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FK 5-HFL
Single and double laminar sealing rings
for the sealing of axial compensators in exhaust pipes of internal combustion engines, manifold sheet metal pipe connections, exhaust gas recirculation systems and turbochargers

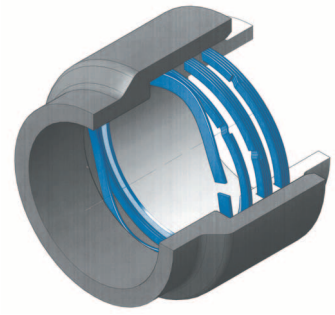
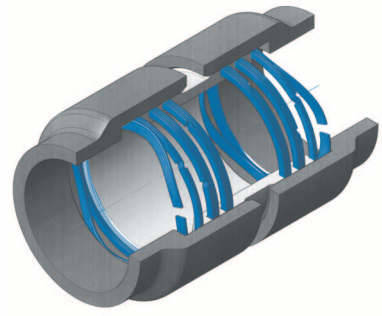
"FK5-HFL" application single and double laminar sealing rings
Single and double wound laminar sealing rings with the identification "FK5-HFL" are made from high-temperature chrome-nickel steels and are designed for the sealing for axial and radial compensators at exhaust pipes of internal combustion engines, exhaust gas recirculation systems, exhaust valves, turbochargers, mobile and stationary power units. Especially for applications that deal with high operating temperatures and high axial and radial movements due to thermal expansions.

Ring materials

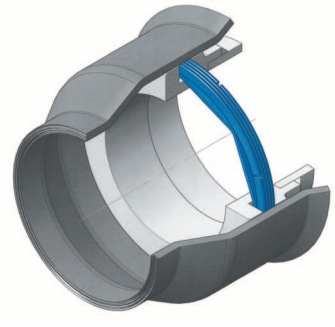
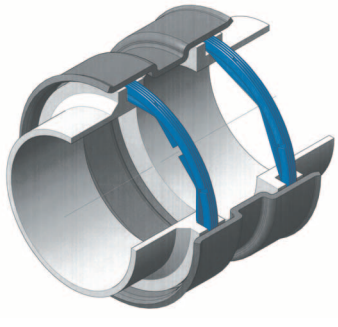
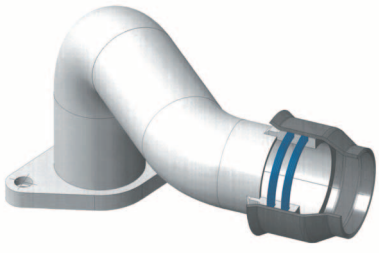
Steel type	Spring resistant up to	Hardness	Surfaces-treatment	Surfaces-protection	Surfaces-color
CrNi - DIN 1.4571	max. +500°C	on request [1])	Vibratory grinding	dry	variable [2])
CrNi - DIN 1.4980	max. +700°C	on request [1])	Vibratory grinding	dry	variable [2])

[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.

Cast iron coupling examples

Single side coupling	Double side coupling	90° arc coupling
		

Sheet metal coupling with centering expander examples

Single side sheet metal pipe coupling	Double side sheet metal coupling	Angled sheet metal coupling
		

Expander dimensions on request

Installation information:
See pages 38 and 39.

Order information:
The ring diameter information must match housing diameter dimensions "D_1" for all inquiries and/or orders. The rings can be ordered individually or in sets.

Run and installation tests:
Run and installation tests under operating conditions must be performed in each case before standard production can begin to determine whether the desired sealing effects can be achieved.

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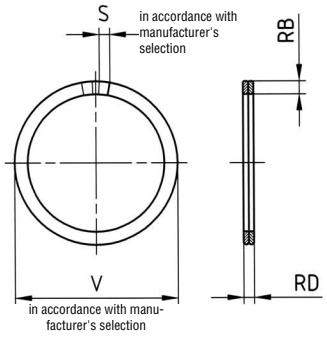
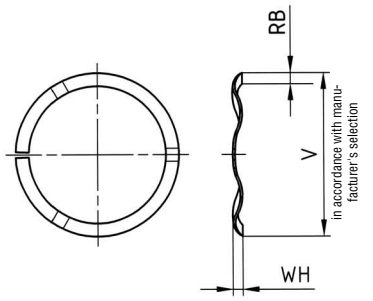




Wave spring FK9

Dimensions and diameters on request.
Please contact our technical office for these questions!

Nominal dimension			Ring dimensions				Groove dimensions					
Bore D_1		Tolerance	RB	Tolerance	RD	Tolerance	NT	Tolerance	A	Tolerance	R_1	R_2
30 - 39.9			2.2		1.45							
40 - 49.9			2.2		1.45							
50 - 59.9			2.6	+ 0.1 - 0.1	1.45							
60 - 69.9			2.8		1.65							
70 - 79.9		H 7	3.3		1.65	+ 0.06 - 0.04						
80 - 89.9			3.8		1.65							
90 - 104.9			4.1		1.65							
105 - 119.9			4.5	+ 0.1 - 0.2	1.95							
120 - 140			5.0		1.95							

Groove dimensions on request

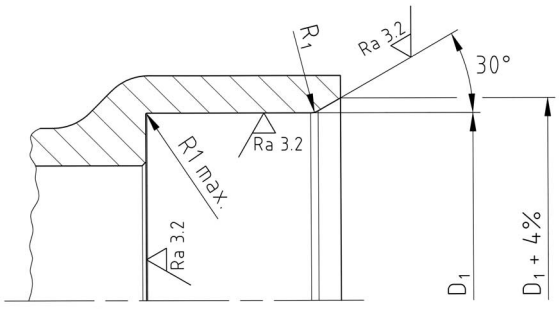
Please contact our technical office!

All dimensions in mm

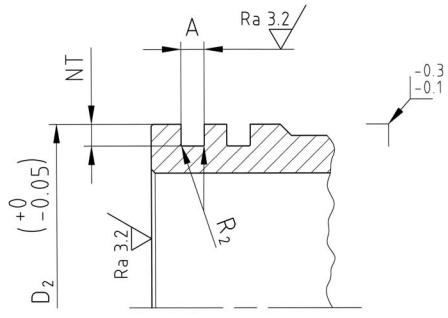
Please contact our technical office for other dimensions.

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

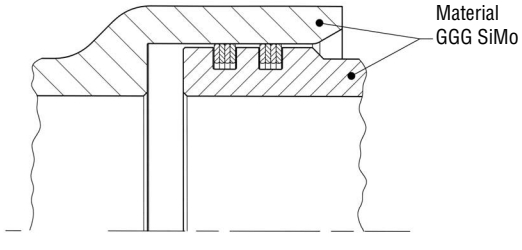
Please list exact bore diameter "D_1" for all inquiries and orders!



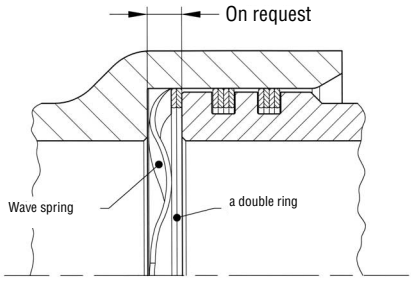
Bore/housing



Ring carrier



Installation situation



Installation situation with FK9 wave spring pre-sealing