

 Aliaxis



TKD DN 15÷50

PP-H

DUAL BLOCK® 3-WAY BALL VALVE

TKD DN 15÷50

FIP has developed a TKD 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.

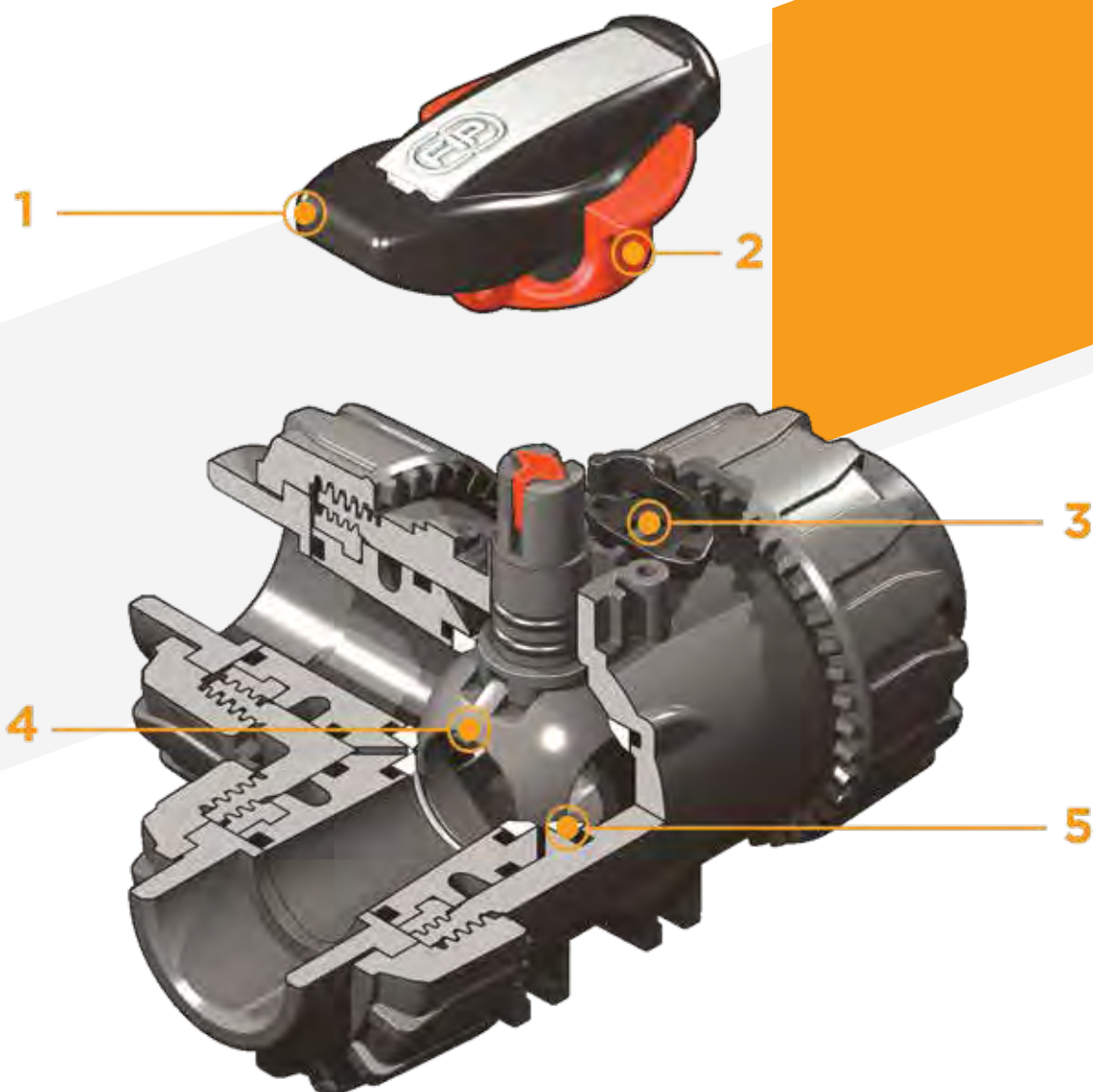


DUAL BLOCK® 3-WAY BALL VALVE

- Connection system for weld and threaded joints
- Patented **SEAT STOP®** ball seat 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
- PN10 **True Union valve body** made for PP-H 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 groove ball connection, equipped with **optical position indicator** for correct handle installation
- **Integrated bracket** 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)
- 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 lockable union nuts
Size range	DN 15 ÷ 50
Nominal pressure	PN 10 with water at 20° C
Temperature range	0 °C ÷ 100 °C
Coupling standards	Welding: EN ISO 15494 Can be coupled to pipes according to EN ISO 15494 Thread: ISO 228-1, DIN 2999
Reference standards	Construction criteria: EN ISO 16135, EN ISO 15494 Test methods and requirements: ISO 9393 Installation criteria: DVS 2202-1, DVS 2207-11, DVS 2208-1, UNI 11318 Actuator couplings: ISO 5211
Valve material	PP-H
Seal material	EPDM, FKM (standard size O-Rings); 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

