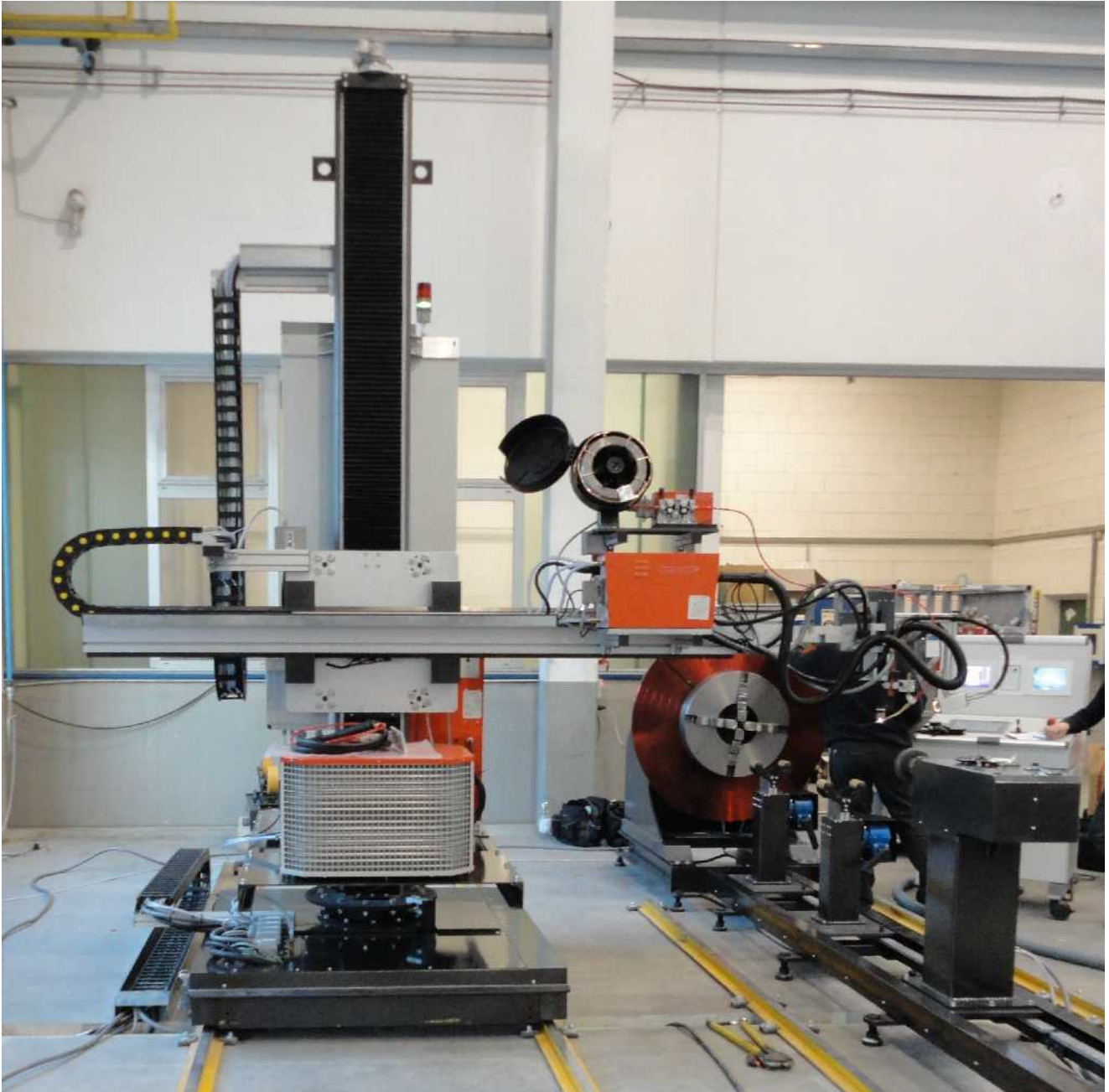




# EQUIPMENT

## *WELDING AUTOMATION*





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Since 1992, EQUIPMENT manufactures servomechanisms, fittings, control systems and complete facilities for welding and cutting process automation. As you will see in this general catalogue, our production is divided into some macro-categories:

- portable automation an interesting range of motorised carriages, with or without track, to easily weld directly on the piece, in the workshop or on-site
- servomechanisms and fittings to complete an already existing facility, such as: seam trackers, AVC, cold wire feeders, oscillators, cameras, manual or motorised slides
- Cartesian axes as manipulators, beams or portals of our AI Power or I Power series
- Joda rotating tables, more and more capacious and complete
- The new OBY roller positioners
- The complete facilities, which are very often the sum of the various products, but are more and more often integrated by numeric control panels or industrial PCs.

With this new publication we hope to give you a general picture of our production, while we invite you to visit our website and the catalogues issued there to have more technical information.

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WELDING AUTOMATION

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# MOTORIZED CARRIAGES

In this section We will show you the motorized carriages.  
They are simple and portable machines for external or internal utilization.  
We divided them in 2 categories: with or without track

With track:

Squirrel on track with rack, in 3 models:

- **Squirrel 2** easy and cheap
- **Squirrel 1** with automatic welding cycle and stitch welding
- **S80** with integrated oscillator

Without track:

**W-track** with 4 wheels and magnetic attraction

**Tortuga** sliding on stiffeners



Squirrel with oscillator  
for vertical welding



Tortuga during the  
welding of a bridge



special W-track for  
pipe welding



### Squirrel series includes several carriages motorized on semirigid rails.

The use of the rail allows to employ the carriage in each position: horizontal, flat, vertical and overhead. The semirigid rails can be used in rectilinear way or in circular with diameter min 6 mt. Then they can be fixed directly on the workpiece or on external structures, thanks to different equipments like magnets or omega supports. There are 3 different versions available. Under here it's possible to examine the several features. Each carriage is customizable with a wide range of accessories, to be more adaptable to different uses.

### The 3 different versions have the same mechanical features:

- structure in aluminum cast;
- gearmotor and trasmission with rack and pinion;
- camlever to release the pinion and to allow the right positioning
- powerline 230V monophas, 42/48V on request



#### **CESM2 - motorized carriage SUIRREL 2**

It is the easiest and cheaper model, the cariage has this functions:

- Potentiometer to adjust the speed from 5 to 130 cm/min, other on demand
- switch forward-reverse and switch start-stop

#### **CESM - motorized carriage SUIRREL 1**

the features of this carriage:

- selection of stitch or continous welding
- speed setting from 5 to 130 cm/min
- welding lenght setting from 0 to 99,9 cm
- no welding lenght setting from 0 to 99,9 cm, during this space the speed goes at max level 130 cm/min.
- display showing speed, welding lenght and no welding lenght
- switch to select a fast return to zero or not
- torch switch for 2 torches
- carriage start delay after arc ignition



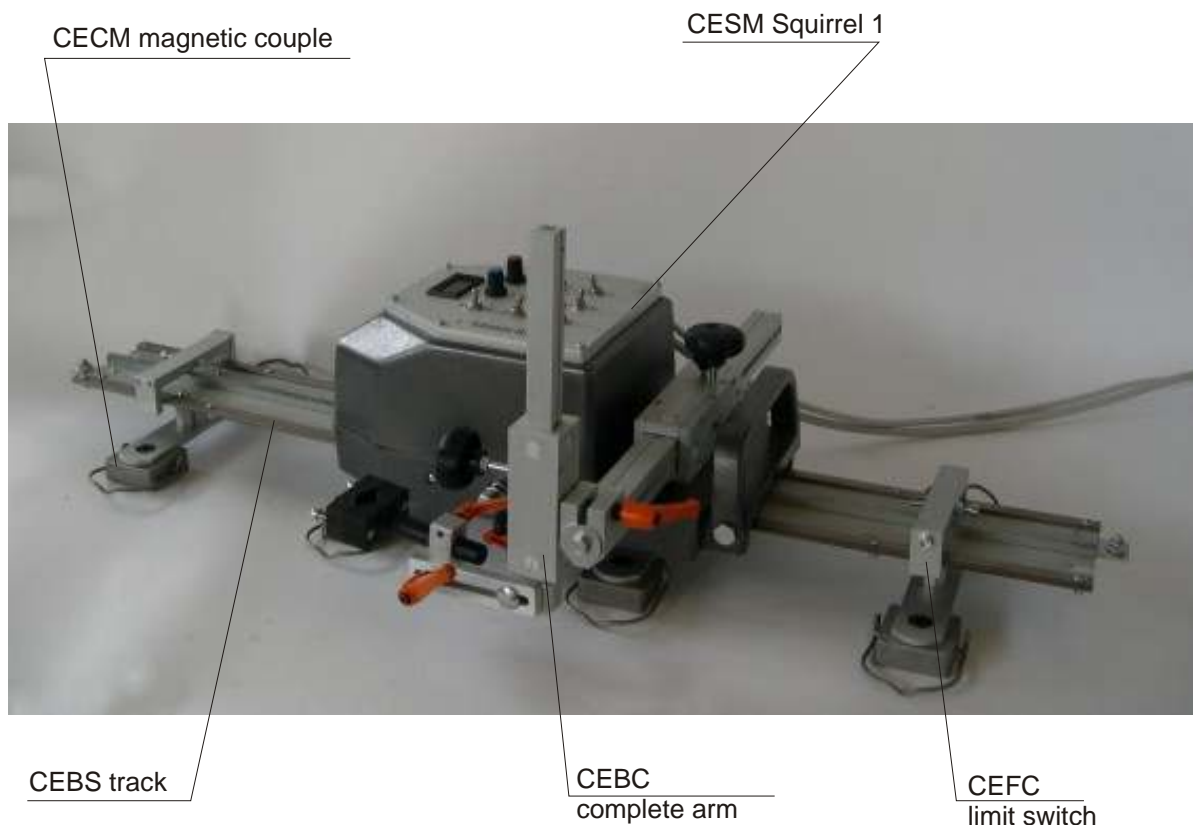
#### **S80 - Squirrel with electronic oscillator DTE80 integrated**

This version combines the carriage functions with those of the electrical oscillator to weld swung cords on joint with big thickness bevel or hard facing.

Then the carriage, in addition to the advance management, allows to control the torch movement:

- speed regulation from 5 to 130 cm/min
- switch forward/reverse and switch start/stop
- Oscillator functions regulator: width - frequency - center - pause

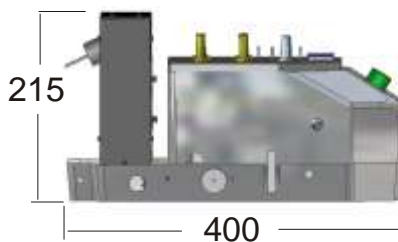
# SQUIRREL: accessories



**CENMS Idle carriage sliding on semi rigid rails.**  
 Suitable to transport equipment trailers like wire feeder, fume extractor or anything else.  
 Complete with fittings for attaching Squirrel.



**CEFC - Pair of limit micro switch.** Complete set of signals to be fixed on the rails at the desired stop points.



## CEBS Semirigid rails.

With high precision steel guides, bandable to a diameter of 6 mt, complete with rack mounting holes and connectors for connecting other pieces.

- CEBS1 track 1 mt
- CEBS2 track 2 mt
- CEBS3 track 3 mt

# SQUIRREL: accessories



**CECM magnet couple** complete with connectors and release levers.



**CECS Support bracket** complete with connections to the rail. An alternative to fixing with magnet to avoid any bending of the track.



**CECV Pair of suckers** to use on nonmagnetic materials, complete with pneumatic and mechanical connectors to compose easily the plant.



**CEPO Omega aluminum profile** to fix permanently the rail. Complete with appropriate holes and bolts.

**CEPO1 mt 1**  
**CEPO2 mt 2**  
**CEPO3 mt 3**



**CEPV High capacity vacuum pump**, complete with air filter and pneumatic connectors.



**CEB20M Axis scroll with rack arm** (stroke till 300 mm) complete with clamp, friction dowels, bolts and clamps for connection to other arm



**CEBT Junction torch with 4 movements** installable on CEB20 or CEB30 to fix or place the torch



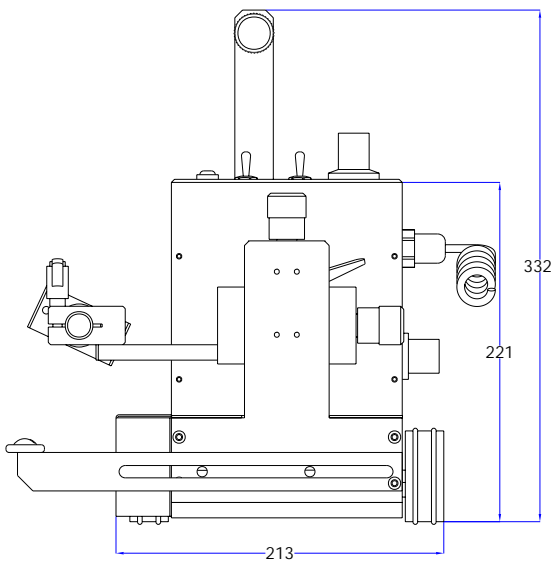
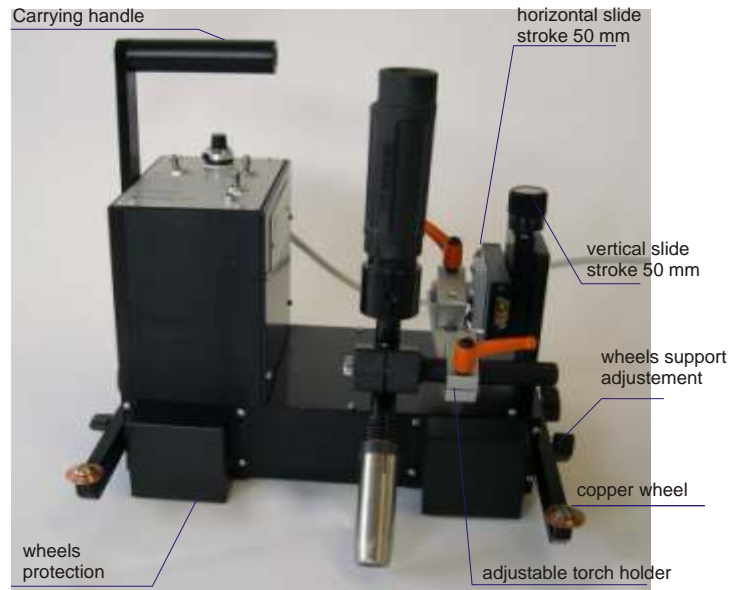
**CEB30 Axis scroll with rack arm stroke 500mm** complete with clamp, friction dowels, bolts and clamps for connection to other arm



**CETM Mechanical probe to automatically adjust the height of the torch**, complete with junction torch and clamp to fix to CEB30

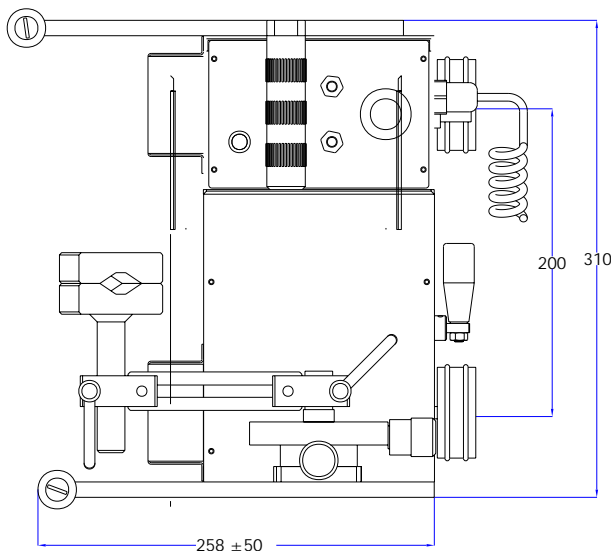


**CETMA Mechanical probe to automatically adjust the position of the torch in the corner**, complete with junction torch and clamp to fix to CEB30



Control panel

- 1 - Line lamp
- 2 - Power switch
- 3 - Direction: forward - stop - reverse
- 4 - Torch switch
- 5 - Speed control



### Data

Dimensions: width 220 mm x height 330 mm x length 340 mm

Weight: 9,5 Kgs

Speed: from 200 to 2200 mm/min

Motor: DC with planetary gear

Magnet: permanent, attraction power 30 kg

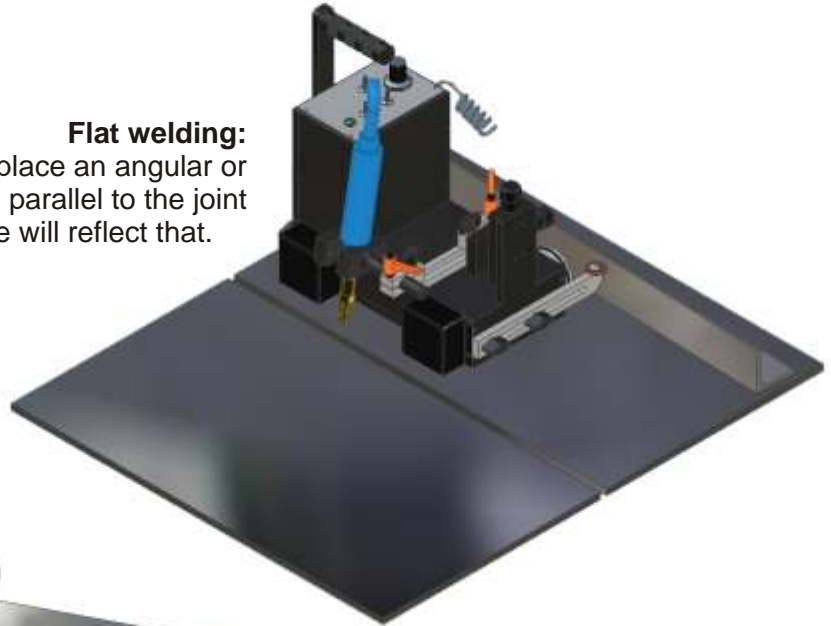
Power: 230 VAC 50/60 Hz  
on demand 24-48 VAC  
on demand 24-60 VDC

Power: 70 W

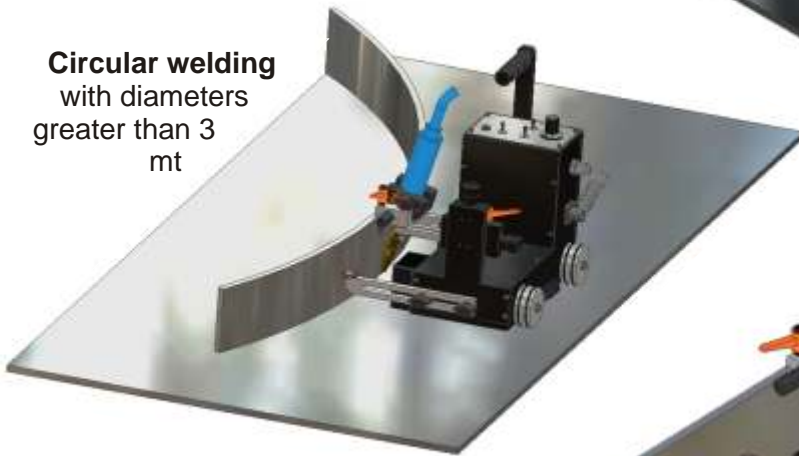


**Flat welding:**

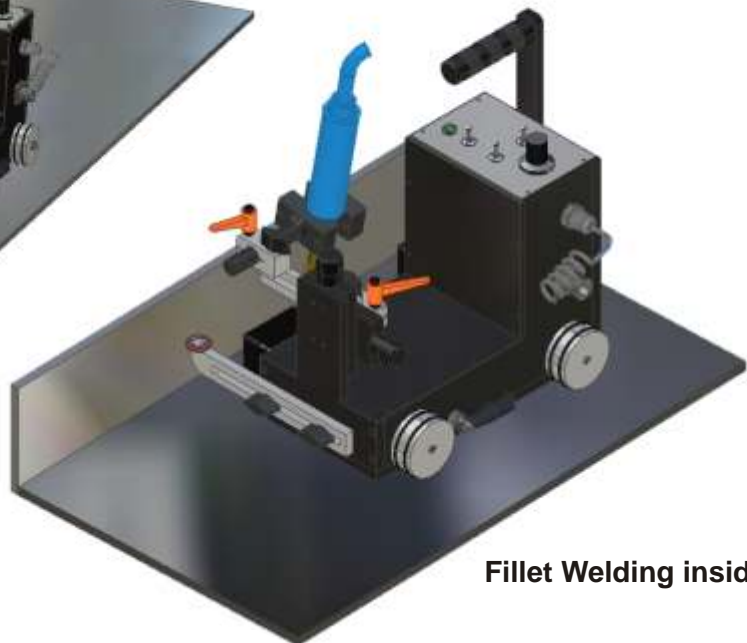
It's possible to place an angular or tubular profile parallel to the joint and the carriage will reflect that.



