MAUS ITALIA

Baffletech twin 2000

Automatic centre with double head
for flaring the holes of the heat exchangers baffle

Production

Baffles flaring holes

ENG / REV 01 / 23

Leader in the industry since 1961

At the end of the 1950s, Franco Agostino seized the opportunity to learn the art of manufacturing tube expanders give to him by Albert Otto, an experienced German manufacturer. Then, thanks to his indomitable courage, his intuition and the help of his wife Luisa, Mr Agostino founded a small factory in Italy, which a few years later would become Maus Italia. In 1972, Maus Italia inaugurated its new headquarters and laid the foundations for the development that is now carried on by his son Stefano, a mechanical engineer, who has been successfully devoting all his energy to bringing Maus Italia to the top of the European and world market in this sector since 1976.

Experience, passion and technology

Maus Italia is a world-leading manufacturer of tools and machines required for the production and maintenance of tube bundle heat exchangers

Our core business is the design, manufacture and sale of tools and machines for the production and maintenance of heat exchangers, condensers, refrigerators and boilers in chemical plants, oil refineries and power plants.
Our aim is to accept the challenges stemming from the market to give impetus to in-house research and offer our customers increasingly specialised, high-tech machinery and tools.

Quality, Safety and Environment

Maus Italia adopted the most important production and work environment certifications to uphold an effective Integrated Management System for Quality, Environment and Safety according to the requirements of UNI EN ISO 9001, ISO 14001 and ISO 45001.

Maus Italia in the world

Every day, we are close to our customers
in more than 80 countries all around the world.


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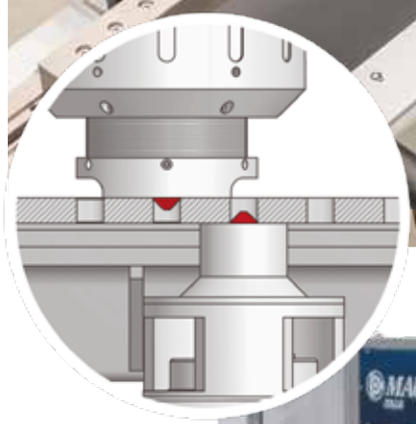


MAUS
Baffletech twin 2000
Automatic twin head baffle holes flaring machine
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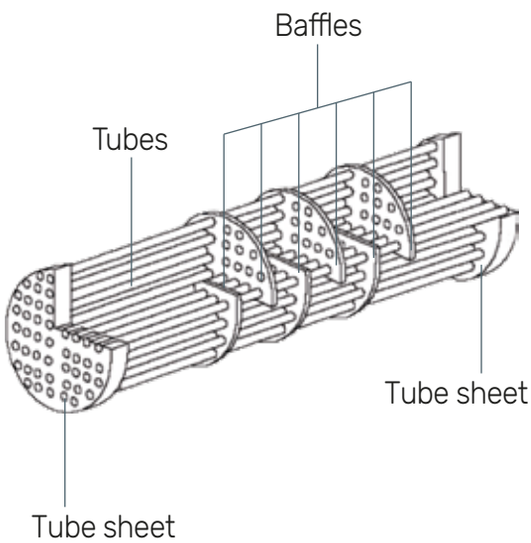
Baffletech twin 2000

