

## FLANGE TABLES

### DN

DN originates from the term 'Diameter Nominale'.

It is a rough translation of mm for imperial sizes. It assumes that an inch is 25mm (which it is not, it is 25.4mm!!).

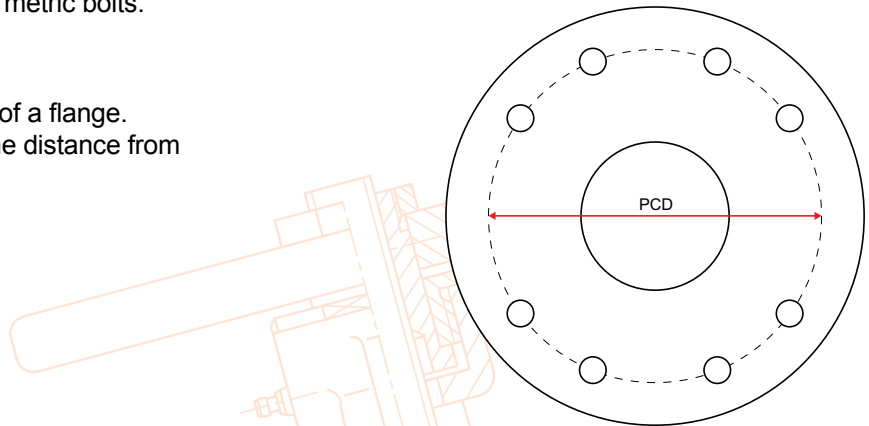
For example a 10" flange is referred to as 250mm in lieu of 254mm.

Even the ANSI imperial system is itself not exact in terms of bore size, hence it is termed 'nominal bore' as each class has a different bore. Note: metric ANSI equivalents are not different. However metric AS equivalents of BS can differ very slightly in bolt hole sizes to accommodate metric bolts.

### PCD

One of the critical dimensions is the PCD of a flange.

PCD (Pitch Circle Diameter) represents the distance from the centre of two opposite bolt holes.



### COMMON STANDARDS FOR FLANGES

#### British Standard - **BS10**

Table D  
Table E  
Table F  
Table G  
Table H  
Table J  
Table K

Table is the most popular for light industrial and water applications. All dimensions are specified in inches.

#### Australian Standard - **AS2129**

Table C  
Table D  
Table E  
Table G  
Table H

These flanges are equivalent to the BS10 flanges, except that all dimensions are specified in mm. In a few sizes, bolt holes are slightly larger due to metric bolting. AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard covering Table D to H. In AS4087 the same drilling as AS2129 is specified but the PN rating system is used (PN16 to PN35).

#### Australian Standard - **AS4087\*\***

PN16  
PN21  
PN35

AS4087 is an update of AS2129, however AS2129 is still widely used so it has not been deleted as a standard, however, it now only covers AS Table D to H. AS4087 is the latest standard for BS Table D to H, the same drilling is used but the new PN pressure rating system has been adopted. As the new pressure ratings are slightly higher the flange thicknesses have slightly increased. Also the raised face dimensions (although rarely specified, flat face is mostly used) are slightly larger. Table C, J or R, no longer exist, PN 16 is the same drilling as Table D, PN21 is the same as Table E, PN35 is the same as Table H.

#### American National Standards (**ANSI**), (and **AS4331, ISO7500-1**)

ANSI 125  
ANSI 150  
ANSI 600  
ANSI 900  
ANSI 1500  
ANSI 2500

Higher numbers denote higher pressure classes. The word 'Class' or Institute 'LB' or even '#' is frequently used. All dimensions are specified in inches. AS4331 covers class PN2.5 to PN420 and the sizing and drilling used is a replication of ISO 7500-1 which in turn is a metricated equivalent of ASME B16.5 class 150 to 2500.

#### **EN1092-1** (Replaces British Standard - **BS4505**)

PN2.5  
PN6  
PN10  
PN16  
PN25  
PN40  
PN64  
PN100

The prefix PN (Pressure Nominale) is commonly used, example 'PN25'. A PN20 flange is designed to withstand pressures up to 20 bar. All dimensions are specified in mm. BS4504 has been superseded by EN1092-1 which also incorporates DIN flanges. Flange drillings of EN1092-1 are generally the same as BS4504 but BS4504 covers a wider range. For dimensions on EN1092-1/BS4504 click [here](#).

# FLANGE TABLE 1

## DN10 (3/8") - DN15 (1/2")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN10 (3/8")	BS4504-6**	75mm	50mm	4	M10	11mm				
DN10 (3/8")	BS4504-10**	90mm	60mm	4	M10	14mm				
DN10 (3/8")	BS4504-16**	90mm	60mm	4	M10	14mm				
DN10 (3/8")	BS4504-25**	90mm	60mm	4	M10	14mm				
DN10 (3/8")	BS4504-40**	90mm	60mm	4	M10	14mm				
DN10 (3/8")	BS4504-64**	100mm	70mm	4	M10	14mm				
DN10 (3/8")	BS4504-100**	100mm	70mm	4	M10	14mm				
DN10 (3/8")	JIS 5K	75mm	55mm	4	M10	12mm				
DN10 (3/8")	JIS 10K	90mm	65mm	4	M14	15mm				
DN10 (3/8")	JIS 16K	90mm	65mm	4	M14	15mm				
DN10 (3/8")	JIS 20K	90mm	65mm	4	M14	15mm				
DN10 (3/8")	JIS 30K	110mm	75mm	4	M16	19mm				
DN10 (3/8")	JIS 40K	110mm	75mm	4	M16	19mm				
DN15 (1/2")	ANSI 125/150	89mm	60mm	4	1/2"	16mm		8mm		11mm
DN15 (1/2")	ANSI 300	95mm	67mm	4	1/2"	16mm				14mm
DN15 (1/2")	ANSI 600	95mm	67mm	4	1/2"	16mm				14mm
DN15 (1/2")	ANSI 900	121mm	83mm	4	3/4"	22mm				22mm
DN15 (1/2")	ANSI 1500	121mm	83mm	4	3/4"	22mm				22mm
DN15 (1/2")	ANSI 2500	133mm	89mm	4	3/4"	22mm				30mm
DN15 (1/2")	AS2129*/BS10 Table D	95mm	67mm	4	M12	14mm	13mm	6mm		10mm
DN15 (1/2")	AS2129*/BS10 Table E	95mm	67mm	4	M12	14mm	13mm	6mm		10mm
DN15 (1/2")	AS2129*/BS10 Table F	95mm	67mm	4	M12	14mm	13mm	8mm		10mm
DN15 (1/2")	AS2129*/BS10 Table H	95mm	83mm	4	M16	17mm	16mm	10mm		13mm
DN15 (1/2")	AS2129*/BS10 Table J	114mm	83mm	4	M16	17mm		16mm		16mm
DN15 (1/2")	AS2129*/BS10 Table K	114mm	83mm	4	M16	17mm		19mm		19mm
DN15 (1/2")	AS2129*/BS10 Table R	115mm	83mm	4	M16	18mm				19mm
DN15 (1/2")	AS2129*/BS10 Table S	125mm	89mm	4	M20	22mm				22mm
DN15 (1/2")	AS2129*/BS10 Table T	140mm	102mm	4	M20	22mm				25mm
DN15 (1/2")	AS4087* PN14	95mm	67mm	4	M12	14mm			6mm	
DN15 (1/2")	AS4087* PN16									
DN15 (1/2")	AS4087* PN21									
DN15 (1/2")	AS4087* PN35									
DN15 (1/2")	BS4504-6**	80mm	55mm	4	M10	11mm	12mm			12mm
DN15 (1/2")	BS4504-10**	95mm	65mm	4	M12	14mm	14mm			14mm
DN15 (1/2")	BS4504-16**	95mm	65mm	4	M12	14mm	14mm			14mm
DN15 (1/2")	BS4504-25**	95mm	65mm	4	M12	14mm	16mm	8mm		16mm
DN15 (1/2")	BS4504-40**	95mm	65mm	4	M12	14mm		9mm		16mm
DN15 (1/2")	BS4504-64**	105mm	75mm	4	M12	14mm				20mm
DN15 (1/2")	BS4504-100**	105mm	75mm	4	M12	14mm				20mm
DN15 (1/2")	EN1092-1/2/3 PN6***	80mm	55mm	4	M10	11mm	12mm		†	12mm
DN15 (1/2")	EN1092-1/2/3 PN10***	95mm	65mm	4	M12	14mm	14mm	14mm	†	16mm
DN15 (1/2")	EN1092-1/2/3 PN16***	95mm	65mm	4	M12	14mm	14mm	14mm	†	16mm
DN15 (1/2")	EN1092-1/2/3 PN25***	95mm	65mm	4	M12	14mm	16mm	14mm	†	16mm
DN15 (1/2")	EN1092-1/2/3 PN40***	95mm	65mm	4	M12	14mm			†	16mm
DN15 (1/2")	EN1092-1/2/3 PN64***	105mm	75mm	4	M12	14mm			†	20mm
DN15 (1/2")	EN1092-1/2/3 PN100***	105mm	75mm	4	M12	14mm			†	20mm
DN15 (1/2")	JIS 5K	80mm	60mm	4	M10	12mm	12mm			9mm
DN15 (1/2")	JIS 10K	95mm	70mm	4	M14	15mm	16mm			12mm
DN15 (1/2")	JIS 16K	95mm	70mm	4	M14	15mm				12mm
DN15 (1/2")	JIS 20K	95mm	70mm	4	M14	15mm	16mm			14mm
DN15 (1/2")	JIS 30K	115mm	80mm	4	M16	19mm				18mm
DN15 (1/2")	JIS 40K	115mm	80mm	4	M16	19mm				20mm
DN15 (1/2")	JIS 63K	120mm	85mm	4	M16	19mm				23mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

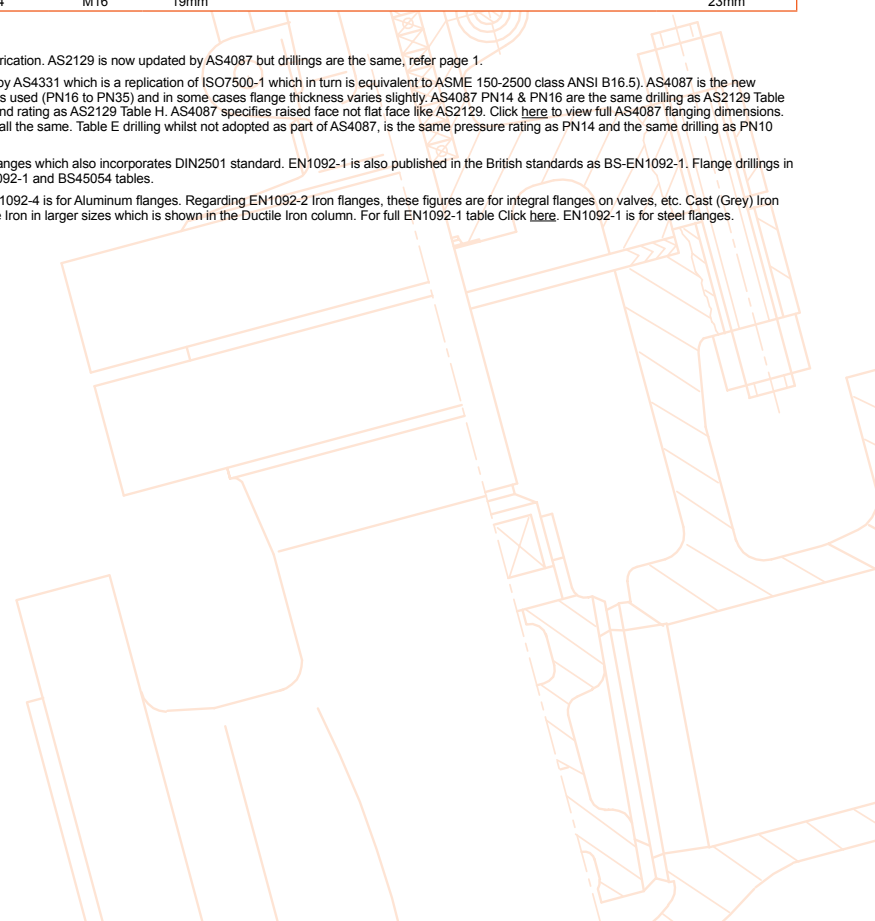
\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click [here](#) to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click [here](#). EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.



