

# PROMOTECH<sup>®</sup>

## AUTOMATION

**CB WELDING (TIG/PLASMA/MIG/SAW)**



**3D PROFILE CUTTING**



**GANTRY WELDING SYSTEMS**



**3D CUTTING & WELDING (SAW)**



*Industrial  
Solutions*

**CUTTING & WELDING**

CATALOGUE

## PROMOTECH – PROFESSIONAL MANUFACTURER OF PREMIUM MACHINES FOR METALWORKING INDUSTRY

PROMOTECH is an innovation driven ISO 9001:2015 manufacturer of professional metalworking machines, welding automation equipment and industrial systems designed for structural steel fabricators, heavy machinery manufacturers, shipyards and other metal machining companies

### Main product lines:

- mag drills, pneumatic drills, rail drills and hydraulic punchers
- weld preparation/portable and stationary bevellers for plates and pipes
- welding and cutting portable mechanisation equipment
- welding and cutting automated systems

### Our products:

- offer solutions to reduce cost and increase productivity
- are designed and engineered for long term use in tough industrial conditions
- meet the requirements of the most demanding clients and markets worldwide
- are made in Poland according to the highest quality standards
- include top quality components
- are thoroughly tested for quality approval
- proved to be extremely reliable with a variety of practical applications in most difficult climatic environments





**PROMOTECH**

PIPE PROFILE CUTTING MACHINE

**PPCM 1500**

[www.promotech.eu](http://www.promotech.eu)



**CUTTING & WELDING**

[www.promotech.eu](http://www.promotech.eu)

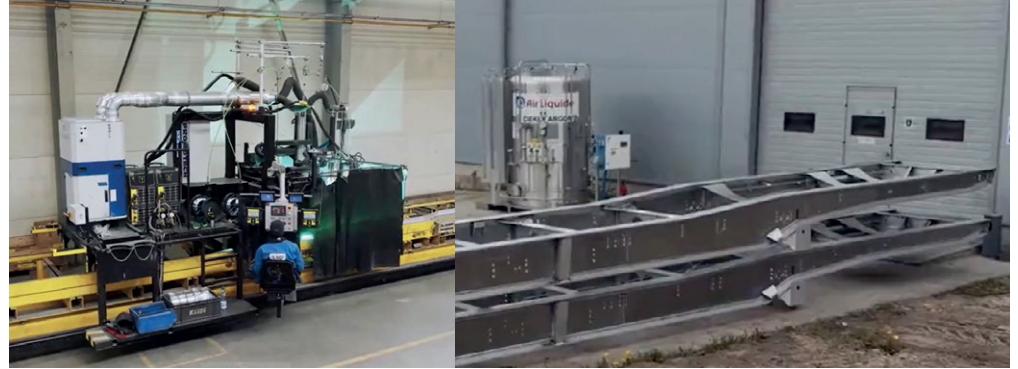




## CUTTING AND WELDING AUTOMATION



**COLUMN & BOOMS**



**GWS WA 1500 HD / WA 2000 HD & MULTI AXIS JOINT TRACKING SYSTEM**

### PIPE PROFILE CUTTING MACHINE



**PPCM 650**



**PPCM 1250**



**PPCM 1500**



**MCM-1000/4000 5 AXIS PORTABLE  
CNC CUTTING AND WELDING MACHINE**



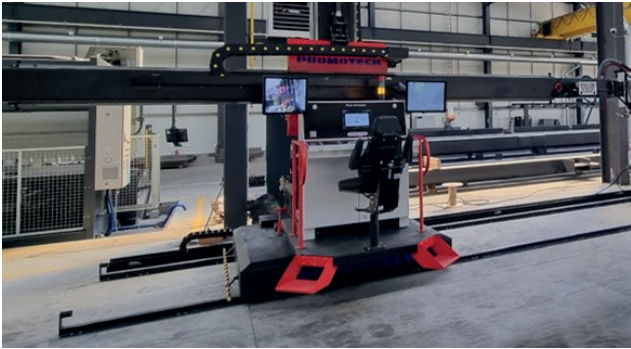
**JTS - AUTOMATIC JOINT  
TRACKING SYSTEM (STAND ALONE)**



## CUTTING AND WELDING AUTOMATION



## WELDING WORKSTATIONS





## COLUMN&BOOMS

Promotech manufactures wide range of customized Column&Booms.

Depends on the request Column&Booms will be delivered with SAW SINGLE OR TANDEM, MIG/MAG, TIG or PLASMA welding head and selected optional items like welding positioners, rotators, fit up bed rollers/turning rolls.

24 months extended warranty.





CRYOGENIC  
TANK



QUALITY CHECK  
- NO WELDING  
DEFECTS



MIG WELDING



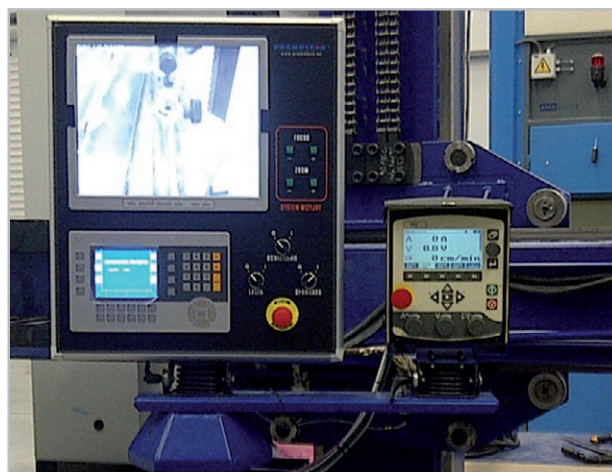
TIG WELDING







Sample view of CB operating panel and integrated SAW ACDC welding equipment from (Lincoln Electric and ESAB)



Sample view of CB operating panel and integrated MIG-MAG welding equipment from (ESAB and LORCH)



Welding process START/STOP available from one C&B control operating panel.



Optional equipment include: camera system for GMAW/SAW, automatic joint tracking system, flux handling equipment, fume extraction, welding rotators, positioners and turntables.



All our Column&Booms are equipped with passive safety systems such as safety chains, automatic brakes on a gear motor in case of power failure.

Active safety systems such as limit switches to prevent collisions are also standard.



## Standard and customized CB by sample succesfull deliveries

Applications for welding of long structural beams of closed profile, beams type T, H, HSI, HSQ with web height up to 1500 mm and the inside/outside welding of tanks, pressure vessels.



Sample views of C&B workstations.

Optional equipment: welding positioners and rotators available from PromotechAutomation



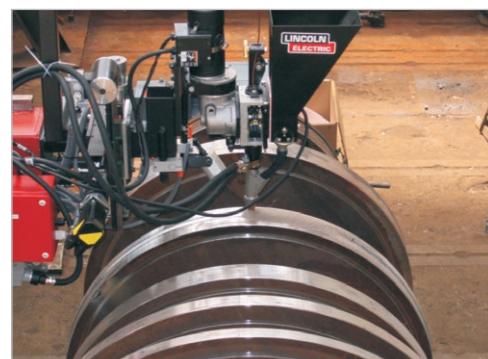
Customized applications delivered to our Clients by sample



ABM-50 for high-quality single and double-sided bevels



CB TIG/MIG-MAG and SAW READY



Hard-surfacing of turbines

Column&Boom can be integrated with other equipment working in the system such as roller beds or other welding positioners.

Column & Booms can be customized according to individual Client request.

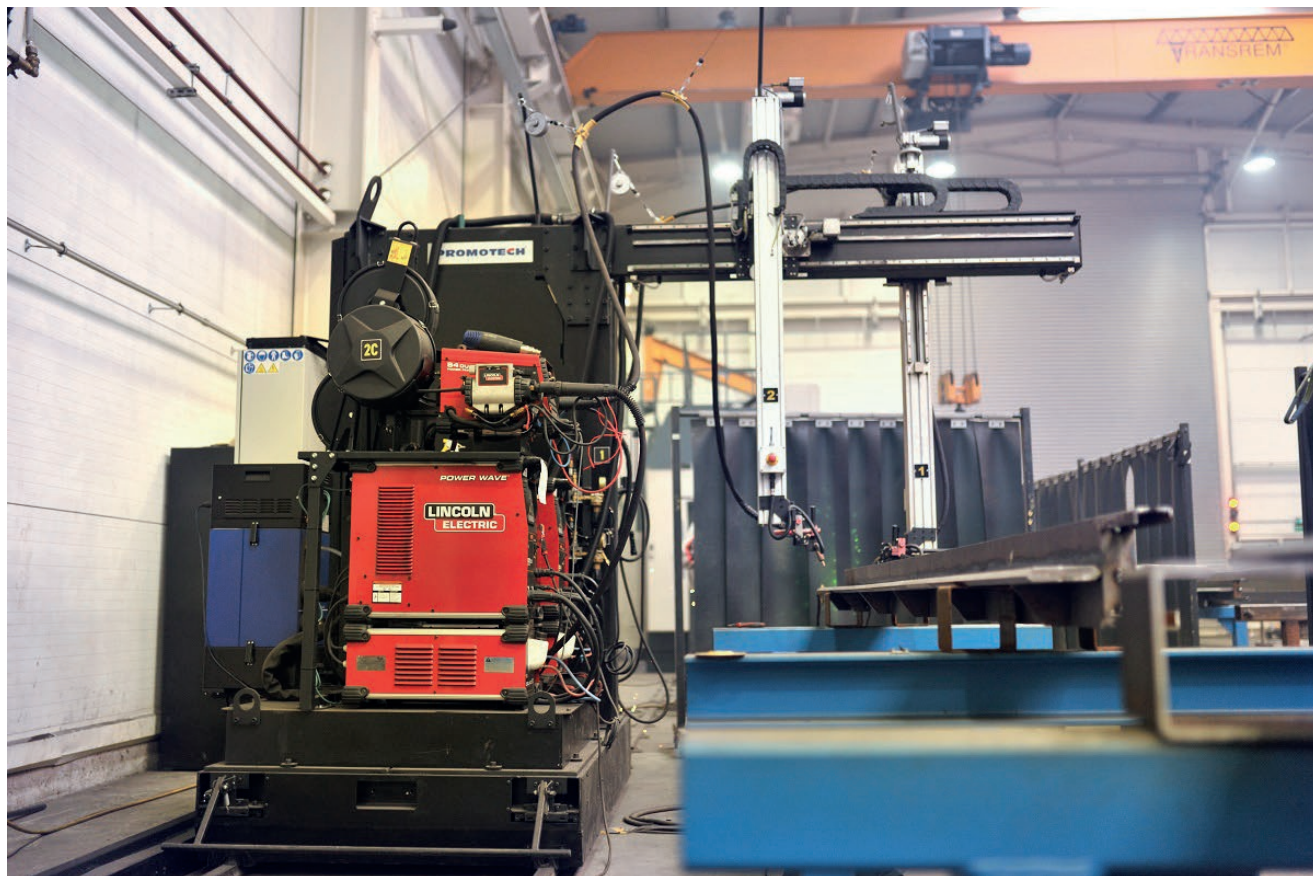
# WA 1000/1500/2000

## MIG-MAG / SAW SD / HD

Automatic longitudinal top quality MIG-MAG or SAW welding of long structural Box beams and H, I, T, HKS, HSQ also automotive chassis for long truck/train beams.

Single or multi-pass automatic fillet/butt welding with mechanical-electro joint tracking system.

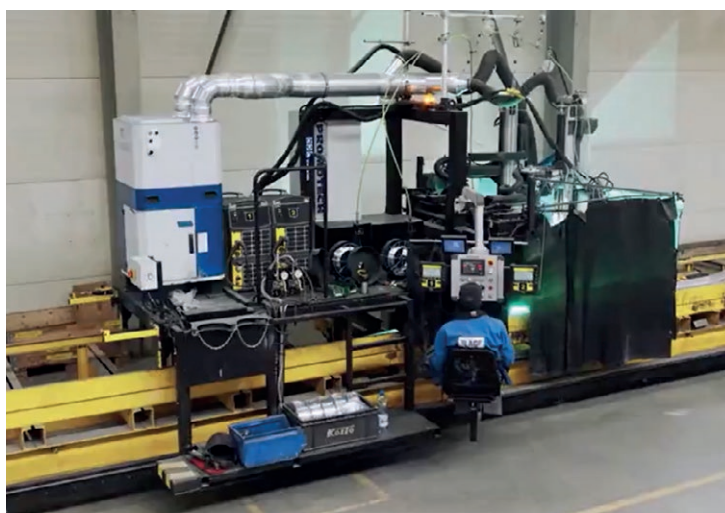
Minimized welding defect&reduced non-productive time and it's **One-man operation!**



GWS type WA TWIN MIG (Hyperfill)

### Your benefits:

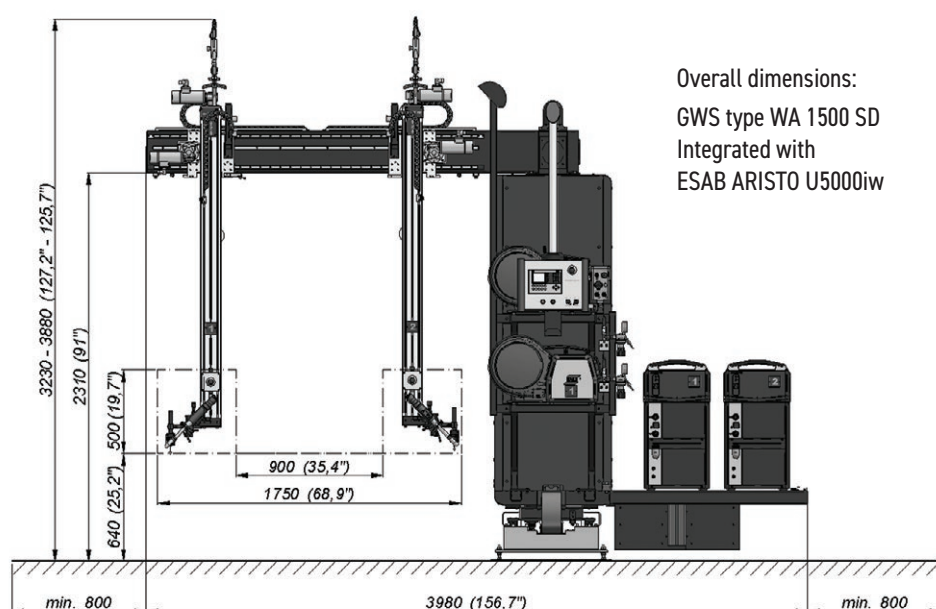
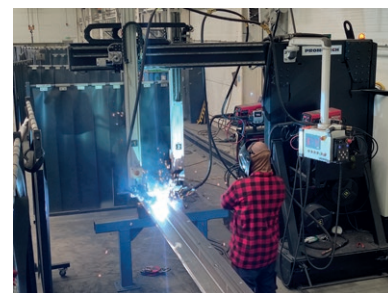
- Automatic fillet and butt welding with joint tracking
- Multipass welding
- One-man operation
- Reduction of costly over-welding and decrease in filler metal usage
- User friendly interface – multiple languages
- Accepts most of MIG-MAG and SAW welding power sources
- 24 months extended warranty



Promotech automatic mechanical-electro joint tracking ensure proper and repeatable torch positioning / welding process.



