



**YELLOW  
JACKET®**

**CLASSIC AMERICAN COOL**

*Ritchie*  
ENGINEERING COMPANY INC.

*Est 1949*



**YELLOWJACKET.COM**

**EDITION 66**

**EST. 1949**

**HVAC/R SERVICE TOOLS**

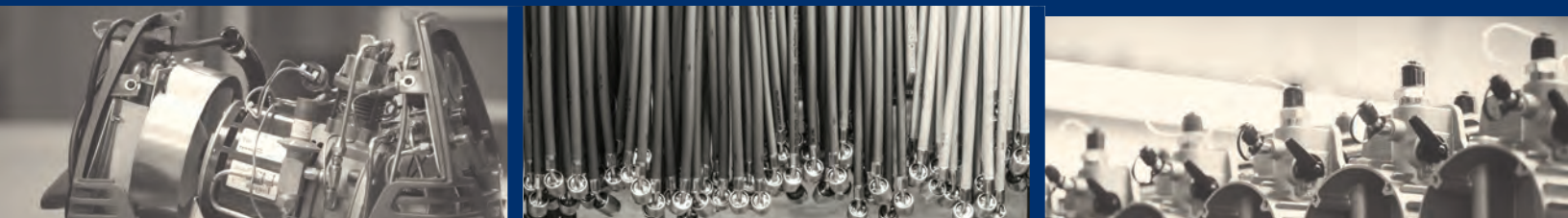




# THEY DON'T MAKE THEM LIKE THEY USED TO. BUT WE STILL DO.

It all started with the need for a charging hose that you could count on. Every time. That was nearly 70 years ago. Today, YELLOW JACKET® is stronger than ever, manufacturing a complete range of HVAC tools right here in the good old U.S.A. that are as rugged, accurate, and reliable as the hard-working service techs who use them. Our comprehensive line-up of products has grown and evolved with the HVAC business over the years, and the 66th Edition of the YELLOW JACKET® full-line catalog is your one stop shop for anything and everything you could ever need. No matter what HVAC tools you're looking for, all of our tools have one thing in common: they won't let you down. That's why the very best techs ask for YELLOW JACKET® by name.

**EDITION 66**





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## REFRIGERANT RECOVERY SYSTEMS





YELLOW JACKET®

## YJ-LTE™ Refrigerant Recovery Machine

The smallest, lightest, most powerful unit in its class

Built in purge circuit eliminates the need for external equipment and makes for easy clearing at the end of the job

Superior condenser performance means the recovery tank stays cooler for a longer period of time, allowing you to recover more refrigerant without high-pressure cut-out



YELLOW  
JACKET®

Don't let the small size fool you. The YJ-LTE™ Refrigerant Recovery System is packed with the features you need at a price your budget can handle. Like a built in purge circuit which eliminates the need for external equipment and makes for easy clearing at the end of the job. And superior condenser performance which means the recovery tank stays cooler for a longer period of time, allowing you to recover more refrigerant without high-pressure cut-out. And it's simple to operate, too, with a single valve, single gauge control panel.

**Additional Features:**

- ½ hp, twin cylinder, oil-less compressor for fast recovery of Class III, IV and V refrigerants including R-410A
- Superior condenser design and performance:
  - System designed for high load conditions
  - Keeps tank up to 10° cooler
  - Allows gravity flow of recovered liquid to recovery tank
- Easy-to-read and extremely durable 2-1/2" liquid-filled condenser pressure gauge
  - Virtually no flutter under any condition
  - Protects against damage from pressure pulses
- Single valve control panel
  - Simple operation
  - Position for either recovery or purge
- Single gauge shows tank pressure during recovery and recovery unit internal pressure during purge
- Sealed compressor crankcase to minimize refrigerant loss over the life of the compressor
- Built-in purge circuit for easy clearing at the end of each job; no extra tanks or vacuum pumps required
- Cup-style piston seals for better performance under high pressure differentials
- Quiet running compressor performance
- Lightweight at 24 pounds
- One-year warranty

**Specifications:**

|                         |  |
|-------------------------|--|
| Capabilities:           | Vapor, liquid, push/pull   |
| Refrigerants:           | 12, 22, 134a, 407C, 410A, 500, 502, and other Class III, IV and V refrigerants |
| Compressor:             | ½ hp, twin cylinder, reciprocating, oil-less                                   |
| Power Source:           | 115V/60 Hz (95730 and 95732)<br>230V/50 Hz (95733 and 95738)                   |
| Amps:                   | 8.0 (95730 and 95732)<br>4.0 (95733 and 95738)                                 |
| High Pressure Shut-Off: | 517 psi – auto reset   |
| Operating Temperature:  | 40° to 122° F (4° to 50° C)  |
| Approvals:              | Performance tested by UL to ARI 740-98 (95732 - CSA C22.2 No. 120)             |
| Weight:                 | 24 Lbs.  |
| Dimensions:             | 9.0 (w) x 11.5 (h) x 13.5 (d) in.<br>22.86 (w) x 29.21 (h) x 34.29 (d) cm      |

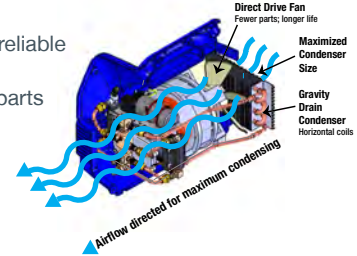
**Built-In High Side Pressure Gauge**

- 2-1/2" Liquid-filled pressure gauge shows discharge pressure during recovery and internal pressure during purge.
- 0 - 40 bar; 0 - 600 psi helps you monitor recovery.
- Durable and easy to read under any conditions.



**Direct Drive Fan**

- No gears, fewer parts, more reliable air flow
- No overheating and melting parts
- Cools the condenser first to help keep the recovery tank pressure lower



**Built-In PurgeCircuit**



- Changeover from liquid to vapor to purge
- No external equipment required
- Simple to use - move the hose and turn the selector button

**Built-In Condenser**

- 24 in<sup>2</sup> (5/16" tubes) with gravity drain
- Reliable operation in high ambient conditions

**Built-In Circuit Breaker**

- Prevents tripping of building circuit breakers

**Displacement**

- Largest displacement among lightweight recovery machines - 11.5 cc (.7 C.I.)

**Motor Speed**

- Powerful 4 pole 1725 RPM CSIR motor



95732, 95733, 95738

| UPC#  | Description                             |
|-------|---|
| 95730 | YJ-LTE Refrigerant Recovery System      |
| 95732 | YJ-LTE CSA Refrigerant Recovery System  |
| 95733 | YJ-LTE 230V/50-60 Hz (Euro and UK plug) |
| 95738 | YJ-LTE™ 230V/50-60 Hz (AU/NZ plug)      |
| 95560 | 1/4" M x F Filter Fitting               |

Designed and assembled in the U.S.A.

**YJ-LTE RECOVERY RATINGS**

| (UL* ARI - 740-98)<br>Vacuum Level: 15 inHg |           |           |        |                 |          |           |        |                 |
|---|-----------|-----------|--------|-----------------|----------|-----------|--------|-----------------|
|   | Lbs./min. |           |        |                 | Kg./min. |           |        |                 |
|   | Vapor     | Push/Pull | Liquid | High Temp Vapor | Vapor    | Push/Pull | Liquid | High Temp Vapor |
| R-22  | 0.37      | 9.17      | 6.83   | 0.28            | 0.17     | 4.16      | 3.10   | 0.13            |
| R-407C                                      | 0.30      | 10.05     | 7.53   | N/A             | 0.14     | 4.56      | 3.42   | N/A             |
| R-410A                                      | 0.35      | 10.91     | 9.27   | N/A             | 0.16     | 4.95      | 4.20   | N/A             |

\* UL and ARI tests are only one way to evaluate recovery speed, and rates are a "level field" comparison method. In other testing conditions, units can exhibit much higher rates.

## RecoverXLT® REFRIGERANT RECOVERY MACHINE



95760


Fully automatic operation for fast recovery of Class III, IV and V refrigerants including R-410A, backed by the best warranty in the industry.

The CPR (Constant Pressure Regulator) valve automatically reduces the pressure of the refrigerant being recovered – regardless of which refrigerant – without slugging the compressor.



Turn the single control valve to “liquid” or “vapor” settings, and the machine will complete recovery while you work on other aspects of the job.

*Convenient cord storage*

- Single valve control for easy changeover from liquid to vapor to purge
- Constant Pressure Regulator (CPR) valve regulates refrigerant to the compressor. Eliminates the need for technician to throttle the suction valve
- Advanced 1/2 hp, 3425 rpm oil-less compressor with precision valves manufactured in an ISO-9001 facility
- Recovers refrigerant and shuts off when unit reaches 13" of vacuum. Unit will automatically restart if system pressure rises
- Indicator signals “recovery complete”
- Quiet running with components nested to reduce vibration and noise. Oil-less compressor is inherently quiet
- Controls and gauges inset for protection and angled for easy access and viewing
- Senses back pressure from tank and shuts off automatically at 517 psi for safety
- Reusable mesh particulate filter inserts into suction port for protection. Simple cleaning eliminates replacement due to clogging
- “On-the-fly” purge with simple turn of a knob to remove residual refrigerant and help prevent cross-contamination
- High efficiency fan keeps air moving across condenser for cool running even in hot weather
- High strength HDPE case for lightweight and rugged use. Rounded corners help protect from nicks and scrapes
- Single high pressure safety switch - external circuit breaker
- Includes three-year compressor warranty
- Made in the USA 
- Tested by UL to ARI 740-98

| UPC#  | Description                                    |
|-------|--|
| 95760 | RecoverXLT 115V/60 Hz                          |
| 95762 | RecoverXLT with tank overfill switch 115/60 Hz |
| 95765 | RecoverXLT 110V/50 Hz (IEC 60309 plug)         |

## RecoverXLT2-AP™ REFRIGERANT RECOVERY MACHINE

The drive to lower global warming potential refrigerants with increased flammability has necessitated the evolution of the market leading YELLOW JACKET® RecoverXLT™ recovery machine: The new RecoverXLT2-AP™ Refrigerant Recovery Machine with twin cylinder 1/2 hp oil less compressor and gravity drain condenser. The unique “ambient pressure switch” and three meter power cord comply with the current safety requirements. The RecoverXLT2-AP is specifically designed for the new lower GWP refrigerants including R-32, R-1234yf and R1234ze as well as the most common CFC, HFC and HFO refrigerants, including R-22, R-404A, R-407, R-410A, R-448A and R-449A.

- 1/2 hp, twin cylinder, oil-less compressor for fast recovery of Class III, IV and V refrigerants including R-32, R-1234yf and R-1234ze.
- Safe venting of case interior prior to start up.
- Low pressure switch stops recovery above ambient pressure for leaking systems to prevent pulling air into recovery cylinders.
- Low pressure bypass for recovery of leak-free systems.



| UPC#  | Description  |
|-------|--|
| 95764 | RecoverXLT2-AP Refrigerant Recovery System 230V/50-60 Hz (Euro, UK, NZ and Australian plug)* |

\*Not tested and approved for use in the U.S.A.



# RecoverX REFRIGERANT RECOVERY MACHINE



95700

Building on the performance and success of the original YELLOW JACKET RecoverX Recovery Machine, the RecoverX is a cost-effective solution for smaller systems and push/pull applications.

- Maximum air flow and cool running even in high ambient temperatures. High efficiency fan keeps air moving across condenser
- High strength HDPE case for lightweight and rugged use. Rounded corners help protect you and your customers from nicks and scrapes
- Whisper-quiet 1/6 hp oil-filled reciprocating hermetic compressor charged with polyol ester oil. Oil drain port for easy maintenance
- Controls and gauges inset for protection and angled for easy access and viewing
- High pressure switch with automatic reset and external circuit breaker
- Made in the USA
- Tested by UL to ARI 740-95

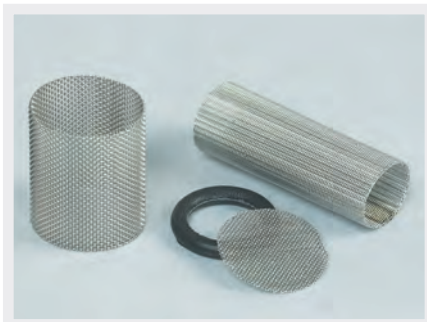
| UPC#  | Description         |
|-------|---------------------|
| 95700 | RecoverX 115V/60 Hz |

## RECOVERY MACHINE COMPARISON CHART

| Features  | RecoverX #95700  | RecoverXLT #95760/95762                               | RecoverXLT2-AP #95764**                                      | RecoverXLT #95765                                     |           |        |        |           |        |        |           |        |
|---|--|---|--|---|-----------|--------|--------|-----------|--------|--------|-----------|--------|
| Recovery capabilities                                 | Vapor and push/pull  | Vapor, liquid, push/pull                              | Vapor, liquid, push/pull                                     | Vapor, liquid, push/pull                              |           |        |        |           |        |        |           |        |
| Compressor  | 1/6 hp oil-filled hermetic   | 1/2 hp oil-less                                       | 1/2 hp oil-less  | 1/2 hp oil-less                                       |           |        |        |           |        |        |           |        |
| Weight  | 29.0 lbs. (13.15 kg)   | 32.6 lbs. (14.78 kg)                                  | 32.6 lbs. (14.78 kg)   | 32.6 lbs. (14.78 kg)                                  |           |        |        |           |        |        |           |        |
| Size L x W x H inches<br>Size L x W x H mm.           | 19.3 x 12.4 x 12.5<br>490 x 315 x 317  | 19.3 x 12.4 x 12.5<br>490 x 315 x 317                 | 19.3 x 12.4 x 12.5<br>490 x 315 x 317                        | 19.3 x 12.4 x 12.5<br>490 x 315 x 317                 |           |        |        |           |        |        |           |        |
| Refrigerant compatibility                             | 12, 22, 134a, 407C, 500, 502, MP and blends  | 12, 22, 134a, 407C, 410A, 500, 502, HP, MP and blends | 32, 1234yf, 1234ze, 22, 404A, 407, 410A, 448A, 449A and more | 12, 22, 134a, 407C, 410A, 500, 502, HP, MP and blends |           |        |        |           |        |        |           |        |
| Volts/Hertz   | 115V/60 Hz   | 115V/60 Hz  | 230V/50-60 Hz  | 110V/50 Hz  |           |        |        |           |        |        |           |        |
| Tank overflow sensor                                  | No   | 95760 No / 95762 Yes                                  | No   | No  |           |        |        |           |        |        |           |        |
| Low pressure shut-off sensor                          | No   | Standard  | Standard   | No  |           |        |        |           |        |        |           |        |
| Inlet mesh filter screen                              | Included   | Included  | Included   | Included  |           |        |        |           |        |        |           |        |
| Inlet filter dryer                                    | Optional filter available for use on contaminated and burn-out systems; use a filter of adequate size (P/N 95014). |   |  |   |           |        |        |           |        |        |           |        |
| Suction and discharge pressure gauges                 | Standard   | Standard  | Standard   | Standard  |           |        |        |           |        |        |           |        |
| Upgraded higher suction and discharge pressure gauges | No   | Standard  | Standard   | Standard  |           |        |        |           |        |        |           |        |
| Upgraded single higher pressure switch                | No   | Standard  | Standard   | Standard  |           |        |        |           |        |        |           |        |
| External circuit breaker                              | Standard   | Standard  | Standard   | Standard  |           |        |        |           |        |        |           |        |
| Plug  | U.S.   | U.S.  | Euro, UK, AU and NZ  | IEC 60309   |           |        |        |           |        |        |           |        |
| Warranty  | 1 year parts and labor   | 1 year parts and labor;<br>3 years compressor         | 1 year   | 1 year parts and labor;<br>3 years compressor         |           |        |        |           |        |        |           |        |
| Certified to ARI standard                             | ARI 740-95   | ARI 740-98  | ARI 740-98   | ARI 740-95  |           |        |        |           |        |        |           |        |
| Testing agency  | UL   | UL  | UL   | UL  |           |        |        |           |        |        |           |        |
| CUL listed  | Yes  | Yes   | Yes  | No  |           |        |        |           |        |        |           |        |
| CE marked   | No   | No  | Yes  | Yes   |           |        |        |           |        |        |           |        |
| Applicable ARI standard                               | 740-95   |   |  | 740-98  |           |        | 740-98 |           |        | 740-95 |           |        |
| Recovery rating in lbs./min.                          | Vapor  | Push/Pull   | Liquid   | Vapor   | Push/Pull | Liquid | Vapor  | Push/Pull | Liquid | Vapor  | Push/Pull | Liquid |
| R-12  | 0.24   | 10.43   | N/A  | 0.33  | 13.49     | 1.98   | 0.22   | 8.99      | 1.32   | 0.22   | 8.99      | 1.32   |
| R-22  | 0.29   | 8.77  | N/A  | 0.33  | 13.49     | 1.98   | 0.22   | 8.99      | 1.32   | 0.22   | 8.99      | 1.32   |
| R-134a  | 0.20   | 9.33  | N/A  | 0.33  | 13.49     | 1.98   | 0.22   | 8.99      | 1.32   | 0.22   | 8.99      | 1.32   |
| R-410A  | N/A  | N/A   | N/A  | 0.48  | 12.21     | 1.68   | 0.32   | 8.14      | 1.12   | N/A    | N/A       | N/A    |
| R-500   | 0.24   | 9.66  | N/A  | 0.33  | 13.49     | 1.98   | 0.22   | 8.99      | 1.32   | 0.22   | 8.99      | 1.32   |
| R-502   | 0.24   | 7.61  | N/A  | 0.59  | 13.58     | 2.65   | 0.39   | 9.05      | 1.77   | 0.39   | 9.05      | 1.77   |
| Recovery rating in kg./hr.*                           | Vapor  | Push/Pull   | Liquid   | Vapor   | Push/Pull | Liquid | Vapor  | Push/Pull | Liquid | Vapor  | Push/Pull | Liquid |
| R-12  | 6.60   | 283.80  | N/A  | 9.00  | 367.20    | 54.00  | 6.00   | 244.80    | 36.00  | 6.00   | 244.80    | 36.00  |
| R-22  | 7.80   | 238.80  | N/A  | 9.00  | 367.20    | 54.00  | 6.00   | 244.80    | 36.00  | 6.00   | 244.80    | 36.00  |
| R-134a  | 5.40   | 253.80  | N/A  | 9.00  | 367.20    | 54.00  | 6.00   | 244.80    | 36.00  | 6.00   | 244.80    | 36.00  |
| R-410A  | N/A  | N/A   | N/A  | 13.20   | 332.40    | 45.60  | 8.80   | 221.60    | 30.40  | N/A    | N/A       | N/A    |
| R-500   | 6.60   | 262.80  | N/A  | 9.00  | 367.20    | 54.00  | 6.00   | 244.80    | 36.00  | 6.00   | 244.80    | 36.00  |
| R-502   | 6.60   | 207.00  | N/A  | 16.20   | 369.70    | 72.00  | 10.80  | 246.40    | 48.00  | 10.80  | 246.40    | 48.00  |

\*ARI tests are only one way to evaluate recovery speed. In other testing conditions the units can exhibit much higher performance rates. ARI rates are a "level field" comparison method.  
 \*\*Rates do not include 95764. Calculated recovery ratings for this product can be found at [www.yellowjacket.com](http://www.yellowjacket.com)

## PARTS FOR R 50A, R 60A, R 70A, R 100



Mesh particulate filter for YELLOW JACKET recovery machines remove particles to protect units. Easy to clean and reuse or replace.

| UPC#  | Description  |
|-------|--|
| 95134 | Screens R 70a Series (4 pak)                           |
| 95136 | Screens R 80a, R 100 Series (4 pak)                    |
| 95139 | Screens R 60 and R 60a Series (4 pak)                  |
| 95141 | Screens RST (4 pak)                                    |
| 95342 | Replacement brass bulkhead fitting for R 60a and R 70a |
| 95343 | Replacement "O" ring for R 60a and R 70a (3 pak)       |
| 95538 | R 60 solid state TOS board                             |

## WRAP-AROUND HEATER FOR REFRIGERANT CYLINDER

- Fits 30, 50 and 125 lb. cylinders
- Thermostat controlled with maximum 130°F (54°C) and minimum 120°F (48.8°C) (surface temperature of tank)
- Cycles on/off to maintain surface temperature
- 200 watt, 115V or 230V
- 20" velcro straps and 6' cord



| UPC#  | Description                      |
|-------|----------------------------------|
| 68848 | Wrap-around cylinder heater 115V |
| 68849 | Wrap-around cylinder heater 230V |

## RECOVERY BURNOUT FILTER FOR DIRTY SYSTEMS

| UPC#  | Description     |
|-------|-----------------|
| 95014 | Recovery filter |

## SIGHT GLASS



Use with YELLOW JACKET RecoverX and RecoverXLT machines. Indicates when all liquid has been recovered so you can switch immediately to vapor cycle and speed up the recovery process. 1/4" flare x 1/4" female flare.

| UPC#  | Description                       |
|-------|-----------------------------------|
| 41145 | Sight glass with 1/4" connections |

## THE TRAP SEPARATOR

High porosity filter effectively traps sealant, dye and lubricant so only pure refrigerant exits to your recovery equipment. Filter replacement is easy in less than five minutes.



| UPC#  | Description                              |
|-------|--|
| 38087 | The Trap Separator - 1/4" flare fittings |
| 38081 | Replacement filter pak                   |



## REFRIGERANT RECOVERY CYLINDERS FOR R-410A

These gray and yellow 30 and 50 lb. cylinders feature "Y" valve for liquid/vapor, 400 psi rating and 3/4" plug for a float switch.

| UPC#  | Description                                       |
|-------|---|
| 95002 | 30 lb. 400 psi cylinder DOT 400                   |
| 95007 | 50 lb. 400 psi cylinder DOT 400                   |
| 95012 | 30 lb. 400 psi cylinder DOT 400 with float switch |
| 95013 | 50 lb. 400 psi cylinder DOT 400 with float switch |

High capacity in-line filter drier removes moisture and oil breakdown products, as well as acid from burnt out systems. Attaches directly to refrigerant recovery system with a 1/4" female and a 1/4" male connection. UL and CSA listed.



## PARTS FOR RECOVERX AND RECOVERXLT

| UPC#  | Description                        |
|-------|------------------------------------|
| 95156 | Circuit breaker (12 AMP)           |
| 95190 | Capacitor (115V Machine)           |
| 95187 | Relay (115V Machine)               |
| 95188 | Shorting cap for umbilical cord    |
| 95210 | Large cord strain relief bushing   |
| 95215 | Power cord (U.S.)                  |
| 95216 | Rocker switch                      |
| 95218 | Oil-less compressor 115V/60 Hz     |
| 95248 | Umbilical cord overfill sensor     |
| 95294 | Fan clip                           |
| 95325 | High pressure switch               |
| 95338 | Low pressure switch                |
| 95449 | Compressor bracket grommet (5 pak) |
| 95451 | High pressure gauge                |
| 95452 | Low pressure gauge                 |
| 95453 | Manifold assembly                  |
| 95528 | CPR valve                          |
| 95455 | Fan blade                          |
| 95457 | Replacement filter screen          |
| 95477 | TOS LED strip assembly             |
| 95527 | Solid state TOS board              |
| 95538 | R 60 solid state TOS board         |

## COMPRESSOR SERVICE PARTS FOR OIL-LESS MODELS

| UPC#  | Description   |
|-------|---|
| 95121 | Compressor kit for oil-less units                         |
| 95122 | Eccentric and bearing assembly for R 60/R 60a, R 70a, XLT |
| 95124 | Compressor service kit for R 100                          |
| 95125 | Eccentric and bearing assembly for R 100                  |
| 95126 | Compressor overhaul kit for R 100                         |
| 95230 | Head and valve plate assembly for oil-less machines       |
| 95269 | Connecting rod for R 100 0.600 stroke                     |
| 95287 | Connecting rod for R 60a, R 70a and XLT 0.750 stroke      |

# VACUUM PUMP SYSTEMS






YELLOW JACKET®

# BULLET® Vacuum Pump

A two-stage rotary vane oil-sealed pump that pulls down to 25 microns or better



The BULLET® pulls down to 25 microns or better, protecting from contaminants and non-condensable gasses in the HVAC system, which can damage components, reduce efficiency and cause system failure.

- Wide mouth oil reservoir port for easier, cleaner filling. Doubles as pump exhaust; threaded to attach garden hose for exhausting to remote location
- Large oil sight glass for easy monitoring of oil level
- Large brass oil drain for easy access to fast oil changes
- Internal intake check valve to help prevent oil backup into the system during a power failure
- Heavy-duty rotors and bearings
- Intake filter screen keeps damaging particles from entering the pump
- Heavy-duty steel handle for well-balanced carrying
- Tethered port caps stay with the pump
- Stable base; wide-stance metal with rubber overlay
- Two year warranty
- Made in the USA 

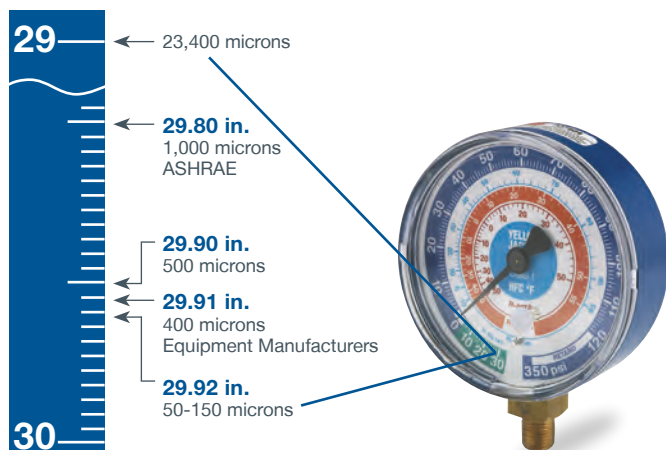
| Domestic                    | Model 93603   | Model 93605   | Model 93600   |
|-----------------------------|---|---|---|
| Free air displacement       | 3.0 cfm   | 5.0 cfm   | 7.0 cfm   |
| Number of stages            | 2-stage rotary vane   | 2-stage rotary vane   | 2-stage rotary vane   |
| Field blankoff              | 25 microns  | 25 microns  | 25 microns  |
| Intake                      | 1/4" x 3/8" x 3/8"  | 1/4" x 3/8" x 3/8"  | 1/4" x 3/8" x 3/8"  |
| Motor                       | 1/2 hp - 1725 rpm   | 1/2 hp - 1725 rpm   | 1/2 hp - 1725 rpm   |
| Thermal overload protection | Yes   | Yes   | Yes   |
| Voltage (single phase)      | 115V/60 Hz  | 115V/60 Hz  | 115V/60 Hz  |
| Power cord                  | 6' - motor mounted switch - U.S. plug                       | 6' - motor mounted switch - U.S. plug                       | 6' - motor mounted switch - U.S. plug                       |
| Oil capacity                | 33.5 oz. (0.991 L)  | 30 oz. (0.9 L)  | 28 oz. (0.828 L)  |
| Dimensions                  | 16.25" L x 6.25" W x 8.25" H<br>(41.3 cm x 15.9 cm x 21 cm) | 16.25" L x 6.25" W x 8.25" H<br>(41.3 cm x 15.9 cm x 21 cm) | 16.25" L x 6.25" W x 8.25" H<br>(41.3 cm x 15.9 cm x 21 cm) |
| Net weight                  | 29.1 lbs. (13.2 kg)   | 30.0 lbs. (13.6 kg)   | 31.6 lbs. (14.3 kg)   |
| Export                      | EU/UK 93613; AU/NZ 93623                                    | EU/UK 93615; AU/NZ 93625                                    | EU/UK 93610; AU/NZ 93620                                    |
| Detachable IEC Cord type    | EU/UK AU/NZ   | EU/UK AU/NZ   | EU/UK AU/NZ   |
| Free air displacement       | 85/70 L/M   | 142/120 L/M   | 200/165 L/M   |
| Motor                       | 1/2 hp - 1725 rpm/1425 rpm                                  | 1/2 hp - 1725/1425 rpm                                      | 1/2 hp - 1725/1425 rpm                                      |
| Voltage (dual phase)        | 115/230V / 50-60 Hz   | 115/230V / 50-60 Hz   | 115/230V / 50-60 Hz   |
| Dimensions                  | 17" L x 6.25" W x 8.25" H<br>(43.2 cm x 15.9 cm x 21 cm)    | 17" L x 6.25" W x 8.25" H<br>(43.2 cm x 15.9 cm x 21 cm)    | 17" L x 6.25" W x 8.25" H<br>(43.2 cm x 15.9 cm x 21 cm)    |
| Net weight                  | 32.1 lbs (14.6 kg)  | 33 lbs (15 kg)  | 34.5 lbs (15.7 kg)  |

### HOW TO MEASURE AN "ADEQUATE" VACUUM

Many contractors pull the refrigerant out and think the work is done. In reality, when you get to 29 inches of vacuum (the green zone on your gauge), you are only half finished. Once the recovery machine has done its work, it's time to finish off the job with a vacuum pump.

#### Standard Lo-Side Gauge

Shows vacuum in inches. A ±1% gauge would be accurate to ±7600 microns when calibrated at a full vacuum (which is generally not the case with this type of gauge).



Only an electronic vacuum gauge can precisely measure the level at which non-condensable gas is removed from system.

### Why a Vacuum Pump?

ASHRAE recommends evacuation to below 1000 microns for moisture removal and below 500 microns after replacing a compressor. Some equipment manufacturers call for evacuation to 400 microns to ensure that harmful water vapor is removed from the system.

When you have water vapor in your system, the risk of icing up capillary tubing and expansion valves becomes much higher. A high quality vacuum pump will be able to take you down to 200-500 microns. With the system almost completely free from water vapor, you are ready to put the refrigerant back in the system. A thorough approach to evacuation ensures longer equipment life and reduced risk of problems.

#### Use a Vacuum Gauge to Read Vacuum Down to 25 Microns

1000 microns equal only 0.039 inches of mercury, a measurement that cannot be made with a mechanical gauge, or determined by evacuation time or the sound of the pump. A popular tool that can measure vacuum at evacuation levels below 1000 microns is an electronic vacuum gauge.

The best place to measure vacuum is at the system, not at the pump. With a combination vacuum/charging valve, you can attach the electronic vacuum gauge directly to the system and isolate it from the pump, hoses and manifold for a true indication of the vacuum in the system. With a digital vacuum gauge, you can see the last evidence of moisture being removed and witness that the system has been dried out.

# BULLET® REPLACEMENT PARTS

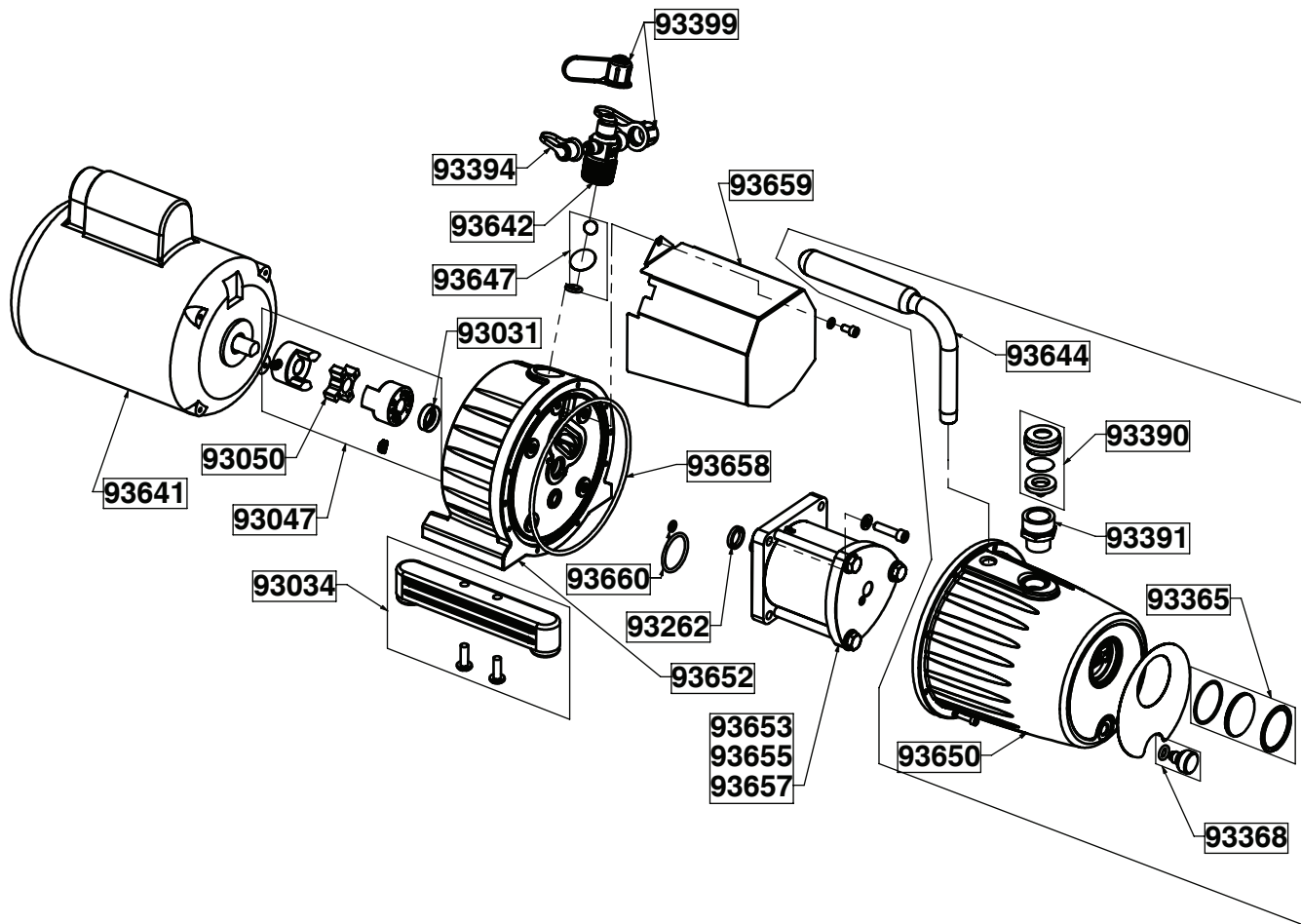
| BULLET® replacement parts |   |
|---------------------------|---|
| UPC#                      | Description                                   |
| 93031                     | Shaft seal                                    |
| 93034                     | Universal pump leg (1)                        |
| 93047                     | Drive coupling (including spider)             |
| 93050                     | Coupling spider for 93047                     |
| 93115*                    | 8' long U.S. cord                             |
| 93262                     | Cartridge locate ring                         |
| 93365                     | Sight glass                                   |
| 93368                     | Oil drain                                     |
| 93390                     | Oil fill cap                                  |
| 93391                     | Oil fill fitting                              |
| 93394                     | 1/4" Flare cap and strap                      |
| 93399                     | 3/8" Flare cap and strap                      |
| 93513                     | 1/2 hp motor (115-230V / 50-60 Hz)            |
| 93641                     | 1/2 hp Motor 115V/60HZ                        |
| 93642                     | 3/8", 3/8" and 1/4" Male flare intake fitting |
| 93644                     | BULLET pump handle                            |
| 93647                     | BULLET anti-suckback assembly                 |
| 95431*                    | 8' long EU cord (detachable IEC-320)          |
| 95432*                    | 8' long UIK cord (detachable IEC-320)         |

\* Damaged supply cords must be replaced by special assemblies available from the manufacturer or its distributors

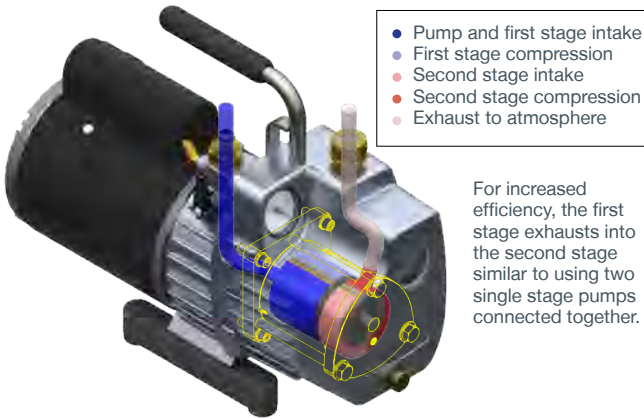
| Built 2010 - 2013 |                                  |
|-------------------|----------------------------------|
| UPC#              | Description                      |
| 93633             | BULLET 3 cfm (85 L/M) cartridge  |
| 93635             | BULLET 5 cfm (142 L/M) cartridge |
| 93637             | BULLET 7 cfm (200 L/M) cartridge |
| 93643             | BULLET pump cover gasket         |
| 93646             | BULLET cartridge baffle          |
| 93648             | BULLET cartridge gaskets         |
| 93649             | BULLET pump cover assembly       |
| 93661**           | BULLET conversion kit            |

| Built 2014 |                                  |
|------------|----------------------------------|
| UPC#       | Description                      |
| 93653      | BULLET 3 cfm (85 L/M) cartridge  |
| 93655      | BULLET 5 cfm (142 L/M) cartridge |
| 93657      | BULLET 7 cfm (200 L/M) cartridge |
| 93658      | BULLET pump cover gasket         |
| 93659      | BULLET cartridge baffle          |
| 93660      | BULLET cartridge gaskets         |
| 93650      | BULLET pump cover assembly       |
| 93652      | Complete BULLET mounting body    |

\*\*BULLET conversion kit includes all parts required to convert 2010-2013 BULLET pumps to 2014- BULLET pumps. Includes 93658, 93659, 93660, 93650 and 93652 (2010-2013 mounting body not available).



# 4, 6, 8, & 11 SUPEREVAC™ VACUUM PUMPS



- Pump and first stage intake
- First stage compression
- Second stage intake
- Second stage compression
- Exhaust to atmosphere

For increased efficiency, the first stage exhausts into the second stage similar to using two single stage pumps connected together.

The SUPEREVAC™ vacuum pump is a highly efficient, two-stage rotary vane oil-sealed pump field-rated at 15 microns or better.

- Isolation valve for oil changes without losing vacuum in the system
- Built-in vacuum indicator gauge
- Wide-mouth oil reservoir port for easier, cleaner filling. Doubles as pump exhaust— threaded to attach garden hose for exhausting to remote location
- Large oil sight glass for easy monitoring of oil level
- Large brass oil drain for easy access to fast oil changes
- Gas ballast valve keeps oil cleaner, longer during evacuation of wet systems
- Internal intake check valve to help prevent oil backup into the system during a power failure
- Intake filter screen keeps damaging particles from entering the pump
- Heavy duty rotors and bearings
- Heavy duty steel handle with lift hook for well-balanced carrying
- Tethered port caps stay with the pump
- Metal with rubber overlay base for stability
- Made in the USA

| Domestic                    | Model 93540  | Model 93560  | Model 93580  | Model 93590  |
|-----------------------------|--|--|--|--|
| Free air displacement       | 4.0 cfm  | 6.0 cfm  | 8.0 cfm  | 11.0 cfm   |
| Number of stages            | 2-stage rotary vane  | 2-stage rotary vane  | 2-stage rotary vane  | 2-stage rotary vane  |
| Field blankoff              | 15 microns   | 15 microns   | 15 microns   | 15 microns   |
| Intake                      | 1/4" and 3/8" Male flare                                   | 1/4" and 3/8" Male flare                                   | 1/4" and 1/2" Male flare                                   | 1/4" and 1/2" Male flare                                   |
| Motor                       | 1/2 hp - 1725 rpm  | 1/2 hp - 1725 rpm  | 1/2 hp - 1725 rpm  | 1/2 hp - 1725 rpm  |
| Thermal overload protection | Yes  | Yes  | Yes  | Yes  |
| Voltage (single phase)      | 115V/60 Hz   | 115V/60 Hz   | 115V/60 Hz   | 115V/60 Hz   |
| Power cord                  | 6' - motor mounted switch                                  | 6' - motor mounted switch                                  | 6' - motor mounted switch                                  | 6' - motor mounted switch                                  |
| Oil capacity                | 36 oz.   | 34 oz.   | 47 oz.   | 44 oz.   |
| Dimensions                  | 16" L x 6" W x 11.5" H<br>(40.6 cm X 15.2 cm X 29.2 cm)    | 16" L x 6" W x 11.5" H<br>(40.6 cm X 15.2 cm X 29.2 cm)    | 17.5" L x 6" W x 11.5" H<br>(44.5 cm X 15.2 cm X 29.2 cm)  | 17.5" L x 6" W x 11.5" H<br>(44.5 cm X 15.2 cm X 29.2 cm)  |
| Net weight                  | 30.3 lbs. (13.7 kg)  | 31.2 lbs. (14.2 kg)  | 32.5 lbs. (14.8 kg)  | 34.1 lbs. (15.4 kg)  |
| Export                      | Model 9354x  | Model 9356x  | Model 9358x  | Model 9359x  |
| Free air displacement       | 113/95 L/M   | 170/142 L/M  | 225/190 L/M  | 310/260 L/M  |
| Motor                       | 1/2 hp - 1725/1425 rpm                                     | 1/2 hp - 1725/1425 rpm                                     | 1/2 hp - 1725/1425 rpm                                     | 1/2 hp - 1725/1425 rpm                                     |
| Motor voltage (dual phase)  | 115/230V / 50-60 Hz  | 115/230V / 50-60 Hz  | 115/230V / 50-60 Hz  | 115/230V / 50-60 Hz  |
| Dimensions                  | 16.75" L x 6" W x 11.5" H<br>(42.5 cm X 15.2 cm X 29.2 cm) | 16.75" L x 6" W x 11.5" H<br>(42.5 cm X 15.2 cm X 29.2 cm) | 18.25" L x 6" W x 11.5" H<br>(46.4 cm X 15.2 cm X 29.2 cm) | 18.25" L x 6" W x 11.5" H<br>(46.4 cm X 15.2 cm X 29.2 cm) |
| Net weight                  | 33.2 lbs. (15.1 kg)  | 33.9 lbs. (15.4 kg)  | 35.5 lbs. (16.1 kg)  | 37.0 lbs. (16.8 kg)  |
| <b>Model #</b>              | <b>93542</b> (95 L/M at 50 Hz)<br>(113 L/M at 60 Hz)       | <b>93562</b> (142 L/M at 50 Hz)<br>(170 L/M at 60 Hz)      | <b>93582</b> (190 L/M at 50 Hz)<br>(225 L/M at 60 Hz)      | <b>93592</b> (260 L/M at 50 Hz)<br>(310 L/M at 60 Hz)      |
| US plug                     | 230V   | 230V   | 230V   | 230V   |
| Factory voltage setting     |  |  |  |  |
| <b>Model # Euro plug</b>    | <b>93543</b> (95 L/M at 50 Hz)                             | <b>93563</b> (142 L/M at 50 Hz)                            | <b>93583</b> (190 L/M at 50 Hz)                            | <b>93593</b> (260 L/M at 50 Hz)                            |
| Factory voltage setting     | 230V   | 230V   | 230V   | 230V (EU/UK plug)  |
| <b>Model #</b>              | <b>93544</b> (95 L/M at 50 Hz)<br>(113 L/M at 60 Hz)       | <b>93564</b> (142 L/M at 50 Hz)<br>(170 L/M at 60 Hz)      | <b>93584</b> (190 L/M at 50 Hz)<br>(225 L/M at 60 Hz)      |  |
| AU/NZ plug                  | 230V   | 230V   | 230V   |  |
| Factory voltage setting     |  |  |  |  |
| <b>Model # UK Plug</b>      | <b>93547</b> (95 L/M at 50 Hz)                             | <b>93567</b> (142 L/M at 50 Hz)                            | <b>93587</b> (190 L/M at 50 Hz)                            |  |
| Factory voltage setting     | 230V   | 230V   | 230V   |  |

All parts listed will not work with NHs.