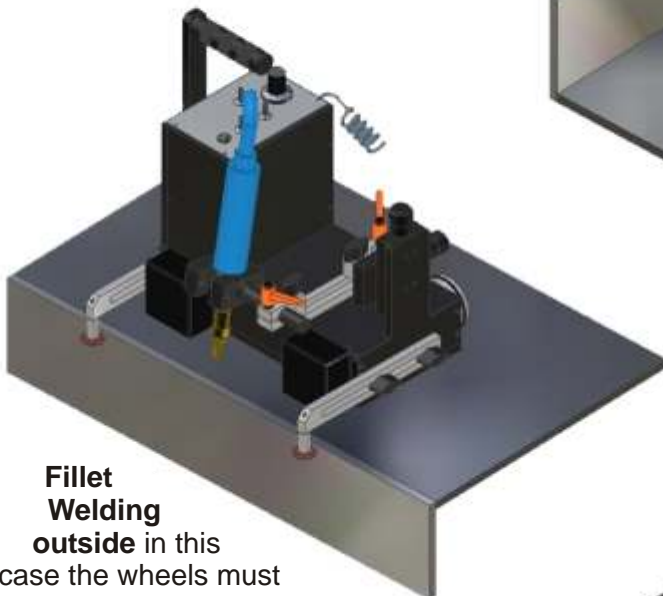
**Circular welding**  
with diameters  
greater than 3  
mt



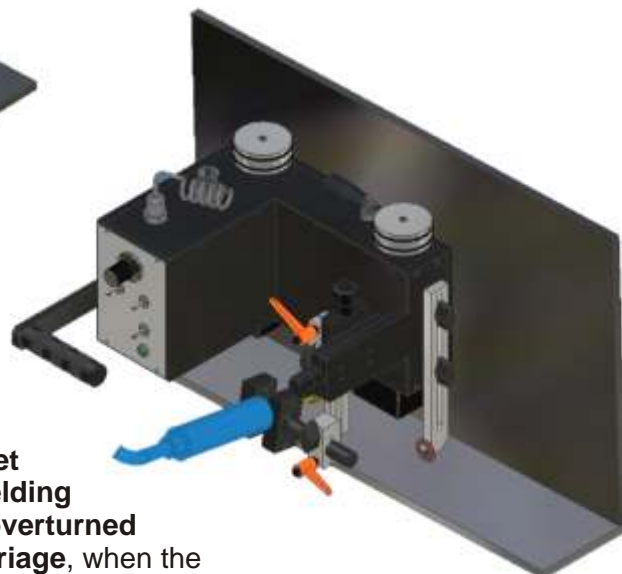
**Fillet Welding inside**



**Fillet Welding outside** in this case the wheels must be mounted downward



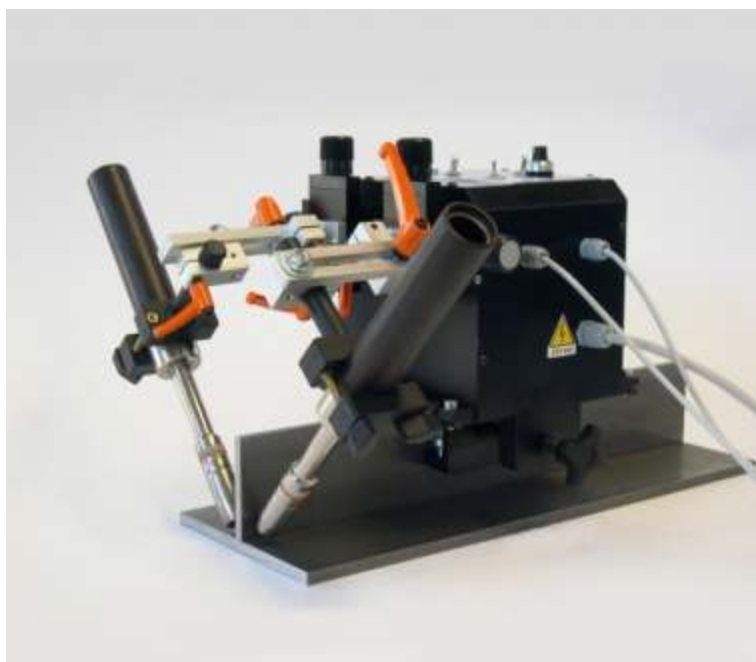
**Fillet Welding with overturned carriage**, when the down flat is tight.



# Tortuga

TRACKLESS CARRIAGE

## Getting a track by the same workpiece



Tortuga can be directly placed on one sheet to weld.

It's available also for naval profile (bulbs or stiffeners)

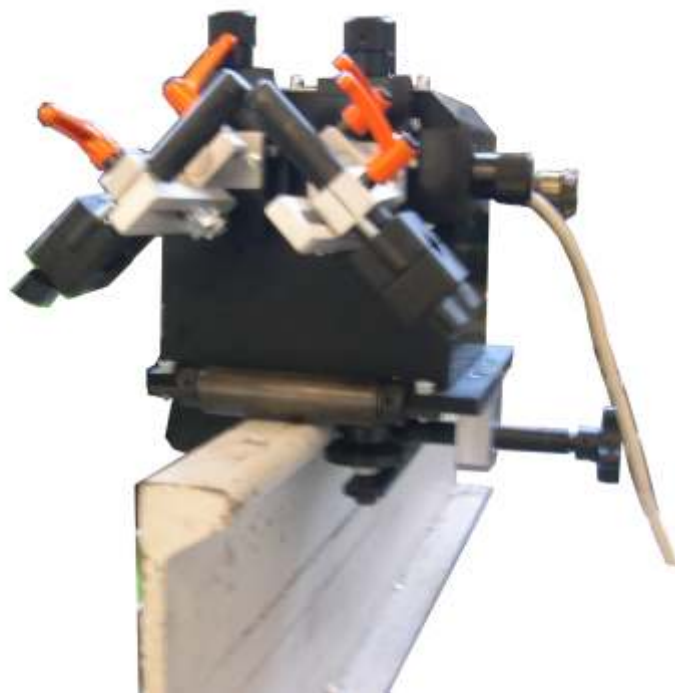
Both versions can have one or two torches holder.

Tortuga 1 and 2:

Carriage sliding on flat with height minimum 50 mm and thickness from 5 to 60 mm.

Tortuga STW1 and 2:

Carriage sliding on naval profile.

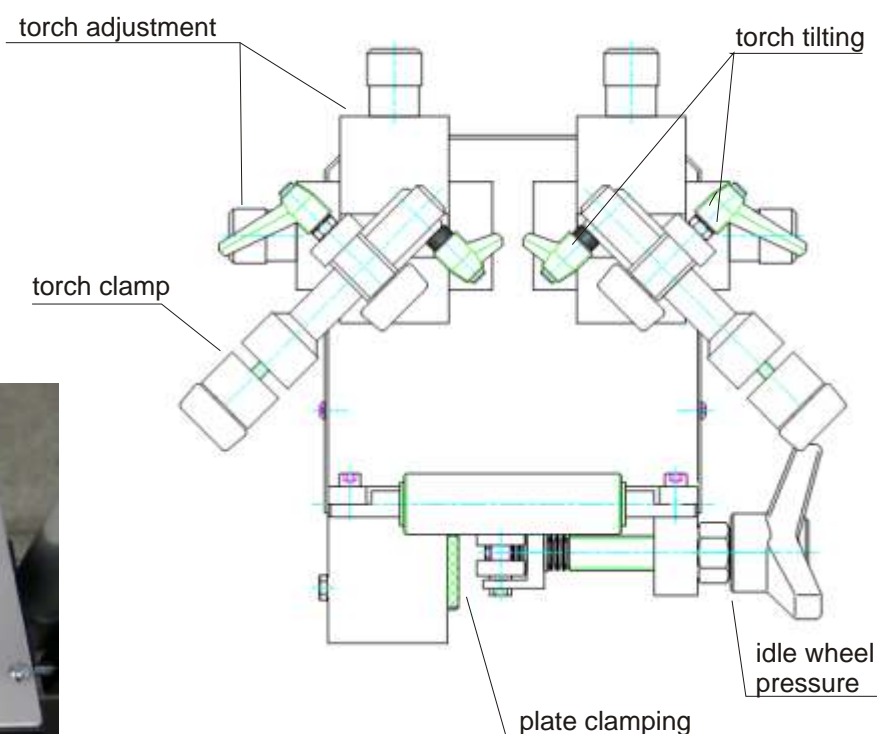


### Technical data:

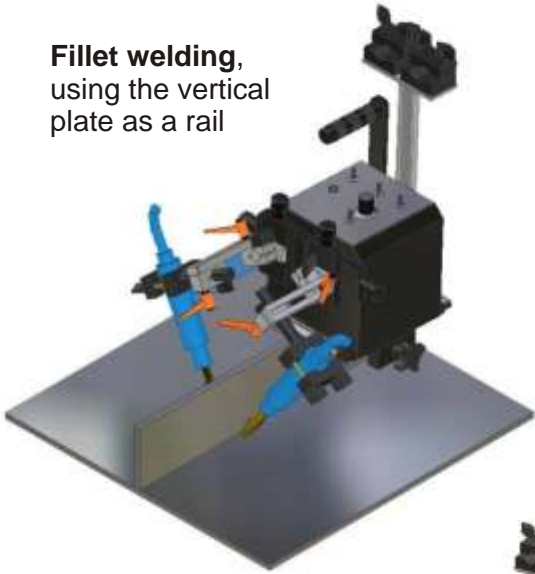
Dimensions: width 220mm - length 340mm - height 330mm  
 Weight: 9.5 kg  
 Speed range: from 200 to 2200 mm/min  
 Motors: DC with planetary gear  
 Powerline: 230 VAC 50-60 Hz  
 On demand 24-48 VAC  
 On demand 24-60 VDC  
 Power: 70 W

### Functions:

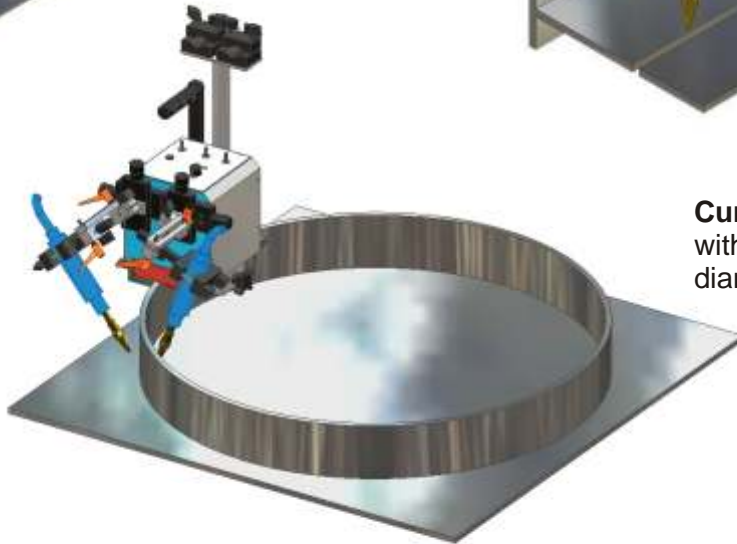
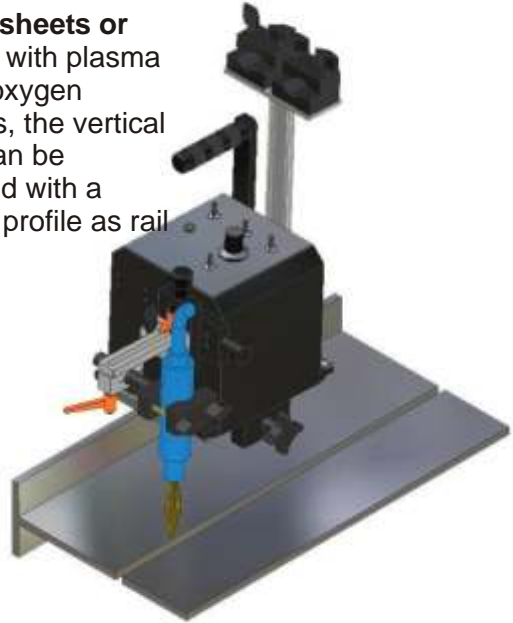
ON/OFF switch  
 Forward/stop switch  
 Potentiometer for speed control  
 Switch welding on/off and Torch 1/2



**Fillet welding,**  
using the vertical  
plate as a rail

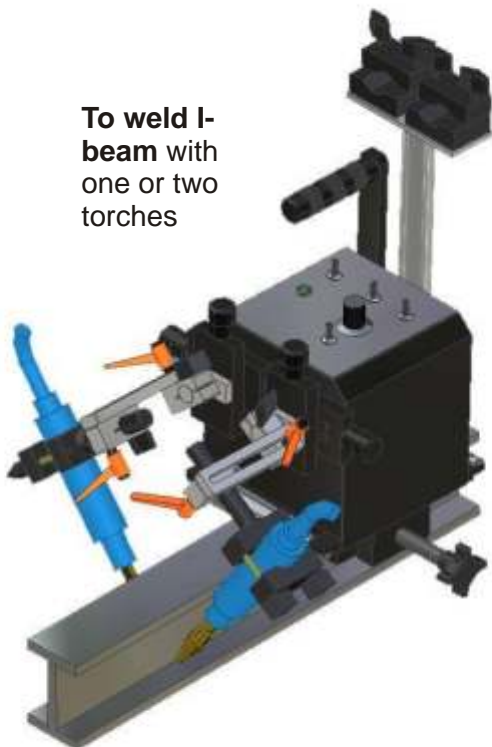


**To cut sheets or  
beams with plasma  
arc or oxygen  
process, the vertical  
plate can be  
replaced with a  
tubular profile as rail**

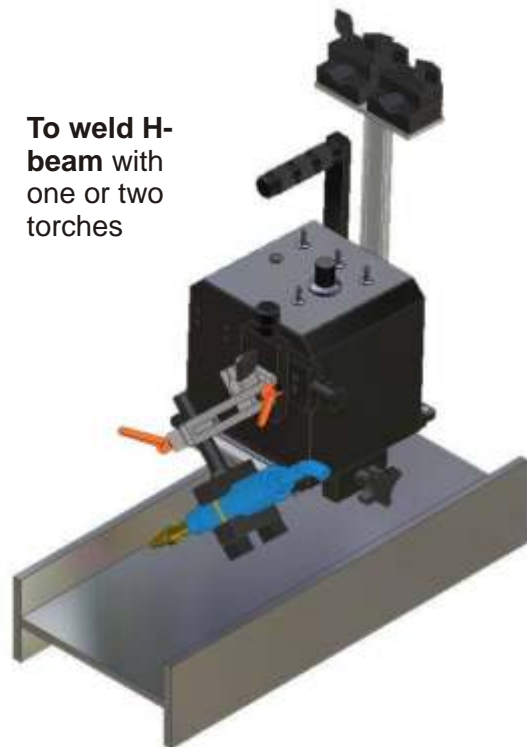


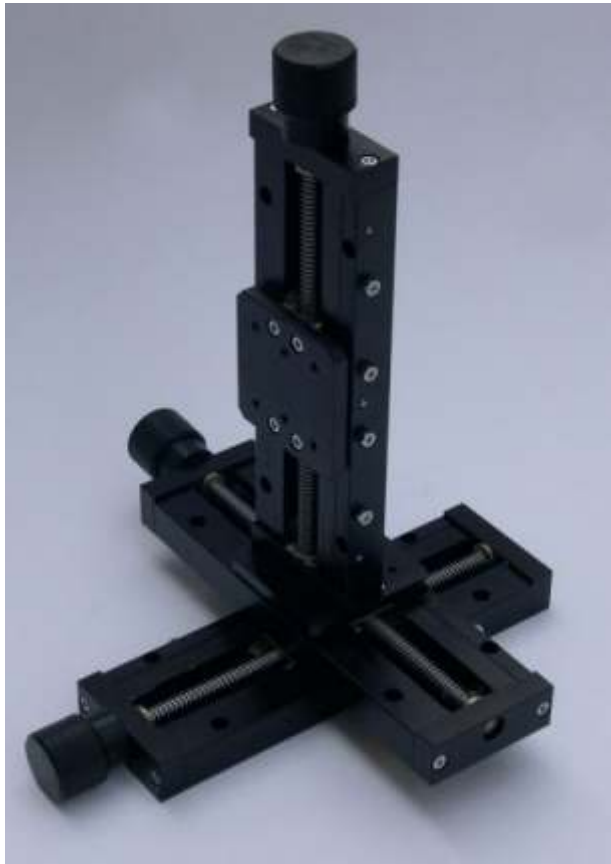
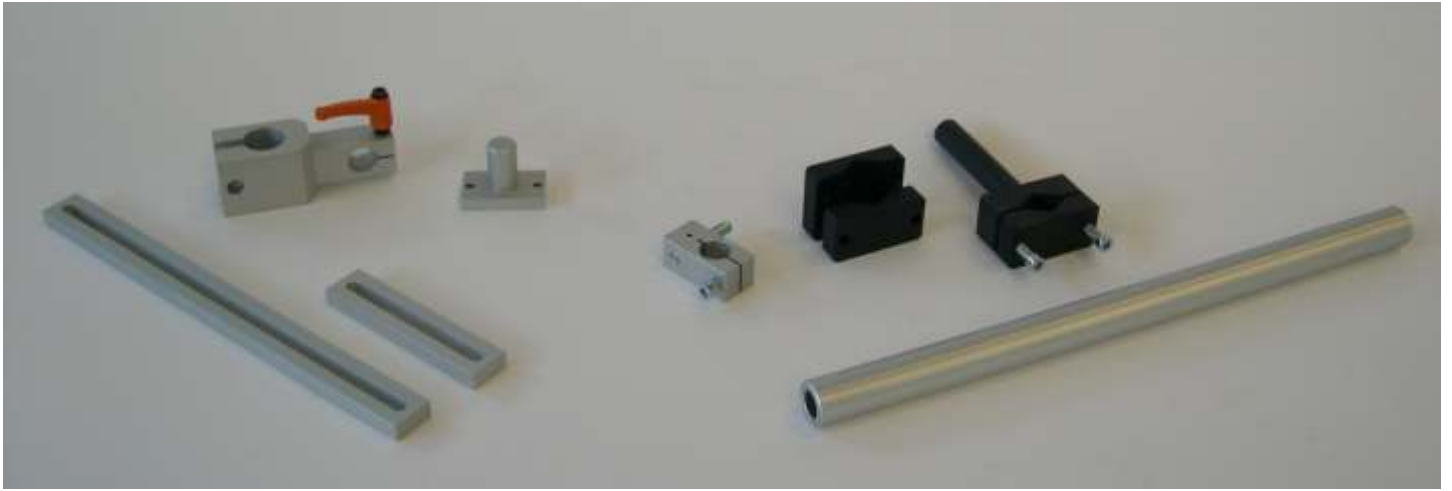
**Curved surfaces  
with minimum  
diameter 800 mm**

**To weld I-  
beam with  
one or two  
torches**



**To weld H-  
beam with  
one or two  
torches**







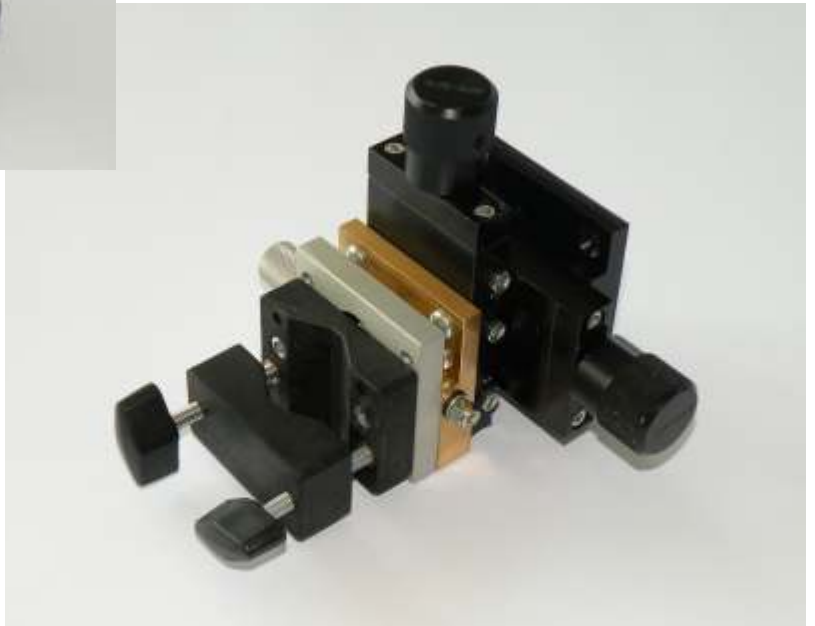


### Modular system micrometer slides SM50/F

- Composition consists in
- 2 micrometer slides SM50/1
  - 1 flange SM/F
  - torch holder SM/PT

### Modular system micrometer slides

- SM50/FR** composition consists in
- 2 micrometer slides SM50/1
  - 1 flange SM/F
  - torch holder SM/PT
  - rotational flange SM/FR



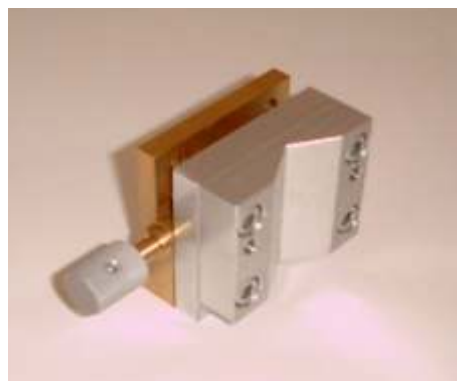
**SM50/1 Micrometer slide with 50mm of stroke.** Structure in machined aluminum, brass slider and screw, steel insert on slider for fixing, grub to adjust the back-lash.



**SM/PT torch holding clamp** for micrometer slide, suitable for torch from  $\varnothing 18$  to 40 mm



**SM/F Fixing flange** for micrometer slide, complete with holes and bolts for fixing to a desired structure



**SM50/FR Rotating flange**, complete with torch holder.



**SMMD80-1** Slide with an axis, effective stroke 80 mm, with the follow features: Structure in machined aluminum, trapezoidal brass screw with nut, brass carriage guide and dovetail with gib for the adjustment, handle in knurled aluminum.