TECHNICAL SPECIFICATIONS	WA 1000 SD / WA 1500 SD
Welding method	MIG/MAG
Welding Torch Rotation Module (WTRM)	Option
Length of track	13m / 12m 16m/15m 19m/18m Upon request 19m+
Max workpiece height	1m (39.4") / 1.5m (60")
Max welding speed	Up to 2 m/min solid wire
Possibility to implement additional functionality e.g. welding length, intermittent welds	Yes
Possibility of changing welding parameters during welding process "on the fly"	Option
Fume extraction system (recommended)	Recommended Option for Operator safety

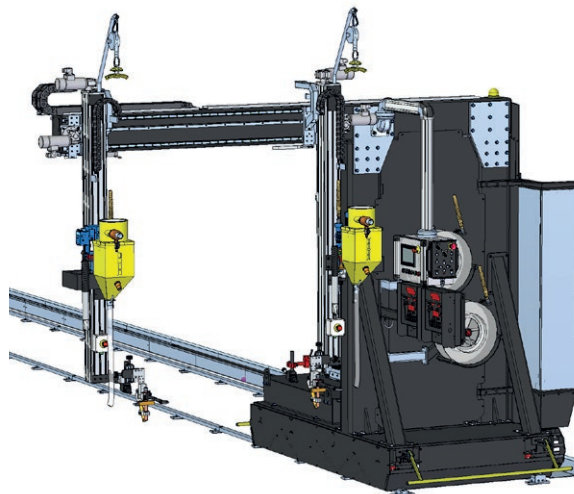
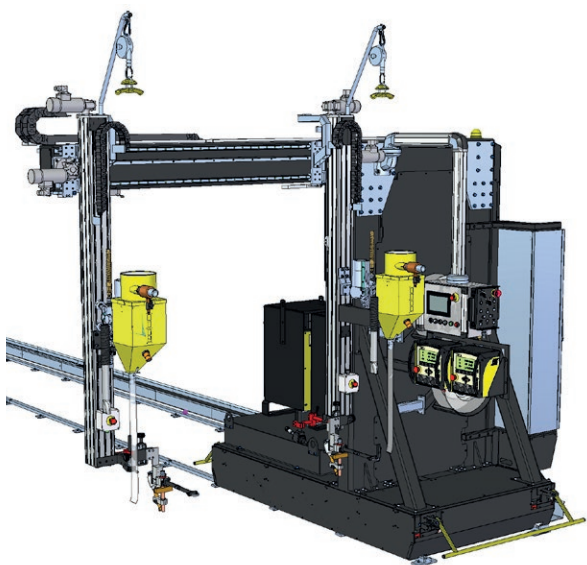


GWS type WA work-station applications confirmed with customers in automotive and steel construction business.



Purpose designed and custom built versions to be agreed with Promotech.





View of GWS type WA 1500 HD / WA 2000 HD MAG/SAW (CV or CC).

**TECHNICAL SPECIFICATIONS FOR GWS TYPE  
WA 1500 HD / WA 2000 HD**

Welding method	either SAW or MIG/MAG
Basic flux recovery system (gravity)	Option
Advanced flux handling system	Option
Welding Torch Rotation Module (WTRM)	Option
Fume extraction system (recommended)	Option
Length of track	Up to 30 m
Max workpiece height	Up to 2 m (80")
Max welding speed	Up to 2 m/min. solid wire
Possibility to implement additional functionality e.g. welding length, intermittent welds	Yes
Possibility of changing welding parameters during welding process "on the fly"	Option
Wire drum feeding	Option



Promotech automatic mechanical-electro joint tracking ensure proper and repeatable welding by means of easy slug removal process.



Special design machine for the trailer beam welding.



All GWS WA HD workstations are equipped with cameras to ensure an operator and welding process safety!



GWS WA work-stations accepts most of welding MIG-MAG and SAW power sources available in the market.

■ GWS type WA MIG / MAG  
Integrated **LORCH S8**



■ GWS type WA MIG / MAG  
Integrated **EWM Phoenix**



■ GWS type WA MIG / MAG  
Integrated **LINCOLN ELECTRIC PW500 HYPERFILL**



■ GWS type WA MIG / MAG  
Integrated **KEMPPI FASTMIG X 450**



■ GWS type WA MIG / MAG  
Integrated **ESAB ARISTO U5000iw**





# WELDING TORCH ROTATION MODULE

Welding Torch Rotation Module (WTRM) for longitudinal welding of variable geometry chassis and structural beams.

Thanks to WTRM, the welding torch keeps a constant position relative to the workpiece, ensuring uniform weld quality along the entire length of the welded joint. The torch position in relation to the workpiece is determined by the distance in the vertical and horizontal axes, correct angle between the welding torch and the workpiece, and tilt angles of the torch. In addition, automatic torch rotation maintains a steady rake angle to the workpiece. Constant values of these parameters ensure proper penetration in depth and width of the weld face.

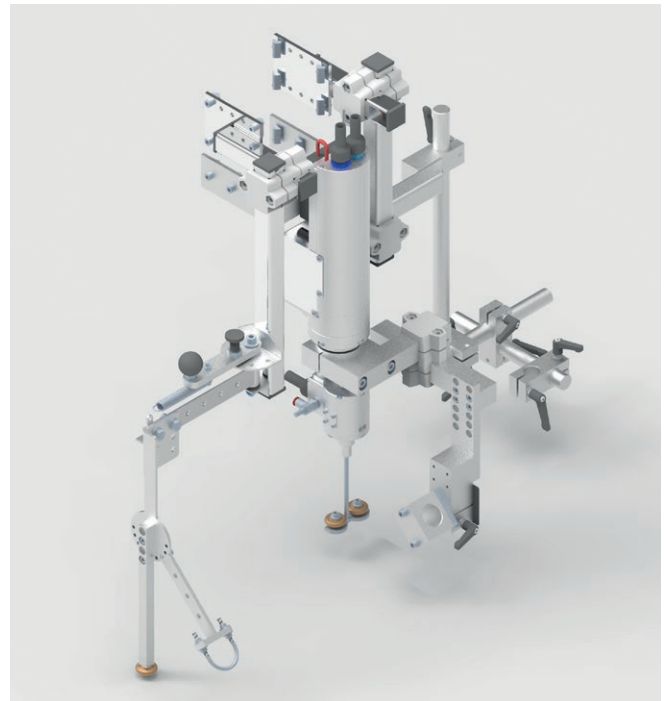
Welding portals equipped with WTRM are an attractive alternative to robotic applications and allow you to increase welding speed and significantly reduce operator training time.

The use of WTRM in the SAW process makes it possible to produce materials in excess of 4mm thick with minimal energy input, reducing workpiece deformation.

Torches with WTRM control easily handle shiny materials such as aluminum and high-alloy steel.



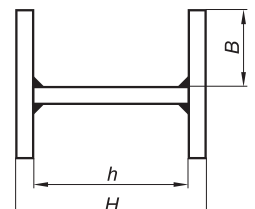
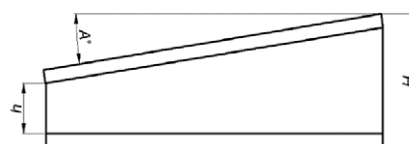
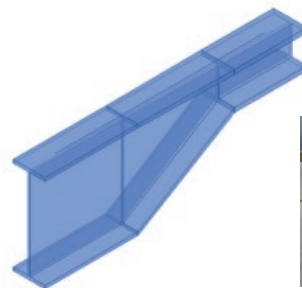
MIG / MAG, TWIN



SAW

## Features and benefits:

- Designed to maintain automatically the constant position of the welding torch in relation to the seam during welding process
- Maximum taper angle (A): 20°
- Minimum width of the welded beam (h): 120 mm
- Maximum width of the welded beam (H): 1500 mm
- Minimum height of the beam flange (B): 90 mm
- Maximum height of the beam flange (B): 160 mm
- Type of weld and welding position: fillet weld, PB position
- Welding process type: MIG/MAG or SAW
- Welding torch to be advised
- Welding equipment to be advised
- 24 months extended warranty

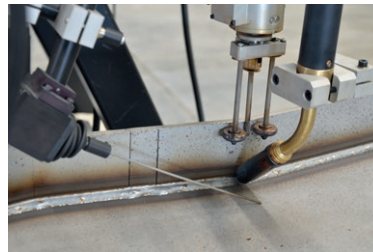
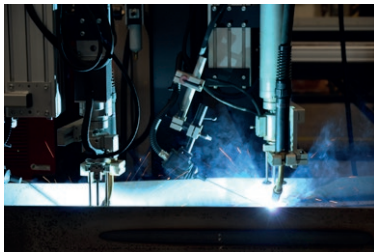
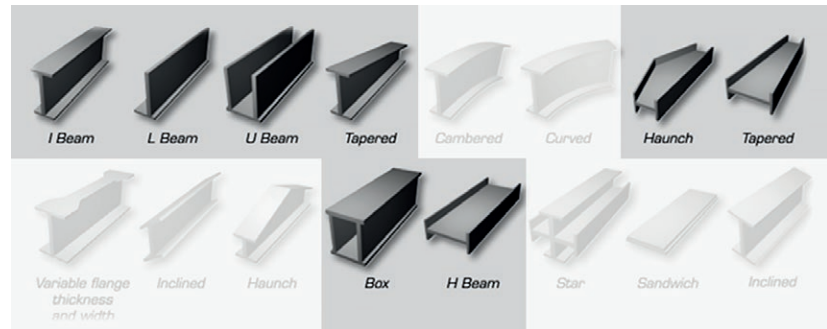




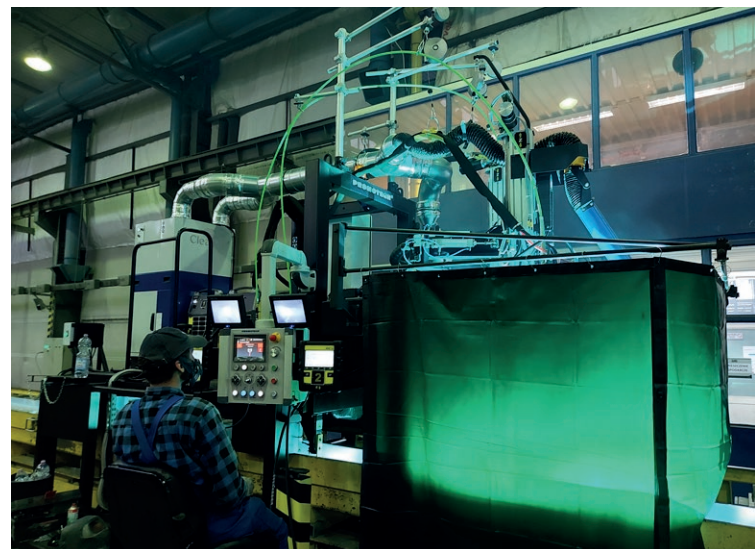
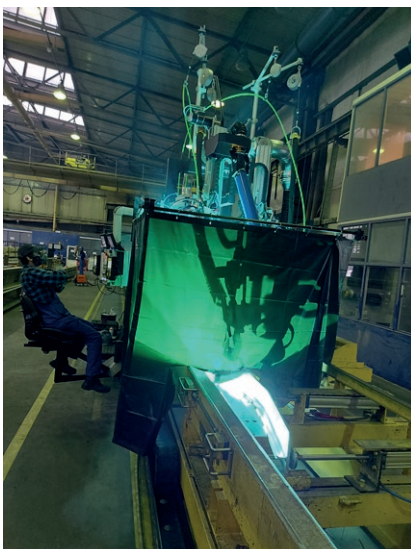
Structural beam type welding

### ■ Welding Torch Rotation Module for WA (target industries):

- Automotive (e.g. truck chassis),
- Railways (e.g. wagon construction),
- Bridge construction,
- Building construction



Automotive chassis beam type welding



Special design machine for the trailer beam welding.



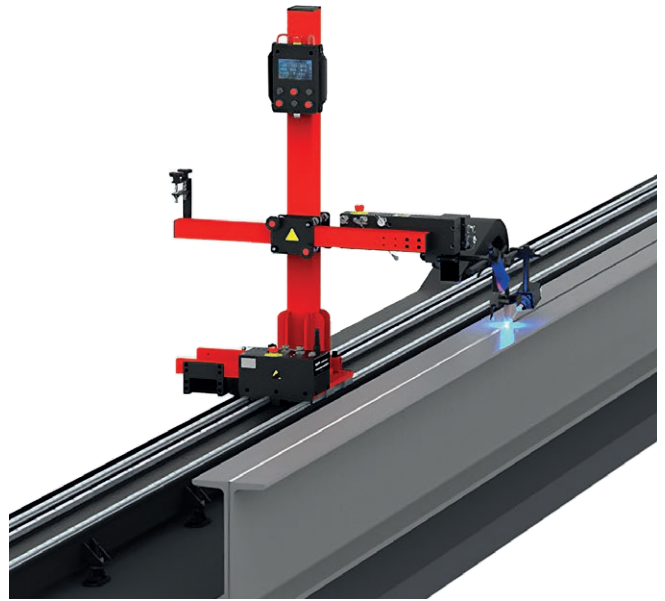
# WA COMPACT | WELDING SYSTEM

The WA Compact Welding System is an advanced and versatile welding solution designed for making both continuous and stitch butt and fillet welds using the MIG/MAG method.

The system provides efficient joint tracking for active compensation of torch position vertically and horizontally with and without oscillation.

