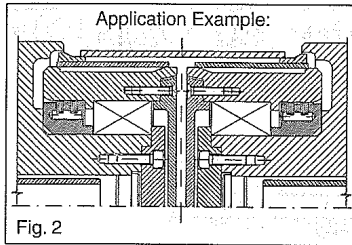
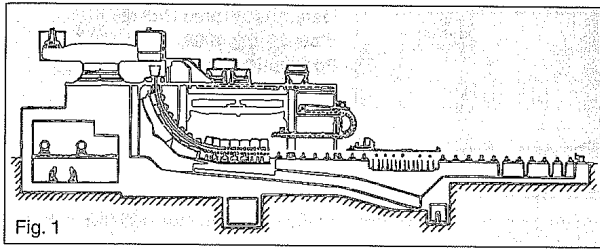


## FK 5 Double Wound Sealing Rings

To seal bearings in continuous casting lines

Material: Spring band steel chromium nickel 1.4571, spring resistant up to +500°C



## FK 6 Double Wound Sealing Rings

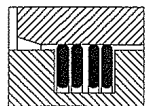
Material: Spring band steel C 75 or similar grades, spring resistant up to +300°C.  
Chromium nickel steel 1.4310 spring resistant up to +450°C.

### Applications: FK 5 and FK 6

Compared with the single wound FK 3 Laminar Rings, FK 5 and FK 6 Laminar Rings are double wound. They serve as a grease seal for plain and roller bearings and are also used as a protective seal in front of rubber lip seals. Higher sealing performance is achieved by the FK 5 and FK 6 Laminar Rings in respect of exuding grease and also provide protection against dust, dirt and splash water. FK 5 and FK 6 Laminar Rings are outstanding for their high retention force and have no joint gap when compared with FK 3 Laminar Rings. The combined ASKD or ISKD ring sets optimise the sealing as a result of the increased labyrinth effect. Due to easier fitting in the grooves the ISD or ISKD arrangement is preferred over the ASD or ASKD arrangement where this is possible. The ring carriers can be manufactured from steel, cast iron or plastic.

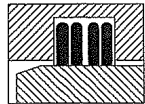
**ASD** = Outside Clamping Double Rings  
(1 set = 2 indiv. Rings)

– no speed limit for housing or ring carrier



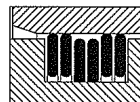
**ISD** = Inside Clamping Double Rings  
(1 set = 2 indiv. Rings)

– no speed limit for housing  
– speed limit for shaft:  
max 10 m/s



**ASKD** = Outside Clamping Double Rings  
Combination (1 set = 3 indiv. Rings)

– no speed limit for housing  
– speed limit for ring carrier:  
max 10 m/s



**ISKD** = Inside Clamping Double Rings  
Combination (1 set = 3 indiv. Rings)

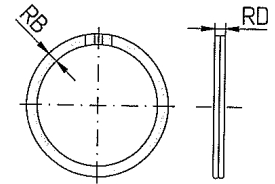
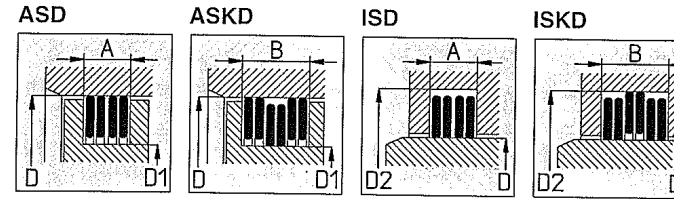
– no speed limit for housing  
– speed limit for shaft:  
max 10 m/s



