

MAXITROL

Selectra® Series 94 Condensed Catalog

Electronic Modulation Gas-Fired Temperature Controls Environmental and Industrial Gas Flame Applications

Selectra® systems from Maxitrol maintain precise, stable gas-fired temperatures. Selectra's unique electronic Modulator-Regulator valves control gas flow with instantaneous response and continual adjustment. They are the superior alternative to mod motors and butterfly valves.

OEM or retrofit applications include environmental climate control, as well as industrial or commercial heating processes. All fuel gases are compatible - capacities to 30,000,000 Btu/h.

Available standard companion electronics include temperature selectors, amplifiers, and temperature sensors, in a variety of configurations. The amplifier supplies output voltage to the M valve.

Series 94 Systems

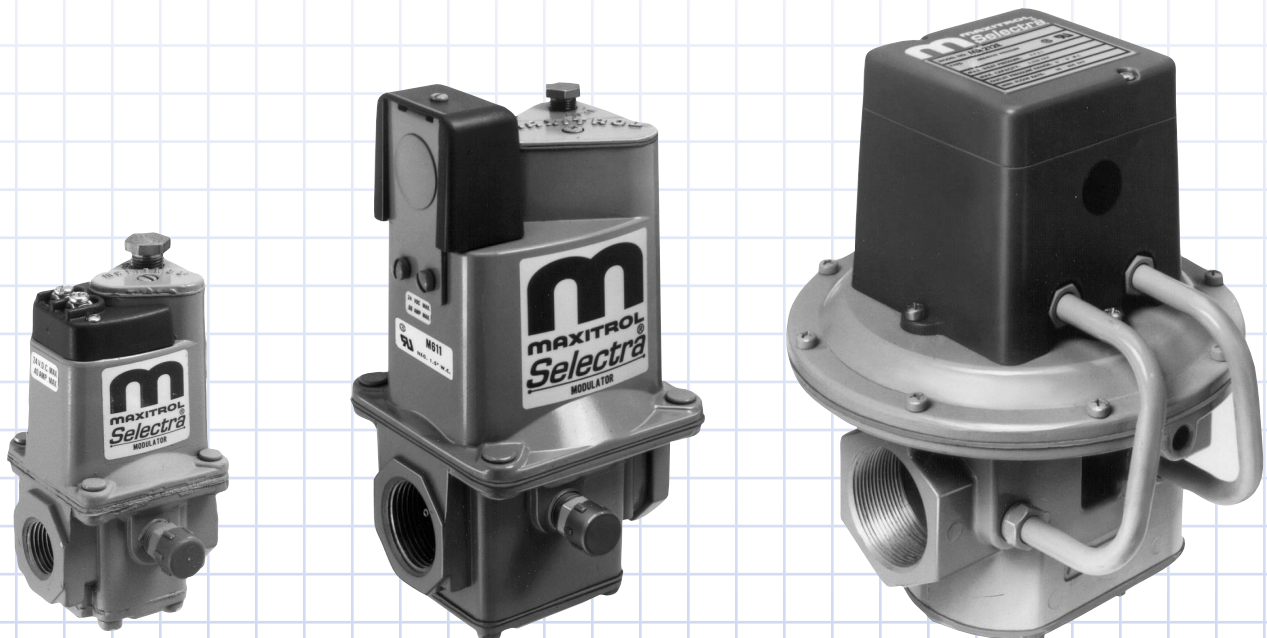
Selectra® Series 94 systems are designed for use with atmospheric and direct fired burners (used in furnaces, ovens, etc.).

Series 94 is used in either 'remote' or 'self-contained' systems, along with components common to either configuration. A remote system contains an amplifier with a separate temperature selector. A room override thermostat is optional with remote single dial selector. The self-contained system has the amplifier/selector combined

as a single unit. Common items include temperature sensors, mixing tubes, and modulator-modulator/regulator valves.

A dual remote temperature selector is also available and is primarily used for paint booth "spray/dry" applications.

A "K" thermocouple (not supplied by Maxitrol) may be used with "K" suffixed amplifier/selectors.



