



Quadrol MRP-EH

Hi-tech hydro-mechanically expansion system
for tube expanders with parallel rolls

Production

Tube rolling system



A winning story since 1961

The Beginning

At the end of the 1950s, Domenico Franco Agostino became the Italian representative of Albert Otto, a German manufacturer of tube expanders. In 1961 Franco Agostino's Albert Otto Italiana was founded and in 1972, after purchasing an area of 10,000 square metres in the municipality of Bagnolo Cremasco, Maus Italia Sas was established.

The Growth

In 1976 his son Stefano, a mechanical engineer, joined the company. Together with his father, he studied products, introduced new machinery onto the market and filed the first patents by Maus Italia. Above all, Stefano was firmly convinced that people are the very heart of a company's success. Therefore, he invested in human capital by valuing people and roles, and he surrounded himself with skilled operators as well as technical, commercial and administrative collaborators. The result was a winning, competent and proactive team.

His daughter Anna - also a mechanical engineer - has been working in the company since 2016, giving new impetus and energy to the business her father and grandfather had built.

Father and daughter work together side by side every day to guarantee the excellence of Maus Italia and support all customers worldwide with competence and passion: the company's distinctive traits.



Stefano Agostino

CEO - Mechanical Engineer

Anna Agostino

COO - Mechanical and Management Engineer



In-house production of each component ***Workshop 4.0 and 24/7 production control***

The production of Maus Italia branded items is entirely carried out in Bagnolo Cremasco, in the heart of an Italian industrial area 30 km southeast of Milan.

The company boasts a 4.0 workshop equipped with state-of-the-art machinery, an in-house heat treatment room and a final inspection department that allow Maus Italia to independently manage every phase of the manufacturing process of its wide range of products whilst maintaining high quality standards.



Quality first. ***Design and development***

One of Maus Italia's strengths is its willingness to understand its customers' needs.

Our technical department is always ready to find operational solutions to the most complex applications, even via feasibility studies. We develop accurate work processes, draw with FEM analyses to verify our mechanical-structural performance and optimise the manufacturing process of each component.

Ready To Deliver

A well-stocked and complete warehouse of finished products enables Maus Italia ship quickly to customers all over the world according to a ready-to-deliver logic.

The warehouse is fully located within our premises in Bagnolo Cremasco at controlled temperatures and conditions to guarantee the maximum safety and quality of Maus Italia products for all our customers.

Quality, environment and safety policy

Research, quality and safety are the watchwords of Maus Italia Spa.

Maus Italia has several projects underway aimed at increasingly sustainable development and integrates environmental concerns into its business model. The company's actions, behaviour and development choices are focused not only on the short run but rather mainly on a medium and long-term horizon.



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in your country



Quadrol MRP-EH

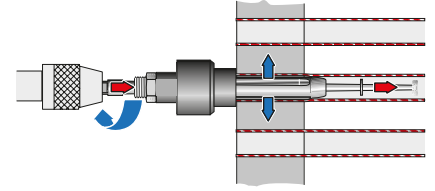
*Hi-tech hydro-mechanically expansion system for tube expanders with **parallel rolls***

This systems is dedicated to expand the tubes wherever it is necessary to minimize elongation in the tube and its related stress to obtain a perfect homogeneous contact between tube and tubesheet across the entire expansion length.

➤ External tubes diameter range from 12,70 to 25,40 mm (from 1/2" to 1")

