



SIZE		DISC PROTRUSION		FLANGE THICKNESS			BOLTING LENGTH (L)		
DN	NPS	X	Y	EN 1092 PN 10	EN 1092 PN 16	ASME B16.5 CL 150	PN 10	PN 16	CL 150
50	2"	25	4	18	18	19.1	35	35	1½"
65	2½"	46	10	18	18	22.4	35	35	1¾"
80	3"	66	17	20	20	23.9	40	40	1¾"
100	4"	86	24	20	20	23.9	40	40	2"
125	5"	112	35	22	22	23.9	45	45	2"
150	6"	140	47	22	22	25.4	45	45	2"
200	8"	191	70	24	24	28.5	50	50	2¼"
250	10"	241	91	26	26	30.3	55	55	2½"
300	12"	290	111	26	28	31.8	60	65	2½"
350	14"	327	129	26	30	35.1	60	65	3"
400	16"	373	142	26	32	36.6	75	80	3½"
450	18"	421	161	28	40	39.7	80	80	4"
500	20"	470	180	28	44	43.0	80	90	4"
600	24"	566	216	28	54	47.8	100	110	5"
700	28"	666	261	30	36	-	100	110	-
750	30"	711	278	-	-	-	-	-	-
800	32"	763	298	32	38	-	120	120	-
900	36"	863	342	34	40	-	130	130	-
1000	40"	973	390	34	42	-	130	140	-
1200	48"	1159	466	38	48	-	-	-	-
1400	56"	1364	568	42	52	-	-	-	-

Note: Where 2 length dimensions are given, the short one is not-through bolting at the shaft passages (8 bolts/valve).

### FLANGE BOLTING LENGTH

The minimum bolting length of a wafer type valve between flanges with through bolting can be calculated with the formula:

$$L_{MIN} = 1 \times F_{toF} + 2 \times \text{Flange Thickness} + 1 \times H_{NUT} + 2 \times H_{SPACER} + 1 \times \text{pitch thread}$$

The table shows the calculated bolt lengths for ISO PN and ASME flanges, based on the following assumptions:

- flange thickness of a steel welding neck flange according EN 1092 and ASME B16.5;
- use of hexagon head cap screws, two spacers and a nut;
- standard available bolt lengths.

**Important:** Only as guideline, any deviation requires recalculation of the bolt length.