# FLANGE TABLE 2

## DN20 (3/4") - DN25 (1")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN20 (3/4")	ANSI 125/150	98mm	70mm	4	1/2"	16mm		9mm		14mm
DN20 (3/4")	ANSI 300	117mm	83mm	4	5/8"	19mm		13mm		16mm
DN20 (3/4")	ANSI 600	117mm	83mm	4	5/8"	19mm				16mm
DN20 (3/4")	ANSI 900	130mm	89mm	4	3/4"	22mm				25mm
DN20 (3/4")	ANSI 1500	130mm	89mm	4	3/4"	22mm				25mm
DN20 (3/4")	ANSI 2500	140mm	95mm	4	3/4"	22mm				32mm
DN20 (3/4")	AS2129*/BS10 Table D	102mm	73mm	4	M12	14mm	13mm	6mm		10mm
DN20 (3/4")	AS2129*/BS10 Table E	102mm	73mm	4	M12	14mm	13mm	6mm		10mm
DN20 (3/4")	AS2129*/BS10 Table F	102mm	73mm	4	M12	14mm	13mm	8mm		10mm
DN20 (3/4")	AS2129*/BS10 Table H	114mm	83mm	4	M16	17mm	16mm	10mm		13mm
DN20 (3/4")	AS2129*/BS10 Table J	114mm	83mm	4	M16	17mm		16mm		16mm
DN20 (3/4")	AS2129*/BS10 Table K	114mm	83mm	4	M16	17mm		19mm		19mm
DN20 (3/4")	AS2129*/BS10 Table R	114mm	83mm	4	M16	22mm				19mm
DN20 (3/4")	AS2129*/BS10 Table S	127mm	89mm	4	M20	22mm				22mm
DN20 (3/4")	AS2129*/BS10 Table T	140mm	102mm	4	M20					25mm
DN20 (3/4")	AS4087* PN14	100mm	73mm	4	M12	14mm		6mm		
DN20 (3/4")	AS4087* PN16									
DN20 (3/4")	AS4087* PN21									
DN20 (3/4")	AS4087* PN35									
DN20 (3/4")	BS4504-6**	90mm	65mm	4	M10	11mm	14mm			14mm
DN20 (3/4")	BS4504-10**	105mm	75mm	4	M12	14mm	16mm			16mm
DN20 (3/4")	BS4504-16**	105mm	75mm	4	M12	14mm	16mm	6mm		16mm
DN20 (3/4")	BS4504-25**	105mm	75mm	4	M12	14mm	18mm	8mm		18mm
DN20 (3/4")	BS4504-40**	105mm	75mm	4	M12	14mm	18mm	9mm		18mm
DN20 (3/4")	BS4504-64**	130mm	90mm	4	M16	18mm				22mm
DN20 (3/4")	BS4504-100**	130mm	90mm	4	M16	18mm				22mm
DN20 (3/4")	EN1092-1/2/3 PN6***	90mm	65mm	4	M10	11mm	14mm		†	14mm
DN20 (3/4")	EN1092-1/2/3 PN10***	105mm	75mm	4	M12	14mm	16mm	16mm	†	18mm
DN20 (3/4")	EN1092-1/2/3 PN16***	105mm	75mm	4	M12	14mm	16mm	16mm	†	18mm
DN20 (3/4")	EN1092-1/2/3 PN25***	105mm	75mm	4	M12	14mm	18mm	16mm	†	18mm
DN20 (3/4")	EN1092-1/2/3 PN40***	105mm	75mm	4	M12	14mm			†	18mm
DN20 (3/4")	EN1092-1/2/3 PN64***	130mm	90mm	4	M16	18mm			†	22mm
DN20 (3/4")	EN1092-1/2/3 PN100***	130mm	90mm	4	M16	18mm			†	22mm
DN20 (3/4")	JIS 5K	85mm	65mm	4	M10	12mm	14mm			10mm
DN20 (3/4")	JIS 10K	100mm	75mm	4	M14	15mm	18mm			14mm
DN20 (3/4")	JIS 16K	100mm	75mm	4	M14	15mm				14mm
DN20 (3/4")	JIS 20K	100mm	75mm	4	M14	15mm	18mm			16mm
DN20 (3/4")	JIS 30K	120mm	85mm	4	M16	19mm				18mm
DN20 (3/4")	JIS 40K	120mm	85mm	4	M16	19mm				20mm
DN20 (3/4")	JIS 63K	135mm	95mm	4	M20	23mm				25mm
DN25 (1")	ANSI 125/150	108mm	79mm	4	1/2"	16mm	11mm			11mm
DN25 (1")	ANSI 300	124mm	89mm	4	5/8"	19mm		15mm		17mm
DN25 (1")	ANSI 600	124mm	89mm	4	5/8"	19mm				17mm
DN25 (1")	ANSI 900	149mm	102mm	4	7/8"	25mm				29mm
DN25 (1")	ANSI 1500	149mm	102mm	4	7/8"	25mm				29mm
DN25 (1")	ANSI 2500	159mm	108mm	4	7/8"	25mm				41mm
DN25 (1")	AS2129*/BS10 Table D	114mm	83mm	4	M12	14mm	13mm	8mm		10mm
DN25 (1")	AS2129*/BS10 Table E	114mm	83mm	4	M12	14mm	13mm	8mm		10mm
DN25 (1")	AS2129*/BS10 Table F	121mm	87mm	4	M12	14mm	13mm	10mm		10mm
DN25 (1")	AS2129*/BS10 Table H	121mm	87mm	4	M16	17mm	19mm	11mm		14mm
DN25 (1")	AS2129*/BS10 Table J	121mm	87mm	4	M16	17mm		19mm		19mm
DN25 (1")	AS2129*/BS10 Table K	127mm	95mm	4	M16	17mm		22mm		22mm
DN25 (1")	AS2129*/BS10 Table R	127mm	95mm	4	M16	17mm				22mm
DN25 (1")	AS2129*/BS10 Table S	140mm	102mm	4	M20	22mm				25mm
DN25 (1")	AS2129*/BS10 Table T	145mm	108mm	4	M20	22mm				29mm
DN25 (1")	AS4087* PN14	115mm	83mm	4	M12	14mm		8mm		
DN25 (1")	AS4087* PN16									
DN25 (1")	AS4087* PN21									
DN25 (1")	AS4087* PN35									
DN25 (1")	BS4504-6**	100mm	75mm	4	M10	11mm	14mm			14mm
DN25 (1")	BS4504-10**	115mm	85mm	4	M12	14mm	16mm			14mm
DN25 (1")	BS4504-16**	115mm	85mm	4	M12	14mm	16mm	8mm		18mm
DN25 (1")	BS4504-25**	115mm	85mm	4	M12	14mm	18mm	9mm		18mm
DN25 (1")	BS4504-40**	115mm	85mm	4	M12	14mm		11mm		18mm
DN25 (1")	BS4504-64**	140mm	100mm	4	M16	18mm				24mm
DN25 (1")	BS4504-100**	140mm	100mm	4	M16	18mm				24mm
DN25 (1")	EN1092-1/2/3 PN6***	100mm	75mm	4	M10	11mm	14mm		†	14mm
DN25 (1")	EN1092-1/2/3 PN10***	115mm	85mm	4	M12	14mm	16mm	16mm	†	18mm
DN25 (1")	EN1092-1/2/3 PN16***	115mm	85mm	4	M12	14mm	16mm	16mm	†	18mm
DN25 (1")	EN1092-1/2/3 PN25***	115mm	85mm	4	M12	14mm	18mm	16mm	†	18mm
DN25 (1")	EN1092-1/2/3 PN40***	115mm	85mm	4	M12	14mm			†	18mm
DN25 (1")	EN1092-1/2/3 PN64***	140mm	100mm	4	M16	18mm			†	24mm
DN25 (1")	EN1092-1/2/3 PN100***	140mm	100mm	4	M16	18mm			†	24mm
DN25 (1")	JIS 5K	95mm	75mm	4	M10	12mm	14mm			10mm
DN25 (1")	JIS 10K	125mm	90mm	4	M16	19mm	18mm			14mm
DN25 (1")	JIS 16K	125mm	90mm	4	M16	19mm				14mm
DN25 (1")	JIS 20K	125mm	90mm	4	M16	19mm	20mm			16mm
DN25 (1")	JIS 30K	130mm	95mm	4	M16	19mm				20mm
DN25 (1")	JIS 40K	130mm	95mm	4	M16	19mm				22mm
DN25 (1")	JIS 63K	140mm	100mm	4	M20	23mm				27mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click [here](#) to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

\*\*\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click [here](#). EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.

# FLANGE TABLE 3

## DN38 (1 1/4") - DN40 (1 1/2")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN38 (1 1/4")	ANSI 125/150	117mm	89mm	4	1/2"	16mm	13mm	10mm		13mm
DN38 (1 1/4")	ANSI 300	133mm	98mm	4	5/8"	19mm		16mm		19mm
DN38 (1 1/4")	ANSI 600	133mm	98mm	4	5/8"	19mm				21mm
DN38 (1 1/4")	ANSI 900	159mm	111mm	4	7/8"	25mm				29mm
DN38 (1 1/4")	ANSI 1500	159mm	111mm	4	7/8"	25mm				29mm
DN38 (1 1/4")	ANSI 2500	184mm	130mm	4	1"	29mm				44mm
DN38 (1 1/4")	AS2129*/BS10 Table D	121mm	87mm	4	M12	14mm	16mm	8mm		13mm
DN38 (1 1/4")	AS2129*/BS10 Table E	121mm	87mm	4	M12	14mm	16mm	8mm		13mm
DN38 (1 1/4")	AS2129*/BS10 Table F	133mm	98mm	4	M16	17mm	16mm	10mm		13mm
DN38 (1 1/4")	AS2129*/BS10 Table H	133mm	98mm	4	M16	17mm	22mm	11mm		17mm
DN38 (1 1/4")	AS2129*/BS10 Table J	133mm	98mm	4	M16	17mm		19mm		19mm
DN38 (1 1/4")	AS2129*/BS10 Table K	133mm	98mm	4	M16	17mm		22mm		22mm
DN38 (1 1/4")	AS2129*/BS10 Table R	133mm	98mm	4	M16	17mm				22mm
DN38 (1 1/4")	AS2129*/BS10 Table S	146mm	108mm	4	M20	22mm				29mm
DN38 (1 1/4")	AS2129*/BS10 Table T	160mm	121mm	4	M24	26mm				32mm
DN38 (1 1/4")	AS4087* PN14	120mm	87mm	4	M12	14mm			8mm	
DN38 (1 1/4")	AS4087* PN16									
DN38 (1 1/4")	AS4087* PN21									
DN38 (1 1/4")	AS4087* PN35									
DN38 (1 1/4")	BS4504-6**	120mm	90mm	4	M12	14mm	16mm			16mm
DN38 (1 1/4")	BS4504-10**	140mm	100mm	4	M16	18mm	18mm			16mm
DN38 (1 1/4")	BS4504-16**	140mm	100mm	4	M16	18mm	18mm	8mm		18mm
DN38 (1 1/4")	BS4504-25**	140mm	100mm	4	M16	18mm	20mm	9mm		18mm
DN38 (1 1/4")	BS4504-40**	140mm	100mm	4	M16	18mm		11mm		18mm
DN38 (1 1/4")	BS4504-64**	155mm	110mm	4	M20	22mm				26mm
DN38 (1 1/4")	BS4504-100**	155mm	110mm	4	M20	22mm				26mm
DN38 (1 1/4")	EN1092-1/2/3 PN6***	120mm	90mm	4	M12	14mm	16mm		†	14mm
DN38 (1 1/4")	EN1092-1/2/3 PN10***	140mm	100mm	4	M16	18mm	18mm	18mm	†	18mm
DN38 (1 1/4")	EN1092-1/2/3 PN16***	140mm	100mm	4	M16	18mm	18mm	18mm	†	18mm
DN38 (1 1/4")	EN1092-1/2/3 PN25***	140mm	100mm	4	M16	18mm	20mm	18mm	†	18mm
DN38 (1 1/4")	EN1092-1/2/3 PN40***	140mm	100mm	4	M16	18mm			†	18mm
DN38 (1 1/4")	EN1092-1/2/3 PN64***	155mm	110mm	4	M20	22mm			†	26mm
DN38 (1 1/4")	EN1092-1/2/3 PN100***	155mm	110mm	4	M20	22mm			†	24mm
DN38 (1 1/4")	JIS 5K	115mm	90mm	4	M12	15mm	16mm			12mm
DN38 (1 1/4")	JIS 10K	135mm	100mm	4	M16	19mm	20mm			16mm
DN38 (1 1/4")	JIS 16K	135mm	100mm	4	M16	19mm				16mm
DN38 (1 1/4")	JIS 20K	135mm	100mm	4	M16	19mm	20mm			18mm
DN38 (1 1/4")	JIS 30K	140mm	105mm	4	M16	19mm				22mm
DN38 (1 1/4")	JIS 40K	140mm	105mm	4	M16	19mm				24mm
DN38 (1 1/4")	JIS 63K	150mm	110mm	4	M20	23mm				30mm
DN40 (1 1/2")	ANSI 125/150	127mm	98mm	4	1/2"	16mm	14mm			14mm
DN40 (1 1/2")	ANSI 300	156mm	114mm	4	3/4"	22mm		17mm		21mm
DN40 (1 1/2")	ANSI 600	156mm	114mm	4	3/4"	22mm				22mm
DN40 (1 1/2")	ANSI 900	178mm	124mm	4	1"	29mm				32mm
DN40 (1 1/2")	ANSI 1500	178mm	124mm	4	1"	29mm				32mm
DN40 (1 1/2")	ANSI 2500	203mm	146mm	4	1"	32mm				51mm
DN40 (1 1/2")	AS2129*/BS10 Table D	133mm	98mm	4	M12	14mm	16mm	10mm		13mm
DN40 (1 1/2")	AS2129*/BS10 Table E	133mm	98mm	4	M12	14mm	16mm	10mm		13mm
DN40 (1 1/2")	AS2129*/BS10 Table F	140mm	105mm	4	M16	17mm	16mm	11mm		13mm
DN40 (1 1/2")	AS2129*/BS10 Table H	140mm	105mm	4	M16	17mm	22mm	13mm		17mm
DN40 (1 1/2")	AS2129*/BS10 Table J	140mm	105mm	4	M16	17mm		22mm		22mm
DN40 (1 1/2")	AS2129*/BS10 Table K	152mm	114mm	4	M20	22mm		25mm		25mm
DN40 (1 1/2")	AS2129*/BS10 Table R	152mm	114mm	4	M20	22mm				25mm
DN40 (1 1/2")	AS2129*/BS10 Table S	159mm	121mm	4	M20	22mm				29mm
DN40 (1 1/2")	AS2129*/BS10 Table T	170mm	133mm	8	M20	22mm				35mm
DN40 (1 1/2")	AS4087* PN14	135mm	98mm	4	M12	14mm			10mm	
DN40 (1 1/2")	AS4087* PN16									
DN40 (1 1/2")	AS4087* PN21									
DN40 (1 1/2")	AS4087* PN35									
DN40 (1 1/2")	BS4504-6**	130mm	100mm	4	M12	14mm	16mm			16mm
DN40 (1 1/2")	BS4504-10**	150mm	110mm	4	M16	18mm	18mm			16mm
DN40 (1 1/2")	BS4504-16**	150mm	110mm	4	M16	18mm	18mm	9mm		18mm
DN40 (1 1/2")	BS4504-25**	150mm	110mm	4	M16	18mm	20mm	11mm		18mm
DN40 (1 1/2")	BS4504-40**	150mm	110mm	4	M16	18mm				18mm
DN40 (1 1/2")	BS4504-64**	170mm	125mm	4	M20	22mm				28mm
DN40 (1 1/2")	BS4504-100**	170mm	125mm	4	M20	22mm				28mm
DN40 (1 1/2")	EN1092-1/2/3 PN6***	130mm	100mm	4	M12	14mm	16mm		†	14mm
DN40 (1 1/2")	EN1092-1/2/3 PN10***	150mm	110mm	4	M16	18mm	18mm	19mm	†	18mm
DN40 (1 1/2")	EN1092-1/2/3 PN16***	150mm	110mm	4	M16	18mm	18mm	19mm	†	18mm
DN40 (1 1/2")	EN1092-1/2/3 PN25***	150mm	110mm	4	M16	18mm	20mm	19mm	†	18mm
DN40 (1 1/2")	EN1092-1/2/3 PN40***	150mm	110mm	4	M16	18mm		19mm	†	18mm
DN40 (1 1/2")	EN1092-1/2/3 PN64***	170mm	125mm	4	M20	22mm			†	28mm
DN40 (1 1/2")	EN1092-1/2/3 PN100***	170mm	125mm	4	M20	22mm			†	26mm
DN40 (1 1/2")	JIS 5K	120mm	95mm	4	M12	15mm	16mm			12mm
DN40 (1 1/2")	JIS 10K	140mm	105mm	4	M16	19mm	20mm			16mm
DN40 (1 1/2")	JIS 16K	140mm	105mm	4	M16	19mm				16mm
DN40 (1 1/2")	JIS 20K	140mm	105mm	4	M16	19mm	22mm			18mm
DN40 (1 1/2")	JIS 30K	160mm	120mm	4	M20	23mm				22mm
DN40 (1 1/2")	JIS 40K	160mm	120mm	4	M20	23mm				24mm
DN40 (1 1/2")	JIS 63K	175mm	130mm	4	M22	25mm				32mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click [here](#) to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click [here](#). EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.