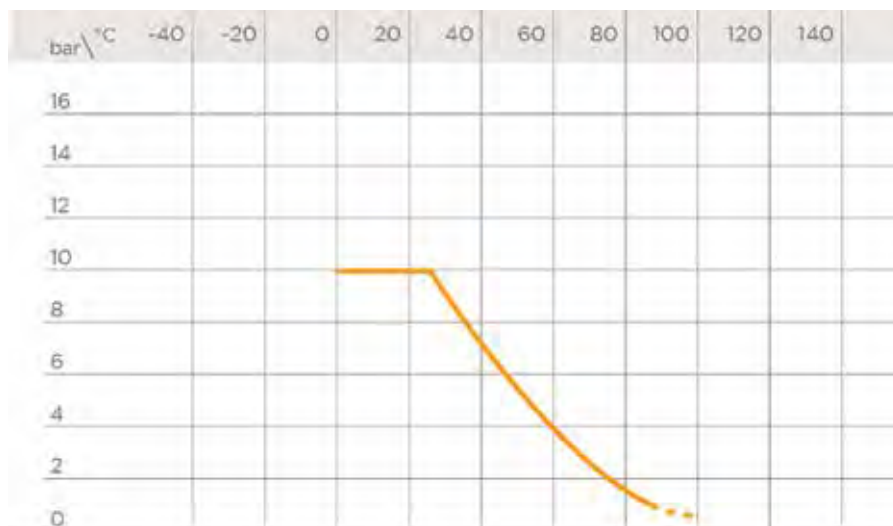
4 **Ball shutter** high surface finish with floating type full passage with **T or L port**

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

TECHNICAL DATA

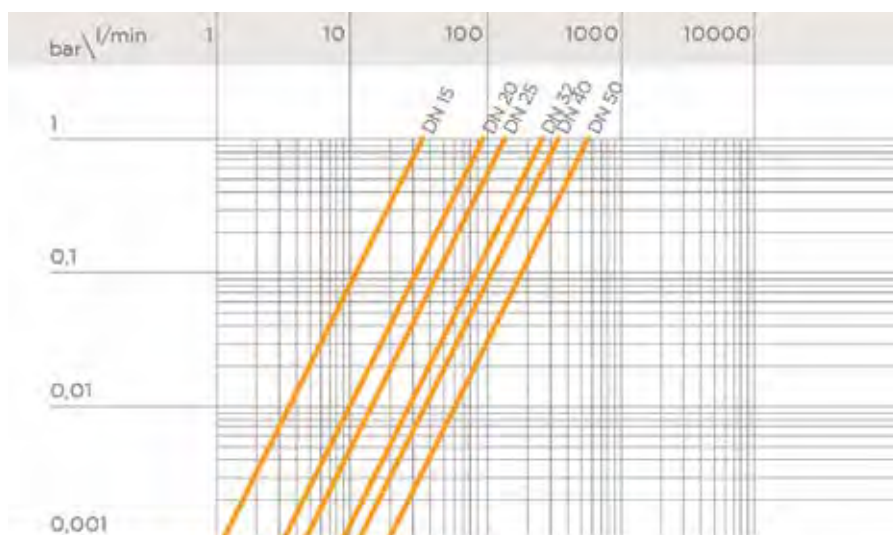
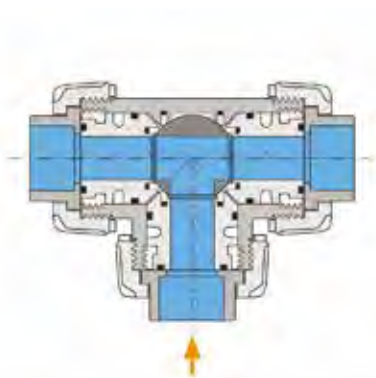
PRESSURE VARIATION ACCORDING TO TEMPERATURE

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).

