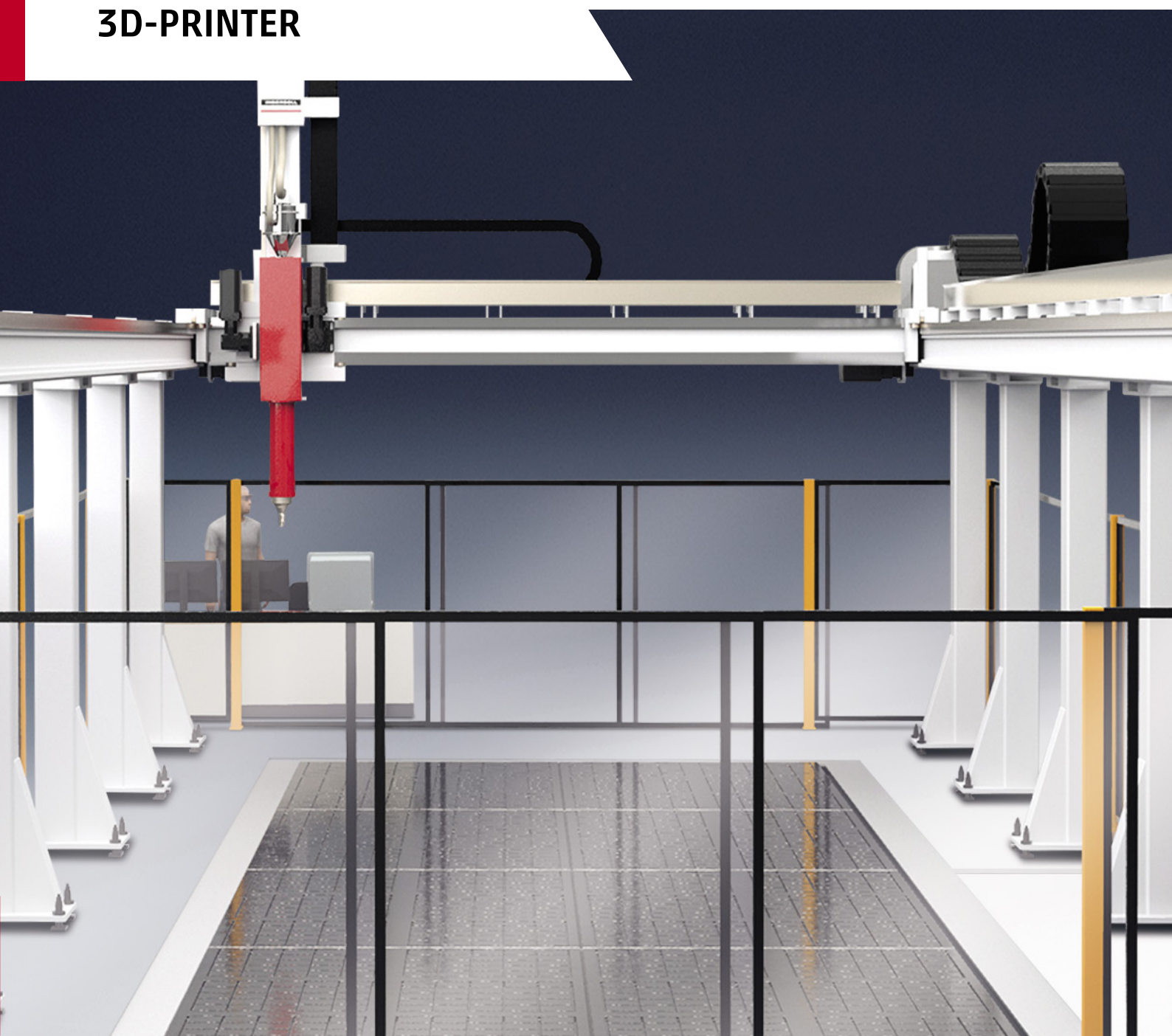




INGERSOLL

Machine Tools

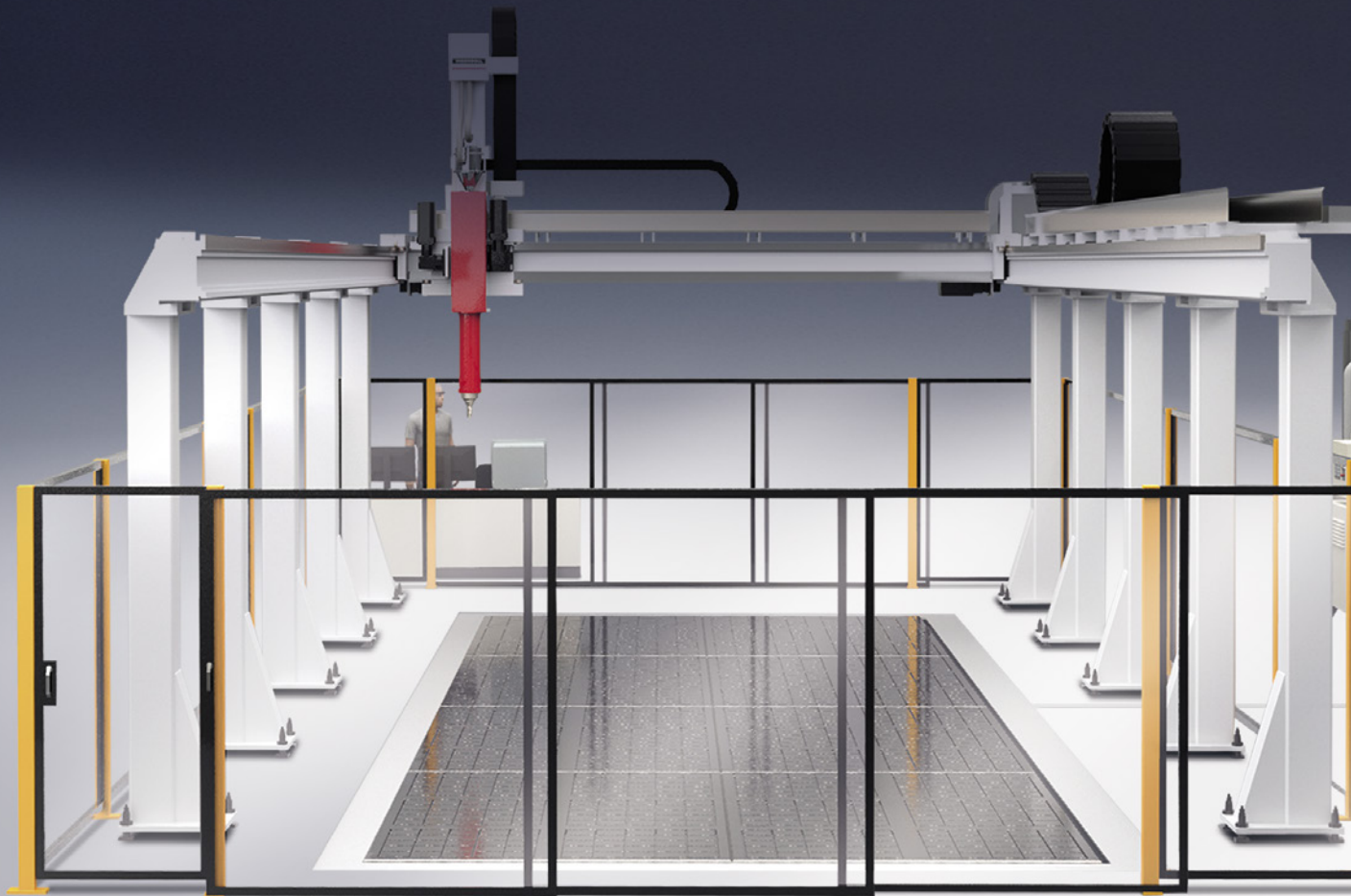
MASTERPRINT® LINEAR **LIGHT LARGE-FORMAT** **THERMOPLASTIC** **3D-PRINTER**



MASTERPRINT® LINEAR

XXL-FORMAT ADDITIVE TECHNOLOGY

ADOPTION MADE EASY



MasterPrint® Linear is Ingersoll Machine Tools' light version of its MasterPrint® technology conceived to ease the adoption of extra-large-format additive manufacturing for complex-geometry, durable, **thermoplastic components** for space, aerospace automotive and naval.

With its innovative lean positioner, MasterPrint® Linear **offers a reduced footprint** and requires lighter foundations, lessening the risks and the investment for your organization, while preserving the **core features and benefits** of MasterPrint® 3X.



MasterPrint® Linear can **print, overprint and reinforce hollow structures** at any fixed angle between 0° and 90°.

MasterPrint® Linear can then finish these structures with a **2-axis milling end effector** carried by the secondary gantry positioner.



BENEFITS



Capacity

3D print parts of large and extra-large volume



Feasibility

3D print parts of complex, contoured geometries



Quality

Match the mechanical and thermal properties for the same parts obtained with subtractive processes (rigidity, resistance, thermal expansion, vacuum tightness ...)