# FLANGE TABLE 4

## DN50 (2") - DN65 (2 1/2")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN50 (2")	ANSI 125/150	152mm	121mm	4	5/8"	19mm	16mm	13mm		16mm
DN50 (2")	ANSI 300	165mm	127mm	8	5/8"	19mm		19mm		22mm
DN50 (2")	ANSI 600	165mm	127mm	8	5/8"	19mm				25mm
DN50 (2")	ANSI 900	216mm	165mm	8	7/8"	25mm				38mm
DN50 (2")	ANSI 1500	216mm	165mm	8	7/8"	25mm				38mm
DN50 (2")	ANSI 2500	235mm	171mm	8	1"	29mm				57mm
DN50 (2")	AS2129*/BS10 Table D	152mm	114mm	4	M16	17mm	17mm	10mm		14mm
DN50 (2")	AS2129*/BS10 Table E	152mm	114mm	4	M16	17mm	19mm	10mm		14mm
DN50 (2")	AS2129*/BS10 Table F	165mm	127mm	4	M16	17mm	19mm	11mm		16mm
DN50 (2")	AS2129*/BS10 Table H	165mm	127mm	4	M16	17mm	25mm	13mm		19mm
DN50 (2")	AS2129*/BS10 Table J	165mm	127mm	4	M20	22mm		25mm		25mm
DN50 (2")	AS2129*/BS10 Table K	165mm	127mm	8	M16	17mm		25mm		25mm
DN50 (2")	AS2129*/BS10 Table R	165mm	127mm	8	M16	17mm				25mm
DN50 (2")	AS2129*/BS10 Table S	172mm	133mm	8	M20	22mm				25mm
DN50 (2")	AS2129*/BS10 Table T	185mm	146mm	8	M20	22mm				25mm
DN50 (2")	AS4087* PN14	150mm	114mm	4	M16	18mm			10mm	
DN50 (2")	AS4087* PN16	150mm	114mm	4	M16	18mm				11mm
DN50 (2")	AS4087* PN21	165mm	127mm	4	M16	18mm				15mm
DN50 (2")	AS4087* PN35									19mm
DN50 (2")	BS4504-6**	140mm	110mm	4	M12	14mm	16mm			32mm
DN50 (2")	BS4504-10**	165mm	125mm	4	M16	18mm	20mm			35mm
DN50 (2")	BS4504-16**	165mm	125mm	4	M16	18mm	20mm	11mm		20mm
DN50 (2")	BS4504-25**	165mm	125mm	4	M16	18mm	22mm	11mm		20mm
DN50 (2")	BS4504-40**	165mm	125mm	4	M16	18mm		13mm		20mm
DN50 (2")	BS4504-64**	180mm	135mm	4	M20	22mm				26mm
DN50 (2")	BS4504-100**	195mm	145mm	4	M24	26mm				30mm
DN50 (2")	EN1092-1/2/3 PN6***	140mm	110mm	4	M12	14mm	16mm		†	14mm
DN50 (2")	EN1092-1/2/3 PN10***	165mm	125mm	4	M16	18mm	20mm	19mm	†	18mm
DN50 (2")	EN1092-1/2/3 PN16***	165mm	125mm	4	M16	18mm	20mm	19mm	†	18mm
DN50 (2")	EN1092-1/2/3 PN25***	165mm	125mm	4	M16	18mm	22mm	19mm	†	20mm
DN50 (2")	EN1092-1/2/3 PN40***	165mm	125mm	4	M16	18mm		19mm	†	20mm
DN50 (2")	EN1092-1/2/3 PN64***	180mm	135mm	4	M20	22mm			†	26mm
DN50 (2")	EN1092-1/2/3 PN100***	195mm	145mm	4	M22	26mm			†	28mm
DN50 (2")	JIS 5K	130mm	105mm	4	M14	15mm		16mm		14mm
DN50 (2")	JIS 10K	155mm	120mm	4	M16	19mm		20mm		16mm
DN50 (2")	JIS 16K	155mm	120mm	8	M16	19mm		20mm		16mm
DN50 (2")	JIS 20K	155mm	120mm	8	M16	19mm		22mm		18mm
DN50 (2")	JIS 30K	165mm	130mm	8	M16	19mm				22mm
DN50 (2")	JIS 40K	165mm	130mm	8	M16	19mm				26mm
DN50 (2")	JIS 63K	185mm	145mm	8	M20	23mm				34mm
DN65 (2 1/2")	ANSI 125/150	178mm	140mm	4	5/8"	19mm	17mm			17mm
DN65 (2 1/2")	ANSI 300	191mm	149mm	8	3/4"	22mm		21mm		25mm
DN65 (2 1/2")	ANSI 600	191mm	149mm	8	3/4"	22mm				29mm
DN65 (2 1/2")	ANSI 900	244mm	191mm	8	1"	29mm				41mm
DN65 (2 1/2")	ANSI 1500	244mm	191mm	8	1"	29mm				41mm
DN65 (2 1/2")	ANSI 2500	267mm	197mm	8	1"	32mm				64mm
DN65 (2 1/2")	AS2129*/BS10 Table D	165mm	127mm	4	M16	17mm	17mm	11mm		14mm
DN65 (2 1/2")	AS2129*/BS10 Table E	165mm	127mm	4	M16	17mm	19mm	11mm		14mm
DN65 (2 1/2")	AS2129*/BS10 Table F	184mm	146mm	8	M16	17mm	19mm	13mm		16mm
DN65 (2 1/2")	AS2129*/BS10 Table H	184mm	146mm	8	M16	17mm	25mm	14mm		19mm
DN65 (2 1/2")	AS2129*/BS10 Table J	184mm	146mm	8	M20	22mm		25mm		25mm
DN65 (2 1/2")	AS2129*/BS10 Table K	184mm	146mm	8	M20	22mm		29mm		29mm
DN65 (2 1/2")	AS2129*/BS10 Table R	184mm	146mm	8	M20	22mm				29mm
DN65 (2 1/2")	AS2129*/BS10 Table S	184mm	146mm	8	M20	22mm				32mm
DN65 (2 1/2")	AS2129*/BS10 Table T	205mm	165mm	8	M24	26mm				41mm
DN65 (2 1/2")	AS4087* PN14	165mm	127mm	4	M16	18mm				11mm
DN65 (2 1/2")	AS4087* PN16	165mm	127mm	4	M16	18mm				11mm
DN65 (2 1/2")	AS4087* PN21	185mm	146mm	8	M16	18mm				15mm
DN65 (2 1/2")	AS4087* PN35									19mm
DN65 (2 1/2")	BS4504-6**	160mm	130mm	4	M12	14mm	16mm			16mm
DN65 (2 1/2")	BS4504-10**	185mm	145mm	4	M16	18mm	20mm			20mm
DN65 (2 1/2")	BS4504-16**	185mm	145mm	4	M16	18mm	20mm	13mm		18mm
DN65 (2 1/2")	BS4504-25**	185mm	145mm	8	M16	18mm	24mm	13mm		22mm
DN65 (2 1/2")	BS4504-40**	185mm	145mm	8	M16	18mm		14mm		22mm
DN65 (2 1/2")	BS4504-64**	205mm	160mm	8	M20	22mm				26mm
DN65 (2 1/2")	BS4504-100**	220mm	170mm	8	M24	26mm				34mm
DN65 (2 1/2")	EN1092-1/2/3 PN6***	160mm	130mm	4	M12	14mm	16mm		†	14mm
DN65 (2 1/2")	EN1092-1/2/3 PN10***	185mm	145mm	8	M16	18mm	20mm	19mm	†	18mm
DN65 (2 1/2")	EN1092-1/2/3 PN16***	185mm	145mm	8	M16	18mm	20mm	19mm	†	18mm
DN65 (2 1/2")	EN1092-1/2/3 PN25***	185mm	145mm	8	M16	18mm	24mm	19mm	†	22mm
DN65 (2 1/2")	EN1092-1/2/3 PN40***	185mm	145mm	8	M16	18mm		19mm	†	22mm
DN65 (2 1/2")	EN1092-1/2/3 PN64***	205mm	160mm	8	M20	22mm			†	26mm
DN65 (2 1/2")	EN1092-1/2/3 PN100***	220mm	170mm	8	M22	26mm			†	30mm
DN65 (2 1/2")	JIS 5K	155mm	130mm	4	M14	15mm	18mm			14mm
DN65 (2 1/2")	JIS 10K	175mm	140mm	4	M16	19mm		22mm		18mm
DN65 (2 1/2")	JIS 16K	175mm	140mm	8	M16	19mm		22mm		18mm
DN65 (2 1/2")	JIS 20K	175mm	140mm	8	M16	19mm		24mm		20mm
DN65 (2 1/2")	JIS 30K	200mm	160mm	8	M20	23mm				26mm
DN65 (2 1/2")	JIS 40K	200mm	160mm	8	M20	23mm				30mm
DN65 (2 1/2")	JIS 63K	220mm	175mm	8	M22	25mm				38mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click [here](#) to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS4504 tables.

\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click [here](#). EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.

# FLANGE TABLE 5

## DN80 (3") - DN90 (3 1/2")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN80 (3")	ANSI 125/150	191mm	152mm	4	5/8"	19mm	19mm	16mm		19mm
DN80 (3")	ANSI 300	210mm	168mm	8	3/4"	22mm		23mm		29mm
DN80 (3")	ANSI 600	210mm	168mm	8	3/4"	22mm				32mm
DN80 (3")	ANSI 900	241mm	191mm	8	7/8"	25mm				38mm
DN80 (3")	ANSI 1500	267mm	203mm	8	1 1/8"	32mm				48mm
DN80 (3")	ANSI 2500	305mm	229mm	8	1 1/4"	35mm				73mm
DN80 (3")	AS2129*/BS10 Table D	184mm	146mm	4	M16	17mm	19mm	13mm		14mm
DN80 (3")	AS2129*/BS10 Table E	184mm	146mm	4	M16	17mm	19mm	13mm		14mm
DN80 (3")	AS2129*/BS10 Table F	203mm	165mm	8	M16	17mm	19mm	14mm		16mm
DN80 (3")	AS2129*/BS10 Table H	203mm	165mm	8	M16	17mm	29mm	16mm		22mm
DN80 (3")	AS2129*/BS10 Table J	203mm	165mm	8	M20	22mm		32mm		32mm
DN80 (3")	AS2129*/BS10 Table K	203mm	165mm	8	M20	22mm		32mm		32mm
DN80 (3")	AS2129*/BS10 Table R	203mm	165mm	8	M20	22mm				32mm
DN80 (3")	AS2129*/BS10 Table S	203mm	165mm	8	M24	26mm				35mm
DN80 (3")	AS2129*/BS10 Table T	235mm	191mm	8	M27	30mm				48mm
DN80 (3")	AS4087* PN14	185mm	146mm	4	M16	18mm	19mm		13mm	
DN80 (3")	AS4087* PN16	185mm	146mm	4	M16	18mm		18mm		11mm
DN80 (3")	AS4087* PN21	205mm	165mm	8	M16	18mm	19mm			15mm
DN80 (3")	AS4087* PN35	205mm	165mm	8	M16	18mm	29mm	22mm		24mm
DN80 (3")	BS4504-6**	190mm	150mm	4	M16	18mm	18mm			18mm
DN80 (3")	BS4504-10**	200mm	160mm	8	M16	18mm	22mm			20mm
DN80 (3")	BS4504-16**	200mm	160mm	8	M16	18mm	22mm	13mm		20mm
DN80 (3")	BS4504-25**	200mm	160mm	8	M16	18mm	26mm	14mm		24mm
DN80 (3")	BS4504-40**	200mm	160mm	8	M16	18mm		16mm		24mm
DN80 (3")	BS4504-64**	215mm	170mm	8	M20	22mm				28mm
DN80 (3")	BS4504-100**	230mm	180mm	8	M24	26mm				36mm
DN80 (3")	EN1092-1/2/3 PN6***	190mm	150mm	4	M16	18mm	18mm		†	16mm
DN80 (3")	EN1092-1/2/3 PN10***	200mm	160mm	8	M16	18mm	22mm	19mm	†	20mm
DN80 (3")	EN1092-1/2/3 PN16***	200mm	160mm	8	M16	18mm	22mm	19mm	†	20mm
DN80 (3")	EN1092-1/2/3 PN25***	200mm	160mm	8	M16	18mm	26mm	19mm	†	24mm
DN80 (3")	EN1092-1/2/3 PN40***	200mm	160mm	8	M16	18mm		19mm	†	24mm
DN80 (3")	EN1092-1/2/3 PN64***	215mm	170mm	8	M20	22mm			†	28mm
DN80 (3")	EN1092-1/2/3 PN100***	230mm	180mm	8	M22	26mm			†	32mm
DN80 (3")	JIS 5K	180mm	145mm	4	M16	19mm	18mm			14mm
DN80 (3")	JIS 10K	185mm	150mm	8	M16	19mm	22mm			18mm
DN80 (3")	JIS 16K	200mm	160mm	8	M20	23mm	24mm			20mm
DN80 (3")	JIS 20K	200mm	160mm	8	M20	23mm	26mm			22mm
DN80 (3")	JIS 30K	210mm	170mm	8	M20	23mm				28mm
DN80 (3")	JIS 40K	210mm	170mm	8	M20	23mm				32mm
DN80 (3")	JIS 63K	230mm	185mm	8	M22	25mm				40mm
DN90 (3 1/2")	ANSI 125/150	216mm	178mm	8	5/8"	19mm				24mm
DN90 (3 1/2")	ANSI 300	229mm	184mm	8	3/4"	22mm				30mm
DN90 (3 1/2")	ANSI 600	229mm	184mm	8	7/8"	25mm				35mm
DN90 (3 1/2")	AS2129*/BS10 Table D	205mm	165mm	4	M16	18mm	19mm			10mm
DN90 (3 1/2")	AS2129*/BS10 Table E	205mm	165mm	4	M16	18mm	19mm			12mm
DN90 (3 1/2")	AS2129*/BS10 Table F	215mm	178mm	8	M16	18mm	22mm			19mm
DN90 (3 1/2")	AS2129*/BS10 Table H	215mm	178mm	8	M16	18mm	29mm			22mm
DN90 (3 1/2")	AS2129*/BS10 Table J	215mm	178mm	8	M20	22mm				32mm
DN90 (3 1/2")	AS2129*/BS10 Table K	230mm	184mm	8	M24	26mm				32mm
DN90 (3 1/2")	AS2129*/BS10 Table R	230mm	184mm	8	M24	26mm				32mm
DN90 (3 1/2")	AS2129*/BS10 Table S	230mm	191mm	8	M24	26mm				38mm
DN90 (3 1/2")	AS2129*/BS10 Table T	265mm	216mm	8	M30	33mm				54mm
DN90 (3 1/2")	JIS 5K	190mm	155mm	4	M16	19mm	18mm			14mm
DN90 (3 1/2")	JIS 10K	195mm	160mm	8	M16	19mm	22mm			18mm
DN90 (3 1/2")	JIS 16K	210mm	170mm	8	M20	23mm	24mm			20mm
DN90 (3 1/2")	JIS 20K	210mm	170mm	8	M20	23mm	28mm			24mm
DN90 (3 1/2")	JIS 30K	230mm	185mm	8	M22	25mm				30mm
DN90 (3 1/2")	JIS 40K	230mm	185mm	8	M22	25mm				34mm
DN90 (3 1/2")	JIS 63K	255mm	205mm	8	M24	27mm				42mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click here to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click here. EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.

