



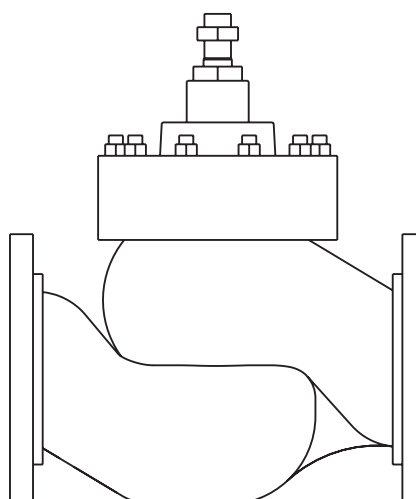
TI-S24-73  
CTLS Issue 5

## Spira-trol™ Two-port Control Valves K Series DN125 to DN300 and 6" to 12"

### Description

Spira-trol™ is a range of two-port single seat globe valves with cage retained seats conforming to EN and ASME standard. These valves are available in three body materials in sizes ranging from DN125 to DN300 (6" to 12"). When used in conjunction with a pneumatic or electric linear actuator they provide characterized modulating or on/off control.

**Important note:** Throughout this document, reference has been made to the standard KE or KEA control valve. With the exception of trim type, the KE, KEA, KF, KFA, KL and KLA control valves are identical.



**KE, KF and KL**  
DN125 to DN300

**KEA, KFA and KLA**  
6" to 12"

### Sizes and pipe connections

| Valve Series | Material        | PN16          | PN25 | PN40 | JIS/KS10 | JIS/KS20 | ASME150   | ASME300   |
|--------------|-----------------|---------------|------|------|----------|----------|-----------|-----------|
| KE           | SG Iron         | DN125 - DN200 |      |      | DN125    |          |           |           |
|              | Carbon Steel    | DN125 - DN300 |      |      |          |          |           |           |
|              | Stainless Steel | DN125 - DN200 |      |      |          |          |           |           |
| KEA          | Carbon Steel    |               |      |      |          |          | 6" - 12"  | 6" - 12"  |
|              | Stainless Steel |               |      |      |          |          | 6" and 8" | 6" and 8" |

ASME 150 and ASME 300 are available with Flat face for use with ASME 125 and ASME 250 Flange.

### Standards

Designed in accordance with EN 60534. This product fully complies with the requirements of the European Pressure Equipment Directive 2014/68/EU and carries the  mark when so required.

### Certification

This product is available with certification to EN 10204 3.1. Optional seat leak test is available on request.

**Note:** All certification/inspection requirements must be stated at the time of order placement.

### Spira-trol™ valve characteristic - options:

**KE and KEA Equal percentage (E)** - Suitable for most modulating process control applications providing good control at all flowrates.

**KF and KFA Fast opening (F)** - For on/off applications only.

**KL and KLA Linear (L)** - Primarily for liquid flow control where the differential pressures across the valve is constant.

### Spira-trol™ valve options:

|                     |                                                                 |                                                                              |
|---------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------|
| <b>Stem sealing</b> | <b>PTFE chevron seals</b>                                       | Standard                                                                     |
|                     | <b>Graphite packing</b>                                         | High temperature applications                                                |
| <b>Seating</b>      | <b>Metal-to-metal</b>                                           | 431 stainless steel - standard                                               |
|                     | <b>Soft seating</b><br>(not available in DN300)                 | Up to 220 °C (428 °F) - PEEK (P) for Class VI shut-off                       |
|                     | <b>Hard facing</b>                                              | 316L stainless steel with Stellite™ 6 facing - for more arduous applications |
| <b>Bonnet type</b>  | Standard bonnet                                                 |                                                                              |
|                     | Extended bonnet for large pipe lagging or hot/cold applications |                                                                              |
| <b>Trim</b>         | Standard trim                                                   |                                                                              |
|                     | Low noise and anti-cavitation trim (see TI-S24-59)              |                                                                              |

### Spira-trol™ valves are compatible with the following actuators and positioners:

|                    |                                                     |
|--------------------|-----------------------------------------------------|
| <b>Electric</b>    | AEL7                                                |
| <b>Pneumatic</b>   | PN1000, PN2000, PN9000 and TN2000 series            |
| <b>Positioners</b> | PP6 (pneumatic)                                     |
|                    | EP6 (electropneumatic)                              |
|                    | SP7 and SP8 (microprocessor based electropneumatic) |

#### Please refer to respective data sheets.

For Special trims please refer to TI-S24-59

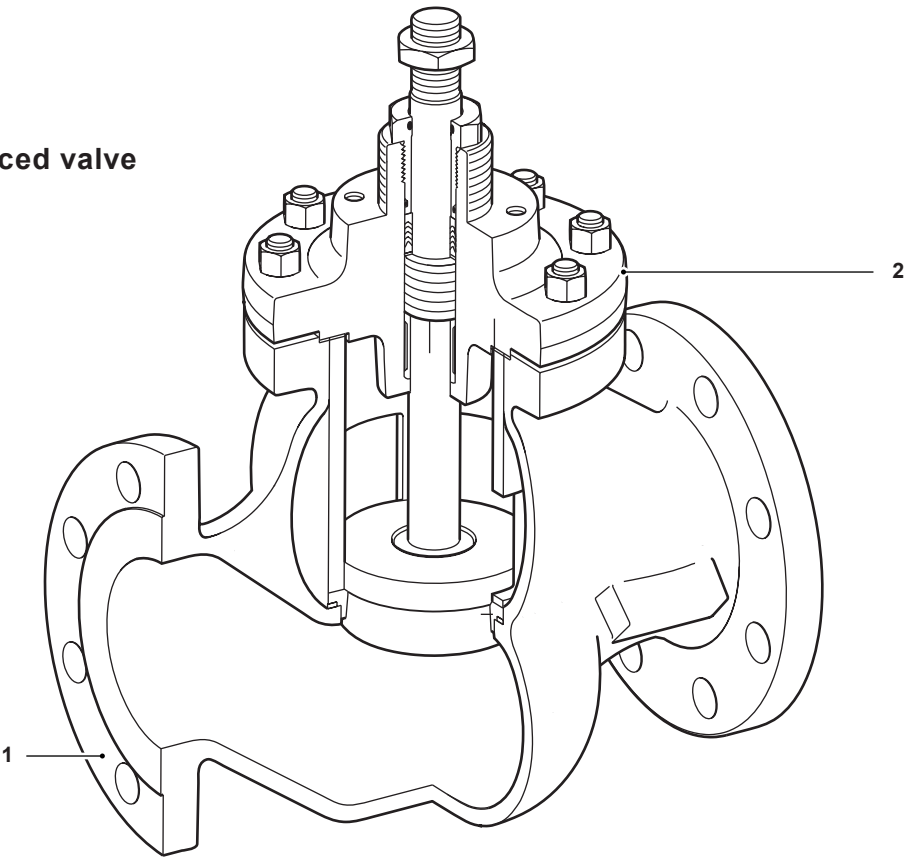
For DN15-100 version please refer to TI-S24-71 and TI-S24-72

