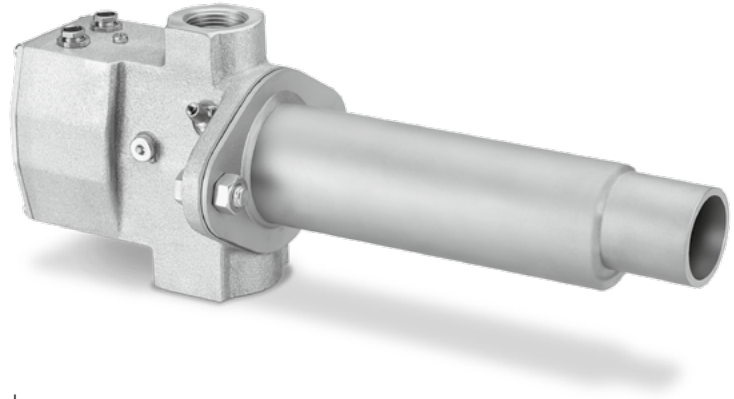


## Pilot burner for gas ZSI with splash-proof connection housing

Technical Information · GB  
9 Edition 09.09l

- Robust design for a long service life
- Diverse possible applications thanks to splash-proof connection housing
- Simple conversion of gas types from natural gas to LPG or town gas
- Reliable electrical ignition and safe flame control thanks to ionisation control
- Can also be used for direct heating
- Rated capacity 50 kW

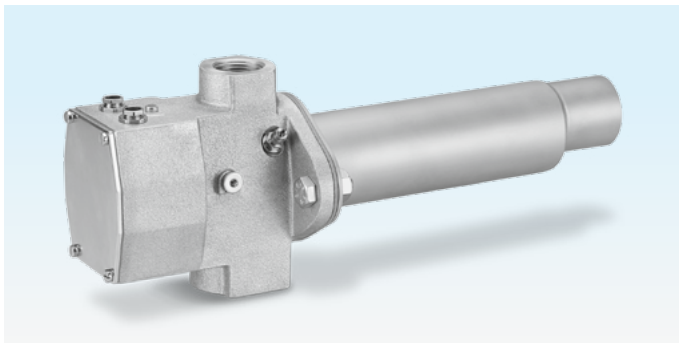


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## 1 Application



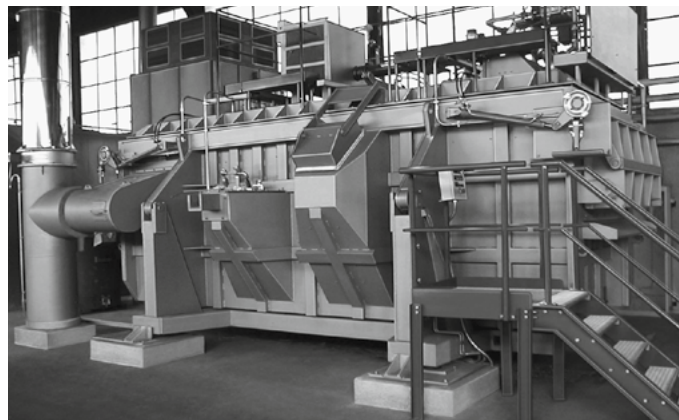
*Pilot burner ZSI with splash-proof connection housing*

For use as a pilot burner for safe ignition of main burners in 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.

Thanks to its high rated capacity of 50 kW, pilot burner ZSI can also be used for direct heating, e.g. for heat treatment of metals or as a manual burner in abattoirs.

The robust design ensures a long service life. The housing is splash-proof.

The pilot burner is supplied for operation with natural gas. It can easily be converted for operation with LPG or town gas.



