



Mastercool[®] Inc.
"World Class Quality"

HVAC/R

AIR CONDITIONING, REFRIGERATION
SERVICE TOOLS & EQUIPMENT

1.800.561.8187

www.**itm**.com

information@itm.com

For over 38 years Mastercool has been supplying professional quality air conditioning service tools and equipment. As one of the fastest growing companies in this market, our primary goal is to drive new product innovation and technologies to make the every day work of the HVAC/R technician easier!

With our never-ending focus on innovation and new technology, Mastercool has been awarded many patents worldwide. Our products are currently being distributed in over 76 countries and growing everyday!

MASTERCool LOCATIONS:

**Corporate Office,
Manufacturing and USA Warehouse**
1 Aspen Drive, Randolph, NJ 07869
USA

European Sales Office and Warehouse
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Laagstraat 19
9140 Temse, Belgium

Brazil Sales Office and Warehouse
Rua Inácio Luis da Costa, 908
CEP 05112-010 Parque São Domingos
São Paulo – SP - Brasil

Australian Sales Office
82a Chinchin St
Islington NSW
2296
Australia

Corporate Office
Manufacturing and USA Warehouse



European Sales Office and Warehouse



Brazil Sales Office and Warehouse








Australian Sales Office





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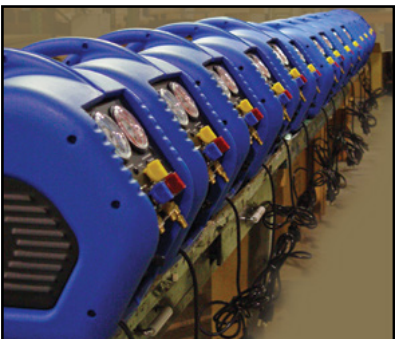
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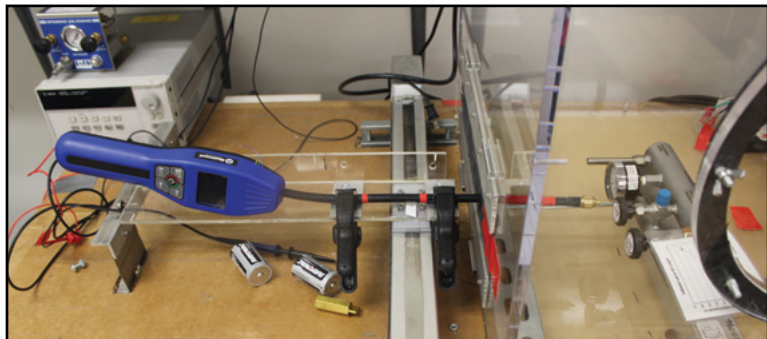
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**MASTERCool PRODUCTS ARE
MADE/ASSEMBLED IN THE USA**



Mastercool manufactures all of its products with the highest quality components and management systems. All products are checked and tested directly at Mastercool headquarters in Randolph, New Jersey, USA.

Our products comply in every respect with the requirements set forth by SAE and EPA Standards as well as ARI Standard 740-98, EU Directives and PROP 65 guidelines.



▲ All of our products comply with current PROP 65 guidelines

CHARGING & RECOVERY EQUIPMENT



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THE TWIN TURBO SERIES IS THE MOST COMPLETE SOLUTION TO YOUR RECOVERY NEEDS!



69300



69370

Mastercool's addition to the recovery machine lineup takes the reliability of the 69000 series machines and enhances those features to allow for maximum recovery capacity while at the same time decreasing size and weight. The design of the double piston compressor and cooling by the largest fan and condenser in the market makes the 69300 series the most complete solution to your recovery needs!

FEATURES & BENEFITS:

- Revolutionary double piston oil-less compressor
- Safety high pressure switch
- Simple internal structure for field service
- Largest volume recovery rate in market
- Approved for all air conditioning refrigerants including A2L mildly flammable refrigerants (i.e. R410A, R32, R1234yf)
- Injection molded high density polyethylene case for maximum durability
- Front cover has bumper guards built in to reduce damage to the control knobs

SPECIFICATIONS:

- 1/2 hp oil less compressor
- Recovery Rate:

R134a
• Direct vapor up to .537 lb/min
• Direct liquid up to 4.72 lb/min
• Push pull up to 11.68 lb/min
R22
• Direct vapor up to .63 lb/min
• Direct liquid up to 7.56 lb/min
• Push pull up to 18.3 lb/min
R410A
• Direct vapor up to .70 lb/min
• Direct liquid up to 7.7 lb/min
• Push pull up to 20.2 lb/min



- Operating Temperature: 32 to 122°F / 0 to 50°C
- Weight: 28.3 lbs / 12.8 kg
- Dimensions: 18" (l) x 10" (w) x 14" (h) (457 mm (l) x 254 mm (w) x 356 mm (h))
- Case Material is HDPE (High Density Polyethylene)
- Compatible refrigerants: All CFC, HCFC, and HFC's

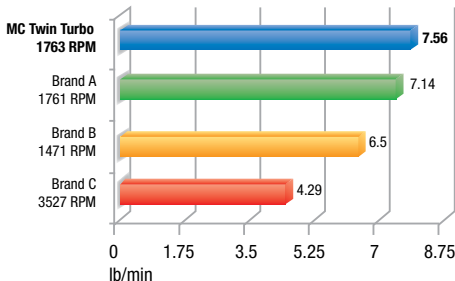
69300 115 V - 60 Hz

69370 115 V - 60 Hz
This unit offers all the same functions and features as the 69300. In addition it has a 6' 3 pole female float switch cable

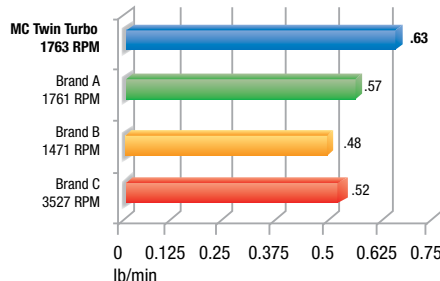


3 pole female float switch cable

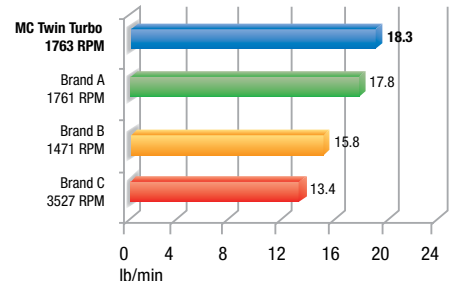
Liquid Recovery (In) lb/min
• Temperature: 79 to 82°F / Refrigerant: R22



Vapor Recovery (In) lb/min
• Temperature: 79 to 82°F / Refrigerant: R22



Push Pull lb/min
• Temperature: 79 to 82°F / Refrigerant: R22



Spark Free COMBUSTIBLE GAS RECOVERY MACHINE COMPATIBLE WITH COMBUSTIBLE GASES

This unit offers all the same functions and features as the 69300.

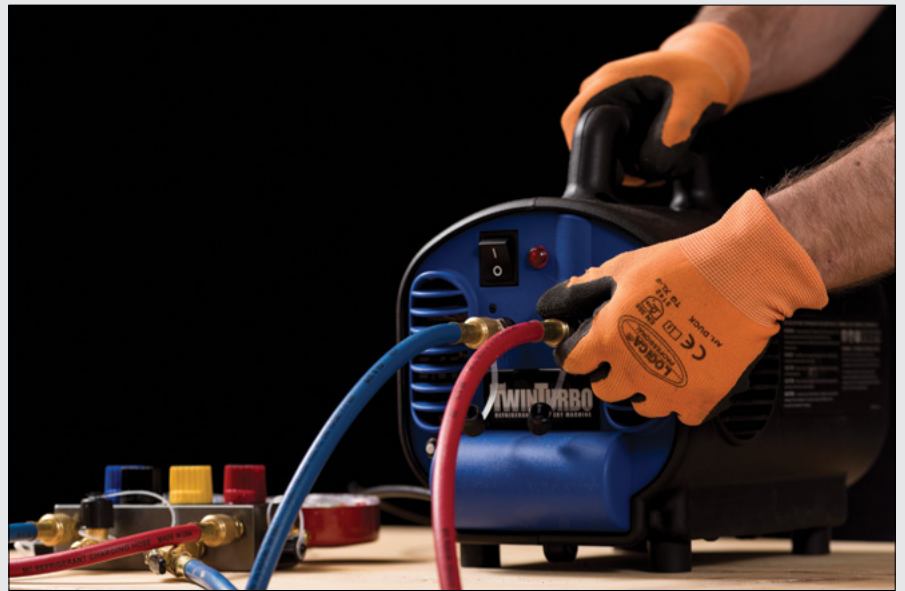
In addition:

- Approved for all air conditioning refrigerants including A2L and A3 flammable refrigerants (i.e. R600a, R290)
- Compatible with all CFC, HCFC and HFC's
- Electric wiring and switches are sealed
- Built with spark free components

69395

115 V - 60 Hz

Spark Free Combustible Gas Recovery Machine

mini
TWINTURBO
REFRIGERANT RECOVERY MACHINE COMPATIBLE WITH COMBUSTIBLE GASES

Mastercool's "Mini Twin" all in one recovery machine is equipped with the same high quality twin piston compressor as the Twin Turbo series and has been designed to work in all applications. Whether you find yourself up a ladder, in a crawl space or just not looking forward to lugging around a heavy piece of equipment this is the right machine for you. Best of all, this machine has been constructed with the safest spark free component allowing for use with all combustible gases.

SPECIFICATIONS:

- 1/2 HP motor
- Operating Temperature: 0 to 50°C (32 to 122°F)
- Approved for all air conditioning refrigerants including A2L and A3 flammable refrigerants (i.e. R600a, R290)
- Compatible with all CFC, HCFC, HFC's, and Combustible gases
- Weight: 11 kg (24 lbs)
- Dimensions: 300 mm (l) x 200 mm (w) x 270 mm (h) (11.8" (l) x 7.9" (w) x 10.6" (h))

69400

115 V - 60 Hz



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REFRIGERANT RECOVERY SYSTEM



69000



69115

These recovery systems are compact, lightweight and work with all refrigerants. They're ideal for commercial, residential or industrial appliance applications.

Our recovery systems offer a state-of-the-art 1/2 HP oil-less compressor with a built-in high volume cooling fan. This innovative design delivers maximum cooling efficiency which keeps the compressor working at high capacities in even the hottest climates. The compressor is also protected by an automatic low pressure cut-off switch that shuts off the unit once the recovery is complete. This AUTO SHUT-OFF feature eliminates the risk of compressor failure and reduces the user's need to monitor the entire recovery system.

All of our recovery systems offer our color-coded gauges with pressure readings in PSI, BAR and MPa. Our stainless steel ball valve designed manifold, controls the flow smoothly and quickly with only a 1/4 turn. With all of this protected by a reinforced hard plastic case, Mastercool's recovery systems will meet all your refrigerant recovery needs.

FEATURES:

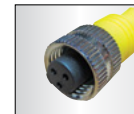
- High performance oil-less compressor
- High volume cooling fan design
- Automatic low pressure Cut-Off Switch
- Liquid compatible head-valve system
- Safety high pressure Cut-Off Switch
- Fully reinforced hard plastic casing

SPECIFICATIONS:

- 1/2 HP oil-less compressor
- Recovery Rate
 - direct vapor up to .44 lb/min (12 kg/h)
 - direct liquid up to 2.6 lb/min (71 kg/h)
 - push-pull up to 11.9 lb (326 kg/h)
- Operating Temp. Range: 32 to 122°F (0 to 50°C)
- Weight: 38 lbs (16 kg)
- Dimensions: 17" (l) x 10" (w) x 12" (h) (432 mm (l) x 254 mm (w) x 305 mm (h))
- Refrigerants: CFC's, HCFC's, HFC's

69000 115 V - 60 Hz

69115 115 V - 60 Hz
This unit offers all the same functions and features as the 69000. In addition it has a 6' 3 pole female float switch cable



3 pole female float switch cable

69500 RECOVERYMATE



Turn any recovery machine into a portable recycler by adding the RECOVERYMATE!

SPECIFICATIONS:

- Lightweight and easy to carry
- 4-way ball valve manifold with readings in psi, bar and Mpa controls the flow smoothly and quickly with only a 1/4 turn
- Large capacity oil separator
- High performance dryer eliminates moisture from recovered refrigerant
- Extra large sight glass monitors refrigerant flow and changes color when a dryer change is necessary
- Rugged carrying case can stand on its own or be mounted on a wall or bench
- Includes 60" nylon barrier hoses ((2) blue, (2) red, (1) yellow and (1) black)
- Length: 15" (38 cm)
- Width: 4" (10 cm)
- Height: 17" (43 cm)
- Weight: 12.25 lbs (5.5 kg)



PORTABLE ELECTRONIC CHARGING STATION

A lightweight, durable, steel frame cart that contains all the necessary tools to quickly and conveniently charge the A/C system. No need for different sized charging cylinders with Mastercool's rugged die cast electronic scale. Simply place the refrigerant cylinder on the scale and charge.

FEATURES:

- A rugged, lightweight steel cart with wheels and convenient storage pocket for scale and hoses allows this portable charging station to be taken almost anywhere
- Dimensions: 26" x 17" x 13" (66 cm x 43 cm x 33 cm)
- Extruded aluminum manifold with long lasting valve design
- 240 lb (109 kg) capacity scale with long lasting 9V battery (60 hrs)
- Deep micron, rotary vane vacuum pumps.

ALSO AVAILABLE:

- Refrigerant tank heater blanket #98250
- * R134a automotive service couplers not included



2 STAGE PORTABLE ELECTRONIC CHARGING STATION

- Large 3 1/8" gauges make it easy to read the pressure and temperature scales
- Deep micron, rotary vane vacuum pumps
- Electronic Charging Scale
- Includes set of 72" hoses

Vacuum Pump	5 CFM	7.5 CFM
2 Way Aluminum Manifold Block	91585	91587
4 Way Aluminum Manifold Block	91586	91588



SINGLE STAGE PORTABLE ELECTRONIC CHARGING STATION

- 2 1/2" gauges
- Deep micron, rotary vane vacuum pumps
- Electronic Charging Scale
- Manual Couplers
- Set of Hoses

R134a 2-Way Manifold Gauge Set	
1.8 CFM Single Stage Vacuum Pump	91580-A
3 CFM Single Stage Vacuum Pump	91580-B
6 CFM Single Stage Vacuum Pump	91585-B



WIRELESS REFRIGERANT CHARGING SCALE



98315 with solenoid



When remote is out of range the unit will automatically pause. This pause mechanism allows unit to restart when remote is back in range.

FEATURES:

- Wireless unit prevents unwanted tangles in wires
- Easily store the remote in the body of the platform
- Keypad provides synchronization and zeroing
- Extremely accurate weight sensor
- Magnet on remote allows easy placement on fixtures
- Battery life symbol for platform and remote constantly displayed on LCD
- Wireless signal strength indicator conveniently displays on remote

FUNCTIONS:

- **CHARGE PROGRAMMING:**
Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing ample time to turn off refrigerant supply.
- **PAUSE/CHARGE (98315 model only):**
This feature allows user to stop and continue charging.
- **TANK CAPACITY PROGRAMMING:**
EMPTY/FULL tank feature allows user to know the amount of refrigerant in the tank at any time.
- **REPEAT (98315 model only):**
Allows user to charge previously stored amount.

SPECIFICATIONS:

- Capacity: 243 lbs (110 kg)
- Accuracy: $\pm 0.05\%$ of reading
- Resolution: 0.05 lb / 0.5 oz / 0.01 kg
- 3 hrs auto off function
- Operating temperature: 32°F to 120°F (0°C to 49°C)
- Battery life: approximately 20 hours
- 31 cm platform
- Accepts all US & EU standard cylinders



REMOTE RANGE:
100 FEET (30 M),
LINE OF SIGHT

98310 Wireless Refrigerant Charging Scale

98315 Wireless Refrigerant Charging Scale with Solenoid

98210-A ACCU-CHARGE II ELECTRONIC CHARGING SCALE WITH BLUETOOTH® WIRELESS TECHNOLOGY



98210-A

Mastercool's ACCU-CHARGE II is the most advanced electronic refrigerant scale in the market today. Constructed with a rugged aluminum cast body, the ACCU-CHARGE II now offers programming capabilities.

FUNCTIONS:

- **CHARGE PROGRAMMING:**
Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing user ample time to turn off refrigerant supply.
- **TANK CAPACITY PROGRAMMING:**
Allows user to know the amount of refrigerant that is left in the tank at any time.
- **REPEAT:**
Allows user to charge previously stored amount.

SPECIFICATIONS:

- Capacity: 243 lbs (110 kg)
- Resolution: 0.05 lb / 0.5 oz / 0.01 kg
- Operating temperature: 32 to 120°F (0 to 49°C)
- Works with 110 or 220V transformer (**part no. 99334-110**)
- Accuracy: $\pm 0.05\%$ of reading
- 3 hrs auto off function
- Battery life: approximately 40 hours
- 9 x 9" (22 x 22 cm) platform

NOW AVAILABLE the ACCU-CHARGE II has Bluetooth® Wireless Technology which provides communication to hand-held smart devices through the Mastercool Connect app.

- 260' (80m) maximum line-of-sight range
- Bluetooth® 4.2 and 5

DOWNLOAD OUR APP



98211-A ACCU-CHARGE III CERTIFIED REFRIGERANT SCALE (OIML & CE Approved, Legal for Trade)



FUNCTIONS:

- **CHARGE PROGRAMMING:**
Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing user ample time to turn off refrigerant supply.
- **PAUSE/CHARGE:**
(Using the 98230 Charging Solenoid Module)
- **TANK CAPACITY PROGRAMMING:**
Allows user to know the amount of refrigerant that is left in the tank at any time.
- **REPEAT:**
Allows user to charge previously stored amount.

SPECIFICATIONS:

- Complies with European (OIML) Standards
- Capacity: 50 kg
- Accuracy: ± 0.01 kg or 0.1% of reading (whichever is greater)
- Resolution: 0.05 kg
- 3 hrs AUTO OFF Function
- 9 x 9" (22 x 22 cm) Platform
- Operating Temperature is 32 to 120°F (0 to 49°C)
- Battery Life (approximately 40 hrs)

98230 CHARGING SOLENOID MODULE



The 98230 Charging Solenoid Module turns the 98210-A ACCU-CHARGE II & 98211-A ACCU-CHARGE III into Automatic Programmable Scales!

This module allows the user to control the exact amount of refrigerant transferring to and from the A/C System. The compact design is battery powered (9V), lightweight, portable and works with all types of refrigerant. 98230 includes a short hose for tank connection, USB cord and 1/4" FL - 1/2" ACME adapters.



98250 ELECTRONIC TANK HEATER BLANKET



The Mastercool refrigerant tank heater blanket speeds up recharging time.

- Assures total discharge of refrigerant from 30 lb and 50 lb tanks. Heats tanks to 125°F resulting in maximum pressure of 185 psi for R134a.
- Quick working 300W heater element
- An excellent complement to all Mastercool Refrigerant Scales
- 110 V

98209 ELECTRONIC CHARGING SCALE



- Slim design for easy storage
- Two keys for easy operation
- Unit change (grams & ounces)
- One touch tare weighing function
- Auto zero and auto off (after 3 hours)

SPECIFICATIONS:

- Capacity: 176 oz / 5000 g
- Sensitivity: 0.035 oz / 1 g
- Dimensions: 140 (w) x 185 (l) x 35 (h) mm
- Platform Size: 120 mm
- Power Source: 2 x AAA 1.5v battery

HIGH PRECISION CHARGING SCALE



Mastercool's high precision charging scale accurately measures small cans of refrigerant for charging systems that need a precise charge.

