

# GEMINI

## BI-ROBOTS CELL FOR 4.0 MANUFACTURING

### OUR STANDARD XXL MANUFACTURING MACHINE



Basic version without axis



Version with one robot linear axis and one workpiece linear axis



Integrating its oversize turntable  
(3 - 20 tons) with backlash

- Combining the **performance of direct control** (precision and real-time information processing)
- With the **potential of multi-channel** (2 robots and multi-axis)
- Around **numerical control** (allowing complex process control and simplicity of use)
- For **multi-technology manufacturing**
- Integrating the functions of the **control in process functions**
- Production of **XXL and high tonnage parts**
- **Agile manufacturing solution** (single part production without necessity of series) : ASD, Railway, Naval, Energy, MRO, Mould and Tooling ...

### SOME GEMINI REFERENCES ON VARIOUS PROCESSES

Hybrid laser additive manufacturing (powder and wire)



18-axis version for  
a workpiece up to  
L: 4 m \* Diam: 2 m

Machining & Metrology

or

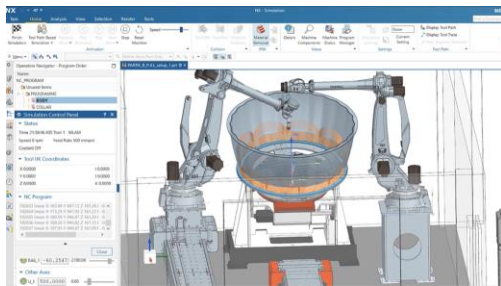
Additive manufacturing WAAM & machining or CND



20-axis version with  
linear axis  
horizontal and  
vertical for one  
workpiece  
up to H: 5 m \* Diam:  
2 m

## INDUSTRIAL ROBUSTNESS

- **Architectural machine customizable** according to dimensions, shapes, type of parts and **evolving in time** with additional axes
- **Multi-technologies** (on one application) & **multi-applications** (machining, bonding, additive manufacturing, NDT ...)
- **Sensor integration** allowing closed loops and adaptives robotics via CNC.
- **Full digital thread** : CAE, CAM, CAD software, digital twin, traceability...
- **Industrial maintainability** : machine tool maintainable by your services + remote diagnosis



NX CAM



A design based on the **CNC, Direct Control and Multi Channel** expertise of VLM ROBOTICS which provides :

- **agility in production**
- **precision of the NDT control**
- **process control via closed loops and synchronous actions**
- **speed of Direct Control**



VLM ROBOTICS' **discriminating expertise** in motion control certified by the **Siemens Solution Partner** label

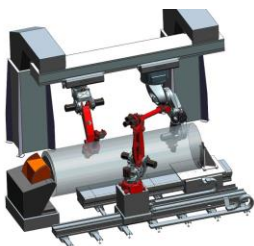


## MACHINE CONFIGURED ACCORDING TO YOUR BUSINESS REQUIREMENTS

Turnkey solution delivered!

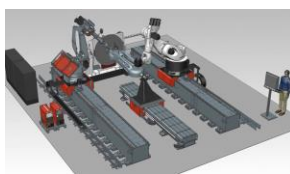
### DESIGN

- **Types of parts H, Diam (x in m)** and weight (x tons)
- **Number of axes** (linear, vertical, gantry, AGV)



### PROCESSES

- **Technologies** : electric arc, laser, cold spray, fsw, machining, finishing, non-contactless control, bonding, etc.
- **Process and part sensors** : T°, P, UT, IR, scanner, camera, etc. (depending on the process to be controlled)



### DIGITAL CONTINUITY

- **Programming** : CAD, process simulation, CAM + in-process monitoring and control
- **Industrial traceability** : data fusion : (trajectory, process and product)
- **Connected, secure machines** ... remote maintenance or even cloud computing
- **Edge computing** : data analytics (true machine 4.0) and AI
- **Digital Twin** : machine, process, parts