

**IBEDA**<sup>®</sup>  
CERTIFIED SAFETY.  
*Worldwide*



IBEDA  
**FLAME SPRAYING**



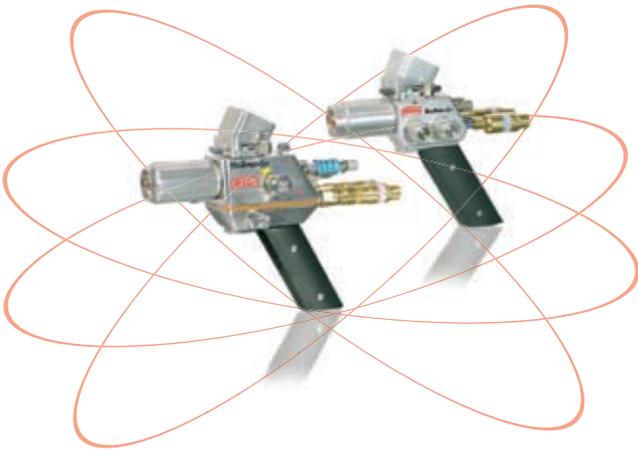
## BENEFIT WITH SYNERGY – SECURE THE ADVANTAGES!

Effective synergy and new possibilities arise from the combination of the IBEDA product lines of the IBEDA fields Flame Spraying, Gas Manifold Systems, Gas Safety and Autogenous Engineering.

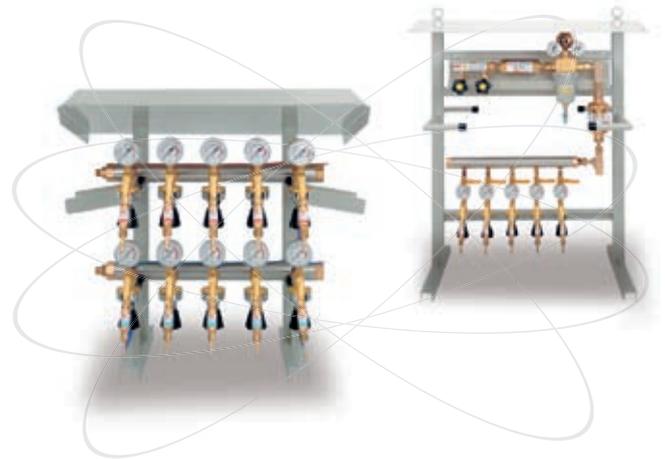
**That means: flexible, affordable, certified and safe products and production solutions from a single supplier, as well as conservation of affordable natural resources.**

We will not compromise on safety. We are committed to the ongoing development of new products as well as established products. We are able to provide well-engineered and reliable safety solutions for every industrial application - and all this with certification!

### FLAME SPRAYING



### GAS MANIFOLD SYSTEMS



## COMPETENCE AND KNOW-HOW

In 2005, IBEDA acquired the flame spraying business and activities from Erwin Hühne GmbH, including the distribution of the former UTP flame spraying products **UNISPRAYJET**, **MINISPRAYJET** as well as the powder spray torch **DURALOY** which is a further development from the UTP HA-Bond (originally UTP Variobond system). These manually operating systems are characterized by their safety and ease of use.

IBEDA was able to successfully transfer its long experience as an OEM manufacturer to the flame spraying products, and has shown positive business development with this range since taking over the activities from Erwin Hühne GmbH.



CERTIFIED SAFETY - WORLDWIDE!

## GAS SAFETY ENGINEERING

## AUTOGENOUS ENGINEERING



## FLAME SPRAYING – FOR ALL INDUSTRIES!

### **DURALOY**

Powder spray torch for coating with self-fluxing alloys

P. 4

### **DURALOYPLUS**

Powder spray torch with quick-action shut-off valve for coating with self-fluxing alloys

P. 4

### **MINISPRAYJET**

Compact flame spraying gun

P. 5

### **UNISPRAYJET**

Flame spraying gun with quick-action shut-off valve

P. 5

### **PLASTIC FLAME SPRAYING SYSTEM F311 FX-S**

Flame spraying system for coating with thermoplastic synthetics

P. 6

### **ACCESSORIES**

P. 7

# FLAME SPRAYING PRODUCTS

## **DURALOY & DURALOYPLUS**

Powder spray torch for thermal spraying with self-fluxing alloys and melting at the same time.

Most types of metal can be coated with the **DURALOY** and the **DURALOYPLUS** torch, provided that the melting point is higher than the working temperature of the alloy. During the operation, the powder particles pass through the flame and onto the surface of the work piece. The bonding is achieved by fusion with the parent metal.

In comparison to the **DURALOY**, the **DURALOYPLUS** torch offers an even more comfortable handling by the integrated quick-action shut-off valve. When operation is interrupted, the gas mixture, which was adjusted previously, is maintained. Therefore, it is not necessary to spend any time re-adjusting the mixture when setting up the re-operation. This is advantageous for applications with frequent interruptions of work.

