

Colorflow[®] and Ball Valves

Industrial Flow Control, Check, Gauge Control

Catalog HY14-3300/US

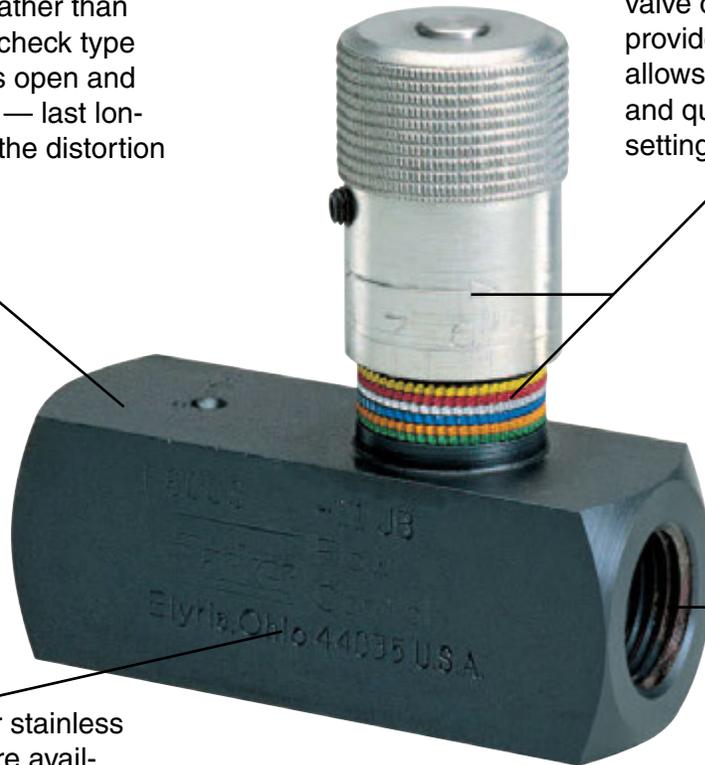
aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Fully guided poppets are used on Colorflow valves rather than the less durable ball-check type construction. Poppets open and close more smoothly — last longer — and eliminate the distortion of seats and springs.

The exclusive “Colorflow” feature on metering, flow control, and needle valves gives highly visible check-points for setting valve openings. This feature also provides a reference point that allows the valve to be accurately and quickly reset to a previous setting.



Steel, brass or stainless steel bodies are available, all of which include stainless steel needles as standard.

Colorflow valves are available with a variety of porting options.

WARNING: Colorflow valves are not repairable

⚠ WARNING – USER RESPONSIBILITY

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SAFETY GUIDE

For safety information, see Safety Guide SG HY14-1000 at www.parker.com/safety or call 1-800-CParker.

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Cat HY14-3300-frtcvr.indd, dd



General Description

Series MV high-precision metering and shut-off valves allow extremely close control of fluids used in actuating and governing equipment.

Operation

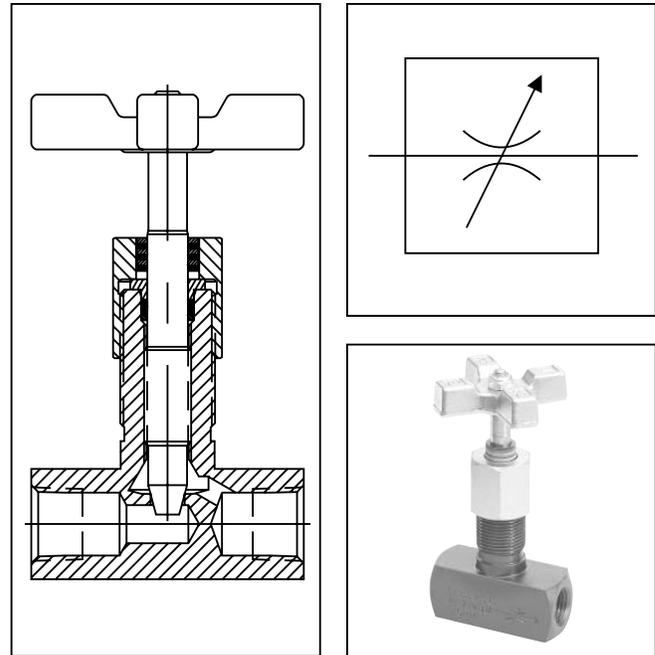
The standard needle allows fine adjustment at low flow by using the first three turns of the adjusting knob. The next three turns open the valve to full flow, and also provide standard throttling adjustments.

