



VKR DualBlock® Metering Ball Valve (DN10 - DN50)

The VKR DualBlock® Metering Ball Valve combines VKD Ball Valve reliability, with a new accurate flow regulation function, suitable for a wide range of industrial applications.

- Size Range: $\frac{3}{8}$ " / d16mm up to 2" / d53mm
- Pressure Rating: Maximum working pressure: 16 bar @ 20°C
- Patented Ball Design: Providing linear flow regulation throughout the range of operation, with low pressure loss
- Fitted with a graduated positioning indicator at 5° intervals, for accurate reading and quick adjustment
- Patented **DualBlock® System**: The DualBlock addition prevents the locking nuts working loose even under the most extreme operating conditions: i.e. vibration or thermal expansion
- Patented **SeatStop®** Design: Allowing micro adjustments to be made to the ball seats and 'take up' of axial pipe loads, which can be done effectively without the need to drain the system.
- Easily Removable Valve Body: Allowing easy access when changing valve seals and ball seats without any requirement for additional tooling
- The pipeline downstream of the valve can be disconnected with the valve in the closed position eliminating any leakages
- VKD Style handle: Ergonomically designed handle with removable tool to tighten union nuts and adjust the ball seat carrier as and when required
- Possibility to fit an electric positioning actuator with a **Powerquick®** mounting kit with standard drillings (ISO 5211 F03, F04, F05, F07) see P207.
- For more information, please visit our website www.durapipe.co.uk

Legend

d	Nominal outside diameter of the pipe in mm
DN	Nominal internal diameter in mm
R	Nominal size of threads in inches
PN	Nominal pressure in bar (max. working pressure at 20°C)
g	Weight in grams
U	Number of holes
s	Wall thickness (mm)
SDR	Standard dimension ratio = d/s
PVC-U	Unplasticised Polyvinyl chloride
PVC-C	Polyvinyl chloride chlorinated
HIPVC	High impact PVC
EPDM	Ethylene Propylene rubber
FPM (FKM)	Vinylidene fluoride rubber
PTFE	Polytetrafluoroethylene
PE	Polyethylene
SP	Flange Thickness





Dimensions and Standards

Imperial

The Imperial System is manufactured in accordance With the relevant British Standards: BS 5392 fittings

Metric

The Metric System is manufactured generally in Accordance with the relevant International Standards: ISO 15493, KIWA 49 and 549, DIN 8062 and 8063

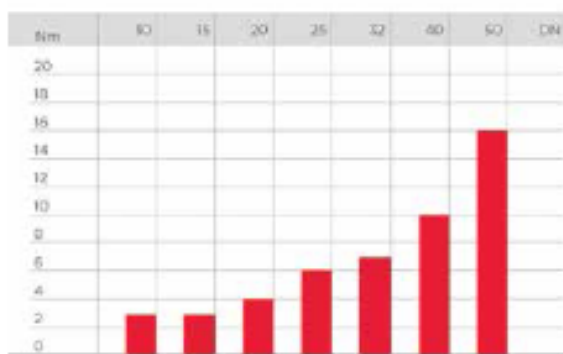
BSP Thread

Threaded fittings conform to the requirements of BS 21/DIN 2999/ISO7. Socket dimensions of metric fittings for solvent welding comply with ISO/DIS 727-1.

