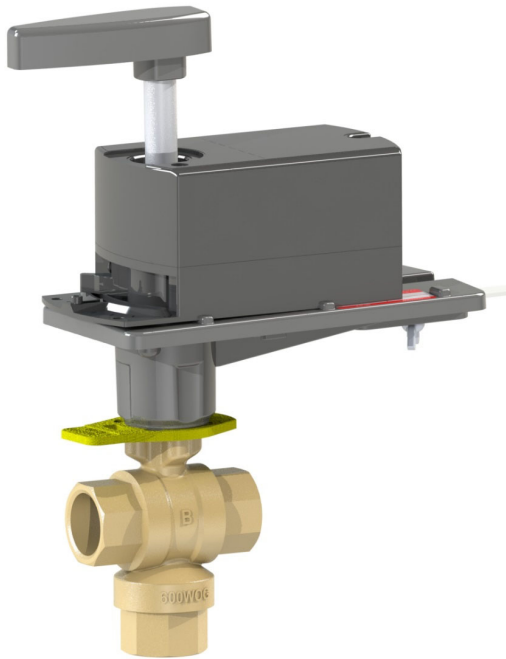
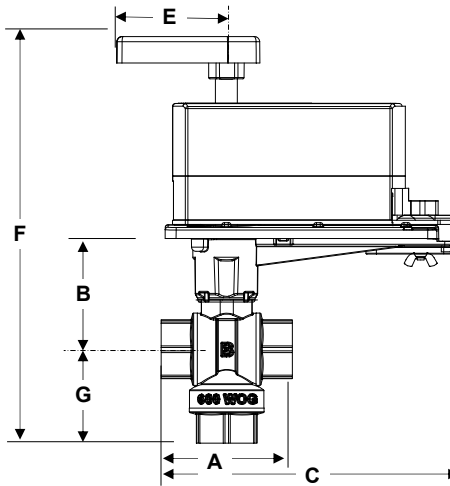


SPECIFICATIONS



- Static Pressure/Temp:** 360 PSI / -4°F to 250°F (600 WOG)
- Service:** Chilled water, hot water, up to 50% Glycol, or contact factory for additional fluids.
- Flow Optimizer:** Glass Filled Polymer
- Body Material:** Forged Brass ASTM B283-06
- End Connections:** Brass – NPT or BSP
- Field Repairable Stem:** Dual Teflon seals and EPDM O-ring
- Stem Seals:** EPDM O-Rings
- Ball Valve:** Nickel-plated brass ball
- Ball Seals:** Teflon Seals with EPDM O-Rings
- Angle of Rotation:** 0-90°
- Installation:** Valve can be installed in mixing or diverting installations.
- Leakage Rate:** A Port: ANSI Class IV; B: Port: Class III

Valves shown are 1/2"-2-1/2".
3" valve has bypass port in Z plane



DIMENSIONS & WEIGHTS (NOMINAL) (measured in inches and lbs unless noted)

All dimensions are for planning purposes only and may change without notice.