# FLANGE TABLE 6

## DN100 (4") - DN125 (5")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN100 (4")	ANSI 125/150	229mm	191mm	8	5/8"	19mm	24mm	17mm		24mm
DN100 (4")	ANSI 300	254mm	200mm	8	3/4"	22mm		27mm		32mm
DN100 (4")	ANSI 600	273mm	216mm	8	7/8"	25mm				38mm
DN100 (4")	ANSI 900	292mm	235mm	8	1 1/8"	32mm				44mm
DN100 (4")	ANSI 1500	311mm	241mm	8	1 1/4"	35mm				54mm
DN100 (4")	ANSI 2500	356mm	273mm	8	1 1/2"	41mm				83mm
DN100 (4")	AS2129*/BS10 Table D	216mm	178mm	4	M16	17mm	19mm	16mm		17mm
DN100 (4")	AS2129*/BS10 Table E	216mm	178mm	8	M16	17mm	22mm	16mm		17mm
DN100 (4")	AS2129*/BS10 Table F	229mm	191mm	8	M16	17mm	22mm	17mm		19mm
DN100 (4")	AS2129*/BS10 Table H	229mm	191mm	8	M16	17mm	32mm	19mm		25mm
DN100 (4")	AS2129*/BS10 Table J	229mm	191mm	8	M20	22mm		35mm		35mm
DN100 (4")	AS2129*/BS10 Table K	241mm	197mm	8	M22	25mm		35mm		35mm
DN100 (4")	AS2129*/BS10 Table R	241mm	197mm	8	M22	25mm				35mm
DN100 (4")	AS2129*/BS10 Table S	250mm	203mm	8	M27	29mm				41mm
DN100 (4")	AS2129*/BS10 Table T	285mm	235mm	8	M30	33mm				57mm
DN100 (4")	AS4087* PN14	215mm	178mm	4	M16	18mm	22mm		22mm	
DN100 (4")	AS4087* PN16	215mm	178mm	4	M16	18mm		20mm		13mm
DN100 (4")	AS4087* PN21	230mm	191mm	8	M16	18mm	22mm			19mm
DN100 (4")	AS4087* PN35	230mm	191mm	8	M16	18mm	32mm	22mm		24mm
DN100 (4")	BS4504-6**	210mm	170mm	4	M16	18mm	18mm			18mm
DN100 (4")	BS4504-10**	220mm	180mm	8	M16	18mm	24mm			20mm
DN100 (4")	BS4504-16**	220mm	180mm	8	M16	18mm	24mm	16mm		20mm
DN100 (4")	BS4504-25**	235mm	190mm	8	M20	22mm	28mm	17mm		24mm
DN100 (4")	BS4504-40**	235mm	190mm	8	M20	22mm		19mm		24mm
DN100 (4")	BS4504-64**	250mm	200mm	8	M24	26mm				30mm
DN100 (4")	BS4504-100**	265mm	210mm	8	M27	30mm				40mm
DN100 (4")	EN1092-1/2/3 PN6***	210mm	170mm	4	M16	18mm	18mm		†	16mm
DN100 (4")	EN1092-1/2/3 PN10***	220mm	180mm	8	M16	18mm	24mm	19mm	†	20mm
DN100 (4")	EN1092-1/2/3 PN16***	220mm	180mm	8	M16	18mm	24mm	19mm	†	20mm
DN100 (4")	EN1092-1/2/3 PN25***	235mm	190mm	8	M20	22mm	28mm	19mm	†	24mm
DN100 (4")	EN1092-1/2/3 PN40***	235mm	190mm	8	M20	22mm		19mm	†	24mm
DN100 (4")	EN1092-1/2/3 PN64***	250mm	200mm	8	M24	26mm			†	30mm
DN100 (4")	EN1092-1/2/3 PN100***	265mm	210mm	8	M27	30mm			†	36mm
DN100 (4")	JIS 5K	200mm	165mm	8	M16	19mm		20mm		16mm
DN100 (4")	JIS 10K	210mm	175mm	8	M16	19mm		24mm		18mm
DN100 (4")	JIS 16K	225mm	185mm	8	M20	23mm		26mm		22mm
DN100 (4")	JIS 20K	225mm	185mm	8	M20	23mm		28mm		24mm
DN100 (4")	JIS 30K	240mm	195mm	8	M22	25mm				32mm
DN100 (4")	JIS 40K	250mm	205mm	8	M22	25mm				36mm
DN100 (4")	JIS 63K	270mm	220mm	8	M24	27mm				44mm
DN125 (5")	ANSI 125/150	254mm	216mm	8	3/4"	22mm	24mm			24mm
DN125 (5")	ANSI 300	279mm	235mm	8	3/4"	22mm		29mm		35mm
DN125 (5")	ANSI 600	330mm	267mm	8	1"	29mm				44mm
DN125 (5")	ANSI 900	349mm	279mm	8	1 1/4"	35mm				51mm
DN125 (5")	ANSI 1500	375mm	292mm	8	1 1/2"	41mm				73mm
DN125 (5")	ANSI 2500	419mm	324mm	8	1 3/4"	48mm				98mm
DN125 (5")	AS2129*/BS10 Table D	254mm	210mm	8	M16	17mm	21mm	17mm		17mm
DN125 (5")	AS2129*/BS10 Table E	254mm	210mm	8	M16	17mm	22mm	17mm		17mm
DN125 (5")	AS2129*/BS10 Table F	279mm	235mm	8	M20	22mm	25mm	19mm		22mm
DN125 (5")	AS2129*/BS10 Table H	279mm	235mm	8	M20	22mm	35mm	22mm		29mm
DN125 (5")	AS2129*/BS10 Table J	279mm	235mm	8	M24	25mm		38mm		38mm
DN125 (5")	AS2129*/BS10 Table K	279mm	235mm	12	M24	25mm		41mm		41mm
DN125 (5")	AS2129*/BS10 Table R	279mm	235mm	12	M24	25mm				41mm
DN125 (5")	AS2129*/BS10 Table S	286mm	235mm	12	M24	25mm				44mm
DN125 (5")	AS2129*/BS10 Table T	325mm	273mm	12	M30	33mm				67mm
DN125 (5")	AS4087* PN14									
DN125 (5")	AS4087* PN16									
DN125 (5")	AS4087* PN21									
DN125 (5")	AS4087* PN35									
DN125 (5")	BS4504-6**	240mm	200mm	8	M16	18mm	20mm			20mm
DN125 (5")	BS4504-10**	250mm	210mm	8	M16	18mm	26mm			22mm
DN125 (5")	BS4504-16**	250mm	210mm	8	M16	18mm	26mm			22mm
DN125 (5")	BS4504-25**	270mm	220mm	8	M24	26mm	30mm			26mm
DN125 (5")	BS4504-40**	270mm	220mm	8	M24	26mm				26mm
DN125 (5")	BS4504-64**	295mm	240mm	8	M27	30mm				34mm
DN125 (5")	BS4504-100**	315mm	250mm	8	M30	33mm				40mm
DN125 (5")	EN1092-1/2/3 PN6***	240mm	200mm	8	M16	18mm	20mm		†	18mm
DN125 (5")	EN1092-1/2/3 PN10***	250mm	210mm	8	M16	18mm	26mm	19mm	†	22mm
DN125 (5")	EN1092-1/2/3 PN16***	250mm	210mm	8	M16	18mm	26mm	19mm	†	22mm
DN125 (5")	EN1092-1/2/3 PN25***	270mm	220mm	8	M24	26mm	30mm	19mm	†	26mm
DN125 (5")	EN1092-1/2/3 PN40***	270mm	220mm	8	M24	26mm		23.5mm	†	26mm
DN125 (5")	EN1092-1/2/3 PN64***	295mm	240mm	8	M27	30mm			†	34mm
DN125 (5")	EN1092-1/2/3 PN100***	315mm	250mm	8	M30	33mm			†	40mm
DN125 (5")	JIS 5K	235mm	200mm	8	M16	19mm	20mm			16mm
DN125 (5")	JIS 10K	250mm	210mm	8	M20	23mm		24mm		20mm
DN125 (5")	JIS 16K	270mm	225mm	8	M24	25mm		26mm		22mm
DN125 (5")	JIS 20K	270mm	225mm	8	M24	25mm		30mm		26mm
DN125 (5")	JIS 30K	275mm	230mm	8	M24	25mm				36mm
DN125 (5")	JIS 40K	300mm	250mm	8	M24	27mm				40mm
DN125 (5")	JIS 63K	325mm	265mm	8	M30	33mm				50mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click [here](#) to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click [here](#). EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.