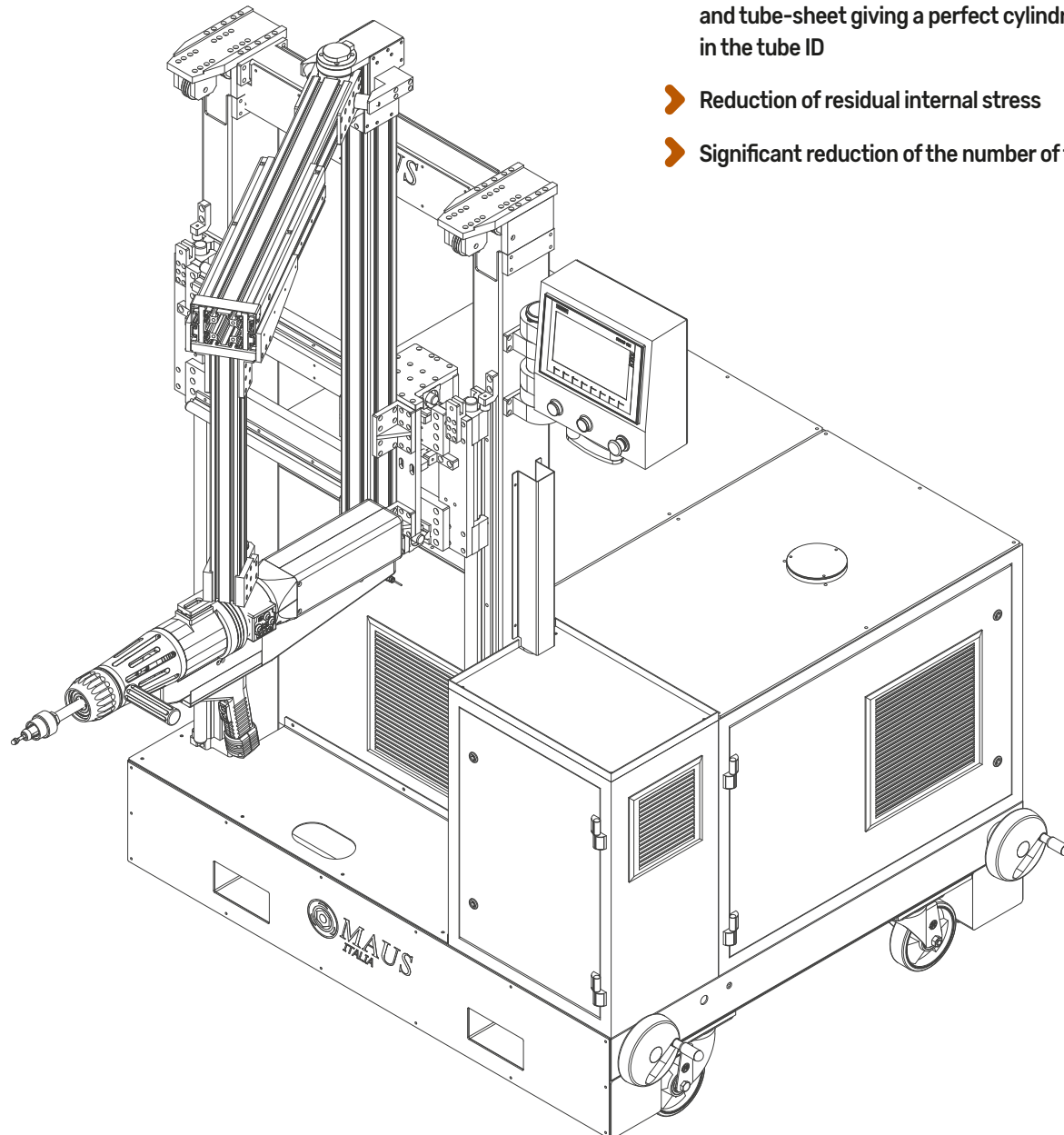
Parallel rolls





Tube expansion with parallel rolls

The process of tube expansion in the bundle's tubesheet using the parallel rolls tube expander meet quality, productivity and repeatability requirements which are essential to successfully pass the strict pressure test and pulling test at which the heat exchangers are subjected in the final testing stage to meet the strict construction standards.



Parallel rolls expansion advantages

- High productivity
- Quality of the expanded product
- Reduction of the tubes elongation (especially for thin tubes)
- Better quality of the expanded contact between the tube and tube-sheet giving a perfect cylindrical expanded shape in the tube ID
- Reduction of residual internal stress
- Significant reduction of the number of the tools required

Quadrol MRP-EH exclusive features

The **Quadrol MRP-EH** system is for tube rolling where a very high precision is needed, the parallel rolls technology also prevent the tube elongation caused during the wall reduction and the relative stress in the tube.

Variable speed brushless low voltage motor is installed on the rolling head

Revolutionary dedicated sensor to control the expanded diameter

Possibility to control the mandrel feeding speed directly on the main controller

Articulated arm equipped with "zero gravity system"

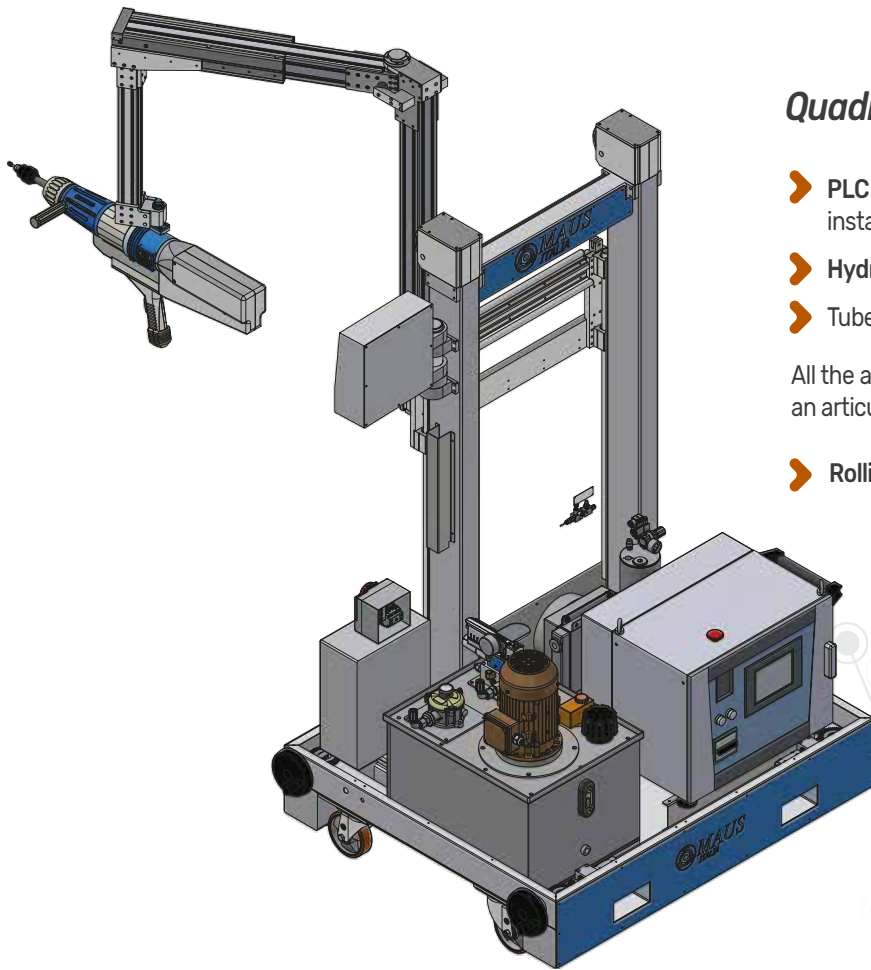
Possibility to save the machine setting program on external memory support

Possibility to save expansion data report



Optional

- Possibility to increase the rolling head size to achieve max 60 Nm rolling torque (**MRP EH-60**).
- The Quadrol MRP-EH can be equipped with a torque cell load installed directly on the mandrel line to measure and verify the actual torque used for the expansion of every tube.



