

 Aliaxis



TKD DN 10÷50

PVC-C

DUAL BLOCK® 3-way ball valve

TKD DN 10÷50

FIP has developed a VKD DUAL BLOCK® ball valve to introduce a high reference standard in thermoplastic valve design. TKD is a True Union diverting and mixing ball valve that meets the most stringent needs required in industrial applications.

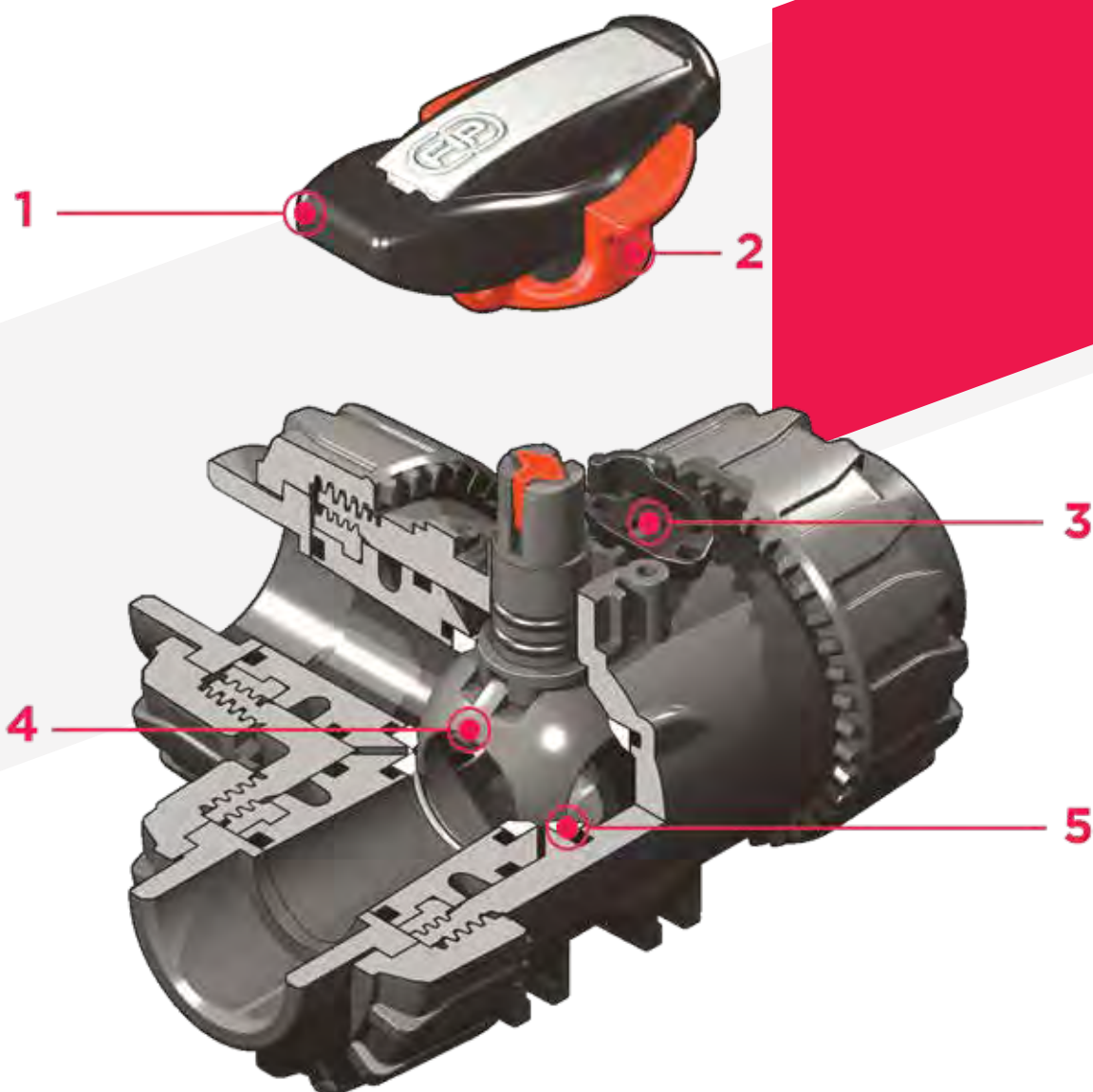


DUAL BLOCK® 3-WAY BALL VALVE

- Connection system for solvent weld, threaded and threaded joints
- Patented **SEAT STOP®** ball carrier system that lets you micro-adjust ball seats and minimise axial force effects
- Easy radial disassembly allowing quick replacement of O-rings and ball seats without any need for tools
- **PN16 True Union valve body** made for rigid PVC-C injection moulding equipped with built-in bores for actuation. ISO 9393 compliant test requisites
- Option of disassembling downstream pipes with the valve in the closed position
- High surface finish stem with double O-Ring and double connection key to the ball, equipped with **visual ball position indicator** for correct handle installation
- **Carrier integrated in the body** for valve anchoring
- Possibility of installing pneumatic and/or electric actuators thanks to the robust integrated bracket for valve anchoring for easy and quick automation using the **Power Quick module** (optional)
- **Valve material compatibility** (PVC-C) and elastomer **seal elements** (EPDM or FKM), with water, drinking water and other food substances as per **current regulations**