# SUPEREVAC™ REPLACEMENT PARTS



| SUPEREVAC™ replacement parts |                              |
|------------------------------|------------------------------|
| UPC#                         | 2005-present 4, 6, 8, 11 cfm |
| <b>Pump oil cover</b>        |                              |
| 93370                        | Handle assembly              |
| 93390                        | Oil fill cap with seal       |
| 93391                        | Oil fill fitting             |
| 93365                        | Oil sight glass              |
| 93368                        | Drain/gas ballast plug       |

## SUPEREVAC™ replacement parts

UPC# 2005-present 4, 6, 8, 11 cfm

### Vacuum cartridge

|       |                           |
|-------|---------------------------|
| 93541 | 4 cfm cartridge complete  |
| 93561 | 6 cfm cartridge complete  |
| 93581 | 8 cfm cartridge complete  |
| 93591 | 11 cfm cartridge complete |

### Mounting body

|       |  |
|-------|--|
| 93031 | Shaft seal   |
| 93011 | 0-30" Vacuum indicator                                   |
| 93012 | Vacuum gauge lens  |
| 93368 | Drain/gas ballast plug                                   |
| 93398 | "O" ring for gas ballast/drain plug                      |
| 93392 | 1/4" Male flare x 1/8" NPT fitting                       |
| 93377 | 4 and 6 cfm intake fitting (3/8" Male flare x 3/4" NPT)  |
| 93393 | 8 and 11 cfm intake fitting (1/2" Male flare x 3/4" NPT) |
| 93394 | 1/4" Flare cap   |
| 93399 | 4 and 6 cfm 3/8" flare cap                               |
| 93395 | 8 and 11 cfm 1/2" flare cap                              |
| 93366 | Blank-off handle   |
| 93367 | Complete parts for blank-off handle                      |
| 93401 | Blank-off rebuild kit                                    |
| 93508 | Intake port gasket                                       |

### Motor

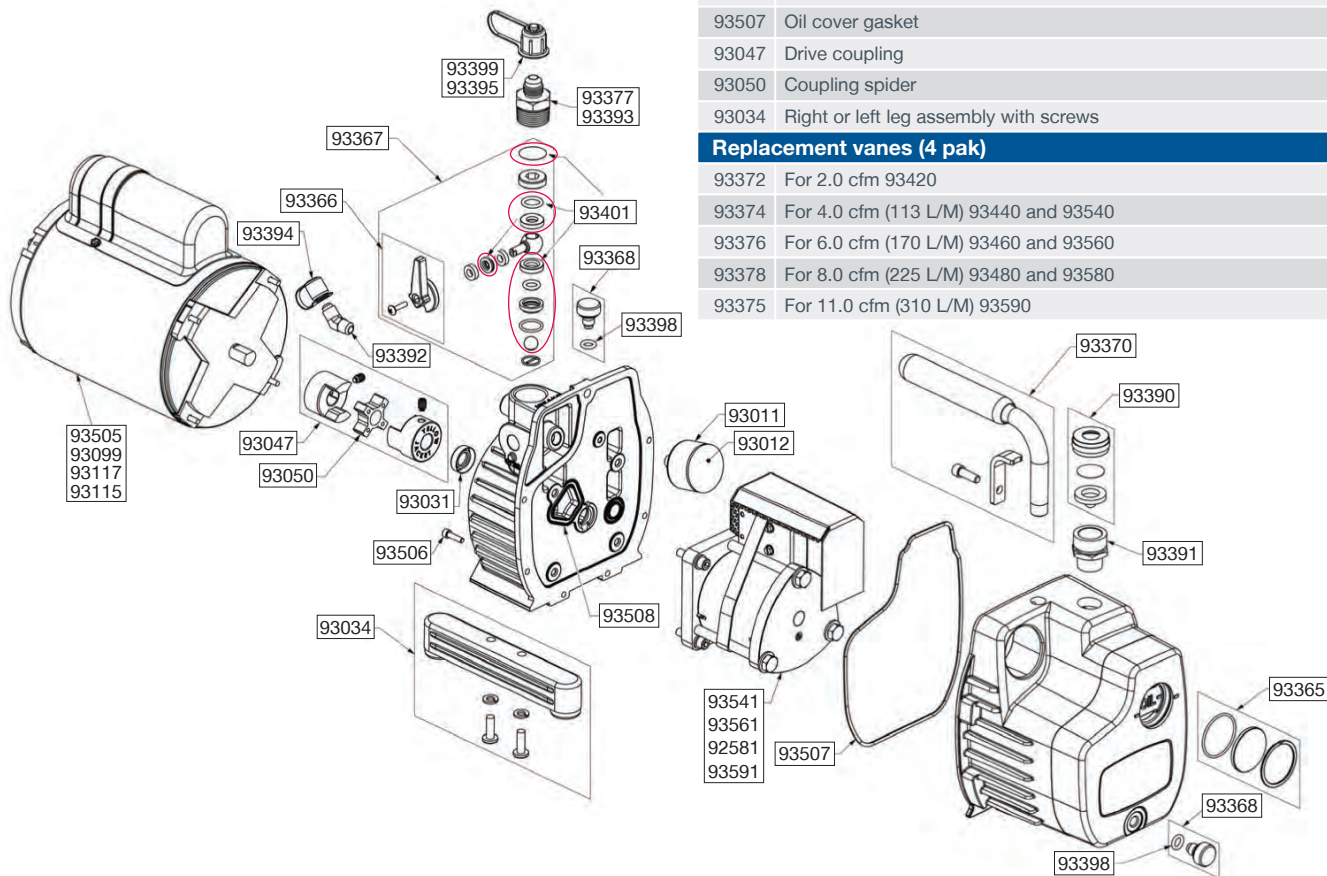
|       |  |
|-------|--|
| 93513 | 1/2 hp motor 115-230V / 50-60 Hz                   |
| 93505 | 1/2 hp - 115V/60 Hz* (includes parts listed below) |
| 93099 | 8/32 x 7-1/4" Motor bolts (4)                      |
| 93117 | Rocker style switch                                |
| 93115 | 6' Long cord                                       |

### Final assembly parts

|       |  |
|-------|--|
| 93506 | 8/32 x 5/8" Socket head screws         |
| 93507 | Oil cover gasket                       |
| 93047 | Drive coupling                         |
| 93050 | Coupling spider                        |
| 93034 | Right or left leg assembly with screws |

### Replacement vanes (4 pak)

|       |                                       |
|-------|---------------------------------------|
| 93372 | For 2.0 cfm 93420                     |
| 93374 | For 4.0 cfm (113 L/M) 93440 and 93540 |
| 93376 | For 6.0 cfm (170 L/M) 93460 and 93560 |
| 93378 | For 8.0 cfm (225 L/M) 93480 and 93580 |
| 93375 | For 11.0 cfm (310 L/M) 93590          |



RECOVERY MACHINES  
 VACUUM PUMP SYSTEMS  
 HOSE ADAPTERS, VALVES AND PARTS  
 VACUUM AND CHARGING HOSES  
 CHARGING SYSTEMS  
 GAUGES  
 WIRELESS AND ELECTRONIC INSTRUMENTS  
 HEATING INSTRUMENTS  
 LEAK MONITORS AND DETECTORS  
 SYSTEM TOOLS



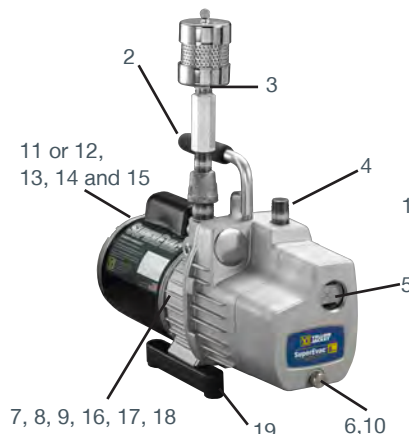
## SUPEREVAC™ PUMP FOR AMMONIA SYSTEMS



Designed and built to the same quality specifications as other SUPEREVAC™ pumps. Features a pump exhaust that doubles as an oil fill port.



## SUPEREVAC™ PUMP FOR AMMONIA SYSTEMS REPLACEMENT PARTS



### SUPEREVAC™ replacement parts

| UPC#                        | Description                                 |
|-----------------------------|---|
| <b>Pump Oil Cover</b>       |   |
| 93351                       | 1. Complete cover (parts listed below)      |
| 93370                       | 2. Handle with screw                        |
| 93386                       | 3. Exhaust filter assembly                  |
| 93359                       | 4. Oil fill/intake fitting                  |
| 93365                       | 5. Oil sight glass                          |
| 93358                       | 6. Oil drain/ballast plug                   |
| <b>Vacuum Cartridge</b>     |   |
| 93531                       | 7. Complete cartridge with oil cover gasket |
| <b>Mounting Body</b>        |   |
| 93355                       | 8. Complete body (parts listed below)       |
| 93354                       | 9. Shaft seal                               |
| 93398                       | 10. "O" ring for gas ballast/drain plug     |
| <b>Motor</b>                |   |
| 93513                       | 11. 1/2 hp motor 115-230V / 50-60 Hz        |
| 93505                       | 12. 1/2 hp - 115V/60 Hz*                    |
| 93099                       | 13. 8/32 x 7-1/4" Motor bolts (4)           |
| 93117                       | 14. Rocker style switch                     |
| 93115                       | 15a. 8' Long cord                           |
| 95431                       | 15b. 8' Long EU cord (detachable IEC-320)   |
| 95432                       | 15c. 8' Long UK cord (detachable IEC-320)   |
| <b>Final assembly parts</b> |   |
| 93506                       | 16. 8/32 x 5/8" Flat head screws            |
| 93507                       | 17. Oil cover gasket                        |
| 93047                       | 18. Drive coupling                          |
| 93034                       | 19. Right or left leg assembly with screws  |

|                       | Model 93530                | Model 93533*                |
|-----------------------|----------------------------|-----------------------------|
| Free air displacement | 8.0 cfm                    | 190 L/M (50 Hz)             |
| Number of stages      | 2-stage rotary vane        | 2-stage rotary vane         |
| Field blankoff        | 15 microns                 | 15 microns                  |
| Intake                | 1/2" Male pipe             | 1/2" Male pipe              |
| Motor                 | 1/2 hp – 1725 rpm          | 1/2 hp – 1425 rpm (50 Hz)   |
| Thermal overload      | Yes                        | Yes                         |
| Voltage               | 115V/60 Hz                 | 115/230V 50 Hz*             |
| Power cord            | 6' – rocker style switch   | 6' – rocker style switch    |
| Oil capacity          | 47 oz.                     | 47 oz.                      |
| Dimensions            | 17.5" L x 6.0" W x 11.5" H | 18.25" L x 6.0" W x 11.5" H |
| Net weight            | 36.2 lbs. (16.4 kg)        | 38.8 lbs. (17.6 kg)         |

\* The 93533 is factory wired for 230V. It can also be configured for 115V. Remove the motor switch plate and make connections as shown on the motor label.

## BELT DRIVE VACUUM PUMPS (0.88-17.7 cfm) by Hyvac Products

These two-stage pumps are lab rated at 0.1 micron and feature large oil capacity, vented exhaust, standard belt guards, motor capacitors and automatic overload protection. Optional exhaust filters available.



| UPC#                   | 80200           | 80210           | 80220           | 80230           | 80240           |
|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| cfm - free air (L/M)   | 0.88 (25)       | 2.79 (79)       | 5.6 (160)       | 10.6 (310)      | 17.7 (500)      |
| Ultimate vacuum (lab)  | 0.1 micron      | 0.1 micron      | 0.1 micron      | 0.1 micron      | 0.1 micron      |
| Stages                 | 2               | 2               | 2               | 2               | 2               |
| Motor hp (ODP)         | 1/4             | 1/3             | 1/2             | 1               | 1-1/2           |
| Voltage (single phase) | 115V/60 Hz      | 115V/60 Hz      | 115V/60 Hz      | 115V/60 Hz      | 115V/60 Hz      |
| Pump rpm               | 580             | 525             | 525             | 525             | 550             |
| Oil capacity           | 1 quart         | 1-1/2 quart     | 2.5 quarts      | 3.5 quarts      | 4.5 quarts      |
| Gas ballast            | Standard        | Standard        | Standard        | Standard        | Standard        |
| Intake O.D.            | 9/16"           | 7/8"            | 1-1/4"          | 1-5/16"         | 1-13/16"        |
| Dimensions (L x W x H) | 15" x 10" x 11" | 18" x 12" x 11" | 18" x 13" x 16" | 18" x 16" x 19" | 21" x 20" x 20" |
| Shipping weight        | 70 lbs.         | 110 lbs.        | 135 lbs.        | 154 lbs.        | 242 lbs.        |

For special electrical requirements, contact factory. Some 50 Hz available for export.

## VACUUM PUMP OIL

YELLOW JACKET vacuum pump oil is specially refined and formulated for extremely low vapor pressure and high pump efficiency at all temperature conditions to help keep your pump running for years.

SDS sheet on website

| UPC#  | Description                       |
|-------|-----------------------------------|
| 93091 | Pint of vacuum oil - 24 per case  |
| 93092 | Quart of vacuum oil - 12 per case |
| 93096 | Gallon of vacuum oil - 6 per case |



## OIL EXHAUST FILTER

Screws onto the pump exhaust to eliminate oil mist. Use on SUPEREVAC™ and BULLET™ pumps.



| UPC#  | Description         |
|-------|---------------------|
| 93386 | Exhaust filter      |
| 93387 | Replacement element |

# SUPEREVAC™ EVACUATION MANIFOLDS



SUPEREVAC™ manifolds are engineered as system components for the SUPEREVAC pumps to help decrease vacuum time by over 50 percent and improve micron readings. Mounts with 1/2" or 3/8" Female flare quick coupler and provides easy connections for two 3/8" vacuum hoses.

- Flutterless™ gauge
- Non-restricting, full flow valves for fast vacuum
- Convenient 1/4 turn full flow
- Extra port for electronic gauge
- Now includes step-down adapter to connect to 3/8" pump intake

### 3/8" Female flare coupler

| UPC#  | Description   |
|-------|---|
| 93851 | Single valve with 1/4" Schrader mount with 3/8" Female flare  |
| 93852 | Single valve with lo-side gauge mount with 3/8" Female flare  |
| 93853 | Two valves with lo-side gauge mount with 3/8" Female flare    |
| 19011 | CH-11 gasket (10 pak)   |
| 19131 | Pump step-down adapter - 1/2" Female flare to 3/8" Male flare |

### 1/2" Female flare coupler

| UPC#  | Description  |
|-------|--|
| 93850 | Single valve with 1/4" Schrader mount with 1/2" Female flare |
| 93855 | Single valve with lo-side gauge mount with 1/2" Female flare |
| 93860 | Two valves with lo-side gauge mount with 1/2" Female flare   |
| 19015 | CH-80 gasket (10-pak)  |
| 19133 | Pump step-up adapter - 3/8" Female flare to 1/2" Male flare  |

### Additional replacement parts

| UPC#  | Description                             |
|-------|---|
| 19030 | 3/8" "O" ring (10 pak)                  |
| 19096 | Ball valve replacement handles (2 pak)  |
| 40272 | 1/4" Male flare with Schrader for 93850 |
| 41139 | 3/8" Male flare x 1/4" NPT Male fitting |
| 49016 | Blue compound °F gauge                  |
| 77921 | 1/4" Flare x 1/8" NPT Male elbow        |
| 93211 | 3/8" Flare cap with gasket              |
| 93854 | 1/2" Flare connector                    |
| 93847 | 3/8" Flare connector for 93846          |
| 93858 | 3/8" Flare connector for 93851-53       |

# SUPEREVAC™ EVACUATION SYSTEMS I, II & III



All system components are available separately, but system pricing makes I, II and III attractive buys.

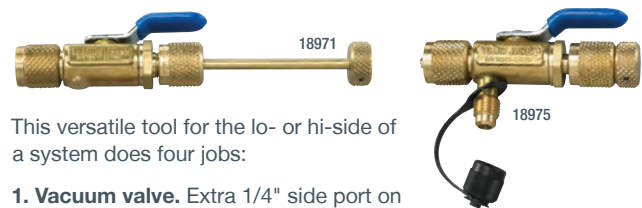
All systems include a two-valve manifold and two 3/8" vacuum hoses for a fast vacuum. Vacuum valves, included with all systems, allow core removal and system isolation. This combination reduces vacuum time by over 50 percent compared to using a regular 1/4" manifold and evacuating through only one side.

System II adds 69075 electronic gauge and standard ratchet wrench to the basic System I.

System III adds a 6 or 8 cfm SUPEREVAC™ pump to System II.

| UPC# for 1/2" | Description   | UPC# for 3/8" |
|---------------|---|---------------|
| 93865         | System I: 2-valve manifold, 2 16248 48" vacuum hoses, 2 valves                | 93866         |
| 93875         | System II: all of above plus 69075 electronic vacuum gauge and ratchet wrench | 93876         |
| 93886 (8 cfm) | System III: all of above plus a SUPEREVAC pump                                | 93885 (6 cfm) |
|               | CH-11 gasket (10 pak)   | 19011         |
| 19015         | CH-80 gasket (10 pak)   |               |

# 1/4" AND 5/16" BALL VALVE 4-IN-1 VACUUM/CHARGE VALVE & CORE TOOL



This versatile tool for the lo- or hi-side of a system does four jobs:

- 1. Vacuum valve.** Extra 1/4" side port on 18975 to attach electronic micron vacuum gauge right at system for greater accuracy. Working pressure of 800 psi.
- 2. Core removal access.** Lets you evacuate and charge through an unrestricted line for increased speed and higher vacuum.
- 3. Core replacement.**
- 4. Recovery valve.** Core removal speeds recovery process.

Made in the USA

For more details see page 32.

| UPC#  | Description                                 |
|-------|---|
| 18971 | 1/4" Vacuum/charge valve without side port  |
| 18975 | 1/4" Vacuum/charge valve with side port     |
| 18981 | 5/16" Vacuum/charge valve without side port |
| 18985 | 5/16" Vacuum/charge valve with side port    |

RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
HOSE ADAPTERS, VALVES AND PARTS, CHARGING HOSES  
CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## SUPEREVAC™ LCD VACUUM GAUGE

### Full range from atmosphere to 1 micron

The SUPEREVAC™ LCD vacuum gauge combines thermocouple sensor technology with advanced electronics for precise readings and repeatability not found with thermistor sensors or analog meters.

Thermocouple technology has long been proven in laboratory and precision industrial instrumentation for sensing the deep vacuum range. Thermocouple sensors are factory calibrated and exhibit few of the electronic variances of thermistor sensors found in many other electronic gauges. Durable molded case with storage for sensor, cable and brass connector.

#### Specifications

- Response time: 3 seconds
- Calibration: Automatic
- Warm up: 3 seconds
- Sensor cable: 5.5' (167 cm) coiled
- Sensor connection: 1/4" Male flare
- Maximum pressure: To avoid sensor damage, do not exceed 5 psig
- Operating temperature range: 32° to 120°F (0° to 49°C)
- Display: 0.5" LCD with battery check
- Automatic shut-off: Yes
- Power: D cell battery, 70 hours continuous battery life
- Dimensions: 9" x 12.25" x 2.37" (230 mm x 310 mm x 60 mm)
- Accuracy: ± 20% of reading

| UPC#  | Description  |
|-------|--|
| 69075 | SUPEREVAC™ LCD vacuum gauge full range complete in case                  |
| 69067 | Optional ball valve to add to sensor 1/8" NPT Female x 1/4" Female flare |
| 69071 | Brass connector 1/4" Female flare x 1/4" Female flare                    |
| 69073 | Replacement sensor for 69070, 69075                                      |
| 19110 | Optional coupler to add to sensor 1/8" NPT Female x 1/4" Female flare    |
| 69058 | Replacement cord   |



#### Thermocouple sensor features:

- No adjustments or warm-up. Stays calibrated after on/off switching and long evacuations
- Automatic battery compensation
- Automatic ambient temperature compensation
- Replacement sensor requires no calibration

#### LCD gauge features:

- Automatic off 20 minutes after power up and no change
- Normal handling and jarring will not affect the LCD reading
- Case protects electronic circuitry and sensor
- Calibration standards traceable to NIST
- Precision circuitry controls sensor and translates sensor input into micron readings
- Made in the USA

## DIGITAL LCD ECONOMY VACUUM GAUGE



This product is protected by one or more of U.S. Patent Number: 6,779,350; 6,832,491; 7,073,346; 7,310,965; and 7,428,822.

The digital LCD economy vacuum gauge indicates air and moisture have been removed from the system. Track down the 14 level bargraph from atmosphere to 25 microns to know that the system is clean and the vacuum pump is performing properly. Packaged complete with 9V alkaline battery and hanging hook.

- Unique thermal conductivity sensor automatically compensates for temperature with no calibration
- Simple On/Off controls
- Easy-to-clean sensor handles 450 psi positive pressure
- Rugged contractor-grade construction with tough ABS housing and solid state circuitry for accuracy
- Automatic battery saver shuts gauge off after 20 minutes with no reading changes
- Low battery indicator
- Calibration standards traceable to NIST
- Patented technology
- Made in the USA

To keep the 69080 vacuum gauge accurate, it is best to avoid oil contamination. Keep the sensor vertical whenever possible and connect the gauge directly to the system, away from the pump.

| UPC#  | Description   |
|-------|---|
| 69080 | Digital LCD vacuum gauge with battery, hook and pouch |
| 69081 | Replacement soft-sided protective case                |
| 69079 | Replacement battery door and screw                    |
| 69095 | Tee fitting   |

RECOVERY MACHINES  
 VACUUM PUMP SYSTEMS  
 VACUUM AND CHARGING HOSES  
 HOSE ADAPTERS, VALVES AND PARTS  
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 GAUGES  
 WIRELESS AND ELECTRONIC INSTRUMENTS  
 HEATING INSTRUMENTS  
 LEAK MONITORS AND DETECTORS  
 SYSTEM TOOLS

## DIGITAL VACUUM GAUGE

### Seven units of vacuum for confidence

This easy-to-use gauge shows that air and moisture have been removed from the system. Simple push of a button changes the display readout between 7 units of measurement. **Each displays from atmosphere to 10 microns (bargraph indication above 25000 microns) of vacuum to let you know that your vacuum pump is clean and performing properly.** If the sensor gets dirty, simply plug a new sensor into the gauge, run through a quick calibration process and be back on the job within minutes.



This product is protected by one or more of U.S. Patent Number: 6,779,350; 6,832,491; 7,073,346; 7,310,965; and 7,428,822.

- Unique patented thermal conductivity sensor automatically compensates for temperature
- Replaceable, cleanable, plug-in sensor (Part #69087) handles 450 psi positive pressure
- Displays seven different units of vacuum (microns, milliTorr, Torr, millimeters of mercury, millibar, kiloPascal and Pascal)
- 12" coiled sensor cord stretches to 24" for easy reach, connectivity and readability of display
- Low battery indicator
- Automatic shut-off after 20 minutes
- Calibration standards traceable to NIST
- 32° to 122°F (0° to 50°C) operating temperature range
- 14 oz. (392 g) with battery
- Approximately 25 hours continuous battery life
- Accuracy ±20% of reading
- Made in the USA

| UPC#  | Description  |
|-------|--|
| 69086 | Hand-held vacuum gauge with fabric carry pouch               |
| 69087 | Replacement sensor for older models without detachable cords |
| 69088 | Replacement cable for original version - not detachable      |
| 40819 | Replacement cable for new version - detachable               |
| 69101 | Replacement sensor and cord assembly                         |
| 69091 | Replacement fabric pouch                                     |

## VACUUM PUMP ADAPTER

Convert a 3/8" or 1/2" vacuum pump intake into flare and Acme compatible fittings.



| UPC#  | Description   |
|-------|---|
| 36018 | 1/2" Pump adapter with 1/4" flare and 1/2" Acme Male fittings |
| 19015 | 1/2" Replacement gaskets for 36018 (10 pak)                   |
| 36019 | 3/8" Pump adapter with 1/4" flare and 1/2" Acme Male fittings |
| 19011 | 3/8" Replacement gaskets for 36019 (10 pak)                   |

## VACUUM PUMP INTAKE REDUCER ADAPTER



| UPC#  | Description   |
|-------|---|
| 19030 | Rubber gasket "O" ring (10 pak) for 19130 and 19133 |
| 19130 | 3/8" Female fl. x 1/4" Male fl. adapter             |
| 19131 | 1/2" Female fl. x 3/8" Male fl. adapter             |
| 19132 | 1/2" Female fl. x 1/4" Male fl. adapter             |
| 19133 | 3/8" Female fl. x 1/2" Male fl. adapter             |
| 19160 | 1/2" Female fl. x 1/2" Male Acme adapter            |
| 93058 | Rubber gasket "O" ring for 19131, 19132 and 19160   |

## HEAT GUN

600° and 1000°F settings. Shockproof and tough housing is durable and lightweight. Use for:

- Coil defrosting
- Faster vacuums
- Drying out condensation in motors, clutches, etc.



Kits include gun, adapters and case.

| UPC#  | Description                       |
|-------|-----------------------------------|
| 69092 | Heat gun kit 115V - UL, CSA       |
| 69093 | Heat gun kit 230V - Euro plug, CE |

## MECHANICAL VACUUM GAUGES



Mechanical vacuum gauges for system installation. Bourdon tube type gauge. 1/8" NPT Male bottom fitting. CAUTION: Handle gauges carefully to assure full service life. See page 53 for further details.

| UPC#  | Description  |
|-------|--|
| 69044 | 3 1/8" Vacuum gauge 0-30 inHg/760-0 Torr (mm)                    |
| 69045 | 3 1/8" Vacuum gauge European version (1000-0 millibar/30-0 inch) |

## VACUUM AND CHARGING HOSES



Test and Charging Manifold

**YELLOW JACKET®**

Date Code 2015

4000psi (275 Bar) Min. burst • 800psi (55 Bar) Max. w.p.

Yellow Jacket Plus II™ Charging Hose • 4000psi (275 Bar) Min. burst • 800psi (55 Bar)

YELLOW JACKET® Plus II™ Charging Hose • 4000psi (275 Bar)




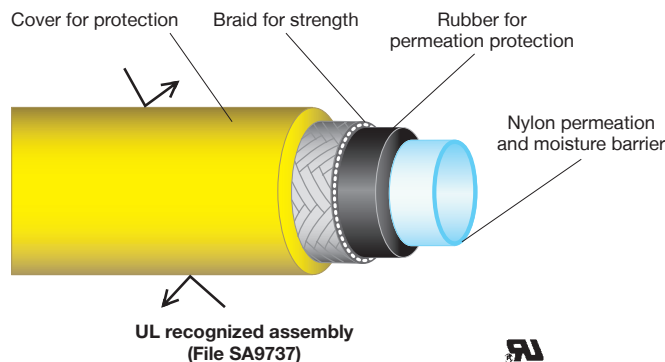
YELLOW JACKET®

## ***PLUS II™* Charging Hoses**

Double barrier protection for CFC, HCFC and HFC refrigerants



- 1/4" **PLUS II™** hoses are **UL recognized assemblies (File SA9737)**
- The nylon permeation barrier meets SAE requirements J2196 for CFC, HCFC and HFC refrigerants
- The moisture barrier provides improved resistance to moisture migration which contaminates expensive refrigerant
- 1/4" RYB **PLUS II™** hoses are rated for 4000 psi (276 bar) minimum burst and 800 psi (55 bar) maximum working pressure and an operating temperature of -20° to 180°F (-28.8° to 82.2°C)
- Minimum bend radius: 6" (152 mm)
- Made in the USA 



**PLUS II™ hoses with UL assemblies are available in the following configurations:**

- 1/4" with 1/4" flare fittings
- 1/4" with compact ball valve end
- 1/4" with SealRight™ low loss anti-blow back fitting
- 1/4" for 5/16" flare (1/2 – 20 thread) service ports for R-410A
- 1/4" with FlexFlow™ valve

| <b>PLUS II™ hose - standard 1/4" flare fittings</b> |        |       |       |  |
|---|--------|-------|-------|--|
| Length  | Yellow | Blue  | Red   | 3 pak*   |
| 12"   | 21012  | 21212 | 21612 | -  |
| 24"   | 21024  | 21224 | 21624 | -  |
| 36"   | 21036  | 21236 | 21636 | 21983  |
| 48'   | 21048  | 21248 | 21648 | 21984  |
| 60"   | 21060  | 21260 | 21660 | 21985  |
| 72"   | 21072  | 21272 | 21672 | 21986  |
| 96"   | 21096  | 21296 | 21696 | 21988  |
| 10'   | 21110  | 21310 | 21710 | -  |
| 12'   | 21112  | 21312 | 21712 | -  |
| 25'   | 21125  | 21325 | 21725 | -  |
| 50'   | 21150  | 21350 | 21750 | -  |
| 75'   | 21175  | 21375 | 21775 | -  |
| 100'  | 21200  | 21399 | 21799 | -  |
| Multi-length  |        |       |       | 21982 two 36", one 60"<br>21981 two 36", one 72" |


\* 3 pak includes a red, yellow and blue hose.

| <b>Replacement parts</b> |                                  |
|--------------------------|----------------------------------|
| UPC#                     | Description                      |
| 19020                    | Replacement gasket (10 pak)      |
| 19302                    | "Adjust-a-Valve" opener (10 pak) |

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LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## PLUS II™ 1/4" HOSE With compact ball valve end



- Metal handle at end of hose fits tight areas and traps all the gas
- Full flow valve
- Uses standard gasket and valve opener
- Recommended for R-410A
- Made in the USA 


UL recognized assemblies (File SA9737)

| Compact ball valve end |        |       |       |       |       |
|------------------------|--------|-------|-------|-------|-------|
| Length                 | Yellow | Blue  | Red   | 3 pak | Black |
| 36"                    | 29036  | 29236 | 29636 | 29983 | -     |
| 48"                    | 29048  | 29248 | 29648 | 29984 | -     |
| 60"                    | 29060  | 29260 | 29660 | 29985 | 29595 |
| 72"                    | 29072  | 29272 | 29672 | 29986 | -     |
| 96"                    | 29096  | 29296 | 29696 | 29988 | -     |
| 10'                    | 29110  | 29310 | 29710 | -     | -     |
| 12'                    | 29112  | 29312 | 29712 | -     | -     |
| 25'                    | 29125  | 29325 | 29725 | -     | -     |
| 50'                    | 29150  | 29350 | 29750 | -     | -     |
| 75'                    | 29175  | 29375 | 29775 | -     | -     |
| 100'                   | 29199  | 29399 | 29799 | -     | -     |

| Replacement parts |                                  |
|-------------------|----------------------------------|
| UPC#              | Description                      |
| 19020             | Replacement gasket (10 pak)      |
| 19302             | "Adjust-a-Valve" opener (10 pak) |

## PLUS II™ 1/4" HOSE With FlexFlow™ valve



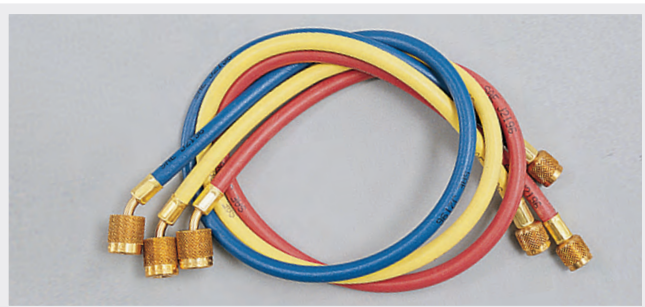
- Valve handle position shows when valve is opened or closed
- Metal handle and smaller ergonomic valve with zero restriction for maximum flow
- Flexible length of hose between valve and fitting makes access to tight areas easier
- Recommended for R-410A
- Made in the USA 

UL recognized assemblies (File SA9737)


| FlexFlow™ valve 8" from angle end |        |       |       |       |
|-----------------------------------|--------|-------|-------|-------|
| Length                            | Yellow | Blue  | Red   | 3 pak |
| 36"                               | 25036  | 25236 | 25636 | 25983 |
| 48"                               | 25048  | 25248 | 25648 | 25984 |
| 60"                               | 25060  | 25260 | 25660 | 25985 |
| 72"                               | 25072  | 25272 | 25672 | 25986 |
| 96"                               | 25096  | 25296 | 25696 | 25988 |
| 10'                               | 25110  | 25310 | 25710 | -     |
| 12'                               | 25112  | 25312 | 25712 | -     |
| 25'                               | 25125  | 25325 | 25725 | -     |
| 50'                               | 25150  | 25350 | 25750 | -     |
| 75'                               | 25175  | 25375 | 25775 | -     |
| 100'                              | 25199  | 25399 | 25799 | -     |

| Replacement parts |                                  |
|-------------------|----------------------------------|
| UPC#              | Description                      |
| 19020             | Replacement gasket (10 pak)      |
| 19302             | "Adjust-a-Valve" opener (10 pak) |

## PLUS II™ 1/4" HOSE With SealRight™ low loss anti-blow back fitting



UL recognized assemblies (File SA9737)

- Low loss anti-blow back SealRight fitting immediately traps refrigerant in the hose when disconnected, helping meet non-venting regulations and prevent finger burns
- 45° end for easy installation in tight areas
- Gaskets resist deterioration from existing CFC, HCFC and HFC refrigerants and oils
- Available with SealRight fittings on both ends
- Made in the USA 

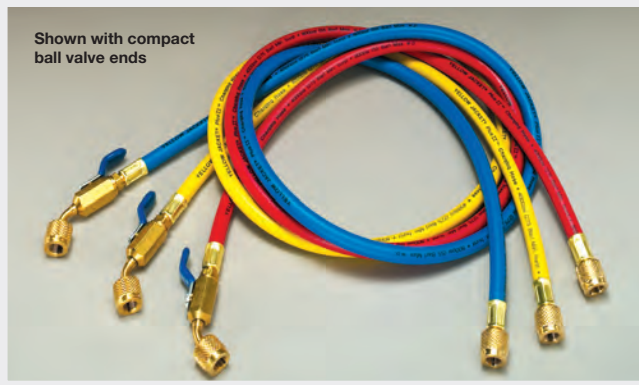
| 45° SealRight fitting at one end |        |       |       |       |
|----------------------------------|--------|-------|-------|-------|
| Length                           | Yellow | Blue  | Red   | 3 pak |
| 12"                              | 22012  | 22212 | 22612 | -     |
| 24"                              | 22024  | 22224 | 22624 | -     |
| 36"                              | 22036  | 22236 | 22636 | 22983 |
| 48"                              | 22048  | 22248 | 22648 | 22984 |
| 60"                              | 22060  | 22260 | 22660 | 22985 |
| 72"                              | 22072  | 22272 | 22672 | 22986 |
| 96"                              | 22096  | 22296 | 22696 | 22988 |
| 10'                              | 22110  | 22310 | 22710 | -     |
| 12'                              | 22112  | 22312 | 22712 | -     |
| 25'                              | 22125  | 22325 | 22725 | -     |
| 50'                              | 22150  | 22350 | 22750 | -     |
| 75'                              | 22175  | 22375 | 22775 | -     |
| 100'                             | 22200  | 22399 | 22799 | -     |

| UPC#  | Multi-length 3 pak    |
|-------|-----------------------|
| 22981 | Two 36" RB, one 72" Y |
| 22982 | Two 36" RB, one 60" Y |

| Replacement parts |   |
|-------------------|---|
| UPC#              | Description   |
| 19020             | 1/4" and 5/16" Replacement gasket (10 pak)                              |
| 19037             | SealRight "O" ring (10 pak)   |
| 19038             | Plug and gasket   |
| 19039             | Nut and clip  |
| 19040             | SealRight repair kit with valve, gasket, plug, spring and two "O" rings |
| 19041             | Complete kit includes 19038, 19039 and 19040                            |



## PLUS II™ 1/4" HOSE For 5/16" flare (1/2 – 20 thread) service ports for R-410A



UL recognized assemblies (File SA9737)

- Available with standard fittings or compact ball valve
- Compatible with both POE and PVE oils
- Made in the USA

**PLUS II™ hose with 1/4" (7/16 – 20) Female flare on manifold connection and 5/16" (1/2 – 20) Female flare angled on service end**

| Standard fitting |        |       |       |
|------------------|--------|-------|-------|
| Length           | Yellow | Blue  | Red   |
| 36"              | 21403  | 21423 | 21463 |
| 60"              | 21405  | 21425 | 21465 |
| 72"              | 21406  | 21426 | 21466 |

**For use with R-410A tanks with 1/4" fittings**  
\*Yellow PLUS II™ hose with standard 1/4" (7/16 – 20) flare fittings

| Length | 3 pak                        |
|--------|------------------------------|
| 36"    | 21483 (21036*, 21423, 21463) |
| 60"    | 21485 (21060*, 21425, 21465) |
| 72"    | 21486 (21072*, 21426, 21466) |

**PLUS II™ hose with 5/16" (1/2 – 20) Female flare on manifold connection and 5/16" (1/2 – 20) Female flare angled on service end**

| Standard fitting |        |       |       |       |
|------------------|--------|-------|-------|-------|
| Length           | Yellow | Blue  | Red   | 3 pak |
| 36"              | 21503  | 21523 | 21563 | 21583 |
| 60"              | 21505  | 21525 | 21565 | 21585 |
| 72"              | 21506  | 21526 | 21566 | 21586 |

**PLUS II™ hose with compact ball valve (1/4" x 5/16")**

| Length | Yellow | Blue  | Red   |
|--------|--------|-------|-------|
| 36"    | 29403  | 29423 | 29463 |
| 60"    | 29405  | 29425 | 29465 |
| 72"    | 29406  | 29426 | 29466 |

**For use with R-410A tanks with 1/4" fittings**  
\*Yellow PLUS II™ hose with 1/4" (7/16 – 20) compact ball valve fittings

| Length | 3 pak                        |
|--------|------------------------------|
| 36"    | 29483 (29036*, 29423, 29463) |
| 60"    | 29485 (29060*, 29425, 29465) |
| 72"    | 29486 (29072*, 29426, 29466) |

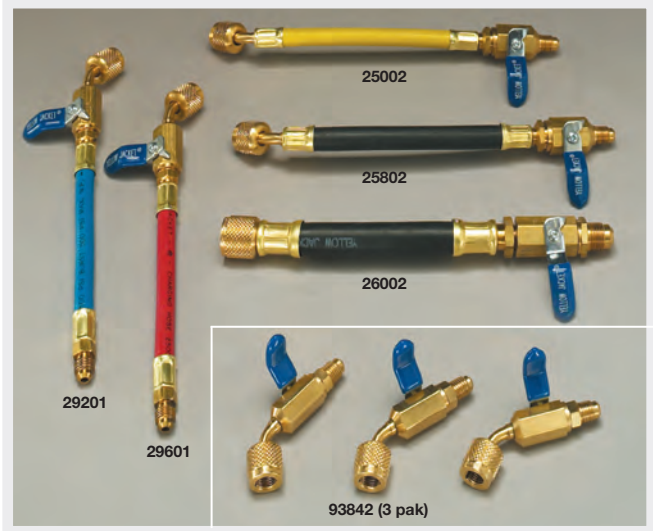
**Compact ball valve (RYB 5/16" x 5/16")**

| Length | Yellow | Blue  | Red   | 3 pak |
|--------|--------|-------|-------|-------|
| 36"    | 29003  | 29203 | 29603 | 29993 |
| 60"    | 29005  | 29205 | 29605 | 29995 |
| 72"    | 29006  | 29206 | 29606 | 29996 |

**Replacement parts**

| UPC#  | Description                                |
|-------|--|
| 19020 | 1/4" and 5/16" Replacement gasket (10 pak) |
| 19302 | "Adjust-a-Valve" opener (10 pak)           |

## 9" FlexFlow™ AND LOW LOSS ADAPTER HOSES



UL recognized assemblies (File SA9737) (Valves SA10088) (except 25802 and 26002)

- Easy retrofit of existing PLUS II™ hoses with ball valve capabilities
- Flexible hose between valve and fitting for handling in tight areas
- Operating temperature -20° to 180°F (-28.8° to 82.2°C)\*\*
- 800 psi working pressure\*\*\*
- Minimum bend radius: 8" (203 mm)
- Made in the USA

**Compact ball valve assemblies**

| UPC#  | Description                           |
|-------|---------------------------------------|
| 29001 | 1/4" Yellow ball valve adapter        |
| 29201 | 1/4" Blue ball valve adapter          |
| 29601 | 1/4" Red ball valve adapter           |
| 29980 | 29001, 29201, 29601 (3 pak)           |
| 93843 | 1/4" Compact ball valve – 45°         |
| 93842 | 1/4" Compact ball valve – 45° (3 pak) |

**FlexFlow™ assemblies**

| UPC#  | Description                            |
|-------|--|
| 25002 | 1/4" Yellow FlexFlow adapter           |
| 25202 | 1/4" Blue FlexFlow adapter             |
| 25602 | 1/4" Red FlexFlow adapter              |
| 25980 | 25002, 25202, 25602 (3 pak)            |
| 25802 | 1/4" Heavy duty FlexFlow adapter*      |
| 26002 | 3/8" Heavy duty FlexFlow adapter**     |
| 26202 | Yellow standard "B" FlexFlow adapter** |
| 27002 | Acme 1/2" Yellow FlexFlow adapter      |
| 19095 | Set of 2 handles and screws            |

\*25802 and 26002: Operating temperature -22° to 176°F (-30° to 80°C)  
\*\*26202: Operating temperature -20° to 200°F (-28.8° to 93.3°C)  
\*\*\*26002 and 26202: 3000 psi (207 bar) burst and 600 psi (41 bar) working pressures

**Replacement parts**


| UPC#  | Description                      |
|-------|----------------------------------|
| 19011 | 3/8" Replacement gasket (10 pak) |
| 19020 | 1/4" Replacement gasket (10 pak) |
| 19302 | "Adjust-a-Valve" opener (10 pak) |

Underwriters Laboratories Inc. Registered Component Mark – applies to all standard 1/4" PLUS II™ and 1/4" RYB FlexFlow™ hoses on pages 21-23.



## PLUS II™ 3/8" "B" CHARGING HOSE

PLUS II™ features in a larger volume hose for fast, high vacuum or charging.

- 3000 psi (207 bar) minimum burst, 600 psi (41 bar) maximum working pressure
- Operating temperature -20° to 180°F (-28.8° to 82.2°C)
- Minimum bend radius: 6" (152 mm)
- Large selection of fittings available
- Made in the USA 

### Replacement parts


| UPC#  | Description                      |
|-------|----------------------------------|
| 19011 | 3/8" Replacement gasket (10 pak) |

| Length | Common selections             |       |       |                     |                          | Other selections |       |                          |                          |       |
|--------|-------------------------------|-------|-------|---------------------|--------------------------|------------------|-------|--------------------------|--------------------------|-------|
|        | 3/8" Str. fl. x 3/8" Str. fl. |       |       | 3/8" fl. x FlexFlow | 3/8" Str. fl. x 3/8" 45° |                  |       | 3/8" Str. fl. x 3/8" 90° | 1/4" Str. fl. x 1/4" 45° |       |
|        | Yellow                        | Blue  | Red   |                     | Yellow                   | Blue             | Red   |                          |                          |       |
| 36"    | 14536                         | B36   | 27836 | 28036               | 26236                    | 18136            | 28236 | 28436                    | 20036                    | 20436 |
| 48"    | 14548                         | B48   | 27848 | 28048               | 26248                    | 18148            | 28248 | 28448                    | 20048                    | 20448 |
| 60"    | 14560                         | B60   | 27860 | 28060               | 26260                    | 18160            | 28260 | 28460                    | 20060                    | 20460 |
| 72"    | 14572                         | B72   | 27872 | 28072               | 26272                    | 18172            | 28272 | 28472                    | 20072                    | 20472 |
| 96"    | 14596                         | B96   | 27896 | 28096               | 26296                    | 18196            | 28296 | 28496                    | 20096                    | 20496 |
| 10'    | 14610                         | B120  | 27910 | 28110               | 26310                    | 18210            | 28310 | 28510                    | 20110                    | 20510 |
| 12'    | 14612                         | B144  | 27912 | 28112               | 26312                    | 18212            | 28312 | 28512                    | 20112                    | 20512 |
| 25'    | 14625                         | B300  | 27925 | 28125               | 26325                    | 18225            | 28325 | 28525                    | 20125                    | 20525 |
| 50'    | 14650                         | B600  | 27950 | 28150               | 26350                    | 18250            | 28350 | 28550                    | 20150                    | 20550 |
| 75'    | 14675                         | B900  | 27975 | 28175               | 26375                    | 18275            | 28375 | 28575                    | 20175                    | 20575 |
| 100'   | 14699                         | B1200 | 27999 | 28199               | 26399                    | 18299            | 28399 | 28599                    | 20199                    | 20599 |



## PLUS II™ 1/4" HEAVY DUTY CHARGING HOSE

Heavy duty construction for substantially increased service life.

- Flexibility for all-weather easy handling
- Pulls 75 micron vacuum or better on 36" hose
- 4000 psi (276 bar) minimum burst, 800 psi (55 bar) maximum working pressure
- Operating temperature -22° to 176°F (-30° to 80°C)
- Minimum bend radius: 6" (152 mm)
- Made in the USA 


### Replacement parts

| UPC#  | Description                      |
|-------|----------------------------------|
| 19020 | Replacement gasket (10 pak)      |
| 19302 | "Adjust-a-Valve" opener (10 pak) |

| Length | Common selections     |           |                     | Other selections     |   |         |                      |         |
|--------|-----------------------|-----------|---------------------|----------------------|---|---------|----------------------|---------|
|        | HCA hose Str. x angle |           | Hose with FlexFlow™ | Hose with ball valve | HCL hose Str. x 90°                                   |         | HCS hose Str. x Str. |         |
| 12"    | 15012                 | HCA-12"   | -                   | -                    | 15212   | HCL-12" | 15412                | HCS-12" |
| 24"    | 15024                 | HCA-24"   | -                   | -                    | 15224   | HCL-24" | 15424                | HCS-24" |
| 36"    | 15036                 | HCA-36"   | 25836               | 29836                | 15236   | HCL-36" | 15436                | HCS-36" |
| 48"    | 15048                 | HCA-48"   | 25848               | 29848                | 15248   | HCL-48" | 15448                | HCS-48" |
| 60"    | 15060                 | HCA-60"   | 25860               | 29860                | 15260   | HCL-60" | 15460                | HCS-60" |
| 72"    | 15072                 | HCA-72"   | 25872               | 29872                | 15272   | HCL-72" | 15472                | HCS-72" |
| 96"    | 15096                 | HCA-96"   | 25896               | 29896                | 15296   | HCL-96" | 15496                | HCS-96" |
| 10'    | 15110                 | HCA-120"  | 25910               | 29910                | Black only. Longer lengths available. Please specify. |         |                      |         |
| 12'    | 15112                 | HCA-144"  | 25912               | 29912                |   |         |                      |         |
| 25'    | 15125                 | HCA-300"  | 25925               | 29925                |   |         |                      |         |
| 50'    | 15150                 | HCA-600"  | 25950               | 29950                |   |         |                      |         |
| 75'    | 15175                 | HCA-900"  | 25975               | 29975                |   |         |                      |         |
| 100'   | 15199                 | HCA-1200" | 25999               | 29999                |   |         |                      |         |

## PLUS II™ 3/8" HEAVY DUTY COMBINATION CHARGING/VACUUM HOSE

Pulls a vacuum much faster than the 1/4" hose.

