

# SUN WP

2-PIECE BALL VALVE—FULL BORE

## MAIN STANDARD FEATURES

- CONSTRUCTION: AISI 316
- CERTIFICATIONS: DVGW for gas  
TÜV for TA Luft
- DIAMETER: from DN10 - 3/8" to DN 50 - 2"
- PRESSURES: from 160 BAR to 40 BAR
- TEMPERATURE LIMITS: from -20°C to +150°C
- ISO 5211 mounting plate
- BLOW-OUT PROOF stem from 3/4" to 2"
- CONNECTIONS: F/F UNI-ISO 7/1 Rp – DIN 2999 parallel  
M/F (male UNI-ISO 7/1 R taper, female parallel)
- WRAPPING SEATS
- TRIPLE stem-packing with labyrinth effect and automatic adjustment by Belleville washers
- NON-WETTED parts in stainless steel
- OPERATION devices: lever
- Tested for vacuum 1-10<sup>-3</sup> STD CC/SEC



DVGW GAS  
APPROVED

## STANDARD PART NUMBERS

**Art. 2551**  
female/female

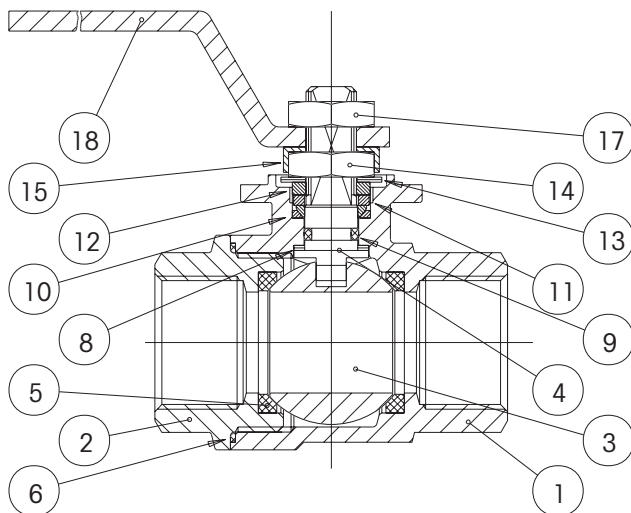
**Art. 2552**  
male/female

## SPECIAL EXECUTIONS

- 15% GLASS-FILLED PTFE. Temperature limits -20°C + 175°C
- PTFE+CARBOGRAPHITE: use up to 195°C, for steam up to 180°C
- FEMALE CONNECTIONS: NPT ANSI B1.20.1
- Stems with antistatic device from 3/4" to 2"
- Degreased version
- SUNNY WP valve (SUN WP polished)
- On request the valve is available with ATEX certificate (from 3/4" to 2")
- For further special requests please consult our technical/commercial service

## GENERAL APPLICATIONS

Use as an ON-OFF valve for: chemical products, for water and pneumatic installations, gas, water, vacuum. For steam within limited working conditions and with special seals. All parts have to be adequately degreased if the valves have to be used for oxygen.  
For special utilizations ascertain the compatibility with process features and the corrosion resistance also by the relevant table.

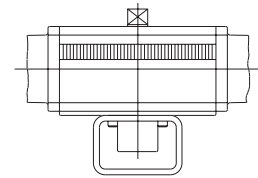
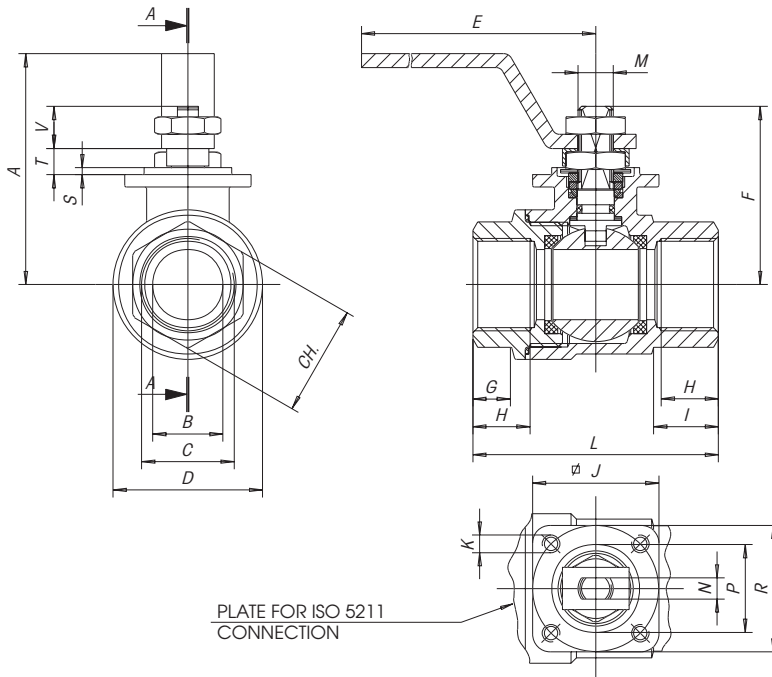


## LIST OF COMPONENTS AND MATERIALS

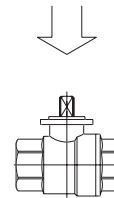
| REF. | PART                 | MATERIAL | DIN MAT. | QTY |
|------|----------------------|----------|----------|-----|
| 1    | BODY                 | AISI 316 | 1.4408   | 1   |
| 2    | FEMALE END           | AISI 316 | 1.4408   | 1   |
| 3    | BALL                 | AISI 316 | 1.4401   | 1   |
| 4    | STEM                 | AISI 316 | 1.4401   | 1   |
| 5    | SEAT                 | PTFE     | -        | 2   |
| 6    | SIDE SEALING RING    | PTFE     | -        | 1   |
| 8    | UPPER SEALING RING   | PTFE     | -        | 2   |
| 9    | STEM O-RING          | VITON    | -        | 1   |
| 10   | UPPER SEALING COUPLE | PTFE     | -        | 1   |
| 11   | PACKING GLAND        | AISI 304 | 1.4301   | 1   |
| 12   | OPERATION STOP       | AISI 304 | 1.4301   | 1   |
| 13   | BELLEVILLE WASHERS   | AISI 301 | 1.4310   | 2   |
| 14   | STEM RETAINING NUT   | AISI 304 | 1.4301   | 1   |
| 15   | FIXING NUT PLATE     | AISI 304 | 1.4301   | 1   |
| 17   | LOCKING NUT          | AISI 304 | 1.4301   | 1   |
| 18   | LEVER HANDLE         | AISI 304 | 1.4301   | 1   |

# SUN WP

## 2-PIECE BALL VALVE—FULL BORE



By removing the lever handle, the SUN WP valve can be directly mounted on an actuator by the special bracket with screws, the stem adapter and by replacing the operation stop (part 12) of the valve (kit supplied upon request).



| C (inch) | A   | B  | D    | E   | F  | G    | H    | I    | J  | K  | L   | M   | N  | P  | R  | S | T    | V    | hex. key | oct. key | ISO conn. | weight in gr MF | weight in gr MF |
|----------|-----|----|------|-----|----|------|------|------|----|----|-----|-----|----|----|----|---|------|------|----------|----------|-----------|-----------------|-----------------|
| 3/8"     | 52  | 10 | 29   | 110 | 37 | 8.5  | 11.4 | 13.5 | 36 | M5 | 50  | M8  | 4  | 25 | 36 | 2 | 6    | 9.5  | 21.5     | -        | F03       | 250             | 235             |
| 1/2"     | 55  | 15 | 34   | 110 | 42 | 10   | 15   | 18   | 36 | M5 | 60  | M8  | 4  | 25 | 36 | 2 | 6    | 9.5  | 26.5     | -        | F03       | 350             | 315             |
| 3/4"     | 66  | 20 | 42.5 | 140 | 52 | 11.5 | 16.3 | 18   | 36 | M5 | 70  | M10 | 6  | 25 | 36 | 2 | 7.5  | 12   | 31.5     | -        | F03       | 565             | 510             |
| 1"       | 70  | 25 | 50.5 | 140 | 56 | 14   | 19.1 | 27.5 | 36 | M5 | 85  | M10 | 6  | 25 | 36 | 2 | 7.5  | 12   | 40.5     | -        | F03       | 855             | 765             |
| 1 1/4"   | 85  | 32 | 63   | 180 | 68 | 15.5 | 21.4 | 28.5 | 42 | M5 | 95  | M12 | 8  | 30 | 42 | 3 | 9.5  | 13.5 | -        | 49.5     | F04       | 1395            | 1270            |
| 1 1/2"   | 91  | 40 | 75.5 | 180 | 74 | 18.5 | 21.4 | 23   | 42 | M5 | 105 | M12 | 8  | 30 | 42 | 3 | 9.5  | 13.5 | -        | 54.5     | F04       | 1945            | 1810            |
| 2"       | 105 | 50 | 91   | 230 | 87 | 22.5 | 25.7 | 35   | 50 | M6 | 125 | M16 | 10 | 35 | 50 | 3 | 11.3 | 17.8 | -        | 69.5     | F05       | 3320            | 3160            |

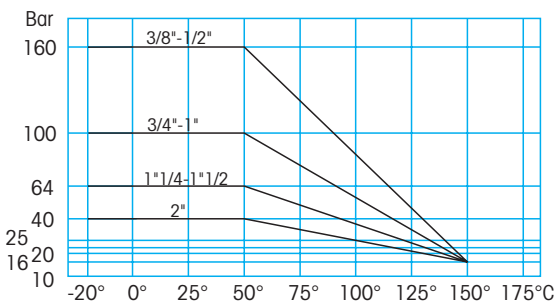
### BREAKAWAY TORQUES in Nm

| PN - bar | DN size | 10   | 15   | 20   | 25  | 32     | 40     | 50   |
|----------|---------|------|------|------|-----|--------|--------|------|
|          |         | 3/8" | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"   |
| 0        |         | 1.6  | 3.2  | 3.6  | 4.6 | 11.5   | 19     | 27.5 |
| 16       |         | 1.8  | 4.3  | 4.9  | 5.9 | 15     | 24     | 38   |
| 40       |         | 2.5  | 5.1  | 6    | 6.9 | 16.7   | 28.6   | 42   |
| 64       |         | 3.2  | 5.6  | 6.8  | 8   | 18.4   | 32     |      |
| 100      |         | 3.8  | 6.5  | 8.5  | 10  |        |        |      |
| 160      |         | 5    | 8    |      |     |        |        |      |

The values in Nm may vary as a function of the seals material, temperature and type of medium. For a firm operation of the various types of actuators, in the different working conditions it is necessary to consider a safety factor of 1.5. During operation, with frequent open and close cycles, the operating torque can decrease considerably in comparison with the initial breakaway torque.

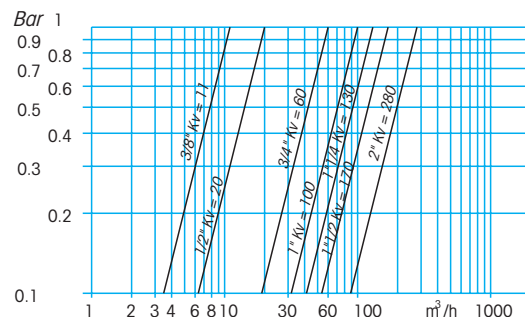
### PRESSURE/TEMPERATURE DIAGRAM

At each pressure level corresponds the admissible temperature level.



