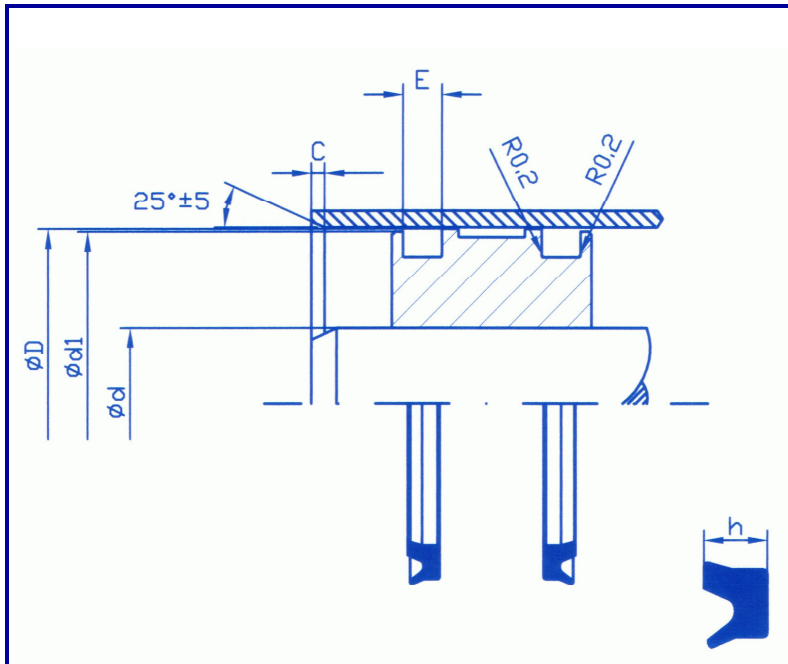


Pistonseal

Profile	Type	Specification	Limits of use			Material
			Temperature	Pressure	Velocity	Sealing element
	PK100	single acting	-30 up to +90 °C	up to 2 Mpa (20bar)	up to 1 m/s	TPU
	PK110	single acting	-30 up to +90 °C	up to 2 Mpa (20bar)	up to 1 m/s	TPU
	PK120	single acting	-30 up to +90 °C	up to 2 Mpa (20bar)	up to 1 m/s	TPU



Limitations on Use

Pressure	< 20 bar
Velocity	< 1 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm

Profile bearing length R_{mr} 50% up to 70%. Measurement on average depth c=0,25xR_z and reference line C_{ref} 5%

Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

D H11	d H10	h	E +0,2	d1*	Part-No.
6,00	3,00	2,00	2,50	5,00	PK100 0060-01-255
8,00	4,00	2,55	3,00	7,00	PK100 0080-01-255
8,00	4,80	2,30	2,70	7,00	PK100 0080-02-255
8,00	4,80	2,55	3,00	7,00	PK100 0080-03-255
10,00	6,00	2,55	3,00	9,00	PK100 0100-01-255
12,00	7,00	2,55	3,00	11,00	PK100 0120-01-255
13,00	8,00	2,55	3,00	12,00	PK100 0130-01-255
14,00	8,00	2,55	3,00	13,00	PK100 0140-01-255
15,00	9,00	2,55	3,00	14,00	PK100 0150-01-255
16,00	10,00	2,55	3,00	15,00	PK100 0160-01-255
17,00	11,00	2,55	3,00	16,00	PK100 0170-01-255
18,00	12,00	2,55	3,00	17,00	PK100 0180-01-255
20,00	14,00	2,55	3,00	19,00	PK100 0200-01-255
20,00	14,00	4,00	4,50	19,00	PK100 0200-02-255
20,00	15,50	4,00	4,50	19,00	PK100 0200-03-255
22,00	16,00	2,55	3,00	21,00	PK100 0220-01-255
24,00	18,00	2,55	3,00	23,00	PK100 0240-01-255
25,00	17,00	5,50	6,00	24,00	PK100 0250-01-255
25,00	19,00	3,25	3,50	24,00	PK100 0250-02-255
25,00	19,00	4,00	4,50	24,00	PK100 0250-03-255

* Recommended hook diameter could be modified accordingly to mounting demand

Limits of application stated herein are standard values. They could be individually transgressed to respective service conditions. In the event of a large duty cycle, pulsation operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due to the large variety of service conditions that may arise in course of actual use, the company does not take responsibility or guarantee the function accuracy of the individual components. Rights for changes are reserved.
Edition 01/09



D H11	d H10	h	E +0,2	d1*	Part-No.
27,00	21,00	3,25	3,50	26,00	PK100 0270-01-255
28,00	18,00	7,00	7,50	27,00	PK100 0280-01-255
28,00	22,00	3,25	3,50	27,00	PK100 0280-02-255
30,00	20,00	5,00	5,70	29,00	PK100 0300-01-255
30,00	22,00	3,25	3,50	29,00	PK100 0300-02-255
32,00	24,00	3,25	3,50	31,00	PK100 0320-01-255
32,00	24,00	5,50	6,00	31,00	PK100 0320-02-255
35,00	27,00	3,25	3,50	34,00	PK100 0350-01-255
36,00	28,00	3,25	3,50	35,00	PK100 0360-01-255
38,00	30,00	3,25	3,50	37,00	PK100 0380-01-255
38,00	20,00	5,50	6,00	37,00	PK100 0380-02-255
40,00	30,00	7,00	7,50	39,00	PK100 0400-01-255
40,00	32,00	3,25	3,50	39,00	PK100 0400-02-255
42,00	30,00	6,00	6,50	41,00	PK100 0420-01-255
42,00	34,00	3,25	3,50	41,00	PK100 0420-02-255
45,00	32,00	3,25	3,50	44,00	PK100 0450-02-255
50,00	40,00	7,00	7,50	49,00	PK100 0500-01-255
50,00	42,00	3,25	3,50	49,00	PK100 0500-02-255
52,00	42,00	4,25	4,50	51,00	PK100 0520-01-255
55,00	45,00	7,00	7,50	54,00	PK100 0550-01-255
58,00	48,00	4,25	4,50	57,00	PK100 0580-01-255
60,00	50,00	5,00	5,70	59,00	PK100 0600-01-255
60,00	50,00	7,00	7,50	59,00	PK100 0600-02-255
63,00	53,00	4,25	4,50	62,00	PK100 0630-01-255
63,00	53,00	7,00	7,50	62,00	PK100 0630-02-255
65,00	55,00	7,00	7,50	64,00	PK100 0650-01-255
68,00	58,00	4,70	5,50	67,00	PK100 0680-01-255
70,00	58,00	8,50	9,50	69,00	PK100 0700-01-255
75,00	63,00	8,50	9,50	74,00	PK100 0750-01-255
80,00	67,30	6,35	7,00	79,00	PK100 0800-01-255
80,00	68,00	8,50	9,50	79,00	PK100 0800-01-255
80,00	70,00	4,25	4,50	79,00	PK100 0800-02-255
85,00	73,00	8,50	9,50	84,00	PK100 0850-01-255
90,00	78,00	8,50	9,50	89,00	PK100 0900-01-255
90,00	80,00	4,25	4,50	89,00	PK100 0900-02-255
100,00	88,00	8,50	9,50	99,00	PK100 1000-01-255

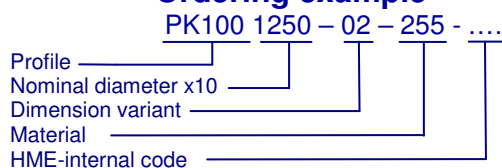
* Recommended hook diameter could be modified accordingly to mounting demand

Limits of application stated herein are standard values. They could be individually transgressed to respective service conditions. In the event of a large duty cycle, pulsation operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due the large variety of service conditions that may arise in course of actual use, the company does not take responsibility or guarantee the function accuracy of the individual components. Rights for changes are reserved.
Edition 01/09