## FK 6 Double Wound Sealing Rings

10056116-2001042-MLO 13

All dimensions in mm



Bore Shaft D	Ring Dim.		Groove width		Groove Ø	Groove Ø
	RB	RD	A	B	D1	D2
15– 24.5	1.0	1.3	2.9	4.3	D – 2.6	D + 2.6
25– 29.5	1.2	1.3	2.9	4.3	– 3.0	+ 3.0
30– 35.5	1.5	1.3	2.9	4.3	– 3.6	+ 3.6
36– 42.5	1.8	1.3	2.9	4.3	– 4.2	+ 4.2
43– 48.5	2.2	1.45	3.2	4.8	– 5.0	+ 5.0
49– 51.5	2.4	1.45	3.2	4.8	– 5.4	+ 5.4
52– 59.5	2.6	1.45	3.2	4.8	– 5.8	+ 5.8
60– 69.5	2.8	1.65	3.6	5.4	– 6.2	+ 6.2
70– 74.5	3.1	1.65	3.6	5.4	– 6.8	+ 6.8
75– 79.5	3.3	1.65	3.6	5.4	– 7.2	+ 7.2
80– 89.5	3.5	1.65	3.6	5.4	– 7.6	+ 7.6
90– 99.5	3.8	1.65	3.6	5.4	– 8.2	+ 8.2
100– 104.5	4.1	1.65	3.6	5.4	– 8.8	+ 8.8
105– 109.5	4.3	1.96	4.3	6.4	– 9.2	+ 9.2
110– 119.5	4.6	1.96	4.3	6.4	– 9.8	+ 9.8
120– 129.5	5.0	1.96	4.3	6.4	–10.8	+10.8
130– 149.5	5.5	1.96	4.3	6.4	–11.8	+11.8
150– 170.0	6.0	2.0	4.4	6.5	–13.0	+13.0
150– 170.0	*6.0	3.0	6.5	9.6	–13.0	+13.0
171– 199.0	7.0	2.0	4.4	6.5	–15.0	+15.0
171– 199.0	*7.0	3.0	6.5	9.6	–15.0	+15.0
200– 259.0	8.0	2.4	5.3	7.8	–18.0	+18.0
200– 259.0	*8.0	3.0	6.5	9.6	–18.0	+18.0
260– 319.0	9.0	3.0	6.5	9.6	–20.0	+20.0
320– 399.0	10.0	3.0	6.6	9.8	–22.0	+22.0
400– 439.0	11.0	3.0	6.6	9.8	–24.0	+24.0
440– 600.0	12.0	3.0	6.6	9.8	–26.0	+26.0
440– 600.0	*12.0	5.0	10.6	15.9	–26.0	+26.0
601– 699.0	14.0	5.0	10.8	16.2	–32.0	+32.0
700– 799.0	16.0	5.0	10.8	16.2	–36.0	+36.0
800– 899.0	18.0	5.0	11.0	16.5	–40.0	+40.0
900– 999.0	20.0	5.0	11.0	16.5	–44.0	+44.0
1000–1300.0	22.0	5.0	11.0	16.5	–48.0	+48.0

\* Increased cross-section.

See page 20/3-4-5

Tolerances mm				
Ø	15– 104.5	105– 149.5	150– 439.0	440– 1300.0
RB	+0.10 –0.10	+0.10 –0.20	+0.15 –0.30	+0.20 –0.40
RD	+0.08 –0.04	+0.10 –0.06	+0.12 –0.08	+0.14 –0.10
A-B	+0.10 –0	+0.15 –0	+0.20 –0	+0.25 –0
D1	+0 –0.20	+0 –0.25	+0 –0.30	+0 –0.40
D2	+0.20 –0	+0.25 –0	+0.30 –0	+0.40 –0

### Modification of Groove Width and Diameter.

If the Laminar Rings are subject to axial play during operation, the groove width "A" or "B" has to be increased by twice the amount of end play encountered.

In the case of radial runout the groove diameter "D1" has to be reduced by the amount of radial runout, while the diameter "D2" must be increased by the amount of radial play.

Disregarding these recommendations will cause damage.

We recommend full use of the groove tolerance (i.e. aim for the upper tolerance limit) especially if the seal arrangement is subject to thermal expansion

Increase groove width by 10% and use Gleitmo 980 for speeds from 1000 r.p.m. upwards.

Use GLEITMO 980.

Ask for a brochure.