### LOSS OF HEAD DIAGRAM/FLOW RATE

The Kv value is the flow rate causing a pressure drop of 1 bar



# SUN WP

2-PIECE BALL VALVE - FULL BORE WITH DOUBLE ACTING PNEUMATIC ACTUATOR

## ACTUATOR FEATURES

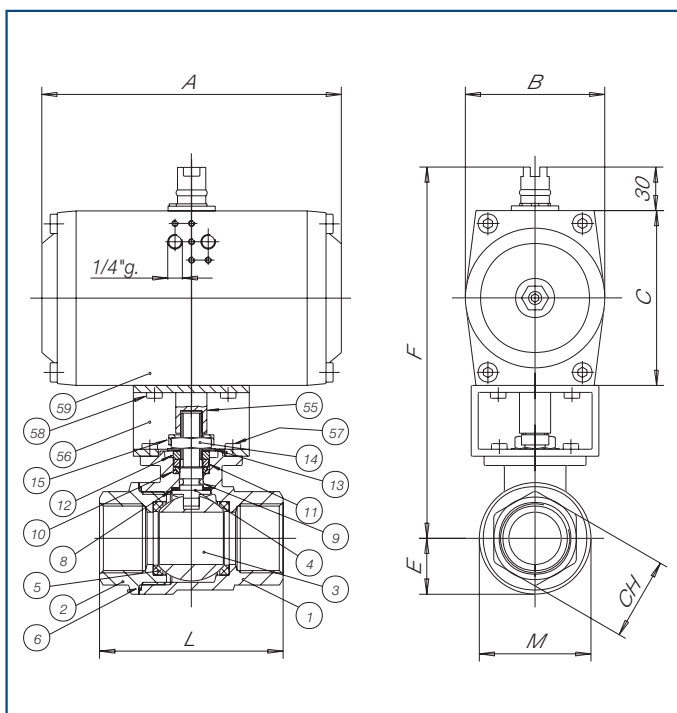
- Rotation angle: 90°
- Standard version for temperature between -20°C and + 90°C
- Supply maximum pressure: 10 bar (8bar for DNA045)
- Nominal pressure: 5,62 bar
- Supply medium: dry filtered compressed air, not necessarily lubricated
- Lubrication: in such a case use a non-detergent or NBR compatible oil

## STANDARD VALVE FEATURES

- Working temperature: from -20°C to +150°C
- Maximum working pressure with actuator: from 160 bar to 40 bar
- CONNECTIONS: F/F UNI-ISO 7/1 Rp - DIN 2999 parallel  
M/F (male UNI-ISO 7/1 R taper, female parallel)
- BLOW-OUT PROOF stem from 3/4" to 2"
- ISO 5211 mounting plate
- For general applications and special versions see technical table of manual valve
- In the below table the part number and the valve code refer to the standard valve female/female



| SIZE   | PART NUMBER | weight in gr. | A   | B  | C   | E    | F     | CH<br>hexa. | CH<br>octo. | L   | M    | ACTUATOR code | VALVE code | MOUNTING KIT code |
|--------|-------------|---------------|-----|----|-----|------|-------|-------------|-------------|-----|------|---------------|------------|-------------------|
| 3/8"   | D31AA20300  | 808           | 110 | 53 | 68  | 14.5 | 157.5 | 21.5        | -           | 50  | 29   | DNA045AZ00    | V400H203   | K1GA0003          |
| 1/2"   | D31AA20400  | 895           | 110 | 53 | 68  | 17   | 162.5 | 26.5        | -           | 60  | 34   | DNA045AZ00    | V400H204   | K1GA0003          |
| 3/4"   | D31AA20500  | 1110          | 110 | 53 | 68  | 21.5 | 168.5 | 31.5        | -           | 70  | 42.5 | DNA045AZ00    | V400H205   | K1GA0105          |
| 1"     | D31AA20600  | 1720          | 127 | 59 | 74  | 25.5 | 188.5 | 40.5        | -           | 85  | 50.5 | DGA052AX00    | V400H206   | K1GA0206          |
| 1 1/4" | D31AA20700  | 2880          | 133 | 70 | 88  | 31.5 | 220   | -           | 49.5        | 95  | 63   | DGA063AX00    | V400H207   | K1GA0207          |
| 1 1/2" | D31AA20800  | 4135          | 132 | 83 | 100 | 38   | 238   | -           | 54.5        | 105 | 75.5 | DGA075AX00    | V400H208   | K1GA0208          |
| 2"     | D31AA20900  | 5620          | 132 | 83 | 100 | 46   | 245   | -           | 69.5        | 125 | 91   | DGA075AX00    | V400H209   | K1GA0009          |
|        |             |               |     |    |     |      |       |             |             |     |      |               |            |                   |
|        |             |               |     |    |     |      |       |             |             |     |      |               |            |                   |
|        |             |               |     |    |     |      |       |             |             |     |      |               |            |                   |



## LIST OF VALVE COMPONENTS AND MATERIALS

| REF. | PART                   | QTY | MATERIAL |
|------|------------------------|-----|----------|
| 1    | BODY                   | 1   | AISI 316 |
| 2    | FEMALE END             | 1   | AISI 316 |
| 3    | BALL                   | 1   | AISI 316 |
| 4    | STEM                   | 1   | AISI 316 |
| 5    | SEAT                   | 2   | PTFE     |
| 6    | SIDE SEALING RING      | 1   | PTFE     |
| 8    | UPPER SEALING RING     | 1   | PTFE     |
| 9    | STEM O-RING            | 1   | VITON    |
| 10   | UPPER SEALING COUPLE   | 1   | PTFE     |
| 11   | PACKING GLAND          | 1   | AISI 304 |
| 12   | WASHER                 | 1   | AISI 304 |
| 13   | BELLEVILLE WASHERS     | 2   | AISI 301 |
| 14   | STEM RETAINING NUT     | 1   | AISI 304 |
| 15   | FIXING NUT PLATE       | 1   | AISI 304 |
| 55   | ACTUATOR SHAFT         | 1   | C.S.     |
| 56   | BRACKET                | 1   | C.S.     |
| 57   | BRACKET/VALVE SCREW    | 4   | 8.8      |
| 58   | BRACKET/ACTUATOR SCREW | 4   | 8.8      |
| 59   | ACTUATOR               | 1   |          |

For accessories see relevant catalogue sheet

# SUN WP

2-PIECE BALL VALVE - FULL BORE WITH SPRING RETURN PNEUMATIC ACTUATOR

## ACTUATOR FEATURES

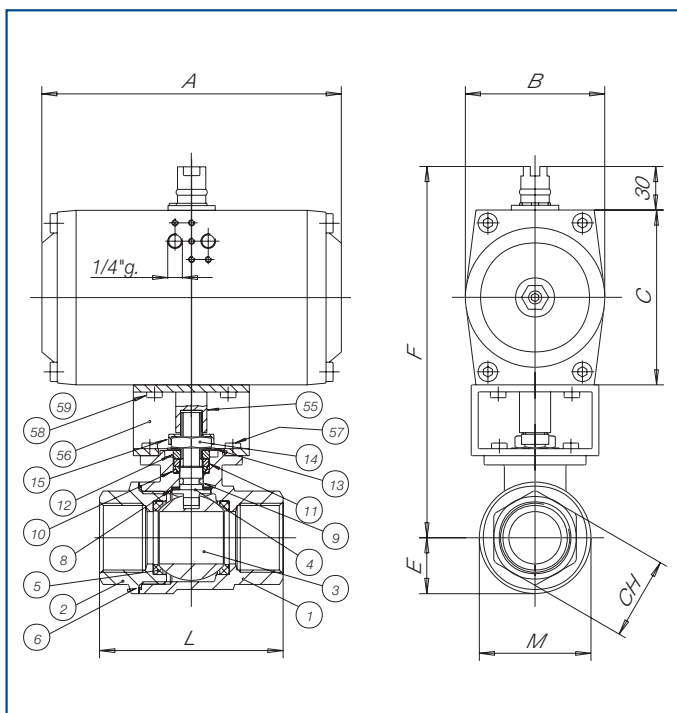
- Rotation angle: 90°
- Standard version for temperature between -20°C and + 90°C
- Supply maximum pressure: 10 bar (8bar for SNA045)
- Nominal pressure: 5,62 bar
- Supply medium: dry filtered compressed air, not necessarily lubricated
- Lubrication: in such a case use a non-detergent or NBR compatible oil
- STANDARD: **SPRING CLOSES/AIR OPENS**, clockwise automatic closing

## STANDARD VALVE FEATURES

- Temperature limits: from -20°C to +150°C
- Maximum working pressure with actuator: from 160 bar to 40 bar
- CONNECTIONS: F/F UNI-ISO 7/1 Rp – DIN 2999 parallel  
M/F (male UNI-ISO 7/1 R taper, female parallel)
- BLOW-OUT PROOF stem from 3/4" to 2"
- ISO 5211 mounting plate
- For general applications and special versions see technical table of manual valve
- In the below table the part number and the valve code refer to the standard valve female/female



| SIZE   | PART NUMBER | weight in gr. | A   | B   | C   | E    | F     | CH<br>hexd. | CH<br>octo. | L   | M    | ACTUATOR code | VALVE code | MOUNTING KIT code |
|--------|-------------|---------------|-----|-----|-----|------|-------|-------------|-------------|-----|------|---------------|------------|-------------------|
| 3/8"   | S31AA20300  | 880           | 110 | 53  | 68  | 14.5 | 157.5 | 21.5        | -           | 50  | 29   | SNA0452W00    | V400H203   | K1GA0003          |
| 1/2"   | S31AA20400  | 1375          | 127 | 59  | 74  | 17   | 178.5 | 26.5        | -           | 60  | 34   | SGA0524X00    | V400H204   | K1GA0204          |
| 3/4"   | S31AA20500  | 1590          | 127 | 59  | 74  | 21.5 | 184.5 | 31.5        | -           | 70  | 42.5 | SGA0524X00    | V400H205   | K1GA0205          |
| 1"     | S31AA20600  | 2475          | 133 | 70  | 88  | 25.5 | 202.5 | 40.5        | -           | 85  | 50.5 | SGA0634X00    | V400H206   | K1GA0306          |
| 1 1/4" | S31AA20700  | 3800          | 132 | 83  | 100 | 31.5 | 232   | -           | 49.5        | 95  | 63   | SGA0754X00    | V400H207   | K1GA0307          |
| 1 1/2" | S31AA20800  | 6000          | 203 | 100 | 117 | 38   | 255   | -           | 54.5        | 105 | 75.5 | SGA0924X00    | V400H208   | K1GA0208          |
| 2"     | S31AA20900  | 9490          | 222 | 120 | 140 | 46   | 285   | -           | 69.5        | 125 | 91   | SGA1104X00    | V400H209   | K1GA0109          |
|        |             |               |     |     |     |      |       |             |             |     |      |               |            |                   |
|        |             |               |     |     |     |      |       |             |             |     |      |               |            |                   |
|        |             |               |     |     |     |      |       |             |             |     |      |               |            |                   |



## LIST OF VALVE COMPONENTS AND MATERIALS

| REF. | PART                   | QTY | MATERIAL |
|------|------------------------|-----|----------|
| 1    | BODY                   | 1   | AISI 316 |
| 2    | FEMALE END             | 1   | AISI 316 |
| 3    | BALL                   | 1   | AISI 316 |
| 4    | STEM                   | 1   | AISI 316 |
| 5    | SEAT                   | 2   | PTFE     |
| 6    | SIDE SEALING RING      | 1   | PTFE     |
| 8    | UPPER SEALING RING     | 1   | PTFE     |
| 9    | STEM O-RING            | 1   | VITON    |
| 10   | UPPER SEALING COUPLE   | 1   | PTFE     |
| 11   | PACKING GLAND          | 1   | AISI 304 |
| 12   | WASHER                 | 1   | AISI 304 |
| 13   | BELLEVILLE WASHERS     | 2   | AISI 301 |
| 14   | STEM RETAINING NUT     | 1   | AISI 304 |
| 15   | FIXING NUT PLATE       | 1   | AISI 304 |
| 55   | ACTUATOR SHAFT         | 1   | C.S.     |
| 56   | BRACKET                | 1   | C.S.     |
| 57   | BRACKET/VALVE SCREW    | 4   | 8.8      |
| 58   | BRACKET/ACTUATOR SCREW | 4   | 8.8      |
| 59   | ACTUATOR               | 1   |          |

