LAND

Thermal Imaging and Temperature Profiles
for Continuous Process Monitoring and Quality Control

LSP HD

Infrared Linescanners

An AMETEK® Company

Mountings and Accessories

LSP$_{HD}$ Mountings and Accessories

The following information is intented as a guide to the extensive range of optional mountings and accessories available to ensure that you get the best possible service from the investment you have made when specifying **LSP$_{HD}$** infrared linescanning systems to monitor and control your manufacturing process.

For specific recommendations on the choice of protection housing, mounting assemblies, water cooling, air purging and cabling requirements to suit your specific industry or installation, contact Land Instruments International for further advise before ordering.

Mountings and Accessories	
Part Name	**Part Number**
Mountings	
Basic Mounting Plate	031.520
Water Cooled Mounting Plate	031.496
Right Angle Mounting Bracket	031.438
Enhanced Water Cooled Mounting System	800095
Light Industrial Housing	802664
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Floatline Mounting with Scanner Protection System	092.732
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Power Supplies and Service Panels	
LSP$_{HD}$ Power Supply	805037
LSP$_{HD}$ Desktop Power Supply	805024
LSP$_{HD}$ Floatline Service Panel	805140
Cables	
LSP$_{HD}$ 15m Low Temperature Cable	805038
LSP$_{HD}$ 50m Low Temperature Cable	805039
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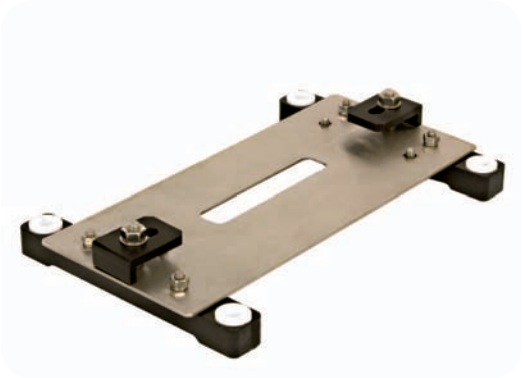
Blowers & Accessories	
Blower Assembly with air filter 230V 50HZ Single Phase	099.471
Blower Assembly with air filter 110V 60HZ Single Phase	099.473
Blower Assembly with air filter 220V 60HZ Single Phase	099.472
Weatherproof Blower Cover	704.374
Air Pre-filter	317.560

Basic Mounting Plate (Part Number: 031.520)

Applications

+ Thermoforming

The basic base plate is used in applications where an **LSP**$_{HD}$ linescanner head is to be installed in light industrial environments where the ambient temperatures is within the recommended operating range of the instrument and the atmosphere is relatively free from dust and airborne particles.

