

## Product information - Presentation of EURO 20 range



The Euro 20 gate valves are equipped with gates fully rubber encapsulated from DN40 to 400 and must be used only in full opening or closing position up to a pressure of 25 bar. They are designed for use on water supply and distribution mains, irrigation systems, fire fighting system and general systems in industrial sites. They can cut the water flow in a pipe and therefore facilitate the network maintenance.

### Main characteristics are:

- Titular of the quality standard ;
- In accordance with ISO & NF standards (DN40-300), in particular, possibility to replace the bush seals under full working pressure, valve totally opened ;
- Coating and materials neutrality concerning drinking water ;
- Full bore to nominal diameter (except DN350) ;
- Corrosion resistance secured by the material and epoxy coating choice ;
- No current maintenance needed ;
- The operating torque is much lower than required by the standards ;
- Easy to maintain.

### General information

Because they easily allow to stop the water flow on the network, isolating valves are aimed at facilitating maintenance or extension operations on the water distribution structure. In case of accident on a pipe, the closing of the valves enables to limit flood risks, as well as the catastrophic consequences such an event could trigger. Placed on the intermeshing, in interconnections, isolating valves become sharing valves which will be used sometimes in an open position, sometimes in a closed position in order to balance a correct the water distribution on the whole network. Isolating valves are generally used for the protection or the maintenance of other valves and couplings' products (regulation devices, pillar hydrants....etc).

Euro 20 valves may be installed:

- On adduction and drinking water distribution networks



- On irrigation networks
- On fire protection networks
- Within water treatment plants
- Within pumping plants
- At tank level ...

They are perfectly operational whether they be installed horizontally vertically, or in a tilted way ; please note that they also exist in a motorized version. They're connected to pipes with flange adaptors, couplings, and links (for further information, please refer to the corresponding products' sheets). T-key operated gate valve following EN1074-2.

## Added values

They are gathered around 3 main aspects in full accordance with the mission and vision of our company:

- durability ;
- safety ;
- maintenance.

### Durability:

The RVOC durability is the consequence of two essential functions of the valves : Performances that allow for a perfect watertightness, and resistance to the corrosion. RVOC'sn functionality performance is the result of the combination of a low torque-MOT and of a great resistance to the efforts of manoeuvre-mST. Consequently, it is effortlessly possible, even under pressure, to operate the opening/closing maneuvers of the product. The resistance to corrosion of our products is the fruit of the bolt-less made design of our valves, along with a judicious choice of materials, and a coating perfectly adapted to our needs (thickness 250 microns mini average according prescriptions of EN14901). All of these characteristics enable us to provide our customers with products of the best quality available on the market. Saint-Gobain PAM, today leader on the RVOC market, guarantees its customers a quality even beyond the requirements of the NF norms. (see table below).

### Safety:

The safety of our products is one of the pillars of our company's mission. Combining top-notch ergonomics (low MOT), reduction of the breaking risks (mST), autoclave effect(less risks at high pressures), and alimentarity ; the St-Gobain PAM brand are the warrants of both an easy to use technology, and safe products.

Saint Gobain PAM's safety is recognized by numerous independent organisations, which requirements are often much lower than the observations made on our products.

### Maintenance:

Leader of the market, ST-Gobain PAM is looking towards the future developing resourceful products, while always focusing on driving down maintenance costs. Also, it's with a great pleasure and efficiency that our technical teams will provide you with the best of their abilities to answer your need. After a quick delivery wherever you need to, the replacement of a product will be fast, and efficient. Last but not least, thanks to a



flawless traceability, and optimal ergonomics of our products, you will often be able to operate a change on the network without even having to stop the water flow.

## Hydraulic characteristics

### Headloss: expressed by Kv

The headloss is expressed by the flow coefficient Kv that is the flow at a temperature of 20°C crossing the valve by triggering a headloss of 1 bar.

