



CARPANO
EQUIPMENT



WELDING AUTOMATION
book



Since 1992, CARPANO 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.

www.carpanoequipment.com



CARPANO
EQUIPMENT

WELDING AUTOMATION

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contents

standard poduction

Motorized carriages	pag. 4
Manual slides and torch holder	pag.12
Motorized slides	pag.17
Cold wire feeder	pag.19
Oscillators	pag.20
AVC arc lenght control	pag.22
Seam tracker	pag.23
Manipulatos, beam, gantry	pag.27
Rotating tables	pag.34
Chucks	pag.43
Rotators	pag.45
Camera	pag.49
Vertical seamer	pag.50

<i>Technological report: special machines, some exemples</i>	pag.51
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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 carriage 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



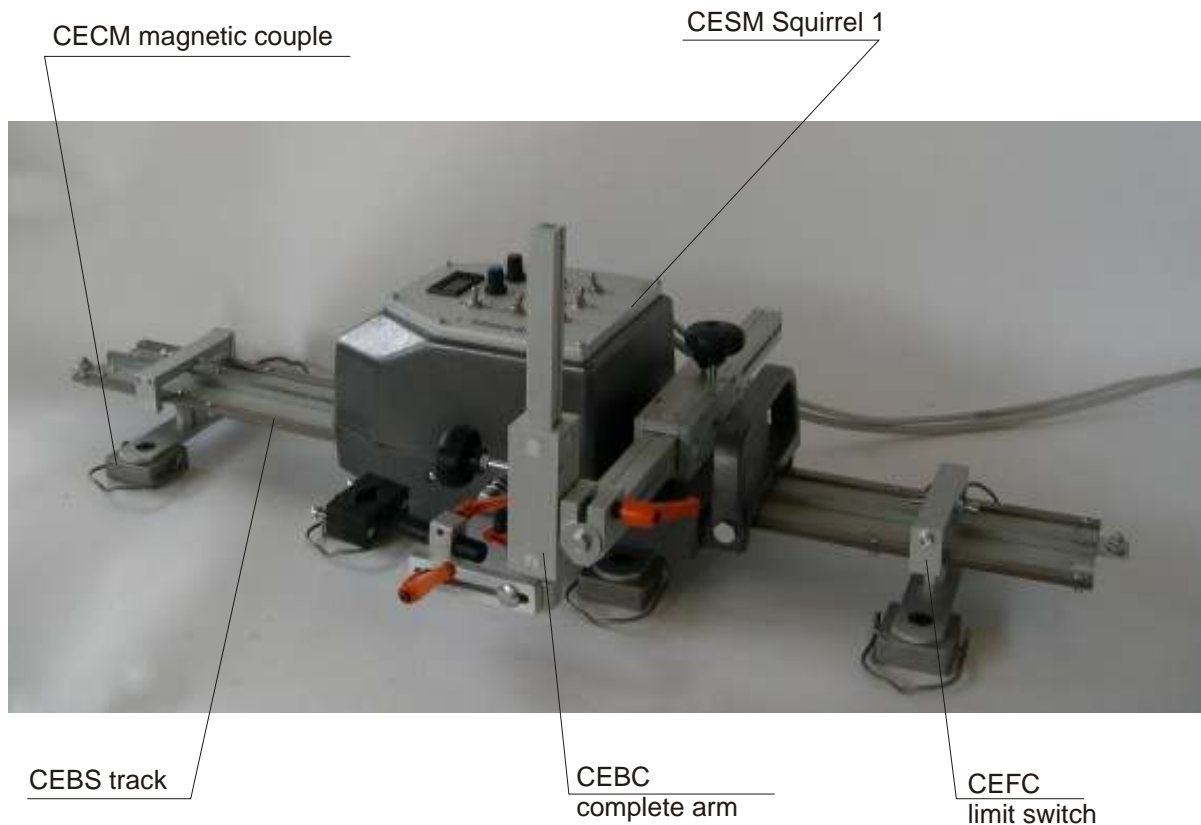
S80 - Squirrel with electronic oscillator DTE80 integrated

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

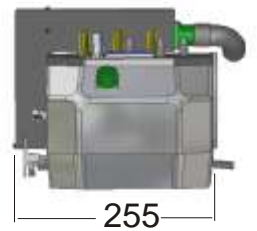
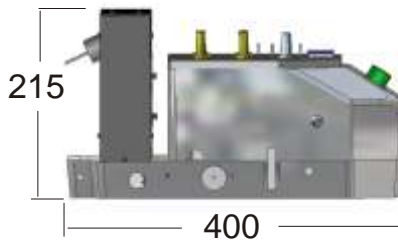
SQUIRREL: accessories



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



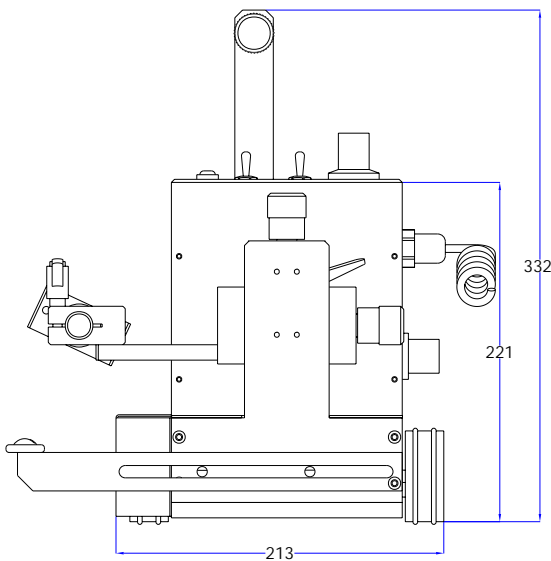
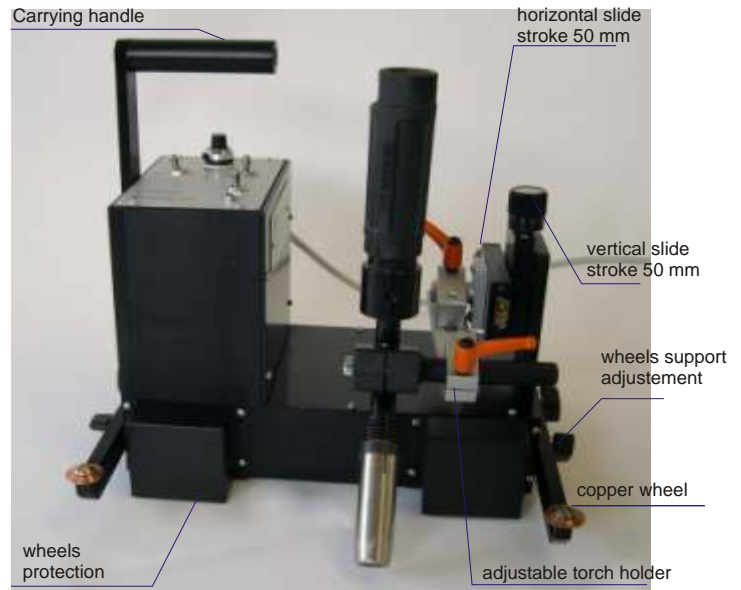
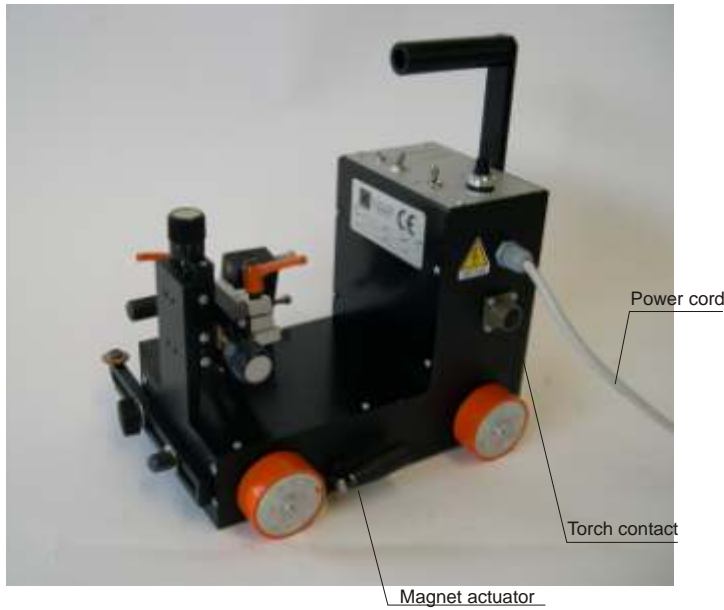
CEB30 Axis scroll with rack arm stroke 500mm complete with clamp, friction dowels, bolts and clamps for connection to other arm



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

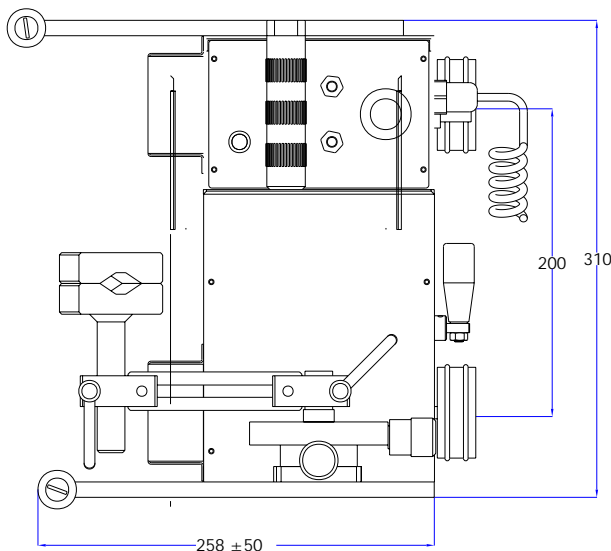


CETMA Mechanical probe to automatically adjust the position of the torch in the corner, complete with junction torch and clamp to fix to CEB30



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

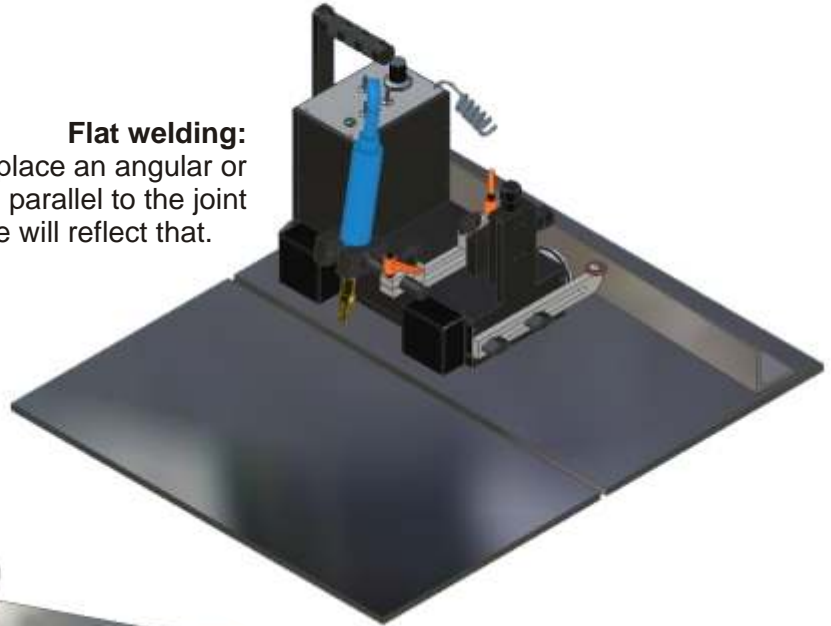
Magnet: permanent, attraction power 30 kg

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

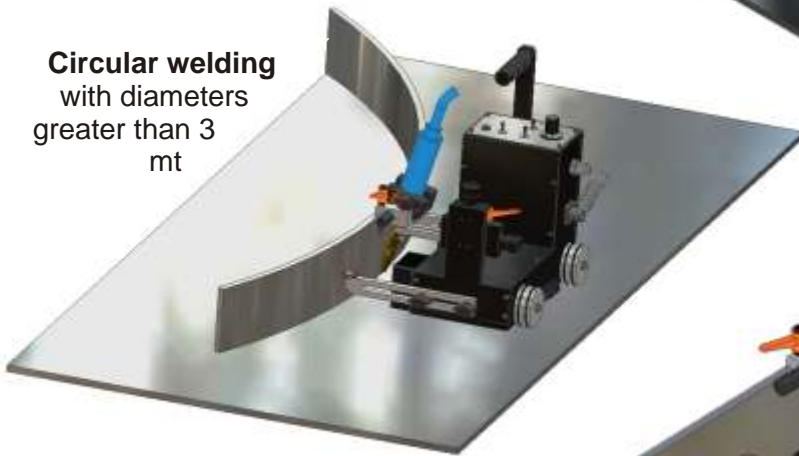
Power: 70 W

Flat welding:

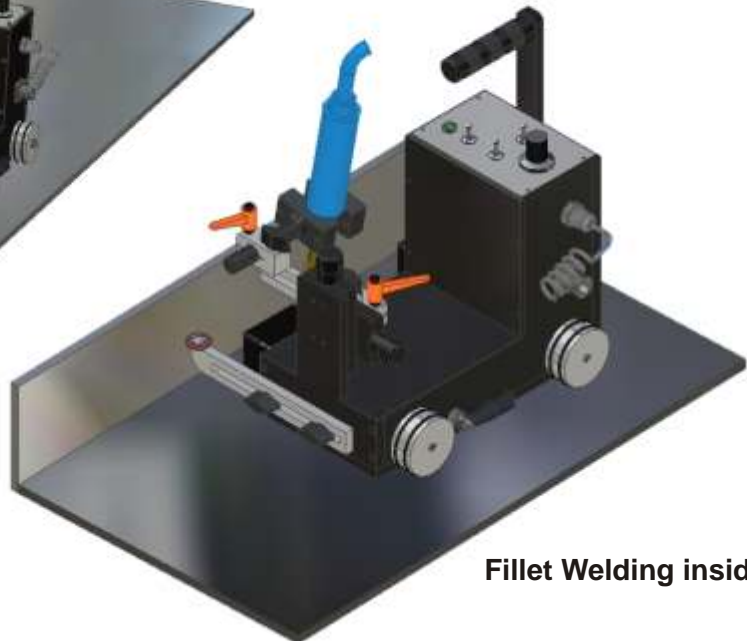
It's possible to place an angular or tubular profile parallel to the joint and the carriage will reflect that.



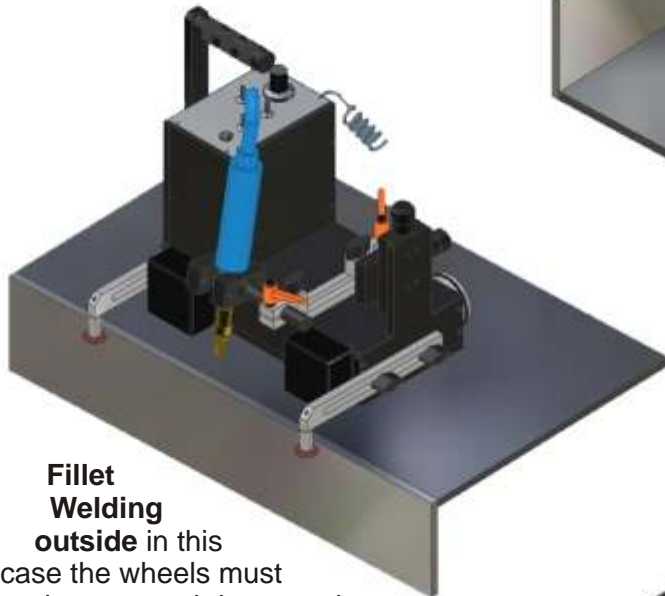
Circular welding
with diameters
greater than 3
mt



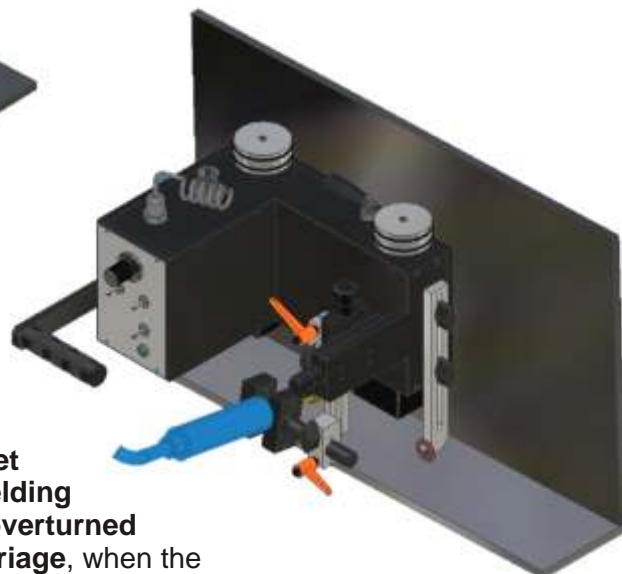
Fillet Welding inside



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



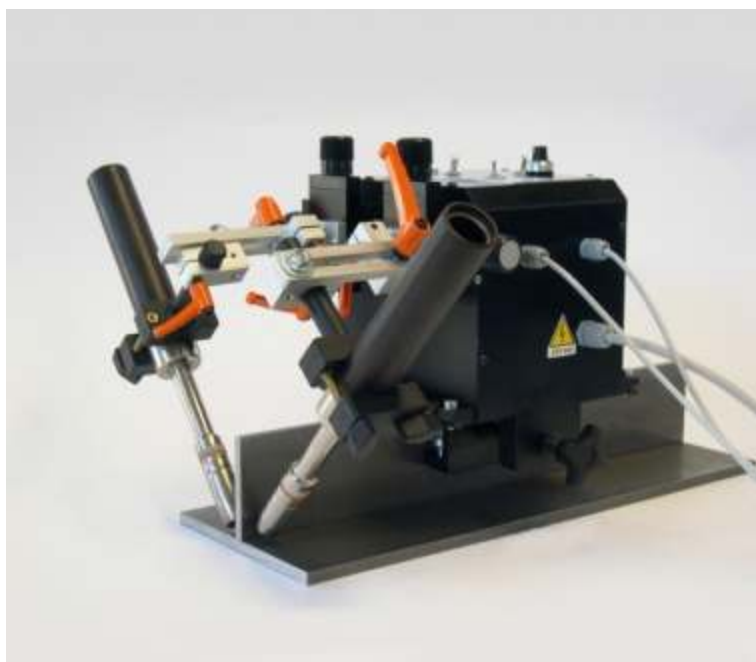
Fillet Welding with overturned carriage, when the down flat is tight.



