

PROPERTIES AND APPLICATIONS

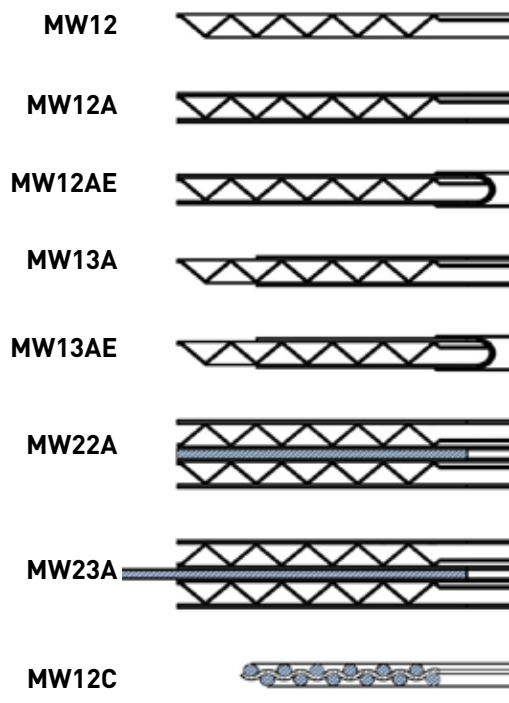
Corrugated gaskets without layer

There are different types of metal gaskets, like flat, grooved, tongue and sectional ones. They are used where compressibility (elasticity) of sealing material is not required. The construction of such gaskets based on the principle of different hardness of adjacent materials. These gaskets come in various shapes and there are almost no limits concerning their size. The corrugated metal gaskets have been proven to be both reliable and cost-effective for the application on flanges and heads where bolt loading is sufficient. Their operation principle is based on different degrees of hardness of adjacent materials. The sealing effect is produced by the constant load to which a gasket is exposed. They are used in applications, which require mechanical strength and thermal conductivity, as well as temperature and corrosion resistance. They are particularly useful when compressibility is not a factor and where sufficient clamping force is available. Metal gaskets feature greater mechanical strength, better heat transfer and resistance to higher temperatures and pressures, and can offer advantages over the clad type gaskets in certain applications.



Corrugated gaskets with soft layer

Corrugated metal is covered with graphite, ceramic or PTFE layers. An additional finishing layer is applied depending on the requirements of the medium to be sealed. Such gaskets are used on uneven or distorted sealing surfaces, where more elastic materials with better sealing performance are needed. The corrugated metal gaskets with soft layer on both sides are used in low-pressure applications in large diameter flue gas ducts at high temperatures. The use of corrugated gaskets eliminates the problem of difficult handling with large non-metal gaskets used in those applications. They are suitable for gas pipes and valve caps, or wherever acids, oils and chemicals are found. They can be used at lower pressures and higher temperatures.

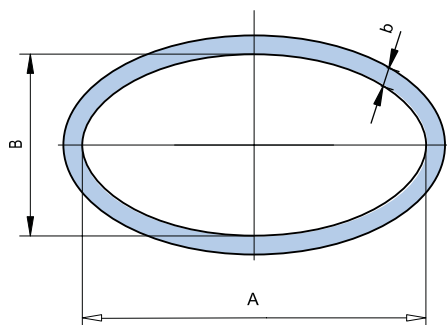
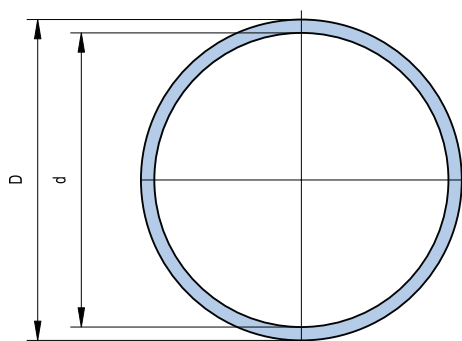


ADVANTAGES

- Outstanding mechanical strength and thermal conductivity.
- Capable of withstanding high temperatures.
- There are almost no limitations regarding size.
- Solid construction provides stability even for large diameters and ensures trouble-free handling and installation.

SHAPE AND CONSTRUCTION

The metal gaskets are produced in several types to meet the most demanding applications. Shapes: round, oval, rectangular etc.



