REF. 440

FORGED CARBON STEEL A105N GLOBE VALVE FLANGED CLASS 150 PN20 RF TRIM 5 BOLTED BONNET FULL BORE

Forged carbon steel globe valve TRIM5 with integral body flanges Class 150 PN20 full bore for petroleum industry, steam, oil and gas and high pressure.
Rising rotating stem with bolted bonnet.
Graphite packing and stainless steel + graphite bonnet gasket.
Compatible with explosive atmosphere, ATEX Zone 1&21 and Zone 2&22.

Certificate 3.1

PED 2014/68/UE

ISO 9001 : 2015

Size :	DN15 to DN50 (NPS 1/2" to 2")
Connection :	Flanges Class 150 PN20 RF
Min Temperature :	-29°C
Max Temperature :	+425°C
Max Pressure :	20 Bars
Specifications :	Rising rotating stem (OS&Y) Bolted bonnet and packing **Full bore (product evolution in standard bore)**
Materials :	Forged Carbon steel ASTM A105N

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SPECIFICATIONS :

- Respect the flow direction (indicated by the arrow)
- Full bore (product evolution in standard bore)
- Integral body flanges
- Rising rotating stem (OS&Y)
- Bolted bonnet
- Bolted gland pack
- Forged carbon steel ASTM A105N
- Full stellite (Trim 5)
- Flanges R.F. Class 150 (PN20)

USE :

- Petroleum industry, steam, high pressure
- Min and max Temperature Ts : - 29°C to + 425°C
- Max Pressure Ps : 20 bars (see graph)

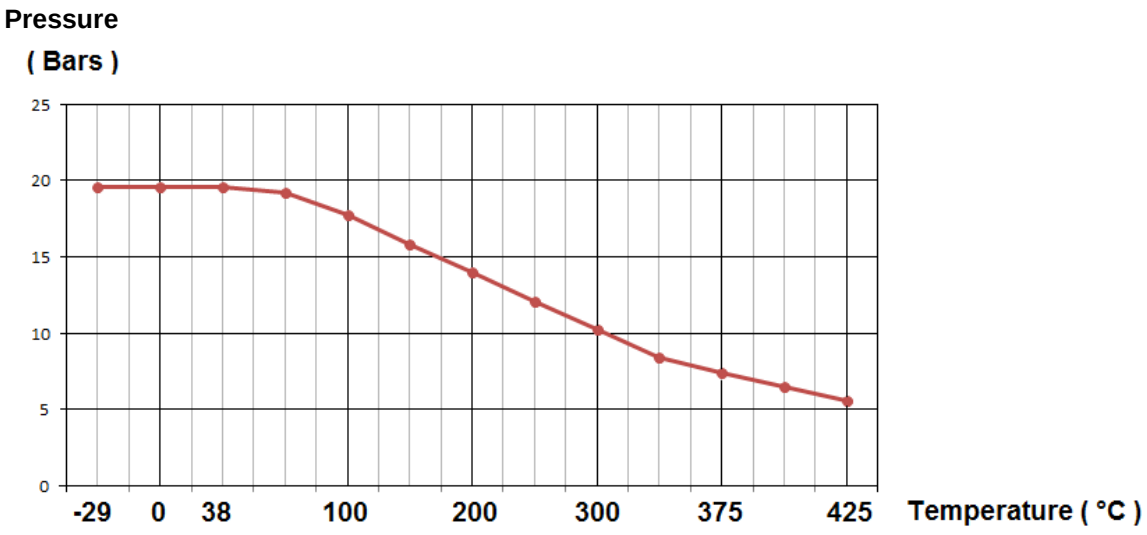
FLOW COEFFICIENT Kvs (M3 / h) :

DN (mm)	15	20	25	40	50
NPS (")	1/2"	3/4"	1"	1"1/2	2"
Kvs (m3/h) Full bore	3.1	5.7	9.4	20.9	34.2
Kvs (m3/h) Standard bore	1.3	3.3	5.9	12.3	21.6

PRESSURE / TEMPERATURE RELATION :

Pressure (bar)	19.6	19.6	19.6	19.2	17.7	15.8	14	12.1	10.2	8.4	7.4	6.5	5.6
Temperature (°C)	-29	0	38	50	100	150	200	250	300	350	375	400	425

