# **Standard Mechanical Seals - Pusher Seals**

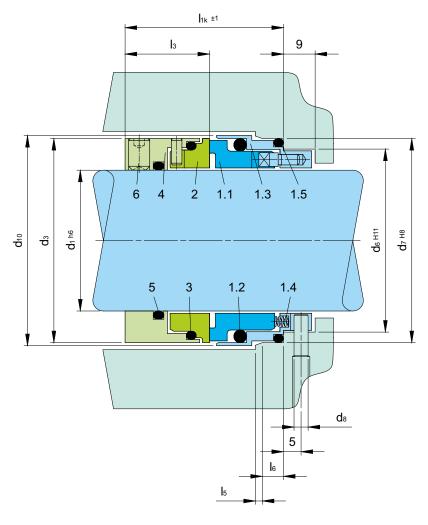


#### **Product Description**

- 1. Single seal configuration
- 2. Balanced design
- 3. Independent of direction of rotation
- 4. For plain shafts
- 5. Stationary design with multiple springs

#### **Technical Features**

- 1. Accommodates shaft deflections due to stationary design
- 2. Designed to handle media containing solids
- 3. O-ring is dynamically loaded to prevent shaft damage.
- 4. Can operate under vacuum without locking the seat
- 5. Pumping device available for increased efficiency in circulation
- 6. Springs are product protected to avoid contamination
- 7. Compact installation design
- 8. Can accommodate reverse pressure



**Note:** The item numbers as depicted above are based on our technical experience and knowledge and are placed in the chronological order of their assembly procedure.

Item	Part no.	Description				
1.1	472	Seal face				
1.2	412.1	O-ring				
1.3	485	Retainer				
1.4	477	Spring				
1.5	412.2	O-ring				
2	475	Seat				
3	412.3	O-ring				
4	485	Drive collar				
5	412.4	O-ring				
6	904	Set screw				
DIN 24250						

## Typical Industrial Applications

Chemical
Dirty & abrasive
media
Dredgers
FGD

Power plant technology
Pulp & paper
Refining technology
Sewage treatment
Solids containing

Fugitive hydrocarbons media

Mining Sticky & stringy media
Oil & gas Water & waste water

Oil sand extraction

Performance Capabilities				
Sizes	d <sub>1</sub> = Upto 100 mm (Upto 4.000")			
Pressure	p <sub>1</sub> *) = 25 bar (363 PSI)			
Temperature	t = -40 °C300 °C (-40 °F +428 °F)			
Speed	20 m/s (66 ft/s)			

\*) Additional seat locking is not needed in vacuum operation. For operation under vacuum it is necessary to arrange for quenching on the atmosphere.

### **Permissible Axial Movement**

± 1.0 mm

Materials						
Seal face	Carbon graphite resin impregnated (B), Silicon carbide (Q1)					
Seat	Silicon carbide (Q1)					
Secondary seals	FKM (V), NBR (P), FFKM (K), PTFE (T)					
Springs	Hastelloy®C-4 (M)					
Metal parts	CrNiMo steel (G)					

Standards

EN 12756

Dimensional Data											
Dimensions in millimeter											
d <sub>1</sub>	$d_3$	$d_6$	d <sub>7</sub>	d <sub>8</sub>	d <sub>10</sub>	$I_{1k}$	<b>I</b> <sub>3</sub>	l <sub>5</sub>	<b>I</b> <sub>6</sub>	f	m <sub>x</sub>
18	33	27	33	3	34.7	37.5	19.5	2.0	5	3.0	4
20	35	29	35	3	36.7	37.5	19.5	2.0	5	3.0	4
22	37	31	37	3	38.7	37.5	19.5	2.0	5	3.0	4
24	39	33	39	3	40.7	40.0	20.5	2.0	5	3.5	5
25	40	34	40	3	41.7	40.0	20.5	2.0	5	3.5	5
28	43	37	43	3	44.7	42.5	21.5	2.0	5	3.5	5
30	45	39	45	3	46.7	42.5	21.5	2.0	5	3.5	5
32	48	42	48	3	49.7	42.5	21.5	2.0	5	3.5	5
33	48	42	48	3	49.7	42.5	21.5	2.0	5	3.5	5
35	50	44	50	3	51.7	42.5	21.5	2.0	5	3.5	5
38	56	49	56	4	57.7	45.0	24.0	2.0	6	4.0	6
40	58	51	58	4	59.7	45.0	24.0	2.0	6	4.0	6
43	61	54	61	4	62.7	45.0	24.0	2.0	6	4.0	6
45	63	56	63	4	64.7	45.0	24.0	2.0	6	4.0	6
48	66	59	66	4	67.7	45.0	24.0	2.0	6	4.0	6
50	70	62	70	4	71.7	47.5	25.0	2.5	6	4.0	6
53	73	65	73	4	74.7	47.5	25.0	2.5	6	4.0	6
55	75	67	75	4	76.7	47.5	25.0	2.5	6	4.0	6
58	78	70	78	4	80.5	52.5	28.0	2.5	6	4.0	6
60	80	72	80	4	82.5	52.5	28.0	2.5	6	4.0	6
63	83	75	83	4	85.5	52.5	28.0	2.5	6	4.0	6
65	85	77	85	4	87.5	52.5	28.0	2.5	6	4.0	6
68	90	81	90	4	92.5	52.5	28.0	2.5	7	4.0	6
70	92	83	92	4	94.5	60.0	34.0	2.5	7	6.0	8
75	97	88	97	4	100.5	60.0	34.0	2.5	7	6.0	8
80	105	95	105	4	108.5	60.0	34.0	3.0	7	6.0	8
85	110	100	110	4	113.5	60.0	34.0	3.0	7	6.0	8
90	115	105	115	4	118.5	65.0	39.0	3.0	7	10.0	8
95	120	110	120	4	123.5	65.0	39.0	3.0	7	10.0	8
100	125	115	125	4	128.5	65.0	39.0	3.0	7	10.0	8

inch size available from size 0.750 to 4.000

Note: Additional technical & dimensional information will be provided on request.