Fig. 1

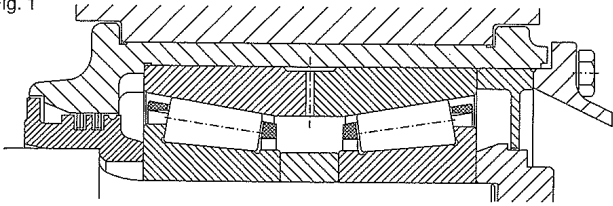


Fig. 2

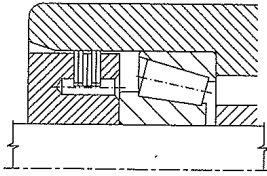


Fig. 3

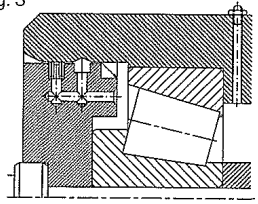


Fig. 4

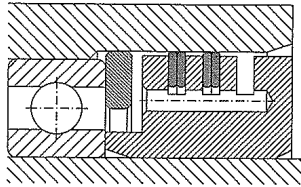


Fig. 5

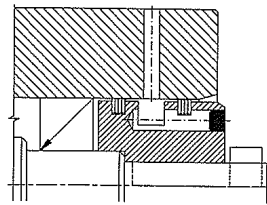


Fig. 6

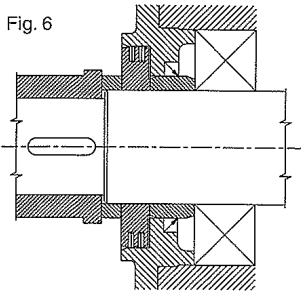


Fig. 7

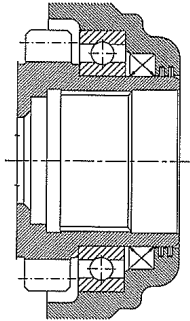


Fig. 8

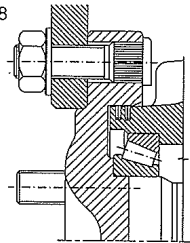


Fig. 9

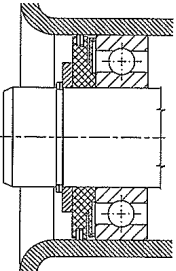


Fig. 10

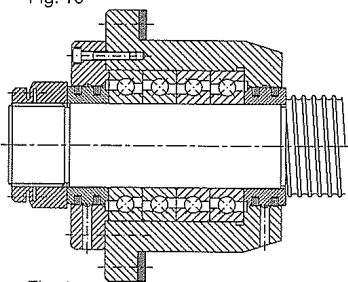


Fig. 11

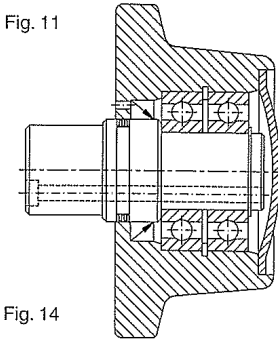


Fig. 12

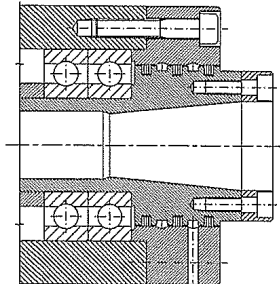


Fig. 13

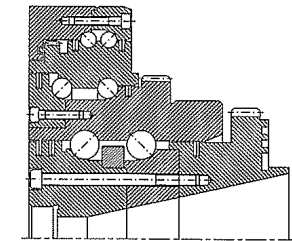


Fig. 14