System Components

Description	Amplifier	Remote Selector	Sensor	Optional Override	Valves (see pg. 4)
Single Dial - Relay to Operate Automatic Valve	A1094	TD94	TS 194/MT1 or TS394	T115 (Can be used with TD94E-0409 only)	M420, M520, M620, M451, M551, M651
Single Dial - No Relay for Automatic Valve	A1494	TD94	TS 194/MT1 or TS 394	T115 (Can be used with TD94E-0409 only)	M411, M511, M611, MR212D, E, G & J
Dual Dial - No Relay for Automatic Valve	A1494	TD294	TS 194/MT1 or TS 394	Not Available	M411, M511, M611, MR212D, E, G & J
Dual Dial - Relay to Operate Automatic Valve	A1094	TD294	TS 194/MT1 or TS 394	Not Available	M420, M520, M620, M451, M551, M651
	Amplifier/Selector				
*Single Dial - Relay to Operate Automatic Valve	AD1094C		TS394	Not Available	M411, M420, M451, M511, M520, M551, M611, M620, M651, MR212D, E, G & J
Single Dial - No Relay for Automatic Valve	AD149CK		"K" Thermocouple Not Supplied by Maxitrol	Not Available	

*Do not use relay on direct fired applications.

REMOTE SYSTEM ITEMS

Remote Temperature Selectors (with LED Display):

TD94E-0409 (40° to 90° F)
 TD94E-0616 (60° to 160° F)
 TD94E-1030 (100° to 300° F)
 TD94E-609/0818 (dual temp 60° to 90° F and 80° to 180° F)

Amplifiers:

A1094 (all temperature ranges)
 A1494 (all temperature ranges)

Override Stst (optional):

T115 (40° to 90° F)
 use with TD94E-0409)

SELF-CONTAINED SYSTEM ITEMS

Amplifier/Selectors (with LCD Display):

AD1094C-1050 (100° to 500° F)
 AD1094C-2565 (250° to 650° F)
 AD1094CM-1234 (120° to 345° F)
 AD1494CK-60120 (600° to 1200° F)

COMMON ITEMS

Temperature Sensors:

TS194 (use with mixing tube) 300° maximum
 TS394-3B48FQ (3" x .19" dia. probe)

Mixing Tubes: (length)

MT1-9 or 2-9 (9" / 229 mm)
 MT1-12 or 2-12 (12" / 305 mm)
 MT1-23 or 2-23 (23" / 584 mm)
 MT1-28 or 2-28 (28" / 711 mm)
 MT-57 (57" / 1448 mm)

Valves:

M411, M420, M420H, and M451 (3/8" & 1/2" pipe size) Ⓢ
 M511, M520, M520H, and M551 (1/2" & 3/4" pipe size) Ⓢ
 M611, M620, M620H, and M651 (3/4" & 1" pipe size) Ⓢ
 MR212D (1", 1 1/4", and 1 1/2" pipe size) Ⓢ
 MR212E (1 1/2" & 2" pipe size) Ⓢ
 MR212G (2 1/2" & 3" pipe size) Ⓢ
 MR212J (4" flanged) Ⓢ
 MR212D-2, E-2, G-2, and J-2 (same pipe sizes as above, but used for 2-speed blower or dual fuel operation) Ⓢ
 MR251D, E, and G (same pipe sizes as above, but used for positive pressure atmospheric burner applications)
Note: the M (modulator) valve requires a pressure regulator for high fire setting. The MR (modulator/regulator) valve requires no pressure regulator up to 5 psi.



Ⓢ M411, M420, M420H, M451, M611, M520, M520H, M611, M620, M620H, MR212D, E, G & J with AD1094 controls - CSA listed to certify compliance with nationally published safety, construction and performance standards.
 Ⓢ M611, MR212D, E & G - UL recognized for compliance to nationally published safety, construction and performance standards.

System Components



**A1094 & A1494
Amplifier**



**AD1094 & AD 1494
Amplifier/Selector**



**TD94E
Remote Temp. Selector**



**TD294E
Dual Temp. Selector**



**TS394
Temperature Sensor**



**TS194
Temperature Sensor**



**MT2/MT1
Mixing Tube**



**T115
Override Stat**

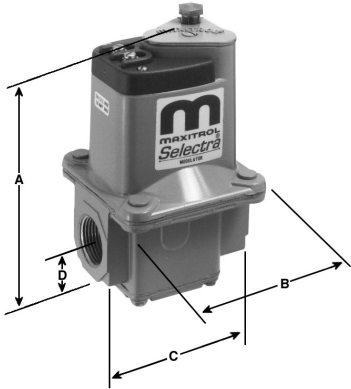
Dimensions

Component Dimensions - width x height x depth, in inches (millimeters)

