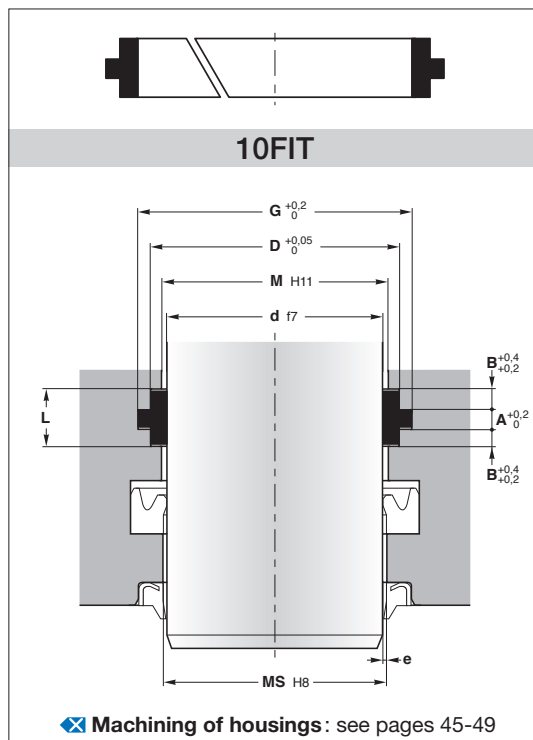
$$F = (p \times d \times L \times n) / s$$

- F** = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
d x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor



10FIT

Acetal resin T-shaped rod guide ring


SEALTECH
Hydraulic Seals Technology


d (mm)	M (mm)
8 - 20	d + 0,5
21 - 100	d + 0,7
101 - 250	d + 0,9
251 - 300	d + 1,2

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

The **10FIT** has been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Chamfered edges prevent splintering of the material during assembly and make the installation into the groove easier. It has a T-shaped cross-section and is split. The compound used for these guides is a medium viscosity glass fibre reinforced acetal resin characterised by high strength, rigidity, hardness, impact resistance, resilience and excellent stability to high and low temperature.

Operating conditions ✕ see page 8

Max. permissible radial load at 25°C: ≤ 40 N/mm²
60°C: ≤ 25 N/mm²

Temperature -40°C to 110°C

Speed ≤ 0,8 m/s

Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring POM + glass fibers

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple assembly
Low break-out and low coefficient of friction
Excellent wear resistance
High mechanical strength
Good load capacity
Reduce vibrations

Please contact us for applications approaching maximum values.

More information

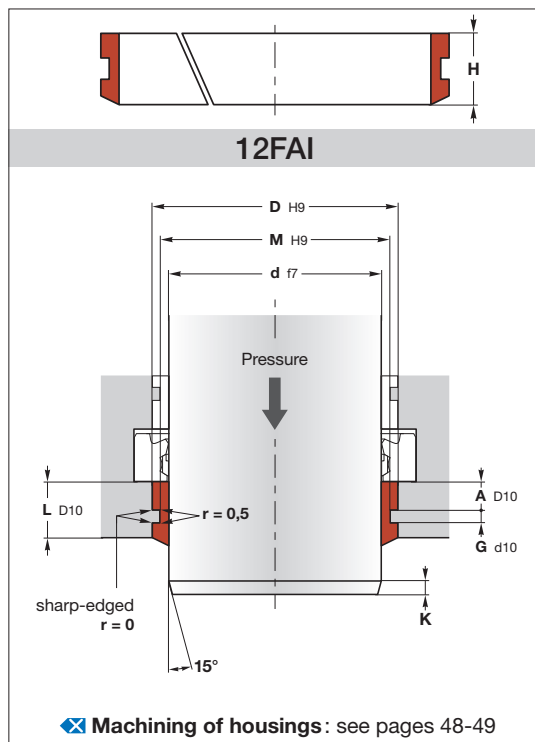
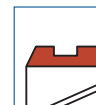
On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

d	D	L	G	A	B	Reference
30	34	10	37	4	3	10FIT 3034
45	49	10	53	4	3	10FIT 4549
50	54	20	58	7	6,5	10FIT 5054
55	60	16	64,5	8	4	10FIT 5560
61	65	10	69	4	3	10FIT 6165
70	74	20	78	7	6,5	10FIT 7074
72	79	31	82	8	11,5	10FIT 7279
75	80	16	84,5	8	4	10FIT 7580
76	80	12	84	5	3,5	10FIT 7680
85	90	27	95	8	9,5	10FIT 8590
85	91	27	95	6	10,5	10FIT 8591
88,5	92,5	20	96,5	7	6,5	10FIT 8892
90	96	26	100	7	9,5	10FIT 9096
91	95	15	100	6	4,5	10FIT 9195
105	111	31	115	8	11,5	10FIT 105111
108,5	112,5	20	116,5	7	6,5	10FIT 108112
110	116	26	120	7	9,5	10FIT 110116
115	120	16	124,5	8	4	10FIT 115120
125	130	29	134	8	10,5	10FIT 125130
128,5	132,5	20	136,5	7	6,5	10FIT 128132
132	138	26	142	7	9,5	10FIT 132138
135	140	16	144,5	8	4	10FIT 135140
148,5	152,5	20	156,5	7	6,5	10FIT 148152
152	158	26	162	7	9,5	10FIT 152158
171,5	175,5	20	179,5	7	6,5	10FIT 171175
172	178	26	182	7	9,5	10FIT 172178
194,5	198,5	20	202,5	7	6,5	10FIT 194198

10FIT guide rings with diameters between 20 and 1500 mm can be manufactured within short delivery time.
For prices and availability: www.sealtech-business.be



12FAI

U-shaped rod guide ring
with wiping function**HUNGER**
Dichtungen**SEALTECH**
Hydraulic Seals Technology

The Hunger bearing ring type **12FAI** with wiping function is mainly used on piston rods. It allows space-saving construction due to its integrated wiping function. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

It has a U-shaped cross-section and is split. The groove design secures the guide ring against axial movement. The compound used for these guides is an extremely abrasion-resistant and low friction POM-PTFE Bronze material.

Operating conditions ⚙️ see page 8

Max. permissible radial load at 25°C: $\leq 78 \text{ N/mm}^2$
60°C: $\leq 40 \text{ N/mm}^2$

Temperature -55°C to 120°C

Speed $\leq 3 \text{ m/s}$

Fluids ⚙️ see pages 22-45

Materials ⚙️ see pages 10-19

Guide ring POM-PTFE bronze compound

Assembly ⚙️ see pages 54-59

Install in the groove

Advantages

Simple assembly

Low break-out and low coefficient of friction (between 0,2 and 0,3)

Excellent wear resistance

High mechanical strength

Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = [p \times d \times (L-G) \times n] / s$$

F = maximum radial force (N)

p = maximum permissible loading for material (N/mm²)

d x (L-G) = diameter x width of the ring (mm²)

n = number of rings

s = safety factor

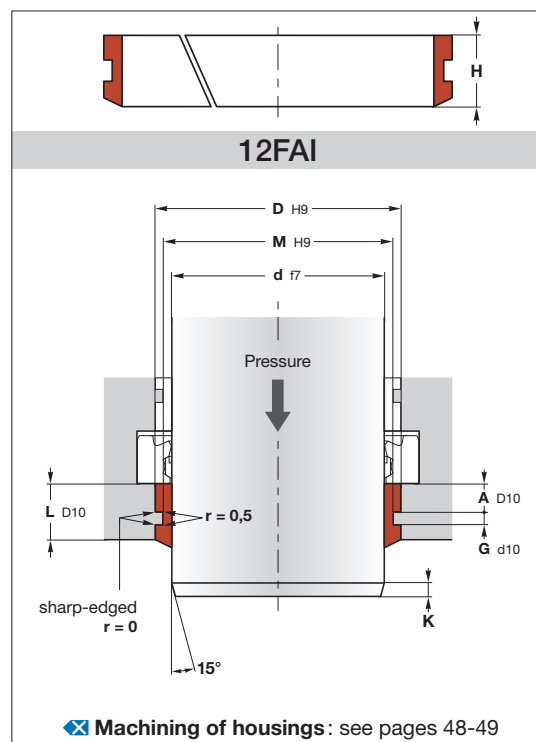
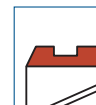
d	D	H	M	L	G	A	HUNGER reference	Reference
20	26	19	23	17	6	6,5	011903	12FAI 20
22	28	19	25	17	6	6,5	011904	12FAI 22
25	31	19	28	17	6	6,5	011906	12FAI 25
28	34	19	31	17	6	6,5	011907	12FAI 28
30	36	19	33	17	6	6,5	011908	12FAI 30
32	38	19	35	17	6	6,5	011909	12FAI 32
35	41	19	38	17	6	6,5	011910	12FAI 35
36	42	19	39	17	6	6,5	011911	12FAI 36
40	46	19	43	17	6	6,5	011912	12FAI 40
42	48	19	45	17	6	6,5	011913	12FAI 42
45	51	19	48	17	6	6,5	011916	12FAI 45
50	56	19	53	17	6	6,5	011918	12FAI 50
55	61	19	58	17	6	6,5	011921	12FAI 55
56	62	19	59	17	6	6,5	011922	12FAI 56
60	70	24	65	21	7	8,5	011924	12FAI 60
63	73	24	68	21	7	8,5	011925	12FAI 63
65	75	24	70	21	7	8,5	011926	12FAI 65
70	80	24	75	21	7	8,5	011928	12FAI 70
72	82	24	77	21	7	8,5	011929	12FAI 72
75	85	24	80	21	7	8,5	011930	12FAI 75
80	90	24	85	21	7	8,5	011932	12FAI 80
85	95	24	90	21	7	8,5	011934	12FAI 85
90	100	24	95	21	7	8,5	011936	12FAI 90
95	105	24	100	21	7	8,5	011937	12FAI 95
100	110	24	105	21	7	8,5	011939	12FAI 100
105	115	24	110	21	7	8,5	011940	12FAI 105
110	120	24	115	21	7	8,5	011941	12FAI 110
115	125	24	120	21	7	8,5	011942	12FAI 115
120	130	24	125	21	7	8,5	011944	12FAI 120
125	135	24	130	21	7	8,5	011945	12FAI 125
130	140	24	135	21	7	8,5	011947	12FAI 130
140	150	24	145	21	7	8,5	011950	12FAI 140
150	162	35	156	31	15	10	011954	12FAI 150
160	172	35	166	31	15	10	011956	12FAI 160
165	177	35	171	31	15	10	011957	12FAI 165
170	182	35	176	31	15	10	011959	12FAI 170
180	192	35	186	31	15	10	011961	12FAI 180
190	202	35	196	31	15	10	011962	12FAI 190
200	212	35	206	31	15	10	011963	12FAI 200
220	232	35	226	31	15	10	011967	12FAI 220
225	237	35	231	31	15	10	011968	12FAI 225
240	252	35	246	31	15	10	011970	12FAI 240

Further dimensions on request

For prices and availability: www.sealtech-business.be



12FAI

U-shaped rod guide ring
with wiping function**HUNGER**
Dichtungen**SEALTECH**
Hydraulic Seals Technology

The Hunger bearing ring type **12FAI** with wiping function is mainly used on piston rods. It allows space-saving construction due to its integrated wiping function. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

It has a U-shaped cross-section and is split. The groove design secures the guide ring against axial movement. The compound used for these guides is an extremely abrasion-resistant and low friction POM-PTFE Bronze material.

Operating conditions see page 8

Max. permissible radial load at 25°C: $\leq 78 \text{ N/mm}^2$
60°C: $\leq 40 \text{ N/mm}^2$

Temperature -55°C to 120°C

Speed $\leq 3 \text{ m/s}$

Fluids see pages 22-45

Materials see pages 10-19

Guide ring POM-PTFE bronze compound

Assembly see pages 54-59

Install in the groove

Advantages

- Simple assembly
- Low break-out and low coefficient of friction (between 0,2 and 0,3)
- Excellent wear resistance
- High mechanical strength
- Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = [p \times d \times (L-G) \times n] / s$$

- F** = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
d x (L-G) = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

d	D	H	M	L	G	A	HUNGER reference	Reference
250	262	35	256	31	15	10	011972	12FAI 250
260	272	35	266	31	15	10	011973	12FAI 260
280	292	35	286	31	15	10	011975	12FAI 280
290	302	35	296	31	15	10	011976	12FAI 290
300	312	35	306	31	15	10	011977	12FAI 300
320	332	35	326	31	15	10	011978	12FAI 320
350	362	35	356	31	15	10	011979	12FAI 350
360	372	35	366	31	15	10	011980	12FAI 360
380	392	35	386	31	15	10	011981	12FAI 380
400	412	35	406	31	15	10	011982	12FAI 400
415	427	35	421	31	15	10	011983	12FAI 415
420	432	35	426	31	15	10	011984	12FAI 420
425	437	35	431	31	15	10	011985	12FAI 425
450	462	35	456	31	15	10	011986	12FAI 450
480	492	35	486	31	15	10	011987	12FAI 480
500	512	35	506	31	15	10	011988	12FAI 500
560	572	35	566	31	15	10	011990	12FAI 560
600	612	35	606	31	15	10	011991	12FAI 600
630	642	35	636	31	15	10	011992	12FAI 630

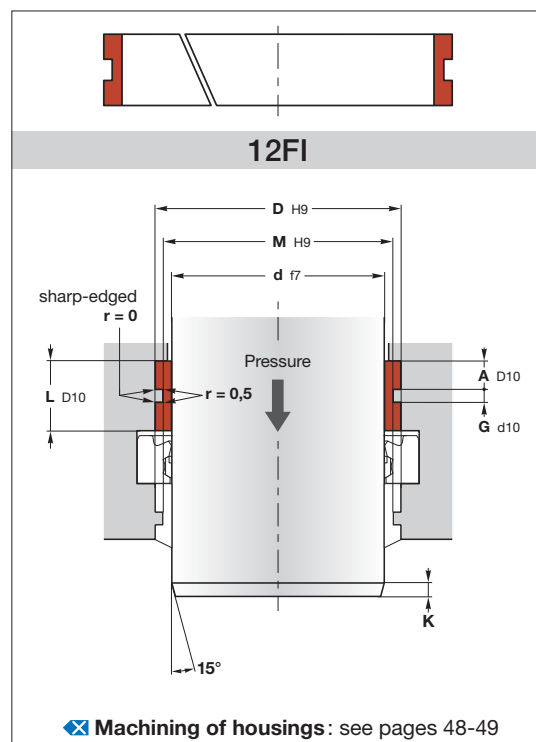
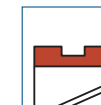
Further dimensions on request

For prices and availability: www.sealtech-business.be



12FI

U-shaped rod guide ring

HUNGER
Dichtungen**SEALTECH**
Hydraulic Seals Technology

Hunger bearing ring type **12FI** is mainly used on piston rods. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

It has a U-shaped cross-section and is split. The groove design secures the guide ring against axial movement. The compound used for these guides is an extremely abrasion-resistant and low friction POM-PTFE Bronze material.

