



DICHTOMATIK

**Profile rings
DIN 3869**



Profile rings

Profile rings acc. to DIN 3869, ISO 9974, ISO 11926 and ISO 1179 are moulded parts made of elastomers for sealing threaded tube connections and fittings with threaded elements.

Description

Product group	Profile Rings DIN 3869
Design	PRR
Seal material	NBR 85 Shore A, black NB901803 FKM 80 Shore A, green FP801804 EPDM 80 Shore A, peroxide-cured, violet EP801801

Areas of application

Profile sealing rings acc. to DIN 3869 are used as axially static soft seals in combination with threaded elements, e.g. in construction machinery, hydraulic presses, injection machines, fittings, hydraulic valves and threaded tube connections in industry in general.

Function

DIN 3869 profile sealing rings are used for the axial-static sealing of threaded tube connections, fittings and sealing screws with stud ends in connection with ports. By tightening the screw connection the easy-to-handle elastomer profile sealing ring is compacted, thereby producing the sealing effect at the surfaces to be sealed. The purpose of the profile sealing ring is to stop the medium from leaking, thereby preventing loss of pressure. The geometry protects the seal against twisting during installation and in the installation housing. At the same time, the profile sealing ring holds back dust and dirt. Any mechanical deformation of the cross-section is minimised due to the geometry of the profile.

Media

NBR

Good chemical resistance to mineral oils and greases, hydraulic oils H, HL, HLP, low-flammability hydraulic pressure fluids HFA, HFB, HFC up to approx. +60°C and water up to max. +80°C, suitable for dynamic and static application in gas appliances and gas equipment acc. to DIN EN 549 B1/H3 (0 up to +80 °C).

NBR is generally not resistant to aromatic and chlorinated hydrocarbons, fuels with a high aromatic content, polar solvents, glycol-based brake fluids, and non-flammable hydraulic fluids HFD.

FKM

Good chemical resistance to mineral oils and greases, synthetic oils and greases, engine, transmission and ATF oils to approx. +150°C, fuels, low-flammability hydraulic pressure fluids HFD, aliphatic, aromatic and chlorinated hydrocarbons, water to max. +80°C, excellent resistance to weathering, ozone and ageing, very low gas permeability (and therefore excellent for vacuum application) and resistance to a wide range of chemicals, suitable for dynamic and static application in gas appliances and gas equipment acc. to DIN EN 549 E1/H3 (0 up to +150 °C).

FKM is generally not resistant to hot water, steam, polar solvents, glycol-based brake fluids and low-molecular organic acids.

EPDM (perox.)

Good resistance to hot water and steam, detergents, caustic potash solutions, silicone oil and greases, many polar solvents, and many diluted acids and chemicals, along with a high level of ozone resistance. EPDM materials are totally unsuitable for use with all mineral oil products (lubricants, fuels).

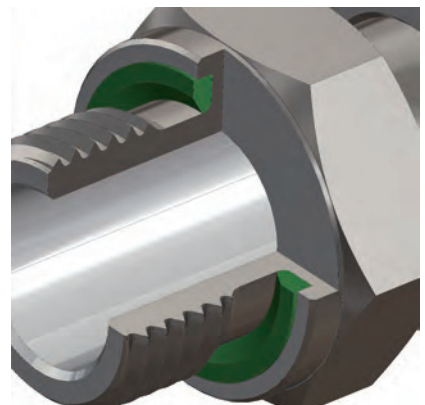
Operational application limits

Temperature (°C)

NBR: -30°C bis +100°C

FKM: -20°C bis +200°C

EPDM (perox.): -45°C bis + 150°C



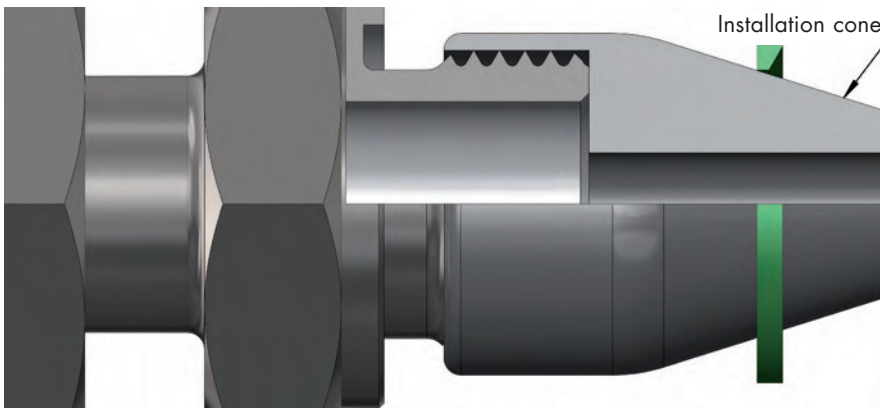
Type examination certificates:

NBR (NB 901803):
DVGW DIN EN 549 B1/H3
FKM (FP 801804):
DVGW DIN EN 549 E1/H3

Installation housing

The installation housing of the profile sealing ring should comply with DIN 3852 Part 11. The surface finishes are to be observed in accordance with the standard quoted. DIN 3869 profile sealing rings can also be installed in installation housing designed according to ISO 1179, ISO 9974-2, ISO 9974-3 and ISO 11926.

