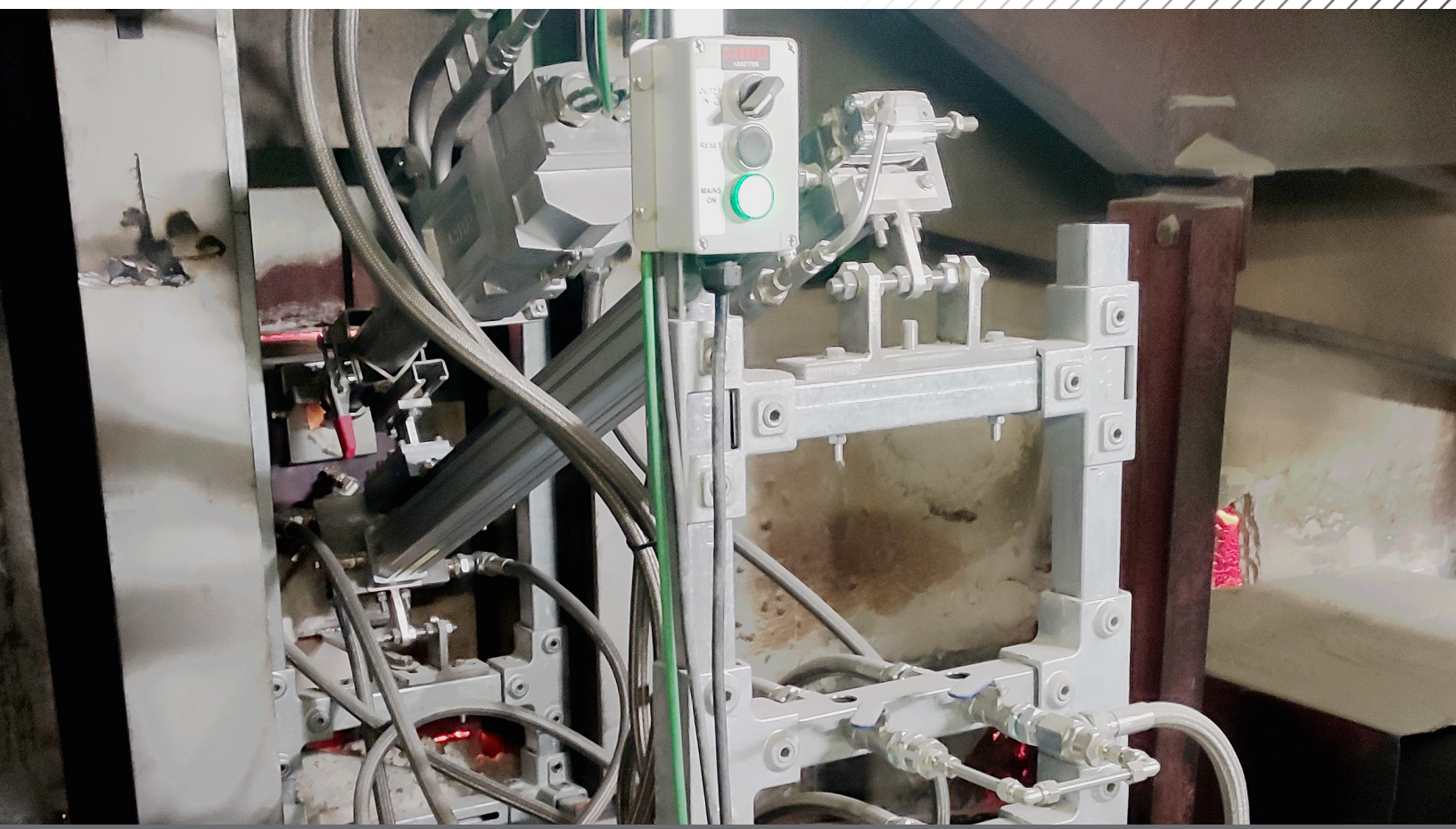
LAND®

AMETEK®

AUTO-RETRACTION SYSTEMS



THERMAL IMAGING SOLUTIONS FOR

NIR-b-656/-2K, NIR-b-640 & MWIR-b-640

See degrees differently.

RETRACTION SYSTEMS OVERVIEW

The furnace thermal imager series by LAND offers a range of systems with advanced spectral responses and temperature ranges from 300 to 2000 °C (572 to 3632 °F). These systems can be equipped with either water cooling and air purging or air cooling and air purging, tailored to suit specific application requirements.