They can be used as single rings or multiple rings arranged adjacent to each other with a distance of 1mm between two rings.

Operating conditions

✕ see page 8

Max. permissible radial load at 25°C: ≤ 78 N/mm²
60°C: ≤ 40 N/mm²

Temperature -55°C to 120°C

Speed ≤ 3 m/s

Fluids ✕ see pages 22-45

Materials

✕ see pages 10-19

Guide ring POM-PTFE bronze compound

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Simple assembly
Low break-out and low coefficient of friction (between 0,2 and 0,3)
Excellent wear resistance
High mechanical strength
Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = [p \times d \times (L-G) \times n] / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
d x (L-G) = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

d	D	L	M	G	A	HUNGER reference	Reference
20	26	19	23	6	6,5	012003	12FI 20
22	28	19	25	6	6,5	012004	12FI 22
25	31	19	28	6	6,5	012006	12FI 25
28	34	19	31	6	6,5	012007	12FI 28
30	36	19	33	6	6,5	012008	12FI 30
32	38	19	35	6	6,5	012009	12FI 32
35	41	19	38	6	6,5	012010	12FI 35
36	42	19	39	6	6,5	012011	12FI 36
40	46	19	43	6	6,5	012012	12FI 40
42	48	19	45	6	6,5	012013	12FI 42
45	51	19	48	6	6,5	012016	12FI 45
50	56	19	53	6	6,5	012018	12FI 50
55	61	19	58	6	6,5	012021	12FI 55
56	62	19	59	6	6,5	012022	12FI 56
60	70	24	65	7	8,5	012024	12FI 60
63	73	24	68	7	8,5	012025	12FI 63
65	75	24	70	7	8,5	012026	12FI 65
70	80	24	75	7	8,5	012028	12FI 70
72	82	24	77	7	8,5	012029	12FI 72
75	85	24	80	7	8,5	012030	12FI 75
80	90	24	85	7	8,5	012032	12FI 80
85	95	24	90	7	8,5	012034	12FI 85
90	100	24	95	7	8,5	012036	12FI 90
95	105	24	100	7	8,5	012037	12FI 95
100	106	19	103	6	6,5	019808	12FI 100/1
100	110	24	105	7	8,5	012039	12FI 100
105	115	24	110	7	8,5	012040	12FI 105
110	120	24	115	7	8,5	012041	12FI 110
115	125	24	120	7	8,5	012042	12FI 115
120	130	24	125	7	8,5	012044	12FI 120
125	135	24	130	7	8,5	012045	12FI 125
130	140	24	135	7	8,5	012047	12FI 130
140	150	24	145	7	8,5	012050	12FI 140
150	162	35	156	15	10	012054	12FI 150
160	170	24	165	7	8,5	019809	12FI 160
160	172	35	166	15	10	012056	12FI 160/1
165	177	35	171	15	10	012057	12FI 165
170	182	35	176	15	10	012059	12FI 170
180	190	24	185	7	8,5	019811	12FI 180
180	192	35	186	15	10	012061	12FI 180/1
190	202	35	196	15	10	012062	12FI 190
195	207	35	201	15	10	039896	12FI 195

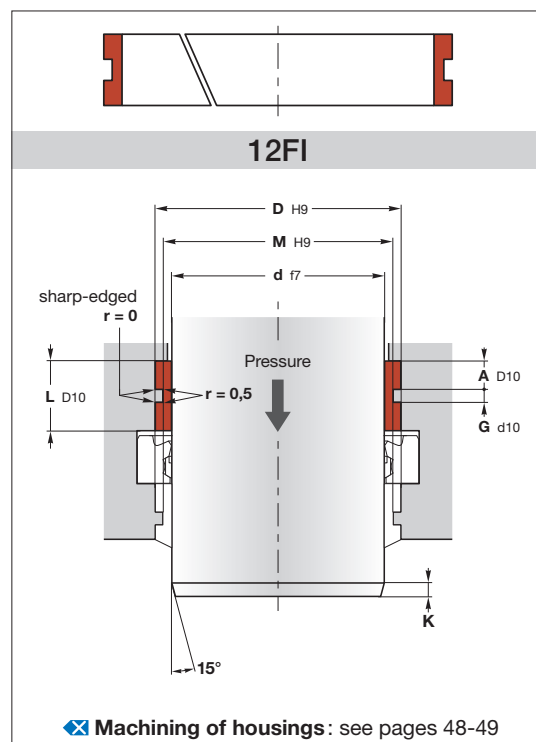
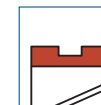
Further dimensions on request

For prices and availability: www.sealtech-business.be



12FI

U-shaped rod guide ring

HUNGER
Dichtungen**SEALTECH**
Hydraulic Seals Technology

Hunger bearing ring type **12FI** is mainly used on piston rods. They guide the rod and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

It has a U-shaped cross-section and is split. The groove design secures the guide ring against axial movement. The compound used for these guides is an extremely abrasion-resistant and low friction POM-PTFE Bronze material.

They can be used as single rings or multiple rings arranged adjacent to each other with a distance of 1mm between two rings.

Operating conditions

⚙️ see page 8

Max. permissible radial load at 25°C: ≤ 78 N/mm²
60°C: ≤ 40 N/mm²

Temperature -55°C to 120°C

Speed ≤ 3 m/s

Fluids ⚙️ see pages 22-45

Materials

⚙️ see pages 10-19

Guide ring POM-PTFE bronze compound

Assembly

⚙️ see pages 54-59

Install in the groove

Advantages

Simple assembly
Low break-out and low coefficient of friction (between 0,2 and 0,3)
Excellent wear resistance
High mechanical strength
Available in many sizes

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

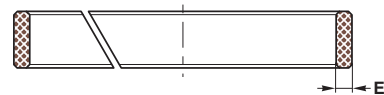
$$F = [p \times d \times (L-G) \times n] / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
d x (L-G) = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

d	D	L	M	G	A	HUNGER reference	Reference
200	212	35	206	15	10	012063	12FI 200
210	222	35	216	15	10	023435	12FI 210
220	232	35	226	15	10	012067	12FI 220
225	237	35	231	15	10	012068	12FI 225
240	252	35	246	15	10	012070	12FI 240
250	262	35	256	15	10	012072	12FI 250
255	267	35	261	15	10	071362	12FI 255
260	272	35	266	15	10	012073	12FI 260
265	277	35	271	15	10	037368	12FI 265
270	282	35	276	15	10	022880	12FI 270
280	292	35	286	15	10	012075	12FI 280
290	302	35	296	15	10	012076	12FI 290
300	312	35	306	15	10	012077	12FI 300
320	332	35	326	15	10	012078	12FI 320
350	362	35	356	15	10	012079	12FI 350
360	372	35	366	15	10	012080	12FI 360
370	382	35	376	15	10	037675	12FI 370
380	392	35	386	15	10	012081	12FI 380
400	412	35	406	15	10	012082	12FI 400
415	427	35	421	15	10	012083	12FI 415
420	432	35	426	15	10	012084	12FI 420
425	437	35	431	15	10	012085	12FI 425
440	452	35	446	15	10	075404	12FI 440
450	462	35	456	15	10	012086	12FI 450
480	492	35	486	15	10	012087	12FI 480
500	512	35	506	15	10	012088	12FI 500
560	572	35	566	15	10	012090	12FI 560
600	612	35	606	15	10	012091	12FI 600
630	642	35	636	15	10	012092	12FI 630

Further dimensions on request

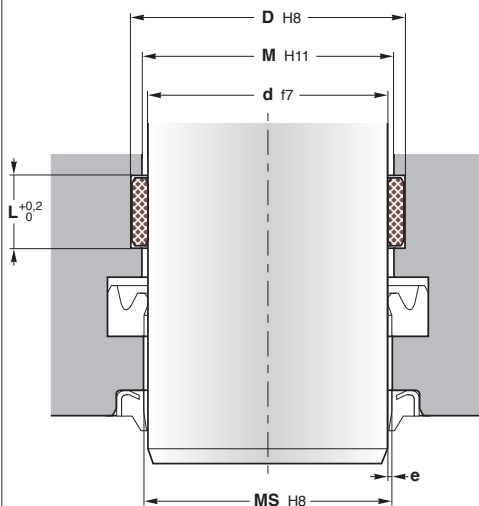
For prices and availability: www.sealtech-business.be



10I/GTP

Example of item code

10I/GTP 56/2,5- 9,7
Sealtech code E (mm)
Diameter d (mm) L (mm)



✕ Machining of housings : see pages 45-49

10I/GTP guide rings are made of cotton fabric reinforced phenolic resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile hydraulics and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

Guide rings are **easier to install** than guide strips and are, therefore, recommended by us.

Operating conditions ✕ see page 8

Compressive strength DIN 53454	290 N/mm ²
Max. permissible radial load	at 25°C : ≤ 90 N/mm ² 60°C : ≤ 45 N/mm ²
Temperature	-30°C to 120°C
Speed	≤ 1 m/s
Fluids	✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring	cotton fabric reinforced phenolic resin + PTFE
Colour	light brown

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple machining and assembly
Low coefficient of friction
High load capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The cutting angle of 10I/GTP is 30°, not to confuse with the 10I/GTP1 which is 45°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

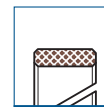
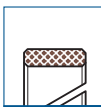
Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F	= maximum radial force (N)
p	= maximum permissible loading for material (N/mm ²)
d x L	= diameter x width of the ring (mm ²)
n	= number of rings
s	= safety factor

d	D	L	ISO 10766	Reference
20	24	6,3		10I/GTP 20/2- 6,3
	25	4,2		10I/GTP 20/2,5- 4,2
	25	5,6		10I/GTP 20/2,5- 5,6
	25	6,3		10I/GTP 20/2,5- 6,3
	25	9,7		10I/GTP 20/2,5- 9,7
	25	15		10I/GTP 20/2,5- 15
21	25	4,2		10I/GTP 21/2- 4,2
	25	6,3		10I/GTP 21/2- 6,3
22	26	4,2		10I/GTP 22/2- 4,2
	27	5,6		10I/GTP 22/2,5- 5,6
	27	6,3		10I/GTP 22/2,5- 6,3
24	28	9,7		10I/GTP 24/2- 9,7
	29	6,3		10I/GTP 24/2,5- 6,3
25	30	5,6		10I/GTP 25/2,5- 5,6
	30	6,3		10I/GTP 25/2,5- 6,3
	30	9,7	•	10I/GTP 25/2,5- 9,7
	30	15		10I/GTP 25/2,5- 15
27	32	4,2		10I/GTP 27/2,5- 4,2
	32	5,6		10I/GTP 27/2,5- 5,6
	32	6,3		10I/GTP 27/2,5- 6,3
	32	9,7		10I/GTP 27/2,5- 9,7
28	32	4,2		10I/GTP 28/2- 4,2
	32	6,3		10I/GTP 28/2- 6,3
	33	5,6	•	10I/GTP 28/2,5- 5,6
	33	6,3		10I/GTP 28/2,5- 6,3
	33	9,7	•	10I/GTP 28/2,5- 9,7
	33	15		10I/GTP 28/2,5- 15
30	35	5,6		10I/GTP 30/2,5- 5,6
	35	6,3		10I/GTP 30/2,5- 6,3
	35	9,7		10I/GTP 30/2,5- 9,7
	35	15		10I/GTP 30/2,5- 15
	35	20		10I/GTP 30/2,5- 20
	35	30		10I/GTP 30/2,5- 30
32	36	6,3		10I/GTP 32/2- 6,3
	37	5,6	•	10I/GTP 32/2,5- 5,6
	37	6,3		10I/GTP 32/2,5- 6,3
33	37	9,7	•	10I/GTP 32/2,5- 9,7
	37	15		10I/GTP 32/2,5- 15
35	39	6,3		10I/GTP 35/2- 6,3
	40	5,6		10I/GTP 35/2,5- 5,6
35	40	6,3		10I/GTP 35/2,5- 6,3
	40	9,7		10I/GTP 35/2,5- 9,7
35	40	15		10I/GTP 35/2,5- 15
	40	20		10I/GTP 35/2,5- 20

d	D	L	ISO 10766	Reference
36	40	6,3		10I/GTP 36/2- 6,3
	40	13		10I/GTP 36/2- 13
	41	5,6	•	10I/GTP 36/2,5- 5,6
	41	6,3		10I/GTP 36/2,5- 6,3
37	41	9,7	•	10I/GTP 36/2,5- 9,7
	41	15		10I/GTP 36/2,5- 15
38	42	9,7		10I/GTP 37/2,5- 9,7
	43	5,6		10I/GTP 38/2,5- 5,6
40	43	9,7		10I/GTP 38/2,5- 9,7
	44	6,3		10I/GTP 40/2- 6,3
41	44	10		10I/GTP 40/2- 10
	45	5,6	•	10I/GTP 40/2,5- 5,6
	45	6,3		10I/GTP 40/2,5- 6,3
	45	9,7	•	10I/GTP 40/2,5- 9,7
42	45	10		10I/GTP 40/2,5- 10
	45	15	•	10I/GTP 40/2,5- 15
	45	20		10I/GTP 40/2,5- 20
	46	9,7		10I/GTP 40/3- 9,7
44,45	45	8,1		10I/GTP 41/2- 8,1
	45	15		10I/GTP 41/2- 15
	45	20		10I/GTP 41/2- 20
45	45	15	•	10I/GTP 40/2,5- 15
	45	20		10I/GTP 40/2,5- 20
46	46	9,7		10I/GTP 40/3- 9,7
	46	15		10I/GTP 40/3- 15
49	47	5,6		10I/GTP 42/2,5- 5,6
	50,8	12,7		10I/GTP 44,45/3,1-12,7
50	49	25		10I/GTP 45/2- 25
	50	5,6	•	10I/GTP 45/2,5- 5,6
	50	6,3		10I/GTP 45/2,5- 6,3
	50	9,7	•	10I/GTP 45/2,5- 9,7
50	50	12,7		10I/GTP 45/2,5- 12,7
	50	15	•	10I/GTP 45/2,5- 15
50	50	20		10I/GTP 45/2,5- 20
	50	25	•	10I/GTP 45/2,5- 25
	50	30		10I/GTP 45/2,5- 30
50	50	6,3		10I/GTP 46/2- 6,3
	50	10		10I/GTP 46/2- 10
	50	15		10I/GTP 46/2- 15
50	55	16		10I/GTP 49/3- 16
	53	8		10I/GTP 50/1,5- 8,0
50	54	6,3		10I/GTP 50/2- 6,3
	55	5,6	•	10I/GTP 50/2,5- 5,6