**SMMD80-2** Slides composition with 2 axis, effective strokes 2x80 mm

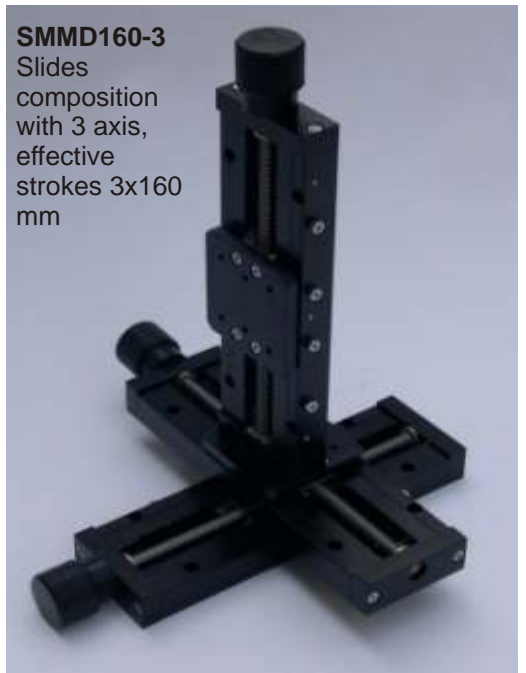


**SMMD80-3** Slides composition with 3 axis, effective strokes 3x80 mm



**SMMD160-1** Slide with an axis, effective stroke 160 mm, with the follow features: Structure in machined aluminum, trapezoidal brass screw with nut, brass carriage guide and dovetail with gib for the adjustment, handle in knurled aluminum.

**SMMD160-3** Slides composition with 3 axis, effective strokes 3x160 mm



**SMMD160-2** Slides composition with 2 axis, effective strokes 2x160 mm



**SMMDPT** Fast torch holder for fixing on the slides in horizontal or vertical position

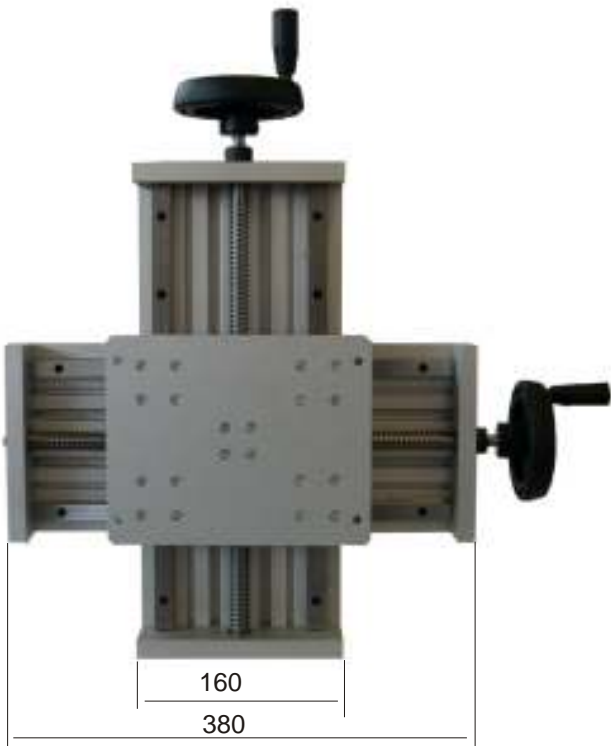
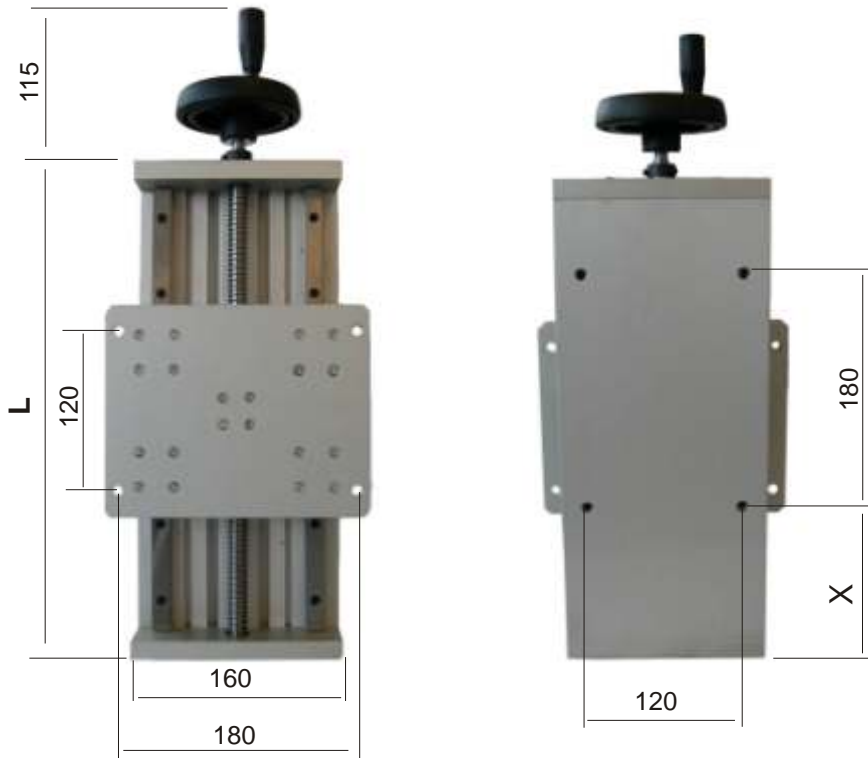
**SM150/FR** rotation flange from -30° to +30°, complete of torch holder



# manual slide SM BIG

manual slide with stroke 100, 190 or 400 mm and max load 60 kgs at 400 mm

SMBIG is a slide with a base made with an aluminum profile, two ball linear guides on the side and one trapezoidal screw in the center. The lifting power of 60 kg to 400 mm makes it suitable to support other slides or sub arc welding head. Always available in standard stroke of 190 mm, however on demand it's possible to obtain the 100 or 400 mm of stroke version. In both version with 1 or 2 axis.



Stroke	100	190	400
L	290	380	590
X	40	130	235

# Torch holder and positioning systems



**TWIN Rotating torch holder with 2 orthogonal axis**, complete with degree indication, torch holder from  $\varnothing$  18 to  $\varnothing$  40 mm and clamp to fix in right position. **360° rotation in both axis.**



**CEBTM16** Torch holder with support  $\varnothing$ 16 for CEB20.

**CEBTM25** Torch holder with support  $\varnothing$ 25 for CEB30



**PER18 Flange with shaft  $\varnothing$ 18** and 2 holes  $\varnothing$ 5,5, center distance 41 mm



**CEBTM25V** Double clamp with  $\varnothing$ 25 and  $\varnothing$ 18 mm.



**MORD8  $\varnothing$ 18mm clamp**, with thread shaft M8, able to connect PT001 to ASTA



**PT001 Torch holder** with shaft  $\varnothing$ 18 made in synthetic material, for  $\varnothing$  torch from 18 to 40 mm

**PT001AL Torch holder** with shaft  $\varnothing$ 18 made in aluminum machined for torch  $\varnothing$  from 18 to 40 mm



**PT002 Torch holder clamp** made in synthetic material to be used with PT001

**PT001AL Torch holder clamp** made in aluminum to be used with PT001AL



**MORS D25** Clamp  $\varnothing$ 25 for connecting a bar to the tube  $\varnothing$ 25



**Aluminum bar** with a slot width  $\varnothing$ 8,5 and these available length: 115, 200, 300 mm

**ASTA115**

**ASTA200**

**ASTA300**



**PT60 Torch holder** for  $\varnothing$  from 20 to 60 mm, to fix thanks 2 holes  $\varnothing$ 6,5 (spot – faced), center distance 48 mm



**TUBO  $\varnothing$ 25 X 400 mm** in alluminum



**CEBTCN Torch holder with hinge** to lock quickly the torch, for automatic torch  $\varnothing$ 35-42 mm





MMINI motorized slides are available with one or two axis with the follow features:

- Panel control power 230 V monophasé
- Remote control with joystick and speed regulation
- Connection cable standard length 10 m
- Recirculating ball screw and one linear ball bearing guide, protected with bellows
- torch holder PT002 and PT003

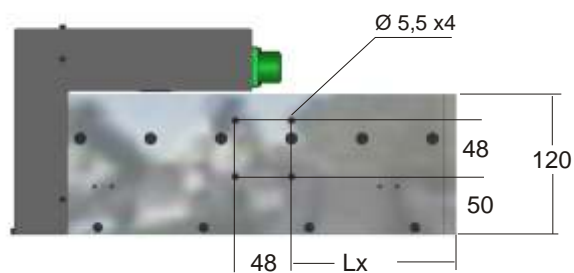
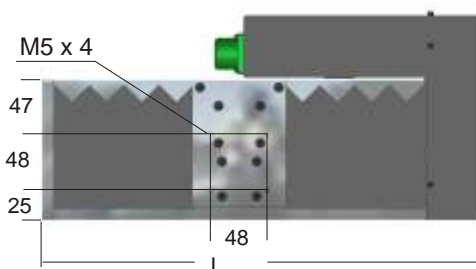
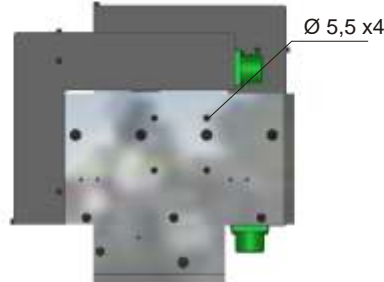
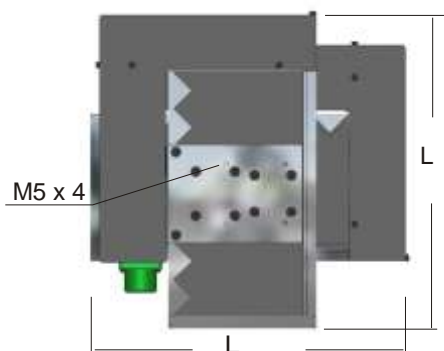
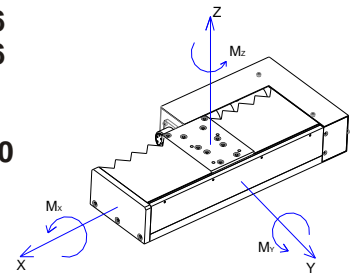
### 1 axis models

MMINI 80/1  
MMINI 180/1  
MMINI 250/1  
MMINI 300/1

### cross slides models

MMINI 80/2  
MMINI 180/2  
MMINI 250/2  
MMINI 300/2

	80	180	250	300
<b>L (mm)</b>	256	376	476	536
<b>Lx (mm)</b>	80	140	196	226
<b>P motor (W)</b>	31	31	31	31
<b>vert.load ( Kg)</b>	10	10	10	10
<b>speed (mm/min)</b>	2300	2300	2300	2300
<b>M X (KNm)</b>	4	4	4	4
<b>M Y (KNm)</b>	3	3	3	3
<b>M Z (KNm)</b>	4	4	4	4



# Motorized slides MM MIDI

**max load 70 or 150 Kg,  
stroke from 100 to 600 mm**



MMIDI motorized slides are available with one or two axis and maximum load from 70 to 150 kg (HD version) with the following features:

- Panel control power 230 V monophase
- Remote control with joystick and speed regulation
- Connection cable standard length 10 m
- Recirculating ball screw and two linear ball bearing guides, protected with bellows
- DC motor with TACO, in the HD version the vertical motor is equipped with brake.

	100	100 HD	250	250 HD	400	400 HD	600	600 HD
<i>L (mm)</i>	479	479	659	659	879	879	1139	1139
<i>A (mm)</i>	330	360	330	360	330	360	330	360
<i>Lx (mm)</i>	110	110	75	75	160	160	140	140
<i>N fixing holes</i>	4	4	8	8	8	8	20	20
<i>P motor (W)</i>	200	350	200	350	200	350	200	350
<i>vertical load (Kg)</i>	70	150	70	150	70	150	70	150
<i>speed (mm/min)</i>	1500	1400	1500	1400	1500	1400	1500	1400
<i>M X (KNm)</i>	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4
<i>M Y (KNm)</i>	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6
<i>M Z (KNm)</i>	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6

## model codes:

### 1 axis standard:

MM MIDI 100/1  
MM MIDI 250/1  
MM MIDI 400/1  
MM MIDI 600/1

### 2 axis standard:

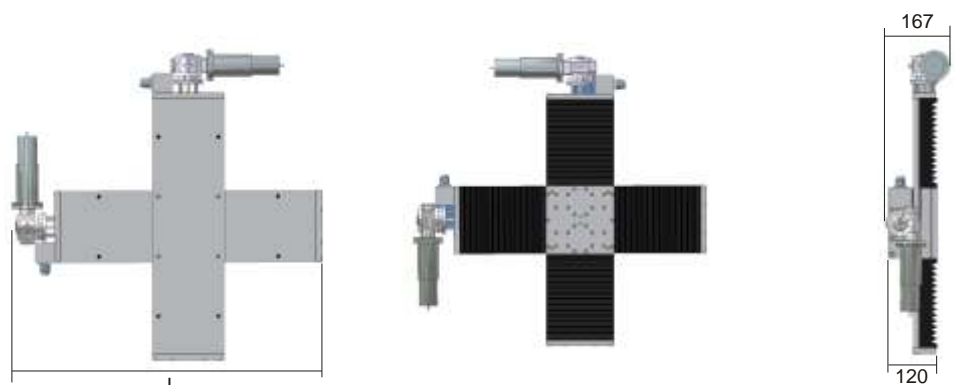
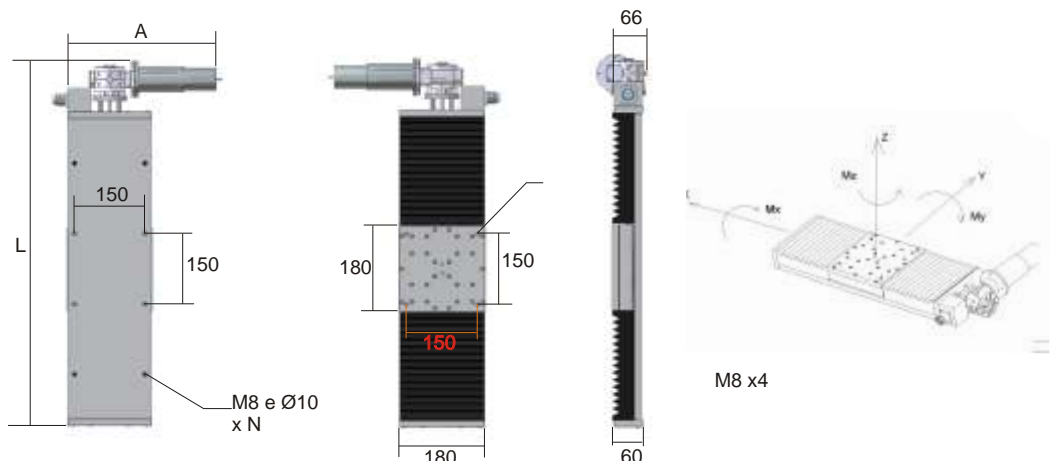
MM MIDI 100/2  
MM MIDI 250/2  
MM MIDI 400/2  
MM MIDI 600/2

### 1 axis HD:

MM MIDI 100/1 HD  
MM MIDI 250/1 HD  
MM MIDI 400/1 HD  
MM MIDI 600/1 HD

### 2 axis HD:

MM MIDI 100/2 HD  
MM MIDI 250/2 HD  
MM MIDI 400/2 HD  
MM MIDI 600/2 HD





**VPR-02 complete Viper**  
The 3 modules on a fixage base

3 modules: feedhead, spoolholder, and controller  
DC motor with two rolls

**Functions:**

Speed digital indication  
Wire pulse mode.  
Wire speed adjustment  
Wire start delayed  
Wire pulse regulation with 2 timer  
Wire retract at the end of welding  
Standard rolls Ø1.0-1.2, on demand:  
0.6-0.8, 0.8-1.0, 1.2-1.6

**Optional:**

CEFF 4 axis wire guide  
VPR-12 current sensor



**VPR-03 Viper with separate controller**  
Feedhead and spoolholder on a base and controller



**VPR-01 Viper with separate modules**  
(connection cables 5 m)



**CEFF Position wire regulation for 4 axis.**

Used in TIG-Plasma technologies.  
The movements are micrometers. It can be fixed on the torch also with a junction torch



**VPR-12 current sensor,**  
length 5 mt.  
To allow motor start and stop.



**DTE80/180 – Linear oscillator with electronic movement inversion, stroke 80/180 mm.**

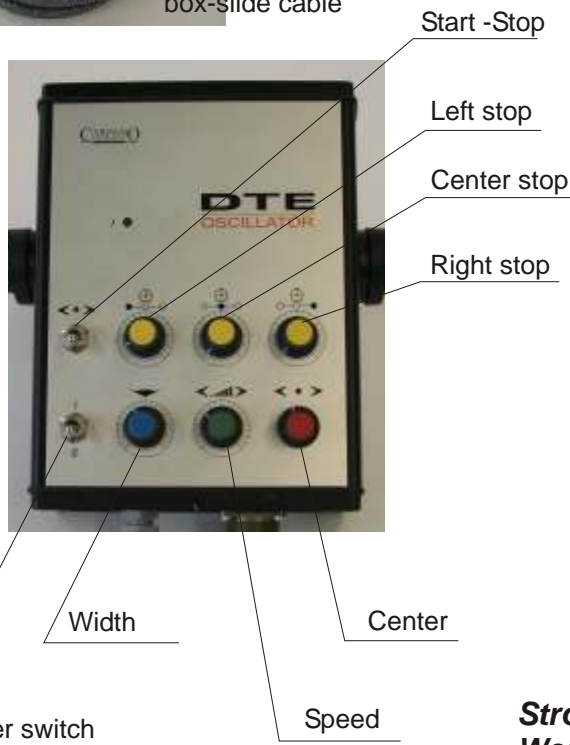
That equipment allows the torch oscillator and it's possible to adjust stroke length, frequency, center, and 3 pauses left, center and right.

Habitual used for big thickness joints or also for valve hard facing or other materials subject to wear.

DTE80 and 180 are featured for a load of 10 kg at 100 mm from the torch holder carriage.



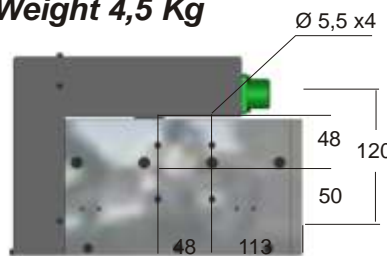
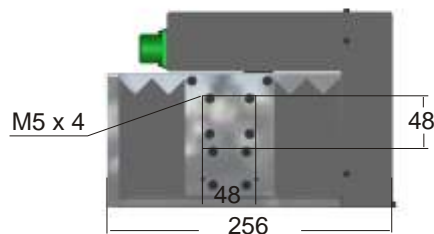
box-slide cable



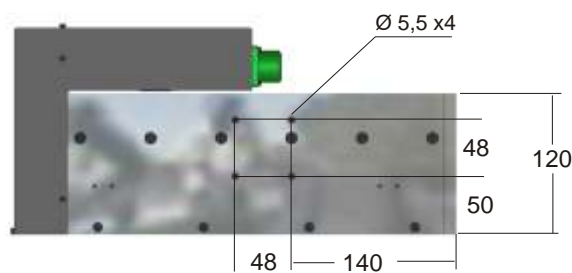
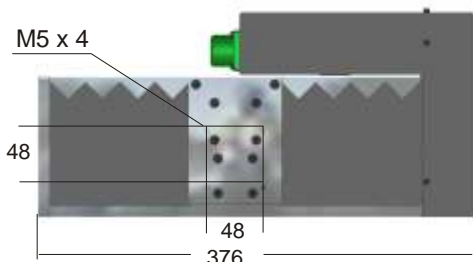
### technical data

- Power: 230 V AC ( on demand 48 V AC)
- Speed: from 20 to 2800 mm/min
- amplitude: from 0 to 30 mm (slide stroke 80)  
from 0 to 50 mm (slide stroke 180)
- Center ± 25 mm (slide stroke 80)  
± 60 mm (slide stroke 180)
- left stop: from 0 to 5 seconds
- righth stop: from 0 to 5 seconds
- center stop: from 0 to 5 seconds
- control dimensions: 200 x 82 x 169 mm
- control weight 3 kg
- slide-control cable: 10 mts, others on demand
- slide load: 10 Kg at 100 mm

### Stroke 80 mm Weight 4,5 Kg



### Stroke 180 mm Weight 5,2 Kg







**DTE250 Electronic linear oscillator with load of 50 kg, stroke 250 mm and the follow features:**

Mechanical:

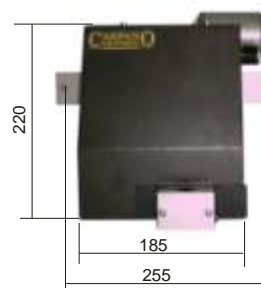
- DC motor with encoder
- Recirculating ball bearing screw
- Protection bellows made in autoextinguishing material
- Max speed 2800 mm/min
- Max load (400 mm):50 kg
- Weight: 15 kg

Electronic:

- Potentiometer regulation of speed, width, oscillation center and 3 pause (center, right and left)



**CEW2 - Connecting rod linear oscillator with mechanical adjustment of the width and electronic speed adjustment. Width adjustment from 0 to 33 mm. Speed from 5 to 150 oscillations/min. Load of 6 kg at 100 mm.**



# AVC arc voltage control



**AVC180 will highly improve your works:**

**The most frequent applications:**

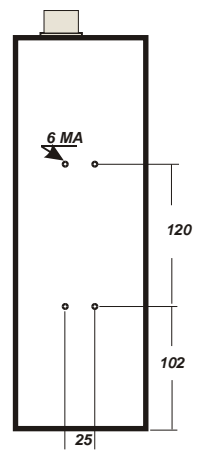
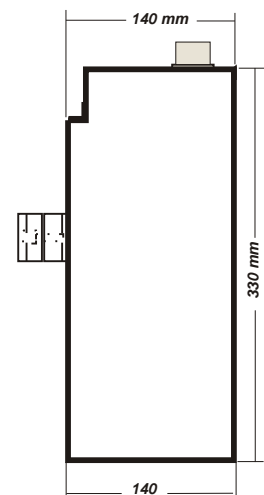
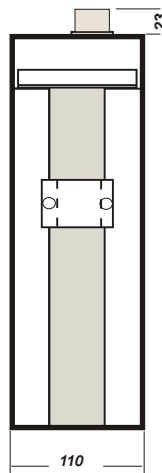
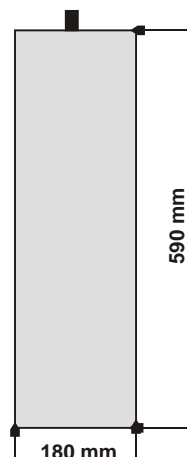
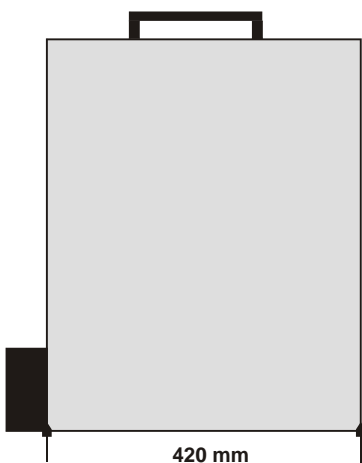
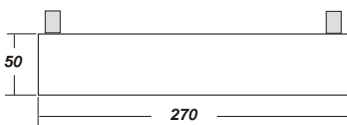
- Highly uniformed and qualified welding seam or cutting
- Working speed greatly improved
- Quick equipment installing and welding part preparing.
- Torch spare material decreased consumption
- Less specialization required to the operator
- Circular tank welding on manipulators
- Longitudinal calender welding on blocking bars.
- Tubes welding on rolling plates or lathes
- Cutting on pantograph
- Tubes cutting on lathe
- Useful in all applications where the torch varies its distance from the part during the welding process

**General technical features:**

- Infeed: 220 V 50-60 Hz.
  - Sensitivity: 100 mV
  - Intervention speed adjustment from 0 to 3000 mm/min.
  - Board cable / Slide: 10 mt.
  - Remote control Cable / board: 10 mt.
  - Generator cables connection: 1.5 mt.
- Control board weight: 25 Kg.

