

# HVAC/R SERVICE TOOLS





























# For over 70 years, the YELLOW JACKET® name has been synonymous with quality products and service in the HVAC/R industry.

It all started back in 1946, when the late Jack Ritchie founded Ritchie Engineering Company in Minneapolis, Minnesota as a fabrication/manufacturer's representative organization. Jack worked hard and in 1949 he created a high-quality charging hose. Jack picked yellow for the color of the hose – which later became the industry standard for refrigerant. The color stuck with Jack and inspired the name YELLOW JACKET®. Today, that hose is known as the YELLOW JACKET® Charging Hose and remains the best-selling refrigeration recovery hose in the industry for almost 70 years.

"While a lot has changed in the last 70 years, but one thing has remained the same...our philosophy of providing HVAC/R professionals the quality products they need, at a competitive price, with fast delivery and dependable follow-up," said Tom Ritchie, President and CEO.

Since the launch of its first charging hose, YELLOW JACKET® has continued to innovate and expand its line of recovery and service tools. While the brand has sold hundreds of thousands of its namesake hose, YELLOW JACKET® has set the bar within the HVAC/R industry with innovative digital manifolds, tubing tools, vacuum pumps, leak detectors, recovery units, electronic instruments and a line of automotive recovery products.

YELLOW JACKET® remains dedicated to its philosophy of creating quality products which are made with exacting standards. Products are carefully assembled by highly-skilled workers at our manufacturing facility, who do everything from producing the smallest coupler to bagging the final packaging. Every shipment is double-checked by weight before shipping out the door.

From its humble beginnings, the YELLOW JACKET® brand has continued to grow and innovate while still a family business, owned and operated by Tom & Kristen Ritchie. YELLOW JACKET® products are now available worldwide.

As we look towards the future, we recognize the need for sustainable solutions to a myriad of challenges. When it comes to product development, packaging, shipping and manufacturing, we are committed to evaluate all options towards the goal of smaller environmental impact while maintaining our innovative edge.







INSTRUMENTS

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Continued

| HEAT         | INCTRIMENT   |
|--------------|--------------|
| CVCTEM TOOLS | SISIEM ISSES |
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YJACK™ Series sensors work together to provide a total HVAC/R diagnostics solution with wireless convenience. Coupled with the P51 TITAN® Digital Manifold, the user has all the necessary information for complete system diagnostics.



### P51 TITAN® DIGITAL MANIFOLDS



### Accurate measurements, analysis and reporting in your hands, and Bluetooth® capability to put them at your fingertips.

The YELLOW JACKET® P51 TITAN® Digital Manifold Series provides ultimate system measurements with ease. This 4-valve manifold provides fast and accurate measurements for refrigeration and a/c systems. Measurements are displayed on a backlit digital display and can be transmitted via Bluetooth® to a Smartphone for even further analysis. Local display of system pressures and temperatures, superheat and subcool provide instant analysis. When connected to your Smartphone, target superheat and subcool are easily attained, along with all other capabilities of the YJACK VIEW™ or the ManTooth® app.

The flagship YELLOW JACKET® P51-870 TITAN® features a 4.3" full color touchscreen graphic display with digital and graphical representation of pressure and temperature measurements. It also features on-board data logging and standard vacuum sensor and measurements (vacuum sensor included). A 4-pack of hoses is included as well as two temperature clamps and a backpack carrying case for safe storage.

#### P51-870 TITAN® ADDITIONAL FEATURES AND BENEFITS

- 4.3" full color touch screen display
- · Digital and graphical representation of pressure and temperature measurements
- Vacuum sensor included
- Set of four manifold hoses included: (3) 1/4" RYB and (1) 3/8"yellow vacuum hose
- (2) temperature clamps included
- · Backpack carrying case included
- · Wirelessly measure and display relative humidity, dry bulb, wet bulb and dew point temperature alongside system pressure and temperature measurements (requires separate purchase of YJACK DEW™ PN 67063)



#### **P51 TITAN® SERIES FEATURES & BENEFITS**

- · Measures high and low side pressures and temperatures
- Displays vapor and liquid saturation temperatures
- System superheat and subcooling calculations
- On board data logging; export to your computer via USB
- YJACK VIEW<sup>™</sup> app used with 40870, 40875 and 40877; ManTooth® app used with 40860
- Bluetooth® capability
- Pressure hold mode displays rate of change for both vacuum and positive pressure measurements
- 4-way TITAN® valve block
- 126 refrigerant profiles stored in the instrument including new blends not currently in the REFPROP database
- · Backlit display with auto-dimming
- Auto shut-off
- Includes two temperature clamps
- · Optional vacuum sensor available (included with P51-870)
  - · Vacuum measurements, targets and leak testing
  - High and low alarm
- · Re-chargeable battery with battery life indicator
  - · Continuous use no backlight: 80 hours
  - Continuous use full backlight: 5 hours (40860) 4 hours (40870)
- US and International units (bar, psia, psig, kPa, MPa, kg/cm²)
- Maximum working pressure 700 psia (48.3 bar)
- · USB charging port
- IP52 certified
- · Robust housing
- Two-year warranty
- Made in the USA





#### **40870 INCLUDES:**

- Vacuum sensor (P/N 67044)
- Set of four manifold hoses: (3) 60", 1/4" RYB (P/N 21985) and (1) 60", 3/8" yellow vacuum hose 3/8" straight x 3/8" 45° (P/N 18160)
- (2) temperature clamps (P/N 67010)
- USB charging cable
- Backpack carrying case (P/N 10146)



#### **40875 INCLUDES:**

- Vacuum sensor (P/N 67044)
- Set of (6) 60" manifold hoses: (3) RYB compact ball valves (P/N 29985); (1) Y 3/8" str x 3/8" 45° (P/N 18160); (2) compact ball valve 1/4" x 5/16" (P/N 29425 and 29465)
- (2) temperature clamps (P/N 67010)
- · USB charging cable
- Backpack carrying case (P/N 10146)



#### 40877 INCLUDES:

- Vacuum sensor (P/N 67044)
- Set of (6) 60" manifold hoses: (3) RYB compact ball valves (P/N 29985); (1) Y 3/8" str x 3/8" 45° (P/N 18160); (2) compact ball valve 1/4" x 5/16" (P/N 29425 and 29465)
- (2) YJACK<sup>™</sup> temperature clamps (67061)
- USB charging cable
- Backpack carrying case (P/N 10146)

#### YJACK VIEW™ APP FEATURES

- All the great features of the ManTooth® app
- Measure HVAC/R system pressure, temperature, saturation temperature, superheat and subcooling
- Monitor system evacuation status
- · Check indoor air comfort and system efficiency with psychrometric air calculations: Percent relative humidity, dry bulb, wet bulb and dew point temperature measurements
- Monitor status of all nearby YJACK<sup>™</sup> and P51-870 TITAN® devices
- Customize data view for each measurement
- · Freely switch between multiple simultaneous sessions without loss of data
- · Create highly customized datalogs which can be saved or emailed from your smart device
- Choose from 126 refrigerant profiles found in the REFPROP database

P51-860 TITAN® Digital Manifold

P51-870 TITAN® Digital Manifold

UPC # Description

40860

40870

40875

29465

40844

· Available on iOS (version 10 or later) and Android (version 8 or later) smart devices

# ManTooth® APP FEATURES

- · Check target superheat and subcool by setting dewpoint and bubble point
- · Additional monitoring, data logging and report generation
- · Generates datalog file
- 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)

#### **APPLICATIONS**

- AC&R System Evaluation
- Evacuation
- Charging/Recovery
- Leak Testing



Vacuum Screen

P/T Screen

#### P51-870 TITAN® Digital Manifold with (2) YJACK™ wireless 40877 temperature clamps, ball valve and 5/16" hoses UPC# **Optional/Replacement Parts** 67044 Vacuum Sensor 10146 Backpack 67010 Temperature Probe Clamp 67061 YJACK™ Temperature Clamp (wireless) (3) 60" RYB (Standard Fittings); (1) 60" Y (3/8" str x 3/8" 45° Quick 21990 Coupler) 18160 60" Yellow, 3/8" straight x 3/8" 45°, PLUS II™ "B" 60" 3 pak, standard fitting, PLUS II™ 1/4" hose 21985 29985 60" 3 pak, compact ball valve, PLUS II™ 1/4" hose 29425 60" Blue, compact ball valve (1/4" x 5/16")

60" Red, compact ball valve (1/4" x 5/16")

P51 TITAN® Replacement Micro-USB Board

P51-870 TITAN® Digital Manifold with ball valve, 5/16" hoses





Bluetooth<sup>®</sup>



# YJACK™ WIRELESS PROBES FOR A MORE CONNECTED TECH



The YJACK<sup>™</sup> Series is a network of devices that form a new platform offering a total HVAC/R diagnostics solution. Multiple devices can measure system and environmental parameters, providing a complete picture of a system's condition.

Each device utilizes Low Energy Bluetooth® (BLE) technology to interconnect with each other and any smart device, Android™ or iOS. Many of the YJACK™ Series devices can also communicate directly with the P51-870 TITAN® Digital Manifold simultaneously.



#### **Enhanced YJACK VIEW® App**

- Customized PDF service reports
- Supply and return air enthalpy
- System heating/cooling efficiency
- System Energy Efficiency Ratio (EER)

The YJACK VIEW® App provides ease of access to all information measured by the YJACK® Series of devices and P51-870 TITAN®.



# **Wireless Probes for a Total HVAC/R Diagnostic Solution.**



# **A2L** YJACK MANO™ Dual Port Manometer 67068

### YJACK® SERIES OVERALL FEATURES:

- Compatible with YJACK VIEW® App and P51-870 TITAN® devices (firmware version v4.0 or later) [YJACK MANO<sup>™</sup> not compatible with P51-TITAN® Digital Manifold]
- Bluetooth® 4.2 compliant low energy radio
- 400 ft. line-of-sight signal range
- Rapid response time
- · Rotating mounting magnet for optimal Bluetooth® transmitter placement (not applicable on YJACK PRESS™ and YJACK VAC™)

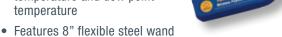


- IP52 rated
- Two-year warranty



# **YJACK DEW® Psychrometer 67063**

 Measures percent relative humidity, dry bulb temperature, wet bulb temperature and dew point temperature



· Optimized sensor housing for increased air exchange and better response time



# **YJACK PATH® Range Extender 67060**

- Connects and rebroadcasts up to (6) YJACK® probes and (2) P51-870 TITAN® Digital Manifolds
- · Adds up to additional 400 ft. line-ofsight signal range per device
- Amplifies signal strength through difficult to penetrate barriers



# **YJACK® Temperature Clamp 67061**

- Measures surface temperature of pipes up to 1.25" diameter
- Temperature clamp provides strong, secure connection to system
- · Flexible cable connection for easy access



## **YJACK® Temperature Strap 67062**

- Measurements for surface temperature of pipes up to 6" diameter
- Quick release latch
- Elastic strap for secure connection

- Static pressure measurements up to +/- 80 inches of water column
- Pressure probe tips and adapters included for accurate duct and gas pressure measurements
- Accurately measure pressure drop with included static pressure tips
- · Display readings on the local display or remotely with the YJACK VIEW® App (v4.0+)
- Soft case for convenient storage





# YJACK PRESS™ Pressure Gauge 67065

- System pressure measurement up to 725 psig (50 bar)
- Integrated charging port to easily adjust refrigerant charge
- Working Pressure: -14.7 to 725 psig (-1.01 to 50 bar gauge)



# YJACK VAC™ Vacuum Gauge 67066

- System vacuum meaurement from atmospheric pressure to 1 micron
- Robust sensor resists pressure shock and oil contamination
- Electronic display for clear visibility – even in direct sunlight



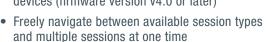
## YJACK AMP™ Current Probe 67067

- Current measurement up to 50 Amps AC
- Current Sensor Accuracy: +/-1% of reading or +/- 0.15 amps
- Measures inrush current to analyze hard starts and to troubleshoot blown fuses



### **YJACK VIEW® HIGHLIGHTS:**

 Compatible with all YJACK® and P51-870 TITAN® devices (firmware version v4.0 or later)



YJACK AMP™ in v3.0+; YJACK MANO™ update to v4.0+



- Psychrometric System Efficiency and Leak Test sessions and communication capabilities with YJACK PRESS™, YJACK VAC™ and
- Easily place and monitor status of all YJACK® and P51-870 TITAN® devices from one screen
- Adjustable datalog formatting, multiple sampling intervals
- Generate customized and detailed service reports capturing system readings and equipment information



#### **YJACK VIEW® SMART APPLICATION:**

- · Measure HVAC/R system pressure, temperature, saturation temperature, superheat and subcooling
- · Monitor system evacuation status
- Check indoor air comfort and system efficiency with psychromeric air calculations: percent relative humidity, dry bulb, wet bulb and dew point temperature measurements
- Perform system leak tests and track pressure change over time
- Measure system charge with scale weight readings during charging and recovery operations
- Take electrical current measurements and analyze critical system power information
- · Identify duct pressure changes and measure regulator gas pressures
- Generate highly customized and detailed service reports capturing system readings and equipment information
- Monitors the status of all nearby YJACK® and P51-870 TITAN® devices
- · Freely switch between multiple simultaneous sessions without loss of data
- · Customize data view for each measurement
- Create data logs to be saved or emailed from your smart device
- Choose from 126 refrigerant profiles found in the REFPROP database
- Available on iOS (version 10 or later) and Android<sup>™</sup> (version 8 or later) smart devices

#### CREATE SERVICE REPORTS NEW

Service report feature creates highly customizable PDF reports of system measurements and service information while storing previous jobs and reports.

#### **ENHANCED DATA LOGGING**

Record data from one or all current session types. Choose from a variety of sampling rates depending on user need. Live updates to selected devices, units, elevation and refrigerant selection appended to existing data logs. Start and stop data logging at will - save for later or share via email for remote analysis.

#### STATIC PRESSURE SESSION NEW

Displays pressure readings from YJACK MANO™ for measurement of duct pressure changes and regulator gas pressure.



| Supply | Supply Return |  |  |  |
|--------|---------------|--|--|--|
| 6.43   | 6.30          |  |  |  |
| HWC    | HIRO          |  |  |  |
| Differ | ential        |  |  |  |
|        | 13            |  |  |  |
|        |               |  |  |  |
| -      | 0.00          |  |  |  |
| HO     | LD            |  |  |  |
|        | 90            |  |  |  |

#### PRESSURE / TEMPERATURE NEW

View system pressure and temperature data as reported by any combination of YJACK PRESS™ devices, temperature devices or P51-870 TITAN® units. Easily select and favorite commonly-used refrigerants for calculating system properties including saturation temperatures and calculated system superheat/subcooling. Effortlessly manipulate data view types, including traditional large numeric format, analog gauge (pressure only) or graphically.

#### **PSYCHROMETRIC SYSTEM EFFICIENCY NEW**

Analyze psychrometric data reported by (2) YJACK DEW® devices. Ensure maximum comfort through wireless supply and return relative humidity, dry bulb, wet bulb, dew point temperatures and enthalpy calculations. Compare system-rated capacity to actual output for overall system efficiency. View available data as traditional large numeric format or graphically.

#### **EVACUATION NEW**

Monitor system vacuum as reported by a P51-870 TITAN® external wired vacuum sensor or the YJACK VAC™ Wireless Vacuum Gauge. Data can be displayed as traditional large numeric format, analog gauge or graphically. Adjustable vacuum pressure target and hold timer ensures all non-condensable gases are removed from the system during evacuation.

#### LEAK TEST NEW

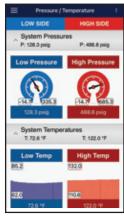
Monitor pressure changes during nitrogen leak testing to verify that system is tight. View system pressure trends as traditional large numeric format or graphically.

#### **CHARGING & RECOVERY**

Display scale readings from the Wireless Charging Scale (P/N 68864) to accurately charge systems or to determine system charge amount

#### ELECTRICAL NEW

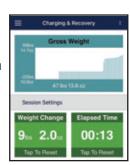
Electrical session displays readings from YJACK AMP™ Wireless Current Probe while calculating power draw and system Energy Efficiency Ratio (EER).







00:01:1





through recovery.

INSTRUMENTS







#### YJACK VIEW® APP SUPPORTED YELLOW JACKET® DEVICES:

- P51-870 TITAN® Digital Manifold
- YJACK PATH® Range Extender
- YJACK PRESS<sup>™</sup> Pressure Gauge
- YJACK VAC™ Vacuum Gauge
- YJACK AMP<sup>™</sup> Current Probe
- YJACK® Temperature Clamp
- YJACK® Temperature Strap
- YJACK DEW<sup>®</sup> Psychrometer
- YJACK MANO™ Manometer
- · Wireless Refrigerant Scale (P/N 68864)

YJACK VIEW® App Apple/App Store



☐iPhone ☐iPad

YJACK VIEW® App Android™/Google Play





Firmware Updates



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### **P51-870 TITAN® DIGITAL MANIFOLD KIT** WITH YJACK® TEMPERATURE CLAMPS

#### **40877 KIT INCLUDES:**

- Vacuum sensor (P/N 67044)
- Set of (6) 60" manifold hoses:
  - (3) RYB compact ball valves (P/N 29985)
  - (1) Y 3/8" str x 3/8" 45° (P/N 18160)
  - (2) Compact ball valve 1/4" x 5/16" (P/N 29425/29465)
- (2) YJACK® Temperature Clamps (P/N 67061)
- USB charging cable
- Backpack carrying case (P/N 10146)



| UPC#  | Description  |  |  |
|-------|--|--|--|
| 67060 | YJACK PATH® Range Extender   |  |  |
| 67061 | YJACK® Temperature Clamp   |  |  |
| 67062 | YJACK® Temperature Strap   |  |  |
| 67063 | YJACK DEW® Psychrometer  |  |  |
| 67065 | YJACK PRESS™ Pressure Gauge NEW  |  |  |
| 67066 | YJACK VAC™ Vacuum Gauge NEW  |  |  |
| 67067 | YJACKAMP™ Current Probe NEW  |  |  |
| 67068 | YJACK MANO™ Dual Port Manometer NEW  |  |  |
| 67070 | O70 YJACK® Temperature Clamp Kit: (2) YJACK® Temperature Clamps, (1) YJACK PATH®   |  |  |
| 67071 | YJACK®Temperature/Humidity Kit: (2) YJACK®Temperature Clamps, (2) YJACK DEW® Psychrometers, (1) YJACK PATH®                              |  |  |
| 67072 | YJACK® Charging Kit: (2) YJACK PRESS™ Pressure Gauges, (2) YJACK® Temperature Clamps NEW   |  |  |
| 67073 | YJACK® Charging & Air Kit: (2) YJACK PRESS™ Pressure<br>Gauges, (2) YJACK® Temperature Clamps, (2) YJACK DEW®<br>Psychrometers NEW       |  |  |
| 67074 | YJACK® Charging & Evacuation Kit: (2) YJACK PRESS™ 67074 Pressure Gauges, (2) YJACK® Temperature Clamps, (1) YJACK VAC™ Vacuum Gauge NEW |  |  |
| 40877 | P51-870 TITAN® Digital Manifold with (2) YJACK® Temperature Clamps, Ball Valve and 5/16" Hoses   |  |  |

### 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                      |  |  |
| 69030 | Vacuum Sensor Cleaning Kit                             |  |  |
| UPC#  | Replacement Parts                                      |  |  |
| 67044 | Vacuum sensor  |  |  |
| 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

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 Sensor Range (Instrument)

Temperature Display Resolution 0.1°F or °C Temperature Accuracy (Instrument) ±0.2°C (±0.36°F)

-4°F to 160°F (-20°C to 71°C) Limited by battery Working Temperature

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

6" long x 1.6" wide x 2.3" thick (15.3 x 4 x 5.8 cm); 0.5 lbs (225 grams) Size and weight

Superheat and Subcool Automatically calculated by the ManTooth App

Max. and Min. Pressures Displays and records the maximum and minimum pressures Refrigerant Database 126 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

Rechargeable LiPo battery for 10+ hours continuous life Battery

#### 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 Instant Warm-Up Time and Response Time



0.1 psi, 0.1 bar, 1 kPa,

0.001 MPa, 0.01 kg/cm<sup>2</sup>

0.5% of full scale at 25°C;

### **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  |  |
| <b>UPC#</b> 67010                         | Replacement Parts  Clamp   |  |
|   | · ·  |  |
| 67010                                     | Clamp  |  |
| 67010<br>67012                            | Clamp<br>USB Cord  |  |
| 67010<br>67012<br>67013                   | Clamp<br>USB Cord<br>Blue boot   |  |
| 67010<br>67012<br>67013<br>67014          | Clamp USB Cord Blue boot Carrying case   |  |
| 67010<br>67012<br>67013<br>67014<br>93394 | Clamp USB Cord Blue boot Carrying case Tether cap  |  |

#### **Specifications:**

Pressure Sensing Resolution

Pressure Sensing Accuracy

Working Pressure **Proof Pressure** 

**Burst Pressure** 

Temperature Sensor Range (Instrument)

Temperature Display Resolution Temperature Accuracy (Instrument) Working Temperature Storage Temperature Working Humidity IP Class Battery Life Range

Bluetooth Radio Size

Superheat and Subcool

Max. and Min. Pressures

Refrigerant Database

Screenshot Feature

Temperature Sensors

**Pressure Transducers** 

System Attachment

Pressure Zeroing

**Elevation Compensation** 

Battery

1% of full scale 55°F to 130°F; 2% of full scale -40°F to 248°F 0 - 700 psia (48.3 bar) Tolerable pressure without internal damage 1000 psia Tolerable pressure without loss of seal 1500 psia 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) 0.1°F or °C ±0.2°C (±0.36°F) -4°F to 160°F (-20°C to 71°C) -4°F to 160°F (-20°C to 71°C) 0-95% RH (non-condensing) IP 50 10+ hours continuous 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. Class 1 Bluetooth 2.1 Radio 6" long x 1.6" wide x 2.3" thick (15.3 x 4 x 5.8 cm) 0.5 lbs (225 grams) Automatically calculated by the ManTooth App Displays and records the max and min pressures 98 NIST refrigerant profiles included; upgradeable Save pressure and temperature readings from your sessions which can be automatically organized by location and serviced unit Capable of measuring 2 temperatures using high accuracy NTC thermistors 67001/67003 - one 67002 - two Very small internal volume minimizes refrigerant loss during system analysis. Simple single button zeroing at the start of each session Enter at start of session for









effortless psia compensation

Rechargeable LiPo battery

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#### **HYDROCARBON CHARGING KIT**



**The YELLOW JACKET® Hydrocarbon Charging Kit** provides all the necessary tools to charge R-290 (propane) and R-600a (isobutane) hydrocarbon systems safely and effectively. The single valve manifold and small ID hoses allow for effective system pressure measurement while minimizing the impact on the system charge. The bottle valve and adapters offer compatibility with a variety of R-290 and R-600a refrigerant bottles.

