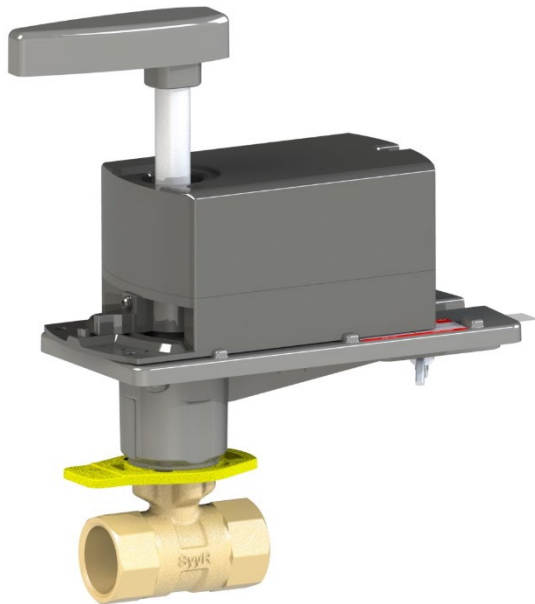


**SPECIFICATIONS**



**Static Pressure/Temp Service:** 360 PSI / -4°F to 250°F (600 WOG)  
 Chilled water, hot water, up to 50% Glycol, or contact factory for additional fluids.

**Flow Optimizer:** Glass Filled Polymer

**Body Material:** Forged Brass (Lead Free<sup>1</sup> Brass Available)

**End Connections:** Brass – NPT or BSP-P

**Field Repairable Stem:** Dual Teflon seals and EPDM O-ring

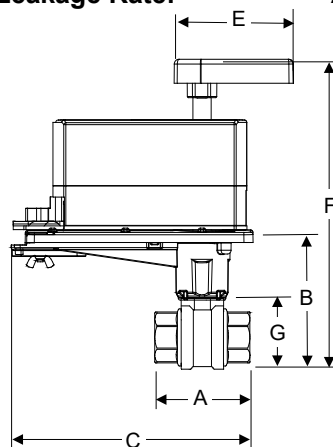
**Ball Valve:** Stainless Steel

**Stem:** Brass (Optional: Stainless Steel)

**Ball Seals:** Teflon Seals with EPDM O-Rings

**Angle of Rotation:** 0–90°

**Leakage Rate:** ANSI Class IV, .01% of Cv



Standard Mounting Kit Shown – Direct Mount available for KMC actuators

**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.	Cv	A	B	C <sup>2</sup>	DEPTH (NOT SHOWN)	E	F <sup>3</sup>	G <sup>4</sup>	WEIGHT
1/2"	UR2A__	0.38, 0.68, 1.3, 2.6, 4.7, 8.0, 11.7	2.4	3.8	6.7	3.0	2.1	8.4	2.0	1.0
3/4"	UR2B__	0.31, 0.63, 1.2, 2.5, 4.3, 7.0, 14.7	2.4	3.8	6.7	3.0	2.1	8.7	2.3	1.2
		10.1, 28.6	2.8	4.1	6.7			8.7	2.3	
1"	UR2C__	9.0, 28.4	2.8	4.1	6.7	3.0	2.1	8.7	2.3	1.2
		4.4, 15.3, 26.1, 43.9, 54.2	3.1	4.4	6.8			9.0	2.6	1.5
1-1/4"	UR2D__	4.4, 8.3, 14.9, 25.0, 41.1	3.1	4.5	6.8	3.0	2.1	9.1	2.7	1.5
		36.5, 102.3	3.7	4.9	7.1			9.5	3.1	2.6
1-1/2"	UR2E__	22.8, 30.0, 73.9	3.5	4.9	7.0	3.0	2.1	9.5	3.1	2.6
		41.3, 171.7	4.1	5.5	7.3			10.1	3.7	3.2
2"	UR2F__	41.7, 108.0	4.0	5.5	7.2	3.5	2.1	10.1	3.7	3.2
		57.0, 71.1, 100.0, 210, 266	4.9	6.1	7.7			10.7	4.3	5.0
2-1/2"	UR2G__	45.0, 55.0, 72.3, 101, 162, 202	5.4	6.1	8.0	3.5	2.1	10.7	4.3	5.5
3"	UR2H__	49.0, 63.0, 82.0, 124, 145	5.8	6.4	8.1	4.0	2.1	11.0	4.6	6.4

