

Size range: 2" - 12"



Profit gate valves type GGOSY are resilient seated gate valves. The grooved cast iron body has a ductile iron wedge with vulcanised rubber lining. The valves are designed to be used in fire protection sprinkler systems and HVAC systems.

Characteristics

- Indoor & outdoor use.
- Manually operated with a hand-wheel.
- Grooved ends according to AWWA C606 standard.
- Installation with grooved mechanical couplings.
- E/E dimension comply with EN 558/series3, ASME B16.10 and ISO 5752 .
- Full bore waterway body.
- Resilient wedge.
- Suitable for use in vertical and horizontal piping.
- Anti-corrosion protection: high grade polyester powder coating, RAL 3000, meets or exceed AWWA C550 standards.
- Pre-notched stem to accomodate an (optional) supervisory switch.
- Meets the requirements of AWWA C515.

Working pressure

2,07 MPa / 20,7 bar / 300 psi.

Working temperature

+1°C to +80°C.

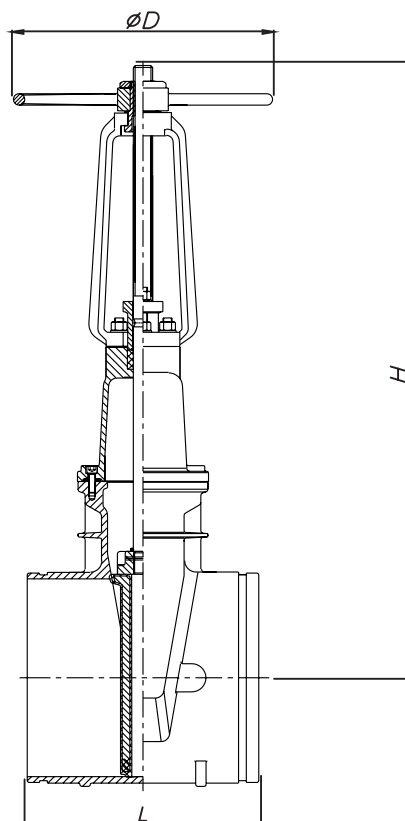
Approvals

- FM approved to FM standard 1120 & 1130.
- UL 262 listed.
- EAC certified.

Material specifications

Component	Specification	European standard	ASTM standard
Body	Ductile cast iron	EN-GJS-450-10	A 536 gr 65-45-12
Wedge	Ductile cast iron + EPDM	EN-GJS-450-10	A 536 gr 65-45-12
Wedge nut	Stainless steel	CF8	A 351 CF8
Bonnet	Ductile cast iron	EN-GJS-450-10	A 536 gr 65-45-12
Stem	Stainless steel	X5 Gr Ni 18-10	A 276 Grade 304
Yoke	Ductile cast iron	EN-GJS-450-10	A 536 gr 65-45-12
Stem nut	Bronze	/	B 148 C 95200
Packing	Graphite (Asbestos-free)	/	/
Gland	Ductile cast iron	EN-GJS-450-10	A 536 gr 65-45-12
Gland stud	Stainless steel	X5 Gr Ni 18-10	A 276 Grade 304
Fasteners	Carbon steel	Gr 4.6	A 307 Gr B
Body / bonnet gasket	EPDM rubber	/	D2000
Plug (NPT)	Malleable iron	/	A 47 Grade 22010
Hand-wheel	Ductile cast iron	EN-GJS-450-10	A 536 Gr 65-45-12

Dimensions

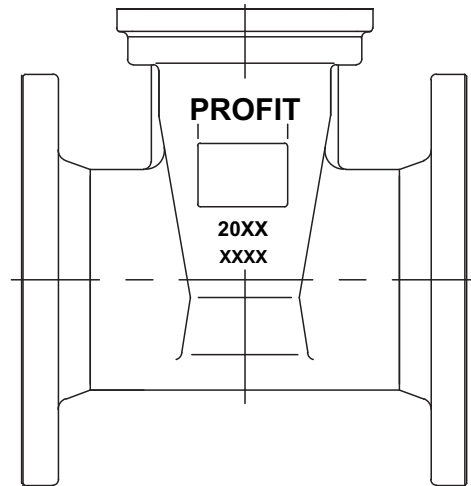
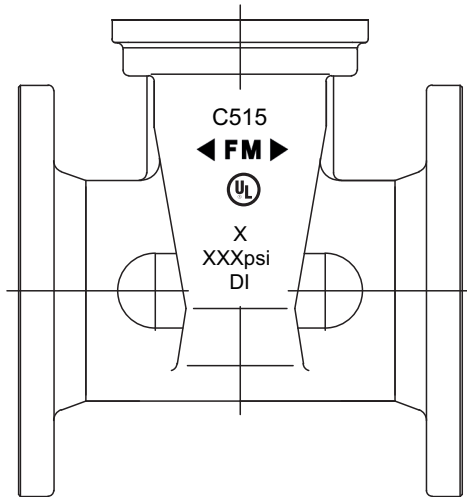