**AVC 180 remote control is made up of:**

- Voltmeter indicating the arc voltage
- Arc lenght adjustment
- Intervention speed
- High position adjustment
- Low position adjustment
- Recall high position
- Recall low position
- Automatic / manual selector
- Intervention delay in comparison to the arc ignition
- Climb delay in comparison with the arc ignition
- Cycle starting button
- Cycle stopping button



## Seam tracker



### SEAM TRACKER

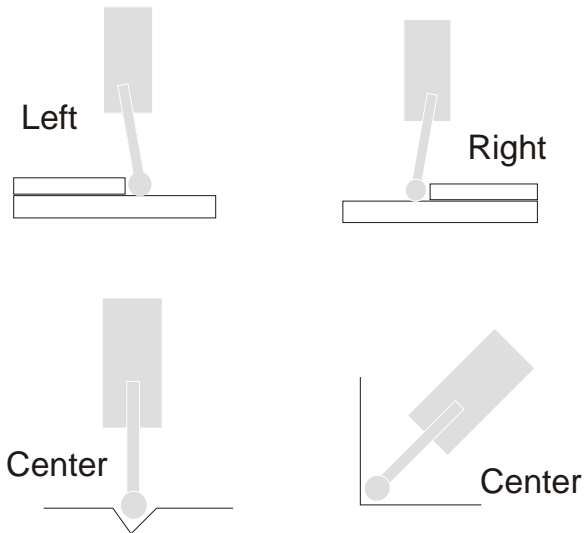
A truly complete range: 3 different slide models 10, 60 or 150 kg stroke from 60 to 600 mm with one or two axis.

It's possible to integrate this system also in other axis like the carriage of a beam or in a manipulator boom or column

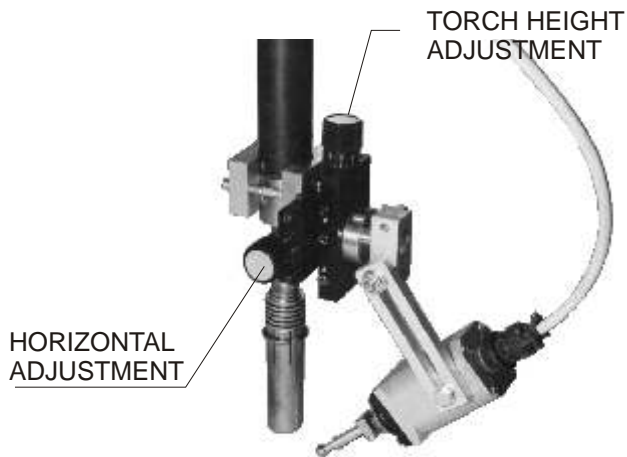




# Seam tracker



the seam tracker has been designed to automatically keep the torch on the joint to be welded when this presents irregularities. The system core is the probe: it sends electrical signals to the motorized slides which immediately adjust the torch position. The probe signal is proportional to any eventual variation so it allows continuous and homogeneous re-adjustments with a precision of about 0.2 mm. Then this system can be used with any applications having a defined joint (angle, smoothed joint or with port ones etc...) to adjust vertical or horizontal axis or both.



### Plant composition:

1. one or more motorized slides
2. connecting cables length 10 m for the slides and the probe
3. panel control
4. probe with micrometer slides for the positioning
5. pendant with 10 mt of cable

All cables can have different length on demand.





3 different models of motorized slides are available:

- LT max load 10 Kg out 100 mm,  
For TIG and MIG process with the following strokes:  
80 - 180 - 250 - 300 - 400 mm
- MD max load 70 Kg out 400 mm, for SAW or MIG with oscillator
- HD max load 150 Kg out 400 mm dalla slitta, for SAW Twin

Both with the following strokes:  
100 - 250 - 400 - 600 mm

All the slides are made with machined aluminum, ball bearing guides and ball bearing screw, all the motors are with tako or encoder.

The model HD on the vertical axle has the brake

Ordering code:

The ordering code depend from the model of slide and n° of axis:

IG LT 80/2: identify a 2 axis seam tracker with slides LT and stroke 80 x 80 mm

IG LT 180/1 H: identify a 1 horizontal axe seam tracker with slide LT stroke 180 mm, horizontal

IG MD 250/1 V: identify a 1 vertical axle with MD slide stroke 250 mm



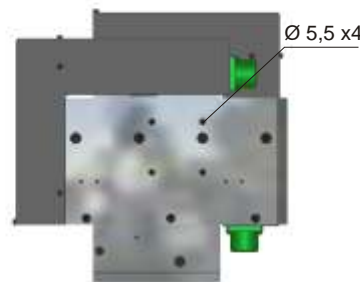
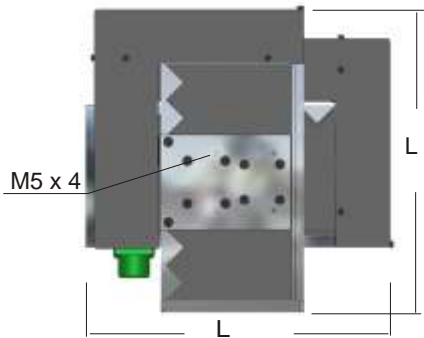
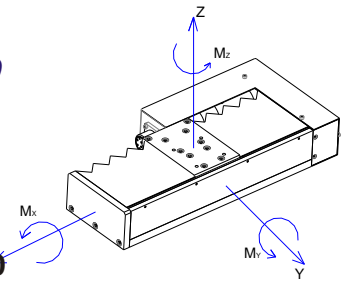
### Probe

To do a better work it is important to choose the correct tip for your seam:

- 1 - IGS001 Complete probe
- 2 - IGP03 tip Ø3 mm
- 3 - IGP06 tip Ø6 mm
- 4 - IGP10 tip Ø10 mm
- 5 - IGP20 tip Ø20 mm
- 6 - IGMTJ002 extension 100 mm long
- 7 - IGROT tip with copper wheel
- 8 - IGT.03-BR Bakelite connection to insulate the probe, used on pre-heated workpieces

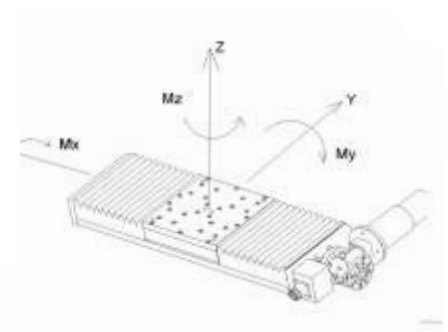
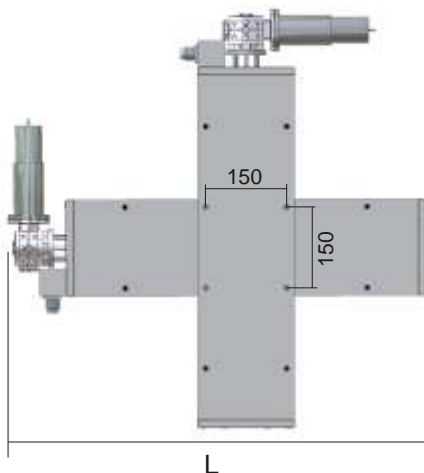
## LT MODEL

	80	180	250	300
<b>L (mm)</b>	256	376	476	536
<b>LX (mm)</b>	80	140	196	226
<b>P motor (W)</b>	31	31	31	31
<b>vertical load (Kg)</b>	10	10	10	10
<b>speed (mm/min)</b>	2300	2300	2300	2300
<b>M X (KNm)</b>	4	4	4	4
<b>M Y (KNm)</b>	3	3	3	3
<b>M Z (Knm)</b>	4	4	4	4



## MD & HD MODEL

	100	100 HD	250	250 HD	400	400 HD	600	600 HD
<b>L (mm)</b>	479	479	659	659	879	879	1139	1139
<b>A (mm)</b>	330	360	330	360	330	360	330	360
<b>LX (mm)</b>	110	110	75	75	160	160	140	140
<b>N fixing holes</b>	4	4	8	8	8	8	20	20
<b>P motor (W)</b>	200	350	200	350	200	350	200	350
<b>vertical load (Kg)</b>	70	150	70	150	70	150	70	150
<b>speed (mm/min)</b>	1500	1400	1500	1400	1500	1400	1500	1400
<b>M X (KNm)</b>	2,4	2,4	2,4	2,4	2,4	2,4	2,4	2,4
<b>M Y (KNm)</b>	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6
<b>M Z (Knm)</b>	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6



## Manipulators, beams, gantry



AI Power: aluminum column and boom from 1x1 to 3x3 m

AI Power travi: 3 motorized beam models with different load capacity

IP4 and 5: Steel carpentry column and boom, stroke available 4x4 and 5x5, with fixed or moved boom

AP Gantry: Welding gantry made in aluminum and steel carpentry





### APMICRO-MAN , Column & boom AI Power Micro manual version:

Iron base 600x600x30 mm, with rotanting flange and brake system

Aluminum vertical axe 180x90 mm, with ball bearing linear guides and rack

Up-Down movement with hand-wheel

Aluminum horizontal axe 120x40 mm, with ball bering linear guides and rack

Horizontal movement with hand-wheel

Useful stroke 1000x1000 mm

Max load 40 Kg

### APMICRO-MAN 10

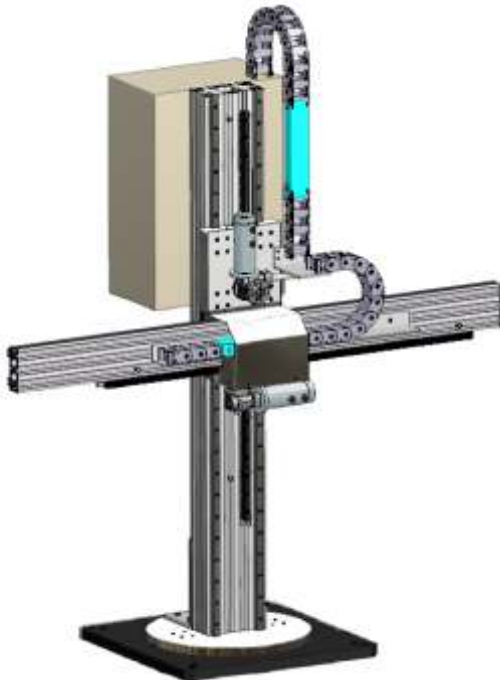
effective stroke 1000x1000

max load on arm 40 kg

### APMICRO-MAN 15

effective stroke 1500x1500

max load on arm 20 kg



### APMICRO-MOT, Column & boom AI Power Micro motorized version:

Iron base 600x600x30 mm, with rotanting flange and brake system  
Aluminum vertical axe 180x90 mm, with ball bearing linear guides and rack

Up-Down movement with AC motor controlled by inverter from 100 to 1900 mm/min

Aluminum horizontal axe 120x40 mm, with ball bering linear guides and rack

Horizontal movement AC motor controlled by inverter from 100 to 1900 mm/min

Useful stroke 1000x1000 mm

Max load 40 Kg

Cables chaine holder on both axis

### APMICRO-MOT 10

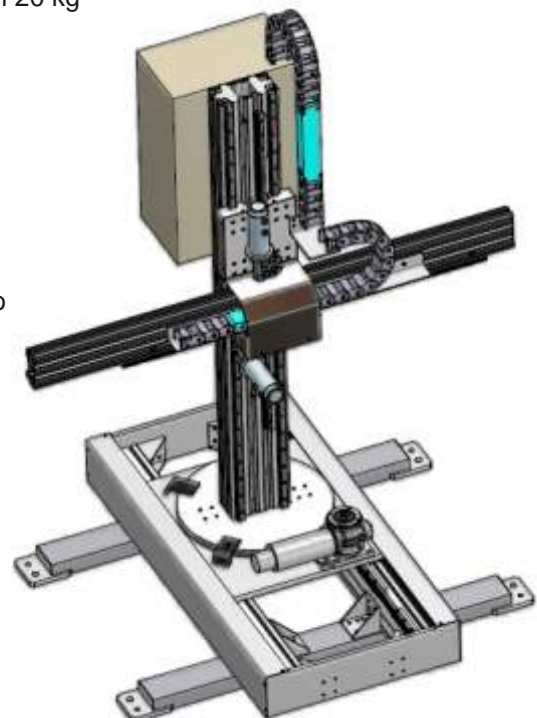
effective stroke 1000x1000

max load on arm 40 kg

### APMICRO-MOT 15

effective stroke 1500x1500

max load on arm 20 kg



### APMICRO-CM, Column & boom AI Power Micro motorized, sliding on motorized base:

Motorized base with DC motor, adjustable speed from 100 to 1900 mm/min

Iron base 600x600x30 mm, with rotanting flange and brake system  
Aluminum vertical axe 180x90 mm, with ball bearing linear guides and rack

Up-Down movement with AC motor controlled by inverter from 100 to 1900 mm/min

Aluminum horizontal axe 120x40 mm, with ball bering linear guides and rack

Horizontal movement DC motor controlled from 100 to 1900 mm/min

Max load 40 Kg

Cables chaine holder on both axis

### APMICRO-CM10

effective stroke 1000x1000

max load on arm 40 kg

### APMICRO-CM15

effective stroke 1500x1500

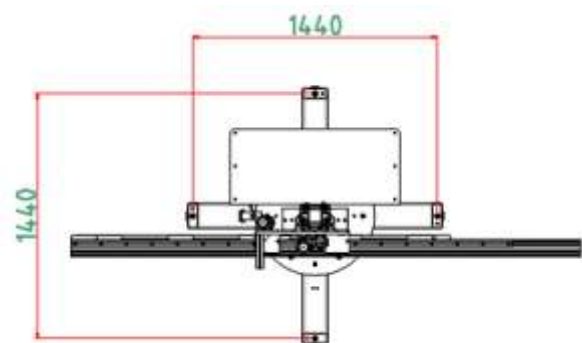
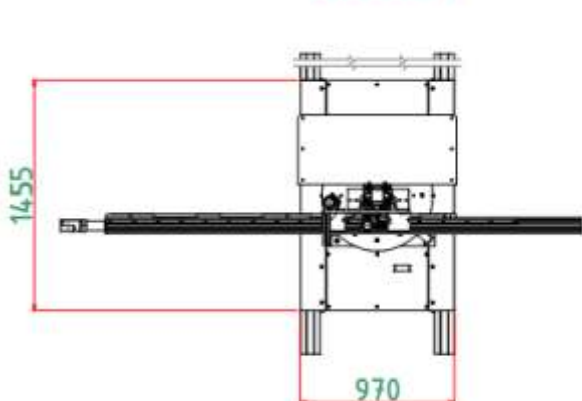
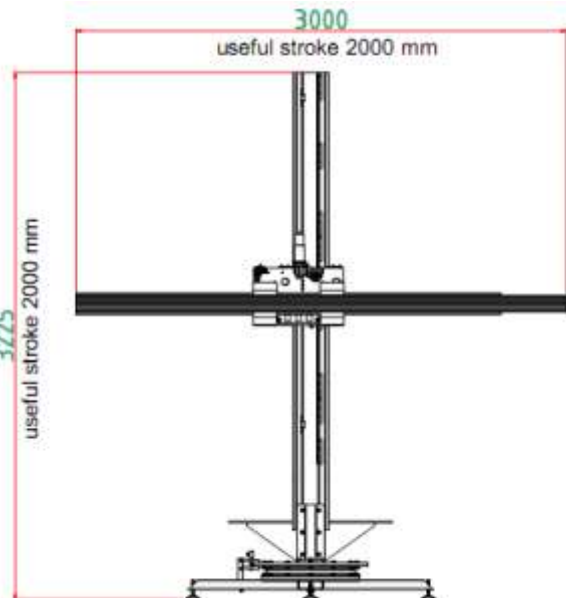
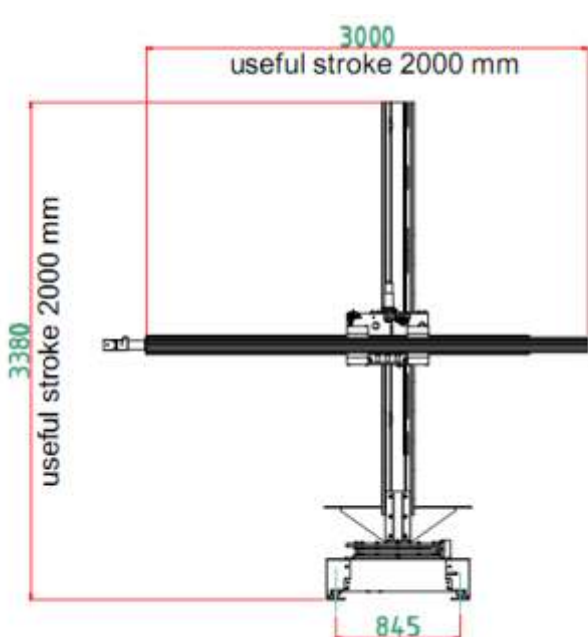
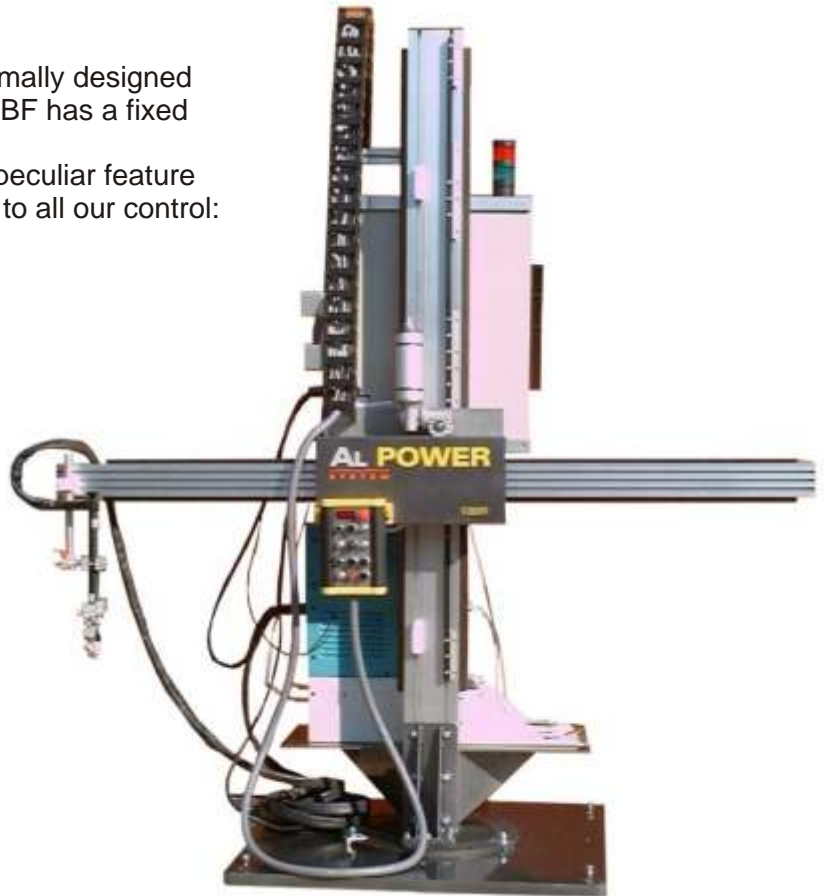
max load on arm 20 kg



