

## CARBON STEEL GATE VALVE FLANGED CLASS 300 PN50 TRIM8

Carbon steel gate valve TRIM8 flanged Class 300 PN50 full bore for water distribution, gas oil, steam, petrochemical, petroleum industry and gas.

Rising non rotating stem with flexible one piece wedge.

Graphite packing for stem and gasket bonnet in stainless steel+graphite.

Gate valve with fire safe certificate API 6FA to reduce risks in case of fire.

Compatible with explosive atmosphere, ATEX Zone 1&21 and Zone 2&22.



**Size :** DN50 à DN400 (NPS 2" to 16")

**Connection :** Flanges RF Class 300 PN50

**Min Temperature :** -29°C

**Max Temperature :** +425°C

**Max Pressure :** 50 Bars

**Specifications :** Rising non rotating stem

Bolted bonnet and packing

Full bore, Fire safe API 6FA

**Materials :** Carbon steel ASTM A216 WCB

## CARBON STEEL GATE VALVE FLANGED CLASS 300 PN50 TRIM8

**SPECIFICATIONS :**

- Full bore
- Fire safe API 6FA
- Rising, non-rotating stem
- Fixed non rising handwheel
- Flexible one piece wedge
- Flanges R.F. Class 300 (PN50)
- Carbon steel body
- Bolted bonnet and gland pack
- ½ stellite ( Trim 8 , seat with stellite )
- Acrylic grey painting RAL 7001 color, 60 µm thickness
- Corrosion allowance : 3 mm
- ATEX

**USE :**

- Water distribution, gas oil, steam, petrochemical, petroleum industry, gas
- Min and max Temperature Ts : - 29°C to + 425°C
- Max Pressure Ps : 50 bars
- **Do not use with scraper**
- **Tighten the gland packing in service**

**FLOW COEFFICIENT Kvs :**

|           |     |     |      |      |      |      |       |       |       |
|-----------|-----|-----|------|------|------|------|-------|-------|-------|
| DN ( mm ) | 50  | 80  | 100  | 150  | 200  | 250  | 300   | 350   | 400   |
| NPS ( " ) | 2"  | 3"  | 4"   | 6"   | 8"   | 10"  | 12"   | 14"   | 16"   |
| Kvs       | 265 | 614 | 1124 | 2690 | 4940 | 7720 | 11540 | 14070 | 18650 |

**TORQUE VALUE ( in Nm without safety coefficient ) :**

|               |    |     |     |     |     |     |     |      |      |
|---------------|----|-----|-----|-----|-----|-----|-----|------|------|
| DN            | 50 | 80  | 100 | 150 | 200 | 250 | 300 | 350  | 400  |
| NPS ( " )     | 2" | 3"  | 4"  | 6"  | 8"  | 10" | 12" | 14"  | 16"  |
| Torque ( Nm ) | 70 | 124 | 160 | 220 | 300 | 480 | 520 | 1075 | 1446 |

**GEARBOX SPECIFICATIONS :**

|                   |     |
|-------------------|-----|
| DN                | 400 |
| NPS ( " )         | 16" |
| Input Torque (Nm) | 130 |

**NUMBER OF CYCLES TO CLOSE OR OPEN THE VALVE :**

|                  |    |    |     |     |     |     |     |     |     |
|------------------|----|----|-----|-----|-----|-----|-----|-----|-----|
| DN               | 50 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
| NPS ( " )        | 2" | 3" | 4"  | 6"  | 8"  | 10" | 12" | 14" | 16" |
| Number of cycles | 15 | 29 | 23  | 28  | 36  | 45  | 54  | 46  | 52  |