For smart positioner please refer to TI-P706-01, TI-P706-04 and TI-P707-02

For pneumatic positioners please refer to TI-P704-01

For electro-pneumatic positioners please refer to TI-P703-01 and TI-P703-03

DN125 unbalanced valve

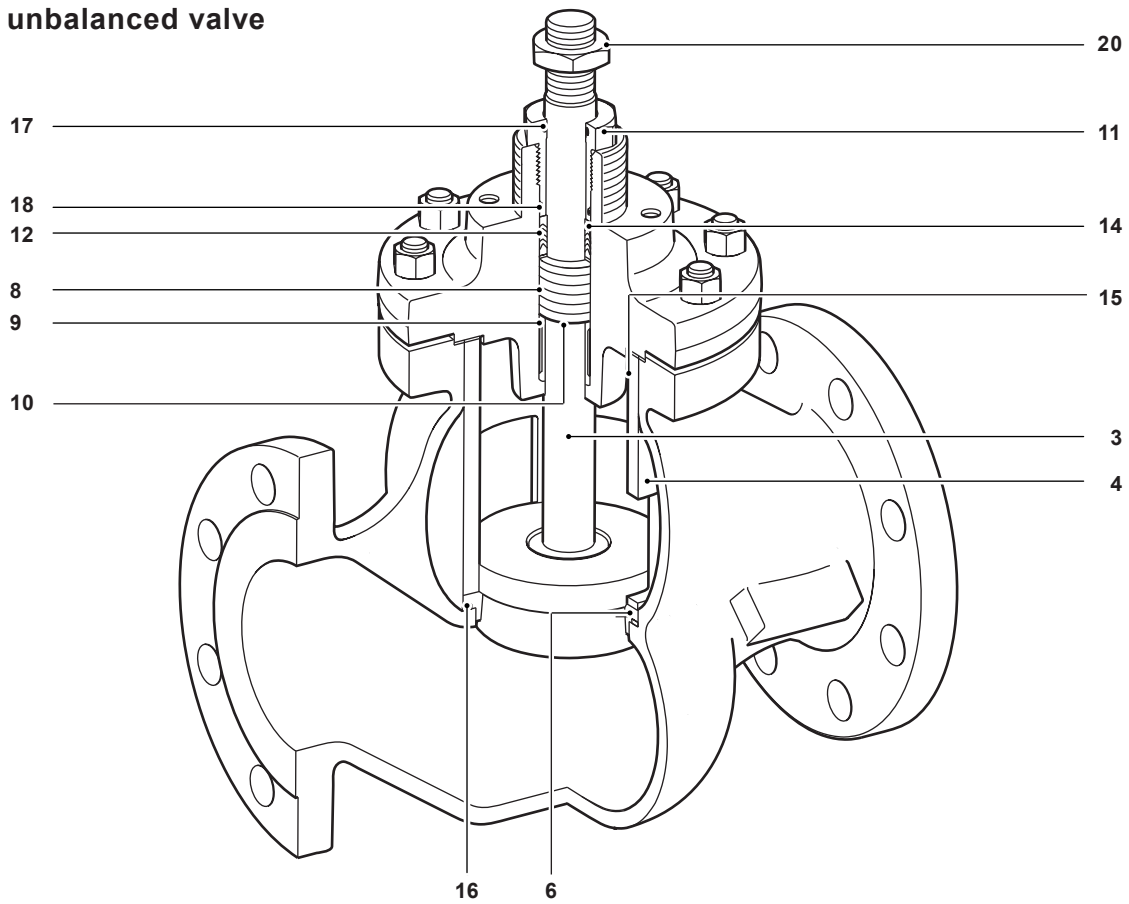


| Body material   | Type  | No. | Part   | Material        |                                  |
|-----------------|-------|-----|--------|-----------------|----------------------------------|
| Carbon steel    | KE43  | 1   | Body   | Cast steel      | BS EN 10213 GP 240GH+N (1.0619N) |
|                 |       | 2   | Bonnet | Cast steel      | BS EN 10213 GP 240GH+N (1.0619N) |
|                 | KEA43 | 1   | Body   | Cast steel      | ASTM A216 WCB                    |
|                 |       | 2   | Bonnet | Cast steel      | ASTM A216 WCB                    |
| Stainless steel | KE63  | 1   | Body   | Stainless steel | EN 10213 (1.4408)                |
|                 |       | 2   | Bonnet |                 |                                  |
|                 | KEA63 | 1   | Body   | Stainless steel | ASTM A351 CF8M                   |
|                 |       | 2   | Bonnet |                 |                                  |
| SG iron         | KE73  | 1   | Body   | SG iron         | EN-GJS-400-18-LT                 |
|                 |       | 2   | Bonnet |                 |                                  |