Quadrol MRP-EH is composed by:

- PLC digital control system with remoted video display installed on trolley
- Hydraulic unit with cooling fan
- Tube expander pneumatic integrated lubrication system

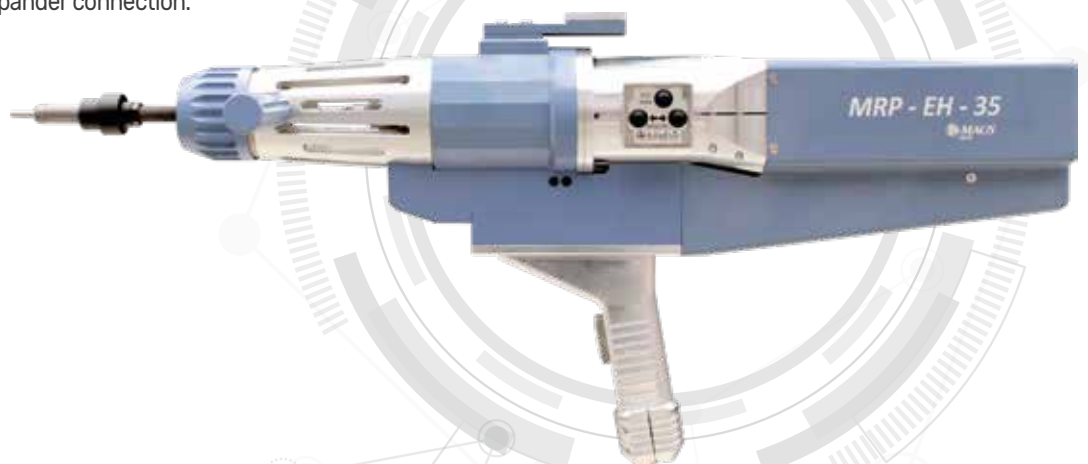
All the above is included in a dedicated trolley equipped with an articulated arm.

- Rolling head

MRP-EH-35 *Innovative rolling head*

The new MRP-EH rolling head is composed by:

- brushless rolling motor
- hydraulic cylinder
- linear sensor for mandrel position
- remoted control buttons for start/stop expansion cycle
- quick adapter for tube expander connection.





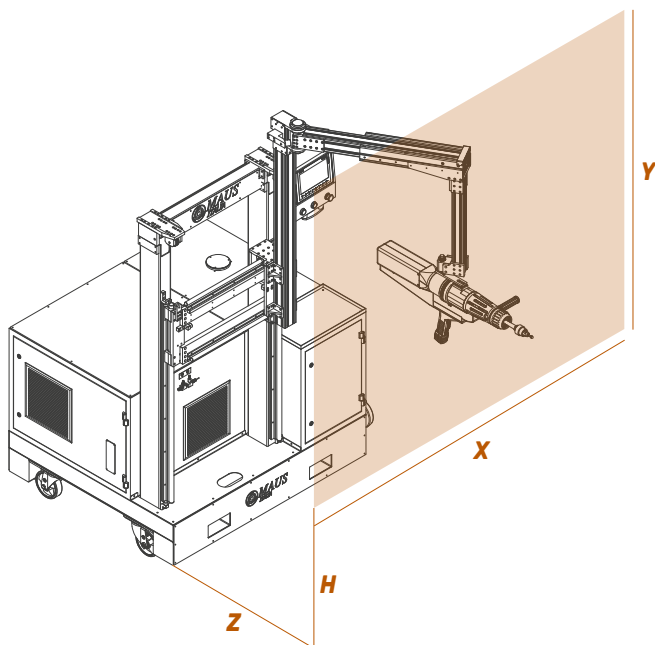
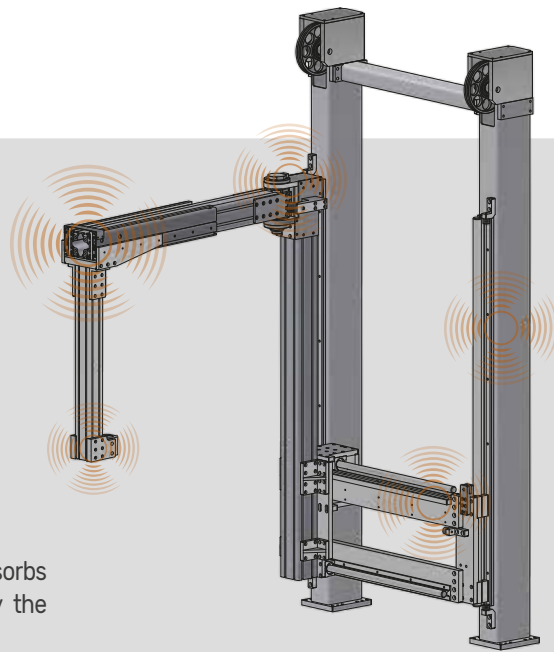
Reached diameter

