

# Flexible Packaging Test Equipment









# **ASSURED QUALITY TESTING SOLUTIONS**

THE **RDM TEST EQUIPMENT** TEAM ARE FOCUSSED ON **MANUFACTURING** FLEXIBLE PACKAGING TEST EQUIPMENT DIRECTLY FROM OUR UK FACTORY, WITHIN AN ISO 9001 MANUFACTURING ENVIRONMENT.

ESTABLISHED IN 1985, OUR PRODUCTS OFFER **SUPERIOR** TECHNICAL PERFORMANCE, **RELIABILITY**, **EASE OF USE** AND **VALUE** FOR MONEY, FOR A WIDE RANGE OF PHYSICAL TESTING METHODS.



#### LABORATORY & PRODUCTION HEAT SEALERS

Heat Sealability of flexible films, ASTM F2029. Flexible pouches, packs, all heat sealable films for QC, R&D, prototyping and small scale production. (Pages 4-11)



# MEDICAL/CLEANROOM HEAT SEALERS with VACUUM & GAS FLUSH OPTIONS

Heat Sealing medical pouches, blisters, & trays, validated to ISO11607. (Pages 12-17)



#### TRAY / BLISTER PACK / POT HEAT SEALERS

Small scale production of semi-rigid/rigid packs with flexible lidding films. (Pages 18-19)



#### **HOT TACK TESTER**

Hot Tack / Seal Strength of heat sealable films used in high speed packaging lines. ASTM F1921, ISO EN DIN55571. (Pages 20-21)

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### **INTERNATIONAL SUPPORT**

OUR EXPERIENCED DISTRIBUTORS AND AGENTS PROVIDE LOCAL SUPPORT, OFFERING YOU ADVICE AND GUIDANCE WITH TEST METHODS, TECHNIQUES AND EQUIPMENT SELECTION.

**AFTER SALES SUPPORT AND CALIBRATION SERVICES** ARE PROVIDED FROM OUR DIRECT OFFICES AND INTERNATIONAL PARTNERS THROUGHOUT EUROPE, ASIA/PACIFIC, AMERICAS, AND AFRICA.



#### SEAL STRENGTH / TENSILE TESTER

Measure Seal Strength, Delamination, Bond Strength, Tensile Strength. ASTM F88. (Pages 22-23)



#### PRECISION FRICTION / SLIP TESTER

Measure Static & Dynamic Friction of films, packaging, paper, & board. ASTM, ISO, Tappi. (Pages 24-25)



#### PACKAGE LEAK & BURST TESTERS

Measure Leak Hole Size (EHS) and Burst Strength of finished packs for food, medical, and industrial packs. (Pages 26-27)



#### **HAZE METER**

For determining haze and transmittance of flat plastic materials to ASTM D1003. (Pages 28-29)

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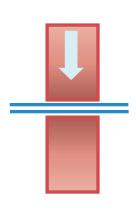
# HS-2 Laboratory Heat Sealer

PRECISION LABORATORY HEAT SEALER FOR ACCURATE AND REPEATABLE

DETERMINATION OF HEAT SEAL THRESHOLD. THE HS-2 IS ESTABLISHED AS THE 'INDUSTRY

STANDARD' FOR THIS PURPOSE. PRODUCES SEALS 5 TO 25MM WIDE AND UP TO 50MM LONG.





#### **Benefits:**

- Choose heat sealing bar configuration, either single (upper) or dual (upper & lower, meets ASTM F2029)
- User can easily change sealing bar for various surface areas or surface finishes
- Accurate and repeatable seals due to precision ground sealing faces and jaw guidance system
- Versatile applications for flexible materials, blister packs and pots
- Low Maintenance 12 months between calibrations

#### **Features:**

- Precise pressure calibration of standard surface area jaw face
- Temperature, pressure and dwell time digital controllers
- Jaws constructed in aluminium and silicone with precision ground faces
- Range of jaw face surfaces including Matched Crimp and Teflon Coating
- Auto cycle feature for greater user convenience with multiple samples



Sealing jaws: Flat metal, Rubber, Crimp or custom designed. Standard size 25mm wide x 50mm long. Can be specified any width 5mm to 25mm.

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TESTING SOLUTIONS





**Seal Width** 50 mm max.

**Temperature** Range: Ambient to 300°C, Accuracy: +/- 0.5%, Operating Accuracy: +/-2°C. Single (Upper) sealing jaw temperature control, or Dual

(Upper & Lower) sealing jaw temperature control

**Pressure** Range: 0 to 100psi (6.8bar, 689Kpa), via precision regulator and

digital display. Accuracy +/-5%, Repeatability +/- 0.02psi.

Supply via clean and dry compressed airline or bottled air/nitrogen

at 90 to 100psi

**Dwell Time** Range: 0.1 to 99.9 sec., Resolution 0.01 sec

**Auto Cycle &** Delay Time Range: 0.1 to 99.9 sec

**Delay Time** For automatic cycling of sealing bars used in manual production

environments. Assists with correct alignment of sample. Electronic

processor controlled.

Jaw Guidance

System

Dovetail slide on jaws with quick release mechanism.

