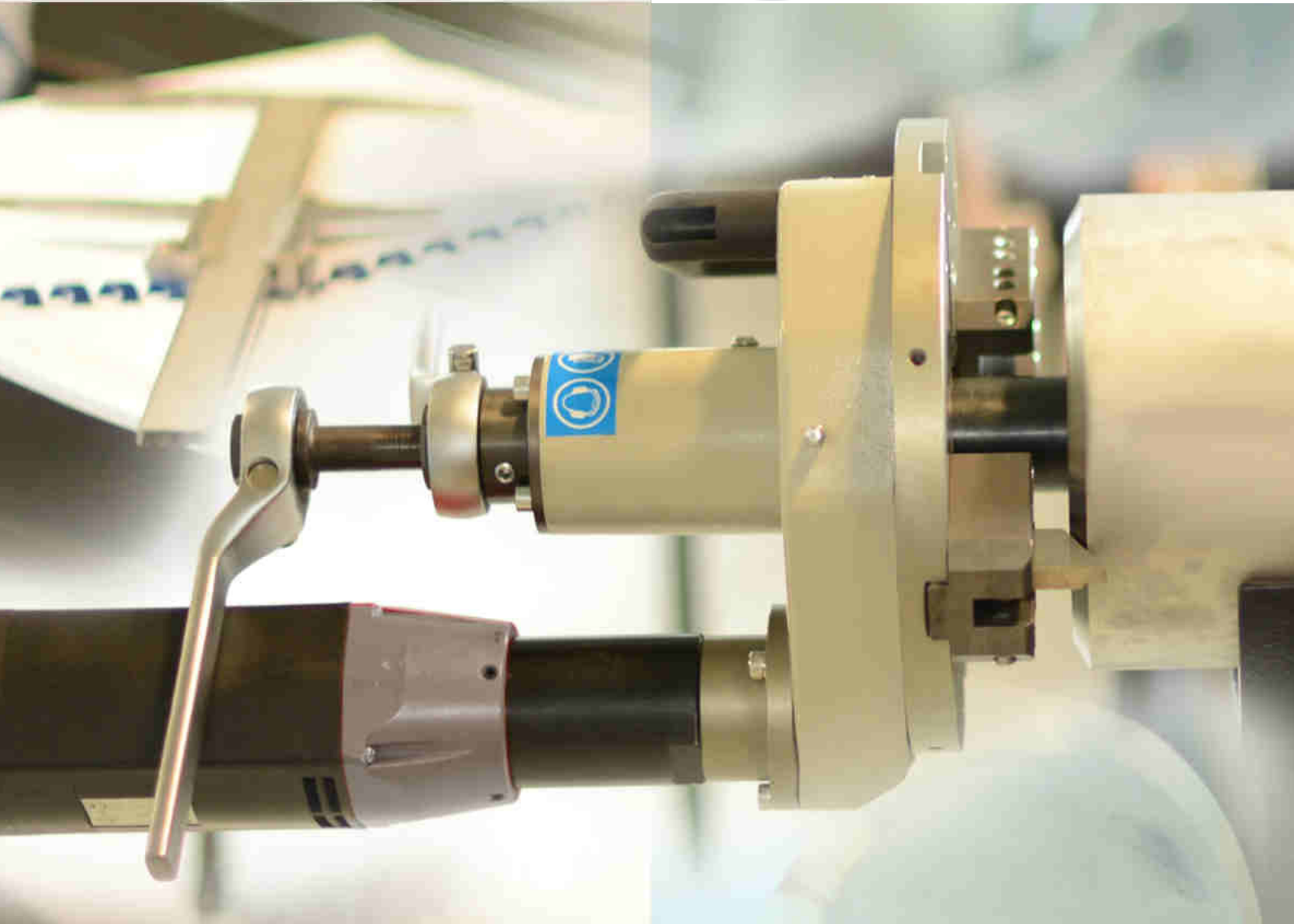




**Practical
Tools Inc.**



PROTEM
Tube and pipe beveling
ID CLAMPING BEVELING MACHINES -
FOR TUBES, PIPES AND BOILER TUBES

US-40

PRACTICAL TOOLS INC.
P.O. Box 233
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US - 40

ID CLAMPING, BEVELING 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!

