

### I Application

Ball valves A640, whether manually or automatically operated, are used mainly with viscous fluids containing solid particles, and, generally, in applications requiring an unobstructed flow. Suitable for the food-processing, beverage, wine-making, oil-making, cosmetic and chemical industries.

The ball valve can be operated automatically with an actuator or manually with a handle. The handle blocks the valve in the "open" or "closed" position. The actuator transforms the axial movement of the piston into a 90° rotary movement which it transmits to the ball.

### I Design and features

Compact and robust design.

Easily interchangeable manual handles and pneumatic or electrical actuators.

Low pressure losses.

Body halves interchangeable with any connection type.

### I Technical specifications

Operating limits:

|                               |                        |                           |
|-------------------------------|------------------------|---------------------------|
| Working temperature (EPDM)    | -10 °C to +120°C       | 14 °F to 248 °F           |
| Temperature SIP, max. 30 min. | +140 °C                | 284 °F                    |
| Minimum working pressure      | Vacuum                 | Vacuum                    |
| Maximum working pressure      | 10 bar (DN 25 - DN 65) | 145 PSI (OD 1" - OD 2 ½") |
|                               | 8 bar (DN 80 - 100)    | 116 (OD 3" - OD 4")       |

Materials:

|                     |                    |
|---------------------|--------------------|
| Ball                | 1.4404 (AISI 316L) |
| Body halves         | 1.4404 (AISI 316L) |
| Other St. St. parts | 1.4301 (AISI 304)  |
| Ball guide          | PTFE               |
| Gasket              | EPDM, NBR or FPM   |

Surface finish:

|          |                     |
|----------|---------------------|
| Internal | $Ra \leq 0,8 \mu m$ |
| External | Machined            |

Available sizes:

|  |                |
|--|----------------|
| DIN EN 10357 series A<br>(previously DIN 11850 series 2) | DN 25 - DN 100 |
|--|----------------|

|   |               |
|---|---------------|
| ASTM A269/270<br>(corresponds to OD pipe) | OD 1" - OD 4" |
|---|---------------|

|             |                  |
|-------------|------------------|
| Connections | Weld, male, nuts |
|-------------|------------------|



**I Technical specifications**

| DN                  | 25 | 40 | 50 | 65 | 80 | 100 |
|---------------------|----|----|----|----|----|-----|
| Dry torque*<br>[Nm] | 10 | 12 | 18 | 20 | 25 | 35  |

| OD                  | 1" | 1 ½" | 2" | 2 ½" | 3" | 4" |
|---------------------|----|------|----|------|----|----|
| Dry torque*<br>[Nm] | 10 | 12   | 18 | 20   | 25 | 35 |

\*For rotating the valve ball in a dry seal ring

**I Technical specifications: handles and actuators**

Handles:

Two positoin handle            1.4301 (AISI 304) + plastic (PF31)

Actuator:

Housing                            1.4307 (AISI 304L)

Support                            1.4301 (AISI 304)

Air pressure                      6-8 bar

Air connection                 G 1/8 (Ø6 pipe)

Air consumption

| Actuator  | Single-acting | Double-acting |
|-----------|---------------|---------------|
| A940 - T1 | 1,3           | 3,4           |
| A940 - T2 | 2,1           | 4,9           |
| A940 - T3 | 6,3           | 15,5          |

Compressed air consumption at  $P_{rel}=6$  bar (litres N/cycle)

Standard assembly

| Valve | A940 - T1 | A940 - T2    | A940 - T3   |
|-------|-----------|--------------|-------------|
| A640  | DN 25     | DN 40 a 65   | DN 80 a 100 |
|       | OD 1"     | OD 1½" a 2½" | OD 3" a 4"  |

**I Options**

Valve in AISI 304.

Different handle types.

Single- or double-acting pneumatic actuator or electrical actuator.

Electropneumatic positioner.

Inductive position sensors

C-TOP S control head.

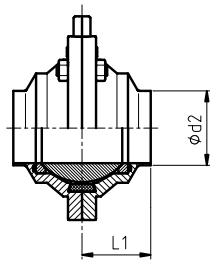
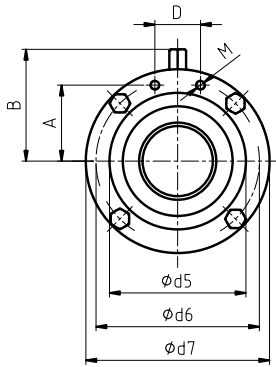
Cleaning and drainage ports.