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)

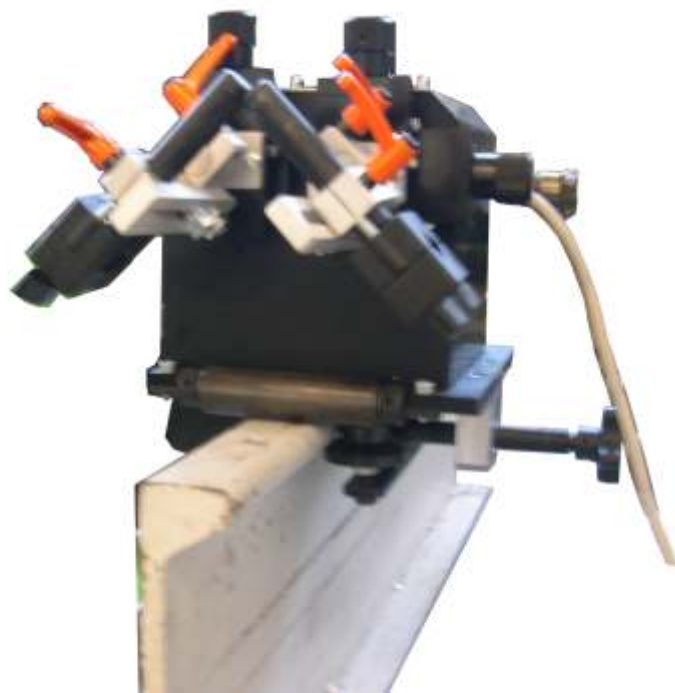
Both versions can have one or two torch holders.

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.

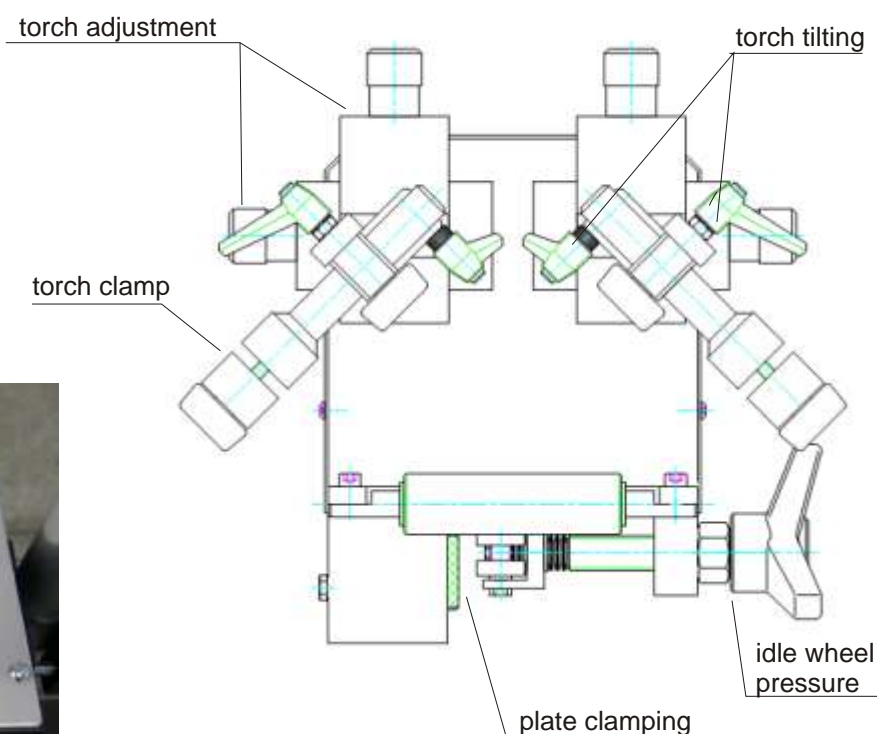


Technical data:

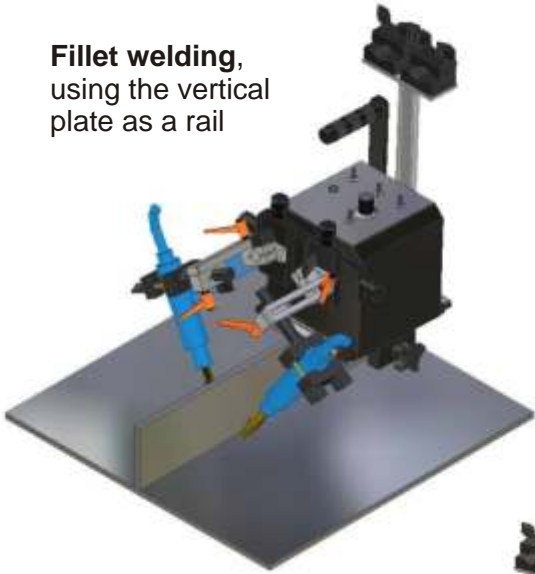
Dimensions: width 220mm - length 340mm - height 330mm
 Weight: 9.5 kg
 Speed range: from 200 to 2200 mm/min
 Motors: DC with planetary gear
 Powerline: 230 VAC 50-60 Hz
 On demand 24-48 VAC
 On demand 24-60 VDC
 Power: 70 W

Functions:

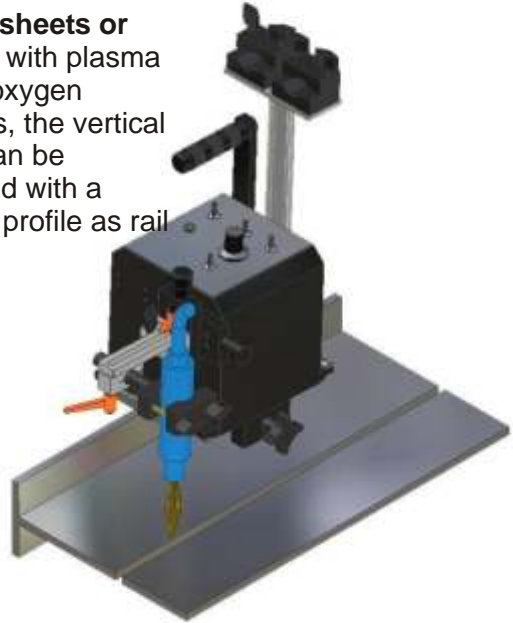
ON/OFF switch
 Forward/stop switch
 Potentiometer for speed control
 Switch welding on/off and Torch 1/2



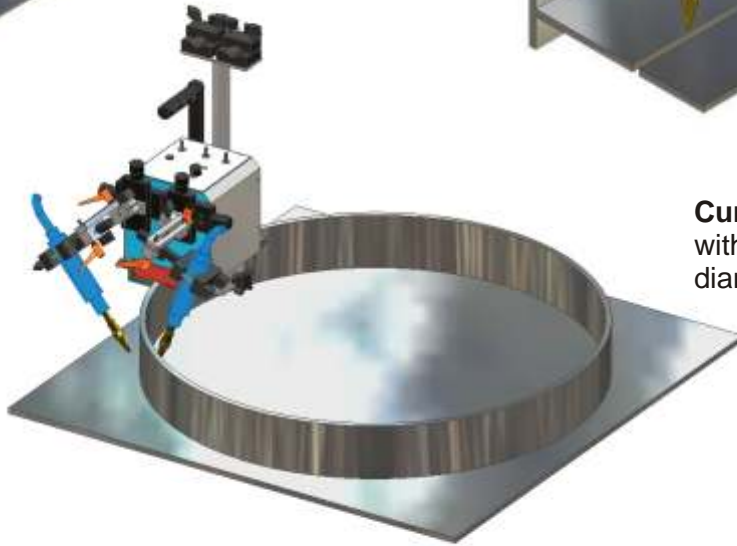
Fillet welding,
using the vertical
plate as a rail



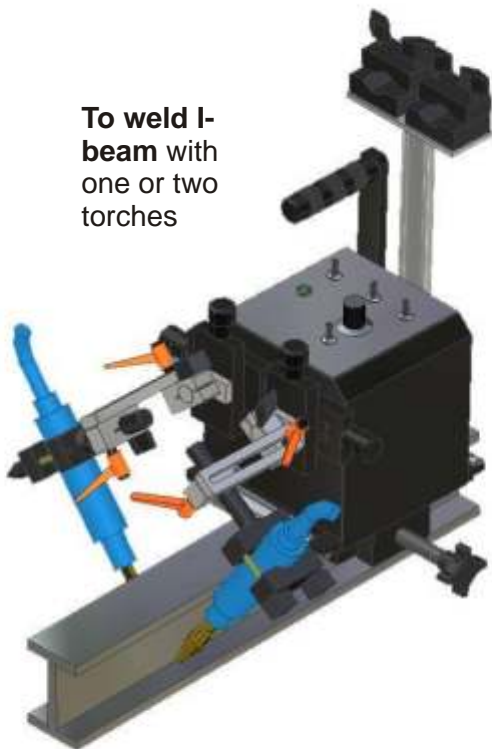
**To cut sheets or
beams with plasma
arc or oxygen
process, the vertical
plate can be
replaced with a
tubular profile as rail**



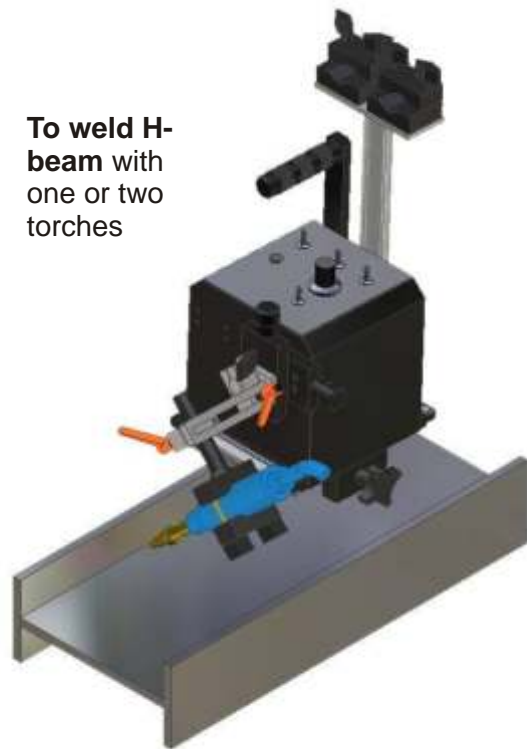
**Curved surfaces
with minimum
diameter 800 mm**

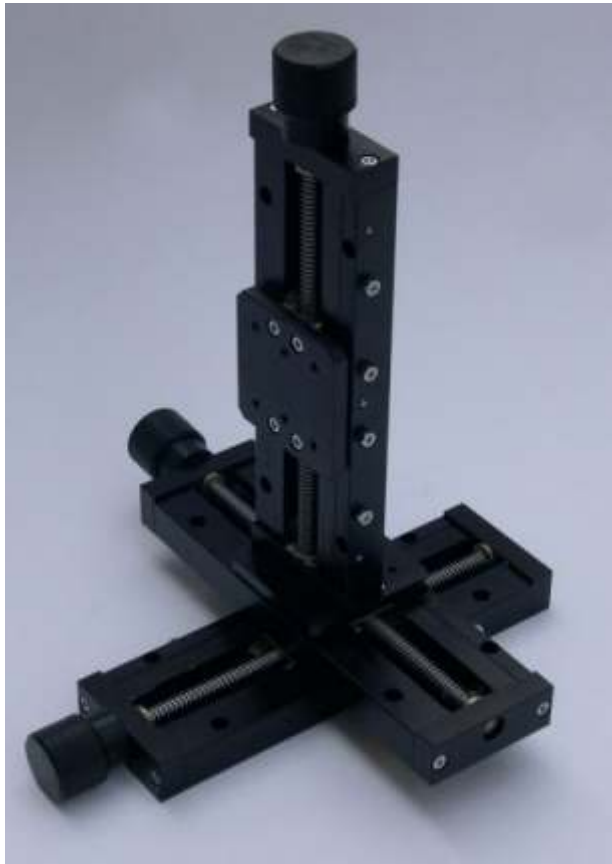
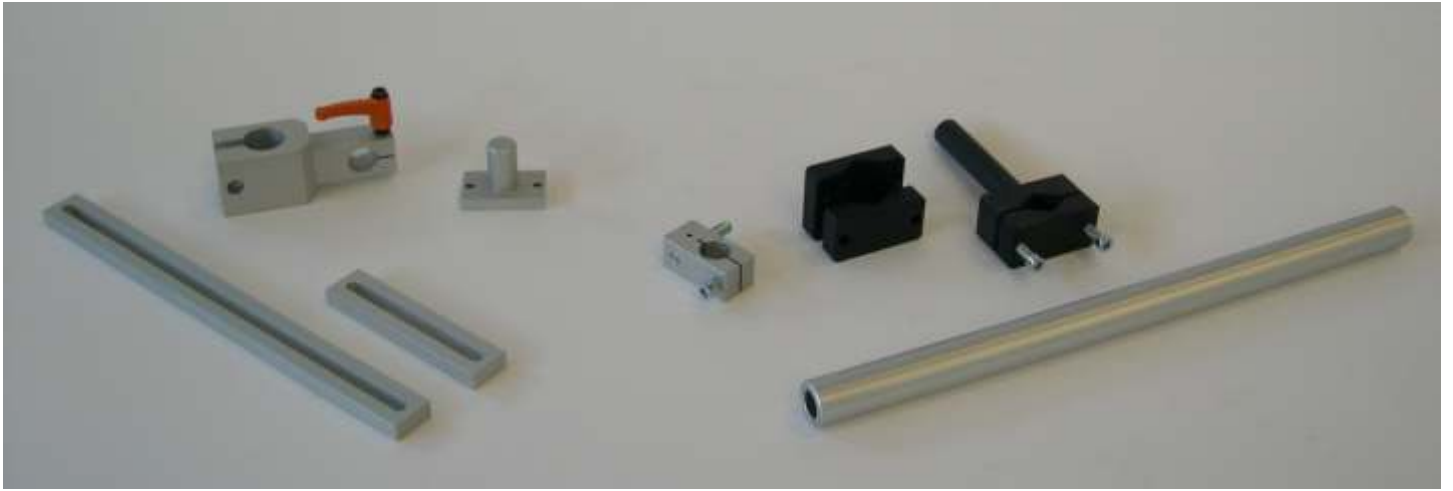


**To weld I-
beam with
one or two
torches**



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





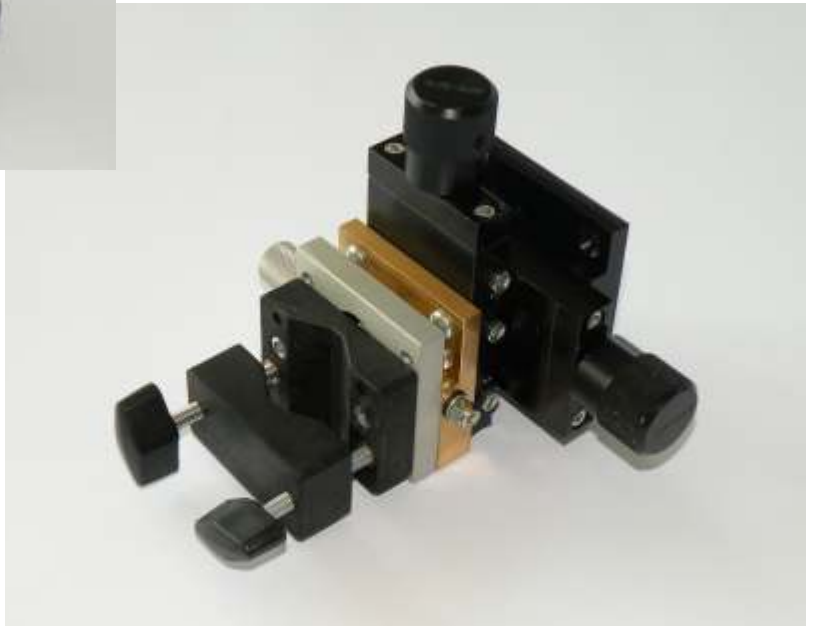


Modular system micrometer slides SM50/F

- 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



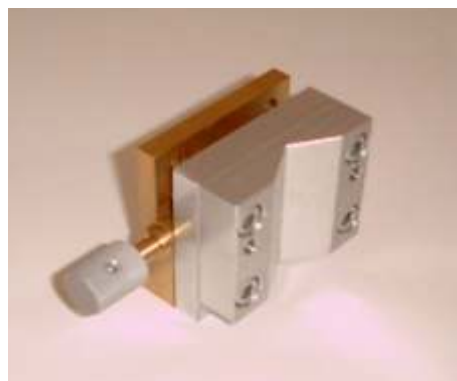
SM50/1 Micrometer slide with 50mm of stroke. Structure in machined aluminum, brass slider and screw, steel insert on slider for fixing, grub to adjust the back-lash.



