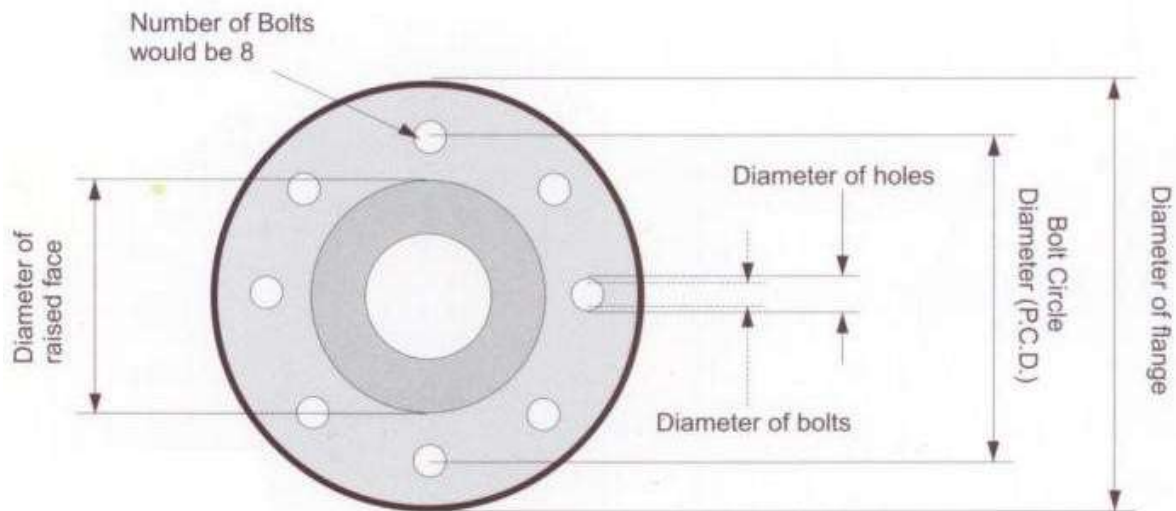


ANSI FLANGES DIMENSIONS

Flanges are commonly used to connect valves into pipework making it easier for removal and maintenance. There are many common flange standards and flanges within the same standard can either be flat (commonly cast iron, ductile iron) or raised face (commonly cast steel and stainless steel). Below is a reference table for critical flange dimensions to help identify what standard you have.



15mm (1/2")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS4087	PN14	95	67	4	M12	14
AS 2129	Table C	95	67	4	13	14
	Table D	95	67	4	13	14
	Table E	95	67	4	13	14
	Table F	95	67	4	13	14
	Table H	114	83	4	16	17
	Table J	114	83	4	16	17
ANSI B16.5	ANSI 150	89	60	4	13	16
	ANSI 300	95	67	4	13	16
	ANSI 600	95	67	4	13	16
	ANSI 900	121	83	4	19	22
	ANSI 1500	121	83	4	19	22
ISO 7005 (DIN)	PN6	80	55	4	M10	11
	PN10	95	65	4	M12	14
	PN16	95	65	4	M12	14
	PN20	90	60.5	4	M14	16
	PN25	95	65	4	M12	14
	PN40	95	65	4	M12	14

20mm (3/4")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS4087	PN14	100	73	4	M12	14
AS 2129	Table C	100	73	4	13	14
	Table D	100	73	4	13	14
	Table E	100	73	4	13	14
	Table F	100	73	4	13	14
	Table H	115	83	4	16	18
	Table J	115	83	4	16	18
ANSI B16.5	ANSI 150	98	70	4	13	16
	ANSI 300	117	83	4	16	19
	ANSI 600	117	83	4	16	19
	ANSI 900	130	89	4	19	22
	ANSI 1500	130	89	4	19	22
ISO 7005 (DIN)	PN6	90	65	4	M10	11
	PN10	105	75	4	M12	14
	PN16	105	75	4	M12	14
	PN20	100	70	4	M14	16
	PN25	105	75	4	M12	14
	PN40	105	75	4	M12	14

