

FORGED GLOBE VALVE CLASS 800 (412-413-414-452-453)

- Size :** DN 10 to 50 (NPS 3/8" to 2")
Ends : Female - Female BSP or NPT, Socket Welding
Min Temperature : - 29°C
Max Temperature : + 538°C for SS (+ 425°C for carbon steel)
Max Pressure : 138 Bars (Class 800)
Specifications : Rising rotating stem (OS&Y)
Bolted bonnet and gland pack
Standard port

Materials : Carbon steel or Stainless steel

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SPECIFICATIONS :

- Respect the flow direction (indicated by the arrow)
- Standard port
- Rising rotating stem (OS&Y)
- Bolted bonnet and gland pack
- Forged Carbon steel or stainless steel
- ½ stellite (Trim 8) for carbon steel valves
- Trim 10 standard SS 316 for stainless steel types
- Class 800

USE :

- Petroleum industry, steam, high pressure
- Min and max Temperature Ts : - 29°C to + 538°C for SS types **Ref.452/453**
- Min and max Temperature Ts : - 29°C to + 425°C for carbon steel types **Ref. 412/413/414**
- Max Pressure Ps : 138 bars (see graph)

FLOW COEFFICIENT Kvs (M3 / h) :

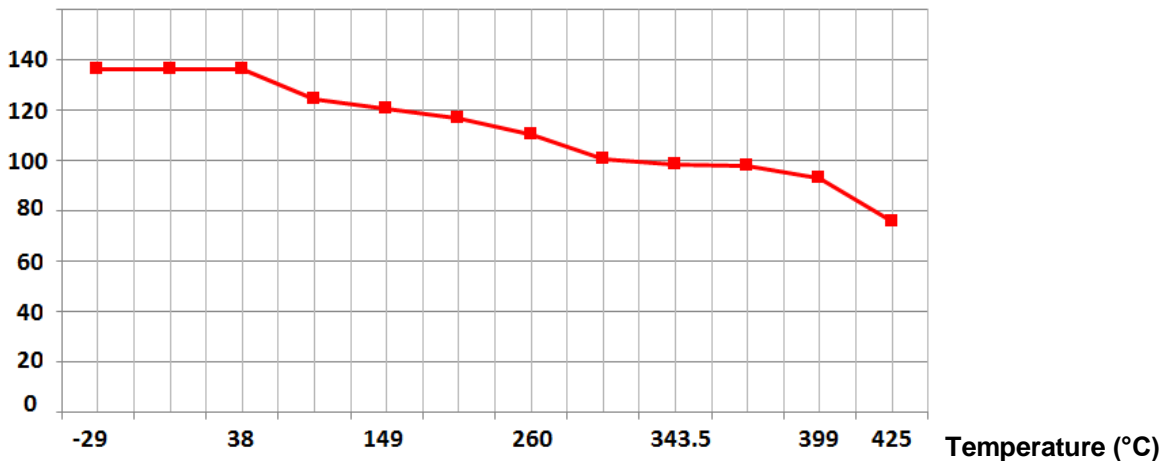
| DN | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|--------------|------|------|------|-----|-------|-------|------|
| NPS | 3/8" | 1/2" | 3/4" | 1" | 1"1/4 | 1"1/2 | 2" |
| Kvs (m3/h) | 1.2 | 1.3 | 3.3 | 5.9 | 9.5 | 12.4 | 21.6 |

PRESSURE / TEMPERATURE RELATION FOR CARBON STEEL VALVES REF. 412/413/414 :

| Pressure (bar) | 136.2 | 136.2 | 136.2 | 124,1 | 120,7 | 116,6 | 110 | 100,7 | 98,6 | 97,9 | 92,7 | 75,9 |
|------------------|-------|-------|-------|-------|-------|-------|-----|-------|-------|------|------|------|
| Temperature (°C) | -29 | 0 | 38 | 93,5 | 149 | 204,5 | 260 | 315,5 | 343,5 | 371 | 399 | 425 |