Installation



Do not damage the profile sealing ring during installation, as this may cause leakage. On the surface to be sealed, grooves, cavities and scratches are to be avoided. Foreign bodies such as dust, dirt, swarf and other particles are to be removed.

In addition, the following points should be observed:

- During installation, make sure that the profile sealing ring is positioned correctly (see illustration).
- Thread tips should be covered using an assembly sleeve, and any assembly tools used should be made of soft material (e.g. POM) and have no sharp edges.
- Unlike O-rings, DIN 3869 profile sealing rings should not be greased for installation; the same applies to the installation housing.

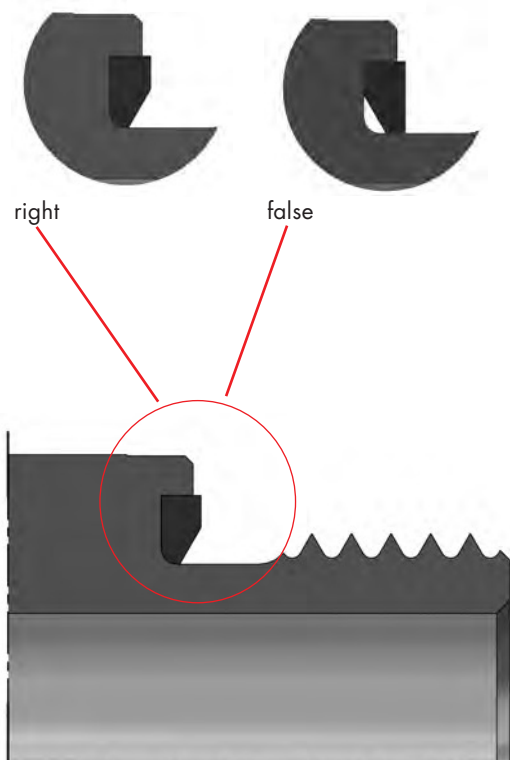
Benefits

- Seals can be refitted
- Low mechanical deformation of the cross-section under pressure loads
- Seals do not twist in the groove
- Simple to handle when fitting
- Low sensitivity to gap extrusion
- No relative movement in the groove at pressure pulsation
- Slight leakage also with low-viscosity mediums
- Minimal cross-section deformation

Any seal. Any time.

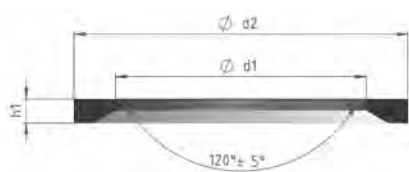
You will find all the current data at www.dichtomatik.de