25mm (1")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS4087	PN14	115	83	4	M12	14
AS 2129	Table C	115	83	4	13	14
	Table D	115	83	4	13	14
	Table E	115	83	4	13	14
	Table F	120	87	4	16	18
	Table H	120	87	4	16	18
	Table J	120	87	4	16	18
ANSI B16.5	ANSI 150	110	79	4	13	16
	ANSI 300	125	89	4	16	19
	ANSI 600	125	89	4	16	19
	ANSI 900		102	4	22	25
	ANSI 1500		102	4	22	25
ISO 7005 (DIN)	PN6	100	78	4	M10	11
	PN10	115	85	4	M12	14
	PN16	115	85	4	M12	14
	PN20	110	79.5	4	M14	16
	PN25	115	85	4	M12	14
	PN40	115	85	4	M12	14

32mm (1 1/4")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS4087	PN14	120	87	4	M12	14
AS 2129	Table C	120	87	4	13	14

	Table D	120	87	4	13	14
	Table E	120	87	4	13	14
	Table F	135	98	4	16	18
	Table H	135	98	4	16	18
	Table J	135	98	4	16	18
ANSI B16.5	ANSI 150	117	89	4	13	16
	ANSI 300	133	98	4	16	19
	ANSI 600	133	98	4	16	19
	ANSI 900	159	111	4	22	25
	ANSI 1500	159	111	4	22	25
ISO 7005 (DIN)	PN6	120	90	4	M12	14
	PN10	140	100	4	M16	18
	PN16	140	100	4	M16	18
	PN20	120	89	4	M14	16
	PN25	140	100	4	M16	18
	PN40	140	100	4	M16	18

40mm (1 1/2")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS4087	PN14	135	98	4	M12	14
AS 2129	Table C	135	98	4	13	14
	Table D	135	98	4	13	14
	Table E	135	98	4	13	14
	Table F	140	105	4	16	18
	Table H	140	105	4	16	18
	Table J	140	105	4	16	18
ANSI B16.5	ANSI 150	127	98	4	13	16
	ANSI 300	156	114	4	19	22
	ANSI 600	156	114	4	19	22
	ANSI 900	178	124	4	25	29
	ANSI 1500	178	124	4	25	29
ISO 7005 (DIN)	PN6	130	100	4	M12	14
	PN10	150	110	4	M16	18
	PN16	150	110	4	M16	18
	PN20	130	98.5	4	M14	16
	PN25	150	110	4	M16	18
	PN40	150	110	4	M16	18

50mm (2")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	150	114	4	M16	18
	PN16	150	114	4	M16	18
	PN21	165	127	4	M16	18
	PN35	165	127	4	M16	18
AS 2129	Table C	150	114	4	16	18
	Table D	150	114	4	16	18
	Table E	150	114	4	16	18
	Table F	165	127	4	16	18

	Table H	165	127	4	16	18
	Table J	165	127	4	19	22
ANSI B16.5	ANSI 150	152	121	4	16	19
	ANSI 300	165	127	8	16	19
	ANSI 600	165	127	8	16	19
	ANSI 900	216	165	8	22	25
	ANSI 1500	216	165	8	22	25
ISO 7005 (DIN)	PN6	140	110	4	M12	14
	PN10	165	125	4	M16	18
	PN16	165	125	4	M16	18
	PN20	150*	120.5	4	M16	18
	PN25	165	125	4	M16	18
	PN40	165	125	4	M16	18

*When made from cast or ductile iron the OD is 155mm.

