

ELBOW MANDREL ASSEMBLY

EMA

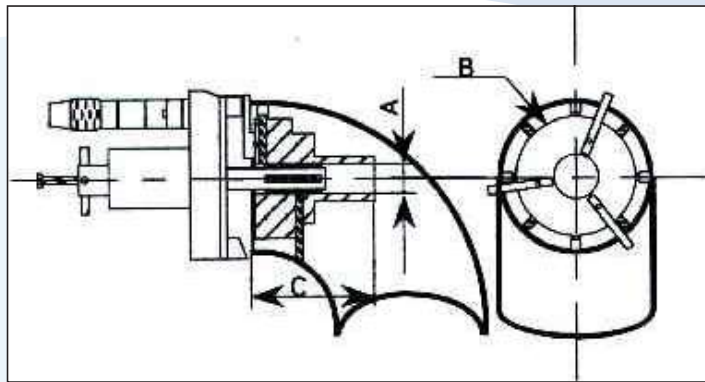
For US machines

DESCRIPTION:

This new generation of elbow mandrel assembly allows the positioning of a US-type machine on all types of elbows.

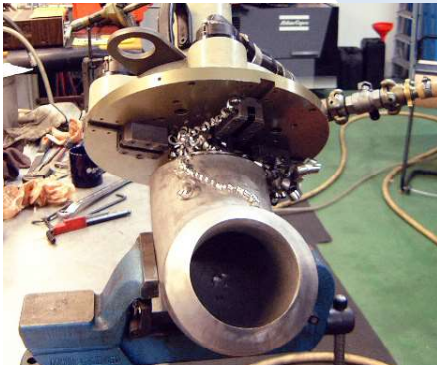
The mounting system provides precise concentric positioning of the machine in the elbow which creates an extremely precise alignment that leads to a high quality weld-end preparation on all types of elbows and materials including stainless steel and high nickel alloys.

DIMENSIONS:



OD MOUNTED MACHINING

APPLICATIONS:



US25-EMA

ORDER NO.	DESCRIPTION
US25PR/C-1000	US25-EMA-40-64 elbow mandrel assembly for US25 (40-64 mm) (1.575" - 2.520")
US25PR/C-1001	US25-EMA-64-90 elbow mandrel assembly for US25 (64-90 mm) (2.520" - 3.543")
US25PR/C-1002	US25-EMA-90-119 elbow mandrel assembly for US25 (90-119 mm) (3.543" - 4.685")

▼ DIMENSIONS:

ØA	ØB	C
-	38 mm - 1.496"	40 mm - 1.575"
-	61 mm - 2.402"	40 mm - 1.575"
-	87.5 mm - 3.445"	40 mm - 1.575"

▼ TECHNICAL FEATURES:

ID Clamping Ø .	OD CLAMPING Ø .
38 mm - 1.496"	68.5 mm - 2.697"
62 mm - 2.44"	92 mm - 3.622"
88 mm - 3.465"	118 mm - 4.646"

US40-EMA

ORDER NO.	DESCRIPTION
US40PR/C-1000	Spider type elbow mandrel kit
US40PR/C-1001	Elbow mandrel assembly for diameters from 145 mm ID up to 219 mm OD (5.709" - 8.622")

▼ DIMENSIONS:

ØA	ØB	C
-	80 mm - 3.150"	40 mm - 1.575"
60 mm - 2.362"	139 mm - 5.472"	100 mm - 3.94"

▼ TECHNICAL FEATURES:

ID Clamping Ø .	OD CLAMPING Ø .
80.5 mm - 3.169"	183 mm - 7.205"
145 mm - 5.709"	219 mm - 8.622"

US150-EMA

ORDER NO.	DESCRIPTION
US150PR/C-1000	US150-EMA standard elbow mandrel assembly for US150 (261-508 mm) for easy installation into the elbow, tube or flange (allows to center the machine according to the bevel to perform)

US30CH-EMA

ORDER NO.	DESCRIPTION
US30CHPR/C-1000	Elbow mandrel assembly for US30CH (55-79,6 mm)
US30CHPR/C-1001	Elbow mandrel assembly for US30CH (78,43-121,54 mm) (3.088" - 4.785")
US30CHPR/C-...	For Ø > 121,54 mm (4.785"): on request

▼ DIMENSIONS:

ØA	ØB	C
35 mm - 1.378"	60 mm - 2.362"	100 mm - 3.94"

▼ TECHNICAL FEATURES:

ID Clamping Ø .	OD CLAMPING Ø .
65 mm - 2.559"	160 mm - 6.299"

US80-EMA

ORDER NO.	DESCRIPTION
US80PR/C-1000	Spider type elbow mandrel kit for easy installation into the flange or tube. Capacity: 100 to 180 mm ID (3.9" - 7" ID)
US80PR/C-1001	Clamping spider for elbows. Allows an easy set up in tube, pipe or flange. Capacity: 170 to 356 mm ID (3.9" - 7" ID)

▼ DIMENSIONS:

ØA	ØB	C
-	80 mm - 3.150"	50 mm - 1.968"
85.4 mm - 3.36"	166 mm - 6.535"	140 mm - 5.512"

▼ TECHNICAL FEATURES:

ID Clamping Ø .	OD CLAMPING Ø .
90 mm - 3.543"	180 mm - 7.087"
170.9 mm - 6.728"	356 mm - 14.016"

▼ DIMENSIONS:

ØA	ØB	C
155 mm - 6.10"	255 mm - 10.039"	140 mm - 5.51"
180 mm - 7.087"	320 mm - 12.598"	208 mm - 8.189"

▼ TECHNICAL FEATURES:

ID Clamping Ø .	OD CLAMPING Ø .
90 mm - 3.543"	180 mm - 7.086"
170.9 mm - 6.728"	356 mm - 14.016"

CONCENTRIC CLAMPING DEVICE FOR ELBOWS

ECM

For Protem US-Series Machines



DESCRIPTION:

The new generation of the elbow clamping device was designed to clamp the US-Series Machines onto any type of elbow. The main benefit of this technology is the possibility to machine elbows onsite precisely and fast.

The most significant innovation of the clamping device is the set-up time. The jaws move all at the same time when clamping. It guarantees perfect positioning of the machine on the tube.

During the set-up, a triangular plate is set on the device to ensure flatness.

The device is extremely durable and provides highprecision machining.

US25-ECM

ORDER NO.	DESCRIPTION
US25-3801	Elbow mandrel assembly for US25 (25 - 33.45 mm)
US25-3802	Elbow mandrel assembly for US25 (32 - 45.91 mm)
US25-3803	Elbow mandrel assembly for US25 (42 - 79.37 mm)

US30CH-ECM

ORDER NO.	DESCRIPTION
US30CH-1901	Elbow mandrel assembly for US30CH (32 - 45.91 mm)
US30CH-1902	Elbow mandrel assembly for US30CH (42 - 67.4 mm)
US30CH-1903	Elbow mandrel assembly for US30CH (76.71 - 121.31 mm)

US40-ECM

ORDER NO.	DESCRIPTION
US40-2701	Elbow mandrel assembly for US40 (42 - 79.37 mm)
US40-2702	Elbow mandrel assembly for US40 (76.71 - 151.29 mm)

US80-ECM

ORDER NO.	DESCRIPTION
US80-3301	Elbow mandrel assembly for US80 (80 - 158.11 mm)
US80-3302	Elbow mandrel assembly for US80 (150 - 265.83 mm)
US80-3303	Elbow mandrel assembly for US80 (252.02 - 277.82 mm)

US150-ECM

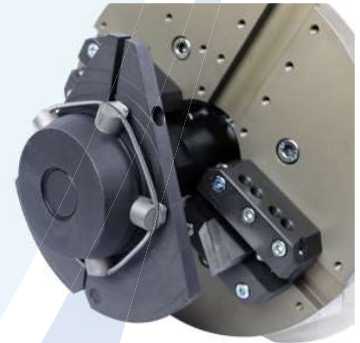
ORDER NO.	DESCRIPTION
US150-3801	Elbow mandrel assembly for US150 (150 - 256.83 mm)
US150-3802	Elbow mandrel assembly for US150 (252.02 - 277.82 mm)
US150-3803	US150-ECM-380 elbow mandrel assembly for US150

3 STEP SET-UP:

Step 1 : Switching the standard mandrel to the elbow clamping device.

Step 2 : Machine clamping: No adjustments needed. The device is self-centering because of the concentric jaws.

Step 3 : Removing the triangular plate, the machine is now ready for machining.



OD MOUNTED MACHINING

TRACKER OPTION

To Obtain a Precise Machining Geometry

IDT & ODT

For US, TT, and PFM Machines



DESCRIPTION:

The tracker option was designed to maintain a precise root face or land independent of the pipe ovality or wall thickness variations.

When the tube is not perfectly round it's necessary to compensate for this defect in order to achieve a perfect weld. The tracker option meets this need. The end result will be a precise root face.

The tracker option is made for PROTEM beveling machines in the US40 to US450 range, PROTEM cutting and beveling machines in the TT-NG series and for the pipe facing, PFM machines.

The tracker is very easy to set up based on a following roller in contact with the tube to ensure a precise root face. The ID-Tracker (IDT) is set inside the tube unlike the OD-tracker (ODT). The tracker is fixed on the tool holder. This option is used mainly for J Bevel preparation.

The tracker option is essential to achieve a perfect welding preparation necessary for automatic welding.

US40

ORDER NO.	DESCRIPTION
US40-2500	ID-Tracker from 120 mm (4.724") I.D to 219 mm (8.622") O.D

US80

ORDER NO.	DESCRIPTION
US80-2800	ID-Tracker from 150 mm (4.724") I.D to 355 mm (14") O.D

US150

ORDER NO.	DESCRIPTION
US150-3400	ID-Tracker from 220 mm (8.661") I.D to 508 mm (20") O.D
US150-3500	OD-Tracker to keep a constant land when tube is oval. Can be used from 324,6 mm I.D to 489,6 mm O.D.

US450

ORDER NO.	DESCRIPTION
US450-3400	ID-Tracker
US450-3500	OD-Tracker

PFM

ORDER NO.	DESCRIPTION
US-HSB-R-PO-5001	Stronger ID tracking carriage. With excentric.
US-HSB-R-PO-1401	Follower roller diameter 40 set on reference 5001
US-HSB-R-PO-1301	Follower roller diameter 36 set on reference 5001

TT-NG

ORDER NO.	DESCRIPTION
TTNG-ODT-1000	OD Tracker for TT210 to TT610
TTNG-ODT-1002	OD Tracker for TT762
TTNG-ODT-1004	OD Tracker for TT900 to TT1016



US600R

US600R version 1

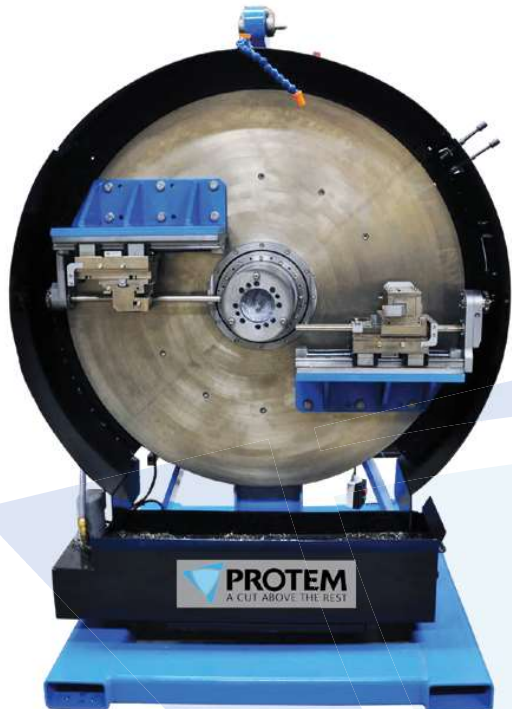
Ø 600 - 1000 mm (23.622" - 39.370")

DESCRIPTION:

The Protem US600-R is a transportable machine that performs custom bevels from 600 mm (23.622") up to 1000 mm (39.370") (version 1) or 1000 mm (39.370") up to 1500 mm (59.055") (version 2).

It is designed to perform bevels on rough tubes and pipes by using standard carbide inserts and can easily perform beveling jobs on wall thicknesses up to 4" wall pipe. The machine is hydraulically driven and connected to a 30 kW power pack.

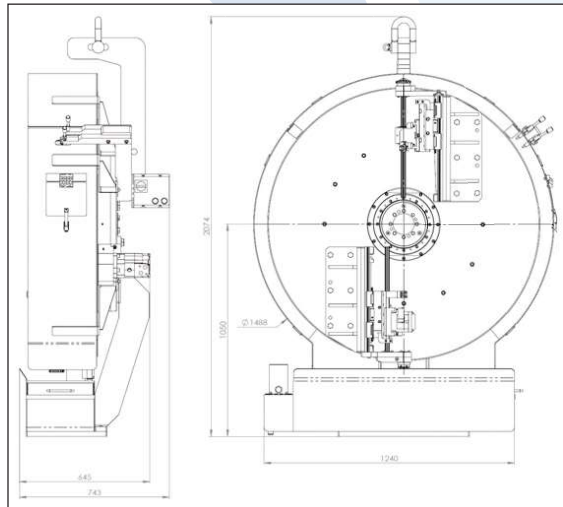
Accuracy is the keyword of the Protem US600-R whether for clamping or for the perfect beveling geometry.



ORDER NO.	DESCRIPTION
US600-R version 1	Inside clamping beveling and surfacing unit for tubes of 18" to 56" with copying carriage and spider clamping kit

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✗	✓	✓	✗

DIMENSIONS:



TECHNICAL FEATURES:

Machine	US600R Version 1
Machining Capacity	600 - 1000 mm
	23.622" - 39.370"
Clamping capacity	545 - 1000 mm
	21.456" - 39.370"
Tool feed	Adjustable
Tool rotation	Up to 50 rpm
Motor	Dual hydraulic drive

Copying carriage



The main feature of the Protem US600-R is its copying carriage, which allows the US600-R to perform any type of weld preparation such as, I-bevel, J-bevel, V-bevel, compound bevel, etc. with accuracy and repeatability. The US600-R can also machine any type of material, for instance; carbon steel, stainless steel, alloy, inconel, duplex or super-duplex. Our R&D engineers are able to adapt the machine to any type of welding preparation and material upon request.

OD MOUNTED MACHINING

US600R version 2

Ø 1000 - 1500 mm (39.370" - 59.055")



DESCRIPTION:

The US 600-R is simply the most suitable beveler for heavy wall tubes and pipes, large diameters and Increased productivity and efficiency.

This machine features many advantages:

- Transportable
- Wide size range
- For heavy wall thicknesses
- Copying carriage available for custom bevels
- High beveling accuracy
- Clamping accuracy with the spider clamping kit
- Premium weld end preparation
- Powerful hydraulic supply
- Easy to use
- Reliable machine in any condition thanks to a strong and powerful design
- Versatile
- Modular design
- Safe use on site and in your workshop.

ORDER NO.	DESCRIPTION
US600-R version 2	Inside clamping beveling and surfacing unit for tubes of 18" to 56" with copying carriage and spider clamping kit

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✗	✓	✓	✗

OPTIONS:

ORDER NO.	DESCRIPTION
US600-R-POSUI	ID tracking carriage to adapt to the pipe's ovality
US600-R-PODEL	Counterboring carriage
US600-R-OA	Optional adjustment arm
US600R-LUB	Lubrication kit
US600-R-K01	Wooden crate
US600-R-K02	US600-R-K02 Wooden crate for several uses
US600-R-K03	Wooden Crate with shrink wrapping (Recommended for shipment by boat)

TECHNICAL FEATURES:

Machine	US600R Version 2
Machining Capacity	1000 mm - 1500 mm
	39.370" - 59.055"
Clamping capacity	1000 mm - 1500 mm
	(39.370" - 59.055")
Tool feed	Adjustable
Tool rotation	Up to 50 rpm
Motor	Dual hydraulic drive

Spider clamping kit



The Protém US600-R is stabilized with a spider clamping kit which was designed to adjust the concentricity and squareness between the tube and the machine. This system is extremely accurate even with large diameter tubes.

ORDER NO.	DESCRIPTION
US600-R-SS	US600-R-SS Small spider clamping kit for diameters from 16" to 32" included in the price of the US 600 R
US600-R-BS	US600-R-BS Big spider clamping kit for diameters from 30" to 56"

PIPE FACING MACHINES

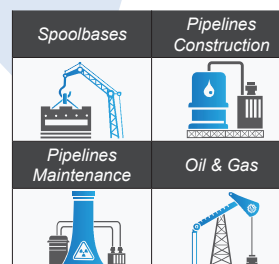
Ø 101.6 mm - 1828.8 mm
Ø 4" - 72"



OD MOUNTED MACHINING

PFM	Machining Capacity	
PFM 414	101.6 - 355.6 mm	4" - 14"
PFM 1222	323.9 - 558.8 mm	12" - 22"
PFM 1030	273.1 - 762 mm	10" - 30"
PFM 3038	762 - 1066 mm	30" - 38"
PFM 3848	965 - 1219.2 mm	38" - 48"

INDUSTRIES:



▼ BIGGER MODELS ON REQUEST



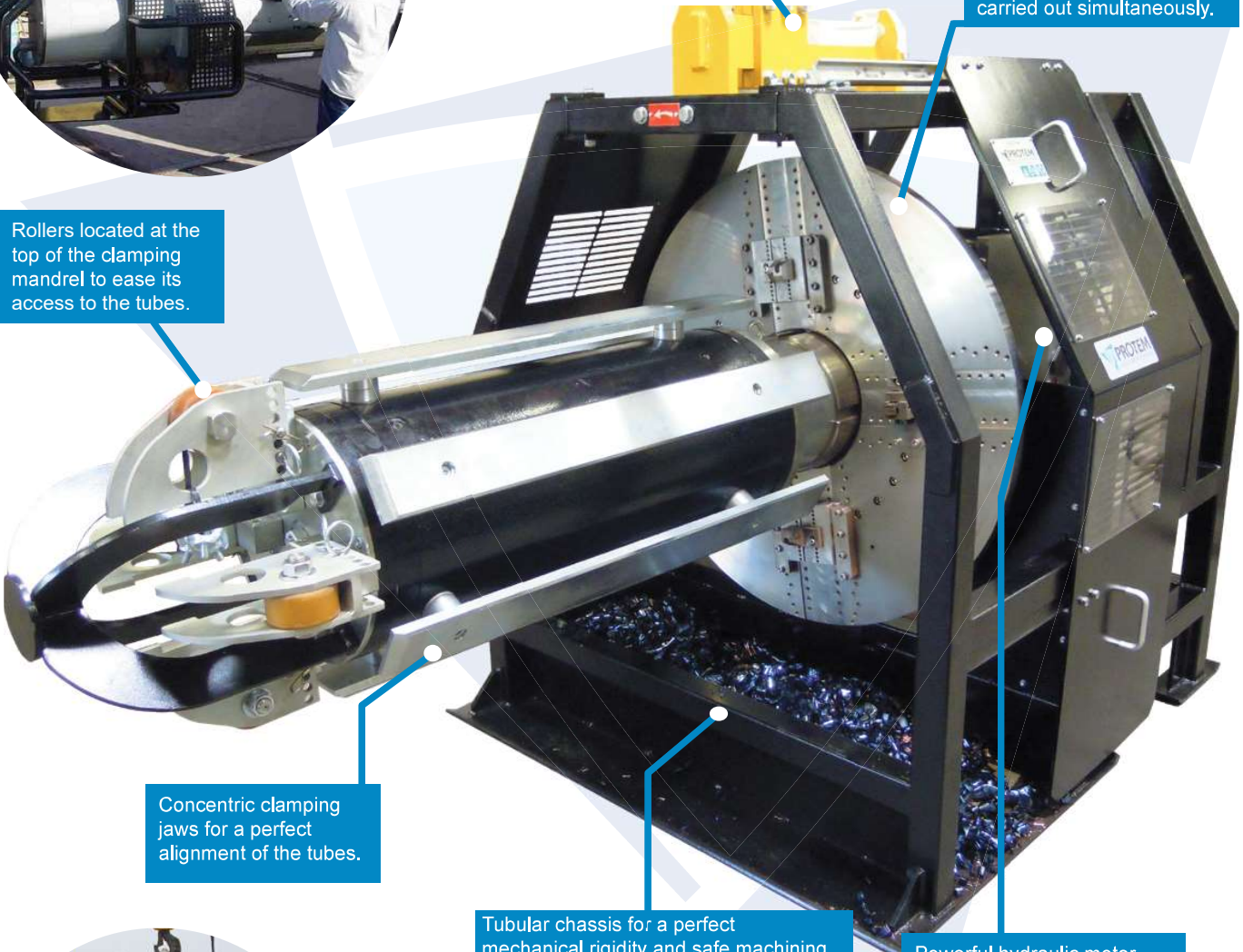
Transportable on-site and/or in workshop.



Tool-holder plate for up to four tool bits for facing, beveling and counterboring operations which can be carried out simultaneously.

Rollers located at the top of the clamping mandrel to ease its access to the tubes.

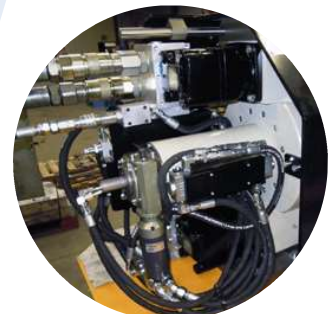
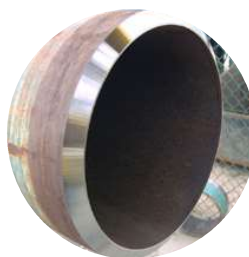
OD MOUNTED MACHINING



Concentric clamping jaws for a perfect alignment of the tubes.

Tubular chassis for a perfect mechanical rigidity and safe machining operations.
Possibility to collect the chips produced during the machining process.

Powerful hydraulic motor suitable for the machining of large wall thicknesses.



PFM

Ø 101.6 - 1828.8 mm (4" - 72")



DESCRIPTION:

The PROTEM PFM HSB are reliable and very powerful portable PIPE FACING MACHINES for diameters ranging from 4" to 72".

The pipeline machinery equipment you will need for all your pipeline projects. Drastically increase your productivity!

The PFM - HSB serve all industries where the weld quality is critical and projects must stay on schedule. The machines are easy to install and quickly adjustable to any size within the machine's range. They will machine the pipe ends in one smooth pass in just a few seconds!

For your Oil and Gas engineering and construction projects:

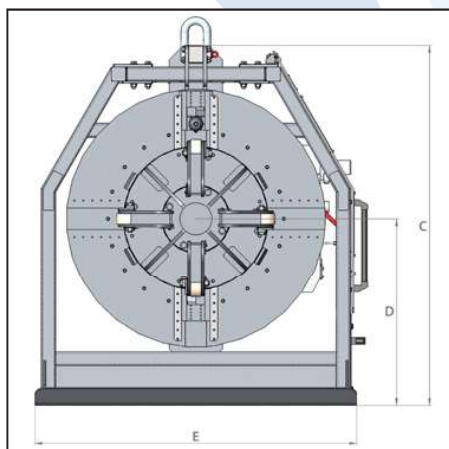
Pipe Facing machines for the most demanding and challenging pipeline applications

Offshore - Onshore - deep water - spool bases

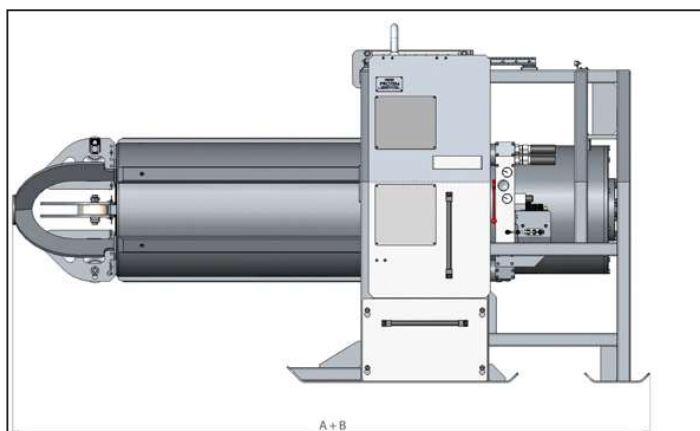
Maximize your production to minimize your downtime

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✗	✓	✓	✗

DIMENSIONS:



DIMENSIONS VIEW 2 :



TECHNICAL FEATURES:

Machine	PFM
Machining Capacity	101.6 mm (4") OD
	1219.2 mm (72") OD
Specific shapes & angles	Facing, 30°, 37°30', 45° bevel, counterbore, J-bevel and others on request
Clamping	Automatic with hydraulic drive
Feed	Automatic with hydraulic drive
Drive Power	Hydraulic

▼ PFM ON-SITE:



▼ APPLICATIONS:



PFM-414 | HSB-80/150

Ø 168 - 355.6 mm (4" - 14")

▼ TECHNICAL FEATURES:

Machine	PFM-414	
Tool plate feed stroke:	50 mm	
	1.968"	
Mandrel expansion stroke:	21 mm	
	0.826"	
	Minimum	Maximum
Advance speed of plate tool holders:	20 rpm	150 rpm
Tool plate feed stroke:	0.05 mm/rev.	0.3 mm/rev.
Mandrel supply pressure:	75 bar	150 bar
	1 087 psi	2 175 psi
Tool plate rotation supply pressure:	65 bar	130 bar
	942 psi	1 885 psi
Tool plate feed supply pressure:	45 bar	120 bar
	652 psi	1740 psi
Wall thickness on X42 material bevel 30°:	10 mm	30 mm
	0.375"	1.180"

▼ DIMENSIONS:

HSB-80

A	1150 mm 45.275"
B	50 mm 1.968"
C	871 mm 34.291"
D	424 mm 16.693"
E	800 mm 31.496"

HSB-150

A	1310 mm 51.575"
B	50 mm 1.968"
C	871 mm 34.291"
D	424 mm 16.693"
E	800 mm 31.496"



ORDER NO.

DESCRIPTION

US150HSB-AR-1000

High speed beveling machining type
US-HSB-R-1000 for tubes 4-14"

PFM-414 | HSB-80/150

Expansion mandrel



ORDER NO.	DESCRIPTION
US-HSB-R-2804	OD clamping system for machining pipes from 6 to 14" (168-273.1 mm)



ORDER NO.	DESCRIPTION
US-HSB-R-2504	OD clamping system for machining pipes from 10 to 14" (273.1-355 mm)

The US80/150HSB-R-HYD can be equipped with two different clamping mandrels. Within a short time through the replacement of either the US150 mandrel or the US80 mandrel, the range of diameters can be reduced or increased according to the version of the expansion mandrel.

Options:	Expansion mandrel US80	Expansion mandrel US150
ID range	80 mm - 273 mm (3.149" - 10.748")	150 mm - 361 mm (5.905" - 14.213")
OD range	6" pipe / Ø OD 168 mm 10" pipe / Ø OD 273 mm	10" pipe / Ø OD 273 mm 14" pipe / Ø OD 356 mm
Wall thickness on X42 material bevel 30°	0.394"/10 mm 1.000"/25 mm	0.394"/10 mm 1.181"/30 mm

PFM-1222 | HSB-220

Ø 323.9 - 558.8 mm (12" - 22")



OD MOUNTED MACHINING



ORDER NO.	DESCRIPTION
US220HSB-1000	High speed beveling machining type US220-HSB for tubes 12-22"

TECHNICAL FEATURES:

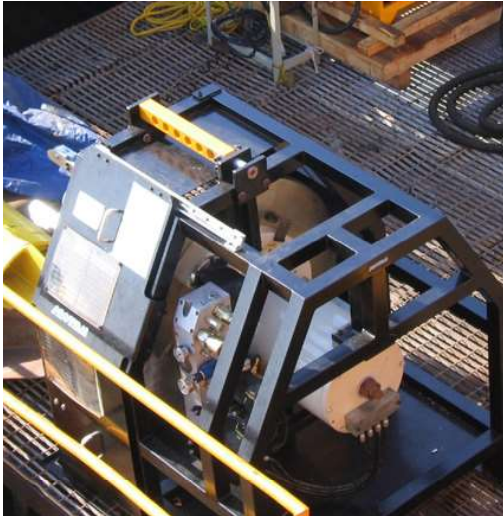
Machine	PFM-1222	
Tool plate feed stroke:	80 mm	
	3.149"	
Mandrel expansion stroke:	44.1 mm	
	1.736"	
	Minimum	Maximum
Tool plate rotation speed:	22 rpm	100 rpm
Advance speed of plate tool holders:	0.05 mm/rev.	0.3 mm/rev.
Mandrel supply pressure:	75 bar	150 bar
	1 087 psi	2 175 psi
Tool plate rotation supply pressure:	65 bar	130 bar
	942 psi	1 885 psi
Tool plate feed supply pressure:	45 bar	120 bar
	652 psi	1 740 psi
Wall thickness on X42 material bevel 30°:	10 mm	30 mm
	0.375"	1.180"

DIMENSIONS:

HSB-220

A	2030 mm 79.921"
B	180 mm 7.087"
C	1410 mm 55.512"
D	640 mm 25.197"
E	1250 mm 49.212"

PFM-1030 | HSB-420



ORDER NO.

