solderstar*

Temperature Profiling Systems

Documentation 2012

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SolderStar LITE - 4 Channel Reflow Profiling System

System Part Number: R-0425

solderstar*
Lite

System Equipment Included

Part No.	Description

DL-NEP4　　　　　　**SolderStar Neptune 4 channel USB datalogger**

Sensor Type	4 x Type K
Measurement Accuracy	±1 C
Measurement Resolution	0.02°C
Measurement Range	-150 - 500 C
Fastest Sample Period	0.1 Sec
Slowest Sample Period	1 Hour
Rechargeble Battery Power	NiMH
Maximum Operating Temperature	85°C
Datalogger Memory Size	65000 Points
Communication Method	USB

Supplied with calibration certificate

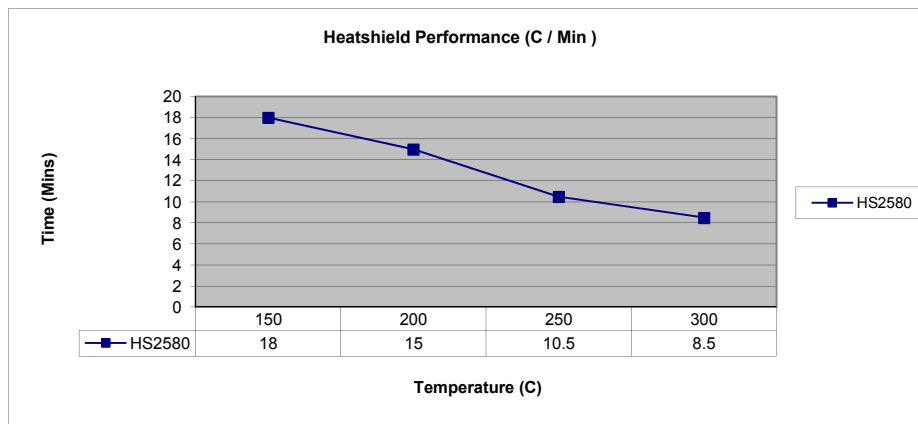**TP-GF100-4**　　　　　　**Thermocouple Pack**

Includes 4 x 100cm Glass Fibre type K thermocouples

Solderstar thermocouples are manufactured from special limits of error wire to EN60584-2 Class 1

HS2080　　　　　　**25mm Thermal Heatshield**

Construction	Stainless Steel
Dimensions	25mm x 80mm x 280mm

Heatshield Performance (C / Min)

	150	200	250	300
HS2580	18	15	10.5	8.5

Y-axis: Time (Mins), X-axis: Temperature (C)

DC001　　　　　　**USB Communication/Recharge cable**

Standard USB A to Mini B

SW-R-STD　　　　　　**Profile Central PC Analysis Software**

Includes PC software on CDROM

Profile Prediction Software Module (Manual)

Wave Solder Support Module

SPC Manager Software

EC001　　　　　　**SolderStar Equipment Case**

Hinged hard plastic equipment case, full custom foam protection insert

SolderStar LITE - Accessories

Part No.	Description
AC-SWAUTO	AUTOSeeker Profile Optimisation Sofware
AC-RC-001	Adjustable Reflow Carrier

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System Part Number: R-0625P

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System Equipment Included

Part No.	Description

DL-NEPSLU — **SolderStar Neptune 6 channel USB datalogger**

Sensor Type	6 x Type K
Measurement Accuracy	±1 C
Measurement Resolution	0.02°C
Measurement Range	-150 - 500 C
Fastest Sample Period	0.1 Sec
Slowest Sample Period	1 Hour
Rechargeble Battery Power	NiMH
Maximum Operating Temperature	85°C
Datalogger Memory Size	65000 Points
Communication Method	USB or 2.4Ghz Wireless (Optional)