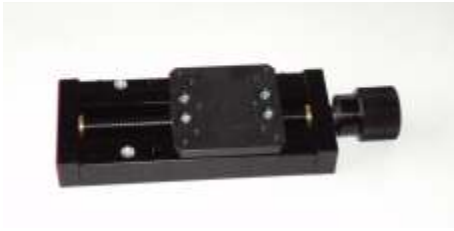
SM/PT torch holding clamp for micrometer slide, suitable for torch from Ø18 to 40 mm



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

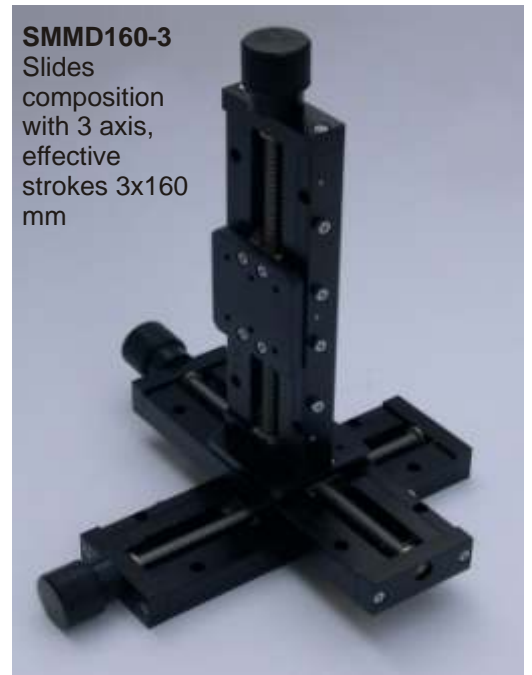


SMMD160-1 Slide with an axis, effective stroke 160 mm, with the follow features: Structure in machined aluminum, trapezoidal brass screw with nut, brass carriage guide and dovetail with gib for the adjustment, handle in knurled aluminum.

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



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



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

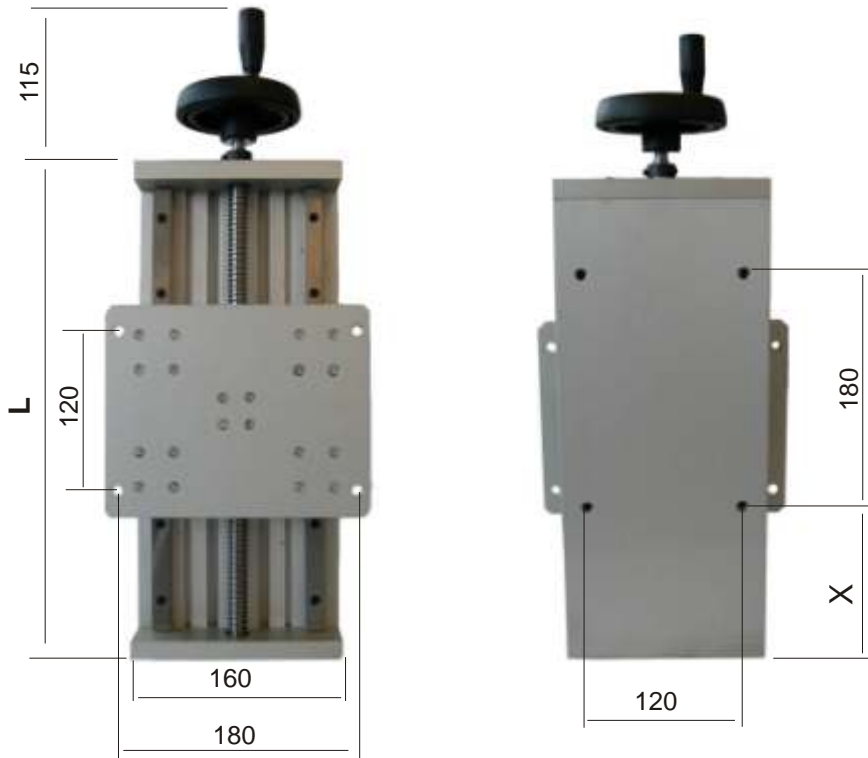
SM150/FR rotation flange from -30° to +30°, complete of torch holder



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

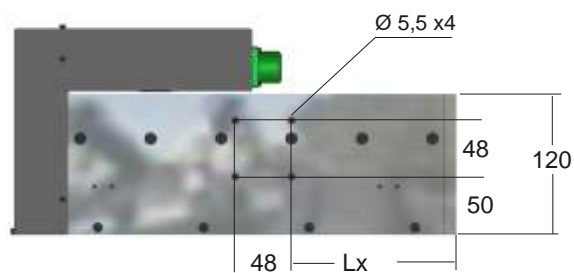
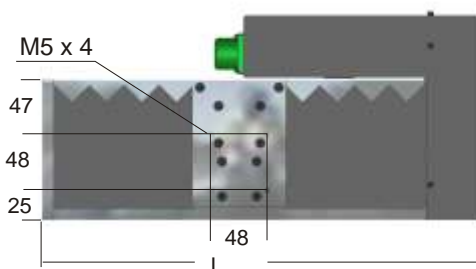
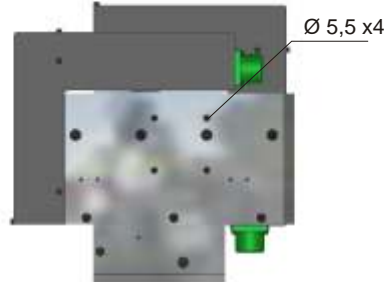
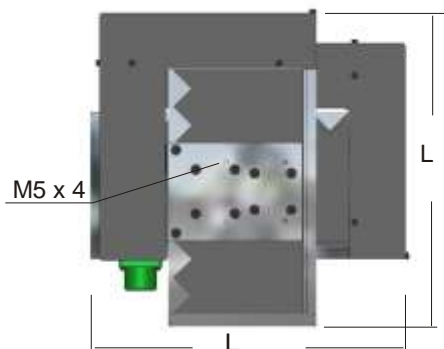
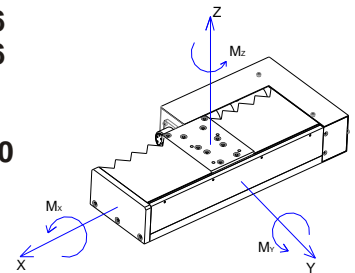
1 axis models

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

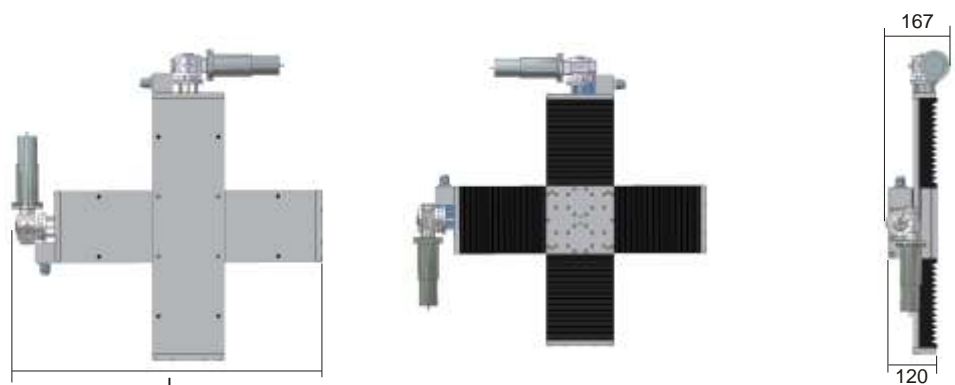
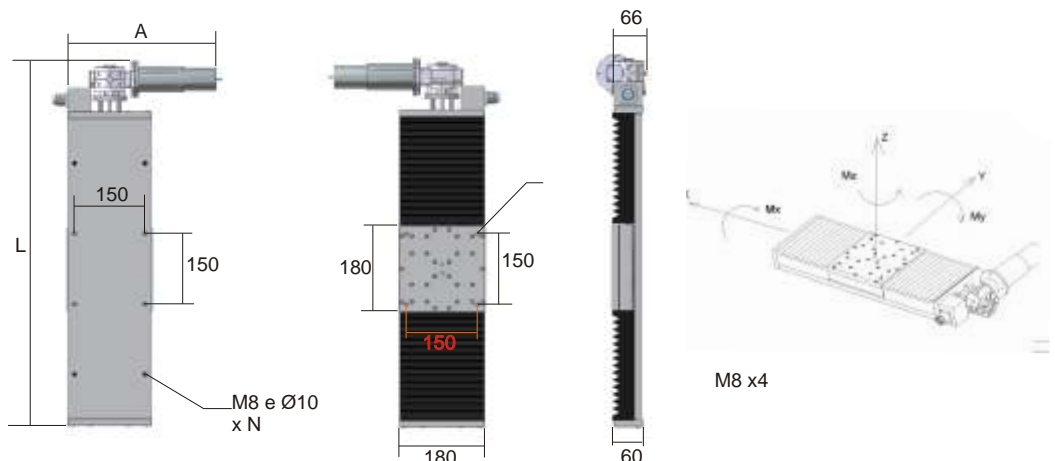
MM MIDI 100/2
MM MIDI 250/2
MM MIDI 400/2
MM MIDI 600/2

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.

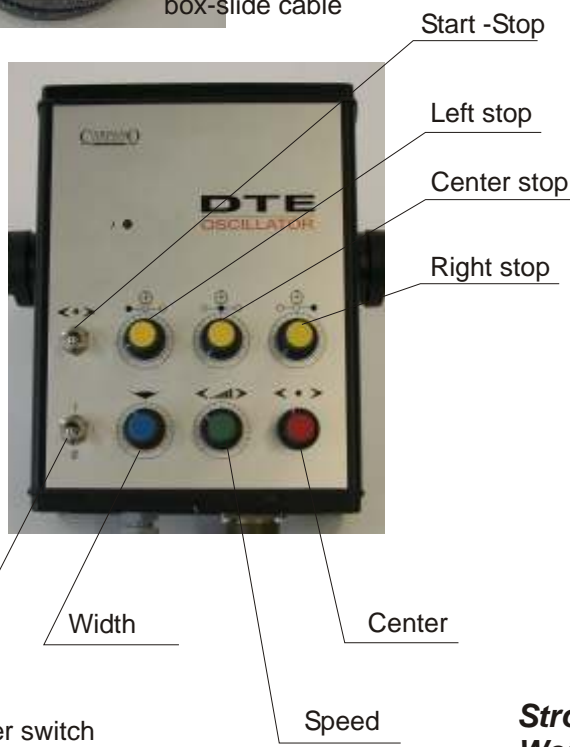
That equipment allows the torch oscillator and it's possible to adjust stroke length, frequency, center, and 3 pauses left, center and right.

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.



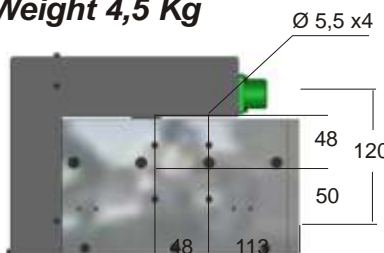
box-slide cable



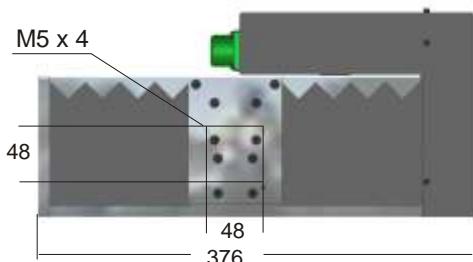
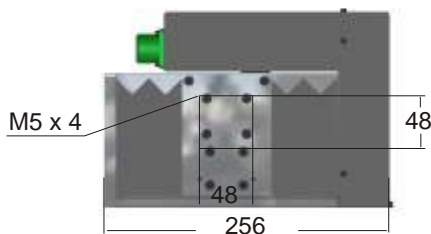
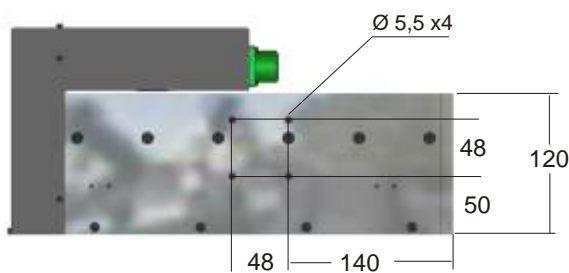
technical data

- 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



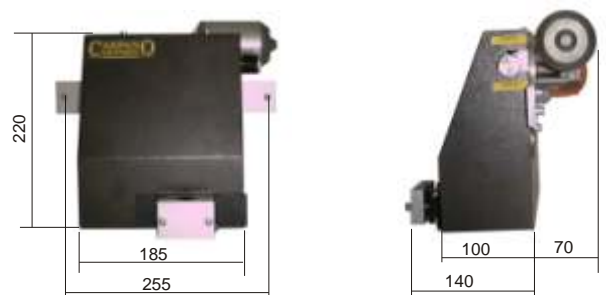


DTE250 Electronic linear oscillator with load of 50 kg, stroke 250 mm and the follow features:

- 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:

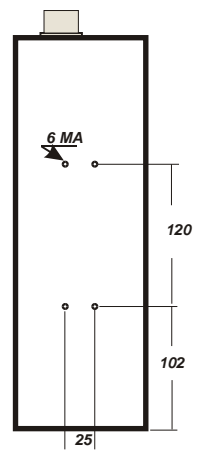
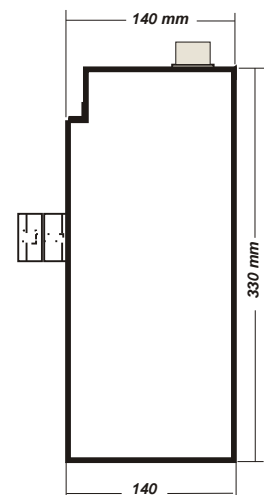
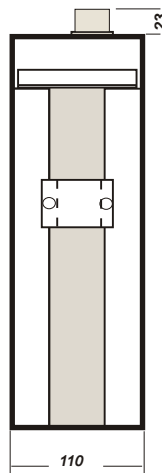
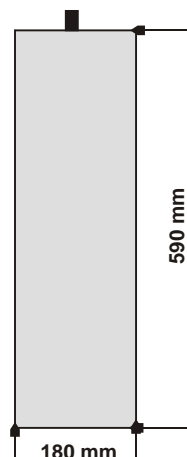
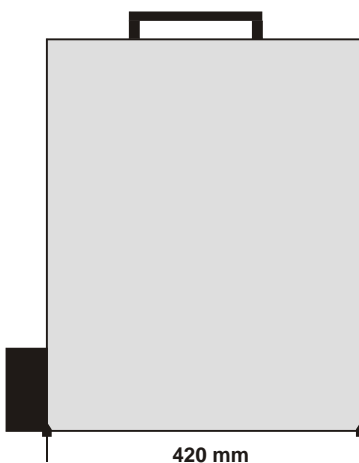
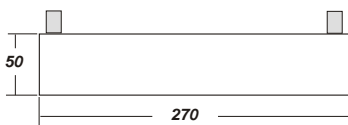
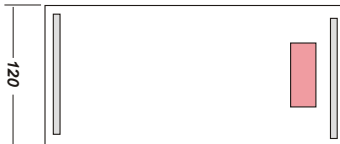
- Highly uniformed and qualified welding seam or cutting
- Working speed greatly improved
- Quick equipment installing and welding part preparing.
- Torch spare material decreased consumption
- Less specialization required to the operator
- Circular tank welding on manipulators
- Longitudinal calender 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



