

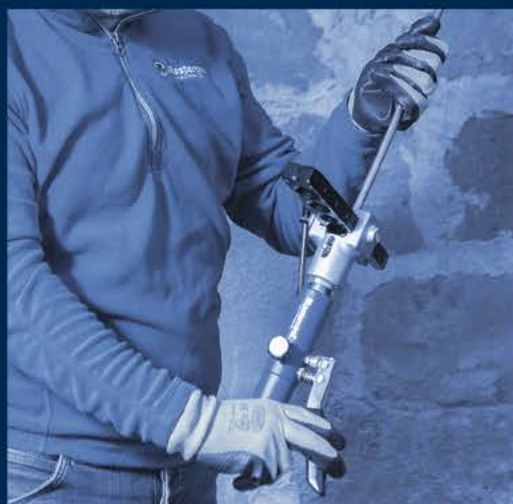


AIR CONDITIONING, REFRIGERATION, SERVICE TOOLS & EQUIPMENT



Mastercool[®] Inc.

"World Class Quality"



HVAC/R



For over 30 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:

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Corporate Office
Manufacturing and USA Warehouse



European Sales Office and Warehouse



Brazil Sales Office and Warehouse








Australian Sales Office





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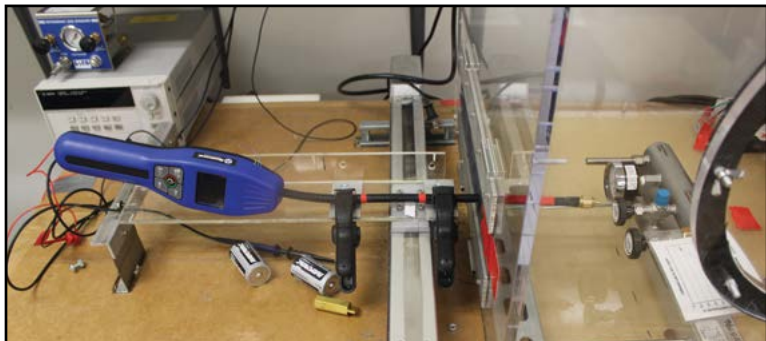
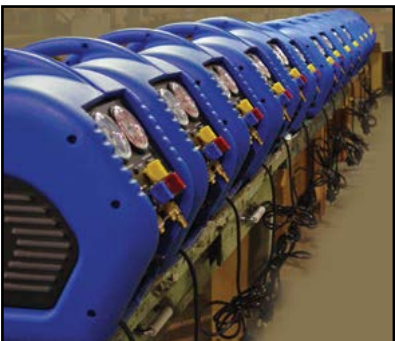
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MASTERCool PRODUCTS ARE
MADE/ASSEMBLED IN THE USA



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 and EU Directives.



CHARGING & RECOVERY EQUIPMENT



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

TWIN TURBO
REFRIGERANT RECOVERY MACHINE



69300

Mastercool's newest 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 new 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
- For use with all refrigerants including R410A
- 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

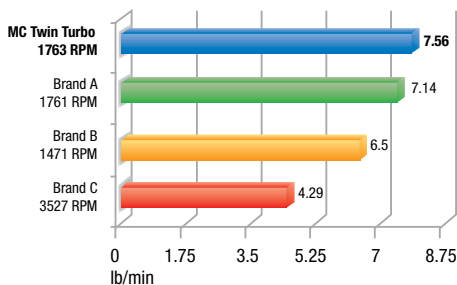
- Operating Temperature: 32 to 122°F / 0 to 50°C
- Weight: 28.3 lbs / 12.8 kg
- Dimensions: 18" (l) x 10" (w) x 14" (h)
(457 mm (l) x 254 mm (w) x 356 mm (h))
- Case Material is HDPE (High Density Polyethylene)
- Compatible refrigerants: All CFC, HCFC, and HFC's



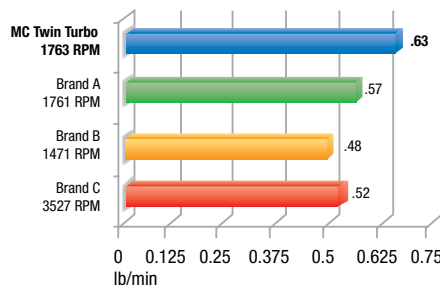
69300

115 V - 60 Hz

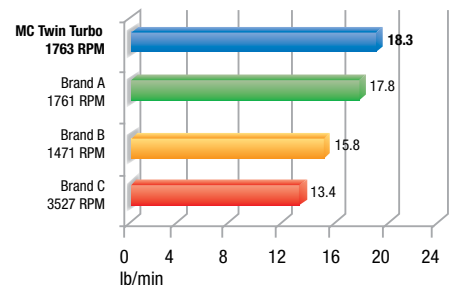
Liquid Recovery (ln) lb/min
• Temperature: 79 to 82°F / Refrigerant: R22



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



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



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TWIN TURBO REFRIGERANT RECOVERY MACHINE



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

69370 115 V - 60 Hz

Spark Free **COMBUSTIBLE GAS RECOVERY MACHINE**



COMPATIBLE WITH COMBUSTIBLE GASES



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

- Compatible with all CFC, HCFC and HFC's

69395 115 V - 60 Hz
Spark Free Combustible Gas Recovery Machine

mini TWINTURBO
REFRIGERANT RECOVERY MACHINE



COMPATIBLE WITH COMBUSTIBLE GASES



Mastercool introduces the new "Mini Twin" all in one recovery machine. Equipped with the same high quality twin piston compressor as the Twin Turbo series this unit 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)
- 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

REFRIGERANT RECOVERY SYSTEM



69000

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
- Automatic low pressure Cut-Off Switch
- Safety high pressure Cut-Off Switch
- High volume cooling fan design
- Liquid compatible head-valve system
- 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



69115

69000 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

69115 115 V - 60 Hz

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 controls the flow smoothly and quickly with only 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
- Length: 15" (38 cm)
- Width: 4" (10 cm)
- Height: 17" (43 cm)
- Weight: 12.25 lbs (5.5 kg)
- Includes hoses



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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
- Available in 5 and 7.5 CFM
- Includes set of 72" hoses

VACUUM PUMP	5 CFM	7.5 CFM
MANIFOLD	110 V	110 V
2 Way Alum Block	91585	91587
4 Way Alum Block	91586	91588



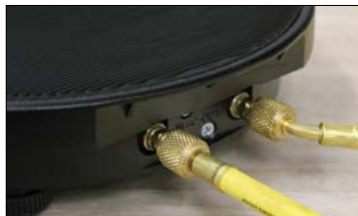
SINGLE STAGE PORTABLE ELECTRONIC CHARGING STATION

- 2 1/2" gauges
- Deep micron, rotary vane vacuum pumps
- Available in 1.8, 3 and 6 CFM

91580-A	91580-B	91585-B
R134a 2-Way Manifold		
1.8 CFM Single Stage Vacuum Pump	3 CFM Single Stage Vacuum Pump	6 CFM Single Stage Vacuum Pump
Electronic Charging Scale		
Manual Couplers		
Set of Hoses		

98310 WIRELESS REFRIGERANT CHARGING SCALE

98315 WIRELESS REFRIGERANT CHARGING SCALE WITH SOLENOID



98315 with solenoid



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

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: $[\pm 0.01 \text{ lb} / \pm 0.005 \text{ kg}]$ or 0.1% of reading whichever is greater
- Resolution: 0.02 lb / 0.01 kg
- Automatic Shut-Off: After 20 minutes
- 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



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



98210-A ACCU-CHARGE II



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: 240 lbs (110 kg)
- Accuracy: $\pm 0.01 \text{ kg}$
 $\pm 0.16 \text{ oz}$
 $\pm 0.01 \text{ lb}$ } or 0.1% of reading
(whichever is greater)
- Resolution: 0.02 lb / 0.01 kg
- 3 hrs Auto Off Function
- Operating Temperature is 32 to 120°F (0 to 49°C)
- Battery Life (approximately 40 hrs)
- Works w/110 Transformer
(part no. 99334-110)
- 9 x 9" (22 x 22 cm) Platform



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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: ± 50 g
- Resolution: 0.05 kg
- 3 hrs AUTO OFF Function
- Operating Temperature is 32 to 120°F (0 to 49°C)
- Battery Life (approximately 40 hrs)
- 9 x 9" (22 x 22 cm) Platform

OIML

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.



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, Automatically turns off its power if the scale is not used within 2 minutes

SPECIFICATIONS:

- Capacity: 176 oz / 5000 g
- Sensitivity: .035 oz / 1 g
- Dimension: 140 (w) x 185 (l) x 35 (h) mm
- Platform Size: 120 mm
- Power Source: 2 x AAA 1.5v battery

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 and 170 psi for R12.
- Quick working 300W heater element
- An excellent complement to all Mastercool Refrigerant Scales

98250

110 V

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

- 1/4" opening for air purge valve
- Valve & Float Switch UL Listed



30 LB. DOT-APPROVED RECOVERY CYLINDERS



- 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



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

100 LB. DOT-APPROVED RECOVERY CYLINDERS



- 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



- 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-W
Connection	1/4" FL-M (7/16-20)
Color	white



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69HVAC **ULTIMA ID™ HVAC REFRIGERANT IDENTIFIER**
69HVAC-P **ULTIMA ID™ HVAC REFRIGERANT IDENTIFIER WITH PRINTER**



The Ultima ID Refrigerant Identifier is the most advanced A/C service tool on the market. Smarter and faster than any refrigerant identifier you've ever used, its compact size and light weight makes testing easier.

Avoid costly cross contamination!

