

# TVO

Turn and tilt table positioner max weight capacity 200 kg

carpano.it



Turn and tilt table positioner max weight capacity 200 kg, available with different control systems and several accessories; it can work in semi-automatic or automatic mode.

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- The updated version is the one in our web site



TWO PLC with SLIDING ARM PNEUMO, tailstock and GRIP200 chuck.



TWO BASE Including Rollo1-CD foot-switch

#### Two control systems and two different motorizations



#### TWO BASE

- Servo-ventilated AC motor driven by inverter, variable rotation speed ranging from 0.4 to 4 rpm.
  - digital tachometer in rpm.
- Rollo1-CD foot-switch with 5m cable and:
  - Start and Stop pedal
  - Emergency button
  - 10 turn potentiometer
  - Weld ON/OFF switch
  - CW/CCW rotation switch
  - Adjustable/Max speed switch

#### TWO BASE DC

- DC motor with tacho generator driven by closed loop drive, variable rotation speed ranging from 0.1 to 4 rpm
- Other features as TWO BASE



#### TWO PLC

- Servo-ventilated AC motor driven by inverter, variable rotation speed ranging from 0.4 to 4 rpm
- Electric cabinet on adjustable support including:
  - Start and Stop lighted buttons
  - Emergency button
  - Worm knob to adjust the speed or other touch-screen parameters
  - 4" touch-screen to set up:
    - . Workpiece diameter
    - . Welding speed in mm/min
    - . Rotation delay in sec.
    - . Overlapping in sec.
    - . Welding ON/OFF
    - . Enabling or disabling tailstock and pneumatic arm controls during automatic cycle
    - . Enabling or disabling welding machine or cold wire feeder
    - . TIG / MIG cycle, to have a different arc extinguishing sequence

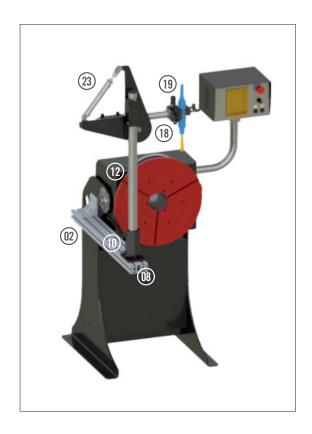
#### TWO PLC work cycle

- Tailstock FW [\*]
- Start cycle (on request: tailstock FW after cycle starting) [\*]
- Torch down [\*]
- Arc ignition and rotation start delay
- 360° rotation + X° overlapping
- Arc extinction
- Torch up [\*]
- X° return to start position
- Tailstock BCKW [\*]

#### TWO PLC DC

- DC motor with tacho generator driven by closed loop drive, variable rotation speed ranging from 0.1 to 4 rpm
- Other features as TWO PLC

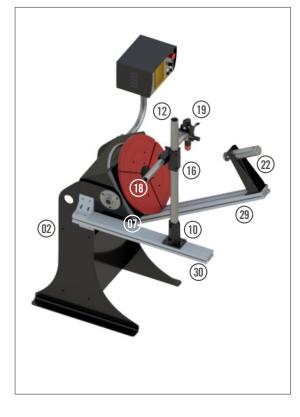
#### Configurations samples



#### TWO PLC with TWO ARM PNEUMO

#### The configuration in the picture here beside includes:

- 02 TWO PLC / turn and tilt table positioner 200Kg capacity
- 08 ONE-2050 / 500mm (40x80x500 mm) Aluminum joist with brackets for fixing
- 10 ONE-2110 / Vertical column basis
- 12 ONE-3075 / 750 mm vertical column
- 18 ONE-3040 / 400 mm horizontal pipe
- 19 SM50/2 + PT / Torch holder with 50x50 mm micrometric slides
- 23 ONE-TL-100 / 30° tilting ARM PNEUMO



# TWO PLC with TWO SWAN and TWO ARM MAN

#### The configuration in the picture here beside includes:

- TWO PLC
- TWO ARM MAN torch holder arm without pneumatic torch release
- TWO SAWAN pneumatic tailstock assembly
- 02 TWO PLC / turn and tilt table positioner 200Kg capacity
- 07 ONE-033 / Junction for rail pos. 29
- 10 ONE-2110 / Vertical column basis
- 12 ONE-3075 / 750 mm vertical column
- 16 ONE-2054 / cross junction for pipes Ø 40/35 mm with lockings
- 18 ONE-3040 / 400 mm horizontal pipe
- 19 SM50/2 + PT / Torch holder with 50x50 mm micrometric slides
- 22 TWO-TS-075S / Pneumatic tailstock 75 mm stroke
- 29 TWO-2085 / 850mm (40x80x850 mm) Aluminum rail
- 30 TWO-2075 / 750mm (40x80x750 mm) Aluminum rail

#### Configurations samples



#### TWO PLC with:

- SLD-PNEUMO pneumatic arm
- SM MIDI 80/2 manual cross slides
- TWIN torch holder

SLD arm allows the adjustment of vertical and horizontal axes by means of hand-wheels.

