

PTA200i PTA300i

WELDING MACHINES plasma transferred arc with powder



The welding machine employs the process Plasma Transferred Arc to make weldings and hardfacings with metallic super-alloys in powder.

The high temperature and the strong concentration of the plasma arc allow to **control the penetration** with the electronic regulation of the pilot gas, granting therefore a very good junction in welding processes and a **reduced dilution** in hardfacing.

Thanks to its high performances, the PTA technology developed by Commersald is since long ago used in hardfacing in different fields of application such as:

- glass moulds and accessories;
- ceramic dies;
- plasticizing screws;
- cochleas for multi purposes transports;
- blades and knives for wood, plastic, paper and metal cutting;
- valves, rings and accessories for the chemical and petro-chemical industry;
- engine valves;
- internal hardfacing of pipes (minimum diameter 50 mm).

A compact cabinet contains all the components: electric, electronic, pneumatic and the cooler as well.

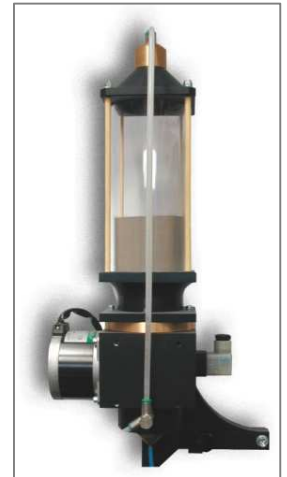
The **power generator**, with Inverter technology, is able to give 200A continuously on the transferred arc. In addition the current is smooth, to maintain the **electrode intact for 8 hours** of continuous work (average working current 130A). The **cooler**, properly dimensioned, is integrated into the machine and it is used to cool both the power section and the welding torch.



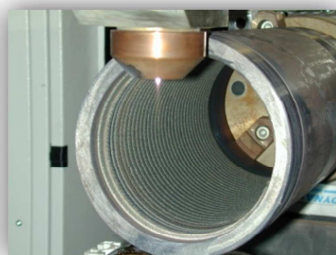
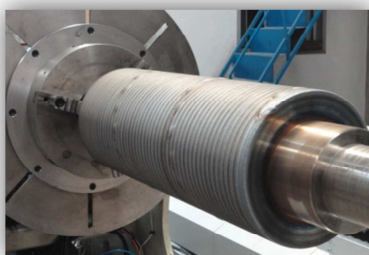
The **control panel** is in a graphic PLC with tactile screen, with functions of **programming and control of the welding parameters**.

The machine is supplied complete of **welding torch**, produced by Commersald, developed to grant the maximum constant efficiency. Many torches are available: 125A, 250A, 500A both for internal and external welding.

The **powder feeder**, produced by Commersald as well, has an adjustable delivery from 0,5 to 5 kg/h and a capacity of 5-7 kg. An improved version, with capacity of 15-20 kg is available on demand.



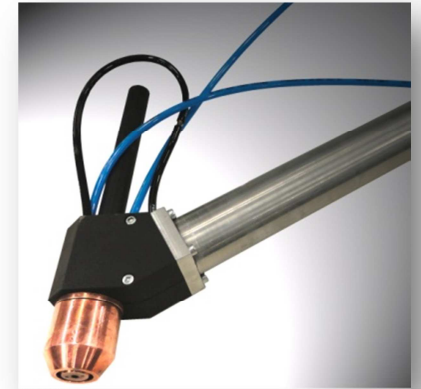
The **standard equipment (powder feeder type AP standard and torch type YZR250)** grants single pass welding with thickness from 1 to 3,5 mm, width till 30 mm and deposition rate till 2 kg/h.





The machine is really **versatile**, as you can choose three different working ways:

- **manual**: with a pedal to adjust the working current and/or a remote control.
- **semi-automatic**: with the setup of internal programs and the use of a remote control, with or without the interface with an external motion. In case Commersald **oscillator** is employed, the PLC is able to manage also the oscillation parameters.
- **automatic**: interfaced with an external NC machine or robot, able to manage the working parameters, too.



We also offer a "**double torch**" version, to use the welding machine with the manual torch or with the automatic torch. In this configuration, the electric panel is implemented with a section to choose the manual/automatic use by means of the PLC and it is integrated with a pedal for the adjustment of the current in manual mode. In addition, there is the possibility to add a second powder feeder.

Obtaining high quality standard also depends on the proper choice of the motion and control systems, that Commersald is available to plan and produce, customized for your application.

TECHNICAL FEATURES			PTA 200 i	PTA 300 i
PILOT ARC GENERATOR	Output current	A	70 at 100%	
TRANSFERRED ARC GEN.	Output current	A	200 at 100%	300 at 100%
POWDER FEEDER	Delivery	Kg/h	0,5 - 5,0	
	Capacity	Kg	5 - 7	
WELDING TORCH	Standard type	p/n	YZR 250	
	Tungsten electrode Ø	mm	4	
COOLER	Given power (water at 20°C)	W	8700	
OVERALL SIZE	Standard version lxdxh	mm	850x850x1500	
	Double torch version lxdxh	mm	850x850x1800	
	Weight	Kg	350	360
GAS	Plasma (Pure Argon)	bar	6	
	Powder/shielding	bar	6	
INSTALLED POWER	Total	KVA	16,7	21,0
TENSIONE			400V 50/60 Hz (3F+N+T)	
OSCILLATOR (optional)	Useful stroke	mm	150	
	Max oscillation speed	mm/sec	30	
	Max oscillation amplitude	mm	30	