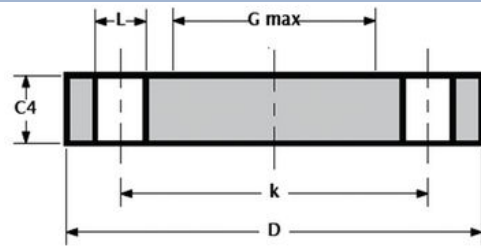


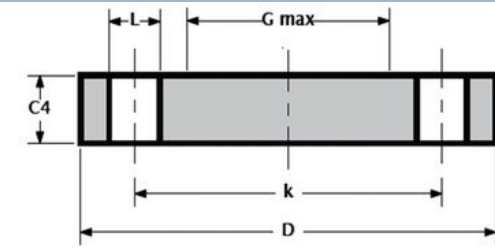
PIPE		FLANGE DATA		DIAMETER OF SHOULDER	DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness	Number of holes		Bolt hole diameter	Diameter of bolt circle	Kg / piece	
DN	D	C4		G MAX	I	K		
10	75.0	12.0	-	4	11.0	50.0	0.4	
15	80.0	12.0	-	4	11.0	55.0	0.4	
20	90.0	14.0	-	4	11.0	65.0	0.7	
25	100.0	14.0	-	4	11.0	75.0	0.8	
32	120.0	14.0	-	4	14.0	90.0	1.2	
40	130.0	14.0	-	4	14.0	100.0	1.4	
50	140.0	14.0	-	4	14.0	110.0	1.6	
65	160.0	14.0	55.0	4	14.0	130.0	2.1	
80	190.0	16.0	70.0	4	18.0	150.0	3.4	
100	210.0	16.0	90.0	4	18.0	170.0	4.2	
125	240.0	18.0	115.0	8	18.0	200.0	6.1	
150	265.0	18.0	140.0	8	18.0	225.0	7.5	
200	320.0	20.0	190.0	8	18.0	280.0	12.3	
250	375.0	22.0	235.0	12	18.0	335.0	18.5	
300	440.0	22.0	285.0	12	22.0	395.0	25.5	
350	490.0	22.0	330.0	12	22.0	445.0	31.8	
400	540.0	22.0	380.0	16	22.0	495.0	38.5	
450	595.0	24.0	425.0	16	22.0	550.0	51.2	
500	645.0	24.0	475.0	20	22.0	600.0	60.1	
600	755.0	30.0	575.0	20	26.0	705.0	103.0	
700	860.0	40.0	670.0	24	26.0	810.0	178.0	
800	975.0	44.0	770.0	24	30.0	920.0	252.0	
900	1075.0	48.0	860.0	24	30.0	1020.0	336.0	
1000	1175.0	52.0	960.0	28	30.0	1120.0	435.0	
1200	1405.0	60.0	1160.0	32	33.0	1340.0	717.0	

> Weights are approximate.



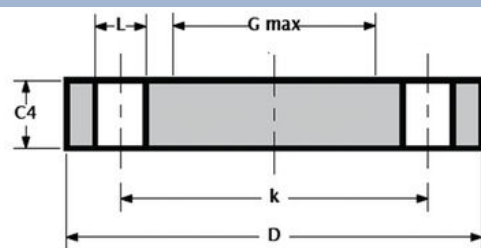
PIPE		FLANGE DATA		DIAMETER OF SHOULDER	DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness	Number of holes		Bolt hole diameter	Diameter of bolt circle	Kg / piece	
DN	D	C4			G MAX	I		K
10	90.0	16.0	-	4	14.0	60.0	0.7	
15	95.0	16.0	-	4	14.0	65.0	0.8	
20	105.0	18.0	-	4	14.0	75.0	1.1	
25	115.0	18.0	-	4	14.0	85.0	1.4	
32	140.0	18.0	-	4	18.0	100.0	2.0	
40	150.0	18.0	-	4	18.0	110.0	2.4	
50	165.0	18.0	-	4	18.0	125.0	2.9	
65	185.0	18.0	55.0	4 or 8	18.0	145.0	3.5	
80	200.0	20.0	70.0	8	18.0	160.0	4.6	
100	220.0	20.0	90.0	8	18.0	180.0	5.7	
125	250.0	22.0	115.0	8	18.0	210.0	8.1	
150	285.0	22.0	140.0	8	22.0	240.0	10.5	
200	340.0	24.0	190.0	8	22.0	295.0	16.5	
250	395.0	26.0	235.0	12	22.0	350.0	24.1	
300	445.0	26.0	285.0	12	22.0	400.0	30.8	
350	505.0	26.0	330.0	16	22.0	460.0	39.6	
400	565.0	26.0	380.0	16	26.0	515.0	49.4	
450	615.0	28.0	425.0	20	26.0	565.0	63.0	
500	670.0	28.0	475.0	20	26.0	620.0	75.2	
600	780.0	34.0	575.0	20	30.0	725.0	124.0	
700	895.0	38.0	670.0	24	30.0	840.0	183.0	
800	1015.0	48.0	770.0	24	33.0	950.0	297.0	
900	1115.0	50.0	860.0	28	33.0	1050.0	374.0	
1000	1230.0	54.0	960.0	28	36.0	1160.0	492.0	
1200	1455.0	66.0	1160.0	32	39.0	1380.0	842.0	

