

AREX400

DATALOGIC

The solution of choice in manufacturing traceability



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 LASERGREENSPOT, 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 Safe Laser Off (SLO) feature.



HIGHLIGHTS

Scanhead

- Ultra-compact, lightweight
- Robust design for durability even in harsh environments
- IP64 protection against dust, water, oil and lubri-coolant 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
- Windows 10 IOT Enterprise 2019
- High reliability, high resolution full-fiber-laser technology
- Space saver form factor 19 inch (2.5U - 3.5 U for AREX401 , 100W version)
- Cost effective embedded communications protocols:
 - TCP/IP, EtherNet IP, Profinet*
- Fully compatible with MARVIS* (Mark and Validate Integrated Solution) for zero-defect traceability
- Low noise air cooling system

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

**additional license required*

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
- Windows 10 IOT Enterprise 2019 Operative System, with built-in end-to-end security
- Unified Write Filter (UWF) to ensure Operative System reliability in case of abrupt power off, reduce wear on solid-state drives, increasing performances
- 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

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

*additional license required



AREX SERIES

PARAMETER		AREX410	AREX420	AREX420MW	AREX430	AREX450	AREX401
Nominal average power	W	10	20	20	30	50	100
Wavelength	nm	1050-1080					
Pulse Energy (Max)	mJ	0,5	1.0	≥0.75	1.0	1.0	1.0
Pulse Width (Typ)	ns	100	100	4 – 250	100	100	100
Peak Power (Max)	kW	10	10	≥10	10	10	10
Repetition rate	kHz	2 - 200	2-200	20-500	2-200	2-200	2-500
Delivery Cable lenght	m	3					
Working Areas	mm ²						
100L M85	☑	50 x 50					
160S M39	☑	100 x 100				100 x 100	
160M M60	☑	-	-	-	100 x 100		-
160L M85	☑	-	100 x 100	-	-	-	-
254S M39	☑	140 x 140					
254M M60	☑	-	-	-	-	-	160 x 160
254L M85	☑	170 x 170					
330L M85	☑	220 x 220			210 x 210		
420L M85	☑	285 x 285			-	-	285 x 285
Marking capabilities		Static, Rotary axis, On the fly (marking in motion)					
Integration		Up to 4 mechanical axis driving capabilities (stepper motor) Up to 10 digital inputs and 10 digital output fully programmable dedicated connector for encoder, photocell, Matrix code reader					
Aiming & Focus Beam		2 x Semiconductor laser @ 635nm					
Protection degree		Head IP64, Controller IP31					
Interface		4 x USB, 3 x Ethernet, 1 x RS232, Digital I/O					
Cooling system		Forced Air					
Power supply		100 / 240 VAC 50/60Hz 500W max					
Scanning Head Dimension	mm ³	96 x 90 x 326 (HxWxD)					
Controller Dimensions	mm ³	113 x 432 x 434 (HxWxD)					158 x 432 x 434 (HxWxD)
System Weight	kg	Head 3,5; Controller 17.5					Head 3,5; Controller 23.5



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 100 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* IO native protocols

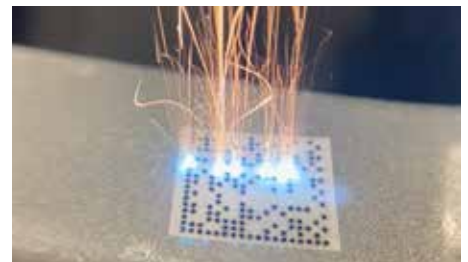
**additional license required*

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
- Additivated plastic marking Polyamide (PA), Polyoxymethylene (POM) Polypropylene (PP), Polyethylene (PE) and many other
- Deep engraving on components subject to exposed to high stress or wear in harsh environments or that are subject to aggressive post processing and finishing