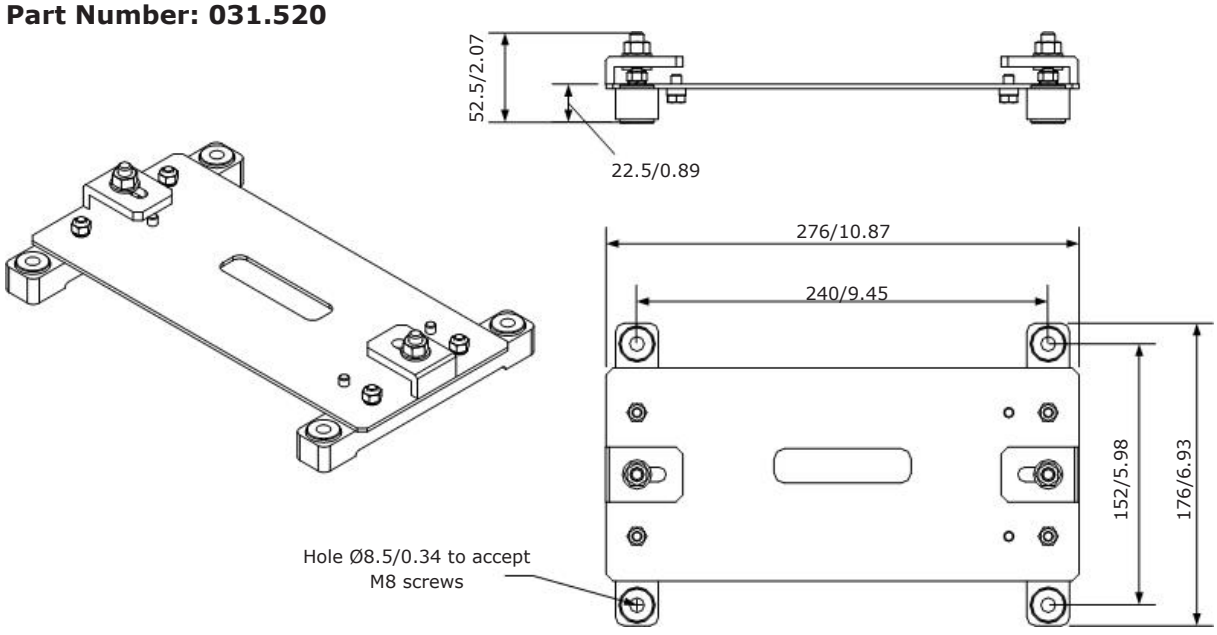


The basic base plate provides a quick release mounting arrangement for the scanner, making realignment a simple and easy operation.

Specifications	
PARAMETER	
Maximum Ambient Temperature	60 °C / 140 °F
Weight	1.2 kg / 2.6 lb
Dimensions (l x w x d)	276 x 176 x 52.5 mm / 10.87 x 6.93 x 2.07 in
Mounting Holes	Ø 8.5 mm / 0.34 in to accept M8 screws

Basic Mounting Plate
Part Number: 031.520

All dimensions in mm/in

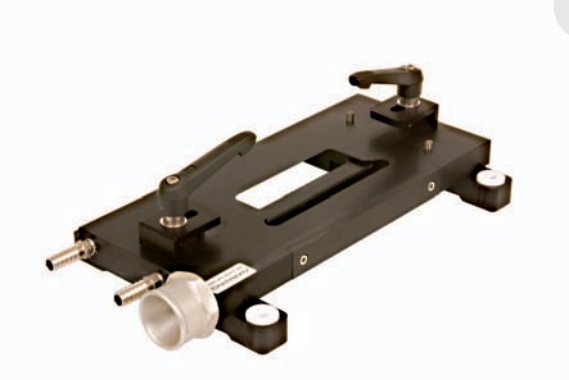


Water Cooled, Air Purged Base Plate (Part Number: 031.496)

Applications

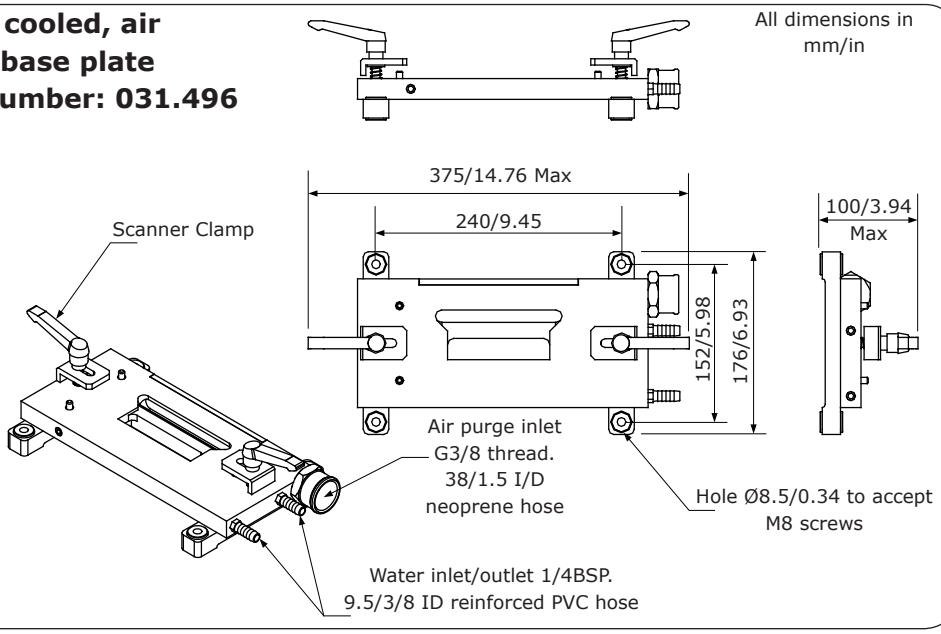
+ Glass Toughening (check ambient temperature)

The water cooled, air purged base plate is used in applications where an **LSP$_{HD}$** scanner is to be installed into environments where the ambient temperatures are in the range of 60 to 100°C/140 to 212°F. It is ideally suited to general industrial applications.
The air purge facility should be utilised where the operating environment is dusty and airborne particles could contaminate the scanner viewing window. The plate provides a quick release mounting arrangement for the scanner, making realignment a simple and easy operation.



