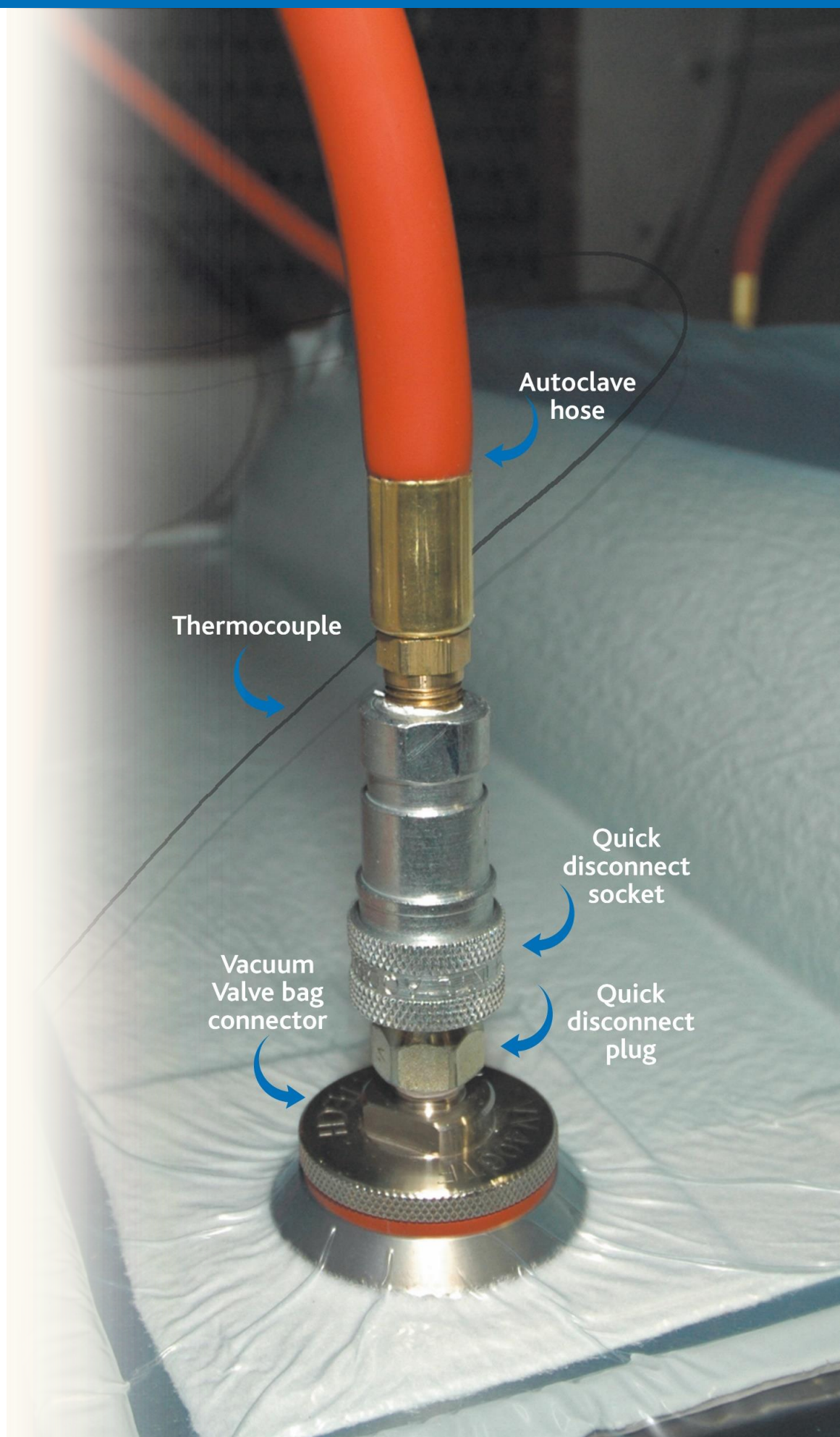


Oven & Autoclave Connections



Essentials





"One-Stop Shop" for Oven & Autoclave Connections

Vac Valves



With 2- or 3-piece construction, screw or twist locking, the Airtech Vacuum Valves have been designed to ensure good seals and safe vacuum bags. They have been used successfully at major aircraft companies holding full vacuum and pressure. Check the entire range to find your best choice of valves.

Airflow Hoses



Airflow are all purpose hoses for composites, bonding and tool shops, to use in oven or autoclave, designed and custom made to length and with straight or elbow end fittings to meet your specific requirements. Check our entire range of hoses and our standard assemblies to find your fit choice.

Quick Disconnects



The 2-piece quick disconnects, plug and socket couplings are made of high-quality materials and have internal valves so when disconnected the airflow is shut off. This means your vacuum bag holds vacuum even after the vacuum hose has been disconnected. Use our quick disconnects and you'll be surprised about how simple a vacuum connection could be.

Vac Gauges



The Airtech vacuum gauges determine how much vacuum is under your vacuum bag and will highlight any leaks present. A heavy ridged rubber jacket protects the gauge from damage in normal shop use. The connection stem is a 1/4-inch male NPT fitting to easily fit into our quick disconnects. A digital vacuum gauge will offer vacuum readings in four selectable units: mBar, mmHg, inHg or Kpa.

Vacuum Checking



The Vacuum Test Unit is used to test the vacuum integrity of all Airtech vacuum hoses and valves as well as the quick disconnect couplings attached to these hoses and valves. Simply connect the Airtech Vacuum Test Unit to a vacuum source and use the isolation valve and the vacuum gauges to perform a vacuum drop test on the attached components to be tested.

Thermocouples



Auto-Couples are economical, ready to use thermocouples, designed to reduce vacuum leakage during autoclave temperature measurement. Vacuum leakage is virtually eliminated through and around the wire, when placed through our sealant tape due to its compact single-extrusion oval design. The Airtech Auto-Couples are available in different types (K, J) and meet different specifications.

Vacuum Valves

How to install a Twist Vac Valve

1. Insert Vac Valve base plate under the vacuum.

2. Make a small cut in the vacuum bag in the area of the round opening in the base plate.

3. Insert the top piece through the cut vacuum bag and twist it to provide a positive seal.



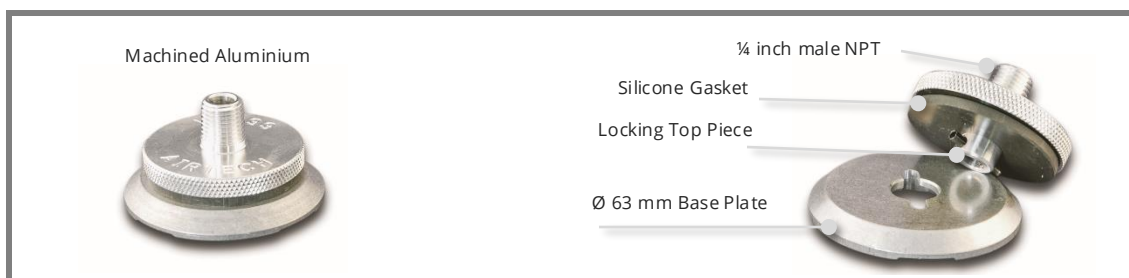
Economical Vac Valves for workshop, oven & autoclave

Vac Valve 399

Service Temperature	Construction	Material Type of Gasket*	Screw Thread	Assembly Style	Size
260°C	2 pieces: Base plate & Locking top piece	Silicone	1/4 inch male NPT	Twisted lock	Ø 63 mm Base Diameter

Benefits

Vac Valve 399 is a machined aluminium, economically priced valve that is inserted through the vacuum bag. It has a black, high temperature silicone seal that will operate to 260°C. Vac Valve 399 is designed to work with our AQD 500TF quick disconnect or our Airlock 450TF.



How to use:

- Insert the base plate under the vacuum bag.
- Make a small cut in the vacuum bag in the area of the round opening in the base plate.
- The top piece is inserted through the vacuum bag into the hole in the base plate.
- Twist the top piece to provide a positive seal.

*Replacement gasket seals or parts can be purchased

Vac Valve 401, 401A & 401C

Service Temperature	Construction	Material Type of Gasket*	Screw Thread	Assembly Style	Size
260°C	2 pieces: Base plate & Locking top piece	Silicone	1/4 inch male NPT	Twisted lock	VV401 Ø 63 mm Base Diameter VV401A 31.75 mm x 88.9 mm Rectangular Base VV401C Ø 63 mm Base Diameter

Benefits

Vac Valve 401 series is a twist lock through bag connector designed to work with our AQD 500TF quick disconnects found in this section of our catalogue. In combination with our AQD 500TF quick disconnects, these vac valves have been used successfully at major aircraft companies holding full vacuum and pressure up to 15 bars at temperatures up to 260°C.