- Contractors can accurately determine the type of refrigerant they are recovering.
- Wholesalers can quickly check contractors' refrigerant and prevent contamination to their bulk reclaim supply.
- Reclaimers can easily pre-screen incoming refrigerant prior to the costly GC process and catch problem refrigerant before it causes damage.

Comes with complete kit: 1/4" Flare sample hose, 110/220VAC Power Adapter, Identifier and accessories housed in a rugged portable case

SPECIFICATIONS:

- Refrigerant: R12, R134a, R22, and HC
- Weight: 8.0 lbs.
- Power requirements: 110/220 VAC via included adapter
- Display: 128 x 64 Pixel Graphing
 - 12-15V DC optional battery pack (Internal)
- Resolution: 0.1%
- Output: Digital display and LEDs
- Operating temperature: 40 to 130°F
- Operating humidity: 0-95% RH non-condensing
- Optional built-in printer

69HVAC-PR Printer roll for 69HVAC-P & 69HVAC-PRO2

69HVAC-PRO2 **ULTIMA ID™ PRO HVAC REFRIGERANT IDENTIFIER**



Diagnostic refrigerant analyzer for multiple HVAC and refrigeration applications

The Ultima ID Pro 2 HVAC/R Refrigerant Analyzer enables fast, accurate testing of refrigerant, reducing the need for costly and time-consuming gas chromatography. Improved accuracy and the ability to test for a wide variety of refrigerants make this an essential tool for pre-screening refrigerant prior to consolidation and reclamation.



FEATURES:

- Oil contamination resistant
- Fast test results
- Internal thermal printer
- Greater accuracy in less time
- Wide refrigerant range
- Refrigerant composition breakdown
- Remote software updates for new refrigerants
- 1/4" flare sample hose
- Vapor or liquid sample analysis

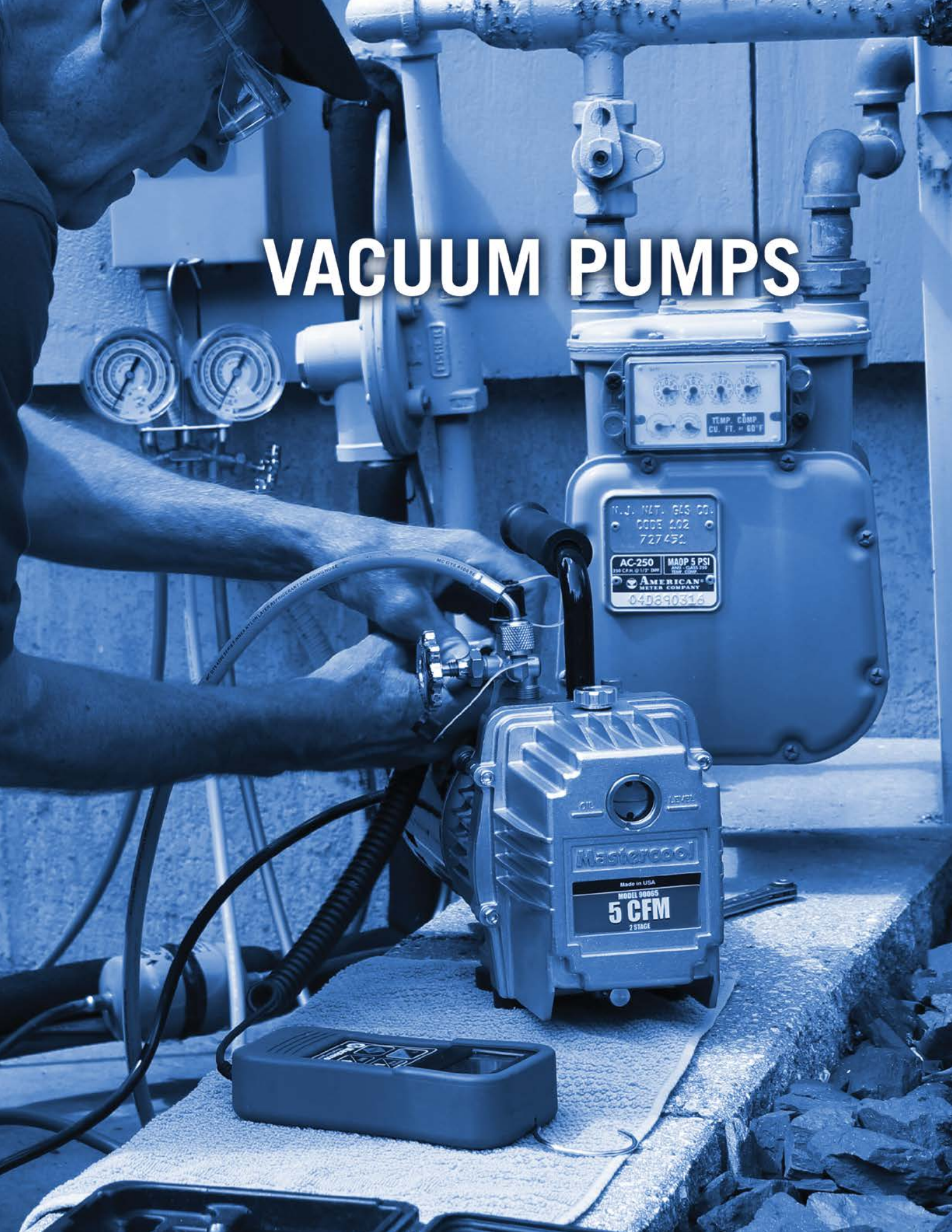
SPECIFICATIONS:

- 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 and Hydrocarbons (HC)
- Weight: Less than 10 Lbs.
- Accuracy: +/- 2% of indicated gasses or better
- Approvals: CE, UL and CUL
- Power Requirements: 12 VDC @ 2A via 110/220 VAC Adapter
- User Interface: Graphic display, soft keys, built in printer
- Sample Gas Extraction: Pressure from cylinder or system
- Temperature Range: 50 to 120°F
- Response Time: Less than 3 minutes
- Humidity: 0-95% RH non-condensing
- Test Sample Size: 5g per test, Test Pressure: 50 psi - 500 psi



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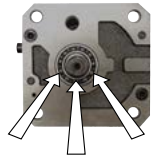
VACUUM PUMPS





2 STAGE ELITE BALL BEARING DESIGN VACUUM PUMPS

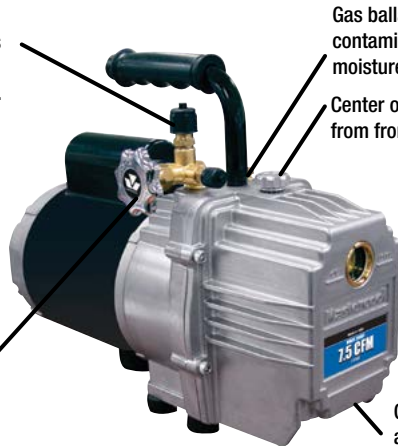
A good quality vacuum pump is an integral tool for complete A/C service. Mastercool vacuum pumps are durable and time tested. They stand up to the most grueling conditions and will provide years of reliable service. Mastercool offers a complete selection of pumps. Regardless of your service requirements,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

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



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



VACUUM PUMPS

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



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2 STAGE DUAL VOLTAGE VACUUM PUMPS

- New 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	110/120 V, 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	110/120 V, 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	110/120 V, 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	110/120 V, 60 HZ
POWER CORD	110 V Cable (US Standard)
WEIGHT	15.88 kg (35 lbs)
DIMENSIONS IN CM	39 x 18 x 27



SINGLE STAGE VACUUM PUMPS

- High volume fan provides cool air motor and pump
- Vapor discharge/oil fill port, easily removable, contains internal check valve to prevent escape of liquid oil
- 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



VACUUM PUMPS

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

*** PLEASE NOTE:**

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

SERVICE INFORMATION

	90065	90067	90063-2V-110-B	90066-2V-110-B	90068-2V-110-B	90612-2V-110-B	90059-B	90066-B
OIL CAPACITY	531 ml / 18 oz	708 ml / 24 oz	250 ml / 8.5 oz	440 ml / 15 oz	570 ml / 19 oz	536 ml / 18 oz	342 ml / 12 oz	536 ml / 18 oz
REPLACEMENT CARTRIDGE	90165-R	90167-R	-	90166-B	90168-B	90112-B	-	-
SEAL SERVICE KIT	90062-11-SEAL	90062-11-SEAL	-	-	-	-	-	-

VACUUM PUMP OIL



90010-6	(Six) - 10 oz bottles (90063-2V-B)
90016-6	(Six) - 16 oz bottles (90059-B)
90018-6	(Six) - 18 oz bottles (90065, 90066-2V-B, 90612-2V-B, 90066-B)
90024-6	(Six) - 24 oz bottles (90067, 90068-2V-B)
90032-6	(Six) - 32 oz bottles
90061-8	(Eight) 8 oz bottles
90128	(Four) - 1 gallon bottles

98061 DIGITAL VACUUM GAUGE

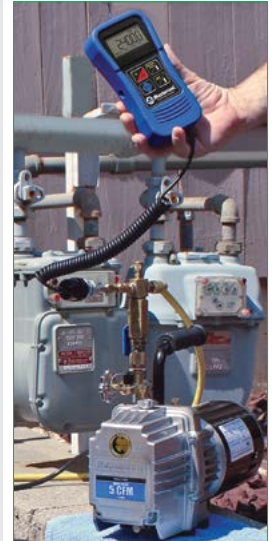


As a professional technician the assurance of a deep vacuum on a system is imperative. The main problem with many small handheld units is their inaccuracy and durability. Although the thermocouple sensor has been proven to be much more accurate and durable than the thermister type, the problem has been 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.