For accessories see relevant catalogue sheet

# SUNNY

## 2-PIECE BALL VALVE—FULL BORE

### MAIN STANDARD FEATURES

- CONSTRUCTION: AISI 316
- DIAMETER: from DN08 - 1/4" to DN 50 - 2"
- PRESSURES: from 100 BAR to 40 BAR
- TEMPERATURE LIMITS: from -20°C to +150°C
- BLOW-OUT PROOF stem
- CONNECTIONS: F/F UNI-ISO 7/1 Rp – DIN 2999 parallel  
M/F (male UNI-ISO 7/1 R taper, female parallel)
- WRAPPING SEATS
- TRIPLE stem-packing with labyrinth effect and automatic adjustment by Belleville washers
- NON-WETTED parts in stainless steel
- OPERATION devices: lever or T-handle
- Tested for vacuum: 1-10<sup>-3</sup> STD CC/SEC



### STANDARD PART NUMBERS

#### Art. 2621

female/female w/lever

#### Art. 2622

male/female w/lever

#### Art. 2631

female/female w/T-handle up to 1"

#### Art. 2632

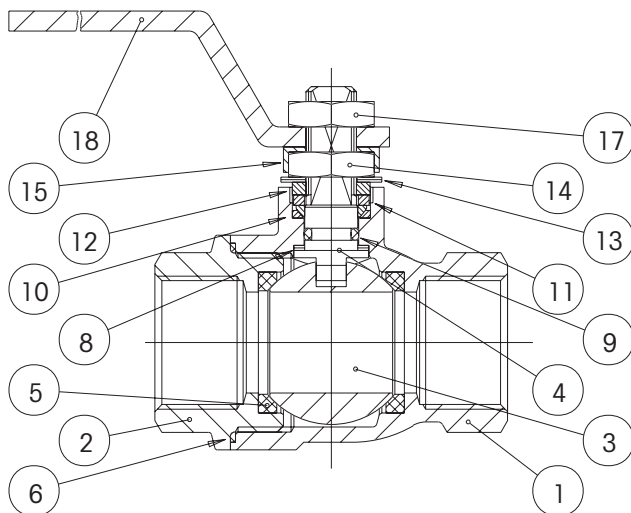
male/female w/T-handle up to 1"

### SPECIAL EXECUTIONS

- 15% GLASS-FILLED PTFE. Temperature limits -20°C + 175°C
- PTFE+CARBOGRAPHITE: use up to 195°C, for steam up to 180°C
- FEMALE CONNECTIONS: NPT ANSI B1.20.1
- Stems with antistatic device from 3/4" to 2"
- Degreased version
- Available also in SUNNY WP version, obtained from SUN WP series
- On request the valve is available with ATEX certificate (from 3/4" to 2")

### GENERAL APPLICATIONS

Use as an ON-OFF valve for: chemical, sanitation and food products, for water and pneumatic installations, gas, water, vacuum. For steam within limited working conditions and with special seals. All parts have to be adequately degreased if the valves have to be used for oxygen. For special utilizations ascertain the compatibility with process features and the corrosion resistance also by the relevant table.

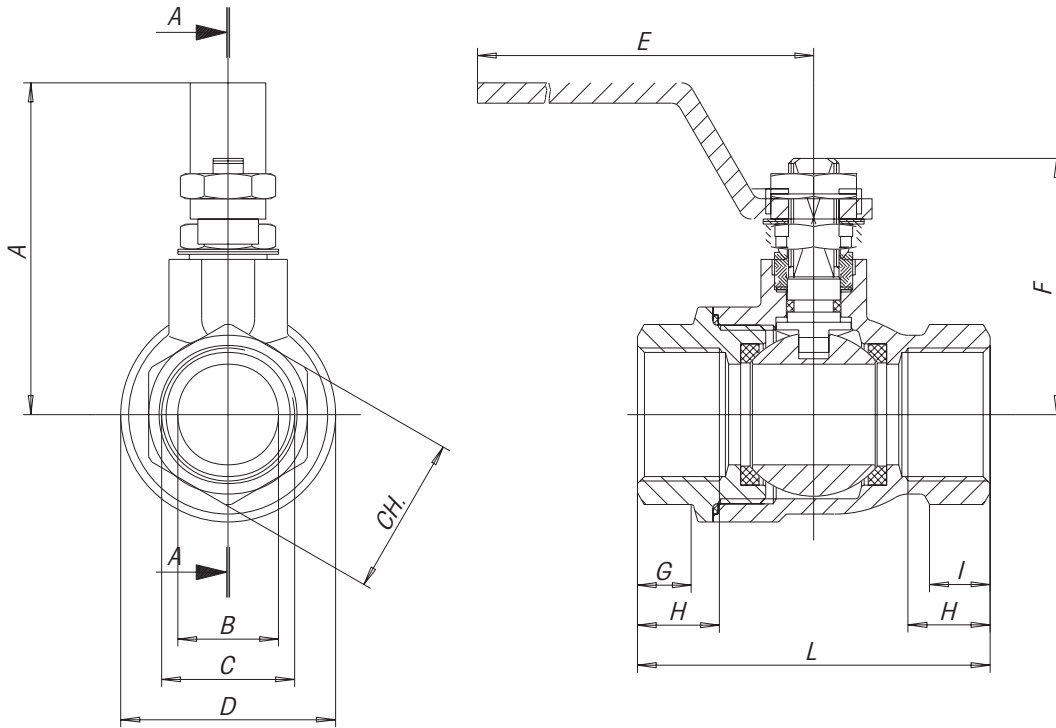


### LIST OF COMPONENTS AND MATERIALS

| REF. | PART                 | MATERIAL | DIN MAT. | QTY |
|------|----------------------|----------|----------|-----|
| 1    | BODY                 | AISI 316 | 1.4408   | 1   |
| 2    | FEMALE END           | AISI 316 | 1.4408   | 1   |
| 3    | BALL                 | AISI 316 | 1.4401   | 1   |
| 4    | STEM                 | AISI 316 | 1.4401   | 1   |
| 5    | SEAT                 | PTFE     | -        | 2   |
| 6    | SIDE SEALING RING    | PTFE     | -        | 1   |
| 8    | UPPER SEALING RING   | PTFE     | -        | 2   |
| 9    | STEM O-RING          | VITON    | -        | 1   |
| 10   | UPPER SEALING COUPLE | PTFE     | -        | 1   |
| 11   | PACKING GLAND        | AISI 304 | 1.4301   | 1   |
| 12   | OPERATION STOP       | AISI 304 | 1.4301   | 1   |
| 13   | BELLEVILLE WASHERS   | AISI 304 | 1.4301   | 2   |
| 14   | STEM RETAINING NUT   | AISI 304 | 1.4301   | 1   |
| 15   | FIXING NUT PLATE     | AISI 304 | 1.4301   | 1   |
| 17   | LOCKING NUT          | AISI 304 | 1.4301   | 1   |
| 18   | LEVER HANDLE         | AISI 304 | 1.4301   | 1   |

# SUNNY

## BALL VALVE—REDUCED BORE



| C (inch) | A   | B  | D    | E   | F  | G    | H    | I    | L   | hex. key | oct. key | weight in gr MF | weight in gr F/F |
|----------|-----|----|------|-----|----|------|------|------|-----|----------|----------|-----------------|------------------|
| 1/4"     | 52  | 8  | 29   | 110 | 37 | 8.5  | 11.4 | 8    | 50  | 21.5     | -        | 230             | 220              |
| 3/8"     | 52  | 10 | 29   | 110 | 37 | 8.5  | 11.4 | 8    | 50  | 21.5     | -        | 230             | 205              |
| 1/2"     | 55  | 15 | 34   | 110 | 42 | 10   | 15   | 9.5  | 60  | 26.5     | -        | 315             | 275              |
| 3/4"     | 66  | 20 | 42.5 | 140 | 52 | 11.5 | 16.3 | 11.5 | 70  | 31.5     | -        | 535             | 465              |
| 1"       | 70  | 25 | 50.5 | 140 | 56 | 14   | 19.1 | 13.5 | 85  | 40.5     | -        | 805             | 710              |
| 1 1/4"   | 85  | 32 | 63   | 180 | 68 | 15.5 | 21.4 | 16   | 95  | -        | 49.5     | 1320            | 1180             |
| 1 1/2"   | 91  | 40 | 75.5 | 180 | 74 | 18.5 | 21.4 | 16   | 105 | -        | 54.5     | 1875            | 1740             |
| 2"       | 105 | 50 | 91   | 230 | 87 | 22.5 | 25.7 | 23.5 | 125 | -        | 69.5     | 3130            | 2930             |

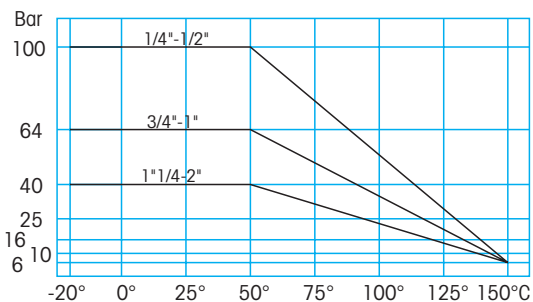
### BREAKAWAY TORQUES in Nm

| PN - bar | DN size | 10       | 15   | 20   | 25  | 32     | 40     | 50   |
|----------|---------|----------|------|------|-----|--------|--------|------|
|          |         | 1/4-3/8" | 1/2" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"   |
| 0        |         | 1.6      | 3.2  | 3.6  | 4.6 | 11.5   | 19     | 27.5 |
| 16       |         | 1.8      | 4.3  | 4.9  | 5.9 | 15     | 24     | 38   |
| 40       |         | 2.5      | 5.1  | 6    | 6.9 | 16.7   | 28.6   | 42   |
| 64       |         | 3.2      | 5.6  | 6.8  | 8   |        |        |      |
| 100      |         | 3.8      | 6.5  |      |     |        |        |      |

The values in Nm may vary as a function of the seals material, temperature and type of medium. For a firm operation of the various types of actuators, in the different working conditions it is necessary to consider a safety factor of 1.5. During operation, with frequent open and close cycles, the operating torque can decrease considerably in comparison with the initial breakaway torque.

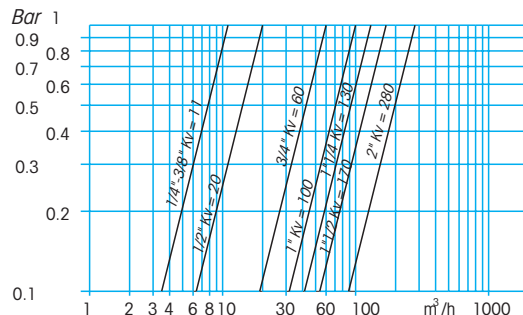
### PRESSURE/TEMPERATURE DIAGRAM

At each pressure level corresponds the admissible temperature level.