How to use:

- Insert the base plate under the vacuum bag.
- Make a small cut in the vacuum bag in the area of the round opening in the base plate.
- The top piece is inserted through the vacuum bag into the hole in the base plate.
- Twist the top piece to provide a positive seal.

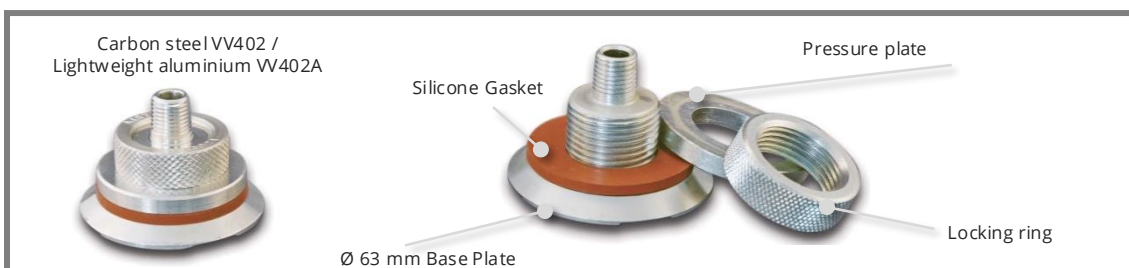
*Replacement gasket seals or parts can be purchased

Vac Valve 402 & 402A

Service Temperature	Construction	Material Type of Gasket*	Screw Thread	Assembly Style	Size
260°C	3 pieces: base plate, pressure plate, locking ring	Silicone	1/4 inch male NPT	Screwed	Ø 63 mm Base Diameter

Benefits

The design of the Vac Valve 402 series allows for a tighter connection with an increase in autoclave pressure. This is achieved by using a threaded locking ring creating a tight mechanical seal, and a pressure plate that increases the surface area providing a superior seal.



How to use:

- Insert the base under the vacuum bag.
- Screw the top piece into the base plate. Unscrew and remove the bag film chad.
- Screw the top piece all the way down into the base sealing onto the bag film.

*Replacement gasket seals or parts can be purchased

Vacuum Valves

Multi-Valve MV407 in bag pleat, with VacPad





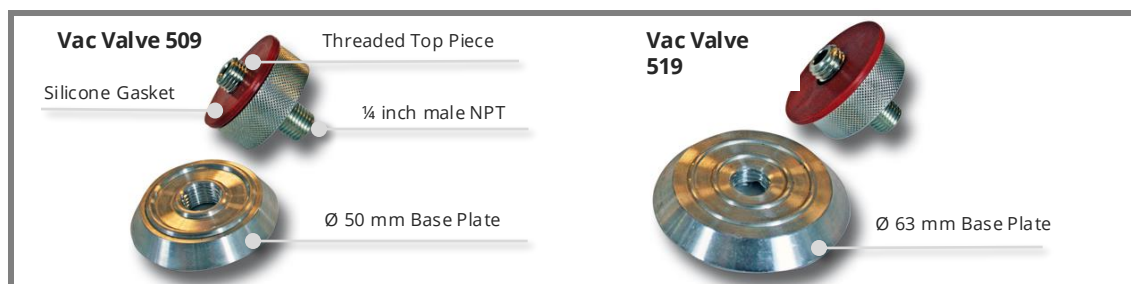
Vac Valves for workshop, oven & autoclave

Vac Valve 509 & 519

Service Temperature	Construction	Material Type of Gasket*	Screw Thread	Assembly Style	Size
260°C	2 pieces: Base plate & Threaded top piece	Silicone	1/4 inch male NPT or BSP	Screw down	VV509 Ø 50 mm Base Diameter VV519 Ø 63 mm Base Diameter

Benefits

Vac Valve 509 and 519 are 2-piece vacuum valves which perforate the bagging film when the top piece is inserted and threaded into the base plate. The specific design of the threaded connection eliminates the need to cut the bagging film prior to inserting the top piece. Vac Valve 509 and 519 will operate for vacuum bagging applications from room temperature up to 260°C. **Note:** Can be supplied assembled with AQD500 Plug.



How to use:

- Insert the base plate under the vacuum bag.
- Screw the top piece into the base plate.
- Unscrew and remove the bag film chad.
- Screw the top piece all the way down into the base sealing onto the bag film.

*Replacement gasket seals or parts can be purchased

Vac Valve 406 TF

Service Temperature	Construction	Material Type of Gasket*	Screw Thread	Assembly Style	Size
260°C	2 pieces: Base plate & Threaded top piece	Silicone	1/4 inch male NPT	Screw down	Ø 63 mm Base Diameter

Benefits

Vac Valve 406 TF is a machined stainless-steel valve with a threaded base plate. The top piece is inserted through the vacuum bag and is easily threaded into the base plate. The base also has a machined raised ring that provides an additional sealing mechanism. Vac Valve 406 TF is designed to work with our AQD 500TF quick disconnect. The rubber seal in this unit is fabricated from high temperature silicone that will operate to 260°C.



How to use:

- Insert the base plate under the vacuum bag.
- Make a small cut in the vacuum bag in the area of the round opening in the base plate.
- The top piece is inserted through the vacuum bag into the hole in the base plate.
- A wrench can be used to apply additional pressure.

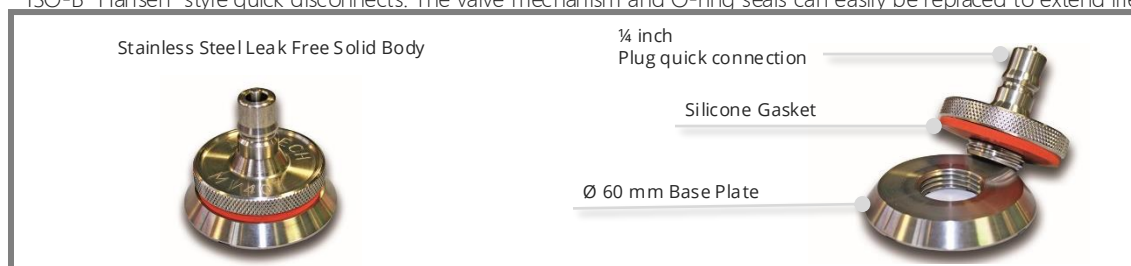
*Replacement gasket seals or parts can be purchased

Premium Multi-Valve 407

Service Temperature	Construction	Material Type of Gasket*	Screw Thread	Assembly Style	Size
260°C	2 pieces: Base plate & Plug top piece	Silicone	Plug	Screw down	Ø 60 mm Base Diameter

Benefits

The solid body design of the Premium Multi-Valve 407 combines the male quick disconnect and thru-bag connector, eliminating threaded connections and potential leak paths. Robust stainless-steel construction ensures corrosion resistance and long life. High temperature O-ring and platinum cured silicone gasket give a long service. It is fully compatible with 1/4" ISO-B "Hansen" style quick disconnects. The valve mechanism and O-ring seals can easily be replaced to extend life.