Productivity

Reduce the manufacturing time (from months to weeks)



High ROI/ Low TCO

Low Technology Acquisition Costs and low Operating Costs

MASTERPRINT® LINEAR FEATURES AND BENEFITS

01

Large Volume X – Y – Z Gantry Positioner

BENEFIT

- 3D print parts of large and extra-large volume (**Capacity**)
- Reduce the manufacturing time (from months to weeks) (**Productivity**)
- High ROI/ Low TCO
 - Low Technology Acquisition Costs
 - Low Operating Costs
 - Low Maintenance Cost

02

Sinumerik One (the latest generation of powerful reliable and widespread, industrial CNCs)

BENEFIT

- Low Operating Costs
- Low Maintenance Cost

05

Material delivery system

06

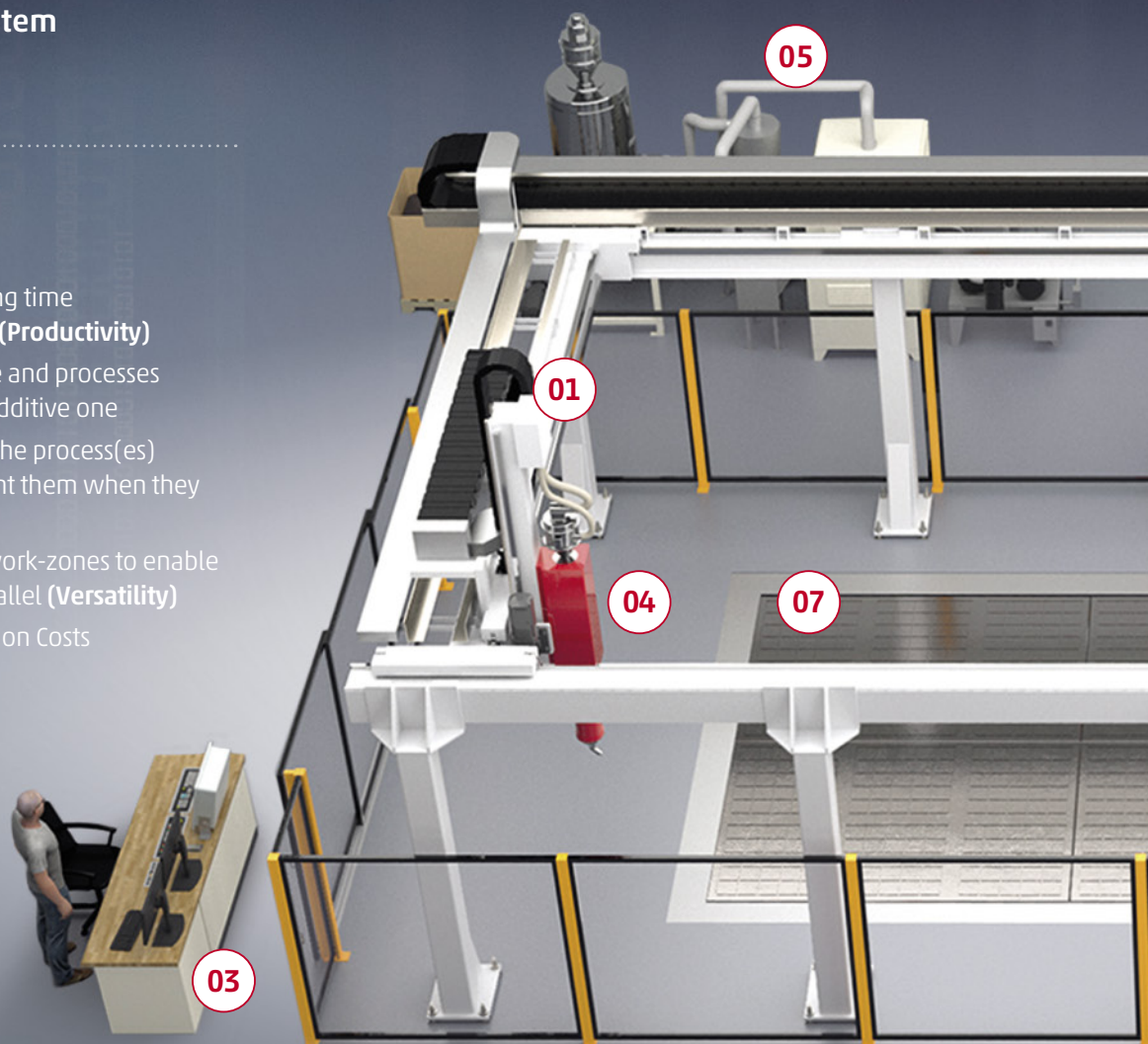
Milling Module

BENEFIT

- Reduce the manufacturing time (from months to weeks) (**Productivity**)
- Option to add subtractive and processes as complements of the additive one
- Possibility to select only the process(es) needed and to implement them when they become necessary
- Option to add multiple work-zones to enable running processes in parallel (**Versatility**)
- Low Technology Acquisition Costs
- High ROI/ Low TCO
 - Low Operating Costs
 - Low Maintenance Cost