# FLANGE TABLE 7

## DN150 (6") - DN200 (8")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN150 (6")	ANSI 125/150	279mm	241mm	8	3/4"	22mm	25mm	21mm		25mm
DN150 (6")	ANSI 300	318mm	270mm	12	3/4"	22mm		30mm		37mm
DN150 (6")	ANSI 600	356mm	292mm	12	1"	29mm				48mm
DN150 (6")	ANSI 900	381mm	318mm	12	1 1/8"	32mm				56mm
DN150 (6")	ANSI 1500	394mm	318mm	12	1 3/8"	38mm				83mm
DN150 (6")	ANSI 2500	483mm	368mm	12	2"	54mm				114mm
DN150 (6")	AS2129*/BS10 Table D	279mm	235mm	8	M16	17mm	21mm	17mm		17mm
DN150 (6")	AS2129*/BS10 Table E	279mm	235mm	8	M20	22mm	22mm	17mm		17mm
DN150 (6")	AS2129*/BS10 Table F	305mm	260mm	8	M20	22mm	25mm	22mm		22mm
DN150 (6")	AS2129*/BS10 Table H	305mm	260mm	12	M20	22mm	35mm	25mm		29mm
DN150 (6")	AS2129*/BS10 Table J	305mm	260mm	12	M22	25mm		38mm		38mm
DN150 (6")	AS2129*/BS10 Table K	305mm	260mm	12	M22	25mm		41mm		41mm
DN150 (6")	AS2129*/BS10 Table R	305mm	260mm	12	M22	25mm				44mm
DN150 (6")	AS2129*/BS10 Table S	324mm	273mm	12	M24	27mm				51mm
DN150 (6")	AS2129*/BS10 Table T	375mm	318mm	12	M33	36mm				73mm
DN150 (6")	AS4087* PN14	280mm	235mm	8	M16	18mm	22mm		22mm	
DN150 (6")	AS4087* PN16	280mm	235mm	8	M16	18mm		23mm		13mm
DN150 (6")	AS4087* PN21	305mm	260mm	12	M20	22mm	25mm			24mm
DN150 (6")	AS4087* PN35	305mm	260mm	12	M20	22mm	35mm	27mm		31mm
DN150 (6")	BS4504-6**	265mm	225mm	8	M16	18mm	20mm			20mm
DN150 (6")	BS4504-10**	285mm	240mm	8	M20	22mm	26mm			22mm
DN150 (6")	BS4504-16**	285mm	240mm	8	M20	22mm	26mm			22mm
DN150 (6")	BS4504-25**	300mm	250mm	8	M24	26mm	34mm			28mm
DN150 (6")	BS4504-40**	300mm	250mm	8	M24	0mm				28mm
DN150 (6")	BS4504-64**	345mm	280mm	8	M30	33mm				36mm
DN150 (6")	BS4504-100**	355mm	290mm	12	M30	33mm				44mm
DN150 (6")	EN1092-1/2/3 PN6***	265mm	225mm	8	M16	18mm	20mm		†	18mm
DN150 (6")	EN1092-1/2/3 PN10***	285mm	240mm	8	M20	22mm	26mm	19mm	†	22mm
DN150 (6")	EN1092-1/2/3 PN16***	285mm	240mm	8	M20	22mm	26mm	19mm	†	22mm
DN150 (6")	EN1092-1/2/3 PN25***	300mm	250mm	8	M24	26mm	34mm	20mm	†	28mm
DN150 (6")	EN1092-1/2/3 PN40***	300mm	250mm	8	M24	26mm		26mm	†	28mm
DN150 (6")	EN1092-1/2/3 PN64***	345mm	280mm	8	M30	33mm			†	36mm
DN150 (6")	EN1092-1/2/3 PN100***	355mm	290mm	12	M30	33mm			†	44mm
DN150 (6")	JIS 5K	265mm	230mm	8	M16	19mm	22mm			18mm
DN150 (6")	JIS 10K	280mm	240mm	8	M20	23mm	26mm			22mm
DN150 (6")	JIS 16K	305mm	260mm	12	M24	25mm	28mm			24mm
DN150 (6")	JIS 20K	305mm	260mm	12	M24	25mm	32mm			28mm
DN150 (6")	JIS 30K	325mm	275mm	12	M25	27mm				38mm
DN150 (6")	JIS 40K	355mm	295mm	12	M30	33mm				44mm
DN150 (6")	JIS 63K	365mm	305mm	12	M30	33mm				54mm
DN200 (8")	ANSI 125/150	343mm	298mm	8	3/4"	22mm	29mm			29mm
DN200 (8")	ANSI 300	381mm	330mm	12	7/8"	25mm		35mm		41mm
DN200 (8")	ANSI 600	419mm	349mm	12	1 1/8"	32mm				56mm
DN200 (8")	ANSI 900	470mm	394mm	12	1 3/8"	38mm				64mm
DN200 (8")	ANSI 1500	483mm	394mm	12	1 5/8"	44mm				92mm
DN200 (8")	ANSI 2500	552mm	438mm	12	2"	54mm				132mm
DN200 (8")	AS2129*/BS10 Table D	337mm	292mm	8	M16	17mm	22mm	19mm		19mm
DN200 (8")	AS2129*/BS10 Table E	337mm	292mm	8	M20	22mm	25mm	19mm		19mm
DN200 (8")	AS2129*/BS10 Table F	368mm	324mm	12	M20	22mm	29mm	25mm		25mm
DN200 (8")	AS2129*/BS10 Table H	368mm	324mm	12	M20	22mm	38mm	32mm		32mm
DN200 (8")	AS2129*/BS10 Table J	368mm	324mm	12	M22	25mm		41mm		41mm
DN200 (8")	AS2129*/BS10 Table K	368mm	324mm	12	M27	29mm		48mm		48mm
DN200 (8")	AS2129*/BS10 Table R	368mm	324mm	12	M27	29mm				51mm
DN200 (8")	AS2129*/BS10 Table S	413mm	356mm	12	M33	35mm				64mm
DN200 (8")	AS2129*/BS10 Table T	475mm	406mm	12	M39	42mm				89mm
DN200 (8")	AS4087* PN14	335mm	292mm	8	M16	18mm	25mm			
DN200 (8")	AS4087* PN16	335mm	292mm	8	M16	18mm		23mm		19mm
DN200 (8")	AS4087* PN21	370mm	324mm	12	M20	22mm	29mm			24mm
DN200 (8")	AS4087* PN35	370mm	324mm	12	M20	22mm	41mm	31mm		31mm
DN200 (8")	BS4504-6**	320mm	280mm	8	M16	18mm	22mm			22mm
DN200 (8")	BS4504-10**	340mm	295mm	8	M20	22mm	26mm			24mm
DN200 (8")	BS4504-16**	340mm	295mm	12	M20	22mm	30mm			24mm
DN200 (8")	BS4504-25**	360mm	310mm	12	M24	26mm	34mm			30mm
DN200 (8")	BS4504-40**	375mm	320mm	12	M27	30mm				34mm
DN200 (8")	BS4504-64**	415mm	345mm	12	M33	36mm				42mm
DN200 (8")	BS4504-100**	430mm	360mm	12	M33	36mm				52mm
DN200 (8")	EN1092-1/2/3 PN6***	320mm	280mm	8	M16	18mm	22mm		†	20mm
DN200 (8")	EN1092-1/2/3 PN10***	340mm	295mm	8	M20	22mm	26mm	20mm	†	24mm
DN200 (8")	EN1092-1/2/3 PN16***	340mm	295mm	12	M20	22mm	30mm	20mm	†	24mm
DN200 (8")	EN1092-1/2/3 PN25***	360mm	310mm	12	M24	26mm	34mm	22mm	†	30mm
DN200 (8")	EN1092-1/2/3 PN40***	375mm	320mm	12	M27	30mm		30mm	†	34mm
DN200 (8")	EN1092-1/2/3 PN64***	415mm	345mm	12	M33	36mm			†	42mm
DN200 (8")	EN1092-1/2/3 PN100***	430mm	360mm	12	M33	36mm			†	52mm
DN200 (8")	JIS 5K	320mm	280mm	8	M20	23mm	24mm			20mm
DN200 (8")	JIS 10K	330mm	290mm	12	M20	23mm	26mm			22mm
DN200 (8")	JIS 16K	350mm	305mm	12	M24	25mm	30mm			26mm
DN200 (8")	JIS 20K	350mm	305mm	12	M24	25mm	34mm			30mm
DN200 (8")	JIS 30K	370mm	320mm	12	M24	27mm				42mm
DN200 (8")	JIS 40K	405mm	345mm	12	M30	33mm				50mm
DN200 (8")	JIS 63K	425mm	360mm	12	M30	33mm				60mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click [here](#) to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click [here](#). EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.



# FLANGE TABLE 8

## DN250 (10") - DN300 (12")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN250 (10")	ANSI 125/150	406mm	362mm	12	7/8"	25mm	30mm	25mm		30mm
DN250 (10")	ANSI 300	445mm	387mm	16	1"	29mm				48mm
DN250 (10")	ANSI 600	508mm	432mm	16	1 1/4"	35mm				64mm
DN250 (10")	ANSI 900	546mm	470mm	16	1 3/8"	38mm				70mm
DN250 (10")	ANSI 1500	584mm	483mm	12	1 7/8"	51mm				114mm
DN250 (10")	ANSI 2500	673mm	540mm	12	2 1/2"	67mm				171mm
DN250 (10")	AS2129*/BS10 Table D	406mm	366mm	8	M20	22mm	25mm	19mm		19mm
DN250 (10")	AS2129*/BS10 Table E	406mm	366mm	12	M20	22mm	25mm	22mm		22mm
DN250 (10")	AS2129*/BS10 Table F	432mm	381mm	12	M22	25mm	29mm	25mm		25mm
DN250 (10")	AS2129*/BS10 Table H	432mm	381mm	12	M22	25mm	41mm	35mm		35mm
DN250 (10")	AS2129*/BS10 Table J	432mm	381mm	12	M27	29mm				48mm
DN250 (10")	AS2129*/BS10 Table K	432mm	381mm	16	M27	29mm				51mm
DN250 (10")	AS2129*/BS10 Table R	432mm	381mm	16	M27	29mm				60mm
DN250 (10")	AS2129*/BS10 Table S	483mm	387mm	16	M30	33mm				79mm
DN250 (10")	AS2129*/BS10 Table T	560mm	489mm	16	M39	42mm				108mm
DN250 (10")	AS4087* PN14	405mm	356mm	8	M20	22mm	25mm			
DN250 (10")	AS4087* PN16	405mm	356mm	8	M20	22mm		24mm		
DN250 (10")	AS4087* PN21	430mm	381mm	12	M24	26mm	32mm			
DN250 (10")	AS4087* PN35	430mm	381mm	12	M24	26mm	41mm	34mm		
DN250 (10")	BS4504-6**	375mm	335mm	12	M16	18mm	24mm			24mm
DN250 (10")	BS4504-10**	395mm	350mm	12	M20	22mm	28mm			26mm
DN250 (10")	BS4504-16**	405mm	355mm	12	M24	26mm	32mm			26mm
DN250 (10")	BS4504-25**	425mm	370mm	12	M27	30mm	36mm			32mm
DN250 (10")	BS4504-40**	450mm	385mm	12	M30	33mm	46mm			38mm
DN250 (10")	BS4504-64**	470mm	400mm	12	M33	36mm				46mm
DN250 (10")	BS4504-100**	505mm	430mm	12	M36	39mm				60mm
DN250 (10")	EN1092-1/2/3 PN6***	375mm	335mm	12	M16	18mm	24mm		†	22mm
DN250 (10")	EN1092-1/2/3 PN10***	395mm	350mm	12	M20	22mm	28mm	22mm	†	26mm
DN250 (10")	EN1092-1/2/3 PN16***	405mm	355mm	12	M24	26mm	32mm	22mm	†	26mm
DN250 (10")	EN1092-1/2/3 PN25***	425mm	370mm	12	M27	30mm	36mm	24.5mm	†	32mm
DN250 (10")	EN1092-1/2/3 PN40***	450mm	385mm	12	M30	33mm		34.5mm	†	38mm
DN250 (10")	EN1092-1/2/3 PN64***	470mm	400mm	12	M33	36mm			†	46mm
DN250 (10")	EN1092-1/2/3 PN100***	505mm	430mm	12	M36	39mm			†	60mm
DN250 (10")	JIS 5K	385mm	345mm	12	M20	23mm	26mm			22mm
DN250 (10")	JIS 10K	400mm	355mm	12	M24	25mm	30mm			24mm
DN250 (10")	JIS 16K	430mm	380mm	12	M24	27mm	34mm			28mm
DN250 (10")	JIS 20K	430mm	380mm	12	M24	27mm	38mm			34mm
DN250 (10")	JIS 30K	450mm	390mm	12	M30	33mm				48mm
DN250 (10")	JIS 40K	475mm	410mm	12	M30	33mm				56mm
DN250 (10")	JIS 63K	500mm	430mm	12	M36	39mm				68mm
DN300 (12")	ANSI 125/150	483mm	432mm	12	7/8"	25mm	32mm	27mm		32mm
DN300 (12")	ANSI 300	521mm	451mm	16	1 1/8"	32mm				51mm
DN300 (12")	ANSI 600	599mm	489mm	20	1 1/4"	35mm				67mm
DN300 (12")	ANSI 900	610mm	533mm	20	1 3/8"	38mm				79mm
DN300 (12")	ANSI 1500	673mm	572mm	16	2"	54mm				124mm
DN300 (12")	ANSI 2500	762mm	619mm	12	2 7/8"	73mm				190mm
DN300 (12")	AS2129*/BS10 Table D	457mm	406mm	12	M20	22mm	25mm	22mm		22mm
DN300 (12")	AS2129*/BS10 Table E	457mm	406mm	12	M22	25mm	29mm	25mm		25mm
DN300 (12")	AS2129*/BS10 Table F	489mm	438mm	16	M22	25mm	32mm	29mm		29mm
DN300 (12")	AS2129*/BS10 Table H	489mm	438mm	16	M22	25mm	44mm	38mm		38mm
DN300 (12")	AS2129*/BS10 Table J	489mm	438mm	16	M22	29mm				51mm
DN300 (12")	AS2129*/BS10 Table K	489mm	432mm	16	M27	32mm				32mm
DN300 (12")	AS2129*/BS10 Table R	508mm	457mm	16	M30	32mm				70mm
DN300 (12")	AS2129*/BS10 Table S	578mm	508mm	16	M33	32mm				92mm
DN300 (12")	AS2129*/BS10 Table T	655mm	572mm	16	M39	48mm				121mm
DN300 (12")	AS4087* PN14	455mm	406mm	12	M20	22mm	29mm			
DN300 (12")	AS4087* PN16	455mm	406mm	12	M20	22mm		30mm		23mm
DN300 (12")	AS4087* PN21	490mm	438mm	16	M24	26mm	32mm			30mm
DN300 (12")	AS4087* PN35	490mm	438mm	16	M24	26mm	44mm	38mm		38mm
DN300 (12")	BS4504-6**	440mm	395mm	12	M20	22mm	24mm			24mm
DN300 (12")	BS4504-10**	445mm	400mm	12	M20	22mm	28mm			26mm
DN300 (12")	BS4504-16**	460mm	410mm	12	M24	26mm	32mm			28mm
DN300 (12")	BS4504-25**	485mm	430mm	16	M27	30mm	40mm			34mm
DN300 (12")	BS4504-40**	515mm	450mm	16	M30	33mm				42mm
DN300 (12")	BS4504-64**	530mm	460mm	16	M33	36mm				52mm
DN300 (12")	BS4504-100**	585mm	500mm	16	M39	42mm				68mm
DN300 (12")	EN1092-1/2/3 PN6***	440mm	395mm	12	M20	22mm	24mm		†	22mm
DN300 (12")	EN1092-1/2/3 PN10***	445mm	400mm	12	M20	22mm	28mm	24.5mm	†	26mm
DN300 (12")	EN1092-1/2/3 PN16***	460mm	410mm	12	M24	26mm	32mm	24.5mm	†	28mm
DN300 (12")	EN1092-1/2/3 PN25***	485mm	430mm	16	M27	30mm	40mm	27.5mm	†	34mm
DN300 (12")	EN1092-1/2/3 PN40***	515mm	450mm	16	M30	33mm		39.5mm	†	42mm
DN300 (12")	EN1092-1/2/3 PN64***	530mm	460mm	16	M33	36mm			†	52mm
DN300 (12")	EN1092-1/2/3 PN100***	585mm	500mm	16	M39x3	42mm			†	68mm
DN300 (12")	JIS 5K	430mm	390mm	12	M20	23mm	28mm			22mm
DN300 (12")	JIS 10K	445mm	400mm	16	M24	25mm	32mm			24mm
DN300 (12")	JIS 16K	480mm	430mm	16	M24	27mm	36mm			30mm
DN300 (12")	JIS 20K	480mm	430mm	16	M24	27mm	40mm			36mm
DN300 (12")	JIS 30K	515mm	450mm	16	M30	33mm				52mm
DN300 (12")	JIS 40K	540mm	470mm	16	M36	39mm				60mm
DN300 (12")	JIS 63K	560mm	485mm	16	M36	39mm				77mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click [here](#) to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

\*\*\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click [here](#). EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.