It is available in two configurations:

SLD-PNEUMO, with pneumatic release of the torch, and SLD-MAN, without pneumatic release of the torch.

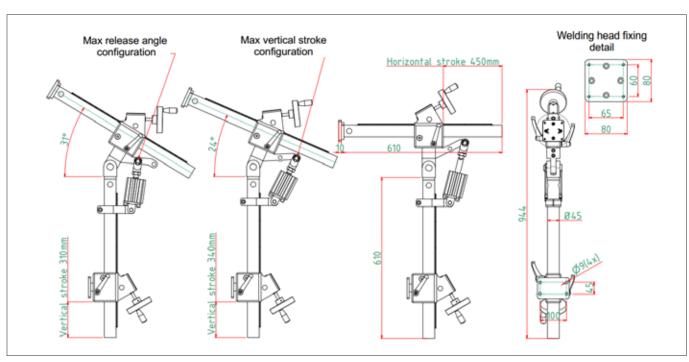




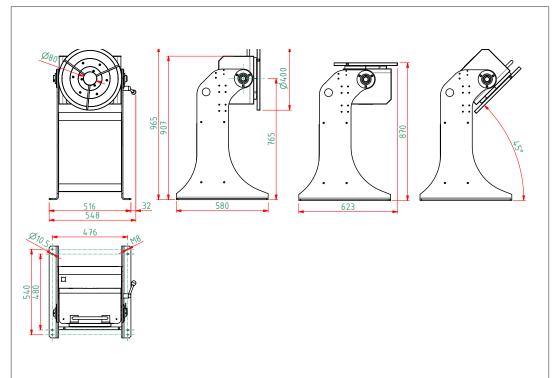
#### A. SLD-Pneumo

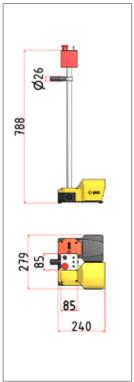
version with pneumatic torch release

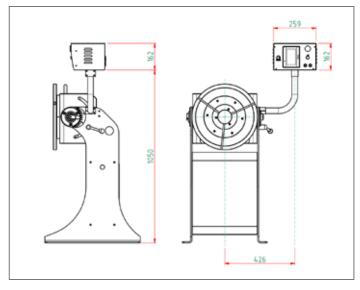
B. SLD-MAN version without pneumatic torch release



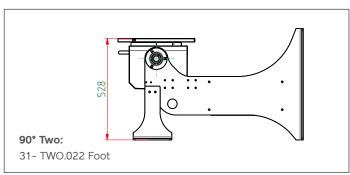
#### Dimensions

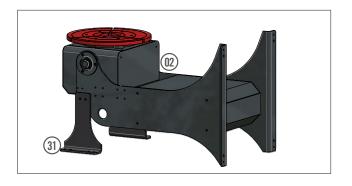






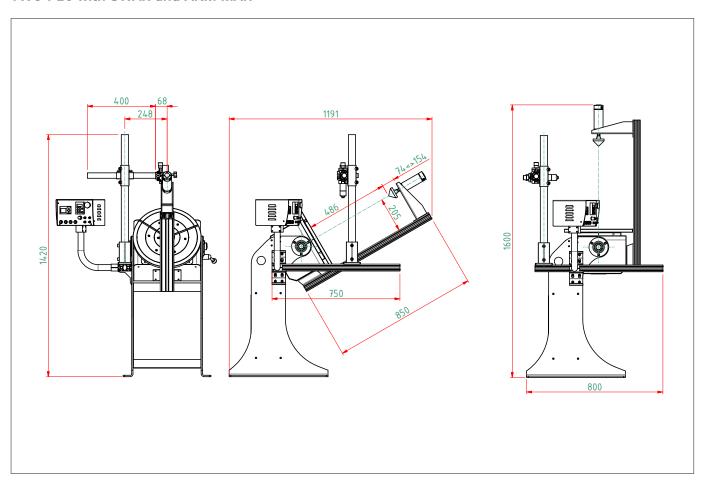
CONTROL	TWO BASE	TWO PLC
Feeding	230V 50Hz	230V 50Hz
Power installed	90 W	90W
Speed display	YES	YES
EMG with reset	YES	YES
Weld ON/OFF function	YES	YES
Adjustable/Max speed function	YES	YES
FW/BCKW function	YES	-
FW/BCKW buttons	-	YES
Start/Stop pedals	YES	-
Start/Stop buttons	-	YES
Tailstock ON/OFF switch	-	YES
Torch UP/DOWN switch	-	YES
10 turn potentiometer	YES	YES
Overlapping	-	YES
Start delay // post gas	-	YES
Automatic cycle	-	YES
HF shielding	YES	YES