Specifications	
PARAMETER	
Maximum Ambient Temperature	100 °C / 212 °F
Cooling Water Requirements	1.5 to 2 litre per min / 0.4 to 0.53 USGal per min @ 30 °C / 86 °F
Maximum Water Pressure	5.88 Bar / 85 PSI
Cooling Water Connection	¼" BSP for 9.5mm / 3/8in bore water hose
Air Purge Requirements	300 litre per min / 12.36 cuft per min
Air Purge Connection	G3/8 suitable for 38mm / 1.5in inner diameter neoprene hose
Weight	2.2 kg 4.8 lb
Dimensions (l x w x d)	375 x 176 x 100 mm / 14.76 x 6.93 x 3.94 in
Mounting Holes	Ø 8.5 mm / 0.34 in to accept M8 screws

Water cooled, air purge base plate
Part Number: 031.496

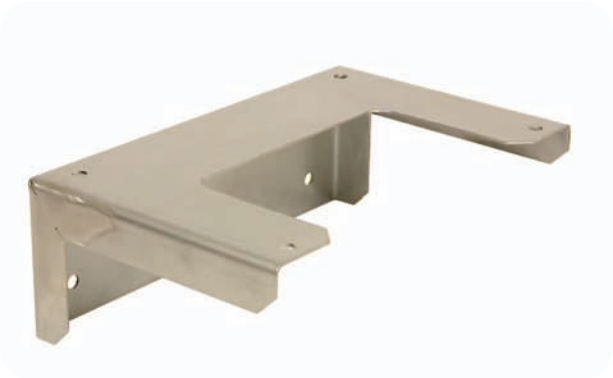


Right Angle Mounting Plate (Part Number: 031.438)

The right angle mounting plate is a simple design intended for basic **LSP$_{HD}$** linescanner head mounting.

It is pre-drilled to accept either the **basic mounting plate** or the **water cooled, air purged base plate**.

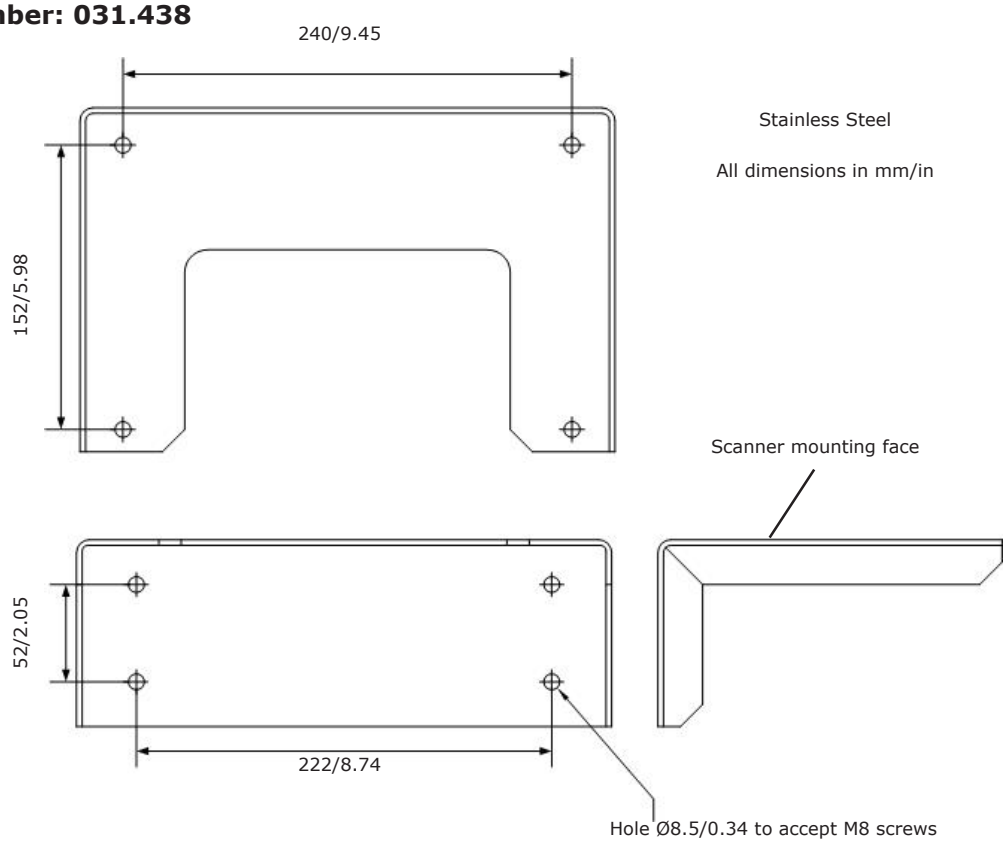
All fixings are supplied with the plate.



