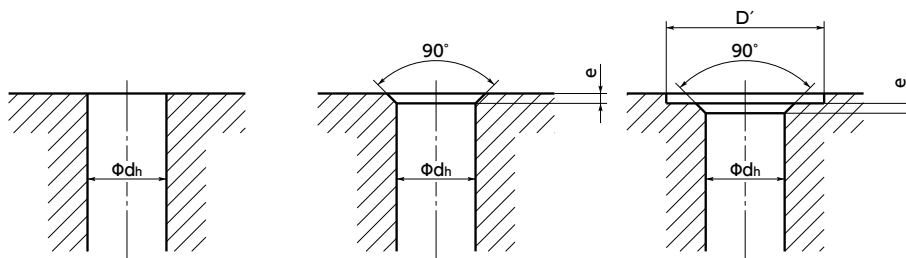


Diameter of Clearance Holes and Counterbores for Bolts and Screws

Excerpt from JIS B 1001:1985

Dimensions of bolt hole diameter and bore diameter



Unit: mm

Nominal diameter of thread	Bolt hole diameter d_h				Chamfering e	Bore diameter D'
	Grade 1	Grade 2	Grade 3	Grade 4*		
2	2.2	2.4	2.6	—	0.3	7
3	3.2	3.4	3.6	—	0.3	9
4	4.3	4.5	4.8	(5.5)	0.4	11
5	5.3	5.5	5.8	(6.5)	0.4	13
6	6.4	6.6	7	(7.8)	0.4	15
8	8.4	9	10	(10)	0.6	20
10	10.5	11	12	(13)	0.6	24
12	13	13.5	14.5	(15)	1.1	28
14	15	15.5	16.5	(17)	1.1	32
16	17	17.5	18.5	(20)	1.1	35
18	19	20	21	(22)	1.1	39
20	21	22	24	(25)	1.2	43
22	23	24	26	(27)	1.2	46
24	25	26	28	(29)	1.2	50

* Grade 4 primarily applies to cast holes.

Remarks: 1. Among the nominal diameter and bolt hole diameter of screws specified in this table, dimensions in parentheses are those not specified in ISO 273.

2. Perform hole chamfering as necessary and the chamfer angle shall be 90 degrees in principle.

3. If diameter larger or smaller than the bore diameter in this table is required for nominal diameter of a certain screw, it is recommended to select values from bore diameter row in this table as long as possible.

4. The bore face should be perpendicular to the center line of the hole and generally bore depth should be adjusted so that the block scale can be removed.