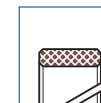
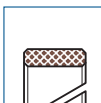


d	D	L	ISO 10766	Reference
50	55	6,3	•	10I/GTP 50/2,5- 6,3
	55	9,7		10I/GTP 50/2,5- 9,7
	55	15		10I/GTP 50/2,5-15
	55	20		10I/GTP 50/2,5-20
	55	29,8		10I/GTP 50/2,5-30
	56	9,7		10I/GTP 50/3- 9,7
55	60	5,6		10I/GTP 55/2,5- 5,6
	60	6,3		10I/GTP 55/2,5- 6,3
	60	9,7		10I/GTP 55/2,5- 9,7
	60	15		10I/GTP 55/2,5-15
	60	20		10I/GTP 55/2,5-20
	60	25		10I/GTP 55/2,5-25
55,4	60	6,35		10I/GTP 55,4/2,3- 6,35
56	61	5,6	•	10I/GTP 56/2,5- 5,6
	61	9,7		10I/GTP 56/2,5- 9,7
	61	15		10I/GTP 56/2,5-15
57	62	15		10I/GTP 57/2,5-15
57,15	63,5	12,7		10I/GTP 57,15/3,1-12,7
58	63	5,6		10I/GTP 58/2,5- 5,6
	63	6,3		10I/GTP 58/2,5- 6,3
	63	9,7		10I/GTP 58/2,5- 9,7
	63	12,7		10I/GTP 58/2,5-12,7
	63	15		10I/GTP 58/2,5-15
	63	20		10I/GTP 58/2,5-20
58	63	25		10I/GTP 58/2,5-25
58,5	63,5	9,7		10I/GTP 58,5/2,5- 9,7
60	65	5,6		10I/GTP 60/2,5- 5,6
	65	6,3		10I/GTP 60/2,5- 6,3
	65	9,7		10I/GTP 60/2,5- 9,7
	65	13		10I/GTP 60/2,5-13
	65	15		10I/GTP 60/2,5-15
	65	16		10I/GTP 60/2,5-16
65	65	20		10I/GTP 60/2,5-20
	65	25		10I/GTP 60/2,5-25
	65	31,8		10I/GTP 60/2,5-31,8
	65	35		10I/GTP 60/2,5-35
63	67	6,3	•	10I/GTP 63/2- 6,3
	68	6,3		10I/GTP 63/2,5- 6,3
	68	9,7		10I/GTP 63/2,5- 9,7
	68	15		10I/GTP 63/2,5-15
68	25			10I/GTP 63/2,5-25

d	D	L	ISO 10766	Reference
63,5	69,85	12,7		10I/GTP 63,5/3,1-12,7
64	70	12,7		10I/GTP 64/3-12,7
	70	16		10I/GTP 64/3-16
65	69	35		10I/GTP 65/2-35
	70	5,6		10I/GTP 65/2,5- 5,6
	70	6,3		10I/GTP 65/2,5- 6,3
	70	9,7		10I/GTP 65/2,5- 9,7
	70	15		10I/GTP 65/2,5-15
	70	16		10I/GTP 65/2,5-16
	70	20		10I/GTP 65/2,5-20
	70	25		10I/GTP 65/2,5-25
	70	30		10I/GTP 65/2,5-30
	71	12,7		10I/GTP 65/3-12,7
66	70	10,2		10I/GTP 66/2-10,2
	71	10,2		10I/GTP 66/2,5-10,2
69	75	20		10I/GTP 69/3-20
70	75	5,6	•	10I/GTP 70/2,5- 5,6
	75	9,7		10I/GTP 70/2,5- 9,7
	75	15		10I/GTP 70/2,5-15
	75	15,2		10I/GTP 70/2,5-15,2
	75	16		10I/GTP 70/2,5-16
	75	20		10I/GTP 70/2,5-20
	75	25		10I/GTP 70/2,5-25
	75	50,2		10I/GTP 70/2,5-50,2
	76	12,7		10I/GTP 70/3-12,7
	76	12,7		10I/GTP 70/3-12,7
74	80	12,7		10I/GTP 74/3-12,7
	80	20		10I/GTP 74/3-20
	80	25		10I/GTP 74/3-25
	80	25		10I/GTP 74/3-25
75	79	8,1		10I/GTP 75/2- 8,1
	80	5,6		10I/GTP 75/2,5- 5,6
	80	6,3		10I/GTP 75/2,5- 6,3
	80	8,1		10I/GTP 75/2,5- 8,1
	80	9,7		10I/GTP 75/2,5- 9,7
	80	13		10I/GTP 75/2,5-13
	80	15		10I/GTP 75/2,5-15
	80	20		10I/GTP 75/2,5-20
	80	25		10I/GTP 75/2,5-25
	80	30		10I/GTP 75/2,5-30
76,2	81,2	13		10I/GTP 76,2/2,5-13
79	85	10		10I/GTP 79/3-10

d	D	L	ISO 10766	Reference
80	84	8,1	•	10I/GTP 80/2- 8,1
	85	5,6		10I/GTP 80/2,5- 5,6
	85	9,7		10I/GTP 80/2,5- 9,7
	85	15		10I/GTP 80/2,5-15
	85	15,2		10I/GTP 80/2,5-15,2
	85	16		10I/GTP 80/2,5-16
	85	20	•	10I/GTP 80/2,5-20
	85	25		10I/GTP 80/2,5-25
	85	50		10I/GTP 80/2,5-50
	85	50,2		10I/GTP 80/2,5-50,2
	86	12,7		10I/GTP 80/3-12,7
	86	19,2		10I/GTP 80/3-19,2
84	90	12,7		10I/GTP 84/3-12,7
	90	25		10I/GTP 84/3-25
85	90	5,6		10I/GTP 85/2,5- 5,6
	90	9,7		10I/GTP 85/2,5- 9,7
	90	15		10I/GTP 85/2,5-15
	90	20		10I/GTP 85/2,5-20
	90	25		10I/GTP 85/2,5-25
	91	25		10I/GTP 85/3-25
	91	25		10I/GTP 85/3-25
86	90	15		10I/GTP 86/2-15
88	93	9,7		10I/GTP 88/2,5- 9,7
88,9	95,25	12,7		10I/GTP 88,9/3,1-12,7
90	95	9,7	•	10I/GTP 90/2,5- 9,7
	95	15		10I/GTP 90/2,5-15
	95	15,2		10I/GTP 90/2,5-15,2
	95	15,2		10I/GTP 90/2,5-15,2
	95	20		10I/GTP 90/2,5-20
	95	25		10I/GTP 90/2,5-25
	95	50,2		10I/GTP 90/2,5-50,2
	96	12,7		10I/GTP 90/3-12,7
	96	19,2		10I/GTP 90/3-19,2
	100	15		10I/GTP 90/5-15
94	99	9,7		10I/GTP 94/2,5- 9,7
	100	12,7		10I/GTP 94/3-12,7
	100	25		10I/GTP 94/3-25
	100	25		10I/GTP 94/3-25
95	100	5,6		10I/GTP 95/2,5- 5,6
	100	9,7		10I/GTP 95/2,5- 9,7
	100	12,8		10I/GTP 95/2,5-12,8
	100	15		10I/GTP 95/2,5-15
	100	20		10I/GTP 95/2,5-20
	100	25		10I/GTP 95/2,5-25

d	D	L	ISO 10766	Reference
96	100	6,3		10I/GTP 96/2- 6,3
	100	15		10I/GTP 96/2-15
	100	20		10I/GTP 96/2-20
100	105	9,7	•	10I/GTP 100/2,5- 9,7
	105	15		10I/GTP 100/2,5-15
	105	15,2		10I/GTP 100/2,5-15,2
	105	15,2		10I/GTP 100/2,5-15,2
	105	20		10I/GTP 100/2,5-20
	105	25		10I/GTP 100/2,5-25
	105	30		10I/GTP 100/2,5-30
	105	30		10I/GTP 100/2,5-30
	105	60,2		10I/GTP 100/2,5-60,2
	106	9,7		10I/GTP 100/3- 9,7
	106	12,7		10I/GTP 100/3-12,7
	106	12,7		10I/GTP 100/3-12,7
	110	15		10I/GTP 100/5-15
	110	15		10I/GTP 100/5-15
104	110	12,7		10I/GTP 104/3-12,7
	110	25		10I/GTP 104/3-25
105	110	9,7		10I/GTP 105/2,5- 9,7
	110	15		10I/GTP 105/2,5-15
	110	20		10I/GTP 105/2,5-20
	110	20		10I/GTP 105/2,5-20
	110	25		10I/GTP 105/2,5-25
	110	25		10I/GTP 105/2,5-25
	110	25		10I/GTP 105/2,5-25
	110	25		10I/GTP 105/2,5-25
110	115	9,7	•	10I/GTP 110/2,5- 9,7
	115	15		10I/GTP 110/2,5-15
	115	20		10I/GTP 110/2,5-20
	115	20		10I/GTP 110/2,5-20
	115	25		10I/GTP 110/2,5-25
	115	65,2		10I/GTP 110/2,5-65,2
	116	9,7		10I/GTP 110/3- 9,7
	116	9,7		10I/GTP 110/3- 9,7
	116	25,4		10I/GTP 110/3-25,4
	120	15		10I/GTP 110/5-15
	120	15		10I/GTP 110/5-15
	120	15		10I/GTP 110/5-15
114	120	30		10I/GTP 114/3-30
	120	30		10I/GTP 114/3-30
	120	30		10I/GTP 114/3-30
	120	30		10I/GTP 114/3-30
115	120	9,7		10I/GTP 115/2,5- 9,7
	120	15		10I/GTP 115/2,5-15
	120	16		10I/GTP 115/2,5-16
	120	16		10I/GTP 115/2,5-16
	120	20		10I/GTP 115/2,5-20
	120	25		10I/GTP 115/2,5-25
	120	25		10I/GTP 115/2,5-25
	120	25		10I/GTP 115/2,5-25
120	125	9,7		10I/GTP 120/2,5- 9,7
	125	10		10I/GTP 120/2,5-10
	125	15		10I/GTP 120/2,5-15
	125	15		10I/GTP 120/2,5-15
	125	15,2		10I/GTP 120/2,5-15,2
	125	16		10I/GTP 120/2,5-16
	125	20		10I/GTP 120/2,5-20
	125	20		10I/GTP 120/2,5-20

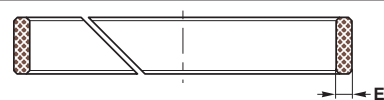
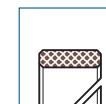
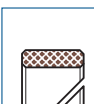


d	D	L	ISO 10766	Reference
120	125	25		10I/GTP 120/2,5-25
	125	70,2		10I/GTP 120/2,5-70,2
	126	12,7		10I/GTP 120/3-12,7
	130	15		10I/GTP 120/5-15
123	130	30		10I/GTP 123/3,5-30
125	130	9,7	•	10I/GTP 125/2,5- 9,7
	130	15	•	10I/GTP 125/2,5-15
	130	16		10I/GTP 125/2,5-16
	130	20		10I/GTP 125/2,5-20
	130	25		10I/GTP 125/2,5-25
	131	15		10I/GTP 125/3-15
	133	25		10I/GTP 125/4-25
130	135	9,7		10I/GTP 130/2,5- 9,7
	135	15		10I/GTP 130/2,5-15
	135	20		10I/GTP 130/2,5-20
	135	25		10I/GTP 130/2,5-25
	136	19,2		10I/GTP 130/3-19,2
133	140	35		10I/GTP 133/3,5-35
134	140	30		10I/GTP 134/3-30
135	140	9,7		10I/GTP 135/2,5- 9,7
	140	15		10I/GTP 135/2,5-15
	140	16		10I/GTP 135/2,5-16
	140	20		10I/GTP 135/2,5-20
	140	25		10I/GTP 135/2,5-25
138	143	15		10I/GTP 138/2,5-15
140	145	9,7	•	10I/GTP 140/2,5- 9,7
	145	15	•	10I/GTP 140/2,5-15
	145	20		10I/GTP 140/2,5-20
140	145	25		10I/GTP 140/2,5-25
	146	12,7		10I/GTP 140/3-12,7
	150	15		10I/GTP 140/5-15
143	150	35		10I/GTP 143/3,5-35
144	150	30		10I/GTP 144/3-30
145	150	9,7		10I/GTP 145/2,5- 9,7
	150	15		10I/GTP 145/2,5-15
	150	20		10I/GTP 145/2,5-20
	150	25		10I/GTP 145/2,5-25
146,06	152,4	12,7		10I/GTP 146,06/3,1-12,7

d	D	L	ISO 10766	Reference
150	155	9,7		10I/GTP 150/2,5- 9,7
	155	15		10I/GTP 150/2,5-15
	155	20		10I/GTP 150/2,5-20
	155	25		10I/GTP 150/2,5-25
	155	30		10I/GTP 150/2,5-30
155	160	9,7		10I/GTP 155/2,5- 9,7
	160	15		10I/GTP 155/2,5-15
	160	16		10I/GTP 155/2,5-16
	160	20		10I/GTP 155/2,5-20
	160	25		10I/GTP 155/2,5-25
160	165	9,7	•	10I/GTP 160/2,5- 9,7
	165	15	•	10I/GTP 160/2,5-15
	165	20		10I/GTP 160/2,5-20
	165	25	•	10I/GTP 160/2,5-25
	168	25		10I/GTP 160/4-25
165	170	9,7		10I/GTP 165/2,5- 9,7
	170	15		10I/GTP 165/2,5-15
	170	20		10I/GTP 165/2,5-20
	170	25		10I/GTP 165/2,5-25
170	175	6,3		10I/GTP 170/2,5- 6,3
	175	9,7		10I/GTP 170/2,5- 9,7
	175	15		10I/GTP 170/2,5-15
	175	20		10I/GTP 170/2,5-20
	175	25		10I/GTP 170/2,5-25
173	178	25		10I/GTP 173/2,5-25
174	180	19,2		10I/GTP 174/3-19,2
175	180	9,7		10I/GTP 175/2,5- 9,7
	180	15		10I/GTP 175/2,5-15
	180	16		10I/GTP 175/2,5-16
175	180	20		10I/GTP 175/2,5-20
	180	25		10I/GTP 175/2,5-25
180	185	9,7		10I/GTP 180/2,5- 9,7
	185	15	•	10I/GTP 180/2,5-15
	185	20		10I/GTP 180/2,5-20
	185	25		10I/GTP 180/2,5-25
	186	15		10I/GTP 180/3-15
	186	19,2		10I/GTP 180/3-19,2
	188	30		10I/GTP 180/4-30
184	190	19,2		10I/GTP 184/3-19,2

d	D	L	ISO 10766	Reference
185	190	9,7		10I/GTP 185/2,5- 9,7
	190	15		10I/GTP 185/2,5-15
	190	20		10I/GTP 185/2,5-20
	190	25		10I/GTP 185/2,5-25
190	195	9,7		10I/GTP 190/2,5- 9,7
	195	15		10I/GTP 190/2,5-15
	195	20		10I/GTP 190/2,5-20
	195	25		10I/GTP 190/2,5-25
194	200	20		10I/GTP 194/3-20
195	200	9,7		10I/GTP 195/2,5- 9,7
	200	15		10I/GTP 195/2,5-15
	200	20		10I/GTP 195/2,5-20
195	200	25		10I/GTP 195/2,5-25
196,85	203,2	12,7		10I/GTP 196,85/3,1-12,7
198	203	20		10I/GTP 198/2,5-20
200	205	15	•	10I/GTP 200/2,5-15
	205	20		10I/GTP 200/2,5-20
	205	25	•	10I/GTP 200/2,5-25
204	210	19,2		10I/GTP 204/3-19,2
205	210	15		10I/GTP 205/2,5-15
	210	20		10I/GTP 205/2,5-20
	210	25		10I/GTP 205/2,5-25
210	215	15		10I/GTP 210/2,5-15
	215	20		10I/GTP 210/2,5-20
	215	25		10I/GTP 210/2,5-25
210	220	30		10I/GTP 210/5-30
214	220	20		10I/GTP 214/3-20
215	220	15		10I/GTP 215/2,5-15
	220	20		10I/GTP 215/2,5-20
	220	25		10I/GTP 215/2,5-25
220	225	15	•	10I/GTP 220/2,5-15
	225	20		10I/GTP 220/2,5-20
	225	25	•	10I/GTP 220/2,5-25
225	230	15		10I/GTP 225/2,5-15
	230	20		10I/GTP 225/2,5-20
	230	25		10I/GTP 225/2,5-25