### LOSS OF HEAD DIAGRAM/FLOW RATE

The Kv value is the flow rate causing a pressure drop of 1 bar



# TRISTAR

3-WAY BALL VALVE—FULL BORE

## MAIN STANDARD FEATURES

- CONSTRUCTION: AISI 316
- DIAMETER: from DN10 - 3/8" to DN 50 - 2"
- PRESSURES: from PN 40 to PN 25
- TEMPERATURE LIMITS: from -20°C to +160°C
- CONNECTIONS: F/F UNI-ISO 7/1 Rp – DIN 2999 parallel
- WRAPPING seats
- NON - WETTED parts in stainless steel
- OPERATION devices: lever handle
- TRIPLE stem-packing with labyrinth effect
- BALL: "L" bored  
"T" bored
- 90° lever rotation clockwise



## STANDARD PART NUMBERS

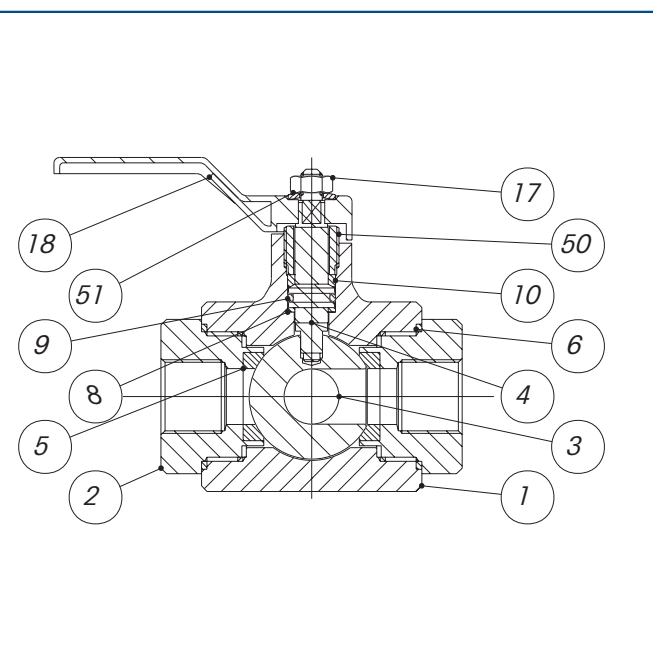
- Art. 2831** female/female with "L" bored ball  
**Art. 2851** female/female with "T" bored ball

## SPECIAL EXECUTIONS

- Female connections: NPT ANSI B1.20.1
- 15% GLASS-FILLED PTFE. Temperature limits -20°C + 175°C
- PTFE+CARBOGRAPHITE: temperature limits -20°C + 195°C
- Degreased version
- ISO 5211 mounting plate for actuator
- Valve for pneumatic actuator
- Different flow combinations obtainable by removing the lever and rotating the stem in order to position the ball as requested during installation (the valve is supplied in the standard version)
- For further special requests please consult our technical/commercial service

## GENERAL APPLICATIONS

Use as an ON-OFF valve for: diversion or mixing of fluids and gases in chemical plants, food, HEVAC and water plants. All parts have to be adequately degreased if the valves have to be used for oxygen. For special utilizations ascertain the compatibility with process features and the corrosion resistance also by the relevant table.

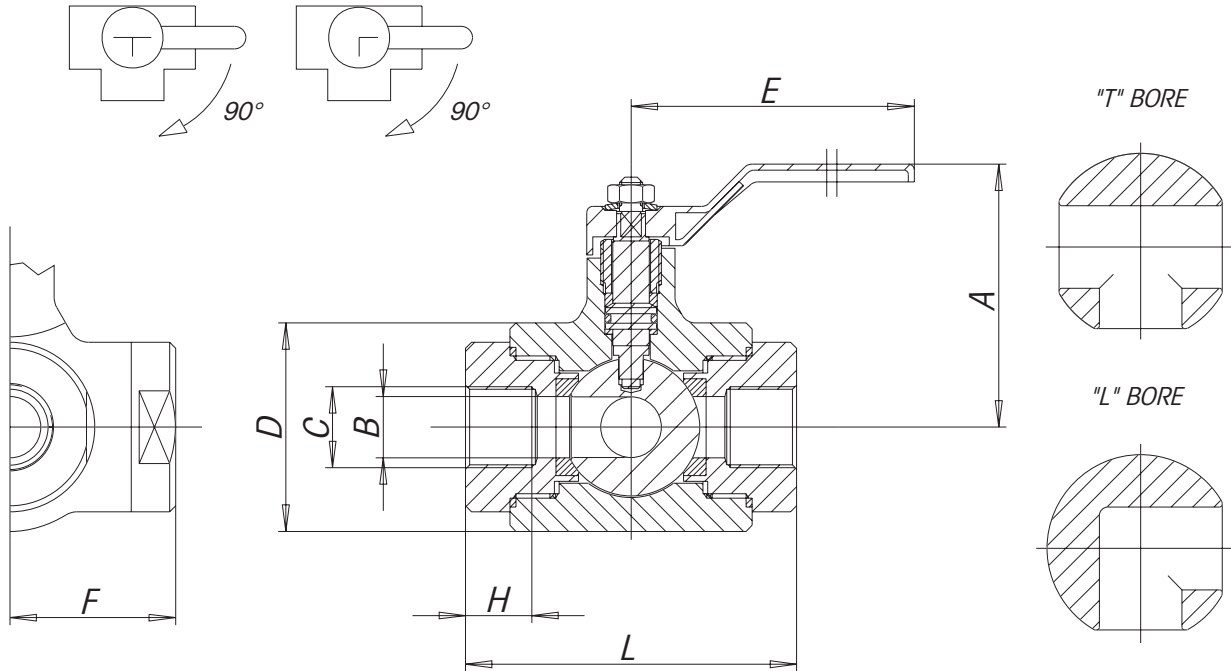


## LIST OF COMPONENTS AND MATERIALS

| REF. | PART                 | MATERIAL | DIN MAT. | QTY |
|------|----------------------|----------|----------|-----|
| 1    | BODY                 | AISI 316 | 1.4401   | 1   |
| 2    | FEMALE END           | AISI 316 | 1.4401   | 1   |
| 3    | BALL                 | AISI 316 | 1.4401   | 1   |
| 4    | STEM                 | AISI 316 | 1.4401   | 1   |
| 5    | SEAT                 | PTFE     | -        | 4   |
| 6    | SIDE SEALING RING    | PTFE     | -        | 3   |
| 8    | UPPER SEALING RING   | PTFE     | -        | 1   |
| 9    | STEM O-RING          | VITON    | -        | 1   |
| 10   | UPPER SEALING COUPLE | PTFE     | -        | 1   |
| 17   | LOCKING NUT          | AISI 304 | 1.4301   | 1   |
| 18   | LEVER HANDLE         | AISI 304 | 1.4301   | 1   |
| 50   | THREADED GLAND       | AISI 303 | 1.4305   | 1   |
| 51   | WASHER               | AISI 304 | 1.4301   | 1   |

# TRISTAR

3-WAY BALL VALVE—FULL BORE



| C (Inch) | A   | B  | D   | E   | F  | H    | L   | weight in gr.<br>FF |
|----------|-----|----|-----|-----|----|------|-----|---------------------|
| 3/8"     | 77  | 12 | 45  | 126 | 36 | -    | 72  | 1000                |
| 1/2"     | 82  | 15 | 52  | 126 | 41 | 15   | 82  | 1200                |
| 3/4"     | 85  | 20 | 60  | 148 | 46 | 16.3 | 92  | 1900                |
| 1"       | 95  | 25 | 70  | 148 | 51 | 19.1 | 102 | 2500                |
| 1 1/4"   | 115 | 32 | 85  | 180 | 59 | 21.4 | 118 | 4300                |
| 1 1/2"   | 130 | 40 | 100 | 180 | 67 | 21.4 | 134 | 6600                |
| 2"       | 140 | 50 | 110 | 185 | 72 | 25.7 | 144 | 8000                |

### BREAKAWAY TORQUES in Nm

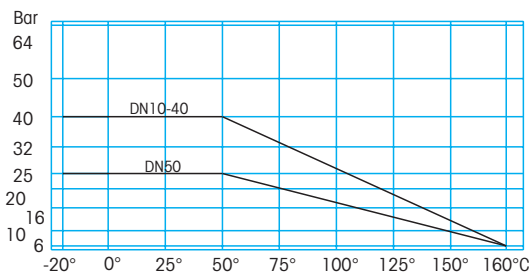
| PN - bar | DN size | 10   | 15   | 20   | 25 | 32     | 40     | 50 |
|----------|---------|------|------|------|----|--------|--------|----|
|          |         | 3/8" | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" |
| 0        |         | 10   | 12   | 23   | 25 | 33     | 40     | 50 |
| 25       |         | 12.2 | 15.5 | 29.5 | 29 | 40.5   | 46     | 60 |
| 40       |         | 14   | 18   | 32.5 | 31 | 43     | 48     |    |

The values in Nm may vary as a function of the seals material, temperature and type of medium. For a firm operation of the various types of actuators, in the different working conditions it is necessary to consider a safety factor of 1.5. During operation, with frequent open and close cycles, the operating torque can decrease considerably in comparison with the initial breakaway torque.

Nm

### PRESSURE/TEMPERATURE DIAGRAM

At each pressure level corresponds the admissible temperature level.



# MOON AISI 316

WAFER BALL VALVE – FULL BORE

## MAIN STANDARD FEATURES

- CONSTRUCTION: AISI 316
- General prescriptions: BS 5351
- Certifications: FIRE SAFE to: BS 6755 - API 6 FA - API 607  
DVGW for gas  
TÜV for TA Luft
- DIAMETER: from DN 15- to DN 100  
(for DN 100 to DN 200 see SELENE valve)
- PRESSURES: PN 16/40 from DN 15 to DN 32 body machined from bar  
PN 16 from DN 40 to DN 100 body from casting
- TEMPERATURE LIMITS: from -20°C to +180°C
- CONNECTIONS with flanges: UNI 2223-2229 and DIN 2501 BL. 1
- FLANGE DRILLING: METRIC
- With contained ball up to DN25
- BLOW-OUT PROOF stem with antistatic device (from DN40)
- WRAPPING SEATS
- TRIPLE stem-packing with labyrinth effect and automatic adjustment by Belleville washers
- ISO 5211 mounting plate for actuators
- NON-WETTED parts in stainless steel
- OPERATION device: lever handle

## SPECIAL EXECUTIONS

- 15% GLASS-FILLED PTFE with temperature limits -20°C + 195°C
- PTFE+CARBOGRAPHITE with temperature limits -20°C + 210°C
- Integral seats in PTFE from DN15 to DN100
- From DN 40 to DN 100 PN 25/40 from bar
- From 1/2" to 4" ANSI 150: through drilled flanges
- Reduction gear with manual operation
- Stem extensions: 50 mm or 100 mm
- Yellow lever handle for gas
- Heating jacket (see MOON CR series)
- Drilled ball and unidirectional valve
- Degreased version
- Antistatic device from DN15 to DN32
- On request the valve is available with ATEX certificate
- For further special requests please consult our technical/commercial service



DVGW GAS  
APPROVED

## STANDARD PART NUMBERS

Art. 2871

standard

## GENERAL APPLICATIONS

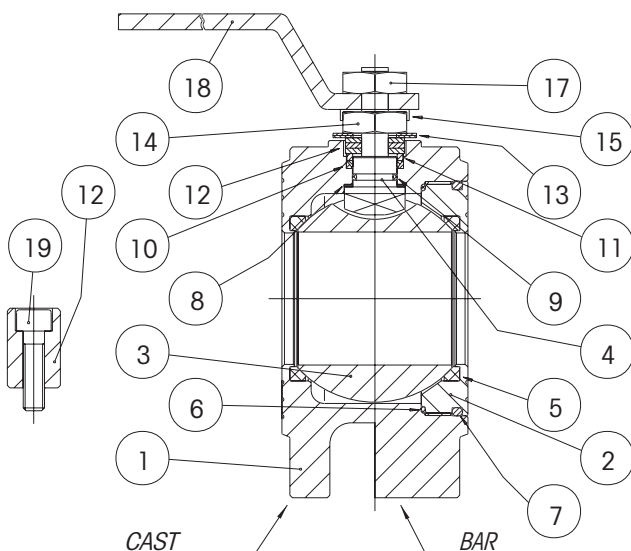
Use as an ON-OFF valve for: chemical products, food plants, distribution lines for gas, air, water. Suitable for vacuum  $1 \cdot 10^{-3}$  STD CC, steam up to +195°C with PTFE+CARBOGRAPHITE and for industrial installations in general.

Thanks to its reduced face to face dimensions and its intrinsic features it offers wide applications in new projects also as an alternative to the split body valve.

For special utilizations ascertain the compatibility with process features and the corrosion resistance also by the relevant table.

