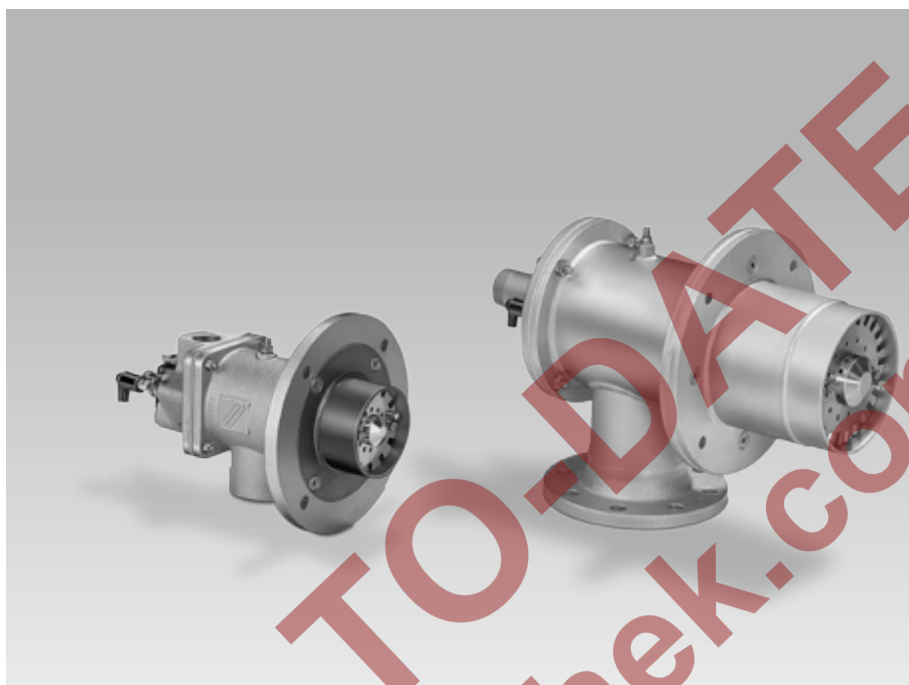




- // Lightweight modular construction
- // Direct ignition and ionisation control
- // Low NO_x production
- // Capacities from 130,000 BTU/Hr to 17,000,000 BTU/Hr
- // Custom version for different gases
- // Multiple flame shapes
- // For air temperatures to 840° F (450° C)
- // Low maintenance
- // Direct firing or radiant tube
- // Furnace temperature to 2900° F (1600° C) with refractory tile
- // Furnace temperature to 1650° F (900° C) with alloy burner tube
- // Aluminium version (BIOA) available

Application

The BIO and ZIO burners are for use on gas fired industrial furnaces, ceramic kilns and ovens. They are for application in the iron and steel, non-ferrous metals, precious metals, ceramic, glass and food industries. The BIO and ZIO burners utilize an alloy burner tube as the combustion chamber. The burner can be extended to suit application requirements.

Specifications

Operating Limits

Type of gas:	Natural gas, propane, propane/butane, butane, town gas, coke oven gas, other gases on request
Flame shapes:	Normal fast mixing (R), long (H) or flat flame (K)
Heating modes:	Direct and indirect
Control modes:	Proportional, Low/High/Off
Operating mode:	Ratio, excess air to 100%, (on specific models) excess fuel 20%, (on specific models)
Available burner length:	2 to 39.37 inch (50 to 1000 mm)
Construction Material:	Housing – cast iron (BIO), aluminium (BIOA), welded steel (ZIO), Burner internals high temperature alloy