Supplied with calibration certificate

SL-HS-6 — **6 Channel Smartlink Adapter**

6 Channel Type K Smartlink adapter
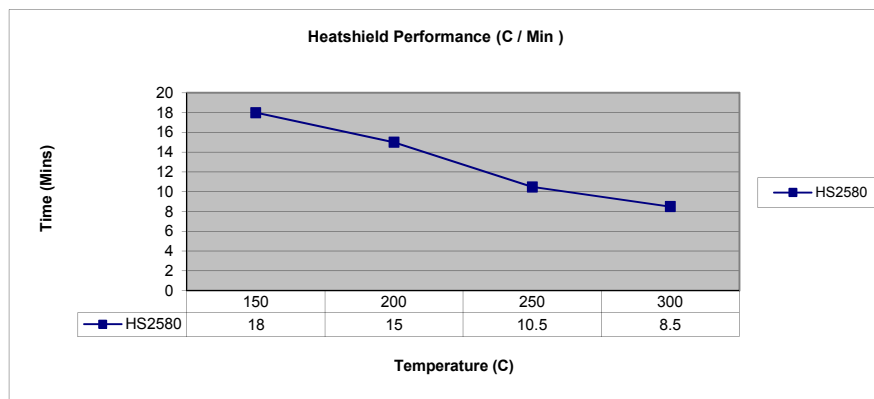
TP-GF100-6 — **Thermocouple Pack**

Includes 6 x 100cm Glass Fibre type K thermocouples
Solderstar thermocouples are manufactured from special limits of error wire to EN60584-2 Class 1

HS2580-SL — **25mm Thermal Heatshield**

Construction	Stainless Steel
Dimensions	25mm x 80mm x 280mm

Heatshield Performance (C / Min)

Time (Mins) vs Temperature (C)

	150	200	250	300
HS2580	18	15	10.5	8.5

DC001 — **USB Communication/Recharge cable**

Standard USB A to Mini B

SW-R-STD — **Profile Central PC Analysis Software**

Includes PC software on CDROM
Profile Prediction Software Module (Manual)
Wave Solder Support Module
SPC Manager Software

EC001 — **SolderStar Equipment Case**

Hinged hard plastic equipment case, full custom foam protection insert

SolderStar PRO - Accessories (see Page 9 for more details)

Part No.	Description
AC-SWAUTO	AUTOSeeker Profile Optimisation Sofware
AC-RFMOD	2.4Ghz Wireless Telemetry Kit
AC-WSPRO	WaveShuttle PRO High Performance Wave Solder Analyser
AC-DP-001	DeltaPRObe Reflow Oven Performance Fixture
AC-RC-001	Adjustable Reflow Carrier
AC-VPPACK	Vapour Phase Pack (Thermal Barrier + Software)

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SolderStar PRO - 9 Channel Reflow Profiling System

System Part Number: R-0925P

soliderstar* Pro

System Equipment Included

Part No.	Description

DL-NEPSLU — **SolderStar Neptune SL USB Rechargeable datalogger**

Sensor Type	Type K
Measurement Accuracy	±1 C
Measurement Resolution	0.02°C
Measurement Range	-150 - 500 C
Fastest Sample Period	0.1 Sec
Slowest Sample Period	1 Hour
Battery Power	NiMH
Maximum Operating Temperature	85°C
Datalogger Memory Size	120000 Points
Communication Method	USB or 2.4Ghz Wireless (Optional)

Supplied with calibration certificate

SL-HS-9 — **9 Channel Smartlink Adapter**

9 Channel Type K Smartlink adapter
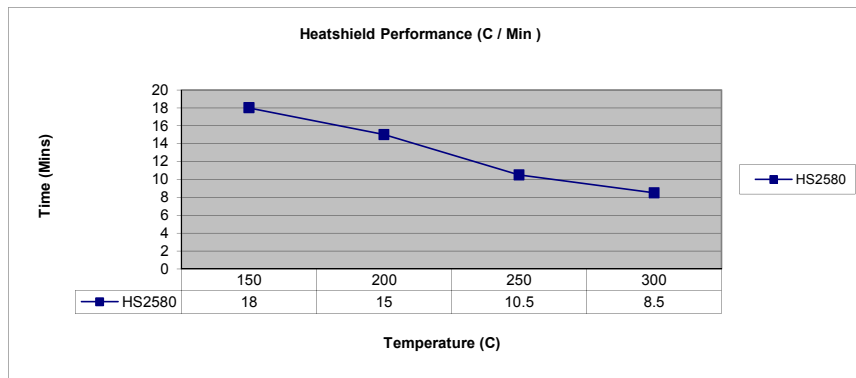
TP-GF100-9 — **Thermocouple Pack**

Includes 9 x 100cm Glass Fibre type K thermocouples (480C Rated)
Solderstar thermocouples are manufactured from special limits of error wire to EN60584-2 Class 1

