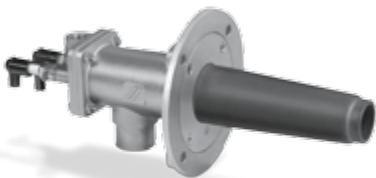
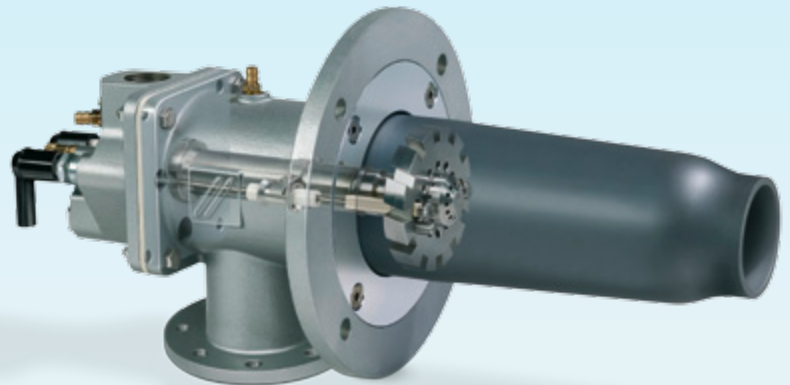


## Burners for gas BIC, BICA, ZIC

Product brochure · GB  
7 Edition 03.11



krom  
schroder



- Can be combined with different ceramic combustion chamber shapes
- Ensures high temperature uniformity in the furnace thanks to high pulse frequency
- Large capacity range up to 1000 kW
- Safe flame control thanks to ionization electrode and reliable electrical ignition
- For installation as ceiling or side-wall burner
- Air preheating to 450°C available as an option
- Length increments enable individual adjustment either to new systems or when modernizing existing systems
- Maintenance-friendly thanks to modular design
- Low polluting level thanks to optimized combustion

*Modular construction consisting of the burner BIC or BICA and the ceramic tube TSC*



BIC, BICA + TSC

ZIC + TSC

*Burner ZIC and ceramic tube TSC*

### Application

For industrial furnaces and firing systems in the iron and steel industries, in the precious, non-ferrous and light metal sector, as well as in the plastics, fibre and paper industries. Burners BIC, BICA or ZIC can also be used in thermal incineration installations, as well as in driers and hot-air generators.

The burner can be used in conjunction with the ceramic tube set TSC in brick-lined or fibre-lined furnaces. No burner quartz is necessary.

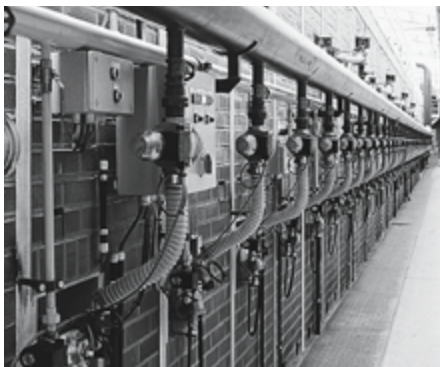
Thanks to their medium to high outlet velocity (80 to 150 m/s), burners BIC, BICA are ideal for industrial furnaces whose temperature is controlled by an impulse system.