DESCRIPTION

US420HSB-1000	High speed beveling machining type US420-HSB for tubes 10-30"
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Ø 273.1 - 762 mm (10" - 30")

TECHNICAL FEATURES:

Machine	PFM-1030	
Tool plate feed stroke:	80 mm 3.149"	
Mandrel expansion stroke:	48.8 mm 1.921"	
	Minimum	Maximum
Tool plate rotation speed:	12 rpm	55 rpm
Advance speed of plate tool holders:	0.05 mm/rev.	0.3 mm/rev.
Mandrel supply pressure:	60 bar 870 psi	120 bar 1 740 psi
Tool-plate rotation supply pressure:	60 bar 870 psi	120 bar 1 740 psi
Tool-plate feed supply pressure:	55 bar 797 psi	110 bar 1 595 psi
Wall thickness on X42 material bevel 30°:	10 mm 0.375"	32 mm 1.250"



DIMENSIONS:

HSB-420

A	2672 mm 105.196"
B	83 mm 3.267"
C	1796 mm 70.708"
D	830 mm 32.677"
E	1360 mm 53.543"

PFM-3038 | HSB-620



ORDER NO.

DESCRIPTION

US620HSB-1000	High speed beveling machining type US620-HSB for tubes 30-38"
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Ø 762 - 1066 mm (30" - 38")

TECHNICAL FEATURES:

Machine	PFM-3038	
Tool plate feed stroke:	150 mm 5.905"	
Mandrel expansion stroke:	48.8 mm 1.921"	
	Minimum	Maximum
Tool plate rotation speed:	12 rpm	50 rpm
Advance speed of plate tool holders:	0.05 mm/rev.	0.3 mm/rev.
Mandrel supply pressure:	75 bar 1 087 psi	150 bar 2 175 psi
Tool plate rotation supply pressure:	65 bar 942 psi	130 bar 1 885 psi
Tool plate feed supply pressure:	55 bar 797 psi	110 bar 1 595 psi
Wall thickness on X42 material bevel 30°:	10 mm 0.375"	35 mm 1.375"



DIMENSIONS:

HSB-620

A	3074 mm 121.023"
B	150 mm 5.905"
C	1544 mm 60.787"
D	755 mm 29.724"
E	1320 mm 51.968"

PFM-3848 | HSB-820

Ø 965 - 1219.2 mm (38" - 48")

≈ 4000 kg
≈ 8818.3 lbs

TECHNICAL FEATURES:

DIMENSIONS:

HSB-820

A	3877 mm 152.637"
B	150 mm 5.905"
C	871 mm 34.291"
D	424 mm 16.692"
E	800 mm 31.496"



Machine	PFM-3848	
Tool-plate feed stroke:	150 mm	
	5.905"	
Mandrel expansion stroke:	48.8 mm	
	1.921"	
	Minimum	Maximum
Tool-plate rotation speed:	10 rpm	42 rpm
Tool-plate feed stroke:	0.05 mm/rev.	0.3 mm/rev.
Mandrel supply pressure:	75 bar	150 bar
	1 087 psi	2 175 psi
Tool-plate rotation supply pressure:	65 bar	130 bar
	942 psi	1 885 psi
Tool-plate feed supply pressure:	55 bar	110 bar
	797 psi	1 595 psi
Wallthickness on X42 material bevel 30°:	10 mm	30 mm
	0.375"	1.180"

ORDER NO.	DESCRIPTION
PFM-3448-1000	High speed beveling machining type US820-HSB for tubes 38-48"

BIGGER MODELS ON REQUEST

HSB-1020



ORDER NO.	DESCRIPTION
PFM-4656-1000	High speed beveling machining type US1020-HSB for tubes 48-56"

HSB-1220



ORDER NO.	DESCRIPTION
PFM-5464-1000	High speed beveling machining type US1220-HSB for tubes 54-64"

HSB-1420



ORDER NO.	DESCRIPTION
PFM-6272-1000	High speed beveling machining type US1420-HSB for tubes 62-72"

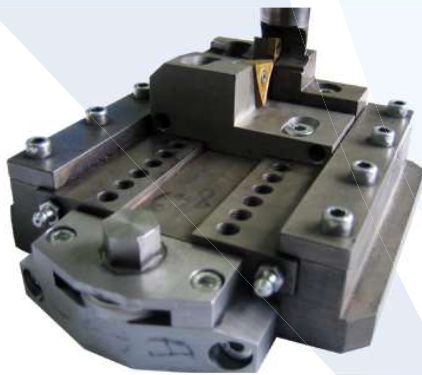
▼ OPTIONS:

ID-Tracker



ORDER NO.	DESCRIPTION
US-HSB-R-PO-5001	Enhanced version of the roller tracking carriage without eccentric roller
US-HSB-R-PO-1401	Tracking roller, diameter 40 set on reference 5001
US-HSB-R-PO-1301	Tracking roller diameter 36 set on reference 5001
US-HSB-R-PO-1201	Follower roller diameter 28 set on reference 5001.

Tool Holder



ORDER NO.	DESCRIPTION
US-HSB-R-PO/3014	Outside beveling carbide insert holder 10°
US-HSB-R-PO/3025	Outside beveling carbide insert holder 20°
US-HSB-R-PO/3018	Outside beveling carbide insert holder 37°5
US-HSB-R-PO/3033	Outside beveling carbide insert holder 75°
O-HSB-C-PO/3005	Counterboring carbide insert holder 15°
O-HSB-C-PO/3026	Tracking Roller Carriage 30°

Brush kit



ORDER NO.	DESCRIPTION
US-HSB-R-PO-2301	Brush Kit (only suitable for the tracking carriage)

ELBOW BEVELING MACHINE



Ø 406.4 - 1066.8 mm (16" - 42")

DESCRIPTION:

Beveling of rough elbows after manufacturing

It is the most complete version of the BB high speed beveling benches. It is adapted for elbow machining for mass production operations. This machine is exceptionally handy to use because of the automation of all its mechanical elements.

The machining head moves automatically from one table to the other. This reduces the waiting time due to elbow loading and unloading operations.

This machine is equipped with a complete control panel allowing control of all the movements by pressing buttons or by adjusting the various parameters on the touch screen.

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✗	✓	✓	✗

TECHNICAL FEATURES:

Elbow diameters included between 16" (406.4 mm) and 42" (1066.8 mm) for a maximum wall thickness of 50.8 mm (2") on carbon steel type XC45.

Four tool holder carriages with profile tracking are mounted onto the rotating plate. Thanks to a roller located on the inside diameter, this device allows the tools to follow the ovality of the elbow.

Machining of the bevel (30°, 37.5°, compound), land and inside counterboring in one simultaneous operation.

Hydraulic system for elbow clamping (reduced loading and unloading times).



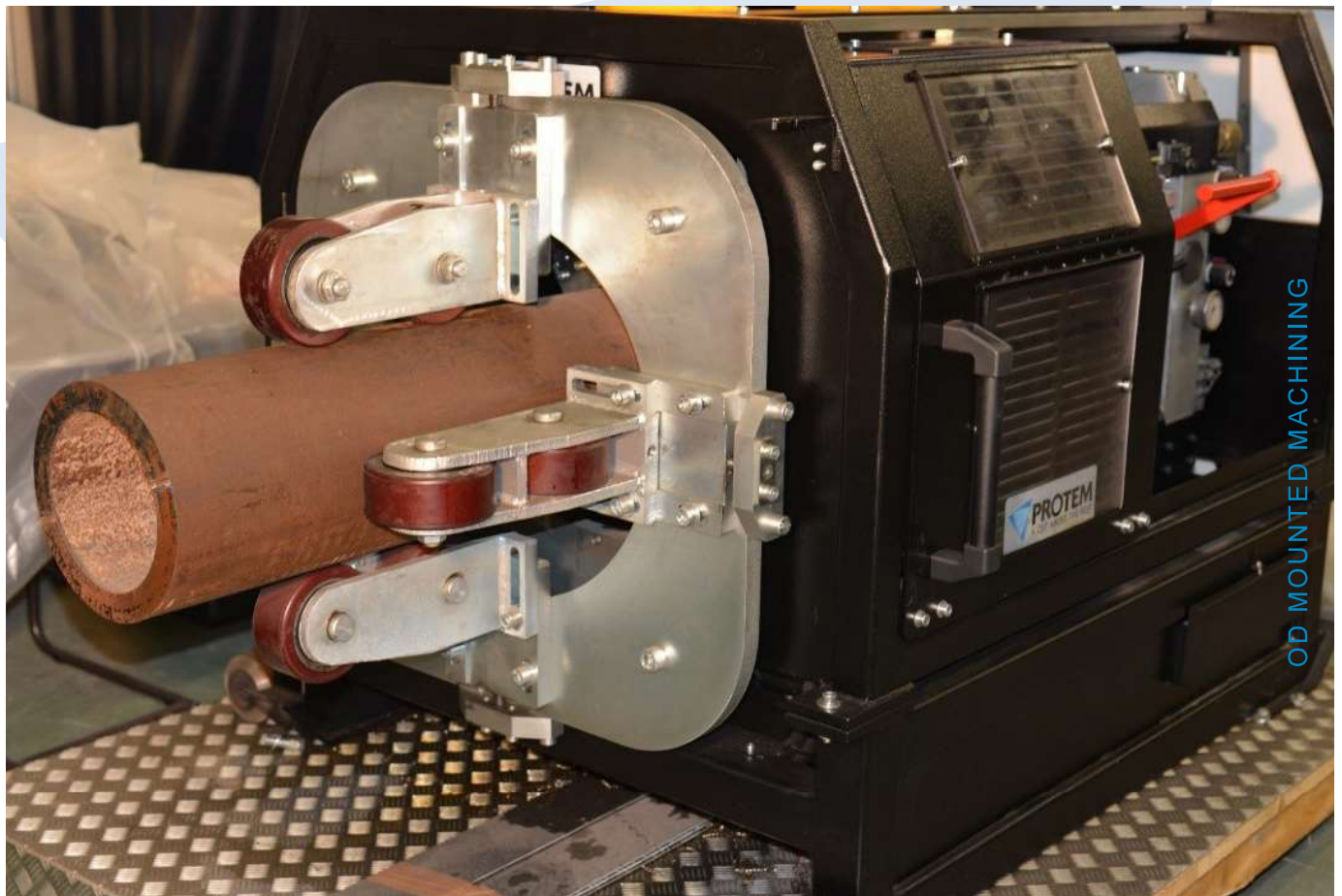
OD MOUNTED MACHINING



OHSB SERIES

OD MOUNTED TUBE AND PIPE BEVELING AND FACING MACHINE

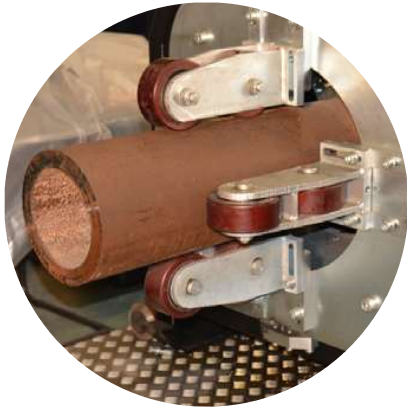
Ø152.4 mm - 355.6 mm
Ø 6" - 14"



OHSB Series	Machining Capacity	
OHSB	152.4 - 355.6 mm	6" - 14"
OHSB-C	152.4 - 355.6 mm	6" - 14"

INDUSTRIES:

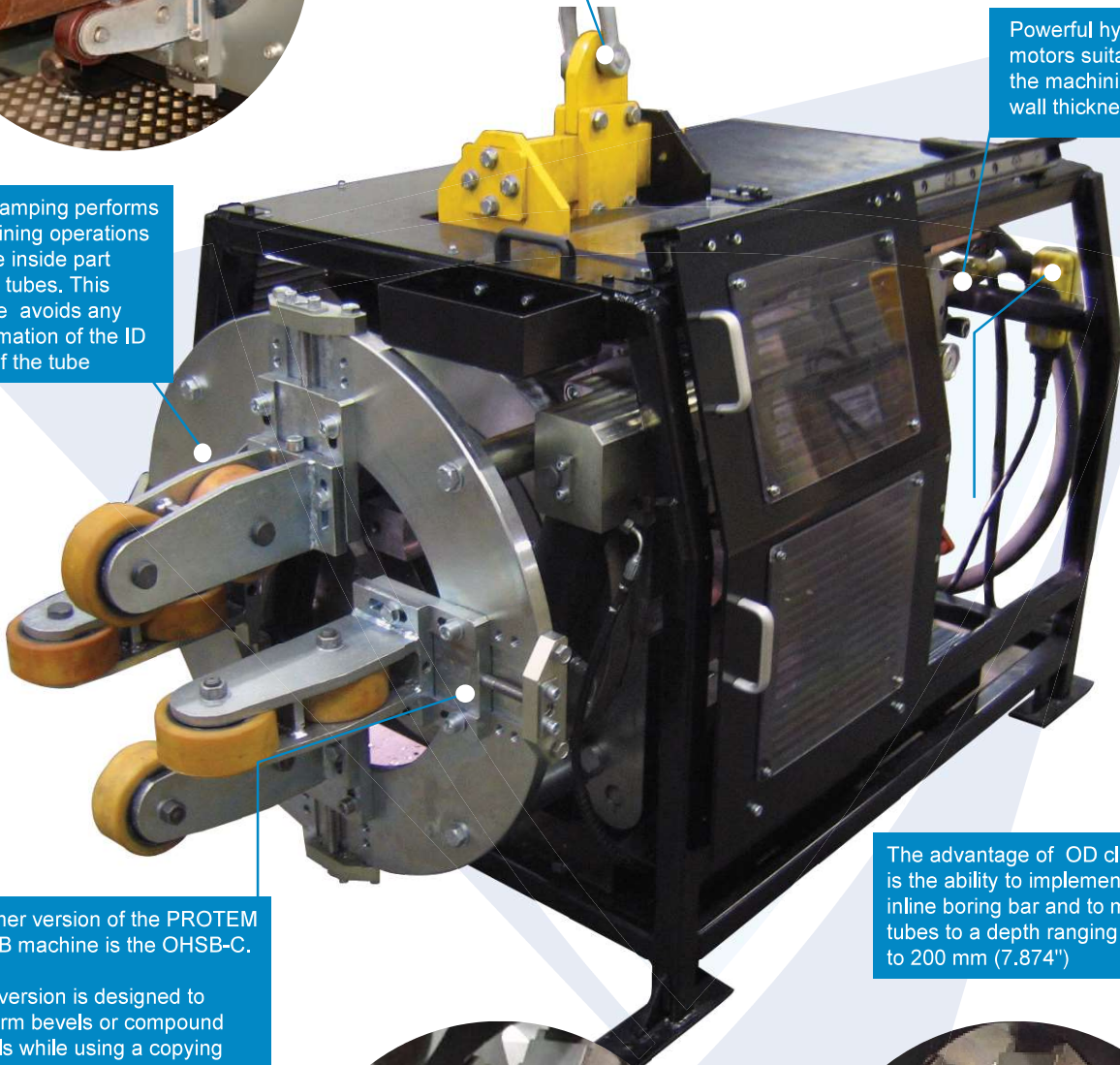
Shipbuilding	Tube Manufacturers
Spoolbases	Pipelines Construction



Easy to move from one working place to another, the OHSB machines can also be used as a stationary machine. Handling and set-up are simple and easy.

Powerful hydraulic motors suitable for the machining of large wall thicknesses.

OD clamping performs machining operations on the inside part of the tubes. This device avoids any deformation of the ID part of the tube



Another version of the PROTEM OHSB machine is the OHSB-C.

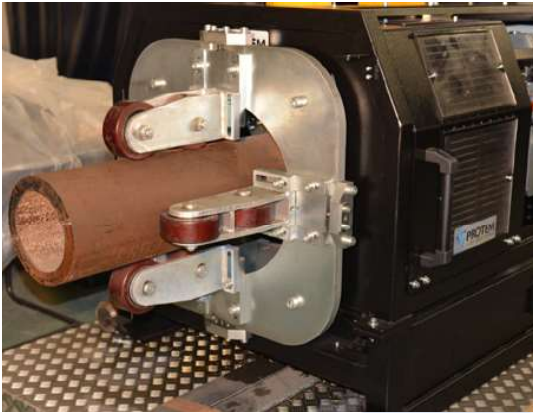
This version is designed to perform bevels or compound bevels while using a copying machining process. A carriage with radial hydraulic movement, mounted on the tool holder, performs beveling operations while using a copying cam.

The advantage of OD clamping is the ability to implement an inline boring bar and to machine tubes to a depth ranging from 0 to 200 mm (7.874")



OHSB Standard

Ø 152.4 - 355.6 mm (6" - 14")



DESCRIPTION:

The OHSB is a portable OD Mounted tube and pipe beveling and facing machine.

The OHSB features an OD clamping system for machining pipes with diameters ranging from 6 to 14" OD with wall thicknesses up to 60 mm.

The machine is perfect for use in the following operations:

- Facing
- Beveling : I, V, J, X shape or compounded bevels
- Counterboring
- Repeatable high quality surface

High performance. Perfectly suitable for manual or automated welding processes.



ORDER NO.	DESCRIPTION
O-HSB-6-14	OHSB Outside clamping beveling and surfacing unit for tubes ranging from 6" to 14"

OHSB MACHINING:

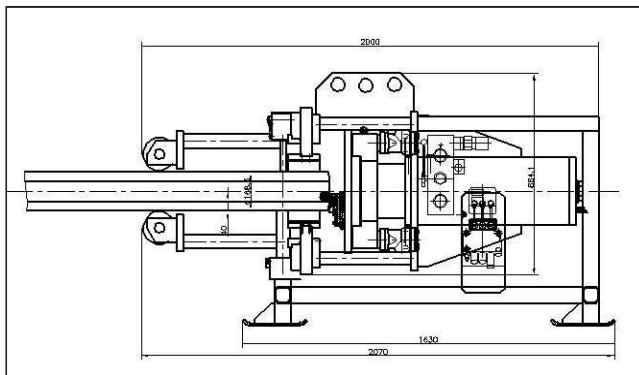


Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✗	✓	✓	✗

TECHNICAL FEATURES:

Machine	OHSB	
Mechanical tool plate feed movement	200 mm	
	7.874"	
Gripping jaw movement	50 mm / Ø	
	1.968" / Ø	
Clamping jack movement	125 mm	
	4.921"	
	Minimum	Maximum
Tool plate rotation speed	10 tr/mn	230 tr/mn
Advance speed of tool plate holders	0.05 mm (.002")/tr	0.3 mm (.012")/tr
Clamping jack supply pressure	-	110 bar
		1 595 psi
Plate rotation drive supply pressure	-	80 bar
		1 160 psi
Plate rotation drive supply pressure	-	80 bar
		1 160 psi
Inside boring capacity	127 mm	218.44 mm
	5"	8.6"
Length of bore	0	152.4 mm
		6"

DIMENSIONS:



OHSB-C-COPIAGE

Ø 152.4 - 355.6 mm (6" - 14")



DESCRIPTION:

Another version of the PROTEM OHSB is the PROTEM- OHSB-C.

This version is designed to carry out bevels or compound bevels by copying. A carriage with hydraulic radial movement, mounted on the tool holder plate performs beveling operations while using a copying cam. The tool holder is equipped with carbide tips.

Maximum wall thickness of the tube: maximum 60 mm (2.362") on a height of chamfer lower than 30 mm (1.181") and a maximum angle of 37°.

The carriage is provided with a copying roller acting on the internal diameter of the tube.

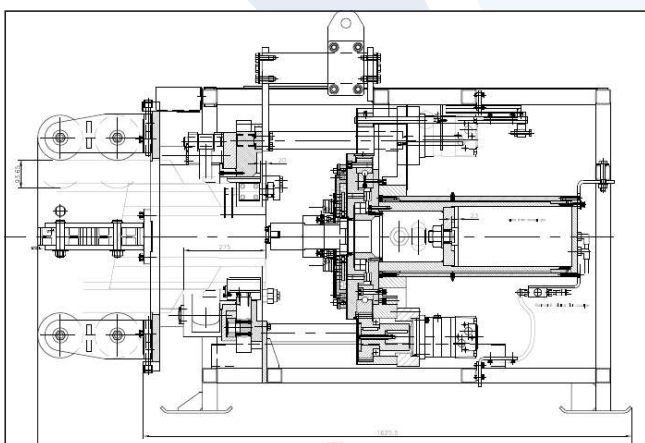
Minimum inside copying Ø: 100 mm (3.937")

Maximum inside copying Ø: 255 mm (10.039")

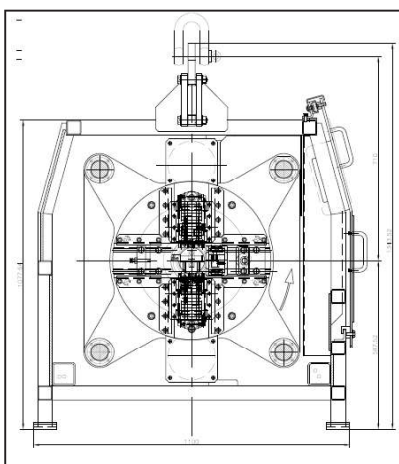
ORDER NO.	DESCRIPTION
O-HSB-C-6-14	O-HSB-C-6-14 Outside clamping beveling and surfacing unit for tubes of 6" to 14"with copying carriage

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✗	✓	✓	✗

DIMENSIONS:



DIMENSIONS VIEW 2:



TECHNICAL FEATURES:

Machine	OHSB-C-COPIAGE
Machining Capacity	Maximum thickness 60 mm (2.362"); maximum angle 37°
Clamping capacity	152.4 mm (6") 355.6 mm (14")
Maximum tool holder plate speed	170 rpm
Feed	Hydraulic actuating cylinder
Stroke	Axial 150 mm Radial 80 mm
Drive Power	Hydraulic

OPTIONS:

ORDER NO.	DESCRIPTION
OHSB-C-6-14-ME	O-HSB-C-6-14-ME Enveloping jaws (set of 4 jaws)
OHSB-C-6-14-BA	O-HSB-C-6-14-BA Boring bar + accessories L = 200 mm (7.874")
O-HSB-C-PO/3005	Counter boring carbide insert holder 15°
O-HSB-C-PO/3026	Copying carbide insert holder 30°
OHSB-K01	O-HSB-K01 Wooden crate
OHSB-K02	O-HSB-K02 Wooden crate for several uses
OHSB-K03	O-HSB-K03 Wooden Crate with shrink wrapping (Recommended for shipment by boat)

US1 ORBITAL TUBE CUTTING SAW

US1

Ø 12.7 - 168 mm (0.5" - 6.6")

≈ 22 kg
≈ 48 lbs



DESCRIPTION:

The ULTIMATE SPLIT 1 has been engineered to fit tube cutting applications in a fabrication workshop or at the job site. This wireless machine can also be bench mounted onto the ULTIMASTER Bench Unit System (B.U.S) along with a 110V or 220V battery adaptor. Our engineering office paid specific attention to the design of the equipment in order to achieve a unique orbital cutting machine using a saw blade. The U.S 1 is fully portable. It features a cordless drive, a split frame housing and, therefore, it can be directly mounted onto a tube.

Beveling	Cutting	Facing	Counterboring	Surfacing
✗	✓	✗	✗	✗



TECHNICAL FEATURES:

Machine	US1
Machining Capacity	12.7 mm - 168 mm OD
	0.5" - 6.6" OD
Clamping capacity	12.7 mm - 168 mm OD
	0.5" - 6.6" OD
Clamping	Manual with key
Feed stroke	30 mm
RPM Engine	0 to 1700 rp/min
Pneumatic drive	736 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electric drive	700 W

OD MOUNTED MACHINE

ORDER NR.	DESCRIPTION
US1-1000	Orbital Cutting Saw US1 for Ø 0.5"-6.625" (12.7mm-168.3mm) with pneumatic drive.
US1-1020	Orbital Cutting Saw US1 for Ø 0.5"-6.625" (12.7mm-168.3mm) with electric drive 220V.
US1-1022	Orbital Cutting Saw US1 for Ø 0.5"-6.625" (12.7mm-168.3mm) with cordless electric drive 220V
US1-1040	Orbital Cutting Saw US1 for Ø 0.5"-6.625" (12.7mm-168.3mm) with electric drive 110V.
US1-1044	Orbital Cutting Saw US1 for Ø 0.5"-6.625" (12.7mm-168.3mm) with cordless electric drive 110V.

The ULTIMATE SPLIT orbital tube cutter features many advantages:

- A perfectly perpendicular cut
- Auto centering on the tube
- Quick clamping
- Compact design
- Burr free
- No vibration during the cutting process
- Reliable
- Durable
- No heat-affected zones
- Perfect preparation for orbital welding
- Lightweight, easy-to-use, versatile
- Powerful cordless drive



ULTIMASTER orbital pipe cutting units are the ideal solution for your on-site jobs. These machines are also perfectly suited for prefabrication workplaces and they can be used under severe conditions (extreme temperatures, high humidity, ionizing radiations)



US6 ORBITAL TUBE CUTTING SAW

US6

Ø 12.7 - 168 mm (0.5" - 6.6")

≈ 75 kg
≈ 165 lbs

DESCRIPTION:

The Ultimate Split 6 orbital cutting machine is used for cutting tubes made of virtually all materials having diameters ranging from 1/2" (12.7 mm) to 6.6" (168 mm) and wallthicknesses ranging from 0.04" (1 mm) to 0.59" (15 mm).

It enables the cutting of pipes without any deformation thanks to its concentric clamping system. The cut is absolutely perpendicular and burr-free. The adjustment to the different diameters is very simple and fast. The Ultimate Split 6 is the orbital cutting saw you need for all your welding preparation works on-site or in the workshop.

Various motorization options are available: Electric or pneumatic.



Beveling	Cutting	Facing	Counterboring	Surfacing
✗	✓	✗	✗	✗

TECHNICAL FEATURES:

Machine	US6
Machining Capacity	12.7 mm - 168 mm OD
	0.5" - 6.6" OD
Clamping capacity	12.7 mm - 168 mm OD
	0.5" - 6.6" OD
Clamping	Manual with key
Feed stroke	30 mm
RPM Engine	115 to 322 rp/min, Speed converter
Pneumatic drive	736 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electric drive	1300 W

OD MOUNTED MACHINE

ORDER NR.	DESCRIPTION
US6-1000	Orbital Cutting Saw US6 for Ø 0.5" - 6.625" (12.7mm - 168.3mm) with pneumatic drive.
US6-1020	Orbital Cutting Saw US6 for Ø 0.5" - 6.625" (12.7mm - 168.3mm) with electric drive 230V.
US6-1022	Orbital Cutting Saw US6 for Ø 0.5" - 6.625" (12.7mm - 168.3mm) with cordless electric drive 230V
US6-1040	Orbital Cutting Saw US6 for Ø 0.5" - 6.625" (12.7mm - 168.3mm) with electric drive 110V.
US6-1042	Orbital Cutting Saw US6 for Ø 0.5" - 6.625" (12.7mm - 168.3mm) with cordless electric drive 110V.

The orbital cutting process used for the US6 provides a lot of advantages:

- Perpendicular cut
- Automatic centering onto the pipe
- Perfect concentric clamping
- Burr-free cut
- No Vibration
- No heat-affected zone
- Excellent preparation for mechanised welding processes
- Rigidity, ergonomic design, flexibility, reliability
- Suitable for all types of steel: mild steel, stainless steel, duplex, super duplex, inconel, hastelloy, aluminium, copper, titanium

ULTIMASTER orbital pipe cutting units are the ideal solution for your on-site jobs. These machines are also perfectly suited for prefabrication workplaces and they can be used under severe conditions (extreme temperatures, high humidity, ionizing radiations)



SE Series Tube Squaring Machines



OD Mounted

Modular design, portable and lightweight for several different applications in many industries such as:

High Purity:

- » Semi-conductors
- » Pharmaceuticals
- » Clean Rooms
- » Food Processing
- » Aerospace
- » Shipbuilding
- » Nuclear
- » Oil and Gas
- » Cryogenics
- » Defence
- » Green Energies
- » Chemicals

SE25 Tube Squaring Machine

Standard Capacity: 3mm - 25,4mm (0.118"-1")



The OD Mounted Facing machine SE25 clamps on the outside \varnothing of the tube with clamping collets. One collet per \varnothing is necessary.

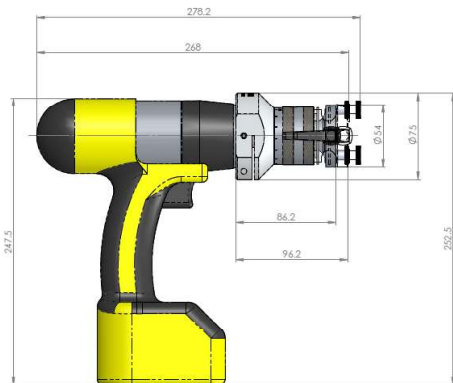
No distortion of the tubes, even for the thinnest ones.

Powered: Electrically or with cordless electric drive.