Those figures are tied by the simple following relation:

$$Kv = \frac{Q}{\sqrt{\Delta P}}$$

with: Kv = flow coefficient in m<sup>3</sup>/h, Q = flow in m<sup>3</sup>/h, ΔP = headloss in the valve in bar.

DN	40	50	65	80	100	125	150	200	250	300	350	400
Kv	130	200	390	600	1000	1800	2900	6000	10000	16000	16000	30000

(\*) the gate valve DN350 has the same passage than the gate valve DN300.

### Headloss: expressed by K

The headloss ΔH of a pipe, the flow speed of the fluid and the headloss coefficient K in the pipe are tied by the following formula:

$$\Delta H = K\alpha \frac{V^2}{2g}$$

with : ΔH = headloss in mCE, V = fluid speed in m/s, g = acceleration due to gravity in m/s<sup>2</sup>, K = headloss coefficient without dimension.

Values of K for gate-valves EURO 20 fully opened:

DN	40	50	65	80	100	125	150	200	250	300	350	400
K	0.300	0.260	0.208	0.170	0.140	0.110	0.090	0.065	0.050	0.040	0.040	0.037

(\*) the gate valve DN350 has the same passage than the gate valve DN300.



## Conformity to Standards

Product :

- NF EN 1074-2

Tests in factory :

- NF EN 12266-1

Face to face dimensions:

- EN 558-2 ISO 5752 serie 15 for type 21
- EN 558-2 ISO 5752 serie 14 for type 23

Flange drilling:

- EN 1092-2
- ISO 7005-2
- DIN 2501

Marking: NF EN 19

In some countries, gate valves are used clockwise closing (FSH) for surface pipes and anti-clockwise closing (FAH) for buried pipes.

The materials of the components and the epoxy coating satisfy the French and European standards in matter of potable water.

## Marking

The marking of the valves manufactured by Saint-Gobain refers to the EN 1074-2 and EN 19 international standards.

Markings are either integral markings, cast in the body, or markings made on plates, securely fixed to the body, in accordance with the EN 19 standard specifications.

EN 19 specifications			Saint-Gobain valves process
Table 1 – Valves markings		Requirements	
1	DN		Integral
2	PN	EN 19 § 4.2.1	Integral
3	Material	Mandatory markings	Integral
4	Manufacturer's name or trade mark	Shall be integral markings or on a marking plate	Plate
11	Reference to standard	EN 19 § 4.3	Integral
		Supplementary markings	



EN 19 specifications		Saint-Gobain valves process	
12	Melt identification	Items 7 to 21 in Table 1	Integral
16	Quality Test		Printed on body
18	Manufacturing date		Plate
21	Closing direction		Plate + sticker on body

## Installation

The gate-valves EURO 20 can be installed as follows:

- On surface
- Buried:
  - under direct backfill (with ground correctly compacted) and placed under surface boxes
  - located in chambers under valve boxes.

The gate-valves can have four positions:

- on horizontal pipe main:
  - standing (each time it is possible)
  - overturned (to avoid for sizes superior to 300)
  - laid down.
- on vertical pipe main:
  - in a horizontal position.

The gate-valve EURO 20 exists under several types, the most common is the EURO 21 with flanges long pattern.

For this type of valve, it's better to use:

- Ultra QUICK, for alying on all type of material
- QUICK GS anchored or not for laying on ductile iron pipes
- QUICK PVC anchored or not for laying on PVC pipes
- Quick PE fus
- and a dismantling joint (PO, PA) to facilitate the laying of the device.

## Maintenance

The gate-valves EURO 20 need no particular maintenance.

The replacing of tightness joint of the operating screw support can be made, the valve under pressure, by loosening the operating bolt when the position is fully open.



*The information on this sketch is, to the best of our knowledge correct at the time of printing. However Saint-Gobain are constantly looking at ways of improving their products and services therefore reserve the right to change without prior notice, any of the data shown. Any orders placed will be subject to our Standard Conditions of Sale, available on request.*