



## **Heavy Duty Gas Igniter**

**Maximum heat release: 2000 kW (7,000,000 BTU/hr),  
Compact design: with integrated spark transformer and  
ionisation flame monitor in  
EC-tested and approved design  
flame proof housing  
II 3 G EEx nC IIC T5, PTB- and ATEX approved  
suitable for applications in Zone 2**

**Model ZXA4...**  
for intermittent operation

**Model ZXDA4...**  
for continuous operation

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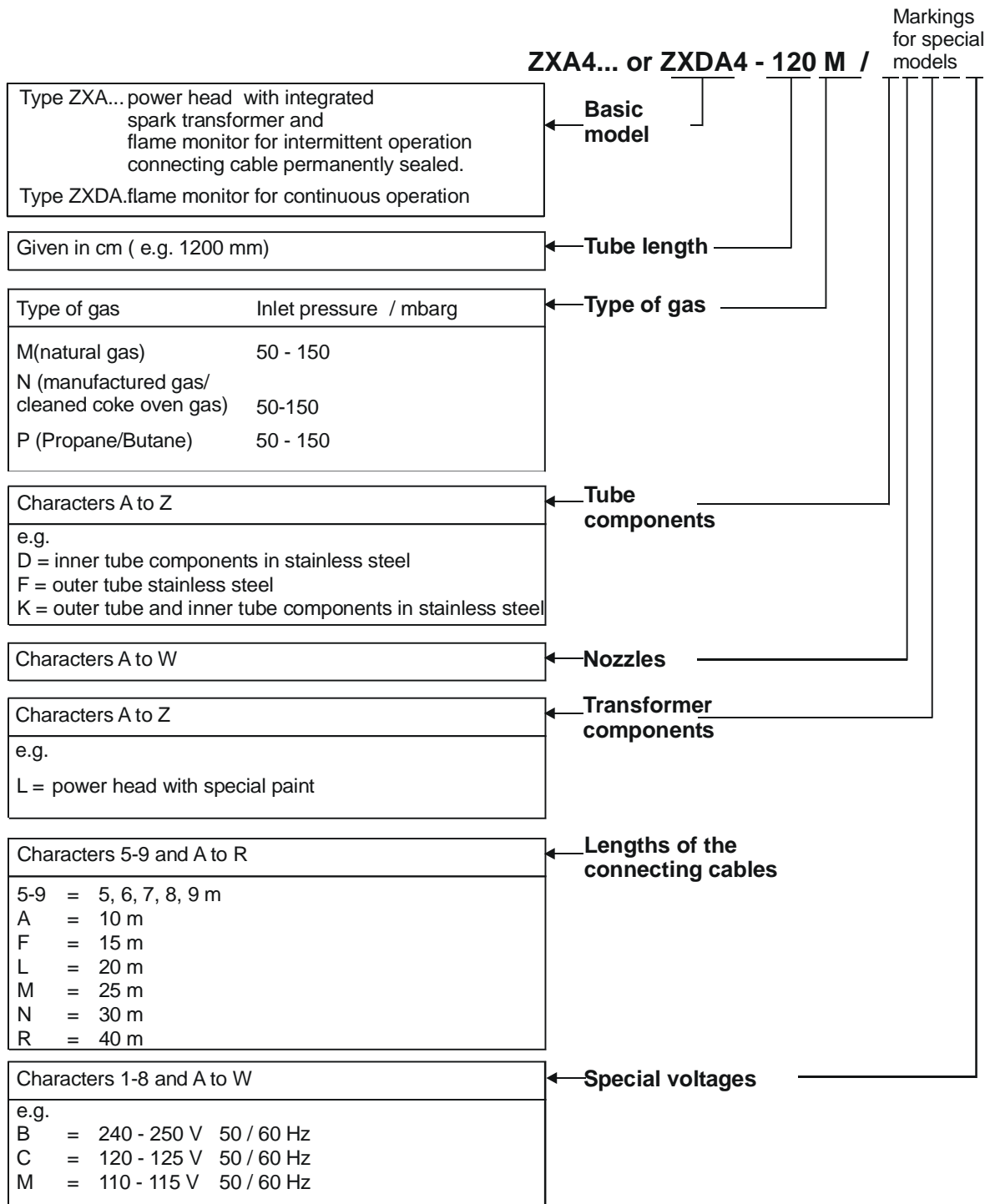
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**Note**

- ***Please read this manual and adhere to it when making use of the device***
- ***Installation and maintenance procedures may only be carried out by authorized personnel***
- ***All local regulations and the prevailing codes of practice must be observed during installation.***
- ***Improper installation, alignment and maintenance, as well as modifications by the customer, can all lead to personal injury or property damage, as well as loss of warranty!***

# 1. Part Numbering System

The example below shows how the most important igniter information is incorporated into the part number:



## 2. Technical Data

### Burner Part

Heat release .....	max. 2000 kW (7,000,000 BTU/hr)
Flame length.....	max. 2500 mm (approx. 100")
Tube length.....	lengths available from 360 –4,000 mm, in 10 mm increments
Gas connection.....	2", from top or bottom (design pressure max. 10bar)
Air connection.....	DN100 PN6, may be rotated in increments of 90°
Air flow .....	max. 1200 m <sup>3</sup> /h
Air ratio .....	0.3 – 0.5; remainder must be available from combustion chamber itself
Maximum ambient temperature.....	igniter tube: 500°C (932°F); if temperature is higher, combustion air 20% min. must be left on to serve as cooling air. At temperatures > 700°C (1292°F), additional cooling air must be supplied in the gap between the guide tube and igniter tube. In case of divisible or tilting tubes the temperature at the division or moving part must not exceed 180°C (356°F).
Maximum back pressure .....	200 mbarg inside the igniter housing

### Power head (Transformer and Flame Monitor)

Operating voltage (Flame monitor).	230 V 50/ 60 Hz (standard), or as specified in the part number
Spark transformer.....	(primary) 230 V 50/ 60 Hz (standard), or as specified in the part number
.....	(secondary) 2 x 5 kV electrode against electrode
Enclosure rating.....	IP 65 (NEMA 4x)
Connection type.....	permanently sealed in control cable (IP 65 version) In ex zone the free cable must be connected in housings which obtain the explosion proof acc. to EN50021 or EN50014
Power consumption.....	spark transformer: 2 x 100 VA flame monitor: 10 VA
Duty cycle .....	spark transformer: 100% usually limited to 2-3 seconds by the burner control flame monitor: any
Ambient temperature.....	-20°C to +40°C (-4°F to +104°F), where EC approval is required
.....	Special version up to 60°C upon request
Start-up requirement .....	airflow must be ensured as described under 3.1
Explosion proof ratings.....	II 3 G EEx nC IIC T5 zone 2 div. II

May be connected to controllers on page 8.

## 3. Storage, Installation Instructions and Lifetime

Igniters are to be stored in a dry and dust-free place. Ambient temperature during storage shall be 0 – 60°C. No operation and storage below dew point. Moisture must not exceed 60%. Igniters shall be protected from mechanical damages.

If the tube is longer than 3 m (approx. 118"), the igniter must be provided with a guide tube. This prevents the tube from bending too much. The end of the igniter tube should protrude at least 300 mm (approx. 12") from the end of the guide tube, if the ambient heat does not require otherwise.

The gap between carrier tube and igniter tube ought to be 5 mm (app. 0.2") or more. In case of higher furnace temperatures additional cooling air may be supplied into the gap through a separate port.

**Gas- and Air-Regulating Components have to be installed at site.**

The device has a limited service life. It is designed for app. 250,000 start ups. For 50 start ups per day its lifetime would be about 10 years. This time decreases under bad conditions e.g. dust, high or low temperature, moisture, aggressive gases. When the appliance has reached the end of its lifetime it must be disposed of according to local regulations.

### 3.1 Monitoring the Gas and Air Pressures

The gas and air supply pressures have to be monitored at site according to local regulations. Further to that it must be ensured that forced air is passing through the igniter and purging it before the electrical supply is switched on. For safety reasons any failure in forced combustion air must lead to an immediate interruption of the electrical supply.

Even after shut down the igniter shall be purged with combustion air to rule out the extremely unlikely accumulation of a flammable mixture in the igniter's windbox.

## 4. Flame Monitoring

The flame is monitored by an ionisation electrode which must be doused into the flame. This flame rod is energized with an a.c. voltage. The burning flame creates a conductive connection to burner mass and acts as a rectifier for the small ionisation current. This d.c. signal is amplified in the flame monitor, which in turn switches a 90Vd.c. signal or an integrated flame relay (ZXDA.. series only).

The ionisation electrode and the spark electrode are aligned according to the drawing on page 13. The electrode support ring is only available as one unit. The electrodes on the support ring are already bent and aligned.

The internal resistance of the ionisation path is several M $\Omega$ . This high resistance requires good insulation for the electrodes and the connecting rods. Therefore, it is important to clean the insulators more often if the combustion air contains dust; avoid moisture.

The temperature of the ceramics must not exceed 500°C. Please see also chapter 'Technical Data; Maximum ambient temperature'.

