

# 2 ways control valve

**Type**  
**6000 HP**



## Description

*Two ways pneumatic control valve especially designed for a wide range of fluids like water, thermal oil, steam, nitrogen, natural gas, etc... These pneumatic control valves offer an optimized and modular solution for industrial process.*

## Caractéristiques / Characteristics

*Flanges DN25 to DN300*

*Threaded 1" to 4"*

*Welded -BW: DN25 to DN300*

*Welded -SW: DN25 to DN100*

*Material:*

*Steel 1.0619 – A 216 WCB/WCC*

*Steel 1.6220 – A 352 LCB*

*Steel 1.7357 – A 217 WC6*

*Steel 1.7379 – A 217 C12 A*

*Stainless steel 1.4408 – A 351 CF8M*

*Stainless steel 1.6982*

*Flanges PN63, 100, 160, 250 - Class 600, 900, 1500*

*Parabolic or perforated cone*

*Kvs 0,4 to 1300*

*Packing : Graphite*

*Temperature range : - 60°C à/to + 560°C*

*Turndown 30 up to seat 15 and 50 after.*

## Options

*Perforated cone*

*Stellited seat/cone*

*Linear characteristic*

*Piloted cone*

*High temperature cover*

*SS Hardened seat cone*

*BW ends*

## Actuator

*Pneumatic or electric actuators*

## Features

*6000 control valves are designed and built in France ensure you an excellent reliability related to exceptional performance.*

Sart von Rohr SAS  
25 Rue de la Chapelle  
BP 2 – F 68620 Bitschwiller-lès-Thann

Tel. 33/ (0)3 89 37 79 50  
Fax 33/ (0)3 89 37 79 51  
E-mail : sartventes@sart-von-rohr.fr

**sart** von Rohr

# 2 ways control valve

**Type**  
**6000 HP**

## How to order

6000HP DN50 PN100 KVs 30 actuator PA60 A6 6S NF

## Certification

DESP; ATEX II 2 G/D; ISO9001 / PED; ATEX II 2 G/D; ISO9001

## Combination DN – Material – PN/Class

| Class<br>PN | Steel                        |                              |                              |                              |                                 |                                 |                                 |                                 | Stainless steel              |                              |                                 |
|-------------|------------------------------|------------------------------|------------------------------|------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|------------------------------|------------------------------|---------------------------------|
|             | 1.0619                       | 1.6220                       | 1.7357                       | 1.7379                       | A 216 WCC                       | A 217 C12                       | A 217 WC6                       | A 352 LCB                       | 1.4408                       | 1.6982                       | A 351 CF8M                      |
| DN          | PN63 / PN100 / PN160 / PN250 | PN63 / PN100 / PN160 / PN250 | PN63 / PN100 / PN160 / PN250 | PN63 / PN100 / PN160 / PN250 | Class600 / Class900 / Class1500 | Class600 / Class900 / Class1500 | Class600 / Class900 / Class1500 | Class600 / Class900 / Class1500 | PN63 / PN100 / PN160 / PN250 | PN63 / PN100 / PN160 / PN250 | Class600 / Class900 / Class1500 |
| 25          |                              |                              | ✓                            |                              |                                 |                                 | ✓                               |                                 |                              |                              | ✓                               |
| 50          | ✓                            | ✓                            | ✓                            | ✓                            | ✓                               | ✓                               | ✓                               | ✓                               | ✓                            | ✓                            | ✓                               |
| 80          | ✓                            | ✓                            | ✓                            | ✓                            | ✓                               | ✓                               | ✓                               | ✓                               | ✓                            | ✓                            | ✓                               |
| 100         | ✓                            | ✓                            | ✓                            | ✓                            | ✓                               | ✓                               | ✓                               | ✓                               | ✓                            | ✓                            | ✓                               |
| 150         | ✓                            | ✓                            | ✓                            | ✓                            | ✓                               | ✓                               | ✓                               | ✓                               | ✓                            | ✓                            | ✓                               |
| 200         | ✓                            | ✓                            | ✓                            | ✓                            | ✓                               | ✓                               | ✓                               | ✓                               | ✓                            | ✓                            | ✓                               |
| 250         |                              | ✓                            | ✓                            | ✓                            | ✓                               | ✓                               | ✓                               | ✓                               | ✓                            | ✓                            | ✓                               |
| 300         |                              | ✓                            | ✓                            | ✓                            | ✓                               | ✓                               | ✓                               | ✓                               | ✓                            | ✓                            | ✓                               |