- Hex cylinder adapter included for easy attachment of refrigerant cylinder to scale
- Specially designed for R600a and R290
- Built in check valve will hold any remaining refrigerant within the 36" nylon tube
- Slim design for easy storage
- Two button keypad for easy operation
- Unit change (grams & ounces)
- One touch tare weighing function
- Auto zero
- Auto off automatically turns off its power if the scale is not used within 3 hours



98202-600

SPECIFICATIONS:

- Capacity: 176 ounces (5000 grams)
- Sensitivity: 0.035 ounces (1 grams)
- Charging Capability: up to 1 gram accuracy
- Dimensions: 5.5 (w) x 7.3 (l) x 1.6 (h) in. (140 (w) x 185 (l) x 40 (h) mm)
- Power Source: 3 x AAA 1.5v battery
- Fitting: 1/4" SAE M flare fitting with check valve

98201 High Precision Charging Scale packaged in a Mastercool labeled cardboard box

98202 High Precision Charging Scale with storage for a 14 oz. refrigerant cylinder (sold separately) packaged in a custom molded plastic case

98202-600 High Precision Charging Scale packaged in a custom molded plastic case with a can of R600a refrigerant (14.8 oz (420 g))

98202-290 High Precision Charging Scale packaged in a custom molded plastic case with a can of R290 refrigerant (13 oz (370 g))

91050-600-12 R600a Refrigerant Cylinder (box of 12)
14.8 oz (420 g) can of R600a refrigerant

91050-290-12 R290 Refrigerant Cylinder (box of 12)
13 oz (370 g) can of R290 refrigerant



91050-290-12

DOT-APPROVED RECOVERY CYLINDERS

Features:

- Powder coated cylinder for high gloss, durable finish
- Pre-charged cylinder provides a clean, dry interior
- 3/4" NPT opening accepts 80% fill float switch shut-off device
- Reusable and conforms to DOT-4BA400 specs and ARI guidelines
- Collar design for ease of handling
- Storage and transport of recovered refrigerant gases
- Y-valve for liquid/vapor
- AUS Approved and TC Canadian Approved

30 LB. DOT-APPROVED RECOVERY CYLINDERS



62010

67010

67011

- Size (w x h): 9.125" x 17.52"
- Standard Spec.: DOT - 4BA400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 17.99 LB
- Body Material: HP295
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >26.2 LB / 11.9 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: 400 PSI / 2.7 MPa

Model	62010 without float switch	62011 with float switch	62012 with float switch & NCG Port	64010 without float switch	67010 with float switch	67011 with float switch
Connection	1/4" FL-M (7/16-20)			1/2" ACME		
Color	yellow/gray			blue	yellow/blue	

50 LB. DOT-APPROVED RECOVERY CYLINDERS



63010

65010

- Size (w x h): 12.25" x 18.78"
- Standard Spec.: DOT - 4BA400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 28.71 LB
- Body Material: HP325 or HP345
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >47.7 LB / 21.6 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: 400 PSI / 2.7 MPa

Model	63010 without float switch	65010 with float switch	66012 with float switch & NCG Port	66010 without float switch	66011 with float switch
Connection	1/4" FL-M (7/16-20)			1/2" ACME	
Color	yellow/gray			yellow/gray	

100 LB. DOT-APPROVED RECOVERY CYLINDERS



68010

- Size (w x h): 11.25" x 31.81"
- Standard Spec.: DOT - 4BW400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 50.5 LB
- Body Material: HP325
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >92.5 LB / 41.9 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: >87 PSI / 0.6 MPa

Model	68010 without float switch
Connection	1/4" FL-M (7/16-20)
Color	yellow/gray

ENVIRO TANK (REFILLABLE CYLINDER)

30 LB. REFILLABLE CYLINDER



62020-WX

- Size (w x h): 8.39" x 20"
- Standard Spec.: DOT - 4BA400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 19.9 LB
- Body Material: HP295
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >30 LB / 13.6 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: >87 PSI / 0.6 MPa

Model	62020-WX
Connection	1/4" FL-M (7/16-20)
Color	white




69LEGEND-HFC LEGEND SERIES™ HFC REFRIGERANT ANALYZER

DIAGNOSTIC REFRIGERANT ANALYZER FOR MULTIPLE HVAC AND REFRIGERATION APPLICATIONS

Clean air calibration is all you need to analyze your refrigerant in less than 2 minutes. No matter the application, the Legend HFC Refrigerant Analyzer is capable of measuring vapor or liquid refrigerant to confirm purity while detecting the presence of other harmful refrigerants or air.

- Only mobile device to provide a high level of accuracy for measured refrigerants
- Accurate results within minutes
- Accuracy of $\pm 1\%$ of single component refrigerants
- Blend analysis for measured R400 series refrigerants
- Vapor or liquid sampling
- Store test data on external USB drive
- Internal thermal printer
- Remote software updates for new refrigerants
- Supports 10 languages for global operations
- Low flow indications to alarm user if flow restrictor becomes clogged

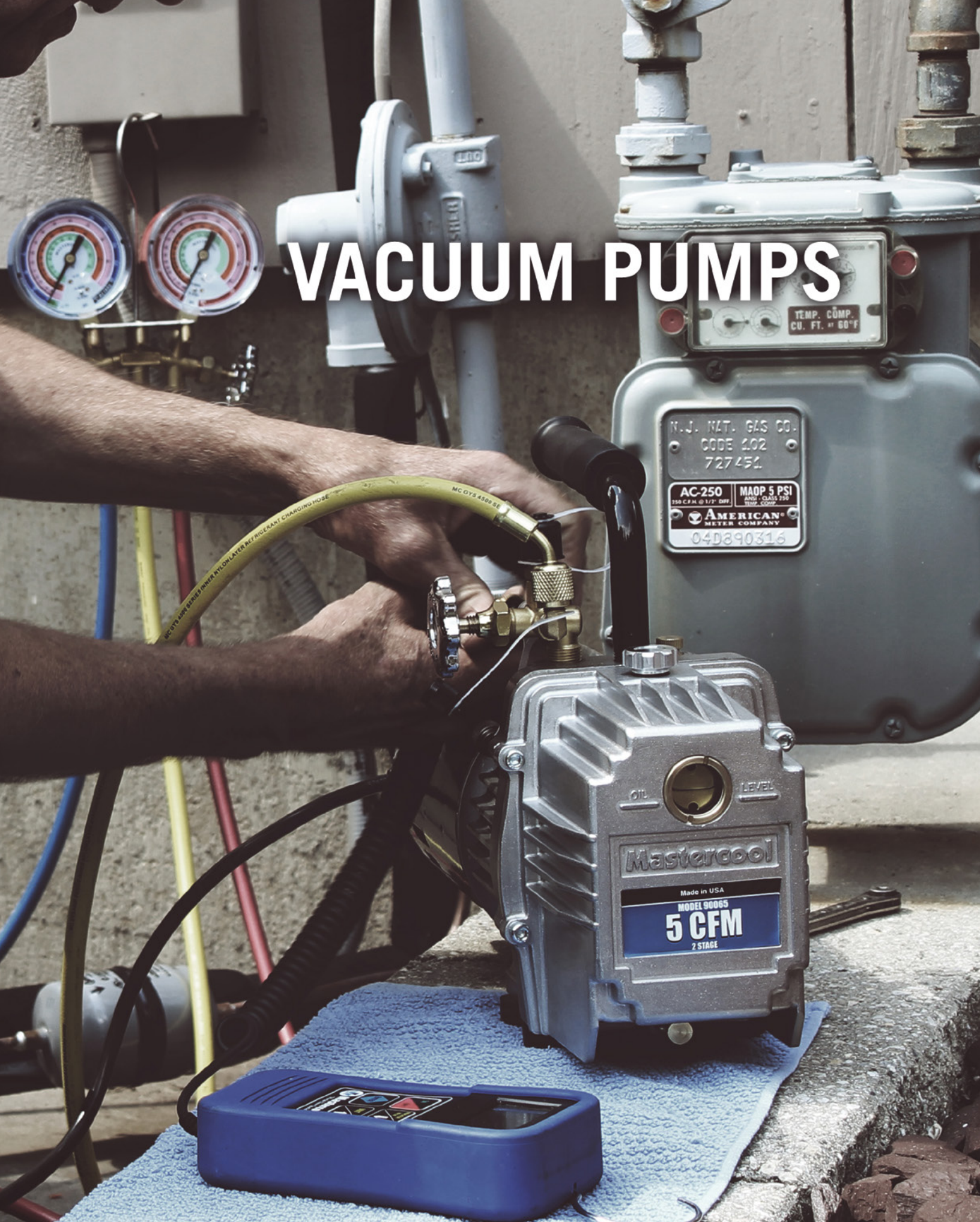

LEGEND HFC IS THE ANSWER!

Confirming a refrigerant is the right gas before service or use will ensure all systems effectively operate while protecting the customer and the technician. The use of a refrigerant analyzer creates a cleaner recovery process and reduces the amount of mixed gas recovered. Reducing mix gas recovery will ultimately cut down on the amount of refrigerant that must be destroyed which helps improve the industries ecological footprint. A refrigerant analyzer is a valuable tool to safeguard users and equipment, while promoting recycling and reuse to protect the environment. The Legend HFC is the most advanced refrigerant analyzer in the market and provides the latest in NDIR technology to support refrigerant testing before use. Reduce the uncertainty and analyze every refrigerant before handling so you can ensure you are safeguarding yourself, your equipment, and the environment to certify the job is done right.

SPECIFICATIONS:

- Weight: Less than 10 lbs.
- Analyzed Refrigerants: R22, R32, R134a, R404A, R407C, R410A, Hydrocarbons (HC) and Air
- Identified Refrigerants: R12, R1234yf, R408A, R409A, R417A, R421A, R421B, R422A, R422B, R422C, R427A, Hydrocarbons
- Accuracy: $\pm 1\%$ of indicated gasses or better
- Power Requirements: 12 VDC @ 2A via 110/220 VAC, 50 - 60 Hz Adapter
- Approvals: CE, UL and CUL
- User Interface: Graphic Display, Soft Keys, Built in Printer
- Sample Gas Extraction: Pressure from cylinder or system
- Temperature Range: 50 - 120°F (10 - 49°C)
- Humidity: 0 - 95% RH non-condensing
- Test Sample Size: 5 g per test
- Test Pressure: 30 psig - 500 psig

VACUUM PUMPS



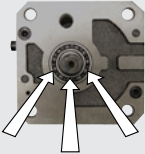
N.J. NAT. GAS CO.
CODE 202
727454
AC-250 MAOP 5 PSI
150 CFM @ 1/2" DIFF. ASSESS CLASS 125
TEMP. COMP.
AMERICAN METER COMPANY
04D890316

OIL LEVEL
Mastercool
Made in USA
MODEL 90065
5 CFM
2 STAGE

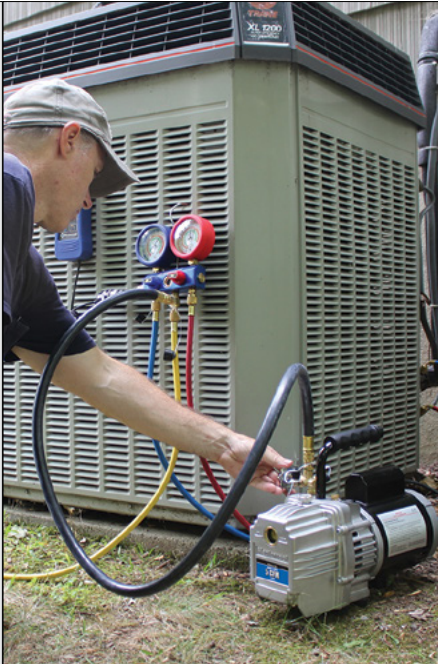
2 STAGE ELITE BALL BEARING DESIGN VACUUM PUMPS

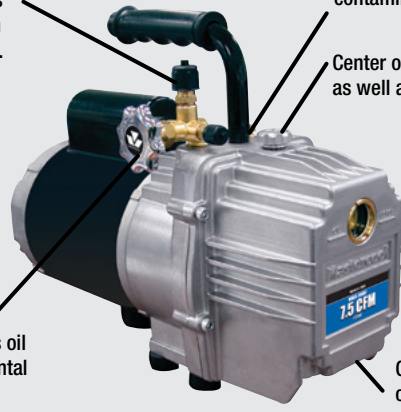


A good quality vacuum pump is an integral tool for complete A/C service. Mastercool vacuum pumps are durable and time tested. They stand up to the most grueling conditions and will provide years of reliable service. Mastercool offers a complete selection of pumps. Regardless of your service requirements, Mastercool has a model for your application.



Ball Bearing Cartridge Design
reduces running temperatures by 30% and extends the life of the pump





Manifold valve isolates pump from the system when testing for leaks. Includes three inlet ports – 1/4", 3/8" SAE and 1/2" ACME on 5 and 7.5 CFM models

Gas ballast valve helps prevent oil contamination caused by high moisture

Center oil fill port is accessible from front as well as sides

Durable lightweight die cast aluminum housing

Two-stage design allows lower pumping pressure resulting in deeper ultimate vacuum

Oil drain valve positioned at bottom of oil reservoir assures maximum drainage

Internal check valve stops oil blowout in case of accidental power loss

5 CFM VACUUM PUMP



MODEL	90065
NO. OF STAGES	2
FREE AIR DISPLACEMENT	5 CFM
ULTIMATE VACUUM	25 Microns
MOTOR	1/3 HP
PUMP SPEED	1425 RPM 1725 RPM
ELECTRICAL SPECS	110 V / 60 HZ
WEIGHT	13.2 kg (29 lbs)
DIMENSIONS IN CM	37 x 15.5 x 27.5 x 24

7 CFM VACUUM PUMP



MODEL	90067
NO. OF STAGES	2
FREE AIR DISPLACEMENT	7.5 CFM
ULTIMATE VACUUM	25 Microns
MOTOR	1/2 HP
PUMP SPEED	1425 RPM 1725 RPM
ELECTRICAL SPECS	110 V / 60 HZ
WEIGHT	16.0 kg (35.5 lbs)
DIMENSIONS IN CM	41 x 15.5 x 27.5 x 24

2 STAGE DUAL VOLTAGE VACUUM PUMPS

- U.S. design
- Stronger motor
- Field serviceable
- Cooling fins to keep temperature cooler during extended motor operation
- Easily removable vapor discharge/oil fill port. Contains internal check valve to prevent escape of liquid oil
- Manifold valve isolates pump from the system when testing for leaks. Includes 3 inlet ports, 1/4", 3/8" SAE and 1/2" ACME

3 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90063-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	3 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	1/3 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110 V/220 V, 50/60 Hz
POWER CORD	110 V Cable (US Standard)
WEIGHT	7 kg (15.43 lbs)
DIMENSIONS IN CM	27 x 15 x 25

6 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90066-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	6 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	1/2 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110 V/220 V, 50/60 Hz
POWER CORD	110 V Cable (US Standard)
WEIGHT	11 kg (24.25 lbs)
DIMENSIONS IN CM	37.9 x 16.7 x 27.5

8 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90068-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	8 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	3/4 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110 V/220 V, 50/60 Hz
POWER CORD	110 V Cable (US Standard)
WEIGHT	15.43 kg (34 lbs)
DIMENSIONS IN CM	38 x 18 x 27

12 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90612-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	12 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	1 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110 V/220 V, 50/60 Hz
POWER CORD	110 V Cable (US Standard)
WEIGHT	15.88 kg (35 lbs)
DIMENSIONS IN CM	39 x 18 x 27

SERVICE INFORMATION

	OIL CAPACITY	REPLACEMENT CARTRIDGE	SEAL SERVICE KIT
90065	18 oz	90165-R	90062-11-SEAL
90067	24 oz	90167-R	90062-11-SEAL
90063-2V-110-B	8.5 oz	-	-
90066-2V-110-B	15 oz	90166-B	-
90068-2V-110-B	19 oz	90168-B	-
90612-2V-110-B	18 oz	90112-B	-
90059-B, 90062-B	12 oz	-	-
90066-B, 90066-B-SF	18 oz	-	-

VACUUM PUMP OIL



90010-6	(Six) - 10 oz bottles (90058, 90063-2V-B)
90016-6	(Six) - 16 oz bottles (90059-B, 90062-B)
90018-6	(Six) - 18 oz bottles (90065, 90066-2V-B, 90612-2V-B, 90066-B, 90066-B-SF)
90024-6	(Six) - 24 oz bottles (90067, 90068-2V-B)
90032-6	(Six) - 32 oz bottles
90128-4	(Four) - 1 gallon bottles

*** PLEASE NOTE:**

The micron readings on all vacuum pumps represent optimal laboratory conditions. Field conditions may vary from these readings.

SINGLE STAGE VACUUM PUMPS

- High volume fan provides cool air to motor and pump
- Vapor discharge/oil fill port, easily removable
- Internal check valve to prevent oil back flow
- Cooling fins to keep temperature cooler during extended motor operation
- Thermally protected motor with on/off rocker switch
- Large, lightweight reinforced base for stable positioning
- Easily accessible oil drain valve
- Large oil level sight glass with max/min oil level indicator
- 2 inlet ports 1/4 SAE & 1/2 ACME

1.8 CFM SINGLE STAGE VACUUM PUMP



MODEL	90059-B
NO. OF STAGES	1
FREE AIR DISPLACEMENT	1.8 CFM
ULTIMATE VACUUM	80 Microns
MOTOR	1/4 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
WEIGHT	6.2 kg (13.6 lbs)
DIMENSIONS IN CM	30 x 15 x 26

3 CFM SINGLE STAGE VACUUM PUMP



MODEL	90062-B
NO. OF STAGES	1
FREE AIR DISPLACEMENT	3 CFM
ULTIMATE VACUUM	80 Microns
MOTOR	1/4 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
WEIGHT	6.35 kg (14 lbs)
DIMENSIONS IN CM	30 x 15 x 26.5

6 CFM SINGLE STAGE VACUUM PUMP



MODEL	90066-B	90066-B-SF <i>Spark Free</i>
NO. OF STAGES	1	1
FREE AIR DISPLACEMENT	6 CFM	6 CFM
ULTIMATE VACUUM	80 Microns	80 Microns
MOTOR	1/3 HP	1/3 HP
PUMP SPEED	1720 RPM	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	110/120 V, 60 HZ
WEIGHT	9.3 kg (20.5 lbs)	9.3 kg (20.5 lbs)
DIMENSIONS IN CM	38 x 17 x 27.5	38 x 17 x 27.5

Approved for all air conditioning refrigerants including A2L and A3 flammable refrigerants (i.e. R600a, R290)



18 VOLT CORDLESS, 1.5 CFM, 2 STAGE VACUUM PUMP



90058-A

- Sure-grip handle, ergonomically designed for superior comfort and portability
- Reinforced base provides extreme shock resistance
- Air cooled motor design allows for operation under high temperature conditions
- Pump runs with extremely high ultimate vacuum and low noise
- Accessible oil drain port & sight glass make both oil maintenance and accuracy easy
- Built-in device eliminates oil mist and an oil-gas separator at the air exhaust outlet prevents oil contamination in the air exhaust

SPECIFICATIONS:

- No. of stages: 2
 - Free air displacement: 1.5 CFM
 - Motor: DC 18V, 90 W
 - Ultimate vacuum: 15 microns/3 Pa
 - Oil capacity: 3.5 oz.
 - Dimensions without battery: 9.9 x 3.7 x 6.1"
 - Net weight: 7.9 lb
- Rechargeable Battery
- Li-ion 18 V 5.0 Ah
- Battery Charger
- Input 100-240 V, 50-60 Hz, 73 W
 - Output: 18V/14.4V 3A

* Mastercool does not recommend this pump be used with any other battery



90058-CH



90058-BAT-5A



90058-SL-MC

90058-5A

Complete kit includes:

- 18 V cordless vacuum pump, 1/4" SAE port
- Mastercool designed rechargeable battery
- Mastercool adapter sleeve
- Standard 110V battery charger
- 3.5 oz of oil

90058-A

18 V cordless vacuum pump, 1/4" SAE port and 3.5 oz of oil (without battery and adapter sleeve)

90058-BAT-KT-5A

Mastercool rechargeable battery and adapter sleeve

90058-BAT-5A

Mastercool rechargeable battery

90058-CH

Mastercool battery charger, 110V standard US cable

90058-SL-MC

Adapter sleeve to allow for use with Mastercool batteries



98063-BT DIGITAL VACUUM GAUGE with Bluetooth® Wireless Technology



Mastercool introduces its new compact hand-held digital vacuum gauge with Bluetooth® wireless technology which combines the most advanced features to provide quick and accurate responses every time. Utilizing a state-of-the-art glass beaded thermistor and temperature compensation, Mastercool is offering the latest technology to the HVAC/R technician.

Included in this package will be the capability to download our free Mastercool Connect app. This will allow for full mobility as activity can be easily viewed on all compatible hand-held smart devices.

FEATURES:

- Sintered bronze inlet filter to protect the sensor
- 5-digit LCD screen features an ultra-vibrant blue back-light allowing for easy readability
- Chemical resistant sensor for ease of cleaning
- Low battery icon displayed on the LCD indicates that the batteries are low and need to be replaced
- Calibration can be performed while in the field environment
- Audio and visual alarm when vacuum goes below a user adjustable set point
- Bluetooth® wireless technology provides communication to hand-held smart devices through the Mastercool Connect app

SPECIFICATIONS:

- Sensor: Glass bead thermistor with temperature compensation
- Connection Fitting: 1/4 SAE F-FL with stem depressor
- Operating Temperature: 32 to 120°F (0 to 45°C)
- Vacuum Units: Micron, Torr, mTorr, mmHg, mBar, Pa
- Range: 20,000 to 1 micron
- Accuracy: ±10% of reading (from 10,000 to 100 microns)
- Proof Pressure: 450 psi
- Auto-Off: Automatic after 10 minutes, blue back-light after 3 minutes
- Power: 2 AA batteries included
- Battery Life: 100+ continuous hours (depending on back-light use)
- Weight: 0.3 lb (0.13 kg) without batteries
0.5 lb (0.23 kg) with batteries
- Dimensions: 1.9" x 6.3" x 1.4" (50 mm x 160 mm x 36 mm)

Specifications for Bluetooth® wireless technology:

- 260' (80m) maximum line-of-sight range
- Bluetooth® 4.2 and 5

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DOWNLOAD OUR APP



Optional Accessories

99333 1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee





ANALOG VACUUM GAUGE



Mastercool's hand-held analog vacuum, class 1.0, gauge is designed with the highest quality to provide accurate readings every time. This bourdon tube type analog vacuum gauge is used for determining system vacuum.

