Retrofitted CNC ORBITAL PIPE BENDER - Mod. PRIMATIST 2

Description

The orbital bending centre PRIMATIST 2 is a machine utilized for cutting and bending tubes in copper, aluminium, iron or stainless steel in annealed condition in level wound coils or bunch coils.

The main movements of the machine are the following ones:

X AXIS (or "advancement"): it allows the straightening and the gauging. The pipe is fed by four rolls "with a Vulkolan insert" having dimension of the pipe size to be worked and by a set of seven shaped rolls in plastic material or in steel, which besides feed it, gauge and straighten it. The pipe advancement on the X axis is carried out by the rotation of all the rolls which receive the movement by a strong reduction gear fed by a BRUSHLESS motor.

Y AXIS (or "rotation"): it allows the rotation of the bending arm where the bending die is installed. The arm rotates 360° by means of a gearmotor. The "Y axis" group includes the bending arm and the BRUSHLESS motor for the "Z" axis movement.

Z AXIS(or "bending"): it allows the bending of the tube. The movement comes from a BRUSHLESS motor and from a reduction gear placed inside of the arm. The power transmission from the motor to the bending counter-die is given by a double chain. The lenght of the arm is 800 mm.

The machinery can be equipped for bending only RIGHT or only LEFT direction. If the machinery is equipped for bending only right, once the tolling has been removed and the arm reaches the zeroing positioning (+180°), it is possible to install the left bending tooling and changing the bending direction from the control panel. This operation takes about 10 minutes.
It is also possible to replace the whole bending arm (optional) in about 2 minutes.

The orbital tearing cut system allows to pre-cut the pipe, setting the cutting depth on the wall thickness, to bend it, and to detach it by the same bending counter-die (Z axis). The system ensures a burr free cut and the absence of any residue or chips in the manufactured tube.

The saw cut system can be added as an option. The head is moved by a pneumatic cylinder with hydraulic brake that slides on ball bearing sleeves and rectified rods.

Retrofitted CNC ORBITAL PIPE BENDER - Mod. PRIMATIST 2

The electric cupboard is isolated and integrated within the machine body in order to reduce the overall dimensions and therefore occupy less space.

The control panel together with the industrial PC is hanging on a hinged and swing overhead arm, and permits the operator to reach all the parts of the machine always keeping the control panel in his hands.

The described working centre using only the BRUSHLESS motors and asynchronous motors gives considerable advantages like:

Reduced power consumption;

Lower noise;

Product quality not conditioned by thermal range;

Reduced maintenance;

Optimization of acceleration and deceleration ramps by PC with consequent movement smoothness.

Technical characteristics

Soft annealed (Cu, Al) bending capacity up to:.. Ø 16 x 1
INOX annealed alloy pipe bending capacity up to:... Ø 10 x 1
Minimum bending radius 5
Maximum bending radius.. 45
Functioning:..Completely electric by BRUSHLESS Motors
Standard arm working lenght:... 500 or 800 mm.
Working axis head lower bulk: .... 87 mm.
Z Axis bending stroke:... 190°
Y Axis rotating stroke:..+180° / 0° / -180°
Saw blade motor power: .... 1,1 KW
Maximum working power: .... 2,5 KW
System noise (cut only):...75 Decibel
"Variable" cutting speed, blade Ø 250 (option): .... 200 ÷ 2800 rpm.
Machine weight, CN included:...Kg. 2.400

Retrofitted CNC ORBITAL PIPE BENDER - Mod. PRIMATIST 2

The machine may be equipped, *__if optioned__*, with a number of additional software implementations, such as:

Anticollision software
Export production data to excel format file
3D step/iges import
3D step/iges export
Print barcodes or text to the tubes
Barcode reader
Operator badge reader
Remote assistance with webcam support
IP-CAMERA for supervision