The retraction systems are engineered to automatically retract and safeguard the thermal imager if the cooling or purge flows are lost, preventing overheating or damage.

Water-cooled & air-purged system

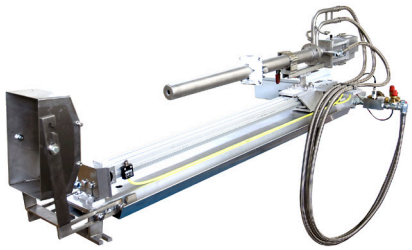
For furnace temperatures up to 2000 °C (572 to 3632 °F)

Air-cooled & air-purged system

For furnace temperatures up to 1200 °C / 2192 °F

As components of a comprehensive furnace imaging system or as standalone accessories or replacements, LAND offers complete systems, available in either pressured air or electrically driven configurations.

EAR Electrical Auto-Retraction System

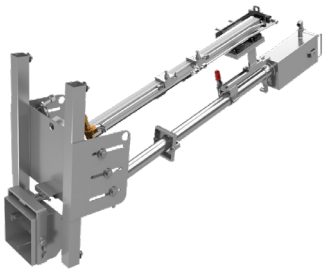


Electrical & battery driven system

LPAR Pneumatic Auto-Retraction System

Pneumatic & air driven system with or without framing. Recommended for most applications

PAR Pneumatic Auto-Retraction System



Pneumatic & air driven system with or without framing. Recommended for glass melt tank applications.

WHICH AUTO-RETRACTION SYSTEM TO CHOOSE?

The LPAR is recommended for most installations. It is engineered for reliability and has a maximum ambient temperature of 80 °C at the mounting point. It can be installed with up to 35° inclination from horizontal.

EAR is simple to install and only requires instrument air for purging. Maximum ambient temperature is 60 °C and maximum inclination is 20° from horizontal.

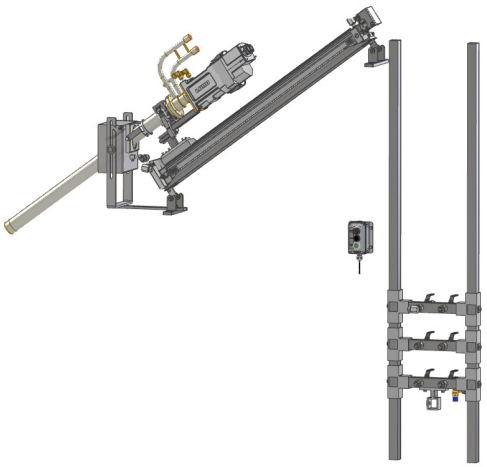
PAR is recommended for use on glass furnaces where its reliability has been proven in many installations worldwide. Maximum ambient temperature 80 °C at the mounting point and maximum inclination is 45° from horizontal.

The LPAR - Pneumatic Auto-Retraction System will remove the instrument from the process if:

- Mains Power is lost
- Air pressure to cylinder is lost
- Cooling air or water flow to the system drops below requirements, or exceeds media temperature limits
- Purge Flow to the system drops below requirements, or exceeds media temperature limits
- The borescope lens system temperature reaches its alarm level
- Camera temperature exceeds limit (MWIR-b-640, NIR-b-656 only)
- Manual retract is initiated