**Sealing Jaws** Standard flat jaws 25mm x 50mm, constructed in aluminium with

precision ground face. Lower sealing jaw with precision ground

silicone rubber face. (See options below)

**Environment:** 5-50C ambient operating temperature,

RH 75% max (non-condensing)

**Power** 240V AC 50/60 Hz (110V AC voltage available

on request)

# **Options**

- Single (Upper) sealing jaw temperature control or Dual (Upper & Lower) sealing jaw temperature control
- Sealing jaw dimension/profile as required (inc. Matched crimp 120° x 1.8mm pitch)
- Stainless Steel sealing jaws
- Teflon Coated Tape or Teflon Coated Jaws
- Footswitch
- PVC Dust Cover
- Alarm package for temperature High/Low, selectable
- Cold seal system
- Digital thermometer with s/s band probe to check jaw temperature (see image)



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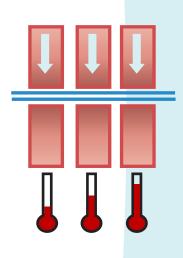
# HSG-3 & HSG-5 Gradient Heat Sealer

PRECISION LABORATORY HEAT SEALER FOR ACCURATE AND REPEATABLE

DETERMINATION OF HEAT SEAL THRESHOLD, WITH 3 OR 5 SETS OF SEALING

JAWS. PRODUCES SEALS 15MM WIDE AND 30MM LONG.





The satisfactory development, manufacture, conversion and application of flexible packaging films necessitates the implementation of precise methods of quality control systems. Efficient determination of heat seal thresholds is achieved with this multi-jaw heat sealer. Up to 5 pairs of jaws can be fitted with independent temperature control providing a temperature gradient on the film. Especially suited for flexible packaging materials, laminates, foils and paper, the HSG-3/5 multi-jaw features accurate control of temperature, pressure and dwell time of a standard surface area sealing jaw.

With the introduction of a standard test method ASTM F2029-00 and our heat sealer HSG-3/5, you can be confident that your heat seal threshold measurement is common to all producers, converters and end users of flexible packaging materials and their eventual applications.

Meets ASTM F-2029-00 (only when top/lower jaw heated)

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**Temperature Control:** 0 - 300°C (0 - 572°F) 0.1°C resolution +/- 0.5% +/- 1 digit accuracy. Operating temperature accuracy +/- 2°C. Resistance Type 'J' thermo-couple sensing. Single independent or dual independent control.

**Pressure:** 0 - 100psi (0 - 6.8 bar, 0 - 689 Kpa) via digital display and transducer. Pressure control through precision regulator. Repeatability +/-0.02 PSI Operation accuracy +/- 5% Supply via factory compressed air line or nitrogen or compressed air bottles min 6 bar (90 psi) max. 7 bar(100 psi). Pressure medium must be clean and dry.

**Dwell Time:** 0.01 – 99.9 sec. 0.01 sec resolution real time base via quartz crystal +/-0.01% of range. Operating accuracy +/- 5% (taking into account friction in piston movement).

**Footswitch:** Connection port for footswitch operation. Optional footswitch.

#### **Sealing Jaw Std:**

Single jaw option: Top heated with silicone rubber (60 shore hardness) 15mm wide x 30mm long. Jaws made from brass with machine ground flat face. Dual jaw option: Top and Lower heated 15mm wide x 30mm long. Jaws made from brass with machine ground flat face.

**Environment:** 5-50°C ambient operating temperature, RH 75% max (non-condensing) Power: 240V AC 50/60 Hz (110V AC voltage available on request).



Five brass sealing jaws



Control panel showing ten temperature controllers, plus digital pressure and digital dwell time controllers.

# **Options**

- Single (Upper) sealing jaw temperature control or Dual (Upper & Lower) sealing jaw temperature control
- Sealing jaw dimension/profile as required (inc. Matched crimp 120° x 1.8mm pitch)
- Teflon Coated Tape or Teflon Coated Jaws
- Footswitch
- PVC Dust Cover
- Cold seal system (temperature circuit removed)
- Digital thermometer with s/s band probe to check jaw temperature (see image)



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# HSE-3 Laboratory Heat Sealer

PRECISION LABORATORY HEAT SEALER FOR PRODUCTION OF REPEATABLE HIGH
QUALITY HEAT SEALS AND DETERMINATION OF HEAT SEAL THRESHOLD.
PRODUCES SEALS 5 TO 25MM WIDE AND UP TO 300MM LONG.





#### **Benefits:**

- Choose heat sealing bar configuration, either single (upper) or dual (upper & lower, meets ASTM F2029)
- User can easily change sealing bar for various surface areas or surface finishes
- Accurate and repeatable seals due to precision ground sealing faces and jaw guidance system
- Versatile applications for flexible materials, blister
- packs and pots
- Low Maintenance 12 months between calibrations

#### **Features:**

- Precise pressure calibration of standard surface area jaw face
- Temperature, pressure and dwell time digital controllers
- Jaws constructed in aluminium and silicone with precision ground faces
- Range of jaw face surfaces including Matched Crimp and Teflon Coating
- Auto cycle feature for greater user convenience with multiple samples



Sealing Bars - Flat Metal, Rubber, and Crimp, with or without Teflon Coating.

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**Seal Width** 300 mm max. (Option to extend to 350mm) **Temperature** Range: Ambient to 300°C, Accuracy: +/- 0.5%,

**Control** Operating Accuracy: +/-2°C. Single (Upper) sealing jaw temperature

control, or Dual (Upper & Lower) sealing jaw temperature control.

**Pressure** Range: 0 to 100psi (6.8bar, 689Kpa), via precision regulator and

digital display. Accuracy +/-5%, Repeatability +/- 0.02psi.

Supply via clean and dry compressed airline or bottled air/nitrogen

at 90 to 100psi

**Dwell Time** Range: 0.1 to 99.9 sec., Resolution 0.01 sec

**Auto Cycle &** Delay Time Range: 0.1 to 99.9 sec

**Delay Time** For automatic cycling of sealing bars used in manual production

environments. Assists with correct alignment of sample. Electronic

processor controlled.