- Large, 80 mm gauge makes it easier and more accurate to read than smaller gauges
- Indicator needle, to mark pressure for testing, provides a backup in case you forget to write the pressure down. You can see if the pressure has changed with a quick glance
- Barometric pressure compensation allows for the most accurate reading regardless of altitude or local weather conditions

SPECIFICATIONS:

- Gauge size: 80 mm
- Units: inhg 30-0 and mbar 0-1000
- Atmospheric pressure compensation: 1065-655 mbar
- Accuracy: EU Class 1, ASME Grade 1A

- 98065** Analog vacuum gauge with 1/8" NPT male thread fitting
Allows for mounting directly to manifold block
- 98066** Analog vacuum gauge with 1/4" flare female swivel nut connection
Allows for direct attachment to system or vacuum pump
- 98067-R** Analog vacuum gauge with control valve 1/4" flare female x 1/4" flare male
Allows for attachment to all connections and isolated leak testing

DIGITAL VACUUM GAUGE



As a professional technician the assurance of a deep vacuum on a system is imperative. The main problem with many small hand-held units is their inaccuracy and durability. Although the thermocouple sensor has been proven to be much more accurate and durable than the thermistor type, the problem has been the inconvenience of a cumbersome tabletop unit. Mastercool's hand held unit uses thermocouple technology. This vacuum gauge has been designed with the technician's field environment in mind, allowing for self-calibration and a sensor that will not be damaged by small mists of oil. The Mastercool unit allows for a target vacuum range to be programmed with a light sensor indicator. Now you have the freedom to continue with your other work and come back to the system once you see the indicator light signaling your target vacuum.

SPECIFICATIONS:

- Response Time: 250 mSec.
- Sensor Cable: Spiral cable extended to 6.5 feet (2.6 meter)
- Sensor: Thermocouple sensor
- Connection Fitting: 1/4" flare female adapter
- Operating Temperature: 32 to 120°F (0 to 45°C)
- Power: 9V DC battery (AC/DC Adapter optional)
- Battery Life: 36 hours
- Low Battery Indicator: Special ICON on LCD
- Vacuum Units: Micron, Torr, mTorr, mmHg, mBar, Pa
- Range: 20,000 to 1 micron
- Accuracy Range*: ATM-1000 Microns: ±10% of reading
1000 - 100 Microns: ±7% of reading,
100 - 1 Micron: ±5% of reading

* Unit accuracy refers to sensor specifications and is based on optimal laboratory conditions. Field operations may greatly deviate from these levels.



- 98061** Digital Vacuum Gauge packaged in a blow molded case
- 98061-C** Digital Vacuum Gauge packaged in a clamshell

Optional Accessories

- 98061-SENSOR** Replacement Sensor
- 99334-110** 110 V AC/DC Adapter
- 99333** 1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee



MANIFOLDS



4.3" Color LCD
provides easy to read diagnostic information



Responsive Touchscreen
enables navigation with a quick tap of the finger



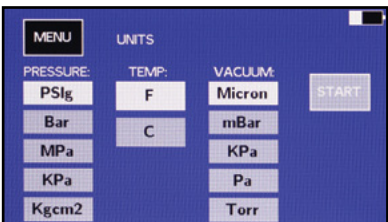
Bluetooth® Wireless Technology
allows information to be viewed on compatible hand-held smart devices via the Mastercool Connect app



Analog Dashboard



Digital Dashboard



Units Dashboard

FEATURES:

- CLASS 1.0 GAUGE provides accurate, high quality readings
- 4.3" COLOR TOUCHSCREEN to navigate with a quick slide of the finger
- PREMIUM BUILT IN VACUUM SENSOR with a resolution down to 1 micron
- DISPLAYS PRESSURE, VACUUM, TEMPERATURE, and will automatically calculate superheat and subcool temperatures
- OVER 60 pre-programmed refrigerants included (see www.mastercool.com for complete list)
- BLUETOOTH WIRELESS TECHNOLOGY provides communication with the Mastercool Connect app to allow for full mobility as activity can be easily viewed on all compatible hand-held devices
- LOW BATTERY INDICATOR on the LCD shows when battery needs charging
- RECORD AND STORE UP TO 36 HOURS OF DATA to the manifold memory
- OPTIONAL PREMIUM TEMPERATURE CLAMP with K-type connector
- AUTO-OFF AFTER 30 MINUTES of inactivity helps to conserve battery life
- PRESSURE LEAK TEST FUNCTION displays delta for both vacuum and positive pressure measurements
- EASILY SWITCH BETWEEN DIGITAL AND ANALOG depictions of pressure and temperature
- SIMPLE CALIBRATION for ultimate utility

SPECIFICATIONS:

- Gauge: Class 1.0
- Pressure Display: psi, bar, MPa, kg/cm²
- Temperature Display: °F or °C
- Deep Vacuum Display: micron, mBar, kPa, Pa, Torr, mTorr, mmHg
- Sensing Resolution: 1 psi (.07 bar, .007 MPa, .07 kg/cm²)
- Sensing Accuracy: ±1 psi or 1% of reading (whichever is greater)
- Working Pressure: 0 to 725 psi (50 bar, 5 MPa, 52 kg/cm²)
- Proof Pressure: 1000 psi (70 bar, 7 MPa, 70 kg/cm²) (Tolerable pressure without internal damage)
- Refrigerant Temperature Range: -40 to 200°F (-40 to 93°C)
- Operating Temperature: 32 to 122°F (0 to 45°C)
- Temperature Accuracy: ±1°F (±0.5°C) between 32 to 160°F (0 to 71°C)
- Storage Temperature: 10 to 120°F (-12 to 49°C) (non-condensing)
- Vacuum Sensor: Range 20,000 to 1 micron
- Connections: 1/4" m-flare and 3/8" m-fl (vacuum hose connection (4 way only))
- Power: Li-Ion rechargeable battery (USB type C connector supplied)
- Battery Life: 30-36 hours normal use (25-30 hours with bluetooth enabled)
- Auto-Off: After 30 minutes, sleep mode 4 minutes

Specifications for Bluetooth® wireless technology:

- 260' (80m) maximum line-of-sight range
- Bluetooth® 4.2 and 5



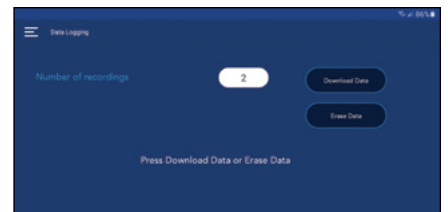
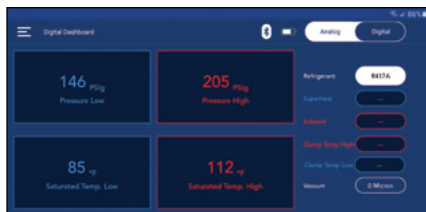
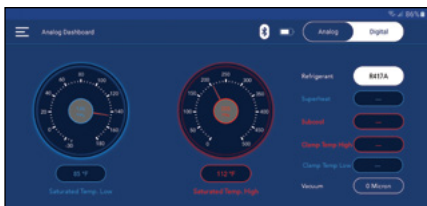
MASTERCOOL CONNECT APP

Simply download the free Mastercool Connect app to begin receiving and analyzing data from any nearby Mastercool Spartan Smart Manifold.



Use the Spartan Smart Manifold and the Mastercool Connect App to:

- Provide all of the manifold's data remotely. Sit back in a comfortable location and watch the system's performance.
- Leak test for both pressure and vacuum. Check on the test's progress while performing other tasks away from the unit.
- Datalog the system's performance for up to 36 hours. Save all of the values of the system's performance throughout the day and overnight without having to manually record them. The app gives you a way to download the information from the manifold and forward the file to your favorite spreadsheet program for analysis.



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SPARTAN SMART MANIFOLD with Bluetooth® Wireless Technology

Mastercool's SPARTAN series smart manifold with Bluetooth® wireless technology is equipped with a 4.3" color touchscreen LCD, allowing the user to navigate through all of the screens and options with a quick tap of their finger. Now with a built-in premium vacuum sensor and an accuracy down to 1 micron, there is no need for additional equipment to properly diagnose and service your A/C system.



99923-BT-2

SPARTAN 2 WAY SMART MANIFOLD

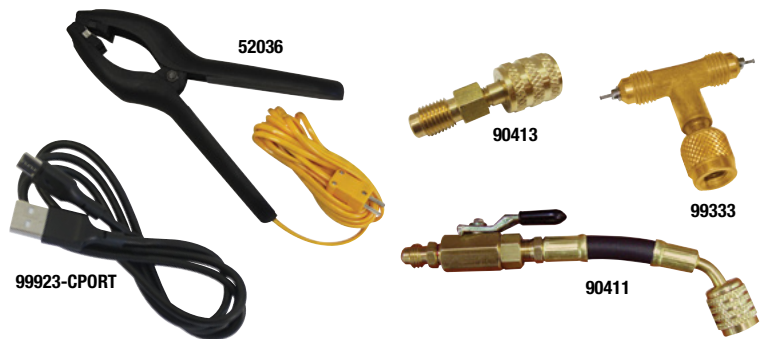
	HIGH PRESSURE HOSES WITH STANDARD FITTINGS	TEMPERATURE CLAMP	BLACK VACUUM HOSE	USB TYPE C CONNECTOR
99923-BT	-	-	-	1
99923-BT-2	-	2	-	1
99926-BT-2 >>POPULAR<<	60"	2	-	1
99927-BT-2	72"	2	-	1



99926-BT-2

SPARTAN 4 WAY SMART MANIFOLD

99943-BT	-	-	-	1
99943-BT-2	-	2	-	1
99946-BT-2 >>POPULAR<<	60"	2	1	1
99947-BT-2	72"	2	1	1



OPTIONAL ACCESSORIES

52036	Ergonomic Clamp-on K Type Probe – 3 ft (1 m)
52108	Ergonomic Clamp-on K Type Probe – 10 ft (3 m)
99923-CPORT	USB Type C Cable
90413	R410A Straight Adapter 1/4" FL-M x 5/16" Swivel-F
99332	1/8" NPT x 1/4"-FL Swivel Adapter
90411	1/4" x 5/16" Flex Adapter with Ball Valve
99333	1/4" FL-M x 1/4" FL-M x 1/4" FL-F Tee
99923-PB	Plastic Molded Case



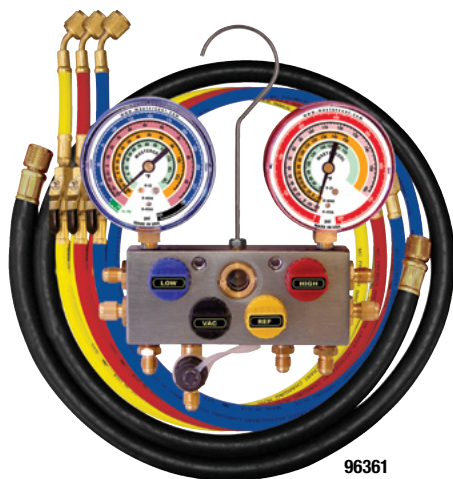
99946-BT-2



ALUMINUM 3/8" BORE 4-WAY BALL VALVE MANIFOLD GAUGE SETS

Exclusive 3/8" Ball Valve Design

- Full 3/8" bore all the way through the block increases flow over the standard block designs
- Ball valve rotates 90° between two teflon washers requiring little effort to turn, even under pressure
- Opens and closes quickly with only a quarter turn
- Visual knob position quickly indicates if valves are opened or closed
- Gauges offered in a wide variety of selections
- Color coordinated gauges for multi-refrigerant recognition
- Includes three 1/4" SAE nylon barrier hoses with manual ball valves and one 3/8" SAE black vacuum hose in plastic box



R410A, R22 & R404A BALL VALVE MANIFOLD SET WITH LARGE 3 1/8" GAUGES (PSI/°F)

36" HOSES	96336
60" HOSES	96361 >>POPULAR<<
72" HOSES	96372
96303	4-way ball valve manifold with 3 1/8" gauges only
58501	R410A, R22, & R404A (PSI/°F) low side (3 1/8") replacement gauge
58803	R410A, R22, & R404A (PSI/°F) high side (3 1/8") replacement gauge

R404A, R407C, R507A & R134a BALL VALVE MANIFOLD SET WITH LARGE 3 1/8" GAUGES (PSI/BAR/°F)

36" HOSES	96536
60" HOSES	96561
72" HOSES	96572
96503	4-way ball valve manifold with 3 1/8" gauges only
54350	R404A, R407C, R507A & R134a (PSI/°F) low side (3 1/8") replacement gauge
54500	R404A, R407C, R507A & R134a (PSI/°F) high side (3 1/8") replacement gauge

R410A & R32 BALL VALVE MANIFOLD SET WITH LARGE 3 1/8" GAUGES (PSI/°F)



36" HOSES	95536
60" HOSES	95561
95203	4-way ball valve manifold with 3 1/8" gauges only
51501	R410A, R32 (PSI/°F) low side (3 1/8") replacement gauge
51803	R410A, R32 (PSI/°F) high side (3 1/8") replacement gauge

* All gauges above are available with shock resistant gauge protectors – to order, add -G after the Part#

3/8" SAE REPLACEMENT BLACK HOSE



94136	Without ball valve (36")
94160	Without ball valve (60")
94172	Without ball valve (72")
94236	With ball valve (36")
94260	With ball valve (60")
94272	With ball valve (72")

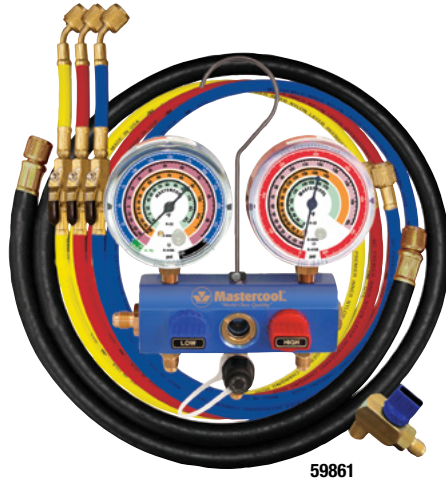
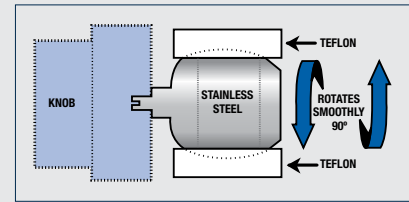
ALUMINUM 3/8" BORE 2-3 WAY BALL VALVE MANIFOLD



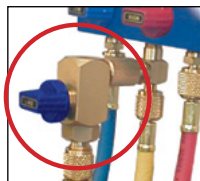
ALUMINUM 3/8" BORE 2-3 WAY BALL VALVE MANIFOLD GAUGE SETS

Exclusive 3/8" Ball Valve Design

- Full 3/8" bore all the way through the block increases flow over the standard block designs
- Ball valve rotates 90° between two teflon washers requiring little effort to turn, even under pressure
- Opens and closes quickly with only a quarter turn
- Visual knob position quickly indicates if valves are opened or closed
- Gauges offered in a wide variety of selections
- Color coordinated gauges for multi-refrigerant recognition
- Includes nylon barrier hoses with manual ball valves in a plastic box



59861



Optional 3/8" hose with special 90° 3/8" swivel ball valve for vacuum line makes 2-way into 3-way full control gauge set.

R410A, R22 & R404A BALL VALVE MANIFOLD SET WITH LARGE 3 1/8" GAUGES (PSI/°F)

Hose Length	2-WAY 3/8" BALL VALVE MANIFOLD, (3) 1/4" SAE NYLON BARRIER HOSES WITH MANUAL BALL VALVES	3-WAY 3/8" BALL VALVE MANIFOLD, (3) 1/4" SAE NYLON BARRIER HOSES WITH MANUAL BALL VALVES, (1) 3/8" SAE VACUUM HOSE & 90° SWIVEL VACUUM BALL VALVE
36"	59636	59836
60"	59661	59861 >>POPULAR<<
72"	59672	59872
58203	Ball valve manifold with 3 1/8" gauges only	
58501	R410A, R22, & R404A (PSI/°F) low side (3 1/8") replacement gauge	
58803	R410A, R22, & R404A (PSI/°F) high side (3 1/8") replacement gauge	



R410A & R32 BALL VALVE MANIFOLD SET WITH LARGE 3 1/8" GAUGES (PSI/°F)

Hose Length	2-WAY 3/8" BALL VALVE MANIFOLD, (3) 1/4" SAE NYLON BARRIER HOSES WITH MANUAL BALL VALVES	3-WAY 3/8" BALL VALVE MANIFOLD, (3) 1/4" SAE NYLON BARRIER HOSES WITH MANUAL BALL VALVES, (1) 3/8" SAE VACUUM HOSE & 90° SWIVEL VACUUM BALL VALVE
36"	51236	51436
60"	51261	51461
72"	51272	51472
51203	Ball valve manifold with 3 1/8" gauges only	
51501	R410A, R32 (PSI/°F) low side (3 1/8") replacement gauge	
51803	R410A, R32 (PSI/°F) high side (3 1/8") replacement gauge	

REPLACEMENT PARTS



89772-PB



90530

- 90530** Ball valve only (3/8" FML x 3/8" FFL 90°)
- 98225** Ball valve repair kit
- 89772-PB** Plastic carrying case



ALUMINUM R410A & R32 2-WAY MANIFOLD GAUGE SETS

Hose connections are 1/4" SAE. Gauges are 3 1/8" in PSI & °F. Packaged in a clamshell.



51161

HOSE LENGTH (SET OF 3)	R410A HOSES STANDARD 1/4" SAE FITTINGS	R410A HOSES BALL VALVE CONTROL STANDARD 1/4" SAE FITTINGS
36"	51136	51336
60"	51161 >>POPULAR<<	51361
72"	51172	51372
51103	Aluminum 2-way manifold with 3 1/8" gauges only	
51501	R410A, R32 (PSI-°F) low side (3 1/8") replacement gauges	
51803	R410A, R32 (PSI-°F) high side (3 1/8") replacement gauges	



ALUMINUM R404A, R407C, R507A & R134a 2-WAY COMMERCIAL MANIFOLD GAUGE SETS

Hose connections are 1/4" SAE. Gauges are 3 1/8" in PSI, BAR & °F. Packaged in a clamshell.



54161

HOSE LENGTH (SET OF 3)	NYLON BARRIER HOSES STANDARD FITTINGS	NYLON BARRIER HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES BALL VALVE
36"	54136	54236	54336
60"	54161	54261	54361
72"	54172	54272	54372
54103	Aluminum 2-way manifold with 3 1/8" gauges only		
54350	R404A, R407C, R507A & R134a (PSI/°F) low side (3 1/8") replacement gauge		
54500	R404A, R407C, R507A & R134a (PSI/°F) high side (3 1/8") replacement gauge		



ALUMINUM R22, R404A & R410A 2-WAY MANIFOLD GAUGE SETS

Designed for high pressure R410A. Gauges are 3 1/8" in PSI, °F. Packaged in a clamshell.



57161

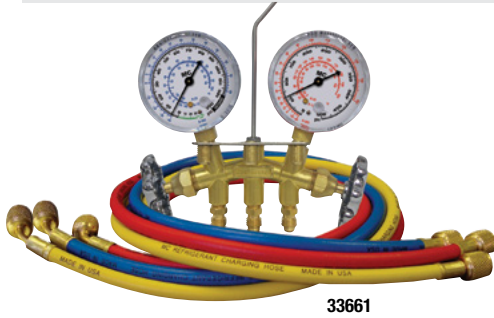
HOSE LENGTH (SET OF 3)	R410A HOSES STANDARD 1/4" SAE FITTINGS	R410A HOSES BALL VALVE CONTROL STANDARD 1/4" SAE FITTINGS
36"	57136	57336
60"	57161 >>POPULAR<<	57361
72"	57172	57372
57103	Aluminum 2-way manifold with 3 1/8" gauges only	
58501	R410A, R22, & R404A (PSI-°F) low side (3 1/8") replacement gauges	
58803	R410A, R22, & R404A (PSI-°F) high side (3 1/8") replacement gauges	

2-WAY BRASS MANIFOLD GAUGE SETS



BRASS R12, R22 & R502 2-WAY MANIFOLD GAUGE SETS

Hose connections are 1/4" SAE. Gauges are 2 1/2" in PSI & °F. Packaged in a clamshell.

