

PROTEM SAS ZI les Bosses F-26800 Etoile sur Rhone Tel.: +33 (0) 47557-4141 Fax: +33 (0) 47557-4149 www.protem.fr		  	PROTEM GmbH Am Hambiegel 27 D-76706 Dettenheim Tel.: +49 (0) 7247 9393-0 Fax: +49 (0) 7247 9393-33 www.protem-gmbh.de
ISO 9001		US150-24"	1/5

Tube and pipe bevelling machine type US150-24"



The US150 portable pipe bevelling tool is the most powerful, robust, reliable and versatile bevelling and facing machine in the world. The US 150-24 covers ranges of diameters ranging from from 5.9" to 24" ID (150-610 mm). The standard tool plate will accept multiple tool bits, allowing up to four simultaneous machining operations. Such operations may include bevelling, facing, counterboring, compound bevelling, OD chamfering, removal of weld joints on tube sheets, lengthening of tubes on tube sheets..

The US150-24 features a self-accepting torque system and an integral drive motor.

The robust US150-24 will perform repeatable high quality weld preparations on all types of materials including stainless steel duplex, super duplex, inconel, P91 etc.

When using the kit on diameter 24" the maximum wall thickness for bevelling is limited on 22 mm. For heavier wall thickness the use of a copying carriage is recommended.

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

Machining capacity:

150 mm ID – 508 mm OD (5.9" ID – 20" OD)

Up to 914 mm (36") with copying carriage!

Clamping capacity:

150 mm ID – 610 mm ID (5.9" ID – 24" ID)

Bevel forms:

Facing, 30 and 37°30 bevel, J-bevel, compound bevel, others on request

Clamping:

manual with key

Expansion: 30 mm (1.1")

Feed stroke: 100 mm (3,9")

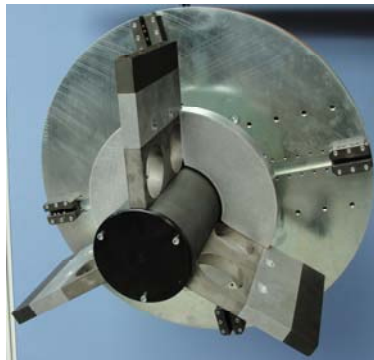
Cutting head gear drive:





7 - 10 rpm off-load speed, 5 - 7 rpm nominal speed

Machine is delivered with:

- 1 tool holder plate 24"
- 4 tool bit holders
- sets of clamping blades for above mentioned diameters
- 1 blade stiffener
- special basic clamping blades for diameters from 330 mm
- 1 tool bit 90°, 1 tool bit 30°
- key and screws
- operating manual

No heat affected zone !



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Order no	Article	Weight
US150-24"	- US150-24" with pneumatic drive: standard version with dual pneumatic drive 2 x 1,47 kW (Machines with dual drive must be used with a maintenance unit type FRL300)	~ 150 kg
US150HY-24"	- US150-24"with dual hydraulic drive	~ 150 kg
US150HY-SD-24"	- US150-24"with single hydraulic drive	~ 150 kg
US150-K01	- crate for US150	
US150-K02	- crate for US150 with kit 24"	

US150-ASB



- Flange facing attachment, for the remachining and resurfacing of worn or damaged flanges with diameters ranging from 165 mm ID up to 900 mm OD (6.5" ID – 35.4" AD)

US150-ASB-EMA1

- Spider type elbow mandrel kit for an easy installation into the flange or tube. Capacity: 170 to 356 mm ID (6.7 – 14" ID)

US150-ASB-EMA2

- Spider type elbow mandrel kit for an easy installation into the flange or tube. Capacity: 400 to 620 mm ID (15.7 – 24.4" ID)

US150-OPT.5



- Bench support for US150

US150-Kit 24"



- Kit 24" for the US150: tool holder plate for diameters up to 24"; has to be ordered with a special crate. Scope of delivery Includes:
 - 1 blade stiffener
 - 1 tool holder plate 24"
 - 1 inner shaft (standard)
 - 1 specific set of basic expansion blades (mounted on the inner shaft and starting at 330 mm ID (13"))
- With this kit, on 24" diameter, wall thickness is limited to 22 mm (0.8"). Over, copying carriage is recommended.

US150-IDT



- ID-Tracker: enables the US150 to maintain a consistent root land thickness independently of the pipe ovality or wall thickness variations.

US150-KS75



- Copying carriage 8"-30"

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US150-KS75-36

- Chariot de copiage 8"-36"

US150-EMA

- Elbow mandrel assembly for US150; diameters: 261 mm – 508 mm OD (10.3 – 20" OD)

HY-HPP 050



- Hydraulik Power Pack (5,5 kW)

FRL300



- Maintenance unit for pneumatically operated machines with dual motor pack

Kit02



- Flexible tubing set for pneumatically operated machines

F-Lub-0,5-L

- Huile pour filtre graisseur (bouteille de 0,5L)

F-Lub-1-L

- Huile pour filtre graisseur (bouteille de 1 L)

F-Lub-5-L

- Huile pour filtre graisseur (bouteille de 5 L)

