



# **AUTOMOTIVE A/C TOOLS AND EQUIPMENT**



**EDITION 75 CATALOG**

# ManTooth® WIRELESS DIGITAL PRESSURE/TEMPERATURE GAUGE

## QUICKLY PERFORM AN AUTOMOTIVE A/C SYSTEM CHECK FROM ANYWHERE - WITHOUT THE NEED FOR AN ENTIRE A/C MACHINE



The YELLOW JACKET® ManTooth® Wireless Digital Pressure/Temperature Gauge Automotive Kit uses Bluetooth® technology and an app to provide service centers and technicians the ability to perform an accurate vehicle A/C system check in less than three minutes (on average). The Automotive ManTooth® Kit utilizes a free downloadable app to calculate and display the system's actual readings in an easy-to-read format on your iPhone, iPad or Android® device.

Adding this to your current courtesy inspection or multi-point inspection process on every vehicle that rolls up to your shop is efficient and easy. It provides an exact A/C system health status for your customer and maximizes the opportunity to up-sell additional A/C service.



Given the current average age of all vehicles on the road is 11.5 years, it is safe to assume that many of the vehicles you are servicing are probably in need of A/C recharge.

Just imagine the additional profits you can drive to your bottom line - no to mention increased customer CSI - through this easy and proactive process!

Made for  
 iPhone iPad



Made for iPhone SE, iPhone 6s, iPhone 6, iPad mini 3, iPad Air, iPad mini 2

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### MANTOOTH® ADDITIONAL FEATURES:

- Two wireless Bluetooth® gauges
- High impact glass reinforced housing
- Integrated rubber case for easy handling
- Rechargeable LiPo battery rated for eight hours of continuous use
- Both R-134a and R-1234YF 5" couplers to minimize refrigerant loss
- Two temperature clamps
- AC charging adapter and USB cord
- Rugged case to protect the equipment when not in use

### MANTOOTH® APP FEATURES:

- Works with iPhone, iPad or Android devices
- ManTooth® App available in Apple app and Google Play stores (over 10,000 downloads to date)
- Built-in camera icon for easy capture of live performance data with ability to add notes
- Ability to log, store and e-mail results
- PH Enthalpy chart for advanced analysis of A/C system performance



The YELLOW JACKET® Automotive ManTooth® Kit includes both R-134a and R-1234YF hoses and couplers for high and low side readings. Two wired temperature clamps, a charging adapter, a USB cord and a rugged case to protect the equipment when not in use are also included.

UPC No.	Description:
67006	ManTooth® (two singles tethered) Automotive Kit: hi- and lo-side hoses, R-134a/R-1234YF couplers, temperature clamps, USB cord and charger, case
67007	ManTooth® (two singles un-tethered) Automotive Kit: hi- and lo-side hoses, R-134a/R-1234YF couplers, temperature clamps, USB cord and charger, case
UPC No.	Replacement Parts
67036	Red hose R-134a
67037	Blue hose R-134a
67038	Red hose R-1234yf
67039	Blue hose R-1234yf
41337	Hi-side R-134a coupler
41338	Lo-side R-134a coupler
41441	Hi-side R-1234yf coupler
41442	Lo-side R-1234yf coupler
93394	Tether cap
19020	Hose gaskets (10 pak)
67012	USB cord
67018	Carrying case
67010	Temperature clamp



Designed and assembled in the U.S.A.

## CONTAMINATED R-134A/R-1234YF REFRIGERANT RECOVERY KIT



Compressor oil level check and oil drain port for easy compressor maintenance

High efficiency fan for maximum air flow and cool running, even in high ambient conditions

- CPR valve regulates refrigerant to the compressor, eliminating the need for the technician to throttle the suction valve
- Pressure equalization valve for reliable starting even under high discharge pressure
- High pressure switch with automatic reset, tank overflow sensor, and external circuit breaker



Specifications	37825
Compressor	1/2 hp, twin cylinder, reciprocating, oil-less
Weight	32 lbs.
Dimensions	12.4"W x 19.3"L x 12.5"H
UPC No.	Description
37825	R-134a/R-1234yf Contaminated recovery kit

