

# HIGH SPEED CUTTING AND BEVELLING





The PROTEM CTA - HIGH SPEED CUTTING AND BEVELLING MACHINE is the equipment you will need for your production and prefabrication requirements!

The PROTEM CTA - HIGH SPEED CUTTING AND BEVELLING MACHINE allows saving place in your workshops and can be integrated in your production lines for unmatched results.

Tubes and pipes with OD diameters ranging from 2" to 36" / 60.3 to 914.4 mm will be cut and bevelled within few seconds!

The CTA serves virtually **any industries** where the weld quality is critical and projects must stay on schedule and on budget.

The CTA machines allow **saving place** in your workshops and can be integrated in your **production lines** for unmatched results.

- ✓ Nuclear and Power industries
- ✓ Oil and Gas
- ✓ Tube processing
- ✓ Prefabrication workshops
- √ Pipeline
- √ Chemical
- √ Power generation
- ✓ Tube and pipe processing...

Mechanical expertise for best weld end preparation results!

Machining solutions for demanding industries!

The cutting process is a cold cutting one!

No heat affected zone!

Excellent quality of the weld end preparation!







#### **Technical Features**

The machining unit is made of a welded structure with:

- · One tool holder plate
- Two OD clamping systems for the pipe
- Cutting principle

The tube to cut and bevel is stationary. It is immobilized in the machines OD clamping devices. The tool bits mounted on the rotating plate are put into rotation around the tube to perform the cut. The feed and back up of the tool bits are realized entirely mechanically during the rotation of the tool holder plate. While cutting, the machine performs bevelling on both ends. The tool holder carriages mounted on the rotating plate are equipped with housings which can accept several types of tool blocks.

#### Possible bevel geometries:

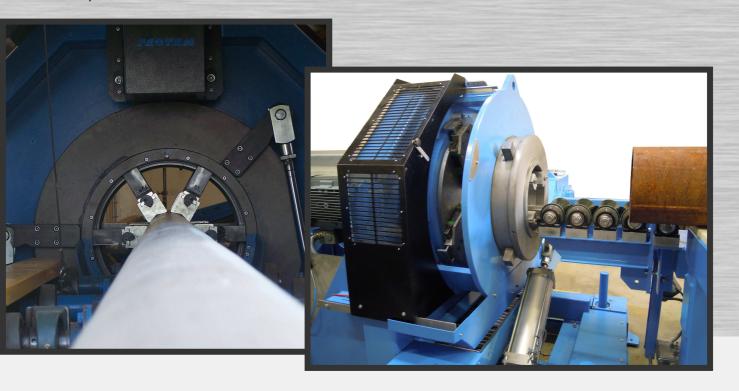
- Straight cuts
- 30° bevelling with land (2 bevels are performed simultaneously with a 60° pointed tool bit)
- 37°30 bevelling with land (2 bevels are performed simultaneously with a 60° pointed tool bit)
- 45° bevelling with land (2 bevels are performed simultaneously with a 60° pointed tool bit)
- Others: please consult PROTEM.

#### **ADVANTAGES:**

- ✓ Save a lot of space in your workshop
- ✓ Save tube transportation times
- √ Fast return of investment
- ✓ Proven efficiency
- ✓ Programming of your machining operations
- ✓ Self centering clamping
- √ High speed machining operation
- ✓ Very Powerful electric motors

- ✓ Multifunctional control Panel
- ✓ Maximum reliability
- ✓ Premium weld end preparation
- ✓ Adapted for extreme conditions
- ✓ Safe use on site or in workshops
- √ Improved weld volume
- ✓ Secured machining operation
- ✓ Reliable

- √ Fast prism clamping
- √ High accuracy
- ✓ Easy to handle and set up
- √ Wide size range
- √ High production rate
- ✓ Optimum stability
- √ Versatile
- ✓ Modular design





## THE PROTEM CTA - SERIES

	CTA 2-12	CTA 6-16	CTA 12-24	CTA 16-30	CTA 24-36
Clamping range	2" - 12" 60.3- 323.9 mm	6" - 16" 168.3-406.4 mm	12" - 24" 323.9-610 mm	16" - 30" 406.4-762 mm	24" - 36" 610-914.4 mm
Clamping	prism	prism	prism	prism	prism
Clamp operation	Automatic	Automatic	Automatic	Automatic	Automatic
Machining time	Few seconds	Few seconds	Few seconds	Few seconds	Few seconds
Motor power	30 kW	55 kW	30 kW	55 kW	55 kW
Machining	Carbide insert	Carbide insert	Carbide insert	Carbide insert	Carbide insert
Weight	2500 kg	4500 kg	5300 kg	6500 kg	7000 kg

Larger models on request







# MULTIFUNCTIONAL CONTROL PANEL

The machine is delivered with an electric panel in accordance with the EC Standards.

