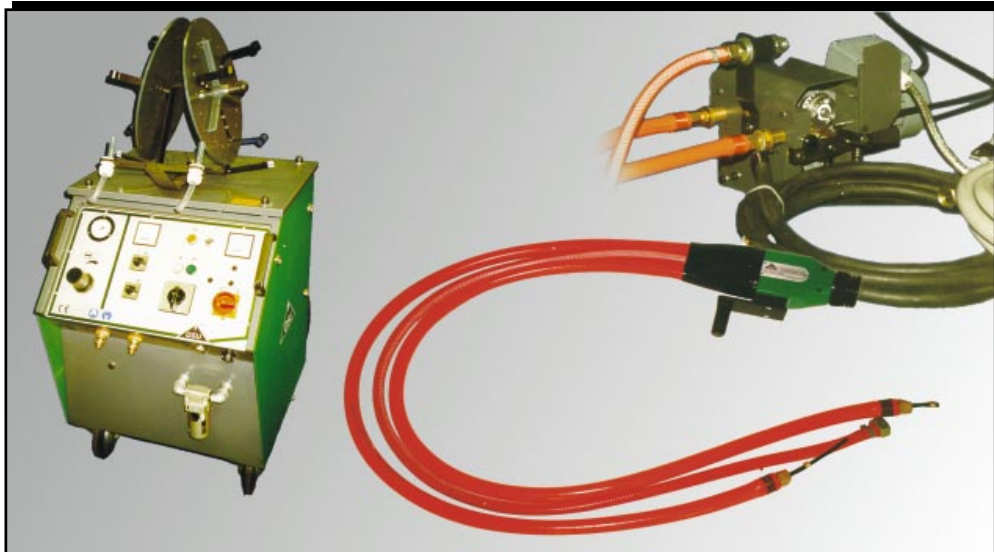


# OSU Capacitor Arc Spray System CAP 300



The complete and fully wired **OSU Capacitor Arc Spray System** type **CAP 300** is composed of the following 4 modules:

- **CAP 300** Power Supply
- **CAP 300** Energy Hose Package
- **CAP 300** Wire Push Unit
- **CAP 300** Spray Gun

This spray system is suitable for endspraying film capacitors with metal coatings of zinc, tin, aluminum, copper and their alloys. The system can utilize wire diameters of 1.6 mm and 2.5 mm, though other diameters can be accepted upon specific request.

## Spray Capacity OSU CAP 300 System

Article-No.	Material	Max. Melting capacity <sup>1)</sup>
OSU 001	Zn 99,99	30 kg/h
OSU 002	ZnAl 85 15	24 kg/h
OSU 004	Al 99,5	9 kg/h
OSU 110	Cu 99,9	21 kg/h
OSU 170	Sn 99,9	60 kg/h

<sup>1)</sup> at constant wire drive

The unique features of the **OSU CAP 300** system enable users to minimize the voltage for melting the wires, control a narrow spray beam and take advantage of a start/stop cycle of less than 2 seconds.

The reliability and suitability for the demanding capacitor applications has been proven at manufacturing plants around the world.

Simple and low cost operation, with infrequent consumption of spare parts and high reliability in continuous applications are the key design components of the **OSU CAP 300** series of Capacitor Arc Spray Systems.

## Applications

- ▶ Capacitors

## Coatings

- ▶ Fine zinc Zn 99,99
- ▶ Zinc-aluminium ZnAl 8515
- ▶ Aluminium Al 99,5
- ▶ Copper Cu 99,9
- ▶ Tin Sn 99,9

## Materials

- ▶ OSU 001 Zn 99,99
- ▶ OSU 002 ZnAl 8515
- ▶ OSU 004 Al 99,5
- ▶ OSU 110 Cu 99,9
- ▶ OSU 170 Sn 99,9

## Modules

- ▶ CAP 300 Power Supply
- ▶ CAP 300 Energy Hose Package
- ▶ CAP 300 Wire Push Unit
- ▶ CAP 300 Spray Gun



# CAP 300 Power Supply



CAP 300 Power Supply



Control panel

The **CAP- designated power supplies** are specifically designed for capacitor arc endspray applications.

The heart of the **CAP 300** power supply is a rigid transformer rectifier system that guarantees the system can run at 100% of the 300 amp rated duty cycle without any degradation of the power.