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## Cone types

### Parabolic cone

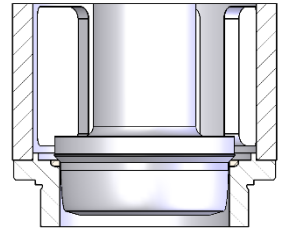
Characteristics : =%

Material : 1.4404 – Chargement stellite en option

Sealing : *Metallic tight*

Leakage : Classe IV (<0.01% Kvs) ANSI B16-104/ FCI 70-2-2006 (EN 60534-4)  
Classe V en option

Applications : *All fluids*



CLAPET PARABOLIQUE  
PARABOLIC CONE

### Perforated cone (option)

Characteristics : =% or linear in option

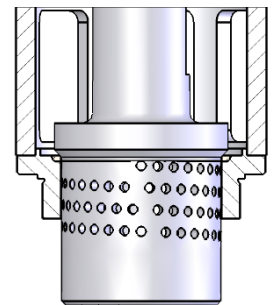
Material : *Stainless steel 1.4122*

Etanchéité : Métal-métal / *Metallic tight*

Leakage : Classe IV (<0.01% Kvs) ANSI B16-104/ FCI 70-2-2006 (EN 60534-4)  
Classe V en option

Applications : *Noise reduction*

Liquide : *Cavitation less, flashing, noise reduction*



CLAPET PERFORE  
PERFORATED CONE

### Staged perforated cone

Characteristics : =% or linear in option

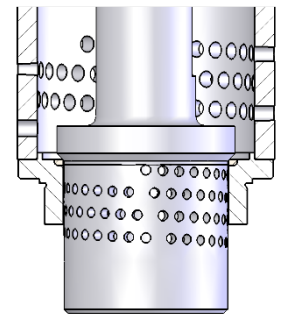
Material : *Stainless steel 1.4122*

Sealing : *Metallic tight*

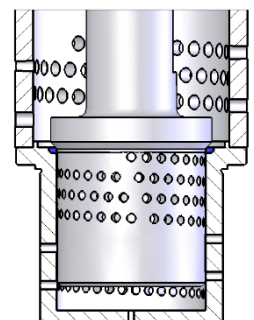
Leakage : Classe IV (<0.01% Kvs) ANSI B16-104/ FCI 70-2-2006 (EN 60534-4)  
Classe V en option

Applications : *Noise reduction*

Liquide : *Cavitation less, flashing, noise reduction*



CLAPET PERFORE 2 ETAGES  
2 STAGES PERFORATED CONE



CLAPET PERFORE 3 ETAGES  
3 STAGES PERFORATED CONE

# 2 ways control valve

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## Packing

Pure graphite

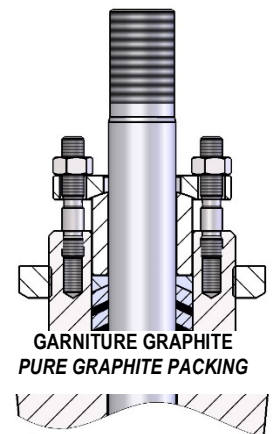
Max temperature : 455°C,

Steam max temperature: 550°C,

Max pressure : See pressure/temperature charts

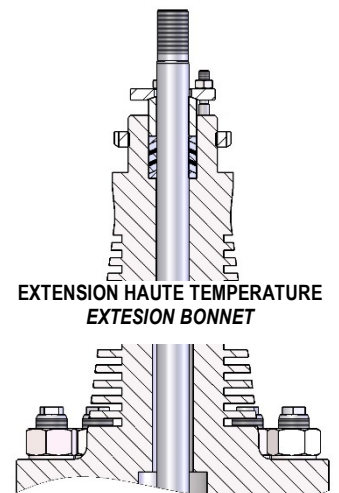
Application : Water, steam, etc...