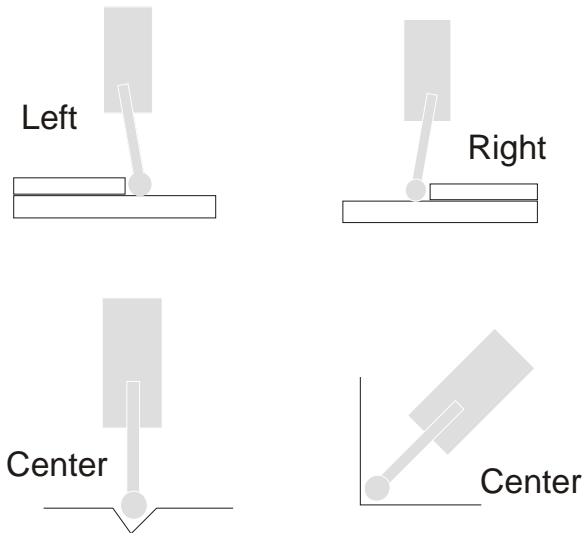
SEAM TRACKER

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

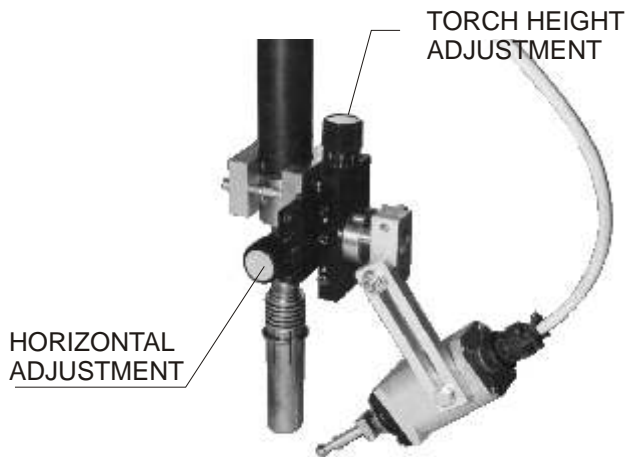
It's possible to integrate this system also in other axis like the carriage of a beam or in a manipulator boom or column



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



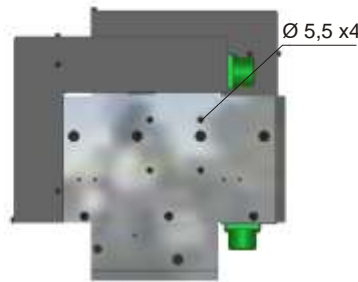
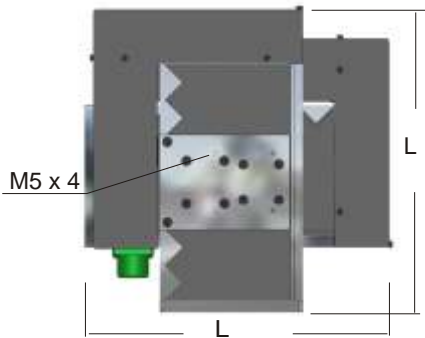
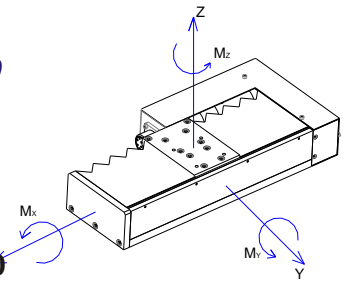
Probe

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

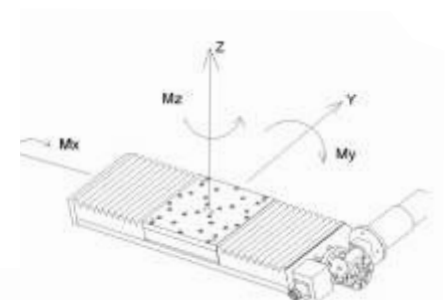
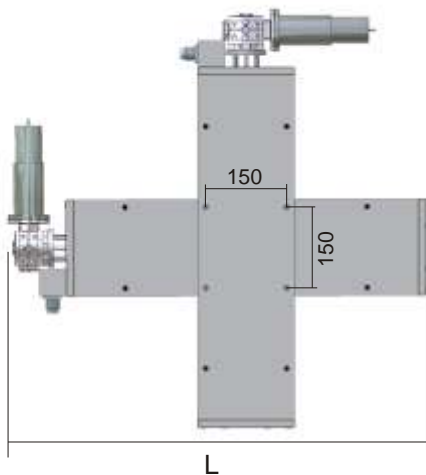
LT MODEL

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



MD & HD MODEL

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

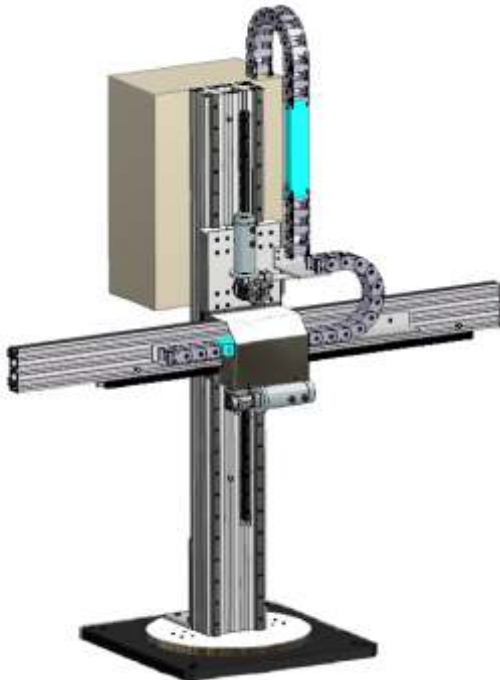
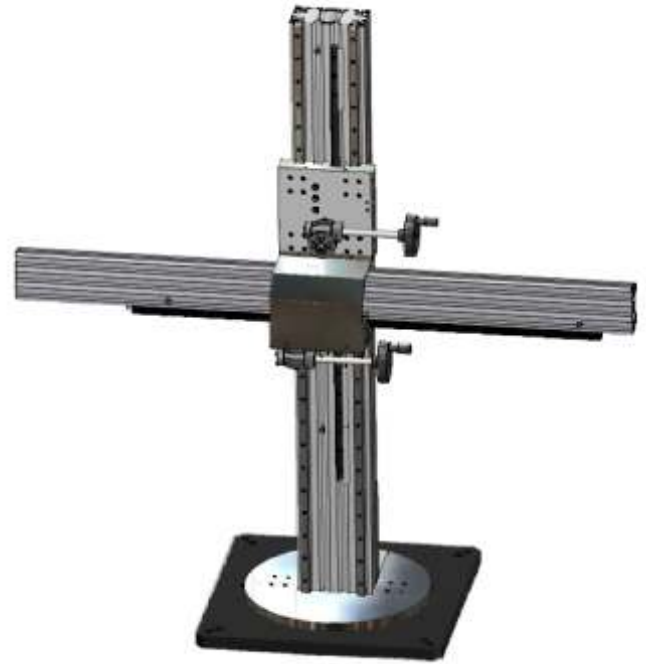
effective stroke 1000x1000

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

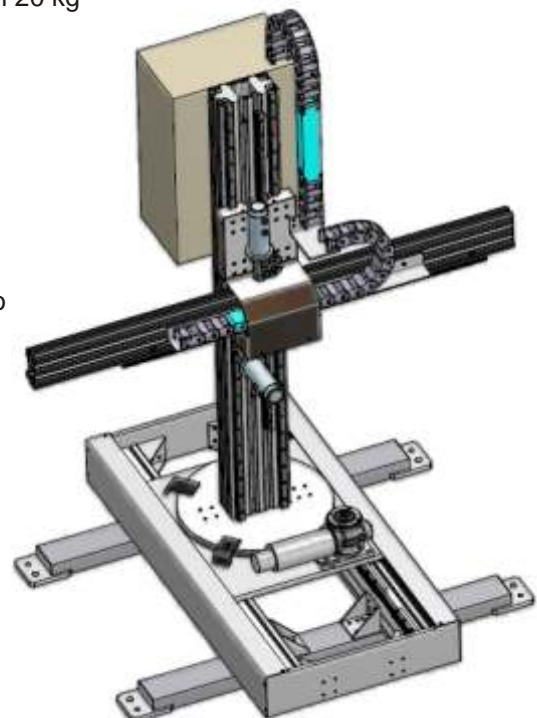
effective stroke 1000x1000

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

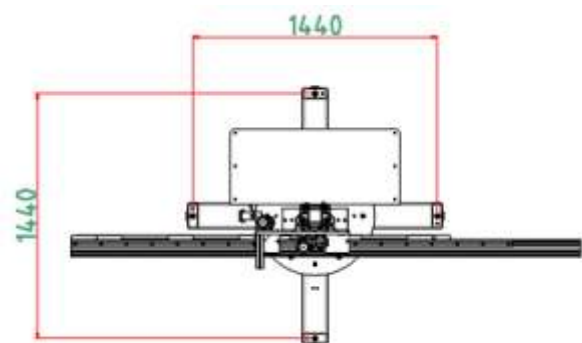
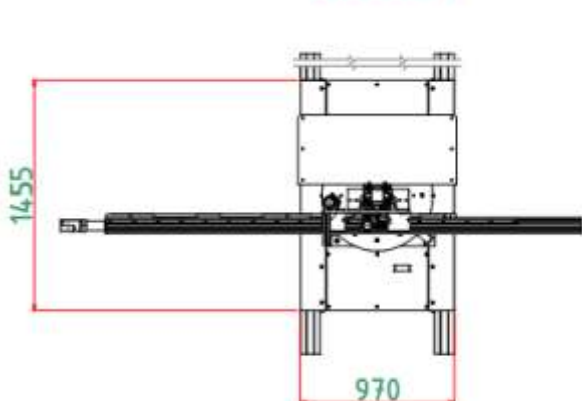
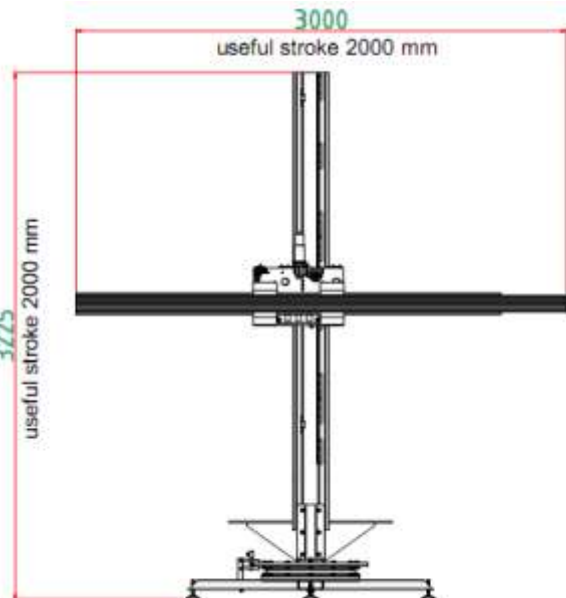
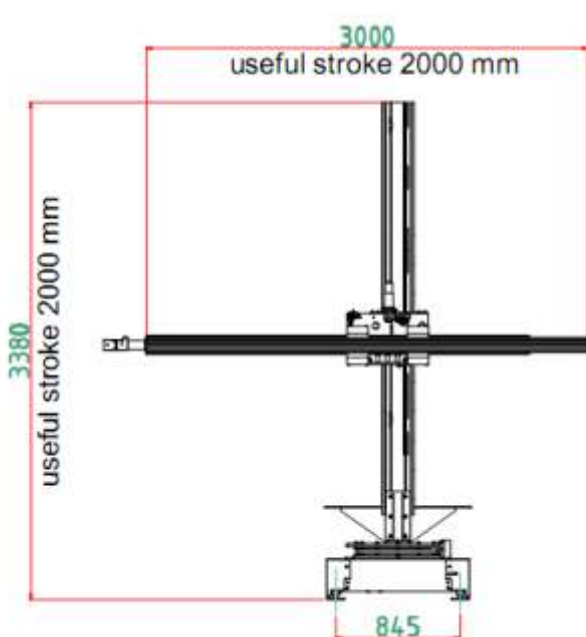
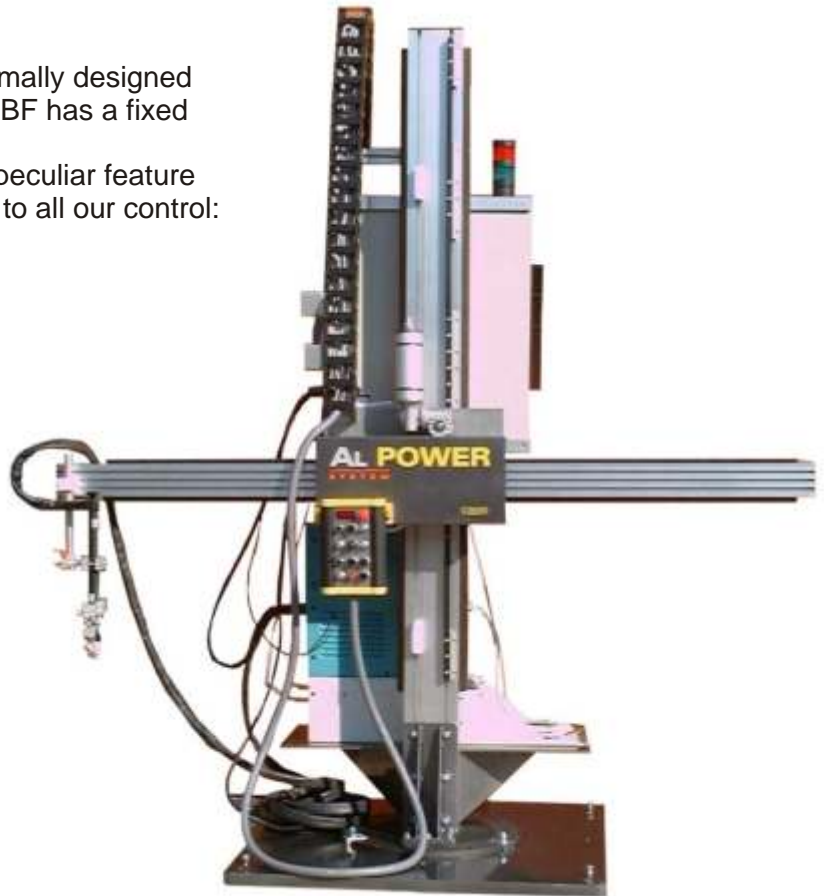
effective stroke 1500x1500