07

Vacuum table



03

Operator console and CMTnet

BENEFIT

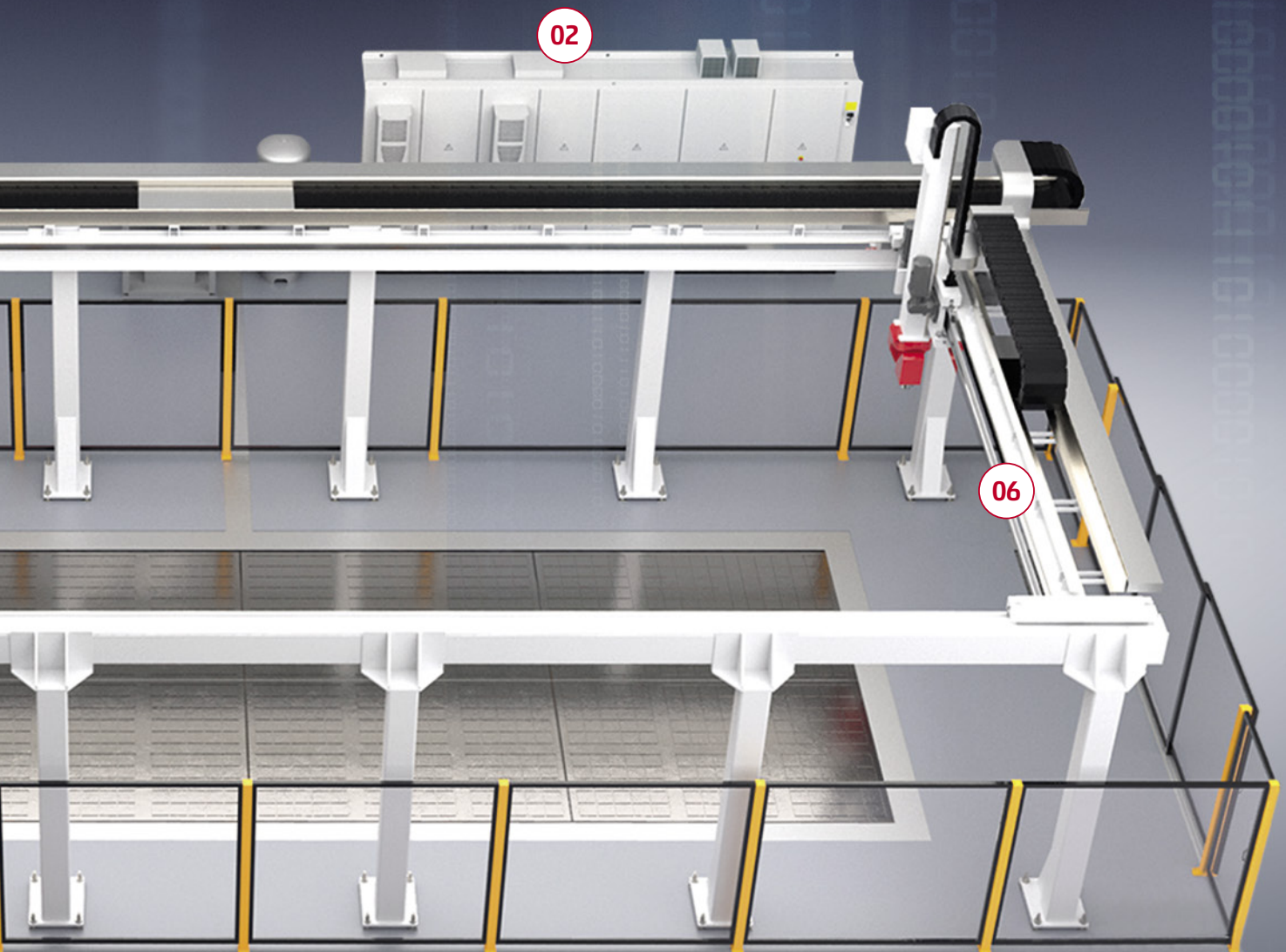
- Reduce the manufacturing time (from months to weeks) (**Productivity**)
- Ergonomics
- Low Operating Costs
- Low Maintenance Cost

04

Manually Adjustable Nozzle

BENEFIT

- 3D print part of complex contoured geometries (**Feasibility**)
- Match mechanical and thermal properties for the same parts obtained with subtractive processes (rigidity, resistance, thermal expansion, vacuum tightness ...) (**Quality**)
- Reduce the manufacturing time (from months to weeks) (**Productivity**)
- Low Operating Costs (**High ROI/ Low TCO**)





MASTERPRINT® LINEAR 150

150 lbs./hr.