D H11	d H10	h	E +0,2	d1*	Part-No.
100,00	90,00	4,25	4,50	99,00	PK100 1000-02-255
110,00	95,00	10,00	11,00	109,00	PK100 1100-01-255
120,00	105,00	10,00	11,00	119,00	PK100 1200 -01-255
125,00	105,00	8,25	8,50	124,00	PK100 1250 -01-255
125,00	110,00	10,00	11,00	124,00	PK100 1250 -02-255
140,00	120,00	8,25	8,50	139,00	PK100 1400 -01-255
160,00	140,00	8,25	8,50	159,00	PK100 1600 -01-255
160,00	124,00	10,00	11,00	159,00	PK100 1600 -02-255
180,00	160,00	14,00	15,00	179,00	PK100 1800 -01-255
200,00	180,00	8,25	8,50	199,00	PK100 2000 -01-255
200,00	180,00	14,00	15,00	199,00	PK100 2000 -02-255
250,00	230,00	14,00	15,00	249,00	PK100 2500 -01-255

Ordering example



Materials code

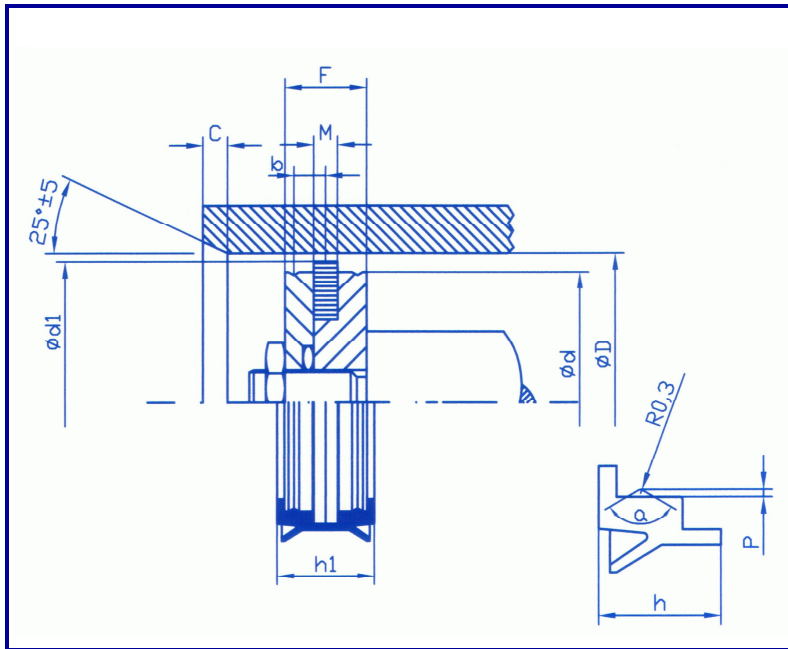
255 – PU 90 Sh A
 250 – PU 85 Sh A

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.

* Recommended hook diameter could be modified accordingly to mounting demand

Limits of application stated herein are standard values. They could be individually transgressed to respective service conditions. In the event of a large duty cycle, pulsation operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due the large variety of service conditions that may arise in course of actual use, the company does not take responsibility or guarantee the function accuracy of the individual components. Rights for changes are reserved.
 Edition 01/09



Limitations on Use

Pressure	< 20 bar
Velocity	< 1 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm
Profile bearing length R _{mr} 50% up to 70%. Measurement on average depth c=0,25xR _z and reference line C _{ref} 5%		

Lead in chamfer (min.)

D / d	D / d	D / d	D / d
< 25	< 25	< 25	< 25
25-60	25-60	25-60	25-60
61-100	61-100	61-100	61-100

D H11	d h9	h1	h	d1	M	P	b	F	a	Rod-Ø	Part.No.
8,00	4,00	12,00	6,00	6,50	4,00	0,35	4,00		120°		PK110 0080-01-255
10,00	4,00	12,00	6,00	8,50	3,00	0,35	3,50		120°		PK110 0100-01-255
12,00	6,00	12,00	6,00	10,50	3,00	0,40	3,50		120°		PK110 0120-01-255
16,00	8,00	12,00	6,00	14,50	3,00	0,40	3,50		120°		PK110 0160-01-255
20,00	10,00	12,00	6,00	18,00	3,00	0,50	3,50		120°		PK110 0200-01-255
25,00	10,00	12,00	6,00	23,00	3,00	0,50	3,50		120°		PK110 0250-01-255
32,00	26,00	14,00	7,00	29,50	3,00	0,50	4,00	11,00	120°	≤20 (mm)	PK110 0320-01-255
32,00	26,00	14,00	7,00	29,50	3,00	0,80	4,00	11,00	90°	≤20 (mm)	PK110 0320-02-255
32,00	26,00	14,00	7,00	29,50	5,00	0,50	4,00	11,00	120°	≤20 (mm)	PK110 0320-03-255
32,00	26,00	14,00	7,00	29,50	5,00	0,80	4,00	11,00	90°	≤20 (mm)	PK110 0320-04-255
40,00	34,00	14,50	7,25	37,50	5,00	0,50	4,25	12,00	120°	≤25 (mm)	PK110 0400-01-255
40,00	34,00	14,50	7,25	37,50	5,00	0,80	4,25	12,00	90°	≤25 (mm)	PK110 0400-02-255
50,00	43,00	14,50	7,25	46,50	5,00	0,60	4,25	12,00	120°	≤35 (mm)	PK110 0500-01-255
50,00	43,00	14,50	7,25	46,50	5,00	0,80	4,25	12,00	90°	≤35 (mm)	PK110 0500-02-255
63,00	55,00	20,00	10,00	59,50	5,00	0,80	6,00	17,00	120°	≤40 (mm)	PK110 0630-01-255
80,00	72,00	22,00	11,00	76,50	5,00	0,80	6,50	19,00	120°	≤50 (mm)	PK110 0800-01-255
100,00	90,00	26,00	13,00	96,50	5,00	0,80	7,50	22,00	120°	≤60 (mm)	PK110 1000-01-255

Ordering example

PK110 0400 – 01 – 255 -

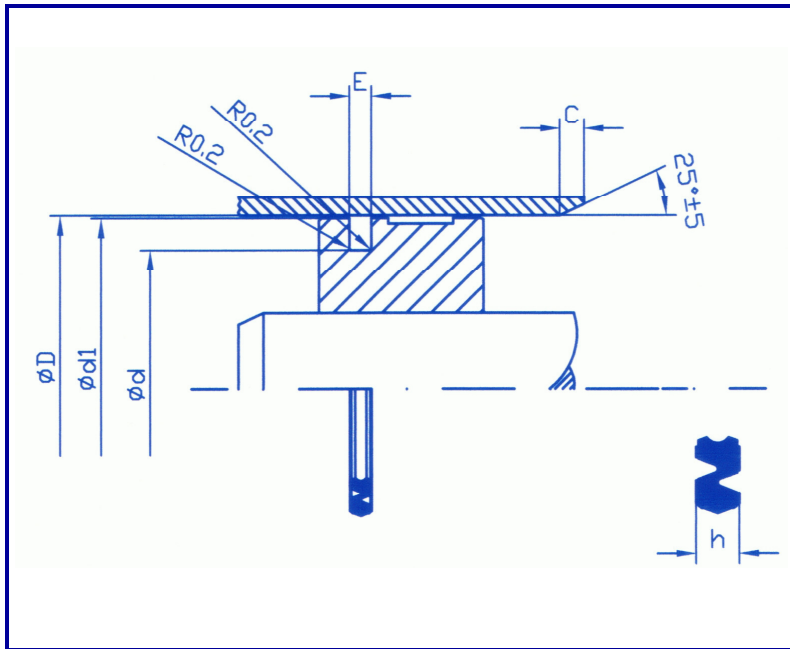
Profile _____
Nominal diameter x10 _____
Dimension variant _____
Material _____
HME-internal code _____

Materials-code

255 – PU 90 Sh A
250 – PU 85 Sh A

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.



