

Model SFMMV Series

Lead-Free Multi-Valve Supply Fixture
Based On The MV17 Master Mixing Valves



THERMOSTATIC MIXING VALVE

APPLICATION:

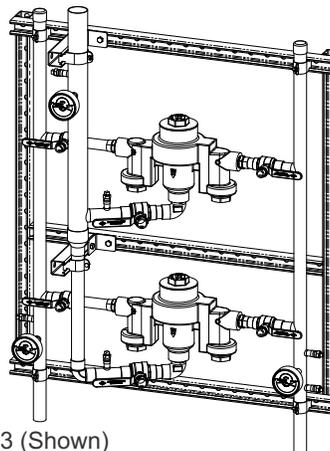
The model SFMMV Series Multi-Valve Supply Fixtures can be accurately referred to as a High/Low Multi-Valve fixture, compliant with the temperature control requirements of ASSE 1017 at flow rates well below the ASSE standard tested flow rate. The SFMMV Series Multi-Valve Supply Fixture are ideal for applications without recirculating pumps where the minimum flow for accurate control can be met by the actual demand of but a few fixtures. They are also ideal for recirculating systems where demand can vary from the pump draw alone (no user demand) up to a very high user usage. From small to large commercial applications, the SFMMV series is offered in 10 models/sizes to allow you to select the valve with the capacity and performance capable of delivering safely controlled tempered hot water to all your fixtures, at all times.

FEATURES:

- ◆ Lead-Free soldered assembly featuring a DZR brass body mixing valve containing corrosion-resistant internal components.
- Integral cartridge style checks with screens to prevent backflow and to filter debris from entering the valve.
- Temperature adjustment is made using an Allen wrench. A locknut on the bonnet prevents unauthorized or accidental temperature adjustment.
- Commercial quality paraffin actuator provides repeatable, reliable performance.
- Includes lockable full port brass ball valves on inlet and outlet connections.
- Temperature/Pressure gauges on inlets and outlet.
- IAPMO certified per ASSE 1017 and CSAB125.3.
- Factory assembled and pneumatically tested to 80 PSI (552 kPa).
- The MV17 is capable of exceeding the temperature control accuracy requirements of ASSE 1017 at Zero GPM actual user demand. The system must include a continuously operating recirculation pump capable of meeting the minimum flow rate shown on the enclosed chart (3 to 12 GPM based on the model) with a correctly adjusted balancing valve.
- Optional -CVS Controlled Valve Staging eliminates the need for a PRV when lower minimum flows are required.
- Upgradable to Acorn BASyC®.

GUIDE SPECIFICATION:

SFMMV Series Multi-Valve Supply Fixtures shall be factory assembled and feature MV17 Series Mixing Valves which contain an advanced paraffin sensor with a temperature range of 100°F to 160°F (37.8°C to 71°C) and factory set at 120°F (49°C) with a locknut to prevent unauthorized temperature changes. Fixture shall also include copper piping, lockable ball valves and a temperature/pressure gauges standard. Valve bodies material shall be "lead-free" brass with corrosion-resistant internal components. Fixture shall include temperature/pressure gauges on inlets and outlet. Multi-Valve Supply Fixture shall be **ACORN CONTROLS®** model SFMMV-_____.



SFMMV-33 (Shown)



Patent #9,898,017

SPECIFICATIONS:

Valve Specifications:

Maximum Operating Pressure: 125 PSI (861 kPa)
 Maximum Hot Water Supply Temp: 180°F (82°C)
 Outlet Temp. Range: 100°F-160°F (38°C-71°C)
 Minimum Hot Water Supply* 5°F (3°C)
 Above Set Point

Flow Rate at 45 PSI (310 kPa) differential:

SFMMV-23: 135 GPM (511 LPM)
 SFMMV-24: 195 GPM (738 LPM)
 SFMMV-25: 270 GPM (1022 LPM)
 SFMMV-33: 180 GPM (681 LPM)
 SFMMV-34: 240 GPM (908 LPM)
 SFMMV-35: 315 GPM (1192 LPM)
 SFMMV-44: 300 GPM (1136 LPM)
 SFMMV-45: 375 GPM (1420 LPM)
 SFMMV-55: 450 GPM (1703 LPM)
 SFMMV-555: 675 GPM (2555 LPM)

* Under Normal Operating Conditions.

◆ The wetted surface of these valves contacted by consumable water contains less than 0.25% of lead by weight in conformance with national lead-free law.