Compatibility

+ Designed for wall mounting of equipment
+ Requires either the **Basic Mounting Plate** or the **Water Cooled Mounting Plate**

Right angle mounting plate
Part Number: 031.438



Enhanced Water Cooled Mounting System (Part Number: 800095)

The water cooled, air purged base plate is used in applications where an **LSP**$_{HD}$ scanner is be installed into environments where the ambient temperatures are in the range of 60 to 120°C/140 to 248°F. It is ideally suited to general industrial applications. The air purge facility should be utilised where the operating environment is dusty and airborne particles could contaminate the scanner viewing window. The plate provides a quick release mounting arrangement for the scanner, making realignment a simple and easy operation.

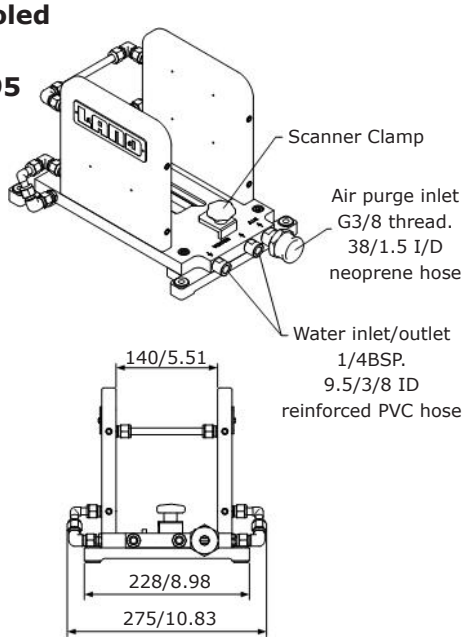
Applications

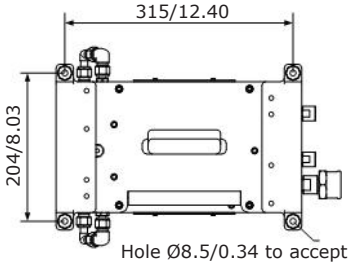
+ Glass Toughening

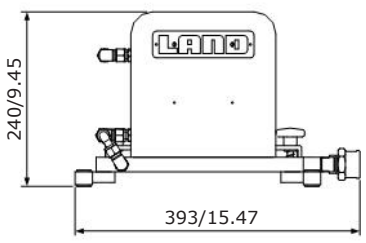
Specifications	
PARAMETER	
Maximum Ambient Temperature	120 °C / 248 °F
Cooling Water Requirements	1.5 to 2 litre per min / 0.4 to 0.53 USGal per min @ 30 °C / 86 °F
Maximum Water Pressure	5.88 Bar / 85 PSI
Cooling Water Connection	¼" BSP for 9.5mm / 3/8in bore water hose
Air Purge Requirements	300 litre per min / 12.36 cuft per min
Air Purge Connection	G3/8 suitable for 38mm / 1.5in inner diameter neoprene hose
Weight	8.4 kg / 18.5 lb
Dimensions (l x w x d)	393 x 275 x 240 mm / 15.47 x 10.83 x 9.45 in
Mounting Holes	Ø 8.5 mm / 0.34 in to accept M8 screws