Limitations on Use

Pressure	< 20 bar
Velocity	< 1 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm

Profile bearing length R_{mr} 50% up to 70%. Measurement on average depth c=0,25xR_z and reference line C_{ref} 5%

Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

D H11	d H10	h	E +0,2	d1	Teilnummer
12,00	7,00	2,20	2,50	11,50	PK120 0120-01-255
16,00	9,00	2,40	2,50	15,50	PK120 0160-01-255
20,00	13,00	2,40	2,50	19,50	PK120 0200-01-255
25,00	18,00	2,40	2,50	24,50	PK120 0250-01-255
28,00	21,00	2,40	2,50	27,50	PK120 0280-01-255
30,00	21,00	2,90	3,00	29,50	PK120 0300-01-255
32,00	23,00	2,90	3,00	31,50	PK120 0320-01-255
35,00	36,00	2,90	3,00	34,50	PK120 0350-01-255
40,00	31,00	2,90	3,00	39,50	PK120 0400-01-255
45,00	36,00	2,90	3,00	44,50	PK120 0450-01-255
50,00	41,00	2,90	3,00	49,50	PK120 0500-01-255
60,00	48,00	3,90	4,00	59,50	PK120 0600-01-255
63,00	51,00	3,90	4,00	62,50	PK120 0630-01-255
70,00	58,00	3,90	4,00	69,50	PK120 0700-01-255
80,00	68,00	3,90	4,00	79,50	PK120 0800-01-255

Ordering example

PK120 0400 – 01 – 255 -

Profile	_____
Nominal diameter x10	_____
Dimension variant	_____
Material	_____
HME-internal code	_____

Materials code

255 – PU 90 Sh A
250 – PU 85 Sh A

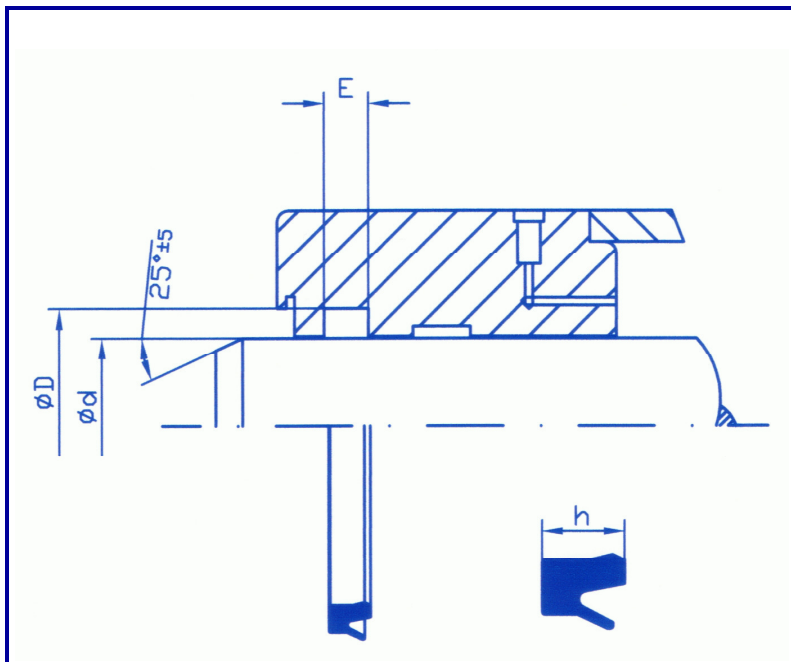
Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.

Limits of application stated herein are standard values. They could be individually transgressed to respective service conditions. In the event of a large duty cycle, pulsation operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due the large variety of service conditions that may arise in course of actual use, the company does not take responsibility or guarantee the function accuracy of the individual components. Rights for changes are reserved.
Edition 01/09

Rodseal

Profile	Type	Specification	Limits of use			Material
			Temperature	Pressure	Velocity	Sealing element
	PS200	single acting	-30 up to +90 °C	up to 2 Mpa (20bar)	up to 1 m/s	TPU
	PS210	douple acting	-30 up to +90 °C	up to 2 Mpa (20bar)	up to 1 m/s	TPU



Limitations on Use

Pressure	< 20 bar
Velocity	< 1 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm

Profile bearing length R_{mr} 50% up to 70%. Measurement on average depth c=0,25xR_z and reference line C_{ref} 5%

Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

d f9	D H10	h	E +0,2	Part-No.
3,00	6,00	2,50	3,00	PS200 0030-01-255
4,00	8,00	3,00	3,50	PS200 0040-01-255
5,00	9,00	2,50	3,00	PS200 0050-01-255
6,00	10,00	3,00	3,50	PS200 0060-01-255
6,00	11,00	3,00	3,50	PS200 0060-02-255
6,00	12,00	4,00	4,50	PS200 0060-03-255
7,00	13,00	4,00	4,50	PS200 0070-01-255
7,00	14,00	3,50	4,00	PS200 0070-02-255
8,00	14,00	4,00	4,50	PS200 0080-01-255
8,00	16,00	4,50	5,00	PS200 0080-02-255
10,00	16,00	4,50	5,00	PS200 0100-01-255
10,00	18,00	5,50	6,00	PS200 0100-02-255
12,00	20,00	5,50	6,00	PS200 0120-01-255
14,00	22,00	5,50	6,00	PS200 0140-01-255
16,00	24,00	5,50	6,00	PS200 0160-01-255
18,00	26,00	5,50	6,00	PS200 0180-01-255
20,00	28,00	5,50	6,00	PS200 0200-01-255
22,00	28,00	4,50	5,00	PS200 0220-01-255
22,00	30,00	5,50	6,00	PS200 0220-02-255
25,00	33,00	5,50	6,00	PS200 0250-01-255
28,00	36,00	5,50	6,00	PS200 0280-01-255

* Recommended hook diameter could be modified accordingly to mounting demand

Limits of application stated herein are standard values. They could be individually transgressed to respective service conditions. In the event of a large duty cycle, pulsation operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due the large variety of service conditions that may arise in course of actual use, the company does not take responsibility or guarantee the function accuracy of the individual components. Rights for changes are reserved.
Edition 01/09



d f9	D H10	h	E +0,2	Part-No.
28,00	38,00	7,00	7,50	PS200 0280-02-255
30,00	38,00	5,50	6,00	PS200 0300-01-255
30,00	40,00	7,00	7,50	PS200 0300-02-255
32,00	40,00	5,50	6,00	PS200 0320-01-255
35,00	43,00	8,00	8,50	PS200 0350-01-255
35,00	45,00	7,00	7,50	PS200 0350-02-255
36,00	46,00	7,00	7,50	PS200 0360-01-255
40,00	48,00	5,50	6,00	PS200 0400-01-255
40,00	50,00	7,00	7,50	PS200 0400-02-255
45,00	55,00	7,00	7,50	PS200 0450-01-255
50,00	60,00	7,00	7,50	PS200 0500-01-255
55,00	65,00	7,00	7,50	PS200 0550-01-255
56,00	66,00	7,00	7,50	PS200 0560-01-255
60,00	72,00	8,50	8,50	PS200 0600-01-255
63,00	73,00	7,00	7,50	PS200 0630-01-255
63,00	75,00	8,50	8,50	PS200 0630-01-255
65,00	77,00	8,50	8,50	PS200 0650-01-255
70,00	82,00	8,50	8,50	PS200 0700-01-255
75,00	87,00	8,50	8,50	PS200 0750-01-255
80,00	92,00	8,50	8,50	PS200 0800-01-255
85,00	97,00	8,50	8,50	PS200 0850-01-255
90,00	102,00	8,50	8,50	PS200 0900-01-255
95,00	107,00	8,50	8,50	PS200 0950-01-255
100,00	115,00	10,00	10,50	PS200 1000-01-255