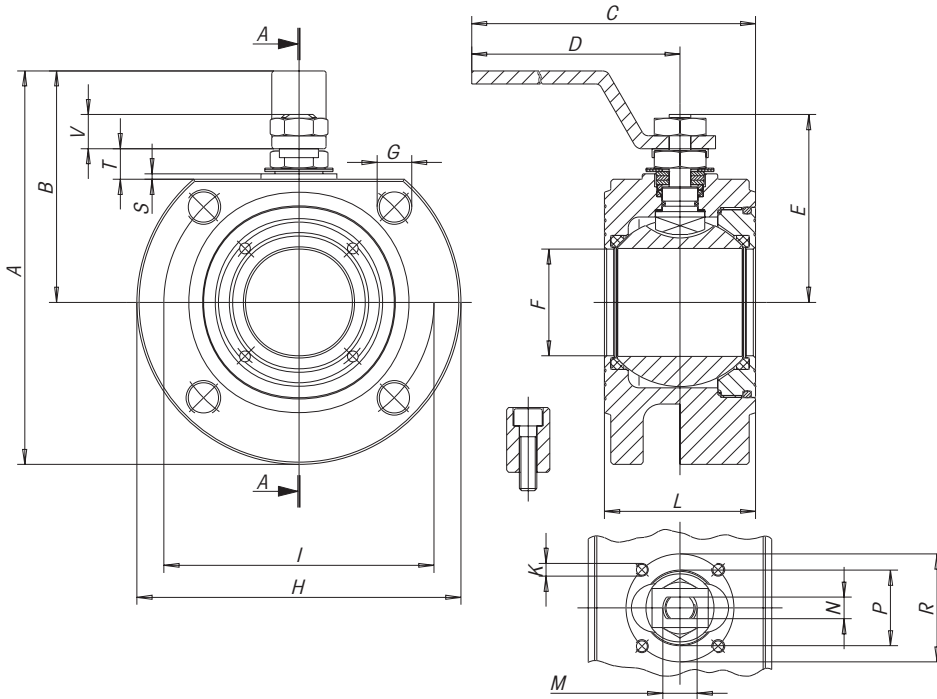
## LIST OF COMPONENTS AND MATERIALS

| REF. | PART                  | MATERIAL      | DIN MAT.      | QTY |
|------|-----------------------|---------------|---------------|-----|
| 1    | BODY                  | AISI 316/CF8M | 1.4408/1.4401 | 1   |
| 2    | THREADED LOCKING RING | AISI 316      | 1.4401        | 1   |
| 3    | BALL                  | AISI 316      | 1.4401        | 1   |
| 4    | STEM                  | AISI 316      | 1.4401        | 1   |
| 5    | SEAT                  | PTFE          |               | 2   |
| 6    | SIDE SEALING RING     | PTFE          |               | 1   |
| 7    | O-RING                | NBR           |               | 1   |
| 8    | UPPER RING            | PTFE          |               | 2   |
| 9    | STEM O-RING           | VITON         |               | 1   |
| 10   | UPPER SEALING COUPLE  | PTFE          |               | 1   |
| 11   | PACKING GLAND         | AISI 304      | 1.4301        | 1   |
| 12   | OPERATION STOP        | S.S.          |               | 1   |
| 13   | BELLEVILLE WASHERS    | 50CrV4        |               | 2   |
| 14   | STEM RETAINING NUT    | S.S.          |               | 1   |
| 15   | FIXING NUT PLATE      | AISI 304      | 1.4301        | 1   |
| 17   | LOCKING NUT           | S.S.          |               | 1   |
| 18   | LEVER HANDLE          | S.S.          |               | 1   |
| 19   | OPERATION STOP SCREW  | S.S.          |               | 1   |



# MOON AISI 316

WAFER BALL VALVE - FULL BORE

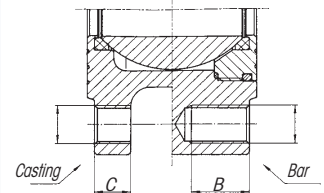


**FLANGE DRILLINGS UNI2223-67**

| SIZE  | A   | B (PN40) | C (PN16) |
|-------|-----|----------|----------|
| DN15  | M12 | 14       | 0        |
| DN20  | M12 | 16       | 0        |
| DN25  | M12 | 16       | 0        |
| DN32  | M16 | 18       | 0        |
| DN40  | M16 | 18       | 13       |
| DN50  | M16 | 18       | 15       |
| DN65  | M16 | 20       | 15       |
| DN80  | M16 | 24       | 17       |
| DN100 | M16 | 20       | 17       |
| DN100 | M20 | 24       | 0        |

**FLANGE DRILLINGS ANSI 150**

| SIZE  | A    | B (PN40) | C (PN16)        |
|-------|------|----------|-----------------|
| DN15  | 1/2" | 13       | 0               |
| DN20  | 1/2" | 14       | 0               |
| DN25  | 1/2" | 16       | 0               |
| DN32  | 1/2" | 17       | 0               |
| DN40  | 1/2" | 19       | 0               |
| DN50  | 5/8" | 20       | (*) 16.4 (17.4) |
| DN65  | 5/8" | 24       | (*) 16.4 (20.6) |
| DN80  | 5/8" | 24       | (*) 18.4 (22.2) |
| DN100 | 5/8" | 24       | (*) 18.4 (22.2) |



| SIZE  | A   | B     | C   | D   | E     | F  | G   | H   | K   | I   | L   | M   | N  | P  | R   | S   | T    | V    | N_Holes | PN | ISO | Weight in gr. |
|-------|-----|-------|-----|-----|-------|----|-----|-----|-----|-----|-----|-----|----|----|-----|-----|------|------|---------|----|-----|---------------|
| DN15  | 110 | 65    | 160 | 140 | 48    | 15 | M12 | 90  | M5  | 65  | 35  | M10 | 6  | 25 | 36  | 2   | 8    | 9    | 4       | 40 | F03 | 1345          |
| DN20  | 120 | 70    | 160 | 140 | 51    | 20 | M12 | 100 | M5  | 75  | 38  | M10 | 6  | 25 | 36  | 2   | 8    | 9    | 4       | 40 | F03 | 1810          |
| DN25  | 137 | 82    | 200 | 180 | 62.5  | 25 | M12 | 110 | M5  | 85  | 43  | M12 | 8  | 30 | 42  | 2   | 11.5 | 11.5 | 4       | 40 | F04 | 2505          |
| DN32  | 150 | 85    | 205 | 180 | 67    | 32 | M16 | 130 | M5  | 100 | 50  | M12 | 8  | 30 | 42  | 2   | 9.5  | 11.5 | 4       | 40 | F04 | 3995          |
| DN40  | 172 | 102   | 260 | 230 | 80    | 40 | M16 | 140 | M6  | 110 | 60  | M16 | 10 | 35 | 50  | 2.5 | 14   | 16   | 4       | 16 | F05 | 4190          |
| DN50  | 185 | 110   | 265 | 230 | 87    | 50 | M16 | 165 | M6  | 125 | 70  | M16 | 10 | 35 | 50  | 2.5 | 14   | 16   | 4       | 16 | F05 | 5790          |
| DN65  | 225 | 137.5 | 400 | 350 | 119.5 | 65 | M16 | 185 | M8  | 145 | 95  | M22 | 14 | 55 | 70  | 3   | 18.7 | 20.8 | 4       | 16 | F07 | 10200         |
| DN80  | 245 | 150   | 410 | 350 | 129.5 | 78 | M16 | 200 | M8  | 160 | 118 | M22 | 14 | 55 | 70  | 3   | 18.7 | 20.8 | 8       | 16 | F07 | 13700         |
| DN100 | 275 | 165   | 580 | 508 | 148.5 | 96 | M16 | 220 | M10 | 180 | 140 | M27 | 16 | 70 | 102 | 3   | 22.2 | 25.3 | 8       | 16 | F10 | 20000         |

For DN 125 to DN 200 see "SELENE" split body wafer valve

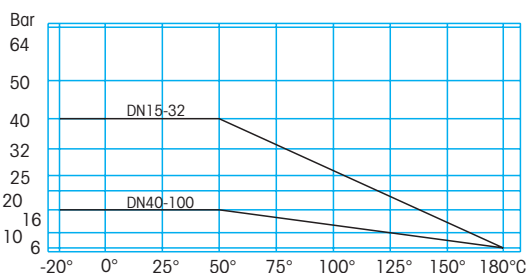
**BREAKAWAY TORQUES in Nm**

| PN - bar | DN size | 15  | 20   | 25   | 32   | 40   | 50   | 65   | 80   | 100 |
|----------|---------|-----|------|------|------|------|------|------|------|-----|
| 0        |         | 4   | 7    | 10   | 16   | 25   | 35   | 55   | 75   | 150 |
| 16       |         | 4.8 | 8.5  | 11.3 | 19   | 28   | 39   | 59   | 84.5 | 168 |
| 25       |         | 5.2 | 9.1  | 12   | 20.5 | 29.5 | 41.5 | 62.5 | 92   | 180 |
| 40       |         | 6   | 10.5 | 13   | 22.5 | 31.5 | 44   | 67   | 99   | 195 |

The values in Nm may vary as a function of the seals material, temperature and type of medium. For a firm operation of the various types of actuators, in the different working conditions it is necessary to consider a safety factor of 1.5. During operation, with frequent open and close cycles, the operating torque can decrease considerably in comparison with the initial breakaway torque.

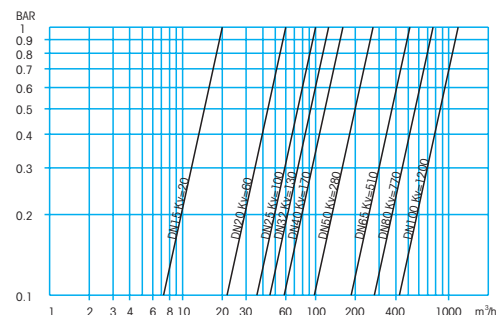
**PRESSURE/TEMPERATURE DIAGRAM**

At each pressure level corresponds the admissible temperature level.



**LOSS OF HEAD DIAGRAM/FLOW RATE**

The Kv value is the flow rate causing a pressure drop of 1 bar



# MOON AISI 316

WAFER BALL VALVE – FULL BORE WITH **DOUBLE ACTING** PNEUMATIC ACTUATOR

## ACTUATOR FEATURES

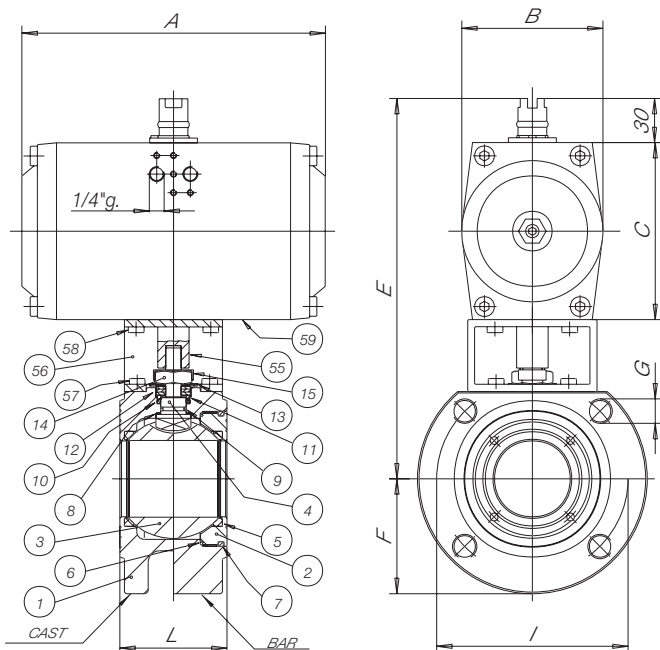
- Rotation angle: 90°
- Standard version for temperature between -20°C and + 90°C
- Supply maximum pressure: 10 bar (8bar for DNA045)
- Nominal pressure: 5,62 bar
- Supply medium: dry filtered compressed air, not necessarily lubricated
- Lubrication: in such a case use a non-detergent or NBR compatible oil