Limitation of the fugitive emissions : Approval with the tests : TA Luft



## Extension bonnet

The extension bonnet is especially designed to reduce the packing temperature when the valve works with hot fluids.



## Temperature limits

| Temperature (°C)                  | -60 | -25 | -10 | 20 | 100 | 250 | 300 | 400 | 560 |
|-----------------------------------|-----|-----|-----|----|-----|-----|-----|-----|-----|
| Graphite Packing                  |     |     |     |    |     |     |     |     |     |
| Extension                         |     |     |     |    |     |     |     |     |     |
| Balanced valve (gasket)           |     |     |     |    |     |     |     |     |     |
| Balanced valve (High Temperature) |     |     |     |    |     |     |     |     |     |
| Steel body                        |     |     |     |    |     |     |     |     |     |
| Stainless steel body              |     |     |     |    |     |     |     |     |     |

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**=% parabolic cone list**  
(No staged cone)

| Seat (mm)   | 5   | 6    | 8   | 10  | 15 | 20  | 23  | 25 | 32 | 40 | 50 | 65 | 65 | 70 | 82  | 100 | 125 | 134 | 148 | 150 | 200 | 210 | 250  |  |
|-------------|-----|------|-----|-----|----|-----|-----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|--|
| Stroke (mm) | 20  | 20   | 20  | 20  | 20 | 20  | 20  | 20 | 20 | 25 | 25 | 30 | 40 | 40 | 35  | 40  | 40  | 40  | 50  | 50  | 50  | 80  | 80   |  |
| DN          | Kvs |      |     |     |    |     |     |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |      |  |
| 25          | 0,4 | 0,63 | 1,6 | 2,5 | 4  | 6,3 | 9,4 |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |      |  |
| 50          |     |      |     | 2,5 | 4  | 6,3 |     | 10 | 16 | 30 |    |    |    |    |     |     |     |     |     |     |     |     |      |  |
| 80          |     |      |     |     |    |     |     | 10 | 16 | 30 | 40 | 63 | 80 | 90 |     |     |     |     |     |     |     |     |      |  |
| 100         |     |      |     |     |    |     |     |    |    |    | 40 | 63 |    |    | 100 |     |     |     |     |     |     |     |      |  |
| 150         |     |      |     |     |    |     |     |    |    |    |    |    |    |    |     | 160 | 217 | 250 |     |     |     |     |      |  |
| 200         |     |      |     |     |    |     |     |    |    |    |    |    |    |    |     | 160 | 227 |     | 357 |     |     |     |      |  |
| 250         |     |      |     |     |    |     |     |    |    |    |    |    |    |    |     |     | 383 |     |     | 430 | 590 | 720 |      |  |
| 300         |     |      |     |     |    |     |     |    |    |    |    |    |    |    |     |     |     |     | 440 | 600 |     |     | 1100 |  |