- Possibility to have handle with integrated LSQT limit micro switch, even as a retrofit in existing installations

Technical specifications

Construction	3-way True Union ball valve with locked carrier and union nuts.
Size range	DN 10 ÷ 50
Nominal pressure	PN 16 with water at 20° C
Temperature range	0 °C ÷ 100 °C
Coupling standards	Solvent welding: EN ISO 15493, ASTM F 439. Can be coupled to pipes according to EN ISO 15493, ASTM F 441 Thread: ISO 228-1, DIN 2999, ASTM F 437
Reference standards	Construction criteria: EN ISO 16135, EN ISO 15493 Test methods and requirements: ISO 9393 Installation criteria: DVS 2204, DVS 2221, UNI 11242 Actuator couplings: ISO 5211
Valve material	PVC-C
Seal material	EPDM, FKM (standard size O-Ring); PTFE (ball seats)
Control options	Manual control; electric actuator; pneumatic actuator



1 Ergonomic HIPVC handle equipped with removable tool to adjust the ball seat carrier. Possibility of installing the **LTKD stroke limiter** (available as an accessory) that permits ball and handle rotation only for set opening and closing angles at 90° or 180°

2 **Handle lock 0°- 90° SHKD** (available as an accessory) ergonomically operable during service and padlockable

3 **DUAL BLOCK®** patented lock system that ensures union nut tightening hold even in severe conditions such as vibrations or heat dilation

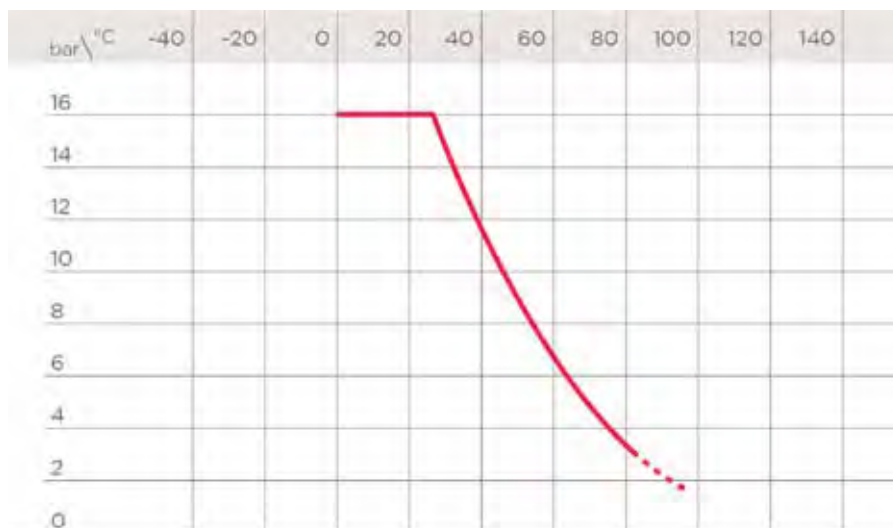
4 **Ball shutter** high surface finish with floating type full passage with **T or L port**

5 **4 PTFE ball seat system** that compensates axial force guaranteeing optimal manageability and long working life