Features

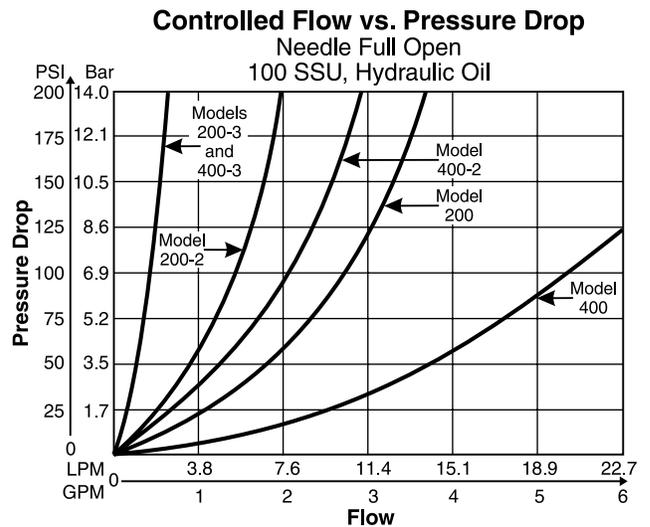
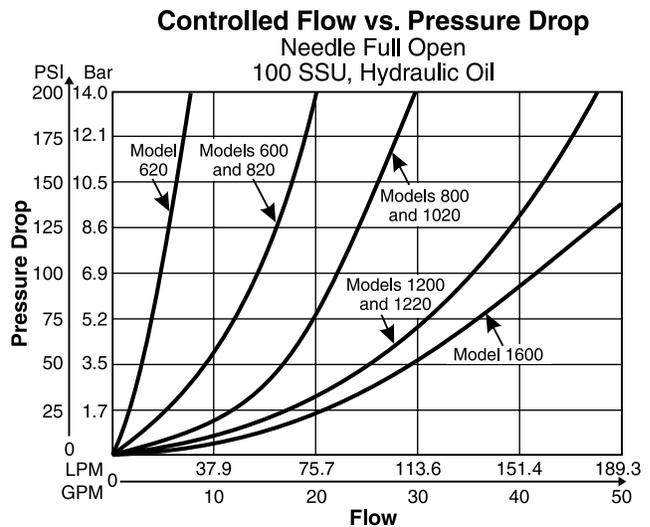
- The exclusive “Colorflow” color-band reference scale on the valve stem is a great convenience and time-saver in setting the valve originally and in returning it to any previous setting.
- Fine and Micro-fine needles available for extremely fine control.
- MVK mounting kit makes panel mounting simple.
- High efficiency o-ring stem seal that eliminates packing.

Specifications

Maximum Operating Pressure	Brass: 140 Bar (2000 PSI) Steel: 413 Bar (6000 PSI) for MV261, 461, 661, 861. 345 Bar (5000 PSI) for MV200, 400, 401, 420, 600, 601, 620, 800, 820, 1020, 1200, 1220. 207 Bar (3000 PSI) for all other sizes and styles.
Material	Body: See ordering code Handle: Zinc alloy - Zinc chromate Needle: 416 Stainless Steel
Temperature Range of Seal Compound	-40°C to +121°C (-40°F to +250°F) Nitrile (standard) -26°C to +205°C (-15°F to +400°F) Fluorocarbon



Performance Curves



Technical Information

Series MV

Ordering Information

□ Options	□ MV Series MV	□ Size	□ Material	□ Needle Options	□ Seal Compound	□ Design Series
Code Description Omit NPTF/SAE ★ 9 BSPP		Code Size Code Size 200 * 1/8" 661 3/8" 260 1/8" 681 #6 SAE 261 1/8" 800 * 1/2" 400 * 1/4" 820 #8 SAE 401 1/4" 860 1/2" 420 #4 SAE 861 1/2" 460 1/4" 1020 #10 SAE 461 1/4" 1200 3/4" 600 * 3/8" 1220 #12 SAE 601 3/8" 1261 3/4" 620 #6 SAE -1600 1" 660 3/8" -1620 #16 SAE	Code Description B Brass S Steel	Code Description Omit Standard 30° Taper 2 Fine 3 Micro-fine	Code Description Omit Nitrile (Standard) V Fluorocarbon	NOTE: Not required when ordering.