65mm (2 1/2")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	165	127	4	M16	18
	PN16	165	127	4	M16	18
	PN21	185	146	8	M16	18
	PN35	185	146	8	M16	18
AS 2129	Table C	165	127	4	16	18
	Table D	165	127	4	16	18
	Table E	165	127	4	16	18
	Table F	185	146	8	16	18
	Table H	185	146	8	16	18
	Table J	185	146	8	19	22
ANSI B16.5	ANSI 150	178	140	4	16	19
	ANSI 300	191	149	8	19	22
	ANSI 600	191	149	8	19	22
	ANSI 900	244	191	8	22	25
	ANSI 1500	244	191	8	25	29
ISO 7005 (DIN)	PN6	160	130	4	M12	14
	PN10	185	145	4	M16	18
	PN16	185	145	4	M16	18
	PN20	180	139.5	4	M16	18
	PN25	185	145	8	M16	18
	PN40	185	145	8	M16	18

80mm (3")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	185	146	4	M16	18
	PN16	185	146	4	M16	18
	PN21	205	165	8	M16	18
	PN35	205	165	8	M16	18
AS 2129	Table C	185	146	4	16	18
	Table D	185	146	4	16	18
	Table E	185	146	4	16	18
	Table F	205	165	8	16	18

	Table H	205	165	8	16	18
	Table J	205	165	8	19	22
ANSI B16.5	ANSI 150	191	152	4	16	19
	ANSI 300	210	168	8	19	22
	ANSI 600	210	168	8	19	22
	ANSI 900	241	192	8	22	25
	ANSI 1500	267	203	8	29	32
ISO 7005 (DIN)	PN6	190	150	4	M16	18
	PN10	200	160	8	M16	18
	PN16	200	160	8	M16	18
	PN20	190	152.5	4	M16	18
	PN25	200	160	8	M16	18
	PN40	185	160	8	M16	18

100mm (4")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	215	178	4	M16	18
	PN16	215	178	4	M16	18
	PN21	230	191	8	M16	18
	PN35	230	191	8	M16	18
AS 2129	Table C	215	178	4	16	18
	Table D	215	178	4	16	18
	Table E	215	178	8	16	18
	Table F	230	191	8	16	18
	Table H	230	191	8	16	18
	Table J	230	191	8	19	22
ANSI B16.5	ANSI 150	229	191	8	16	19
	ANSI 300	254	200	8	19	22
	ANSI 600	273	216	8	22	25
	ANSI 900	292	235	8	29	32
	ANSI 1500	311	241	8	32	35
ISO 7005 (DIN)	PN6	210	170	4	M16	18
	PN10	220	180	8	M16	24
	PN16	220	180	8	M16	18
	PN20	230	190.5	8	M16	18
	PN25	235	190	8	M20	22
	PN40	235	190	8	M20	22

125mm (5")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
----------	-------	----------	----------------------	-----------------	-----------	-----------------------

AS 4087	PN14	280	235	8	M16	18
	PN16	-	-	-	-	-
	PN21	-	-	-	-	-
	PN35	-	-	-	-	-
AS 2129	Table C	255	210	8	16	18
	Table D	255	210	8	16	18
	Table E	255	210	8	16	18
	Table F	280	235	8	19	22
	Table H	280	235	8	19	22
	Table J	280	235	8	22	26
ANSI B16.5	ANSI 150	254	216	8	19	22
	ANSI 300	279	235	8	19	22
	ANSI 600	330	267	8	25	29
	ANSI 900	349	279	8	32	35
	ANSI 1500	375	292	8	38	41
ISO 7005 (DIN)	PN6	240	200	8	M16	18
	PN10	250	210	8	M16	18
	PN16	250	210	8	M16	18
	PN20	255	216	8	M20	22
	PN25	270	220	8	M24	26
	PN40	270	220	8	M24	26

150mm (6")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	280	235	8	M16	18
	PN16	280	235	8	M16	18
	PN21	305	260	12	M20	22
	PN35	305	260	12	M20	22
AS 2129	Table C	280	235	8	16	18
	Table D	280	235	8	16	18
	Table E	280	235	8	19	22
	Table F	305	260	12	19	22
	Table H	305	260	12	19	22
	Table J	305	260	12	22	26
ANSI B16.5	ANSI 150	279	241	8	19	22
	ANSI 300	318	270	12	19	22
	ANSI 600	356	292	12	25	29
	ANSI 900	381	318	12	29	32
	ANSI 1500	394	318	12	35	38
ISO 7005 (DIN)	PN6	265	225	8	M16	18
	PN10	285	240	8	M20	22
	PN16	285	240	8	M20	22
	PN20	280	241.5	8	M20	22