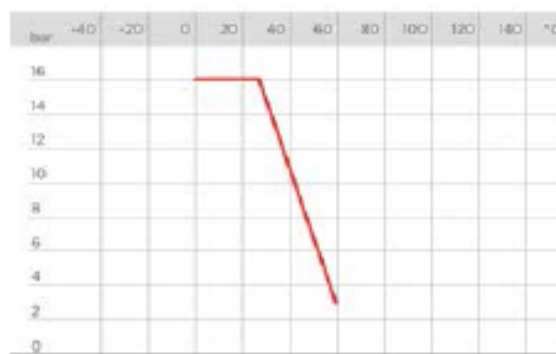
Interchangeability

Components in the imperial and metric ranges are not interchangeable

Technical Data

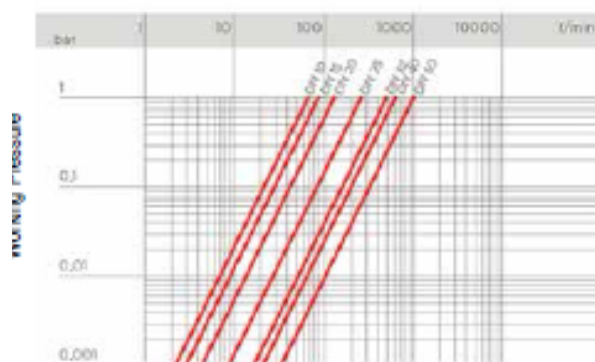


Torque at maximum working pressure @ 16Bar

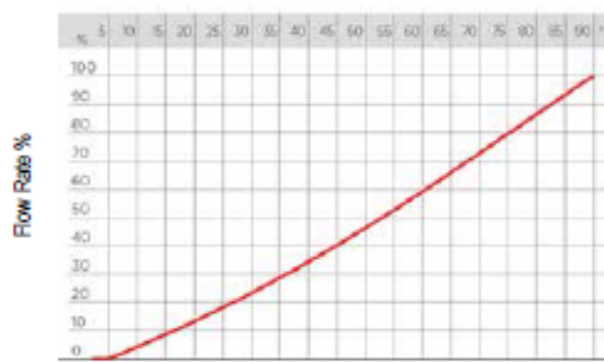


Working Temperature

Pressure/temperature rating for water and harmless fluids to which the material is RESISTANT. In other cases a reduction of the PN is required. (25 years with safety factor).



Relative Flow Chart, Flow Opening



Valve Opening Angle

DN	15	20	25	32	40	50
k_{v100}	88	135	256	478	592	1068

Flow coefficient k_{v100}

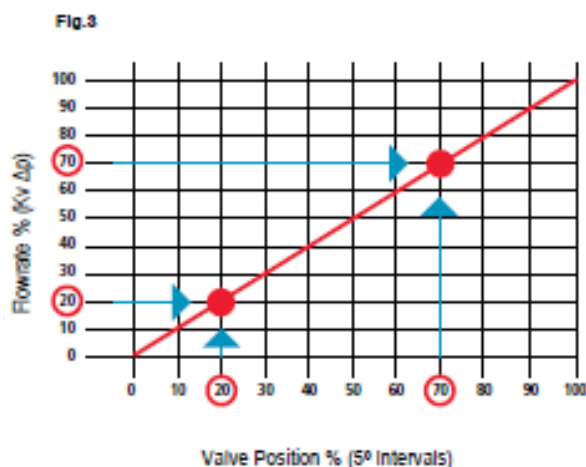
k_{v100} is the number of litres per minute of water at a temperature of 20°C that will flow through a valve with a one bar pressure differential at a specified rate. The k_{v100} values shown in the table are calculated with the valve fully open.



Metering Flow Addition

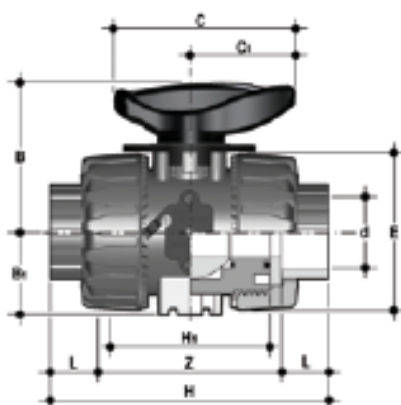
The **VKR Metering Ball Valve** combines VKD Ball Valve reliability, with a new accurate flow regulation function, Suitable for a wide range of industrial applications.