**NOTES**

<sup>1</sup> Contains less than 0.25% lead content on wetted surfaces, is certified to meet current legislation, and is compliant with NSF-61G standards.  
<sup>2</sup> Dimension "C" is maximum length, which is measured from end fitting or mounting plate, whichever extends farther.  
<sup>3</sup> Height includes 5.3" long shaft & standard mounting kit. If Neptronic, KMC Controls, or Siemens actuators are used deduct 1.3" from height.  
<sup>4</sup> Height of valve without mounting kit. For KMC direct mount version add actuator height of 3.6" for full height.

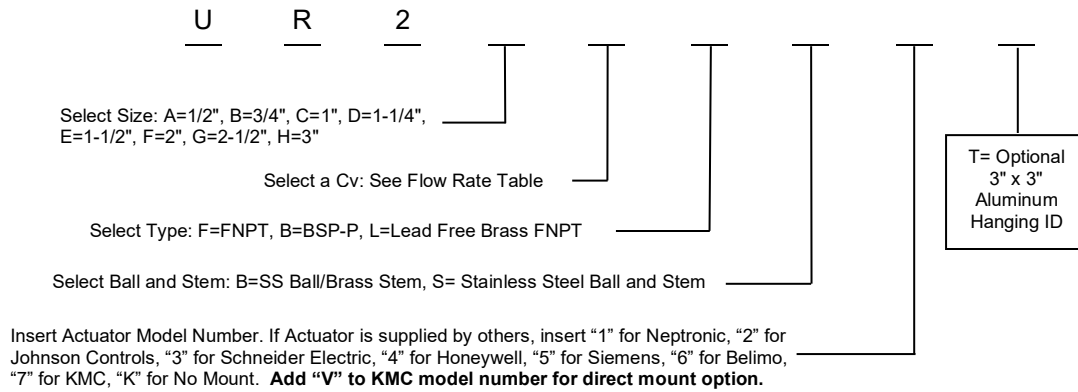
Cv SELECTION AND FLOW RATE TABLE (GPM)

