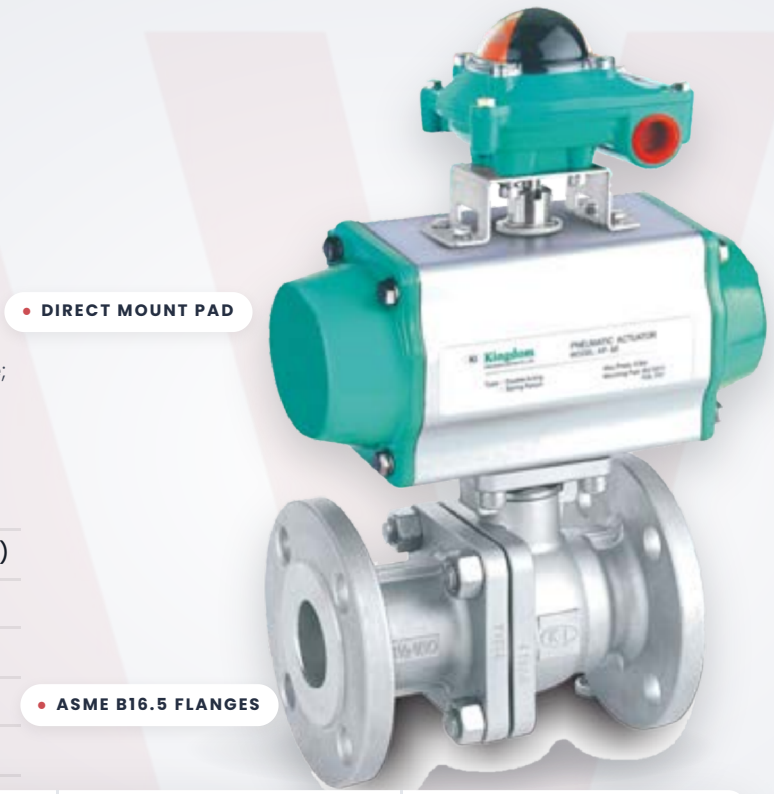
2-PIECE FLANGED BALL VALVE

# KV-L41 · L42
# KV-L61 · L62

## ASME Class 150 / 300 · full port · NPS ½ – 8

2-piece body, full port, flanged ends ball valve with direct mount ISO 5211 pad. KV-L41 / L42 direct mount standard type; KV-L61 / L62 direct mount fire safe type.

- Built-in ISO 5211 direct mounting pad for easy automation
- Fire safe design approved (API 607 5th 2005, ISO 10497)
- Anti-static devices · blow-out proof stem
- TA-Luft / ISO 15848-1 design approved
- Casting approved by TÜV AD 2000-Merkblatt W0
- NACE MR-0175 (optional)




| 150 / 300 | ½–8 NPS | F03–F14 | 4200 |
|---|---|---|---|
| ASME CLASS | FULL PORT | ISO 5211 PAD | CV · NPS 8 |

## Four models.

STANDARD & FIRE SAFE TYPES

| KV-L41 | KV-L42 | KV-L61 | KV-L62 |
|---|---|---|---|
| Direct mount standard | Direct mount standard | Direct mount fire safe | Direct mount fire safe |
| Class 150 | Class 300 | Class 150 | Class 300 |

### Applicable standards

| | |
|---|---|
| Design | ASME B16.34 |
| Fire safe | API 607 5th 2005, ISO 10497 |
| Face to face | ASME B16.10 |
| Flanged ends | ASME B16.5 Class 150 / 300 |
| Inspection & testing | API 598 |

### Options

| | |
|---|---|
| 1 | Actuator |
| 2 | Limit switch |
| 3 | Positioner |
| Gear | Worm gear operation (NPS 2½–8, optional) |

MATERIALS

A351-CF8M · A351-CF8 · A216-WCB · TFM1600 / PTFE / TFM4215 seats · Pressure balance hole in ball slot