Jaw Guidance

System

Dovetail slide on jaws with quick release mechanism.

Sealing Jaws Standard flat jaws 25mm x 300mm, constructed in aluminium with

precision ground face. Lower sealing jaw with precision ground

silicone rubber face. (See options below)

**Environment:** 5-50°C ambient operating temperature,

RH 75% max (non-condensing)

**Power** 240V AC 50/60 Hz (110V AC voltage available

on request)

# **Options**

- Single (Upper) sealing jaw temperature control or Dual (Upper & Lower) sealing jaw temperature control
- Sealing jaw dimension/profile as required (inc. Matched crimp 120° x 1.8mm pitch)
- Stainless Steel sealing jaws
- Teflon Coated Tape or Teflon Coated Jaws
- Blister Pack Simulator sealing jaw
- Additional Blister tray
- Footswitch
- PVC Dust Cover
- Alarm package for temperature High/Low, selectable
- Cold seal system
- Digital thermometer with s/s band probe to check jaw temperature (see image)



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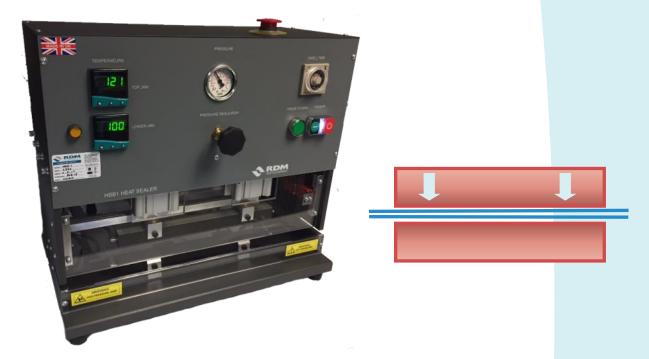




# HSB-1 Laboratory Heat Sealer

LABORATORY HEAT SEALER FOR STANDARD DETERMINATION OF HEAT SEAL THRESHOLD.

PRODUCES SEALS 5 TO 25MM WIDE AND UP TO 300MM LONG.



#### **Benefits:**

- Choose heat sealing bar configuration, either single (upper) or dual (upper & lower, meets ASTM F2029)
- User can easily change sealing bar for various surface areas or surface finishes
- Accurate and repeatable seals due to precision ground sealing faces and jaw guidance system
- Versatile applications for flexible materials, blister packs and pots
- Low Maintenance 12 months between calibrations

#### Features:

- Pressure calibration of standard surface area iaw face
- Temperature digital controllers, pressure and dwell time dial controllers (upgrade to precision digital controllers as required)
- Jaws constructed in aluminium and silicone with precision ground faces
- Range of jaw face surfaces including Matched Crimp and Teflon Coating



Sealing Bars - Flat Metal, Rubber, and Crimp, with or without Teflon Coating.

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**Seal Width** 300 mm max. (Option to extend to 350mm) **Temperature** Range: Ambient to 300°C, Accuracy: +/- 0.5%,

**Control** Operating Accuracy: +/-2°C. Single (Upper) sealing jaw temperature

control, or Dual (Upper & Lower) sealing jaw temperature control.

**Pressure** Range: 0 to 100psi (6.8bar, 689Kpa), via dial pressure gauge,

pressure control via precision regulator.

Operating Accuracy +/-10%, Repeatability +/- 5psi.

Supply via clean and dry compressed airline or bottled air/nitrogen

at 90 to 100psi

**Dwell Time** Range: 0.1 to 99.9 sec., Resolution 0.01 sec

Jaw Guidance

System

Quick release mechanism for simple jaw changeover.

**Sealing Jaws** Standard flat jaws 25mm x 300mm, constructed in aluminium with

precision ground face. Lower sealing jaw with precision ground

silicone rubber face. (See options below)

**Environment:** 5-50°C ambient operating temperature,

RH 75% max (non-condensing)

**Power** 240V AC 50/60 Hz (110V AC voltage available

on request)

# **Options**

- Single (Upper) sealing jaw temperature control or Dual (Upper & Lower) sealing jaw temperature control
- Sealing jaw dimension/profile as required (inc. Matched crimp 120° x 1.8mm pitch)
- Upgrade to digital pressure transducer/readout, and digital dwell timer.
- Stainless Steel sealing jaws
- Teflon Coated Tape or Teflon Coated Jaws
- Footswitch
- PVC Dust Cover
- Alarm package for temperature High/Low, selectable
- Cold seal system
- Digital thermometer with s/s band probe to check jaw temperature (see image)



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# HSX-400 Medical Heat Sealer

TOUCH SCREEN PRECISION MEDICAL HEAT SEALER FOR PRODUCTION OF REPEATABLE HIGH QUALITY HEAT SEALS IN MEDICAL PACKAGING, VALIDATION TO ISO 11607.



#### **Benefits:**

- Choose heat sealing bar configuration, either single (upper) or dual (upper & lower, meets ASTM F2029)
- Sealing bar can be specified to suit various surface areas or surface finishes
- Accurate and repeatable seals due to precision ground sealing faces and advanced jaw guidance system
- Versatile applications for flexible materials, porous and non-porous films, foils and blister packs
- Low Maintenance 12 months between calibrations



Settings screen for all control parameters

#### **Features:**

- 5.7" touch screen controller for precise control of temperature, pressure and dwell time
- Memory recipe function for quick and accurate recall of settings
- Precise pressure calibration of standard surface area jaw face
- Jaws constructed in aluminium and silicone with precision ground faces
- Range of jaw face surfaces including Matched Crimp and Teflon Coating
- Auto cycle feature for greater user convenience and cycle



Temperature and pressure calibration screen

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**Models** HSX-400 SingleMed—Upper jaw temperature controlled

HSX-400 DualMed—Upper & Lower jaw temperature controlled

**Seal Width** Up to 400 mm max.

**Controller** 5.7" Touch Screen TFT LCD 320 x 240 colour display. IP56 rated.

Stores up to 20 sealing recipes. Password protection. Optical pack

in place sensors. Auto, touch screen or optional footswitch

operation.

