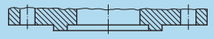
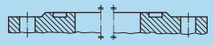
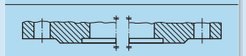
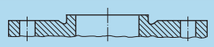
Facing types acc. to DIN EN 1092-1

The process of turning includes all processes which result in either spiral or concentric grooves. The radius of the round nosed tool for types A, B1, E, and F has to have a minimum of 1 mm.

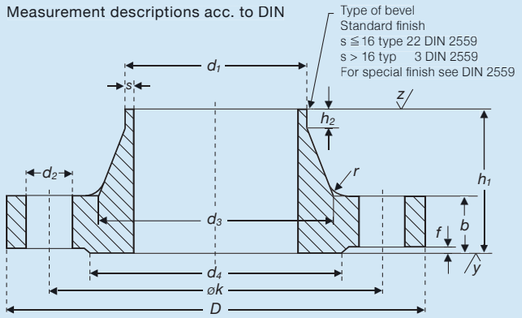
Flange	Description acc.to **DIN 2526**			acc. to **DIN EN 1092-1**			Drawing
	Standard	Remark	Facing	Facing	Ra in µm	Rz in µm	
without facing	DIN 2641 / 2642 DIN 2655 / 2656 DIN 2673	No requirements	Type A	Type A	3,2 - 12,5	12,5 - 50	
	DIN 2527 DIN 2573 / 2576	Rz = 160, turned[1]	Type B				
with facing	DIN 2630 to DIN 2635	Rz = 160, turned[1]	Type C				
		Rz = 40, turned	Type D	Type B1[2]	3,2 - 12,5	12,5 - 50	
	from DIN 2636	Rz = 16, turned	Type E	Type B2[3]	0,8 - 3,2	3,2 - 12,5	
Tongue	DIN 2512	PN 10 to PN 160	Type F	Type C	0,8 - 3,2	3,2 - 12,5	
Groove	DIN 2512	PN 10 to PN 160	Type N	Type D	0,8 - 3,2	3,2 - 12,5	
Male	DIN 2513	PN 10 to PN 100	Type V13	Type E	3,2 - 12,5	12,5 - 50	
Female	DIN 2513	PN 10 to PN 100	Type R13	Type F	3,2 - 12,5	12,5 - 50	
O-Ring	DIN 2514	PN 10 to PN 40	Type R14	Type G	0,8 - 3,2	3,2 - 12,5	
O-Ring Groove	DIN 2514	PN 10 to PN 40	Type V14	Type H	0,8 - 3,2	3,2 - 12,5	
lens shaped joint	DIN 2696	PN 63 to PN 400	Type L	–	–	–	
Diaphragm weld-gasket	DIN 2695	PN 63 to PN 400	Type M	–	–	–	

[1] Not smoother than 40µm Rz average roughness

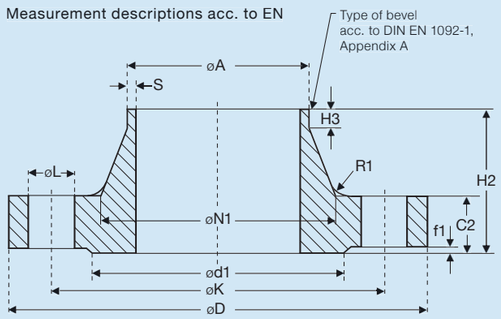
[2] B1 general application PN 2,5 - PN 40 Ra arithmetical average roughness