**CARBON STEEL GATE VALVE FLANGED CLASS 300 PN50 TRIM8**

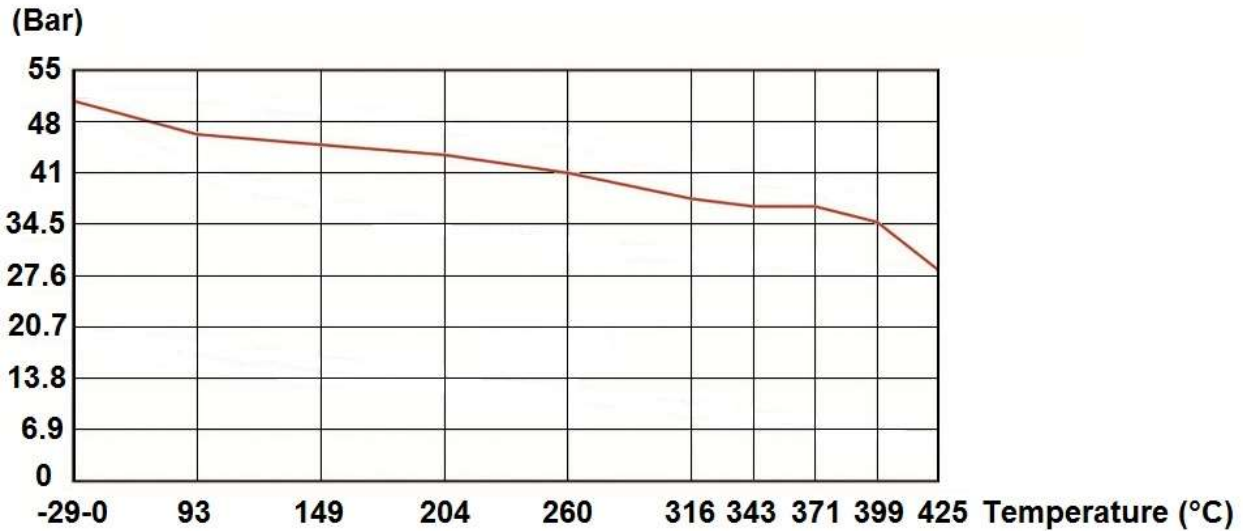
**PRESSURE / TEMPERATURE RELATION :**

( According to AMSE B16-34 for A216 WCB )

| Pressure ( Bar )   | 51.1 | 51.1 | 46.2 | 45.1 | 43.8 | 41.3 | 37.9 | 36.9 | 36.9 | 34.8 | 28.2 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|
| Temperature ( °C ) | -29  | 38   | 93   | 149  | 204  | 260  | 316  | 343  | 371  | 399  | 425  |

**PRESSURE / TEMPERATURE GRAPH :**

Pressure

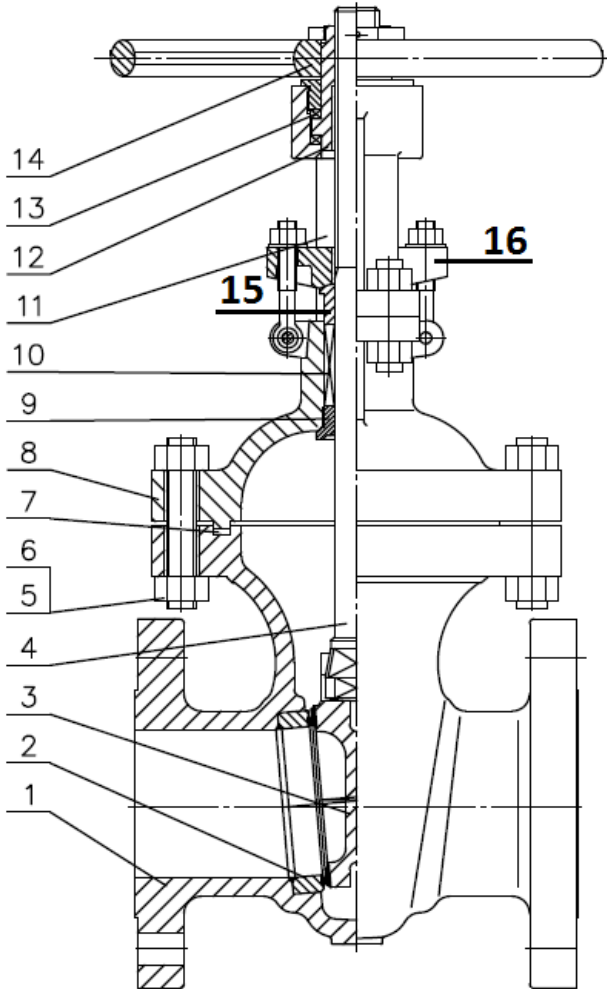


**RANGE :**

- Carbon steel gate valve with flanges R.F. Class 300 (PN50) **Ref. 144** From DN 50 to DN 350 ( from NPS 2" to 14" )
- Carbon steel gate valve with flanges R.F. Class 300 (PN50) with gearbox **Ref. 144** DN 400 ( NPS 16" )