	PN25	300	250	8	M24	26
	PN40	300	250	8	M24	26

200mm (8")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	335	292	8	M16	18
	PN16	335	292	8	M16	18
	PN21	370	324	12	M20	22
	PN35	370	324	12	M20	22
AS 2129	Table C	335	292	8	16	18
	Table D	335	292	8	16	18
	Table E	335	292	8	19	22
	Table F	370	324	12	19	22
	Table H	370	324	12	19	22
	Table J	370	324	12	22	26
ANSI B16.5	ANSI 150	343	298	8	19	22
	ANSI 300	381	330	12	19	22
	ANSI 600	419	349	12	29	32
	ANSI 900	470	394	12	35	38
	ANSI 1500	483	394	12	41	44
ISO 7005 (DIN)	PN6	320	280	8	M16	18
	PN10	340	295	8	M20	22
	PN16	340	295	12	M20	22
	PN20	345	298.5	8	M20	22
	PN25	360	310	12	M24	26
	PN40	375	320	12	M27	30

250mm (10")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	405	356	8	M20	22
	PN16	405	356	8	M20	22
	PN21	430	381	12	M24	26
	PN35	430	381	12	M24	26
AS 2129	Table C	405	356	8	19	22
	Table D	405	356	8	19	22
	Table E	405	356	12	19	22
	Table F	430	381	12	22	26
	Table H	430	381	12	22	26
	Table J	430	381	12	25	30
ANSI B16.5	ANSI 150	406	362	12	22	25
	ANSI 300	445	387	16	25	29
	ANSI 600	508	432	16	32	35

	ANSI 900	546	470	16	35	38
	ANSI 1500	584	483	12	41	51
ISO 7005 (DIN)	PN6	375	335	12	M16	18
	PN10	395	350	12	M20	22
	PN16	405	355	12	M24	26
	PN20	405	362	12	M24	26
	PN25	425	370	12	M27	30
	PN40	450	385	12	M30	33

300mm (12")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	455	406	12	M20	22
	PN16	455	406	12	M20	22
	PN21	490	438	16	M24	26
	PN35	490	438	16	M24	26
AS 2129	Table C	455	406	12	19	22
	Table D	455	406	12	19	22
	Table E	455	406	12	22	26
	Table F	490	438	16	22	26
	Table H	490	438	16	22	26
	Table J	490	438	16	25	30
ANSI B16.5	ANSI 150	483	432	12	22	25
	ANSI 300	521	451	16	29	32
	ANSI 600	559	489	20	32	35
	ANSI 900	610	533	20	35	38
	ANSI 1500	673	571	16	51	54
ISO 7005 (DIN)	PN6	440	395	12	M20	22
	PN10	445	400	12	M20	22
	PN16	460	410	12	M24	26
	PN20	485	432	12	M24	26
	PN25	485	430	16	M27	30
	PN40	515	450	16	M30	33

350mm (14")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	525	470	12	M24	26
	PN16	525	470	12	M24	26
	PN21	550	495	16	M27	30
	PN35	550	495	16	M27	30
AS 2129	Table C	525	470	12	22	26
	Table D	525	470	12	22	26
	Table E	525	470	12	22	26
	Table F	550	495	16	25	30

	Table H	550	495	16	25	30
	Table J	550	495	16	29	32
ANSI B16.5	ANSI 150	533	476	12	25	29
	ANSI 300	584	514	20	29	32
	ANSI 600	603	527	20	38	41
	ANSI 900	641	559	20	38	41
	ANSI 1500	749	635	16	57	60
ISO 7005 (DIN)	PN6	490	445	12	M20	22
	PN10	505	460	16	M20	22
	PN16	520	470	16	M24	26
	PN20	535	476	12	M27	35
	PN25	555	490	16	M30	33
	PN40	580	510	16	M33	36