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

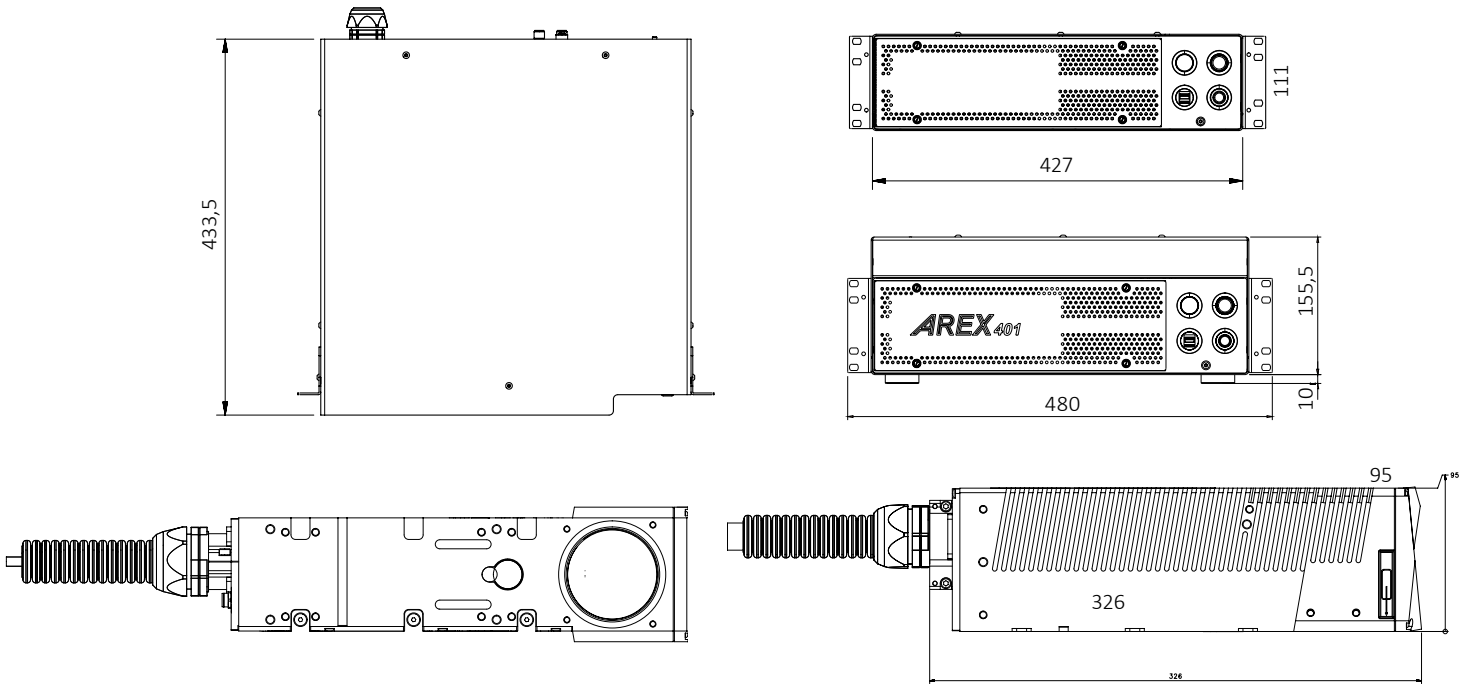
- High precision contrast marking and annealing for branding & traceability on: stainless steel, high-grade steel, steel, carbon steel, iron, ferrous metals, magnesium, aluminum, brass, gold, platinum, titanium ...
- "Aesthetic" plastic marking for branding and texturing Polycarbonate (PC) Polysulfone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