#### **Features:**

- Compact charging scale provides 0.05 g (0.01 oz) resolution for accurate charging
- Bottle stand offers stability for liquid charging with inverted refrigerant bottles
- Single valve manifold with 0.08" (2mm) ID x 24" REFFLEX® hoses
- · Bottle valve for 7/16" threaded bottles
- Bottle adapter for 1" threaded bottles
- 90° quick-coupler fitting for compatibility with piercing and other right-angle bottle valves
- Line tap valve for system connection to 1/4", 5/16" or 3/8" process lines
- Vice grip pinch-off tool for crimping process tube after service is completed
- Safety placard provides visual warning of flammability risk during service
- Rugged case to protect the equipment when not in use
- One-year warranty



| UPC # | Description   |  |  |
|-------|---|--|--|
| 61001 | Hydrocarbon Charging Kit                                    |  |  |
| UPC # | Replacement Parts   |  |  |
| 19201 | 90° Quick Coupler (for right-angle bottle valves)           |  |  |
| 40349 | Low-Side Manifold R-600a/290                                |  |  |
| 49188 | 3-1/8", Blue Compound, bar/psi, R-600a/290<br>Gauge (°F/°C) |  |  |
| 60661 | Vice Grip Pinch-Off Tool                                    |  |  |
| 61002 | HC Kit Bottle Stand   |  |  |
| 61003 | HC Kit Scale  |  |  |
| 61004 | HC Kit Manifold Assembly (manifold, hoses and connectors)   |  |  |
| 61005 | HC Kit Hose (single 0.08"/2 mm x 24" yellow hose)           |  |  |
| 61008 | HC Kit Bottle Valve (for 7/16" threaded bottle connections) |  |  |
| 61009 | HC Kit Bottle Adapter (for 1" threaded bottle connections)  |  |  |
| 61010 | Line Tap Valve  |  |  |
| 61013 | Propane Safety Placard                                      |  |  |

#### **Specifications:**

#### **Overall Kit**

Compatible Refrigerants: R-290 and R-600a

System Connections: 1/4", 5/16", 3/8" OD Tubing

Operating Temperature: 0° to 130°F (-18° to 55°C)

Operating Pressure: -14.7 to 101 psi (-1 to 7 bar)

Bottle Compatibility: Valve and adapter work with most 7/16" and

1" threaded bottle connections. The 19201 90° Quick Coupler allows for connection of piercing-type and other right-angle bottle

valves

#### **Charging Scale**

Capacity: 13.22 lb (6 kg)

Accuracy: 0.1%

Units of Measure: Grams (g), Pounds (lb), Pounds & Ounces (lb/

oz), Ounces (oz), Milliliters (ml)

Resolution: 0.01 oz (0.05 g)

Overload Protection: Yes

Power: (3) AAA Batteries (included)

Battery Life: 50+ hours

Auto-Off Timer: 2 minutes after last reading change

#### **Hydrocarbon Single Valve Manifold**

Pressure Range: -14.7 to 101 psi (-1 to 7 bar)

Refrigerants: R-290 and R-600a

(saturation temperatures in °F and °C)

Hose Length: 24" (610 mm)

# **Series 41 Hydrocarbon 2-Valve Manifold**

Refrigerants: R-290 and R-600a (saturation temperatures in °F and °C)

Hose Length: 24" (610 mm)
Hose Fitting: Quick Coupler

Pressure Units: bar/psi





| UPC # | Description   |
|-------|---|
| 41868 | Series 41 Hydrocarbon 2-Valve Manifold with 24" (610 mm) RYB REFFLEX® Hoses |
| 41867 | Series 41 Hydrocarbon 2-Valve Manifold                                      |
| 61015 | Hydrocarbon Hoses 24" (610 mm) RYB REFFLEX® 3 pak                           |
|       |   |

NEW

# **ManCover™ Manifold Cover**

- · Large size fits most manifolds
- Rubber material for bounce protection while enroute to service calls
- Allows hoses to remain connected while protecting the gauge face from damage

| UPC # | Description             |  |
|-------|-------------------------|--|
| 49095 | ManCover Manifold Cover |  |



NEW

# 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-/losides, 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 following pages.

| TITAN® 4-Valve                            |  |  |   |                  |  |
|---|--|--|---|------------------|--|
| UPC#                                      | Description - °F/°C  | Gauges   | Scale   | Refrigerant      |  |
| 49914<br>49913<br>49915                   | Manifold only with 5/16"-3/8"-5/16"-5/16" anchor and service fittings 49914 with 60" <i>PLUS II</i> " RYB and 3/8" x 45° Manifold only with 5/16"-3/8"-1/4"-5/16" anchor fittings and 1/4"-3/8"-1/4" service fittings  | Red/Blue<br>Red/Blue<br>Red/Blue                         | kPa/psi<br>kPa/psi<br>kPa/psi                       | R-32/410A        |  |
| 49922<br>49925                            | Manifold only Manifold with 60" <i>PLUS II</i> ™ RYB and 3/8" x 45°  | Liquid<br>Liquid   | bar/psi<br>bar/psi                                  | R-22             |  |
| 49960<br>49962<br>49964<br>49965<br>49966 | Manifold with 60" <i>PLUS II</i> <sup>™</sup> compact ball valve RYB and 3/8" x 45° <b>A2L</b> Manifold only <b>A2L</b> Manifold only with 5/16-3/8-5/16-5/16" fittings <b>A2L</b> Manifold with 60" <i>PLUS II</i> <sup>™</sup> RYB and 3/8" x 45° <b>A2L</b> Manifold only with 1/4" fittings <b>A2L</b> | Red/Blue<br>Red/Blue<br>Red/Blue<br>Red/Blue<br>Red/Blue | bar/psi<br>bar/psi<br>bar/psi<br>bar/psi<br>bar/psi | R-32/410A        |  |
| 49971<br>49982                            | Heat pump manifold only, 1/4×5/16×1/4 hose holder fittings Manifold only   | Black/Black<br>Liquid                                    | bar/psi<br>bar/psi                                  | R-410A           |  |
| 45925                                     | Manifold with (3) black CO2 hoses and (1) yellow 72" PLUS II 3/8" x 45° hose   | Liquid   | bar/psi   | R-744            |  |
| UPC#                                      | Description - °F   | Gauges   | Scale   | Refrigerant      |  |
| 49973<br>49977                            | Manifold only Manifold with 60" <i>PLUS II</i> ™ RYB and 3/8" x 45°  | Liquid<br>Liquid   | psi<br>psi  | R-22/410A        |  |
| 49963<br>49967<br>49968<br>49283*         | Manifold only  Manifold with 60" <i>PLUS II</i> <sup>™</sup> RYB and 3/8" x 45°  Manifold with 60" <i>PLUS II</i> <sup>™</sup> compact ball valve RYB and 3/8" x 45°  Manifold only  | Red/Blue<br>Red/Blue<br>Red/Blue<br>Red/Blue             | psi<br>psi<br>psi<br>psi                            | R-22/404A/410A   |  |
| 49983<br>49987<br>49993<br>49997          | Manifold only  Manifold with 60" <i>PLUS II</i> <sup>™</sup> RYB and 3/8" x 45°  Manifold only  Manifold with 60" <i>PLUS II</i> <sup>™</sup> RYB and 3/8" x 45°   | Red/Blue<br>Red/Blue<br>Liquid<br>Liquid                 | psi<br>psi<br>psi<br>psi                            | R-22/134a/404A   |  |
| 49974<br>49975                            | Manifold only <b>A2L</b> Manifold with 60" <i>PLUS II</i> ™ RYB, compact ball valve <b>A2L</b>   | Red/Blue<br>Red/Blue                                     | psi<br>psi  | R-32/454B/410A   |  |
| 49932<br>49935<br>49952<br>49955          | Manifold only  Manifold with 60" <i>PLUS II</i> ™ RYB and 3/8" x 45°  Manifold only  Manifold with 60" <i>PLUS II</i> ™ RYB and 3/8" x 45°   | Red/Blue<br>Red/Blue<br>Liquid<br>Liquid                 | psi<br>psi<br>psi<br>psi                            | R-134a/404A/407C |  |
| 49900                                     | Manifold with 72" PLUS II™ RYB and 3/8" x 45°  | Red/Blue   | psi   | R-417A/422A/422D |  |
| 49907                                     | Manifold only  | Red/Blue   | bar/psi   | R-448A/449A/452D |  |
| UPC#                                      | Description - °C   | Gauges   | Scale   | Refrigerant      |  |
| 49916                                     | Manifold only  | Red/Blue   | bar/psi   | R-12/22/502      |  |
| 49933<br>49912<br>49911                   | Manifold only Manifold only 49912 manifold with 60" <i>PLUS II</i> ™ RYB and 3/8" x 45°  | Red/Blue<br>Red/Blue<br>Red/Blue                         | bar/psi<br>kPa/psi<br>kPa/psi                       | R-22/134a/404A   |  |
| 49931<br>49934                            | Manifold only; no sight glass  | Red/Blue<br>Red/Blue                                     | bar/psi<br>bar/psi                                  | R-134a/404A/407F |  |
| 49936<br>49956                            | Manifold only Manifold only  | Red/Blue<br>Red/Blue                                     | bar/MPa<br>bar/psi                                  | R-134a/404A/407C |  |
| 49972                                     | Heat pump manifold; no sight glass; 800 psi both gauges  | Black/Black  | bar/psi   |                  |  |

For replacement parts, refer to the manual (also available at yellowjacket.com)

## **CO<sub>2</sub> TEST AND CHARGING MANIFOLDS**

### Manifold and hoses designed specifically for transcritical CO<sub>2</sub> (R-744) applications.





The YELLOW JACKET® TITAN® Test and Charging Manifold for transcritical CO<sub>2</sub> systems is constructed with a forged aluminum alloy body making it lightweight for handling ease and durability. No sightglass means added safety. It features true 45° SAE flare hoses 78" in length.

- Large, easy-to-read 3-1/8" (80 mm) liquid-filled red and blue, 1% accuracy (Class 1) gauges; psi/bar
- Proven, 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 extends the life of the seats.
- Fourth hose to enable connection to hi/lo sides, refrigerant tank, and 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 on unit are 1/4").
- Dedicated transcritical CO<sub>2</sub> hose 78" (200 cm) in length
- Designed and assembled in the USA





#### **Specifications**

Scales:

LP 30 in. Hg/1500 psi (-1/+105 bar)

-60° to 85°F (-52° to 30°C)

HP 0/3000 psi (0/210 bar)

4-valve forged aluminum body

Precision stainless steel valve feed screws

No sight glass for added safety

Class 1, 3-1/8" (80 mm), oil-filled, pulse-free

Fittings: (3) 1/4"; (1) 3/8" (vacuum application only)

Hoses: Three (3) black, 78" (200 cm), 1/4" SAE fittings (45°)

Operating pressure 1740 psi (120 bar)

High pressure copper gaskets

One (1) yellow, 78" (200 cm), 3/8" SAE fittings

- Operating pressure 594 psi (41 bar)
- Neoporene built-in gaskets

| UPC#  | Description  |
|-------|--|
| UPC#  | Description  |
| 45925 | TITAN® CO2 Manifold with hoses (3) black and (1) yellow          |
| 45930 | CO2 Transcritical Test and Charging Manifold with Quick Couplers |
| 45922 | CO2 78" (200 cm) black replacement hose (single)                 |
| 45923 | Nylon CO2 Manifold bag with handle and straps (optional)         |
| 45924 | CO2 Manifold Briefcase   |
| 14579 | 3/8" 78" (200 cm) yellow replacement hose (single)               |
| 49193 | High pressure replacement gauge                                  |
| 49194 | Low pressure replacement gauge                                   |

For replacement parts, refer to the manual (also available at yellowjacket.com)

## 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 following page.

| UPC#   | Description - °F/°C                       | Gauges   | Scale   | Refrigerant      |
|--------|---|----------|---------|------------------|
| 49814  | Manifold only with 5/16" fittings         | Red/Blue | kPa/psi |                  |
| 49813  | With 60" PLUS II™ 5/16x5/16" RYB          | Red/Blue | kPa/psi |                  |
| 49815  | Manifold only with 5/16"-1/4"-5/16"       | Red/Blue | kPa/psi |                  |
|        | anchor fittings and 1/4" service fittings |          |         |                  |
| 49862  | Manifold only with 1/4" fittings          | Red/Blue | bar/psi | R-32/410A (A2L)  |
| 49860  | With 60" PLUS II™ compact ball valve RYB  | Red/Blue | bar/psi | COMPARIBLE       |
| 49864  | Manifold only with 5/16" fittings         | Red/Blue | bar/psi |                  |
| 49865  | Manifold with 60" PLUS II™ RYB            | Red/Blue | bar/psi |                  |
| 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     | R-1234yf         |
| UPC#   | Description - °F                          | Gauges   | Scale   | Refrigerant      |
| 49883  | Manifold only                             | Red/Blue | psi     |                  |
| 49887  | Manifold with 60" PLUS II™ RYB            | Red/Blue | psi     | R-22/134a/404A   |
| 49889  | Manifold with 60" PLUS II™ SealRight RYB  | Red/Blue | psi     |                  |
| 49801  | Manifold with 60" PLUS II™ SealRight RYB  | Red/Blue | psi     |                  |
| 49863  | Manifold only                             | Red/Blue | psi     |                  |
| 49281* | Manifold only                             | Red/Blue | psi     | R-22/404A/410A   |
| 49867  | Manifold with 60" PLUS II™ RYB            | Red/Blue | psi     |                  |
| 49868  | With 60" PLUS II™ compact ball valve RYB  | Red/Blue | psi     |                  |
| 49832  | Manifold only                             | Red/Blue | psi     |                  |
| 49835  | Manifold with 60" PLUS II™ RYB            | Red/Blue | psi     | R-134a/404A/407C |
| 49831  | Manifold with 60" PLUS II™ SealRight RYB  |          | psi     |                  |
| 49847  | With 72" PLUS II™ Acme fittings RYB       | Red/Blue | psi     | R-12/22/134a     |
| UPC#   | Description - °C                          | Gauges   | Scale   | Refrigerant      |
| 49816  | Manifold only                             | Red/Blue | bar/psi | R-12/22/502      |
| 49833  | Manifold only                             | Red/Blue | bar/psi |                  |
| 49812  | Manifold only                             | Red/Blue | kPa/psi | R-22/134a/404A   |
| 49811  | 49812 with 60" PLUS II™ RYB               | Red/Blue | kPa/psi |                  |
| 49836  | Manifold only                             | Red/Blue | bar/MPa | R-134a/404A/407C |
| 49856  | Manifold only                             | Red/Blue | bar/psi | D. COLLADA       |
| 40922  | Manifold only with 5/16" fittings         | Red/Blue | MPa     | R-32/410A        |



\* Manifold comes standard with certified gauges.

For replacement parts, refer to the manual (also available at yellowjacket.com)

## **PROTECTIVE GAUGE BOOTS**

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



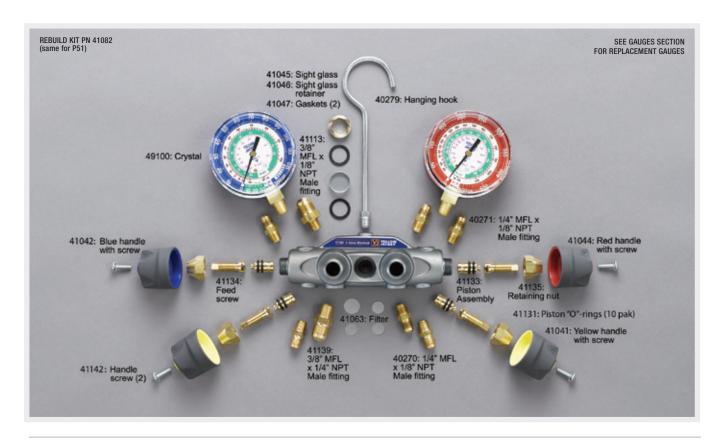
Rubber boots slip easily around gauges to cushion and protect them from impact.

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

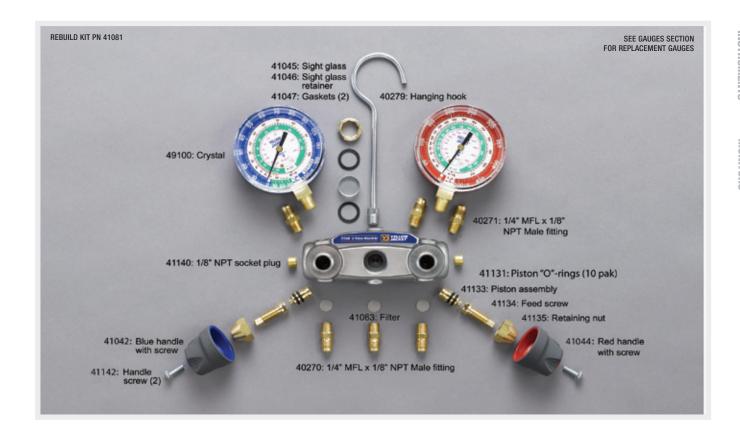


| UPC#  | Description                       |
|-------|-----------------------------------|
| 49010 | 2-1/2" Polycarbonite Lens         |
| 49090 | 2-1/2" Set of gauge boots         |
| 49091 | 2-1/2" Red protective gauge boot  |
| 49092 | 2-1/2" Blue protective gauge boot |
| 49100 | 3-1/8" Replacement crystal        |
| 49190 | 3-1/8" Set of gauge boots         |
| 49191 | 3-1/8" Red protective gauge boot  |
| 49192 | 3-1/8" Blue protective gauge boot |

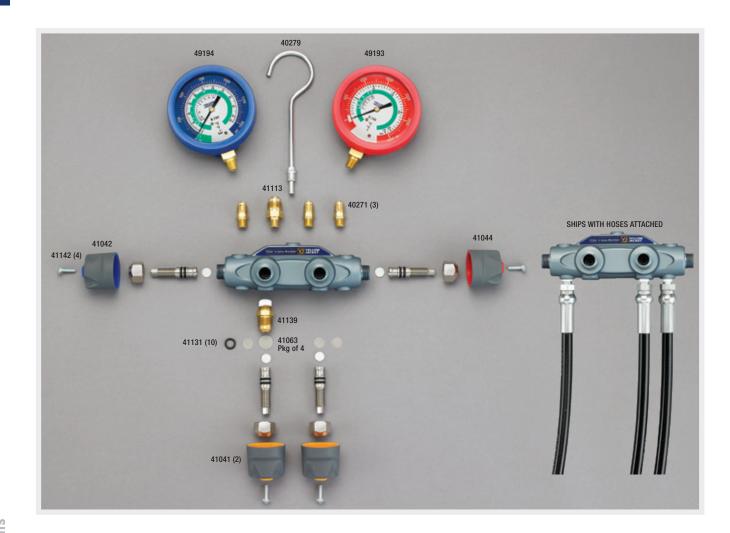
### TITAN® 4-VALVE MANIFOLD REPLACEMENT PARTS



### TITAN® 2-VALVE MANIFOLD REPLACEMENT PARTS



# **CO<sub>2</sub> TEST AND CHARGING MANIFOLD REPLACEMENT PARTS**





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



Replacement parts available.

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-/losides with 1/2" vacuum port for larger systems



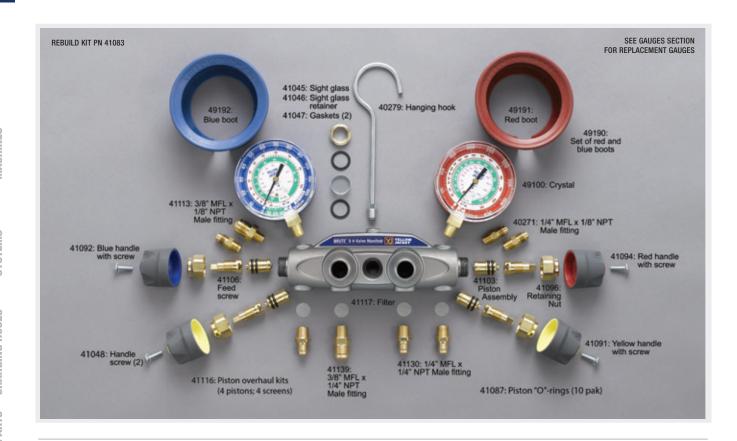
- Double "O" ring piston for reliability and long service life
- Exclusive 100-mesh filter in-line on all flare fittings helps keep out particulate material and extend the life of the seat
- Front access for easy field recalibration
- Contoured easy-grip handles for positive control; color-coded for 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



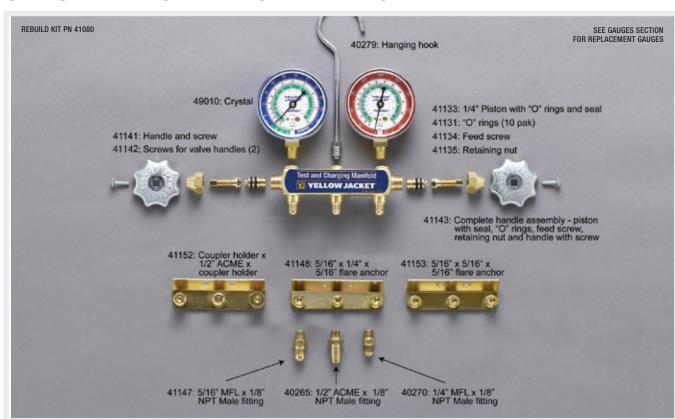
| 46021<br>46026<br>46000<br>46003 | Manifold only Manifold only  | 0/01        |              |          |         |               |
|----------------------------------|--|-------------|--------------|----------|---------|---------------|
| 46026<br>46000<br>46003          | Manifold only  | 3/8"        | 1/4"         | Liquid   | bar/psi | R-410A        |
| 46000<br>46003                   | IVIALIIIOIU OLIIV  | 3/8"        | 1/4"         | Liquid   | bar/psi |               |
| 46003                            | Manifold with 72" PLUS II™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Liquid   | bar/psi | R-22          |
|                                  | Manifold only A2L  | 3/8"        | 1/4"         | Red/Blue | bar/psi |               |
| 46160                            | With 60" PLUS II™ compact ball valve RYB and 3/8" x 45° <b>A2L</b>   | 3/8"        | 1/4"         | Red/Blue | bar/psi | R-32/410A     |
|                                  | ·  |             | -            | Red/Blue | bar/psi | 11-02/410A    |
| 46170                            | Manifold only 5/16"-3/8"-5/16"-5/16" anchor and service fittings <b>A2L</b>                                    | -           | -            | Red/Blue | bar/psi | AOL           |
| 46174                            | Manifold only 5/16"-3/8"-1/4"-5/16" anchor and 1/4" service fittings <b>A2L</b>                                |             |              | Red/Blue | kPa/psi | COMPATIBLE    |
| 46176                            | Manifold only 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   | Refrigeran    |
| 46011                            | Manifold only  | 3/8"        | 1/4"         | Liquid   | psi     | R-22/410A     |
| 46010                            | Manifold only  | 3/8"        | 1/4"         | Red/Blue | psi     |               |
| 46013                            | Manifold with 60" PLUS II™ compact ball valve RYB and 3/8" x 45  | ° 3/8"      | 1/4"         | Red/Blue | psi     | R-22/404A/4   |
|                                  | Manifold only  | 3/8"        | 1/4"         | Red/Blue | psi     | 11-22/4U4AV4  |
| 46022                            | Manifold with 60" PLUS II™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Red/Blue | psi     |               |
| 46030                            | Manifold only  | 3/8"        | 1/4"         | Red/Blue | psi     |               |
| 46031                            | Manifold only  | 3/8"        | 1/4"         | Liquid   | psi     | R-134a/404A/4 |
| 46032                            | Manifold with 60" PLUS II™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Red/Blue | psi     | H-134a/404A/4 |
| 46038                            | Manifold with 72" PLUS II™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Liquid   | psi     |               |
| 46040                            | Manifold only  | 3/8"        | 1/4"         | Red/Blue | psi     |               |
| 46041                            | Manifold only  | 3/8"        | 1/4"         | Liquid   | psi     |               |
| 46042                            | Manifold with 60" PLUS II™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Red/Blue | psi     | R-22/134a/40  |
| 46043                            | Manifold with 60" PLUS II $^{\!\scriptscriptstyle \text{TM}}$ compact ball valve RYB and 3/8" x 45°            | 3/8"        | 1/4"         | Red/Blue | psi     |               |
| 46048                            | Manifold with 72" PLUS II™ RYB and 3/8" x 45°  | 3/8"        | 1/4"         | Liquid   | psi     |               |
| 46014                            | Manifold only <b>A2L</b>   | 3/8"        | 1/4"         | Red/Blue | psi     | R-32/454B/4   |
| 46015                            | Manifold with 60" PLUS II™ 1/4" RYB compact ball valve <b>A2L</b>  | 3/8"        | 1/4"         | Red/Blue | psi     | (A2L)         |
| UPC#                             | Description - °C   | Vacuum port | Hi/Lo charge | Gauges   | Scale   | Refrigeran    |
| 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/4 |
| 46190                            | Manifold only  | 3/8"        | 1/4"         | Red/Blue | bar/psi | 11-104d/4U4AV |
| 46140                            | Manifold only  | 3/8"        | 1/4"         | Red/Blue | bar/psi | R-22/134a/40  |
| BRUT                             | E II <sup>®</sup> 4-Valve Commercial   |             |              |          |         |               |
| UPC#                             | Description - °F/°C  | Vacuum port | Hi/Lo charge | Gauges   | Scale   | Refrigeran    |
| 46081                            | Manifold only  | 1/2"        | 3/8"         | Liquid   | bar/psi |               |
| 46084                            | Manifold with 3 at 3/8" x 60" heavy duty - Straight x 45° and  | 1/2"        | 3/8"         | Liquid   | bar/psi | R-22          |
|                                  | 1 at 1/2" x 60" heavy duty - Straight x Straight   |             |              |          |         |               |
| UPC#                             | Description - °F   | Vacuum port | Hi/Lo charge | Gauges   | Scale   | Refrigeran    |
| 46090                            | Manifold only  | 3/8"        | 3/8"         | Red/Blue | psi     |               |
| 46091                            | Manifold only  | 1/2"        | 3/8"         | Liquid   | psi     | D 00/104 /4/  |
| 46092                            | Manifold with 4 at 3/8" x 60" heavy duty - Straight x 45°  | 3/8"        | 3/8"         | Red/Blue | psi     | R-22/134a/40  |
| 46094                            | Manifold 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 Gauges section. For replacement parts, refer to the manual (also available at yellowjacket.com)