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

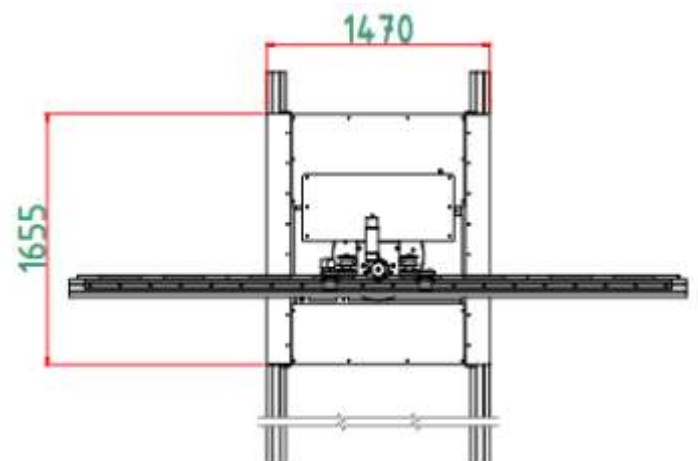
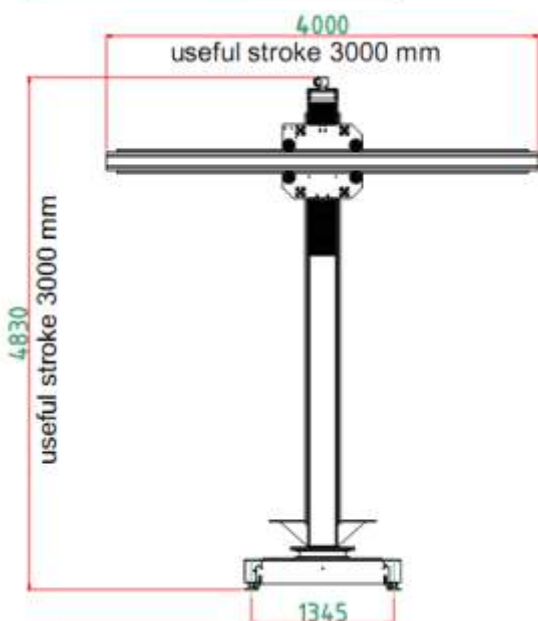
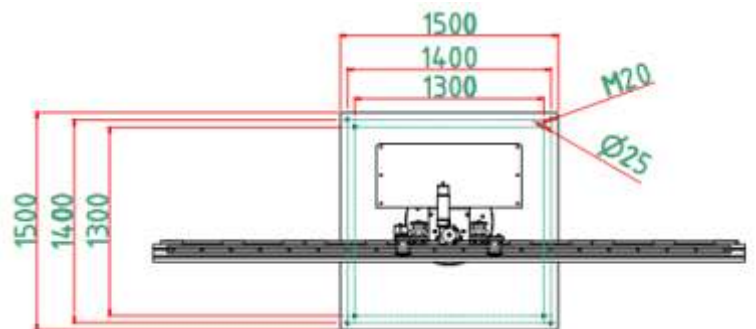
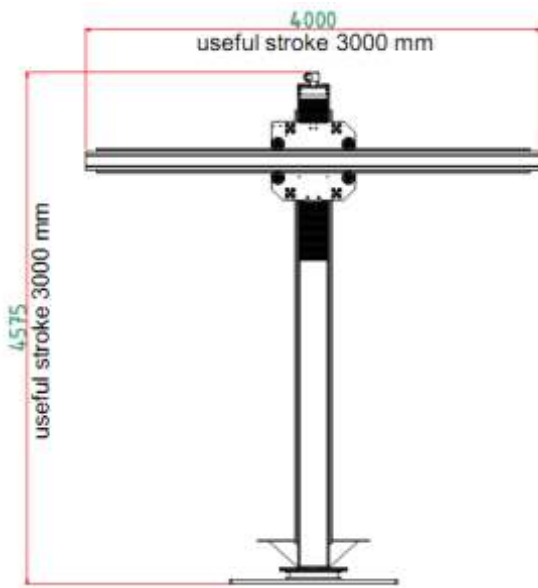
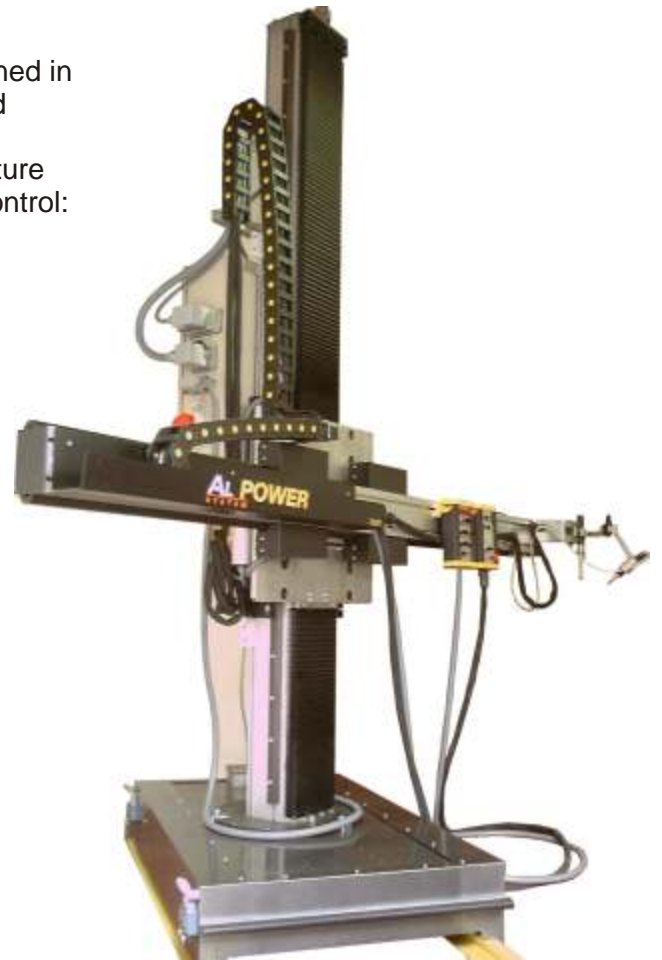


APMIDI is a manipulator made in aluminum, normally designed in the version with effective stroke 3x3 m. APMDBF has a fixed base and APMDCM has the motorized carriage.

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





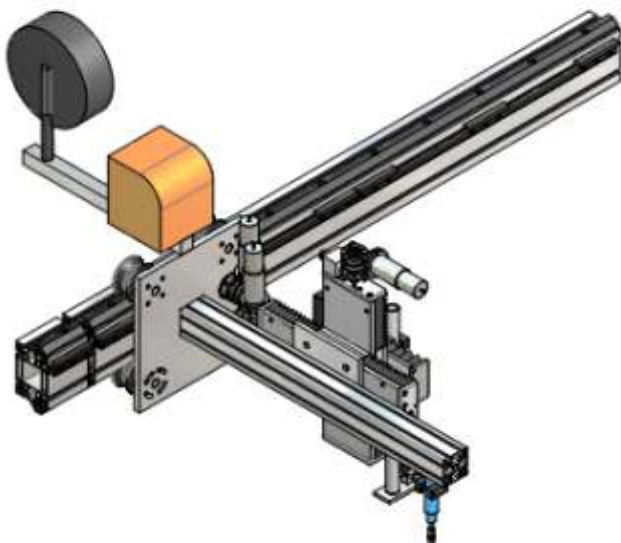
With the same concept of the manipulator Al Power we have designed our motorized beam which can be combined with our servomechanism or, in many cases, have also other coordinated axis: vertical or transversal to the beam carriage.

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

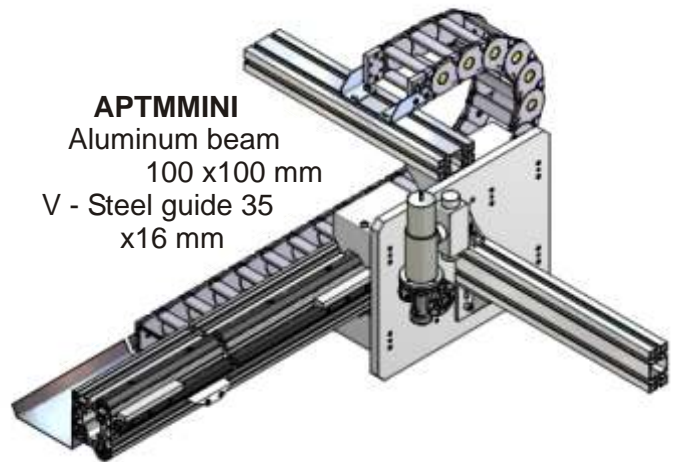


In the picture:
APTMMIDI Beam with a vertical element able to do an effective stroke of 2 m. On the vertical axis it's fixed the wire feeder and a horizontal slide. The vertical axis and this slide are driven by our IG.
TSV 03 (camera) allows the remote control of the process.

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

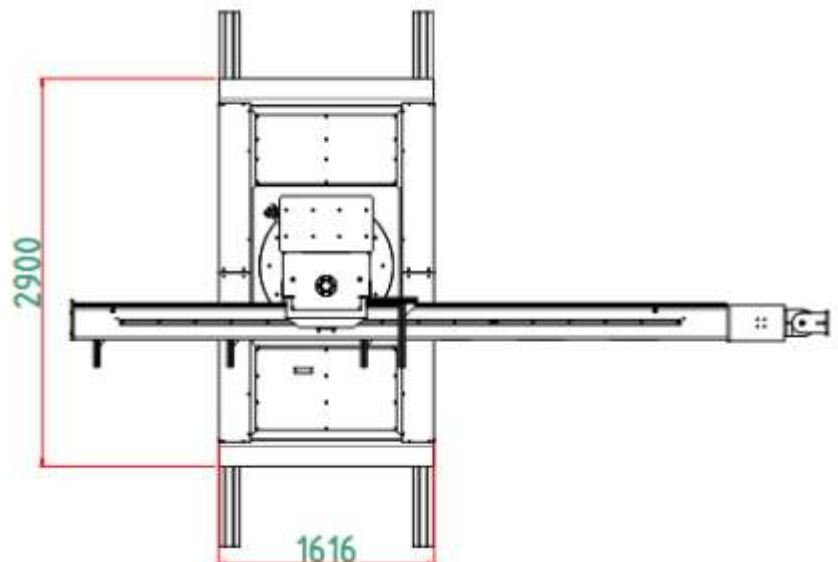
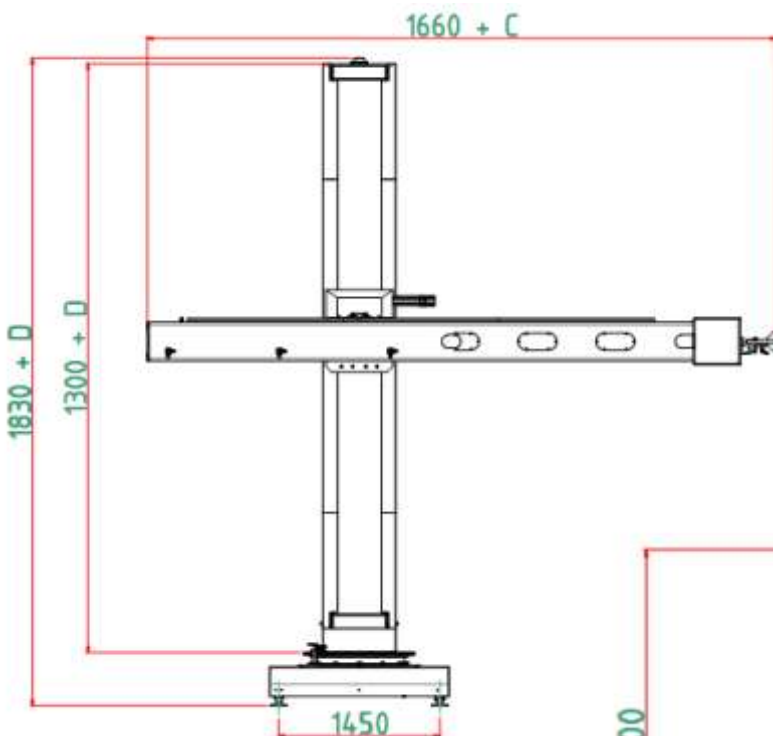


I-Power 4 or 5 gets remarkable and innovative skills:

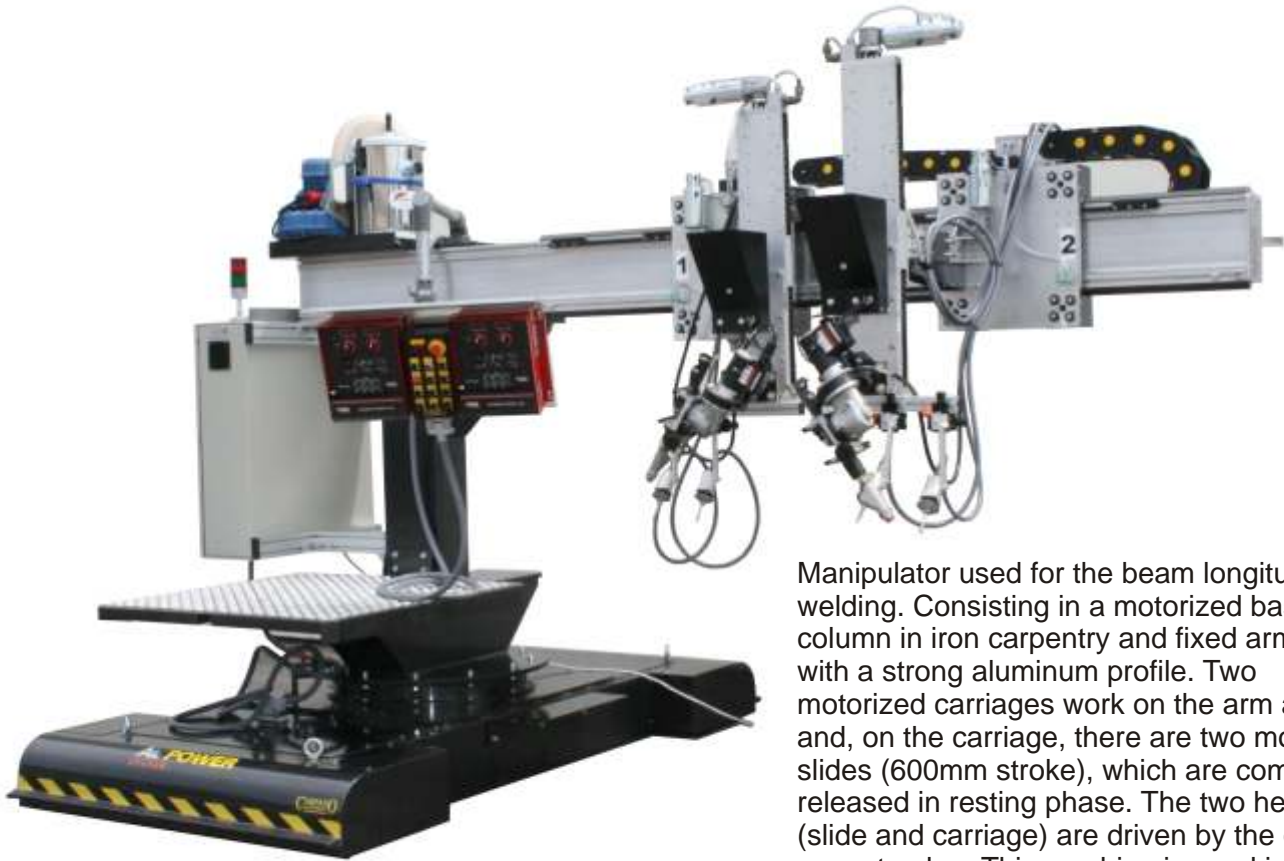
- The gear motor that allows the boom lifting is down and thanks to this feature the height of the column is less than traditional machines with the same stroke.
- 2 axis are moved on ball bearing linear guides to have a high precision movement
- The column is made with 2 iron tubulars and in this way 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	<i>IP 4</i>	<i>IP 5</i>
C	4000	5000
D	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.

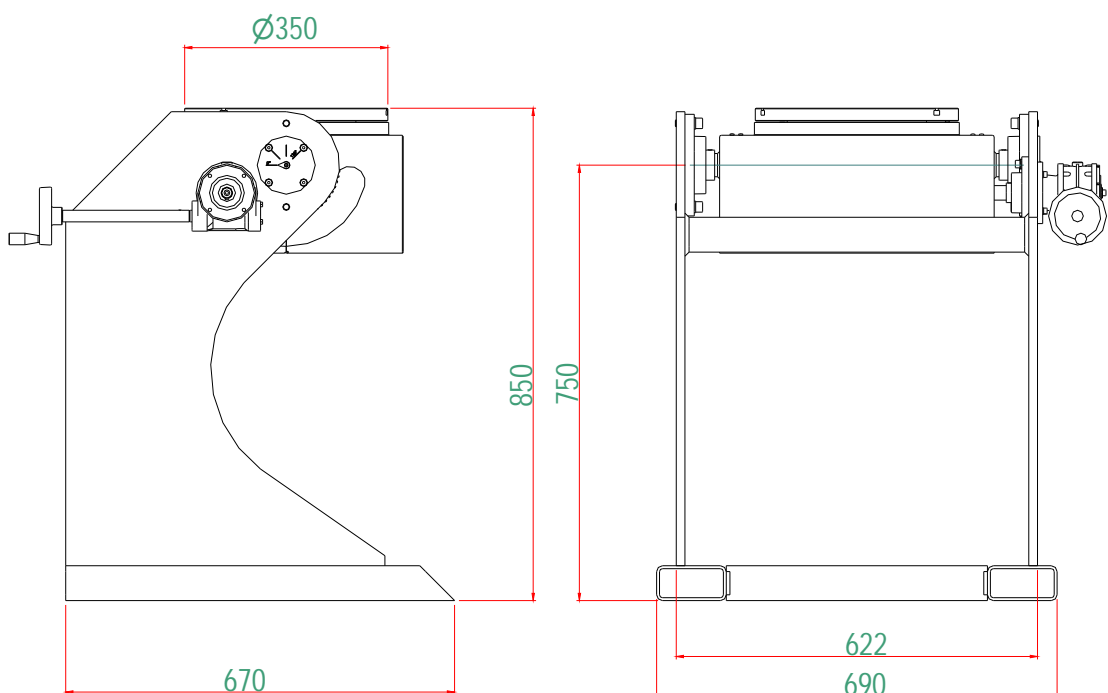


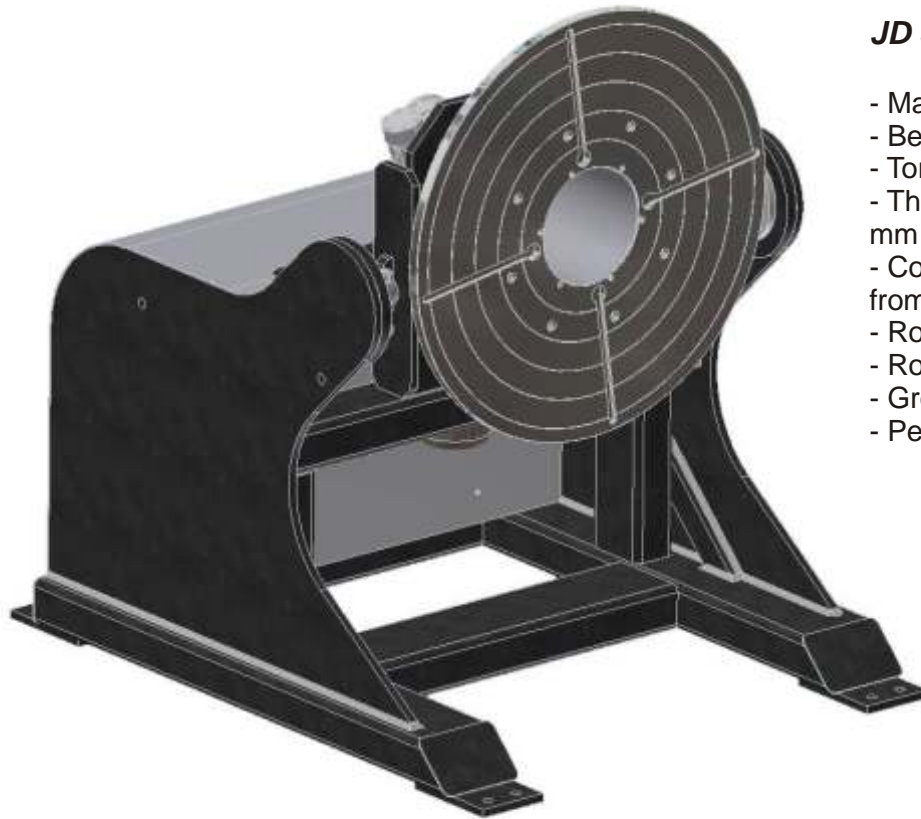
I Power manipulator with fixed arm on the column, in this way the arm height can be adjusted. On the arm there's a motorized carriage with a motorized slide: both driven by our seam tracker. This machine is used in the trains panel line welding process.



