



Profile	Reference	Pressure ≤ (MPa)*	Temperature (°C)*	Speed ≤ (m/s)*	Material	Dimensions (mm)	mm	inch	Page
7a Cushioning seals									
	10CIM	2	-30 +90	1	PU	6 ... 78	●		826 - 827

Profile	Reference	Pressure ≤ (MPa)*	Temperature (°C)*	Speed ≤ (m/s)*	Material	Dimensions (mm)	mm	inch	Page
7b Rod seals									
	10DDI	12	-30 +100	0,5	NBR	3/16" ... 8"1/4	●	●	262
	10DDIM					8 ... 180	●		264
	10DDIM/C	12	-30 +100	0,5	NBR	4 ... 130	●		266
	11DDIM/C... FPM	12	-10 +180	0,5	FPM	10 ... 100	●		268
	10DDIM.../P	2	-30 +90	1	PU	3 ... 100	●		828 - 829
	10RZR.../NBR	1,2	-30 +100	1	NBR	6 ... 50	●		830 - 831
	10RZR	2	-30 +90	1	PU	6 ... 50	●		832 - 833
	10DUP	2	-30 +90	1	PU	4 ... 60	●		834 - 835
	10NPSL	1,6	-30 +100	1	NBR/ST	10 ... 50	●		836 - 837
	11NPSL...FPM	1,6	-10 +150	1	FPM/ST	20 ... 40	●		838 - 839
	10NPSL-P	2	-30 +90	1	PU	12 ... 63	●		840 - 841
	10NPSL-TPE	1,6	-30 +100	1	NBR/TPE	12 ... 63	●		842 - 843
	10UWP	2	-30 +90	1	PU	3 ... 50	●		844 - 845

* See page 8



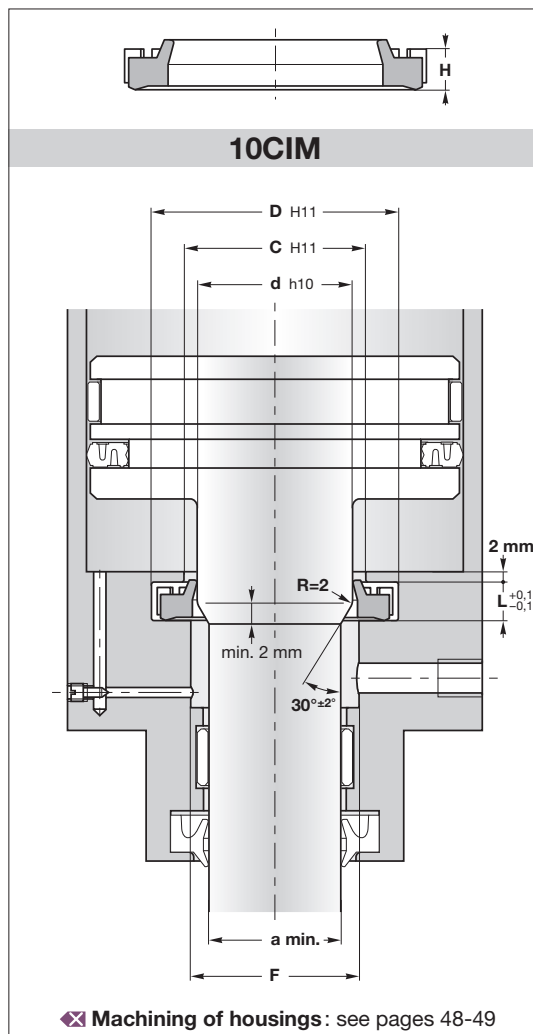
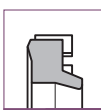
Profile	Reference	Pressure ≤ (MPa) *	Temperature (°C) *	Speed ≤ (m/s) *	Material	Dimensions (mm)	mm	inch	Page
7c Piston seals									
	10DDE 10DDEM	8	-30 +100	0,5	NBR	1/2" ... 12" 12 ... 250	●	●	512 514
	10DDEM/C	12	-30 +100	0,5	NBR	20 ... 200	●		516
	11DDEM/C... FPM	12	-10 +200	0,5	FPM	20 ... 200	●		518
	10DDEM.../P	2	-30 +90	1	PU	5 ... 250	●		846 - 847
	10MPZ	1,6	-30 +80	1	NBR	16 ... 160	●		848 - 849
	10PKK	1,6	-30 +80	1	NBR	30 ... 160	●		850 - 851
	10RZP.../NBR	1,2	-30 +100	1	NBR	12 ... 125	●		852 - 853
	10RZP	2	-30 +90	1	PU	12 ... 80	●		854 - 855
	10TDOP	1,6	-30 +100	1	NBR/ST	20 ... 400	●		856 - 857
	10ADOP	1,2	-30 +100	1	NBR/AL	20 ... 100	●		858 - 859
	10PM	2	-30 +90	1	PU/AL/ MST/POM	32 ... 100	●		860 - 861

* See page 8

Profile	Reference	Pressure ≤ (MPa) *	Temperature (°C) *	Speed ≤ (m/s) *	Material	Dimensions (mm)	mm	inch	Page
7d Wipers									
	10WRP	-	-30 +90	1	PU	6 ... 50	●		862 - 863

Profile	Reference	Load ≤ (N/mm²) *	Temperature (°C) *	Speed ≤ (m/s) *	Material	Dimensions (mm)	mm	inch	Page
7e Wear rings									
	10EDP	36	-40 +110	1	POM	8 ... 250	●		864 - 865
	10IDP	36	-40 +110	1	POM	8 ... 50	●		866 - 867
	10GT...-30 17GM...-T51	25°C: 15 120°C: 8	-60 +150	15	PTFE	6,3 ... 15	●		868 - 869

* See page 8



10CIM is specially designed for cushioning pistons in pneumatic cylinders

Several elements contribute to the efficiency of the **10CIM** seal braking system:

- the scraping profile with lead-in chamfer for better insertion of the shoulder
- the external grooves granting auto-alignment
- the edge at the bottom of the cushioning

Operating conditions see page 8

Pressure	≤ 2 MPa
Temperature	-30°C to +90°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials see pages 10-19

Standard	PU06: polyurethane 90 Sh A
Alternative	PU09: polyurethane 93 Sh A

Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

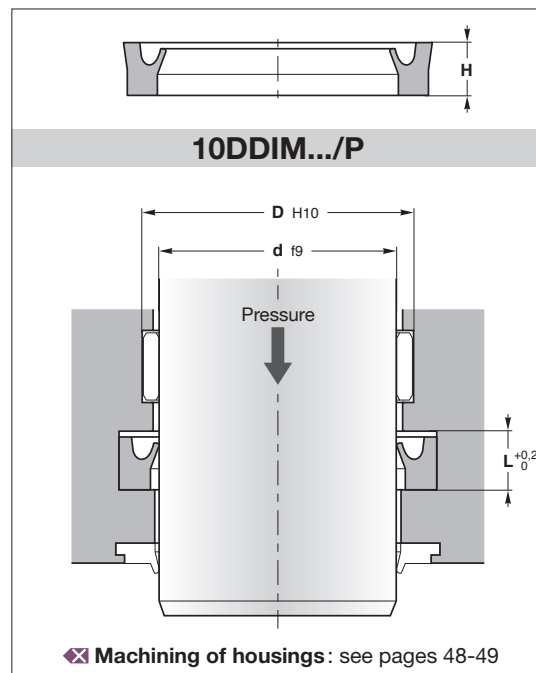
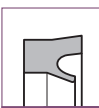
The use of polyurethane ensures a long service life thanks to the high modulus of elasticity
Very good impact resistance

Please contact us for applications approaching maximum values.

More information

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

d	D	C	L	a min.	H	F	Reference
6	10	8	3,7	4,5	3,4	6,5	10CIM 6
8	11,6	10	3,3	7	3	8,5	10CIM 8
9,5	15	12	4,5	8	4	10	10CIM 9
10	18	15	7	8	6,5	11	10CIM 10
12	18	15,5	4,8	10	4,3	13	10CIM 12
	20	17	7	10	6,5	13	10CIM 12/1
14	22	19	7	12	6,5	15	10CIM 14
16	22	21	5,2	14	4,7	17	10CIM 16
	24	21	7	14	6,5	17	10CIM 16/1
18	26	23	7	16	6,5	19	10CIM 18
20	28	24	7	17,5	6,5	21	10CIM 20
22	30	26	7	19,5	6,5	23	10CIM 22
25	33	29	7	22,5	6,5	26	10CIM 25
28	36	32	7	25,5	6,5	29	10CIM 28
30	40	35	7	27,5	6,5	31,5	10CIM 30
32	42	37	7	29	6,5	33,5	10CIM 32
36	46	41	7	33	6,5	37,5	10CIM 36
40	50	45	7	37	6,5	41,5	10CIM 40
50	60	55	7	47	6,5	51,5	10CIM 50
57	74	65	12,5	54	12	60	10CIM 57
70	87	78	12,5	66	12	73	10CIM 70
78	95	86	12,5	74	12	81	10CIM 78



Rod seal type **10DDIM.../P** has been developed with technical design features to overcome existing limits of similar seals on the market in order to obtain a smoother seal which is also more sensitive to low pressure.

Operating conditions ✦ see page 8

Pressure	≤ 2 MPa
Temperature	-30°C to +90°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication, mineral oils or grease

Materials ✦ see pages 10-19

Standard	PU06: polyurethane 90 Sh A
Alternative	PU07: polyurethane 85 Sh A

Assembly ✦ see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

A rounded dynamic lip improves linear movements.
A deeper U-profile between the dynamic and the static lip improves flexibility and performs better in case of misalignments in the system.