# FLANGE TABLE 9

## DN350 (14") - DN400 (16")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN350 (14")	ANSI 125/150	533mm	476mm	12	1"	29mm	35mm			35mm
DN350 (14")	ANSI 300	584mm	514mm	20	1 1/8"	32mm				54mm
DN350 (14")	ANSI 600	603mm	527mm	20	1 3/8"	38mm				70mm
DN350 (14")	ANSI 900	641mm	559mm	20	1 1/2"	41mm				86mm
DN350 (14")	ANSI 1500	749mm	635mm	16	2 1/4"	60mm				133mm
DN350 (14")	AS2129*/BS10 Table D	527mm	470mm	12	M22	25mm	29mm	25mm		25mm
DN350 (14")	AS2129*/BS10 Table E	527mm	470mm	12	M27	25mm	32mm	25mm		25mm
DN350 (14")	AS2129*/BS10 Table F	552mm	495mm	16	M27	29mm	35mm	32mm		32mm
DN350 (14")	AS2129*/BS10 Table H	552mm	495mm	16	M30	29mm	48mm	41mm		41mm
DN350 (14")	AS2129*/BS10 Table J	552mm	495mm	16	M30	33mm				54mm
DN350 (14")	AS2129*/BS10 Table K	572mm	508mm	16	M30	36mm				60mm
DN350 (14")	AS2129*/BS10 Table R	584mm	527mm	16	M30	36mm				79mm
DN350 (14")	AS2129*/BS10 Table S	648mm	578mm	20	M39	42mm				105mm
DN350 (14")	AS4087* PN14	525mm	470mm	12	M24	26mm	32mm			
DN350 (14")	AS4087* PN16	525mm	470mm	12	M24	26mm		33mm		30mm
DN350 (14")	AS4087* PN21	550mm	495mm	16	M27	30mm	35mm			30mm
DN350 (14")	AS4087* PN35	550mm	495mm	16	M27	30mm	48mm	41mm		48mm
DN350 (14")	BS4504-6**	490mm	445mm	12	M20	22mm	26mm			26mm
DN350 (14")	BS4504-10**	505mm	460mm	16	M20	22mm	30mm			28mm
DN350 (14")	BS4504-16**	520mm	470mm	16	M24	26mm	36mm			30mm
DN350 (14")	BS4504-25**	555mm	490mm	16	M30	33mm	44mm			38mm
DN350 (14")	BS4504-40**	580mm	510mm	16	M33	36mm				46mm
DN350 (14")	BS4504-64**	600mm	525mm	16	M36	39mm				56mm
DN350 (14")	BS4504-100**	655mm	560mm	16	M45	48mm				74mm
DN350 (14")	EN1092-1/2/3 PN6***	490mm	445mm	12	M20	22mm	26mm		†	22mm
DN350 (14")	EN1092-1/2/3 PN10***	505mm	460mm	16	M20	22mm	30mm	24.5mm	†	26mm
DN350 (14")	EN1092-1/2/3 PN16***	520mm	470mm	16	M24	26mm	36mm	26.5mm	†	30mm
DN350 (14")	EN1092-1/2/3 PN25***	555mm	490mm	16	M30	33mm	44mm	30mm	†	38mm
DN350 (14")	EN1092-1/2/3 PN40***	580mm	510mm	16	M33	36mm		44mm	†	46mm
DN350 (14")	EN1092-1/2/3 PN64***	600mm	525mm	16	M36	39mm			†	56mm
DN350 (14")	EN1092-1/2/3 PN100***	655mm	560mm	16	M45x3	48mm			†	74mm
DN350 (14")	JIS 5K	480mm	435mm	12	M22	25mm	30mm			24mm
DN350 (14")	JIS 10K	490mm	445mm	16	M22	25mm	34mm			26mm
DN350 (14")	JIS 16K	540mm	480mm	16	M30	33mm	38mm			34mm
DN350 (14")	JIS 20K	540mm	480mm	16	M30	33mm	44mm			40mm
DN350 (14")	JIS 30K	560mm	495mm	16	M30	33mm				54mm
DN350 (14")	JIS 40K	585mm	515mm	16	M36	39mm				64mm
DN350 (14")	JIS 63K	615mm	530mm	16	M42	46mm				81mm
DN375 (15")	AS2129*/BS10 Table D	552mm	522mm	12	M22	25mm	29mm	25mm		
DN375 (15")	AS2129*/BS10 Table E	552mm	522mm	12	M22	25mm	32mm	25mm		
DN375 (15")	AS2129*/BS10 Table F	578mm	578mm	16	M27	29mm	35mm	32mm		
DN375 (15")	AS2129*/BS10 Table H	578mm	578mm	16	M27	29mm	51mm	44mm		
DN375 (15")	AS2129*/BS10 Table J	578mm	578mm	16	M30	32mm				
DN375 (15")	AS2129*/BS10 Table K	857mm	603mm	20	M33	35mm				
DN400 (16")	ANSI 125/150	597mm	540mm	16	1"	29mm	37mm			37mm
DN400 (16")	ANSI 300	648mm	572mm	20	1 1/4"	35mm				57mm
DN400 (16")	ANSI 600	699mm	603mm	20	1 1/2"	41mm				76mm
DN400 (16")	ANSI 900	705mm	616mm	20	1 5/8"	44mm				89mm
DN400 (16")	ANSI 1500	826mm	705mm	16	2 1/2"	67mm				146mm
DN400 (16")	AS2129*/BS10 Table D	578mm	521mm	12	M22	25mm	29mm	25mm		25mm
DN400 (16")	AS2129*/BS10 Table E	578mm	521mm	12	M22	25mm	32mm	25mm		25mm
DN400 (16")	AS2129*/BS10 Table F	610mm	552mm	20	M27	29mm	35mm	32mm		32mm
DN400 (16")	AS2129*/BS10 Table H	610mm	552mm	20	M27	29mm	51mm	44mm		44mm
DN400 (16")	AS2129*/BS10 Table J	610mm	552mm	20	M30	32mm				57mm
DN400 (16")	AS2129*/BS10 Table K	629mm	565mm	20	M30	33mm				67mm
DN400 (16")	AS2129*/BS10 Table R	641mm	584mm	20	M30	33mm				89mm
DN400 (16")	AS2129*/BS10 Table S	743mm	660mm	20	M45	48mm				117mm
DN400 (16")	AS4087* PN14	580mm	521mm	12	M24	26mm	32mm			
DN400 (16")	AS4087* PN16	580mm	521mm	12	M24	26mm		33mm		30mm
DN400 (16")	AS4087* PN21	610mm	552mm	20	M27	30mm	35mm			38mm
DN400 (16")	AS4087* PN35	610mm	552mm	20	M27	30mm	51mm	44mm		48mm
DN400 (16")	BS4504-6**	540mm	495mm	16	M20	22mm	28mm			28mm
DN400 (16")	BS4504-10**	565mm	515mm	16	M24	26mm	32mm			32mm
DN400 (16")	BS4504-16**	580mm	525mm	16	M27	30mm	38mm			32mm
DN400 (16")	BS4504-25**	620mm	550mm	16	M33	36mm	48mm			40mm
DN400 (16")	BS4504-40**	660mm	585mm	16	M36	39mm				50mm
DN400 (16")	BS4504-64**	670mm	585mm	16	M39	42mm				60mm
DN400 (16")	BS4504-100**	715mm	620mm	16	M45	48mm				78mm
DN400 (16")	EN1092-1/2/3 PN6***	540mm	495mm	16	M20	22mm	28mm		†	22mm
DN400 (16")	EN1092-1/2/3 PN10***	565mm	515mm	16	M24	26mm	32mm	24.5mm	†	26mm
DN400 (16")	EN1092-1/2/3 PN16***	580mm	525mm	16	M27	30mm	38mm	28mm	†	32mm
DN400 (16")	EN1092-1/2/3 PN25***	620mm	550mm	16	M33	36mm	48mm	32mm	†	40mm
DN400 (16")	EN1092-1/2/3 PN40***	660mm	585mm	16	M36	39mm		48mm	†	50mm
DN400 (16")	EN1092-1/2/3 PN64***	670mm	585mm	16	M39	42mm			†	60mm
DN400 (16")	EN1092-1/2/3 PN100***	715mm	620mm	16	M45	48mm			†	78mm
DN400 (16")	JIS 5K	540mm	495mm	16	M22	25mm	30mm			24mm
DN400 (16")	JIS 10K	560mm	510mm	16	M24	27mm	36mm			28mm
DN400 (16")	JIS 16K	605mm	540mm	16	M30	33mm	42mm			38mm
DN400 (16")	JIS 20K	605mm	540mm	16	M30	33mm	50mm			46mm
DN400 (16")	JIS 30K	630mm	560mm	16	M36	39mm				60mm
DN400 (16")	JIS 40K	645mm	570mm	16	M36	39mm				70mm
DN400 (16")	JIS 63K	680mm	590mm	16	M42	46mm				89mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click [here](#) to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS4504 tables.

\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click [here](#). EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.

# FLANGE TABLE 10

## DN450 (18") - DN550 (22")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN450 (18")	ANSI 125/150	635mm	578mm	16	1 1/8"	32mm	40mm			40mm
DN450 (18")	ANSI 300	711mm	629mm	24	1 1/4"	35mm				60mm
DN450 (18")	ANSI 600	743mm	654mm	20	1 5/8"	44mm				83mm
DN450 (18")	ANSI 900	787mm	686mm	20	1 7/8"	51mm				102mm
DN450 (18")	ANSI 1500	914mm	775mm	16	2 3/4"	73mm				162mm
DN450 (18")	AS2129*/BS10 Table D	641mm	584mm	12	M24	26mm	32mm	29mm		32mm
DN450 (18")	AS2129*/BS10 Table E	641mm	584mm	16	M24	26mm	35mm	29mm		35mm
DN450 (18")	AS2129*/BS10 Table F	673mm	610mm	20	M30	33mm	38mm	35mm		44mm
DN450 (18")	AS2129*/BS10 Table H	673mm	610mm	20	M30	33mm	54mm	48mm		60mm
DN450 (18")	AS2129*/BS10 Table J	673mm	610mm	20	M33	36mm				70mm
DN450 (18")	AS2129*/BS10 Table K	718mm	654mm	20	M36	39mm				89mm
DN450 (18")	AS2129*/BS10 Table R	735mm	673mm	20	M36	39mm				98mm
DN450 (18")	AS4087* PN14	640mm	584mm	12	M24	26mm	35mm			
DN450 (18")	AS4087* PN16	640mm	584mm	12	M24	26mm		33mm		30mm
DN450 (18")	AS4087* PN21	675mm	610mm	20	M30	33mm	38mm			38mm
DN450 (18")	AS4087* PN35	675mm	610mm	20	M30	33mm	54mm	46mm		58mm
DN450 (18")	BS4504-6**	595mm	550mm	16	M20	22mm	30mm			30mm
DN450 (18")	BS4504-10**	615mm	565mm	20	M24	26mm	32mm			36mm
DN450 (18")	BS4504-16**	640mm	585mm	20	M27	30mm	40mm			40mm
DN450 (18")	BS4504-25**	670mm	600mm	20	M33	35mm	52mm			52mm
DN450 (18")	BS4504-40**	685mm	610mm	20	M36	39mm				68mm
DN450 (18")	EN1092-1/2/3 PN6***	595mm	550mm	16	M20	22mm	28mm	25.5mm	†	22mm
DN450 (18")	EN1092-1/2/3 PN10***	615mm	565mm	20	M24	26mm	32mm	30mm	†	26mm
DN450 (18")	EN1092-1/2/3 PN16***	640mm	585mm	20	M27	30mm	40mm	34.5mm	†	40mm
DN450 (18")	JIS 5K	605mm	555mm	16	M22	25mm	30mm			24mm
DN450 (18")	JIS 10K	620mm	565mm	20	M24	27mm	38mm			30mm
DN450 (18")	JIS 16K	675mm	605mm	20	M30	33mm	46mm			40mm
DN450 (18")	JIS 20K	675mm	605mm	20	M30	33mm	54mm			48mm
DN500 (20")	ANSI 125/150	699mm	635mm	20	1 1/8"	32mm	43mm			43mm
DN500 (20")	ANSI 300	775mm	686mm	24	1 1/4"	35mm				64mm
DN500 (20")	ANSI 600	813mm	724mm	24	1 5/8"	44mm				89mm
DN500 (20")	ANSI 900	845mm	749mm	20	2"	54mm				108mm
DN500 (20")	ANSI 1500	984mm	832mm	16	3"	79mm				178mm
DN500 (20")	AS2129*/BS10 Table D	705mm	641mm	16	M22	25mm	32mm	32mm		32mm
DN500 (20")	AS2129*/BS10 Table E	705mm	641mm	16	M22	25mm	38mm	32mm		32mm
DN500 (20")	AS2129*/BS10 Table F	737mm	673mm	20	M30	32mm	41mm	38mm		38mm
DN500 (20")	AS2129*/BS10 Table H	737mm	673mm	20	M30	32mm	57mm	51mm		51mm
DN500 (20")	AS2129*/BS10 Table J	737mm	673mm	20	M33	35mm				64mm
DN500 (20")	AS2129*/BS10 Table K	787mm	711mm	20	M39	41mm				83mm
DN500 (20")	AS2129*/BS10 Table R	807mm	730mm	20	M39	41mm				105mm
DN500 (20")	AS4087* PN14	705mm	641mm	16	M24	26mm	38mm			
DN500 (20")	AS4087* PN16	705mm	641mm	16	M24	26mm		35mm		38mm
DN500 (20")	AS4087* PN21	735mm	673mm	24	M30	33mm	41mm			48mm
DN500 (20")	AS4087* PN35	735mm	673mm	24	M30	33mm	57mm	49mm		58mm
DN500 (20")	BS4504-6**	645mm	600mm	20	M20	22mm	30mm			30mm
DN500 (20")	BS4504-10**	670mm	620mm	20	M24	26mm	34mm			38mm
DN500 (20")	BS4504-16**	715mm	650mm	20	M30	33mm	42mm			36mm
DN500 (20")	BS4504-25**	730mm	660mm	20	M33	36mm	52mm			44mm
DN500 (20")	BS4504-40**	755mm	670mm	20	M39	42mm				52mm
DN500 (20")	BS4504-64**	800mm	705mm	20	M45	58mm				67mm
DN500 (20")	BS4504-100**	870mm	760mm	20	M52	56mm				94mm
DN500 (20")	EN1092-1/2/3 PN6***	645mm	600mm	20	M20	22mm	30mm		†	24mm
DN500 (20")	EN1092-1/2/3 PN10***	670mm	620mm	20	M24	26mm	34mm	26.5mm	†	28mm
DN500 (20")	EN1092-1/2/3 PN16***	715mm	650mm	20	M30	33mm	42mm	31.5mm	†	44mm
DN500 (20")	EN1092-1/2/3 PN25***	730mm	660mm	20	M33	36mm	52mm	36.5mm	†	48mm
DN500 (20")	EN1092-1/2/3 PN40***	755mm	670mm	20	M39	42mm		52mm	†	57mm
DN500 (20")	EN1092-1/2/3 PN64***	800mm	705mm	20	M45	58mm			†	67mm
DN500 (20")	EN1092-1/2/3 PN100***	870mm	760mm	20	M52	56mm			†	94mm
DN500 (20")	JIS 5K	655mm	605mm	20	M22	25mm	32mm			24mm
DN500 (20")	JIS 10K	675mm	620mm	20	M24	27mm	40mm			30mm
DN500 (20")	JIS 16K	730mm	660mm	20	M30	33mm	50mm			42mm
DN500 (20")	JIS 20K	730mm	660mm	20	M30	33mm	58mm			50mm
DN550 (22")	ANSI 125/150	749mm	692mm	20	1 1/4"	35mm				
DN550 (22")	ANSI 300	838mm	743mm	24	1 1/2"	41mm				
DN550 (22")	AS2129*/BS10 Table D	760mm	699mm	16	M27	30mm	35mm			29mm
DN550 (22")	AS2129*/BS10 Table E	760mm	699mm	16	M27	30mm	38mm			44mm
DN550 (22")	AS2129*/BS10 Table F	785mm	724mm	24	M30	33mm	41mm			54mm
DN550 (22")	AS2129*/BS10 Table H	785mm	724mm	24	M30	33mm	60mm			70mm
DN550 (22")	AS2129*/BS10 Table J	785mm	724mm	24	M33	36mm				86mm
DN550 (22")	AS2129*/BS10 Table K	870mm	781mm	20	M52	55mm				105mm
DN550 (22")	AS2129*/BS10 Table R	895mm	806mm	20	M52	55mm				114mm
DN550 (22")	JIS 5K	720mm	665mm	20	M24	27mm	32mm			26mm
DN550 (22")	JIS 10K	745mm	680mm	20	M30	33mm	42mm			32mm
DN550 (22")	JIS 16K	795mm	720mm	20	M36	39mm	54mm			44mm
DN550 (22")	JIS 20K	795mm	720mm	20	M36	39mm	62mm			52mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click [here](#) to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click [here](#). EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.