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

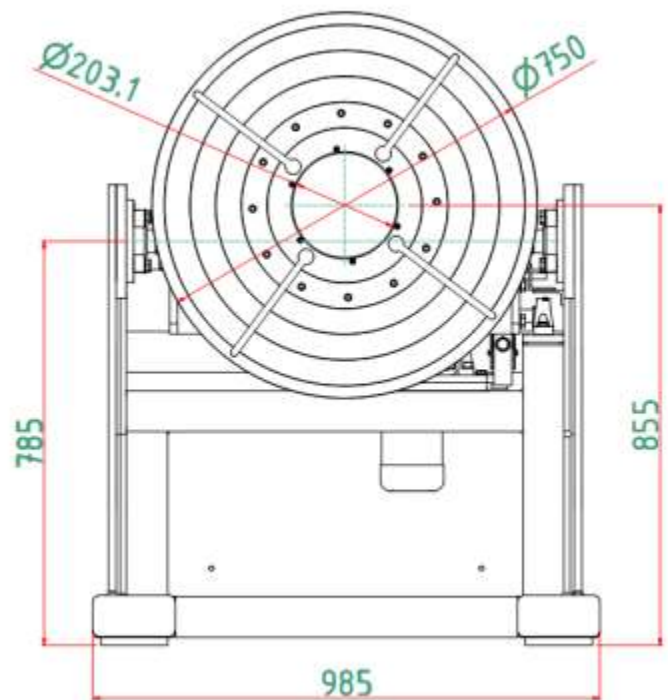
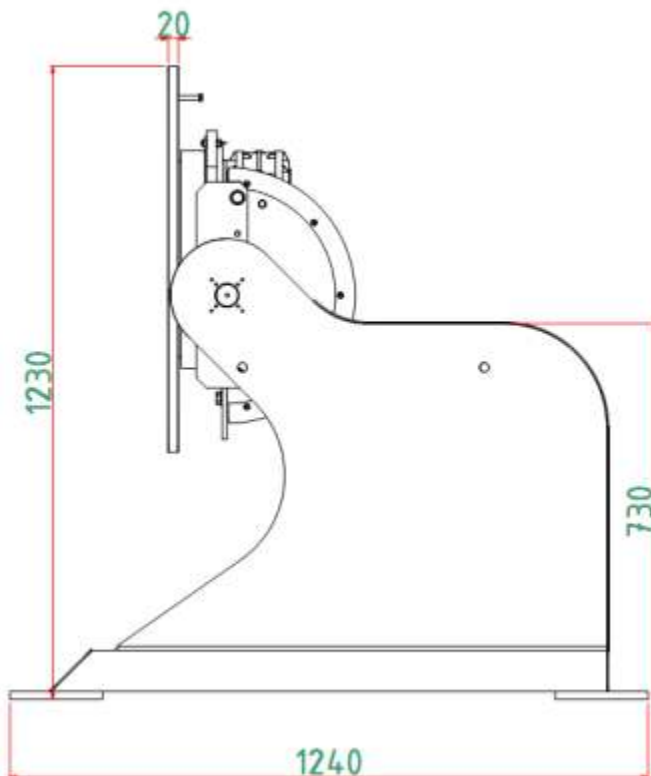
- Max load: 100 Kg
- Bending moment 20 Kgm
- Torque 8 Kgm
- Thru-hole Ø100 mm, on table Ø350 mm with 3 radial slot at 120°
- Continuous manual inclination with hand-wheel from 0 to -135°
- Dc motor with tako with adjustable speed from 0,2 to 4 rpm, other on demand
- Grounding 400 Amp
- Pendant or foot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





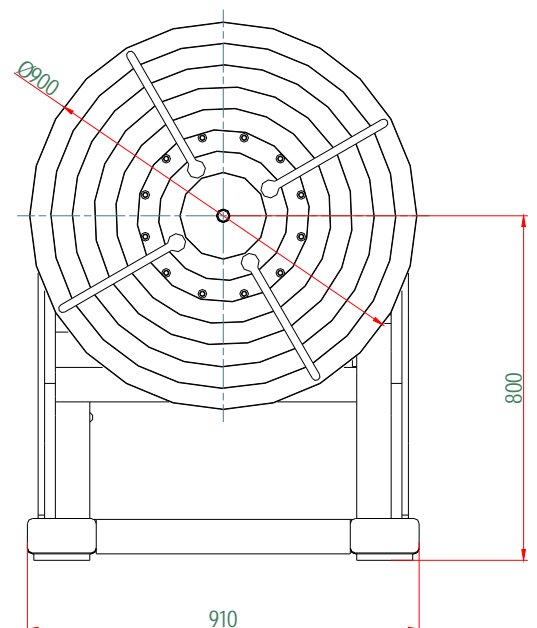
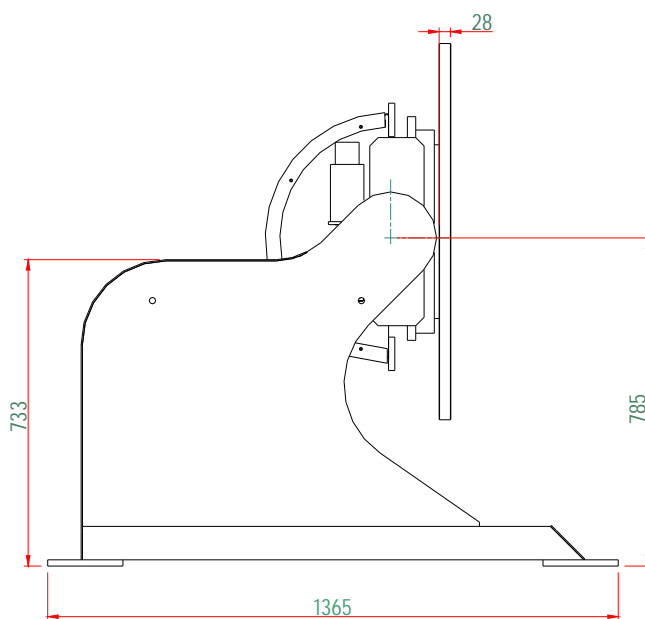
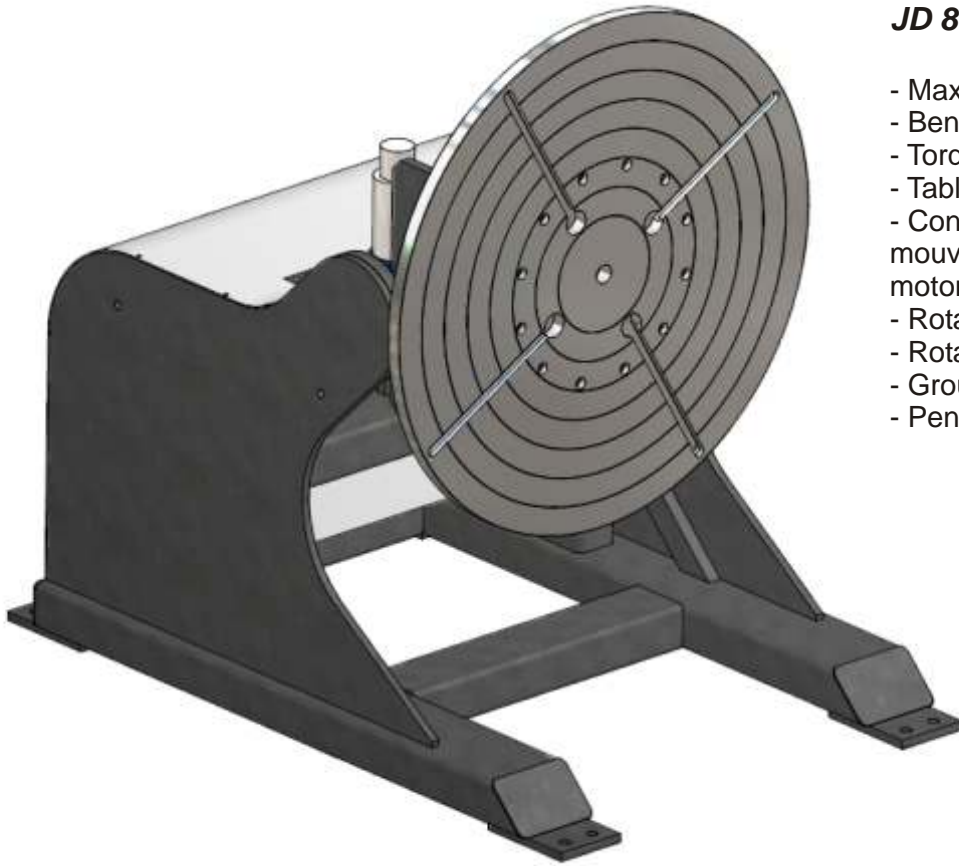
JD 5 - Positioner Joda 5

- 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



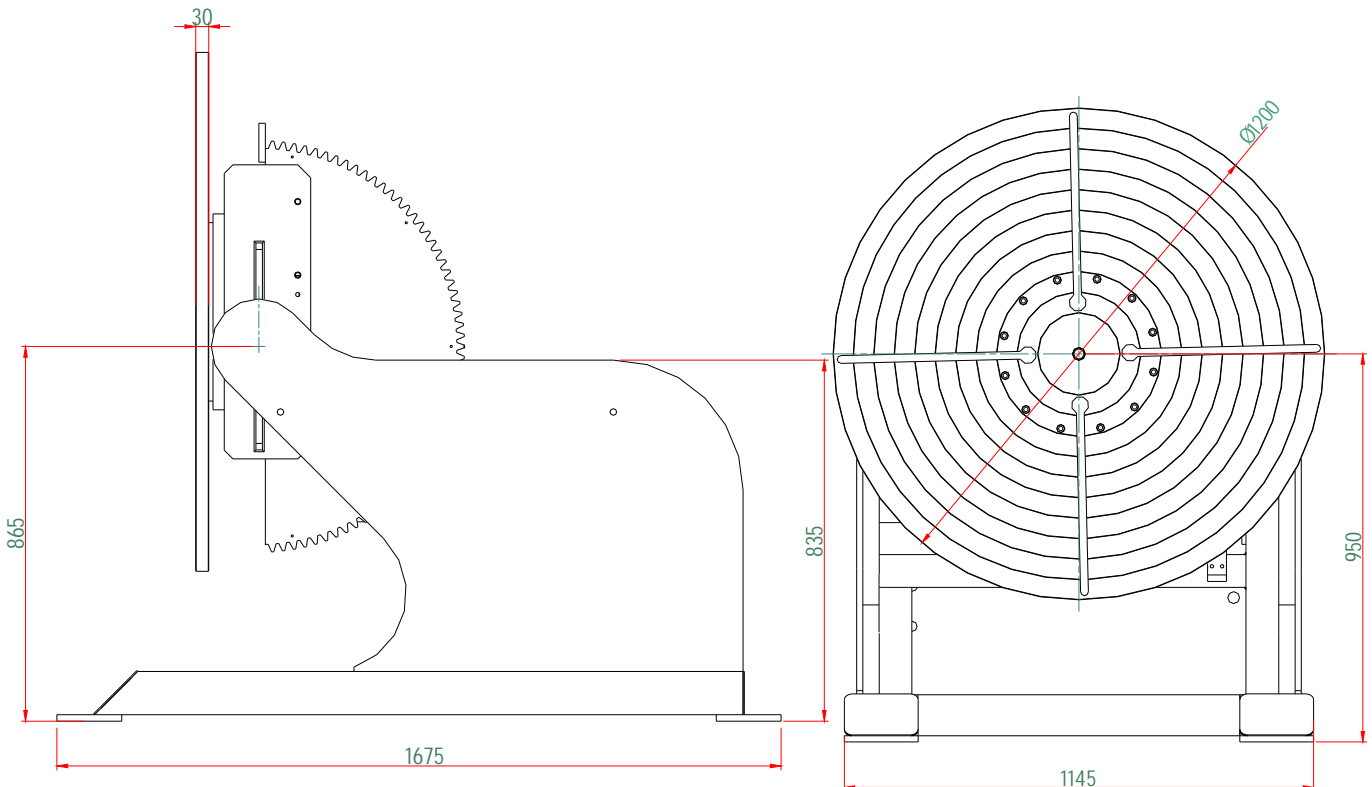
JD 8 - Positioner Joda 8

- 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



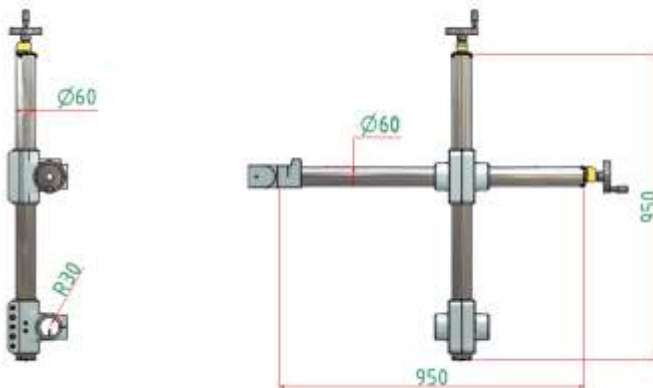
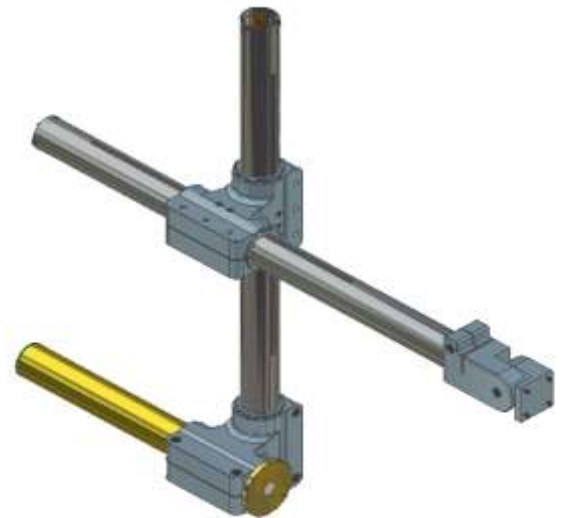


JDBV Torch holder arm with handle movement

- 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



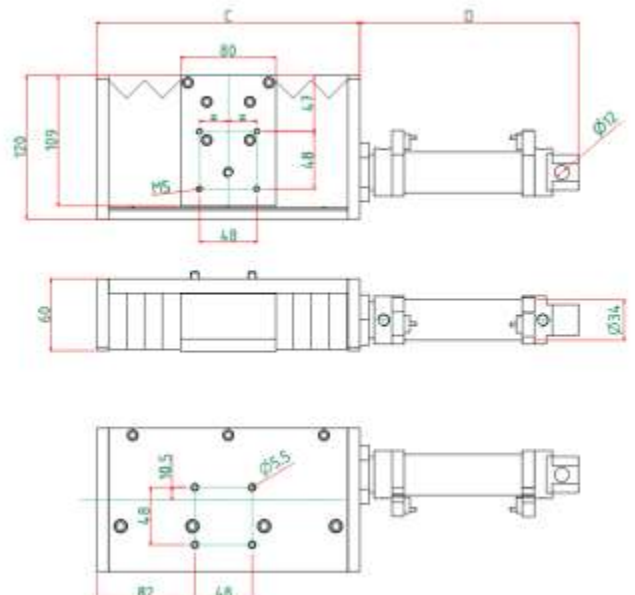
JDPNEUMO Pneumatic slide for torch holder arm

- 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

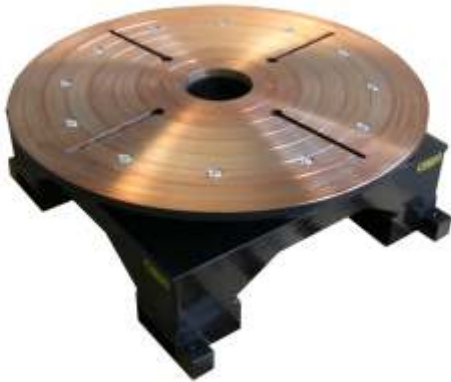


JDPNEUMO80 with 80 mm of stroke
C=220 mm D=183 mm

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.