SIZE	MODEL NO.	THROUGH Cv	A:LENGTH		B:HEIGHT		C:LENGTH		D:DEPTH (NOT SHOWN)	E: HANDLE	F:HEIGHT		G:HEIGHT		WEIGHT
			FNPT	BSP	FNPT	BSP	FNPT	BSP			FNPT	BSP	FNPT	BSP	
1/2"	UR3A_	0.33, 0.59, 1.0, 2.4, 4.3, 8.0	2.7	2.7	3.4	3.4	7.0	7.0	3.0	2.0	9.5	9.5	2.0	2.0	1.6
3/4"	UR3B_	0.40, 0.66, 1.3, 2.4, 3.8, 7.0, 11.0	2.8	2.8	3.4	3.4	6.5	6.5	3.0	2.0	8.9	8.9	2.0	2.0	1.6
1"	UR3C_	0.40, 0.65, 1.3, 2.3, 3.5, 10.0	2.8	2.8	3.4	3.4	7.3	7.3	3.0	2.0	9.6	9.6	2.1	2.1	1.6
		8.6	3.0	3.0	3.9	3.9	6.8	6.8			9.9	9.9	2.4	2.4	2.3
		4.5, 14.9, 22.3, 30.8	4.3	4.3	4.1	4.1	7.8	7.8			10.9	10.9	3.3	3.3	3.6
1-1/4"	UR3D_	4.1, 8.7, 19.4	3.0	3.0	3.9	3.9	6.8	6.8	3.0	2.0	9.9	9.9	2.4	2.4	3.3
		12.7, 26.8, 34.1	3.6	3.6	4.1	4.1	7.3	7.3			10.4	10.4	2.8	2.8	3.5
1-1/2"	UR3E_	4.0, 8.3, 13.4, 32.0	3.4	3.4	4.1	4.1	7.8	7.8	3.0	2.0	10.9	10.9	2.7	2.7	3.6
		23.5, 61.1	4.0	4.0	4.6	4.6	7.3	7.3			11.1	11.1	3.2	3.2	5.2
2"	UR3F_	23.9, 38.2, 56.7	4.0	4.0	4.6	4.6	7.3	7.3	3.0	2.0	11.1	11.1	3.2	3.2	5.2
		82.6, 108.5	5.0	5.0	5.9	5.9	7.8	7.8			12.4	12.4	3.8	3.8	8.5
2-1/2"	UR3G_	38.1, 74.1, 99.5	5.3	5.3	5.9	5.9	7.8	7.8	3.0	2.0	12.4	12.4	4.1	4.1	9.1
3" ¹	UR3H_	75, 100, 125, 150, 175, 200	9.4	9.4	4.5	N/A ²	10.1	10.1	7.1	2.0	12.3	12.3	2.8	N/A ²	23.0

NOTES

¹ Valve shown is 1/2" to 2-1/2". 3" valve has bypass port in Z plane.

² Not available in 3" size.

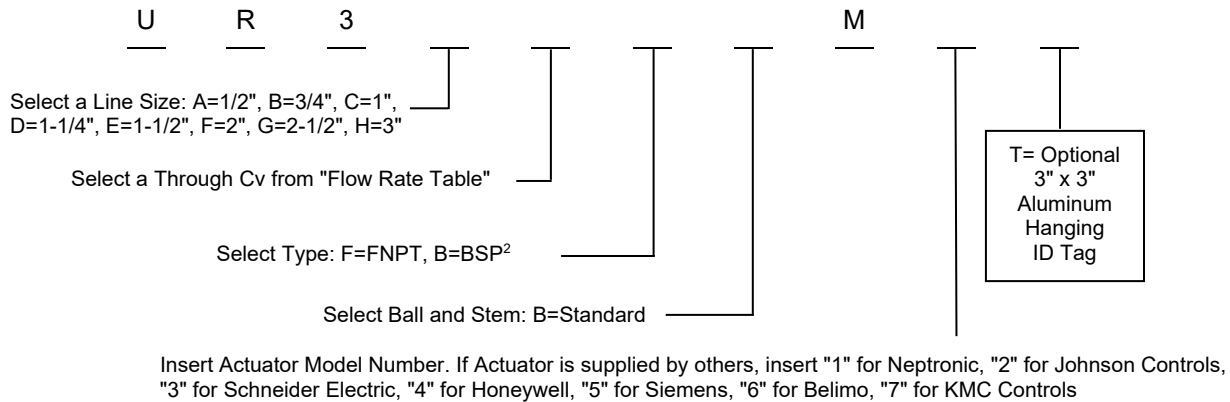
THROUGH Cv SELECTION AND FLOW RATE TABLE (GPM)