The **CAP 300** power supply unit is designed to have the start/stop cycles controlled by manual switches or by a signal from an external existing control system. Internally the start/stop cycles are automatically controlled. The start/stop cycles can be as short as 2 seconds with no detriment to the

system or clogging of the guns.

Regulation and control units on the front of the **CAP 300** power supply can adjust the spray capacity and atomizing air pressure. Supply connections for the energy and compressed air cables are on the back of the power supply unit.

The **CAP-** power supplies are cooled by convection. With no fan on the power supply we prevent the metal dust associated with the spray process from contaminating the power supply.

The power supply is protected against overloading, overheating and air pressure drops.

## Applications

- ▶ Capacitors

## Coatings

- ▶ Fine zinc Zn 99,99
- ▶ Zinc-aluminium ZnAl 8515
- ▶ Aluminium Al 99,5
- ▶ Copper Cu 99,9
- ▶ Tin Sn99,9

## Materials

- ▶ OSU 001 Zn 99,99
- ▶ OSU 002 ZnAl 8515
- ▶ OSU 004 Al 99,5
- ▶ OSU 110 Cu 99,9
- ▶ OSU 170 Sn 99,9

## Equipment Programme

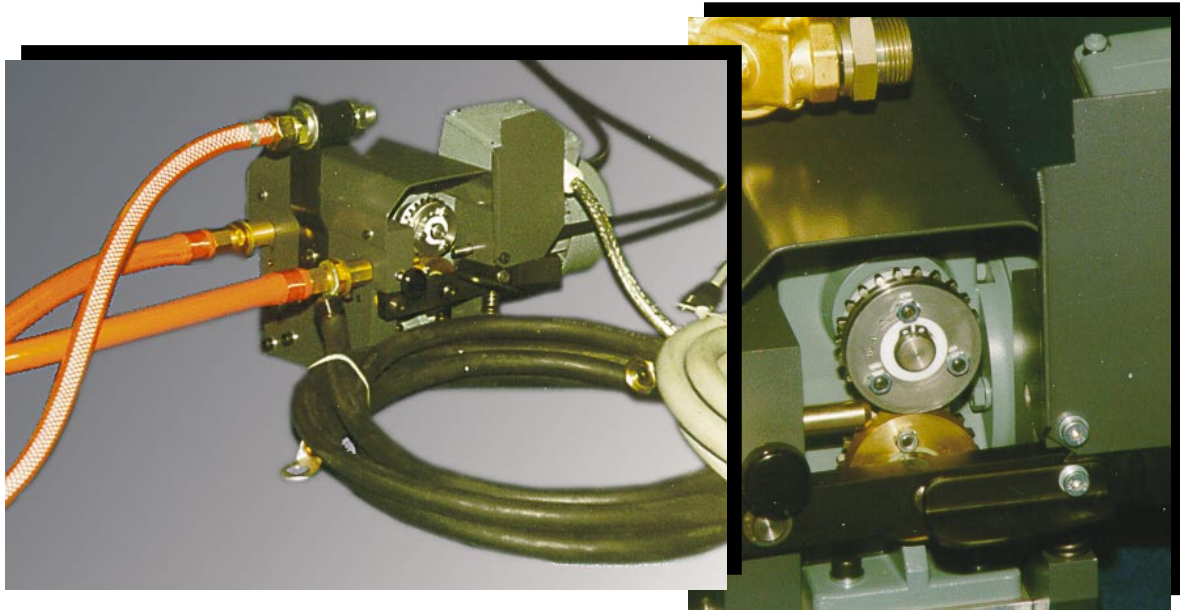
- ▶ OSU CAP 300 System

## Technical Data CAP 300 Power Supply

Primary nominal current at 400 V	A	16
Nominal rating	kW	9
Nominal direct tension	V	19 - 30 (12 steps)
Secondary nominal current 100% duty factor	A	300
Convection cooling		



# CAP 300 Wire Push Unit



MODULES

## CAP 300 Wire Push Unit for continuous wire drive

The **CAP 300 Wire Push Unit** pushes the wire to the spray device with a continuous variable speed.

The **CAP 300** wire push unit was carefully designed to be mounted outside of the hostile environment of the spray booth. This results in improved reliability and greatly reduced maintenance.