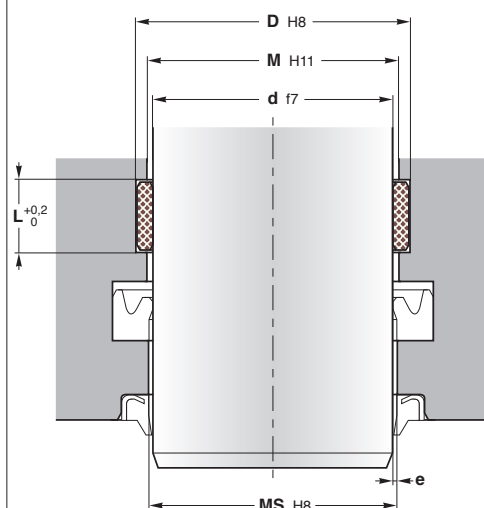
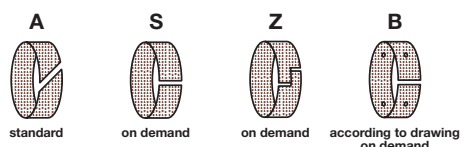
d	D	L	ISO 10766	Reference
230	235	15		10I/GTP 230/2,5-15
	235	20		10I/GTP 230/2,5-20
235	240	15		10I/GTP 235/2,5-15
	240	20		10I/GTP 235/2,5-20
	240	25		10I/GTP 235/2,5-25
240	245	15		10I/GTP 240/2,5-15
	245	25		10I/GTP 240/2,5-25
245	250	15		10I/GTP 245/2,5-15
	250	20		10I/GTP 245/2,5-20
	250	25		10I/GTP 245/2,5-25
250	255	20		10I/GTP 250/2,5-20
	255	25	•	10I/GTP 250/2,5-25
	255	30		10I/GTP 250/2,5-30
	260	30		10I/GTP 250/5-30
255	260	9,7		10I/GTP 255/2,5- 9,7
	260	15		10I/GTP 255/2,5-15
	260	25		10I/GTP 255/2,5-25
260	265	25		10I/GTP 260/2,5-25
275	280	25		10I/GTP 275/2,5-25
280	285	15	•	10I/GTP 280/2,5-15
295	300	20		10I/GTP 295/2,5-20
	300	25		10I/GTP 295/2,5-25
315	320	25		10I/GTP 315/2,5-25
320	325	15	•	10I/GTP 320/2,5-15
	325	25		10I/GTP 320/2,5-25
470	480	30		10I/GTP 470/5-30

**10I/GTP1**

Example of item code

10I/GTP1 - 25 097 - 1050 - A
 Sealtech code L (mm x 10) E (mm x 10) d (mm x 10) Type of cut

Type of cut



✕ Machining of housings: see pages 45-49

The cutting angle of 10I/GTP1 is 45°, not to confuse with the 10I/GTP which is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
 The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

E (mm)	M (mm)
E ≤ 2	d + 1
2 < E < 4	d + 1,8
E ≥ 4	d + 3

10I/GTP1 guide rings are made of synthetic fabric reinforced phenolic resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile hydraulics and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

An increased sliding ability which results in an improvement of the stick-slip effect is achieved by **inclusion of PTFE** in the compound.

Guide rings are **easier to install** than guide strips and are, therefore, recommended by us.

Operating conditions ✕ see page 8

Compressive strength DIN 53454 320 N/mm²
 Max. permissible radial load at 25°C: ≤ 100 N/mm²
 60°C: ≤ 50 N/mm²
 Temperature -30°C to 120°C
 Speed ≤ 1 m/s
 Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring synthetic fabric reinforced phenolic resin + PTFE
 Colour light brown

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple groove, easy fitting
 Very high load capacity
 Reduced friction (PTFE)
 No water absorption
 High wear capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
d x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

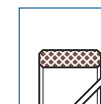
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18	23	5,6		10I/GTP1-25056-0180-A
20	24	6,3		10I/GTP1-20063-0200-A
	25	5,6		10I/GTP1-25056-0200-A
	25	6,3		10I/GTP1-25063-0200-A
22	27	5,6		10I/GTP1-25056-0220-A
	27	6,3		10I/GTP1-25063-0220-A
25	29	6,3		10I/GTP1-20063-0250-A
	30	5,6	•	10I/GTP1-25056-0250-A
	30	6,3		10I/GTP1-25063-0250-A
25	30	9,7		10I/GTP1-25097-0250-A
28	33	5,6	•	10I/GTP1-25056-0280-A
	33	6,3		10I/GTP1-25063-0280-A
	33	9,7		10I/GTP1-25097-0280-A
30	34	6,3		10I/GTP1-20063-0300-A
	34	8,1		10I/GTP1-20081-0300-A
	35	5,6		10I/GTP1-25056-0300-A
30	35	9,7		10I/GTP1-25097-0300-A
	35	15		10I/GTP1-25150-0300-A
32	36	6,3		10I/GTP1-20063-0320-A
	37	5,6	•	10I/GTP1-25056-0320-A
	37	6,3		10I/GTP1-25063-0320-A
	37	9,7	•	10I/GTP1-25097-0320-A
35	40	5,6		10I/GTP1-25056-0350-A
	40	6,3		10I/GTP1-25063-0350-A
	40	9,7		10I/GTP1-25097-0350-A
	40	15		10I/GTP1-25150-0350-A
36	41	5,6	•	10I/GTP1-25056-0360-A
	41	6,3		10I/GTP1-25063-0360-A
	41	9,7	•	10I/GTP1-25097-0360-A
	41	15		10I/GTP1-25150-0360-A
40	44	6,3		10I/GTP1-20063-0400-A
	44	8,1		10I/GTP1-20081-0400-A
	44	9,7		10I/GTP1-20097-0400-A
	45	5,6	•	10I/GTP1-25056-0400-A
	45	6,3		10I/GTP1-25063-0400-A
	45	9,7	•	10I/GTP1-25097-0400-A

d	D	L	ISO 10766	Reference
40	45	15		10I/GTP1-25150-0400-A
	45	20		10I/GTP1-25200-0400-A
	45	25	•	10I/GTP1-25250-0400-A
42	47	9,7		10I/GTP1-25097-0420-A
45	50	5,6	•	10I/GTP1-25056-0450-A
	50	6,3		10I/GTP1-25063-0450-A
	50	9,7	•	10I/GTP1-25097-0450-A
	50	15		10I/GTP1-25150-0450-A
	50	20		10I/GTP1-25200-0450-A
	50	25		10I/GTP1-25250-0450-A
50	54	6,3		10I/GTP1-20063-0500-A
	54	8,1		10I/GTP1-20081-0500-A
	54	9,7		10I/GTP1-20097-0500-A
	55	5,6	•	10I/GTP1-25056-0500-A
	55	9,7	•	10I/GTP1-25097-0500-A
	55	15		10I/GTP1-25150-0500-A
	55	20		10I/GTP1-25200-0500-A
52	57	6,3		10I/GTP1-25063-0520-A
55	60	5,6		10I/GTP1-25056-0550-A
	60	9,7		10I/GTP1-25097-0550-A
	60	15		10I/GTP1-25150-0550-A
	60	20		10I/GTP1-25200-0550-A
56	61	5,6	•	10I/GTP1-25056-0560-A
	61	9,7	•	10I/GTP1-25097-0560-A
	61	15	•	10I/GTP1-25150-0560-A
	61	20		10I/GTP1-25200-0560-A
60	65	5,6		10I/GTP1-25056-0600-A
	65	9,7		10I/GTP1-25097-0600-A
	65	15		10I/GTP1-25150-0600-A
	65	20		10I/GTP1-25200-0600-A
	65	25		10I/GTP1-25250-0600-A
63	67	6,3		10I/GTP1-20063-0630-A
	67	8,1		10I/GTP1-20081-0630-A
	67	9,7		10I/GTP1-20097-0630-A
	68	9,7	•	10I/GTP1-25097-0630-A
	68	15		10I/GTP1-25150-0630-A



10I/GTP1

Phenolic resin/synthetic fabric guide ring for rods

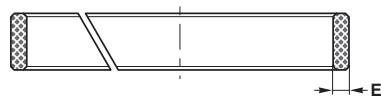


d	D	L	ISO 10766	Reference
65	70	5,6		10I/GTP1-25056-0650-A
	70	6,3		10I/GTP1-25063-0650-A
	70	9,7		10I/GTP1-25097-0650-A
65	70	15		10I/GTP1-25150-0650-A
	70	20		10I/GTP1-25200-0650-A
	70	25		10I/GTP1-25250-0650-A
70	74	8,1		10I/GTP1-20081-0700-A
	74	9,7		10I/GTP1-20097-0700-A
	75	5,6	•	10I/GTP1-25056-0700-A
	75	6,3		10I/GTP1-25063-0700-A
	75	9,7	•	10I/GTP1-25097-0700-A
	75	15	•	10I/GTP1-25150-0700-A
	75	20		10I/GTP1-25200-0700-A
	75	25	•	10I/GTP1-25250-0700-A
75	79	8,1		10I/GTP1-20081-0750-A
	80	5,6		10I/GTP1-25056-0750-A
	80	6,3		10I/GTP1-25063-0750-A
	80	9,7		10I/GTP1-25097-0750-A
	80	15		10I/GTP1-25150-0750-A
	80	20		10I/GTP1-25200-0750-A
	80	25		10I/GTP1-25250-0750-A
	80	45,2		10I/GTP1-25452-0750-A
80	84	9,7		10I/GTP1-20097-0800-A
	85	5,6		10I/GTP1-25056-0800-A
	85	9,7	•	10I/GTP1-25097-0800-A
	85	15	•	10I/GTP1-25150-0800-A
	85	20		10I/GTP1-25200-0800-A
	85	25	•	10I/GTP1-25250-0800-A
85	90	5,6		10I/GTP1-25056-0850-A
	90	9,7		10I/GTP1-25097-0850-A
	90	15		10I/GTP1-25150-0850-A
	90	20		10I/GTP1-25200-0850-A
	90	25		10I/GTP1-25250-0850-A
90	94	9,7		10I/GTP1-20097-0900-A
	95	5,6		10I/GTP1-25056-0900-A
	95	9,7	•	10I/GTP1-25097-0900-A
	95	15	•	10I/GTP1-25150-0900-A
	95	20		10I/GTP1-25200-0900-A
	95	25		10I/GTP1-25250-0900-A

d	D	L	ISO 10766	Reference
95	100	9,7		10I/GTP1-25097-0950-A
	100	15		10I/GTP1-25150-0950-A
	100	20		10I/GTP1-25200-0950-A
	100	25		10I/GTP1-25250-0950-A
100	104	9,7		10I/GTP1-20097-1000-A
	105	9,7	•	10I/GTP1-25097-1000-A
	105	15	•	10I/GTP1-25150-1000-A
	105	20		10I/GTP1-25200-1000-A
	105	25		10I/GTP1-25250-1000-A
	106	25,4		10I/GTP1-30254-1000-A
105	110	9,7		10I/GTP1-25097-1050-A
	110	15		10I/GTP1-25150-1050-A
	110	20		10I/GTP1-25200-1050-A
	110	25		10I/GTP1-25250-1050-A
110	114	9,7		10I/GTP1-20097-1100-A
	115	9,7	•	10I/GTP1-25097-1100-A
	115	15	•	10I/GTP1-25150-1100-A
	115	20		10I/GTP1-25200-1100-A
	115	25		10I/GTP1-25250-1100-A
115	120	15		10I/GTP1-25150-1150-A
	120	20		10I/GTP1-25200-1150-A
	120	25		10I/GTP1-25250-1150-A
120	125	15		10I/GTP1-25150-1200-A
	125	20		10I/GTP1-25200-1200-A
	125	25		10I/GTP1-25250-1200-A
125	130	15	•	10I/GTP1-25150-1250-A
	130	20		10I/GTP1-25200-1250-A
	130	25		10I/GTP1-25250-1250-A
130	135	15		10I/GTP1-25150-1300-A
	135	20		10I/GTP1-25200-1300-A
	135	25		10I/GTP1-25250-1300-A
135	140	15		10I/GTP1-25150-1350-A
140	145	9,7		10I/GTP1-25097-1400-A
	145	15	•	10I/GTP1-25150-1400-A
	145	20		10I/GTP1-25200-1400-A
	145	25		10I/GTP1-25250-1400-A
150	155	15		10I/GTP1-25150-1500-A
	155	20		10I/GTP1-25200-1500-A
	155	25		10I/GTP1-25250-1500-A

d	D	L	ISO 10766	Reference
155	160	15		10I/GTP1-25150-1550-A
160	165	9,7	•	10I/GTP1-25097-1600-A
	165	15	•	10I/GTP1-25150-1600-A
	165	25	•	10I/GTP1-25250-1600-A
163	168	15		10I/GTP1-25150-1630-A
170	175	25		10I/GTP1-25250-1700-A
180	185	15	•	10I/GTP1-25150-1800-A
	185	20		10I/GTP1-25200-1800-A
	185	25		10I/GTP1-25250-1800-A
183	188	15		10I/GTP1-25150-1830-A
185	190	15		10I/GTP1-25150-1850-A
200	205	15		10I/GTP1-25150-2000-A
	205	25	•	10I/GTP1-25250-2000-A
210	215	9,7		10I/GTP1-25097-2100-A
	215	15		10I/GTP1-25150-2100-A
215	220	15		10I/GTP1-25150-2150-A
220	225	25	•	10I/GTP1-25250-2200-A
240	245	15		10I/GTP1-25150-2400-A
	245	25		10I/GTP1-25250-2400-A

d	D	L	ISO 10766	Reference
245	250	15		10I/GTP1-25150-2450-A
250	255	25	•	10I/GTP1-25250-2500-A
275	280	20		10I/GTP1-25200-2750-A
280	285	25	•	10I/GTP1-25250-2800-A
285	290	25		10I/GTP1-25250-2850-A
290	295	15		10I/GTP1-25150-2900-A
300	305	15		10I/GTP1-25150-3000-A
	305	25		10I/GTP1-25250-3000-A
310	315	25		10I/GTP1-25250-3100-A
315	320	15		10I/GTP1-25150-3150-A
320	325	25	•	10I/GTP1-25250-3200-A
330	335	25		10I/GTP1-25250-3300-A
360	365	25	•	10I/GTP1-25250-3600-A
380	385	25		10I/GTP1-25250-3800-A
400	405	25		10I/GTP1-25250-4000-A
530	535	25		10I/GTP1-25250-5300-A