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



Mastercool[®]
"World Class Quality"



MANIFOLDS

THE BEST KEEPS GETTING BETTER.....

Patent Pending

**NOW COMPATIBLE WITH R744 (CO₂)
SENSORS ABLE TO WITHSTAND
PRESSURE UP TO 750 PSI (50 BAR)**



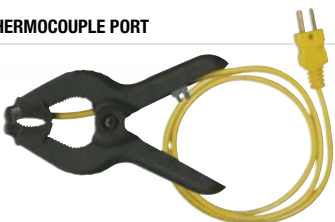
USB CONNECTOR PORT

USB Cable
99903-USB



THERMOCOUPLE PORT

3 ft. Clamp-On
Thermocouple
52336



VACUUM THERMOCOUPLE SENSOR PORT

Vacuum Sensor and
Cable Assembly
98062



99961

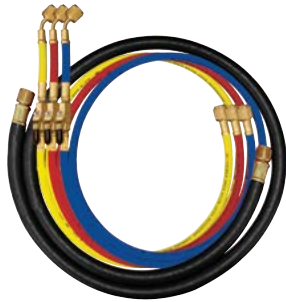
- 99903** 4-Way Digital Manifold only
- 99903-2** Manifold with (2) clamp-on thermocouples in a blow molded case
- 99961** Complete Kit in a blow molded case includes: manifold with a set of 3-60" ball valve hoses with manual shut-off valves and one black vacuum hose, vacuum sensor with cable, clamp-on thermocouple, data logger CD and USB cable
- 99972** Complete Kit in a blow molded case includes: manifold with a set of 3-72" ball valve hoses with manual shut-off valves and one black vacuum hose, vacuum sensor with cable, clamp-on thermocouple, data logger CD and USB cable

OPTIONAL ACCESSORIES

52336	Clamp-on Thermocouple (extends 3 ft)	90411	1/4 x 5/16 R410A Ball Valve Adapter
52337	Clamp-on Thermocouple (extends 10 ft)	99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee
90413	R410A Straight Adapter 1/4 FL-M x 5/16 Swivel-F	99334-110	110 V AC/DC Adapter
98062	Vacuum Sensor and Cable Assembly (6.5 ft)	99903-PBA	Plastic Carrying Case
99332	1/8 NPT x 1/4-FL Flare Swivel Adapter		



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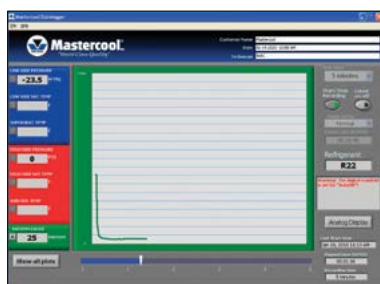
Includes three 1/4" SAE B-R-Y nylon barrier ball valve hoses with manual shut-off valves and one 3/8" SAE black vacuum hose



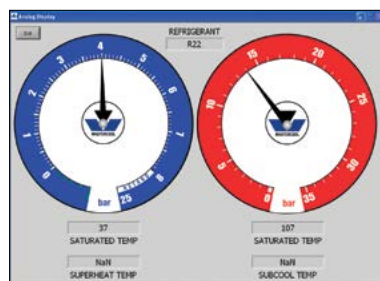
Mastercool Datalogger Application



Temperature/Pressure Screen



Vacuum Screen



Analog Gauge Screen

With the 4-Way Digital Manifold, Mastercool is showing its determination to become the leader in this sector of the industry. Taking the experience gained with the 2-Way Digital Manifold the 4-Way model not only offers a 4-valve option but it also allows for a multitude of interactive PC enhanced functions and the capability of 24 hours of data logging.

- Record and store up to 24 hours of data and up to 15 jobs
- Large Easy to Read LCD
- Displays Pressures, Saturated, Actual, Superheat and Subcool Temperatures
- Over 60 Refrigerants
- Clamp-on Thermocouple Connector displays Actual Temperature and Automatically Calculates Superheat or Subcool Temperature
- Vacuum Sensor Cable displays Deep Vacuum
- Ball valve design includes 3/8" bore through the block for increased flow

SPECIFICATIONS:

- Class 1.0 standard gauge reading
- Pressure Display: PSI, INHg, 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 750 psi (52 Bar, 5 MPa, 52 Kg/cm²) (does not display 0-5 psi)
- 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)
- Connections: 1/4" M-Flare
- Power: 9V DC battery with optional AC/DC adapter
- Battery Life: 30-36 hours pressure and temperature mode only (continuous use)
25-30 hours vacuum or backlight mode (continuous use)
- Auto-Off: 15 min. with disabling capability

EASILY UPDATE REFRIGERANTS:

New refrigerants can be updated with a USB connection and Mastercool Software.

R12, R22, R23, R32, R113, R114, R115, R116, R123, R124, R134, R134a, R141B, R142B, R143, R143A, R290, R401A, R401B, R401C, R402A, R402B, R403A, R403B, R404A, R405A, R406A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R410B, R411A, R411B, R412A, R413A, R414A, R414B, R417A (ISCEON M059), R421A, R422A (ISCEON M079), R422B, R422C, R422D (ISCEON M029), R427A (FX100), R434A, R437A, R438A, R441A, R501, R502, R503, R504, R507A, R508B, R509A, R600, R600A, R601, R601A, R744

MASTERCOOL'S 4-WAY DIGITAL MANIFOLD RECORDING FUNCTION:

- Records and stores data directly into the manifold memory
- Records up to 24 hours of data or 15 jobs before having to download
- Downloads data at a rate 115 kb per second (24 hrs of data = approx. 15 min of download time)
- Uses Mastercool's Data Logger Application to easily view data

MASTERCOOL DATA LOGGER APPLICATION:

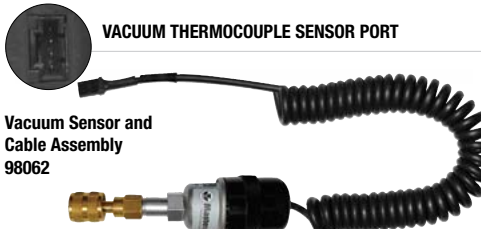
- Display data in "real time" using a USB connection, computer and software
- Platform: Windows 2000, XP, Windows Vista and Windows 7
- Log Customer Name, Date and Technician's Name
- Recorder/Cursor Function Features
 - (1) Recorder TIME command. Record in intervals of 5, 15 min, 1, 4, 8 and 24 hrs.
 - (2) Recorder ON/OFF command.
 - (3) ZOOM: NORMAL, 5X or 10X. Use the zoom option to view specific data points of interest.
 - (4) The Time-Line measures the selected recording time. Moving the cursor along the timeline easily displays specific plot points.
- The Data Logger program uses the Units information (Kg/cm², BAR, Mpa, PSI, °C, and °F) contained in each data bit on the manifold and displays these units on the screen.
- Display Function Features
 - (1) Display ALL command. This enables all parameters of the Digital Manifold to be displayed simultaneously. As the line functions propagate across the screen, the "real-time" data will also be displayed digitally.
 - (2) Monitor specific functions of interest. The Data Logger continues to record all the functions in the background, regardless of how many individual functions are being displayed.
 - (3) Display DEEP VACUUM ONLY command. This enables only the deep vacuum readings to be displayed on the screen.
 - (4) View ANALOG GAUGES function enables the user to represent the Digital Manifold data in the form of high and low pressure analog gauges.



MANIFOLDS

ALL THE INFORMATION YOU NEED IN THE PALM OF YOUR HAND!

Patent Pending



99661-A



99661-A-EU

Model #	Digital Manifold	Hoses	Vacuum Sensor & Cable (98062)	Clamp-On Thermocouple (52336)
99103-A	✓	NA	NA	NA
99103-A-2	✓	NA	NA	✓ (2)
99661-A	✓*	3-60" standard hoses	✓	✓
99661-AR	✓*	3-60" manual shut-off valve hoses	✓	✓
99663-R	✓*	3-60" standard hoses	NA	✓
99663-AR	✓*	3-60" manual shut-off valve hoses	NA	✓
99772-A	✓*	3-72" standard hoses	✓	✓
99772-AR	✓*	3-72" manual shut-off valve hoses	✓	✓
99773-R	✓*	3-72" standard hoses	NA	✓
99773-AR	✓*	3-72" manual shut-off valve hoses	NA	✓

* includes blow molded plastic box

OPTIONAL ACCESSORIES

52336	Clamp-on Thermocouple (extends 3 ft)	90411	1/4 x 5/16 R410A Ball Valve Adapter
52337	Clamp-on Thermocouple (extends 10 ft)	99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee
90413	R410A Straight Adapter 1/4 FL-M x 5/16 Swivel-F	99334-110	110 V AC/DC Adapter
98062	Vacuum Sensor and Cable Assembly (6.5 ft)	99903-PBA	Plastic Carrying Case
99332	1/8 NPT x 1/4-FL Flare Swivel Adapter		



Mastercool®
"World Class Quality"

**NOW COMPATIBLE WITH R744 (CO₂)
SENSORS ABLE TO WITHSTAND
PRESSURE UP TO 750 PSI (50 BAR)**



78 PSI		R	290 PSI	
Saturated Temp.	19 IF	Low	Saturated Temp.	137F High
Sensor Temp.	49F			
Superheat	14 IF			

SUPERHEAT & SUBCOOL CALCULATIONS

Clamp-on thermocouple provides fast and accurate superheat and subcool readings.



Vacuum	120 MICRONS
--------	-------------

PRECISE VACUUM READINGS

Vacuum thermocouple sensor provides accurate vacuum readings.

