

# Gas Burners BROCHURE

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Thermische Leistung max.  
Heat Release max.

## 15 kW

Ausführungen ohne oder mit elektrischen  
Anbauteilen: siehe Tabelle Seite 6  
Versions with or without electrical  
components: see table page 6

### Brenner mit Rohr Ø 35 mm

#### Beispiel für Brenner BAKP

Regelbereich	5 : 1
Brennerrohrlänge L	240 – 4000 mm
Gasanschluss	1/2", links oder rechts
Luftanschluss	1", um 4 x 90° versetzbar

#### Trafoeteil

Zündung	5 kV
Umgebungs- temperatur	0°C bis +60°C
Schutzart	IP 54

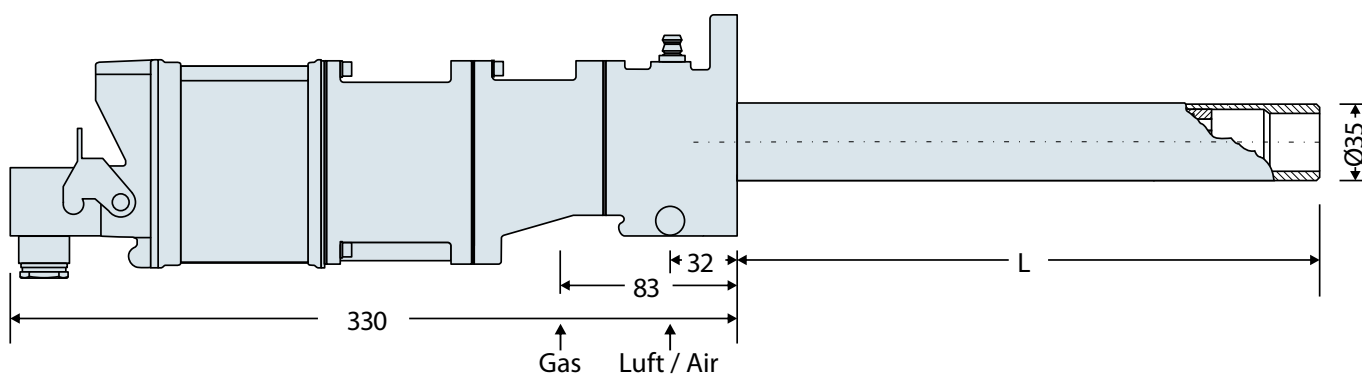
### Burners with tube Ø 35 mm

#### Example for burner BAKP

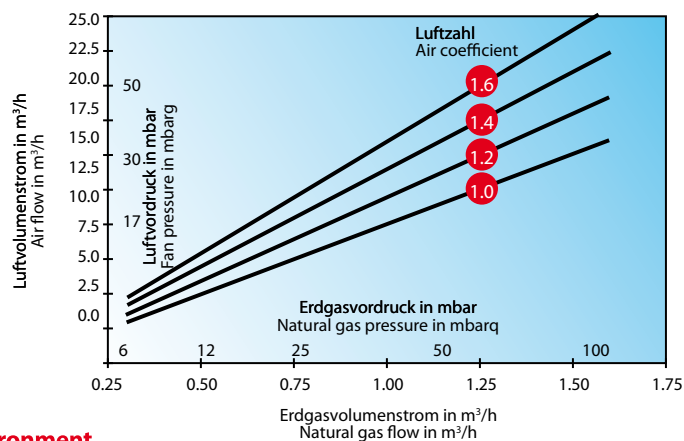
turn down ratio	5 : 1
burner tube length L	240 – 4000 mm
gas inlet	1/2", from left or right
air inlet	1", may be rotated in steps of 90°

#### transformer part

ignition	5 kV
ambient temperature	0°C up to +60°C
protection	IP 54



### Durchsatzkurven Flow Charts



Thermische Leistung max.  
Heat Release max.

## 35 kW

Ausführungen ohne oder mit elektrischen  
Anbauteilen: siehe Tabelle Seite 6

Versions with or without electrical  
components: see table page 6

### Brenner mit Rohr Ø 50 mm

#### Beispiel für Brenner BAK0

Regelbereich	10 : 1
Brennerrohrlänge L	240 – 4000 mm
Gasanschluss	1/2", links oder rechts
Luftanschluss	1", um 4 x 90° versetzbar

