

KINEDIZER®

High capacity low NO_x gas burners



- **Field proven low emissions.** State-of-the-art Low NO_x firing - adjustable for application flexibility.
- **Rugged design** for oxidizers, process heaters, kilns, furnaces, dryers, waste incineration and other low and high temperature applications.
- Available in a **wide range of capacities, each** with turndown as high as 40:1.
- **Nozzle mixing** design.
- Burns **natural gas, propane** or other fuel gases.
- Provides **excellent stirring and mixing** with its medium velocity exhaust.
- Accepts **preheated and vitiated combustion air.**
- Can be used with cross velocities up to 3000 ft/min.

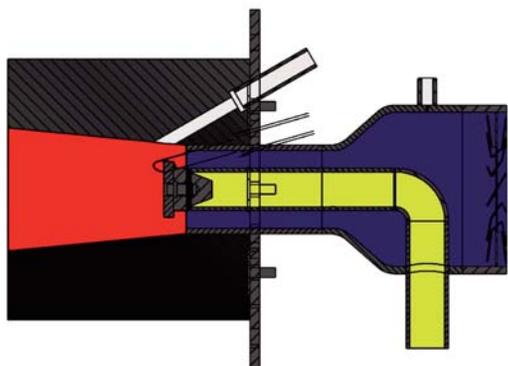
Product description

The KINEDIZER® burner is a nozzle-mixing medium-velocity design. Using advanced mixing technology, the burner produces low emissions with very little excess air. Ruggedly built with a reinforced refractory block and steel burner body and nozzle, it burns natural gas, propane or other fuels. Combustion air is supplied with an external blower. Accurate air and fuel modulation can be accomplished by the MAXON MICRO-RATIO® valve or SMARTLINK® technology.

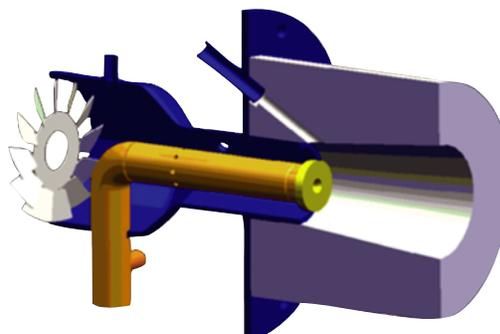
Combustion air can range from 21 % down to 17 % O₂ if preheated and from ambient temperature up to 660° F (max. 800° F on request). Maximum chamber temperature is 2000° F, with any cross velocity up to 3000 ft/min.

The KINEDIZER® burner's maximum capacity can be boosted by 20 % simply by supplying higher combustion air and gas pressures.

Contact MAXON for correct application details.



Principle of burner operation



Cross sectional view of KINEDIZER® burner

Available KINEDIZER® sizes

Typical burner data								
Fuel : natural gas at 60° F with 1000's Btu/ft ³ (st) (HHV) - sg = 0.6 [1]								
Combustion air : 60° F - 21 % O ₂ - 50 % Humidity - sg = 1.0 [1]								
Stated pressures are indicative. Actual pressures are a function of air humidity, altitude, type of fuel and gas quality								
KINEDIZER® size		0.5M	2.5M	5M	9M	18M	27M	40M
Max. capacity @ n=1,3	MBtu/h HHV	0.5	2.5	5	9	18	27	40
Turndown		1:10	1:15	1:40	1:40	1:40	1:40	1:30
Air flow at max. capacity	scfm	107	540	1071	1960	3920	5845	8658
Air turndown		1:6	1:9	1:16	1:16	1:23	1:23	1:14
Advised pilot capacity	MBtu/h HHV	0.1	0.3	0.2	0.3	0.5	1.0	2.5
Comb. air pressure @ inlet [2]	"wc	35	35	35	35	35	35	28
Nat. gas inlet pressure diff.	"wc	47	61	86	83	110	110	67