Dimensions (mm/inch)									
Size	2"	2,5"	3"	4"	5"	6"	8"	10"	12"
L	178/7,0	190/7,5	203/8,0	229/9,0	254/10,0	267/10,5	292/11,5	330/13,0	356/14,0
H (open)	385/15,2	415/16,3	518/20,4	561/22,1	714/28,1	782/30,8	981/38,6	1244/49,0	1376/54,2
H (close)	333/13,1	349/14,0	439/17,6	462/18,5	590/23,6	630/25,2	782/31,3	991/39,6	1075/43,0
D	183/7,2	183/7,2	253/10,0	253/10,0	306/12,0	306/12,0	355/14,0	445/17,5	445/17,5
Weight (kg)	13,00	19,30	22,00	28,00	41,20	46,50	80,00	120,00	170,00

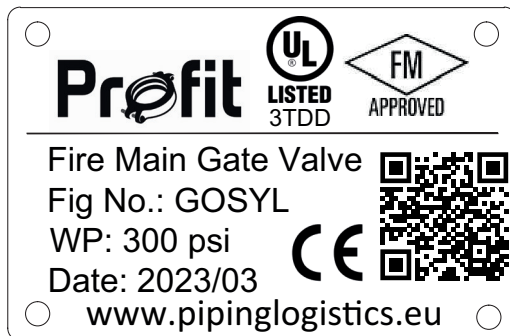


Marking

Body:



Marking plate:



For size 10" - 12"



For size 2,5" - 8"

Performances

Cv/Kv-values:

Definition / formulas:

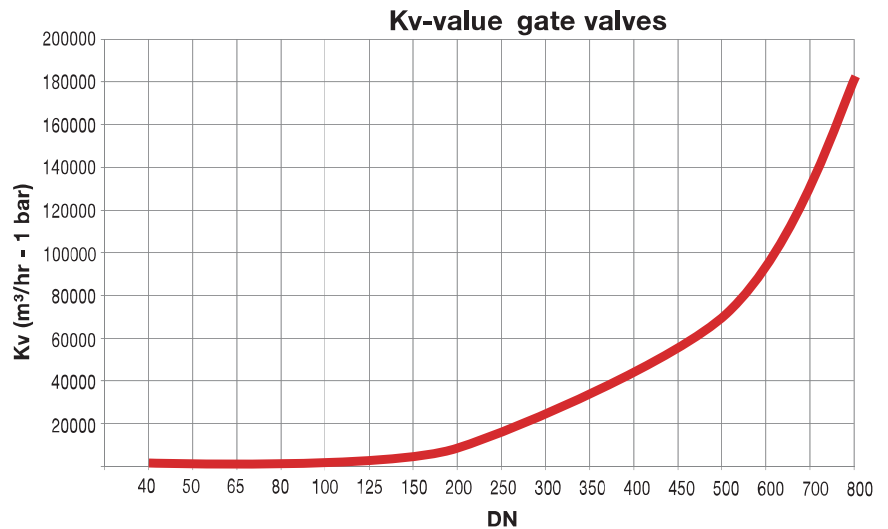
Kv-Value: actual flow of water (m³/hr)
creating pressure loss of 1 bar.

Pressure loss coefficient **Zeta (K) value:**
ratio of static and dynamic pressure loss.

Pressure loss coefficient,
Zeta (K-value) = Diff pressure / (500 X V²)
Diff pressure (Pa)
V: water flow velocity (m/sec)
Actual diff pressure (bar) = (Q/Kv)²

Zeta values:

DN 40-125: 0,06
DN 150-250: 0,04
DN 300-800: 0,02



Flow velocity (m/sec)	Q m3/h					
	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300
1.0	28.3	44.2	63.6	113.1	176.7	254.5
1.5	42.4	66.3	95.4	169.6	265.1	381.7
2.0	56.5	88.4	127.2	226.2	353.4	508.9
2.5	70.7	110.4	159.0	282.7	441.8	636.2
3.0	84.8	132.5	190.9	339.3	530.1	763.4
3.5	99.0	154.6	222.7	395.8	618.5	890.6
4.0	113.1	176.7	254.5	452.4	706.9	1,017.9
4.5	127.2	198.8	286.3	508.9	795.2	1,145.1
5.0	141.4	220.9	318.1	565.5	883.6	1,272.3

Opening %	CV/KV											
	DN 100		DN 125		DN 150		DN 200		DN 250		DN 300	
	CV	KV	CV	KV	CV	KV	CV	KV	CV	KV	CV	KV
10%	75	64	143	122	158	135	343	293	448	383	583	498
20%	186	159	278	238	319	273	642	549	904	773	1290.5	1103
									1459	1247	2015	1722
									2187	1869	2952	2523
									3195	2731	4006	3424
									6230	5325	8286	7082
									16842	14395	29844	25508

