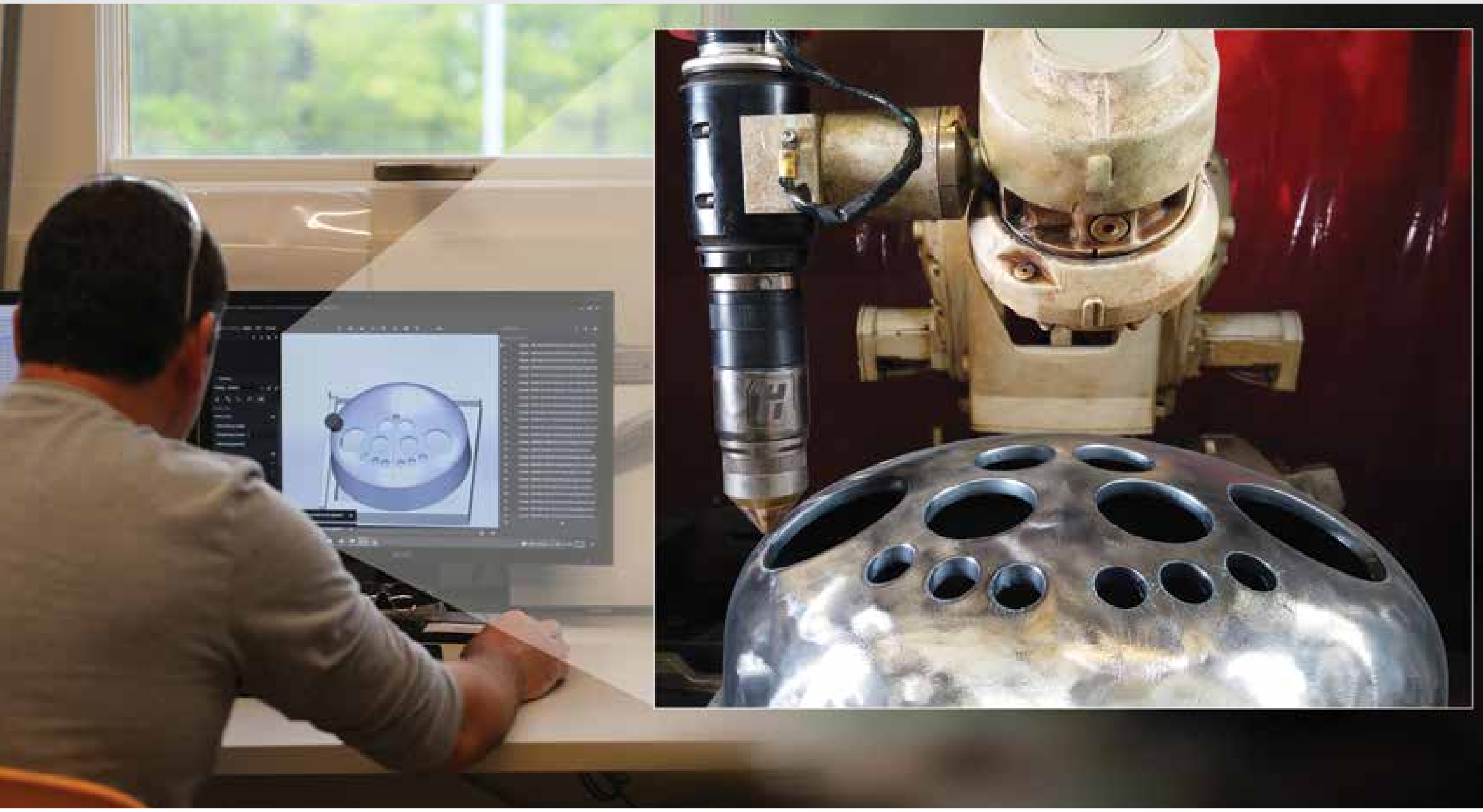
Robotmaster®
OFFLINE PROGRAMMING SOFTWARE FOR ROBOTS

Hypertherm Associates
Software Group

The best way to program your plasma cutting robot



What is OLP?

Offline Programming (OLP) or Offline Robot Programming (OLRP) software is a robot programming method that allows users to program a robot from a computer using software rather than using the traditional robot controller method.

What is Robotmaster?

Robotmaster is an offline programming software that enables manufacturers to easily program their robot for plasma cutting applications without the need for robotics, programming, or plasma cutting expertise.

How does it work?

1. **Import CAD model**
2. **Input material type and thickness**
3. **Generate toolpaths**
   Robotmaster automatically creates toolpaths based on part profiles leveraging fully integrated Hypertherm® cut charts.
4. **Simulate cutting process**
5. **Resolve robotic errors and optimize**
   Robotmaster has a variety of tools to automatically resolve kinematic errors and optimize for minimal cycle time.
6. **Generate robot code**

Why OLP

Ease of use
Reduced the need for robotics, teach pendant programing, robotic languages, and cutting process expertise with intelligent OLP that is built around the user experience.

Increase uptime
Keep the robot in production while new programs are created enabling quick changeovers and high mix production.

Reduce programming time
Generate robot programs for difficult to teach complex shapes including robotic systems with multiple robots within a few clicks.

Risk management
Analyze the workspace, determine any robot reach limitations and potential costly collisions in advance to ensure safe and optimal results.

Simulation environment
Simulate the robotic cutting system and program to understand robot movement, process results, and expected cycle time.

