INSTALLATION AND OPERATING MANUAL FOR BUTTERFLY VALVES

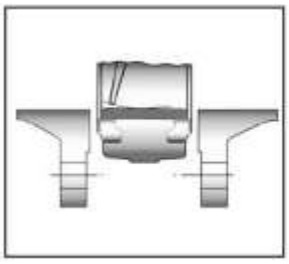
INSTALLATION INSTRUCTIONS

GENERAL GUIDELINES :

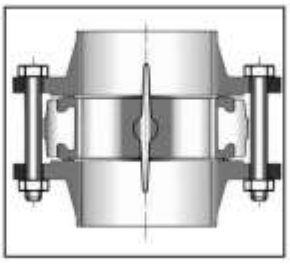
- Ensure that the valves to be used are appropriate for the conditions of the installation (type of fluid,pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves to be installed are of correct strenght to be able to support the capacity of their usage.
- **Installation of all circuits should ensure that their function can be automatically tested on a regular basis (at least two times a year).**

INSTALLATION INSTRUCTIONS :

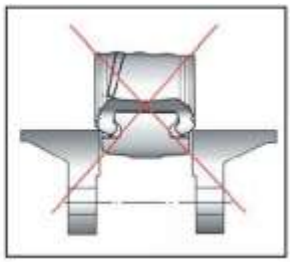
- **Before installing the valves,clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the valves.
- **Ensure that both connecting pipes either side of the valve (upstream and downstream) are aligned (if they're not,the valves may not work correctly).**
- **Make sure that the two sections of the pipe (upstream and downstream) match,the valve unit will not absorb any gaps.Any distortions in the pipes may affect the thightness of the connection,the working of the valve and can even cause a rupture.**To be sure,place the kit in position to ensure the assembling will work.
- **If sections of piping do not have their final support in place,they should be temporarily fixed.This is to avoid unnecessary strain on the valve.**
- The valve must be inserted between flanges with disc half opened but the disc must not overpass the valve thickness. Position the bolts to keep centered the valve. Then open fully the valve and tighten the bolts. **See graph under**.



Half open valve introduction



Complete opened disc valves when screw tightening



- Tighten the bolts in cross.
- The disc must move easily inside the pipe.
- Valves must be opened during cleaning operation.
- Tests must be done with a cleaned pipe.
- Tests must be done with opened valve. Test pressure must not be higher than the valve specification according to ISO 5208 or EN 12266-1.
- Then open slowly the valve.
- **Do not mount butterfly valves with stainless steel pressed collars and turning flanges without strias.**
- **And not on flat face flanges without strias (example : painted cast iron fittings)**

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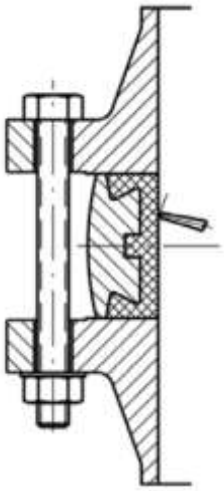
ADVISABLE TIGHTENING TORQUES FOR BOLTING FLANGES :



DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Couple de serrage (Nm)	34	46	28	35	48	83	84	129	172	96	129	155	160	218

These theorical values are indicative and need to be adapted to the service conditions, the bolts used and the type of flanges used.

For information, below are the maximum torques allowed by the bolt according to its material.

		Maximum torques (Nm)			
	Bolting types	5,6 / A307 Gr.B	8,8 / A193 B7	10,9	12,9
Bolting DN	M12 (1/2'')	41,16	84,28	117,6	142,1
	M14 (9/16'')	66,64	132,3	186,2	225,4
	M16 (5/8'')	102,9	205,8	289,1	347,9
	M18 (3/4'')	142,1	284,2	396,9	475,3
	M20 (3/4'')	196	401,8	568,4	676,2
	M22 (7/8'')	259,7	539	764,4	911,4
	M24 (1'')	338,1	695,8	980	1176
	M27 (1''1/8)	499,8	1029	1470	1764
	M30 (1''1/4)	666,4	1421	1960	2352

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BEST POSITION INSTALLATION :

For wastewater, fluids with solid particles or cold network (air conditioning for example), the best position is the horizontal one :

- **For an installation in ATEX area, check the conductivity between the valve, the upstream pipe and the downstream pipe and make sure the pipe is connected to the earth.**

MAINTENANCE :

- We recommend to operate fully the valve 1 to 2 times per year.
- During maintenance operation, ensure that the pipe isn't under pressure, that there's no fluid in the pipe and that the valve is isolated. If there's a fluid in the pipe, evacuate it. Ensure that there are no risks due to the temperature or the fluid (like acids). If the fluid is corrosive, inert the installation before maintenance operation.