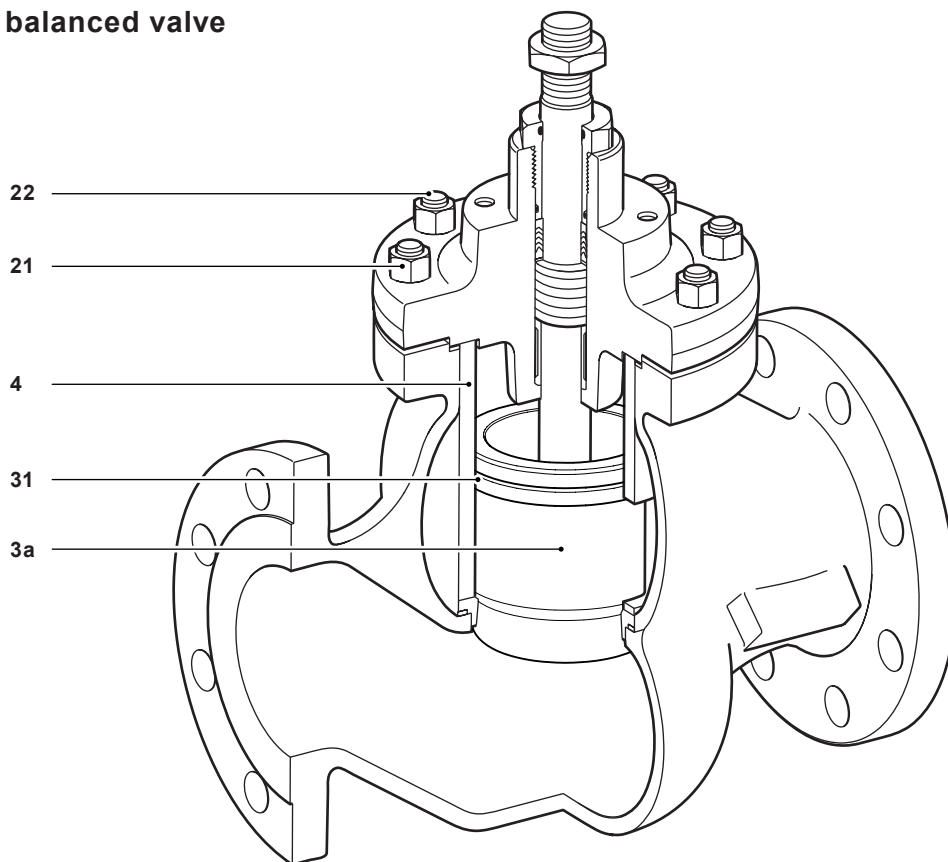
## Materials - DN125 to DN300 (6" to 12") (continued)

| Body material                   | No. | Part                              | Material                 |                                        |
|---------------------------------|-----|-----------------------------------|--------------------------|----------------------------------------|
| All versions                    | 3   | Plug and stem assembly            | All others               | Stainless steel AISI 431               |
|                                 |     |                                   | KE63                     | Stainless steel AISI 316L              |
|                                 |     |                                   | Seating version W        | Stellite™ 6                            |
|                                 | 4   | Cage                              | Stainless steel          |                                        |
|                                 | 6   | Valve seat ring                   | Seating version T        | Stainless steel AISI 431 S29           |
|                                 |     |                                   | Seating versions P       | PEEK                                   |
|                                 |     |                                   | All others               | Stainless steel Stellite™ 6            |
|                                 | 9   | Bearing                           | Stellite™                |                                        |
|                                 | 10  | Spacer (not used in DN125 valves) | Stainless steel          |                                        |
|                                 | 11  | Gland nut                         | Stainless steel          | AISI 416                               |
|                                 | 14  | Washer                            | Stainless steel          | AISI 316L                              |
|                                 | 15  | Bonnet gasket                     | Stainless steel/graphite |                                        |
|                                 | 16  | Seat gasket                       | Stainless steel/graphite |                                        |
|                                 | 20  | Stem nut                          | Stainless steel          | AISI 316                               |
|                                 | 21  | Standard bonnet nut               | KE43                     | Carbon steel BS EN ISO 898-1 Grade 8   |
|                                 |     |                                   | KE63                     | Stainless steel A2-70                  |
|                                 |     |                                   | KE73                     | Carbon steel BS EN ISO 898-1 Grade 8   |
|                                 |     |                                   | KEA43                    | Carbon steel ASTM A194 2H              |
|                                 |     |                                   | KEA63                    | Stainless steel ASTM A194 8M           |
|                                 |     | High temperature bonnet nut       | Stainless steel          | DIN ISO 3506 A2                        |
|                                 | 22  | Standard stud                     | KE43                     | Carbon steel BS EN ISO 898-1 Grade 8.8 |
|                                 |     |                                   | KE63                     | Stainless steel A2-70                  |
|                                 |     |                                   | KE73                     | Carbon steel BS EN ISO 898-1 Grade 8.8 |
|                                 |     |                                   | KEA43                    | Carbon steel ASTM A193 B7              |
|                                 |     |                                   | KEA63                    | Stainless steel ASTM A193 B8M2         |
|                                 |     | High temperature bonnet nut       | KE43<br>KE73             | Stainless steel DIN ISO 3506 A2-70     |
| PTFE gland versions             | 8   | Spring                            | Stainless steel          |                                        |
|                                 | 12  | Chevron packing set               | PTFE                     |                                        |
|                                 | 17  | Stem 'O' ring                     | Viton™                   |                                        |
|                                 | 18  | Bonnet 'O' ring                   | Viton™                   |                                        |
| High temperature gland versions | 26  | Gland packing                     | Graphite                 |                                        |
| Balanced versions               | 3a  | Plug and stem assembly            | Stainless steel          |                                        |
|                                 | 29  | Cage                              | Stainless steel          |                                        |
|                                 | 31  | Balanced seal                     | Graphite                 |                                        |

## DN125 unbalanced valve



## DN125 balanced valve



## Kv values

| Valve size    |                |              | DN125 | DN150 | DN200 | DN250 | DN300 |
|---------------|----------------|--------------|-------|-------|-------|-------|-------|
| Standard trim | Full port      | Equal %      | 245   | 370   | 580   | 700   | 1 000 |
|               |                | Linear       | 260   | 390   | 640   | 780   | 1 100 |
|               |                | Fast opening | 260   | 390   | 640   | 780   | 1 100 |
|               | Reduced trim 1 | Equal %      | 200   | 287   | 370   | 580   | 700   |
|               |                | Linear       | 200   | 287   | 550   | 640   | 780   |
|               | Reduced trim 2 | Equal %      | 100   | 132   | 232   | 370   | 580   |
|               |                | Linear       | 100   | 132   | 232   | 550   | 640   |
|               | Reduced trim 3 | Equal %      | 63    | 103   | 163   | 232   | 370   |
|               |                | Linear       | 63    | 103   | 163   | 232   | 550   |
|               | Reduced trim 4 | Equal %      |       |       |       | 163   | 232   |
|               |                | Linear       |       |       |       | 163   | 232   |
|               | Reduced trim 5 | Equal %      |       |       |       |       | 163   |
|               |                | Linear       |       |       |       |       | 163   |