PRESSURE / TEMPERATURE GRAPH :



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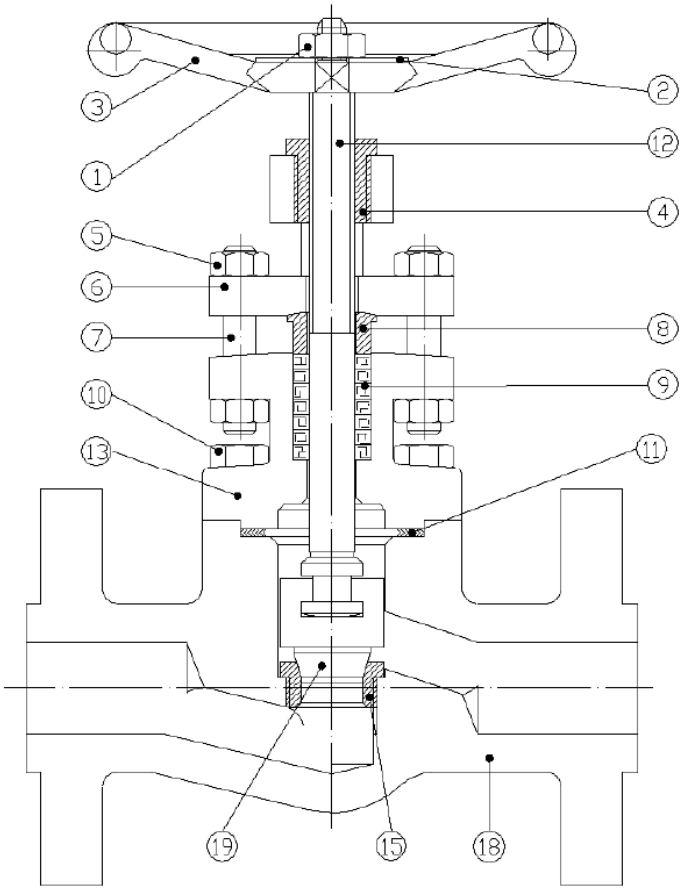
RANGE :

- Forged globe valve A05N with integral body flanges Class 150 (PN20) R.F. **Ref.440** from DN 15 to 50 (NPS 1/2“ to 2“)

MATERIALS :



Item	Designation	Materials
1	Handwheel nut	Carbon steel
2	ID plate	Aluminium
3	Handwheel	Carbon steel
4	Yoke nut	ASTM A473 type 416
5	Gland nut	ASTM A194 2H
6	Gland flange	ASTM A182 F304
7	Gland stud	ASTM A193 B7
8	Gland	ASTM A276 type 410
9	Packing	Graphite
10	Screw	ASTM A193 B7
11	Spiral bonnet gasket	ASTM A182 F316 + graphite
12	Stem	ASTM A276 type 410
13	Bonnet	ASTM A105N
15	Seat	ASTM A276 TP 10 C/2 + Stellite
18	Body	ASTM A105N
19	Disc	ASTM A182 F6 Stellite

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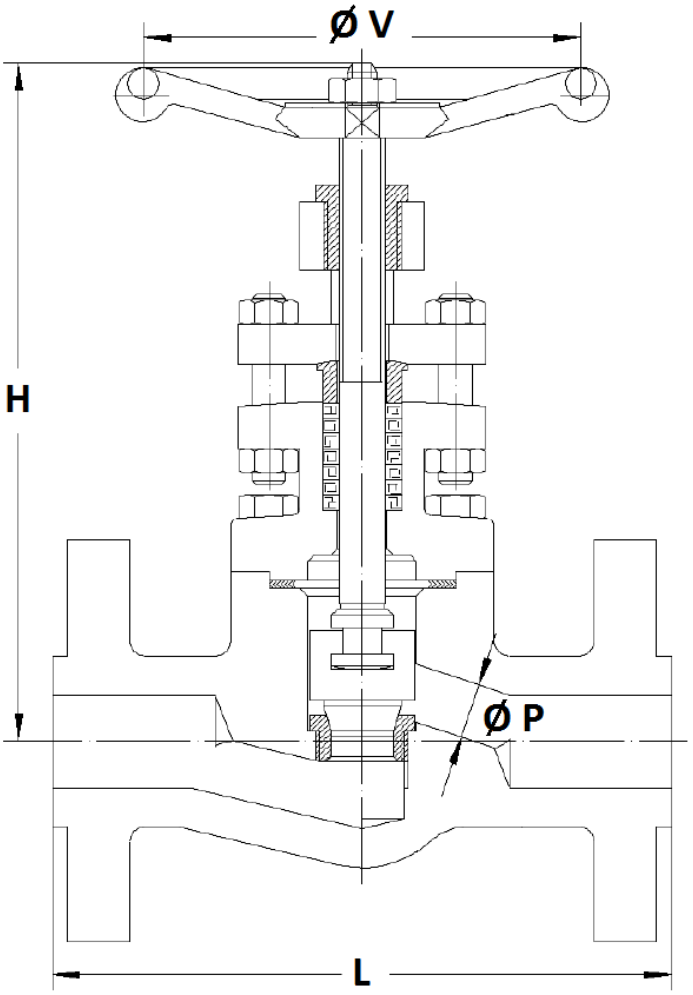
SIZE (in mm) :



