

- // Lightweight modular construction
- // Medium and high velocity discharge
- // Direct spark ignition
- // Capacities from 51,000 BTU/Hr to 3,000,000 BTU/Hr
- // Silicon carbide burner tube (TSC)
- // Application temperature in excess of 2650° F (1400° C)
- // Complete with ignition electrode and ionization electrode
- // Built in limiting orifice valve and gas metering orifice
- // Low NO_x production
- // Available for firing natural gas, LPG, butane/propane and other gases on request

Application

The BIC and ZIC burners are suitable for use on gas fired industrial furnaces, ceramic kilns and ovens. Both are appropriate in the iron and steel, non-ferrous metals, precious metals, ceramic, glass and food industries. The BIC and ZIC burners utilize a lightweight tube manufactured from a high quality SiC silicon carbide. The silicon carbide tube is well-suited for installations using ceramic fiber insulation and brick linings.

Specifications

Operating Limits

Type of gas:	Natural gas, propane, propane/butane, butane, coke oven gas, other gases on request
Flame shapes:	Normal fast mixing (R) or long luminous (H)
Heating modes:	Direct and indirect
Control modes:	Proportional, On/Off, Low/High/Off
Operating mode:	Ratio, excess air to 100%, (on specific models), excess fuel 20%, (on specific models)
Available burner length:	8 to 30 inch (0 to 900 mm) extended version
Construction Material:	Housing – cast iron (BIC), welded steel (ZIC), burner internals-high temperature alloy

Features

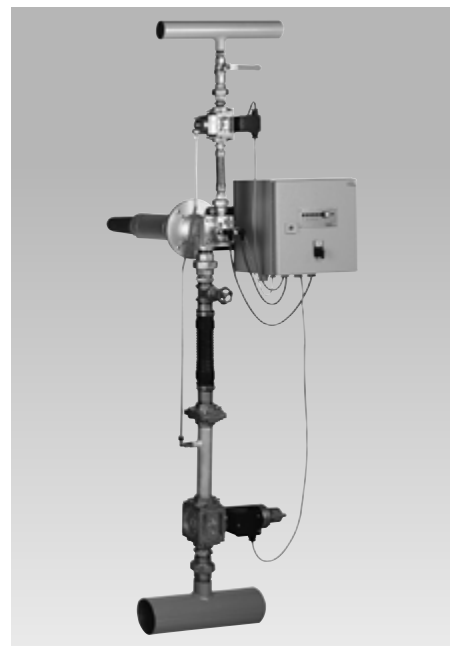
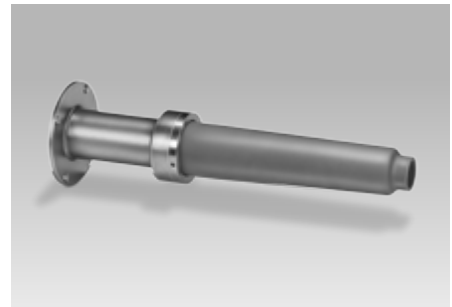
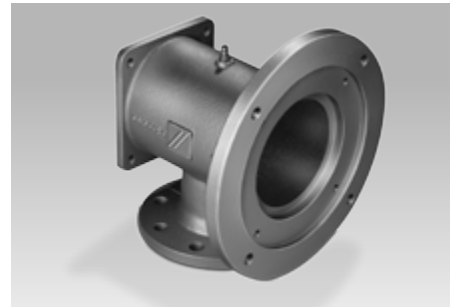
- Versatile
The BIC and ZIC burners are lightweight and modular allowing the burner to adapt to any furnace design by customizing the flame shape, flame length, fuel type and velocity.
- Ease of installation
Most burners are equipped with a built-in limiting orifice valve for gas flow adjustment, gas 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 BIC and ZIC burners have 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.