Temperature Control Range: Ambient to 300°C, Accuracy: +/- 0.5%, Operating Accuracy:

+/-2°C. User definable alarm for over/under set level.

**Pressure** Range: 0 to 100psi (6.8bar, 689Kpa), via electronic pneumatic E/P

regulator. Accuracy +/-1%. User definable alarm for over/under set level. Supply via clean and dry compressed airline or bottled air/

nitrogen at 75 to 115psi

**Dwell Time** Range: 0.1 to 99.9 sec., Resolution 0.1 sec

**Auto Cycle &** Delay Time Range: 0.1 to 99.9 sec

**Delay Time** Auto Cycle incorporates 'Pack-in-place' sensors for automatic

cycling of sealing bars used in manual production environments,

and assists with correct alignment of sample.

**Jaw Guidance** 

Advanced jaw guidance system guarantees even closure, resulting

System

in consistently high quality seals.

**Pre-Heat Cycle** User definable variable time interval, electronic processor

controlled.

**Cycle Counter** Electronic counter for seals completed.

**Sealing Jaws** Standard flat jaws 25mm x 400mm, constructed in aluminium with

precision ground face. Lower sealing jaw with precision ground

silicone rubber face. (See options below)

**Environment:** 5-50°C ambient operating temperature,

RH 75% max (non-condensing)

**Power** 240V AC 50/60 Hz (110V AC available on request)

### **Options**

- Sealing jaw dimension/profile as required (inc. Matched crimp 120° x
   1.8mm pitch)
- Teflon Coated Tape or Teflon Coated Jaws
- Vacuum and/or gas flushing of packs
- Guillotine cutter
- Integral or separate control console (photo shows integral version)
- Validation documentation / service

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# HSX-600 Medical Heat Sealer

TOUCH SCREEN PRECISION MEDICAL HEAT SEALER FOR PRODUCTION OF REPEATABLE
HIGH QUALITY HEAT SEALS IN MEDICAL PACKAGING, VALIDATION TO ISO 11607.

PRODUCES SEALS 5 TO 25MM WIDE AND UP TO 600MM LONG.



#### **Benefits:**

- Choose heat sealing bar configuration, either single (upper) or dual (upper & lower, meets ASTM F2029)
- Sealing bar can be specified to suit various surface areas or surface finishes
- Accurate and repeatable seals due to precision ground sealing faces and advanced jaw guidance system
- Versatile applications for flexible materials, porous and non-porous films, foils and blister packs
- Low Maintenance 12 months between calibrations

#### **Features:**

- 5.7" touch screen controller for precise control of temperature,
- pressure and dwell time
- Memory recipe function for quick and accurate recall of settings
- Precise pressure calibration of standard surface area jaw face
- Jaws constructed in aluminium and silicone with precision ground faces
- Range of jaw face surfaces including Matched Crimp and Teflon Coating
- Auto cycle feature for greater user convenience and cycle counter



MEDICAL PACK

Settings screen for all control parameters

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Models HSX-600 SingleMed—Upper jaw temperature controlled

HSX-600 DualMed—Upper & Lower jaw temperature controlled

**Seal Width** Up to 600 mm max.

**Controller** 5.7" Touch Screen TFT LCD 320 x 240 colour display. IP56 rated.

Stores up to 20 sealing recipes. Password protection. Optical pack

in place sensors. Auto, touch screen or optional footswitch

operation.

Temperature Control Range: Ambient to 300°C, Accuracy: +/- 0.5%, Operating Accuracy:

+/-2°C. User definable alarm for over/under set level.

Pressure Range: 0 to 100psi (6.8bar, 689Kpa), via electronic pneumatic E/P

regulator. Accuracy +/-1%. User definable alarm for over/under set level. Supply via clean and dry compressed airline or bottled air/

nitrogen at 75 to 115psi

**Dwell Time** Range: 0.1 to 99.9 sec., Resolution 0.1 sec

**Auto Cycle &** Delay Time Range: 0.1 to 99.9 sec

**Delay Time** Auto Cycle incorporates 'Pack-in-place' sensors for automatic

cycling of sealing bars used in manual production environments,

and assists with correct alignment of sample.

Jaw Guidance

Advanced jaw guidance system guarantees even closure, resulting

**System** in consistently high quality seals.

**Pre-Heat Cycle** User definable variable time interval, electronic processor

controlled.

**Cycle Counter** Electronic counter for seals completed.

**Sealing Jaws** Standard flat jaws 25mm x 600mm, constructed in aluminium with

precision ground face. Lower sealing jaw with precision ground

silicone rubber face. (See options below)

**Environment:** 5-50°C ambient operating temperature,

RH 75% max (non-condensing)

**Power** 240V AC 50/60 Hz (110V AC available on request)

# **Options**

- Sealing jaw dimension/profile as required
- Teflon Coated Tape or Teflon Coated Jaws
- Vacuum and/or gas flushing of packs
- Guillotine cutter
- Integral or separate control console (photo shows separate version)
- Validation documentation / service

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# HSX-800 Medical Heat Sealer

TOUCH SCREEN PRECISION MEDICAL HEAT SEALER FOR PRODUCTION OF REPEATABLE
HIGH QUALITY HEAT SEALS IN MEDICAL PACKAGING, VALIDATION TO ISO 11607.
PRODUCES SEALS 5 TO 25MM WIDE AND UP TO 800MM LONG.