HS2580-SL — **25mm Thermal Heatshield - Smartlink Ready**

Construction	Stainless Steel
Dimensions	25mm x 80mm x 280mm

Heatshield Performance (C / Min)

	150	200	250	300
HS2580	18	15	10.5	8.5

Temperature (C)
Time (Mins)

DC001 — **USB Communication/Recharge cable**

Standard USB A to Mini B

SW-R-STD — **Profile Central PC Analysis Software**

Includes PC software on CDROM
Profile Prediction Software Module (Manual)
Wave Solder Support Module
SPC Manager Software

EC001 — **SolderStar Equipment Case**

Hinged hard plastic equipment case, full custom foam protection insert

SolderStar PRO - Accessories (see Page 9 for more details)

Part No.	Description
AC-SWAUTO	AUTOSeeker Profile Optimisation Sofware
AC-RFMOD	2.4Ghz Wireless Telemetry Kit
AC-WSPRO	WaveShuttle PRO High Performance Wave Solder Analyser
AC-DP-001	DeltaPRObe Reflow Oven Performance Fixture
AC-RC-001	Adjustable Reflow Carrier
AC-VPPACK	Vapour Phase Pack (Thermal Barrier + Software)

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SolderStar PRO - 12 Channel Reflow Profiling System

System Part Number: R-1225P

System Equipment Included

Part No.   **Description**

**DL-NEPSLU**   **SolderStar Neptune SL USB Rechargeable datalogger**

Sensor Type	Type K
Measurement Accuracy	±1 C
Measurement Resolution	0.02°C
Measurement Range	-150 - 500 C
Fastest Sample Period	0.1 Sec
Slowest Sample Period	1 Hour
Battery Power	NiMh
Maximum Operating Temperature	85°C
Datalogger Memory Size	120000 Points
Communication Method	USB or 2.4Ghz Wireless (Optional)

Supplied with calibration certificate

SL-HS-12   **12 Channel Smartlink Adapter**

12 Channel Type K Smartlink adapter
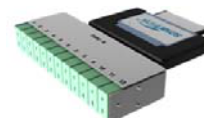
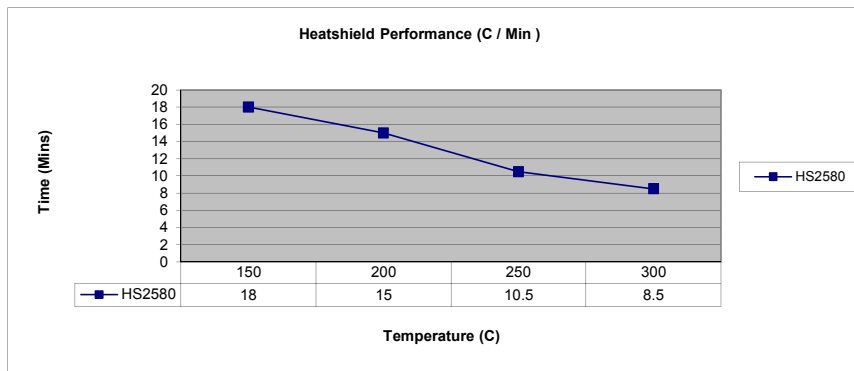**TP-GF100-12**   **Thermocouple Pack**

Includes 12 x 100cm Glass Fibre type K thermocouples (480C Rated)

Solderstar thermocouples are manufactured from special limits of error wire to EN60584-2 Class 1

HS2580-SL   **25mm Thermal Heatshield - Smartlink Ready**

Construction	Stainless Steel
Dimensions	25mm x 80mm x 280mm

Heatshield Performance (C / Min)

	150	200	250	300
HS2580	18	15	10.5	8.5

Time (Mins) — vertical axis

Temperature (C) — horizontal axis

DC001   **USB Communication/Recharge cable**

Standard USB A to Mini B

SW-R-STD   **Profile Central PC Analysis Software**

Includes PC software on CDROM

Profile Prediction Software Module (Manual)

Wave Solder Support Module

SPC Manager Software

EC001   **SolderStar Equipment Case**

Hinged hard plastic equipment case, full custom foam protection insert

SolderStar PRO - Accessories (see Page 9 for more details)

Part No.	Description
AC-SWAUTO	AUTOSeeker Profile Optimisation Sofware
AC-RFMOD	2.4Ghz Wireless Telemetry Kit
AC-WSPRO	WaveShuttle PRO High Performance Wave Solder Analyser
AC-DP-001	DeltaPRObe Reflow Oven Performance Fixture
AC-RC-001	Adjustable Reflow Carrier
AC-VPPACK	Vapour Phase Pack (Thermal Barrier + Software)

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SolderStar PRO - 16 Channel Reflow Profiling System

System Part Number: R-1625P

System Equipment Included

Part No.   **Description**

DL-NEPSLU   **SolderStar Neptune SL USB Rechargeable datalogger**

Sensor Type	Type K
Measurement Accuracy	±1 C
Measurement Resolution	0.02°C
Measurement Range	-150 - 500 C
Fastest Sample Period	0.1 Sec
Slowest Sample Period	1 Hour
Battery Power	NiMh
Maximum Operating Temperature	85°C
Datalogger Memory Size	120000 Points
Communication Method	USB or 2.4Ghz Wireless (Optional)

Supplied with calibration certificate

SL-HS-16   **16 Channel Smartlink Adapter**

16 Channel Type K Smartlink adapter
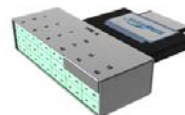
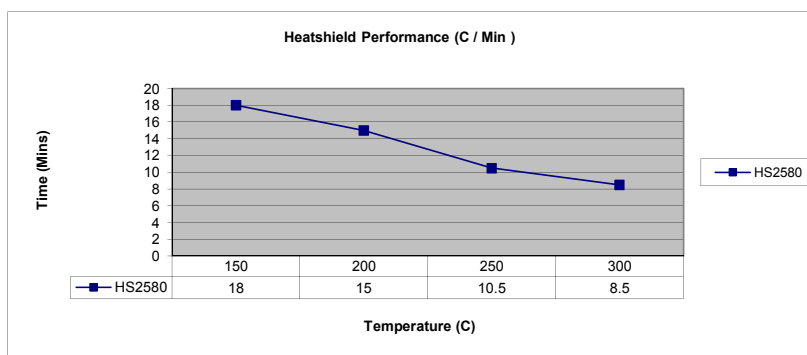**TP-GF100-16**   **Thermocouple Pack**

Includes 16 x 100cm Glass Fibre type K thermocouples (480C Rated)
Solderstar thermocouples are manufactured from special limits of error wire to EN60584-2 Class 1

HS2580-SL   **25mm Thermal Heatshield - Smartlink Ready**

Construction	Stainless Steel
Dimensions	25mm x 80mm x 280mm

Heatshield Performance (C / Min)

Temperature (C)	150	200	250	300
HS2580	18	15	10.5	8.5

DC001   **USB Communication/Recharge cable**

Standard USB A to Mini B

SW-R-STD   **Profile Central PC Analysis Software**

Includes PC software on CDROM
Profile Prediction Software Module (Manual)
Wave Solder Support Module
SPC Manager Software

EC001   **SolderStar Equipment Case**

Hinged hard plastic equipment case, full custom foam protection insert

SolderStar PRO - Accessories (see Page 9 for more details)

Part No.	Description
AC-SWAUTO	**AUTOSeeker Profile Optimisation Sofware**
AC-RFMOD	**2.4Ghz Wireless Telemetry Kit**
AC-WSPRO	**WaveShuttle PRO High Performance Wave Solder Analyser**
AC-DP-001	**DeltaPRObe Reflow Oven Performance Fixture**
AC-RC-001	**Adjustable Reflow Carrier**
AC-VPPACK	**Vapour Phase Pack (Thermal Barrier + Software)**

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Wave Shuttle PRO - Wave Solder Anayser (Wave Only - Solution)
System Includes Pallet + Datalogger for standalone Wave Solder solution
For combined system for reflow/wave : Select PRO Reflow system + P/N AC-WSPRO
E.g: R-0625P + AC-WSPRO

System Part Number: W-1004

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Pro

System Equipment Included

Part No.	Description

DL-NEPSLU   **SolderStar Neptune SL USB Rechargeable datalogger**

Sensor Type	Type K
Measurement Accuracy	±1 C
Measurement Resolution	0.02°C
Measurement Range	-150 - 500 C
Fastest Sample Period	0.1 Sec
Slowest Sample Period	1 Hour
Battery Power	NiMH
Maximum Operating Temperature	85°C
Datalogger Memory Size	120000 Points
Communication Method	USB

Supplied with calibration certificate

AC-WSPRO   **WaveShuttle PRO High Performance Wave Solder Analyser**

High performance analyser for use on medium/large machines. High reliability Wave Solder Analyser with additional bottom side sensors for detailed solder wave calibration and process control.