TECHNICAL DATA

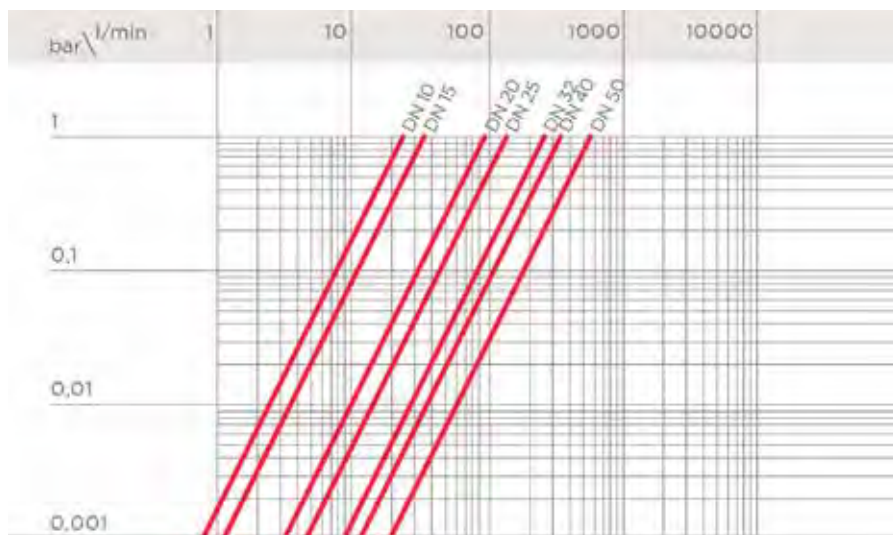
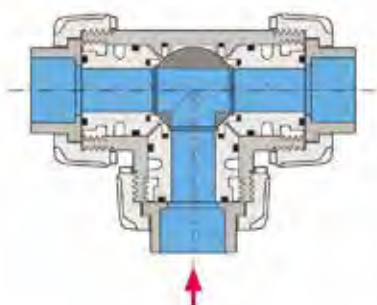
PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and harmless fluids to which the material is classified as CHEMICALLY RESISTANT. In other cases, a reduction of the nominal PN pressure is required (25 years with safety factor).

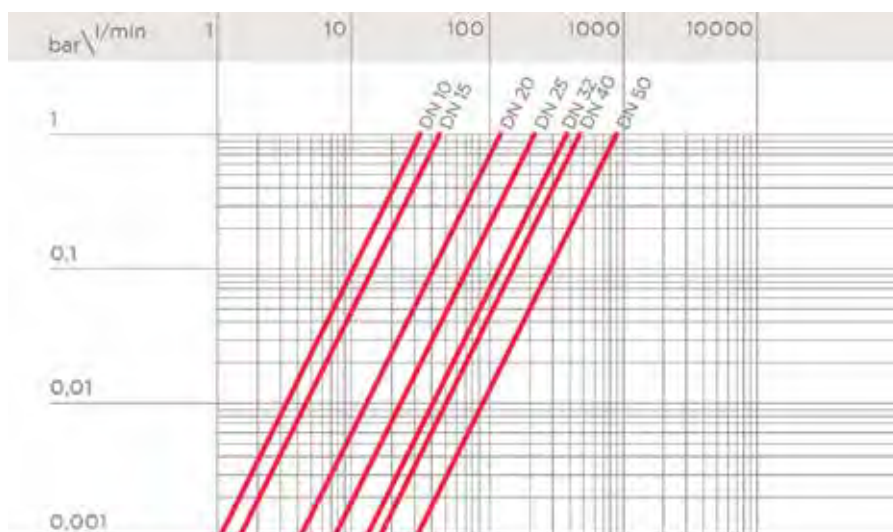
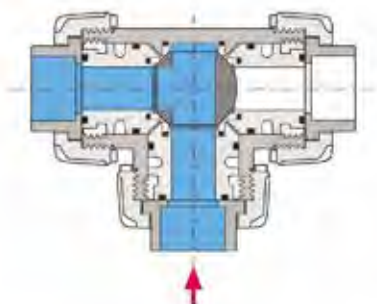