#### **Benefits:**

- Choose heat sealing bar configuration, either single (upper) or dual (upper & lower, meets ASTM F2029)
- Sealing bar can be specified to suit various surface areas or surface finishes
- Accurate and repeatable seals due to precision ground sealing faces and advanced jaw guidance system
- Versatile applications for flexible materials, porous and non-porous films, foils and blister packs
- Low Maintenance 12 months between calibrations

#### **Features:**

- 5.7" touch screen controller for precise control of temperature, pressure and dwell time
- Memory recipe function for quick and accurate recall of settings
- Precise pressure calibration of standard surface area jaw face
- Jaws constructed in aluminium and silicone with precision ground faces
- Range of jaw face surfaces including Matched Crimp and Teflon Coating
- Auto cycle feature for greater user convenience and cycle counter

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**Models** HSX-800 SingleMed—Upper jaw temperature controlled

HSX-800 DualMed—Upper & Lower jaw temperature controlled

**Seal Width** Up to 800 mm max.

**Controller** 5.7" Touch Screen TFT LCD 320 x 240 colour display. IP56 rated.

Stores up to 20 sealing recipes. Password protection. Optical pack

in place sensors. Auto, touch screen or optional footswitch

operation.

**Temperature Control** 

Range: Ambient to 300°C, Accuracy: +/- 0.5%, Operating Accuracy:

+/-2°C. User definable alarm for over/under set level.

Pressure Range: 0 to 100psi (6.8bar, 689Kpa), via electronic pneumatic E/P

regulator. Accuracy +/-1%. User definable alarm for over/under set level. Supply via clean and dry compressed airline or bottled air/

nitrogen at 75 to 115psi

**Dwell Time** Range: 0.1 to 99.9 sec., Resolution 0.1 sec

**Auto Cycle &** Delay Time Range: 0.1 to 99.9 sec

**Delay Time** Auto Cycle incorporates 'Pack-in-place' sensors for automatic

cycling of sealing bars used in manual production environments,

and assists with correct alignment of sample.

Jaw Guidance

Advanced jaw guidance system guarantees even closure, resulting

**System** in consistently high quality seals.

**Pre-Heat Cycle** User definable variable time interval, electronic processor

controlled.

**Cycle Counter** Electronic counter for seals completed.

**Sealing Jaws** Standard flat jaws 25mm x 800mm, constructed in aluminium with

precision ground face. Lower sealing jaw with precision ground

silicone rubber face. (See options below)

**Environment:** 5-50°C ambient operating temperature,

RH 75% max (non-condensing)

**Power** 240V AC 50/60 Hz (110V AC available on request)

## **Options**

- Sealing jaw dimension/profile as required
- Teflon Coated Tape or Teflon Coated Jaws
- Vacuum and/or gas flushing of packs
- Guillotine cutter
- Integral or separate control console (photo shows integral version)
- Validation documentation / service

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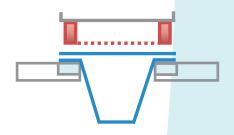
### HSP-1 & HSP 2 Pot Heat Sealers

POT HEAT SEALERS FOR LAB SCALE / PROTOTYPE PRODUCTION OF REPEATABLE
HIGH QUALITY HEAT SEALS IN POT / LIDDING FILM APPLICATIONS.
CUSTOMISABLE TO PRODUCE SEALS TYPICALLY UP TO 200MM X 300MM.





HSP-2 Pot Heat Sealer



The HSP-1 Pot Heat Sealer is a customisable technology to deliver high quality heat seals for pot / lidding film packaging. A custom made pot holder and sealing platen are specified for individual sealed packs, or multiple seals across a pack.

Pot loading is done manually, and the lidding film is either drawn off a small roll or placed manually. Either a touch screen or panel controls give flexible setting of sealing parameters, and alerts users to out of tolerance settings, or errors in the sealing sequence.

The robust frame, with 'pack-in-place' sensors, easy to use controls, and interlocked sliding guards ensure safe and repeatable operation, time after time.

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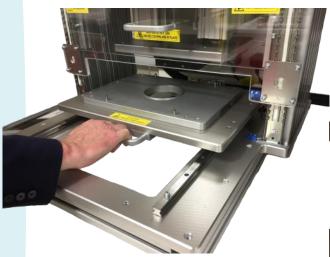


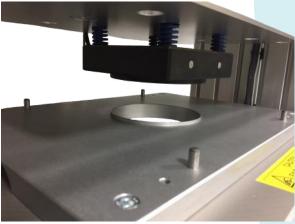




### HSP-1 & HSP 2 Pot Heat Sealers

FOR PRODUCTION OF HIGH QUALITY HEAT SEALS FOR LIDDING FILMS ON POTS, CONTAINERS, PODS AND BLISTER PACKS





#### **Benefits:**

- Highly customisable technology to suit the application with heat sealing jaw configuration
- Validate to ISO11607, or internal standards
- High quality repeatable seals, not influenced by operator
- Versatile applications for pots, containers, blister packs and trays, custom designs as required
- Low Maintenance 12 months between calibrations



#### Features:

- Precise control of temperature, pressure and dwell time.
- Optional storage of recipes for fast and repeatable recall of machine settings
- Precise pressure calibration of standard surface area jaw face
- Jaws constructed in aluminium and silicone rubber with precision ground faces

