

VACUUM VALVES INSTRUCTIONS FOR USE

- Make a cut or slit approximately 1" (2.54cm) in the bagging film at the spot in which you want to place the vacuum valve.
- Align the base plate with the rubber seal under the bagging film with the threaded column projecting through the bagging film.
- If applicable, place the pressure plate over the column and secure over the dowel pin. Using finger pressure only, screw down the locking ring, ensuring a complete seal.
- The Quick Disconnect may be secured onto the Vacuum Valve.



DATA SHEET

VACUUM VALVE HK1196

The advanced design of HAWKEYE'S VACUUM VALVE 1196 offers 400% greater longevity than that of any vacuum fitting now on the market. It has been used by major aircraft companies in excess of 200 psi and up to 500 degrees F (260 degrees C). This fitting can be used for graphite, boron, kevlar and other advanced composites in metal bond and plastic layups.

It is produced from two dissimilar metals, aluminum and steel, thereby reducing wear and "seizing". Finger-tight pressure suffices to effect the seal.

Unlike competitive products currently on the market, the HAWKEYE VACUUM VALVE 1196 has no pins too "crack-out", and no burrs to be developed by giving false torque pressure. With direct pressure applied, there will be no twist or wrinkling of the bagging film in the seal area. There will be no need to "gunk-up" your fitting with sealant tape to provide a positive seal.

DIRECTIONS FOR USE: Place the base plate with the silicone rubber seal under the dowel pin, beneath the bagging film through appropriate slit. Next comes the knurled pressure plate, lining up the small dowel pin with the notch in the pressure plate. The pressure lock ring can then be applied, screwing it securely tight with finger pressure only. No tools are necessary. This method allows ease of application and tightening above the bag surface.



DATA SHEET

VACUUM VALVE HK1401

The HAWKEYE VACUUM VALVE 1401 is made of machined aluminum OR steel. It has been used by major aircraft companies in excess of 200 psi, holding 29 inches of mercury and at temperatures up to 500 degrees F (260 degrees C).

The Vacuum Valve 1401 is designed to work with our Quick Disconnect Couplers. Due to the unique design of the base plate no compressing of the breather under the base plate occurs.

HK1401A & S is available with $\frac{1}{4}$ " NPT unless otherwise ordered.

The HK1401A is manufactured using 6061T6 aluminum.

VACUUM VALVE 1401AL Machined Aluminum

VACUUM VALVE 1401S Steel

Directions for Use: Insert the base of the vacuum valve beneath the bagging film through an appropriate slit in the bagging film. The pressure lock ring is then applied on the top of the bagging film, screwing it securely tight with finger pressure only. No tools are necessary.

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DATA SHEET HK1402A and HK1402SS Vacuum Valve

HK1402A and HK1402SS Vacuum Valves provide a chamber that helps to prevent seal-offs. The HK1402 has a rotating cam for adapting to various material thicknesses. The compound action applies higher pressure that ¼ turn style valves. There are two metal sealing rings in the seal area on the bottom section of the valve to ensure a positive seal



DATA SHEET

VACUUM VALVE HK1401A Rectangular

The HAWKEYE VACUUM VALVE 1401A is made of machined aluminum. It is regtangular in shape. It has been used by major aircraft companies in excess of 200 psi, holding 29 inches of mercury and at temperatures up to 500 degrees F (260 degrees C).

The Vacuum Valve 1401 is designed to work with our Quick Disconnect Couplers. Due to the unique design of the base plate no compressing of the breather under the base plate occurs.

Directions for Use: Insert the base of the vacuum valve beneath the bagging film through an appropriate slit in the bagging film. The pressure lock ring is then applied on the top of the bagging film, screwing it securely tight with finger pressure only. No tools are necessary.



DATA SHEET

HK700 and HK700R HOSE

HK700 is a high temperature, high pressure braided steel outer cover, Teflon® inner tube which will withstand pressures exceeding 300 PSI.

HK700R hose is the same type of hose as is the HK700, but it has a rubber silicone sleeve. The HK700 hose can be ordered with an outer metal coil that protects against kinking and other accidents..

SPECIFICATIONS

500°F (260°C) Maximum use temperature: over 300 PSI Maximum pressure Male threaded fitting ID stock sizes 1/4 inch Hose ID stock sizes 3/8 inch Outer Braid Steel Outer Sleeve AF100R only Silicone Rubber Teflon Inner tube Standard Lengths* 10 feet

Life Expectancy
* any size lengths can be ordered

NOTE: Technical information furnished by HAWKEYE is based on laboratory findings and is believed to be correct. No warranties of any kind are made except that materials supplied are HAWKEYE standard quality. All risk and liability arising from handling, storage and use of HAWKEYE products, as well as compliance with applicable legal restrictions rests with the buyer.

