

RELY ON EXCELLENCE

H7N

Mechanical seals | Mechanical seals for pumps | Pusher seals



Features

- For stepped shafts
- Single seal
- Balanced
- Super-Sinus-spring or multiple springs rotating
- Independent of direction of rotation
- Integrated pumping device available (H7F, H75F)
- Variant with seat cooling available (H75G115)

Advantages

- Universal application opportunities (standardization)
- Efficient stock keeping due to easily interchangeable faces
- Extended selection of materials
- Flexibility in torque transmissions
- Self cleaning effect
- Short Installation length possible (G16)

Operating range

Shaft diameter:

d1 = 14 ... 100 mm (0.55" ... 3.94")

(Single spring: d1 = max. 100 mm (3.94"))

Pressure:

p1 = 80 bar (1,160 PSI) for d1 = 14 ... 100 mm,

p1 = 25 bar (363 PSI) for d1 = 100 ... 200 mm,

p1 = 16 bar (232 PSI) for d1 > 200 mm

Temperature:

t = -50 °C ... 220 °C (-58 °F ... 428 °F)

Sliding velocity: v_g = 20 m/s (66 ft/s)

Axial movement:

d1 up to 22 mm: ± 1.0 mm

d1 24 up to 58 mm: ± 1.5 mm

d1 from 60 mm: ± 2.0 mm

Materials

Seal face: Silicon carbide (Q1, Q2), Carbon graphite antimony impregnated (A),

Aluminium oxide (V), CrMo cast steel (S)

Seat G9: Carbon graphite antimony

impregnated (A), Carbon graphite resin

impregnated (B), Silicon carbide (Q1*, Q2*)

Secondary seals: EPDM (E), NBR (P), FKM (V),

FFKM (K)

Springs: CrNiMo steel (G)

Metal parts: CrNiMo steel (G), Duplex (G1)

* Cannot be combined with seal face made of S

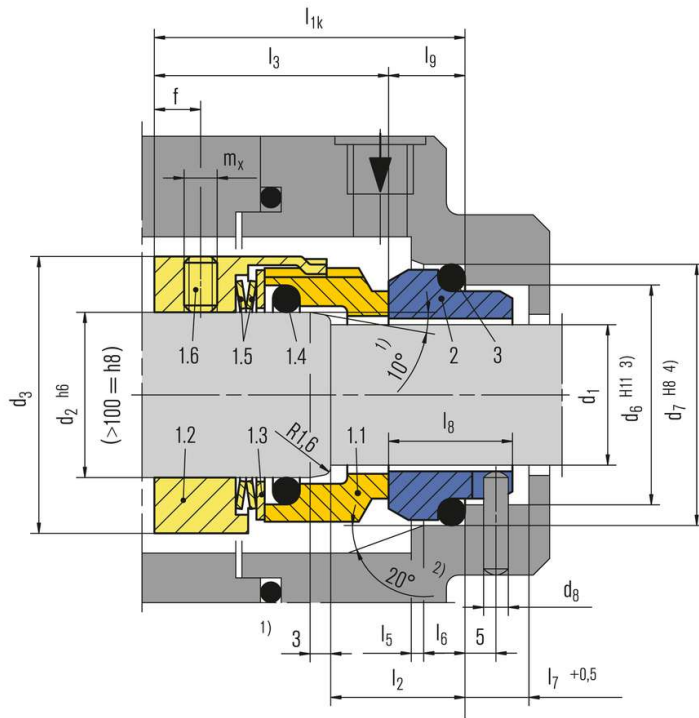
Standards and approvals

- EN 12756

Recommended applications

- Process industry
- Oil and gas industry
- Refining technology
- Petrochemical industry
- Chemical industry
- Power plant technology
- Pulp and paper industry
- Food and beverage industry
- Hot water applications
- Light hydrocarbons
- Boiler feed pumps
- Process pumps

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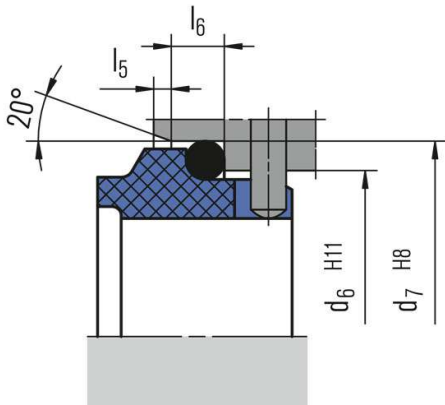
**Item Part no. to Description
DIN 24250**

1.1	472	Seal face
1.2	485	Drive collar
1.3	474	Thrust ring
1.4	412.1	O-Ring
1.5	477	Spring
1.6	904	Set screw
2	475	Seat (G9)
3	412.2	O-Ring