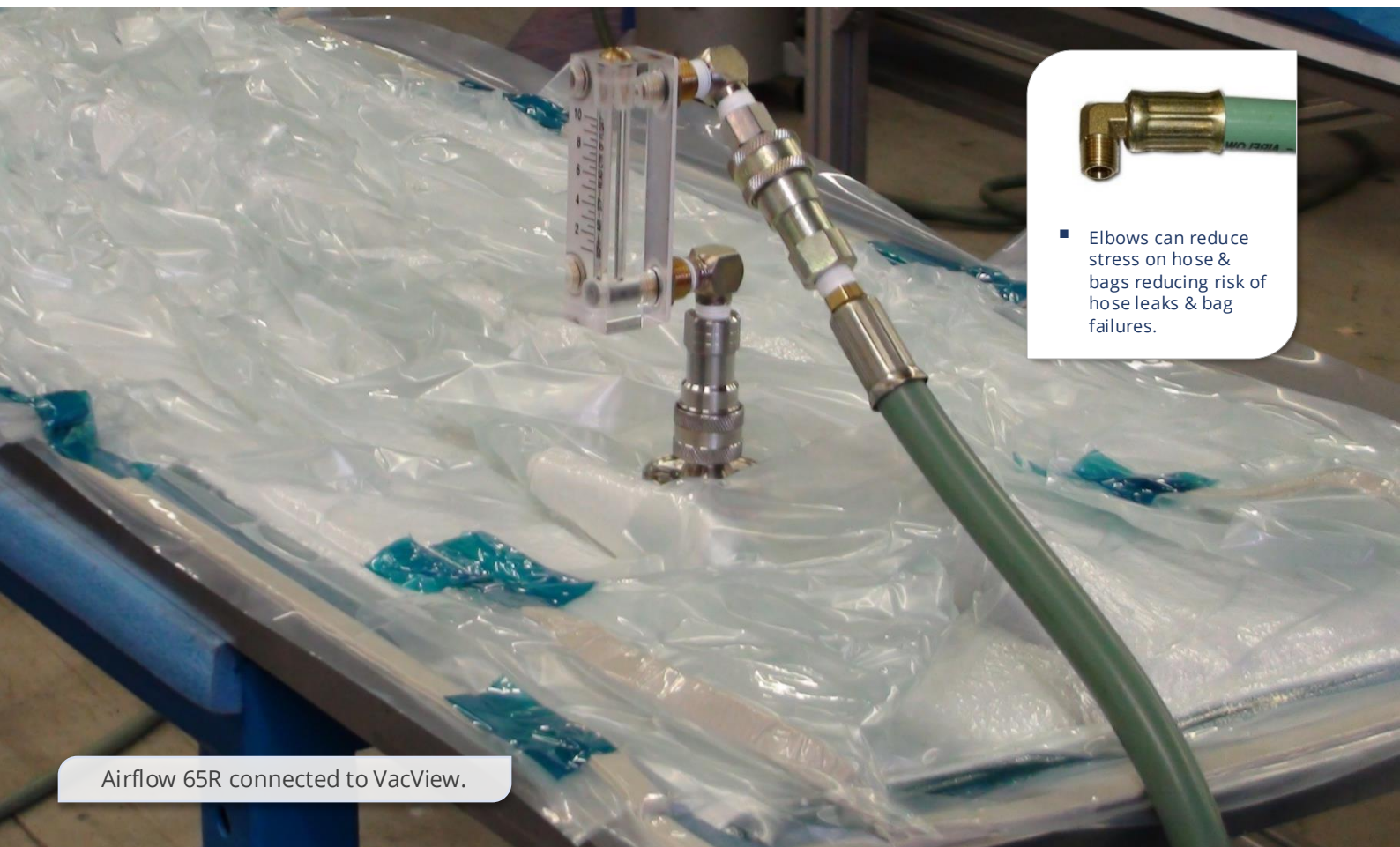
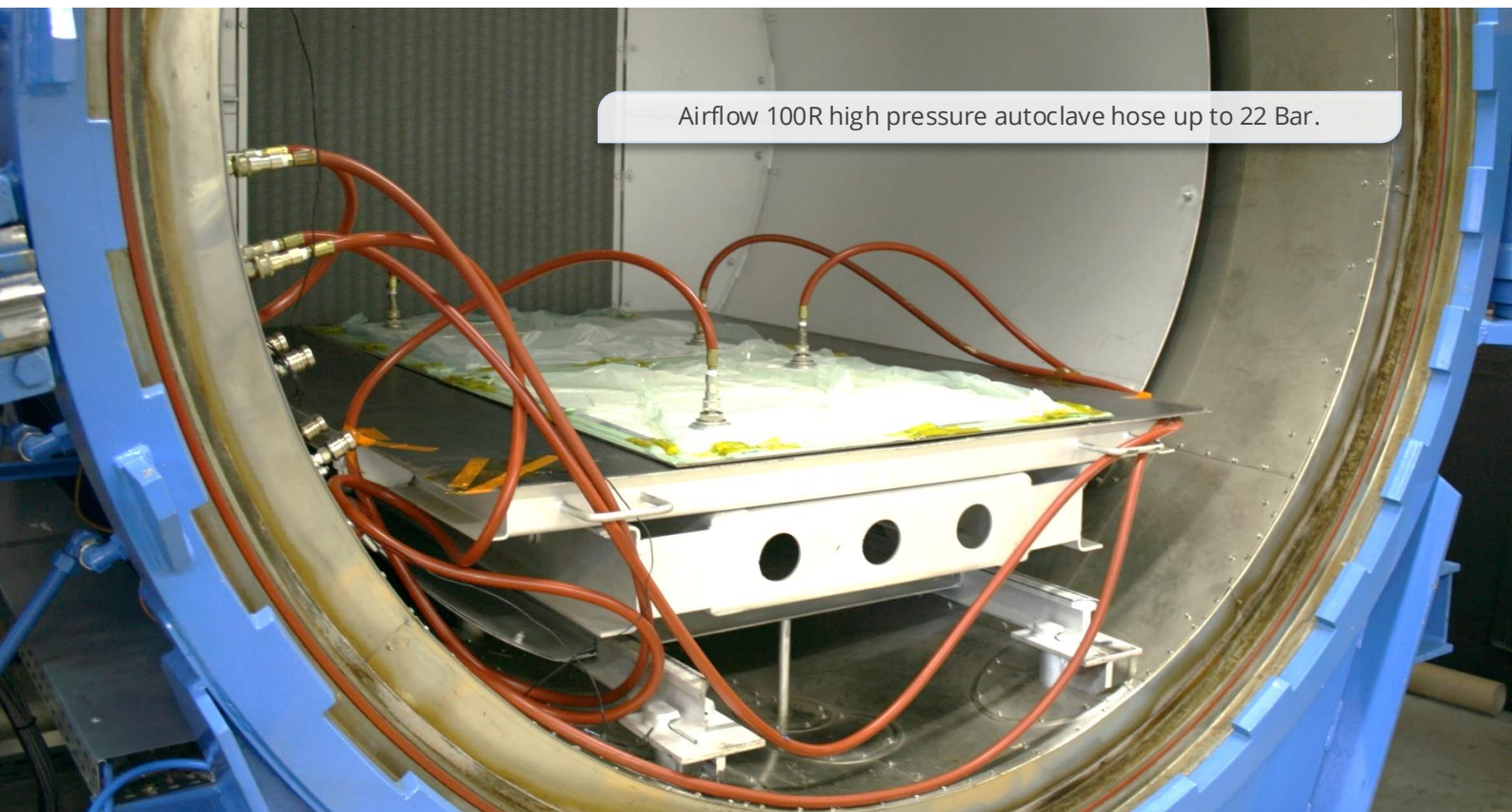


How to use:

- Insert the base under the vacuum bag.
- Make a small cut in the vacuum bag in the area for the round opening in the base plate.
- The top piece of the valve is inserted through the vacuum bag and threaded into the base.
- Maintenance seals removable through base.

* Seal and spare parts can be purchased – See Premium Multi-Valve 407 seal and replacement parts data sheet.

Hoses



- Elbows can reduce stress on hose & bags reducing risk of hose leaks & bag failures.



For workshop, oven & autoclave

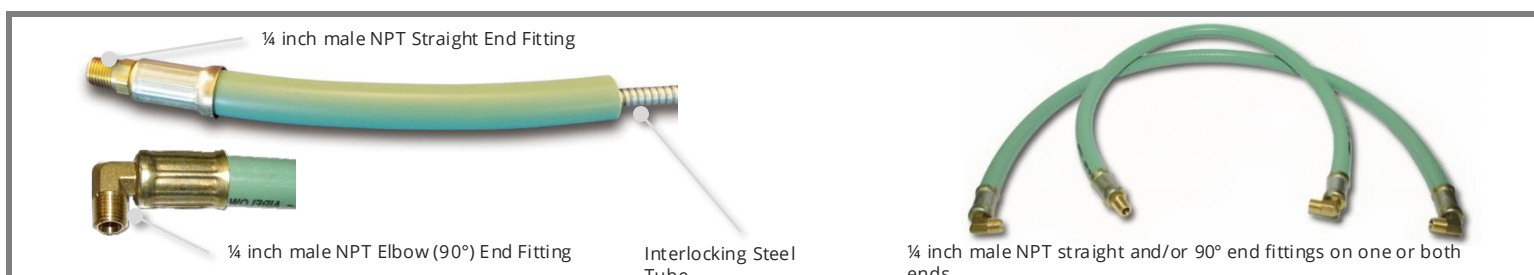
Airflow 65R

Service Temperature	Material Type	Max. Autoclave Pressure	End Fittings	Hose Length*
232°C	Silicone rubber / Interlocking steel tube	9 Bar	1/4 inch male NPT Straight or Elbow (90°)	Up to 30m (100 feet)

Benefits

Airflow 65R can be used as an autoclave or oven hose. The outer ply is silicone rubber that encases a flexible steel tube that prevents collapse and hose separation. The bell-shaped ferrule helps hose lacerations at fitting ends extending hose life.

Note: Can be supplied assembled with AQD500 sockets on each end.



*Though standard sizes are 3 m (10 feet), hose lengths can be customized to meet your specific requirements.