**linear parabolic cone list**  
(No staged cone)

| Seat (mm)   | 5   | 6    | 8   | 10  | 15 | 20  | 23  | 25 | 32 | 40 | 50 | 65 | 65 | 70 | 82  | 100 | 125 | 134 | 148 | 150 | 200 | 210 | 250  |  |
|-------------|-----|------|-----|-----|----|-----|-----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|--|
| Stroke (mm) | 20  | 20   | 20  | 20  | 20 | 20  | 20  | 20 | 20 | 25 | 25 | 30 | 40 | 40 | 35  | 40  | 40  | 40  | 50  | 50  | 50  | 80  | 80   |  |
| DN          | Kvs |      |     |     |    |     |     |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |      |  |
| 25          | 0,4 | 0,63 | 1,6 | 2,5 | 4  | 6,3 | 9,4 |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |      |  |
| 50          |     |      |     | 2,5 | 4  | 6,3 |     | 10 | 16 | 30 |    |    |    |    |     |     |     |     |     |     |     |     |      |  |
| 80          |     |      |     |     |    |     |     | 10 | 16 | 30 | 40 | 63 | 80 | 90 |     |     |     |     |     |     |     |     |      |  |
| 100         |     |      |     |     |    |     |     |    |    |    | 40 | 63 |    |    | 100 |     |     |     |     |     |     |     |      |  |
| 150         |     |      |     |     |    |     |     |    |    |    |    |    |    |    |     | 160 | 217 | 250 |     |     |     |     |      |  |
| 200         |     |      |     |     |    |     |     |    |    |    |    |    |    |    |     | 160 | 227 |     | 357 |     |     |     |      |  |
| 250         |     |      |     |     |    |     |     |    |    |    |    |    |    |    |     |     | 383 |     |     | 430 | 590 | 720 |      |  |
| 300         |     |      |     |     |    |     |     |    |    |    |    |    |    |    |     |     |     |     | 440 | 600 |     |     | 1100 |  |

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=% perforated cone list

| Seat (mm)   | 16          | 20  | 23  | 32  | 40   | 45   | 65 | 65 | 70 | 82 | 82 | 100 | 115 | 125 | 125 | 134 | 148 | 150 | 210 | 250     |
|-------------|-------------|-----|-----|-----|------|------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| Stroke (mm) | 20          | 20  | 20  | 30  | 30   | 30   | 30 | 40 | 40 | 40 | 50 | 50  | 55  | 55  | 60  | 80  | 60  | 100 | 100 | 100     |
| DN          | 1 stage Kv  |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     |     |         |
| 25          | 2,5         | 3,4 | 6,4 |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     |     |         |
| 50          |             |     |     | 10  | 23   |      |    |    |    |    |    |     |     |     |     |     |     |     |     |         |
| 80          |             |     |     |     |      | 25   |    | 43 | 63 |    |    |     |     |     |     |     |     |     |     |         |
| 100         |             |     |     |     |      |      |    | 35 | 63 | 77 |    |     |     |     |     |     |     |     |     |         |
| 150         |             |     |     |     |      |      |    |    |    | 80 |    | 132 | 166 |     |     | 208 |     |     |     |         |
| 200         |             |     |     |     |      |      |    |    |    |    |    | 134 |     |     |     |     | 258 |     |     |         |
| 250         |             |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     | 400 | 600 |         |
| 300         |             |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     | 620 | 720     |
| DN          | 2 stages Kv |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     |     |         |
| 25          | 1.8         | 3,4 | 4.5 |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     |     |         |
| 50          |             |     |     | 7.1 | 16.3 |      |    |    |    |    |    |     |     |     |     |     |     |     |     |         |
| 80          |             |     |     |     |      | 17.8 |    | 31 | 45 |    |    |     |     |     |     |     |     |     |     |         |
| 100         |             |     |     |     |      |      |    | 25 | 45 | 55 |    |     |     |     |     |     |     |     |     |         |
| 150         |             |     |     |     |      |      |    |    |    | 57 |    | 94  | 138 |     |     | 173 |     |     |     |         |
| 200         |             |     |     |     |      |      |    |    |    |    |    | 95  |     |     |     |     | 214 |     |     |         |
| 250         |             |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     | 332 | 498 |         |
| 300         |             |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     |     | 515 598 |
| DN          | 3 stages Kv |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     |     |         |
| 25          |             | 3,4 |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     |     |         |
| 50          |             | 3,4 |     | 7   | 12   |      |    |    |    |    |    |     |     |     |     |     |     |     |     |         |
| 80          |             |     |     | 7   | 12   |      | 38 | 38 |    |    |    |     |     |     |     |     |     |     |     |         |
| 100         |             |     |     |     |      |      | 38 | 38 |    | 47 |    |     |     |     |     |     |     |     |     |         |
| 150         |             |     |     |     |      |      |    |    |    | 47 |    | 75  |     | 90  | 110 | 144 |     |     |     |         |
| 200         |             |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     | 180 |     |     |         |
| 250         |             |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     | 280 |         |
| 300         |             |     |     |     |      |      |    |    |    |    |    |     |     |     |     |     |     |     |     | 550     |

