

PROTEM
Tube and pipe bevelling
ID CLAMPING BEVELLING MACHINE -
FOR TUBES, PIPES AND BOILER TUBES

US-40

PROTEM SAS

Phone: +33 (0) 4 75 57 41 41

Fax: +33 (0) 4 75 57 41 49

contact@protem.fr

www.protem.fr

PROTEM GmbH

Phone: +49 (0) 7247 9393 - 0

Fax: +49 (0) 7247 9393 - 33

info@protem-gmbh.de

www.protem-gmbh.de





US - 40

ID CLAMPING BEVELLING MACHINE

ID clamping beveling machine for tubes, pipes and boiler tubes

The Protem US40 portable pipe beveling tool is the most powerful, robust, reliable and versatile beveling / facing machine in the world.

The US40 covers ranges of diameters ranging from 1.5" to 8" ID - 43 to 219 mm ID

The standard tool plate will accept multiple tool bits, allowing up to 4 simultaneous machining operations.

Such operations may include beveling, 30° and 37°30, 45° bevel, J-bevels, facing, counterboring, compound beveling,

OD chamfering, removal of weld joints on tube sheets, lengthening of tubes on tube sheets.

WE DELIVER
UNMATCHED SOLUTIONS!
For perfect weld
preparations



Developed in collaboration with the users, tested and approved by 100 % of them



THE PROTEM US40 WILL PERFORM REPEATABLE HIGH QUALITY WELD PREPARATIONS ON ALL TYPES OF MATERIALS INCLUDING

- Mild steel
- Chrome steel
- Stainless steel
- Duplex
- Super duplex
- Copper-nickel alloy steel
- Inconel
- P91
- Aluminium
- Copper and exotic alloys
- Etc. ...

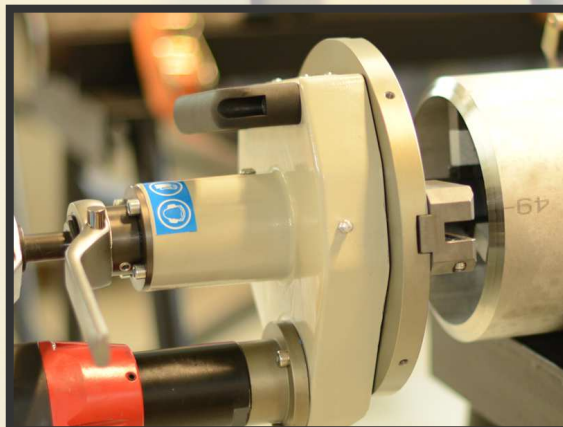
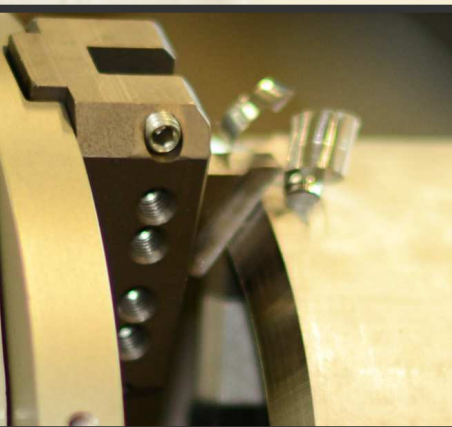
FLANGE FACING/SINGLE POINT MACHINING AVAILABLE ON REQUEST

For diameters ranging from 70mm ID up to 400mm OD 2.7" - 15.7"

- Short clamping mandrel for elbows
- Fittings
- Tees
- Flanges
- Quick clamping device for serial machining works
- Automatic feed and automatic clamping – US40 CA
- For almost all environments: Irradiated areas, extreme conditions, subsea ...

The US40 features a self-accepting torque system and an integral drive motor. For serial works and on request, the machine can be equipped with an automatic clamping and with an automatic feed device.

The tool bits can be changed and adjusted very quickly. Carbide tool inserts can alternatively be used.