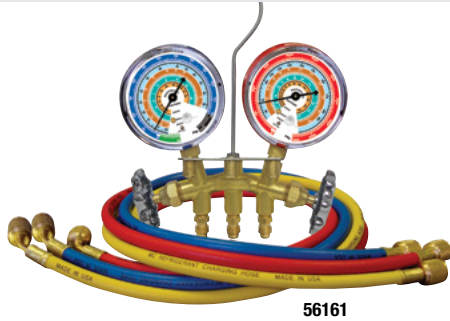


HOSE LENGTH (SET OF 3)	STANDARD HOSES STANDARD FITTINGS	STANDARD HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES STANDARD FITTINGS	NYLON BARRIER HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES MANUAL BALL VALVES
36"	33636	35636	36636	37636	32636
60"	33661 >>POPULAR<<	35661	36661	37661	32661
72"	33772	35772	36772	37772	32772
33103	Brass 2-way manifold with 2 1/2" gauges only				
93350	R12, R22, R502 (PSI/°F) low side (2 1/2") replacement gauge				
93500	R12, R22, R502 (PSI/°F) high side (2 1/2") replacement gauge				

BRASS R404A, R407C, R507A & R134a 2-WAY COMMERCIAL MANIFOLD GAUGE SETS



Hose connections are 1/4" SAE. Gauges are 3 1/8" in PSI, BAR & °F. Packaged in a clamshell.

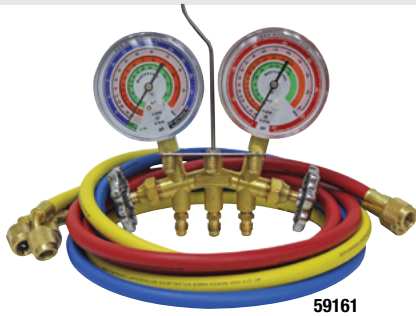


HOSE LENGTH (SET OF 3)	NYLON BARRIER HOSES STANDARD FITTINGS	NYLON BARRIER HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES BALL VALVE
36"	56136	56236	56336
60"	56161 >>POPULAR<<	56261	56361
72"	56172	56272	56372
56103	Brass 2-way manifold with 3 1/8" gauges only		
54350	R404A, R407C, R507A & R134a (PSI-°F) low side (3 1/8") replacement gauge		
54500	R404A, R407C, R507A & R134a (PSI-°F) high side (3 1/8") replacement gauge		

BRASS R22, R404A & R410A 2-WAY MANIFOLD GAUGE SETS



Designed for high pressure R410A. Gauges are 3 1/8" in PSI, °F. Packaged in a clamshell.



HOSE LENGTH (SET OF 3)	R410A HOSES STANDARD 1/4" SAE FITTINGS	R410A HOSES BALL VALVE CONTROL STANDARD 1/4" SAE FITTINGS
36"	59136	59236
60"	59161 >>POPULAR<<	59261
72"	59172	59272
59103	Brass 2-way manifold with 3 1/8" gauges only	
58501	R410A, R22, & R404A (PSI-°F) low side (3 1/8") replacement gauge	
58803	R410A, R22, & R404A (PSI-°F) high side (3 1/8") replacement gauge	



R600a, R290 & R134a SPECIALTY MANIFOLDS (HYDROCARBONS)

- Large 3 1/8" gauges (PSI/F) with easy to read temperatures scales
- Silicone dampened gauges smooth out needle movement
- Gauges can be easily recalibrated in the field to maintain accuracy
- Easy to grip knobs
- Constructed of the finest materials
- Machined with precision to the highest quality standards
- Packaged in a clamshell



33561



33518-TP



93561



93518-TP

R600a, R290 & R134a 2-WAY BRASS MANIFOLD SET

33561	Brass 2-way manifold gauge set with 60" standard hoses with standard fittings
33518-TP >>POPULAR<<	Brass 2-way manifold gauge set with (3) 18" thermoplastic capillary hoses (2 mm thermoplastic capillary hoses with straight x 45° fittings with depressor for maximum precision on small capacity systems)
33524-TP	Brass 2-way manifold gauge set with (3) 24" thermoplastic capillary hoses (2 mm thermoplastic capillary hoses with straight x 45° fittings with depressor for maximum precision on small capacity systems)
33503	Brass 2-way manifold with 3 1/8" gauges only
51350	R600a, R290, R134a (PSI/F) low side (3 1/8") replacement gauge
51500	R600a, R290, R134a (PSI/F) high side (3 1/8") replacement gauge

R600a, R290 & R134a 2-WAY ALUMINUM MANIFOLD SET

93561	Aluminum 2-way manifold gauge set with 60" standard hoses with standard fittings
93518-TP	Aluminum 2-way manifold gauge set with (3) 18" thermoplastic capillary hoses (2 mm thermoplastic capillary hoses with straight x 45° fittings with depressor for maximum precision on small capacity systems)
93524-TP	Aluminum 2-way manifold gauge set with (3) 24" thermoplastic capillary hoses (2 mm thermoplastic capillary hoses with straight x 45° fittings with depressor for maximum precision on small capacity systems)
51303	Aluminum 2-way manifold with 3 1/8" gauges only
51350	R600a, R290, R134a (PSI/F) low side (3 1/8") replacement gauge
51500	R600a, R290, R134a (PSI/F) high side (3 1/8") replacement gauge



SPECIALTY MANIFOLDS, SINGLE VALVE MANIFOLDS

SINGLE BALL VALVE MANIFOLDS

(packaged in a clamshell)



92103-53-1/4

1/4" SINGLE BALL VALVE MANIFOLD WITH 3 1/8" GAUGES (PSI/°F)

	Refrigerant Scales	Gauge p/n (HP/LP)
92103-53-1/4	R600a, R290, R134a	51350
92103-55-1/4	R410A, R32	51501

5/16" SINGLE BALL VALVE MANIFOLD WITH 3 1/8" GAUGES (PSI/°F)

	Refrigerant Scales	Gauge p/n (HP/LP)
92103-55-5/16	R410A, R32	51501

* Manifolds assembled with gauge guards, add a -G



92518-53-1/4TP

1/4" SINGLE BALL VALVE MANIFOLD WITH 3 1/8" GAUGES (PSI/°F) & 2 MM THERMOPLASTIC CAPILLARY HOSE WITH STRAIGHT X 45° FITTINGS WITH DEPRESSOR for maximum precision on small capacity systems



	Refrigerant Scales	Gauge p/n (HP/LP)	Thermoplastic Capillary Hose
92518-53-1/4TP >>POPULAR<<	R600a, R290, R134a	51350	18"
92524-53-1/4TP	R600a, R290, R134a	51350	24"

ALUMINUM CO2 (R744) 2-WAY PISTON VALVE MANIFOLD (PSI/MPA)




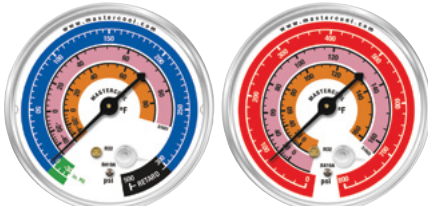


- Our free floating piston valve results in less wear and tear in comparison to market standard twisting piston valves
- Double o-ring allows for a much better seal resulting in less leaks
- Oil filled, class 1% (1A), 2 3/4" gauges with easy to read pressure scales
- Solid extruded aluminum body
- Large easy-to-grip-knobs
- 1/4" SAE
- Steel braided hoses for CO2
- Assemblies packed in plastic carrying case
- Plastic carrying case, p/n 58102-PBR

R744 (PSI/MPa) low side (2 3/4") class 1.0 replacement gauge	55102-1400
R744 (PSI/MPa) high side (2 3/4") class 1.0 replacement gauge	55102-2400
Manifold body with hook and hose holder (1/4" SAE)	55102
Manifold with oil filled gauges only (1/4" SAE)	55103
Manifold (as above) with 3 - 60" braided hoses	55661

REPLACEMENT GAUGES

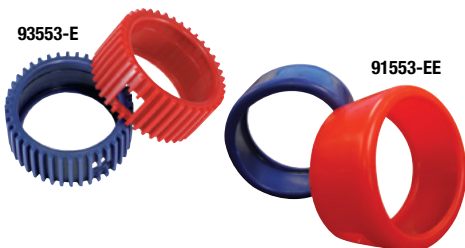
Mastercool offers one of the most extensive lines of high quality replacement gauges. Our wide variety of gauge scales are available in different sizes and styles. All of our gauges are designed with the **ANTI-FLUTTER** feature that reduces needle fluctuation and increases reading accuracy.

	High pressure	Low pressure	Diameter	Units	Refrigerant Scales	Gauge Class
	93500	93350	2 1/2"	PSI/F	R12, R22, R502	1.6
	55102-2400	55102-1400	2 3/4"	PSI/MPa	R744	1.0
	54500	54350	3 1/8"	PSI/F	R404A, R407C, R507A, R134a	1.6
	58803	58501	3 1/8"	PSI/F	R410A, R22, R404A	1.6
	51803	51501	3 1/8"	PSI/F	R410a, R32	1.6
	51500	51350	3 1/8"	PSI/F	R600a, R290, R134a	1.6



MANIFOLD REPLACEMENT PARTS

GAUGE PROTECTORS



Mastercool gauge protectors are built to cushion shock due to rough handling. The unique ribbing deadens bumps and deflects shocks. Snug fitting. Color coded. All Mastercool manifold gauge sets are available with gauge protectors installed. To order, simply place a "-G" after any gauge set number.

2 1/2" (63 MM) GAUGE PROTECTORS

93253-E	2 1/2" (63 mm) blue gauge protector
93503-E	2 1/2" (63 mm) red gauge protector
93553-E	2 1/2" (63 mm) set (red & blue)

3 1/8" (80 MM) GAUGE PROTECTORS

91253-EE	3 1/8" (80 mm) red gauge protector
91503-EE	3 1/8" (80 mm) blue gauge protector
91553-EE	3 1/8" (80 mm) set (red & blue)

LENS



85253-E	2 1/2" (63 mm) lens
98251-E	3 1/8" (80 mm) lens

4-WAY MANIFOLD REPLACEMENT KNOBS



4-WAY MANIFOLD REPLACEMENT KNOBS

58211	Blue knob
58212	Red knob
58213	Yellow knob
58214	Black knob

2-WAY MANIFOLD REPLACEMENT KNOBS

85211-R	Blue knob
85212-R	Red knob
93211-R	Black knob

85200 DELUXE A/C SERVICE REPAIR KIT



Replacement gaskets, depressors, o-rings and nylon guides for charging hoses and adapters. Consists of:

42010	1/4" gasket (10 pcs)	82010	Gasket for R134a hose (10 pcs)
42014	1/4" depressor (10 pcs)	82336	Gasket for 82335 (10 pcs)
80034	O-ring for 82834 (10 pcs)	83341	O-ring for R134a hose (10 pcs)
80034-1	High side nylon guide (5 pcs)	90336	Gasket for R12 shut-off valve (10 pcs)
80134	O-ring for 82934 (10 pcs)		

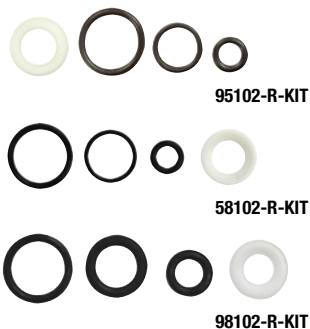
92207 REFRIGERATION GASKET, DEPRESSOR ASSORTMENT KIT



Consists of:

42010	1/4" gasket (6 pcs)
85511	3/8" hose gasket (1 pc)
42017	Screw type depressor (3 pcs)

PARTS FOR MANIFOLDS



PARTS FOR 2-WAY BRASS MANIFOLDS

34215	O-rings for brass manifolds	34216	Seal & seat assembly for brass manifolds
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PARTS FOR 2-WAY ALUMINUM MANIFOLDS

85215	O-rings (4 pcs)	85216	Seal & seat assembly (2 pcs)
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PARTS FOR BALL VALVE MANIFOLDS

95102-R-KIT	O-ring repair kit for 4 way ball valve manifold
58102-R-KIT	O-ring repair kit for 2 and 3 way ball valve manifold
98102-R-KIT	O-ring repair kit for single ball valve manifold

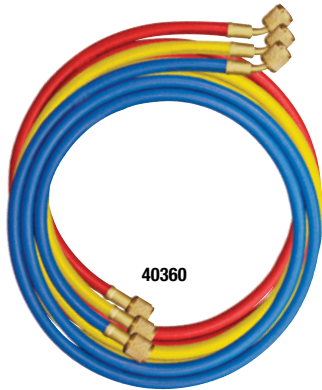
HOSES, ADAPTERS & ACCESSORIES



Mastercool uses only **(GRADE 5 HOSE)** with a selection of standard and nylon barrier for high pressure applications. Knurled brass nuts make finger tightening easy. **Crimped with 8 segment dies for secure fit and maximum durability.** Hoses are available in sets and a variety of lengths to meet all EPA, SAE and UL requirements for containment of refrigerant. **Sets include one blue, one red and one yellow hose.**



STANDARD & HIGH PRESSURE HOSES W/STANDARD FITTINGS (1/4" SAE)



R12, R502 Standard Hoses, Working Pressure 600 PSI, Burst 3000 PSI

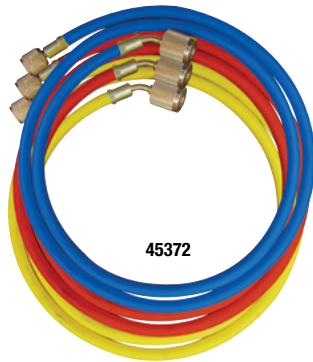
HOSE LENGTH	36"	60"	72"	96"
Blue 1/4" x 1/4"	41361	41601	41721	41961
Yellow 1/4" x 1/4"	41362	41602	41722	41962
Red 1/4" x 1/4"	41363	41603	41723	41963
SETS 1/4" x 1/4"	40336	40360 >>POPULAR<<	40372	40396

R22, R32, R410A Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

Blue 1/4" x 1/4"	47361	47601	47721	47961
Yellow 1/4" x 1/4"	47362	47602	47722	47962
Red 1/4" x 1/4"	47363	47603	47723	47963
Black 1/4" x 1/4"	47364	47604	47724	47964
SETS 1/4" x 1/4"	47336	47360 >>POPULAR<<	47372	47396
Black 1/4" hose w/(3/8" x 3/8" fitting)	48364	48604	48724	48964



STANDARD & HIGH PRESSURE HOSES W/AUTOMATIC SHUT-OFF VALVE FITTINGS (1/4" SAE)



R12, R502 Standard Hoses, Working Pressure 600 PSI, Burst 3000 PSI

HOSE LENGTH	36"	60"	72"	96"
Blue 1/4" x 1/4"	45361	45601	45721	45961
Yellow 1/4" x 1/4"	45362	45602	45722	45962
Red 1/4" x 1/4"	45363	45603	45723	45963
Black 1/4" x 1/4"	N/A	N/A	N/A	N/A
SETS 1/4" x 1/4"	45336	45360 >>POPULAR<<	45372	45396

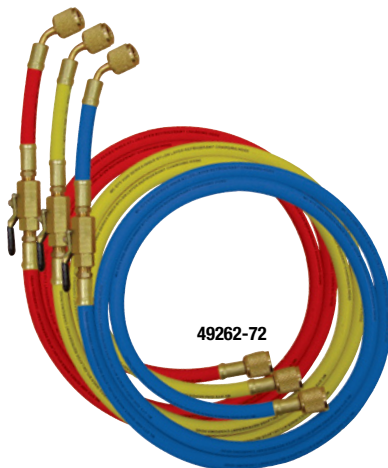
R22, R32, R410A Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

Blue 1/4" x 1/4"	46361	46601	46721	46961
Yellow 1/4" x 1/4"	46362	46602	46722	46962
Red 1/4" x 1/4"	46363	46603	46723	46963
Black 1/4" x 1/4"	46364	46604	46724	46964
SETS 1/4" x 1/4"	46336	46360 >>POPULAR<<	46372	46396

Auto shut-off valves automatically retain refrigerant in the service hose when they are removed from the system, meets EPA, SAE and UL standards for containment of refrigerant.



STANDARD & HIGH PRESSURE HOSES W/MANUAL SHUT-OFF VALVE FITTINGS (1/4" SAE) >> RECOMMENDED FOR R410A <<



R12, R502 Standard Hoses, Working Pressure 600 PSI, Burst 3000 PSI

HOSE LENGTH	36"	60"	72"
Blue 1/4" x 1/4"	90263-36	90263-60	90263-72
Yellow 1/4" x 1/4"	90264-36	90264-60	90264-72
Red 1/4" x 1/4"	90265-36	90265-60	90265-72
SETS 1/4" x 1/4"	90262-36	90262-60	90262-72

R22, R32, R410A Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

Blue 1/4" x 1/4"	49263-36	49263-60	49263-72
Yellow 1/4" x 1/4"	49264-36	49264-60	49264-72
Red 1/4" x 1/4"	49265-36	49265-60	49265-72
SETS 1/4" x 1/4"	49262-36	49262-60 >>POPULAR<<	49262-72
Red 1/4 x 5/16"	49265-36-JT	49265-60-JT	49265-72-JT
Blue 1/4 x 5/16"	49263-36-JT	49263-60-JT	49263-72-JT
SETS Red/Blue 1/4 x 5/16", Yellow 1/4 x 1/4"	49262-36-JT	49262-60-JT	49262-72-JT



3/8" SAE REPLACEMENT BLACK HOSE



HOSE LENGTH	36"	60"	72"
Without Ball Valve	94136	94160	94172
With Ball Valve	94236	94260	94272

PRESSURE CONTROL HOSES



Replaces regular copper capillary tubing and eliminates capillary failure due to work hardening from vibration.