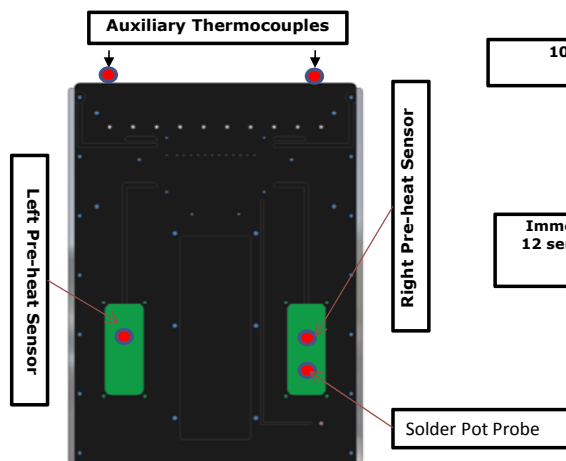| Temperature Measurement Sensor	Type K
Wave Measurement Sensor	Titanium
Pallet Side Rails	Titanium
Temperature Measurement Points	5 (See Figure 1)
Wave Measurement Points	22 (See Figure 2)
Wave Measurement Rate	0.01 Seconds

Auxiliary Thermocouples

Left Pre-heat Sensor

Right Pre-heat Sensor

Solder Pot Probe

Figure 1
WaveShuttle - PRO Top Side
Temperature Positions

10 x Dwell Time Sensors

**Immersion Depth Array
12 sensors set at 0.2mm
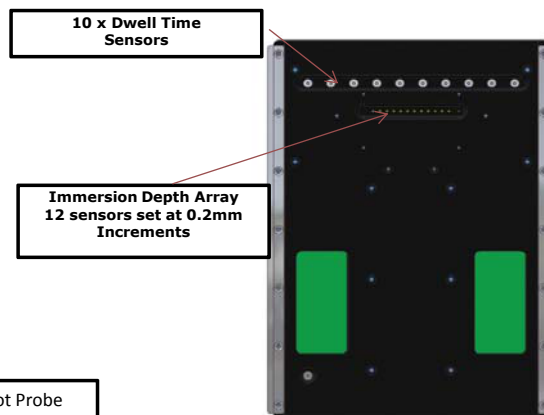Increments**

Figure 2
WaveShuttle PRO Bottom Side
Contact Positions

DC001   **USB Communication/Recharge cable**
Standard USB A to Mini B

SW-W-STD   **Wave Central PC Analysis Software**
Includes PC software on CDROM
SPC Manager Software
Hardcopy User Guide

EC002   **SolderStar Equipment Case**
Equipment Bag

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SolderStar PRO - 6 Vapour Phase Profiling System

System Part Number: VP-0640P

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System Equipment Included

Part No.   **Description**

DL-NEPSLU   **SolderStar Neptune SL USB Rechargeable datalogger**

Sensor Type	Type K
Measurement Accuracy	±1 C
Measurement Resolution	0.02°C
Measurement Range	-150 - 500 C
Fastest Sample Period	0.1 Sec
Slowest Sample Period	1 Hour
Rechargeble Battery Power	NiMH
Maximum Operating Temperature	85°C
Datalogger Memory Size	65000 Points
Communication Method	USB or 2.4Ghz Wireless (Optional)

Supplied with calibration certificate

**TP-GF100-6**   **Thermocouple Pack**

Includes 6 x 100cm Glass Fibre type K thermocouples
Solderstar thermocouples are manufactured from special limits of error wire to EN60584-2 Class 1

HS-VP-0640   **6 Channel Vapour Phase Barrier (for SolderStar PRO USB)**

Construction	Aluminium
Weight	525g

Heatshield Performance (C / Min)