PRESSURE DROP GRAPH AND WORK POSITIONS

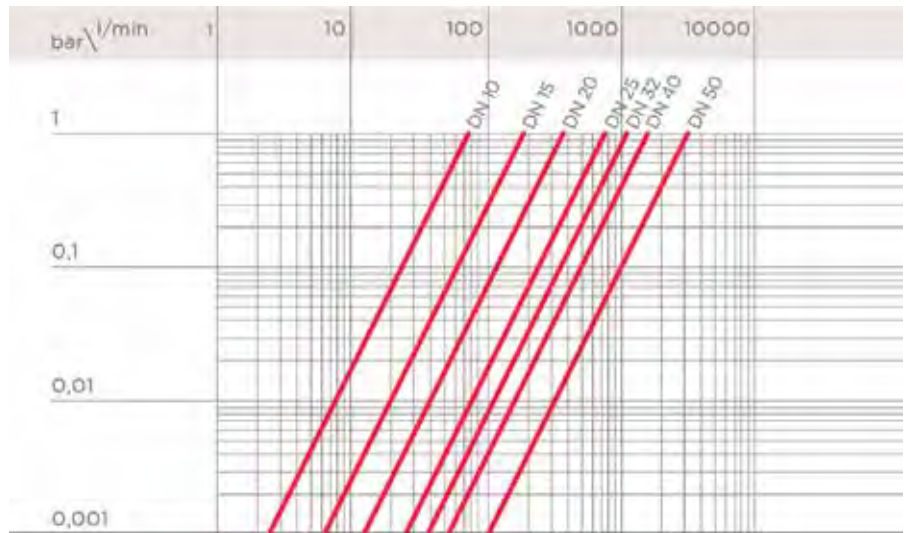
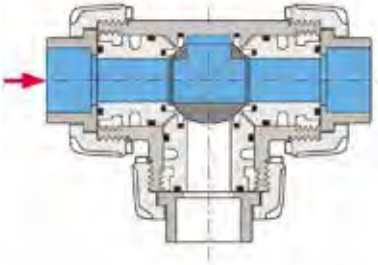
A - T-port ball valve:
0° - Mixing



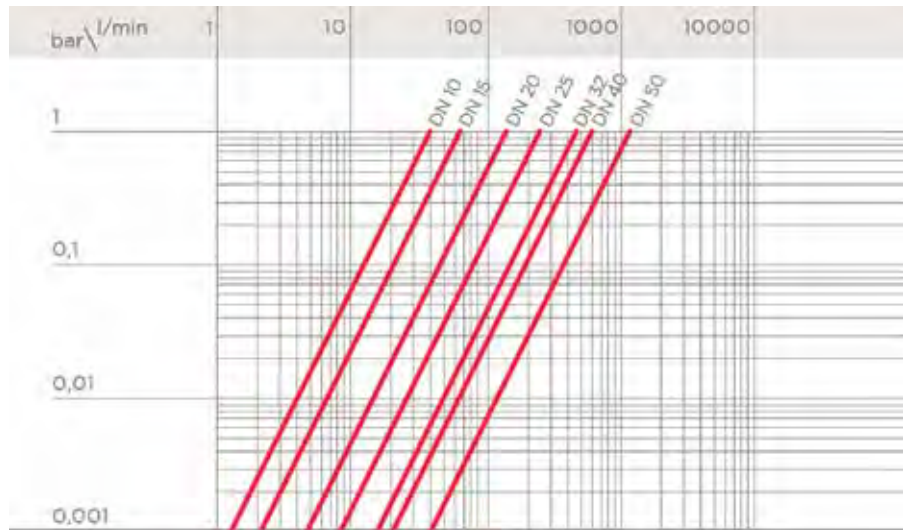
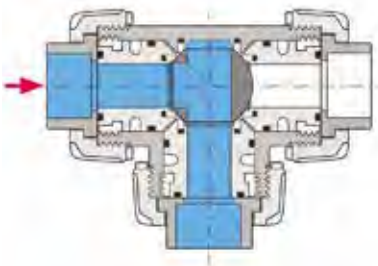
B - T-port ball valve:
90° - Diverting