Extruder

Throughput	150 lbs./hr. nominal (when using ABS 20%CF)
Barrel/Screw Size	30mm Diameter, L/D = 24 (~720mm Length)
Heat Zones	(4) barrel zones, (1) nozzle band (multiple for angled nozzles) heating to 500°C (PEI, PPSU, PESU capable)
Restart Assist Heater	Auto-indexing motorized heater
Manual Indexing Nozzle	0° - 90°

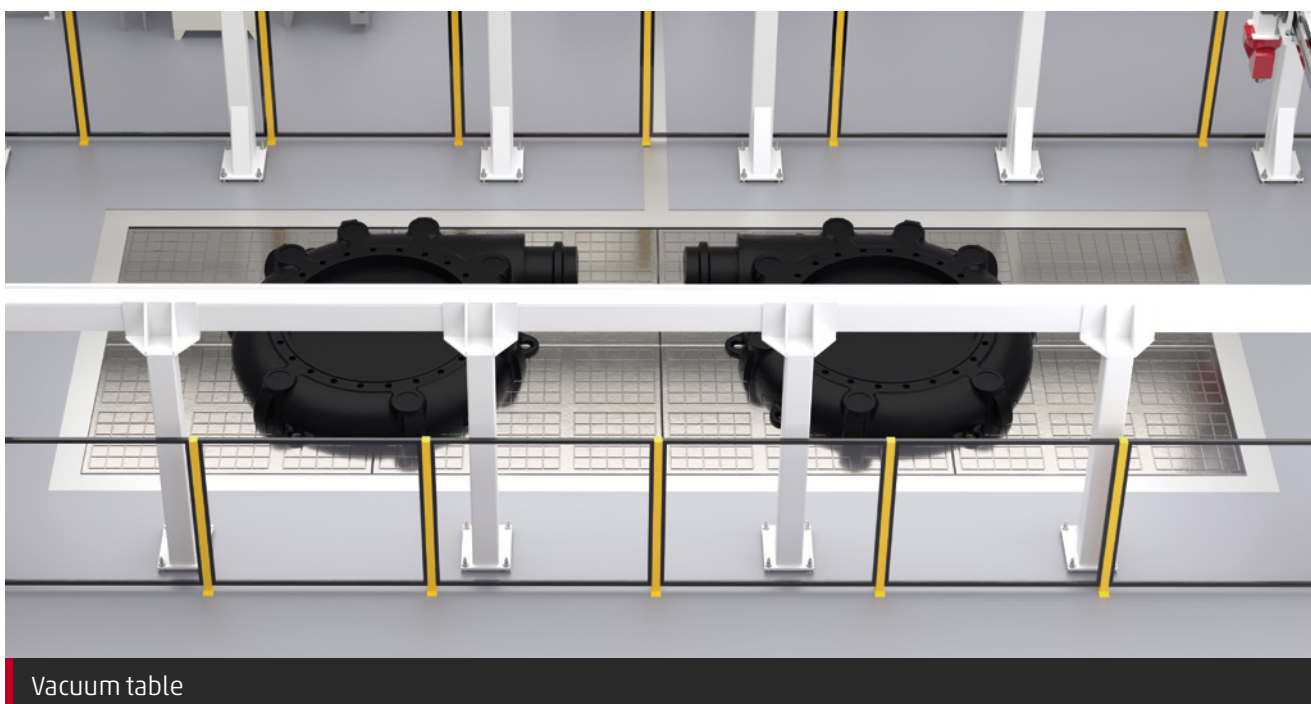
Material Delivery System

Material Ready Hopper	600 lbs. capacity raw material
Dryer and Handling System	150 lbs./hr. capacity prepared material
Capable of Delivering	150 lbs./hr. prepared material

AUXILIARY EQUIPMENT

All machine models can be equipped with:

- Milling Gantry
- Vacuum table



APPLICATION SECTORS

■ AIRCRAFT MANUFACTURERS



■ BOAT MANUFACTURERS



■ AUTOMOTIVE



Other sectors:

- DEFENSE CONTRACTORS
- MOLD MANUFACTURERS
- UNIVERSITIES
AND RESEARCH CENTERS
- NAVAL
- AUTOMOTIVE

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