- Operating temperature -22° to 176°F (- 30° to 80°C)
- 3000 psi (207 bar) minimum burst, 600 psi (41 bar) maximum working pressure
- Minimum bend radius: 8" (203 mm)
- Made in the USA 




| Replacement parts |                                  |
|-------------------|----------------------------------|
| UPC#              | Description                      |
| 19020             | 1/4" Replacement gasket (10 pak) |
| 19011             | 3/8" Replacement gasket (10 pak) |
| 19302             | "Adjust-a-Valve" opener (10 pak) |

| Common selections |                               |                           |                     | Other selections    |  |                     |  |  |
|-------------------|-------------------------------|---------------------------|---------------------|---------------------|--|---------------------|--|--|
| Length            | 3/8" Str. fl. x 3/8" Str. fl. | 3/8" Str. fl. x FlexFlow™ | 3/8" fl. x 3/8" 45° | 3/8" fl. x 3/8" 90° | 3/8" fl. x 1/4" 45°  | 1/4" fl. x 1/4" 45° |  |  |
| 36"               | 15636 BC-36"                  | 26036                     | 19636               | 19836               | 16236 BCA-36"  | 20236               |  |  |
| 48"               | 15648 BC-48"                  | 26048                     | 19648               | 19848               | 16248 BCA-48"  | 20248               |  |  |
| 60"               | 15660 BC-60"                  | 26060                     | 19660               | 19860               | 16260 BCA-60"  | 20260               |  |  |
| 72"               | 15672 BC-72"                  | 26072                     | 19672               | 19872               | 16272 BCA-72"  | 20272               |  |  |
| 96"               | 15696 BC-96"                  | 26096                     | 19696               | 19896               | 16296 BCA-96"  | 20296               |  |  |
| 10'               | 15710 BC-120"                 | 26110                     | 19710               | 19910               |  | 20310               |  |  |
| 12'               | 15712 BC-144"                 | 26112                     | 19712               | 19912               |  | 20312               |  |  |
| 25'               | 15725 BC-300"                 | 26125                     | 19725               | 19925               | Longer lengths available. Please specify. Longer than 8' not recommended for evacuation. | 20325               |  |  |
| 50'               | 15750 BC-600"                 | 26150                     | 19750               | 19950               |  | 20350               |  |  |
| 75'               | 15775 BC-900"                 | 26175                     | 19775               | 19975               |  | 20375               |  |  |
| 100'              | 15799 BC-1200"                | 26199                     | 19799               | 19999               |  | 20399               |  |  |

## PLUS II™ 1/2" AND 5/8" HEAVY DUTY COMBINATION CHARGING/VACUUM HOSE

Heavy duty construction with PLUS II™ barrier technology reduces permeation and vacuum loss. Large I.D. reduces vacuum time substantially over 1/4" or 3/8" hose.

- Pull a more complete vacuum
- Faster refrigerant transfer
- Faster charging on large systems
- 3000 psi (207 bar) minimum burst, 600 psi (41 bar) maximum working pressure
- Operating temperature -22° to 176°F (-30° to 80°C)
- Other fittings available on request
- Minimum bend radius: 10" (254 mm)
- Made in the USA 



| Replacement parts |                                   |
|-------------------|-----------------------------------|
| UPC#              | Description                       |
| 19015             | 1/2" and 5/8" Replacement gaskets |
| 19020             | 1/4" Replacement gasket (10 pak)  |
| 19011             | 3/8" Replacement gasket (10 pak)  |
| 19302             | "Adjust-a-Valve" opener (10 pak)  |

| Common selections |                         |                         |  | Other selections               |                     |                     |  |
|-------------------|-------------------------|-------------------------|--|--------------------------------|---------------------|---------------------|--|
| Length            | "C" 1/2" fl. x 1/2" fl. | "D" 5/8" fl. x 5/8" fl. | "CA" 1/4" angle end x 1/2" fl.   | "DA" 1/4" angle end x 5/8" fl. | 1/2" fl. x 3/8" fl. | 3/8" fl. x 3/8" fl. |  |
| 36"               | 15836 C-36"             | 16036 D-36"             | 16436 CA-36  | 16636 DA-36                    | 19236               | 20636               |  |
| 48"               | 15848 C-48"             | 16048 D-48"             | 16448 CA-48  | 16648 DA-48                    | 19248               | 20648               |  |
| 60"               | 15860 C-60"             | 16060 D-60"             | 16460 CA-60  | 16660 DA-60                    | 19260               | 20660               |  |
| 72"               | 15872 C-72"             | 16072 D-72"             | 16472 CA-72  | 16672 DA-72                    | 19272               | 20672               |  |
| 96"               | 15896 C-96"             | 16096 D-96"             | 16496 CA-96  | 16696 DA-96                    | 19296               | 20696               |  |
| 10'               | 15910 C-120"            | 16110 D-120"            |  |                                | 19310               | 20710               |  |
| 12'               | 15912 C-144"            | 16112 D-144"            |  |                                | 19312               | 20712               |  |
| 25'               | 15925 C-300"            | 16125 D-300"            | 36" hose will pull to 25 microns and lower. Hoses longer than 8' not recommended for evacuation. |                                | 19325               | 20725               |  |
| 50'               | 15950 C-600"            | 16150 D-600"            |  |                                | 19350               | 20750               |  |

Black only. Longer lengths available. Specify type, length and fitting combination.

## PLUS II™ 3/4" HEAVY DUTY CHARGING HOSE



Large 3/4" I.D. designed to save time in charging or evacuation of centrifugals and other large systems.

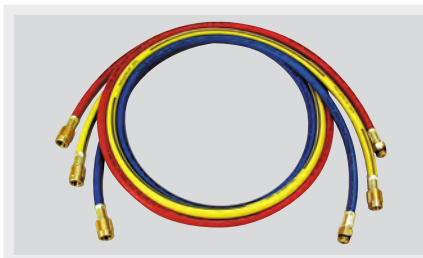
- Constructed for heavy duty use with most refrigerants
- 3000 psi (206 bar) minimum burst, 600 psi (41 bar) maximum working pressure
- Available with steel 3/4" Female, 3/4" Male flares, 3/4" Male pipe or hex fittings
- Operating temperature -20° to 200°F (-28.8° to 93.3°C)
- Minimum bend radius: 12" (305 mm)
- Not for use with NH<sub>3</sub>

| Length | 3/4" fl. x 3/4" fl. – "O" ring seal | 3/4" hex x 3/4" hex copper gasket seal |
|--------|-------------------------------------|--|
| 12"    | 18412 E-12"                         | 20812                                  |
| 24"    | 18424 E-24"                         | 20824                                  |
| 36"    | 18436 E-36"                         | 20836                                  |
| 48"    | 18448 E-48"                         | 20848                                  |
| 60"    | 18460 E-60"                         | 20860                                  |
| 72"    | 18472 E-72"                         | 20872                                  |
| 96"    | 18496 E-96"                         | 20896                                  |
| 10'    | 18510 E-120"                        | 20910                                  |
| 12'    | 18512 E-144"                        | 20912                                  |
| 25'    | 18525 E-300"                        | 20925                                  |
| 50'    | 18550 E-600"                        | 20950                                  |

### Replacement parts

| UPC#  | Description        |
|-------|--------------------|
| 19012 | 3/4" "O" ring      |
| 59655 | 3/4" Copper gasket |

## AUTOMOTIVE MANIFOLD HOSES FOR R-134A SYSTEMS



These 1/4" hoses combine PLUS II™ hose with 1/2" Acme fittings to meet SAE requirements. You get PLUS II™ double barrier protection in a hose manufactured specifically for automotive applications. Fitting threads are 1/2" Acme Female and 14 mm Male fittings.

| Color  | Yellow                        | Blue                       | Red                        | 3 pak |
|--------|-------------------------------|----------------------------|----------------------------|-------|
| Length | SealRight Straight x 45° Acme | 1/2" fe. Acme x 14 mm Male | 1/2" fe. Acme x 14 mm Male |       |
| 60"    | 27460                         | 27260                      | 27660                      | 27102 |
| 72"    | 27472                         | 27272                      | 27672                      | 27101 |
| 96"    | 27496                         | 27296                      | 27696                      | 27104 |
| 10'    | 27510                         | 27310                      | 27710                      | 27103 |

## AUTOMOTIVE CHARGING MANIFOLD AND HOSES FOR 1234YF SYSTEMS



Charging manifold and hoses designed specifically for 1234yf. Manifold body made of lightweight forged aluminum alloy for handling ease and the durability and reliability required for repeated use. Hoses SAE J2788 approved.

| Color  | Yellow                           | Blue                            | Red   |
|--------|----------------------------------|---------------------------------|-------|
| Length | 3/16" hose (12 mm barb x 45° QC) | 3/16" hose (12 mm x 12 mm barb) |       |
| 36"    | 17803                            | 17823                           | 17863 |
| 48"    | 17804                            | 17824                           | 17864 |
| 60"    | 17805                            | 17825                           | 17865 |
| 72"    | 17806                            | 17826                           | 17866 |
| 96"    | 17808                            | 17828                           | 17868 |
| 120"   | 17810                            | 17830                           | 17870 |
| 144"   | 17812                            | 17832                           | 17872 |
| 180"   | 17815                            | 17835                           | 17875 |

### 1234yf Test & Charging Manifold

|       |   |
|-------|---|
| 49849 | TITAN 2-Valve Manifold with 72 PLUS II™ SAE RYB hoses with couplers, R/B gauges, bar/psi/kPa, R1234yf, °F |
|-------|---|

## SPECIAL 1/4" PLUS II™ CHARGING HOSES

YELLOW JACKET 1/4" yellow charging hoses with special fittings include straight, 3/8" and 90° fittings. Red and blue hoses also available.

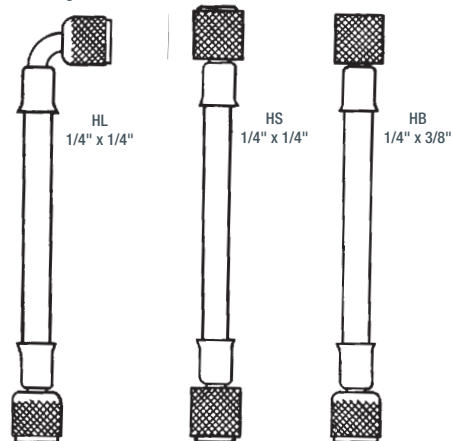
| Length | 1/4" fl. x 1/4" 90° fl. | 1/4" fl. x 1/4" fl. | 1/4" fl. x 3/8" fl. |
|--------|-------------------------|---------------------|---------------------|
| 36"    | 12036 HL36              | 13036 HS36          | 14036 HB36          |
| 48"    | 12048 HL48              | 13048 HS48          | 14048 HB48          |
| 60"    | 12060 HL60              | 13060 HS60          | 14060 HB60          |
| 72"    | 12072 HL72              | 13072 HS72          | 14072 HB72          |

Longer lengths available. Please specify.

### Replacement parts

| UPC#  | Description/Quantity                            |
|-------|---|
| 19010 | 1/4" Gasket (6 pak) and valve depressor (3 pak) |
| 19020 | Replacement gasket (10 pak)                     |
| 19302 | "Adjust-a-Valve" opener (10 pak)                |

90° for tight areas



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WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

# HOSE COMPARISON CHART

| 1/4" Flexible hoses   | 3/8" Flexible hoses  | 1/2" and 5/8" Flexible hoses   |
|---|--|--|
| Easily connects to 1/4" Male flare access fitting on system   | Evacuates and charges faster than 1/4" hose  | Evacuates and charges faster than 1/4" hose<br><br>Allows you to pull a deeper vacuum<br><br>More efficient job of removing moisture and contaminants from the system  |
| <b>PLUS II™ 1/4" Charging hose (SealRight™, FlexFlow and ball valve ends)</b><br><br>Adjust-a-Valve™ valve core depressor easily opens all out-of-tolerance Schrader valves (SealRight hoses offer different technology)<br><br><i>PLUS II™</i> hoses offer double barrier protection<br><br>Nylon layer for permeation, braid for strength, and outer cover for protection<br><br>Fully UL recognized assemblies (File SA9737) | <b>PLUS II™ 3/8" Charging hose</b><br><br><i>PLUS II™</i> hoses with double barrier protection | <b>PLUS II™ 1/2" and 5/8" Charging hose</b><br><br><i>PLUS II™</i> hoses with double barrier protection<br><br>Large I.D. reduces vacuum time substantially over 1/4" or 3/8" hose<br><br>Faster refrigerant transfer and faster charging on large systems<br><br>Wide selection of fittings are available |
| <b>Temp:</b> -20° to 180°F (-28.8° to 82.2°C)   | <b>Temp:</b> -20° to 180°F (-28.8° to 82.2°C)  | <b>Temp:</b> -22° to 176°F (-30° to 80°C)  |
| <b>Burst:</b> 4000 psi (276 bar) minimum  | <b>Burst:</b> 3000 psi (207 bar) minimum   | <b>Burst:</b> 3000 psi (207 bar) minimum   |
| <b>Working:</b> 800 psi (55 bar) maximum  | <b>Working:</b> 600 psi (41 bar) maximum   | <b>Working:</b> 600 psi (41 bar) maximum   |
| <b>Safety factor:</b> 5 to 1  | <b>Safety factor:</b> 5 to 1   | <b>Safety factor:</b> 5 to 1   |
| <b>Available lengths:</b> 12 inches to 100 feet   | <b>Available lengths:</b> 12 inches to 100 feet  | <b>Available lengths:</b> 12 inches to 100 feet  |



The "Adjust-a-Valve" valve core depressor easily opens out-of-tolerance Schrader valves. Simply adjust height with needle nose pliers. Designed for repeat usage; replacement is convenient.

### Inspect your hoses on a regular basis.

Since 1964, YELLOW JACKET 1/4" charging hoses have "year of manufacture" coded or listed on the rim of the nut. Prior to 2006, a series of I's, X's, O's, A's, B's or C's indicated the year. Since mid-2006, the actual year of manufacture has been used. **If your hoses are more than five years old, we recommend that you replace them.**

| Fittings available PLUS II™ hoses |      |     |     |
|-----------------------------------|------|-----|-----|
| Type                              | Str. | 45° | 90° |
| 1/8" Female flare                 |      |     |     |
| 3/16" Female flare                |      |     |     |
| 1/4" Female flare                 |      |     |     |
| 1/4" Female SealRight™            |      |     |     |
| 3/8" Female flare                 |      |     |     |
| 5/16" Female flare                |      |     |     |
| 1/4" Male flare                   |      |     |     |
| 1/8" NPT Male                     |      |     |     |
| 1/4" NPT Male                     |      |     |     |
| 1/2" Female Acme                  |      |     |     |
| 14 mm Male                        |      |     |     |

Not all hose and fitting combinations are listed in this catalog. Ask for specifics.

|          |      |             |      |
|----------|------|-------------|------|
| 6        | 1964 | 4 BBBB      | 1997 |
| 1        | 1970 | 3 BBB       | 1998 |
| 6 IIIIII | 1971 | 2 BB        | 1999 |
| 1 I      | 1976 | 1 B         | 2000 |
| 6 XXXXXX | 1977 | 6 CCCCCC    | 2001 |
| 1 X      | 1982 | 5 CCCCC     | 2002 |
| 6 OOOOOO | 1983 | 4 CCCCC     | 2003 |
| 1 O      | 1988 | 3 CCC       | 2004 |
| 6 AAAAAA | 1989 | 2 CC        | 2005 |
| 1 A      | 1994 | 1 C or 2006 | 2006 |
| 6 BBBBBB | 1995 | 2007        | 2007 |
| 5 BBBBB  | 1996 |             |      |

All after 2007 are stamped with year of mfg.

| Ounces of liquid held per foot of hose at 80° F |      |      |        |        |        |        |       |
|---|------|------|--------|--------|--------|--------|-------|
| Hose type                                       | R-12 | R-22 | R-134a | R-404A | R-407C | R-410A | R-502 |
| 1/4" PLUS II™                                   | 0.36 | 0.33 | 0.33   | 0.29   | 0.31   | 0.29   | 0.33  |
| 1/4" Heavy duty                                 | 0.34 | 0.31 | 0.32   | 0.27   | 0.30   | 0.28   | 0.32  |
| 3/8" PLUS II™                                   | 0.85 | 0.77 | 0.78   | 0.67   | 0.73   | 0.68   | 0.78  |
| 3/8" Heavy duty                                 | 0.85 | 0.77 | 0.78   | 0.67   | 0.73   | 0.68   | 0.78  |
| 1/2" Heavy duty                                 | 1.85 | 1.68 | 1.70   | 1.47   | 1.60   | 1.49   | 1.71  |
| 3/4" Heavy duty                                 | 3.89 | 3.53 | 3.58   | 3.09   | 3.37   | 3.13   | 3.60  |

RECOVERY MACHINES  
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GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## AMMONIA CHARGING HOSE



Available black only

Designed with steel quick couplers at both ends. Features include:

- Regular CH20 gaskets for 1/4" hoses (19010, 19020). CH11 gaskets for 3/8" hoses (19011)
- 1/4" and 3/8" – 2500 psi (172 bar) minimum burst, 500 psi (34 bar) maximum working pressure
- 1/4" operating temperature -20° to 176°F (-28.8° to 80°C) and minimum bend radius: 6" (152 mm)
- 3/8" operating temperature -22° to 176°F (-30° to 80°C) and minimum bend radius: 8" (203 mm)
- Made in the USA

| 1/4" Str. fl. x 1/4" 45° |          |        | 3/8" Str. fl. both ends |          |
|--------------------------|----------|--------|-------------------------|----------|
| UPC#                     | Part#    | Length | UPC#                    | Part#    |
| 16848                    | NHA-48"  | 48"    | 19448                   | NBC-48"  |
| 16872                    | NHA-72"  | 72"    | 19472                   | NBC-72"  |
| 16896                    | NHA-96"  | 96"    | 19496                   | NBC-96"  |
| 16910                    | NHA-120" | 10'    | 19510                   | NBC-120" |
| 16912                    | NHA-144" | 12'    | 19512                   | NBC-144" |

| Steel half union ammonia fittings |                                    |
|-----------------------------------|------------------------------------|
| UPC#                              | Description                        |
| 16801                             | 1/4" Male fl. x 1/4" NPT Male Str. |
| 16802                             | 1/4" Male fl. x 1/4" NPT Male 90°  |
| 16803                             | 3/8" Male fl. x 1/4" NPT Male      |

NH<sub>3</sub> manifold on page 46.

## CYLINDER VALVE HOSES

### With finger tight drum fitting

Designed for finger tight operation on 125 lb. and 145 lb. refrigerant cylinders. Gaskets seal without wrenches.



| UPC#  | L.  | Part#  | Type            | Fittings                     | Burst pressure     | Working pressure | Operating temp.               | Min. bend radius |
|-------|-----|--------|-----------------|------------------------------|--------------------|------------------|-------------------------------|------------------|
| 18612 | 12" | CVX-12 | 1/4" Heavy duty | 1/4" Male flare x 3/4" NPS   | 4000 psi (276 bar) | 800 psi (55 bar) | -22 to 176 (-30° to 80°C)     | 6" (152 mm)      |
| 18912 | 12" | CVY-12 | 3/8" Heavy duty | 3/8" Male flare x 3/4" NPS   | 3000 psi (207 bar) | 600 psi (41 bar) | -22 to 176 (-30° to 80°C)     | 8" (203 mm)      |
| 18072 | 72" | CVH-72 | 1/4" Original   | 1/4" Female flare x 3/4" NPS | 2500 psi (172 bar) | 500 psi (34 bar) | -20 to 180 (-28.8° to 82.2°C) | 6" (152 mm)      |
| 18372 | 72" | CVB-72 | 3/8" Standard   | 3/8" Female flare x 3/4" NPS | 3000 psi (207 bar) | 600 psi (41 bar) | -20 to 200 (-28.8° to 93.3°C) | 6" (152 mm)      |

## FUEL OIL ASSEMBLY HOSES

Reinforced hose designed for quick pump to nozzle connection and oil burner connections.

- Flexible to absorb vibration and swelling while providing positive cut-off
- 4000 psi (276 bar) minimum burst and 800 psi (55 bar) maximum working pressure
- Operating temperature -20° to 180°F (-28.8° to 82.2°C)
- Minimum bend radius: 6" (152 mm)
- Made in the USA



| UPC#  | Length | Description  |
|-------|--------|--|
| 78041 | 12"    | 3/16" Female flare x 3/16" Female flare Pump to nozzle connector                 |
| 78042 | 12"    | 1/4" Female flare x 1/4" Female flare Pump to nozzle connector                   |
| 78112 | 12"    | 1/8" NPT Female swivel x 1/8" NPT Male Pump to nozzle connector or gauge to pump |
| 78043 | 18"    | 3/16" Female flare x 3/16" Female flare Pump to nozzle connector                 |
| 78044 | 18"    | 1/4" Female flare x 1/4" Female flare Pump to nozzle connector                   |

Longer lengths available.

## OIL PUMP VIBRATION ELIMINATOR

Reinforced rubber hose helps eliminate noise and vibration when installed in a heating system.

- 3000 psi (207 bar) minimum burst, 600 psi (41 bar) maximum working pressure
- Operating temperature -20° to 180°F (-28.8° to 82.2°C)
- Minimum bend radius: 6" (152 mm)

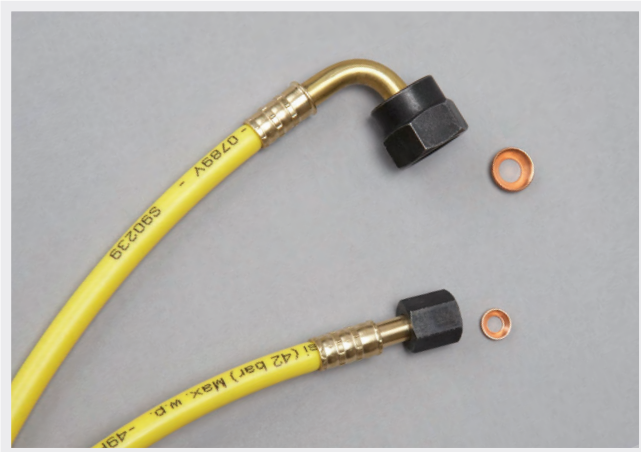


| UPC#  | Length | Description  |
|-------|--------|--|
| 78012 | 12"    | 3/8" Male flare x 1/4" NPT Male oil burner connector |

RECOVERY MACHINES  
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WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

# HIGH PRESSURE CONTROL HOSE

For HFC, HCFC and CFC refrigerants



The YELLOW JACKET® pressure control hose is constructed of a thermoplastic polymer inner tube and cover. This new material eliminates the vibration problems that are present in copper capillary tube installations.

The higher temperature ratings of this thermoplastic to 266° F eliminate the failures caused by maximum load conditions on rubber type pressure control hoses.

Between the inner tube and the cover, the hose is reinforced with a polyester braid of high tensile strength with high modulus, giving it the ability to withstand higher pressures.

Available in any combination of 1/4" or 3/8" brass SAE flare straight or 90° angle fittings. Hex nuts are steel and finished with black zinc. Copper gaskets provide the best possible seal.

- Improved permeation characteristics. R-134a permeation tested at: 0.188 oz./ft./yr. 0.0118 lb./ft./yr 17.6 gr./m./yr.
- Results with other refrigerants will also show superior performance characteristics
- For use with most HFCs such as R-134a, R-404A, R-407A, R-407B, R-407C, R-410A and R-507, and HCFC such as R-22
- Usable oil types include polyol ester, alkylbenzene and mineral oils.

### Specifications

I.D.: .156" (4.0 mm)  
 O.D.: .325" (8.2 mm)  
 Working pressure: 800 psi, 55 bar, 5.5 MPa  
 Burst pressure: 4000 psi, 276 bar, 27.6 MPa  
 Minimum temperature: -49° F (-44° C)  
 Maximum temperature: 266° F (130° C)  
 Minimum bend radius: 4" (102 mm)

| Length*<br>(assembly) | UPC#             |                 |                |                  |                 |
|-----------------------|------------------|-----------------|----------------|------------------|-----------------|
|                       | 1/4" Str. x Str. | 1/4" Str. x 90° | 1/4" 90° x 90° | 3/8" Str. x Str. | 3/8" Str. x 90° |
| 12"                   | 78612            | 78712           | 78812          | 78912            | 79112           |
| 18"                   | 78618            | 78718           | 78818          | 78918            | 79118           |
| 24"                   | 78624            | 78724           | 78824          | 78924            | 79124           |
| 30"                   | 78630            | 78730           | 78830          | 78930            | 79130           |
| 36"                   | 78636            | 78736           | 78836          | 78936            | 79136           |
| 48"                   | 78648            | 78748           | 78848          | 78948            | 79148           |
| 60"                   | 78660            | 78760           | 78860          | 78960            | 79160           |
| 72"                   | 78672            | 78772           | 78872          | 78972            | 79172           |
| 96"                   | 78696            | 78796           |                |                  |                 |

\* Special lengths are readily available.



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# STAINLESS STEEL HOSE SPECIFICATIONS

YELLOW JACKET stainless steel assemblies are 300 series corrugated hose and braid for applications where temperature and pressure could be a problem.

With stainless steel braid wrapping a stainless steel core, all hoses on this page prevent permeation and moisture infusion. Use with all standard refrigeration oils and refrigerants, as well as the new alternative oils and refrigerants including R-123.

Applications: vacuum and charging, vibration isolation, movable components and permanent application. **Not for use with NH<sub>3</sub>.**

Standard and custom length assemblies are made to order. Minimum length 12."


| Stainless steel hose specifications |                  |                     |                       |                                 |
|-------------------------------------|------------------|---------------------|-----------------------|---------------------------------|
| Size                                | Max psi working* | Flexing bend radius | Permanent bend radius | Temperature/pressure correction |
| 1/4"                                | 1275 (88 bar)    | 5.5"                | 1"                    | 68°F - 1.00                     |
| 3/8"                                | 1000 (69 bar)    | 6.5"                | 1-1/4"                | 200°F - .86                     |
| 1/2," 5/8"                          | 1000 (69 bar)    | 8.5"                | 1-1/2"                | 300°F - .80                     |
| 3/4," 7/8"                          | 725 (50 bar)     | 10"                 | 2"                    | 400°F - .78                     |
| 1," 1-1/8"                          | 700 (48 bar)     | 11.5"               | 2-3/4"                | 500°F - .77                     |
| 1-1/4," 1-3/8"                      | 550 (38 bar)     | 13"                 | 3-1/4"                | 800°F - .76                     |
|                                     |                  |                     |                       | 900°F - .74                     |
|                                     |                  |                     |                       | 1000°F - .70                    |

\* PSI at 68°F with a 4-to-1 safety factor. Core is T-321 SS with 300 Series SS braid.

## QUICK COUPLER ASSEMBLY

### For vacuum and charging

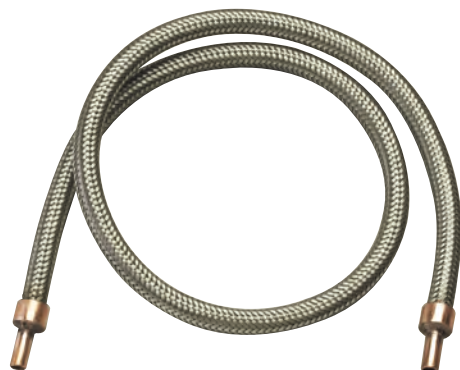
Oversized to increase flow and speed evacuation. Pull 25 microns and better on 36" length.

- Brass quick coupler
- Standard 45° angle at one end on 1/4" and 3/8" (90° available)
- Straight fittings only on 1/2", 5/8" and 3/4"
- Made in the USA 




| Length | Str. x 45° 1/4" I.D. | Str. x 45° 3/8" I.D. | Str. x Str. 1/2" I.D. | Str. x Str. 5/8" I.D. | Str. x Str. 3/4" I.D. |
|--------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|
| 36"    | 81636                | 81736                | 81836                 | 81936                 | 82036                 |
| 48"    | 81648                | 81748                | 81848                 | 81948                 | 82048                 |
| 60"    | 81660                | 81760                | 81860                 | 81960                 | 82060                 |

## SWEAT FITTING ASSEMBLY



| Female sweat fitting |              | Male sweat fitting |              |
|----------------------|--------------|--------------------|--------------|
| 86136                | 1/4" x 36"   | 85136              | 1/4" x 36"   |
| 86236                | 3/8" x 36"   | 85236              | 3/8" x 36"   |
| 86336                | 1/2" x 36"   | 85336              | 1/2" x 36"   |
| 86436                | 5/8" x 36"   | 85436              | 5/8" x 36"   |
| 86536                | 3/4" x 36"   | 85536              | 3/4" x 36"   |
| 86636                | 7/8" x 36"   | 85636              | 7/8" x 36"   |
| 86736                | 1-1/8" x 36" | 85736              | 1-1/8" x 36" |
| 86836                | 1-3/8" x 36" | 85836              | 1-3/8" x 36" |


Manufactured with straight, copper sweat ends.

- Male sweat to fit inside mating tube
- Female sweat to fit outside mating tube
- Made in the USA 

## FLARE ASSEMBLY

### For display cases, etc.



Stainless steel assemblies are made with a combination of Male and Female flares. Custom assemblies can be made. 

| Fl. size x length | Male fl. x Male fl. | Male fl. x Fe. fl. | Fe. fl. x Fe. fl. |
|-------------------|---------------------|--------------------|-------------------|
| 1/4" x 36"        | 82136               | 83136              | 84136             |
| 1/4" x 48"        | 82148               | 83148              | 84148             |
| 3/8" x 36"        | 82236               | 83236              | 84236             |
| 3/8" x 48"        | 82248               | 83248              | 84248             |
| 1/2" x 36"        | 82336               | 83336              | 84336             |
| 1/2" x 48"        | 82348               | 83348              | 84348             |
| 5/8" x 36"        | 82436               | 83436              | 84436             |
| 5/8" x 48"        | 82448               | 83448              | 84448             |
| 3/4" x 36"        | 82536               | 83536              | 84536             |
| 3/4" x 48"        | 82548               | 83548              | 84548             |

NOTE: Stainless steel hoses are made-to-order and cannot be returned.

NOTE: Custom lengths are available for all stainless steel hose assemblies on this page.

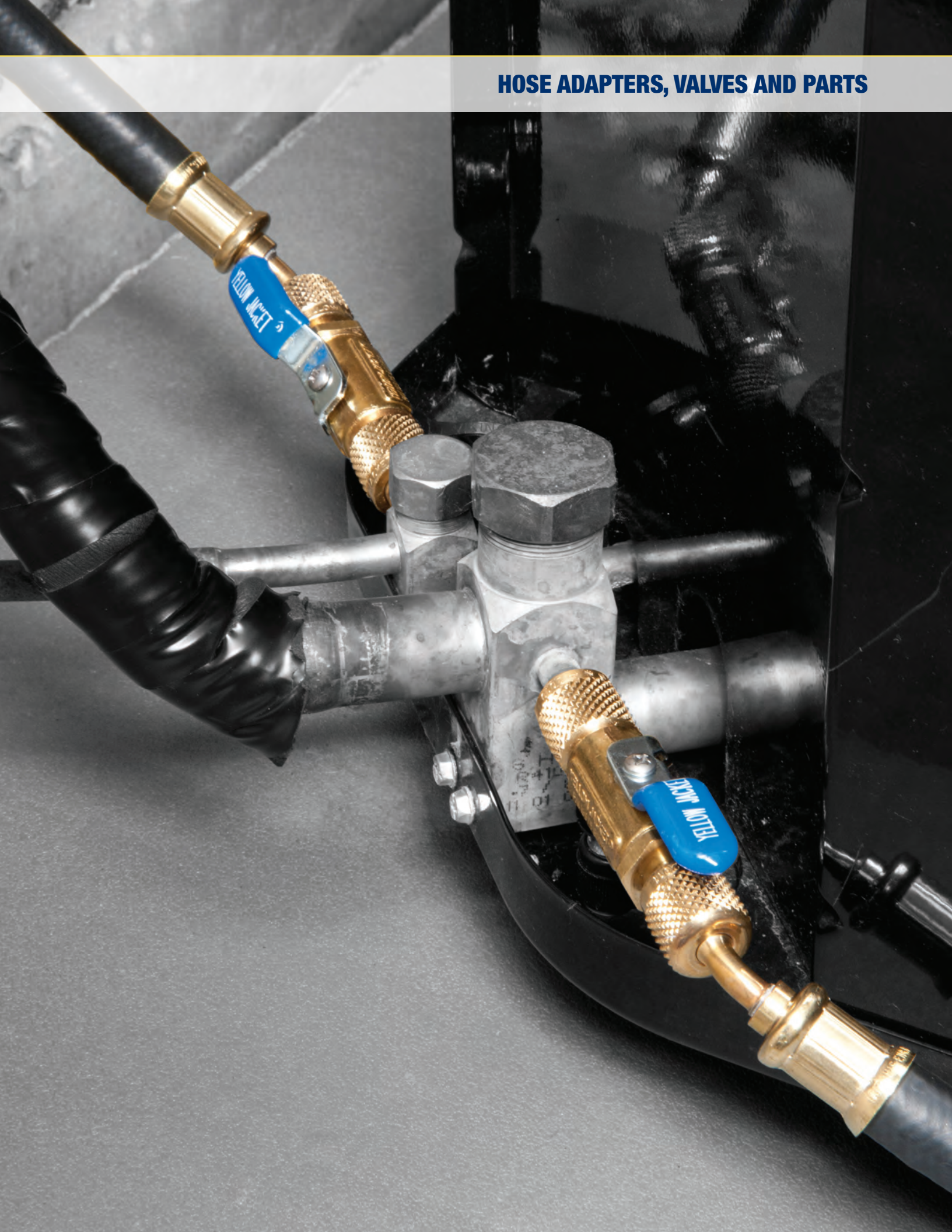
## GET MAXIMUM BENEFIT FROM YOUR YELLOW JACKET METAL HOSES

Keep your hoses on the job longer and the YELLOW JACKET warranty in effect by avoiding sharp bending and twisting that causes early failure. The warranty does not cover fatigue failure. Replace gaskets in quick couplers as needed to ensure a proper sealing.

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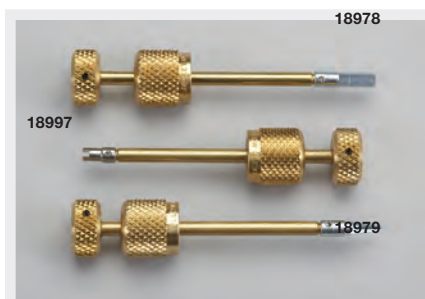
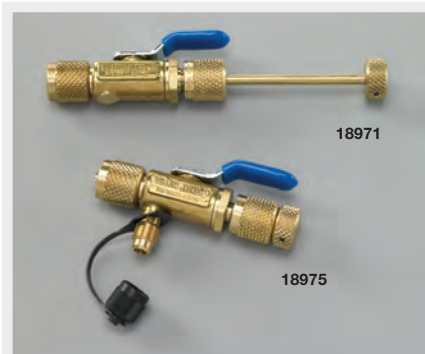
## HOSE ADAPTERS, VALVES AND PARTS



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## 1/4" 4-IN-1 BALL VALVE TOOL

For vacuum, charge, cores and recovery



Remove and replace Schrader cores without losing charge.

- Extra 1/4" side port on 18975 to attach electronic micron vacuum gauge right at system for greater accuracy or to add refrigerant
- Evacuate and charge through an unrestricted line for increased speed and higher vacuum
- Core removal allows recovery unit to work at maximum efficiency, speeding the recovery process

| UPC#  | Description                                      |
|-------|--|
| 18975 | Vacuum/charge valve with side port               |
| 18971 | Vacuum/charge valve without side port            |
| 18980 | Accessory set - 2 piece                          |
| 18978 | Schrader rethreading accessory                   |
| 18979 | Broken Schrader remover accessory                |
| 18983 | Quad rings (10 pak)                              |
| 18997 | Grappler rod/nut assembly                        |
| 18973 | Gasket for 18975 (5 pak)                         |
| 18974 | Seal kit includes core, cap, 4 "O" rings, gasket |
| 19305 | Schrader cores (10 pak)                          |

## 5/16" 4-IN-1 BALL VALVE TOOL

For R-410A systems with 5/16" access ports



Similar to the 1/4" 4-in-1 core tool but with 5/16" flare fittings. For use with R-410A systems and mini splits with larger 5/16" service ports.

| UPC#  | Description                                       |
|-------|---|
| 18985 | 5/16" Vacuum/charge valve with side port          |
| 18981 | 5/16" Vacuum/charge valve without side port       |
| 18987 | 5/16" Grappler rod/nut assembly                   |
| 18988 | 5/16" Rethread accessory                          |
| 18989 | 5/16" Schrader remover                            |
| 18984 | Seal kit includes core, cap, 4 "O" rings, gaskets |
| 19173 | 5/16" Quick coupler x 1/4" MFL Schr               |
| 19305 | Schrader cores (10 pak)                           |

## COMPACT BALL VALVES

1/4" and 5/16"



Compact ball valves feature full flow for charging and recovery. Metal valve handle.

- 1/4" ball valves are UL recognized to 4000 psi (276 bar) minimum burst, 800 psi (55 bar) maximum working pressure
- 5/16" for R-410A applications where 5/16" system ports are used
- 5/16" are UL recognized to 4000 psi (276 bar) minimum burst, 800 psi (55 bar) maximum working pressure

| UPC#  | Description   |
|-------|---|
| 93844 | 1/4" Compact ball valve – straight                                    |
| 93843 | 1/4" Compact ball valve – 45°   |
| 93842 | 1/4" Compact ball valves – 45° (3 pak)                                |
| 93825 | 5/16" Compact ball valve for 5/16" Female flare x 1/4" Male flare-45° |
| 93826 | 5/16" Compact ball valve for 1/4" Female flare x 5/16" Male flare     |
| 93827 | 5/16" Compact ball valve for 5/16" Female flare x 5/16" Male flare    |

## FULL CONTROL BALL VALVES FOR VACUUM/CHARGING



When building your own charging/vacuum system, these straight flow-through valves connect hoses and provide full-flow capacity.

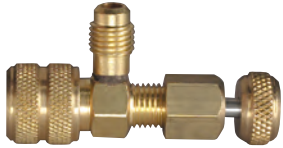
- No angles to cause restrictions and pressure drops
- Handle position shows when the valve is opened or securely closed

Use gaskets on page 35.

|            | M. fl. x M. fl.   | M. fl. x 1/4" FPT | M. fl. x Fe. fl. | Gaskets |
|------------|---|-------------------|------------------|---------|
| 1/4" SAE*  | 93834   | 93833             | 93844            | 19020   |
| 5/16" SAE  | –   | –                 | 93827            | 19020   |
| 3/8" SAE*  | 93836   | 93832             | 93846            | 19011   |
| 1/2" SAE   | 93838   | –                 | 93848            | 19015   |
| 1/2" Acme* | 93830   | 93831             | 93840            | 19020   |
| 19095      | Replacement handle/screw for all 1/4", 3/8" and Acme valves (2 pc. set) |                   |                  |         |
| 19096      | Replacement handle/screw for all 1/2" flare valves (2 pc. set)          |                   |                  |         |

\* UL Listed

## GAS RETENTION VALVE



- Valve controls refrigerant flow from access fitting
- Closes Schrader before disconnecting
- Back seat valve feature to retain gas in hose when disconnecting
- 1/4" Female flare x 1/4" Male flare
- 500 psi working pressure
- Made in the USA

| UPC#  | Description          |
|-------|----------------------|
| 18993 | Core depressor valve |

## VACUUM/CHARGE VALVE

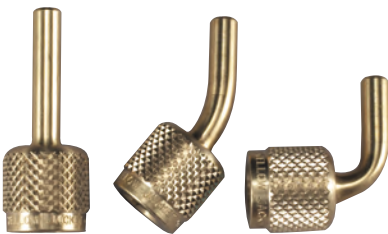


1/4" vacuum/charge valve with or without side port. For faster vacuum/charging or removing/replacing Schrader cores.

| UPC#  | Description                        |
|-------|------------------------------------|
| 18990 | Vacuum/Charge valve with side port |
| 19000 | Vacuum/Charge valve                |

| Replacement parts |                           |
|-------------------|---------------------------|
| 18995             | "O" ring set              |
| 18996             | Shut-off stem             |
| 18997             | Grappler rod/nut assembly |

## QUICK COUPLER-STYLE BRAZE-IN FITTINGS



Braze-in brass fitting with replaceable soft seat. Quick coupler-style fittings are the same as supplied on metal hose.

| UPC#  | Description                            |
|-------|--|
| 19082 | 1/4" Str. Female fl. with CH20 gasket  |
| 19083 | 1/4" 45° Female fl. with CH20 gasket   |
| 19084 | 1/4" 90° Female fl. with CH20 gasket   |
| 19085 | 3/8" Str. Female fl. with quad ring    |
| 19086 | 3/8" 45° Female fl. with quad ring     |
| 19087 | 3/8" 90° Female fl. with quad ring     |
| 19088 | 1/2" Str. only Female with CH80 gasket |

Use 19015 (CH80), 19020 (CH20) and 19026 (quad ring) seals.

## VALVE CORE TOOL



Self contained tool for quickly removing and replacing cores. Handle contains six cores.

| UPC#  | Description     |
|-------|-----------------|
| 19306 | Valve core tool |

## 125 AND 145 LB. CYLINDER VALVE ADAPTER



Finger tight adapters fit 125 and 145 lb. cylinders. Seal remains seated.

| UPC#  | Description                                    |
|-------|--|
| 19105 | 3/4" NPS cylinder adapter with 1/4" Male flare |
| 19106 | 3/4" NPS cylinder adapter with 3/8" Male flare |
| 18001 | Replacement gasket (10 pak)                    |

## VACUUM PUMP INTAKE ADAPTER



Reducing adapter for pump intakes on SUPEREVAC™ and other vacuum pumps.

| UPC#  | Description                         |
|-------|-------------------------------------|
| 19130 | 3/8" Fe. fl. x 1/4" M. fl. adapter  |
| 19131 | 1/2" Fe. fl. x 3/8" M. fl. adapter  |
| 19132 | 1/2" Fe. fl. x 1/4" M. fl. adapter  |
| 19160 | 1/2" Fe. fl. x 1/2" M. Acme adapter |
| 19133 | 3/8" Fe. fl. x 1/2" M. fl. adapter  |

## VACUUM PUMP ADAPTER



Convert a 3/8" or 1/2" vacuum pump intake into 1/4" and 1/2" Acme R-134a compatible fittings.

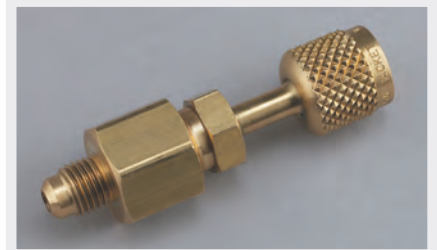
| UPC#  | Description   |
|-------|---|
| 36018 | 1/2" Pump adapter with 1/4" flare and 1/2" Acme Male fittings |
| 36019 | 3/8" Pump adapter with 1/4" flare and 1/2" Acme Male fittings |

## MODIFIED NEEDLE VALVE In-line control



| UPC#  | Description                        |
|-------|------------------------------------|
| 69670 | Needle type bleed valve 1/4" flare |

## MANIFOLD PARTICULATE FILTER



Manifold particulate filters trap particles before they damage valve seats or pass into recovery equipment. Screens are replaceable and cleanable.

| UPC#  | Description                       |
|-------|-----------------------------------|
| 41119 | 1/4" Manifold particulate filter  |
| 41120 | 3/8" Manifold particulate filter  |
| 41121 | 1/2" Manifold particulate filter  |
| 41122 | Replacement filter screen (5 pak) |

## ADD-A-HOSE COUPLER



Add-a-hose couplers easily connect hoses to the length desired.

| UPC#  | Description      | UPC#  | Description     |
|-------|------------------|-------|-----------------|
| 19143 | 3/16" Male flare | 19150 | 5/8" Male flare |
| 19144 | 1/4" Male flare  | 19152 | 3/4" Male flare |
| 19146 | 3/8" Male flare  | 19142 | 1/2" Acme       |
| 19148 | 1/2" Male flare  | -     | -               |

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# QUICK COUPLERS Expanded line



- Full size with deep knurling for easy handling
- CH14 “Adjust-a-Valve” opener in all 1/4" Female ends
- Acme conversion couplers are available for recovery tank threads and R-134a cylinder threads
- 5/16" Conversion couplers available
- Made in the USA

| UPC#                           | Description                             |
|--------------------------------|---|
| <b>Straight quick couplers</b> |   |
| 19125                          | 1/8" Female QC x 1/4" Male flare (Ford) |
| 19120                          | 3/16" Female QC x 1/4" Male flare (GM)  |
| 19101                          | 1/4" Female QC x 1/4" Male flare        |
| 19102                          | 1/4" Female QC x 3/8" Male flare        |
| 19111                          | 1/4" Female QC Str. x 1/8" NPT Male     |
| 19116                          | 1/4" Female QC Str. x 1/4" NPT Male     |
| 19103                          | 3/8" Female QC x 3/8" Male flare        |
| 19104                          | 3/8" Female QC x 1/4" Male flare        |
| 19115                          | 1/2" Female QC x 3/8" Male flare        |
| 19114                          | 3/8" Female QC x 1/2" Male flare        |

| UPC#                      | Description |
|---------------------------|-------------|
| <b>90° Quick couplers</b> |             |

|       |                                       |
|-------|---------------------------------------|
| 19220 | 3/16" Female QC 90° x 1/4" Male flare |
| 19201 | 1/4" Female QC 90° x 1/4" Male flare  |
| 19202 | 1/4" Female QC 90° x 3/8" Male flare  |
| 19203 | 3/8" Female QC 90° x 3/8" Male flare  |
| 19214 | 3/8" Female QC 90° x 1/2" Male flare  |

| <b>Gauge quick couplers with CH14 adjustable valve opener</b> |  |
|---|--|
|---|--|

|        |                                    |
|--------|------------------------------------|
| 19110  | 1/4" Female QC x 1/8" NPT Fe.      |
| 19118  | 1/4" Female QC Str. x 1/4" NPT Fe. |
| 19210  | 1/4" Female QC 90° x 1/8" NPT Fe.  |
| 19218* | 1/4" Female QC 90° x 1/4" NPT Fe.  |

| <b>5/16" Quick couplers with CH14 adjustable valve opener</b> |  |
|---|--|
|---|--|

|         |                                 |
|---------|---------------------------------|
| 192121* | 5/16" QC Str. x 1/4" Male flare |
| 19221*  | 5/16" QC 90° x 1/4" Male flare  |
| 192122* | 1/4" QC Str. x 5/16" Male flare |
| 19222*  | 1/4" QC 90° x 5/16" Male flare  |

| <b>ACME 1/2" couplers – auto straight</b> |  |
|---|--|
|---|--|

|       |   |
|-------|---|
| 19161 | 1/4" Female QC x 1/2" Acme Male                             |
| 19162 | 1/4" Female hex x 1/2" Acme Male for permanent applications |
| 19166 | 1/2" Acme Male x 1/2" Acme Female                           |
| 19165 | 1/2" Acme Female x 1/4" Male flare                          |
| 19168 | 1/2" Acme Female x 1/8" NPT Male                            |
| 19158 | 1/2" Acme Female x 14 mm Male                               |

\* Not pictured

## QUICK COUPLERS Schrader core in male end



- All couplers have Schrader valve cores in Male flare end
- Female coupler end has deep knurling for easy handling
- Patented CH14 “Adjust-a-Valve” opener in all 1/4" Female ends
- Made in the USA

| UPC#                           | Description |
|--------------------------------|-------------|
| <b>Straight quick couplers</b> |             |

|       |                                  |
|-------|----------------------------------|
| 19171 | 1/4" Female QC x 1/4" Male flare |
| 19172 | 3/8" Female QC x 1/4" Male flare |

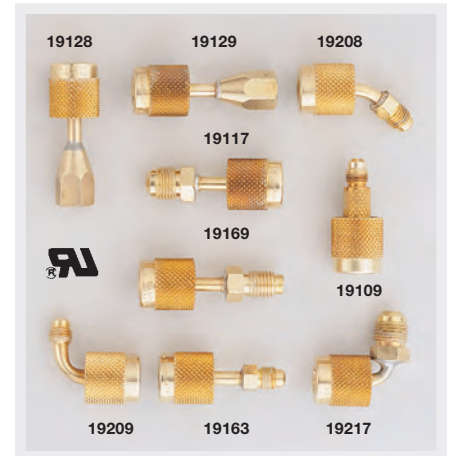
| <b>90° Bend quick couplers</b> |  |
|--------------------------------|--|
|--------------------------------|--|

|       |                                  |
|-------|----------------------------------|
| 19191 | 1/4" Female QC x 1/4" Male flare |
| 19192 | 3/8" Female QC x 1/4" Male flare |

| <b>45° R-410A couplers</b> |  |
|----------------------------|--|
|----------------------------|--|

|       |                                    |
|-------|------------------------------------|
| 19173 | 5/16" Female QC x 1/4" Male flare  |
| 19174 | 1/4" Female QC x 5/16" Male flare  |
| 19175 | 5/16" Female QC x 5/16" Male flare |

# SEALRIGHT™ QUICK COUPLERS

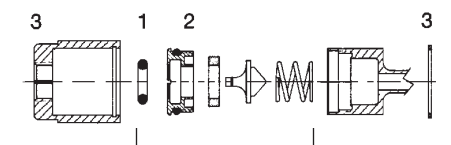


SealRight fittings automatically and immediately trap refrigerant in the hose when disconnected, helping meet non-venting regulations and preventing finger burns. One-piece attaches quickly, saving up to 50 percent in time compared to 2-piece quick couplers.