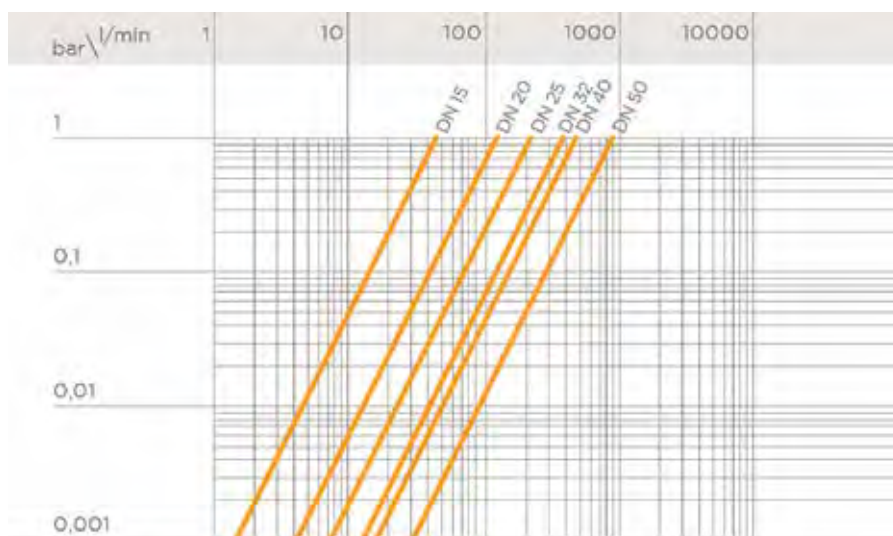
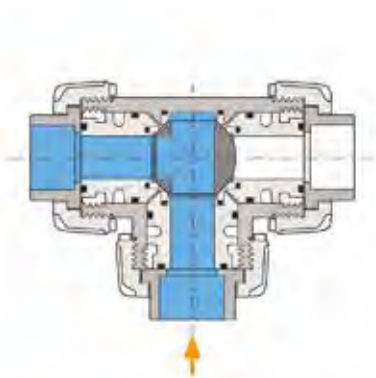


PRESSURE DROP GRAPH AND WORK POSITIONS

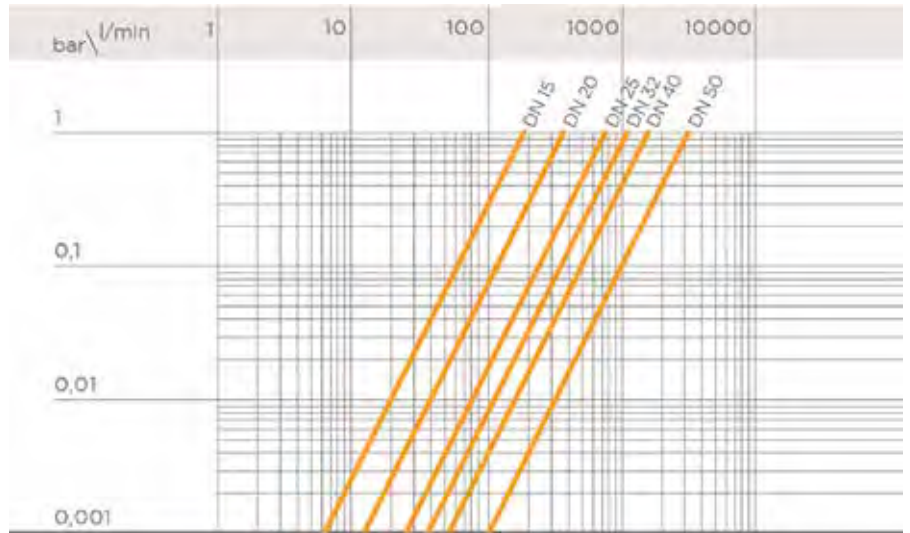
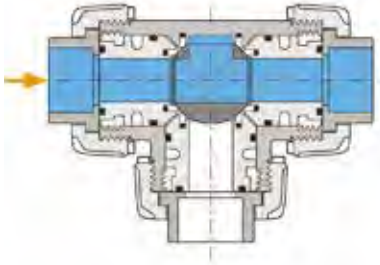
A - T-port ball valve:
0° - Mixing