# FLANGE TABLE 11

## DN600 (24") - DN800 (32")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN600 (24")	ANSI 125/150	813mm	749mm	20	1 1/4"	35mm	48mm			48mm
DN600 (24")	ANSI 300	914mm	813mm	24	1 1/2"	41mm				70mm
DN600 (24")	ANSI 600	940mm	838mm	24	1 7/8"	51mm				102mm
DN600 (24")	ANSI 900	104mm	864mm	20	2 1/2"	67mm				140mm
DN600 (24")	ANSI 1500	1168mm	991mm	16	3 1/2"	92mm				203mm
DN600 (24")	AS2129*/BS10 Table D	826mm	756mm	16	M27	29mm	35mm	35mm		35mm
DN600 (24")	AS2129*/BS10 Table E	826mm	756mm	16	M30	32mm	41mm	38mm		38mm
DN600 (24")	AS2129*/BS10 Table F	851mm	781mm	24	M33	35mm	44mm	41mm		41mm
DN600 (24")	AS2129*/BS10 Table H	851mm	781mm	24	M33	35mm	64mm	57mm		57mm
DN600 (24")	AS2129*/BS10 Table J	851mm	781mm	24	M36	38mm				70mm
DN600 (24")	AS4087* PN14	825mm	756mm	16	M27	30mm	41mm			
DN600 (24")	AS4087* PN16	825mm	756mm	16	M27	30mm		42mm		48mm
DN600 (24")	AS4087* PN21	850mm	781mm	24	M33	36mm	44mm			58mm
DN600 (24")	AS4087* PN35	850mm	781mm	24	M33	36mm	64mm	54mm		68mm
DN600 (24")	BS4504-6**	755mm	705mm	20	M24	26mm	30mm			32mm
DN600 (24")	BS4504-10**	780mm	725mm	20	M27	30mm	36mm			42mm
DN600 (24")	BS4504-16**	840mm	770mm	20	M33	36mm	48mm			40mm
DN600 (24")	BS4504-25**	845mm	770mm	20	M36	39mm				46mm
DN600 (24")	BS4504-40**	890mm	795mm	20	M45	48mm				60mm
DN600 (24")	BS4504-64**	930mm	820mm	20	M52	56mm				76mm
DN600 (24")	BS4504-100**	990mm	875mm	20	M56	62mm				104mm
DN600 (24")	EN1092-1/2/3 PN6***	755mm	705mm	20	M24	26mm	30mm		†	30mm
DN600 (24")	EN1092-1/2/3 PN10***	780mm	725mm	20	M27	30mm	36mm	30mm	†	28mm
DN600 (24")	EN1092-1/2/3 PN16***	840mm	770mm	20	M33	36mm	48mm	36mm	†	54mm
DN600 (24")	EN1092-1/2/3 PN25***	845mm	770mm	20	M36	39mm	56mm	42mm	†	58mm
DN600 (24")	EN1092-1/2/3 PN40***	890mm	795mm	20	M45	48mm		58mm	†	72mm
DN600 (24")	EN1092-1/2/3 PN64***	930mm	820mm	20	M52	56mm			†	76mm
DN600 (24")	EN1092-1/2/3 PN100***	990mm	875mm	20	M56	62mm			†	104mm
DN600 (24")	JIS 5K	770mm	715mm	20	M24	27mm		32mm		26mm
DN600 (24")	JIS 10K	765mm	730mm	24	M30	33mm		44mm		32mm
DN600 (24")	JIS 16K	845mm	770mm	24	M36	39mm		58mm		46mm
DN600 (24")	JIS 20K	845mm	770mm	24	M36	39mm		66mm		54mm
DN650 (26")	ANSI 125/150	870mm	806mm	24	1 1/4"	35mm				
DN650 (26")	ANSI 300	971mm	876mm	28	1 5/8"	41mm				
DN650 (26")	JIS 5K	825mm	770mm	24	M24	27mm	34mm			26mm
DN650 (26")	JIS 10K	845mm	780mm	24	M30	33mm		43mm		34mm
DN650 (26")	JIS 16K	895mm	820mm	24	M36	39mm				48mm
DN650 (26")	JIS 20K	945mm	850mm	24	M45	48mm				60mm
DN700 (28")	ANSI 125/150	927mm	864mm	28	1 1/4"	35mm				
DN700 (28")	ANSI 300	1035mm	940mm	28	1 5/8"	70mm				
DN700 (28")	AS2129*/BS10 Table D	910mm	845mm	20	M27	30mm	44mm			
DN700 (28")	AS2129*/BS10 Table E	910mm	845mm	20	M30	33mm	38mm			35mm
DN700 (28")	AS2129*/BS10 Table F	935mm	857mm	24	M33	36mm	44mm			51mm
DN700 (28")	BS4504-6**	860mm	810mm	24	M24	26mm	32mm			34mm
DN700 (28")	BS4504-10**	895mm	840mm	24	M27	30mm	40mm			46mm
DN700 (28")	BS4504-16**	910mm	840mm	24	M33	36mm	54mm			58mm
DN700 (28")	BS4504-25**	960mm	875mm	24	M39	42mm				
DN700 (28")	BS4504-40**	995mm	900mm	24	M45	48mm				
DN700 (28")	BS4504-64**	1045mm	935mm	24	M52	56mm				
DN700 (28")	BS4504-100**	1145mm	1020mm	24	M64	70mm				
DN700 (28")	JIS 5K	875mm	820mm	24	M24	27mm	34mm			26mm
DN700 (28")	JIS 10K	905mm	840mm	24	M30	33mm	48mm			34mm
DN700 (28")	JIS 16K	960mm	875mm	24	M39	42mm				50mm
DN700 (28")	JIS 20K	995mm	900mm	24	M45	48mm				64mm
DN750 (30")	ANSI 125/150	984mm	914mm	28	1 1/4"	35mm	54mm			
DN750 (30")	ANSI 300	1092mm	997mm	28	1 3/4"	48mm				
DN750 (30")	AS2129*/BS10 Table D	995mm	927mm	20	M30	33mm	48mm			
DN750 (30")	AS2129*/BS10 Table E	995mm	927mm	20	M33	36mm	41mm			41mm
DN750 (30")	AS2129*/BS10 Table F	1015mm	940mm	28	M33	36mm	48mm			54mm
DN750 (30")	JIS 5K	945mm	880mm	24	M30	33mm	36mm			28mm
DN750 (30")	JIS 10K	970mm	900mm	24	M30	33mm	50mm			36mm
DN750 (30")	JIS 16K	1020mm	935mm	24	M39	42mm				52mm
DN750 (30")	JIS 20K	1080mm	970mm	24	M52	56mm				68mm
DN800 (32")	ANSI 125/150	1060mm	978mm	28	1 1/2"	41mm				
DN800 (32")	ANSI 300	1149mm	1054mm	28	1 7/8"	50mm				
DN800 (32")	AS2129*/BS10 Table D	1060mm	984mm	20	M33	36mm	41mm			41mm
DN800 (32")	AS2129*/BS10 Table E	1060mm	984mm	20	M33	36mm	48mm			54mm
DN800 (32")	AS2129*/BS10 Table F	1060mm	984mm	28	M33	36mm	52mm			68mm
DN800 (32")	BS4504-6**	975mm	920mm	24	M27	30mm	34mm			38mm
DN800 (32")	BS4504-10**	1015mm	950mm	24	M30	33mm	44mm			52mm
DN800 (32")	BS4504-16**	1025mm	950mm	24	M36	39mm	58mm			64mm
DN800 (32")	BS4504-25**	1085mm	990mm	24	M45	48mm				
DN800 (32")	BS4504-40**	1140mm	1030mm	24	M52	56mm				
DN800 (32")	BS4504-64**	1165mm	1050mm	24	M56	62mm				
DN800 (32")	JIS 5K	995mm	930mm	24	M30	33mm	36mm			28mm
DN800 (32")	JIS 10K	1020mm	950mm	28	M30	33mm	52mm			36mm
DN800 (32")	JIS 16K	1085mm	990mm	24	M45	48mm				54mm
DN800 (32")	JIS 20K	1140mm	1030mm	24	M52	56mm				72mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click here to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

\*\*\*\*\* EN1092-1 is for steel flanges, EN1092-2 is for Iron flanges, EN1092-3 is for Copper Alloy flanges, EN1092-4 is for Aluminum flanges. Regarding EN1092-2 Iron flanges, these figures are for integral flanges on valves, etc. Cast (Grey) Iron thicknesses are shown in Cast Iron column. EN1092-2 specifies a thinner flange thickness for Ductile Iron in larger sizes which is shown in the Ductile Iron column. For full EN1092-1 table Click here. EN1092-1 is for steel flanges.

† Refer EN1092-3 copper alloy, EN1092-4 aluminum alloy.