Installation position



Profil rings acc. to DIN 3869

Dimensions



**NBR 85
black**

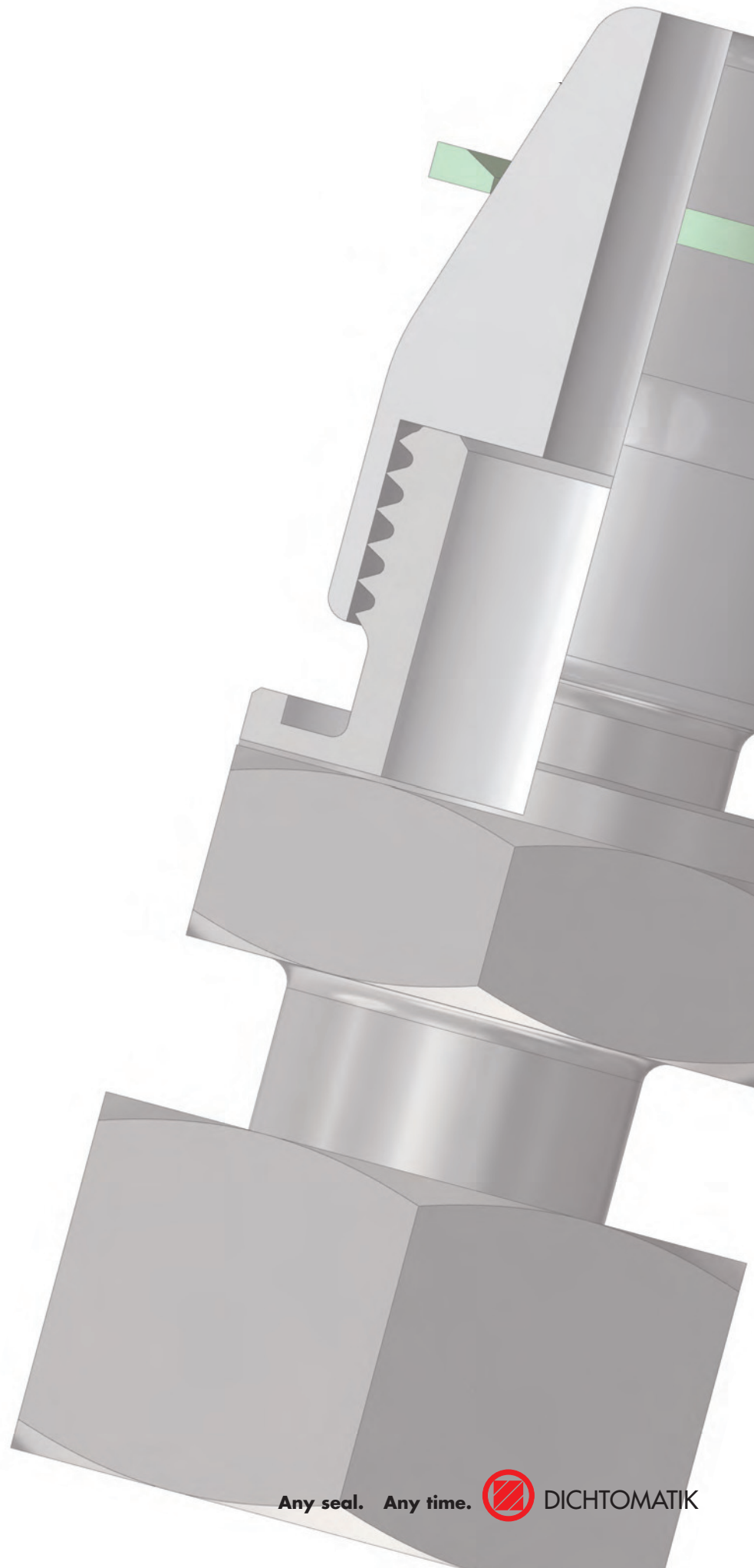
d	D	h ₁	Nominal Size	Metric	Imperial
6,5	9,9	1	8	M 8 x 1	
8,4	11,9	1	10	M 10 x 1	G 1/8 A
9,8	14,4	1,5	12	M 12 x 1,5	
11,6	16,5	1,5	14	M 14 x 1,5	G 1/4 A
13,8	18,9	1,5	16	M 16 x 1,5	
14,7	18,9	1,5	17		G 3/8 A
15,7	20,9	1,5	18	M 18 x 1,5	
17,8	22,9	1,5	20	M 20 x 1,5	
18,5	23,9	1,5	21		G 1/2 A
19,6	24,3	1,5	22	M 22 x 1,5	
23,9	29,2	1,5	27	M 26 x 1,5/ M 27 x 2	G 3/4 A
27,7	32,7	2	30	M 30 x 1,5	
29,7	35,7	2	33	M 33 x 2	G 1 A
38,8	45,8	2	42	M 42 x 2	G 1 1/4 A
44,7	50,7	2	48	M 48 x 2	G 1 1/2 A

**FKM 80
green**

d	D	h ₁	Nominal Size	Metric	Imperial
6,5	9,9	1	8	M 8 x 1	
8,4	11,9	1	10	M 10 x 1	G 1/8 A
9,8	14,4	1,5	12	M 12 x 1,5	
11,6	16,5	1,5	14	M 14 x 1,5	G 1/4 A
13,8	18,9	1,5	16	M 16 x 1,5	
14,7	18,9	1,5	17		G 3/8 A
15,7	20,9	1,5	18	M 18 x 1,5	
17,8	22,9	1,5	20	M 20 x 1,5	
18,5	23,9	1,5	21		G 1/2 A
19,6	24,3	1,5	22	M 22 x 1,5	
23,9	29,2	1,5	27	M 26 x 1,5/ M 27 x 2	G 3/4 A
27,7	32,7	2	30	M 30 x 1,5	
29,7	35,7	2	33	M 33 x 2	G 1 A
35,9	43,2	2,4			
38,8	45,8	2	42	M 42 x 2	G 1 1/4 A
44,7	50,7	2	48	M 48 x 2	G 1 1/2 A

