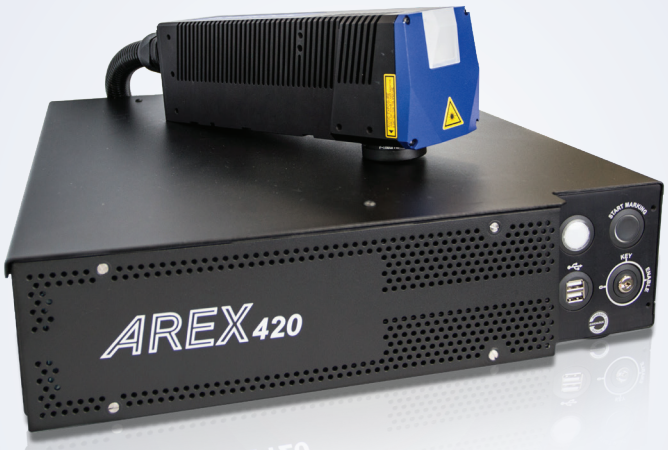
AREX400

DATALOGIC



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.

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

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APPLICATION

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 420 MW	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.Adapter Cable GIGA Ethernet X-Coded to Ethernet D-Coded				
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

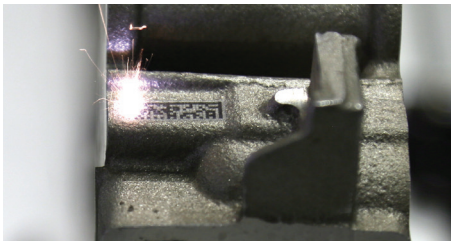
- Ultra compact, high protection rate scanhead, IP64 for maximum performance even in aggressive environments
- Complete power range from 10 W to 50 W, long pulse, high energy fiber laser source
- Standard Datalogic I/O Interface
- Integrated Windows-based marking controller, no external PC needed
- Safe 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

APPLICATION

- 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
- "Aestethic" plastic marking Polycarbonate (PC) Polysulfone (PSU), Polyphenylene sulfide (PPS)
- "Non- aestethic" 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

APPLICATION

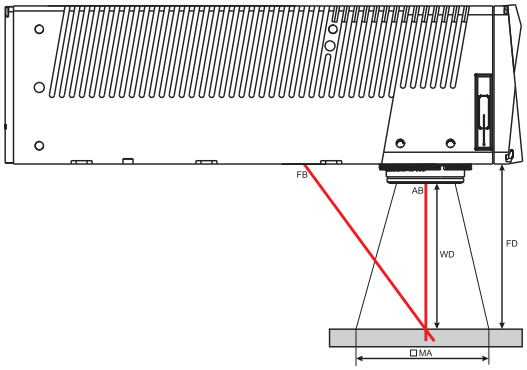
- High precision contrast marking and annealing for branding & traceability on: stainless steel, high-grade steel, steel, carbon steel, iron, ferrous metals, magnesium, aluminum, brass, gold, platinum, titanium ...
- "Aesthetic" plastic marking for branding and texturing Polycarbonate (PC) Polysulfone (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

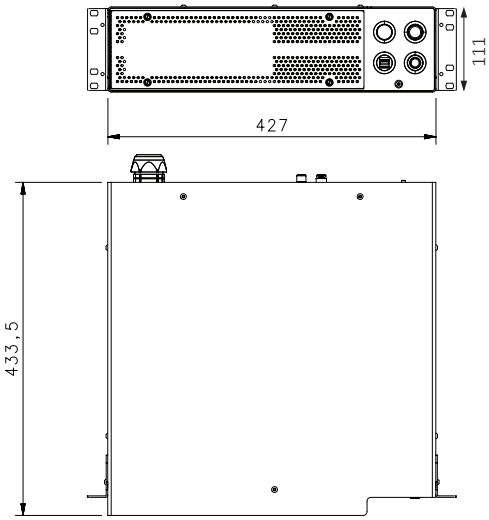
Automotive, aerospace, industrial electronics, mobile & semicon electronics, precision mechanics, watch & jewelry, surgical tools & implants

