



The AREX400 is the new generation of high performance Laser Markers based on Fiber Laser technology developed to achieve the highest reliability even in harsh manufacturing environments.

Because of its' exceptionally small and robust scanhead machined from solid aluminum, the AREX400 is unbeatable in tight space installations where a small footprint is mandatory and reliability is a must.

The AREX400 incorporates the new LASER GREENSPOT, the programmable visual indicator for immediate and effective visible process feedback directly on the marking area.

The totally new embedded controller is now offering improved performances, cost effective embedded communication protocols (TCP/IP, Ethernet IP, Profinet), reduced noise level down to 65 dB and a new Safety Laser Off (SLO) feature.



LASER MARKING

HIGHLIGHTS

SCANHEAD

- Ultra-compact, lightweight
- Robust design for durability even in harsh environments
- IP64 protection against dust, lubri-coolant and oil droplets
- High resistance conduit suitable for robotic applications
- Laser marking GreenSpot
- Lens protective cup



CONTROLLER

- All-inclusive design; no external PC or hardware required
- High performance Embedded PC
- High reliability, high resolution full-fiber-laser technology
- Space saver form factor 19 inch 2.5U
- Cost effective embedded communications protocols:
 - TCP/IP, Ethernet IP, Profinet
- Fully compatible with MARVIS (Mark and Validate Integrated Solution) for zero-defect code marking
- Low noise air cooling system

APPLICATIONS

TRACEABILITY

- Excellent contrast high readability text and codes on metals and color-enhanced thermoplastic materials
- Quick and clear black laser annealing, without cracks or thermal damages
- High speed deep engraving



BRANDING AND TEXTURING

- Personalization and branding with high resolution logo and graphics
- Flexible and cost effective aesthetic permanent marking



Quick Installation and Setup

AREX400 design and configuration dramatically simplifies and speeds up machine design and system integration

- New generation of Embedded Marking Controller (EMC) up to Quadcore 1.83 GHz with latest version of LIGHTER Suite ensures quick and easy installation, setup, control and system diagnostics, even remotely via Ethernet TCP/IP
- Built-in step motor controller, completely integrated in software editor, dramatically simplifies integration of rotary indexers, x-y tables and z axis, compatible with Micrometric Displacement Sensor for auto-focus operations
- Twin front panel USB for quick and easy system update and layout transfer

Flexible Programming and Control

LIGHTER Suite, with its intuitive and easy-to-learn interface, simplifies the development of a complete and cost effective Laser Marking Station for OEM and Machine builders.

AREX400 can be operated in a STAND ALONE MODE with built-in control and software resources, and in a MASTER-SLAVE mode with a with supervising computer for advanced network-oriented Laser Marking Applications.

Main built-in features are:

- Advanced Graphical Layout
- Local and Remote laser diagnostic
- Local and Remote I/O and axis control
- Local and Remote ActiveX
- Ethernet protocol for easy integration PLC and industrial environments
- Marking On-the-Fly capabilities
- Native support for Ethernet TCP/IP, Ethernet IP and Profinet communications



AREX SERIES

| AREX 400 | | AREX 410 | AREX 420 | AREX 420MW | AREX 430 | AREX 450 |
|------------------------|------|---|----------|------------|----------|----------|
| Nominal Power | [W] | 10 | 20 | 20 | 30 | 50 |
| Peak Power (max) | [kW] | 10 | 10 | 12 | 10 | 10 |
| Pulse Energy | [mJ] | 1,0 | 1,0 | 0,5 | 1,0 | 1,0 |
| Modulation | KHz | 2-200 | 2-200 | 20-500 | 2-200 | 2-200 |
| Pulsewidth | ns | 100 | 100 | Adj 4-250 | 100 | 100 |
| Marking Capabilities | | Static, on the rotary indexer, on the fly (marking in motion); Extended-Layer (combination with X,Y Axis) | | | | |
| Fiber Length | [m] | 3 | | | | |
| Integration | | Up to 4 mechanical axis driving capabilities (built in stepper motors controller up to 100 KHz) Up to 10 digital inputs and 10 digital output fully programmable dedicated connectors for Encoder, Photocell, Distance sensor, Vision device, bar code readers, etc. | | | | |
| Interfaces | | 6 x USB, 3 x Ethernet (PRO VERSION), 1 x RS-232, Digital I/O | | | | |
| Protection Rating | | Head: IP64; Controller: IP31 | | | | |
| Power Supply | | 100/240 VAC – 50/60 Hz – 400 W (MAX) | | | | |
| Cooling | | Low noise, Forced air | | | | |
| Head Dimensions/Weight | | 89 mm x 96 mm x 311 mm – 3 kg | | | | |
| Controller Dimensions | | 427 mm x 111 mm x 435 mm – 16 kg | | | | |