Certifications

Size		FM	UL
DN	NPS		
DN 50	2"	Up to 2,07 MPa / 20,7 bar / 300 psi	Up to 2,07 MPa / 20,7 bar / 300 psi
DN 65	2½"	Up to 2,07 MPa / 20,7 bar / 300 psi	Up to 2,07 MPa / 20,7 bar / 300 psi
DN 80	3"	Up to 2,07 MPa / 20,7 bar / 300 psi	Up to 2,07 MPa / 20,7 bar / 300 psi
DN 100	4"	Up to 2,07 MPa / 20,7 bar / 300 psi	Up to 2,07 MPa / 20,7 bar / 300 psi
DN 125	5"	Up to 2,07 MPa / 20,7 bar / 300 psi	Up to 2,07 MPa / 20,7 bar / 300 psi
DN 150	6"	Up to 2,07 MPa / 20,7 bar / 300 psi	Up to 2,07 MPa / 20,7 bar / 300 psi
DN 200	8"	Up to 2,07 MPa / 20,7 bar / 300 psi	Up to 2,07 MPa / 20,7 bar / 300 psi
DN 250	10"	Up to 2,07 MPa / 20,7 bar / 300 psi	Up to 2,07 MPa / 20,7 bar / 300 psi
DN 300	12"	Up to 2,07 MPa / 20,7 bar / 300 psi	Up to 2,07 MPa / 20,7 bar / 300 psi



Storage and handling

- Upon receipt, carefully check complete the valve on any damage during shipment.
- Valves should unloaded carefully, they should not be lifted by handwheel or stem or by using the waterway-passage through the valve. Do not drop onto the ground.
- GGOSY valves must be stored indoor, protected the rubber seating from direct sunlight. Storage is recommended with the disc slightly turned open.
- When stored outside, protect the valve from weather conditions and avoid accumulation of water, dirt, or debris.



Installation

- Inspection before installation. Checklist:
 1. Check pressure rating of the valve is compatible with the service conditions. GGOSY valves may be installed with any schedule or pressure class of pipe that is listed or approved.
 2. Check that the available length between the pipes matches the total length L of the valve.
 3. Check the groove dimensions to AWWA C606.
 4. Open and close the valve to ensure that it operates properly.
 5. Check that valve-body, and adjacent pipes are clean inside.
 6. Pipework must be supported near the valve and pipes must be well aligned so that no extra stress will be exerted on the valve-body during installation.
 7. To prolong the valve-life, we recommend to install the valve not closer than 5-6 x DN when installed downstream near a fitting (bends and tees).
 8. The gate valves are not intended to be used for regulating or throttling services.
 9. The valves may be installed in:
 - a) Horizontal pipework (attention: stem should not be placed horizontal because shut-off performance may be impaired).
 - b) Vertical pipework with stem horizontal.
 10. For replacements: all pipes need to be depressurised and purged before starting the installation.
 11. Personnel for the installation must be qualified for the task.

- Installation of the valve:
 1. The valves are bi-directional.
 2. Close the valve.
 3. Insert the valve between the pipes.
 4. Install the mechanical couplings.
- Operation of the valve:
 1. Check the operation by fully opening (turn clockwise) and closing (turn anti-clockwise) the valve.
 2. Turn the valve fully open before filling and pressurising the system.



Maintenance

- GGOSY valves are basically installed maintenance-free. However we advise to verify at least annually (or scheduled in agreement with the local authority or competent maintenance company) that the valve operates properly. Also check for any leaks in the stem area. Stem-leakage can be solved easily by tightening the 2 gland nuts clockwise, till leakage has stopped. In the event that gland packing needs replacement please contact Piping Logistics technical dpt.
- When the valve is blocked, please do not use excessive force or torque on the handwheel. Important temperature differences can be the cause of the problem. Take the valve out to check the cause.
- When a major problem of any kind occurs, please contact technical dpt. of Piping Logistics.
- The owner of the system is responsible for testing and inspection of the sprinkler system, in accordance with the applicable standard. We recommend that this testing is done by a qualified inspection service company.

GENERAL INFO

- Installers should be trained or experienced to install and understand the product.
- Read and understand all technical datasheets and installation instructions before attempting to install, remove or adjust any Profit piping products.
- Depressurise and drain the sprinkler installation system before attempting to install, remove or adjust any Profit piping products.
- Never work on piping systems that are pressurised and / or filled with water.
- Piping Logistics reserves the right to change specifications, designs and / or standard equipment without notice and without incurring in any obligations.
- Use the necessary Personal Protection Equipment (PPE) to avoid personal injury (helmet, safety shoes and goggles, Profit gloves).



Failure to follow these instructions could result in death or serious injury and property damage.

We advise to always store our products in closed and dry environments, the products do not need any specific maintenance once installed on an aboveground sprinkler installation.

REVISION TABLE

Date	△	Notes
26/03/2024	A	Page 1 - Approvals have been added.
07/05/2024	B	Page 2 - Correction in the dimensions of open and closed height.