LINE SIZE	MODEL NO.	THROUGH Cv	FULL ³ PORT	CLOSE OFF ⁴	FLOWRATE (GPM) @ DIFFERENTIAL PRESSURE (PSI)											
					2-Position HVAC Apps		HVAC Modulating Apps									
					0.5	Cv ⁵	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	7.0	10.0
1/2"	UR3AA	A=0.33		50 PSI	0.2	0.33	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.9	1.0
	UR3AB	B=0.59			0.4	0.59	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.6	1.9
	UR3AC	C=1.0			0.7	1.0	1.2	1.4	1.6	1.7	1.9	2.0	2.1	2.2	2.6	3.2
	UR3AD	D=2.4			1.7	2.4	2.9	3.4	3.8	4.2	4.5	4.8	5.1	5.4	6.3	7.6
	UR3AE	E=4.3			3.0	4.3	5.3	6.1	6.8	7.4	8.0	8.6	9.1	9.6	11.4	13.6
	UR3AF	F=8.0			5.7	8.0	9.8	11.3	12.6	13.9	15.0	16.0	17.0	17.9	21.2	25.3
3/4"	UR3BA	A=0.40		50 PSI	0.3	0.40	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	1.1	1.3
	UR3BB	B=0.66			0.5	0.66	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.7	2.1
	UR3BC	C=1.3			0.9	1.3	1.6	1.8	2.1	2.3	2.4	2.6	2.8	2.9	3.4	4.1
	UR3BD	D=2.4			1.7	2.4	2.9	3.4	3.8	4.2	4.5	4.8	5.1	5.4	6.3	7.6
	UR3BE	E=3.8			2.7	3.8	4.7	5.4	6.0	6.6	7.1	7.6	8.1	8.5	10.1	12.0
	UR3BF	F=11.0	•		4.9	7.0	8.6	9.9	11.1	12.1	13.1	14.0	14.8	15.7	18.5	22.1
1"	UR3CA	A=0.40		50 PSI	0.3	0.40	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	1.1	1.3
	UR3CB	B=0.65			0.5	0.65	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.7	2.1
	UR3CC	C=1.3			0.9	1.3	1.6	1.8	2.1	2.3	2.4	2.6	2.8	2.9	3.4	4.1
	UR3CD	D=2.3			1.6	2.3	2.8	3.3	3.6	4.0	4.3	4.6	4.9	5.1	6.1	7.3
	UR3CE	E=3.5			2.5	3.5	4.3	4.9	5.5	6.1	6.5	7.0	7.4	7.8	9.3	11.1
	UR3CF	F=10.0			7.1	10.0	12.2	14.1	15.8	17.3	18.7	20.0	21.2	22.4	26.5	31.6
	UR3CG	G=8.6			6.1	8.6	10.5	12.1	13.6	14.9	16.1	17.2	18.2	19.2	22.7	27.2
	UR3CH	H=22.3			15.8	22.3	27.3	31.5	35.3	38.6	41.7	44.6	47.3	49.9	59.0	70.5
	UR3CJ	J=14.9			10.5	14.9	18.2	21.1	23.6	25.8	27.9	29.8	31.6	33.3	39.4	47.1
	UR3CK	K=4.5			3.2	4.5	5.5	6.4	7.1	7.8	8.4	9.0	9.5	10.1	11.9	14.2
	UR3CM	M=30.8			21.8	30.8	37.7	43.6	48.7	53.3	57.6	61.6	65.3	68.9	81.5	97.4
1-1/4"	UR3DB	B=19.4	•	40 PSI	13.7	19.4	23.8	27.4	30.7	33.6	36.3	38.8	41.2	43.4	51.3	61.3
	UR3DC	C=12.7			9.0	12.7	15.6	18.0	20.1	22.0	23.8	25.4	26.9	28.4	33.6	40.2
	UR3DD	D=4.1			2.9	4.1	5.0	5.7	6.4	7.0	7.6	8.1	8.6	9.1	10.7	12.8
	UR3DE	E=8.7			6.1	8.7	10.6	12.3	13.7	15.0	16.2	17.3	18.4	19.4	22.9	27.4
	UR3DF	F=34.1	•		24.1	34.1	41.8	48.2	53.9	59.1	63.8	68.2	72.3	76.2	90.2	107.8
	UR3DG	G=26.8			19.0	26.8	32.8	37.9	42.4	46.4	50.1	53.6	56.9	59.9	70.9	84.7
1-1/2"	UR3EA	A=13.4		40 PSI	9.5	13.4	16.4	18.9	21.1	23.2	25.0	26.7	28.4	29.9	35.4	42.3
	UR3EB	B=4.0			2.8	4.0	4.9	5.7	6.4	7.0	7.5	8.1	8.5	9.0	10.7	12.7
	UR3EC	C=8.3			5.8	8.3	10.1	11.7	13.1	14.3	15.5	16.5	17.5	18.5	21.9	26.1
	UR3ED	D=32.0	•		22.6	32.0	39.2	45.3	50.6	55.5	59.9	64.0	67.9	71.6	84.7	101.3
	UR3EE	E=23.5			16.6	23.5	28.8	33.3	37.2	40.8	44.0	47.1	49.9	52.6	62.3	74.4
	UR3EF	F=61.1			43.2	61.1	74.8	86.4	96.6	105.8	114.3	122.2	129.6	136.6	161.6	193.2
2"	UR3FA	A=23.9		40 PSI	16.9	23.9	29.3	33.8	37.8	41.4	44.7	47.8	50.7	53.4	63.2	75.6
	UR3FB	B=56.7			40.1	56.7	69.4	80.2	89.7	98.2	106.1	113.4	120.3	126.8	150.0	179.3
	UR3FC	C=38.2			27.0	38.2	46.8	54.0	60.4	66.2	71.5	76.4	81.0	85.4	101.1	120.8
	UR3FD	D=108.5			76.7	108.5	132.9	153.4	171.6	187.9	203	217	230	243	287	343
	UR3FE	E=82.6			58.4	82.6	101.2	116.8	130.6	143.1	154.5	165.2	175.2	184.7	219	261
2-1/2"	UR3GA	A=38.1		40 PSI	26.9	38.1	46.7	53.9	60.2	66.0	71.3	76.2	80.8	85.2	100.8	120.5
	UR3GC	C=74.1			52.4	74.1	90.8	104.8	117.2	128.3	138.6	148.2	157.2	165.7	196.1	234
	UR3GB	B=99.5	•		70.4	99.5	121.9	140.7	157.3	172.3	186.1	199.0	211	223	263	315
3"	UR3HA	A=75.0		70 PSI	53.0	75.0	91.9	106.1	118.6	129.9	140.3	150.0	159.1	167.7	198.4	237
	UR3HB	B=100.0			70.7	100.0	122.5	141.4	158.1	173.2	187.1	200	212	223	264	316
	UR3HC	C=125.0			88.4	125.0	153.1	176.8	197.6	216	234	250	265	279	331	395
	UR3HD	D=150.0			106.0	150.0	183.7	212	237	260	281	300	318	335	397	474
	UR3HE	E=175.0			123.7	175.0	214	247	277	303	327	350	371	391	463	553
	UR3HF	F=200.0	•		141.4	200	245	283	316	346	374	400	424	447	529	632

NOTES

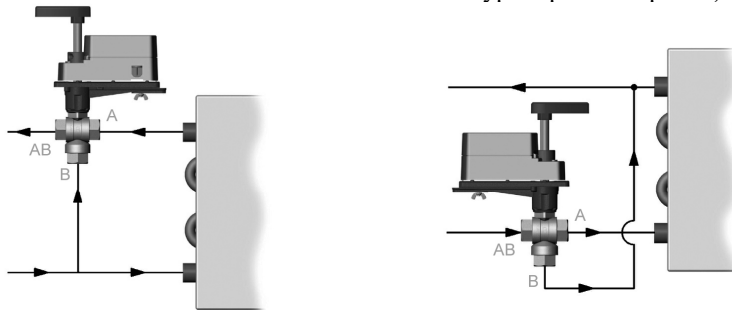
- ³ These valves are full port and do not have the Optimizer insert.
- ⁴ Close-Off Pressures measured with 35 in-lb. actuator. The "Close Off Pressure" is the maximum allowable pressure drop across the valve body when the valve is fully closed. (Do not use actuators with torques higher than 90 in-lbs)
- ⁵ The Cv is the gallons of water per minute (gpm) at 60°F that the valve will pass at 1 PSI pressure drop. Hence the 1.0 PSI pressure differential column in the table above is equivalent to the Cv value.

MODEL NUMBER SELECTION



PIPING CONFIGURATIONS

Our 3-Way ball allows the same 3-Way valve to be installed in either a mixing or diverting configuration without sacrificing any performance or Cv. (Valve shown is 1/2"-2-1/2". 3"-6" valve has bypass port in Z plane.)



Mixing — fluid enters through two inlets (A, B) and exits through one outlet (AB)

Diverting — fluid enters through one inlet (AB) and exits through two outlets (A, B)

ACTUATOR SELECTION



The Griswold Controls Universal Mounting Plate on all 1/2" to 3" valves is compatible with the following actuators besides the actuators detailed in the following tables. Contact the factory if you have a different model number not listed below.⁶

- Honeywell:** ML6161D2006, ML6174D2009, ML7161A2008, ML7174A2001, ML6185A1000, ML6185C1008, ML8185A1008, ML8185C1006, ML7285A1007, ML7285C1005, MN6105, MN7510, MN7520, MN6110
- Schneider Electric:** MF40-6083, MA40-7043, MA40-7043-501, MA40-7040, MA40-7040-501, MF40-7043, MF40-7043-501, MS40-7043, MS40-7043-501
- Johnson Controls:** M9106-AGA2, M9106-AGC2, M9106-GGA2, M9106-GGC2, M9206-AGA2, M9206-AGC2, M9206-GGA2, M9206-GGC2, M9104-AGA-2S, M9208-GGA-2, M9208-GGA-3
- Belimo:** LM24, LM24S, LF24, LF24S, LF120, LF120S, LF24-3, LF24-3S, LM24SR, LF24SR, LF24SRS, LMB24-SR-T, LMB24-3-T
- Neptronic:** BBT-24, BBT-1000, BBT-1060, BBT-1021, BBT-1080, BBTHV-1100, BBTHV-1160, BBTHV-1120, BBTHV-1180, BBM2000A, BBM2060A

NOTES

⁶ Do not use actuators capable of torques higher than 90 in-lbs.

SUITABLE FOR 1/2" TO 3" VALVES

SIEMENS	GDE131.1P	GDE161.1P	GMA121.1P	GMA131.1P	GMA161.1P
Power Supply	24Vac	24Vac	24Vac/dc	24Vac/dc	24Vac/dc
Torque	44 in-lb	44 in-lb	62 in-lb	62 in-lb	62 in-lb
Control Signal: On/Off			•		
Control Signal: 3 Point	•			•	
Control Signal: Modulating 0–10 VDC		•			•
Speed	90 sec	90 sec	90 sec	90 sec	90 sec
Fail Safe (Spring Return)			•	•	•
Operating Power	3.3 VA	3.3 VA	5 VA	5 VA	5 VA
Mounting Components	9656-250	9656-250	9656-250	9656-250	9656-250
Weight	1.1 pounds	1.1 pounds	3.0 pounds	3.0 pounds	3.0 pounds
Wiring Diagram					

SUITABLE FOR 1/2" TO 3/4" VALVES ONLY

KMC CONTROLS	MEP-4201	MEP-4255	MEP-4252
Power Supply	24 Vac/dc	100-240 Vac	24 Vac/dc
Torque	25 in-lb	25 in-lb	25 in-lb
Control Signal: On/Off	•	•	
Control Signal: 3 Point	•		
Control Signal:			Modulating 2-10VDC
Speed	<35 sec	<25 sec	<50 sec
Fail Safe (Capacitor)		•	•
Operating Power	6 VA	6 VA	6 VA
Mounting Components	9656-248	9656-248	9656-248
Weight	1.1 pounds	1.5 pounds	1.5 pounds
Wiring Diagram	See actuator cover for wiring diagram		

SUITABLE FOR 1/2" TO 3" VALVES

KMC CONTROLS	MEP-4001	MEP-4002	MEP-4554	MEP-4555	MEP-4501	MEP-4552 (formerly MEP-5372)	MEP-4551 (formerly MEP-5373)	MCP-36315000
Power Supply	24 Vac	24 Vac	24 Vac/dc	100-240 Vac	24 Vac	24 Vac	24 Vac	Pneumatic
Torque	40 in-lb	40 in-lb	45 in-lb	45 in-lb	40 in-lb	45 in-lb	45 in-lb	59 in-lb
Control Signal: On/Off			•	•	•			
Control Signal: 3 Point	•				•		•	
Control Signal:		Modulating 2-10VDC				Modulating 2-10VDC		8-13 psi
Speed	90 sec	90 sec	<35 sec	<25 sec	<35 sec	50 sec	90 sec	
Fail Safe (Capacitor)			•	•		•	•	
Operating Power	2 VA	4 VA	6 VA	6 VA	6 VA	6 VA	6 VA	
Mounting Components	9656-250	9656-250	9656-248	9656-248	9656-248	9656-250	9656-250	9656-852
Weight	1.1 pounds	1.1 pounds	1.5pounds	1.5 pounds	1.1 pounds	3.0 pounds	3.0 pounds	1.5 pounds
Wiring Diagram	See actuator cover for wiring diagram							