**Caution: Do not leave the spark voltage on during any of the safety time. A spark-free period of approx. 0.5 seconds must be guaranteed, since the high voltage can suppress the ionisation signal.**

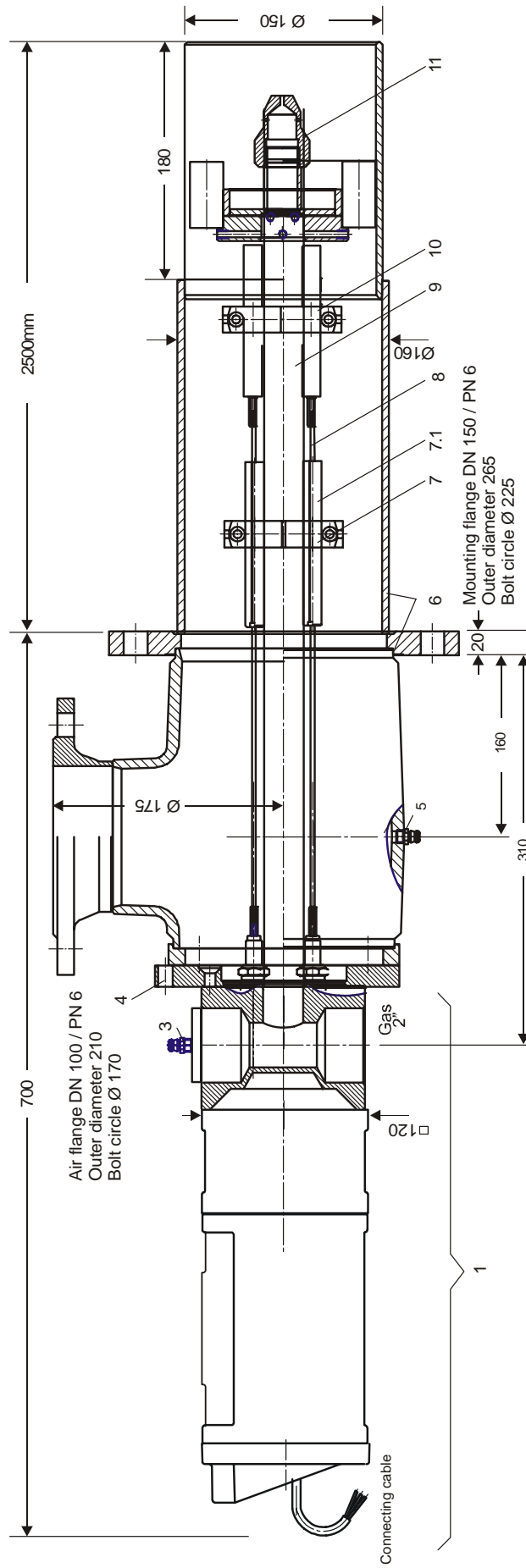
## 5. Construction According to Sectional Drawing

(see also page 6)

The igniter consist essentially of power head (item 1), into which the spark transformers and the flame monitor are built, the igniter tube with air/mounting flange (6), gas tube (9) and nozzle (11), as well as the electrode support ring (10). The igniter tube, which includes the air connection, is threaded onto the power head, and, after loosening four screws (4), can be detached or rotated in 90° increments according to the location of the air supply. When rotating the tubes, one must be careful not to twist the electrodes support ring and rods. This could disrupt operation of the igniter.

The gas connection can be made from either the top or bottom. The unused opening is plugged with a stopper into which the gas pressure test nipple (3) has also been screwed. The electrode support ring (10) is attached to the end of the gas tube. The ionisation and 2 spark electrodes are lengthened with connecting rods (8). These rods are guided via 3 ceramic insulators through the floor of the power head and are held every 300 mm by supporters (7) which are welded in at the gas tube.

**Standard model: transformer module enclosure rating IP 65 (NEMA 4x), with control cable**



*Igniter Sectional Drawing*

## 6. Available Spare Parts and Wear and Tear Parts

Item.	Qty.	Description	Part Number	Voltages	Material	Remarks
1	1	Complete transformer and flame monitor module for ZXA4...	ZX320K7/_ _ _ ZX320K7/_ _ M ZX320K7/_ _ C ZX320K7/_ _ B	230 V 115 V 120/125 V 240/250 V	with housing and sealed in cable	Standard model Special model Special model Special model
	1	for ZXDA4...	ZX320K8/_ _ _ ZX320K8/_ _ M ZX320K8/_ _ C ZX320K8/_ _ B	230 V 115 V 120/125 V 240/250 V		Standard model Special model Special model Special model
3	1	Gas pressure test nipple	--		Brass * Stainless steel	No spare part
4	4	Allen screw	--		Stainless steel	No spare part
5	1	Air pressure test nipple	--		Brass * Stainless steel *	No spare part
6	1	Igniter tube, complete with mixing chamber, mounting flange and air flange	Z1455Z_ _ _	Tube length given should be the same as that in the part number for the igniter	Stainless steel	Standard model  Can be rotated in increments of 90°
7	*	Supporter for 3 ceramic insulators			Stainless steel	*welded in at the gas tube
7.1	3*	insulators	--		Ceramics	diam.14 x 125 mm *depends on numbers of item 7
8	3	Connecting rods	--		Stainless steel	∅ 3.0 mm Please state type of igniter in your order
9	1	Gas tube with swirler	--		Mild steel, galvanized or stainless steel	Standard Special model
10	1	Electrode supporter with 3 ceramic insulators and 3 electrodes	--		Mild steel	Welded with the gas tube  <b>Subject to wear and tear</b>
11	1	Gas nozzle	Natural gas	Z900F100-6x45	Stainless steel 1.4104	Standard
			Propane gas	Z900F80-6x40	Stainless steel 1.4104	Standard