Ordering example

PS200 0400 – 01 – 255 -

Profile ————
Nominal diameter x10 ————
Dimension variant ————
Material ————
HME-internal code ————

Materials code

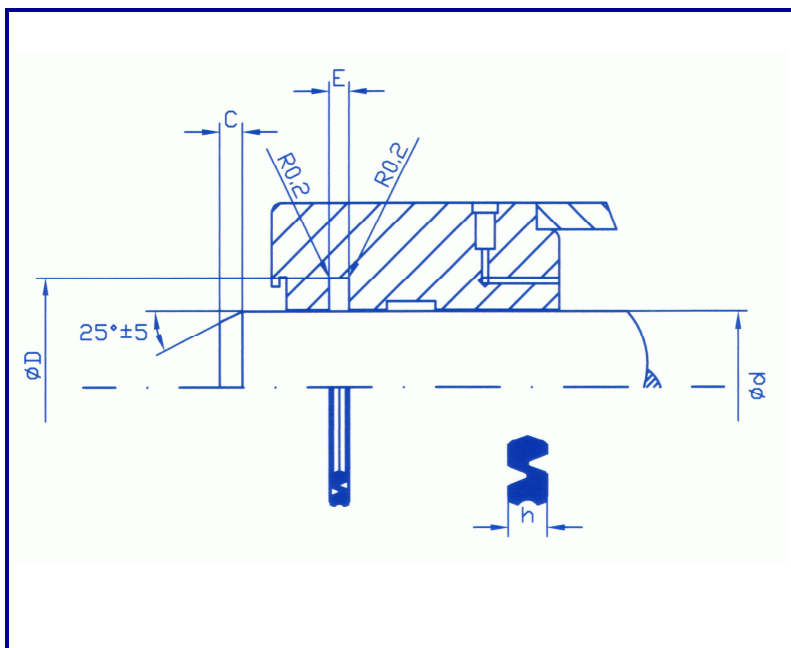
255 – PU 90 Sh A
250 – PU 85 Sh A

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.

* Recommended hook diameter could be modified accordingly to mounting demand

Limits of application stated herein are standard values. They could be individually transgressed to respective service conditions. In the event of a large duty cycle, pulsation operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due the large variety of service conditions that may arise in course of actual use, the company does not take responsibility or guarantee the function accuracy of the individual components. Rights for changes are reserved.
Edition 01/09



Limitations on Use

Pressure	< 20 bar
Velocity	< 1 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm

Profile bearing length R_{mr} 50% up to 70%. Measurement on average depth c=0,25xR_z and reference line C_{ref} 5%

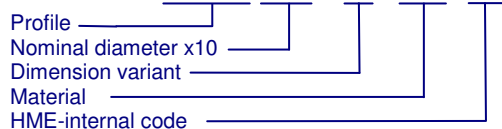
Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

d f9	D H10	h	E +0,2	Part-No.
6,00	13,00	2,30	2,50	PS210 0060-01-255
8,00	15,00	2,30	2,50	PS210 0080-01-255
10,00	17,00	2,30	2,50	PS210 0100-01-255
12,00	19,00	2,30	2,50	PS210 0120-01-255
14,00	21,00	2,30	2,50	PS210 0140-01-255
15,00	22,00	2,30	2,50	PS210 0150-01-255
16,00	25,00	2,80	3,00	PS210 0160-01-255
20,00	29,00	2,80	3,00	PS210 0200-01-255
25,00	34,00	2,80	3,00	PS210 0250-01-255
30,00	39,00	2,80	3,00	PS210 0300-01-255
40,00	49,00	2,80	3,00	PS210 0400-01-255
42,00	51,00	2,80	3,00	PS210 0420-01-255
50,00	59,00	2,80	3,00	PS210 0500-01-255

Ordering example

PS210 0400 - 01 - 255 -



Materials code

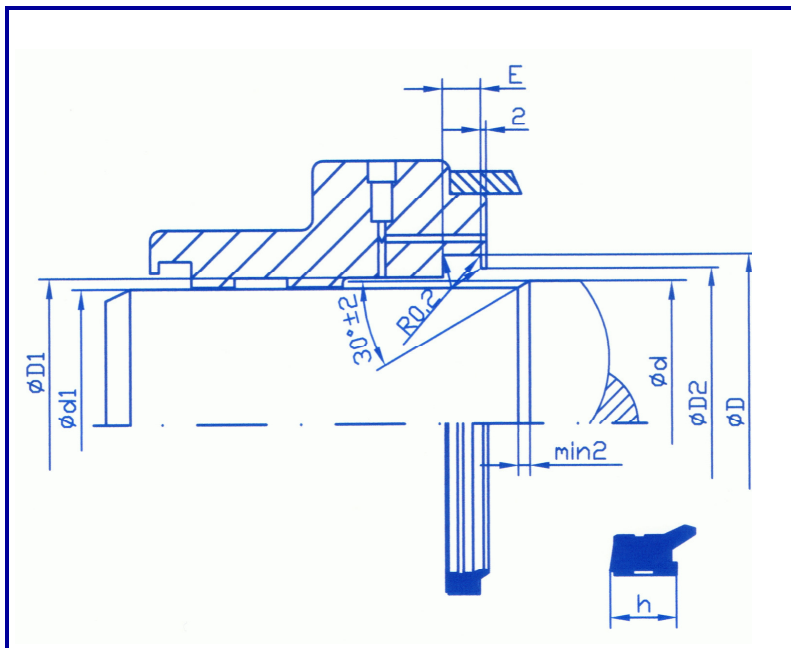
255 – PU 90 Sh A
250 – PU 85 Sh A

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.

Cushioning seal

Profile	Type	Specification	Limits of use			Material
			Temperature	Pressure	Velocity	Sealing element
	PE270	single acting	-30 up to +90 °C	up to 2 Mpa (20bar)	up to 1 m/s	TPU



Limitations on Use

Pressure	< 20 bar
Velocity	< 1 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm

Profile bearing length R_{mr} 50% up to 70%. Measurement on average depth c=0,25xR_z and reference line C_{ref} 5%

Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

d h10	D H11	h	E	D1	D2	<d1	Part-No.
6,00	10,00	3,40	3,70	6,50	8,00	4,50	PE270 0060-01-255
8,00	11,60	3,00	3,30	8,50	10,00	7,00	PE270 0080-01-255
9,50	15,00	4,00	4,50	10,00	12,00	8,00	PE270 0095-01-255
10,00	18,00	6,50	7,00	11,00	15,00	8,00	PE270 0100-01-255
12,00	18,00	4,30	4,80	13,00	15,50	10,00	PE270 0120-01-255
12,00	20,00	6,50	7,00	13,00	17,00	10,00	PE270 0120-02-255
14,00	22,00	6,50	7,00	15,00	19,00	12,00	PE270 0140-01-255
16,00	22,00	4,70	5,20	17,00	19,50	14,00	PE270 0160-01-255
16,00	24,00	6,50	7,00	17,00	21,00	14,00	PE270 0160-02-255
18,00	26,00	6,50	7,00	19,00	23,00	16,00	PE270 0180-01-255
20,00	28,00	6,50	7,00	21,00	24,00	17,50	PE270 0200-01-255
22,00	30,00	6,50	7,00	23,00	26,00	19,50	PE270 0220-01-255
25,00	33,00	6,50	7,00	26,00	29,00	22,50	PE270 0250-01-255
28,00	36,00	6,50	7,00	29,00	32,00	25,50	PE270 0280-01-255
30,00	40,00	6,50	7,00	31,50	35,00	27,50	PE270 0300-01-255
32,00	42,00	6,50	7,00	33,50	37,00	29,00	PE270 0320-01-255
36,00	46,00	6,50	7,00	37,50	41,00	33,00	PE270 0360-01-255
40,00	50,00	6,50	7,00	41,50	45,00	37,00	PE270 0400-01-255



h10	D H11	h	E	D1	D2	<d1	Part-No.
50,00	60,00	6,50	7,00	51,50	55,00	47,00	PE270 0500-01-255
57,00	74,00	12,00	12,50	60,00	65,00	54,00	PE270 0570-01-255
70,00	87,00	12,00	12,50	73,00	78,00	66,00	PE270 0700-01-255
78,00	95,00	12,00	12,50	81,00	86,00	74,00	PE270 0780-01-255