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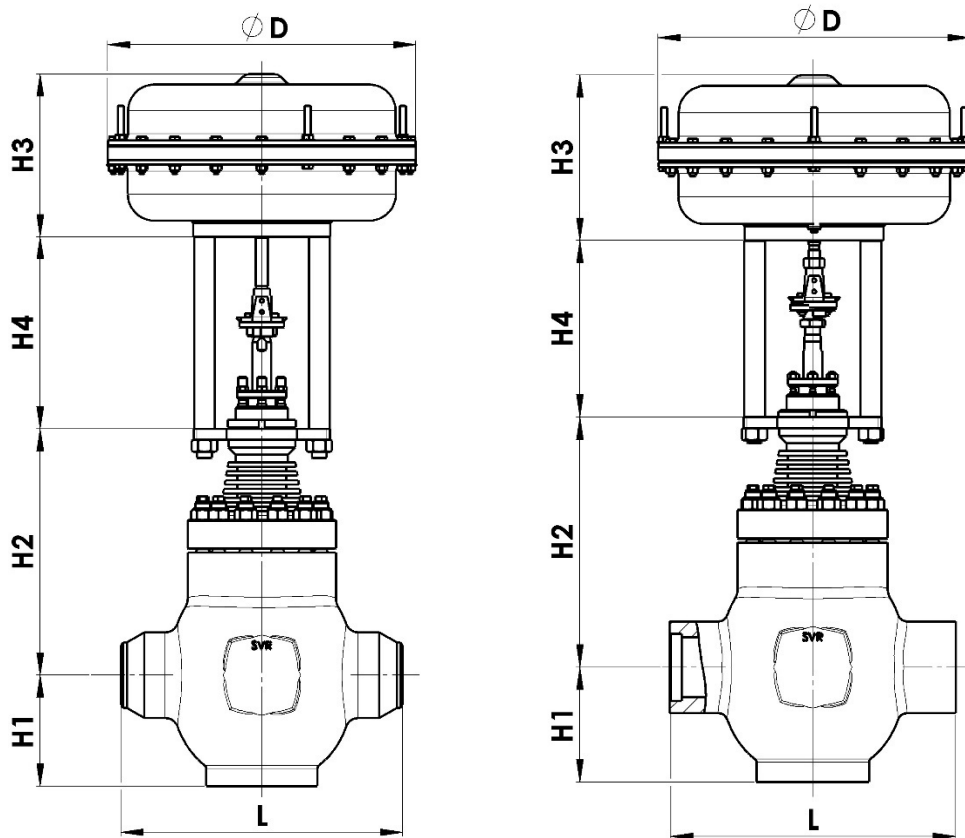
## Linear perforated cone list (No staged cone)