## REFRIGERANT GAS ANALYZER

UPC.	Description
37865	Refrigerant gas analyzer (R-134a, R-1234yf, R-22, HC, Air)
68948	Optional internal rechargeable battery kit w/ battery and 110V charger
68949	Optional 110/220V power adapter
68977	In line identifier replacement filter
68978	R-12 replacement hose
68979	R-134a replacement hose

- Dispersive infrared technology quickly determines the weight concentrations of R-12, R-134a, R-1234yf hydrocarbons and air
- Rechargeable battery lasts all day
- Rugged, portable case includes R-12 hose with 1/4" flare and auto couplers for R-134a and R-1234yf



## THE TRAP™ SEALANT FILTER SYSTEM



This rugged filter cartridge connects in-line between a vehicle and any A/C service equipment to protect refrigerant supply, recovery system and oil separators. Hi-tech design captures large volumes of sealant oil sludge and other contaminants while still filtering effectively without plugging. Maintenance is fast and simple with a clean-out drain, and when necessary, easy filter replacement.

UPC No.	Description
38080	The TRAP™ sealant filter system, 1/2" ACME fittings
38081	The TRAP™ replacement filter kit
38087	The TRAP™ sealant filter system, 1/4" flare fittings
38139	The TRAP™ dual (2) sealant filter system, 1/2" ACME fittings
01152	30" R-134a blue hose, 1/2" ACME x 1/2" ACME 45° ball valve end
01153	30" R-134a red hose, 1/2" ACME x 1/2" ACME 45° ball valve end

## RECHARGE OIL PUMP



Oil recharge pump for replacing oil in auto A/C systems or into compressors after oil removal. Easily works on all system pressures to 300 psi, .35 oz. per stroke. Includes bottle with calibrations, hose and low-side R-134a coupler. May be used on R-12 and R-134a systems.

UPC No.	Description
77950	Oil recharge pump, bottle, hose and service couplers

## CALIBRATED A/C SCREW INJECTION



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

UPC No.	Description
69729	Universal screw injector
69730	R-12 Calibrated A/C screw injector
69731	Auto R-134a calibrated A/C screw injector with service coupler
69732	Auto R-134a calibrated A/C screw injector without service coupler

## BULLET®X 7 CFM VACUUM PUMP



Wide mouth oil reservoir port for easier, cleaner filling. The YELLOW JACKET® BULLET®X vacuum pump is a two-stage rotary vane oil-sealed 7 CFM pump that pulls down to 25 microns or better.

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

Specifications	
Free air displacement	3 CFM / 5 CFM / 7 CFM
Number of stages	Two-stage rotary vane
Field test	25 microns
Intake	1/4" x 3/8" x 3/8"
Motor	1/2 hp – 1725 rpm
Internal capacitor thermal overload	Temperature rise 40° C
Voltage (single phase)	115V/60 Hz
Power cord	6' – motor mounted switch
Oil capacity	33.5 / 30.0 / 28 oz.
Net weight	29.1 / 30.0 / 31.6 lbs.

UPC No.	Description
93603	3 CFM 115V/60 Hz single phase
93605	5 CFM 115V/60 Hz single phase
93600	7 CFM 115V/60 Hz single phase

## SUPEREVAC® PUMPS



The SUPEREVAC® vacuum pump is a highly efficient, two-stage rotary vane oil-sealed pump field-rated at 15 microns or better. The lower the micron rating, the better the pump performance.

- Isolation valve for oil changes without losing vacuum in the system
- Built-in vacuum indicator gauge and large oil sight glass for easy monitoring of oil level
- Large brass oil drain for easy access to fast oil changes
- Gas ballast valve keeps oil cleaner, longer during evacuation of wet systems
- Made in the USA

Specifications	Model 93514	Model 93515
CFM	4	6
Field test	15 microns	15 microns
Intake	1/4" and 1/2" ACME	1/4" and 1/2" ACME
Motor	1/2 hp - 1725 rpm	1/2 hp - 1725 rpm
Internal capacitor thermal overload	Temp. rise 40°C	Temp. rise 40°C
Voltage (single phase)	115 Volt - 60 cycle	115 Volt - 60 cycle
Oil capacity	36 oz.	34 oz.
Dimensions (LxWxH)	15.25" x 6.75" x 12"	16.25" x 6.75" x 12"
Net weight (without oil)	28.3 lbs. (12.8 kg)	29.0 lbs. (13.1 kg)

8 and 11 cfm models also available. Visit [yellowjacket.com](http://yellowjacket.com)

## VACUUM PUMP OIL



Specially refined and formulated for extremely low vapor pressure and high pump efficiency at all temperature conditions.