VH210R

Service Temperature	Material Type	Max. Autoclave Pressure	End Fittings	Hose Length*
232°C	Silicone rubber / Galvanised steel	9 Bar	1/4 inch male BSP Threaded	Up to 10m (33 feet)

Benefits

VH 210R vacuum hose is a robust and durable fibre reinforced version of VH 210. It is an economical and durable hose for longer life in demanding workshops. VH210R provides flexibility, making loading ovens and autoclaves easy and fast. Straight and elbow end fittings help reduce strain on hose and vacuum bags.



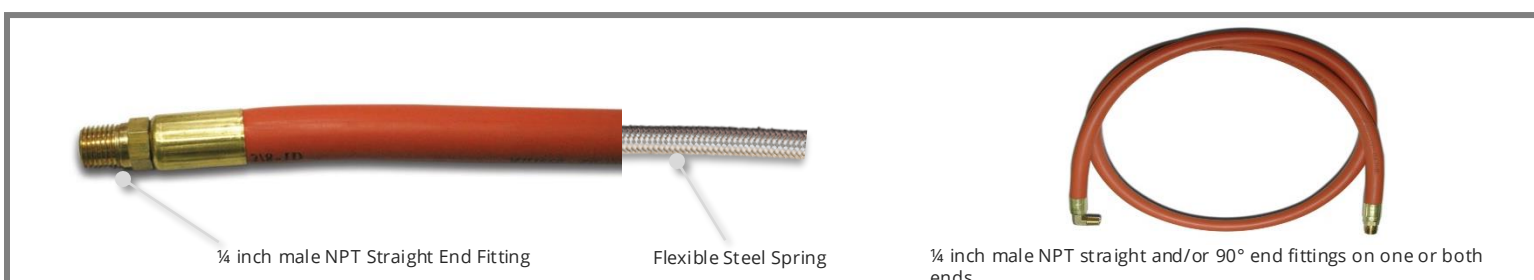
*Though standard sizes are 3 m (10 feet), hose lengths can be customized to meet your specific requirements.

Airflow 100R

Service Temperature	Material Type	Max. Autoclave Pressure	End Fittings	Hose Length*
260°C	Silicone rubber / Steel spring	22 Bar	1/4 inch male NPT Straight or Elbow (90°)	Up to 30m (100 feet)

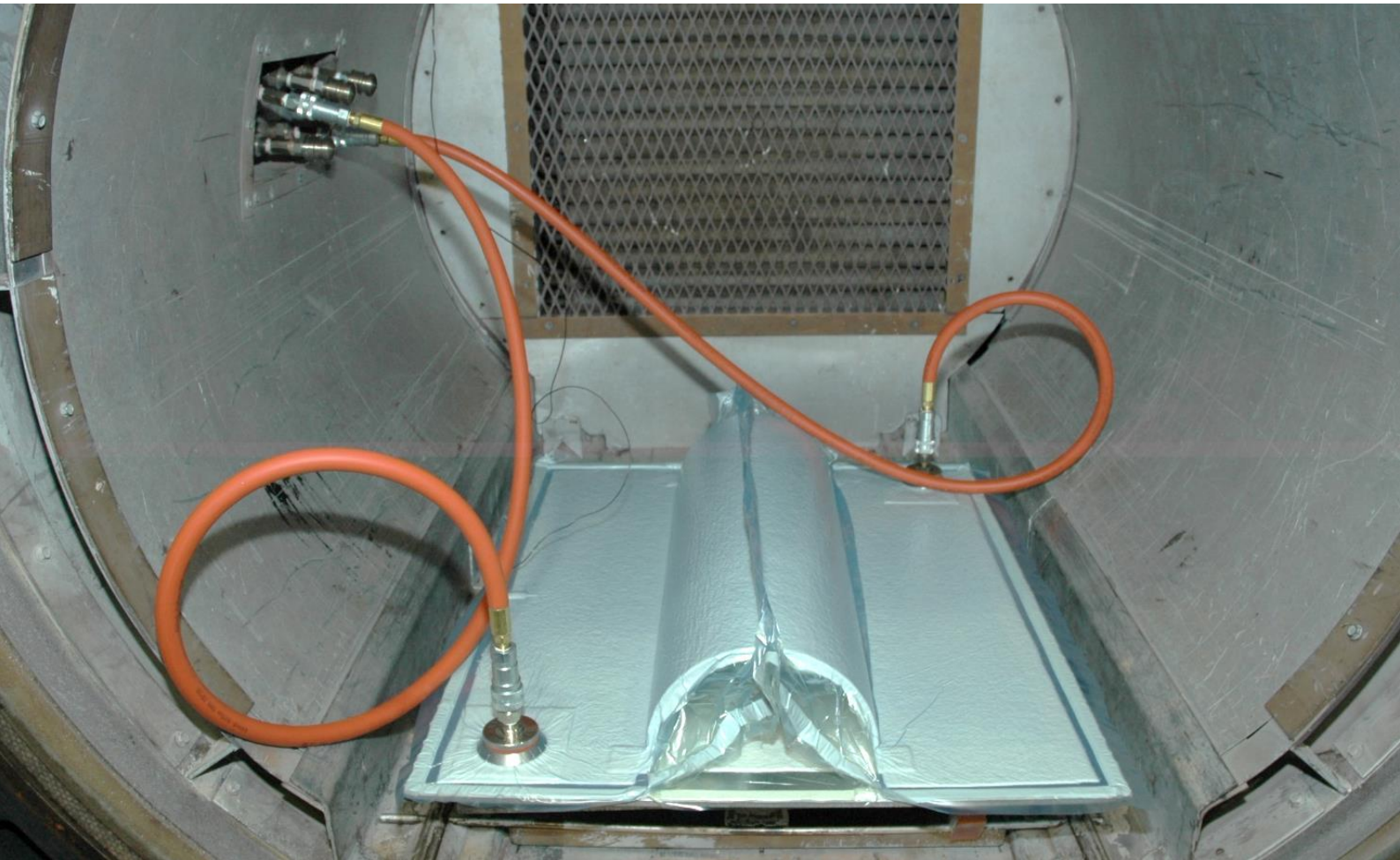
Benefits

Airflow 100R is a durable high temperature and high pressure autoclave hose with the addition of a silicone rubber outer protective sleeve. The hose construction consists of a braided steel outer covering a PTFE inner tube supported with a flexible steel spring conduit. Its unique design prevents collapse from vacuum or autoclave pressures.



*Though standard sizes are 3 m (10 feet), hose lengths can be customized to meet your specific requirements.

Quick Disconnects





Quick disconnect socket and plug couplings

AQD 500TF

Service Temperature	Material	Connection to Hose	Screw Thread	Coupling Size
260°C	Carbon steel	Threaded	¼ inch female NPT	

Benefits

The AQD 500TF quick disconnect couplings are made of high carbon steel that have been plated to halt oxidation. The couplings have internal valves so when disconnected the airflow is shut off in both plug and socket. This means your vacuum bag holds vacuum even after the vacuum hose has been disconnected.

1/4 inch



Note: Sockets and plugs can be sold separately.

Airlock 450 TF

Service Temperature	Material	Connection to Hose	Screw Thread	Coupling Size
232°C	Brass	Threaded	¼ inch female NPT	

Benefits

The Airlock 450TF is specifically designed for use in the autoclave environment. Its sturdy design performs well in higher temperature and pressure cure cycles. It is made with FKM O-rings that are not attacked by epoxies.

1/4 inch



Airlock 550 TF

Service Temperature	Material	Connection to Hose	Screw Thread	Coupling Size
287°C	Stainless Steel	Threaded	¼ inch female NPT	

Benefits

The Airlock 550TF are specifically designed for use in the autoclave environment. Its sturdy design performs well in higher temperature and pressure cure cycles. It is made with FKM O-rings that are not attacked by epoxies.