The tube facing machine SE25 can be mounted onto a bench support.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✗	✓	✗	✗	✗	✗

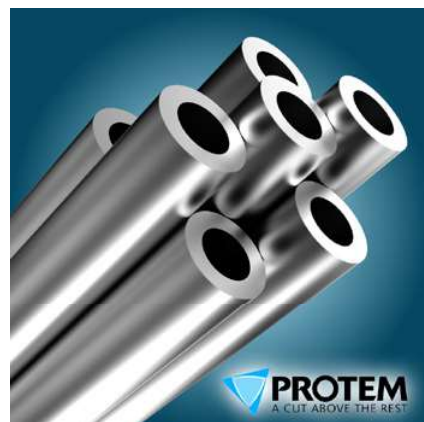
OD Mounted



Dimensions

Advantages:

- Portable
- Powerful Machining Equipment
- Easy and Safe use for the Operators
- No Heat Affected Zone
- High Accuracy
- Fast and easy mounting
- Perfect and repeatable welding preparation
- Adapted for works in tight spaces
- The machine can be used in all positions: vertical, horizontal, over head
- The Tool-Inserts can be changed and adjusted very quickly
- Smooth and Burr-Free Surface Finish
- No vibration during the machining process



SE25 Tube Squaring Machine

Technical Features:

Specific shapes & angles	I and V
Clamping	Manual
Feed stroke	10 mm (0.394")
Gear drive	1. Level 0 - 425 rpm 2. Level 0 - 1200 rpm 3. Level 0 - 1800 rpm
Electrical or Cordless drive	110 V (1500 W) or 220 V (1050 W)

Order No.	Description
SE25-1020	Tube Squaring Machine PROTEM SE25 for Ø 0.118"-1" (3mm-25.4mm) with cordless drive 220V.
SE25-1030	Tube Squaring Machine PROTEM SE25 for Ø 0.118"-1" (3mm-25.4mm) with electric drive 220V.
SE25-1040	Tube Squaring Machine PROTEM SE25 for Ø 0.118"-1" (3mm-25.4mm) with cordless drive 110V.
SE25-1050	Tube Squaring Machine PROTEM SE25 for Ø 0.118"-1" (3mm-25.4mm) with electric drive 110V

Applications:



OD Mounted

SE65 High Purity Tube Squaring Machine

Standard Capacity: 12,7mm - 63,5mm (0.5"-2.5")

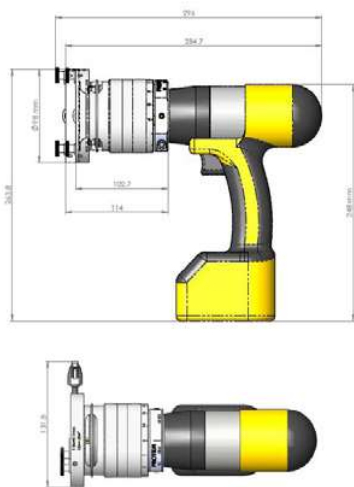


The OD Mounted Facing machine SE65 clamps on the outside \varnothing of the tube with clamping collets. One collet per \varnothing is necessary. No distortion of the tubes, even for the thinnest ones.

Powered: Electrically or with cordless electric drive. The tube facing machine can be mounted onto a bench support.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✗	✓	✗	✗	✗	✗

OD Mounted



Dimensions

Technical Features:

Specific shapes & angles	
Clamping	Manual
Feed stroke	10 mm (0.394")
Gear drive	1. Level 0 - 425 rpm 2. Level 0 - 1200 rpm 3. Level 0 - 1800 rpm
Electrical or Cordless drive	110 V (1500 W) or 220 V (1050 W)

Order No.	Description
SE65-1020	Tube Squaring Machine PROTEM SE65 for \varnothing 0.5"-2.5" (12.7mm-63.5mm) with electric cordless drive 220V.
SE65-1030	Tube Squaring Machine PROTEM SE65 for \varnothing 0.5"-2.5" (12.7mm-63.5mm) with electric drive 220V.
SE65-1040	Tube Squaring Machine PROTEM SE65 for \varnothing 0.5"-2.5" (12.7mm-63.5mm) with electric cordless drive 110V.
SE65-1050	Tube Squaring Machine PROTEM SE65 for \varnothing 0.5"-2.5" (12.7mm-63.5mm) with electric drive 110V.



SE2T OD Mounted Tube End Squaring Machine

Standard Capacity: 3mm - 63,5mm (0.118"-2.5")



SE2T with a SE25 Machining Head



SE2T with a SE65 Machining Head

2 Machines in one! SE2T= SE25+SE65

The OD Mounted Facing machine SE2T clamps on the outside Ø of the tube with clamping collets. One collet per Ø is necessary. No distortion of the tubes, even for the thinnest ones.

Powered: Electrically or with cordless electric drive. The tube facing machine can be mounted onto a bench support.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✗	✓	✗	✗	✗	✗

Technical Features:

Specific shapes & angles	I and V
Clamping	Manual
Feed stroke	10 mm (0.394")
Gear drive	1. Level 0 - 425 rpm 2. Level 0 - 1200 rpm 3. Level 0 - 1800 rpm
Electrical or Cordless drive	110 V (1500 W) or 220 V (1050 W)

OD Mounted

SE2T On-Site:



Order No.	Description
SE2T-1020	Tube End Squaring Machine PROTEM SE2T for Ø 0.118"-2.5" (3mm-63.5mm) with electric cordless drive, 220V.
SE2T-1030	Tube End Squaring Machine PROTEM SE2T for Ø 0.118"-2.5" (3mm-63.5mm) ,with electric drive 220V
SE2T-1040	Tube End Squaring Machine PROTEM SE2T for Ø 0.118"-2.5" (3mm-63.5mm) with electric cordless drive, 110V.
SE2T-1050	Tube End Squaring Machine PROTEM SE2T for Ø 0.118"-2.5" (3mm-63.5mm) ,with electric drive 110V

SE25RA Tube Squaring Machine with Angle Drive

Standard Capacity: 3mm - 25,4mm (0.118"-1")



The OD Mounted Facing machine SE25RA clamps on the outside Ø of the tube with clamping collets. One collet per Ø is necessary. No distortion of the tubes, even for the thinnest ones.

Powered: Electrically or with cordless electric drive. The tube facing machine can be mounted onto a bench support.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✗	✓	✗	✗	✗	✗

OD Mounted



Technical Features:

Specific shapes & angles	I
Clamping	Manual
Feed stroke	10 mm (0.394")
Gear drive	1. Level 0 - 425 rpm 2. Level 0 - 1200 rpm 3. Level 0 - 1800 rpm
Electrical or Cordless drive	110 V (1500 W) or 220 V (1050 W)

Order No.	Description
SE25RA-1020	Tube Squaring Machine PROTEM SE-25RA for Ø 0.118"-1" (3mm-25.4mm) with right angle cordless drive.
SE25DASH-1020	Tube Squaring Machine PROTEM SE25 DASH for Ø 0.118"-1" (3mm-25.4mm) with cordless drive. Adapted for aerospace applications.
SE25RA-DASH-1020	Tube Squaring Machine PROTEM SE25RA-DASH for Ø 0.118"-1" (3mm-25.4mm) with right angle cordless drive. Adapted for aerospace applications.

SE65RA Tube End Squaring Machine with Angle Drive

Standard Capacity: 12,7mm - 63,5mm (0.5"-2.5")



The OD Mounted Facing machine SE65RA clamps on the outside Ø of the tube with clamping collets. One collet per Ø is necessary. No distortion of the tubes, even for the thinnest ones.

Powered: Electrically or with cordless electric drive. The tube facing machine can be mounted onto a bench support.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✗	✗	✗	✗	✗	✗



Technical Features:

Specific shapes & angles	I and V
Clamping	Manual
Feed stroke	10 mm (0.394")
Gear drive	1. Level 0 - 425 rpm 2. Level 0 - 1200 rpm 3. Level 0 - 1800 rpm
Electrical or Cordless drive	110 V (1500 W) or 220 V (1050 W)

OD Mounted

Order No.	Description
SE65RA-1020	Tube Squaring Machine PROTEM SE-65RA for Ø 0.5"-2.5" (12.7mm-63.5mm) with right angle cordless drive.
SE65DASH-1020	Tube Squaring Machine PROTEM SE65 DASH for Ø 0.5"-2.5" (12.7mm-63.5mm) with cordless drive. Adapted for aerospace applications.
SE65RA-DASH-1020	Tube Squaring Machine PROTEM SE65RA-DASH for Ø 0.5"-2.5" (12.7mm-63.5mm) with right angle cordless drive. Adapted for aerospace applications.

SE Tube Squaring Machines


Options & Accessories

SE Crates:



Order No.	Description
SE25-K04	Transport box for SE25 with cordless electric drive
SE25-K05	Transport box for SE25
SE65-K03	Transport box for SE65 with battery
SE65-K04	Transport box for SE65
SE2T-K01	Transport box for SE-2T

SE25 Insert Holders:

Order No.	Description	Picture
SE25-31	Insert Holder 30° for SE25 & SE2T	
SE25-3110	Insert Holder 37°30 for SE25 & SE2T	
SE25-33	Insert Holder 90° for SE25E & SE2T	

SE Collets:

Order No.	Description
SE25-2000-(Please specify the required Ø)	Clamping collet for SE25 and SE2T for (Please specify the required Ø)
SE25-2300-(Please specify the required Ø)	Clamping collet short version for SE25 and SE2T for Micro Fittings (Please specify the required Ø)
SE65-2000-(Please specify the required Ø)	Clamping collet for SE65 and SE2T for (Please specify the required Ø)



OD Mounted

SE Tube Squaring Machines

Tool-Bits

Order No.	Description	Picture
O-SE-P0-3.-H-T-24	Tool-bit for SE25	
O-SE-P1-3.-H-F-20	Tool-bit for SE25 material HSSE, coating: TiALN	
O-SE-P1-3.-C-T-20A	Tool-bit for SE25 material carbide, coating: TiN	
O-SE-P1-3.-H-T-20	Tool-bit for SE25 material HSSE, coating: TiN	
O-SE-P1-3.-C-F-20A	Tool-bit for SE25 material carbide, coating: TiALN	
O-SE-P1-3.-H-HC-20	Tool-bit for SE25 material HSSE, coating: TiSiN	
O-SE-P2-3.-H-T-25	Insert, right, material HSSE with TiN coating	
O-SE-P2-3.-H-F-25	Insert, right, material HSSE with TiALN coating	
O-SE-P3-3.-H-T-25A		
O-SE-P3-3.-H-F-25A	Insert right for J-prep with radius 1.5, material HSSE with TiALN coating	
O-SE-P3-3.-H-T-25C	Insert, right for J-prep with radius 2	
O-SE-P4-3.-H-T-26		
O-SE-P4-3.-H-F-26	Insert, left, material HSSE with TiALN coating	
O-SE-P5-3.-H-T-26A	Insert, left for J-prep with radius 1.5, material HSSE with TiN coating	
O-SE-P5-3.-H-F-26A	Insert, left, for J-prep with radius 1.5, material HSSE with TiALN coating	

OD Mounted

SL Series Tube Squaring Machines

Cold Machining

Clamping collets enable a perfect concentric clamping without any deformation of the tubes. Short collets for fittings and micro fittings available.

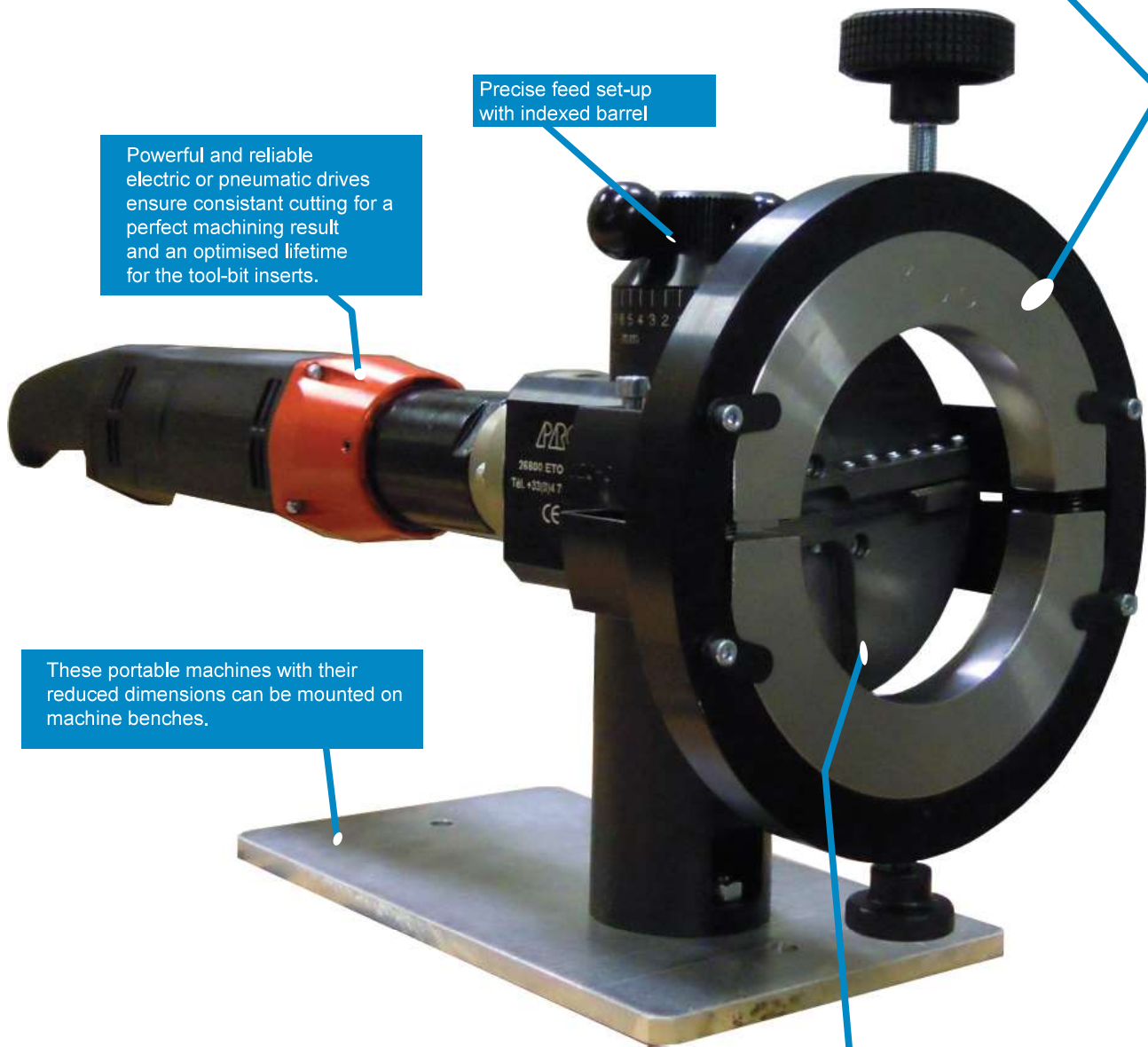
Precise feed set-up with indexed barrel

Powerful and reliable electric or pneumatic drives ensure constant cutting for a perfect machining result and an optimised lifetime for the tool-bit inserts.

These portable machines with their reduced dimensions can be mounted on machine benches.

Tool-holder plates enable the facing and beveling of tubes, fittings, micro fittings and tee fittings. Machining can be performed on all types of materials (mild steels, stainless steels, alloys). Chips are contained and easily collected in order to avoid altering the integrity of the tube.

OD Mounted



SL30 Tube and Pipe Beveling Machine

Standard Capacity: 3mm - 30mm (0.118"-1.181")



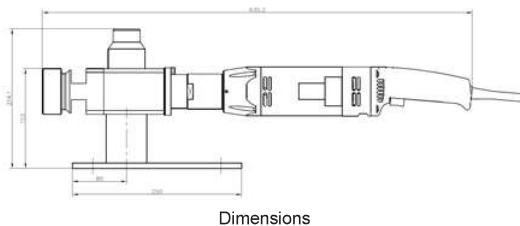
The tube end squaring machine PROTEM SL30 is designed to square tubes, fittings, micro-fittings and tees (short clamping head available) on all metal tubes with \varnothing 0.118"-1.181" (3mm-30mm) including mild, stainless steel, exotic alloys such as inconel, P91, hastelloy, copper etc.. Its clearance, capacities and design have been engineered along with the end users. This machine is ideal for applications within the high-purity field: food and beverage industry, semiconductors, cleanrooms, pharmaceuticals etc. It minimises the risk of contamination since it produces collectible ribbon-like chips and no particulates. Its small dimension allows it to be portable or bench mounted.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✗	✓	✗	✗	✗	✗

Advantages:

- Portable
- Powerful Machining Equipment
- Easy and Safe use for the Operators
- No Heat Affected Zone
- High Accuracy
- Fast and easy mounting
- Perfect and repeatable welding preparation
- Adapted for works in tight spaces
- The machine can be used in all positions: vertical, horizontal, over head
- The Tool-Inserts can be changed and adjusted very quickly
- Smooth and Burr-Free Surface Finish
- No vibration during the machining process

OD Mounted



SL30 Tube and Pipe Beveling Machine

Technical Features:

Specific shapes & angles	I, V, Other on Requests
Clamping	Clamping heads and collets long or short
Feed stroke	10 mm (0.394")
Gear drive	95 tr/min to 280 tr/min
Pneumatic drive	730 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electrical drive	110 V (1500 W) or 220 V (1050 W)
<i>Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.</i>	

Order No.	Description
SL30-1000	Tube & Pipe Beveling and Facing Machine PROTEM SL30 for Ø 0.118"-1.181" (3mm-30mm) with pneumatic drive
SL30-1002	Tube & Pipe Beveling and Facing Machine PROTEM SL30 for Ø 0.118"-1.181" (3mm-30mm) version with short clamping head for microfittings, with pneumatic drive
SL30-1004	Tube & Pipe Beveling and Facing Machine PROTEM SL30 for Ø 0.118"-1.181" (3mm-30mm) with pneumatic drive and automatic clamping device
SL30-1020	Tube & Pipe Beveling and Facing Machine PROTEM SL30 for Ø 0.118"-1.181" (3mm-30mm) with electric drive 220V.
SL30-1022	Tube & Pipe Beveling and Facing Machine PROTEM SL30 for Ø 0.118"-1.181" (3mm-30mm) version with short clamping head for microfittings, with electric drive 220V.
SL30-1040	Tube & Pipe Beveling and Facing Machine PROTEM SL30 for Ø 0.118"-1.181" (3mm-30mm) with electric drive 110V MS10.
SL30-1042	Tube & Pipe Beveling and Facing Machine PROTEM SL30 for Ø 0.118"-1.181" (3mm-30mm) with electric drive 220.

OD Mounted

Applications:



SL60 Tube and Pipe Facing Machine

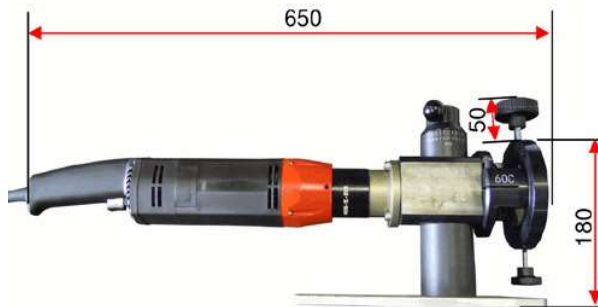
Standard Capacity: 10mm - 60,3mm (0.393"-2.374")



The tube end squaring machine PROTEM SL60 is designed to square tubes, fittings, micro-fittings and tees (short clamping head available) on all metal tubes with Ø 0.393"-2.374" (10mm-60,3mm) including mild, stainless steel, exotic alloys such as inconel, P91, hastelloy, copper etc..

Its clearance, capacities and design have been engineered along with the end users. This machine is ideal for applications within the high-purity field: food and beverage industry, semiconductors, cleanrooms, pharmaceuticals etc. It minimises the risk of contamination since it produces collectible ribbon-like chips and no particulates. Its small dimension allows it to be portable or bench mounted.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✗	✓	✗	✗	✗	✗



Dimensions

Technical Features:

Specific shapes & angles	I, V, Other on Requests
Clamping	Clamping heads and collets long or short
Feed stroke	10 mm (0.394")
Gear drive	120 rpm to 360 rpm
Pneumatic drive	730 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electrical drive	110 V (1500 W) or 220 V (1050 W)
<i>Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.</i>	

OD Mounted

Order No.	Description
SL60-1000	Tube & Pipe Beveling and Facing Machine PROTEM SL60 for Ø 0.393"-2.374" (10mm-60,3mm) with pneumatic drive
SL60-1002	Tube & Pipe Beveling and Facing Machine PROTEM SL60 for Ø 0.393"-2.374" (10mm-60,3mm) version with short clamping head for microfittings, with pneumatic drive
SL60-1004	Tube & Pipe Beveling and Facing Machine PROTEM SL60 for Ø 0.393"-2.374" (10mm-60,3mm) with pneumatic drive and automatic clamping device
SL60-1020	Tube & Pipe Beveling and Facing Machine PROTEM SL60 for Ø 0.393"-2.374" (10mm-60,3mm) with electric drive 220V.

Order No.	Description
SL60-1022	Tube & Pipe Beveling and Facing Machine PROTEM SL60 for Ø 0.393"-2.374" (10mm-60,3mm) version with short clamping head for microfittings, with electric drive 220V.
SL60-1040	Tube & Pipe Beveling and Facing Machine PROTEM SL60 for Ø 0.393"-2.374" (10mm-60,3mm) with electric drive 110V MS10.
SL60-1042	Tube & Pipe Beveling and Facing Machine PROTEM SL60 for Ø 0.393"-2.374" (10mm-60,3mm) with electric drive 220.

SL120 Tube Squaring Machine

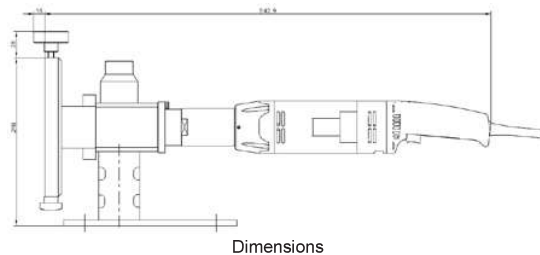
Standard Capacity: 50mm - 120mm (1.968"-4.724")



The tube end squaring machine PROTEM SL120 is designed to square tubes, fittings, micro-fittings and tees (short clamping head available) on all metal tubes with Ø 1.968"-4.724" (50mm-120mm) including mild, stainless steel, exotic alloys such as inconel, P91, hastelloy, copper etc.. Its clearance, capacities and design have been engineered along with the end users. This machine is ideal for applications within the high-purity field: food and beverage industry, semiconductors, cleanrooms, pharmaceuticals etc. It minimises the risk of contamination since it produces collectible ribbon-like chips and no particulates. Its small dimension allows it to be portable or bench mounted.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✗	✓	✗	✗	✗	✗

OD Mounted



Technical Features:

Specific shapes & angles	I, V, Other on Requests
Clamping	Clamping heads and collets long or short
Feed stroke	10 mm (0.394")
Gear drive	20 tr/min to 60 tr/min
Pneumatic drive	730 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electrical drive	110 V (1500 W) or 220 V (1050 W)
Pneumatically driven machines have to be used with a lubricating filter.	
Recommended option: regulation valve.	

Order No.	Description
SL120-1000	Tube & Pipe Beveling and Facing Machine PROTEM SL120 for 1.968"-4.724" (50-120mm) with pneumatic drive
SL120-1002	Tube & Pipe Beveling and Facing Machine PROTEM SL120 for 1.968"-4.724" (50-120mm) version with short clamping head for microfittings, with pneumatic drive
SL120-1004	Tube & Pipe Beveling and Facing Machine PROTEM SL120 for 1.968"-4.724" (50-120mm) with pneumatic drive and automatic clamping device
SL120-1020	Tube & Pipe Beveling and Facing Machine PROTEM SL120 for 1.968"-4.724" (50-120mm) with electric drive 220V.

Order No.	Description
SL120-1022	Tube & Pipe Beveling and Facing Machine PROTEM SL120 for 1.968"-4.724" (50-120mm) version with short clamping head for microfittings, with electric drive 220V.
SL120-1040	Tube & Pipe Beveling and Facing Machine PROTEM SL120 for 1.968"-4.724" (50-120mm) with electric drive 110V MS10.
SL120-1042	Tube & Pipe Beveling and Facing Machine PROTEM SL120 for 1.968"-4.724" (50-120mm) with electric drive 220.

SL Tube Squaring Machines Options & Accessories

SL Crates:

Order No.	Description
SL30-K01	Transport box for SL30 pneumatic or electric
SL60-K01	Transport box for SL60 pneumatic or electric
SL120-K01	Transport box for SL120 pneumatic or electric
SL120-K02	Transport box for SL120 electric + RA

SL Insert Holders:

Order No.	Description
SL-1300	Machine support suitable for SL30, SL60, SL120
SL1410	Insert-holder 90° to be ordered with item ref. SL-1810, suitable for SL30, SL60, SL120
SL-1411	Insert-holder 30° to be ordered with item 1810, suitable for SL30, SL60, SL120
SL-1412	Insert holder 37°30 to be ordered with item ref. 1810, suitable for SL30, SL60, SL120
SL-1414	Insert-holder 45° to be ordered with item 1810, suitable for SL30, SL60, SL120
SL-1810	Insert-holder for SL30
SL-2310	Insert-holder for SL60
SL-3310	Insert-holder for SL120

SL Collets:

Order No.	Description
SL-1900-(Please specify the required Ø)	Clamping collet for SL30 with standard clamping head (Please specify the required Ø)
SL-2100-(Please specify the required Ø)	Clamping collet, short version for SL30 with short clamping head (Please specify the required Ø)
SL-2400-(Please specify the required Ø)	Clamping collet for SL60 with standard clamping head (Please specify the required Ø)





Order No.	Description
SL-2610-(Please specify the required Ø)	Clamping collet, short version for SL60 with short clamping head (Please specify the required Ø)
SL-3410-(Please specify the required Ø)	Clamping collet for SL120 with standard clamping head (Please specify the required Ø)
SL-3610-(Please specify the required Ø)	Clamping collet, short version for SL120 with short clamping head (Please specify the required Ø)

OD Mounted

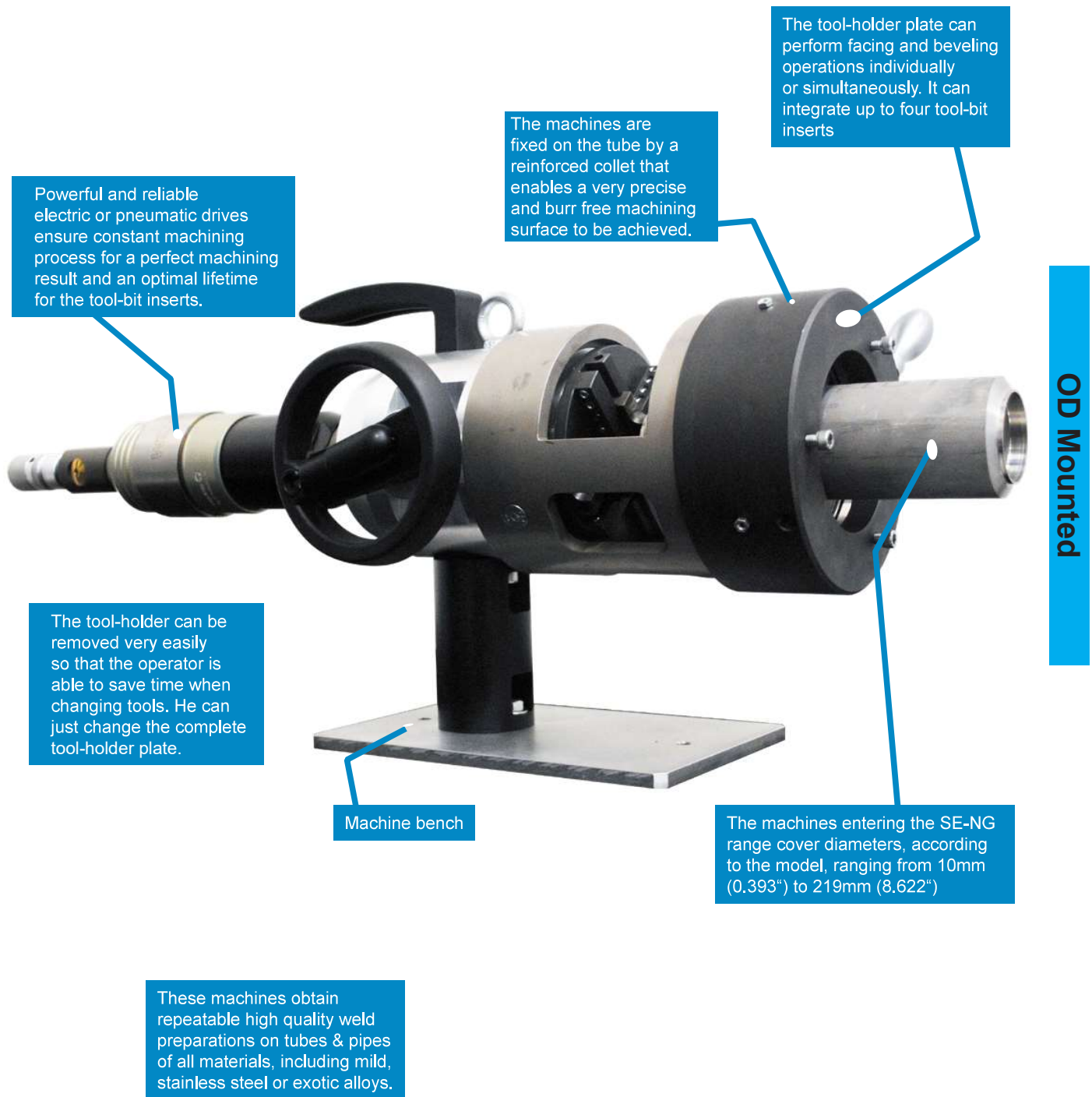
SL Tube Squaring Machines

Tool-Inserts

OD Mounted

Order No.	Description	Picture
O-SE-P2-3.-H-T-25	Insert, right, material HSSE with TiN coating	
O-SE-P2-3.-H-F-25	Insert, right, material HSSE with TiALN coating	
O-SE-P3-3.-H-T-25A		
O-SE-P3-3.-H-F-25A	Insert right for J-prep with radius 1.5, material HSSE with TiALN coating	
O-SE-P3-3.-H-T-25C	Insert, right for J-prep with radius 2	
O-SE-P4-3.-H-T-26		
O-SE-P4-3.-H-F-26	Insert, left, material HSSE with TiALN coating	
O-SE-P5-3.-H-T-26A	Insert, left for J-prep with radius 1.5, material HSSE with TiN coating	
O-SE-P5-3.-H-F-26A	Insert, left, for J-prep with radius 1.5, material HSSE with TiALN coating	

SE-NG Series Tube Squaring Machines



SE60NG Tube and Pipe Beveling Machine

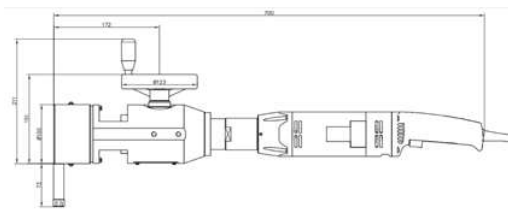
Standard Capacity: 10mm - 60,3mm (0.393"-2.374")



The pneumatic or electric powered Tube & Pipe end preparation machine PROTEM SE60NG is lightweighted and portable. It will perform repeatable perfect quality weld preps on all metal tubes and pipes including mild, stainless steel, exotic alloys such as inconel, P91, hastelloy, copper etc.. The SE60NG allows to cover diameters ranging from 0.393" to 2.374" (10mm-60,3mm). The cutting head will face, bevel and counterbore individually or in a simultaneous operation. The tool-holder plate can hold up to 4 tool blocks. The tool-holder plate is easily removable and thus allows the operator to save time once the tool blocks have been adjusted by exchanging the whole plate. The SE60NG machine is available with either pneumatic or electric (230 V or 110 V) drives. It clamps to the tubes and pipes by means of a heavy clamping collet and thus provides a chatterfree accurate finish.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✓	✓	✗	✗	✗	✗

OD Mounted



Dimensions

Advantages:

- Portable
- Powerful Machining Equipment
- Easy and Safe use for the Operators
- No Heat Affected Zone
- High Accuracy
- Fast and easy mounting
- Perfect and repeatable welding preparation
- Adapted for works in tight spaces
- The machine can be used in all positions: vertical, horizontal, over head
- The tool-Inserts can be changed and adjusted very quickly
- Smooth and Burr-Free Surface Finish
- No vibration during the machining process



SE60NG Tube and Pipe Beveling Machine

Technical Features:

Specific shapes & angles	I, V, J-bevel, Other on Requests
Clamping	Manual
Feed stroke	10 mm (0.394")
Gear drive	240 rpm to 330 rpm
Pneumatic drive	730 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electrical drive	110 V (1500 W) or 220 V (1050 W)
<i>Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.</i>	

Order No.	Description
SE60NG-1000	Tube & Pipe Beveling and Facing Machine PROTEM SE60NG for Ø 0.393"-2.374" (10mm-60.3mm) with pneumatic drive
SE60NG-1002	Tube & Pipe Beveling and Facing Machine PROTEM SE60NG for Ø 0.393"-2.374" (10mm-60.3mm) with pneumatic drive and automatic clamping.
SE60NG-1004	Tube & Pipe Beveling and Facing Machine PROTEM SE60NG for Ø 0.393"-2.374" (10mm-60.3mm) with integrated pneumatic automatic clamping and feed device
SE60NG-1020	Tube & Pipe Beveling and Facing Machine PROTEM SE60NG for Ø 0.393"-2.374" (10mm-60.3mm) with electric drive 220V.
SE60NG-1022	Tube & Pipe Beveling and Facing Machine PROTEM SE60NG for Ø 0.393"-2.374" (10mm-60.3mm) with electric right angle drive 220V.
SE60-1040	Tube & Pipe Beveling and Facing Machine PROTEM SE60NG for Ø 0.393"-2.374" (10mm-60.3mm) with electric drive 110V.
SE60-SAA	Tube & Pipe Beveling and Facing Machine PROTEM SE60NG for Ø 0.393"-2.374" (10mm-60.3mm) with automatic feed.

