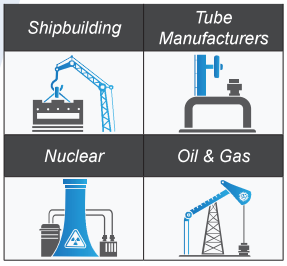
HIGH SPEED CUTTING AND BEVELING MACHINE

Ø 25.4 mm - 1422.4 mm
Ø 1” – 56”

CTA Series	Machining Capacity	
CTA 1-4	25.4 - 114 mm	1” – 4”
CTA 2-6	60.3 - 168 mm	2” – 6”
CTA 2-12	60.3 - 323.9 mm	2” – 12”
CTA 6-16	168.3 - 406.4 mm	6” - 16”
CTA 12-24	323.9 - 610 mm	12” - 24”
CTA 16-30	406.4 - 762 mm	16” - 30”
CTA 24-36	610 - 914.4 mm	24” - 36“

BIGGER MODELS ON REQUEST

INDUSTRIES:



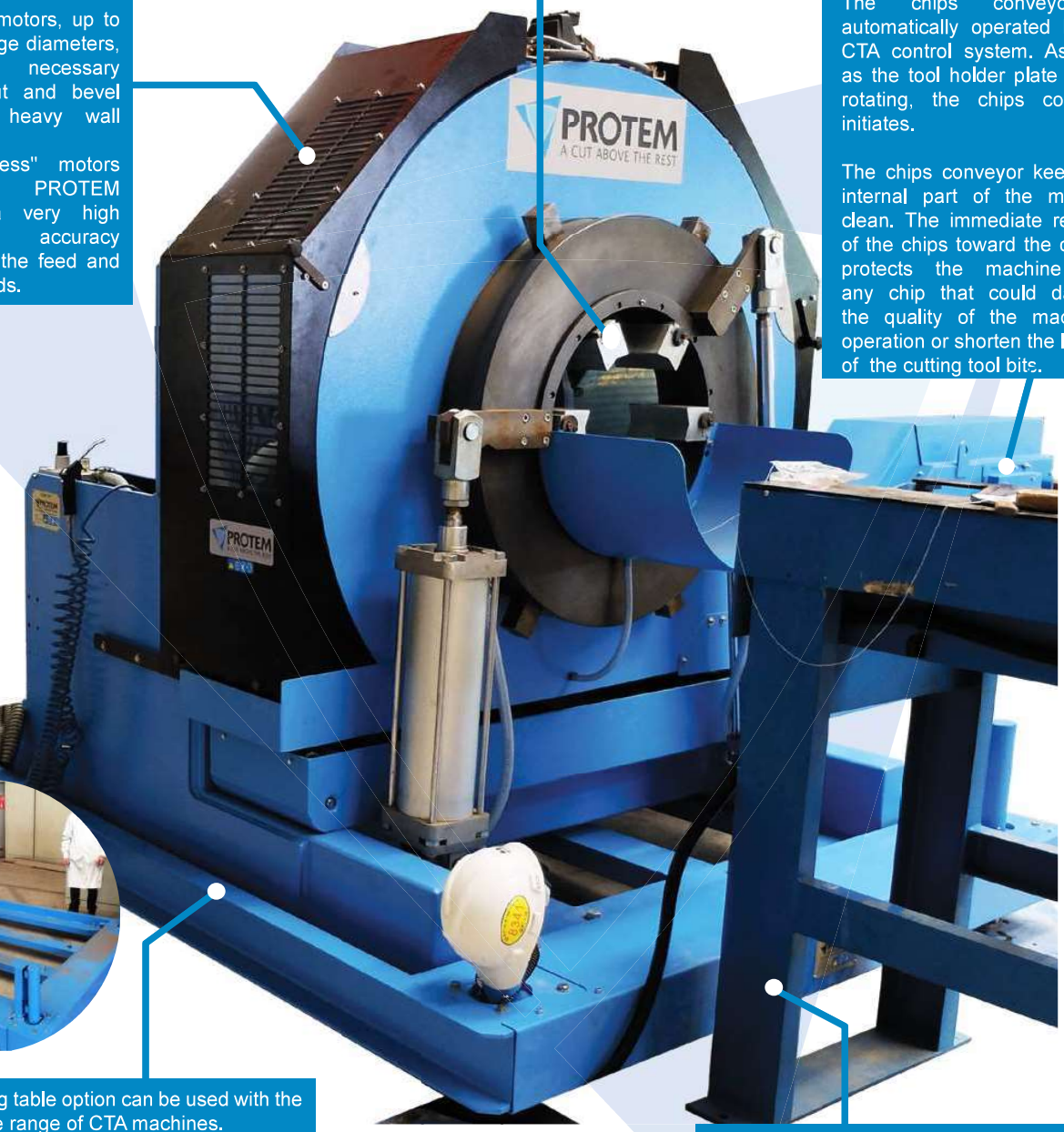
The machine is designed with a double external clamping of the tubes upstream and downstream of the internal part of the machine.

The jack thrust and clamping system design provide a firm and concentric clamping on the outside diameter of the tube.

The electric motors, up to 50 kW for large diameters, supply the necessary power to cut and bevel tubes with heavy wall thicknesses.
The "Brushless" motors used by PROTEM guarantee a very high machining accuracy and control the feed and rotation speeds.

The chips conveyor is automatically operated by the CTA control system. As soon as the tool holder plate starts rotating, the chips conveyor initiates.

The chips conveyor keeps the internal part of the machine clean. The immediate removal of the chips toward the outside protects the machine from any chip that could damage the quality of the machining operation or shorten the lifetime of the cutting tool bits.



The lifting table option can be used with the complete range of CTA machines.

The lifting table is positioned under the CTA structure. It adjusts the machine to the tube diameter. This option is necessary if the front and back conveyors (to be supplied by the user or delivered as an option upon request) are not equipped with a height adjustment system.

All the front / back conveyors can be used with the complete range of CTA machines.

The height adjustment conveyor is designed to align the different diameter tubes with the cutting machine axis. It can be supplied with different lengths; 6 meters (20 '), 8 meters (26') or 12 meters (39'). The tubes can be conveyed manually or with motorized rollers.

CTA SERIES

CTA

Ø 25.4 - 1422.4 mm (1” - 56”)

DESCRIPTION:

The Protem CTA machines are the equipment you will need for your production and prefabrication requirements. The PROTEM CTA – High speed cutting and beveling machines save space in your workshops and can be integrated on 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 beveled within just a few seconds. Larger diameters are available upon request.

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 completed entirely mechanically during the rotation of the tool holder plate. While cutting, the machine performs beveling on both ends.

The tool holder carriages mounted on the rotating plate are equipped with housings which can accept several types of tool blocks.

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✓	✓	✗	✗

CTA 1-4

Ø 25.4 - 114 mm (1” - 4”)

ORDER NO.	DESCRIPTION
CTA-1-4-1000	Automatic cutting and beveling machine for tubes from 1“ to 4“

TECHNICAL FEATURES:

Machine	CTA 1-4
Pipe size range	25.4 - 114 mm
	1” – 4”
Machining Capacity	15 mm (0.590“)
Clamping	Automatic
Machining Time	1 to 3 minutes
Motor Power	30 kW
Machining	Carbide insert

CTA 2-6

Ø 60.3 - 168.3 mm (2” - 6”)

TECHNICAL FEATURES:

Machine	CTA 2-6
Pipe size range	60.3 - 168.3 mm
	2” – 6”
Machining Capacity	22 mm (0.866“)
Clamping	Automatic
Machining Time	1 to 3 minutes
Motor Power	40 kW
Machining	Carbide insert

ORDER NO.	DESCRIPTION
CTA-2-6-1000	Automatic cutting and beveling machine for tubes from 2“ to 6“