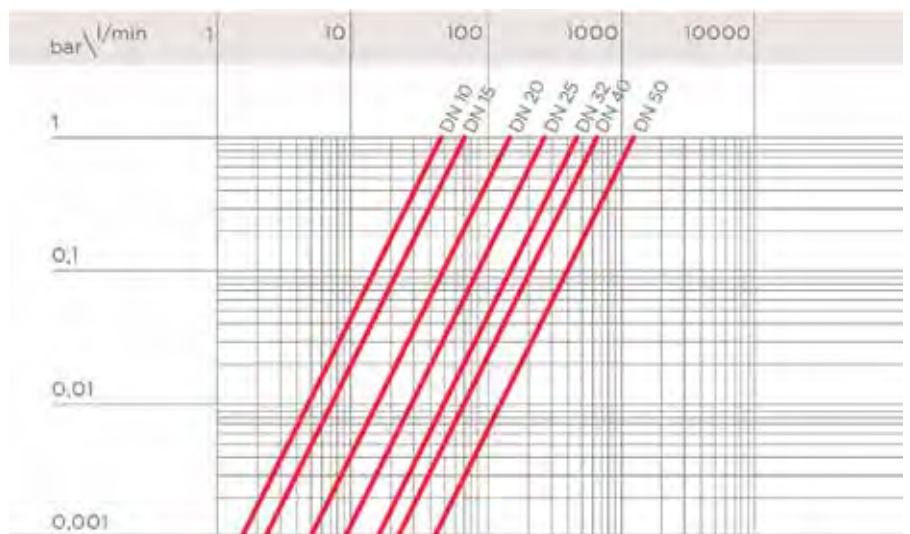
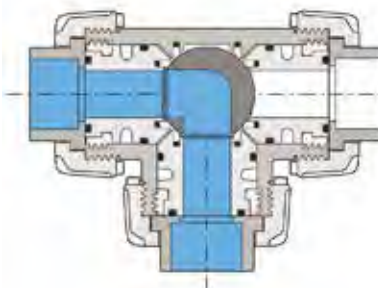
C - T-port ball valve:
180° - Branch closed/direct flow



D - T-port ball valve:
270° - Diverting



E - L-port ball valve:
0°/270° - Diverting



K_v100 FLOW COEFFICIENT

The K_v100 flow coefficient is the Q flow rate of litres per minute of water at a temperature of 20°C that will generate $\Delta p = 1$ bar pressure drop at a certain valve position. The K_v100 values shown in the table are calculated with the valve completely open.

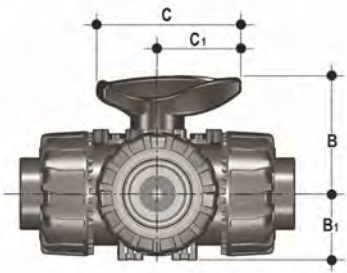
DN	10	15	20	25	32	40	50
A	25	35	95	140	270	330	620
B	37	55	135	205	390	475	900
C	78	195	380	760	1050	1700	3200
D	40	65	145	245	460	600	1200
E	48	73	150	265	475	620	1220

OPERATING TORQUE AT MAXIMUM WORKING PRESSURE



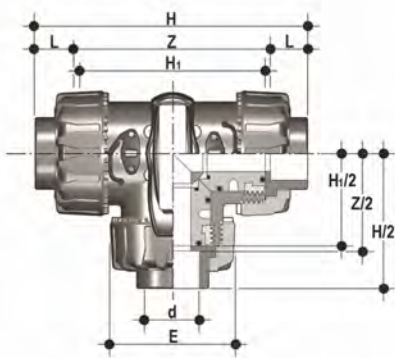
The information in this leaflet is provided in good faith. No liability will be accepted concerning technical data that is not directly covered by recognised international standards. FIP reserves the right to carry out any modification. Products must be installed and maintained by qualified personnel.

DIMENSIONS



Dimensions shared by all versions

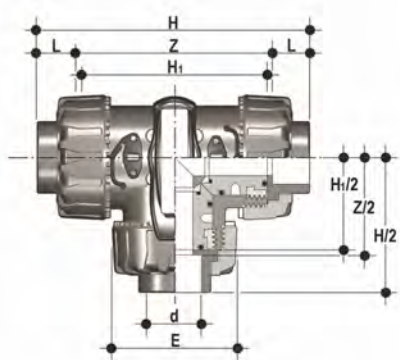
d	DN	B	B ₁	C	C ₁
16	10	54	29	67	40
20	15	54	29	67	40
25	20	65	34,5	85	49
32	25	69,5	39	85	49
40	32	82,5	46	108	64
50	40	89	52	108	64
63	50	108	62	134	76



TKDIC

DUAL BLOCK® 3-way ball valve with metric plain socket ends for solvent welding, T bore