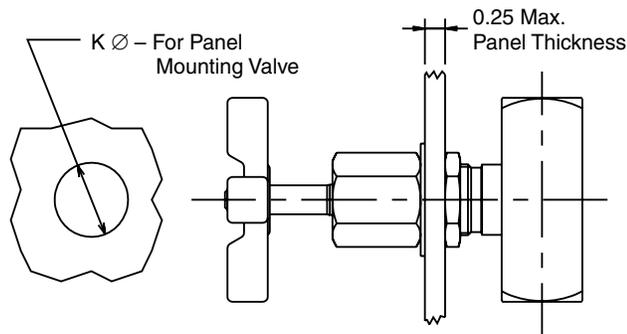
★ Code 9 can be used with sizes 200, 261, 400, 461, 600, 661, 800, 861, 1200, 1261, and 1600.

* Sizes available in Brass

00 is Female to Female
 01 is Female to Male
 6* is Right Angle
 60 is Male to Female
 61 is Female to Female

Model Number	Effective Orifice Area Max Flow LPM (GPM)	Control Flow in. ²	Effective Control Flow C _v
MV200	11 (3)	0.0107	0.244
MV260	11 (3)	0.0107	0.244
MV261	11 (3)	0.0107	0.244
MV420	11 (3)	0.0107	0.244
MV200-2	7 (1.8)	0.0053	0.121
MV260-2	7 (1.8)	0.0053	0.121
MV261-2	7 (1.8)	0.0053	0.121
MV420-2	7 (1.8)	0.0053	0.121
MV200-3	2 (0.5)	0.0014	0.032
MV260-3	2 (0.5)	0.0014	0.032
MV261-3	2 (0.5)	0.0014	0.032
MV420-3	2 (0.5)	0.0014	0.032
MV400	19 (5)	0.0216	0.493
MV460	19 (5)	0.0216	0.493
MV461	19 (5)	0.0216	0.493
MV620	19 (5)	0.0216	0.493
MV400-2	11 (2.8)	0.0081	0.186
MV460-2	11 (2.8)	0.0081	0.186
MV461-2	11 (2.8)	0.0081	0.186
MV620-2	11 (2.8)	0.0081	0.186
MV400-3	2 (0.5)	0.0017	0.039
MV460-3	2 (0.5)	0.0017	0.039
MV461-3	2 (0.5)	0.0017	0.039
MV620-3	2 (0.5)	0.0017	0.039
MV600	30 (8)	0.0567	1.294
MV660	30 (8)	0.0567	1.294
MV661	30 (8)	0.0567	1.294
MV681	30 (8)	0.0567	1.294
MV820	30 (8)	0.0567	1.294
MV600-2	1.8 (0.5)	0.018	0.466
MV600-3	0.28 (0.1)	0.0027	0.0326
MV800	57 (15)	0.0845	1.930
MV860	57 (15)	0.0845	1.930
MV861	57 (15)	0.0845	1.930
MV1020	57 (15)	0.0845	1.930
MV1200	95 (25)	0.1400	3.205
MV1220	95 (25)	0.1400	3.205
MV1261	95 (25)	0.1400	3.205
MV-1600	151 (40)	0.1675	3.829
MV-1620	151 (40)	0.1675	3.829