Ordering example

PE270 0400 – 01 – 255 -

Profile _____
 Nominal diameter x10 _____
 Dimension variant _____
 Material _____
 HME-internal code _____

Materials code

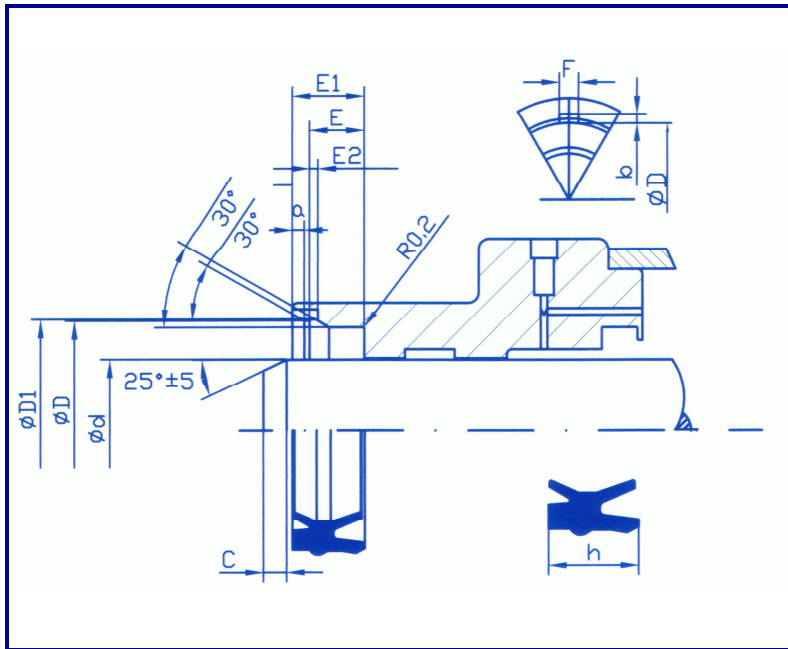
255 – PU 90 Sh A
 200 – PU 93 Sh A

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.

Wiper

Profile	Type	Specification	Limits of use			Material
			Temperature	Pressure	Velocity	Sealing element
	PA300	douple acting	-30 up to +90 °C	up to 2 Mpa (20bar)	up to 1 m/s	TPU
	PA310	douple acting	-30 up to +90 °C	up to 2 Mpa (20bar)	up to 1 m/s	TPU
	PA320	douple acting	-30 up to +90 °C	up to 2 Mpa (20bar)	up to 1 m/s	TPU
	PA330	single acting	-30 up to +90 °C		up to 4 m/s	TPU



Limitations on Use

Pressure	< 20 bar
Velocity	< 4 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm

Profile bearing length R_{mr} 50% up to 70%. Measurement on average depth c=0,25xR_z and reference line C_{ref} 5%

Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

d h9	D H10	D1	h	E1	E	E2	r	a	b	F	Part-No.
12,00	20,00	22,00	10,70	13,00	8,80	2,50	1,10	1,50	1,80	4,00	PA300 0120-01-255
12,00	22,00	22,00	10,70	13,00	8,80	2,50	1,10	1,50	1,80	4,00	PA300 0120-02-255
16,00	26,00	28,00	10,70	13,00	8,80	2,50	1,10	1,50	1,80	5,00	PA300 0160-01-255
18,00	26,00	28,00	10,70	13,00	8,80	2,50	1,10	1,50	1,80	5,00	PA300 0180-01-255
18,00	28,00	30,00	10,70	13,00	8,80	2,50	1,10	1,50	1,80	5,00	PA300 0180-02-255
20,00	30,00	32,00	10,70	13,00	8,80	2,50	1,10	1,50	1,80	5,00	PA300 0200-01-255
22,00	32,00	34,50	11,20	14,00	9,40	3,00	1,40	2,00	2,00	7,50	PA300 0220-01-255
25,00	35,00	37,50	11,20	14,00	9,40	3,00	1,40	2,00	2,00	7,50	PA300 0250-01-255
30,00	40,00	42,50	11,20	14,00	9,40	3,00	1,40	2,00	2,00	7,50	PA300 0300-01-255
32,00	42,00	44,50	11,20	14,00	9,40	3,00	1,40	2,00	2,00	7,50	PA300 0320-01-255
40,00	50,00	52,50	11,20	14,00	9,40	3,00	1,40	2,00	2,00	7,50	PA300 0400-01-255
45,00	55,00	58,20	12,20	15,00	10,40	4,00	1,80	2,00	2,50	10,00	PA300 0450-01-255
50,00	60,00	63,20	12,20	15,00	10,40	4,00	1,80	2,00	2,50	10,00	PA300 0500-01-255
63,00	75,00	78,20	13,00	16,00	11,40	4,00	1,80	2,00	2,50	10,00	PA300 0630-01-255

Ordering example

PA300 0400 - 01 - 255 -

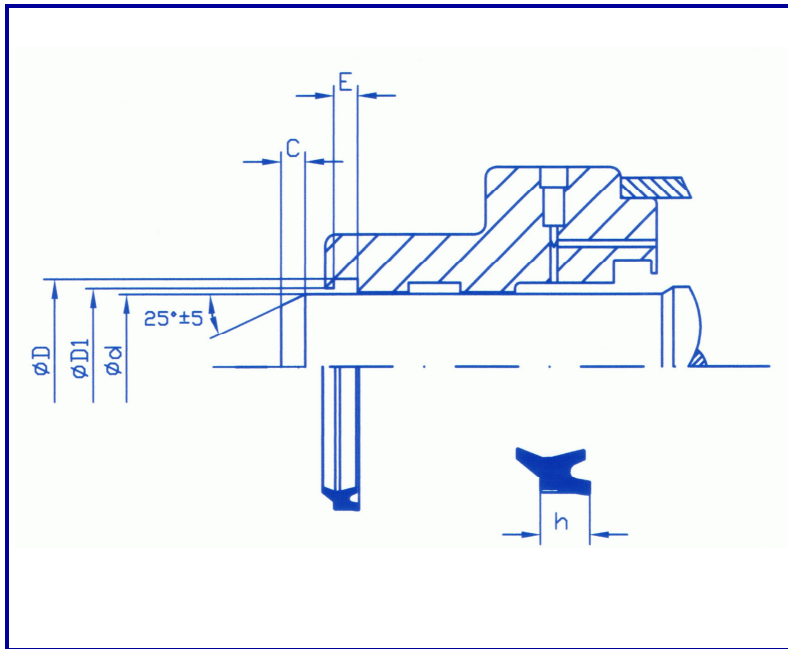
Profile	_____
Nominal diameter x10	_____
Dimension variant	_____
Material	_____
HME-internal code	_____

Materials-code

255 – PU 90 Sh A
200 – PU 93 Sh A

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.



