Standard seals for threaded connectors

ED seals according to DIN 3869

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Threaded connectors like Parker's EO2 compression joint, are successfully and in large quantities used around the world. These connecting elements are divided into two different categories: those using soft seals and those using metallic seals.
Soft seals exhibit a number of advantages including:

- Low leakage even when used with low-viscous media
- Compensation of manufacturing tolerances
- Easy handling
- Suitability for reassembly

Applications

Soft-sealing threaded connectors are used in virtually all industrial sectors. Among others, they include construction equipment, machine tools, hydraulic presses and injection moulding machines as well as ship building, rail technology and offshore applications.

The Parker Seal Group offers so called ED rings for threaded connectors. ED rings are elastomeric (soft) seals, which, in conjunction with high-grade connecting elements, assure optimum functional performance even in extreme application conditions.
The special shape of ED rings enables them to be used in high-pressure applications, compensates for manufacturing tolerances and provides reliable sealing action.

Materials

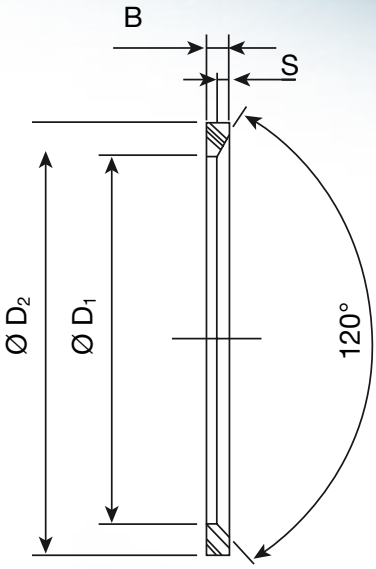
Parker manufactures ED rings for virtually any use from a wide range of sealing materials, primarily NBR, EPDM and FKM.

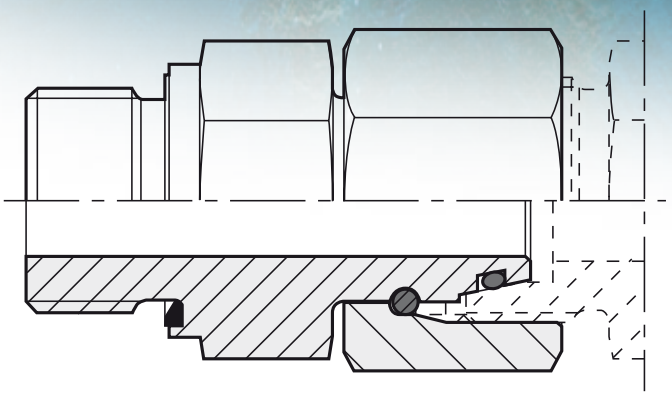
NBR materials are suitable for diverse applications in temperatures ranging from -30 to +100 °C. For more aggressive media and temperatures up to 200 °C, FKM materials withstanding even extreme operating conditions are used. EPDM on the other hand is preferably used with special media such as water.

To facilitate the identification of these materials, Parker offers them in black (NBR), green (FKM) and purple (EPDM) (see also Table 1). In addition, the seals feature an engraved surface indicating the material, the size (Table 2) and the manufacturer, Parker. The seals conform to DIN 3869 for profile sealing rings.

Table 1: **Compounds for ED Seals**

Parker compound	N552-90	E3980-85	V3718-85
Polymer	NBR	EPDM	FKM
Hardness [Shore A]	90	85	85
Colour	black	purple	green
Temperature range [°C]	-30 to 100	-45 to 150	-20 to 200





Example: straight male stud coupling with sealing cone

Table 2: **Available dimensions according to DIN 3869**

Nominal size	Thread configuration metric	Inches	D_2	D_1	B	S	Parker No.
8	M 8 x 1.0		9.9	6.5	1.0	0.5	1-452
10	M 10 x 1.0	G 1/8 A	11.9	8.4	1.0	0.5	1-288
12	M 12 x 1.5		14.4	9.8	1.5	0.8	1-311
14	M 14 x 1.5	G 1/4 A	16.5	11.6	1.5	0.8	1-255
16	M 16 x 1.5		18.9	13.8	1.5	0.8	1-467
17		G 3/8 A	18.9	14.7	1.5	0.8	1-437
18	M 18 x 1.5		20.9	15.7	1.5	0.8	1-256
20	M 20 x 1.5		22.9	17.8	1.5	0.8	1-448
21		G 1/2 A	23.9	18.5	1.5	0.8	1-447
22	M 22 x 1.5		24.3	19.6	1.5	0.8	1-272
24	M 24 x 1.5		26.9	21.8	1.5	0.8	1-519
27	M 26 x 1.5	G 3/4 A	29.2	23.9	1.5	0.8	1-432
27	M 27 x 2.0	G 3/4 A	29.2	23.9	1.5	0.8	1-432
30	M 30 x 1.5		32.7	27.7	2.0	0.8	1-511
33	M 33 x 2.0	G 1 A	35.7	29.7	2.0	1.0	1-375
42	M 42 x 2.0	G 1 1/4 A	45.8	38.8	2.0	1.0	1-420
48	M 48 x 2.0	G 1 1/2 A	50.7	44.7	2.0	1.0	1-449
60	M 60 x 2.0	G 2 A	66.5	56.5	4.0	2.0	1-510

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