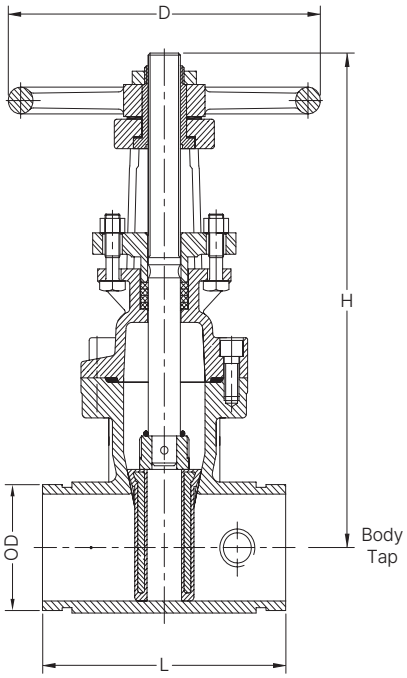
AOSY-GG

OS&Y Gate Valve Resilient Seat Grooved

Technical Features

- **Connections:** Grooved Ends (AWWA C606)
- **Sizes:** 2½", 3", 4", 5", 6", 8", 10", 12"
- **Approvals:** UL, ULC, FM
- **Maximum Working Pressure:** 300PSI (Max. Test Pressure: 600PSI)
- **Maximum Working Temperature:** 180ºF (82ºC)
- **Design & Dimensions Conform To:** AWWA C515
- **Coating:** Fusion Bonded Epoxy Coated Interior and Exterior, AWWA C550
- NPT Plug on Body

Components	Material	Standard Specification
Body	Ductile Iron	ASTM A536 Gr. 65-45-12
Wedge	Ductile Iron, EPDM Encapsulated	
Wedge Nut	Stainless Steel	ANSI 304
Stem	Stainless Steel	ANSI 420
Bonnet	Ductile Iron	ASTM A536 Gr. 65-45-12
Gasket	Rubber	EPDM
Packing	Graphite	Commercial
Gland	Ductile Iron	ASTM A536 Gr. 65-45-12
Yoke Nut	Bronze	B62 C83600
Handwheel	Ductile Iron	ASTM A536 Gr. 65-45-12
Handwheel Nut	Ductile Iron	ASTM A536 Gr. 65-45-12
NPT Plug	Malleable Iron	Commercial
Gland Bolt	Stainless Steel	AISI 316
Bonnet Bolt	Carbon Steel	A307B



Dimensions

Nominal Pipe Size	OD		L		H (OPEN)		H (CLOSE)		D		Body Taps	Weight
	in	mm	in	mm	in	mm	in	mm	in	mm		lbs
2½"	2.9	73.7	7.5	190.5	16.3	414.0	13.8	350.5	7.2	182.9	½"	35.16
3"	3.5	88.9	8.0	203.2	18.9	480.0	15.7	398.8	10.0	254.0	½"	42.66
4"	4.5	114.3	9.0	228.6	21.7	551.2	17.7	449.6	10.0	254.0	½"	49.38
5"	5.6	142.2	10.0	254.0	25.8	655.3	20.9	530.9	12.0	304.8	¾"	88.18
6"	6.6	167.6	10.5	266.7	29.1	739.1	23.2	589.3	12.0	304.8	¾"	90.61
8"	8.6	218.4	11.5	292.1	36.6	929.6	28.7	729.0	14.0	355.6	¾"	142.75
10"	10.7	271.8	13.0	330.2	44.5	1130.3	34.6	878.9	17.5	444.5	¾"	229.94
12"	12.8	325.1	14.0	355.6	52.0	1320.8	40.2	1021.1	17.5	444.5	¾"	321.43

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Installation

Prior to installation, a check of the identification plate and body marking must be made to ensure that the correct valve is being installed.

The Valve should not be subjected to misuse, careless handling or allowing debris to enter the valve through the end ports. Failure to clean the valve or system prior to installation will affect performance, and may void the warranty.

All special packaging material must be removed.

Valves must be provided with adequate support. Adjoining pipework must be supported to avoid strain on the valve body, which could impair its performance or crack the valve body.

Valves should not be lifted using the handwheel or stem.

Valve end protectors should only be permanently removed immediately before installation. The valve interior should be inspected through the end ports to determine whether it is clean and free from foreign matter. The mating flange (both valve and pipework flanges) should be checked for correct gasket, surface finish and condition. If a condition is found which might cause leakage, no attempt to assemble should be made until the condition has been corrected.

The gasket should be suitable for operation conditions or maximum pressure/temperature ratings. The gaskets should be checked to ensure freedom from defects or damage.

Care should be taken to provide correct alignment of the flanges being assembled. Bolts are tightened sequentially to make initial contact of flanges and gaskets. Follow by gradual and uniform tightening in an opposite bolting sequence to avoid bending flanges to the other, particularly on flanges with raised faces.

Parallel alignment of flanges is especially important in the case of the assembly of a valve into an existing system. If not, that might damage the valve body.

Concentricity of flanges is especially important in the case of the assembly of a valve into an existing system. If not, that might damage the valve body.

Flanged joints depend on compression of the gasket material between the flange surfaces. Thus, the bolting must be checked for correct size, length, material and that all connection flange bolt holes have been utilized.

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Operating

The valve is opened by counter-clockwise rotation of the handwheel to a positive stop. Further effort is not necessary. When fully open it is advantageous to rotate the handwheel clockwise ½ turn.

To close the valve, the handwheel is rotated clockwise to a positive stop.

Wheelkeys or other similar devices should not be used.

Note:
When the valve is closed at extreme high temperature and then cooled, the wedge may become tight in the valve and prove difficult to open. Conversely, a valve closed at room temperature can be difficult to open if there is an increase in fluid temperature causing a linear expansion of the stem, which tightens the wedge further into the body seats. The operator should use suitable hand protection at extreme temperature conditions. The valve should only be used in the open or closed position. Regulating or throttling service should be avoided.

Maintenance

The valve should be at zero pressure and ambient temperature prior to any maintenance.

Maintenance Engineers & Operators are reminded to use correct fitting tools and equipment.

Tools causing showers of sparks are only permissible if:
- No hazardous explosive atmosphere is present.
- Dust deposits have been removed and no dust cloud is present.

A full risk assessment and methodology statement must be compiled prior to any maintenance.

The risk assessment must take into account the possibility of the limits of use being exceeded whereby a potential hazard could result.

In systems where corrosion could be a potential hazard, wall thickness checks on the body and bonnet should be made. This requires either the removal of the valve from the pipeline or removal of the bonnet with the system at zero pressure. If the wall thickness has reduced by 25%, the valve must be replaced.

Gland Adjustment

The gland may need adjustment during installation and then periodically thereafter to maintain a stem gland seal.
The following procedure is recommended:

Each gland nut should be tightened evenly in a clockwise direction until increased resistance is obtained, or if leakage is present until the leakage stops.

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Note:
It is recommended that within the 1st year the gland be inspected at 3 monthly intervals to check for gland leakage and adjustment.

Under normal working conditions Gate Valves should not need further attention but when required the following procedures are recommended.

Fitting Additional Packing

1. Turn off circulating pumps.
2. Close valve by clockwise rotation of handwheel.
3. Loosen both gland nuts counter-clockwise and remove.
4. Lift the gland.
5. Replace bonnet gasket if damaged.7.12Replace bonnet gasket if damaged.
6. Refit the gland and both nuts, tighten gland nuts evenly in a clockwise direction until increased tension to operate the valve is obtained.

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