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Submission # **SFMMV Series** Revised: 06/24/2025
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Certifications:



ASSE 1017
CSA B125.3



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VALVE SELECTION:

- SFMMV-23 1-1/4" Inlets & 2" Outlet, 135 GPM (511 LPM)
- SFMMV-24 1-1/2" Inlets & 2" Outlet, 195 GPM (738 LPM)
- SFMMV-25 2" Inlets & 2-1/2" Outlet, 270 GPM (1022 LPM)
- SFMMV-33 1-1/4" Inlets & 2" Outlet, 180 GPM (681 LPM)
- SFMMV-34 1-1/2" Inlets & 2-1/2" Outlet, 240 GPM (908 LPM)
- SFMMV-35 2" Inlets & 3" Outlet, 315 GPM (1192 LPM)
- SFMMV-44 1-1/2" Inlets & 2" Outlet, 300 GPM (1136 LPM)
- SFMMV-45 2" Inlets & 3" Outlet, 375 GPM (1420 LPM)
- SFMMV-55 2" Inlets & 3" Outlet, 450 GPM (1703 LPM)
- SFMMV-555 3" Inlets & 4" Outlet, 675 GPM (2555 LPM)

PIPING CONFIGURATION:

INLET:

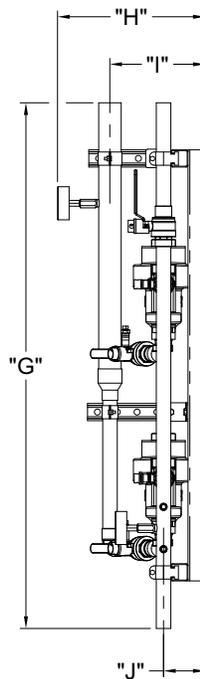
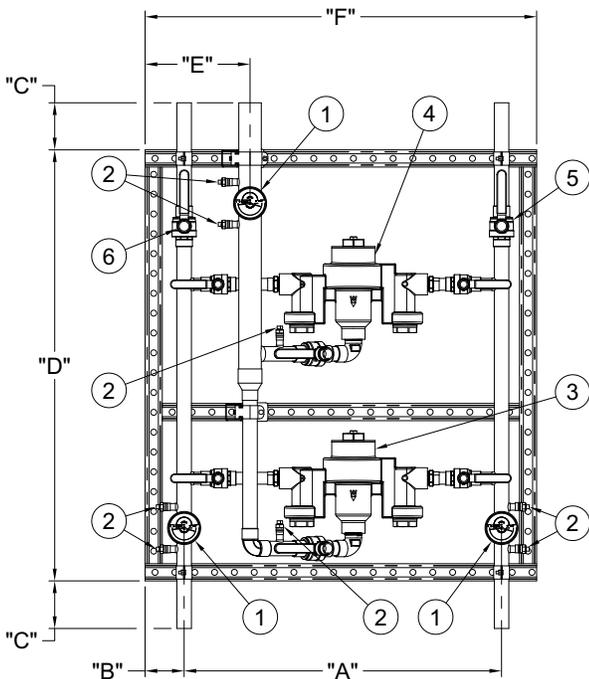
- T Top Supply Inlet
- B Bottom Supply Inlet

OUTLET:

- OT Outlet Top
- OB Outlet Bottom

VALVE OPTIONS:

- CVS Controlled Valve Staging Assembly
- CWB Cold Water Bypass (Includes a Reducer and Ball Valve)
Specify Pipe Size
 1/2" 3/4" 1" 1-1/4" 1-1/2"
 2"
- HWB Hot Water Bypass (Includes a Reducer and Ball Valve)
Specify Pipe Size
 1/2" 3/4" 1" 1-1/4" 1-1/2"
 2"
- TBV Thermostatic Balancing Valve
Specify Pipe Size
 1/2" 3/4" 1" 1-1/4" 1-1/2"
 2"



- ① TEMPERATURE/PRESSURE GAUGES
- ② SENSOR PORTS FOR UPGRADING TO ACORN BASyC™ SYSTEM
- ③ CVS VALVE
- ④ LOW FLOW VALVE
- ⑤ -CWB COLD WATER BYPASS BALL VALVE
- ⑥ -HWB HOT WATER BYPASS BALL VALVE