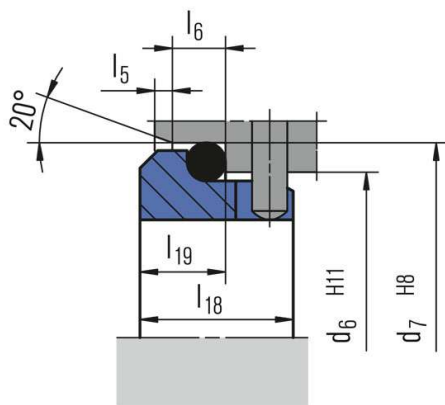
- 1) $d_1 > 100 \text{ mm}$: 2 mm x 30°
- 2) $d_1 > 100 \text{ mm}$: 30°
- 3) $d_1 > 100 \text{ mm}$: +0.1
- 4) $d_1 > 100 \text{ mm}$: H7

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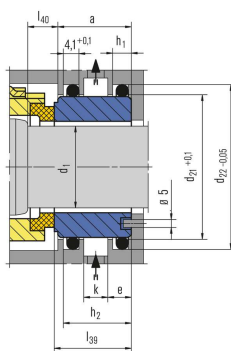
Seat alternatives



G9
(EN 12756)



G16
(EN 12756, but l_{1k} and l_2 are shorter than specified)

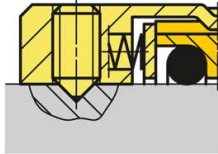


G115
Cooled seat especially for hot water applications.

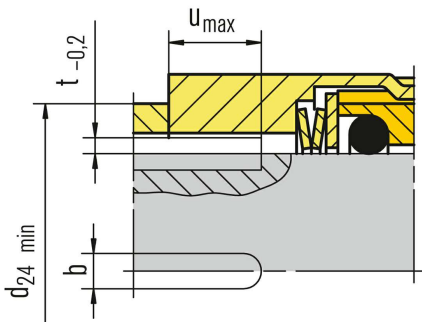
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Torque transmissions

$d_1 > 100 \text{ mm (3.94")}$ Torque transmission by **4 set screws** with cone point. Offset: 90°

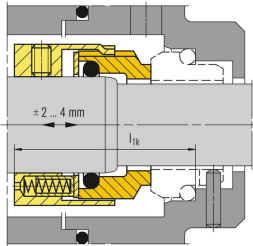


Drive key
(H7S2 / H75S2)



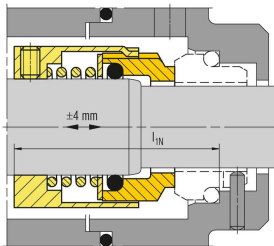
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Product variants



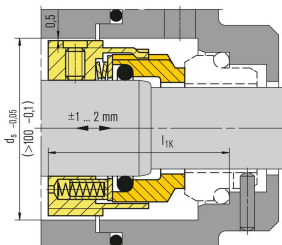
H75

Shaft diameter: $d_1 = 28 \dots 200 \text{ mm}$ (1.10" ... 7.87")
 As H7N, but with multiple springs in sleeves (Item no. 1.5)
 Axial movement: $\pm 2 \dots 4 \text{ mm}$, dependent on diameter.



H76

Shaft diameter: $d_1 = 14 \dots 100 \text{ mm}$ (0.55" ... 3.94")
 Dimensions, items and description as for H7N, but with special single spring (Item no. 1.5) for compensating large axial movements ($\pm 4 \text{ mm}$).



H7F

Shaft diameter: $d_1 = \text{max. } 100 \text{ mm}$ (3.94")
 Dimensions, items and descriptions as for H7N, but with single spring and pumping screw.
 Dependent on direction of rotation. (Viscosity \leq ISO VG10).

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H75F

Shaft diameter: d1 = 28 ... 200 mm (1.10" ... 7.87")

Dimensions, items and descriptions as for H7N, but with single spring and pumping screw.

Dependent on direction of rotation.

(Viscosity \leq ISO VG10).

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d ₁	d ₂	d ₃	d ₆	d ₇	d ₈	d ₂₄	d ₂₁	d ₂₂	d _s	l _{1K}	l _{1N}	l ₂	l ₃	l ₅	l ₆	l ₇	l ₈	l ₉	l ₃₉	l ₄₀	A	b	e	f	h ₁	h ₂	k	m _x	u _{max.}	t
190*	200	236	217.5	229.3	5	203	217.30	223.20	241	91.0	-	42	63.0	2.0	12	-	38.0	28.0	37.0	16.5	34.5	12	10.0	12.0	7.1	32.1	16	M8	22	2.1
195*	205	245	222.5	234.2	5	208	225.30	231.20	250	94.0	-	43	66.0	2.0	12	-	38.0	28.0	37.0	17.5	34.5	12	10.0	14.0	7.1	32.1	16	M10	22	2.1
200*	210	250	227.5	239.3	5	213	230.30	236.20	255	94.0	-	43	66.0	2.0	12	-	38.0	28.0	37.0	17.5	34.5	12	10.0	14.0	7.1	32.1	16	M10	22	2.1

Dimensions in millimeter

* EN 12756