This unit utilizes an AC motor, which has a frequency controlled speed.

The brushless motor is designed to be maintenance free.

The small integrated worm gear box reduces the high motor speeds to the

desired speed for the application.

The wire feed rolls for the transport of the zinc (or other metals) are manufactured from special alloys.

These special alloys make it possible to feed the wire without damaging or contaminating the wire surface.

This system also prevents chips from forming on the wire surface.

The overall design of the **CAP 300** wire push unit results in less contamination of the spray system and in longer life for the contact tubes.

### ▲ Applications

- ▶ Capacitors

### ▲ Coatings

- ▶ Fine zinc Zn 99,99
- ▶ Zinc-aluminium ZnAl 8515
- ▶ Aluminium Al 99,5
- ▶ Copper Cu 99,9
- ▶ Tin Sn 99,9

### ▲ Materials

- ▶ OSU 001 Zn 99,99
- ▶ OSU 002 Zn Al 8515
- ▶ OSU 004 Al 99,5
- ▶ OSU 110 Cu 99,9
- ▶ OSU 170 Sn 99,9

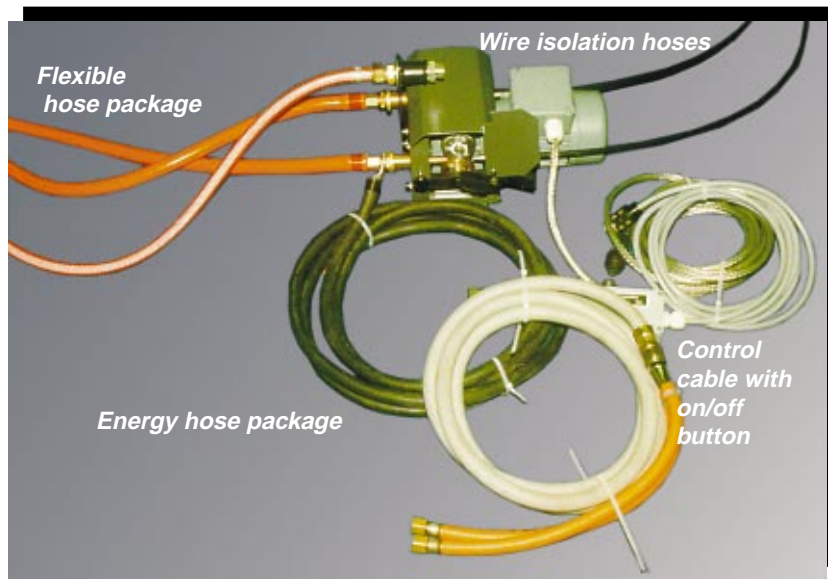
### ▲ Equipment Programme

- ▶ OSU CAP 300 System

## Characteristics CAP 300 Wire Push Unit

Weight	8,9 kg
Three-phase current - drive motor	230 V

# CAP 300 Energy Hose Package



## CAP 300 Energy-Hose-Package

The **CAP 300 Energy Hose Package** is composed of the following 3 components:

### ➤ CAP 300 Flexible Hose Package

The flexible hose package has a standard length of 1.5 meters (4.9 feet) though this length can be designed to meet your automation requirements.

The hose package consists of two current cables and an atomizing air hose. In the current cable, the wire is fed through a specially designed wire feed hose.

The hose is designed to be flexible to simplify the automation of the system.

### ➤ CAP 300 Wire Insulation Hoses

The wire insulation hoses have a standard length of 4 meters (13 feet) and are made from a special low resistance material.

The length can be shortened on site with a simple cutting tool. The wire insulation hoses connect the **CAP 300** wire push unit with the optional spool decoiling or drum despooling devices.

### ➤ CAP 300 Energy Cable Set

The energy cable set has a standard length of 4 meters (13 feet). The cable connects the **CAP 300** wire push unit with the **CAP 300** power supply.

It consists of two current cables with a ring connector on the power supply side and a ring connector on the push unit side and a compressed air hose for the atomizing air.

