



SIZE		DISC PROTRUSION				FLANGE THICKNESS			BOLTING LENGTH (L)		
DN	NPS	X	Y	S	T	EN 1092 PN 10	EN 1092 PN 16		PN 10	PN 16	
80	3"	48	8	19	-	20	20		130	130	
100	4"	77	18	19	-	20	20		130	130	
125	5"	104	28	20	-	22	22		140	140	
150	6"	130	37	20	-	22	22		150	150	
200	8"	179	56	21	-	24	24		170	170	
250	10"	223	68	23	-	26	26		200	200	
300	12"	278	93	24	-	26	28		200	200	
350	14"	311	105	26	-	26	30		220	220	
400	16"	360	123	28	43	26	32		240	240	
450	18"	409	142	28	54	28	40		240	280	
500	20"	462	167	32	60	28	44		240	280	
600	24"	559	204	35	76	28	54		280	340	
700	28"	647	229	37	115	30	36		340	340/130	
750	30"	699	253	37	115	-	-		-	-	
800	32"	749	273	40	115	32	38		340	360	

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:

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

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;
- 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.