**Note:** For low noise and anti-cavitation Kv please see TI-S24-59

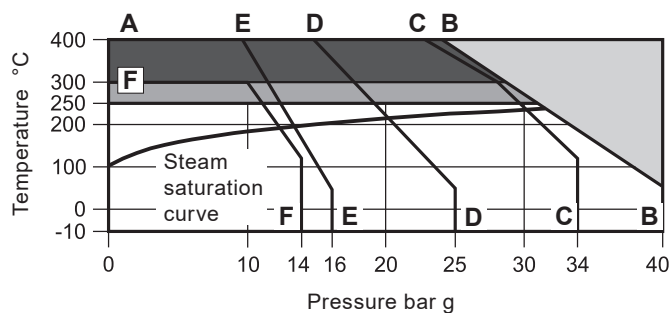
## Cv (US) values

$C_v (US) = C_v (UK) \times 1.2009$

| Valve size    |                |              | DN150 | DN200 | DN250 | DN300 |
|---------------|----------------|--------------|-------|-------|-------|-------|
| Standard trim | Full port      | Equal %      | 433   | 679   | 809   | 1 156 |
|               |                | Linear       | 456   | 749   | 902   | 1 272 |
|               |                | Fast opening | 456   | 749   | 902   | 1 272 |
|               | Reduced trim 1 | Equal %      | 336   | 433   | 670   | 809   |
|               |                | Linear       | 336   | 636   | 740   | 902   |
|               | Reduced trim 2 | Equal %      | 154   | 271   | 428   | 670   |
|               |                | Linear       | 154   | 271   | 636   | 740   |
|               | Reduced trim 3 | Equal %      | 120   | 191   | 268   | 428   |
|               |                | Linear       | 120   | 191   | 268   | 636   |
|               | Reduced trim 4 | Equal %      |       |       | 188   | 268   |
|               |                | Linear       |       |       | 188   | 268   |
|               | Reduced trim 5 | Equal %      |       |       |       | 188   |
|               |                | Linear       |       |       |       | 188   |

**Note:** For low noise and anti-cavitation Cv please see TI-S24-59

## Pressure/temperature limits - KE43 (Carbon steel)



The product **must not** be used in this region.

High temperature packing is required for use in this region.

High temperature bolting and packing is required for use in this region

**A - B** Flanged EN 1092 PN40.

**A - C** Flanged JIS/KS 20K.

**A - D** Flanged EN 1092 PN25.

**A - E** Flanged EN 1092 PN16.

**A - F** Flanged JIS/KS 10K.

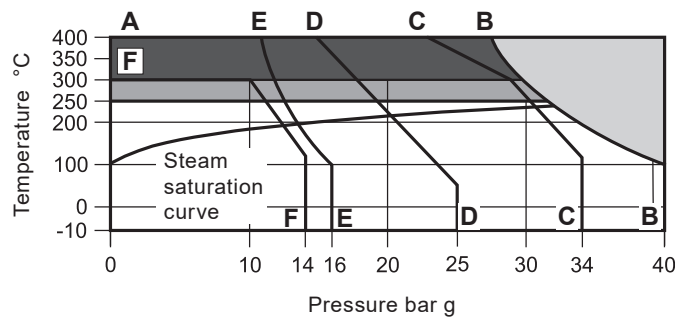
### Notes:

- Where the process fluid temperature is sub-zero and the ambient temperature is below +5 °C, the external moving parts of the valve and actuator must be heat traced to maintain normal operation.
- When selecting a valve with a bellows sealed bonnet, the pressure/temperature limits of the bellows must be read in conjunction with the valve pressure/temperature limits shown in table below.

|                                      |                                           |                  |
|--------------------------------------|-------------------------------------------|------------------|
| Body design conditions               |                                           | PN40             |
| Maximum design pressure              |                                           | 40 bar g @ 50 °C |
| Maximum differential pressure design | Full PEEK seat (P)                        | 19 bar           |
| Maximum design temperature           |                                           | 400 °C           |
| Minimum design temperature           |                                           | -10 °C           |
| Maximum operating temperature        | PEEK soft seat (P)                        | 220 °C           |
|                                      | Standard packing PTFE chevron             | 250 °C           |
|                                      | Extended bonnet (E) with PTFE chevron     |                  |
|                                      | High temperature packing (H)              | 400 °C           |
|                                      | Extended bonnet (E) with graphite packing |                  |

**Note:** We recommend that an extended bonnet (E) with graphite packing is used where valve operation is above 300 °C.

## Pressure/temperature limits - KE63 (Stainless steel)



- The product **must not** be used in this region.
- High temperature packing is required for use in this region.
- High temperature bolting and packing is required for use in this region

**A - B** Flanged EN 1092 PN40.

**A - C** Flanged JIS/KS 20K.

**A - D** Flanged EN 1092 PN25.

**A - E** Flanged EN 1092 PN16.

**A - F** Flanged JIS/KS 10K.

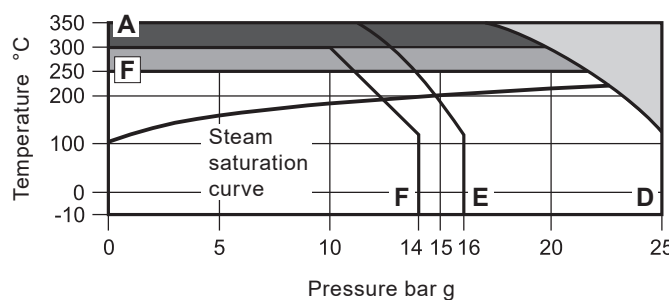
### Notes:

- Where the process fluid temperature is sub-zero and the ambient temperature is below +5 °C, the external moving parts of the valve and actuator must be heat traced to maintain normal operation.
- When selecting a valve with a bellows sealed bonnet, the pressure/temperature limits of the bellows must be read in conjunction with the valve pressure/temperature limits shown in table below.