Mounting Kit

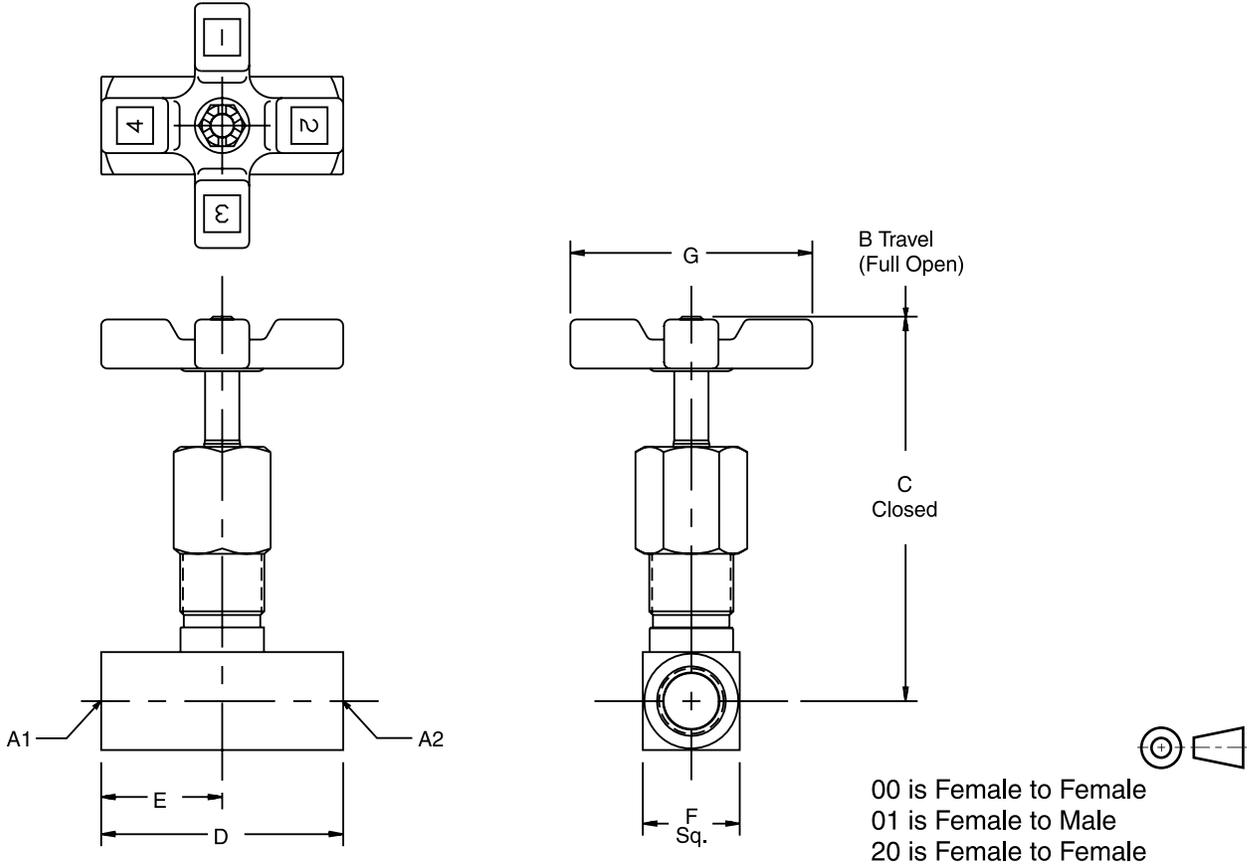


Panel Mounting Kits					
Kit Number	K	Valve Model	Kit Number	K	Valve Model
MVK2	15.0 (0.59)	MV200	MVK8	29.5 (1.16)	MV800
		MV260			MV860
		MV261S			MV861S
		MV420			MV1020
MVK4	19.8 (0.78)	MV400	MVK12	35.8 (1.41)	MV1200
		MV401			MV1220
		MV460S			MV1261
		MV461S	MVK16	35.8 (1.41)	MV-1600
MV620	MV-1620				
MVK6	23.1 (0.91)	MV600			
		MV601			
		MV660			
		MV661S			
		MV681			
		MV820			

Dimensions

Series MV

Inch equivalents for millimeter dimensions are shown in (**)