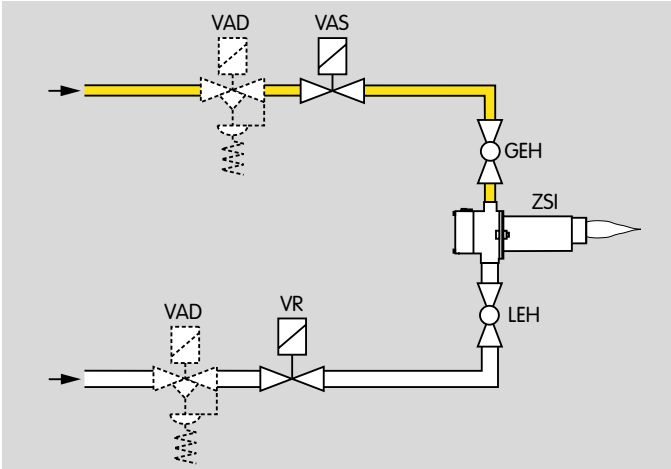
*Aluminium shaft melting furnace*



*Heat treatment furnace for sheet steel*

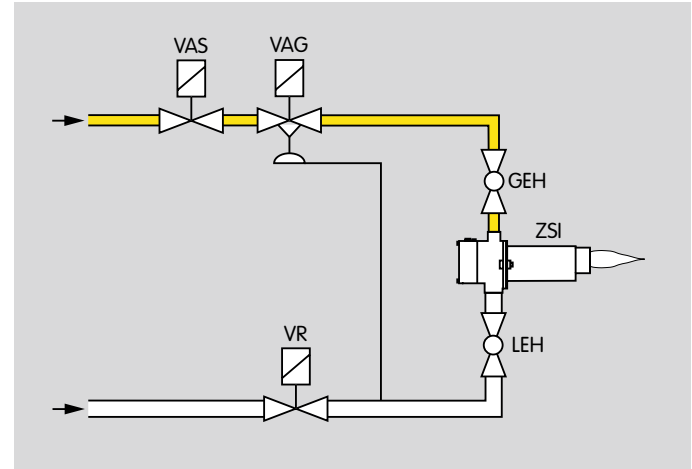
## 1.1 Examples of application

### 1.1.1 Staged On/Off control



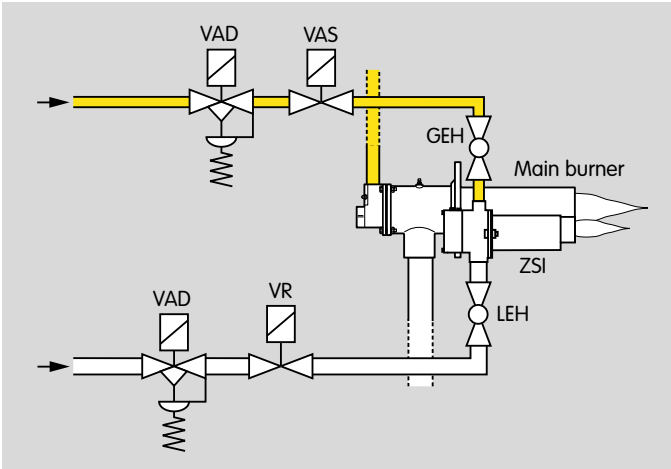
The gas/air mixture is set using the gas adjusting cock GEH and the air adjusting cock LEH. For a constant mixture of gas and air ( $\lambda$ ), one pressure regulator per burner is used on the gas and air sides.

### 1.1.2 Staged control with pneumatic ratio control system

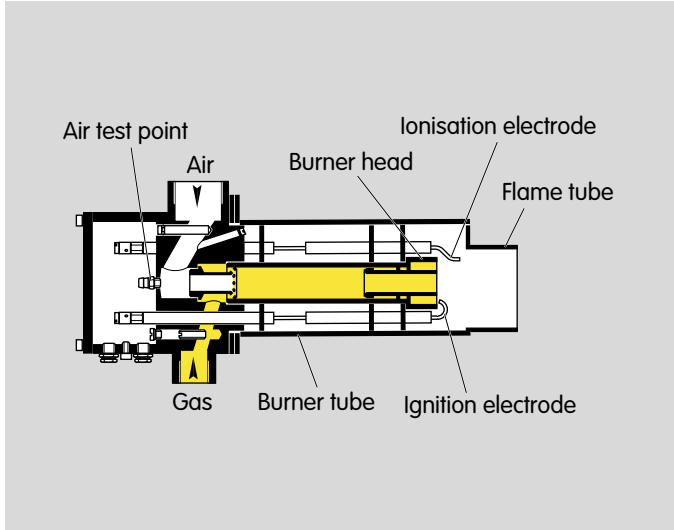


The pneumatic ratio control system offers maximum safety thanks to an air deficiency cut-out, with a constant  $\lambda$  value being maintained while the air pressure varies.

### 1.1.3 Pilot burner with staged control



Install the pilot burner so that reliable ignition of the main burner is guaranteed.



## 2 Function

The burner control unit opens the gas and air control valves. Gas flows through the gas connection and air flows through the air connection in the burner housing as far as the burner head.

The combustible gas/air mixture is produced downstream of the burner head.

The gas/air mixture is electrically ignited directly by an ignition electrode. A flame forms which is monitored using an ionisation electrode.

