

Application "FK7 DMS" Double retaining ring shaft with centrifugal force protection

"FK7 DMS" double laminar retaining rings with centrifugal force protection can be used for rotational speeds that cannot be achieved by "FK7 DSW" retaining rings.

Diameter range for DMS rings:

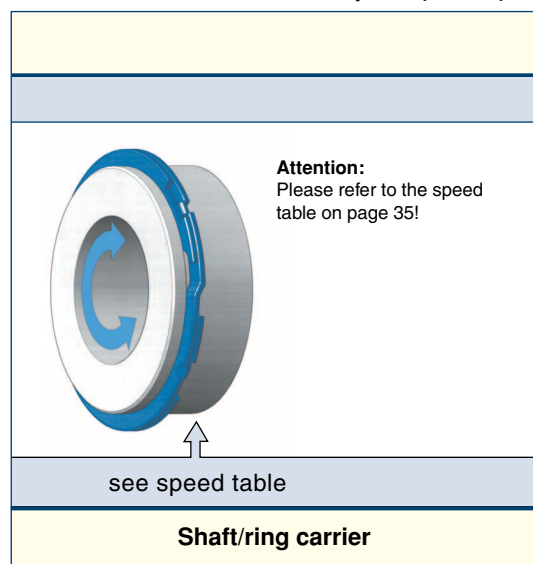
Ø 45 mm to Ø 310 mm.

Ring materials

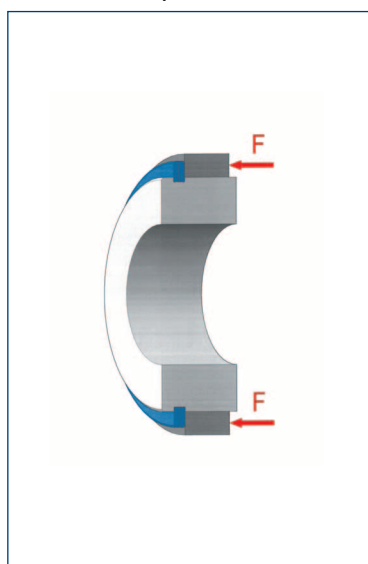
Steel type	Spring resistant up to	Hardness	Surface protection	Surface color
C75S - DIN 1.0605	max. +300°C	on request ¹⁾	oiled	variable ²⁾
C60E - DIN 1.1221	max. +300°C	on request ¹⁾	oiled	variable ²⁾
50CrV4- DIN 1.8159	max. +400°C	on request ¹⁾	oiled	variable ²⁾
CrNi - DIN 1.4310	max. +450°C	on request ¹⁾	bright and dry	variable ²⁾

¹⁾ Variable depending on the thermal treatment type! Hardness values depending on ring cross section measured in Rockwell HRA or HRC.
²⁾ The surface color can vary depending on the thermal treatment type: bright, light brown or blackened.

Permissible circumferential speed (in m/s)



Axial stress ³⁾



FK7 DMS ring ⁴⁾



Axial stress ³⁾:

Shearing tests under operating conditions must be performed to determine the axial shearing capacity of the retaining rings. The secure position of the retaining rings in the groove cannot be guaranteed if the surrounding components thrust uncontrollable against the laminar rings during operation (coupling effect) or if the components vibrate extremely.

Installation information:

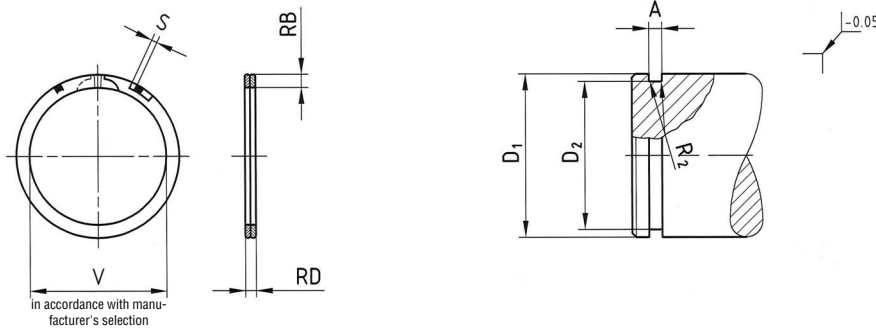
See pages 38 and 39.