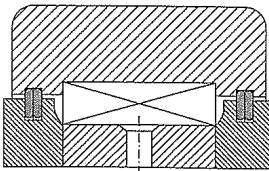


Fig. 1

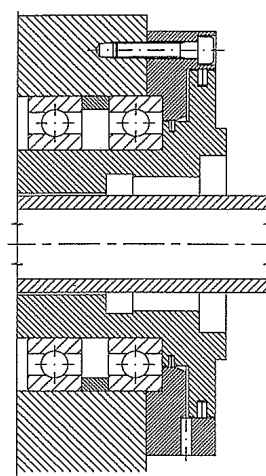


Fig. 2

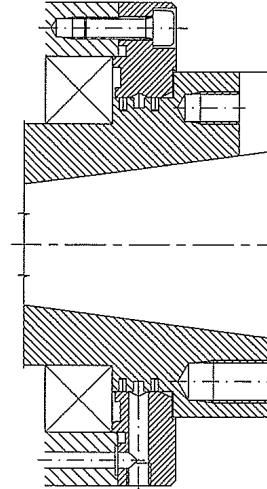


Fig. 3

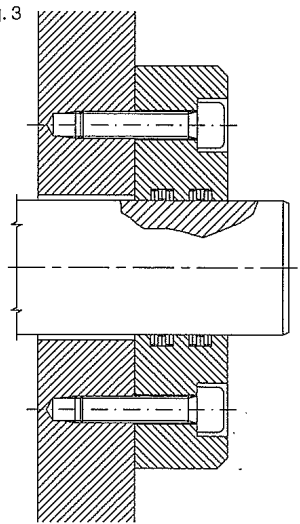


Fig. 4

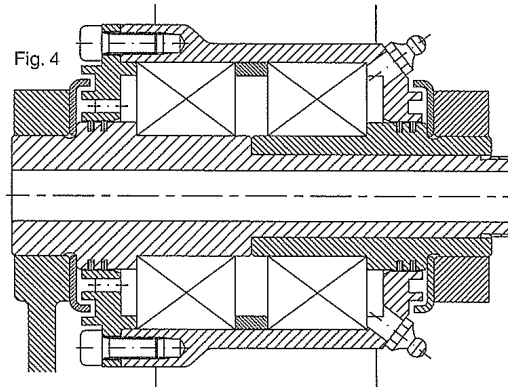


Fig. 5

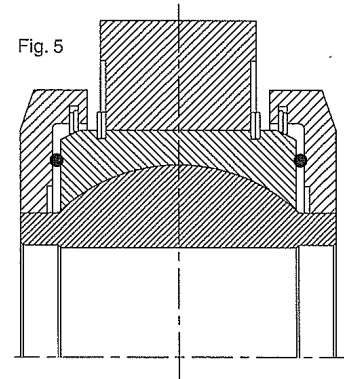


Fig. 6

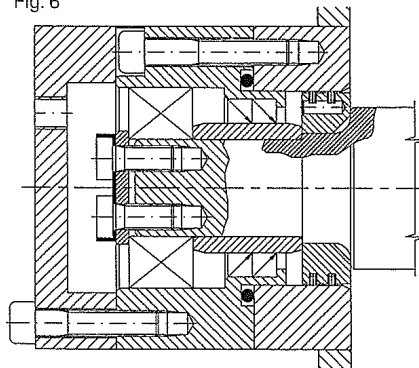
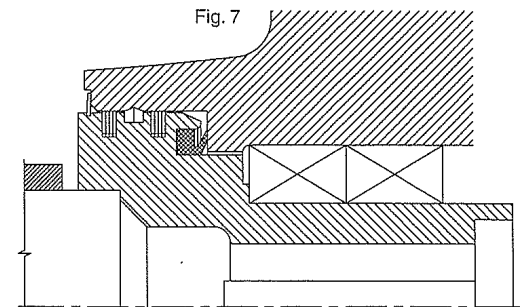
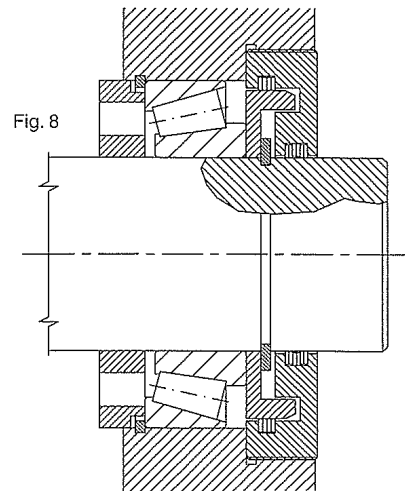
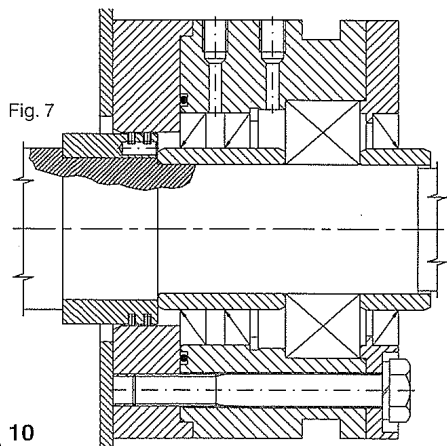
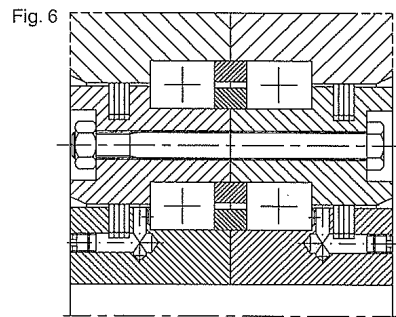
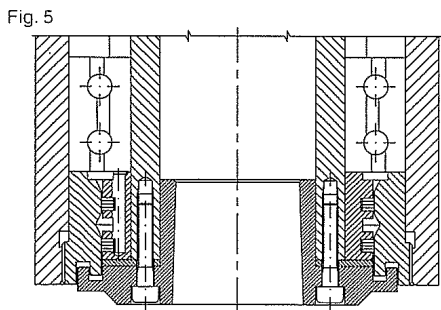
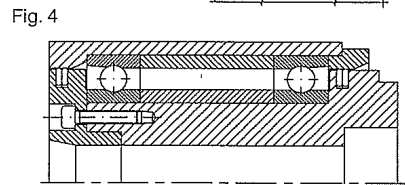
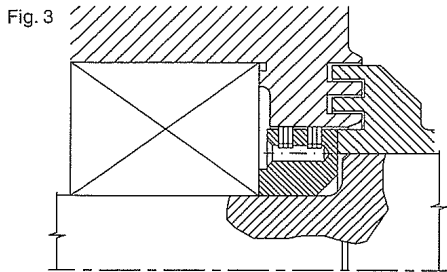
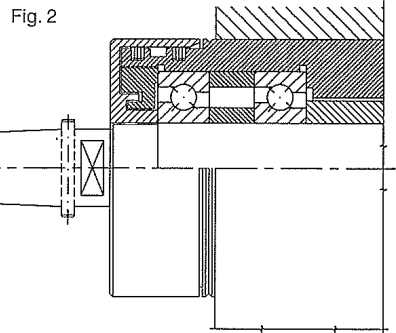
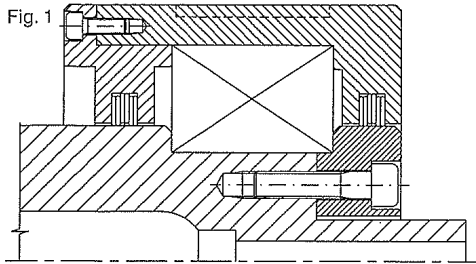