Error resolution and program optimization
Leverage smart auto correction and optimization tools to resolve robotic errors with ease and reduce cycle time.

Robotmaster OLP for plasma cutting

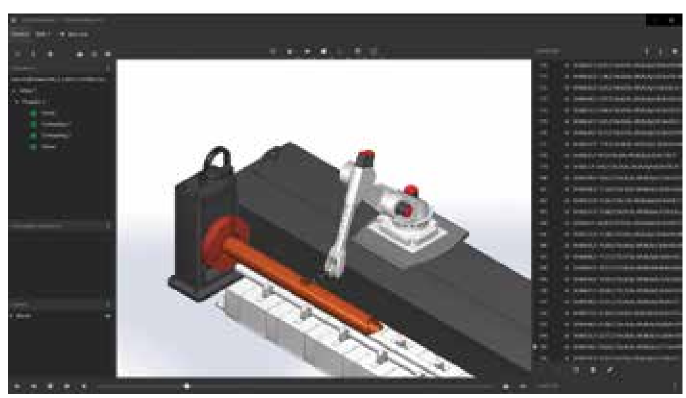
Robotmaster with integrated Hypertherm cut intelligence

Embedded Cutting Process Expertise
Manual plasma cutting and teach pendant programming is dependent on skilled labor, which is in short supply. By automating the plasma cutting process and using Robotmaster to program the robot, the need for plasma cutting process expertise is eliminated. This is achieved through Robotmaster's embedded cutting strategies that are automatically recommended based on the selected material and thickness, ensuring optimal cut outcomes.

Achieve high-quality, weld-preparation ready cuts
Easily achieve optimum edge quality and consistent cuts that are weld preparation ready with the embedded cutting technique specific for Hypertherm plasma hardware.

Reduce secondary operations
Automated plasma cutting achieves a high-quality cut resulting in minimal to no post-processing. This relieves labor time for other tasks.

Not all offline programming software is built the same. Robotmaster maximizes cutting performance by automatically applying optimized Hypertherm cutting process parameters to simplify cutting and reduce the need for operator cutting expertise.



Robotmaster eliminates the need for robotics, robot programming/teaching, and process expertise. Unleash the potential of plasma cutting with Robotmaster fully integrated cut charts.

No expertise required plasma robot programming

Once the operator inputs the material type and thickness, Robotmaster offline programming automatically recommends the ideal plasma parameters based on years of cut parameter testing and development. This ensures a good outcome and eliminates the need for plasma cutting expertise from the operator.

Operator Inputs

Material Type + **Material Thickness**

Plasma parameters based on integrated Hypertherm cut intelligence

Cut path - Torch orientation, cut direction, kerf compensation

Accurate cat path - cut height, initial height sensing (IHS)

Arc on and off controls

Multi touch sensing

Robotmaster OLP in action

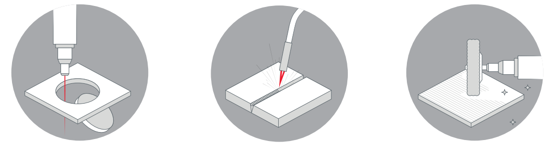
A pressure vessel dome manufacturer transitioned from using handheld plasma to a robotic plasma cutting solution programmed by Robotmaster. Each dome head is about 24" in diameter and 3/8" thick.

When performing the cutting process by hand, the operator had to create a cut guide layout drawing then cut each hole by hand and fine tune each one with a bevel. This took a skilled operator a total of 97 minutes

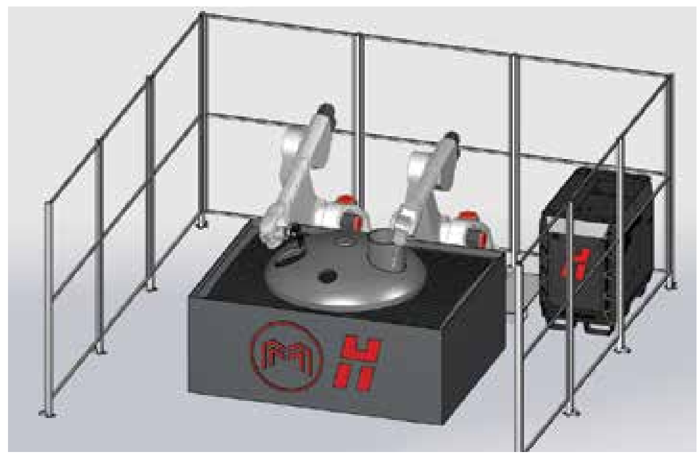
The same part was cut on a robotic plasma solution programmed with Robotmaster in 28 minutes. Once the initial program was created, subsequent parts only took 16 minutes.

The value stream

Robotmaster is the ideal solution for programming robotic systems equipped with Hypertherm plasma, but it is capable of more than that. With Robotmaster, you can program the complete value stream from cutting to welding to grinding and finishing.



Plasma cut | Weld | Grind/Finish



>1 Hour of skilled labor time released for other primary operations.

HANDCUT

97 minutes

VS

ROBOT

programmed with Robotmaster OLP

16 minutes

SHAPING POSSIBILITY®

PLASMA | LASER | WATERJET | AUTOMATION | SOFTWARE | CONSUMABLES

For more information, visit: www.robotmaster.com/applications/cutting/

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Environmental stewardship is one of Hypertherm Associates' core values. www.hyperthermassociates.com/environment

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