



## EMI SHIELDING SOLUTIONS

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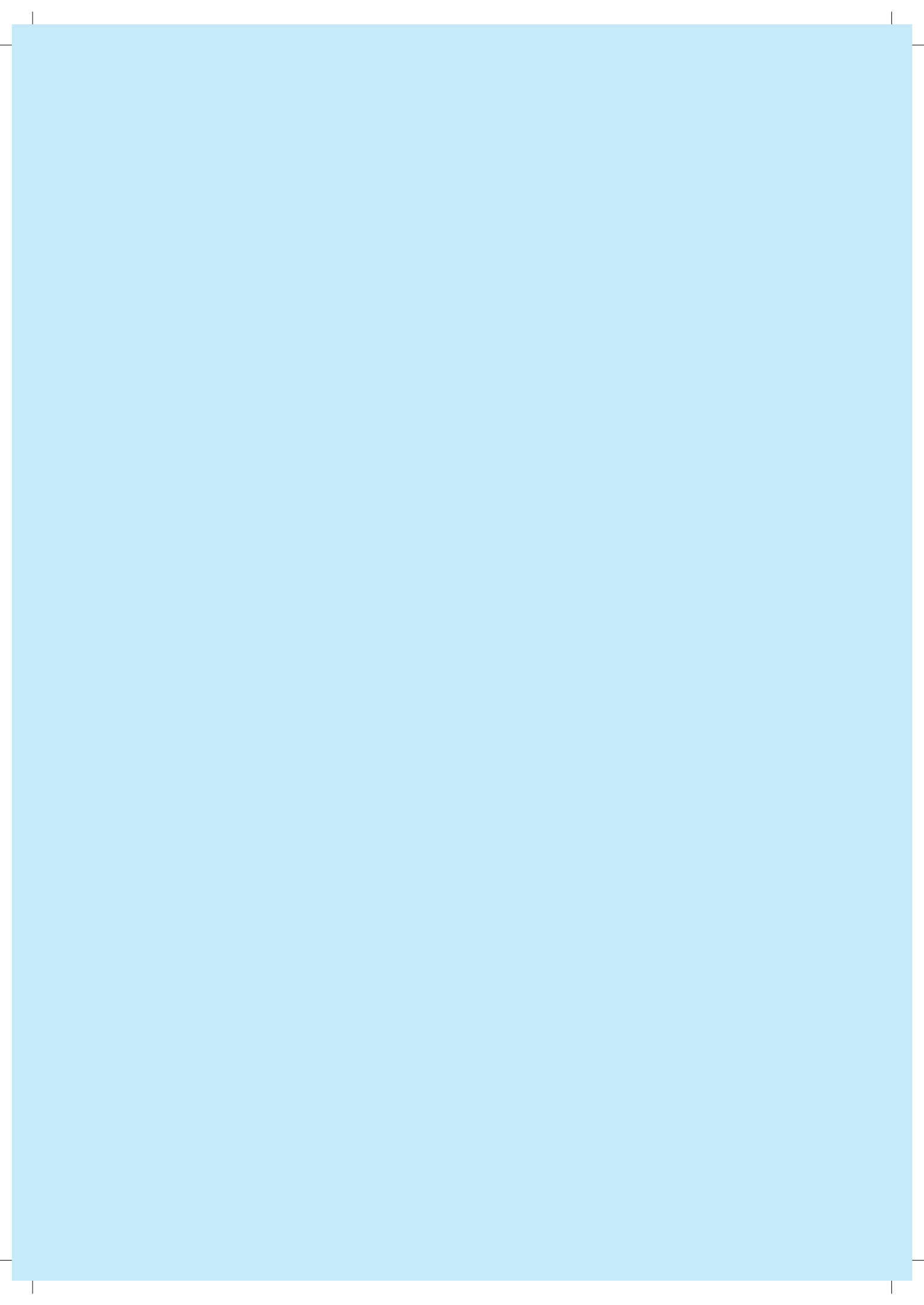
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# GT SERIES

## CONDUCTIVE FABRIC GASKETS



### DESCRIPTION

THESE GASKETS ARE REALIZED IN EXPANDED POLYURETHANE WRAPPED IN NICKEL/COPPER CONDUCTIVE FABRIC (STANDARD TYPE) OR WITH OTHER TREATMENTS.  
THE ADHESIVE TAPE PLACED ON THE GASKETS ALLOWS AN EASY POSITIONING.

### APPLICATION

THEY ARE APPLIED IN ORDER TO SOLVE ELECTROMAGNETIC INTERFERENCES PROBLEMS IN TELECOMMUNICATIONS, LCD, INSTRUMENTS, COMPUTERS, MEDICALS, ETC.

### AVAILABILITY

THEY ARE SUPPLIED IN A LARGE RANGE OF SHAPES AND DIMENSIONS IN 1 MT. LENGTH BARS. GREATER OR SMALLER LENGTH AVAILABLE ON DEMAND.

VARIOUS SHAPES AND DIMENSIONS SATISFY DIFFERENT NEEDS.

EXECUTED MANUFACTURING:

- CUT MADE ACCORDING TO CUSTOMER'S REQUIREMENTS
- DIE-CUTTING

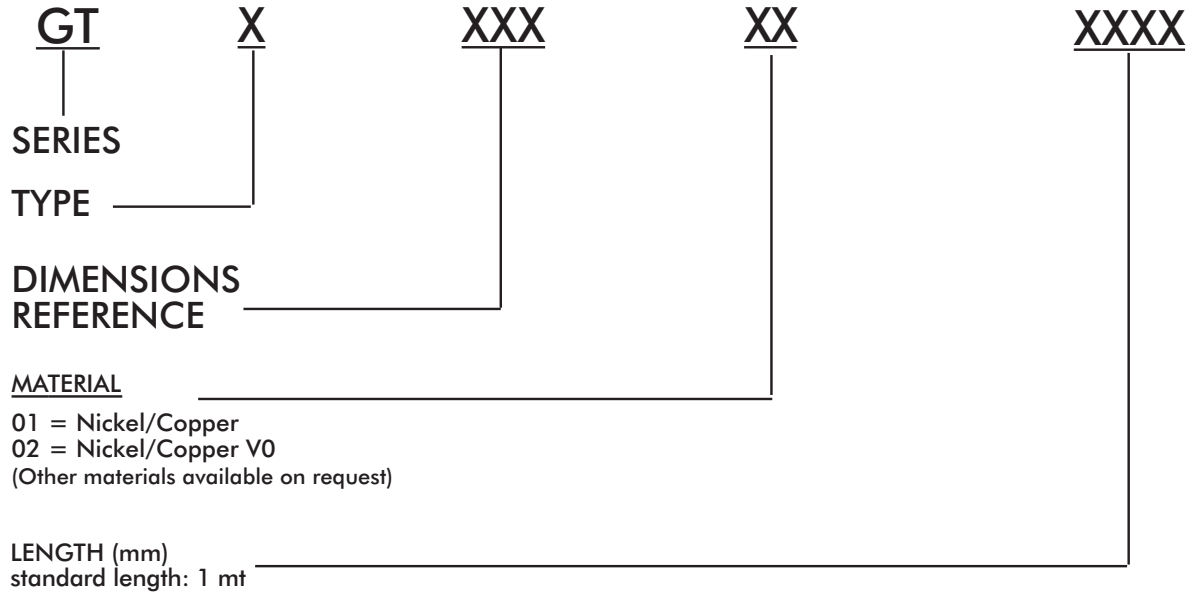
### TECHNICAL DATA

INTERNAL MATERIAL:	EXPANDED POLYURETHANE
RAW MATERIAL:	FABRIC 100% POLYESTER
TREATMENT:	NICKEL/COPPER (OTHER TYPE OF TREATMENTS ARE AVAILABLE)
TEMPERATURE MAX:	100°C
ELECTRIC RESISTANCE:	0,08Ohm
SHIELDING EFFECTIVENESS:	70 – 95Db from 20Mhz up to 10Ghz
FLAME CLASS:	UL94VTM-1 / UL94V0

# GT SERIES

## CONDUCTIVE FABRIC GASKETS

### PART NUMBER GUIDE



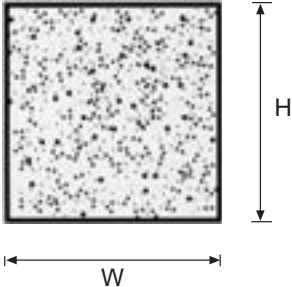
**MATERIAL**  
01 = Nickel/Copper  
02 = Nickel/Copper V0  
(Other materials available on request)

**LENGTH (mm)**  
standard length: 1 mt

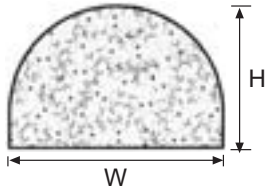
**EXAMPLE:** GTR011010060 = Gasket type R 2,0 X 4,0 mm nickel/Copper length 60 mm  
GTD003021000 = Gasket type D 3,5 X 11,0 mm nickel/Copper V0 length 1 mt

# GT SERIES

## CONDUCTIVE FABRIC GASKETS

TYPE R	H (mm)	W (mm)	DIMENSIONS REFERENCES
		1,0	3,0
1,0		5,0	002
1,0		10,0	003
1,0		21,0	004
1,0		25,4	005
1,2		4,0	006
1,2		10,0	007
1,2		55,0	008
1,5		10,0	009
1,5		14,0	010
2,0		4,0	011
2,0		7,0	012
2,0		12,7	013
2,0		18,0	014
2,0		21,0	015
2,0		27,0	016
2,0		45,0	017
2,3		19,2	018
3,0		3,9	019
3,0		13,0	020
3,0		25,4	021
3,2		5,0	022
3,2		6,4	023
3,2		9,5	024
3,2		40,0	025
4,0		15,0	026
5,0		5,0	027
6,0		6,0	028
6,4		9,5	029
7,5		15,0	030
9,4		12,4	031
9,5		9,5	032
9,5		20,0	033
17,0		17,0	034

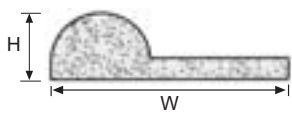
\*Other dimensions available on request

TYPE D	H (mm)	W (mm)	DIMENSIONS REFERENCES
		2,3	2,3
3,4		6,5	002
3,5		11,0	003
3,8		3,8	004
5,5		6,0	005
6,4		9,4	006
10,0		10,0	007
23,0		18,0	008

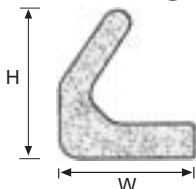
\*Other dimensions available on request

# GT SERIES

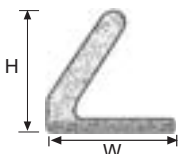
## CONDUCTIVE FABRIC GASKETS

	TYPE P		DIMENSIONS REFERENCES
	H (mm)	W (mm)	
	2,0	8,0	001
3,3	13,2	002	

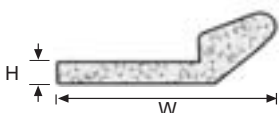
\*Other dimensions available on request

	TYPE C		DIMENSIONS REFERENCES
	H (mm)	W (mm)	
	3,5	7,5	001
	8,0	8,0	002
	9,8	10,7	003
15,0	17,3	004	

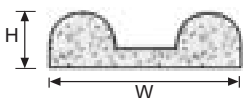
\*Other dimensions available on request

	TYPE L		DIMENSIONS REFERENCES
	H (mm)	W (mm)	
	6,4	5,9	001
	9,8	10,7	002
15,0	14,0	003	

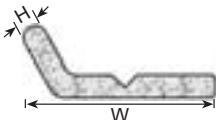
\*Other dimensions available on request

	TYPE K		DIMENSIONS REFERENCES
	H (mm)	W (mm)	
	2,5	12,7	001
	3,5	12,5	002
6,4	19,1	003	

\*Other dimensions available on request

	TYPE W		DIMENSIONS REFERENCES
	H (mm)	W (mm)	
	2,8	9,7	001
3,2	9,6	002	

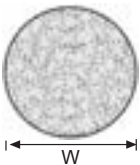
\*Other dimensions available on request

	TYPE S		DIMENSIONS REFERENCES
	H (mm)	W (mm)	
	18,0	7,9	001
18,6	2,0	002	

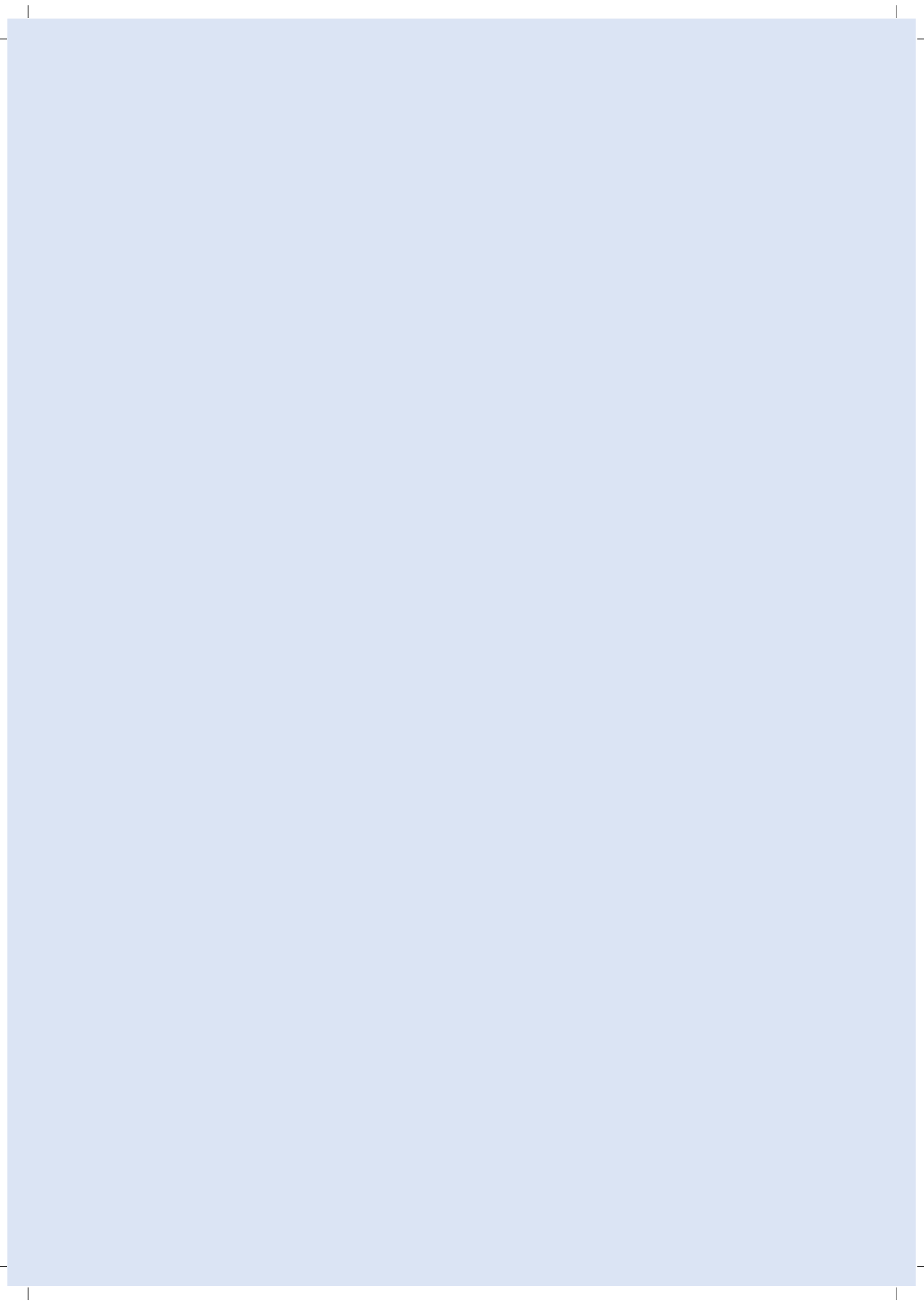
\*Other dimensions available on request

# GT SERIES

## CONDUCTIVE FABRIC GASKETS

<b>TYPE T</b> 	W (mm)	DIMENSIONS REFERENCES
	2,7	001
3,2	002	
5,0	003	
10,0	004	

\*Other dimensions available on request





# EE SERIES

## CONDUCTIVE ELASTOMER GASKETS



### DESCRIPTION

THESE GASKETS ARE REALIZED IN EXCELLENT QUALITY EXTRUDED SILICONE, FILLED WITH DIFFERENT TYPES OF METAL PARTICLES.

### APPLICATION

THEY ARE APPLIED IN ORDER TO SOLVE ELECTROMAGNETIC INTERFERENCES PROBLEMS IN MILITARY/AEROSPACE FIELDS.

ALSO USED TO ACHIEVE A HIGH SHIELDING EFFICIENCY COMBINED WITH ENVIRONMENTAL SEALING.

### AVAILABILITY

THEY ARE SUPPLIED IN DIFFERENT SHAPES, DIMENSIONS AND STANDARD SHEETS.