Mastercool's 2-Way Digital Manifold is the most advanced and user friendly Digital Manifold on the market today! This manifold offers a large easy to read LCD that displays Pressures, Saturated Temperatures, Actual Temperatures, Superheat and Subcooling Temperatures for over 60 refrigerants. When used with the clamp-on thermocouple connector it will display the actual temperature and automatically calculate the superheat or subcool temperature. When the vacuum sensor cable is attached to the manifold it will display deep vacuum. To insure lasting performance and durability the manifold case is constructed of ABS material and protected by a rugged rubber boot. The technician now has a fully functional manifold with the intelligence to quickly access and deliver the accurate information needed *to do the job right!*



INCLUDES THE FOLLOWING REFRIGERANTS:

R12, R22, R23, R32, R113, R114, R115, R116, R123, R124, R134, R134a, R141B, R142B, R143, R143A, R290, R401A, R401B, R401C, R402A, R402B, R403A, R403B, R404A, R405A, R406A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R410B, R411A, R411B, R412A, R413A, R414A, R414B, R417A (ISCEON M059), R421A, R422A (ISCEON M079), R422B, R422C, R422D (ISCEON M029), R427A (FX100), R434A, R437A, R438A, R441A, R501, R502, R503, R504, R507A, R508B, R509A, R600, R600A, R601, R601A, R744

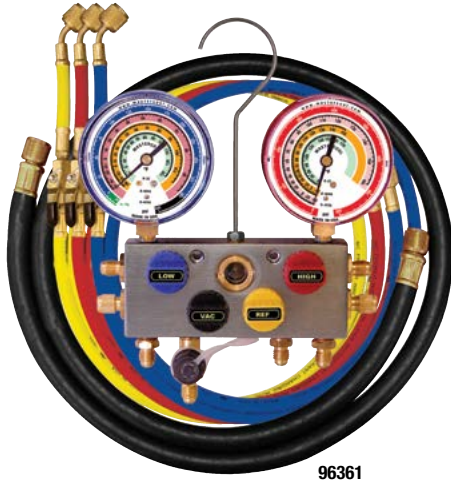
SPECIFICATIONS:

- Class 1.0 standard gauge reading
- Pressure Display: PSI, INHg, 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 750 psi (52 Bar, 5 MPa, 52 Kg/cm²) (does not display 0-5 psi)
- 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)
- Connections: 1/4" M-Flare
- Power: 9V DC battery with optional AC/DC adapter
- Battery Life: 30-36 hours pressure and temperature mode only (continuous use)
25-30 hours vacuum and backlight mode (continuous use)
- Auto-Off: 15 min. with disabling capability

MANIFOLDS

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

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



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 B-R-Y nylon barrier ball valve hoses with manual shut-off valves and one 3/8" SAE Black Vacuum Hose in plastic box.

R410A, R22 & R404A		
HOSE LENGTH	2 1/2" GAUGES (PSI/°F)	3 1/8" GAUGES (PSI/°F)
36"	96236	96336
60"	96261	96361 >>POPULAR<<
72"	96272	96372
R12, R22 & R502		
R404A, R407C, R507A & R134a		
HOSE LENGTH	2 1/2" GAUGES (PSI/°F)	3 1/8" GAUGES (PSI/BAR/°F)
36"	96436-A	96536
60"	96461-A	96561
72"	96472-A	96572

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

4-WAY MANIFOLDS WITH GAUGES ONLY

96203	R410A, R22, & R404A (2 1/2" Gauges)
96303	R410A, R22, & R404A (3 1/8" Gauges)
95103-A	R12, R22 & R502 (2 1/2" Gauges)
96503	R404A, R407A, R507A & R134a (3 1/8") Gauges

REPLACEMENT GAUGES

2 1/2" Gauge Sets

57501	R410A, R22, & R404A (PSI-°F) Low-Side (2 1/2")
57803	R410A, R22, & R404A (PSI-°F) High-Side (2 1/2")
93350	R12, R22, R502 (PSI-°F) Low Side (2 1/2")
93500	R12, R22, R502 (PSI-°F) High Side (2 1/2")

3 1/8" Gauge Sets

58501	R410A, R22, & R404A (PSI-°F) Low-Side (3 1/8")
58803	R410A, R22, & R404A (PSI-°F) High-Side (3 1/8")
54350	R404A, R407A, R507A & R134a (PSI-°F) Low-Side (3 1/8")
54500	R404A, R407A, R507A & R134a (PSI-°F) High-Side (3 1/8")

3/8" SAE REPLACEMENT BLACK HOSE

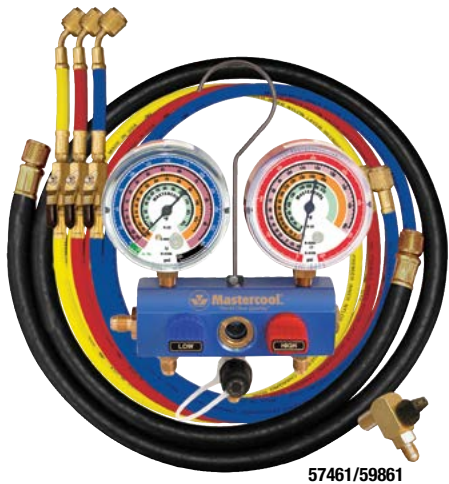


94136	Without Ball Valve (36")
94160	Without Ball Valve (60")
94172	Without Ball Valve (72")
94236	With Ball Valve (36")
94260	With Ball Valve (60")
94272	With Ball Valve (72")



Mastercool[®]
"World Class Quality"

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

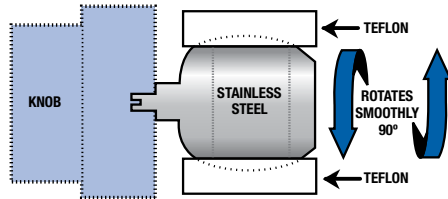


Exclusive 3/8" Ball Valve Design

- 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 ball valve hoses with manual shut-off valves in a plastic box.

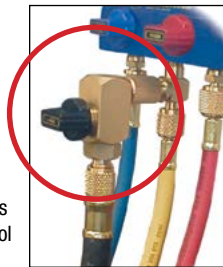
R410A, R22 & R404A BALL VALVE MANIFOLD SET W/ STANDARD 2 1/2" GAUGES

Hose Length	2-Way 3/8" Ball Valve Manifold w/ (3) 1/4" SAE Ball Valve Hoses with Manual Shut-Off Valves	3-Way 3/8" Ball Valve Manifold w/ (3) 1/4" SAE Ball Valve Hoses with Manual Shut-Off Valves, (1) 3/8" SAE Vacuum Hose & 90° Swivel Vacuum Ball Valve
36"	57236	57436
60"	57261	57461
72"	57272	57472



R410A, R22 & R404A BALL VALVE MANIFOLD SET W/ LARGE 3 1/8" GAUGES

Hose Length	2-Way 3/8" Ball Valve Manifold w/ (3) 1/4" SAE Hoses with Manual Ball Valves	3-Way 3/8" Ball Valve Manifold w/ (3) 1/4" SAE Hoses w/Manual Ball Valves, (1) 3/8" SAE Vacuum Hose & 90° Swivel Vacuum Ball Valve
36"	59636	59836
60"	59661	59861 >>POPULAR<<
72"	59672	59872



* 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.

BALL VALVE MANIFOLD WITH GAUGES ONLY

58103	R410A, R22 & R404A (2 1/2" Gauges)
58203	R410A, R22 & R404A (3 1/8" Gauges)

REPLACEMENT GAUGES

2 1/2" Gauge Sets

57501	R410A, R22, & R404A (PSI-°F) Low-Side (2 1/2")
57803	R410A, R22, & R404A (PSI-°F) High-Side (2 1/2")

3 1/8" Gauge Sets

58501	R410A, R22, & R404A (PSI-°F) Low-Side (3 1/8")
58803	R410A, R22, & R404A (PSI-°F) High-Side (3 1/8")

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



Mastercool®
"World Class Quality"

2-WAY ALUMINUM MANIFOLD GAUGE SETS

ALUMINUM R12, R22 & R502 2-WAY MANIFOLD GAUGE SETS WITH HOSES PACKAGED IN CLAMSHELLS



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

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"	93636	95636	96636	97636	92636
60"	93661	95661	96661	97661	92661
72"	93772	95772	96772	97772	92772

ALUMINUM R404A, R407C, R507A & R134a 2-WAY COMMERCIAL MANIFOLD GAUGE SETS W/HOSES PACKAGED IN CLAMSHELLS



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

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

ALUMINUM R22, R404A & R410A 2-WAY MANIFOLD GAUGE SETS W/HOSES PACKAGED IN CLAMSHELLS



Designed for High Pressure R410A. Gauges are 3 1/8" in PSI, °F.