A gas test point and an air test point are available on the burner to measure gas and air pressure respectively.

### 3 Selection

	200	300	400	500	600	700	800	/50
ZSI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

● = standard, ○ = available

#### Order example

ZSI 200/50

### 3.1 Type code

Code	Description
ZSI	Pilot burner with forced air supply
	Length of burner tube [mm]:
200	200
300	300
400	400
500	500
600	600
700	700
800	800
/50	Length of flame tube [mm]: 50

## 4 Technical data

Types of gas: natural gas, LPG (gaseous), town gas.

Rated capacity: 50 kW, max. 60 kW.

Max. ambient temperature:

flame tube: < 1000°C,

around the burner tube: 500°C.

Flame control: ionisation electrode.

Ignition: direct, electrical.

Ignition and ionisation electrode:

made of heat-resistant special alloy.

Housing:

AlSi, splash-proof IP 54.

Burner and flame tube:

material 1.4841.

Gas connection: Rp 1, air connection: Rp 1½.

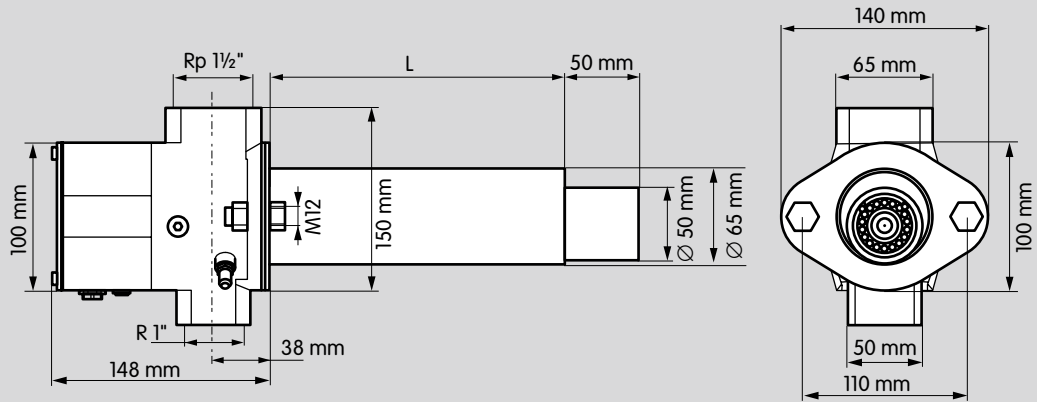
Gas/air pressure at rated capacity = 50 kW,  $\lambda = 1$ :

	Gas pressure [mbar]	Air pressure [mbar]
Natural gas	4.2	25
LPG	3.6	19
Town gas	10	17

Flame length at rated capacity (50 kW): approx. 50 cm.

Control: On/Off.





## 4.1 Dimensions

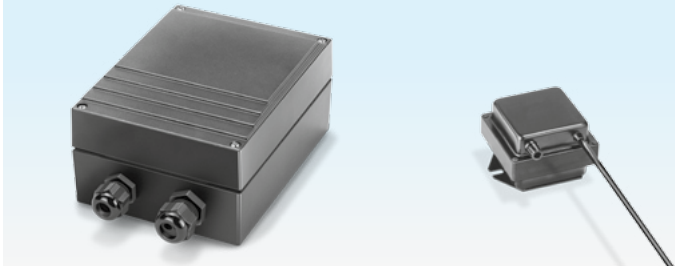
Type	Dimensions [mm]	
	L	
ZSI 200/50	200	
ZSI 300/50	300	
ZSI 400/50	400	
ZSI 500/50	500	
ZSI 600/50	600	
ZSI 700/50	700	
ZSI 800/50	800	

## **5 Maintenance cycles**

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

## 6 Accessories

### 6.1 Ignition transformer



≥ 7.5 kV, ≥ 12 mA, e.g. TGI 7.5-12/100 or TZI 7.5-12/100.

## Feedback

Finally, we are offering you the opportunity to assess this “Technical Information (TI)” and to give us your opinion, so that we can improve our documents further and suit them to your needs.

### Clarity

- Found information quickly
- Searched for a long time
- Didn't find information
- What is missing?
- No answer

### Comprehension

- Coherent
- Too complicated
- No answer

### Scope

- Too little
- Sufficient
- Too wide
- No answer



### Use

- To get to know the product
- To choose a product
- Planning
- To look for information

### Navigation

- I can find my way around
- I got “lost”
- No answer

### My scope of functions

- Technical department
- Sales
- No answer

### Remarks

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