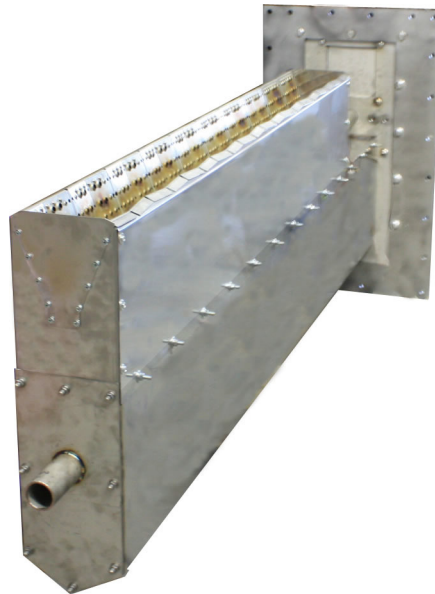


V-Line

Nozzle-mix line burner

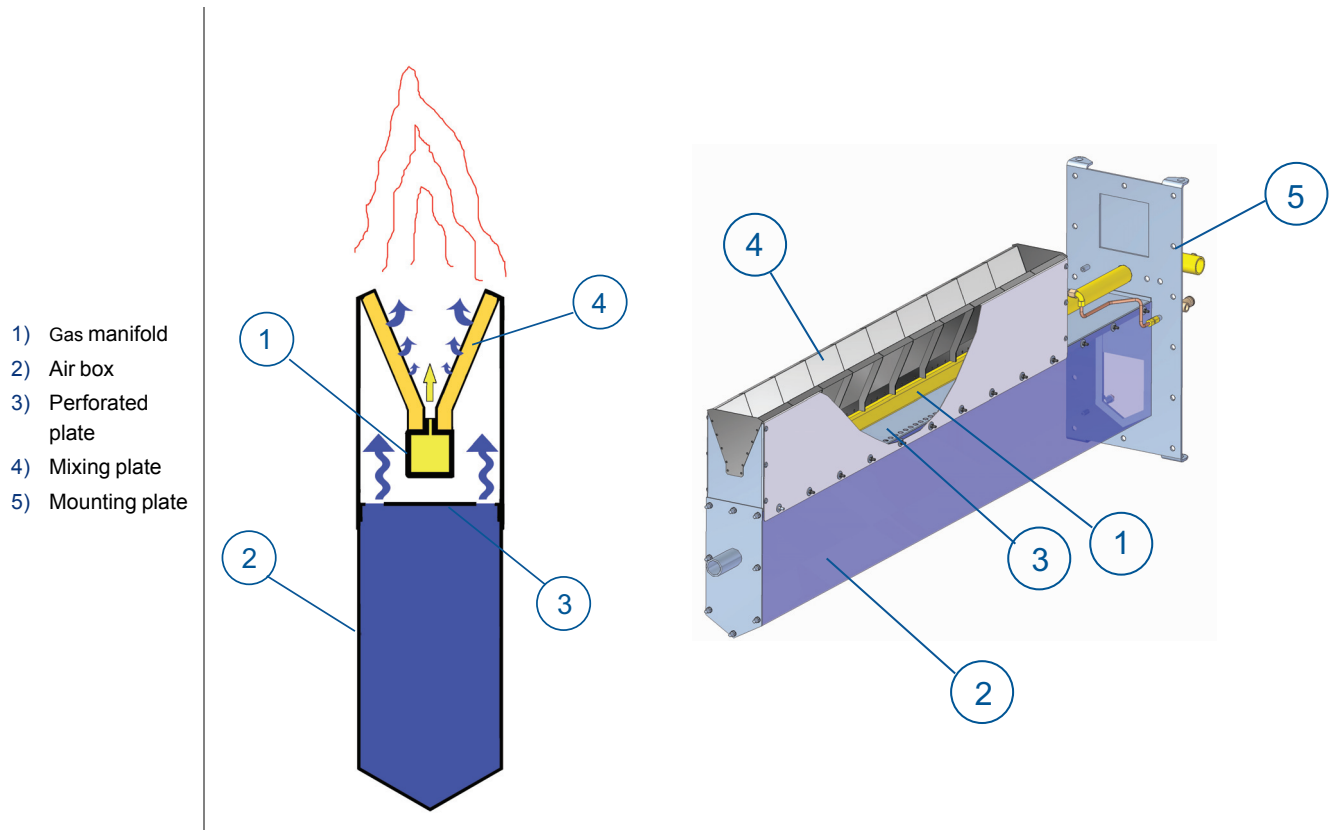


- Nozzle-mixing line burner for use with low pressure natural gas, propane and butane.
- Suitable for operation in variable process air-flows.
- Stainless steel burner parts.
- Allows the use of pre-heated combustion air for lower fuel consumption.
- Up to 40:1 turndown.
- Up to 400 kW per foot.
- Up to 6.5 ft in length. (1 ft = 305 mm)
- Available as packaged unit, including gas pipe train and burner controller.

Product description

MAXON V-Line burners are packaged nozzle-mix line burners, especially designed for fresh air heating or low temperature re-circulating air heating applications.

The V-Line burner utilizes a one piece stainless steel gas manifold. This manifold evenly injects the fuel gas between V-shaped air mixing plates. Combustion air is connected to a stainless steel air box and is forced through the mixing plates where it mixes with the fuel gas.



An additional perforated plate ensures the combustion air is distributed evenly over the entire burner length. This results in a stable and even flame pattern.

The material selection of the burner parts allows the use of preheated combustion air. Depending on the application, this feature can drastically decrease the fuel consumption.

The design of the V-Line burner allows for high turndown without premixing fuel and air at low firing rates. Low emissions are maintained through precise aeration of the flame along its length.