\* special design upon request

## 7. Accessories

The igniters can be connected to the following devices:

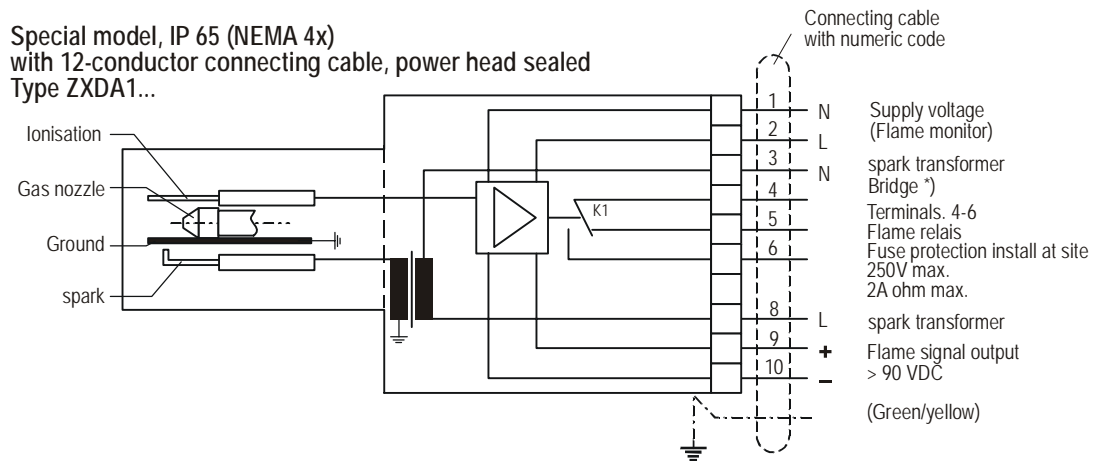
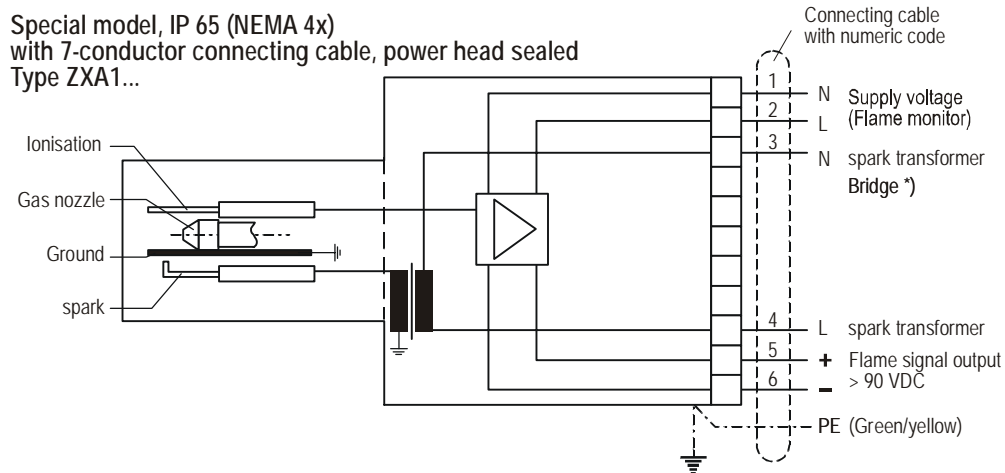
- AAUS 620 L20 Controller  
for intermittent operation,  
modular unit  
230V 50/60 Hz IP 40  
please also refer to the separate description 1.86Se of this product
- AASD 820 L20 Controller  
for continuous operation,  
modular unit  
230V 50/60 Hz IP 40  
please also refer to the separate description 1.86De of this product
- A240 K3/306 Controllers safety time 3 seconds  
(5 or 8 seconds also available)  
for intermittent or continuous operation,  
European standard size PC board, 19" rack module  
24V DC  
please also refer to the separate description 1.93e of this product
- A285 K2.3 Flame Relay  
with 2 volt-free relay contacts,  
top hat mounting rail according to IEC/EN 60715  
For burner management systems that meet the applicable standards and requirements for safety-related integration of the igniter.

**It must be ensured the spark voltage (terminal 8 on the igniter) is shut off before the end of the spark safety time, so that there is a brief segment of time without spark. The high-voltage spark gap can suppress the ionisation signal to such an extent that the flame relay cannot close.**

Please also refer to the separate description 1.77e of this product.

## 8. Electrical Connection

Connect the wiring cable carefully at site. Connection to ground is achieved by protection earth of the supply cable and via the metallic housing, the gas and air connection and the flame of the combustion chamber. Please provide for adequate contact. Depending on their location at site, the wiring terminals of the supply cable may have to be installed in an enclosure that provides the same protection from explosion. Take care of local regulations.