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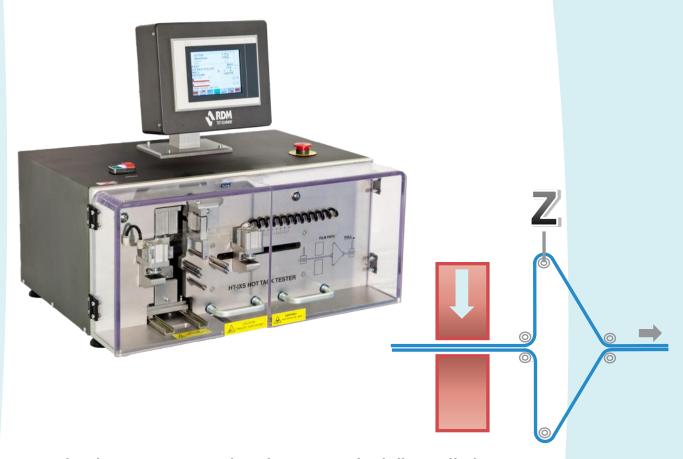








# HT-1XS Hot Tack Tester



Heat seal applications are constantly evolving to meet the challenge of higher specification materials and faster production methods. Food manufacturers, film converters, film producers and resin manufacturers are constantly striving to shorten cycle rates on packaging lines and recognise that optimising the heat sealing process is one way of accomplishing this and ensuring a higher degree of seal integrity. The number of heat seal applications is extensive, polypropylene and cello films, co-extruded films, thermoformed cups and trays, laminates and blisters, together with non-woven are only a few of the materials that are bonded by heat and as the number grows and new materials emerge in response to environmental demands, so does the need for more accurate, reproducible methods of measuring heat sealing capabilities and performance.

Determination of hot tack performance requires a test method that provides repeatable results, free from operator interference. Other types of hot tack determination methods such as the falling weight or the spring test methods are difficult to regulate and are at best suited for rough pass/fail evaluations, neither method promises quantitative data. The results are either peel or no peel and are inappropriate for the strict demands of true quality control, and research and development.

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# HT-1XS Hot Tack Tester

The HT-1XS Hot Tack Tester provides an accurate, repeatable and consistent method of testing the sealing properties of a wide range of heat sealable materials. Precise control of sealing parameters (temperature, pressure and dwell time) are via the touch screen display. Precisely as the sealing jaws open, the HT-1XS automatically draws the sample through the rollers which performs a peel test of the heat sealed sample. The force required to separate the seal is measured by a sensitive and accurate load cell. Preparation of the sample is quick and easy with a small pneumatic grip at each end of the mechanism. Both clamps are designed to prevent slippage or premature release of the sample material. The results can be presented in either grams, Newtons or lbs on the touch screen, and specifically designed p.c. software enables the data to be captured and graphically displayed. Results follow the requirements of the ASTM F 1921-98 test method producing load vs time and load vs temperature curves, which are stored in a database with traceability parameters. Data can be printed in table and/or graphical format, or exported to Excel for customized tables, SPC and other graphical reports.

Cold peel testing can be performed on the same instrument, thereby making it possible to study Hot Tack and Cold Peel performance (ultimate seal strength) of seals and to obtain information about package performance both under production conditions and development.

The HT-1XS can also perform Hot Tack measurement values using the falling weight test for comparison evaluation making it a versatile heat seal performance test apparatus.



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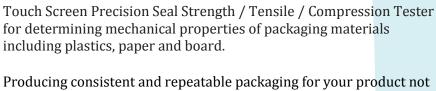




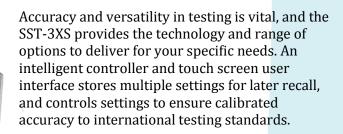


# SST-3XS Seal Strength Tester

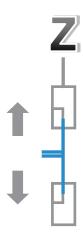
THE SST-3XS SEAL STRENGTH TESTER MEASURES TENSILE AND COMPRESSION FORCES SUCH AS SEAL STRENGTH OF HEAT SEALS IN PLASTIC FILMS. TESTS ARE PERFORMED TO RECOGNISED INTERNATIONAL STANDARDS E.G. ASTM F88.



only ensures minimal handling damage, but is vital in delivering a consistent brand to your customers. Precise measurement of the mechanical properties of materials and final packages is one way to ensure consistency and reduce material costs.







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Models: SST-3XS (300mm travel)

SST-3XS Extended (500mm travel)

**Drive Mechanism:** DC synchronous motor and gearbox with ball screw

and crosshead

1mm/min to 1000mm/min +/- 0.5% **Speed Control:** 

Speed Feedback: Via in line encoder

**Touch Panel Screen:** LCD, 256 Colour, QVGA, 320 x 240 pixels, 14.48cm

> diagonal viewing Touch screen, analogue resistive (gonze) with serial controller Processor Geode SC2200. 266 MHz MMX compatible. 2 mbyte, on board flash memory for firmware 64 MB Dram main memory

**Load Range:** Selectable load cell

0 - 5Kg ( 0 - 50N) +/- 0.25%

0 - 10Kg (0 - 100N) +/- 0.25% (Standard)

0 - 25Kg (0 - 250N) +/- 0.25% 0 - 50 Kg (0 - 500 N) + / - 0.25%

**Standard Grips:** Light duty side entry vice grips

Travel: 300 mm or 550mm effective travel

**Output:** RS 232

Power: 80 - 240 VAC single phase 50/60 Hz

500W Max

**Environment:** 5-50°C ambient operating temperature, RH 75% max

(non-condensing)

# Standard Equipment Supplied

- 0 10Kg (0-100N) load cell
- Side and top entry vice grips
- 1000g check weight

# **Options Available**

- PC data acquisition software
- Grips as required please discuss with Sales
- Friction test attachment to ASTM or BS
- Roller for adhesive tape and label adhesion (90º peel)
- Flat plate for adhesive tape and label adhesion (180º peel)



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# CF-800XS - Precision Co-Efficient of Friction Tester

THE CF-800XS PRECISION CO-EFFICIENT OF FRICTION TESTER DETERMINES THE STATIC AND KINETIC FRICTION PROPERTIES OF PLASTIC FILMS, FOILS, LAMINATES, PAPERS AND BOARDS.

