

Laser Marking Machines

Select a marking platform by how the part reaches the laser, then choose the source and optics for the required mark. This guide compares eight published platforms, from fixed workstations to handheld and production-line systems. Material tests, fixture clearance and a complete cycle-time target should guide the final configuration.



FY-LMM03 split desktop platform; official product reference image.

THREE DECISIONS BEFORE YOU SHORTLIST

01 Start with the mark

Identify the exact material, coating and finish. Define contrast, depth, artwork and code readability before comparing sources; a cabinet shape or nominal power does not establish the result.

02 Choose the handling method

Compare a fixed workstation, separate desktop units, handheld access or moving-line integration. Check the largest part and fixture together, including loading movements and access to the marking position.

03 Validate the full cycle

Test representative parts using the proposed source, lens and fixture. Include loading, positioning and inspection in cycle time, and confirm extraction and the approved laser-protection arrangement for the installation.

Compare eight marking platforms

OPTION / PLATFORM	WHEN TO SHORTLIST	CONFIRM BEFORE ORDERING
FY-LMM01	Dedicated floor-standing open workstation for repeated marking jobs.	Largest part, fixture access, source, field and protection for the open work zone.
FY-LMM01-C	Enclosed floor-standing format when the part and loading method suit an enclosure.	Door opening, internal part-and-fixture envelope, extraction and documented protection configuration.
FY-LMM02	Integrated desktop station for bench-based loading and a compact control layout.	Bench space, column clearance, source, lens and supplied computer/software package.
FY-LMM02-C	Enclosed desktop platform with a defined internal working space.	Door access and complete part-and-fixture clearance, including projecting features.
FY-LMM03	Split desktop layout with a separate marking stand and control cabinet.	Space for both units, protected cables, manual working-distance adjustment and optional fixtures.
FY-LMM04	Marking integrated with moving products on a production line.	Trigger, encoder, product spacing, marking window, data transfer and full line trial.
FY-LMM05	Handheld access for large or fixed parts that cannot readily be table-loaded.	Exact variant, head access, positioning, cable route, controlled access and extraction.
FY-LMM07	Foldable desktop layout where operating and storage arrangements both matter.	Deployed footprint, part access, moving frequency and protection at the operating location.

Platform and source are separate choices

Fiber, MOPA, CO2 and UV respond differently to materials and finishes. Compare them using the same acceptance target and representative parts; no source is universal.

Keep the model documents

Eight existing model application PDFs remain useful. The handheld file covers FY-LMM05-1 specifically; confirm that variant before applying its guidance to another FY-LMM05 configuration.

Prepare a useful application brief

Material and finish

Provide the exact grade, coating, colour and surface treatment, with representative samples. These details influence source selection and the marking process window.

Artwork and acceptance

Send the actual logo, text or code; specify dimensions, smallest feature, contrast or depth, readability method and durability requirement for approval.

Part and fixture envelope

Record the largest part, fixture, marking position and loading movement. Include cylindrical work and any proposed rotary attachment or access constraints.

Production workflow

State batch size, changeover frequency and target complete cycle time. For moving lines, add product spacing, line conditions and code-data integration needs.

Optics and workspace

Define the required marking field with artwork size and detail. Confirm lens working distance, table or bench space, cabling and operator access.

Installation and supply

Confirm electricity, extraction, laser protection, software, computer and fixture responsibilities. Identify which accessories and acceptance records must be included in the quotation.

A PRACTICAL ROUTE TO A CONFIRMED CONFIGURATION

01 Define

Send material, artwork, part dimensions and the acceptance target before requesting a source or machine.

02 Shortlist

Match the handling method to a platform, then review the source, lens and fixture together.

03 Test

Approve representative samples and record settings, mark quality and complete cycle time for the proposed configuration.

04 Confirm

Agree the supply list, protection arrangement, installation requirements and acceptance method before placing the order.

Model codes identify mechanical platforms, not a universal source, power or marking capability. Final source, field, fixtures, controls and protective measures require application review. These selection notes do not replace the supplied machine instructions or establish a safety classification or certification.

OFFICIAL REFERENCES

1. Marking platforms
2. Laser source comparison
3. Field and lens guide
4. Existing model documents