Third hole.

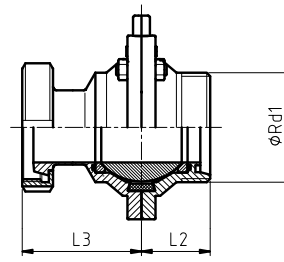
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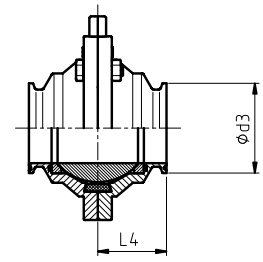
I Dimensions



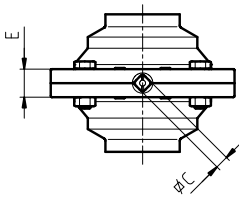
DIN 10357 Series A



DIN 11851



DIN 32676



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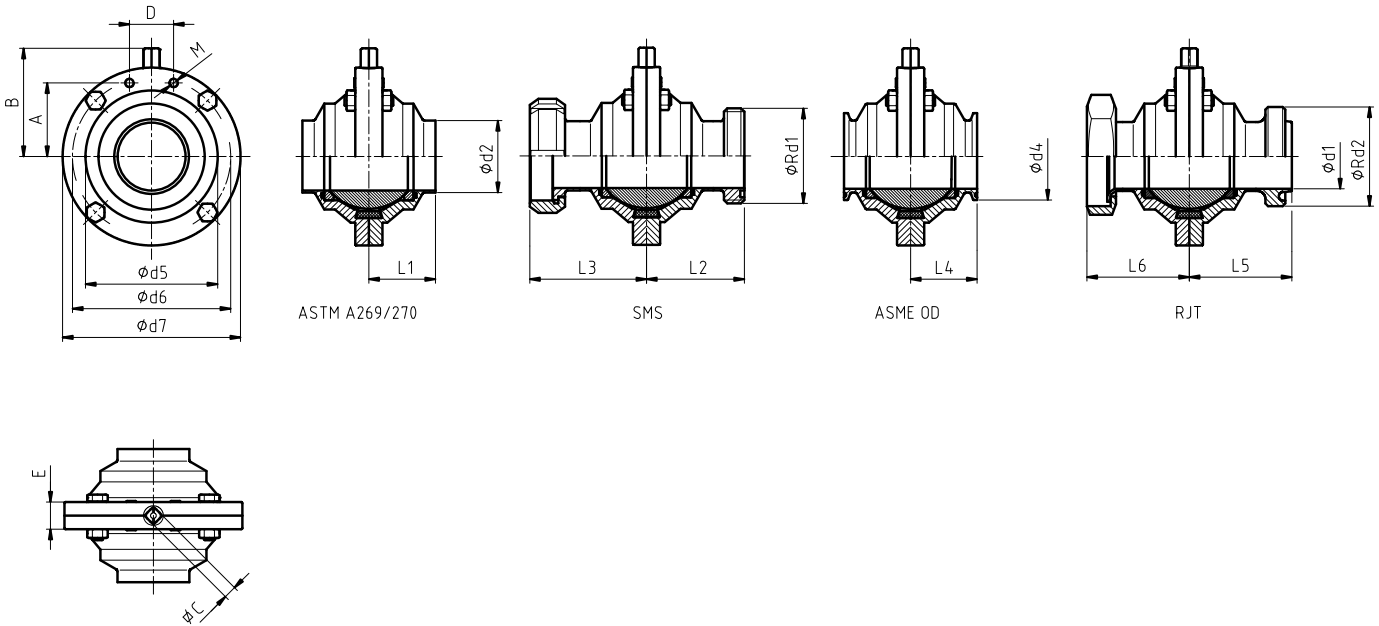
| DN  | Valve |       |     |      |       |     |      |    |    | Connection |     |               |      |    |    |     | Weight (kg)* |      |
|-----|-------|-------|-----|------|-------|-----|------|----|----|------------|-----|---------------|------|----|----|-----|--------------|------|
|     | Ød5   | Ød6   | Ød7 | A    | B     | C   | D    | E  | M  | Ød1        | Ød2 | ØRd1          | Ød3  | L1 | L2 | L3  |              | L4   |
| 25  | 61    | 79,5  | 94  | 35,2 | 60,7  | 9,4 | 32,5 | 20 | M5 | 26         | 29  | Rd 52 x 1/6"  | 50,5 | 36 | 36 | 66  | 36           | 1,3  |
| 40  | 80    | 99    | 114 | 45,5 | 71    | 9,4 | 32,5 | 20 | M5 | 38         | 41  | Rd 65 x 1/6"  | 50,5 | 42 | 42 | 76  | 42           | 2,1  |
| 50  | 97,5  | 116,5 | 131 | 54,2 | 79,7  | 9,4 | 32,5 | 20 | M5 | 50         | 53  | Rd 78 x 1/6"  | 64   | 49 | 49 | 85  | 49           | 3,1  |
| 65  | 124,5 | 143,5 | 158 | 67,7 | 93,2  | 9,4 | 32,5 | 20 | M5 | 66         | 70  | Rd 95 x 1/6"  | 91   | 60 | 60 | 101 | 60           | 5,4  |
| 80  | 147   | 166   | 181 | 78,7 | 104,2 | 12  | 50   | 30 | M6 | 81         | 85  | Rd 110 x 1/4" | 106  | 70 | 70 | 120 | 70           | 8,5  |
| 100 | 175   | 194   | 209 | 92,8 | 118,3 | 12  | 50   | 30 | M6 | 100        | 104 | Rd 130 x 1/4" | 119  | 82 | 82 | 137 | 82           | 13,3 |