CONFIGURATIONS

LPAR PNEUMATIC AUTO-RETRACTION SYSTEM



STANDARD SYSTEM

New system installation

System Includes:
- Retraction System
- Camera, Housing & cables
- ImagePro
-

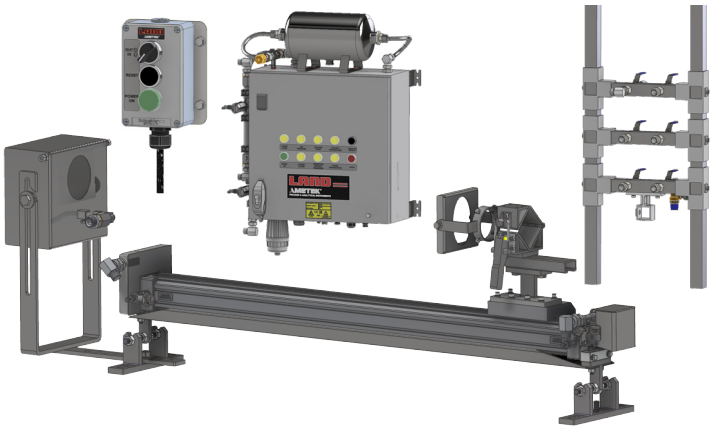
System Options

Cable Lengths
- 25 m
- 50 m

Housing Cooling
- Water
- Air

Imager Types
- NIR-b-656
- NIR-b-2K
- NIR-b-2K-Glass
- NIR-b-640
- MWIR-b-640

Camera & Housing Lengths
- 2 ft
- 3 ft



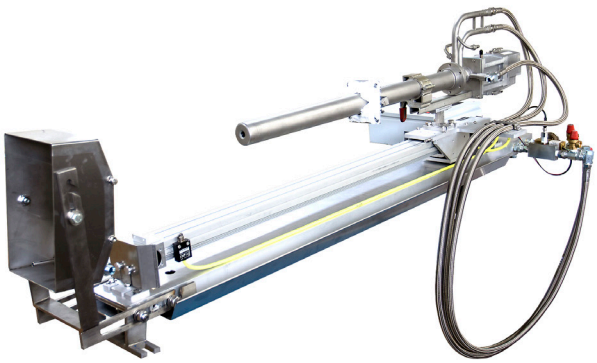
UPGRADE SYSTEM

To upgrade an existing furnace camera installation

System Includes:

- Retraction System
- Control Unit
- Remote Box with 25 or 50 m Cable
- Media Bar
- Retraction Slide
- 7 x Hoses 2.7 m

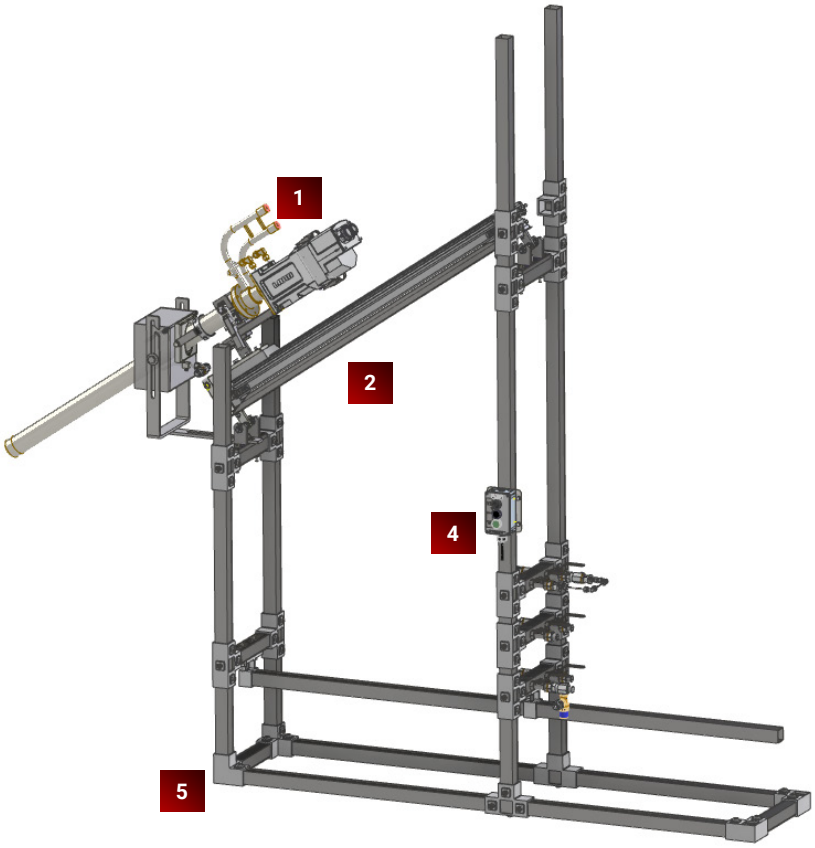
EAR – ELECTRICAL AUTO-RETRACTION SYSTEM



The LAND Electrical Auto-Retraction System is designed for installations where there is a limited supply of compressed air. It integrates a battery to guarantee safe retraction in case of air flow loss, power supply interruption, or a high borescope tip temperature alarm.

Please contact LAND for the best choice for auto-retraction systems.