#SFMMV-33-CVS-CWB-1-1/4"-HWB-1-1/4"
SHOWN FOR REFERENCE

SEE PAGES 3 AND 4 FOR FLOW CHART AND PAGE 5 FOR DIMENSIONAL CHART

SELECTION SUMMARY & APPROVAL FOR MANUFACTURING

Model Number & Options _____ Quantity _____

Company _____

Contact _____ Title _____

Signature (Approval for Manufacturing) _____ Date _____

Model SFMMV Series

Lead-Free Multi-Valve Supply Fixture
Based On The MV17 Master Mixing Valves



THERMOSTATIC MIXING VALVE

FLOW CHART:

	PRESSURE DROP PSID (kPa)	CV	MINIMUM FLOW GPM	CERTIFIED MINIMUM FLOW GPM	5 (34)	10 (69)	15 (103)	20 (138)	30 (207)	45 (310)	60 (414)
SFMMV-23	FLOW RATE GPM (LPM)	20.1	0.1 (0.4)	3 (11)	45 (170)	64 (242)	78 (295)	90 (341)	110 (416)	135 (511)	156 (591)
SFMMV-24	FLOW RATE GPM (LPM)	29.1	0.1 (0.4)	4 (15)	65 (246)	92 (348)	113 (428)	130 (492)	159 (602)	195 (738)	225 (852)
SFMMV-25	FLOW RATE GPM (LPM)	40.2	0.1 (0.4)	5 (19)	90 (341)	127 (481)	156 (591)	180 (681)	220 (833)	270 (1022)	312 (1181)
SFMMV-33	FLOW RATE GPM (LPM)	26.8	0.1 (0.4)	4 (15)	60 (227)	85 (322)	104 (394)	120 (454)	147 (556)	180 (681)	208 (787)
SFMMV-34	FLOW RATE GPM (LPM)	35.8	0.1 (0.4)	5 (19)	80 (303)	113 (428)	140 (530)	160 (606)	195 (738)	240 (908)	277 (1049)
SFMMV-35	FLOW RATE GPM (LPM)	46.9	0.1 (0.4)	6 (23)	105 (397)	148 (560)	182 (689)	210 (795)	257 (973)	315 (1192)	364 (1378)
SFMMV-44	FLOW RATE GPM (LPM)	44.8	0.1 (0.4)	6 (23)	100 (379)	141 (534)	173 (655)	200 (757)	245 (927)	300 (1136)	346 (1310)
SFMMV-45	FLOW RATE GPM (LPM)	55.9	0.1 (0.4)	7 (27)	125 (473)	177 (670)	217 (821)	250 (946)	306 (1158)	375 (1420)	433 (1639)
SFMMV-55	FLOW RATE GPM (LPM)	67.0	0.1 (0.4)	8 (30)	150 (568)	212 (803)	260 (984)	300 (1137)	367 (1389)	450 (1703)	520 (1968)
SFMMV-555	FLOW RATE GPM (LPM)	100.5	0.1 (0.4)	12 (45)	225 (852)	318 (1204)	390 (1476)	450 (1703)	562 (2127)	675 (2555)	779 (2949)

NOTE:

Minimum flow when the valve is installed at or near hot water source with re-circulated tempered water using a properly sized, continuously operating pump.

NOTE:

ASSE 1017 performance based on actual demand or recirculation pump flow rate or a combination of both. See FEATURES regarding control performance at ZERO GPM user demand.

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Submital # **SFMMV Series**
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Certifications:



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THERMOSTATIC MIXING VALVE

-CVS FLOW CHART:

	PRESSURE DROP PSID (kPa)	CV	MINIMUM FLOW GPM	CERTIFIED MINIMUM FLOW GPM	5 (34)	10 (69)	15 (103)	20 (138)	30 (207)	45 (310)	60 (414)
SFMMV-23 -CVS	FLOW RATE GPM (LPM)	19.91	0.1 (0.4)	1 (3.8)	45 (170)	63 (238)	77 (291)	89 (337)	109 (413)	134 (507)	154 (583)
SFMMV-24 -CVS	FLOW RATE GPM (LPM)	28.71	0.1 (0.4)	1 (3.8)	64 (242)	91 (344)	111 (420)	128 (485)	157 (594)	193 (731)	222 (840)
SFMMV-25 -CVS	FLOW RATE GPM (LPM)	39.7	0.1 (0.4)	1 (3.8)	89 (337)	126 (477)	154 (283)	178 (674)	217 (821)	266 (1007)	308 (1166)
SFMMV-33 -CVS	FLOW RATE GPM (LPM)	26.61	0.1 (0.4)	2 (7.6)	60 (227)	84 (318)	103 (390)	119 (450)	146 (553)	179 (678)	206 (780)
SFMMV-34 -CVS	FLOW RATE GPM (LPM)	35.41	0.1 (0.4)	2 (7.6)	79 (299)	112 (424)	137 (518)	158 (598)	194 (734)	238 (901)	274 (1037)
SFMMV-35 -CVS	FLOW RATE GPM (LPM)	46.41	0.1 (0.4)	2 (7.6)	104 (394)	147 (556)	180 (681)	208 (787)	254 (961)	311 (1177)	359 (1359)
SFMMV-44 -CVS	FLOW RATE GPM (LPM)	44.36	0.1 (0.4)	3 (11.4)	99 (375)	140 (529)	172 (651)	198 (750)	243 (920)	298 (1128)	344 (1302)
SFMMV-45 -CVS	FLOW RATE GPM (LPM)	55.36	0.1 (0.4)	3 (11.4)	124 (469)	175 (662)	214 (810)	248 (939)	303 (1147)	371 (1404)	429 (1624)
SFMMV-55 -CVS	FLOW RATE GPM (LPM)	66.54	0.1 (0.4)	4 (15.1)	149 (564)	210 (795)	258 (977)	298 (1128)	364 (1378)	446 (1688)	515 (1949)
SFMMV-555 -CVS	FLOW RATE GPM (LPM)	100.1	0.1 (0.4)	4 (15.1)	224 (848)	317 (1200)	388 (1469)	448 (1696)	548 (2074)	671 (2540)	775 (2934)

NOTE:

Minimum flow when the valve is installed at or near hot water source with re-circulated tempered water using a properly sized, continuously operating pump.

NOTE:

ASSE 1017 performance based on actual demand or recirculation pump flow rate or a combination of both. See FEATURES regarding control performance at ZERO GPM user demand.

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THERMOSTATIC MIXING VALVE

TECHNICAL DIMENSIONAL CHART:

	INLET	OUTLET	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"
SFMMV-23	1-1/4" NCT	2" NCT	30" (762)	3-3/4" (95)	4-1/2" (114)	36-1/2" (927)	10" (254)	37" (940)	45-1/2" (1156)	14" (356)	9" (229)	4" (102)
SFMMV-24	1-1/2" NCT	2" NCT	30" (762)	3-1/2" (89)	4-1/2" (114)	36-1/2" (927)	8-3/4" (222)	37" (940)	45-1/2" (1156)	16-1/4" (413)	11-1/8" (283)	4" (102)
SFMMV-25	2" NCT	2-1/2" NCT	36" (914)	2-3/4" (70)	4-1/2" (114)	36-1/2" (927)	9-1/8" (232)	41-1/2" (1054)	45-1/2" (1156)	17-3/4" (451)	12-1/2" (318)	4-1/4" (108)
SFMMV-33	1-1/4" NCT	2" NCT	30" (762)	3-3/4" (95)	4-1/2" (114)	40-3/4" (1035)	10" (254)	37" (940)	49-3/4" (1264)	14" (356)	9" (229)	4" (102)
SFMMV-34	1-1/2" NCT	2-1/2" NCT	30" (762)	3-1/2" (89)	4-1/2" (114)	40-3/4" (1035)	7-3/4" (197)	37" (940)	49-3/4" (1264)	15-3/4" (400)	10-1/2" (267)	4" (102)
SFMMV-35	2" NCT	3" NCT	36" (914)	2-3/4" (70)	4-1/2" (114)	40-1/2" (1029)	8-7/8" (225)	41-1/2" (1054)	49-1/2" (1257)	17-1/2" (445)	12" (305)	4-1/4" (108)
SFMMV-44	1-1/2" NCT	2" NCT	30" (762)	3-1/2" (89)	4-1/2" (114)	40-3/4" (1035)	9-3/8" (238)	37" (940)	49-3/4" (1264)	16-1/4" (413)	11" (279)	4" (102)
SFMMV-45	2" NCT	3" NCT	36" (914)	2-3/4" (70)	4-1/2" (114)	41-1/2" (1054)	10" (254)	41-1/2" (1054)	50-1/2" (1283)	19" (483)	13-1/2" (343)	4-1/4" (108)
SFMMV-55	2" NCT	3" NCT	36" (914)	2-3/4" (70)	4-1/2" (114)	41-1/2" (1054)	10-1/8" (257)	41-1/2" (1054)	50-1/2" (1283)	19-1/4" (489)	13-1/4" (337)	4-1/4" (108)
SFMMV-555	3" NCT	4" NCT	36" (914)	2-3/4" (70)	4-1/2" (114)	60" (1524)	10-3/8" (264)	41-1/2" (1054)	69" (1753)	20-1/2" (521)	14-1/2" (368)	4-7/8" (124)