We recommend using the current mineral-based pump oil when working with both R-34a and R1234yf A/C systems. 🇺🇸

UPC No.	Description
93091	Pint of vacuum oil - 24/case
93092	Quart of vacuum oil - 12/case
93096	Gallon of vacuum oil - 6/case



# FLUORESCENT SOLUTIONS FOR NON-REFRIGERANT APPLICATIONS



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



- Pin point leaks in milling machines and hydraulic systems such as cherry pickers
- Find seal and gasket leaks in engines, compressors and transmissions

- Locate leaks in gasoline or diesel fuel equipment, offset printing presses, injection-molding machines, locomotive engine oil coolers and oil-cooled chillers
- H<sub>2</sub>O solution glows blue at leak sources in large closed-loop water systems. Use one pint per 1,000 gallons of water.
- Detect leaks in storage tanks and other high volume containers, as well as associated piping, valves, condensers, sprinkler systems, pumps, etc.
- Detect water leakage in any enclosed circulatory system or static system that can be pressurized or agitated

UPC No.	Description	Quantity
69733	1 oz. (30 ml) oil and fluid dye	6/case
69734	1 oz. (30 ml) oil and fluid dye	24/case
69735	8 oz. (240 ml) oil and fluid dye	1/case

# UNIVERSAL A/C DYE SOLUTIONS FOR MINERAL, ALKYL BENZENE OR POLYOL ESTER LUBRICANTS



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



UPC No.	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

# 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.

- 69782 features five UV bulbs for 395-415nm wavelength
- Lifetime LEDs
- Waterproof
- AA Alkaline battery included

UPC No.	Description
69788*	UV LED flashlight and dye kit auto
69789*	UV LED flashlight and dye kit for AC/R
69782	395-415nm wavelength UV LED flashlight
69793	Replacement pouch for LED (for older style light with black casing)
69794	Lithium battery - 2 pak (for older style light with black casing)

\*Not for direct injection into R-410A systems

# UNIVERSAL A/C DYE INJECTORS AND HOSE

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

\*69702 and 69703 not for direct injection into R-410A systems.



UPC No.	Description
69702*	Hose plus 2 injectors for R-12
69703*	Auto R-134a hose, coupling and injectors
69705	Injector hose with SealRight™ for R-12
69706	Auto R-134a injector hose and service coupler

# UNIVERSAL A/C DISPOSABLE INJECTORS



Universal disposable 1 oz. applicator for fast, economical dispensing. Universal dye for all common refrigerants and oils, minimizing

inventory. Four 1/4 oz. applications for auto A/C. Less costly and faster than many other methods. Not for direct injection into R-410A systems.



UPC No.	Description	Quantity
69700	1 oz. (30ml) injector (24 automotive A/C applications/cs.)	6/case
69721	1 oz. (30ml) injector (8 automotive A/C applications/pkg.)	2/pkg.
69727	1 oz. (30ml) injector (4 automotive A/C applications/pkg.)	single

# AccuPROBE™ UV AND AccuPROBE™ II LEAK DETECTORS



Use the electrolyte sensor or UV technology (or both at the same time) to detect HFC, HCFC and CFC refrigerants, including SNAP approved hydrocarbon blends.

The SmartAlarm® LED shows how big or small a leak is on a scale of one to nine. With the electrolyte sensor, UV lights and SmartAlarm® indicator, this is the only tool you need for fast, easy and certain leak detection.