Enhanced Water Cooled Mounting System
Part Number: 800095

All dimensions in mm/in





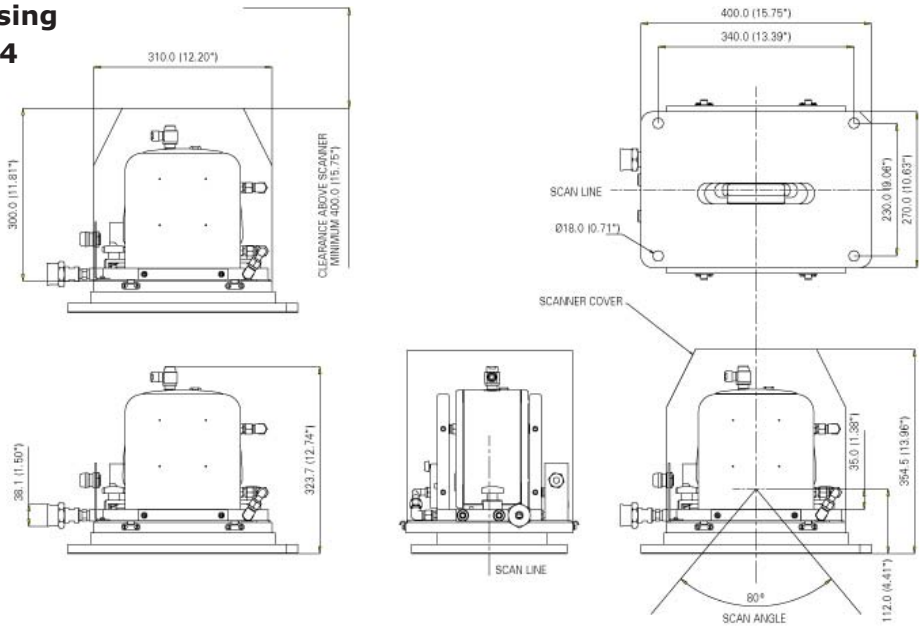


Light Industrial Housing (Part Number: 802664)

The light industrial housing is used in applications where an **LSP$_{HD}$** scanner needs to be enclosed for additional protection due to airborne particulates. It can be installed into environments where the ambient temperatures are up to 150°C / 302°F. The air purge facility should be utilised where the operating environment is dusty and airborne particles could contaminate the scanner viewing window. A quick release mounting arrangement is included for the scanner, making realignment a simple and easy operation.

Specifications	
PARAMETER	
Maximum Ambient Temperature	150 °C / 302 °F
Cooling Water Requirements	1.5 to 2 litre per min / 0.4 to 0.53 USGal per min @ 30 °C / 86 °F
Maximum Water Pressure	5.88 Bar / 85 PSI
Cooling Water Connection	¼” BSP for 9.5mm / 3/8in bore water hose
Air Purge Requirements	300 litre per min / 12.36 cuft per min
Air Purge Connection	G3/8 suitable for 38mm / 1.5in inner diameter neoprene hose
Weight	14.4 kg / 32 lb
Dimensions (l x w x d)	393 x 275 x 240 mm / 15.47 x 10.83 x 9.45 in
Mounting Holes	Ø 8.5 mm / 0.34 in to accept M8 screws

Light Industrial Housing
Part Number: 802664



Heavy Industrial Housing (Part Number: 802665)

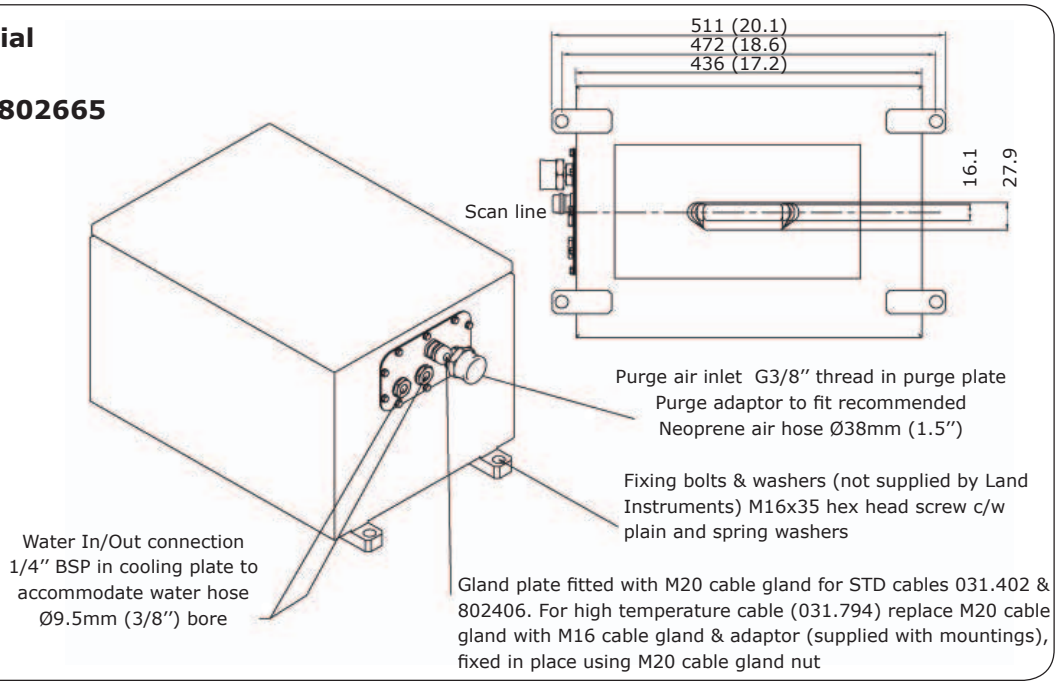
The heavy industrial housing is used in applications where an **LSP$_{HD}$** scanner needs to be enclosed for additional protection due to airborne particulates or for outdoor operation. It can be installed into environments where the ambient temperatures are up to 150°C / 302°F. The air purge facility should be utilised where the operating environment is dusty and airborne particles could contaminate the scanner viewing window. A quick release mounting arrangement is included for the scanner, making realignment a simple and easy operation.

