MAUS ITALIA

CERTIFICAZIONE DI SISTEMA DI GESTIONE
DNV·GL
ISO 9001 = OHSAS 18001

Tube to tube-sheet Tig orbital welding equipment

PPS-200

Giotto – 250 Tube to tube-sheet orbital welding head

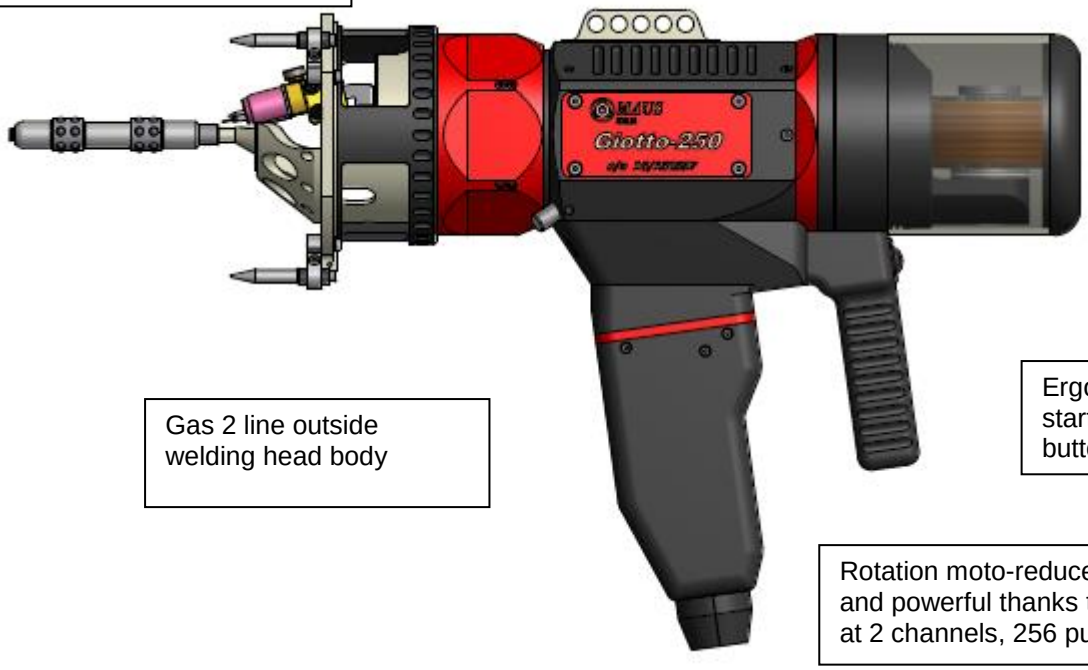
Main features :

Welding procedure:	Tig / Tig + filler wire
Welding position:	Horizontal, vertical
Welding geometry:	Protruding, flush or recessed
Head motors:	24V DC motor + encoder
Tube diameters	from 12 to 50 mm standard version
Electrode:	Adjustable on three axes according to Welding geometry
Axial regulation of the electrode:	manual micrometer
Electrode diameter:	1.6 – 2.4 - 3.2 mm (standard 2.4 mm)
Head dimensions:	140 mm
Weight :	9 Kg
Welding wire.	0.8 / 1 mm (spool Ø100 mm , 1Kg)
Connection cable:	6mt

GIOTTO-250 Main features

Complete range of spindle and cartridges for each tube diameter and thickness

Filler wire driving system in rotation with the electrode axis



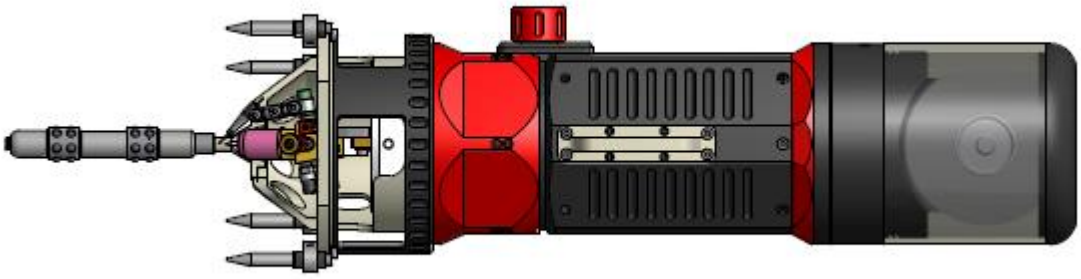
Gas 2 line outside welding head body

Ergonomic handle with start and stop cycle buttons

Rotation moto-reducer, extremely precise and powerful thanks to the digital encoder at 2 channels, 256 pulses

Universal wrench for the regulation of the wire exit geometry

Handle for the micometric regulation of the distance tube-sheet - electrode.