#### Trafoeteil

Zündung	5 kV
Umgebungs- temperatur	0°C bis +60°C
Schutzart	IP 54

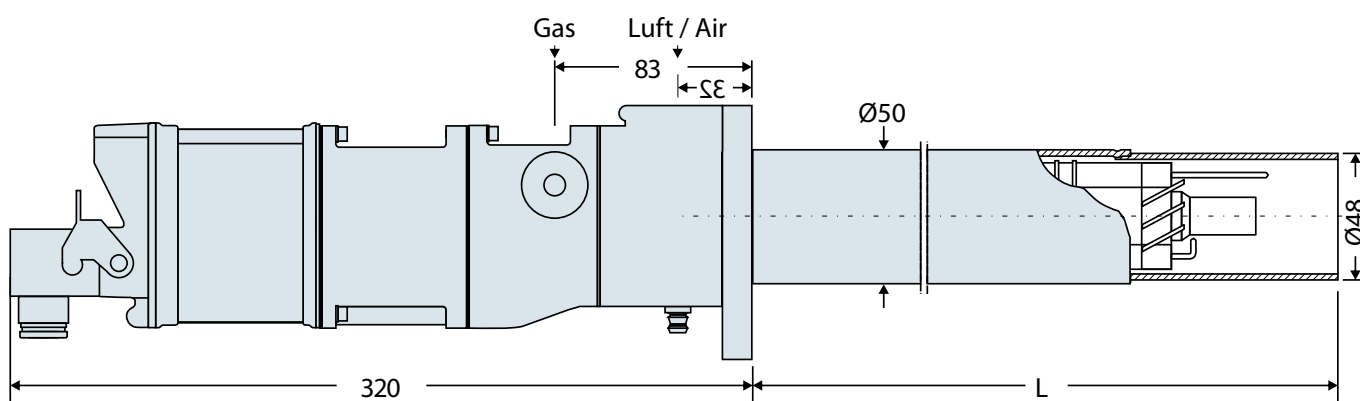
### Burners with tube Ø 50 mm

#### Example for burner BAK0

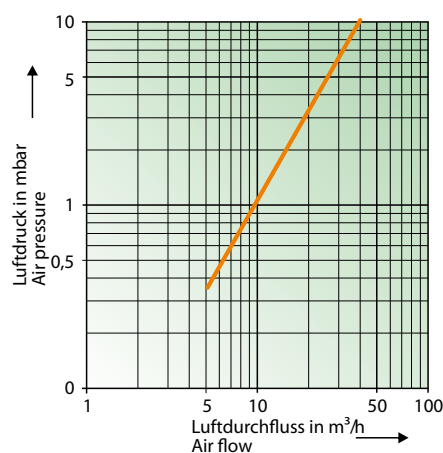
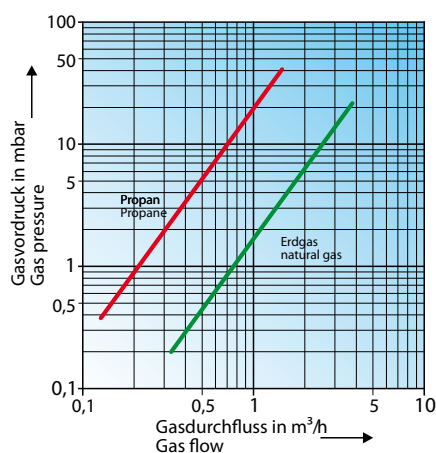
turn down ratio	10 : 1
burner tube length L	240 – 4000 mm
gas inlet	1/2", from left or right
air inlet	1", may be rotated in steps of 90°

#### transformer part

ignition	5 kV
ambient temperature	0°C up to +60°C
protection	IP 54



### Durchsatzkurven Flow Charts



Thermische Leistung max.  
Heat Release max.

## 35 kW

Ausführungen ohne oder mit elektrischen  
Anbauteilen: siehe Tabelle Seite 6

Versions with or without electrical  
components: see table page 6

### Brenner mit Rohr Ø 50 mm

#### Beispiel für Brenner BR0

Regelbereich	10 : 1
Brennerrohrlänge L	120 – 2000 mm
Gasanschluss	3/4", um 4 x 90° drehbar
Luftanschluss	2", um 4 x 90° drehbar

#### Trafoteil

Zündung	5 kV
Umgebungs- temperatur	0°C bis +60°C
Schutzart	IP 54

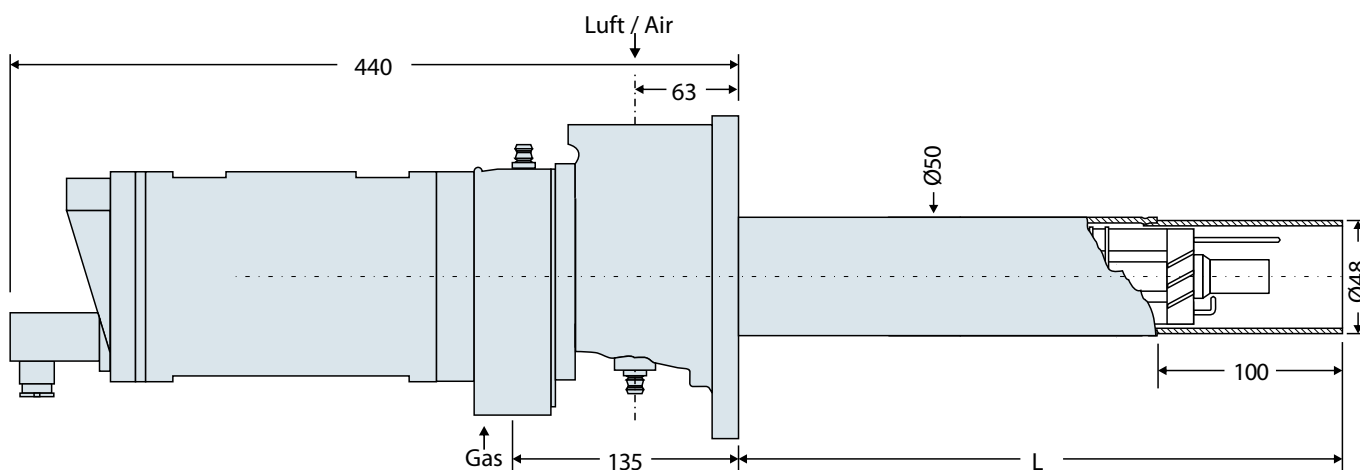
### Burners with tube Ø 50 mm

#### Example for burner BR0

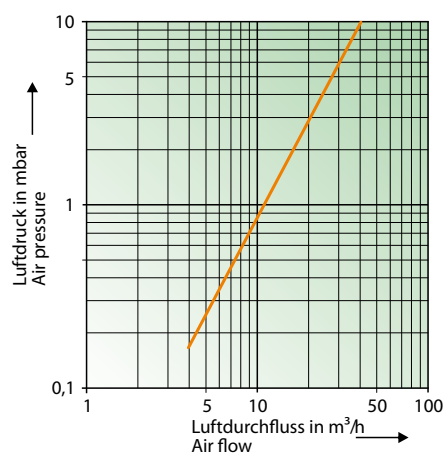
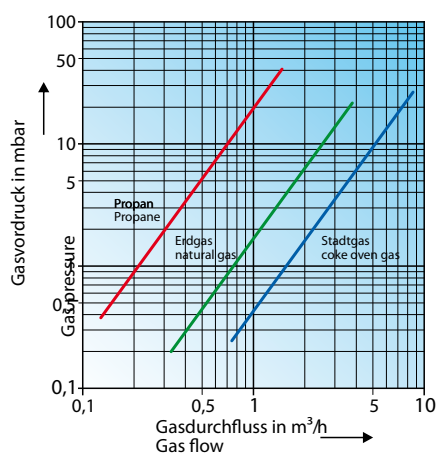
turn down ratio	10 : 1
burner tube length L	120 – 2000 mm
gas inlet	3/4", may be rotated in steps of 90°
air inlet	2", may be rotated in steps of 90°