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	57361
72"	57172	57372

2-WAY ALUMINUM MANIFOLDS WITH GAUGES ONLY

93103	R12, R22 & R502 (2 1/2") 1/4" MFL
54103	R404A, R407C, R507A & R134a (3 1/8") 1/4" MFL
57103	R22, R404A & R410A (3 1/8") 1/4" MFL

REPLACEMENT GAUGES

2 1/2" Gauge Sets

93350	R12, R22, R502 (PSI-°F) Low Side (2 1/2")
93500	R12, R22, R502 (PSI-°F) High Side (2 1/2")

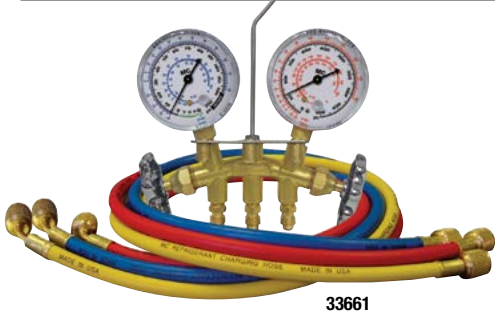
3 1/8" Gauge Sets

58501	R410A, R22, & R404A (PSI-°F) Low-Side (3 1/8")
58803	R410A, R22, & R404A (PSI-°F) High-Side (3 1/8")
54350	R404A, R407A, R507A & R134a (PSI-°F) Low-Side (3 1/8")
54500	R404A, R407A, R507A & R134a (PSI-°F) High-Side (3 1/8")



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"World Class Quality"

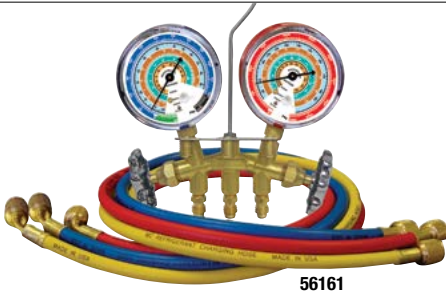
BRASS R12, R22 & R502 2-WAY MANIFOLD GAUGE SETS WITH HOSES PACKAGED IN CLAMSHELLS



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

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

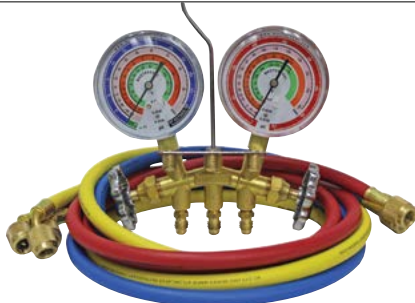
BRASS R404A, R407C, R507A & R134a 2-WAY COMMERCIAL MANIFOLD GAUGE SETS W/HOSES PACKAGED IN CLAMSHELLS



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

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

BRASS R22, R404A & R410A 2-WAY MANIFOLD GAUGE SETS W/HOSES PACKAGED IN CLAMSHELLS



Designed for High Pressure R410A. Gauges are 3 1/8" in PSI, °F.

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

2-WAY BRASS MANIFOLDS WITH GAUGES ONLY

33103	R12, R22 & R502 (2 1/2") 1/4" MFL
56103	R404A, R407C, R507A & R134a (3 1/8") 1/4" MFL
59103	R22, R404A & R410A (3 1/8") 1/4" MFL

REPLACEMENT GAUGES

2 1/2" Gauge Sets

93350	R12, R22, R502 (PSI-°F) Low Side (2 1/2")
93500	R12, R22, R502 (PSI-°F) High Side (2 1/2")

3 1/8" Gauge Sets

58501	R410A, R22, & R404A (PSI-°F) Low-Side (3 1/8")
58803	R410A, R22, & R404A (PSI-°F) High-Side (3 1/8")
54350	R404A, R407A, R507A & R134a (PSI-°F) Low-Side (3 1/8")
54500	R404A, R407A, R507A & R134a (PSI-°F) High-Side (3 1/8")



2-WAY PISTON VALVE MANIFOLD FOR CO2 (R744)

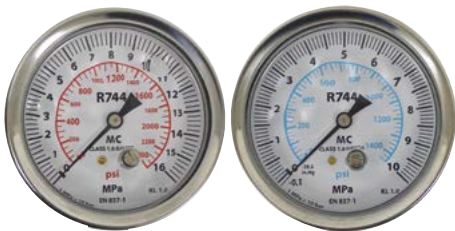


- Our Free Floating Piston Valve results in less wear and tear in comparison to market standard twisting piston valves
- Double O-Ring allows for a much better seal resulting in less leaks
- Oil filled, class 1% (1A), 2 3/4" gauges
- E-Z to read temperature scales on gauge face
- Solid extruded aluminum 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



Gauge class – diameter	1% (1A) - 2 3/4"
Units	PSI/MPa
Refrigerant scales	R744
Gauge p/n (HP/LP)	55102-2400 55102-1400
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

CLASS 1.0 REPLACEMENT GAUGE FOR CO2



High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
55102-2400	55102-1400	2 3/4"	PSI/MPa	R744

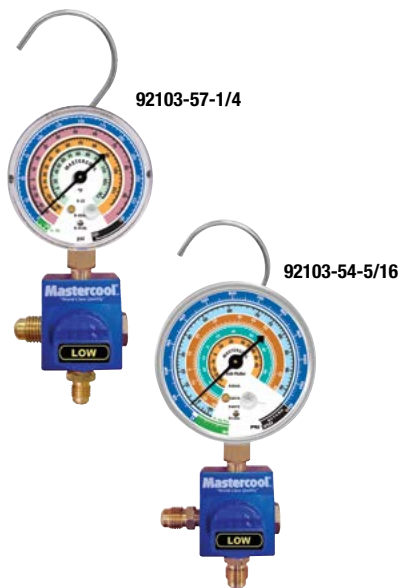
STEEL BRAIDED HOSES FOR CO2



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

SINGLE VALVE MANIFOLDS



(packaged in a clamshell)

1/4" SINGLE VALVE MANIFOLD – BALL VALVE

Single Valve Manifold	Gauge Class Diameter	Unit	Refrigerant Scales	Gauge p/n (HP/LP)
92103-93-1/4	1.6	PSI/°F	R12, R22 & R502	93350
92103-57-1/4	2 1/2"	PSI/°F	R410A, R22 & R404A	57501
92103-54-1/4	1.6	PSI/°F	R404A, R407C, R507A & R134a	54350
92103-58-1/4	3 1/8"	PSI/°F	R410A, R22 & R404A	58501

5/16" SINGLE VALVE MANIFOLD – BALL VALVE

Single Valve Manifold	Gauge Class Diameter	Unit	Refrigerant Scales	Gauge p/n (HP/LP)
92103-93-5/16	1.6	PSI/°F	R12, R22 & R502	93350
92103-57-5/16	2 1/2"	PSI/°F	R410A, R22 & R404A	57501
92103-54-5/16	1.6	PSI/°F	R404A, R407C, R507A & R134a	54350
92103-58-5/16	3 1/8"	PSI/°F	R410A, R22 & R404A	58501

* Manifolds assembled with gauge guards, add a -G

MANIFOLDS

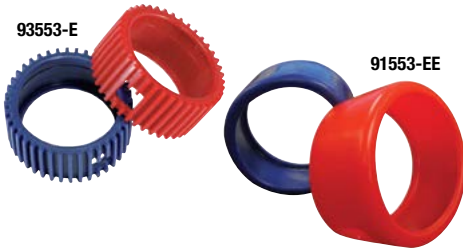
REPLACEMENT GAUGES

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 p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
	93500	93350	2 1/2"	PSI/°F	R12, R22, R502
	57803	57501	2 1/2"	PSI/°F	R410A, R22, R404A
	54500	54350	3 1/8"	PSI/°F	R404A, R407C, R507A, R134a
	58803	58501	3 1/8"	PSI/°F	R410A, R22, R404A

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)
42016	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 2-3 AND 4 WAY BALL VALVE MANIFOLDS

95102-R-KIT	O-Ring Repair Kit for 2-3 and 4 Way Ball Valve Manifold
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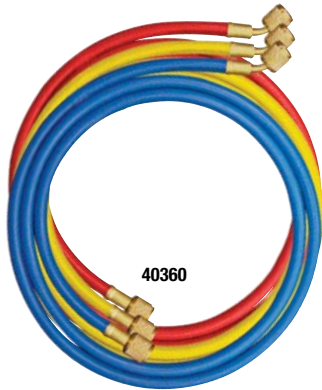
Mastercool[®]
"World Class Quality"

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, R22, R502 Standard Hoses, Working pressure 750 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, 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, R22, R502 Standard Hoses, Working pressure 750 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

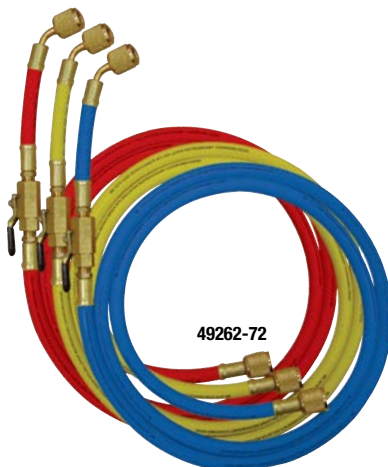
R22, R410A Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

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, R22, R502 Standard Hoses, Working pressure 750 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, 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



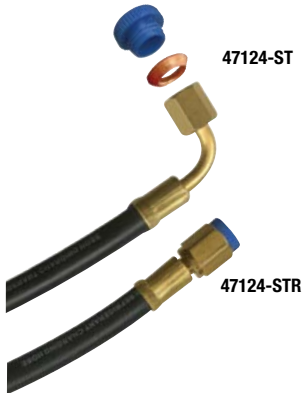
Mastercool[®]
"World Class Quality"

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

SERVICE HOSE REPLACEMENT PARTS



1/4" FITTING	SPRING TYPE		SCREW TYPE	
	GASKET	DEPRESSOR	GASKET	DEPRESSOR
CHARGING HOSES	42010-10	42014-10	42010-10	42016-10
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

HOSES, ADAPTERS AND ACCESSORIES

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

AUTOMATIC SHUT-OFF VALVES



90333-R

90335-R

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"

90337 Straight 1/4 x 3/16"

CONTROL VALVE



90328

90328-5/16

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)

VALVE CORE REMOVERS/INSTALLERS AUTOMOTIVE/HVAC (1/4"FL)

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)

Newly designed with 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)