Model Number	Weight kg (lbs.)	A1	A2	B	C	D	E	F	G
MV200	0.1 (0.3)	1/8-27 NPTF Female	1/8-27 NPTF Female	69.1 (2.72)	63.8 (2.51)	38.1 (1.50)	19.1 (0.75)	15.7 (0.62)	44.5 (1.75)
MV420	0.1 (0.3)	7/16-20 UNF #4 SAE	7/16-20 UNF #4 SAE	71.6 (2.82)	66.3 (2.61)	50.8 (2.00)	25.4 (1.00)	20.6 (0.81)	44.5 (1.75)
MV400	0.3 (0.7)	1/4-18 NPTF Female	1/4-18 NPTF Female	86.9 (3.42)	81.5 (3.21)	50.8 (2.00)	25.4 (1.00)	20.6 (0.81)	50.8 (2.00)
MV401	0.3 (0.7)	1/4-18 NPTF Male	1/4-18 NPTF Female	86.9 (3.42)	81.5 (3.21)	55.4 (2.18)	30.0 (1.18)	20.6 (0.81)	50.8 (2.00)
MV620	0.5 (1.1)	9/16-18 UNF #6 SAE	9/16-18 UNF #6 SAE	89.2 (3.51)	83.8 (3.30)	60.5 (2.38)	30.2 (1.19)	25.4 (1.00)	50.8 (2.00)
MV600	0.5 (1.1)	3/8-18 NPTF Female	3/8-18 NPTF Female	99.6 (3.92)	91.9 (3.62)	63.5 (2.50)	31.8 (1.25)	25.4 (1.00)	63.5 (2.50)
MV601	0.5 (1.1)	3/8-18 NPTF Male	3/8-18 NPTF Female	99.6 (3.92)	91.9 (3.62)	68.1 (2.68)	36.3 (1.43)	25.4 (1.00)	63.5 (2.50)
MV820	0.5 (1.1)	3/4-16 UNF #8 SAE	3/4-16 UNF #8 SAE	108.7 (4.28)	101.1 (3.98)	76.2 (3.00)	38.1 (1.50)	28.4 (1.12)	63.5 (2.50)
MV800	1.0 (2.2)	1/2-14 NPTF Female	1/2-14 NPTF Female	129.3 (5.09)	116.6 (4.59)	66.5 (2.62)	33.3 (1.31)	31.8 (1.25)	82.6 (3.25)
MV1020	1.0 (2.2)	7/8-14 UNF #10 SAE	7/8-14 UNF #10 SAE	129.5 (5.10)	116.6 (4.59)	88.9 (3.50)	44.5 (1.75)	31.8 (1.25)	82.6 (3.25)
MV1200	1.6 (3.5)	3/4-14 NPTF Female	3/4-14 NPTF Female	141.8 (5.58)	127.8 (5.03)	82.6 (3.25)	41.1 (1.62)	38.1 (1.50)	98.6 (3.88)
MV1220	1.6 (3.5)	1 1/16-12 UN #12 SAE	1 1/16-12 UN #12 SAE	141.8 (5.58)	127.8 (5.03)	101.6 (4.00)	50.8 (2.00)	38.1 (1.50)	98.6 (3.88)
MV-1600	1.9 (4.2)	1-11 1/2 NPTF Female	1-11 1/2 NPTF Female	146.8 (5.78)	132.8 (5.23)	108.0 (4.25)	53.8 (2.12)	44.5 (1.75)	98.6 (3.88)
MV-1620	1.9 (4.2)	1 5/16-12 UN #16 SAE	1 5/16-12 UN #16 SAE	152.9 (6.02)	138.9 (5.47)	108.0 (4.25)	53.8 (2.12)	57.2 (2.25)	98.6 (3.88)

An optional MVK mounting kit makes panel mounting quite simple.