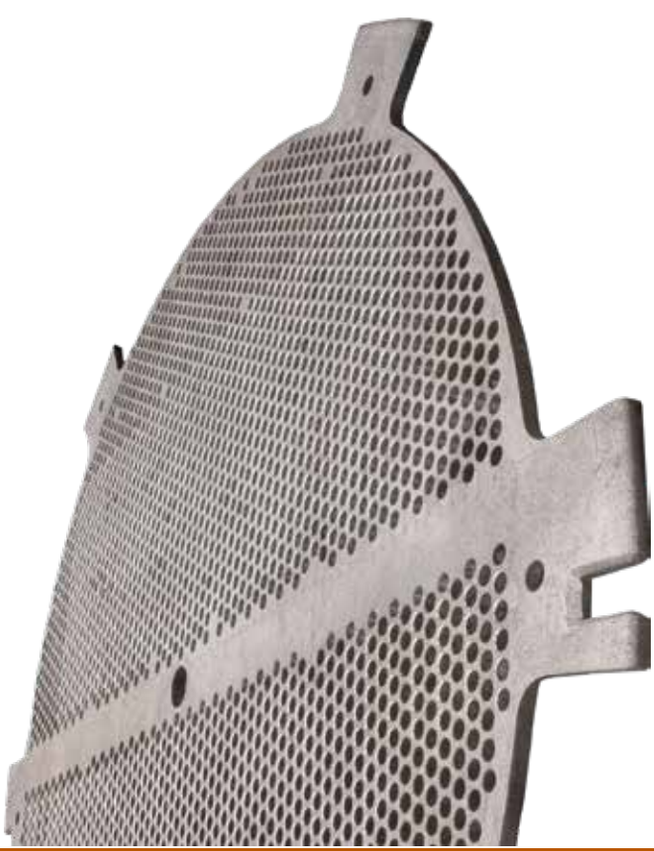
Automatic centre with double head for flaring the holes of the heat exchangers baffle up to O.D. 2000 mm (78")



Maus Italia presents the Baffletech twin 2000, another step towards a completely automated production chain in the construction of heat exchanger tube bundles.

The Baffletech twin 2000, entirely designed and manufactured by Maus Italia, allows the simultaneous flare of the holes on both sides of the baffle in a single pass without the need for additional operations thanks to two opposing heads which are equipped with self-centring tools.

The baffle are loaded on one the side of the machine, proceeds along roller tables thanks to motored arms, which once the flaring phase is finish, will bring the baffle to the unloading position.
The Baffletech twin 2000, is equipped with CNC control for:



- the movement of the baffle;
- the independent positioning of the two heads;
- the movement and independent rotation of the tools.

The Baffletech twin 2000 also permits:

- a uniform depth flare thanks to the special design of the tilting head;
- precise centering of the flare in relation to the axis of the hole due to the innovative self-centring mandrel tool-holder;
- programming of the work sequence using dedicated software developed by Maus Italia

Electrical cabinet

Installed on the machine, including air conditioning for **automatic control of the internal temperature.**

Locking bars

Locking of the baffle against the corresponding beam during the working phase, the locking bar will automatically release the baffle for the movement phase.

Check beam

Work surface located between the sliding rollers. This is the **machine's reference** point for the lower and upper machining of the baffle.

X axis

CNC-controlled transverse movement of the two flaring heads.

Pneumatic cabinet

Isolated from the electrical cabinet, this contains the system for distributing the air into the various areas.

Sliding and loading roller

Modular system of rollers for the support and sliding of the baffle during loading and machining.

Y1 axis - baffle loading

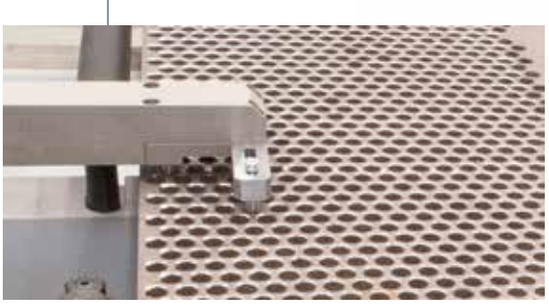
CNC-controlled movement of the baffle with a quick connecting system and centring system with zero workpiece.

