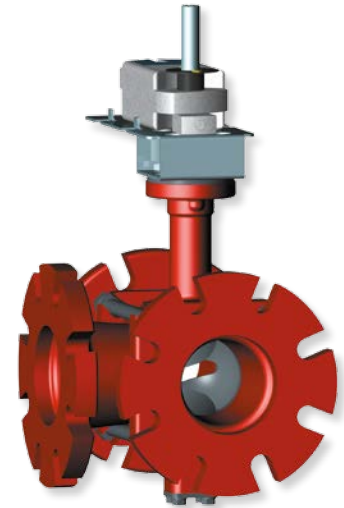


FlowCon Unimizer 3-way 100-150mm

Actuated Control Valves



SPECIFICATIONS

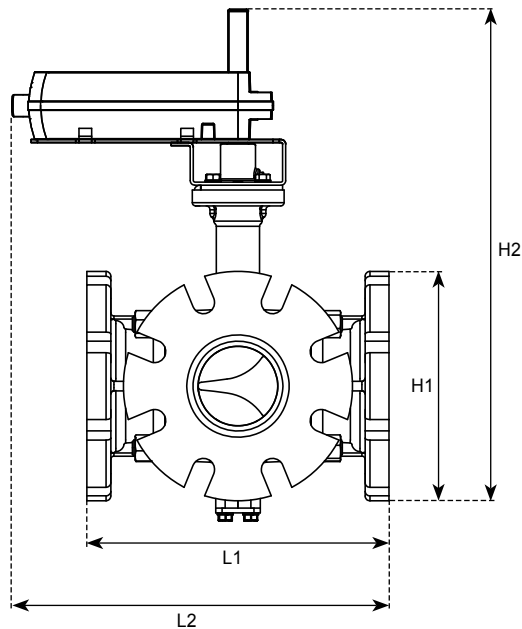
Pressure rating:	1600 kPa / 240 psi
Temperature rating, media:	-20°C to +120°C / -4°F to +248°F
Temperature rating, ambient:	-20°C to +50°C / -4°F to +122°F
Media:	Chilled water, hot water (Fluid grp. 2) For higher glycol content than 50% or additional fluids, please consult factory
Material:	
- Body:	Cast iron ASTM A395, 60-40-18
- End connections:	EN 1092-1 flanges
- Stem:	Stainless steel
- Stem seals:	EPDM o-rings
- Ball valve:	Stainless steel
- Ball seals:	Teflon seals
Angle of rotation:	0-90°
Leakage:	Bypass port has IEC 60534-1 Class III Leakage rate when valve is in straight through position ¹

Note 1: Bypass flow leakage rate based on largest Kv of the ball

DIMENSIONS AND WEIGHTS (NOMINAL) (measured in mm unless noted)

Model no.	Size (mm)	Size (")	Kv (m ³ /h)	L1	L2 ²	H1	H2	D depth (not shown)	Weight ³ (kgs)
F3WR.J_	100	4	78 102 131 170 219 282	302	363	229	493	267	34.0
F3WR.K_	125	5	124 159 207 266 345	353	389	254	516	305	40.8
F3WR.L_	150	6	179 231 298 380 497 560	404	414	279	544	340	47.6

Note 2: L2 is maximum length, which is measured from end flange or mounting plate, whichever extends farther.
 Note 3: The weight is without actuator.



FLANGE MATCH UNIMIZER

Model no.	Unimizer DN (mm)	EN 1092-1:2007 flanges			
		PN 10	PN 16	PN 25	PN 40
F3WR.J_	100	✓	✓	✓	✓
F3WR.K_	125	✓	✓	✓	✓
F3WR.L_	150	✓	✓	✓	✓

MODEL NUMBER SELECTION

F3WR L . S . M

Insert ball size:

J=100mm, 4" **K**=125mm, 5" **L**=150mm, 6"

Insert a Kv value (**A, B, C, D, E** or **F**) (see flow rate table below):

Insert mounting kit number:

1=FlowCon
4=Honeywell
5=Siemens

Insert power supply, actuator:

0=if no actuator required
10=24V 2-position or 3-point floating (without end switches) (TT000)
20=240V 2-position or 3-point floating (without end switches) (TT300)
40=24V 2-position or 3-point floating incl. auxiliary switches (TT020)
50=240V 2-position or 3-point floating incl. auxiliary switches (TM300)
60=24V modulating incl. auxiliary switches (TM000)

T=Optional aluminum hanging ID tag

Example: F3WR.J.C.L.S.M.1.10.T=Unimizer 3-way 100mm (Kv equal to 131 m³/h) with FlowCon mounting kit, 24V 2-position actuator and ID-tag.