- Works with or without Schrader core
- Gaskets resist deterioration from SealRight repair assembly components
- CFC, HCFC, HFC refrigerants and refrigerant oils. Field serviceable
- Made in the USA

| UPC# | Description |
|------|-------------|
|------|-------------|

|       |                                       |
|-------|---------------------------------------|
| 19109 | 1/4" SealRight Str. x 1/4" Male flare |
| 19208 | 1/4" SealRight 45° x 1/4" Male flare  |
| 19209 | 1/4" SealRight 90° x 1/4" Male flare  |
| 19100 | Set of 19109 and 19209                |
| 19117 | 1/4" SealRight Str. x 3/8" Male flare |
| 19217 | 1/4" SealRight 90° x 3/8" Male flare  |
| 19128 | 1/4" SealRight Str. x 1/8" NPT Female |
| 19129 | 1/4" SealRight Str. x 1/4" NPT Female |
| 19169 | Acme 1/2" SealRight x 1/2" Acme       |
| 19163 | Acme 1/2" SealRight x 1/4" Male flare |



| UPC# | Description |
|------|-------------|
|------|-------------|

| <b>SealRight repair assembly components</b> |  |
|---|--|
|---|--|

|       |                                   |
|-------|-----------------------------------|
| 19037 | “O” rings (10 pak) (1)            |
| 19038 | Plug assembly with all seals (2)  |
| 19039 | Nut and clip (3)                  |
| 19040 | Rebuild kit (4)                   |
| 19041 | Overhaul kit with all above parts |
| 19045 | Gasket set                        |

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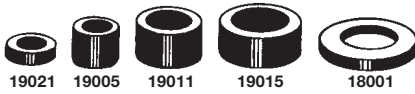
## SINGLE VALVES



- Individual manifolds for hi- and lo-sides of system
- Individual valves are available in two or three port versions
- Nylon seals with double “O” rings
- Made in the USA

| UPC#  | Description   |
|-------|---|
| 40317 | Hi-side manifold with gauge   |
| 40318 | Lo-side manifold with gauge and hook  |
| 40315 | 2 Port valve – 1/8" NPT Female x 1/4" Male flare                                  |
| 40325 | 3 Port valve – 1/8" NPT Female x 2 1/4" Male flares                               |
| 40350 | 2 Port valve – 1/4" QC Female with CH14 depressor x 1/4" Male flare with Schrader |
| 40326 | Lo-side 1/4" valve for R-32 and R-410A  |

## QUICK COUPLER GASKETS AND “O” RINGS



The only gaskets designed for optimum performance with YELLOW JACKET Charging Hoses. Works with all refrigerants. Manufactured to strict tolerances to resist blow out.

| UPC#    | Gasket/Part                  | Quantity | Application                               |
|---------|------------------------------|----------|---|
| 19020   | CH20/10                      | 10       | 1/4" Hose<br>5/16" Hose<br>1/2" Acme hose |
| 19005   | CH20/100                     | 100      | 1/4" Hose                                 |
| 19011   | CH11                         | 10       | 3/8" Hose                                 |
| 19015   | CH80                         | 10       | 1/2"-5/8" Hose                            |
| 19012   | E hose                       | 10       | 3/4" Hose                                 |
| 18001** |                              | 10       | Cylinder valve                            |
| 19021   | 1/8" Gasket                  | 10       | 1/8" Coupler                              |
| 19022   |                              | 5        | 60667 Recovery pliers                     |
| 19010   | CH20 and CH14                | 6<br>3   | 1/4" Hose opener                          |
| UPC#    | “O” ring                     | Quantity | Application                               |
| 19026*  | –                            | 10       | 3/8" Quad ring                            |
| 19034   | –                            | 10       | “O” ring for 14 mm Male                   |
| 19037   | –                            | 10       | 1/4" SealRight “O” ring                   |
| UPC#    | Description                  |          |   |
| 59651   | 1/4" Copper gaskets (10 pak) |          |   |
| 59652   | 3/8" Copper gaskets (10 pak) |          |   |
| 59653   | 1/2" Copper gaskets (10 pak) |          |   |
| 59654   | 5/8" Copper gaskets (10 pak) |          |   |
| 59655   | 3/4" Copper gaskets (10 pak) |          |   |

\* Gaskets for some metal hose sizes. Others use 19020 or 19011 gaskets.  
\*\*Flat washer.

## PARTS KITS AND EMPTY BOXES

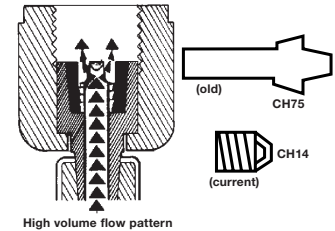


The **19003** complete kit includes the following gaskets, valve openers and SealRight parts in a 12 compartment case.

- Five 1/8" gaskets
- Five 1/8" valve openers
- One hundred 3/16"-1/4" gaskets
- Ten 1/4" Adjust-a-Valve openers
- Ten 1/4" flat valve openers
- Ten 3/8" gaskets
- Ten 1/2"-5/8" gaskets
- Ten cylinder valve flat gaskets
- Ten SealRight “O” rings
- Four SealRight plug and seal assemblies
- Four 1/4" SealRight nut and clip

| UPC#  | Description                                  |
|-------|--|
| 19003 | Complete kit                                 |
| 19004 | 11" x 6-3/4" x 3/4" Kit box with parts label |
| 60178 | 11" x 6-3/4" x 3/4" 12 Compartments empty    |
| 60135 | 11" x 6-3/4" x 3/4" 18 Compartments empty    |

## “ADJUST-A-VALVE™” OPENERS



The patented “Adjust-a-Valve” reaches out-of-tolerance Schrader valves in 1/4", 3/16" and 5/16" couplers. Simply rotate the opener with needle nose pliers to the desired height and when finished, rotate it back. “Adjust-a-Valve” for 1/4" and 5/16" hoses is the same.

| UPC#  | Description                       |
|-------|-----------------------------------|
| 19302 | “Adjust-a-Valve” openers (10 pak) |
| 19301 | 1/4" Valve openers (10 pak)       |
| 19304 | 1/8" Valve openers (10 pak)       |

## GASKET REMOVER PICK

Easily remove worn gaskets from hoses and replace with new gaskets. Sharp, angled pick is long enough to pull the gasket from deep inside the hose. Notch on the opposite end of the pick for placing the depressor inside the hose. Pick stores inside case along with five CH20 gaskets (included) for protection and safety.



| UPC#  | Description                      |
|-------|----------------------------------|
| 19047 | Gasket Remover Pick (Individual) |
| 19048 | Counter Display (12 pak)         |

## AUTOMOTIVE R-134a A/C COUPLERS

Premium with control valve

41301 - 41338



Couplers interface with R-134a service ports. 14 mm Female thread or 1/4" Male flare available.

- Quick, easy connect/disconnect
- Control valve for access to systems even at working pressures
- Integral safety sleeve holds coupler securely to service port
- Highest flow characteristics
- Low profile for tight applications

| UPC#  | Description                             |
|-------|---|
| 41301 | Chrome hi-side x 14 mm R-134a coupler   |
| 41302 | Chrome lo-side x 14 mm R-134a coupler   |
| 41327 | Hi-side x 3/8" Male fl., R-134a coupler |
| 41328 | Lo-side x 3/8" Male fl., R-134a coupler |
| 41337 | Hi-side x 1/4" Male fl., R-134a coupler |
| 41338 | Lo-side x 1/4" Male fl., R-134a coupler |
| 41300 | Replacement "O" rings (2 pak)           |

## LIQUID CHARGING ADAPTER

Convert liquid to saturated vapor



Liquid charging is recommended when charging blends into refrigeration and air conditioning systems. A liquid charging adapter is necessary for safe and fast liquid (saturated vapor) charging through the low pressure side of a system. The YELLOW JACKET liquid charging adapter connects to the cylinder valve or refrigerant tank.

- To protect the compressor, adapter orifice reduces liquid flow to a level below compressor capacity
- Refrigerant flashes off into a saturated vapor to speed entry
- Eliminates the time and work of heating cylinders

| UPC#  | Description                                    |
|-------|--|
| 41123 | 1/4" Liquid charging adapter                   |
| 41124 | 5/16" Liquid charging adapter                  |
| 41132 | Replacement "O" ring/orifice for 1/4" adapter  |
| 41138 | Replacement "O" ring/orifice for 5/16" adapter |

## AUTOMOTIVE R-134a ECONOMY A/C COUPLERS



A basic R-134a service coupler with no control valve. Snaps on for instant flow.

| UPC#  | Description                      |
|-------|----------------------------------|
| 41318 | Lo-side coupler with 1/4" flare  |
| 41317 | Hi-side coupler with 1/4" flare  |
| 41305 | Replacement "O" ring set (6 pak) |

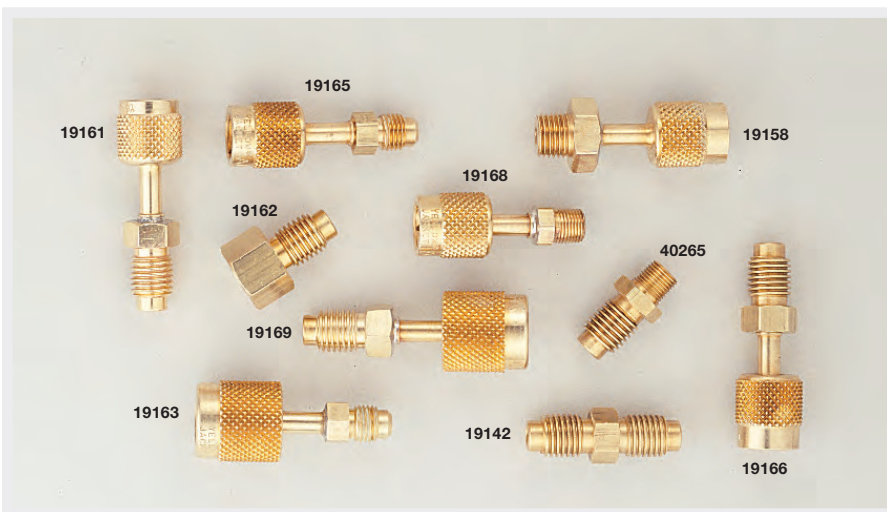
## AUTOMOTIVE 1234YF A/C COUPLERS



- Couplers interface with 1234yf service ports.
- M12x1.5-6H Female thread
- Quick, easy connect/disconnect
- Meets SAE J639

| UPC#  | Description                  |
|-------|------------------------------|
| 41441 | 1234yf hi-side coupler, 14mm |
| 41442 | 1234yf lo-side coupler, 14mm |

## AUTOMOTIVE A/C FITTINGS COUPLERS



Adapter fittings designed to work with 1/2" Acme or 14 mm threads.

| UPC#   | Description   |
|--------|---|
| 19157* | 14 mm Male x 1/4" Male flare                                    |
| 19156* | 14 mm Male x 3/8" Male flare                                    |
| 19161  | 1/2" Acme Male x 1/4" Female flare                              |
| 19165  | 1/2" Acme Female x 1/4" Male flare                              |
| 19158  | 1/2" Acme Female x 14 mm Male                                   |
| 19162  | 1/2" Acme Male x 1/4" Female flare hex                          |
| 19168  | 1/2" Acme Female x 1/8" Male pipe                               |
| 19169  | 1/2" Acme Male x 1/2" Acme SealRight                            |
| 19163  | 1/2" Acme SealRight x 1/4" Male flare                           |
| 19166  | 1/2" Acme Female x 1/2" Acme Male                               |
| 40265  | 1/2" Acme Male x 1/8" NPT Male half union                       |
| 19142  | 1/2" Acme union   |
| 19153* | 1/2" Acme Female hex x 13 mm R-134a lo-side Male for A/C system |

\* Not pictured

RECOVERY MACHINES  
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CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

# CHARGING SYSTEMS





YELLOW JACKET®

# ManTooth® Wireless Digital P/T/V Gauge

Simplify and automate measurements, save time, share data and reduce costs.  
 Provides wireless connection to your smart device so you can test the system  
 without losing refrigerant. Measure vacuum only or pressure, temperature and vacuum.





# MANTOOTH WIRELESS VACUUM GAUGE AND P/T GAUGE COMBINATION



The YELLOW JACKET ManTooth-PTV (67023) shown above provides vacuum and high- and low-side P/T readings. This full set includes dual non-tethered pressure/temperature gauges, two wired temperature clamps, and one interchangeable vacuum gauge. The single ManTooth-PTV (67021) can be combined with an existing ManTooth P/T device (67001) for adding wireless vacuum capability and/or expanding it to a full system analysis tool. Simply update your ManTooth P/T app to version 2.0, connect to the 67020 hardware, and you're ready to go!

To enable mounting on 5/16" systems, add coupler 19221 (90°) or 19121 (straight).

## Product Features:

- Interchangeable/removable vacuum gauge
- Easy-to-clean vacuum sensor
- Built-in Schrader cores for easy refrigerant charging
- Operates with and without hoses attached
- Two year warranty
- High impact glass reinforced housing
- Rechargeable LiPo battery for long battery life
- Robust/rugged vacuum sensor
- Integral magnet for mounting on framework
- Integrated rubber side grip for easy handling

## App Features:

- Available in English, French, Spanish, Dutch, and German.
- Data logging to record and document values during servicing
- Improved connectivity and reconnect process if signal is lost
- Ability to download logged data for graphing in Excel
- For iOS and Android devices
- Backwards compatible with existing ManTooth Devices (excluding vacuum gauge)

| UPC#  | Description  |
|-------|--|
| 67020 | ManTooth™-V (Vacuum only) with side grip               |
| 67021 | ManTooth™-PTV Single with side grip                    |
| 67023 | ManTooth™-PTV Dual with side grip                      |
| UPC#  | Replacement Parts                                      |
| 67030 | Vacuum gauge   |
| 67012 | USB Cord   |
| 67014 | Carrying case  |
| 93394 | Tether cap   |
| 19020 | Hose gaskets (10 pak)                                  |
| 19121 | Straight 5/16" Flare quick connect x 1/4" Male coupler |
| 19221 | 90° 5/16" Flare quick connect x 1/4" Male coupler      |
| 19302 | Valve depressor (10 pak)                               |
| 19305 | Schrader valve (10 pak)                                |

### Pressure/Temperature Specifications

|                                       |   |
|---------------------------------------|---|
| Pressure Sensing Resolution           | 0.1 psi, 0.1 bar, 1 kPa, 0.001 MPa, 0.01 kg/cm <sup>2</sup>   |
| Pressure Sensing Accuracy             | 0.5% of full scale at 25°C; 1% of full scale 55°F to 130°F; 2% of full scale -40°F to 248°F   |
| Working Pressure                      | 0 – 700 psia (48.3 bar)   |
| Proof Pressure                        | Tolerable pressure without internal damage 1000 psia  |
| Burst Pressure                        | Tolerable pressure without loss of seal 1500 psia   |
| Temperature Sensor Range (Instrument) | Sensing element: -40°F to 266°F (-40°C to 130°C); Max Cord temp: 176°F (80°C); Max Clamp Temp: 203°F (95°C)   |
| Temperature Display Resolution        | 0.1°F or °C   |
| Temperature Accuracy (Instrument)     | ±0.2°C (±0.36°F)  |
| Working Temperature                   | -4°F to 160°F (-20°C to 71°C) Limited by battery  |
| Storage Temperature                   | -4°F to 160°F (-20°C to 71°C) - for best battery performance do not store at over 100°F (38°C)  |
| Working Humidity                      | 0-95% RH (non-condensing)   |
| IP Class                              | IP 50   |
| Bluetooth Range                       | 70-90 ft. (Class 1) or 30-40 ft. (Class 2) in most cases (varies depending on the Bluetooth capability of smart device used). Under perfect conditions (clear line of sight and low interference) communications can extend up to 300 feet. |
| Bluetooth Radio                       | Class 1 Bluetooth 2.1 Radio   |
| Size and weight                       | 6" long x 1.6" wide x 2.3" thick (15.3 x 4 x 5.8 cm); 0.5 lbs (225 grams)   |
| Superheat and Subcool                 | Automatically calculated by the ManTooth App  |
| Max. and Min. Pressures               | Displays and records the maximum and minimum pressures  |
| Refrigerant Database                  | 98 NIST refrigerant profiles included; upgradeable  |
| Screenshot Feature                    | Save pressure and temperature readings from your sessions; automatically organize   |
| Temperature Sensors                   | Capable of measuring 2 temperatures using high accuracy NTC thermistors   |
| Pressure Transducers                  | 67001/67003 – one pressure transducer; 67002 – two pressure transducers   |
| System Attachment                     | Very small internal volume minimizes refrigerant loss during system analysis.   |
| Pressure Zeroing                      | Simple single button zeroing at the start of each session   |
| Elevation Compensation                | Enter elevation at the start of the session for effortless psia compensation  |
| Battery                               | Rechargeable LiPo battery for 10+ hours continuous life   |

### Vacuum Specifications

|                                |   |
|--------------------------------|---|
| Cord Length                    | Approximately 33"                       |
| Magnet Strength                | 8 lbs. holding force                    |
| Operational Temperature Range  | 10 – 122F 12 – 50C                      |
| Calibration                    | Calibration standards traceable to NIST |
| Resolution                     | .1 micron                               |
| Warm-Up Time and Response Time | Instant                                 |

RECOVERY MACHINES  
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 WIRELESS AND ELECTRONIC INSTRUMENTS  
 HEATING INSTRUMENTS  
 LEAK MONITORS AND DETECTORS  
 SYSTEM TOOLS

# MANTOOTH WIRELESS DIGITAL PRESSURE/TEMPERATURE GAUGE



The YELLOW JACKET® ManTooth™ Wireless Digital Pressure/Temperature Gauge provides wireless connection to your smart device so you can test the system without losing refrigerant (no hoses or manifolds necessary)!

The free downloadable ManTooth RSA app wirelessly calculates and displays the system's actual pressures, temperatures, superheat and subcooling in an easy-to-read color format on your iPhone®, iPad® or Android™ device.

**Additional Features:**

- Built-in Schrader ports to easily adjust refrigerant charge
- Range up to 400' (unobstructed)
- YELLOW JACKET ManTooth RSA app (free download)
- Two-year warranty
- Screenshot feature allows you to save pressure and temperature readings from your sessions which can be automatically organized by location and unit being serviced
- Share screenshots via e-mail right from your phone
- Easily track and store service history
- Rechargeable lithium polymer battery with 10 hours battery life

The ManTooth Single Pressure Wireless Digital P/T Gauge includes a single hardware device and clamp. Two single units can be purchased in a case by ordering Part #67003.

For dual pressure readings, use two of the 67001 ManTooth single pressure gauges or the 67002 ManTooth Dual Pressure Unit which comes with a P/T module, tether unit and two temperature probe clamps. This unit also includes a convenient carrying case which can be purchased separately for the single pressure unit.

| UPC#  | Description  |
|-------|--|
| 67001 | ManTooth™ Single Pressure Gauge (includes P/T Module with boot, temperature probe clamp, and USB cable)                                  |
| 67002 | ManTooth™ Dual Pressure Gauge Set (includes P/T Module and tether unit with boots, two temperature probe clamps, and USB cable in case)  |
| 67003 | Two (2) ManTooth™ Single Pressure Gauges (includes two P/T Modules with boots, two temperature probe clamps, and two USB cables in case) |

| UPC#  | Replacement Parts        |
|-------|--------------------------|
| 67010 | Clamp                    |
| 67012 | USB Cord                 |
| 67013 | Blue boot                |
| 67014 | Carrying case            |
| 93394 | Tether cap               |
| 19020 | Hose gaskets (10 pak)    |
| 19302 | Valve depressor (10 pak) |
| 19305 | Schrader valve (10 pak)  |

**Specifications:**

|                                       |   |
|---------------------------------------|---|
| Pressure Sensing Resolution           | 0.1 psi, 0.1 bar, 1 kPa, 0.001 MPa, 0.01 kg/cm <sup>2</sup>   |
| Pressure Sensing Accuracy             | 0.5% of full scale at 25°C; 1% of full scale 55°F to 130°F; 2% of full scale -40°F to 248°F   |
| Working Pressure                      | 0 – 700 psia (48.3 bar)   |
| Proof Pressure                        | Tolerable pressure without internal damage 1000 psia  |
| Burst Pressure                        | Tolerable pressure without loss of seal 1500 psia   |
| Temperature Sensor Range (Instrument) | Sensing element: -40°F to 266°F (-40°C to 130°C)<br>Max Cord temp: 176°F (80°C); Max Clamp Temp: 203°F (95°C)   |
| Temperature Display Resolution        | 0.1°F or °C   |
| Temperature Accuracy (Instrument)     | ±0.2°C (±0.36°F)  |
| Working Temperature                   | -4°F to 160°F (-20°C to 71°C)   |
| Storage Temperature                   | -4°F to 160°F (-20°C to 71°C)   |
| Working Humidity                      | 0-95% RH (non-condensing)   |
| IP Class                              | IP 50   |
| Battery Life                          | 10+ hours continuous  |
| Range                                 | 70-90 ft. (Class 1) or 30-40 ft. (Class 2) in most cases (varies depending on the Bluetooth capability of smart device used). Under perfect conditions (clear line of sight and low interference) communications can extend up to 300 feet. |
| Bluetooth Radio                       | Class 1 Bluetooth 2.1 Radio   |
| Size                                  | 6" long x 1.6" wide x 2.3" thick (15.3 x 4 x 5.8 cm)  |
| Weight                                | 0.5 lbs (225 grams)   |
| Superheat and Subcool                 | Automatically calculated by the ManTooth App  |
| Max. and Min. Pressures               | Displays and records the max and min pressures  |
| Refrigerant Database                  | 98 NIST refrigerant profiles included; upgradeable  |
| Screenshot Feature                    | Save pressure and temperature readings from your sessions which can be automatically organized by location and serviced unit  |
| Temperature Sensors                   | Capable of measuring 2 temperatures using high accuracy NTC thermistors   |
| Pressure Transducers                  | 67001/67003 – one 67002 – two   |
| System Attachment                     | Very small internal volume minimizes refrigerant loss during system analysis.   |
| Pressure Zeroing                      | Simple single button zeroing at the start of each session   |
| Elevation Compensation                | Enter at start of session for effortless psia compensation  |
| Battery                               | Rechargeable LiPo battery   |



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Designed and assembled in the U.S.A.

RECOVERY MACHINES  
 VACUUM PUMP SYSTEMS  
 VACUUM AND CHARGING HOSES  
 HOSE ADAPTERS, VALVES AND PARTS  
 CHARGING SYSTEMS  
 GAUGES  
 WIRELESS AND ELECTRONIC INSTRUMENTS  
 HEATING INSTRUMENTS  
 LEAK MONITORS AND DETECTORS  
 SYSTEM TOOLS

The YELLOW JACKET® refrigeration system analyzer features a full color graphics display for intuitive, easy reading. The display reads in analog, digital or a combination of both, and monitors two pressures, two live temperatures, subcooling and superheat, and saturation temperatures (liquid and vapor) for nearly 100 refrigerants.



- Nearly 100 NIST refrigerant profiles included (upgradeable via USB for new refrigerants)
- Built-in pressure/temperature chart reference screen for all refrigerants
- Built-in full scale vacuum sensor reads deep vacuum down to 10 microns
- Dual K-Type temperature-compensated sensor ports allow for simultaneous suction and liquid readings
- High accuracy and resolution pressure transducers for fast and sensitive leak detection
- Provides real-time pressure data in selectable time increments: 0.1, 0.2, 0.5, 1 and 2 seconds

**Specifications**

**Pressure sensing resolution (low and high sides):**  
0.1 psi, 0.01 bar, 1 kPa, 0.1 MPA, 0.01 kg/cm<sup>2</sup>

**Pressure sensing accuracy:**  
0.5% of full scale at 25°C  
1% of full scale at 55°F to 130°F  
2% of full scale -40°C to 120°C

**Working pressure (maximum measurable pressure):**  
Low side: 0 - 350 psia High side: 0 - 700 psia

**Proof pressure (low and high sides):** 1000 psi

**Burst pressure (low and high sides):** 1500 psi

**Temperature sensor range:** -100 to 600°F (-73 to 315°C)

**Temperature display resolution:** 0.1°F or C°

**Temperature accuracy:** ±1.8°F (±1°C)

**Vacuum display resolution:**  
Shows two most significant digits in microns (25xxx-10xxx, 99xx-10xx, 99x-10x, 99-10)  
Other units are direct conversions from the micron value

**Vacuum accuracy:** 20% of reading


**Operating temperature:** -4 to 122°F (-20 to 50°C)

**Storage temperature:** -20 to 170°F (-29 to 77°C)

**Dimensions:** 8.3" wide x 6.7" tall x 3.6" deep (21 cm x 17 cm x 9 cm) excluding manifold

**Weight:** 3.2 lb (1.45 kg) excluding manifold

**Power:** AA batteries (8); alkaline, NiCd, NiMH, A-A Lithium, Li Ion, Li Pol (approximately 14 hours of continuous use with industrial alkaline batteries)

- Automatic superheat and subcooling calculations
- Corresponding bubble point and dew points for current high side and low side pressures, respectively
- Displays and records max/min pressures
- Holds current reading/scrolls back to past readings
- Data logging for onscreen review or USB export to PC to generate performance/Excel™ work reports
- Tracks and exports date and time, useful for data logging
- Elevation may be entered manually for accurate, automatic pressure compensation
- Zero pressure by pressing a key in the set-up menu
- Selectable “auto power off” and “power saving mode”
- Low battery indicator
- 360° swivel hook stows when not in use
- Highly weather resistant, glass fiber reinforced, engineering grade thermoplastic housing - fully gasketed for water and dust resistance
- Two-year warranty
- Made in the USA 



The YELLOW JACKET® refrigeration system analyzer comes in a blow-molded carrying case complete with a TITAN™ 4-valve test and charging manifold, vacuum sensor cordset, battery holder (‘AA’ size, 2X4), instrument boot, bumper, plug, sensor boots, USB cable, vacuum sensor and two general purpose “K-Type” probes.

| UPC#  | Description   |
|-------|---|
| 40812 | Refrigeration system analyzer with TITAN™ 4-valve manifold  |
| 40813 | Refrigeration system analyzer with TITAN™ 4-valve manifold, 60" PLUS II™ charging hoses (RYB) with compact ball valve end, and 3/8" Str. fl. x 3/8" 45° (Y) |
| 40815 | Refrigeration system analyzer with TITAN™ 4-valve manifold and 60" PLUS II™ charging hoses (RYB)  |

| Replacement parts |   |
|-------------------|---|
| 40819             | Vacuum sensor cordset                                     |
| 40820             | Battery holder, ‘AA’ size, 2X4                            |
| 40821             | Refrigeration system analyzer boot                        |
| 40823             | Refrigeration system analyzer battery door                |
| 40824             | Refrigeration system analyzer bumper, plug & sensor boots |
| 40827             | USB cable   |
| 40828             | General purpose “K-Type” probe (4 meter)                  |
| 40832             | AA Batteries (package of 8)                               |
| 40833             | Replacement case handle                                   |
| 69081             | Replacement accessory pouch                               |
| 69087             | Vacuum sensor   |

| Accessories |   |
|-------------|---|
| 69214       | General purpose “K-Type” probe (3 Feet) 1-3/8" Clamp  |
| 69217       | General purpose “K-Type” probe (10 Feet) 1-3/8" Clamp |
| 69218       | General purpose “K-Type” probe (1 meter)              |


RECOVERY MACHINES  
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VACUUM AND CHARGING HOSES  
HOSE ADAPTERS, VALVES AND PARTS  
CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

# TITAN™ 4-VALVE TEST & CHARGING MANIFOLD °F and °C



Forged aluminum alloy body makes this unit lightweight for handling ease with the durability and reliability required for repeated use.

- Fourth hose to enable connection to hi-/lo-sides, refrigerant tank and recovery unit or vacuum pump for diagnostics, evacuation and charging without switching hoses
- 3/8" Vacuum port for use with larger hose to cut evacuation time by up to 33% (all other fittings are 1/4")
- Large, easy-to-read 3-1/8" (80 mm) steel case red and blue, 1% accuracy (Class 1) gauges
- Front access for easy field recalibration
- Double "O" ring piston for reliability and long service life

- Exclusive 100 mesh filter in-line on all flare fittings helps keep out particulate material and extend the life of the seats
  - Contoured easy-grip handles for positive control; color-coded for ready identification
  - Sight glass to easily view refrigerant movement and condition during charging and recovery
  - Optional protective gauge boots available
  - Heavy duty hook won't pull out
  - Manifold and hose holder fittings 1/4"-3/8"-1/4"-1/4" unless otherwise identified
  - Made in the USA 
- Replacement parts on page 44.

## TITAN™ 4-Valve

| UPC#   | Description - °F/°C   | Gauges      | Scale   | Refrigerant      |
|--------|---|-------------|---------|------------------|
| 49914  | Manifold only with 5/16"-3/8"-5/16"-5/16" anchor and service fittings                             | Red/Blue    | kPa/psi | R-32/410A        |
| 49913  | 49914 with 60" PLUS II™ RYB and 3/8" x 45°  | Red/Blue    | kPa/psi |                  |
| 49915  | Manifold only with 5/16"-3/8"-1/4"-5/16" anchor fittings and 1/4"-3/8"-1/4"-1/4" service fittings | Red/Blue    | kPa/psi |                  |
| 49922  | Manifold only   | Liquid      | bar/psi | R-22             |
| 49925  | With 60" PLUS II™ RYB and 3/8" x 45°  | Liquid      | bar/psi |                  |
| 49960  | With 60" PLUS II™ compact ball valve RYB and 3/8" x 45°   | Red/Blue    | bar/psi | R-32/410A        |
| 49962  | Manifold only   | Red/Blue    | bar/psi |                  |
| 49964  | Manifold only with 5/16-3/8-5/16-5/16" fittings   | Red/Blue    | bar/psi |                  |
| 49965  | With 60" PLUS II™ RYB and 3/8" x 45°  | Red/Blue    | bar/psi |                  |
| 49966  | Manifold only with 1/4" fittings  | Red/Blue    | bar/psi |                  |
| 49971  | Heat pump manifold only, 1/4x5/16x1/4 hose holder fittings  | Black/Black | bar/psi | R-410A           |
| 49982  | Manifold only   | Liquid      | bar/psi |                  |
| UPC#   | Description - °F  | Gauges      | Scale   | Refrigerant      |
| 49973  | Manifold only   | Liquid      | psi     | R-22/410A        |
| 49977  | With 60" PLUS II™ RYB and 3/8" x 45°  | Liquid      | psi     |                  |
| 49963  | Manifold only   | Red/Blue    | psi     | R-22/404A/410A   |
| 49967  | With 60" PLUS II™ RYB and 3/8" x 45°  | Red/Blue    | psi     |                  |
| 49968  | With 60" PLUS II™ compact ball valve RYB and 3/8" x 45°   | Red/Blue    | psi     |                  |
| 49283* | Manifold only   | Red/Blue    | psi     |                  |
| 49983  | Manifold only   | Red/Blue    | psi     | R-22/134a/404A   |
| 49987  | With 60" PLUS II™ RYB and 3/8" x 45°  | Red/Blue    | psi     |                  |
| 49993  | Manifold only   | Liquid      | psi     |                  |
| 49997  | With 60" PLUS II™ RYB and 3/8" x 45°  | Liquid      | psi     | R-134a/404A/407C |
| 49932  | Manifold only   | Red/Blue    | psi     |                  |
| 49935  | With 60" PLUS II™ RYB and 3/8" x 45°  | Red/Blue    | psi     |                  |
| 49952  | Manifold only   | Liquid      | psi     |                  |
| 49955  | With 60" PLUS II™ RYB and 3/8" x 45°  | Liquid      | psi     |                  |
| 49900  | With 72" PLUS II™ RYB and 3/8" x 45°  | Red/Blue    | psi     | R-417A/422A/422D |
| UPC#   | Description - °C  | Gauges      | Scale   | Refrigerant      |
| 49916  | Manifold only   | Red/Blue    | bar/psi | R-12/22/502      |
| 49933  | Manifold only   | Red/Blue    | bar/psi | R-22/134a/404A   |
| 49912  | Manifold only   | Red/Blue    | kPa/psi |                  |
| 49911  | 49912 with 60" PLUS II™ RYB and 3/8" x 45°  | Red/Blue    | kPa/psi | R-134a/404A/407F |
| 49931  | Manifold only   | Red/Blue    | bar/psi |                  |
| 49934  | Manifold only; no sight glass   | Red/Blue    | bar/psi | R-134a/404A/407C |
| 49936  | Manifold only   | Red/Blue    | bar/MPa |                  |
| 49956  | Manifold only   | Red/Blue    | bar/psi |                  |
| 49972  | Heat pump manifold; no sight glass; 800 psi both gauges   | Black/Black | bar/psi |                  |

\*  Manifold comes standard with certified gauges. For more information on the certification of 3-1/8" gauges, see page 51.

# TITAN™ 2-VALVE TEST & CHARGING MANIFOLD °F and °C



Comes with the same features and benefits as the TITAN™ 4-valve unit but without the fourth hose. All fittings 1/4" unless otherwise noted.



Replacement parts on page 44.

| UPC#   | Description - °F/°C   | Gauges   | Scale   | Refrigerant      |                  |
|--------|---|----------|---------|------------------|------------------|
| 49814  | Manifold only with 5/16" fittings   | Red/Blue | kPa/psi | R-32/410A        |                  |
| 49813  | With 60" PLUS II™ 5/16x5/16" RYB  | Red/Blue | kPa/psi |                  |                  |
| 49815  | Manifold only with 5/16"-1/4"-5/16" anchor fittings and 1/4" service fittings | Red/Blue | kPa/psi |                  |                  |
| 49862  | Manifold only with 1/4" fittings  | Red/Blue | bar/psi |                  |                  |
| 49860  | With 60" PLUS II™ compact ball valve RYB                                      | Red/Blue | bar/psi |                  |                  |
| 49864  | Manifold only with 5/16" fittings   | Red/Blue | bar/psi |                  |                  |
| 49865  | With 60" PLUS II™ RYB   | Red/Blue | bar/psi | R-1234yf         |                  |
| 49866  | Manifold only with 5/16"-1/4"-5/16" anchor fittings and 1/4" service fittings | Red/Blue | bar/psi |                  |                  |
| 49849  | With 72" PLUS II™ Acme fittings RYB   | Red/Blue | psi     |                  |                  |
| UPC#   | Description - °F  | Gauges   | Scale   | Refrigerant      |                  |
| 49883  | Manifold only   | Red/Blue | psi     | R-22/134a/404A   |                  |
| 49887  | With 60" PLUS II™ RYB   | Red/Blue | psi     |                  |                  |
| 49889  | With 60" PLUS II™ SealRight RYB   | Red/Blue | psi     | R-22/404A/410A   |                  |
| 49801  | With 60" PLUS II™ SealRight RYB   | Red/Blue | psi     |                  |                  |
| 49863  | Manifold only   | Red/Blue | psi     |                  |                  |
| 49281* | Manifold only   | Red/Blue | psi     |                  |                  |
| 49867  | With 60" PLUS II™ RYB   | Red/Blue | psi     | R-134a/404A/407C |                  |
| 49868  | With 60" PLUS II™ compact ball valve RYB                                      | Red/Blue | psi     |                  |                  |
| 49832  | Manifold only   | Red/Blue | psi     | R-12/22/134a     |                  |
| 49835  | With 60" PLUS II™ RYB   | Red/Blue | psi     |                  |                  |
| 49831  | With 60" PLUS II™ SealRight RYB   | Red/Blue | psi     |                  |                  |
| 49847  | With 72" PLUS II™ Acme fittings RYB   | Red/Blue | psi     | R-12/22/502      |                  |
| UPC#   | Description - °C  | Gauges   | Scale   |                  | Refrigerant      |
| 49816  | Manifold only   | Red/Blue | bar/psi |                  | R-22/134a/404A   |
| 49833  | Manifold only   | Red/Blue | bar/psi |                  |                  |
| 49812  | Manifold only   | Red/Blue | kPa/psi |                  | R-134a/404A/407C |
| 49811  | 49812 with 60" PLUS II™ RYB   | Red/Blue | kPa/psi |                  |                  |
| 49836  | Manifold only   | Red/Blue | bar/MPa |                  | R-32/410A        |
| 49856  | Manifold only   | Red/Blue | bar/psi |                  |                  |
| 40922  | Manifold only with 5/16" fittings   | Red/Blue | MPa     |                  |                  |

\*  Manifold comes standard with certified gauges.

## PROTECTIVE GAUGE BOOTS

For 2-1/2" (63.5 mm), 3-1/8" (80 mm), and solar gauges

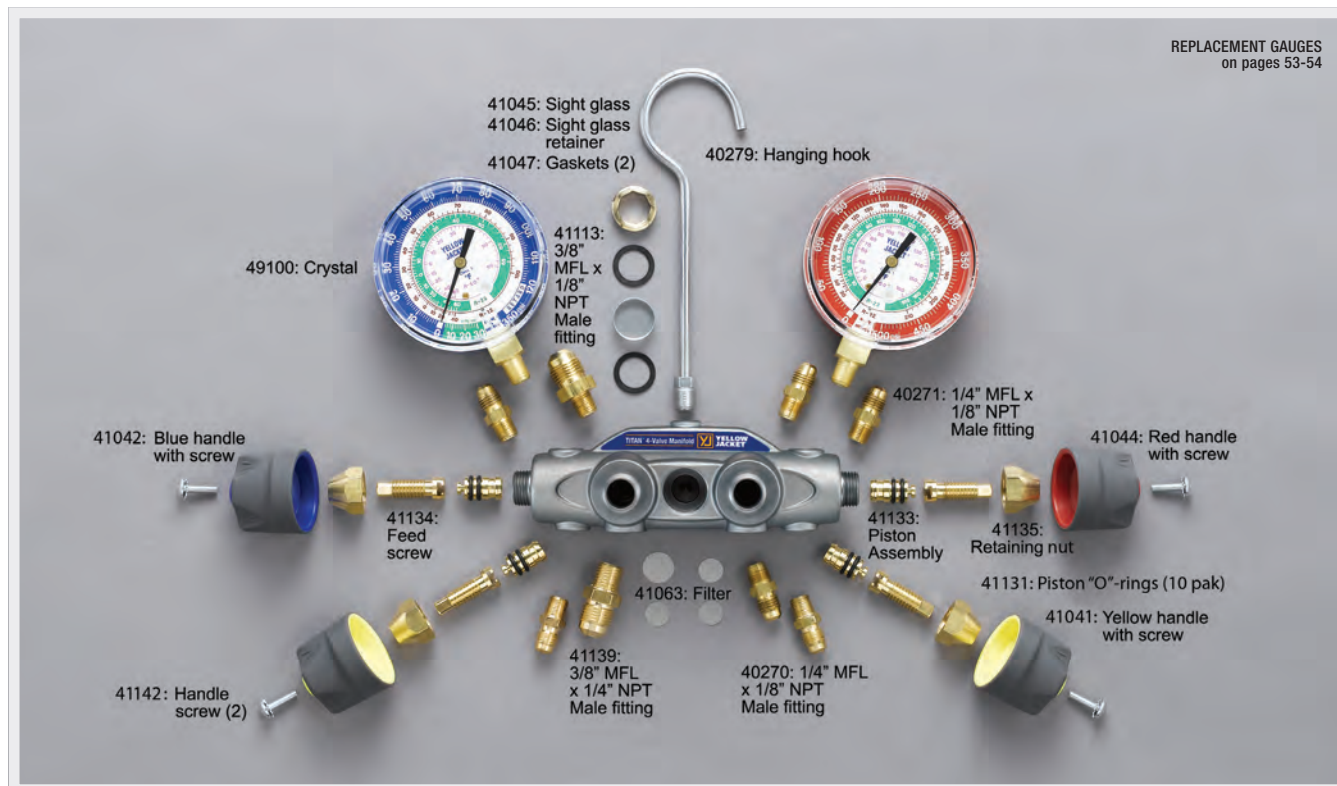


Rubber boots slip easily around gauges to cushion and protect them from impact.

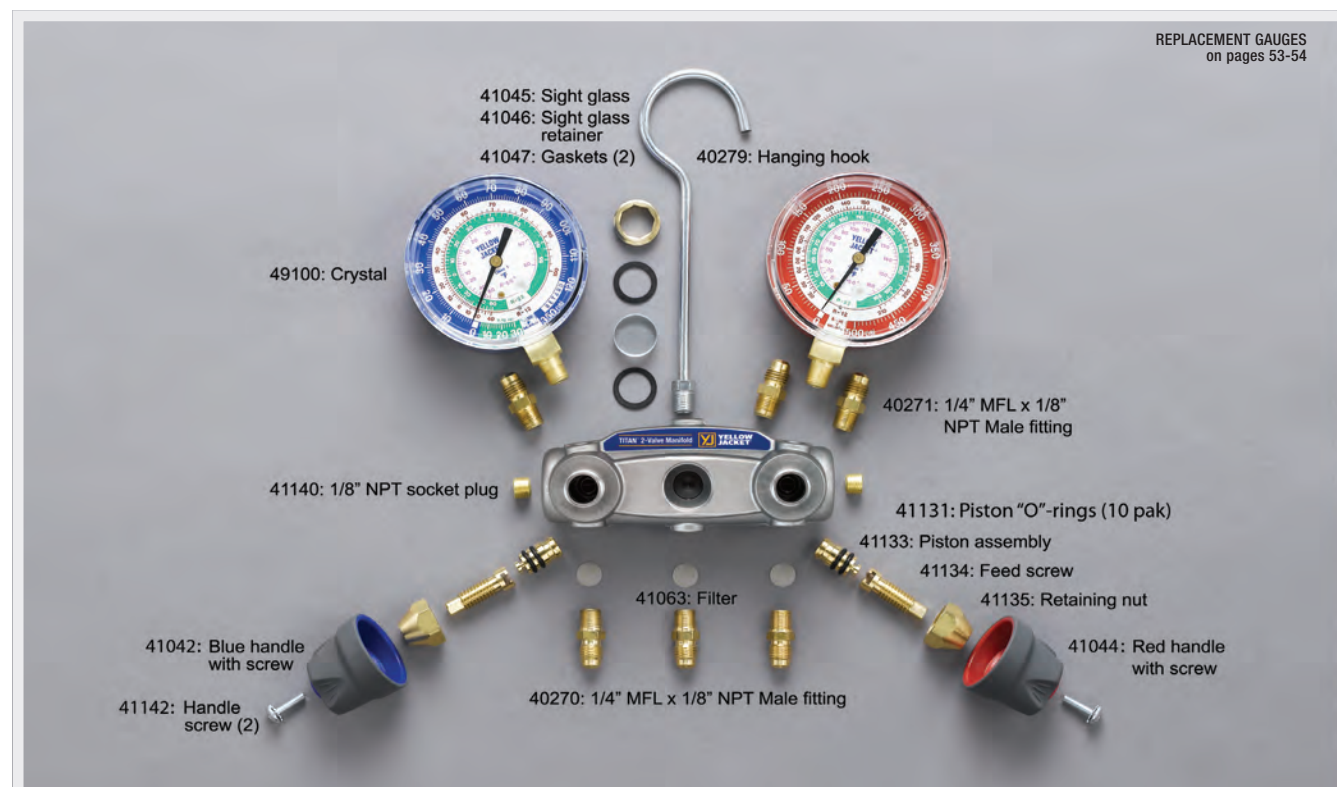
- Fit 2-1/2" and 3-1/8" gauges without covering easy access recalibration screw
- Color-coded red or blue to match gauge

| UPC#  | Description                       |
|-------|-----------------------------------|
| 49090 | 2-1/2" Set of gauge boots         |
| 49091 | 2-1/2" Red protective gauge boot  |
| 49092 | 2-1/2" Blue protective gauge boot |
| 49190 | 3-1/8" Set of gauge boots         |
| 49191 | 3-1/8" Red protective gauge boot  |
| 49192 | 3-1/8" Blue protective gauge boot |
| 49087 | Red solar gauge boot              |
| 49088 | Blue solar gauge boot             |
| 49089 | Solar gauge boot set              |

## TITAN™ 4-VALVE MANIFOLD REPLACEMENT PARTS



## TITAN™ 2-VALVE MANIFOLD REPLACEMENT PARTS



# BRUTE II® 4-VALVE TEST & CHARGING MANIFOLD °F and °C



Replacement parts on page 46.