V-Line burners are built complete with a mounting plate to facilitate mounting of this burner on a duct. The burner is available in straight sections, up to 6.5 ft. (1ft = 305 mm)

V-Line operating data

Note that these are typical data, which may slightly vary depending on the application and/or process design data. Data are valid for firing with cold combustion air with modulated air/gas control.

Typical burner data			
15 °C - 21% O ₂ combustion air - 50% rel. humidity - natural gas with 10,9 kWh/Nm ³ HHV - sg = 0,6 [1]			
Stated pressures are indicative - actual pressures are function of air humidity, altitude, type of fuel and gas quality			
Max. capacity / ft	[2]	kW (HHV)	400
Max. flame length	[3]	m	2
Turndown			40:1
Comb. air pressure at max. capacity	[4]	mbar	17
Corresponding excess air factor	[5]	n	1,1
Natural gas pressure at max. capacity	[6]	mbar	75

[1] sg (specific gravity) = relative density to air (density air = 1,293 kg/Nm³)

[2] Advised maximum capacities/ft. Overfiring is possible (up to 20%) if special considerations are taken. Overfiring will give longer flames. Contact MAXON for more information.

[3] Typical flame lengths for shown excess air and capacity. Process oxygen levels, process velocities and air distribution may influence flame length. Contact MAXON for detailed information.

[4] Differential air pressure between burner test connection and combustion chamber for burner commissioning.

[5] Advised excess air factor for given capacity and optimal burner performance. Higher excess air factor will reduce flame length. Contact MAXON for detailed information.

[6] Differential natural gas pressure between burner gas test connection and combustion chamber.

