



LASER MARKING

## AREX: LASER MARKING MADE EASY

AREX is the compact Pulsed Fiber Laser System addressed to the Automotive and Electronics industry for Direct Part Marking and Direct Engraving on metal parts and components.

The new AREX incorporates a high performance fiber laser source with power levels available from 10W to 50W.

The extended power range available together with improved scan head, new rack design and advanced LIGHTER Software features, allow for higher achievable performance in terms of flexibility, reliability, and ease of installation.

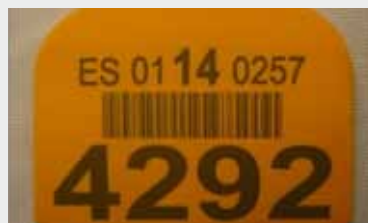
## APPLICATIONS

### METAL MARKING

- Arex fiber laser marker series provides unmatched performance and functionality on metal.
- High resolution, excellent contrast with low thermal impact
- Quick and clear black laser annealing, without cracks damage
- High quality deep engraving

### HIGH CONTRAST MARKING

- High contrast marking on additivated plastic materials
- High speed on PCB and electronic devices



## High performance and reliability

- Zero laser-leakage to ensure no ghost lines or damage even on sensitive materials.
- Up to 50°C operative temperature (10W & 20W models) guarantees high reliability and performance even in complex installation and adverse environments
- Improved Scan Head with IP54 protection class

## Quick installation and setup

AREX design and configuration dramatically simplifies and speeds up machine design and system integration.

- Embedded Marking Controller (EMC) with LIGHTER Suite ensures quick and easy installation, setup, control and system diagnostics even from remote.
- Reduced Scan-head footprint (112x298x90mm) saves space and costs during installation and setup in automatic production lines
- Embedded 4 independent step motors controller dramatically simplifies management of rotary indexers, x-y tables, z axis etc

## 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.

AREX is thought to be used in both a STAND ALONE MODE with built-in control and software resources, and in a MASTER-SLAVE mode with a supervising computer for advanced network-oriented Laser Marking Applications.

Main Arex features are:

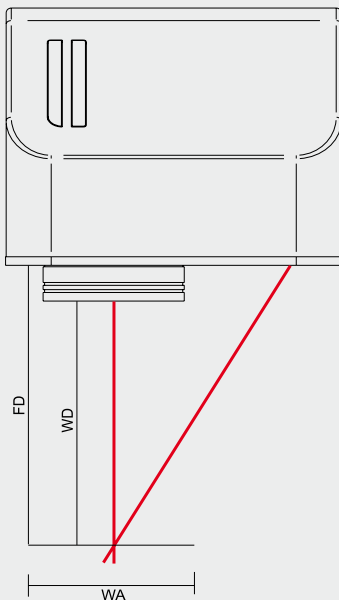
- Advanced Graphical Layout
- Local and Remote laser diagnostic
- Local and Remote I/O & axis control
- Local and Remote laser test & setup
- Local and Remote ActiveX
- Ethernet protocol for easy integration in PLC and industrial environments
- Marking On Fly capabilities



## AREX SERIES

	AREX 10W	AREX 20W	AREX 30W	AREX 50W
Nominal Power	10W	20W	30W	50W
Peak power (max)	5 Kw	10 kW	10 kW	
Pulse energy	0,5 mJ	1,0 mJ		
Head cable Length	3 m standard			
Wavelength	1060 – 1080 nm			
Laser source	Pulsed Fiber Laser			
Modulation	20 kHz ÷ 100 kHz		30kHz - 100 kHz	50Khz – 100 Khz
Pulsewidth	100 nsec			
Marking capabilities	Standing, 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 connectors Encoder and PhotoCell			
Interface	Ethernet, RS 232, USB			
Aiming & Focus Beam	Semiconductor laser @ 635 nm			
Temperature Range	<ul style="list-style-type: none"> <li>▪ 5°C to 50°C (50% emission time)</li> <li>▪ 5°C to 42°C (100% emission time)</li> </ul>		5°C to 35°C	
Protection degree	Head: IP54 - Controller IP21			
Cooling	Air cooled			
Power Supply	100/240 VAC – 50/60 Hz			
Head Dimension & Weight	mm 90x112x298 kg 2			
Rack Dimension & Weight	mm 106x430x370 kg 16			
Standard Marking configuration	F – Theta 160 S Marking AREA 100x100 mm <sup>2</sup> Working Distance 181 mmm			
	F-Theta 254S Marking AREA 140x140 mm <sup>2</sup> Working Distance 290 mm			