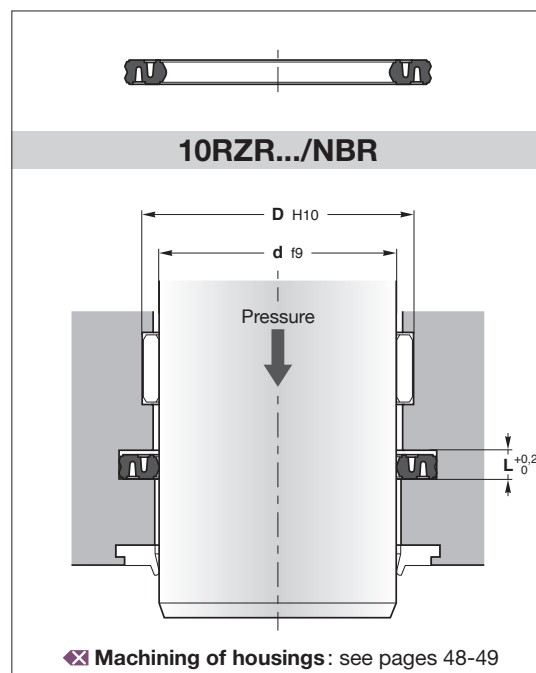
Please contact us for applications approaching maximum values.

More information

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

d	D	L	H	Reference
3	6	3	2,5	10DDIM 0306/P
4	8	3,5	3	10DDIM 0408/P
5	9	3	2,5	10DDIM 0509/P
6	10	3,5	3	10DDIM 0610/P
6	11	3,5	3	10DDIM 0611/P
6	12	4,5	4	10DDIM 0612/P
7	13	4,5	4	10DDIM 0713/P
7	14	4	3,5	10DDIM 0714/P
8	14	4,5	4	10DDIM 0814/P
8	16	5	4,5	10DDIM 0816/P
10	16	5	4,5	10DDIM 1016/P
10	18	6	5,5	10DDIM 1018/P
12	20	6	5,5	10DDIM 1220/P
14	22	6	5,5	10DDIM 1422/P
16	24	6	5,5	10DDIM 1624/P
18	26	6	5,5	10DDIM 1826/P
20	28	6	5,5	10DDIM 2028/P
22	28	5	4,5	10DDIM 2228/P
22	30	6	5,5	10DDIM 2230/P
25	33	6	5,5	10DDIM 2533/P
28	36	6	5,5	10DDIM 2836/P
28	38	7,5	7	10DDIM 2838/P
30	38	6	5,5	10DDIM 3038/P
30	40	7,5	7	10DDIM 3040/P
32	40	6	5,5	10DDIM 3240/P
35	43	8,5	8	10DDIM 3543/P
35	45	7,5	7	10DDIM 3545/P

d	D	L	H	Reference
36	46	7,5	7	10DDIM 3646/P
40	48	6	5,5	10DDIM 4048/P
40	50	7,5	7	10DDIM 4050/P
45	55	7,5	7	10DDIM 4555/P
50	60	7,5	7	10DDIM 5060/P
55	65	7,5	7	10DDIM 5565/P
56	66	7,5	7	10DDIM 5666/P
60	72	9,5	9	10DDIM 6072/P
63	73	7,5	7	10DDIM 6373/P
63	75	9,5	9	10DDIM 6375/P
65	77	9,5	9	10DDIM 6577/P
70	82	9,5	9	10DDIM 7082/P
75	87	9,5	9	10DDIM 7587/P
80	92	9,5	9	10DDIM 8092/P
85	97	9,5	9	10DDIM 8597/P
88	100	9,5	9	10DDIM 88100/P
90	102	9,5	9	10DDIM 90102/P
95	107	9,5	9	10DDIM 95107/P
100	115	11	10	10DDIM 100115/P



10RZR.../NBR rod seal has been designed for pneumatic cylinder applications. **10RZR.../NBR** can also be used for pneumatic valves.

A compact design can be obtained thanks to the reduced overall dimensions.

Operating conditions see page 8

Pressure	≤ 1,2 MPa
Temperature	
NBR	-30°C to +100°C
FPM	-15°C to +150°C
Speed	≤ 1 m/s
Fluids	air with lubrication

Materials see pages 10-19

Standard	NBR 80 Sh A
Alternative	FPM 75 Sh A

Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

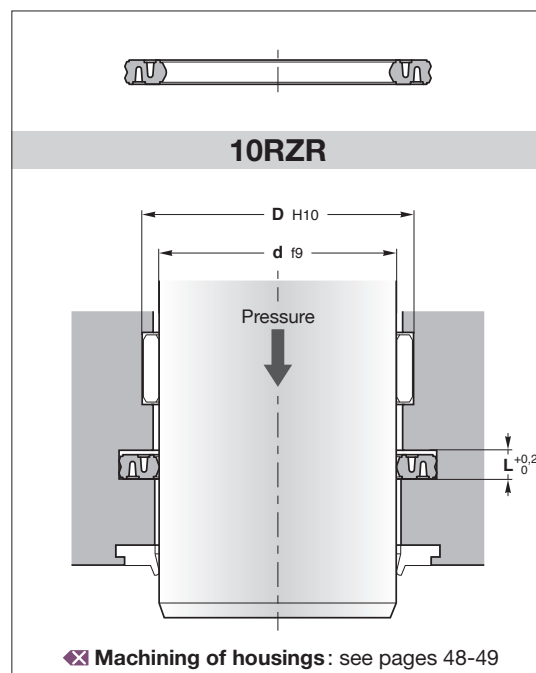
The profile is rounded in the middle of the dynamic lip and has two projections on the static lip.
This symmetrical shape allows easier installation.
The special spring shaped profile ensures high flexibility in the system even at low pressure.

Please contact us for applications approaching maximum values.

More information

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

d	D	L	Reference
6	13	2,5	10RZR 6/NBR
8	15	2,5	10RZR 8/NBR
10	17	2,5	10RZR 10/NBR
12	19	2,5	10RZR 12/NBR
14	21	2,5	10RZR 14/NBR
15	22	2,5	10RZR 15/NBR
16	25	3	10RZR 16/NBR
20	29	3	10RZR 20/NBR
25	34	3	10RZR 25/NBR
30	39	3	10RZR 30/NBR
40	49	3	10RZR 40/NBR
50	59	3	10RZR 50/NBR



10RZR rod seal has been designed for pneumatic cylinder applications. **10RZR** can also be used for pneumatic valves.

A compact design can be obtained thanks to the reduced overall dimensions.

Operating conditions see page 8

Pressure	≤ 2 MPa
Temperature	-30°C to +90°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials see pages 10-19

Standard	PU06: polyurethane 90 Sh A
Alternative	PU07: polyurethane 85 Sh A

Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

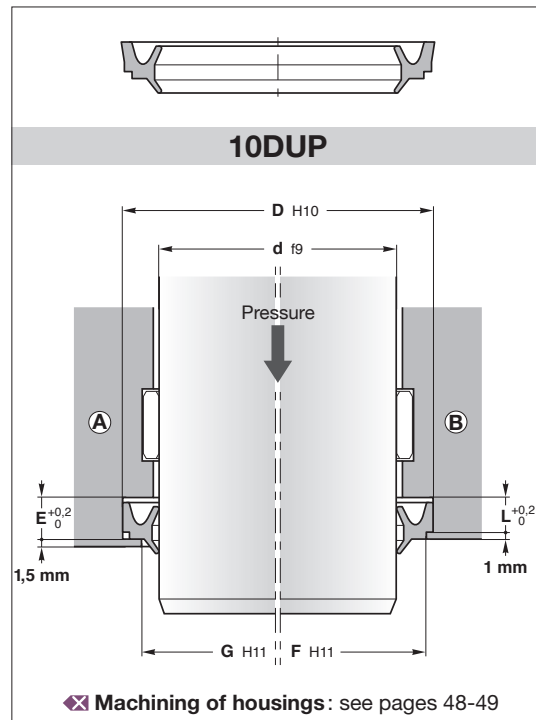
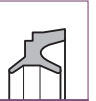
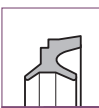
The profile is rounded in the middle of the dynamic lip and has two projections on the static lip.
This symmetrical shape allows easier installation.
The special spring shaped profile ensures high flexibility in the system even at low pressure.

Please contact us for applications approaching maximum values.

More information

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

d	D	L	Reference
6	13	2,5	10RZR 6
8	15	2,5	10RZR 8
10	17	2,5	10RZR 10
12	19	2,5	10RZR 12
14	21	2,5	10RZR 14
15	22	2,5	10RZR 15
16	25	3	10RZR 16
20	29	3	10RZR 20
25	34	3	10RZR 25
30	39	3	10RZR 30
40	49	3	10RZR 40
50	59	3	10RZR 50



10DUP wiper combines an asymmetric lip seal profile with a wiper.

The sealing lip of **10DUP** has a radius allowing greater smoothness and on the static side, the reduced size step facilitates installation, especially for small diameters.

Operating conditions see page 8

Pressure	≤ 2 MPa
Temperature	-30°C to +90°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials see pages 10-19

Standard	PU06: polyurethane 90 Sh A
Alternative	PU07: polyurethane 85 Sh A

Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

The scraping part has a very thin lip to not influence the “stick-slip” effect in the cylinder movement.

The coordinated geometries of the seal and wiper lips achieve favourable friction coefficients and long service life.

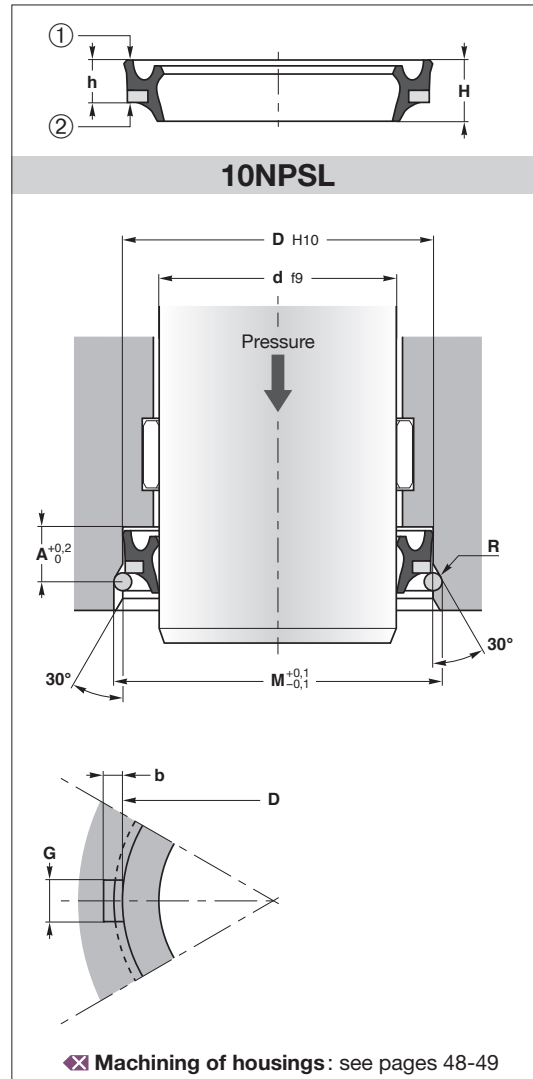
Short axial assembly length.