## STANDARD VALVE FEATURES

- General prescriptions: BS 5351, Fire safe BS 6755-API 6 FA- API 607
- Working temperature: from -20°C to +180°C
- Maximum working pressure with actuator: **PN 16** (PN 25 and 40 on request)
- CONNECTIONS with flanges: UNI 2223-2229 AND DIN 2501 BL.1
- FLANGE DRILLING: METRIC
- BLOW-OUT PROOF stem with antistatic device
- For general applications and special versions see technical table of manual valve
- In the below table the part number and the valve code refer to the standard valve **PN 16** and **PN 40** where applicable



| SIZE  | PART NUMBER | weight in gr. | A   | B   | C   | E   | F    | G   | I   | L   | PN | ACTUATOR code | VALVE code | MOUNTING KIT code |
|-------|-------------|---------------|-----|-----|-----|-----|------|-----|-----|-----|----|---------------|------------|-------------------|
| DN15  | D41AA60400  | 1880          | 110 | 53  | 68  | 167 | 45   | M12 | 65  | 35  | 40 | DNA045AZ00    | V415X604   | K1GA0004          |
| DN20  | D41AA60500  | 2360          | 110 | 53  | 68  | 170 | 50   | M12 | 75  | 38  | 40 | DNA045AZ00    | V415X605   | K1GA0004          |
| DN25  | D41AA60600  | 3370          | 127 | 59  | 74  | 202 | 55   | M12 | 85  | 43  | 40 | DGA052AX00    | V415X606   | K1GA0006          |
| DN32  | D41AA60700  | 5450          | 133 | 70  | 88  | 222 | 65   | M16 | 100 | 50  | 40 | DGA063AX00    | V415X607   | K1GA0007          |
| DN40  | D41AA60800  | 7640          | 132 | 83  | 100 | 238 | 70   | M16 | 110 | 60  | 16 | DGA075AX00    | V415X608   | K1GA0008          |
| DN50  | D41AA60900  | 10000         | 182 | 91  | 108 | 253 | 75   | M16 | 125 | 70  | 16 | DGA083AX00    | V415X609   | K1GA0008          |
| DN65  | D41AA61000  | 18715         | 203 | 100 | 117 | 294 | 87.5 | M16 | 145 | 95  | 16 | DGA092AX00    | V415X610   | K1GA0010          |
| DN80  | D41AA61100  | 24785         | 222 | 120 | 140 | 327 | 95   | M16 | 160 | 118 | 16 | DNA110AX00    | V415X611   | K1GA0011          |
| DN100 | D41AA61200  | 40800         | 300 | 137 | 160 | 378 | 110  | M16 | 180 | 140 | 16 | DNA127AX00    | V415X612   | K1GA0012          |



## LIST OF VALVE COMPONENTS AND MATERIALS

| REF. | PART                   | QTY | MATERIAL      |
|------|------------------------|-----|---------------|
| 1    | BODY                   | 1   | AISI 316/CF8M |
| 2    | THREADED LOCKING RING  | 1   | AISI 316      |
| 3    | BALL                   | 1   | AISI 316      |
| 4    | STEM                   | 1   | AISI 316      |
| 5    | SEAT                   | 2   | PTFE          |
| 6    | SIDE SEALING RING      | 1   | PTFE          |
| 7    | O-RING                 | 1   | NBR           |
| 8    | UPPER SEALING RING     | 2   | PTFE          |
| 9    | STEM O-RING            | 1   | VITON         |
| 10   | UPPER SEALING COUPLE   | 1   | PTFE          |
| 11   | PACKING GLAND          | 1   | AISI 304      |
| 12   | WASHER                 | 1   | S.S.          |
| 13   | BELLEVILLE WASHERS     | 2   | 50CrV4        |
| 14   | STEM RETAINING NUT     | 1   | S.S.          |
| 15   | FIXING NUT PLATE       | 1   | AISI 304      |
| 55   | ACTUATOR SHAFT         | 1   | C.S.          |
| 56   | BRACKET                | 1   | C.S.          |
| 57   | BRACKET/VALVE SCREW    | 4   | 8.8           |
| 58   | BRACKET/ACTUATOR SCREW | 4   | 8.8           |
| 59   | ACTUATOR               | 1   |               |

For accessories see relevant catalogue sheet

# MOON AISI 316

WAFER BALL VALVE – FULL BORE WITH SPRING RETURN PNEUMATIC ACTUATOR

## ACTUATOR FEATURES

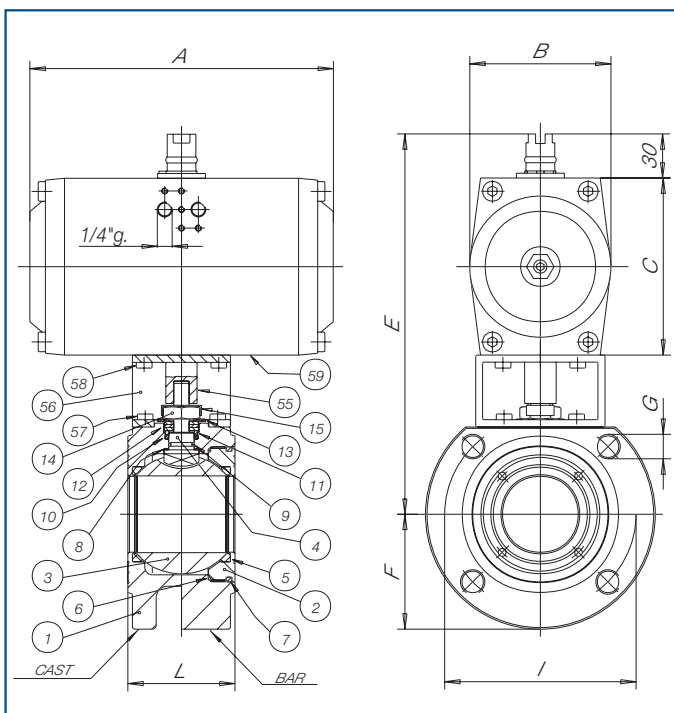
- Rotation angle: 90°
- Standard version for temperature between -20°C and + 90°C
- Supply maximum pressure: 10 bar (8bar for DNA045)
- Nominal pressure: 5,62 bar
- Supply medium: dry filtered compressed air, not necessarily lubricated
- Lubrication: in such a case use a non-detergent or NBR compatible oil

## STANDARD VALVE FEATURES

- General prescriptions: BS 5351, Fire safe BS 6755-API 6 FA- API 607
- Working temperature: from -20°C to +180°C
- Maximum working pressure with actuator: **PN 16** (PN 25 and 40 on request)
- CONNECTIONS with flanges: UNI 2223-2229 AND DIN 2501 BL.1
- FLANGE DRILLING: METRIC
- BLOW-OUT PROOF stem with antistatic device
- For general applications and special versions see technical table of manual valve
- In the below table the part number and the valve code refer to the standard valve **PN 16** and PN 40 where applicable



| SIZE  | PART NUMBER | weight in gr. | A   | B   | C   | E   | F    | G   | I   | L   | PN | ACTUATOR code | VALVE code | CÓD. KIT |
|-------|-------------|---------------|-----|-----|-----|-----|------|-----|-----|-----|----|---------------|------------|----------|
| DN15  | S41AA60400  | 2320          | 127 | 59  | 74  | 183 | 45   | M12 | 65  | 35  | 40 | SGA0524X00    | V415X604   | K1GA0104 |
| DN20  | S41AA60500  | 3360          | 133 | 70  | 88  | 200 | 50   | M12 | 75  | 38  | 40 | SGA0634X00    | V415X605   | K1GA0005 |
| DN25  | S41AA60600  | 4780          | 132 | 83  | 100 | 228 | 55   | M12 | 85  | 43  | 40 | SGA0754X00    | V415X606   | K1GA0106 |
| DN32  | S41AA60700  | 6900          | 182 | 91  | 108 | 242 | 65   | M16 | 100 | 50  | 40 | SGA0834X00    | V415X607   | K1GA0107 |
| DN40  | S41AA60800  | 9370          | 203 | 100 | 117 | 255 | 70   | M16 | 110 | 60  | 16 | SGA0924X00    | V415X608   | K1GA0108 |
| DN50  | S41AA60900  | 13020         | 222 | 120 | 140 | 285 | 75   | M16 | 125 | 70  | 16 | SNA1104X00    | V415X609   | K1GA0108 |
| DN65  | S41AA61000  | 25120         | 300 | 137 | 160 | 337 | 87.5 | M16 | 145 | 95  | 16 | SNA1274X00    | V415X610   | K1GA0110 |
| DN80  | S41AA61100  | 38390         | 380 | 172 | 198 | 395 | 95   | M16 | 160 | 118 | 16 | SNA1604X00    | V415X611   | K1GA0111 |
| DN100 | S41AA61200  | 51270         | 380 | 172 | 198 | 426 | 110  | M16 | 180 | 140 | 16 | SNA1605X00    | V415X612   | K1GA0112 |



## LIST OF VALVE COMPONENTS AND MATERIALS

| REF. | PART                   | QTY | MATERIAL      |
|------|------------------------|-----|---------------|
| 1    | BODY                   | 1   | AISI 316/CF8M |
| 2    | THREADED LOCKING RING  | 1   | AISI 316      |
| 3    | BALL                   | 1   | AISI 316      |
| 4    | STEM                   | 1   | AISI 316      |
| 5    | SEAT                   | 2   | PTFE          |
| 6    | SIDE SEALING RING      | 1   | PTFE          |
| 7    | O-RING                 | 1   | NBR           |
| 8    | UPPER SEALING RING     | 2   | PTFE          |
| 9    | STEM O-RING            | 1   | VITON         |
| 10   | UPPER SEALING COUPLE   | 1   | PTFE          |
| 11   | PACKING GLAND          | 1   | AISI 304      |
| 12   | WASHER                 | 1   | S.S.          |
| 13   | BELLEVILLE WASHERS     | 2   | 50CrV4        |
| 14   | STEM RETAINING NUT     | 1   | S.S.          |
| 15   | FIXING NUT PLATE       | 1   | AISI 304      |
| 55   | ACTUATOR SHAFT         | 1   | C.S.          |
| 56   | BRACKET                | 1   | C.S.          |
| 57   | BRACKET/VALVE SCREW    | 4   | 8.8           |
| 58   | BRACKET/ACTUATOR SCREW | 4   | 8.8           |
| 59   | ACTUATOR               | 1   |               |

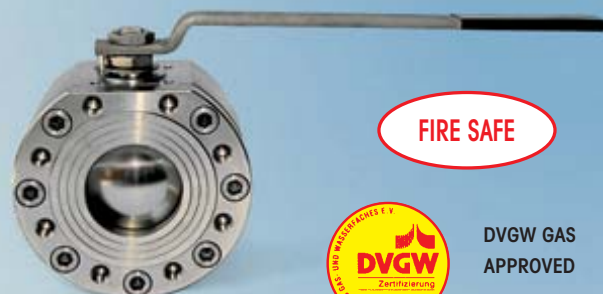
For accessories see relevant catalogue sheet

# SELENE AISI 316

WAFER SPLIT BODY BALL VALVE – FULL BORE

## MAIN STANDARD FEATURES

- CONSTRUCTION: AISI 316
- General prescriptions: BS 5351
- Certifications to FIRE SAFE to: BS 6755 - API 6 FA - API 607 up to DN100  
STÜV for TA Luft up to DN100
- DIAMETER: from DN 50 to DN 200
- PRESSURES: PN 16/40 from DN 50 to DN 100  
PN 16 DN 125, 150, 200
- TEMPERATURE LIMITS: from -20°C to +180°C
- CONNECTIONS with flanges: UNI 2223-2229 and DIN 2501 BL.1
- FLANGE DRILLING: METRIC
- BLOW-OUT PROOF stem with antistatic device
- WRAPPING SEATS
- ISO 5211 mounting plate for actuators
- OPERATION device: lever handle
- BOLTED flange for ball retaining
- With contained ball



## STANDARD PART NUMBERS

Art. 2901

PN16

Art. 2902

PN40

## SPECIAL EXECUTIONS

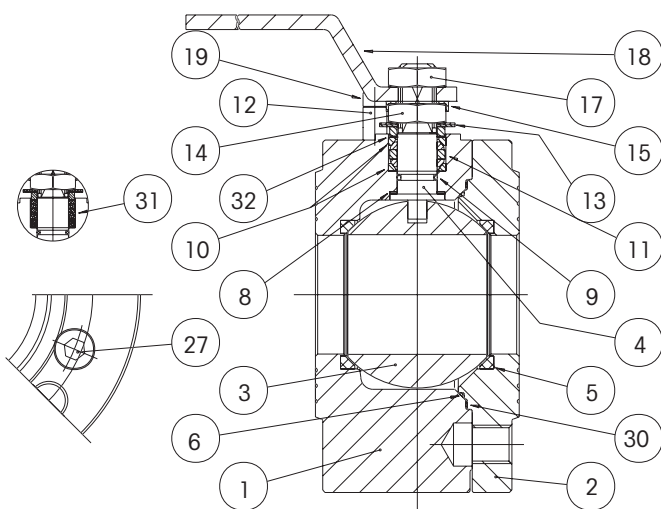
- 15% GLASS-FILLED PTFE with temperature limits -20°C + 195°C
- PTFE+CARBOGRAPHITE with temperature limits -20°C + 210°C
- Integral seats in PTFE up to DN100
- DN 125 to DN 200 PN 25/40
- Reduction gear with manual operation
- Stem extensions: 50 mm or 100 mm up to DN 100
- Yellow lever handle for gas
- Degreased version
- For further special requests please consult our technical/commercial service

## GENERAL APPLICATIONS

Use as an ON-OFF valve for: installations for gas, water, air distribution. Suitable for vacuum  $1 \cdot 10^{-3}$  STD CC, steam up to +195°C with PTFE+CARBOGRAPHITE and for industrial plants in general. Thanks to its reduced face to face dimensions and its intrinsic features it offers wide applications in new projects also as an alternative to the standard split body valve. For special utilizations ascertain the compatibility with process features and the corrosion resistance also by the relevant table.