PRESSURE / TEMPERATURE GRAPH FOR CARBON STEEL VALVES REF. 412/413/414 :

Pressure (Bars)



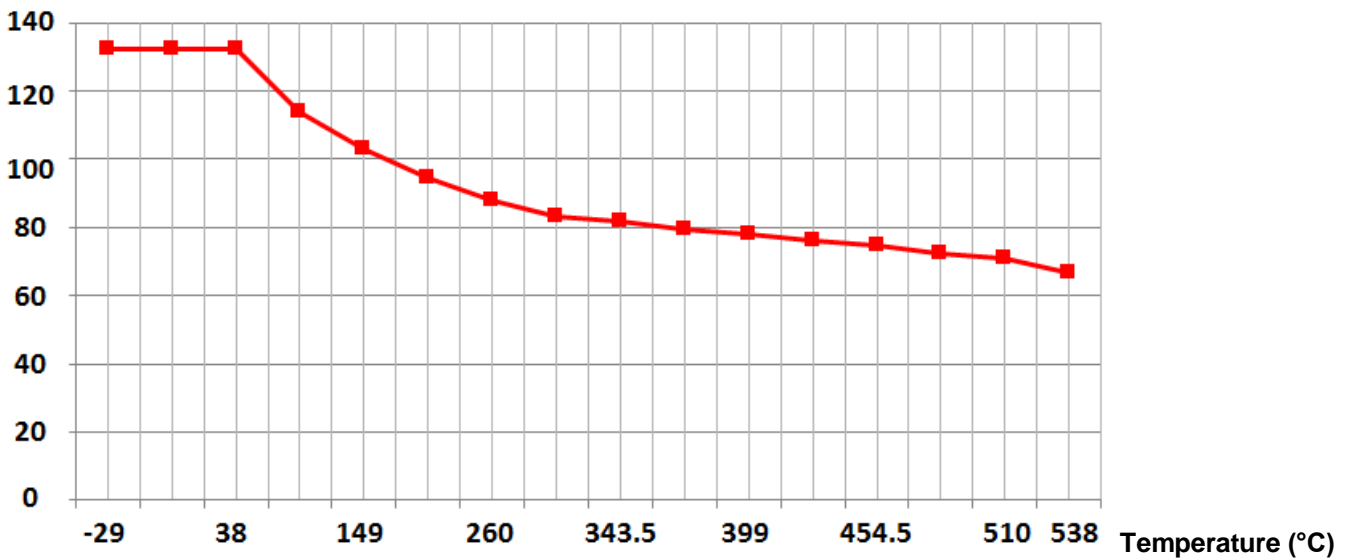
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PRESSURE / TEMPERATURE RELATION FOR STAINLESS STEEL VALVES REF. 452/453 :

| Pressure (bar) | 132.4 | 132.4 | 132.4 | 114.1 | 103.1 | 94.5 | 87.9 | 83.1 | 81.7 | 79.3 | 77.9 | 76.2 | 74.5 | 72.4 | 71 | 66.9 |
|------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|------|------|-------|------|-----|------|
| Temperature (°C) | -29 | 0 | 38 | 93,5 | 149 | 204,5 | 260 | 315,5 | 343,5 | 371 | 399 | 425 | 454.5 | 482 | 510 | 538 |

PRESSURE / TEMPERATURE GRAPH FOR STAINLESS STEEL VALVES REF. 452/453 :

Pressure (Bars)