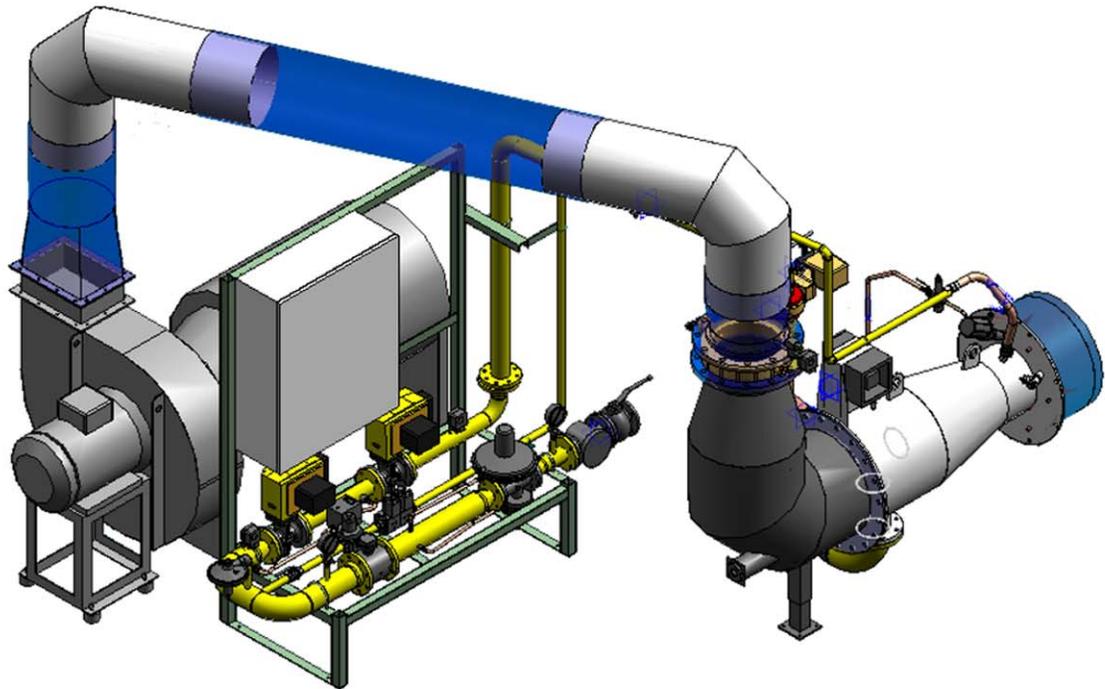
[1] sg (specific gravity) = relative density to air (density air = 0.0763 lb/ft³(st)).

[2] Combustion air pressure required at full capacity, relative to process.

Add 5% safety margin + piping & control valve pressure drops for blower sizing.

Applications

KINEDIZER® burners may be applied to a variety of applications for low to ultra-low emissions. The rugged design of the KINEDIZER® burner is ideal for oxidizers and incinerators, process heaters, kilns, furnaces, and other high-temperature applications.



