

CNC Plasma & Oxy-Fuel Cutting

Choose the cutting process before choosing a portable, table or gantry platform. Plasma addresses suitable electrically conductive materials; conventional oxy-fuel is associated with suitable carbon-steel work. Material, required edge, production thickness and plate handling determine the torch package, source and site arrangements that need confirmation with each machine format.



FY-GCM01 gantry platform; official source product image.

THREE DECISIONS BEFORE YOU SHORTLIST

01 Choose the process by material

Specify the actual material and production cut. Compare plasma for suitable conductive metals and oxy-fuel for appropriate carbon-steel work; do not assume one torch setup handles every alloy or thickness.

02 Separate capacity definitions

Ask for a cutting chart matched to the proposed source and torch. Identify regular piercing thickness, edge-start conditions, required edge quality and output rather than relying on a maximum severance figure.

03 Plan the whole installation

Choose portable, table or gantry layout from plate size, loading and workshop space. Include rails, supports, foundations, extraction or water arrangements and the responsibility for site-prepared items.

Compare platforms and process choices

OPTION / PLATFORM	WHEN TO SHORTLIST	CONFIRM BEFORE ORDERING
FY-PCM01 portable	Flexible CNC plate-cutting layouts using a portable-format motion platform.	Effective travel, track/support arrangement, controller, torch package and separate plasma source requirements.
FY-TCM01 table	A dedicated table-style cutting station with planned material support.	Bed and support layout, water/extraction arrangement, torch height control, controller and source.
FY-GCM01 gantry	Larger planned rail layouts with dedicated plate handling and installation space.	Usable width/travel versus overall rails, foundations, lifting access, drive and torch arrangement.
Plasma process	Suitable conductive-metal cutting, with quality and output matched to the source.	Production piercing, current, gas/air quality, torch consumables and material-specific cut chart.
Oxy-fuel process	Appropriate carbon-steel plate applications using matched oxygen/fuel and torch equipment.	Material suitability, thickness, fuel, nozzle, ignition, preheat and safe site gas arrangements.
Confirmed dual-process package	Jobs genuinely requiring both plasma and flame processing on the selected platform.	Included torches, source, utilities and mode setup; do not assume both processes are standard.

Effective area is not the rail footprint

A quoted cutting width and travel do not define the complete installation. Check rails, foundation, loading access, service space and the plate support arrangement together.

A machine frame is not the full package

Some configurations require customer-prepared supports, rails or utilities. Itemize the CNC platform, source, torches, controllers, consumables, extraction and all installation responsibilities.

Prepare a useful application brief

Material and production thickness

List grades, typical and maximum thicknesses, and the frequency of each job. State whether parts require production piercing or can start from an accessible plate edge.

Drawings and cut quality

Provide cutting files, smallest features, edge and dimensional acceptance, secondary finishing needs and target daily output. These requirements determine the useful process window.

Plate handling and area

Record normal plate size and weight, effective cutting area and lifting method. Map rails or table supports separately from usable travel and service access.

Source and torch package

Identify plasma, oxy-fuel or a required combination. Request matched current/source, torches, consumables, height control and the applicable cutting charts for review.

Site utilities and supports

Describe electricity, earthing, available air or process gases, oxygen/fuel arrangements and extraction. Assign responsibility for foundations, rails, supports and water or fume-control systems.

Controls and acceptance

Confirm controller language, file/nesting workflow, installation scope and spare parts. Define a sample test with material, start method, cut settings and measurable quality criteria.

A PRACTICAL ROUTE TO A CONFIRMED CONFIGURATION

01 Define

Send plate materials, production thickness, drawings, quality targets and the intended loading arrangement for review.

02 Choose

Compare the cutting process first, then match portable, table or gantry format to the site.

03 Prove

Review the matched source chart and representative cuts, recording start method, settings, quality and output.

04 Agree

Finalize the complete package, site-prepared items, installation drawings, utilities and documented acceptance responsibilities.

The published model sizes are configuration references. Actual cutting performance depends on the matched source, torch, process and material. Confirm effective travel, site works, utility and gas arrangements and all supplied components. This selection guide is not an operating procedure or approval of a particular installation.

OFFICIAL REFERENCES

1. Plasma and oxy-fuel range
2. CNC cutting process comparison
3. Current download library