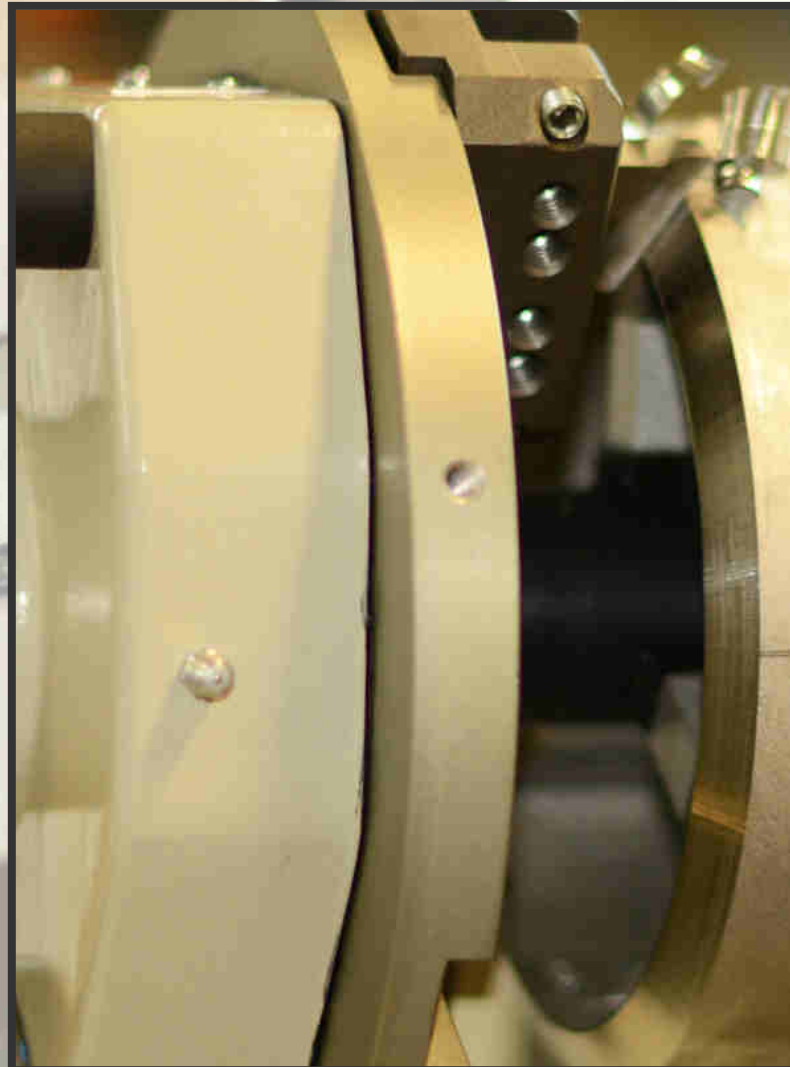
The US40 covers ranges of diameters
ranging from
1.7" to 9" ID - 43 to 219 mm ID

The standard tool plate will accept multiple
tool bits, allowing up to four 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 our end users, earning worldwide acclaim!



US-40

THE PROTEM US40 WILL PERFORM REPEATED 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

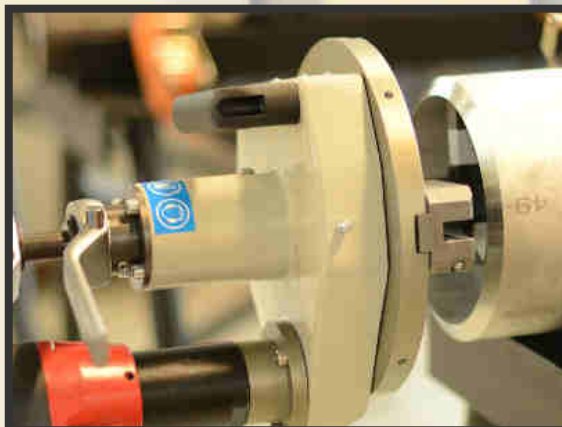
FLANGE FACING/SINGLE POINT MACHINING
AVAILABLE ON REQUEST

For diameters ranging from
70mm ID up to 400mm OD 2.75" - 15.75"

- Short clamping mandrel for elbows
- Fittings
- Tees
- Flanges
- Quick clamping device for serial machining operations
- Automatic feed and automatic clamping - US40 CA
- For almost all environments; irradiated areas, extreme conditions, subsea, etc.