### **BRUTE II® MANIFOLD REPLACEMENT PARTS**



### **SERIES 41 MANIFOLD REPLACEMENT PARTS**



### **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<sup>™</sup> 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





| Sorios  | 41 Manifolds   |            |                      |
|---|--|------------|----------------------|
|   |  |            |                      |
| UPC#  | Description - °F and °C - Red/Blue                             | Scale      | Refrigerant          |
| 42051   | Heat pump manifold only, 1/4-5/16-1/4"                         | bar/psi    |                      |
| 42054   | With 60" black PLUS II™ hoses (two 1/4x5/16" ball valve and    | bar/psi    | R-410A               |
|   | one 1/4x1/4" ball valve)                                       |            |                      |
| 41712   | Manifold only  | kg/cm²/psi |                      |
| 41703   | With 60" PLUS II™ FLEXFLOW™ hoses                              | kg/cm²/psi |                      |
| 41709   | With 60" PLUS II <sup>™</sup> standard fittings                | kg/cm²/psi |                      |
| 41715*  | With 60" PLUS II™ standard fittings                            | kg/cm²/psi | D 410A               |
| 41710   | With 60" PLUS II™ heavy duty black standard fittings           | kg/cm²/psi | R-410A               |
| 41702   | With 60" PLUS II™ heavy duty black compact ball valve fittings | kg/cm²/psi |                      |
| 42715   | With 60" PLUS II™ compact ball valve fittings                  | kg/cm²/psi |                      |
| 41711*  | With 60" PLUS II™ compact ball valve fittings                  | kg/cm²/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        | 3                    |
| 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                            |            |                      |
| 44213   | With 36" PLUS II™ SealRight fittings                           | psi        | R-12/22/502          |
| 44220   |  | psi        | n-12/22/302          |
|   | 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        |                      |
| 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 <sup>™</sup> standard fittings                | psi        | R-134a/404A/507      |
| 44313   | With 36" PLUS II™ SealRight fittings                           | psi        | 11 10-40 -10-7 ( 001 |
| 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        |                      |
| 41209   | With 36" PLUS II™ standard fittings                            | psi        | R-22/134a/404A       |
| 41211   | With 60" PLUS II™ standard fittings                            | psi        |                      |
| UPC#  | Description - °C - Red/Blue Scale                              | Refrigeran |                      |
| 41292   | Manifold only  | kg/cm²/psi |                      |
| 41293   | With 36" PLUS II™ standard fittings                            | kg/cm²/psi |                      |
| 41295   | With 60" PLUS II™ standard fittings                            | kg/cm²/psi | R-12/22/502          |
| 41299   | With 72" PLUS II™ standard fittings                            | kg/cm²/psi |                      |
| 41382   | Manifold only  | bar/psi    |                      |
| 41353   | Manifold with 36" PLUS II™ standard fittings                   | bar/psi    |                      |
| 41355   | Manifold with 60" PLUS II™ standard fittings                   | bar/psi    |                      |
| 43355   | Manifold with 60" PLUS II™ standard fittings                   | bar/psi    |                      |
| 41392   | Manifold only  | kg/cm²/psi | R-134a/404A/507      |
|   | Manifold with 36" PLUS II™ standard fittings                   |            |                      |
| 41363   |  | kg/cm²/psi |                      |
| 41365   | Manifold with 60" PLUS II™ standard fittings                   | kg/cm²/psi |                      |
| 43365   | Manifold with 60" PLUS II™ standard fittings                   | kg/cm²/psi | D 404-/4044/40=0     |
| 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. |  |            |                      |

'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. For replacement parts, refer to the manual (also available at yellowjacket.com)

NEW! NEW!

#### **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<sup>™</sup> 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



|                 | o                   |   |                               |                      |
|-----------------|---------------------|---|-------------------------------|----------------------|
| 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                       |                      |
| 41652           | -                   | Manifold only with 5/16", 1/4", 5/16" anchor and 1/4" service fittings                                    | bar/psi                       |                      |
| 41659<br>-<br>- | -<br>42021<br>42024 | Manifold only with 5/16" anchor fittings<br>Manifold only<br>Manifold with 60" PLUS II™ standard fittings | bar/psi<br>bar/psi<br>bar/psi | R-32/410A            |
| 41862           | -                   | Manifold only with 5/16" anchor and service fittings  | kPa/psi                       | COMPATIBLE           |
| -               | 41865               | 41862 with 60" PLUS II™ 5/16" fittings  | kPa/psi                       |                      |
| UPC#            | UPC#                | Description - °F - Red/Blue   | Scale                         | Refrigerant          |
| -<br>-          | 41842<br>42007      | Manifold only  Manifold with 60" PLUS II™ standard fittings   | psi<br>psi                    | R-12/22/134a         |
| -               | 41846               | Manifold with 72" PLUS II™ with couplers  | psi                           |                      |
| _               | 42001               | Manifold only   | psi                           |                      |
| -               | 49271*              | Certified 42001 manifold  |                               |                      |
| _               | 42004<br>42201      | Manifold with 60" PLUS II™ standard fittings With 60" PLUS II™ compact ball valve fittings                | psi<br>psi                    | R-22/404A/410A       |
| -               | 42005               | Manifold only   | psi                           |                      |
| _               | 49272*              | Certified 42005 manifold  |                               | R-22/134a/404A       |
| -               | 42006               | Manifold with 60" PLUS II™ standard fittings  | psi                           | 11 22/10 10 17 10 17 |
| -               | 42205               | With 60" PLUS II™ compact ball valve fittings   | psi                           |                      |
| _               | 42035<br>42036      | Manifold only <b>A2L</b> With 60" PLUS II™ 1/4" Hoses 3-Pak RYB <b>A2L</b>                                | psi<br>psi                    | R-32/454B/410A       |
| UPC#            | UPC#                | Description - °C - Red/Blue   | Scale                         | Refrigerant          |
| -               | 41622               | Manifold only   | bar/psi                       |                      |
| _               | 41852               | Manifold only   | kPa/psi                       | R-22/134a/404A       |
| -               | 41855               | Manifold with 60" PLUS II™ standard fittings  | kPa/psi                       |                      |
| -               | 41632               | Manifold only   | bar/psi                       | R-12/134a/413A       |
| _               | 42031<br>42034      | Manifold only With 60" PLUS II™ hose, standard fittings   | psi                           | R-22/404A/410A       |
| -               | 41866               | Manifold only   | bar/psi                       | R600A/600/290        |
| 41784           | -                   | Manifold only with 5/16" fittings   | MPa                           | R-32/410A            |
|                 |                     |   |                               |                      |

### 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<sup>™</sup> technology included
- · Polished solid brass case with glass crystals
- Made in the USA



| UPC#  | Description                                   | Scale | Refrigerant         |
|-------|---|-------|---------------------|
| 44235 | With 60" PLUS II™<br>SealRight fittings       | psi   | R-12/22/502         |
| 42332 | Manifold only                                 | psi   |                     |
| 42333 | With 36" PLUS II™ compact ball valve fittings | psi   |                     |
| 42436 | With 60" PLUS II™ compact ball valve fittings | psi   | R-22/134a/<br>404A  |
| 42435 | With 60" PLUS II™ standard fittings           | psi   |                     |
| 45221 | Retro manifold °C                             | psi   | R-134a/404A<br>407C |
| 45222 | Retro manifold °F                             | psi   |                     |



For more information on the certification of 3-1/8" gauges, see Gauges section.

#### **SERIES 41 DIGITAL MANIFOLDS**

°F and °C with 3 1/8" backlit LCD gauges



# When clear, swift and accurate readings meet quality and precision measurements.

The YELLOW JACKET® Series 41 Digital Manifold combines the advantages of digital technology with the proven Series 41 2-valve brass manifold. The 3-1/8" backlit LCD gauges provide easy-to-read accurate measurements for system pressures. Each interchangeable gauge is capable of handling maximum pressures of 800 psi, so there are no worries about over-pressurizing. Pre-programmed with 21 most common refrigerants, the Series 41 Digital Manifold will provide clear, swift and accurate pressure measurements for all your system applications.

The forged body of the manifold is constructed of solid brass for durability. Full porting maximizes capacity, and the metal valve handles are full size for easy operation. For added security, the hose anchors are forged into the back of body at 45°.

#### Gauge Specifications:

Pressure Range: -14.7 ~ 800 psi (-1 ~ 54.4 bar)
Unit (Pressure): psi / bar / MPa / kg/cm2 / kPa
Working Temperature: 14°F ~ 140°F (-10°F ~ 60°F)
Pressure Accuracy: ±0.5% F.S @71.6~82.4°F

(@22~28°F)

Unit (Temperature): °F/°CWorking Humidity: 35~85%

• Sampling Rate = 1.2 sec max.

Auto-off: 10 minutes

Zero pressure function

• Power Supply: Battery CR123A (3.0V, 1400mAh)

 Battery Life: 2 years for continuous operation without backlight

· Warranty: One year

#### Refrigerants:

R-22, R-23, R-32, R-124, R-134A, R-290, R-404A, R-407C, R-407F, R-408A, R-410A, R-417A, R-427A, R-444B, R-448A, R-449A, R-452A, R-507, R-600, R-1234YF, R1270

#### Manifold Specifications:

- · Forged brass body for durability
- Sliding double "O" ring pistons reduce wear
- Long life nylon seats
- · Full porting maximizes capacity and flow
- Hose assemblies UL recognized for 4000 psi (275 bar) burst and 800 psi (55 bar) working pressure. File# SA9737
- Assembled in the USA

| UPC#  | Description   |
|-------|---|
| 46060 | Series 41 Digital Manifold <b>A2L</b>   |
| 46062 | Series 41 Digital Manifold with 3-pack PLUS II <sup>™</sup> hoses with compact ball valves <b>A2L</b> |
| UPC#  | Replacement Parts   |
| 49017 | Replacement gauge   |

# **NH3 AMMONIA MANIFOLD**

| UPC # | Description                                  |
|-------|--|
| 40190 | Manifold body with valves                    |
| 40192 | Manifold and gauges                          |
| 40193 | Manifold and gauges with three NHA 48" hoses |
| 40194 | 3/8" Ammonia manifold                        |
| 40195 | 3/8" Ammonia manifold with NBC-48" hoses     |
| 40196 | 3/8" Ammonia manifold with NBC-72" 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 NH₃ rated hoses
- Made in the USA



#### **HEAT PUMP MANIFOLDS**



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 <i>PLUS II</i> ™ 1/4" hoses  | 1/4-1/4-1/4"         | R-22/<br>R-407C/ |
| 49133 | High side replacement gauge | 800 psi, °F  | -                    | R-410A           |
| 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 <i>PLUS II</i> ™ 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 <i>PLUS II</i> ™ 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  | -                    |                  |



#### MANIFOLD BACKPACK KITS NEW!

The YELLOW JACKET® Manifold Backpack Kits pair popular TITAN® and Series 41 Manifolds with PLUS II™ Charging Hoses in a rugged backpack for hands-free, grab-and-go convenience.

There is plenty of room to add additional tools needed for all your A/C installation and tune up needs. Select the Manifold Kits specific to the refrigerants you are working with.

# **DOMESTIC MANIFOLD BACKPACK KITS**



# 4V TITAN® R-32/410A Manifold Kit (P/N 49944)

- TITAN® 4-Valve Manifold, 3-1/8" Gauges, bar/psi, °F °C
- PLUS II™ 1/4" Hose 60" 3-Pak RYB Compact Ball Valve
- PLUS II™ 3/8" Yellow Large Volume 72" Charging Hose



# 4V TITAN® R-448A/449A/452A Manifold Kit (P/N 49945)

- TITAN® 4-Valve Manifold, 3-1/8" Gauges, bar/psi, °F
- PLUS II™ 1/4" Hose 60" 3-Pak RYB, Compact Ball Valve
- PLUS II<sup>™</sup> 3/8" Yellow Large Volume 72" Charging Hose



# 4V TITAN® R-22/404A/410A Manifold Kit (P/N 49984)

- TITAN® 4-Valve Manifold, 3-1/8" Gauges, psi, °F
- PLUS II™ 1/4" Hose 60" 3-Pak RYB, Compact Ball Valve
- PLUS II™ 3/8" Yellow Large Volume 72" Charging Hose



# Series 41 R-22/404A/410A Manifold Kit (P/N 42017)

- Series 41 Manifold, 3-1/8" Gauges, psi, °F
- PLUS II™ 1/4" Hose 72" 3-Pak RYB
- PLUS II<sup>™</sup> 3/8" Yellow Large Volume 72" Charging Hose



# Series 41 R-134A/404A/407C Manifold Kit (P/N 41316)

- Series 41 Manifold, 2-1/2" Gauges, psi, °F
- PLUS II™ 1/4" Hose 72" 3-Pak RYB
- PLUS II<sup>™</sup> 3/8" Yellow Large Volume 72" Charging Hose



# **INTERNATIONAL MANIFOLD BACKPACK KITS**



# 4V TITAN® R-32/410A Manifold Kit NOR EU (P/N 49940)

- TITAN® 4-Valve Manifold, 80mm Gauges, bar/psi, °F °C
- PLUS II<sup>™</sup> 1/4" Hoses 60" RB 1/4" x 5/16", Y 1/4" Compact Ball Valve
- Yellow B-72 Charging / Evacuation Hose 3/8" x 3/8"



# 4V TITAN® R-448A/449A/452A Manifold Kit (P/N 49942)

- TITAN® 4-Valve Manifold, 80mm Gauges, bar/psi, °C
- PLUS II<sup>™</sup> 1/4" Charging Hose 72" 3-Pak RYB, Standard 1/4" Fittings
- Yellow B-72 Charging / Evacuation Hose 3/8" x 3/8"



# Series 41 Heat Pump R-32/410A Manifold Kit (P/N 42056)

- Series 41 2-Valve Heat Pump Manifold, 80mm Gauges, EU, °F °C
- PLUS II<sup>™</sup> 1/4" Hoses 60" RB 1/4" x 5/16", Y 1/4" Compact Ball Valve



# 4V TITAN® R-134A/404A/407C Manifold Kit (P/N 49941)

- TITAN® 4-Valve Manifold, 80mm Gauges, bar/psi, °C
- PLUS II<sup>™</sup> 1/4" Charging Hose 72" 3-Pak RYB, Standard 1/4" Fittings
- Yellow B-72 Charging / Evacuation Hose 3/8" x 3/8"



# 4V TITAN® Pressure Test Manifold Kit (P/N 49943)

- TITAN® 4-Valve Pressure Test Manifold, 80mm Gauges, bar/psi
- PLUS II<sup>™</sup> 1/4" Charging Hose 72" 3-Pak RYB, Standard 1/4" Fittings
- Yellow B-72 Charging / Evacuation Hose 3/8" x 3/8"



# Series 41 R-32/410A Manifold Kit (P/N 41653)

- Series 41 2-Valve Manifold, 80mm Gauges, EU, °F °C
- PLUS II<sup>™</sup> 1/4" Hoses 60" RB 1/4" x 5/16", Y 1/4" Compact Ball Valve



### **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

| MADE II |
|---------|
|         |

| 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.



MADE IN THE USA

#### UPC# Description

41118 "O" ring lubricant (0.75 oz.)





| UPC#   | Description  |
|--------|--|
| 41099  | Complete kit   |
| 41105  | Box only with label  |
| Kit co | ntents/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. MADE IN THE USA

| UPC#  | Description   |
|-------|---|
| 40263 | Series 41 case – 12 1/4" x 8" x 4 1/4"  |
| 40822 | Case for <i>BRUTE™II</i> 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 MADE IN THE USA 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

MADE IN THE USA

# 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/407 |                                 |  |  |
| 40320                                  | Lo-side manifold R-410A         |  |  |
| 40326                                  | Lo-side 1/4" valve R-32/410A    |  |  |
| 40338                                  | Lo-side manifold R-600A         |  |  |
| 40339 Hi-side manifold R-600A/600/290  |                                 |  |  |
| 40340                                  | Lo-side manifold R-600A/600/290 |  |  |
| 40349                                  | Low-side manifold R-600a/290    |  |  |
|  |                                 |  |  |



### SINGLE TEST GAUGES

Quick pressure checks - use lo- or hi-side gauge with quick coupler to attach directly to system or tanks. MADE IN THE USA



| LIPC# D     | escription |
|-------------|------------|
| $OI O\pi D$ | Cochiption |

| 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 red |                   |              |           |         |
|--|-------------------|--------------|-----------|---------|
| saude with 19110 duick coubler for red | Carrage resides 4 | 0440         |           | fau uaa |
|  | aaude with i      | 9 I IV GUICK | k coubler | ior rec |

| Gauge | with 19110 quick coupler for recovery tank pressure check                  |
|-------|--|
| 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   |
| 40334 | Red pressure °F; 0 - 800 psi; R-22/404A/410A                               |
| 40335 | Blue compound °F; 0 - 800 psi; R-22/404A/410A                              |
| 40344 | Red pressure °F; 0 - 800 psi; R-22/404A/410A; with quick coupler and hose  |
| 40345 | Blue compound °F; 0 - 800 psi; R-22/404A/410A; with quick coupler and hose |
|       |  |

### **SPECIALIZED AND GENERAL USE GAUGES**





# **Manifold Gauges**

High visibility, colored temperature scales for accurate measurements.



NEW!

NEW!