## ▲ Applications

- ▶ Capacitors

## ▲ Coatings

- ▶ Fine zinc Zn 99,99
- ▶ Zinc-aluminium ZnAl 8515
- ▶ Aluminium Al 99,5
- ▶ Copper Cu 99,9
- ▶ Tin Sn 99,9

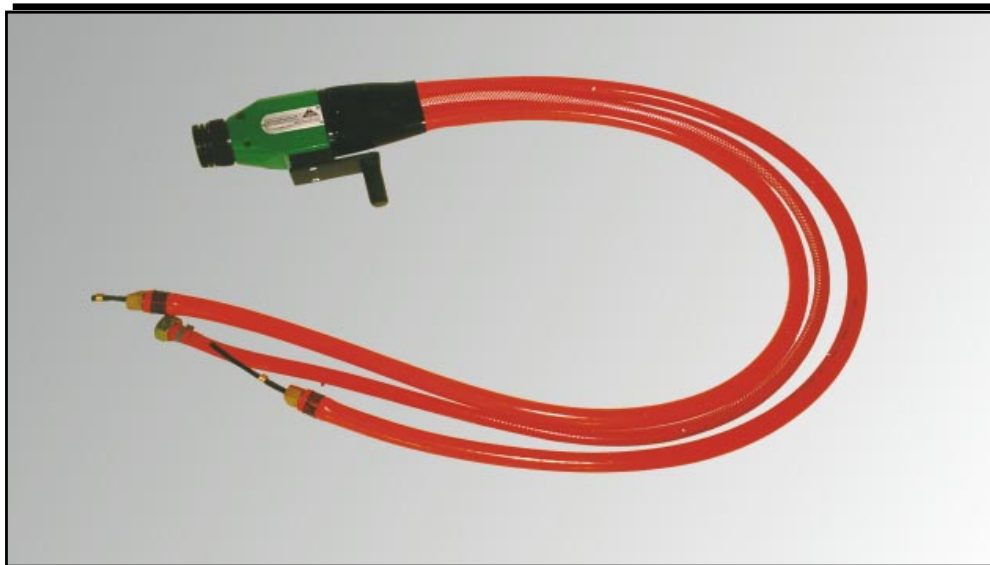
## ▲ Materials

- ▶ OSU 001 Zn 99,99
- ▶ OSU 002 ZnAl 8515
- ▶ OSU 004 Al 99,5
- ▶ OSU 110 Cu 99,9
- ▶ OSU 170 Sn 99,9

## ▲ Equipment Programme

- ▶ OSU CAP 300 System

# CAP 300 Spray Gun



CAP 300 Spray Gun

The **CAP 300 Spray Gun** is light and easy to use. It has simple adjustments and requires minimal maintenance.

Weighing only 1.2 kg or 2.6 lbs. the device can be installed in a wide variety of automated equipment.

The two 2.5 mm wires (other diameters can be optionally added) are passed through our special split **CAP 300** long life contact tubes and introduced into the arc.

After melting the wires with low voltage levels (approximately 18 volts for zinc), the molten metal is atomized into small particles by compressed air.

The low voltage is necessary to keep the temperature of the molten spray particles as low as possible. This is especially critical to avoid damaging

sensitive capacitor films. (For more information on this technology see our arc spray technology pages).

The compressed air is passing over a uniquely designed hard ceramic air cap. The compressed air volume is fully adjustable, as it is an important factor in controlling the particle size.

The compressed air atomizes the particles into a well defined range of particle sizes and a small diameter spray pattern.

The defined particle size and small spray diameter increase both the quality of the endspray and efficiency of the metal deposition.

## ▲ Applications

- ▶ *Capacitors*

## ▲ Coatings

- ▶ *Fine zinc* Zn 99,99
- ▶ *Zinc-aluminium* ZnAl 8515
- ▶ *Aluminium* Al 99,5
- ▶ *Copper* Cu 99,9
- ▶ *Tin* Sn 99,9

## ▲ Materials

- ▶ *OSU 001* Zn 99,99
- ▶ *OSU 002* ZnAl 8515
- ▶ *OSU 004* Al 99,5
- ▶ *OSU 110* Cu 99,9
- ▶ *OSU 170* Sn 99,9

## ▲ Equipment Programme

- ▶ *OSU CAP 300 System*

### CAP 300 Spray Gun with 1,5 mtr. hose package

Weight CAP 300 spray gun	1,2 kg
Weight compl. with hose package	4,6 kg
Compressed air supply:	75 Nm <sup>3</sup> /h
Atomizer air, closed nozzle system at 4 bar	