#### transformer part

ignition	5 kV
ambient temperature	0°C up to +60°C
protection	IP 54



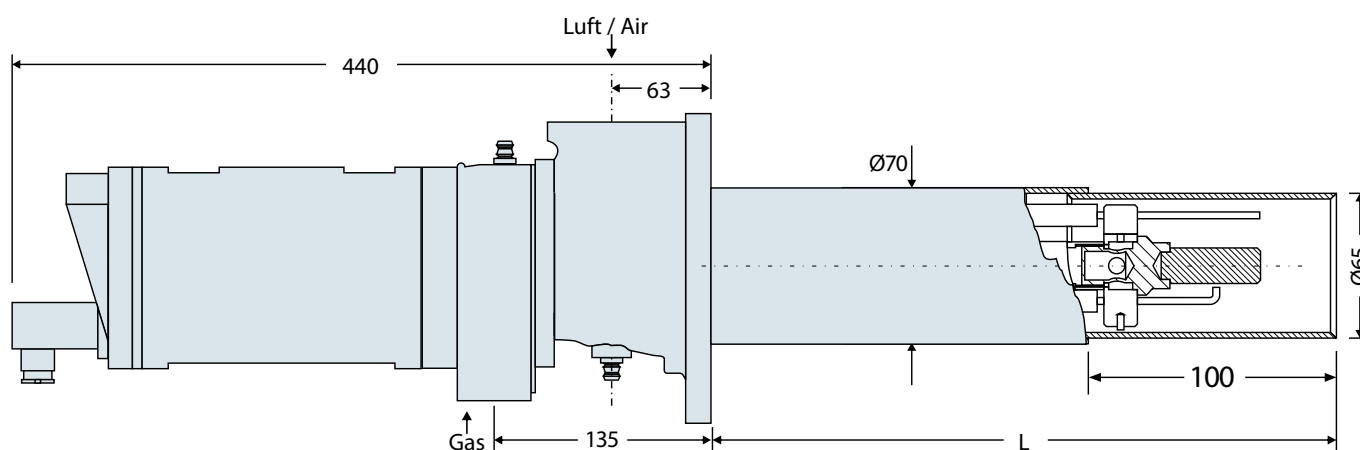
### Durchsatzkurven Flow Charts



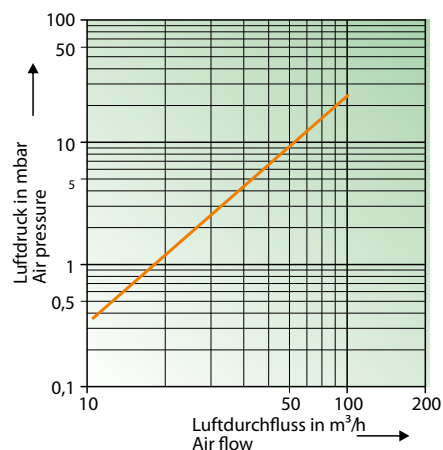
# 85 kW

Ausführungen ohne oder mit elektrischen Anbauteilen: siehe Tabelle Seite 6  
Versions with or without electrical components: see table page 6

Burners with tube Ø 70 mm	
Example for burner BR1	
turn down ratio	10 : 1
burner tube length L	120 – 2000 mm
gas inlet	3/4", may be rotated in steps of 90°
air inlet	2", may be rotated in steps of 90°
transformer part	
ignition	5 kV
ambient temperature	0°C up to +60°C
protection	IP 54



A log-log plot showing the relationship between gas pressure (y-axis) and gas flow (x-axis) for two different gases: Propan (Propane) and Erdgas (natural gas). The y-axis is labeled 'Gasdruck in mbar' and 'Gas pressure' with a scale from 0.1 to 200. The x-axis is labeled 'Gasdurchfluss in m³/h' and 'Gas flow' with a scale from 0.1 to 10. The Propan curve (red) starts at approximately (0.4, 2) and ends at (3.5, 180). The Erdgas curve (green) starts at approximately (0.8, 0.4) and ends at (8, 30). Both curves show a positive correlation between pressure and flow.



Thermische Leistung max.  
Heat Release max.

## 200 kW

Ausführungen ohne oder mit elektrischen  
Anbauteilen: siehe Tabelle Seite 6

Versions with or without electrical  
components: see table page 6

### Brenner mit Rohr Ø 90 mm

#### Beispiel für Brenner BR2

Regelbereich	10 : 1
Brennerrohrlänge L	120 – 2000 mm
Gasanschluss	3/4", um 4 x 90° drehbar
Luftanschluss	2", um 4 x 90° drehbar