# 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<sup>™</sup> 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

|   | °F - Fahrenheit Gauges |  |                                 |                  |
|---|------------------------|--|---------------------------------|------------------|
|   | UPC#                   | Description  | Pressure Scale                  | Refrigerants     |
|   | 49103<br>49104         | 3-1/8" Red pressure<br>3-1/8" Blue compound          | 0 - 500 psi<br>30"-0-120** psi  | R-12/22/134a     |
|   | 49105                  | 3-1/8" Red pressure                                  | 0 - 500 psi                     | R-22/134a/404A   |
|   | 49106                  | 3-1/8" Blue compound                                 | 30"-0-120** psi                 | N-22/134a/404A   |
|   | 49111<br>49112         | 3-1/8" Red pressure<br>3-1/8" Blue compound          | 0 - 500 psi<br>30"-0-120** psi  | R-417A/422A/422D |
|   | 49133<br>49134         | 3-1/8" Heat pump red dial 3-1/8" Heat pump blue dial | 0 - 800 psi<br>0 - 800 psi      | R-22/407C/410A   |
|   | 49137<br>49138         | 3-1/8" Red pressure<br>3-1/8" Blue compound          | 0 - 800 psi<br>30"-0-350*** psi | R-22/404A/410A   |
|   | 49151<br>49152         | 3-1/8" Red pressure<br>3-1/8" Blue compound          | 0 - 500 psi<br>30"-0-120** psi  | R-134a/404A/407C |
|   | 49157<br>49158         | 3-1/8" Red pressure                                  | 0 - 800 psi<br>0-55 bar         | Pressure only    |
|   | 49603                  | 3-1/8" Blue compound<br>3-1/8" Red pressure          | 0 - 500 psi                     | R-448A/449A/452A |
| ! | 49604<br>49117         | 3-1/8" Blue compound<br>3-1/8" Red pressure          | 30"-0-120** psi<br>0 - 500 psi  | R-32/454B/410A   |
| ! | 49118                  | 3-1/8" Blue compound                                 | 30"-0-120** psi                 |                  |
| Į |                        | d Gauges   | 0 500 1                         |                  |
|   | 49203<br>49204         | 3-1/8" Red pressure<br>3-1/8" Blue compound          | 0 - 500 psi<br>30"-0-120** psi  | R-12/22/134a     |
|   | 49205<br>49206         | 3-1/8" Red pressure<br>3-1/8" Blue compound          | 0 - 500 psi<br>30"-0-120** psi  | R-22/134a/404A   |
|   | 49237<br>49238         | 3-1/8" Red pressure 3-1/8" Blue compound             | 0 - 800 psi<br>30"-0-350*** psi | R-22/404A/410A   |
|   | 49251                  | 3-1/8" Red pressure                                  | 0 - 500 psi                     | R-134a/404A/407C |
| ! | 49252<br>49217         | 3-1/8" Blue compound<br>3-1/8" Red pressure          | 30"-0-120** psi<br>0 - 500 psi  | R-32/454B/410A   |
| ! | 49218                  | 3-1/8" Blue compound                                 | 30"-0-120** psi                 | 11 02/1010/110/1 |

| Universal Gauges (°F - Fahrenheit and °C - Celsius) |  |                                      | elsius)      |
|---|--|--------------------------------------|--------------|
| UPC#  | # Description Pressure so                            |                                      | Refrigerants |
| 49109<br>49110                                      | 3-1/8" Red pressure<br>3-1/8" Blue compound          | kPa and psi<br>kPa and psi           | R-32/410A    |
| 49141<br>49142                                      | 3-1/8" Heat pump red dial 3-1/8" Heat pump blue dial | · ·                                  | R-410A       |
| 49155<br>49156                                      | 3-1/8" Red pressure<br>3-1/8" Blue compound          | bar, psi and kPa<br>bar, psi and kPa | R-32         |
| 49159<br>49160                                      | 3-1/8" Red pressure<br>3-1/8" Blue compound          | bar and psi<br>bar and psi           | R-32/410A    |
| 49259<br>49260                                      | 3-1/8" Red pressure<br>3-1/8" Blue compound          | bar and psi<br>bar and psi           | R-32/410A    |



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.

| °C - C   | °C - Celsius Gauges  |                 |                         |  |
|----------|----------------------|-----------------|-------------------------|--|
| UPC#     | Description          | Pressure scale  | Refrigerants            |  |
| 49107    | 3-1/8" Red pressure  | kPa and psi     |                         |  |
| 49108    | 3-1/8" Blue compound | kPa and psi     | D 00/404 /4044          |  |
| 49169    | 3-1/8" Red pressure  | bar and psi     | R-22/134a/404A          |  |
| 49170    | 3-1/8" Blue compound | bar and psi     |                         |  |
| 49131    | 3-1/8" Red pressure  | bar and psi     | R-134a/404A/407C        |  |
| 49132    | 3-1/8" Blue compound | bar and psi     | 11 10 10 10 10 10 10 10 |  |
| 49139    | 3-1/8" Red pressure  | psi             | R-22/404A/410A          |  |
| 49140    | 3-1/8" Blue compound | psi             |                         |  |
| 49145    | 3-1/8" Red pressure  | bar and psi     | R-12/22/502             |  |
| 49146    | 3-1/8" Blue compound | bar and psi     |                         |  |
| 49147    | 3-1/8" Red pressure  | MPa             | R-32/410A               |  |
| 49148    | 3-1/8" Blue compound | MPa             |                         |  |
| 49163    | 3-1/8" Red pressure  | bar and MPa     | R-134a/404A/407C        |  |
| 49164    | 3-1/8" Blue compound | bar and MPa     |                         |  |
| 49165    | 3-1/8" Red pressure  | bar and psi     | R-12/134a/413A          |  |
| 49166    | 3-1/8" Blue compound | bar and psi     |                         |  |
| 49181    | 3-1/8" Red pressure  | bar and psi     | R-134a/404A/407F        |  |
| 49182    | 3-1/8" Blue compound | bar and psi     |                         |  |
| 49601    | 3-1/8" Red pressure  | 0 - 500 psi     | R-448A/449A/452A        |  |
| 49602    | 3-1/8" Blue compound | 30"-0-120** psi |                         |  |
| 49149    | 3-1/8" Red pressure  | 0 - 160 psi     | R-600a/600/290          |  |
| 49150    | 3-1/8" Blue compound | 30"-0-58* psi   |                         |  |
| <b>,</b> | ed Gauges            |                 |                         |  |
| 49231    | 3-1/8" Red pressure  | bar and psi     | R-134a/404A/407C        |  |
| 49232    | 3-1/8" Blue compound | bar and psi     |                         |  |
| 49245    | 3-1/8" Red pressure  | bar and psi     | R-12/22/502             |  |
| 49246    | 3-1/8" Blue compound | bar and psi     |                         |  |
| 49263    | 3-1/8" Red pressure  | bar and MPa     | R-134a/404A/407C        |  |
| 49264    | 3-1/8" Blue compound | bar and MPa     |                         |  |
| 49265    | 3-1/8" Red pressure  | bar and psi     | R-12/134a/413A          |  |
| 49266    | 3-1/8" Blue compound | bar and psi     |                         |  |
| 49269    | 3-1/8" Red pressure  | bar and psi     | R-22/134a/404A          |  |
| 49270    | 3-1/8" Blue compound | bar and psi     |                         |  |

- \* Features retard protection to 101 psi.
- \*\* Features retard protection to 350 psi. \*\*\* Features retard protection to 500 psi.

#### Replacement Crystal - for 3 1/8" Gauges

UPC# Description
49100 Replacement crystal

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

With 1% accuracy (Class 1) calibration



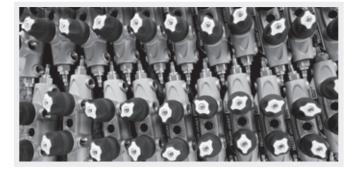
Gauges are completely filled with glycerin for maximum protection from pulsation. Large 3-1/2" (90 mm) diameter gauge with refrigerants color-coded on the dials in bold numbers. Offset stem fits all major manifold brands.

- · 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)



| Universal Gauges (°F - Fahrenheit and °C - Celsius) |                      |                         |                  |              |
|---|----------------------|-------------------------|------------------|--------------|
| 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 |                  |              |
| 49519   | 3-1/2" Red pressure  | 0-800 psi (0 to 55 bar) | )                |              |
| 49520   | 3-1/2" Blue compound | 30"-0-300** psi (-1 to  | R-410A           |              |
| 49193   | 3-1/2" Red pressure  | 0-3000 psi (0 to 210 b  | ′ R-/44          |              |
| 49194   | 3-1/2" Blue compound | 30"-0-1500 psi (-1 to 1 |                  |              |
| °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"-0-120l 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  | 101010           |              |
| 49522   | 3-1/2" Blue compound | 30"-0-116* psi (-1 to   |                  |              |

\*Features retard protection to 350 psi. \*\*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

| Universal Gauges (°F - Fahrenheit and °C - Celsius) |                      |                                     |              |  |
|---|----------------------|-------------------------------------|--------------|--|
| UPC#  | Description          | Pressure scale                      | Refrigerants |  |
| 49013   | 2-1/2" Red pressure  | 0 - 500 psi                         | R-134a       |  |
| 49014   | 2-1/2" Blue compound | 30"-0-120** psi                     | n-134a       |  |
| 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> |              |  |
| 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)       | 11-410/      |  |
| °F - Fahrenheit Gauges                              |                      |                                     |              |  |
| HDC#  | Description          | Prossuro soalo                      | Dofrigorante |  |

| LIPC#               | Description          | Pressure scale  | Refrigerants    |
|---------------------|----------------------|-----------------|-----------------|
|                     | •                    |                 | Henrigerants    |
| 49001               | 2-1/2" Red pressure  | 0 - 500 psi     |                 |
| 49002               | 2-1/2" Blue compound | 30"-0-120** psi | R-12/22/502     |
| 49015               | 2-1/2" Red pressure  | 0 - 500 psi     | R-22/134a/404A  |
| 49016               | 2-1/2" Blue compound | 30"-0-120** psi | N-22/134a/404A  |
| 49051               | 2-1/2" Red pressure  | 0 - 500 psi     | R-134a/404A/507 |
| 49052               | 2-1/2" Blue compound | 30"-0-120** psi | n-134a/404A/307 |
| °C - Celsius Gauges |                      |                 |                 |

| °C - Celsius Gauges |                      |                            |                  |
|---------------------|----------------------|----------------------------|------------------|
| UPC#                | Description          | Pressure scale             | Refrigerants     |
| 49027               | 2-1/2" Red pressure  | kg/cm <sup>2</sup> and psi | R-12/22/502      |
| 49028               | 2-1/2" Blue compound | kg/cm² and psi             | N=12/22/302      |
| 49031               | 2-1/2" Red pressure  | bar and psi                | R-22/134a/407C   |
| 49032               | 2-1/2" Blue compound | bar and psi                | N-22/134d/407G   |
| 49033               | 2-1/2" Red pressure  | bar and psi                | R-22/134a/404A   |
| 49034               | 2-1/2" Blue compound | bar and psi                | N=22/134a/404A   |
| 49055               | 2-1/2" Red pressure  | bar and psi                | R-134a/404A/507  |
| 49056               | 2-1/2" Blue compound | bar and psi                | n-134a/404A/307  |
| 49057               | 2-1/2" Red pressure  | kg/cm <sup>2</sup> and psi | R-134a/404A/507  |
| 49058               | 2-1/2" Blue compound | kg/cm² and psi             | n-134a/404A/307  |
| 49063               | 2-1/2" Red pressure  | bar and psi                | R-134a/404A/407C |
| 49064               | 2-1/2" Blue compound | bar and psi                | n-134a/404A/407C |

- \* Features retard protection to 35 bar \*\* 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.

| Replacement Crystal - for 2 1/2" Gauges |                     |  |
|---|---------------------|--|
| UPC#                                    | Description         |  |
| 49010                                   | Replacement crystal |  |

### **DIGITAL MANIFOLD GAUGE (°F and °C)** For Series 41 Digital Manifold

3-1/8" backlit LCD gauges provide easy-to-read accurate measurements for system pressures. This gauge is capable of handling maximum pressures of 800 psi, so there are no worries about over-pressurizing. The YELLOW JACKET Digital gauges provide clear, swift and accurate pressure measurements for all your system applications. Pre-programmed with 21 of the most common refrigerants.

#### Refrigerants

R-22, R-23, R-32, R-124, R-134A, R-290, R-404A, R-407C, R-407F, R-408A, R-410A, R-417A, R-427A, R-444B, R-448A, R-449A, R-452A, R-507, R-600A, R-1234YF, R1270

| UPC#  | Description |
|-------|-------------|
| OF OT | Description |

49017 Series 41 digital manifold

#### **Gauge Specifications**

- Pressure Range: -14.7 ~ 800 psi  $(-1 \sim 54.4 \text{ bar})$
- Unit (Pressure): psi / bar / MPa / kg/cm2 / kPa
- Working Temperature: 14°F ~ 140°F (-10°C ~ 60°C)
- Pressure Accuracy: ±0.5% F.S @71.6~82.4°F (@22~28°C)
- Unit (Temperature): °F/°C
- Working Humidity: 35~85%
- Sampling Rate = 1.2 sec max.
- Auto-off: 10 minutes
- Zero pressure function
- Power Supply: Battery CR123A (3.0V, 1400mAh)
- Battery Life: 2 years for continuous operation without backlight
- · Warranty: One year



# **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<sup>™</sup> 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         | N=22/134a/404A |
|   | Certified | d Gauges                      |                        |                |
|   | 49199     | 2-1/2" Brass pressure         | 0 - 500 psi            | D 00/1046/404A |
| • | 49200     | 2-1/2" Brass compound         | 30"-0-120* psi         | R-22/134a/404A |
| • | 49010     | Replacement crystal (poly     | carbonate) for old 490 | 011, 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" (63.5 mm), 3-1/8" (80 mm)

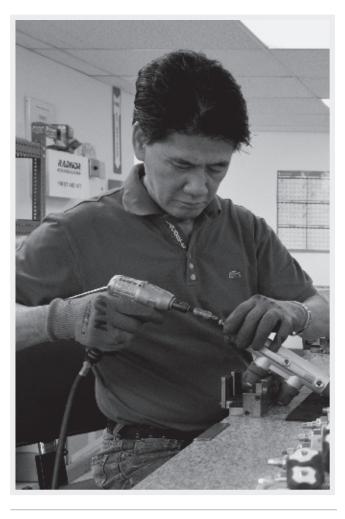


Rubber boots slip easily around gauges to cushion and protect them from impact.

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



| UPC#  | Description                       |
|-------|-----------------------------------|
| 49010 | 2-1/2" Polycarbonite Lens         |
| 49090 | 2-1/2" Set of gauge boots         |
| 49091 | 2-1/2" Red protective gauge boot  |
| 49092 | 2-1/2" Blue protective gauge boot |
| 49100 | 3-1/8" Replacement Crystal        |
| 49190 | 3-1/8" Set of gauge boots         |
| 49191 | 3-1/8" Red protective gauge boot  |
| 49192 | 3-1/8" Blue protective gauge boot |



# 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. |

# 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 |
| 49100 | 3-1/8" | Replacement crystal            |                     |       |

# **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<br>and -0.1-0-28 bar °C |
| 40202 | 2-1/2" Gauge with twist on polycarbonate crystal | 30" - 0 - 150 psi °F<br>and -0.1-0-10 bar °C |
| 49010 | 2-1/2" Replacement crystal                       |  |







## **Refrigerant Recovery Machines**

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.



### Turbo Recover™ REFRIGERANT RECOVERY MACHINE NEW!

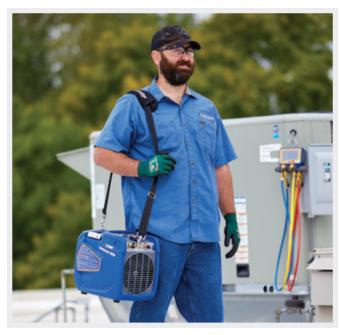


### **Outperforms in Speed and Simplicity!**

- Fully automatic operation for fast recovery of Class III, IV and V refrigerants including R-410A and A2L refrigerants
- Powerful twin-cylinder, oil-less compressor and 1.25 hp Brushless DC (BLDC) motor ensures fast recovery
- Lightweight design and included shoulder strap allow for easy transportation
- Single valve control for simple operation and easy changeover from recover to purge
- Status indicator LED provides notification of machine faults and completed recovery
- Dual-gauge design allows for monitoring of the system and tank pressures simultaneously
- Low pressure switch provides automatic shut-off when unit reaches 10" of vacuum
- Integrated purge function clears residual refrigerant to prevent cross-contamination
- Reusable mesh particulate filter is integrated into the suction port and can be easily cleaned or replaced
- 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
- Locking power cord 10' eliminate the need for extension cord
- High air flow fan with a micro-channel condenser to keep the unit running cool
- Tested by UL to ARHI 740-2016
   CSA C22.2#100:2014 Ed.7+U1, UL 1004-7:2018 Ed.3+R:10 Aug2022
   CSA C22.2#77:2014Ed.8+E1, UL 1004-1:2012 Ed.2+R:07 Aug2018
- Ignition proof design tested and approved to ANSI/ISA 12.12.01:2016 Ed.7
- One-year warranty



TurboRecover<sup>™</sup> has all the features you need for fast and effective refrigerant recovery.



Carry strap for easy transport to the job site.

| UPC#   | Description  |  |  |  |  |
|--------|--|--|--|--|--|
| 95780  | Turbo Recover™ for North America                                       |  |  |  |  |
| 95782  | Turbo Recover <sup>™</sup> for North America with Tank Overfill Switch |  |  |  |  |
| EXPORT |  |  |  |  |  |
| 95783  | TurboRecover™ with EU, UK and AU/NZ Power Cords                        |  |  |  |  |

### **RecoverXLT® REFRIGERANT RECOVERY MACHINE**



- Single valve control for easy changeover from liquid to vapor to purge
- Robust compressor design for fast recovery of liquid and vapor refrigerant
- Advanced 1/2 hp, 1750 rpm oil-less twin cylinder compressor with precision valves
- Recovers refrigerant and shuts off when unit reaches 15" of vacuum
- Status indicator LED provides notification of machine faults and completed recovery
- 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 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
- Tested by UL to ARI 740-98
   CSA C22.2#100:2014 Ed.7+U1, UL 1004-7:2018 Ed.3+R:10 Aug2022
   CSA C22.2#77:2014Ed.8+E1, UL 1004-1:2012 Ed.2+R:07 Aug2018
- One-year warranty also includes three-year compressor warranty on domestic models (one year on INTL models)
- Designed and manufactured in the USA



| UPC#  | Description                                     |
|-------|---|
| 95760 | RecoverXLT® 115V/60 Hz                          |
| 95762 | RecoverXLT® 115/60 Hz with tank overfill switch |
| 95765 | RecoverXLT® 115/60 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.



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

## **RECOVERY MACHINE COMPARISON CHART**

| Features  | RecoverXLT #95                                | 760/95762            | Recove        | rXLT2-AP   | #95764**               | Recov           | er <b>XLT</b> #9576                                   | 55      |  |
|---|---|----------------------|---------------|--|------------------------|-----------------|---|---------|--|
| Recovery capabilities                                 | Vapor, liquid, pus                            | sh/pull              | Vapor, I      | iquid, push/   | /pull                  | Vapor, I        | iquid, push/ <sub>l</sub>                             | pull    |  |
| Compressor  | 1/2 hp oil-less                               |                      | 1/2 hp        | 1/2 hp oil-less  |                        | 1/2 hp oil-less |   |         |  |
| Weight  | 32.6 lbs. (14.78 kg)                          |                      | 32.6 lbs      | 32.6 lbs. (14.78 kg)   |                        | 32.6 lbs        | 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                 |         |  |
| Refrigerant compatibility                             | 12, 22, 134a, 407<br>500, 502, HP, MP         |                      |               | 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                                    |                      | 230V/50       | 230V/50-60 Hz  |                        | 110V/5          | 110V/50 Hz  |         |  |
| Tank overfill sensor                                  | 95760 No / 95762                              | 2 Yes                | No            |  |                        | No              |   |         |  |
| Low pressure shut-off sensor                          | Standard                                      |                      | Standa        | rd   |                        | No              |   |         |  |
| Inlet mesh filter screen                              | Included                                      |                      | Include       | d  |                        | Include         | d   |         |  |
| Inlet filter dryer                                    | Optional filter ava                           | ailable for use on c | ontaminated a | and burn-ou  | t systems; use a filte | er of adequa    | te size (P/N :  | 95014). |  |
| Suction and discharge pressure gauges                 | Standard                                      |                      | Standa        | rd   |                        | Standa          | rd  |         |  |
| Upgraded higher suction and discharge pressure gauges | Standard                                      |                      | Standa        | rd   |                        | Standa          | rd  |         |  |
| Upgraded single<br>higher pressure switch             | Standard                                      |                      | Standard      |  | Standard               |                 |   |         |  |
| External circuit breaker                              | Standard                                      |                      | Standa        | Standard   |                        | Standard        |   |         |  |
| Plug  | U.S.  |                      | Euro, U       | Euro, UK, AU and NZ  |                        | IEC 60309       |   |         |  |
| Warranty  | 1 year parts and labor;<br>3 years compressor |                      | 1 year        | 1 year   |                        |                 | 1 year parts and labor;<br>3 years compressor         |         |  |
| Certified to ARI standard                             | ARI 740-98                                    |                      |               |  |                        |                 |   |         |  |
| Testing agency  | UL  |                      | UL            | UL   |                        | UL              |   |         |  |
| CUL listed  | Yes   |                      | No            | No   |                        | No              |   |         |  |
| CE marked   | No  |                      | Yes           |  |                        | Yes             | Yes   |         |  |
| Applicable ARI standard                               | 740-98  |                      | 740-98        |  |                        | 740-95          |   |         |  |
| Recovery rating in lbs./min.                          | Vapor Push/Pu                                 | ıll Liquid           | Vapor         | Push/Pull  | Liquid                 | Vapor           | Push/Pull   | Liquid  |  |
| R-12  | 0.33 13.49                                    | 1.98                 | 0.22          | 8.99   | 1.32                   | 0.22            | 8.99  | 1.32    |  |
| R-22  | 0.33 13.49                                    | 1.98                 | 0.22          | 8.99   | 1.32                   | 0.22            | 8.99  | 1.32    |  |
| R-134a  | 0.33 13.49                                    | 1.98                 | 0.22          | 8.99   | 1.32                   | 0.22            | 8.99  | 1.32    |  |
| R-410A  | 0.48 12.21                                    | 1.68                 | 0.32          | 8.14   | 1.12                   | N/A             | N/A   | N/A     |  |
| R-500   | 0.33 13.49                                    | 1.98                 | 0.22          | 8.99   | 1.32                   | 0.22            | 8.99  | 1.32    |  |
| R-502   | 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/Pu                                 | II Liquid            | Vapor         | Push/Pull  | Liquid                 | Vapor           | Push/Pull   | Liquid  |  |
| R-12  | 9.00 367.20                                   | 54.00                | 6.00          | 244.80   | 36.00                  | 6.00            | 244.80  | 36.00   |  |
| R-22  | 9.00 367.20                                   | 54.00                | 6.00          | 244.80   | 36.00                  | 6.00            | 244.80  | 36.00   |  |
| R-134a  | 9.00 367.20                                   | 54.00                | 6.00          | 244.80   | 36.00                  | 6.00            | 244.80  | 36.00   |  |
| R-410A  | 13.20 332.40                                  | 45.60                | 8.80          | 221.60   | 30.40                  | N/A             | N/A   | N/A     |  |
| R-500   | 9.00 367.20                                   | 54.00                | 6.00          | 244.80   | 36.00                  | 6.00            | 244.80  | 36.00   |  |
| R-502   | 16.20 369.70                                  | 72.00                | 10.80         | 246.40   | 48.00                  | 10.80           | 246.40  | 48.00   |  |

<sup>\*</sup>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.

<sup>\*\*</sup>Rates do not include 95764. Calculated recovery ratings for this product can be found at 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 |

### **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.



38081



# 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                     |
| 95248 | Umbilical cord overfill sensor    |
| 95294 | Fan clip                          |
| 95325 | High pressure switch              |
| 95338 | Low pressure switch               |
| 95444 | Case, front                       |
| 95445 | Case, rear                        |
| 95446 | Case, half (both halves)          |
| 95447 | Case, cord wrap                   |
| 95448 | Aluminum frame                    |
| 95449 | Compressor bracket grommet (5 pk) |
| 95450 | Condensor coil                    |
| 95451 | High pressure gauge               |
| 95452 | Low pressure gauge                |
| 95453 | Manifold assembly                 |
| 95456 | Neon lamp (115V Machine)          |
| 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        |

# 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 |
| A<br>A | 95013 | 50 lb. 400 psi cylinder DOT 400 with float switch |

# RECOVERY BURNOUT FILTER FOR DIRTY SYSTEMS

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

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.











## **Vacuum Pumps**

Select from a complete line of Vacuum Pumps that meet your needs.



**DETECTORS AND** 

### **SuperEvac® PLUS II VACUUM PUMPS**





### **Enhancements to Improve Performance and Ergonomics:**

- Convenient shoulder strap for easy carrying over long distances with built-in mount points.
- · Smaller oil bath requires less oil
- Built-in cooling fins to cool pump and increase performance
- Anti-suckback valve
- Elongated oil sight glass easier to see oil level
- Tethered oil drain plug

### The SuperEvac® PLUS II Vacuum Pump is a highly efficient, two-stage rotary vane oil-sealed pump field-rated at 15 microns or better.