- > Weights are approximate.
- > DN65 available with 4 or 8 bolt holes.
- > DN10 - DN40 = PN40.



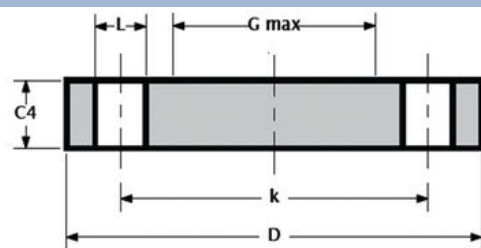
PIPE		FLANGE DATA		DIAMETER OF SHOULDER	DRILLING DATA		WEIGHT
Nominal pipe size	Outside diameter	Thickness	Number of holes		Bolt hole diameter	Diameter of bolt circle	Kg / piece
DN	D	C4		G MAX	I	K	
10	90.0	16.0	-	4	14.0	60.0	0.7
15	95.0	16.0	-	4	14.0	65.0	0.8
20	105.0	18.0	-	4	14.0	75.0	1.1
25	115.0	18.0	-	4	14.0	85.0	1.4
32	140.0	18.0	-	4	18.0	100.0	2.0
40	150.0	18.0	-	4	18.0	110.0	2.4
50	165.0	18.0	-	4	18.0	125.0	2.9
65	185.0	18.0	55.0	4 or 8	18.0	145.0	3.5
80	200.0	20.0	70.0	8	18.0	160.0	4.6
100	220.0	20.0	90.0	8	18.0	180.0	5.7
125	250.0	22.0	115.0	8	18.0	210.0	8.1
150	285.0	22.0	140.0	8	22.0	240.0	10.5
200	340.0	24.0	190.0	12	22.0	295.0	16.2
250	405.0	26.0	235.0	12	26.0	355.0	25.0
300	460.0	28.0	285.0	12	26.0	410.0	35.1
350	520.0	30.0	330.0	16	26.0	470.0	48.0
400	580.0	32.0	380.0	16	30.0	525.0	63.5
450	640.0	40.0	425.0	20	30.0	585.0	96.6
500	715.0	44.0	475.0	20	33.0	650.0	133.0
600	840.0	54.0	575.0	20	36.0	770.0	226.0
700	910.0	58.0	670.0	24	36.0	840.0	285.0
800	1025.0	62.0	770.0	24	39.0	950.0	388.0
900	1125.0	64.0	860.0	28	39.0	1050.0	483.0
1000	1255.0	68.0	960.0	28	42.0	1170.0	640.0
1200	1485.0	-	1160.0	32	48.0	1390.0	-

- > Weights are approximate.
- > DN65 available with 4 or 8 bolt holes.
- > DN10 - DN40 = PN40.