Applications

+ Strip Mill
+ Plate Mill
+ Rolling Mill
+ Outdoor Applications

Specifications	
PARAMETER	
Maximum Ambient Temperature	150 °C / 302 °F
Cooling Water Requirements	1.5 to 2 litre per min / 0.4 to 0.53 USGal per min @ 30 °C / 86 °F
Maximum Water Pressure	5.88 Bar / 85 PSI
Cooling Water Connection	¼" BSP for 9.5mm / 3/8in bore water hose
Air Purge Requirements	300 litre per min / 12.36 cuft per min
Air Purge Connection	G3/8 suitable for 38mm / 1.5in inner diameter neoprene hose
Weight	29 kg / 64 lb
Dimensions (l x w x d)	511 x 320 x 296.2 mm / 20.12 x 12.8 x 11.67 in
Mounting Holes	Ø 18 mm / 0.71 in to accept M16 screws

Heavy Industrial Housing
Part Number: 802665



Floatline Mounting with Scanner Protection System (Part Number: 092.732)

The Floatline Mounting with Scanner Protection System provides protection for the **LSP$_{HD}$** scanner against the high ambient temperatures and heavy contamination associated with the float glass environment. The design incorporates a shutter system to isolate and protect the scanner from hot Lehr gasses in the event of a failure of the cooling or purge system. This is recommended for installations on Lehr Zones A - C.

Applications

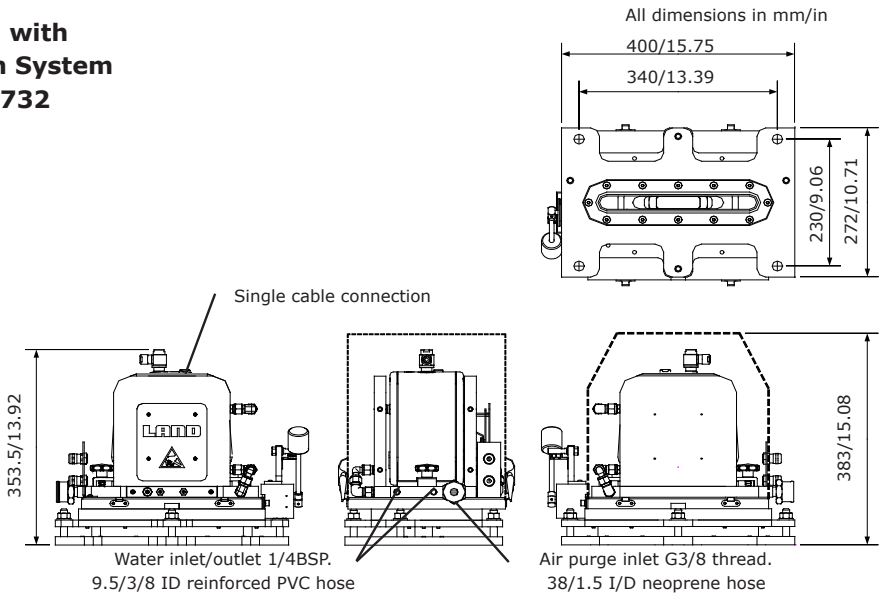
+ Glass floatline on the lehr

Compatibility

+ Requires **LSP$_{HD}$** Floatline Service Panel

Specifications	
PARAMETER	
Maximum Ambient Temperature	150 °C / 302 °F
Scanner Protection System	Shutter mechanism activated on: Over Temperature Low/High Purge Pressure
Cooling Water Requirements	1.5 to 2 litre per min / 0.4 to 0.53 USGal per min @ 30 °C / 86 °F
Maximum Water Pressure	5.88 Bar / 85 PSI
Cooling Water Connection	¼" BSP for 9.5mm / 3/8in bore water hose
Air Purge Requirements	300 litre per min / 12.36 cuft per min @ less than 40 °C / 104 °F
Air Purge Connection	G3/8 suitable for 38mm / 1.5in inner diameter neoprene hose
Weight	N/A
Dimensions (l x w x d)	383 x 400 x 272 mm / 15.08 x 15.75 x 10.71 in
Mounting Holes	Ø 8.5 mm / 0.34 in to accept M8 screws

Floatline Mounting with Scanner Protection System Part Number: 092.732



Floatline Mounting without Scanner Protection System (Part Number: 802663)