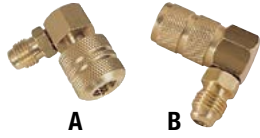
Special valve core remover/installer adapter allows replacement of damaged or faulty service valve cores without recharging the system. Valve replacement no longer requires time consuming refrigerant recovery. Calculation of superheat with excellent accuracy by reading refrigerant temperature and pressure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



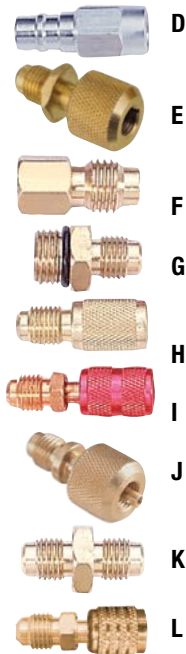
		REPLACEMENT	GASKET/O-RING	DEPRESSOR
A	90333-R	Shut-Off Valve 1/4" MFL x 1/4" FFL	90336	-
B	90314*	1/4" MFL x 1/4" FFL w/ Valve Core	42010	42014
B	90354*	1/4" MFL x 3/16" FFL (High Side) GM 1976 & Later	90369	90368

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	82272*	R134a 1/2" ACME-F x 13 mm R134a (Low-Side)	85511	-
E	82335	R134a Shut-Off Valve 1/2" ACME-M x 1/2" ACME-F	90336	-
E	90335-R	Shut-Off Valve 1/4" MFL x 1/4" FFL	90336	-
E	90337	Shut-Off Valve 1/4" MFL x 3/16" FFL	90331	-
F	82634*	1/4" FFL x 1/2" ACME-M	80234	-
G	82734	14 mm-M x 1/4" MFL	83341	-
H	90358*	1/4" MFL x 3/16" FFL (High-Side)	42010	42014
I	90274	1/4" MFL x 1/4" FFL Swivel	42010	42014
I	90332**	1/4" MFL x 1/4" FFL Anti-Blowback Fitting	42010	42014
I	90357	1/4" MFL x 3/16" FFL (High-Side) Swivel	90369	90368
I	91084*	1/4" MFL x 3/16" FFL (High-Side) Swivel Adapter GM 1976 & Later, Ford 1981 & Later	90369	90368
J	90338*	GM 1991 & Later Service Adapter	90339	-
K	90633	1/4" MFL x 1/4" MFL Union	-	-
K	82633	1/2" ACME-M x 1/2" ACME-M Union	-	-
L	90413	Convert 1/4 to 5/16 SAE (1/2-20 UNF) swivel female nut with depressor.	-	-

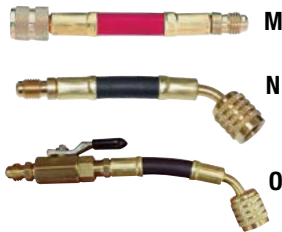
90416 SWIVEL/ANGLE ADAPTER FITTING



R410A 1/4" SAE x 5/16 SAE (1/2" - 20 UNF) Swivel/Angle Adapter Fitting



FLEX ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
M	90355*	1/4" MFL x 3/16" FFL (High-Side) GM 1976 & Later, Ford 1981 & Later	90369	90368
M	90356*	1/4" MFL x 1/4" FFL	42010	42014
N	90410	Convert 1/4 SAE hose into 5/16 SAE, 1/2-20 UNF swivel connection for R410A.	-	-
O	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
P	90296*	1/4" MFL x 1/8" NPT	-	-
P	80296*	1/2" ACME-M x 1/8" NPT	-	-



Mastercool[®]
 "World Class Quality"

MALE x MALE CONNECTORS



82734

- 82734** 14 mm-M x 1/4" FL-M (7/16-20") Connector
- 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

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 AUTOMOTIVE 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.

HOSES, ADAPTERS AND ACCESSORIES



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** 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-E** High-Side Manual R134a 1/4" FL-M x 16 mm Quick Coupler
- 82934-E** Low-Side Manual R134a 1/4" FL-M 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)

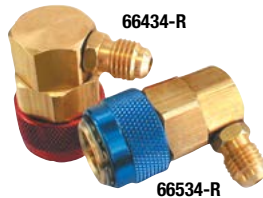
E-Z SNAP™ COUPLERS



This unique patented design easily snaps on and off the A/C systems service ports under any pressure. The E-Z Snap™ automatically adjusts to various service port dimensions allowing fast and immediate access into the A/C system. The swivel feature enables the user to easily access all service ports, even in the tightest quarters. Meets SAE, UL, and EPA requirements for containment of refrigerant. **PATENT# 5,244,010**

- 82214** High-Side E-Z Snap R134a 14 mm-F x 16 mm Quick Coupler
- 82224** Low-Side E-Z Snap R134a 14 mm-F x 13 mm Quick Coupler
- 82214-E** High-Side E-Z Snap R134a 1/4" FL-M x 16 mm Quick Coupler
- 82224-E** Low-Side E-Z Snap R134a 1/4" FL-M x 13 mm Quick Coupler
- 82214-3/8** High-Side E-Z Snap R134a 3/8" FL-M x 16 mm Quick Coupler
- 82224-3/8** Low-Side E-Z Snap 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)

ECONOMY COUPLERS



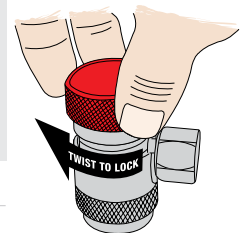
Specially designed to work in the tightest quarters. Attaches to your existing R12 hoses and snaps easily to A/C service ports.

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

SAFETY-LOCK MANUAL COUPLERS



Mastercool's new safety-lock manual couplers are designed for use on all R134a systems. This unique design allows the technician to work on the system without the worry of accidentally disconnecting the hose regardless of movement. Once the coupler is connected to the system, the safety-lock sleeve slides into place guaranteeing that the coupler cannot be taken off without unscrewing the manual valve. Meets all SAE, UL and EPA requirements for containment of refrigerant.



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



MEASURE & TEST INSTRUMENTS

THE COMPLETE A/C DIAGNOSTIC TOOL



52251



52270



52280

Mastercool's new 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
- Backlit 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	✓	-	✓	✓	✓



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52253 ROUND VANE



Temp. Range/Resolution/Accuracy:

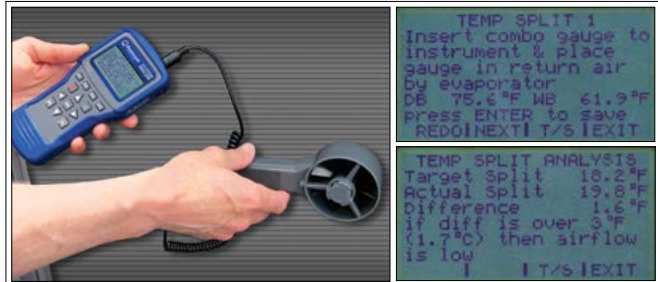
- -4 to 140°F (-20 to 60°C)
- 0.2°F (0.1°C)
- ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range

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

Windspeed Range/Resolution/Accuracy:

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



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



Temp. Range/Resolution/Accuracy:

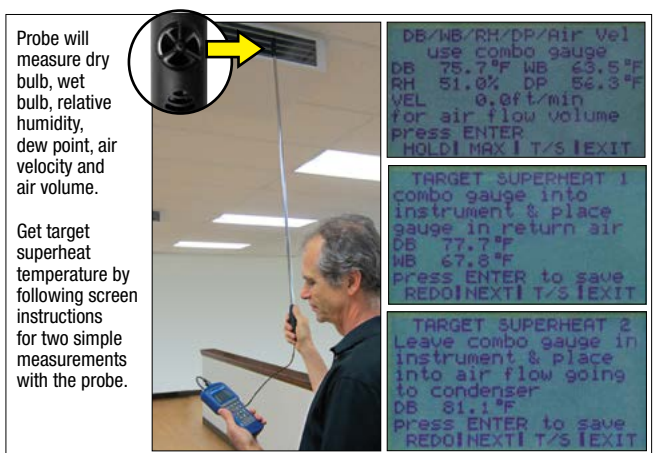
- -4 to 140°F (-20 to 60°C)
- 0.2°F (0.1°C)
- ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range

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

Windspeed Range/Resolution/Accuracy:

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



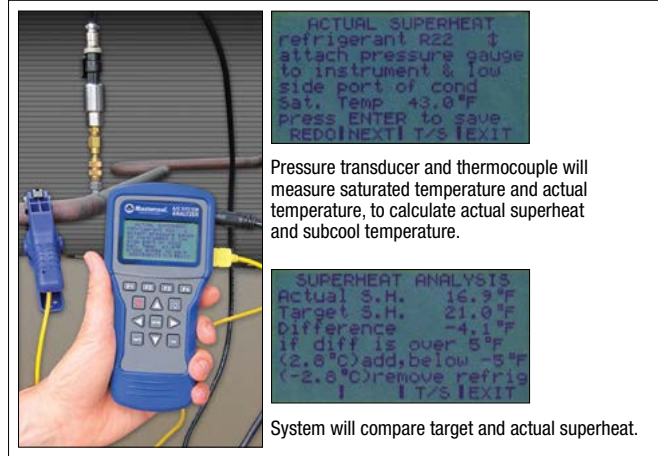
Probe will measure dry bulb, wet bulb, relative humidity, dew point, air velocity and air volume.

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

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



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))



Temp. Range/Resolution

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

52337 Clamp-On Thermocouple (extends 10 ft (3 M))

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:

- Pre-programmed 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 Temp., 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 backlit 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.