The ultra-sensitive sensor of the YELLOW JACKET® AccuProbe™ UV Handheld Leak Detector allows it to detect even the most difficult to detect R-1234yf, R-134a, R-404A, R-407C and R-410A refrigerants. Our solid electrolyte sensor technology reduces heat and gives the sensor longer life than traditional heated anode or heated diode detectors.

The AccuProbe™ II comes with all of the features of AccuProbe™ without the SmartAlarm® indicator, flashing tip, UV lights and mute.



## FEATURES:

- Improved, 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 quickly from large amounts of refrigerant
- Automatic calibration and reset to environment
- Microcontroller technology
- 24-month limited warranty
- SAE J2791 certified

UPC No.	Description
69336	AccuProbe™ UV leak detector (with case)
69354	AccuProbe™ II leak detector (with pouch)


## DIGITAL ELECTRONIC CHARGING SCALE



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

**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.**

- Schrader valve prevents backflow through solenoid.
- Charging accuracy is equal to scale accuracy +/- 1/4 oz.
- Solenoid valve with 400 psi maximum operating pressure differential (MOPD) allows metering broad range of refrigerants.
- Mesh filter in charging module protects solenoid valve from debris
- Low flow triggers automatic hold to extend solenoid life
- Made in USA 

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

UPC No.	Description
68802	Electronic Charging scale 110 lbs. (50 kg)
68803	Programmable charging scale 110 lbs. (50 kg)


## 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 (bar graph 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.

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

UPC No.	Description
69336	Hand-held vacuum gauge with fabric carry pouch
69354	Replacement sensor for 69086
69101	Replacement sensor and cable for 69086
69091	Replacement fabric pouch for 69086

## CHARGING SCALE



The 220 lb. capacity of the YELLOW JACKET® Digital Charging Scale has a 0.1 oz. resolution and 0.5% accuracy under all conditions. It can be easily re-calibrated in the field with inexpensive reference weights.

Programmable—enter desired charge weight and built-in alarm indicates when threshold has been reached, and the built-in memory remembers all previous settings.


UPC No.	Description
68862	220 lb. Charging scale with bag



## TITAN® 2-VALVE MANIFOLD



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


- 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
- Made in the USA 

UPC NO.	Hose	Manifold Ports	Couplers
<b>R-12/22/134a combination</b>			
49840*	No hose	1/4" flare	None
49841	72" PLUS II™ SealRight™ – RYB	1/4" flare	Premium
49842	120" PLUS II™ SealRight™ – RYB	1/4" flare	Premium
<b>R-134a (R-12/22/134a gauges)</b>			
49846	No hose	1/2" ACME	None
49847	72" PLUS II™ 1/2" ACME x 14mm and and 1/2" ACME SealRight™	1/2" ACME	Premium
49848	120" PLUS II™ 1/2" ACME x 14mm and 1/2" ACME SealRight™	1/2" Acme	Premium
<b>R-12 (R-12/22/134a gauges)</b>			
49843	No hose	1/4" flare	None
49844	72" PLUS II™ SealRight™ – RYB	1/4" flare	None
49845	120" PLUS II™ SealRight™ – RYB	1/4" flare	None
<b>R-1234yf (R-1234yf gauges)</b>			
49849	72" PLUS II™ SAE RYB	1/2 ACME Left Hand	R-1234yf

\*Manifold includes high- and low-side anchors

## SERIES 41 2-VALVE MANIFOLD WITH 1/4" PORTS



Forged body is solid brass for durability. Full porting maximizes capacity. Metal valve handles are full size for easy operation. Hose anchors are forged into back of body at 45°. Flutterless™ technology helps minimize needle pulsation for easier, more accurate readings. Double “O” ring piston for reliability and long service life. 

UPC No.	Gauge	Hose
<b>R-134a manifold</b>		
41339	2-1/2" red and blue	72" R,B Str. x Str. quick coupler and Y Str. x 1/2" ACME 45° SealRight™ and premium couplers

## REPLACEMENT GAUGES 2-1/2" (68 mm) GAUGES



High-visibility dials with colored scales for easy reading. Flutterless™ technology minimizes needle pulsation for 3-2-3 percent accuracy. Steel cases.