OD Mounted

Applications:



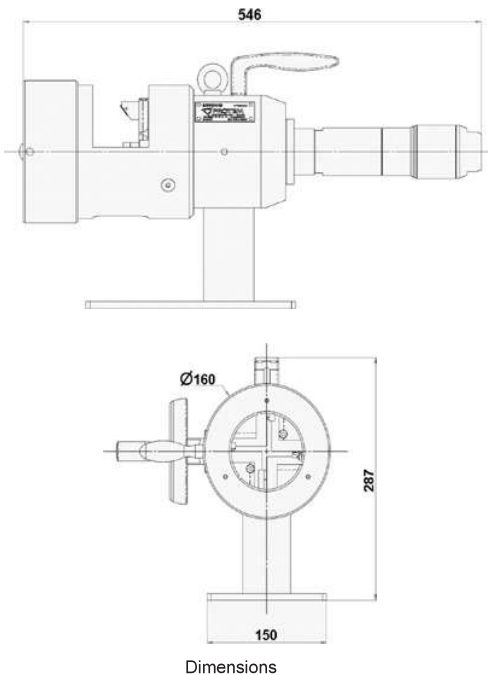
SE90NG Tube and Pipe Facing Machine

Standard Capacity: 10mm - 90mm (0.393"-3.543")



The pneumatic or electric powered Tube & Pipe end preparation machine PROTEM SE90NG is lightweighted and portable. It will perform repeatable perfect quality weld preps on all metal tubes and pipes including mild, stainless steel, exotic alloys such as inconel, P91, hastelloy, copper etc.. The SE90NG allows to cover diameters ranging from 0.393" to 3.543" (10mm-90mm). The cutting head will face, bevel and counterbore individually or in a simultaneous operation. The tool-holder plate can hold up to 4 tool blocks. The tool-holder plate is easily removable and thus allows the operator to save time once the tool blocks have been adjusted by exchanging the whole plate. The SE90NG machine is available with either pneumatic or electric (230 V or 110 V) drives. It clamps to the tubes and pipes by means of a heavy clamping collet and thus provides a chatterfree accurate finish.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✓	✓	✗	✗	✗	✗



Technical Features:

Specific shapes & angles	I, V, J-bevel, Other on Requests
Clamping	Manual
Feed stroke	10 mm (0.394")
Gear drive	75 rpm to 90 rpm
Pneumatic drive	730 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electrical drive	110 V (1500 W) or 220 V (1050 W)
Pneumatically driven machines have to be used with a lubricating filter.	
Recommended option: regulation valve.	

OD Mounted

Order No.	Description
SE90NG-1000	Tube & Pipe Beveling and Facing Machine PROTEM SE90NG for Ø 0.393"-3.543" (10mm-90mm) with pneumatic drive
SE90NG-1002	Tube & Pipe Beveling and Facing Machine PROTEM SE90NG for Ø 0.393"-3.543" (10mm-90mm) with pneumatic drive and automatic clamping.
SE90NG-1004	Tube & Pipe Beveling and Facing Machine PROTEM SE90NG for Ø 0.393"-3.543" (10mm-90mm) with integrated pneumatic automatic clamping and feed device
SE90NG-1020	Tube & Pipe Beveling and Facing Machine PROTEM SE90NG for Ø 0.393"-3.543" (10mm-90mm) with electric drive 220V.

Order No.	Description
SE90NG-1022	Tube & Pipe Beveling and Facing Machine PROTEM SE90NG for Ø 0.393"-3.543" (10mm-90mm) with electric right angle drive 220V.
SE90-1040	Tube & Pipe Beveling and Facing Machine PROTEM SE90NG for Ø 0.393"-3.543" (10mm-90mm) with electric drive 110V.
SE90-SAA	Tube & Pipe Beveling and Facing Machine PROTEM SE90NG for Ø 0.393"-3.543" (10mm-90mm) with automatic feed.

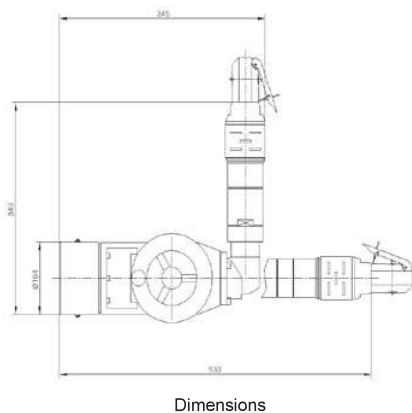
SE120NG Tube Squaring Machine

Standard Capacity: 50mm - 120mm (1.968"-4.724")



The pneumatic or electric powered Tube & Pipe end preparation machine PROTEM SE120NG is lightweighted and portable. It will perform repeatable perfect quality weld preps on all metal tubes and pipes including mild, stainless steel, exotic alloys such as inconel, P91, hastelloy, copper etc.. The SE120NG allows to cover diameters ranging from 1.968" to 4.724" (50mm-120mm). The cutting head will face, bevel and counterbore individually or in a simultaneous operation. The tool-holder plate can hold up to 4 tool blocks. The tool-holder plate is easily removable and thus allows the operator to save time once the tool blocks have been adjusted by exchanging the whole plate. The SE120NG machine is available with either pneumatic or electric (230 V or 110 V) drives. It clamps to the tubes and pipes by means of a heavy damping collet and thus provides a chatterfree accurate finish.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✓	✓	✗	✗	✗	✗



Technical Features:

Specific shapes & angles	I, V, J-bevel, Other on Requests
Clamping	Manual
Feed stroke	10 mm (0.394")
Gear drive	60 rpm to 75 rpm
Pneumatic drive	730 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electrical drive	110 V (1500 W) or 220 V (1050 W)
Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.	

OD Mounted

Order No.	Description
SE120NG-1000	Tube & Pipe Beveling and Facing Machine PROTEM SE120NG for Ø 1.968"-4.724" (50mm-120mm) with pneumatic drive
SE120NG-1002	Tube & Pipe Beveling and Facing Machine PROTEM SE120NG for Ø 1.968"-4.724" (50mm-120mm) with pneumatic drive and automatic clamping.
SE120NG-1004	Tube & Pipe Beveling and Facing Machine PROTEM SE120NG for Ø 1.968"-4.724" (50mm-120mm) with integrated pneumatic automatic clamping and feed device
SE120NG-1020	Tube & Pipe Beveling and Facing Machine PROTEM SE120NG for Ø 1.968"-4.724" (50mm-120mm) with electric drive 220V.

Order No.	Description
SE120NG-1022	Tube & Pipe Beveling and Facing Machine PROTEM SE120NG for Ø 1.968"-4.724" (50mm-120mm) with electric right angle drive 220V.
SE120-1040	Tube & Pipe Beveling and Facing Machine PROTEM SE120NG for Ø 1.968"-4.724" (50mm-120mm) with electric drive 110V.
SE120-SAA	Tube & Pipe Beveling and Facing Machine PROTEM SE120NG for Ø 1.968"-4.724" (50mm-120mm) with automatic feed.

SE219NG Tube Squaring Machine

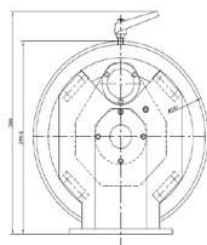
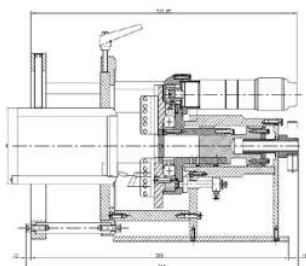
Standard Capacity: 60,3mm - 219mm (2.374"-8.622")



The PROTEM SE219NG is especially designed and engineered to face and bevel tubes with Ø 2.374"-8.622" (60.3mm-219mm) OD. Its design and unique working range makes it the best tool in its class. The stainless steel or aluminium collet and its front support allow a perfect clamping and squaring without deformation for orbital welding. 4 standard HSS tool-bits can be mounted on the tool-holder plate to work simultaneously. This tool is ideal for sanitary tubing, food processing and chemical and pharmaceutical applications. The SE219NG can be mounted either with an electric or a pneumatic drive.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✓	✓	✗	✗	✗	✗

OD Mounted



Dimensions

Technical Features:

Specific shapes & angles	I, V, J-bevel, Other on Requests
Clamping	Manual
Feed stroke	10 mm (0.394")
Gear drive	16,5 rpm
Pneumatic drive	730 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electrical drive	110 V (1500 W) or 220 V (1050 W)
Pneumatically driven machines have to be used with a lubricating filter.	
Recommended option: regulation valve.	

Order No.	Description
SE219NG-1000	Tube & Pipe Beveling and Facing Machine PROTEM SE219NG for Ø 2.374"-8.622" (60.3mm-219mm) with pneumatic drive
SE219NG-1002	Tube & Pipe Beveling and Facing Machine PROTEM SE219NG for Ø 2.374"-8.622" (60.3mm-219mm) with pneumatic drive and automatic clamping.
SE219NG-1004	Tube & Pipe Beveling and Facing Machine PROTEM SE219NG for Ø 2.374"-8.622" (60.3mm-219mm) with integrated pneumatic automatic clamping and feed device
SE219NG-1020	Tube & Pipe Beveling and Facing Machine PROTEM SE219NG for Ø 2.374"-8.622" (60.3mm-219mm) with electric drive 220V MS10.

Order No.	Description
SE219NG-1022	Tube & Pipe Beveling and Facing Machine PROTEM SE219NG for Ø 2.374"-8.622" (60.3mm-219mm) with electric right angle drive 220V MS15.
SE219-1040	Tube & Pipe Beveling and Facing Machine PROTEM SE219NG for Ø 2.374"-8.622" (60.3mm-219mm) with electric drive 110V.
SE219-SAA	Tube & Pipe Beveling and Facing Machine PROTEM SE219NG for Ø 2.374"-8.622" (60.3mm-219mm) with automatic feed.

SE-NG Tube Squaring Machines Options & Accessories

SE-NG Crates:

Order No.	Description
SE60NG-K01	Transport crate for SE60
SE60NG-K02	Transport crate for SE60E
SE60-K03	Transport crate for SE60-RA
SE90NG-K01	Transport crate for SE90
SE90NG-K02	Transport crate for SE90E
SE120NG-K01	Transport crate for SE120
SE120NG-K02	Transport crate for SE120E
SE219-K01	Transport crate for SE219
SE219-K02	Transport crate for SE219E

SE60NG Tool-holders:

Order No.	Description
SE60NG-1310	Tool-holder plate
SE60PP-30-41	Tool-holder 30°
SE60PP-37-10	Tool-holder 37°30
SE60PP-45-11	Tool-holder 45°
SE60PP-90-09	Tool-holder 90°
SE60PPD-14-16	Tool-holder for counterboring works 14°

Order No.	Description
SE60PPD-15-12	Tool-holder for counterboring works 15°
SE60PPJ-15-43	Tool-holder for J-bevels 15°
SE60PPJ-20-44	Tool-holder for J-bevels 20°
SE60PPJ-20-45	Tool-holder for J-bevels 20° R=0
SE60PPJ-20-47	Tool-holder for J-bevels 20° R=2
SE60PPJ-30-46	Tool-holder for J-bevels 30°

OD Mounted

SE90NG Tool-holders:

Order No.	Description
SE90NG-1310	Tool-holder plate
SE90NG-1311	Tool-holder 30°
SE90NG-1312	Tool-holder for inside machining works 5°
SE90NG-1313	Tool-holder 90°

Order No.	Description
SE90NG-1314	Tool-holder 37°30
SE90NG-1315	Tool-holder 45°
SE90NG-1316	Tool-holder for inside machining works 15°

SE-NG Tube Squaring Machines Options & Accessories

SE120NG Tool-holders:

Order No.	Description
SE120-68	Tool-holder plate
SE60PP-30-41	Tool-holder 30°
SE60PP-37-10	Tool-holder 37°30
SE60PP-45-11	Tool-holder 45°
SE60PP-90-09	Tool-holder 90°

OD Mounted

SE-NG Collets:








Order No.	Description
SE60NG-1200-(Please specify the required Ø)	Clamping collet. One collet necessary per Ø. Please specify the required Ø
SE60NG-1204-(Please specify the required Ø)	Clamping collet, stainless steel. One collet necessary per Ø. Please specify the required Ø
SE90NG-1200-(Please specify the required Ø)	Clamping collet, aluminium. One collet necessary per Ø. Please specify the required Ø
SE90NG-1202-(Please specify the required Ø)	Clamping collet, steel. One collet necessary per Ø. Please specify the required Ø

Order No.	Description
SE90NG-1204-(Please specify the required Ø)	Clamping collet, stainless steel. One collet necessary per Ø. Please specify the required Ø
SE120-69-(Please specify the required Ø)	Clamping collet. One collet necessary per Ø. Please specify the required Ø
SE219-1200-(Please specify the required Ø)	Clamping collet, aluminium. One collet necessary per Ø. Please specify the required Ø
SE219-1204-(Please specify the required Ø)	Clamping collet, stainless steel. One collet necessary per Ø. Please specify the required Ø

SE-NG Tube Squaring Machines

Tool-Inserts

OD Mounted

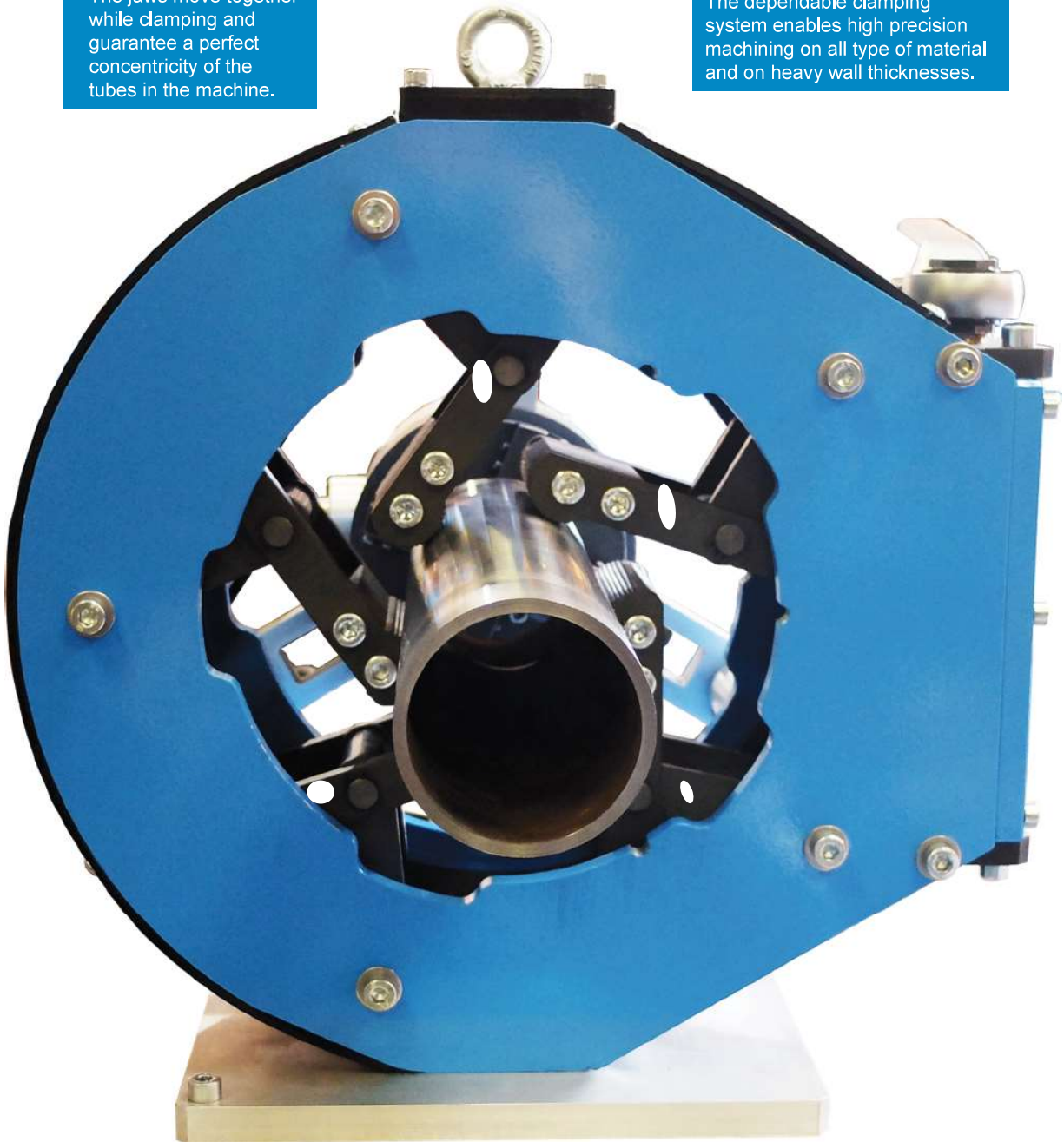
Order No.	Description	Picture
O-SE-P2-3.-H-T-25	Insert, right, material HSSE with TiN coating	
O-SE-P2-3.-H-F-25	Insert, right, material HSSE with TiALN coating	
O-SE-P3-3.-H-T-25A		
O-SE-P3-3.-H-F-25A	Insert right for J-prep with radius 1.5, material HSSE with TiALN coating	
O-SE-P3-3.-H-T-25C	Insert, right for J-prep with radius 2	
O-SE-P4-3.-H-T-26		
O-SE-P4-3.-H-F-26	Insert, left, material HSSE with TiALN coating	
O-SE-P5-3.-H-T-26A	Insert, left for J-prep with radius 1.5, material HSSE with TiN coating	
O-SE-P5-3.-H-F-26A	Insert, left, for J-prep with radius 1.5, material HSSE with TiALN coating	
O-US-A1-9-H-27	Tool-bit 90°	
O-US-A2-9-H-26	Tool-bit for 30° bevel	
O-US-A3-9-H-28	Tool-bit for 37°30 bevel	

BMFM Series Tube & Pipe Beveling and Facing Machines

OD Mounted

The jaws move together while clamping and guarantee a perfect concentricity of the tubes in the machine.

The dependable clamping system enables high precision machining on all type of material and on heavy wall thicknesses.



These machines minimize the risk of contamination since they produce collectible ribbon-like chips and no particles.

The outside clamping system prevents all inside contamination of the inside of the tube. Such contamination would be considered hazardous or critical for high purity applications.

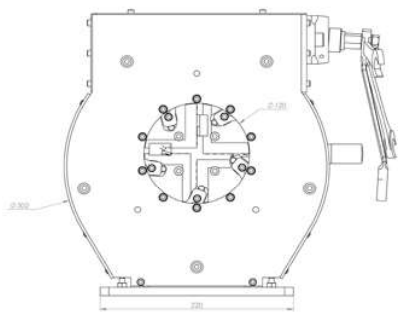
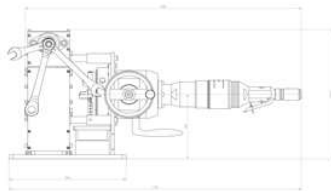
BMFM 90 Tube and Pipe Beveling Machine

Standard Capacity: 3,175mm - 90mm (0.125"-3.543")



The new od mounted and concentric clamping machine Protem BMFM90 is designed to perform weld preparations on tubes with diameters up to 3.543 inches (90mm). The machine can bevel, face and counterbore separately or in a simultaneous operation. The tool-holder plate can hold up to four tool blocks. The new generation of PROTEM BMFM features the possibility to machine several tube diameters without changing the clamping system. Collets are not necessary. The concentric clamping system enables a perfect preparation of tubes for manual or automated welding operations. Mounted on a bench, just one operator is necessary to machine tubes with the BMFM90.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✓	✓	✗	✗	✗	✗

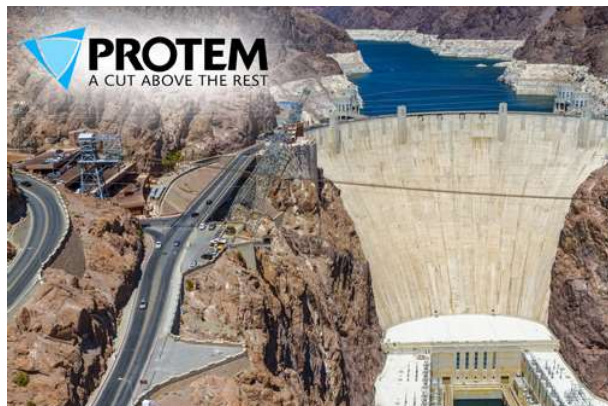


Dimensions

Advantages:

- Portable
- Powerful Machining Equipment
- Easy and Safe use for the Operators
- No Heat Affected Zone
- High Accuracy
- Fast and easy mounting
- Perfect and repeatable welding preparation
- Adapted for works in tight spaces
- The machine can be used in all positions: vertical, horizontal, over head
- The Tool-Bits can be changed and adjusted very quickly
- Smooth and Burr-Free Surface Finish
- No vibration during the machining process

OD Mounted



BMFM90 Tube and Pipe Beveling Machine

Technical Features:

Specific shapes & angles	I, V, X and J-bevel, Other on Requests
Clamping	Manual with a key
Feed stroke	30 mm (1.181")
Gear drive	75 rpm to 90 rpm
Pneumatic drive	730 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electrical drive	110 V (1500 W) or 220 V (1050 W)
<i>Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.</i>	

Order No.	Description
BMFM90-1000	Tube & Pipe Beveling and Facing Machine PROTEM BMFM90 for Ø 0.125"-3.543" (3,175mm-90mm) with pneumatic drive
BMFM90-1002	Tube & Pipe Beveling and Facing Machine PROTEM BMFM90 for Ø 0.125"-3.543" (3,175mm-90mm) with pneumatic drive and automatic clamping.
BMFM90-1004	Tube & Pipe Beveling and Facing Machine PROTEM BMFM90 for Ø 0.125"-3.543" (3,175mm-90mm) with integrated pneumatic automatic clamping and feed device
BMFM90-1020	Tube & Pipe Beveling and Facing Machine PROTEM BMFM90 for Ø 0.125"-3.543" (3,175mm-90mm) with electric drive 220V.
BMFM90-1040	Tube & Pipe Beveling and Facing Machine PROTEM BMFM90 for Ø 0.125"-3.543" (3,175mm-90mm) with electric drive 110V.
BMFM90-SAA	Tube & Pipe Beveling and Facing Machine PROTEM BMFM90 for Ø 0.125"-3.543" (3,175mm-90mm) with automatic feed.
BMFM90-K01	Transport crate for BMFM90

OD Mounted

Applications:



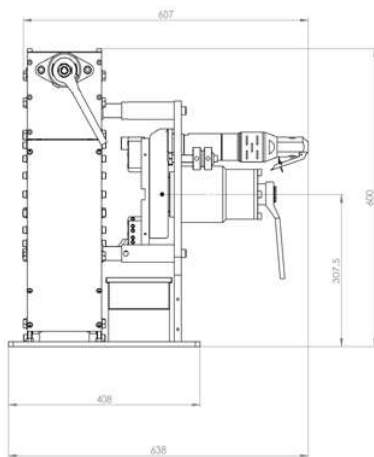
BMFM219 Tube and Pipe Facing Machine

Standard Capacity: 25,4mm - 219mm (1"-8.622")



With a very robust and reliable design and very easy to use, the BMFM219 can perform repeatable quality weld preps on all metal pipes and tubes including mild and stainless steel, duplex and super duplex, inconel etc. The benefit of this machine is the possibility to machine several tube diameters without changing the clamping system. The jaws move together while clamping and ensure a perfect concentricity of the tubes in the machine. This machine minimize the risk of contamination since it produces collectible ribbon-like chips and no particles. Moreover the outside clamping system prevents all contamination of the inside of the tube. Such contamination would be considered hazardous or critical for high purity applications.

Beveling	Squaring	Counter-boring	Cut to length	Weld Joint Removal	Coating Removal	Saddles	Surfacing
✓	✓	✓	✓	✗	✗	✗	✗



Dimensions

Technical Features:

Specific shapes & angles	I, V, X and J-bevel, Other on Requests
Clamping	Manual with a key
Feed stroke	23 mm (0.905")
Gear drive	34 rpm
Pneumatic drive	730 W, 6 bar (87 psi), 1400 l/min (49 cfm)
Electrical drive	110 V (1500 W) or 220 V (1050 W)
Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.	