EXECUTED MANUFACTURING:

- CUT MADE ACCORDING TO CUSTOMER'S REQUIREMENTS
- DIE-CUTTING
- O-RING

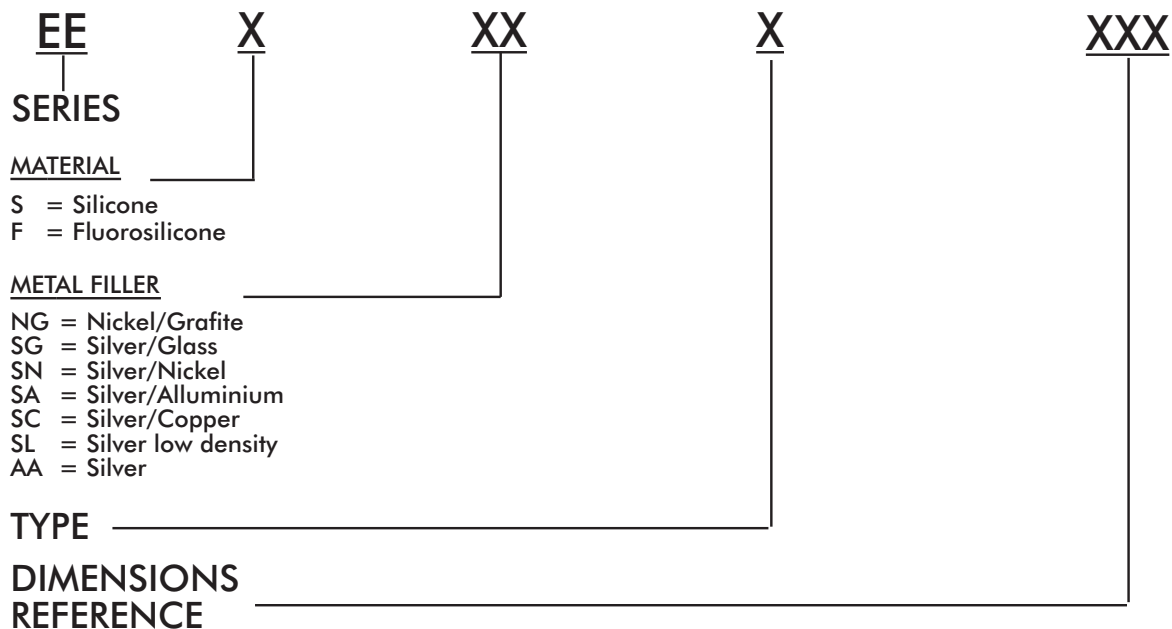
### TECHNICAL DATA

Series	U of M	NG	NG	SG	SG	SN	SN	SA	SA	SC	SC	SL	AA	AA
<b>Filler</b>	-	NiGr	NiGr	AG/Glass	AG/Glass	AG/Ni	AG/Ni	AG/W	AG/W	Silver Copper	Silver Copper	Silver low density	Silver pure	Silver pure
<b>Elastomer</b>	-	Silicone	Fluoro-Silicone	Silicone	Fluoro-Silicone	Silicone	Fluoro-Silicone	Silicone	Fluoro-Silicone	Silicone	Fluoro-Silicone	Silicone	Fluoro-Silicone	Silicone
<b>MIL-83528 TYPE</b>	-	-	-	M	-	L	-	B	D	A	C	I	E	F
<b>Operating Temp. (°C)</b>	Min	-55	-55	55	55	55	-55	-55	-55	-55	-55	-55	-55	-45
	Max	+150	+150	+160	+160	+125	+125	+160	+160	+125	+125	+160	+160	+160
<b>Hardness</b>	Shore A	30-78	65	65	65	75	78	65	78	65	75	65	65	75
<b>Specific Gravity</b>	g/cc	1,95	1,95	1,9	1,9	4,0	4,4	2,0	2,0	3,5	4,1	1,8	3,5	4,0
<b>Compression Deflection</b>	% min	3,5	3,0	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5	8,0	2,5	3,5
<b>Tensile Strength</b>	#/in sq	150	150	200	200	200	180	200	180	200	180	150	300	250
<b>Elongation</b>	Min	100	100	100	100	100	60	100	60	100	100	50	200	100
	Max	-	-	300	300	300	260	300	260	300	300	250	500	300
<b>Compression Set</b>	%	35	25	30	30	32	30	32	30	32	35	35	45	60
<b>Tear Strength</b>	#/in	40	35	30	30	30	35	30	35	35	25	35	50	40
<b>Volume Res.</b>	Ohm-cm	0,10	0,10	0,006	0,006	0,005	0,012	0,008	0,012	0,004	0,010	0,010	0,002	0,002
<b>Shielding Effectiveness as tested per MIL-DTL-83528</b>	100 MHz	100	100	100	100	120	120	120	120	120	120	100	120	120
	500 MHz	100	100	100	90	120	120	120	120	120	120	100	120	120
	2 GHz	100	100	90	90	120	115	115	115	120	120	90	120	120
	10 GHz	100	100	90	90	110	110	115	115	120	115	90	120	120

# EE SERIES

## CONDUCTIVE ELASTOMER GASKETS

### PART NUMBER GUIDE

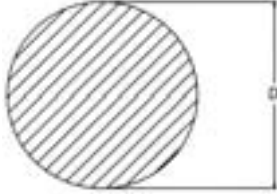


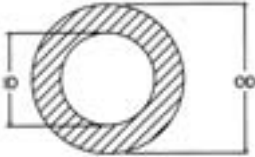
**EXAMPLE:** EESSAC003 = Silicone gasket filled with Silver/Alluminium, solid round diameter 1,57 mm  
EEFSGQ007 = Fluorosilicone gasket filled with Silver/Glass, rectangular section 6,35 x 1,57 mm

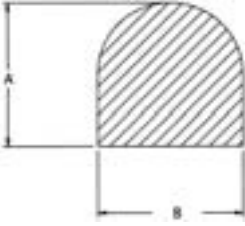
TYPE S (STANDARD SHEET)	A (mm)	B (mm)	S (mm)	DIMENSIONS REFERENCES
		250	250	0.51
380		500	0.51	002
250		250	0.81	003
380		500	0.81	004
250		250	1.00	005
380		500	1.00	006
250		250	1.20	007
380		500	1.20	008
250		250	1.57	009
380		500	1.57	010
250		250	2.36	011
380		500	2.36	013
250		250	3.18	014
380		500	3.18	015

# EE SERIES

## CONDUCTIVE ELASTOMER GASKETS

<b>TYPE C</b> 	D (mm)	DIMENSIONS REFERENCES
	1,00	001
1,35	002	
1,57	003	
1,78	004	
2,00	005	
2,36	006	
2,60	007	
2,85	008	
3,00	009	
3,18	010	
3,30	011	
3,53	012	
3,80	013	
4,10	014	
4,78	015	
5,50	016	
6,35	017	

<b>TYPE T</b> 	OD (mm)	ID (mm)	DIMENSIONS REFERENCES
	1,78	0,63	
2,36	0,90		002
2,60	1,00		003
3,18	1,14		004
3,18	1,57		005
3,96	1,27		006
4,50	2,00		007
6,35	3,18		008
7,92	4,88		009
9,52	6,35		010
11,10	6,35		011

<b>TYPE D</b> 	B (mm)	A (mm)	DIMENSIONS REFERENCES
	1,40	1,62	
1,57	1,72		002
1,57	1,72		003
2,38	1,98		004
1,98	2,26		005
2,38	2,38		006
1,57	2,54		007
3,81	2,80		008
3,10	3,32		009
3,15	3,45		010
3,00	3,96		011
3,96	3,96		012
4,52	4,45		013
4,78	4,78		014
6,35	6,35		015

# EE SERIES

## CONDUCTIVE ELASTOMER GASKETS

<b>TYPE H</b> 	A (mm)	B (mm)	C (mm)	D (mm)	DIMENSIONS REFERENCES
	3,96	1,14	1,98	1,14	001
	3,96	1,98	1,98	1,14	002
	4,75	2,36	2,36	1,27	003
	6,35	3,17	3,17	1,65	004
	7,92	3,96	3,96	1,57	005
	12,37	2,00	6,20	2,00	006
	7,92	5,10	2,85	1,57	007

<b>TYPE Q</b> 	A (mm)	B (mm)	DIMENSIONS REFERENCES
	0,82	0,82	001
	1,60	1,10	002
	2,41	1,57	003
	3,00	1,90	004
	3,18	1,57	005
	3,96	1,57	006
	6,35	1,57	007
	12,70	1,90	008
	12,70	3,18	009
	12,70	4,78	010
	19,00	1,57	011
	22,35	1,57	012
	25,40	6,35	013
30,00	1,57	014	

<b>TYPE U</b> 	A (mm)	B (mm)	C (mm)	D (mm)	DIMENSIONS REFERENCES
	2,54	2,54	0,86	0,84	001
	3,20	2,80	0,66	1,27	002
	3,20	5,71	0,51	1,90	003
	3,96	3,96	1,57	1,20	004
	4,45	3,96	1,20	1,20	005
	4,45	3,96	1,20	1,90	006
	8,30	5,97	1,57	2,92	007

<b>TYPE P</b> 	A (mm)	B (mm)	C (mm)	D (mm)	DIMENSIONS REFERENCES
	5,10	2,00	6,98	1,57	001
	5,10	2,00	16,51	1,57	002
	6,35	3,18	6,35	1,57	003
	6,35	3,18	9,53	1,57	004
	6,35	3,81	9,53	1,57	005
	6,35	3,18	15,87	1,57	006
	7,92	4,75	14,30	1,57	007
	9,14	6,48	10,80	1,78	008
	6,35	3,18	15,87	1,57	009

# AM SERIES

## ALL-METAL WIRE MESH GASKETS



### DESCRIPTION

WIRE SHIELDING MESH UTILIZES SINGLE-STRAND WIRE, AVAILABLE IN A WIDE RANGE OF METALS, KNITTED AND FORMED INTO PRE-SPECIFIED CROSS SECTIONS. AN ECONOMICAL AND RELIABLE GASKET IS SO USED IN A VARIETY OF SHIELDING APPLICATIONS. CROSS SECTIONS CAN BE ROUND, RECTANGULAR, ROUND WITH A FIN AND DOUBLE ROUND WITH A FIN INTERCONNECTOR.

### APPLICATION

WIRE MESH GASKETS ALLOW HIGH PERFORMANCE IN THOSE APPLICATIONS WHERE HIGH SHIELDING EFFECTIVENESS IS REQUIRED, AN ENVIRONMENTAL SEAL IS NOT NEEDED, AND THE GASKET MUST CONFORM TO AN IRREGULAR SURFACE.

PANEL GASKETS, CABLE WRAPPING, DOOR GASKETS, AND STATIC DISCHARGE, ARE JUST A FEW OF THE COMMON APPLICATIONS.

### AVAILABILITY

THESE GASKETS ARE SUPPLIED IN CONTINUOUS LENGTHS.

EXECUTED MANUFACTURING:

-CUT MADE TO MEASURE

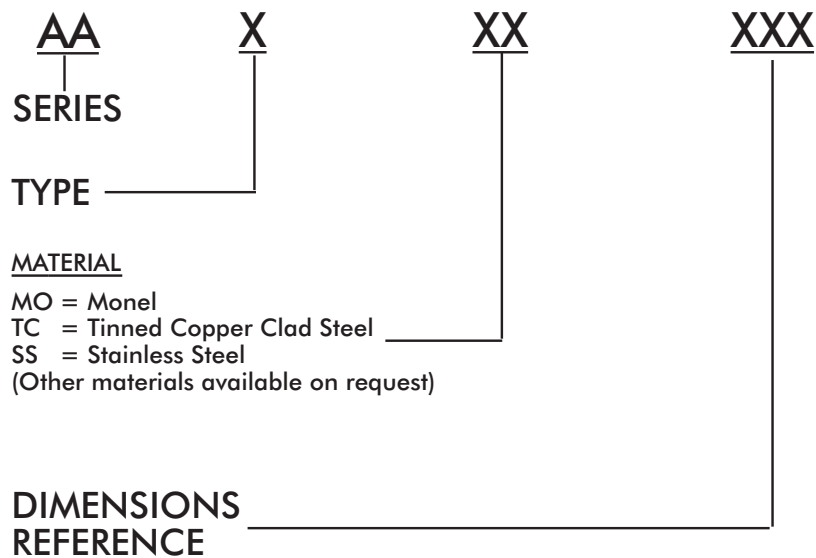
### TECHNICAL DATA

MATERIAL	MO monel	TC Tinned copper clad steel	SS Stainless Steel
Electrical Shielding Effectiveness			
1 MHz	125 db	125 db	125 db
10 MHz	110 db	110 db	110 db
500 MHz	98 db	98 db	98 db
1 GHz	85 db	85 db	85 db

# AM SERIES

## ALL-METAL WIRE MESH GASKETS

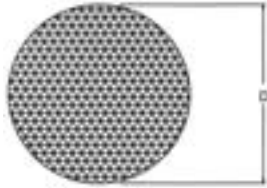
### PART NUMBER GUIDE



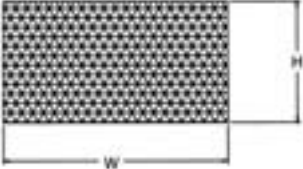
**EXAMPLE:** AMRSS005 = Stainless Steel mesh round section diameter 6,40 mm  
AMQMO009 = Monel mesh rectangular section 6,40 x 12,70 mm

# AM SERIES

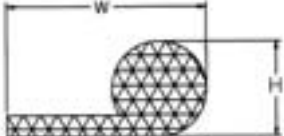
## ALL-METAL WIRE MESH GASKETS

<b>TYPE R</b> 	D (mm)	DIMENSIONS REFERENCES
	160	001
	2,40	002
	3,20	003
	4,80	004
	6,40	005
	9,50	006
	12,70	007

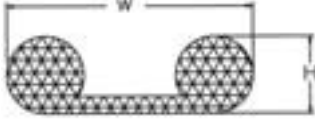
\*Other dimensions available on request

<b>TYPE Q</b> 	H (mm)	W (mm)	DIMENSIONS REFERENCES
	2,40	2,40	001
	2,40	3,20	002
	2,40	4,80	003
	3,20	3,20	004
	3,20	6,40	005
	4,80	4,80	006
	4,80	12,70	007
	6,40	6,40	008
	6,40	12,70	009
	9,50	12,70	010

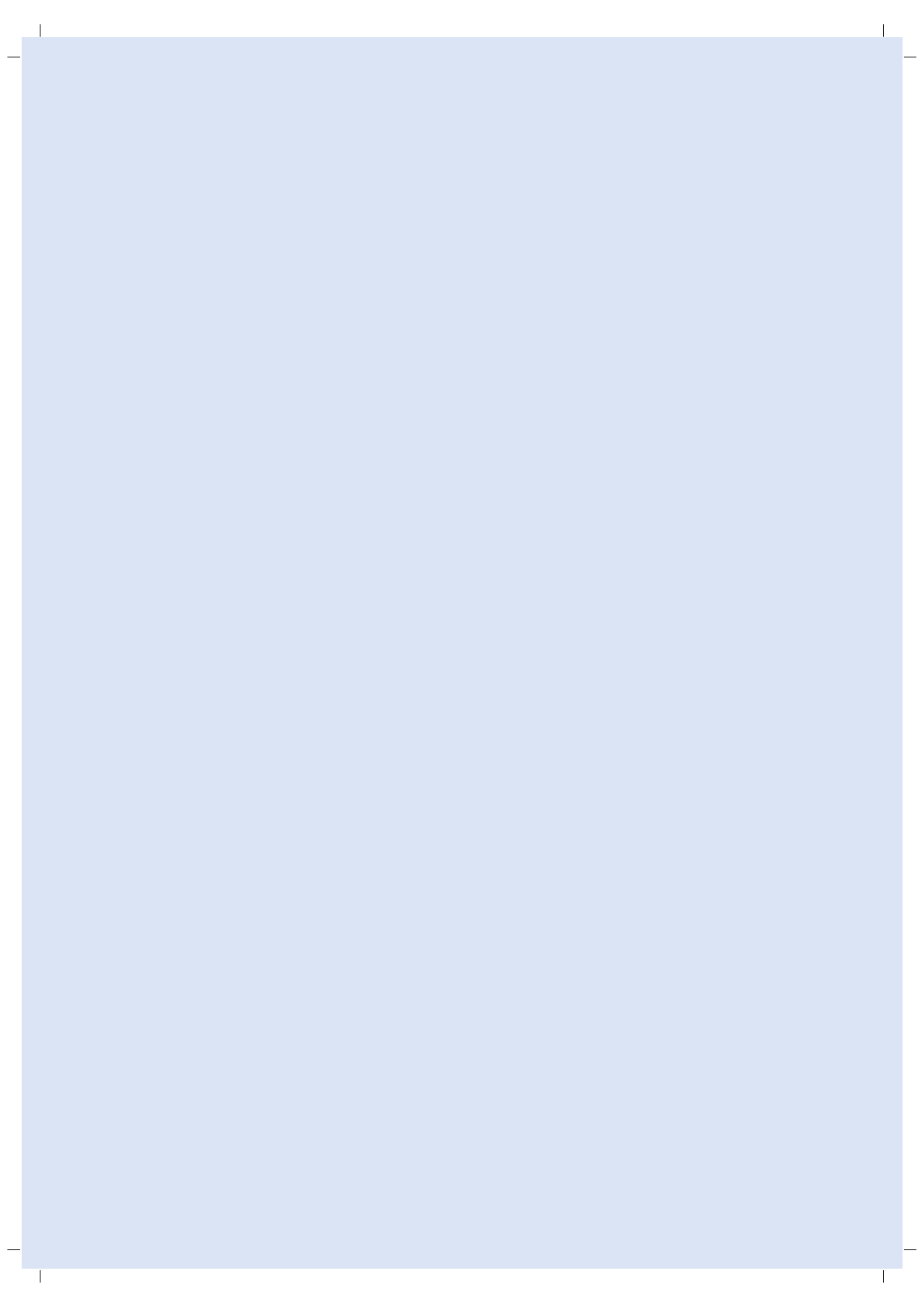
\*Other dimensions available on request

<b>TYPE P</b> 	H (mm)	W (mm)	DIMENSIONS REFERENCES
	3,20	9,50	001
	3,20	12,70	002
	4,80	15,90	003
	4,80	25,40	004
	9,50	32,00	005

\*Other dimensions available on request

<b>TYPE B</b> 	H (mm)	W (mm)	DIMENSIONS REFERENCES
	3,20	9,50	001
	3,20	12,70	002
	3,20	19,00	003
	4,80	15,90	004
	4,80	25,40	005
	9,50	32,00	006

\*Other dimensions available on request





# EM SERIES

## WIRE MESH OVER ELASTOMER



### DESCRIPTION

WIRE MESH OVER AN ELASTOMER IS A DOUBLE LAYER OF WIRE MESH KNITTED OVER A ROUND OR RECTANGULAR CORE OF ELASTOMER. THE MESH LAYERS PROVIDE EMI/RFI SHIELDING, WHILE THE ELASTOMER ACTS AS A DUST AND MOISTURE SEAL.

