Available Series “MG” Mixer sizes

Capacity and selection data

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Based on gross heating value of: 1000 Btu/ft³, sg = 0.6 for natural gas Maximum capacities for shown air factors are based on specified natural gas data. All air data is for standard conditions (59° F, 14.69 psi(a) at mixer outlet). Propane/butane/LPG pressures shown for different (LPG) nozzle insert. n = air factor (n = 1: stoichiometric mixture, n = 1.1 = 10 % excess air)								
Type “MG” (1)	Max. air flow m³(st)/hr	Δp air @ max. flow incl/excl. swirler ”wc (2)	Δp gas @ max. capacity and 30 % excess air (n = 1.3) (3)			Maximum capacities MBtu/h (HHV)		
			nat. gas ”wc	propane ”wc	butane ”wc	n = 1.1	n + 1.3	n + 1.8
MG-50	200		6.6	6.6	5.2	0.68	0.58	0.41
MG-65	280		4.0	4.6	3.6	0.96	0.82	0.58
MG-80	380		3.8	4.4	3.5	1.30	1.09	0.79
MG-100	650		3.7	3.9	3.0	2.22	1.88	1.37
MG-125	980		3.3	4.0	3.1	3.35	2.83	2.05
MG-150	1240		2.8	4.2	3.3	4.23	3.59	2.60
MG-200	2190		2.8	3.7	2.9	7.48	6.35	4.58
MG-250	3210		2.5	2.8	2.1	10.96	9.29	6.73
MG-300	4550		2.1	2.7	2.1	15.54	13.11	9.49
MG-400	7170		2.4	2.6	2.0	24.49	20.70	14.96

[1] Use always the smallest available mixing tube for the required capacity. (Typical turn down of the mixing tubes mixture flow is 1/5 of max. rated flow).
[2] The shown air p (10.63 “wc) = the Δp between upstream air pressure and downstream mixture pressure at maximum listed airflow. (The lower p (2.8” wc - 4.0” wc) =Δp between air test connection and mixture test connection – for info only). Pressure drops are only shown for combustion system design - the mixing tube is not to be used as a flowmeter.
[3] Differential pressure between gas test connection and mixture test connection.

Connections of “MG” mixing tubes

Standard “MG” mixing tubes have PN10 (DIN 2576) flanges for air inlet and mixture outlet. Gas inlet is threaded up to and including 2” (ISO 7 cylindrical female, conical male), flanged above 2” (PN10 DIN2576).

Optional, mixing tubes with other flanges (other pressure ratings or ANSI-flanges) are available.

Materials of Construction

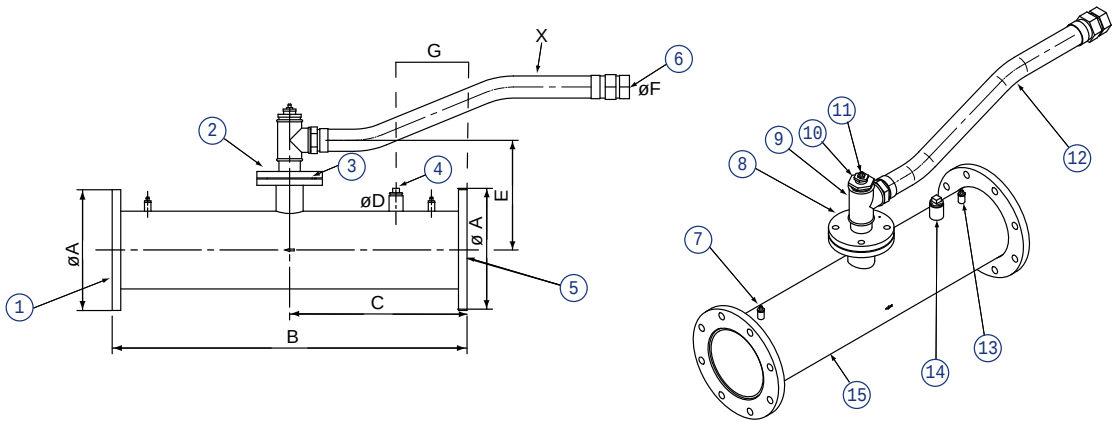
Standard “MG” mixing tubes are made of seamless carbon steel tubes and carbon steel fittings. Weld quality corresponds with (European) requirements for fuel gas piping. Flexible hoses have stainless steel hoses with malleable cast iron nipples and unions. Standard painting of the mixing tubes will give sufficient corrosion protection for indoor installations. Specify outdoor installation if better paint system is required.

Optional available: 100 % stainless steel “MG” mixing tubes (AISI 304 – 1.4301, and other materials).