OD Mounted

Order No.	Description
BMFM219-1000	Tube & Pipe Beveling and Facing Machine PROTEM BMFM219 for Ø 1"-8.622" (25.4mm-219mm) with pneumatic drive
BMFM219-1002	Tube & Pipe Beveling and Facing Machine PROTEM BMFM219 for Ø 1"-8.622" (25.4mm-219mm) with pneumatic drive and automatic clamping.
BMFM219-1004	Tube & Pipe Beveling and Facing Machine PROTEM BMFM219 for Ø 1"-8.622" (25.4mm-219mm) with integrated pneumatic automatic clamping and feed device
BMFM219-1020	Tube & Pipe Beveling and Facing Machine PROTEM BMFM219 for Ø 1"-8.622" (25.4mm-219mm) with electric drive 220V.
BMFM219-1040	Tube & Pipe Beveling and Facing Machine PROTEM BMFM219 for Ø 1"-8.622" (25.4mm-219mm) with electric drive 110V.
BMFM219-SAA	Tube & Pipe Beveling and Facing Machine PROTEM BMFM219 for Ø 1"-8.622" (25.4mm-219mm) with automatic feed.
BMFM219-K01	Transport crate for BMFM219















BMFM219 On-Site:



BMFM Tube Squaring Machine

Tool-Bits

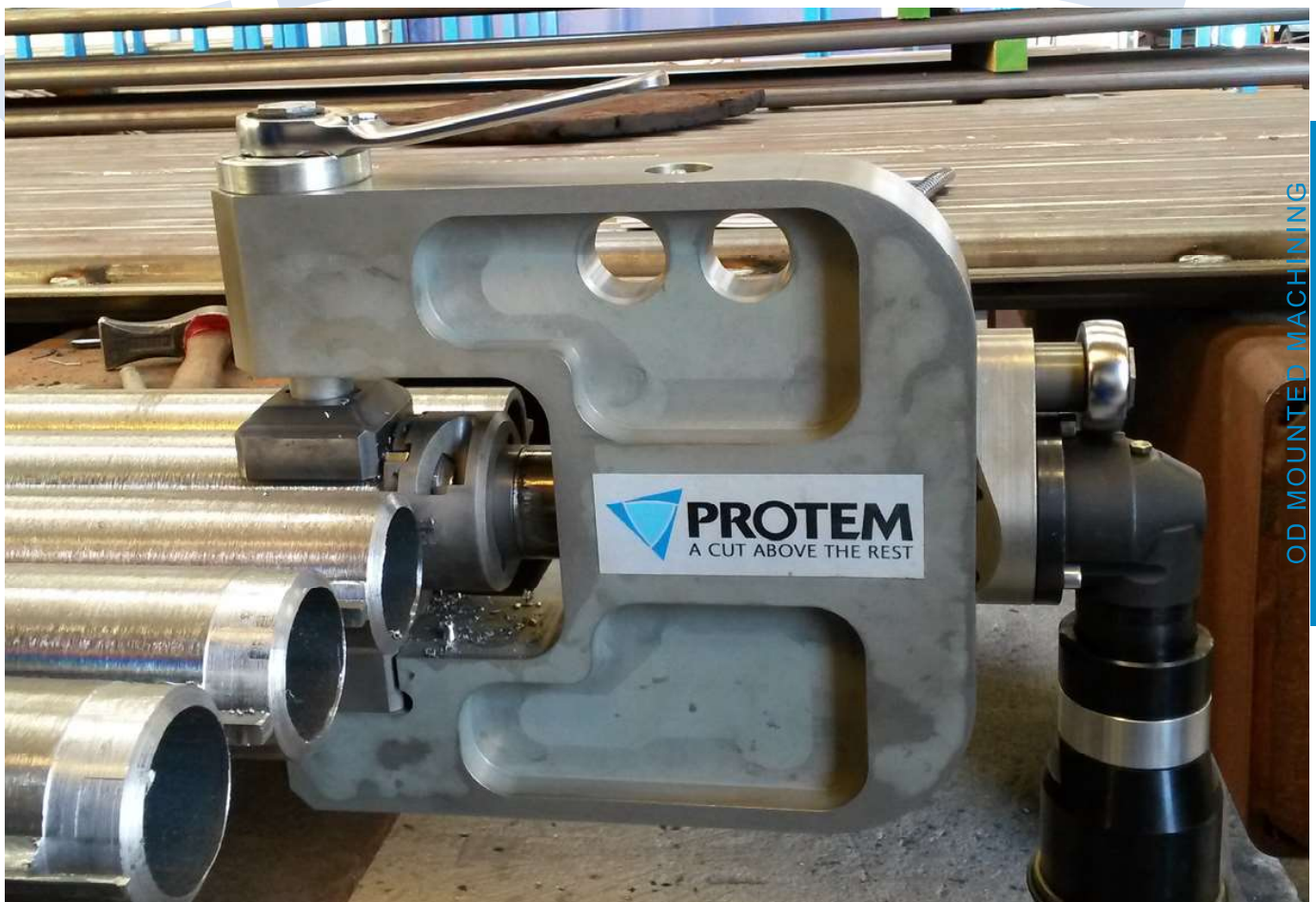
OD Mounted

Order No.	Description	Picture
O-US-A1-6-H-18	Tool-bit 90°	
O-US-A2-6-H-17	Tool-bit for 30° bevel	
O-US-A3-6-H-19	Tool-bit for 37°30 bevel	
O-US-A4-6-H-16	Tool-bit for counterboring 15°	
O-US-A5-6-H-85	Tool-bit for 45° bevel	
O-US-A6-6	Tool-bit for counterboring 10°	
O-US-B6-6-H-55	Tool-bit 90°, with disalignment	
O-US-B7-6-H-57	Tool-bit 30°, with disalignment	
O-US-B8-6-H-58	Tool-bit 37°30, with disalignment	
O-US-B9-6-H-60	Tool-bit for counterboring 15°, with disalignment	
O-US-B11-6-H-24	Tool-bit for counterboring and squaring	
O-US-C5-6-H-62	Tool-bit for 7° R6 j-bevels	
O-US-C6-6-H-64	Tool-bit for 12,5° R6 j-bevels	
O-US-C7-6-H-66	Tool-bit for 7° R6 j-bevels, with disalignment	
O-US-C8-6-H-68	Tool-bit for 12,5° R6 j-bevels, with disalignment	
O-US-C9-6-H-20	Tool-bit for 10° R1,5 j-bevels	
O-US-C10-6-H-61	Tool-bit for 20° j-bevels	

GR SERIES

EQUIPMENT FOR WATERWALL CUTOUT WINDOWS ON BOILER TUBES

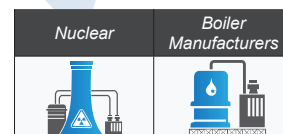
Ø 21.3 mm - 114.3 mm
Ø 0.839" - 4.5"



OD MOUNTED MACHINING

GR Series	Machining Capacity	
GR40NG	21.3 - 60.3 mm	0.839" - 2.374"
GR76NG	38 - 76 mm	1.496" - 2.992"
GR90NG	42.2 - 89 mm	1.661" - 3.5"
GR120NG	48.3 - 114.3 mm	1.902" - 4.5"

INDUSTRIES:



The GR machines simultaneously perform the welding preparation on the tubes and excavate the membrane of the tube panels

The clamping system consists of a fixed clamping jaw and a mobile clamping jaw. Both are activated manually with a ratchet.



Their rugged and compact design is perfectly suited for on-site machining operations.

The machine frame is made from aluminum with optimal mechanical features. This design enables the performance of repair operations within the windows of the tube panels without having to dismantle the entire panel.

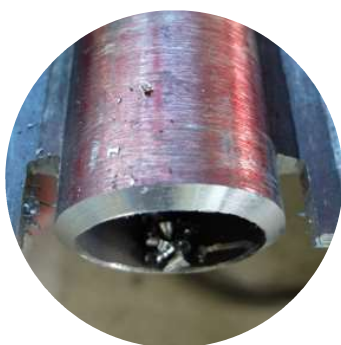
The machining tools are designed to meet the technical requirements of our customers.



Small dimensions allow the machine to be used in confined spaces

Simultaneous beveling and excavation of the membrane walls within the tube exchanger panels.

The GR machines perform, simultaneously, the welding preparation of the tubes and excavation of the membrane walls of the tube panels.



GR SERIES

GR40

Ø 21.3 - 60.3 mm (0.839" - 2.374")

≈ 11.5 kg
≈ 25.4 lbs



DESCRIPTION:

Machine	GR40NG
Pipe size range	21,3 mm (0.839") ID
	60,3 mm (2.374") OD
Max. wall thickness	≈ 12 mm (0.472")
Drive Power	Pneumatic (1,47 kW)
Air consumption	1800 l/min (63 cfm)
Air pressure:	6 bars (87 psi)

ORDER NO.	DESCRIPTION
GR40NG-1000	GR40 OD clamping machining equipment for tube panels

OPTIONS:

ORDER NO.	DESCRIPTION
GR40NG-1500	GR40-PPF milling tool for GR76 - one for each diameter
GR40PP-45-11	GR40-PP45 45° tool holder
GR40PP-90-09	GR40-PP90 90° tool holder
GR40PPD-1316	GR40-PPD tool holder for inside machining operations
GR40-68	GR40-PO tool holder plate
GR40-K01	GR40-K01 transport crate

GR76

Ø 38 - 76 mm (1.496" - 2.992")

≈ 24 kg
≈ 53 lbs



DESCRIPTION:

Machine	GR76NG
Pipe size range	38 mm (1.496") ID
	76 mm (2.992") OD
Max. wall thickness	≈ 13 mm (0.511")
Drive Power	Pneumatic (1,47 kW)
Air consumption	1800 l/min (63 cfm)
Air pressure:	6 bars (87 psi)

ORDER NO.	DESCRIPTION
GR76	GR76 OD clamping machining equipment for tube panels

OPTIONS:

ORDER NO.	DESCRIPTION
GR76NG-1500	GR76-PPF milling tool for GR76 - one for each diameter
GR76PP-45-11	GR76-PP45 45° tool holder
GR76PP-90-09	GR76-PP90 90° tool holder
GR76PPD-1316	GR76-PPD tool holder for inside machining operations
GR76-68	GR76-PO tool holder plate
GR76-K01	GR76-K01 transport crate

OD MOUNTED MACHINING

GR90

Ø 42.2 - 89 mm (1.661" - 3.5")

▼ **DESCRIPTION:**

Machine	GR90NG
Pipe size range	42.2 mm (1.661") ID
	89 mm (3.5") OD
Max. wall thickness	≈ 15 mm (0.591")
Drive Power	Pneumatic (1,47 kW)
Air consumption	1800 l/min (63 cfm)
Air pressure:	6 bars (87 psi)

ORDER NO.**DESCRIPTION**

GR90NG-1000	GR90 OD clamping machining equipment for tube panels
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▼ **OPTIONS:**

ORDER NO.	DESCRIPTION
GR90NG-1500	GR90-PPF milling tool for GR76 - one for each diameter
GR90PP-45-11	GR90-PP45 45° tool holder
GR90PP-90-09	GR90-PP90 90° tool holder
GR90PPD-1316	GR90-PPD tool holder for inside machining operations
GR90-68	GR40-PO tool holder plate
GR90-K01	GR90-K01 transport crate

GR120

Ø 48.3 - 114.3 mm (1.902" - 4.5")

▼ **DESCRIPTION:**

Machine	GR120NG
Pipe size range	48.3 mm (1.902") ID
	114.3 mm (4.5") OD
Max. wall thickness	≈ 20 mm (0.787")
Drive Power	Pneumatic (1,47 kW)
Air consumption	1800 l/min (63 cfm)
Air pressure:	6 bars (87 psi)

ORDER NO.**DESCRIPTION**

GR120NG-1000	GR120 OD clamping machining equipment for tube panels
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▼ **OPTIONS:**

ORDER NO.	DESCRIPTION
GR120NG-1500	GR120-PPF milling tool for GR76 - one for each diameter
GR120PP-45-11	GR120-PP45 45° tool holder
GR120PP-90-09	GR120-PP90 90° tool holder
GR120PPD-1316	GR120-PPD tool holder for inside machining operations
GR120-68	GR120-PO tool holder plate
GR120-K01	GR120-K01 transport crate

TTNG Series Splitframe Orbital Pipe Cutting & Beveling Machines

OD Mounted

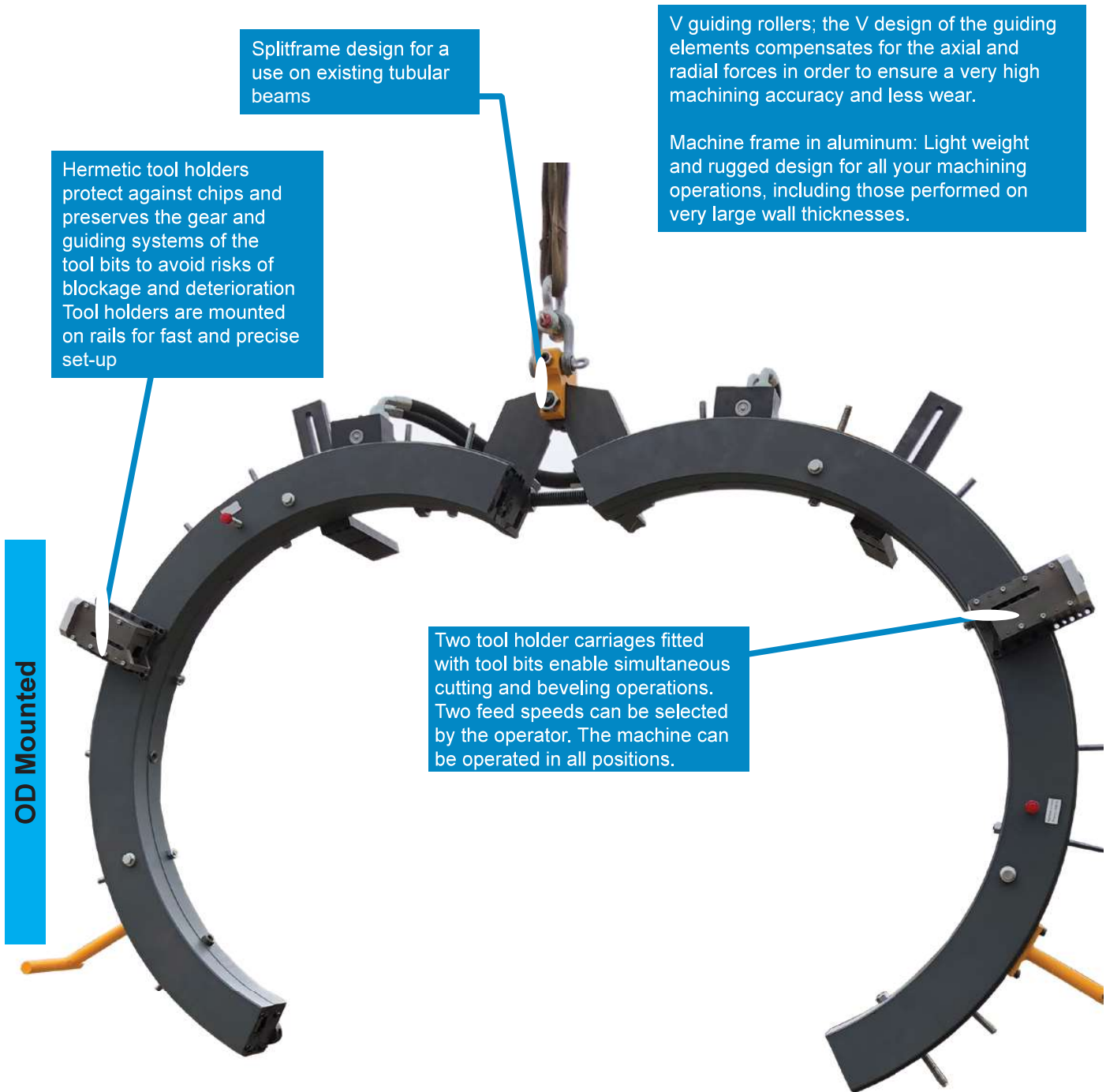


PROTEM SAS
 Z.I. Les Bosses
 26800 Etoile-sur-Rhone | France
 Phone: +33 4 75 57 41 41
 Fax: +33 4 75 57 41 49
 E-Mail: contact@protem.fr
 Web: www.protem.fr

PROTEM GmbH
 Am Hambiegel 27
 76706 Dettenheim | Germany
 Phone: +49 7247 93 93 0
 Fax: +49 7247 93 93 33
 E-Mail: info@protem-gmbh.de
 Web: www.protem-gmbh.de

PROTEM USA LLC
 29340 Industrial way #402
 Evergreen CO 80439 | USA
 Phone: +1 303 955 4862
 Fax: +1 303 955 5904
 E-Mail: contact@protemusa.com
 Web: www.protemusa.com

TTNG Series Splitframe Orbital Pipe Cutting & Beveling Machines



Splitframe design for a use on existing tubular beams

Hermetic tool holders protect against chips and preserves the gear and guiding systems of the tool bits to avoid risks of blockage and deterioration. Tool holders are mounted on rails for fast and precise set-up.

V guiding rollers; the V design of the guiding elements compensates for the axial and radial forces in order to ensure a very high machining accuracy and less wear.

Machine frame in aluminum: Light weight and rugged design for all your machining operations, including those performed on very large wall thicknesses.

Two tool holder carriages fitted with tool bits enable simultaneous cutting and beveling operations. Two feed speeds can be selected by the operator. The machine can be operated in all positions.

Hydraulic, pneumatic or electric drives are available for all machines in the TT series.

Cold Cutting Process.
No Heat Affected Zone

The machines in the TT series are available with numerous options and in different configurations with standard or specific optional tooling, such as, counterboring carriages, wheel cutters, enveloping jaws, etc.

OD Mounted

TTNG Series Splitframe Orbital Pipe Cutting & Beveling Machines

Standard Capacity: 60.3mm - 1422.4mm (2.374" - 56")

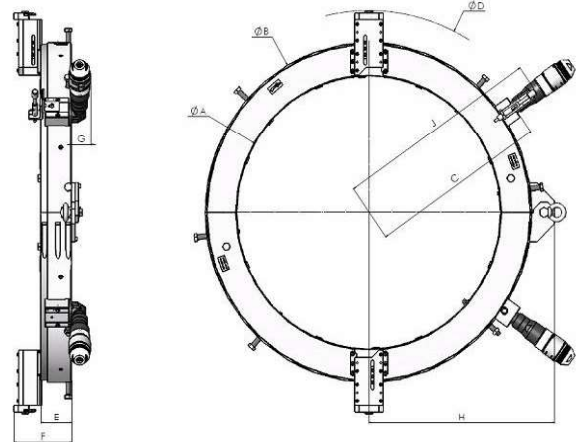
TTNG are engineered to serve all industries where the weld quality is critical and projects must stay on schedule. TTNG series machines are available in many configurations with standard or customised accessories and options. All the devices provided with the TTNG series machines are built based on 50 years knowledge and expertise of PROTEM to provide enhanced performance and job specific solutions. They are built to cut and bevel tubes up to 100mm (3.937") thick (larger upon request) in the field, in prefabrication workshops.

Their low clearance design of rotating parts is highly appreciated by all operators worldwide. To mount the machine on the pipe, the two half-shells connected with a hinge can be opened. The alignment of concentricity is done by separately adjustable clamping jaws. The perpendicularity is adjusted in the same time. Additional clamping screws allow to bear the axial forces.

Beveling	Cutting	Counterboring	Severing	Coating Removal	Squaring	Weld joint removal	Surfacing
✓	✓	✓	✓	✓	✗	✗	✗

Advantages:

- Mobile
- Powerful Machining Equipment
- Easy and Safe use for the Operators
- No Heat Affected Zone
- High Accuracy
- Fast and easy mounting
- The tool-bits can be changed and adjusted very quickly
- Smooth and Burr-Free Surface Finish
- No vibration during the machining process
- Splitframe Configuration



Dimensions

OD Mounted

Tool carriages with covered spindles enable to ensure a protection against chips. The main advantage of the TTNG machines are: cut and bevel individually or simultaneously, Perfect Weld End Preparation suited for manual welding operations and for advanced orbital welding systems, V track and rollers: The V shape design compensates for axial and radial forces to ensure maximum precision and less wear. Aluminium body: Light weight and durable for limitless machining jobs! Split frame design with hinge: Easier to set up on continuous or long length pipes. Fully enclosed tool-holder design: Protects the feed system from chips and prevents damage during machining.

Sliding tool-holders: Easier and faster to set up. Machine design permits cutting and beveling operation simultaneously, maximizes productivity! Large diameter machines delivered with two standard configuration motors allowing more power for highly demanding jobs, Cold cutting process, no heat affected zone, Dependability, Versatility, Durability, Rapidity, High Accuracy, Rigidity, Compact design, dimensions adapted for works in areas of tight clearances. For any material: mild, stainless steel, alloys, hastelloy, Inconel, duplex, super duplex, P91

TTNG Series Splitframe Orbital Pipe Cutting & Beveling Machines

Technical Features:

Specific shapes & angles	I, V, X, J-bevel, other on request
Clamping	Manual
Feed stroke	98 mm (3.858")
Cutting head gear drive	174 rpm. Approximate rotation speed according to air pressure and air flow
TTNG168-TTNG323 pneumatic drive	1.47 kW, 6 bar (87 psi), 1800 l/min (63 cfm)
TTNG406-TTNG900 pneumatic drive	1.47 kW, 6 bar (87 psi), 3600 l/min (128 cfm)
TTNG1016 hydraulic drive	0 - 5.7 rpm (speed to be adjusted according to the diameter, the thickness and the material of the pipe to be machined)
TTNG1200 hydraulic drive	0.4 - 6 rpm (speed to be adjusted according to the diameter, the thickness and the material of the pipe to be machined)
TTNG1400 hydraulic drive	0.5 - 5.2 rpm (speed to be adjusted according to the diameter, the thickness and the material of the pipe to be machined)
Electric drive	110V, 240V and 380V
<i>Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.</i>	



OD Mounted

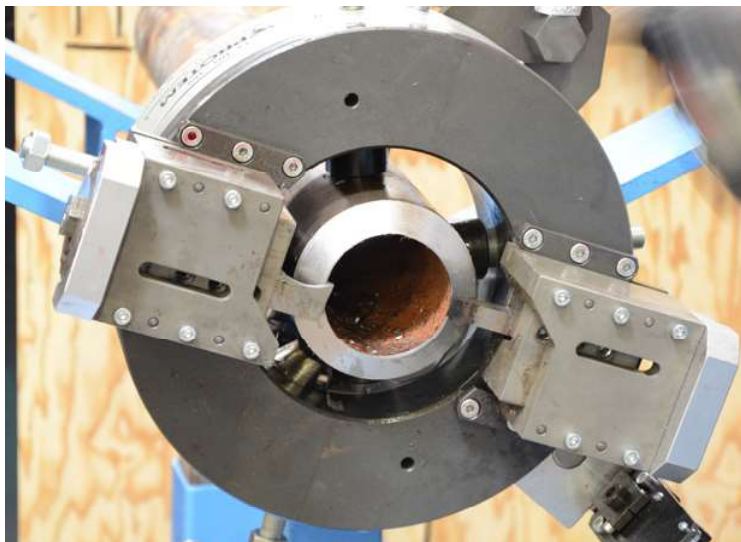
Several options available: Enveloping jaws can be optionally proposed, they are designed to clamp the machine onto even the thinnest tubes without any distortion. Remote control available on request for works in hazardous areas (under water, explosive areas, areas submitted to ionizing radiations etc) Counterboring carriages, cam-copying operations and wheel cutting are possible within the wide range of diameters covered by each model in the TTNG series.

The OD tracker ensures consistent machining, regardless of the tube's ovality. Its roller follows the tube's OD profile and adjusts the position of the tool-holder. Radial Copying carriage. Copying carriage allows the user to machine any geometry of bevel thanks to a cam-following system. This technology of single point machining is particularly suited for heavy wall machining. Axial copying carriage. Performs special shape machining on the inner or outer diameter Axial copying carriage. Performs special shape machining on the inner or outer diameter Counterboring tool-holder.

Counterboring operations ensure consistent thickness all around the tube by machining the inside diameter. Operations of this type are essential when automatic welding machines are used - Cutting wheel. The cutting wheel accessory allows the user to cut the tube without producing chips. The wheel is very useful when cleanliness standards require that no chips can be introduced inside the tube during machining.

TTNG168 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 60.3mm - 168.3mm (2.374" - 6.625")

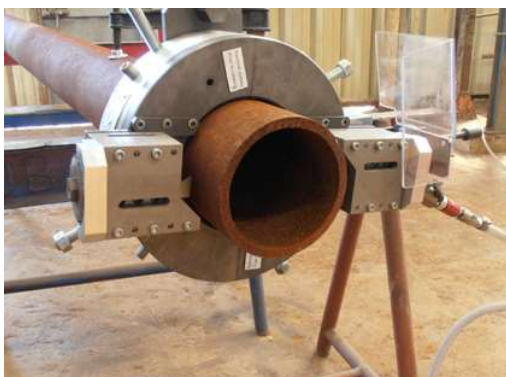


Order No.	Description
TTNG168-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with single pneumatic drive
TTNG168-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with single pneumatic drive and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG168-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with angle electric drive 230V - ME25
TTNG168-1022	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with angle electric drive MS15 - 230V
TTNG168-1040	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with 110V electric drive

Order No.	Description
TTNG168-1042	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with angled drive 110 V MS15
TTNG168-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with 1 hydraulic Motor and reversing valve
TTNG168-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with 1 hydraulic Motor
TTNG168-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with hydraulic drive (1 Motor) and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG168-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG168 for Ø 2.374" - 6.625" (60.3mm - 168.3mm) with Brushless electric drive. 3 Phase

OD Mounted

TTNG168 On-Site or in Workshop:



TTNG219 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 114.3mm - 219.1mm (4.5" - 8.625")



OD Mounted

Order No.	Description
TTNG219-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with single pneumatic drive
TTNG219-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with single pneumatic drive and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG219-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with angle electric drive 230V - ME25
TTNG219-1022	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with angle electric drive MS15 - 230V
TTNG219-1040	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with 110V electric drive

Order No.	Description
TTNG219-1042	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with angled drive 110 V MS15
TTNG219-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with 1 hydraulic Motor and reversing valve
TTNG219-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with 1 hydraulic Motor
TTNG219-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with hydraulic drive (1 Motor) and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG219-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG219 for Ø 4.5" - 8.625" (114.3mm - 219.1mm) with 1 Brushless electric drive. 3 Phase

TTNG273 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 168.3mm - 273.1mm (6.625" - 10.751")



OD Mounted

Order No.	Description
TTNG273-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with single pneumatic drive
TTNG273-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with single pneumatic drive and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG273-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with angle electric drive 230V - ME25
TTNG273-1022	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with angle electric drive MS15 - 230V
TTNG273-1040	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with 110V electric drive

Order No.	Description
TTNG273-1042	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with angled drive 110 V MS15
TTNG273-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with 1 hydraulic Motor and reversing valve
TTNG273-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with 1 hydraulic Motor
TTNG273-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with hydraulic drive (1 Motor) and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG273-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG273 for Ø 6.625" - 10.751" (168.3mm - 273.1mm) with 1 Brushless electric drive. 3 Phase

TTNG323 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 219.1mm - 323.9mm (8.625" - 12.751")

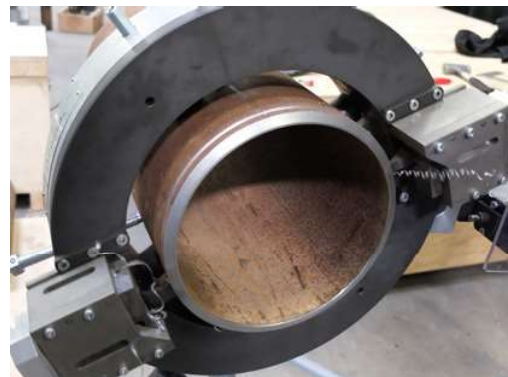


OD Mounted

Order No.	Description
TTNG323-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with single pneumatic drive
TTNG323-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with single pneumatic drive and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG323-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with angle electric drive 230V - ME25
TTNG323-1022	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with angle electric drive MS15 - 230V
TTNG323-1040	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with 110V electric drive

Order No.	Description
TTNG323-1042	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with angled drive 110 V MS15
TTNG323-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with 1 hydraulic Motor and reversing valve
TTNG323-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with 1 hydraulic Motor
TTNG323-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with hydraulic drive (1 Motor) and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG323-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG323 for Ø 8.625" - 12.751"(219.1mm - 323.9mm) with 1 Brushless electric drive. 3 Phase

TTNG323 On-Site or in Workshop:



TTNG406 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 273.1mm - 406.4mm (10.751" - 16")

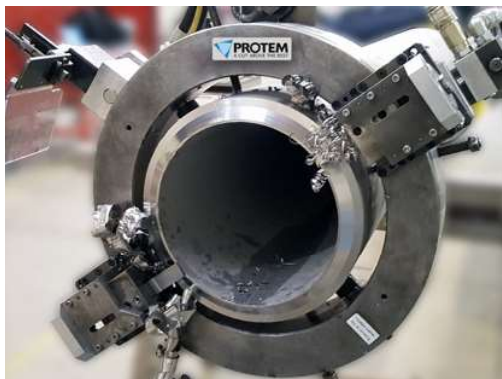


Order No.	Description
TTNG406-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG406 for Ø 10.751" - 16" (273.1mm - 406.4mm) with 2 pneumatic drives
TTNG406-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG406 for Ø 10.751" - 16" (273.1mm - 406.4mm) with double pneumatic drive (2 pneumatic drives) and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG406-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG406 for Ø 10.751" - 16" (273.1mm - 406.4mm) with angle electric drive 230V - ME25

Order No.	Description
TTNG406-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG406 for Ø 10.751" - 16" (273.1mm - 406.4mm) with 2 hydraulic drives and reversing valve
TTNG406-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG406 for Ø 10.751" - 16" (273.1mm - 406.4mm) with 2 hydraulic drives
TTNG406-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG406 for Ø 10.751" - 16" (273.1mm - 406.4mm) with 2 hydraulic drives and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG406-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG406 for Ø 10.751" - 16" (273.1mm - 406.4mm) with 1 Brushless electric drive. 3 Phase

OD Mounted

TTNG406 On-Site or in Workshop:



TTNG508 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 323.9mm - 508mm (12.751" - 20")



OD Mounted

Order No.	Description
TTNG508-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG508 for Ø 12.751" - 20" (323.9mm - 508mm) with 2 pneumatic drives
TTNG508-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG508 for Ø 12.751" - 20" (323.9mm - 508mm) with 2 pneumatic drives and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG508-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG508 for Ø 12.751" - 20" (323.9mm - 508mm) with angle electric drive 230V - ME25