### APPLICATION

WIRE MESH OVER ELASTOMER GASKETS ARE USED WITH DOORS, CABINETS, AND WHERE SURFACES MAY BE UNEVEN AND LOW CLOSURE FORCES EXIST.

### AVAILABILITY

THESE GASKETS ARE SUPPLIED IN CONTINUOUS LENGTHS.

EXECUTED MANUFACTURING:

-CUT MADE TO MEASURE

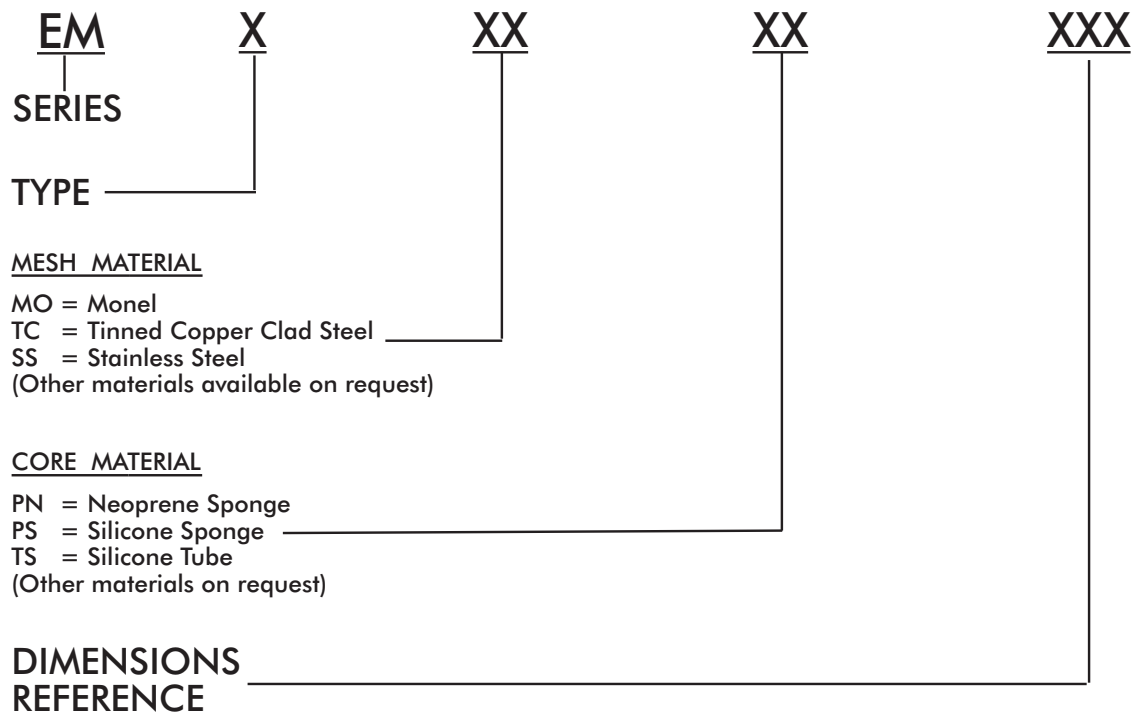
### TECHNICAL DATA

MATERIAL	MO monel	TC Tinned copper clad steel	SS Stainless Steel
Electrical Shielding Effectiveness			
1 MHz	125 db	125 db	120 db
10 MHz	105 db	105 db	100 db
500 MHz	92 db	92 db	89 db
1 GHz	70 db	70 db	67 db

# EM SERIES

## WIRE MESH OVER ELASTOMER

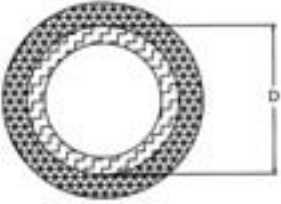
### PART NUMBER GUIDE



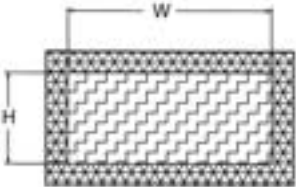
**EXAMPLE:** EMRMOTS001 = Monel mesh over silicone tube round section 1,60 mm  
EMQSSPS006 = Stainless Steel mesh over neoprene sponge rectangular section 4,80 x 4,80 mm

# EM SERIES

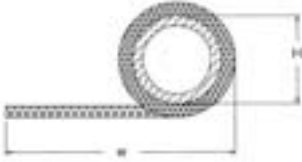
## WIRE MESH OVER ELASTOMER

<b>TYPE R</b> 	D (mm)	DIMENSIONS REFERENCES
	1,60	001
	2,40	002
	3,20	003
	4,80	004
	6,40	005
	9,50	006
	12,70	007

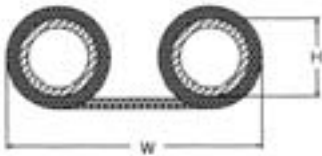
\*Other dimensions available on request

<b>TYPE Q</b> 	H (mm)	W (mm)	DIMENSIONS REFERENCES
	2,40	2,40	001
	2,40	3,20	002
	2,40	4,80	003
	3,20	3,20	004
	3,20	6,40	005
	4,80	4,80	006
	4,80	12,70	007
	6,40	6,40	008
	6,40	12,70	009
	9,50	12,70	010

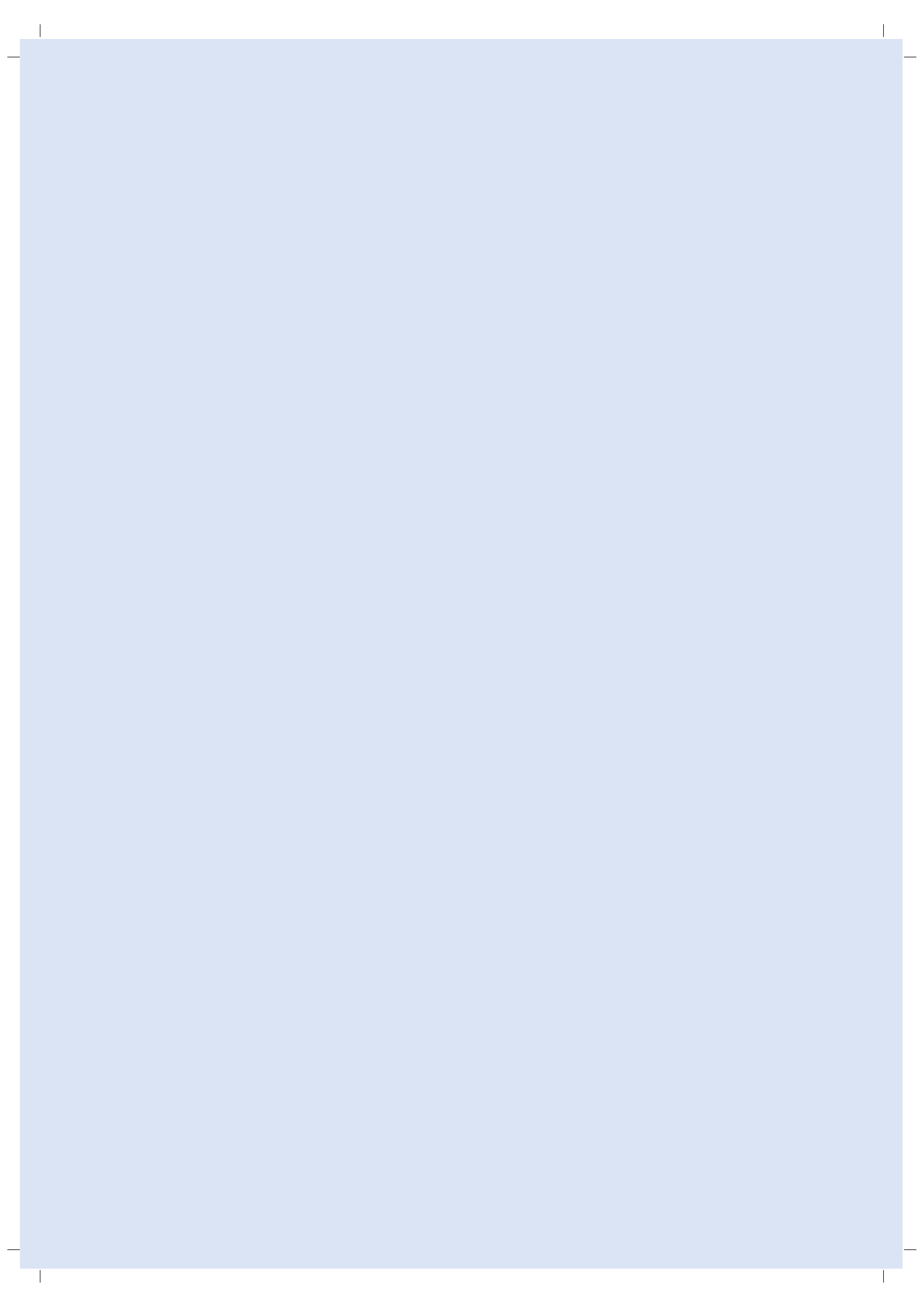
\*Other dimensions available on request

<b>TYPE P</b> 	H (mm)	W (mm)	DIMENSIONS REFERENCES
	3,20	9,50	001
	3,20	12,70	002
	4,80	15,90	003
	4,80	25,40	004
	9,50	32,00	005

\*Other dimensions available on request

<b>TYPE B</b> 	H (mm)	W (mm)	DIMENSIONS REFERENCES
	3,20	9,50	001
	3,20	12,70	002
	3,20	19,00	003
	4,80	15,90	004
	4,80	25,40	005
	9,50	32,00	006

\*Other dimensions available on request



# RS SERIES

## EXPANDED METAL/ELASTOMER COMBINATIONS



### DESCRIPTION

THESE GASKETS ARE A COMPOSITE OF METAL SHEETING IMPREGNATED WITH AN ELASTOMER TO OBTAIN A SHIELDING GASKET THAT CAN ALLOW GOOD, EMI/RFI SHIELDING AND ENVIRONMENTAL SEALING. THE ELECTRICAL CONTINUITY IS OBTAINED THANKS TO MANY METALLIC CONTACT POINTS THAT LEAKING OUT THE ELASTOMER.

### APPLICATION

IT IS PARTICULARLY USED TO OBTAIN FLAT SHIELDING GASKETS REQUIRED WHERE JOINT UNEVENNESS IS LESS THAN 1mm. A TYPICAL APPLICATION IS FOR FLAT GASKETS, CONNECTORS OR FOR WAVE GUIDE FLANGE.

### AVAILABILITY

THEY ARE SUPPLIED IN DIFFERENT ELASTOMER/METAL SHEETING COMBINATIONS IN DIFFERENT THICKNESS IN THE STANDARD LENGTH OF 15,2 MT.

EXECUTED MANUFACTURING:

- CUT MADE TO MEASURE
- DIE-CUTTING

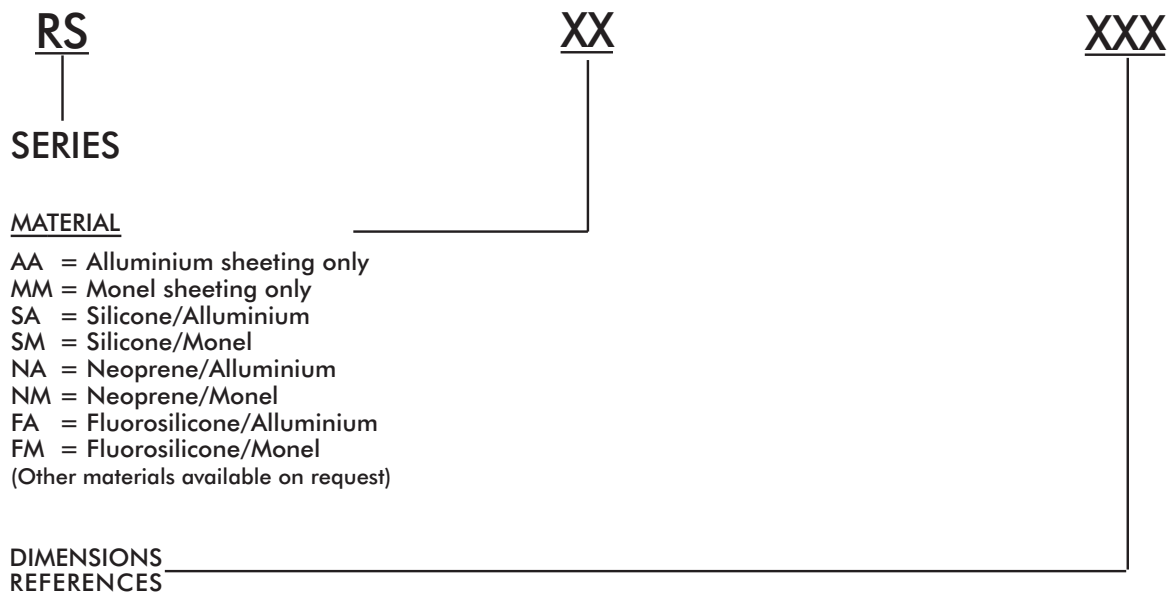
### TECNICAL DATA

MATERIAL	AA aluminium	MM monel	SA silicone aluminium	SM silicone monel	NA neoprene aluminium	NM neoprene monel	FA fluorosilicone aluminium	FM fluorosilicone monel
Shielding db	60 dB @ 200 KHz 90 dB @ 100 Mhz 70 dB @ 1 GHz							
Closing force (psi)	50 - 75							
Compression set @50 psi	1%							

# RS SERIES

## EXPANDED METAL/ELASTOMER COMBINATIONS

### PART NUMBER GUIDE



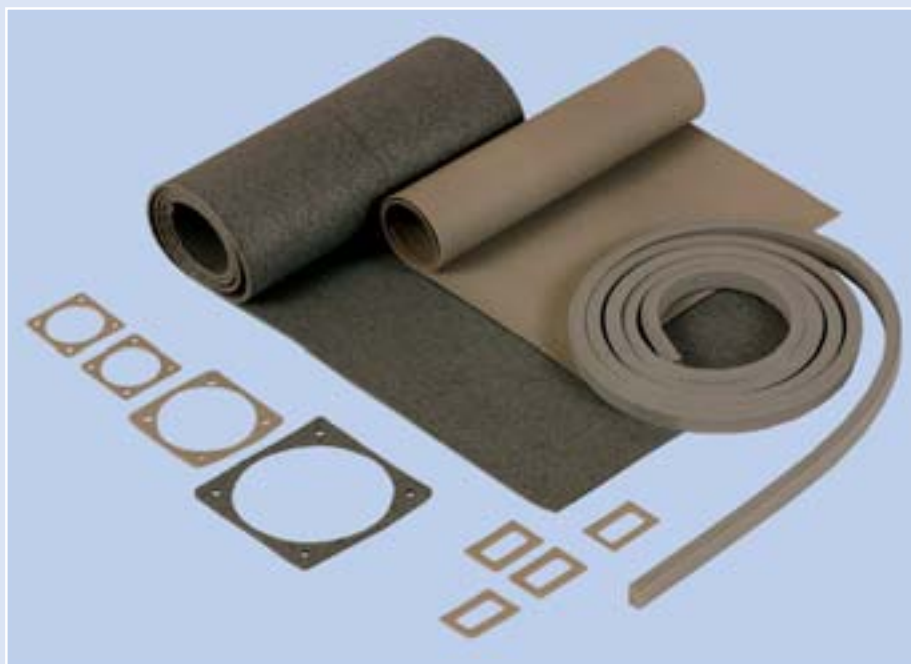
- AA = Alluminium sheeting only  
 MM = Monel sheeting only  
 SA = Silicone/Alluminium  
 SM = Silicone/Monel  
 NA = Neoprene/Alluminium  
 NM = Neoprene/Monel  
 FA = Fluorosilicone/Alluminium  
 FM = Fluorosilicone/Monel  
 (Other materials available on request)

**EXAMPLE:** RSMM003 = Monel sheeting only thickness 0,41 mm whidth 305 mm  
 RSM007 = Expanded monel in silicone tickness 0,76 mm whidth 203 mm

	THICKNESS (mm)	WIDTH (mm)	DIMENSIONS REFERENCES
STANDARD SHEET LENGTH: 15,2 mt.	0,41	203	001
	0,41	254	002
	0,41	305	003
	0,51	203	004
	0,51	254	005
	0,51	305	006
	0,76	203	007
	0,76	254	008
	0,76	305	009

# FV SERIES

## WIRE ORIENTED IN SILICONE



### DESCRIPTION

THE MATERIAL IS REALIZED FROM THE COMBINATION OF COMPACT OR EXPANDED SILICONE WITH METALLIC WIRES MADE OF ALUMINIUM OR MONEL.  
MANY METALLIC CONTACT POINT (AT ABOUT 100 POINTS/CM.) ALLOW AN EXCELLENT SHIELDING, WHILE THE SILICONE REALIZE A GOOD ENVIRONMENTAL SEALING.