MODEL	TWO BASE/PLC AC	TWO BASE/PLC DC
Capacity	200 kg	200 kg
Tilt torque	30 kgm	30 kgm
Rotation torque	7 kgm	7 kgm
Tilting	0-135° manual tilting with release lever	0-135° manual tilting with release lever
Motor	90W 4P AC servo-ventilated	DC with tacho generator
Transmission	Worm gear with pinion and slewing-ring	Worm gear with pinion and slewing-ring
Rotation speed	0.4<>4 rpm, other on request	0.1<>4 rpm, other on request
Table	Ø 400 mm with Ø 80 mm	Ø 400 mm with Ø8 0 mm
Ground bearing	400 Amp @ 60% - 300 Amp @ 100%	400 Amp @ 60% - 300 Amp @ 100%
Weight	100 kg + 5 kg Rollo1-CD	105 Kg

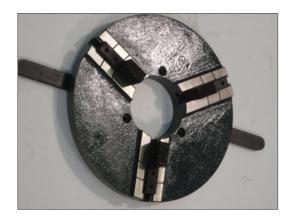
#### TWO PLC with SWAN and ARM MAN



#### Chucks

On TWO we can install either GRIP quick-release chucks or CHK-ST conventional chucks.

- CHK-ST chucks need a flange for fixing and centering, GRIP ones not.



#### Quick-release chucks:

- GRIP 200
- GRIP 300
- GRIP 400, with restrictions on tilting and in use of arm support and of tailstock

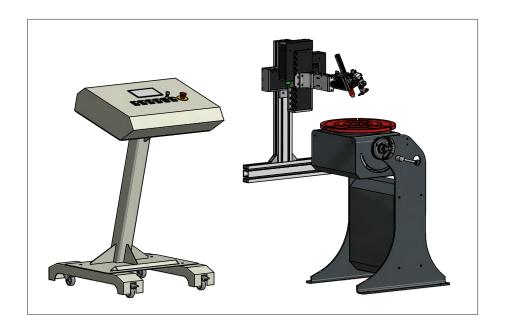




#### **Conventional chucks:**

- CHK-ST 200 + JDF.TWO-200 flange
- CHK-ST 250 + JDF.TWO-250 flange
- CHK-ST 315 + JDF.TWO-315 flange



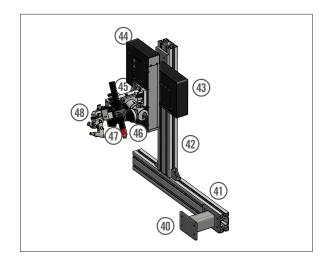


#### TWO with complete automation for TIG cold wire multi-pass circular welding:

- PLC with 7" touch-screen panel
- Vertical slide with AVC function
- Horizontal slide with oscillation function
- Cold wire managed by PLC
- Welding machine JOB recalled by PLC
- Possibility to create up to 200 work programs, for any program you can set pass number and for any pass you can set:
  - Workpiece diameter in mm
  - Rotation delay
  - Overlapping in mm
  - Voltage
  - Oscillation parameters: amplitude, speed, center, left-center-right pause
  - Welding job, with bus connection

#### **Optionals:**

- connection by modem, for remote assistance or program updating
- Industria 4.0 pack: monitoring of work parameters, off-line programming, OPC UA server for communicating with production management system.