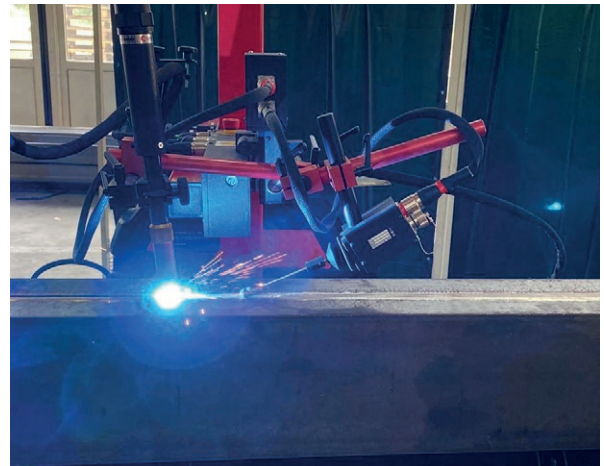
WA Compact supports welding with different oscillation patterns, including straight, triangle, trapezoid, and square, enhancing its adaptability to various welding tasks.

It is ideally suited for industrial applications, providing an efficient and budget-friendly option for workshops and large industrial plants.



## Features and benefits:

- **Advanced Welding Capabilities:** Supports both continuous and stitch welding using MIG/MAG method, ensuring versatility in different welding tasks.
- **Precision and Efficiency:** Equipped with oscillation and joint tracking with motorized vertical slide, maintaining the correct torch position for high-quality welds.
- **Flexible Oscillation Patterns:** Offers various weld paths such as straight, triangle, trapezoid, and square, increasing adaptability to different requirements.
- **User-Friendly Control:** Ergonomic remote control pendant with simple and easy to find control knobs makes adjustments possible without lifting of the operator's welding hood
- **Custom Track Length:** Track sections consists of 2 m support segments. The total length of the track can be tailored to the customer's requirements.
- **Cost-Effective Solution:** Budget-friendly advanced and versatile welding solution with customized workspace, making it a practical choice for both workshops and large industrial facilities



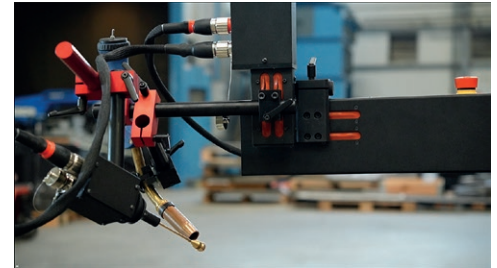
## Welding joints:





## WA COMPACT TECHNICAL SPECIFICATION

Voltage	1~ 110-120 V, 50-60 Hz 1~ 220-240 V, 50-60 Hz
Power	200 W
Torch type	MIG/MAG
MIG/MAG torch diameter	16-22 mm (5/8"-55/64")
Horizontal speed	0,05-2,5 m/min (2-98 inch/min)
Standard torch travel length *	3,5 m
Standard overall track length *	4 m
* Can be extended by a 2 m long track section to maximum 20 m total length	Option
Cable chain in custom lengths on request	Option
Oscillation type	Linear
Weld path	Straight, triangle, trapezoid, square
Oscillation width	0-11,4 cm (0-4 31/64")
Oscillation speed	0,1-2 m/min (4-79 inch/min)
Oscillation dwell time at center and on ends	0-5 s
Maximum oscillator pulling force	50 N
Allowed ambient temperature during operation	0-40°C (32-104°F)
Weight (incl. 4 m standard track length)	484 kg



## WA Compact Oscillation Paths



**Triangle.** The machine travels only during oscillation. During oscillation dwell time, the machine stops to fill the crater.



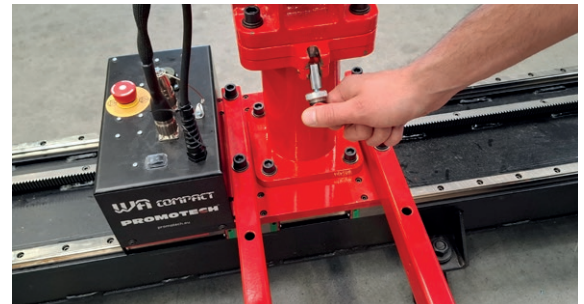
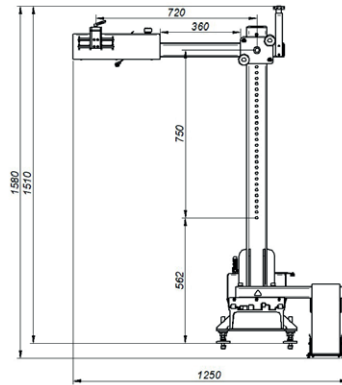
**Trapezoid.** The machine travels at all times, also during oscillation dwell time.



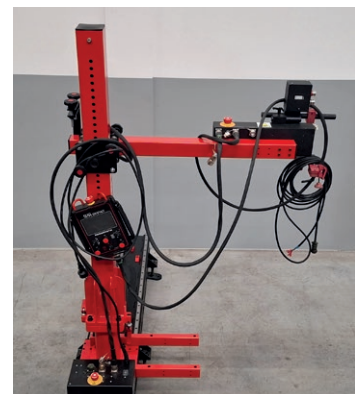
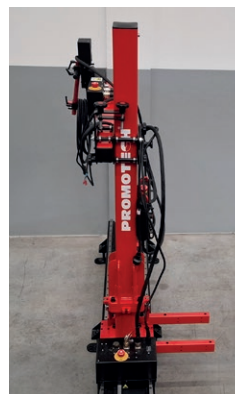
**Square.** The machine travels only during oscillation dwell time in left and right position. During oscillation, the machine stops. During oscillation dwell time in center position the machine fills the crater.

### Standard shipping set:

- Gantry welding system
- 4 m long track (total length up to 20 m on request)
- Arc ignition cable
- Remote control pendant
- Set of 4 signal cables
- Vertical slide
- Tracking sensor
- Fork tracking tip
- Torch holder
- Rod
- Long oscillator holder
- Rod clamp (2 pcs)
- Clamping block (2 pcs)
- 2 mm hex wrench
- 1.5 mm hex wrench
- Operator's manual



The rotating module enables the working arm to be repositioned depending on whether the welded part is on the right or left side of the track, or along the track axis, in order to deliver or collect the workpiece.





# PPCM-650 | PIPE PROFILE CUTTING MACHINE

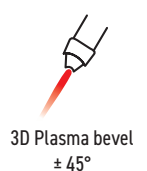
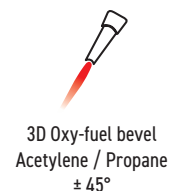
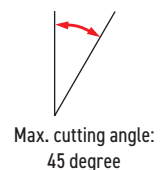
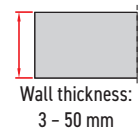
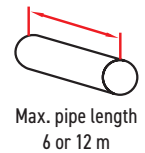
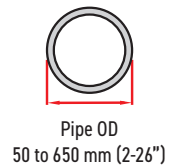
The CNC controlled Pipe Profile Cutting Machine allows 3D cutting/beveling using oxy-fuel or plasma.

Advanced design and top quality components enable fast and efficient cutting with top quality results.

Integrated library of macros allows for parametric definition of typical pipe joints and fast shape programming directly from machines' control panel or offline via technologist laptop, just after a short a couple of hours training.

Pipe joints can be prepared remotely in the office to keep machine operating, increasing process efficiency and reducing downtime.

Heavy duty design allows to extend warranty for 24 months, more available upon request!



## Important features:

- User friendly software including library of macros for most typical cutting shapes
- Automatic compensation of cutting speed depending on the material thickness, torch angle and cutting direction for the best cutting quality
- Heavy duty rigid construction
- Well proven in most demanding environments
- Easy access to gas valves / flash back arrestors / cutting torch
- Fume extraction system thru spindle



CAD/CAM file transfer thru  
Lantek Flex 3D Tubes  
(option)



## Options available upon customers' requests

### I. Oxy-fuel cutting (Acetylene or Propane)

Alternative cutting method that is available on request.

### II. Plasma Bevel - YES

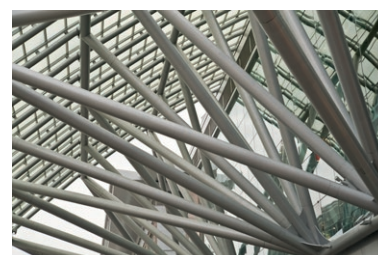


### III. Fume extraction system

Fume extraction system integrated with PPCM-650 thru spindle ensure the Client with effective fumes removal.



PPCM-650 TECHNICAL SPECIFICATION	
Pipe OD diameter	50 - 650 mm (2-26")
Max. pipe length	6 or 12 m (19 or 39 ft.)
Pipe weight	up to 3 000 kg
Wall thickness	3 - 50 mm
Max. cutting angle	± 45 degree
Cutting method	Oxy-Acetylene (Option) Oxy-Propane (Option) Plasma (Option)
Ignition: Oxy-fuel / Plasma	Manual / Automatic
Pipe support	2 pcs for up to 6-meter long pipes 4 pcs for up to 12-meter long pipes Additional supports on request
Vertical oval compensation mechanism	Included
Airconditioning of control cabinet	Option
Menu language	English, Croatian, Finnish, French, Russian, Turkish Other languages on request
Fume extraction system	Option
Auto nesting of multiple parts	Option
Transfer of NC data from CAD: Tekla files, SAT, STEP, IFC, Excel etc. files thru LANTEK flex 3D	Option





# PPCM-1250 / PPCM-1500 | PIPE PROFILE CUTTING MACHINE

The CNC controlled Pipe Profile Cutting Machine allows 3D cutting/beveling using oxy-fuel or plasma.

Advanced design and top quality components enable fast and efficient cutting with top quality results.

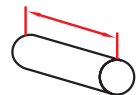
Integrated library of macros allows for parametric definition of typical pipe joints and fast shape programming directly from machines' control panel or offline via technolist laptop, just after a short a couple of hours training.

Pipe joints can be prepared remotely in the office to keep machine operating, increasing process efficiency and reducing downtime.

Heavy duty design allows to extend warranty for 24 months, more available upon request!



Pipe OD  
100 to 1250 mm (4-49") for PPCM-1250  
100 to 1524 mm (4-60") for PPCM-1500



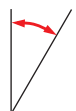
Max. pipe length  
6 or 12 m



Pipe weight  
up to 10 000 kg



Wall thickness:  
3 – 50 mm



Max. cutting angle:  
45 degree



3D Oxy-fuel bevel  
Acetylene / Propane  
± 45°



3D Plasma bevel  
± 45°



CAD/CAM file transfer thru  
Lantek Flex 3D Tubes  
(option)

## Important features:

- User friendly software including library of macros for most typical cutting shapes
- Automatic compensation of cutting speed depending on the material thickness, torch angle and cutting direction for the best cutting quality
- Heavy duty rigid construction
- Well proven in most demanding environments
- Easy access to gas valves
- Fume exhaust system thru spindle (option)



## Options available upon customers' requests

### I. Oxy-fuel cutting (Acetylene or Propane)

Alternative cutting method that is available on request.



### II. Plasma Cutting

We can integrate plasma source preferred by customer.

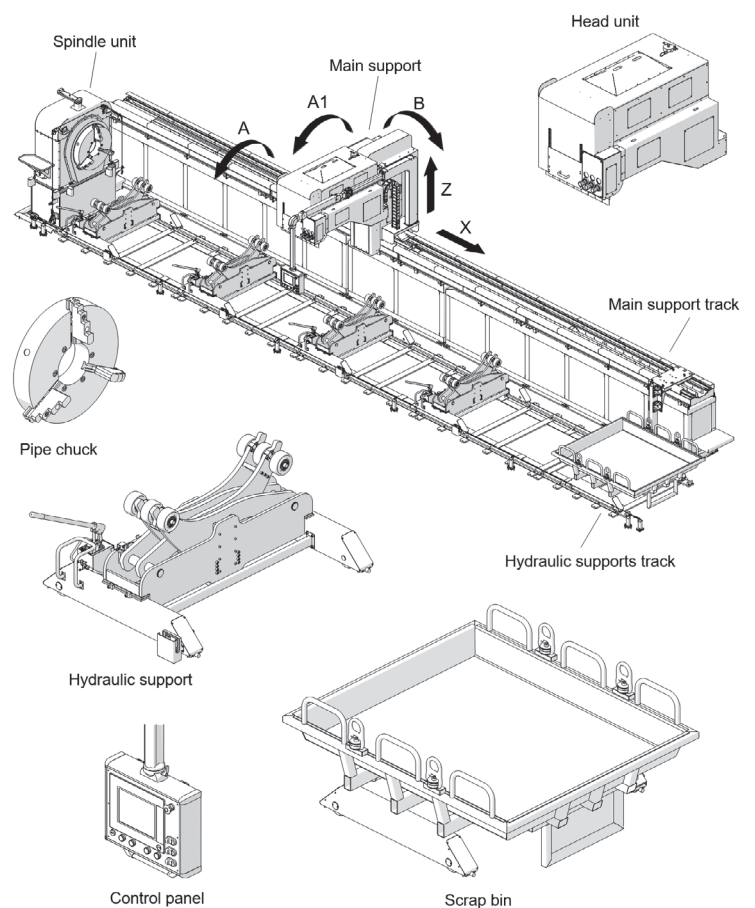


### III. Fume extraction system

Fume extraction system with electric adjustment of dirty air level, combined with PPCM-1500 spindle provides customer with effective fume removal.