18 - 24 months



DATA SHEET HK7334 FILTERED VACUUM VALVE

The HK7334 Filtered Vacuum Valve is designed to produce the complete filtered vacuum valve assembly. The filtered base consists of a machined aluminum body, silicone o-ring, and filter. The filter helps to protect vacuum fittings and lines from resin contamination. The perimeter of the filter becomes impregnated with the resin while still allowing air to flow in the middle. Too much resin will saturate the entire filter and may allow some resin to travel into the line.

It is recommended that you treat the vacuum valve top and base with some type of release coating. In the event that the filter has to be replaced, removing the old filter will be an easier job.

The filter is removed by pushing down through the center of the top of the base onto the filter. The o-ring may also require replacement. Both the filter and the o-ring are available separately.

Standard: 1/4" npt



DATA SHEET HK100 AUTOCLAVE HOSE

HK100 is a high temperature, high pressure braided steel hose. It has an outer sleeve of silicone rubber. The HK100 Autoclave hose has a Teflon® inner tube with a steel spring inside to ensure against collapse when used with pressure exceeding 300 PSI>

DESCRIPTION

Maximum use temperature Maximum pressure

Male threaded fitting ID stock sizes

Hose ID – stock sizes

Outer Braid
Outer Sleeve
Inner tube
Inner spring
Life Expectancy
Standard Lengths*

*Any length can be ordered

500°F (260°C) over 300 PSI

14 inch, 12 inch, 34 inch 3/8 inch, 12 inch, and 34 inch

Steel

Silicone Rubber

Teflon Steel spring 18-24 months

10 feet



DATA SHEET

HK722 VACUUM HOSE

The HK722 Vacuum Hose is an extremely flexible, durable autoclave and oven hose. Its soft outer shell prevents bag punctures, mold damage and injuries to users while the Kevlar reinforcement, unlike glass and dacron found in other hoses, provides superior strength and durability.

HK722 offers the following superior features:

High Flow 3/8" ID
Kevlar-reinforced Silicone Rubber
Crush-resistant Stainless Steel Core
Extremely Flexible Hose

SPECIFICATIONS

Maximum Temperature: 450° F (232° C) Continuous

Maximum Autoclave Pressure: 250 psi

End Fittings: Straight and 90 degree

1/4" npt standard. 3/8" and 1/2" available

To Order, please specify length and required end fittings



DATA SHEET

HK723 AUTOCLAVE VACUUM HOSE

The HK723 is an excellent, economical hose for autoclave and over processes. There is no outer braiding that can fray and injure someone and the smooth, annular corrugations provide good flexibility while also preventing damage to the molds and vacuum bags.

SPECIFICATIONS

Maximum Temperature: 1000° F (538° C) Continuous

Maximum Autoclave Pressure: 200 psi

Dimensions: High Flow 3/8" ID
Construction: 100% Stainless Steel
End Fittings: 1/4" npt male - standard

1/4", 3/8" and 1/2" female JIC available

To Order, please specify length and required end fittings



DATA SHEET

HK724 AUTOCLAVE VACUUM HOSE

If you require the ultimate in flexibility and durability, the HK724 Autoclave Vacuum Hose, will fill your requirements. With a continuous use temperature of 1000 degrees F (538 deg C) and a pressure capacity of 1000 psi, we feel that this is the finest hose available. There is no outer braiding that can fray and injure someone and the smooth, tight-pitch corrugations provide excellent flexibility while preventing damage to the molds and vacuum bags.

SPECIFICATIONS

Maximum Temperature: 1000 Degrees F (538 Deg C)

Continuous

Maximum Autoclave Pressure: 1000 psi

Dimensions: High-flow 3/8" ID Construction: 100% Stainless Steel

Construction

End Fittings: 1/4" npt male - Standard

1/4", 3/8" and 1/2" female JIC -

available

To Order, please specify length and required end fittings



DATA SHEET

HK770 HIGH TEMPERATURE AUTOCLAVE VACUUM HOSE

HK770 High Temperature Autoclave Vacuum Hose has been designed for extremely high temperatures. The solid steel construction makes it possible to use the HK770 Autoclave Hose continuously to 900 degrees F (482 degrees C) and for limited usage as high as 1000 degrees F (538 degrees C). The fabrication process provides superior durability yet maintains flexibility. An optional silicone sleeve can be ordered to provide additional durability.

SPECIFICATIONS

Maximum Continuous Operating Temperature:

Maximum Temperature:

Standard Hose Size:

End Fittings:

Lengths:

900 Deg. F (482 Deg C)
1000 Deg F. (538 Deg. C)
3/8" Hose Diameter
1/4" NPT - Standard
Any length available

Other end fittings and hose diameters are available upon request.