The *BRUTE II*™ 4-Valve Test and Charging Manifold provides the flow that's proven faster than any conventional manifold. The aluminum alloy body is forged for strength and reliability with 3/8" bores through the body to speed the job.

- Fourth hose enables connection to hi-/lo-sides, refrigerant tank and recovery unit or vacuum pump for diagnostics, evacuation and charging without switching hoses
- Available in 1/4" hi-/lo-sides with 3/8" vacuum port for regular jobs, or 3/8" hi-/lo-sides with 1/2" vacuum port for larger systems

- Front access for easy field recalibration

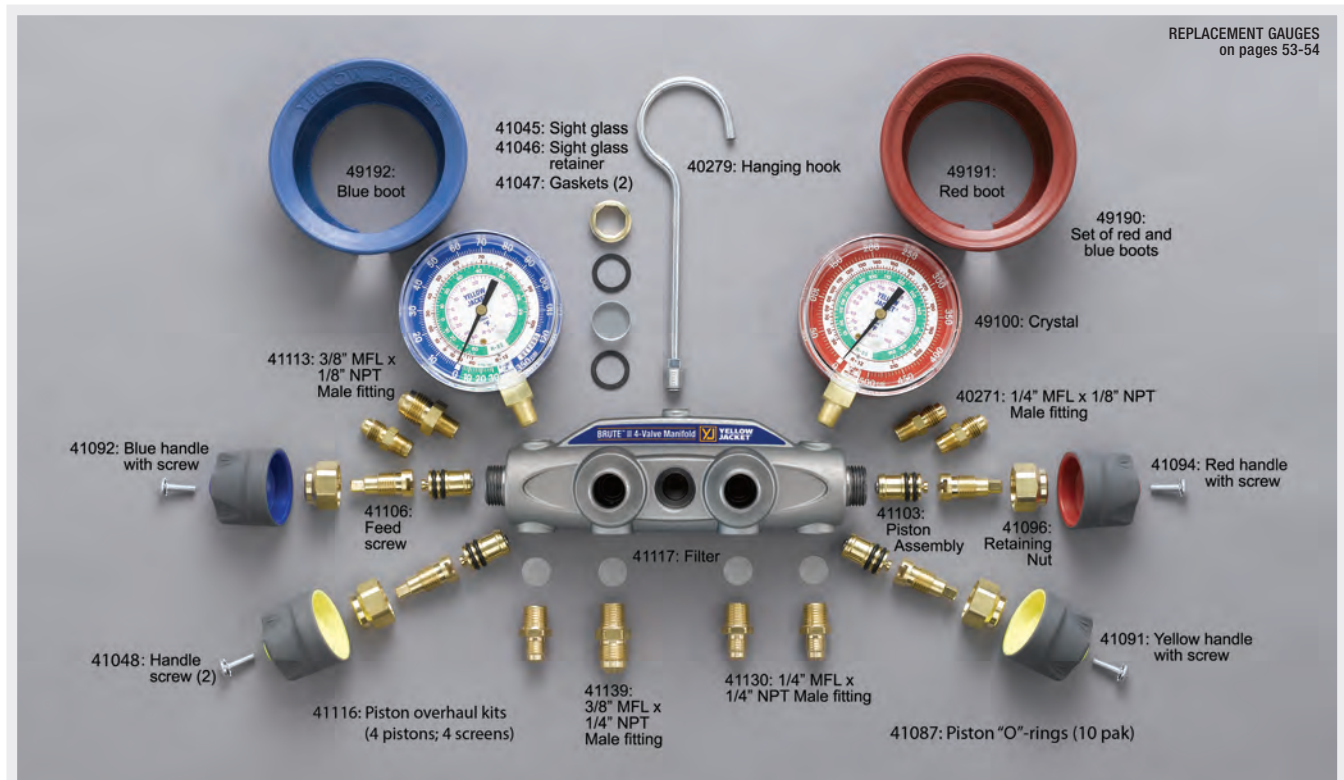


- Double "O" ring piston for reliability and long service life
- Exclusive 100-mesh filter in-line on all flare fittings helps keep out particulate material and extend the life of the seat
- Contoured easy-grip handles for positive control; color-coded for ready identification
- Sight glass to easily view refrigerant movement and condition during charging and recovery
- Heavy duty hook won't pull out
- Also available with 3-1/2" (90 mm) red and blue liquid-filled gauges
- Manifold and hose holder fittings 1/4"-3/8"-1/4"-1/4" unless otherwise identified
- Made in the USA

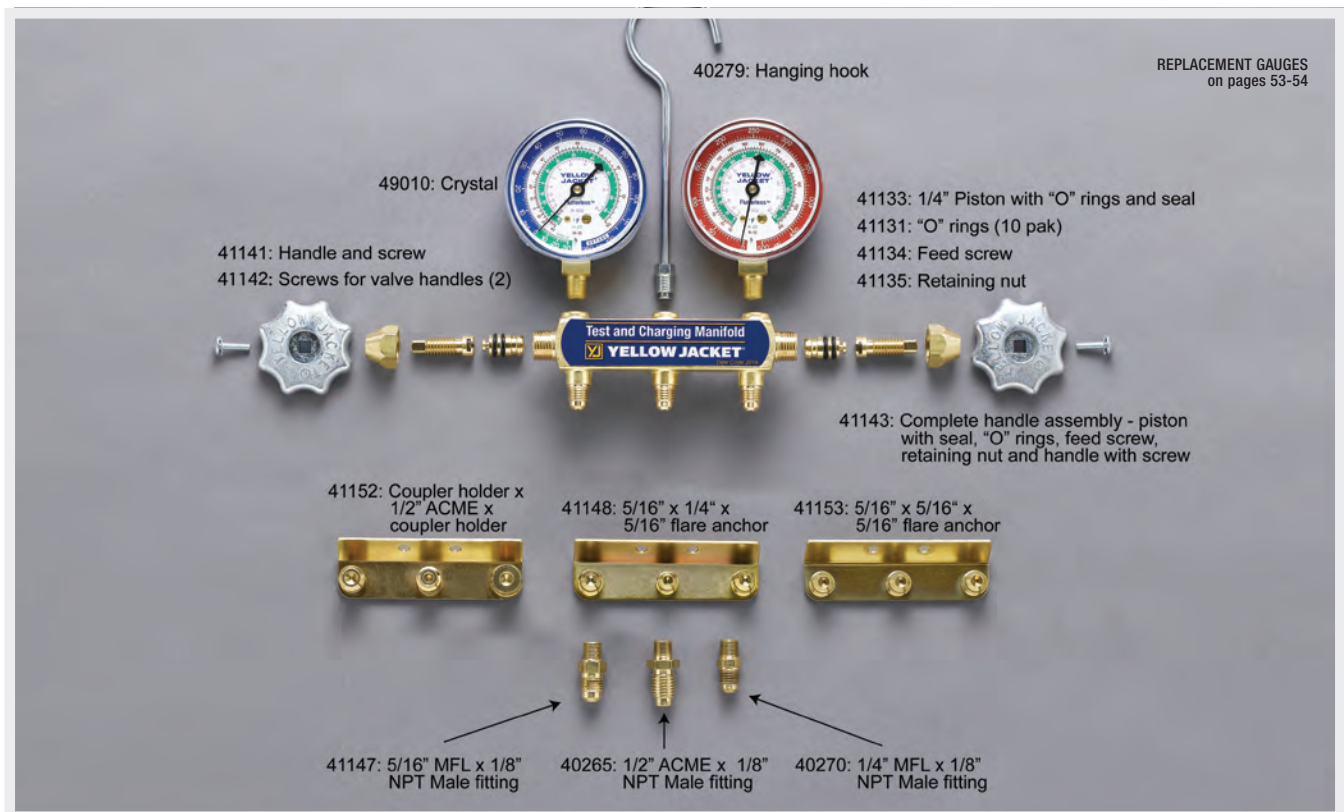
| BRUTE II™ 4-Valve            |   |             |              |          |         |                  |
|------------------------------|---|-------------|--------------|----------|---------|------------------|
| UPC#                         | Description - °F/°C   | Vacuum port | Hi/Lo charge | Gauges   | Scale   | Refrigerant      |
| 46001                        | Manifold only   | 3/8"        | 1/4"         | Liquid   | bar/psi | R-410A           |
| 46021                        | Manifold only   | 3/8"        | 1/4"         | Liquid   | bar/psi | R-22             |
| 46026                        | With 72" <i>PLUS II</i> ™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Liquid   | bar/psi | R-22             |
| 46000                        | Manifold only   | 3/8"        | 1/4"         | Red/Blue | bar/psi | R-32/410A        |
| 46003                        | With 60" <i>PLUS II</i> ™ compact ball valve RYB and 3/8" x 45°                                       | 3/8"        | 1/4"         | Red/Blue | bar/psi |                  |
| 46160                        | Manifold only with 5/16"-3/8"-1/4"-5/16" anchor and 1/4" service fittings                             | -           | -            | Red/Blue | bar/psi |                  |
| 46170                        | Manifold only with 5/16"-3/8"-5/16"-5/16" anchor and service fittings                                 | -           | -            | Red/Blue | bar/psi |                  |
| 46174                        | Manifold only with 5/16"-3/8"-1/4"-5/16" anchor and 1/4" service fittings                             | -           | -            | Red/Blue | kPa/psi |                  |
| 46176                        | Manifold only with 5/16"-3/8"-5/16"-5/16" anchor and service fittings                                 | -           | -            | Red/Blue | kPa/psi |                  |
| UPC#                         | Description - °F  | Vacuum port | Hi/Lo charge | Gauges   | Scale   | Refrigerant      |
| 46011                        | Manifold only   | 3/8"        | 1/4"         | Liquid   | psi     | R-22/410A        |
| 46010                        | Manifold only   | 3/8"        | 1/4"         | Red/Blue | psi     | R-22/404A/410A   |
| 46013                        | With 60" <i>PLUS II</i> ™ compact ball valve RYB and 3/8" x 45°                                       | 3/8"        | 1/4"         | Red/Blue | psi     |                  |
| 49291*                       | Manifold only   | 3/8"        | 1/4"         | Red/Blue | psi     |                  |
| 46022                        | With 60" <i>PLUS II</i> ™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Red/Blue | psi     |                  |
| 46030                        | Manifold only   | 3/8"        | 1/4"         | Red/Blue | psi     | R-134a/404A/407C |
| 46031                        | Manifold only   | 3/8"        | 1/4"         | Liquid   | psi     |                  |
| 46032                        | With 60" <i>PLUS II</i> ™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Red/Blue | psi     |                  |
| 46038                        | With 72" <i>PLUS II</i> ™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Liquid   | psi     |                  |
| 46040                        | Manifold only   | 3/8"        | 1/4"         | Red/Blue | psi     | R-22/134a/404A   |
| 46041                        | Manifold only   | 3/8"        | 1/4"         | Liquid   | psi     |                  |
| 46042                        | With 60" <i>PLUS II</i> ™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Red/Blue | psi     |                  |
| 46043                        | With 60" <i>PLUS II</i> ™ compact ball valve RYB and 3/8" x 45°                                       | 3/8"        | 1/4"         | Red/Blue | psi     |                  |
| 46048                        | With 72" <i>PLUS II</i> ™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Liquid   | psi     |                  |
| 46044                        | Manifold only   | 3/8"        | 1/4"         | Liquid   | psi     |                  |
| UPC#                         | Description - °C  | Vacuum port | Hi/Lo charge | Gauges   | Scale   | Refrigerant      |
| 46180                        | Manifold only   | 3/8"        | 1/4"         | Red/Blue | bar/psi | R-12/22/502      |
| 46130                        | Manifold only   | 3/8"        | 1/4"         | Red/Blue | bar/MPa | R-134a/404A/407C |
| 46190                        | Manifold only   | 3/8"        | 1/4"         | Red/Blue | bar/psi |                  |
| 46140                        | Manifold only   | 3/8"        | 1/4"         | Red/Blue | bar/psi |                  |
| 46140                        | Manifold only   | 3/8"        | 1/4"         | Red/Blue | bar/psi |                  |
| BRUTE II™ 4-Valve commercial |   |             |              |          |         |                  |
| UPC#                         | Description - °F/°C   | Vacuum port | Hi/Lo charge | Gauges   | Scale   | Refrigerant      |
| 46081                        | Manifold only   | 1/2"        | 3/8"         | Liquid   | bar/psi | R-22             |
| 46084                        | With 3 at 3/8" x 60" heavy duty - Straight x 45° and 1 at 1/2" x 60" heavy duty - Straight x Straight | 1/2"        | 3/8"         | Liquid   | bar/psi |                  |
| UPC#                         | Description - °F  | Vacuum port | Hi/Lo charge | Gauges   | Scale   | Refrigerant      |
| 46090                        | Manifold only   | 3/8"        | 3/8"         | Red/Blue | psi     | R-22/134a/404A   |
| 46091                        | Manifold only   | 1/2"        | 3/8"         | Liquid   | psi     |                  |
| 46092                        | With 4 at 3/8" x 60" heavy duty - Straight x 45°  | 3/8"        | 3/8"         | Red/Blue | psi     |                  |
| 46094                        | With 3 at 3/8" x 60" heavy duty - Straight x 45° and 1 at 1/2" x 60" heavy duty - Straight x Straight | 1/2"        | 3/8"         | Liquid   | psi     |                  |
| 46094                        | With 3 at 3/8" x 60" heavy duty - Straight x 45° and 1 at 1/2" x 60" heavy duty - Straight x Straight | 1/2"        | 3/8"         | Liquid   | psi     |                  |

Manifold comes standard with certified gauges. For more information on the certification of 3-1/8" gauges, see page 51.

# BRUTE II™ MANIFOLD REPLACEMENT PARTS



# SERIES 41 MANIFOLD REPLACEMENT PARTS



RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
VACUUM AND CHARGING HOSES  
HOSE ADAPTERS, VALVES AND PARTS  
CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS



# SERIES 41 MANIFOLDS

°F and °C with 2-1/2" (63.5 mm) gauges



Forged body is solid brass for durability. Full porting maximizes capacity. Metal valve handles are full size for easy operation. Hose anchors are forged into back of body at 45°.

- Flutterless™ technology means surge protector and silicone dampened movement helps minimize needle pulsation for easier, more accurate readings
- Sliding double “O” ring pistons reduces wear
- Most manifolds include color-coded YELLOW JACKET charging hoses
- Easy-to-read 2-1/2" (63.5 mm) steel case gauges with 3-2-3% accuracy (Class B)
- Limited lifetime warranty on manifold bar and valves – not gauges. See warranty information for details
- Made in the USA



| Series 41 Manifolds |   |   |                         |                  |
|---------------------|---|---|-------------------------|------------------|
| UPC#                | Description - °F and °C - Red/Blue  | Scale   | Refrigerant             |                  |
| 42051               | Heat pump manifold only, 1/4-5/16-1/4"  | bar/psi   | R-410A                  |                  |
| 42054               | With 60" black PLUS II hoses (two 1/4x5/16" ball valve and one 1/4x1/4" ball valve) | bar/psi   |                         |                  |
| 41712               | Manifold only   | kg/cm <sup>2</sup> /psi                               | R-410A                  |                  |
| 41703               | With 60" PLUS II™ compact ball valve fittings                                       | kg/cm <sup>2</sup> /psi                               |                         |                  |
| 41709               | With 60" PLUS II™ standard fittings   | kg/cm <sup>2</sup> /psi                               |                         |                  |
| 41715*              | With 60" PLUS II™ standard fittings   | kg/cm <sup>2</sup> /psi                               |                         |                  |
| 41710               | With 60" PLUS II™ heavy duty black standard fittings                                | kg/cm <sup>2</sup> /psi                               |                         |                  |
| 41702               | With 60" PLUS II™ heavy duty black compact ball valve fittings                      | kg/cm <sup>2</sup> /psi                               |                         |                  |
| 42715               | With 60" PLUS II™ compact ball valve fittings                                       | kg/cm <sup>2</sup> /psi                               |                         |                  |
| 41711*              | With 60" PLUS II™ compact ball valve fittings                                       | kg/cm <sup>2</sup> /psi                               |                         |                  |
| 41652               | Manifold only with 5/16, 1/4", 5/16" hose fittings                                  | bar/psi   | R-32/410A               |                  |
| UPC#                | Description - °F - Red/Blue   | Scale   | Refrigerant             |                  |
| 41212               | Manifold only   | psi   | R-12/22/502             |                  |
| 41213               | With 36" PLUS II™ standard fittings   | psi   |                         |                  |
| 41220               | With 48" PLUS II™ standard fittings   | psi   |                         |                  |
| 41215               | With 60" PLUS II™ standard fittings   | psi   |                         |                  |
| 41219               | With 72" PLUS II™ standard fittings   | psi   |                         |                  |
| 44213               | With 36" PLUS II™ SealRight fittings  | psi   |                         |                  |
| 44220               | With 48" PLUS II™ SealRight fittings  | psi   |                         |                  |
| 44215               | With 60" PLUS II™ SealRight fittings  | psi   |                         |                  |
| 44219               | With 72" PLUS II™ SealRight fittings  | psi   |                         |                  |
| 42215               | With 60" PLUS II™ compact ball valve fittings                                       | psi   |                         |                  |
| 42219               | With 72" PLUS II™ compact ball valve fittings                                       | psi   |                         |                  |
| 41312               | Manifold only   | psi   | R-134a/404A/507         |                  |
| 41313               | With 36" PLUS II™ standard fittings   | psi   |                         |                  |
| 41311               | With 48" PLUS II™ standard fittings   | psi   |                         |                  |
| 41315               | With 60" PLUS II™ standard fittings   | psi   |                         |                  |
| 41319               | With 72" PLUS II™ standard fittings   | psi   |                         |                  |
| 43313               | With 36" PLUS II™ standard fittings   | psi   |                         |                  |
| 44313               | With 36" PLUS II™ SealRight fittings  | psi   |                         |                  |
| 44315               | With 60" PLUS II™ SealRight fittings  | psi   |                         |                  |
| 44319               | With 72" PLUS II™ SealRight fittings  | psi   |                         |                  |
| 42315               | With 60" PLUS II™ compact ball valve fittings                                       | psi   |                         |                  |
| 41202               | Manifold only   | psi   | R-22/134a/404A          |                  |
| 41209               | With 36" PLUS II™ standard fittings   | psi   |                         |                  |
| 41211               | With 60" PLUS II™ standard fittings   | psi   |                         |                  |
| UPC#                | UPC#  | Description - °C - Red/Blue                           | Scale                   | Refrigerant      |
| 42008               |   | Manifold only   | bar/psi                 | R-12/22/502      |
| 41283               |   | With 36" PLUS II™ standard fittings                   | bar/psi                 |                  |
| 41285               |   | With 60" PLUS II™ standard fittings                   | bar/psi                 |                  |
| 42002               |   | Manifold only   | kPa/psi                 |                  |
| 41223               |   | With 36" PLUS II™ standard fittings                   | kPa/psi                 |                  |
| 41225               |   | With 60" PLUS II™ standard fittings                   | kPa/psi                 |                  |
| 41292               |   | Manifold only   | kg/cm <sup>2</sup> /psi |                  |
| 41293               |   | With 36" PLUS II™ standard fittings                   | kg/cm <sup>2</sup> /psi |                  |
| 41295               |   | With 60" PLUS II™ standard fittings                   | kg/cm <sup>2</sup> /psi |                  |
| 41299               |   | With 72" PLUS II™ standard fittings                   | kg/cm <sup>2</sup> /psi |                  |
| 41382               |   | Manifold only   | bar/psi                 | R-134a/404A/507  |
| 41353               |   | With 36" PLUS II™ standard fittings                   | bar/psi                 |                  |
| 41355               |   | With 60" PLUS II™ standard fittings                   | bar/psi                 |                  |
| 43355               |   | With 60" PLUS II™ standard fittings                   | bar/psi                 |                  |
| 41392               |   | Manifold only   | kg/cm <sup>2</sup> /psi |                  |
| 41363               |   | With 36" PLUS II™ standard fittings                   | kg/cm <sup>2</sup> /psi |                  |
| 41365               |   | With 60" PLUS II™ standard fittings                   | kg/cm <sup>2</sup> /psi |                  |
| 43365               |   | With 60" PLUS II™ standard fittings                   | kg/cm <sup>2</sup> /psi |                  |
| 41332               |   | Manifold only   | bar/psi                 | R-134a/404A/407C |
| 40944               |   | Manifold only with 1/4" ports and 5/16" hose fittings | bar/MPa                 | R-410A           |
| 41781               |   | Manifold only with 5/16" fittings                     | bar/MPa                 |                  |
| 41780               |   | Manifold only with 1/4" fittings                      | bar/MPa                 |                  |

\*Special R-410A hose - R/B hoses are 1/4" x 45° 5/16" end; Y hose is 1/4" x 45° 1/4" end.

RECOVERY MACHINES  
 VACUUM PUMP SYSTEMS  
 VACUUM AND CHARGING HOSES  
 HOSE ADAPTERS, VALVES AND PARTS  
 CHARGING SYSTEMS  
 GAUGES  
 WIRELESS AND ELECTRONIC INSTRUMENTS  
 HEATING INSTRUMENTS  
 LEAK MONITORS AND DETECTORS  
 SYSTEM TOOLS

RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
VACUUM AND CHARGING HOSES  
HOSE ADAPTERS, VALVES AND PARTS  
CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## SERIES 41 MANIFOLDS

°F and °C with 3-1/8" (80 mm) gauges



Series 41 manifolds are also available with larger, easier to read 3-1/8" color-coded gauges in rugged steel cases with polycarbonate crystals. These gauges feature 1% accuracy (Class 1) for an exact reading in critical charge systems.

- Color-coded scales
- Sliding double "O" ring pistons reduce wear
- Long life nylon seats
- Forged brass body for durability
- Full porting maximizes capacity and flow
- Some models include color-coded, 60" PLUS II™ hoses with standard 1/4" flare fittings
- Hose assemblies UL recognized for 4000 psi (275 bar) burst and 800 psi (55 bar) working pressure. File# SA9737
- Made in the USA

## SERIES 41 DELUXE MANIFOLDS

°F Class 1 (1% accuracy) brass gauges



All the same features as the regular "Series 41" with 1% accuracy (Class 1) brass gauges.

- Upgraded movement with phosphor bronze plates, brass gears and pinions. Dissimilar parts create less friction and last longer. FlutterLess™ technology included
- Polished solid brass case with glass crystals
- Made in the USA

| Box   | Clamshell |  |             |                |
|-------|-----------|--|-------------|----------------|
| UPC#  | UPC#      | Description - °F/°C  | Scale       | Refrigerant    |
| 41863 | -         | Manifold only with 5/16"-1/4"-5/16" anchor fittings and 1/4" service fittings - red/blue gauge | kPa/psi     | R-32/410A      |
| 41652 | -         | Manifold only with 5/16", 1/4", 5/16" anchor and 1/4" service fittings                         | bar/psi     |                |
| 41659 | -         | Manifold only with 5/16" anchor fittings   | bar/psi     |                |
| -     | 42021     | Manifold only  | bar/psi     |                |
| -     | 42024     | With 60" PLUS II™ standard fittings  | bar/psi     |                |
| 41862 | -         | Manifold only with 5/16" anchor and service fittings   | kPa/psi     |                |
| -     | 41865     | 41862 with 60" PLUS II™ 5/16" fittings   | kPa/psi     | R-600          |
| -     | 41866     | Manifold only  | bar/kPa/psi |                |
| UPC#  | UPC#      | Description - °F - Red/Blue  | Scale       |                |
| -     | 41842     | Manifold only  | psi         | R-12/22/134a   |
| -     | 42007     | With 60" PLUS II™ standard fittings  | psi         |                |
| -     | 41846     | With 72" PLUS II™ with couplers  | psi         |                |
| -     | 42001     | Manifold only  | psi         | R-22/404A/410A |
| -     | 49271*    | Certified 42001 manifold   | psi         |                |
| -     | 42004     | With 60" PLUS II™ standard fittings  | psi         |                |
| -     | 42201     | With 60" PLUS II™ compact ball valve fittings  | psi         |                |
| -     | 42005     | Manifold only  | psi         | R-22/134a/404A |
| -     | 49272*    | Certified 42005 manifold   | psi         |                |
| -     | 42006     | With 60" PLUS II™ standard fittings  | psi         |                |
| -     | 42205     | With 60" PLUS II™ compact ball valve fittings  | psi         |                |
| UPC#  | UPC#      | Description - °C - Red/Blue  | Scale       | Refrigerant    |
| -     | 41622     | Manifold only  | bar/psi     | R-22/134a/404A |
| -     | 41852     | Manifold only  | kPa/psi     |                |
| -     | 41855     | With 60" PLUS II™ standard fittings  | kPa/psi     |                |
| -     | 41632     | Manifold only  | bar/psi     | R-12/134a/413A |
| -     | 42031     | Manifold only  | psi         | R-22/404A/410A |
| -     | 42034     | With 60" PLUS II™ hose, standard fittings  | psi         | R-22/404A/410A |
| 41784 |           | Manifold only with 5/16" fittings  | MPa         | R-32/410A      |

\* Manifold comes standard with certified gauges. For more information on the certification of 3-1/8" gauges, see page 51.

## NH<sub>3</sub> AMMONIA MANIFOLD

| UPC#  | Description                                  |
|-------|--|
| 40190 | Manifold body with valves                    |
| 40192 | Manifold and gauges                          |
| 40193 | Manifold and gauges with three NHA 48" hoses |
| 40199 | Replacement valve assembly                   |
| 41131 | "O"-rings (10 pak)                           |
| 41142 | Replacement screw                            |
| 41151 | Hose anchor                                  |

This heavy duty manifold features cast iron body and full size metal handles. Dual temperature/pressure R717 gauge has bar with °C and psi with °F ammonia scales.


- Finger-tight one-piece valve stem for positive seal on nylon seat
- Easy, accurate valve adjustment
- Use only with NH<sub>3</sub> rated hoses
- Made in the USA



# HEAT PUMP MANIFOLD



The YELLOW JACKET® Heat Pump Manifold features two 800 psi gauges to read all heat pump pressure conditions. Traditional lo-side manifold gauges can be susceptible to damage when heat pumps go into heating mode. Because the lo-side gauge of the YELLOW JACKET Heat Pump Manifold is also designed for pressures up to 800 psi, it can read the pressure whether the pump is in heating mode, cooling mode or transition.

- Large 3-1/8" gauges feature black steel cases with polycarbonate crystal
- Hi- and lo-side gauges read up to 800 psi
- Larger dials are bold and easy to read
- Dials with 1% accuracy (Class 1) full scale movement provide the level of accuracy necessary for critical charge systems
- Proven sliding double "O" ring pistons reduce wear
- Long life nylon seats
- Forged brass body for durability
- Full porting maximizes capacity and flow
- Full-size metal valve handles for easy operation
- Hose assemblies UL recognized for 4000 psi (275 bar) burst and 800 psi (55 bar) working pressure (File # SA9737)
- Made in the USA 

| UPC#  | Description                 | Hoses  | Hose holder fittings | Refrigerants               |
|-------|-----------------------------|--|----------------------|----------------------------|
| 42041 | Heat pump manifold          | None   | 1/4-1/4-1/4"         |                            |
| 42044 | Heat pump manifold          | (3) 60" black PLUS II™ 1/4" hoses  | 1/4-1/4-1/4"         | R-22/<br>R-407C/<br>R-410A |
| 49133 | High side replacement gauge | 800 psi, °F  | -                    |                            |
| 49134 | Low side replacement gauge  | 800 psi, °F  | -                    |                            |
| 42052 | Heat pump manifold          | None   | 1/4-1/4-1/4"         |                            |
| 42055 | Heat pump manifold          | (3) 60" black PLUS II™ 1/4" ball valve hoses   | 1/4-1/4-1/4"         |                            |
| 42051 | Heat pump manifold          | None   | 5/16-1/4-5/16"       |                            |
| 42054 | Heat pump manifold          | 60" black PLUS II™ 1/4" ball valve hoses; (2) 5/16" on service end (1) 1/4" on service end | 5/16-1/4-5/16"       | R-410A                     |
| 49971 | Heat Pump Manifold          | Manifold only  | 5/16-3/8-1/4-5/16"   |                            |
| 49141 | High side replacement gauge | 800 psi (55 bar), °C and °F  | -                    |                            |
| 49142 | Low side replacement gauge  | 800 psi (55 bar), °C and °F  | -                    |                            |



RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
VACUUM AND CHARGING HOSES  
HOSE ADAPTERS, VALVES AND PARTS

CHARGING SYSTEMS

GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## LIQUID CHARGER



Liquid charging is recommended when charging blends into refrigeration and air conditioning systems, and a liquid charger adapter is necessary for safe and fast liquid charging through the low pressure side of a system.

- The adapter connects to the cylinder valve or refrigerant can
- To protect the compressor, adapter orifice reduces liquid flow to a level below compressor capacity
- Eliminates the time and work of heating cylinders

| UPC#  | Description                   |
|-------|-------------------------------|
| 41123 | 1/4" Liquid charging adapter  |
| 41124 | 5/16" Liquid charging adapter |
| 41132 | 1/4" "O" ring and orifice     |
| 41138 | 5/16" "O" ring and orifice    |

## "O" RING LUBRICANT

To lubricate "O" rings in manifolds when pistons or "O" rings are being replaced. Use sparingly.

| UPC#  | Description                   |
|-------|-------------------------------|
| 41118 | "O" ring lubricant (0.75 oz.) |

## MANIFOLD PARTS KIT For Series 41, TITAN™, and BRUTE II™ Manifolds



| UPC#                  | Description  |
|-----------------------|--|
| 41099                 | Complete kit   |
| 41105                 | Box only with label  |
| Kit contents/quantity |  |
| 41041                 | Yellow handle with screw - TITAN (4)                                 |
| 41042                 | Blue handle with screw - TITAN (3)                                   |
| 41044                 | Red handle with screw - TITAN (3)                                    |
| 41048                 | Handle screws (2) - Series 41/TITAN/BRUTE II (6 sets)                |
| 41061                 | Sight glass (1), retainer (1), gaskets (2) - BRUTE II/TITAN (4 sets) |
| 41090                 | Handle screws (2) - Older style BRUTE (6 sets)                       |
| 41091                 | Yellow handle with screw - BRUTE II (4)                              |
| 41092                 | Blue handle with screw - BRUTE II (3)                                |
| 41094                 | Red handle with screw - BRUTE II (3)                                 |
| 41096                 | Valve retaining nut - BRUTE II (4)                                   |
| 41103                 | 3/8" Piston - BRUTE II (8)   |
| 41106                 | Feed screw - BRUTE II (4)  |
| 41134                 | Feed screw - Series 41/TITAN (6)                                     |
| 41135                 | Valve retaining nut - Series 41/TITAN (6)                            |
| 41141                 | Metal handle with screw - Series 41 (4)                              |
| 41142                 | Handle screws (2) - Series 41/TITAN/BRUTE II (6 sets)                |
| 41133                 | 1/4" Piston - Series 41/TITAN (6)                                    |

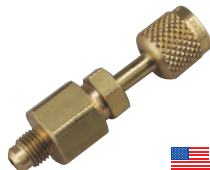
## MANIFOLD CARRYING CASES



Heavy duty blue blow- molded cases are available in four different manifold/hose configurations. Includes handle and a long life top hinge.

| UPC#  | Description   |
|-------|---|
| 40261 | Series 41 case - 13-1/2" x 10" x 3-1/2"   |
| 40263 | Series 41 case - 12-1/4" x 8" x 4-1/4"  |
| 40822 | Case for BRUTE™ II and Refrigeration System Analyzer (40815) - 6-1/2" x 17" x 14" |

## MANIFOLD PARTICULATE FILTER



As manifold usage changes with more recovery change outs, more particulate matter is drawn through manifolds. Trap the particles with these fittings before they damage valve seats or pass into your recovery equipment. Replaceable, cleanable screens.

| UPC#  | Description                       |
|-------|-----------------------------------|
| 41119 | 1/4" Manifold particulate filter  |
| 41120 | 3/8" Manifold particulate filter  |
| 41121 | 1/2" Manifold particulate filter  |
| 41122 | Replacement filter screen (5 pak) |

## SIGHT GLASS TOOL

Designed to fit into the TITAN and BRUTE II sightglass retainers, metal insert allows you to remove or tighten the retainer using a 1/4" drive wrench.

| UPC#  | Description                      |
|-------|----------------------------------|
| 41095 | Sight glass tool for TITAN/BRUTE |

## SINGLE GAUGE MANIFOLD

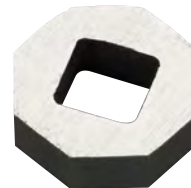
- Check pressure on lo-side of system
- Nylon seals and double "O" ring pistons

| UPC#  | Description                       |
|-------|-----------------------------------|
| 40318 | Lo-side manifold R-12/22/502      |
| 40319 | Lo-side manifold R-134a/404A/407C |
| 40320 | Lo-side manifold R-410A           |
| 40326 | Lo-side 1/4" valve R-32/410A      |

## SINGLE TEST GAUGES

Quick pressure checks – use lo- or hi-side gauge with quick coupler to attach directly to system or tanks.

| UPC#   | Description                                       |
|--|---|
| Gauge with quick coupler and 12" hose - angle coupling           |   |
| 14811  | 12" Red hose 1/4" Male flare x 45° quick coupler  |
| 14821  | 12" Blue hose 1/4" Male flare x 45° quick coupler |
| 19110  | Quick coupler only                                |
| Gauge with 19110 quick coupler for recovery tank pressure checks |   |
| 40331  | Red pressure °F                                   |
| 40332  | Blue compound °F                                  |
| 40341  | Red pressure w/quick coupler & hose               |
| 40342  | Blue compound w/quick coupler & hose              |
| 19110  | Quick coupler only                                |



RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
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GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## SPECIALIZED AND GENERAL USE GAUGES





YELLOW JACKET®

# 3-1/8" Dry Manifold Gauges

Class 1 (1% accuracy) calibration with high visibility colored temperature scales

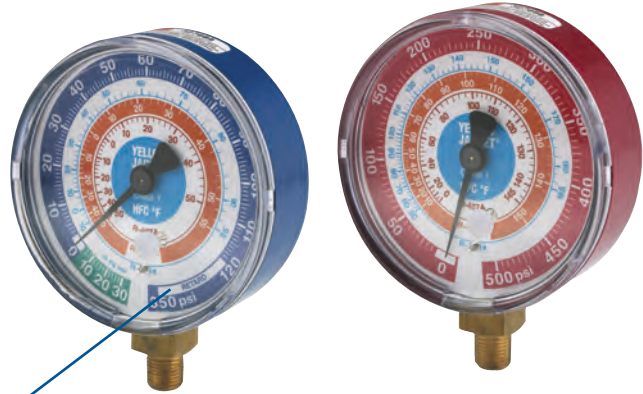


# 3-1/8" (80 mm) DRY MANIFOLD GAUGES (°F and °C) RED, BLUE AND BLACK With 1% accuracy (Class 1) calibration

Large 3-1/8" gauges are housed in a red or blue steel case with front recalibrator screw. High visibility colored temperature scales are easy to read through the full view polycarbonate crystal.

- Flutterless™ technology with brass surge protector to minimize needle pulsation
- Brass gauge movement
- Copper alloy Bourdon tube
- 1/8" NPT Male connection
- Calibrated to 1% accuracy
- Color-coded red for pressure and blue for compound
- Color-coded refrigerant types

When a gauge has a **RETARD zone**, full scale is considered to be the last marked reading prior to entering the RETARD zone. For example, this gauge has a full scale reading of 120 psi. Gauge accuracy is not specified in the RETARD zone.



| °F - Fahrenheit Gauges |                            |                  |                  |
|------------------------|----------------------------|------------------|------------------|
| UPC#                   | Description                | Pressure scale   | Refrigerants     |
| 49103                  | 3-1/8" Red pressure        | 0 - 500 psi      | R-12/22/134a     |
| 49104                  | 3-1/8" Blue compound       | 30"-0-120** psi  |                  |
| 49105                  | 3-1/8" Red pressure        | 0 - 500 psi      | R-22/134a/404A   |
| 49106                  | 3-1/8" Blue compound       | 30"-0-120** psi  |                  |
| 49111                  | 3-1/8" Red pressure        | 0 - 500 psi      | R-417A/422A/422D |
| 49112                  | 3-1/8" Blue compound       | 30"-0-120** psi  |                  |
| 49133                  | 3-1/8" Heat pump red dial  | 0 - 800 psi      | R-22/407C/410A   |
| 49134                  | 3-1/8" Heat pump blue dial | 0 - 800 psi      |                  |
| 49137                  | 3-1/8" Red pressure        | 0 - 800 psi      | R-22/404A/410A   |
| 49138                  | 3-1/8" Blue compound       | 30"-0-350*** psi |                  |
| 49141*                 | 3-1/8" Heat pump red dial  | 0 - 800 psi      | R-410A           |
| 49142*                 | 3-1/8" Heat pump blue dial | 0 - 800 psi      |                  |
| 49151                  | 3-1/8" Red pressure        | 0 - 500 psi      | R-134a/404A/407C |
| 49152                  | 3-1/8" Blue compound       | 30"-0-120** psi  |                  |
| 49157                  | 3-1/8" Red pressure        |                  |                  |
| 49158                  | 3-1/8" Blue compound       |                  |                  |

| Universal Gauges |                      |                |              |
|------------------|----------------------|----------------|--------------|
| UPC#             | Description          | Pressure scale | Refrigerants |
| 49149            | 3-1/8" Red pressure  | bar, KPa, psi  | R-600        |
| 49150            | 3-1/8" Blue compound | bar, KPa, psi  |              |
| 49155            | 3-1/8" Red pressure  |                | R-32         |
| 49156            | 3-1/8" Blue compound |                |              |

| Certified Gauges |                      |                  |                  |
|------------------|----------------------|------------------|------------------|
| 49203            | 3-1/8" Red pressure  | 0 - 500 psi      | R-12/22/134a     |
| 49204            | 3-1/8" Blue compound | 30"-0-120** psi  |                  |
| 49205            | 3-1/8" Red pressure  | 0 - 500 psi      | R-22/134a/404A   |
| 49206            | 3-1/8" Blue compound | 30"-0-120** psi  |                  |
| 49237            | 3-1/8" Red pressure  | 0 - 800 psi      | R-22/404A/410A   |
| 49238            | 3-1/8" Blue compound | 30"-0-350*** psi |                  |
| 49251            | 3-1/8" Red pressure  | 0 - 500 psi      | R-134a/404A/407C |
| 49252            | 3-1/8" Blue compound | 30"-0-120** psi  |                  |
| 49100            | Replacement crystal  |                  |                  |

| °C - Celsius Gauges |                            |                |                     |
|---------------------|----------------------------|----------------|---------------------|
| UPC#                | Description                | Pressure scale | Refrigerants        |
| 49107               | 3-1/8" Red pressure        | kPa and psi    | R-22/134a/404A      |
| 49108               | 3-1/8" Blue compound       | kPa and psi    |                     |
| 49169               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49170               | 3-1/8" Blue compound       | bar and psi    | R-32/410A           |
| 49109*              | 3-1/8" Red pressure        | kPa and psi    |                     |
| 49110*              | 3-1/8" Blue compound       | kPa and psi    | R-410A              |
| 49153               | 3-1/8" Red pressure        | bar and MPa    |                     |
| 49154               | 3-1/8" Blue compound       | bar and MPa    | R-134a/404A/407C    |
| 49131               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49132               | 3-1/8" Blue compound       | bar and psi    | R-22/404A/410A      |
| 49139               | 3-1/8" Red pressure        | psi            |                     |
| 49140               | 3-1/8" Blue compound       | psi            | R-410A              |
| 49141*              | 3-1/8" Heat pump red dial  | 0 - 800 psi    |                     |
| 49142*              | 3-1/8" Heat pump blue dial | 0 - 800 psi    | R-12/22/502         |
| 49145               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49146               | 3-1/8" Blue compound       | bar and psi    | R-32/410A           |
| 49147               | 3-1/8" Red pressure        | MPa            |                     |
| 49148               | 3-1/8" Blue compound       | MPa            | R-134a/404A/407C    |
| 49159*              | 3-1/8" Red pressure        | bar and psi    |                     |
| 49160*              | 3-1/8" Blue compound       | bar and psi    | R-12/134a/413A      |
| 49163               | 3-1/8" Red pressure        | bar and MPa    |                     |
| 49164               | 3-1/8" Blue compound       | bar and MPa    | R-134a/404A/407F    |
| 49165               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49166               | 3-1/8" Blue compound       | bar and psi    | R-22/134a/404A      |
| 49181               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49182               | 3-1/8" Blue compound       | bar and psi    | R-134a/404A/407C    |
| 49231               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49232               | 3-1/8" Blue compound       | bar and psi    | R-12/22/502         |
| 49245               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49246               | 3-1/8" Blue compound       | bar and psi    | R-32/410A           |
| 49259               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49260               | 3-1/8" Blue compound       | bar and psi    | R-134a/404A/407C    |
| 49263               | 3-1/8" Red pressure        | bar and MPa    |                     |
| 49264               | 3-1/8" Blue compound       | bar and MPa    | R-12/134a/413A      |
| 49265               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49266               | 3-1/8" Blue compound       | bar and psi    | R-22/134a/404A      |
| 49269               | 3-1/8" Red pressure        | bar and psi    |                     |
| 49270               | 3-1/8" Blue compound       | bar and psi    | Replacement crystal |
| 49100               | Replacement crystal        |                |                     |


\* These gauges have °C and °F on dial.



## 3-1/2" (90 mm) LIQUID-FILLED MANIFOLD GAUGES (°F and °C) RED AND BLUE

With 1% accuracy (Class 1) calibration



Gauges are completely filled with glycerin for maximum protection from pulsation. Large 3-1/2" (90 mm) diameter gauge with refrigerants color-coded on the dials in bold numbers. Offset stem fits all major manifold brands. 

- Now with zero adjustment
- 1/8" NPT Male connection
- Temperature rating of 0° to 122°F (-18° to 50°C)
- Calibrated to 1% accuracy (Class 1)

### °F - Fahrenheit and °C - Celsius Gauges

| UPC#  | Description          | Pressure scale                | Refrigerants |
|-------|----------------------|-------------------------------|--------------|
| 49511 | 3-1/2" Red pressure  | 0-500 psi (0 to 34 bar)       | R-22         |
| 49512 | 3-1/2" Blue compound | 30"-0-120 psi (-1 to 8 bar)   |              |
| 49519 | 3-1/2" Red pressure  | 0-800 psi (0 to 55 bar)       | R-410A       |
| 49520 | 3-1/2" Blue compound | 30"-0-300* psi (-1 to 21 bar) |              |

### °F - Fahrenheit Gauges

| UPC#  | Description          | Pressure scale | Refrigerants     |
|-------|----------------------|----------------|------------------|
| 49513 | 3-1/2" Red pressure  | 0-500 psi      | R-22/134a/404A   |
| 49514 | 3-1/2" Blue compound | 30"-0-120 psi  |                  |
| 49515 | 3-1/2" Red pressure  | 0-800 psi      | R-22/410A        |
| 49516 | 3-1/2" Blue compound | 30"-0-300* psi |                  |
| 49517 | 3-1/2" Red pressure  | 0-500 psi      | R-134a/404A/407C |
| 49518 | 3-1/2" Blue compound | 30"-0-120 psi  |                  |

### °C - Celsius Gauges

| UPC#  | Description          | Pressure scale              | Refrigerants     |
|-------|----------------------|-----------------------------|------------------|
| 49521 | 3-1/2" Red pressure  | 0-500 psi (0 to 35 bar)     | R-134a/404A/407C |
| 49522 | 3-1/2" Blue compound | 30"-0-116 psi (-1 to 8 bar) |                  |

\*Features retard protection to 500 psi.



## 2-1/2" (68 mm) MANIFOLD GAUGES (°F and °C) RED AND BLUE Class B



- Steel case with 3-2-3% accuracy
- High-visibility dials - colored temperature scales for easy reading;
- Flutterless™ technology surge protector minimizes the needle pulsation for improved accuracy
- 1/8" NPT Male connection; calibration traceable to NIST standards

### °F - Fahrenheit Gauges

| UPC#   | Description          | Pressure scale                      | Refrigerants    |
|--------|----------------------|-------------------------------------|-----------------|
| 49001  | 2-1/2" Red pressure  | 0 - 500 psi                         | R-12/22/502     |
| 49002  | 2-1/2" Blue compound | 30"-0-120** psi                     |                 |
| 49013* | 2-1/2" Red pressure  | 0 - 500 psi                         | R-134a          |
| 49014* | 2-1/2" Blue compound | 30"-0-120** psi                     |                 |
| 49015  | 2-1/2" Red pressure  | 0 - 500 psi                         | R-22/134a/404A  |
| 49016  | 2-1/2" Blue compound | 30"-0-120** psi                     |                 |
| 49035* | 2-1/2" Red pressure  | 0 - 800 psi/kg/cm <sup>2</sup>      | R-410A          |
| 49036* | 2-1/2" Blue compound | 30"-0-300*** psi/kg/cm <sup>2</sup> |                 |
| 49051  | 2-1/2" Red pressure  | 0 - 500 psi                         | R-134a/404A/507 |
| 49052  | 2-1/2" Blue compound | 30"-0-120** psi                     |                 |
| 49053* | 2-1/2" Red pressure  | 0 - 55 bar (0-5.5 MPa)              | R-410A          |
| 49054* | 2-1/2" Blue compound | -1 - 21 bar (-0.1 - 2.1 MPa)        |                 |
| 49010  | Replacement crystal  |                                     |                 |

\* These gauges have °C and °F on dial.