Dimensions & weights

MG-50 to MG-200

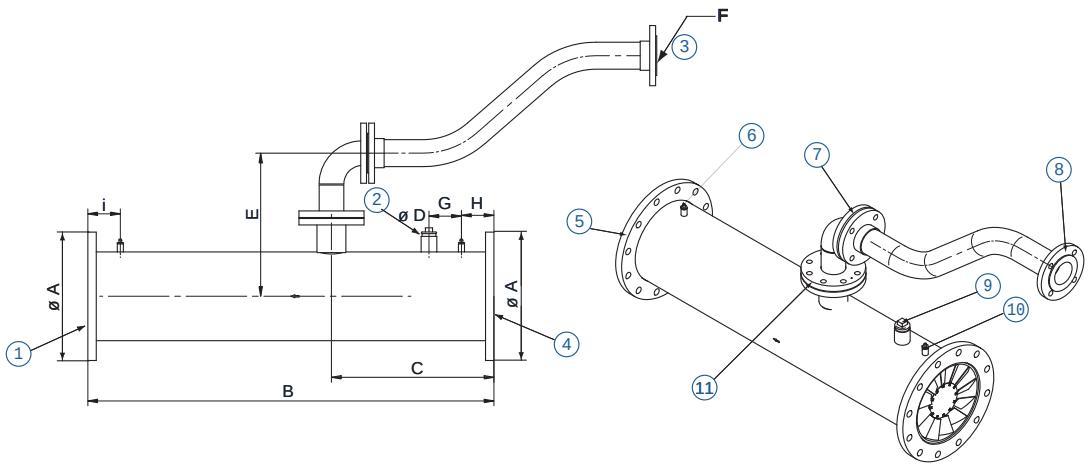
1) Mixture outlet
2) Gasket
3) Grooved pin
4) By-pass
5) Air inlet
6) Fuel gas inlet
7) Test nipple
8) Gas orifice
9) Tee
10) Reducing bush
11) Testnipple
12) Flexible
13) Testnipple
14) Plug
15) Mixing body



Dimensions in inches (unless stated otherwise)									
“MG” mixer size	øA ANSI 150 lbs	B	C	øD	E	F NPT	G	X	Weight lbs
MG-50	2”	19.69	9.94	1/4”	8.11	3/4”	5.91	19.69	9
MG-65	2.1/2”	19.69	9.94	1/4”	8.11	3/4”	5.91	19.69	13
MG-80	3”	19.69	9.94	1/2”	8.39	1”	5.91	19.69	18
MG-100	4”	19.69	9.94	1/2”	9.57	1”	5.91	19.69	24
MG-125	5”	19.69	9.94	3/4”	10.55	1.1/4”	5.91	39.37	37
MG-150	6”			3/4”	11.42	1.1/2”	5.91	39.37	68
MG-200	8”	39.37		1”	12.17	2”	7.87	39.37	110

MG-250 to MG-400

1) Mixture outlet
2) By-pass
3) Fuel gas inlet
4) Air inlet
5) Mixing body
6) Test nipple
7) Gas orifice
8) Flexible
9) Plug
10) Test nipple
11) Gasket



Dimensions in inches (unless stated otherwise)											
“MG”mixer size	øA ANSI 150 lbs	B	C	øD NPT	E	F ANSI 150 lbs	G	H	I	X	Weight lbs
MG-250	10”	49.21	19.69	1.1/4”	17.36	2.1/2”	3.93	3.93	3.93	39.37	240
MG-300	12”	59.06	19.69	1.1/2”	19.06	3”	3.93	3.93	3.93	39.37	395
MG-400	16”	78.74	19.69	2”	22.13	4”	3.93	3.93	3.93	39.37	617

Standard instructions for Series “MG” mixing tubes

Always consult and use the combustion system’s manual for any activity on the combustion system including the mixing tube – in case of any conflicting information, contact the system supplier.

These standard instructions should be considered as the absolute minimum requirements for the correct and safe use of these mixing tubes – specific installations might impose other instructions in their manual.

Storage and handling instructions

Keep Series “MG” mixing tubes dry and clean until final assembly in the combustion system’s piping.

Mounting instructions

Series “MG” mixing tubes can be mounted in any orientation.
For critical applications, allow 3 diameters of straight pipe with same diameter, up-stream and down-stream of the mixing tube.
Do not locate valves, reducers or orifices, directly on the air inlet of the mixing tube. The inlet of the mixing tube shall be connected to piping of the same diameter as the mixing tube inlet. Orifices, reducers or valves directly mounted on the mixing tube’s inlet will disturb the mixing. Wafer type butterfly valves mounted directly on the mixing tube’s inlet flange will not be able to open (the inlet of the mixing tube is blocked by the swirler).

An arrow, located in the middle of the mixing tube, indicates correct flow direction. Make sure the orientation of the tube in the system’s piping is correct. For ease of connection, Series “MG” mixing tubes are standard supplied with a flexible hose on the fuel gas inlet. The use of this hose is not mandatory. In case the mixing tube fuel inlet is rigidly piped to the fuel gas supply (the hose is not used), use unions or flanged connections in the fuel gas piping to the mixer to allow removal of the nozzle insert.

Gaskets, bolts and sealing paste used to connect the mixing tube to gas, air and mixture piping shall be in accordance with the requirements of the applicable code(s) of the combustion application.

The mixture, at the outlet of the mixing tube will have some swirl. The use of the mixing tubes directly mounted on the inlet of certain types of premix burners (as Maxon Sticktite nozzles) will require a straightener at the inlet of these burners (the mixture swirl will influence flame shape, combustion quality and stability of these burners).

Commissioning, start-up, maintenance and service instructions

Start-up, commissioning, maintenance and service of installations using Series “MG” mixing tubes shall be done in accordance with the specifications of the manual of these combustion systems.

Regular visual inspections of the installation and minimally one thorough check every year is advised to verify the soundness of the gas and mixture piping and cleanliness of the Series “MG” mixing tube.

The nozzle insert has provisions to make sure it can only be mounted in the correct orientation (gas drillings facing up-stream to the air inlet of the mixer).