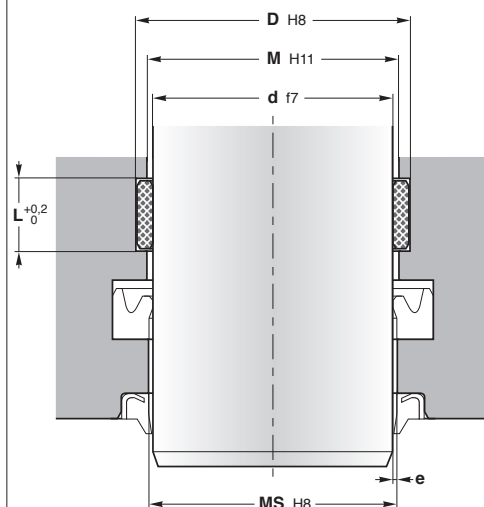
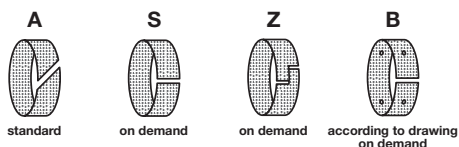


10I/GTP-HT

Example of item code

10I/GTP-HT - 25 150 - 1050 - A
 Sealtech code L (mm x 10) E (mm x 10) d (mm x 10) Type of cut

Type of cut



✕ Machining of housings: see pages 45-49

10I/GTP-HT guide rings are made of aramid fabric reinforced phenolic resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile hydraulics and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

An increased sliding ability which results in an improvement of the stick-slip effect is achieved by **inclusion of graphite** in the compound.

Guide rings are **easier to install** than guide strips and are, therefore, recommended by us.

The 10I/GTP-HT guide rings are used for applications at **high temperatures** (up to 200°C).

Operating conditions ✕ see page 8

Compressive strength DIN 53454 380 N/mm²
 Max. permissible radial load at 25°C: ≤ 120 N/mm²
 60°C: ≤ 60 N/mm²

Temperature -40°C to 200°C

Speed ≤ 1 m/s

Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring aramid fabric reinforced
 high temperature phenolic resin
 + graphite

Colour grey

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple groove, easy fitting
 Very high load capacity
 Reduced friction (graphite)
 For high temperature applications
 No water absorption
 High wear capacity

Please contact us for applications approaching maximum values.

Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
d x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

d	D	L	ISO 10766	Reference
20	25	5,6		10I/GTP-HT-25056-0200-A
25	30	5,6	•	10I/GTP-HT-25056-0250-A
30	35	5,6		10I/GTP-HT-25056-0300-A
35	40	5,6		10I/GTP-HT-25056-0350-A
	40	9,7		10I/GTP-HT-25097-0350-A
40	45	9,7	•	10I/GTP-HT-25097-0400-A
45	50	9,7	•	10I/GTP-HT-25097-0450-A
50	55	9,7	•	10I/GTP-HT-25097-0500-A
55	60	9,7		10I/GTP-HT-25097-0550-A
58	63	9,7		10I/GTP-HT-25097-0580-A
60	65	9,7		10I/GTP-HT-25097-0600-A
65	70	9,7		10I/GTP-HT-25097-0650-A
70	75	9,7	•	10I/GTP-HT-25097-0700-A
	75	15	•	10I/GTP-HT-25150-0700-A
75	80	9,7		10I/GTP-HT-25097-0750-A
	80	15		10I/GTP-HT-25150-0750-A
80	85	9,7	•	10I/GTP-HT-25097-0800-A
	85	15	•	10I/GTP-HT-25150-0800-A

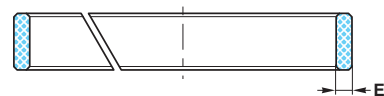
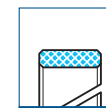
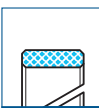
d	D	L	ISO 10766	Reference
85	90	9,7		10I/GTP-HT-25097-0850-A
	90	15		10I/GTP-HT-25150-0850-A
90	95	9,7	•	10I/GTP-HT-25097-0900-A
	95	15	•	10I/GTP-HT-25150-0900-A
95	100	9,7		10I/GTP-HT-25097-0950-A
	100	15		10I/GTP-HT-25150-0950-A
100	105	15	•	10I/GTP-HT-25150-1000-A
105	110	15		10I/GTP-HT-25150-1050-A
110	115	15	•	10I/GTP-HT-25150-1100-A
115	120	15		10I/GTP-HT-25150-1150-A
120	125	15		10I/GTP-HT-25150-1200-A
125	130	15	•	10I/GTP-HT-25150-1250-A
135	140	15		10I/GTP-HT-25150-1350-A
	140	25		10I/GTP-HT-25250-1350-A
140	145	15	•	10I/GTP-HT-25150-1400-A
	145	25		10I/GTP-HT-25250-1400-A
145	150	15		10I/GTP-HT-25150-1450-A
155	160	15		10I/GTP-HT-25150-1550-A
	160	25		10I/GTP-HT-25250-1550-A
160	165	25	•	10I/GTP-HT-25250-1600-A
175	180	25		10I/GTP-HT-25250-1750-A

The cutting angle of 10I/GTP-HT is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
 The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

E (mm)	M (mm)
E ≤ 2	d + 1
2 < E < 4	d + 1,8
E ≥ 4	d + 3

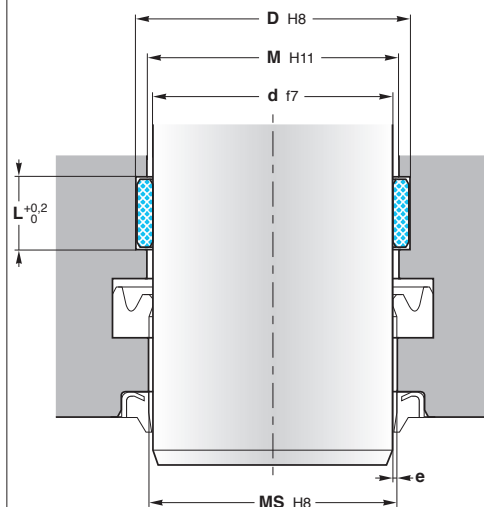
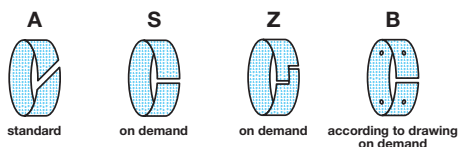


10I/GTN

Example of item code

10I/GTN - 25 200 - 1050 - A
 Sealtech code L (mm x 10) E (mm x 10) d (mm x 10) Type of cut

Type of cut



✕ Machining of housings: see pages 45-49

The cutting angle of 10I/GTN is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
 The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

E (mm)	M (mm)
$E \leq 2$	$d + 1$
$2 < E < 4$	$d + 1,8$
$E \geq 4$	$d + 3$

10I/GTN guide rings are made of polyester fabric reinforced polyester resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile hydraulics and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

An increased sliding ability which results in an improvement of the stick-slip effect is achieved by **inclusion of PTFE** in the compound.

Guide rings are **easier to install** than guide strips and are, therefore, recommended by us.

Operating conditions

✕ see page 8

Compressive strength DIN 53454 340 N/mm²
 Max. permissible radial load at 25°C: ≤ 110 N/mm²
 60°C: ≤ 55 N/mm²
 Temperature -30°C to 120°C
 Speed ≤ 1 m/s
 Fluids ✕ see pages 22-45

Materials

✕ see pages 10-19

Guide ring polyester fabric reinforced
 polyester resin + PTFE
 Colour light blue

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Supplied preformed or by the meter (rolls 10GTN)
 Easy machining and assembly
 Reduced friction
 High load capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

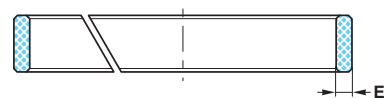
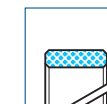
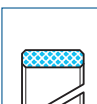
Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
d x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

d	D	L	ISO 10766	Reference
20	25	4,2		10I/GTN-25042-0200-A
	25	5,6		10I/GTN-25056-0200-A
	25	9,7		10I/GTN-25097-0200-A
27	32	4,2		10I/GTN-25042-0207-A
30	35	5,6		10I/GTN-25056-0300-A
32	36	5,6		10I/GTN-20056-0320-A
	37	6,3		10I/GTN-25063-0320-A
35	40	5,6		10I/GTN-25056-0350-A
	40	8,1		10I/GTN-25081-0350-A
	40	9,7		10I/GTN-25097-0350-A
36	41	9,7	•	10I/GTN-25097-0360-A
40	45	5,6		10I/GTN-25056-0400-A
	45	9,7	•	10I/GTN-25097-0400-A
	45	15		10I/GTN-25150-0400-A
45	49	9,7		10I/GTN-20097-0450-A
	50	5,6	•	10I/GTN-25056-0450-A
	50	6,3		10I/GTN-25063-0450-A
	50	9,7	•	10I/GTN-25097-0450-A
	50	15		10I/GTN-25150-0450-A
50	55	5,6	•	10I/GTN-25056-0500-A
	55	9,7	•	10I/GTN-25097-0500-A
51	55	9,7		10I/GTN-20097-0510-A
55	60	5,6		10I/GTN-25056-0550-A
	60	9,7		10I/GTN-25097-0550-A
56	61	9,7	•	10I/GTN-25097-0560-A
	61	15	•	10I/GTN-25150-0560-A
58	63	9,7		10I/GTN-25097-0580-A
60	65	9,7		10I/GTN-25097-0600-A
63,5	68,5	25		10I/GTN-25250-0635-A
65	70	9,7		10I/GTN-25097-0650-A
	70	15		10I/GTN-25150-0650-A
70	75	9,7	•	10I/GTN-25097-0700-A
	75	40		10I/GTN-25400-0700-A
75	80	9,7		10I/GTN-25097-0750-A
	80	15		10I/GTN-25150-0750-A

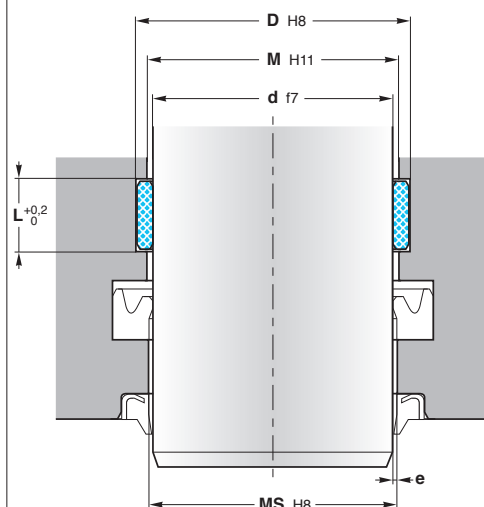
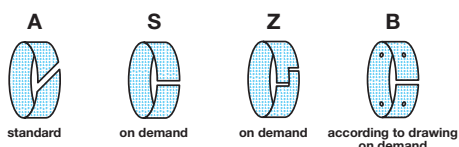
d	D	L	ISO 10766	Reference
80	85	9,7	•	10I/GTN-25097-0800-A
	85	15	•	10I/GTN-25150-0800-A
85	90	5,6		10I/GTN-25056-0850-A
	90	9,7		10I/GTN-25097-0850-A
90	95	9,7	•	10I/GTN-25097-0900-A
	95	15	•	10I/GTN-25150-0900-A
	95	25		10I/GTN-25250-0900-A
95	100	5,6		10I/GTN-25056-0950-A
	100	9,7		10I/GTN-25097-0950-A
	100	15		10I/GTN-25150-0950-A
100	105	9,7	•	10I/GTN-25097-1000-A
	105	15	•	10I/GTN-25150-1000-A
105	110	20		10I/GTN-25200-1050-A
107	112	9,7		10I/GTN-25097-1070-A
110	115	9,7	•	10I/GTN-25097-1100-A
	115	15	•	10I/GTN-25150-1100-A
115	120	9,7		10I/GTN-25097-1150-A
	120	15		10I/GTN-25150-1150-A
	120	20		10I/GTN-25200-1150-A
	120	25		10I/GTN-25250-1150-A
120	125	9,7		10I/GTN-25097-1200-A
	125	15		10I/GTN-25150-1200-A
	125	20		10I/GTN-25200-1200-A
	125	25		10I/GTN-25250-1200-A
125	130	9,7	•	10I/GTN-25097-1250-A
	130	15	•	10I/GTN-25150-1250-A
130	135	9,7		10I/GTN-25097-1300-A
	135	15		10I/GTN-25150-1300-A
135	140	9,7		10I/GTN-25097-1350-A
	140	25		10I/GTN-25250-1350-A
140	145	9,7	•	10I/GTN-25097-1400-A
	145	15	•	10I/GTN-25150-1400-A
150	155	15		10I/GTN-25150-1500-A
155	160	9,7		10I/GTN-25097-1550-A
	160	15		10I/GTN-25150-1550-A

**10I/GTN**

Example of item code

10I/GTN - 25 200 - 1050 - A
 Sealtech code L (mm x 10) E (mm x 10) d (mm x 10) Type of cut

Type of cut



✕ Machining of housings: see pages 45-49

The cutting angle of 10I/GTN is 30°.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
 The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

E (mm)	M (mm)
$E \leq 2$	$d + 1$
$2 < E < 4$	$d + 1,8$
$E \geq 4$	$d + 3$

10I/GTN guide rings are made of polyester fabric reinforced polyester resin. They prevent metallic contact of the machine parts and absorb the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile hydraulics and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

An increased sliding ability which results in an improvement of the stick-slip effect is achieved by **inclusion of PTFE** in the compound.

Guide rings are **easier to install** than guide strips and are, therefore, recommended by us.