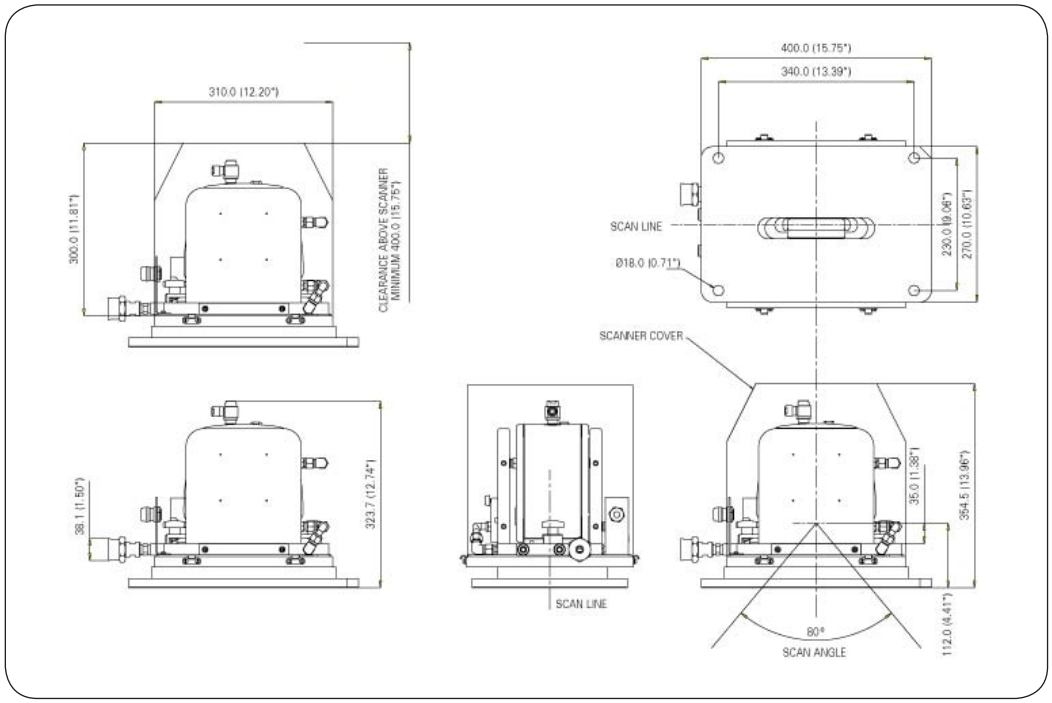
The Floatline Mounting without Scanner Protection System provides protection for the **LSP$_{HD}$** scanner against the high ambient temperatures and heavy contamination associated with the float glass environment. The interface to the lehr cone includes a 2-axis adjustment to ensure that the scanner has a clear line of sight to the ribbon during commissioning.

Applications

+ Glass float line on the lehr

Specifications	
PARAMETER	
Maximum Ambient Temperature	150 °C / 302 °F
Cooling Water Requirements	1.5 to 2 litre per min / 0.4 to 0.53 USGal per min @ 30 °C / 86 °F
Maximum Water Pressure	5.88 Bar / 85 PSI
Cooling Water Connection	¼" BSP for 9.5mm / 3/8in bore water hose
Air Purge Requirements	300 litre per min / 12.36 cuft per min @ less than 40 °C / 104 °F
Air Purge Connection	G3/8 suitable for 38mm / 1.5in inner diameter neoprene hose
Weight	N/A
Dimensions (l x w x d)	393 x 275 x 240 mm / 15.47 x 10.83 x 9.45 in
Mounting Holes	Ø 18 mm / 0.71 in to accept M16 screws

Floatline Mounting without Scanner Protection System Part Number: 802663



Power Supplies & Service Panels

LSP$_{HD}$ Industrial Power Supply (Part Number 805037)

A terminal box which allows connection of the incoming **LSP$_{HD}$** connection cable via an M12 industrial ethernet port, incoming mains power and the downstream data connection via either CAT 5 / 6 cable or multi-mode fibre optic.

Specifications	
PARAMETER	
Input Power Supply	100 to 240 V a.c.
LSP$_{HD}$ Connection	M12 4 pin D-Coded Industrial Ethernet Socket
Downstream Connections	1 x Multi-Mode Fibre Optic with 3 x RJ45 Terminations
Environmental Rating	IP65
Maximum Ambient Temperature	50°C / 120 °F
Dimensions (h x w x d)	380 x 380 x 260 mm / 15 x 15 x 10 in

LSP$_{HD}$ Desktop Power Supply (Part Number 805024)

An unsealed power supply for use in clean environments to provide power for the **LSP$_{HD}$**.