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ASSE 1017
CSA B125.3



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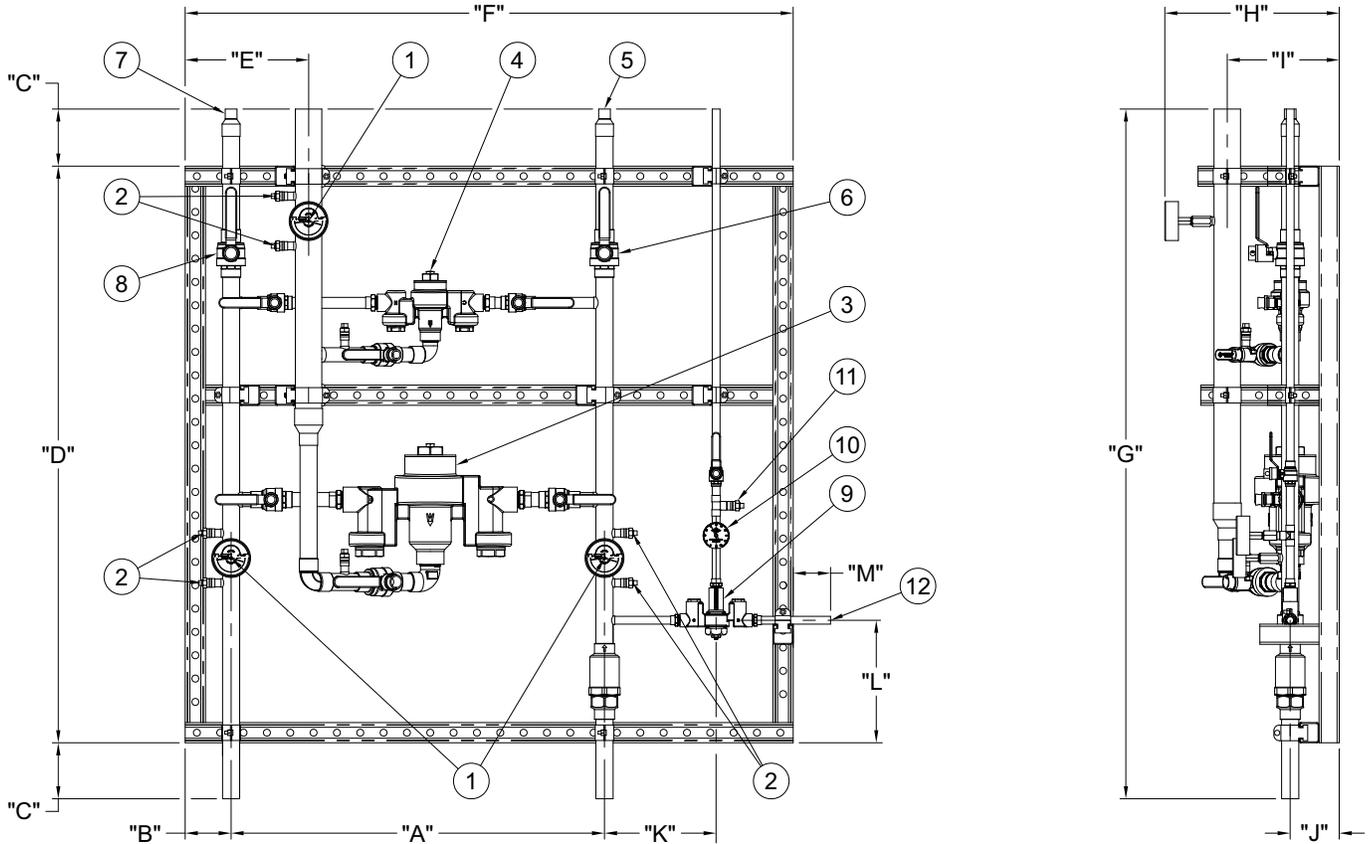
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Lead-Free Multi-Valve Supply Fixture
Based On The MV17 Master Mixing Valves