LPAR SPECIFICATION AND DESIGN



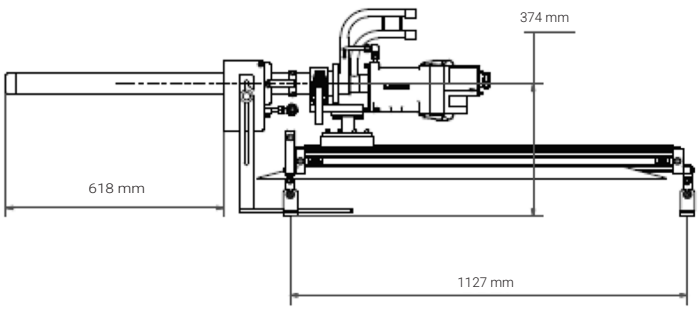
1: FURNACE IMAGER
(full imager unit contains camera, cooling jacket, power supply, cables and ImagePro software
2: LPAR – PNEUMATIC AUTO RETRACTION SYSTEM

3: LPAR – CONTROL UNIT

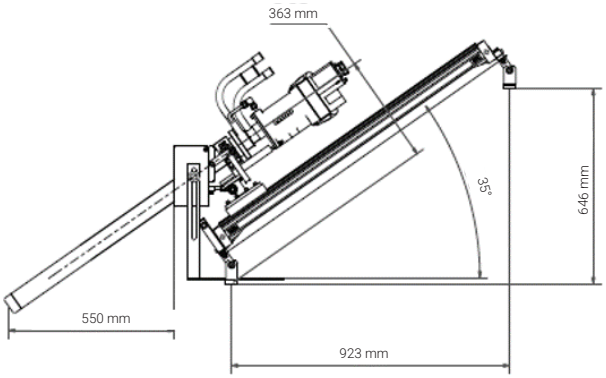
4: LPAR MEDIA BAR

5: LPAR – FRAME ASSEMBLY (ACCESSORY)

MOUNTING ANGLES – 0° TO 35°



0° mounting



35° mounting

LPAR SPECIFICATIONS

OPERATING CONDITIONS	
Ambient Temperature:	0 °C to 80 °C
MECHANICS	
Size:	2050 x 2450 x 500 mm (with 816085 accessory)
System Weight:	88 kg (camera, retraction system, frame)
Probe:	5 kg
Cooling Jacket:	15 kg
Retraction System:	35 kg (modular sections, Max 17 kg)
Port Seal:	7 kg
Cylinder Assembly:	12 kg
Media Frame:	17 kg
Frame Accessory:	33 kg (816085)
CONTROL UNIT	
Voltage:	100-240 VAC
Current:	2.4 A - 1.2 A
Frequency:	50/60 Hz
Operating Temperature:	0 °C to 60 °C
I/O	
Input:	4-20 mA, 0-200 °C (lens temperature) (Max loop Resistance 300 ohms , Isolated)
Relay:	'System OK' (250 VAC, 8 A contact rating)
SEALING	
Sealing:	IP54
PNEUMATIC AIR SUPPLY	
Pressure:	Angle Dependant (MAX 7 bar)
Temperature:	-10 °C to 80 °C (at inlet)
Connection:	1/2" BSPP threads
Air quality:	ISO 8573-1:2010 [4.7.4]
Particles:	< 100/m3 (> 1 µm diameter)
Water:	< 500 mg/m3
Oil:	< 5 mg/m3

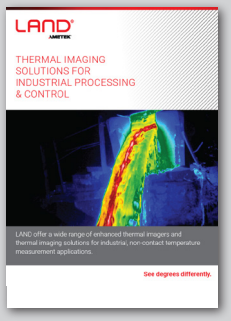
Thermal Imagining Solutions for NIR-b-656/-2K, NIR-b-640 & MWIR-b-640

AMECARE® PERFORMANCE SERVICES

Our global service centres provide after-sales services to ensure you get the best performance from your system. This includes technical support, certification, calibration, commissioning, repairs, servicing, preventative maintenance and training. Our highly trained technicians/engineers can also attend your site to cover planned maintenance schedules and repair emergency breakdowns.

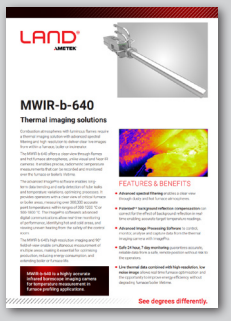
THERMAL IMAGING SOLUTIONS

Thermal Imaging Solutions



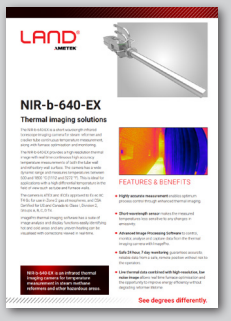
NIR-656 & 2K

MWIR-b-640



NIR-b-640

NIR-b-640-EX



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CONTACT US

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We are fully committed to Quality Assurance. See all our accreditations at **AMETEK-LAND.COM/QUALITY**

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