- 1/4" operates to 600 psi (42 bar) and 200°F (93°C)
- Operational temperature: -20° to 200°F (-29° to 93°C)

Hex Style Fittings with 1/4" SAE Thread

HOSE LENGTH	STRAIGHT X STRAIGHT	STRAIGHT X 90°
12"	47124-STR	47124-ST
18"	47184-STR	47184-ST
24"	47244-STR	47244-ST
36"	47364-STR	47364-ST
48"	47484-STR	47484-ST
60"	47604-STR	47604-ST

STEEL BRAIDED HOSES FOR CO2



Steel Braided Hoses, Working Pressure 2900 PSI, Burst 11600 PSI

HOSE LENGTH	60"
Steel Braided Hose for CO2	55601
SET of 3 Steel Braided Hoses for CO2	55360

SERVICE HOSE REPLACEMENT PARTS



1/4" FITTING	SPRING TYPE		SCREW TYPE	
	GASKET	DEPRESSOR	GASKET	DEPRESSOR
CHARGING HOSES	42010-10	42014-10	42010-10	42017-10
SHUT-OFF VALVE	90336-10	N/A	N/A	N/A

[85511-10](#) 3/8" GASKET for 85510 (can tap valve)

[48010](#) 3/8" GASKET for 3/8" hose

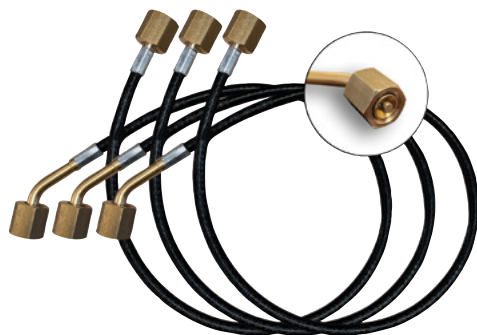


2MM THERMOPLASTIC CAPILLARY HOSE

- EN 1736 and ISO 13971 - Class 2
- Inner Diameter 2 mm
- Outer Diameter 5.9 mm
- Tolerances 0.1 mm
- Bending Radius 10 mm
- Max Allowable Pressure 60 bar (870 psi)
- Working Temperature 248°F (120°C)
- Min/Max Allowable Temperature -40 to 266°F (-40 to 130°C)
- Weight 25 g/m



THERMOPLASTIC CAPILLARY TUBE ASSEMBLIES - STRAIGHT X 45° FITTINGS WITH DEPRESSOR



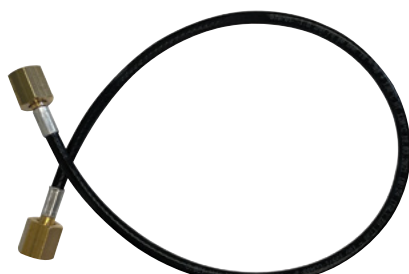
44184-S45

- 2 mm thermoplastic capillary hose for maximum precision on small capacity systems

44318	Set of 3-18" (450 mm) capillary hoses with straight x 45° fittings with depressor
44324	Set of 3-24" (600 mm) capillary hoses with straight x 45° fittings with depressor
44184-S45	18" (450 mm) capillary hose with straight x 45° fittings with depressor
44244-S45	24" (600 mm) capillary hose with straight x 45° fittings with depressor



THERMOPLASTIC CAPILLARY TUBE ASSEMBLIES - STRAIGHT X STRAIGHT FITTING



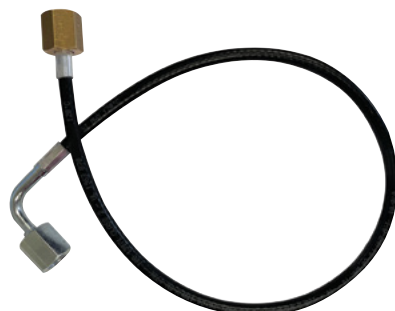
44184-STR

- 2 mm thermoplastic capillary hose

44124-STR	12" (30 cm) capillary hose assembly with straight x straight fittings
44184-STR	18" (45 cm) capillary hose assembly with straight x straight fittings
44244-STR	24" (60 cm) capillary hose assembly with straight x straight fittings
44484-STR	48" (120 cm) capillary hose assembly with straight x straight fittings
44604-STR	60" (150 cm) capillary hose assembly with straight x straight fittings



THERMOPLASTIC CAPILLARY TUBE ASSEMBLIES - STRAIGHT X 90° FITTING



44184-ST

- 2 mm thermoplastic capillary hose

44124-ST	12" (30 cm) capillary hose assembly with straight x 90° fittings
44184-ST	18" (45 cm) capillary hose assembly with straight x 90° fittings
44244-ST	24" (60 cm) capillary hose assembly with straight x 90° fittings
44484-ST	48" (120 cm) capillary hose assembly with straight x 90° fittings
44604-ST	60" (150 cm) capillary hose assembly with straight x 90° fittings



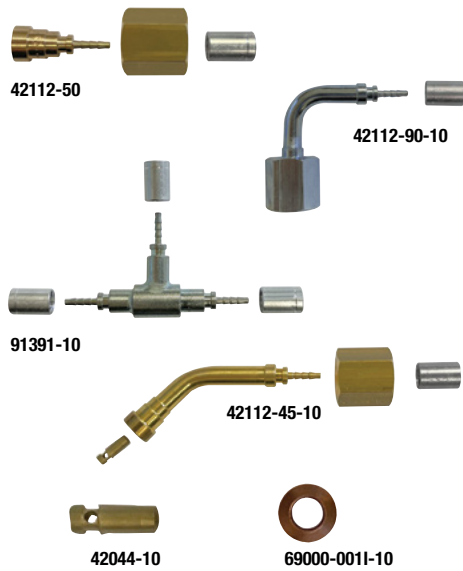
2MM THERMOPLASTIC CAPILLARY HOSE



44004-1000	2 mm thermoplastic capillary hose roll of 1000 inches (25 meters)
44004-2000	2 mm thermoplastic capillary hose roll of 2000 inches (50 meters)



CRIMP FITTINGS FOR 2 MM CAPILLARY HOSE



- 42112-50** Straight Crimp Fitting with Hex Nut packaged in a box of 50 pieces
 - Straight female fitting 1/4" SAE
 - Short nut 16 mm
 - Thread SAE J513 - 7/16" 20 UNF

- 42112-90-10** 90° Crimp Fitting with Hex Nut packaged in a box of 10 pieces
 - 90° female fitting 1/4" SAE
 - Short nut 16 mm
 - Thread SAE J513 - 7/16" 20 UNF

- 91391-10** Tee Fitting packaged in a box of 10 pieces

- 42112-45-10** 45° Crimp Fitting with Hex Nut packaged in a box of 10 pieces
 - 45° female fitting 1/4" SAE
 - Short nut 16 mm
 - Thread SAE J513 - 7/16" 20 UNF

- 42044-10** Depressor packaged in a bag of 10

- 69000-0011-10** 1/4" Copper Gasket packaged in a bag of 10



71551 MANUAL CRIMPER



Manual hose crimper for 2 mm capillary hose



80013 CAPILLARY TUBE CUTTER



Capillary tube cutter for 2 mm capillary hose



44425 CAPILLARY TUBE KIT



All the components necessary to crimp your own capillary hoses housed in Mastercool's nylon backpack.

Kit consists of:

- 50 meters thermoplastic capillary hose (44004-2000)
- Manual crimper (71551)
- Capillary tube cutter (80013)
- Straight crimp fitting with hex nut (50 pieces) (42112-50)
- Depressor (10 pieces) (42044-10)



SHUT-OFF VALVES

Mastercool manufactures a complete line of shut-off valves for containment of refrigerant. EPA requires shut-off valves within 12 inches of the charging hose ends to prevent unnecessary venting of refrigerant. Using shut-off valves is much safer than allowing refrigerant to blow out during service.



90262-R 45° MANUAL SHUT-OFF VALVE SET

>>POPULAR<<



Ball valve design with flexible hose controls refrigerant with a quarter turn of the valve handle. Meets SAE, EPA and UL requirements for containment of refrigerant. One hand operation. Screws onto charging hose end.

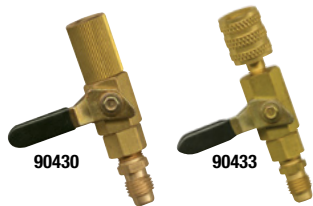
45° Manual Shut-Off Valve Set Includes:

90263-R Blue 1/4" x 1/4"

90264-R Yellow 1/4" x 1/4"

90265-R Red 1/4" x 1/4"

MANUAL SHUT-OFF BALL VALVES



For custom application, Mastercool offers swivel ball valves without the hoses. This valve may be used to add shut-off valves to recycling equipment, manifold sets, flushing equipment, etc.

90430 1/4 x 1/4" Swivel Ball Valve

90433 1/4" x 5/16" Swivel Ball Valve

AUTOMATIC SHUT-OFF VALVES



Valve simply screws onto hose end. Available in straight and 90° models. Meets SAE, EPA and UL requirements for containment of refrigerant.

<< QUICK DISCONNECT : NO LOSS OF REFRIGERANT >>

90333-R 90° 1/4 x 1/4"

90333-UV 90° 1/4" FFL x 13 mm

90335-R Straight 1/4 x 1/4"

CONTROL VALVE



Ideal for use on charged systems. Eliminates refrigerant, oil or dye from spraying during connections.

90328 1/4" FFL x 1/4" MFL

90328-5/16 5/16" FFL x 5/16" MFL

91290 UNIVERSAL VALVE CORE REMOVER



Double ended for easy replacement of standard and GM R12 large bore valve cores.

90376 VALVE CORE REMOVER W/VALVE CORES



Quickly removes valve cores. Storage area includes six replacement access valve cores.

90377 Replacement Standard Valve Cores for 90376 (6 pcs of 0377-001)

91490 STANDARD VALVE CORE REMOVER/INSTALLER



Sturdy ball valve design controls refrigerant flow with 1/4 turn of the valve lever. Lever position also gives visual indication of whether valve is opened or closed.

1490-002 Standard Valve Core Shaft Only (Can be used w/ 91490/91491 body)

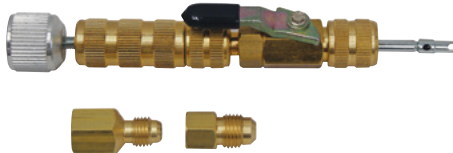
91490-K Replacement Tip & Pin for 91490, 91496 & 91499

91496 VALVE CORE REMOVER/INSTALLER WITH ACCESS PORT



Temporary removal of service valve core eliminates the restriction it creates and provides full flow of refrigerant and vacuum during recovery, evacuation and recharge. You will save valuable service time.

91498 UNIVERSAL VALVE CORE REMOVER/INSTALLER KIT



(for High Pressure Refrigerants) (410A)

Designed with a patented locking mechanism, the 91498 is the only valve core remover kit that has a safety nut allowing the technician to freely access the valve core without fighting high pressures. Packaged in a blow molded carrying case, this kit also offers 5/16" and 1/4" flare fittings for all refrigerant applications. **PATENT# 6,253,436**



91499 SUPERHEAT DETERMINATION SET (HVAC)



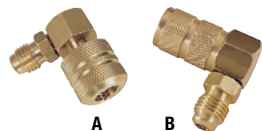
Special valve core remover/installer adapter allows replacement of damaged or faulty service valve cores without recharging the system. Valve replacement no longer requires time consuming refrigerant recovery. Calculation of superheat with excellent accuracy by reading refrigerant temperature and pressure from the same location in the system.

CHARGING ADAPTERS, REPLACEMENT GASKETS & DEPRESSORS

* Includes Access Valve Core (0377-001) – (90-110 PSI Opening)

** Includes Check Valve Core (0332-002) – (8-12 PSI Opening)

90° ADAPTERS



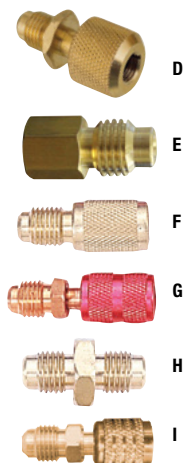
		REPLACEMENT	GASKET/O-RING	DEPRESSOR
A	90333-R	Shut-Off Valve 1/4" MFL x 1/4" FFL	90336	-
B	90314*	1/4" MFL x 1/4" FFL with Valve Core	42010	42014
B	90354*	1/4" MFL x 3/16" FFL (High Side) GM 1976 & Later	90369	90368

45° ADAPTERS



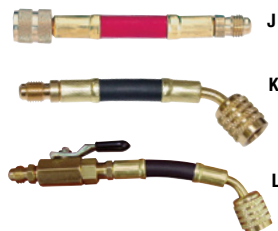
		REPLACEMENT	GASKET/O-RING	DEPRESSOR
C	90924	1/4" MFL x 1/4" FFL	42010	42014
C	90927*	1/4" MFL x 3/16" FFL (High-Side)	90369	90368

STRAIGHT ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
D	90335-R	Shut-Off Valve 1/4" MFL x 1/4" FFL	90336	-
E	82634*	1/4" FFL x 1/2" ACME-M	90331	-
E	82634-M	1/4" FFL x 1/2" ACME-M without Valve Core	-	-
F	90358*	1/4" MFL x 3/16" FFL (High-Side)	42010	42014
G	90274	1/4" MFL x 1/4" FFL Swivel	42010	42014
G	90332**	1/4" MFL x 1/4" FFL Anti-Blowback Fitting	42010	42014
G	90357	1/4" MFL x 3/16" FFL (High-Side) Swivel	90369	90368
H	90633	1/4" MFL x 1/4" MFL Union	-	-
H	82633	1/2" ACME-M x 1/2" ACME-M Union	-	-
I	90413	Convert 1/4 to 5/16 SAE (1/2-20 UNF) Swivel Female Nut with Depressor	-	-

FLEX ADAPTERS



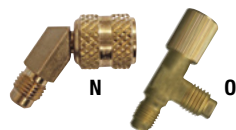
		REPLACEMENT	GASKET/O-RING	DEPRESSOR
J	90356*	1/4" MFL x 1/4" FFL	42010	42014
K	90410	Convert 1/4 SAE Hose into 5/16 SAE, 1/2-20 UNF Swivel Connection for R410A	-	-
L	90411	Flex Adapter with Ball Valve - convert 1/4 SAE hose into 5/16 SAE, 1/2-20 UNF swivel connection for R410A	-	-

ACCESS SERVICE TOOLS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
M	90296*	1/4" MFL x 1/8" NPT	-	-
M	80296*	1/2" ACME-M x 1/8" NPT	-	-

SWIVEL ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
N	90416	R410A 1/4" SAE x 5/16 SAE (1/2" - 20 UNF) Swivel/Angle Adapter Fitting	-	-
O	82031	Vacuum Pump Swivel Adapter - screws onto existing 1/4" flare fitting and converts to 1/4"-FL and 1/2" ACME	-	-

TANK ADAPTER



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
P	90637	3/4-16 x 1/4" FL	90638	-

MALE x MALE CONNECTORS



82735

- 82735** 14 mm-M x M10 x 1.5-M Connector
- 82736** 14 mm-M x M12 x 1.75-M Connector
- 82738** 14 mm-M x 3/8" FL-M Connector
- 83341** O-Ring for 82733, 82734, 82735 and 82736
- 80234** O-Ring for 82634, 82634-M, 90364 and 90365

FEMALE x MALE CONNECTORS



82634

- 82635** 1/2" ACME-F x 1/4" FL (7/16-20")-M R134a Adapter Coupler
- 82733** 14 mm-F x 1/2" ACME-M Connector
- 90364** 1/4" (7/16-20")-F x M10 x 1.5-M Adapter
- 90363** 5/16" (1/2-20 UNF)-F x 1/4" FL-M Connector
- 82634** 1/4" FL-F (7/16-20") x 1/2" ACME-M Connector
- 82634-M** 1/4" FL-F (7/16-20") x 1/2" ACME-M R134a Connector
- 90366** 1/4" SAE FL-F x 5/16" FL-M Connector

99333 "T" FITTING



1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee

HOSE CUTTERS



- 80011** Heavy Duty Ratchet Hose Cutter
Ratcheted action makes this cutter extremely easy to operate resulting in quick, clean cuts. Cutting blade is made of special alloy, heat treated steel for long life. Cuts all rubber hoses and PVC pipe up to 1 1/2" (38 mm) O.D. (Not recommended for PVC200)
- 80111** Replacement Blade for 80011
- 80013** Refrigerant Hose Cutter
Makes quick, clean cuts. Cuts rubber automotive refrigerant hoses up to 1 1/2" O.D.
- 80113** Replacement Blade for 80013

90925 CONDENSER FIN COMB



Cleans and straightens condenser and evaporator fins. Six sided head for 8, 9, 10, 12, 14 and 15 fins per inch applications.

85530 3-IN-1 SIDE MOUNT CAN TAP VALVE



This unique design covers 2 7/8" (R134a), 2 1/2" and 2" (OIL) charge cans. Includes 1/2" ACME-M and 1/4" FL-M ports. Internal safety check valve prevents system back flow.

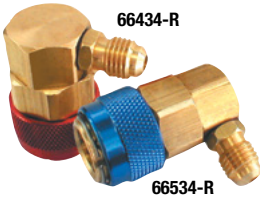
MANUAL COUPLERS



Patented manual couplers adjust easily to R134a service ports with varying dimensions. All metal construction for extra durability. Patented, spring loaded depressor will not damage service valves. Can be removed from service ports regardless of knob position without losing refrigerant. Meets SAE, UL and EPA requirements for containment of refrigerant. Color coded. **PATENT# 5,370,359**

- 82834-E** High Side Manual R134a 1/4" FL-M x 16 mm Quick Coupler >>POPULAR<<
- 82934-E** Low Side Manual R134a 1/4" FL-M x 13 mm Quick Coupler >>POPULAR<<
- 82834** High Side Manual R134a 14 mm-F x 16 mm Quick Coupler
- 82934** Low Side Manual R134a 14 mm-F x 13 mm Quick Coupler
- 82834-3/8** High Side Manual R134a 3/8" FL-M x 16 mm Quick Coupler
- 82934-3/8** Low Side Manual R134a 3/8" FL-M x 13 mm Quick Coupler
- 80034** O-Ring for 16 mm Quick Coupler (10 pcs)
- 80134** O-Ring for 13 mm Quick Coupler (10 pcs)

QUICK COUPLERS



Specially designed to work in the tightest quarters. Attaches to your existing 1/4" FL hoses and snaps easily to A/C service ports.

- 66434-R** High Side R134a 1/4" FL-M x 16 mm Quick Coupler
- 66534-R** Low Side R134a 1/4" FL-M x 13 mm Quick Coupler
- 60034-10** O-Ring for 66434 (10 pcs)
- 60134-10** O-Ring for 66534 (10 pcs)

R1234yf COUPLERS



- Meets SAE J639 & J2888
- All metal construction for extra durability
- Color coded
- Allows recovery of entire refrigerant, including the space between the coupler and fitting

- 83834** High Side R1234yf 12 mm-F x 17 mm Coupler with Extended Disconnect Sleeve
- 83934** Low Side R1234yf 12 mm-F x 14 mm Coupler with Extended Disconnect Sleeve
- 67434** High Side R1234yf 12 mm-F x 17 mm Quick Coupler
- 67534** Low Side R1234yf 12 mm-F x 14 mm Quick Coupler



MEASURE & TEST INSTRUMENTS



THE COMPLETE A/C DIAGNOSTIC TOOL



52251



52270



52280

Mastercool's A/C system analyzer is an all-in one tool that not only calculates critical information for the air conditioning system but also diagnoses basic system problems. The LCD display leads the technician through basic tests making service quicker and less complicated. The A/C system analyzer is able to calculate: actual superheat, subcool, target superheat, temperature split, dry bulb, wet bulb, relative humidity, dew point, air velocity and air flow volume.

The A/C system analyzer easily guides the technician in determining if the refrigerant charge is correct. No calculations or charts are needed. Easily save test results under a customer and technician name and even download the data for future reference.

FEATURES:

- Calculates actual superheat and subcool temperatures for the following refrigerants: R22, R114, R123, R124, R134a, R141B, R142B, R401A, R401B, R404A, R407A, R407B, R407C, R407D, R408A, R409A, R410A, R411A, R411B, R414A, R414B, R417A, R507A
- Provides all the functions of a high-end anemometer: airflow volume, air velocity, dry bulb temperature, wet bulb temperature, relative humidity and dew point
- Save results and download in Excel format for future use
- Optional pressure transducer for direct system readings
- Optional antenna type meter for any hard to reach locations

SPECIFICATIONS:

- Operating temperature: 32 to 122°F (0 to 50°C), humidity <80%
- Storage temperature: -4 to 122°F (-20 to 50°C), humidity <90%
- Dimensions with boot: 191mm x 93 mm x 41 mm
- Weight: (meter w/ batteries & round vane) 1.1 lb (500 g)
- Temperature display: °F and °C
- Pressure display: PSI and Bar
- Back-lit LCD display
- Low battery indicator
- K-type thermocouple connection
- USB connection
- 6 AA batteries

All models available in multiple languages.

Please add the suffix below to the part number for the corresponding languages

- ES : English and Spanish
- EG : English and German
- EF : English and French
- EI : English and Italian
- EP : English and Portuguese



Part #	52251 System Analyzer	52253 Round Vane	52254 Antenna Type Meter (extends to 37")	52336 3 Ft. Clamp-on Thermocouple	52252 Pressure Transducer
SYSTEM ANALYZER KITS in a blow molded plastic box					
52255	✓	✓	-	✓	-
52260	✓	-	✓	✓	-
52270	✓	✓	-	✓	✓
52280	✓	-	✓	✓	✓

52253 ROUND VANE



Temperature Range/Resolution/Accuracy:

- -4 to 140°F (-20 to 60°C)
- 0.2°F (0.1°C)
- ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range -humidity Range/

Resolution/Accuracy:

- 0.1% to 99.9% RH
- 0.1% RH
- ±3% RH (at 77°F (25°C), 10 to 90% RH), ±5% RH at other range

Wind-speed Range/Resolution/Accuracy:

- 0.6 to 32 m/s
- 0.1 m/s
- ±2% of full scale



```

TEMP SPLIT 1
Insert combo gauge to
instrument & place
gauge in return air
by evaporator
DB 75.4°F WB 61.9°F
press ENTER to save
REDO|NEXT| T/S |EXIT

TEMP SPLIT ANALYSIS
Target split 16.2°F
Actual Split 19.6°F
Difference 1.6°F
if diff is over 3°F
(1.7°C) then airflow
is low
| T/S |EXIT
    
```

Just two measurements with the probe will give the target temperature split and actual temperature split across the evaporator and compare the two.

52254 ANTENNA TYPE METER



Temperature Range/Resolution/Accuracy:

- -4 to 140°F (-20 to 60°C)
- 0.2°F (0.1°C)
- ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range

Humidity Range/Resolution/Accuracy:

- 0.1% to 99.9% RH
- 0.1% RH
- ±3% RH (at 25°C (77°F), 10 to 90% RH), ±5% RH at other range

Wind-speed Range/Resolution/Accuracy:

- 0.5 to 25 m/s
- 0.1 m/s
- ±(2% of reading +0.3 m/s)

Probe will measure dry bulb, wet bulb, relative humidity, dew point, air velocity and air volume.