#### Trafoteil

Zündung	5 kV
Umgebungs- temperatur	0°C bis +60°C
Schutzart	IP 54

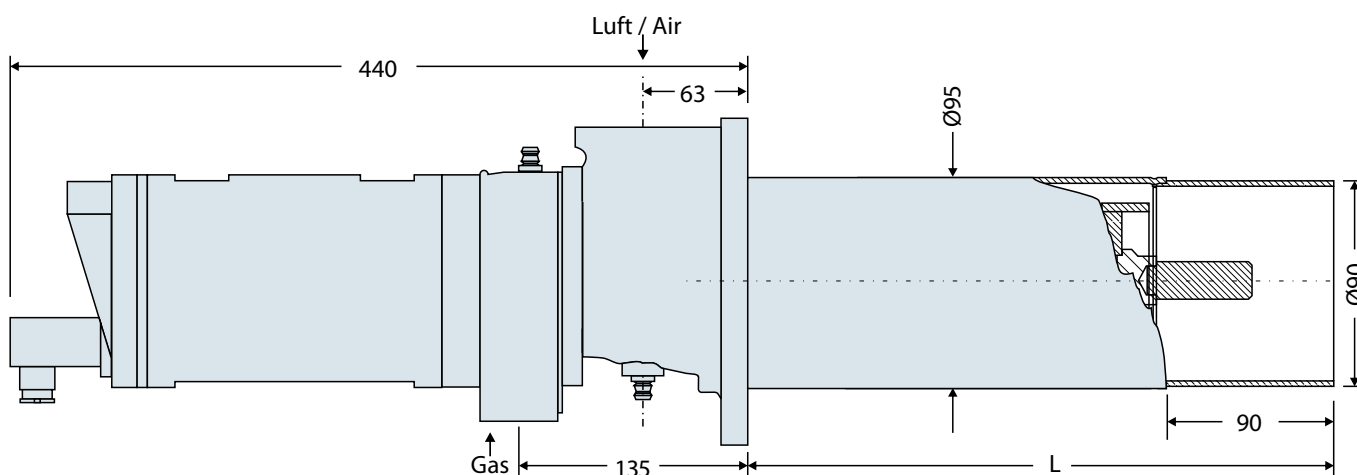
### Burners with tube Ø 90 mm

#### Example for burner BR2

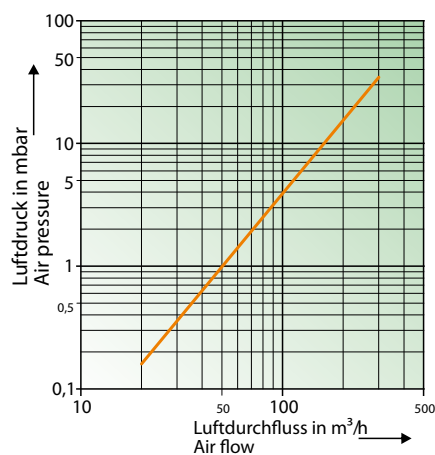
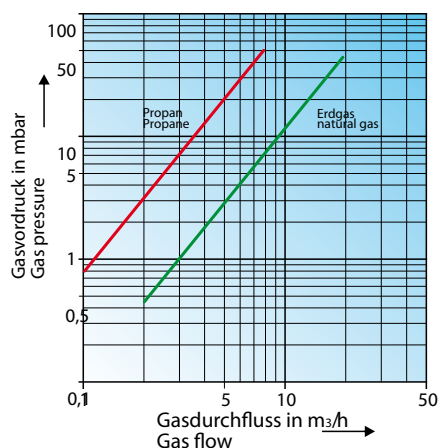
turn down ratio	10 : 1
burner tube length L	120 – 2000 mm
gas inlet	3/4", may be rotated in steps of 90°
air inlet	2", may be rotated in steps of 90°

#### transformer part

ignition	5 kV
ambient temperature	0°C up to +60°C
protection	IP 54



### Durchsatzkurven Flow Charts



Thermische Leistung max.  
Heat Release max.

## 350 kW

Ausführungen ohne oder mit elektrischen  
Anbauteilen: siehe Tabelle Seite 6

Versions with or without electrical  
components: see table page 6

### Brenner mit Rohr Ø 135 mm

#### Beispiel für Brenner BR3

Regelbereich	10 : 1
Brennerrohrlänge L	200 – 2000 mm
Gasanschluss	oben oder unten, 1" bei Propan- oder Erdgasausführung, 2" bei Stadtgasausführung
Luftanschluss	DN 80 PN6, um 4 x 90° drehbar