400mm (16")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	580	521	12	M24	26
	PN16	580	521	12	M24	26
	PN21	610	552	20	M27	30
	PN35	610	552	20	M27	30
AS 2129	Table C	580	521	12	22	26
	Table D	580	521	12	22	26
	Table E	580	521	12	22	26
	Table F	610	552	20	25	30
	Table H	610	552	20	25	30
	Table J	610	552	20	29	33
ANSI B16.5	ANSI 150	597	540	16	25	29
	ANSI 300	648	572	20	32	35
	ANSI 600	686	603	20	38	41
	ANSI 900	705	616	20	41	44
	ANSI 1500	826	705	16	64	67
ISO 7005 (DIN)	PN6	540	495	16	M20	22
	PN10	565	515	16	M24	26
	PN16	580	525	16	M27	30
	PN20	600	540	16	M27	29.5
	PN25	620	550	16	M33	36
	PN40	660	585	16	M36	39

450mm (18")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	640	584	12	M24	26
	PN16	640	584	12	M24	26
	PN21	675	610	20	M30	33
	PN35	675	510	20	M30	33
AS 2129	Table C	640	584	12	22	26
	Table D	640	584	12	22	26
	Table E	640	584	16	22	26
	Table F	675	610	20	29	33
	Table H	675	610	20	29	33
	Table J	675	610	20	32	35
ANSI B16.5	ANSI 150	635	578	16	29	32
	ANSI 300	711	629	24	32	35
	ANSI 600	743	654	20	41	44
	ANSI 900	787	686	20	48	51
	ANSI 1500	914	775	16	70	73
ISO 7005 (DIN)	PN6	595	550	16	M20	22
	PN10	615	565	20	M24	26
	PN16	640	585	20	M27	30
	PN20	635	578	16	M30	32.5
	PN25	-	-	-	-	-
	PN40	-	-	-	-	-

500mm (20")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	705	641	16	M24	26
	PN16	705	641	16	M24	26
	PN21	735	673	24	M30	33
	PN35	735	673	24	M30	33
AS 2129	Table C	705	641	16	22	26
	Table D	705	641	16	22	26
	Table E	705	641	16	22	26
	Table F	735	673	24	29	33
	Table H	735	673	24	29	33
	Table J	735	673	24	32	36
ANSI B16.5	ANSI 150	699	635	20	29	32
	ANSI 300	775	686	24	32	35
	ANSI 600	813	724	24	41	44
	ANSI 900	857	749	20	51	54
	ANSI 1500	984	832	16	76	79
ISO 7005	PN6	645	600	20	M20	22

(DIN)	PN10	670	620	20	M24	26
	PN16	715	650	20	M30	33
	PN20	700	635	20	M30	32.5
	PN25	-	-	-	-	-
	PN40	-	-	-	-	-

600mm (24")

Standard	Class	Diameter	Bolt Circle Diameter	Number of Bolts	Bolt Size	Diameter of Bolt Hole
AS 4087	PN14	825	756	16	M27	30
	PN16	825	756	16	M27	30
	PN21	850	781	24	M33	36
	PN35	750	781	24	M33	36
AS 2129	Table C	825	756	16	25	30
	Table D	825	756	16	25	30
	Table E	825	756	16	29	33
	Table F	850	781	24	32	36
	Table H	850	781	24	32	36
	Table J	850	781	24	35	39
ANSI B16.5	ANSI 150	813	749	20	32	35
	ANSI 300	914	813	24	38	41
	ANSI 600	940	838	24	48	51
	ANSI 900	1041	902	20	64	67
	ANSI 1500	1168	991	16	89	92
ISO 7005 (DIN)	PN6	755	705	20	M24	26
	PN10	780	725	20	M27	30
	PN16	840	770	20	M33	36
	PN20	815	749.5	20	M33	36
	PN25	-	-	-	-	-
	PN40	-	-	-	-	-