PIPE		FLANGE DATA		DIAMETER OF SHOLDER	DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness	Number of holes		Bolt hole diameter	Diameter of bolt circle	Kg / piece	
DN	D	C4			G MAX	I		K
10	90.0	16.0	-	4	14.0	60.0	0.7	
15	95.0	16.0	-	4	14.0	65.0	0.8	
20	105.0	18.0	-	4	14.0	75.0	1.1	
25	115.0	18.0	-	4	14.0	85.0	1.4	
32	140.0	18.0	-	4	18.0	100.0	2.0	
40	150.0	18.0	-	4	18.0	110.0	2.4	
50	165.0	20.0	-	4	18.0	125.0	3.2	
65	185.0	22.0	55.0	8	18.0	145.0	4.3	
80	200.0	24.0	70.0	8	18.0	160.0	5.5	
100	235.0	24.0	90.0	8	22.0	190.0	7.6	
125	270.0	26.0	115.0	8	26.0	220.0	10.8	
150	300.0	28.0	140.0	8	26.0	250.0	14.6	
200	360.0	30.0	190.0	12	26.0	310.0	22.5	
250	425.0	32.0	235.0	12	30.0	370.0	33.5	
300	485.0	34.0	285.0	16	30.0	430.0	46.3	
350	555.0	38.0	332.0	16	33.0	490.0	68.1	
400	620.0	40.0	380.0	16	36.0	550.0	89.7	
450	670.0	50.0	425.0	20	36.0	600.0	130.0	
500	730.0	51.0	475.0	20	36.0	660.0	159.0	
600	845.0	66.0	575.0	20	39.0	770.0	278.0	
700	960.0	to be specified by purchaser	-	24	42.0	875.0	-	
800	1085.0		-	24	48.0	990.0	-	
900	1185.0		-	28	48.0	1090.0	-	
1000	1320.0		-	28	56.0	1210.0	-	

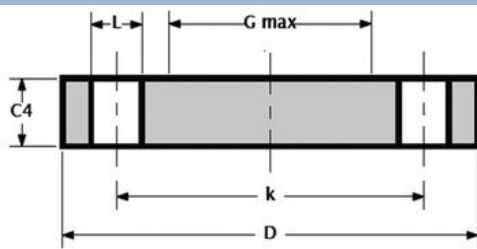
> Weights are approximate.  
> DN10 - DN150 = PN40.



PIPE	FLANGE DATA		DIAMETER OF SHOLDER	DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness		Number of holes	Bolt hole diameter	Diameter of bolt circle	Kg / piece
DN	D	C4	G MAX		I	K	
10	90.0	16.0	-	4	14.0	60.0	0.7
15	95.0	16.0	-	4	14.0	65.0	0.8
20	105.0	18.0	-	4	14.0	75.0	1.1
25	115.0	18.0	-	4	14.0	85.0	1.4
32	140.0	18.0	-	4	18.0	100.0	2.0
40	150.0	18.0	-	4	18.0	110.0	2.4
50	165.0	20.0	-	4	18.0	125.0	3.2
65	185.0	22.0	55.0	8	18.0	145.0	4.3
80	200.0	24.0	70.0	8	18.0	160.0	5.5
100	235.0	24.0	90.0	8	22.0	190.0	7.6
125	270.0	26.0	115.0	8	26.0	220.0	10.8
150	300.0	28.0	140.0	8	26.0	250.0	14.6
200	375.0	36.0	190.0	12	30.0	320.0	28.8
250	450.0	38.0	235.0	12	33.0	385.0	44.4
300	515.0	42.0	285.0	16	33.0	450.0	64.2
350	580.0	46.0	330.0	16	36.0	510.0	89.5
400	660.0	50.0	380.0	16	39.0	585.0	127.0
450	685.0	57.0	425.0	20	39.0	610.0	154.0
500	755.0	57.0	475.0	20	42.0	670.0	188.0
600	890.0	72.0	575.0	20	48.0	795.0	331.0

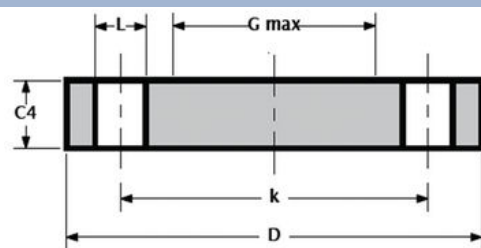
> Weights are approximate.





PIPE		FLANGE DATA		DIAMETER OF SHOLDER	DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness	Number of holes		Bolt hole diameter	Diameter of bolt circle	Kg / piece	
DN	D	C4			I	K		
10	100.0	20	-	4	14.0	70.0	1.0	
15	105.0	20	-	4	14.0	75.0	1.2	
20	130.0	22	-	4	18.0	90.0	2.0	
25	140.0	24	-	4	18.0	100.0	2.5	
32	155.0	24	-	4	22.0	110.0	3.1	
40	170.0	26	-	4	22.0	125.0	4.0	
50	180.0	26	-	4	22.0	135.0	4.5	
65	205.0	26	45	8	22.0	160.0	5.7	
80	215.0	28	60	8	22.0	170.0	6.9	
100	250.0	30	80	8	26.0	200.0	10.0	
125	295.0	34	105	8	30.0	240.0	15.9	
150	345.0	36	130	8	33.0	280.0	23.3	
200	415.0	42	180	12	36.0	345.0	39.2	
250	470.0	46	220	12	36.0	400.0	56.7	
300	530.0	52	270	16	36.0	460.0	81.2	
350	600.0	56	310	16	39.0	525.0	113.0	
400	670.0	60	360	16	42.0	585.0	152.0	