Please contact us for applications approaching maximum values.

More information

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

d	D	F	G	L	E	Assembly	Reference
4	8,1	6,7			3	B	10DUP 4
6	11,1	9,1			3,6	B	10DUP 6
8	14,1	12,1			3,6	B	10DUP 8
10	16,1	14,1			4,2	B	10DUP 10
12	18,1	15,1			4,2	B	10DUP 12
12	20	18			4	B	10DUP 12/1
14	22	20			4	B	10DUP 14
16	24	22			4	B	10DUP 16
18	26		21,5	6		A	10DUP 18
20	28		23,5	6		A	10DUP 20
22	30		25,5	6		A	10DUP 22
25	33		28,5	6		A	10DUP 25
30	38		33,5	6		A	10DUP 30
32	40		35,5	6		A	10DUP 32
35	43		38,5	6		A	10DUP 35
36	44		39,5	6		A	10DUP 36
40	48		43,5	6		A	10DUP 40
42	50		45,5	6		A	10DUP 42
45	53		48,5	6		A	10DUP 45
50	58		53,5	6		A	10DUP 50
55	63		58,5	6		A	10DUP 55
60	68		63,5	6		A	10DUP 60



10NPSL wiper is a bi-functional element, acting simultaneously as wiper and sealing.

The special geometry with a vulcanised metal core inside allows and improves the assembly in open grooves.

The housing design with a circlips recess is identical as for **10NPSL-P** and **10NPSL-TPE**.

For higher temperatures, choose **11NPSL...FPM**.

ALL-TEC does NOT deliver the corresponding circlips (according DIN 7993 B) which can easily be found on the market.

Operating conditions ✕ see page 8

Pressure	≤ 1,6 MPa
Temperature	-30°C to +100°C
Speed	≤ 1 m/s
Fluids	air with lubrication, mineral oils or grease

Materials ✕ see pages 10-19

Standard	① NBR 75 Sh A + ② carbon steel
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Assembly ✕ see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

The grooved seat circlip holder avoids the ejection of the seal.

The replacement is also very simple during maintenance.

The special profile, combining seal and wiper in a single solution, keeps the cylinder free from external contamination.

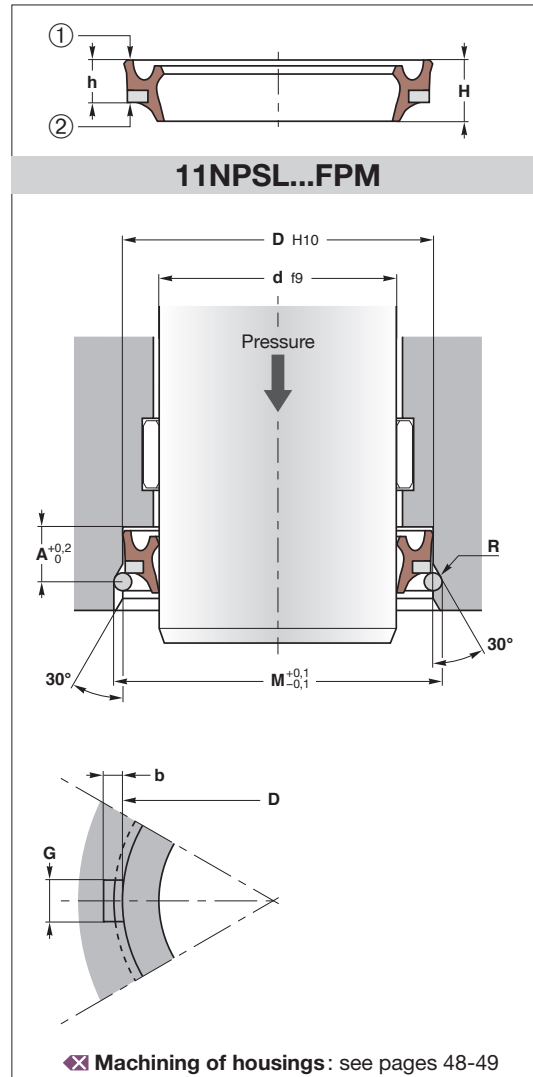
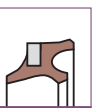
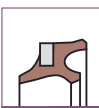
In case the seal/wiper set needs to be exchanged during maintenance, this can be accomplished without removing the piston rod if a dismantling recess has been provided for.

Please contact us for applications approaching maximum values.

More information

On www.all-tec-business.net, click first on the reference and then on the material code to obtain the data sheet of the different materials.

d	D	h	H	M	A	R	b	G	Reference
10	20	7	9,5	22	8,5	1,1	1,8	4	10NPSL 1020/7
12	22	7	9,5	24	8,5	1,1	1,8	4	10NPSL 1222/7
14	24	7	9,5	26	8,5	1,1	1,8	4	10NPSL 1424/7
16	26	7	9,5	28	8,5	1,1	1,8	4	10NPSL 1626/7
18	26	6	8,5	28	7,5	1,1	1,8	4	10NPSL 1826/6
18	28	7	9,5	30	8,5	1,1	1,8	4	10NPSL 1828/7
20	30	7	9,5	32	8,8	1,4	1,8	4	10NPSL 2030/7
22	32	7	9,5	34,5	8,8	1,4	2	7,5	10NPSL 2232/7
25	35	7	9,5	37,5	8,8	1,4	2	7,5	10NPSL 2535/7
30	40	7	9,5	42,5	8,8	1,4	2	7,5	10NPSL 3040/7
32	42	7	9,5	44,5	8,8	1,4	2	7,5	10NPSL 3242/7
35	45	7	9,5	47,5	8,8	1,4	2	7,5	10NPSL 3545/7
40	50	7	9,5	52,5	8,8	1,4	2	7,5	10NPSL 4050/7
45	55	7	9,5	58,2	8,8	1,4	2,5	10	10NPSL 4555/7
50	60	7	9,5	63,2	8,8	1,4	2,5	10	10NPSL 5060/7



11NPSL...FPM wiper is a bi-functional element used in high-temperature applications, acting simultaneously as wiper and sealing.

The special geometry with a vulcanised metal core inside allows and improves the assembly in open grooves.

The housing design with a circlips recess is identical as for **10NPSL-P** and **10NPSL-TPE**.

ALL-TEC does NOT deliver the corresponding circlips (according DIN 7993 B) which can easily found on the market.

Operating conditions see page 8

Pressure	≤ 1,6 MPa
Temperature	-10°C to +150°C
Speed	≤ 1 m/s
Fluids	air with lubrication, mineral oils or grease

Materials see pages 10-19

FPM	① FPM 75 Sh A + ② carbon steel
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Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

In case the seal/wiper set needs to be exchanged during maintenance, this can be accomplished without removing the piston rod if a dismantling recess has been provided for.

Advantages

The grooved seat circlip holder avoids the ejection of the seal.

The replacement is also very simple during maintenance.

The special profile, combining seal and wiper in a single solution, keeps the cylinder free from external contamination.

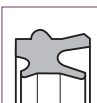
Please contact us for applications approaching maximum values.

More information

On www.all-tec-business.net, click first on the reference and then on the material code to obtain the data sheet of the different materials.

FPM seals

d	D	h	H	M	A	R	b	G	Reference
20	30	7	9,5	32	8,8	1,4	1,8	4	11NPSL 2030/7 FPM
25	35	7	9,5	37,5	8,8	1,4	2	7,5	11NPSL 2535/7 FPM
30	40	7	9,5	42,5	8,8	1,4	2	7,5	11NPSL 3040/7 FPM
40	50	7	9,5	52,5	8,8	1,4	2	7,5	11NPSL 4050/7 FPM

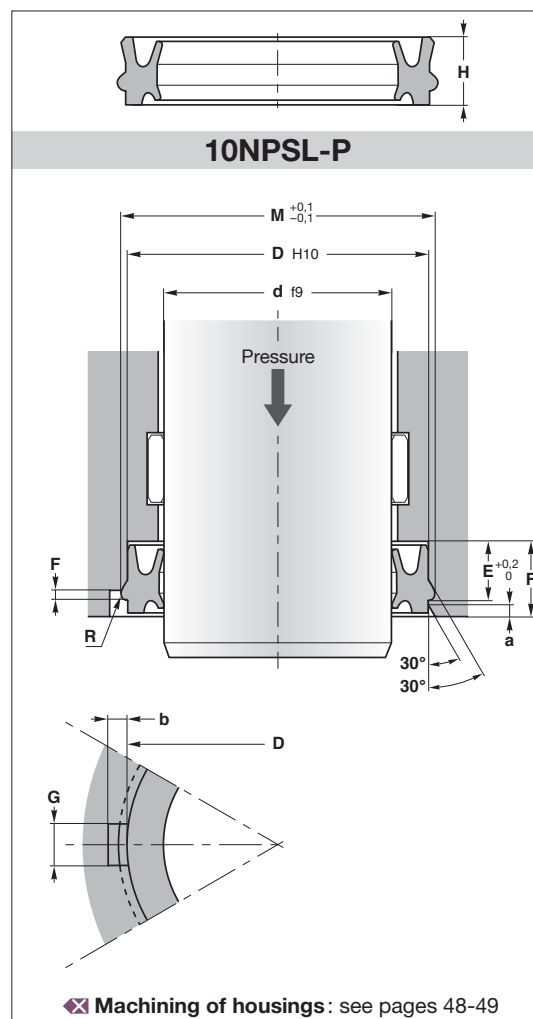
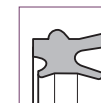


10NPSL-P

PU bi-directional wiper



ALL-TEC®
SEALING SYSTEMS



10NPSL-P wiper is a bi-functional element, acting simultaneously as wiper and sealing.