Developed in collaboration with the users, tested and approved by 100 % of them



US-40



Machining capacity:

43 mm ID – 219 mm OD
1.5" – 8"

Clamping capacity:

43 mm ID – 219 mm ID
1.5" – 8"

Bevel forms:

Facing, 30° and 37°30', 45° bevel, J-bevel, compound bevels, removal of weld joints from tube sheets, lengthening of tubes from tube sheets, others on request

Clamping:

Manual with ratchet

Expansion: 16 mm / 0.6"

Feed stroke: 50 mm – 1.9" with ratchet

Cutting head gear drive:

25 rpm off-load speed, 16 rpm nominal speed
(Approximate rotation speed according to air pressure and air flow)

Machine is delivered with:

- 1 tool holder plate
- 2 tool bit holders
- sets of clamping blades for above mentioned diameters
- 1 tool bit 90°, 1 tool bit 30°
- key and screws
- operating and maintenance manual

NO HEAT AFFECTED ZONE!

READY TO USE !

FOR UNMATCHED RESULTS!

- Portable ID locking tube end forming machine
- Perfect weld preparation
- Suitable for I, V, J-preps, compound bevels, weld removals, lengthening of tubes, counterboring works,
- Flange facing/single point machining available on request.
- Short clamping mandrel for elbows, fittings, tees, flanges.
- Specific milling head for use on membrane walls and boiler panels
- Quick clamping device for serial machining works
- Automatic feed and automatic clamping

FOR CONSTRUCTION, INSPECTION AND REPAIR WORKS ON SITE OR IN THE ASSEMBLY WORKSHOP

Developed in collaboration with the users, tested and approved by 100 % of them






EQUIPMENT & OPTIONS

Order no	Article	Weight
US40	- US40 with pneumatic drive 730 W	~ 15 kg
US40E	- US40 with electric drive 1200 W*	~ 15 kg
US40CA	- US40CA with pneumatic drive and automatic clamping	~ 15 kg
US40HY	- US40 with hydraulic drive (without control valve)	~ 20 kg
US40HY-SDV	- US40 with hydraulic drive (with control valve)	~ 20 kg
US40-K01	- crate for US40	
US40-K04	- crate for US40 with right angled drive	
US40-K02	- crate for US40 CA	
US40-K05	- crate for US40 E and HY	

**Please note that the capacity of the US40 with electric drive is limited for the machining of tubes with large diameters (>168 mm / 6") in connection with heavy wall thicknesses (>10 mm / 0.4"). Please ask us if you want to use this machine for such cases.

The pneumatic drive is unlimited usable for the machining of tubes with large diameters and heavy wall thicknesses. Therefore, it is recommended to use a pneumatic drive in such cases.

Order no	Article
US40-ASB 	Flange facing attachment, for the remachining and resurfacing of worn or damaged flanges with diameters ranging from 70 mm ID up to 400 mm OD (2.7 - 16")
US40CA 	US40CA with pneumatic drive and automatic clamping system. Especially recommended for serial machining works consisting in the removal of weld joints from tube plates, in the bevelling of large quantities of tubes, in the lengthening of tubes on tube sheets etc
US40TA-PPF 	BOILER APPLICATIONS Milling tool with carbide tips for the removal of membrane walls on tube panels and bevelling operations on tubes from tube sheets. These works can be performed in a single operation or simultaneously. Please submit a drawing of your application. The milling tool will be manufactured on request according to your specification.



US-40

US40-CH



BOILER APPLICATIONS

Pipe bevelling machine type US40CH for boilers works – reduced dimensions
The most suitable equipment to lengthen tubes on tube sheets, to remove weld joints from tube sheets, to perform bevelling works

US40-ASB-EMA



Spider type elbow mandrel kit for an easy installation into the flange or tube

US40-EMA



Elbow mandrel assembly for diameters from 145 mm ID up to 219 mm OD (5,7 – 8")

US40-KS65

- Copying carriage

US40-KS.S

- Cam for compound bevel and compatible with copying carriage

US40-OPT5



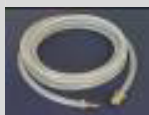
- Machine support

FRL200



- Air filter and lubricating unit with pressure adjustment for pneumatically operated machines

KIT02



- Flexible hose set for pneumatically operated machines

F-Lub-0,5-L

- Oil for lubricating filters bottle of 0,5 liter

F-Lub-1-L

- Oil for lubricating filters bottle of 1 liter



TOOLS

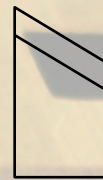
TOOL BITS

Width 25 mm / 0.9"

Facing: A1



Bevelling: A2 – A3

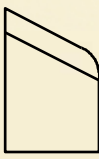


30°

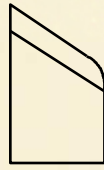


37°30

J Bevel: C5 – C6 – C9



7° (r=6)