CTA 2-12

Ø 60.3 - 323.9 mm (2” - 12”)

TECHNICAL FEATURES:

Machine	CTA 2-12
Pipe size range	60.3 - 323.9 mm
	2” – 12”
Machining Capacity	15 mm (0.590“)
Clamping	Automatic
Machining Time	1 to 3 minutes
Motor Power	30 kW
Machining	Carbide insert

ORDER NO.	DESCRIPTION
CTA-2-12-1000	Automatic cutting and beveling machine for tubes from 2“ to 12“

CTA 6-16

Ø 168.3 - 406.4 mm (6” - 16”)

TECHNICAL FEATURES:

Machine	CTA 6-16
Pipe size range	168.3 - 406.4 mm
	6” - 16”
Machining Capacity	25.4 mm (0.984“)
Clamping	Automatic
Machining Time	1 to 3 minutes
Motor Power	55 kW
Machining	Carbide insert

ORDER NO.	DESCRIPTION
CTA-6-16-1000	Automatic cutting and beveling machine for tubes from 6“ to 16“

CTA 12-24

Ø 323.9 - 610 mm (12” - 24”)

TECHNICAL FEATURES:

Machine	CTA 12-24
Pipe size range	323.9 - 610 mm
	12” - 24”
Machining Capacity	15 mm (0.590“)
Clamping	Automatic
Machining Time	1 to 3 minutes
Motor Power	30 kW
Machining	Carbide insert

ORDER NO.	DESCRIPTION
CTA-12-24-1002	Automatic cutting and beveling machine for tubes from 12“ to 24“

CTA 16-30

Ø 406.4 - 762 mm (16” - 30”)

TECHNICAL FEATURES:

Machine	CTA 16-30
Pipe size range	406.4 - 762 mm
	16” - 30”
Machining Capacity	25.4 mm (0.984“)
Clamping	Automatic
Machining Time	1 to 3 minutes
Motor Power	55 kW
Machining	Carbide insert

ORDER NO.	DESCRIPTION
CTA-16-30-1000	Automatic cutting and beveling machine for tubes from 16“ to 30“

CTA 24-36

Ø 610 - 914.4 mm (24” - 36”)

TECHNICAL FEATURES:

Machine	CTA 24-36
Pipe size range	610 - 914.4 mm
	24” - 36“
Machining Capacity	25.4 mm (0.984“)
Clamping	Automatic
Machining Time	1 to 3 minutes
Motor Power	55 kW
Machining	Carbide insert

ORDER NO.	DESCRIPTION
CTA-24-36-1000	Automatic cutting and beveling machine for tubes from 24“ to 36“

OPTIONS:

Multifunctional Control Panel

The machine is delivered with an electric panel in accordance with the EC Standards.
On the face of the panel, several switches and a screen to operate the machine are available. The end user can use the manual mode. The control panel allows the user to control all important functions: Clamp /Unlock, Slow / Fast Machining, Start / Stop Machine Manual / Automatic.

Automatic clamping system

The automatic and pneumatic clamping systems set the concentricity of the tube. The machining is performed between both clamping systems.

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 (20 feet), 8 meters (26 feet), 10 meters (33 feet) or 12 meters (39 feet). The height adjustment ensures 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 to the transported tubes.

Tube Storage Table

All the feeding tube conveyors or storage tube conveyors can be easily connected to any machine in the CTA series.

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

Lifting table

The optional lifting table can be used with any version of the CTA machine.

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 saves time and helps to increase productivity. It also makes the CTA very easy to use due to the alignment between the axis of the tube set on a tube conveyor and the axis of the tool holder plate of the CTA.

Chips conveyor

The optional chips conveyor can be used on all versions of the CTA.
This option increases productivity as all the chips produced during a machining cycle are removed automatically.

This option makes the machining process much easier for the operator, as it is not necessary to stop the production operations to remove the chips, which it is the case with the chips tank delivered on the standard version.