The main characteristic of the profile is the easy-to-snap-in retainer ridge who enables easy and fast installation into a complete open housing, both automatically and manually.

The housing design with a circlips recess is identical as for **10NPSL** and **10NPSL-TPE**.

For higher temperatures, choose **11NPSL...FPM**.

Operating conditions see page 8

Pressure	≤ 2 MPa
Temperature	-30°C to +90°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials see pages 10-19

Standard	PU06: polyurethane 90 Sh A
Alternative	PU09: polyurethane 93 Sh A

Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

The groove is completely open with a lateral milling, which allows the wiper to be replaced easily.

The special profile combining seal and wiper is very strong and allows important rod misalignments without any danger of ejection from the seat.

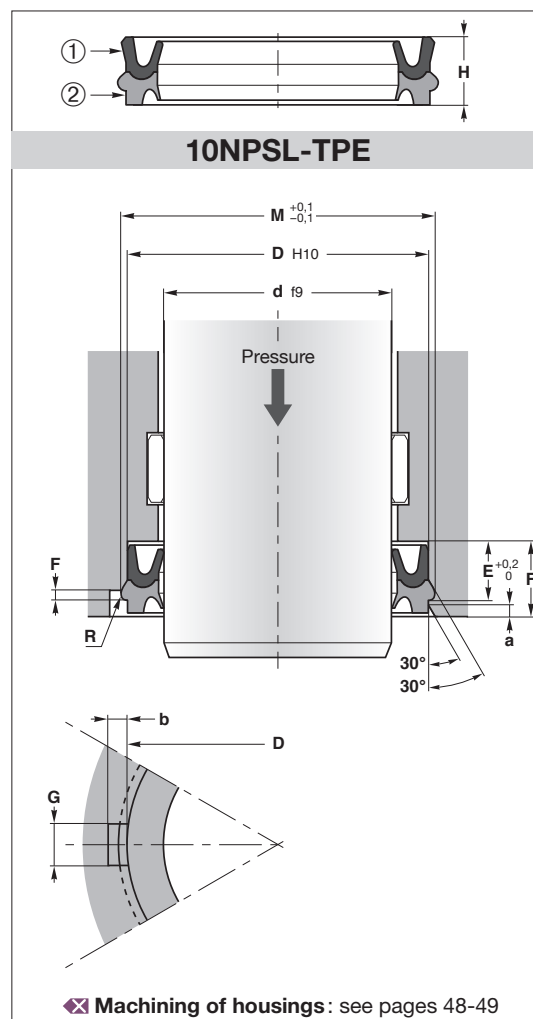
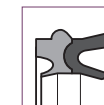
Moreover, the static lips profile keeps the cylinder free from external contamination.

Please contact us for applications approaching maximum values.

More information

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

d	D	H	L	M	E	R	F	a	b	G	Reference
12	22	10,7	13	24	8,8	1,1	2,5	1,5	1,8	4	10NPSL-P 12
12	20	10,7	13	22	8,8	1,1	2,5	1,5	1,8	4	10NPSL-P 12/1
16	26	10,7	13	28	8,8	1,1	2,5	1,5	1,8	5	10NPSL-P 16
18	28	10,7	13	30	8,8	1,1	2,5	1,5	1,8	5	10NPSL-P 18
18	26	10,7	13	28	8,8	1,1	2,5	1,5	1,8	5	10NPSL-P 18/1
20	30	10,7	13	32	8,8	1,1	2,5	1,5	1,8	5	10NPSL-P 20
22	32	11,2	14	34,5	9,4	1,4	3	2	2	7,5	10NPSL-P 22
25	35	11,2	14	37,5	9,4	1,4	3	2	2	7,5	10NPSL-P 25
30	40	11,2	14	42,5	9,4	1,4	3	2	2	7,5	10NPSL-P 30
32	42	11,2	14	44,5	9,4	1,4	3	2	2	7,5	10NPSL-P 32
40	50	11,2	14	52,5	9,4	1,4	3	2	2	7,5	10NPSL-P 40
45	55	12,2	15	58,2	10,4	1,8	4	2	2,5	10	10NPSL-P 45
50	60	12,2	15	63,2	10,4	1,8	4	2	2,5	10	10NPSL-P 50
63	75	13	16	78,2	11,4	1,8	4	2	2,5	10	10NPSL-P 63



10NPSL-TPE wiper is a bi-functional element, acting simultaneously as wiper and sealing.

The special geometry with a easy-to-snap-in retainer ridge allows and improves the assembly in open grooves.

The housing design with a circlips recess is identical as for **10NPSL** and **10NPSL-P**.

For higher temperatures, choose **11NPSL...FPM**.

Operating conditions see page 8

Pressure	≤ 1,6 MPa
Temperature	-30°C to +100°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials see pages 10-19

Standard	① NBR 80 Sh A /② TPE
Alternative	① PU 92 Sh A / ② TPE

Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

In case the seal/wiper set needs to be exchanged during maintenance, this can be accomplished without removing the piston rod if a dismantling recess has been provided for.

The special profile combining seal and wiper is very strong and allows important rod misalignments without any danger of ejection from the seat.

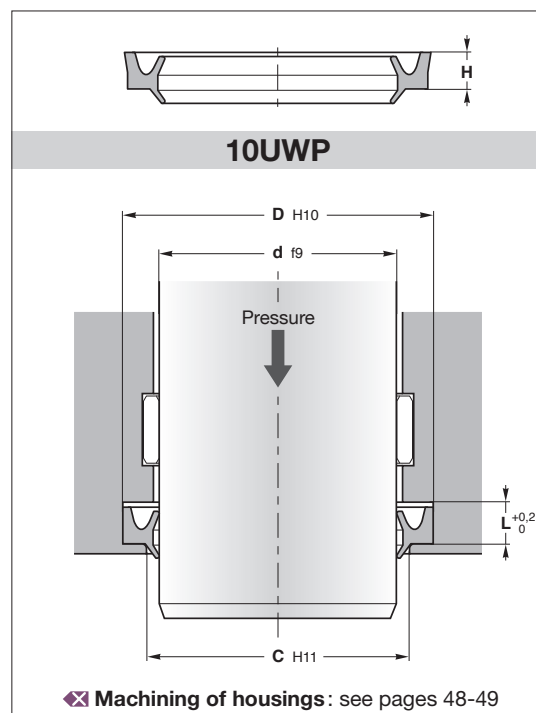
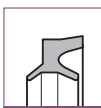
Moreover, the static lips profile keeps the cylinder free from external contamination.

Please contact us for applications approaching maximum values.

More information

On www.all-tec-business.net, click first on the reference and then on the material code to obtain the data sheet of the different materials.

d	D	H	L	M	E	R	F	a	b	G	Reference
12	22	10,7	13	24	8,8	1,1	2,5	1,5	1,8	4	10NPSL-TPE 12
14	24	10,7	13	26	8,8	1,1	2,5	1,5	1,8	4	10NPSL-TPE 14
16	26	10,7	13	28	8,8	1,1	2,5	1,5	1,8	5	10NPSL-TPE 16
18	28	10,7	13	30	8,8	1,1	2,5	1,5	1,8	5	10NPSL-TPE 18
20	30	10,7	13	32	8,8	1,1	2,5	1,5	1,8	5	10NPSL-TPE 20
25	35	11,2	14	37,5	9,4	1,4	3	2	2	7,5	10NPSL-TPE 25
30	40	11,2	14	42,5	9,4	1,4	3	2	2	7,5	10NPSL-TPE 30
32	42	11,2	14	44,5	9,4	1,4	3	2	2	7,5	10NPSL-TPE 32
35	45	11,2	14	47,5	9,4	1,4	3	2	2	7,5	10NPSL-TPE 35
40	50	11,2	14	52,5	9,4	1,4	3	2	2	7,5	10NPSL-TPE 40
45	55	12,2	15	58,2	10,4	1,8	4	2	2,5	10	10NPSL-TPE 45
50	60	12,2	15	63,2	10,4	1,8	4	2	2,5	10	10NPSL-TPE 50
63	75	13	16	78,2	11,4	1,8	4	2	2,5	10	10NPSL-TPE 63



10UWP wiper is a bi-functional element, acting simultaneously as wiper and sealing.

The profile design meets the high requirements in mini-pneumatics, i.e. the dimensions of this profile are especially small for most diameters and friction values are low.

Operating conditions see page 8

Pressure	≤ 2 MPa
Temperature	- 30°C to +90°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials see pages 10-19

Standard	PU06: polyurethane 90 Sh A
Alternative	PU07: polyurethane 85 Sh A

Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

- Reduced overall dimensions.
- Fast construction of the groove.
- Easy assembly.

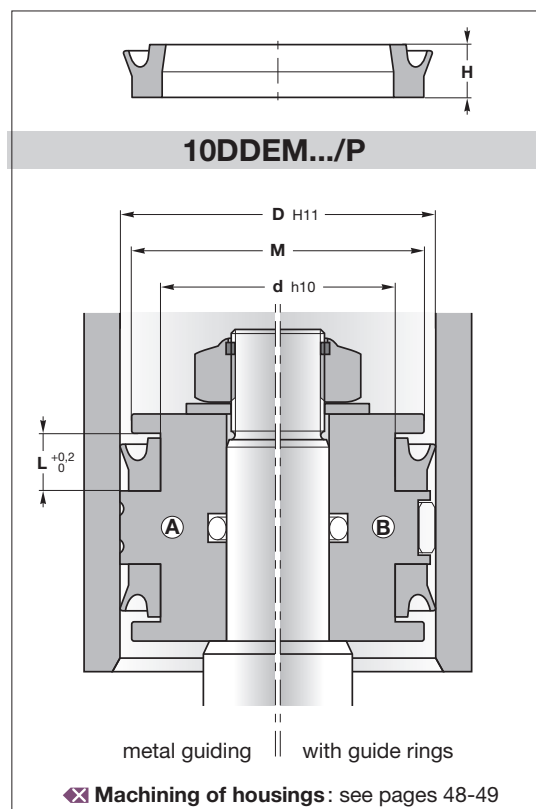
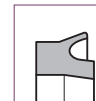
Please contact us for applications approaching maximum values.