DATA SHEET

RETRACTABLE VACUUM HOSE

The retractable vacuum hose is a self-retracting vacuum hose for cleanroom and shop use where vacuum is required at room temperature. The retractable vacuum hose is an economically priced system, which utilizes a nylon hose. The Retractable Vacuum Hose will repel most chemicals and comes equipped with brass male swivel fitting on both ends. We recommend HK510 Quick Disconnect Fittings with use of the Retractable Vacuum Hose.

Description

Maximum use temperature 180°F (82°C) Hose ID:* ¼ inch Male fitting:* ¼ inch NPT Standard hose length:* 15 feet

Other sizes available on request



DATA SHEET

HK510 QUICK DISCONNECT

HK510 Quick Disconnect, (QDC), is a high quality, economical, valve fitting suitable for most vacuum and pressure applications.

HK510 Quick Disconnects are manufactured of cadmium-plated steel. Spring operated valves are incorporated into both halves which open automatically when connected to allow evacuation or gas flow. The internal springs and fittings are corrosion resistant and of the highest quality materials. When the fittings are disconnected, the air flow is shut off in booth the plug and the coupler. This allows your vacuum valve to remain under vacuum pressure after the vacuum source has been disconnected. This allows for ease of movement of the parts under vacuum cure.

Viton high temperature elastomeric seals are fitted as standard. The HK510 Quick Disconnect is available in 1/4" or 1/2" npt female threads only.

SPECIFICATIONS

Maximum Use Temperature: 500 Degrees F (260 Deg. C)
Construction: Cadmium-plated steel
Thread Sizes: 1/4" or 1/2" npt female threads

only



DATA SHEET

HK510-K QUICK DISCONNECT

HK510-K Quick Disconnect, (QDC), is a high quality, valve fitting suitable for most vacuum and pressure applications.

HK510-K Quick Disconnects are manufactured of cadmium-plated steel. Spring operated valves are incorporated into both halves. Each half opens automatically when connected to allow evacuation or gas flow. The internal springs and fittings are corrosion resistant and of the highest quality materials. When the fittings are disconnected, the air flow is shut off in both the plug and the coupler. This allows your vacuum valve to remain under vacuum pressure after the vacuum source has been disconnected. This allows for ease of movement of the parts under vacuum cure.

The "O" ring for the HK510-K is a high temperature, carbon black filled compound which has a maximum temperature of 660°F (350°C). This is a general purpose material suitable for most applications. The compound is not recommended for applications involving water/steam and aliphatic amines at higher temperatures. It should never be used in applications involving ethylene oxide or propylene oxide.

SPECIFICATIONS

Maximum Use Temperature: 660° F (350° C)
Construction: Cadmium-plated steel

Thread Sizes: 1/4" or 1/2" npt female threads

only



DATA SHEET

HK510 QUICK DISCONNECT INSTRUCTIONS FOR USE

To connect the coupler to the plug, retract the springs loaded sleeve on the coupler, and push the plug and coupler firmly together. Release the sleeve.

To disconnect, simply reverse the procedure. Retract the spring loaded sleeve on the coupler and pull the plug and coupler apart.

The coupler is equipped with a threaded female fitting that effects an air-tight seal when inserted into the Hawkeye Vacuum Hose. For a guaranteed seal, Hawkeye Thread Seal should be applied to the threaded fitting prior to installation into the hose.

The plug portion of HK510 Quick Disconnect has female standard pipe thread. Coat the male threads of the Hawkeye Vacuum Valve with Thread Seal. Thread the Quick Disconnect plug onto the Vacuum Valve and tighten.

The system is now ready for use



DATA SHEET

HK 550TF



HK550 Quick Disconnect (QDC) is the best quick disconnect. It features double end shut-off (DESO) stem and body. When the assemble is pressurized in the coupled position, no rotation or swivel action is permitted.

HK550TF is manufactured of stainless steel with high temperature "0" rings. HK550TF provides reliable connections in vacuum and pressure systems. The automatic shut-off minimizes pressure loss or fluid spillage when uncoupling. HK550TF provides easy, straight-line, finger tip push or pull action for instant coupling or uncoupling.

SPECIFICATIONS

Maximum Use Temperature: Maximum Use Pressure:

550°F (285°C) 17.5 PSI KG/Sq cm

Standard Size:

Bottom portion has female hex with 1/4"

pipe. Thread that fits directly onto the Vacuum Valve HK1401 (or other valves). The top Portion also has female hex nut with ¼" pipe thread that threads onto your autoclave hose.



DATA SHEET

HK801 GENERAL PURPOSE HOSE

HK801 General Purpose Hose is constructed of synthetic rubber tube with one textile braid reinforcement. It has a MSHA approved synthetic rubber cover. HK801 is furnished in gray, red, black, or blue.