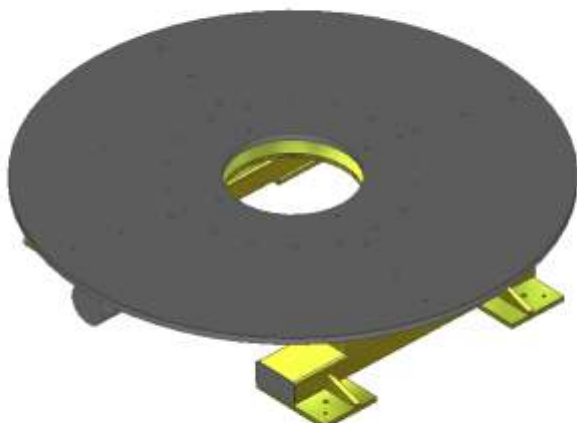
- 2' \$ 3/ \$12



JODA PLANO 50
high model



JODA PLANO 50 with
plate Ø4500 mm

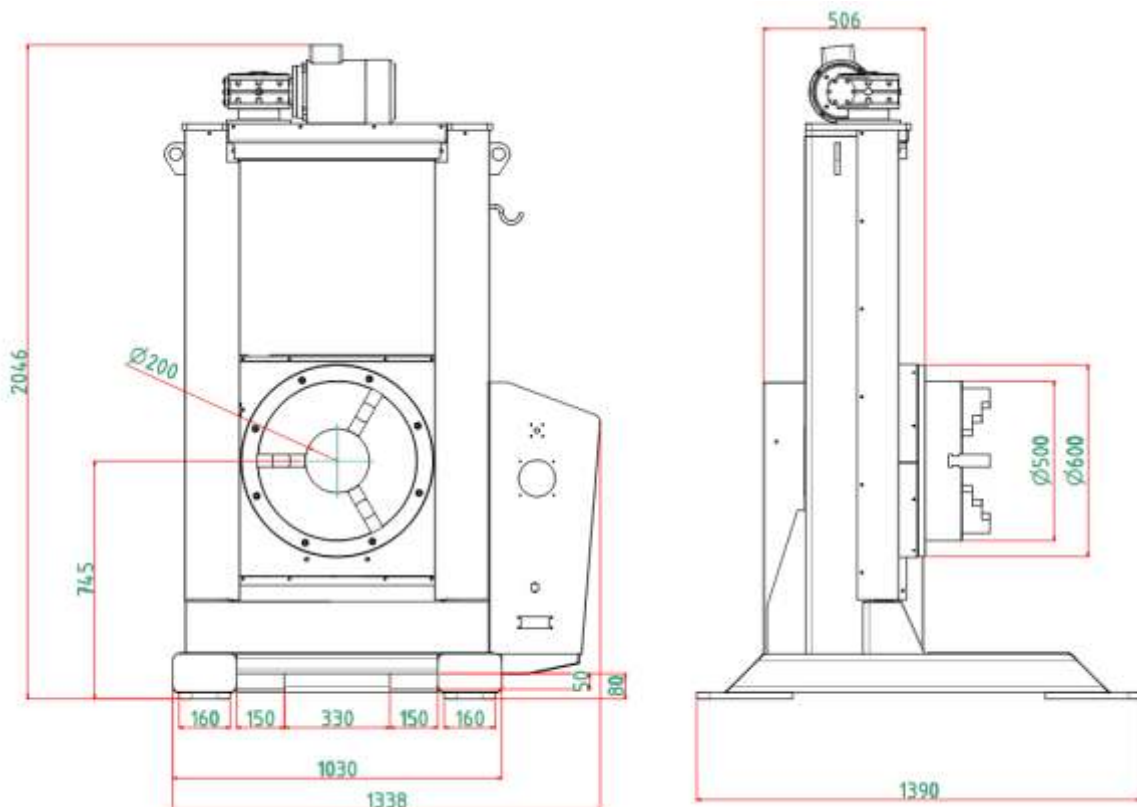


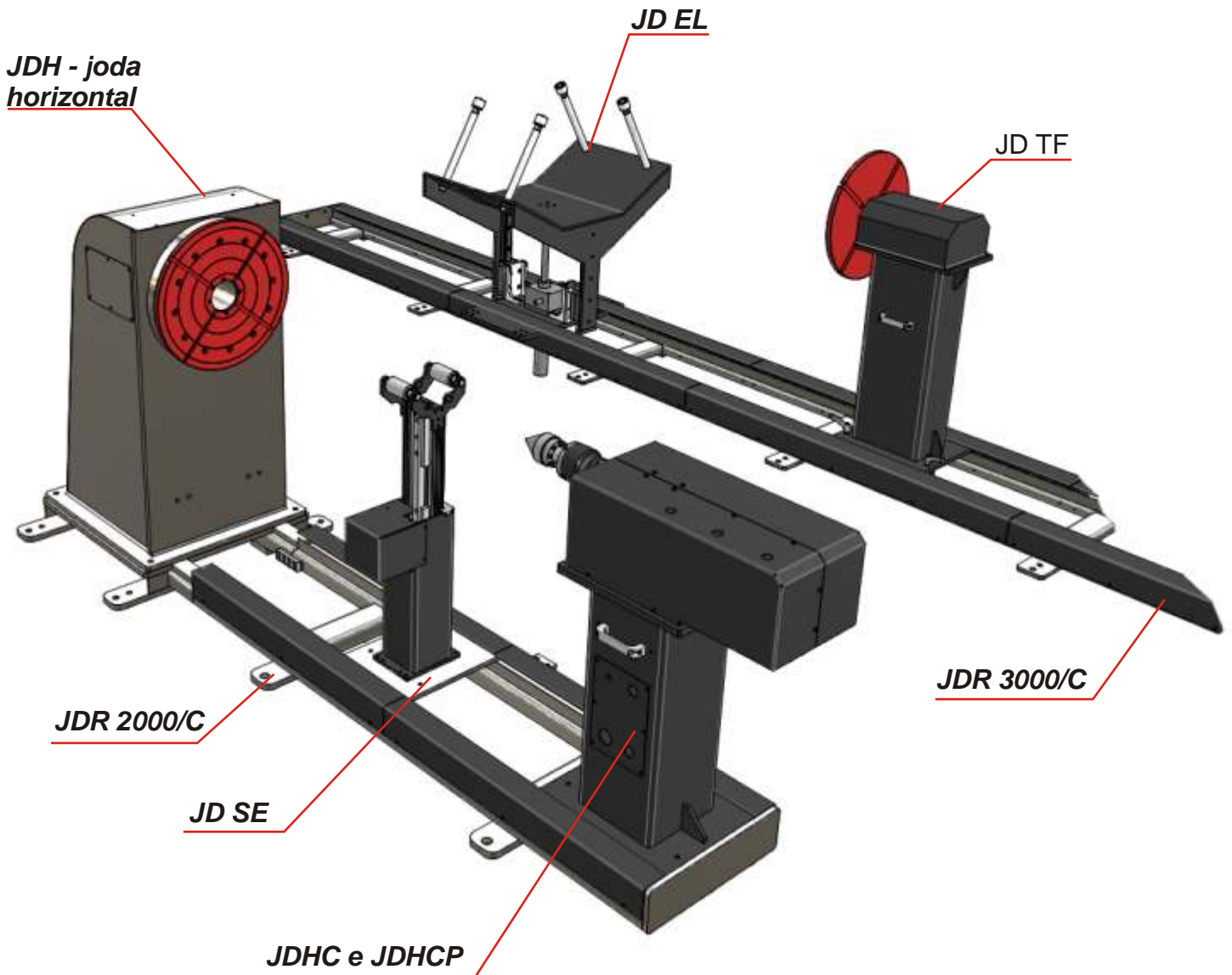
- JODAPLANO150** Turning table with nominal load 15000 kg.
- Structure in welded, machined and painted iron.
 - Table Ø 2000 with thru-hole and with 4 radial slot milling.
 - Earthing 400A.
 - AC gear motor driven by inverter.
 - Control panel with 230V 50-60 hz (380 hz on demand).
 - Remote control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

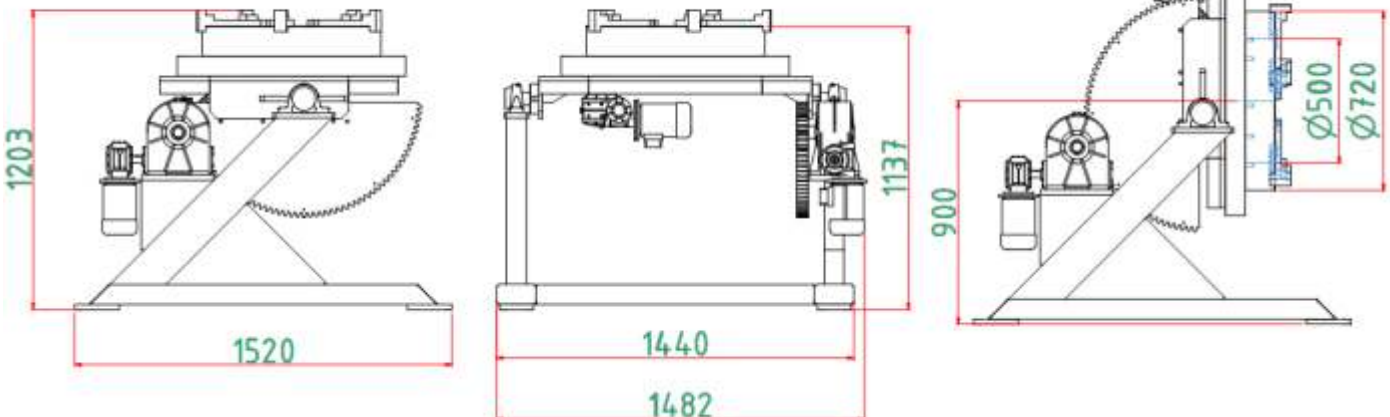


JD BF JODA BI-FACE

- 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:

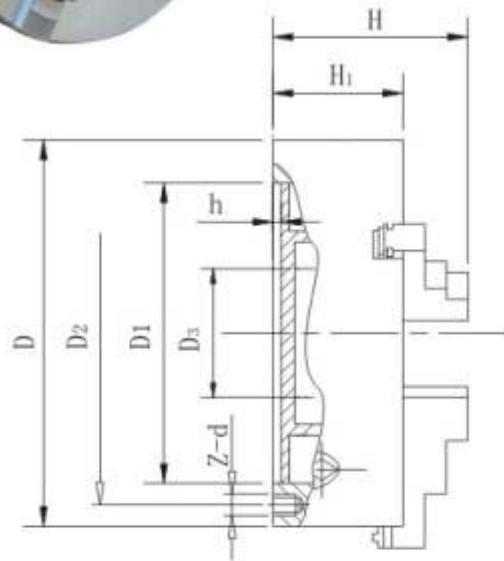
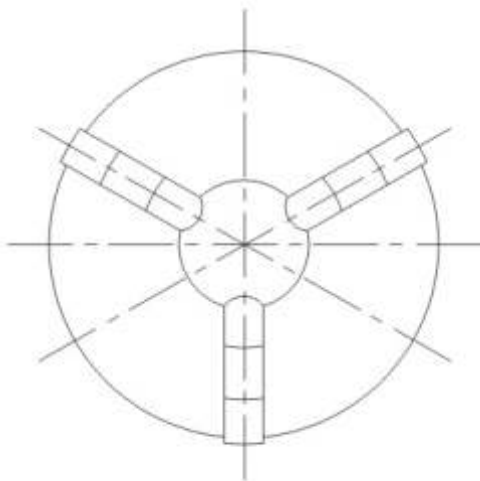
- Ø 200 mm with monoblock jaws

With master and top jaws, screwed

- Ø 315 mm

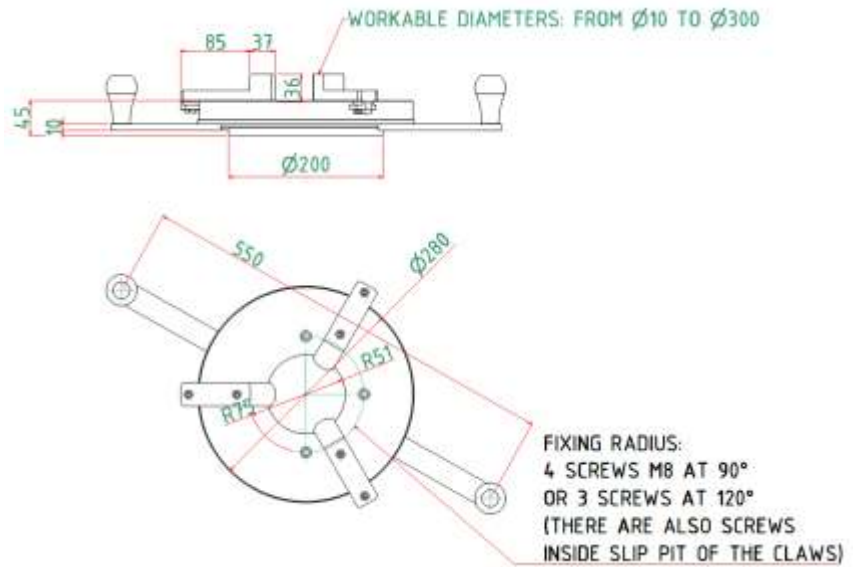
- Ø 400 mm

- 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

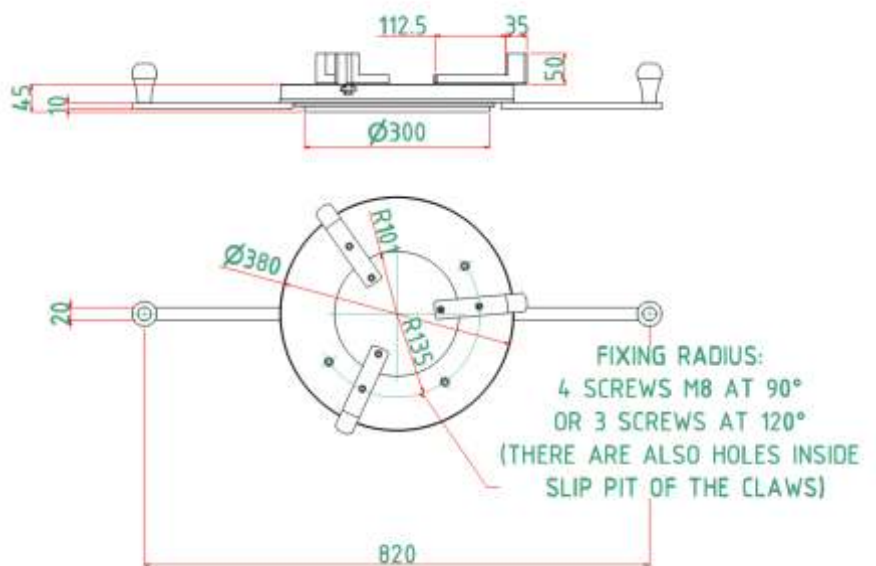


Two models:

- 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°



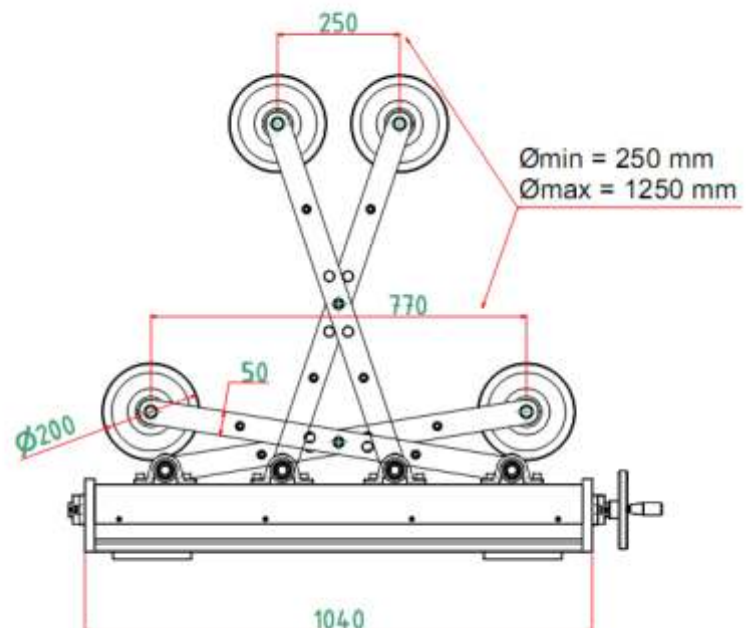
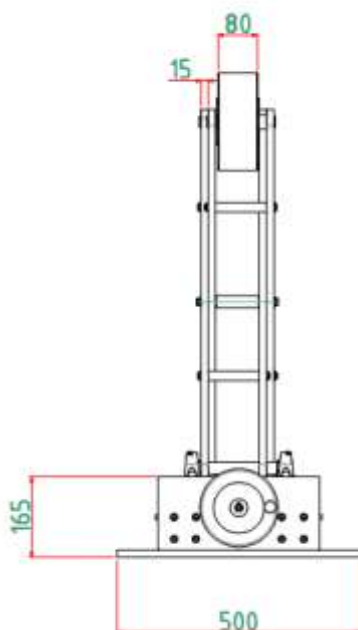
IPTRE is a idle and lifting rotator