### APPLICATION

THIS MATERIAL IS USED TO REALIZE SHIELDING GASKETS THAT CAN OFFER ALSO A GOOD ENVIRONMENTAL SEALING LEVEL.

THE COMPACT SILICONE, WITH SHORE HARDNESS AT 40, IS NOT GENERALLY SUITED FOR GASKETS ON PANELS OR OTHER APPLICATIONS WHERE THERE ARE FREQUENT OPENINGS DUE TO THE HIGH CLOSING FORCE. IT IS SUGGESTED FOR 15% COMPRESSION.

### SUPPLY

THE MATERIAL IS SUPPLIED IN SHEETS OR STRIPS WITH A STANDARD LENGTH OF 910mm.  
EXECUTED MANUFACTURING:

- CUT MADE TO MEASURE
- DIE-CUTTING

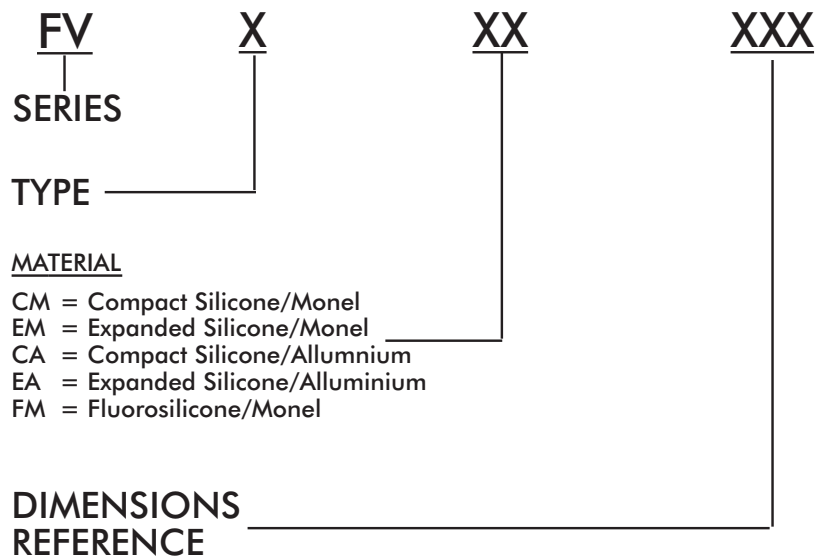
### TECHNICAL DATA

MATERIAL	CM Solid Silicone Monel	EM Solid Silicone Sponge	CA Solid Silicone Aluminium	EA Sponge Silicone Aluminium	FM Fluorosilicone Monel
Shielding db	70 dB @ 200 Khz 120 dB @ 100 Mhz 100 dB @ 1 GHz				
Flue/solvent resistant	NO	NO	NO	NO	YES
Compression set	25 %				
Temperature range (C°)	- 65 / + 200	- 65 / + 200	- 65 / + 200	- 65 / + 200	- 65 / + 200

# FV SERIES

## WIRE ORIENTED IN SILICONE

### PART NUMBER GUIDE



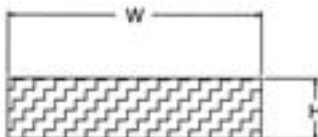
**EXAMPLE:** FVTCM011 = Completely conductive compact silicone/monel 1,40 mm width 152,40 mm  
FVPEA007 = Partially conductive expanded silicone/alluminium thickness 2,36 mm width 19,00 mm



# FV SERIES

## WIRE ORIENTED IN SILICONE

TYPE T		W (mm)	H (mm)	DIMENSIONS REFERENCES
		COMPLETLY CONDUCTIVE	76,2	0,81
	114,3	0,81	002	
	152,4	0,81	003	
STANDARD LENGTH: 910 mm	228,6	0,81	004	
	76,2	1,14	005	
	114,3	1,14	006	
	152,4	1,14	007	
	228,6	1,14	008	
	76,2	1,40	009	
	114,3	1,40	010	
	152,4	1,40	011	
	228,6	1,40	012	
	76,2	1,57	013	
	114,3	1,57	014	
	152,4	1,57	015	
	228,6	1,57	016	
	76,2	2,36	017	
	114,3	2,36	018	
	152,4	2,36	019	
	228,6	2,36	020	
	76,2	3,17	021	
	114,3	3,17	022	
	152,4	3,17	023	
	228,6	3,17	024	
		2,36	1,57	025
		3,97	1,57	026
		6,35	1,57	027
		12,7	1,57	028
		25,4	1,57	029
		2,36	2,36	030
		3,97	2,36	031
		6,35	2,36	032
		12,7	2,36	033
		25,4	2,36	034
		2,36	3,17	035
		3,97	3,17	036
		6,35	3,17	037
		12,7	3,17	038
		25,4	3,17	039
		2,36	4,78	040
		3,97	4,78	041
		6,35	4,78	042
		12,7	4,78	043
		25,4	4,78	044
		2,36	6,35	045
		3,97	6,35	046
		6,35	6,35	047
		12,7	6,35	048
		25,4	6,35	049

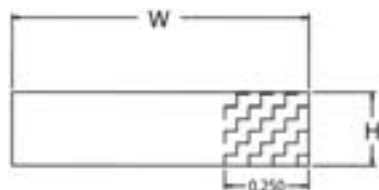


\*Other dimensions available on request

# FV SERIES

## WIRE ORIENTED IN SILICONE

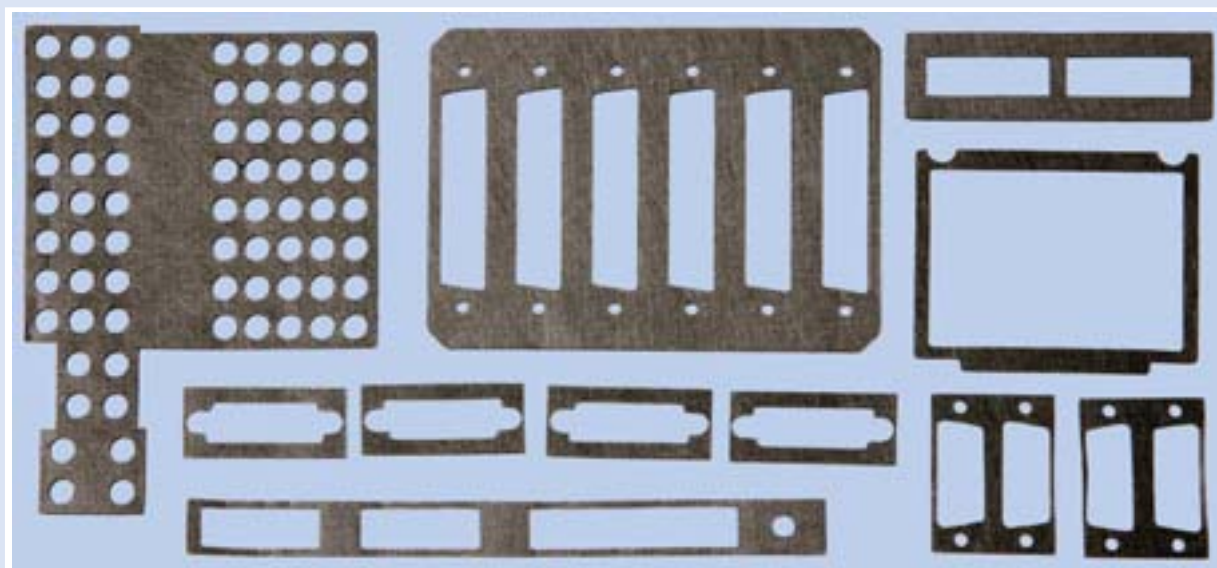
<b>TYPE P</b>	<b>W (mm)</b>	<b>H (mm)</b>	<b>DIMENSIONS REFERENCES</b>
<b>PARTIALLY CONDUCTIVE</b> <b>STANDARD LENGTH: 910 mm</b>	9,5	1,57	001
	12,7	1,57	002
	19,0	1,57	003
	25,4	1,57	004
	9,5	2,36	005
	12,7	2,36	006
	19,0	2,36	007
	25,4	2,36	008
	9,5	3,17	009
	12,7	3,17	010
	19,0	3,17	011
	25,4	3,17	012
	9,5	4,78	013
	12,7	4,78	014
	19,0	4,78	015
	25,4	4,78	016
	9,5	6,35	017
	12,7	6,35	018
	19,0	6,35	019
	25,4	6,35	020
	9,5	9,5	021
	12,7	9,5	022
	19,0	9,5	023
	25,4	9,5	024



\*Other dimensions available on request

# ZFM SERIES

## CONDUCTIVE XYZ FOAM



### GENERAL INFORMATION

ZFM SERIES IS COMPOSED OF A CONDUCTIVE FOAM (Ag PU FOAM) WITH CONDUCTIVE ADHESIVE AND NON-WOVEN Ni/Cu SHEET. THIS MATERIAL IS CONDUCTIVE ON THREE AXIS XYZ . SO IT IS IDEAL FOR INPUT/OUTPUT (I/O) SHIELDING PANELS.

### TECHNICAL DATA

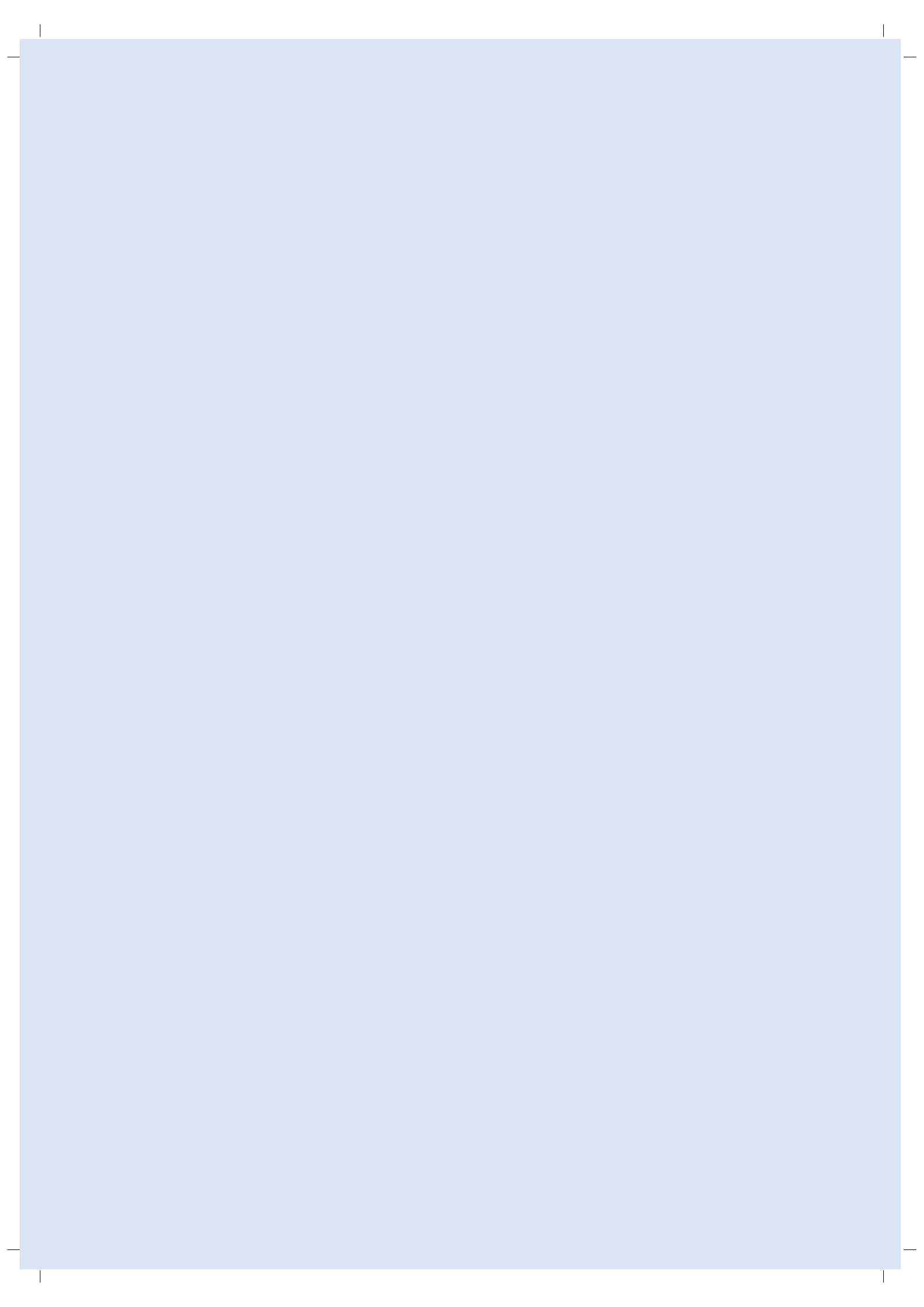
COLOR	GRAY
MAX TEMPERATURE C°	-30 +150
ELETRIC RESISTANCE	0,03 Ω
SHIELDING EFFECTIVENESS	90 dB

THICKNESS	PART NO.
1	ZFMST100
1,5	ZFMST150
2	ZFMST200
3	ZFMST300

STANDARD SHEET: SIZE 470X500 mm

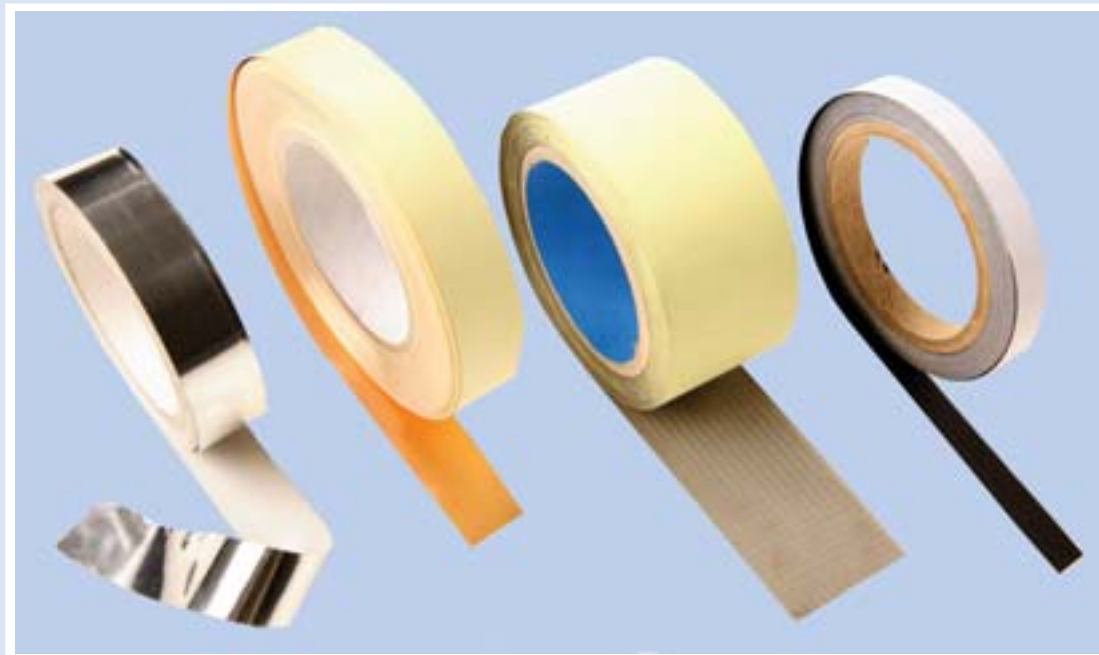
AVAILABLE ON REQUEST:  
-DIFFERENT SIZE AND THICKNESS  
-WITH OUT ADHESIVE

EXECUTED MANUFACTURING:  
CUT MADE ACCORDING TO CUSTOMER'S REQUIREMENTS



# NC SERIES

## CONDUCTIVE TAPE



### GENERAL INFORMATION

NC CONDUCTIVE TAPES ARE REALIZED IN ALUMINIUM, COPPER AND CONDUCTIVE FABRIC WITH CONDUCTIVE ADHESIVE FOR THE FOLLOWING APPLICATIONS.