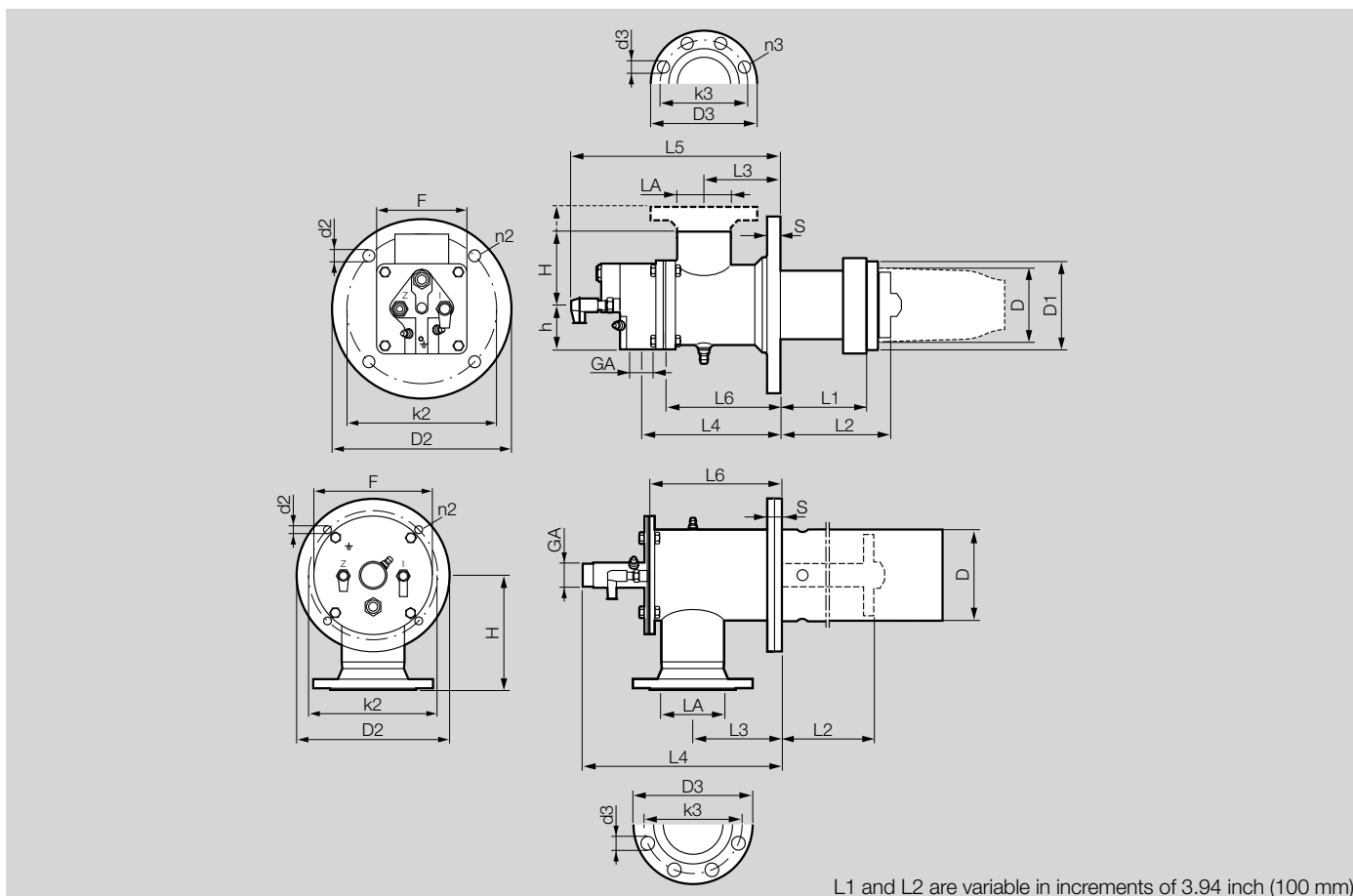
Additional features include

- Preheat air up to 842° F (450° C)
- Direct ionization control
- Direct spark ignition
- Electrode material-Kanthal A1
- Suitable carbide burner tube selection allows for variation in burner capacity and flame velocity
- Maximum furnace temperature 2650° F (1400° C)
- Port for flame observation
- Ideal for frequency firing

Optional features

- Integral pilot burner for ultra-low turndown of 240:1 (L version)
- Control with UV sensor.





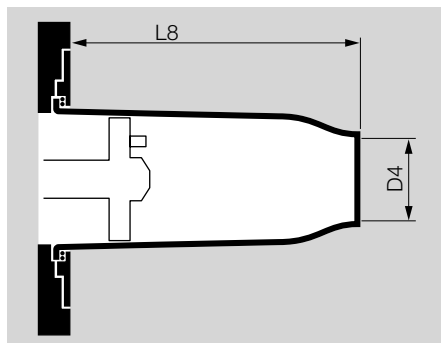
L1 and L2 are variable in increments of 3.94 inch (100 mm).