#### Trafoeteil

Zündung	5 kV
Umgebungs- temperatur	0°C bis +60°C
Schutzart	IP 54

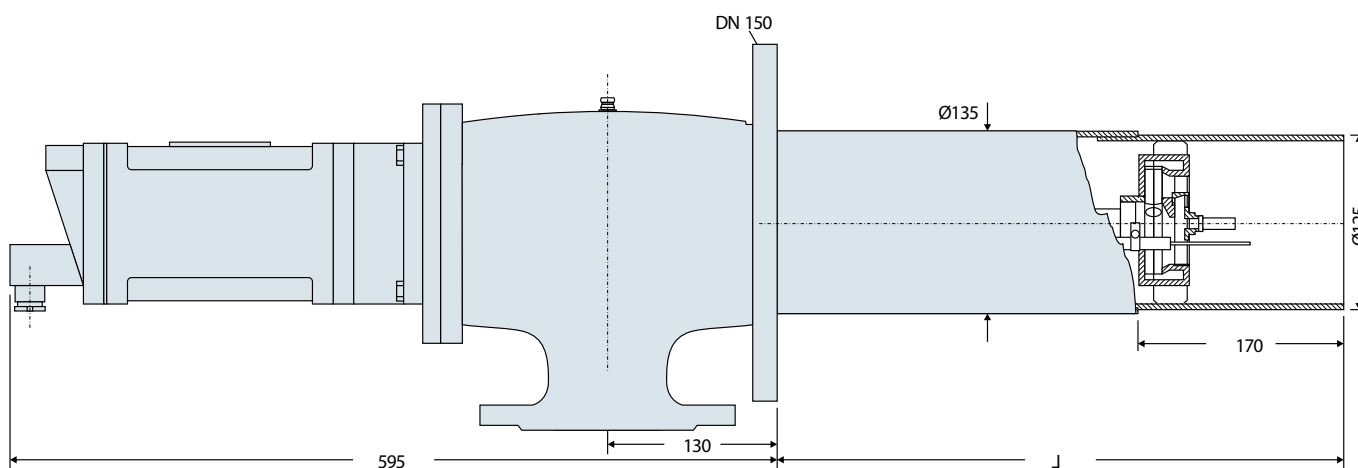
### Burners with tube Ø 135 mm

#### Example for burner BR3

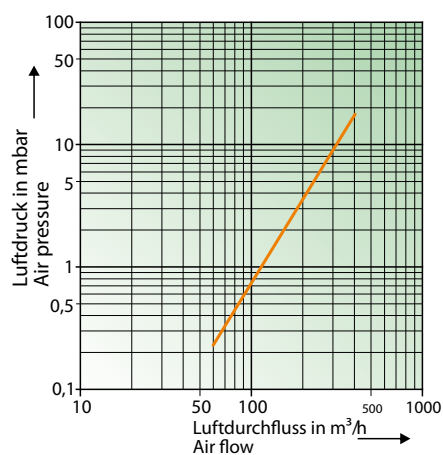
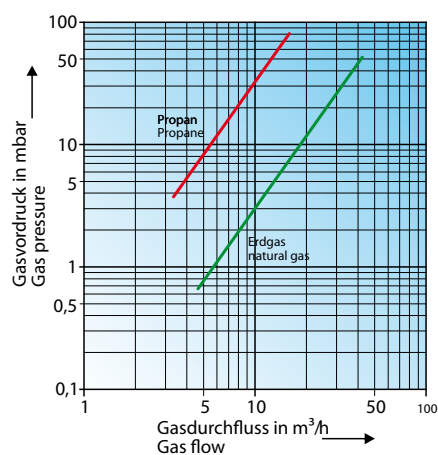
turn down ratio	10 : 1
gas tube length L	200 – 2000 mm
gas inlet	from above or below, 1" for LPG or natural gas, 2" for manufactured gas
air inlet	DN 80 PN6, may be rotated in steps of 90°

#### transformer part

ignition	5 kV to earth
ambient temperature	0°C up to +60°C
protection	IP 54



### Durchsatzkurven Flow Charts



Thermische Leistung max.  
Heat Release max.

## 800 kW

Ausführungen ohne oder mit elektrischen  
Anbauteilen: siehe Tabelle Seite 6  
Versions with or without electrical  
components: see table page 6

### Brenner mit Rohr Ø 160 mm

#### Beispiel für Brenner BR4

Regelbereich	10 : 1
Brennerrohrlänge L	240 – 2000 mm
Gasanschluss	2", oben oder unten
Luftanschluss	DN 100 PN6, um 4 x 90° drehbar

#### Trafoeteil

Zündung	2 x 5 kV gegen Masse
Umgebungs- temperatur	0°C bis +60°C
Schutzart	IP 54

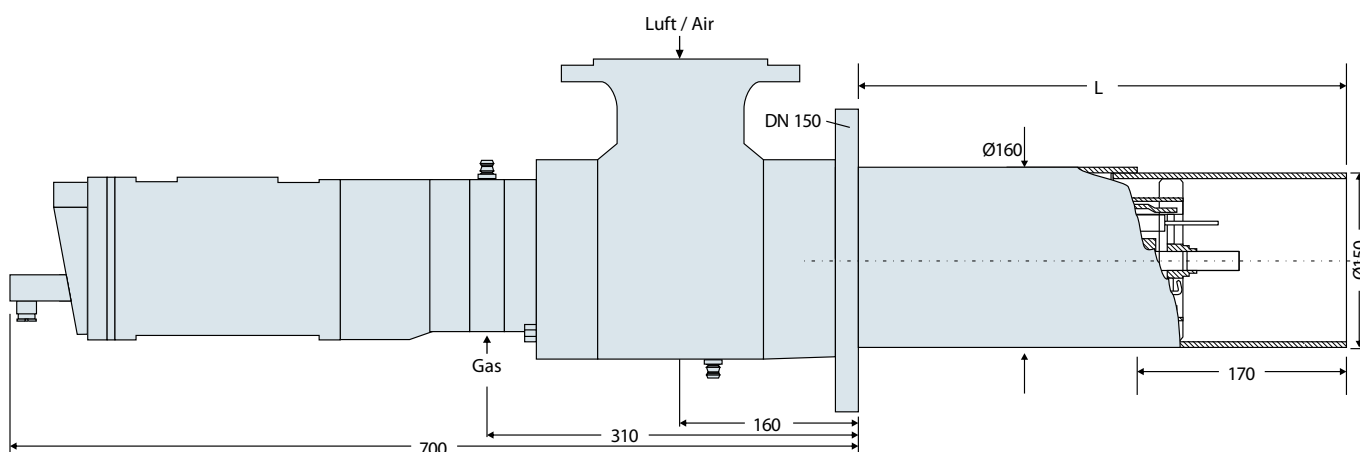
### Burners with tube Ø 160 mm

#### Example for burner BR4

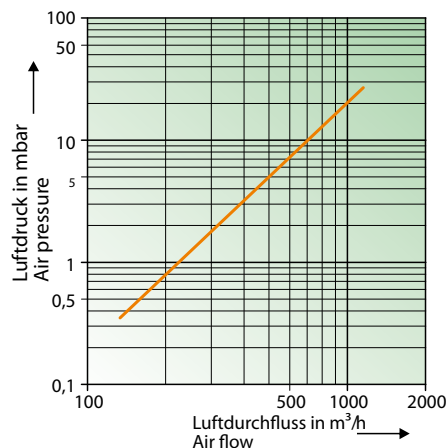
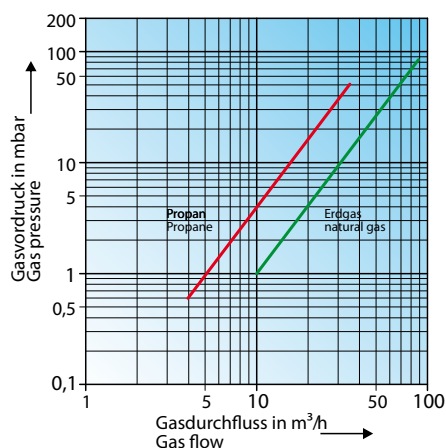
turn down ratio	10 : 1
gas tube length L	240 – 2000 mm
gas inlet	2", from above or below
air inlet	DN 100 PN6, may be rotated in steps of 90°

#### transformer part

ignition	2 x 5 kV to earth
ambient temperature	0°C up to +60°C
protection	IP 54



### Durchsatzkurven Flow Charts





Thermische Leistung max.  
Heat Release max.