- · Designed for use with A2L systems
- Isolation valve for oil changes without losing vacuum in the system
- Gas ballast valve keeps oil cleaner, longer during evacuation
- 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
- Built-in vacuum gauge
- Wide mouth oil reservoir port for easier, cleaner filling. Doubles as a pump exhaust - threaded to attach a garden hose for exhausting to a remote location
- Large brass oil drain for easy access to fast oil changes
- Downward angled oil pump to remove contaminants usually trapped in other sump designs
- Non-sparking switch for A2L compliance
- Locking, low-profile IEC connector with 9'10" (3 meter) power cord to prevent accidental removal
- · Heavy duty steel handle
- Lift hook for hoisting pump to rooftops
- Two-year warranty
- Made in the USA



| DOMESTIC  | Model 93740  | Model 93760  | Model 93780  | Model 93790  |
|---|--|--|--|--|
| Free air desplacement                                 | 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 two 3/8" Male flares                              | 1/2", 3/8", 1/4" Male flares                               | 1/2", 3/8", 1/4" Male flares                               | 1/2", 3/8", 1/4" Male flares                               |
| Motor   | BLDC 1/2 hp  | BLDC 1/2 hp  | BLDC 1/2 hp  | BLDC 1/2 hp  |
| Thermal overload protection                           | Yes  | Yes  | Yes  | Yes  |
| Voltage (single phase) Factory voltage setting        | 100-127V/220-240V, 50-60 Hz;<br>Factory set at 115V        |
| Power cord  | 9'10"cord (3 meter) locking IEC                            |
| Oil capacity  | 36 oz.   | 36 oz.   | 28 oz.   | 28 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  | 24.6 lbs. (11.2 kg)  | 25.9 lbs. (11.7 kg)  | 26.8 lbs. (12.2 kg)  | 28.4 lbs. (12.9 kg)  |
| INTERNATIONAL   | Model 9374x  | Model 9376x  | Model 9378x  | Model 9379x  |
| Free air desplacement                                 | 113 L/M  | 170 L/M  | 225 L/M  | 310 L/M  |
| Motor   | BLDC 1/2 hp  | BLDC 1/2 hp  | BLDC 1/2 hp  | BLDC 1/2 hp  |
| Motor voltage (dual phase)                            | 100-127V/220-240V, 50-60 Hz                                | 100-127V/220-240V, 50-60 Hz                                | 100-127V/220-240V, 50-60 Hz                                | 100-127V/220-240V, 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  | 24.6 lbs. (11.2 kg)  | 25.9 lbs. (11.7 kg)  | 26.8 lbs. (12.2 kg)  | 28.4 lbs. (12.9 kg)  |
| Model #   | 93742 (95 L/M at 50 Hz)                                    | 93762 (142 L/M at 50 Hz)                                   | 93782 (190 L/M at 50 Hz)                                   | 93792 (260 L/M at 50 Hz)                                   |
| US plug   | (113 L/M at 60 Hz)   | (170 L/M at 60 Hz)   | (225 L/M at 60 Hz)   | (310 L/M at 60 Hz)   |
| Factory voltage setting                               | 230V   | 230V   | 230V   | 230V   |
| Model # Euro Plug                                     | 93743 (95 L/M at 50 Hz)                                    | 93763 (142 L/M at 50 Hz)                                   | 93783 (190 L/M at 50 Hz)                                   | 93793 (260 L/M at 50 Hz)                                   |
| Factory voltage setting                               | 230V   | 230V   | 230V   | 230V   |
| Model #   | 93744 (95 L/M at 50 Hz)                                    | 93764 (142 L/M at 50 Hz)                                   | 93784 (190 L/M at 50 Hz)                                   |  |
| AU/NZ plug  | (113 L/M at 60 Hz)   | (170 L/M at 60 Hz)   | (225 L/M at 60 Hz)   |  |
| Factory voltage setting                               | 230V   | 230V   | 230V   |  |
| Model # UK Plug                                       | 93747 (95 L/M at 50 Hz)                                    | 93767 (142 L/M at 50 Hz)                                   | 93787 (190 L/M at 50 Hz)                                   |  |
| Factory voltage setting                               | 230V   | 230V   | 230V   |  |
| III parts listed will not work with NH <sub>3</sub> . |  |  |  |  |

For replacement parts, refer to the manual (also available at yellowjacket.com)

### **BULLET®DC VACUUM PUMPS**



| DOMESTIC                    | MODEL 93870   |  |  |
|-----------------------------|---|--|--|
| Free air displacement       | 7.0 cfm   |  |  |
| Number of stages            | 2-stage rotary vane                                     |  |  |
| Field blankoff              | 25 microns  |  |  |
| Intake                      | 1/4" x 3/8" x 1/2"                                      |  |  |
| Motor                       | BLDC 1/2 hp   |  |  |
| Thermal overload protection | Yes   |  |  |
| Voltage (single phase)      | 100-127V/220-240V, 50-60 Hz; factory set at 115V        |  |  |
| Power cord                  | 9' 10" cord (3 meter) locking IEC                       |  |  |
| Oil capacity                | 28 oz. (0.828 L)  |  |  |
| Dimensions                  | 17.5" L x 6" W x 12" H<br>(44.5 cm x 15.2 cm x 30.5 cm) |  |  |
| Net weight                  | 27.5 lbs. (12.5 kg) filled                              |  |  |

## High Torque, High Efficiency, Brushless DC (BLDC) Motor

- Easily handles supply voltage variations especially low-voltage conditions
- Starts and stops in extreme low temperatures
- · Rated for use with A2L refrigerants
- 20% lighter than AC motor-driven pump
- Pulls down to 25 microns or better
- Optional shoulder strap (P/N 92965)
- 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
- Wide mouth oil reservoir port for easier, cleaner filling.
   Doubles as a pump exhaust threaded to attach a garden hose for exhausting to a remote location
- Large brass oil drain for easy access to fast oil changes
- Downward angled oil pump to remove contaminants usually trapped in other sump designs
- Locking, low-profile IEC connector with 9'10" (3 meter) power cord to prevent accidental removal
- Two-year warranty
- Made in the USA



| EXPORT                     | 93872   | 93873 | 93874 | 93877 |  |  |
|----------------------------|---|-------|-------|-------|--|--|
| Detachable IEC cord type   | US  | EU    | AU/NZ | UK    |  |  |
| Free air displacement      | 200/165 L/M   |       |       |       |  |  |
| Motor                      | BLDC 1/2 hp   |       |       |       |  |  |
| Motor voltage (dual phase) | 100-127V/220-240V, 50-60 Hz; factory set at 230V        |       |       |       |  |  |
| Dimensions                 | 17.5" L x 6" W x 12" H<br>(44.5 cm x 15.2 cm x 30.5 cm) |       |       |       |  |  |
| Net weight                 | 27.5 lbs. (12.5 kg) filled                              |       |       |       |  |  |

### **BULLET®X VACUUM PUMPS**

- Built-in cooling fins to cool pump and increase performance
- Improved oil suck -back valve
- Elongated oil sight glass easier to see oil level
- 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
- Wide mouth oil reservoir port doubles as pump exhaust; threaded to attach garden hose for exhausting to remote location.
- Vacuum/moisture boiling point chart
- Two-year warranty



| Domestic                    | Model 93600   |
|-----------------------------|---|
| Free air displacement       | 7.0 cfm   |
| Number of stages            | 2-stage rotary vane                                     |
| Field blankoff              | 25 microns  |
| Intake                      | 1/4" x 3/8" x 3/8"                                      |
| Motor                       | 1/2 hp - 1725 rpm                                       |
| Thermal overload protection | Yes   |
| Voltage (single phase)      | 115V/60 Hz  |
| Power cord                  | 6' - motor mounted switch - U.S. plug                   |
| Oil capacity                | 28 oz. (0.828 L)  |
| Dimensions                  | 17.5" L x 6" W x 12" H<br>(44.5 cm x 15.2 cm x 30.5 cm) |
| Net weight                  | 31.7 lbs. (14.4 kg)                                     |
| Export                      | EU/UK 93610; AU/NZ 93620                                |
| Detachable IEC Cord type    | EU/UK AU/NZ   |
| Free air displacement       | 200/165 L/M   |
| Motor (€                    | 1/2 hp - 1725/1425 rpm                                  |
| Voltage (dual phase)        | 115/230V / 50-60 Hz                                     |
| Dimensions                  | 18" L x 6" W x 12" H<br>(45.7 cm x 15.2 cm x 30.5 cm)   |
| Net weight                  | 34.5 lbs (15.7 kg)                                      |

For replacement parts, refer to the manual at yellowjacket.com

**INSTRUMENTS** 

### **YJII® VACUUM PUMPS**

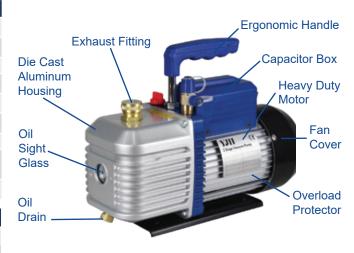


| SPECIFICATIONS         | 93266              | 93265 INTL                  |
|------------------------|--------------------|-----------------------------|
| Free Air Displacement  | 5 cfm              | 4 cfm 95 L/M                |
| Ultimate Vacuum        | 25 microns         | 25 microns                  |
| Number of Stages       | 2 Stage            | 2 Stage                     |
| Motor                  | 1/2 hp - 1725 rpm  | 1/2 hp - 3000 rpm           |
| Intake Ports           | 1/4" and 3/8" SAE  | 1/4" and 3/8" SAE           |
| Voltage (single phase) | 120V (50-60 Hz)    | 220-240V (50-60 Hz)         |
| Oil Capacity           | 18 oz (532 ml)     | 532 ml                      |
| Dimensions             | 13" x 5" x 11"     | 330 mm x 127 mm x<br>279 mm |
| Weight                 | 25.3 lbs (11.5 kg) | 10.9 kg                     |

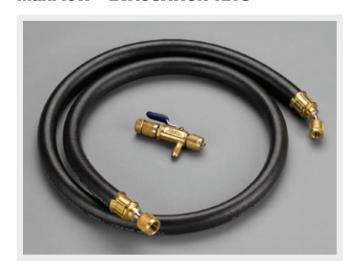
| UPC#  | Description                 |
|-------|-----------------------------|
| 93266 | YJII® Vacuum Pump 5cfm      |
| 93265 | YJII® Vacuum Pump 4cfm INTL |

YJII® is a compact, lightweight, portable and affordable pump for servicing small systems.

- Deep ultimate vacuum
- Quick flow rate
- Wide range of applications
- · Lightweight, durable aluminum housing
- Small and portable
- Reliable runs steadily for long periods
- Thermal protector in motor to guarantee pump runs steadily and safely
- · High torque motor design for easy start-up and efficient operation, even in the harshest conditions
- 1/4" and 3/8" SAE flare inlet connections allow for flexibility of hose fittings/sizes
- 3/4" garden hose exhaust fitting with removable cap for venting
- Oversized 3/8" oil drain for faster oil changes
- Vacuum pump oil included
- · One-year warranty



### MaxFlow™ EVACUATION KITS



- Perform A/C and refrigeration system evacuations at least 5x faster than using 1/4" hoses
- · Reduce the time it takes to pull and hold vacuum leaving a tight and dry system
- 1/4" (93887) and 5/16" (93889) Core/Vacuum/Charge Tools removes cores that cause restriction
- 1/2" large diameter hose creates full, quicker flow
- · Heavy duty hose won't collapse
- · Vacuum rated to 20 microns
- Opens up over 90% of internal diameter of access hose
- Made in the USA

| UPC#  | Description  |
|-------|--|
| 93887 | MaxFlow™ Evacuation Kit 3/8" x 1/4" 45°              |
| 93889 | MaxFlow <sup>™</sup> Evacuation Kit 3/8" x 5/16" 45° |

## **BULLET®X NH3 AMMONIA VACUUM PUMP**



The capabilities of our BULLET®X NH₃ Ammonia Vacuum Pumps make it the premier vacuum pump for ammonia refrigeration and chiller applications. Our newest generation features many benefits to make your job faster and easier, and is brass-free down to the smallest screw for lifelong durability in ammonia applications.

BULLET®X NH $_3$  Ammonia is a highly efficient, two-stage rotary vane, oil-sealed pump – field rated to 25 microns or better. The upgraded BULLET®X NH $_3$  Ammonia combines some of the same great features and benefits with enhancements to improve ergonomics and performance.



| Specifications              | Model 93530   | Model 93533   | Model 93539   |
|-----------------------------|---|---|---|
| Free air displacement       | 8.0 cfm   | 190 L/M @50 Hz  | 190 L/M @50 Hz  |
| Number of stages            | 2-stage rotary vane                                       | 2-stage rotary vane                                       | 2-stage rotary vane                                       |
| Field blankoff              | 25 microns  | 25 microns  | 25 microns  |
| Intake                      | 3/4" NPT  | 3/4" NPT  | 3/4" NPT  |
| Motor                       | 1/2 hp - 1725 rpm   | 1/2 hp - 1725 rpm   | 1/3 hp - 1425 rpm   |
| Thermal overload protection | Yes   | Yes   | Yes   |
| Voltage (single phase)      | 115V/60 Hz  | 115/230V/50-60 Hz   | 100V/50 Hz  |
| Power cord                  | 6' US plug - motor mounted switch                         | 8' EU plug - motor mounted switch                         | 8' US plug - motor mounted switch                         |
| Oil capacity                | 28 oz   | 28 oz   | 28 oz   |
| Dimensions                  | 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) | 17.5" L x 6" W x 11.5" H<br>(44.5 cm x 15.2 cm x 29.2 cm) |
| Net weight (lbs)            | 33.0 lbs (15 kg)  | 37.0 lbs (16.75 kg)                                       | 37.0 lbs (16.75 kg)                                       |

For replacement parts, refer to the manual (also available at yellowjacket.com)



### **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 $^{\text{TM}}$  and BULLET $^{\text{®}}$  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 guick coupler and provides easy connections for two 3/8" vacuum hoses.

- Flutterless<sup>™</sup> 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
- Made in the USA



| 3/8" Fem | 3/8" Female flare coupler                                     |  |
|----------|---|--|
| UPC#     | PC# 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    | 9011 CH-11 gasket (10 pak)                                    |  |
| 19131    | Pump step-down adapter - 1/2" Female flare to 3/8" Male flare |  |

| 1/2" Fem | 1/2" Female flare coupler                                    |  |
|----------|--|--|
| UPC#     | 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  |  |

| Additiona | 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<br>16248 48" vacuum hoses, 2 valves                   | 93866            |
| 93875            | System II: all of above plus<br>69075 electronic vacuum gauge<br>and ratchet wrench | 93876            |
| 93886<br>(8 cfm) | System III: all of above plus a SuperEvac pump                                      | 93885<br>(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:



18975

- 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

| 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     |
| 18986 | 1/4" Male x 5/16" female vacuum/charge valve |

### OMNI™ DIGITAL VACUUM GAUGE



The YELLOW JACKET® OMNI™ Digital Vacuum Gauge is an easy-to-use, compact vacuum gauge that is loaded with features for the price. And it's rugged, too. Made with high impact, glass reinforced housing, it survives moisture and accidental drops or attachment to a high pressure line. The easy-to-clean vacuum sensor handles 450 psi positive pressure and reads several units of vacuum (microns, millibar, Torr and Pascal).

- · Visual signal when target vacuum level is reached
- Electronic paper display for clear visibility even in direct sunlight
- · Rich and intuitive user interface turn it on and it is ready to use with default settings
- 45° bend for fitting (1/4" or 5/16")
- · Automatic power down and time out
- · Power savings multiple time-out selections
- · Low battery indicator and automatic power-down when inactive
- · Adapter fittings available
- Made in the USA



### Compact, easy-to-use, and more unique features than any other unit on the market.

### Specifications

Vacuum Reading Resolution:

1 micron (from 1,000 to 5 microns) 10 microns (from 10,000 to 1,000 microns)

100 microns (from 99,999 to 10,000 microns)

+/- 20% of reading (from 10,000 to 25 microns)

Vacuum Reading Range:

5 to 99,999 Microns

Display Vacuum Measurement Accuracy:

(133.3 mBar, 100 Torr, 13,333 Pa); Progress bar-graph from Atmosphere (ATM)

to 99,999 Microns

Proof Pressure: 450 psi

Working Temperature: 32°F to 104°F (0°C to 40°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Working Humidity: 0-95% RH (non-condensing) I

Class:

Battery Life: 150+ hours continuous Battery: (2) AAA batteries (included) Size: 6" long x 1.6" wide x 1.6" thick

including fitting (15.3 x 4 x 4 cm)

Weight: 0.39 lb (175 grams)

Warranty One year

| UPC#  | Description                                   |
|-------|---|
| 69020 | OMNI™ Digital Vacuum Gauge with 1/4" Coupler  |
| 69021 | OMNI™ Digital Vacuum Gauge with 5/16" Coupler |



### **VACUUM SENSOR CLEANING KIT**

Follow cleaning procedure for these YELLOW JACKET® vacuum gauges: 69020 series OMNI™, 67044 series used with P51 digital manifold and Mantooth gauges or 69086 digital vacuum gauge.

Made in the USA



| UPC# Des |       | Description                |
|----------|-------|----------------------------|
|          | 69030 | Vacuum Sensor Cleaning Kit |

### 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 from 10 to 10,000 microns

|  | 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   |

### **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
- $\bullet$  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                                     |
| 69030 | Vacuum Sensor Cleaning Kit                                   |

### **VACUUM PUMP ADAPTER**

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





MADE IN THE USA

| 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.

| 69092 Heat gun kit 115V - UL, CSA |  |
|-----------------------------------|--|

### **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) |





2. GAUGES

3. RECOVERY MACHINES

4. VACUUM PUMP SYSTEMS

6. HOSE ADAPTERS, VALVES & PARTS

7. WIRELESS AND ELECTRONIC INSTRUMENTS

8. LEAK
DETECTORS AND
MONITORS

9. HEATING INSTRUMENTS

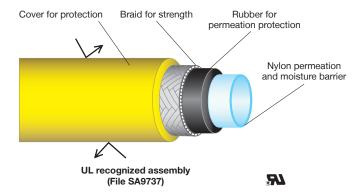
**10. SYSTEM TOOLS** 





### THE ANATOMY OF A HOSE

- 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<sup>™</sup> 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

| Length       | Yellow | Blue  | Red   | 3 pak*                |
|--------------|--------|-------|-------|-----------------------|
| 12"          | 21012  | 21212 | 21612 | -                     |
| 24"          | 21024  | 21224 | 21624 | -                     |
| 36"          | 21036  | 21236 | 21636 | 21983                 |
| 18'          | 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 |
|              |        |       |       | 21981 two 36", one 72 |

<sup>\* 3</sup> pak includes a red, yellow and blue hose.

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

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



### **Designed for** R-410A

- Metal handle at end of hose fits tight areas and traps all the gas
- Full flow valve
- Uses standard gasket and valve opener
- 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<sup>™</sup> valve



### **Designed for** R-410A

- 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
- Made in the USA



### UL recognized assemblies (File SA9737)

| FlexFlow <sup>™</sup> 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)

### **Designed for R-410A**

- Low loss anti-blow back SealRight<sup>™</sup> 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<sup>™</sup> 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 |

| Replace | ment 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*<sup>™</sup> hose with 1/4" (7/16 – 20) Female flare on manifold connection and 5/16" (1/2 – 20) Female flare angled on service end

| nda |  |  |
|-----|--|--|
|     |  |  |
|     |  |  |

| 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 I/" 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*<sup> $^{\text{II}}$ </sup> 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

| Length | 3 pak                      |     |
|--------|----------------------------|-----|
| 36"    | 29483 (29036*, 29423, 2946 | i3) |
| 60"    | 29485 (29060* 29425 2946   | 55) |

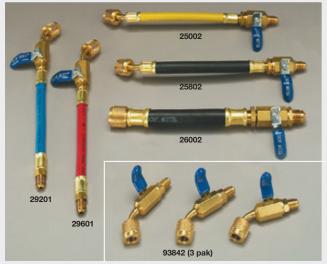
### 29486 (29072\*, 29426, 29466) Compact ball valve (RYB 5/16" x 5/16")

| 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)

### **Designed for** R-410A

- Easy retrofit of existing PLUS II<sup>™</sup> 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) |  |  |  |  |  |

| FlexFlo | FlexFlow <sup>™</sup> assemblies                   |  |  |  |  |  |  |
|---------|--|--|--|--|--|--|--|
| UPC#    | Description  |  |  |  |  |  |  |
| 29011   | 1/4" to 5/16" Yellow FlexFlow™ adapter <b>NEW!</b> |  |  |  |  |  |  |
| 29211   | 1/4" to 5/16" Blue FlexFlow™ adapter <b>NEW!</b>   |  |  |  |  |  |  |
| 29611   | 1/4" to 5/16" Red FlexFlow™ adapter <b>NEW!</b>    |  |  |  |  |  |  |
| 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

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



Underwriters Laboratories Inc. Registered Component Mark – applies to all standard 1/4" *PLUS If*<sup>™</sup> and 1/4" RYB FlexFlow<sup>™</sup> hoses



## PLUS II™ 3/8" "B" CHARGING HOSE

Designed for R-410A

PLUS II<sup>™</sup> 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) |  |  |

| Common selections |       |                 |                 |       |            |        | Other selections |       |               |               |  |
|-------------------|-------|-----------------|-----------------|-------|------------|--------|------------------|-------|---------------|---------------|--|
|                   |       | 3/8" Str. fl. : | x 3/8" Str. fl. |       | 3/8" fl. x | 3/8"   | Str. fl. x 3/8   | " 45° | 3/8" Str. fl. | 1/4" Str. fl. |  |
| Length            | Yell  | ow              | Blue            | Red   | FlexFlow   | Yellow | Blue             | Red   | x 3/8" 90°    | x 1/4" 45°    |  |
| 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.

Designed for R-410A

- 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) |  |  |  |  |

|        |                             | Con       |                                 | Other se             | elections        |                |                    |          |
|--------|-----------------------------|-----------|---------------------------------|----------------------|------------------|----------------|--------------------|----------|
| Length | ength HCA hose Str. x angle |           | Hose with FlexFlow <sup>™</sup> | Hose with ball valve | HCL hos          | e Str. x 90°   | HCS hose Str. x St |          |
| 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                |                  |                |                    |          |
| 12'    | 15112                       | HCA-144"  | 25912                           | 29912                |                  |                |                    |          |
| 25'    | 15125                       | HCA-300"  | 25925                           | 29925                | Blac             | k only. Longer | r lengths ava      | ailable. |
| 50'    | 15150                       | HCA-600"  | 25950                           | 29950                |                  | Please         | specify.           |          |
| 75'    | 15175                       | HCA-900"  | 25975                           | 29975                | r rouse speen.j. |                |                    |          |
| 100'   | 15199                       | HCA-1200" | 25999                           | 29999                |                  |                |                    |          |

**SYSTEMS** 

### 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)
- Vacuum rated to 20 microns
- 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 <sup>™</sup> opener (10 pak) |  |  |  |



|        | Com   | mon select           | tions                        | Other selections    |                     |   |            |                     |  |
|--------|-------|----------------------|------------------------------|---------------------|---------------------|---|------------|---------------------|--|
| Length |       | Str. fl.<br>Str. fl. | 3/8" Str. fl.<br>x FlexFlow™ | 3/8" fl. x 3/8" 45° | 3/8" fl. x 3/8" 90° | 3/8" fl. >  | c 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               |   | lengths    | 20312               |  |
| 25'    | 15725 | BC-300"              | 26125                        | 19725               | 19925               |   | e. Please  | 20325               |  |
| 50'    | 15750 | BC-600"              | 26150                        | 19750               | 19950               | specify. Longer than 8' not recommended for evacuation. |            | 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)
- Vacuum rated to 20 microns
- Made in the USA



| Replace | 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 <sup>™</sup> opener (10 pak) |  |  |  |  |  |  |

|        | Common selections |        |                 |                   | Other selections  |               |                   |       |                     |                     |
|--------|-------------------|--------|-----------------|-------------------|---|---------------|-------------------|-------|---------------------|---------------------|
| Length | "C" 1/2<br>x 1/2  |        | "D" 5,<br>x 5/8 | /8" fl.<br>8" fl. | "CA"<br>angle end   |               | "DA"<br>angle end |       | 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"            | 26" h   | يم النبير ممم | .II to 00 mi      | 24000 | 19310               | 20710               |
| 12'    | 15912             | C-144" | 16112           | D-144"            |   |               | ıll to 20 mid     |       | 19312               | 20712               |
| 25'    | 15925             | C-300" | 16125           | D-300"            | and lower. Hoses longer than 8' not 19325 20725 recommended for evacuation. |               |                   |       | 20725               |                     |
| 50'    | 15950             | C-600" | 16150           | D-600"            | reco  | mmenaea       | ior evacua        | tion. | 19350               | 20750               |

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

## 1. CHARGING SYSTEMS

GAUGES

3. RECOVERY

4. VACUUM PUMP SYSTEMS

### 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 NH3



### **AUTOMOTIVE MANIFOLD HOSES FOR R-134A SYSTEMS**



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

MADE I THE US

| Color  | Yellow  | Blue                        | Red                         | 3 pak |
|--------|---|-----------------------------|-----------------------------|-------|
| Length | Straight<br>Acme QC<br>x 45° Acme<br>SealRight™ | 1/2" fe.<br>Acme x<br>14 mm | 1/2" fe.<br>Acme x<br>14 mm |       |
| 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.