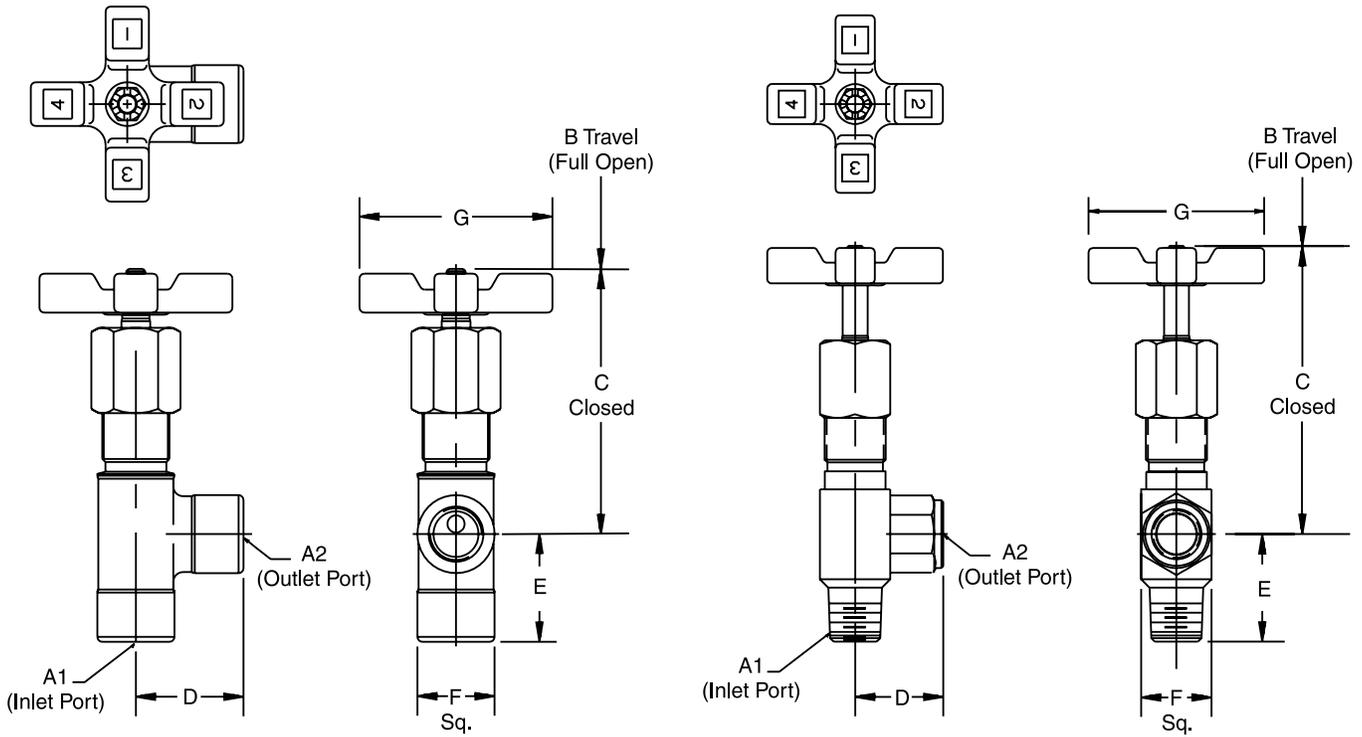
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Dimensions

Series MV

Inch equivalents for millimeter dimensions are shown in (**)



61 is Female to Female

60 is Male to Female

Model Number	Weight kg (lbs.)	A1	A2	B	C	D	E	F	G
MV260	0.1 (0.3)	1/8-27 NPTF Male	1/8-27 NPTF Female	72.4 (2.85)	67.1 (2.64)	19.1 (0.75)	22.1 (0.87)	15.7 (0.62)	44.5 (1.75)
MV460	0.3 (0.7)	1/4-18 NPTF Male	1/4-18 NPTF Female	90.2 (3.55)	84.8 (3.34)	27.2 (1.07)	30.7 (1.21)	20.6 (0.81)	50.8 (2.00)
MV660	0.5 (1.1)	3/8-18 NPTF Male	3/8-18 NPTF Female	110.7 (4.36)	103.1 (4.06)	31.8 (1.25)	34.8 (1.37)	25.4 (1.00)	63.5 (2.50)
MV860	0.9 (2.0)	1/2-14 NPTF Male	1/2-14 NPTF Female	133.4 (5.25)	120.7 (4.75)	36.8 (1.45)	42.7 (1.68)	31.8 (1.25)	82.6 (3.25)
MV261	0.1 (0.3)	1/8-27 NPTF Female	1/8-27 NPTF Female	93.98 (3.70)	60.7 (2.39)	26.9 (1.06)	26.9 (1.06)	17.5 (0.69)	44.5 (1.75)
MV461	0.3 (0.7)	1/4-18 NPTF Female	1/4-18 NPTF Female	86.1 (3.39)	76.4 (3.01)	33.5 (1.32)	31.2 (1.23)	22.3 (0.88)	50.8 (2.00)
MV661	0.5 (1.1)	3/8-18 NPTF Female	3/8-18 NPTF Female	98.04 (3.86)	86.4 (3.40)	38.3 (1.51)	35.0 (1.38)	25.4 (1.00)	63.5 (2.50)
MV861	1.0 (2.2)	1/2-14 NPTF Female	1/2-14 NPTF Female	118.3 (4.66)	106.9 (4.21)	43.43 (1.71)	40.3 (1.59)	29.4 (1.16)	82.6 (3.25)
MV1261	1.6 (3.5)	3/4-14 NPTF Female	3/4-14 NPTF Female	146.8 (5.78)	132.8 (5.23)	44.5 (1.75)	41.1 (1.62)	38.1 (1.50)	98.6 (3.88)

An optional MVK mounting kit makes panel mounting quite simple.