## 3-1/8" (80 mm) RED AND BLUE DRY MANIFOLD GAUGES °F – 1% ACCURACY



Housed in a red or blue steel case with front recalibrator screw and brass gauge movement. Flutterless™ technology with brass surge protector minimizes needle pulsation.


UPC. No	Description
<b>R-12, R-22, R-134a</b>	
49013	2-1/2" red pressure °F gauge
49014	2-1/2" blue compound °F gauge
49103	3-1/8" red pressure °F gauge
49104	3-1/8" blue compound °F gauge
<b>R-12, R-134a, R-413A</b>	
49165	3-1/8" red pressure °C gauge
49166	3-1/8" blue compound °C gauge
<b>R-1234yf</b>	
49161	3-1/8" red pressure universal gauge
49162	3-1/8" blue compound universal gauge



## YELLOW JACKET® PLUS II™ 1/4" HOSE WITH SEALRIGHT™ LOW LOSS ANTI-BLOW BACK FITTING



PLUS II™ hoses have proven performance benefits of the original hose, plus double barrier protection for R-12 and R-134a.

- Nylon permeation barrier meets UL requirements
- Moisture barrier provides improved resistance to moisture migration which contaminates expensive refrigerant
- 4000 psi burst and 800 psi working pressure
- UL 1963 recognized component for R-12 and R-134a
- Immediately traps refrigerant in the hose when disconnected, helping meet non-venting regulations and prevent finger burns
- 45° end for easy installation
- Made in the USA 

PLUS II™ Hoses - 45° SealRight™ fitting one end				
Length	Color and UPC No.			
	Yellow	Blue	Red	3 Pak
72"	22072	22272	22672	22986

## YELLOW JACKET® PLUS II™ HOSES WITH COMPACT BALL VALVE END

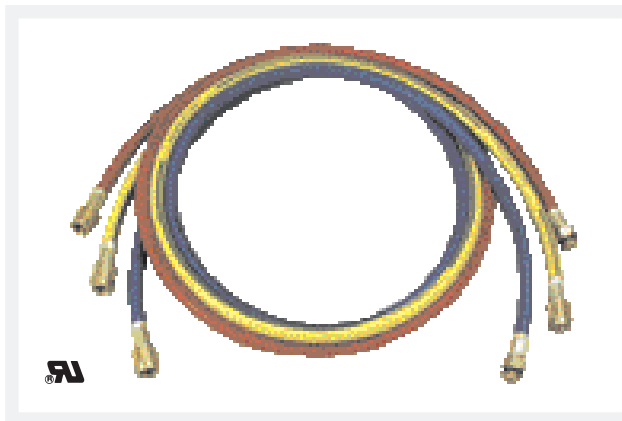


Same features as above but with full flow for faster recovery.

PLUS II™ Hoses - standard 1/4" flare fittings				
Length	Color and UPC No.			
	Yellow	Blue	Red	3 Pak
72"	22072	22272	22672	22986
96"	22096	22296	22696	22988

UL recognized assemblies (File SA 9737).

## AUTOMOTIVE MANIFOLD HOSES FOR R-134a SYSTEMS



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



Color	Yellow	Red	Blue	3 Pak
Length	45° SealRight™ x Straight ACME	1/2" fe. Acme x 14 mm Male	1/2" fe. Acme x 14 mm Male	
60"	27460	27660	27260	27102
72"	27472	27672	27272	27101
96"	27496	27696	27296	27104
120"	27510	27710	27310	27103

Longer lengths available. Please specify.

\*These hoses meet SAE requirements J2196 and are UL 1963 recognized components for R-12 and R-134a.

## AUTOMOTIVE CHARGING HOSES FOR R-1234YF SYSTEMS




- Charging hoses designed specifically for R-1234yf
- SAE J2788 approved
- 3/16" hose

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

## AUTO A/C FITTINGS AND COUPLERS



All couplers in our expanded line are manufactured full size with deep knurling for easy handling.