Fig. 7





**Material:** Spring band steel C 75 or similar grades, or chromium nickel steel 1.4310

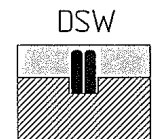
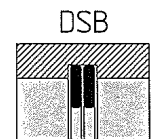
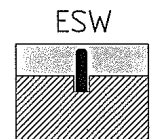
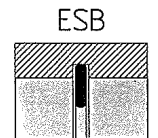
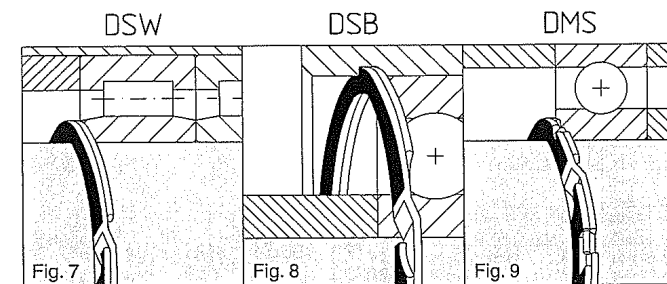
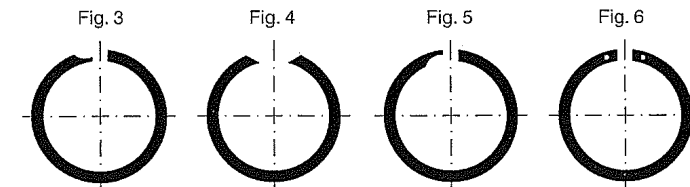
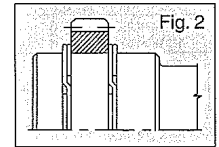
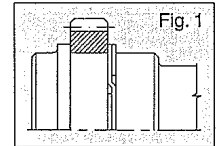
The double-wound retaining rings DSB, DSW and DMS, Fig. 7, 8, 9, are valuable addition to the regular, single-wound retaining rings.

**Advantages:**

- Roundness of the closed ring over 360° ensures strong contact with the groove bottom and continuous support around the circumference.
- Reliably retained in the groove, even under high axial load.
- Well balanced during rotation.
- Absolutely free from material defects.
- DMS double-wound rings with locking feature to resist centrifugal forces can be used at shaft speeds that are beyond the range of DSW rings. Diameter range for DMS: 45–310 mm.

See page 20/1 and 2

Assembly/disassembly features per fig. 3–6 optional.



Double wound laminar locking rings FK 7, Fig. 7–9, are supplied to order with single-sided or double-sided removal recesses, as shown in Fig. 3

**Application examples:**

These retaining rings are used whenever parts need to be fixed axially, for example, in transmissions, on agricultural machinery and construction equipment, in shipbuilding and general engineering, aerospace and automotive applications and for winches, pulleys, wheels, roller bearings, vertical drive shafts, etc.