\*\* Features retard protection to 350 psi.

\*\*\* Features retard protection to 500 psi.

Note: Small screw in back is 6/32" x 5/32" Phillips pan head screw.

Note: Gauges not meant to be used with nitrogen.

### °C - Celsius Gauges

| UPC#  | Description          | Pressure scale             | Refrigerants     |
|-------|----------------------|----------------------------|------------------|
| 49005 | 2-1/2" Red pressure  | bar and psi                | R-12/22/502      |
| 49006 | 2-1/2" Blue compound | bar and psi                |                  |
| 49027 | 2-1/2" Red pressure  | kg/cm <sup>2</sup> and psi | R-12/22/502      |
| 49028 | 2-1/2" Blue compound | kg/cm <sup>2</sup> and psi |                  |
| 49031 | 2-1/2" Red pressure  | bar and psi                | R-22/134a/407C   |
| 49032 | 2-1/2" Blue compound | bar and psi                |                  |
| 49033 | 2-1/2" Red pressure  | bar and psi                | R-22/134a/404A   |
| 49034 | 2-1/2" Blue compound | bar and psi                |                  |
| 49055 | 2-1/2" Red pressure  | bar and psi                | R-134a/404A/507  |
| 49056 | 2-1/2" Blue compound | bar and psi                |                  |
| 49057 | 2-1/2" Red pressure  | kg/cm <sup>2</sup> and psi | R-134a/404A/507  |
| 49058 | 2-1/2" Blue compound | kg/cm <sup>2</sup> and psi |                  |
| 49063 | 2-1/2" Red pressure  | bar and psi                | R-134a/404A/407C |
| 49064 | 2-1/2" Blue compound | bar and psi                |                  |
| 49010 | Replacement crystal  |                            |                  |



# HEAVY DUTY 2-1/2" BRASS MANIFOLD GAUGES (°F and °C)

With 1% accuracy (Class 1) calibration



Solid brass case and premium movements. Heavy duty phosphor bronze and stainless steel internal components for longer service life under severe use.

- Flutterless™ technology with brass surge protector to minimize needle pulsation

- 1/8" NPT Male connection
- Calibrated to 1% accuracy
- Full view glass crystal

| UPC#                    | Description  | Pressure scale | Refrigerants     |
|-------------------------|--|----------------|------------------|
| 49067                   | °F Brass pressure  | 0 - 500 psi    | R-22/134a/404A   |
| 49068                   | °F Brass compound  | 30"-0-120* psi |                  |
| 49073                   | °C Brass pressure  | 0 - 500 psi    | R-134a/404A/407C |
| 49074                   | °C Brass compound  | 30"-0-120* psi |                  |
| <b>Certified Gauges</b> |  |                |                  |
| 49199                   | 2-1/2" Brass pressure                                    | 0 - 500 psi    | R-22/134a/404A   |
| 49200                   | 2-1/2" Brass compound                                    | 30"-0-120* psi |                  |
| 49010                   | Replacement crystal (polycarbonate) for old 49011, 49012 |                |                  |
| 49039                   | Glass crystal for brass gauge                            |                |                  |
| 49040                   | Brass gauge ring   |                |                  |

\*Features retard protection to 350 psi.  
Note: Gauges are not meant to be used with nitrogen.

# PROTECTIVE GAUGE BOOTS

For 2-1/2" and 3-1/8" gauges



- Rubber boots slip easily around gauges to cushion and protect them from impact
- Fit 2-1/2" or 3-1/8" gauges without covering easy access recalibration screw
- Color-coded red or blue to match gauge

| UPC#  | Description                        |
|-------|------------------------------------|
| 49090 | 2-1/2" Set of gauge boots          |
| 49091 | 2-1/2" Red protective gauge boot   |
| 49092 | 2-1/2" Blue protective gauge boot  |
| 49190 | 3-1/8" Set of gauge boots          |
| 49191 | 3-1/8" Red protective gauge boot   |
| 49192 | 3-1/8" Blue protective gauge boot  |
| 49087 | Red solar gauge boot               |
| 49088 | Blue solar gauge boot              |
| 49089 | Set red and blue solar gauge boots |



RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
VACUUM AND CHARGING HOSES  
HOSE ADAPTERS, VALVES AND PARTS  
CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

RECOVERY MACHINES  
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## 3-1/8" MECHANICAL VACUUM GAUGES



Full range mechanical Bourdon tube steel gauges for determining system vacuum is more accurate than a compound gauge. All gauges are 1/8" NPT Male bottom connection.

- Larger to show vacuum more accurately in inches of mercury and Torr (or millibar)

**CAUTION:** Vacuum gauges must be handled carefully. Dropping, pressurizing and rough handling reduce their life.

| UPC#  | Size   | Scale                          | Connection          | Case  |
|-------|--------|--------------------------------|---------------------|-------|
| 69044 | 3-1/8" | 0-30" Hg & 760-0 Torr          | 1/8" NPT Male lower | Green |
| 69045 | 3-1/8" | 1000-0 millibar & 30-0" (Euro) | 1/8" NPT Male lower | Green |

## LOW PRESSURE DIAPHRAGM 2-1/2" GAUGES



- The bronze diaphragm is designed for better protection on incidental overpressure
- Intended for low pressure applications only
- Black steel case
- Cannot be recalibrated

| UPC#  | Description                     | Range      |
|-------|---------------------------------|------------|
| 78056 | 2-1/2" Barb type connection     | 0-10" W.C. |
| 78061 | 2-1/2" Barb type connection     | 0-35" W.C. |
| 78057 | 2-1/2" 1/4" NPT Male connection | 0-10" W.C. |
| 78066 | 2-1/2" 1/4" NPT Male connection | 0-35" W.C. |

## 2-1/2" AMMONIA GAUGES With dual scale



Ammonia gauges are designed for use on manifolds and as permanent gauges on any system or equipment charged with ammonia. The Bourdon tube is made of 316 stainless. The dials show dual temperature and pressure scales. All gauges are equipped with restrictors to protect the gauges against pulsating pressure.

- 1/4" NPT Male connection
- Black steel gauges
- Steel sockets
- Calibrated to 3-2-3% accuracy

| UPC # | Description                                      | Range                                     |
|-------|--|---|
| 40201 | 2-1/2" Gauge with twist on polycarbonate crystal | 30" - 0 - 400 psi °F and -0.1-0-28 bar °C |
| 40202 | 2-1/2" Gauge with twist on polycarbonate crystal | 30" - 0 - 150 psi °F and -0.1-0-10 bar °C |
| 49010 | 2-1/2" Replacement crystal                       |   |

## WIRELESS AND ELECTRONIC INSTRUMENTS





YELLOW JACKET®

## Electronic Charging Scales

Eliminates refrigerant transfer from tank to cylinder to system.  
The cylinder with refrigerant is weighed before and after charging.  
Charge directly into the system or recover from the system



Electronic charging scales show the progress of the charge as it's happening, indicating when to close the valves and stop the charge. Works with any refrigerant in any system.

- Calibration standards traceable to NIST
- Removable control module on retractable 5' coiled cord
- Mechanical overload protection and "OL" alert on LCD
- Industrial grade circuitry for long life performance
- Minus (-) reading shows weight removed from the platform

- Single point load cell strain gauge for long-term stability and accuracy



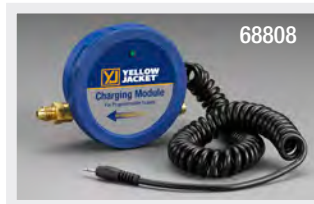
Full bridge configuration with four strain gauges for accuracy.

Programmable electronic charging scales have added capabilities for automated, faster and more economical charging. Simply program the charging weight and the valve will close automatically when the charge is complete.

- Mesh filter in charging module protects solenoid valve from debris
- Low flow triggers automatic hold to extend solenoid life
- Schrader valve prevents backflow through solenoid

- Charging accuracy is equal to scale accuracy +/- 0.25 oz.
- Solenoid valve with 400 psi maximum operating pressure differential (MOPD) allows metering broad range of refrigerants
- Made in the USA

Convert standard 68802 and 68800 scales to programmable with upgrade kits 68804 and 68805. Each kit includes a charging module, power pack, instruction manual and larger carrying case to hold all parts.



**Specifications**

Resolution: 0.1 oz./0.01 lb./0.01 kg  
 Display: Sealed LCD with high resolution 0.5" characters  
 Keypad: Moisture resistant membrane keypad with tactile metal domes  
 Operating temperature range: 32° to 122°F (0° to 50°C)  
 Storage temperature range: -4° to 158°F (-20° to 70°C)  
 Power: 9V battery, battery life approximately 25 hours

**Specifications: 110 lbs. (50 kg) scale**

Platform size: 9" x 9" (228 mm x 228 mm)  
 Case size: 15.5" x 12.25" x 3.25" (394 mm x 311 mm x 83 mm)  
 Accuracy: ± 0.5 oz./ ± 0.03 lb./ ± 0.015 kg or 0.1% of reading, whichever is greater  
 Total unit weight: 9 lbs. (4.1 kg)

**Specifications: 220 lbs. (100 kg) scale**

Platform size: 11.3" x 11.3" (287 mm x 287 mm)  
 Case size: 18" x 13" x 4.25" (457 mm x 330 mm x 108 mm)  
 Accuracy: ± 1.0 oz./ ± 0.06 lb./ ± 0.03 kg or 0.1% of reading, whichever is greater  
 Total unit weight: 12 lbs. (5.4 kg)

| UPC#  | Description  |
|-------|--|
| 68802 | Electronic charging scale 110 lbs. (50 kg)               |
| 68812 | Electronic charging scale 220 lbs. (100 kg)              |
| 68803 | Programmable electronic charging scale 110 lbs. (50 kg)  |
| 68813 | Programmable electronic charging scale 220 lbs. (100 kg) |
| 68800 | Metric electronic charging scale 50 kg (110 lbs.)        |
| 68810 | Metric electronic charging scale 100 kg (220 lbs.)       |
| 68801 | Metric programmable charging scale 50 kg (110 lbs.)      |
| 68811 | Metric programmable charging scale 100 kg (220 lbs.)     |
| 68804 | 115V Upgrade kit   |
| 68805 | 230V Upgrade kit   |
| 68806 | 115V Adapter   |
| 68807 | 230V Adapter   |
| 68818 | 230V Adapter (UK)  |
| 68835 | Replacement battery cover (black)                        |
| 69089 | Replacement battery cover (blue)                         |
| 68808 | Charging module  |



Model 68802 – 110 lbs. (50 kg)  
9" x 9" (228 mm x 228 mm)

Model 68812 – 220 lbs. (100 kg)  
11.3" x 11.3" (287 mm x 287 mm)

## MANTOOTH WIRELESS VACUUM GAUGE AND P/T GAUGE COMBINATION



The YELLOW JACKET ManTooth-PTV (67023) shown above provides vacuum and high- and low-side P/T readings. This full set includes dual non-tethered pressure/temperature gauges, two wired temperature clamps, and one interchangeable vacuum gauge. The single ManTooth-PTV (67021) can be combined with an existing ManTooth P/T device (67001) for adding wireless vacuum capability and/or expanding it to a full system analysis tool. Simply update your ManTooth P/T app to version 2.0, connect to the 67020 hardware, and you're ready to go!

To enable mounting on 5/16" systems, add coupler 19221 (90°) or 19121 (straight).

### Product Features:

- Interchangeable/removable vacuum gauge
- Easy-to-clean vacuum sensor
- Built-in Schrader cores for easy refrigerant charging
- Operates with and without hoses attached
- Two year warranty
- High impact glass reinforced housing
- Rechargeable LiPo battery for long battery life
- Robust/rugged vacuum sensor
- Integral magnet for mounting on framework
- Integrated rubber side grip for easy handling

### App Features:

- Available in English, French, Spanish, Dutch, and German.
- Data logging to record and document values during servicing
- Improved connectivity and reconnect process if signal is lost
- Ability to download logged data for graphing in Excel
- For iOS and Android devices
- Backwards compatible with existing ManTooth Devices (excluding vacuum gauge)

| UPC#  | Description  |
|-------|--|
| 67020 | ManTooth™-V (Vacuum only) with side grip               |
| 67021 | ManTooth™-PTV Single with side grip                    |
| 67023 | ManTooth™-PTV Dual with side grip                      |
| UPC#  | Replacement Parts                                      |
| 67030 | Vacuum gauge   |
| 67012 | USB Cord   |
| 67014 | Carrying case  |
| 93394 | Tether cap   |
| 19020 | Hose gaskets (10 pak)                                  |
| 19121 | Straight 5/16" Flare quick connect x 1/4" Male coupler |
| 19221 | 90° 5/16" Flare quick connect x 1/4" Male coupler      |
| 19302 | Valve depressor (10 pak)                               |
| 19305 | Schrader valve (10 pak)                                |

### Pressure/Temperature Specifications

|                                       |   |
|---------------------------------------|---|
| Pressure Sensing Resolution           | 0.1 psi, 0.1 bar, 1 kPa, 0.001 MPa, 0.01 kg/cm <sup>2</sup>   |
| Pressure Sensing Accuracy             | 0.5% of full scale at 25°C; 1% of full scale 55°F to 130°F; 2% of full scale -40°F to 248°F   |
| Working Pressure                      | 0 – 700 psia (48.3 bar)   |
| Proof Pressure                        | Tolerable pressure without internal damage 1000 psia  |
| Burst Pressure                        | Tolerable pressure without loss of seal 1500 psia   |
| Temperature Sensor Range (Instrument) | Sensing element: -40°F to 266°F (-40°C to 130°C); Max Cord temp: 176°F (80°C); Max Clamp Temp: 203°F (95°C)   |
| Temperature Display Resolution        | 0.1°F or °C   |
| Temperature Accuracy (Instrument)     | ±0.2°C (±0.36°F)  |
| Working Temperature                   | -4°F to 160°F (-20°C to 71°C) Limited by battery  |
| Storage Temperature                   | -4°F to 160°F (-20°C to 71°C) - for best battery performance do not store at over 100°F (38°C)  |
| Working Humidity                      | 0-95% RH (non-condensing)   |
| IP Class                              | IP 50   |
| Bluetooth Range                       | 70-90 ft. (Class 1) or 30-40 ft. (Class 2) in most cases (varies depending on the Bluetooth capability of smart device used). Under perfect conditions (clear line of sight and low interference) communications can extend up to 300 feet. |
| Bluetooth Radio                       | Class 1 Bluetooth 2.1 Radio   |
| Size and weight                       | 6" long x 1.6" wide x 2.3" thick (15.3 x 4 x 5.8 cm); 0.5 lbs (225 grams)   |
| Superheat and Subcool                 | Automatically calculated by the ManTooth App  |
| Max. and Min. Pressures               | Displays and records the maximum and minimum pressures  |
| Refrigerant Database                  | 98 NIST refrigerant profiles included; upgradeable  |
| Screenshot Feature                    | Save pressure and temperature readings from your sessions; automatically organize   |
| Temperature Sensors                   | Capable of measuring 2 temperatures using high accuracy NTC thermistors   |
| Pressure Transducers                  | 67001/67003 – one pressure transducer; 67002 – two pressure transducers   |
| System Attachment                     | Very small internal volume minimizes refrigerant loss during system analysis.   |
| Pressure Zeroing                      | Simple single button zeroing at the start of each session   |
| Elevation Compensation                | Enter elevation at the start of the session for effortless psia compensation  |
| Battery                               | Rechargeable LiPo battery for 10+ hours continuous life   |

### Vacuum Specifications

|                                |   |
|--------------------------------|---|
| Cord Length                    | Approximately 33"                       |
| Magnet Strength                | 8 lbs. holding force                    |
| Operational Temperature Range  | 10 – 122F 12 – 50C                      |
| Calibration                    | Calibration standards traceable to NIST |
| Resolution                     | .1 micron                               |
| Warm-Up Time and Response Time | Instant                                 |

# MANTOOTH WIRELESS DIGITAL PRESSURE/TEMPERATURE GAUGE



The YELLOW JACKET® ManTooth™ Wireless Digital Pressure/Temperature Gauge provides wireless connection to your smart device so you can test the system without losing refrigerant (no hoses or manifolds necessary)!

The free downloadable ManTooth RSA app wirelessly calculates and displays the system's actual pressures, temperatures, superheat and subcooling in an easy-to-read color format on your iPhone®, iPad® or Android™ device.

**Additional Features:**

- Built-in Schrader ports to easily adjust refrigerant charge
- Range up to 400' (unobstructed)
- YELLOW JACKET ManTooth RSA app (free download)
- Two-year warranty
- Screenshot feature allows you to save pressure and temperature readings from your sessions which can be automatically organized by location and unit being serviced
- Share screenshots via e-mail right from your phone
- Easily track and store service history
- Rechargeable lithium polymer battery with 10 hours battery life

The ManTooth Single Pressure Wireless Digital P/T Gauge includes a single hardware device and clamp. Two single units can be purchased in a case by ordering Part #67003.

For dual pressure readings, use two of the 67001 ManTooth single pressure gauges or the 67002 ManTooth Dual Pressure Unit which comes with a P/T module, tether unit and two temperature probe clamps. This unit also includes a convenient carrying case which can be purchased separately for the single pressure unit.

| UPC#  | Description  |
|-------|--|
| 67001 | ManTooth™ Single Pressure Gauge (includes P/T Module with boot, temperature probe clamp, and USB cable)                                  |
| 67002 | ManTooth™ Dual Pressure Gauge Set (includes P/T Module and tether unit with boots, two temperature probe clamps, and USB cable in case)  |
| 67003 | Two (2) ManTooth™ Single Pressure Gauges (includes two P/T Modules with boots, two temperature probe clamps, and two USB cables in case) |

| UPC#  | Replacement Parts        |
|-------|--------------------------|
| 67010 | Clamp                    |
| 67012 | USB Cord                 |
| 67013 | Blue boot                |
| 67014 | Carrying case            |
| 93394 | Tether cap               |
| 19020 | Hose gaskets (10 pak)    |
| 19302 | Valve depressor (10 pak) |
| 19305 | Schrader valve (10 pak)  |

**Specifications:**

|                                       |   |
|---------------------------------------|---|
| Pressure Sensing Resolution           | 0.1 psi, 0.1 bar, 1 kPa, 0.001 MPa, 0.01 kg/cm <sup>2</sup>   |
| Pressure Sensing Accuracy             | 0.5% of full scale at 25°C; 1% of full scale 55°F to 130°F; 2% of full scale -40°F to 248°F   |
| Working Pressure                      | 0 – 700 psia (48.3 bar)   |
| Proof Pressure                        | Tolerable pressure without internal damage 1000 psia  |
| Burst Pressure                        | Tolerable pressure without loss of seal 1500 psia   |
| Temperature Sensor Range (Instrument) | Sensing element: -40°F to 266°F (-40°C to 130°C)<br>Max Cord temp: 176°F (80°C); Max Clamp Temp: 203°F (95°C)   |
| Temperature Display Resolution        | 0.1°F or °C   |
| Temperature Accuracy (Instrument)     | ±0.2°C (±0.36°F)  |
| Working Temperature                   | -4°F to 160°F (-20°C to 71°C)   |
| Storage Temperature                   | -4°F to 160°F (-20°C to 71°C)   |
| Working Humidity                      | 0-95% RH (non-condensing)   |
| IP Class                              | IP 50   |
| Battery Life                          | 10+ hours continuous  |
| Range                                 | 70-90 ft. (Class 1) or 30-40 ft. (Class 2) in most cases (varies depending on the Bluetooth capability of smart device used). Under perfect conditions (clear line of sight and low interference) communications can extend up to 300 feet. |
| Bluetooth Radio                       | Class 1 Bluetooth 2.1 Radio   |
| Size                                  | 6" long x 1.6" wide x 2.3" thick (15.3 x 4 x 5.8 cm)  |
| Weight                                | 0.5 lbs (225 grams)   |
| Superheat and Subcool                 | Automatically calculated by the ManTooth App  |
| Max. and Min. Pressures               | Displays and records the max and min pressures  |
| Refrigerant Database                  | 98 NIST refrigerant profiles included; upgradeable  |
| Screenshot Feature                    | Save pressure and temperature readings from your sessions which can be automatically organized by location and serviced unit  |
| Temperature Sensors                   | Capable of measuring 2 temperatures using high accuracy NTC thermistors   |
| Pressure Transducers                  | 67001/67003 – one 67002 – two   |
| System Attachment                     | Very small internal volume minimizes refrigerant loss during system analysis.   |
| Pressure Zeroing                      | Simple single button zeroing at the start of each session   |
| Elevation Compensation                | Enter at start of session for effortless psia compensation  |
| Battery                               | Rechargeable LiPo battery   |



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## DIGITAL VACUUM GAUGE

### Seven units of vacuum for confidence

This easy-to-use gauge shows that air and moisture have been removed from the system. Simple push of a button changes the display readout between 7 units of measurement. **Each displays from atmosphere to 10 microns (bargraph indication above 25000 microns) of vacuum to let you know that your vacuum pump is clean and performing properly.** If the sensor gets dirty, simply plug a new sensor into the gauge, run through a quick calibration process and be back on the job within minutes.



This product is protected by one or more of U.S. Patent Number: 6,779,350; 6,832,491; 7,073,346; 7,310,965; and 7,428,822.

- Unique patented thermal conductivity sensor automatically compensates for temperature
- Replaceable, cleanable, plug-in sensor (Part #69087) handles 450 psi positive pressure
- Displays seven different units of vacuum (microns, milliTor, Torr, millimeters of mercury, millibar, kiloPascal and Pascal)
- 12" coiled sensor cord stretches to 24" for easy reach, connectivity and readability of display
- Low battery indicator
- Automatic shut-off after 20 minutes
- Calibration standards traceable to NIST
- 32° to 122°F (0° to 50°C) operating temperature range
- 14 oz. (392 g) with battery
- Approximately 25 hours continuous battery life
- Accuracy  $\pm 20\%$  of reading
- Made in the USA 

| UPC#  | Description  |
|-------|--|
| 69086 | Hand-held vacuum gauge with fabric carry pouch               |
| 69087 | Replacement sensor for older models without detachable cords |
| 69088 | Replacement cable for original version - not detachable      |
| 40819 | Replacement cable for new version - detachable               |
| 69101 | Replacement sensor and cord assembly                         |
| 69091 | Replacement fabric pouch                                     |



## SUPEREVAC™ LCD VACUUM GAUGE

### Full range from atmosphere to 1 micron

The SUPEREVAC™ LCD vacuum gauge combines thermocouple sensor technology with advanced electronics for precise readings and repeatability not found with thermistor sensors or analog meters.

Thermocouple technology has long been proven in laboratory and precision industrial instrumentation for sensing the deep vacuum range. Thermocouple sensors are factory calibrated and exhibit few of the electronic variances of thermistor sensors found in many other electronic gauges. Durable molded case with storage for sensor, cable and brass connector.



#### Specifications

- Response time: 3 seconds
- Calibration: Automatic
- Warm up: 3 seconds
- Sensor cable: 5.5' (167 cm) coiled
- Sensor connection: 1/4" Male flare
- Maximum pressure: To avoid sensor damage, do not exceed 5 psig
- Operating temperature range: 32° to 120°F (0° to 49°C)
- Display: 0.5" LCD with battery check
- Automatic shut-off: Yes
- Power: D cell battery, 70 hours continuous battery life
- Dimensions: 9" x 12.25" x 2.37" (230 mm x 310 mm x 60 mm)
- Accuracy: ± 20% of reading

| UPC#  | Description  |
|-------|--|
| 69075 | SUPEREVAC™ LCD vacuum gauge full range complete in case                  |
| 69067 | Optional ball valve to add to sensor 1/8" NPT Female x 1/4" Female flare |
| 69071 | Brass connector 1/4" Female flare x 1/4" Female flare                    |
| 69073 | Replacement sensor for 69070, 69075                                      |
| 19110 | Optional coupler to add to sensor 1/8" NPT Female x 1/4" Female flare    |
| 69058 | Replacement cord   |

#### Thermocouple sensor features:

- No adjustments or warm-up. Stays calibrated after on/off switching and long evacuations
- Automatic battery compensation
- Automatic ambient temperature compensation
- Replacement sensor requires no calibration

#### LCD gauge features:

- Automatic off 20 minutes after power up and no change
- Normal handling and jarring will not affect the LCD reading
- Case protects electronic circuitry and sensor
- Calibration standards traceable to NIST
- Precision circuitry controls sensor and translates sensor input into micron readings
- Made in the USA

## DIGITAL LCD ECONOMY VACUUM GAUGE



This product is protected by one or more of U.S. Patent Number: 6,779,350; 6,832,491; 7,073,346; 7,310,965; and 7,428,822.

The digital LCD economy vacuum gauge indicates air and moisture have been removed from the system. Track down the 14 level bargraph from atmosphere to 25 microns to know that the system is clean and the vacuum pump is performing properly. Packaged complete with 9V alkaline battery and hanging hook.

- Unique thermal conductivity sensor automatically compensates for temperature with no calibration
- Simple On/Off controls
- Easy-to-clean sensor handles 450 psi positive pressure
- Rugged contractor-grade construction with tough ABS housing and solid state circuitry for accuracy
- Automatic battery saver shuts gauge off after 20 minutes with no reading changes
- Low battery indicator
- Calibration standards traceable to NIST
- Patented technology
- Made in the USA

To keep the 69080 vacuum gauge accurate, it is best to avoid oil contamination. Keep the sensor vertical whenever possible and connect the gauge directly to the system, away from the pump.

| UPC#  | Description   |
|-------|---|
| 69080 | Digital LCD vacuum gauge with battery, hook and pouch |
| 69081 | Replacement soft-sided protective case                |
| 69079 | Replacement battery door and screw                    |
| 69095 | Tee fitting   |

## REFRIGERANT ANALYZER

Speed, accuracy and portability



*Built-in printer (68947) runs an instant receipt for convenient and accurate customer billing.*

- Dispersive infrared technology quickly determines the weight concentrations of R-12, R-134a, hydrocarbons and air
- Analytical software identifies EPA SNAP approved blends, as well as illegal replacements and blends including propane and butane
- Quickly and automatically determines purity of R-12 and R-134a to help eliminate potential of human error
- Large, easy-to-read graphing display
- Rechargeable battery lasts all day
- Rugged portable case includes R-12 hose with 1/4" flare and R-134a with auto coupler

### Specifications

Operating temperature range: 40° to 130°F  
 Operating humidity: 0-95% RH non-condensing  
 Display: 128 x 64 pixel LCD  
 Resolution: 0.1%  
 Output: Digital display and LEDs, optional printer module (internal)  
 Power: 12V, via battery clips (optional power supply available)  
 Weight: 8.0 lbs.  
 Start to finish: 60 seconds

| UPC#  | Description  |
|-------|--|
| 68940 | HVAC Multi refrigerant analyzer  |
| 68941 | R-134a Refrigerant analyzer; R-40 sensitive                              |
| 68945 | Refrigerant analyzer (R-12, R-134a, HC, and EPA SNAP approved blends)    |
| 68947 | Refrigerant analyzer with printer  |
| 68948 | Optional internal rechargeable battery kit with battery and 110V charger |
| 68949 | Optional 110/220V power adapter  |
| 68950 | Thermal printer paper - 1 roll   |
| 68977 | In line identifier replacement filter                                    |
| 68978 | R-12 replacement hose  |
| 68979 | R-134a replacement hose  |

## POCKET THERMOMETERS

1" and 1-3/8" dial thermometers are adjustable with a 5" stainless steel stem. Colored sheath with pocket clip.

- Individually calibrated
- Shock resistant



| UPC#  | Description                                       |
|-------|---|
| 69251 | 1" Dial 0° to 220°F (12 pak)                      |
| 69252 | 1" Dial 40° to 160°F (12 pak)                     |
| 69253 | 1" Dial 50° to 550°F (12 pak)                     |
| 69255 | 1-3/8" Dial -40° to 160°F (-40° to 70°C) (12 pak) |
| 69256 | 1-3/8" Dial 0° to 220°F (-10° to 110°C) (12 pak)  |
| 69265 | 1" Dial 0° to 70°C (12 pak)                       |

## POCKET DIGITAL THERMOMETER

Digital head rotates 180° for easy reading.

- On/off button
- Auto off after 10 minutes
- Reading updates every second
- 5" (125 mm) stem



| UPC#  | Description                                       |
|-------|---|
| 69107 | Digital thermometer -58° to 302°F (-50° to 150°C) |
| 69250 | 69107 display (12 pak)                            |
| 69110 | Battery   |

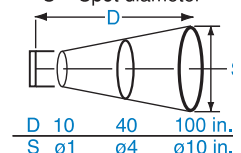
## PISTOL-GRIP INFRARED THERMOMETER

With wide measurement of -40° to 932°F, this easy-to-use tool is the effective choice for high or low temperature and refrigeration applications. For accuracy and resolution, the focal point is a tight 10:1 ratio with laser sighting.

- Selectable 3-point emissivity for simple set-up
- Backlight for dark area use
- °F/°C switchable
- ± 2% or 2°C accuracy
- 0.1°F resolution at -40° to 212°F (-40° to 100°C)
- Fast response time of 500 msec



D = Distance to object  
 S = Spot diameter



| UPC#  | Description                      |
|-------|----------------------------------|
| 69228 | Pistol-grip infrared thermometer |

## DIGITAL THERMOMETER PROBES

### Differential and single

#### Single Probe "K" type:

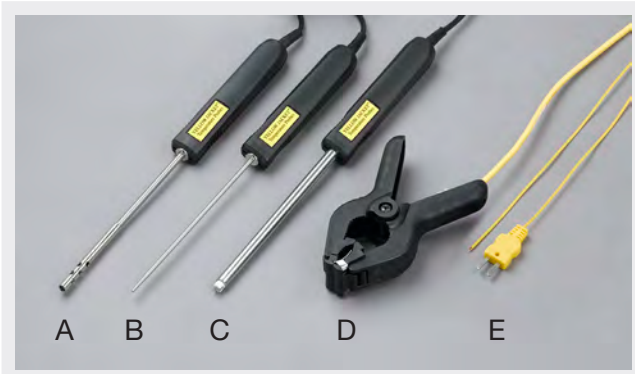
- Single "K" type input
- °F/°C switchable
- Maximum and minimum hold
- Low battery indicator
- Power off after 30 minutes

#### Differential "K" type:

- Dual "K" type thermocouple inputs
- T1, T2 or T1-T2 differential readings
- Resolution 1°

#### Specifications

Temperature range: -58° to 1999°F (-50° to 1300°C)  
 Resolution: 0.1 or 1°  
 Display: LCD 5/8" (16 mm)  
 Operating temperature range: 32° to 120°F (0 to 49°C)  
 Storage temperature range: -20° to 130°F (-29 to 54°C)  
 Power: 9V, battery life approximately 200 hours  
 Dimensions: 7.2" x 2.75" x 1.6" (180 mm x 70 mm x 40 mm)  
 Accuracy: -58° to 1800°F ± (0.3% of reading + 2°F); -50° to 982°C ± (0.3% of reading + 1°C)



| UPC#  | Description                        | Maximum temperature | Length          | Response time (sec.) |
|-------|------------------------------------|---------------------|-----------------|----------------------|
| 69215 | Type "K" air probe (A)             | 1112°F (600°C)      | 4 ft. (1.21 m)  | 5                    |
| 69217 | Type "K" 1.375" clamp-on probe (D) | 248°F (120°C)       | 10 ft. (3.05 m) | 3                    |
| 69218 | Type "K" general purpose probe (E) | 500°F (260°C)       | 3 ft. (0.91 m)  | 3                    |
| 69220 | Type "K" surface probe (C)         | 1650°F (900°C)      | 4 ft. (1.21 m)  | 3                    |
| 69222 | Type "K" puncture probe (B)        | 1112°F (600°C)      | 4 ft. (1.21 m)  | 12                   |

## ANEMOMETER



This hand-held instrument reads both air velocity and temperature simultaneously when balancing air conditioning/heating ventilation systems.

- Microprocessor controller
- Calculates cfm air volume
- Records minimum and maximum readings
- Averages air velocity
- Display "hold" button freezes LCD reading
- °F/°C switchable
- Auto off after 20 minutes
- RS232 output

#### Specifications

Air flow ranges: 125 – 4900 ft/min  
 Resolution: 1 ft/min and 0.01 m/sec.  
 Accuracy: ±2%  
 Temperature: 14° to 122°F (-10° to 50°C)  
 Resolution: 0.01°F and 0.1°C  
 Accuracy: ±1.0°F (±0.6°C)  
 Power: 9V battery, battery life approximately 100 hours  
 Fan diameter: 2-7/8" (70 mm)

| UPC#  | Description                                       |
|-------|---|
| 68915 | Anemometer kit                                    |
| 68916 | Replacement 2.75" (70 mm) diameter probe assembly |

## DIGI-ALARM THERMOMETER



*Extended reach stainless steel probe.*

This compact unit measures from -58° to 392°F (-50° to 200°C) and triggers an alarm at the high and low programmed temperatures.

- No calibration
- °F/°C switchable
- Data hold function
- Key tone for operation confirmation
- Maximum/minimum temperature memory
- Foldaway stand
- Automatic self test after battery installation

#### Specifications


Measurement range: -50 to 200°C / -58 to 392°F  
 Accuracy: ±1°C between -19.9 to 119.9°C  
 ±2°C between 120 to 199.9°C  
 otherwise ±3°C  
 ±1.8°F between -3.8 to 183.8°F  
 ±3.6°F between 248 to 391.8°F  
 otherwise ±5.4°F  
 Display resolution: 0.1° over full range  
 Alarm resolution: 1° over full range  
 Sampling rate: 1 second  
 Battery: Requires one 1.5 volt size AAA/UM4 or equivalent (included)  
 Ambient temperature: 0 to 50°C / 32 to 122°F

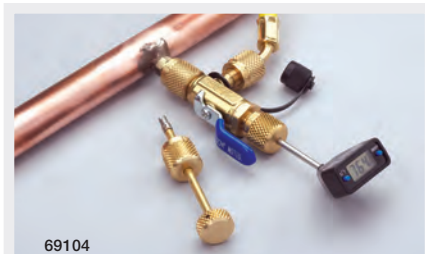
| UPC#  | Description            |
|-------|------------------------|
| 69239 | Digi-alarm thermometer |

## SUPERHEAT CALCULATION KIT

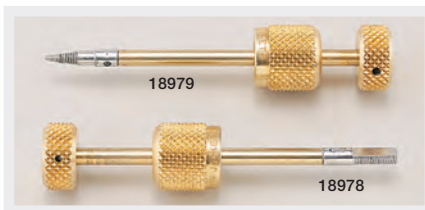


Easily take an internal temperature reading for calculating system superheat.

- Read from -58° to 302°F (-50° to 150°C)
- °F/°C switchable
- Extract Schrader cores without opening system
- Remove broken Schrader cores
- Chase damaged threads
- Replace cores
- Use as vacuum valve to increase flow and reduce vacuum and charging time
- Use to reduce recovery time
- Made in the USA 



69104



18979

18978

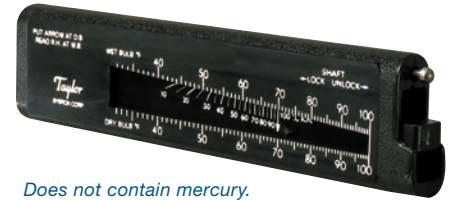
Accessory set 18980.

| UPC#  | Description                                       |
|-------|---|
| 69103 | Superheat kit without accessory kit               |
| 69104 | Complete superheat kit and accessories (as shown) |
| 69106 | Digital thermometer and nut - 40° to 230°F        |
| 69107 | Pocket thermometer (made in China)                |
| 18975 | Improved vacuum/charge valve                      |
| 18978 | Schrader rethreading accessory                    |
| 18979 | Broken Schrader remover accessory                 |
| 18980 | Accessory set - 2 piece                           |
| 18997 | Grappler rod and nut assembly                     |

## SLING PSYCHROMETER

Measures wet and dry bulb temperatures of surrounding air for immediate conversion of readings to relative humidity percentage.

- One piece unit in self-contained housing fits into your pocket
- Calibrated and easy-to-read
- “Slide rule” scale built into case
- Accurate to 1 percent of “Hygrometric Tables”



Does not contain mercury.

| UPC#  | Description               |
|-------|---------------------------|
| 69010 | Sling psychrometer        |
| 69011 | Replacement wicks (5 pak) |
| 69015 | Replacement thermometer   |

## WATER-TYPE MANOMETER

Economical plastic tube manometer helps you set manifold pressure for natural or L.P. gas. Goes to -2" W.C. for newer systems.

- Strong magnet on manometer holds it in convenient upright position
- Includes tubing with fitting
- Made in the USA 


| UPC#  | Description                      |
|-------|----------------------------------|
| 78070 | -2" - 0 - 7-1/2" scale manometer |
| 78075 | -2" - 0 - 15" scale manometer    |
| 78071 | Tubing with fitting              |
| 59511 | Brass fitting only               |



## DIGITAL ELECTRONIC MANOMETER



The digital electronic manometer eliminates the mess and fragility of U-tubes or diaphragm type gas pressure gauges. This easy-to-use instrument provides a continuous display of the measured positive or negative pressure. Ideal for setting gas pressure at manifold, checking pressure, flue draft and air balancing. Kit includes battery, 18" tubing and brass fitting.

- Display unit: inches of water
- -19.95" to 19.95" water gauge
- Accuracy:  $\pm 1.5\%$  FS ( $\pm 0.3$  inches of water)
- 0.05" water column resolution
- Large LCD display
- Automatic off 
- Long battery life
- Made in the USA

| UPC#  | Description                            |
|-------|--|
| 78052 | Dual port digital electronic manometer |
| 69089 | Battery door                           |
| 78071 | 18" Tubing with fitting                |
| 59511 | Brass fitting only                     |

## DIGITAL PSYCHROMETER



Quickly measure humidity, dry bulb, dew point and wet bulb. No need to whirl a meter or refer to a chart for results.

- °F/°C switchable
- Data hold
- Auto power off
- Display relative humidity and temperature simultaneously
- Response time of 60 seconds to changes in humidity

### Specifications

Temperature range: -4° to 122°F (-20° to 50°C)  
 Resolution: 0.1°F/°C, 0.1% RH  
 Operating temperature range: 4° to 122°F (-20° to 50°C) 0-100% RH  
 Power: 2 AAA batteries  
 Dimensions: 7" x 1-7/8" x 1" (178 mm x 48 mm x 25 mm)  
 Weight: 2.65 oz. (75 g)  
 Accuracy: Relative humidity functions (± 3% RH at 25°C)  
 Temperature ± 1°F (0.6°C)  
 Sensors: Temperature: thermistor bead  
 Humidity: polymer film (capacitance)  
 Update rate: 2-6 seconds depending on function

| UPC#  | Description          |
|-------|----------------------|
| 69008 | Digital psychrometer |

## FUEL OIL TEST KIT



Determine pump efficiency, cut-off and suction, as well as analyze or troubleshoot burner efficiency. Kit includes 2" gauge, 30" 0-150 lb. scale and 12" hose with fittings.



| UPC#  | Description                         |
|-------|-------------------------------------|
| 78020 | Complete fuel oil gauge kit         |
| 78021 | 2" Fuel oil gauge only              |
| 78023 | Carrying case                       |
| 78011 | 12" Hose – no valve opener          |
| 78024 | Fitting set (4 pak)                 |
| 78025 | Adapter for 1/8" NPT                |
| 78031 | 2-1/2" Gauge, scale 30", 0-150 lbs. |
| 78032 | 2-1/2" Gauge, scale 30", 0-300 lbs. |

All gauges are 1/8" NPT.

## OIL PUMP VIBRATION ELIMINATOR



Reinforced rubber hose helps eliminate noise and vibration when installed in a heating system.

- 1250 psi (86 bar) minimum burst, 250 psi (17 bar) maximum working pressure
- Operating temperature -20° to 180°F (-28.8° to 82.2°C)
- Made in the USA

| UPC#  | Length | Description  |
|-------|--------|--|
| 78012 | 12"    | 3/8" Male flare x 1/4" NPT Male oil burner connector |

## TEST LEAD SETS

Set of two leads 3' in length. Clips with red and black insulators each end. 120/240V – AC. 69532 and 69531 use 16-1 wire. 69530 and 69529 use 14-1 wire.



| UPC#  | Maximum amps | Clip size |
|-------|--------------|-----------|
| 69532 | 5 Amp        | Small     |
| 69531 | 10 Amp       | Medium    |
| 69530 | 10 Amp       | Medium    |
| 69529 | 20 Amp       | Large     |

## ADAPTER CORD – TEST CONNECTOR

A 12" lead using number 14-3 wire and Female plug one end. Three large clips other end with red, black and green insulators. 120/240V – AC.



| UPC#  | Maximum amps | Clip size |
|-------|--------------|-----------|
| 69522 | 15 Amp       | Large     |




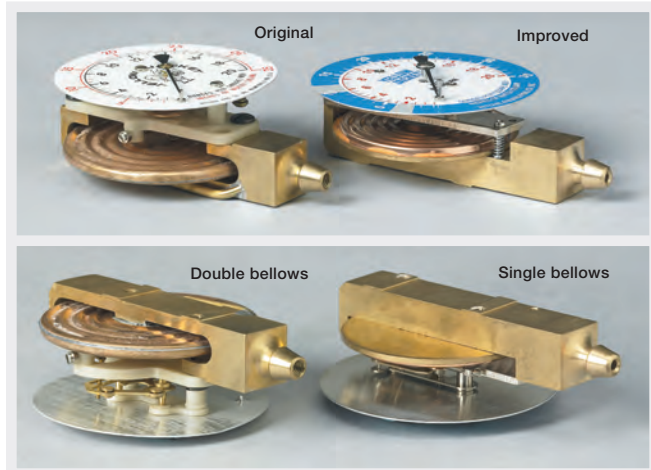
RECOVERY MACHINES  
 VACUUM PUMP SYSTEMS  
 VACUUM AND CHARGING HOSES, VALVES AND PARTS  
 HOSE ADAPTERS, SYSTEMS  
 CHARGING SYSTEMS  
 GAUGES  
 WIRELESS AND ELECTRONIC INSTRUMENTS  
 HEATING INSTRUMENTS  
 LEAK MONITORS AND DETECTORS  
 SYSTEM TOOLS

## GAS PRESSURE TEST KIT



Easier to use than a manometer, this compact kit helps you accurately set manifold pressure for natural or L.P. gas.

- Sensitive diaphragm gauge calibrated in inches of water column and ounces per square inch
- Improved lamination strength of diaphragm (bellows) to brass plate withstands higher over-pressure
- Tube nipple for easy connection to system manifold
- Two gauge ranges available
- Made in the USA 



The unique single bellows on brass plate design replaces the double bellows for a stronger seal that better resists over-pressure.

| UPC#  | Description                      |
|-------|----------------------------------|
| 78055 | Complete test kit – 0-10" W.C.   |
| 78056 | Barb-fitting gauge – 0-10" W.C.  |
| 78057 | 1/4" NPT Male gauge – 0-10" W.C. |
| 78060 | Complete test kit – 0-35" W.C.   |
| 78061 | Barb-fitting gauge – 0-35" W.C.  |
| 78066 | 1/4" NPT Male gauge – 0-35" W.C. |
| 78062 | Hose with nipple                 |
| 78064 | Brass barb-fitting               |
| 78065 | Rubber nipple                    |
| 78059 | Gauge crystal                    |
| 78063 | Carrying case                    |

## 2" GAS TEST GAUGE

1/2", 3/4" and 1" pipe



Easy-to-read gauge to test system pressure for leaks in new installations. Pressure drop indicates leakage. 0-30 gauge is in 1/4 lb. increments and 0-15 gauge is in 1/5 lb. increments. Brass threaded bell for leak tight connection.

| UPC#  | Description   |
|-------|---|
| 78076 | 2" Test unit 0-15 lb. gauge 1/2" pipe                       |
| 78077 | 2" Test unit 0-15 lb. gauge 3/4" pipe                       |
| 78080 | 2" Test unit 0-30 lb. gauge 3/4" pipe                       |
| 78087 | 2" Test unit 0-60 lb. gauge 3/4" pipe                       |
| 78090 | 2" Test unit 0-100 lb. gauge 3/4" pipe                      |
| 78078 | Gauge 1/4" NPT Male 0-15 lb.                                |
| 78081 | Gauge 1/4" NPT Male 0-30 lb.                                |
| 78091 | Gauge 1/4" NPT Male 0-100 lb.                               |
| 78079 | 2" Test unit 0-15 lb. gauge 1" pipe                         |
| 78085 | 2" Test unit 0-30 lb. gauge 1" pipe                         |
| 78095 | 2" Test unit 0-100 lb. gauge 1" pipe                        |
| 78096 | Schrader fitting 1/8" NPT Male x tire fitting (0.305" - 32) |

## 3-1/2" GAS TEST GAUGE

3/4" and 1" pipe



Larger 3-1/2" gauges are easier to read. Scale in psi and bar. Brass threaded bell for leak tight connection.

| UPC#  | Description                           |
|-------|---------------------------------------|
| 78084 | 3-1/2" Test unit 0-30 3/4" pipe       |
| 78086 | 3-1/2" Test unit 0-100 3/4" pipe      |
| 78088 | 3-1/2" Test unit 0-30 1" pipe         |
| 78089 | 3-1/2" Test unit 0-100 1" pipe        |
| 49422 | Gauge only 3-1/2" test unit 0-60 psi  |
| 49421 | Gauge only 3-1/2" test unit 0-30 psi  |
| 49424 | Gauge only 3-1/2" test unit 0-100 psi |

RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
VACUUM AND CHARGING HOSES  
HOSE ADAPTERS, VALVES AND PARTS  
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GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

**LEAK MONITORS AND LEAK DETECTORS**





YELLOW JACKET®

# AccuProbe™ UV Leak Detector

With electrolyte sensor, UV technology and Smart Alarm™ indicator, this is the only tool you need for fast, easy and certain leak detection





Use the solid electrolyte sensor or UV technology (or both at the same time) to detect the more current and difficult HFC refrigerants such as R-134a, R-404A, R-407 and R-410A, in addition to all HCFC (R-22) refrigerants including SNAP approved hydrocarbon and HFO refrigerants, all with minimal chance of false alarms.