APMINI is a manipulator made in aluminum, normally designed in the version with effective stroke 2x2 m. APMNBF has a fixed base and APMNCF has the motorized carriage. As all manipulator of the ALPOWER series, the peculiar feature is the possibility to drive one or both axis thanks to all our control: AVC IG or CNC

**Features:**

- Max load on boom head 30 kg
- Vertical and horizontal transmission with rack and pinion
- Column section: 170x120 mm
- Boom section: 100x100 mm
- vertical axis guide: iron with double sliding plane 55x25 mm
- horizontal axis guide: iron with double sliding plane 35 x16 mm
- 6 wheels for driving the vertical axis with roller bearing (3 eccentric)
- 8 wheels for driving the horizontal axis with roller bearing (4 eccentric)
- Gearmotor DC with TAKO

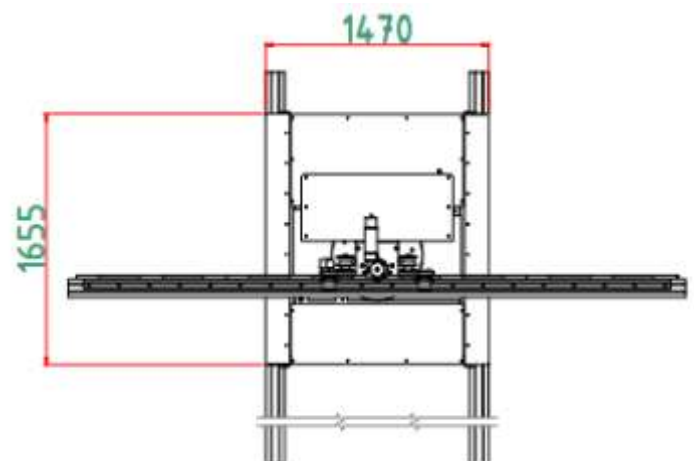
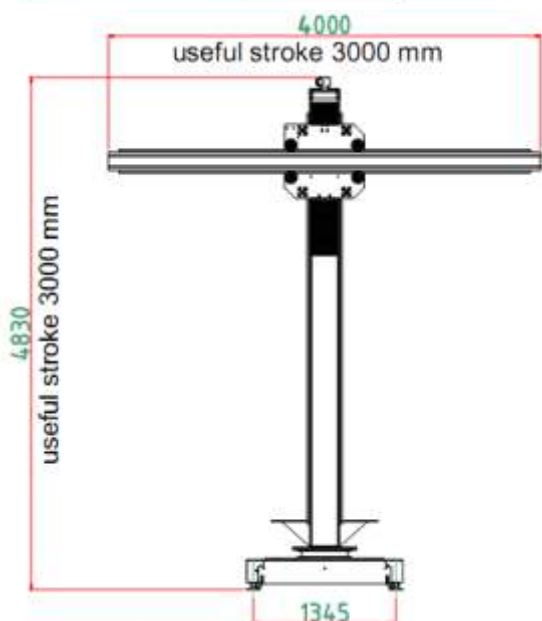
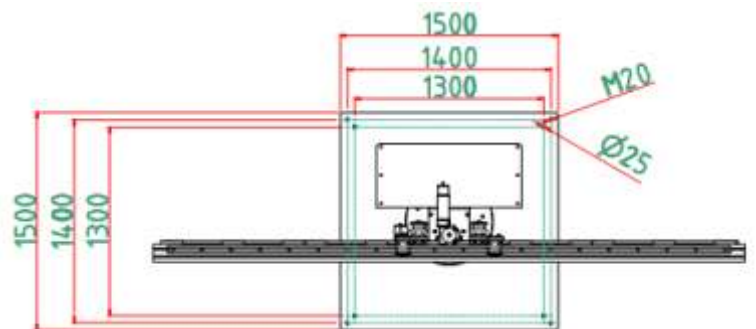
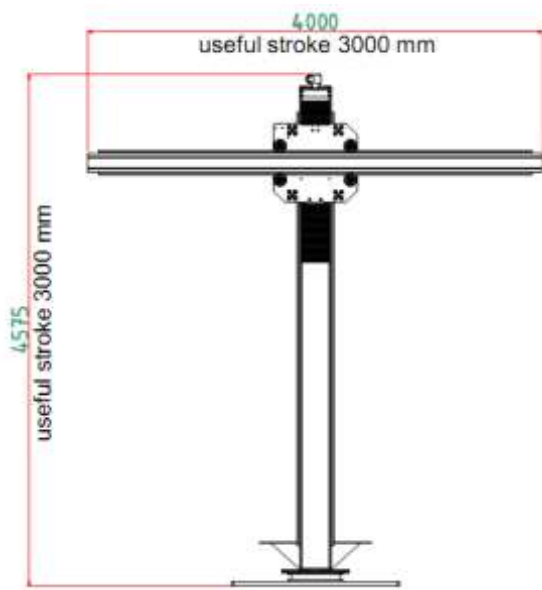
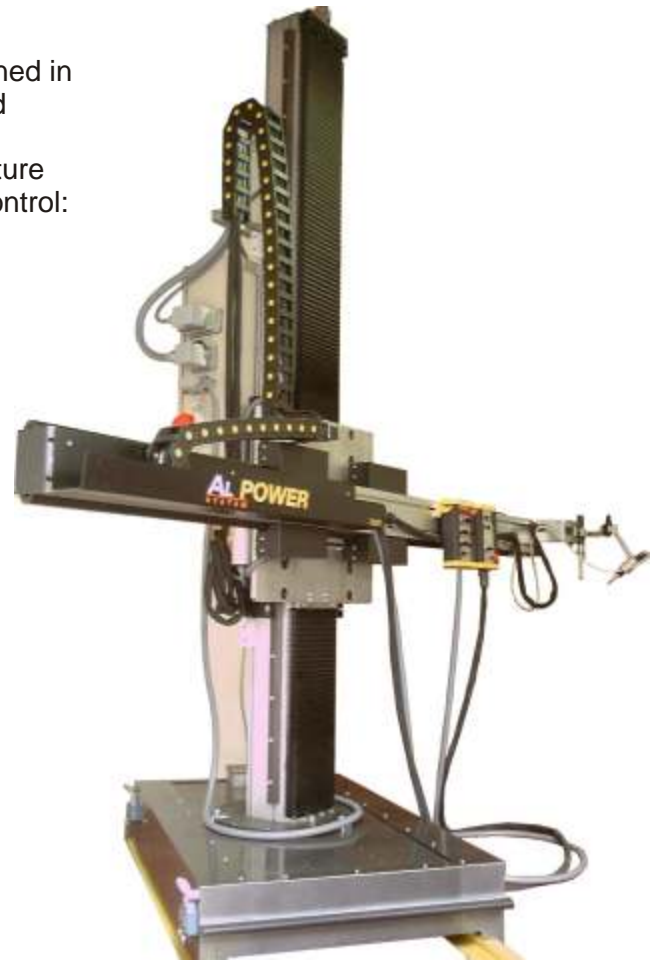


APMIDI is a manipulator made in aluminum, normally designed in the version with effective stroke 3x3 m. APMDBF has a fixed base and APMDCM has the motorized carriage.

As all manipulator of the ALPOWER series, the peculiar feature is the possibility to drive one or both axis thanks to all our control: AVC IG or CNC

**Features:**

- Max load on boom head 100kg
- Vertical transmission with recirculating ball screw, with safety nut and protection bellows
- Horizontal transmission with rack and pinion
- Column section: 280x170 mm
- Boom section: 170x120mm vertical axis guide: iron with double sliding plane 55x25 mm
- horizontal axis guide: iron with double sliding plane 55 x25 mm
- 2 wheels for driving the vertical axis with V profile (2 eccentric)
- Gearmotor DC with TAKO





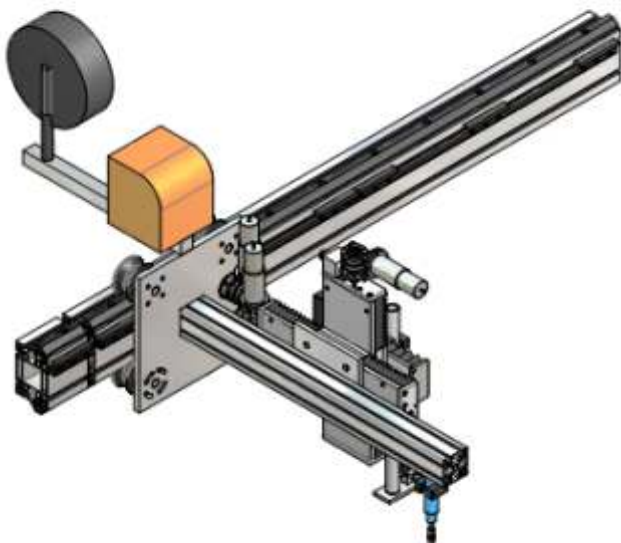
With the same concept of the manipulator Al Power we have designed our motorized beam which can be combined with our servomechanism or, in many cases, have also other coordinated axis: vertical or transversal to the beam carriage.

In the picture:  
APTMMIDI Beam with IG on two axis for welding channel beam to create tubular profile

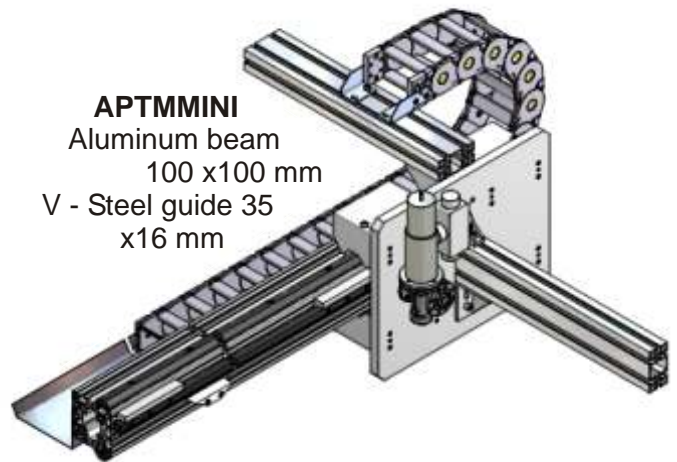


In the picture:  
APTMMIDI Beam with a vertical element able to do an effective stroke of 2 m. On the vertical axis it's fixed the wire feeder and a horizontal slide. The vertical axis and this slide are driven by our IG.  
TSV 03 (camera) allows the remote control of the process.

**APTMMIDI**  
Aluminum beam 120 x170 mm  
V - Steel guide 55 x25 mm



**APTMMINI**  
Aluminum beam  
100 x100 mm  
V - Steel guide 35  
x16 mm



**APTMMAXI** Aluminum beam 170  
x 280 mm  
V - Steel guide 55 x25 mm





I POWER 4  
I POWER 5

**Manipulator 4x4 & 5x5**

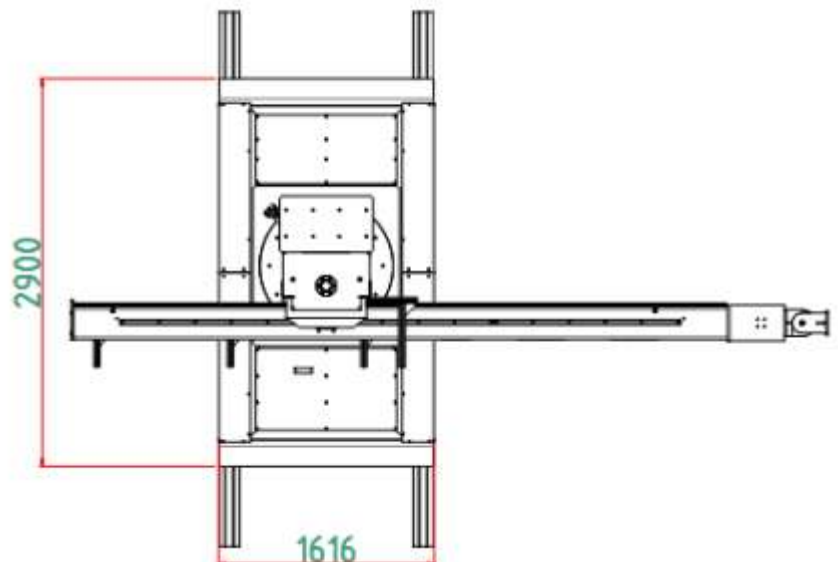
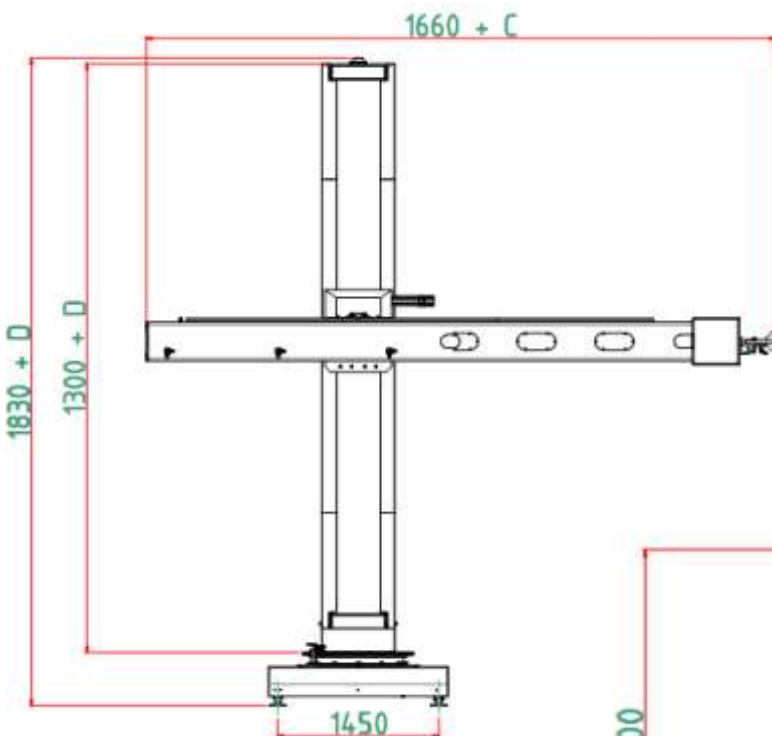


**I-Power 4 or 5 gets remarkable and innovative skills:**

- The gear motor that allows the boom lifting is down and thanks to this feature the height of the column is less than traditional machines with the same stroke.
- 2 axis are moved on ball bearing linear guides to have a high precision movement
- The column is made with 2 iron tubulars and in this way we got a excellent stiffness also because, thanks to this solution, the guides center distance is bigger than the traditional machines
- All trasmission and guides are protected by roll-up covers made in PVC.
- It's possible as optional to work with a wireless remote control

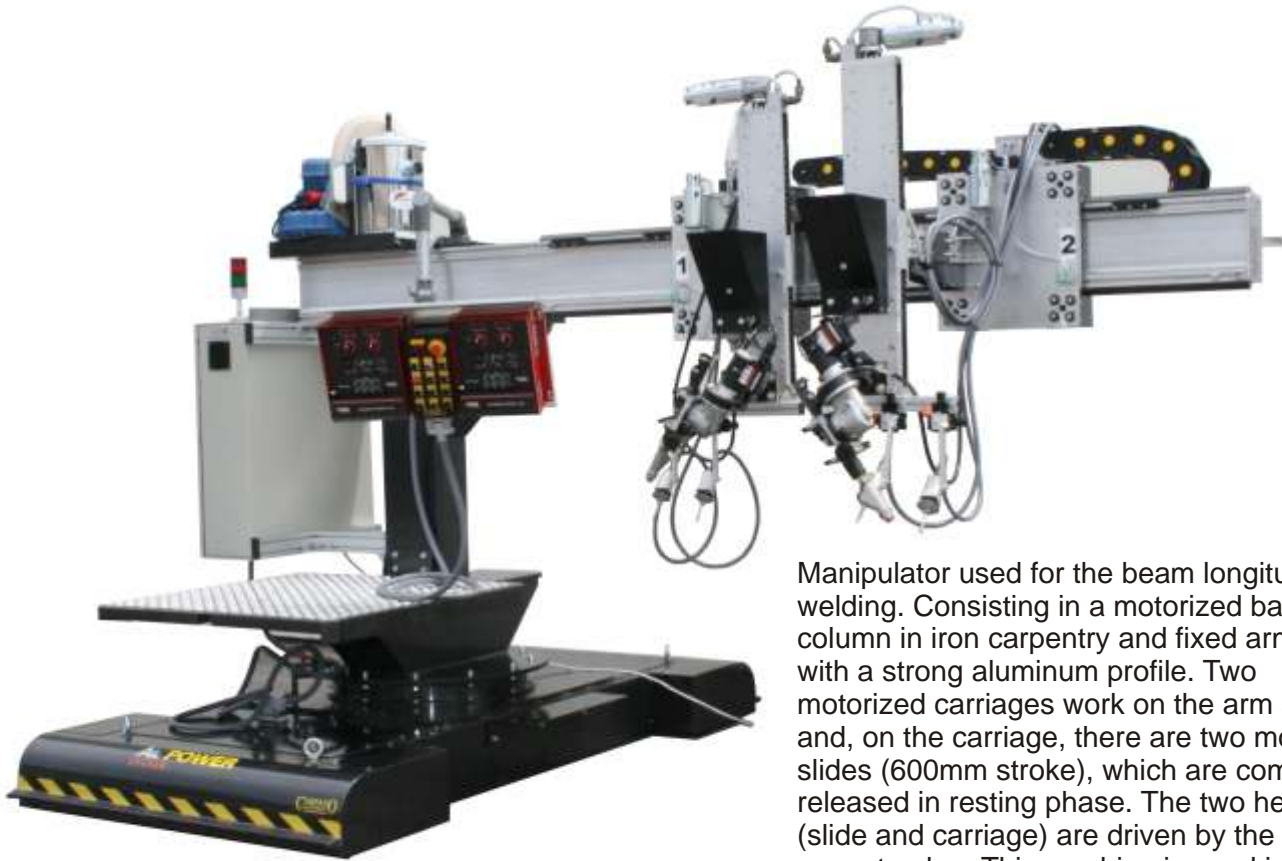
**General technical features:**

- motorized base made in welded carpentry, machined and painted;
- the edges are fitted with anti-collision safety system;
- the column can rotate 360° on a very hard slewing bearing. It's possible to lock that in a stable position thanks to 2 brakes and reference pins every 90°;
- safety system on lifting trasmission with block of any fall and wear control system
- base speed range: 200-2500 mm/min;
- column speed: 900 mm/min;
- boom speed range: 150-1800 mm/min.



I POWER	<b>IP 4</b>	<b>IP 5</b>
<b>C</b>	4000	5000
<b>D</b>	4000	5000





Manipulator used for the beam longitudinal welding. Consisting in a motorized base, column in iron carpentry and fixed arm made with a strong aluminum profile. Two motorized carriages work on the arm axis and, on the carriage, there are two motorized slides (600mm stroke), which are completely released in resting phase. The two heads (slide and carriage) are driven by the our seam tracker. This machine is used in sub-arc process.