> Weights are approximate.  
> DN10 - DN40 = PN100



PIPE	FLANGE DATA		DIAMETER OF SHOLDER	DRILLING DATA			WEIGHT
Nominal pipe size	Outside diameter	Thickness		Number of holes	Bolt hole diameter	Diameter of bolt circle	Kg / piece
DN	D	C4	G MAX		I	K	
10	100.0	20.0	-	4	14.0	70.0	1.0
15	105.0	20.0	-	4	14.0	75.0	1.2
20	130.0	22.0	-	4	18.0	90.0	2.0
25	140.0	24.0	-	4	18.0	100.0	2.5
32	155.0	24.0	-	4	22.0	110.0	3.1
40	170.0	26.0	-	4	22.0	125.0	4.0
50	195.0	28.0	-	4	26.0	145.0	5.6
65	220.0	30.0	45.0	8	26.0	170.0	7.4
80	230.0	32.0	60.0	8	26.0	180.0	8,9
100	265.0	36.0	80.0	8	30.0	210.0	13.3
125	315.0	40.0	105.0	8	33.0	250.0	21.3
150	355.0	44.0	130.0	12	33.0	290.0	29.4
200	430.0	52.0	180.0	12	36.0	360.0	52.7
250	505.0	60.0	210.0	12	39.0	430.0	85.4
300	585.0	68.0	260.0	16	42.0	500.0	128.0
350	655.0	74.0	300.0	16	48.0	560.0	175.0

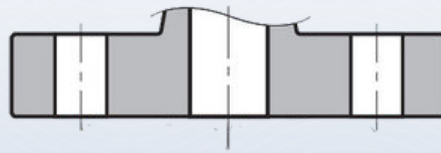
> Weights are approximate.

# FLANGE FACING TYPES

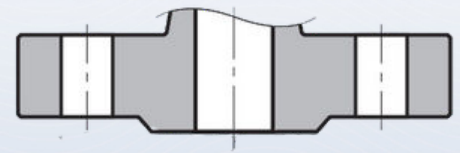
## EN 1092-1



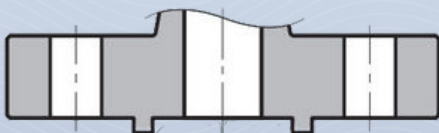
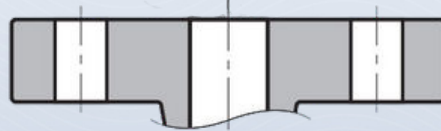
TYPE A	FLAT FACE
TYPE B	RAISED FACE
TYPE C	TONGUE
TYPE D	GROOVE
TYPE E	SPIGOT
TYPE F	RECESS
TYPE G	O-RING SPIGOT
TYPE H	O-RING GROOVE



TYPE A - FLAT FACE



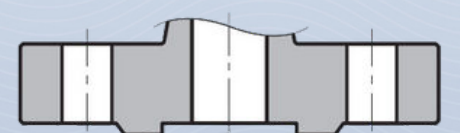
TYPE B - RAISED FACE



TYPE C AND D -  
TONGUE AND GROOVE FACE



TYPE E AND F -  
SPIGOT AND RECESS FACE



TYPE G AND H -  
O-RING SPIGOT  
AND  
O-RING GROOVE FACE

FACING TYPES	METHODE OF MACHINING	RADIUS OF TOOL NOSE MM	RA $\mu\text{m}$		RZ $\mu\text{m}$	
		min.	min.	max.	min.	max.
A, B1 b, E, F	Turning c	1.0	3.2	12.5	12.5	50
B2b, C, D, G, H	Turning c	-	0.8	3.2	3.2	12.5

For certain applications, e.g. low temperatures gases, it may be necessary to stipulate closer control to the surface finish.

A	Ra and Rz are defined in EN ISO 4287
B	Types B1 and B2 are raised face (type B) flanges with different specified surface roughness values.
B1	Standard facing for all PN numbers.
B2	Only if agreed between the purchaser and the flange manufacturer.
C	The term "turning" includes any method of machine operation producing either serrated concentric or serrated spiral grooves.