- SHIELDING FOR SIGNAL CABLE
- EMI SHIELD ROOM
- ADHESIVE GROUNDING OF OBJECTIVE BODY FOAM
- ADHESIVE GROUNDING FOR ANTISTATIC BRUSH
- GROUNDING FOR VARIOUS ELECTRONIC PRODUCTS.

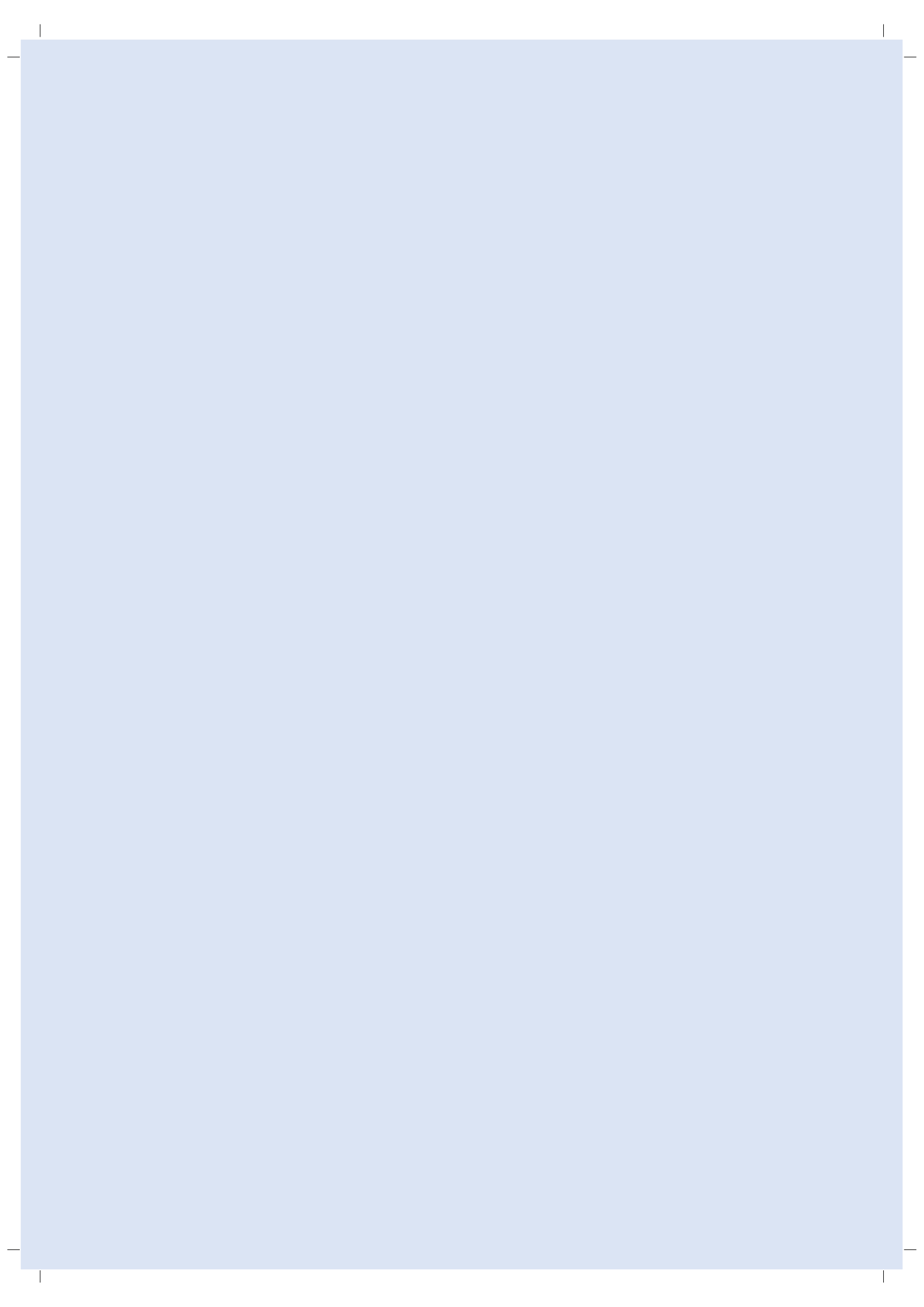
### TECHNICAL DATA

MATERIAL COLOUR	COPPER NATURAL	ALUMINIUM NATURAL	NICKEL/COPPER FABRIC BLACK
THICKNESS (mm.)	0,08	0,08	0,12
ELECTRIC RESISTANCE	0,03 $\Omega$	0,06 $\Omega$	0,06 $\Omega$
MAX TEMPERATURE C°	-30 +150	-30 +150	-30 +150

MATERIAL	WIDTH(mm)	PART. NO
NICKEL/COPPER FABBRIC	12,7 25	NCTR127 NCTR250
COPPER	12,7 25	NCMC127 NCMC250
ALUMINIUM	12,7 25	NCMA127 NCMA250

AVAILABLE ON REQUEST:  
- FABRIC TYPE IN BRIGHT GRAY  
- BOTH SIDE CONDUCTIVE ADESIVE  
- OTHER WIDTH

STANDARD LENGHT: 50 MT



# MT SERIES

## MESH TAPE

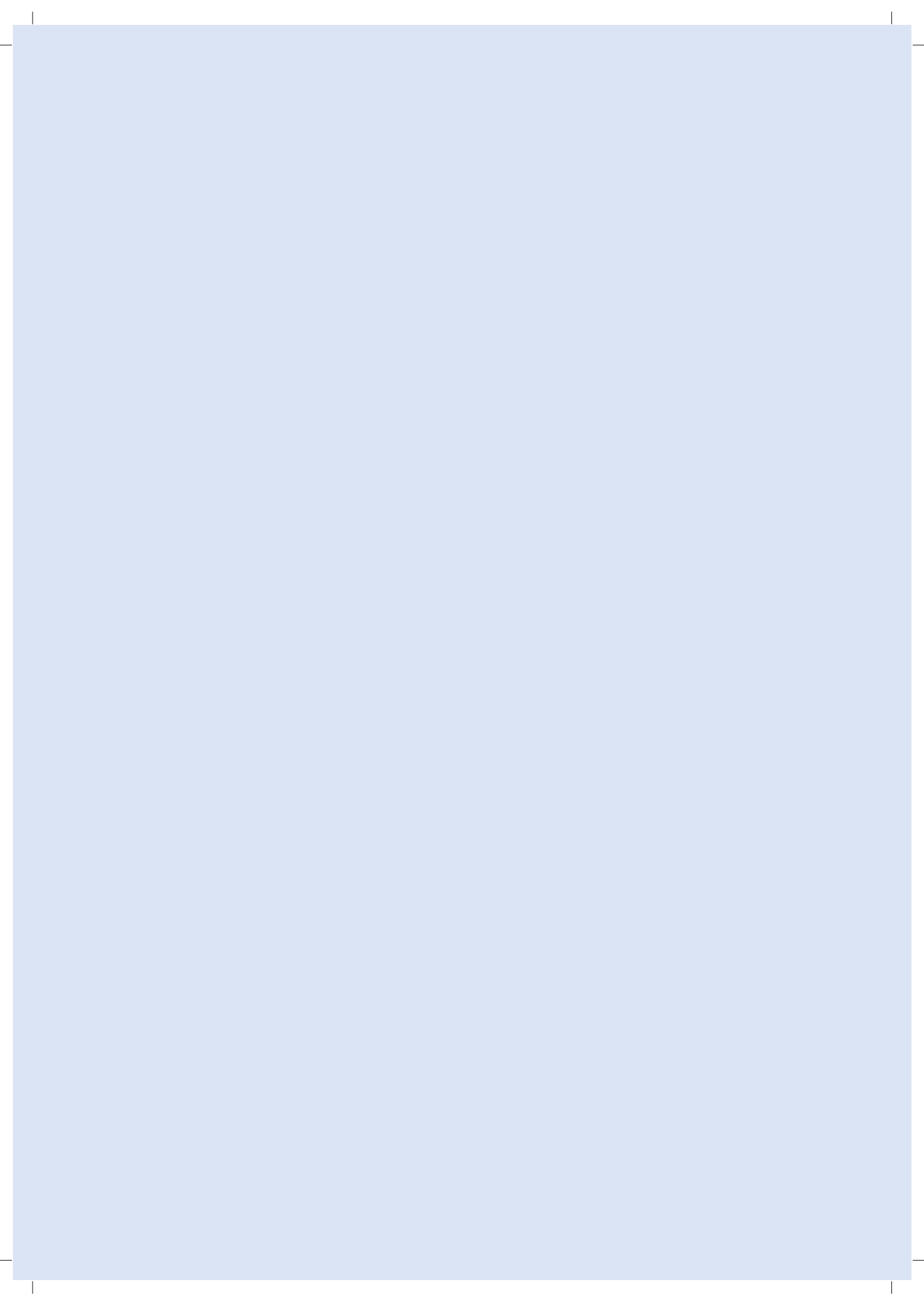


### GENERAL INFORMATION

MT TAPE IS SPECIALLY DESIGNED FOR CABLE ASSEMBLIES SHIELDING

MADE IN MONEL, TINNED COPPER CLAD STEEL AND IN OTHER MATERIALS, MT TAPE PROVIDES EXCELLENT SHIELDING IN MAGNETIC AND ELECTRIC FIELDS.

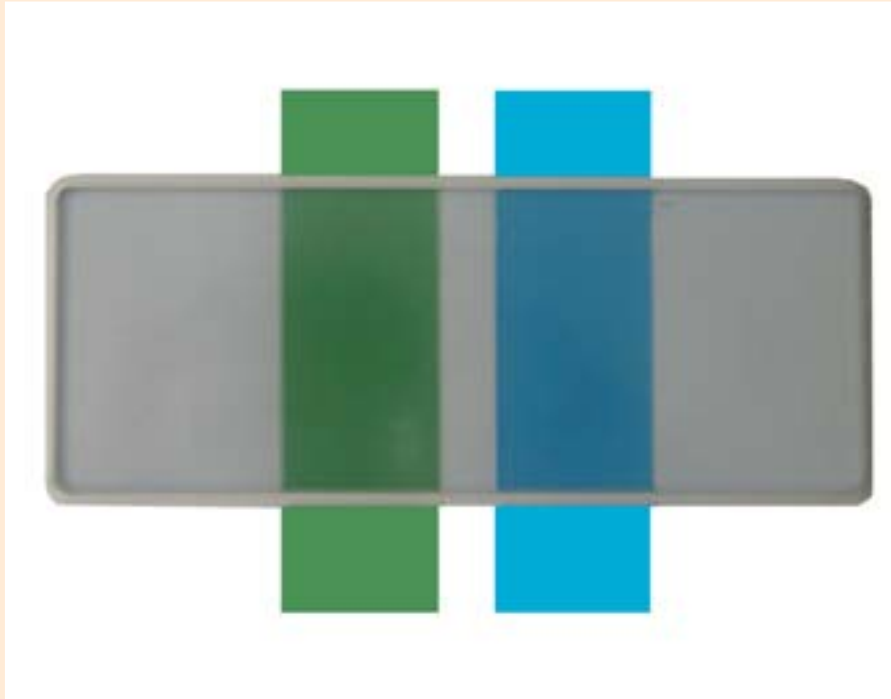
MATERIAL	WIDTH(mm)	PART. NO
MONEL	25 50	MT025MO MT050MO
TINNED COPPER CLAD STEEL	25 50	MT025TC MT050TC
OTHER MATERIALS AND WIDTH AVAILABLE ON REQUEST		





# VS SERIES

## EMC FILTERS



### GENERAL INFORMATION

VS SERIES IS A COMPLETE RANGE OF OPTICAL FILTERS WITH AN EMBEDDED METAL MESH FOR THE SUPPRESSION OF ELECTROMAGNETIC FIELDS.

### THE PROPERTIES OF EMC FILTER

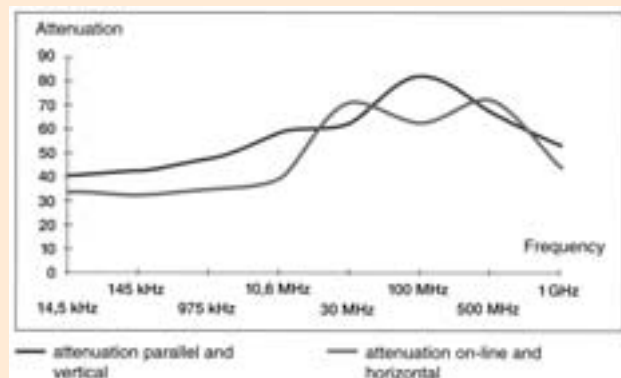
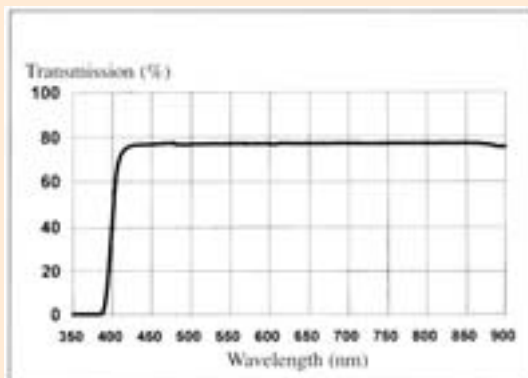
A TECHNIQUE HAS BEEN DEVELOPED IN ORDER TO MAKE POSSIBLE TO EMBED THE METAL MESH AS AN INTEGRAL PART OF THE ACRYLIC FILTER SO THAT UNNECESSARY REFRACTION SURFACES ARE NOT CREATED. THE EMBEDDED MESH IS TYPICALLY RUSTPROOF, BUT OTHER TYPES OF MESH CAN BE SUPPLIED FOR OTHER APPLICATIONS.

THE EMC FILTERS CAN BE MOUNTED AT ANY ANGLE BETWEEN 0° AND 45°.

### TRANSMISSION AND SHIELDING

ALL EMC SHIELDING IS A COMPROMISE BETWEEN THE SHIELDING EFFECT AND THE READABILITY. THE MOULDING TECHNIQUE RESULTS IN A LIGHT TRANSMITTANCE OF 78% FOR THE EMC FILTER IN RELATION TO TRANSPARENT ACRYLIC.

THE EMBEDDING OF THE METAL MESH IN ACRYLIC FILTER RANGE HAS MINIMAL SIGNIFICANCE AS FAR AS THE SPECTRAL CHARACTERISTIC OF THE EMC FILTER IS CONCERNED. THE STEEL MESH IS NOT REFLECTIVE AND WHEN MIXING THE COLOUR PRIOR TO MOULDING THE ACRYLIC SHEETS, ADJUSTMENTS ARE MADE TO COMPENSATE FOR THE TRANSMISSION ATTENUATION CAUSED BY THE MESH.



# VS SERIES

## EMC FILTERS

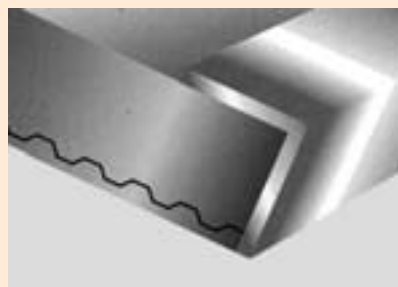
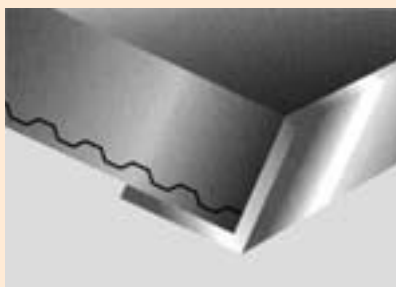
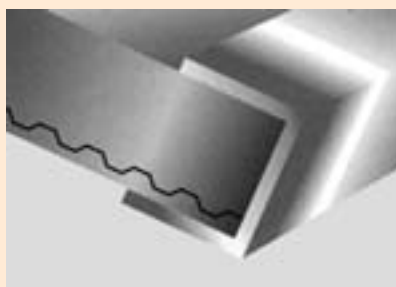
### CONTACT WITH THE CABINET

IN ORDER FOR THE FILTER TO BE ABLE TO MEET THE SPECIFIED DATA, IT IS VITAL THAT ELECTRICAL CONTACT IS MADE BETWEEN THE ENTIRE PERIMETER OF THE MESH AND THE CABINET OF THE APPARATUS. THIS CONTACT CAN BE ESTABLISHED BY APPLYING SILVER PAINT TO THE EDGE OF THE FILTER.

THE EMC FILTER SHOULD THEN BE MOUNTED IN THE PANEL WITH A CONDUCTING GASKET OR CONDUCTING GLUE.

### FURTHER REFINEMENT

THE EMC FILTERS CAN BE SUPPLIED WITH MAT-FINISH SURFACE TREATMENT, WHICH PREVENTS DISTRACTING REFLECTIONS FROM THE SURROUNDINGS WITHOUT REDUCING THE QUALITY OF THE SIGNAL. IT IS POSSIBLE TO HAVE THE FILTERS MACHINED, FOR INSTANCE, USING LASER CUTTING AND MILLING TECHNIQUES. THE FILTERS CAN ALSO BE SUPPLIED WITH SILK SCREEN PRINTING.



