WALFORM Seals

FKM 90 - Product & Material Information

Product Description

WALFORM seals are elastomer sealing rings used as replacement soft seals in WALFORM-type tube fitting connections. The seal is installed as part of the tube connection and provides static sealing at the fitting interface.

WALFORM seal - FKM

Material

FKM 90 elastomer. The supplied compound is FKM 90 with a specified hardness of 90 ± 5 Shore A.

Application

For use in compatible WALFORM-type tube fitting assemblies. Correct seal size must be selected according to the tube outside diameter and fitting series.

Design / Selection

The available range covers L, S and combined L/S tube fitting sizes. The available STEMA size references are listed below. Dimensions of the mating fitting and installation geometry depend on the applicable tube fitting system.

Technical Notes

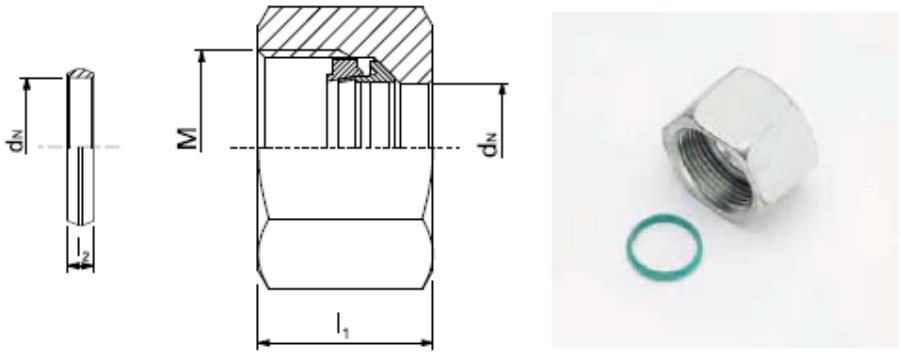
Property	Specification
Seal type	Replacement soft seal for WALFORM-type tube fittings
Elastomer	FKM 90
Hardness specification	90 ± 5 Shore A
Colour	Green (supplied product)

Important

The information in this datasheet applies to the referenced product and compound. Suitability for a specific medium, temperature, pressure and fitting configuration must be confirmed for the intended application.

WALFORM Seals

Dimensions & Selection - L Series



WALFORM fitting geometry and replacement soft seal location. Dimensions below refer to the fitting system shown.

Use tube outside diameter dN and series to select the corresponding seal. PN values shown are WALFORM system reference pressures from the source table and are not stated as an independent pressure rating for the elastomer seal.

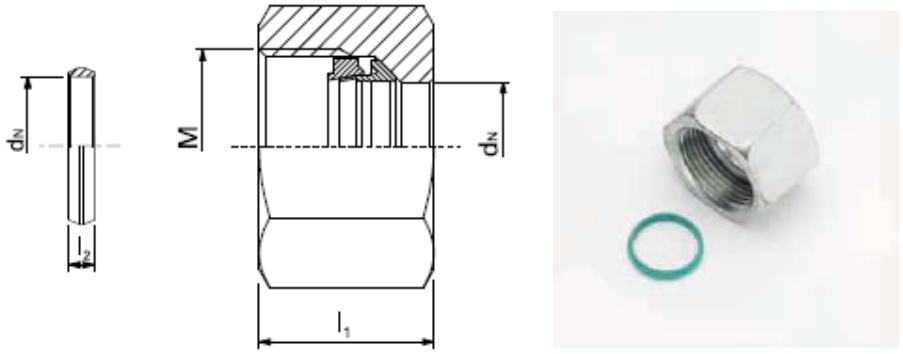
Series	PN bar (psi)	dN mm	Model	M	l1	l2	S2
L	500 (7252)	6	W-R 6 L VI	M12 x 1.5	14.5	2.7	14
L	500 (7252)	8	W-R 8 L VI	M14 x 1.5	14.5	2.7	17
L	500 (7252)	10	W-R 10 L VI	M16 x 1.5	15.5	2.95	19
L	400 (5801)	12	W-R 12 L VI	M18 x 1.5	15.5	2.95	22
L	400 (5801)	15	W-R 15 L VI	M22 x 1.5	17	2.95	27
L	400 (5801)	18	W-R 18 L VI	M26 x 1.5	18	2.95	32
L	250 (3626)	22	W-R 22 L VI	M30 x 2	20	2.95	36
L	250 (3626)	28	W-R 28 L VI	M36 x 2	21	2.95	41
L	250 (3626)	35	W-R 35 L VI	M45 x 2	24	3.5	50
L	250 (3626)	42	W-R 42 L VI	M52 x 2	24	3.5	60

STEMA ordering references

Current STEMA supplied FKM 90 sizes corresponding to this series: WF 06L/S, WF 08L/S, WF 10L/S, WF 12L/S, WF 15L, WF 18L, WF 22L, WF 28L, WF 35L and WF 42L.

WALFORM Seals

Dimensions & Selection - S Series



WALFORM fitting geometry and replacement soft seal location. Dimensions below refer to the fitting system shown

S-series dimensional reference data. Select the seal by tube outside diameter dN and series. The model, thread and fitting dimensions are reproduced from the supplied WALFORM reference table for identification of the mating system.

Series	PN bar (psi)	dN mm	Model	M	l1	l2	S2
S	800 (11603)	6	W-R 6 S VI	M14 x 1.5	16.5	2.7	17
S	800 (11603)	8	W-R 8 S VI	M16 x 1.5	16.5	2.7	19
S	800 (11603)	10	W-R 10 S VI	M18 x 1.5	17.5	2.95	22
S	630 (9137)	12	W-R 12 S VI	M20 x 1.5	17.5	2.95	24
S	630 (9137)	16	W-R 16 S VI	M24 x 1.5	20.5	2.95	30
S	420 (6091)	20	W-R 20 S VI	M30 x 2	24	3.7	36
S	420 (6091)	25	W-R 25 S VI	M36 x 2	27	3.7	46
S	420 (6091)	30	W-R 30 S VI	M42 x 2	29	3.85	50
S	420 (6091)	38	W-R 38 S VI	M52 x 2	32.5	3.5	60

STEMA Ordering References

Current STEMA supplied FKM 90 sizes corresponding to this series: WF 06L/S, WF 08L/S, WF 10L/S, WF 12L/S, WF 16S, WF 20S, WF 25S, WF 30S and WF 38S.

Selection Notes

Symbol	Meaning
dN	Tube outside diameter
M	Fitting thread
l1 / l2	Fitting dimensions shown in the reference drawing
S2	Wrench size / across flats
PN	WALFORM system reference pressure; not an independent seal pressure rating

FKM 90 Compound

Documented Material Data

FLUOROCARBON RUBBER (FKM)

Compound Ref.: FKM

Specification hardness: 90 ± 5 Shore A

The values below are documented material properties for the FKM 90 compound used for the supplied WALFORM seals.

Physical Properties

Property	Test Result	Test Method
Hardness	89 Shore A	ASTM D2240
Tensile Strength	14.6 MPa	ASTM D412
Elongation at Break	125%	ASTM D412
M100	12.2 MPa	ASTM D412
Density	2.12 g/cm³	ASTM D792

Technical Note

The properties above are compound QC values and should not be interpreted as complete application limits for the finished seal. Chemical compatibility, temperature capability, pressure capability and service life depend on the actual application and fitting system.