PPCM-1250 / PPCM-1500 TECHNICAL SPECIFICATION	
Pipe OD diameter	100 to 1250 mm (4-49") for PPCM-1250 100 to 1524 mm (4-60") for PPCM-1500
Max. pipe length	6 or 12 m (19 or 39 ft.)
Pipe weight	up to 10 000 kg
Wall thickness	3 - 50 mm
Max. cutting angle	± 45 degree
Cutting method	Oxy-Acetylene (Option) Oxy-Propane (Option) Plasma (Option)
Ignition: Oxy-fuel / Plasma	Manual / Automatic
Pipe support	2 pcs for up to 6-meter long pipes 4 pcs for up to 12-meter long pipes Additional supports on request
Vertical oval compensation mechanism	Included
Airconditioning of control cabinet	Option
Menu language	English, Croatian, Finnish, French, Russian, Turkish Other languages on request
Fume extraction system	Option
Auto nesting of multiple parts	Option
Transfer of NC data from CAD: Tekla files, SAT, STEP, IFC, Excel etc. files thru LANTEK flex 3D	Option

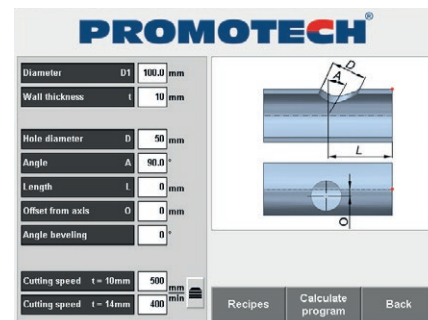




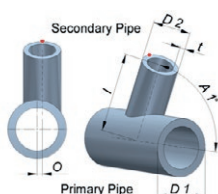
## Machines' software for PPCM-650, PPCM-1250 and PPCM-1500

### I. PPCM-650/1250/1500 software includes a wide scope of standard macros.

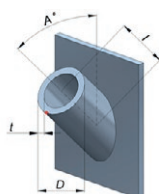
The macros present the typical cutting shapes and are easily programmable thanks to intuitive menu with necessary pipe parameters.



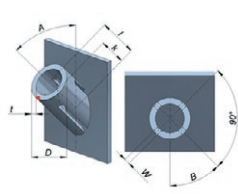
Typical cutting shapes:



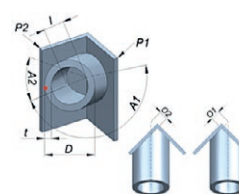
Pipe - pipe



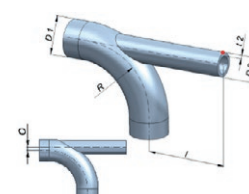
Pipe - plane



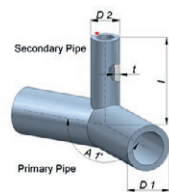
Pipe-plane with holes for fins



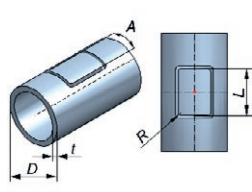
Pipe - planes



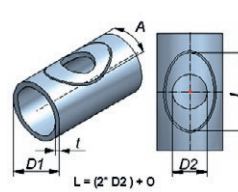
Pipe - elbow



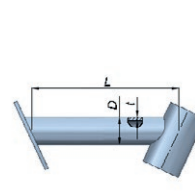
Pipe - joint



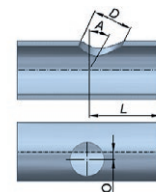
Rectangular pad



Reinforcement pad



Compound cut



Round hole with bevel

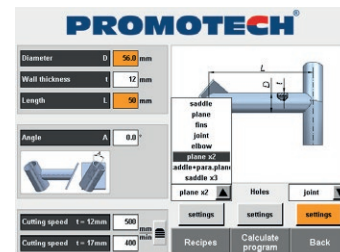
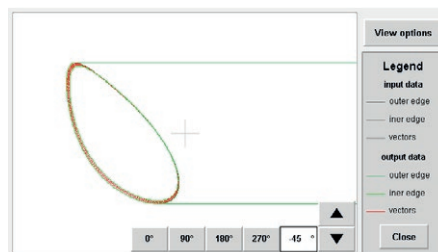
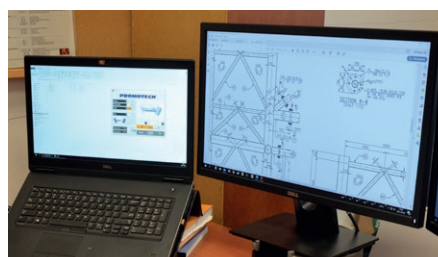
Promotech can expand the macro library upon customer's request.

### II. PPCM SIM PC / Off-line programming

Thanks to PPCM standard macros library you can work remotely on your projects.

Main features of PPCM SIM PC:

- all the macros from the PPCM library are also available on the PC
- time efficiency - when the PPCM machine is used for cutting, next project can be prepared on the PC in the meantime
- easy transfer between PC and PPCM machine using USB stick
- stand-alone application
- simple and user-friendly software



### On-line service support



Built-in network router enables remote access to machine interface (VNC Network)



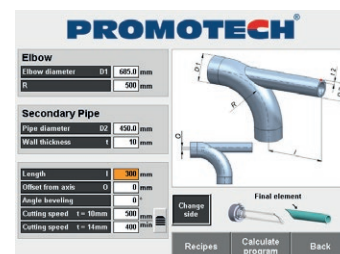
Cable connection or WiFi (option)



Compatible with mobile and desktop devices



On-request software updates and machine diagnostics





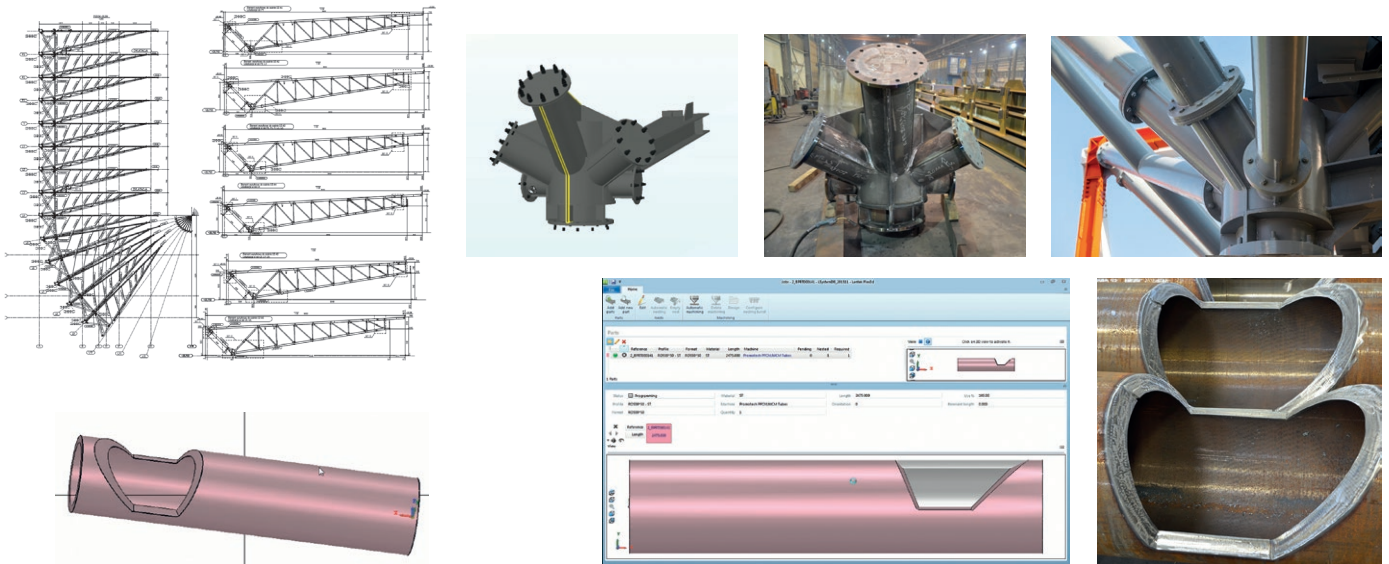
## Lantek Flex 3D Tubes software for CAD/CAM file transfer (option)

This software being customized for PPCM enables a simple way of generating the CNC code necessary to cut complex pipe intersection shapes. Lantek Flex 3D Tubes software is a perfect tool to import CAD geometry, design tubes using a set of standard shapes, or construct them from 2D outlines and generate them with any type of contour projected through the tube.

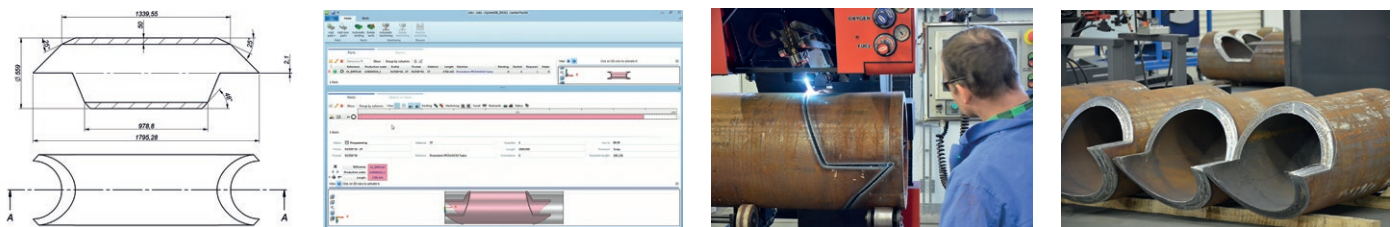
lantek

## Main benefits of optional Lantek Flex3d Tubes software

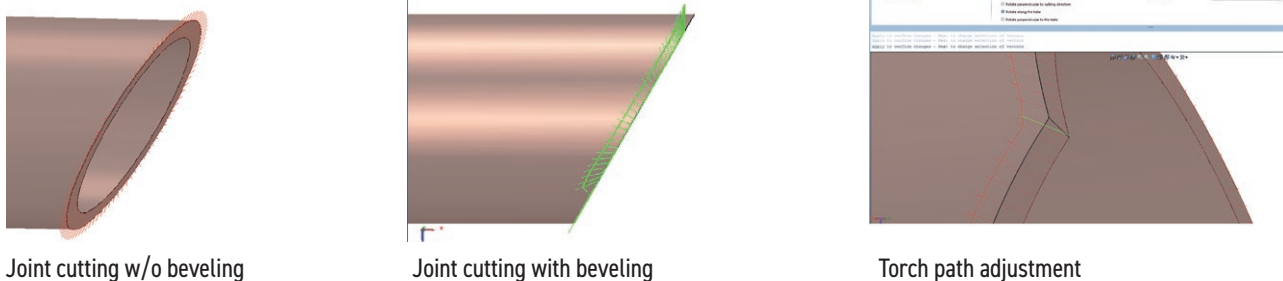
I. Import of CAD geometry from external software and acceptance of various file types including Tekla, SAT, STEP, IFC...



II. Designing of tubes and joints using a set of standard shapes or construction them from 2D outlines



III. Visualization of joints and torch path adjustment to optimize weld preparation



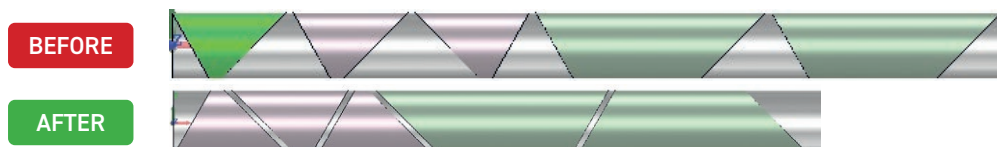
Joint cutting w/o beveling

Joint cutting with beveling

Torch path adjustment

IV. Auto Nesting of multiple parts

Lantek automatic nesting system determines the most efficient position of elements to be cut from pipes, thus minimizing waste of material as well as facilitating managing the warehouse of pipes.





# MODULAR WELDING STATIONS

Promotech offers modular workstation capable of circumferential welding of pipe elements, flanges and fasteners such as elbows, tees etc. The modular design allows for versatile use and easy adaptation of the system devices to perform various applications such as welds with oscillation, hardfacing and many others.

**TIG**  
resistant

**Modular Welding Stations** can be configured in a variety of ways depending on customer's needs with the following devices:

- Positioner 750 Premium
- Positioner 300 Premium
- Linear oscillator
- Motorized vertical slide
- Seam tracking attachment
- Pendulum oscillator OSC-8



## Premium Positioners:

- User-friendly control panel to set and monitor process parameters
- speed stabilization within full speed range from 0,12 rpm up to 2,4 rpm
- continuous speed adjustment
- setting and reading of key welding parameters in cm (inches) and cm/min or inches/min
- arc ignition control with pre and post crater fill adjustment
- left and right rotation
- heavy-duty construction
- recommended cooperation with optional Mini C&B System in order to configure an advanced modular welding station



CONTINUOUS  
WELDING

INTERMITTENT  
WELDING

AUTOMATIC  
INTERMITTENT  
WELDING

OVERLAP  
WELDING

HARDFACING

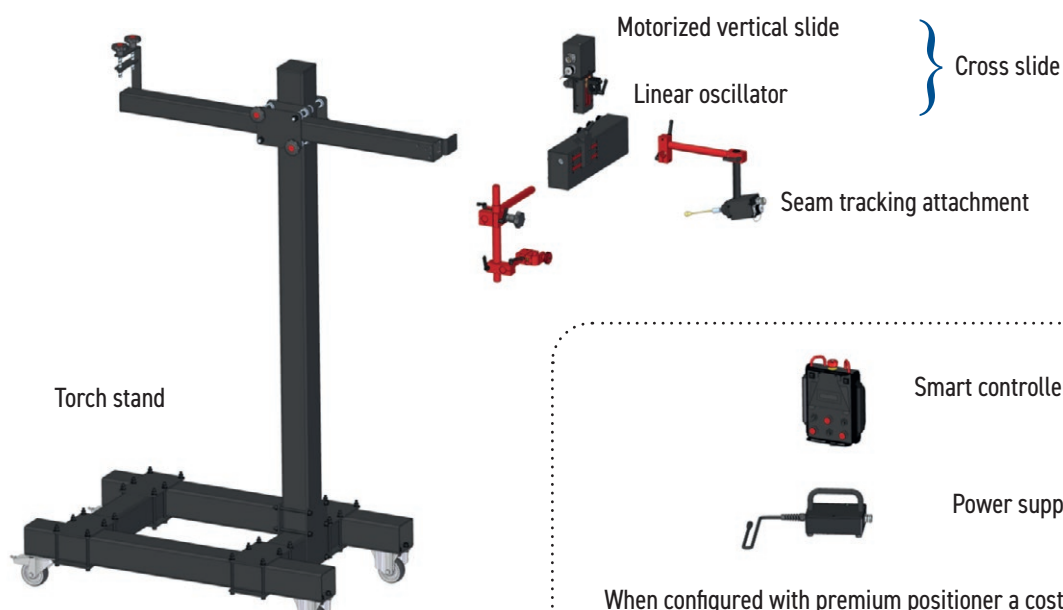
**Smart Controller** comes together with premium positioner and enables adjustment of all welding functions. When the premium positioner is configured with other devices, the control panel additionally allows adjustment of such parameters as:

- linear oscillation width, speed and delay time
- vertical torch position
- seam tracking

A portable control panel allows the operator to easily enter data and conveniently monitor various aspects of the welding process.