- The VKR features the innovative Metering Control Indicator (**FIG 1**). The indicator can be used to set flow rate at 5° intervals providing greater measure of flow control
- The patented "fin-shaped" ball design (**FIG 2**) helps provide market leading linear flow regulation throughout the range of operation and guarantees minimal pressure loss
- The VKR Metering Ball Valve is unique in its ability to provide excellent flow regulation compared with that of a standard ball, diaphragm valve or other metering ball valves currently on the market. Where the flow is usually greater or smaller at the point of open or close, the VKR has provides the excellent flow regulation throughout the full operating cycle (**FIG 3**)





BS Series Female Ends



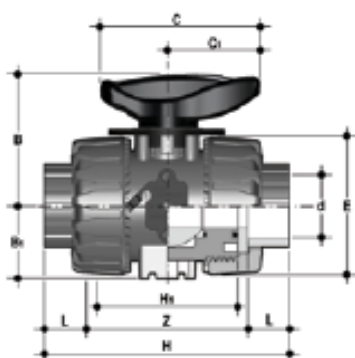
VKRLV **PVC-U**
VKRLA **ABS**

VKR Metering Ball Valve – BS series female ends for solvent welding

d	DN	PN	L	Z	H	H ₁	E	B	B ₁	C	C ₁
3/8	10	16	16.5	70	103	65	54	54	29	67	40
1/2	15	16	16.5	70	103	65	54	54	29	67	40
3/4	20	16	19	77	115	70	65	65	34.5	85	49
1	25	16	22.5	83	128	78	73	70	39	85	49
1 1/4	32	16	26	94	146	88	86	83	46	108	64
1 1/2	40	16	30	104	164	91	98	89	52	108	64
2	50	16	36	127	199	111	122	108	62	134	76

d	PVC-U			ABS		
	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code
3/8	205	H0 MBE 101	H0 MBF 101	205	H0 MBA 101	H0 MBB 101
1/2	205	H0 MBE 102	H0 MBF 102	205	H0 MBA 102	H0 MBB 102
3/4	335	H0 MBE 103	H0 MBF 103	335	H0 MBA 103	H0 MBB 103
1	433	H0 MBE 104	H0 MBF 104	433	H0 MBA 104	H0 MBB 104
1 1/4	703	H0 MBE 105	H0 MBF 105	703	H0 MBA 105	H0 MBB 105
1 1/2	925	H0 MBE 106	H0 MBF 106	925	H0 MBA 106	H0 MBB 106
2	1577	H0 MBE 107	H0 MBF 107	1577	H0 MBA 107	H0 MBB 107