More information

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

d	D	C	H	L	Reference
3	8,8	5	4	4,5	10UWP 3
4	7 8,8	6 5,4	2,2 4	2,7 4,5	10UWP 4 10UWP 4/1
5	8	6,2	2,2	2,7	10UWP 5
6	9 10,8	7,2 8	2,2 4	2,7 4,5	10UWP 6 10UWP 6/1
8	11,5 12,8 14	9,2 10 11	2,5 4 4	3 4,5 4,5	10UWP 8 10UWP 8/1 10UWP 8/2
10	14 16 16,8	11,4 12,5 13	2,8 3,6 4	3,2 4 4,5	10UWP 10 10UWP 10/1 10UWP 10/2
	18	14	4,5	5	10UWP 10/3
12	16,5 18 20	13,7 14,5 16	3,2 3,6 3,2	3,7 4 3,7	10UWP 12 10UWP 12/1 10UWP 12/2
12	20 20 22	16 16 16	4,5 5 5	5 5,5 6	10UWP 12/3 10UWP 12/4 10UWP 12/5
14	18,5 20 22	15,7 16,5 18	3,2 3,6 4,5	3,7 4 5	10UWP 14 10UWP 14/1 10UWP 14/2
	24	18	5	6	10UWP 14/3
16	20,5 22 24	17,7 18,5 18,5	3,2 3,6 4,5	3,7 4 5	10UWP 16 10UWP 16/1 10UWP 16/2
	26	20	5	6	10UWP 16/3

d	D	C	H	L	Reference
18	22,5 24 26	19,7 20,5 21	3,2 3,6 4,5	3,7 4 5	10UWP 18 10UWP 18/1 10UWP 18/2
	28	22	5	6	10UWP 18/3
20	25 26 30	21,9 22,5 24	3,6 3,6 6	4 4 7	10UWP 20 10UWP 20/1 10UWP 20/2
22	27 28 32	23,9 24,5 26	3,6 3,6 6	4 4 7	10UWP 22 10UWP 22/1 10UWP 22/2
25	30 31 35	26,9 27,5 29	3,6 3,6 6	4 4 7	10UWP 25 10UWP 25/1 10UWP 25/2
28	38	32	6	7	10UWP 28
30	35,5 38 40	32,1 33 34	3,9 4,5 6	4,5 5 7	10UWP 30 10UWP 30/1 10UWP 30
32	37,5 40 42	34,1 35 36	3,9 4,5 6	4,5 5 7	10UWP 32 10UWP 32 10UWP 32
35	45	39	6	7	10UWP 35
36	44 46	39 40	4,5 6	5 7	10UWP 36 10UWP 36
40	50	44	6	7	10UWP 40
45	53 55	48 49	4,5 6	5 7	10UWP 45 10UWP 45
50	62	55	7,5	8,5	10UWP 50



10DDEM.../P has been designed for single and double acting cylinders.

The deep groove between the dynamic and the static lip, together with back-to-back radius lips, enhance seal sliding, even where there is a lack of environmental lubrication.

Operating conditions ✕ see page 8

Pressure	≤ 2 MPa
Temperature	-30°C to +90°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials ✕ see pages 10-19

Standard	PU06: polyurethane 90 Sh A
Alternative	PU07: polyurethane 85 Sh A

Assembly ✕ see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the tube will ease installation.

Advantages

The reduced dimensions, together with the high flexibility of the material, facilitate installation in closed grooves.

Smooth running due to optimum lubricant-retaining sealing lip geometry.

Pressure relief grooves at the back of the seal ensure optimal function even in case of flow-controlled exhaust air.

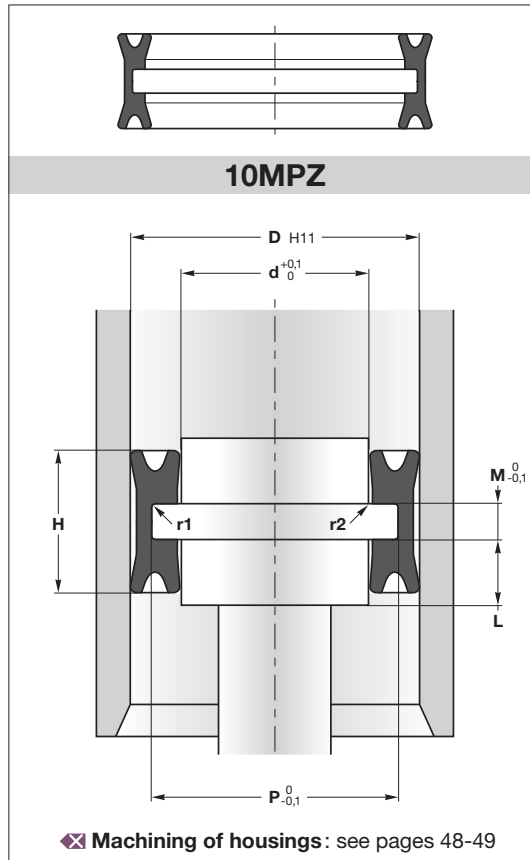
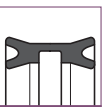
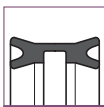
Please contact us for applications approaching maximum values.

More information

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

D	d	L	M	H	Reference
5	2,5	2	4		10DDEM 0502/P
6	3	2,5	5	2	10DDEM 0603/P
8	4	3	7	2,5	10DDEM 0804/P
8	4,8	2,7	7	2,3	10DDEM 0805/P
8	4,8	3	7	2,55	10DDEM 0805/P1
10	6	3	9	2,55	10DDEM 1006/P
12	7	3	11	2,55	10DDEM 1207/P
13	8	3	12	2,55	10DDEM 1308/P
14	8	3	13	2,55	10DDEM 1408/P
15	9	3	14	2,55	10DDEM 1509/P
16	10	3	15	2,55	10DDEM 1610/P
17	11	3	16	2,55	10DDEM 1711/P
18	12	3	17	2,55	10DDEM 1812/P
20	14	3	19	2,55	10DDEM 2014/P1
20	14	4,5	19	4	10DDEM 2014/P
22	16	3	21	2,55	10DDEM 2216/P
24	18	3	23	2,55	10DDEM 2418/P
25	17	6	24	5,5	10DDEM 2517/P
25	19	3,5	24	3,25	10DDEM 2519/P
25	19	4,5	24	4	10DDEM 2519/P1
28	18	7,5	27	7	10DDEM 2818/P
28	22	3,5	27	3,25	10DDEM 2822/P
30	20	5,7	29	5	10DDEM 3020/P
30	22	3,5	29	3,25	10DDEM 3022/P
32	24	3,5	31	3,25	10DDEM 3224/P1
32	24	6	31	5,5	10DDEM 3224/P
35	27	3,5	34	3,25	10DDEM 3527/P
36	28	3,5	35	3,25	10DDEM 3628/P
38	30	3,5	37	3,25	10DDEM 3830/P
38	30	6	37	5,5	10DDEM 3830/P1
40	30	7,5	39	7	10DDEM 4030/P
40	32	3,5	39	3,25	10DDEM 4032/P
42	30	6,5	41	6	10DDEM 4230/P

D	d	L	M	H	Reference
42	34	3,5	41	3,25	10DDEM 4234/P
45	37	3,5	44	3,25	10DDEM 4537/P
50	40	7,5	49	7	10DDEM 5040/P
50	42	3,5	49	3,25	10DDEM 5042/P
52	42	4,5	51	4	10DDEM 5242/P
55	45	7,5	54	7	10DDEM 5545/P
58	48	4,5	57	4	10DDEM 5848/P
60	50	5,7	59	5	10DDEM 6050/P1
60	50	7,5	59	7	10DDEM 6050/P
63	53	4,5	62	4	10DDEM 6353/P1
63	53	7,5	62	7	10DDEM 6353/P
65	55	7,5	64	7	10DDEM 6555/P
68	58	5,5	67	4,7	10DDEM 6858/P
70	58	9,5	69	8,5	10DDEM 7058/P
75	63	9,5	74	8,5	10DDEM 7563/P
80	68	9,5	79	8,5	10DDEM 8068/P
80	70	4,5	79	4	10DDEM 8070/P
85	73	9,5	84	8,5	10DDEM 8573/P
90	78	9,5	89	8,5	10DDEM 9078/P
90	80	4,5	89	4	10DDEM 9080/P
100	88	9,5	99	8,5	10DDEM 100088/P
100	90	4,5	99	4	10DDEM 100090/P
110	95	11	109	10	10DDEM 110095/P
120	105	11	119	10	10DDEM 120105/P
125	105	8,5	124	8,25	10DDEM 125105/P
125	110	11	124	10	10DDEM 125110/P
140	120	8,5	139	8,25	10DDEM 140120/P
160	140	8,5	159	8,25	10DDEM 160140/P
160	145	11	159	10	10DDEM 160145/P
180	160	15	179	14	10DDEM 180160/P
200	180	8,5	199	8,25	10DDEM 200180/P1
200	180	15	199	14	10DDEM 200180/P
250	230	15	249	14	10DDEM 250230/P



10MPZ pneumatic piston seal is a double U-ring with an integral guiding surface for double-acting pistons.

Operating conditions

✕ see page 8

Pressure	≤ 1,6 MPa
Temperature	-30°C to +80°C
Speed	≤ 1 m/s
Fluids	air with lubrication, mineral oils or grease

Materials

✕ see pages 10-19

Standard	NBR 75 Sh A
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Assembly

✕ see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the tube will ease installation.

Advantages

Multi-functional sealing element with guiding function. However, due to its geometry the sealing element is not suitable for absorption of high radial forces or long strokes.

Prevents metallic contact between the piston and cylinder. Ideal for light-metal and plastic cylinders (ridging).

Good wear resistance.

Easier installation.

Assembly on one-part piston is possible.

