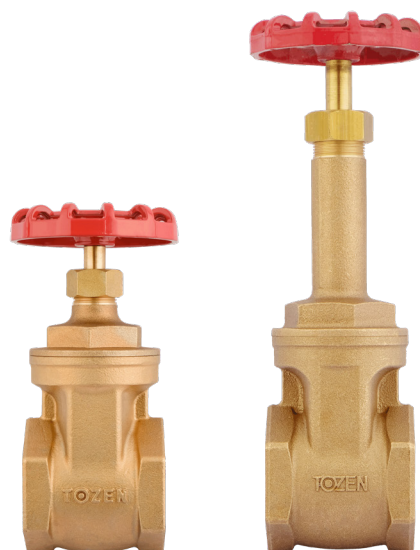


BRASS & BRONZE GATE VALVE

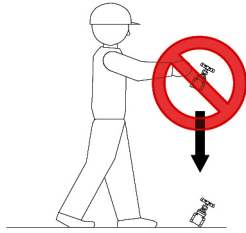
INSTALLATION, OPERATION AND MAINTENANCE MANUAL



HANDLING MANUAL (BS21 (ISO 7))

TRANSPORTATION

- If using a cardboard box for package, the strength of the box may be decreased due to moisture. Be sure to protect the package and handle it carefully.
- Please avoid strong shock (drop, overturn, or thrown out) or vibration toward valves (Drawing 1).
- Please do not hang the valve through handle (Drawing 2) as the handle may come off and drop.



No drop, overturn, thrown out!

Drawing 1



No hanging!

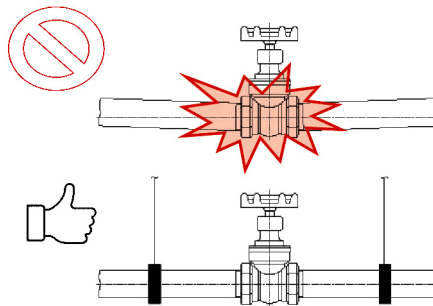
Drawing 2

STORAGE

- Please be sure not to expose valves with the package to rain, water, or dew, etc. while in storage.
- Please be sure not to store brass valves in a corrosive environment to avoid corrosive crack.
- Please do not load heavy materials on valves during storage.
- Please do not dismantle valves.

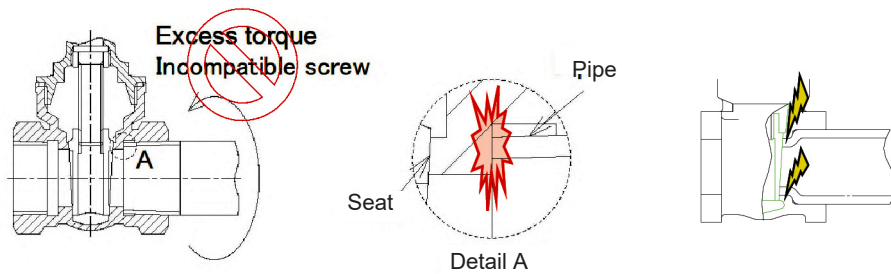
INSTALLATION

- Before installing valves, be sure to check that the adequate valves have been prepared to exactly meet the usage conditions including the working pressures and working temperature, and the connecting pipe size. And care should be taken to remove all foreign objects such as sands or scales from the valve and pipe thread portion.
- Before installation, please close the valve clockwise.
- Where extraordinary external forces such as piping stress may be applied to valves, be sure to provide supports for pipes or any other adequate protective measures. (Drawing 3)



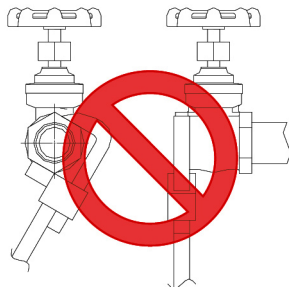
Drawing 3

- Ensure that the length of the pipe thread is suitable for the valve. The standard thread in BS21 (ISO 7) is required. If the thread length is too long, it would damage valve seat and cause body crack, and if the thread length is too short, it would cause leakage from the connection part.
- Please do not over tighten the pipe to avoid damage on valve seat and body (Drawing 4).
- Please apply any seal compound or PTFE tape properly on the male thread only, not on the female thread.

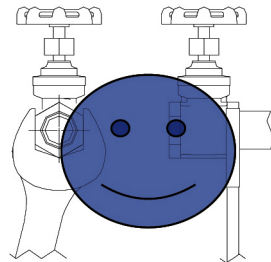


Drawing 4

- A tool as a clamp shall be used on the pipe side to connect the valve (Drawing 5).
- For connection, please use adequate tool (Spanner, etc) to screw correctly. And please do not screw by using pipe wrench on valve side (Drawing 5).



Do not clamp on the pipe side
Do not use pipe wrench on valve



Clamp on the pipe side
Use Spanner on valve

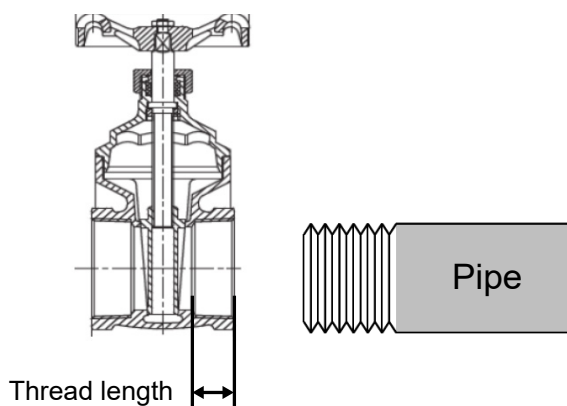
Drawing 5

WORKING CONDITION

- Close Torque (reference value)

Size	15A	20A	25A	32A	40A	50A	65A	80A	100A
N-m	2.9	4.4	4.9	5.5	9.9	14.0	14.8	17.2	20.0

ASSEMBLY CONDITIONS FOR VALVES



Drawing 6

Size (mm.)	Size (inch)	Thread Length (mm.)
15A	1/2"	9.4
20A	3/4"	11.2
25A	1"	15
32A	1-1/4"	15
40A	1-1/2"	15.7
50A	2"	17
65A	2-1/2"	21
80A	3"	24
100A	4"	26

- When installing the valve, do not tighten or assemble the pipe beyond the thread length, as this can damage the valve.



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