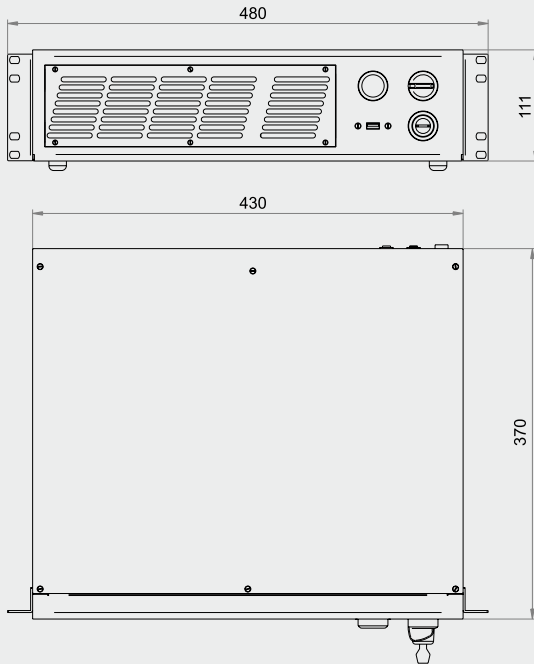
All laser sources described in this product guide are Class 4 laser sources.  
Laser interaction with organic or inorganic material can cause TOXIC FUMES/PARTICLES. The OEM laser components described in this product guide is for sale solely to qualified manufacturers, who shall provide interlocks, indicators and other appropriate safety features in full compliance with applicable national and local regulations.



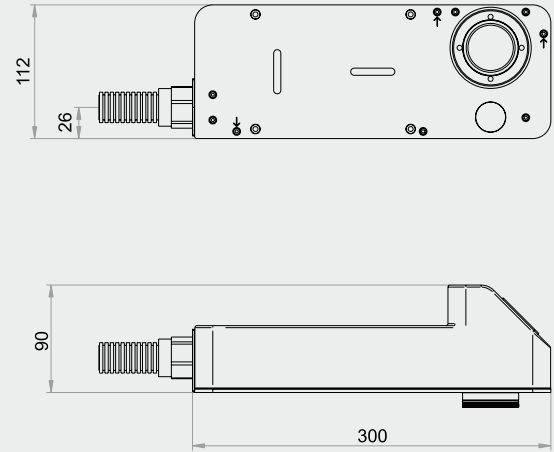
Objective F-Theta mm	160S	254S
Working distance (WD) mm	181	290
Fixing distance (FD) mm	196	309
Working area (mm x mm)	100X100	140X140

## DIMENSIONS

CONTROL UNIT



MARKING HEAD



## MODEL SELECTION AND ORDER INFORMATION

ORDERING CODES	MODEL	FULL DESCRIPTION
985180012	AREX 1100-1041 Fiber IR System	AREX3 10W IR Fiber Laser Marker without F-Lens
985180001	AREX 1100-1341 Fiber IR System	AREX3 10W IR Fiber Laser Marker with F160S lens
985180004	AREX 1100-1641 Fiber IR System	AREX3 10W IR Fiber Laser Marker with F254S lens
985180013	AREX 1200-1041 Fiber IR System	AREX3 20W IR Fiber without F-Lens
985180002	AREX 1200-1341 Fiber IR System	AREX3 20W IR Fiber Laser Marker with F160S lens
985180005	AREX 1200-1641 Fiber IR System	AREX3 20W IR Fiber Laser Marker with F254S lens
985180007	AREX 1300-1041 Fiber IR System	AREX3 30W IR Fiber without F-Lens
985180003	AREX 1300-1341 Fiber IR System	AREX3 30W IR Fiber Laser Marker with F160S lens
985180006	AREX 1300-1641 Fiber IR System	AREX3 30W IR Fiber Laser Marker with F254S lens
985180015	AREX 1500-1041 Fiber IR System	AREX3 50W IR Fiber without F-Lens
985180016	AREX 1500-1341 Fiber IR System	AREX3 50W IR Fiber Laser Marker with F160S lens
985180017	AREX 1500-1641 Fiber IR System	AREX3 50W IR Fiber Laser Marker with F254S lens

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