### TECHNICAL DATA

Light transmittance approx. 78% compared to transparent acrylic

Thickness: 1.5, 2.5, 3 and 4 mm

Supplied in approx. 40 different colours

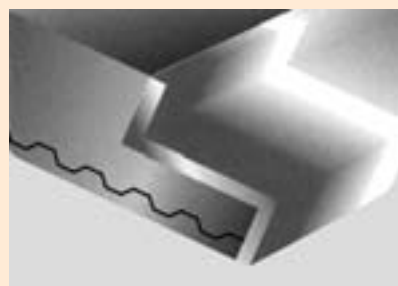
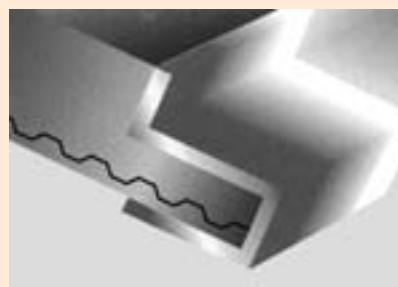
Mesh: Bright (Non-standard) or blackened Wire diameter: 0.025 mm, 100 OPI. The mesh can be angled between 0° - 45°

Flexible, conductive silver or nickel edge

Standard operation temperatures between -40° to 70° C

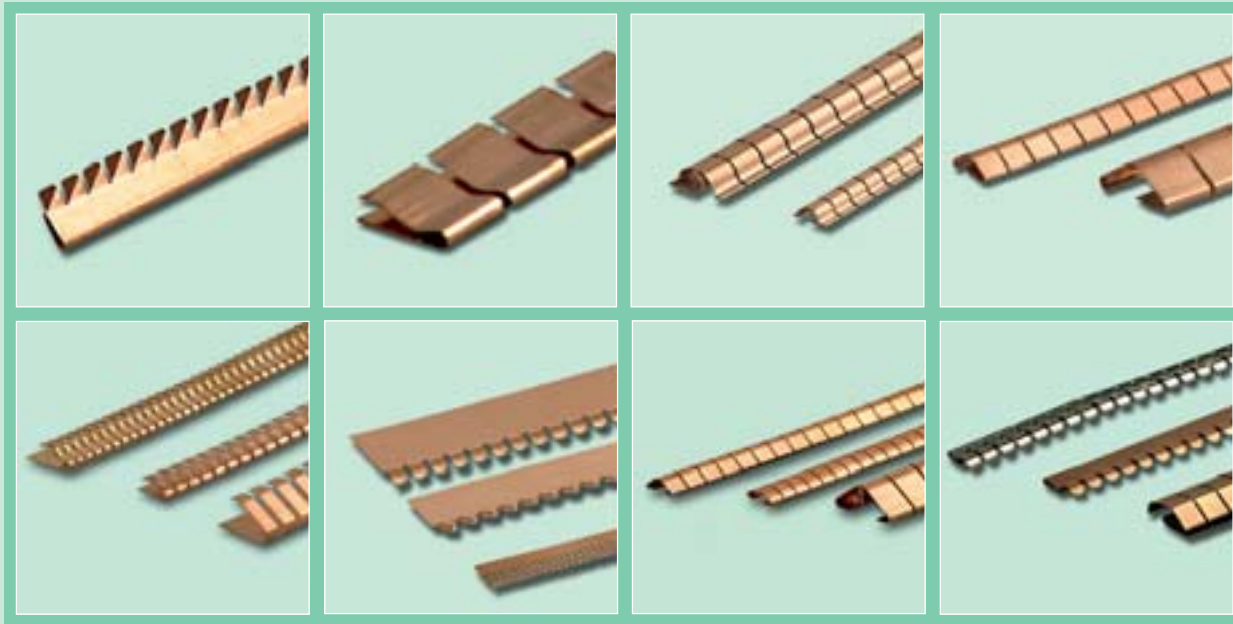
Dimensions up to 1500 x 1000 mm

Non-standard mesh types can be embedded upon request



# NF SERIES

## FINGERS GASKETS



### DESCRIPTION

NS SERIES FINGERS GASKETS ARE MADE OF COPPER BERYLLIUM AND TREADED TO PRODUCE HIGH ELASTICITY CONTACTS RELIABLE UNDER LIGHT PRESSURE.

### APPLICATION

HAS A VARIETY OF USES ACCORDING TO THE TYPE OF PART TO WHICH IT IS APPLIED:

- EARTHING
- HYPERFREQUENCY SHIELDING GASKETS FOR ENCLOSURE, METAL CABINETS AND PANELS
- MAKING SLIDING CONTACT RING GASKETS, ETC.

### AVAILABILITY

THEY ARE SUPPLIED IN STRAIGHT STRIPS, ROLLS AND SEGMENTS.

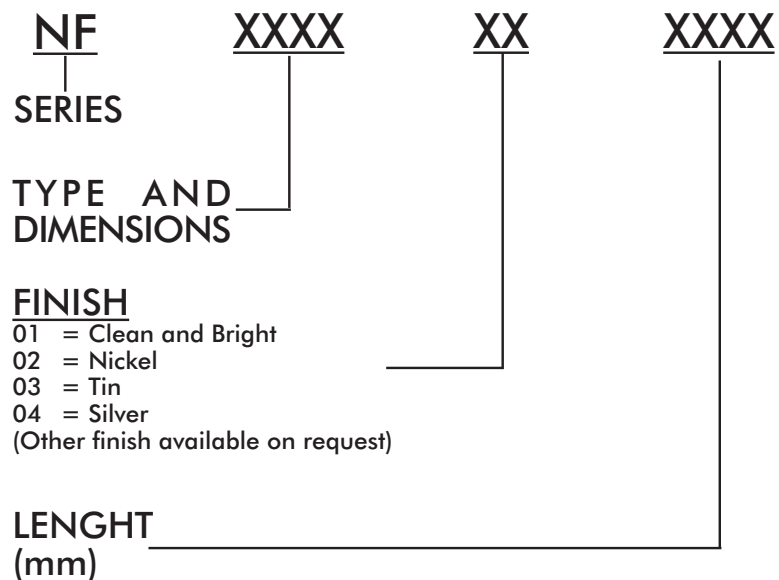
### SHIELDING EFFECTIVENESS

THE FINGERS GASKETS ARE VERY RESILIENT AND PROVIDE EXCELLENT ATTENUATION. 110 dB UNDER COMPRESSION OF 25% OF THEIR HEIGHT.

# NF SERIES

## FINGERS GASKETS

### PART NUMBER GUIDE

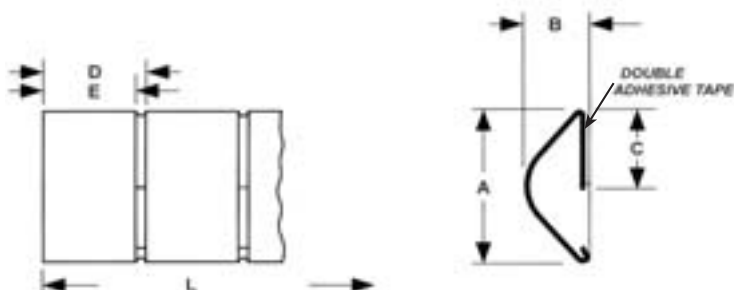


**EXAMPLE:** NFG001-01-0610 = FINGER GASKET TYPE G001 CLEAN AND BRIGHT FINISH L= 610 mm  
NFA002-02-0047 = FINGER GASKET TYPE A002 NICKEL FINISH L= 47 mm

# NF SERIES

## FINGERS GASKETS

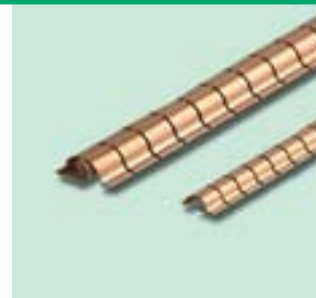
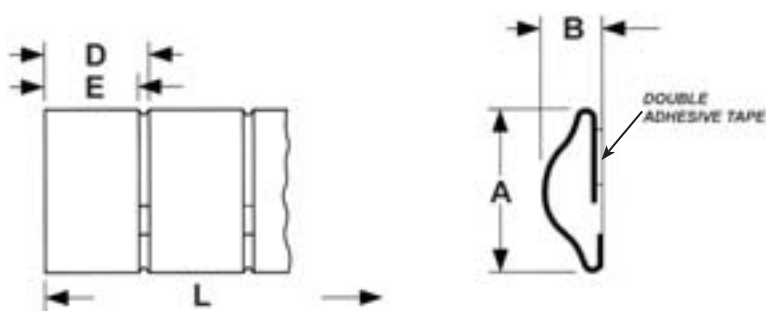
### S TYPE



PART NUMBER	A	B	C	D	E	L
NFS001-XX-XXXX	7,1	2,8	4,6	4,75	4,29	610
NFS002-XX-XXXX	8,1	2,8	5,3	4,75	4,29	457
NFS003-XX-XXXX	9,4	3,3	5,3	6,35	5,72	406
NFS004-XX-XXXX	15,2	5,6	7,1	9,52	8,71	610
NFS005-XX-XXXX	20,3	8,1	11,2	9,52	8,71	610

unit: mm.

### M TYPE



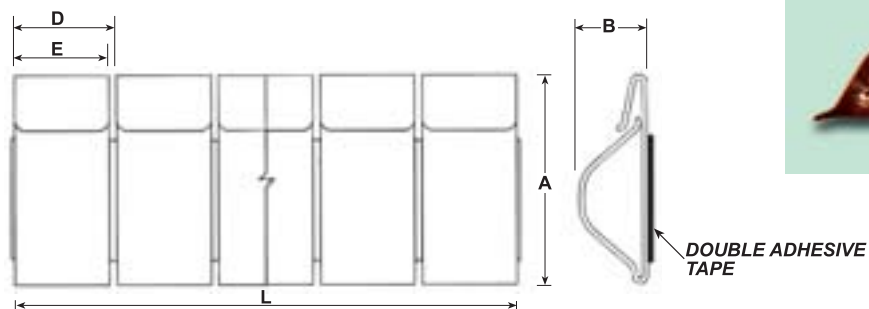
PART NUMBER	A	B	D	E	L
NFM001-XX-XXXX	8,1	2,5	3,96	3,51	406
NFM002-XX-XXXX	9,4	3,3	6,35	5,72	406
NFM003-XX-XXXX	15,2	5,6	9,52	8,71	457

unit: mm.

# NF SERIES

## FINGERS GASKETS

### C TYPE



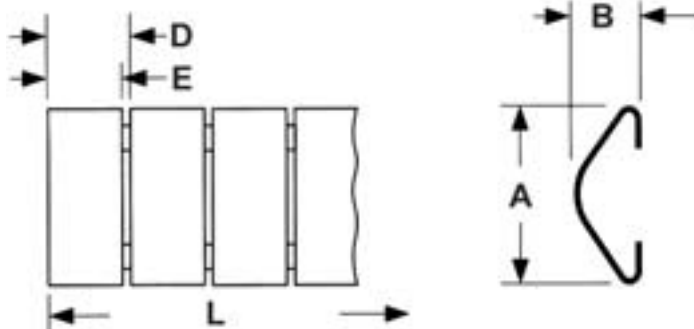
PART NUMBER	A	B	D	E	L
NFC001-XX-XXXX	19,3	5,8	9,52	8,71	610
NFC002-XX-XXXX	13,0	3,8	6,35	5,79	406
NFC003-XX-XXXX	9,7	3,0	4,78	4,32	406
NFC004-XX-XXXX	6,4	2,3	4,78	4,32	406

unit: mm.

# NF SERIES

## FINGERS GASKETS

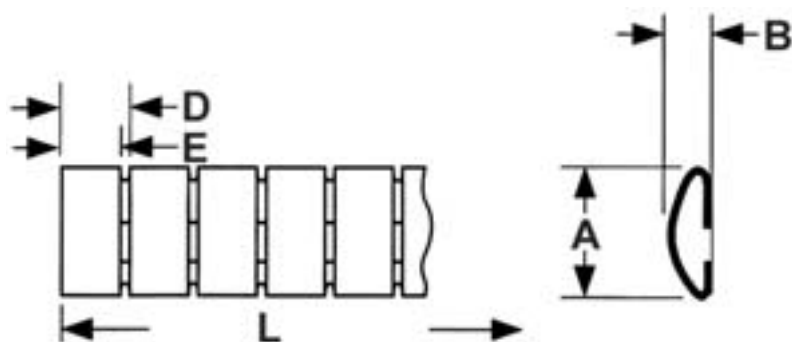
### A TYPE



PART NUMBER	A	B	D	E	L
NFA001-XX-XXX	8,1	2,8	4,75	4,29	406
NFA002-XX-XXXX	9,4	3,3	6,35	5,72	457
NFA003-XX-XXXX	15,2	5,6	9,52	8,71	400
NFA004-XX-XXXX	20,3	8,1	9,52	8,71	400

unit: mm.

### A TYPE

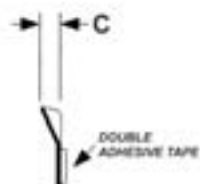
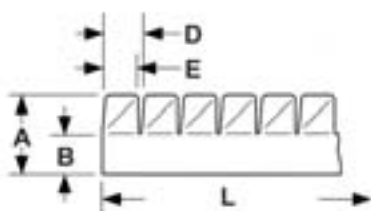


PART NUMBER	A	B	D	E	L
NFA005-XX-XXXX	8,9	2,8	4,75	4,29	541

unit: mm.

# NF SERIES FINGERS GASKETS

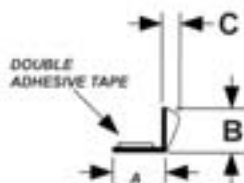
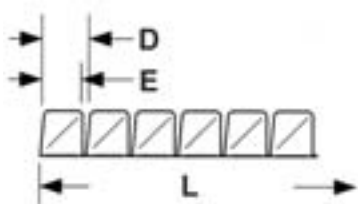
## G TYPE



PART NUMBER	A	B	C	D	E	L
NFG001-XX-XXXX	5,8	3,6	0,8	2,41	2,03	610
NFG002-XX-XXXX	8,6	4,6	1,8	4,19	3,81	610

unit: mm.

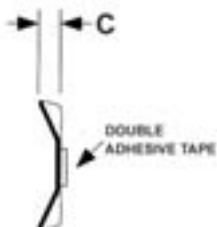
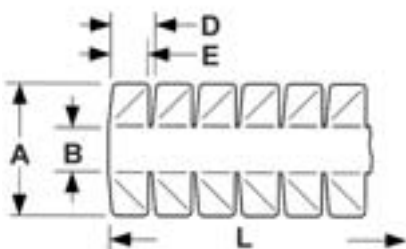
## G TYPE



PART NUMBER	A	B	C	D	E	L
NFG003-XX-XXXX	3,6	2,3	0,8	2,41	2,03	610
NFG004-XX-XXXX	5,1	3,3	1,8	4,19	3,81	610

unit: mm.

## G TYPE



PART NUMBER	A	B	C	D	E	L
NFG005-XX-XXXX	12,7	4,8	1,8	4,19	3,81	610

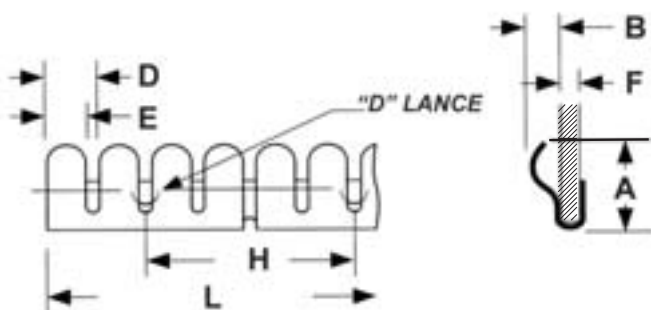
unit: mm.



# NF SERIES

## FINGERS GASKETS

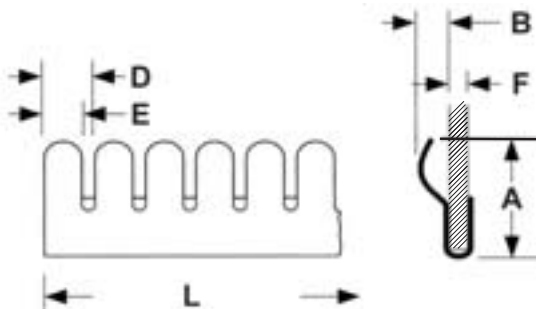
### F TYPE



PART NUMBER	A	B	D	E	F	H	L
NFF001-XX-XXXX	7,9	2,5	4,62	3,43	1,5	18,5	406

unit: mm.