Specifications	
PARAMETER	
Input Power Supply	100 to 240 V a.c.
Instrument Connection	1 x RJ45 termination
Downstream Connections	1 x RJ45 termination
Supplied with	M12 to RJ45 Adaptor Cable
Maximum Ambient Temperature	55°C / 131 °F
Dimensions (h x w x d)	166 x 80 x 43.6 mm / 6.48 x 3.15 x 1.72 in

LSP$_{HD}$ Floatline Service Panel (Part Number 805140)

The **LSP$_{HD}$** linescanner float line system service panel provides mains power to all components of the **LSP$_{HD}$** system, isolation facilities for servicing access and real-time system status information.

The display panel can be supplied with a choice of languages to suit the local application.

It provides a real-time indication of system status, including:

Power On (24V) - status indication
Over Temperature - warning indication
Low Purge Pressure - warning indication
High Purge Pressure - warning indication
Shutter Not Open - status indication
Manual Close - status indication
Push For Manual Close - manual operation

Any chosen installation site for the service panel must have low vibration, low contamination and must be within ambient temperature specification at all times (max. 50°C/90°F).

The maximum cable run between the service panel installation site and the float line mountings should not exceed 15m, taking into account the safe routing of the cable.

Specifications	
PARAMETER	
Input Power Supply	100 to 240 V a.c.
LSP$_{HD}$ Connection	M12 4 pin D-Coded Industrial Ethernet Socket
Downstream Connections	4 x RJ45 terminations 1 x Multi-Mode Fibre Optic with SC Terminations Service Panel Alarm Over Temperature Alarm Purge Pressure Alarm Shutter Not Open Alarm
Maximum Ambient Temperature	50 °C / 120 °F
Dimensions (h x w x d)	510 x 510 x 250 mm / 20 x 20 x 10 in

Cables

Connection cables between the **LSP$_{HD}$** scanner and the **LSP$_{HD}$** Power Supply unit; pre-terminated with M12 industrial ethernet connectors this single cable provides both data and Power-over-Ethernet connections.

Specifications				
PARAMETER				
	LSP$_{HD}$ 15m Low Temperature	**LSP$_{HD}$** 50m Low Temperature	**LSP$_{HD}$** 15m High Temperature	System Cable for Floatline Mounting with Scanner Protection 15m
Part Number	805038	805039	804977	031.795
Length	15 m / 49 ft	50 m / 164 ft	15 m / 49 ft	15 m / 49 ft
Maximum Ambient Temperature	105 °C / 220 °F	105 °C / 220 °F	200 °C / 390 °F	200 °C / 390 °F

Blowers & Accessories

The plate mounted blower unit provides air to the **LSP$_{HD}$**. Each specific application may require a controlled air supply. Optical air purging may be required in order to maintain a clear sighting window.

Each blower can support up to two scanners.

Accessories

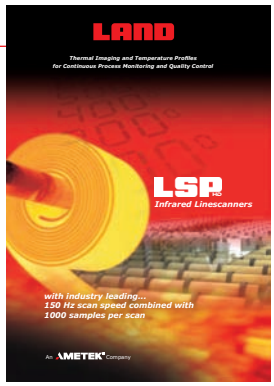
+ A Weatherproof Blower Cover is available. This is only required for outdoor use
+ Air Pre-filter

Specifications			
PARAMETER			
	Option 1	**Option 2**	**Option 3**
Power Supply:	230V a.c.	110V a.c.	220V a.c.
Frequency:	50Hz	60Hz	60Hz
Power consumption:	400W	500W	500W
Circuit breaker (type C):	10A	16A	10A
Operating Temperature:	-20 to 50°C/-4 to 122°F (-40 to 50°C/-40 to 122°F with optional air heater fitted)		
Environmental Rating:	IP55/NEMA 4 (IP55/NEMA 4X (with weatherproof cover fitted)		
CE marking:	89/336/CEE; 73/23/CEE		
Weather proofing:	In accordance with EN 60034-5		

LSP$_{HD}$ Overview

A complete overview of the entire product range, including the key features and benefits of all models.

Ref **LSP$_{HD}$** Overview 0210



LSP$_{HD}$ Mountings and Accessories

A complete overview of the entire range of mountings and accessories for the entire LSP-E product range

Ref. **LSP$_{HD}$** M&A 0210

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Non-Contact Temperature Measurement Solutions

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REGISTERED ISO 9001 MANAGEMENT SYSTEM — Applies in the USA

LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025:2005

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