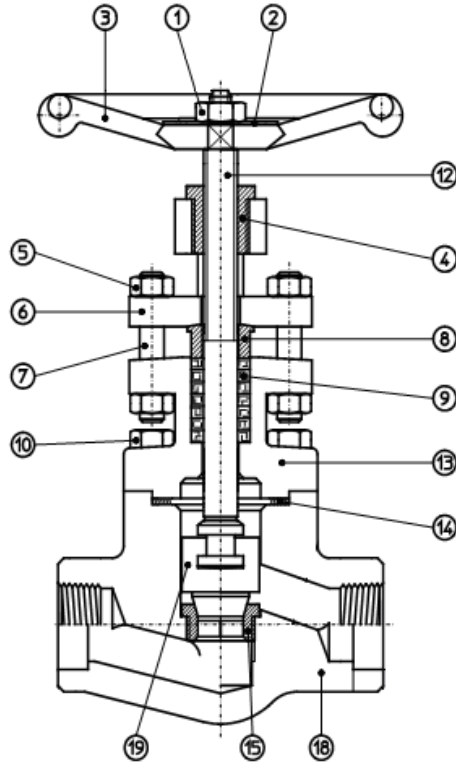


RANGE :

- Forged A105N carbon steel globe valve TRIM 8 with Socket Welding ends **Ref. 412** DN 10 to DN 50 (NPS 3/8" to DN 2")
- Forged A105N carbon steel globe valve TRIM 8 with NPT threaded ends **Ref.413** DN 10 to DN 50 (NPS 3/8" to DN 2")
- Forged A105N carbon steel globe valve TRIM 8 with BSP cylindrical threaded ends **Ref.414** DN 10 to DN 50 (NPS 3/8" to DN 2")
- Forged A182 F316 stainless steel globe valve TRIM 10 with Socket Welding ends **Ref.452** DN 10 to DN 50 (NPS 3/8" to DN 2")
- Forged A182 F316 stainless steel globe valve TRIM 10 with NPT threaded ends **Ref.453** DN 10 to DN 50 (NPS 3/8" to DN 2")

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MATERIALS:

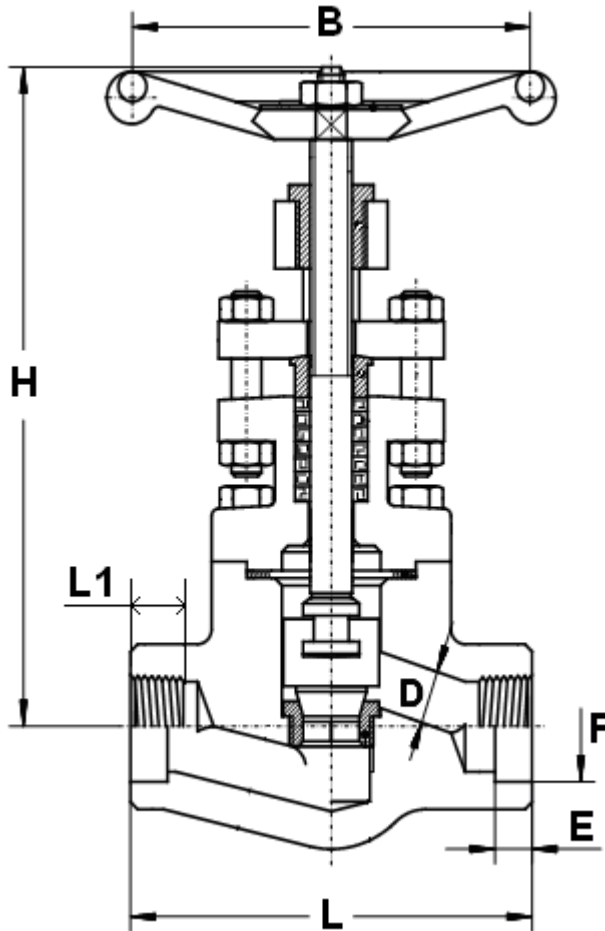


| Item | Designation | Materials 412/413/414 | Materials 452/453 |
|------|--------------|-------------------------------------|--------------------------------|
| 1 | Wheel nut | Carbon steel | Carbon steel |
| 2 | Name plate | Aluminium | Aluminium |
| 3 | Handwheel | Carbon steel | Carbon steel |
| 4 | Yoke nut | ASTM A582 type 416 | ASTM A582 type 303 |
| 5 | Gland nut | ASTM A194 2H | ASTM A194 GR.8 |
| 6 | Gland flange | ASTM A105 | ASTM A182 F304 |
| 7 | Gland stud | SS 410 | ASTM A193 B8 |
| 8 | Gland | ASTM A276 type 410 | ASTM A479 type 304 |
| 9 | Packing | Graphite | Graphite |
| 10 | Bolts | ASTM A193 B7 | ASTM A193 B8 |
| 12 | Stem | ASTM A276 type 410 | ASTM A479 type 316 |
| 13 | Bonnet | ASTM A105N | ASTM A182 F316 |
| 14 | Gasket | SS 316 + graphite spiral wound | SS 316 + graphite spiral wound |
| 15 | Seat | ASTM A276 type 410 + Stellite GR.6' | ASTM A479 type 316 |
| 18 | Body | ASTM A105N | ASTM A182 F316 |
| 19 | Disc | ASTM A276 type 410 | ASTM A479 type 316 |

Internet : www.oktogonkft.hu | Webshop : webshop.oktogonkft.hu | e-mail: szolnok@oktogonkft.hu

FORGED GLOBE VALVE CLASS 800 (412-413-414-452-453)

SIZE (in mm) :



| Ref. | DN (mm) | 10 | 15 | 20 | 25 | 32 | 40 | 50 |
|------------------------|---------------|------|-------|-------|-------|--------|--------|-------|
| | NPS (") | 3/8" | 1/2" | 3/4" | 1" | 1"1/4" | 1"1/2" | 2" |
| 412/413/414 452/453 | Ø D | 9 | 9 | 13 | 17.5 | 22.5 | 29.5 | 35 |
| | L | 80 | 80 | 90 | 110 | 127 | 155 | 170 |
| 413/414/453 | H (open) | 148 | 148 | 165 | 180 | 213 | 248 | 257 |
| | Ø B | 90 | 90 | 90 | 110 | 130 | 130 | 180 |
| 412/452 | L1 | 13 | 15 | 18 | 19 | 20 | 21 | 21 |
| 412/452 | E (SW) | 11.1 | 12.7 | 14.5 | 16 | 17.5 | 19 | 22 |
| | Ø F (SW) | 17.6 | 21.72 | 27.05 | 33.78 | 42.54 | 48.64 | 61.11 |
| 412/413/414 | Weight (Kg) | 1.9 | 1.9 | 2.14 | 3.42 | 5.14 | 7.06 | 11 |
| 452/453 | Weight (Kg) | 1.9 | 1.9 | 2.18 | 3.52 | 5.3 | 7.3 | 11.3 |

FORGED GLOBE VALVE CLASS 800 (412-413-414-452-453)**STANDARDS :**

- Fabrication according to **ISO 9001 : 2008**
- **DIRECTIVE 97/23/CE : CE N° 0036**
Risk category III module H
- Designing according to **ISO 15761** and **API 602** 8th
- Pressure tests according to **API 598, table 6**
- Approval certificate Russian Federation **GOST-R**
- Valves approved by the main oil industries (certificates on request)
- ATEX Group II Category 2 G/2D Zone 1 & 21 Zone 2 & 22 (optional marking)
- Threaded female BSP cylindrical ends according to **ISO 7-1 Rp**
- Threaded female NPT ends according to **ANSI B1.20.1**

ADVICE : Our opinion and our advice are not guaranteed and SFERACO shall not be liable for the consequences of damages.
The customer must check the right choice of the products with the real service conditions.

FORGED GLOBE VALVE CLASS 800 (412-413-414-452-453)**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 strength 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 tightness 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.
- **During welding operation, for S.W. types half open the valve and do not exceed 350-400°C**
- The theoretical lengths given by ISO/R7 for the tapping are typically longer than required, the length of the thread should be limited, and **check that the end of the tube does not press right up to the head of the thread.**
- **Never use a vice to tighten the fixings of the valve.**
- **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.**
- **It may be necessary to screw the packing gland during using according to the type of use.**
- **Do not use a tool to shut the valve**
- **Fluids in the valve must not contain solid objects (it could damaged the seat).**
- It's recommended to operate the valve (open and close) 1 to 2 times per year