Kv SELECTION AND FLOW RATE TABLE (l/h)

Line size (mm)	Model no	Close OFF ΔP^4 (bar)	Flow rate (l/h) differential pressure (kPa) across valve												Kv ⁵ m ³ /h	Kv for model no. selection
			5	10	15	20	25	30	40	50	60	70	80	90		
100	F3WR.J.A_	5	17350	24536	30050	34699	38795	42498	49072	54864	60101	64916	69399	73608	78	A
	F3WR.J.B_		22748	32170	39400	45495	50865	55720	64340	71934	78800	85113	90990	96510	102	B
	F3WR.J.C_		29299	41435	50748	58598	65515	71768	82871	92652	101495	109628	117197	124306	131	C
	F3WR.J.D_		37975	53705	65775	75950	84915	93020	107410	120088	131550	142090	151901	161115	170	D
	F3WR.J.E_		48970	69254	84818	97940	109500	119951	138508	154856	169637	183229	195880	207762 ⁶	219	E
	F3WR.J.F_		63035	89145	109179	126070	140950	154403	178289	199333	218359 ⁶	235854 ⁶	252139 ⁶	-	282	F
125	F3WR.K.A_	5	27759	39257	48079	55517	62070	67994	78513	87780	96158	103863	111034	117770	124	A
	F3WR.K.B_		35665	50438	61774	71331	79750	87362	100877	112784	123548	133447	142661	151315	159	B
	F3WR.K.C_		46264	65428	80132	92528	103450	113324	130855	146300	160264	173105	185057	196283	207	C
	F3WR.K.D_		59569	84243	103176	119138	133200	145913	168486	188373	206353 ⁶	222886 ⁶	238275 ⁶	-	266	D
	F3WR.K.E_		77106	109045	133552	154213	172415	188871	218090 ⁶	243832 ⁶	267104 ⁶	288505 ⁶	308425 ⁶	-	345	E
150	F3WR.L.A_	5	40093	56700	69443	80185	89650	98207	113399	126784	138885	150013	160371	170099	179	A
	F3WR.L.B_		51653	73049	89466	103306	115500	126524	146097	163342	178932	193268	206613 ⁶	219146 ⁶	231	B
	F3WR.L.C_		66702	94331	115531	133404	149150	163386	188661	210930 ⁶	231062 ⁶	249576 ⁶	266808 ⁶	282992 ⁶	298	C
	F3WR.L.D_		85015	120230	147251	170031	190100	208244 ⁶	240460 ⁶	268842 ⁶	294502 ⁶	318098 ⁶	-	-	380	D
	F3WR.L.E_		111222	157292	192642	222444 ⁶	248700 ⁶	272437 ⁶	-	-	-	-	-	-	497	E
	F3WR.L.F_		125287	177182	217003 ⁶	250574 ⁶	-	-	-	-	-	-	-	-	560	F

Note 4: Close OFF pressures measured with 10 Nm actuator for 100-125mm valves. Close OFF pressures measured with 15 Nm actuator for 150mm valve, up to 159000 l/h. For flowrates greater than 159000 l/h a 22 Nm actuator is recommended.

The "Close OFF pressure" is the maximum allowable pressure drop across the valve body when the valve is fully closed.

Note 5: Kv is defined as the quantity of water in m³/h at 15°C that will flow through a given valve with a pressure drop of 1 bar.

Hence the 1.0 bar pressure differential column in the table above is equivalent to the Kv value.

Note 6: Due to high velocity, flowrates of 204500 l/h and higher may result in water noise.

GENERAL SPECIFICATIONS

1. ACTUATED BALL VALVE

- 1.1. Valve housing shall consist of cast iron ASTM A395, 60-40-18 rated at no less than 1600 kPa at +120°C. Valve housing shall have EN 1092-1 flanges.
- 1.2. Valve ball shall consist of stainless steel with parabolic ports to make flow control equal percentage.
- 1.3. Valve shall have a blow-out proof stem with two EPDM O-Rings.
- 1.4. Valve shall have EPDM O-Rings behind ball seals to allow for a minimum close-off pressure of 480 kPa with 10 Nm of torque for 100mm and 125mm valves. 150mm valves shall require actuators with 15 Nm of torque for flowrates under 159000 l/h.
- 1.5. Bypass Kv shall be 80% of through Kv.

2. VALVE ACTUATOR

- 2.1. Control valve actuator shall be analog modulating (4-20 mA or 2-10 V), floating (tri-state), pulse width modulation, or two position as indicated in the control sequence.
- 2.2. Actuator shall provide minimum torque required for full valve shutoff position.
- 2.3. A 0.9 m cable shall be provided for installation to electrical junction box.
- 2.4. A universal mounting plate shall allow installation of actuators meeting the system electrical requirements and valve torque requirements as provided by FlowCon, Honeywell, Neptronics or Siemens.
The control valve actuator may be furnished by the controls contractor under Section 15970 or by the valve manufacturer.

3. ACCESSORIES

- 3.1. Identification tags shall be available for all valves; tags shall be indelibly marked with Kv, model number and location; tags shall be aluminum.

UPDATES

For latest updates please see www.flowcon.com

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