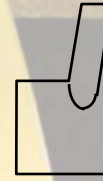


12°5 (r=6)

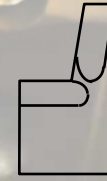


10° (r=1.5)

Counterboring: A4 – B11



15°



15°

Tool bits for limited clearance

Facing: B6



Bevelling: B7 – B8



30°



37°30

J Bevel: C7 – C8



7° (r=6)



12°5 (r=6)

Counterboring: B9



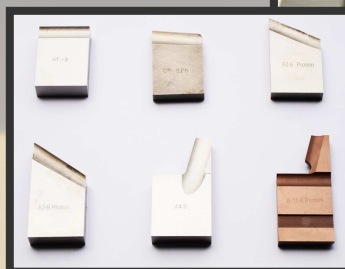
15°

Developed in collaboration with the users, tested and approved by 100 % of them



TOOLS

STANDARD TOOLING FOR US SERIES



REF.	Designation
O-US-A1-9-H-27	O-US-A1-9-H-27 tool bit 90°
O-US-A1-9-H-T-27	O-US-A1-9-H-T-27 tool bit 90° with titanium coating
O-US-A1-9-H-F-27	O-US-A1-9-H-F-27 tool bit 90° with TiCN coating
O-US-A2-9-H-26	O-US-A2-9-H-26 tool bit for 30° bevel
O-US-A2-9-H-T-17	O-US-A2-9-H-T-17 tool bit for 30° bevel with titanium coating
O-US-A2-9-H-F-17	O-US-A2-9-H-F-17 tool bit for 30° bevel with TiCN coating
O-US-A2-9-H-79	O-US-A2-9-H-79 tool bit for 30° invers bevel
O-US-A3-9-H-28	O-US-A3-9-H-28 tool bits for 37°30 bevels
O-US-A3-9-H-T-28	O-US-A3-9-H-T-28 tool bit for 37°30 bevel with titanium coating
O-US-A3-9-H-F-28	O-US-A3-9-H-F-28 tool bit for 37°30 bevel with TiCN coating
O-US-A3-9-H-82	O-US-A3-9-H-82 tool bit for 37°30 invers bevel
O-US-A4-9-H-25	O-US-A4-9-H-25 tool bit for counterboring 15°
O-US-A4-9-H-F-25	O-US-A4-9-H-F-25 tool bit for counterboring 15° with TiCN coating
O-US-A5-9-H-85	O-US-A5-9-H-85 tool bit for 45° bevels
O-US-B6-9-H-54	O-US-B6-9-H-54 tool bit 90°, with disalignment
O-US-B7-9-H-56	O-US-B7-9-H-56 tool bit 30°, with disalignment
O-US-B8-9-H-59	O-US-B8-9-H-59 tool bit 37°30, with disalignment
O-US-B9-9-H-61	O-US-B9-9-H-61 tool bit for counterboring 15°, with disalignment
O-US-B11-9-H-15	O-US-B11-9-H-15 tool bit for counterboring and squaring
O-US-C5-9-H-63	O-US-C5-9-H-63 tool bit for 7° R6 j-bevels
O-US-C6-9-H-65	O-US-C6-9-H-65 tool bit for 12,5° R6 j-bevels
O-US-C7-9-H-67	O-US-C7-9-H-67 tool bit for 7° R6 j-bevels, with disalignment
O-US-C8-9-H-69	O-US-C8-9-H-69 tool bit for 12,5° R6 j-bevels, with disalignment
O-US-C9-9-H-29	O-US-C9-9-H-29 tool bit for 10° R1,5 j-bevels

Developed in collaboration with the users, tested and approved by 100 % of them



CONTACT & COMMENTS

Our commitment! Your satisfaction!

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

Call or email us for more information

PROTEM GmbH

Am Hambiegel 27
76706 Dettenheim
Phone: +49 (0) 7247 9393 - 0
Fax: +49 (0) 7247 9393 - 33
info@protem-gmbh.de
www.protem-gmbh.de

PROTEM SAS

Z.I. Les Bosses
26800 Etoile-sur-Rhone
Phone: +33 (0) 4 75 57 41 41
Fax: +33 (0) 4 75 57 41 49
contact@protem.fr
www.protem.fr

Your comments:
