

TECHNICAL SPECIFICATION Wire mesh over Elastomer



Description

Metal elastomer gaskets obtained with the cladding of layers in concentric metallic mesh around an elastomer material that accomplishes the function of elastic recovery after compression. Various sections are available and dimensions upon client request. This type is not suitable for water tight sealing; for this specific application refer to the Twinshield type of gasket. The possibility of combining elastomer and metallic mesh and overlapping layers is very broad and left to the needs of the client.

Applications

Gasket for the shielding of electric and magnetic fields where there is no requirement for water tight sealing as well. Elastic recovery is obtained with expanded materials of various types such as Silicone, Neoprene and EPDM. These are recommended for panel systems, electrical control panels, doors, etc., which must be disassembled or opened with a certain frequency, therefore the need for the elastic recovery of the gasket.

Provision

In spools or in pieces pre-cut to size, in section and dimension upon client request.

Process specification

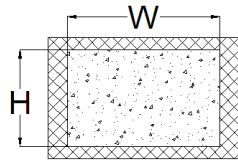
Manufacturing process according to "IO_PRD1_05 Knitted mesh macchine circolari Ed. 4".

PART NUMBER FORMULATION

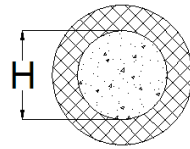
Example: B.R.300.200.EPDM341.1.MO.AD3M6.200 L= 1000 MM

1. Section Type

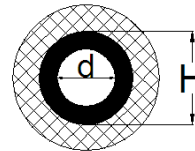
NOTE: Quotes in millimeters. Diameter of the the elastomer if present.



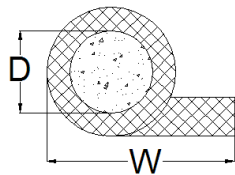
B.R.Wx10.Hx10



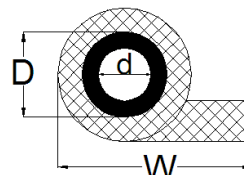
B.O.Hx10



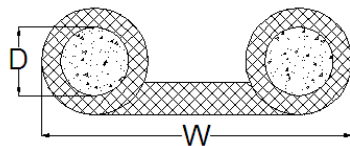
B.O.T.Hx10.dx10



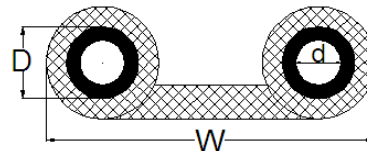
B.O.P.Dx10.Wx10.



B.O.T.P.Dx10.dx10.Wx10.



B.O.S.Wx10.Dx10



B.O.T.S.Wx10.Dx10.dX10

Tolerances of the product are defined according to "IO_PRD1_02 Parameters and Tolerances - Ed. 3".

Ex: **B.R.300.200**.EPDM341.1.MO.AD3M6.200 L= 1000 MM

2. Elastomer type

Material	EPDM Sponge EDPM-cr	Neoprene Sponge cr201	Neoprene Sponge cr205	Socaprene	Poyurethane sponge type: EUROBATEX	Polyurethane sponge: D40	Polyurethane sponge: D60 UL94 HBF	Polyurethane sponge: D90	Silicone sponge	Transparent Silicone sponge	EPDM type: SP-50- EPM/TN	EPDM type: SP-100- EPM/TN	EPDM type: SP-MICRO- EPM/TN
Code	EPDM341	N201	N205	CIG3	EBX	PU40	PU60	PU90	SE	S	SP50	SP100	SPMICRO
Color	Black	Black	Black	Gray	Black	White	Dark gray	Dark gray	White	Transparent	Black	Black	Black
Density	110-150 kg/m3	130-170 kg/m3	210-300 kg/m3	170-220 kg/m3	60 kg/m3	40 kg/m3	60-65 kg/m3	70-95 kg/m3	0,50-0,60 g/cm3	1,16 g/cm3	0,430 +/- 0,050 g/cm3	0,400 +/- 0,050 g/cm3	0,600 +/- 0,080 g/cm3
Hardness	20-40 SH 00	38-55 SH 00	45-65 SH 00	38-55 SH 00	/	/	/	/	/	63 SH 00	/	/	/
Compression Resistance	14/35 KPa (25% 22 h Room T.)	35/63 kPa (25% 22 h Room T.)	63/91 kPa (25% 22 h Room T.)	35/63 kPa (25% 22 h Room T.)	N.D.	N.D.	6,0 kPa (40%)	2,0 kPa (50%)	N.D.	N.D.	0,120 MPa (25% 22 h Room T.)	0,10 MPa (25% 22 h Room T.)	0,250 MPa (25% 22 h Room T.)
Water Absorbance (ASTM D 1056)	3%	0,70%	0,60%	0,90%	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Breaking lengthness (DIN 53571)	190%	129%	156%	236%	N.D.	200%	260%	150%	350-450%	381	N.D.	N.D.	N.D.
Breaking resistance (DIN 53571)	500 kPa	810 kPa	1001 kPa	756 kPa	/	130 kPa	160 kPa	250 kPa	N.D.	8,9 MPa	N.D.	N.D.	N.D.
Flame resistance	/	94 HB	94 HB	94 V0 >4mm (UL94)	UL94 V0	UL94 HF1 – MVSS302 SE	UL94 HBF	/	Fino a 200 - 260°C	N.D.	/	/	/
Using temperature (in continue)	From - 50 to 100°C up to 110°C intermitting	From -40 to +85°C up to 100°C intermitting	From -40 to +85°C up to 100°C intermitting	From -40 to +85°C up to 100 °C intermitting	From -45 to + 120°C	From -40 to + 80 °C up to 120 °C intermitting	From - 40 to + 120 °C	From - 40 to + 120 °C	From - 40 to + 120 °C	From - 40 to + 120 °C	From -35 to +110°C	From - 35 to + 110 °C	From - 35 to + 110 °C

Ex: B.R.300.200.**EPDM341**.1.MO.AD3M6.200 L= 1000 MM

3. Number of Layers

Greater is the numbers of layer, greater is the shielding effectiveness

Number	Code
1 Layer	1
2 Layers	2
3 Layers	3
4 Layers	4
5 Layers	5
6 Layers	6

Ex: B.R.300.200.EPDM341.1.MO.AD3M6.200 L= 1000 MM

Notes: Possible also with layers of different types (Ex: 2.MO.2.CWS)

4. Conductive Wire

Conductive Wire			
Name	Code	Dimensions	Material
Copperweld	CWS	0,09 or 0,11 mm	Tin plated 40% Copper clad steel
Monel	MO	0,09 or 0,11 mm	Main components: Ni-Fe-Cu
Tin-Copper	RS	0,12 mm	Tin coated copper
Stainless steel	SS	0,06 – 0,11 mm	Stainless steel AISI 304
Alluminum	AL	0,11 mm	Alluminum wire n° 3.3555
P-91	P-91	550 dtex 1800 Nm	Flame retardant yarn in Polyacrilonitrile and copper coated with tin – 70% PAN FR – 30% Cu+Sn
NyAg	PaAg	0.170 mm	Nylon 6.6 filament yarn
P-140	P-140	350 dtex 28500 Nm	Flame retardant yarn in Polyacrilonitrile and copper coated with tin – 50% PET – 50% Cu+Sn

Notes: MO0,09 indicates Monel wire with 0.09 mm diameter
 MO. indicates Monel wire with 0.11 mm diameter

Shieldig effectiveness					
Material	Layers	Magnetic Field – 100 kHz	Electrical Field – 10 MHz	Plane wave – 1 GHz	Plane wave – 10 GHz
MONEL	1		65	80	
MONEL	2	30-45	75	84	60
MONEL + CWS	2+2	30-45	85	92	>60
MONEL + CWS	2+3	68	90	>100	75

Ex: B.R.300.200.EPDM341.1.MO.AD3M6.200 L= 1000 MM

 <p>Protezioni Interferenze Elettromagnetiche EMI - RFI - ESD - TEMPEST</p>		<p>COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = AS/EN/JISQ 9100 =</p>	<p>COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =</p>	<p>Specifica: SOL-02 Rev. 0 05/09/2013 Pag. 5/5</p>
--	---	---	--	---

5. Biadhesive tape

Material	Code	Adhesive	Temperature range
3M Y-9485	AD3M	Long aging acrylic	Up to 149° C (continuos) 204° C (short period)
MP 2395PW	ADP	Modified acrylic	-40/+120° C
TESA 4914	ADB	Modified acrylic	Up to 200° C

Ex: B.R.300.200.EPDM341.1.MO.**AD3M**.6.200 L= 1000 MM

6. Biadhesive width

Number	Code
3 mm	3
4 mm	4
6 mm	6
9 mm	9

Ex: B.R.300.200.EPDM341.1.MO.AD3M**6**.200 L= 1000 MM

7. Side with adhesive

Last three numbers, if present, indicate the sides with the adhesive. Possible without adhesive.

Ex: B.R.300.200.EPDM341.1.MO.AD3M6.**200** L= 1000 MM

8. Type of supply

If the length is indicated it means that the gasket is supplied in pieces, if the length is not present it means that the gasket is supplied in linear meters. Particular supply can also be requested (i.e. twisted, ecc..)

Ex: B.R.300.200.EPDM341.1.MO.AD3M6.200 **L= 1000 MM**