Features

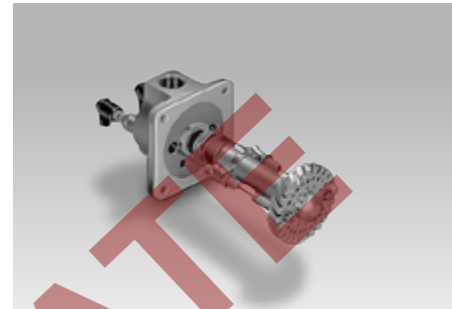
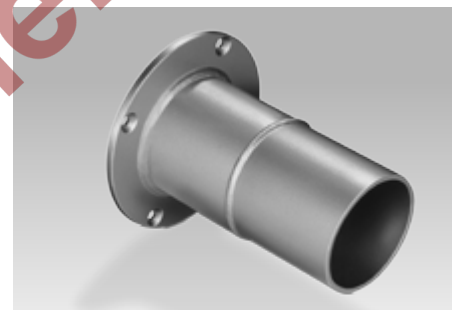
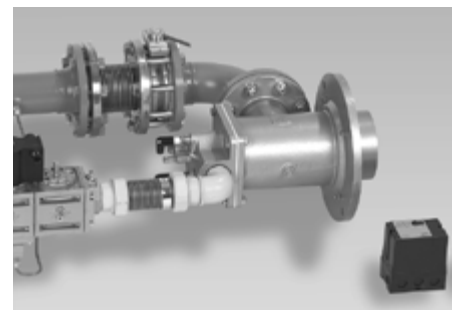
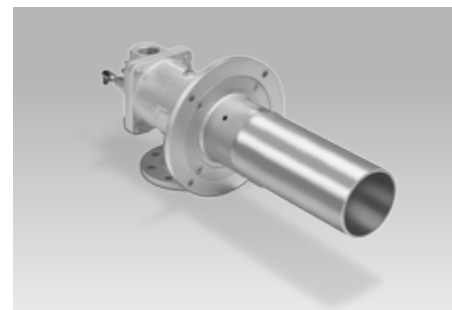
- Versatile
The BIO and ZIO burners are lightweight and modular allowing the burner to adapt to any furnace design by customizing the flame shape, flame length, fuel type and velocity.
- Ease of installation
Most burners are equipped with a built-in limiting orifice valve for gas flow adjustment, gas metering orifice for set-up and tuning, and ignition and ionization electrodes. In most burner models, the ignition and ionization electrodes can be interchanged. In the event of a failure, they can be replaced without burner removal.
- Reliable
The BIO and ZIO burners have a unique burner nozzles that mechanically mix the fuel and air at the nozzle providing very high flame intensity and eliminating the possibility of explosive mixtures in the piping.

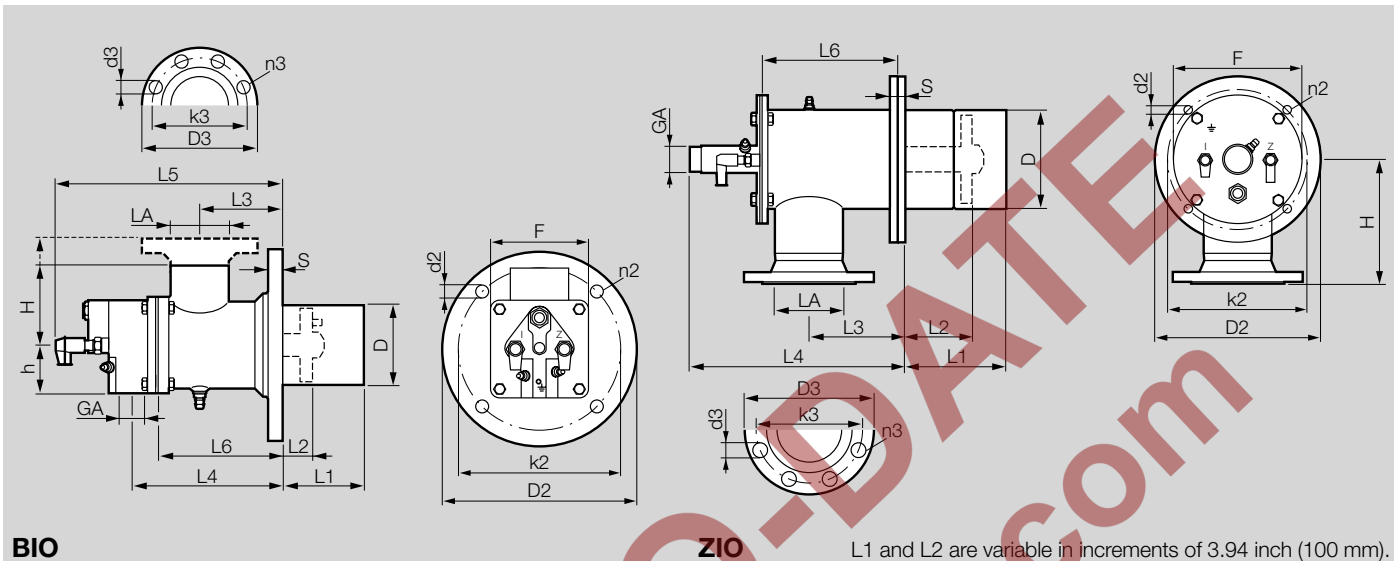
Additional features include

- Preheat air up to 842° F (450° C)
- Ionization control
- Direct spark ignition
- Electrode material Kanthal A1
- Maximum furnace temperature 2900° F (1600° C) with refractory tile
- Heat resistant aluminum paint
- Port for flame observation
- Ideal for frequency firing or proportional applications

Optional features

- Internal pilot with separate air and gas (L version)
- Turndown 650:1
- Control with UV sensor.
- Heat resistant steel tube extensions for indirect firing





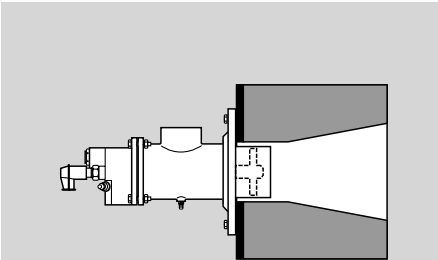
Type	Capacity 1000 BTU/h	Dimensions [inches]														Hole n2	F	D3	k3	d3	Hole n3	Weight LBS
		D	GA	LA	H	h	S	L3	L4	L5	L6	D2	k2	d2								
BIO 50	137	1.97	½"	1½"	1.97	1.50	0.47	3.03	5.87	9.29	5.00	7.13	5.94	0.47	4	2.95	–	–	–	–	11.9	
BIO 65	307	2.56	¾"	1½"	2.44	1.89	0.47	2.87	6.14	9.65	5.00	7.68	6.50	0.47	4	3.74	–	–	–	–	15.9	
BIO 80	512	3.23	¾"	2"	4.41	2.17	0.55	3.54	6.77	10.63	5.51	9.45	8.27	0.55	4	4.33	–	–	–	–	24.7	
BIO 100	785	4.02	1"	2"	3.94	2.36	0.63	4.06	7.28	11.22	6.02	9.45	7.84	0.55	4	4.72	–	–	–	–	27.8	
BIO 125	1092	5.00	1½"	2½"	5.31	2.87	0.71	4.72	10.00	13.98	4.41	10.63	9.45	0.55	4	5.71	7.23	5.71	0.71	4	47.8	
BIO 140	1536	5.51	1½"	3"	5.91	3.15	0.71	5.11	10.67	14.96	9.13	11.81	10.43	0.55	4	6.30	7.84	6.23	0.71	8	63.9	
ZIO 165	2150	6.65	1½"	4"	8.27	–	0.39	5.91	14.13	–	9.06	11.22	9.45	0.55	4	8.66	8.66	7.09	0.71	8	56.2	
ZIO 200	3413	7.64	2"	6"	8.66	–	0.39	8.66	18.46	–	13.39	13.00	11.61	0.87	8	10.04	11.22	9.45	0.87	8	85.5	
ZIO 240	5100	9.37	2"	8"	10.6	–	0.91	11.1	22.6	–	16.9	15.6	13.8	0.91	8	13.6	13.4	15.6	0.87	12	137	
ZIO 270	10200	10.6	2½"	10"	13.8	–	0.91	15.1	27.6	–	22.0	19.9	18.1	0.91	8	17.3	15.9	14.0	0.91	12	194	
ZIO 320	17000	12.7	3"	14"	17.7	–	0.91	18.8	33.1	–	27.6	24.2	23.0	0.91	8	20.9	20.5	18.5	1.02	16	397	