1/4 inch



Premium Blanking Cap 500

Service Temperature	Coupling Style	Construction	Coupling Size
246°C	Hansen ISO-B	Single piece solid body	

Benefits

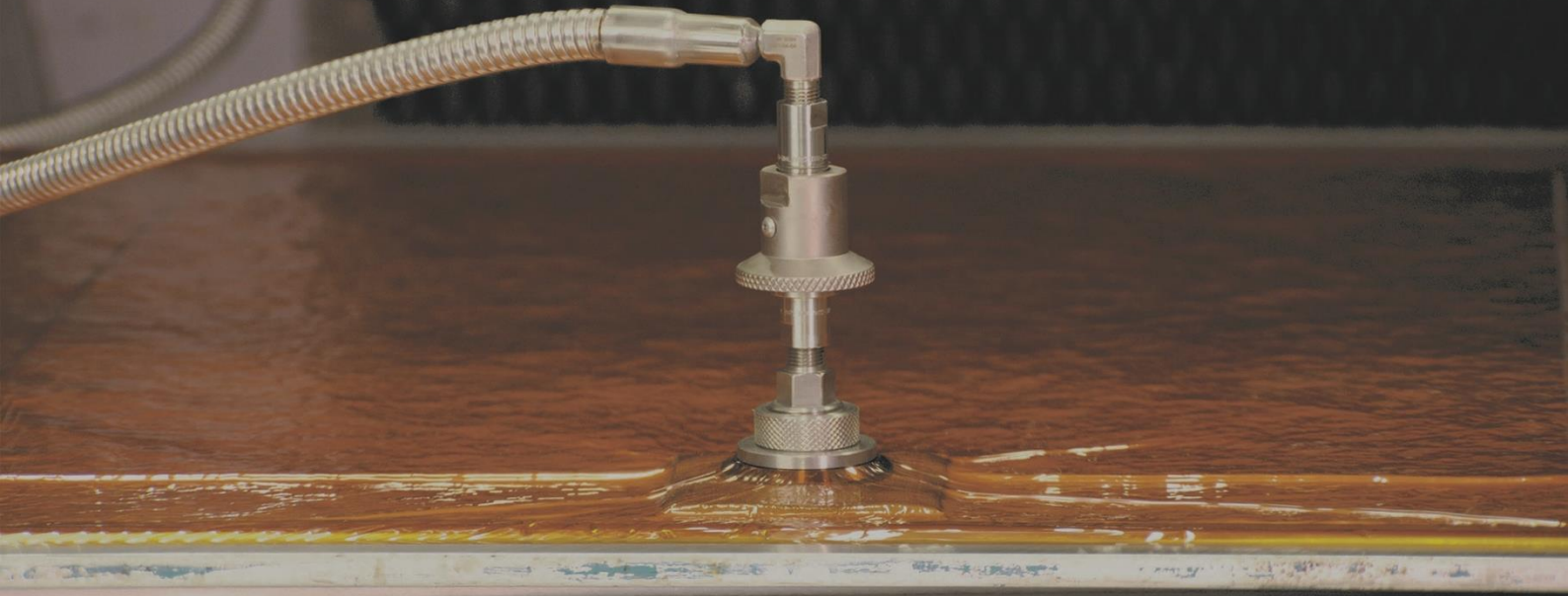
Use the Blanking Cap 500 on unused quick disconnect plugs to avoid vacuum loss from your system. It has a domed end which fits in the palm of the hand making it easier to push into place on plugs.

1/4 inch



Ultra-High Temperature Connections

Ultra high temperature BBH 1080 hose for cures up to 482°C



Vac Valve 429 SS HTR with graphite seal for cures up to 482°C



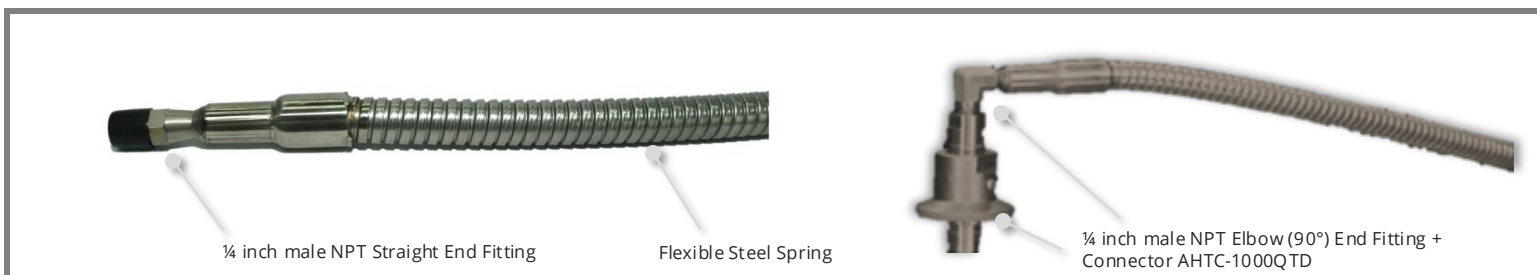
Ultra-high temperature and high-pressure autoclave connections

BBH 1080

Service Temperature	Material Type	Max. Autoclave Pressure	End Fittings	Hose Length*
482°C	Stainless Steel	24 Bar	1/4 inch male NPT Straight or Elbow (90°C)	Up to 22m (75 feet)

Benefits

BBH 1080 is a durable high temperature and high-pressure autoclave hose. The hose construction consists of an inner flexible stainless-steel conduit over-wrapped with a stainless-steel braid. A stainless-steel armour jacket covers the hose and protects it from the harsh autoclave and production environment. The unique design provides durability, flexibility, and reliability.



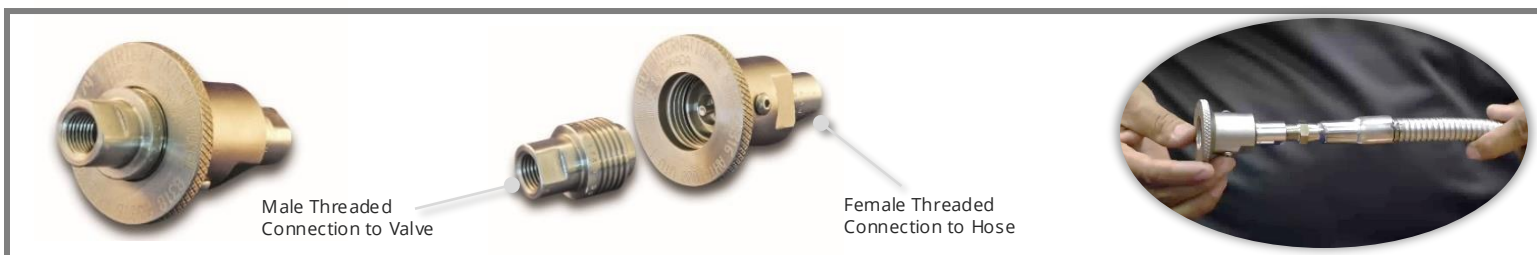
**Though standard sizes are 3 m (10 feet), hose lengths can be customized to meet your specific requirements.*

AHTC-1000 QTD

Service Temperature	Material	Max Autoclave Pressure	Connection to Hose	Screw Thread
538°C	All metallic	69 Bar	Threaded	1/2 or 1/4 inch female NPT

Benefits

The AHTC-1000 QTD Quick Turn Disconnect is designed for use up to 538°C. The ferrule expands to create a seal at elevated temperatures. There are no organic materials to break down under high temperature applications. The end fittings are female NPT style and work well with our Vac Valve 409 SS HTR, Airflow 800, and BBH 1080 autoclave hoses.



Vac Valve 429 SS HTR

Service Temperature	Construction	Material Type of Gasket*	Screw Thread	Assembly Style	Size
482°C	4 pieces: base plate, top piece, vac hose connector, locking screw	High performance graphite	1/4 inch female NPT	Screw down	Ø 61 mm base diameter

Benefits

Vac Valve 429 SS HTR was designed for high temperature cures where standard valves with silicone rubber seals breakdown. Vac Valve 429 SS HTR is to be used for direct connection to vacuum hoses instead of a complex and expensive coupling system. It is usable up to 482°C in combination with new high performance graphite seals. This valve can be directly screwed to our Airflow 800 or BBH1080 which provide a safe connection for high temperature processes, such as thermoplastics. Graphite seals and thread sealing products for high temperature use are easy to replace and can be ordered separately.