CARBON STEEL GATE VALVE FLANGED CLASS 300 PN50 TRIM8

**MATERIALS DN50-350 (NPS 2" to 14") :**



**Repairability :**



| *Gaskets Kit (Items 7 and 10) |         |         |
|-------------------------------|---------|---------|
| DN (mm)                       | NPS (") | Ref.    |
| 50                            | 2"      | 9802310 |
| 65                            | 2"1/2   | 9802311 |
| 80                            | 3"      | 9802312 |
| 100                           | 4"      | 9802313 |
| 150                           | 6"      | 9802314 |
| 200                           | 8"      | 9802315 |
| 250                           | 10"     | 9802316 |
| 300                           | 12"     | 9802317 |
| 350                           | 14"     | 9802318 |

(\* : included in gaskets kit)

| Item | Designation       | Materials                 |
|------|-------------------|---------------------------|
| 1    | Body              | ASTM A216 WCB             |
| 2    | Seat              | ASTM A105 + Stellite Gr.6 |
| 3    | Wedge             | ASTM A216 WCB + 13Cr      |
| 4    | Stem              | ASTM A182 F6a             |
| 5    | Stud bolt         | ASTM A193 Gr B7           |
| 6    | Nut               | ASTM A194 Gr 2H           |
| 7*   | Bonnet gasket     | AISI 304 + graphite       |
| 8    | Bonnet            | ASTM A216 WCB             |
| 9    | Back seat bushing | ASTM A276-420             |
| 10*  | Packing           | Flexible graphite         |
| 11   | Yoke              | ASTM A216 WCB             |
| 12   | Stem nut          | Aluminium + Bronze        |
| 13   | Ring              | E51100                    |
| 14   | Handwheel         | Cast iron                 |
| 15   | Packing gland     | ASTM A276-420             |
| 16   | Gland flange      | ASTM A216 WCB             |

**CARBON STEEL GATE VALVE FLANGED CLASS 300 PN50 TRIM8**

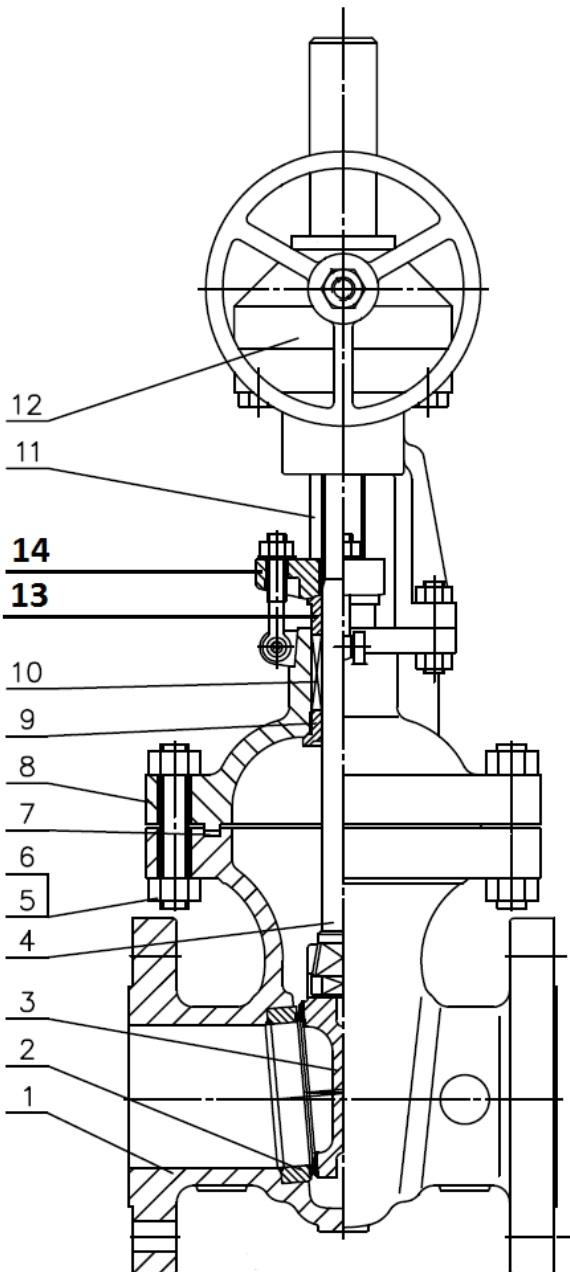
MATERIALS DN400 (NPS 16") :