Order No.	Description
TTNG508-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG508 for Ø 12.751" - 20" (323.9mm - 508mm) with 2 hydraulic drives and reversing valve
TTNG508-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG508 for Ø 12.751" - 20" (323.9mm - 508mm) with 2 hydraulic drives
TTNG508-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG508 for Ø 12.751" - 20" (323.9mm - 508mm) with 2 hydraulic drives and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG508-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG508 for Ø 12.751" - 20" (323.9mm - 508mm) with 1 Brushless electric drive. 3 Phase

TTNG508 On-Site or in Workshop:



TTNG610 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 406.4mm - 610mm (16" - 24")



Order No.	Description
TTNG610-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG610 for Ø 16" - 24" (406.4mm - 610mm) with 2 pneumatic drives
TTNG610-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG610 for Ø 16" - 24" (406.4mm - 610mm) with 2 pneumatic drives and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG610-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG610 for Ø 16" - 24" (406.4mm - 610mm) with angle electric drive 230V - ME25

Order No.	Description
TTNG610-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG610 for Ø 16" - 24" (406.4mm - 610mm) with 2 hydraulic drives and reversing valve
TTNG610-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG610 for Ø 16" - 24" (406.4mm - 610mm) with 2 hydraulic drives
TTNG610-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG610 for Ø 16" - 24" (406.4mm - 610mm) with 2 hydraulic drives and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG610-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG610 for Ø 16" - 24" (406.4mm - 610mm) with 1 Brushless electric drive. 3 Phase

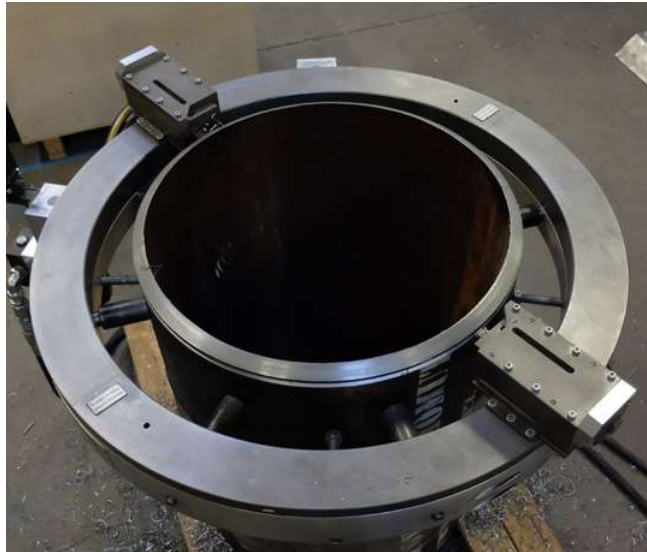
OD Mounted

TTNG610 On-Site or in Workshop:



TTNG762 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 558.8mm - 762mm (22" - 30")



OD Mounted

Order No.	Description
TTNG762-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG762 for Ø 22" - 30" (558.8mm - 762mm) with 2 pneumatic drives
TTNG762-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG762 for Ø 22" - 30" (558.8mm - 762mm) with 2 pneumatic drives and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG762-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG762 for Ø 22" - 30" (558.8mm - 762mm) with angle electric drive 230V - ME25

Order No.	Description
TTNG762-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG762 for Ø 22" - 30" (558.8mm - 762mm) with 2 hydraulic drives and reversing valve
TTNG762-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG762 for Ø 22" - 30" (558.8mm - 762mm) with 2 hydraulic drives
TTNG762-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG762 for Ø 22" - 30" (558.8mm - 762mm) with 2 hydraulic drives and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG762-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG762 for Ø 22" - 30" (558.8mm - 762mm) with 1 Brushless electric drive, 3 Phase

TTNG762 On-Site or in Workshop:



TTNG900 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 660.4mm - 914.4mm (26" - 36")

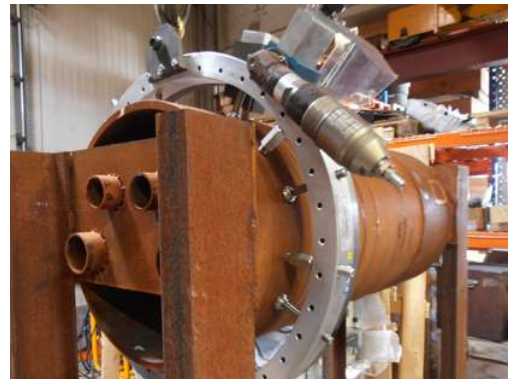


Order No.	Description
TTNG900-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG900 for Ø 26" - 36" (660.4mm - 914.4mm) with 2 pneumatic drives
TTNG900-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG900 for Ø 26" - 36" (660.4mm - 914.4mm) with 2 pneumatic drives and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG900-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG900 for Ø 26" - 36" (660.4mm - 914.4mm) with angle electric drive 230V - ME25

Order No.	Description
TTNG900-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG900 for Ø 26" - 36" (660.4mm - 914.4mm) with 2 hydraulic drives and reversing valve
TTNG900-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG900 for Ø 26" - 36" (660.4mm - 914.4mm) with 2 hydraulic drives
TTNG900-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG900 for Ø 26" - 36" (660.4mm - 914.4mm) with 2 hydraulic drives and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG900-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG900 for Ø 26" - 36" (660.4mm - 914.4mm) with 1 Brushless electric drive. 3 Phase

OD Mounted

TTNG900 On-Site or in Workshop:



TTNG1016 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 812.8mm - 1016mm (32" - 40")



OD Mounted

Order No.	Description
TTNG1016-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1016 for Ø 32" - 40" (812.8mm - 1016mm) with 2 pneumatic drives
TTNG1016-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1016 for Ø 32" - 40" (812.8mm - 1016mm) with 2 pneumatic drives and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG1016-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1016 for Ø 32" - 40" (812.8mm - 1016mm) with angle electric drive 230V - ME25

Order No.	Description
TTNG1016-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1016 for Ø 32" - 40" (812.8mm - 1016mm) with 2 hydraulic drives and reversing valve
TTNG1016-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1016 for Ø 32" - 40" (812.8mm - 1016mm) with 2 hydraulic drives
TTNG1016-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1016 for Ø 32" - 40" (812.8mm - 1016mm) with 2 hydraulic drives and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG1016-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1016 for Ø 32" - 40" (812.8mm - 1016mm) with 2 Brushless electric drive, 3 Phase

TTNG1200 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 914.4mm - 1219.2mm (36" - 48")



Order No.	Description
TTNG1200-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1200 for Ø 36" - 48" (914.4mm - 1219.2mm) with 2 pneumatic drives
TTNG1200-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1200 for Ø 36" - 48" (914.4mm - 1219.2mm) with 2 pneumatic drives and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG1200-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1200 for Ø 36" - 48" (914.4mm - 1219.2mm) with angle electric drive 230V - ME25

Order No.	Description
TTNG1200-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1200 for Ø 36" - 48" (914.4mm - 1219.2mm) with 2 hydraulic drives and reversing valve
TTNG1200-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1200 for Ø 36" - 48" (914.4mm - 1219.2mm) with 2 hydraulic drives
TTNG1200-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1200 for Ø 36" - 48" (914.4mm - 1219.2mm) with 2 hydraulic drives and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG1200-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1200 for Ø 36" - 48" (914.4mm - 1219.2mm) with 2 Brushless electric drive, 3 Phase

OD Mounted

TTNG1200 On-Site or in Workshop:



TTNG1400 Splitframe Orbital Pipe Cutting & Beveling Machine

Standard Capacity: 1117.6mm - 1422.4mm (44" - 56")



OD Mounted

Order No.	Description
TTNG1400-1000	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1400 for Ø 44" - 56" (1117.6mm - 1422.4mm) with 2 pneumatic drives
TTNG1400-1002	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1400 for Ø 44" - 56" (1117.6mm - 1422.4mm) with 2 pneumatic drives and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG1400-1020	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1400 for Ø 44" - 56" (1117.6mm - 1422.4mm) with angle electric drive 230V - ME25

Order No.	Description
TTNG1400-1060	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1400 for Ø 44" - 56" (1117.6mm - 1422.4mm) with 2 hydraulic drives and reversing valve
TTNG1400-1062	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1400 for Ø 44" - 56" (1117.6mm - 1422.4mm) with 2 hydraulic drives
TTNG1400-1064	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1400 for Ø 44" - 56" (1117.6mm - 1422.4mm) with 2 hydraulic drives and reversing valve and options TTNG-3100 (Extension Kit), TTNG-3700 (hinge) and TTNG-3600 (squares)
TTNG1400-1080	Splitframe - Orbital Pipe Cutting Machine PROTEM TTNG1400 for Ø 44" - 56" (1117.6mm - 1422.4mm) with 2 Brushless electric drive, 3 Phase

TTNG1400 On-Site or in Workshop:

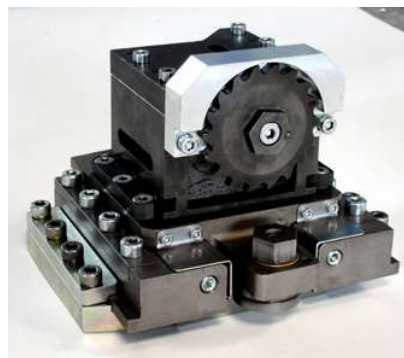


TTNG Pipe Cutting & Beveling Machines

Options & Accessories

TTNG OD Tracker:

Order No.	Description
TTNG-ODT-1000	OD Tracker for TTNG219 - TTNG610
TTNG-ODT-1002	OD Tracker for TTNG762
TTNG-ODT-1004	OD Tracker for TTNG900 - TTNG1016



TTNG Copying Carriage:

Order No.	Description
TTNG-4200	Copying Carriage, stroke 50mm
TTNG-4300	Copying Carriage, stroke 100mm



TTNG Counterboring Carriage:

Order No.	Description
TTNG-2700	Counterboring Carriage, stroke 50mm with tool bit holder
TTNG-2800	Counterboring Carriage, stroke 50mm with insert holder
TTNG-2900	Counterboring Carriage, stroke 100mm with tool bit holder
TTNG-3000	Counterboring Carriage, stroke 100mm with insert holder



TTNG Further Options:

Order No.	Description
TTNG-3600	Adjustment bracket for TTNG168, TTNG219, TTNG273, TTNG323, TTNG406 price per set of 2 units
TTNG-3602	Adjustment bracket for TTNG508, TTNG610, TTNG762, TTNG900, TTNG1016 price per set of 2 units
TTNG-3604	Adjustment bracket for TTNG1200, TTNG1400, price per set of 2 units
TTNG-3700	Opening assisted device for TTNG168, TTNG219, TTNG273, TTNG323, TTNG406, TTNG508
TTNG-3702	Opening assisted device for TTNG610, TTNG762, TTNG1016
TTNG-3704	Opening assisted device for TTNG900
TTNG-3708	Opening assisted device for TTNG1200
TTNG-4100	Carriage with clutch feed for machining of grooves (eg for vitolic joints)



OD Mounted

TTNG Pipe Cutting & Beveling Machines

Deep Counterboring

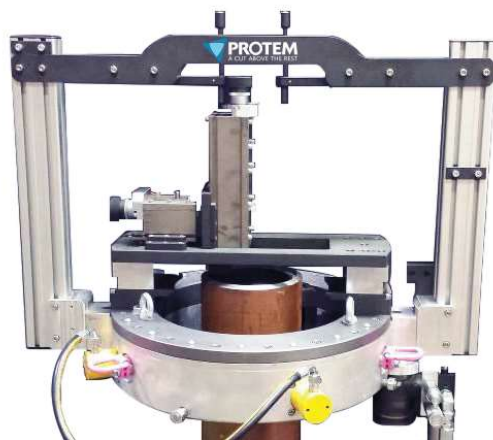


When heavy counterboring lengths are imposed, they are often associated to tight tolerances that are similar to boring operations. Protem has developed some solutions for the TTNG orbital cutting machines, so as to meet the requests of the most demanding users.

Two examples of applications are shown below: The first is more « classic » with a simpler design, the second one performs more difficult shapes and its design is more compact.

TTNG: System with extended counterboring/boring carriage

OD Mounted



This system reproduces the function of the standard counterboring carriage but with an extended tool holder carriage (stroke 180-200mm (7"-8")), a stiffening beam between the tool holder and an axial clutch finger for an automatic feed. In order to get a high degree of rigidity, the holder square of the extended tool holder is stationary.

The entire system offers increased reliability compared to the standard counterboring system, in order to ensure the boring tolerances over a great length (no bending at the end of the tool).

The machining is performed with tool bits or inserts. This is also possible to implement two clutch fingers so as to reduce the cycle times, and a steel rule or a digital gauge on the extended tool holder so as to control the depth of the tool.

TTNG: System with an automatic boring bar through copying



This system is a variation of the copying carriage for heavy wall. It is designed to perform boring operations. The tool holder carriage follows a cam that was machined according to the profile of the required boring. A cam is necessary for each boring configuration. The machining is performed by straight turning with an insert.

The entire system offers a holder beam, a copying device and incrementation with right angle for the use of a finger side clutch. This system, with reduced dimensions, machines difficult boring profiles without manual intervention (angle adjustment or others).

TTNG Pipe Cutting & Beveling Machines

Coating Removal

For TTNG and US machines



PROTEM US with coating removal option

The PROTEM TTNG Cold Cutting and Beveling Machines and the US ID Clamping Beveling Machines can be equipped with optional accessories capable of machining the plastic coating of pipe, up to 130 mm (5") wall thickness. All maintenance operations (cutting and beveling) can be performed at any place along the pipeline, removing the coating to provide space for the welding equipment.

Heating the coating at high temperature and removing it manually with a blade, or using machines with a waterjet cutting system (which damages the pipes) is no longer necessary. The machining of the coating with PROTEM equipment is the ideal solution. PROTEM offers you professional solutions to perform machining operations on the job site safely, while getting perfect results.

Order No.	Description
US80-3600	Beveling machine with coating option
US150-3600	Beveling machine with coating option

Order No.	Description
TT168-3600	Cutting and Beveling Machine with coating option
TT219-3600	Cutting and Beveling Machine with coating option
TT273-3600	Cutting and Beveling Machine with coating option
TT323-3600	Cutting and Beveling Machine with coating option
TT406-3600	Cutting and Beveling Machine with coating option
TT508-3600	Cutting and Beveling Machine with coating option
TT610-3600	Cutting and Beveling Machine with coating option
TT762-3600	Cutting and Beveling Machine with coating option
TT900-3600	Cutting and Beveling Machine with coating option
TT1016-3600	Cutting and Beveling Machine with coating option
TT1200-3600	Cutting and Beveling Machine with coating option
TT1400-3600	Cutting and Beveling Machine with coating option

OD Mounted



PROTEM TTNG Orbital cutting machine with coating removal option



TTNG Pipe Cutting & Beveling Machines

Brushless Motor

For TTNG and US machines



Protem US beveling machine with Brushless Motor

Protem has implemented the brushless motor technology on their US (portable beveling machines) and TT machines (orbital pipe cutting & beveling machines). The brushless motors offer numerous advantages. Compared to classical DC motors, the brushless motors are light and compact. It is a significant benefit for machines mainly used on-site and very often in harsh environments. The lifetime of these motors is approximately four times longer than DC motors.

Any issues related to friction with the brushes have been rectified. The mechanical wear is almost non-existent. Consequently, the reliability of the equipment is greatly improved. The electrical efficiency is higher than what a DC motor is able to provide. Moreover, the thermal heating of a brushless motor is very low compared to a traditional motor.

The speed adjustment is far smoother and the torque stays constant during the use of the motor (no modification is needed for the input voltage) Lastly, the brushless motor is not vibrating, and the low noise level of the running motor guarantees a positive ergonomic experience for the operators using the equipment.

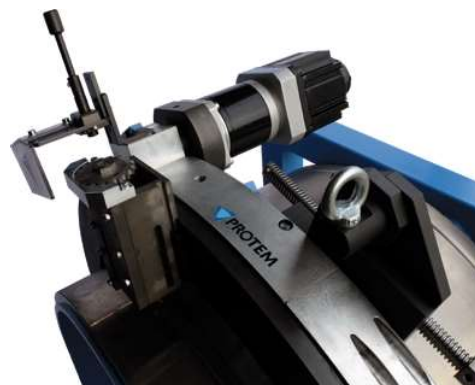
OD Mounted

Order No.	Description
US80-1080	Heavy Duty Pipe Facing Machine with brushless electric drive --Three-Phase Motorization-- Please indicate the required voltage and frequency for your application. For Ø 3.149" - 13.976" (80mm - 355mm)
US150-1080	Heavy Duty Pipe Facing Machine with brushless electric drive & Three-Phase Motorization. Please indicate the required voltage and frequency for your application. For Ø 5.905" - 20" (150mm - 508mm)

Order No.	Description
TT168-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT219-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT273-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT323-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT406-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT508-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT610-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT762-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT900-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT1016-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT1200-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V
TT1400-1080	Cutting and Beveling Machine with Electric motorisation Brushless, 220V



Protem TTNG orbital cutting machine with Brushless Motor



Order No.	Description
O-TTN-TT1-5-H-PL	Severing tool-bit, max. wall thickness 35mm
O-TTN-TT1-5-H-PT	Pointed tool-bit, max. wall thickness 35mm
O-TTN-TT2-12-H-2	Beveling tool-bit 30°, wall thickness 27mm
O-TTN-TT3-12-H-3	Beveling tool-bit 37°30, wall thickness 20mm
O-TTN-TT4-12-H-4	Beveling tool-bit 45°
O-TTN-TT5-12-H-5	Beveling tool-bit 30°, reversed
O-TTN-TT6-12-H-6	Beveling tool-bit 37°30, reversed
O-TTN-TT7-25-H-7	Beveling tool-bit 30°, wall thickness 35mm
O-TTN-TT8-25-H-8	Beveling tool-bit 37°30, wall thickness 35mm
O-TTN-TT9-25-H-9	Beveling tool-bit for double bevel
O-TTN-TT10-12-H-10	Beveling tool-bit 37°30, double bevel, wall thickness 18mm
O-TTN-TT11-5-H-PL	Severing tool-bit, max. wall thickness 90mm
O-TTN-TT11-5-H-PT	Pointed tool-bit, max. wall thickness 90mm
O-TTN-TT12-25-H-12	Beveling tool-bit for double bevel, wall thickness 46mm

Order No.	Description
O-TTN-TT13-25-H-13	Beveling tool-bit for double bevel, wall thickness 39mm
O-TTN-TT14-25-H-14	Beveling tool-bit 37°30, wall thickness 50mm
O-TTN-TT15-8-H-PL	Severing tool-bit, max. wall thickness 90mm , width 30mm
O-TTN-TT15-8-H-PT	Pointed tool-bit, max. wall thickness 90mm , width 30mm
O-TTN-TT16-8-H-PL	Severing tool-bit, max. wall thickness 90mm, width 8mm
O-TTN-TT16-8-H-PT	Pointed tool-bit, max. wall thickness 90mm, width 8mm
O-TTN-TT17-25-H-17	Beveling tool-bit for compound bevel 37°30 / 10°
O-TTN-TT18-25-H-18	Beveling tool-bit for compound bevel, wall thickness 45mm 37°30 / 10°
O-TTN-TT19-25-H-19	Beveling tool-bit for compound bevel, wall thickness 50mm 37°30 / 10°
O-TTN-TT20-25-H-20	Beveling tool-bit for compound bevel, wall thickness 35mm 30° / 10°
O-TTN-TT21-25-H-21	Beveling tool-bit for compound bevel, wall thickness 45mm 30° / 10°
O-TTN-TT22-25-H-22	Beveling tool-bit for compound bevel, wall thickness 50mm 30° / 10°
O-TTN-TT23-25-H-23	Beveling tool-bit for double bevel, wall thickness 50mm 30°
O-TTN-TT24-12-H-24	Beveling tool-bit for double bevel, wall thickness 22mm 30°

OD Mounted

TT-LW SERIES

TT-LW

Ø 60.3 - 610 mm (2.374" - 24")

DESCRIPTION:

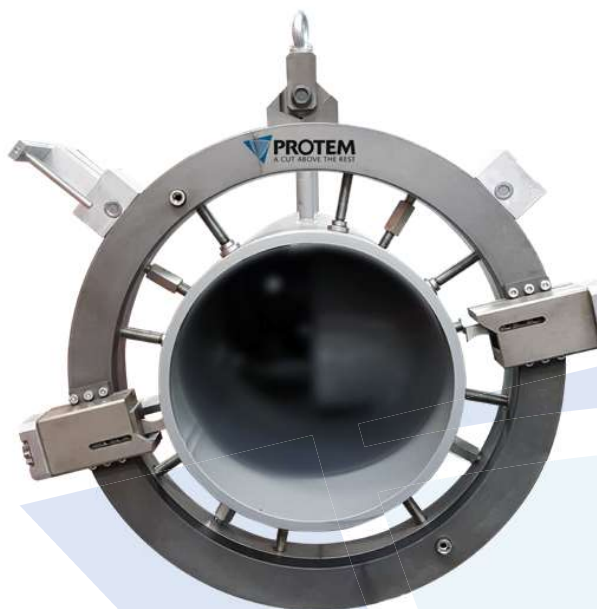
The machines in the TTLW series cut and bevel tubes simultaneously using two tool holder plates that are incremented by the finger of a mechanical clutch.

- Light weight
- Rugged construction
- Fast and easy mounting on tubes and pipes
- Suited for in-line piping systems
- Safe operation
- Modular design
- Ideal for tight spaces
- Dependable orbital cutting and beveling

These machines are the low profile version of the TTNG series. They are transportable and can be opened in two halfshells; According to the diameters and wall thicknesses to consider, they can be equipped with pneumatic, electric or hydraulic drive.

The turning ring is rolling on adjustable bearings. The TTLW can perform a cut up to a 25.4 mm (1") wall on any material and cut and bevel up to 20 mm (.787"). A variety of weld joint designs can be performed including cut, bevel, double bevel, J-bevel, counterbore, compound bevel and socket weld removal.

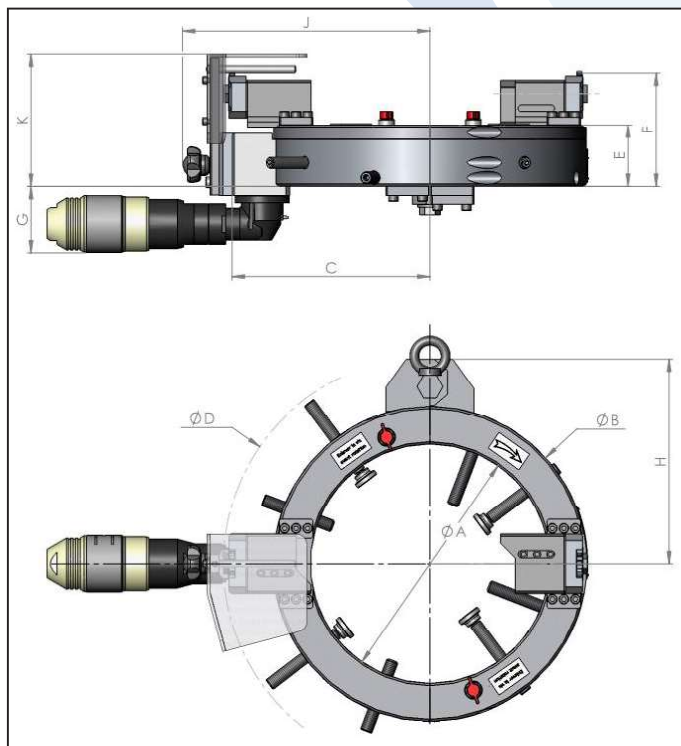
Adapted for virtually all environments : Irradiated areas (remote control device on request), Subsea, Very high or very low temperatures



TTLW Orbital Tube Cutting & Beveling equipment with pneumatic drive

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✓	✓	✓	✗

DIMENSIONS:



TECHNICAL FEATURES:

Machine	TTLW
Machining Capacity	60.3 mm (2.374") ID 610 mm (24") OD
Specific shapes & angles	I, V, J, X or any other specific weld preps special shapes are available on request
Clamping	manual, without a key
Feed	Automatic with clutch
Drive Power	Pneumatic or hydraulic Electric drive is available upon request
<i>Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.</i>	

OD MOUNTED MACHINING

ORBITAL TUBE CUTTING & BEVELING SPLIT-FRAME CLAMSHELLS

TTLW168



TTLW168 Orbital Tube Cutting & Beveling Equipment with pneumatic drive

Ø 60.3 - 168.3 mm (2" - 6")

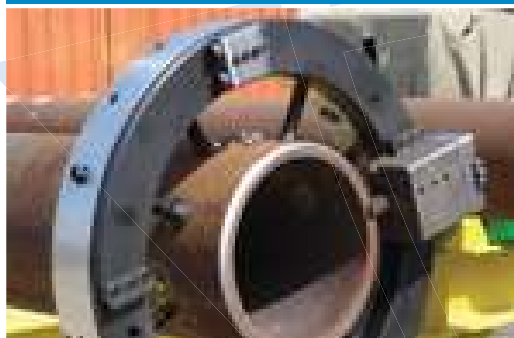
≈ 15.5 kg
≈ 34.2 lbs

ORDER NO.	DESCRIPTION
TTLW168-1000	TTLW168 Cutting and beveling machine with pneumatic drive
TTLW168-1020	TTLW168 Tube cutting and beveling machine with electric drive, 230 V 1500W RA

▴ DIMENSIONS:

ØA	ØB	C	ØD	E	F	G	H	J
175 mm	325 mm	217 mm	460 mm	108.6 mm	202.6 mm	66 mm	216 mm	407 mm
6.889"	12.795"	8.543"	18.110"	4.252"	7.953"	2.598"	8.504"	16.024"

TTLW219



TTLW219 Tube Cutting & Beveling Equipment with pneumatic drive

Ø 114.3 - 219.3 mm (4" - 8")

≈ 18 kg
≈ 40 lbs

ORDER NO.	DESCRIPTION
TTLW219-1000	TTLW219 Cutting and beveling machine with pneumatic drive
TTLW219-1020	TTLW219 Tube cutting and beveling machine with electric drive, 230 V 1500W

▴ DIMENSIONS:

ØA	ØB	C	ØD	E	F	G	H	J
223 mm	373 mm	241 mm	508 mm	108.6 mm	202.6 mm	66 mm	240 mm	431 mm
8.779"	14.685"	9.488"	20"	4.252"	7.953"	2.598"	9.449"	16.968"

TTLW273



TTLW273 Tube Cutting & Beveling Equipment with pneumatic drive

Ø 168.3 - 273.1 mm (6" - 10")

≈ 20.4 kg
≈ 45 lbs

ORDER NO.	DESCRIPTION
TTLW273-1000	TTLW273 Cutting and beveling machine with pneumatic drive
TTLW273-1020	TTLW273 Tube cutting and beveling machine with electric drive, 230 V 1500W

▴ DIMENSIONS:

ØA	ØB	C	ØD	E	F	G	H	J
283 mm	433 mm	271 mm	570 mm	108.6 mm	202.6 mm	66 mm	270 mm	462 mm
11.142"	17.047"	10.669"	22.441"	4.252"	7.953"	2.598"	10.629"	18.189"

TTLW323



TTLW323 Tube Cutting & Beveling Equipment with pneumatic drive

Ø 219.1 - 323.9 mm (8" - 12")

≈ 22.7 kg
≈ 50 lbs

ORDER NO.	DESCRIPTION
TTLW323-1000	TTLW323 Cutting and beveling machine with pneumatic drive
TTLW323-1020	TTLW323 Tube cutting and beveling machine with electric drive, 230 V 1500W

▴ DIMENSIONS:

ØA	ØB	C	ØD	E	F	G	H	J
331 mm	481 mm	295 mm	619 mm	108.6 mm	202.6 mm	66 mm	294 mm	486 mm
13.031"	18.937"	11.614"	24.370"	4.252"	7.953"	2.598"	11.574"	19.134"

OD MOUNTED MACHINING

TT-LW SERIES

TTLW406

Ø 273.1 - 406.4 mm (10" - 16")



TTLW406 Tube Cutting & Beveling Equipment with pneumatic drive

ORDER NO.	DESCRIPTION
TTLW406-1000	TTLW406 Cutting and beveling machine with pneumatic drive
TTLW406-1020	TTLW406 Tube cutting and beveling machine with electric drive, 230 V 1500W

DIMENSIONS:

ØA	ØB	C	ØD	E	F	G	H	J
175 mm	325 mm	217 mm	460 mm	108.6 mm	202.6 mm	66 mm	216 mm	407 mm
6.889"	12.795"	8.543"	18.110"	4.252"	7.953"	2.598"	8.504"	16.024"

TTLW508

Ø 323.9 - 508 mm (12" - 20")



TTLW508 Tube Cutting & Beveling Equipment with pneumatic drive

ORDER NO.	DESCRIPTION
TTLW508-1000	TTLW508 Cutting and beveling machine with pneumatic drive
TTLW508-1020	TTLW508 Tube cutting and beveling machine with electric drive, 230 V 1500W

DIMENSIONS:

ØA	ØB	C	ØD	E	F	G	H	J
223 mm	373 mm	241 mm	508 mm	108.6 mm	202.6 mm	66 mm	240 mm	431 mm
8.779"	14.685"	9.488"	20"	4.252"	7.953"	2.598"	9.449"	16.968"

TTLW610

Ø 355.6 - 610 mm (14" - 24")



TTLW610 Tube Cutting & Beveling Equipment with pneumatic drive

ORDER NO.	DESCRIPTION
TTLW610-1000	TTLW610 Cutting and beveling machine with pneumatic drive
TTLW610-1020	TTLW610 Tube cutting and beveling machine with electric drive, 230 V 1500W

DIMENSIONS:

ØA	ØB	C	ØD	E	F	G	H	J
283 mm	433 mm	271 mm	570 mm	108.6 mm	202.6 mm	66 mm	270 mm	462 mm
11.142"	17.047"	10.669"	22.441"	4.252"	7.953"	2.598"	10.629"	18.189"

TTS-NG SERIES

TTS-NG

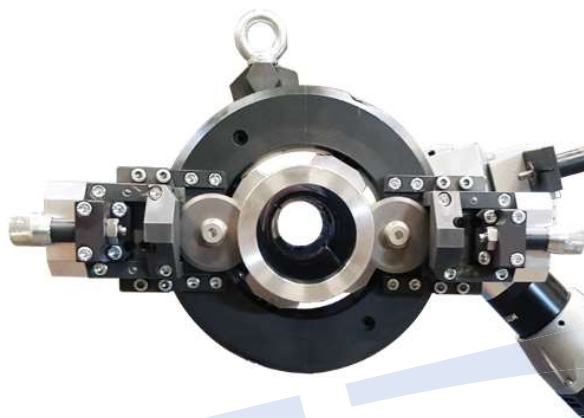
Ø 10.3 - 219 mm (0.406" - 8.622")

DESCRIPTION:

The TTS-NG-Series performs accurate cutting and/or beveling of tubes and pipes of all schedules from 10.3 mm up to 273 mm (.406" up to 10.748") OD in one simultaneous operation. Their reduced weight and overall dimensions enable these machines to work in areas where there is a shortage of space.