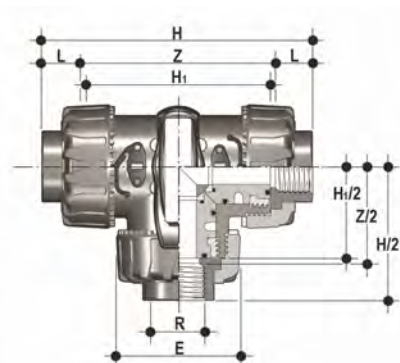
d	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
16	10	16	54	118	80	14	90	310	TKDICO16E	TKDICO16F
20	15	16	54	118	80	16	86	310	TKDICO20E	TKDICO20F
25	20	16	65	145	100	19	107	550	TKDICO25E	TKDICO25F
32	25	16	73	160	110	22	116	790	TKDICO32E	TKDICO32F
40	32	16	86	188.5	131	26	136.5	1275	TKDICO40E	TKDICO40F
50	40	16	98	219	148	31	157	1660	TKDICO50E	TKDICO50F
63	50	16	122	266.5	179	38	190.5	2800	TKDICO63E	TKDICO63F



LKDIC

DUAL BLOCK® 3-way ball valve with metric plain socket ends for solvent welding, L bore.

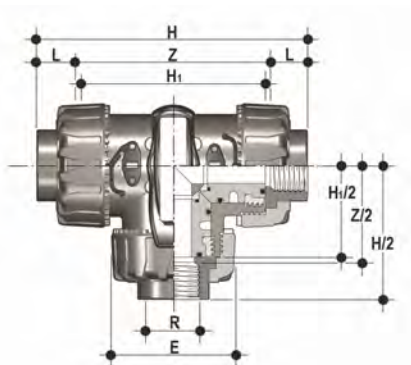
d	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
16	10	16	54	118	80	14	90	310	LKDIC016E	LKDIC016F
20	15	16	54	118	80	16	86	310	LKDIC020E	LKDIC020F
25	20	16	65	145	100	19	107	550	LKDIC025E	LKDIC025F
32	25	16	73	160	110	22	116	790	LKDIC032E	LKDIC032F
40	32	16	86	188.5	131	26	136.5	1275	LKDIC040E	LKDIC040F
50	40	16	98	219	148	31	157	1660	LKDIC050E	LKDIC050F
63	50	16	122	266.5	179	38	190.5	2800	LKDIC063E	LKDIC063F



TKDFC

Dual Block® 3-way ball valve with BSP threaded female ends, T-port ball.

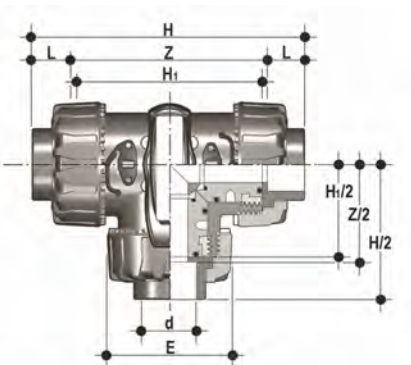
R	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
1/2"	15	16	54	126	80	18	90,4	310	TKDFC012E	TKDFC012F
3/4"	20	16	65	146,4	100	18	110,4	550	TKDFC034E	TKDFC034F
1"	25	16	73	166,6	110	22,6	121,4	790	TKDFC100E	TKDFC100F
1" 1/4	32	16	86	195,8	131	25,1	145,6	1275	TKDFC114E	TKDFC114F
1" 1/2	40	16	98	211,4	148	24,7	162	1660	TKDFC112E	TKDFC112F
2"	50	16	122	253,8	179	29,6	194,6	2800	TKDFC200E	TKDFC200F



LKDFC

Dual Block® 3-way ball valve with BSP threaded female ends, L-port ball.

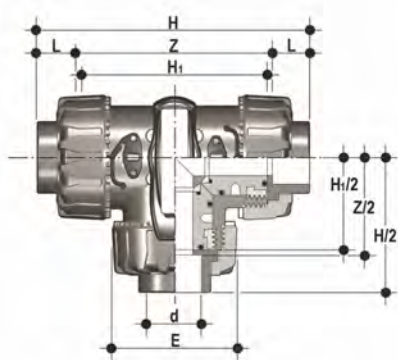
R	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
1/2"	15	16	54	126	80	18	90,4	310	LKDFC012E	LKDFC012F
3/4"	20	16	65	146,4	100	18	110,4	550	LKDFC034E	LKDFC034F
1"	25	16	73	166,6	110	22,6	121,4	790	LKDFC100E	LKDFC100F
1" 1/4	32	16	86	195,8	131	25,1	145,6	1275	LKDFC114E	LKDFC114F
1" 1/2	40	16	98	211,4	148	24,7	162	1660	LKDFC112E	LKDFC112F
2"	50	16	122	253,8	179	29,6	194,6	2800	LKDFC200E	LKDFC200F



TKDAC

DUAL BLOCK® 3-way ball valve with female ends for solvent welding, ASTM series, T-port ball.