Get target superheat temperature by following screen instructions for two simple measurements with the probe.



```

DB/WB/RH/DP/Air Vel
use combo gauge
DB 75.7°F WB 63.5°F
RH 51.0% DP 56.3°F
VEL 0.0ft/min
for air flow volume
press ENTER
HOLD|MAX| T/S |EXIT

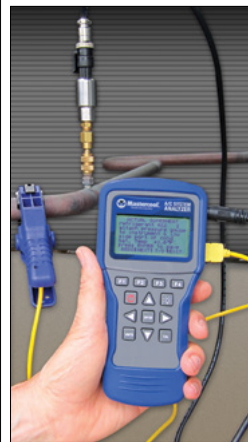
TARGET SUPERHEAT 1
Combo gauge into
instrument & place
gauge in return air
DB 77.7°F
WB 67.8°F
press ENTER to save
REDO|NEXT| T/S |EXIT

TARGET SUPERHEAT 2
Leave combo gauge in
instrument & place
into air flow going
to condenser
DB 81.1°F
press ENTER to save
REDO|NEXT| T/S |EXIT
    
```

52252 PRESSURE TRANSDUCER



- Operating Pressure Range: 0-750 psi (0-52 bar)
- 1/4FL Swivel nut connection
- Accuracy: ±0.5, ±1% F.S.
- Operating Temperature: -40 to 100°C (-40 to 212°F)
- Certification: CE, Explosion-proof D
EMC: EN50081-1/-2: EMS: EN50082-2



```

ACTUAL SUPERHEAT
refrigerant R22 ↓
attach pressure gauge
to instrument & low
side port of cond
Sat. Temp 43.0°F
press ENTER to save
REDO|NEXT| T/S |EXIT

SUPERHEAT ANALYSIS
Actual S.H. 16.9°F
Target S.H. 21.0°F
Difference -4.1°F
if diff is over 5°F
(2.8°C)add,below -5°F
(-2.8°C)remove refrig
| T/S |EXIT
    
```

Pressure transducer and thermocouple will measure saturated temperature and actual temperature, to calculate actual superheat and subcool temperature.

System will compare target and actual superheat.

52336 CLAMP-ON THERMOCOUPLE (extends 3 ft (1 m))



Temperature Range/Resolution

- -40 to 250°F (-40 to 121°C)
- 0.2°F (0.1°C)



52246 COMPACT SUBCOOL/SUPERHEAT CALCULATOR



ACHIEVE SUBCOOL OR SUPERHEAT READINGS IN 3 EASY STEPS...

- 1.) Enter refrigerant
- 2.) Enter pressure from gauges
- 3.) Clamp thermocouple on proper tube

FEATURES:

- Preprogrammed with 37 popular refrigerants
- Clamp-on K-Type thermocouple included to achieve accurate temperature measurement
- View bubble and dew temperature for corresponding pressure on large LCD display
- Easily select superheat or subcool temperature with a touch of a button
- Easily look up saturated temperature using the pressure from any gauge set
- Hold function keeps data on the LCD even when thermocouple is disconnected



SPECIFICATIONS:

- 37 Refrigerants (R22, R32, R114, R123, R124, R134, R134a, R141B, R142B, R290, R401A, R401B, R404A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R411A, R411B, R414A, R414B, R417A, R421A, R422A, R422B, R422C, R422D, R427A, R434A, R437A, R438A, R441A, R507A)
- °F or °C temperature
- Displays bubble, saturated and dew point temperatures
- Pressure displays in Kg/cm², MPa, Bar, PSI (0-600 PSI)

52236 AIRFLOW+PSYCHROMETER



Reads Humidity, Air Temperature, Dew Point, Wet Bulb, Air Velocity, Air Volume & BTU. The sensor is built into the remote fan and is protected by a rotating cap.

FEATURES:

- Auto-off with disabling capability
- Metric & inch unit selection
- Tripod mountable for extended use
- Microprocessor circuitry
- Professional remote vane
- Large back-lit LCD display
- Fast response & accurate reading
- Dew Point & Wet Bulb
- 4 AAA batteries
- Low battery indicator

SPECIFICATIONS:

- *Temperature:* -4 to 140°F (-20 to 60°C)
Accuracy: ±1°F (±0.6°C)
- *Relative Humidity:* 0 to 100% RH
Accuracy: ±3% at 10 to 90% RH (cal. temp.) ±5% at other range
- *Dew Point:* -90 to 158°F (-68 to 70°C)
- *Wet Bulb Temperature:* -7.6 to 158°F (-22 to 70°C)
- *Air Velocity:* 0.3 to 35 m/s (1 to 114 ft/s)
- *Air Volume:* 0 to 99999 m³/s (0 to 99999 cfm)

52237 Data Logger CD & USB Cable for use with 52236 AirFlow+Psychrometer



52230 PEN TYPE HYGROMETER



- Rotating cap to protect sensor
- Temperature and humidity in °F or °C
- Data hold to capture readings
- LCD digital display
- Max/Min record function
- Auto-off function

SPECIFICATIONS:

- Size: 6.8" x 1.6" x 0.6" (17 x 4 x 1.5 cm)
- Sensor: Electronic capacitance polymer film
- Temp. Range: -4 to 140°F (-20 to 60°C)
- RH Range: 0 to 100%
- Accuracy: ±3% from 10 to 95% RH at 77°F (25°C) / ±1% from other RH range
- Resolution: 0.1°F / 0.1°C / 0.1%
- Storage Temp.: 14 to 140°F (-10 to 60°C) / Storage RH%: <95%
- Battery: (1) CR2032 (Lithium Coin Cell) / Battery life: 100 hrs.

52233 DIGITAL PSYCHROMETER



- Rotating cap to protect sensor
- LCD digital display
- Low battery indicator
- Max/Min record function
- Auto power off with disabling capability
- External temperature probe (optional)
- Data hold to capture readings
- Fast response, accurate reading
- Microprocessor circuitry for reliability

SPECIFICATIONS:

- Temp. Range: -4 to 122°F (-20 to 50°C)
- RH% Range: 0 to 100% RH
- Wet Bulb Range: -6.88 to 122°F (-21.6 to 50.0°C)
- Dew Point Range: -109.7 to 122°F (-78.7 to 50.0°C)
- Ext Temp. Range: -4 to 158°F (-20 to 70°C)
- Accuracy: RH% 3% at 77°F (25°C)/Temp: 1°F (0.6°C)
- Response Time: 60 seconds
- Pocket Size: 0.9" (h) x 1.9" (w) x 7.0" (l) (2 x 5 x 18 cm)
- Power: (2) 1.5V AAA battery

52231 Probe for 52233



52238 DIGITAL SOUND LEVEL METER



- Automatic or manual ranging
- 4 measurement ranges from 40 to 130 dB
- 0.1 dB resolution
- +/- 1.5 dB accuracy
- Select fast or slow response times
- Select A or C weighting
- Maximum hold function
- Record maximum or minimum measurements
- Jacks provide AC analog output

52240 PROFESSIONAL HVAC/R CLAMP METER



- Multi-Function: Frequency count, diode check and alarm
- Current: (AC) 20 mA - 600A
- Voltage: AC 200 mv - 750V / DC 1V-1000V
- Auto power off
- Frequency: 10Hz - 2KHZ
- Ohms: (Resistance) 200m ohm-20K ohm
- Peak data hold
- Unit and sign display



52225-MED MULTI-FUNCTION MEDICAL/SURFACE INFRARED THERMOMETER



- One second measurement provides for a quick response
- Non-contact for hygiene and comfort
- Surface mode to easily monitor an object temperature
- Fever alarm detects a temperature $\geq 99.5^{\circ}\text{F}$ (37.5°C) under forehead mode
- Mute function
- Large LCD with blue LED back-light for dark lit conditions
- 25 sets of measurement conditions for body temperature
- Easily switch between $^{\circ}\text{F}$ and $^{\circ}\text{C}$
- Automatic shut-off after 1 minute to prolong battery life

SPECIFICATIONS:

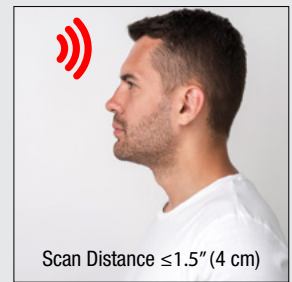
- Temperature measurement range: *Forehead mode:* 93.2 to 108 $^{\circ}\text{F}$ (34 to 42.2 $^{\circ}\text{C}$)
Surface mode: -7.6 to 176 $^{\circ}\text{F}$ (-22 to 80 $^{\circ}\text{C}$)
- Operating temperature range: 50 to 104 $^{\circ}\text{F}$ (10 to 40 $^{\circ}\text{C}$), 15% to 85% RH
- Storage temperature range: Stored at room temperature between -4 to 122 $^{\circ}\text{F}$ (-20 to 50 $^{\circ}\text{C}$), RH \leq 85%; transportation temperature shall be less than 158 $^{\circ}\text{F}$ (70 $^{\circ}\text{C}$), RH \leq 95%
- Atmospheric pressure: 800 to 1013 hPa
- Accuracy: *Forehead mode:* $\pm 0.4^{\circ}\text{F}$ (0.2 $^{\circ}\text{C}$) within 95 to 107.6 $^{\circ}\text{F}$ (35 to 42 $^{\circ}\text{C}$) (ambient temp: 59 to 95 $^{\circ}\text{F}$ (15 to 35 $^{\circ}\text{C}$), $\pm 0.5^{\circ}\text{F}$ (0.3 $^{\circ}\text{C}$) for other range
Surface mode: $\pm 0.5^{\circ}\text{F}$ (0.3 $^{\circ}\text{C}$) within 71.6 to 108 $^{\circ}\text{F}$ (22 to 42.2 $^{\circ}\text{C}$), others $\pm 4\%$ or $\pm 4^{\circ}\text{F}$ (2 $^{\circ}\text{C}$) whichever is greater
- Battery: AAA x 2 pcs (included)
- Battery life: Around 3,000 continuous readings
- Blue LED back-light: Automatically turned on after measurement and auto off after 5 seconds
- Dimensions: 6.22 x 1.89 x 1.6"
- Weight: 3.5 oz including battery



Surface Mode



Blue LED Back-light



Scan Distance $\leq 1.5"$ (4 cm)

52224-A INFRARED THERMOMETER WITH LASER

>>POPULAR<<



The 52224-A offers laser targeting accuracy, enhanced back-lit LCD display and an expanded temperature range. The compact design is simple to use and easy to store.

SPECIFICATIONS:

- Non-contact temperature range: -58 to 1022 $^{\circ}\text{F}$ (-50 to 550 $^{\circ}\text{C}$)
- Field of view: 12 : 1
- Display illumination: Back-lit LCD color display
- Target indicator: Circular laser spot
- Emissivity: 0.95
- Resolution: 0.1 $^{\circ}\text{F}$ / 0.1 $^{\circ}\text{C}$
- Accuracy: $\pm 4^{\circ}\text{F}$ (2 $^{\circ}\text{C}$) or $\pm 2\%$ of reading
- Response time: 0.5 seconds
- Power off: Automatic after 15 seconds
- Battery life: Approximately 14 hours
- Included accessories: 2 AAA batteries, instruction manual, plastic molded case





52224-CC INFRARED THERMOMETER WITH CIRCULAR LASER



Features both infrared and dual laser technologies.

SPECIFICATIONS:

- Non-contact temperature range: -76 to 1400°F (-60 to 760°C)
- Field of view: 12 : 1
- Display illumination: Back-lit LCD color display
- Target indicator: Circular laser spot
- Emissivity: 0.95
- Resolution: 0.1°F / 0.1°C
- Accuracy: ±4°F (2°C) or ±2% of reading
- Response time: 1 second
- Power off: Automatic after 15 seconds
- Battery life: Approximately 14 hours
- Included accessories: 2 AAA batteries, instruction manual, plastic molded case



52224-D MULTI-LASER INFRARED THERMOMETER



The multi-laser infrared thermometer safely monitors hot, hazardous, or hard to reach materials without contamination or damage to the surface. Simply point at target, pull the trigger, and read the temperature.

SPECIFICATIONS:

- Measurement range: -76 to 1400°F (-60 to 760°C)
- Operating range: 32 to 122°F (0 to 50°C)
- Field of view: 12 : 1
- Display illumination: Back-lit LCD color display
- Target indicator: Eight laser
- Emissivity: 0.95 default – adjustable 0.1 to 1 step .01
- Resolution: 0.1°C/0.1°F at -76 to 999.9 (°C/°F), otherwise 1°C/1°F
- Modes: E, MAX, MIN, DIF, AVG, HAL (high alarm) and LAL (low alarm)
- Accuracy: (Tobj=15 to 35°C, Tamb=25°C): ±1.0°C (1.8°F) (tamb=23 ±3°C): 0 to 760°C: ±2% of reading or 2°C (4°F) whichever is greater -60 to 0°C: ±(2°C+0.05/degree)
- Response time (90%): 1 second
- Battery life: Minimum 9 hrs continuous use with laser
- Included accessories: 2 AAA batteries, instruction manual, plastic molded case



52225-A DUAL TEMP PLUS INFRARED THERMOMETER



3 ft. (1m) Wire Thermocouple Included

Features both infrared and contact thermometer technologies. Includes programmable HI/LO alarms and lock mode to capture temperature readings. The contact function offers a built-in K type jack and wire thermocouple.

SPECIFICATIONS:

- Non-contact temperature range: -76 to 1400°F (-60 to 760°C)
- Thermocouple temperature range: -83 to 1999°F (-64 to 1400°C)
- Field of view: 30 : 1
- Display illumination: Back-lit LCD display
- Target indicator: Single laser spot
- Emissivity: 0.10 (10E) to 1.0 (100E)
- Resolution: 0.1°F / 0.1°C
- Modes: MIN, MAX, DIFF & AVG
- Accuracy: ±4°F (2°C) or ±2% of reading
- Response time: 1 second
- Power off: Automatic after 15 seconds
- Battery life: Approximately 14 hours
- Included accessories: 2 AAA batteries, 1m thermocouple probe, instruction manual, plastic molded case
- Optional accessories: 3 m wire thermocouple probe, piercing penetration, surface and air probe





52234-BT DIGITAL THERMOMETER/HYGROMETER with Bluetooth® Wireless Technology



Mastercool's Digital Thermometer/Hygrometer with Bluetooth® wireless technology works with our Mastercool Connect app to remotely provide dry bulb temperature, wet bulb temperature and relative humidity. Integrated into this unit is a high-performance ceramic antenna which offers maximum Bluetooth® wireless technology range. This digital thermometer/hygrometer will allow for varying the refrigerant charge in a system and seeing in real time how the supply parameters change.

The convenient clip, can easily be attached to a vent louver or register to see results more accurately. The mode key switches between dry bulb, wet bulb and relative humidity while the °C/°F key toggles between fahrenheit and celcius for easy to read calculations.

SPECIFICATIONS:

- Relative humidity (Tamb=73±9°F (23±5°C)): 1~99%, accuracy: ±3% from 20~80%, otherwise ±5%
- Dry bulb temperature (DBT): -4~150°F (-20~65°C), accuracy: ±4.5°F (±2.5°C)
- Wet bulb temperature (WBT): -4~150°F (-20~65°C), accuracy: ±4.5°F (±2.5°C)
- Battery life: 40 hours continuous use, battery shelf life 8 months
- Battery: one CR2032 lithium cell battery
- Dimensions: 2.2 x 2.1 x 1.7" (54.9 x 52.6 x 43 mm)
- Weight: 1.2 oz (35 g)

Specifications for Bluetooth® wireless technology:

- 260' (80m) maximum line-of-sight range
- Bluetooth® 4.2 and 5

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DOWNLOAD OUR APP



52325 THERMAL IMAGING WITH VISIBLE CAMERA

with carry case, micro SD card, CD, USB cord, batteries and instructions



- Fully automatic
- Focus free
- Superior measurement/accuracy
- Micro SD card storage
- Reporting software included

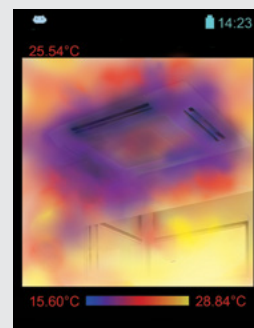
SPECIFICATIONS:

- Thermal image resolution: 32 x 31 pixels
- Visual image resolution: 640 x 480
- Measurement range: -4 to 662°F (-20 to 350°C)
- Accuracy (tamb=20 to 26°C): ±2% of reading, or 4°F (2°C) whichever is greater
- Thermal sensitivity: 0.1°F (0.1°C)
- Frame rate: 9 Hz
- Field of view: 40 x 40 deg
- Emissivity range: 0.95 default – adjustable 0.1 to 1 step 0.1
- Focus: Focus free
- LCD size: 2.8" (71 mm)
- LCD: Color
- Image storage: Stores up to 25,000 images, BMP format (typical 8G micro SD card)
- Memory type: Micro SD card
- Sensor filter: 8 to 14 um
- Interface: USB
- Battery type: 3.6V Li-ion rechargeable battery
- Battery life (with back-lit): 3 hours continuous use
- Dimensions: 3.73 x 2.91 x 9.20 inch

VISIBLE CAMERA:



Visual



Fusion

52226 DUAL TEMP INFRARED/PROBE THERMOMETER



The 52226 dual temp thermometer offers both infrared and contact probe technologies.

- Infrared temperature range: -67 to 428°F (-55 to 220°C)
- Probe temperature range: -67 to 626°F (-55 to 330°C)
- Field of view ratio 1 : 1
- Adjustable emissivity
- Lock mode for hands free scanning
- Minimum/maximum capture mode
- Contact probe locks safely on the side of the unit

52227 POCKET INFRARED THERMOMETER



The 52227 pocket infrared thermometer offers accurate non-contact temperature measurement in a compact and easy to use size.

- Temperature range: -67 to 428°F (-55 to 220°C)
- Field of view ratio 1 : 1
- Adjustable emissivity
- Back-lit LCD display
- Minimum/maximum capture mode



52228 DIGITAL DIFFERENTIAL THERMOMETER



The 52228 digital differential thermometer provides instant measurements of TWO points. (T1, T2) and T1 – T2.

- Max hold function
- Data hold function
- Temperature in °F or °C
- AUX output jacks
- T1 – T2 differential
- Temperature range: -50 to 1999°F (-50 to 1300°C)
- Type K thermocouple input
- Resolution: 1°F (1°C)
- Includes two 3 ft (1m) thermocouple probes

52229 HAND-HELD WATERPROOF DIGITAL THERMOMETER



- Measuring range: -58 to 572°F / -50 to 300°C
- Wide measurement range
- Maximum/minimum temperature memory
- Celsius and fahrenheit exchange
- Data hold function
- High/Low temperature alarm setting
- Key tone for operation confirmation
- Stainless steel probe
- Foldaway stand

POCKET ANALOG DESIGNS



All thermometers include pocket holder and clip.

Item#	Dial Size	Temperature Scale
52220	25 mm	0 to 220°F
52161	35 mm	-40 to 160°F (-40 to 70°C)
91120	44.5 mm	0 to 220°F

POCKET DIGITAL DESIGN

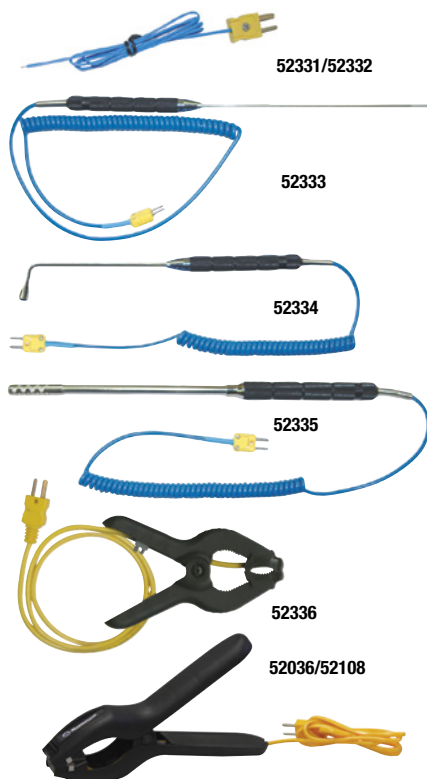


All thermometers include pocket holder and clip.
 Battery operated, (on/off and auto shut-off after 10 minutes)

- $\pm 1^\circ\text{C}$ Accuracy
- 0.1°C Resolution

Item#	Dial Size	Temperature Scale
52223-A	25 mm	-50 to 150°C (-58 to 302°F)

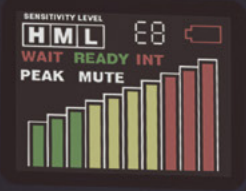
OPTIONAL THERMOCOUPLE PROBES



52331	Wire Probe - 3 ft (1 m)
52332	Wire Probe- 10 ft (3 m)
52333	Piercing Penetration Probe w/coil cord
52334	Surface Probe w/coil cord
52335	Air Probe w/coil cord
52336	Clamp-On Probe - 3 ft (1 m)
52036	NEW Ergonomic Clamp-on K Type Probe (3 ft (1 m)) Mastercool's ergonomic clamp-on K type probe features a spring-loaded jaw for secure grip on pipes up to 1 5/8". The sturdy, hands-free design makes this the ideal tool for superheat/subcooling temperature measurement. This probe can be used on any unit with a type K thermocouple input.
	<ul style="list-style-type: none"> • Maximum Clamp Size: 1 5/8" • Response Time: 3 seconds • Temperature Range: -40 to 250°F (-40 to 121°C) • Resolution: 0.2°F (0.1°C)
52108	NEW Ergonomic Clamp-on K Type Probe (10 ft (3 m))



LEAK DETECTION



VOLUME MUTE PEAK

H.M.L. SENSITIVITY

1.800.561.8187

www.**itm**.com

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THE ONLY LEAK DETECTOR YOU WILL EVER NEED



IntelliSense REFRIGERANT LEAK DETECTOR



- High sensitivity, fast response
- Intelligent tip design senses environmental conditions to eliminate the potential of false alarms
- First progressive color LCD corresponds to the magnitude of the detected leak
- Detects: Combustible Gases, Hydrogen, Refrigerants (all CFC's, HCFC's & HFC's)

<< MEETS AND EXCEEDS J2791 (R134A), J2913 (R1234YF) AND EN 14624 >>

The 55800 leak detector employs a new metal oxide gas sensor for the detection of chlorofluorocarbon gases and blends. This tin oxide sensor is characterized by high sensitivity and a fast response, upon detecting the presence of extremely small levels of chlorofluorocarbon gases. Integrated into the design is a powerful microprocessor that automatically selects the best operating conditions for the sensor, to ensure optimum performance. The optimum sensor performance is maintained and monitored throughout the life of the sensor.