THE EQUIPMENT PERFORMS TESTS TO RECOGNISED INTERNATIONAL TEST STANDARDS INCLUDING BS 2782 METHOD 824A, ASTM D1894, ISO 8295, AND TAPPI T549.



This equipment is essential for measuring the slip properties of packaging materials to ensure smooth running on production packaging machines or to measure the effect that a coating or print has on base material.

The new CF-800XS features the latest in design and technology for machine set up, testing, measurement and recording using touch panel screen display units. The constant, smooth lead screw driven cross arm ensures reliable and repeatable measurement.

Other benefits include: Vacuum suction on the bed to clamp the material, optional temperature control circuit to heat the bed for `hot slip´ values, together with analogue recorder output and RS232 output for either chart recorder logging or computer data logging of results.

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**Bed Material:** Natural anodised cast aluminium

**Sled Material:** Anodised aluminium with foam contact pad with density of 0.25/cm

**Speed Control:** 10 – 1000mm/min +/- 10mm/min

**Force Reading:** 0-1000.0 grammes +/- 0.25% Fro (other loads can be specified)

**C of F Reading:** Calculated value from sled used 0-1.00 +/- 0.25% Fto

**Touch Panel** LCD, 256 Colour, QVGA, 320 x 240 pixels, 14.48cm diagonal viewing.

**Screen:** Touch screen, analogue resistive (gonze) with serial controller

Processor Geode SC2200. 266 MHz MMX compatible.

2 mbyte, on board flash memory for firmware

64 MB Dram main memory

**Vacuum:** Air pressure of 80 – 100 PSI supply with venture generated vacuum

pulling +90 % vacuum

**Temperature:** Ambient to  $100^{\circ}\text{C} + / - 5^{\circ}\text{C}$  (when specified)

**Drive:** DC synchronous motor/gear box driving ball screw and crosshead

**Speed Feedback:** Via in line encoder

Output: RS232 C

**Power:** 240 VAC single phase 50/60 Hz (110V AC available on request)

0.75 KW max

**Environment:** 5-50°C ambient operating temperature, RH 75% max (non-

condensing)

#### Standard Accessories

- 200g 63.5mm x 63.5mm sled
- Sled / Bed Templates
- · Check weight
- Sled links
- Magnetic strips

# A ROM

# **Options**

- Temperature circuit for HOT SLIP measurement
- Software package for data logging via RS232 link
- Ski sled 100g for measurement of stainless steel on test material
- Bed inserts to give test comparison with different metals
- Tensile grips for T peel or tensile test
- Peel attachment for 90° and 180° label / sticky tape peel test

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# Check-A-Pack Package Seal Integrity Testers

MEASUREMENT OF MICRO LEAK HOLE SIZE AND BURST PRESSURE SEAL INTEGRITY WITH OPTIONAL OXYGEN AND CARBON DIOXIDE ANALYSIS, FOR ALL FLEXIBLE AND SEMI-RIGID PACKAGING. BENCHTOP MODELS WITH MANUAL OR AUTOMATIC SAMPLE PREPARATION. HOLE SIZE MEASUREMENT 5 TO 200 MICRONS.



Check-A-Pack models 600

#### **Benefits:**

- Automatic sample preparation eliminates potential user error (Check-A-Pack 600 models)
- Manual sample preparation suits a wider variety of pack formats (Check-A-Pack 200 models)
- Tests a wide range of flexible and semi-flexible product packs and components including modified atmosphere packaging, food pouches, trays, pots, sachets, medical packs, pharma blisters, electronic packs, and industrial packaging.
- Full traceability: operator, line, product, batch number, date, time.

#### **Features:**

- Touchscreen controller, with password protected test recipes.
- Connectivity via USB and Ethernet, networking of results.
- Automatic result database, recall, export, statistics, password protected.
- Remote access for fault diagnoses, maintenance and supervision.
- Pneumatic backflush eliminates blocked needles.

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МОГ	DELS:
CHECK-A-PACK 200	CHECK-A-PACK 600
Leak & Burst Tester	Automatic Leak & Burst Tester
CHECK-A-PACK 202 Leak & Burst Tester with 02 analysis	CHECK-A-PACK 602 Automatic Leak & Burst Tester with O2 analysis
CHECK-A-PACK 222	CHECK-A-PACK 622
Leak & Burst Tester with 02 & CO2	Automatic Leak & Burst Tester
analysis	with 02 & CO2 analysis

#### SPECIFICATION:

#### Leak & Burst:

Technology: Mass Flow & Piezoresistive sensors

Accuracy: +/- 2% full scale Resolution: 0.1 ml/min & 0.1 mbar Scale: 1000 ml/min & 1.5 bar

Sensitivity: 10 microns @ 20mbar & 5 microns @ 500mbar

#### Oxygen:

Technology: Electrochemical sensor Accuracy: +/- 1% of reading +0.01% 02

Resolution: 0.01% Sample Volume: Target <1% O2 : <4ml

Carbon Dixoide:

Technology: NDIR sensor Accuracy: +/- 2% full scale Resolution: 0.1%

Sample Volume: Target <90% CO2: <6ml

#### Device:

Dimensions: 345 (W) x 175 (D) x 165 (H)

Weight: 5kg

Results memory: Unlimited (adjustable

memory size)

Ports: 1 x USB, 1 x Ethernet Display: 8 inch touchscreen

Power: 100-230 VAC, 50-60Hz Temperature: 0-40°C

#### Device:

Dimensions: 569(W) x 473(D) x 495(H)

Weight: 25kg

Results memory: Unlimited (adjustable

memory size)

Ports: 1 x USB, 1 x Ethernet Display: 8 inch touchscreen

Power: 100-230 VAC, 50-60Hz

Temperature: 0-40°C

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# HT1003 Hazemeter (Fully Automatic)

Hazemeter applicable in all transparent and semi-transparent parallel level material for testing transmittance and haze degree.