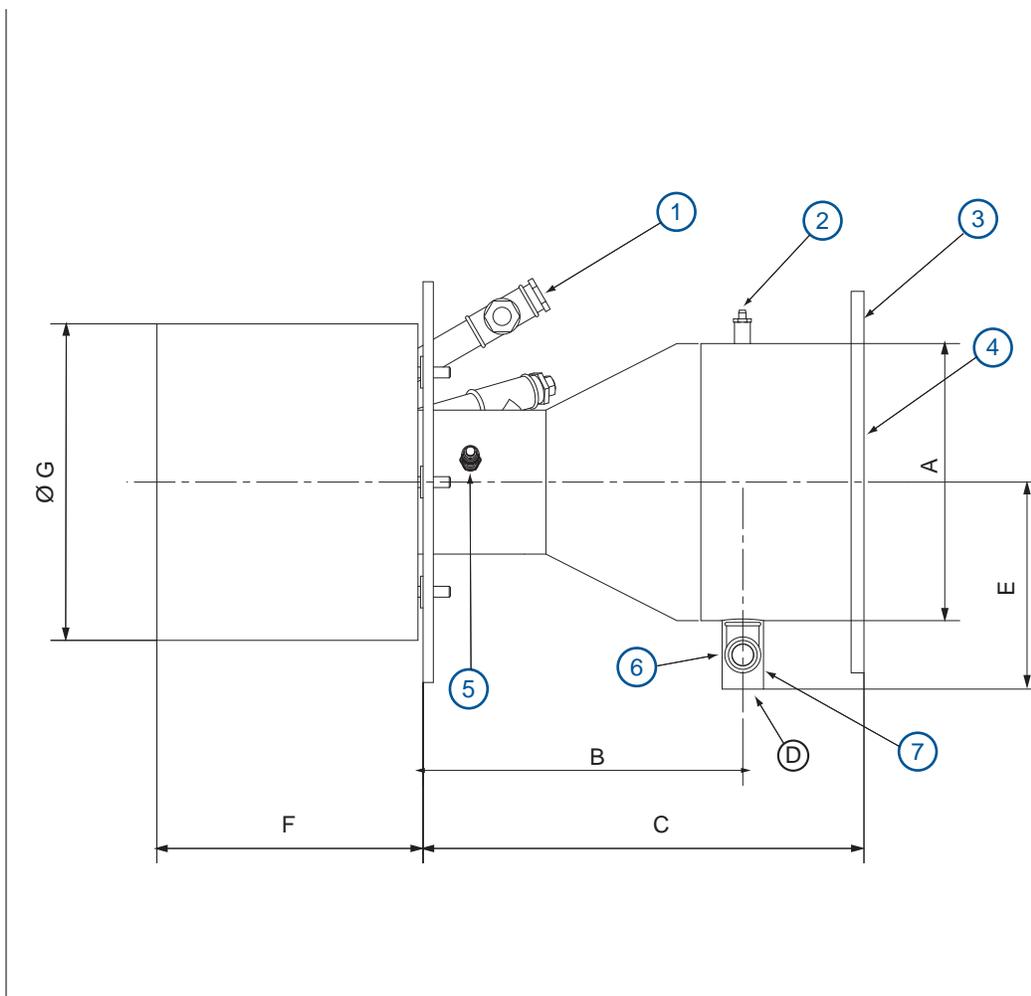
KINEDIZER® 40M burner with pipe-train, control panel and combustion air blower.

Dimensions and weights

KINEDIZER® 0.5M and 2.5M - ANSI

0.5M and 2.5M are all exclusive NPT / ANSI KINEDIZER® burners

- 1) Scanner position
1/2" NPT
- 2) Combustion air test connection
- 3) Optional air inlet flange
- 4) Combustion air inlet
- 5) Spark ignitor
- 6) Pilot gas inlet
- 7) Main gas inlet