| Seat (mm)   | 16          | 20  | 23  | 32  | 40   | 45   | 65 | 65 | 70 | 82 | 82  | 100 | 115 | 125 | 125 | 134 | 148 | 150 | 210 | 250 |
|-------------|-------------|-----|-----|-----|------|------|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Stroke (mm) | 20          | 20  | 20  | 30  | 30   | 30   | 30 | 40 | 40 | 40 | 50  | 50  | 55  | 55  | 60  | 80  | 60  | 100 | 100 | 100 |
| DN          | 1 stage Kv  |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 25          | 3,4         | 3,4 | 6,4 |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 50          | 3,5         |     |     | 10  | 23   |      |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 80          |             |     |     |     | 17   | 25   |    | 51 | 63 |    |     |     |     |     |     |     |     |     |     |     |
| 100         |             |     |     |     |      |      |    | 52 | 63 | 77 | 100 |     |     |     |     |     |     |     |     |     |
| 150         |             |     |     |     |      |      |    |    |    | 80 |     | 132 | 166 |     |     | 208 |     |     |     |     |
| 200         |             |     |     |     |      |      |    |    |    |    |     | 134 |     |     |     |     | 258 |     |     |     |
| 250         |             |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     | 400 | 600 |     |
| 300         |             |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     | 620 | 720 |
| DN          | 2 stages Kv |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 25          | 2,4         |     | 4,5 |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 50          | 2,5         |     |     | 7,1 | 12   |      |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 80          |             |     |     |     | 12,1 | 17,8 |    | 36 | 42 |    |     |     |     |     |     |     |     |     |     |     |
| 100         |             |     |     |     |      |      |    | 37 | 45 | 52 | 70  |     |     |     |     |     |     |     |     |     |
| 150         |             |     |     |     |      |      |    |    |    | 57 |     | 94  | 138 |     |     | 173 |     |     |     |     |
| 200         |             |     |     |     |      |      |    |    |    |    |     | 95  |     |     |     |     | 212 |     |     |     |
| 250         |             |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     | 332 | 498 |     |
| 300         |             |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     | 515 | 598 |
| DN          | 3 stages Kv |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 25          |             | 3,4 |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 50          |             | 3,4 |     | 7   | 12   |      |    |    |    |    |     |     |     |     |     |     |     |     |     |     |
| 80          |             |     |     | 7   | 12   |      | 25 | 38 |    |    |     |     |     |     |     |     |     |     |     |     |
| 100         |             |     |     |     |      |      | 25 | 38 |    | 47 |     |     |     |     |     |     |     |     |     |     |
| 150         |             |     |     |     |      |      |    |    |    | 47 |     | 75  |     | 90  | 110 | 144 |     |     |     |     |
| 200         |             |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     | 180 |     |     |     |
| 250         |             |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     | 280 |     |
| 300         |             |     |     |     |      |      |    |    |    |    |     |     |     |     |     |     |     |     |     | 550 |

# 2 ways control valve

Type  
6000 HP

## Welded version dimensions



| DN                         | 25                                     | 40  | 50  | 80  | 100 | 150 | 200 | 250 | 300 |
|----------------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|
| L                          | 270                                    | 300 | 305 | 381 | 520 | 650 | 650 | 775 | 900 |
| H1                         | 90                                     | 113 | 113 | 153 | 178 | 228 | 315 | 440 | 620 |
| H2                         | 204                                    | 276 | 276 | 339 | 379 | 505 | 592 | 600 | 622 |
| H2 with extension bonnet   | 304                                    | 376 | 376 | 439 | 479 | 605 | /   | /   | /   |
| H4 (max)                   | 210                                    | 238 | 238 | 235 | 288 | 367 | 367 | 400 | 400 |
| <b>BW ends dimensions</b>  | Schedule 40/80/160 according to B16.25 |     |     |     |     |     |     |     |     |
| <b>SW ends dimensions</b>  | According to B16.11                    |     |     |     |     | /   | /   | /   | /   |
| <b>Mass (kg)</b>           | 26                                     | 45  | 45  | 85  | 135 | 360 | 600 | /   | /   |
| <b>Add. Mass extension</b> | 4                                      | 5   | 5   | 6   | 8   | 10  | /   | /   | /   |

All dimensions in mm

|                          | MA41-B6 | MA41-C6 | MA60-G6 |
|--------------------------|---------|---------|---------|
| ØD                       | 420     | 420     | 600     |
| H3                       | 242     | 354     | 383     |
| <b>Masse / Mass (kg)</b> | 55      | 72      | 130     |

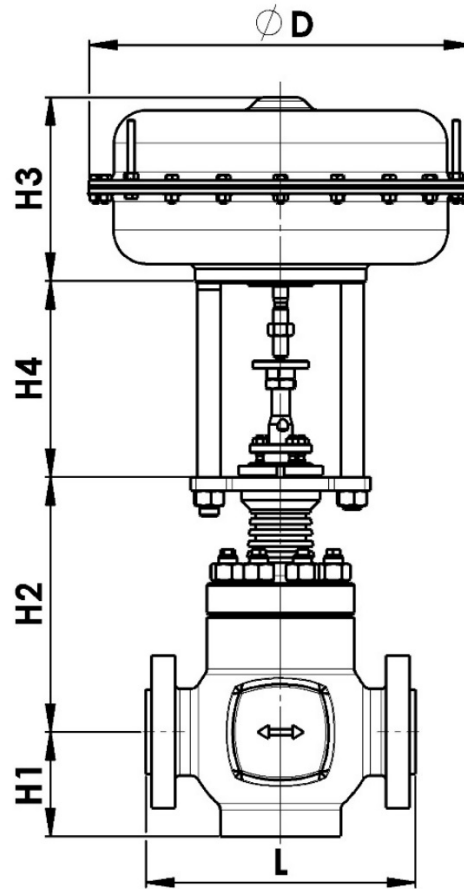
All dimensions in mm



# 2 ways control valve

Type  
6000 HP

## Flanges version dimensions



| DN                                     | 25  | 40    | 50  | 80  | 100 | 150 | 200 | 250 | 300  |
|--|-----|-------|-----|-----|-----|-----|-----|-----|------|
| L (PN63/100 FS) serie 2 (NF EN 558)    | 230 | 300 * | 300 | 380 | 430 | 550 | 650 | 775 | 900  |
| L (PN160 FS) serie 2 (NF EN 558)       | 230 | 300 * | 300 | 380 | 430 | 550 | 650 | /   | /    |
| L (PN250 FS) serie 92 (NF EN 558)      | 260 | 350 * | 350 | 450 | 520 | 914 | /   | /   | /    |
| L (Class 600 RF) serie 5 (NF EN 558)   | 216 | 292 * | 292 | 356 | 432 | 559 | 660 | 787 | 900* |
| L (Class 900 RF) serie 54 (NF EN 558)  | 254 | 368 * | 368 | 381 | 457 | 610 | 737 | 838 | /    |
| L (Class 1500 RF) serie 55 (NF EN 558) | 254 | 368 * | 368 | 470 | 546 | 705 | 832 | 991 | /    |
| H1                                     | 90  | 113   | 113 | 153 | 178 | 228 | 315 | 440 | 620  |
| H2                                     | 204 | 276   | 276 | 339 | 379 | 505 | 592 | 600 | 622  |
| H2 with extension bonnet               | 304 | 376   | 376 | 439 | 479 | 605 | /   | /   | /    |
| H4 (max)                               | 210 | 238   | 238 | 235 | 288 | 367 | 367 | 400 | 400  |
| Mass (kg) (Class600 – PN63/100)        | 22  | 55    | 55  | 100 | 155 | 360 | 600 | /   | /    |
| Mass (kg) (Class900 – PN160)           | 23  | 60    | 60  | 110 | 170 | 410 | 730 | /   | /    |
| Mass (kg) (Class1500 – PN250)          | 25  | 65    | 65  | 120 | 182 | 450 | 805 | /   | /    |
| Add. Mass extension                    | 4   | 5     | 5   | 6   | 8   | 10  | /   | /   | /    |

All dimensions in mm  
\* non standard

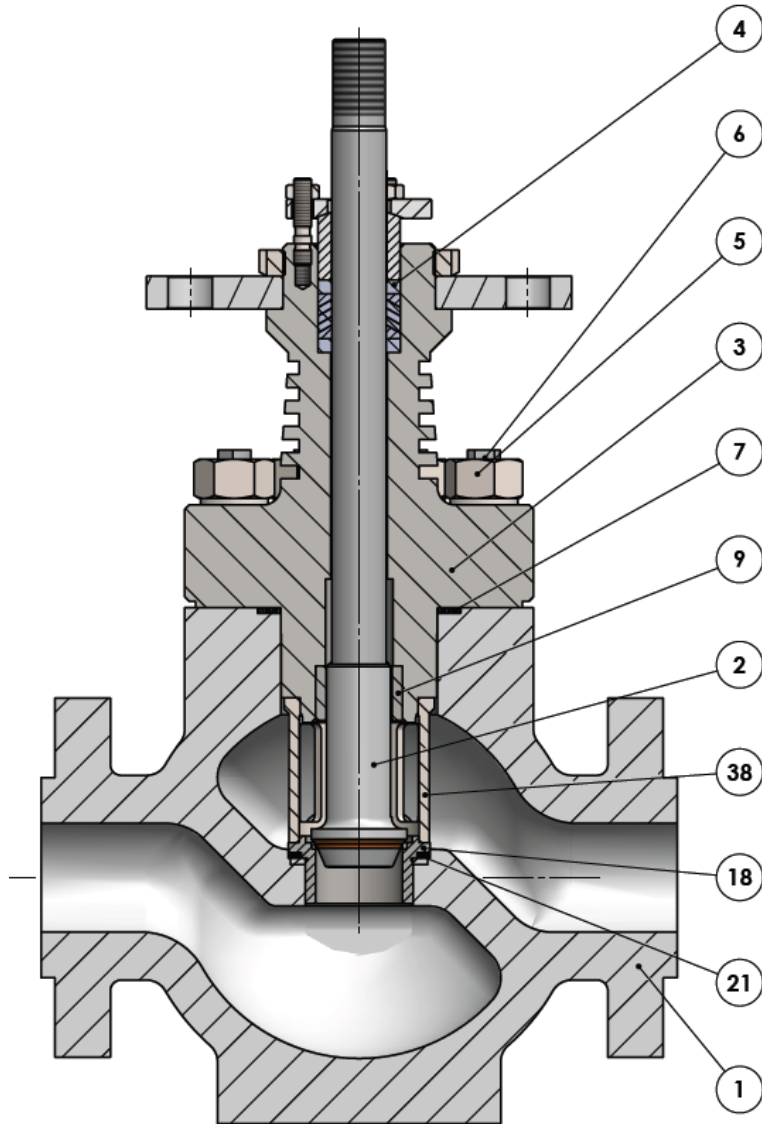
|           | MA41-B6 | MA41-C6 | MA60-G6 |
|-----------|---------|---------|---------|
| ØD        | 420     | 420     | 600     |
| H3        | 242     | 354     | 383     |
| Mass (kg) | 55      | 72      | 130     |

All dimensions in mm

# 2 ways control valve

Type  
6000 HP

## Part list



| Item | Description         | Material                |
|------|---------------------|-------------------------|
| 1    | Body                | Steel - Stainless steel |
| 2    | Cone                | Stainless steel         |
| 3    | Cover               | Steel - Stainless steel |
| 4*   | <b>Stuffing box</b> | Stainless steel         |
| 5    | Nut                 | Steel - Stainless steel |
| 6    | Stud                | Steel - Stainless steel |
| 7*   | <b>Gasket</b>       | Graphite steel          |
| 9    | Guiding bush        | 1,4542                  |
| 18   | Seat                | Stainless steel         |
| 21*  | <b>Gasket</b>       | Graphite steel          |
| 38   | Diffuser            | Stainless steel         |

\* Spare parts