On panel face, several switches and a screen enable to operate the machine. The machine can also be operated manually.

The control panel allows the operator to control the functions:

- ✓ Clamp /Unlock
- ✓ Slow / Fast Machining
- ✓ Start / Stop Machine
- ✓ Manual / Automatic
- ✓ Direction tool holder
- ✓ Lubrication
- ✓ Chip conveyor
- ✓ Emergency stop button

#### PRISM CLAMPING SYSTEM

The prism clamps the pipe. Accuracy and repetitive perfect weld end preparation are achieved within few seconds.

The clamping can be done either manually or automatically.





### **POWERFUL ELECTRIC MOTOR**

The electric motor power up to 50kW for large diameters gives the necessary power to cut heavy duty pipe. The brushless motor allows very precise machining and offers different cutting and feed speeds.



### **OPTIONS**

CTA 2-12	CTA 6-16	CTA 12-24	CTA 16-30	CTA 24-36
•	•	•	•	•
•	•	•	•	•
•	•	•	•	•
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	CTA 2-12  • • • • • • • •	CTA 2-12 CTA 6-16	CTA 2-12	CTA 2-12       CTA 6-16       CTA 12-24       CTA 16-30         •       •       •       •         •       •       •       •         •       •       •       •         •       •       •       •         •       •       •       •         •       •       •       •         •       •       •       •         •       •       •       •         •       •       •       •         •       •       •       •         •       •       •       •         •       •       •       •



#### **TUBE CONVEYORS**

All tube conveyors can be used with the CTA machine range. The tube conveyor can be delivered in various configurations to meet the customer's application requirements.

The tube conveyor can be supplied with different lengths 6 meters, 8 meters, 10 meters or 12 meters. Their height adjustment enables a very precise positioning of the tube in the mandrel.

The tubes can be manually conveyed or be driven by motorized rollers. The rollers are zinc treated and therefore able to accept stainless steel tubes while avoiding any risk of pollution of the transported tubes.

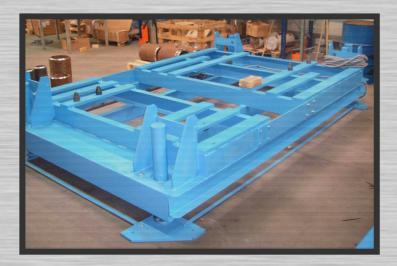
### **TUBE STORAGE TABLE**

All the feeding tube conveyors or storage tube conveyors can be associated easily with the complete CTA range.

The length of the feeding or storage tube conveyor should be adapted to the length of the tube conveyor.







# CHIPS CONVEYOR

The option chips conveyor can be used on all versions of the  $CT\Delta$ 

This option enables to increase the productivity rate as all the chips produced during a machining cycle are removed automatically.

This option brings a real conviviality of use for the operator as it is not necessary to stop the production works to remove the chips which it is the case with the chips tank delivered in standard.

#### LIFTING TABLE

The optional lifting table can be used with all CTA versions.

The lifting table is positioned under the CTA structure. Its purpose is to align the axis tool holder plate with the tube to be machined which must be set on a fixed tube conveyor.

This option enables to save time and helps to increase the productivity. Moreover, it offers a great conviviality of use in the alignment between the axis of the tube set on a tube conveyor and the axis of the tool holder plate of the CTA.





## **LUBRICATION DEVICE**

In order to increase the lifetime of the inserts and to reduce the noise level during the machining works, we propose:

- A lubrication system integrated to a chip conveyor (for chips removal).
- A pump sprays oil mixed with water during the cut. A tank replaces the standard chips box and a filter insures close circuit with the pump.

This option is activated through a push button.



# **CONTACT & COMMENTS**

## **OUR COMMITMENT! YOUR SATISFACTION!**

Serving our customers around the world with competence, efficiency and a reliable service is our main target. Whatever your questions, do not hesitate to consult us. Our staff will always advise you in a professional manner the right equipment that will meet your technical requirements.

Call or email us for more information!

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# YOUR COMMENTS