- Patented CH14 Adjust-a-Valve opener in all 1/4" female ends
- Acme conversion couplers are available to aid in recovery where recovery tank has incompatible threads
- Also used to convert R-134a refrigerant cylinder threads as necessary
- Made in the USA 


UPC No.	Description
<b>R-12</b>	<b>Couplers/Adapters</b>
19171	1/4" fe QC x 1/4" male fl. with Schrader
19191	1/4" fe QC x 90 1/4" male fl. Schrader
19125	1/8" fe QC x 1/4" male fl. (Ford)
19120	3/16" fe QC x 1/4" male fl. (GM)
19101	1/4" fe QC x 1/4" male fl.
19220	3/16" fe QC 90° x 1/4" male fl.
19201	1/4" fe QC 90° x 1/4" male fl.
19109	1/4" SealRight™ x 1/4" male fl.
19208	1/4" SealRight™ 45° x 1/4" male fl.
19209	1/4" SealRight™ 90° x 1/4" male fl.
<b>R-134a</b>	<b>Coupler/Adapters</b>
19161	1/4" fe QC x 1/2" male Acme
19102	1/4" fe QC x 3/8" male fl.
19166	1/2" Acme x 1/2" Acme male fl.
19165	1/2" Acme fe x 1/4" male fl.
19158	1/2" Acme fe x 14 mm male fl.
19169	1/2" Acme SealRight™ x 1/2" Acme male fl.
19163	1/2" Acme SealRight™ x 1/4" male fl.
19157	14 mm male x 1/4" male fl.
19162	1/2" Acme male x 1/4" female fl. hex
19168	1/2" Acme fe x 1/8" male pipe
40265	1/2" Acme male 1/8" NPT half union
19142	1/2" Acme union

## 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
- Made in the USA 

UPC No.	Description
41301	Chrome high-side x 14mm R-134a coupler
41302	Chrome low-side x 14mm R-134a coupler
41327	High-side x 3/8" m.fl., R-134a coupler
41328	Low-side x 3/8" m.fl., R-134a coupler
41337	High-side x 1/4" m.fl., R-134a coupler
41338	Low-side x 1/4" m.fl., R-134a coupler
41300	Replacement "O" rings (2 pak)

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



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

UPC No.	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 R-1234YF A/C COUPLERS

- Couplers interface with 1234yf service ports.
- M12x1.5-6H Female thread
- Quick, easy connect/disconnect
- Integral safety sleeve holds coupler securely to service port




UPC No.	Description
41441	R-1234yf hi-side coupler
41442	R-1234yf lo-side coupler

## 1/4" 4-IN-1 BALL VALVE TOOL FOR VACUUM, CHARGE, CORES AND RECOVERY



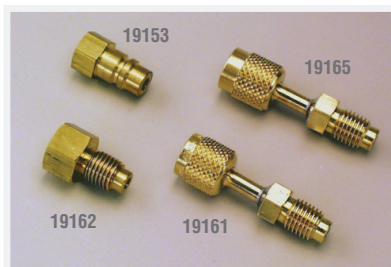
Remove and replace Schrader cores without losing charge.

- 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
- Made in the USA 

UPC No.	Description
18975	Vacuum/charge ball valve with side port
18971	Vacuum/charge ball valve without side port
18980	Accessory set - 2 piece
18978	Schrader rethreading accessory
18979	Broken Schrader remover accessory
18997	Grapppler rod/nut assembly
18973	Gasket for 18975 (5 pak)
18974	Seal Kit includes core, cap, 4 "O" rings, gasket



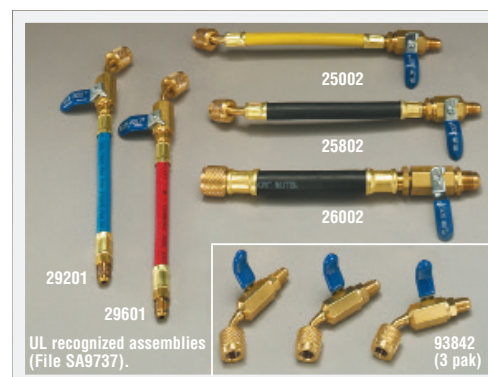
## R-12 AND R-134a ADAPTERS




Conversion adapters from 1/4" and 3/16" threads to 1/2" Acme. Also adapter to convert R-134a refrigerant tank fitting for low-side quick coupler to remove gas.