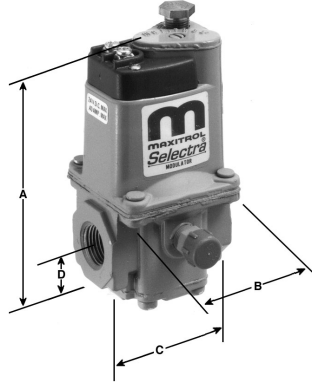
<p>A1094 Amplifier 7.5" (191) x 3.5" (89) x 2" (51)</p> <p>A1494 Amplifier 7.5" (191) x 3.5" (89) x 2" (51)</p> <p>AD1094 Amplifier/Selector 4" (102) x 4" (102) x 7.75" (197)</p> <p>AD1494 Amplifier/Selector 4" (102) x 4" (102) x 7.75" (197)</p> <p>TD94E Remote Temp. Selector 4" (102) x 4" (102) x 1.75" (44)</p> <p>T294E Dual Temp. Selector 6.75" (171) x 4" (102) x 1.75" (44)</p>	<p>TS394 Temperature Sensor W/ 4 ft. Lead Wire (122 cm)</p> <p>MT1 Mixing Tube enclosure (for sensor) 4.19" (106) x 4.19" (106) x 1.88" (48) [Tube lengths: 9" (229), 12" (305), 23" (584), 28" (711), 57" (1448)]</p> <p>MT2 Mixing Tube enclosure (for sensor) 2.19" (56) x 4.19" (106) x 1.88" (48) [Tube lengths: 9" (229), 12" (305), 23" (584), 28" (711)]</p> <p>T115 Override Stat 2.96" (75) x 4.69" (119) x 2.56" (65)</p>
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Dimensions are to be used only as an aid in designing clearance. Actual production dimensions may vary somewhat from those shown.

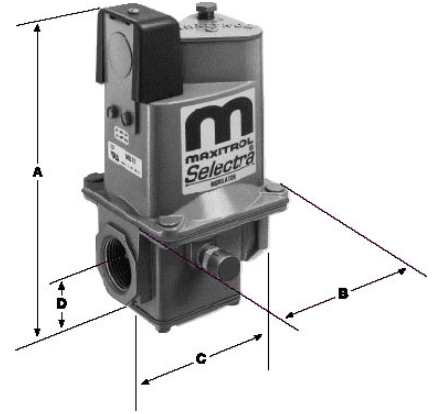
Pressures, Dimensions



M451, M551, M651



M411, M420, M511, M520, M620

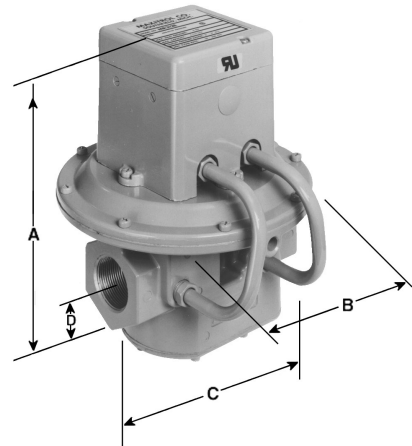


M611

Valve Dimensions - in inches (millimeters)

Dimensions are to be used only as an aid in designing clearance for the valve.
Actual production dimensions may vary somewhat from those shown.

Model Number	Swing Radius	Call-Outs			
		A	B	C	D
M411, M420, M451	3.1 (79)	3.9 (100)	2 (51)	2.1 (54)	.9 (24)
M511, M520, M551	4.3 (109)	5.3 (135)	3.25 (83)	3.4 (86)	1.2 (30)
M620, M651	7.2 (183)	7.1 (180)	3.9 (99)	4 (102)	1.5 (37)
M611	7.2 (183)	7.4 (188)	3.9 (98.6)	4 (102)	1.5 (37)
MR212D	8.1 (206)	10.2 (259)	7 (178)	5.5 (140)	2.3 (59)
MR212E	8.6 (218)	11.25 (286)	9.1 (232)	8 (203)	3 (76)
MR212G	10.4 (264)	14.75 (375)	13.5 (343)	11.75 (298)	4.6 (118)
MR212J (Not Shown)	—	24 (610)	21.5 (546)	13.9 (352)	5.9 (149)



MR212D, E, G & J



M411, M511, M611 - CSA tested for 1/2 psi inlet pressure,
Maxitrol tested for 1 psi maximum operating inlet pressure.

MR212D, E, G, J - CSA rated for 5 psi inlet pressure,
Maxitrol tested for 5 psi maximum operating inlet pressure.

See Bulletin MT2035 for additional valve information.

MAXITROL

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