|                                      |                                           |                  |
|--------------------------------------|-------------------------------------------|------------------|
| Body design conditions               |                                           | PN40             |
| Maximum design pressure              |                                           | 40 bar g @ 50 °C |
| Maximum differential pressure design | Full PEEK seat (P)                        | 19 bar           |
| Maximum design temperature           |                                           | 400 °C           |
| Minimum design temperature           |                                           | -10 °C           |
| Maximum operating temperature        | PEEK soft seat (P)                        | 220 °C           |
|                                      | Standard packing PTFE chevron             | 250 °C           |
|                                      | Extended bonnet (E) with PTFE chevron     |                  |
|                                      | High temperature packing (H)              | 400 °C           |
|                                      | Extended bonnet (E) with graphite packing |                  |

**Note:** We recommend that an extended bonnet (E) with graphite packing is used where valve operation is above 300 °C.

## Pressure/temperature limits - KE73 (SG iron)



- The product **must not** be used in this region.
  - High temperature packing is required for use in this region.
  - High temperature bolting and packing is required for use in this region
- A - D** Flanged EN 1092 PN40.
- A - E** Flanged EN 1092 PN16.
- A - F** Flanged JIS/KS 10.

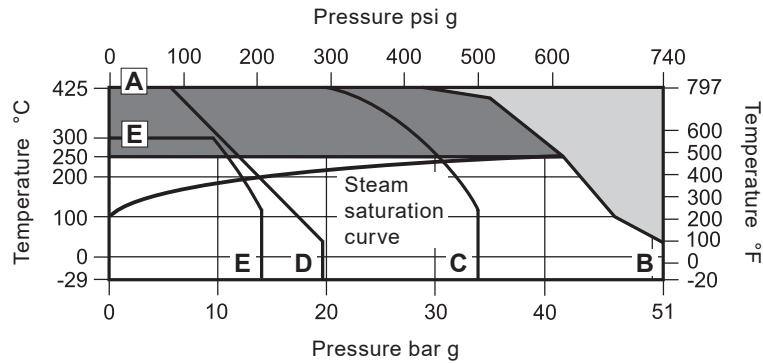
### Notes:

- Where the process fluid temperature is sub-zero and the ambient temperature is below +5 °C, the external moving parts of the valve and actuator must be heat traced to maintain normal operation.
- When selecting a valve with a bellows sealed bonnet, the pressure/temperature limits of the bellows must be read in conjunction with the valve pressure/temperature limits shown in table below.

|                                      |                                           |                   |
|--------------------------------------|-------------------------------------------|-------------------|
| Body design conditions               |                                           | PN25              |
| Maximum design pressure              |                                           | 25 bar g @ 120 °C |
| Maximum differential pressure design | Full PEEK seat (P)                        | 19 bar            |
| Maximum design temperature           |                                           | 350 °C            |
| Minimum design temperature           |                                           | -10 °C            |
| Maximum operating temperature        | PEEK soft seat (P)                        | 220 °C            |
|                                      | Standard packing PTFE chevron             | 250 °C            |
|                                      | Extended bonnet (E) with PTFE chevron     |                   |
|                                      | High temperature packing (H)              | 350 °C            |
|                                      | Extended bonnet (E) with graphite packing |                   |

**Note:** We recommend that an extended bonnet (E) with graphite packing is used where valve operation is above 300 °C.

## Pressure/temperature limits - KEA43 (Carbon steel)



- The product **must not** be used in this region.
- Graphite stem sealing is required for use in this region

**A - B** Flanged ASME 300.

**A - C** Flanged JIS/KS 20.

**A - D** Flanged ASME 150.

**E - E** Flanged JIS/KS 10.

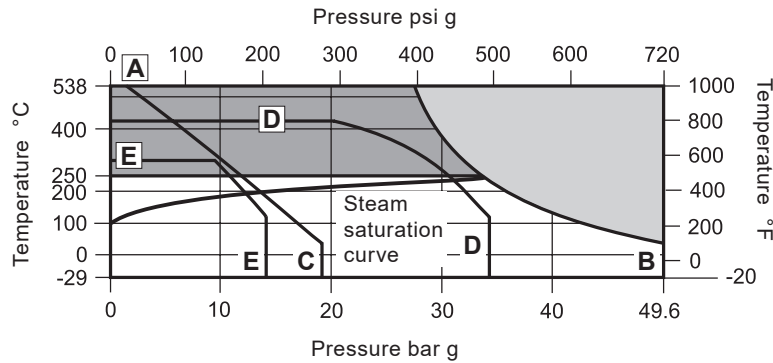
### Notes:

- Where the process fluid temperature is sub-zero and the ambient temperature is below +5 °C, the external moving parts of the valve and actuator must be heat traced to maintain normal operation.
- When selecting a valve with a bellows sealed bonnet, the pressure/temperature limits of the bellows must be read in conjunction with the valve pressure/temperature limits shown above.
- As standard the KEA, KFA, KLA series two-port control valves are supplied with the PTFE stem sealing option.

| Body design conditions               |                                           | ASME 150 and ASME 300 |                      |
|--------------------------------------|-------------------------------------------|-----------------------|----------------------|
| Maximum design pressure              | ASME 150                                  | 19.6 bar g @ 38 °C    | (284 psi g @ 100 °F) |
|                                      | ASME 300                                  | 51.1 bar g @ 38 °C    | (740 psi g @ 100 °F) |
| Maximum differential pressure design | Full PEEK seat (P)                        | 19 bar                |                      |
| Maximum design temperature           |                                           | 425 °C                | (800 °F)             |
| Minimum design temperature           |                                           | -29 °C                | (-20 °F)             |
| Maximum operating temperature        | PEEK soft seat (P)                        | 220 °C                | (428 °F)             |
|                                      | Standard packing PTFE chevron             | 250 °C                | (482 °F)             |
|                                      | Extended bonnet (E) with PTFE chevron     |                       |                      |
|                                      | Graphite packing (H)                      |                       |                      |
|                                      | Extended bonnet (E) with graphite packing | 425 °C                | (800 °F)             |

**Note:** We recommend that an extended bonnet (E) with graphite packing is used where valve operation is above 300 °C (572 °F).