UPC No.	Description
19161	1/4" fe. QC x 1/2" male Acme
19162	1/4" fe. hex x 1/2" male Acme
19165	1/2" fe. Acme QC x 1/4" m. flare
19153	1/2" fe. Acme hex x 13 mm R-134a low-side male
Retrofit Adapters	
36211	1/4" (7/16" x 20) x 13mm, low side adapter, Individual
36212	1/4" (7/16" x 20) x 16mm, high side adapter, Individual

## 9" FlexFlow™ AND LOW LOSS ADAPTER HOSES



- Easy retrofit of existing PLUS II™ hoses with ball valve capabilities
- Operating temperature -20° to 180°F (-28.8° to 82.2°C)
- Made in the USA 

UPC No.	Description
R-12	FlexFlow™ assemblies
25002	1/4" yellow FlexFlow™ adapter
25202	1/4" blue FlexFlow™ adapter
25602	1/4" red FlexFlow™ adapter
25980	3 pak: 25002, 25202, 25602
26202	3/8" yellow FlexFlow™ adapter
R-134a	FlexFlow™ assemblies
27002	1/2" Acme yellow FlexFlow™ adapter
Replacement parts	
19109	(R-12) 1/4" SealRight x 1/4" male fl.
19011	3/8" Replacement gasket (10 pak)
19020	1/4" Replacement gasket (10 pak)
19302	"Adjust-a-Valve" opener (10 pak)

 Underwriters Laboratories Inc. Registered Component Mark – applies to all 1/4" Plus II™ and FlexFlow™ hoses.



## HYDRAULIC TUBE EXPANDER KIT



- Saves time and money
- Eliminates fittings
- Easy one-hand operation
- Hydraulic power
- Lightweight and portable

UPC No.	Description
60493	Hydraulic expander kit: heads for 3/8", 1/2", 5/8", 3/4", 7/8", 1-1/8", 1-3/8", 1-5/8" tubing O.D.; small cutter, tube reamer, carrying case and instructions
60494	Hydraulic expander pump with reamer in case
60495	Replacement expander pin 3/8" to 1-5/8"
60499	Replacement grease tube
60414-24	Replacement expander heads

## LIGHTWEIGHT SWAGE/FLARE KIT



- Lightweight, compact and portable.
- Quick-connect feature on yoke saves time during pin/cone changing.
- Built-in slide gauge stops tubing at the proper flare height without the guess-work.

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

- Six quick-change positions for flaring soft copper and aluminum tube
- The chrome finish of the swaging pins allows for an easy swaging operation
- One yoke for both flaring and swaging
- Blow-molded carrying case included

UPC No.	Description
60430	6 positions for 1/4", 5/16", 3/8", 1/2", 5/8" and 3/4" O.D. tube

## RATCHET HAND TUBE BENDER



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

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

UPC #	Bending Radius	Description
60331	-	Complete kit
60325	-	Deluxe kit - includes reverse bending mandrel
60326	1"	1/4" O.D. bending mandrel
60327	7/8"	5/16" O.D. bending mandrel
60332	1-3/16"	3/8" O.D. bending mandrel
60333	1-3/8"	1/2" O.D. bending mandrel
60334	1-15/16"	5/8" O.D. bending mandrel
60335	2-13/16"	3/4" O.D. bending mandrel
60336	3-3/8"	7/8" O.D. bending mandrel
60329	-	Crossbar assembly complete - 3/4" to 7/8"
60330	-	Crossbar assembly complete - 1/4" to 5/8"
60338	-	Plastic carrying case
60339	-	Ratchet body
60342	-	Reverse bending mandrel (sold separately)



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### IMPORTANT NOTICE TO PURCHASER:

The products in this catalog are for use by trained service professionals only.

Many factors beyond the control of Ritchie Engineering Company, Inc. can affect the use and performance of the products in this catalog.

It is essential that the user evaluate any product in this catalog to determine the suitability of that product for a specific application. Using any product in a way that is not accepted as common practice can result in injury.

All products are for use as described only.