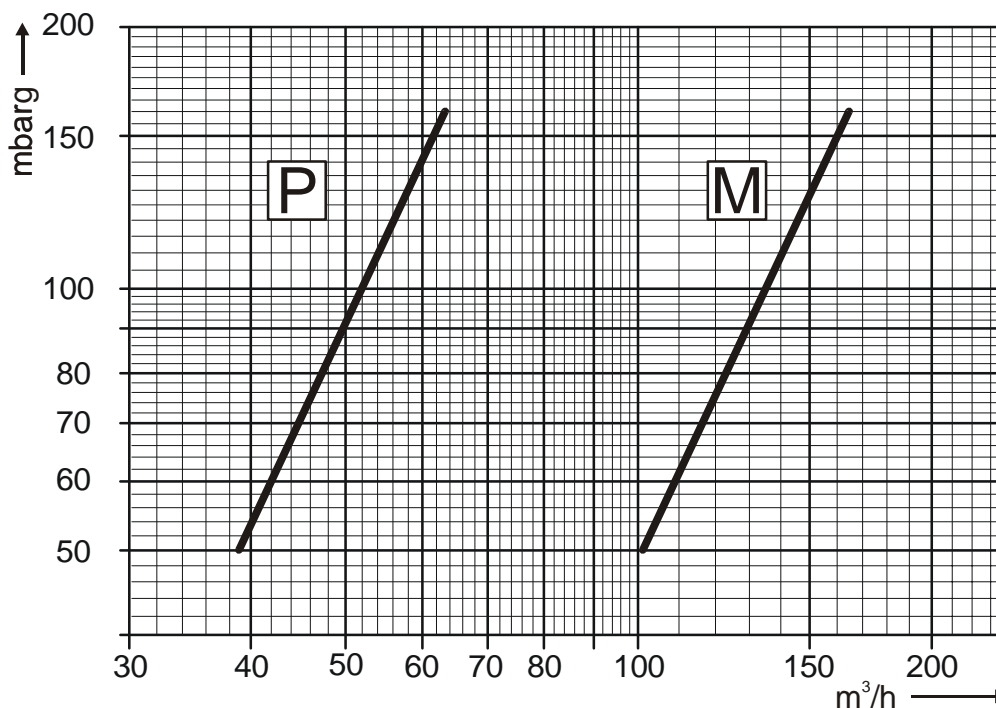
Power supply according to the nameplate on the igniter

\*) Bridge 1-3 if the transformer and flame monitor voltages have the same phases

## 9. Setting the Required Gas Flow

The igniters operate in a pressure range of 50-150 mbar, which may be measured using the **gas pressure test nipple (item 3/ sectional drawing)**. Open the test nipple by turning the inserted Allen screw anti clockwise by 1 ½ turns. Connect the hose with pressure gauge immediately (be aware of the pressure). After measurement close test nipple by turning clockwise immediately.

The gas flow can be selected according to the diagram below. Pressure is set using a ball valve (to be installed at site) to a value of 100 mbar.



Character	Gas	Nozzle Orifices (mm)	Flame Length (mm)	Notes
P	Propane	Z900F80-6x40 with swirler Z305Z1	ca. 2500	Standard nozzle
M	Natural gas	Z900F100-6x45 with swirler Z305Z1	ca. 2500	Standard nozzle

The graphs shown are based on average values regarding gas density, gas composition, calorific value, igniter version and igniter tube length as well as optimised surrounding (unimpeded burn out and no back pressure in combustion chamber). The supply pressure derived from the graphs should therefore be regarded as guide numbers only. The actually required values can deviate, depending on site conditions.

## 10. Setting the Required Air Flow

The required airflow or air pressure basically depends on the length of the igniter tube.

Approximate values:     5 mbar at tube length until 1m  
                              10 mbar at tube length until 1-3m

For example, the air pressure on an igniter with a tube length of 5 m must be set to 50 mbar.

The blower pressure has to be reduced by an air-regulating sleeve to the actually required flow pressure stipulated by the igniter's tube length. Any furnace backpressure has to be compensated. The flow pressure can be picked up at the **air pressure test nipple (item 5/ sectional drawing)**. Open the test nipple by turning the inserted Allen screw anti clockwise by 1 ½ turns. Connect the hose with pressure gauge immediately (be aware of the pressure). After measurement close test nipple by turning clockwise immediately.

Varying backpressures with fluctuations exceeding 20% require a differential pressure regulator on the air supply side.

1. Immediate ignition
2. Good optical flame image / flame signal > 90VDC respectively optimized ionisation current > 10 $\mu$ A (test jacks (standard version) in the power head's front plate)
3. Flame length approx. 2000 mm at a maximum capacity of 2000 kW (approx. 7,000,000 BTU/hr) at unimpeded burn out

## 11. Maintenance and Alignment

These igniters do not require any special maintenance. They should, however, be checked periodically (e.g., every 3 months) for proper operation.

If the igniters are operated using air that contains dust, this check should be performed at shorter intervals, since electrically conductive dirt deposits or moisture on the ceramic insulators can lead to a fault in the igniter.

