

# REF. 412-413-414

### FORGED GLOBE VALVE CLASS 800 A105N TRIM8 (412-413-414)





ISO 9001: 2015



PED 2014/68/EU





**Certificate 3.1** 

**Size:** DN 10 to 50 (NPS 3/8" to 2")

**Ends:** Female - Female BSP or NPT, Socket Welding

**Min Temperature :** - 29°C **Max Temperature :** + 425°C

Max Pressure: 136 Bars (Class 800)

**Specifications:** Rising rotating stem (OS&Y)

Bolted bonnet and gland pack

Standard port

Materials: Carbon steel A105N



### **SPECIFICATIONS:**

- · Respect the flow direction (indicated by the arrow)
- Standard port
- Rising rotating stem (OS&Y)
- · Bolted bonnet and gland pack
- Forged Carbon steel A105N
- ½ stellite (Trim 8)
- Class 800

#### USE:

- · Petroleum industry, steam, high pressure
- Min and max Temperature Ts : 29°C to + 425°C
- Max Pressure Ps : 136 bars ( see graph )

#### FLOW COEFFICIENT Kvs (M3/h):

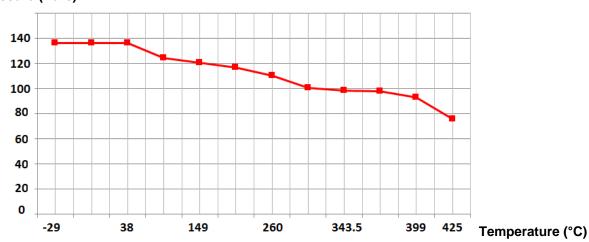
DN	10	15	20	25	32	40	50
NPS	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Kvs ( m3/h )	1.2	1.3	3.3	5.9	9.5	12.4	21.6

### PRESSURE / TEMPERATURE RELATION:

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 :

### Pressure (Bars)



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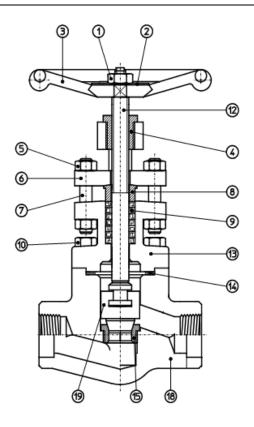


### RANGE:

- 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 conical threaded ends Ref.414 DN 10 to DN 50 (NPS 3/8" to DN 2")



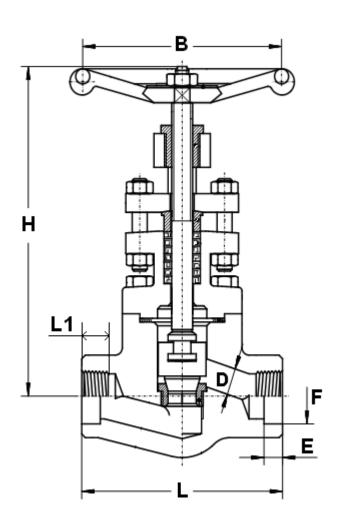
### **MATERIALS:**



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



### 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	Ø D	9	9	13	17.5	22.5	29.5	35
	L	80	80	90	110	127	155	170
	H ( opened )	148	148	165	180	213	248	257
	ØВ	90	90	90	110	130	130	180
413/414	L1	13	15	18	19	20	21	21
412	E(SW)	11.1	12.7	14.5	16	17.5	19	22
	ØF(SW)	17.6	21.8	27.2	33.9	42.7	48.8	61.2
412/413/414	Weight (Kg)	1.9	1.9	2.14	3.42	5.14	7.06	11



### STANDARDS:

- Fabrication according to ISO 9001: 2015
- DIRECTIVE 2014/68/EU: CE N° 0036 Risk category III module H
- Certificate 3.1 on request
- Designing according to ISO 15761 and API 602 8th
- Pressure tests according to API 598, table 6
- Valves approved by the main oil industries (certificates on request)
- ATEX Group II Category 2 G/2D T3 Zone 1 & 21 Zone 2 &22 (optional marking) according to directive 2014/34/EU
- Threaded female BSP conical ends according to ISO 7-1 Rc
- Threaded female NPT ends according to ANSI B1.20.1
- Socket Welding ends according to ISO 15761

**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.



### **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 thightness 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

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