MADE IN THE USA

| Color  | Yellow                           | Blue              | Red             |
|--------|----------------------------------|-------------------|-----------------|
| Length | 3/16" hose (12 mm barb x 45° QC) | 3/16" hose (12 mn | n 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

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

MADE IN

THE USA

| Length | 3/4"<br>3/4"<br>"O" rin | fl. –  | 3/4" hex x<br>3/4" hex copper<br>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  |
|        |                         |        |  |

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

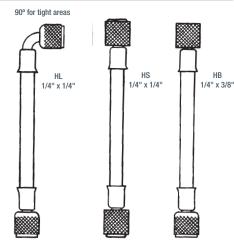
### **SPECIAL 1/4" PLUS II™ CHARGING HOSES**

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     |

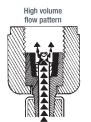
Longer lengths available. Please specify.

| Replace | 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 <sup>™</sup> opener (10 pak)     |  |  |  |  |



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

| Fittings available <i>PLUS II</i> <sup>™</sup> hoses                 |                 |     |     |
|--|-----------------|-----|-----|
| Туре   | 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. As | k for specifics |     |     |

### 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.* 

| 6        | 1964 | 4 BBBB                       | 1997              |
|----------|------|------------------------------|-------------------|
| 1        | 1970 | 3 BBB                        | 1998              |
| 6 IIIIII | 1971 | 2 BB                         | 1999              |
| 11       | 1976 | 1 B                          | 2000              |
| 6 XXXXXX | 1977 | 6 CCCCCC                     | 2001              |
| 1 X      | 1982 | 5 CCCCC                      | 2002              |
| 6 000000 | 1983 | 4 CCCC                       | 2003              |
| 10       | 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 v | vith year of mfg. |

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

### **AMMONIA CHARGING HOSE**



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"           | 1/4" Str. fl. x 1/4" 45°   |           |           | 3/8" Str. fl. both ends |          |             |  |       |         |
|----------------|----------------------------|-----------|-----------|-------------------------|----------|-------------|--|-------|---------|
| UPC#           | Part#                      | Ler       | ngth      | UPC#                    | Part#    |             |  |       |         |
| 16848          | NHA-48"                    | 48        | 3"        | 19448                   | NBC-48"  |             |  |       |         |
| 16872          | NHA-72"                    | 72"       |           | 19472                   | NBC-72"  |             |  |       |         |
| 16896          | NHA-96"                    | 96"       |           | 96"                     |          | NHA-96" 96" |  | 19496 | NBC-96" |
| 16910 NHA-120" |                            | 10'       |           | 19510                   | NBC-120" |             |  |       |         |
| 16912          | NHA-144"                   | 12'       |           | 19512                   | NBC-144" |             |  |       |         |
| Steel ha       | lf union ammonia           | a fitting | gs        |                         |          |             |  |       |         |
| UPC#           | Description                |           |           |                         |          |             |  |       |         |
| 16801          | 1/4" Male fl. x 1/4" NPT N |           | Male Str. |                         |          |             |  |       |         |
| 16802          | 1/4" Male fl. x 1/4" NPT N |           | ale 90°   |                         |          |             |  |       |         |
| 16803          | 3/8" Male fl. x 1/4"       | ' NPT M   | ale       |                         |          |             |  |       |         |

 $\ensuremath{\text{NH}}_3$  manifold on page 23.

### **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<br>Pump to nozzle connector                 |
| 78042 | 12"    | 1/4" Female flare x 1/4" Female flare<br>Pump to nozzle connector                   |
| 78112 | 12"    | 1/8" NPT Female swivel x 1/8" NPT Male<br>Pump to nozzle connector or gauge to pump |
| 78043 | 18"    | 3/16" Female flare x 3/16" Female flare<br>Pump to nozzle connector                 |
| 78044 | 18"    | 1/4" Female flare x 1/4" Female flare<br>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)
- Made in the USA



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

# **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#  | Description   |
|-------|---|
| 19020 | Replacement gasket for 1/4" and 1/2" Acme hose (10 pak) |
| 18001 | Cylinder gasket (10 pak)                                |

Use cylinder valve adapters only. See page 33.

| UPC#  | L.  | Part#  | Туре            | 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)      |

### **HIGH PRESSURE CONTROL HOSE**

### For HFC, HCFC and CFC refrigerants and hydrocarbons



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 brass. 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, HCFC such as R-22, HC's, R290 and
- 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*    | UPC#             |                 |                |                  |                 |
|------------|------------------|-----------------|----------------|------------------|-----------------|
| (assembly) | 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           |                |                  |                 |

<sup>\*</sup> Special lengths are readily available.



### 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>.

|   | Stainless steel hose specifications |                     |                        |                          |                                 |  |  |  |
|---|-------------------------------------|---------------------|------------------------|--------------------------|---------------------------------|--|--|--|
|   | Size                                | Max psi<br>working* | Flexing<br>bend radius | Permanent<br>bend radius | Temperature/pressure correction |  |  |  |
| Ī | 1/4"                                | 1275 (88 bar)       | 5.5"                   | 1"                       | 68°F – 1.00                     |  |  |  |
| ĺ | 3/8"                                | 1000 (69 bar)       | 6.5"                   | 1-1/4"                   | 200°F86<br>300°F80              |  |  |  |
|   | 1/2," 5/8"                          | 1000 (69 bar)       | 8.5"                   | 1-1/2"                   | 400°F – .78                     |  |  |  |
| ĺ | 3/4"                                | 725 (50 bar)        | 10"                    | 2"                       | 500°F77<br>800°F76              |  |  |  |
|   | 1"                                  | 700 (48 bar)        | 11.5"                  | 2-3/4"                   | 900°F74                         |  |  |  |
| ĺ | 1-1/4"                              | 550 (38 bar)        | 13"                    | 3-1/4"                   | 1000°F – .70                    |  |  |  |

 $<sup>^{\</sup>star}$  PSI at 68°F with a 4-to-1 safety factor. Core is T-321 SS with 300 Series SS braid.

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

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

### **SWEAT FITTING ASSEMBLY**



|       | male<br>t fitting | Male<br>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



### **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.

## **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   | Male fl.   | Male fl.  | Fe. fl.   |
|------------|------------|-----------|-----------|
| x length   | x Male fl. | x 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.

### **CO<sub>2</sub> TEST AND CHARGING MANIFOLDS**

Manifold and hoses designed specifically for transcritical CO<sub>2</sub> (R-744) applications.



The YELLOW JACKET® TITAN® Test and Charging Manifold for transcritical CO<sub>2</sub> systems is constructed with a forged aluminum alloy body making it lightweight for handling ease and durability. No sightglass means added safety. It features true 45° SAE flare hoses 78" in length.

- Large, easy-to-read 3-1/8" (80 mm) liquid-filled red and blue, 1% accuracy (Class 1) gauges; psi/bar
- Proven, 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 extends the life of the seats.
- · Fourth hose to enable connection to hi/lo sides, refrigerant tank, and 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 on unit are 1/4").
- Dedicated transcritical CO<sub>2</sub> hose 78" (200 cm) in length
- Designed and assembled in the USA





### **Specifications**

Scales:

LP 30 in. Hg/1500 psi (-1/+105 bar)

-60° to 85°F (-52° to 30°C) HP 0/3000 psi (0/210 bar)

4-valve forged aluminum body

Precision stainless steel valve feed screws

No sight glass for added safety

Class 1, 3-1/8" (80 mm), oil-filled, pulse-free

Fittings: (3) 1/4"; (1) 3/8" (vacuum application only)

Hoses: Three (3) black, 78" (200 cm), 1/4" SAE fittings (45°)

- Operating pressure 1740 psi (120 bar)
- · High pressure copper gaskets

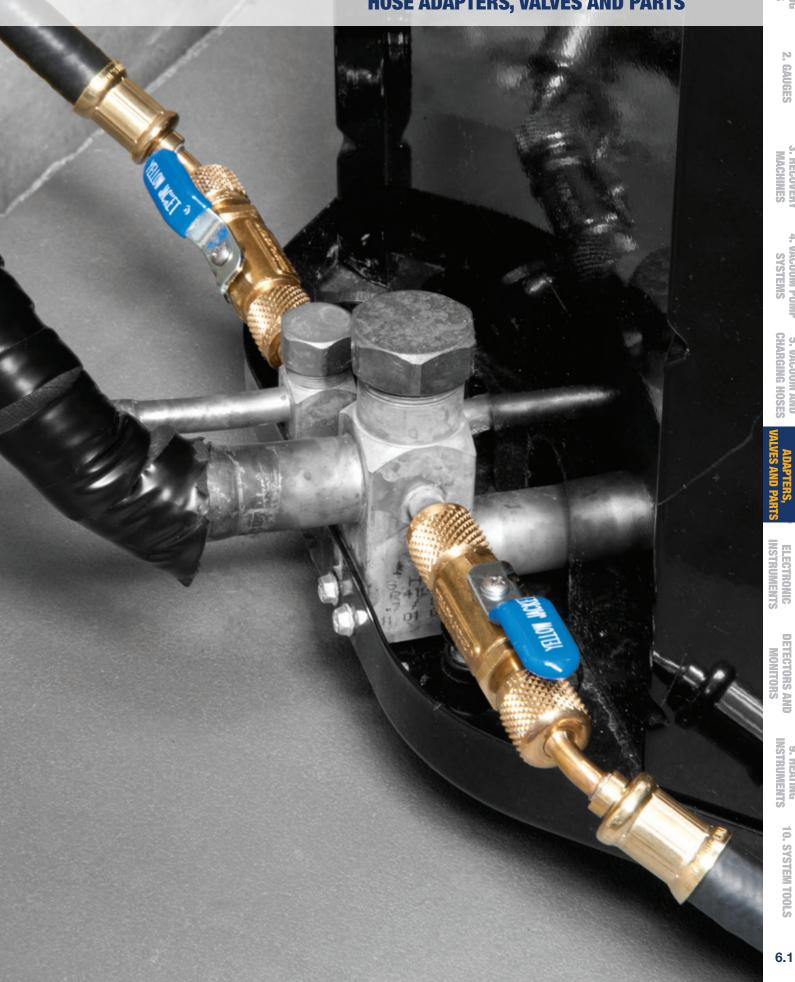
One (1) yellow, 78" (200 cm), 3/8" SAE fittings

- · Operating pressure 594 psi (41 bar)
- · Neoporene built-in gaskets

| UPC#  | Description   |
|-------|---|
| 45925 | TITAN® CO2 Manifold with hoses (3) black and (1) yellow         |
| 45930 | CO2 Tanscritical Test and Charging Manifold with Quick Couplers |
| UPC#  | Replacement Parts   |
| 45922 | CO2 78" (200 cm) black replacement hose (single)                |
| 45923 | Nylon CO2 Manifold bag with handle and straps (optional)        |
| 45924 | CO2 Manifold Briefcase  |
| 14579 | 3/8" 78" (200 cm) yellow replacement hose (single)              |
| 49193 | High pressure replacement gauge                                 |
| 49194 | Low pressure replacement gauge                                  |
| 79472 | 1/4" STR X 45° CO2 Hose 72"                                     |
| 79510 | 1/4" STR X 45° CO2 Hose 120"                                    |

For replacement parts, refer to the manual (also available at yellowjacket.com)

## **HOSE ADAPTERS, VALVES AND PARTS**





### The RealTorque<sup>™</sup> Core Removal Tool is essential for effectively removing and replacing HVAC/R system Schrader cores.

The RealTorque™ Vacuum/Charge Valve with Side Port removal of system Schrader cores can greatly increase the speed of recovery and evacuation. Once charging is complete, it is important that the system Schrader cores be properly tightened to prevent leaks. The RealTorque™ Core Removal Tool has an integrated torque mechanism that clicks as soon as the Schrader core has been tightened to the manufacturer recommended torque value of 3-5 in-lb. This provides assurance that the Schrader core is properly tightened on every job and minimizes the chances of leaks from this area of the system.

### **FEATURES & BENEFITS**

- Core removal improves the speed of recovery and evacuation
- Torque mechanism clicks when Schrader core has been properly tightened to 3-5 in-lb
- Side port provides attachment location for vacuum gauge
- Available in 1/4" and 5/16" sizes
- Complete valves and superheat kits supplied in hard cases for protection
- One-year warranty
- Made in USA



### **Torque Extractor (CRT) Assembly**

Upgrade your current core removal tool with the 18998 (1/4") and 18999 (5/16") RealTorque™ Extractor Assembly.





### **RealTorque™ SuperHeat Kits**

The RealTorque™ SuperHeat Kits include all the tools necessary for accurate system superheat calculations. The thermometer and core removal tool with side port allow for the pressure and temperature measurements to be taken at the same system location. Compare these measurements to the system refrigerant P/T chart to determine the system superheat. Once charging is complete, use the RealTorque<sup>™</sup> Core Removal tool to properly tighten the system Schrader core to the manufacturer's recommended torque value of 3-5 in-lb with its integrated torque mechanism. The kits also include all the tools necessary to replace Schrader cores without losing system pressure even if the core or mating core threads are damaged. Kits are available for 1/4" (69111) and 5/16" (69112) systems.

69112

| UPC # | Description  |
|-------|--|
| 18991 | RealTorque <sup>™</sup> 1/4" Vacuum/Charge Valve with Side Port              |
| 18992 | RealTorque <sup>™</sup> 5/16" Vacuum/Charge Valve with Side Port             |
| 18994 | RealTorque™ 1/4" Male x 5/16" Female Vacuum/Charge Valve with 1/4" Side Port |
| 69111 | RealTorque™ 1/4" SuperHeat Kit with Torque CRT                               |
| 69112 | RealTorque™ 5/16" SuperHeat Kit with Torque CRT                              |
| UPC # | Replacement Parts  |
| 18978 | 1/4" Schrader Rethreading Accessory  |
| 18979 | 1/4" Broken Schrader Remover Accessory                                       |
| 18980 | 1/4" Schrader Accessory Set – 2 Piece  |
| 18988 | 5/16" Schrader Rethreading Accessory   |
| 18989 | 5/16" Broken Schrader Remover Accessory                                      |
| 18998 | RealTorque™ 1/4" Torque CRT Accessory  |
| 18999 | RealTorque™ 5/16" Torque CRT Accessory                                       |
| 69106 | Digital Thermometer & 1/4" Nut   |
| 69113 | Digital Thermometer & 5/16" Nut  |

### 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)              |

Seal kit includes core, cap, 4 "O" rings, gasket 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,<br>4 "O" rings, gaskets |
| 19173 | 5/16" Quick coupler x 1/4" MFL Schr                  |
| 19305 | Schrader cores (10 pak)                              |
| 18986 | 1/4" Male x 5/16" female vacuum/ charge valve        |
| 18973 | Gasket for 18975 (5 pak)                             |

### **COMPACT BALL VALVES** 1/4" and 5/16"

19305



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

| Description   |
|---|
| 1/4" Compact ball valve – straight                                    |
| 1/4" Compact ball valve – 45°   |
| 1/4" Compact ball valves – 45° (3 pak)                                |
| 5/16" Compact ball valve for 5/16" Female flare x 1/4" Male flare-45° |
| 5/16" Compact ball valve for 1/4" Female flare x 5/16" Male flare     |
| 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

- Handle position shows when the valve is opened or securely closed

|  | MADE IN<br>THE USA |
|--|--------------------|
|--|--------------------|

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

\* UL Listed

| valves connect hoses and provide full- |
|--|
| flow capacity.                         |
| No angles to cause restrictions and    |
| pressure drops                         |

**NSTRUMENTS** 

### **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 LISA

| • | wade | ın | tne | USF | ۱ = |  |
|---|------|----|-----|-----|-----|--|
|   |      |    | _   |     |     |  |

| UPC#  | Description          |
|-------|----------------------|
| 18993 | Core depressor valve |
| 18995 | "O" ring set         |

### **VACUUM/CHARGE VALVE**



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

|        | MADEIN  |
|--------|---------|
|        | MADE IN |
| 000008 | THE USA |

| UPC#              | Description                        |
|-------------------|------------------------------------|
| 18990             | Vacuum/Charge valve with side port |
| 19000             | Vacuum/Charge valve                |
| Replacement parts |                                    |
| 18995             | "O" ring set                       |
|                   |                                    |
| 18996             | Shut-off stem                      |

### **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. MADE IN THE USA

| 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        |
| 19305 | Schrader valve (10 pk) |

### 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.



MADE IN THE USA

| 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 MADE IN THE USA 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



MADE IN THE USA

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

### ADD-A-HOSE COUPLER



Add-a-hose couplers easily connect hoses to the length desired. MADE IN THE USA

| PC# | Description     |
|-----|-----------------|
| 150 | 5/8" Male flare |
| 152 | 3/4" Male flare |

### **QUICK COUPLERS** Expanded line



**UPC#** Description

Gauge quick couplers with CH14 adjustable valve opener

5/16" Quick couplers with

CH14 adjustable valve opener

3/16" Female QC 90° x 1/4" Male flare

1/4" Female QC 90° x 1/4" Male flare

1/4" Female QC 90° x 3/8" Male flare

3/8" Female QC 90° x 3/8" Male flare

3/8" Female QC 90° x 1/2" Male flare

1/4" Female QC x 1/8" NPT Fe.

5/16" QC Str. x 1/4" Male flare

5/16" QC 90° x 1/4" Male flare

1/4" QC Str. x 5/16" Male flare

19222\* 1/4" QC 90° x 5/16" Male flare

ACME 1/2" couplers – auto straight

1/4" Female QC x 1/2" Acme Male

1/4" Female hex x 1/2" Acme Male for permanent applications

1/2" Acme Male x 1/2" Acme Female 1/2" Acme Female x 1/4" Male flare

1/2" Acme Female x 1/8" NPT Male
1/2" Acme Female x 14 mm Male
Quick Coupler ACME X 1/4 MPT

1/4" Female QC Str. x 1/4" NPT Fe.

1/4" Female QC 90° x 1/8" NPT Fe.

1/4" Female QC 90° x 1/4" NPT Fe.

90° Quick couplers

19220

19202

19203

19214

19110

19118

19218\*

19121

19221\*

19122\* 19222\*

19161

19162

19166

19168

- 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                             |
|----------|---|
| Straight | t quick couplers                        |
| 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        |
| 19020    | Gaskets (10 pk)                         |

## **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                        |  |  |
|---------|------------------------------------|--|--|
| Straigh | t quick couplers                   |  |  |
| 19171   | 1/4" Female QC x 1/4" Male flare   |  |  |
| 19172   | 3/8" Female QC x 1/4" Male flare   |  |  |
| 90° Ber | nd quick couplers                  |  |  |
| 19191   | 1/4" Female QC x 1/4" Male flare   |  |  |
| 19192   | 3/8" Female QC x 1/4" Male flare   |  |  |
| 45° R-4 | IOA couplers                       |  |  |
| 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

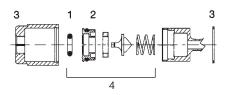


SealRight™ fittings automatically and immediately trap refrigerant in the hose when disconnected, helping meet nonventing regulations and preventing finger burns. One-piece attaches quickly, saving up to 50 percent in time compared to 2-piece quick couplers.

- · 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                       |
|---------|-----------------------------------|
| SealRig | ht repair assembly components     |
| 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                        |

### **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 | High-side manifold with gauge   |
| 40318 | Low-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 | Low-side 1/4" valve for R-32 and R-410A   |
| 40338 | Low-side manifold R600A   |
| 40339 | High-side manifold R600A/600/290  |
| 40340 | Low-side manifold R600A/600/290   |

### **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/<br>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"<br>Gasket   | 10            | 1/8" Coupler                              |
| 19022   |                  | 5             | 60667<br>Recovery pliers                  |
| 19010   | CH20 and<br>CH14 | 6<br>3        | 1/4" Hose<br>opener                       |
| UPC#    | "O" ring         | Quantity      | Application                               |
| 19026*  | -                | 10            | 3/8" Quad ring                            |
| 19034   | -                | 10            | "O" ring for<br>14 mm Male                |
| 19037   | -                | 10            | 1/4" SealRight<br>"O" ring                |
| UPC#    | Descrip          | tion          |   |
| 59651   | 1/4" Copp        | er gaskets (1 | 0 pak)                                    |
| 59652   | 3/8" Copp        | er gaskets (1 | 0 pak)                                    |
| 59653   | 1/2" Copp        | er gaskets (1 | 0 pak)                                    |
| 59654   | 5/8" Copp        | er gaskets (1 | 0 pak)                                    |
| 59655   | 3/4" Copp        | er gaskets (1 | 0 pak)                                    |

<sup>\*</sup> Gaskets for some metal hose sizes. Others use 19020 or 19011 gaskets.

### **PARTS KITS AND EMPTY BOXES**



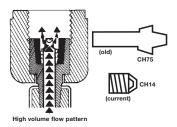
The 19003 complete kit includes the following gaskets, valve openers and SealRight parts in a 12 compartment case.

- 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
- Made in the USA



| 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"<br>12 Compartments empty |
| 60135 | 11" x 6-3/4" x 3/4"<br>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<sup>™</sup> for 1/4" and 5/16" hoses is the same.

| UPC#  | Description                                  |
|-------|--|
| 19302 | Adjust-a-Valve <sup>™</sup> 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)         |

<sup>\*\*</sup>Flat washer.

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

Premium with control valve



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
- Made in the USA



| 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

| MADE IN |
|---------|

| UPC#  | Description                  |
|-------|------------------------------|
| 41441 | 1234yf hi-side coupler, 12mm |
| 41442 | 1234yf lo-side coupler, 12mm |

### **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<br>R-134a lo-side Male for A/C system |

\* Not pictured

7.1

## **WIRELESS AND ELECTRONIC INSTRUMENTS**















# **Wireless and Electronic Instruments**

Convenient wirelsss measurements for complete HVAC/R diagnostics.





· One-year warranty





YJACK™ PROBES & P51-TITAN MANIFOLD - SEE CHARGING SYSTEM & DIAGNOSTIC TOOLS

# WIRELESS REFRIGERANT CHARGING SCALE



# Convenient Wireless Measurements!

With a 220 lb. capacity, large platform and wireless Bluetooth® communication, this accurate scale makes refrigerant charge measurements fast and easy. Just connect with any smart device and you are ready to go...with .05% accuracy and 0.2 oz. resolution, service technicians can count on precision measurements every time. Save the charging measurements to your smart device, and you have a permanent record for that installation or service call.