Limitations on Use

Pressure	< 20 bar
Velocity	< 1 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm
Profile bearing length R _{mr} 50% up to 70%. Measurement on average depth c=0,25xR _z and reference line C _{ref} 5%		

Lead in chamfer (min.)

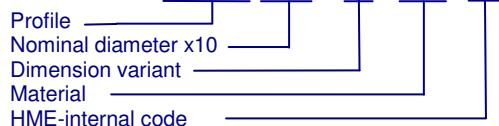
D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

d f9	D H10	h	E +0,2	D1	Part-No.
3,00	8,80	4,00	4,50	5,00	PA310 0030-01-255
4,00	7,00	2,20	2,70	6,00	PA310 0040-01-255
4,00	8,80	4,00	4,50	5,40	PA310 0040-02-255
5,00	8,00	2,20	2,70	6,20	PA310 0050-01-255
6,00	9,00	2,20	2,70	7,20	PA310 0060-01-255
6,00	10,80	4,00	4,50	8,00	PA310 0060-02-255
8,00	11,50	2,50	3,00	9,20	PA310 0080-01-255
8,00	12,80	4,00	4,50	10,00	PA310 0080-02-255
8,00	14,00	4,00	4,50	11,00	PA310 0080-03-255
10,00	14,00	2,80	3,20	11,40	PA310 0100-01-255
10,00	16,00	3,60	4,00	12,50	PA310 0100-02-255
10,00	16,80	4,00	4,50	13,00	PA310 0100-03-255
10,00	18,00	4,50	5,00	14,00	PA310 0100-04-255
12,00	16,50	3,20	3,70	13,70	PA310 0120-01-255
12,00	18,00	3,60	4,00	14,50	PA310 0120-02-255
12,00	20,00	3,20	3,70	16,00	PA310 0120-03-255
12,00	20,00	4,50	5,00	16,00	PA310 0120-04-255
12,00	20,00	5,00	5,50	16,00	PA310 0120-05-255
12,00	22,00	5,00	5,50	16,00	PA310 0120-06-255
14,00	18,50	3,20	3,70	15,70	PA310 0140-01-255
14,00	20,00	3,60	4,00	16,50	PA310 0140-02-255
14,00	22,00	4,50	5,00	18,00	PA310 0140-03-255
14,00	24,00	5,00	5,50	18,00	PA310 0140-04-255

d f9	D H10	h	E +0,2	D1	Part-No.
16,00	20,50	3,20	3,70	17,70	PA310 0160-01-255
16,00	22,00	3,60	4,00	18,50	PA310 0160-02-255
16,00	24,00	4,50	5,00	18,50	PA310 0160-03-255
16,00	26,00	5,00	5,50	20,00	PA310 0160-04-255
18,00	22,50	3,20	3,70	19,70	PA310 0180-01-255
18,00	24,00	3,60	4,00	20,50	PA310 0180-02-255
18,00	26,00	4,50	5,00	21,00	PA310 0180-03-255
18,00	28,00	5,00	6,00	22,00	PA310 0180-04-255
20,00	25,00	3,60	4,00	21,90	PA310 0200-01-255
20,00	26,00	3,60	4,00	22,50	PA310 0200-02-255
20,00	28,00	6,00	7,00	22,00	PA310 0200-01-255
20,00	30,00	6,00	7,00	24,00	PA310 0200-03-255
22,00	27,00	3,60	4,00	23,90	PA310 0220-01-255
22,00	28,00	3,60	4,00	24,50	PA310 0220-02-255
22,00	32,00	6,00	7,00	26,00	PA310 0220-03-255
25,00	30,00	3,60	4,00	26,90	PA310 0250-01-255
25,00	31,00	3,60	4,00	27,50	PA310 0250-02-255
25,00	35,00	6,00	7,00	29,00	PA310 0250-03-255
28,00	38,00	6,00	7,00	32,00	PA310 0280-01-255
30,00	35,50	3,90	4,50	32,10	PA310 0300-01-255
30,00	38,00	4,50	5,00	33,00	PA310 0300-02-255
30,00	40,00	6,00	7,00	34,00	PA310 0300-03-255
32,00	37,50	3,90	4,50	34,10	PA310 0320-01-255
32,00	40,00	4,50	5,00	35,00	PA310 0320-02-255
32,00	42,00	6,00	7,00	36,00	PA310 0320-03-255
35,00	45,00	6,00	7,00	39,00	PA310 0350-01-255
36,00	44,00	4,50	5,00	39,00	PA310 0360-01-255
36,00	46,00	6,00	7,00	40,00	PA310 0360-02-255
40,00	50,00	6,00	7,00	44,00	PA310 0400-01-255
45,00	53,00	4,50	5,00	48,00	PA310 0450-01-255
45,00	55,00	6,00	7,00	49,00	PA310 0450-02-255
50,00	62,00	7,50	8,50	55,00	PA310 0500-01-255

Ordering example

PA310 0400 - 01 - 255 -

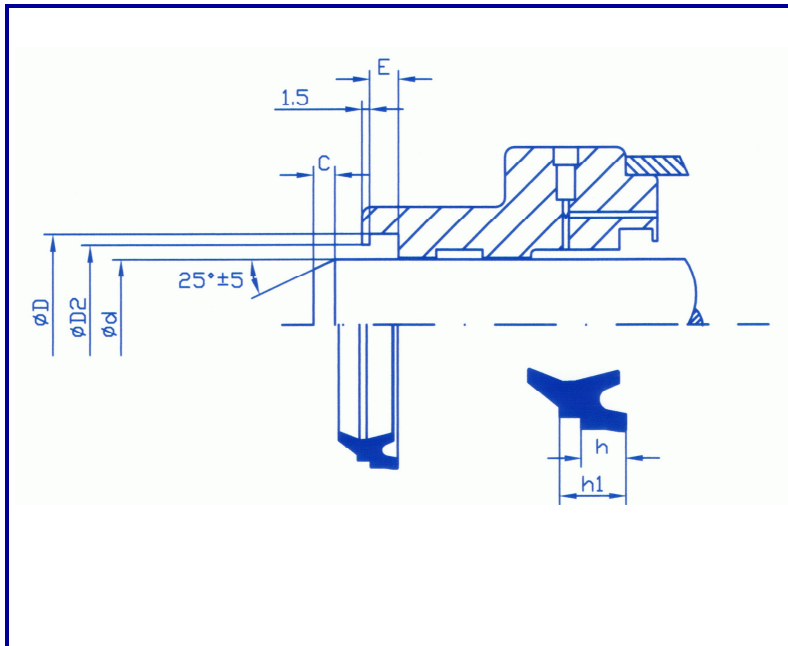


Materials-code

255 – PU 90 Sh A
 250 – PU 85 Sh A

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.