	Input of workpiece dimension information into the system
<b>MODE</b>	Selection of the welding procedure and precise setting of its parameters (e.g. continuous, intermittent, number of welds, back welding, overlap, crater fill etc.)
	Selection of automatic tracing in the y-axis, z-axis or simultaneously in the y-axis and z-axis

■ **Mini Column & Boom System** - stand alone version that can be configured with any positioner.



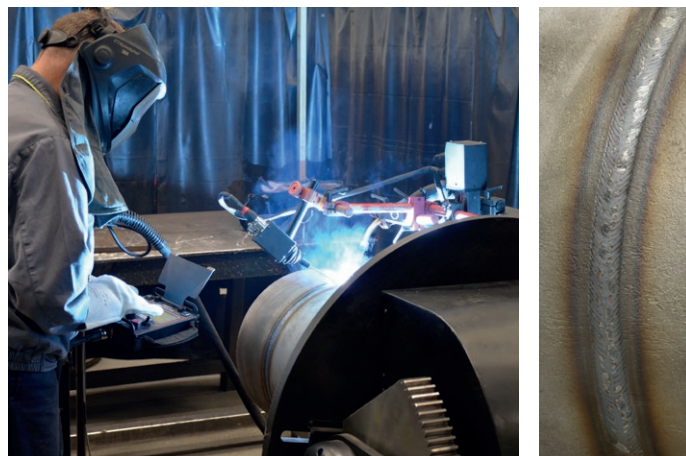
When configured with premium positioner a cost-effective Mini Column & Boom System without the smart controller and power supply unit can be ordered instead of the full version.

#### ■ Features and benefits:

- Easy and high precision positioning of the torch to a work piece using Smart Controller
- Wide range of linear oscillation settings
- Seam tracking enables active compensation of torch position vertically and horizontally with and without oscillation

Mini Column & Boom System	
Oscillation width	115 mm
Oscillation speed	10-200 cm/min.
Oscillation delay time	0-5s.
Vertical slide altitude range	50 mm

Positioner technical specification	Premium 300	Premium 750
Speed range min/max	0,12 - 2,4 rpm	0,035 - 1,4 rpm
Max load capacity	300 kg	750 kg
Mass center offset at a 90° tilt	up to 100mm	up to 150 mm
Faceplate diameter	630 mm	920 mm
Tilt angle range	0-90°	0-135°
Tilt angle adjustment	manually	motorized
Hollow-shaft inside diameter	28 mm	28 mm
Max welding current transfer	400 A	550-600A
Voltage	220-240 V, 50-60 Hz 100-120 V, 50-60 Hz	3x400V 50/60 Hz
Product code	PZY-0730-10-20-00-0	PZY-0736-10-40-00-0







# MCM-1000

## 5-AXIS TRUE PORTABLE CNC 3D CUTTING/BEVELING TO OFFSHORE TP'S AND XXL SIZE MONOPILES

### The 3 in one machine

- laser measurement
- oxy-plasma cutting/beveling
- SAW welding

Promotech MCM machines are a true portable CNC cutting and welding cartesian robots already proven with several Customers in Wind Business, including multiple successful installations!

Promotech's MCM supports Offshore projects with regards to cutting/beveling different openings in the TP's and Monopiles, XXL Monopiles.

### MCM machines as standard are available in the configuration:

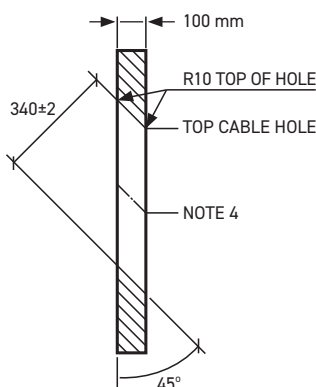
- MCM 3D oxy-cutting / beveling,  
for single or double sided bevel

### Options:

- MCM 3D SAW ACDC welding  
(recommended)
- MIG-MAG / FCAW-G / MCAW  
(available upon Customer request only)

### MCM main advantages:

- No CNC programming required
- Fast and easy positioning
- On-line service connection
- One-man operation
- 24 months extended warranty  
available



2D drawing, plate thickness  
approx. #100 mm.



Final result



Overall view of XL monopile



Overall view of XXL monopile

## Typical MCM Offshore application



MCM machines are available with an on-line connection software (on demand)



Built-in network router enables remote access to machine interface (VNC Network)



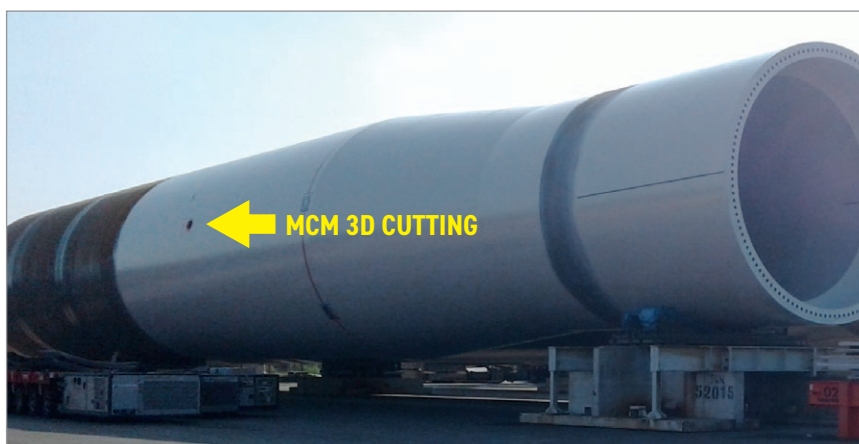
WIFI and cable connections



Compatible with mobile and desktop devices



On-request software updates and machine diagnostics



Overall view of XL monopile



## MCM-4000

The 3 in one machine

- laser measurement
- oxy-plasma cutting/beveling
- SAW welding

## 5-AXIS TRUE PORTABLE CNC 3D CUTTING/BEVELING AND WELDING CARTESIAN ROBOTS RECOMMENDED TO ONSHORE AND OFFSHORE WIND TOWERS MANUFACTURERS!

MCM are true portable CNC scanning, cutting, beveling and welding robots that eliminates the biggest bottleneck in the steel wind towers production On&Offshore!

MCM 3D Oxy-fuel CNC 3D cutting&beveling head ensure top quality welding preparation each time!

MCM SAW ACDC welding head increases deposition rate up to 14 kg/hour at 100% boost productivity and significantly reduce the largest component of welding costs – labor and overhead!



### MCM robots are available in the configuration:

- 4000 S / 4500 onshore / 4000 offshore / 5000+ offshore
- 3D Oxy-fuel cutting&beveling kit for single V or double sided bevel
- 3D SAW ACDC / Unbalance AC Single Wire

### Features & Benefits:

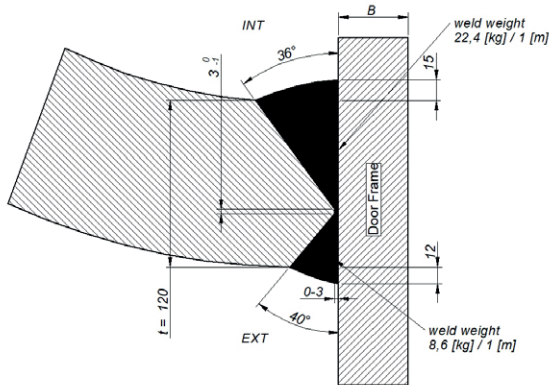
- Short setup time and easy handling
- Each workpiece (e.g. doorframe) is scanned to automatically obtain individual shape, CNC cutting/beveling and CNC welding path
- Top quality weld preps / aperture root gap 1-3 mm
- Welding defect rate less 1% / no grinding
- One-man operation
- Excellent Return On Investment (ROI)!
- Multiple successful installations to the Clients in the Wind Business!
- **Production support by means of WPQR / WPS development**
- **Production support by means of well experienced Promotech expert operators**
- **100% design and made in the EU (Poland)**
- **24 months extended warranty available**



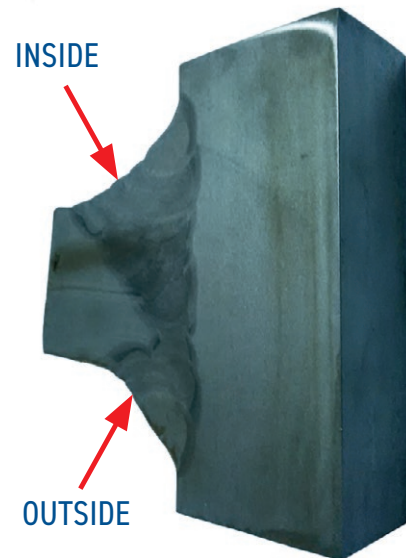
## ON&OFFSHORE WIND TOWERS APPLICATION: DOOR / VENTILLATION FRAMES

Weld prep: 3D Oxy-fuel double bevel

Welding: 3D SAW ACDC 4.00 mm single wire



MCM SAW welding joint design: double bevel 2/3 inside; 1/3 outside



## 3D CNC Oxy-fuel cutting&beveling inside tower section / aperture door assembly & fit up



One-man operation!



3D CNC SAW ACDC welding inside&outside of tower section!



One-man operation!

True portable MCM Cartesian robot  
for fast and easy handling Inside&Outside tower section!



## Standard technical data to MCM Onshore and Offshore applications

	Tower section ID	Max. width / length of the door frame
MCM Mini Offshore	Min. 3.0 m	Up to 0.5 x 1 m
MCM 1000 Offshore	Min. 3.5 m	Up to 1 x 2 m
MCM 4000 S Onshore	Min. 3.9 m	Up to 1.35 x 4.1 m
MCM 4500 Onshore	Min. 4.3 m	Up to 1.4 x 4.5 m
MCM 5000 Offshore	Min. 4.9 m	Up to 1.7 x 4.5 m
CNC 3D Oxy-fuel straight cut/bevel head	YES	
CNC 3D SAW ACDC	Recommended	
Max. wire electrode diameter	SAW Single Wire 4.00 mm	
Max. welding dep. rate at 100% arc time	10-12 kg/hr	
One-man Operation	YES	

## On-line service support connection available! (on demand)



Built-in network router enables remote access to machine interface (VNC Network)



WIFI and cable connections



Compatible with mobile and desktop devices



On-request software updates and machine diagnostics



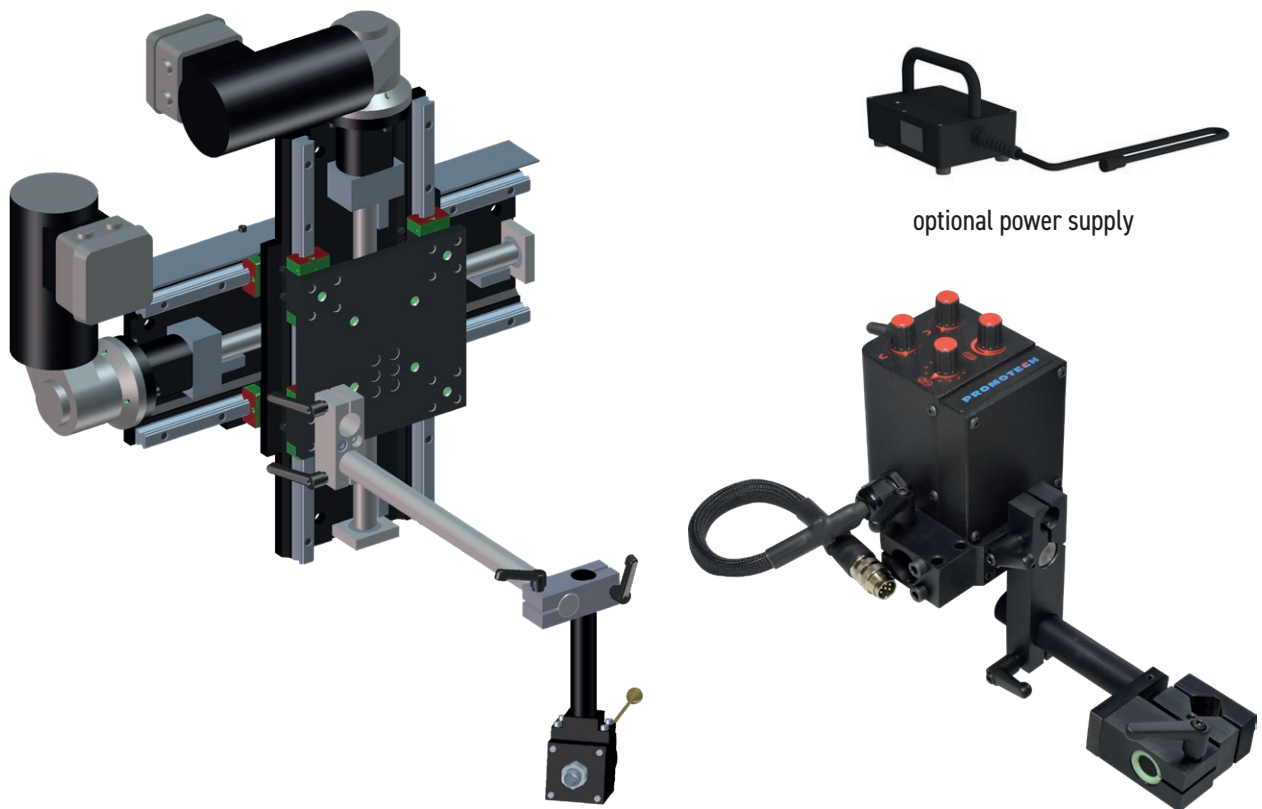
Promotech service team support on site (scheduled preventive maintenance)



## JTS | AUTOMATIC JOINT TRACKING SYSTEM

The Joint Tracking System automatically guides the welding torch properly with respect to the weld joint in two axes. It is suitable for GMAW, GTAW, FCAW and SAW applications and can be fitted to column and boom welding manipulators, gantry welding systems and other purpose-designed welding systems.

The electro-mechanical seam tracking system keeps maintaining the correct position of the welding torch relative to the welding groove set at the beginning. Any changes in inclination of a tracking sensor tip generate electrical signal resulting in active compensation of torch position and its motion up to 200 mm in both axes of standard motorized cross slide system. Movement range can be customized upon customer's request.