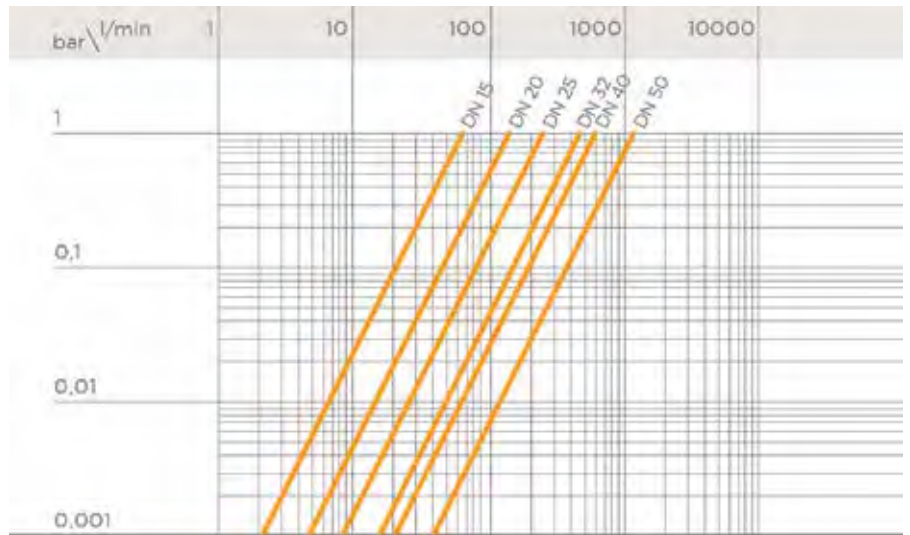
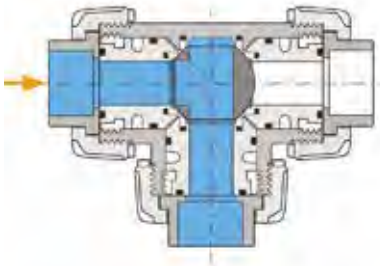
B - T-port ball valve:
90° - Diverting



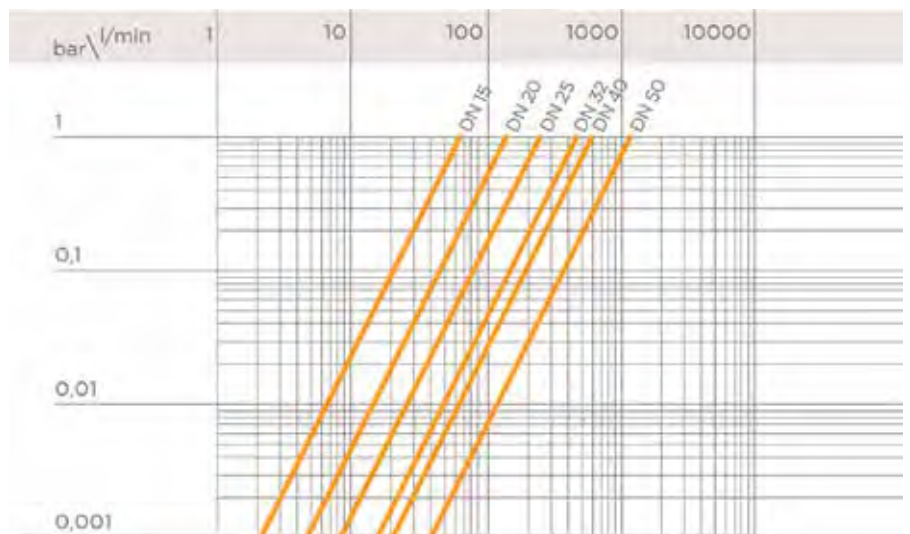
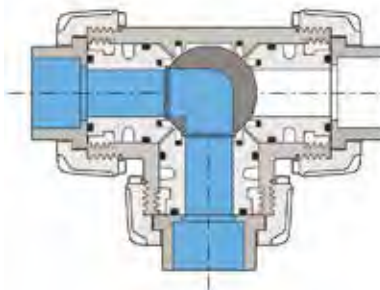
C - T-port ball valve:
180° - Branch closed/direct flow