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"World Class Quality"

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 Temp. 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
- 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

SALT SOLUTION BOTTLE



for calibrating 52230 Pen Type Hygrometer and 52233 Digital Psychrometer

52733 Salt Solution Bottle 33% (Dark Brown Bottle)

52775 Salt Solution Bottle 75% (Blue Bottle)

52224-A INFRARED THERMOMETER WITH LASER



The 52224-A offers laser targeting accuracy, enhanced backlit 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 932°F (-50 to 500°C)
 Field of View: 12 : 1
 Display Illumination: Backlit LCD Color Display
 Target Indicator: Single Laser Spot
 Emissivity: 0.95
 Resolution: 0.5°F / 0.5°C
 Accuracy: ±4°F (2°C) or ±2% of reading
 Response Time: 0.5 seconds
 Power Off: Automatic after 15 seconds
 Battery Life: Approximately 180 hours
 Included Accessories: 2 AAA batteries, instruction manual, plastic molded case

52224-C INFRARED THERMOMETER WITH DUAL LASER



Features both infrared and dual laser technologies.



SPECIFICATIONS:

Non-Contact Temperature Range: -76 to 1022°F (-60 to 550°C)
 Field of View: 12 : 1
 Display Illumination: Backlit LCD Color Display
 Target Indicator: Dual 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 180 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)
 Field of View: 12 : 1 (90% energy covered)
 Display Illumination: Backlit LCD Color Display
 Target Indicator: Eight Laser
 Emissivity: 0.95 fixed
 Resolution: 0.1°F/0.1°C at -76 to 999.9(°F/°C), otherwise 1°F/1°C
 Modes: E, MAX, MIN, DIF and AVG
 Accuracy: (Tobj=15-35°C, Tamb=25°C): +/-1.0°C (1.8°F)
 (Tamb=23 +/- 3°C): 0~550°C: +/-2% of reading or 2°C (4°F) whichever is greater -60~0°C: +/- (2°C+0.05/degree)
 Response Time (90%): 1 second
 Battery Life: Typ.12, min 9 hours continuous use (Alkaline, with Laser and Back Light.)
 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: Backlit 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 180 hours
- Included Accessories: 2 AAA batteries, 1m thermocouple probe, instruction manual, plastic molded case
- Optional Accessories: 3 m Wire Thermocouple Probe, Piercing Penetration Probe, Surface Probe, Air Probe



52225-B ULTRA TEMP DUAL LASER THERMOMETER



Optional Wire Thermocouple

Features both infrared and contact thermometer technologies. Includes programmable HI/LO alarms, and Lock Mode to capture temperature readings. The built-in K type jack offers optional contact functions. Illuminates working area with built-in LED light.

SPECIFICATIONS:

- Non-Contact Temperature Range: -76 to 1832°F (-60 to 1000°C)
- Thermocouple Temperature Range: -83 to 1999°F (-64 to 1400°C)
- Field of View: 50 : 1
- Display Illumination: Backlit LCD display
- Target Indicator: Dual Laser Spot
- Emissivity: 0.95
- 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 180 hours
- Included Accessories: 2 AAA batteries, instruction manual, plastic molded case
- Optional Accessories: 1 m, 3 m Wire Thermocouple Probes, Piercing Penetration Probe, Surface Probe, Air Probe



MEASURE AND TEST INSTRUMENTS

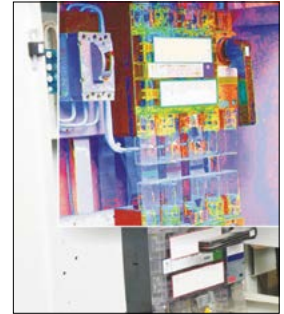
TAKE TEMPERATURE MEASURING TO ANOTHER LEVEL WITH MASTERCool'S NEW THERMAL IMAGING CAMERA...



- Fully Automatic
- Focus Free
- Superior Measurement/Accuracy
- Micro SD Card Storage
- Reporting Software Included

SPECIFICATIONS:

Thermal Image Resolution: 82 x 62 pixels
 Measurement Range: -4 to 662°F (-20 to 350°C)
 Accuracy (Tamb=20~26°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 30 deg
 Emissivity Range: 0.95 default – adjustable 0.1 to 1 step .01
 Focus: Focus free
 LCD (inch): 2.8" (71 mm)
 LCD Type: Color
 Image Storage: Stores up to 20,000 images, BMP format
 Memory Type: Support 8G micro SD card
 Spectral Range: 8 to 14 um
 Interface: USB
 Battery Type: (4) AA
 Battery Life (with backlit): 3 hrs continuous use
 Dimensions: 94.65 x 74.03 x 233.68 mm (3.73 x 2.91 x 9.20 inch)
 Weight: 0.10 kg (13.8 oz)



Electrical/Mechanical



Solar

52350 Thermal Imaging Camera with carry case, 8 gb micro SD card, CD, USB cord, batteries and instructions

52300 THERMAL IMAGING CAMERA with carry case, 8 gb micro SD card, CD, USB cord, batteries and instructions



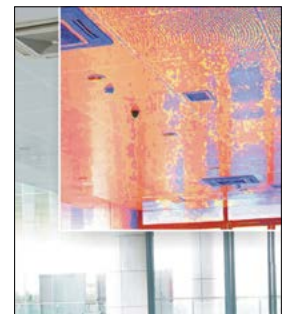
- Fully Automatic
- Focus Free
- Superior Measurement/Accuracy
- Micro SD Card Storage
- Reporting Software Included

SPECIFICATIONS:

Thermal Image Resolution: 32 x 31 pixels
 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: 33 x 33 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
 Memory Type: Support 8G micro SD card
 Sensor Filter: 8 to 14 um
 Interface: USB
 Battery Type: (4) AA
 Battery Life (with backlit): 6 hours continuous use
 Dimensions: 94.65 x 74.03 x 233.68 mm (3.73 x 2.91 x 9.20 inch)
 Weight: 0.4 kg (14.1 oz)



Building Diagnostics



HVAC



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 "World Class Quality"

52226 DUAL TEMP INFRARED/PROBE THERMOMETER



The 52226 Dual Temp Thermometer offers both infrared and contact probe technologies.

- Infrared Temp Range: -67 to 428°F (-55 to 220°C)
- Probe Temp 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.

- Temp Range: -67 to 428°F (-55 to 220°C)
- Field of View Ratio 1 : 1
- Adjustable Emissivity
- Backlit 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
- Temp. 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 HANDHELD 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

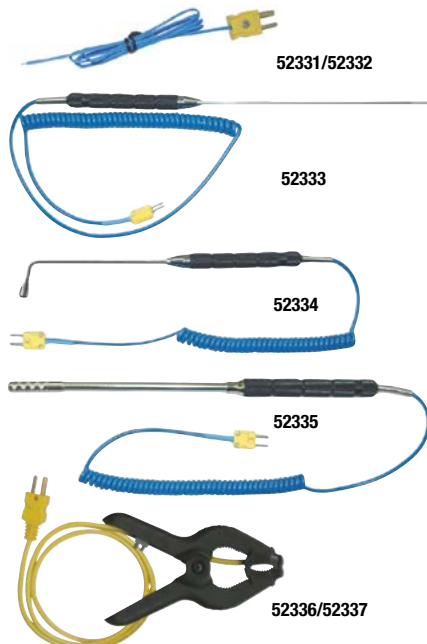
POCKET DIGITAL DESIGN



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)
52337	Clamp-On Probe - 10 ft (3 m)

LEAK DETECTION



SENSITIVITY LEVEL
HML E8
WAIT READY INT
PEAK MUTE

VOLUME
MUTE
PEAK
H.M.L.

THE ONLY LEAK DETECTOR YOU WILL EVER NEED



IntelliSense
REFRIGERANT LEAK DETECTOR



- 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 ≥ 0.05 oz/yr (1.5 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



Mastercool[®]
"World Class Quality"

55800 *IntellaSense*
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
- 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
- 12 LED UV light (53512-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
- Sensor Life: 2000 hours
- Refrigerants: Detects combustible gases (see below)
- Response Time: less than 1 second
- Battery: 2 "C" Alkaline 6000 mAh batteries
- Operating Temperature Range: 0°F to 120°F
- Ultimate Sensitivity: 50 – 1000 ppm

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 button 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

LEAK DETECTION



Mastercool[®]
"World Class Quality"

ELECTRONIC LEAK DETECTION

The 55200 "INSPECTOR" and 55100 offer revolutionary features and state of the art micro processing technology. The design sensor delivers an accurate and instantaneous response. Both units come in a heavy duty custom molded carrying case and meet SAE J1627 and CE conformity.

55100 / 55200 GENERAL FEATURES & SPECIFICATIONS:

- Digital Signal Micro Processor
- Detects All Halogenated Refrigerants
- Meets SAE J1627 / CE Conformity
- Auto Release Feature
- Battery Test Feature
- Flexible 43 cm (16") Probe
- Keypad Control
- Power Supply (2 "C" Batteries)
- Variable Frequency Audible Alarm

55100 ELECTRONIC LEAK DETECTOR



The 55100 offers an accurate and reliable solution to Electronic Leak Detection.

SPECIFIC FEATURES:

- 3 Levels Of Sensitivity (5 Levels Of Detection)
- Visual Leak Level Indicator
- Detects Leaks As Small As 3 gr (1/10 oz) Per Year*
* based on optimal laboratory conditions
- Detects All Refrigerants, CFC'S, HCFC'S, HFC'S
- Includes a Custom Molded Carrying Case



55100-SEN Sensor Tip for 55100, 55200, 55300 & 55400

55200 "INSPECTOR" 2 IN 1 ELECTRONIC / UV LEAK DETECTOR



This revolutionary design allows the user to perform Electronic and UV Leak Detection all with one tool. The "INSPECTOR" offers six levels of sensitivity (15 levels of detection) with a tri-colored LED indicator. This allows the "INSPECTOR" to pin-point leaks as small as 3 gr (1/10 oz) per year. The ultra bright UV light is built into the end of the probe allowing easy access into tight areas. Incorporating both electronic and UV technology into one unit insures that even the toughest leaks can be found.