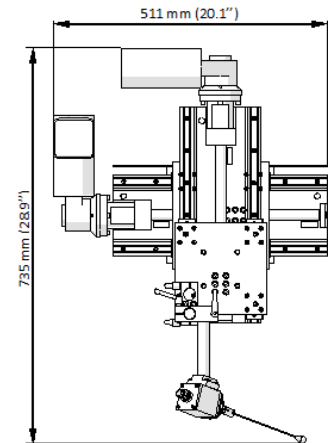
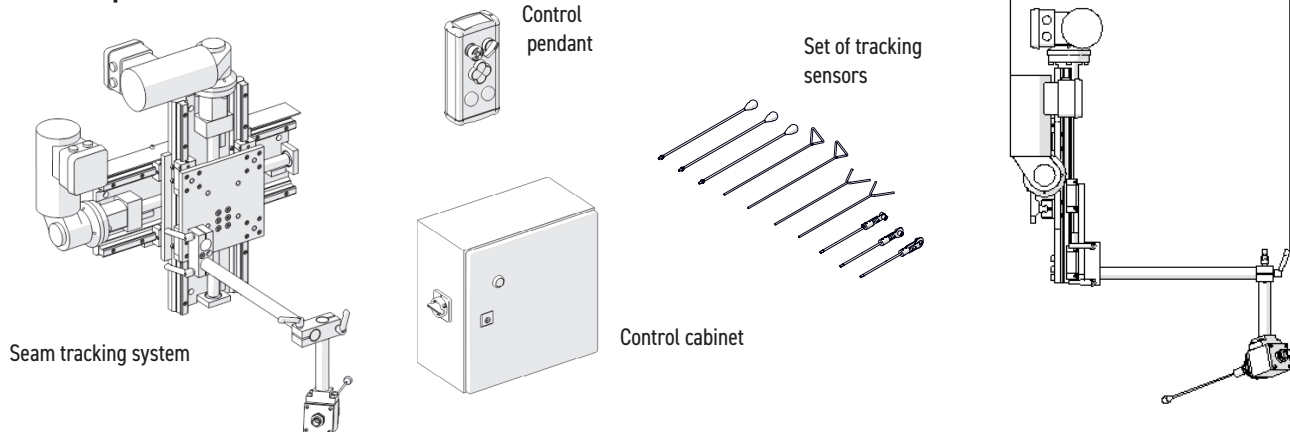
### ■ Features and benefits:

- Standard movement range of 200 x 200mm
- Electro-mechanical joint tracking system with high-precision linear guides ensures precise and smooth motion of 2 axes (up-down, right-left)
- Real-time compensation of head position relative to the welding groove
- Minimized welding defects and grinding
- Cross slide can be tailored to customers' needs
- User friendly control pendant
- Possibility to track only in one Z-axis (up-down) useful for butt welding
- Possibility to integrate with welding oscillator
- JTS system is perfect for fillet and butt welding in tanks, vessels as well as construction beams
- Oscillation unit available as option (optional power supply)

**TECHNICAL SPECIFICATION FOR JTS - JOINT TRACKING SYSTEM 200 X 200**

Voltage	230 V, 50/60 Hz + PE
Power	500 W
Cross slide vertical movement range (up-down axis)*	200 mm (7.9")
Cross slide horizontal movement range (right-left axis)*	200 mm (7.9")
Cross slide vertical movement speed (up-down axis)	360 mm/min (14.2 in/min)
Cross slide horizontal movement speed (right-left axis)	360 mm/min (14.2 in/min)
Required ambient temperature	5-40°C (41-104°F)
Weight	45 kg (100 lbs)
Integration with external safety devices	YES

\* Movement range can be customized upon customer's request.


**Main components of the JTS:**


The JTS can be applied for both circumferential and longitudinal welding.



Longitudinal welding (tanks, beams)

Circumferential welding (tanks, vessels)

The JTS can be enriched with oscillator and visual system



# PRO-WP 150 PRO-WP 300

## WELDING POSITIONERS

The welding positioners enable round or tubular pieces of metal to be rotated easily, provide better weld seam accessibility, can help produce high quality welds and increase deposition rates.

Frequency inverter ensures continuous speed adjustment and speed stabilization at the set value. They reduce time and effort for the welders, who can focus on their job with no need to constantly move around their workspace in order to get the best position.

The compact design takes up minimal floor space and tilting up to 90 degrees improves ergonomics of the workspace.

Selection of various auxiliary accessories make it possible to create an advanced modular welding station and customize it depending on required welding or cutting applications to maximize production efficiency.

### Primary features and benefits:

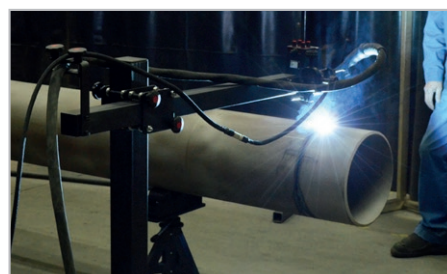
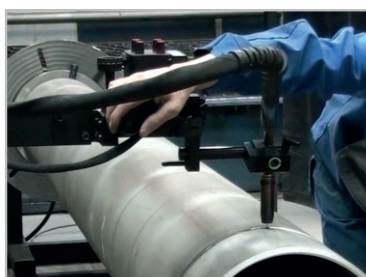
- Left or right rotation
- Continuous speed adjustment
- Speed stabilization within full speed range from 0,12 rpm up to 2,4 rpm
- Start/Stop (both controller and foot pedal)
- Arc ignition
- Remote control
- Foot pedal for hands-free operation
- Heavy duty construction
- Lots of auxiliary accessories enable building a modular welding station tailored for various welding and cutting applications



TECHNICAL SPECIFICATION	PRO-WP 150	PRO-WP 300
Voltage	1~ 220-240 V, 50-60 Hz 1~ 100-120 V, 50-60 Hz	1~ 220-240 V, 50-60 Hz 1~ 100-120 V, 50-60 Hz
Power	0,25 kW	0,25 kW
Speed range min/max	0,12 - 2,4 rpm	0,12 - 2,4 rpm
Max load capacity	150 kg (331 lbs)	300 kg (661 lbs)
Mass center offset from the table at a 90° tilt	up to 100 mm	up to 100 mm
Faceplate diameter	450 mm (17.7")	630 mm (24.8")
Hollow-shaft inside diameter	28 mm (1.1")	28 mm (1.1")
Tilting range with continuous angle adjustment	0-90°	0-90°
Tilting	manual	manual
Max. welding current transfer	400 A	400 A
Weight	115 kg (254 lbs)	150 kg (330 lbs)
Product code:	PZY-0681-10-10-00-0	PZY-0682-10-10-00-0

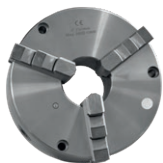


The arc ignition allows the welding torch to be switched on and off remotely.



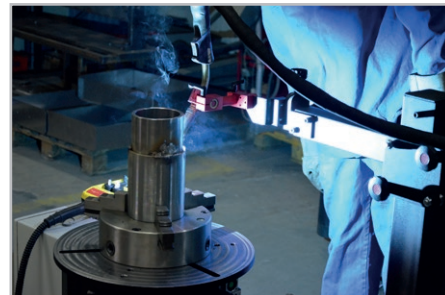
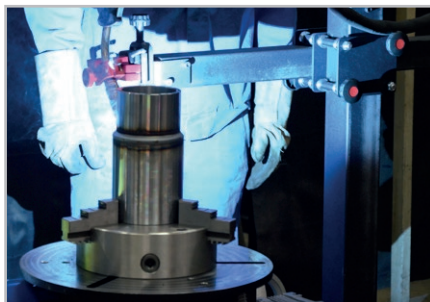
## Optional accessories for various welding and cutting applications:

- Lathe self-centering chuck D250



External clamping diameter:  $\Phi$  90-250 mm  
Internal clamping diameter:  $\Phi$  6-110 mm,  
 $\Phi$  80-250 mm

UCW-0681-18-00-00-0

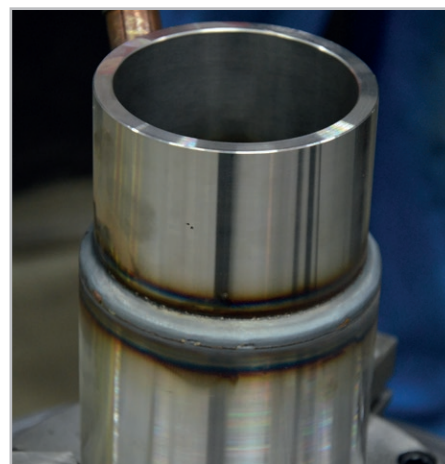
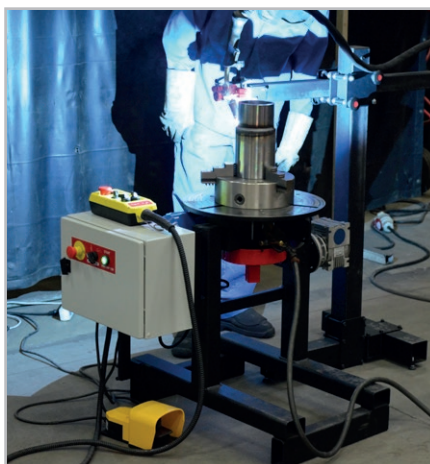


- Lathe self-centering chuck D400



External clamping diameter:  $\Phi$  120-400 mm  
Internal clamping diameter:  $\Phi$  15-210 mm,  
 $\Phi$  120-400 mm

UCW-0681-17-00-00-0



- Keyless self-centering chuck DD300



External clamping diameter:  $\Phi$  170 - 280 mm  
Internal clamping diameter:  $\Phi$  80 - 190 mm  
UCW-0681-19-00-00-0

- Keyless self-centering chuck DD400



External clamping diameter:  $\Phi$  250 - 380 mm  
Internal clamping diameter:  $\Phi$  120 - 250 mm  
UCW-0681-20-00-00-0

- Torch Holder



To be fixed directly on positioner  
UCW-0681-14-00-00-0





- Mini Column & Boom System (SWS0)

**TIG**  
compatible



Mini Column & Boom System (SWS0)	
Height	1710 mm
Length	1060 mm
Width	580 mm
Vertical movement range	1000 mm
Horizontal movement range	805 mm
Maximum load with full extension of horizontal arm	7 kg

- Cross slide assembly (option)



35 mm x 35 mm (left & right, up & down)  
ZSP-0466-14-00-00-0

- Roller support



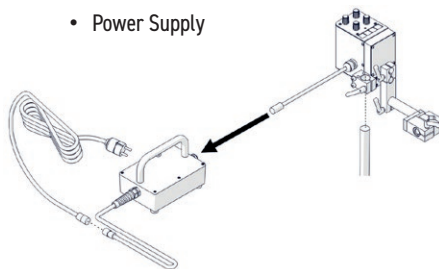
Load capacity: 1000 kg (2200 lbs)  
WSP-0681-16-00-00-0

- Pendulum Oscillator OSC-8 PRO

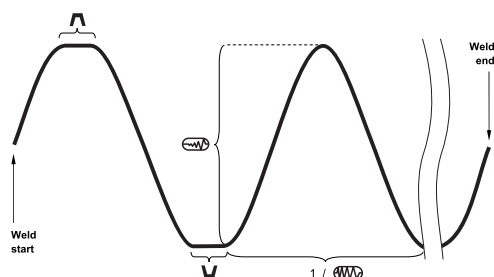


Product code: OSC-0799-10-00-00-0

- Power Supply



Product codes:  
ZSL-0720-03-00-05-0 (230V)  
ZSL-0720-03-00-04-0 (230 V, India type D)  
ZSL-0720-03-00-03-0 (230 V, UK type G)  
ZSL-0720-03-00-02-0 (230 V, Australia)  
ZSL-0720-03-00-01-0 (115 V)



Parameter	Value	Description
	3-99%	Oscillation width
	0-99% (where 0%=5s, 99%=0.2s) 0.2-5 s	Oscillation speed
	0-5 s [step: 0.1]	Oscillation dwell time in right position
	0-5 s [step: 0.1]	Oscillation dwell time in left position

OSC-8 PRO TECHNICAL SPECIFICATION	
Voltage	14-24 V DC
Power	50 W
Torch type	MIG/MAG
Torch diameter	16-22 mm (5/8"-55/64")
Oscillation type	Angular
Oscillation width at r=150 mm (5 29/32")	1-30 mm; 3/64"-1 3/16" (3-99%)
Oscillation speed at oscillation width of 10 mm (3/8") and zero dwell time on ends	12-300 cycles/min
Dwell time on ends	0-5 s
Maximum torque	8 N-m
Protection level	IP 20
Protection class	I
Required ambient temperature	0-50°C (32-122°F)
Weight	2.1 kg (4.6 lbs)

■ Clamping accessories for welding torches (to choose from)



- Short rod torch holder with clamp 16-22 mm  
UCW-0754-07-00-00

- Long rod torch holder with clamp 16-22 mm  
UCW-0752-07-00-00

- Short low rod torch holder with clip 16-22 mm  
UCW-0476-06-00-00

- Short rod torch holder with clip 16-22 mm  
UCW-0476-27-00-00

- Long rod torch holder with clip 16-22 mm  
UCW-0466-22-00-00

■ Clamping accessories for cutting torches (to choose from)



- Standard torch holder with clamp 28-35 mm and rough angle adjustment  
UCW-0475-28-00-00

- Precise torch holder with clamp 28-35 mm and precise angle adjustment  
UCW-0475-08-00-00



- Rod 150 mm for cutting torch holders  
SLP-0233-13-02-00-1



- Standard machine torch holder for oxy-fuel cutting with vertical position setting and rough angle adjustment  
For 30 mm torch with rack:  
UCW-0475-61-00-00-0  
For 35 mm torch with rack:  
UCW-0475-29-00-00-1



- Precise machine torch holder for oxy-fuel cutting with vertical position setting and precise angle adjustment.  
For 30 mm torch with rack:  
UCW-0475-59-00-00-0  
For 35 mm torch with rack:  
UCW-0475-42-00-00-1

- Clamping set  
Product code: ZST-0681-15-00-00



Clamp 100mm x 32mm x 19mm (3 pcs)



Clamp 150mm x 32mm x 22mm (3 pcs)



Double end stud bolt 75mm x 30mm (4 pcs)  
Double end stud bolt 100mm x 30mm (4 pcs)  
Double end stud bolt 125mm x 30mm (4 pcs)  
Double end stud bolt 150mm x 30mm (4 pcs)  
Double end stud bolt 175mm x 30mm (4 pcs)  
Double end stud bolt 200mm x 30mm (4 pcs)



Step block 28mm x 20mm - 38mm (4 pcs)



Step block 35mm x 28mm - 64mm (4 pcs)



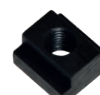
Step block 98mm x 64mm - 152mm (4 pcs)



Flanged nut M10 x 15mm (6 pcs)



Extension nut M10 x 30mm long (4 pcs)



T-slot nut 12mm x 18mm x 14mm (6 pcs)



# WIRE FEEDER BOOMS

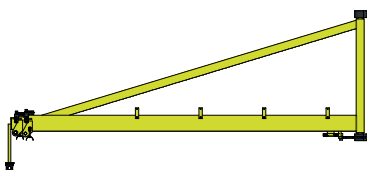
Highly useful devices that improve ergonomics and increase flexibility of welding stations.

