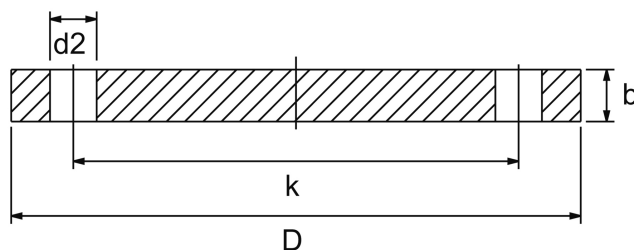


aluminium-blind flange

[short name: BF.10\\*](#)

drilled according to PN 10

similar to DIN 2527

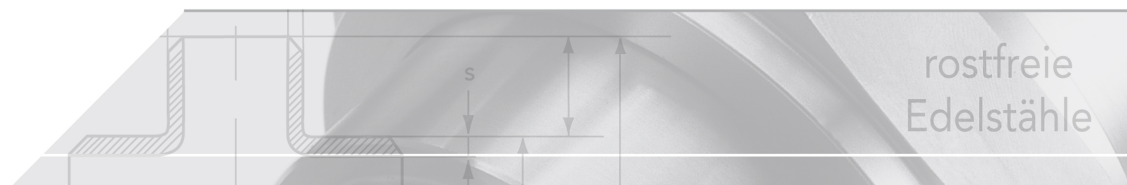


### technical product sheet

DN	D	b	k	d2	M	O	kg	Art.-Nr.
25	115	12	85	14	4 x M12	blank	0,389	BF-025-010
32	140	16	100	18	4 x M16	blank	0,535	BF-032-010
40	150	16	110	18	4 x M16	blank	0,660	BF-040-010
50	165	16	125	18	4 x M16	blank	0,860	BF-050-010
50	165	18	125	18	4 x M16	beschichtet	0,098	BF-050-B10
65	185	16	145	18	4 x M16	blank	1,170	BF-065-010
65	185	18	145	18	4 x M16	beschichtet	1,160	BF-065-B10
80	200	16	160	18	8 x M16	blank	1,480	BF-080-010
80	200	20	160	18	8 x M16	beschichtet	1,480	BF-080-B10
100	220	18	180	18	8 x M16	blank	1,640	BF-100-010
100	220	20	180	18	8 x M16	beschichtet	1,800	BF-100-B10
125	250	18	210	18	8 x M16	blank	2,580	BF-125-010
125	250	22	210	18	8 x M16	beschichtet	2,581	BF-125-B10
150	285	18	240	22	8 x M20	blank	2,871	BF-150-010
150	285	22	240	23	8 x M20	beschichtet	3,390	BF-150-B10
200	340	20	295	22	8 x M20	blank	4,620	BF-200-010
200	340	24	295	23	8 x M20	blank	5,450	BF-200-B10
250	395	22	350	22	12x M24	blank	6,500	BF-250-010
250	395	26	350	23	12x M24	beschichtet	5,489	BF-250-B10
300	445	26	400	22	12x M24	blank	9,900	BF-300-010
300	445	26	400	23	12x M24	beschichtet	7,820	BF-300-B10
350	505	22	460	22	16x M24	blank	10,460	BF-350-010
400	565	26	515	25	16x M27	blank	19,500	BF-400-010
400	565	26	515	27	16x M27	beschichtet	19,500	BF-400-B10
500	670	28	620	25	20x M30	blank	29,000	BF-500-010

available material: AlSi12Cu

Flanges &gt; blind flanges &gt; aluminium



## Lightweight alloy flange

The lightweight metal flanges are manufactured using a G-ALSi12 (Cu) casting process that has both good mechanical properties and a good resistance to corrosion

The alloy composition pursuant to DIN 1725, sheet 2, is as follows:

Cu	Zn	Si	Fe	Ti	Ni	Mn	Mg	Pb	Sn	Al
1,0%	0,5%	11-13,5	0,8%	0,15%	0,2%	0,5%	0,3%	0,2%	0,1%	Rest

The mechanical properties at room temperature are as follows:

Property	Unit	Value
0.2 limit $R_{p0,2}$	N/mm <sup>2</sup>	90-120
Tensile strength (p/B)	N/mm <sup>2</sup>	160-240
Elongation A5	%	1 - 4
Brinell hardness	HB 5/250	55-75
Fatigue strength	N/mm <sup>2</sup>	70-80

As the thermal conductivity of lightweight alloys are three to four times higher than those of plain carbon steel and six to eight times higher than those of creep resistant steels, a very fast thermal absorption and thermal dissipation is enabled to take place so that the intrinsic temperature of a lightweight alloy flange can also be kept below critical values even if the pipeline should be subjected to high surface temperatures.

Mechanical properties when subjected to higher temperatures (approximate values):

Property	20° C	50° C	100° C	200° C
0.2 limit $R_{p0,2}$	90 N/mm <sup>2</sup>	80 N/mm <sup>2</sup>	70 N/mm <sup>2</sup>	55 N/mm <sup>2</sup>
Tensile strength $R_m$	190 N/mm <sup>2</sup>	180 N/mm <sup>2</sup>	160 N/mm <sup>2</sup>	110 N/mm <sup>2</sup>
Elongation A5	4%	5%	7%	10%
Brinell hardness HB	55	51	45	32

It can be stated for practical operations, that lightweight alloy flanges that are manufactured with the dimensions of the DIN flange according to PN 10, can be used with an operating pressure of max. 6 bar and a flange temperature of 150°C. Higher temperatures are permissible with a lower operational figure.

Extensive tests and years of practical use have shown that with the stated operating conditions with regard to the leakage behaviour, no differences worth mentioning could be determined between a steel and a lightweight alloy flange.

The flange is normally supplied with a bright metal surface.

This version is fitted in lightweight alloy, stainless steel and plastic pipelines as when subjected to a normal atmosphere, the natural casting skin (oxide layer) of the flange provides good protection against corrosion.

When subjected to a moist atmosphere, a thick oxide layer forms that comprises two partial layers that are on top of each other: the almost non-porous base layer and a barrier layer comprising amorphous aluminium oxide and a porous, aqueous top layer with a small proportion of crystals. A white deposit can form on

the surface of this top layer. The barrier layer that is beneath it is almost insoluble however within a Ph range of between 4.5 and 8.0, so that in most cases, a flange with a bright metal surface can be fitted.

The flanges are also available with an electrostatically applied and burned-in epoxy resin coating.

This version could be desirable due to the improved corrosion protection or for optical reasons .

The epoxy resin coated flanges are degreased, blasted and then burned in with an electrostatically applied powder. During transportation, the installation of the pipeline and the screwing of the pipeline together

and the screwing of the flange together, it is to be ensured that no damage is caused, as there could otherwise

be an infiltration of the coating by corrosion to a greater extent.