## CV & weight.

BY CLASS

| Size | CV | | KV-L41 / KV-L61 | | KV-L42 / KV-L62 | |
|---|---|---|---|---|---|---|
| NPS | Class 150 | Class 300 | kg | lb | kg | lb |
| 1/2 | 18 | 18 | 1.6 | 3.5 | 2.54 | 5.60 |
| 3/4 | 36 | 36 | 2.3 | 5.1 | 3.64 | 7.94 |
| 1 | 48 | 48 | 3.0 | 6.6 | 4.55 | 9.92 |
| 1-1/4 | 93 | 93 | 3.5 | 7.7 | 5.17 | 11.4 |
| 1-1/2 | 165 | 165 | 5.6 | 12.4 | 8.69 | 19.2 |
| 2 | 207 | 207 | 8.4 | 18.5 | 10.9 | 24.1 |
| 2-1/2 | 450 | 450 | 14.5 | 32.0 | 17.5 | 38.6 |
| 3 | 780 | 780 | 18.5 | 40.8 | 27.3 | 59.5 |
| 4 | 1360 | 1360 | 29.5 | 65.0 | 41.8 | 92.2 |
| 5 | 1700 | 1700 | 53.5 | 118.0 | 67.6 | 149.1 |
| 6 | 2600 | 2600 | 74.0 | 163.0 | 100.6 | 221.8 |
| 8 | 4200 | 4200 | 128.0 | 282.0 | 144.3 | 318.2 |

## Torque values.

CLOSE TO OPEN

| ΔP | 75 psig · 5 bar | | 150 psig · 10 bar | | 300 psig · 20 bar | | 700 psig · 50 bar | |
|---|---|---|---|---|---|---|---|---|
| NPS | N·m | in·lb | N·m | in·lb | N·m | in·lb | N·m | in·lb |
| 1/2 | 5 | 44 | 5 | 44 | 5 | 44 | 5 | 44 |
| 3/4 | 6 | 53 | 6 | 53 | 6 | 53 | 6 | 53 |
| 1 | 10 | 88 | 10 | 88 | 11 | 97 | 11 | 97 |
| 1-1/4 | 13 | 115 | 13 | 115 | 15 | 133 | 17 | 150 |
| 1-1/2 | 19 | 168 | 19 | 168 | 22 | 195 | 24 | 212 |
| 2 | 25 | 221 | 29 | 257 | 32 | 283 | 35 | 310 |
| 2-1/2 | 40 | 354 | 45 | 398 | 49 | 434 | 54 | 478 |
| 3 | 65 | 575 | 72 | 637 | 81 | 717 | 90 | 796 |
| 4 | 100 | 885 | 110 | 973 | 122 | 1080 | 135 | 1195 |
| 5 | 190 | 1681 | 210 | 1858 | 245 | 2168 | 285 | 2522 |
| 6 | 280 | 2478 | 306 | 2708 | 340 | 3009 | 530 | 4690 |
| 8 | –* | –* | 430 | 3805 | 487 | 4310 | 760 | 6726 |

Torque: standard seats (TFM1600 & PTFE). Torques increase about 30% with reinforced fibre-glass PTFE, carbon-filled PTFE, EK+PTFE or TFM4215 seats. Figures at 5 bar are maximum values tested after valves are placed for 24 hours. Actuator sizing: min. 30% safety factor recommended. * NPS 8 at 75 psig is published as 487 N·m / 3274 in·lb – the two figures do not agree, so they are omitted here; please confirm with us.

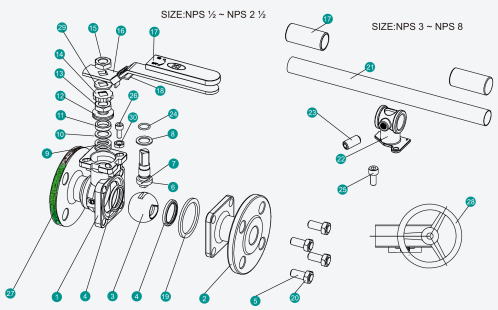
## Material of construction.

* FIRE SAFE

| No. | Part | CF8M | CF8 | WCB |
|---|---|---|---|---|
| 1 | End cap | A351-CF8M | A351-CF8 | A216-WCB |
| 2 | Body | A351-CF8M | A351-CF8 | A216-WCB |
| 3 | Ball | A351-CF8M | A351-CF8 | |
| 4 | Ball seat | TFM1600 / PTFE / TFM4215 | | |
| 5 | Bolting | A193-B8 | | A193-B7 |
| 6 | Stem | 316 | 304 | |
| 7 | Anti-static | 316 | 304 | |
| 8 | Thrust washer | PTFE / TFM1600 | | |
| 9 | Stem packing | PTFE / graphite* | | |
| 10 | Bushing | 50% SS + 50% PTFE / 304* | | |
| 11 | Gland | 316 | | |
| 12 | Belleville washer | 301 | | |
| 13 | Stem nut | A194-8 | | |
| 14 | Stop-lock-cap | 304 | | |
| 15 | Handle nut (NPS ½–2½) | A194-8 | | |
| 16 | Lever (NPS ½–2½) | 304 | | |
| 17 | Handle sleeve | 304 | | |
| 18 | Lock device (NPS ½–2½) | 304 | | |
| 19 | Body gasket | PTFE / 316 spiral wound + graphite* | | |
| 20 | Bolt nut | A194-8 | | A194-2H |
| 21 | Pipe handle (NPS 3–8) | A53 + plated Zn | | |
| 22 | Handle adapter (NPS 3–8) | A351-CF8 | | |
| 23 | Set screw (NPS 3–8) | A2-70 | | |
| 24 | O-ring | FKM | | |
| 25 | Bolting (NPS 3–8) | A2-70 | | |
| 26 | Stop bolt | A2-70 | | |
| 27 | Nameplate | 304 | | |
| 28 | Worm gear (optional) | Package | | |
| 29 | Support washer | 304 | | |
| 30 | Stop nut | A2-70 | | |