\*Weld connection



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I Dimensions



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| OD  | Valve |       |     |      |       |     |      |    |    | Connection |       |      |                  |    |    |      | Weight (kg)* |      |
|-----|-------|-------|-----|------|-------|-----|------|----|----|------------|-------|------|------------------|----|----|------|--------------|------|
|     | Ød5   | Ød6   | Ød7 | A    | B     | C   | D    | E  | M  | Ød1        | Ød2   | Ød4  | ØRd2             | L1 | L4 | L5   |              | L6   |
| 1"  | 61    | 79,5  | 94  | 35,2 | 60,7  | 9,4 | 32,5 | 20 | M5 | 22,1       | 25,4  | 50,5 | Rd 45,72 x 1/8"  | 36 | 36 | 62,5 | 61,5         | 1,4  |
| 1½" | 80    | 99    | 114 | 45,5 | 71    | 9,4 | 32,5 | 20 | M5 | 34,8       | 38,1  | 50,5 | Rd 58,42 x 1/8"  | 42 | 42 | 68,5 | 69           | 2,2  |
| 2"  | 97,5  | 116,5 | 131 | 54,2 | 79,7  | 9,4 | 32,5 | 20 | M5 | 47,5       | 50,8  | 64   | Rd 72,72 x 1/6"  | 49 | 49 | 75,5 | 75,4         | 3,3  |
| 2½" | 124,5 | 143,5 | 158 | 67,7 | 93,2  | 9,1 | 32,5 | 20 | M5 | 60,2       | 63,5  | 77,5 | Rd 85,42 x 1/6"  | 60 | 60 | 86,5 | 88           | 5,8  |
| 3"  | 147   | 166   | 181 | 78,7 | 104,2 | 12  | 50   | 30 | M6 | 72,9       | 76,2  | 90,9 | Rd 98,12 x 1/6"  | 70 | 70 | 96,5 | 98,5         | 9,4  |
| 4"  | 175   | 194   | 209 | 92,8 | 118,3 | 12  | 50   | 30 | M6 | 97,4       | 101,6 | 119  | Rd 123,52 x 1/6" | 82 | 82 | 109  | 112          | 13,9 |