Metric Series Female Ends

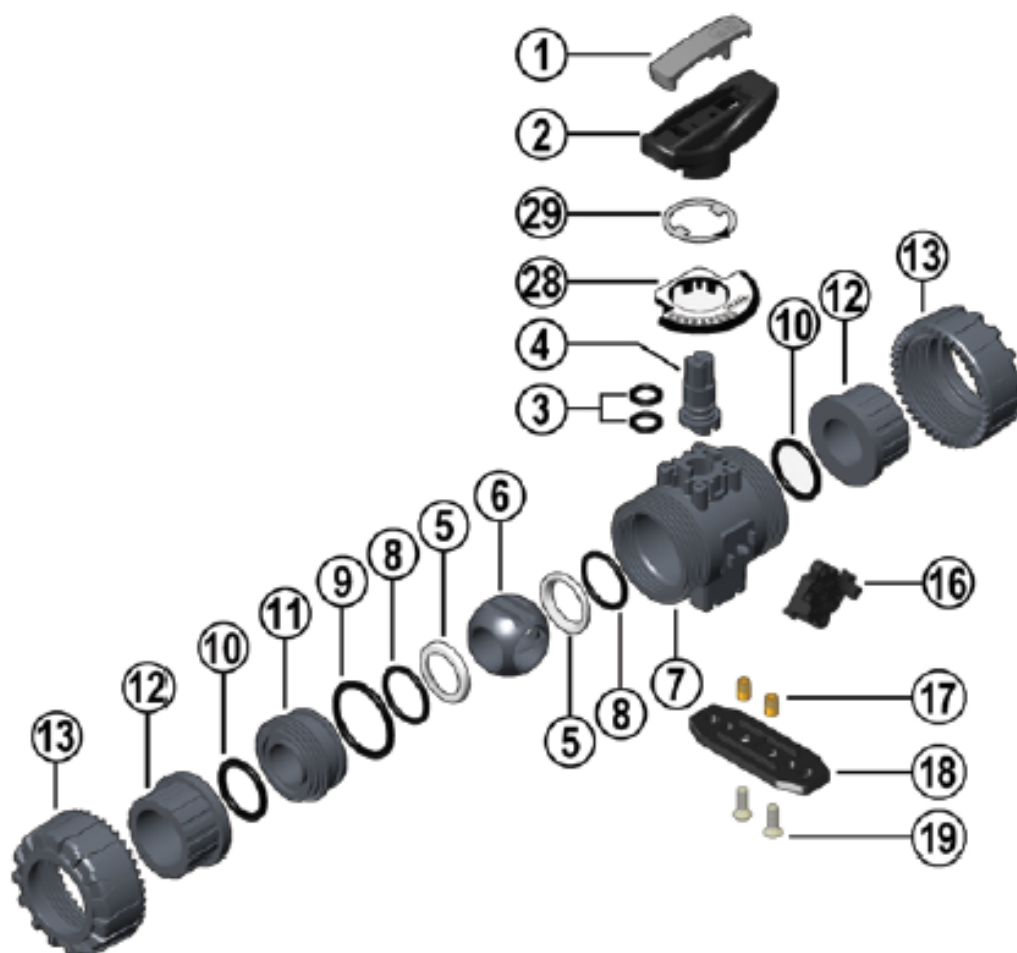


VKRIV **PVC-U**
VKRIA **ABS**

VKR Metering Ball Valve – Metric female ends for solvent welding

d	DN	PN	L	Z	H	H ₁	E	B	B ₁	C	C ₁
16	10	16	16	71	103	65	54	54	29	67	40
20	15	16	16	71	103	65	54	54	29	67	40
25	20	16	19	77	115	70	65	65	34.5	85	49
32	25	16	22	84	128	78	73	70	39	85	49
40	32	16	26	94	146	88	86	83	46	108	64
50	40	16	31	102	164	91	98	89	52	108	64
63	50	16	38	123	199	111	122	108	62	134	76

d	PVC-U			ABS		
	gms	EPDM Code	FPM Code	gms	EPDM Code	FPM Code
16	215	H0 MBE 305	H0 MBF 305	215	H0 MBA 305	H0 MBB 305
20	215	H0 MBE 306	H0 MBF 306	215	H0 MBA 306	H0 MBB 306
25	330	H0 MBE 307	H0 MBF 307	330	H0 MBA 307	H0 MBB 307
32	438	H0 MBE 308	H0 MBF 308	438	H0 MBA 308	H0 MBB 308
40	493	H0 MBE 309	H0 MBF 309	493	H0 MBA 309	H0 MBB 309
50	925	H0 MBE 310	H0 MBF 310	925	H0 MBA 310	H0 MBB 310
63	1577	H0 MBE 311	H0 MBF 311	1577	H0 MBA 311	H0 MBB 311



Position	Components	Material
1	Handle Insert Tool	PVC-U
2	Handle	HPVC
3*	Stem O-ring	EPDM/FPM
4	Stem	Valve Material
5*	Ball Seat	PTFE
6	Ball	Valve Material
7	Body	Valve Material
8*	Ball Seat O-ring	EPDM/FPM
9*	Carrier O-ring	EPDM/FPM
10	Socket Seal O-ring	EPDM/FPM
11	Ball Seat Carrier	Valve Material
12*	End Connector	Valve Material
13	Union Nuts	Valve Material
16*	DualBlock®	POM
17**	Threaded Insert	Stainless Steel/Brass
18**	Spacer	PP-GR
19**	Screw	Stainless steel
28	Metering Plate	POM - PVC
29	Metering Indicator	PVC-U

*Spare Parts **Accessories