# FLANGE TABLE 12

## DN850 (34") - DN1500 (60")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN850 (34")	ANSI 125/150	1111mm	1029mm	32	1 1/2"	41mm				
DN850 (34")	ANSI 300	1206mm	1105mm	28	1 7/8"	50mm				
DN850 (34")	AS2129*/BS10 Table D	1090mm	1016mm	20	M33	36mm	41mm			44mm
DN850 (34")	AS2129*/BS10 Table E	1090mm	1016mm	20	M33	36mm	51mm			57mm
DN850 (34")	AS2129*/BS10 Table F	1090mm	1016mm	32	M33	36mm	54mm			54mm
DN850 (34")	JIS 5K	1045mm	980mm	24	M30	33mm	38mm			28mm
DN850 (34")	JIS 10K	1070mm	1000mm	28	M30	33mm	52mm			36mm
DN850 (34")	JIS 16K	1135mm	1040mm	24	M45	48mm				56mm
DN850 (34")	JIS 20K	1200mm	1090mm	24	M52	56mm				74mm
DN900 (36")	ANSI 125/150	1168mm	1086mm	32	1 1/2"	41mm	60mm			
DN900 (36")	ANSI 300	1270mm	1168mm	32	2"	54mm				
DN900 (36")	AS2129*/BS10 Table D	1175mm	1092mm	24	M33	36mm	44mm			48mm
DN900 (36")	AS2129*/BS10 Table E	1175mm	1092mm	24	M33	36mm	51mm			64mm
DN900 (36")	AS2129*/BS10 Table F	1185mm	1105mm	32	M36	39mm	57mm			76mm
DN900 (36")	BS4504-6**	1075mm	1020mm	24	M27	30mm	36mm			42mm
DN900 (36")	BS4504-10**	1115mm	1050mm	28	M30	33mm	46mm			56mm
DN900 (36")	BS4504-16**	1125mm	1050mm	28	M36	39mm	62mm			72mm
DN900 (36")	BS4504-25**	1185mm	1090mm	28	M45	48mm	55mm			58mm
DN900 (36")	BS4504-40**	1285mm	1170mm	28	M52	56mm				
DN900 (36")	BS4504-64**	1285mm	1170mm	28	M56	62mm				
DN900 (36")	JIS 5K	1095mm	1030mm	24	M30	33mm	38mm			30mm
DN900 (36")	JIS 10K	1120mm	1050mm	28	M30	33mm	54mm			38mm
DN900 (36")	JIS 16K	1185mm	1090mm	28	M45	48mm				58mm
DN900 (36")	JIS 20K	1250mm	1140mm	28	M52	56mm				76mm
DN950 (38")	ANSI 125/150	1238mm	1149mm	32	1 1/2"	41mm				
DN950 (38")	ANSI 300	1327mm	1219mm	32	2"	54mm				
DN1000 (40")	ANSI 125/150	1289mm	1200mm	36	1 1/2"	41mm				
DN1000 (40")	ANSI 300	1384mm	1276mm	36	2"	54mm				
DN1000 (40")	AS2129*/BS10 Table D	1255mm	1175mm	24	M33	36mm	44mm			51mm
DN1000 (40")	AS2129*/BS10 Table E	1255mm	1175mm	24	M36	39mm	54mm			67mm
DN1000 (40")	AS2129*/BS10 Table F	1275mm	1194mm	36	M36	39mm	60mm			83mm
DN1000 (40")	BS4504-6**	1175mm	1120mm	28	M27	30mm	36mm			46mm
DN1000 (40")	BS4504-10**	1230mm	1160mm	28	M33	36mm	50mm			62mm
DN1000 (40")	BS4504-16**	1255mm	1170mm	28	M39	42mm	66mm			78mm
DN1000 (40")	BS4504-25**	1320mm	1210mm	28	M52	56mm	60mm			
DN1000 (40")	BS4504-40**	1360mm	1250mm	28	M52	56mm				
DN1000 (40")	BS4504-64**	1415mm	1290mm	28	M64	70mm				
DN1000 (40")	JIS 5K	1195mm	1130mm	28	M30	33mm	40mm			32mm
DN1000 (40")	JIS 10K	1235mm	1160mm	28	M36	39mm	58mm			40mm
DN1000 (40")	JIS 16K	1320mm	1210mm	28	M52	56mm				62mm
DN1050 (42")	ANSI 125/150	1346mm	1257mm	36	1 1/2"	41mm	66mm			
DN1050 (42")	ANSI 300	1448mm	1340mm	36	2"	54mm				
DN1100 (44")	ANSI 125/150	1346mm	1257mm	36	1 1/2"	41mm	66mm			
DN1100 (44")	ANSI 300	1505mm	1397mm	36	2"	50mm				
DN1100 (44")	JIS 5K	1305mm	1240mm	28	M30	33mm	42mm			32mm
DN1100 (44")	JIS 10K	1345mm	1270mm	28	M36	39mm	62mm			42mm
DN1100 (44")	JIS 16K	1420mm	1310mm	32	M52	56mm				66mm
DN1150 (46")	ANSI 125/150	1454mm	1365mm	40	1 1/2"	41mm				
DN1150 (46")	ANSI 300	1562mm	1454mm	40	2 1/8"	50mm				
DN1200 (48")	ANSI 125/150	1511mm	1422mm	44	1 1/2"	41mm	70mm			
DN1200 (48")	ANSI 300	1651mm	1543mm	40	2"	57mm	102mm			
DN1200 (48")	AS2129*/BS10 Table D	1490mm	1410mm	32	M33	36mm	51mm			60mm
DN1200 (48")	AS2129*/BS10 Table E	1490mm	1410mm	32	M36	39mm	60mm			79mm
DN1200 (48")	AS2129*/BS10 Table F	1530mm	1441mm	40	M39	42mm	57mm			95mm
DN1200 (48")	BS4504-6**	1405mm	1340mm	32	M30	33mm	40mm			56mm
DN1200 (48")	BS4504-10**	1455mm	1380mm	32	M36	39mm	56mm			74mm
DN1200 (48")	BS4504-16**	1485mm	1390mm	32	M45	48mm				94mm
DN1200 (48")	BS4504-25**	1530mm	1420mm	32	M52	56mm				
DN1200 (48")	BS4504-40**	1575mm	1460mm	32	M56	62mm				
DN1200 (48")	BS4504-64**	1665mm	1530mm	32	M72	78mm				
DN1200 (48")	JIS 5K	1420mm	1350mm	32	M30	33mm	46mm			34mm
DN1200 (48")	JIS 10K	1465mm	1380mm	32	M36	39mm	66mm			44mm
DN1200 (48")	JIS 16K	1530mm	1420mm	32	M52	56mm				70mm
DN1250 (50")	ANSI 125/150	1568mm	1479mm	44	1 3/4"	48mm				
DN1300 (52")	ANSI 125/150	1626mm	1537mm	44	1 3/4"	48mm				
DN1350 (54")	ANSI 125/150	1683mm	1594mm	44	1 3/4"	51mm	76mm			
DN1350 (54")	JIS 5K	1575mm	1505mm	32	M30	33mm	48mm			34mm
DN1350 (54")	JIS 10K	1630mm	1540mm	36	M42	45mm	70mm			45mm
DN1350 (54")	JIS 16K	1700mm	1590mm	32	M56	62mm				62mm
DN1400 (56")	ANSI 125/150	1746mm	1651mm	48	1 3/4"	48mm				
DN1400 (56")	AS2129*/BS10 Table D	1700mm	1615mm	36	M33	36mm	57mm			60mm
DN1400 (56")	BS4504-6**	1630mm	1560mm	36	M33	36mm				
DN1400 (56")	BS4504-10**	1675mm	1590mm	36	M39	42mm				
DN1400 (56")	BS4504-16**	1685mm	1590mm	36	M45	48mm				
DN1400 (56")	BS4504-25**	1755mm	1640mm	36	M56	60mm				
DN1400 (56")	BS4504-40**	1795mm	1680mm	36	M56	62mm				
DN1400 (56")	JIS 16K	1755mm	1640mm	36	M56	62mm				78mm
DN1450 (58")	ANSI 125/150	1803mm	1708mm	48	1 3/4"	48mm				
DN1500 (60")	ANSI 125/150	1854mm	1759mm	52	1 3/4"	51mm	79mm			
DN1500 (60")	JIS 5K	1730mm	1660mm	36	M30	33mm	52mm			36mm
DN1500 (60")	JIS 10K	1795mm	1700mm	40	M42	45mm	74mm			50mm
DN1500 (60")	JIS 16K	1865mm	1750mm	36	M36	62mm				80mm

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\* AS2129 still in use but now only covers Table D to H (Table C now obsolete, Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087 is the new standard replacing Table D to H. The same drilling D, F, H (not E) is specified but the PN rating system is used (PN16 to PN35) and in some cases flange thickness varies slightly. AS4087 PN14 & PN16 are the same drilling as AS2129 Table D. AS4087 PN21 is the same drilling and rating as AS2129 Table F. AS4087 PN35 is the same drilling and rating as AS2129 Table H. AS4087 specifies raised face not flat face like AS2129. Click here to view full AS4087 flanging dimensions. In terms of bolting compatibility between AS4087 and AS2129 flanges, table C, D, PN10 and PN16 are all the same. Table E drilling whilst not adopted as part of AS4087, is the same pressure rating as PN14 and the same drilling as PN10 and PN16 in all sizes up to 600NB except: 100NB, 250NB & 450NB.

\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

# FLANGE TABLE 13

## DN1600 (64") - DN3600 (144")

SIZE MM (INCH)	RATING	FLANGE OD DIAMETER	PCD	# BOLTS	BOLT SIZE	HOLE SIZE	THICKNESS IRON	THICKNESS BRONZE	THICKNESS COPPER ALLOY	THICKNESS CARBON STEEL
DN1600 (64")	ANSI 125/150	1981mm	1880mm	52	1 7/8"	51mm				
DN1600 (64")	BS10 Table D	1910mm	1825mm	40	M36	39mm	60mm			64mm
DN1600 (64")	BS4504-6**	1830mm	1760mm	40	M33	36mm				
DN1600 (64")	BS4504-10**	1915mm	1820mm	40	M45	48mm				
DN1600 (64")	BS4504-16**	1930mm	1820mm	40	M52	56mm				
DN1600 (64")	BS4504-25**	1975mm	1860mm	40	M56	60mm				
DN1600 (64")	BS4504-40**	2025mm	1900mm	40	M64	70mm				
DN1650 (66")	ANSI 125/150	2032mm	1930mm	52	1 7/8"	51mm				
DN1700 (68")	ANSI 125/150	2089mm	1988mm	56	1 7/8"	51mm				
DN1750 (70")	ANSI 125/150	2140mm	2045mm	56	1 7/8"	51mm				
DN1800 (72")	ANSI 125/150	2197mm	2095mm	60	1 3/4"	51mm	89mm			
DN1800 (72")	BS10 Table D	2110mm	2019mm	44	M39	42mm	67mm			73mm
DN1800 (72")	BS4504-6**	2045mm	1970mm	44	M36	39mm				
DN1800 (72")	BS4504-10**	2115mm	2020mm	44	M45	48mm				
DN1800 (72")	BS4504-16**	2130mm	2020mm	44	M52	56mm				
DN1800 (72")	BS4504-25**	2195mm	2070mm	44	M64	69mm				
DN1850 (74")	ANSI 125/150	2248mm	2146mm	60	1 3/4"	51mm				
DN1900 (76")	ANSI 125/150	2305mm	2197mm	60	1 3/4"	51mm				
DN1950 (78")	ANSI 125/150	2362mm	2254mm	60	2 1/8"	51mm				
DN2000 (80")	ANSI 125/150	2419mm	2311mm	60	2 1/8"	51mm				
DN2000 (80")	BS4504-6**	2265mm	2180mm	48	M39	42mm				
DN2000 (80")	BS4504-10**	2325mm	2230mm	48	M45	48mm				
DN2000 (80")	BS4504-16**	2345mm	2230mm	48	M56	61mm				
DN2000 (80")	BS4504-25**	2425mm	2300mm	48	M64	69mm				
DN2050 (82")	ANSI 125/150	2476mm	2369mm	60	2 1/8"	51mm				
DN2100 (84")	ANSI 125/150	2534mm	2426mm	64	2 1/8"	51mm				
DN2150 (86")	ANSI 125/150	2534mm	2425mm	64	2"	57mm	99mm			
DN2200 (88")	BS10 Table D	2560mm	2460mm	44	M45	48mm	73mm			83mm
DN2200 (88")	BS4504-6**	2475mm	2390mm	52	M39	42mm				
DN2200 (88")	BS4504-10**	2550mm	2440mm	52	M52	55mm				
DN2200 (88")	BS4504-16**	2555mm	2440mm	52	M56	62mm				
DN2250 (90")	ANSI 125/150	2705mm	2597mm	68	2 1/4"	54mm				
DN2300 (92")	ANSI 125/150	2762mm	2654mm	68	2 1/4"	54mm				
DN2350 (94")	ANSI 125/150	2819mm	2699mm	68	2 1/4"	54mm				
DN2400 (96")	ANSI 125/150	2877mm	2756mm	68	2 1/4"	63mm	108mm			
DN2400 (96")	BS10 Table D	2775mm	2673mm	52	M45	48mm	83mm			92mm
DN2400 (96")	BS4504-6**	2685mm	2545mm	56	M39	42mm				
DN2400 (96")	BS4504-10**	2760mm	2570mm	56	M52	55mm				
DN2450 (98")	ANSI 125/150	2934mm	2813mm	68	2 1/4"	63mm				
DN2500 (100")	ANSI 125/150	2991mm	2870mm	68	2 1/4"	63mm				
DN2550 (102")	ANSI 125/150	3048mm	2908mm	72	2 1/4"	63mm				
DN2600 (104")	BS4504-6**	2905mm	2810mm	60	M45	48mm				
DN2600 (104")	BS4504-10**	2960mm	2850mm	60	M52	55mm				
DN2700 (108")	ANSI 125/150	3219mm	3067mm	72	2 1/4"	63mm				
DN2800 (112")	BS10 Table D	3200mm	3090mm	56	M45	48mm	89mm			102mm
DN2800 (112")	BS4504-6**	3115mm	3020mm	64	M45	48mm				
DN2800 (112")	BS4504-10**	3180mm	3070mm	64	M52	55mm				
DN3000 (120")	ANSI 125/150	3562mm	3372mm	76	2 1/4"	63mm				
DN3000 (120")	BS4504-6**	3315mm	3220mm	68	M45	48mm				
DN3000 (120")	BS4504-10**	3405mm	3290mm	68	M56	62mm				
DN3200 (128")	BS4504-6**	3525mm	3430mm	72	M45	48mm				
DN3300 (132")	ANSI 125/150	3905mm	3702mm	80	2 1/4"	48mm				
DN3400 (136")	BS4504-6**	3735mm	3640mm	76	M45	48mm				
DN3600 (144")	ANSI 125/150	4248mm	4020mm	84	2 1/4"	63mm				
DN3600 (144")	BS4504-6**	3970mm	3860mm	80	M52	56mm				

\* BS4504 now incorporated into EN1092-1 but flange drilling dimensions are generally the same.

\*\* BS10 and AS2129 are generally the same except some bolt hole sizes are larger in AS2129 due to metrication. AS2129 is now updated by AS4087 but drillings are the same, refer page 1.

\*\*\* British metric standard BS4504 is now obsolete and replaced by EN1092-1 edition 09-2008 for steel flanges which also incorporates DIN2501 standard. EN1092-1 is also published in the British standards as BS-EN1092-1. Flange drillings in EN1092-1 are generally the same as BS4504 but EN1092-1 covers a wider range. This includes EN1092-1 and BS45054 tables.

### Temperature - Pressure Ratings for Carbon Steel Plate Flanges

"Flange table"	Pressure - kPa, Temperature - °C												Maximum hydrostatic test pressure kPa
	-18° to 120	-50° to 232	250	275	300	325	350	375	400	425	450	475	
D		700	650	600	570	550	500	450	400	350			1 050
C	1 200												1 800
E		1 400	1 300	1 200	1 100	1 000	950	900	800	700			2 100
F		2 100	2 000	1 800	1 700	1 600	1 400	1 300	1 200	1 100			3 150
H		3 500	3 300	3 100	2 900	2 600	2 400	2 000	2 000	1 700	1 300	900	5 250
J		4 800	4 600	4 300	4 000	3 700	3 400	3 100	2 700	2 400	1 900	1 300	7 200
K		6 200	5 900	5 500	5 100	4 700	4 300	3 900	3 500	3 100	2 400	1 600	9 300
R		8 300	7 900	7 400	6 800	6 300	5 800	5 200	4 700	4 200	3 200	2 200	12 450
S		12 400	11 800	11 100	10 300	9 500	8 700	7 900	7 100	6 300	4 800	3 300	18 600
T		19 300	18 400	17 200	16 000	14 700	13 500	12 200	11 000	9 800	7 500	5 100	28 950

AS2129 still in use but now only covers Table D to H (Table C now obsolete), Table J to T now replaced by AS4331 which is a replication of ISO7500-1 which in turn is equivalent to ASME 150-2500 class ANSI B16.5). AS4087\*\* is the new standard covering Table D to H. The same drilling is specified but the PN rating system is used (PN16 to PN35).

For ANSI 150 to 2500 class flange pressure/temperature ratings refer to the forged pressure/temperature ratings shown in the following [link](#).