OPT-RP



- Regulation Valve

OPT-SPH



- Chip Hook

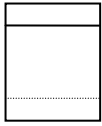
Other options on request

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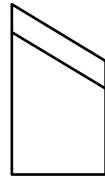
TOOL BITS

Width 25 mm / 0.9"

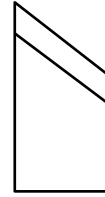
Facing: A1



Bevelling: A2 - A3

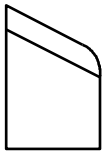


30°

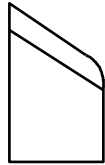


37°30

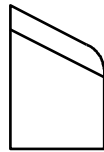
J Bevel: C5 - C6 - C9



7° (r=6)

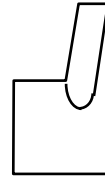


12°5 (r=6)



10° (r=1.5)

Counterboring: A4 - B11



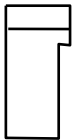
15°



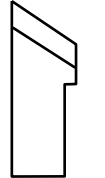
15°

Tool bits for limited clearance

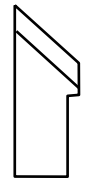
Facing: B6



Bevelling: B7 - B8

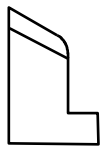


30°

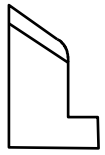


37°30

J Bevel: C7 - C8



7° (r=6)



12°5 (r=6)

Counterboring: B9







15°

Nota: available wall thicknesses: 6 or 9 mm (0.2 or 0.3")

STANDARD TOOLING FOR US SERIES



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TOOLS

REF.	Designation	For
O-US-A1-9-H-27	- O-US-A1-9-H-27 tool bit 90°	US30, US40, US80, US150, SE219, S40
O-US-A1-9-H-T-27	- O-US-A1-9-H-T-27 tool bit 90° with titanium coating	US30, US40, US80, US150, SE219, S40
O-US-A1-9-H-F-27	- O-US-A1-9-H-F-27 tool bit 90° with TiCN coating	US30, US40, US80, US150, SE219, S40
O-US-A2-9-H-26	- O-US-A2-9-H-26 tool bit for 30° bevel	US30, US40, US80, US150, SE219, S40
O-US-A2-9-H-T-17	- O-US-A2-9-H-T-17 tool bit for 30° bevel with titanium coating	US30, US40, US80, US150, SE219, S40
O-US-A2-9-H-F-17	- O-US-A2-9-H-F-17 tool bit for 30° bevel with TiCN coating	US30, US40, US80, US150, SE219, S40
O-US-A2-9-H-79	- O-US-A2-9-H-79 tool bit for 30° invers bevel	US30, US40, US80, US150, SE219, S40
O-US-A3-9-H-28	- O-US-A3-9-H-28 tool bits for 37°30 bevels	US30, US40, US80, US150, SE219, S40
O-US-A3-9-H-T-28	- O-US-A3-9-H-T-28 tool bit for 37°30 bevel with titanium coating	US30, US40, US80, US150, SE219, S40
O-US-A3-9-H-F-28	- O-US-A3-9-H-F-28 tool bit for 37°30 bevel with TiCN coating	US30, US40, US80, US150, SE219, S40
O-US-A3-9-H-82	- O-US-A3-9-H-82 tool bit for 37°30 invers bevel	US30, US40, US80, US150, SE219, S40
O-US-A4-9-H-25	- O-US-A4-9-H-25 tool bit for counterboring 15°	US30, US40, US80, US150
O-US-A4-9-H-F-25	- O-US-A4-9-H-F-25 tool bit for counterboring 15° with TiCN coating	US30, US40, US80, US150
O-US-A5-9-H-85	- O-US-A5-9-H-85 tool bit for 45° bevels	US30, US40, US80, US150
O-US-B6-9-H-54	- O-US-B6-9-H-54 tool bit 90°, with disalignment	US30, US40, US80, US150
O-US-B7-9-H-56	- O-US-B7-9-H-56 tool bit 30°, with disalignment	US30, US40, US80, US150
O-US-B8-9-H-59	- O-US-B8-9-H-59 tool bit 37°30, with disalignment	US30, US40, US80, US150
O-US-B9-9-H-61	- O-US-B9-9-H-61 tool bit for counterboring 15°, with disalignment	US30, US40, US80, US150
O-US-B11-9-H-15	- O-US-B11-9-H-15 tool bit for counterboring and squaring	US30, US40, US80, US150
O-US-C5-9-H-63	- O-US-C5-9-H-63 tool bit for 7° R6 j-bevels	US30, US40, US80, US150
O-US-C6-9-H-65	- O-US-C6-9-H-65 tool bit for 12,5° R6 j-bevels	US30, US40, US80, US150
O-US-C7-9-H-67	- O-US-C7-9-H-67 tool bit for 7° R6 j-bevels, with disalignment	US30, US40, US80, US150
O-US-C8-9-H-69	- O-US-C8-9-H-69 tool bit for 12,5° R6 j-bevels, with disalignment	US30, US40, US80, US150
O-US-C9-9-H-29	- O-US-C9-9-H-29 tool bit for 10° R1,5 j-bevels	US30, US40, US80, US150
O-US-C10-9-H-61	- O-US-C10-9-H-61 tool bit for 20° j-bevels	US30, US40, US80, US150