Dimensions [inches]

Type	Capacity 1000 BTU/h	Dimensions [inches]																			Weight	
		D	D1	GA	LA	H	h	S	L3	L4	L5	L6	D2	k2	d2	n2	F	D3	k3	d3	n3	LBS
BIC 50	119	2.17	2.99	1/2	1 1/2	1.97	1.50	0.47	2.87	5.87	9.29	5.00	7.23	5.94	0.47	4	2.95	-	-	-	-	11
BIC 65	239	2.72	3.54	3/4	1 1/2	2.44	1.89	0.47	2.87	6.14	9.65	5.00	7.68	6.50	0.47	4	3.74	-	-	-	-	14.6
BIC 80	358	3.39	4.53	3/4	2	4.41	2.17	0.55	3.54	6.77	10.63	5.51	9.45	8.27	0.55	4	4.33	-	-	-	-	23.6
BIC 100	682	4.09	5.00	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	-	-	-	-	25.8
BIC 140	1228	5.59	6.61	1 1/2	3	5.91	3.15	0.71	5.12	10.67	14.96	9.13	11.81	10.43	0.55	4	6.30	7.87	6.23	0.71	8	59
ZIC 165	2150	6.73	-	1 1/2	4	8.39	-	1.18	5.91	14.45	-	9.37	11.22	9.45	0.55	4	ø8.7	8.66	7.09	0.71	8	57
ZIC 200	3413	7.76	-	2	6	8.66	-	1.18	8.66	18.78	-	13.70	12.99	11.6	0.87	8	ø10	11.22	9.45	0.87	8	82

Dimensions [mm]

Type	Capacity kW	Dimensions [mm]																			Weight	
		D	D1	GA	LA	H	h	S	L3	L4	L5	L6	D2	k2	d2	n2	F	D3	k3	d3	n3	kg
BIC 50	35	55	76	1/2	1 1/2	50	38	12	73	149	236	127	181	151	12	4	75	-	-	-	-	5
BIC 65	70	69	90	3/4	1 1/2	62	48	12	73	156	245	127	195	165	12	4	95	-	-	-	-	6.6
BIC 80	105	86	115	3/4	2	112	55	14	90	172	270	140	240	210	14	4	110	-	-	-	-	10.7
BIC 100	200	104	127	1	2	100	60	16	103	185	285	153	240	200	14	4	120	-	-	-	-	11.7
BIC 140	360	142	168	1 1/2	3	150	80	18	130	271	380	232	300	265	14	4	160	200	160	18	8	26.7
ZIC 165	630	171	-	1 1/2	4	213	-	30	150	367	-	238	285	240	14	4	ø220	220	180	18	8	26
ZIC 200	1000	197	-	2	6	220	-	30	220	477	-	348	330	295	22	8	ø255	285	240	22	8	37



Burner Tube Capacity and Dimensions [inches]

Type	1000			1000			1000			L8
	BTU/h	velocity fps	D4 Ø inch	BTU/h	velocity fps	D4 Ø inch	BTU/h	velocity fps	D4 Ø inch	
TSC 50	51	317	.78	102	323	1.1	119	242	1.37	11.8
TSC 65	171	389	1.29	205	319	1.57	239	258	1.88	7.87 or 11.8
TSC 80	204	463	1.29	358	553	1.57	380	376	1.96	9.84
TSC 100	307	310	1.96	546	321	2.55	614	228	3.22	9.84 or 11.8
TSC 140	921	470	2.75	1,091	378	3.34	1,228	215	4.72	11.8
TSC 165	2150	210	6.1	-	-	-	-	-	-	15.7 or 19.7
TSC 200	3413	230	7.1	-	-	-	-	-	-	17.7 or 21.7

Order Information

Burners BIC, ZIC

BIC, ZIC	Burners for gas
50, 65, 80, 100, 125, 140, 165, 200	Burner size
T	T-Product
R	Flame shape: normal long
H	
B	Type of gas: natural gas propane, propane/butane butane, butane/propane, propane town gas
G	
M	
D	
-0, -50, -100, -150...	Length of the steel extension 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 no
X	Contact sales office for construction stage

Ceramic tube TSC

TSC	Ceramic tube set
50, 65, 80, 100, 125, 140, 165, 200	Burner size
A	Conical
B	Recessed form
020, 028, 033, 040, 048, 050, 065, 080, 085, 120, 155, 180	Exit diameter [mm]
-200 to -550	tube length [mm] (L8)
/35, /135, /235, /335	Length from mounting flange to face of burner head
-Si	Ceramic tube material: silicon-filtered SiC
-S	Sintered material for limited sizes
-1350	Max. application temperature in °C (2460° F) (2730° F) (2910° F)
-1500	
-1600 (Sintered material for limited sizes)	

* See TSC Product Brochure for additional information regarding the ceramic tube set.

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.