Operating conditions

✕ see page 8

Compressive strength DIN 53454 340 N/mm²
 Max. permissible radial load at 25°C: ≤ 110 N/mm²
 60°C: ≤ 55 N/mm²
 Temperature -30°C to 120°C
 Speed ≤ 1 m/s
 Fluids

✕ see pages 22-45

Materials

✕ see pages 10-19

Guide ring polyester fabric reinforced
 polyester resin + PTFE
 Colour light blue

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Supplied preformed or by the meter (rolls 10GTN)
 Easy machining and assembly
 Reduced friction
 High load capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

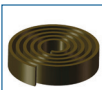
Calculation of the permissible radial force

$$F = (p \times d \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
d x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

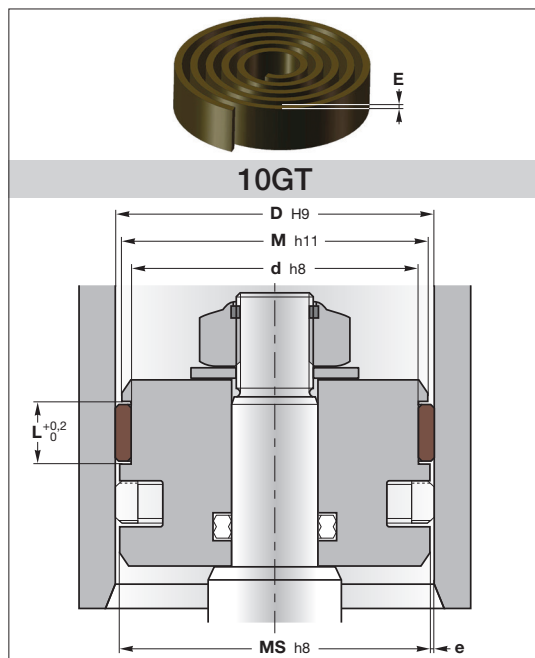
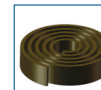
d	D	L	ISO 10766	Reference
160	165	9,7	•	10I/GTN-25097-1600-A
	165	15	•	10I/GTN-25150-1600-A
	165	25	•	10I/GTN-25250-1600-A
165	170	15		10I/GTN-25150-1650-A
	170	25		10I/GTN-25250-1650-A
167	172	15		10I/GTN-25150-1670-A
170	175	15		10I/GTN-25150-1700-A
175	180	9,7		10I/GTN-25097-1750-A
	180	15		10I/GTN-25150-1750-A
180	185	15	•	10I/GTN-25150-1800-A
190	195	15		10I/GTN-25150-1900-A
195	200	15		10I/GTN-25150-1950-A
	200	25		10I/GTN-25250-1950-A
200	205	15	•	10I/GTN-25150-2000-A
	205	25	•	10I/GTN-25250-2000-A
	208	25		10I/GTN-40250-2000-A
210	215	15		10I/GTN-25150-2100-A

d	D	L	ISO 10766	Reference
215	220	15		10I/GTN-25150-2150-A
220	225	15	•	10I/GTN-25150-2200-A
224	229	15		10I/GTN-25150-2240-A
225	230	15		10I/GTN-25150-2250-A
230	235	15		10I/GTN-25150-2300-A
232	240	25		10I/GTN-40250-2320-A
244	250	20		10I/GTN-30200-2440-A
275	280	25		10I/GTN-25250-2750-A
280	285	25	•	10I/GTN-25250-2800-A
315	320	25		10I/GTN-25250-3150-A
322	330	25		10I/GTN-40250-3220-A
360	365	25	•	10I/GTN-25250-3600-A
375	380	25		10I/GTN-25250-3750-A
450	455	25		10I/GTN-25250-4500-A
470	475	25		10I/GTN-25250-4700-A

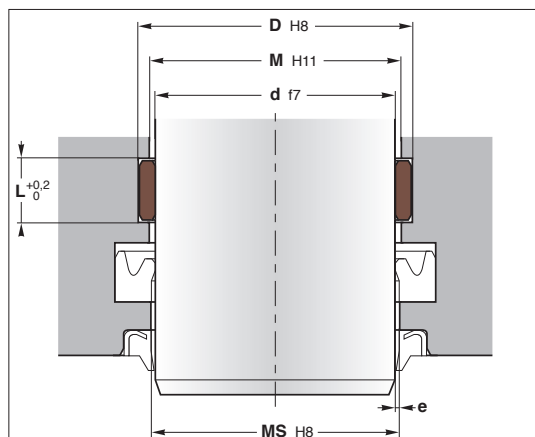


10GT

PTFE filled guide strip

**SEALTECH**
Hydraulic Seals Technology

E (mm)	M (mm)
1,5	D - 0,8
2	D - 1,2
2,5	D - 1,6
3	D - 2
4	D - 2,5



✕ Machining of housings: see pages 45-49

E (mm)	M (mm)
1,5	d + 0,8
2	d + 1,2
2,5	d + 1,6
3	d + 2
4	d + 2,5

10GT guide strip are used as piston or rod guides due to their outstanding friction behaviour and high speed performance. They are also characterised by high compatibility with nearly all media and large temperature range (-60 à 150°C).

Glass, carbon or bronze filled PTFE strips are supplied by the meter or cut to specific length.



Our **10GT** strips have **diamond streaked surface** to improve the self-lubricating effect and have **chamfers** for easy installation into the grooves.

Operating conditions

✕ see page 8

Max. permissible radial load at 25°C: ≤ 15 N/mm²
120°C: ≤ 8 N/mm²

Temperature -60°C to 150°C

Speed ≤ 15 m/s

Fluids ✕ see pages 22-45

Materials

✕ see pages 10-19

Material (colour) PT15 (grey)
PT30 (black)
PT55 (brown)

Assembly

✕ see pages 54-59

Install in the groove

Advantages

Supplied by the meter or cut to specific length
Low static and dynamic friction
No stick slip
Reduce vibrations, good damping effect
High chemical compatibility
Large temperature range from -60 to 150 °C

Please contact us for applications approaching maximum values.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

Length of the rolls: 10 meters

PT15		
E	L	Reference
2,5	5,6	10GT 25056-15
	9,7	10GT 25097-15
	15	10GT 25150-15
20		10GT 25200-15
	25	10GT 25250-15

PT30		
E	L	Reference
1,5	4,2	10GT 15042-30
	6,3	10GT 15063-30
	8,1	10GT 15081-30
15		10GT 15150-30
	15	10GT 15150-30
1,55	2,5	10GT 15025-30
	30	10GT 15300-30
2	8,1	10GT 20081-30
	35,2	10GT 20352-30
2,5	4,2	10GT 25042-30
	5,6	10GT 25056-30
	6,3	10GT 25063-30
8,1		10GT 25081-30
	15	10GT 25150-30
	20	10GT 25200-30
	25	10GT 25250-30
3	7	10GT 30070-30
	9,7	10GT 30097-30
	10	10GT 30100-30

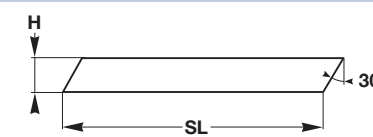
PT55					
E	L	Reference	E	L	Reference
1,5	2,5	10GT 15025-55	2,5	4,2	10GT 25042-55
	3,2	10GT 15032-55		5,6	10GT 25056-55
	4,2	10GT 15042-55		6,3	10GT 25063-55
5,6		10GT 15056-55	8,1		10GT 25081-55
	6,3	10GT 15063-55		9,7	10GT 25097-55
	8,1	10GT 15081-55		10	10GT 25100-55
9,7		10GT 15097-55	12,8		10GT 25128-55
	10	10GT 15100-55		15	10GT 25150-55
	12	10GT 15120-55		16	10GT 25160-55
15		10GT 15150-55	20		10GT 25200-55
				25	10GT 25250-55
				30	10GT 25300-55
1,55	4	10GT 15040-55	40		10GT 25400-55
2	4,2	10GT 20042-55	3	9,6	10GT 30096-55
	5,6	10GT 20056-55		12,8	10GT 30128-55
	6,3	10GT 20063-55		15	10GT 30150-55
8,1		10GT 20081-55	19,2		10GT 30192-55
	9,7	10GT 20097-55		20	10GT 30200-55
	12	10GT 20120-55		25	10GT 30250-55
15		10GT 20150-55	30		10GT 30300-55
	16	10GT 20160-55		35	10GT 30350-55
	20	10GT 20200-55		40	10GT 30400-55
25		10GT 20250-55	4	8,1	10GT 40081-55
	30	10GT 20300-55		9,7	10GT 40097-55
	35	10GT 20350-55		25	10GT 40250-55
40		10GT 20400-55	30		10GT 40300-55
	45	10GT 20450-55		50	10GT 40500-55
	50	10GT 20500-55			

Calculation of the permissible radial force for pistons

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

Calculation of the stretched length

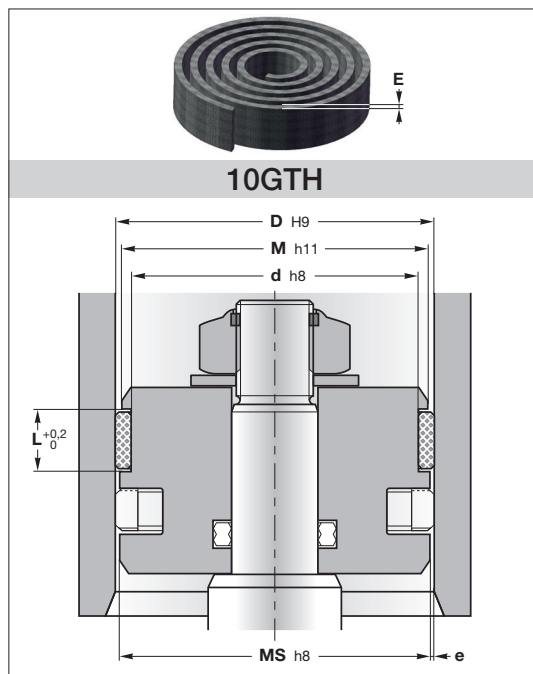


Piston: **SL = (D-E).3,11** Rod: **SL = (d+E).3,11**

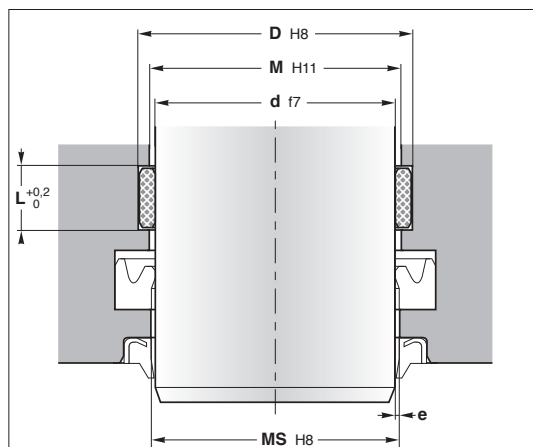


10GTH

Fabric reinforced polyester resin graphite impregnated guide strip



E (mm)	M (mm)
$E \leq 2$	$D - 1$
$2 < E < 4$	$D - 1,8$
$E \geq 4$	$D - 3$



✕ Machining of housings: see pages 45-49

E (mm)	M (mm)
$E \leq 2$	$d + 1$
$2 < E < 4$	$d + 1,8$
$E \geq 4$	$d + 3$

Fabric reinforced composite **10GTH** guides are widely used as piston or rod guides for heavy duty hydraulic applications due to their high compressive strength, good sliding behaviour and the excellent wear resistance. They are supplied by the meter or cut to specific length.

Operating conditions ✕ see page 8

Max. permissible radial load at 25°C: $\leq 100 \text{ N/mm}^2$
60°C: $\leq 50 \text{ N/mm}^2$
Temperature -30°C to 120°C
Speed $\leq 1 \text{ m/s}$
Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring fabric reinforced polyester resin
graphite impregnated
Colour grey

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple groove design
Only suitable for diameters above 150 mm
Reduced friction
Vibration absorbing
Excellent wear resistance
High load capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

Length of the rolls: 10 meters

E	L	Reference
2	5,6	10GTH 20056
	6,3	10GTH 20063
	8,1	10GTH 20081
	9,7	10GTH 20097
2,5	12	10GTH 20120
	12,8	10GTH 20128
	15	10GTH 20150
	19,2	10GTH 20192
2,5	20	10GTH 20200
	25	10GTH 20250
	30	10GTH 20300
	35	10GTH 20350
2,5	40	10GTH 20400
	5,6	10GTH 25056
	6,3	10GTH 25063
	8,1	10GTH 25081
2,5	9,7	10GTH 25097
	12	10GTH 25120
	12,8	10GTH 25128
	15	10GTH 25150

E	L	Reference
2,5	15	10GTH 25150
	16	10GTH 25160
	19,2	10GTH 25192
	20	10GTH 25200
2,5	25	10GTH 25250
	30	10GTH 25300
	35	10GTH 25350
	40	10GTH 25400
2,5	5,6	10GTH 30056
	9,7	10GTH 30097
	12	10GTH 30120
	12,8	10GTH 30128
2,5	15	10GTH 30150
	19,2	10GTH 30192
	20	10GTH 30200
	25	10GTH 30250
2,5	30	10GTH 30300
	35	10GTH 30350
	40	10GTH 30400

E	L	Reference
3,5	9,7	10GTH 35097
	15	10GTH 35150
	20	10GTH 35200
	25	10GTH 35250
3,5	30	10GTH 35300
	35	10GTH 35350
	40	10GTH 35400
	4	9,7 10GTH 40097
3,5	12,8	10GTH 40128
	15	10GTH 40150
	20	10GTH 40200
	25	10GTH 40250
3,5	30	10GTH 40300
	35	10GTH 40350
	40	10GTH 40400
	5	25 10GTH 50250

Inch dimensions

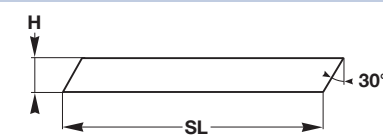
E	L	Reference
1/8" (3,18 mm)	3/8" (9,53 mm)	10GTH 31095
	1/2" (12,7 mm)	10GTH 31127
	5/8" (15,88 mm)	10GTH 31159
3/4" (19,05 mm)	1" (25,4 mm)	10GTH 31191
		10GTH 31254

Calculation of the permissible radial force for pistons

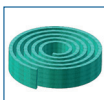
$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

Calculation of the stretched length

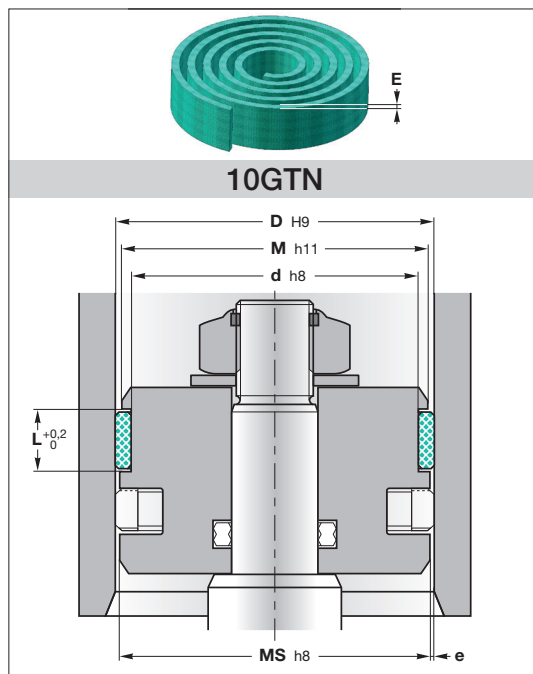
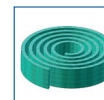


Piston: $SL = (D-E) \cdot 3,11$ Rod: $SL = (d+E) \cdot 3,11$

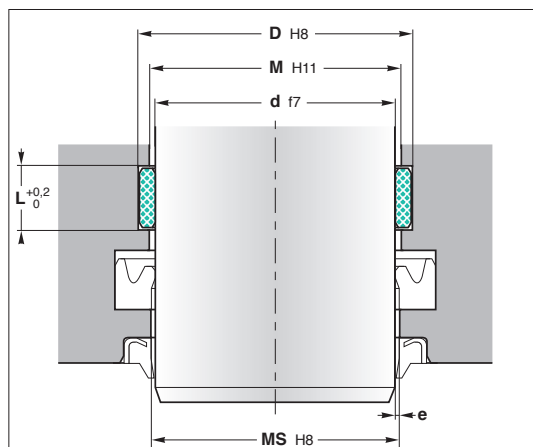


10GTN

Fabric reinforced polyester resin PTFE impregnated guide strip



E (mm)	M (mm)
$E \leq 2$	$D - 1$
$2 < E < 4$	$D - 1,8$
$E \geq 4$	$D - 3$



✕ Machining of housings: see pages 45-49

E (mm)	M (mm)
$E \leq 2$	$d + 1$
$2 < E < 4$	$d + 1,8$
$E \geq 4$	$d + 3$

Fabric reinforced composite **10GTN** guides are widely used as piston or rod guides for heavy duty hydraulic applications due to their high compressive strength, good sliding behaviour and the excellent wear resistance. They are supplied by the meter or cut to specific length.