HK801 General Purpose Hose is widely used for shop air systems and general industrial, maintenance and automotive applications. It can be used with petroleum based hydraulic fluids and lubricating oils within a temperature range of -40°F to +212°F (-40°C to +100°C). It can be used with water, water/oil emulsion and water/glycol hydraulic fluids up to +185°F (+85°C). It is also used as an air hose with temperature range of -40°F to +158°F (-40°C to +70°C).

SPECIFICATIONS

(10mm)
(16mm)
(1.7 MPa)
(1,7 MPa)
(75mm)
sqft (0.16 kg/m)
(6 kPa)



DATA SHEET

VACUUM PUMP - SPECIFICATIONS

Motor Voltage/Frequency: 115 Volts/60Hz
Motor Type: Shaded Pole
Starting Current: 2.29 Amp.
Min. Full Load Speed 2500 RPM

Net Weight: 3.25 lbs

Head Configuration: Pressure/Vacuum

Horsepower: 1/25
Current @ Rated Load 1.5 Amps

Insulation Class: B Thermal Protector: Yes Stroke: .390

PRESSURE	FLOW		
(psi)	(CFM)	(LPM)	
"O ´	74	22	
8	.49	14	
10	.46	13	
15	.39	11	
20	.39	11	
25	.35	10	
30	.32	9	
35	.28	8	
50	.25	7	
70	.18	5	

Maximum Continuous Pressure: 25
Maximum Intermittent Pressure: 70

VACUUM	FLOW			
(Inches Hg)	(CFM)		(LPM)	
0	.67		19	
5	.46		13	
10	.39		11	
15	.32		9	
20	.18		5	
25	.00		0	
Maximum Vacuum (Inches Hg.):		24		
Maximum Ambient Temperature:				
Minimum Ambient Temperature: 50° F (10° C)				



DATA SHEET

VACUUM PUMP

The Hawkeye Vacuum Pump does not require shop air to generate vacuum. The operation of the Hawkeye Vacuum Pump is regulated. The gauges and the adjustments for the vacuum, air pressure and selector switch are easily identifiable and convenient.

- Hi Strength Pull 20 inches Hg.
- Reliability Piston System
- Continuous Running No Fluctuation in Vacuum Pressure
- Easy-to-Read Vacuum Gauge
- Bleeder Valve to Adjust Pressure
- Ideal for Tool and Wing Bagging



DATA SHEET HK 29 VACUUM GAUGE

HK29 Vacuum Gauge is a durable inexpensive gauge used to determine the amount of vacuum pressure under your vacuum bag. It is manufactured with a 1/4" pipe thread stem which fits easily into our quick disconnects. HK29 Vacuum Gauge is calibrated in inches of mercury, Hg.

For best results, place the Vacuum Gauge in an opposite, diagonal corner of your bag from the vacuum port. After full vacuum has been achieved, disconnect the vacuum source from the quick disconnect. Allow a little air to re-enter through your vacuum port. Within seconds, the Vacuum Gauge should register a drop in pressure. If not, you may have vacuum "trap off" around your vacuum port.

SPECIFICATIONS

Range: 0-(-30 Hg), 0-(-100KPa)
Graduations -.5" Hg, -2KPa
Accuracy 2.5% full range
Figure interval -5" Hg., -20KPa



DATA SHEET

TS600 THREAD SEAL

TS600 Teflon*Thread Sealant is a paste which lubricates, protects and seals threaded and flanged connections. It can be used in water, oil, air, steam, common gases and hydraulic systems. TS600 can be used on both ferrous and non-ferrous metal; PVC, CPVC, brass, copper, nickel, stainless steel, aluminum and galvanized.

TS600 Thread Sealant is manufactured with an anti-seize formula and is non-hardening. Easy disassembly of both old and new threaded fittings is assured due to the formulation.

SPECIFICATIONS

Type: Synthetic resins with Teflon*

Solids: 64% Consistency: paste

Use Temperature: -40 degrees to 400 degrees F

Color: Off-white
Shelf Life: 12 months
Missing Ratio: Do not Dilute
Application: Brush-on

NOTE: DO NOT USE ON OXYGEN SYSTEMS

*Teflon - Registered Trademark of DuPont.



DATA SHEET HK31 VACUUM PAD

HK31 is an open weave Teflon*-coated fiberglass. When placed directly beneath the vacuum valve, it will facilitate consistent airflow through the valve. A constant airflow will result in an improved bond.

SPECIFICATIONS

 Size:
 3" X 3" (7.62 cm X 7.62 cm)

 Maximum Use Temperature:
 550° F (285° C)

 Weave Space:
 3/16" (4.8mm)

^{*}Teflon is a registered trademark of DuPont



DATA SHEET VENT VAC 22 – VENTURI BLOCK

The Vent Vac 22 is a venturi block and silencer that converts shop air lines to vacuum without the use of a vacuum pump. Vent Vac 22 will draw 22 inches of mercury.