Type	Capacity	Dimensions [mm]																			Weight
		kW	D	GA	LA	H	h	S	L3	L4	L5	L6	D2	k2	d2	Hole n2	F	D3	k3	d3	
BIO 50	40	50	1½"	1½"	50	38	12	73	149	236	127	181	151	12	4	75	–	–	–	–	5.4
BIO 65	90	65	¾"	1½"	62	48	12	73	156	245	127	195	165	12	4	95	–	–	–	–	7.2
BIO 80	150	82	¾"	2"	112	55	14	90	172	270	140	240	210	14	4	110	–	–	–	–	11.2
BIO 100	230	102	1"	2"	100	60	16	103	185	285	153	240	200	14	4	120	–	–	–	–	12.6
BIO 125	320	127	1½"	2½"	135	73	18	120	254	355	212	270	240	14	4	145	185	145	18	4	21.7
BIO 140	450	140	1½"	3"	150	80	18	130	271	380	232	300	265	14	4	160	200	160	18	8	29.0
ZIO 165	630	169	1½"	4"	210	–	10	150	359	–	230	285	240	14	4	220	220	180	18	8	25.5
ZIO 200	1000	194	2"	6"	220	–	10	220	469	–	340	330	295	22	8	255	285	240	22	8	38.8
ZIO 240	1500	238	2"	8"	270	–	23	283	575	–	430	395	350	23	8	345	340	395	22	12	62
ZIO 270	3000	268	2½"	10"	350	–	23	383	701	–	560	505	460	23	8	440	405	355	23	12	88
ZIO 320	5000	322	3"	14"	450	–	23	478	841	–	700	615	585	23	8	530	520	470	26	16	135

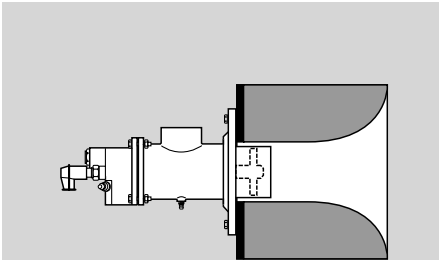
Dimension L1 will vary according to wall thickness,

Burner applications

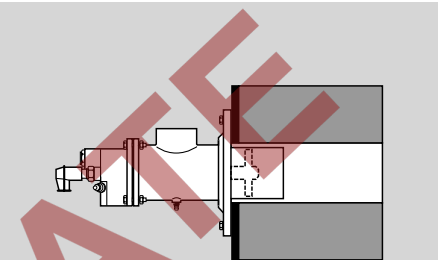
Refractory by customer



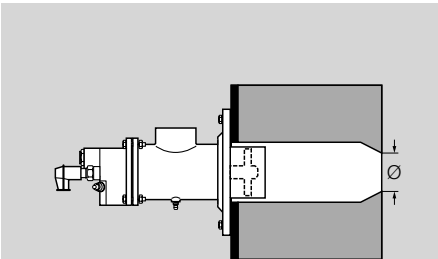
Conical opening



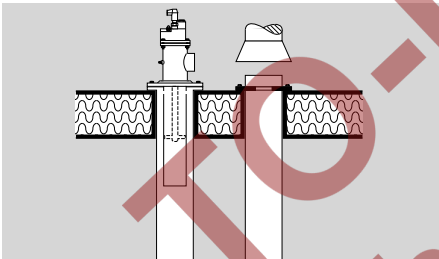
Flat flame



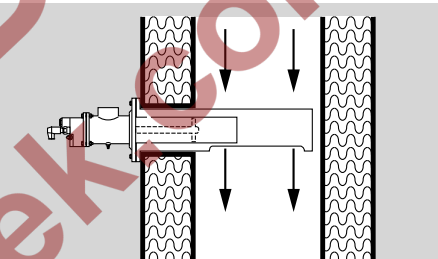
Cylindrical



Diameter reduced



Radiant tube



Air heating

Order Information

BIO, ZIO	Burners for gas
50, 65, 80, 100, 125, 140, 165, 200, 240, 270, 320	Burner size
T	T-Product
R	Flame shape: normal
H	long
K	flat
B	Type of gas: natural gas
G	propane, propane/butane
M	butane, butane/propane, propane
D	town gas
-0, -50, -100, -150...	Length of the burner tube in mm (L1)
/35, /85, /135, 185...	Length from mounting flange to face of burner head in mm (L2)
(X)	Contact sales office for burner head number
X	Contact sales office for construction stage

Warning:

Situations dangerous to personnel and property can result from the misapplication and incorrect operation of combustion equipment. Kromschroder advises compliance with the National Fire Protection Association standards that apply for related equipment and Insurance Underwriters recommendation, and care of operation.

We reserve the right to make technical changes designed to improve our products without prior notice. For current product information, visit our website at www.kromschroder.com.