## Pressure/temperature limits - KEA63 (Stainless steel)



The product **must not** be used in this region.

Graphite stem sealing is required for use in this region

**A - B** Flanged ASME 300.

**A - C** Flanged JIS/KS 20.

**D - D** Flanged ASME 150.

**E - E** Flanged JIS/KS 10.

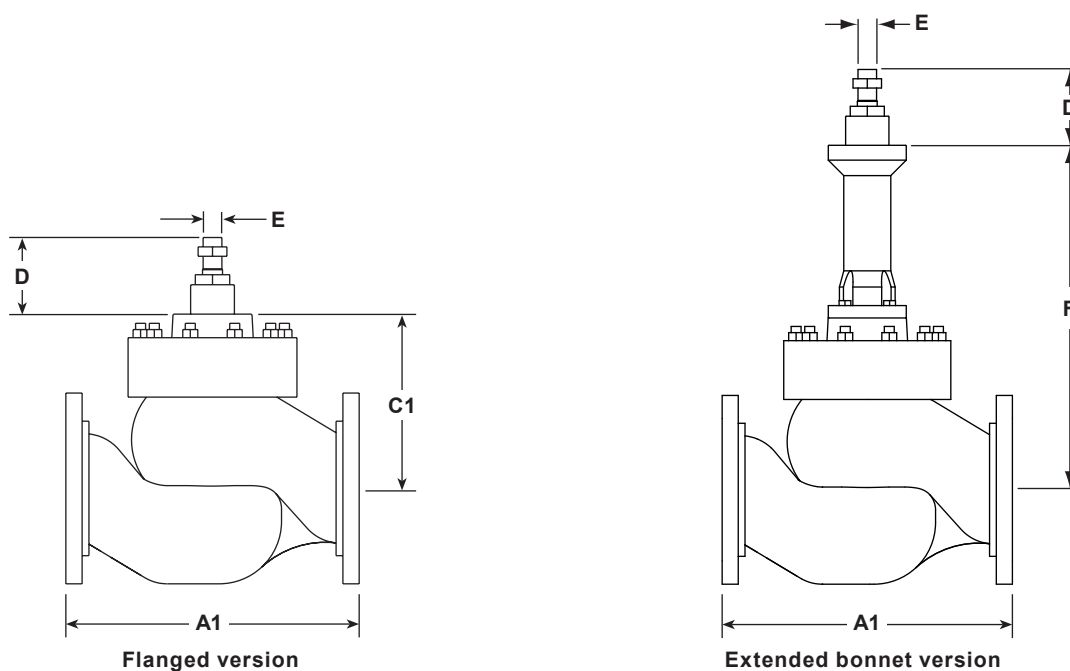
### Notes:

- Where the process fluid temperature is sub-zero and the ambient temperature is below +5 °C, the external moving parts of the valve and actuator must be heat traced to maintain normal operation.
- When selecting a valve with a bellows sealed bonnet, the pressure/temperature limits of the bellows must be read in conjunction with the valve pressure/temperature limits shown above.
- As standard the KEA, KFA, KLA series two-port control valves are supplied with the PTFE stem sealing option.

| Body design conditions               |                                           | ASME 150 and ASME 300 |                      |
|--------------------------------------|-------------------------------------------|-----------------------|----------------------|
| Maximum design pressure              | ASME 150 (6" to 8" only)                  | 19.6 bar g @ 38 °C    | (275 psi g @ 100 °F) |
|                                      | ASME 300                                  | 49.6 bar g @ 38 °C    | (720 psi g @ 100 °F) |
| Maximum differential pressure design | Full PEEK seat (P)                        | 19 bar                |                      |
| Maximum design temperature           |                                           | 538 °C                | (1000 °F)            |
| Minimum design temperature           |                                           | -29 °C                | (-20 °F)             |
| Maximum operating temperature        | PEEK soft seat (P)                        | 220 °C                | (428 °F)             |
|                                      | Standard packing PTFE chevron             | 250 °C                | (482 °F)             |
|                                      | Extended bonnet (E) with PTFE chevron     |                       |                      |
|                                      | Graphite packing (H)                      | 538 °C                | (1000 °F)            |
|                                      | Extended bonnet (E) with graphite packing |                       |                      |

**Note:** We recommend that an extended bonnet (E) with graphite packing is used where valve operation is above 300 °C (572 °F).

**Dimensions** for the **Spira-trol™ two-port control valve** approximate in mm and (inches)

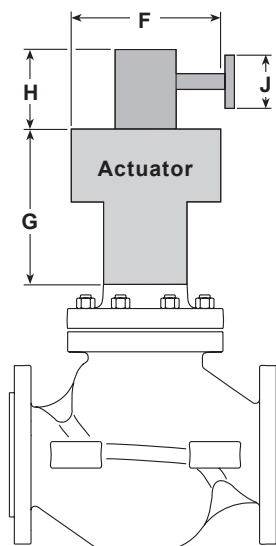


| Valve size  | Flanged              |        |     |                   |                                        |                                        |                                        | D                                    | E<br>Thread | F<br>Extended bonnet                   |
|-------------|----------------------|--------|-----|-------------------|----------------------------------------|----------------------------------------|----------------------------------------|--------------------------------------|-------------|----------------------------------------|
|             | KE valves            |        |     |                   | KEA valves                             |                                        |                                        |                                      |             |                                        |
|             | A1                   |        | C1  | A1                |                                        | C1                                     |                                        |                                      |             |                                        |
|             | PN16<br>PN25<br>PN40 | JIS/KS |     | KS 10<br>ASME 150 | KS 20<br>ASME 300                      |                                        |                                        |                                      |             |                                        |
|             |                      | 10     | 20  |                   |                                        |                                        |                                        |                                      |             |                                        |
| DN125 (5")  | 400                  | 403    | 425 | 257               |                                        |                                        |                                        | 125(4 <sup>7</sup> / <sub>8</sub> ") | M30         | 538 (21 <sup>1</sup> / <sub>8</sub> ") |
| DN150 (6")  | 480                  | 451    | 473 | 275               | 451 (17 <sup>3</sup> / <sub>4</sub> ") | 473 (18 <sup>5</sup> / <sub>8</sub> ") | 279 (11")                              |                                      |             | 556 (21 <sup>7</sup> / <sub>8</sub> ") |
| DN200 (8")  | 600                  | 543    | 568 | 341               | 543 (21 <sup>3</sup> / <sub>8</sub> ") | 568 (22 <sup>3</sup> / <sub>8</sub> ") | 343 (13 <sup>1</sup> / <sub>2</sub> ") |                                      |             | 621 (24 <sup>1</sup> / <sub>2</sub> ") |
| DN250 (10") | 730                  | 673    | 708 | 344               | 673                                    | 708                                    | 344 (13 <sup>1</sup> / <sub>2</sub> ") |                                      |             | 622 (24 <sup>1</sup> / <sub>2</sub> ") |
| DN300 (12") | 850                  | 737    | 775 | 355               | 737                                    | 775                                    | 355 (14")                              |                                      |             | 634 (25")                              |