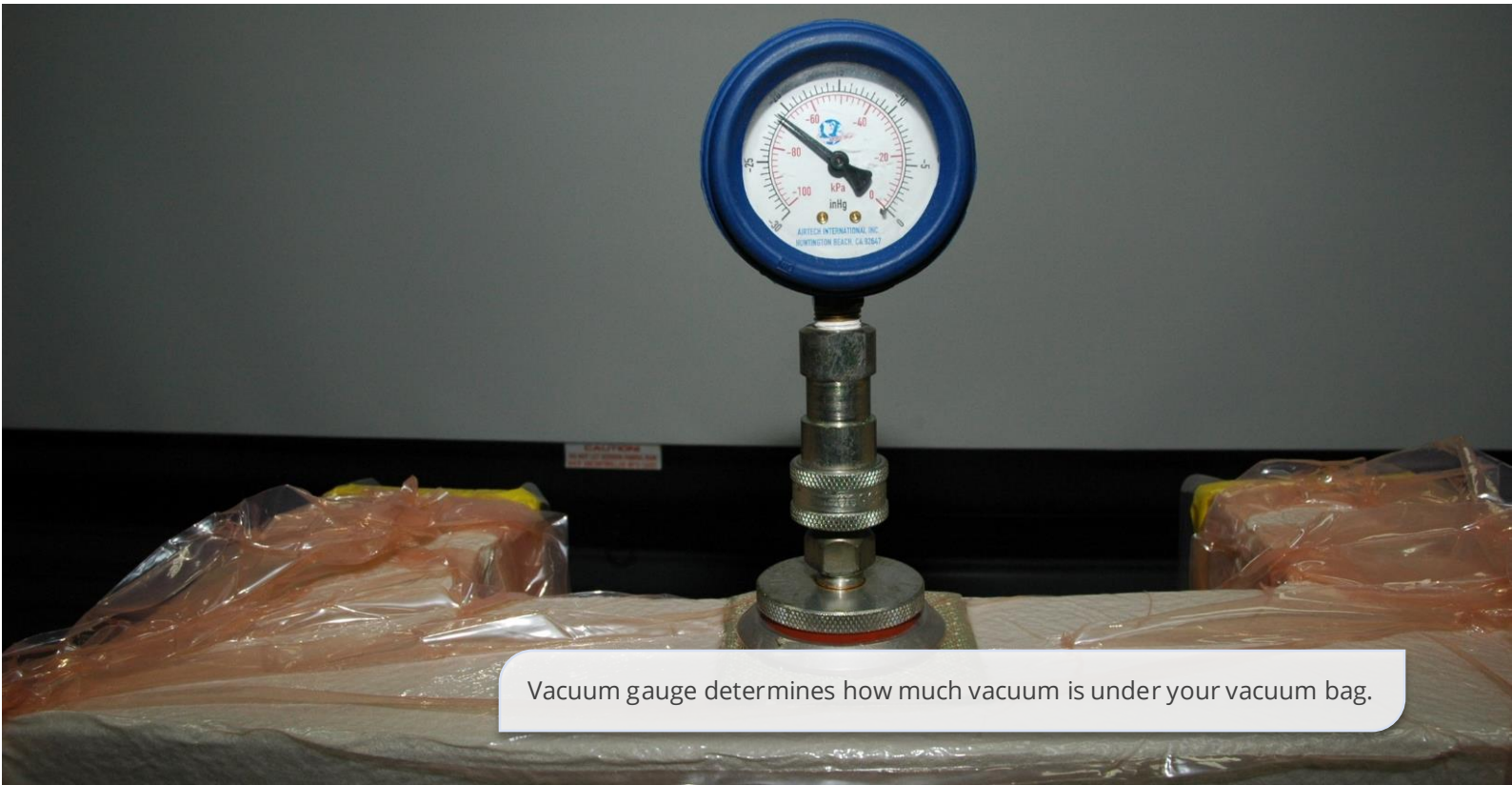


How to use:

- Insert the base under the vacuum bag.
- Make a small cut in the vacuum bag in the area for the round opening in the base plate.
- Apply a graphite seal on the bottom and on top of the thread connector piece and place it on the vacuum bag with the base plate under.
- The top piece of the vacuum hose is screwed on the thread connector piece of the vac valve until fixation.

**Graphite seals and thread seal materials can be ordered separately.*

Vacuum Gauges & Testing





Gauges, caps and testing

Vac-Gauge 30

Assembly Style	Range	Screw Thread
Screwed	0 - 30 in. Hg (0 - 100 KPa)	

Benefits

Vac-Gauge 30 is our durable, inexpensive vacuum gauge to determine how much vacuum is under your vacuum bag. A heavy ridged blue rubber jacket protects the gauge from damage in normal shop use. The Vac-Gauge 30 stem is a 1/4 inch male NPT fitting that fits easily into our AQD quick disconnects. Note: Can be supplied assembled with AQD500 Socket.

1/4 inch male NPT



Vac-Gauge 40D

Assembly Style	Range	Screw Thread
Screwed	0 - 30 in. Hg (0 - 100 KPa)	

Benefits

Vac-Gauge 40D is a versatile digital vacuum gauge used for leak detection and vacuum determinations under your vacuum bag. The gauge offers vacuum readings in four selectable units: mBar, mmHg, inHg, and KPa. A heavy duty rubber jacket protects the gauge from damage in normal shop use. The Vac-Gauge 40D connection stem is a 1/4-18 inch NPT thread fitting that fits easily into our AQD quick disconnects. Note: Can be supplied assembled with AQD500 socket

1/4 inch male NPT



Vac-Gauge THA

Assembly Style	Range	Screw Thread
Screwed	0 - (-1) bar	

Benefits

Vac-Gauge THA is a shock resistant, liquid filled vacuum gauge designed as a reference in determining vacuum integrity. Technicians can easily detect if a vacuum bag or mould is leaking in addition to establishing the rate of vacuum decay. Vac-Gauge THA has a male NPT fitting that easily attaches to our AQD 500TF, Airlock 450TF & 550TF quick disconnect couplings. Note: Vac-Gauge THA is an inexpensive reference gauge for shop use only.

1/4 inch male NPT



Airtech Vacuum Test Unit

Housing Material	Vacuum Gauge Connection	
Steel	1/4 inch NPT	

Benefits

The Airtech Vacuum Test Unit is used to test the vacuum integrity of all Airtech vacuum hoses and valves as well as the quick disconnect couplings attached to these hoses and valves. Simply connect the Airtech Vacuum Test Unit to a vacuum source and use the isolation valve and the vacuum gauges to perform a vacuum drop test on the attached components to be tested.

- 2 x quick disconnect plug
- 1 x vacuum diaphragm
- 2 x valve for circuit isolation under vacuum
- 2 x Airtech Vac Gauge 30 installed as standard