### HIGHLIGHTS

- Modular design
- Easy fit welding/heating attachments
- Easy to change in the field of application
- Cost efficient by using standard components and standard spare parts
- High level of operational safety
- Easy to use on components which are difficult to access
- Tungsten Carbide inserts available for use with carbide powders (optional)
- Quick action couplings according to EN 561 for the gas hoses
- Safety devices according to EN 730 (optional)
- Accessories are easy to fit and to adjust
- Cost efficient operating materials (Acetylene, Oxygen)
- Quick-action shut-off valve (**DURALOYPLUS**)
- Heating shield (**DURALOYPLUS**)



Tip 550mm with Tungsten Carbide inserts

### CONTENTS OF THE **DURALOY** KIT:

- **DURALOY**-torch with powder cartridge and adapter for UTP HA-Bond powder cartridge
- Welding tips size 1-5
- Heating tips size 4 and 5
- Coupling DKG
- Igniter
- Spare gaskets/seals – assortment

**DURALOY** Kit Art.No. 5000-0006



### CONTENTS OF THE **DURALOYPLUS** KIT:

- **DURALOYPLUS** torch with quick-action shut-off valve, powder cartridge and adapter for UTP HA-Bond powder cartridge
- Heating shield
- Welding tips size 1-5
- Heating tips size 4 and 5
- Coupling Pin D1 and coupling DKG for Oxygen and Acetylene
- Igniter

**DURALOYPLUS** Kit Art.No. 5000-0095

## MINISPRAYJET & UNISPRAYJET

Flame spraying gun for thermal spraying with powder using an oxy-fuel flame. Function and safety are guaranteed through a gas mixture system using the injector principle.

The following fuel gases can be used: acetylene, propane (for zinc and plastic powders) and hydrogen in combination with oxygen as well as compressed air used for cooling purposes.

The **MINISPRAYJET** and **UNISPRAYJET** are designed for universal application where wear and corrosive protection have to be considered. They are suitable for both manual application and application with a manipulator (like robots or linear units). Because of the light weight, the standard gun **MINISPRAYJET** can be used for mobile and manual applications. The **UNISPRAYJET** is used for applications with frequent interruptions of work. It comes with a shut-off valve to open and close the gas flow without changing the gas mixture. Additionally, the **UNISPRAYJET** is also available with connections for an external powder feeder, **UNISPRAYJET-SE**.

### HIGHLIGHTS

- Integrated powder transport system
- With the integrated gate valve many types of transport gases can be used
- Overhead position through removable and 180° changeable powder connection
- Just one powder connector with adjustable slider for different capacities
- Lever to turn gas on and off without changing the settings (**UNISPRAYJET** and **UNISPRAYJET-SE**)
- Model for connection of one external separate powder feeder (**UNISPRAYJET-SE**)

### AREAS OF USE / APPLICATION:

#### METAL POWDER COATING

for the hot and cold spraying techniques with self-fluxing, metal or ceramic powders.

#### CORROSION RESISTANT COATINGS

on the basis of low melting metal flame spraying powder (for example zinc and aluminium)

#### PLASTIC COATINGS

Many different types of thermoplastics and epoxy resins



**MINISPRAYJET** and **MINISPRAYJET-KIT**

Art.No 5000-0014: Standard Kit

Art.No 5000-0055: LT/A Kit for low melting flame spraying powder



**UNISPRAYJET** and **UNISPRAYJET Kit**

Art.No 5000-0015: Standard Kit

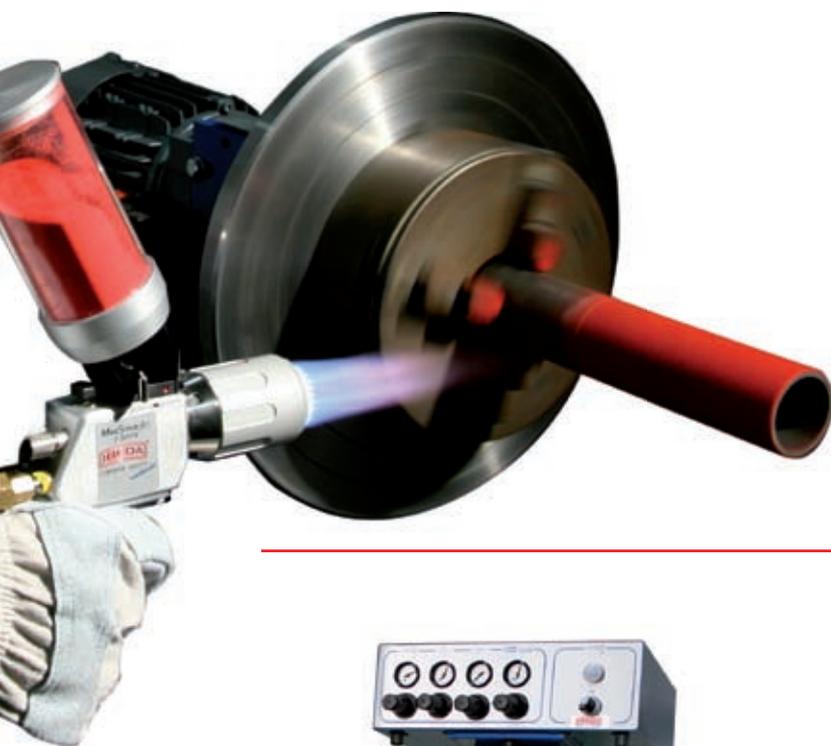
Art.No 5000-0016: **UNISPRAYJET-SE** Kit with external powder feeder