**Weights** for the **Spira-trol™ two-port control valve** approximate in kg (and lbs)

| Valve size | KE valves |      |      | KEA valves    |              | Additional extended bonnet | Additional balanced |
|------------|-----------|------|------|---------------|--------------|----------------------------|---------------------|
|            | KE43      | KE63 | KE73 | KEA43         | KEA63        |                            |                     |
| DN125 (5") | 81        | 81   | 81   |               |              | 16<br>(35)                 | 2<br>(4.4)          |
| DN150 (6") | 121       | 121  | 121  | 130<br>(286)  | 130<br>(286) | 16<br>(35)                 | 3<br>(7)            |
| DN200 (8") | 210       | 210  | 210  | 210<br>(462)  | 210<br>(462) | 16<br>(35)                 | 10<br>(22)          |
| DN250 10") | 228       |      |      | 242<br>(533)  |              | 16<br>(35)                 | 10<br>(22)          |
| DN300 12") | 451       |      |      | 465<br>(1025) |              | 16<br>(35)                 | 16<br>(35)          |

**Dimensions/weights** for the **PN actuator range** approximate in mm and kgs (inches and lbs)



| Actuator range and variants | F   |                                   | G     |                                  | H   |        | J   |        | Weight   |        |                |        |
|-----------------------------|-----|-----------------------------------|-------|----------------------------------|-----|--------|-----|--------|----------|--------|----------------|--------|
|                             | mm  | inches                            | mm    | inches                           | mm  | inches | mm  | inches | Actuator |        | With handwheel |        |
| PN1500 and PN2500           | 405 | 16"                               | 1 114 | 46"                              |     |        |     |        | 55       | 121.00 |                |        |
| PN1600 and PN2600           | 465 | 18 <sup>5</sup> / <sub>16</sub> " | 1 116 | 46"                              |     |        |     |        | 70       | 154.00 |                |        |
| PN9400E                     | 732 | 28 <sup>3</sup> / <sub>4</sub> "  | 465   | 18 <sup>1</sup> / <sub>3</sub> " |     |        |     |        | 60       | 132.00 |                |        |
| PN9400R                     |     |                                   |       |                                  |     |        |     |        |          |        |                |        |
| TN2277E                     | 532 | 21"                               | 863   | 34"                              | 330 | 13"    | 330 | 13"    | 116      | 255.00 | +21.00         | +46.00 |
| TN2277NDA                   | 532 | 21"                               | 863   | 34"                              |     |        |     |        | 98       | 216.00 |                |        |

**Dimensions/weights** for the **EL and AEL actuator ranges** approximate in mm and kgs (and in inches and lbs)

| Actuator range | F   |        | G   |        | Weight |     |
|----------------|-----|--------|-----|--------|--------|-----|
|                | mm  | inches | mm  | inches | kg     | lbs |
| AEL7           | 216 | 8.5"   | 657 | 26"    | 19     | 42  |

## Spare parts

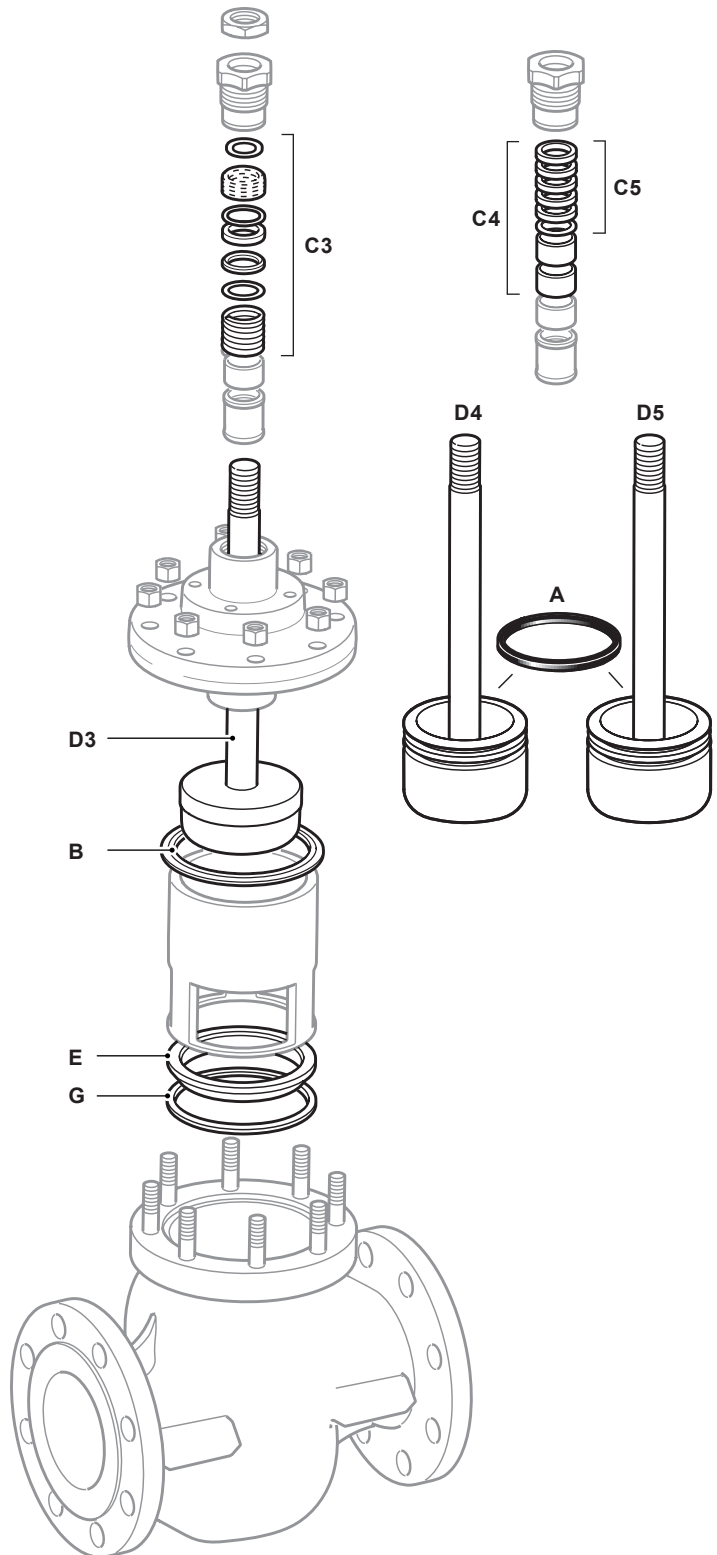
### Spira-trol™ two-port control valve Balanced and unbalanced DN125 to DN300 and 6" to 12"