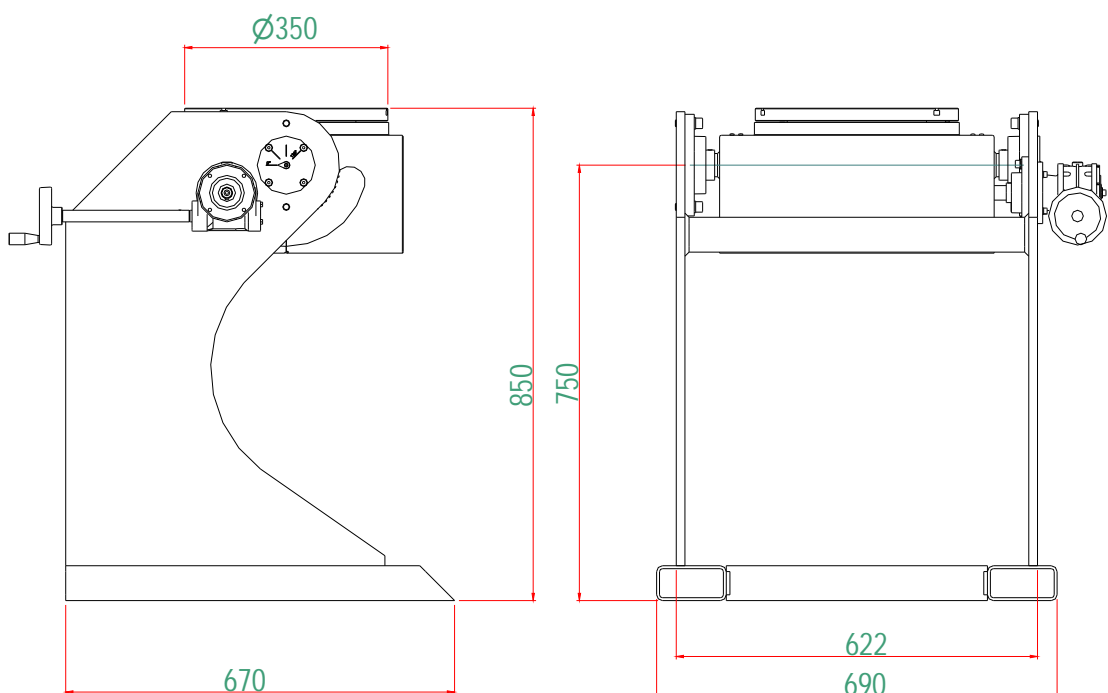


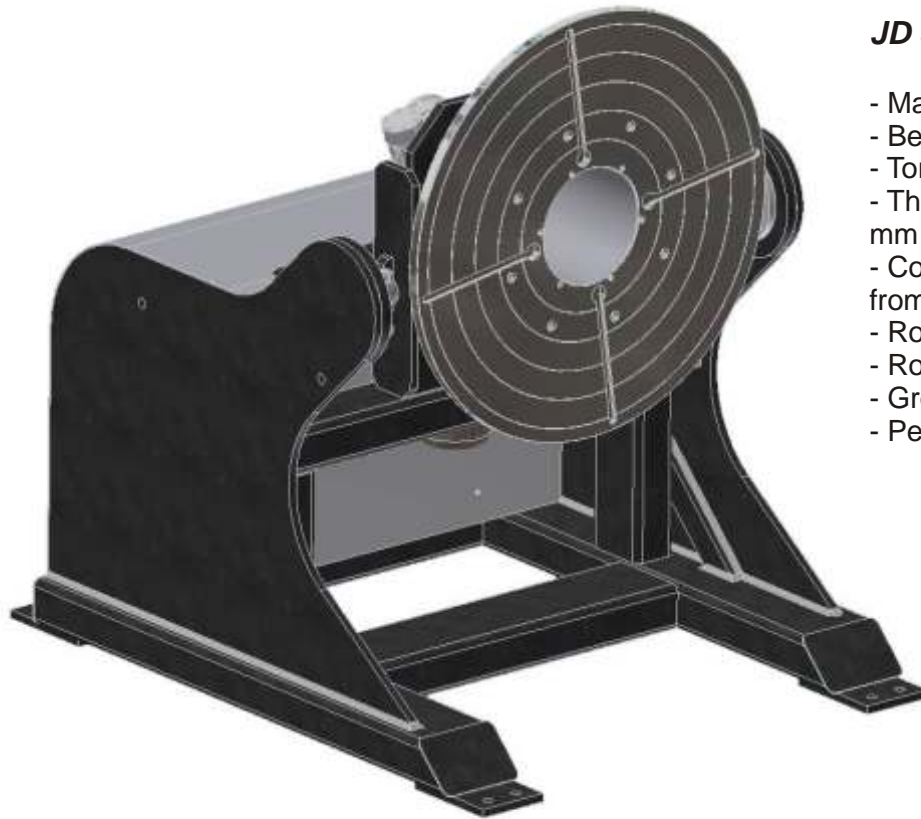
I Power manipulator with fixed arm on the column, in this way the arm height can be adjusted. On the arm there's a motorized carriage with a motorized slide: both driven by our seam tracker. This machine is used in the trains panel line welding process.



**JD 1-100 - Positioner with thru-hole  
Ø 100 mm**

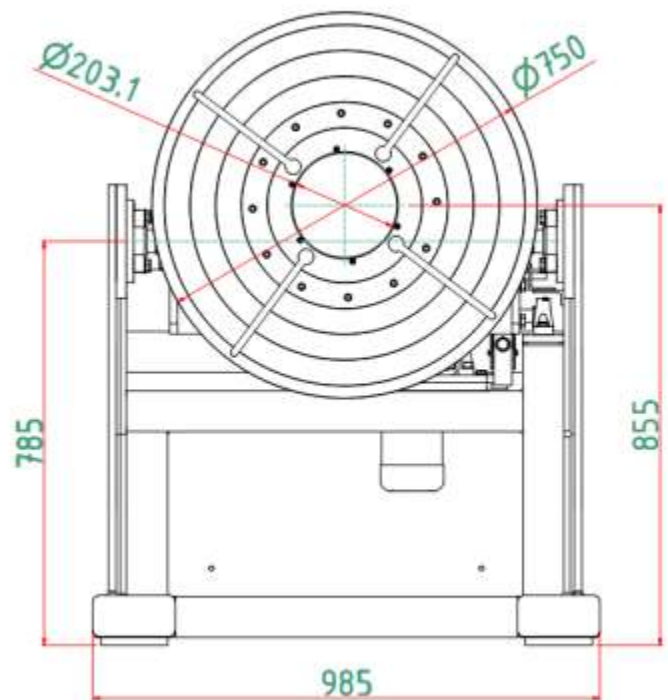
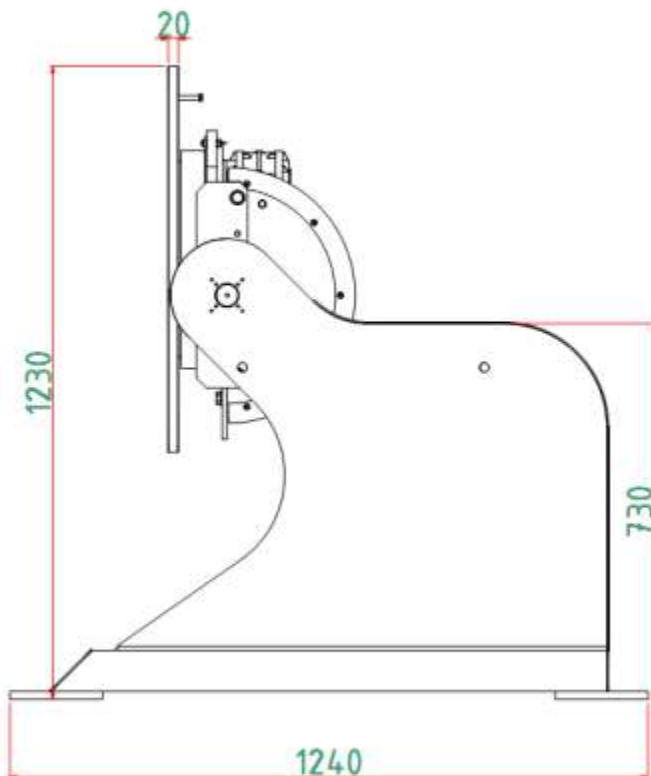
- Max load: 100 Kg
- Bending moment 20 Kgm
- Torque 8 Kgm
- Thru-hole Ø100 mm, on table Ø350 mm with 3 radial slot at 120°
- Continuous manual inclination with hand-wheel from 0 to -135°
- Dc motor with tako with adjustable speed from 0,2 to 4 rpm, other on demand
- Grounding 400 Amp
- Pendant or foot switch





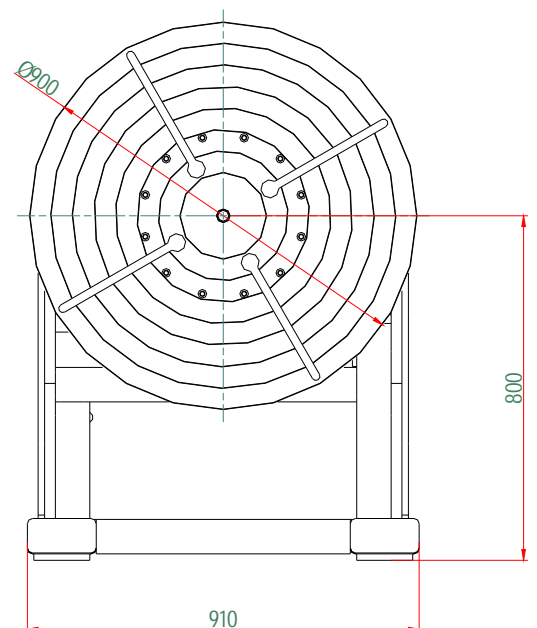
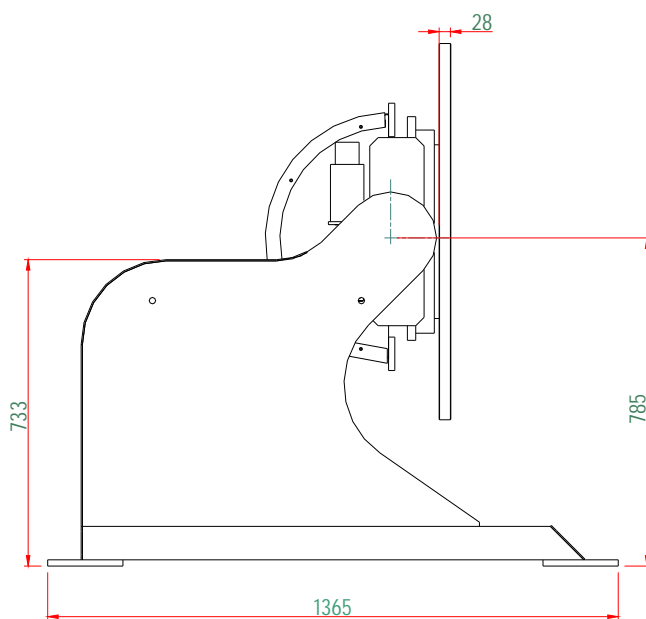
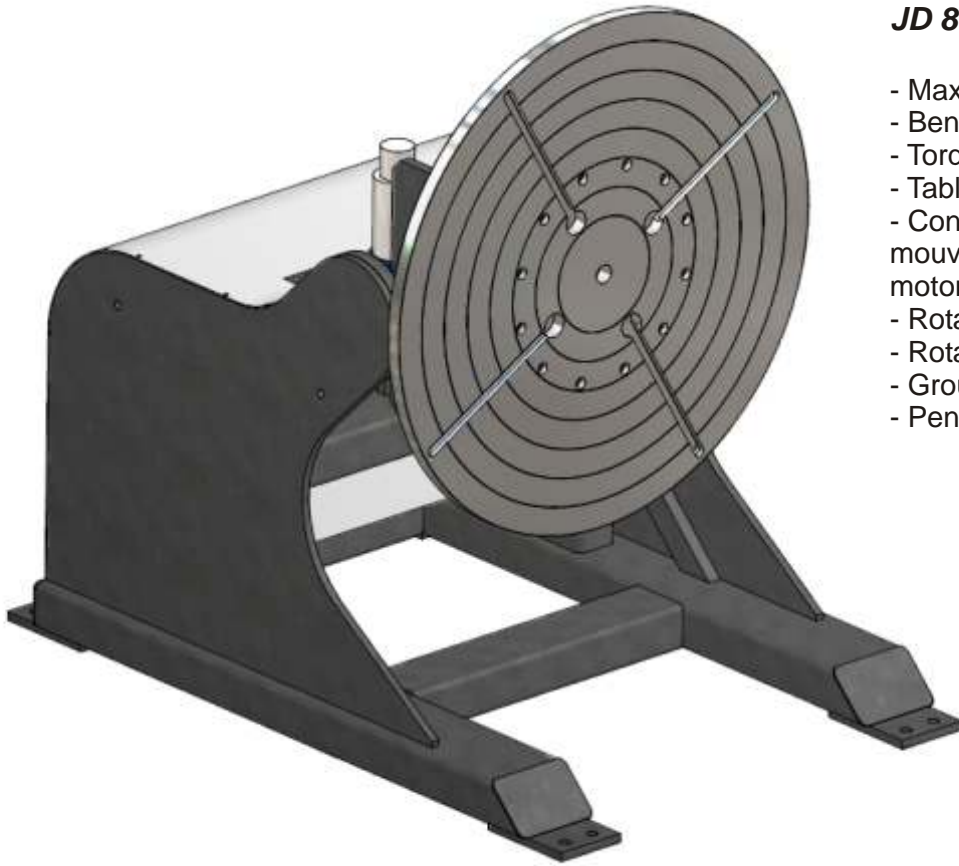
**JD 5 - Positioner Joda 5**

- Max load: 500 Kg
- Bending moment: 200 Kgm
- Torque: 100 Kgm
- Thru-hole Ø200 mm, on table Ø750 mm with 4 radial slot
- Continuous motorized tilting movement from 0 to -135° with AC motor
- Rotation with brushless motor
- Rotation speed from 0,1 to 2 rpm
- Grounding 400 Amp
- Pendant with 7 mt cable



**JD 8 - Positioner Joda 8**

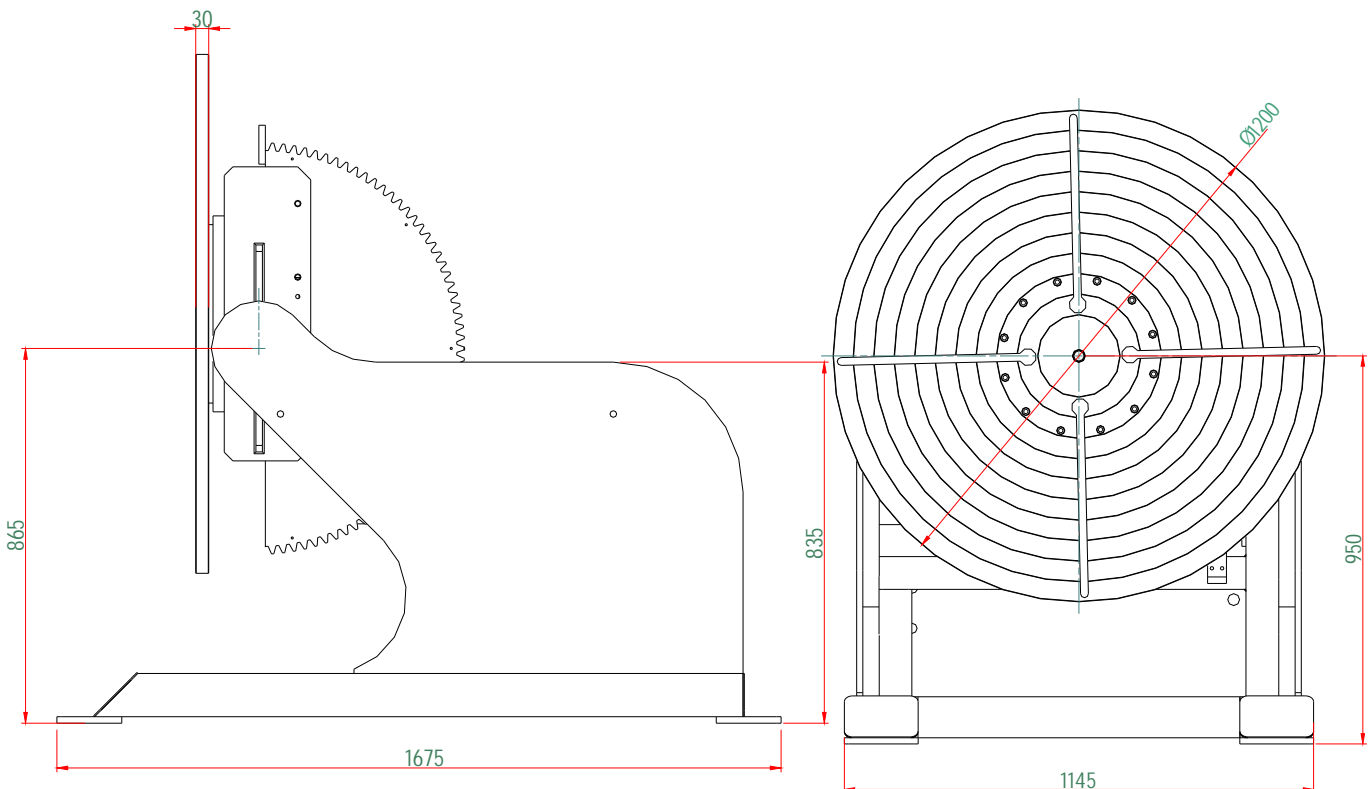
- Max load: 800 Kg
- Bending moment: 310 Kgm
- Torque: 124 Kgm
- Table Ø900 mm with 4 radial slot
- Continuous motorized tilting movement from 0 to -135° with AC motor
- Rotation with brushless motor
- Rotation speed from 0,1 to 1,3 rpm
- Grounding 400 Amp
- Pendant with 7 mt cable

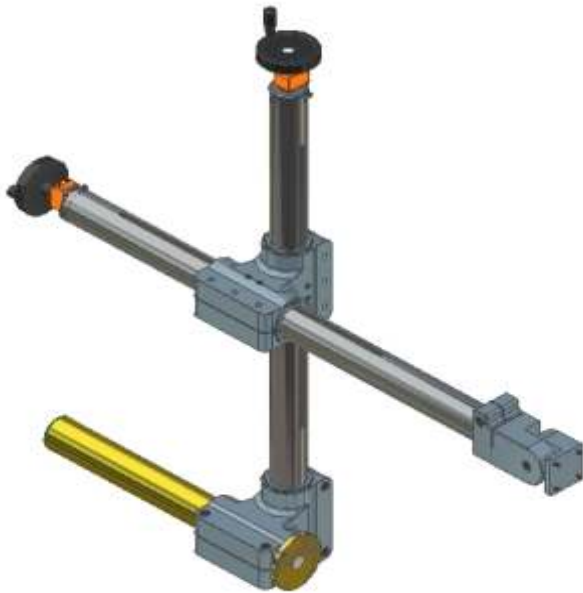




**JD 20 - Positioner Joda 20**

- Max load 2000 Kg
- Bending moment: 510 Kgm
- Torque: 200 Kgm
- Table Ø1200 mm with 4 radial slot
- Continuous motorized tilting movement from 0 to -135° with AC motor + brake
- Rotation with AC motor controlled by inverter
- Rotation speed from 0,05 to 1 rpm
- Grounding 400 Amp
- Pendant with 7 mt cable



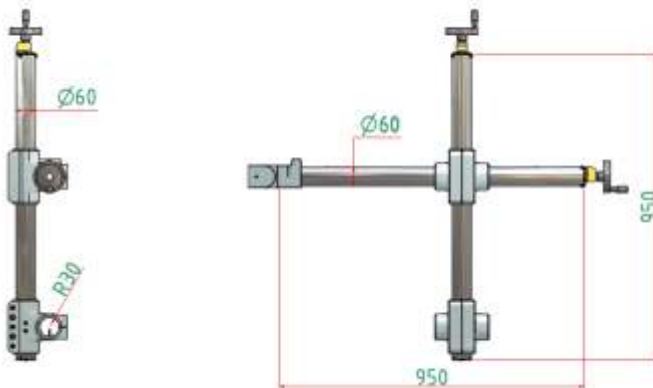
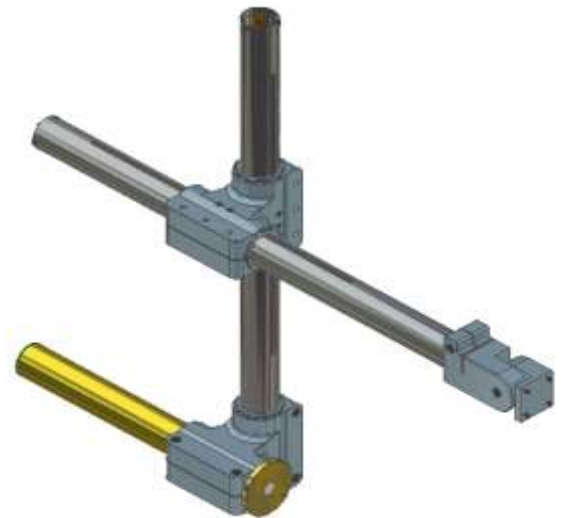


**JDBV Torch holder arm with handle movement**

- 2 clamps made in aluminium cast machined
- horizontal tube  $\text{Ø}60 \times 500\text{mm}$  for attaching on a flange placed on all our turning tables
- Vertical tube  $\text{Ø}60 \times 900\text{mm}$  and horizontal tube  $\text{Ø}60 \times 600$  with internal trapezoidal screw to move with a handwheel
- Clamps with 2 axis possibility movement to fix manual, motorized or pneumatic slides

**JDBB Torch holder arm without handbill**

- 2 clamps made in Aluminum cast machined
- horizontal tube  $\text{Ø}60 \times 500\text{mm}$  for attaching on a flange placed on all our turning tables
- Vertical tube  $\text{Ø}60 \times 900\text{mm}$  horizontal tube  $\text{Ø}60 \times 600$
- Clamps with 2 axis possibility movement to fix manual, motorized or pneumatic slides



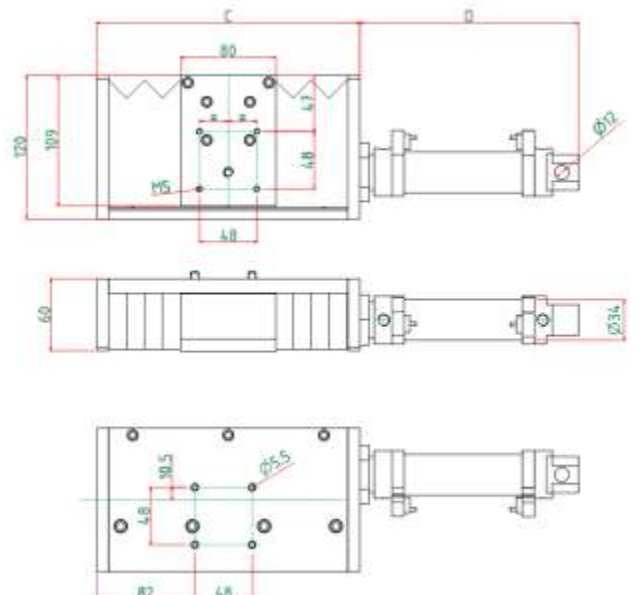
**JDPNEUMO Pneumatic slide for torch holder arm**

- Aluminum machined structure
- Inductive limit switch
- One linear ball bearing guide
- protection bellows
- Pneumatic circuit to place into the positioner, consisting of pressure reduction valve, manometer and electro-valve

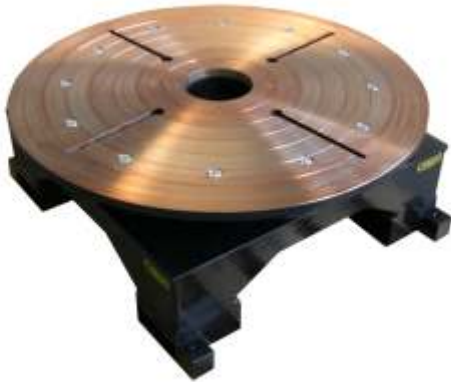


**JDPNEUMO80** with 80 mm of stroke  
C=220 mm D=183 mm

**JDPNEUMO180** with 180 mm of stroke  
C=320 mm D=283 mm



*Joda Plano series includes our vertical rotation axis positioner. We have 3 standard models but We can build all variations on demand*



- JODAPLANO25** Turning table with nominal load 2500 kg.
- Structure in welded, machined and painted iron.
  - Table Ø 900mm with thru-hole and with 4 radial slot.
  - Earthing 400A.
  - AC gear motor driven by inverter. Control panel with 230V 50-60 hz (380 hz on demand).
  - Remote control with speed adjustment and clockwise - anticlockwise selection.