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



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

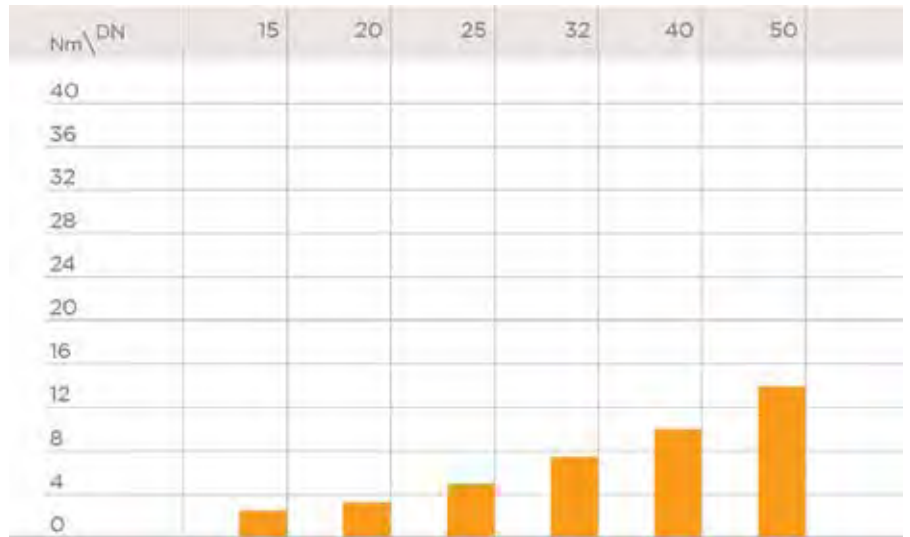


K_v100 FLOW COEFFICIENT

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 Δp= 1 bar pressure drop at a certain valve position. The Kv100 values shown in the table are calculated with the valve completely open.

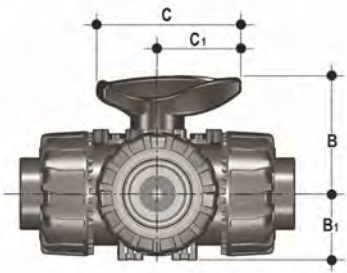
DN	10	15	20	25	32	40	50
A	25	35	95	140	270	330	620
B	37	55	135	205	390	475	900
C	78	195	380	760	1050	1700	3200
D	40	65	145	245	460	600	1200
E	48	73	150	265	475	620	1220

OPERATING TORQUE AT MAXIMUM WORKING PRESSURE



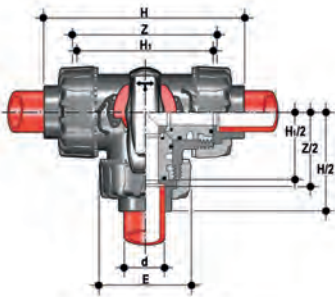
The information in this leaflet is provided in good faith. No liability will be accepted concerning technical data that is not directly covered by recognised international standards. FIP reserves the right to carry out any modification. Products must be installed and maintained by qualified personnel.

DIMENSIONS



Dimensions shared by all versions

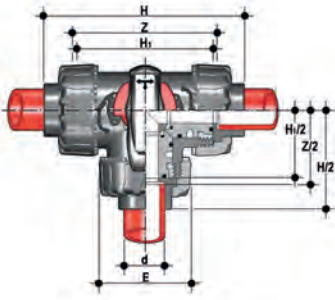
d	DN	B	B ₁	C	C ₁
20	15	54	29	67	40
25	20	65	35	85	49
32	25	70	39	85	49
40	32	83	46	108	64
50	40	89	52	108	64
63	50	108	62	134	76



TKDIM

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

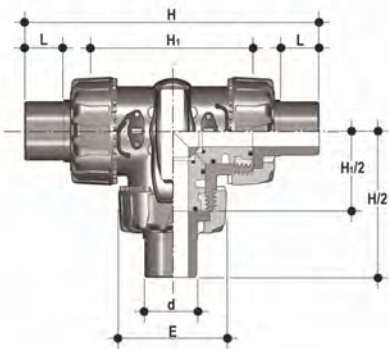
d	DN	PN	E	H	H ₁	Z	g	EPDM code	FKM code
20	15	10	54	117	80	88	195	TKDIM020E	TKDIM020F
25	20	10	65	144	100	112	350	TKDIM025E	TKDIM025F
32	25	10	73	158	110	122	505	TKDIM032E	TKDIM032F
40	32	10	86	184	131	143	820	TKDIM040E	TKDIM040F
50	40	10	98	219	148	172	1070	TKDIM050E	TKDIM050F
63	50	10	122	267	179	212	1795	TKDIM063E	TKDIM063F