* Materials for KV-L61, KV-L62 series (fire safe models).

EXPLODED VIEW



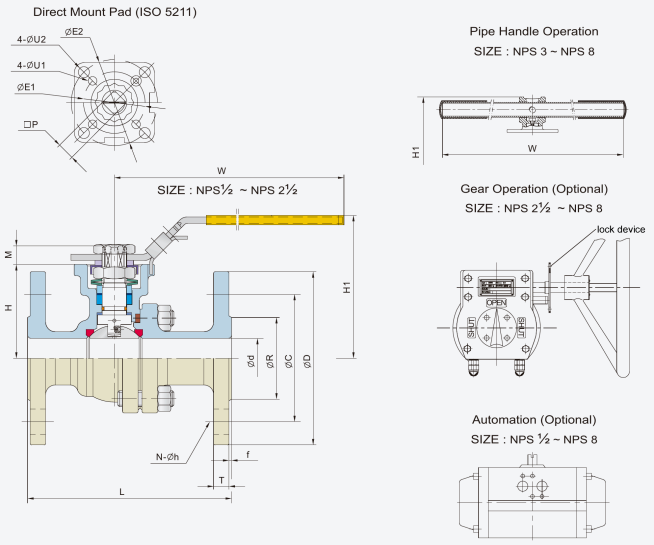

### Fire safe models (KV-L61 / KV-L62)

Graphite stem packing, 304 bushing and 316 spiral wound + graphite body gasket replace the PTFE-based parts of the standard type.

### Operation

Lever NPS ½–2½ · pipe handle NPS 3–8 · worm gear optional NPS 2½–8 · automation optional NPS ½–8.

## DIRECT MOUNT PAD · PIPE HANDLE · GEAR (OPTIONAL) · AUTOMATION (OPTIONAL)




## ASME Class 150.

KV-L41 / KV-L61 · MM

| NPS | d | L | R | D | C | T | f | N | h | H | H1 | W | P | M | E1 | E2 | U1 | U2 | ISO 5211 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1/2** | 15 | 108 | 35.0 | 90 | 60.3 | 8.0 | 2 | 4 | 16.0 | 49 | 79 | 147 | 9 | 9 | 36 | 42 | 6 | 6 | F03~F04 |
| **3/4** | 20 | 117 | 43.0 | 100 | 69.9 | 8.9 | 2 | 4 | 16.0 | 53 | 84 | 147 | 9 | 9 | 36 | 50 | 6 | 7 | F03~F05 |
| **1** | 25 | 127 | 51.0 | 110 | 79.4 | 9.6 | 2 | 4 | 16.0 | 59 | 90 | 177 | 11 | 11 | 42 | 50 | 6 | 7 | F04~F05 |
| **1-1/4** | 32 | 140 | 63.5 | 115 | 88.9 | 11.2 | 2 | 4 | 16.0 | 71 | 102 | 177 | 11 | 11 | 42 | 70 | 6 | 9 | F04~F07 |
| **1-1/2** | 38 | 165 | 73.2 | 125 | 98.4 | 12.7 | 2 | 4 | 16.0 | 76 | 110 | 197 | 14 | 14 | 50 | 70 | 7 | 9 | F05~F07 |
| **2** | 50 | 178 | 92.0 | 150 | 120.7 | 14.3 | 2 | 4 | 19.0 | 82 | 115 | 197 | 14 | 14 | 50 | 70 | 7 | 9 | F05~F07 |
| **2-1/2** | 63.5 | 190 | 104.7 | 180 | 139.7 | 15.9 | 2 | 4 | 19.0 | 102 | 150 | 267 | 17 | 17 | 70 | 102 | 9 | 11 | F07~F10 |
| **3** | 76 | 203 | 127.0 | 190 | 152.4 | 17.5 | 2 | 4 | 19.0 | 112 | 176 | 300 | 17 | 17 | 70 | 102 | 9 | 11 | F07~F10 |
| **4** | 100 | 229 | 157.0 | 230 | 190.5 | 22.3 | 2 | 8 | 19.0 | 140 | 211 | 400 | 22 | 22 | – | 102 | – | 11 | F10 |
| **5** | 125 | 356 | 186.0 | 255 | 215.9 | 22.3 | 2 | 8 | 22.3 | 183 | 263 | 600 | 27 | 27 | 125 | – | 14 | – | F12 |
| **6** | 150 | 394 | 216.0 | 280 | 241.3 | 23.9 | 2 | 8 | 22.3 | 204 | 284 | 800 | 27 | 27 | 125 | – | 14 | – | F12 |
| **8** | 200 | 457 | 270.0 | 345 | 298.5 | 27.0 | 2 | 8 | 22.3 | 253 | 334 | 800 | 27 | 27 | 125 | 140[a] | 14 | 18[a] | F12 or F14[a] |