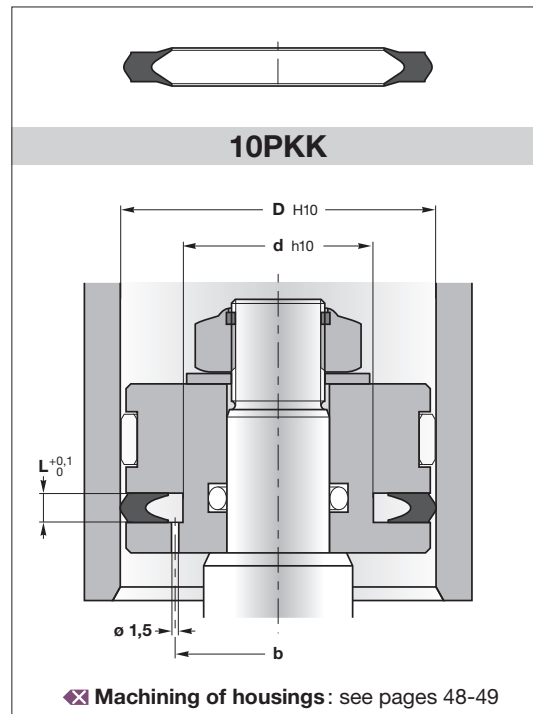
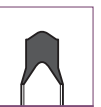
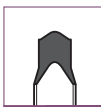
Installation in open housings with retaining collar.

Please contact us for applications approaching maximum values.

More information

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

D	d	H	P	M	L	r1	r2	Reference
16	10	10,5	13,5	3	4,5	0,9	0,2	10MPZ 16
20	14	10,5	17,5	3	4,5	0,9	0,2	10MPZ 20
25	18	12	22,5	3	5	1,3	0,2	10MPZ 25
28	21	10,5	25,5	3	4,5	1,3	0,2	10MPZ 28
30	23	12	27,5	3	5	1,3	0,2	10MPZ 30
32	25	12	29,5	3	5	1,3	0,2	10MPZ 32
40	33	12	37,5	3	5	1,3	0,2	10MPZ 40
45	38	12	42,5	3	5	1,3	0,2	10MPZ 45
50	43	12	47,5	3	5	1,3	0,2	10MPZ 50
63	53	17	60	5	7	1,6	0,3	10MPZ 63
63	56	12	60,5	3	5	1,6	0,3	10MPZ 63/1
70	62	13	67,5	4	5,5	1,6	0,3	10MPZ 70
80	70	18	77	6	7	1,6	0,3	10MPZ 80
80	72	13	77,4	4	5,5	1,6	0,3	10MPZ 80/1
100	88	21	96,5	8	7,5	1,6	0,4	10MPZ 100
100	90	16	97	4	7	1,6	0,3	10MPZ 100/1
125	113	15	122	5	6	1,6	0,4	10MPZ 125
125	113	21	121,5	8	7,5	1,6	0,4	10MPZ 125/1
140	128	21	136,5	8	7,5	1,6	0,4	10MPZ 140
160	145	26	155,5	10	9,5	1,6	0,4	10MPZ 160



10PKK piston seals is a low friction seal for pneumatic systems.

Operating conditions ❖ see page 8

Pressure	≤ 1,6 MPa
Temperature	-30°C to +80°C
Speed	≤ 1 m/s
Fluids	air with lubrication

Materials ❖ see pages 10-19

Standard	NBR 75 Sh A
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Assembly ❖ see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the tube will ease installation.

Advantages

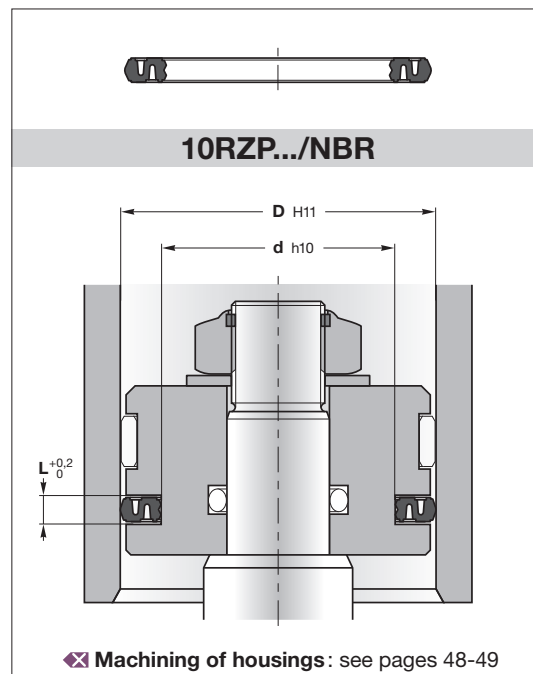
Very long service life thanks to the lubricating film achieved by optimization of the external sealing profile.
Symmetrical profile.
Easy installation.

Please contact us for applications approaching maximum values.

More information

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

D	d	L	b	Reference
30	19,5	2,3	21,2	10PKK 30
40	26,5	3	28,2	10PKK 40
50	36,5	3	38,2	10PKK 50
63	45,5	3,5	47,2	10PKK 63
80	60	4,1	61,7	10PKK 80
82	62	4,1	63,7	10PKK 82
125	100	5,1	102	10PKK 125
160	132	6,2	134	10PKK 160



10RZP.../NBR piston seal has been designed for pneumatic cylinder applications.

10RZP.../NBR can also be used for pneumatic valves.

A compact design can be obtained thanks to the reduced overall dimensions.

Operating conditions see page 8

Pressure	≤ 1,2 MPa
Temperature	-30°C to +100°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials see pages 10-19

Elastomere	NBR 80 Sh A
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Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the tube will ease installation.

Advantages

The profile is rounded in the middle of the dynamic lip and has two projections on the static lip.

This symmetrical shape allows easier installation.

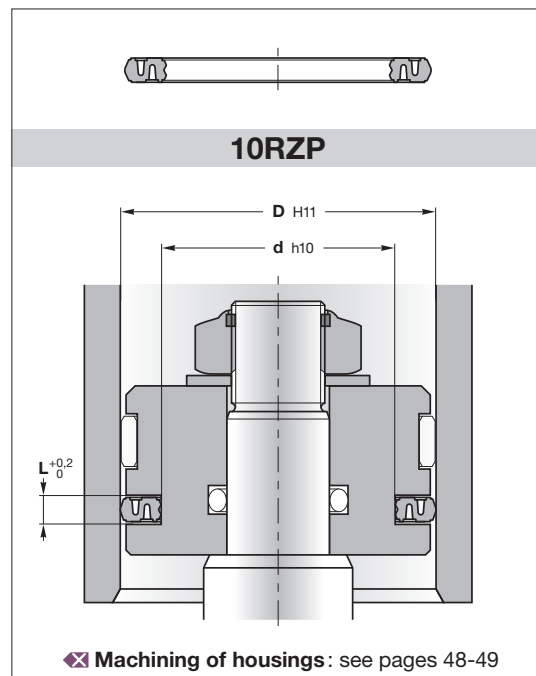
The special spring shaped profile ensures high flexibility in the system even at low pressure.

Please contact us for applications approaching maximum values.

More information

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

D	d	L	Reference
12	7	2,5	10RZP 12/NBR
16	9	2,5	10RZP 16/NBR
20	13	2,5	10RZP 20/NBR
25	18	2,5	10RZP 25/NBR
28	21	2,5	10RZP 28/NBR
30	21	3	10RZP 30/NBR
32	23	3	10RZP 32/NBR
35	26	3	10RZP 35/NBR
40	31	3	10RZP 40/NBR
45	36	3	10RZP 45/NBR
50	41	3	10RZP 50/NBR
60	48	4	10RZP 60/NBR
63	51	4	10RZP 63/NBR
70	58	4	10RZP 70/NBR
80	68	4	10RZP 80/NBR
100	88	4	10RZP 100/NBR
125	110	5	10RZP 125/NBR



10RZP piston seal has been designed for pneumatic cylinder applications.

10RZP can also be used for pneumatic valves where the overall dimensions allowed.

A compact design can be obtained thanks to the reduced overall dimensions.

Operating conditions

✕ see page 8

Pressure	≤ 2 MPa
Temperature	-30°C to +90°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials

✕ see pages 10-19

Standard	PU06: polyurethane 90 Sh A
Alternative	PU07: polyurethane 85 Sh A

Assembly

✕ see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the tube will ease installation.

Advantages

The profile is rounded in the middle of the dynamic lip and it has two projections on the static lip.

This symmetric shape allows easier installation.

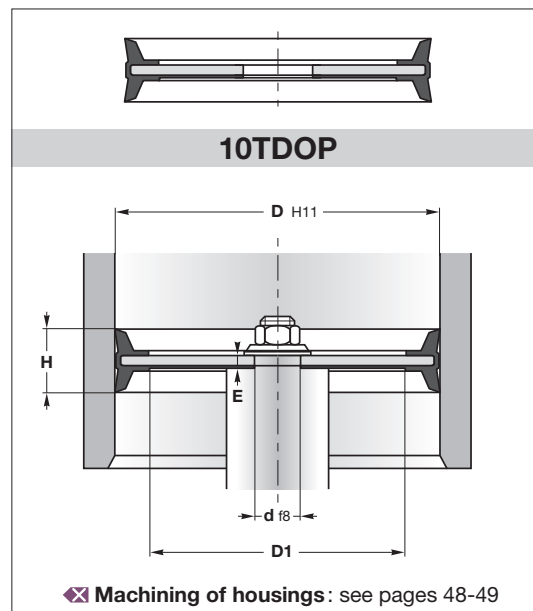
The special spring shaped profile ensures high flexibility in the system even at low pressure.

Please contact us for applications approaching maximum values.

More information

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

D	d	L	Reference
12	7	2,5	10RZP 12
16	9	2,5	10RZP 16
20	13	2,5	10RZP 20
25	18	2,5	10RZP 25
28	21	2,5	10RZP 28
30	21	3	10RZP 30
32	23	3	10RZP 32
35	26	3	10RZP 35
40	31	3	10RZP 40
45	36	3	10RZP 45
50	41	3	10RZP 50
60	48	4	10RZP 60
63	51	4	10RZP 63
70	58	4	10RZP 70
80	68	4	10RZP 80



10TDOP double-acting is a complete pneumatic piston with a double cup seal and a vulcanised metal disc support.

It is generally used in pneumatic applications, in single and double acting cylinders.

Operating conditions see page 8

Pressure	≤ 1,6 MPa
Temperature	-30°C to +100°C
Speed	≤ 1 m/s
Fluids	air with lubrication, mineral oils or grease

Materials see pages 10-19

Standard	NBR 80 Sh A
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Assembly see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the tube will ease installation.