LINE SIZE	MODEL NO.	FULL 5 PORT	CLOSE OFF ΔP <sup>6</sup>	FLOWRATE (GPM) @ DIFFERENTIAL PRESSURE (PSI) ACROSS VALVE											
				2-Position HVAC Apps			HVAC Modulating Apps								
				0.5	1.0	Cv <sup>7</sup>	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	7.0
1/2"	UR A1		130PSI	0.3	<b>0.38</b>	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.8	1.0	1.2
	UR A2			0.5	<b>0.68</b>	0.8	1.0	1.1	1.2	1.3	1.4	1.4	1.5	1.8	2.2
	UR A3			0.9	<b>1.3</b>	1.6	1.8	2.1	2.3	2.4	2.6	2.8	2.9	3.4	4.1
	UR A4			1.8	<b>2.6</b>	3.2	3.7	4.1	4.5	4.9	5.2	5.5	5.8	6.9	8.2
	UR A5			3.3	<b>4.7</b>	5.8	6.6	7.4	8.1	8.8	9.4	10.0	10.5	12.4	14.9
	UR A6	•		8.3	<b>11.7</b>	14.3	16.5	18.5	20.3	21.9	23.4	24.8	26.2	31.0	37.0
	UR A7			5.7	<b>8.0</b>	9.8	11.3	12.6	13.9	15.0	16.0	17.0	17.9	21.2	25.3
3/4"	UR B6		130PSI	0.2	<b>0.31</b>	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	1.0
	UR B7			0.4	<b>0.63</b>	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.7	2.0
	UR B8			0.8	<b>1.2</b>	1.5	1.7	1.9	2.1	2.2	2.4	2.5	2.7	3.2	3.8
	UR B1			1.8	<b>2.5</b>	3.1	3.5	4.0	4.3	4.7	5.0	5.3	5.6	6.6	7.9
	UR B2			3.0	<b>4.3</b>	5.3	6.1	6.8	7.4	8.0	8.6	9.1	9.6	11.4	13.6
	UR B9			4.9	<b>7.0</b>	8.6	9.9	11.1	12.1	13.1	14.0	14.8	15.7	18.5	22.1
	UR B3	•		10.4	<b>14.7</b>	18.0	20.8	23.2	25.5	27.5	29.4	31.2	32.9	38.9	46.5
1"	UR C1		100PSI	6.4	<b>9.0</b>	11.0	12.7	14.2	15.6	16.8	18.0	19.1	20.1	23.8	28.5
	UR C2	•		20.1	<b>28.4</b>	34.8	40.2	44.9	49.2	53.1	56.8	60.2	63.5	75.1	89.8
	UR C3			3.1	<b>4.4</b>	5.4	6.2	7.0	7.6	8.2	8.8	9.3	9.8	11.6	13.9
	UR C4	•		10.8	<b>15.3</b>	18.7	21.6	24.2	26.5	28.6	30.6	32.5	34.2	40.5	48.4
	UR C5			38.3	<b>54.2</b>	66.4	76.7	85.7	93.9	101.4	108.4	115.0	121.2	143.4	171.4
	UR C6			18.5	<b>26.1</b>	32.0	36.9	41.3	45.2	48.8	52.2	55.4	58.4	69.1	82.5
	UR C7			31.0	<b>43.9</b>	53.8	62.1	69.4	76.0	82.1	87.8	93.1	98.2	116.1	138.8
1-1/4"	UR D5		100PSI	3.1	<b>4.4</b>	5.4	6.2	7.0	7.6	8.2	8.8	9.3	9.8	11.6	13.9
	UR D6			5.9	<b>8.3</b>	10.2	11.7	13.1	14.4	15.5	16.6	17.6	18.6	22.0	26.4
	UR D1			10.5	<b>14.9</b>	18.2	21.1	23.6	25.8	27.9	29.8	31.6	33.3	39.4	47.1
	UR D7			17.7	<b>25.0</b>	30.6	35.4	39.5	43.3	46.8	50.0	53.0	55.9	66.1	79.1
	UR D2	•		29.1	<b>41.1</b>	50.3	58.1	65.0	71.2	76.9	82.2	87.2	91.9	108.7	130.0
	UR D3			25.8	<b>36.5</b>	44.7	51.6	57.7	63.2	68.3	73.0	77.4	81.6	96.6	115.4
	UR2D4	•		72.3	<b>102.3</b>	125.3	144.7	161.8	177.2	191.4	205	217	229	271	324
1-1/2"	UR E1		100PSI	16.1	<b>22.8</b>	27.9	32.2	36.0	39.5	42.7	45.6	48.4	51.0	60.3	72.1
	UR E5			21.2	<b>30.0</b>	36.7	42.4	47.4	52.0	56.1	60.0	63.6	67.1	79.4	94.9
	UR E2	•		52.3	<b>73.9</b>	90.5	104.5	116.8	128.0	138.3	147.8	156.8	165.2	195.5	234
	UR E3			29.2	<b>41.3</b>	50.6	58.4	65.3	71.5	77.3	82.6	87.6	92.3	109.3	130.6
	UR E4	•		121.4	<b>171.7</b>	210	243	272	297	321	343	364	384	454	543
2"	UR F1		100PSI	29.5	<b>41.7</b>	51.1	59.0	65.9	72.2	78.0	83.4	88.5	93.2	110.3	131.9
	UR F2	•		76.4	<b>108.0</b>	132.3	152.7	170.8	187.1	202	216	229	242	286	342
	UR F5			40.3	<b>57.0</b>	69.8	80.6	90.1	98.7	106.6	114.0	120.9	127.5	150.8	180.2
	UR F3			50.3	<b>71.1</b>	87.1	100.6	112.4	123.1	133.0	142.2	150.8	159.0	188.1	225
	UR F6			70.7	<b>100.0</b>	122.5	141.4	158.1	173.2	187.1	200	212	224	265	316
	UR F7			148.5	<b>210</b>	257	297	332	364	393	420	445	470	556	664
	UR F4	•		188.1	<b>266</b>	326	376	421	461	498	532	564	595	704	841
2-1/2"	UR G2		100PSI	31.8	<b>45.0</b>	55.1	63.6	71.2	77.9	84.2	90.0	95.5	100.6	119.1	142.3
	UR G3			38.9	<b>55.0</b>	67.4	77.8	87.0	95.3	102.9	110.0	116.7	123.0	145.5	173.9
	UR G4			50.9	<b>72.0</b>	88.2	101.8	113.8	124.7	134.7	144.0	152.7	161.0	190.5	228
	UR G5			71.4	<b>101.0</b>	123.7	142.8	159.7	174.9	189.0	202.0	214.3	225.8	267.2	319
	UR G6			114.6	<b>162.0</b>	198.4	229	256	281	303.1	324	344	362	429	512
	UR G7	•		142.8	<b>202</b>	247	286	319	350	378	404	429	452	534	639
	UR G1			188.1	<b>266</b>	326	376	421	461	498	532	564	595	704	841
3"	UR H1		100PSI	34.6	<b>49.0</b>	60.0	69.3	77.5	84.9	91.7	98.0	103.9	109.6	129.6	155.0
	UR H2			44.5	<b>63.0</b>	77.2	89.1	99.6	109.1	117.9	126.0	133.6	140.9	166.7	199.2
	UR H3			58.0	<b>82.0</b>	100.4	116.0	129.7	142.0	153.4	164.0	173.9	183.4	217	259
	UR H4			87.7	<b>124.0</b>	151.9	175.4	196.1	215	232	248	263	277	328	392
	UR H5	•		102.5	<b>145.0</b>	177.6	205	229	251	271	290	308	324	384	459