The spare parts available are shown in solid outline. Parts drawn in a grey line are not supplied as spares.

**Note:** When placing an order for spare parts please specify clearly the full product description as found on the label of the valve body, as this will ensure that the correct spare parts are supplied.

#### Available spares - K series

|                                                |                                                         |                |
|------------------------------------------------|---------------------------------------------------------|----------------|
| <b>Gasket set</b><br><b>Non bellows sealed</b> | <b>Balanced</b>                                         | <b>A, B, G</b> |
|                                                | <b>Unbalanced</b>                                       | <b>B, G</b>    |
| <b>Stem seal kit</b>                           | <b>PTFE chevrons</b>                                    | <b>C3</b>      |
|                                                | <b>Graphite packing conversion kit (DN125 to DN300)</b> | <b>C4</b>      |
|                                                | <b>Graphite seal set</b>                                | <b>C5</b>      |
| <b>Plug stem and seat kit</b>                  | <b>Balanced (No gaskets supplied)</b>                   | <b>A, D, E</b> |
|                                                | <b>Unbalanced (No gaskets supplied)</b>                 | <b>D, E</b>    |



## How to order spares

Always order spares by using the description given in the column headed 'Available spares', and state the size and type of valve including the full product description of the product.

**Example:** 1 - PTFE stem seal kit for a Spirax Sarco DN150 Spira-trol™ two-port KE43 PTSBSS.2 Kvs 370 control valve.

## How to fit spares

Full fitting instructions are given in the Installation and Maintenance Instructions supplied with the spare.

## Spira-trol™ selection guide:

|                             |                                                  |                     |
|-----------------------------|--------------------------------------------------|---------------------|
| <b>Valve size</b>           | EN standard = DN125, DN150, DN200, DN250 and 300 | <b>DN150</b>        |
|                             | ASME standard = 6", 8", 10" and 12"              |                     |
| <b>Valve series</b>         | K = K series 2-port control valve                | <b>K</b>            |
| <b>Valve characteristic</b> | E = Equal percentage                             | <b>E</b>            |
|                             | F = Fast opening                                 |                     |
|                             | L = Linear                                       |                     |
| <b>Flange type</b>          | A = ASME                                         | <b>Blank</b>        |
|                             | Blank = EN (PN)                                  |                     |
| <b>Flow</b>                 | Blank = under                                    | <b>Blank</b>        |
|                             | T = over                                         |                     |
| <b>Body material</b>        | 4 = Carbon steel                                 | <b>4</b>            |
|                             | 6 = Stainless steel                              |                     |
|                             | 7 = SG iron                                      |                     |
| <b>Connections</b>          | 3 = Flanged                                      |                     |
| <b>Stem sealing</b>         | H = Graphite                                     |                     |
|                             | P = PTFE                                         |                     |
|                             | V = PTFE for vacuum service                      |                     |
| <b>Seating</b>              | P = Full PEEK (not available in DN300)           |                     |
|                             | T = 431 stainless steel                          |                     |
|                             | W = 316L with stellite 6 facing                  |                     |
| <b>Type of trim</b>         | A1 = 1 stage anti-cavitation                     | <b>S</b>            |
|                             | A2 = 2 stage anti-cavitation                     |                     |
|                             | P1 = 1 stage low noise cage                      |                     |
|                             | P2 = 2 stage low noise cage                      |                     |
|                             | P3 = 3 stage low noise cage                      |                     |
|                             | S = Standard trim                                |                     |
| <b>Trim balancing</b>       | B = Balanced                                     | <b>U</b>            |
|                             | U = Unbalanced                                   |                     |
| <b>Bonnet type</b>          | E = Extended                                     | <b>S</b>            |
|                             | S = Standard                                     |                     |
| <b>Bolting</b>              | H = High temperature                             | <b>S</b>            |
|                             | S = Standard                                     |                     |
| <b>Finish</b>               | Blank = Standard                                 |                     |
| <b>Series</b>               | 2 = .2                                           | <b>.2</b>           |
| <b>Kvs</b>                  | To be specified                                  | <b>Kvs 370</b>      |
| <b>Connection type</b>      | To be specified                                  | <b>Flanged PN40</b> |

### Selection example:

|       |   |   |   |   |   |   |   |   |   |   |   |  |    |   |         |   |              |
|-------|---|---|---|---|---|---|---|---|---|---|---|--|----|---|---------|---|--------------|
| DN150 | - | K | E | 4 | 3 | P | T | S | U | S | S |  | .2 | - | Kvs 370 | - | Flanged PN40 |
|-------|---|---|---|---|---|---|---|---|---|---|---|--|----|---|---------|---|--------------|

### How to order

**Example:** 1 off Spirax Sarco Spira-trol™ DN150 KE43PTSUSS.2 Kvs 16 two-port control valve having flanged PN40 connections.