## AccuPROBE™ UV LEAK DETECTOR

Our solid electrolyte sensor technology reduces heat and gives the sensor longer life than traditional heated anode or heated diode detectors.

3 UV lights fluoresce between 395 and 415 nanometers.

The Smart Alarm™ LED shows how big or small a leak is on a scale of one to nine:

- 1 to 3 – less than 0.1 oz./yr.
- 4 to 6 – 0.1 to 0.5 oz./yr.
- 7 to 9 – more than 0.5 oz./yr.


In addition to the Smart Alarm indicator, the AccuPROBE UV features low, normal and high sensitivity levels with visual and audible signals.

- If there is no response from the flashing tip or beeping signal at the preset normal sensitivity in the general area of a suspected leak, select high sensitivity
- High sensitivity will detect even low levels that could be missed with other detection systems
- Use low sensitivity as you move the tip over more defined areas of a system



*The frequency of flashing from the electrolyte sensor tip increases as you get closer to a leak and refrigerant concentration increases. The*

*audible alert, which can also be muted, increases in frequency and duration as concentration increases.*

- Robust, ergonomic design is easy to use in close areas and extendable into hard-to-reach areas
- Long life, stable sensor
- Instantaneous response time
- Clears in 12 seconds or less after exposure to a 1.75 oz (50g)/yr. leak
- Automatic calibration and reset to ambient
- Low battery indicator
- Microcontroller technology
- SAE J2791 certified, CE marked, EN 14624
- 24-month limited warranty
- Made in the USA 

### Specifications

|  |  |
|--|--|
| <b>Sensitivity:</b><br>HFC (R-134a) 0.06 oz. (1.7g)/yr.<br>HCFC (R-22) 0.03 oz. (0.9 g)/yr.<br>HFO (1234yf) 0.15 oz. (4.3 g)/yr. | <b>Calibration:</b> Automatic                                    |
| <b>Heated solid electrolyte sensor:</b><br>Over 300 hours service life with minimal cleaning and no adjustments                  | <b>Response time:</b> Instantaneous                              |
| <b>Maintenance required:</b> None  | <b>Power:</b> 4 AA alkaline batteries, 4.5 hours continuous life |
| <b>Body length:</b> 10.5" (270 mm)   | <b>Operating temperature range:</b> 24° to 125°F (-4° to 52°C)   |
| <b>Probe length:</b> 17" (430 mm)  | <b>Storage temperature range:</b> -4° to 122°F (-20° to 50°C)    |
| <b>Weight:</b> 17 oz. (480 g)  | <b>Humidity:</b> 0 to 95% RH non-condensing                      |
| <b>Warm up time:</b> 20 seconds or less  | <b>Approvals:</b> SAE J2791, CE marked, EN 14624                 |

| UPC#  | Description  |
|-------|--|
| 69336 | AccuPROBE UV   |
| 69337 | AccuPROBE UV with global power supply (US, EU, UK, AU, NZ) |
| 69338 | AccuPROBE UV - Japan                                       |

| Accessories and parts |   |
|-----------------------|---|
| 69375                 | A/C Adapter - global power supply (US, EU, UK, AU, NZ) CE and GS approved |
| 69383                 | Kit – sensor, filters and bottle  |
| 69384                 | Replacement sensor and filter   |
| 69385                 | Sensor filters (5 pak)  |
| 69386                 | Leak sensor bottle  |
| 69387                 | Carrying case with inserts  |
| 69388                 | Battery cover/screw (AccuProbe UV)  |

## AccuPROBE™ II LEAK DETECTOR



Low, normal and high sensitivity levels with audible signals to quickly and easily pinpoint leaks.



### Specifications

|   |  |
|---|--|
| <b>Sensitivity:</b><br>HFC (R-134a) 0.06 oz. (1.7 g)/yr.<br>HCFC (R-22) 0.03 oz. (0.9 g)/yr.<br>HFO (1234yf) 0.15 oz. (4.3 g)/yr. | <b>Probe length:</b> 17" <b>Weight:</b> 15 oz.                   |
| <b>Sensor life:</b> Over 300 hours service life with minimal cleaning and no adjustments  | <b>Warm up time:</b> 20 seconds or less                          |
|   | <b>Power:</b> 4 AA alkaline batteries, 4.5 hours continuous life |
|   | <b>Approvals:</b> SAE J2791, CE marked, EN 14624                 |

| UPC#  | Description                     |
|-------|---------------------------------|
| 69354 | AccuPROBE II leak detector      |
| 69383 | Kit – sensor, filter and bottle |
| 69384 | Replacement sensor and filter   |
| 69385 | Sensor filters (5 pak)          |
| 69386 | Leak sensor bottle              |
| 69387 | Carrying case with inserts      |
| 69361 | Zipper pouch                    |

### Tips for detecting system leaks with leak detector:

1. Inspect entire A/C system for signs of oil leakage, corrosion cracks or other damage. Follow the system in a continuous path so no potential leaks are missed.
2. Make sure there is enough refrigerant in the system (about 15% of system capacity or 50 psi min.) to generate pressure to detect leaks.
3. Check all service access port fittings. Check seals in caps.
4. Move detector probe at 1" per second within 1/4" of suspected leak area.
5. Refrigerant is heavier than air so position probe below test point.
6. Minimize air movement in area to make it easier to pinpoint the leak.
7. Verify an apparent leak by blowing air into suspected leak to clean the area and see if the leak remains.
8. When checking for evaporator leaks, check for gas in condensate drain tube.

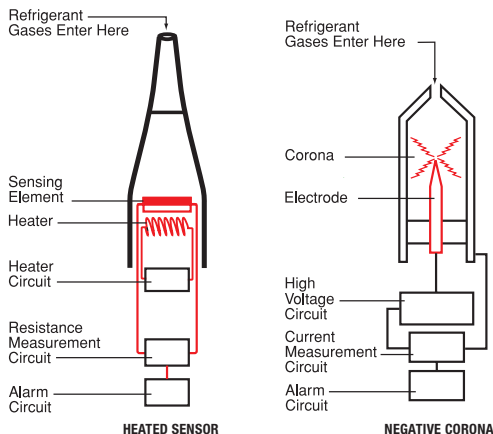
### ELECTROLYTE SENSOR OR NEGATIVE CORONA?

#### Electrolyte Sensor Leak Detectors

When the electrolyte sensing element is exposed to refrigerant, an electrochemical reaction changes the electrical resistance within the element, causing an alarm. The sensor is refrigerant specific with superior sensitivity to all HFCs and HCFCs, and minimal chance of false alarms. When exposed to large amounts of refrigerant, which could poison other systems, the electrolyte sensor clears quickly and does not need recalibration before reuse.

#### Negative Corona Leak Detectors

In the sensor of a corona detector, high voltage applied to a pointed electrode creates a corona. When refrigerant breaks the corona arc, the degree of breakage generates the level of the alarm. Sensitivity decreases with exposure to dirt, oils and water. False alarms can be triggered by dust, dirt specks, soap bubbles, humidity, smoke, small variations in the electrode emission, high levels of hydrocarbon vapors and other non-refrigerant variables.



## H<sub>2</sub> DETECTOR

### Detects 5% H<sub>2</sub> in 95% Nitrogen Tracer Gas



Many countries are now adopting laws that ban the use of refrigerants for system testing. The YELLOW JACKET H<sub>2</sub> was developed for the H<sub>2</sub> (95% nitrogen and 5% hydrogen) tracer gas mixture.

When used with the H<sub>2</sub>/nitrogen tracer gas mixture, the YELLOW JACKET H<sub>2</sub> will detect leak rates less than 5 ppm.

- Long life, stable sensor
- Does not require rechargeable batteries
- Automatic calibration and reset to ambient
- Three adjustable sensitivity levels
- Low battery indicator
- CE Certified
- True mechanical pump
- Two-year warranty
- Made in USA

#### Specifications

|                                    |   |
|------------------------------------|---|
| Sensitivity: Less than 5 ppm       | Warm up time: 20 seconds or less                        |
| Sensor life: Over 300 hours        | Power: 4 AA alkaline batteries, 8 hours continuous life |
| Response Time: Instantaneous       | Approvals: EN35422 and EN14624                          |
| Probe length: 17" Weight: 1.5 lbs. |   |

| UPC#  | Description                       |
|-------|-----------------------------------|
| 69341 | H2 leak detector                  |
| 69342 | Replacement sensor                |
| 69343 | Carrying case with inserts (grey) |

## MICRO LED UV LEAK DETECTION KITS AND LAMPS

### For all A/C systems and lamps



Individual reflectors surround each of five LEDs recessed for protection in the stainless steel head.

- Long life LEDs
- Constant ON switch
- Sealing locks out moisture
- AA Alkaline battery included (dispose of batteries via disposal practices in your area)
- Aluminum body

| UPC#   | Description   |
|--------|---|
| 69782  | 395-415 nm wavelength UV LED flashlight                       |
| 69788* | Micro UV LED and dye kit for auto                             |
| 69789* | Micro UV LED and dye kit for AC/R                             |
| 69793  | Replacement pouch for LED (for older style with black casing) |
| 69794  | Lithium battery (2 pak) (for older style with black casing)   |

\* Not for direct injection into R-410A systems due to high pressure. Bulbs not replaceable.

RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
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WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## LARGE SYSTEM INJECTORS

Systems with up to 32 gallons of lubricant



Self-contained injection system for inducing up to 16 oz. of universal AC/R dye into the largest systems. Add to the lo-side. Easily works on all system pressures to 300 psi, .35 oz. per stroke. Hose included with SealRight end.

- Recommended for R-410A
- Made in the USA

| UPC#  | Description                        |
|-------|------------------------------------|
| 69555 | Large system injector              |
| 77950 | Large system injector with coupler |

## CALIBRATED A/C SCREW INJECTION



This 2 oz. injector is easy to refill and easy to operate. Calibrations are clearly marked on the injector. Connect to A/C lo-side and rotate handle. AC/R and auto models. Maximum port pressure of 250 psi.

| UPC#  | Description   |
|-------|---|
| 69729 | Universal screw injector (no hose)                                |
| 69730 | 1/4" Calibrated A/C screw injector (with hose)                    |
| 69731 | Auto R-134a calibrated A/C screw injector with service coupler    |
| 69732 | Auto R-134a calibrated A/C screw injector without service coupler |
| 69723 | 1/4" replacement hose   |
| 69724 | R-134a replacement hose   |

## UNIVERSAL A/C DYE INJECTORS AND HOSE



Universal A/C dye injectors work in AC/R and auto A/C systems. Four 1/4 oz. applications of dye in each disposable tube make it economical, fast and clean. Hose features back flow check valve.

- Maximum system port pressure of 80 psi
- Not for direct injection into R-410A systems due to high pressure
- Made in the USA

| UPC#  | Description                                   |
|-------|---|
| 69702 | Hose plus 2 injectors for AC/R                |
| 69703 | Auto R-134a hose, coupling and injectors      |
| 69705 | Injector hose with SealRight                  |
| 69706 | Auto R-134a injector hose and service coupler |

US Patent # 6,164,348

## DYE AND OIL INJECTORS



Body and cap are rugged aluminum with an "O" ring seal. 1/4" Male fitting at one end with Schrader. A ball valve for control on other end with a short length of hose. Valve depressor in 1/4" Female end. 600 psi working pressure.

Saves time on many applications:

- Add oil to system
- Put oil in after changeout
- Add scanner fluorescent solution
- Add additives to system
- Refrigerant sampling
- Recommended for R-410A
- Made in the USA

| UPC#  | Description                               |
|-------|---|
| 69559 | 1/4 oz. Oil injector                      |
| 69560 | 1/2 oz. Oil injector                      |
| 69561 | 2 oz. Oil injector                        |
| 69562 | 4 oz. Oil injector                        |
| 69563 | "O" ring 1/4 and 1/2 oz. injector (5 pak) |
| 69564 | "O" ring 2 and 4 oz. injector (5 pak)     |
| 69722 | Replacement hose                          |

## UNIVERSAL A/C DISPOSABLE INJECTORS

Universal disposable 1 oz. applicator for fast economical dispensing. Universal dye for all common refrigerants and oils. Two 1/2 oz. applications for regular split systems or four 1/4 oz. applications for small appliances or auto A/C.



US Patent # 6,164,348

- Less costly and faster than many other methods
- One dye minimizes inventory
- No back-up refrigerant to move dye into system
- Maximum system port pressure of 80 psi
- Not for direct injection into R-410A systems due to high pressure
- Made in the USA



Easy to use: connect to system, push in plunger, then disconnect

| UPC#  | Description   |
|-------|---|
| 69700 | 1 oz. (30 ml) Injector (6 pak) (12 residential applications/case)   |
| 69721 | 1 oz. (30 ml) Injector (2 pak) (4 residential applications/package) |
| 69727 | 1 oz. (30 ml) Injector  |

RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
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HOSE ADAPTERS, VALVES AND PARTS  
CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## UNIVERSAL A/C DYE SOLUTIONS



Universal dye for A/C systems with mineral, alkyl benzene or polyol ester lubricants.

- Field proven and sold worldwide
- Passed thermal stability tests
- One dye for AC/R systems
- Raw material QC assures dye uniformity

| UPC#  | Description                             |
|-------|---|
| 69711 | 1/4 oz. (7.5 ml) Universal A/C (24 pak) |
| 69708 | 1/2 oz. (15 ml) Universal A/C (12 pak)  |
| 69709 | 1 oz. (30 ml) Universal A/C (6 pak)     |
| 69710 | 2 oz. (60 ml) Universal A/C (6 pak)     |
| 69712 | 8 oz. (240 ml) Universal A/C            |
| 69713 | 8 oz. (240 ml) Universal A/C (6 pak)    |
| 69803 | 1 gal. (3.78 L) Universal A/C           |

Oil/fluid and coolant dyes available on page 75.

### DYE APPLICATION AMOUNTS

#### Application

- Small appliance
- A/C or refrigerant systems
- Larger systems

#### System size in lbs. of refrigerant

- Up to 4.9 lbs. (2.22 kg)
- Up to 25 lbs. (11.34 kg)
- Above 25 lbs. (11.34 kg)

#### Universal dye amount

- 0.25 oz. (7.5 ml)
- 0.5 oz. (15 ml)
- 0.5 oz. (15 ml) per gallon of oil

Not recommended for systems with internal temperatures below -40°F. Compatible with mineral, alkylbenzene, ester and PAG oil systems.

## FLUORESCENT SCANNER SOLUTIONS

Technology to match refrigerant and system volume



Different concentrations of fluorescent solutions are available to match the refrigerant volume in a system.

- Operating temperature is -40°F for all solutions and -100°F for alkylbenzene systems
- When working on split systems, use solution 3 even if system has 10 lbs. or less of gas

01 – Systems with up to 2.9 lbs. gas

1 – Systems with 1 to 4.9 lbs. gas

2 – Systems with 5 to 9.9 lbs. gas

3 – Systems with 10 to 25 lbs. gas

4 – Large systems use 1/4 oz. per gallon of oil in system

| Solution concern | System size    | Self-infusing injector |                  |                     |         |
|------------------|----------------|------------------------|------------------|---------------------|---------|
|                  |                | Mineral oil system     | Ester oil system | Alkylbenzene system | PAG oil |
| 01 (0.03 oz.)    | up to 2.9 lbs. | 69610                  | 69620            | 69600               | 69590   |
| 1 (0.5 oz.)      | up to 4.9 lbs. | 69611                  | 69621            | 69601               |         |
| 2 (0.5 oz.)      | up to 9.9 lbs. | 69612                  | 69622            | 69602               |         |
| 3 (0.5 oz.)*     | up to 25 lbs.  | 69613                  | 69623            | 69603               |         |
| 4 (2 oz.)        | Large**        |                        |                  |                     |         |
| 4 (16 oz.)       | Large**        |                        |                  |                     |         |

\* Use on all split systems.  
\*\* Only bottles are available for systems with over 75 lbs. of refrigerant.

Disposable pre-filled tubes

For large systems add 1/4 oz. #4 solution per gallon of oil.

Injectors sold as 6 paks.

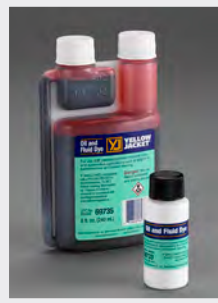
#4 solution sold as individual bottles.



RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
VACUUM AND CHARGING HOSES  
HOSE ADAPTERS, VALVES AND PARTS  
CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## FLUORESCENT SOLUTIONS

### For non-refrigerant applications



The oil and fluid dye solution is for finding leaks in oil-based applications. Use 1 oz. per 2 gallons of oil.

- Pin point leaks in milling machines and hydraulic systems such as cherry pickers

- Find seal and gasket leaks in engines, compressors and transmissions

- Locate leaks in gasoline or diesel fuel equipment, offset printing presses, injection-molding machines, locomotive engine oil coolers and oil-cooled chillers

H<sub>2</sub>O (water) solution glows blue at leak sources in large closed-loop water systems. Use one pint per 1,000 gallons of water.

- Detect leaks in storage tanks and other high volume containers, as well as

associated piping, valves condensers, sprinkler systems, pumps, etc.

- Detect water leakage in any enclosed circulatory system or static system that can be pressurized or agitated
- Made in the USA

| UPC#  | Description                              |
|-------|--|
| 69733 | 1 oz. (30 ml) Oil and fluid dye (6 pak)  |
| 69734 | 1 oz. (30 ml) Oil and fluid dye (24 pak) |
| 69735 | 8 oz. (240 ml) Oil and fluid dye         |

**YELLOW JACKET solutions meet or exceed applicable ASHRAE and ANSI tests and SAE standard J2297 for R-134a UV leak detection.**

## COMBUSTIBLE GAS DETECTOR

### With ultra-sensitive, long life sensor



Detects all hydrocarbon and other combustible gases including propane, methane, butane, industrial solvents and more.

Unit is preset at normal sensitivity, but you can switch to high or low. Slow beeping indicates that unit is warmed up. Frequency increases when a leak is detected until an alarm sounds when moving into high gas concentration. The Smart Alarm™ LED indicates leak size.

If no leak is detected in a suspected area, select high sensitivity. This will detect even low levels in the area. Move the tip over more defined areas, and you will be alerted when the tip encounters the concentration at the leak source.

- Ultra-sensitive sensor detects less than 15 ppm methane and better than 12 ppm for propane. Performs equally well on a complete list of detectable gases including acetylene, butane and isobutane
- Automatic calibration and zeroing
- Sensor replaceable after full service life
- Smart Alarm LED shows how big or small a leak is on a scale of one to 9.
- 24-month limited warranty (12-month warranty on sensor)
- Made in USA

## CLEANERS



### Scan-off UV Cleaner

Water-based biodegradable spray cleans scanner solution from system.

### Natural Degreaser

Heavy duty biodegradable degreaser removes scanner solution from system.

### Hand Cleaner

Cleans solution from hands.

| UPC#  | Description                      |
|-------|----------------------------------|
| 69698 | 19 oz. Natural degreaser #01020  |
| 69699 | 16 oz. Hand cleaner              |
| 69696 | 8 oz. Scan-off solution          |
| 69697 | 8 oz. Scan-off solution (12 pak) |

### APPLICATIONS:

- Internal gas lines/pipes
- Propane filling stations
- Gas heaters
- Combustion appliances
- Hydrocarbon refrigerant
- Heat exchangers
- Marine bilges
- Manholes
- Air quality
- Arson residue (accelerants)

### Specifications

Warm up time: 25 seconds  
 Power battery: 4 AA alkaline batteries, 20 hours continuous life  
 Probe length: 17" (43.17 cm)  
 Sensor life: 500 hours  
 Body length: 10.5" (26.67 cm)  
 Weight: 16 oz. (0.45kg)  
 Operating temperature range: 32° to 110°F (0° to 43°C)

| UPC#  | Description                         |
|-------|-------------------------------------|
| 69371 | Replacement sensor                  |
| 69372 | Replacement sensor cover            |
| 69373 | Combustible gas detector with case  |
| 69387 | Carrying case – blow molded         |
| 69379 | Battery cover and screw (2003-2011) |
| 69347 | Battery cover and screw (2011)      |

RECOVERY MACHINES  
 VACUUM PUMP SYSTEMS  
 VACUUM AND CHARGING HOSES  
 HOSE ADAPTERS, VALVES AND PARTS  
 CHARGING SYSTEMS  
 GAUGES  
 WIRELESS AND ELECTRONIC INSTRUMENTS  
 HEATING INSTRUMENTS  
 LEAK MONITORS AND DETECTORS  
 SYSTEM TOOLS

## SENSOR FOR LEAK MONITORING SYSTEMS



Semi-conductor technology makes YELLOW JACKET monitoring systems an attractive alternative to electrochemical or infrared systems.

- Factory calibrated for R-404A (call factory for other refrigerants)
- Sensors mount to any flat vertical surface
- For point detection, mount sensor(s) near the most likely leak source

- For perimeter detection, sensors surround the potential leak area
- Operating temperature range of -20 to 122°F (-29 to 50°C)
- Refrigerant sensors for most common CFCs, HFCs and HCFCs, plus R-134a, R-404A, R-410A and R-407C
- Should not be used with refrigerants that have an Occupational Exposure Limit of less than 300ppm

### Specifications

Relays: Dry contact switch; 10 amp at 120/250V max

Sensor: 4.3" x 2.2" x 0.9" (109 mm x 56 mm x 23 mm)

Sensors can be hard wired up to 200' from controller

Power LED: Green

Sensor cable: Use 4 conductor, unshielded cable, 22 AWG or larger\* (0.25" O.D. maximum)

Power: 120V/60 Hz or 230V/50-60 Hz

Operation: Constant power-on and fault monitoring

Reset: On two level unit, automatic on low level; manual on high level

\*Check your local building code for additional requirements specific to your application.

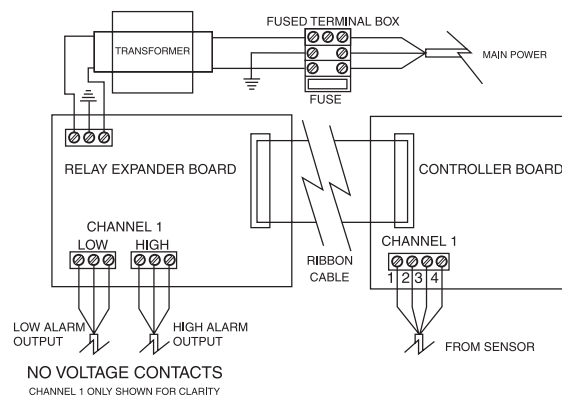
| UPC#  | Description                                   |
|-------|---|
| 68091 | 120V Refrigerant sensor for two level monitor |
| 68099 | 120V Monitor key switch set                   |

## RELAY EXPANDER BOX



Enables the four or six sensor controller to individualize response to each sensor, e.g. sensor one is set to activate a fan and auto dialer while other sensors activate different response systems. If sensor one detects a leak, only its corresponding systems are activated. The other sensors remain in monitoring mode and will respond individually if a leak is detected in their specific area.

### Typical Installation



| UPC#  | Description                                       |
|-------|---|
| 120V  |   |
| 68028 | Four sensor expander box (ribbon cable connector) |
| 68029 | Six sensor expander box (ribbon cable connector)  |

## INTEGRATED AREA MONITOR



Sensor and controller are combined into a single, compact unit that can be hard wired into any outlet or power supply to detect leaks in the area.

The unit emits a continuous siren and constant red LED illumination at about 1000 ppm. This early warning allows time to find the leak while refrigerant concentration is still low. With adjustable delay, the monitor waits up to 15 minutes to avoid false alarms before signaling. Siren can be switched off.

Two voltage-free relays can activate ventilation or remote alarms, or report to control systems. The monitor can also be connected to dedicated 16-unit panel (indefinitely expandable by connecting control panels).

- 3.4" x 5.8" x 2.4" (86 mm x 147 mm x 61 mm)
- For use in living spaces, marine and mechanical rooms

| UPC#  | Description                      |
|-------|----------------------------------|
| 68050 | Integrated area monitor 115V     |
| 68051 | Integrated area monitor 220/240V |
| 68052 | Control panel 115V               |
| 68053 | Control panel 220/240V           |





YELLOW JACKET®

## Deluxe 45° Flaring Tool

A full range 1/8" to 3/4" O.D. flaring tool for soft copper



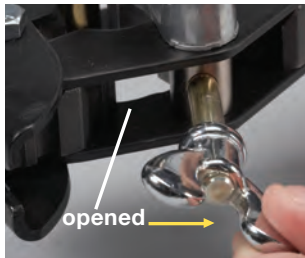


# DELUXE 45° FLARING TOOL

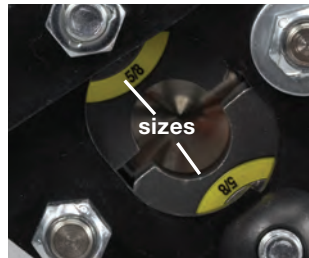


- Designed with the new R-410A system requirements in mind
- Self-centering yoke grips without marring or constricting tube
- Automatic tube height gauge for correct tubing height
- Multi-faceted burnishing cone produces a burnished flare seat for a positive seal
- Easy-to-use with four basic steps
- Made in the USA

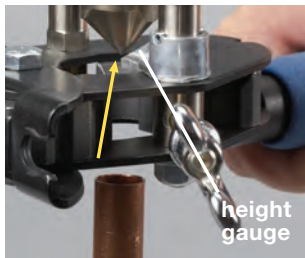
**Note:** To improve grip on copper, all moving parts including the wing nut threads, wing nut mating threads and feed screw threads must be oiled regularly. Failure to do so may result in tubing slippage, undersize flares and damage to the tool.



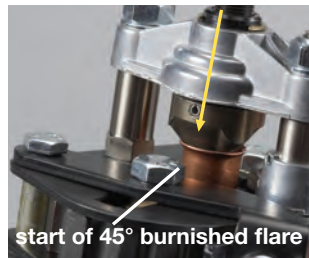
1. With cone up, open the two dies of the clamping yoke



2. Select sizes on underside of dies to match tubing O.D.



3. Insert tubing until it touches the height gauge



4. Turn the feed screw to flare the tubing

| UPC#  | Description                               |
|-------|---|
| 60278 | Deluxe flaring tool for 1/8" to 3/4" O.D. |
| 60214 | Replacement wing nut                      |
| 60268 | Replacement grip                          |
| 60269 | Wing nut and bolt                         |
| 60273 | Burnishing cone and pin                   |
| 60274 | Yoke assembly                             |

## R-410A Flare Diameters

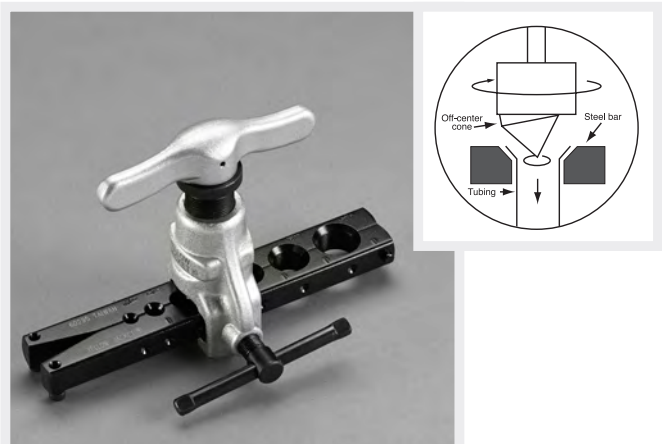
- Installation instructions for systems using R-410A vary between manufacturers with respect to 45° flares. Some require the larger flares produced by the Deluxe 45° Flaring Tool (60278) while others prefer the rolled flare produced by the eccentric cone flaring tool
- Instead of the standard 1/4" (7/16-20 thread, 1/4" O.D.) fitting for air conditioning systems, some manufacturers are moving to 5/16" (1/2-20 thread, 5/16" O.D.) to differentiate fittings and avoid misconnections. These fittings can often be found on mini split systems

## Maximum Diameter of Flare Cone (Average)

| Flare size | SAE spec produced by most flaring tools | Some R-410A mfg. specs produced by 60278 |
|------------|---|--|
| 1/8"       | 0.181"                                  | *  |
| 3/16"      | 0.248"                                  | *  |
| 1/4"       | 0.327"                                  | 0.358"                                   |
| 5/16"      | 0.406"                                  | *  |
| 3/8"       | 0.488"                                  | 0.520"                                   |
| 1/2"       | 0.622"                                  | 0.654"                                   |
| 5/8"       | 0.748"                                  | 0.776"                                   |
| 3/4"       | 0.917"                                  | 0.945"                                   |

\* These tube sizes are not used by some R-410A equipment manufacturers. The Deluxe Flaring Tool 60278 adopts the SAE standard for these sizes.

# ECCENTRIC CONE FLARING TOOL



Off-center hardened steel cone with 45° flare produces a rolling action for uniform flare walls without galling in 3/16" to 3/4" O.D. tubing.

- Large feed screw handle for smooth turning with little effort
- Black oxide-finished steel flaring bars are heat-treated for durability and secure grip on tubing
- Recommended for soft materials such as copper and aluminum
- Built-in clutch release to prevent over-torquing

| UPC#  | Description   |
|-------|---|
| 60295 | Flaring tool with eccentric cone for 3/16" to 3/4" O.D. |

## 45° FLARING TOOLS 3/16" to 1-1/8"



60210



60230



60290

- 60210 heavy-duty is designed for tight spaces
- 60230 heavy-duty flares on tubing up to 3/4"
- 60290 large is designed to flare on tubing up to 1-1/8"
- Hardened steel flaring bar to resist tube slippage
- Forged steel yoke that slips over bar and locks with a turn
- Precision threaded feed screw and long handle
- Chrome finish

| UPC#  | Description  |
|-------|--|
| 60210 | Heavy-duty flaring tool for 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" O.D. |
| 60212 | Flaring bar only for 60210   |
| 60230 | Heavy-duty flaring tool for 1/2", 5/8", 3/4" O.D.                            |
| 60232 | Flaring bar only for 60230   |
| 60213 | Yoke for 60210 up to 5/8" flare  |
| 60214 | Wing nut   |
| 60233 | Yoke for 60230 up to 3/4" flare  |
| 60290 | Large flaring tool for 3/4", 7/8", 1", 1-1/8" O.D.                           |
| 60293 | Flaring yoke for 60290   |
| 60292 | Flaring bar for 60290  |

The only replaceable parts are those listed above.

## FLARE/BURNISH TOOL



Multi-faceted cone rolls a precise flare and simultaneously burnishes it on brass, copper and aluminum.

| UPC#  | Description                               |
|-------|---|
| 60270 | Flare/burnish tool for 3/16" to 5/8" O.D. |
| 60271 | Flare yoke only for 60270                 |
| 60272 | Flaring bar for 60270                     |

The only replaceable parts are those listed above.

## UNIVERSAL 45° FLARE/BURNISH TOOL



Universal designed bar will hold all inch and metric size tubing up to 5/8" (16 mm).

- Flare bar is compact and easy to use in tight spaces
- Multi-faceted cone rolls out precise 45° flare and burnishes simultaneously
- Flare is formed above flare bar

| UPC#  | Description                                   |
|-------|---|
| 60275 | Universal flaring tool for 3/16" to 5/8" O.D. |
| 60276 | Flaring bar only for 60275                    |
| 60277 | Flaring yoke only for 60275                   |

The only replaceable parts are those listed above.

## LIGHTWEIGHT SWAGE/FLARE KIT



60430 shown  
60431 includes 6 additional metric pins

The aluminum body and bar makes this half the weight of traditional steel designs.

- Six quick-change positions for flaring soft copper and aluminum tube
- The chrome finish of the swaging pin allows for an easy flare operation
- Strong aluminum bars - each hole flare tested more than 1000 times.
- Swage pin sizes are molded into the case for easy organization
- Quick connect on yoke saves time during pin/cone changing
- Built-in slide gauge to easily meet desired flare sizes without the guesswork.
- One yoke for both flaring and swaging
- Blow-molded carrying case included

| UPC#  | Kit Swaging/Flaring Sizes  |
|-------|--|
| 60430 | Inches: 6 positions for 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4" O.D. tube  |
| 60431 | Inches: 6 positions for 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4" O.D. tube<br>Metric: 6 positions for 6, 8, 10, 12, 16 and 18 MM O.D. tube; hex wrench included |

| UPC#  | Replacement Parts                 |
|-------|-----------------------------------|
| 60428 | Replacement case for 60430/60431  |
| 60432 | Lightweight 60430/60431 bar, inch |
| 60433 | Lightweight 60431 bar, metric     |
| 60434 | Replacement yoke for 60430/60431  |
| 60435 | 6 mm swage pin for 60431          |
| 60436 | 8 mm swage pin for 60431          |
| 60471 | 10 mm swage pin for 60431         |
| 60437 | 12 mm swage pin for 60431         |
| 60438 | 16 mm swage pin for 60431         |
| 60451 | 18 mm swage pin for 60431         |
| 60452 | Flaring cone for 60430/60431      |
| 60472 | 1/4" swage pin for 60430          |
| 60473 | 5/16" swage pin for 60430         |
| 60474 | 3/8" swage pin for 60430          |
| 60477 | 1/2" swage pin for 60430          |
| 60478 | 5/8" swage pin for 60430          |
| 60479 | 3/4" swage pin for 60430          |

## SWAGING AND 45° FLARING TOOL 1/2" to 1-1/8" O.D.



- 60453 mid-size swages and flares for 1/2", 5/8" and 3/4" O.D. tubing



- 60455 large-size swages and flares for 3/4", 7/8" and 1-1/8" O.D. tubing

| UPC#  | Description  |
|-------|--|
| 60453 | Swage/flare kit complete for 1/2" to 3/4" O.D.     |
| 60446 | 1/2" Swage adapter                                 |
| 60447 | 5/8" Swage adapter                                 |
| 60448 | 3/4" Swage adapter                                 |
| 60449 | Flare cone 1/2" to 3/4"                            |
| 60443 | Complete yoke for 60440/60453                      |
| 60232 | Flare bar 1/2" to 3/4" O.D.                        |
| 60455 | Large swage/flare kit complete 3/4" to 1-1/8" O.D. |
| 60457 | 7/8" Swage adapter                                 |
| 60458 | 1-1/8" Swage adapter                               |
| 60459 | Flare cone 3/4" to 1-1/8"                          |
| 60456 | Complete yoke for 60455                            |
| 60292 | Flare bar 3/4" to 1-1/8" O.D.                      |
| 60441 | Handle screw assembly                              |
| 60442 | "C" clip and nut                                   |

## SWAGING AND 45° FLARING TOOL 3/16" to 3/4" O.D.



This combination tool both flares and swages soft or annealed copper and similar materials.

- Six hardened and plated alloy steel adapters are interchangeable to convert sizes and functions
- Slip-on self-centering steel yoke has a feed screw with extra long handle

- Deeply knurled adapters
- Flaring bars are hardened and chrome plated for durability
- Kit comes complete with six swage adapters, flaring cone, two flaring bars, yoke and a deluxe case



| UPC#  | Description                                     |
|-------|---|
| 60440 | Swage/flare kit complete for 3/16" to 3/4" O.D. |
| 60450 | Case only                                       |
| 60451 | Case insert only                                |
| 60444 | 3/16" and 3/8" Adapter                          |
| 60439 | 1/4" Adapter                                    |
| 60445 | 5/16" Adapter                                   |
| 60446 | 1/2" Swage adapter                              |
| 60447 | 5/8" Swage adapter                              |
| 60448 | 3/4" Swage adapter                              |
| 60449 | Flare cone for 3/8" to 3/4" - 45° adapter       |
| 60442 | "C" clip and nut                                |
| 60441 | Handle/feed screw                               |
| 60443 | Complete yoke 60440/60453                       |
| 60212 | Flare bar for 3/16" to 5/8" O.D.                |
| 60232 | Flare bar for 1/2" to 3/4" O.D.                 |

## FLARING/CUTTING KITS



A wide variety of heavy-duty tool kits for flaring 3/16" to 3/4" O. D.

60260



60240

| UPC#  | Description   |
|-------|---|
| 60240 | Full range 45° flaring kit for 3/16" to 3/4" O.D. with yoke, two bars, case, instructions                     |
| 60230 | 45° Flaring tool only for 1/2" to 3/4" O.D.   |
| 60250 | 45° Flaring/cutting kit for 3/16" to 5/8" O.D. with 60210 flaring tool, 60101 cutter, case, instructions      |
| 60260 | Full range 45° flaring/cutting kit for 3/16" to 3/4" O.D. same as 60240 with 60101 cutter, case, instructions |

## ELECTRIC/MANUAL LIGHTWEIGHT FLARING TOOL



| UPC#  | Kit Swaging/Flaring Sizes   |
|-------|---|
| 60241 | Inches: 6 positions for 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4" O.D. tube |
| 60242 | Metric: 6 positions for 6, 8, 10, 12, 16 and 18 MM O.D. tube        |
| UPC#  | Replacement Parts   |
| 60433 | Lightweight 60431 bar, metric                                       |
| 60434 | Replacement yoke for 60430/60431                                    |
| 60243 | Replacement side handle for 60241/60242                             |
| 60244 | Replacement top handle for 60241/60242                              |

For super fast flaring, remove the top handle and replace with an electric drill bit.

- For use with electric/power drill (with torque adjusted function only).
- Handle included for manual flaring.
- Side handle locks movement of the yoke assembly during flaring.
- The hardened, polished eccentric cone of with 45° flare produces a rolling action for uniform flare walls without galling in 1/4" to 3/4" O.D. tubing.
- Built-in clutch release to prevent over-torquing.

## TUBING EXPANDER/SWAGER For 5/16" to 1-5/8" O.D.



60407



With long handles for comfortable leverage, easily expand 5/16" to 1-1/8" O.D. soft copper and aluminum tubing in seconds. Select from nine expander heads to attach to the front of the handles.

- Precise swaging on the job
- Re-round deformed tubes and fittings
- Salvage shorts and scrap to make couplings
- Handles, tapered expanding pin, and other moving surfaces heat treated for durability
- Use on 0.063" wall soft copper and aluminum to 1-5/8" O.D. (anneal hard copper prior to use)
- Use on 0.047" wall soft steel to 7/8" O.D.
- Kit includes six expander heads; three optional sizes sold separately

### Sets in case

| UPC#  | Description  |
|-------|--|
| 60407 | Expander kit with handles; heads for 3/8", 1/2", 5/8", 3/4", 7/8", 1-1/8" tubing O.D.; deburring tool, carrying case, instructions |
| 60412 | Expander handles   |
| 60405 | Nut and bolt   |
| 60410 | Expander handle hinge bolt (9 mm)  |
| 60411 | Blue case  |
| 60427 | Steel roller   |
| 60429 | Drive pin  |

### Expander heads

| UPC#   | Description          | Maximum wall thickness | Swage depth | Segment stretch |
|--------|----------------------|------------------------|-------------|-----------------|
| 60413* | 5/16" Expander head  | 0.039"                 | 0.24"       | —               |
| 60414  | 3/8" Expander head   | 0.039"                 | 0.35"       | 0.06"           |
| 60415  | 1/2" Expander head   | 0.047"                 | 0.43"       | 0.06"           |
| 60416  | 5/8" Expander head   | 0.047"                 | 0.57"       | 0.06"           |
| 60417  | 3/4" Expander head   | 0.047"                 | 0.59"       | 0.06"           |
| 60418  | 7/8" Expander head   | 0.047"                 | 0.71"       | 0.06"           |
| 60420  | 1-1/8" Expander head | 0.063"                 | 0.77"       | 0.90"           |
| 60422* | 1-3/8" Expander head | 0.063"                 | 0.77"       | 0.90"           |
| 60424* | 1-5/8" Expander head | 0.063"                 | 0.77"       | 0.90"           |

\* Optional sizes sold separately.

## PUNCH-TYPE SWAGING TOOL



60475

- Expands one end of copper tubing for connecting same size tubes
- Heat-treated and plated alloy steel
- Made in the USA

### Swaging sets

| UPC#  | Description   |
|-------|---|
| 60475 | Set - 4 piece in pouch for 1/4", 3/8", 1/2" and 5/8"        |
| 60476 | Set - 5 piece in pouch for 1/4", 5/16", 3/8", 1/2" and 5/8" |
| 60461 | Set with clamping bar and 6 punches 3/16" to 5/8"           |
| 60462 | Clamping bar only   |



60460

### Single tools

| UPC#  | Description                              |
|-------|--|
| 60460 | Multi-swage punch, 6 sizes 3/16" to 5/8" |
| 60463 | 3/16" O.D. punch                         |
| 60464 | 1/4" O.D. punch                          |
| 60465 | 5/16" O.D. punch                         |
| 60466 | 3/8" O.D. punch                          |
| 60467 | 1/2" O.D. punch                          |
| 60468 | 5/8" O.D. punch                          |
| 60469 | 3/4" O.D. punch                          |
| 60470 | 7/8" O.D. punch                          |

## HYDRAULIC TUBE EXPANDER KIT

- Hydraulic power
- Eliminates fittings



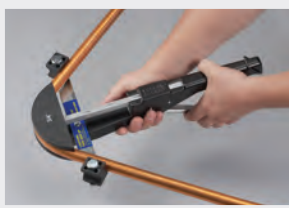
60493

- Lightweight and portable
- Easy one-hand operation

| UPC#     | Description   |
|----------|---|
| 60493    | Deluxe hydraulic expander kit: heads for 3/8", 1/2", 5/8", 3/4", 7/8", 1-1/8", 1-3/8" and 1-5/8" tubing O.D.; small cutter, tube reamer, carrying case and instructions |
| 60497    | Hydraulic expander kit: heads for 3/8", 1/2", 5/8", 3/4", 7/8", 1-1/8"; carrying case and instructions  |
| 60495    | Replacement expander pin 3/8" to 1-5/8"   |
| 60498    | Replacement case  |
| 60499    | Replacement grease tube   |
| 60413-24 | Replacement expander heads (see above)  |

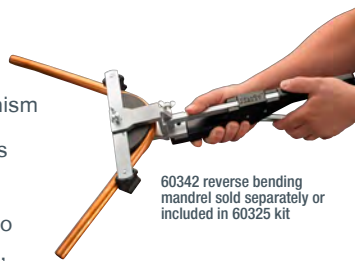
RECOVERY MACHINES  
VACUUM PUMP SYSTEMS  
VACUUM AND CHARGING HOSES  
HOSE ADAPTERS, VALVES AND PARTS  
CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## RATCHET HAND TUBE BENDER



Easy one hand bending of 1/4" to 7/8" soft copper and soft aluminum. Hard copper must be annealed before bending.

- Quick change bending mandrels and shoes
- Trouble free ratchet mechanism
- Index marks to locate bends
- Complete tube bender kit includes all items required to bend 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" and 7/8" tubing



| UPC#  | Bending radius                        | Description                               |
|-------|---------------------------------------|---|
| 60331 | —                                     | Complete kit                              |
| 60325 | —                                     | 60331 kit and 60342 bending mandrel kit   |
| 60326 | 1"                                    | 1/4" O.D. bending mandrel                 |
| 60327 | 7/8"                                  | 5/16" O.D. bending mandrel                |
| 60332 | 1-3/16"                               | 3/8" O.D. bending mandrel                 |
| 60333 | 1-3/8"                                | 1/2" O.D. bending mandrel                 |
| 60334 | 1-15/16"                              | 5/8" O.D. bending mandrel                 |
| 60335 | 2-13/16"                              | 3/4" O.D. bending mandrel                 |
| 60336 | 3-3/8"                                | 7/8" O.D. bending mandrel                 |
| 60329 | —                                     | Crossbar assembly complete - 3/4" to 7/8" |
| 60330 | —                                     | Crossbar assembly complete - 1/4" to 5/8" |
| 60338 | —                                     | Plastic carrying case                     |
| 60339 | —                                     | Ratchet body                              |
| 60342 | —                                     | Reverse bending mandrel                   |
| UPC#  | Replacement parts for 60331           |   |
| 60101 | Small cutter for 1/8" to 1-1/8" O.D.  |   |
| 60161 | Tube reamer for 1/16" to 1-3/8" O.D.  |   |
| 60328 | Lever screw (20)*                     |   |
| 60339 | Ratchet body (10)*                    |   |
| 60340 | Ratchet bar (9)* and catch bolt (14)* |   |
| 60344 | Catch pin (13)* and spring (15)*      |   |
| 60345 | Catch lever (16)*                     |   |
| 60346 | Flat spring (17)*                     |   |
| 60347 | Feed lever (19)*                      |   |
| 60348 | Wing nut screw (8, 11)*               |   |
| 60349 | Tension spring (18)*                  |   |

\* Designates the call-out number for the parts diagram on the 60331 instruction chart.

## FULL RANGE HEAVY DUTY TUBE BENDERS For 1/4" to 7/8" radius



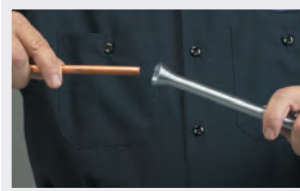
Make fast bends on almost every size of soft copper, brass, aluminum, steel and soft stainless steel tubing to 180°.