	100	150	200	250
HS-VP-0640	38	25	18	15

Time (Mins) vs Temperature (C)
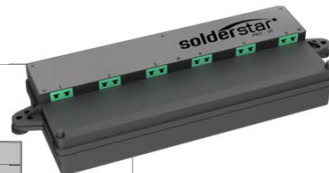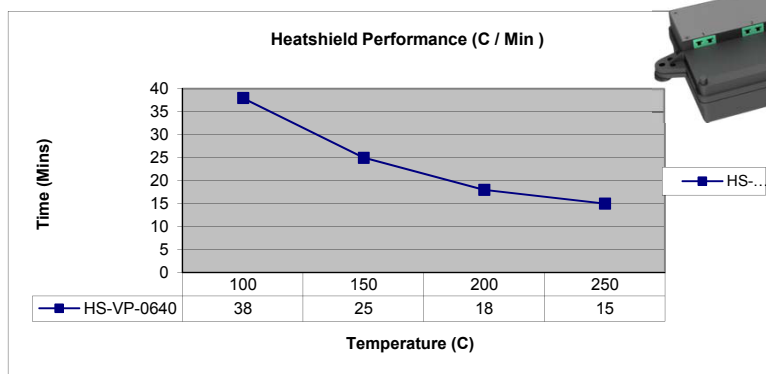
DC001   **USB Communication/Recharge cable**

Standard USB A to Mini B

SW-VR-STD   **Profile Central PC Analysis Software**

Includes PC software on CDROM
Profile Prediction Software Module (Manual)
Vapour Phase Solder Support Module
SPC Manager Software

EC001   **SolderStar Equipment Case**

Hinged hard plastic equipment case, full custom foam protection insert

SolderStar PRO - Accessories

Part No.   **Description**
AC-RFMOD   **2.4Ghz Wireless Telemetry Kit**

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SolderStar PRO - Accessories (Detailed)

Part No.	Description	
AC-SWAUTO	**AUTOSeeker Profile Optimisation Sofware** The AUTOSeeker is an optional software module which allows profiles to be optimised automatically. A profile is first captured from a test PCB, the Autoseeker can searches for the optimal set points for the oven. Profiles can be solved to give the absolute optimum, faster throughput or use less energy.	
AC-RFMOD	**2.4Ghz Wireless Telemetry Kit** The Wireless Telemetry option all connectionless datalogger setup and viewing of profiles live to the computer as they happen. Downloading of data stored in memory is also possible. Live battery status and internal datalogger temperatures are fed to the computer while the datalogger passes through the machine allowing costly machine jams to be quickly detected. The system uses an innovative self-healing Zigbee network, with this approach transmitted data is never lost and long transmission ranges can be achieved with additional repeaters.	
AC-WSPRO	**WaveShuttle PRO High Performance Wave Solder Analyser** The AC-WPRO extends the use of a SolderStar PRO Reflow system for use on the wave solder machine. It is compatible with R-0625P , R-0925P , R-1225P and R-1625P. **The datalogger from the reflow system** is connected to the pallet to measure all key parameters including wave height in a single pass.	
AC-DP-001	**DeltaPRObe Reflow Oven Performance Fixture** The AC-DP-001 is compatible with R-0625P , R-0925P , R-1225P and R-1625P. The datalogger from the reflow system is connected to the DeltaPRObe to provide a convenient fixture to test the repeatability of the reflow oven. A 'golden' process profile is captured by the sensors, this can then be used to perform 'capture and compare' measurement periodically without the need for fragile test boards.	
AC-RC-001	**Adjustable Reflow Carrier** The AC-RC-001 is an adjustable carrier that is used to safely transport your profiling system through the reflow process on the conveyor. Adjustment from 120mm - 450mm is possible, the system is manufactured from stainless steel and compatible with all Solderstar Heatshield types. Height adjustment on the side rails is also possible allowing use of the system on very low height tunnels	
AC-VPPACK	**Vapour Phase Pack (Thermal Barrier + Software)** The AC-VPPACK is compatible with R-0625P , R-0925P , R-1225P and R-1625P. The datalogger from the reflow system is connected to the Vapour Phase barrier to provide sealed and high thermal performance barrier. This can be passed into the process along with the PCB to capture thermal profiles at component level.	

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