AREX400 PULSED

High Performance and Reliability

- Ultra compact, high protection rate scanhead, IP64 for maximum performance even in aggressive environments
- Complete power range from 10 W to 50 W, long pulse, high energy fiber laser source
- Standard Datalogic I/O Interface
- Integrated Windows-based marking controller, no external PC needed
- Safe Laser Off (SLO) ready for ISO 13849-1 and ISO 11553-1 integrations
- LaserMarking Green Spot technology
- Low noise cooling system
- RS-232 Ethernet TCP/IP, Ethernet IP, ProfiNet native protocols

APPLICATIONS

- High contrast marking & engraving for branding & traceability on: Stainless steel, high-grade steel, steel, carbon steel, copper, iron, ferrous metals, magnesium, aluminum, brass, gold, silver, platinum, titanium
- 'Aesthetic' plastic marking
Polycarbonate (PC) Polysulfone (PSU), Polyphenylene sulfide (PPS)
- 'Non- aesthetic' plastic marking for traceability
Polystyrene (PC), Styrene acrylonitrile (SAN), Acrylonitrile Butadiene Styrene (ABS), Polyethylene terephthalate (PET) Polybutylene terephthalate (PBT)
- Additivated plastic marking
Polyamide (PA), Polyoxymethylene (POM) Polypropylene (PP), Polyethylene (PE) and many other

INDUSTRIES:

AUTOMOTIVE, INDUSTRIAL ELECTRONICS, PRECISION MECHANICS, SURGICAL TOOLS AND IMPLANTS



AREX400 MOPA

High Flexibility and Marking Repeatability

Additional features:

- Linear power range from 0.1 W to full power for precise marking even on sensitive materials
- Pulse-width adjustment from 4 ns to 250 ns for best process optimization and repeatability
- High repetition rate up to 500 KHz for faster marking and accurate texturing
- High peak power for extended process capability
- Accurate Energy control for maximum marking repeatability

APPLICATIONS

- High precision contrast marking and annealing for branding & traceability on: stainless steel, high-grade steel, steel, carbon steel, iron, ferrous metals, magnesium, aluminum, brass, gold, platinum, titanium ...
- 'Aesthetic' plastic marking for branding and texturing Polycarbonate (PC) Polysulfone (PSU), Polyphenylene sulfide (PPS), Polyether ether ketone (PEEK)
- High contrast plastic marking for traceability Polystyrene (PS), Styrene acrylonitrile (SAN), Acrylonitrile Butadiene Styrene (ABS), Polyethylene terephthalate (PET), Polybutylene terephthalate (PBT) Polyoxymethylene (POM)
- Color enhanced plastic Polyamide (PA), Polypropylene (PP), Polyethylene (PE) and many other
- Coating removal/night & day application
- Color marking on metal

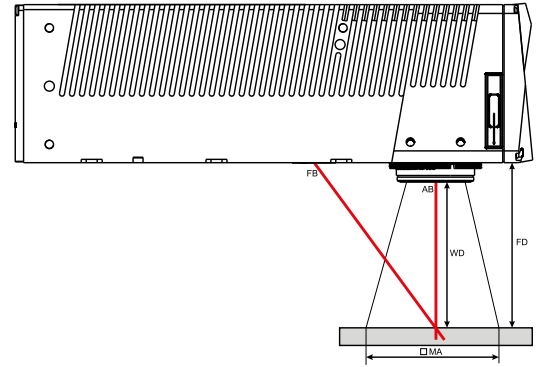
INDUSTRIES

AUTOMOTIVE, AEROSPACE, INDUSTRIAL ELECTRONICS, MOBILE & SEMICON ELECTRONICS, PRECISION MECHANICS, WATCH & JEWELRY, SURGICAL TOOLS & IMPLANTS



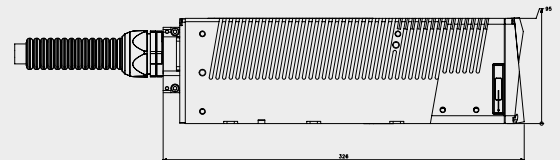
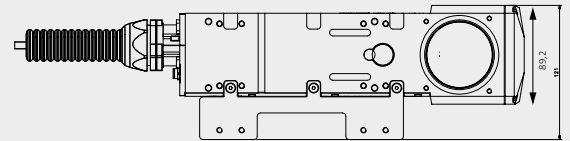
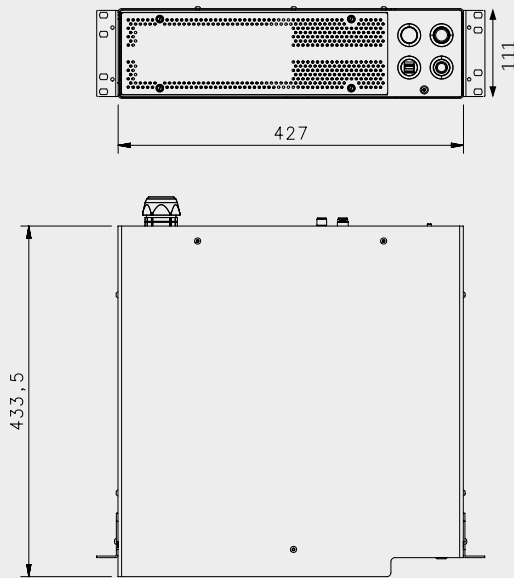
MODEL SELECTION AND ORDER INFORMATION