#### Application:

Applied to determine the transmittance, haze, reflectivity of transparent, translucent parallel flat objects (Plastic plates, sheets, plastic film, glass).

#### Standards:

ASTM D1003-61 (1997): "Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics" and JISK7105.

#### Features:

- 1. Receive mode: parallel illumination hemisphere scattering, photoelectric integrating sphere.
- 2. Touch-screen operation, with a USB interface, data storage (800 groups) and U disk storage function.
- 3. Equipped with specialized software, computer-controlled operation can be achieved (optional)
- 4. Displayed directly to: Transmittance 0.01%, 0.01% haze.
- 5. Using the modulator, the instrument no longer subject to the influence of ambient light, do not use the darkroom, to ensure the accuracy of the large sample measurement.
- 6. With film magnetic clamps, liquid sample cup, giving users great convenience.

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#### RDM TEST EQUIPMENT

# HT1003 Hazemeter

### Specification:

#### **Technical parameters:**

Transmittance accuracy: ≤ 1%

Haze Accuracy: Haze  $\leq 0.5\%$ ,  $\leq \pm 0.1\%$ 

Haze> 0.5%,  $\leq \pm 0.3\%$ Light Repeatability: 0.5%

Haze Repeatability: Haze  $\leq 0.5\%$ , 0.05% Haze> 0.5%, 0.1%

Instrument Size: 740mm \* 270mm \* 300mm

Instrument Weight: 21kg

Power supply:  $220V \pm 22V 50Hz \pm 1 Hz$ 

Environmental conditions: 5 degC ~ 35 degC

#### **Performance**

- 1. Optical system:
- a). Collimated illumination, diffuse vision, integrating sphere receiving mode
- b). Sample window size: into windows: 25mm, out the window: 21mm
- c). Light source: C light (6774K), A light (2856K)
- d). Receiver: silicon photovoltaic cells
- 2. Electronic Systems: 1). Large LCD touch screen 2). Minimum reading: transmittance haze 0.01% 0.01% 3). USB interface, U disk storage function.
- 3. Measuring range: 1). Transmittance 0% -100.0% 2). Haze 0% -30.00%
- 4. Film Sample size: 50mm \* 50mm

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# International Testing Standards

Heat Sealability	
	Standard Practices for Making Heatseals for determination of Heatsealability of Flexible Webs as measured by Seal Strength.

Medical Pack Heat Sealing	
ISO 11607-2	Packaging for terminally sterilized medical devices Part 2: Validation requirements for forming, sealing and assembly processes

Friction Testing	
ASTM D1894	Standard Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting
ISO 8295	Plastics Film and sheeting Determination of the coefficients of friction
ISO 15359	Paper and board Determination of the static and kinetic coefficients of friction Horizontal plane method
TAPPI T549	Coefficients of static and kinetic friction of uncoated writing and printing paper by use of the horizontal plane method
ASTM D2534	Standard Test Method for Coefficient of Kinetic Friction for Wax Coatings

Haze	
ASTM D1003	Standard test method for haze and luminous transmittance of transparent plastic

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# International Testing Standards

Seal Strength / Tensile / Tear	
ASTM F88 / F88M	Standard Test Method for Seal Strength of Flexible Barrier Materials
FINAT 1, 2, 3, 9	FINAT Test Methods for self-adhesive laminates and labels
ASTM D3330 / D3330M	Standard Test Method for Peel Adhesion of Pressure -Sensitive Tape
ASTM D6252 / D6252M	Standard Test Method for Peel Adhesion of Pressure -Sensitive Label Stocks at a 90° Angle
ISO 8510-2	Adhesives - Peel test for a flexible-bonded-to-rigid test specimen assembly - Part 2: 180 degree peel
BS EN 1939	Self adhesive tapes. Determination of peel adhesion properties.
BS EN 1895	Adhesives for paper and board, packaging and disposable sanitary products. 180°. "T" peel test for a flexible-to-flexible assembly
BS EN 868-5	Packaging for terminally sterilized medical devices. Sealable pouches and reels of porous and plastic film construction. Requirements and test methods
ASTM D1938-14	Standard Test Method for Tear-Propagation Resistance (Trouser Tear) of Plastic Film and Thin Sheeting by a Single-Tear Method
ASTM D1004-13	Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting
ISO 6383-1	Plastics Film and sheeting Determination of tear resistance Part 1: Trouser tear method
ISO 12625	Tissue Paper and Tissue Products

Hot Tack	
ASTM F1921 / F1921M	Standard Test Methods for Hot Seal Strength (Hot Tack) of Thermoplastic Polymers and Blends Comprising the Sealing Surfaces of Flexible Webs
DIN 55571	Hot Tack—Part 1: Position measuring devices Hot Tack—Part 2: Peel strength measuring devices

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### **International**



RDM products are available globally, either directly from our offices in UK and USA, or from our international partners.

Refer to www.rdmtest.com for your nearest distributor.

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