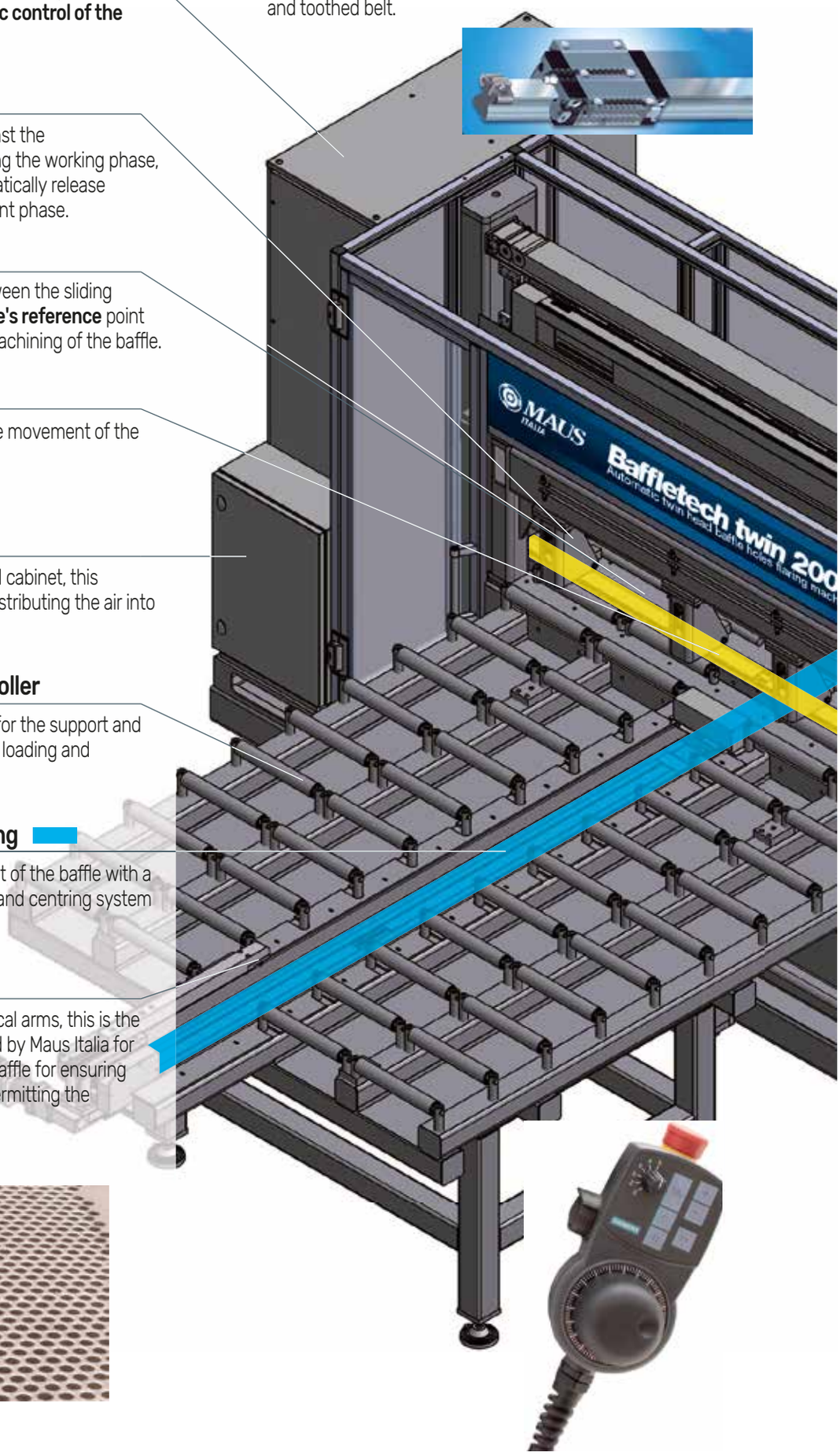
Rake system

Mounted on two mechanical arms, this is the innovative solution offered by Maus Italia for the quick hooking of the baffle for ensuring the zero workpiece and permitting the movement of the baffle.

Linear Bosch Rexroth modules

Ensure perfect movement of the aces with recircular ball screws and toothed belt.



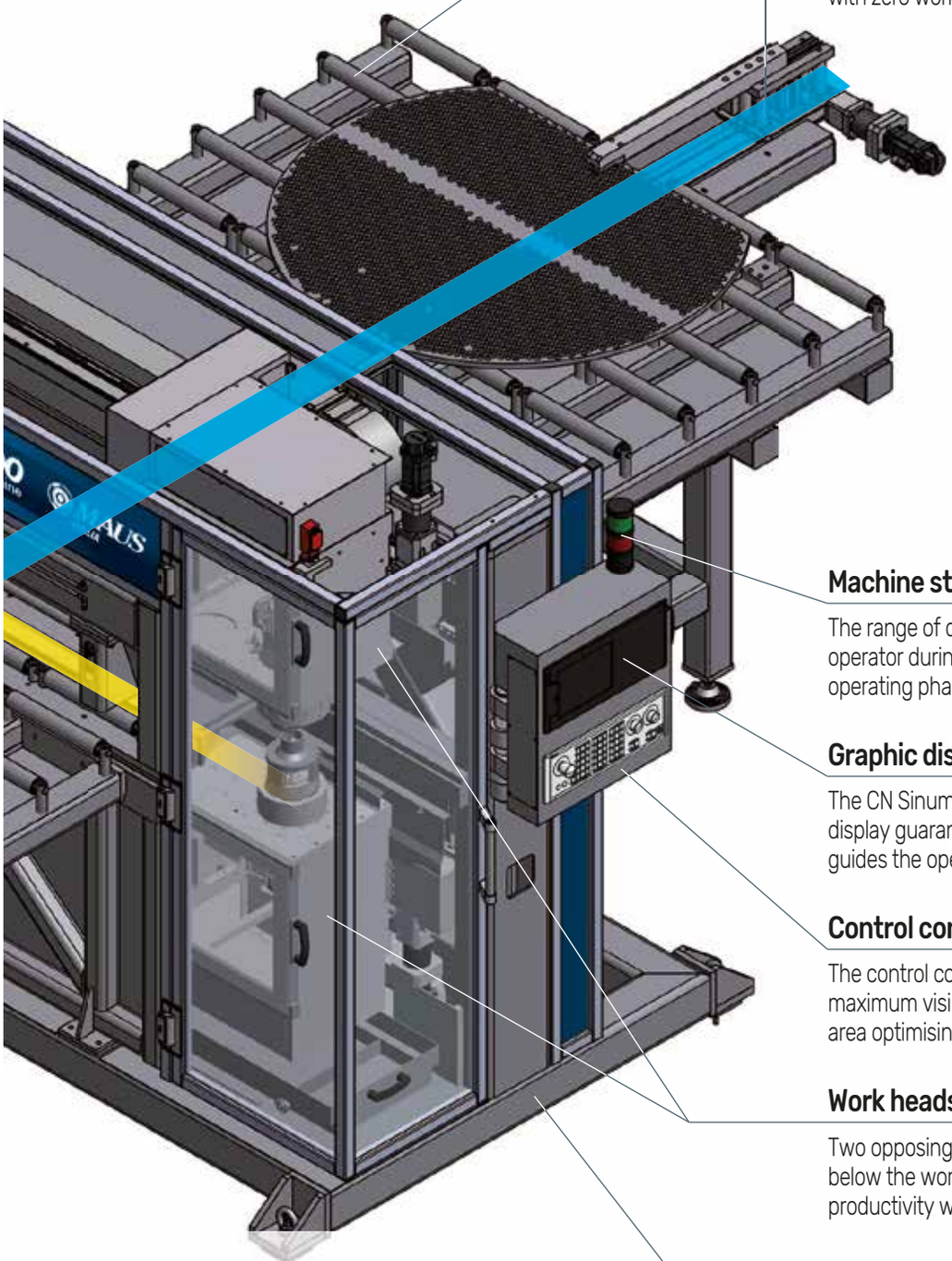


Sliding and unloading roller

Modular roller system for supporting and sliding the baffle during machining and unloading.