LKDIM

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

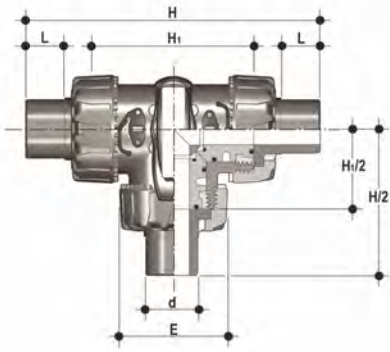
d	DN	PN	E	H	H ₁	Z	g	EPDM code	FKM code
20	15	10	54	117	80	88	195	LKDIM020E	LKDIM020F
25	20	10	65	144	100	112	350	LKDIM025E	LKDIM025F
32	25	10	73	158	110	122	505	LKDIM032E	LKDIM032F
40	32	10	86	184	131	143	820	LKDIM040E	LKDIM040F
50	40	10	98	219	148	172	1070	LKDIM050E	LKDIM050F
63	50	10	122	267	179	212	1795	LKDIM063E	LKDIM063F



TKDDM

DUAL BLOCK® 3-way ball valve with male ends for socket welding, metric series, T-port ball.

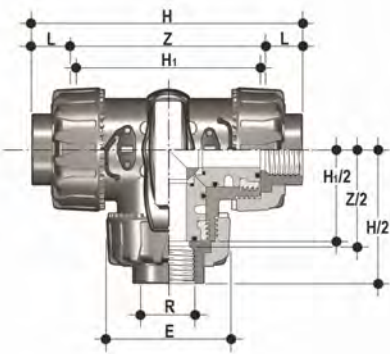
d	DN	PN	E	H	H ₁	L	g	EPDM code	FKM code
20	15	10	54	140	80	16	205	TKDDM020E	TKDDM020F
25	20	10	65	175	100	18	360	TKDDM025E	TKDDM025F
32	25	10	73	188	110	20	515	TKDDM032E	TKDDM032F
40	32	10	86	220	131	22	835	TKDDM040E	TKDDM040F
50	40	10	98	251	148	23	1100	TKDDM050E	TKDDM050F
63	50	10	122	294	179	29	1830	TKDDM063E	TKDDM063F



LKDDM

DUAL BLOCK® 3-way ball valve with male ends for socket welding, metric series, L-port ball.

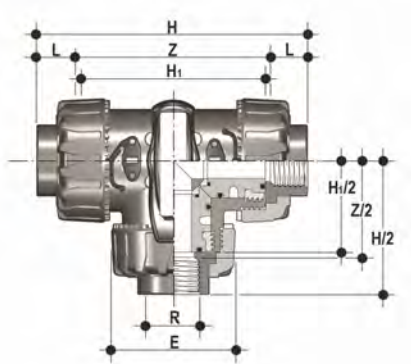
d	DN	PN	E	H	H ₁	L	g	EPDM code	FKM code
20	15	10	54	140	80	16	205	LKDDM020E	LKDDM020F
25	20	10	65	175	100	18	360	LKDDM025E	LKDDM025F
32	25	10	73	188	110	20	515	LKDDM032E	LKDDM032F
40	32	10	86	220	131	22	835	LKDDM040E	LKDDM040F
50	40	10	98	251	148	23	1100	LKDDM050E	LKDDM050F
63	50	10	122	294	179	29	1830	LKDDM063E	LKDDM063F



TKDFM

DUAL BLOCK® 3-way ball valve with BS parallel socket threaded ends, T bore.

R	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
1/2"	15	10	54	117	80	15	87	195	TKDFM012E	TKDFM012F
3/4"	20	10	65	143	100	16	114	350	TKDFM034E	TKDFM034F
1"	25	10	73	157	110	19	120	505	TKDFM100E	TKDFM100F
1" 1/4	32	10	86	185	131	21	140	820	TKDFM114E	TKDFM114F
1" 1/2	40	10	98	217	148	21	172	1070	TKDFM112E	TKDFM112F
2"	50	10	122	266	179	26	211	1795	TKDFM200E	TKDFM200F



LKDFM

DUAL BLOCK® 3-way ball valve with BS parallel socket threaded ends, L bore.

R	DN	PN	E	H	H ₁	L	Z	g	EPDM code	FKM code
1/2"	15	10	54	117	80	15	87	195	LKDFM012E	LKDFM012F
3/4"	20	10	65	143	100	16	114	350	LKDFM034E	LKDFM034F
1"	25	10	73	157	110	19	120	505	LKDFM100E	LKDFM100F
1" 1/4	32	10	86	185	131	21	140	820	LKDFM114E	LKDFM114F
1" 1/2	40	10	98	217	148	21	172	1070	LKDFM112E	LKDFM112F
2"	50	10	122	266	179	26	211	1795	LKDFM200E	LKDFM200F