DN (mm)	15	20	25	40	50
NPS (")	1/2"	3/4"	1"	1"1/2	2"
Ø P (Full bore)	13	17.5	22.5	35	50
Ø P (Standard bore)	9	13	17.5	29.5	35
L	108	117	127	165	203
H (opened)	196	215	255	300	280
Ø V	80	110	130	180	180
Weight (Kg)	3.2	4.7	6.8	13.3	16
Ref.	440015	440020	440025	440040	440050

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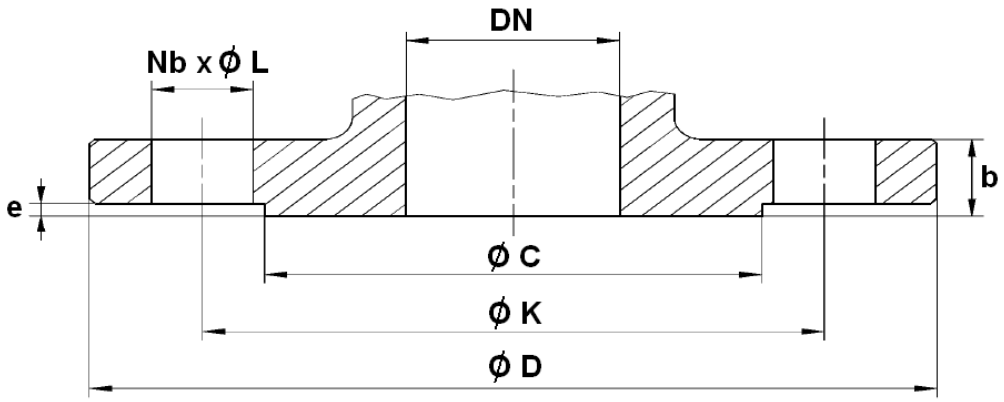
FLANGES SIZE (in mm) :



DN (mm)	15	20	25	40	50
NPS (")	1/2"	3/4"	1"	1"1/2	2"
Ø C	34.9	42.9	50.8	73	92.1
Ø D	89	98.5	108	127	152.5
Ø K	60.5	70	79.5	98.5	120.5
Nb x Ø L	4 x 16	4 x 16	4 x 16	4 x 16	4 x 19
b	11.5	13	14.5	18	19.5
e	1.6	1.6	1.6	1.6	1.6

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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 GD T3 Zone 1 & 21 Zone 2 &22 (optional marking) according to directive 2014/34/EU
- Integral body flanges R.F. according to **ASME B16.05**
- Length according to **EN 558 series 10 (ASME B16.10 Table 1, Column 15)**

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

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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.
- **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.**
- Tighten the bolts in cross.
- It's recommended to operate the valve (open and close) 1 to 2 times per year
- Tighten the gland packing at the first start of the installation (with a moderate torque) so that there's no leakage and the handwheel is easy to operate.
- Do not use tools to operate the handwheel
- Respect the flow direction indicated by the arrow
- **For an installation in ATEX area, check the conductivity between the valve, the upstream pipe and the downstream pipe and make sure the pipe is connected to the earth.**