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

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



40 years of experience in precision machining



US-40

**Machining capacity:**

43 mm ID – 219 mm OD
1.7" – 9"

NO HEAT AFFECTED ZONE!**Clamping capacity:**

43 mm ID – 219 mm ID
1.7" – 9"

READY TO USE!**Bevel forms:**

Facing, 30° and 37°30', 45° bevel, J-bevel, compound bevels, removal of weld joints from tube sheets, cutting tubes to length from tube sheets and other applications on request

FOR UNMATCHED RESULTS!**Clamping:**

Manual with ratchet

Expansion: 16 mm / 0.6"**Feed stroke:** 50 mm – 2" 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)

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

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

FOR CONSTRUCTION, INSPECTION AND REPAIR OPERATIONS ON SITE OR IN THE ASSEMBLY WORKSHOP**Developed in collaboration with our end users, earning worldwide acclaim!**



US-40






EQUIPMENT & OPTIONS

Order no	Article	Weight
US40	↪ US40 with pneumatic drive 730 W	~ 33 LB
US40E	↪ US40 with electric drive 1200 W*	~ 33 LB
US40CA	↪ US40CA with pneumatic drive and automatic clamping	~ 33 LB
US40HY	↪ US40 with hydraulic drive (without control valve)	~ 44 LB
US40HY-SDV	↪ US40 with hydraulic drive (with control valve)	~ 44 LB
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 / 7") in connection with heavy wall thicknesses (>10 mm / 0.4"). Please ask us if you want to use this machine in these situations.

The pneumatic drive has unlimited usage 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 (2.8" - 16")
US40CA 	US40CA with pneumatic drive and automatic clamping system. This machine is recommended for serial machining operations such as, the removal of weld joints from tube plates, beveling large quantities of tubes, cutting tubes to length on tube sheets, etc.
US40TA-PPF 	BOILER APPLICATIONS: Milling tool with carbide tips for the removal of membrane walls on tube panels and beveling operations on tubes from tube sheets. These operations 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 specifications.



US-40

US40-CH



BOILER APPLICATIONS

Pipe beveling machine type US40CH for boiler operations – reduced dimensions
The most suitable equipment to cut tubes to length on tube sheets, to remove weld joints from tube sheets, to perform beveling operations

US40-ASB-EMA



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

US40-EMA



Elbow mandrel assembly for diameters from 145 mm ID up to 219 mm OD (5.7 – 8.6")

US40-KS65

- Copying carriage

US40-KS.S

- Cam for compound bevel and compatible with copying carriage

US40-OPT10



- Bench 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 0.5 liter bottle

F-Lub-1-L

- Oil for lubricating filters 1 liter bottle



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TOOLS

TOOL BITS

Width 25 mm / 1"

Facing: A1



Bevelling: A2 - A3

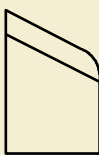


30°

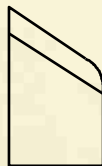


37°30'

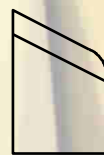
J Bevel: C5 - C6 - C9



7° (r=6)

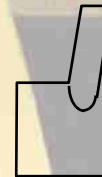


12°5' (r=6)



10° (r=1.5)

Counterboring: A4 - B11



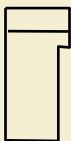
15°



15°

Tool bits for limited clearance

Facing: B6



Bevelling: B7 - B8

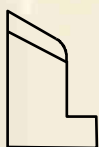


30°



37°30'

J Bevel: C7 - C8



7° (r=6)



12°5' (r=6)

Counterboring: B9



15°

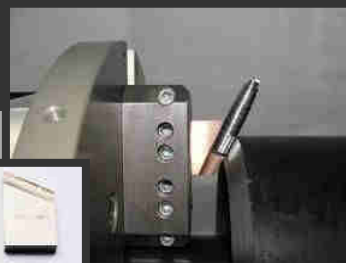
Facing, Beveling, Counterboring, Cut to length, Weld Joint Removal



Practical Tools Inc.

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 offset
O-US-B7-9-H-56	O-US-B7-9-H-56 tool bit 30°, with offset
O-US-B8-9-H-59	O-US-B8-9-H-59 tool bit 37°30, with offset
O-US-B9-9-H-61	O-US-B9-9-H-61 tool bit for counterboring 15°, with offset
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 offset
O-US-C8-9-H-69	O-US-C8-9-H-69 tool bit for 12,5° R6 j-bevels, with offset
O-US-C9-9-H-29	O-US-C9-9-H-29 tool bit for 10° R1,5 j-bevels

The right solution whatever the job!