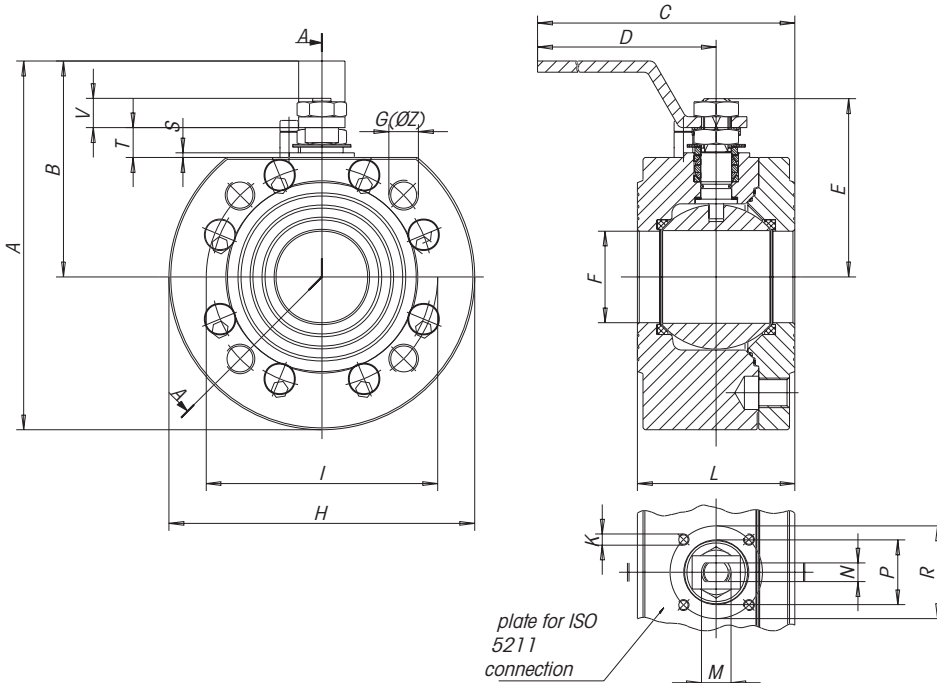
## LIST OF COMPONENTS AND MATERIALS

| REF. | PART                  | MATERIAL     | DIN MAT. | QTY |
|------|-----------------------|--------------|----------|-----|
| 1    | BODY                  | AISI 316     | 1.4401   | 1   |
| 2    | FLANGE                | AISI 316     | 1.4401   | 1   |
| 3    | BALL                  | AISI 316     | 1.4401   | 1   |
| 4    | STEM                  | AISI 316     | 1.4401   | 1   |
| 5    | SEAT                  | PTFE         |          | 2   |
| 6    | SIDE SEALING RING     | PTFE         |          | 1   |
| 8    | UPPER RING            | PTFE         |          | 3   |
| 9    | STEM O-RING           | VITON        |          | 1   |
| 10   | UPPER SEALING COUPLE  | PTFE         |          | 2   |
| 11   | PACKING GLAND         | AISI 304     | 1.4301   | 2   |
| 12   | OPERATION STOP        | AISI 304     | 1.4301   | 1   |
| 13   | BELLEVILLE WASHERS    | AISI 301     | 1.4310   | 2   |
| 14   | STEM RETAINING NUT    | AISI 304     | 1.4301   | 1   |
| 15   | FIXING NUT PLATE      | AISI 304     | 1.4301   | 1   |
| 17   | LOCKING NUT           | AISI 304     | 1.4301   | 1   |
| 18   | LEVER HANDLE          | AISI 304     | 1.4301   | 1   |
| 19   | OPERATION STOP SCREW  | AISI 304     | 1.4301   | 1   |
| 27   | FLANGE LOCKING SCREW  | AISI 304     | 1.4301   | 1   |
| 30   | SIDE SEALING RING     | GRAFITO PURO |          | 1   |
| 31   | V SHAPED CHEVRON TYPE | PTFE+GRAFITO |          | 1   |
| 32   | UPPER RING            | PTFE         |          | 1   |



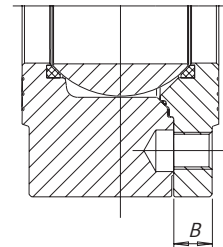
# SELENE AISI 316

WAFER SPLIT BODY BALL VALVE - FULL BORE



FLANGE DRILLINGS UNI2223-67

| SIZE  | A   | B  |
|-------|-----|----|
| DN65  | M16 | 20 |
| DN80  | M16 | 24 |
| DN100 | M16 | 20 |
| DN100 | M20 | 24 |
| DN125 | M16 | 22 |
| DN150 | M20 | 22 |
| DN200 | M20 | 24 |



| SIZE  | A   | B   | C   | D   | E     | F    | G   | H   | K   | I   | L    | M   | N  | P  | R   | S   | T    | V    | N. Holes | PN | ISO | Weight in gr. |
|-------|-----|-----|-----|-----|-------|------|-----|-----|-----|-----|------|-----|----|----|-----|-----|------|------|----------|----|-----|---------------|
| DN40  | 183 | 108 | 273 | 230 | 87    | 40   | M16 | 150 | M6  | 110 | 76   | M16 | 10 | -  | 50  | -   | 10   | 14   | 4        | 40 | F05 | 8750          |
| DN50  | 199 | 117 | 273 | 230 | 94.5  | 49.5 | M16 | 165 | M6  | 125 | 85   | M16 | 10 | 35 | 50  | 2.5 | 16   | 14   | 4        | 40 | F05 | 11000         |
| DN65  | 232 | 139 | 372 | 320 | 119.5 | 65   | M16 | 185 | M8  | 145 | 103  | M22 | 14 | 55 | 70  | 3   | 19   | 20.5 | 4        | 16 | F07 | 17500         |
| DN65  | 232 | 139 | 372 | 320 | 119.5 | 65   | M16 | 185 | M8  | 145 | 103  | M22 | 14 | 55 | 70  | 3   | 19   | 20.5 | 8        | 40 | F07 | 17300         |
| DN80  | 249 | 149 | 381 | 320 | 129.5 | 78   | M16 | 200 | M8  | 160 | 122  | M22 | 14 | 55 | 70  | 3   | 19   | 20.5 | 8        | 40 | F07 | 22800         |
| DN100 | 277 | 167 | 448 | 370 | 148.5 | 96   | M16 | 220 | M10 | 180 | 155  | M27 | 16 | 70 | 102 | 3   | 22.2 | 25.3 | 8        | 16 | F10 | 34500         |
| DN100 | 284 | 167 | 448 | 370 | 148.5 | 96   | M20 | 235 | M10 | 190 | 155  | M27 | 16 | 70 | 102 | 3   | 22.2 | 25.3 | 8        | 40 | F10 | 39000         |
| DN125 | 309 | 181 | 455 | 370 | 166.5 | 118  | M16 | 255 | M10 | 210 | 170* | M27 | 16 | 70 | 102 | 3   | 22.2 | 25.3 | 8        | 16 | F10 | 51220         |
| DN150 | 388 | 241 | 500 | 395 | 197.5 | 144  | M20 | 259 | M12 | 240 | 210* | M42 | 26 | -  | 125 | -   | 4    | 29   | 8        | 16 | F12 | 80960         |
| DN200 | 458 | 276 | 829 | 674 | 232.5 | 192  | M20 | 365 | M12 | 295 | 310* | M42 | 26 | -  | 125 | -   | 4    | 29   | 12       | 16 | F12 | 177060        |

\* from 2005      DN125 : L 185      DN150 : L 235      DN200 : L 315

### BREAKAWAY TORQUES in Nm

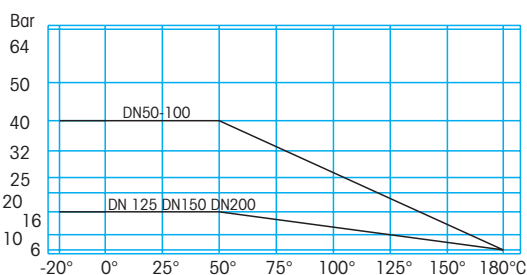
| DN size | 50   | 65   | 80   | 100 | 125 | 150 | 200 |
|---------|------|------|------|-----|-----|-----|-----|
| 0       | 35   | 55   | 75   | 150 | 240 | 310 | 600 |
| 16      | 39   | 59   | 84.5 | 168 | 300 | 400 | 800 |
| 25      | 41.5 | 62.5 | 92   | 180 |     |     |     |
| 40      | 44   | 67   | 99   | 195 |     |     |     |

Nm

The values in Nm may vary as a function of the seals material, temperature and type of medium. For a firm operation of the various types of actuators, in the different working conditions it is necessary to consider a safety factor of 1.5. During operation, with frequent open and close cycles, the operating torque can decrease considerably in comparison with the initial breakaway torque.

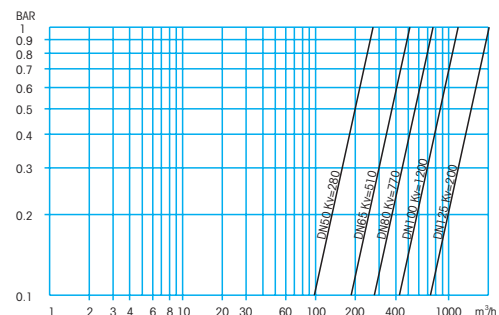
### PRESSURE/TEMPERATURE DIAGRAM

At each pressure level corresponds the admissible temperature level.