#### The configuration in the picture here beside includes:

40 TWO-4040 / Support

41 TWO-4065 / 650 mm (45x90x650) Aluminum joist

42 TWO-4070 / 700 mm (45x90x700) Aluminum joist

43 MM MINI 180 Motorized slide with oscillation function

44 MM MINI 180 Motorized slide with AVC function

45 SM MIDI 160 Manual slide

46 TWIN 2 rotating axes torch holder

47 TWO-4041 Flange

48 CEFF 4-axes wire guide

#### Configurations samples



# TWO for welding of closing caps to pipes

- TIG process, melting only
- · Loading of the workpiece through the through hole
- Pneumatic stop to lock the pipe in work position
- Pneumatic saddle to center the cap to the pipe
- Tailstock to push the cap



#### TWO PLC with bench for special tailstock

- Aluminum bench with ball guides
- Sliding of a height-adjustable dolly
- · Special tailstock with hinges for its displacement out off rotation axis



### Photo gallery

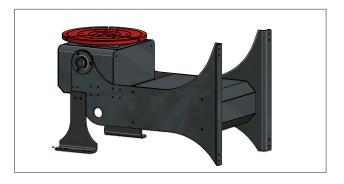






**Special version,** with table 650 mm diameter and feet to put table face at a low height from ground.







**NOTE** 





# GENERAL SUPPLY CONDITIONS

#### 1. SUPPLY OBLIGATION ARRANGEMENT

The following general terms of business are always to be considered applicable to every order made by the buyer. Therefore, any supply clause written by the buyer on his orders or any other document given to the seller, which may result to be conflicting with the present general conditions, will be considered not written. The buyer has to forward the orders to the seller in writing. The seller reserves the authority to accept telephone and verbal orders. The order is to be considered executed when the buyer receives the written acceptance of the same (order confirmation) by the vendor or, in the absence thereof, automatically 15 days afterthe order receipt by the seller. All offers and prices are just an indication and are not binding. Therefore the seller considers himself to be bound only to what is declared in his order confirmations.

#### 2. TERMS FOR DELIVERY

The delivery dates indicated by the seller as well as the ones written on the buyers' orders have to be considered just as an indication and are not binding and are subject to the punctual supply by the buyer of all the specifics, to the variations due to the availability of the goods with the suppliers or to reasons of force majeure: delays in the delivery due to said availability variations are not attributable to theseller, who is not in duty bound to the compensation for damages suffered by the buyer. Reasons of force majeure have also to be considered the accidents (industrial injury, disease, etc) and any other circumstances which may cause a totalor partial job reduction, as well as the lack of raw materials, troubles with transportation, etc. The seller reserves the authority to suspend the delivery of the goods if the buyer has not seen to the payment of the invoices relative toother supplies whose terms of payment are overdue. The goods are understood as being delivered for allintents and purposes to the buyer from the time they were picked up by the carrier or the buyer himself at the seller'swarehouse.

#### 3. PAYMENT AND TERMS OF PAYMENT

The payments have to be made to the seller's domicile and in accordance with the established conditions. In the event of a delay, the due amounts of money will automatically imply the charge of interests based on the official discount rate plus 5 points. In the event of a non-payment, the buyer is to be considered in default without the necessity of any formal notice by the seller. The presence of possible faults and/or defects in the products does not excuse the buyer for suspending the payment of the invoices. Should the client suspend and/or delaythe payments, the seller may suspend the supplies, with the authority to consider the contract automatically terminated by rights and to demand for damages.

#### 4. WARRANTY

CARPANO EQUIPMENT guarantees the products for a period of 24 months starting from the delivery date, for a daily work cycle of 8 hours. The warranty is intended ex works CARPANO EQUIPMENT. CARPANO EQUIPMENT guarantees the performance of its products in accordance with the instructions written in the relative manuals. For the products based on job orders, the warranty is pertaining to the specifics agreed with the client.

#### **5. VOID WARRANTY**

In case of any tampering or unauthorized intervention the warranty shall be deemed void.

#### 6. LIABILITY FOR DAMAGE

The seller's liability is limited only to the obligations above and it's expressly agreed that the seller does not accept any liability for damages resulting from any cause connected with the use and utilization of the sold products.

CARPANO EQUIPMENT is not responsible and for no reason whatsoever may the expenses be charged for:

- Machine downtime.
- Direct or in direct damage due to the non-operation of the equipment.
- Working hours spent to solve possible problems on the equipment.

#### 7. RESERVATION OF OWNERSHIP

Until the payment in full of any credit resulting from business relations has taken place, included any additional credit and until the payment of bills and cheques has been made, the property in the goods remains in the seller.

#### 8. COMPETENT COURT

It's established that the court of Bologna will be the sole competent court for every dispute relative to this contract.

#### 9. APPLICABLE LAWS

The applicable law is the Italian law.

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