Repairability :



**\*Gaskets Kit (Items 7 and 10)**

|       |         |             |
|-------|---------|-------------|
| DN400 | NPS 16" | Ref.9802319 |
|-------|---------|-------------|

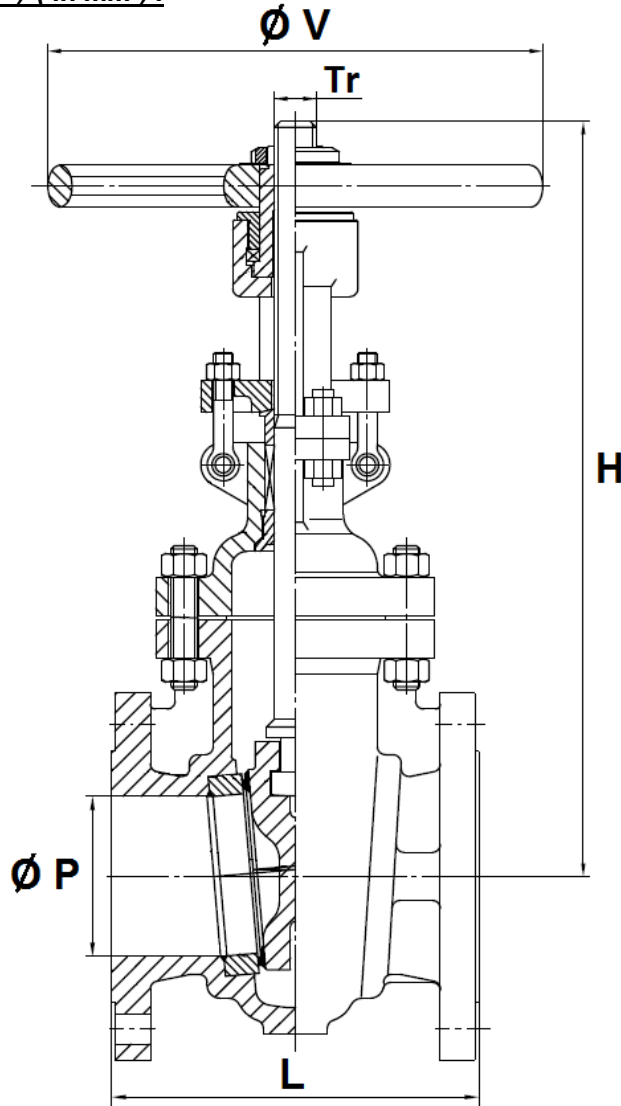


| Item | Designation       | Materials                 |
|------|-------------------|---------------------------|
| 1    | Body              | ASTM A216 WCB             |
| 2    | Seat              | ASTM A105 + Stellite Gr.6 |
| 3    | Wedge             | ASTM A216 WCB + 13Cr      |
| 4    | Stem              | ASTM A182 F6a             |
| 5    | Stud Bolt         | ASTM A193 Gr B7           |
| 6    | Nut               | ASTM A194 Gr 2H           |
| 7*   | Bonnet gasket     | AISI 304 + graphite       |
| 8    | Bonnet            | ASTM A216 WCB             |
| 9    | Back seat bushing | ASTM A276-420             |
| 10*  | Packing           | Flexible graphite         |
| 11   | Yoke              | ASTM A216 WCB             |
| 12   | Gearbox           | -                         |
| 13   | Packing gland     | ASTM A276-420             |
| 14   | Gland flange      | ASTM A216 WCB             |