# **Features and Benefits**

Low Energy Bluetooth® communication

· Lightweight, durable design

· Stability control for accurate

220 lb. (100kg) capacity

• 0.05% accuracy & 0.2 oz. resolution

Overload protection

Oversized platform (12 in./

Integrated handle

· Carrying case included

· 9V battery included



The Wireless Refrigerant Scale 68864 is controlled and operated with any Smart Device via Bluetooth® and the YJACK VIEW™ app.

# READINGS SCREEN OVERVIEW

# YJACK VIEW™ READINGS SCREEN OVERVIEW

- · Readings screen will display the scale weight and will also display the weight change and elapsed time since the last set
- Both readings can be set/reset by pressing on the corresponding box
- · Weights are displayed as lb./oz. or kg



# **Specifications**

Weight Capacity: 220 lb. / 100 kg

Overload Protection:

Pounds and ounces (lb & oz) Measurement Units:

or kilograms (kg) Reading Accuracy: 0.05% of reading

Reading Resolution:

32°F - 122°F (0°C - 50°C) Operating Temperature:

Scale Platform Diameter: 11.8 in (300mm) Scale Weight: 6.4 lb. (2.9 kg) Power: 9V battery (included)

Battery Life: 40+ hours App OS Compatibility: iOS or Android

Bluetooth® Technology: Bluetooth® Low Energy (BLE)

## **Description**

Wireless refrigerant scale, 220 lb.

# REFRIGERANT CHARGING SCALE



# Accurate, compact and economical!

With a 220 lb. capacity and solid accuracy, this compact YELLOW JACKET® charging scale can handle the job, no matter what the size. Service technicians can count on precise information while on the job with 0.05% accuracy and 0.17 oz. resolution.

## **Features and Benefits**

- Compact and lightweight
- Rugged, low profile design
- Maximum weight: 220 lb. (100 kg)
- · Large, backlit LCD
- Control module with six foot cord stores under the scale when not in use
- Stability indicator shows when the scale is ready to take a reading
- Over-range indicator
- Auto power off
- Long battery life 40 hours continuous battery life
- Battery life indicator
- · Carrying case with storage pouch and shoulder strap included

# **Specifications**

Weight Capacity: 220 lb. / 100 kg

Resolution: 0.17 oz. / 0.011 lb. / 5g Accuracy: +0.05% of reading + 10g

Display: 05" (1.27 cm) LCD

(7-segment)

Readout Options: Lbs. / oz. / kg

10.6" x 10.6" x 2.9" Overall Size:

(27.1 cm x 27.1 cm x 7.4 cm)

Overall Weight: 8 lbs. (3.6 kg)

Battery Type: 5 x 1.5V AAA alkaline batteries

Battery Life: 40 hours continuous

Warranty: 1 year

14° F to 104° F Operating Temperature:

(-10° C to 40° C

Temperature Fluctuation Range: 41° F / hr. (5° C)

5° F to 122° F Storage Temperature:

(-15° C to 50° C)

Relative Humidity: 50 - 85%

# Control module stores inside the platform when not in use.



| UPC#  | Description                     |
|-------|---------------------------------|
| 68862 | 220 lb, charging scale with bag |

# **DIGITAL ELECTRONIC CHARGING SCALES**

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.





| 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  |

### **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:  $\pm 0.5$  oz./  $\pm 0.03$  lb./  $\pm 0.015$  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:  $\pm$  1.0 oz./  $\pm$  0.06 lb./  $\pm$  0.03 kg or 0.1% of reading,

whichever is greater

Total unit weight: 12 lbs. (5.4 kg)



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                      |
| 69030 | Vacuum sensor cleaning kit                             |
| UPC#  | Replacement Parts                                      |
| 67044 | Vacuum sensor  |
| 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

System Attachment

Capable of measuring 2 temperatures using high accuracy NTC thermistors

67001/67003 – one pressure transducer; 67002 – two pressure transducers

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

0.1 psi, 0.1 bar, 1 kPa,

# **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  |
| <b>UPC#</b> 67010                         | Replacement Parts Clamp  |
|   |  |
| 67010                                     | Clamp  |
| 67010<br>67012                            | Clamp<br>USB Cord  |
| 67010<br>67012<br>67013                   | Clamp<br>USB Cord<br>Blue boot   |
| 67010<br>67012<br>67013<br>67014          | Clamp USB Cord Blue boot Carrying case   |
| 67010<br>67012<br>67013<br>67014<br>93394 | Clamp USB Cord Blue boot Carrying case Tether cap  |

### Specifications:

Pressure Sensing Resolution

Pressure Sensing Accuracy

Working Pressure Proof Pressure

**Burst Pressure** 

Temperature Sensor Range (Instrument)

Temperature Display Resolution Temperature Accuracy (Instrument) Working Temperature Storage Temperature Working Humidity IP Class **Battery Life** Range

Bluetooth Radio Size

Weight Superheat and Subcool

Max. and Min. Pressures

Refrigerant Database

Screenshot Feature

Temperature Sensors

**Pressure Transducers** 

System Attachment

Pressure Zeroing

**Elevation Compensation** 

**Battery** 

0.001 MPa, 0.01 kg/cm<sup>2</sup> 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 0 - 700 psia (48.3 bar) Tolerable pressure without internal damage 1000 psia Tolerable pressure without loss of seal 1500 psia 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) 0.1°F or °C ±0.2°C (±0.36°F) -4°F to 160°F (-20°C to 71°C) -4°F to 160°F (-20°C to 71°C) 0-95% RH (non-condensing) 10+ hours continuous 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. Class 1 Bluetooth 2.1 Radio 6" long x 1.6" wide x 2.3' thick (15.3 x 4 x 5.8 cm) 0.5 lbs (225 grams) Automatically calculated by the ManTooth App Displays and records the max and min pressures 126 NIST refrigerant profiles included; upgradeable Save pressure and tem perature readings from your sessions which can be automatically organized by location and serviced unit Capable of measuring 2 temperatures using high accuracy NTC thermistors 67001/67003 - one 67002 - two Very small internal volume minimizes refrigerant loss during system analysis. Simple single button zeroing at the start of each session

Enter at start of session for effortless psia compensation Rechargeable LiPo battery









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# OMNI™ DIGITAL VACUUM GAUGE



The YELLOW JACKET® OMNI™ Digital Vacuum Gauge is an easy-to-use, compact vacuum gauge that is loaded with features for the price. And it's rugged, too. Made with high impact, glass reinforced housing, it survives moisture and accidental drops or attachment to a high pressure line. The easy-to-clean vacuum sensor handles 450 psi positive pressure and reads several units of vacuum (microns, millibar, Torr and Pascal).

- · Visual signal when target vacuum level is reached
- Electronic paper display for clear visibility even in direct sunlight
- · Rich and intuitive user interface turn it on and it is ready to use with default settings
- 45° bend for fitting (1/4" or 5/16")
- · Automatic power down and time out
- · Power savings multiple time-out selections
- · Low battery indicator and automatic power-down when inactive
- · Adapter fittings available
- Made in the USA



# Compact, easy-to-use, and more unique features than any other unit on the market.

## **Specifications**

Vacuum Reading Resolution:

1 micron (from 1,000 to 5 microns) 10 microns (from 10,000 to 1,000 microns)

100 microns (from 99,999 to 10,000 microns)

Display Vacuum Measurement Accuracy:

+/- 20% of reading (from 10,000 to 25 microns)

Vacuum Reading Range:

5 to 99,999 Microns

(133.3 mBar, 100 Torr, 13,333 Pa);

Progress bar-graph from Atmosphere (ATM)

to 99,999 Microns

Proof Pressure: 450 psi

Working Temperature: 32°F to 104°F (0°C to 40°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Working Humidity: 0-95% RH (non-condensing)

Class:

Battery Life: 150+ hours continuous Battery: (2) AAA batteries (included) Size: 6" long x 1.6" wide x 1.6" thick

including fitting (15.3 x 4 x 4 cm)

Weight: 0.39 lb (175 grams)

Warranty One year

| UPC   | Desc              | ription                                 |
|-------|-------------------|---|
| 69020 | OMNI <sup>*</sup> | Digital Vacuum Gauge with 1/4" Coupler  |
| 6902  | OMNI <sup>†</sup> | Digital Vacuum Gauge with 5/16" Coupler |



# **VACUUM SENSOR CLEANING KIT**

Follow cleaning procedure for these YELLOW JACKET® vacuum gauges: 69020 series OMNI™, 67044 series used with P51 digital manifold and Mantooth gauges or 69086 digital vacuum gauge.

Made in the USA



| UPC#  | Description                |
|-------|----------------------------|
| 69030 | Vacuum Sensor Cleaning Kit |

# **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. A 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                                     |
| 69030 | Vacuum Sensor Cleaning Kit                                   |

# 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.

|  | Ci |  |  |  |  |
|--|----|--|--|--|--|
|  |    |  |  |  |  |
|  |    |  |  |  |  |

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

Replacement cord

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 from 10 to 10,000 microns

| 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    |



### 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   |

# **POCKET THERMOMETERS**

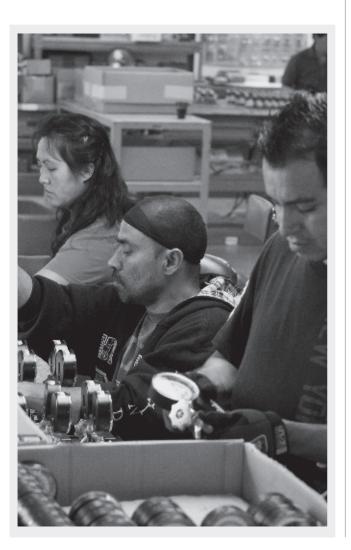
1" and 1-3/8" dial thermometers are adjustable with a 5" stainless steel stem. Colored sheath with pocket clip.

- 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<br>(-40° to 70°C) (12 pak) |
| 69256 | 1-3/8" Dial 0° to 220°F<br>(-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

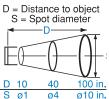
| UPC#  | Description                                       |
|-------|---|
| 69107 | Digital thermometer -58° to 302°F (-50° to 150°C) |
| 69250 | 69107 display (12 pak)                            |
| 69110 | Battery   |

# 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





| 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

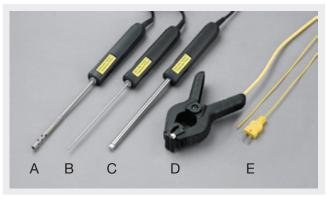
(-29 to 54°C)

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  $\pm$  (0.3% of reading

+ 2°F); -50° to 982°C ± (0.3% of reading + 1°C)



| UPC#  | Description                        | Maximum<br>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.

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

- 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)

# DIGI-ALARM THERMOMETER



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

 $\pm 1.8^{\circ}\text{F}$  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 |

8.1

# **LEAK DETECTORS AND LEAK MONITORS**





3. RECOVERY MACHINES

4. VACUUM PUMP SYSTEMS

5. VACUUM AND CHARGING HOSES

6. HOSE ADAPTERS, VALVES & PARTS

7. WIRELESS AND ELECTRONIC INSTRUMENTS

9. HEATING INSTRUMENTS

**10. SYSTEM TOOLS** 



# AccuProbe™ Leak Detectors

The only tool you will need for fast, easy and certain leak detection.





# ACCUPROBE™ IR LEAK DETECTOR

Use the infrared (IR) sensor for ultimate sensitivity, accuracy and reliability. Identifying the smallest leaks is fast and easy. Detects all CFC, HCFC, HFC and HFO refrigerants, including R-134A, R-404A, R-410A and R-1234YF. The Smart Alarm LED shows the size of the leak on a rising scale. Coupled with two modes for sensitivity gives the AccuProbe™ IR the ability to locate a leak of any size.

- Sensor Type: Infrared
- · Senses All CFC, HCFC, HFC and HFO Refrigerants
- Manual zero capability
- Audible and Visual Leak Indication
- Regulations: CE, EN14624, EN61010, SAE2913
- Rechargeable Li-Ion Battery
- · Sensitivity will not degrade over time
- USB micro charging port (cable included)
- Includes one (1) spare filter
- · Includes carrying case
- Two year over-the-counter warranty
- Made in the USA

## **Specifications**

- Minimum Sensitivity: 0.1 oz/ yr. (3 g/yr.)
- Body Material: ABS
- Body Length: 8.25" (210 mm)
- Probe Length: 17" (430 mm)
- Weight: 0.84 lb. (0.38 kg)
- Calibration: Automatic
- Response Time: Instantaneous
- Battery Life: 8 hours
- Fast Charge Time: 3 hours
- Holds Charge When Not In Use: 9 months (app.)
- Operating Temperature Range: -4°F to 140°F (-20°C to 60°C)

### UPC# **Description**

AccuProbe IR™ Leak Detector

## **Accessories and Parts**

69321 Replacement Filters (5 pack) Replacement Battery Pack

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 J2913 certified, CE marked, EN 14624
- 24-month limited warranty
- Made in the USA



## **Specifications**

Sensitivity:

HFC (R-134a) 0.06 oz. (1.7g)/yr. HCFC (R-22) 0.03 oz. (0.9 g)/yr. HFO (1234yf) 0.15 oz. (4.3 g)/yr.

Heated solid electrolyte sensor: Over 300 hours service life with minimal cleaning and no adjustments

Maintenance required: None Body length: 10.5" (270 mm) Probe length: 17" (430 mm) Weight: 17 oz. (480 g)

UPC# Description

Warm up time: 20 seconds or less

Calibration: Automatic Response time: Instantaneous Power: 4 AA alkaline batteries, 4.5 hours continuous life

Operating temperature range: 24° to 125°F (-4° to 52°C)

Storage temperature range: -4° to 122°F (-20° to 50°C) Humidity: 0 to 95% RH

non-condensing

Approvals: SAE J2913

CE marked, EN 14624

| <b>U.</b> U. | 2000 Puon   |
|--------------|---|
| 69336        | AccuProbe UV  |
| 69337        | AccuProbe UV with global power supply (US, EU, UK, AU, NZ)                |
| 69338        | AccuProbe UV - Japan  |
| Access       | sories 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**

Sensitivity: HFC (R-134a) 0.06 oz. (1.7 g)/yr. HCFC (R-22) 0.03 oz. (0.9 g)/yr. HFO (1234yf) 0.15 oz. (4.3 g)/yr.

Sensor life: Over 300 hours service life with minimal cleaning and no adjustments

Probe length: 17" Weight: 15 oz. Warm up time: 20 seconds or less Power: 4 AA alkaline batteries, 4.5 hours continuous life Approvals: SAE J2913 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                    |

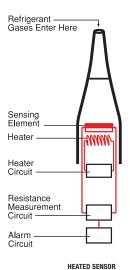
# Tips for Detecting System Leaks with Leak Detector:

- 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.
- 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.
- 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**

### **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.



# ${ m H_2}$ **DETECTOR** Detects 5% ${ m H_2}$ in 95% Nitrogen Tracer Gas



Many countries are now adopting laws that ban the use of refrigerants for system testing. The YELLOW JACKET  $\rm H_2$  was developed for the  $\rm H_2$  (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 the USA



### **Specifications**

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

| 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.

# 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 L | Large system injector              |
| 77950 L | 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. MADE IN THE USA

| 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   |
| -     | 69729<br>69730<br>69731<br>69732<br>69723                         |

# **UNIVERSAL A/C DYE INJECTORS AND HOSE**



US Patent # 6,164,348

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                  |
| 3 | 69706 | Auto R-134a injector hose and service coupler |

# **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.



- 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
- · 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  |

# 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
- Made in the USA



| 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 87.

# **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
- When working on split systems, use solution 3 even if system has 10 lbs. or less of gas
- Made in the USA



| Self-Infusing Injector Tubes |                         |                         |  |
|------------------------------|-------------------------|-------------------------|--|
| Solution<br>Concern          | System with<br>Gas Size | Ester Oil<br>System P/N |  |
| 1 (0.5 oz.)                  | 3 to 4.9 lbs.           | 69621 - 6 Pak           |  |
| 2 (0.5 oz.)                  | 5 to 9.9 lbs.           | 69622 - 6 Pak           |  |
| 3 (0.5 oz.)*                 | 10 to 25 lbs.           | 69623 - 6 Pak           |  |

\* Use on all split systems

- 1 Systems with 3 to 4.9 lbs. gas
  - 2 Systems with 5 to 9.9 lbs. gas
  - 3 Systems with 10 to 25 lbs. gas

# 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 SOLUTIONS**

# For non-refrigerant applications



The oil and fluid dve solution is for finding leaks in oilbased 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
- 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 replacable 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) |





Easy to Use • Reliable • Accurate



6 Parameters Displayed



# **COMBUSTION ANALYZER NEW!**

# 3 IN 1

# Ambient CO Monitor, Manometer and Analyzer All One Instrument

- Two gas sensors for 02 and CO, high CO protection
- C02, combustion efficiency, excess air, ambient CO monitor
- Flue gas CO detector, displaying PPM for CO to alert CO poisoning hazard
- CO over-limit sensing provides sensor longevity and field-replaceable sensors
- Built-in dual pressure manometer and optional manometer tube accessory to monitor system and flue pressures
- 15 pre-programmed fuels
- Internal data storage
- Six simultaneous readings on backlit display for low light conditions
- Compact and lightweight with a magnetic protective holster
- 7" duct probe with adjustable depth stop for easy access
- Inline condensate trap and soot filter for easy cleanup
- YELLOW JACKET® YJ Combustion App
- Automatic generation of QR Code to download analyses to share with customers or for records
- Ideal for high-efficiency condensing HVAC systems
- Long-lasting, rechargeable battery
- Wireless printer option (included in CA502P P/N 68602)
- · Protective hard carrying case
- One-year warranty



| UPC # | Description                             |
|-------|---|
| 68601 | Combustion Analyzer CA502               |
| 68602 | Combustion Analyzer CA502P with Printer |
| 68611 | Combustion Analyzer Printer             |
| 68612 | Combustion Analyzer Filters 5-Pak       |

# **VALVES & PARTS**

7. WIRELESS AND **INSTRUMENTS** 

# **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





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"



| 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



# **HEAT PUMP KIT 5/16"**





# Complete Kit for Fast, Safe Heat Pump Installations and Service.

The YELLOW JACKET® Heat Pump Kit is developed specifically for R410A/R32 Mini-Split Systems with a single 5/16" SAE access point. This kit allows the service technician to quickly and safely install and service heat pumps with minimal refrigerant loss. Featuring a 3 1/8" (80 mm) heavy duty gauge and hose set designed for 800 psi, it can read pressure whether the heat pump is in heating, cooling or transition. The Heat Pump Kit includes a thermometer, core removal tool, OMNI™ digital vacuum gauge and eccentric cone flaring tool. The rugged carrying case keeps all tools organized and protected.

| UPC #             | Description   |
|-------------------|---|
| 61040             | Heat Pump 5/16"                                       |
| Replacement Parts |   |
| 40346             | Heat Pump Single Valve Manifold R-410A/R-32 °F and °C |
| 49142             | Replacement Gauge R-410A/R-32 °F and °C               |
| 29491             | Heavy Duty 12" Hose with 1/4" x 5/16" Ball Valve      |
| 15024             | Heavy Duty 24" Hose with 1/4" x 1/4" 45° Black        |
| 18985             | 5/16" Core Removal Tool                               |
| 69239             | Digi-Alarm Thermometer                                |
| 60295             | Eccentric Cone Flaring Tool                           |
| 69021             | OMNI™ Digital Vacuum Gauge with 5/16" Coupler         |
| 61045             | Carrying Case   |

# **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  |

# **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     |

# **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



# Original Improved Double bellows Single bellows

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                      |
| 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 |

# **SYSTEM TOOLS**





# **Deluxe 45° Flaring Tool**

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



# **DELUXE 45° FLARING TOOL**

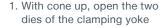


- Designed with the new R-410A system requirements in mind
- Self-centering yoke grips without marring or constricting tube
- Automatic tube height gauge for correct tubing height
- Multi-faceted burnishing cone produces a burnished flare seat for a positive seal
- Easy-to-use with four basic steps
-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







 Select sizes on underside of dies to match tubing



3. Insert tubing until it touches the height gauge

| start of 45° burnished flare |
|------------------------------|

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<br>produced by<br>most flaring tools | Some R-410A<br>mfgr. specs<br>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 WITH FLARE SIZING GAUGE



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 | Eccentric Cone Flaring Tool with Flare Sizing Gauge |

**INSTRUMENTS** 

# **45° FLARING TOOLS** 3/16" to 1-1/8"



- 60210 heavy-duty is designed for tight spaces
   60220 heavy duty.
- 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 60200  |

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**



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               |
|       | 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** 3/4" to 1-1/8" 0.D.



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

| UPC#  | Description  |
|-------|--|
| 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.                        |
| 60448 | 3/4" Swage adapter                                 |
| 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

| 9 | MADE IN |
|---|---------|
|   |         |

| 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 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                             |
|       |   |

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

9. HEATING INSTRUMENTS

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





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"           |
| * Online of the control of the contr |                      |                        |             |                 |

<sup>\*</sup> Optional sizes sold separately.

# **PUNCH-TYPE SWAGING TOOL**



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

60462 Clamping bar only

| 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"           |  |



| 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
- · 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 60495 Replacement expander pin 3/8" to 1-5/8" 60498 Replacement case 60499 Replacement grease tube 60413-24 Replacement expander heads (see above)

# **ALLOY RATCHET HAND TUBE BENDER**







|       |  | Bending                        |  |
|-------|--|--------------------------------|--|
| UPC # | Replacement Parts  | Radius                         |  |
| 63325 | Deluxe Alloy Ratchet Tube Bender Kit (includes 63342 Reverse Bender) |                                |  |
| 63331 | Alloy Ratchet Tube Bender Kit  |                                |  |
| 63342 | Reverse Bender for 63331   |                                |  |
| 63326 | Alloy Bending Mandrel - 1/4"   | 1"                             |  |
| 63327 | Alloy Bending Mandrel - 5/16"  | 1-1/8"                         |  |
| 63332 | Alloy Bending Mandrel - 3/8"   | 1-1/4"                         |  |
| 63333 | Alloy Bending Mandrel - 1/2"   | 1-1/2"                         |  |
| 63334 | Alloy Bending Mandrel - 5/8"   | 1-1/2"                         |  |
| 63335 | Alloy Bending Mandrel - 3/4"   | 1-3/4"                         |  |
| 63336 | Alloy Bending Mandrel - 7/8"   | 2"                             |  |
| 63329 | Crossbar Assembly 3/4" to 7/8"                                       |                                |  |
| 63330 | Crossbar Assembly 1/4" to 5/8"                                       | Crossbar Assembly 1/4" to 5/8" |  |
| 60328 | Fillister Head Screw   |                                |  |
| 60348 | Wing Nut and E-Clip  |                                |  |
| 63340 | Ratchet Bar and Catch Bolt   |                                |  |
| 60343 | Bender Body Housing  |                                |  |
| N/A   | Spiral Pins  |                                |  |
| 60344 | Catch Pin and Spring   |                                |  |
| 60345 | Catch Lever  |                                |  |
| 60346 | Flat Spring  |                                |  |
| 60349 | 349 Tension Spring   |                                |  |
| 60347 | Feed Lever   |                                |  |
| 63339 | Ratchet Body Assembly  |                                |  |
| 63338 | Plastic Carrying Case  |                                |  |
| 60101 | Small Cutter for 1/8" to 1-1/8" OD                                   |                                |  |
| 60161 | Tube Reamer - 1/16" to 1-3/8"  |                                |  |

 $<sup>^{\</sup>star}$  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  $180^{\circ}$  help you duplicate angles.

| 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.               |

# **DIGITAL ADJUSTABLE TORQUE WRENCH**







# **FEATURES & BENEFITS**

- Interchangeable heads
- · Digital torque value readout
- +/- 2% accuracy
- CW and CCW operation
- · Peak hold and track mode selectable
- Buzzer and LED indicator for 9 pre-set target torques
- Four user selectable units of measure (ft. lb., in. lb., N-m, kg-cm)
- 50 data memory for recall and joint torque auditing
- Auto sleep (after about five minutes idle)
- Water contact indicator
- Two AAA batteries included

| P/N                | Description   |  |
|--------------------|---|--|
| 60624              | Deluxe Digital Adjustable Torque Wrench (with 3/8" Drive<br>Ratchet Head P/N 60632) |  |
| 60648              | Digital Adjustable Torque Wrench  |  |
| 60632              | 3/8" Drive Ratchet Head (included in 60624)   |  |
| 60647              | Adjustable Wrench Head .20" to 1.18" (5-30 mm)                                      |  |
| Optional Accessory |   |  |
| 60625              | Adjustable Wrench Head .32" to 1.61" (8-41 mm)                                      |  |

# Captures and Displays Torque Measurement in Real Time Mode to Provide Users with Unprecedented Levels of Control and Accuracy

The YELLOW JACKET® Digital Adjustable Torque Wrench (P/N 60624 and 60648) has 9 common preset torque values, which display on the digital screen as the flare nut is tightened. For added assurance, indicator lights increase as the torque value is approached. With adjustable wrench heads, you can leave your other wrenches at home. The protective carrying case keeps it safe as you carry it from job site to job site.