**Refillable Powder Cartridge** Art.No 1383-0001

# THE MOBILE IBEDA PLASTIC FLAME SPRAYING SYSTEM F311 FX-S

The new IBEDA flame spraying system F311 FX allows the coating of metallic and non-metallic work pieces with thermoplastic synthetics. Using this process a plastic powder is heated up with a special flame spraying gun and then smoothly dispersed. During the spraying the powder is in a liquid state and consistently coats the material. This in turn builds up a weatherproof coating with a homogeneous surface structure.



Flame Spraying System F311 FX-S  
Art.No. 5000-0010

## HIGHLIGHTS

- IBEDA flame spraying gun **MINISPRAYJET** F311 FX-P for propane packed in an aluminium case
- IBEDA mobile powder feeder unit F311 FX for direct working from the original powder container
- Fuel gas, oxygen and compressed air hose as well as powder hose
- The powder flame spraying gun F311 FX-P is also available in a design suitable for using a powder cartridge instead of the mobile powder feeder F311 FX.

The IBEDA plastic flame spraying gun **MINISPRAYJET** F311 FX-P works following the Venturi principal and guarantees maximum safety against flashbacks!

## TECHNICAL DATA

**IBEDA POWDER FEEDING DEVICE F311 FX MOBILE**  
Electro-pneumatic control unit with vibrating table and suction device to use with plastic powders.

**Dimensions:** width 450 mm, depth 650 mm,  
height 1160 mm

**Weight:** 30 kg

**Inlet current:** 230 V / 50 cycles

**PLASTIC FLAME SPRAYING GUN *MINISPRAYJET* F311 FX-P**

**Working media:** Propane, oxygen, compressed air

**Weight:** 990 g

**Coating capacity:** approx. 8 to 10 kg/h

**Pulver:** -200/+80  $\mu$ m

## ACCESSORY - NOZZLES FOR *UNISPRAYJET* · *MINISPRAYJET*

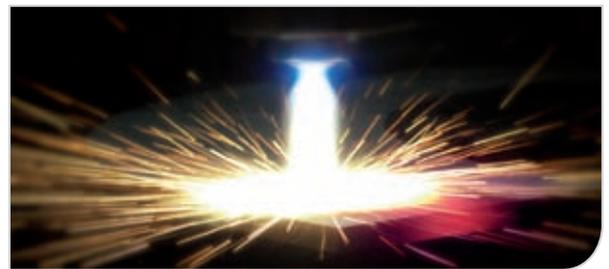
In addition to the standard equipment for the *UNISPRAYJET*- and *MINISPRAYJET*-Kit IBEDA offers a variety of accessories to satisfy your demands.

... for thermoplastic synthetics

... for ceramic synthetics

... for low melting powders

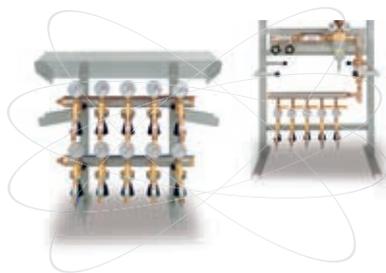
## SPRAY EXTENTION FOR *UNISPRAYJET* · *MINISPRAYJET*



*UNISPRAYJET* with watercooled IBEDA spray extension

## GAS MANIFOLD · EQUIPMENT

IBEDA offers the whole range of components which are necessary for the IBEDA flame spraying products, e.g. cylinder and tapping point regulators, hoses and suitable safety devices. Additionally, we can supply gas manifold systems for oxygen and all technical gases as well as for **acetylene** (standard version and special version for **2,5 bar** outlet pressure) including the tapping points.



## POWDER

IBEDA can supply the material for thermal spraying which is suitable for the IBEDA flame spraying products, e.g. self-fluxing alloys, metal powder, plastic powder as well as ceramic powder. IBEDA offers a wide range of burners for subsequent melting of self-fluxing alloys. We will be pleased to send our catalogue for Autogenous Engineering upon request.



IBEDA FLAME SPRAYING ENGINEERING IN USE WORLDWIDE

**IBEDA Sicherheitsgeräte und Gastechnik GmbH & Co. KG**

Bahnhofstraße 27 · 53577 Neustadt/Wied

Tel. +49(0)2683.306-0 · Fax +49(0)2683.306-31

[www.ibeda.de](http://www.ibeda.de) · [info@ibeda.de](mailto:info@ibeda.de)