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



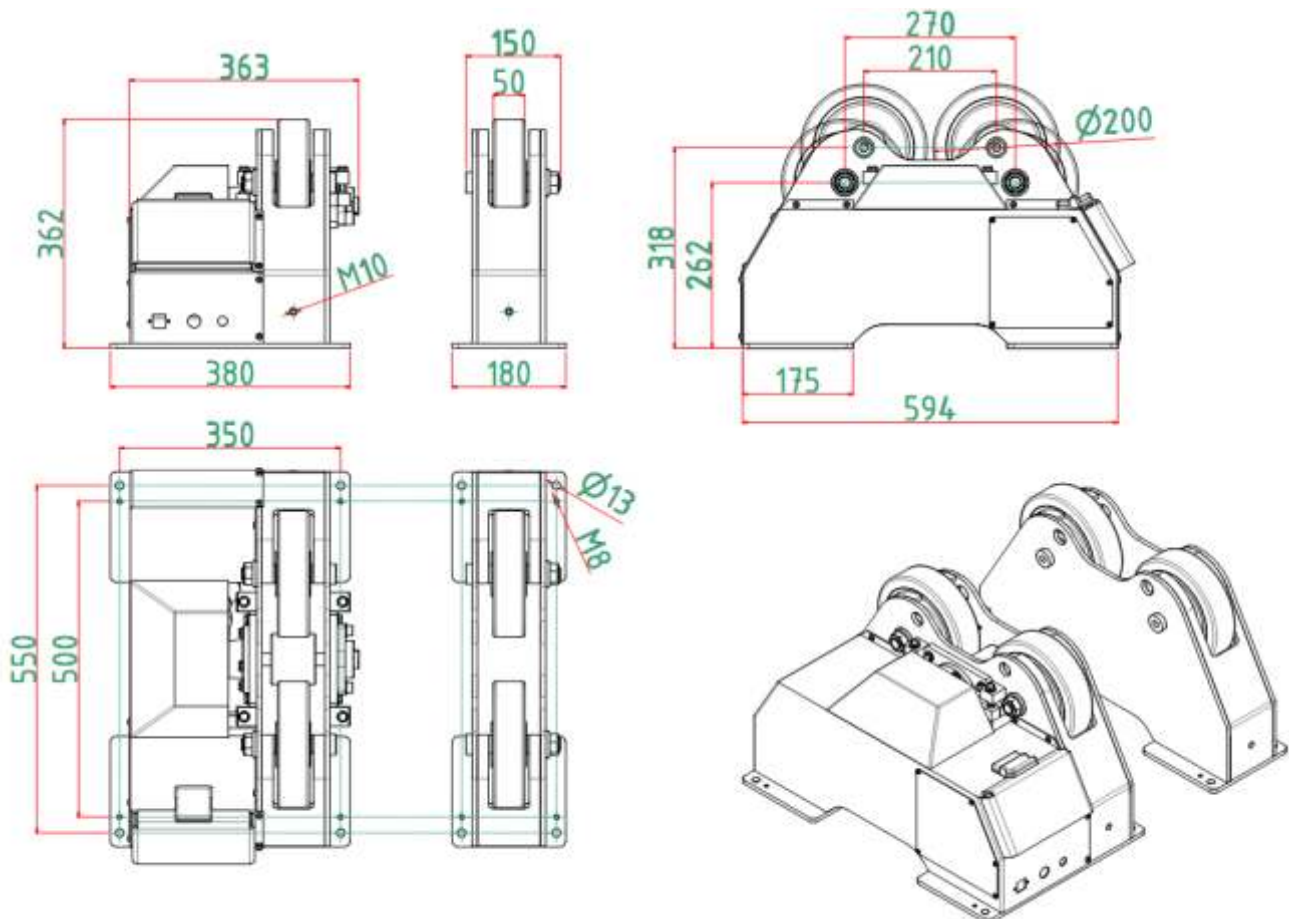


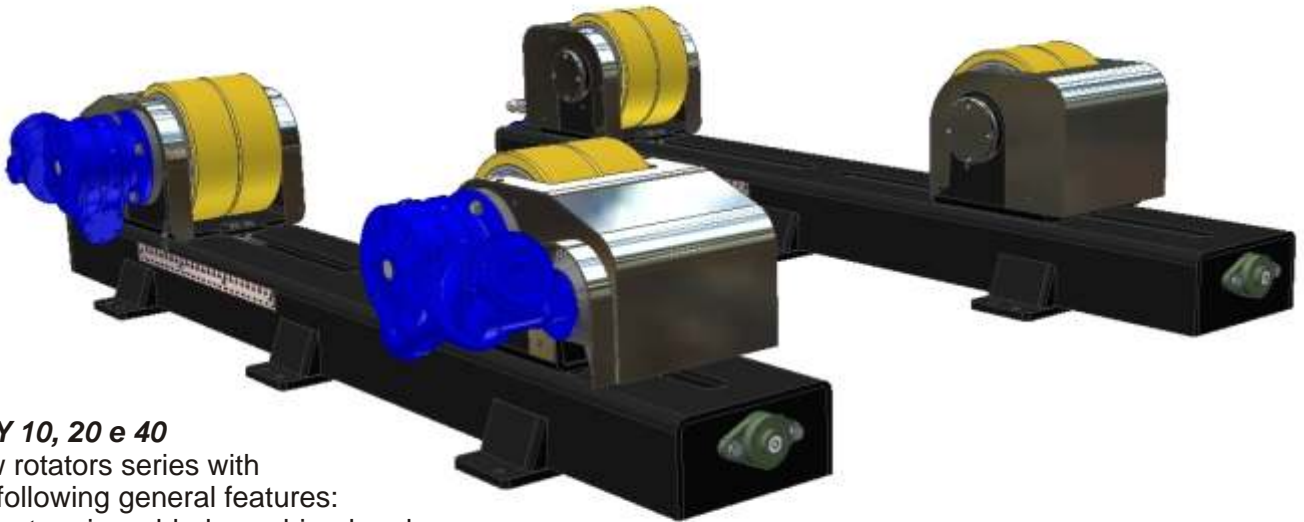
OBY1 is a rotator, consisting in a motorized part and an idle one.

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

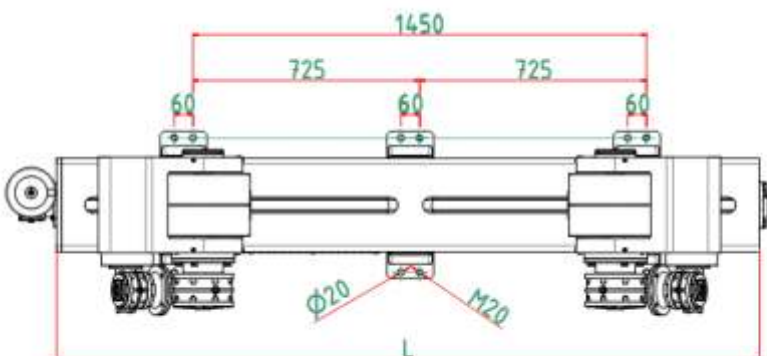
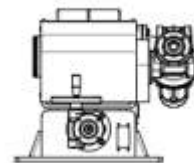
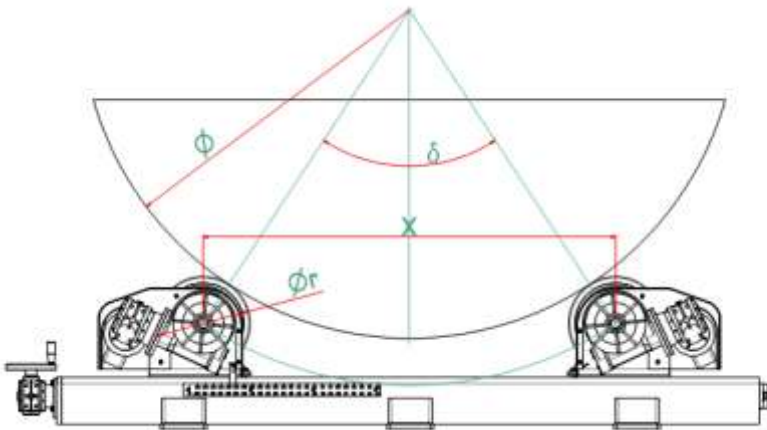



OBY 10, 20 e 40

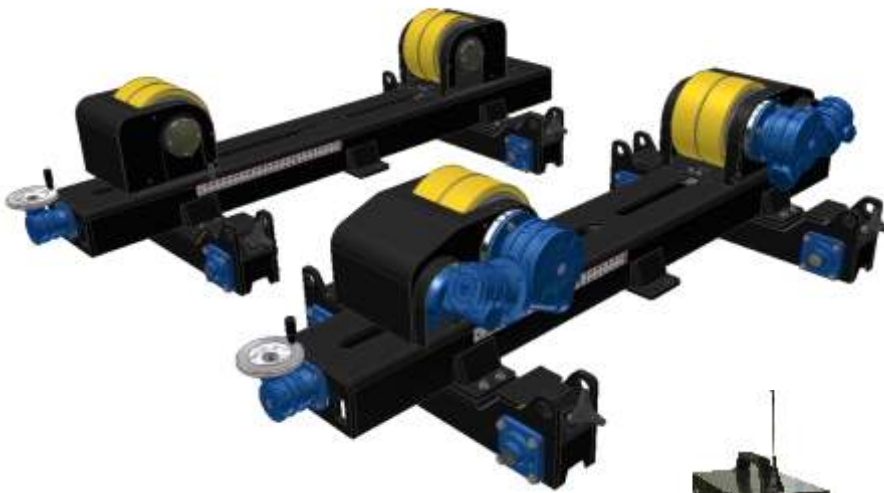
New rotators series with

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.



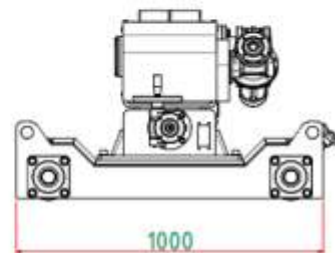
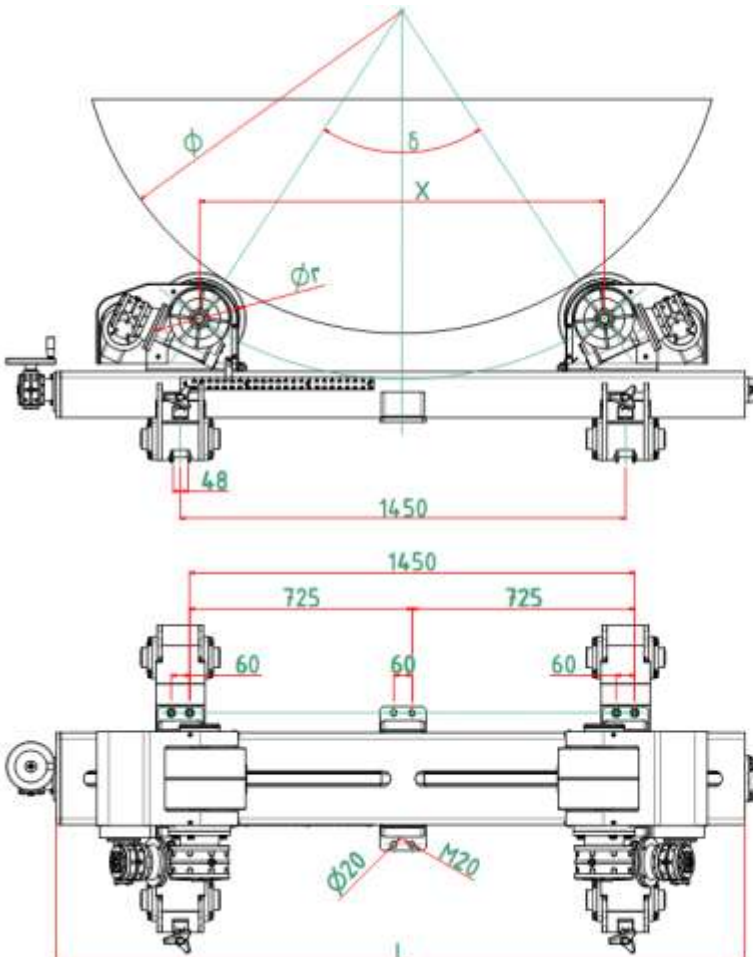
 BY	OBY 10	OBY 20	OBY 40
L	2250	2700	3000
Ør	300	350	400
Ø	300-5000	350-5500	600-6000
X	1550	1800	2000
d	34°- 83°	36°- 70°	36°- 73°



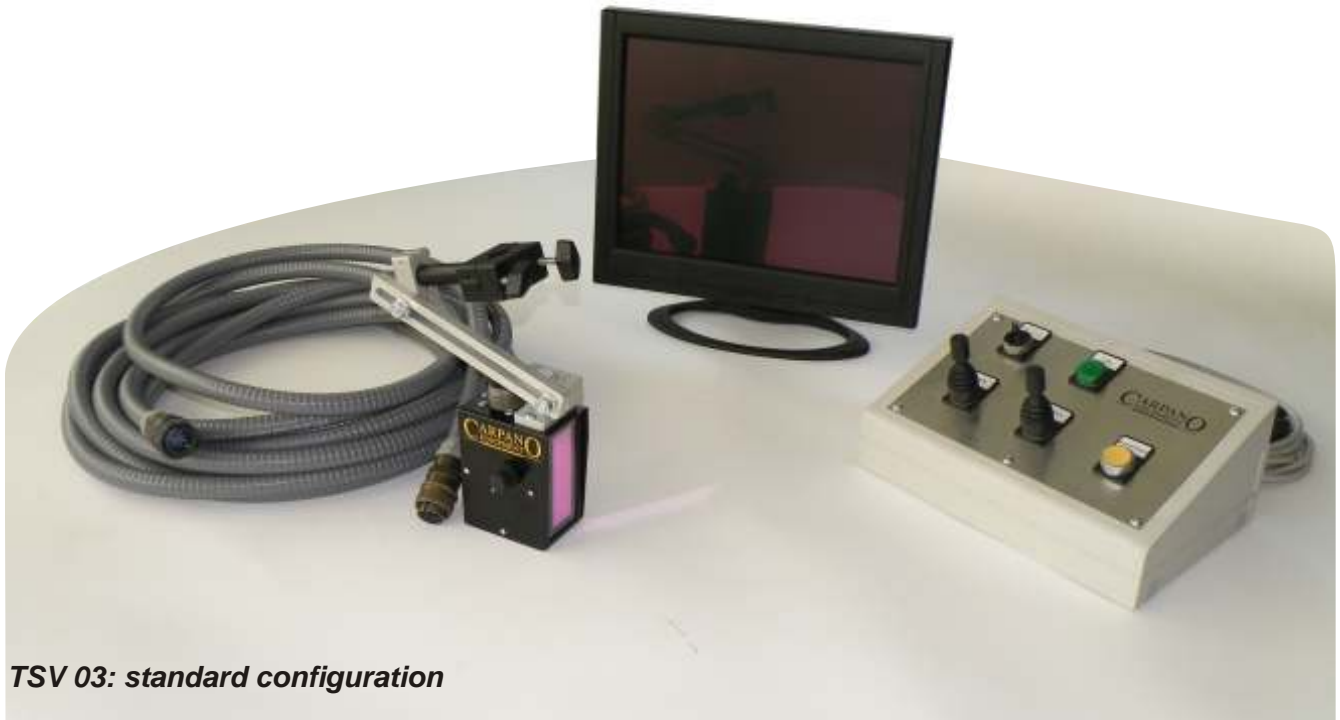
Version with idle undercarriage

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.



BY	OBY 10	OBY 20	OBY 40
L	2250	2700	3000
ϕ_r	300	350	400
ϕ	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

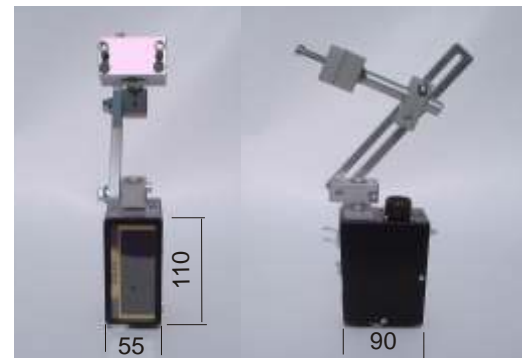


Video cable, 1 mt for the connection
Monitor-console



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.