THERMOSTATIC MIXING VALVE

-TBV TECHNICAL DRAWING:



- | | |
|--|--------------------------------------|
| ① TEMPERATURE/PRESSURE GAUGES | ⑦ 3/4" -HWB HOT WATER BYPASS (SHOWN) |
| ② TEMPERATURE AND PRESSURE SENSOR PORTS FOR UPGRADING TO ACORN BASyC™ SYSTEM | ⑧ -HWB HOT WATER BYPASS BALL VALVE |
| ③ CVS VALVE | ⑨ -TBV THERMOSTATIC BALANCING VALVE |
| ④ LOW FLOW VALVE | ⑩ RETURN TEMPERATURE GAUGE |
| ⑤ 3/4" -CWB COLD WATER BYPASS (SHOWN) | ⑪ RETURN TEMPERATURE SENSOR PORT |
| ⑥ -CWB COLD WATER BYPASS BALL VALVE | ⑫ 1/2" NCT RETURN |

SFMMV-23-CVS-CWB-3/4\"/>

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-TBV TECHNICAL DIMENSIONAL CHART:

	INLET	OUTLET	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	"K"	"L"	"M"
SFMMV-23	1-1/4" NCT	2" NCT	30" (762)	3-3/4" (95)	4-1/2" (114)	46-1/2" (1181)	10" (254)	48-7/8" (1241)	55-1/2" (1410)	14" (356)	9" (229)	4" (102)	9" (229)	9-7/8" (251)	3" (76)
SFMMV-24	1-1/2" NCT	2" NCT	30" (762)	3-1/2" (89)	4-1/2" (114)	47-1/2" (1206)	8-3/4" (222)	48-7/8" (1241)	56-1/2" (1435)	16-1/4" (413)	11-1/8" (283)	4" (102)	9-1/4" (235)	10-7/8" (276)	3" (76)
SFMMV-25	2" NCT	2-1/2" NCT	36" (914)	2-3/4" (70)	4-1/2" (114)	48" (1219)	9-1/8" (232)	54-1/4" (1378)	57" (1448)	17-3/4" (451)	12-1/2" (318)	4-1/4" (108)	9-1/4" (235)	11" (279)	3" (76)
SFMMV-33	1-1/4" NCT	2" NCT	30" (762)	3-3/4" (95)	4-1/2" (114)	50-1/2" (1283)	10" (254)	48-7/8" (1241)	59-1/2" (1511)	14" (356)	9" (229)	4" (102)	9" (229)	9-7/8" (251)	3" (76)
SFMMV-34	1-1/2" NCT	2-1/2" NCT	30" (762)	3-1/2" (89)	4-1/2" (114)	50-1/2" (1283)	7-3/4" (197)	48-7/8" (1241)	59-1/2" (1511)	15-3/4" (400)	10-1/2" (267)	4" (102)	9-1/4" (235)	9-7/8" (251)	3" (76)
SFMMV-35	2" NCT	3" NCT	36" (914)	2-3/4" (70)	4-1/2" (114)	51-1/2" (1308)	8-7/8" (225)	54-1/4" (1378)	60-1/2" (1537)	17-1/2" (445)	12" (305)	4-1/4" (108)	9-1/4" (235)	11" (279)	3" (76)
SFMMV-44	1-1/2" NCT	2" NCT	30" (762)	3-1/2" (89)	4-1/2" (114)	51-1/2" (1308)	9-3/8" (238)	48-7/8" (1241)	59-1/2" (1511)	16-1/4" (413)	11" (279)	4" (102)	9-1/4" (235)	9-7/8" (251)	3" (76)
SFMMV-45	2" NCT	3" NCT	36" (914)	2-3/4" (70)	4-1/2" (114)	51-1/2" (1308)	10" (254)	54-1/4" (1378)	60-1/2" (1537)	19" (483)	13-1/2" (343)	4-1/4" (108)	9-1/4" (235)	11" (279)	3" (76)
SFMMV-55	2" NCT	3" NCT	36" (914)	2-3/4" (70)	4-1/2" (114)	51-1/2" (1308)	10-1/8" (257)	54-1/4" (1378)	60-1/2" (1537)	19-1/4" (489)	13-1/4" (337)	4-1/4" (108)	9-1/4" (235)	11" (279)	3" (76)

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