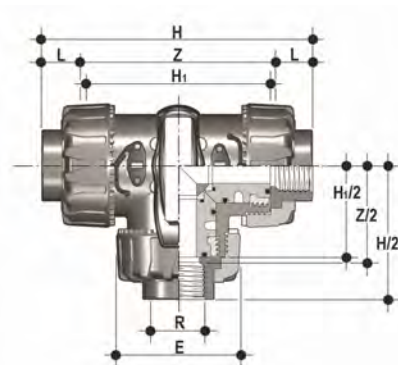
d	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
1/2"	15	16	54	132,2	80	23	87,2	310	TKDAC012E	TKDAC012F
3/4"	20	16	65	159,2	100	25,5	108,2	550	TKDAC034E	TKDAC034F
1"	25	16	73	174	110	28,7	116,6	790	TKDAC100E	TKDAC100F
1" 1/4	32	16	86	205	131	32	141	1275	TKDAC114E	TKDAC114F
1" 1/2	40	16	98	227,6	148	35	157,6	1660	TKDAC112E	TKDAC112F
2"	50	16	122	267	179	38,2	190,6	2800	TKDAC200E	TKDAC200F



LKDAC

DUAL BLOCK® 3-way ball valve with female ends for solvent welding, ASTM series, L-port ball.

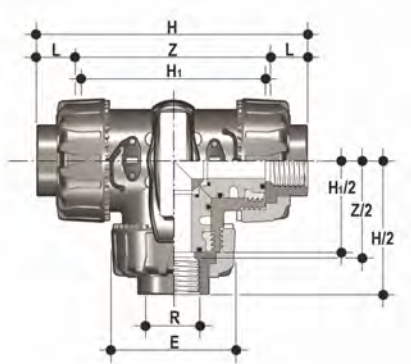
d	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
1/2"	15	16	54	132,2	80	23	87,2	310	LKDAC012E	LKDAC012F
3/4"	20	16	65	159,2	100	25,5	108,2	550	LKDAC034E	LKDAC034F
1"	25	16	73	174	110	28,7	116,6	790	LKDAC100E	LKDAC100F
1" 1/4	32	16	86	205	131	32	141	1275	LKDAC114E	LKDAC114F
1" 1/2	40	16	98	227,6	148	35	157,6	1660	LKDAC112E	LKDAC112F
2"	50	16	122	267	179	38,2	190,6	2800	LKDAC200E	LKDAC200F



TKDNC

DUAL BLOCK® 3-way ball valve with female ends, NPT thread, T-port ball.

R	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
1/2"	15	16	54	126	80	18	90,4	310	TKDNC012E	TKDNC012F
3/4"	20	16	65	146,4	100	18	110,4	550	TKDNC034E	TKDNC034F
1"	25	16	73	166,6	110	22,6	121,4	790	TKDNC100E	TKDNC100F
1" 1/4	32	16	86	195,8	131	25,1	145,6	1275	TKDNC114E	TKDNC114F
1" 1/2	40	16	98	211,4	148	24,7	162	1660	TKDNC112E	TKDNC112F
2"	50	16	122	253,8	179	29,6	194,6	2800	TKDNC200E	TKDNC200F



LKDNC

DUAL BLOCK® 3-way ball valve with female ends, NPT thread, L-port ball.

R	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
1/2"	15	16	54	126	80	18	90.4	310	LKDNC012E	LKDNC012F
3/4"	20	16	65	146.4	100	18	110.4	550	LKDNC034E	LKDNC034F
1"	25	16	73	166.6	110	22.6	121.4	790	LKDNC100E	LKDNC100F
1" 1/4	32	16	86	195.8	131	25.1	145.6	1275	LKDNC114E	LKDNC114F
1" 1/2	40	16	98	211.4	148	24.7	162	1660	LKDNC112E	LKDNC112F
2"	50	16	122	253.8	179	29.6	194.6	2800	LKDNC200E	LKDNC200F