The CNC program measure the tube diameter after expansion to have an absolute precision of reached tube diameter and the end of rolling process.



Zero gravity system

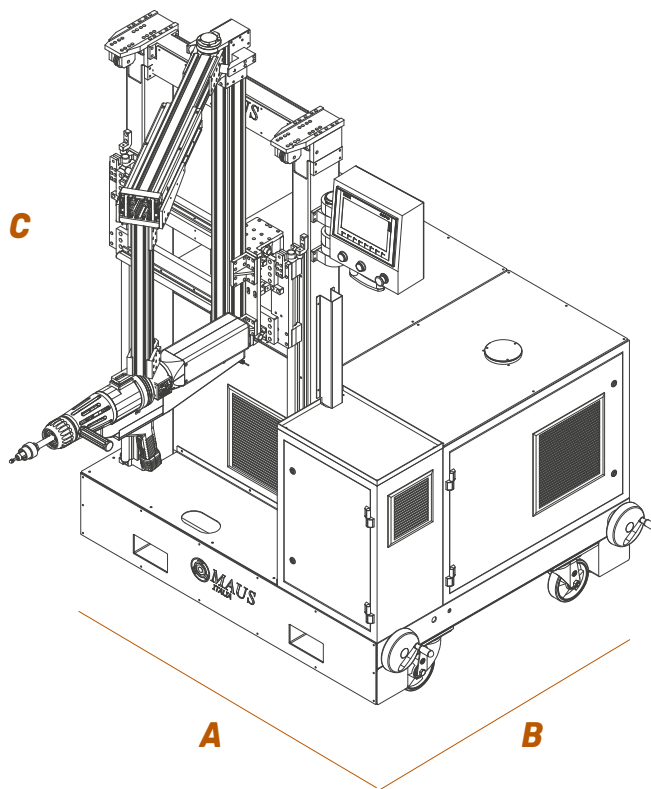
The articulated arm supports the weight of the rolling head and absorbs the torque generated during expansion to remove completely the operator effort and increase the productivity.



Articulate arm working area

X Range	mm / inches	1750 / 68.90
Y Range	mm / inches	820 / 32.28
H Minimum height	mm / inches	780 / 30.71
Z Stroke	mm / inches	500 / 19.69

Technical details



Quadrol MRP-EH

Maximum torque	Nm	35 (optional 60)
Mandrel rotation speed	rpm	from 0 to 600
Minimum mandrel feeding speed	mm / sec - inches / sec	0
Maximum mandrel feeding speed	mm / sec - inches / sec	8,0 / 0.31"
Mandrel square drive size	inches	1/4" - 3/8"
Installed power	kw	2,5
Voltage	Hz	400-3 phases / 50-60 Hz

Length A	mm / inches	1450 / 57.1
Width B	mm / inches	1350 / 53.2
Height C	mm / inches	2100 / 82.7
Weight	Kg / Lbs	700 / 1543

Shipping dimension of the crate

Length A	mm / inches	1550 / 61.0
Width B	mm / inches	1450 / 57.1
Height C	mm / inches	2300 / 90.5
Shipping weight	Kg / Lbs	about 950 Kgs / 2094