*Ceramics kiln with temperature control via impulse system*



*Overhead firing with burner BIC*



*Tunnel kiln*



*Steel forging furnace*

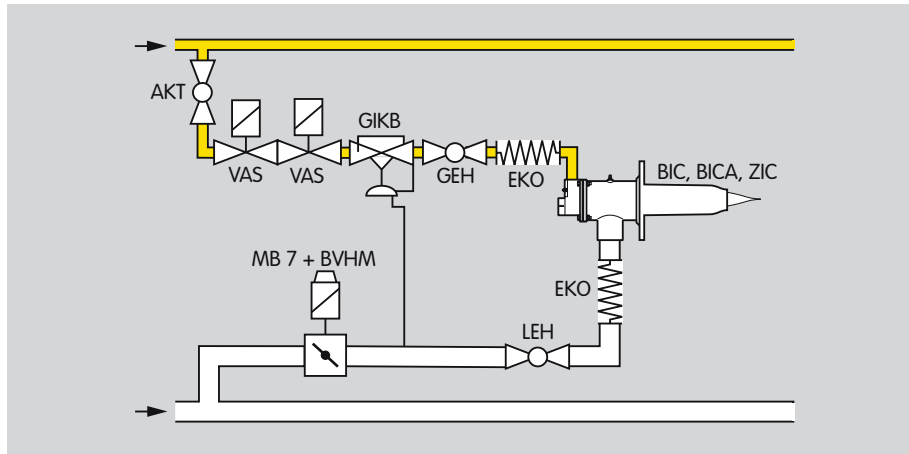


*Roller hearth kiln*



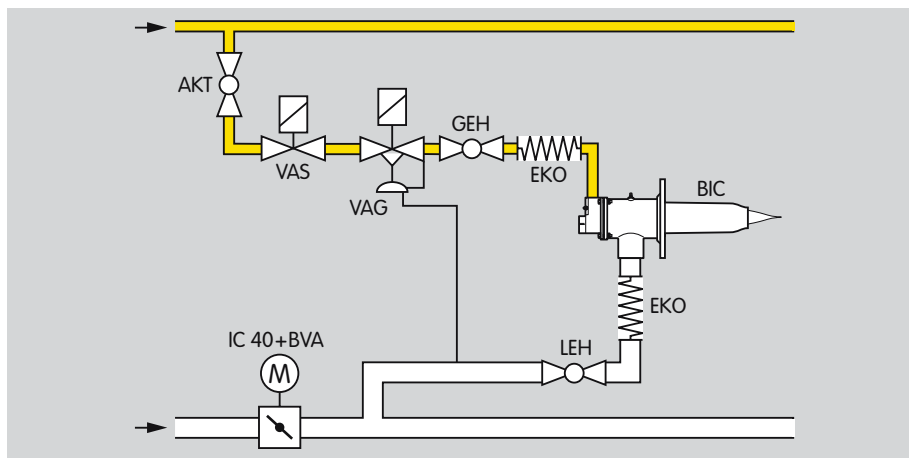
*Chamber kiln*

Examples of application



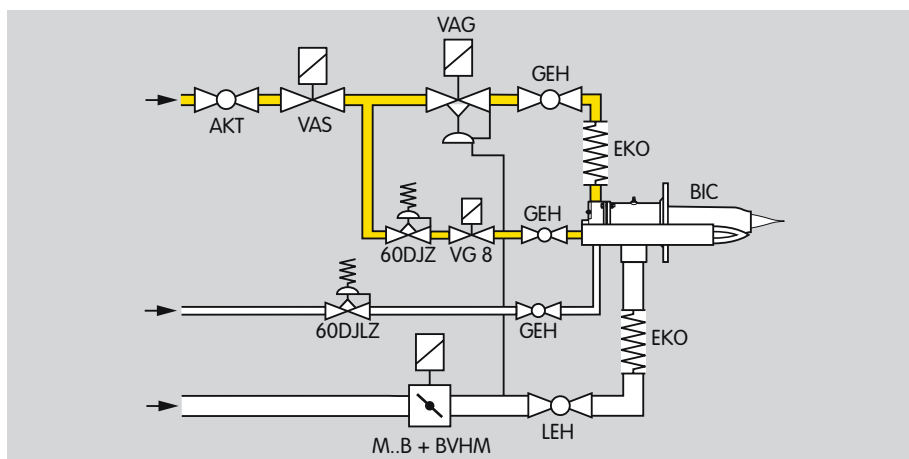
Staged control with pneumatic ratio control system

The burner capacity is switched cyclically between high fire and low fire by opening and closing the solenoid-operated air butterfly valve. The impulse line on the air/gas ratio control VAG ensures constant air and gas pressures. The ratio of the gas volume is kept constant. The low-fire rate is guaranteed by the bypass nozzle in the GIKB. The high output pulse frequency at the burner produces a uniform temperature distribution and good circulation of the furnace or kiln atmosphere, e.g. in heat treatment furnaces in the iron and non-ferrous metal industries or kilns for heavy clay and fine ceramics.



Continuous control with zoned air control

This type of control produces high temperature accuracy where there is low circulation e.g. in roller hearth kilns in the heavy-clay ceramics industry. The capacity of the burners of a zone/group is adjusted using a central air control element.



Stage-controlled heating system with lance

The main burner is controlled in stages by opening and closing the butterfly valve BVHM. The impulse line on the air/gas ratio control VAG ensures constant air and gas pressures. The ratio of the gas volume to the air volume is kept constant. The burner's flexibility is increased thanks to an ignition lance, e.g. in heat treatment furnaces in the iron and non-ferrous metal industries and in heating furnaces in the steel industry.

## Technical data

Gas supply pressure:  
approx. 20 to 50 mbar,  
air supply pressure: approx 25 to 40 mbar,  
each depending on flame shape and gas  
type.

Overall lengths: 0 to 400 mm, 100 mm  
length increments  
(other lengths available on request).

Gas types: natural gas, LPG (gaseous) and  
coke oven gas; other gases on request.

Control type:  
staged: On/Off, High/Low/Off,  
continuous: constant  $\lambda$  value.

Flame control: with ionization electrode (UV  
control as an option).

Ignition: direct, electrical; lance as an  
option.

Burner housing:

BIC: cast steel,

BICA: AlSi,

ZIC: St.

Most of the burner components are made  
of corrosion-resistant stainless steel.

Max. furnace temperature: 1450°C (higher  
temperatures on request).

Hot air:

BIC and ZIC up to 450°C,

BICA up to 200°C.

Flame outlet velocity:  
medium to high.

The flame diameter is one to two times that  
of the burner tube outlet.

## Maintenance cycles

Twice per year, but if the media are highly  
contaminated, this interval should be re-  
duced.

## Burner type code

Code	Description
BIC	Burner for gas
BICA	Burner for gas with aluminium housing
ZIC	Burner for gas
50–200	Burner size
R	Flame shape: short
H	long
B	Gas type: natural gas
G	butane, propane, propane/butane
M	butane, propane, propane/butane
L	low calorific value gas
D	town gas, coke oven gas
L	Ignition lance
R	Reduced max. connection rating
-0	Length of burner extension (L1) [mm]
-100	
-200 ...	
/35-	Position of burner head (L2) [mm]
/135-	
/235- ...	
(1)–(99)	Burner head identifier
A–F	Construction stage

## Ceramic tube set TSC type code

Code	Description
TSC	Ceramic tube set
50–200	Designed for burner size
A	Shape: cylindrical
B	tapered
020, 025, 028, 033, 035, 040, 048, 050, 064, 065, 066, 070, 075, 085, 100, 120, 154, 180	Outlet dia. [mm]
–200, –250, –300	Tube length (L8) [mm]
/35–	Position of burner head (L9) [mm]
/135–	
Si-1500	Ceramic tube material

## Detailed information on this product



<http://docuthek.kromschroeder.com/documents/index.php?lang=en&selclass=6&sellang=GB&folder=207080>

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