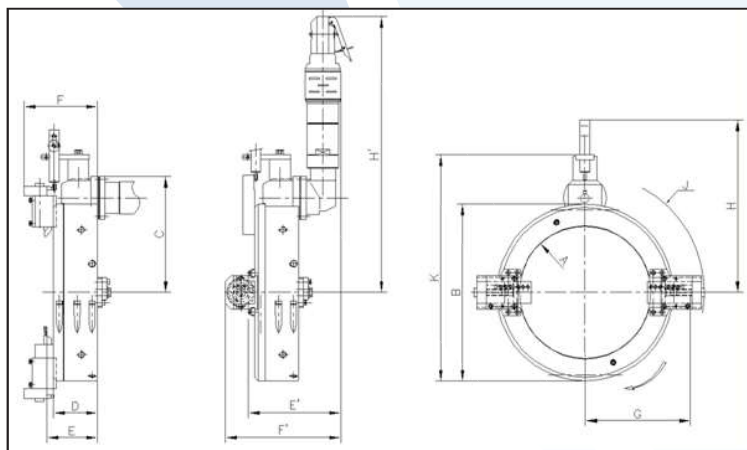
The special design of the machines features:

- Split frame configuration, opening in two half-shells
- Manual clamping using four independent adjustable jaws



Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✓	✓	✓	✗

DIMENSIONS:



TECHNICAL FEATURES:

Machine	TTS-NG
Machining Capacity	10.3 mm (0.406") OD
	219 mm (8.622") OD
Clamping	manual with key
Feed	Automatic with clutch
Drive Power	Pneumatic drive: 730 W, 6 bar (87 psi), 1400 l/min (49 cfm).
<i>Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.</i>	

OD MOUNTED MACHINING

TTS-NG27

Ø 10.3 - 26.7 mm (0.406" - 1.02")



ORDER NO.	DESCRIPTION
TTSNG27-1000	TTS27 with pneumatic drive 730 W
TTSNG27-1020	TTS27 with pneumatic angled drive 730 W

DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
30 mm	106 mm	100 mm	86 mm	81.5 mm	175 mm	154 mm	97.5 mm	135.5 mm	175.5 mm	156 mm	194 mm	368.5 mm
1.181"	4.173"	3.937"	3.385"	3.188"	6.889"	6.062"	3.818"	5.314"	6.889"	6.141"	7.637"	14.488"

TTS-NG SERIES

TTS-NG33

Ø 10.3 - 33.4 mm (0.406" - 1.29")



ORDER NO.

DESCRIPTION

TTSNG33-1000	TTS33 with pneumatic drive 730 W
TTSNG33-1020	TTS33 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
36 mm	112 mm	103 mm	86 mm	84.5 mm	181 mm	160 mm	97.5 mm	135.5 mm	178.5 mm	156 mm	194 mm	371.5 mm
1.417"	4.409"	4.055"	3.385"	3.307"	7.125"	6.299"	3.818"	5.314"	7.007"	6.141"	7.637"	14.606"

TTS-NG42

Ø 10.3 - 42.2 mm (0.406" - 1.66")



ORDER NO.

DESCRIPTION

TTSNG42-1000	TTS42 with pneumatic drive 730 W
TTSNG42-1020	TTS42 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
45 mm	121 mm	107.5 mm	74 mm	89 mm	187 mm	169 mm	85.5 mm	123.5 mm	183.5 mm	156 mm	194 mm	376 mm
1.771"	4.763"	4.212"	2.913"	3.503"	7.362"	6.653"	3.346"	4.842"	7.204"	6.141"	7.637"	14.803"

TTS-NG48

Ø 10.3 - 48.3 mm (0.406" - 1.902")



ORDER NO.

DESCRIPTION

TTSNG48-1000	TTS48 with pneumatic drive 730 W
TTSNG48-1020	TTS48 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
51 mm	127 mm	110.5 mm	74 mm	92 mm	194 mm	175 mm	85.5 mm	123.5 mm	186.5 mm	156 mm	194 mm	379 mm
2.007"	5"	4.330"	2.913"	3.622"	7.637"	6.889"	3.346"	4.842"	7.322"	6.141"	7.637"	14.921"

TTS-NG60

Ø 21.3 - 60.3 mm (0.839" - 2.374")



ORDER NO.

DESCRIPTION

TTSNG60-1000	TTS60 with pneumatic drive 730 W
TTSNG60-1020	TTS60 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
63 mm	139 mm	116.5 mm	74 mm	98 mm	206 mm	187 mm	85.5 mm	123.5 mm	192.5 mm	156 mm	194 mm	385 mm
2.480"	5.472"	4.566"	2.913"	3.858"	8.110"	7.362"	3.346"	4.842"	7.559"	6.141"	7.637"	15.157"



TTS-NG73

Ø 21.3 - 73 mm (0.839" - 2"874)

≈ 5.5 kg
≈ 12.1 lbs

▼ DIMENSIONS:

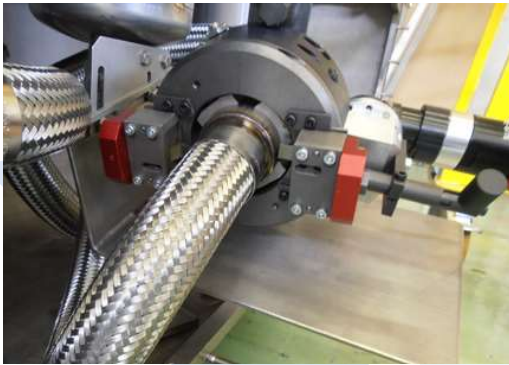
ORDER NO.	DESCRIPTION
TTSNG73-1000	TTS73 with pneumatic drive 730 W
TTSNG73-1020	TTS73 with pneumatic angled drive 730 W

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
75 mm	151 mm	122.5 mm	74 mm	104 mm	223.5 mm	199 mm	86.5 mm	123.5 mm	198.5 mm	156 mm	194 mm	391 mm
2.952"	5.944"	4.803"	2.913"	4.094"	8.779"	7.834"	3.385"	4.842"	7.795"	6.141"	7.637"	15.393"

TTS-NG88

Ø 33.4 - 88.9 mm (1.29" - 3.46")

≈ 6 kg
≈ 13.2 lbs



ORDER NO.	DESCRIPTION
TTSNG88-1000	TTS88 with pneumatic drive 730 W
TTSNG88-1020	TTS88 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
90 mm	166 mm	130 mm	74 mm	111.5 mm	232.5 mm	214 mm	85.5 mm	123.5 mm	205.5 mm	156 mm	194 mm	412 mm
3.543"	6.535"	5.118"	2.913"	4.370"	9.133"	8.425"	3.346"	4.842"	8.070"	6.141"	7.637"	16.220"

TTS-NG101

Ø 48.3 - 101.6 mm (1.89" - 3.976")

≈ 6.5 kg
≈ 14.3 lbs

▼ DIMENSIONS:

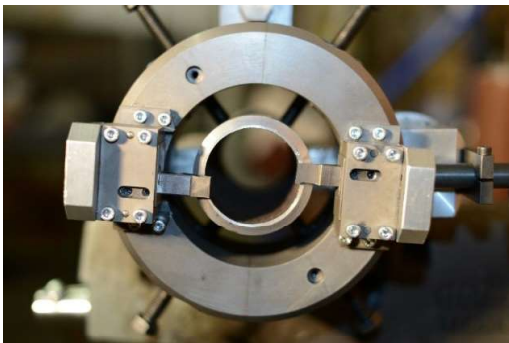
ORDER NO.	DESCRIPTION
TTSNG101-1000	TTS101 with pneumatic drive 730 W
TTSNG101-1020	TTS101 with pneumatic angled drive 730 W

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
105 mm	181 mm	137.5 mm	74 mm	119 mm	250.5 mm	229 mm	85.5 mm	123.5 mm	213 mm	156 mm	194 mm	406 mm
4.133"	7.125"	5.393"	2.913"	4.685"	9.842"	9.015"	3.346"	4.842"	8.385"	6.141"	7.637"	15.984"

TTS-NG114

Ø 60.3 - 114.3 mm (2.36" - 4.488")

≈ 7 kg
≈ 15.4 lbs



ORDER NO.	DESCRIPTION
TTSNG114-1000	TTS114 with pneumatic drive 730 W
TTSNG114-1020	TTS114 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
117 mm	193 mm	143.5 mm	74 mm	125 mm	259.5 mm	241 mm	85.5 mm	123.5 mm	219 mm	156 mm	194 mm	412 mm
4.606"	7.598"	5.629"	2.913"	4.921"	10.196"	9.488"	3.346"	4.842"	8.622"	6.141"	7.637"	16.220"

TTS-NG SERIES

TTS-NG127

Ø 60.3 - 127.0 mm (2.36" - 5")

≈ 7.5 kg
≈ 16.5 lbs

ORDER NO. DESCRIPTION

TTSNG127-1000	TTS127 with pneumatic drive 730 W
TTSNG127-1020	TTS127 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
129 mm	205 mm	149.5 mm	74 mm	131 mm	271.5 mm	253 mm	85.5 mm	123.5 mm	225 mm	156 mm	194 mm	418 mm
5.078"	8.070"	5.866"	2.913"	5.157"	10.669"	9.960"	3.346"	4.842"	8.858"	6.141"	7.637"	16.456"

TTS-NG141

Ø 73.0 - 141.3 mm (2.87" - 5.55")

≈ 8.5 kg
≈ 18.7 lbs

ORDER NO. DESCRIPTION

TTSNG141-1000	TTS141 with pneumatic drive 730 W
TTSNG141-1020	TTS141 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
144 mm	220 mm	157 mm	74 mm	138.5 mm	286.5 mm	268 mm	85.5 mm	123.5 mm	232.5 mm	156 mm	194 mm	425.5 mm
5.669"	8.661"	6.181"	2.913"	5.433"	11.259"	10.551"	3.346"	4.842"	9.133"	6.141"	7.637"	16.732"

TTS-NG168

Ø 88.9 - 168.3 mm (3.5" - 7")

≈ 10 kg
≈ 22 lbs

ORDER NO. DESCRIPTION

TTSNG168-1000	TTS168 with pneumatic drive 730 W
TTSNG168-1020	TTS168 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
171 mm	247 mm	170.5 mm	74 mm	152 mm	351.5 mm	330 mm	85.5 mm	123.5 mm	265.5 mm	156 mm	194 mm	439 mm
6.732"	9.724"	6.692"	1.181"	5.984"	13.818"	12.992"	3.346"	4.842"	10.433"	6.141"	7.637"	17.283"

TTS-NG193

Ø 114.3 - 193 mm (4.5" - 7.6")

≈ 11 kg
≈ 24.3 lbs

ORDER NO. DESCRIPTION

TTSNG193-1000	TTS193 with pneumatic drive 730 W
TTSNG193-1020	TTS193 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
195 mm	271 mm	182.5 mm	74 mm	164 mm	375.5 mm	354 mm	85.5 mm	123.5 mm	277.5 mm	156 mm	194 mm	451 mm
7.677"	10.669"	7.165"	2.913"	6.456"	14.763"	13.937"	3.346"	4.842"	10.905"	6.141"	7.637"	17.755"

TTS-NG219

Ø 141.3 - 219.1 mm (5.6" - 8.6")

≈ 12 kg
≈ 26.5 lbs

ORDER NO. DESCRIPTION

TTSNG219-1000	TTS219 with pneumatic drive 730 W
TTSNG219-1020	TTS219 with pneumatic angled drive 730 W

▼ DIMENSIONS:

ØA	B	C	D	G	ØJ	K	E	F	H	E'	F'	H'
222 mm	298 mm	196 mm	74 mm	177.5 mm	402.5 mm	381 mm	85.5 mm	123.5 mm	291 mm	156 mm	194 mm	464.5 mm
8.740"	11.732"	7.716"	1.181"	6.968"	15.826"	15"	3.346"	4.842"	11.456"	6.141"	7.637"	18.267"

OD MOUNTED MACHINING



TTS-RD SERIES

TTS-RD

Ø 21 - 141.3 mm (0.827" - 5.563")



DESCRIPTION:

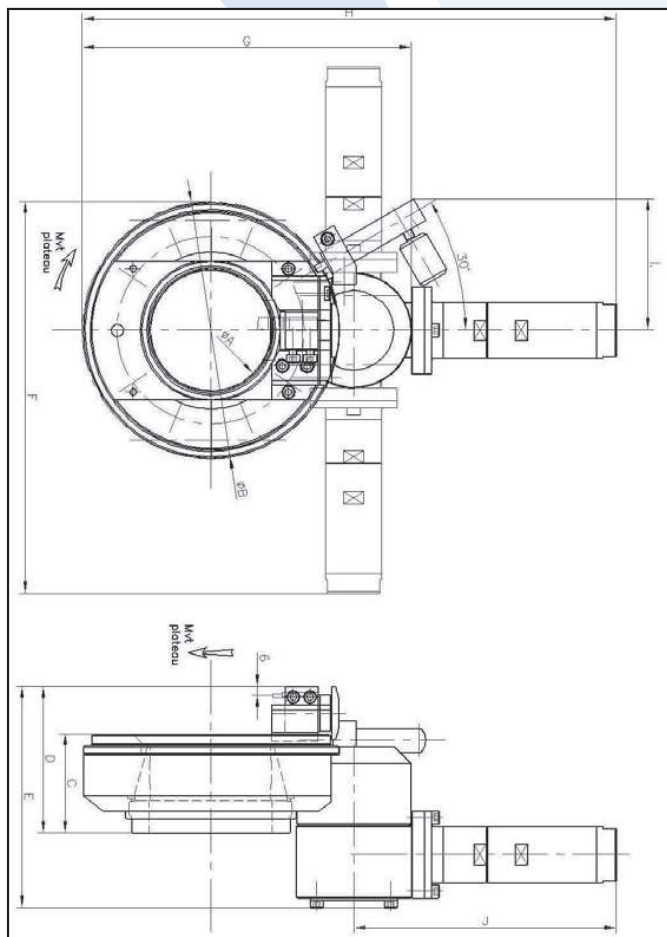
The TTS-RD cutting machines are designed to cut and bevel all types of tubes, individually or simultaneously.

The collet clamping system of the TTS-RD series allows for quick set-up and an easy concentricity adjustment. This clamping method is particularly suited to small wall thicknesses in order to avoid tube distortion in case of poor machine set-up. These machines have the lowest clearance of the series.

Splitframe design. All gears are protected for increased protection of the operators. They can be controlled remotely for operations being done in ionizing areas, for example.

Beveling	Cutting	Facing	Counterboring	Surfacing
✗	✓	✓	✗	✗

DIMENSIONS:



TECHNICAL FEATURES:

Machine	TTS-RD
Machining Capacity	21 mm (0.827") OD
	141.3 mm (5.563") OD
Clamping	manual with a key
Feed	Automatic with clutch
Rotation	Up to 30 rpm off-load-speed
Drive Power	Pneumatic.
<i>Pneumatically driven machines have to be used with a lubricating filter. Recommended option: regulation valve.</i>	

OD MOUNTED MACHINING

TTS-RD SERIES

ASSEMBLY OPERATION:

Operation 1 :
Implementation of nut + collet



The two parts of the nut must be positioned on the tube. Next the collet is positioned relative to the outside diameter of the tube. Then the machine is positioned on the tubes (see the photo enclosed).



Operation 2:
Implementation and assembly of the two half-shells on the tube.



The TTSRD machines are portable and made for orbital tube cutting. These machines can be opened in two half-shells.

This allows for cuts to be made cleanly and precisely.

The Split-frame configuration allows for fast set up on the outside diameter of the tube.

Operation 3:
Clamping of the machine nut on the tube.



Clamping with a pin wrench and Immediate centering on the tube.

The tool holder modules have an automatic feed and manually adjustable carriage.

Each round, due to the clutch pin, moves the tool carriage forward. (0.04 mm (.002") /rev)

Two drive designs are available; straight or angle drive version (only for the pneumatic drive)

A clutch system stops and restarts the machining process at any time. This system is very safe due to the incrementation system.

Operation 4:
Incrementation of the tools



Operation 5:
Cutting



TTS-RD60**Ø 21.3 - 60.3 mm (0.839" - 2.374")**

ORDER NO.	DESCRIPTION
TTSRD60-1000	Orbital tube cutting machine with concentric clamping and pneumatic drive 730 W.

⚡ DIMENSIONS:

A	B	C	D	E
Dimensions on request				

TTS-RD 73**Ø 21.3 - 73 mm (0.839" - 2.874")**

ORDER NO.	DESCRIPTION
TTSRD73-1000	Orbital tube cutting machine with concentric clamping and pneumatic drive 730 W.

⚡ DIMENSIONS:

A	B	C	D	E
Dimensions on request				

TTS-RD 88**Ø 33.4 - 88.9 mm (1.29" - 3.46")**

ORDER NO.	DESCRIPTION
TTSRD88-1000	Orbital tube cutting machine with concentric clamping and pneumatic drive 730 W.

⚡ DIMENSIONS:

A	B	C	D	E
Dimensions on request				

TTS-RD 101**Ø 48.3 - 101.6 mm (1.889" - 4")**

ORDER NO.	DESCRIPTION
TTSRD101-1000	Orbital tube cutting machine with concentric clamping and pneumatic drive 730 W.

⚡ DIMENSIONS:

A	B	C	D	E
Dimensions on request				

TTS-RD 114**Ø 60.3 - 114.3 mm (2.36" - 4.5")**

ORDER NO.	DESCRIPTION
TTSRD114-1000	Orbital tube cutting machine with concentric clamping and pneumatic drive 730 W.

⚡ DIMENSIONS:

A	B	C	D	E
Dimensions on request				

TTS-RD 127**Ø 60.3 - 127 mm (2.36" - 5")**

ORDER NO.	DESCRIPTION
TTSRD127-1000	Orbital tube cutting machine with concentric clamping and pneumatic drive 730 W.

⚡ DIMENSIONS:

A	B	C	D	E
Dimensions on request				

TTS-RD 141**Ø 73 - 141.3 mm (2.874" - 5.55")**

ORDER NO.	DESCRIPTION
TTSRD141-100	Orbital tube cutting machine with concentric clamping and pneumatic drive 730 W.

⚡ DIMENSIONS:

A	B	C	D	E
Dimensions on request				

TNO SERIES

HEAVY DUTY SEVERING & BEVELING



Ø 114.3 mm - 1828.8 mm
Ø 4.5" - 72"

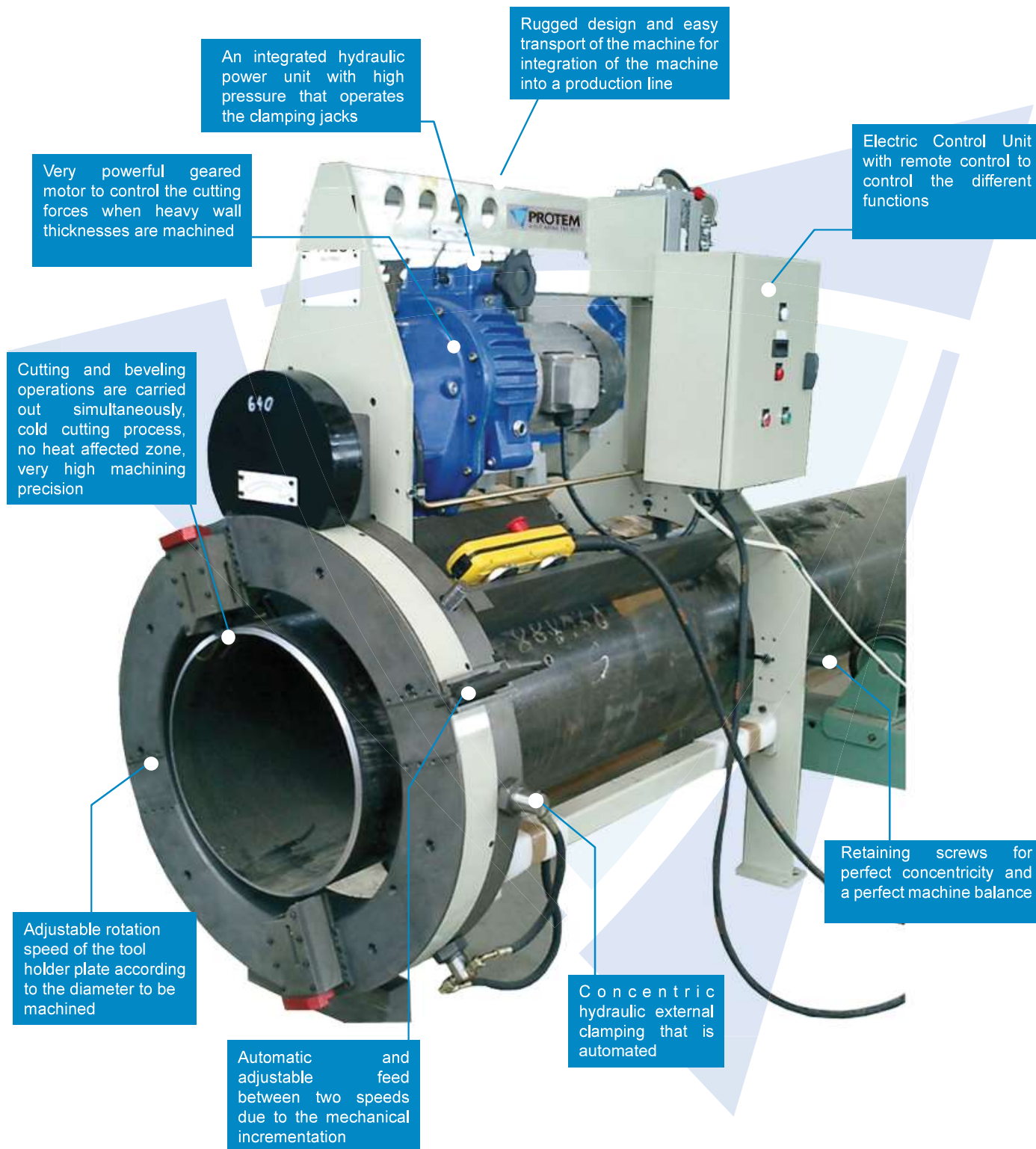
OD MOUNTED MACHINING



TNO Series	Machining Capacity	
TNO 4-12	114.3 - 323.9 mm	4" - 12"
TNO 12-24	323.9 - 610 mm	12" - 24"
TNO 24-36	610 - 914.4 mm	24" - 36"

INDUSTRIES:

Oil & Gas	Tube Manufacturers
	



TNO SERIES

TNO

Ø 114.3 - 1828.8 mm (4.5" - 72")

DESCRIPTION:

The TNO are high speed cutting and beveling machines, specially designed to fit your piping or tubing prefab applications on-site or in workshops. These machines cut and bevel heavy wall pipes faster than any other machine!

The TNO machines save space in your workshops and can be integrated into your production lines for unmatched results.

They save man hours by avoiding grinding operations, flame cutting, difficult handling and the setting of pipes on a lathe. They are transportable, rigid, fast and accurate.

The TNO machines are electrically driven and equipped with a hydraulic power unit for the automatic clamping system. Clamping screws located on the front and on the rear of the machine adjust the concentricity and allow a perfect alignment and a perfect squaring.

The TNO is an OD clamping orbital cutting and beveling machine. The cutting tools rotate around the tube.

The automatic incremental feed system controls the two tool carriages with two feed speeds.

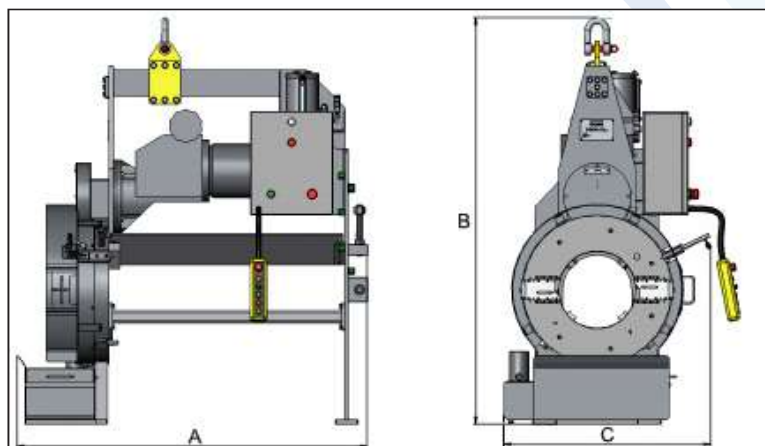
The rotation speed of the tool holder plate is adjustable according to the tube diameter.

SPECIFIC WELD PREPARATIONS ON REQUEST



Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✓	✓	✓	✗

DIMENSIONS:



TECHNICAL FEATURES:

Machine	TNO Series
Clamping range	114.3 - 1828.8 mm 4" - 12"
Clamping	Automatic
Machining Time	Few minutes
Power	400 V – 50 Hz
Stroke of the tool holder	100 mm 3.937"
Usable feed of cutting or beveling tool bits	60 mm 2.362"
Feed of the clamping cylinders	100 mm 3.937"

TNO 4-12

Ø 114.3 - 323.9 mm (4" - 12")

≈ 1100 kg
≈ 2425 lbs

DESCRIPTION:

ORDER NO.	DESCRIPTION
TNO FAB-12	Cutting and beveling machine type TNO 4-12"



Machine	TNO 4-12	
Clamping range	114.3 - 323.9 mm	
	4" - 12"	
	Minimum	Maximum
Tool-plate rotation speed:	5,5 rpm	30 rpm
Advance speed of tool holder plates:	0.08 mm/round	0.16 mm/round
Operating pressure of the clamping cylinders	100 bar	200 bar
	1450 psi	2900 psi
Tube outside diameter	114.3 mm	323.9 mm
	4.5"	12.751"

DIMENSIONS:

TNO 4-12

A	1700 mm
	66.929"
B	1964 mm
	77.322"
C	1000 mm
	39.370"

OD MOUNTED MACHINING

TNO 12-24

Ø 323.9 - 610 mm (12" - 24")

≈ 1200 kg
≈ 2645.5 lbs

DESCRIPTION:

ORDER NO.	DESCRIPTION
TNO FAB-24	Cutting and beveling machine type TNO 12-24"



Machine	TNO 12-24	
Clamping range	323.9 - 610 mm	
	12" - 24"	
	Minimum	Maximum
Tool-plate rotation speed:	4.2 tr/mn	21.5 tr/mn
Advance speed of tool holder plates:	0.08 mm/round.	0.16 mm/round
Operating pressure of the clamping cylinders	100 bar	200 bar
	1450 psi	2900 psi
Tube outside diameter	323.9 mm	610 mm
	12.751"	24.015"

DIMENSIONS:

TNO 12-24

A	1700 mm
	66.929"
	2118 mm
B	88.385"
	1210 mm
C	47.637"

TNO SERIES

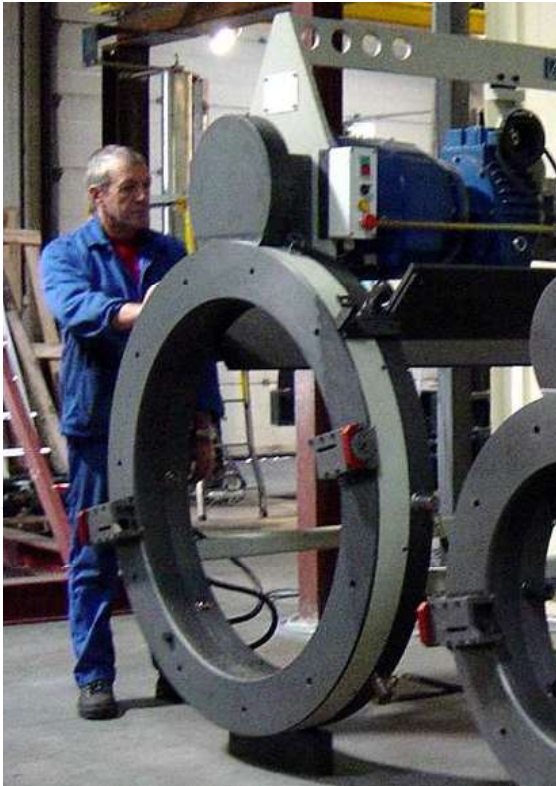
TNO 24-36

Ø 610 - 914.4 mm (24" - 36")

≈ 1600 kg
≈ 3527 lbs

DESCRIPTION:

ORDER NO.	DESCRIPTION
TNO FAB-36	Cutting and beveling machine type TNO 24-36"



DIMENSIONS:

TNO 24-36

A	1700 mm
	66.929"
B	2515 mm
	99.015"
C	1510 mm
	59.448"

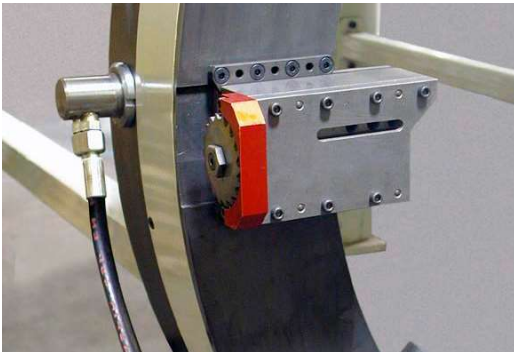
Machine	TNO 24-36	
Clamping range	610 - 914.4 mm	
	24" - 36"	
	Minimum	Maximum
Tool-plate rotation speed:	2.2 rpm	11.9 rpm
Advance speed of tool holder plates:	0.08 mm/round.	0.16 mm/round
Operating pressure of the clamping cylinders	100 bar	200 bar
	1450 psi	2900 psi
Tube outside diameter	610 mm	915 mm
	24.015"	36.023"

▼ BIGGER MODELS ON REQUEST

OD MOUNTED MACHINING

▼ OPTIONS:

Tool block carriage



100 mm (3.937") stroke carriages or two ovality tracking carriages are necessary. Depending on the application, a wide range of cutting or beveling tool bits are available to perform the majority of the required machining applications.