Liquid internal welding head cooling system

Liquid cooling of the external body

MW280-F MAUS **PROGRAMMER GENERATOR** .

Welding programmer – generator customized for MAUS ITALIA welding heads GIOTTO. Due to its light and compact design, it is ideal for all type of applications The integrated programmer control both current generator and welding head. This allow a repeatability at .100%

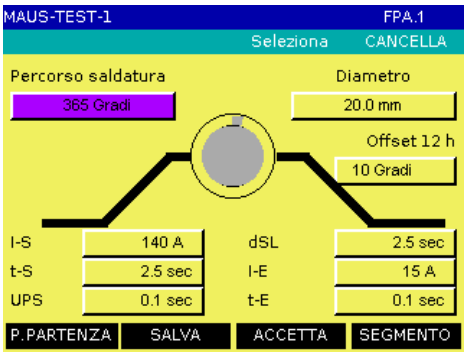
- Control of the current by inverter
- Digital programmer (up to 200 programs storable in files)
- Integrated water cooling system with control of the flow.
- Controller with integrated micro-processor
- Touch-screen operating panel (customizable colors)
- Languages selection
- Remote control with 10mt wire
  - Start cycle
  - Stop cycle
  - Emergency stop
  - Manual commands
- Continuous registration of HEAT INPUT applied energy expressed in KJ
- USB connection for data transfer and storage.
- Integrated printer for welding data

Technical features

Welding procedures:	TIG / TIG + filler wire
Feeding	2 phases x 230 V – 50/ 60 Hz (13.2 Amp) / (-10% +15%)
Open circuit voltage:	44 V
Pick voltage:	9,5 KV
Welding current:	5- 200 A
Working cycle:	200 A (10 min/40°C) 35% d.c. 145 A (10 min/40°C) 60% d.c 110 A (10 min/40°C) 100% d.c
Cooling delivery	3,0 lt/min (0,79 US gal/min)
Tank capacity:	1,8 Lt (0.47 US gal)
Cooling system power:	500 Watt (40°C / 104°F 1lt/min)
Net weight:	38 kgs without trolley
Protection degrees:	IP 23

Dimensions without trolley L/p/h: 650x 290x 480 mm (25.6x 11.4x 18.9 in)

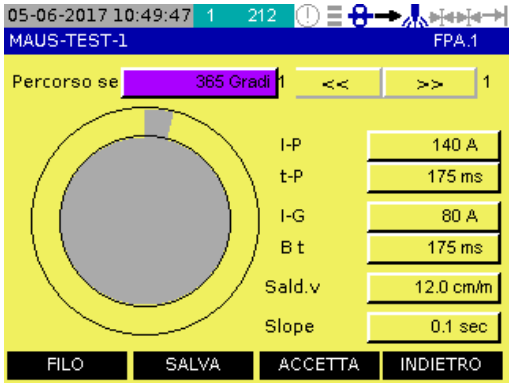
Dimensions with trolley: 1036x 685x 1058 mm (41x 27x 41.65 in)



Parameters setting

Pre-gas1/ Pre gas 2:
Start current:
Upslope time :
Puddle formation time:
Welding current:

Base current:
Pulse time:
Downslope time:
Final current:
Post gas time:
Rotation speed (analogical)
Welding speed (analogical)



Programmable sectors from 1 to 10
Programmable slopes up and down
Simulation cycle for diagnostic of the set program
Memory: 200 programs and modification function
Complete diagnostic for malfunctions

- **Parameters visualization** with general welding parameters which allow to the operator to have an immediate feedback on the actual setting of all values
- **Start**: the operator can set the parameter upslope starting from pre-gas to electric arc and the information about welding puddle
- **Welding:** all welding parameters (such as number of sectors, current, pulse rotation speed and quantity of filler material) can be set
- **Evanescence:** arc control during the switching off with the protection of the gas

Remote command with display, simple and intuitive interface for the control of all welding parameters. Complete with all manual commands of the welding head, besides: start, stop, gas test, selector on/off, wire.
Supplied with hooking system and magnetic base for easy and fast positioning in the working place.

Memory printer and report :

Integrated thermal Printer 58mm paper for immediate printing:

- Welding parameter program in use
- Welding report of the used actual values: date, time, operator
- Applied energy to the welding
- Malfunctioning alarms

Integrated USB exit for: :

- Storage and movement of welding programs
- Storage of welding parameters program in use
- Storage of welding report of the actual used values (date, time, operator).
- Storage of the actual energy value applied to the welding.
- Storage of functioning alarms.

