# AREX400

LASER MARKING

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.

c(UL)us LISTED
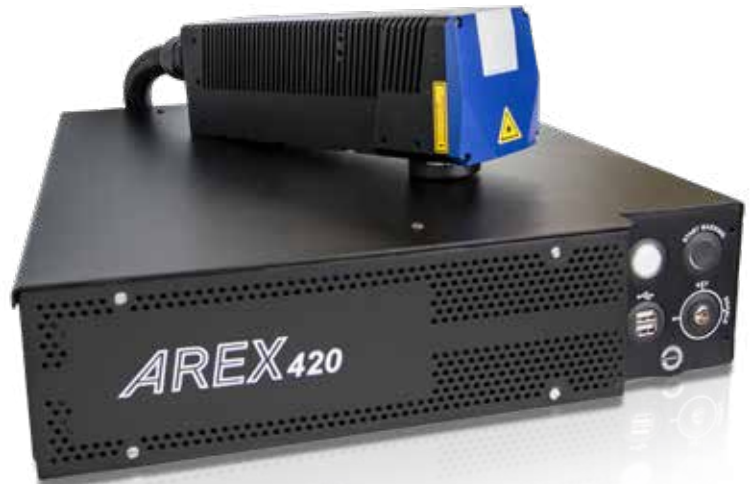
HIGHLIGHTS

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

Deep Engraving

In-Position Technologies
www.iptech1.com

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				

◆DATALOGIC

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

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

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

- '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

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 repeatibility
- 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

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

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

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
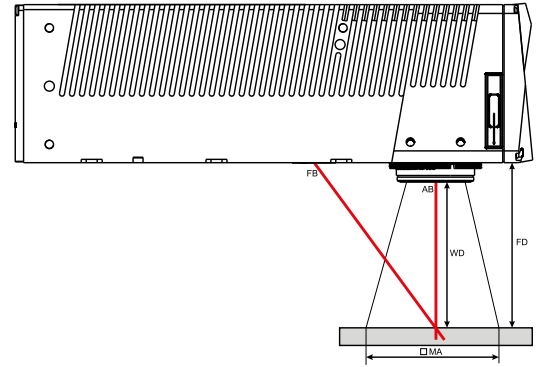
F-THETA MODEL	Marking Area [MA] mm2	Marking Area [MA] mm2	FIXING DISTANCE [FD] mm	WORKING DISTANCE [WD] mm
	AREX 410 AREX 420 AREX 420MW	AREX 430 AREX 450		
	mm	mm	mm²	mm²
F = 100L	50 x 50	X	141	99
F = 160S	100x100	X	197	183
F = 160L	X	100x100	212	176
F = 254S	140x 140	X	300	280
F = 254L		170x170	367	296
F = 330L	220x 200	210x210	471	388
F = 420L	285x285		561	492

DIMENSIONS

111

427

433,5

89,2
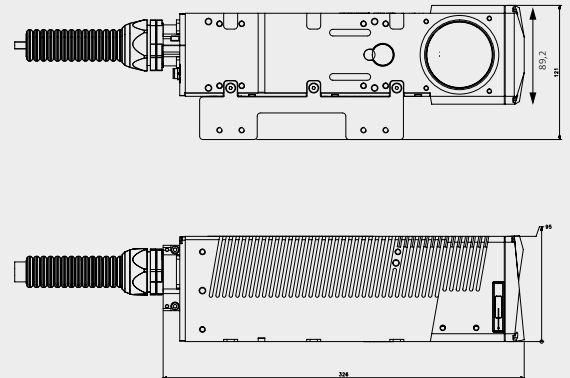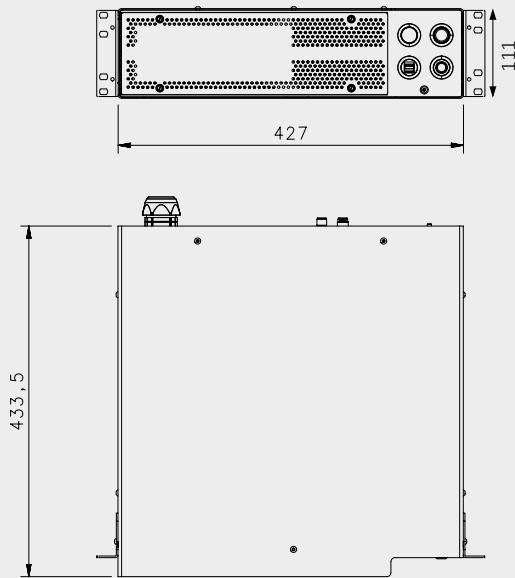
ACCESSORIES

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