## 2 MW

Ausführungen ohne oder mit elektrischen  
Anbauteilen: siehe Tabelle Seite 6

Versions with or without electrical  
components: see table page 6

### Brenner mit Rohr Ø 220 mm

#### Beispiel für Brenner BR5

Regelbereich	10 : 1
Brennerrohrlänge L	360 – 2000 mm
Gasanschluss	2" von unten
Luftanschluss	DN 150 PN16, um 4 x 90° drehbar

#### Trafoteil

Zündung	2 x 5 kV gegen Masse
Umgebungs- temperatur	0°C bis +60°C
Schutzart	IP 54

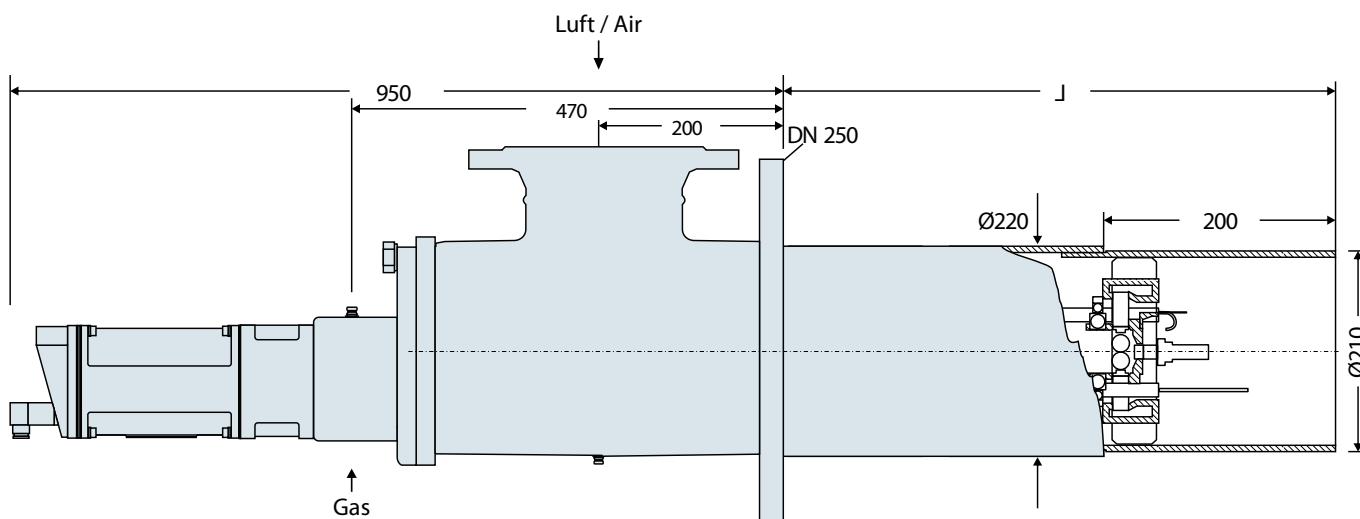
### Burners with tube Ø 220 mm

#### Example for burner BR5

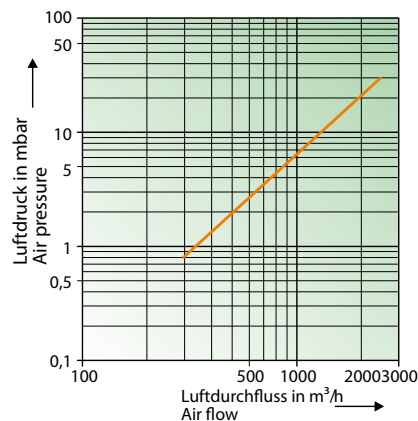
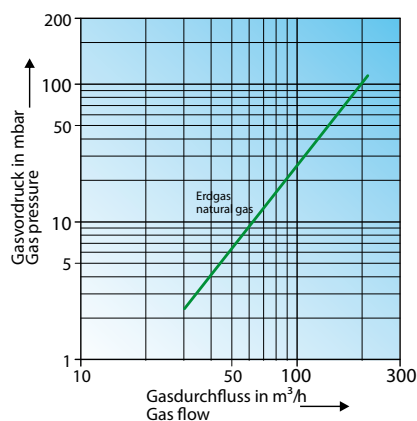
turn down ratio	10 : 1
burner tube length L	360 – 2000 mm
gas inlet	2", below
air inlet	DN 150 PN16, may be rotated in steps of 90°

#### transformer part

ignition	2 x 5 kV to earth
ambient temperature	0°C up to +60°C
protection	IP 54



### Durchsatzkurven Flow Charts



Thermische Leistung max.  
Heat Release max.