SPECIFICATIONS:

- Sensitivity: HIGH ≥ 0.15 oz/yr (4.25 g/yr) / MEDIUM ≥ 0.25 oz/yr (7 g/yr) / LOW ≥ 0.5 oz/yr (14 g/yr)
* based on optimal laboratory conditions
- Probe: Intelligent tip design that senses the condition of the environment, to eliminate the potential of false alarms. Flexible 16" probe for difficult to reach locations
- Display: Progressive LCD with vertical bars corresponding to the magnitude of the detected leak. Visual indication of the selected sensitivity range
- Refrigerants: Detects all refrigerants (CFC's, HCFC's, & HFC's), unit has been tested and approved to work with R1234yf as well as R32 and R410a
- Sensor life: 2000 hours
- Operating temperature range: 0 to 140°F
- Power: Two (2) D Batteries
- Battery life: 60 hours continuous use
- Weight: 1 lb. 8 oz

"SUPER SENSITIVE FUNCTION" allows the unit further sensitizing beyond the standard settings for locating small leaks with gases such as R1234yf and R407C

LCD FEATURES:

- WAIT: This indication flashes whenever the unit is in the wait mode. This could occur whenever the unit is turned on or interference is detected.
- READY: This indication appears when the unit is ready for use.
- INT: This indication appears whenever the microprocessor detects conditions that are not suitable for reliable leak detection. Excessive wind blowing, blocked probe (no air flow), burned out fan, or a missing or defective sensor that needs to be replaced.
- BATTERY SYMBOL: When the battery symbol becomes illuminated this is an indication that the battery is low and needs to be replaced.
- H - M - L: High, Medium and Low sensitivity ranges will be displayed accordingly based on the selection made on the keypad.
- SIGNAL LEVEL BARS: There are 10 vertical signal level bars on the display corresponding to the level of signal detected by the unit.
- ERROR SIGNALS: E1 through E9 indicates diagnostic signals.

KEYPAD FUNCTIONS:

- ON/OFF: Press the ON/OFF button on the center of the keypad to turn the unit on or off.
- VOLUME/MUTE: Press the VOLUME/MUTE button to control the volume of the unit.
- H M L SENSITIVITY: Press the H M L SENSITIVITY button to select the desired sensitivity level.
- HOLD: Press the HOLD button to freeze the signal bars. Press the HOLD button again to disengage.
- PEAK: Press the PEAK button when multiple leaks are suspected as being present.



LCD Display



Keypad

55800	IntelliSense Refrigerant Leak Detector packaged in a blow molded case with 2 "D" batteries, leak test vial and replacement filters
55800-FILTER	3 Replacement Filters
55800-VL	Leak Test Vial

55850

IntellaSense

REFRIGERANT LEAK DETECTOR KIT



Intella Sense Refrigerant Leak Detector

Kit includes:

- Intella Sense Refrigerant Leak Detector
- Mini UV light (53513-UV)
- UV safety glasses (92398)
- 2 "D" batteries
- Replacement filters (55800-FILTER)
- Leak Test Vial (55800-VL)
- Blow molded case (55800-PB)

55975

IntellaSense III

COMBUSTIBLE GAS LEAK DETECTOR

COMPATIBLE WITH COMBUSTIBLE GASES



Intella Sense III Combustible Gas Leak Detector is packaged in a blow molded case with 2 "C" batteries, leak test vial and replacement filters

SPECIFICATIONS

- Sensing element: heated tin oxide
- Refrigerants: detects all refrigerants
- Battery: 2 "C" alkaline 6000 mAh batteries
- Ultimate sensitivity: 50 – 1000 ppm
** based on optimal laboratory conditions*
- Sensor life: 2000 hours
- Response time: less than 1 second
- Operating temperature range: 0°F to 120°F

PROBE:

- Intelligent tip, with environment sensing element to eliminate the potential of false alarms
- Flexible 15.5 inch probe length for difficult to reach locations

DISPLAY:

Six vertical LED's enabled selectively (red, yellow or green) to display the following information to the user such as:

- The relative signal level of the detected leak
- The selected sensitivity range (low, medium or high) of the unit
- Diagnostic information (low battery, interference/wait, contaminated atmosphere readiness of the unit or fault conditions of the unit)

KEYPAD CONTROLS:

- ON/OFF, volume/mute, sensitivity for high, medium and low level selection, peak when multiple leaks are suspected

DETECTS:

Acetone, Acetylene, Ammonia, Benzene, Butane, Butanol, Chlorine, Ethane, Ethanol, Gasoline, Hexane, Hydrogen, Hydrogen Sulfide, Isobutane, Methane (natural gas), Methanol, Methyl Acetate, Methyl Chloride, Methyl Ether, Naptha, N-Butane, Pentane, Propane, Propanol, Sulfur Dioxide and Trichloroethane



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56100



>>POPULAR<<



The *Raptor Refrigerant Leak Detector* offers state-of-the-art features and micro-processing technology while the design sensor delivers an accurate and instantaneous response. Packaged in a blow molded case with 2 "C" batteries and sensor tip.

FEATURES:

- Digital signal micro processor
- Visual leak level indicator
- Reset function and keypad control
- Sensitivity level adjustment
- Battery test function
- Variable frequency audible alarm
- Meets and exceeds SAE J1627

SPECIFICATIONS:

- 3 levels of sensitivity (5 levels of detection)
- Detects leaks as small as 1/10 oz per year*
*based on optimal laboratory conditions
- Detects all refrigerants (CFC's, HCFC's, HFC's)
- Power: 2 "C" batteries
- Probe: flexible 16" (43 cm)



56200



with UV Blue Light

>>POPULAR<<



The *Raptor Refrigerant Leak Detector with UV Blue Light* offers state-of-the-art features and micro-processing technology while the design sensor delivers an accurate and instantaneous response. An ultra bright UV light is built into the end of the probe allowing for both electronic and UV leak detection of even the toughest leaks. Packaged in a blow molded case with UV glasses, 2 "C" batteries and sensor tip.

FEATURES:

- Digital signal micro processor
- Mute function
- Visual leak level indicator
- Reset function and keypad control
- Battery test function
- Sensitivity level adjustment
- Ultra bright UV/blue LED light
- Variable frequency audible alarm
- Meets and exceeds SAE J1627

SPECIFICATIONS:

- 6 levels of sensitivity (15 levels of detection)
- Detects leaks as small as 1/10 oz per year*
*based on optimal laboratory conditions
- Detects all refrigerants (CFC's, HCFC's, HFC's)
- Power: 2 "C" batteries
- Probe: flexible 16" (43 cm)



COMPLETE ELECTRONIC & UV LEAK DETECTION KITS



The ultimate solution for all your A/C leak detection needs.



56300

56300 Kit includes: 56200 "Raptor" electronic leak detector with UV blue light, UV dye injector w/25 application dye cartridge, dye injector connection hose w/ 1/4" FL adapter, dye cleaner & UV safety glasses, comes in a custom molded carrying case

56400 Kit includes: 56200 "Raptor" electronic leak detector with UV blue light, refillable dye injector, dye injector connection hose w/ 1/4" FL adapter, 2 oz bottle of concentrated universal dye, UV safety glasses & dye cleaner, comes in a custom molded carrying case



55744 ELECTRONIC LEAK DETECTOR FOR R744



Mastercool's Electronic Leak Detector for R744 is the most technologically advanced instrument of its kind. The minimal power requirements, small size and high sensitivity combine to create a tool which is easy to handle and ultra-effective at locating even the most difficult to find leaks.

SPECIFICATIONS:

- Operating temperature: 32 - 122°F (0-50°C)
- Warm up time: 10 seconds
- Response time: < 1 second
- Reset time: < 1 second
- Sensitivity (high): < 400 ppm at 350 ppm ambient
- Sensitivity (low): < 4,000 ppm at 350 ppm ambient
- Sensor lifetime: > 2 years
- Probe length: 12" (30cm)
- Batteries: 4 x 1.5V 'AA' alkaline batteries (6 VDC)
- Battery life: 20 hours
- Dimensions: 20.3 cm x 6.3 cm x 5.7 cm
- Weight: 15 oz (425 grams) with batteries



53518-UV RECHARGEABLE 110 V HIGH INTENSITY LED UV FLASHLIGHT



- AAA battery holder provides backup power to flashlight (3 AAA batteries included)
- Battery life: 3 to 5 hours continuous leak detection
- Includes safety glasses and 110 V charger

SPECIFICATIONS:

- Lamp power: 2W
- 154 – 170 μW/cm² which is compatible to a 50 watt UV flashlight
- UV wavelength: 390-400
- Illumination mode: on-off
- Battery: lithium li-ion, full discharge and cut-off discharge of 4.2V and 2.75V



53513-UV MINI UV FLASHLIGHT (LED)



- High intensity LED bulb - UV illumination
- Easy grip texture
- Aluminum body with anodized finish
- 25,000 hour bulb life
- 3 AAA batteries
- Includes safety glasses
- UV wavelength: 390-400

53515 MACH IV FLEXIBLE UV LIGHT (LED)



The Mach IV flexible UV light has **4 TRUE UV LEDS** delivering a brilliant fluorescent glow.

- Gets into tight areas easily.
- Includes UV enhancing safety glasses

PATENT NO. 6,647,761

53515-B Light bulb

53515-BAT-2 CR2 lithium battery



REFILLABLE UNIVERSAL OIL/DYE INJECTOR



53123-A

To inject the oil or dye, simply connect the injector to the low side of the A/C system and twist the handle until you reach the desired amount.



53322-A

53123 Refillable Universal Dye Injector with auto shut-off valve adapter and 2 oz (60 ml) bottle of concentrated A/C dye (25 Apps)

53123-A Refillable Universal Dye/Oil Injector (w/o dye) with auto shut-off valve adapter

53322 Refillable Dye Injector with 1/4" auto shut-off valve connection and 2 oz (60 ml) bottle of concentrated A/C dye (25 Apps)

53322-A Refillable Dye Injector with 1/4" auto shut-off valve connection (w/o dye)

53223 "CARTRIDGE TYPE" UNIVERSAL DYE INJECTOR



Adding dye with the 53223 is fast and easy, simply connect the injector to the low side of the A/C system and twist the handle to the next application line. The replaceable cartridge provides 25 applications of universal dye that is compatible with all systems. The injector hose comes complete with an auto shut-off valve adapter for 1/4" FL systems.

92376 IN-LINE DYE INJECTOR



Refillable in-line dye injector with 1/4" auto shut-off valve connection. Rugged all metal 2 oz canister.



STANDARD UNIVERSAL ULTRAVIOLET A/C DYES



<used with 53123, 53322, 92376 Injectors>

92699 Standard Universal Dye
Six 1/4 oz (7.5 ml) packs - 1 application

92708 Standard Universal Dye
8 oz (240 ml) ester (POE) oil base bottle - 32 applications

92732 Standard Universal Dye
32 oz (1 L) ester (POE) oil base bottle - 128 applications

CONCENTRATED UNIVERSAL ULTRAVIOLET A/C DYES



<used with 53223 Injector>

53825 Concentrated Universal Dye Cartridge
replaceable cartridge (ester (POE) oil base) - 25 applications

<used with 53123, 53322, 92376 Injectors>

53625 Concentrated Universal Dye
2 oz (60 ml) ester (POE) oil base bottle - 25 applications



- Lubricates system and helps prevent leaks
- Seals small leaks
- Illuminates larger leaks through the use of high quality universal fluorescent dye
- Compatible with all refrigerants and oils
- No need to recover refrigerant during application
- Stops leaks in metal and rubber air conditioner and refrigeration parts including evaporators, o-rings, gaskets and hoses
- Patented delivery system prevents any residual sealant from being left in can



53615 Master Leak Shield HVAC - Up to 1.5 Tons (5.3 kW)
1 oz can of Master Leak Shield HVAC sealant with dye for use on systems up to 1.5 tons

53660 Master Leak Shield HVAC - 1.5 to 6 Tons (5.3 kW to 21 kW)
3 oz can of Master Leak Shield HVAC sealant with dye for use on systems 1.5 to 6 tons



SERVICE ACCESSORIES AND CONSUMABLES



“MASTERCLEANSE” FLUSH MACHINE



Mastercool’s “MASTERCLEANSE” large volume flush machines are designed to flush all HVAC/R and automotive systems. “MASTERCLEANSE” will be commonly used for the removal of all solids and residues caused by breakage of compressor or filters. Designed with durable roll-away wheels and handle, this machine can conveniently move as needed.

FEATURES:

- Stainless steel ball valve controls
- 1/4” SAE connection
- Additional external container connection
- External nitrogen bottle connection
- Pump equipped with mechanical seal and PTFE gasket
- Mechanical filter present at suction side

SPECIFICATIONS:

- Pump flow rate: 4 g/min (16 l/min)
- Pump motor: 300 watts
- Pump horsepower: 110V/60 Hz - 0.4 HP, 220-240V/50/60 Hz - 0.28 HP
- Full load amperage: 110V/60 Hz - 2.4 amps, 220-240V/50/60 Hz - 1.7 amps
- Flush container: 2.6 gal (10 l)
- Hoses: 9 ft (3 m) flexible, clear coiled
- Dimensions: 15” (l) x 16” (w) x 24” (h) / with handle extended 36” (h) (381 mm (l) x 406 mm (w) x 609 mm (h) / with handle extended 914 mm (h))
- Weight: 42 lbs (19 kg)



69900 110 V / 60 Hz

69900-220 220-240 V / 50/60 Hz

A/C FLUSH SOLVENT



91049-32

91049-128

Effectively removes debris and sludge from A/C components.

- Solvent based
- Evaporates quickly
- Leaks no residue

91049-32 32 oz. Flush Solvent

91049-32-6 6 pack - 32 oz. Flush Solvent

91049-128 1 Gallon Flush Solvent

91049-128-4 4 pack - 1 Gallon Flush Solvent



TOTAL A/C QUICK FLUSH



Specific fluid for the inner flushing of air conditioning and refrigeration systems

- 91051** Total A/C Quick Flush Kit
- 91050** 17 oz. Total A/C Quick Flush Can
- 91050-6** 6 Pack - 17 oz. Total A/C Quick Flush Can

NITROGEN PRESSURE REGULATOR



Mastercool's nitrogen regulator is specifically designed to meet the specifications of HVAC/R A/C systems. This single stage nitrogen regulator is used to test systems for leaks when they do not contain refrigerant.

- 1/4" SAE flare outlet port, with control valve, to keep pressure on the regulator at all times
- T-Handle for ease of pressure adjustment
- 63 mm (2 1/2") gauges with guards
- High pressure gauge 4400 psig (300 bar)
- Low pressure gauge 1000 psig (70 bar)

- 53001** Pressure Testing Regulator
CGA580 (US) standard, 1/4 FL-M outlet connection
- 53010** Pressure Testing Regulator Kit
Pressure testing regulator (53001), 38" yellow charging hose (47382), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), blow molded case (53000-PB)

OPTIONAL ACCESSORIES

- 90413** R410a Straight Adapter 1/4" FL-M x 5/16" Swivel-F
- 53042** Leak Testing Adapter
- 53000-42** Leak Testing Gauge
- 53000-70** Low Pressure Regulator Gauge
- 53000-300** High Pressure Regulator Gauge
- 47382** 38" Yellow Charging Hose
- 93254-E** Black Gauge Guard
- 53000-W** Teflon Washer



ACCESSORIES



53314 Dye Remover
4 oz (120 ml)

53315 Service Labels
25 per pack, bright yellow label indicating that the system has been charged with UV Dye

92398 UV Enhancing Safety Glasses
This is a must for protection against ultraviolet light during leak detection

90935 ALUM BOND (6.5 oz package)



A two-component epoxy formula highly concentrated with carefully selected pure aluminum particles, modified curing agents and special high quality additives to provide maximum strength, durability and ease of application. Alum Bond is aluminum filled epoxy specially formulated for repairing condenser coils, tanks, valves, pumps, castings, water jackets, radiators, etc., where non-rusting, non-magnetic aluminum finish is desired.



PHYSICAL PROPERTIES:

- Hardness (Shore, ASTM D 1706): 83D
- Coefficient of thermal expansion: 40×10^{-6} cm/cm^oC
- Compression strength (ASTM D 695): 8600 psi (59 M Pa)
- Tensile strength (ASTM D 638): 3500 psi (24 M Pa)
- Maximum line pressure (after 5 hours application time): 650 psi

BLOWER FANS



This multi-functional product allows equipment to not only work faster but more efficiently while also helping to extend its life.

- 120 Volts, 60 Hz
- For indoor or outdoor use
- 3 speed switch (high, medium, low)
- Built-in overload protection
- (2 pcs) 11 amp built-in grounded receptacles
- Housing material: impact resistant ABS
- 8.5 ft cord length, SJTW 14AWG
- 4-position adjustment feet

1200 CFM BLOWER FAN

- Moves air up to: 1200 CFM
- Rated power: 2.0 Amp
- Unit weight: 15.9 lbs

300 CFM BLOWER FAN

- Moves air up to: 300 CFM
- Rated power: 1.0 Amp
- Unit weight: 11.5 lbs

20300-HTR HEATER ATTACHMENT FOR 300 CFM BLOWER FAN



Mastercool's heater attachment for a 300 CFM blower fan transforms the blower fan into a proficient heater.

- 1320 Watts, 120 Volts
- 11 Amps, 5000 BTU
- Converts blower into a heater
- Clips securely onto the front of the blower and plugs into one of the outlets on the side of the blower
- 16 AWG SJT cord, grounded plug



Masteron
Special Class 2

TUBE & HOSE FORMING

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HYDRA-SWAGE



71600-A



71650-A



Fabricates and expands copper, aluminum and soft steel tubing using hydraulic power. **PATENT# 6,619,099**

71600-A TUBE EXPANDING TOOL KIT (7 HEAD KIT) consists of expander heads 3/8, 1/2, 5/8, 3/4, 7/8, 1 and 1 1/8", hydra-swage 71601, adapter and inner-outer reamer

71650-A TUBE EXPANDING TOOL KIT (10 HEAD KIT) consists of expander heads 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 3/8, 1 5/8, and 2 1/8", hydra-swage 71601, adapter and inner-outer reamer

PART#	DESCRIPTION	TUBE O.D.
71601-A	Hydra-Swage	
71601-D	Adapter for 71601	
71685	Inner - Outer Reamer	
71600-PB	Molded Box for 71600, 71600-M & 71650	
71600-03	Expander Head	3/8"
71600-04	Expander Head	1/2"
71600-05	Expander Head	5/8"
71600-06	Expander Head	3/4"
71600-07	Expander Head	7/8"
71600-08	Expander Head	1"
71600-09	Expander Head	1 1/8"
71600-11	Expander Head	1 3/8" (35 mm)
71600-13	Expander Head	1 5/8"
71600-17	Expander Head	2 1/8" (54 mm)

HYDRAULIC FLARING AND EXPANDING



71675

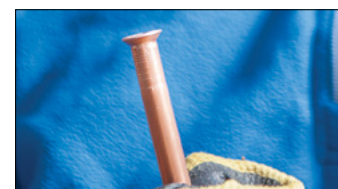
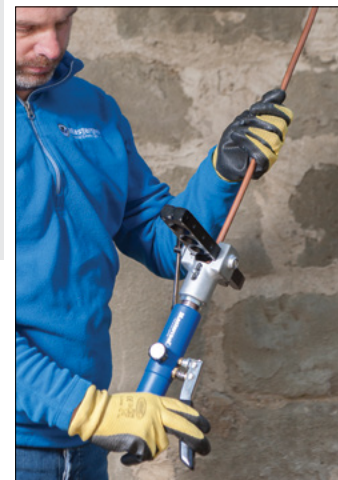


71676

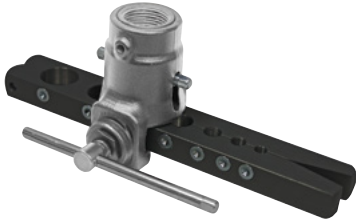
Mastercool introduces the newest members of its hand-held hydraulic line of tubing tools. These new kits are an upgrade to the existing hydra-swage expanding kits, allowing the user to easily make OEM flares with a pump of the handle.