Operating conditions ✕ see page 8

Max. permissible radial load at 25°C: $\leq 100 \text{ N/mm}^2$
60°C: $\leq 50 \text{ N/mm}^2$
Temperature -30°C to 120°C
Speed $\leq 1 \text{ m/s}$
Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring polyester fabric reinforced
polyester resin + PTFE
Colour light blue

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple groove design
Only suitable for diameters above 150 mm
Reduced friction
Vibration absorbing
Excellent wear resistance
High load capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal. The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

Length of the rolls: 10 meters

E	L	Reference	E	L	Reference	
2	5,6	10GTN 20056	2,5	30	10GTN 25300	
	6,3	10GTN 20063		40	10GTN 25400	
	9,7	10GTN 20097		50	10GTN 25500	
	12	10GTN 20120	3	12	10GTN 30120	
	12,8	10GTN 20128		12,8	10GTN 30128	
	15	10GTN 20150		15	10GTN 30150	
	19,2	10GTN 20192	20	20	10GTN 30200	
	20	10GTN 20200		25	10GTN 30250	
	25	10GTN 20250		30	10GTN 30300	
	30	10GTN 20300	35	35	10GTN 30350	
35	10GTN 20350	40		10GTN 30400		
40	10GTN 20400	3,5	20	10GTN 35200		
2,5	5,6		10GTN 25056	4	9,7	10GTN 40097
	6,3		10GTN 25063		15	10GTN 40150
	8,1		10GTN 25081		20	10GTN 40200
	9,7		10GTN 25097	25	25	10GTN 40250
	12		10GTN 25120		30	10GTN 40300
	12,8		10GTN 25128		40	10GTN 40400
	15		10GTN 25150	50	50	10GTN 40500
	20		10GTN 25200			
	25		10GTN 25250			

Inch dimensions

E	L	Reference
1/8" (3,18 mm)	3/8" (9,53 mm)	10GTN 31095
	1/2" (12,7 mm)	10GTN 31127
	5/8" (15,88 mm)	10GTN 31159
	3/4" (19,05 mm)	10GTN 31191
	1" (25,4 mm)	10GTN 31254

Calculation of the permissible radial force for pistons

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

Calculation of the stretched length



Piston: $SL = (D-E) \cdot 3,11$ Rod: $SL = (d+E) \cdot 3,11$



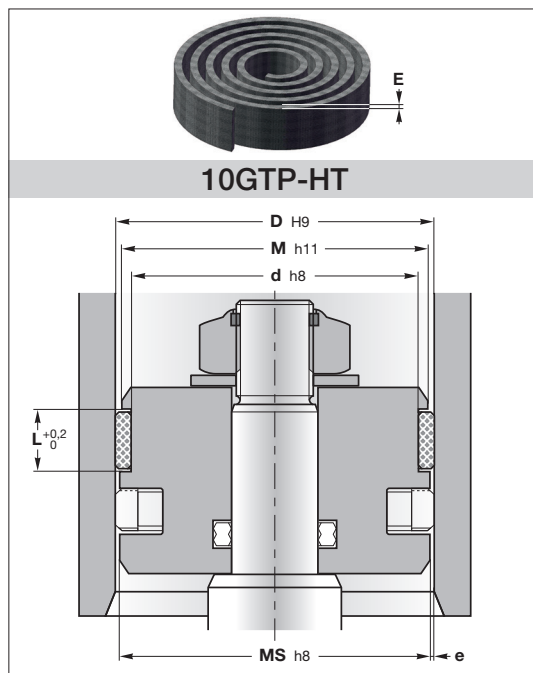
10GTP-HT

Phenolic resin/aramid fabric graphite impregnated guide strip

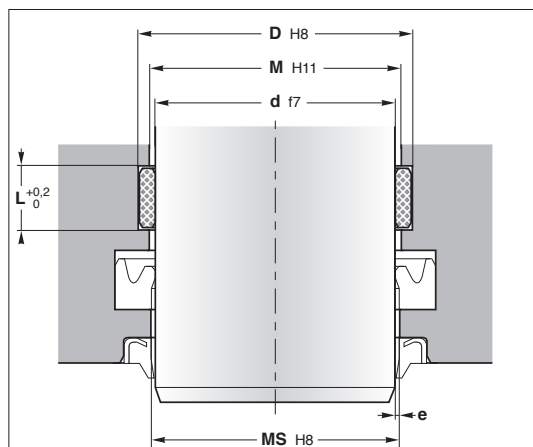


Length of the rolls : 2 meters

E	L	Reference
2,5	5,6	10GTP-HT 25056
	9,7	10GTP-HT 25097
	15	10GTP-HT 25150
	20	10GTP-HT 25200
	25	10GTP-HT 25250



E (mm)	M (mm)
$E \leq 2$	$D - 1$
$2 < E < 4$	$D - 1,8$
$E \geq 4$	$D - 3$



✕ Machining of housings : see pages 45-49

E (mm)	M (mm)
$E \leq 2$	$d + 1$
$2 < E < 4$	$d + 1,8$
$E \geq 4$	$d + 3$

10GTP-HT guide strip is made of aramid fabric reinforced graphite impregnated phenolic resin. It prevents metallic contact of the machine parts and absorbs the transverse force that occurs.

Hard fabric material guide rings are primarily used in mobile hydraulics and heavy hydraulics, as they are very well-suited for **higher surface pressures**.

An increased sliding ability which results in an improvement of the stick-slip effect is achieved by **inclusion of graphite** in the compound.

The **10GTP-HT** guide strip is used for applications at **high temperatures** (up to 200°C).

Operating conditions ✕ see page 8

Max. permissible radial load at 25°C : $\leq 120 \text{ N/mm}^2$
60°C : $\leq 60 \text{ N/mm}^2$
Temperature -40°C to 200°C
Speed $\leq 1 \text{ m/s}$
Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring aramid fabric reinforced
high temperature phenolic resin
+ graphite
Colour grey

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple groove design
Only suitable for diameters above 150 mm
Very high load capacity
Reduced friction (graphite)
For high temperature applications
No water absorption
High wear capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

Calculation of the permissible radial force for pistons

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

Calculation of the stretched length

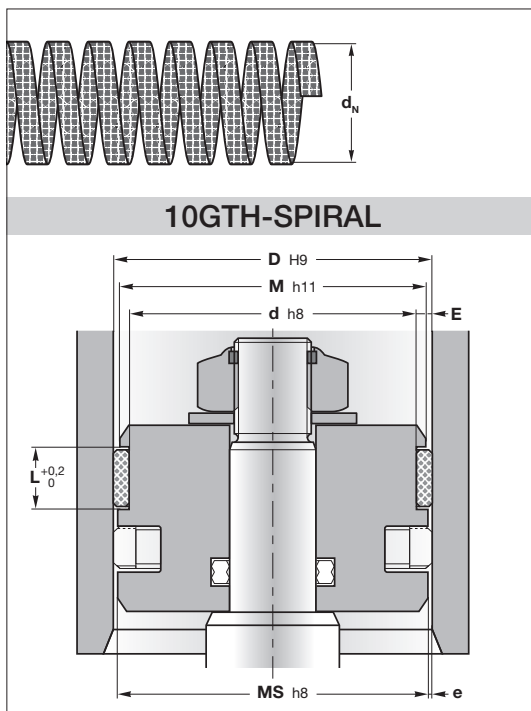


Piston : $SL = (D-E).3,11$ Rod : $SL = (d+E).3,11$

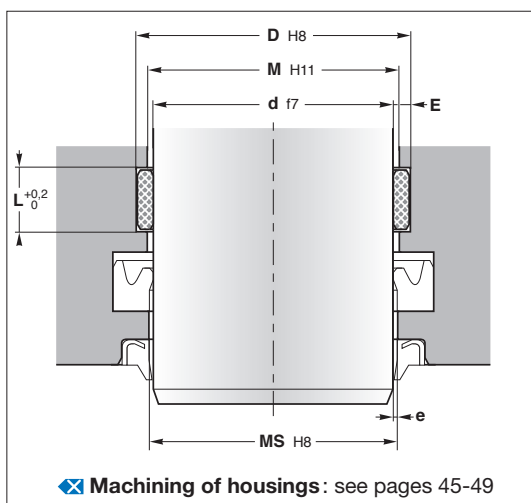


10GTH-SPIRAL

Fabric reinforced polyester resin spiral guide strip



E (mm)	M (mm)
$E \leq 2$	$D - 1$
$2 < E < 4$	$D - 1,8$
$E \geq 4$	$D - 3$



✕ Machining of housings: see pages 45-49

E (mm)	M (mm)
$E \leq 2$	$d + 1$
$2 < E < 4$	$d + 1,8$
$E \geq 4$	$d + 3$

Fabric reinforced composite **10GTH-SPIRAL** guides are widely used as piston or rod guides for heavy duty hydraulic applications due to their high compressive strength, good sliding behaviour and the excellent wear resistance.

They are supplied by spirals of 5 meters length.

The nominal diameter corresponds to the inner diameter of the spiral.

Operating conditions ✕ see page 8

Max. permissible radial load at 25°C: $\leq 100 \text{ N/mm}^2$
60°C: $\leq 50 \text{ N/mm}^2$

Temperature -30°C to 120°C

Speed $\leq 1 \text{ m/s}$

Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring fabric reinforced polyester resin
graphite impregnated

Colour grey

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple groove design
Reduced friction
Vibration absorbing
Excellent wear resistance
High load capacity

Please contact us for applications approaching maximum values.

More information

On www.sealtech-business.be, click first on the reference and then on the material code to obtain the data sheet of the material.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

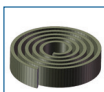
Length of the spirals : 5 meters

E	L	d _N	Reference
2,5	5,6	40	10GTH-SPIRAL 25056-040
		60	10GTH-SPIRAL 25056-060
2,5	9,7	40	10GTH-SPIRAL 25097-040
		60	10GTH-SPIRAL 25097-060
		80	10GTH-SPIRAL 25097-080
		100	10GTH-SPIRAL 25097-100
2,5	15	80	10GTH-SPIRAL 25150-080
		100	10GTH-SPIRAL 25150-100
		120	10GTH-SPIRAL 25150-120
		150	10GTH-SPIRAL 25150-150
2,5	20	100	10GTH-SPIRAL 25200-100
2,5	25	100	10GTH-SPIRAL 25250-100
		120	10GTH-SPIRAL 25250-120
		160	10GTH-SPIRAL 25250-150
		200	10GTH-SPIRAL 25250-200

Calculation of the permissible radial force for pistons

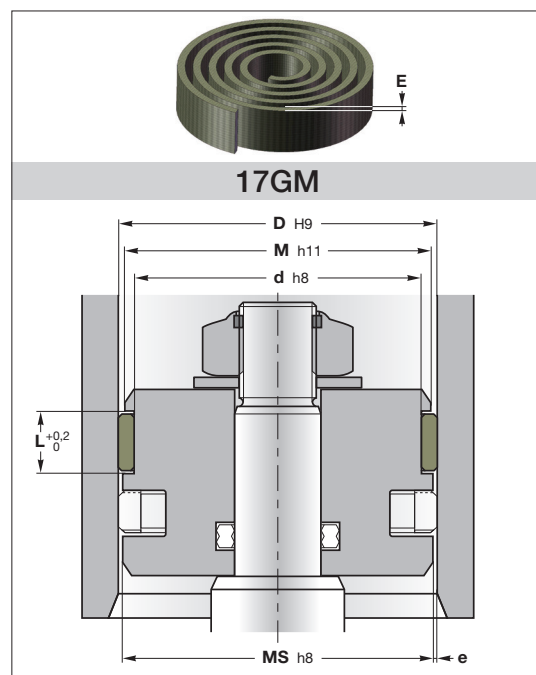
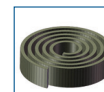
$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

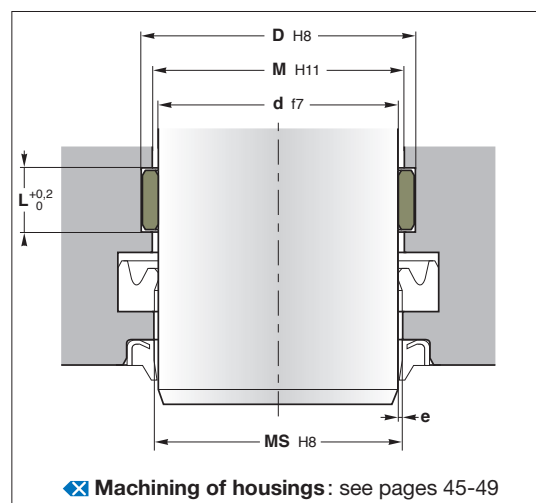


17GM

Slydring® rolls

SEALTECH
Hydraulic Seals Technology

E (mm)	M (mm)
1,5 - 1,55	D - 0,6
2 - 2,5	D - 1,2
4	D - 2,1



✕ Machining of housings: see pages 45-49

E (mm)	M (mm)
1,5 - 1,55	d + 0,6
2 - 2,5	d + 1,2
4	d + 2,1

Slydring® are used as piston or rod guides due to their outstanding friction behaviour, stick-slip free and good resistance to high temperatures and chemicals. They are available as off-the-roll materials for cutting to specific length. **Slydring®** up to and including 4 mm radial thickness in **Turcite®** materials are as standard supplied with teardrop structure on the sliding surface. This structure comprises small lubricant pockets on the surface which improve the initial lubrication and promote the formation of a lubricant film.