## 3.2 / 4.5 MW

Ausführungen ohne oder mit elektrischen  
Anbauteilen: siehe Tabelle Seite 6  
Versions with or without electrical  
components: see table page 6

### Brenner mit Rohr Ø 275

Type GB6	
Thermische Leistung	3,2 MW
Zünd-/Pilotbrenner	ZDA0
Hauptflammen- überwachung	Ionisation / UV

### Burners with tube Ø 275

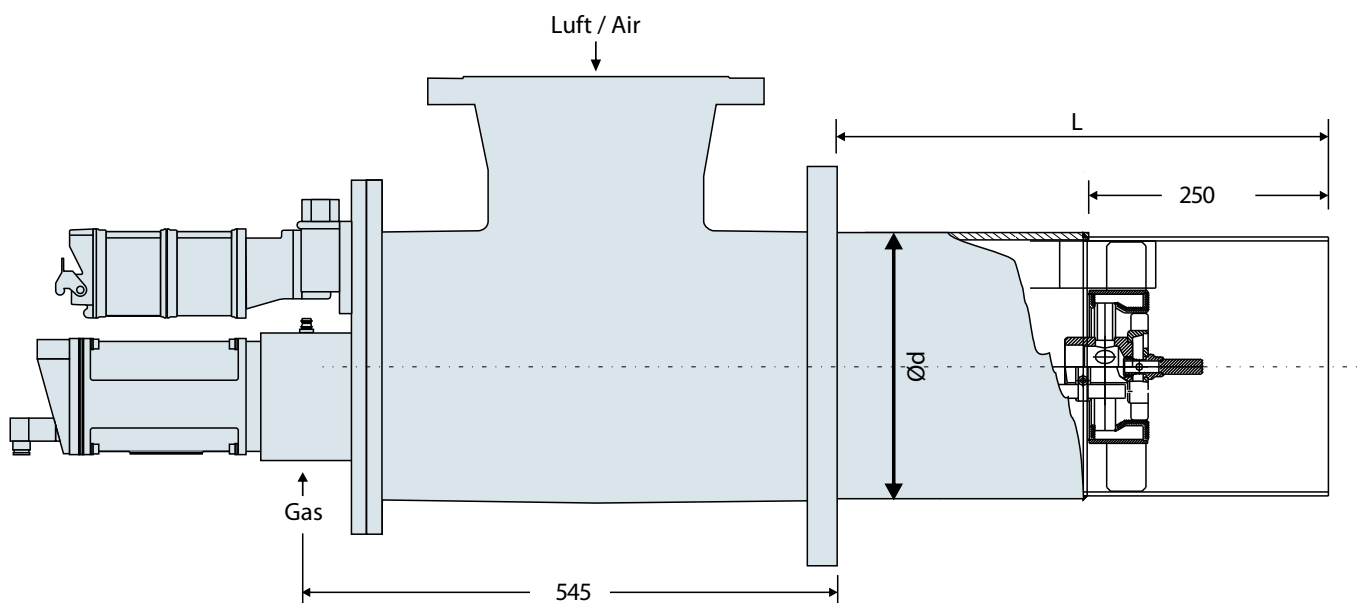
Type GB6	
heat release	3.2 MW
ignition / pilot	ZDA0
main flame supervision	Ionisation / UV

### Brenner mit Rohr Ø 325

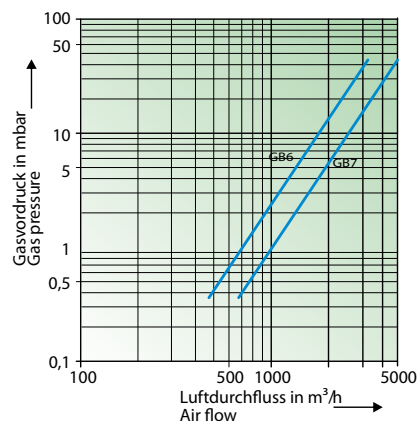
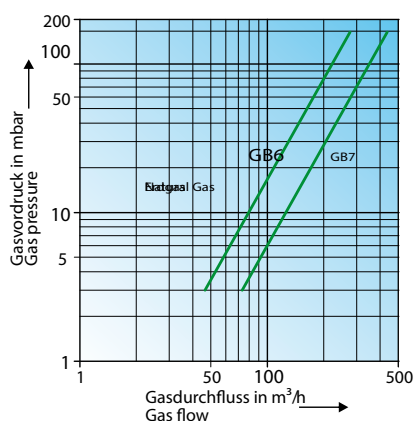
Type GB7	
Thermische Leistung	4,5 MW
Zünd-/Pilotbrenner	ZDA1
Hauptflammen- überwachung	Ionisation / UV

### Burners with tube Ø 325

Type GB7	
heat release	4.5 MW
ignition / pilot	ZDA1
main flame supervision	Ionisation / UV



### Durchsatzkurven Flow Charts












Please fill in the questionnaire in Word or on paper!

Please note: Not all of the options listed below are available for every gas burner series.

<b>Project:</b>	
<b>Plant specification</b>	
Kind of furnace/boiler:	<input type="checkbox"/> Industrial combustion system <input type="checkbox"/> Big boiler <input type="checkbox"/> Heat recovery boiler
Combustion system	<input type="checkbox"/> Fluidized bed combustion <input type="checkbox"/> Travelling grate <input type="checkbox"/> Duct burner for air heating <input type="checkbox"/> Duct burner for turbine exhaust gas reheating <input type="checkbox"/> Other
Combustion chamber atmosphere: corrosive Temperature range [°C]	<input type="checkbox"/> yes <input type="checkbox"/> no from ..... to .....
Design pressure of the plant:	..... bar
Static combustion chamber pressure [+/- mbar]:	..... mbar
Is the combustion chamber governed by the Pressure Equipment Directive?	<input type="checkbox"/> no <input type="checkbox"/> yes, pressure ..... bar category 1 <input type="checkbox"/> category 2 <input type="checkbox"/>
Dynamic combustion chamber pressure [+/- mbar]:	..... mbar to ..... mbar
Burner/Igniter in Ex-zone:	<input type="checkbox"/> yes <input type="checkbox"/> no
Applicable standards and codes of practice?	<input type="checkbox"/> EN 676 (forced draught burners) <input type="checkbox"/> EN 746-2 (ind. thermoproc. equipm.) <input type="checkbox"/> EN 60079-10-1 (Ex-zones gas) <input type="checkbox"/> EN 60079-10-2 (Ex-zones dust) <input type="checkbox"/> EN 161 (shut-off-valves) <input type="checkbox"/> EN 298 (burner controls for gas)
<b>Gas burner specification</b>	
Required heat release [kW]:	
Required turn down ratio:	
Operation:	<input type="checkbox"/> 1-stage <input type="checkbox"/> 2-stage <input type="checkbox"/> modulating
Kind of gas:	<input type="checkbox"/> natural gas <input type="checkbox"/> LPG <input type="checkbox"/> cleaned coke oven gas (gas analysis required) <input type="checkbox"/> special gas (gas analysis required)
Available gas pressure [mbar]:	
Available combustion air pressure [mbar]:	