- JODAPLANO50** Turning table with nominal load 5000 kg.
- Structure in welded, machined and painted iron.
  - Table Ø 1200 mm with thru-hole and with 4 radial slot milling. Earthing 400A.
  - AC gear motor driven by inverter.
  - Control panel with 230V 50-60 hz (380 hz on demand).
  - Remote control with speed adjustment and clockwise - anticlockwise selection.



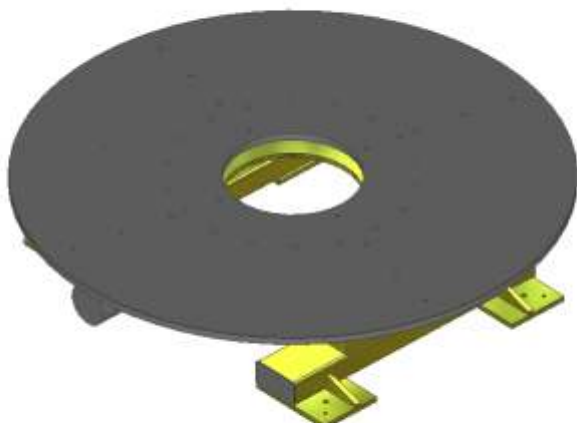
- 2' \$ 3/ \$12



**JODA PLANO 50**  
high model



**JODA PLANO 50** with  
plate Ø4500 mm

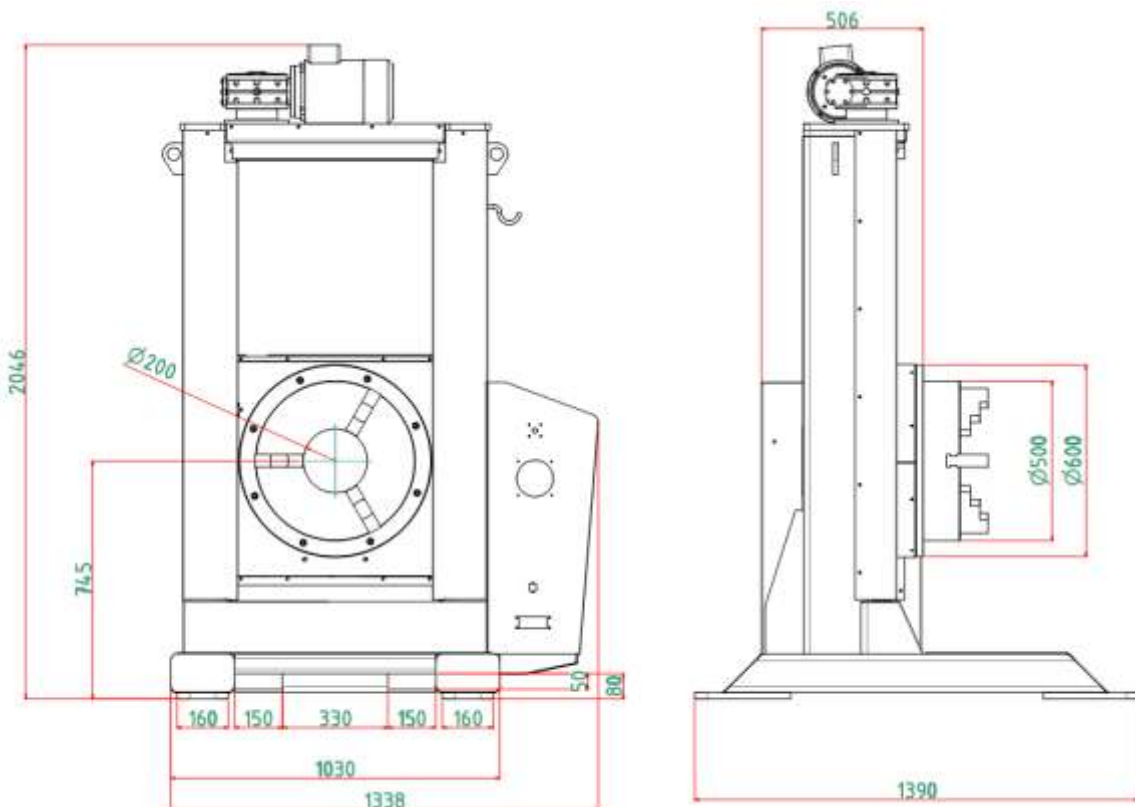


- JODAPLANO150** Turning table with nominal load 15000 kg.
- Structure in welded, machined and painted iron.
  - Table Ø 2000 with thru-hole and with 4 radial slot milling.
  - Earthing 400A.
  - AC gear motor driven by inverter.
  - Control panel with 230V 50-60 hz (380 hz on demand).
  - Remote control with speed adjustment and clockwise - anticlockwise selection.

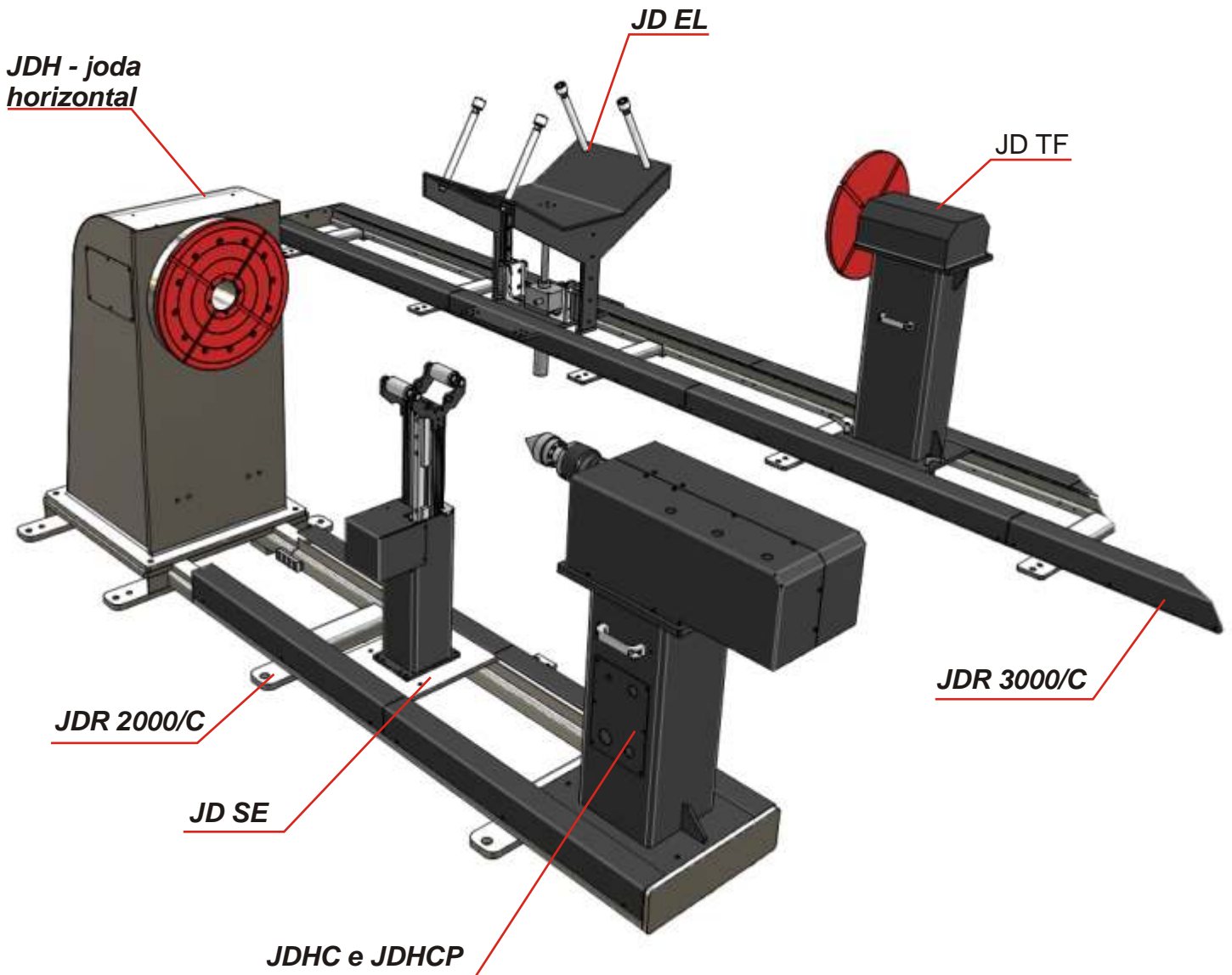


**JDHE - Positioner joda horizontal with motorized lifting axe**

- Max load capacity 1000 Kg
  - Bending moment 300 Kgm
  - Torque 100 Kgm
  - Manual chuck Ø500 mm, with hole 200 mm and 3 reversible jaws
  - Lifting system with motorgear, screw and antifall
- device
- Lifting speed 560 mm/min
  - Protection bellows
  - Brushless motor with encoder for rotation
  - Speed rotation from 0,25 rpm to 10 rpm. other on demand
  - Grounding 400 Amp
  - Electrical power 4,5 Kwa







**JODA HORIZONTAL:**

Our horizontal rotation axis positioner has the follow features:

- Table Ø500mm with 4 milling slot every 90°, thru-hole Ø100
- Nominal load 400 kg
- Bending moment 100 kgm
- Torque 65 kgm
- Earthing 400A
- Iron carpentry machined and painted
- Brushless gear motor with encoder
- Rotation speed range: 0.1-2 rpm (others on demand)
- Control panel with power line 230 V 50-60 Hz
- Standard cycle: start delay, overlap, return to 0, TIG-MIG selection

**JDR3000C or JDR2000C**

Rail useful to the sliding and positioning of equipments, made with a robust iron structure machined and painted, ball bearing linear guides, carters and feet for mounting and leveling.

(Standard stroke 3000 or 2000 mm)

**JDSE** Manually lifting support thanks a simple handbill and sliding on JDR rail. It's also possible to lock his position and choose the right form of the rolling elements more suitable.

**JDHC and JDHCP**

Pneumatic tailstock in two version: 400 kg (JDHC) or 1000kg (JDHCP). Also that sliding and locking on the rail.

**JDTF**

Idle positioner. It can be fixed or pneumatically released. Sliding and locking on the rail.

**JD EL**

Lifting support with pneumatic or screw drive. The position can be adjusted manually or controlled by our control panel. Also that sliding and locking on the rail.

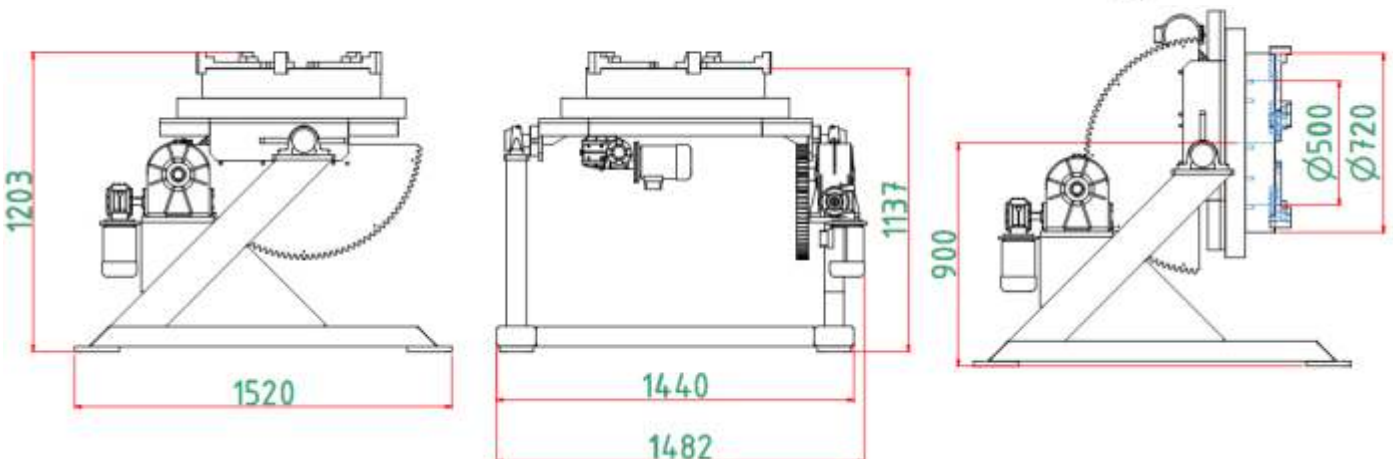


**JD BF JODA BI-FACE**

- Positioner with tilting possibility 180° (from -90° to + 90°).
- Nominal load 300 kg.
- Structure in welded, machined and painted iron.
- Table Ø 750, thru-hole Ø200, 4 radial slot milling.
- Earthing 400A.
- AC gear motor driven by inverter for rotation and inclination.
- Speed rotation from 0,1 to 2 rpm, other on demand. Inclination speed: 180° in 30".
- Flection moment: 120 Kgm
- Torque: 100 Kgm
- Cycle with: start delay, overlap, return to 0, TIG-MIG selection and wire feeder contact.

**JD10S500 JODA**

- Positioner with tilting possibility 135°.
- Nominal load 1000 kg.
- Structure in welded, machined and painted iron.
- Manual chuck with clamping diameter 500 mm thanks to 5 jaws.
- Earthing 400A.
- AC gear motor driven by inverter for rotation and inclination.
- Speed rotation from 0,1 to 2 rpm, other on demand.
- Bending moment: 200 Kgm
- Torque: 100 Kgm
- Cycle with: start delay, overlap, return to 0, TIG-MIG selection.



### CHK-ST Self centering chuck with open hole

3 reversible jaws

4 models:

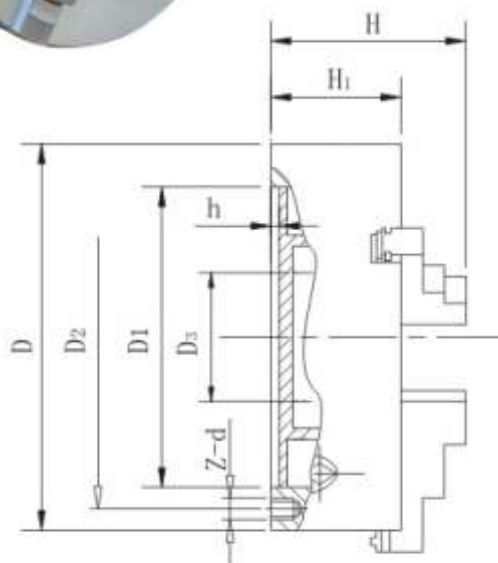
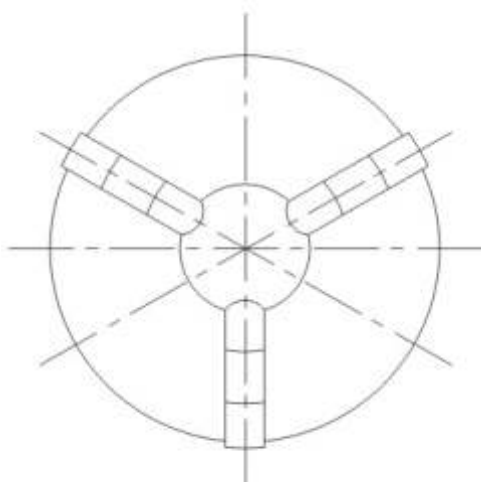
- Ø 200 mm with monoblock jaws

With master and top jaws, screwed

- Ø 315 mm

- Ø 400 mm

- Ø 500 mm



#### Dimensions:

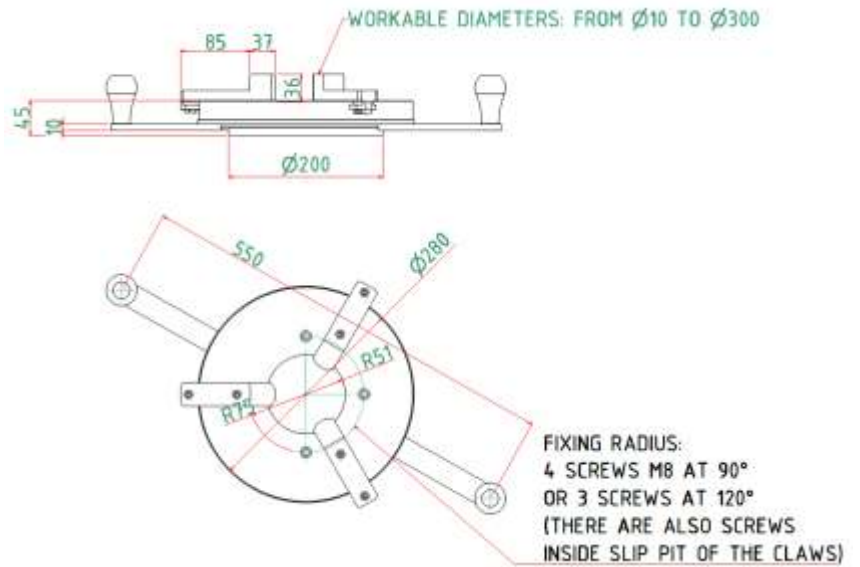
#### CHK-ST 200\*

#### CHK-ST 315A

#### CHK-ST 400A CHK-ST 500A

D	200	315	400	500
D1	165	260	340	440
D2	180	285	368	465
D3	65	100	130	200
h	5	6	6	6
Z-d	3-M10	3-M16	3-M16	3-M16
H	109	142.5	155.5	160
H1	60	90	100	115
Peso	19Kg	41 kg	71Kg	118 Kg

\* in the model 200 the jaws are one piece, in the others models the jaws are in 2 pcs

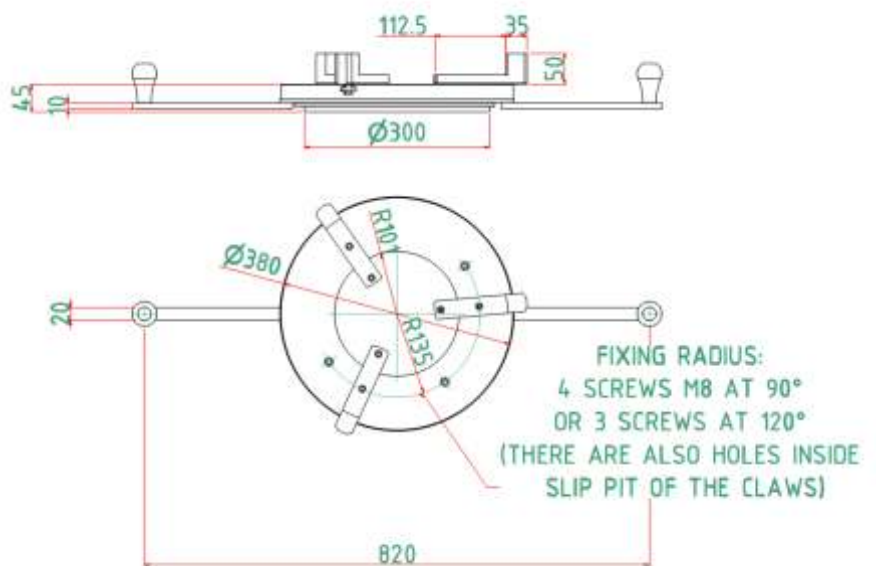


**Two models:**

- CHK-100:** bore Ø 100 mm
- CHK-200:** bore Ø 200 mm

**Main features:**

- Fully machined steel C40
- Quick action with lever, without key
- Low profile
- Bore: Ø100 or 200 mm
- Low weight
- Reversible jaws
- Fixing bolts at 90° or 120°





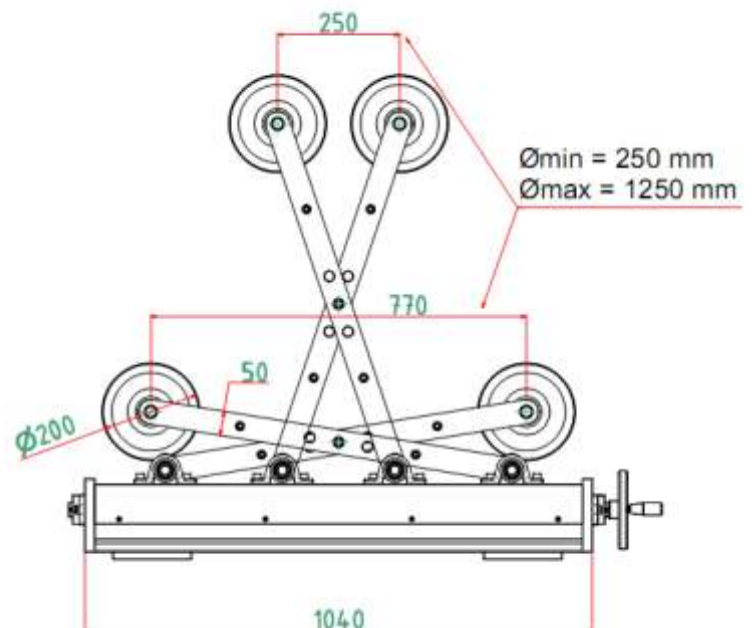
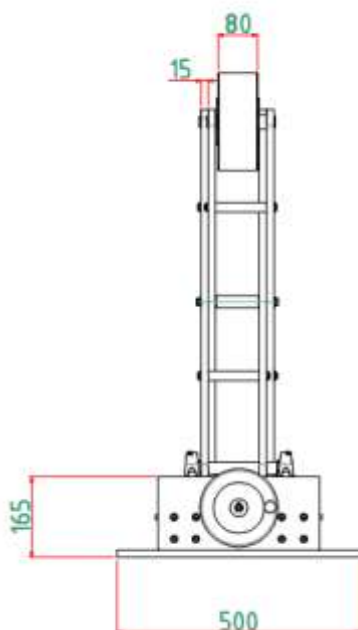
**IPTRE is a idle and lifting rotator**

Simple and cheap system to rotate pipe. Also useful for supporting pipe in combination with a turning table.