Heat exchanger's world

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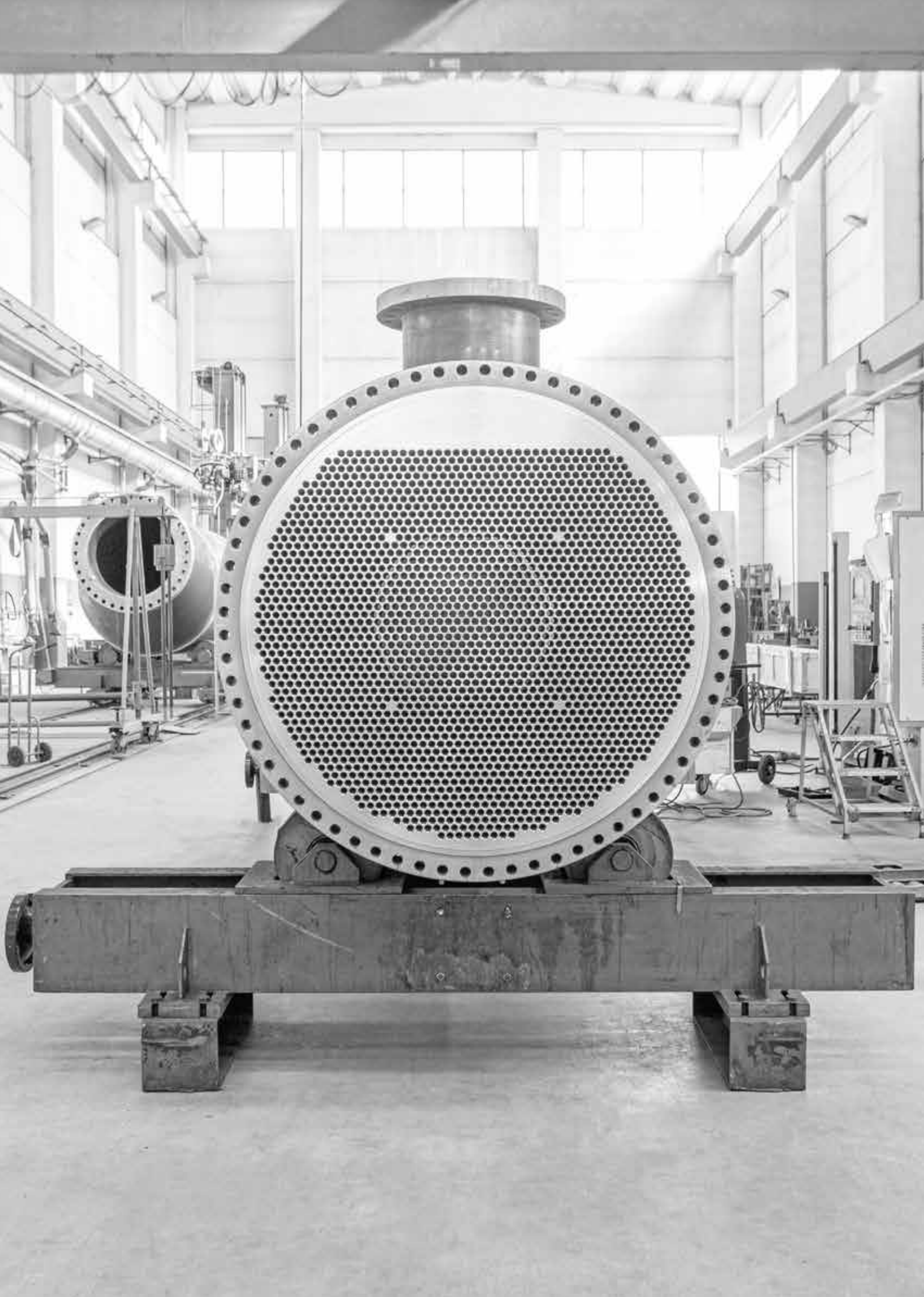


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