Order information ⁴⁾:

The ring diameter information must match shaft diameter dimensions "D₁" for all inquiries and/or orders.

Run and installation tests:

Run and installation tests under operating conditions must be performed in each case before standard production of our laminar rings can begin to determine whether the retaining rings can withstand the required stress.

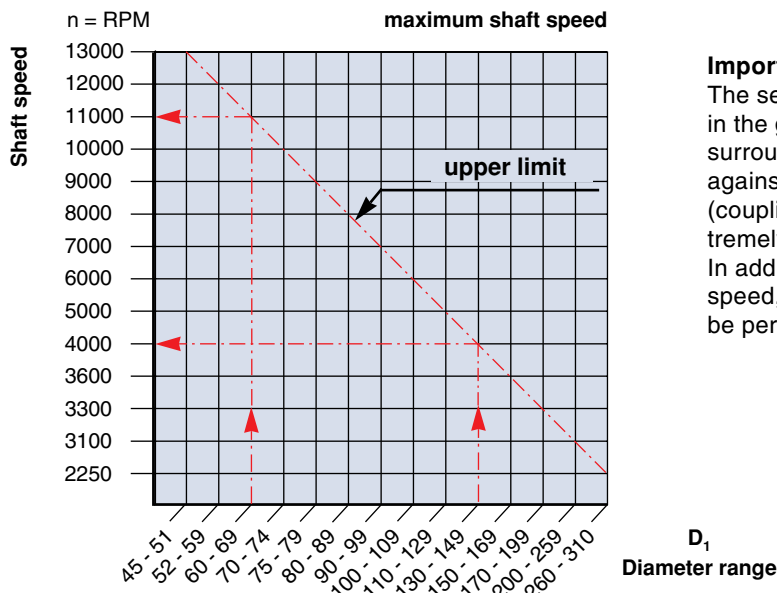


Nominal dimension		Ring dimensions				Groove dimensions					
Shaft D ₁	Tolerance	RB	Tolerance	RD	Tolerance	D ₂ = D ₁ minus	Tolerance	A	Tolerance	S	R ₂
45 - 51.9	h 7	3.5	+ 0.1 - 0.1	1.65	+ 0.1 - 0	- 2.0	+ 0 - 0.05	1.8	+ 0.05 - 0	max. 1.0	max. 0.1
52 - 59.9		3.5		1.65		- 2.0		1.8			
60 - 69.9		3.8		1.65		- 2.0		1.8			
70 - 74.9		4.1	+ 0.1 - 0.2	1.65		- 2.5		1.8			
75 - 79.9		4.3		1.98		- 2.5		2.15			
80 - 89.9		4.6		1.98		- 2.8		2.15			
90 - 99.9		5.0	+ 0.15 - 0.3	1.98		- 3.0		2.15			
100 - 109.9		5.5		1.98		- 3.0		2.15			
110 - 129.9		6.0		2.0		- 3.5		2.15			
130 - 149.9		6.0	+ 0.15 - 0.3	3.0		- 3.5		3.15			
150 - 169.9		7.0		3.0		- 4.0		3.15			
170 - 199.9		8.0		3.0		- 5.0		3.15			
200 - 259.9	9.0	+ 0.15 - 0.3	3.0	- 5.0	3.15						
260 - 310	10.0		3.0	- 5.5	3.15						

All dimensions in mm

Attention: Please refer to the information on pages 2, 38, 39, 40 and 41 (questionnaire).

For inquiries and orders, please provide the exact shaft diameter "D₁", operating temperature and shaft speed!



Important information:

The secure position of the "FK7 DMS" rings in the groove cannot be guaranteed if the surrounding components thrust uncontrollable against the laminar rings during operation (coupling effect) or if the shafts vibrate extremely.

In addition to the stated max. permissible shaft speed, installation and long term run tests must be performed under operating conditions.