DIMENSIONS



MODEL SELECTION AND ORDER INFORMATION

ORDER NO.	MODEL	DESCRIPTION
985180073	AREX 110-965 FIBER MARKER	AREX 110-965, 10W FIBER MARKER, IR@1070NM, F100L-M85, WIN10
985180074	AREX 110-365 FIBER MARKER	AREX 110-365, 10W FIBER MARKER, IR@1070NM, F160S-M39, WIN10
985180075	AREX 110-665 FIBER MARKER	AREX 110-665, 10W FIBER MARKER, IR@1070NM, F254S-M39, WIN10
985180078	AREX 120-965 FIBER MARKER	AREX 120-965, 20W FIBER MARKER, IR@1070NM, F100L-M85, WIN10
985180079	AREX 120-365 FIBER MARKER	AREX 120-365, 20W FIBER MARKER, IR@1070NM, F160S-M39, WIN10
985180080	AREX 120-665 FIBER MARKER	AREX 120-665, 20W FIBER MARKER, IR@1070NM, F254S-M39, WIN10
985180081	AREX 120-A65 FIBER MARKER	AREX 120-A65, 20W FIBER MARKER, IR@1070NM, F330L-M85, WIN10
985180082	AREX 120-B65 FIBER MARKER	AREX 120-B65, 20W FIBER MARKER, IR@1070NM, F420L-M85, WIN10
985180083	AREX 120-765 FIBER MARKER	AREX 120-765, 20W FIBER MARKER, IR@1070NM, F254L-M85, WIN10
985190005	AREX A20-965 FIBER MARKER	AREX A20-965, 20W MOPA FIBER MARKER, IR@1070NM, F100L-M85, WIN10
985190006	AREX A20-365 FIBER MARKER	AREX A20-365, 20W MOPA FIBER MARKER, IR@1070NM, F160S-M39, WIN10
985190007	AREX A20-665 FIBER MARKER	AREX A20-665, 20W MOPA FIBER MARKER, IR@1070NM, F254S-M38, WIN10
985190008	AREX A20-A65 FIBER MARKER	AREX A20-A65, 20W MOPA FIBER MARKER, IR@1070NM, F330L-M85, WIN10
985190009	AREX A20-B65 FIBER MARKER	AREX A20-B65, 20W MOPA FIBER MARKER, IR@1070NM, F420L-M85, WIN10
985190010	AREX A20-765 FIBER MARKER	AREX A20-765, 20W MOPA FIBER MARKER, IR@1070NM, F254L-M85, WIN10
985180086	AREX 130-465 FIBER MARKER	AREX 130-465, 30W FIBER MARKER, IR@1070NM, F160L-M85, WIN10
985180087	AREX 130-765 FIBER MARKER	AREX 130-765, 30W FIBER MARKER, IR@1070NM, F254L-M85, WIN10
985180088	AREX 130-A65 FIBER MARKER	AREX 130-A65, 30W FIBER MARKER, IR@1070NM, F330L-M85, WIN10
985180089	AREX 150-465 FIBER MARKER	AREX 150-465, 50W FIBER MARKER, IR@1070NM, F160L-M85, WIN10
985180090	AREX 150-765 FIBER MARKER	AREX 150-765, 50W FIBER MARKER, IR@1070NM, F254L-M85, WIN10
985180091	AREX 150-A65 FIBER MARKER	AREX 150-A65, 50W FIBER MARKER, IR@1070NM, F330L-M85, WIN10
985180092	AREX 150-B65 FIBER MARKER	AREX 150-B65, 50W FIBER MARKER, IR@1070NM, F420L-M85, WIN10
985180133	AREX 10C-765 FIBER MARKER	AREX 10C-765, 100W FIBER MARKER, IR@1070NM, F254L-M85, WIN10
985180134	AREX 10C-A65 FIBER MARKER	AREX 10C-A65, 100W FIBER MARKER, IR@1070NM, F330L-M85, WIN10
985180135	AREX 10C-B65 FIBER MARKER	AREX 10C-B65, 100W FIBER MARKER, IR@1070NM, F420L-M85, WIN10
985180136	AREX 10C-M65 FIBER MARKER	AREX 10C-M65, 100W FIBER MARKER, IR@1070NM, F160M-M60, WIN10
985180137	AREX 10C-N65 FIBER MARKER	AREX 10C-N65, 100W FIBER MARKER, IR@1070NM, F254M-M60, WIN10

AREX400 **X X X** **-** **X** **5**

Laser Technology

1 = Pulsed Fiber
A = M.O.P.A. Fiber

Nominal Power

10 = 10 Watt
20 = 20 Watt
30 = 30 Watt
50 = 50 Watt
OC = 100 Watt

F-Theta Lens

3 = F160S mm M39
4 = F160L mm M85
6 = F254S mm M39
7 = F254L mm M85
9 = F100L mm M85
A = F330L mm M85
B = F420L mm M85



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