ORDER NO.	DESCRIPTION
TTNG-2200	TTNG-PO-C-50 Tool holder carriage, 50 mm stroke
TTNG-2400	TTNG-PO-C-100 Tool holder carriage, 100 mm stroke
TNO_FAB-1002	TTNG FAB-4/12-POSUI Carriage for ovalization tracking with kit intermediate plates and clutch holder

Lubrication device



In order to increase the lifetime of the inserts and to reduce the noise level during the machining operations a lubrication device must be used. This lubrication device is made up of a cutting fluid tank, covered by a chip container and a pump for circulating the cutting fluid. A flexible piping kit for aiming the fluid at the cutting point is also supplied together with a tank support plate. This option is activated through a push button.

ORDER NO.	DESCRIPTION
TNO_FAB-36-LUB	TNO FAB-36-LUB Lubrication kit

Counterboring carriage



The counterboring carriage performs an ID bevel in order to obtain a regular land.

ORDER NO.	DESCRIPTION
TTNG-2700	Counterboring carriage, stroke 50 mm with tool bit holder
TTNG-2800	Counterboring carriage, stroke 50 mm with insert holder
TTNG-2900	Counterboring carriage, stroke 100 mm with tool bit holder
TTNG-3000	Counterboring carriage, stroke 100 mm with insert holder

Chipguard



The whole range of TNO units is fitted with a protective housing which covers the tool-plate. The housing represents a safety system for the operators. It has a slot to be able to adjust the position of the clutch pin that moves the tool carriage forward.

ORDER NO.	DESCRIPTION
TNO-3200	Safety housing

MF SERIES

TRANSPORTABLE TUBE CUTTING & BEVELING MACHINES Ø 25.4mm - 406 mm Ø 1" - 16"

OD MOUNTED MACHINING



MF Series	Machining Capacity	
MF170	25.4 - 168 mm	1" - 6.6"
MF420	168 - 406 mm	6.6" - 16"

INDUSTRIES:

Tube Manufacturers	Nuclear	Oil & Gas

Automatic feed with clutch

Machine guard ensures safe use

Ease of use due to the control panel

Powerful electric drive (1500 W)

Hermetic tool holders protect against chips and preserves the gear and guiding systems of the tool bits to avoid risks of blockage and damage

Tool holder mounted on rails for fast and precise set-up

Fast and perfect concentric clamping with a ratchet

Very rugged design for fast and precise machining of tubes with large wall thicknesses

MF170

MF170

Ø 25.4 - 168 mm (1" - 6.6")

≈ 180 kg
≈ 396.8 lbs

DESCRIPTION:

MF-Series machines are designed to cut and bevel tubes from 25.4 mm to 406 mm (1" to 16") OD in one operation.

Perfect for use in all highly demanding industries such as, Energy Generation, Oil & Gas, Shipbuilding, Tube Processing, Aerospace, etc.



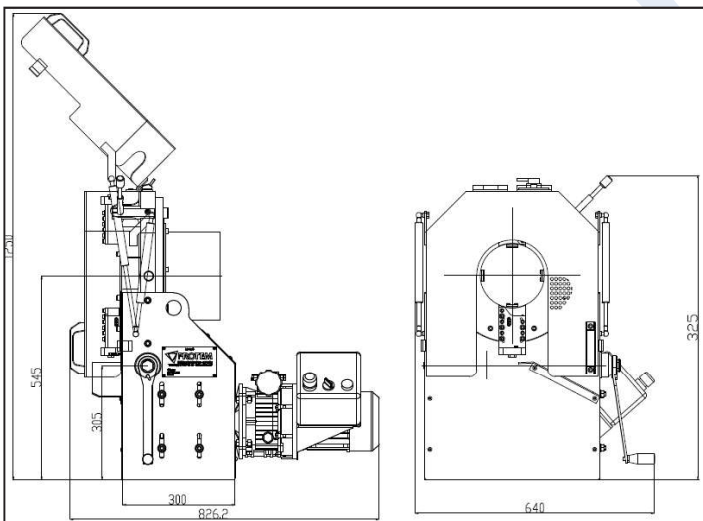
ORDER NO.	DESCRIPTION
MF-170-1000	MF170 with electrical drive 1500 W, weight ~ 180 kg/ 396.8 lbs

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✓	✓	✗	✗

MF170 ON-SITE :



DIMENSIONS:



TECHNICAL FEATURES:

Machine	MF170
Clamping range	25.4 to 168 mm (1" - 6.6")
Clamping	Concentric clamping with ratchet
Clamping Process	Manual Automatic
Feed stroke	60 mm
Gear drive	10 - 80 rpm
Machining Time	Few minutes
Motor Power	Electric 1500W - 380 V Three phase motor
Machining	Carbide insert
Weight	180 kg (397 lbs)

OPTIONS:

ORDER NO.	DESCRIPTION
MF170-K01	Wooden crate
MF170-2200	Kit for diameters from 25,4 mm (1")
MF170-2100	Pneumatic clamping
MF170-2400	Lifting table, manual
MF-170-2000	Electric Lubrication System
MF170-ODK	Visual speed control

MF420

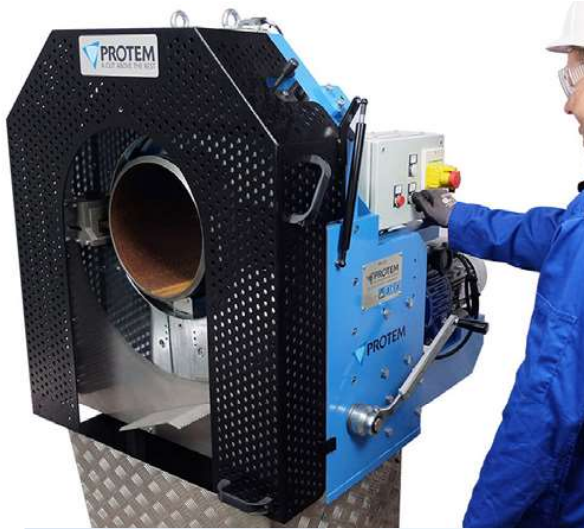
MF420

Ø 168 - 406 mm (6.6" - 16")

≈ 500 kg
≈ 1102.3 lbs

DESCRIPTION:

The PROTEM MF machines can achieve perfect weld preparations on all materials: mild steel, stainless steel, exotic alloys such as incoloy, hastelloy, duplex, super duplex, copper, etc.



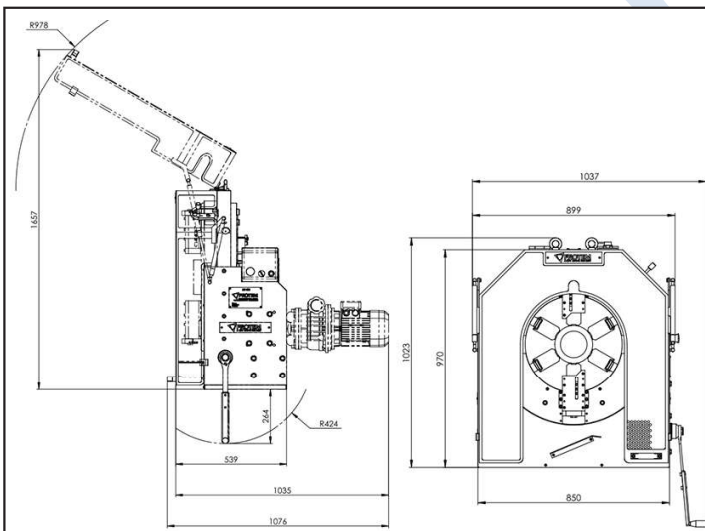
ORDER NO.	DESCRIPTION
MF420-1000	MF420 with electrical drive 1500 W, weight ~ 500 kg/ 1102,3 lbs

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✓	✓	✗	✗

MF420 ON-SITE



DIMENSIONS:



TECHNICAL FEATURES:

Machine	MF420
Clamping range	168 to 406 mm (6.6" - 16")
Clamping	Concentric clamping with ratchet
Clamping Process	Manual Automatic
Feed stroke	80 mm
Gear drive	10 - 80 rpm
Machining Time	Few minutes
Motor Power	Electric 1500W - 380 V Three phase motor
Machining	Carbide insert HSS-toolbits
Weight	500 kg (1102 lbs)

OPTIONS:

ORDER NO.	DESCRIPTION
MF420-K01	Crate MF420
MF-420-1133-2	6 additional jaws for diameters from 140 mm to 255 mm
MF420-1133-1	6 additional jaws for diameters from 230 mm to 335 mm
MF420-MHT	Lifting table, manual
MF-420-3000	Lifting table, electric
MF420-EKSS	Electric Lubrication System
MF420-ODK	Visual speed control

OD MOUNTED MACHINING

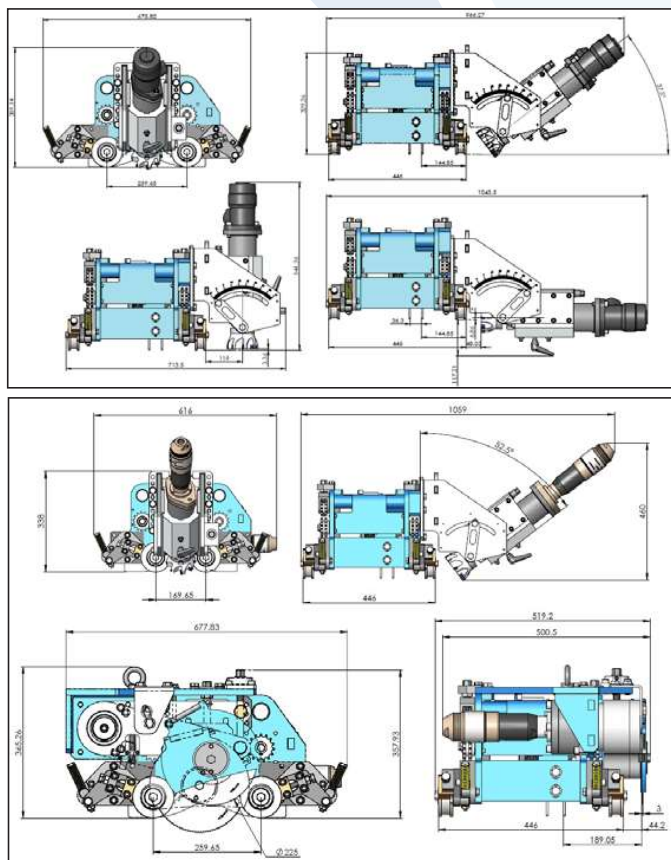
OD MOUNTED MACHINING

≈ 96 kg
≈ 212 lbs

It has extension chains to clamp onto large diameter tubes.

- The OCM tube cutting machine is the essential complement for all your welding operations.
- Portable machining tool (OD clamping).
- Cutting and beveling modules available.
- Perfect weld preparation.
- Ability to perform I and V bevels from 0 to 90°.
- For construction, maintenance, and repair of tubular components.
- On -site or in the workshop.
- No heat-affected zone!
- Designed for all types of materials; carbon steel, chromium, stainless steel, duplex, super duplex, copper-nickel alloys, inconel, P91, aluminum, exotic alloys.

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✓	✓	✗	✗



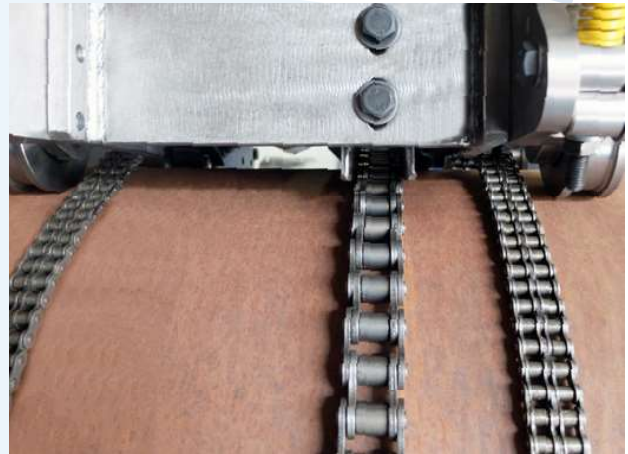
Machine	OCM
Machining capacity	<p>From 6" OD (168.3 mm) For wall thicknesses up to 2" (50.8 mm). The basic chains machine up to 52" diameter (1320.8 mm). Optional extension chains cover the full range of standard tubes on the market.</p> <p>Beveling can be performed on wall thicknesses up to 2" (50.8 mm) in several passes. Its adjustable module can bevel the required inclination, whatever it may be.</p>
Carriage feed	8" (200 mm)/min.
Clamping capacity	From 6" (168.3 mm) OD According to length of the chain.
Shapes and bevel angles	Facing, bevels from 0° to 90°
Clamping	Manual according to the procedure of the operating manual
Penetration	Manual according to the procedure of the operating manual
Feed and rotation	Automatic

Machine	OCM
Hydraulic motor	Feed motor nominal speed: 95 rpm (before gear reduction) Cutting motor nominal speed: From 10 to 50 rpm Beveling motor nominal speed: From 160 to 255 rpm (adjustable rotation speed according to oil pressure and flow) Feed motor power: 1.1kW Cutter saw motor power: 35.4 kW Beveling motor power: 10 kW

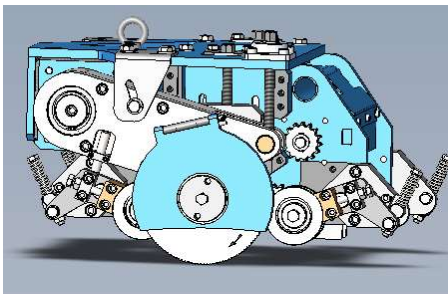
Machine	OCM
Pneumatic motor	Feed motor nominal speed: 95 rpm (before gear reduction) Cutting motor nominal speed: From 10 to 50 rpm (after gear reduction) Beveling motor nominal speed: From 160 to 255 rpm (after gear reduction) (adjustable rotation speed according to pressure and flow – mini recommended air supply: 6bars- Adjustable speed) Feed motor power: 1 kW Cutter saw motor power: 2 kW Beveling motor power: 2 kW

Other motors are available on request

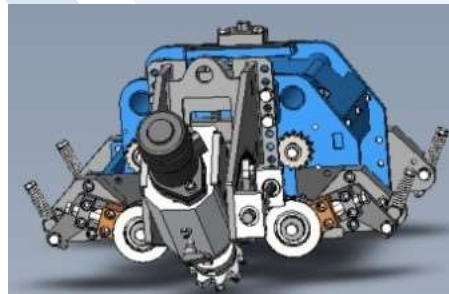
ORDER NO.	DESCRIPTION
OCM-1004	OCM with 2kW hydraulic motor and 35.4kW cutting module - Weight 386 LB ~ 175 kg.
OCM-2200	OCM with 2kW hydraulic motor and 12 kW beveling module - Weight 309 LB ~ 140 kg
OCM-1062	OCM with 2kW hydraulic motor, 35.4kW cutting module and 12 kW beveling module - Weight 486 LB ~ 220 kg
OCM-1100	OCM - Orbital cutting and beveling machine for tubes and pipe carriage only - Weight 212 LB ~ 96 kg
OCM-1005	OCM with pneumatic motor and cutting module 2kW
OCM-2202	OCM with pneumatic motor and beveling module 2Kw
OCM-1000	OCM with pneumatic motor cutting module and beveling module(2kW)
OCM-1102	OCM - Orbital cutting and beveling machine for tubes and pipe carriage only



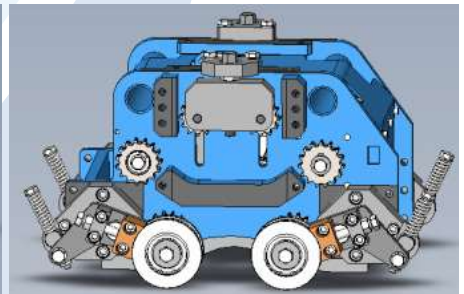
OPTIONS:



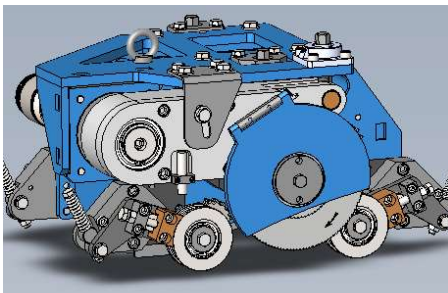
OCMHY-CC



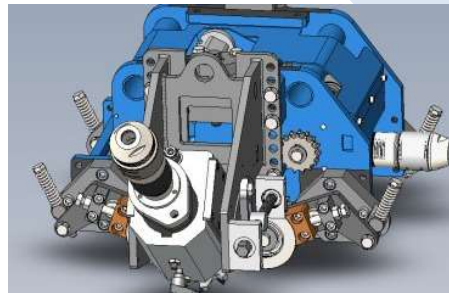
OCMHY-CF



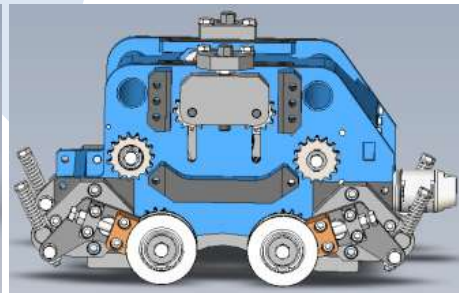
OCMHY-CH



OCMP-CC



OCMP-CF



OCMP-CH

CTA SERIES

HIGH SPEED CUTTING AND BEVELING MACHINE

Ø 25.4 mm - 1422.4 mm
Ø 1" - 56"

OD MOUNTED MACHINING



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:

Shipbuilding	Tube Manufacturers
Nuclear	Oil & Gas



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 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 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.



OD MOUNTED MACHINING



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
✓	✓	✓	✗	✗

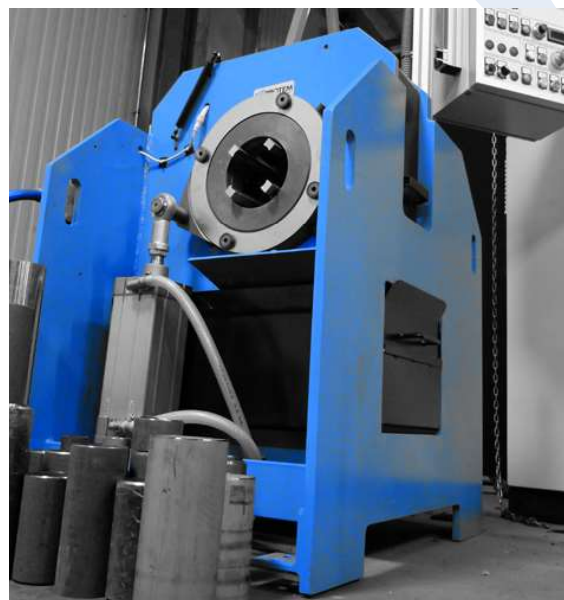
CTA 1-4

Ø 25.4 - 114 mm (1" - 4")

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

OD MOUNTED MACHINING



ORDER NO.

DESCRIPTION

CTA-1-4-1000

Automatic cutting and beveling machine for tubes from 1" to 4"

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 SERIES

CTA 6-16

Ø 168.3 - 406.4 mm (6" - 16")



ORDER NO.

DESCRIPTION

CTA-6-16-1000

Automatic cutting and beveling machine for tubes from 6" to 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

CTA 12-24

Ø 323.9 - 610 mm (12" - 24")



ORDER NO.

DESCRIPTION

CTA-12-24-1002

Automatic cutting and beveling machine for tubes from 12" to 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

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"

CTA SERIES

▼ OPTIONS:

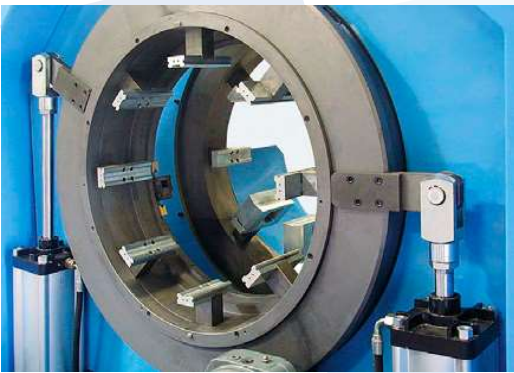
Multifunctional Control Panel



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.

BB SERIES

HIGH SPEED PIPE BEVELING MACHINE

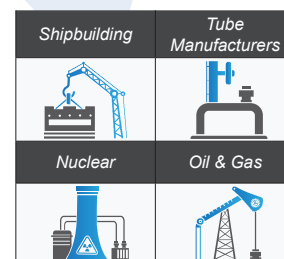
Ø 25.4 mm - 1422.4 mm
Ø 1" - 56"

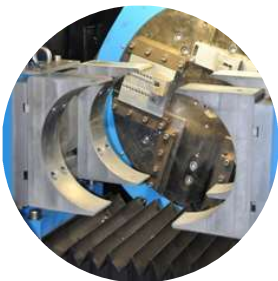
OD MOUNTED MACHINING



BB Series	Machining Capacity	
BB 1-6	25.4 - 168 mm	1" - 6"
BB 3-16	76.2 - 406.4 mm	3" - 16"
BB 12-24	323 - 610 mm	12" - 24"
BB 24-36	610 - 914 mm	24" - 36"
BB 36-48	914 - 1219 mm	36" - 48"

INDUSTRIES:





The machine is designed with an outside clamping system in order to guarantee perfect guidance of the tube inside the machine. The torque control performed by the motor guarantees a firm and concentric tube clamping over the outside diameter range of the BB.



The "Brushless" motors used by PROTEM guarantee very high accuracy and control the cutting speeds and feed as required.

The machine is delivered with a panel equipped with push buttons for the main functions, as well as, a touch screen that operates all the other modes and parameters. The user machine interface is particularly user friendly and does not require any computer knowledge.



Performs perfect and repetitive welding preparations on all materials; soft steel, stainless steel and exotic alloys such as inconel, austenite, duplex steel, super duplex steel, P91, etc.

The lifting table option can be used with the complete range of BB machines. The lifting table is positioned under the BB structure. It adjusts the axis height of the machine spindle according to the selected tube diameter. It saves time, and therefore, greatly increases productivity.



The PROTEM conveyors are designed to adapt to all the BB machines. The tubes can be conveyed manually or with motorized rollers. The rollers are zinc treated in order to avoid any pollution to the tubes during transport. If preferred, they can be rubber coated.



BB SERIES

BB

Ø 25.4 - 1422.4 mm (1" - 56")



DESCRIPTION:

The electric BB machines can be used either on-site or in the workshop. These heavy duty bevelers will bevel, face and counterbore, individually or simultaneously, heavy walled pipes.

The BB machines are high speed bench bevelers. If desired, they can be attached to the floor, are easily installed and clamp onto the OD diameter of the tubes and pipes.

They can be easily operated by a sole operator. Used with the optional profile tracking device, they will machine oval pipes, leaving a root face of a consistent width, which is required when using orbital welding processes.

Beveling	Cutting	Facing	Counterboring	Surfacing
✓	✗	✓	✓	✗

OD MOUNTED MACHINING

BB 1-6

Ø 25.4 - 168 mm (1" - 6")



TECHNICAL FEATURES:

Machine	BB 1-6
Pipe size range	25.4 - 168 mm
	1" - 6"
Machining Capacity	25.4 mm (1")
Clamping process	Manual
	Semi automatic
	Automatic
Feed stroke	100 mm (3.937")
Feed	Manual
	Automatic
Machining Time	A few seconds
Motor Power	30 kW
Machining	Carbide insert

ORDER NO.

DESCRIPTION

BB-1/6-1000

Bench Beveling Machine with outside clamping device for pipes ranging from 1" to 6"

BB 3-16

Ø 76.2 - 406.4 mm (3" - 16")

**ORDER NO.****DESCRIPTION**

BB-3/6-1000

Bench Beveling Machine with outside clamping device for pipes ranging from 3" to 16"

▼ **TECHNICAL FEATURES:**

Machine	BB 3-16
Pipe size range	76.2 - 406.4 mm
	3" - 16"
Machining Capacity	25.4 mm (1")
Clamping process	Manual
	Semi automatic
	Automatic
Feed stroke	100 mm (3.937")
Feed	Manual
	Automatic
Machining Time	A few seconds
Motor Power	30 kW
Machining	Carbide insert

BB 12-24

Ø 323 - 610 mm (12" - 24")

**ORDER NO.****DESCRIPTION**

BB-12-24-V3-1004

Bench Beveling Machine with outside clamping device for pipes ranging from 12" to 24"

▼ **TECHNICAL FEATURES:**

Machine	BB 12-24
Pipe size range	323 - 610 mm
	12" - 24"
Machining Capacity	25.4 mm (1")
Clamping process	Manual
	Semi automatic
	Automatic
Feed stroke	100 mm (3.937")
Feed	Manual
	Automatic
Machining Time	A few seconds
Motor Power	37 kW
Machining	Carbide insert

BB SERIES

BB 24-36

Ø 610 - 914 mm (24" - 36")



▼ TECHNICAL FEATURES:

Machine	BB 24-36
Pipe size range	610 - 914 mm
	24" - 36"
Machining Capacity	35 mm (1.37")
Clamping process	Manual
	Semi automatic
	Automatic
Feed stroke	150 mm (5.905")
Feed	Manual
	Automatic
Machining Time	Few seconds
Motor Power	50 kW
Machining	Carbide insert

ORDER NO.

DESCRIPTION

BB-24/36-1000

Bench Beveling Machine with outside clamping device for pipes ranging from 24" to 36"

BB 36-48

Ø 914 - 1219 mm (36" - 48")



▼ TECHNICAL FEATURES:

Machine	BB 36-48
Pipe size range	914 - 1219 mm
	36" - 48"
Machining Capacity	35 mm (1.37")
Clamping process	Manual
	Semi automatic
	Automatic
Feed stroke	200 mm (7.874")
Feed	Manual
	Automatic
Machining Time	Few seconds
Motor Power	50 kW
Machining	Carbide insert

ORDER NO.

DESCRIPTION

BB-36/48-1000

Bench Beveling Machine with outside clamping device for pipes ranging from 36" to 48"

▼ BIGGER MODELS ON REQUEST

OD MOUNTED MACHINING

▼ OPTIONS:

Multifunctional Control Panel



The machine is delivered with an electric panel in accordance with the EC Standards. On the face of the panel are several switches and a screen to operate the machine. 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 - Stop feed - Lubrication - Chip conveyor - Emergency stop button

Tube Storage Table



All the feeding tube conveyors or storage tube conveyors can be easily connected to any BB machine within the 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 all versions of the BB. The lifting table is positioned under the BB 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 increases 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 BB.

Chips Conveyor



The optional chips conveyor can be used on all versions of the BB. 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.

BB SERIES

Machining Table for Elbows



Designed for machining elbows, this option allows you to quickly and easily machine elbows of all sizes.

Enveloping Clamping Jaws



To avoid deformation of tubes with thinner wall thicknesses during the clamping operation, the aluminum enveloping clamping jaws are recommended.

One set of enveloping clamping jaws is necessary for each different OD.

Lubrication Device



Increases the lifetime of the inserts and reduces the noise level.

A lubrication system is integrated into the chips 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 a closed circuit with the pump.

This option is activated through a push button.

Tube conveyors



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.

ID-Tracker



The ID tracking carriage maintains a constant machining geometry.

Prism Clamping System



The prism clamps the pipe. Accuracy and repetitive perfect weld end preparations are achieved within a few seconds. The clamping can be done manually or automatically.