Type: AxBxb (oval)

MATERIALS FOR METAL AND CORRUGATED METAL GASKETS

Material	ASTM	EN (DIN) Material No.
Low carbon steel	Soft iron (CS)	1.0333
Stainless steel	AISI 304	1.4301
Stainless steel	AISI 309	1.4828
Stainless steel	AISI 316, AISI 316L	1.4401, 1.4404
Stainless steel	AISI 316Ti	1.4571
Stainless steel	AISI 321	1.4541

EN 1514-4:1997 Corrugated gaskets for EN 1092-1 flanges

PN DN	d1 (mm)	d2 (mm)					
	10 - 100	10	16	25	40	63	100
10	18	48	48	48	48	58	58
15	22	53	53	53	53	63	63
20	27	63	63	63	63	74	74
25	34	73	73	73	73	84	84
32	43	84	84	84	84	90	90
40	49	94	94	94	94	105	105
50	61	109	109	109	109	115	121
65	77	129	129	129	129	140	146
80	89	144	144	144	144	150	156
100	115	164	164	170	170	176	183
125	141	194	194	196	196	213	220
150	169	220	220	226	226	250	260
200	220	275	275	286	293	312	327
250	273	330	330	343	355	367	394
300	324	380	386	403	420	427	461
350	356	440	446	460	477	489	515
400	407	491	498	517	549	546	575
450	458	541	558	567	574	-	-
500	508	596	620	627	631	660	708
600	610	698	737	734	750	768	819
700	712	813	807	836	-	883	956
800	813	920	914	945	-	994	-
900	915	1020	1014	1045	-	1114	-

EN 12560-4:2001 Corrugated gaskets for ASME B16.5 flanges

DN	Class NPS	d1 (mm)	d2 (mm)					
		150 - 2500	150	300	600	900	1500	2500
15	1/2"	22.0	47.6	54.0	54.0	63.5	63.5	69.9
20	3/4"	27.0	57.2	66.7	66.7	69.9	69.9	76.2
25	1"	34.0	66.7	73.0	73.0	79.4	79.4	85.7
32	1 1/4"	43.0	76.2	82.6	82.6	88.9	88.9	104.8
40	1 1/2"	49.0	85.7	95.3	95.3	98.4	98.4	117.5
50	2"	61.0	104.8	111.1	111.1	142.9	142.9	146.1
65	2 1/2"	73.0	123.8	130.2	130.2	165.1	165.1	168.3
80	3"	89.0	136.5	149.2	149.2	168.3	174.6	196.9
100	4"	115.0	174.6	181.0	193.7	206.4	209.6	235.0
125	5"	141.0	196.9	215.9	241.3	247.7	254.0	279.4
150	6"	169.0	222.3	250.8	266.7	288.9	282.6	317.5
200	8"	220.0	279.4	308.0	320.7	358.8	352.4	387.4
250	10"	273.0	339.7	362.0	400.1	435.0	435.0	476.3
300	12"	324.0	409.6	422.3	457.2	498.5	520.7	549.2
350	14"	356.0	450.9	485.8	492.1	520.7	577.9	
400	16"	407.0	514.4	539.8	565.2	574.7	641.4	
450	18"	458.0	549.3	596.9	612.8	638.2	704.9	
500	20"	508.0	606.4	654.1	682.6	698.5	755.7	
600	24"	610.0	717.6	774.7	790.6	838.2	901.7	

SIZE

Gaskets with an outer diameter up to 1000 mm are usually made in one piece, while larger dimensions are welded. Welding is also recommended for cost-effectiveness.

Profile

The metal is 0.5 mm thick and the corrugation pitch is 3 mm, 4 mm, 5 mm or 6 mm depending on the width and size of the gaskets. The thickness of corrugation is approx. 1 mm to 1.5 mm, depending on gasket size. Corrugated metal is covered with graphite, ceramic or PTFE layers in thickness 0.5 mm to 2 mm.

GASKET ORDERING EXAMPLE

STANDARD SIZE:

CORRUGATED GASKET MW12A, EN 1514-4, DN 100 / PN 40,
material: 1.4571/Graphite 99.85% purity

NON-STANDARD DIMENSION:

CORRUGATED GASKET MW12A, D=946 mm, d=914 mm, s=3.5 mm,
material: AISI 316Ti/Graphite 99.85% purity