<b>Project:</b>	
Will preheated combustion air be fed into the gas burner's combustion air port?	<input type="checkbox"/> no <input type="checkbox"/> yes, ..... °C
Outer tube length [mm]:	
Mounting flange:	<input type="checkbox"/> Hegwein standard <input type="checkbox"/> EN: DN ....., PN ..... <input type="checkbox"/> ANSI: ....., ..... lbs, ..... inch
Spark transformer integrated:	<input type="checkbox"/> yes <input type="checkbox"/> no
Spark transformer and ionisation flame monitor integrated:	<input type="checkbox"/> yes <input type="checkbox"/> no
Spark transformer and burner control integrated:	<input type="checkbox"/> yes (not for Ex-versions) <input type="checkbox"/> no
Ionisation flame monitor for continuous operation required:	<input type="checkbox"/> yes <input type="checkbox"/> no
Approval of the ionisation flame monitor:	<input type="checkbox"/> EN * <input type="checkbox"/> FM <input type="checkbox"/> AGA * Burner control only with EN approval
Ionisation flame monitor with integrated volt-free SPDT contact: (Note: Versions that provide a 4 – 20 mA output signal to annunciate the flame intensity come with a volt free NO contact)	<input type="checkbox"/> yes <input type="checkbox"/> no
Flame relay - contact material:	<input type="checkbox"/> standard <input type="checkbox"/> AgNi 90/10, hard gold plated, max. 100 mA
Volt-free changeover with additional circuitry (only possible if a corresponding burner management system exists at site):	<input type="checkbox"/> none <input type="checkbox"/> NAMUR (enables an open- or short-circuit fault to be detected in the field wiring)
4 – 20 mA signal to annunciate the flame intensity (for visualisation only): (Note: Gas burners in an IP 65 version that provide a 4 – 20 mA output signal come with a sealed-in control cable only.)	<input type="checkbox"/> yes (not for Ex-versions) <input type="checkbox"/> no
Supply voltage (+ 10 %/- 15 % at 50/60 Hz):	<input type="checkbox"/> 230 V <input type="checkbox"/> 115 V <input type="checkbox"/> 125 V <input type="checkbox"/> 250 V
Place of installation:	<input type="checkbox"/> indoor <input type="checkbox"/> outdoor

<b>Project:</b>	
IP rating of the power head:	<input type="checkbox"/> IP 54, integrated plug and socket (not for hazardous area) <input type="checkbox"/> IP 65, sealed-in control cable (not for hazardous area) <input type="checkbox"/> IP 65, sealed-in control cable (for hazardous area, zone 2 or zone 22) <input type="checkbox"/> IP 65, terminal strip (for hazardous area, zone 1 or zone 21)
In case of IP 65: Length of the control cable (not with gas burners for zone 1 or zone 21)	<input type="checkbox"/> 5 m (minimum length) <input type="checkbox"/> 10 m <input type="checkbox"/> 15 m ..... m
Painting of the power head:	<input type="checkbox"/> Hegwein standard <input type="checkbox"/> C 4 (saline atmosphere; not for version zone 21 and zone 22)
Ambient temperature of the power head:	<input type="checkbox"/> - 30 °C bis + 60 °C (standard version, not for hazardous area) <input type="checkbox"/> - 30 °C bis + 80 °C (special version, not for hazardous area) <input type="checkbox"/> - 20 °C bis + 60 °C (standard version for hazardous area, zone 2 or zone 22) <input type="checkbox"/> - 40 °C bis + 80 °C (special version for hazardous area, zone 2 or zone 22) <input type="checkbox"/> - 40 °C bis + 60 °C (version for hazardous area, zone 1 or zone 21)

<b>Project:</b>	
<p>Required explosion protection: (G = gas / D = dust)</p>	<p><input type="checkbox"/> none</p> <p>PTB certified:</p> <p><input type="checkbox"/>  II 2G Ex de IIB T4, zone 1</p> <p><input type="checkbox"/>  II 2G Ex de IIC T4, zone 1</p> <p><input type="checkbox"/>  II 2D Ex tD A21 IP 65 T 95 °C, zone 21</p> <p>IBExU certified:</p> <p><input type="checkbox"/>  II 3G Ex nC IIC T5 Gc, zone 2</p> <p><input type="checkbox"/>  II 3D Ex tc IIIC T 100 °C, zone 22 (standard version, power head completely potted, ionisation flame monitor or spark transformer cannot be replaced individually)</p> <p>IBExU certified:</p> <p><input type="checkbox"/>  II 3G Ex nA nC IIC T5 Gc, zone 2</p> <p><input type="checkbox"/>  II 3D Ex tc IIIB T 100 °C, zone 22 (special version, power head partially potted, ionisation flame monitor can be replaced individually)</p> <p>IBExU certified:</p> <p><input type="checkbox"/>  II 3G Ex nC nR IIC T5 Gc, zone 2</p> <p><input type="checkbox"/>  II 3D Ex tc IIIC T 100 °C, zone 22 (special version, power head partially potted, ionisation flame monitor or spark transformer can be replaced individually. Leakage test at site required)</p>
<p>Test certificate according to EN 10204 required:</p>	<p><input type="checkbox"/> no</p> <p><input type="checkbox"/> Declaration of compliance with the order 2.1</p> <p><input type="checkbox"/> Test report 2.2</p> <p><input type="checkbox"/> Inspection certificate 3.1</p> <p><input type="checkbox"/> Inspection certificate 3.2</p>
<p>Additional information:</p>	

## Contactos/Contacts:

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24 Horas: (+351) 96 523 73 93



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