[3] B2 general application PN 63 and PN 100

Measurement descriptions acc. to DIN



Measurement descriptions acc. to EN



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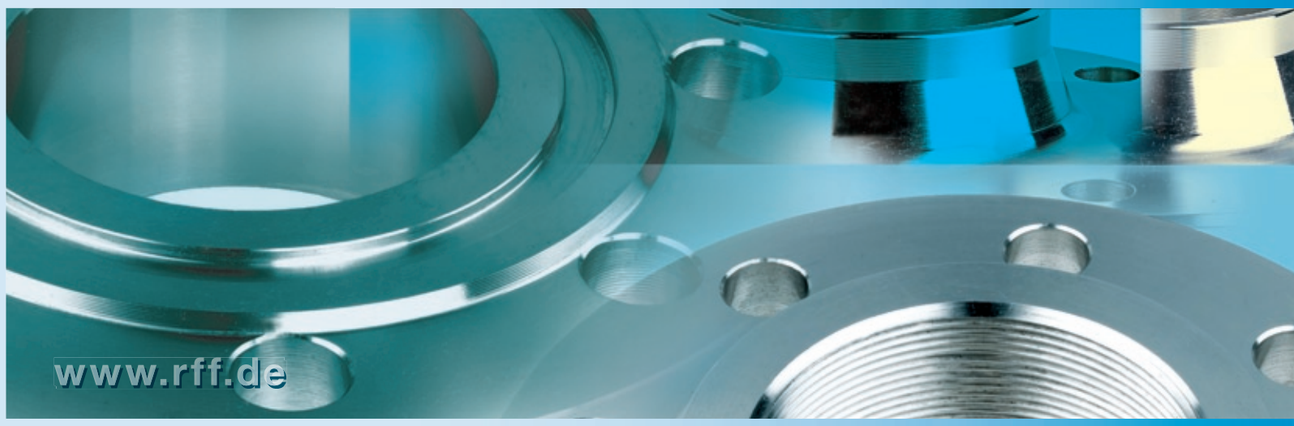

DIN EN 1092-1
Flanges acc. to DIN EN 1092-1
in comparison to DIN-Flanges

The Industrial Partner ▸ Bremen Leipzig Düsseldorf Mannheim Nürnberg

Flanges acc. to DIN EN 1092-1

The European standard for flanges DIN EN 1092-1 has been developed under the supervision of the European Standards Organization CEN and its 30 member organizations.

The national standards committees of the 30 member organizations, for Germany the „Deutsche Institut für Normung e.V." (DIN), for Austria the „Österreichische Normungsinstitut" (Ö-Norm), for France the „Associacion Française de Normalisation" (AFNOR), for England the „British Standards Institute" (BSI), and others, have influenced the European standard EN 1092-1 in terms of their national standard. Therefore it is a compromise of all member organizations involved.

In the following, you will find the essential differences between DIN EN 1092-1 and flanges acc. to DIN.

1. Flange measurements such as outside diameter, bore, number of bolts and diameter of bolt holes corresponding to DIN 2500 et seqq.
2. For all flanges of PN 16, dimensions DN 10 to DN 40 have been omitted. For these dimensions flanges acc. to PN 40 should be used.
3. The descriptions for the types of facings have been changed (see page 4).
4. The facing type A (without requirements) acc. to DIN 2526 has been omitted. According to DIN EN 1092-1 all facings have to be mechanically turned.
5. For flanges of PN 16 DN 65 the number of bolt holes is 8. Upon request, flanges with 4 bolt holes can be supplied.
6. Dimensions DN 20 and DN 32 have been added to Welding Neck Flanges Type 11 PN 100.
7. The dimensions at bevel changes, starting with DN 1200, e.g. ISO = 1220, EN = 1219, ISO = 1420, EN = 1422.
8. More material grades have been added to DIN EN 1092-1. These have been separated in single material groups.
9. Each material proup has pressure/temperature ratings.
10. The grooves respectively the tongues acc. to DIN EN 1092-1 are in their dimensions deeper respectively higher as in DIN 2512, edition 1975.
11. For flanges with groove-groove connections, steel sealing rings have been added.
12. Additional manufacturing processes have been permitted (e.g. casting).
13. Welding procedures and inspections are described.
14. A manufacturer of flanges acc. to DIN EN 1092-1 must have a PED approval in order for an inspection certificate acc. to EN 10204:2005 3.1 or 3.2 to be issued.
15. Tolerances are more specific in DIN EN 1092-1.
16. The Marking has been changed, only the nominal size, e.g. DN 50 has to be stamped, because there is only one ISO - outside diameter at bevel acc. to DIN EN 1092-1.
17. On page 3 of this brochure, under the table of the different flange types, you will find further details about DIN EN 1092-1, edition 09/2008.
18. The standard material grade acc. to DIN EN 1092-1 for carbon steel flanges is P245GH.
    In Appendix D (informative) of DIN EN 1092-1:2008 table D.1 (additional material grades) the grade C22.8/1.0460, acc. to VdTÜV 350/3 as well as grade P250GH/1.0460, acc. to EN 10222-2 are listed.
    The grade P250GH was incorporated to VdTÜV 350/3 in the edition of 6/2008.
    With the use of grades C22.8/P250GH in connection with EN 1092-1 in pressure equipment acc. to the directive 97/23/EC, in the chemical industry with the basis of PAS 1057 as well as for deliveries in other European countries a specific verification is recommended.
    There could be additional requirements for the inspection range of the additional grades listed in table D.1.