**Technical data:**

Maximum load capacity: 1000 kg  
 Range pipe Ø: from 250 to 1250 mm  
 2 wheels made in vulkollan  
 Lifting/lowering obtained by a right/left screw and a handwheel



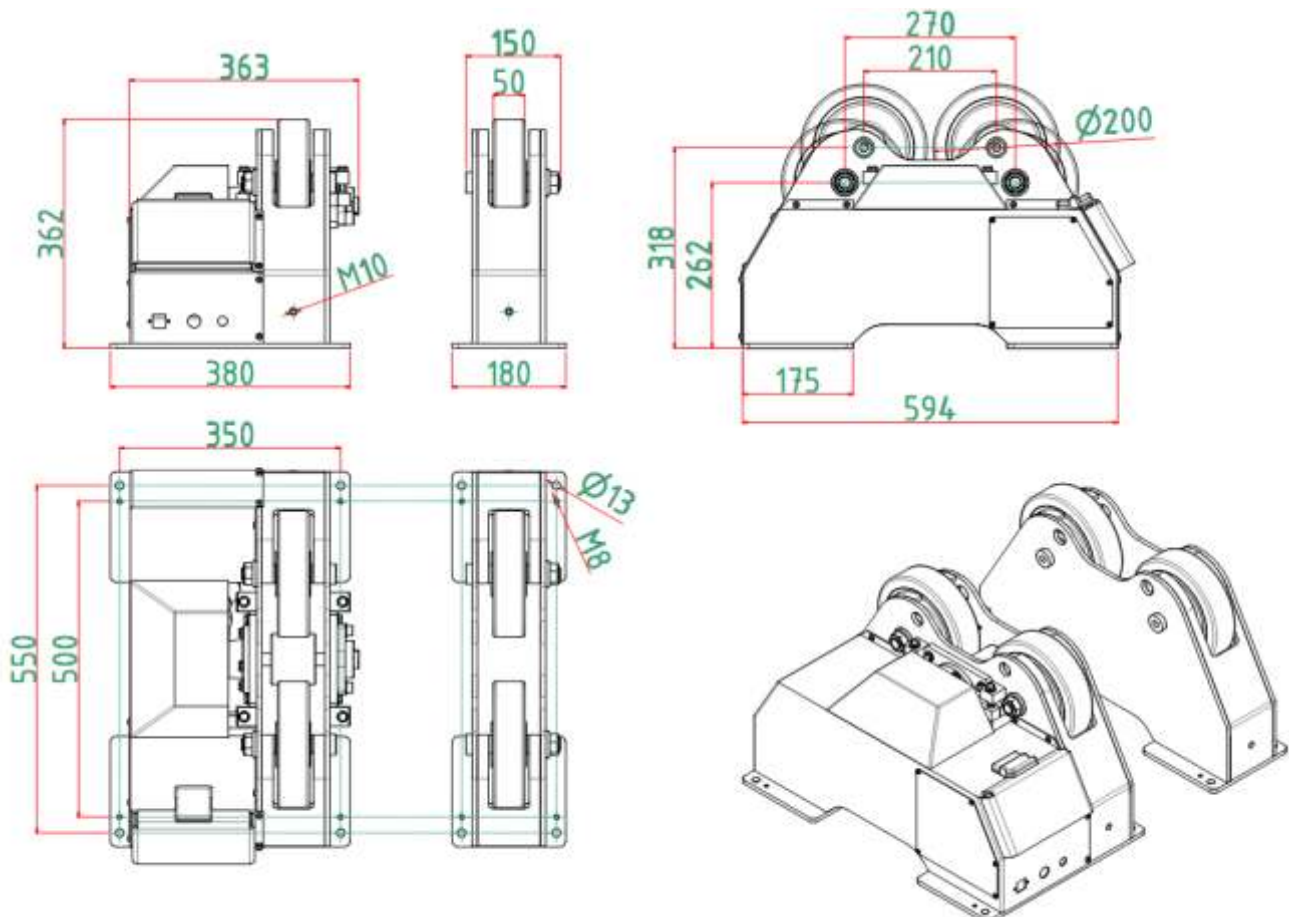


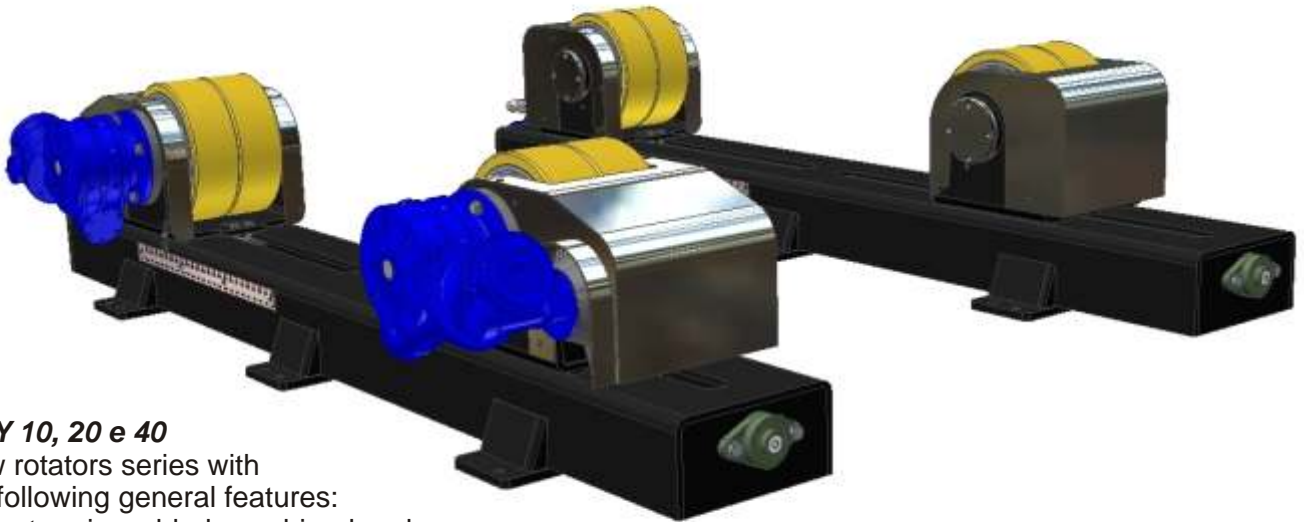
**OBY1** is a rotator, consisting in a motorized part and an idle one.

The control panel is integrated in the motorized part and it can adjust the following functions:

- clockwise and anti-clockwise rotation directions;
- 2 t / 4 t selector;
- rotation speed range: 160 – 1600 mm/mm;
- diameters range with max load: 20 – 800 mm;

Optionals: pedal with clockwise, anticlockwise function;  
remote control

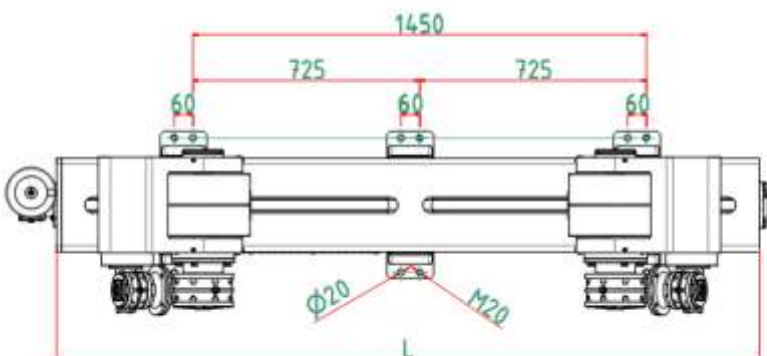
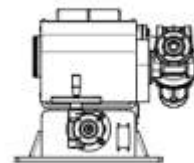
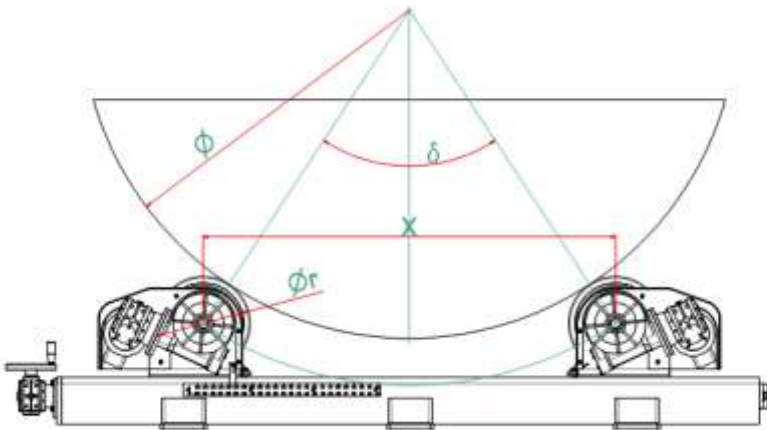



**OBY 10, 20 e 40**

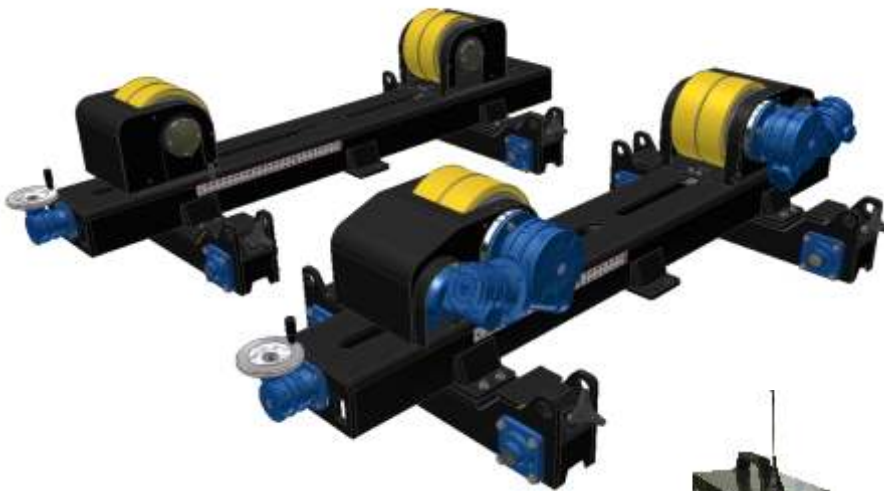
New rotators series with

the following general features:

- structure in welded, machined and painted iron, more compact thanks to the new design;
- trapezoidal left - right screw to adjust the wheels distance simultaneously;
- motorized part with 2 AC gear motor self -ventilated to ensure constant rotation also at low speed and synchronized by inverter;
- polyurethane wheels or vulcanized rubber with a core of cast iron;
- control panel separately and remote control with the possibility to adjust speed, direction of rotation and emergency stop.



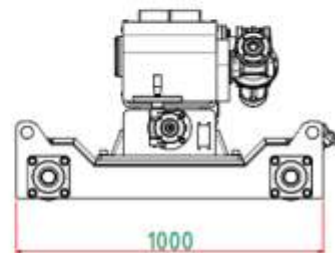
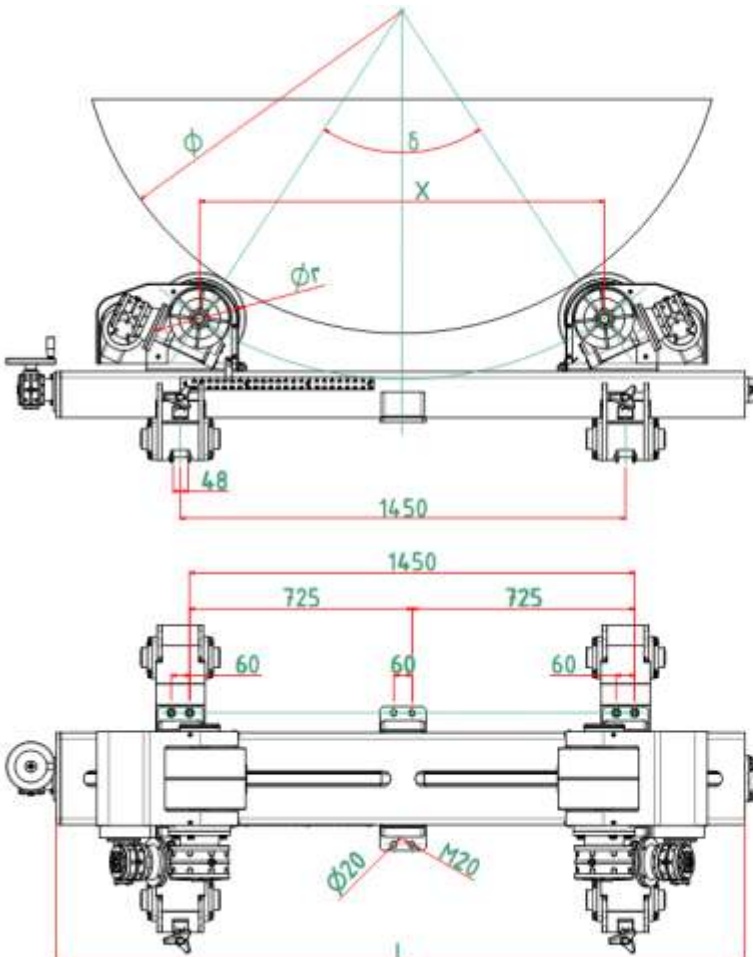
 BY	<b>OBY 10</b>	<b>OBY 20</b>	<b>OBY 40</b>
<b>L</b>	2250	2700	3000
<b>Ør</b>	300	350	400
<b>Ø</b>	300-5000	350-5500	600-6000
<b>X</b>	1550	1800	2000
<b>d</b>	34°- 83°	36°- 70°	36°- 73°



### Version with idle undercarriage

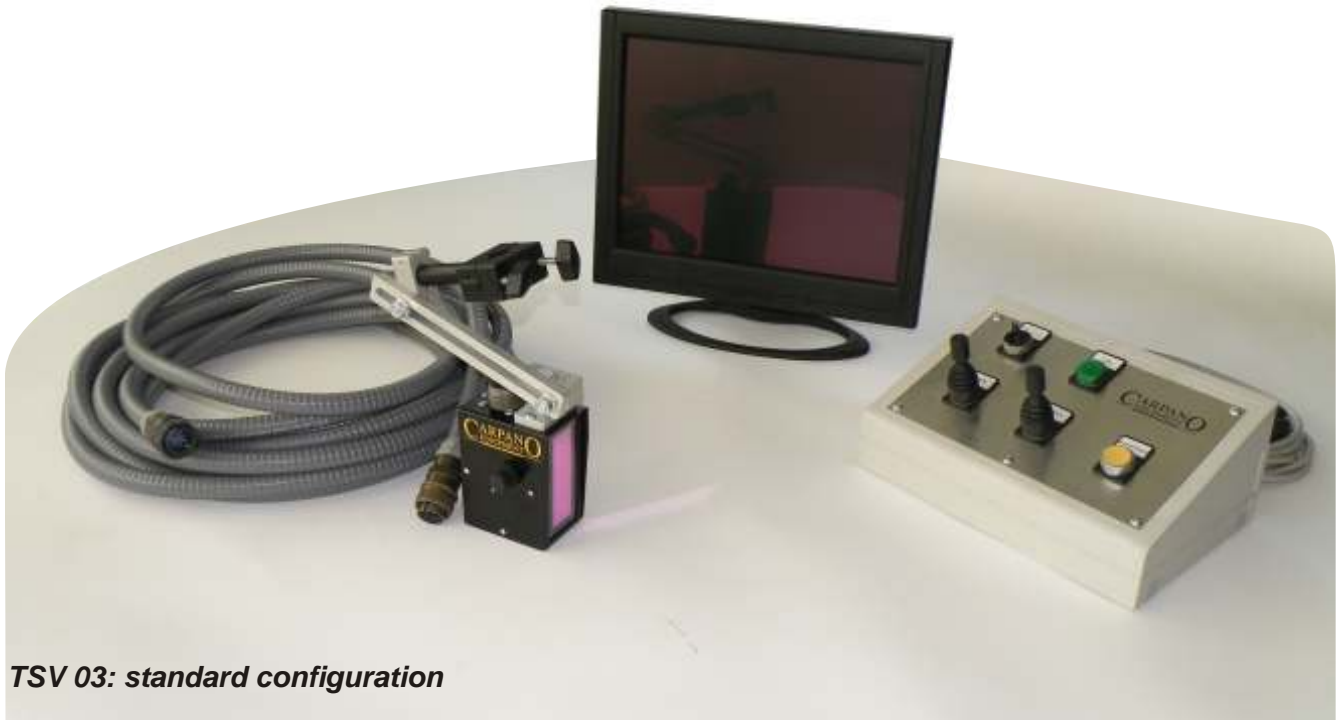
In this configuration OBY rotators is fixed on 2 idle undercarriages to allow to adjust the position by moving it on a rail. It can lock in position the elements thanks a manually operated brake.

On demand it's available also a wireless remote control. the pictures show the control box equipped with transmission aerial. The remote control includes an additional battery and a charger.



OBY	OBY 10	OBY 20	OBY 40
L	2250	2700	3000
$\phi r$	300	350	400
$\phi$	300-5000	350-5500	600-6000
X	1550	1800	2000
d	34° - 83°	36° - 70°	36° - 73°





**TSV 03: standard configuration**

- Camera with autodarkening shield, without for the SAW version
  - LCD Color Monitor 15"
  - Control box
  - Control box-camera cable of 10 mt
  - Monitor-control box cable of 1 mt
- Options:
- Monitor with different dimensions or B/W
  - Camera-console cable until 40 mt

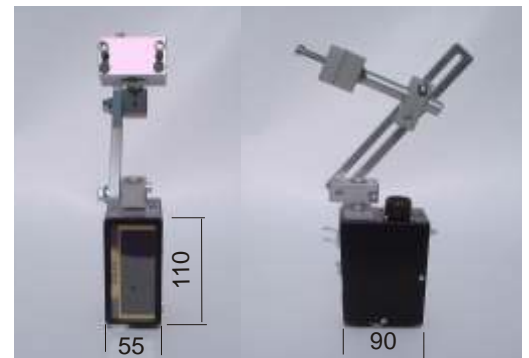


**Video cable**, 1 mt for the connection  
Monitor-console



**Control console**, with the following adjustment:

- Autofocus
- Zoom in-out
- Manual focus



**Camera:**

The camera is very compact. The box is made in aluminium, like the universal support

**Frequently applications :**

- Tank, vessel welding
- Internal pipe welding
- On seamer welding

**The advantages:**

- Observe the welding in difficult position
- To help and to move it from difficult positions
- To control with just one operator more torch
- To improve the positining precision thanks to the high tele



**Control cable**, standard length 10 mt, on demand till 40 mt



The vertical seamer is designed to close, with buttwelding, flat sheet metal or rolled with more Ø500 mm. With this model, it's possible to weld thicknesses from 0,8 up to 3 mm without tack . For thicknesses greater (3 to 10 mm) it need to be tacked.

The machine is available in the stroke 1550 mm version or with stroke 2050 mm.

Thanks to the robust structure of the mandrel, it doesn't need to install an AVC sensor.

Naturally the mandrel is lifted thanks to a gear motor that allows to put out the rolls after welding.



Bench in welded, machined and painted sheet and iron profile on which there are:

- mandrel to support the pieces on which it's fixed the sheet support, in the welding zone, made in a special copper alloy;
- pneumatic system to lock the sheet flap on mandrel, driven by independent pedals;
- beam to move the carriage where it's located the welding head, driven by DC gear motor with rack and pinion transmission;
- the motorized carriage is in aluminum and it works on linear ball bearing system to have high precision during the movement. On demand wire feeder support;
- panel control according to CEI legislation;
- automatic cycle managed by 2 axes - CNC with 5" touch screen;
- pneumatic slide to release the torch after welding;
- cross slide (stroke 80 mm) to have a micro regulation of the torch;
- pneumatic system to adjust the right center of the flap (centering);
- through the sheet support there is the passage of gas to create a protective environments also below of the sheet;
- cooling circuit of the sheet support. The cooling system isn't included.

Normal working cycle:

- positioning of the left sheet flap against the centering system;
- action by the combs to lock pneumatically the left flap thanks to the pedal command;
- positioning of the right flap and pneumatically locking thanks to the other pedal, consequently lifting of the centering system;
- START AUTOMATIC CYCLE:
  - carriage from 0 point to welding start;
  - drop of the pneumatic slide and arc ignition;
  - start delay and eventually cool wire start;
  - welding up to programmed point;
  - extinguishing arc and post gas time, before releasing of the pneumatic slide
  - releasing of the pneumatic slide and quick return to 0 point.