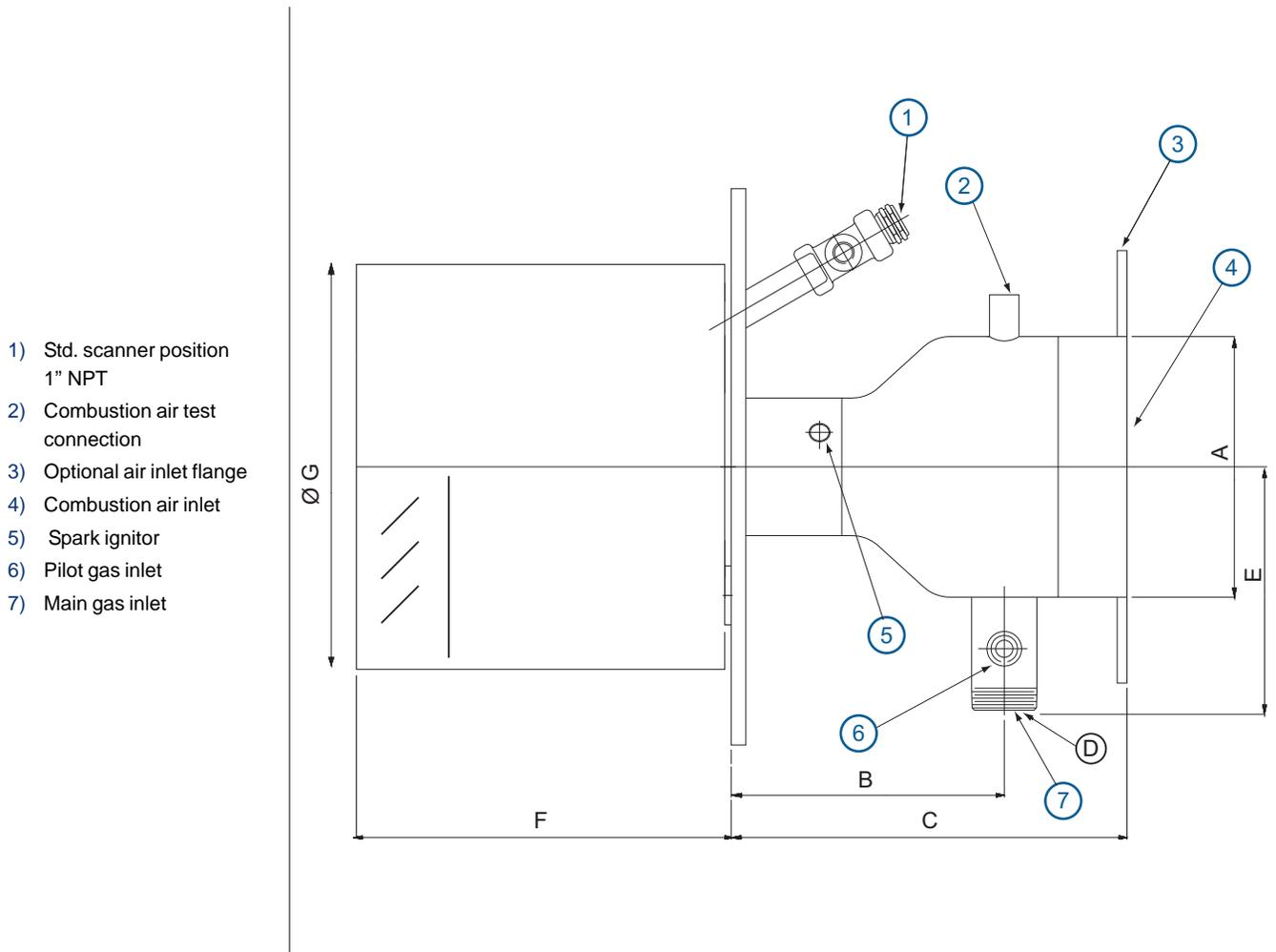


Dimensions in in. unless stated otherwise

Size	A [1] air conn.	B	C	D gas conn.	E	F	G ø	Weight lbs
.5M	3" ANSI	5.7	7.86	3/8" NPT	4.69	9.60	8.56	66
2.5M	6" ANSI	6.94	10.06	3/8" NPT	6.19	9.60	10.42	100

[1] Available with SCH10/SCH40 pipe air connection or with ANSI 150 lbs flange connection.