## Main features and benefits:

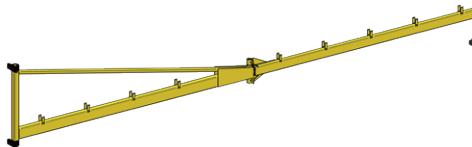
- extended workspace
- more freedom of movement over significantly larger area comparing to the traditional setup
- no wires on the floor
- no mess of tangled cables that in extreme cases can be outright dangerous
- more convenient welding of bigger and complex constructions
- simple and robust device
- can be easily mounted to the construction elements of the production halls with no need for any additional infrastructure
- permissible load: up to 50 kg



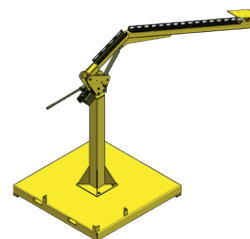
## Three types to choose from:



Wall mounted telescopic wire feeder boom



Wall mounted pivot wire feeder boom



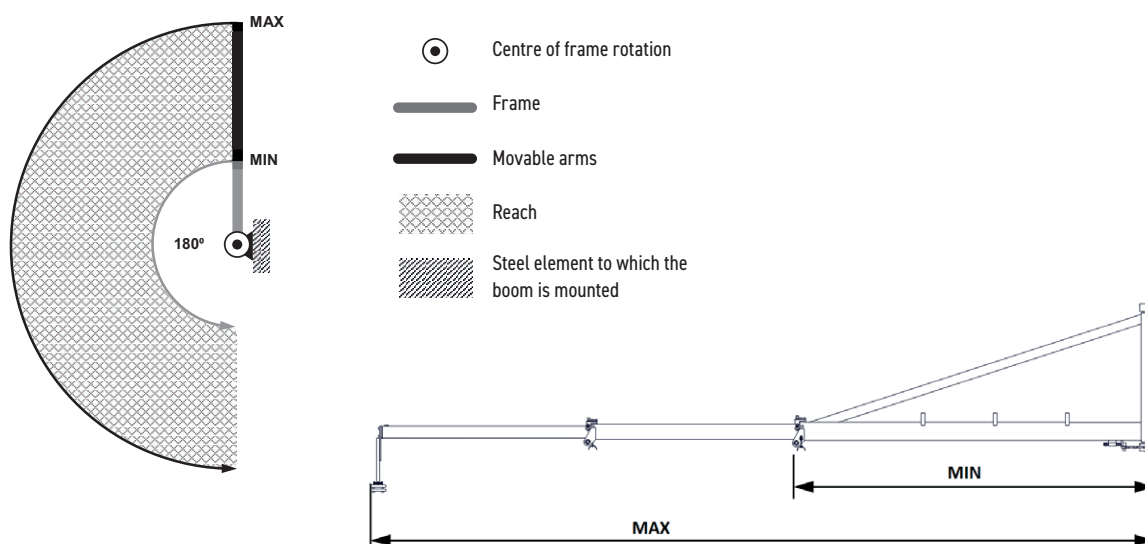
Hydraulic wire feeder boom

## Wall mounted telescopic wire feeder boom

- can rotate up to 180° around the vertical axis
- two types of frames: either welded or bolted for self-assembly after shipping
- two adjustable ranges of movable arms: either up to ca 6000 mm or up to ca 8000 mm
- two types of holders: either R type or L type
- eight various models altogether



## Adjustable reach of telescopic wire feeder booms

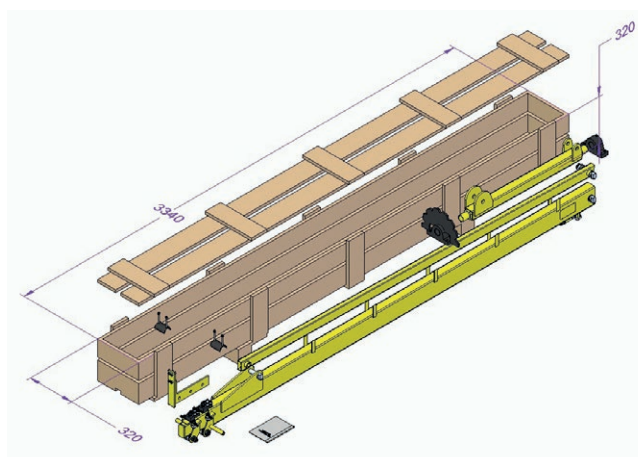
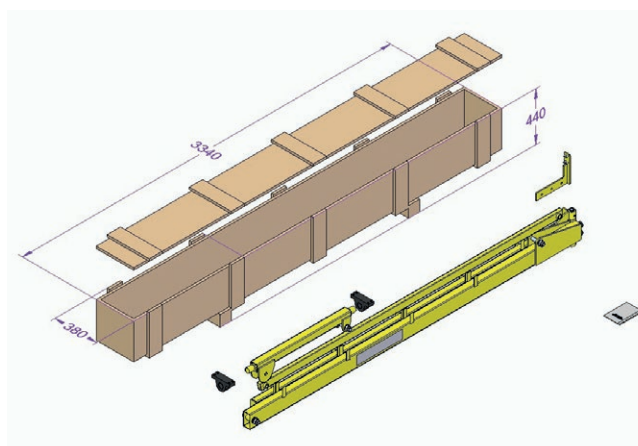


TELESCOPIC	Frame	Reach (Min - Max)	Rotation	Max. load	Weight	Holder type	Product code
TL6000 WL	Welded	2500-5980 mm	0-180°	50 kg	95 kg	L	WSG-0569-10-00-01-0
TL6000 WR	Welded	2550-6030 mm	0-180°	50 kg	95 kg	R	WSG-0569-10-00-02-0
TL8000 WL	Welded	3250-7710 mm	0-180°	50 kg	120 kg	L	WSG-0429-10-00-01-0
TL8000 WR	Welded	3310-7770 mm	0-180°	50 kg	120 kg	R	WSG-0429-10-00-02-0
TL6000 BL	Bolted	2540-5990 mm	0-180°	50 kg	107 kg	L	WSG-0767-10-00-00-0
TL6000 BR	Bolted	2590-6040 mm	0-180°	50 kg	107 kg	R	WSG-0767-10-00-01-0
TL8000 BL	Bolted	3320-7750 mm	0-180°	50 kg	130 kg	L	WSG-0732-10-00-00-0
TL8000 BR	Bolted	3370-7800 mm	0-180°	50 kg	130 kg	R	WSG-0732-10-00-01-0

### Bolted frame versions

To optimize transport costs, PROMOTECH offers a new line of wire feeder booms (both pivot and telescopic) with a bolted frame that is disassembled for delivery and ready for self-assembly after shipping.

Each bolted wire feeder boom is individually packaged in a wooden shipping box.





## Types of holders

Each telescopic and pivot wire feeder boom comes with a specific type of holder either "R" or "L". Please refer to product codes available in tables at page 4 and 6.

To increase the functionality of the booms, their current design allows the users to replace the original holder with another holder variant even after purchase. Both the 'R' and 'L' brackets are mounted in the same way (see below), so users are able to swap them themselves.



"R" type wire feeder holder  
Product code:  
MCW-0732-08-00-00-0



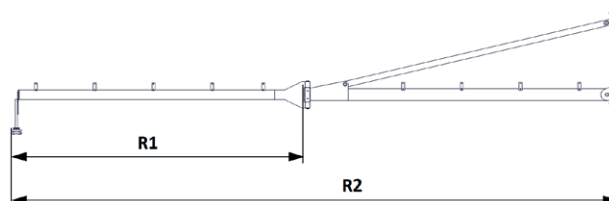
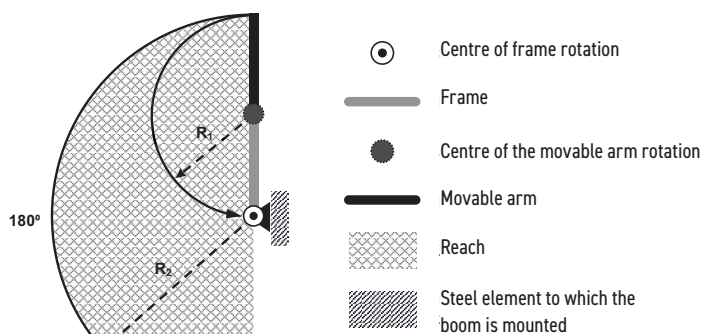
"L" type wire feeder holder  
Product code:  
MCW-0732-09-00-00-0

## Wall mounted pivot wire feeder boom

- can rotate up to 180° around the vertical axis
- additionally the movable arm can be rotated up to 180° around the pivot
- two types of frames: either welded or bolted for self-assembly after shipping
- adjustable reach of movable arm: up to ca 6000 mm
- two types of holders: either R type or L type
- four various models altogether



## Reach of pivot wire feeder booms

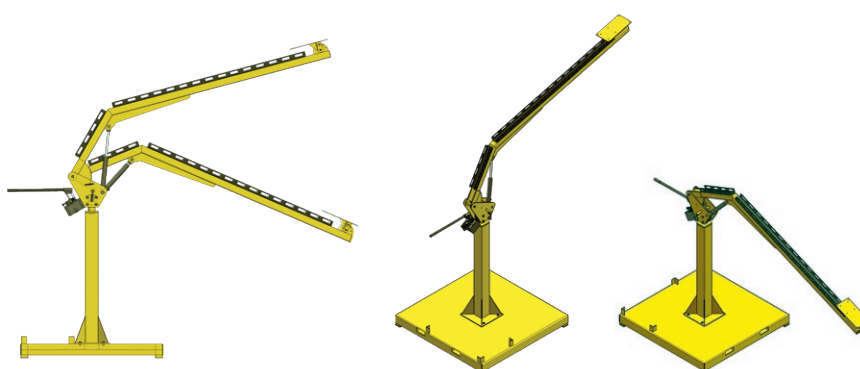
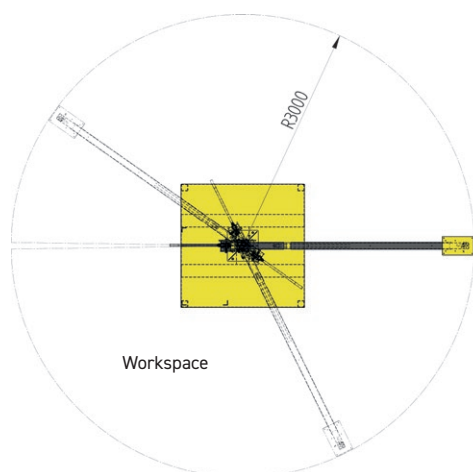
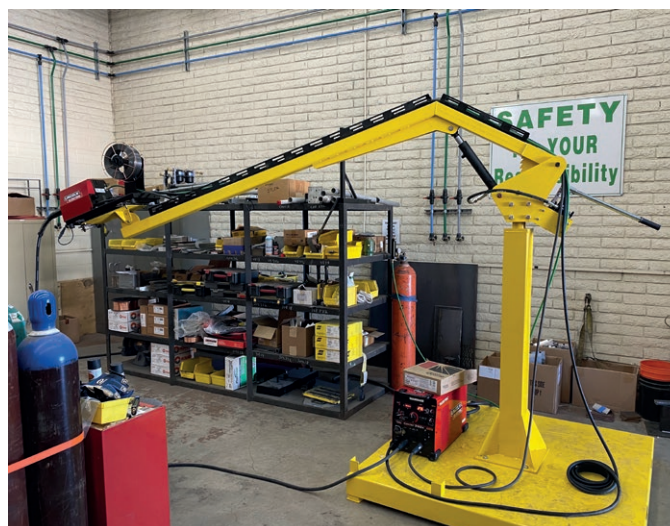
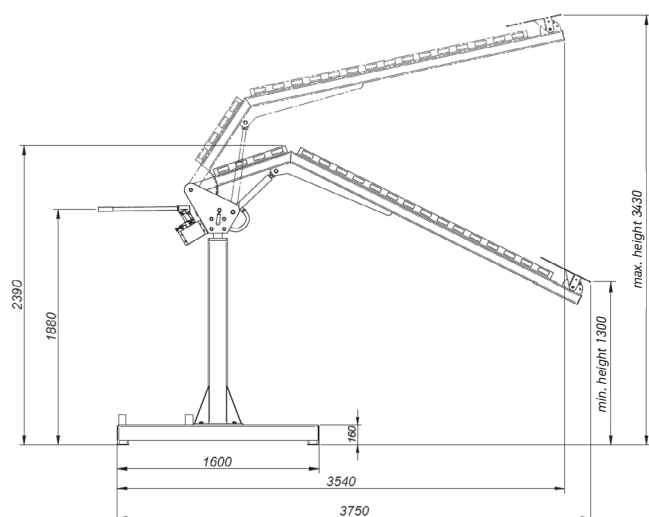


PIVOT	Frame	Reach (R1 - R2)	Rotation	Max. load	Weight	Holder type	Product code
WP6000 WL	Welded	2830-5940 mm	0-180°	50 kg	100 kg	L	WSG-0725-10-00-01-0
WP6000 WR	Welded	2890-6000 mm	0-180°	50 kg	100 kg	R	WSG-0725-10-00-02-0
WP6000 BL	Bolted	2840-5980 mm	0-180°	50 kg	110 kg	L	WSG-0745-10-00-00-0
WP6000 BR	Bolted	2890-6030 mm	0-180°	50 kg	110 kg	R	WSG-0745-10-00-01-0