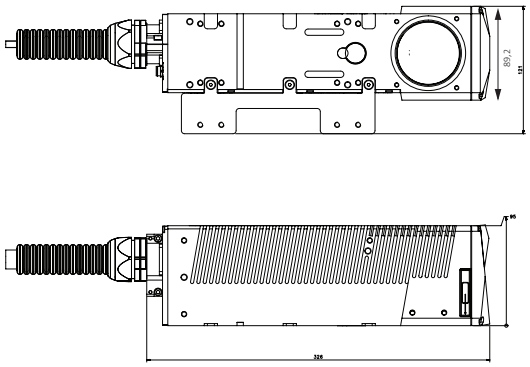
MODEL SELECTION AND ORDER INFORMATION

ORDERING CODES	PRODUCT DESCRIPTION
985180103	AREX 410 PRO, 10W Fiber laser, 10W Fiber laser with F100L - M85 Lens
985180104	AREX 410 PRO, 10W Fiber laser with F160S - M39 Lens
985180105	AREX 410 PRO, 10W Fiber laser with F254S - M39 Lens
985180124	AREX 410 BASIC, 10 W Fiber Laser with F160S - M39 Lens
985180125	AREX 410 BASIC, 10 W Fiber Laser with F254S - M39 Lens
985180106	AREX 420 PRO, 20W Fiber laser with F100L - M85 Lens
985180107	AREX 420 PRO, 20W Fiber laser with F160S - M39 Lens
985180108	AREX 420 PRO, 20W Fiber laser with F254S - M39 Lens
985180110	AREX 420 PRO, 20W Fiber laser with F330L - M85 Lens
985180111	AREX 420 PRO, 20W Fiber laser with 420L - M85 Lens
985180126	AREX 420 BASIC, 20 W Fiber Laser with F160S - M39 Lens
985180127	AREX 420 BASIC, 20 W Fiber Laser with F254S - M39 Lens
985180112	AREX 420MW, 20W MOPA Fiber Laser with F100L - M85 Lens
985180113	AREX 420MW, 20W MOPA Fiber Laser with F160S - M39 Lens
985180114	AREX 420MW,20W MOPA Fiber Laser with F254S - M39 Lens
985180116	AREX 420MW, 20W MOPA Fiber Laser with F330L - M85 Lens
985180117	AREX 420MW, 20W MOPA Fiber Laser with 420L - M85 Lens
985180118	AREX 430, 30W Fiber Laser with F160L - M85 Lens
985180119	AREX 430,30W Fiber Laser with F254L - M85 Lens
985180120	AREX 430, 30W Fiber Laser with F330L - M85 Lens
985180121	AREX 450, 50W Fiber Laser with F160L - M85 Lens
985180122	AREX 450, 50W Fiber Laser with F254L - M85 Lens



F-THETA MODEL	MARKING AREA [MA] MM²	MARKING AREA [MA] MM²	FIXING DISTANCE [FD] MM	WORKING DISTANCE [WD] MM
	AREX 410 AREX 420 AREX 420 MW	AREX 430 AREX 450		
	mm	mm	mm²	mm²
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		170X170	367	296
F = 330L	220X 200	210X210	471	388
F = 420L	285X285		561	492

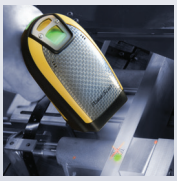




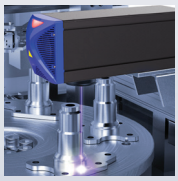
ORDERING CODES	MODEL
937600124	MARVIS ADD-ON for AREX400
985350035	REMOTE START FOOT SWITCH
985330032	I/O INTERFACE
985330031	CONTROL BOX STANDARD
985350038	M39 F-THETA PROTECTIVE CAP
985350037	MICROMETRIC DISTANCE SENSOR KIT AREX 400
985350039	RACK HANDLES AREX 400
985340035	LAS 160 FUME EXTRACTOR
985350032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

DATALOGIC PRODUCT OFFERING

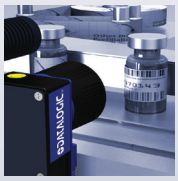
Sensors

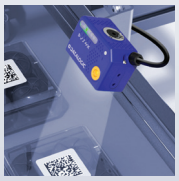

Hand Held scanners

Mobile Computers


Laser Marking Systems

Safety Laser Scanner


Vision Systems


Stationary Industrial Scanners

Safety Light Curtains

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