Y2 axis - Unloading of baffle

CNC-controlled lengthways movement of the baffle with quick coupling system and centring with zero workpiece.



Machine status signal

The range of default signals assist the operator during the loading and operating phases.

Graphic display

The CN Sinumerik 828D Siemens® graphic display guarantees maximum simplicity as it guides the operator during operating phases.

Control console

The control console is located to ensure maximum visibility of the the operator's work area optimising the performance of all phases.

Work heads

Two opposing heads, located above and below the work surface, ensure high productivity without the need to turn the baffle.

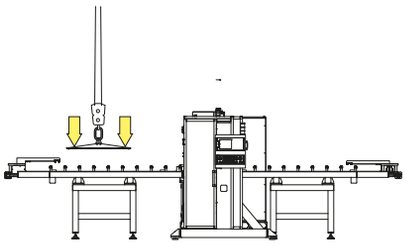
Frame structure

Frame structure (central frame and two rollers) in normalised electro-welded steel with high rigidity and vibration absorption characteristics.

3D design

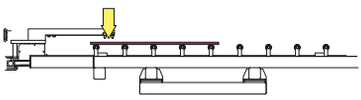
Each component has been entirely designer by Maus Italia technical staff in a virtual environment before being manufactured.

Work procedure



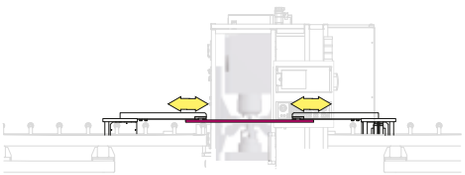
1 Loading

The baffle to be machined is positioned using a bridge crane on to the roller and is correctly oriented for machining.



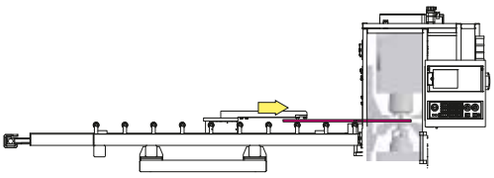
2 Hooking

The motorised arm, thanks to the special rake system, rapidly hooks the baffle, ensuring the zero work piece and movement.



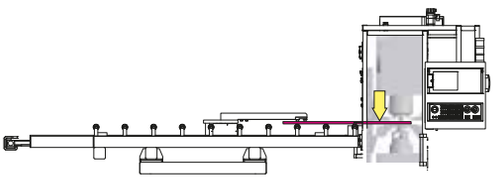
3 Alignment

Before the baffle is machined, the two mechanical arms align it accurately.



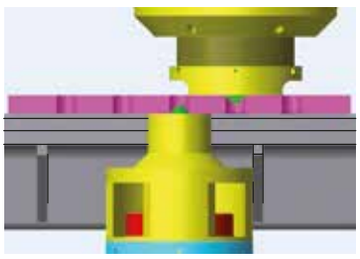
4 Positioning

The motorised arm guide the baffle lengthways to its work position on the check beam.



5 Locking

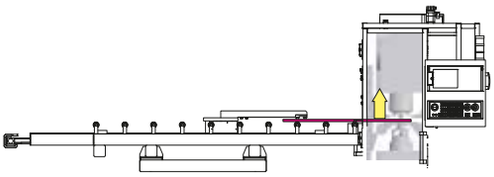
The locking bars press the baffle against the check beam and ensure its position during machining.



6 Flaring

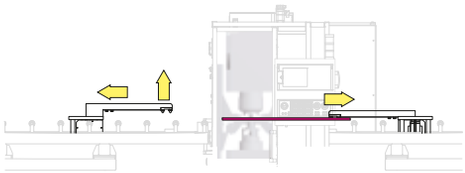
The two thrust collar mounted on the opposing heads will position against the baffle while the two flaring tool will execute the flare according to the machine program. The flaring of the holes is perfectly centered and is always at an equal depth thanks to the zero-set of the tool.