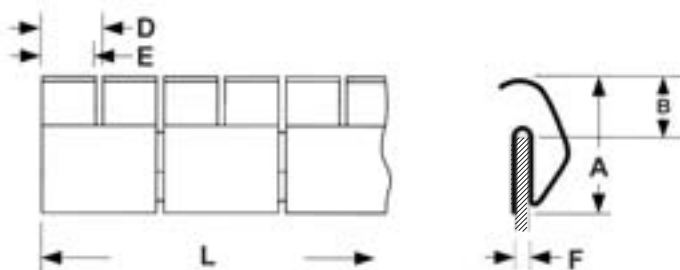
### F TYPE



PART NUMBER	A	B	D	E	F	L
NFF002-XX-XXXX	10,7	3,0	4,75	3,56	1,0	406

unit: mm. "D" Lance optional

### F TYPE



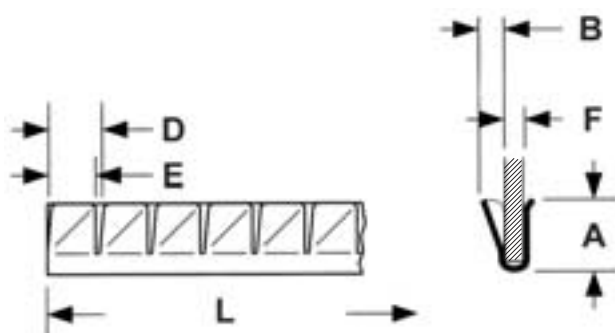
PART NUMBER	A	B	D	E	F	L
NFF003-XX-XXXX	14,0	6,1	6,35	5,59	1,5	406

unit: mm. "D" Lance optional

# NF SERIES

## FINGERS GASKETS

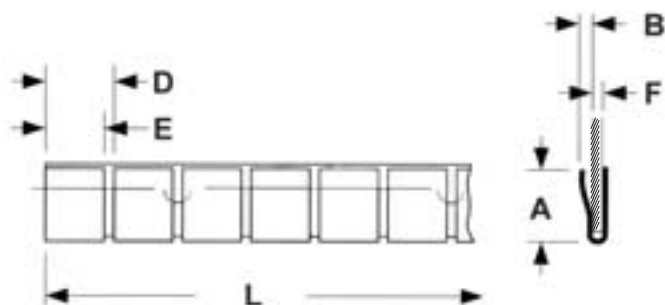
### H TYPE



PART NUMBER	A	B	D	E	F	L
NFH001-XX-XXXX	9,7	1,8	4,19	3,81	1,5	610
NFH002-XX-XXXX	5,6	1,8	4,19	3,81	1,5	457
NFH003-XX-XXXX	5,8	0,8	2,41	2,03	1,5	457
NFH004-XX-XXXX	4,1	0,8	2,41	2,03	1,5	457

"D" Lance optional  
"D" Lance optional  
unit: mm.

### P TYPE

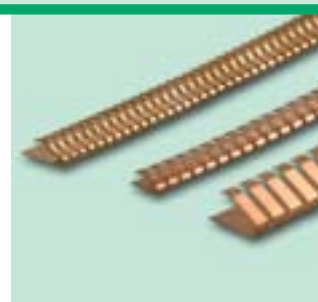
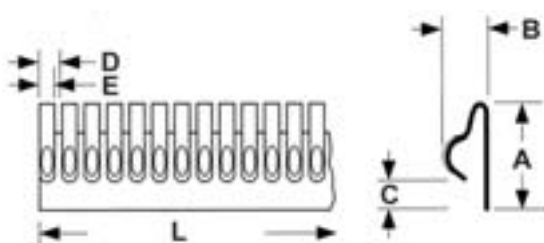


PART NUMBER	A	B	D	E	F	L
NFP001-XX-XXXX	6,9	1,5	6,35	5,59	0,75 / 1,0	406

"D" Lance optional  
unit: mm.

# NF SERIES FINGERS GASKETS

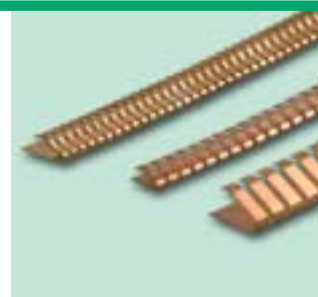
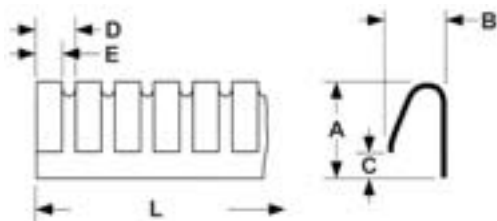
## R TYPE



PART NUMBER	A	B	C	D	E	L
NFR001-XX-XXXX	4,8	2,3	0,8	1,52	1,02	610
NFR002-XX-XXXX	6,6	2,8	0,8	1,91	1,27	457
NFR003-XX-XXXX	11,2	4,1	3,0	2,36	1,58	610

unit: mm.

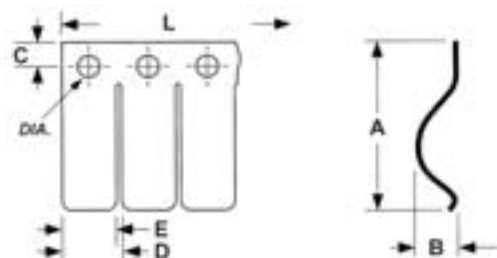
## R TYPE



PART NUMBER	A	B	C	D	E	L
NFR004-XX-XXXX	3,3	1,8	0,8	1,52	1,02	610
NFR005-XX-XXXX	7,1	3,3	0,8	3,40	2,31	406
NFR006-XX-XXXX	7,1	5,1	2,3	3,40	2,31	610
NFR007-XX-XXXX	12,2	7,1	3,3	4,75	3,18	610

Unit: mm.

## E TYPE



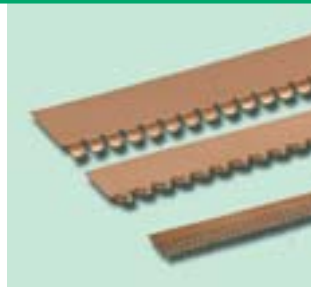
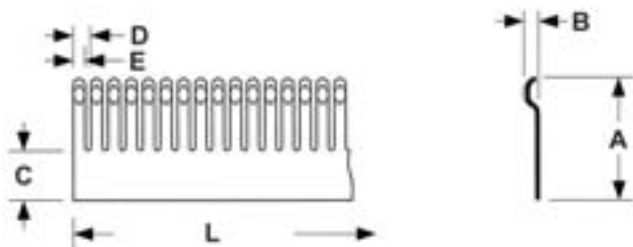
PART NUMBER	A	B	C	D	E	L
NFE001-XX-XXXX	27,7	6,6	4,1	9,52	8,48	
NFE002-XX-XXXX	42,4	10,4	4,8	12,70	11,68	

Unit: mm.

# NF SERIES

## FINGERS GASKETS

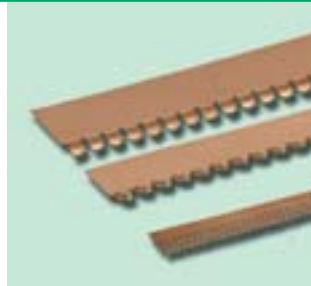
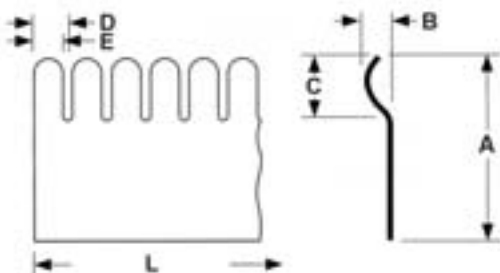
### T TYPE



PART NUMBER	A	B	C	D	E	L
NFT001-XX-XXXX	8,6	1,0	3,0	1,52	0,28	610
NFT002-XX-XXXX	13,5	1,3	5,6	1,91	1,27	610

Unit: mm.

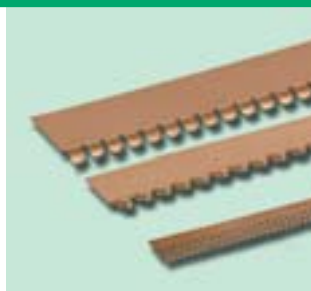
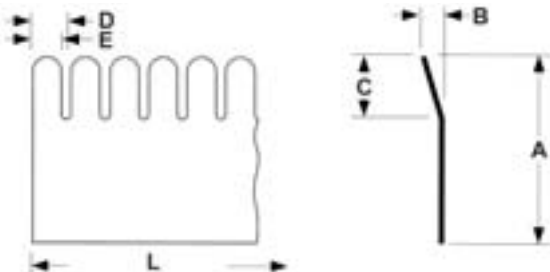
### T TYPE



PART NUMBER	A	B	C	D	E	L
NFT003-XX-XXXX	22,6	2,3	6,9	4,75	3,56	610

Unit: mm.

### T TYPE

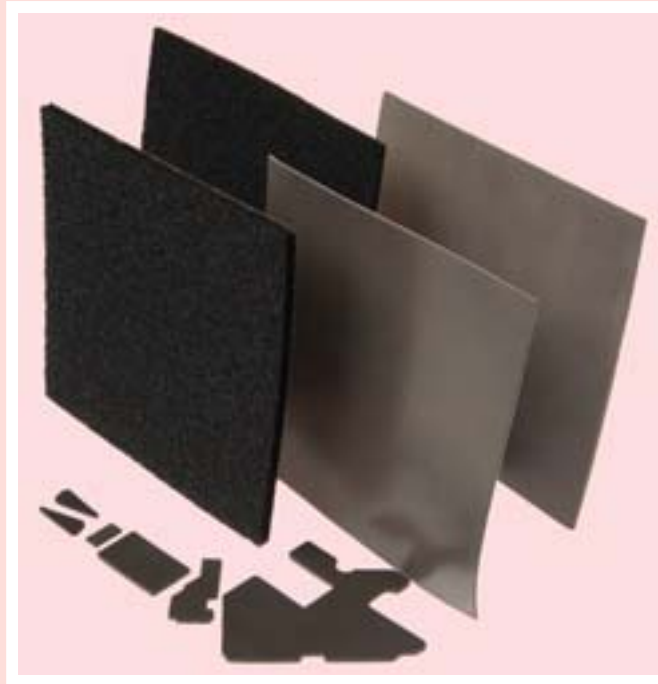


PART NUMBER	A	B	C	D	E	L
NFT004-XX-XXXX	23,4	2,3	7,6	4,75	3,56	610

Unit: mm.

# MW SERIES

## MICROWAVE ABSORBERS



### INTRODUCTION

THERE IS A GROWING INTEREST IN MICROWAVE ABSORBING MATERIALS. AS INDICATED IN THE NAME, MICROWAVE ABSORBERS ARE MATERIALS WHOSE ELECTRICAL AND MAGNETIC PROPERTIES ARE ALTERED TO ALLOW ABSORPTION OF MICROWAVE ENERGY AT DISCRETE OR BROADBAND FREQUENCIES. OUR GOAL IS TO BALANCE PERFORMANCE, THICKNESS, WEIGHT, MECHANICAL PROPERTIES AND COST ACCORDING TO THE CUSTOMER'S NEED.

### ABSORBER TYPES

WE CAN OFFER DIFFERENT TYPES OF ABSORBERS ACCORDING TO CUSTOMER'S REQUIREMENTS.

#### ELASTOMERIC (RUBBER) ABSORBERS (SERIES MAG)

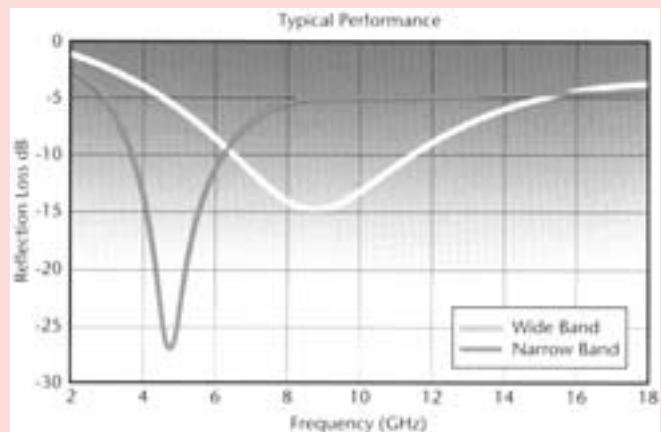
THIS SERIES COMBINES THE SUPERIOR ENERGY ABSORPTION PROPERTIES OF HIGH PERFORMANCE MAGNETIC MATERIALS WITH THE DESIRABLE PHYSICAL CHARACTERISTICS OF ELASTOMERIC BINDERS. THE RESULT IS A THIN, FLEXIBLE, RESONANT ABSORBER THAT CAN BE TUNED TO A WIDE RANGE OF FREQUENCIES AND BANDWIDTHS. IRON POWDERS AND FILLERS ARE COMBINED WITH GUMSTOCK SILICONE, NITRILE, URETHANE AND NEOPRENE RUBBERS IN EXACTING RATIOS FOR PRECISELY TUNED ABSORPTION. THROUGH COMPRESSION MOLDING, EXTRUSION, CALENDERING AND PROPRIETARY DISPENSING METHODS, WE ARE ABLE TO DELIVER PRODUCTS THAT ARE TAILORED TO YOUR SPECIFIC APPLICATION.

#### APPLICATION

- SPECULAR RETURN (RCS, AIRCRAFT EXTERIORS,..)
- SURFACE CURRENT REDUCTION
- SYSTEM ISOLATION

#### CHARACTERISTICS AND BENEFITS

- ATTENUATES FROM 500 MHz TO 40 GHz
- SPACE SAVING THIN MATERIAL
- DURABILITY
- EASILY CUT TO SHAPE
- MOISTURE AND CHEMICAL RESISTANT
- FUNCTIONAL OVER A WIDE TEMPERATURE RANGE
- INTEGRATED GROUND PLANE AVAILABLE
- EASY ATTACHMENT WITH PRESSURE SENSITIVE ADHESIVE
- RESISTANT FORMULATION AVAILABLE
- UL FLAMMABILITY RATINGS



# MW SERIES

## MICROWAVE ABSORBERS

THE SUBSTRATE MATERIAL ALLOWS TO OBTAIN DIFFERENT PERFORMANCES ACCORDING YOUR REQUIREMENTS. IN THIS TABLE DIFFERENT PERFORMANCES SPECIFICATIONS ARE SUMMARIZED.

Substrate Material	Physical Characteristics	Temperature range
Silicone	Highly flexible; excellent environmental properties; UL94-V0 rated	-50°C to 190°C
Urethane	High abrasion resistance and tear strength; UL94-HB rated	-50°C to 135°C
Neoprene	Durable, weatherproof, economical	-40°C to 105°C
Nitrile	High moisture, fluid and fuel resistance	-40°C to 150°C

### FOAM ABSORBERS (SERIES FOL)

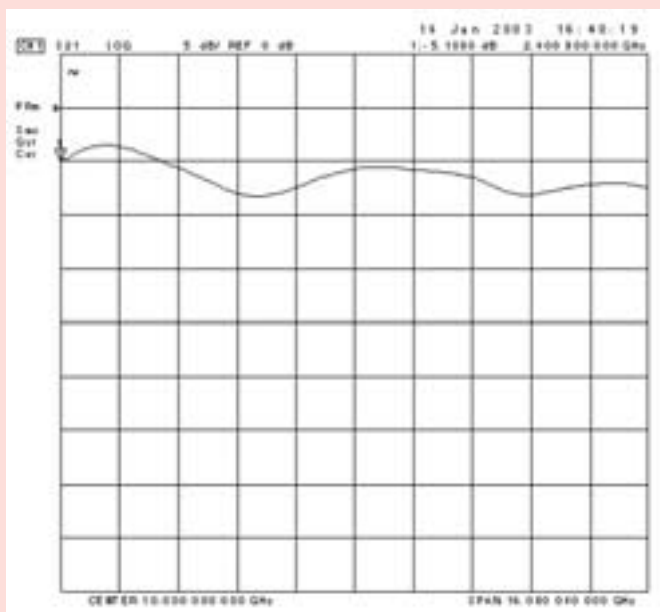
THIS FAMILY OF LOW-DENSITY, HIGH-LOSS FLEXIBLE EMI ABSORBERS ARE DESIGNED TO SOLVE A WIDE RANGE OF INTERFERENCE CONTROL PROBLEMS EASILY, QUICKLY AND COST-EFFECTIVELY. USING PROVEN FORMULAS, REFINED CARBON POWDERS IS COMBINED WITH BINDING AGENTS. THE ABSORBENT MIXTURE IS THEN INTEGRATED INTO AN OPEN CELL, POLYURETHANE FOAM STRUCTURE. THESE PRECISELY CONTROLLED, CARBON LOADED FOAM ABSORBERS OFFER EXCELLENT SUPPRESSION OF UNWANTED ELECTROMAGNETIC SIGNALS FOR A VARIETY OF APPLICATIONS INCLUDING TELECOMMUNICATIONS, HIGH-SPEED COMPUTERS, WIRELESS TECHNOLOGIES AND MICROWAVE SYSTEMS. BY VARYING THE THICKNESS AND LOADING LEVELS OF THESE UNIFORMLY LOADED FOAM SHEETS, FUTURA FOAM ABSORBERS CAN BE FREQUENCY-TUNED FOR A SPECIFIC APPLICATION.

### CHARACTERISTICS AND BENEFITS

- ABSORPTION OF ELECTROMAGNETIC ENERGY FROM 2GHZ TO 40GHZ
- FLEXIBLE, LIGHTWEIGHT AND CONFORMABLE
- BROADBAND PERFORMANCE CHARACTERISTICS
- STANDARD THICKNESSES FROM 3.18MM - 50.8MM
- CUSTOM THICKNESSES UP TO 155 MM
- LOW COST EMI SOLUTION
- INTEGRATED GROUND PLANE AVAILABLE
- CONTROLS SURFACE CURRENT
- ENVIRONMENTALLY PROTECTIVE SURFACE COATINGS AVAILABLE
- CHOICE OF DIELECTRIC PROPERTIES TO OPTIMIZE ABSORPTIVE PERFORMANCE
- EASILY ATTACHED WITH PRESSURE SENSITIVE ADHESIVE
- UL94 HB FLAMMABILITY RATING (UL FILE NO. E204422)
- EASILY CUT, DIE-CUT OR FLEXED TO ANY SHAPE OR SIZE

AMONG THE FOAM FAMILY WE HAVE DIFFERENT TYPES OF FOAM ABSORBERS:

**LOSSY FLEXIBLE FOAM:** LOW DENSITY, HIGH LOSS, FLEXIBLE MICROWAVE ABSORBER. BY VIRTUE OF IT'S PRECISE CARBON IMPREGNATION, LOSSY FOAM IS IDEAL FOR SUPPRESSION OF ELECTROMAGNETIC ENERGY AND UNWANTED STATIC BUILDUP. THIS ABSORBER CAN EASILY BE CUT, WRAPPED, AND FIT FOR VARIOUS APPLICATIONS. PLACING THE MATERIAL WITHIN A CAVITY WILL REDUCE MULTIPLE REFLECTIONS RESULTING IN IMPROVED PERFORMANCE.



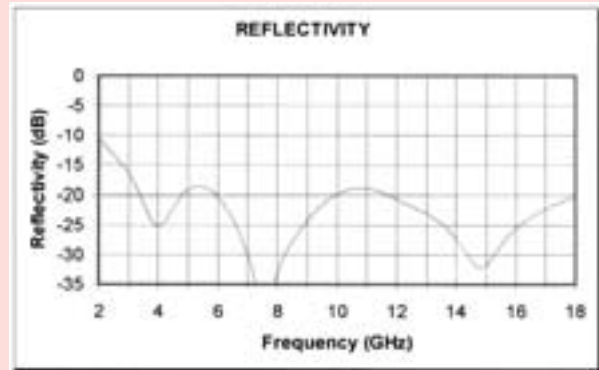
# MW SERIES

## MICROWAVE ABSORBERS

**MULTILAYER FOAM:** THE MULTILAYER SERIES IS A FAMILY OF LIGHTWEIGHT, FLEXIBLE, OPEN-CELL FOAM ABSORBERS THAT ARE DESIGNED FOR BROADBAND APPLICATIONS. MULTILAYER ABSORBERS FUNCTION ON AN IMPEDANCE MATCHING PRINCIPLE. MAXIMUM BROADBAND PERFORMANCE IS ACHIEVED BY LAMINATING INDIVIDUAL LAYERS THAT HAVE BEEN LOADED FOR PREDETERMINED LOSS TANGENTS. BECAUSE THE MULTILAYER ABSORBER IS ELECTRICALLY, RATHER THAN GEOMETRICALLY TAPERED, REFLECTION LOSS CHARACTERISTICS OF -20DB ARE ACHIEVABLE IN A SPACE EFFICIENT PACKAGE.

**APPLICATIONS:**

- CROSSTALK REDUCTION
- ANTENNA SHROUDING
- SHADOWING PARTS FOR RCS MEASUREMENTS
- SHADOWING COMPONENTS OF ANECHOIC CHAMBERS

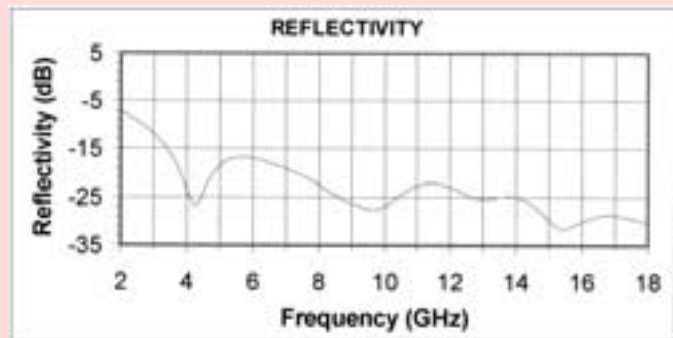


Standard Sheet size	610 x 610 mm; other size available
Standard thicknesses	(7, 11, 19, 29, 57, 115 mm); other thicknesses available
Foam density	32 Kg/m <sup>3</sup>
Color	Black
Temperature	-60 °C to 135 °C

**RETICULATED FOAM:** THE RETICULATED SERIES IS A GROUP OF OPEN-CELL, CARBON-LOADED FOAM ABSORBERS. EXACTING CONTROL OF THE CONDUCTIVE GRADIENT PROVIDES OUTSTANDING BROADBAND PERFORMANCE. RETICULATED FOAM'S OPEN CELL STRUCTURE IS AN EXCELLENT CONDUIT FOR CONVECTIVE AIRFLOW. LIGHTWEIGHT AND FLEXIBLE, RT IS OFFERED IN FLAT FORM OR IN A CONVOLUTED FORMAT FOR HIGHER ELECTRICAL PERFORMANCE.

**APPLICATIONS:**

- ANTENNA AND ANTENNA ARRAY ISOLATION
- CAMOUFLAGE OF REFLECTIVE OBJECTS
- ANTENNA SHROUDS
- RF INTERFERENCE SUPPRESSION



Standard Sheet size	610 x 610 mm; other size available
Standard thicknesses	(10 to 105 mm); other thicknesses available
Foam density	32 Kg/m <sup>3</sup>
Color	Black
Temperature	-70 °C to 150 °C

# MW SERIES

## MICROWAVE ABSORBERS

### HONEYCOMB ABSORBERS

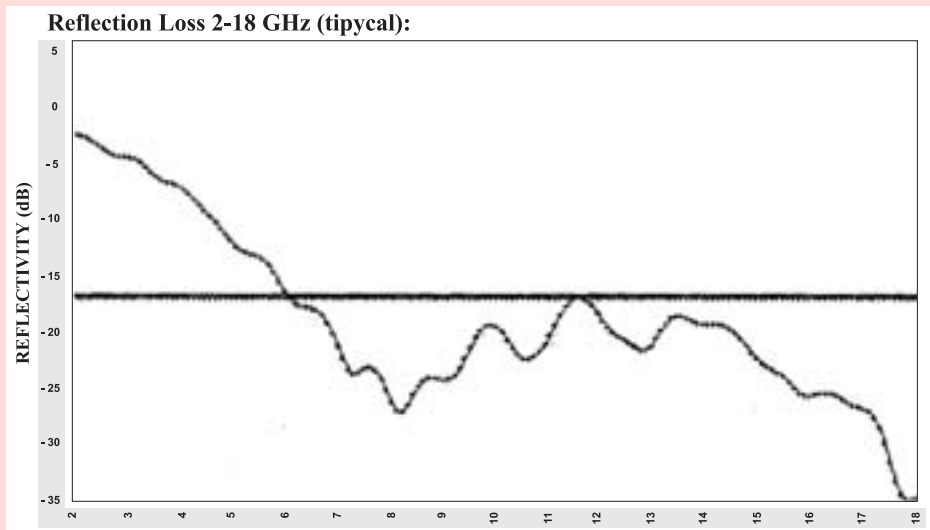
THE HONEYCOMB SERIES OFFERS EXCELLENT BROADBAND PERFORMANCE AND IS LIGHTWEIGHT YET MECHANICALLY STRONG. HC PRODUCTS ARE ENGINEERED TO MEET EACH CUSTOMER'S ELECTRICAL SPECIFICATIONS BY TAILORING PROPRIETARY COATINGS AND THEIR THICKNESS. HC PRODUCTS ARE LIKELY CANDIDATES WHEN STRUCTURAL INTEGRITY, HIGH POWER HANDLING AND CONVECTIVE COOLING ARE REQUIRED IN A BROADBAND ABSORBER.

#### APPLICATIONS:

- ANTENNA CAVITY INSERTS
- ENHANCE ANTENNA PERFORMANCE
- RADAR ABSORBING STRUCTURE
- REDUCED SIDE LOBE REFLECTION
- REDUCED SIDE LOBE REFLECTION

#### CHARACTERISTICS AND BENEFITS

- BROADBAND ABSORPTION FROM 500 MHZ TO 40 GHZ
- CAN BE FABRICATED TO CUSTOM CONFIGURATIONS
- EXCELLENT CONVECTIVE AIRFLOW
- SUPERIOR STRUCTURAL INTEGRITY AND LIGHT WEIGHT
- AVAILABLE W/SKIN FOR RAS APPLICATIONS
- CUSTOM TUNING
- AVAILABLE IN FLAT OR PYRAMIDAL FORM



### CHIP CAPS

A NEW CONCEPT FOR CONTROL OF HIGH FREQUENCY INTERFERENCE FROM SURFACE MOUNT OR PLUG-IN CHIPS. FUTURA CHIP-CAP ABSORBER PRODUCTS ARE QUICKLY AND CONVENIENTLY MOUNTED OVER THE NOISY CHIP AND ARE DESIGNED TO SUPPRESS UNDESIRABLE SIGNALS OVER A WIDE RANGE OF FREQUENCIES, FROM 500MHZ TO OVER 40GHZ. THE CHIP-CAP CONSISTS OF A MAGNETIC ABSORBER LOADED WITH METALLIC POWDER, ENCAPSULATED IN FLEXIBLE POLYMER SUCH AS SILICONE OR URETHANE. THEY FUNCTION AS A MODE SUPPRESSOR OR SIGNAL ISOLATOR TO ABSORB HF ENERGY EMANATING FROM THE CHIP PACKAGE AND LEADS. ATTACHMENT IS ACCOMPLISHED BY PRESSURE SENSITIVE ADHESIVE OR THE ABSORBER CAN BE RETAINED IN PLACE BY A HEAT SINK, IF USED. MANY PARTS ARE UL94 RATED.

#### CHARACTERISTICS AND BENEFITS

- DESCRIPTION: HIGH PERMEABILITY FILLERS LOADED INTO FLEXIBLE SILICONE OR URETHANE RESINS
- HARDNESS, SHORE A: >70
- TEMPERATURE RANGE: -55°C TO +195°C (SILICONE), -55°C TO +135°C (URETHANE)
- ELECTRICAL PROPERTIES: DEPENDS ON FILLER AND LOADING %
- ATTENUATION FREQUENCY RANGE: 0.5 TO 40 GHZ





# MW SERIES

## MICROWAVE ABSORBERS

### FU-WX SERIES

FU-WX PRODUCTS WAS INTRODUCED IN RESPONSE TO TECHNICAL NEEDS FOR A LOW PROFILE EMI ABSORBER THAT IS READILY CONFORMABLE AND EASY TO INSTALL. EMI IS NOT A SINGLE-SOURCE PROBLEM WITH A SINGLE-PRODUCT SOLUTION. THAT'S WHY FU-WX IS OFFERED IN AN ARRAY OF SIZES, FEATURES AND FORMULATIONS.

FU-WX PRODUCTS PROVIDE EMI SUPPRESSION AND/OR ABSORPTION OF RADIATED EMISSIONS GENERATED BY:

- TELECOM & COMPUTER SYSTEMS
- ELECTRONIC ENCLOSURES
- CABLES
- PCBS
- ISOLATED CIRCUITS
- ON-BOARD COMPONENTS
- HEAT SINKS
- INTEGRATED CIRCUITS
- MULTICHIP MODULES

FREQ. RANGE	100 MHz - 5 GHz
OPERATING TEMP.	-55° / +180°C
THICKNESS	0.5 mm - 6.35 mm
SURFACE RESISTIVITY	> 1MΩ

### CHARACTERISTICS AND BENEFITS

- EXCELLENT MECHANICAL CONFORMABILITY PROPERTIES
- EASILY CUT TO ANY SIZE AND SHAPE
- 3-DIMENSIONAL/ASYMETRICAL SHAPES AVAILABLE
- EASY ATTACHMENT - JUST PEEL AND STICK WITH PRESSURE SENSITIVE ADHESIVE
- SPACE SAVING, THIN MATERIAL
- CAN BE INJECTION OR COMPRESSION MOLDED
- EFFECTIVE FREQUENCY RANGE: 100MHz to 60GHz
- EXCELLENT ATTENUATION AND MODE SUPPRESSION
- FREQUENCY-SPECIFIC PRODUCT TUNING
- IDEAL FOR ON-CHIP SUPPRESSION
- INTEGRATED GROUND PLANE AVAILABLE
- THICKNESS RANGE 0.05MM TO 6.35 MM

# MW SERIES

## MICROWAVE ABSORBERS

### RIGID ABSORBER

RIGID, MAGNETICALLY-LOADED, ELECTRICALLY NON-CONDUCTIVE EPOXY. THIS MATERIAL IS EXTENSIVELY USED IN THE WAVEGUIDE INDUSTRY AS AN ABSORBER, ATTENUATOR OR FOR TERMINATION PURPOSES. APPLICATIONS ALSO EXIST IN THE ANTENNA INDUSTRY WHERE HIGH INSERTION LOSS IS NEEDED FOR ANTENNA ISOLATION OR THE SUPPRESSION OF SURFACE CURRENTS.

THIS PRODUCT IS SUPPLIED IN RIGID FORM, WHICH OFFERS EXCELLENT MACHINABILITY TO CLOSE TOLERANCES USING STANDARD MACHINE TOOLS.

FUTURA HAS THE CAPABILITY TO MOLD AND/OR MACHINE THIS MATERIAL TO SPECIFIED FORM FACTORS AND SIZE.

### TYPICAL PROPERTIES

<b>COLOR:</b>	GRAY
<b>DENSITY:</b>	4.3 G/CM <sup>3</sup>
<b>TEMPERATURE RANGE:</b>	-55°C TO +155°C (-67°F TO +311°F)
<b>DUROMETER:</b>	SHORE D: >85
<b>TENSILE STRENGTH:</b>	>555.4 KGF/CM <sup>2</sup> (>7,900 PSI)
<b>WATER ABSORPTION:</b>	<0.3% PER 24 HOURS
<b>THERMAL EXPANSION:</b>	30 X 10 <sup>-6</sup> PER C
<b>DIELECTRIC CONSTANT @ 10GHZ:</b>	22.4

THE FOLLOWING TABLE SUMMERIES THE MAIN ELETRICAL PROPERTIES OF THIS KIND OF MATERIAL:

Frequency (GHz)	2	3	5	8	10	15	18
$\epsilon'$	23.82	23.48	22.92	22.58	22.42	22.29	22.21
$\epsilon''$	1.75	1.74	1.29	1.42	1.41	1.32	1.33
Loss tangent	0.073	0.074	0.056	0.063	0.063	0.059	0.059
$\mu'$	4.42	3.73	2.68	1.78	1.44	0.89	0.89
$\mu''$	2.14	2.31	2.38	2.09	1.94	1.52	1.30
Mag loss tangent	0.484	0.619	0.888	1.174	1.347	1.708	1.461
dB / cm	37.5	51.5	73.9	93.6	104.4	121.8	145.7

# TAGLIO E FUSTELLATURA DIE CUTTING SERVICE

LA NOSTRA SOCIETÀ ESEGUE, SU DISEGNO DEL CLIENTE, TAGLI DI VARI MATERIALI PER APPLICAZIONI ELETTRONICHE, COME MATERIALI SCHERMANTI, ISOLANTI ELETTRICI E MATERIALI TERMOCONDUTTIVI. POSSIAMO REALIZZARE SAGOME COMPLESSE DI QUALSIASI DIMENSIONE CON DIVERSI MACCHINARI.

WE CAN CUT, ACCORDING TO CUSTOMER REQUIREMENTS ALL KINDS OF MATERIAL FOR ELETRONIC APPLICATIONS LIKE EMI MATERIALS, ELECTRICALLY INSULATING AND THERMALLY CONDUCTIVE MATERIALS. WE CAN PRODUCE COMPLEX SHAPES OF ANY DIMENSIONS WITH DIFFERENT MACHINES.

- FUSTELLATRICE
- DIE-CUTTING MACHINE
- MACCHINA CNC A LAMA OSCILLANTE
- CNC OSCILLANTING KNIFE-CUTTING MACHINE

Esempi di materiali lavorati dalle nostre macchine da taglio  
Examples of re-worked materials by our cutting machines include:

## EMI/RFI shielding materials

- Conductive particles filled silicone
- Silicone filled knitted monel or aluminium wire mesh
- Conductive woven or non woven fabric sheets

## Electrically insulating materials

- Mylar
- Kapton
- Lexan
- Valox
- Nomex
- Peek

## Thermally conductive material

- Silicone
- Ultra soft silicone
- Graphite

## Microwave absorber

- Silicone
- Nitrile
- Urethane

## Sealing gaskets

- Silicone
- Neoprene
- Polystyrene
- Polyurethane

POSSIAMO INOLTRE LAVORARE ALTRI MATERIALI INCLUSO FELTRO, TESSUTO, SUGHERO, CARTONE, GOMMA, SPUGNA, COMPOSITI E ALTRI MATERIALI PROPOSTI DAI NOSTRI CLIENTI.

WE CAN ALSO WORK OTHER MATERIALS INCLUDED FELT, FABRICS, CORK OR PAPER, RUBBER, FOAM OR SPONGE, COMPOSITES AND OTHER MATERIALS PROPOSED BY OUR CUSTOMERS.