The intrinsic impedance of the ionisation path amounts to several M $\Omega$ . Such high resistance requires that the ceramic insulators be in perfect condition.

### Performing Maintenance and Replacing Worn Parts

(please compare to the sectional drawing)

**Igniter Tube** (may be rotated in 90° increments)

After loosening the four screws (item 4), the tube may be removed. Depending on the position of the air connection, the tube may be turned and tightened.

#### Power head

The power head with ionisation flame monitor is completely interchangeable. To do so, the outer tube must be detached, and the electrode support ring (item 10) and the three 3 mm rods (item 8) must be removed. The gas tube must then be unscrewed.

**Electrode Supporter** (subject to wear and tear, exempted from manufacturer's warranty)

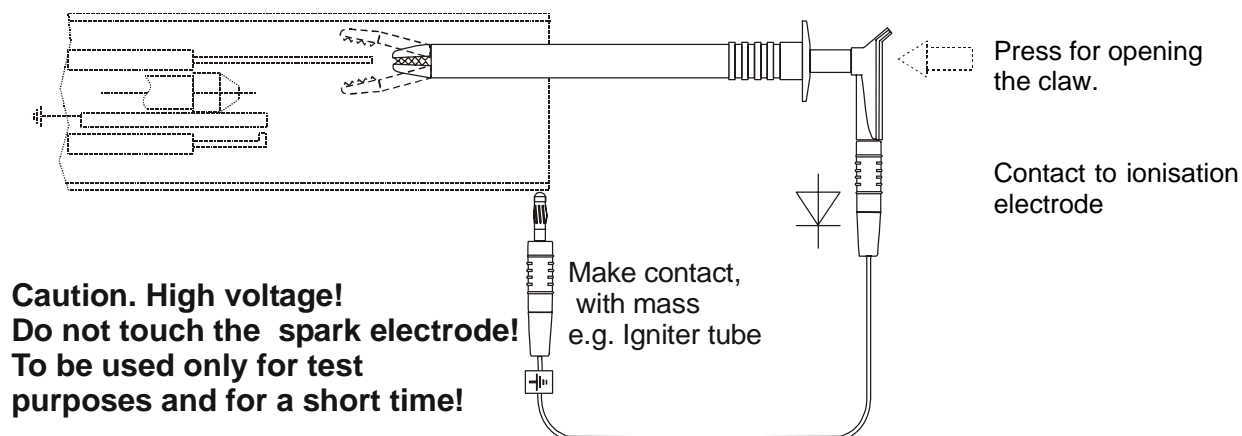
Remove the igniter tube and loosen the locking screw on the electrodes supporter and then pull out the electrodes with the ceramics. Change the ceramics if necessary. Slide in the new unbended electrodes. Screw in the locking screws of the supporter. The ionisation electrode has to be unbended both Spark electrodes have to bend, shortened and aligned once they are in place.

## 12. Electrical Function Test (without Flame) Using A10Z2 Test Diode

This test diode is employed to perform a purely electrical function test. Such a test should be carried out by authorized personnel only.

**Caution: The gas valve must first be closed!**

With the aid of the test diode A10Z2 (rectifier built in to a cable), may be simulated a flame signal to the flame monitor, once power is applied. The diode must be clamped to the ionisation electrode, the other end of the cable should make contact with burner mass (note the polarity!)



Once contact is made with the test diode at wire 5 and 6 on ZXA.. and 9 and 10 on ZXDA.. version the voltage of 90 V d.c. has to be reported.

If there is no flame signal, the following should be checked:

- Is the supply voltage present on terminals 1-2?
- Is the polarity of the test diode correct?
- Are the ceramic insulators damp, dirty or broken?  
Remedy: If so, clean or replace. If necessary replace the flame monitor module (item 1).

**In case of spark problems please see chapter 'Trouble shooting'.**

## 13. Troubleshooting

The following items have to be carried out step by step

### 13.1 Spark cannot be seen

#### **Possible Causes:**

- .1 Igniter has not been energized
- .2 Spark suppresses the ionisation signal.  
(Visual check in dark surrounding with **fuel valves closed**.)



Caution: do not touch high voltage electrode.

#### **Possible Reasons/ Remedy**

- .1.1 Remedy: Check wiring.  
Check BMS.
- .2.1 Spark electrode internals has been burnt away  
Remedy: replace electrode, clean igniter / burner internals and verify the correct spark gap.
- .2.2 Electrode distance to large or has a short circuit  
Remedy: clean igniter / burner internals, replace worn parts and verify the correct spark gap of 2-3 mm.
- .2.3 Spark transformer faulty  
Remedy: Replace spark transformer.
- .2.4 Tinder on the spark electrode or ground rod / bolt.  
Remedy: clean igniter / burner internals, and remove layer with emery cloth.
- .2.5 Ceramic insulator is broken  
(De-energize the igniter/ burner.  
Remove outer tube.)  
Remedy: Replace ceramic insulator.