Vacuum Valve Test



Vacuum Hose Test



Vac-Reg

Range	Graduations	Accuracy	Screw Thread
0 - (- 1) bar	_ - 0.02 bar	_ +/-1.6 %	

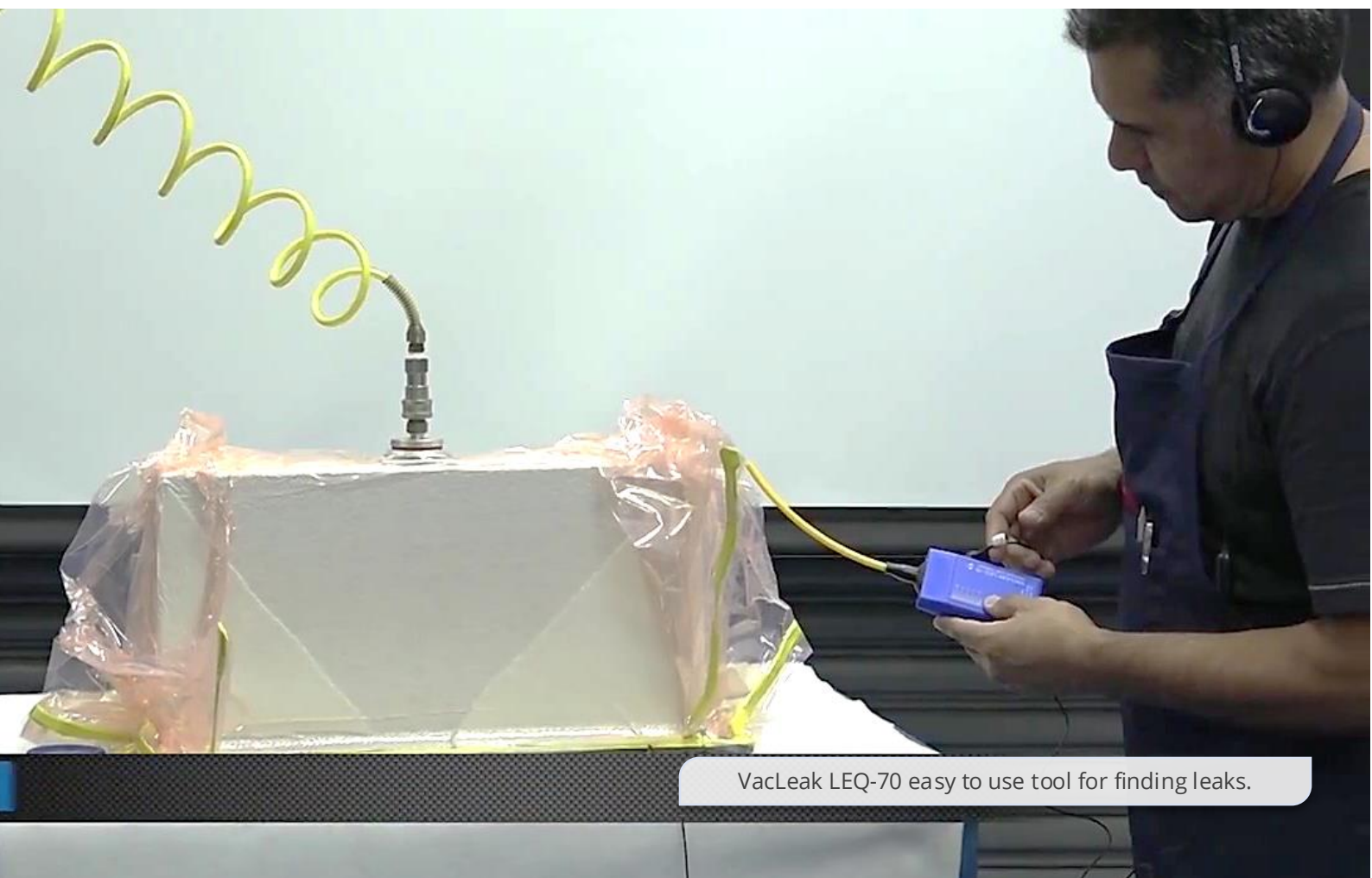
Benefits

Vac-Reg has been designed to provide accurate, controlled vacuum for parts that use honeycomb core. Vac-Reg is a small in-line unit that is easy to use. Each part in the shop can be independently regulated using Vac-Reg. It uses standard 6.35mm male NPT fittings and will accept AQD 500TF, Airlock 450TF & 550TF quick disconnect fittings.

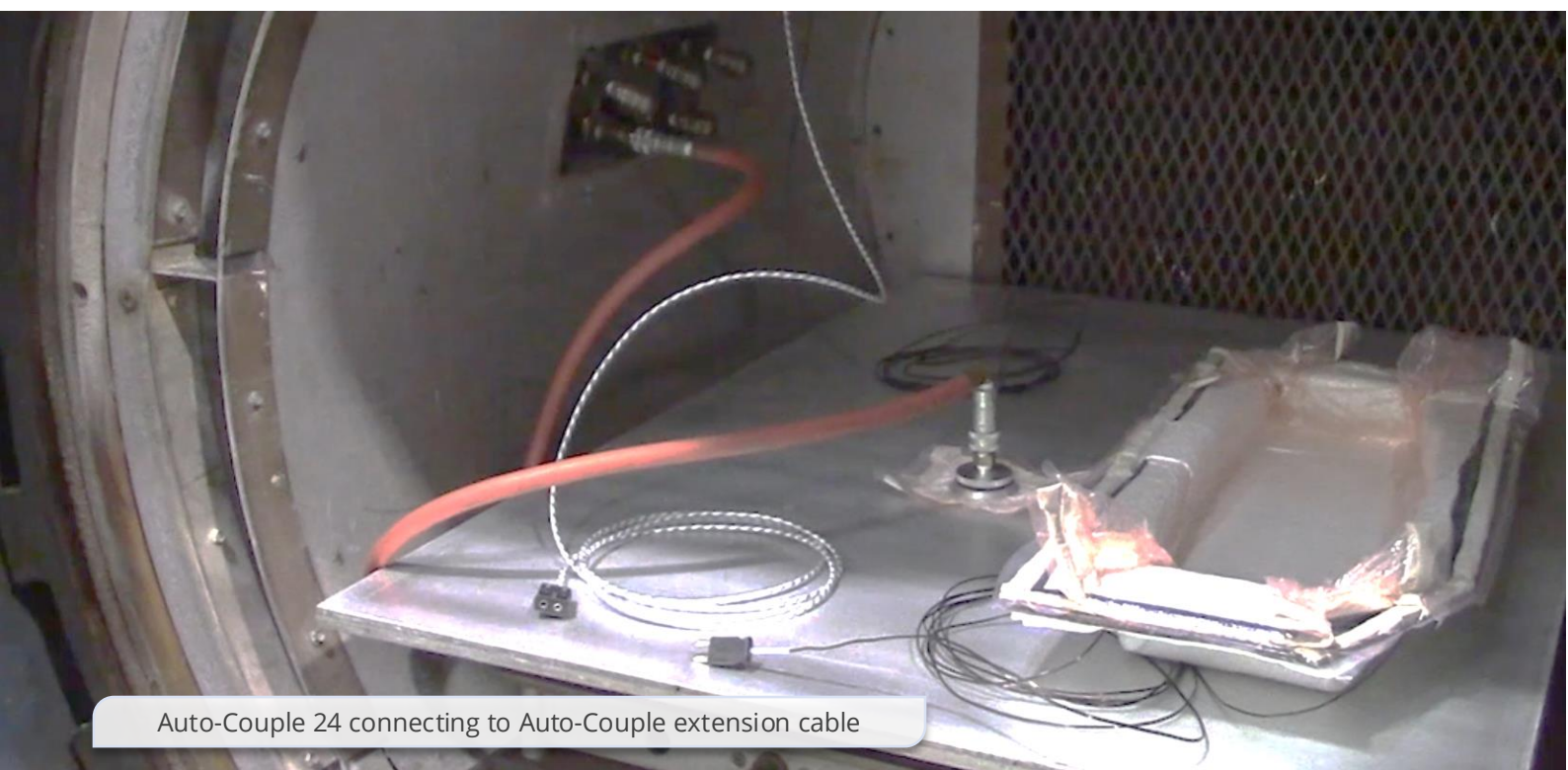
1/4 inch male NPT



Accessories



VacLeak LEQ-70 easy to use tool for finding leaks.



Auto-Couple 24 connecting to Auto-Couple extension cable



Flow meters and ultrasonic detectors & tools for prepreg laminating

Vac Saver HT

Service Temperature	Material Type	Material Type Seals	Screw Thread
200°C	Anodized aluminium	Fluorocarbon	1/4 inch male NPT

Benefits

Vac Saver HT is a one way check valve used to protect vacuum bagged parts against vacuum loss. Vac Saver HT protects against back pressure when multiple lines are connected to a single vacuum source. In case of a vacuum loss in a part which is connected to the same vacuum source, the Vac Saver HT closes automatically and protects parts against vacuum loss. Vac Saver HT can be used in combination with our quick disconnectors like AQD 500TF and our Airflow vacuum hoses.



Vac View 10

Graduations	Construction	Range	Quick Disconnect Plug / Socket
0.5 SCFH	Acrylic body with carbon steel connections	0 to 4.7 litres / minute	1/4 inch

Benefits

The Vac View 10 leak indicator allows the instant detection of both high and low level leakages within a vacuum bag. Airflow through the Vac View causes the internal ball to oscillate and float inside the acrylic body, displaying a definite airflow reading which can be read off against the scale. This allows the size of the leak to be easily quantified.



Airvac 22

Screw Thread Vacuum	Screw Thread Air	Assembly Style
1/4 inch male NPT	1/8 inch female NPT	Screw down

Benefits

The Airvac 22 is a venturi block with a self contained silencer that uses compressed shop air lines to create vacuum without the use of a vacuum pump. Airvac 22 will quietly draw up to 25.5 in. Hg (86.4 kPa). The maximum vacuum is achieved at a positive air pressure of 80 psi (5.5 bar). Going above or below this input pressure will decrease the Venturi vacuum potential.



VacLeak LEQ-70

Frequency Response	Equipment Components	Display
38-42 kHz	Receiver, headphones, hollow probe and carrying case	Ten element bar graph

Benefits

The latest VacLeak LEQ-70 Series 3 is a compact economical vacuum leak detector for finding leaks in vacuum bags, sealant tapes, hoses and fittings. The VacLeak LEQ-70 Series 3 has improved circuitry for 20% more sensitivity to convert the ultrasonic sound produced by leaks to an audible level and also visually display the leak on an LED meter. With clearer sound technicians can detect leaks faster than ever before.



Auto-Couple 20, 24 & 28

Maximum Use Temperature	Thermocouple Type	Product Reference	Size
246°C	Type J moulded male plug & Tig welded junction	Auto-Couple 20	20 Gauge (0.81mm) x 4.57m
		Auto-Couple 24	24 Gauge (0.51mm) x 4.57m
		Auto-Couple 28	28 Gauge (0.32mm) x 4.57m

Benefits

Auto-Couple is an economical, ready to use thermocouple, designed to reduce vacuum leakage during autoclave temperature measurement. The male connector is welded to the wire extrusion, eliminating any user assembly. Auto-Couple may be used repeatedly. Auto-Couple EXT thermocouple extension wires bridge the long runs between part thermal couples and jack panels in the autoclave. Auto-Couple EXT features a rugged construction that allows for reuse in the autoclave.