KINEDIZER® 5M - 9M - 18M - 27M and 40M - ANSI



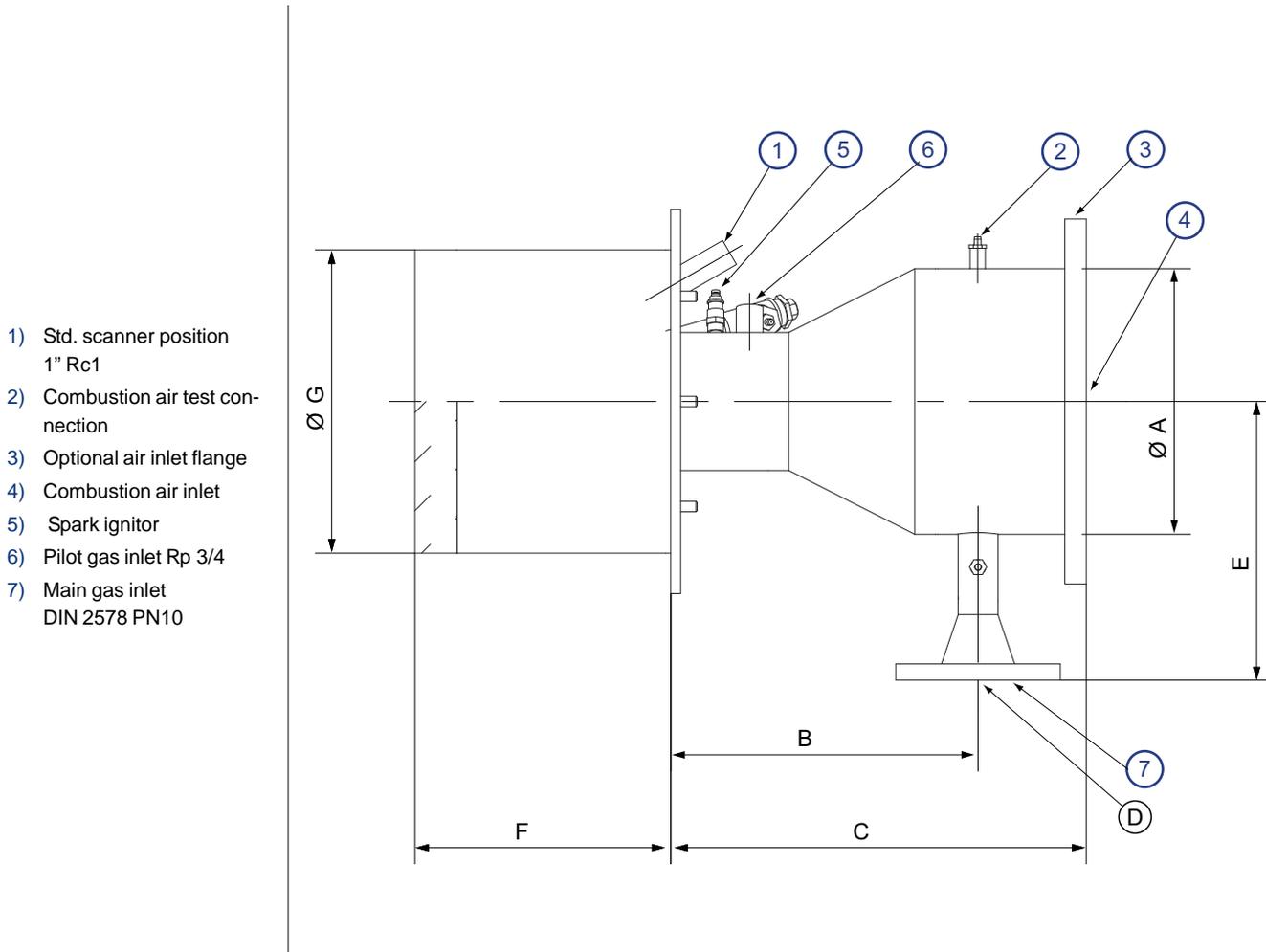
- 1) Std. scanner position
1" NPT
- 2) Combustion air test
connection
- 3) Optional air inlet flange
- 4) Combustion air inlet
- 5) Spark ignitor
- 6) Pilot gas inlet
- 7) Main gas inlet

Dimensions in in. unless stated otherwise									
Burner size	A [1] air conn.		B	C	D gas conn.	E	F	G ø	Weight lbs
5M	8" ANSI		11.24	15.09	3/8" NPT	7.38	9.60	12.94	165
9M	12.75	12"	14.75	19.75	3"	13.39	12.24	14.56	265
18M	12.75	12"	18.35	24.73	3"	12.00	12.24	16.56	331
27M	18.0	18"	23.84	29.71	4"	16.34	12.24	18.68	662
40M	22.0	22"	37.09	48.21	6"	16.5	12.12	23.91	922

[1] Available with SCH10/SCH40 pipe air connection or with ANSI 150 lbs flange connection.

KINEDIZER® 9M - 18M - 27M and 40M - ISO

9M - 18M - 27M - 40M KINEDIZER® have different versions for the European market with flanged air and gas inlet to comply with CE requirements for fuel gas piping.



Dimensions in in. unless stated otherwise									
Burner size	A [1] air conn.		B	C	D (1) gas conn.	E	F	G ϕ	Weight lbs
9M	12.75	DN300	14.7	19.88	DN80	13.39	12.24	14.56	265
18M	12.75	DN300	16.42	22.91	DN80	12.0	12.24	16.56	331
27M	18.0	18"ANSI	23.74	29.88	DN100	16.34	12.24	18.68	662
40M	22.0	22"	37.04	48.35	DN150	16.5	12.24	23.91	922

[1] DN80, DN100 and DN150 refer to PN10 (ISO7005) flanges. 18" ANSI will accept a 150 lbs ANSI B16.9 inlet flange. For the 18" and 22" air inlet, an optional companion flange can be supplied.

Typical emissions

The KINEDIZER® burner is capable of low NO_x when given excess air, typically 25-30 % at high fire.

The same burner, when adjusted for on-ratio operation, will give low CO and high thermal efficiency. With flue gas recirculation, the emissions and efficiency can be further improved.

Read "Specifications of KINEDIZER® gas burners" for more detailed information on KINEDIZER® burners.