## ASME Class 300.

KV-L42 / KV-L62 · MM

| NPS | d | L | R | D | C | T | f | N | h | H | H1 | W | P | M | E1 | E2 | U1 | U2 | ISO 5211 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1/2** | 15 | 140 | 35.0 | 95 | 66.7 | 12.7 | 2 | 4 | 16.0 | 49 | 79 | 147 | 9 | 9 | 36 | 42 | 6 | 6 | F03~F04 |
| **3/4** | 20 | 152 | 43.0 | 115 | 82.6 | 14.3 | 2 | 4 | 19.0 | 59 | 89 | 147 | 9 | 9 | 36 | 42 | 6 | 6 | F03~F04 |
| **1** | 25 | 165 | 51.0 | 125 | 88.9 | 15.9 | 2 | 4 | 19.0 | 64 | 95 | 177 | 11 | 11 | 42 | 50 | 6 | 7 | F04~F05 |
| **1-1/4** | 32 | 178 | 63.5 | 135 | 98.4 | 17.5 | 2 | 4 | 19.0 | 71 | 102 | 177 | 11 | 11 | 42 | 50 | 6 | 7 | F04~F05 |
| **1-1/2** | 38 | 190 | 73.2 | 155 | 114.3 | 19.1 | 2 | 4 | 22.3 | 80 | 113 | 197 | 14 | 14 | 50 | 70 | 7 | 9 | F05~F07 |
| **2** | 50 | 216 | 92.0 | 165 | 127.0 | 20.7 | 2 | 8 | 19.0 | 85 | 118 | 197 | 14 | 14 | 50 | 70 | 7 | 9 | F05~F07 |
| **2-1/2** | 63.5 | 241 | 104.7 | 190 | 149.2 | 23.9 | 2 | 8 | 22.3 | 102 | 150 | 267 | 17 | 17 | 70 | 102 | 9 | 11 | F07~F10 |
| **3** | 76 | 282 | 127.0 | 210 | 168.3 | 27.0 | 2 | 8 | 22.3 | 112 | 176 | 300 | 17 | 17 | 70 | 102 | 9 | 11 | F07~F10 |
| **4** | 100 | 305 | 157.0 | 255 | 200.0 | 30.2 | 2 | 8 | 22.3 | 140 | 211 | 400 | 22 | 22 | – | 102 | – | 11 | F10 |
| **5** | 125 | 381 | 186.0 | 280 | 235.0 | 33.4 | 2 | 8 | 22.3 | 183 | 263 | 600 | 27 | 27 | 125 | – | 14 | – | F12 |
| **6** | 150 | 403 | 216.0 | 320 | 269.9 | 35.0 | 2 | 12 | 22.3 | 204 | 284 | 800 | 27 | 27 | 125 | – | 14 | – | F12 |
| **8** | 200 | 502 | 270.0 | 380 | 330.2 | 39.7 | 2 | 12 | 25.4 | 253 | 334 | 800 | 27 | 27 | 125 | 140[a] | 14 | 18[a] | F12 or F14[a] |

(a) Optional. Inch versions of these tables and pressure-temperature curves (PTFE, TFM1600, TFM4215 seats; CF8M and WCB bodies) are published by Kingdom – available on request.

Data supplied by Kingdom Flow Control and provided for reference only. Specifications may change without notice – please confirm details with Actuation Valve & Control before ordering.

**Need a flanged ball valve ready to automate?**

Talk to our UK team about Class 150/300 valves, fire safe options and actuated packages.

actuation.co.uk