Auto-Couple EXT 3m, 6.1m & 9.1m



Airtech UK Customer Service



Global Manufacturing & Local Inventories
Delivering Short Lead Times. AAMG: >98% OTD



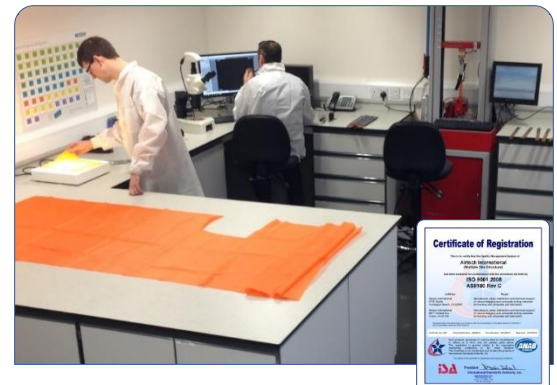
Customer Service
Team Contacts



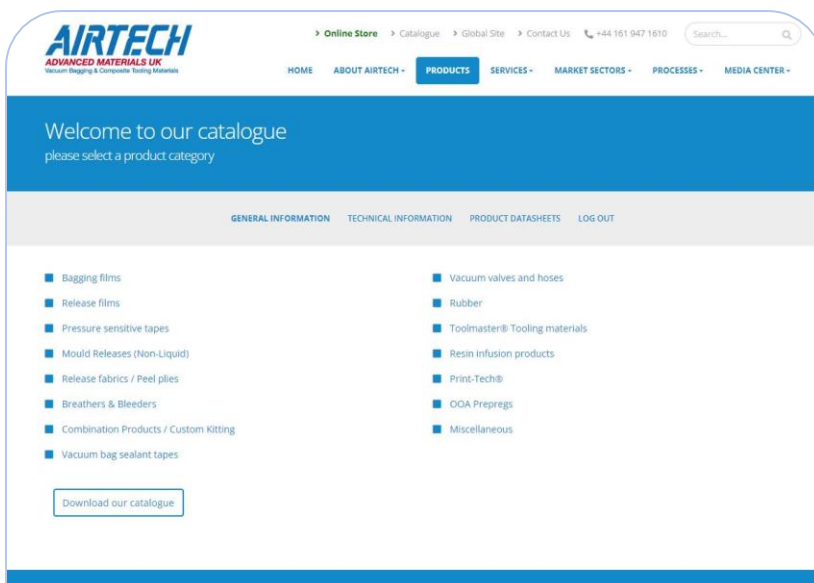
Development, Innovation &
Continuous Improvement



Technical Support, Training Workshop & On-site Training Support



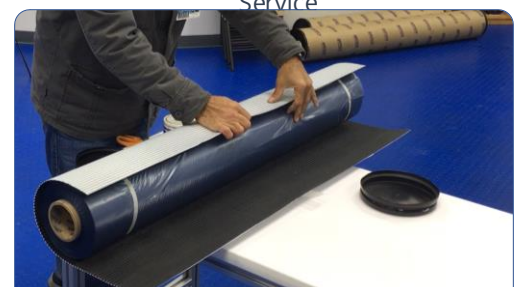
Quality System
Accreditation



Online Catalogue with Technical Data Sheet & Safety Data Sheet to Download



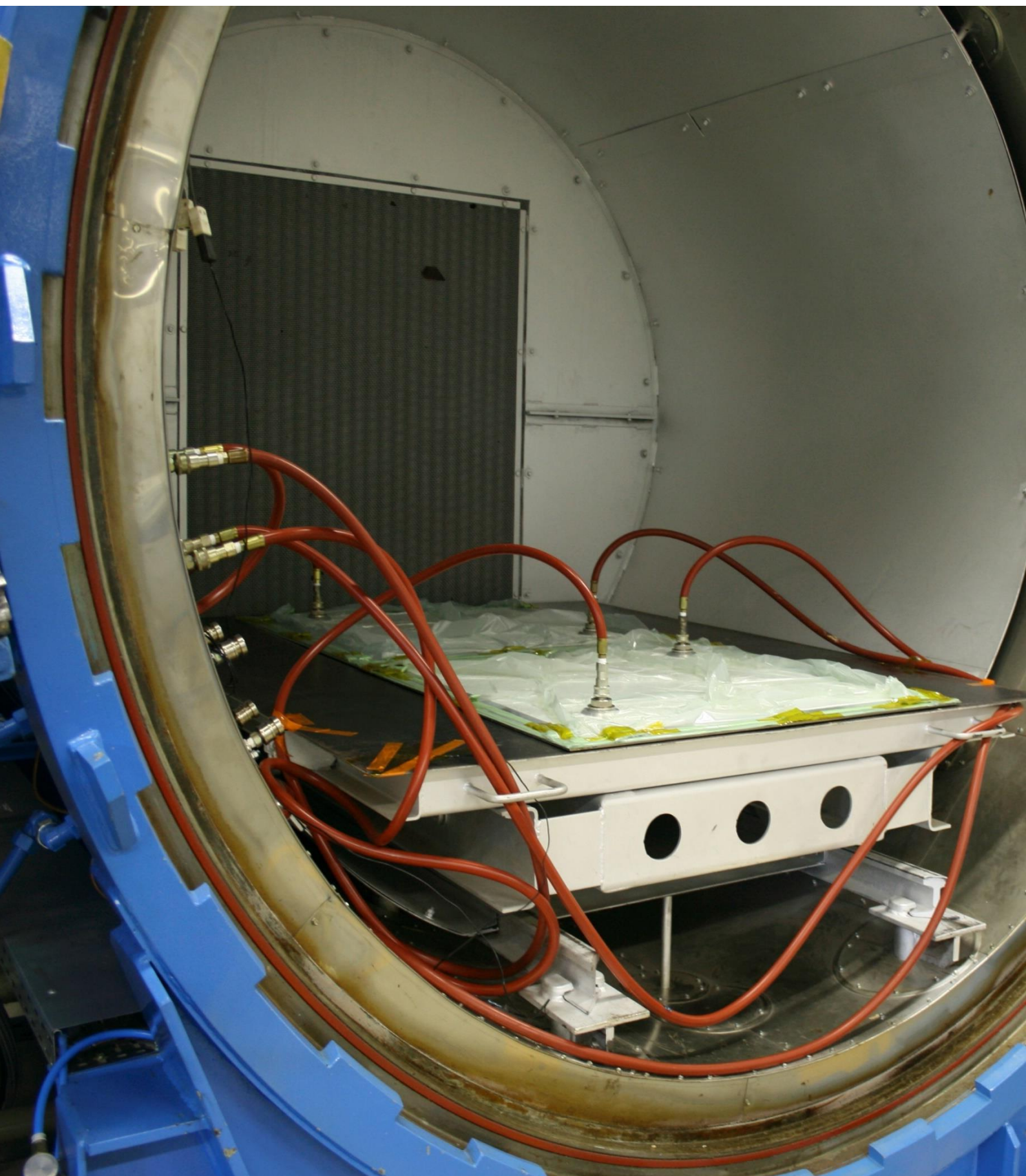
Consignment Stocking & Management
Service



Recyclable Packaging



Dedicated to the needs of our customers



Need more information, a quote or a sample?

Please contact our customer service team

Phone: +44 161 947 1610

Email: sales@airtech-amg.co.uk



About Airtech

Chadderton, England

www.airtech-amg.co.uk

www.airtech3D.com

- ▶ Airtech UK (formerly Tygavac) is a division of Airtech Advanced Materials Group, the largest manufacturer of vacuum bagging and composite tooling materials for prepreg/autoclave, resin infusion, and wet lay-up processes up to 799°F (426°C). Our product line consists of: vacuum bagging films, release films, pressure sensitive tapes, mould releases (non-liquid), peel plies, breathers & bleeders, sealant tapes, vacuum bag connectors & hoses, rubber, pressure pads, cutting tools, vacuum leak detectors, shrink tape, PTFE coated fibreglass, tooling prepreps and resins, and carbon and glass reinforcements.
- ▶ With 50 years of extrusion experience, we've taken the next step into additive manufacturing. Print-Tech® is our new large scale additive manufacturing or 3D printing tooling service for composites. Large-scale tooling in the form of trim fixtures, holding fixtures, and layup moulds can be designed, tooled, and built faster without compromise quality. Also, we manufacture a full line of Dahltram® tooling and Dahlpram® purging resins.
- ▶ Airtech Advanced Materials Group is family owned. We have seven locations strategically placed worldwide: Huntington Beach, California, USA; Chino, California, USA; Springfield, Tennessee, USA; Differdange, Luxembourg; Chadderton, England; Goa, India and Tianjin, China. All of our facilities offer technical assistance and are ready to meet your composite production challenges.
- ▶ Airtech is an ISO 9001:2015 / AS9100 Rev. D registered company.

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