Limitations on Use

Pressure	< 20 bar
Velocity	< 1 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm

Profile bearing length R_{mr} 50% up to 70%. Measurement on average depth c=0,25xR_z and reference line C_{ref} 5%

Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

d f9	D H10	h	h1	E	D 2 (h)	D2 (h1)	Part-No.
4,00	8,10	2,80		3,00	6,70		PA320 0040-01-255
6,00	11,10	3,30		3,60	9,10		PA320 0060-01-255
8,00	14,10	3,30		3,60	12,10		PA320 0080-01-255
10,00	16,10	3,80		4,20	14,10		PA320 0100-01-255
12,00	18,10	3,80		4,20	15,10		PA320 0120-01-255
12,00	20,00	3,60		4,00	18,00		PA320 0120-02-255
14,00	22,00	3,60		4,00	20,00		PA320 0140-01-255
16,00	24,00	3,60		4,00	22,00		PA320 0160-01-255
18,00	26,00		5,60	6,00		21,50	PA320 0180-01-255
20,00	28,00		5,60	6,00		23,50	PA320 0200-01-255
22,00	30,00		5,60	6,00		25,50	PA320 0220-01-255
25,00	33,00		5,60	6,00		28,50	PA320 0250-01-255
28,00	36,00		5,60	6,00		31,50	PA320 0280-01-255
30,00	38,00		5,60	6,00		33,50	PA320 0300-01-255
32,00	40,00		5,60	6,00		35,50	PA320 0320-01-255
35,00	43,00		5,60	6,00		38,50	PA320 0350-01-255
36,00	44,00		5,60	6,00		39,50	PA320 0360-01-255
40,00	48,00		5,60	6,00		43,50	PA320 0400-01-255
42,00	50,00		5,60	6,00		45,50	PA320 0420-01-255
45,00	53,00		5,60	6,00		48,50	PA320 0450-01-255
50,00	58,00		5,60	6,00		53,50	PA320 0500-01-255
55,00	63,00		5,60	6,00		58,50	PA320 0550-01-255
56,00	64,00		5,60	6,00		59,50	PA320 0560-01-255
60,00	68,00		5,60	6,00		63,50	PA320 0600-01-255
100,00	108,00		5,60	6,00		103,50	PA320 1000-01-255

Ordering example

PA320 0400 – 01 – 255 -

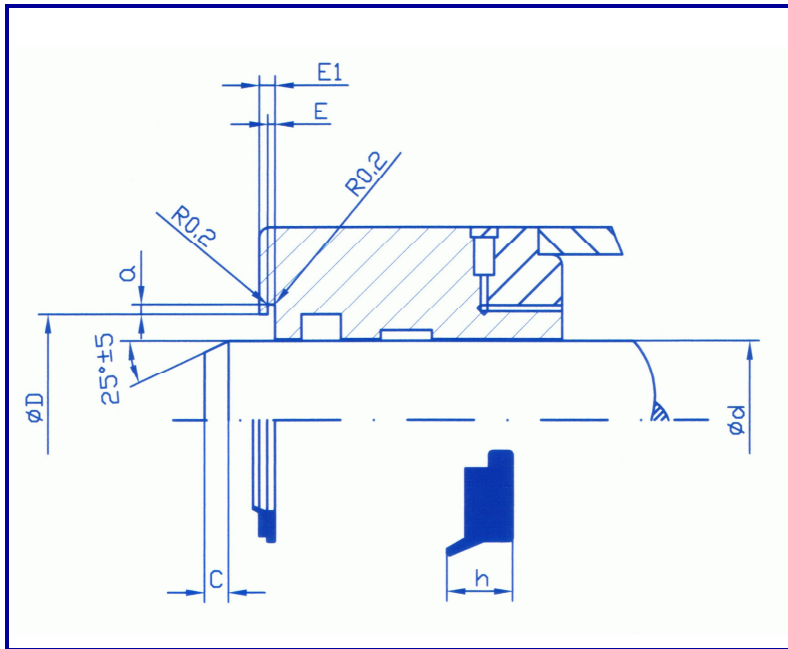
Profile _____
Nominal diameter x10 _____
Dimension variant _____
Material _____
HME-internal code _____

Materials-code

255 – PU 90 Sh A
250 – PU 85 Sh A

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.



Limitations on Use

Velocity	< 4 m/s
Temperature	-30° bis +90°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm

Profile bearing length R_{mr} 50% up to 70%. Measurement on average depth c=0,25xR_z and reference line C_{ref} 5%

Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

d f9	D H11	h	E1	a	E	Part-No.
6,00	12,00	4,50	3,00	1,30	1,60	PA330 0060-01-255
8,00	15,00	4,50	3,00	1,30	1,60	PA330 0080-01-255
10,00	17,00	4,50	3,00	1,30	1,60	PA330 0100-01-255
12,00	19,00	4,50	3,00	1,30	1,60	PA330 0120-01-255
14,00	21,00	4,50	3,00	1,30	1,60	PA330 0140-01-255
16,00	24,00	4,50	3,00	1,30	1,60	PA330 0160-01-255
20,00	28,00	4,50	3,00	1,30	1,60	PA330 0200-01-255
25,00	35,00	4,50	3,00	1,50	1,60	PA330 0250-01-255
30,00	40,00	4,50	3,00	2,00	1,60	PA330 0300-01-255
40,00	52,00	4,50	3,00	2,00	1,60	PA330 0400-01-255
50,00	62,00	4,50	3,00	2,00	1,60	PA330 0500-01-255

Ordering example

PA330 0400 - 01 - 255 -

Profile	PA330
Nominal diameter x10	0400
Dimension variant	01
Material	255
HME-internal code	

Materials-code

255 - PU 90 Sh A

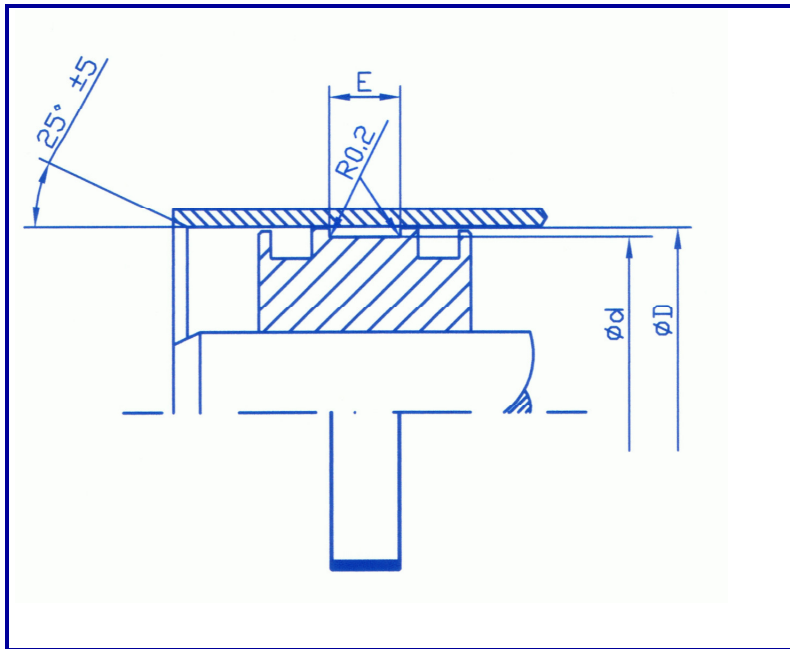
Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.

Limits of application stated herein are standard values. They could be individually transgressed to respective service conditions. In the event of a large duty cycle, pulsation operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due the large variety of service conditions that may arise in course of actual use, the company does not take responsibility or guarantee the function accuracy of the individual components. Rights for changes are reserved.
Edition 01/09

Guide rings

Profile	Type	Specification	Limits of use			Material
			Temperature	Pressure	Velocity	Sealing element
	PF451 - PF457	Guide rings for piston	-40 up tp +115°C		up to 1 m/s	POM
	PF451	Guide rings for rod	-40 up to+115°C		up to 1 m/s	POM



Limitations on Use

Static strength	36 N/mm ²
Velocity	< 1 m/s
Temperature	-40° bis +115°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm
Profile bearing length R _{mr} 50% up to 70%. Measurement on average depth c=0,25xR _z and reference line C _{ref} 5%		

Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

D H11	d h7	E +0,2	Part-No.
8,00	4,90	2,50	PF451 0049-10-525
10,00	6,90	2,50	PF451 0069-10-525
10,00	6,90	4,00	PF451 0069-12-525
12,00	8,90	4,00	PF451 0089-12-525
14,00	10,90	4,00	PF451 0109-12-525
15,00	11,90	4,00	PF451 0119-12-525
16,00	12,90	4,00	PF451 0129-12-525
16,00	12,00	9,70	PF452 0120-16-525
18,00	14,90	4,00	PF451 0149-12-525
20,00	16,90	4,00	PF451 0169-12-525
20,00	16,00	8,20	PF452 0160-36-525
20,00	16,00	9,70	PF452 0160-16-525
22,00	18,00	9,70	PF452 0180-16-525
25,00	21,90	4,00	PF451 0219-12-525
25,00	21,00	8,20	PF451 0210-36-525
30,00	25,80	5,00	PF456 0258-62-525
30,00	26,00	8,20	PF452 0260-36-525
32,00	28,90	4,00	PF451 0289-12-525
32,00	28,00	5,00	PF452 0280-62-525
32,00	28,00	8,20	PF452 0280-36-525
35,00	31,00	8,20	PF452 0310-36-525
40,00	35,00	9,70	PF450 0350-16-525
40,00	36,00	8,20	PF452 0360-36-525
45,00	41,00	10,20	PF452 0410-38-525
50,00	46,00	5,20	PF452 0460-32-525

D H11	d h7	E +0,2	Part-No.
50,00	46,00	10,20	PF452 0460-38-525
50,00	47,00	12,00	PF457 0470-70-525
55,00	51,00	10,20	PF452 0510-38-525
58,00	54,00	10,20	PF452 0540-38-525
60,00	56,00	10,20	PF452 0560-38-525
63,00	59,00	10,20	PF452 0590-38-525
63,00	60,00	12,00	PF457 0600-70-525
65,00	61,00	10,20	PF452 0610-38-525
70,00	66,00	10,20	PF452 0660-38-525
75,00	71,00	15,20	PF452 0710-42-525
80,00	76,00	10,20	PF452 0760-38-525
80,00	76,00	15,20	PF452 0760-42-525
85,00	81,00	15,20	PF452 0810-42-525
90,00	86,00	15,20	PF452 0860-42-525
95,00	91,00	15,20	PF452 0910-42-525
100,00	96,00	10,20	PF452 0960-38-525
100,00	96,00	15,20	PF452 0960-42-525
105,00	101,00	20,30	PF452 1010-44-525
110,00	106,00	20,30	PF452 1060-44-525
115,00	111,00	20,30	PF452 1110-44-525
120,00	116,00	20,30	PF452 1160-44-525
125,00	121,00	25,20	PF452 1210-42-525
125,00	121,00	20,30	PF452 1210-44-525
130,00	126,00	20,30	PF452 1260-44-525
135,00	131,00	20,30	PF452 1310-44-525
140,00	136,00	20,30	PF452 1360-44-525
150,00	146,00	25,40	PF452 1460-46-525
160,00	155,00	15,00	PF450 1550-18-525
160,00	156,00	15,20	PF452 1560-42-525
180,00	176,00	25,40	PF452 1760-46-525
200,00	195,00	15,00	PF450 1950-18-525
200,00	196,00	20,30	PF452 1960-44-525
200,00	196,00	25,40	PF452 1960-46-525
220,00	216,00	30,50	PF452 2160-49-525
250,00	246,00	20,30	PF452 2460-44-525
250,00	246,00	30,50	PF452 2460-49-525

Ordering example

PF452 0180 – 16 – 525 -

Profile _____
 Nominal diameter x10 _____
 Dimension variant _____
 Material _____
 HME-internal code _____

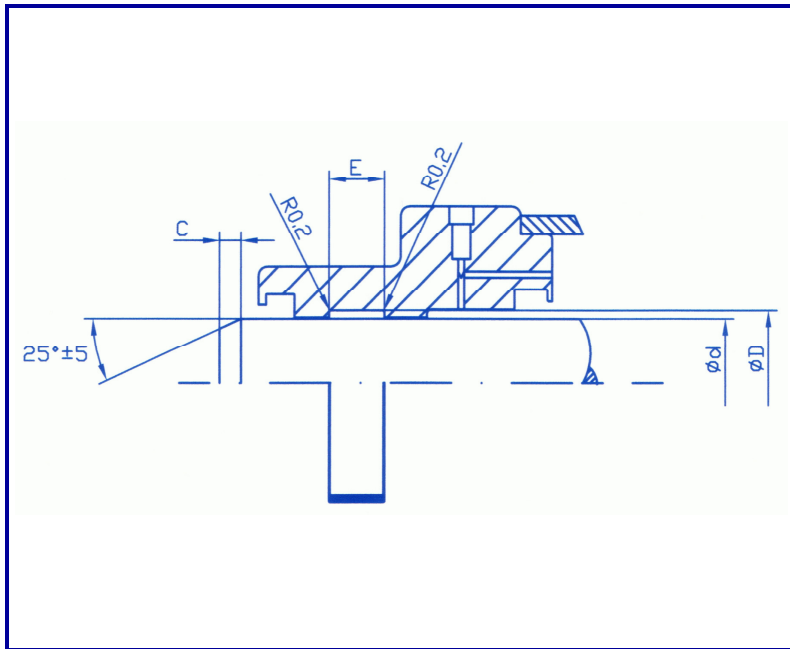
Materials-code

525 – POM modified

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.

Limits of application stated herein are standard values. They could be individually transgressed to respective service conditions. In the event of a large duty cycle, pulsation operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due the large variety of service conditions that may arise in course of actual use, the company does not take responsibility or guarantee the function accuracy of the individual components. Rights for changes are reserved.
Edition 01/09



Limitations on Use

Static strength	36 N/mm ²
Velocity	< 1 m/s
Temperature	-40° bis +115°C

Media for Use

Air with or without lubrication, mineral oils or grease

Surface Finish

Surface	R _z	R _a
Sliding surface	2,5µm	0,6 µm
Base of housing	10 µm	1,6 µm
Sides of housing	10 µm	1,6 µm
Profile bearing length R _{mr} 50% up to 70%. Measurement on average depth c=0,25xR _z and reference line C _{ref} 5%		

Lead in chamfer (min.)

D / d	C	D / d	C
< 25	2,5	101-180	5,0
25-60	3,0	181-300	6,0
61-100	4,0	>300	7,5

d f9	D H7	E +0,2	Part-No.
8,00	11,10	2,50	PF451 0080-10-525
10,00	13,10	2,50	PF451 0100-10-525
10,00	13,10	4,00	PF451 0100-12-525
12,00	15,10	4,00	PF451 0120-12-525
12,00	16,00	9,70	PF452 0120-16-525
14,00	17,10	4,00	PF451 0140-12-525
14,00	18,00	9,70	PF452 0140-16-525
15,00	18,10	4,00	PF451 0150-12-525
16,00	19,10	4,00	PF451 0160-12-525
16,00	20,00	9,70	PF452 0160-16-525
18,00	22,00	9,70	PF452 0180-16-525
20,00	23,10	4,00	PF451 0200-12-525
22,00	25,10	4,00	PF451 0220-12-525
25,00	28,10	4,00	PF451 0250-12-525
28,00	31,10	4,00	PF451 0280-12-525
30,00	33,10	4,00	PF451 0300-12-525
32,00	35,10	4,00	PF451 0320-12-525
35,00	38,10	4,00	PF451 0350-12-525

d f9	D H7	E +0,2	Part-No.
36,00	39,10	4,00	PF451 0360-12-525
40,00	43,10	4,00	PF451 0400-12-525
50,00	53,10	4,00	PF451 0500-12-525

Ordering example

PF451 0140 – 12 – 525 -

Profile _____
Nominal diameter x10 _____
Dimension variant _____
Material _____
HME-internal code _____

Materials-code

525 – POM modified

Instruction for installation:

To prevent any damage during mounting the seal eliminate any cutting edges and flash in the housing.