# **SPECIFICATIONS**

# Digital Adjustable Torque Wrench P/N 60624 & 60648:

Guaranteed Accuracy Range:12.5 - 62.7 ft. lb. (17 - 85 N-m)

150 - 752 in. lb. (173 - 867 kg-cm)

Accuracy: CW: ±2%; CCW: ±3%

Data Memory Size: 50
Pre-Sets: 9

LED Indicators: 6 (1 red, 5 green)

Operation Mode: Peak hold/track
Unit Selection: ft. lb., in. lb., N-m, kg-cm

Gear Teeth: 52

Head Open Size: .2 - 1.18 inches (5 - 30 mm)

Battery Type: Two AAA (non-rechargeable)

Operating Temperature: 14°F ~ 140°F (-10°C ~ 60°C)

Storage Temperature: 4°F ~ 158°F (-20°C ~ 70°C)

Humidity: Up to 90% non-condensing

Drop Test: 1 m Vibration Test: 10 g

| Description                               | Length | Max<br>Torque | Torque<br>Measuring<br>Range |
|---|--------|---------------|------------------------------|
| 3/8" Drive Ratchet Head                   | 10.6"  | 62.7 ft. lb.  | 3.1-62.7 ft. lb.             |
|   | 270 mm | 85 N-m        | 4.2-85 N-m                   |
| Adjustable Wrench .20" to 1.18" (5-30 mm) | 12.8"  | 49.0 ft. lb.  | 2.4-49.0 ft. lb.             |
|   | 325 mm | 66.5 N-m      | 3.3-66.5 N-m                 |
| Adjustable Wrench .32" to 1.61" (8-41 mm) | 13.3"  | 47.0 ft. lb.  | 2.3-47 ft. lb.               |
|   | 338 mm | 63.75 N-m     | 3.2-64 N-m                   |

# 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 BI07.14M & 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 |
|       |                             |

# **SOLENOID VALVE SERVICE MAGNET**

The YELLOW JACKET® Solenoid Valve Service Magnet is the quickest and easiest way to manually operate solenoid valves. It works by magnetically lifting the stem assembly and plunger to actuate the valve during service.

### **Test and Control**

Use this solenoid service magnet to test, troubleshoot, or manually activate and control a direct connected or pilot operat-

ed 2-way solenoid, 3-way reclaim or 4-way reversing valve, typically found in a reverse cycle air conditioner or heat pump.

### **Recovery and Evacuation**

This magnet can also be used to hold a solenoid valve open during recovery and evacuation so the entire system can be accessed.

To optimize recovery, simply remove the solenoid coil from all normally closed valves – refrigerant control valves, hot gas defrost valves, reversing valves, etc. Then apply the YELLOW JACKET® solenoid magnet to each valve to speed up recovery and evacuation.

To help isolate solenoid valve issues, remove the coil from the valve and apply the YELLOW JACKET® solenoid magnet. If the valve actuates, an electrical or solenoid coil issue is indicated. If the valve actuates but there is no flow, this indicates a plugged valve. No actuation indicates the problem is in the valve body itself.





Solenoid Valve

4-Way Reversing Valve

### **Other Uses**

- Use in place of the power head on a hot water oil shutoff valve to eliminate the need to wait for the delay on open
- Use it to temporarily replace a faulty coil to open the solenoid valve
- Use it to turn the power on or replace the solenoid if it is bad

### **Specifications**

Opening: 0.75 in. (18 mm) fits most common

manufactured valves including reversing valves.

Diameter: 1.5 in. Length: 1.6 in.

| UPC#  | Description             |
|-------|-------------------------|
| 61192 | Solenoid Service Magnet |

# **DELUXE MINI-SPLIT TOOL KIT**



YELLOW JACKET® Deluxe Mini-Split Tool Kit 60994 for the most complete set of premium tools designed for the growing variety of mini-split brands and sizes.

- Designed for all mini-split refrigerants (R22/404A/410A)
- . Takes the guesswork out of finding the right tool for the job
- · Meets manufacturers' specifications on mini-split installations and repairs
- One-year warranty



### Kit includes:

- TITAN 4-Valve Manifold: Designed for all mini-split refrigerants and pressures (including heating modes)
- 60" PLUS II™ Hoses: Rated for 4000 psi (276 bar) minimum burst and 800 psi (55 bar) maximum working pressure. (RYB) 1/4" with 1/4" compact ball valve x 1/4" flare fittings
- . Eccentric Cone Flare Tool with Flare Sizing Gauge Creates high quality flares for 3/16" to 3/4" O.D. tubing
- Hex Key Sets Imperial (12 sizes) and Metric (9 sizes)
- Two Vacuum/Charge Valves with Side Port 5/16" x 1/4" x 1/4" and 5/16" x 5/16" x 5/16"
- · Adjustable Digital Torque Wrench

Adjustable spanner head fits flare nut sizes .2" to 1.18" (5 to 30 mm), with a torque measuring range of 3.1 to 62.7 ft. lbs. (4.2 to 85 N-m) Adjustable Torque Wrench Head 10-41 mm

- Tube Cutter and Deburring Tool
- . Mirror with telescopic head and pocket clip

| UDO #    | B 11   |
|----------|--|
| UPC #    | Description  |
| 60994    | Deluxe Mini-Split Tool Kit with Digital Adjustable Torque Wrench |
| Replacen | nent Parts   |
| 18985    | 5/16" x 5/16" x 5/16" Vacuum/Charge Valve with Side Port         |
| 18986    | 5/16" x 1/4" x 1/4" Vacuum/Charge Valve with Side Port           |
| 19173    | 1/4" Male Flare x 5/16" Female Flare Adapter                     |
| 19305    | 10-Pack of Replacement Schrader Cores                            |
| 29985    | 3-pak 60" PLUS II™ RYB Hoses                                     |
| 49963    | TITAN 4-Valve Manifold   |
| 60121    | Tube Cutter, 1/4" to 7/8" Tube Diameter                          |
| 60163    | Deburring Tool   |
| 60295    | Eccentric Cone Flare Tool with Flare Sizing Gauge (60297)        |
| 60625    | Adjustable Torque Wrench Head 10-41 mm                           |
| 60648    | Digital Adjustable Torque Wrench                                 |
| 60669    | Imperial Hex Key Set - 12 sizes                                  |
| 60670    | Metric Hex Key Set - 9 sizes                                     |
| 60990    | Tool Bag 16"   |
| 78098    | 1 1/4" Diameter Glass Mirror                                     |
| 93891    | 60" Heavy Duty Hose, 3/8" x 5/16" Flare Fittings                 |

# MINI-SPLIT TOOL KIT



The YELLOW JACKET® Mini-Split Tool Kit 60993 addresses many of the special requirements found in mini-split installation manuals

- · Designed for all mini-split refrigerants (R22/407C/410A)
- . Takes the guesswork out of finding the right tool for the job
- . Meets manufacturers' specifications on mini-split installations and repairs
- One-year warranty



### Kit includes:

Heat Pump Manifold

Designed to handle all mini-split refrigerants and pressures (including heating modes)

60" PLUS II™ Hoses

Rated for 4000 psi (276 bar) minimum burst and 800 psi (55 bar) maximum working pressure. (RYB) 1/4" with 1/4" flare fittings

- . Eccentric Cone Flare Tool with Flare Sizing Gauge Creates high quality flares for 3/16" to 3/4" O.D. tubing
- · Hex Key Set

Mini-Split Hex Keys: 5/32", 3/16", 5 mm and 6 mm

- · Vacuum/Charge Valve with Side Port 5/16" x 1/4" x 1/4"
- · Adjustable Digital Torque Wrench

Adjustable spanner head fits flare nut sizes .2" to 1.18" (5 to 30 mm), with a torque measuring range of 3.1 to 62.7 ft. lbs. (4.2 to 85 N-m)

- Tube Cutter and Deburring Tool
- Tool Bag 16"

Durable nylon bag with strap - over 25 pockets

| UPC #    | Description   |
|----------|---|
| 60993    | Mini-Split Tool Kit with Digital Adjustable Torque Wrench |
| Replacen | nent Parts  |
| 18986    | 5/16" x 1/4" x 1/4" Vacuum/Charge Valve with Side Port    |
| 21985    | 3-pak 60" PLUS II™ RYB Hoses                              |
| 41019    | Heat Pump Manifold R-22/407C/410A                         |
| 60101    | Tube Cutter, 1/8" to 1-1/8" Tube Diameter                 |
| 60163    | Deburring Tool  |
| 60295    | Eccentric Cone Flare Tool with Flare Sizing Gauge (60297) |
| 60648    | Digital Adjustable Torque Wrench                          |
| 60749    | Hex Key Set   |
| 60990    | Tool Bag 16"  |

# **SERVICE WRENCHES**





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



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.



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



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



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

| 000000 | 3333 | 8888 | 8 |  |
|--------|------|------|---|--|
|        |      |      |   |  |

| Description      | Hex sizes   |
|------------------|---|
| Set - 5 wrenches | 1/4" to 7/8"  |
| Set - 3 wrenches | 1/4" to 9/16"   |
| Ratchet wrench   | 1/4" x 5/16"  |
| Ratchet wrench   | 3/8" x 7/16"  |
| Ratchet wrench   | 1/2" x 9/16"  |
| Ratchet wrench   | 5/8" x 11/16"   |
| Ratchet wrench   | 3/4" x 7/8"   |
|                  | Set - 5 wrenches Set - 3 wrenches Ratchet wrench Ratchet wrench Ratchet wrench Ratchet wrench |

# 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 |

# FLARE SIZING GAUGE NEW!

- · Lightweight and compact
- · Covers 6 common diameters of flares
- · Quick access to tube size and torque specifications

| UPC # Description |      |                    |  |
|-------------------|------|--------------------|--|
| 6                 | 0297 | Flare Sizing Gauge |  |





**INSTRUMENTS** 

60101

# **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





Snare 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 104

# **HEAVY DUTY MINI-CUTTERS**

Extended



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.



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 104



- "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

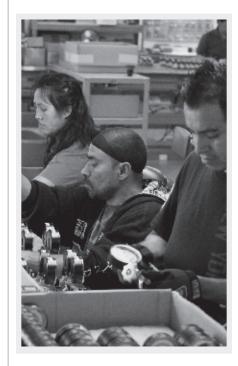
| UPC#  | Description                             |
|-------|---|
| 60139 | Tube cutter for 3/8" to 2-5/8" O.D.     |
| 60146 | Large tube cutter for 2" to 5-1/8" O.D. |
| 60165 | Replacement deburr tool for 60139       |
| 60166 | Replacement deburr tool for 60146       |
| 60136 | Individual/Retainer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

# **CAPILLARY CUTTER**



Cleanly cut capillary tubing without flattening or constricting tubing.

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



# **PIPE CUTTER** For black iron



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

# UPC# Description 60131 6 lb. pipe cutter for

| 00131 | o ib. pipe cutter for 1/6 to 2 |
|-------|--------------------------------|
| 60132 | Pipe cutter wheel for 60131    |

# **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       |

# **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.

| UPC#   | Qty | Pkg* | UPC#   | Qty | Pkg* | Description                         | Cutter  |
|--------|-----|------|--------|-----|------|-------------------------------------|---|
| 60098  | 1   | В    | 60099  | 10  | В    | Cutter wheels for stainless         | 60101, 60102, 60103   |
| 60079  | 1   | В    | 60097  | 5   | В    | Axel with detent                    | 60101, 60102, 60103   |
| 60093  | 1   | В    | _      | _   | _    | Package one each wheel, pin         | 60101, 60102, 60103   |
| 60100  | 1   | В    | 60107  | 10  | В    | Cutter wheels for copper            | 60101, 60102, 60103, 60160  |
| 60106  | 1   | В    | 60117  | 10  | В    | Constrictor wheels                  | 60101, 60102, 60103   |
| 60077  | 1   | В    | 60095  | 5   | В    | Reamer screw and washer             | 60101, 60102, 60103   |
| 60078  | 1   | В    | 60096  | 5   | В    | Reamer                              | 60101, 60102, 60103   |
| 60108  | 1   | В    | 60129  | 5   | В    | Screw for knob                      | 60101, 60102, 60103   |
| 60074  | 1   | В    | 60075  | 5   | В    | Screw for cutter wheel              | 60121   |
| 60072  | 1   | В    | 60073  | 10  | В    | Cutter wheels                       | 60121   |
| *0800  | 1   | В    | 60125* | 5   | В    | Screw for cutter wheel              | 60121, 60123  |
| 60120* | 1   | В    | 60116* | 20  | В    | Cutter wheels                       | 60121, 60142  |
| 60144  | 1   | В    | 60143  | 5   | В    | Cutter blade pin and clip           | 60142   |
| 60124  | 1   | В    | 60115  | 10  | В    | Cutter wheels                       | 60139   |
| 50136  | 1   | _    | 60140  | 5   | _    | Screw/retainer                      | 60139   |
| 60172  | 1   | В    | _      | -   | _    | Screw for handle                    | 60139   |
| 60174  | 1   | В    | _      | -   | -    | Spring for shaft                    | 60139   |
| 60165  | 1   | _    | _      | -   | _    | Replacement deburr tool             | 60139   |
| 60147  | 1   | В    | 60148  | 5   | В    | Cutter wheels                       | 60146   |
| 60141  | 1   | В    | 60149  | 5   | В    | Screws for cutter wheels            | 60146   |
| 60166  | 1   | _    | _      | _   | _    | Replacement deburr tool             | 60146   |
| 60110  | 1   | В    | 60088  | 10  | В    | Cutter wheel                        | 60122 and 60160   |
| 50081  | 1   | В    | 60085  | 10  | В    | Screw                               | 60122 and 60160   |
| 60110  | 1   | В    | 60088  | 10  | В    | Spare cutting wheel                 | 60122 and 60160   |
| 50081  | 1   | В    | 60085  | 10  | В    | Spare screw                         | 60160   |
| 60111  | 1   | В    | 60089  | 10  | В    | Cutter wheel for Imperial           | 75015<br>174-F, 274-F, 312-FB, 374-F<br>TC 1000, TC 1020, TC 2050 |
| 60112  | 1   | В    | 60090  | 10  | В    | Cutter wheel for stainless Imperial | 75046<br>174-F, 274-F, 312-FB, 374-F<br>TC 1000, TC 1020, TC 2050 |
| 60082  | 1   | В    | 60086  | 10  | В    | Screw for Imperial                  | 74762<br>174-F, 274-F, 312-FB, 374-F<br>TC 1000, TC 1020, TC 2050 |
| 60113  | 1   | В    | 60091  | 10  | В    | Cutter wheel for Imperial           | 74761 206-FA  |
| 60083  | 1   | В    | 60087  | 10  | В    | Screw and nut for Imperial          | 77511 206-FA  |

<sup>\*</sup> For old model with Ritchie imprint.

# **SERVICE COUNTER KIT**



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

| Service counter cutter parts kit 60130 |     |                                      |                       |  |  |  |
|--|-----|--------------------------------------|-----------------------|--|--|--|
| UPC#                                   | Qty | Description                          | Cutter                |  |  |  |
| 60130                                  |     | Counter selection - tube cutter main | ntenance kit as below |  |  |  |
| 60179                                  | 1   | Kit box only with label - empty      |                       |  |  |  |
| 60100                                  | 3   | Cutter wheels for copper             |                       |  |  |  |
| 60079                                  | 3   | Axel with detent                     |                       |  |  |  |
| 60097                                  | 5   | Axel with detent                     | 60101                 |  |  |  |
| 60077                                  | 3   | Reamer screw and spacer              | 60102                 |  |  |  |
| 60078                                  | 3   | Reamer                               | 60103                 |  |  |  |
| 60106                                  | 3   | Constrictor wheel                    |                       |  |  |  |
| 60098                                  | 3   | Cutter wheel for stainless           |                       |  |  |  |
| 60108                                  | 3   | Screw for knob                       |                       |  |  |  |
| 60120                                  | 6   | Cutter wheels                        | 60121 (old)*, 60142   |  |  |  |
| 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                 |  |  |  |

<sup>\* 60121 (</sup>old) model with Ritchie imprint. \* 60121 (new) model with YELLOW JACKET imprint.

# RETAINING RING PLIERS – COMBINATION INTERNAL/EXTERNAL

Compact pliers for use on SealRight $^{\text{\tiny{TM}}}$  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

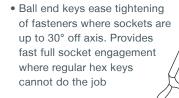
Works on internal and external retaining rings where bearings are used, where a shaft must be held in a bore, under the dashboard and more.

| 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









| UPC # Standard End | UPC # Bail End | Description                     |
|--------------------|----------------|---------------------------------|
| 60670              | 60685          | 12 piece set with case          |
| 60669              | -              | Metric - 12 piece set with case |

# **12" HEX KEY WRENCHES**

- Heat-treated for long life
- Chamfered ends for easy insertion into sockets
- Black finish



| UPC#<br>25 per pkg. | Size  |                                      | UPC#<br>Individual |
|---------------------|-------|--------------------------------------|--------------------|
| 60750               |       | cs. Hex key wro<br>s all sizes belov | ,                  |
| 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" |

# **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" pully 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            |

# 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) |

# **PINCH-OFF TOOLS**

60665 will pinch off and reround 1/4", 5/16", 3/8" and 1/2" copper. 60661 pinches off copper and other lines quickly. Trigger release. 60666 is a Vise Grip® pinch-off tool.



| UPC#  | Description                          |
|-------|--------------------------------------|
| 60665 | Bar-style pinch-off and reround tool |
| 60661 | Plier type pinch-off tool            |
| 60666 | Vise Grip® pinch-off tool            |

# MaxFlow™ 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 | MaxFlow <sup>™</sup> 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                    |

I.D. 1/4

Note: Not for use with ammonia laden oil

# MaxFlow™ DELUXE OIL PUMP

The MaxFlow™ 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 | MaxFlow <sup>™</sup> 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



| 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                |
| 69722 | Replacement hose for 69560, 69561 and 69562                |



# **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 <sup>™</sup> 1 | 8 and 10        | Orange   | 61161          |
| 61152           | FinFix <sup>™</sup> 2 | 9 and 15        | Yellow   | 61162          |
| 61153           | FinFix <sup>™</sup> 3 | 11 and 13       | Blue     | 61163          |
| 61154           | FinFix <sup>™</sup> 4 | 12 and 14       | Green    | 61164          |
| 61155           | FinFix <sup>™</sup> 5 | 16 and 17       | Lime     | 61165          |
| 61156           | FinFix <sup>™</sup> 6 | 18 and 20       | Red      | 61166          |
| 61157           | FinFix <sup>™</sup> 7 | 21/22 and 23/24 | Purple   | 61167          |
| 61158           | Set of 6              | 8 to 20         | Assorted | _              |

# 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             |

# **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 |

# 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" |

# **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 |

# TELESCOPING GLASS MIRRORS



| UPC#                                | Description                    | Extension         |
|-------------------------------------|--------------------------------|-------------------|
| 78094                               | 2-1/4" round                   | 9-1/4" to 14-1/4" |
| 78097                               | 2-1/4" round<br>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<br>magnified (2X) | 7" to 19"         |
| 78103                               | 2" x 3-1/2"<br>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" rectan             | gular glass       |

78107 1" x 2" oval glass

# **NECK LIGHT**



Proper lighting and the freedom to use both hands makes every job run smoother.

- Dual LED Lights
- Up to 200 Lumens
- Hands-free
- 90° Pivoting Heads



|       | •                                  |
|-------|------------------------------------|
| UPC#  | Description                        |
| 10990 | Neck Light                         |
| 10996 | Neck Light 6-Pack, Counter Display |

# PREMIUM WORK GLOVES



The perfect work gloves offer protection, comfort and mobility without the bulkiness. These gloves are designed to move with you and offer the grip needed to finish the job.

- Premium grade pigskin palm to prevent abrasions and refrigerant burns
- Blue stretch back minimizes resistance to movement
- · Neoprene knuckle for stretch and flexibilty
- Velcro closure for secure connection

| UPC#  | Description                        |
|-------|------------------------------------|
| 61201 | YELLOW JACKET® Premium Gloves - L  |
| 61202 | YELLOW JACKET® Premium Gloves - XL |

# **MAGNETIC HOOK**



Every job site presents unique challenges. Finding a place to hang your gauges should not be one of them. This is a simple, low-cost solution to protect your valuable equipment at every job site.

- Holds up to 65 lbs (30 kg)
- Hook swivels up and down and rotates 360°
- Rubber backer prevents surface scratches

| UPC#  | Description   |
|-------|---------------|
| 61193 | Magnetic Hook |
|       |               |

# **SAFETY GLASSES**



Eye protection is critical for HVAC/R service and finding safety glasses that are both comfortable and durable can be a challenge.

- High-strength polycarbonate lenses triple-dipped in anti-scratch coating
- Rubberized temple surface for secure placement and
- Conformable thermoplastic rubber nose pad
- Glasses offer 99.9% UV protection
- ANSI/ISEA Z87.1+2015 & MCEPS GL-PD 10-12 compliant

| UPC#  | Description                           |
|-------|---------------------------------------|
| 11022 | YELLOW JACKET® Safety Glasses - Clear |
| 11023 | YELLOW JACKET® Safety Glasses - Sun   |

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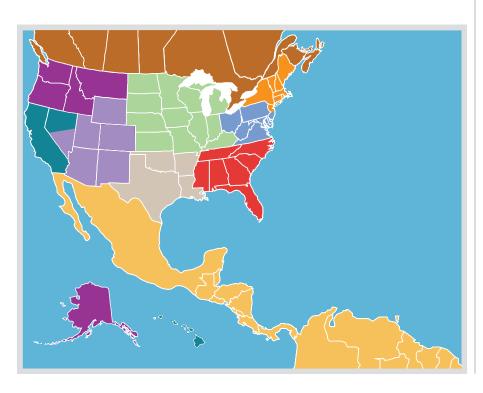
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