| ORDERING CODES | MODEL | PRODUCT DESCRIPTION |
|----------------|---------------------------------|--------------------------|
| 985180104 | AREX 110-364 Fiber Laser Marker | AREX 410 with 160S |
| 985180103 | AREX 110-964 Fiber Laser Marker | AREX 410 with 100L |
| 985180105 | AREX 110-664 Fiber Laser Marker | AREX 410 with 254S |
| 985180124 | AREX 110-354 Fiber Laser Marker | AREX 410 BASIC with 160S |
| 985180125 | AREX 110-654 Fiber Laser Marker | AREX 410 BASIC with 254S |
| 985180107 | AREX 120-364 Fiber Laser Marker | AREX 420 with 160S |
| 985180106 | AREX 120-964 Fiber Laser Marker | AREX 420 with 100L |
| 985180108 | AREX 120-664 Fiber Laser Marker | AREX 420 with 254S |
| 985180110 | AREX 120-A64 Fiber Laser Marker | AREX 420 with 330L |
| 985180111 | AREX 120-B64 Fiber Laser Marker | AREX 420 with 420L |
| 985180126 | AREX 120-354 Fiber Laser Marker | AREX 420 BASIC with 160S |
| 985180127 | AREX 120-654 Fiber Laser Marker | AREX 420 BASIC with 254S |
| 985180113 | AREX A20-364 Fiber Laser Marker | AREX 420MW with 160S |
| 985180112 | AREX A20-964 Fiber Laser Marker | AREX 420MW with 100L |
| 985180114 | AREX A20-664 Fiber Laser Marker | AREX 420MW with 254S |
| 985180116 | AREX A20-A64 Fiber Laser Marker | AREX 420MW with 330L |
| 985180117 | AREX A20-B64 Fiber Laser Marker | AREX 420MW with 420L |
| 985180118 | AREX 130-364 Fiber Laser Marker | AREX 430 with 160L |
| 985180119 | AREX 130-764 Fiber Laser Marker | AREX 430 with 254L |
| 985180120 | AREX 130-A64 Fiber Laser Marker | AREX 430 with 330L |
| 985180121 | AREX 130-364 Fiber Laser Marker | AREX 450 with 160L |
| 985180122 | AREX 150-764 Fiber Laser Marker | AREX 450 with 254L |
| 985180123 | AREX 150-A64 Fiber Laser Marker | AREX 450 with 330L |



| F-THETA MODEL | Marking Area [MA] mm ² | Marking Area [MA] mm ² | FIXING DISTANCE [FD] mm | WORKING DISTANCE [WD] mm |
|---------------|------------------------------------|-----------------------------------|-------------------------|--------------------------|
| | AREX 410 AREX 420 AREX 420MW | AREX 430 AREX 450 | | |
| | mm | mm | mm ² | mm ² |
| F = 100L | 50 x 50 | X | 141 | 99 |
| F = 160S | 100x100 | X | 197 | 183 |
| F = 160L | X | 100x100 | 212 | 176 |
| F = 254S | 140x 140 | X | 300 | 280 |
| F = 254L | X | 170x170 | 367 | 296 |
| F = 330L | 220x 200 | 210x210 | 471 | 388 |
| F = 420L | 285x285 | | 561 | 492 |

DIMENSIONS



ACCESSORIES

| ORDERING CODES | MODEL |
|----------------|--|
| 937600124 | MARVIS ADD-ON for AREX400 |
| 985350035 | REMOTE START FOOT SWITCH |
| 985330032 | I/O INTERFACE |
| 985330031 | CONTROL BOX STANDARD |
| 985350038 | M39 F-THETA PROTECTIVE CAP |
| 985350037 | MICROMETRIC DISTANCE SENSOR KIT AREX 400 |
| 985350039 | RACK HANDLES AREX 400 |
| 985340035 | LAS 160 FUME EXTRACTOR |
| 985350032 | DB25-TO-FREE LEADS CABLE |
| 985330027 | STARTER KIT FOR MARKING ON THE FLY |