## Hydraulic wire feeder boom

- can be rotated up to 360° around the vertical axis
- adjustable height of the boom from 1300 mm (51") up to 3430 mm (135")

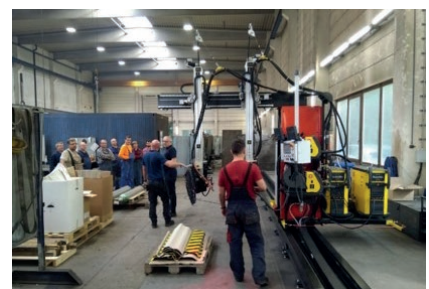
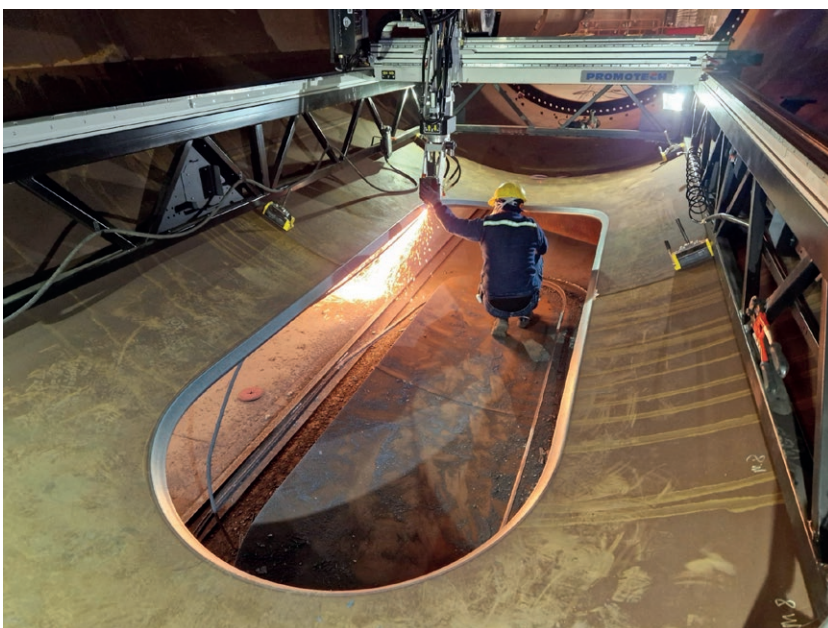
product code: WSG-000003



HYDRAULIC WIRE FEEDER BOOM Technical specifications	
Reach	3000 mm (118")
Lifting height	1300 – 3430 mm (51 – 135")
Rotation angle	0-360°
Maximum load (wire feeder, wire)	50 kg (110 lbs)
Dimensions [L x W x H]	3750 mm x 1600 mm x 2390 mm (min) / 3430 mm (max) 148" x 63" x 94" (min) / 135" (max)
Weight	330 kg (733 lbs)

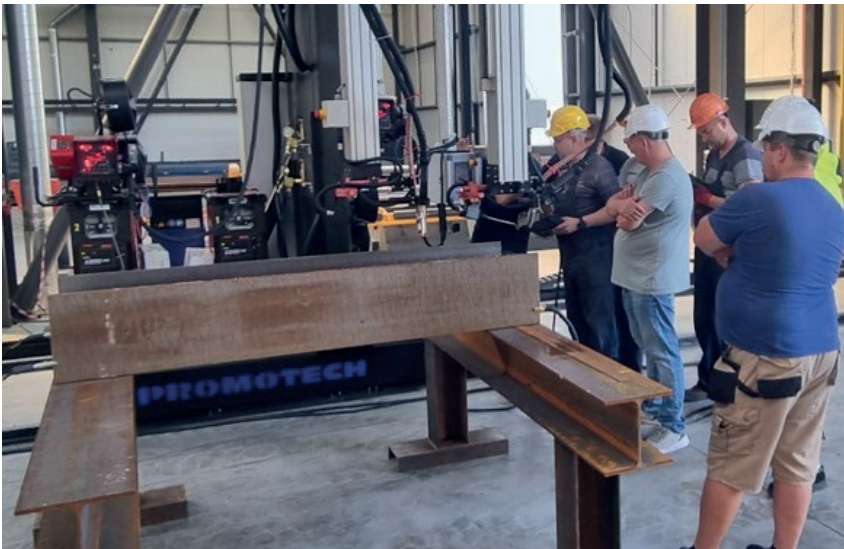


■ Installations worldwide





## Workshops and training sessions



## Product Service

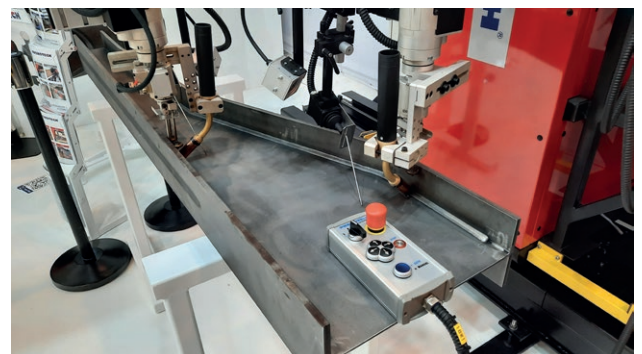




Reference visits



Participation in trade fairs





# Stay connected

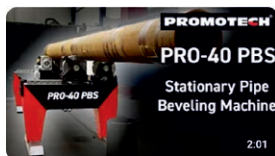
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- Real-world case studies
- Tips & tricks
- and more

## Don't miss a thing



PRO-40 PBS | Stationary Pipe Beveling Machine



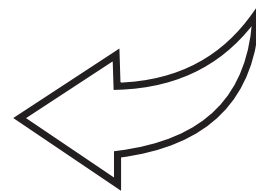
SCORPIO BATTERY: Advanced Battery-Powered Welding Tractor



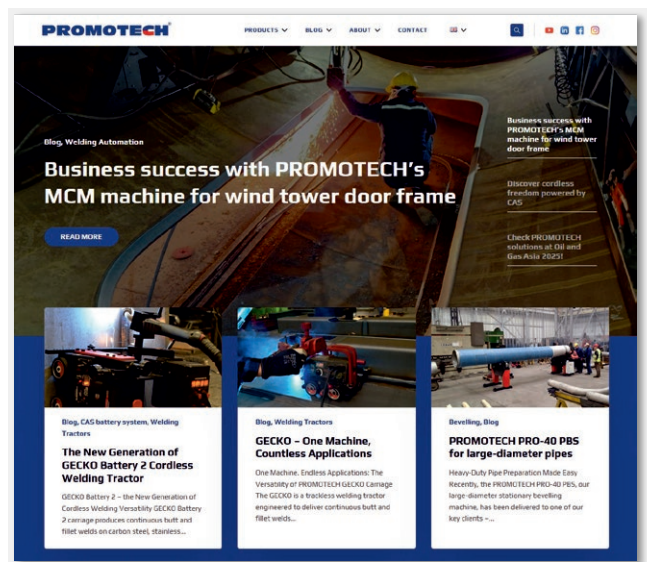
ABM-50 DD Vario | Auto-Feed Heavy Duty Beveler



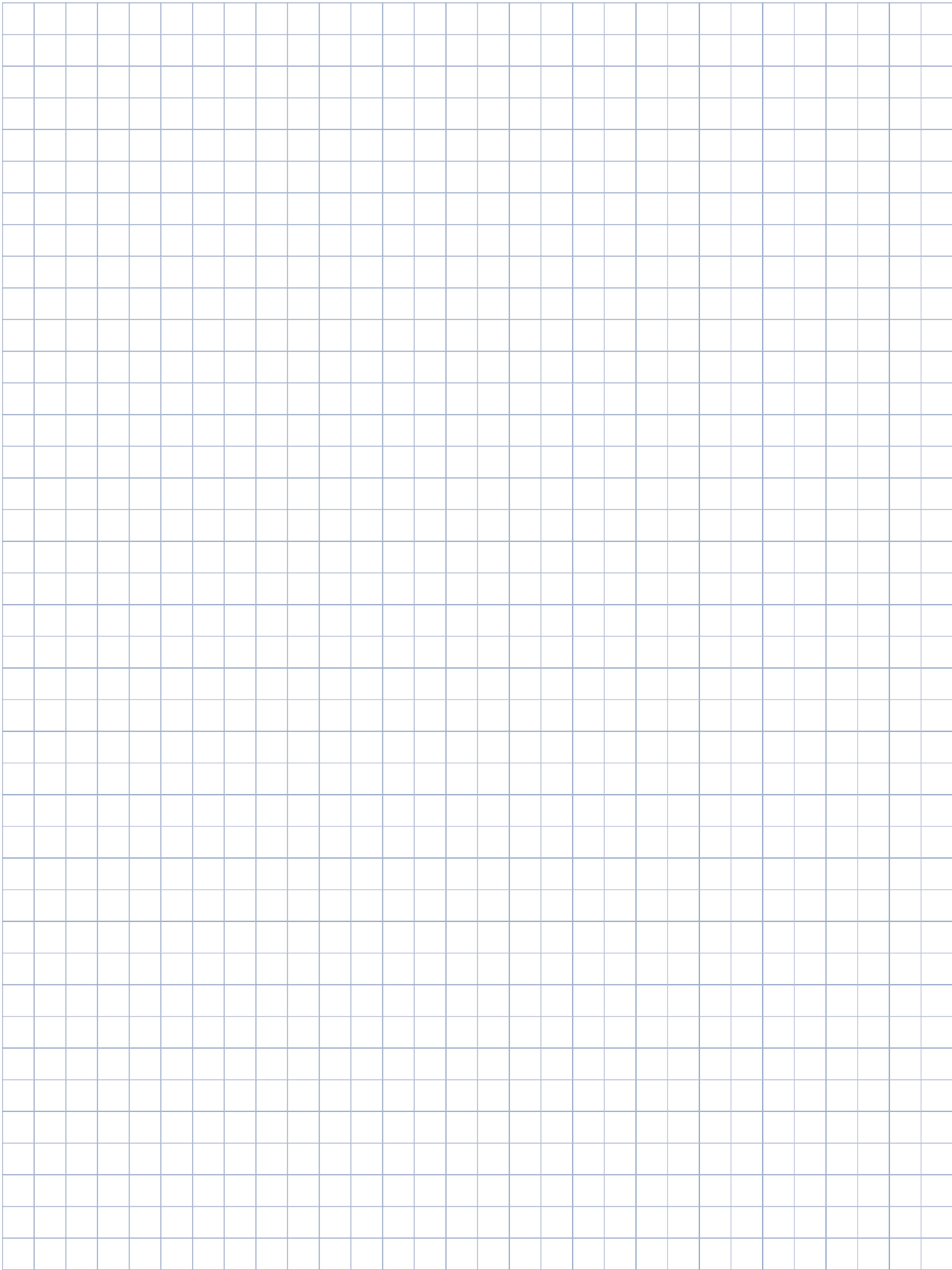
PROMOTECH MCM | 5-Axis CNC Machine- Revolutionize Wind Tower Door Frame...



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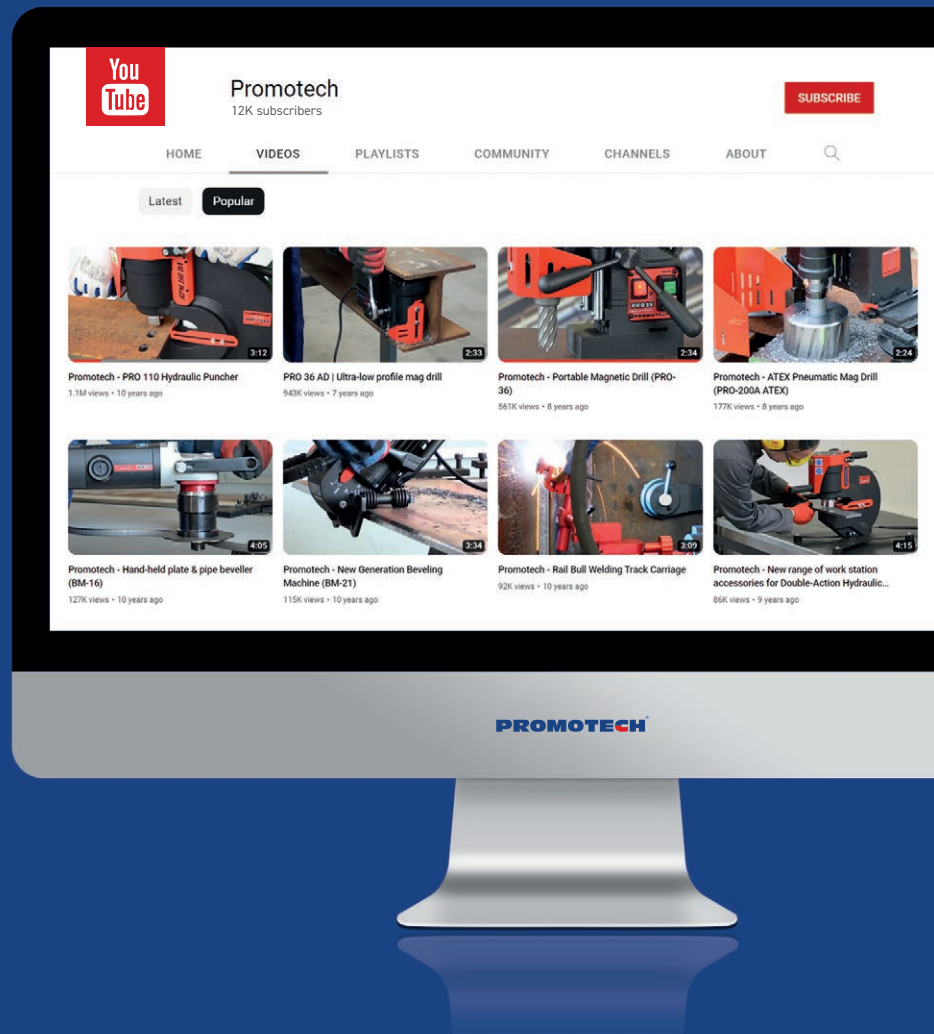
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