(\* : included in gaskets kit)

CARBON STEEL GATE VALVE FLANGED CLASS 300 PN50 TRIM8

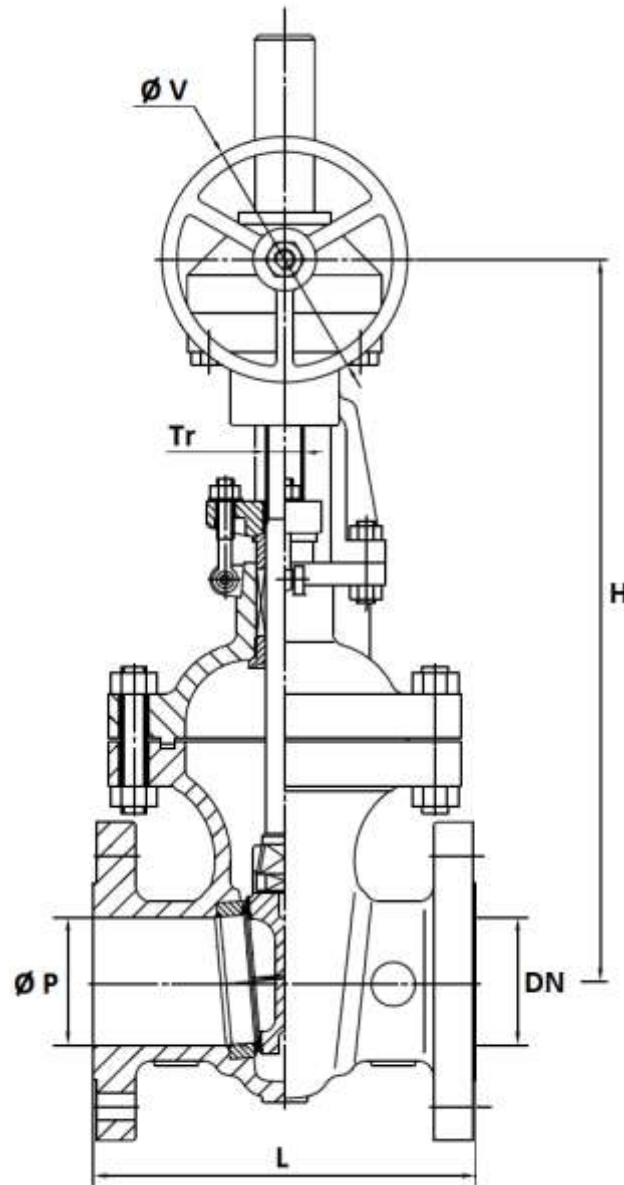
**SIZE DN50-350 (NPS 2" to 14") ( in mm ) :**