The row of holes is rapidly machined on both sides with the transverse movement of the two independent heads.



7 Unlocking

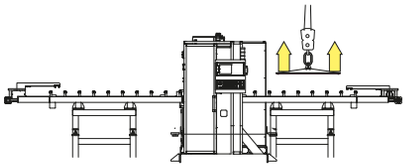
The locking bars release the baffle, allowing positioning for machining the next row of holes.



8 Relay

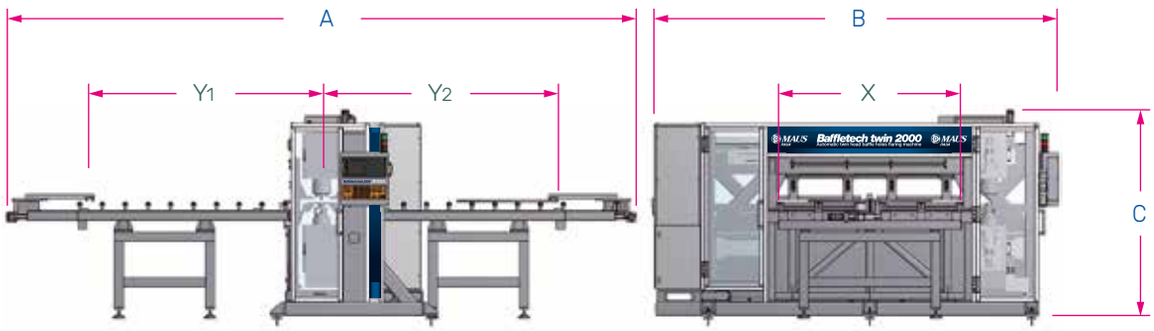
At the end stroke of Y1, the loading arm automatically "passes" the baffle to the unloading arm which guides it along Y2 until machining is complete.

Relay

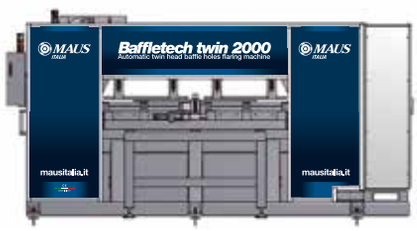


9 Unloading

When machining is complete, the mechanical unloading arm releases the baffle which may then be unloaded.



Baffletech twin 2000



Power supply			
Voltage		Volt - Ph	400 - 3
Frequency		Hz	50
Installed power		KW	6
Pressure		Bar *Psi*	4-6 *58-87*
Air consumption		l/min *US gpm*	340-400 *92-105*
Work capacity			
Max Ø of the baffle		mm *inches*	2000 *78*
Max thickness of baffle		mm *inches*	30 *1.181*
Ø of the machinable hole		mm *inches*	12,7÷50,8 *1/2"÷2"*
Size capacity			
Lenghtways stroke of the baffle	**Y1 / Y2**	mm *inches*	2500 *98*
Transverse stroke of the heads	**X**	mm *inches*	2000 *78*
Dimensions			
Lenght	**A**	mm *inches*	6694 *264*
Width	**B**	mm *inches*	4466 *176*
Height	**C**	mm *inches*	2186 *87*
Stand weight		kg *lbs*	6000 *13250*
2 rollers weight (loading + unloading)		kg *lbs*	2000 *4400*
Colours of structure		RAL	7030-7035
Degree of protection		IP	55

IMPROVE THE QUALITY OF YOUR WORK

MAUS ITALIA IS YOUR PARTNER FOR ALL THE PHASES OF THE PRODUCTION AND MAINTENANCE OF THE HEAT EXCHANGER TUBE BUNDLES

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