NOTES

- <sup>5</sup> These valves are full port and do not have the Optimizer insert.
- <sup>6</sup> 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 capable of torques higher than 90 in-lbs)
- <sup>7</sup> Cv is defined as the quantity of water in GPM at 60°F that will flow through a given valve with a pressure drop of 1PSI. Hence the 1.0 PSI pressure differential column in the table above is equivalent to the Cv value.

**MODEL NUMBER SELECTION**



**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. Direct Mount Option available on KMC Actuators Only. Contact the factory if you have a different model number not listed below.<sup>8</sup>

- 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

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

<b>KMC CONTROLS<sup>9</sup></b>	<b>MEP-4201</b>	<b>MEP-4255</b>	<b>MEP-4252</b>
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		

**NOTES**

<sup>8</sup> Do not use actuators capable of torques higher than 90 in-lbs.  
<sup>9</sup> Add V to KMC model number for direct mount option.

**SUITABLE FOR 1/2" TO 3" VALVES**

<b>KMC CONTROLS<sup>10</sup></b>	<b>MEP-4001</b>	<b>MEP-4002</b>	<b>MEP-4554</b>	<b>MEP-4555</b>	<b>MEP-4501</b>	<b>MEP-4552</b>	<b>MEP-4551</b>	<b>MCP-36315000</b>
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	1.5 pounds	1.5 pounds	1.1 pounds	3.0 pounds	3.0 pounds	1.5 pounds
Wiring Diagram	See actuator cover for wiring diagram							

<b>SIEMENS</b>	<b>GDE131.1P</b>	<b>GDE161.1P</b>	<b>GMA121.1P</b>	<b>GMA131.1P</b>	<b>GMA161.1P</b>
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	<p>Where 6 is CW and 7 is CCW</p>				

**NOTES**

<sup>10</sup> Add V to KMC model number for direct mount option.