The Association of Steel Flanges e.V. in Düsseldorf has in co-operation with the Beuth-publishing house introduced a catalogue for flanges acc. to DIN EN 1092-1 under the title „Deutscher Flanschenkatalog, Europäische Norm, Ausgabe 2008".
The protective charge from Beuth Publishing EUR 85,00 plus EUR 8,50 for shipping and handling.
Ordering option: rff Rohr Flansch Fitting Handels GmbH, P.O.Box 1365, 28816 Stuhr, Germany, Ms Last, secretary, last@rff.de
Like with every new standard, changes and objections are inevitable. In the offered catalogue, the changes are identified in blue under notice, but not corrected in the texts and measurement tables.
A new reprint is exepted to come out in 2010.

Flange Types acc. to DIN EN 1092-1 showing the equivalent DIN standards of each pressure class plus additional pressure classes acc. to DIN EN 1092-1 (marked red ●)

	Description	Drawing	EN Type	PN	2,5	6	10	16	25	40	63	100	160	250	320	400
Plate flanges	Plate flanges for welding		01		●	2573	2576	●	●	●	●	●	–	–	–	–
	Loose plate flanges		02		●	2641	2642	●	2655	2656	–	–	–	–	–	–
	Weld-on plate collar (see also type 37)		32		●	2641	2642	●	2655	2656	–	–	–	–	–	–
	Loose plate flanges with weld-neck collar (for type 34)		04		–	–	2673	2674	2675	2676	–	–	–	–	–	–
	Blind flanges		05		●	2527	2527	2527	2527	2527	2527	2527	–	–	–	–
Weld-neck flanges	Weld-neck flanges		11		2630	2631	2632	2633	2634	2635	2636	2637	2638	2628	2629	2627
	Weld-neck collar (for type 04)		34		–	–	2673	2674	2675	2676	–	–	–	–	–	–
	Hubbed slip-on flanges for welding		12		–	●	86029	86030	●	●	●	●	–	–	–	–
	Hubbed threaded flanges		13		–	2565	●	2566	●	2567	2568	2569	–	–	–	–
Collars	Weld-on plate collar		32		●	2641	2642	●	2655	2656	–	–	–	–	–	–
	Lapped pipe end (for type 02)		33		●	●	●	●	–	–	–	–	–	–	–	–
	Weld-neck collar (for type 04)		34		–	–	2673	2674	2675	2676	–	–	–	–	–	–
	Weldring neck (for type 02)		35		●	●	●	●	●	●	–	–	–	–	–	–
	Pressed collar with long neck (for type 02)		36		●	●	●	●	–	–	–	–	–	–	–	–
	Pressed collar (for type 02)		37		●	2641	2642	●	–	–	–	–	–	–	–	–

[1] and [2] see also under collars

Additional details to DIN EN 1092-1, Edition September 2008

- Following DIN standards have not been incorporated into DIN EN 1092-1 when required can still be ordered under the DIN Standards.
  - Oval threaded flanges acc. to DIN 2558.
  - Flanges for vessels acc. to DIN 28030, 28031, 28032, 28034, 28036 and DIN 28038 as well as DIN 86041, 86044 and DIN 28117.
  - Flanges made for diaphragm-weld gaskets acc. to DIN 2695 and Flanges with a groove for lens-shaped joints acc. to DIN 2696.
- Slip-on flanges can be ordered as type 12 PN 10 and PN 16 acc. to DIN EN 1092-1 or also as DIN 86029 / 86030.
- In DIN EN 1092-1 are for certain flange types and several pressure classes EN-Standards specified, which apply for DIN standards, but have been withdrawn from the DIN set of standards. These withdrawn DIN standards have been identified **green** in the table.
- Flanges with DIN – outside diameter at bevel e.g. DN 15/20, DN 25/30, DN 50/57, DN 100/108 can only be supplied under DIN standards, because in all types and pressure classes of DIN EN 1092-1 only ISO dimensions have been incorporated.
- Flanges for automatic welding, because of their tight tolerances are specified acc. to PAS 1057-6:2008-6.