### 13.2 Flame cannot be seen

#### **Possible Causes:**

- .1 No combustion air.  
(Check pressure at test nipple).
- .2 No fuel  
(Check pressure at test nipple).
- .3 Air/Fuel ratio not correct.  
(Check fuel and air pressure at test nipple)

#### **Possible Reasons / Remedy**

- .1.1 Sleeves or valves are completely closed.  
Flap or valve does not work.
- .1.2 Pipe is clogged.
- .2.1 Fuel pipe too long.  
Remedy: Install valve close to Burner/ Igniter.
- .2.2 Fuel pipe inert with nitrogen.  
Remedy: Start the igniter/ burner several times to get the inert gas removed and replaced by fuel.
- .2.3 Shut off valve is out of order.  
Remedy: Replace fuel valve.
- .3.1 Check correct fuel and air pressure adjustment.  
Use diagram values given in igniter/ burner manual.
- .3.2 Correct fuel type?
- .3.3 Clean combustion air?

### 13.3 Flame can be seen but no flame signal present after safety spark time has elapsed

#### **Possible Causes:**

- .1 No ionisation signal.  
(Visual check with **fuel valves closed** and de-energized igniter/ burner.)
- .2 Igniter/ burner is wired to a Hegwein burner control:  
Supply voltage is released simultaneously with operation voltage.
- .3 Igniter/ burner is wired to burner control of another make:  
spark suppress the ionisation signal.
- .4 Burner/Igniter has been exposed to excessive temperature from combustion chamber during Burner/Igniter stand still. Ceramics are too hot, the insulation resistance has dropped to a value that is too low.
- .5 The setting of the fuel and air pressures at the burner/igniter are not correct. Flame root is not in the area of the ionisation electrode.
- .6 After failure correction of item1- 5 a flame signal is still not available.  
If flame signal is still not reported though step 1 to 5 have been verified.

#### **Possible Reasons / Remedy**

- .1.1 Ionisation electrode has been burnt away.  
Remedy: Replace electrode and verify the correct spark gap.
- .1.2 Ceramic insulator is broken.  
Remedy: Replace insulator.
- .2.1 Operation voltage must lag supply voltage at least by 0.5 seconds.
- .3.1 Spark voltage must be shut off 0.5 seconds before spark safety time has elapsed.
- .4.1 Leave blower air fully on or in cooling stage while the burner/igniter is switched off.
- .5.1 Adjustment and correction of the corresponding devices.  
Use diagram values as given in the available manual.
- .5.2 Flame is pushed out of the igniter/ burner mouth : Fuel or/ and air flow insufficient.
- .6.1 Remedy: Check complete wiring with test diode A10Z2.  
See manual.

### 13.4 Shut off during operation

#### **Possible Causes:**

- .1 Varying back pressures or supply pressures cause the flame to trip.



#### **Possible Reasons / remedy**

- .1.1 Check pressure at the test nipples. Fluctuations require a differential pressure regulator on the air and fuel supply side.
- .1.2 Burner or igniter test should be carried out outside combustion chamber.  
**Local safety regulations must be observed.**
- .2 Pilot flame is strongly influenced or when suffocated by the main flame.
  - .2.1 Remedy: Change igniter position
  - .2.2 Remedy: A more powerful burner/ igniter may be requested.

### **13.5 Automatic shut-down at start-up when a flame is reported before the spark fuel valve have been opened**

***Possible Causes:***

***Possible Reasons / remedy***

- .1 Flame has not extinguished after the previous shut-down due to a leaking valve and is still present when system is restarted.

- .1.1 Remedy : Replace valve.

### **13.6 Electrical Malfunction**



- .1 Burner control does not start
  
- .2 ZXDA.. only : Burner/ Igniter and burner control are in operation but the volt free contact does not work.

- .1.1 Remedy: Devices of a different make can cause trouble. See chapter.

- .2.1 Check separate fuse (2AT).

In case of questions please give us the exact type designation as given on the nameplate.