Advantages

Smooth running due to optimum adjustment of the functional lips.

Immediate response (full pressure load) thanks to incorporated venting channels.

Easy attachment to the piston rod without additional sealing elements.

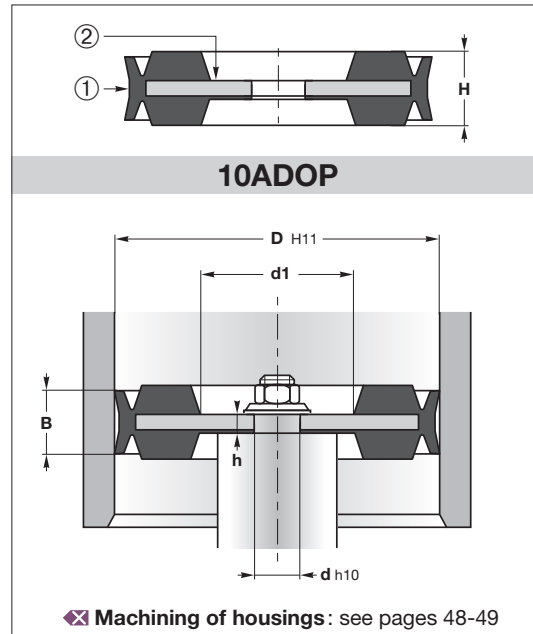
Easy installation due to integrated static sealing function.

Please contact us for applications approaching maximum values.

More information

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

D	d	H	E	D1	Reference
20	5,2	8	1	12,2	10TDOP 020
25	8	12	3,8	14	10TDOP 025
32	8	15	3,8	14	10TDOP 032
35	8	15	3	19	10TDOP 035
40	10	18	4,8	20	10TDOP 040
50	10	18	4,8	20	10TDOP 050
60	12	22	5	37	10TDOP 060
63	12	22	6	40	10TDOP 063
63	16	22	6	40	10TDOP 063/1
63	14	22	6	40	10TDOP 063/2
65	12	25	5	40	10TDOP 065
70	12	22	6	47	10TDOP 070
80	16	24	6	55	10TDOP 080
80	12	25	6	55	10TDOP 080/1
80	14	25	6	55	10TDOP 080/2
80	20	22,5	6	55	10TDOP 080/3
90	12	25	6	65	10TDOP 090
100	20	26	9	74	10TDOP 100
100	18	25	9	75	10TDOP 100/1
110	12	25	9	75	10TDOP 110
125	20	26	9	90	10TDOP 125
125	18	30	9	90	10TDOP 125/1
140	20	30	10	95	10TDOP 140
150	20	30	10	105	10TDOP 150
160	27	30	11	115	10TDOP 160
180	27	31	10	135	10TDOP 180
200	27	35	11	150	10TDOP 200
250	30	35	12	200	10TDOP 250
320	36	40	15	278,5	10TDOP 320
400	40	50	20	320	10TDOP 400



10ADOP double-acting is a complete pneumatic piston with a double cup seal and a vulcanised metal disc support.

It performs three functions: sealing, guiding and cushioning.

Operating conditions **see page 8**

Pressure	≤ 1,2 MPa
Temperature	-30°C to +100°C
Speed	≤ 1 m/s
Fluids	air with lubrication, mineral oils or grease

Materials **see pages 10-19**

Seal ①	NBR 80 Sh A
Body ②	Aluminium

Assembly **see pages 54-59**

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the tube will ease installation.

Advantages

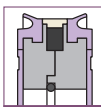
- Immediate response (full pressure load) thanks to incorporated venting channels.
- Cushioning buffers on the piston's front faces with integrated ventilation ducts provide for mechanical cushioning of the cylinders.
- Low assembly height of the complete piston enables short cylinder designs.
- Easy installation due to integrated static sealing function.

Please contact us for applications approaching maximum values.

More information

On www.all-tec-business.net, click first on the reference and then on the material code to obtain the data sheet of the different materials.

D	d	H	B	d1	h	Reference
20	6	7,5	6,3	8,8	2,9	10ADOP 020
25	7	8,8	7	10,8	3,5	10ADOP 025
32	8	11	8	12,5	3,5	10ADOP 032
40	8	11,8	8,8	17	4,5	10ADOP 040
50	10	14	10	26	4,5	10ADOP 050
63	12	14	10	26	4,5	10ADOP 063
80	16	16	12	30	5,5	10ADOP 080
100	20	18	14	35	6,5	10ADOP 100

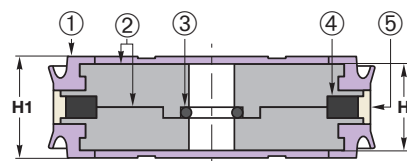
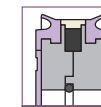


10PM

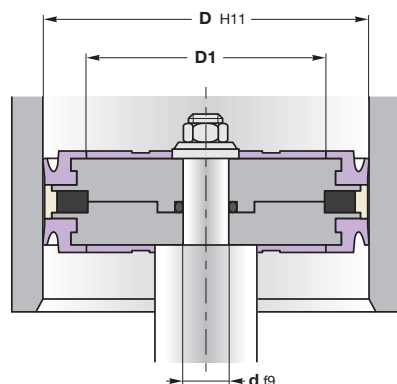
Complete magnetic piston



ALL-TEC®
SEALING SYSTEMS



10PM



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

10PM magnetic piston has been specifically designed for double acting pneumatic cylinders where it's necessary to control the piston stroke, with a magnetic ring inside the piston.

10PM piston compared with **10TDOP** has another relevant advantage, thanks to the piston wear ring, which maintains the piston perfectly aligned with the bore.

Moreover, the two opposed polyurethane piston seals, ensure a good sliding effect on the piston and maintain the system clean even in the presence of lubricated air.

Operating conditions

✕ see page 8

Pressure	≤ 2 MPa
Temperature	-30°C to +90°C
Speed	≤ 1 m/s
Fluids	air lubricated or not, grease

Materials

✕ see pages 10-19

Seal ①	PU 85 or 90 Sh A
Body ②	Aluminium (2 pieces)
O-ring ③	NBR 70 Sh A
Magnetic element ④	Magnetic ring
Guide ring ⑤	POM

Assembly

✕ see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the tube will ease installation.

Advantages

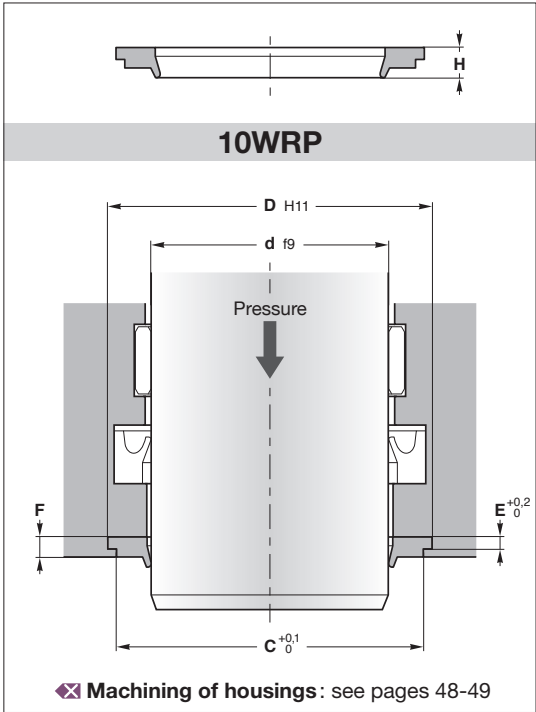
- Easy to assemble
- Perfect alignment
- Complete piston
- Good solution for magnetic pistons

Please contact us for applications approaching maximum values.

More information

On www.all-tec-business.net, click first on the reference and then on the material code to obtain the data sheet of the different materials.

D	d	H	H1	D1	Reference
32	8	13	16	22	10PM 32
40	8	13	16	26	10PM 40
50	10	13	16	35	10PM 50
60	12	14	17	43	10PM 60
63	12	14	17	46	10PM 63
70	12	14	17	54	10PM 70
75	12	14	17	59	10PM 75
80	16	14	17	64	10PM 80
90	16	15	18	74	10PM 90
100	16	16	21	83	10PM 100



10WRP is a light-duty wiper designed to clean the rod and to protect the guiding system for the rod.

Operating conditions		❖ see page 8
Temperature		-30°C to +90°C
Speed		≤ 1 m/s
Fluids		air with or without lubrication

Materials		❖ see pages 10-19
Standard		PU06: polyurethane 90 Sh A
Alternative		PU07: polyurethane 85 Sh A

Assembly ❖ see pages 54-59

Sharp edges should be removed from around the housing in order to avoid damaging the seal lips during installation. A lead-in chamfer on the rod will ease installation.

Advantages

The field of applications has been enlarged to the pneumatic cylinders thanks to the very simple mechanical design and the reduced overall dimensions.

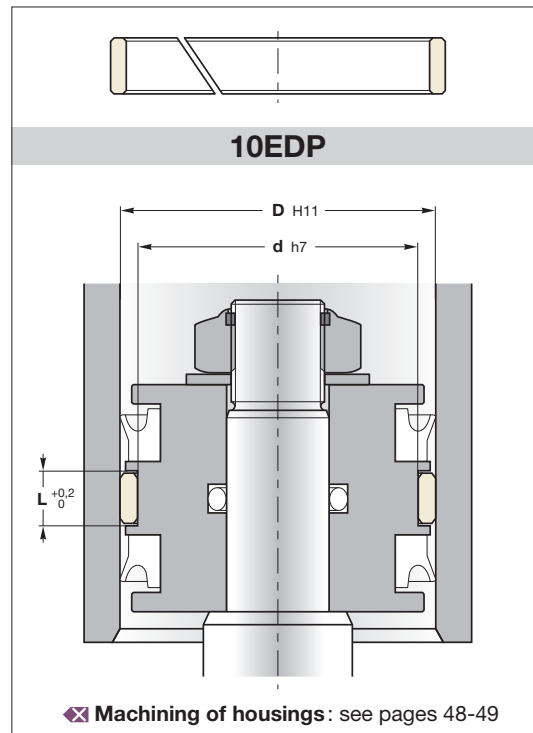
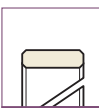
The highly flexible wiper lip does not interfere with the sliding of the guide system.

