

## Available Series "MG" Mixer sizes

### Capacity and selection data

Based on gross heating value of: 10.9 kWh/m <sup>3</sup> (st), 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 (15° C, 1.013 bar(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 m <sup>3</sup> (st)/hr	$\Delta p$ air @ max. flow incl/excl. swirler mbar (2)	$\Delta p$ gas @ max. capacity and 30 % excess air (n = 1.3) (3)			Maximum capacities kW (HHV)		
			nat. gas mbar	propane mbar	butane mbar	n = 1.1	n + 1.3	n + 1.8
MG-50	200	27 / 10	15.2	16.7	13.1	200	170	120
MG-65	280	27 / 7	10.2	11.7	9.2	280	240	170
MG-80	380	27 / 7	9.7	11.3	8.8	380	320	230
MG-100	650	27 / 7	9.4	9.8	7.7	650	550	400
MG-125	980	27 / 7	8.5	10.1	7.9	980	830	600
MG-150	1240	27 / 7	7.2	10.7	8.4	1240	1050	760
MG-200	2190	27 / 7	7.2	9.3	7.3	2190	1860	1340
MG-250	3210	27 / 7	6.3	7.0	5.4	3210	2720	1970
MG-300	4550	27 / 7	5.4	6.8	5.3	4550	3840	2780
MG-400	7170	27 / 7	6.2	6.6	5.2	7170	6060	4380

[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 (27 mbar) = the  $\Delta p$  between upstream air pressure and downstream mixture pressure at maximum listed airflow. (The lower p (7 mbar - 10 mbar) =  $\Delta p$  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

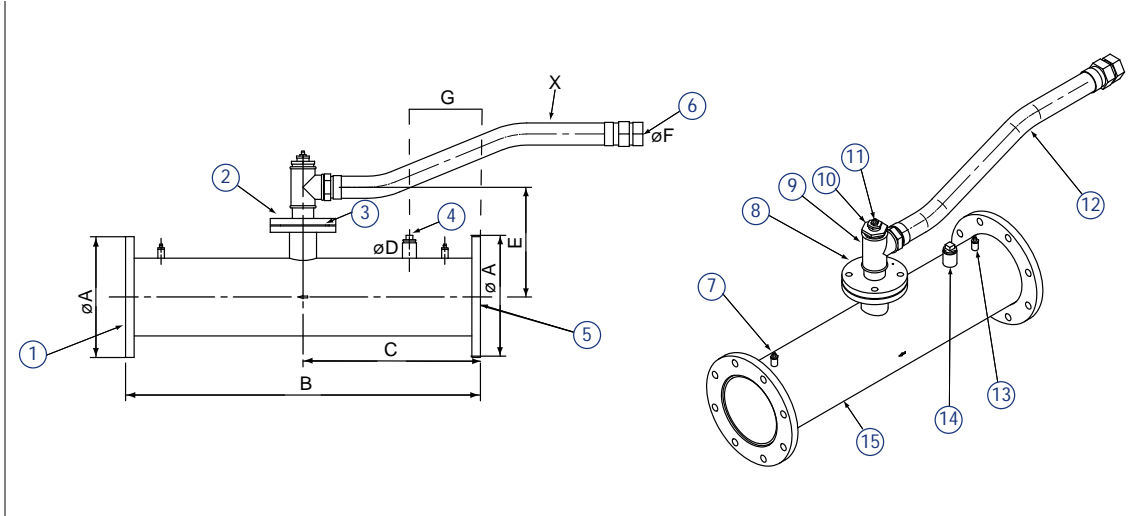
Standard "MG" mixing tubes are made of seamless carbon steel tubes and carbon steel fittings. Weld quality corresponds with (European) requirements for fuel gas piping. Flexible hoses have stainless steel hoses with malleable cast iron nipples and unions. Standard painting of the mixing tubes will give 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

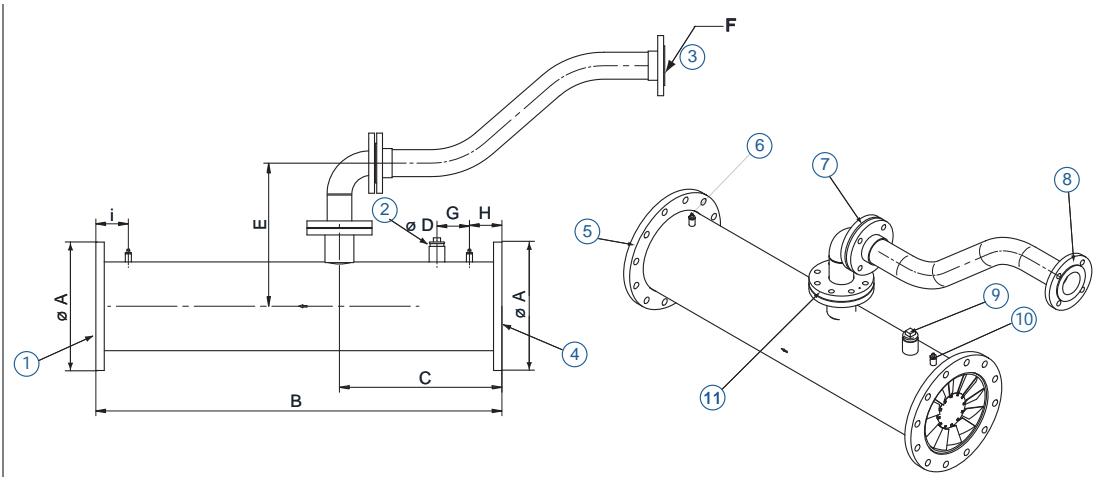


Dimensions in mm (unless stated otherwise)

"MG" mixer size	øA PN10	B	C	øD	E	F ISO	G	X	Weight kg
MG-50	DN50	500	250	5	206	Rp 3/4	150	500	4
MG-65	DN65	500	250	7	206	Rp 3/4	150	500	6
MG-80	DN80	500	250	8	213	Rp 1	150	500	8
MG-100	DN100	500	250	10	243	Rp 1	150	500	11
MG-125	DN125	500	250	12.5	268	Rp 1.1/4	150	1000	17
MG-150	DN150	750	375	15	290	Rp 1.1/2	150	1000	31
MG-200	DN200	1000	500	20	309	Rp 2	200	1000	50

## 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 mm (unless stated otherwise)

"MG"mixer size	øA PN10	B	C	øD ISO	E	F PN10	G	H	I	X	Weight
											kg
MG-250	DN250	1250	500	Rp 1.1/4	441	DN65	100	100	100	1000	110
MG-300	DN300	1500	500	Rp 1.1/2	484	DN80	100	100	100	1000	180
MG-400	DN400	2000	500	Rp 2	562	DN100	100	100	100	1000	280

## 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

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Keep Series "MG" mixing tubes dry and clean until final assembly in the combustion system's piping.

### Mounting instructions

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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).