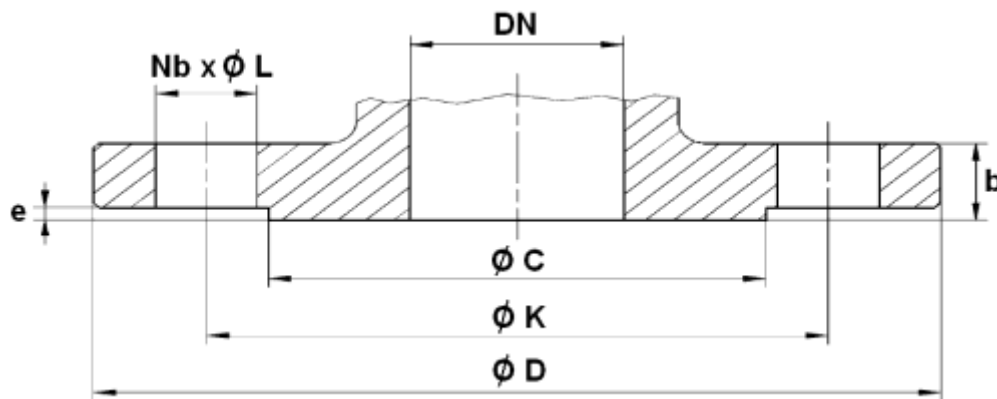
| DN ( mm )         | 50       | 80       | 100      | 150      | 200      | 250      | 300      | 350      |
|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| NPS ( " )         | 2"       | 3"       | 4"       | 6"       | 8"       | 10"      | 12"      | 14"      |
| Ø P               | 51       | 76       | 102      | 152      | 203      | 254      | 305      | 334      |
| L                 | 216      | 283      | 305      | 403      | 419      | 457      | 502      | 762      |
| H ( opened )      | 402      | 538      | 616      | 817      | 992      | 1249     | 1415     | 1574     |
| H ( closed )      | 335      | 445      | 505      | 647      | 771      | 975      | 1085     | 1214     |
| Ø V               | 240      | 280      | 300      | 400      | 400      | 500      | 500      | 600      |
| Threading stem Tr | Tr18x4LH | Tr22x5LH | Tr26x5LH | Tr32x6LH | Tr36x6LH | Tr38x6LH | Tr42x6LH | Tr44x7LH |
| Weight ( Kg )     | 23       | 48       | 69       | 130      | 189      | 297      | 439      | 650      |
| Ref.              | 144050   | 144080   | 144100   | 144150   | 144200   | 144250   | 144300   | 144350   |

**CARBON STEEL GATE VALVE FLANGED CLASS 300 PN50 TRIM8**

**SIZE DN 400 (NPS 16") ( in mm ) :**



| Ref.   | DN ( mm )         | 400      |
|--------|-------------------|----------|
|        | NPS ( " )         | 16"      |
| 144400 | Ø P               | 385      |
|        | L                 | 838      |
|        | H                 | 1455     |
|        | Ø V               | 530      |
|        | Threading stem Tr | Tr48x8LH |
|        | Weight (in Kg)    | 805      |

**CARBON STEEL GATE VALVE FLANGED CLASS 300 PN50 TRIM8**
**FLANGES SIZE ( in mm ) :**


| DN ( mm ) | 50     | 80     | 100    | 150     | 200     | 250     | 300     | 350     | 400     |
|-----------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| NPS ( " ) | 2"     | 3"     | 4"     | 6"      | 8"      | 10"     | 12"     | 14"     | 16"     |
| Ø C       | 92.1   | 127    | 157.2  | 215.9   | 269.9   | 323.8   | 381     | 412.8   | 469.9   |
| Ø D       | 165    | 210    | 255    | 320     | 380     | 445     | 520     | 585     | 650     |
| Ø K       | 127    | 168.3  | 200    | 269.9   | 330.2   | 387.4   | 450.8   | 514.4   | 571.5   |
| Nb x Ø L  | 8 x 19 | 8 x 22 | 8 x 22 | 12 x 22 | 12 x 26 | 16 x 29 | 16 x 32 | 20 x 32 | 20 x 35 |
| b         | 22.7   | 29     | 32.2   | 37      | 41.7    | 48.1    | 51.3    | 54.4    | 57.6    |
| e         | 2      | 2      | 2      | 2       | 2       | 2       | 2       | 2       | 2       |

**CARBON STEEL GATE VALVE FLANGED CLASS 300 PN50 TRIM8**

**STANDARDS :**

- Manufacturer certified ISO 9001 : 2015 and ISO 14001 : 2015
- DIRECTIVE 2014/68/EU : For liquids and gas of Group 1
  - DN50-100 (NPS 2"-4") : Risk Category II, CE 0036 marking
  - DN150-400 (NPS 6"-16") : Risk Category III, CE 0036 marking
- Certificate 3.1 on request
- Designing according to API 600
- Pressure Tests according to API 598, table 6
- Length according to ASME B16.10, table 2 A10 series and EN 558 series 4
- Flanges R.F. according to ASME B16.05 Class 300
- Fire safe according to API SPEC 6FA 3th edition 04-1999
- ATEX Group II Category 2 G/2D Zone 1 & 21 Zone 2 & 22 ( optional marking ) according to directive 2014/34/EU
- Materials according to NACE MR 01-75 **on request**

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