**EPDM (perox.) 80
violet**

d	D	h ₁	Nominal Size	Metric	Imperial
6,5	9,9	1	8	M 8 x 1	
8,4	11,9	1	10	M 10 x 1	G 1/8 A
9,8	14,4	1,5	12	M 12 x 1,5	
11,6	16,5	1,5	14	M 14 x 1,5	G 1/4 A
13,8	18,9	1,5	16	M 16 x 1,5	
14,7	18,9	1,5	17		G 3/8 A
15,7	20,9	1,5	18	M 18 x 1,5	
17,8	22,9	1,5	20	M 20 x 1,5	
18,5	23,9	1,5	21		G 1/2 A
19,6	24,3	1,5	22	M 22 x 1,5	
23,9	29,2	1,5	27	M 26 x 1,5/ M 27 x 2	G 3/4 A
27,7	32,7	2	30	M 30 x 1,5	
29,7	35,7	2	33	M 33 x 2	G 1 A
35,9	43,2	2,4			
38,8	45,8	2	42	M 42 x 2	G 1 1/4 A
44,7	50,7	2	48	M 48 x 2	G 1 1/2 A



A-2/2

NG-5112CM0489

Type Typ	Technical Data Technische Daten	Remarks Bemerkungen
NB 90 18 03	hardness range class: H3 temperature range: 0...+80 °C temperature class: B1	



DIN-DVGW type examination certificate

DIN-DVGW-Baumusterprüfzertifikat

NG-5112CM0489

Registration Number
Registrierungsnummer

Field of Application <i>Anwendungsbereich</i>	products of gas supply <i>Produkte der Gasversorgung</i>
Owner of Certificate <i>Zertifikatinhaber</i>	DICHTOMATIK Vertriebsgesellschaft für Technische Dichtungen mbH Albert-Schweitzer-Ring 1, D-22045 Hamburg
Distributor <i>Vertreiber</i>	DICHTOMATIK Vertriebsgesellschaft für Technische Dichtungen mbH Albert-Schweitzer-Ring 1, D-22045 Hamburg
Product Category <i>Produktart</i>	greasing and sealing materials: Sealing material made of elastomers for gas appliances (5112)
Product Description <i>Produktbezeichnung</i>	Homogeneous elastomer material for dynamic and static sealings
Model <i>Modell</i>	NB 90 18 03
Test Reports <i>Prüfberichte</i>	type testing: 11/251/5112/1 from 22.11.2011 (EBI)
Test Basis <i>Prüfgrundlagen</i>	DIN EN 549 (01.04.1995) DVGW VP 406-A 7 (01.12.2004)

Date of Expiry / File No. 22.11.2016 / 11-0612-GNE
Ablaufdatum / Aktenzeichen

14.12.2011 Rie A-1/2

Date, issued by: *Sheet, Head of Certification Body*
 Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle

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A-2/2

NG-5112CM0470

Type Typ	Technical Data Technische Daten	Remarks Bemerkungen
FP 80 18 04	hardness range class: H3 temperature range: 0...+150 °C temperature class: E1	



DIN-DVGW type examination certificate

DIN-DVGW-Baumusterprüfzertifikat

NG-5112CM0470

Registration Number
Registriernummer

Field of Application <i>Anwendungsbereich</i>	products of gas supply <i>Produkte der Gasversorgung</i>
Owner of Certificate <i>Zertifikatinhaber</i>	DICHTOMATIK Vertriebsgesellschaft für Technische Dichtungen mbH Albert-Schweitzer-Ring 1, D-22045 Hamburg
Distributor <i>Vertreiber</i>	DICHTOMATIK Vertriebsgesellschaft für Technische Dichtungen mbH Albert-Schweitzer-Ring 1, D-22045 Hamburg
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Product Description <i>Produktbezeichnung</i>	Homogeneous elastomer material for dynamic and static sealings
Model <i>Modell</i>	FP 80 18 04
Test Reports <i>Prüfberichte</i>	type testing: 11/251/5112/2 from 23.11.2011 (EBI)
Test Basis <i>Prüfgrundlagen</i>	DIN EN 549 (01.04.1995) DVGW VP 406-A 7 (01.12.2004)

Date of Expiry / File No. 23.11.2016 / 11-0612-GNE
Ablaufdatum / Aktenzeichen

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Date, issued by, Signel, Head of Certification Body
 Datum, Bearbeiter, Stütz, Leiter der Zertifizierungsstelle

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Any seal. Any time.

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