OPTIONAL

1. **Feeding group of the integrated wire IWFG GIOTTO,** assembled on the back part of the welding head, designed for welding spool of 1 kg weight and diameter from 0,8 up to 1 mm

2. **Four point support thrust collar for welding protruding tubes** for the welding of protruding tubes, complete with block-out protective screen.

3. **Thrust collar for welding flush tubes or recessed,** complete with block out protective screen.

4. **Thrust collar Gas2** for the welding of tubes in protected atmosphere, complete with block-out protective screen.

5. **Spring balancer** TPB/3/A range from 10 to 14 kg

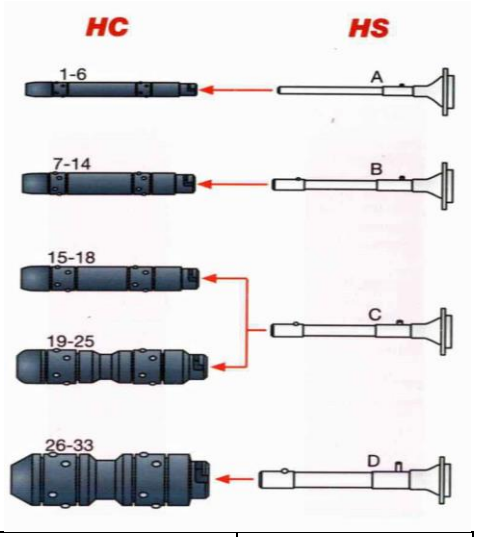
6. **4 wheels trolley with voltage feeding** complete with cabinet for tools and gas tank holder, supplied with 3phase transformer and connection point for the generator:

Voltage available:

- [x] 400 Volt 50/60 Hz
- [ ] 440 Volt 3ph 50/60 Hz
- [ ] 480 volt 3Ph 50/60 Hz
- [ ] -------- 3Ph 50/60Hz (Customized)

7. **Extended component for the electrode clamping support**, with 25 mm extension and fixed angle (0°, 15° or 20°, to be decided by customer on the base of job configuration) to increase the Tube OD range

ACCESSORIES



CARTRIDGE HC GR.	TUBE I.D. mm	TUBE I.D. IN INCHES	SPINDLE HS
1	10,0 ÷ 10,5	0.394 ÷ 0.413	A
2	10,5 ÷ 11,0	0.413 ÷ 0.433	A
3	11,0 ÷ 11,5	0.433 ÷ 0.453	A
4	11,5÷ 12,0	0.453 ÷ 0.472	A
5	12,0 ÷ 12,5	0.472 ÷ 0.492	A
6	12,5 ÷ 13,0	0.492 ÷ 0.512	A
7	12,8 ÷ 14,0	0.504 ÷ 0.551	A
8	13,8 ÷ 15,0	0.543 ÷ 0.590	B
9	14,8 ÷ 16,0	0.583 ÷ 0.630	B
10	15,8 ÷ 17,0	0.622 ÷ 0.669	B
11	16,8 ÷ 18,0	0.661 ÷ 0.709	B
12	17,8 ÷ 19,0	0.701 ÷ 0.748	B
13	18,8 ÷ 20,5	0.740 ÷ 0.807	B
14	19,8 ÷ 22,5	0.779 ÷ 0.886	B
15	22,3 ÷ 25,0	0.878 ÷ 0.984	C
16	24,5 ÷ 27,0	0.965 ÷ 1.160	C
17	26,5 ÷ 29,0	1.043 ÷ 1.141	C
18	28,5 ÷ 31,0	1.122 ÷ 1.220	C
19	30,5 ÷ 33,0	1.201 ÷ 1.299	C
20	32,5 ÷ 36,0	1.279 ÷ 1.417	C
21	35,5 ÷ 39,0	1.398 ÷ 1.535	C
22	38,5 ÷ 42,0	1.516 ÷ 1.653	C
23	41,5 ÷ 45,0	1.634 ÷ 1.772	C
24	44,5 ÷ 48,0	1.752 ÷ 1.890	C
25	47,5 ÷ 51,0	1.870 ÷ 2.008	C
26	50,5 ÷ 54,0	1.988 ÷ 2.126	D
27	53,5 ÷ 58,0	2.106 ÷ 2.283	D
28	57,5 ÷ 62,0	2.264 ÷ 2.441	D
29	61,5 ÷ 68,0	2.421 ÷ 2.677	D
30	65,5 ÷ 70,0	2.579 ÷ 2.756	D
31	69,5 ÷ 74,0	2.736 ÷ 2.913	D
32	73,5 ÷ 78,0	2.894 ÷ 3.071	D