## 14. Approvals

<b>CE 0085</b>		 Zertifizierungsstelle
<b>EG-Baumusterprüfbescheinigung</b> <b>EC type examination certificate</b>		<b>CE-0085BR0163</b> <small>Produkt-Identnummer product identification no.</small>
<b>Anwendungsbereich</b> <i>field of application</i>	EG-Gasgeräterichtlinie (90/396/EWG) <i>EC Gas Appliances Directive (90/396/EEC)</i>	
<b>Zertifikatinhaber</b> <i>owner of certificate</i>	Hegwein GmbH Am Boschwerk 7, D-70469 Stuttgart	
<b>Vertreiber</b> <i>distributor</i>	Hegwein GmbH Am Boschwerk 7, D-70469 Stuttgart	
<b>Produktart</b> <i>product category</i>	Ausrüstungsteile für Gas- und Druckgeräte: Flammenwächter (4131)	
<b>Produktbezeichnung</b> <i>product description</i>	Flammenwächter mit Ionisations- oder UV-Flammenfühler als Einbaugerät für Gaszündbrenner sowie Gasbrenner der Firma Hegwein und Durag	
<b>Modell</b> <i>model</i>	A0515Z3...	
<b>Bestimmungsländer</b> <i>countries of destination</i>	AT, BE, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MT, NL, NO, PL, PT, SE, SI, SK	
<b>Prüfberichte</b> <i>test reports</i>	Baumusterprüfung: C-F 1308-00/06 vom 24.04.2006 (TSG)	
<b>Prüfgrundlagen</b> <i>basis of type examination</i>	EU/90/396/EWG (29.06.1990) DIN EN 298 (01.01.2004)	
<b>Aktenzeichen</b> <i>file number</i>	05-0994-GEE	
<b>12.07.2006 Rie A-1/2</b> <small>Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle date, issued by, sheet, head of certification body</small>		
<small>DVGW-Zertifizierungsstelle - von der Deutschen Bundesregierung benannte und von der Europäischen Kommission offiziell registrierte Stelle für die Konformitätsbewertung von Gasgeräten DVGW Certification Body - notified by the government of the Federal Republic of Germany and officially registered by the European Commission for conformity assessment of gas appliances</small>	 <b>ZLS</b> ZLS-ZE-349/03	<small>DVGW Deutsche Vereinigung des Gas- und Wasserfaches e.V. Technisch-wissenschaftlicher Verein Zertifizierungsstelle Josef-Wirmer-Straße 1-3 53123 Bonn Telefon: +49 (228) 91 88 807 Telefax: +49 (228) 91 88 993</small>

A-2/2

CE-0085BR0163

<b>Typ</b> <i>type</i>	<b>Technische Daten</b> <i>technical data</i>	<b>Bemerkungen</b> <i>remarks</i>
A0515Z3000; A0515Z300M	Identifikationscode: B/O/O/O/X/K Sicherheitszeit: 1 s	
<b>Ausführungsvariante</b> <i>type variation</i>	<b>Erläuterungen</b> <i>explanations</i>	
A0515Z3000	Elektrische Daten: 230 V AC, 50/60 Hz	
A0515Z300M	Elektrische Daten: 115 V AC, 50/60 Hz	
<b>Verwendungshinweise / Bemerkungen</b> <i>hints of utilization / remarks</i>		
Zugelassen für: intermittierenden Betrieb und Dauerbetrieb (Dauerbetrieb nur mit Ionisationsfühler)		

DVGW

**Physikalisch-Technische Bundesanstalt**

Braunschweig und Berlin

**CONFORMITY STATEMENT**  
(Translation)

- (1)
- (2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**
- (3) Test Certificate Number:

**PTB 04 ATEX 1022**

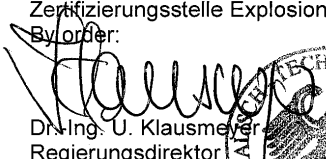
- (4) Equipment: Ignitor, type ZX AAA K\_ K\_ \_ \_
- (5) Manufacturer: Georg Hegwein GmbH + Co. KG
- (6) Address: Am Boschwerk 7, 70469 Stuttgart, Germany
- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
- The examination and test results are recorded in the confidential report PTB Ex 04-13451.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 50021:1999**
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This Conformity Statement relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.
- (12) The marking of the equipment shall include the following:

**II 3 G EEx nC IIC T5**

Zertifizierungsstelle Explosionsschutz

Braunschweig, March 16, 2004

By order:

  
 Dr.-Ing. U. Klausmeyer  
 Regierungsdirektor


Sheet 1/2

Conformity Statements without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

**Physikalisch-Technische Bundesanstalt**

Braunschweig und Berlin

(13) **SCHEDULE**(14) **CONFORMITY STATEMENT PTB 04 ATEX 1022**(15) Description of equipment

The ignitor, type ZX AAA K\_K\_ , consists of the ignition transformer and the ionisation flame detector, which are accommodated in an aluminium enclosure filled with sealing compound (ignition protection Hermetically Sealed "nC"). Connection is made by means of an open-ended line.

Technical data

## Design voltage

Flame detector .....	up to	230 V
Ignition transformer .....	up to	230 V (primary),
.....		5 kV to ground (secondary)

## Input

Flame detector .....	max.	10 VA
Ignition transformer .....	max.	100 VA
Rated cross section .....	max.	12 x 1.5 mm <sup>2</sup>

Ambient temperatures .....	-20 °C to +40 °C
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(16) Test report PTB Ex 04-13451(17) Special conditions for safe use

None

Notes for manufacturing and operation

Within the potentially explosive area, the open cores of the open-ended line have to be connected to enclosures that comply with a standardized type of protection in compliance with EN 50021 or EN 50014.

(18) Essential health and safety requirements

Met by compliance with the standards mentioned above.

Zertifizierungsstelle Explosionsschutz

By order:



Dr.-Ing. U. Klausmeier  
Regierungsdirektor



Braunschweig, March 16, 2004

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Conformity Statements without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

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