Turcite® T47 is bronze filled PTFE for hydraulic components with good lubricating performance.

Turcite® T51 is carbon filled PTFE for lubricated and poor lubricated linear and slow rotary moving hydraulic and pneumatic components.

Turcite® M12 is the new filled PTFE for hydraulic components.

Zurcon® Z80 is a UHMW-PE material preferred for use in water, hydraulics and pneumatics. For food stuff and medical applications, use **Zurcon® Z81** (FDA approvals).

Operating conditions ✕ see page 8

Max. permissible radial load

Turcite® at 25°C: ≤ 15 N/mm²
120°C: ≤ 8 N/mm²

Zurcon® at 25°C: ≤ 25 N/mm²
120°C: ≤ 8 N/mm²

Temperature

Turcite® -60°C to 150°C

Zurcon® -60°C to 80°C

Speed

Turcite® ≤ 15 m/s

Zurcon® ≤ 2 m/s

Fluids

✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring T47, T51, M12, Z80

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Supplied by meter or cut to specific length
Reduced friction
No stick slip
Reduce vibrations, good damping effect
Simple groove design and easy assembly
High chemical compatibility
Large temperature range from -60 to 150 °C
Suitable for low and medium load

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

Turcite® Slydring® 17GM...-T47

E	L	Reference	Min. length of the roll
1,55	4	17GM4300000-T47	18,5 meters
2	15	17GM5300000-T47	12 meters
2,5	5,6	17GM6500000-T47	9 meters
	6,3	17GM6700000-T47	9 meters
	9,7	17GM6900000-T47	9 meters
	15	17GM7300000-T47	9 meters
	20	17GM7400000-T47	9 meters
	25	17GM7500000-T47	9 meters
4	9,7	17GM99L0000-T47	4,5 meters
	25	17GM98L0000-T47	4,5 meters

Turcite® Slydring® 17GM...-M12

E	L	Reference	Min. length of the roll
1,55	4	17GM4300000-M12	18,5 meters
2,5	5,6	17GM6500000-M12	9 meters
	6,3	17GM6700000-M12	9 meters
	9,7	17GM6900000-M12	9 meters
	15	17GM7300000-M12	9 meters
	20	17GM7400000-M12	9 meters
	25	17GM7500000-M12	9 meters
4	9,7	17GM9900000-M12	4,5 meters
	25	17GM9800000-M12	4,5 meters

Turcite® Slydring® 17GM...-T51

E	L	Reference	Min. length of the roll
1,5	3	17GM22L0000-T51	19 meters
1,55	4	17GM4300000-T51	18,5 meters
2	9,7	17GM4900000-T51	12 meters
	15	17GM5300000-T51	12 meters
2,5	5,6	17GM6500000-T51	9 meters
	9,7	17GM6900000-T51	9 meters
	15	17GM7300000-T51	9 meters
	20	17GM7400000-T51	9 meters
	25	17GM7500000-T51	9 meters

Zurcon® Slydring® 17GM...-Z80

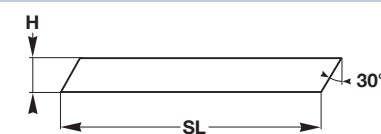
E	L	Reference	Length of the roll
1,55	4	17GM4100000-Z80	25 meters
2,5	5,6	17GM6500000-Z80	15 meters
	9,7	17GM6900000-Z80	15 meters
	15	17GM7300000-Z80	15 meters
	25	17GM7500000-Z80	15 meters

Calculation of the permissible radial force for pistons

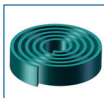
$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

Calculation of the stretched length



Piston: **SL = (D-E).3,11** Rod: **SL = (d+E).3,11**

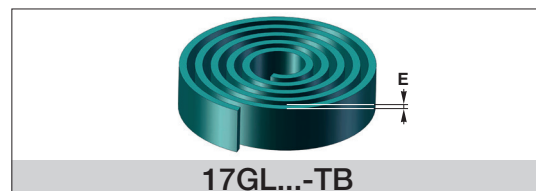
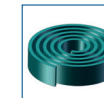


17GL...-TB

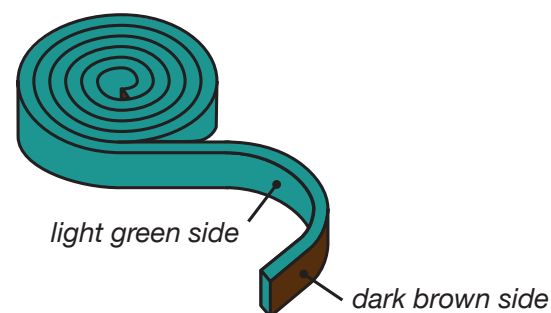
Turcite® B Slydway®
filled PTFE rolls



SEALTECH
Hydraulic Seals Technology

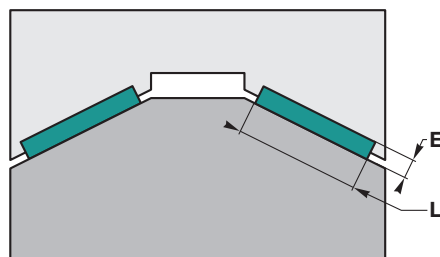


The product Slydway® 17GL...TB is used for the slides of machines. The Slydway® is bonded on the moving part of the linear guide and is then machined. It is also used in civil engineering: bridge supports, pads, telescopic arms...



Try to avoid adhesive on this side.

Apply adhesive to the dark brown side only.



Calculation of the permissible radial force

$$F = (p \times L \times SL) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
L = width of SLYDWAY® (mm)
SL = length
s = safety factor

Trelleborg's proven **Turcite® B Slydway®** Bearing System has been specifically developed as an effective bearing element between sliding metal surfaces found in machine tools or other linear bearing applications.

The **Slydway®** is bonded on the moving part of the linear guide. The low friction technology of **Turcite® B** offers reduced stick-slip in machine transitions while maintaining positioning accuracy and vibration damping.

This PTFE based bearing material is also resistant to virtually all media including cutting fluids and slide way oils. This, along with minimal abrasion, preventing damage to counter surfaces, and high wear resistance, extend product life.

Operating conditions see page 8

Max. permissible radial load at 25°C: ≤ 15 N/mm²
120°C: ≤ 8 N/mm²
Temperature -60°C to 150°C
Speed ≤ 15 m/s
Fluids  see pages 22-45

Materials see pages 10-19

Turcite® B TB

Advantages

Low coefficient of friction
No stick slip
High chemical compatibility
Reduce vibrations, good damping effect
High wear resistance
Good mechanical properties

Please contact us for applications approaching maximum values.

Instructions for assembly

Cleaning

Surfaces to be bonded must be cleaned.
Use acetone for final cleaning. The surfaces to be bonded must not be treated after cleaning. Oil, grease, water, perspiration and blowing off with compressed air will impair the bonding result.

Bonding

The bonding surface of the metal should have a roughness Ra value between 0.8 and 3.2 µm.
Apply adhesive to the dark brown side only.
A two-component adhesive is required for Slydway®: **reference 17XZZS000006**
Mixing ratio resin/accelerator: 100/40
Time to use: 30 min. at 23°C
Hardening time: 12 h. at 20°C
Apply the adhesive **thinly and distribute it uniformly** using a spatula (200 g/m²).
Applying the adhesive uniformly will prevent air inclusions.

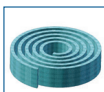
Machining after bonding

A roughness Ra value = 0.6 µm should be obtained.
Milling: high cutting speed (800 m/min.)
Grinding: with grindstones of average grain sizes and low hardness.

Turcite® SLYDWAY® 17GL...-TB

E	L	Reference	Length of the roll
1,5	10	17GLB500010-TB	18,5 meters
	15	17GLB500015-TB	18,5 meters
	20	17GLB500020-TB	18,5 meters
	25	17GLB500025-TB	18,5 meters
	30	17GLB500030-TB	18,5 meters
	35	17GLB500035-TB	18,5 meters
	40	17GLB500040-TB	18,5 meters
	45	17GLB500045-TB	18,5 meters
	50	17GLB500050-TB	18,5 meters
	60	17GLB500060-TB	18,5 meters
2,5	70	17GLB500070-TB	18,5 meters
	100	17GLB500100-TB	18,5 meters
	150	17GLB500150-TB	18,5 meters
	10	17GLC500010-TB	11 meters
	15	17GLC500015-TB	11 meters
	20	17GLC500020-TB	11 meters
	25	17GLC500025-TB	11 meters
	30	17GLC500030-TB	11 meters
	35	17GLC500035-TB	11 meters
	40	17GLC500040-TB	11 meters
	45	17GLC500045-TB	11 meters
	50	17GLC500050-TB	11 meters
	60	17GLC500060-TB	11 meters
	70	17GLC500070-TB	11 meters
	80	17GLC500080-TB	11 meters
	90	17GLC500090-TB	11 meters
	100	17GLC500100-TB	11 meters
	125	17GLC500125-TB	11 meters
	150	17GLC500150-TB	11 meters

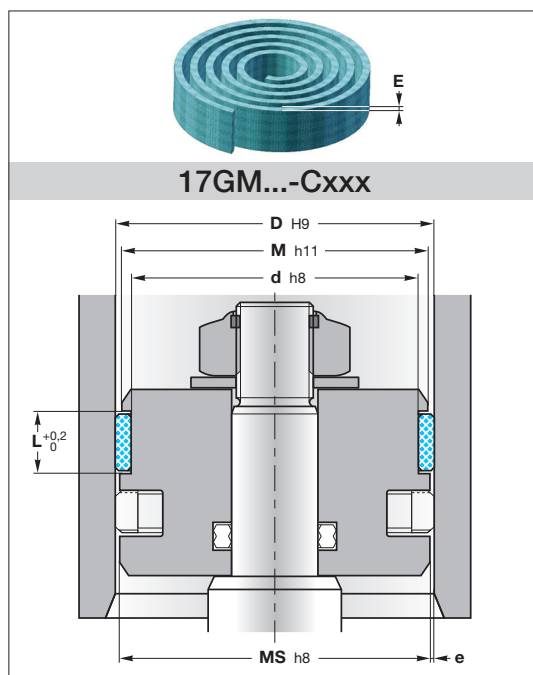
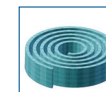
6d ROLLS TSS



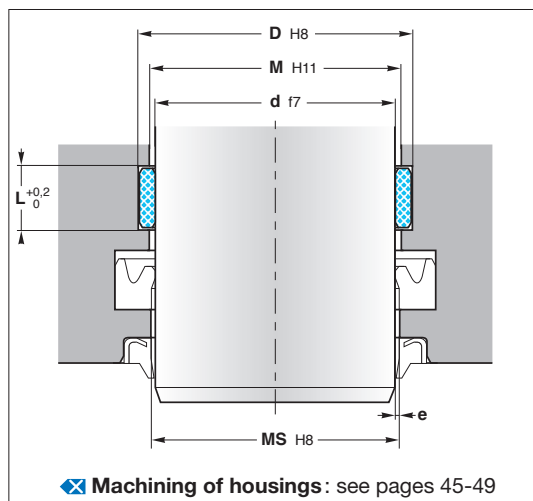
17GM...-Cxxx

Orkot® Slydring®

TRELLEBORG

SEALTECH
Hydraulic Seals Technology

E (mm)	M (mm)
$E \leq 2$	$D - 1$
$2 < E < 4$	$D - 1,8$
$E \geq 4$	$D - 3$



✕ Machining of housings: see pages 45-49

E (mm)	M (mm)
$E \leq 2$	$d + 1$
$2 < E < 4$	$d + 1,8$
$E \geq 4$	$d + 3$

Orkot® Slydring® of fabric reinforced composite materials are used in hydraulic cylinders exposed to high loads. The high compressive strength, good sliding behaviour and the exceptional wear properties ensure a long service life.

Orkot® C380 are available as off-the-roll materials for cutting to specific length.

Orkot® C380 are suitable for all commonly used hydraulic fluids such as mineral or synthetic oils, as well as water based fluids.

Orkot® C320 are often used in sea-water applications.

Operating conditions ✕ see page 8

Compressive strength DIN 53454 $\geq 300 \text{ N/mm}^2$
 Max. permissible radial load at 25°C : $\leq 100 \text{ N/mm}^2$
 60°C : $\leq 50 \text{ N/mm}^2$
 Temperature -40°C to 120°C
 Speed $\leq 1 \text{ m/s}$
 Fluids ✕ see pages 22-45

Materials ✕ see pages 10-19

Guide ring polyester fabric reinforced
 polyester resin + additives

Assembly ✕ see pages 54-59

Install in the groove

Advantages

Simple groove design
 Only suitable for diameters above 150 mm
 Good sliding properties
 Vibration absorbing
 High wear resistance
 High load capacity

Please contact us for applications approaching maximum values.

The diameter **M** is only valid in the area of the guide ring and not in the extrusion area of the seal.
 The diameter **MS** in the seal area must be calculated with the **e** value of the seal used.

✕ see pages 50-53

Orkot® Slydring® 17GM...-C380

E	L	Reference	Length of the roll
2,5	5,6	17GM65A0000-C380	2 meters
	9,7	17GM69A5000-C380	5 meters
	15	17GM73X1000-C380	10 meters
	20	17GM74A5000-C380	5 meters
	25	17GM75X0010-C380	10 meters
4	25	17GM98A5000-C380	5 meters

Orkot® Slydring® 17GM...-C320

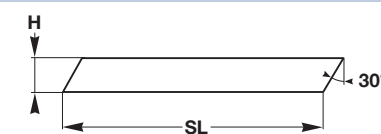
E	L	Reference	Length of the roll
2,5	9,7	17GM69A5000-C320	5 meters
	15	17GM73A5000-C320	5 meters
	25	17GM75A5000-C320	5 meters

Calculation of the permissible radial force for pistons

$$F = (p \times D \times L \times n) / s$$

F = maximum radial force (N)
p = maximum permissible loading for material (N/mm²)
D x L = diameter x width of the ring (mm²)
n = number of rings
s = safety factor

Calculation of the stretched length



Piston: $SL = (D-E) \cdot 3,11$ Rod: $SL = (d+E) \cdot 3,11$