71675 COMPLETE HYDRAULIC FLARING AND EXPANDING KIT (7 HEAD KIT) consists of expander heads 3/8, 1/2, 5/8, 3/4, 7/8, 1 and 1 1/8", hydra-swage 71601, adapter, inner-outer reamer and hydraulic flaring accessory 71680 packaged in a blow molded case

71676 COMPLETE HYDRAULIC FLARING AND EXPANDING KIT (10 HEAD KIT) consists of expander heads 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 3/8, 1 5/8, and 2 1/8", hydra-swage 71601, adapter, inner-outer reamer and hydraulic flaring accessory 71680 packaged in a blow molded case

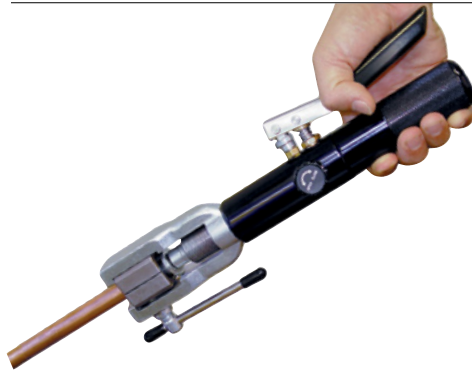


71680 HYDRAULIC FLARING ACCESSORY



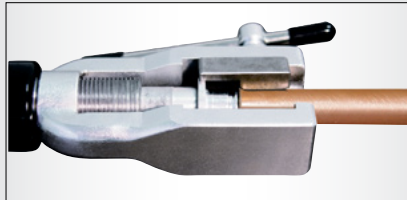
Add the 71680 to your existing Mastercool hydraulic expanding kits to allow for the ability to make OEM flares with a simple pump of the handle.

71700 HYDRAULIC FLARING & SWAGING TOOL



This kit features a hand-held hydraulic press that accurately flares & swages copper tubing. Once the die and adapter are secured in the fixture, a few pumps of the handle and you're done! This tool really takes the work out of swaging and flaring, especially on larger tube sizes. The kit includes dies and adapters for flaring and swaging copper tubing sizes 1/4, 5/16, 3/8, 1/2, 5/8, 3/4 and 7/8." Comes in custom molded carrying case.

PATENT# 5,782,128



The copper tube is secured in the holding fixture by the forming dies. The hydraulic pump pushes in the forming adapter to fabricate the flare or swage.



71700-A	Flaring & Swaging Pump
71700-B	Yoke Assembly
71700-PB	Plastic Molded Box
71700-01	45° Flaring Cone
71700-04	1/4" Swaging Adapter
71700-05	5/16" Swaging Adapter
71700-06	3/8" Swaging Adapter
71700-08	1/2" Swaging Adapter
71700-10	5/8" Swaging Adapter
71700-12	3/4" Swaging Adapter
71700-14	7/8" Swaging Adapter
71700-104	1/4" Die Set
71700-105	5/16" Die Set
71700-106	3/8" Die Set
71700-108	1/2" Die Set
71700-110	5/8" Die Set
71700-112	3/4" Die Set
71700-114	7/8" Die Set
71685	Inner-Outer Reamer
70087	Steel Brush Thread Cleaner



ONLY ECCENTRIC FLARING TOOL ON THE MARKET TO COVER UP TO 7/8"



Make the perfect flare every time.

Keeping with tradition, Mastercool introduces the newest addition to our flaring tool line. This eccentric flaring tool is the only tool on the market to cover up to 7/8" making the job of the HVAC/R technician easier everyday! Its automatic torque release prevents cracking of copper caused by over flaring.

Flares 6 sizes: 1/4, 3/8, 1/2, 5/8, 3/4, 7/8" O.D. Tubing



Railing allows yoke to smoothly travel while keeping the flaring tool and bar aligned



3/8" access drive allows for use with impact wrench

70059 Flares 6 sizes: 1/4, 3/8, 1/2, 5/8, 3/4, 7/8" O.D. tubing

70060 Kit includes: **70059** eccentric flaring tool, **71685** inner-outer reamer, **70033** heavy duty tube cutter for (1/8" – 1 1/8") 4 to 28 mm

ECCENTRIC FLARING TOOLS



<< NEW AND IMPROVED >>

- Aluminum design
- Light weight and durable
- Automatic torque release

70057-A Flares 6 Sizes: 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4" O.D. tubing

70058-A Kit includes: **70057-A** eccentric flaring tool, **71685** inner-outer reamer, **70033** heavy duty tube cutter for (1/8" – 1 1/8") 4 to 28 mm. O.D. tubing (1/4 to 1" nominal)

70051 STANDARD 45° FLARING TOOL

Durable forged steel slip-on yoke. Flaring bar is hardened, highly polished and nickel chrome plated. Auto centering yoke features bearing driven hardened cone for easy flaring. Flares 7 sizes: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. tubing.

70052 SLIDING DIE-BLOCK 45° FLARING TOOL

Uniquely designed flaring cone flares and burnishes in one easy operation. Slide-on yoke is simple to use. Hardened multi-size flaring bar speeds flaring time. Flares and burnishes 6 sizes: 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing.

70056 LARGE CAPACITY 45° FLARING TOOL

Flares large tube sizes. Hard chrome plated, swivel flaring cone makes flaring quick and easy. Flaring bar is hardened and nickel chrome plated. Flares 4 sizes: 5/8", 3/4", 7/8" and 1 1/8" O.D. tubing.



70091 45° FLARING & CUTTING TOOL SET

45° Flaring & Cutting Tool Set includes:

- 70033** Heavy Duty Tube Cutter for 1/8" to 1 1/8"
- 70051** Standard 45° Flaring Tool flares 7 sizes: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. tubing



70092 45° FLARING, DOUBLE FLARING & CUTTING TOOL SET

The 70092 tool set includes a heavy duty tube cutter for 1/8 to 1 1/8" tubing, standard 45° flaring tool flares 7 sizes: 3/16, 1/4, 5/16, 3/8, 7/16, 1/2 and 5/8" O.D. tubing and 5 double flaring adapters for 3/16, 1/4, 5/16, 3/8 and 1/2" O.D.



70093 45° SLIDING DIE-BLOCK FLARING & CUTTING TOOL SET

Includes heavy duty tube cutter (70033) and sliding die-block flaring tool (70052.) Uniquely designed flaring cone flares and burnishes in one easy operation. Slide-on yoke is simple to use. Hardened multi-size flaring bar speeds flaring time.

45° Sliding Die-Block Flaring & Cutting Tool Set includes:

- 70052** 45° Flaring Tool flares and burnishes 6 sizes: 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing
- 70033** Heavy Duty Tube Cutter for 1/8" to 1 1/8" O.D. tubing



70094 WIDE RANGE 45° FLARING & CUTTING TOOL SET

Includes heavy duty tube cutter (70033) and wide range flaring tool (70054) with rugged forged steel slip-on yoke. Flaring bars are hardened, highly polished and nickel chrome plated.

Wide Range 45° Flaring & Cutting Tool Set includes:

- 70054** Flaring Tool flares 9 sizes: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4"
- 70033** Heavy Duty Tube Cutter for 1/8" to 1 1/8" O.D. tubing
- 70082** Ratchet Wrench for 1/4", 3/8", 3/16" and 5/16" O.D. tubing



70053 45° FLARING & SWAGING TOOL SET



Durable forged steel slip-on yoke. Bars are chrome plated, hardened steel. Swages in close quarters where punch style cannot be used. Includes custom molded plastic box.

45° Flaring & Swaging Tool Set includes:

- Two Flaring Bars covering 9 sizes: 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8 and 3/4" O.D. Tubing.
- Five Swaging Adapters covering 7 sizes: 3/16, 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4" O.D. Tubing.

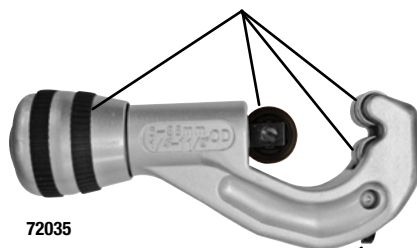


BALL BEARING CUTTERS



72029

Each cutter includes up to 8 ball bearings for easy operation and extra smooth cut.



72035

Includes a detachable swivel deburring tool for smooth surface

Mastercool's ball bearing tube cutters offer the latest "reduced friction" technology! Our reduced friction design incorporates ball bearings into the cutter wheel, tube rollers and a control knob. Reducing the resistance in these high friction areas allows the cutter to roll fast and easy as it slices through the tube. The "reduced friction" design is sure to save time and reduce fatigue!



COMPARE



Standard steel cutting wheel used on competing cutters



Re-enforced steel cutting wheel with internal ball bearings for extra smooth cut



- 72029** "Reduced Friction" Tube Cutter for 1/8 to 1 1/8" (3-28 mm)
- 72035** "Reduced Friction" Tube Cutter for 1/4 to 1 1/2" (6-38 mm)
- 72030** Replacement Cutting Wheel for 72029
- 72034** Replacement Cutting Wheel for 72035

TUBE CUTTERS



70027



70029



70033



70037

- Mastercool tube cutters are lightweight yet durable.
- Carbide steel cutting wheels work with hard and soft copper, aluminum, brass, thin wall steel and stainless steel.
- All cutters feature rollers with flare cut-off grooves to salvage as much old tubing material as possible.

- 70027** Mini Tube Cutter for 1/8 to 5/8" (3-16 mm) O.D. tubing (1/8 to 1/2" nominal)
- 70029** Mini Tube Cutter for 3/8 to 1 1/8" (4-28 mm) O.D. tubing (1/4 to 1" nominal)
- 70033** Heavy Duty Tube Cutter for 1/8 to 1 1/8" (4-28 mm) O.D. tubing (1/4 to 1" nominal)
- 70035** Heavy Duty Tube Cutter for 1/4 to 1 5/8" (6-40 mm) (1/4 to 1 1/2" nominal)
- 70037** Sliding Ratchet Tube Cutter for 1/4 to 2 5/8" (6-67 mm) O.D. tubing (1/4 to 2 3/4" nominal), triple chrome plated
- 70038** Sliding Ratchet Tube Cutter for 1/4 to 3 1/2" (6-89 mm) O.D. tubing (1/4 to 3" nominal)

TUBE CUTTER KIT



- 70090** contains:
70027 Mini tube cutter for 1/8" to 5/8" O.D. tubing (1/8" to 1/2" nominal)
70029 Midi tube cutter for 3/8" to 1 1/8" O.D. tubing (1/4" to 1" nominal)
70033 Heavy duty tube cutter for 1/8" to 1 1/8" O.D. tubing (1/4" to 1" nominal)

- 70090-A** contains:
70027 Mini tube cutter for 1/8" to 5/8" O.D. tubing (1/8" to 1/2" nominal)
70029 Midi tube cutter for 3/8" to 1 1/8" O.D. tubing (1/4" to 1" nominal)
70033 Heavy duty tube cutter for 1/8" to 1 1/8" O.D. tubing (1/4" to 1" nominal)
70037 Heavy duty tube cutter for 1/4" to 2 5/8" O.D. tubing (1/4" to 2 3/4" nominal)

RATCHET STYLE TUBE CUTTER



When you don't have swing room, ratchet action allows cutting all the way around the tubing easy.

- 70030** (1/4 to 7/8" O.D. tubing)
70031 (5/16 to 1 1/8" O.D. tubing)

70025 CAPILLARY TUBE CUTTER



Cuts all sizes of capillary tubes without collapsing the tube.

80021 PLUMBERS TYPE MINI CUTTER



Designed for applications with limited working space. Cuts soft copper, aluminum and thin wall steel tubing. Tube cutter for 1/8 to 7/8" (4-22 mm) O.D. tubing. (1/8 to 3/4" nom.)

- 80121** Spare Cutting Wheel for 80021

REPLACEMENT CUTTER WHEELS



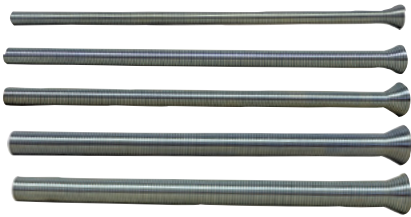
- 70028** Replacement Cutting Wheels for 70027 (10 pcs)
70034 Replacement Cutting Wheels for 70029, 70030, 70031, 70033, 70035 (10 pcs + 1 holding screw)
70128 Carbide Cutting Wheel & Screw Set for 70027 includes: 2 spare cutting wheels and 1 holding screw
70134 Carbide Cutting Wheel and Screw Set for 70029, 70035. Includes: 2 spare cutting wheels and 1 holding screw
70138 Replacement Cutting Wheel for 70038 (1 per pkg.) Cut hard and soft copper, aluminum, brass, thin wall steel and stainless steel
70233 Tube Constrictor Wheel used with 70033 and 70035
70237 PVC Cutting Wheel for 70037. Cuts PVC and ABS
70238 Oversize PVC Cutting Wheel for 70038. Wheel is 1 5/8" diameter. Cuts PVC and ABS

70069-A 4-IN-1 LEVER STYLE TUBE BENDER



Complete 180° bend all metal multi-purpose tube bender for 3/16, 1/4, 5/16 and 3/8" O.D. tubing.

SPRING STYLE TUBE BENDERS



Economical and effective tools for bending soft copper or aluminum tubing without kinks. Special nickel plated, spring steel is flared on one end for quick tube insertion. Each tool bends one size.

MODEL#	SIZE	LENGTH
70071	1/4"	10"
70072	5/16"	10"
70073	3/8"	10"
70074	1/2"	12"
70075	5/8"	14"
70077	3/4"	14"

70076 SPRING STYLE TUBE BENDER SET



Set of 5 spring benders for 1/4, 5/16, 3/8, 1/2 and 5/8" O.D. tubing.

LEVER STYLE TUBE BENDERS



70061



70066

Open side design slips over tube at any point. Makes smooth short radius bends up to 180° with minimum effort. Calibrated to show angle of bend. Easy 90° start requires much less effort to make fast and accurate bends. Each tool bends one size.



MODEL #	OUTSIDE DIAMETER OF TUBING	NOMINAL SIZE	RADIUS TO CENTER OF TUBE
70061	1/4"	1/8"	9/16"
70062	5/16"	-	11/16"
70063	3/8"	1/4"	15/16"
70064	1/2"	3/8"	1 1/2"
70065	5/8"	1/2"	2 1/4"
70066	3/4"	5/8"	3"
70067	7/8"	3/4"	3"

70070 “Ratchet Style” TUBE BENDER KIT - 5 SIZES



- Hand-operated ratchet design bends tubes easily
- Bends 5 sizes: 3/8, 1/2, 5/8, 3/4 and 7/8” O.D. soft tubing
- Includes heavy duty tube cutter for 1/8 to 1 1/8” O.D. tubing
- Includes inner-outer reamer for 3/16 to 1 1/2” O.D. tubing
- Comes in custom molded case



70070-RD REVERSE DIRECTION BENDING ADAPTER



Bends: 1/4”, 5/16”, 3/8”, 1/2”, 5/8”, 3/4”, 7/8” O.D. tubing



PUNCH-TYPE SWAGING TOOLS



Enlarge one end of copper tubing to accept piece of original size tubing then solder together like a fitting. Tools are heat treated for durability.

- 70040** All-in-one swaging punch nickel-chrome finish. Swages 1/4, 5/16, 3/8, 1/2 and 5/8”
- 70048** Set of 5 swaging punches for 1/4, 5/16, 3/8, 1/2 and 5/8” O.D.
- 70049** Flaring bar and set of 5 punches for 1/4, 5/16, 3/8, 1/2 and 5/8” O.D. all in case

MODEL#	SIZE	LENGTH
70041	1/4”	1/8”
70042	5/16”	–
70043	3/8”	1/4”
70044	1/2”	3/8”
70045	5/8”	1/2”
70046	3/4”	5/8”
70047	7/8”	3/4”

70078 TORQUE WRENCH



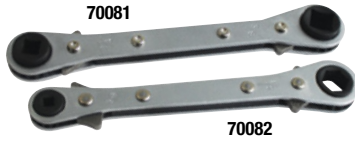
Ensures accurate tightness of fittings, especially R410A. Kit in a blow molded case includes sizes: 17, 22, 24, 26, 27 and 29 mm.

Optional Wrench Sizes Available:

70078-19	19 mm	70078-28	28 mm
70078-25	25 mm	70078-32	32 mm



RATCHET WRENCHES



70081 Steel Forged Wrench with Reversible Ratchet.
9/16", 1/2" hex, 1/4" and 3/16" square.

70082 Compact Chrome Satin Wrench specially designed for use in hard to reach places. 1/4, 3/8, 3/16 and 5/16" square ratchet.

70088 1/4" TUBE PIERCING PLIER



70088-TIP Replacement Tip for 70088

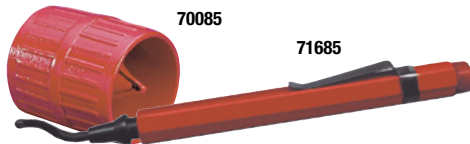
70083 PINCH-OFF PLIER



Specially designed for the refrigeration industry. Pinches off and locks on copper tubing.

- Size: Throat 7"
- Depth 1"
- Jaw thickness 1/4"

INNER-OUTER REAMERS



70085 Inner/Outer Reamer for 3/16 to 1 1/2" O.D. tubing

71685 Inner/Outer Reamer
Designed to remove inner burrs easily. Full metal grip. Includes one spare tungsten blade for long use

71686-2 Two Spare Blades for 71685 (2 pcs)

70200-MSK MINI-SPLIT TOOL KIT



Consists of:

- MC-BACKPACK** Mastercool Backpack
- 59661-G** 2 Way Ball Valve Manifold Gauge Set
- 70078** Torque Wrench
- 90413** Straight Adapter Fittings (2 pcs)
- 70058-A** Eccentric Flaring Tool Kit
- 91498** Universal Valve Core Remover/Installer Kit

TUBING TOOL SELECTION CHART

+ Tubing should be torch annealed before flaring.

		TYPES OF TUBING												
		COPPER							STEEL		STAINLESS			
		Annealed (Soft) Gen. Purpose	Type K		Type L			Annealed Aluminum (Soft)	Annealed Brass (Soft)	S.A.E. 1010 (Soft)	Brazed-Bundy GM	Annealed Soft	1/8 Hard	Titanium
Type of Tool	Size Range Tube O.D.		Soft	Hard	Soft	Soft	Type M							
Tube Cutters														
70027	1/8 - 5/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
70029	3/8 - 1 1/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
70033	1/8 - 1 1/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
70035	1/4 - 1 5/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
70039	3/8 - 2 5/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
72029	1/8 - 1 1/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
72035	1/4 - 1 1/2"	*	*	*	*	*	*	*	*	*	*	*	*	*
45° Flaring & Expanding Tools														
70051	3/16 - 5/8"	*	*		*		+	*	*					
70052	3/16 - 5/8"	*	*		*		+	*	*					
70053	1/8 - 3/4"	*	*		*		+	*	*					
70054	1/8 - 3/4"	*	*		*		+	*	*					
70056	5/8 - 1 1/8"	*	*		*		+	*	*					
71600	3/8 - 1 1/8"	*	*		*		+	*	*					
71650	3/8 - 2 1/8 "	*	*		*		+	*	*					
71700	1/4 - 7/8"	*	*		*		+	*	*					
45° Double Flaring Tool 70092 3/16 - 1/2"														
Reaming and Deburring Tools														
70085	3/16 - 1 1/2"	*	*	*	*	*	*	*	*					
71685		*	*	*	*	*	*	*	*					
Bending Tools														
70061-70069	1/4 - 7/8"	*	*		*			*	*	*	*	*		
70071 - 70077	1/4 - 3/4"	*	*		*			*	*					
70070	3/8 - 7/8"	*	*		*			*	*	*	*	*		
70080	3/8 - 1 1/8"	*	*		*			*	*	*	*	*		
Tube Constrictor 70233 1/8 - 1 5/8"														
Swaging Tools 70040 - 70049 1/4 - 7/8"														
		+	+		+			+	+					



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