\*Weld connection

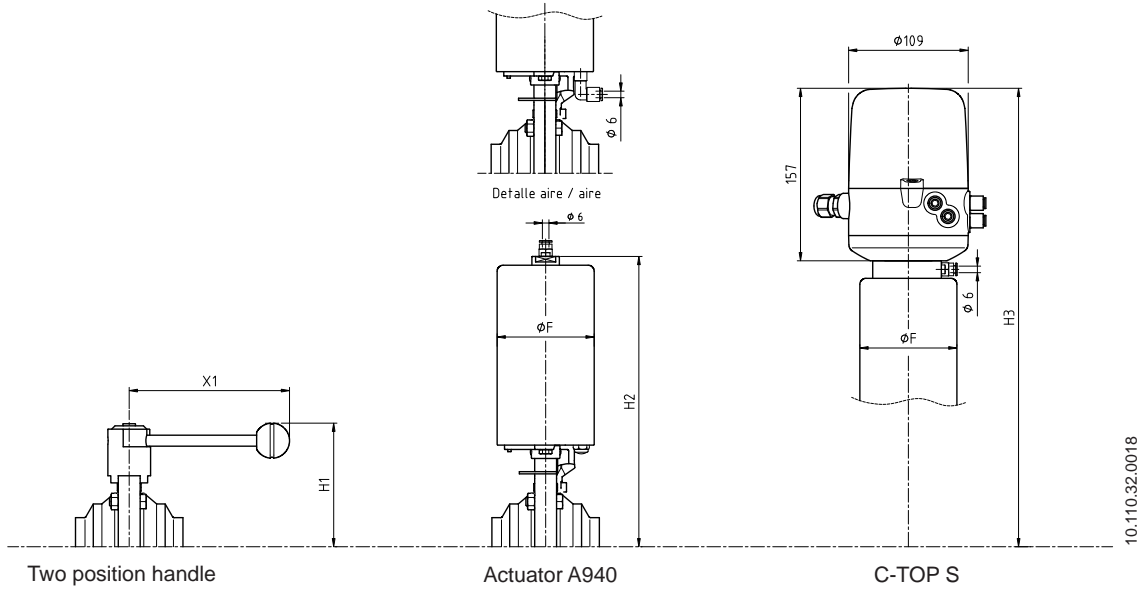
| SMS   | Connection |               |     |      | Weight (kg)* |
|-------|------------|---------------|-----|------|--------------|
|       | Ød3        | ØRd1          | L2  | L3   |              |
| 25    | 22,5       | Rd 40 x 1/6"  | 55  | 63,5 | 1,5          |
| 38    | 35,5       | Rd 60 x 1/6"  | 65  | 79   | 2,6          |
| 51    | 48,5       | Rd 70 x 1/6"  | 72  | 86   | 3,7          |
| 63,5  | 60,5       | Rd 85 x 1/6"  | 87  | 105  | 6,5          |
| 76    | 72,9       | Rd 98 x 1/6"  | 97  | 115  | 10,3         |
| 101,6 | 97,6       | Rd 132 x 1/6" | 117 | 144  | 16,5         |
| 104   | 100        | Rd 125 x 1/4" | 112 | 132  | 14,4         |

\*Male connection



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I Dimensions



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| Handles and actuators |     |     |              |     |                |     |               |     |
|-----------------------|-----|-----|--------------|-----|----------------|-----|---------------|-----|
| DN / OD               | H1  | X1  | T1 (ØF = 76) |     | T2 (ØF = 88,5) |     | T3 (ØF = 135) |     |
|                       |     |     | H2           | H3  | H2             | H3  | H2            | H3  |
| 25                    | 94  | 146 | 224          | 388 | -              | -   | -             | -   |
| 40                    | 104 | 146 | -            | -   | 256            | 420 | -             | -   |
| 50                    | 112 | 146 | -            | -   | 265            | 429 | -             | -   |
| 65                    | 126 | 146 | -            | -   | 278            | 443 | -             | -   |
| 80                    | 142 | 175 | -            | -   | -              | -   | 345           | 510 |
| 100                   | 156 | 175 | -            | -   | -              | -   | 359           | 534 |

| Handles and actuators |     |     |              |     |                |     |               |     |
|-----------------------|-----|-----|--------------|-----|----------------|-----|---------------|-----|
| OD                    | H1  | X1  | T1 (ØF = 76) |     | T2 (ØF = 88,5) |     | T3 (ØF = 135) |     |
|                       |     |     | H2           | H3  | H2             | H3  | H2            | H3  |
| 1"                    | 94  | 146 | 224          | 388 | -              | -   | -             | -   |
| 1 ½"                  | 104 | 146 | -            | -   | 256            | 420 | -             | -   |
| 2"                    | 112 | 146 | -            | -   | 265            | 429 | -             | -   |
| 2 ½"                  | 126 | 146 | -            | -   | 278            | 443 | -             | -   |
| 3"                    | 142 | 175 | -            | -   | -              | -   | 345           | 510 |
| 4"                    | 156 | 175 | -            | -   | -              | -   | 359           | 534 |