Please contact us for applications approaching maximum values.

More information

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

d	D	C	H	F	E	Reference
6	14,6	12	4,5	3	1,6	10WRP 6
8	17,6	15	4,5	3	1,6	10WRP 8
10	19,6	17	4,5	3	1,6	10WRP 10
12	21,6	19	4,5	3	1,6	10WRP 12
14	23,6	21	4,5	3	1,6	10WRP 14
16	26,6	24	4,5	3	1,6	10WRP 16
20	30,6	28	4,5	3	1,6	10WRP 20
25	38	35	4,5	3	1,6	10WRP 25
30	44	40	4,5	3	1,6	10WRP 30
40	56	52	4,5	3	1,6	10WRP 40
50	66	62	4,5	3	1,6	10WRP 50



10EDP type rod guide ring is used to avoid metal contact between piston and tube.

The guide rings are moulded in non-abrasive and self-lubricant material, especially studied to improve the linear sliding.

Operating conditions see page 8

Max. permissible radial load	≤ 36 N/mm ²
Temperature	-40°C to +110°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials see pages 10-19

Standard	POM modified
----------	--------------

Assembly see pages 54-59

Sharp edges should be removed from around the housing. A lead-in chamfer on the tube will ease installation.

Advantages

The profile presents chamfers both sides for easier installation of rod and piston.

High load capacity and reduced friction.

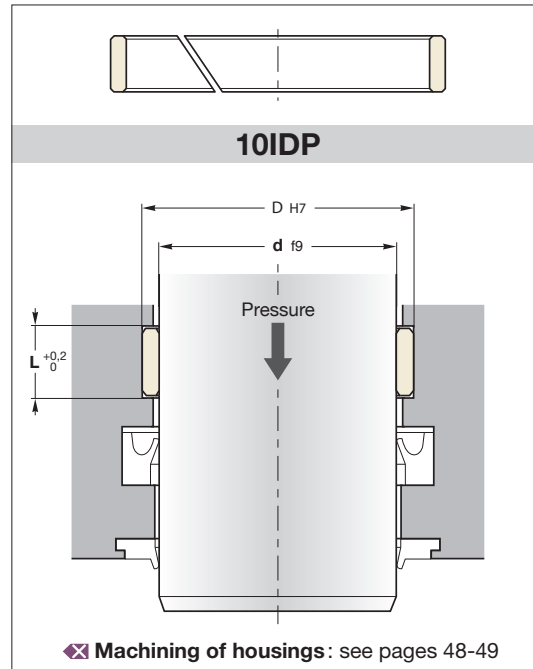
Please contact us for applications approaching maximum values.

More information

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

D	d	L	Reference
8	4,9	2,5	10EDP 8
10	6,9	2,5	10EDP 10
10	6,9	4	10EDP 10/1
12	8,9	4	10EDP 12
14	10,9	4	10EDP 14
15	11,9	4	10EDP 15
16	12,9	4	10EDP 16
16	12	9,7	10EDP 16/1
18	14,9	4	10EDP 18
20	16,9	4	10EDP 20
20	16	8,2	10EDP 20/1
20	16	9,7	10EDP 20/2
22	18	9,7	10EDP 22
25	21,9	4	10EDP 25
25	21	8,2	10EDP 25/1
30	26	8,2	10EDP 30
32	28,9	4	10EDP 32
32	28	8,2	10EDP 32/1
35	31	8,2	10EDP 35
40	36	8,2	10EDP 40
45	41	10,2	10EDP 45
50	46	10,2	10EDP 50
55	51	10,2	10EDP 55
58	54	10,2	10EDP 58
60	56	10,2	10EDP 60
63	59	10,2	10EDP 63
65	61	10,2	10EDP 65
70	66	10,2	10EDP 70
75	71	15,2	10EDP 75
80	76	10,2	10EDP 80

D	d	L	Reference
80	76	15,2	10EDP 80/1
85	81	15,2	10EDP 85
90	86	15,2	10EDP 90
95	91	15,2	10EDP 95
100	96	10,2	10EDP 100
100	96	15,2	10EDP 100/1
105	101	20,3	10EDP 105
110	106	20,3	10EDP 110
115	111	20,3	10EDP 115
120	116	20,3	10EDP 120
125	121	15,2	10EDP 125
125	121	20,3	10EDP 125/1
130	126	20,3	10EDP 130
135	131	20,3	10EDP 135
140	136	20,3	10EDP 140
150	146	25,4	10EDP 150
160	155	15	10EDP 160
160	156	15,2	10EDP 160/1
180	176	25,4	10EDP 180
200	195	15	10EDP 200
200	196	20,3	10EDP 200/1
200	196	25,4	10EDP 200/2
220	216	30,5	10EDP 220
250	246	20,3	10EDP 250
250	246	30	10EDP 250/1



10IDP type rod guide ring is used to avoid metal contact between cylinder head and rod.

The guide rings are moulded in a non-abrasive and self-lubricant material, especially studied to improve the linear sliding.

Operating conditions see page 8

Max. permissible radial load	≤ 36 N/mm ²
Temperature	-40°C to +110°C
Speed	≤ 1 m/s
Fluids	air with or without lubrication

Materials see pages 10-19

Standard	POM modified
----------	--------------

Assembly see pages 54-59

Sharp edges should be removed from around the housing. A lead-in chamfer on the rod will ease installation.

Advantages

The profile presents chamfers both sides for easier installation of rod and piston.

High load capacity and reduced friction.

Please contact us for applications approaching maximum values.

More information

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

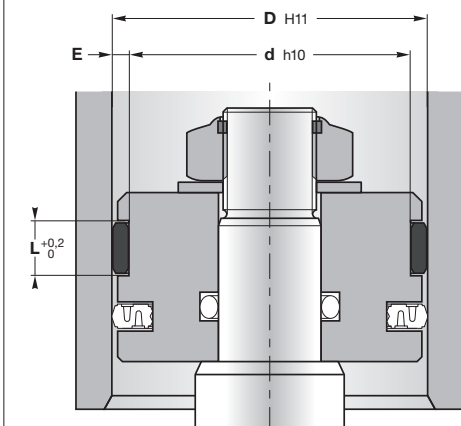
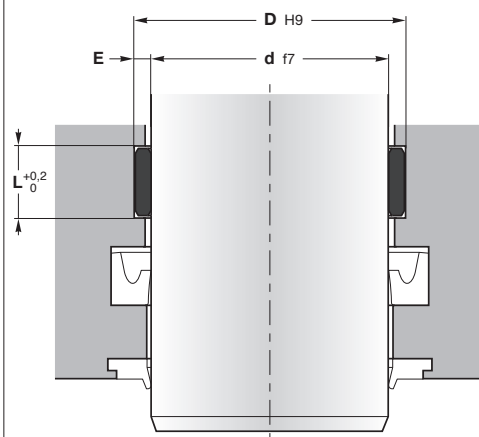
d	D	L	Reference
8	11,1	2,5	10IDP 8
10	13,1	2,5	10IDP 10
10	13,1	4	10IDP 10/1
12	15,1	4	10IDP 12
12	16	9,7	10IDP 12/1
14	17,1	4	10IDP 14
14	18	9,7	10IDP 14/1
15	18,1	4	10IDP 15
16	19,1	4	10IDP 16
16	20	9,7	10IDP 16/1
18	22	9,7	10IDP 18
20	23,1	4	10IDP 20
22	25,1	4	10IDP 22
25	28,1	4	10IDP 25
28	31,1	4	10IDP 28
30	33,1	4	10IDP 30
32	35,1	4	10IDP 32
35	38,1	4	10IDP 35
36	39,1	4	10IDP 36
40	43,1	4	10IDP 40
50	53,1	4	10IDP 50



10GT...-30

17GM...-T51

PTFE rolls

ALL-TEC®
SEALING SYSTEMS10GT...-30
17GM...-T51

✕ Machining of housings: see pages 48-49

10GT...-30 and 17GM...-T51 PTFE rolls are cut to manufacture rod and piston guide rings. These guide rings are used to avoid metal contact between cylinder head and rod and also between piston and tube.



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 air with or without lubrication

Materials ✕ see pages 10-19

10GT...-30 PTFE PT30

17GM...-T51 PTFE T51

Assembly ✕ see pages 54-59

Sharp edges should be removed from around the housing. A lead-in chamfer on the rod or on the tube will ease installation.

Advantages

The profile presents chamfers both sides for easier installation of rod and piston.

High load capacity and reduced friction due to the carbon additive in PTFE.

Vibration absorption effect.

Please contact us for applications approaching maximum values.

More information

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

10GT...-30

E	L	Reference	Length of roll
1,5	4,2	10GT 15042-30	10 meters
	6,3	10GT 15063-30	10 meters
	8,1	10GT 15081-30	10 meters
2	15	10GT 15150-30	10 meters
	15	10GT 20150-30	10 meters
	8,1	10GT 20081-30	10 meters
2,5	5,6	10GT 25056-30	10 meters
	6,3	10GT 25063-30	10 meters
	8,1	10GT 25081-30	10 meters
	9,7	10GT 25097-30	10 meters
	10	10GT 25100-30	10 meters
	15	10GT 25150-30	10 meters
20	20	10GT 25200-30	10 meters
	25	10GT 25250-30	10 meters

Turcite® SLYDRING® 17GM...-T51

E	L	Reference	Minimum length of roll
1,5	3	17GM2200000-T51	19 meters
1,55	4	17GM4300000-T51	18,5 meters
2	9,7	17GM4900000-T51	12 meters
2,5	15	17GM5300000-T51	9 meters
	5,6	17GM6500000-T51	9 meters
	9,7	17GM6900000-T51	9 meters
15	15	17GM7300000-T51	9 meters
	20	17GM7400000-T51	9 meters
	25	17GM7500000-T51	9 meters

Calculation of the permissible radial force for pistons

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

F = maximum radial force (N)

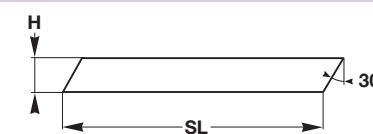
p = maximum permissible loading for material (N/mm²)

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: $SL = (d+E) \cdot 3,11$