### LOSS OF HEAD DIAGRAM/FLOW RATE

The Kv value is the flow rate causing a pressure drop of 1 bar



# SELENE AISI 316

WAFER SPLIT BODY BALL VALVE - FULL BORE WITH **DOUBLE ACTING** PNEUMATIC ACTUATOR

## ACTUATOR FEATURES

- Rotation angle: 90°
- Standard version for temperature between -20°C and + 90°C
- Supply maximum pressure: 10 bar (8bar for DNA045)
- Nominal pressure: 5,62 bar
- Supply medium: dry filtered compressed air, not necessarily lubricated
- Lubrication: in such a case use a non-detergent or NBR compatible oil

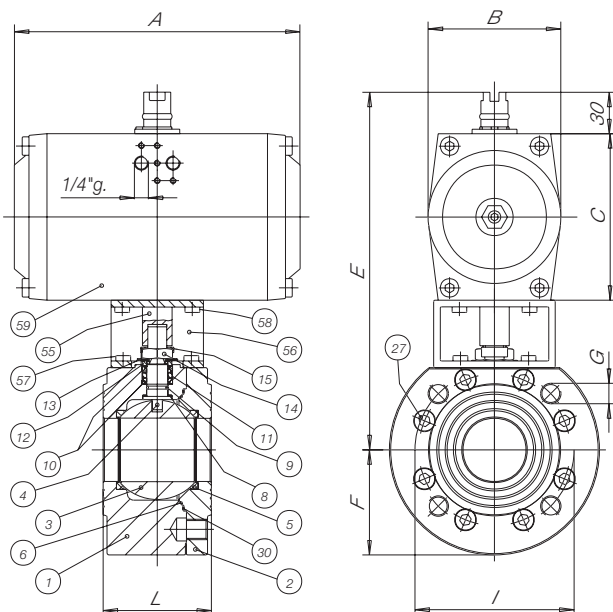
## STANDARD VALVE FEATURES

- General prescriptions: BS 5351, Fire safe to: BS 6755-API 6 FA- API 607
- Working temperature: from -20°C to +180°C
- Maximum working pressure with actuator: **PN 16** (PN 25 and 40 on request)
- CONNECTIONS with flanges: UNI 2223-2229 AND DIN 2501 BL.1
- FLANGE DRILLING: METRIC
- BLOW-OUT PROOF stem with antistatic device
- For general applications and special versions see technical table of manual valve
- In the below table the part number and the valve code refer to the standard valve **PN 16** and PN 40 where applicable



| SIZE  | PART NUMBER | weight in gr. | A   | B   | C   | E     | F     | G   | I   | L    | PN | ACTUATOR code | VALVE code | MOUNTING KIT code |
|-------|-------------|---------------|-----|-----|-----|-------|-------|-----|-----|------|----|---------------|------------|-------------------|
| DN50  | D91AA60900  | 13700         | 182 | 91  | 108 | 260.5 | 82.5  | M16 | 125 | 85   | 40 | DGA083AX00    | V901X609   | K1GA0008          |
| DN65  | D91AA61000  | 21215         | 203 | 100 | 117 | 294   | 92.5  | M16 | 145 | 103  | 16 | DGA092AX00    | V901X610   | K1GA0010          |
| DN65  | D92AA61000  | 21015         | 203 | 100 | 117 | 294   | 92.5  | M16 | 145 | 103  | 40 | DGA092AX00    | V902X610   | K1GA0010          |
| DN80  | D91AA61100  | 28085         | 222 | 120 | 140 | 327   | 100   | M16 | 160 | 122  | 40 | DNA110AX00    | V901X611   | K1GA0011          |
| DN100 | D91AA61200  | 43800         | 300 | 137 | 160 | 382   | 110   | M16 | 180 | 155  | 16 | DNA127AX00    | V901X612   | K1GA0012          |
| DN100 | D92AA61200  | 48300         | 300 | 137 | 160 | 382   | 117.5 | M20 | 190 | 155  | 40 | DNA127AX00    | V902X612   | K1GA0012          |
| DN125 | D91AA61300  | 77000         | 380 | 172 | 198 | 430   | 128   | M16 | 210 | 170* | 16 | DNA160AX00    | V901X613   | K1GA0013          |
| DN150 | D91AA61400  | 114000        | 450 | 224 | 255 | 542   | 148   | M20 | 240 | 210* | 16 | DNA160AX00    | V901X614   | K1GA0014          |
| DN200 | D91AA61500  | 224000        | 450 | 224 | 255 | 564   | 183   | M20 | 295 | 310* | 16 | DNA210AX00    | V901X615   | K1GA0015          |

\* from 2005    DN125 : L 185    DN150 : L 235    DN200 : L 315



## LIST OF VALVE COMPONENTS AND MATERIALS

| REF. | PART                   | QTY | MATERIAL      |
|------|------------------------|-----|---------------|
| 1    | BODY                   | 1   | AISI 316/CF8M |
| 2    | FLANGE                 | 1   | AISI 316      |
| 3    | BALL                   | 1   | AISI 316      |
| 4    | STEM                   | 1   | AISI 316      |
| 5    | SEAT                   | 2   | PTFE          |
| 6    | SIDE SEALING RING      | 1   | PTFE          |
| 8    | UPPER RING             | 3   | PTFE          |
| 9    | STEM O-RING            | 1   | VITON         |
| 10   | UPPER SEALING COUPLE   | 1   | PTFE          |
| 11   | PACKING GLAND          | 1   | AISI 304      |
| 12   | WASHER                 | 1   | AISI 304      |
| 13   | BELLEVILLE WASHERS     | 2   | AISI 301      |
| 14   | STEM RETAINING NUT     | 1   | AISI 304      |
| 15   | FIXING NUT PLATE       | 1   | AISI 304      |
| 27   | FLANGE LOCKING SCREW   | 8   | AISI 304      |
| 30   | SIDE SEALING RING      | 1   | GRAPHITE      |
| 55   | ACTUATOR SHAFT         | 1   | C.S.          |
| 56   | BRACKET                | 1   | C.S.          |
| 57   | BRACKET/VALVE SCREW    | 4   | 8.8           |
| 58   | BRACKET/ACTUATOR SCREW | 4   | 8.8           |
| 59   | ACTUATOR               | 1   |               |

For accessories see relevant catalogue sheet

# SELENE AISI 316

WAFER SPLIT BODY BALL VALVE - FULL BORE WITH **SPRING RETURN PNEUMATIC ACTUATOR**

## ACTUATOR FEATURES

- Rotation angle: 90°
- Standard version for temperature between -20°C and +90°C
- Supply maximum pressure: 10 bar
- Nominal pressure: 5,62 bar
- Supply medium: dry filtered compressed air, not necessarily lubricated
- Lubrication: in such a case use a non-detergent or NBR compatible oil
- STANDARD: **SPRING CLOSES/AIR OPENS**, clockwise automatic closing

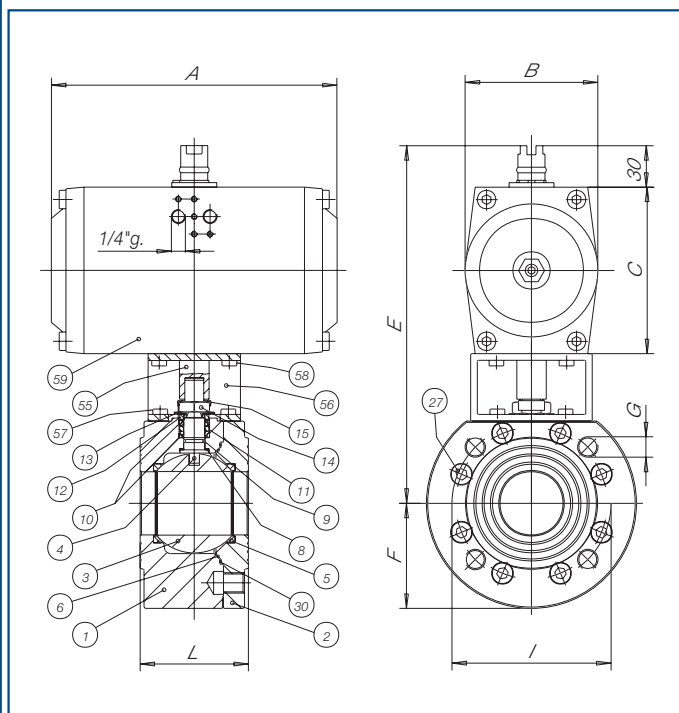
## STANDARD VALVE FEATURES

- General prescriptions: BS 5351, Fire safe BS 6755-API 6 FA- API 607
- Working temperature: from -20°C to +180°C
- Maximum working pressure with actuator: **PN 16** (PN 25 and 40 on request)
- CONNECTIONS with flanges: UNI 2223-2229 AND DIN 2501 BL.1
- FLANGE DRILLING: METRIC
- BLOW-OUT PROOF stem with antistatic device
- For general applications and special versions see technical table of manual valve
- In the below table the part number and the valve code refer to the standard valve **PN 16** and PN 40 where applicable



| SIZE  | PART NUMBER | weight in gr. | A   | B   | C   | E     | F     | G   | I   | L    | PN | ACTUATOR code | VALVE code | MOUNTING KIT code |
|-------|-------------|---------------|-----|-----|-----|-------|-------|-----|-----|------|----|---------------|------------|-------------------|
| DN50  | S91AA60900  | 16720         | 222 | 120 | 140 | 292,5 | 82.5  | M16 | 125 | 85   | 40 | SNA1104X00    | V901X609   | K1GA0108          |
| DN65  | S91AA61000  | 27620         | 300 | 137 | 160 | 337   | 92.5  | M16 | 145 | 103  | 16 | SNA1274X00    | V901X610   | K1GA0110          |
| DN65  | S92AA61000  | 27420         | 300 | 137 | 160 | 337   | 92.5  | M16 | 145 | 103  | 40 | SNA1274X00    | V902X610   | K1GA0110          |
| DN80  | S91AA61100  | 41690         | 380 | 172 | 198 | 395   | 100   | M16 | 160 | 122  | 40 | SNA1604X00    | V901X611   | K1GA0111          |
| DN100 | S91AA61200  | 54270         | 380 | 172 | 198 | 430   | 110   | M16 | 180 | 155  | 16 | SNA1605X00    | V901X612   | K1GA0112          |
| DN100 | S92AA61200  | 58770         | 380 | 172 | 198 | 430   | 117.5 | M20 | 190 | 155  | 40 | SNA1605X00    | V902X612   | K1GA0112          |
| DN125 | S91AA61300  | 93000         | 450 | 224 | 255 | 492   | 128   | M16 | 210 | 170* | 16 | SNA2104X00    | V901X613   | K1GA0113          |
| DN150 | S91AA61400  | 171000        | 683 | 272 | 302 | 594   | 148   | M20 | 240 | 210* | 16 | SNA2544X00    | V901X614   | K1GA0114          |
| DN200 | S91AA61500  | 261000        | 603 | 272 | 302 | 634   | 183   | M20 | 295 | 310* | 16 | SNA2554X00    | V901X615   | K1GA0115          |

\* from 2005    DN125 : L 185    DN150 : L 235    DN200 : L 315



## LIST OF VALVE COMPONENTS AND MATERIALS

| REF. | PART                   | QTY | MATERIAL      |
|------|------------------------|-----|---------------|
| 1    | BODY                   | 1   | AISI 316/CF8M |
| 2    | FLANGE                 | 1   | AISI 316      |
| 3    | BALL                   | 1   | AISI 316      |
| 4    | STEM                   | 1   | AISI 316      |
| 5    | SEAT                   | 2   | PTFE          |
| 6    | SIDE SEALING RING      | 1   | PTFE          |
| 8    | UPPER RING             | 3   | PTFE          |
| 9    | STEM O-RING            | 1   | VITON         |
| 10   | UPPER SEALING COUPLE   | 1   | PTFE          |
| 11   | PACKING GLAND          | 1   | AISI 304      |
| 12   | WASHER                 | 1   | AISI 304      |
| 13   | BELLEVILLE WASHERS     | 2   | AISI 301      |
| 14   | STEM RETAINING NUT     | 1   | AISI 304      |
| 15   | FIXING NUT PLATE       | 1   | AISI 304      |
| 27   | FLANGE LOCKING SCREW   | 8   | AISI 304      |
| 30   | SIDE SEALING RING      | 1   | GRAPHITE      |
| 55   | ACTUATOR SHAFT         | 1   | C.S           |
| 56   | BRACKET                | 1   | C.S.          |
| 57   | BRACKET/VALVE SCREW    | 4   | 8.8           |
| 58   | BRACKET/ACTUATOR SCREW | 4   | 8.8           |
| 59   | ACTUATOR               | 1   |               |

For accessories see relevant catalogue sheet