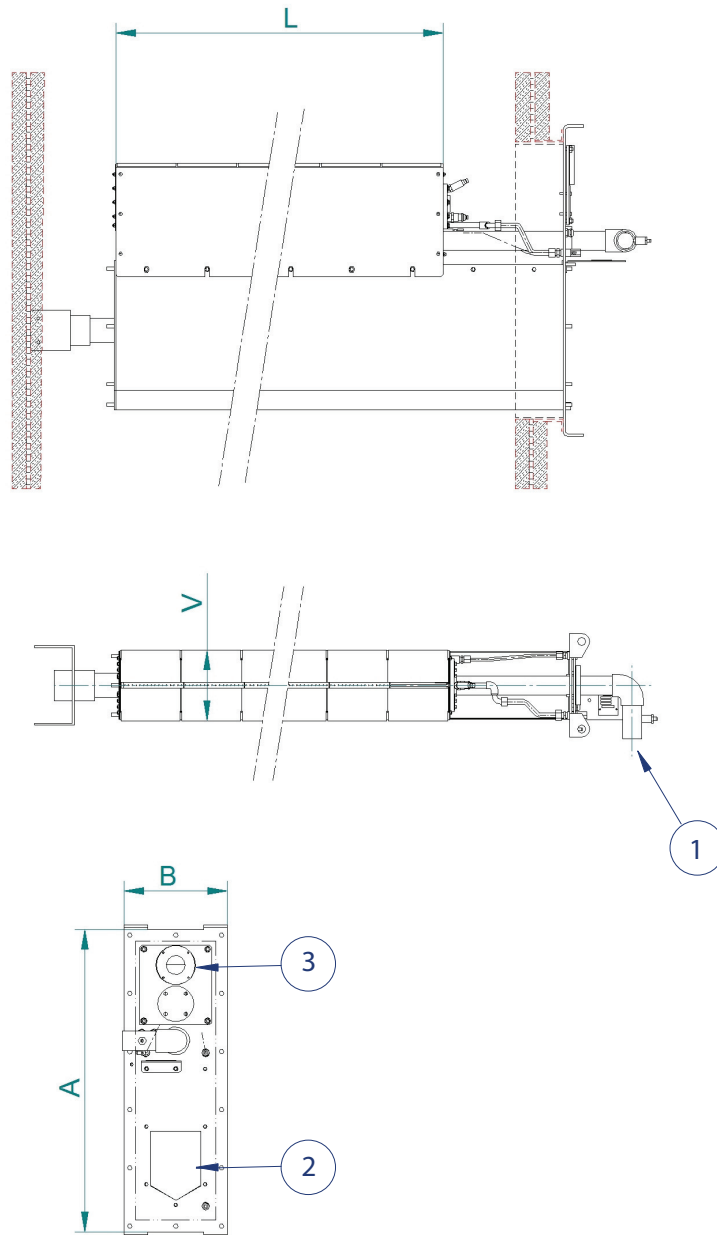
Applications

MAXON V-Line burners can be installed in a wide variety of applications.

The V-Line is perfectly suitable for direct air heating in different applications. The combustion products generated by the burner meet most of the local requirements for make-up air systems. Its operation is independent from possible variations of the process air flow. The burner design allows for higher upstream process air temperatures which makes the V-Line suitable for recirculating air processes. These features of the V-Line match the criteria of applications like paint-booths and make-up air units.

Besides make-up air heating and low temperature ovens, the V-Line can be used in all kind of drying applications, with fresh cold or preheated process air, or in recirculating low oxygen/high humidity atmospheres (paper, food, gypsum boards,...).

Dimensions and weights



- 1) Gas inlet
- 2) Combustion air inlet
- 3) View Port

Burner Size	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5
A	560	560	660	660	660	660	760	760	760	760	760	760	760
B	269	269	269	269	269	269	269	269	269	269	269	269	269
L	160	312	464	616	768	920	1072	1224	1376	1528	1680	1832	1984
V	178	178	178	178	178	178	178	178	178	178	178	178	178
Weight (kg)	25	30	35	40	45	50	55	60	65	70	75	80	85

Typical emissions

Thanks to the advanced mixing technology of the V-Line burner, MAXON V-Line burners combine excellent flexibility and turndown with very sharp emission levels on both CO and NO_x. Contact MAXON for more information.

Read "Specifications of V-Line burners" for correct and complete information on V-Line burners.