60390 is a compact three-in-one bender for 1/4", 5/16" and 3/8" O.D. tubing. Calibrated markings for bends up to 180° help you duplicate angles.

Conforms to Fed. Spec. GGG-B-191-a Type III, Class 2.

| UPC#  | Bending radius | Description                          |
|-------|----------------|--------------------------------------|
| 60390 | 15/16"         | 1/4", 5/16", 3/8" 3-in-1 Tube bender |
| 60373 | 9/16"          | 1/4" Tube bender                     |
| 60374 | 11/16"         | 5/16" Tube bender                    |
| 60375 | 15/16"         | 3/8" Tube bender                     |
| 60377 | 1-1/2"         | 1/2" Tube bender                     |
| 60378 | 2-1/4"         | 5/8" Tube bender                     |
| 60379 | 3"             | 3/4" Tube bender                     |
| 60380 | 3-1/4"         | 7/8" Tube bender                     |

## SPRING TUBE BENDER For 1/4" to 7/8"



Spring benders slip over soft copper and aluminum tubing during bending to help prevent tube collapse.

- Silver-plated finish
- Conforms to Fed. Spec. GGG-B-191-a Type IV

| UPC#  | Description  |
|-------|--|
| 60354 | 1/4" O.D. bending spring                                 |
| 60355 | 5/16" O.D. bending spring                                |
| 60356 | 3/8" O.D. bending spring                                 |
| 60357 | 7/16" O.D. bending spring                                |
| 60358 | 1/2" O.D. bending spring                                 |
| 60359 | 5/8" O.D. bending spring                                 |
| 60360 | 3/4" O.D. bending spring                                 |
| 60361 | 7/8" O.D. bending spring                                 |
| 60351 | Set-6 sizes-1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. |
| 60352 | Set-4 sizes-1/4", 3/8", 1/2" and 5/8" O.D.               |
| 60353 | Set-4 sizes-1/2", 5/8", 3/4" and 7/8" O.D.               |

## MINI-SPLIT TOOL KIT



The YELLOW JACKET Mini-Split Tool Kit addresses many of the special requirements found in mini-split installation manuals.

- R-410A service tools
- Takes the guesswork out of finding the right tool for the job
- Meet manufacturers' specifications on mini-split installations and repairs
- 60991 for domestic and 60992 for international service technicians

Each kit includes:

- Heat Pump Manifold  
Designed to handle all mini-split refrigerants and pressures (including heating modes) (R-410A only on 60992)
- 60" PLUS II Hoses  
Rated for 400 psi (276 bar) minimum burst and 800 psi (55 bar) maximum working pressure.
  - 60991 - (RYB) 1/4" with 1/4" flare fittings
  - 60992 - 1/4" with 1/4" flare flare fittings (Y), 1/4" x 5/16" (R&B) and; (Red) 1/4" Female flare on manifold connection and 1/4" female flare on angled service end.
- Eccentric Cone Flare Tool  
Creates high quality flares for 3/16" to 3/4" O.D. tubing
- Hex Key Set  
Mini-Split Hex Keys - 5/32", 3/16", 5mm and 6mm
- Vacuum/Charge Valve with Side Port
  - 60991: 5/16"x1/4"x1/4" (18986)
  - 60992: 5/16"x5/16"x5/16" (18985)
- 45° R-410A Coupler 5/16" Female Quick Coupler x 1/4" Male Flare (60992 only)
- Tube Cutter and Deburring Tool
- Adjustable Torque Wrench
  - 60652 Eight head Kit includes: 60991: 16, 17, 21, 22, 24, 26, 27 and 29 mm flare nuts
  - 60650 Six head kit includes: 60992: 17, 22, 24, 26, 27 and 29 mm flare nuts
- 16" Tool Bag  
Durable nylon bag with strap and over 25 pockets

| UPC#  | Description   |
|-------|---|
| 60991 | Mini-Split tool kit with tool bag (R-22/407C/410A Heat pump manifold) |
| 60992 | Mini-Split tool kit with tool bag (R-410A Heat pump manifold)         |
| 60990 | 16" Tool bag  |

## PRECISION TORQUE WRENCH



Designed to accommodate the full range of ductless mini-split flare nut sizes and torque requirements.

Easier-to-use and more adjustable than other flare nut torque wrenches on the market.

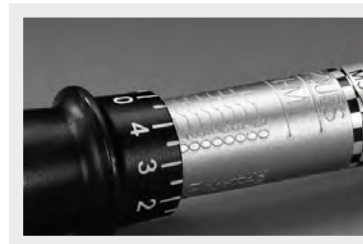
Precision torque wrench for exact tightening to 10-80 N-M or 7.4-59 ft. lb.

- Adjustable in Newton-meters and foot-pound.
- Six interchangeable open end adapters.

60650 (6 Heads): Sizes: 17, 22, 24, 26, 27 & 29 mm

60652 (8 Heads): Sizes: 16, 17, 21, 22, 24, 26, 27 & 29 mm

- The N-M and foot-pound (FT-LB) scales are marked on the barrel of the wrench for easy and permanent reference.
- The micrometer-type sleeve is easy to read and allows accurate pre-set torque values to be set. When the set torque is reached, the wrench produces an audible click and a slight, safe release of tension to prevent over tightening.
- This product has been designed to be tough, durable and easy to use. It comes supplied in a blow-molded storage and carry case.
- Accurate within 4% when measured per BSEN 26789 & ISO 6789 & ASME B107.14M & DIN3122 regardless of the open end adapter head used.



The N-M and foot-pound (FT-LB) scales are marked on the barrel of the wrench for easy and permanent reference.

| UPC#  | Description                 |
|-------|-----------------------------|
| 60650 | Torque wrench kit - 6 heads |
| 60652 | Torque wrench kit - 8 heads |

## SERVICE WRENCHES



60613

**Standard** reversible ratchet wrench with square openings: 1/4" and 3/16" at one end; 3/8" and 5/16" at other end.



60618

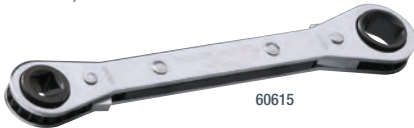
**Heavy-duty** features a heavier handle and larger gear. Stronger gear teeth are combined with strong reversing mechanism for long service life.

Square opening 3/16" and 1/4" at one end; 3/8" and 5/16" at other end.



60616

**Knuckle saver** design for convenience in tight areas. Square opening 1/4" and 3/16" one end; 3/8" and 5/16" at other.



60615

Reversible wrench for **larger service valves**. 3/8" square one end; 1/2" square at other.



60612

**7" heavy-duty** reversible ratchet wrench with hex openings 1/2" and 9/16" at one end; square 3/16" and 1/4" at other end.

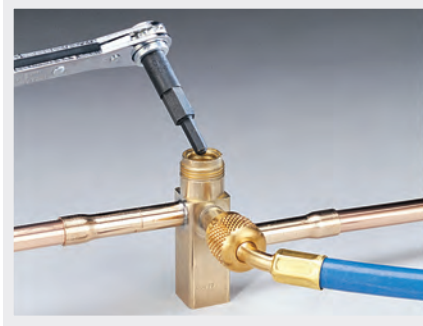
### Service wrenches

| UPC#  | Description                           |
|-------|---------------------------------------|
| 60613 | Straight service wrench               |
| 60618 | Heavy-duty service wrench             |
| 60616 | Off-set service wrench                |
| 60615 | Refrigeration wrench for large valves |
| 60612 | 7" Heavy-duty wrench                  |
| 60003 | 60613 (50 pak)                        |
| 60006 | 60616 (50 pak)                        |
| 60008 | 60618 (42 pak)                        |

CAUTION: Do not use cheater bars.

## SERVICE WRENCH AND ADAPTER

Combination service wrench and hex adapter for accessing liquid and suction based valves on residential and commercial units up to 7.5 tons. Heat-treated hex works for 3/16" and 5/16" hex valves. Black oxide plated. New adapter for some York and Coleman units.




| UPC#  | Description                             |
|-------|---|
| 60609 | Hex key adapter                         |
| 60610 | 60613 service wrench and 60609 adapter  |
| 60638 | Shorter 3/16" and 5/16" hex key adapter |

## KNUCKLE-SAVER™ HEX WRENCH SETS

### Three-piece or five-piece




The offset design saves knuckles in tight places.

- Accurately sized and broached ends for correct fit
- Heat-treated critical wear parts for long life
- Finger control reversing
- Chrome plated for durability
- Made in the USA 

| UPC#  | Description      | Hex sizes     |
|-------|------------------|---------------|
| 60630 | Set - 5 wrenches | 1/4" to 7/8"  |
| 60631 | Set - 3 wrenches | 1/4" to 9/16" |
| 60633 | Ratchet wrench   | 1/4" x 5/16"  |
| 60634 | Ratchet wrench   | 3/8" x 7/16"  |
| 60635 | Ratchet wrench   | 1/2" x 9/16"  |
| 60636 | Ratchet wrench   | 5/8" x 11/16" |
| 60637 | Ratchet wrench   | 3/4" x 7/8"   |

## SPORLAN VALVE WRENCH



Spanner end tightens packing nut around super heat adjustment stem. 1/8" square end adjusts Sporlan solenoid valves with manual lift stems as on Series B6 and E6 through MA 50. Also 3/16" square at same end for expansion valves. 

| UPC#  | Description          |
|-------|----------------------|
| 60617 | Sporlan valve wrench |



RECOVERY MACHINES  
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WIRELESS AND ELECTRONIC INSTRUMENTS  
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SYSTEM TOOLS

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HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## TUBE DEBURRING TOOL

For fast deburring, rotate blade.



| UPC#  | Description                          |
|-------|--------------------------------------|
| 60163 | Deburring tool with spare blades     |
| 60164 | Replacement blade for 60163          |
| 60165 | Economy deburr for 60139 tube cutter |
| 60166 | Economy deburr for 60146 tube cutter |

## TUBE REAMER/BURR REMOVER

Steel blades remove inner and outer burrs.



| UPC#  | Description                           |
|-------|---------------------------------------|
| 60161 | Tube reamer - 1/16" up to 1-3/8" O.D. |

## PREMIUM TUBE CUTTERS



Retracted



Extended



Spare blade stored in handle

Enclosed precision feed mechanism for easy, smooth cutting.

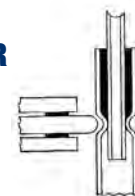
- Wide rollers with flare cut-off groove for convenience. Ground surface for easy rolling
- Wheel retracts into cutter body to save 1" in cutting radius
- Textured finish is easy to grip and hold
- Alloy steel wheels have a sharper cutting wheel edge for less burr on copper, aluminum and mild steel tubing
- Wheels are pinned to rotate in either direction without the screw backing out
- Corrosion-resistant finish on lightweight aluminum frame



- Fold away steel reamer with turned cutting edge for deburring
- Flare cut-off groove for quickly removing damaged flare
- Small and large sizes available
- Conforms to Fed. Spec. GGG-C-771-d, 1-31, 64. Type II, Class 1.

## CONSTRICTOR/CUTTER

Cutter modified with blunt wheel to roll down the tube O.D.



| UPC#  | Description                                |
|-------|--|
| 60101 | Small cutter* for 1/8" to 1-1/8" O.D.      |
| 60102 | Large cutter* for 1/4" to 1-5/8" O.D.      |
| 60103 | Constrictor/cutter for 1/4" to 1-1/8" O.D. |

Spare parts listed on page 88.

## HEAVY DUTY MINI-CUTTERS

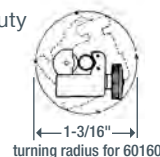


Mini-cutters are compact yet easy to grip and feature large rollers and flare cut-off groove.

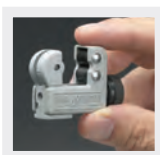
**Mini-cutter 60121** for heavy-duty cutting from 1/4" to 7/8" O.D.

**Small Mini 60160** cuts 1/8" to 5/8" with a turning radius of only 1-3/16".

**Big Mini 60142** cuts from 1/4" to 1-1/8" O.D.



1-3/16" turning radius for 60160

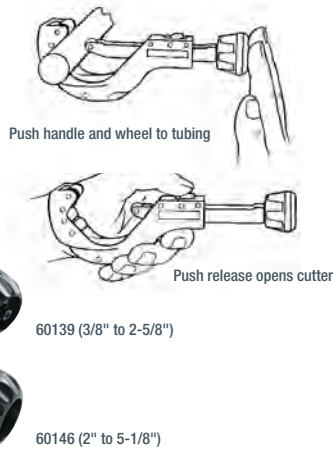


| UPC#  | Description                       |
|-------|-----------------------------------|
| 60160 | Small Mini for 1/8" to 5/8" O.D.  |
| 60121 | Mini-cutter for 1/4" to 7/8" O.D. |
| 60142 | Big Mini for 1/4" to 1-1/8" O.D.  |

Spare parts listed on page 88.



## LARGE TUBE CUTTERS To 5-1/8" O.D. (130 mm)



- “I beam” design uses aluminum alloy for both strength and light weight
- Wide body has long rollers to hold tubing and includes a flare cut-off groove
- Contoured handle for easy gripping also holds spare cutter wheel
- Separate deburr tool slides into cutter body

| UPC#  | Description                             |
|-------|---|
| 60139 | Tube cutter for 3/8" to 2-5/8" O.D.     |
| 60146 | Large tube cutter for 2" to 5-1/8" O.D. |
| 60165 | Replacement deburr tool for 60139       |
| 60166 | Replacement deburr tool for 60146       |
| 60136 | Individual/Retainer screw               |
| 60172 | Handle screw for 60139                  |
| 60173 | Handle and screw for 60139              |
| 60174 | Spring for 60139                        |

## PIPE CUTTER For black iron



| UPC#  | Description                           |
|-------|---------------------------------------|
| 60131 | 6 lb. pipe cutter for 1/8" to 2" pipe |
| 60132 | Pipe cutter wheel for 60131           |

Cuts black iron pipe more cleanly and quickly than other types of cutters. Cast iron body holds heat-treated steel cutter wheel.

- Fine pitch threads assure easy cuts on black pipe
- Large rollers for clean right angle cuts

## HEAVY DUTY PIPE WRENCH

| UPC#  | Description        |
|-------|--------------------|
| 60641 | 8 in. pipe wrench  |
| 60642 | 10 in. pipe wrench |
| 60644 | 14 in. pipe wrench |
| 60645 | 18 in. pipe wrench |
| 60646 | 24 in. pipe wrench |



Designed for strength and durability with maleable iron construction. Instant grip and release jaws are heat treated and non-replaceable.

## PVC AND POLYETHYLENE PIPE CUTTER



- Easy ratchet action and unique hooked tube-gripping jaws give an easy and clean cut
- Steel alloy blade is replaceable, repairable and heat-treated for long life

| UPC#  | Description                       |
|-------|-----------------------------------|
| 60190 | PVC pipe cutter up through 3/4"   |
| 60191 | PVC pipe cutter up through 1-1/4" |
| 60152 | PVC pipe cutter up through 2-1/8" |
| 60193 | Replacement blade for 60190       |
| 60194 | Replacement blade for 60191       |
| 60155 | Replacement blade for 60152       |

## CAPILLARY CUTTER



Cleanly cut capillary tubing without flattening or constricting tubing.

| UPC#  | Description      |
|-------|------------------|
| 60195 | Capillary cutter |



### TIPS FOR CUTTING

Cutters are designed for different applications and materials, and must be used properly for optimum performance.

- Tubing cutters are designed for softer thinner-wall materials such as copper, aluminum and brass. The wheel is designed very specifically with a sharp edge for quick cutting
- Black iron pipe cutters are larger in size and use fine pitch threads and large rollers for clean right-angle cuts

To ensure lasting tool performance, use the correct cutters for copper and pipe cutters for black iron pipe.

| Tube cutter parts – organized by cutter |     |      |        |     |      |                                     |   |
|---|-----|------|--------|-----|------|-------------------------------------|---|
| UPC#                                    | Qty | Pkg* | UPC#   | Qty | Pkg* | Description                         | Cutter  |
| 60098                                   | 1   | B    | 60099  | 10  | B    | Cutter wheels for stainless         | 60101, 60102, 60103   |
| 60079                                   | 1   | B    | 60097  | 5   | B    | Pin and clip for wheel              | 60101, 60102, 60103   |
| —                                       | —   | —    | 60094  | 5   | B    | Clip only for pins above            | 60101, 60102, 60103, 60122  |
| 60093                                   | 1   | B    | —      | —   | —    | Package one each wheel, pin, clip   | 60101, 60102, 60103   |
| 60100                                   | 1   | B    | 60107  | 10  | B    | Cutter wheels for copper            | 60101, 60102, 60103, 60160  |
| 60106                                   | 1   | B    | 60117  | 10  | B    | Constrictor wheels                  | 60101, 60102, 60103   |
| 60077                                   | 1   | B    | 60095  | 5   | B    | Reamer screw and washer             | 60101, 60102, 60103   |
| 60078                                   | 1   | B    | 60096  | 5   | B    | Reamer                              | 60101, 60102, 60103   |
| 60108                                   | 1   | B    | 60129  | 5   | B    | Screw for knob                      | 60101, 60102, 60103   |
| 60074                                   | 1   | B    | 60075  | 5   | B    | Screw for cutter wheel              | 60121   |
| 60072                                   | 1   | B    | 60073  | 10  | B    | Cutter wheels                       | 60121   |
| 60080*                                  | 1   | B    | 60125* | 5   | B    | Screw for cutter wheel              | 60121, 60123  |
| 60120*                                  | 1   | B    | 60116* | 20  | B    | Cutter wheels                       | 60121, 60142  |
| 60144                                   | 1   | B    | 60143  | 5   | B    | Cutter blade pin and clip           | 60142   |
| 60124                                   | 1   | B    | 60115  | 10  | B    | Cutter wheels                       | 60139   |
| 60136                                   | 1   | —    | 60140  | 5   | —    | Screw/retainer                      | 60139   |
| 60172                                   | 1   | B    | —      | —   | —    | Screw for handle                    | 60139   |
| 60174                                   | 1   | B    | —      | —   | —    | Spring for shaft                    | 60139   |
| 60165                                   | 1   | —    | —      | —   | —    | Replacement deburr tool             | 60139   |
| 60147                                   | 1   | B    | 60148  | 5   | B    | Cutter wheels                       | 60146   |
| 60141                                   | 1   | B    | 60149  | 5   | B    | Screws for cutter wheels            | 60146   |
| 60166                                   | 1   | —    | —      | —   | —    | Replacement deburr tool             | 60146   |
| 60110                                   | 1   | B    | 60088  | 10  | B    | Cutter wheel                        | 60122 and 60160   |
| 60081                                   | 1   | B    | 60085  | 10  | B    | Screw                               | 60122 and 60160   |
| 60110                                   | 1   | B    | 60088  | 10  | B    | Spare cutting wheel                 | 60122 and 60160   |
| 60081                                   | 1   | B    | 60085  | 10  | B    | Spare screw                         | 60160   |
| 60111                                   | 1   | B    | 60089  | 10  | B    | Cutter wheel for Imperial           | 75015<br>174-F, 274-F, 312-FB, 374-FC,<br>TC 1000, TC 1020, TC 2050 |
| 60112                                   | 1   | B    | 60090  | 10  | B    | Cutter wheel for stainless Imperial | 75046<br>174-F, 274-F, 312-FB, 374-FC,<br>TC 1000, TC 1020, TC 2050 |
| 60082                                   | 1   | B    | 60086  | 10  | B    | Screw for Imperial                  | 74762<br>174-F, 274-F, 312-FB, 374-FC,<br>TC 1000, TC 1020, TC 2050 |
| 60113                                   | 1   | B    | 60091  | 10  | B    | Cutter wheel for Imperial           | 74761 206-FA  |
| 60083                                   | 1   | B    | 60087  | 10  | B    | Screw and nut for Imperial          | 77511 206-FA  |

\* For old model with Ritchie imprint.

## SERVICE COUNTER KIT



Kit quantities only. Order individual parts and paks for restocking from chart.

| Service counter cutter parts kit 60130 |     |  |                     |
|--|-----|--|---------------------|
| UPC#                                   | Qty | Description  | Cutter              |
| 60130                                  |     | Counter selection - tube cutter maintenance kit as below |                     |
| 60179                                  | 1   | Kit box only with label - empty                          |                     |
| 60100                                  | 3   | Cutter wheels for copper                                 | 60101               |
| 60079                                  | 3   | Pin and clip for wheel                                   |                     |
| 60077                                  | 3   | Reamer screw and spacer                                  |                     |
| 60078                                  | 3   | Reamer   | 60102               |
| 60106                                  | 3   | Constrictor wheel  | 60103               |
| 60098                                  | 3   | Cutter wheel for stainless                               | 60121 (old)*, 60142 |
| 60108                                  | 3   | Screw for knob   |                     |
| 60120                                  | 6   | Cutter wheels  |                     |
| 60072                                  | 3   | Cutter wheels  | 60121 (new)*        |
| 60080                                  | 3   | Cutter wheel screw and retainer                          | 60121 (old)*        |
| 60074                                  | 3   | Cutter wheel screw and retainer                          | 60121 (new)*        |
| 60144                                  | 3   | Cutter pin and clip for wheel                            | 60142               |
| 60124                                  | 3   | Cutter wheels  | 60139               |
| 60136                                  | 3   | Cutter wheel screw and retainer                          | 60139               |
| 60110                                  | 3   | Spare cutting wheel                                      | 60160               |
| 60081                                  | 3   | Spare screw  | 60160               |

\* 60121 (old) model with Ritchie imprint.

\* 60121 (new) model with YELLOW JACKET imprint.

## RETAINING RING PLIERS – COMBINATION INTERNAL/EXTERNAL

Compact pliers for use on SealRight™ coupler with interchangeable tips.



- Six point broached jaw for accurate tip alignment. Adjustable for hex tips
- High handle-to-jaw ratio for increased mechanical advantage
- Easy-to-use – just set lever to “internal” or “external”
- Adjustable stop for efficient internal ring installation and prevention of external ring damage
- Spring return for easy control
- Includes pouch with five pairs of alloy steel replaceable tips and hex wrench

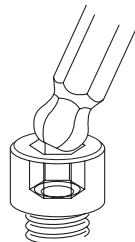
**Works on internal and external retaining rings where bearings are used, where a shaft must be held in a bore, under the dashboard and more.**

| UPC#  | Description   |
|-------|---|
| 60593 | Small pliers for 1/4" - 1" (8 mm - 26 mm) internal rings; 1/8" - 1" (3 mm - 26 mm) external rings                               |
| 60596 | Replacement tip set for 60593: straight 0.023" (0.6 mm), 0.036" (0.9 mm), 0.047" (1.2 mm); 90° 0.036" (0.9 mm), 0.047" (1.2 mm) |

## HEX KEYS

All hex keys from 1/20" to 5/16" are premium 8650 heat-treated steel alloy for rugged use.

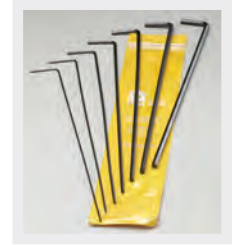
- Chamfered square cut ends for easy socket insertion
- Corrosion-resistant finish
- Patented organizer case with identifying slots that lock keys in place when not in use
- Ball end keys ease tightening of fasteners where sockets are up to 30° off axis. Provides fast full socket engagement where regular hex keys cannot do the job



| UPC# Standard end                            | Description                     |            | UPC# Ball end |
|--|---------------------------------|------------|---------------|
|  | Size                            | Length     |               |
| 60670  | 12 piece set with case          |            | 60685         |
| 60669  | Metric – 12 piece set with case |            | –             |
| <b>All individual keys below are 10 paks</b> |                                 |            |               |
| 60671  | 1/20"                           | 2.8 inches | 60686         |
| 60672  | 1/16"                           | 3.0 inches | 60687         |
| 60673  | 5/64"                           | 3.2 inches | 60688         |
| 60674  | 3/32"                           | 3.4 inches | 60689         |
| 60675  | 7/64"                           | 3.6 inches | 60690         |
| 60676  | 1/8"                            | 3.7 inches | 60691         |
| 60677  | 9/64"                           | 3.9 inches | 60692         |
| 60678  | 5/32"                           | 4.1 inches | 60693         |
| 60679  | 3/16"                           | 4.5 inches | 60694         |
| 60680  | 7/32"                           | 4.9 inches | 60695         |
| 60681  | 1/4"                            | 5.1 inches | 60696         |
| 60682  | 5/16"                           | 6.0 inches | 60697         |
| 60683  | –                               | Case       | 60698         |

## 12" HEX KEY WRENCHES

- Heat-treated for long life
- Chamfered ends for easy insertion into sockets
- Black finish



| UPC# 25 per pkg. | Size  |        | UPC# Individual |
|------------------|---|--------|-----------------|
| 60750            | Set 7 pcs. Hex key wrenches, includes all sizes below |        |                 |
| 60757            | 5/64"   | 1-3/4" | 60857           |
| 60758            | 3/32"   | 1-3/4" | 60858           |
| 60760            | 1/8"  | 1-3/4" | 60860           |
| 60762            | 5/32"   | 1-3/4" | 60862           |
| 60763            | 3/16"   | 1-3/4" | 60863           |
| 60764            | 7/32"   | 1-3/4" | 60864           |
| 60765            | 1/4"  | 1-3/4" | 60865           |

## FOLD-UP HEX KEY SETS



Locate the correct key size easily. For rugged use, each key is premium 8650 heat-treated steel alloy.

- Chamfered square cut ends for easy socket insertion
- Corrosion-resistant finish
- Smooth one-piece handle with sizes clearly marked
- Keys snap to work position for leverage and fold into handle for compact storage
- Replacement keys available

| UPC#  | Description   |
|-------|---|
| 60700 | Hex key set – 8 sizes - 1/20", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32"       |
| 60710 | Hex key set – 9 sizes - 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4" |

RECOVERY MACHINES  
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HOSE ADAPTERS, VALVES AND PARTS  
CHARGING SYSTEMS  
GAUGES  
WIRELESS AND ELECTRONIC INSTRUMENTS  
HEATING INSTRUMENTS  
LEAK MONITORS AND DETECTORS  
SYSTEM TOOLS

## FAN BLADE PULLER



All steel design includes a 15/16" hex head and 5/8" shaft milled back 1-1/2" and undersized for 1/2" shaft opening. A self centering alignment tool is included.

Four fingers attach to the fan blade. For durability they are made of hardened 4140 chrome moly steel.

- Remove squirrel cage type blower wheels
- Pull off fan blades
- Remove pulleys or sheaves
- Fits 1-3/4" hub maximum (will work on a 10" pulley if the diameter is less than 1-3/4")

Comes with 8 screws, 4 for hex key and 4 for wrench.

| UPC#  | Description               |
|-------|---------------------------|
| 60590 | Fan blade puller complete |
| 60591 | Replacement "fingers" (4) |
| 60592 | Bolt for 60590            |

## PINCH-OFF TOOLS

60665 will pinch off and reread 1/4", 5/16", 3/8" and 1/2" copper.

60661 pinches off copper and other lines quickly. Trigger release.

60666 is a ViseGrip® pinch-off tool.



| UPC#  | Description                         |
|-------|-------------------------------------|
| 60665 | Bar-style pinch-off and reread tool |
| 60661 | Plier type pinch-off tool           |
| 60666 | ViseGrip® pinch-off tool            |

## REFRIGERANT RECOVERY PLIERS

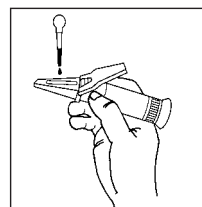


The fastest and easiest way to evacuate refrigerant before disposal of a unit.

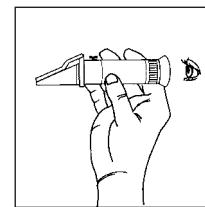
- Snaps onto refrigerant line and punctures large hole for immediate and maximum full flow to recovery unit
- One adjustable tool fits all sizes from 3/16" to 7/8" O. D. hard tubing
- Replaceable hardened steel needle

| UPC#  | Description                     |
|-------|---------------------------------|
| 60667 | Refrigerant recovery pliers     |
| 60668 | Replacement needle and gasket   |
| 19022 | Replacement gasket only (5 pak) |

## HAND-HELD REFRACTOMETER



Place sample liquid on prism and close cover.



Look through the eyepiece and focus for scale reading.


For retrofitting a mineral oil system with POE, the refractometer can accurately predict remaining mineral oil in the system down to one percent. Acceptable levels of remaining oil depend on compressor/system manufacturer requirements.

Refractive range 1.435 to 1.520 at room temperature.

| UPC#  | Description                       |
|-------|-----------------------------------|
| 69000 | Hand-held refractometer with case |

## MAX-FLOW™ COMBINATION OIL PUMP

Pump oil into the compressor *on the down stroke* while the system is under pressure, making pumping easier with a positive stroke.

- Remove oil for recovery and conversion
- Add oil to existing systems
- Pumps 2.6 oz. or 78 ml per stroke
- Pumps against 200 psi pressure
- Comfort-grip rubber handle
- Universal stopper automatically adjusts to all standard openings in 1, 2-1/2 and 5 gallon oil containers
- Suction transfer hose and fittings included. Connects to bottom of unit to pump oil from equipment quickly and efficiently
- Use with alkyl-benzene, ester-based, polyol ester, mineral and synthetic oils
- Made in the USA 




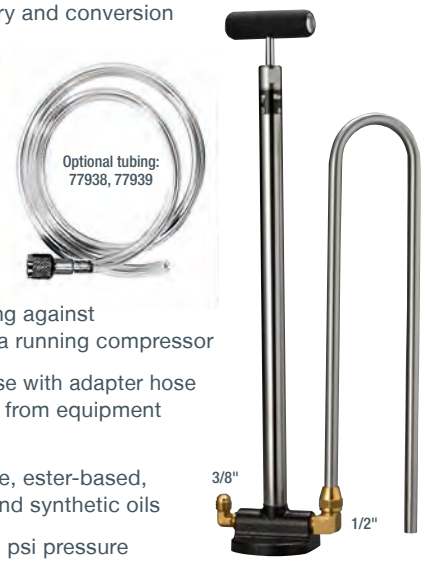
| UPC#  | Description   |
|-------|---|
| 77940 | Max-Flow combination oil pump with tubing                       |
| 77941 | Automatic stopper for oil container openings for new 77940 pump |
| 77942 | "O" ring kit for 77940  |
| 77920 | Adapter fitting straight – 1/8" NPT Male x 1/4" flare           |
| 77921 | Adapter fitting 90° angle – 1/8" NPT Male x 1/4" flare          |
| 77922 | 24" suction hose – 1/4" fitting one end only                    |

Note: Not for use with ammonia laden oil.

## MAX-FLOW™ DELUXE OIL PUMP

The Max-Flow deluxe oil pump is a high capacity unit for quick charging.


- Remove oil for recovery and conversion
- Add oil to existing systems
- Pumps 3.8 oz. (112.38 ml) per stroke
- Fits all size oil containers
- Foot stand base provides support and leverage while pumping against the high pressures of a running compressor
- Operating unit in reverse with adapter hose accessory removes oil from equipment quickly and efficiently
- Use with alkyl-benzene, ester-based, polyol ester, mineral and synthetic oils
- Will pump against 250 psi pressure
- Made in the USA 



| UPC#  | Description  |
|-------|--|
| 77930 | Max-Flow deluxe oil pump   |
| 77925 | Plastic seat   |
| 77931 | "O" ring kit for 77930   |
| 77932 | Piston rod assembly  |
| 77935 | Ball spring – 2 each   |
| 77936 | Replacement suction copper tube with 1/2" flare nut at one end       |
| 77933 | Replacement fittings – 3/8" NPT Male x 1/2" flare – 90°              |
| 77937 | Replacement fittings – 3/8" NPT Male x 3/8" flare – 90°              |
| 77938 | Optional 1/2" flexible suction hose, 24" long – fitting one end only |
| 77939 | Optional 3/8" flexible drain hose, 24" long – fitting one end only   |
| 59653 | 1/2" copper gasket soft (10 pak)                                     |

## REFILLABLE OIL INJECTORS

Add liquid to systems and sample refrigerant quickly and easily.

- Body and cap are rugged aluminum with "O" ring seal
- Male fitting at one end with Schrader. A ball valve for control on other end with a short length of hose
- Valve depressor in Female end
- 600 psi maximum working pressure
- Made in the USA 

| UPC#  | Description  |
|-------|--|
| 69560 | 1/2 oz. Oil injector 1/4" Male flare x 1/4" Female Q.C.    |
| 69561 | 2 oz. Oil injector 1/4" Male flare x 1/4" Female Q.C.      |
| 69562 | 4 oz. Oil injector 1/4" Male flare x 1/4" Female Q.C.      |
| 69563 | "O" ring 1/2 oz. injector (5 pak)                          |
| 69564 | "O" ring 2 and 4 oz. injector (5 pak)                      |
| 69565 | 1/2 oz. R-134a auto injector with hose and service coupler |
| 69566 | 2 oz. R-134a auto injector with hose and service coupler   |
| 69567 | 4 oz. R-134a auto injector with hose and service coupler   |
| 69722 | Replacement hose for 69560, 69561 and 69562                |
| 69724 | Replacement hose for 69565, 69566 and 69567                |



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## ERGONOMIC FINFIX™ COMBS

### For 14 different fin sizes

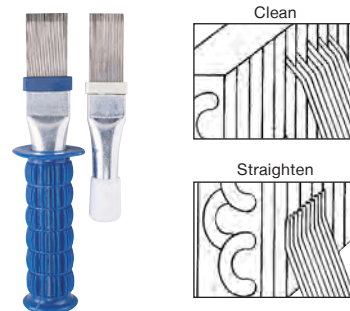
Color-coded nylon fin combs are designed to easily straighten and clean fins on standard and high efficiency condensers and evaporators. Shape conforms to the hand and thumb for a more comfortable grip.



Available individually bagged or as a set of six assorted. One set of six covers 12 different fin sizes. 61157 is for high efficiency units.

| Individual UPC# | Description | Fins per inch   | Color    | Bag of 25 UPC# |
|-----------------|-------------|-----------------|----------|----------------|
| 61151           | FinFix 1    | 8 and 10        | Orange   | 61161          |
| 61152           | FinFix 2    | 9 and 15        | Yellow   | 61162          |
| 61153           | FinFix 3    | 11 and 13       | Blue     | 61163          |
| 61154           | FinFix 4    | 12 and 14       | Green    | 61164          |
| 61155           | FinFix 5    | 16 and 17       | Lime     | 61165          |
| 61156           | FinFix 6    | 18 and 20       | Red      | 61166          |
| 61157           | FinFix 7    | 21/22 and 23/24 | Purple   | 61167          |
| 61158           | Set of 6    | 8 to 20         | Assorted | —              |

## FIN STRAIGHTENERS



Fin straighteners straighten even severely damaged condenser and evaporator fins quickly and easily. Also clean away lint, rust, dirt and other debris.

Straightening wire tension is adjustable to accommodate various fin types. Wires are held by a sturdy metal body.

61170 includes a long comfort-grip handle, making straightener easier to use. Head is 20 percent wider than the 61150 to straighten more fins in one pass.

| UPC#  | Description                        |
|-------|------------------------------------|
| 61150 | Fin straightener                   |
| 61170 | Fin straightener with large handle |

## MECHANIX™ WORK GLOVES

Gloves feature a padded, two-way stretch lined spandex top for fit and flexibility.



- Smooth surface thumb and index finger improve grip
- Soft, flexible, durable and breathable synthetic leather palm
- Synthetic leather and lycra finger gussets
- Elastic cuff with adjustable hook and loop TPR closure

| UPC#  | Description                       |
|-------|-----------------------------------|
| 10057 | Medium Mechanix™ work gloves      |
| 10058 | Large Mechanix™ work gloves       |
| 10059 | Extra large Mechanix™ work gloves |

## SAFETY GOGGLES

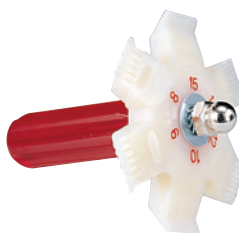


Helps protect your eyes against metal particles, sparks, refrigerant gases, etc. when working on HVAC/R systems.

Safety goggles are recommended any time you work on a system.

| UPC#  | Description               |
|-------|---------------------------|
| 11002 | Safety goggles            |
| 11003 | Ventilated safety goggles |

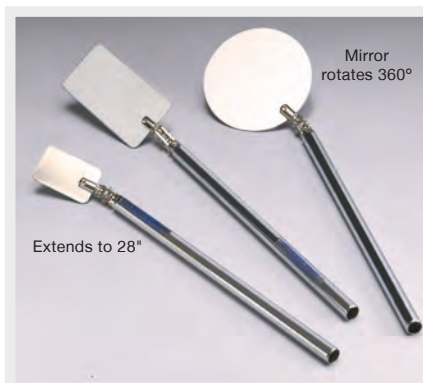
## 6-IN-1 FIN STRAIGHTENER



Fin straightener sizes are marked on the head - 8, 9, 10, 12, 14 and 15 fins per inch. Compact 4" length.

| UPC#  | Description             |
|-------|-------------------------|
| 61171 | 6-in-1 Fin straightener |
| 61172 | Head only               |
| 61173 | Handle only             |

## STAINLESS TELESCOPING INSPECTION MIRRORS



- Check leaks in hard to see places
- Stainless steel mirror on ball joint rotates 360°
- Handle extends to 28"

| UPC#  | Description             |
|-------|-------------------------|
| 78100 | Round 3-3/4" diameter   |
| 78101 | Rectangular 3-3/4" x 2" |
| 78102 | Rectangular 2" x 1-1/4" |

## TELESCOPING GLASS MIRRORS



| UPC#  | Description                 | Extension         |
|-------|-----------------------------|-------------------|
| 78094 | 2-1/4" round                | 9-1/4" to 14-1/4" |
| 78097 | 2-1/4" round magnified (2X) | 9-1/4" to 14-1/4" |

| With pocket clip and insulated head |                             |                |
|-------------------------------------|-----------------------------|----------------|
| 78098                               | 1-1/4" round                | 7" to 19"      |
| 78099                               | 1-1/4" round magnified (2X) | 7" to 19"      |
| 78103                               | 2" x 3-1/2" rectangular     | 11" to 15-1/2" |
| 78104                               | 1" x 2" oval                | 7" to 19"      |

| Replacement mirrors only |                               |
|--------------------------|-------------------------------|
| 78105                    | 2-1/4" round glass            |
| 78106                    | 2" x 3-1/2" rectangular glass |
| 78107                    | 1" x 2" oval glass            |

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| 59511       | 66             | 60278       | 79             | 69058-69080 | 17, 63     | 69733-69735 | 75         | 93377       | 14         |
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| 59655       | 26, 35         | 60295       | 79             | 69088       | 18, 62     | 77920       | 91         | 93394       | 12, 14, 39 |
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| 60160       | 86, 88         | 60641-60646 | 87             | 69354-69361 | 71         | 78097-78107 | 92         | 95002-95343 | 8          |
| 60161       | 83, 86         | 60650-60652 | 84             | 69371-69373 | 75         | 78112       | 28         | 95431-95432 | 12, 15     |
| 60163-60164 | 86             | 60661-60666 | 90             | 69375       | 71         | 78612-79172 | 29         | 95449-95538 | 8          |
| 60165-60166 | 86-88          | 60667       | 35, 90         | 69379       | 75         | 80200-80240 | 15         | 95560       | 5          |
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## MANUFACTURERS REPRESENTATIVES USA

### Kivlan Group

100 Sterling Parkway, Ste. 111  
Mechanicsburg, PA 17050  
Phone: 717-249-6019  
Fax: 717-960-1528  
E-mail: info@kivlangroup.com  
www.kivlangroup.com

### Monti and Associates, Inc.

P.O. Box 866  
Arlington Heights, IL 60006  
Phone: 847-956-8200  
Fax: 847-956-8237  
E-mail: ma-line@ma-line.com  
www.ma-line.com

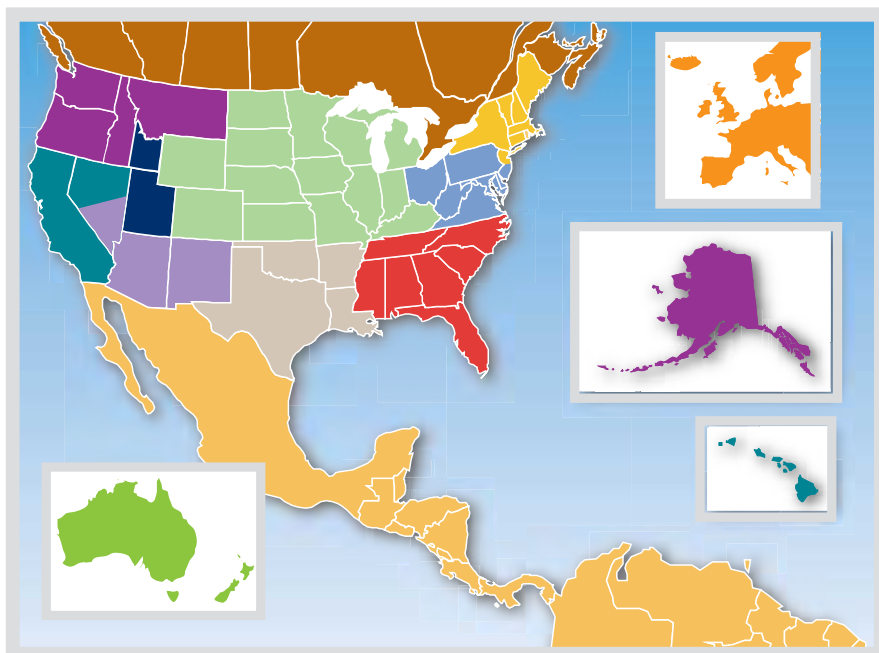
### M. Brady and Associates

15259 S.E. 82nd Drive, Ste. 201  
Clackamas, OR 97015  
Phone: 503-656-4560  
Fax: 503-656-4570  
E-mail: sarah@mbrady.com  
www.mbrady.com

### Morley Associates Inc

146 Cedar Street  
Branford, CT 06405  
Phone: 203-488-8944  
Fax: 203-488-9790  
E-mail: info@morleyassociates.com  
www.morleyassociates.com

## Contact the Factory



### E.V. Dunbar Company

125 Townpark Drive, Ste. 150  
Kennesaw, GA 30144  
Phone: 770-218-1750  
Fax: 770-218-1756  
E-mail: info@evdunbarco.com  
www.evdunbarco.com

### The Pollex Group

PO box 66  
Little Elm, TX 75068  
Phone: 877-314-2938  
Fax: 800-231-4617  
E-mail: info@thepollexgroup.com  
www.thepollexgroup.com

### DENCO Manufacturer's Representatives

1015 W. Foothill Blvd.  
Azusa, CA 91702  
Phone: 626-815-9444  
Fax: 626-815-9894  
E-mail: dave@dencorep.net  
www.dencorep.net

### Danko Sales Company, LLC

625 W. Deer Valley Rd. #103-421  
Phoenix, AZ 85027  
Phone: 602-298-9360  
Fax: 602-298-9365  
E-mail: john@dankomsc.com  
www.dankomsc.com

## CANADA

### B.J. Williams & Associates, Inc.

745 Development Drive, Unit 3  
Kingston, ON K7M 4W6  
CANADA  
Phone: 613-389-2879  
Fax: 613-389-4967  
E-mail: shane@actoolsource.com  
www.actoolsource.com

## MEXICO, CENTRAL AND SOUTH AMERICA

### International Sales & Marketing Group, Inc.

200 S. Birch Rd., Ste. 106  
Ft. Lauderdale, FL 33316  
Phone: 001-954-515-9445  
Fax: 001-954-788-2449  
E-mail: intlsalesgroup@aol.com

## EUROPE

### Fairfield Technologies

Fairfield House  
St. Martins  
Guildtown Perthshire PH2 6AE  
UNITED KINGDOM  
Phone: 00-44-(0) 1738-550-005  
Fax: 00-44-(0) 1738-550-015  
E-mail: info@fairfieldtechnologies.co.uk

## AUSTRALIA

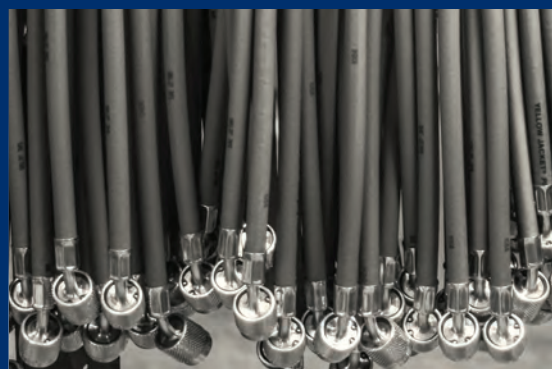
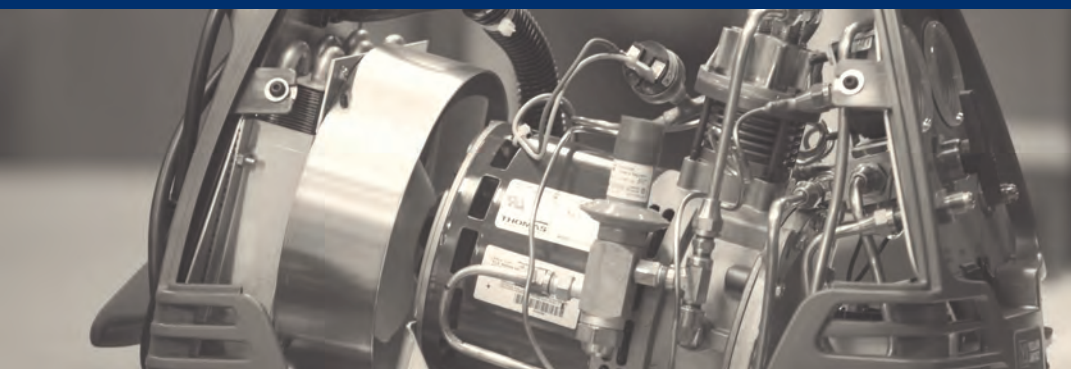
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**FAX:**  
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952.943.1605

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