

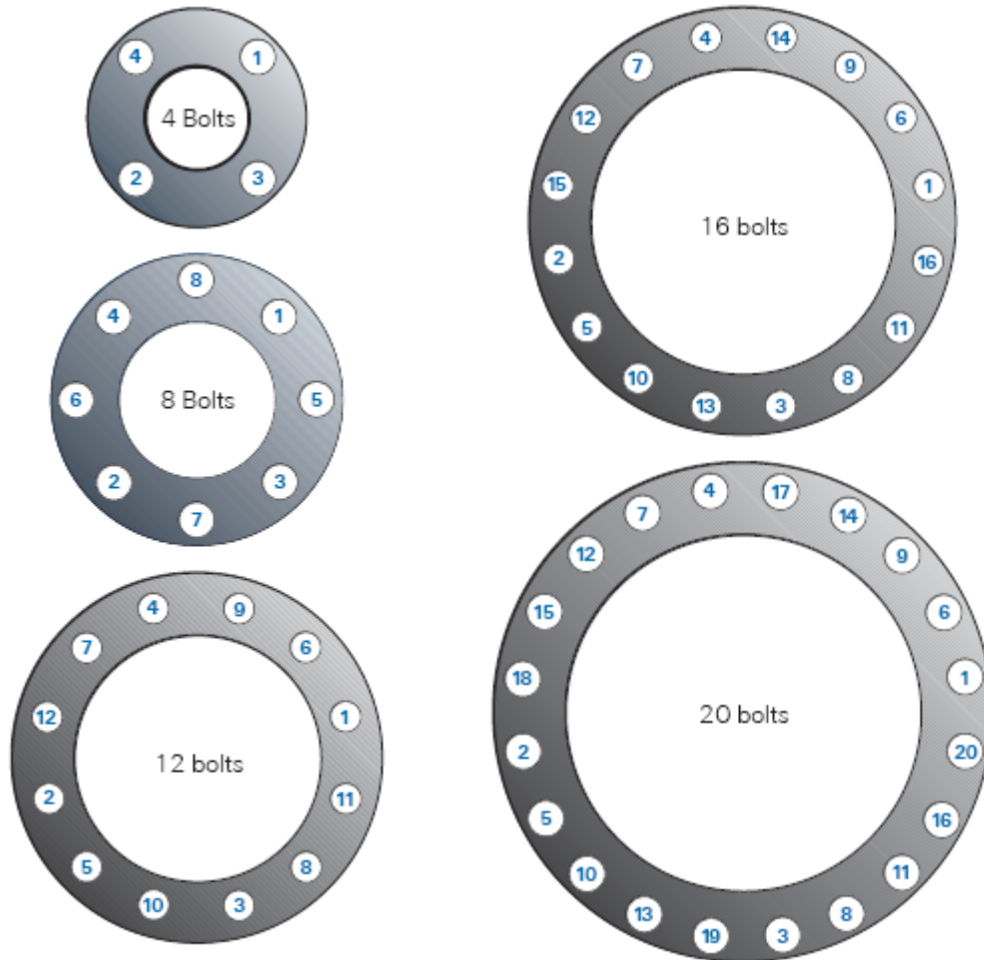
**PN10/16 FLANGE BOLT SETS  
FOR WAFER BUTTERFLY VALVES**

The following table shows the number and size of bolts required to mount a wafer butterfly valve between PN10 or PN16 flanges.

Valve Size	Valve body thickness	No of bolts PN10	No of bolts PN16	Bolt Size	Bolt Length
1"	32	4	4	M12	55
1 1/4"	32	4	4	M16	55
1 1/2"	32	4	4	M16	55
2"	43	4	4	M16	65
2 1/2"	46	4	4	M16	65
3"	46	8	8	M16	70
4"	52	8	8	M16	70
5"	56	8	8	M16	70
6"	56	8	8	M20	70
8"	60	8	12	M20	75
10"	68	12	12	M24	80
12"	78	12	12	M24	80

See following page for recommended bolt tightening sequence for flanges.

## Recommended sequence for flange bolt tightening



### Bolts:

When tightening the bolts in flanges we recommend the above sequence is followed to ensure that the flange faces are pulled together as evenly as possible. Bolts should initially be tightened by hand, then a spanner/ wrench. When using the spanner/ wrench, the nuts should be tightened 1 turn at a time until tight, then say 1/2 turn each and so on.

Once fully assembled the flange bolts should be tightened to the specified torque setting suited to operating pressure and temperature conditions, again following the sequence shown.

### Washers:

Washers are used to protect the surface against which the nut being tightened would otherwise damage. They should be used only on the free end of the bolt, and are not required under the bolt head.