PATENT# 6,647,761

SPECIFIC FEATURES:

- Ultra Bright UV/Blue LED Light
- UV Safety Glasses
- 6 Levels Of Sensitivity (15 Levels Of Detection)
- Tri-colored Visual Leak Level Indicator
- Mute Function
- Detects Leaks As Small As 3 gr (1/10 oz) Per Year*
* based on optimal laboratory conditions
- Detects All Refrigerants, CFC'S, HCFC'S, HFC'S
- Includes A Custom Molded Carrying Case



53515-B LED Bulb for 55200, 55300 & 55400



Mastercool[®] Inc.
"World Class Quality"

55300 COMPLETE ELECTRONIC & UV LEAK DETECTION KIT



This kit offers the "INSPECTOR" along with our UV Dye Injection System. Our cartridge type dye injector is fast and easy to use. Just twist the handle to inject the appropriate amount of dye. The 55300 kit is the ultimate solution for all your A/C leak detection needs.

SPECIFIC FEATURES:

- 55200 "INSPECTOR" Electronic Leak Detector
- UV Dye Injector w/25 Application Dye Cartridge
- Dye Injector Connection Hose w/ 1/4" FL Adapter
- UV Safety Glasses & Dye Cleaner
- Comes In A Custom Molded Carrying Case

55400 COMPLETE ELECTRONIC & UV LEAK DETECTION KIT



This kit offers the "INSPECTOR" along with our UV Dye Injection System. Our refillable dye injector is fast and easy to use. Just twist the handle to inject the appropriate amount of dye. The 55400 kit is the ultimate solution for all your A/C leak detection needs.

SPECIFIC FEATURES:

- 55200 "INSPECTOR" Electronic Leak Detector
- 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



LEAK DETECTION

53518-UV RECHARGEABLE 110 V UV FLASHLIGHT (LED)



- Twist the handle to zoom the UV light in or out
- AAA battery holder provides backup power to flashlight (3 AAA batteries included)
- Battery Life: 3 to 5 hours continuous leak detection
- Includes safety glasses

SPECIFICATIONS:

- High Intensity LED
- 154 - 170 $\mu\text{W}/\text{cm}^2$ which is compatible to a 50 watt UV flashlight
- 2 Illumination Modes: super bright and battery conservation
- Battery: Lithium Li-Ion, full discharge and cut-off discharge of 4.2V and 2.75V
- 53518-UV includes 110V charger



53512-UV MINI UV FLASHLIGHT (LED)



- 12 LED Bulb UV Illumination
- Battery Life: 5 hours continuous leak detection
- Aluminum body with Type III anodized finish
- Easy grip texture
- 25,000 hour bulb life
- 3 AAA batteries
- Includes safety glasses

53517-UV COMPACT UV FLASHLIGHT (LED)



- 17 LED Bulb UV Illumination
- Battery Life: 4 hours continuous leak detection
- Aluminum body with Type III anodized finish
- Easy grip texture
- 25,000 hour bulb life
- 3 AAA batteries
- Includes safety glasses

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



REFILLABLE UNIVERSAL OIL/DYE INJECTOR



53123-A



53322

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.

- 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 ON-LINE DYE INJECTOR



Refillable On-Line Dye Injector with 1/4" Auto Shut-Off Valve Connection.

STANDARD UNIVERSAL ULTRAVIOLET A/C DYES



92699 92708 92732

<used with 53123, 53322, 92376 Injectors>

- 92699** Standard Universal Dye - Six 1/4 oz Packs (6 pcs) Pack 1/4 oz (7.5 ml) - 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



53825 53625

<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



53615

53660

- 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



LEAK DETECTION



SERVICE ACCESSORIES AND CONSUMABLES

INNER NYLON LAYER REFRIGERANT CHARGING TOOL

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

A/C FLUSH SOLVENT



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

NITROGEN PRESSURE REGULATOR



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

CE
Directive
97/23/EC

- 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** CGA580 (US) Standard, 1/4 FL-M outlet connection
- 53010** Pressure Testing Regulator Kit
53001 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), Blow molded case (53000-PB)

OPTIONAL ACCESSORIES

- 66434-R** High Side Standard R134a 1/4" FL-M x 13 mm Economy Coupler
- 82834** High Side Manual R134a 14 mm-F x 16 mm Coupler
- 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
- 47482** 48" 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. Alumbond 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 x 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



- 120 Volts, 60 Hz
- Rated Power: 2.0 Amp
- For indoor or outdoor use
- Variable Speed Switch Controls Motor Speed: 950-1650 RPM
- 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

- 21200** **1200 CFM BLOWER FAN**
 - Moves air up to: 1200 CFM
 - Unit weight: 15.9 lbs

- 20300** **300 CFM BLOWER FAN**
 - Moves air up to: 300 CFM
 - Unit weight: 11.5 lbs

20300-HTR HEATER ATTACHMENT FOR 300 CFM BLOWER FAN



- 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
- 14AWG SJT Cord, Grounded Plug



**TUBE AND HOSE
FORMING**

HYDRA-SWAGE



71600-A



71650-A

Fabricates and Expands Copper, Aluminum and Soft Steel Tubing Using Hydraulic Power.
PATENT# 6,619,099



71600-A (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 (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

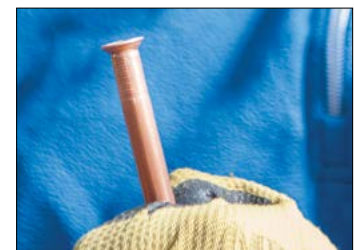


71676

Mastercool introduces the newest members of its handheld 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 (7 HEAD KIT)
 Complete Hydraulic Flaring and Expanding 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 (10 HEAD KIT)
 Complete Hydraulic Flaring and Expanding 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



Mastercool[®]
 "World Class Quality"

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.

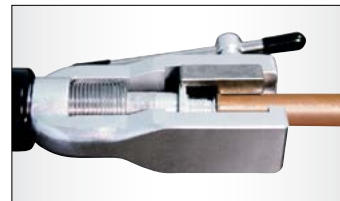
71700 HYDRAULIC FLARING & SWAGING TOOL



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**



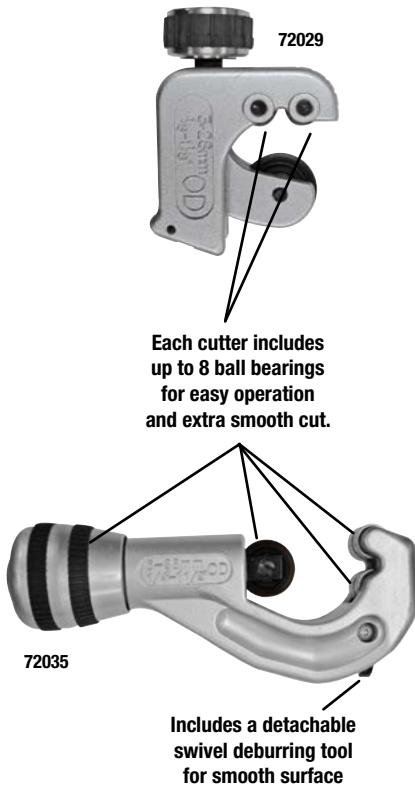
- 71700-A** Flaring & Swaging Pump
- 71700-B** Yoke Assembly
- 71700-PB** Plastic Molded Box
- 71700-01** 45° Flaring Cone
- 71700-04** 1/4" Swaging Adapter
- 71700-05** 5/16" Swaging Adapter
- 71700-06** 3/8" Swaging Adapter
- 71700-08** 1/2" Swaging Adapter
- 71700-10** 5/8" Swaging Adapter
- 71700-12** 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



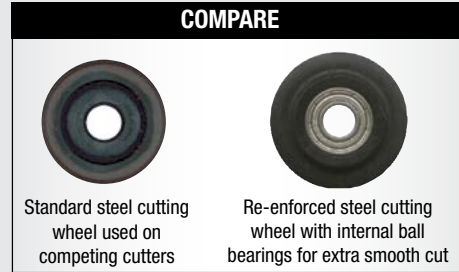
The copper tube is secured in the holding fixture by the forming dies. The hydraulic pump pushes in the forming adapter to fabricate the flare or swage. This cut-away photo shows the forming process.



BALL BEARING CUTTERS



Mastercool's EZ 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!



- 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



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)



Mastercool[®]
"World Class Quality"

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



70030

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



70034

- 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.
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.

TUBE CONSTRICTOR WHEEL



- 70233** Used with 70033 or 70035.



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.



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"World Class Quality"

TUBE BENDERS

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

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"



70066



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 – 1 1/8” O.D. tubing
- Includes inner-outer reamer for 3/16 – 1 1/2” O.D. tubing
- Comes in custom molded case



70080 “Ratchet Style” TUBE BENDER KIT - 6 SIZES



<< BENDS 6 SIZES >>

Same as 70070 less 70033 Cutter & 70085 Reamer. Bends 6 sizes: 3/8, 1/2, 5/8, 3/4, 7/8 and 1 1/8” O.D. soft tubing.

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 plated 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



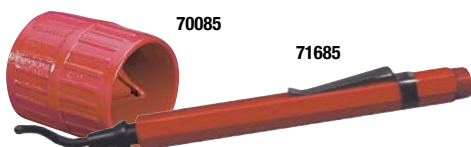
- 70088-TIP** Replacement Tip for 70088

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** 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).



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70200-MSK MINI-SPLIT TOOL KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 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

70200-BSK BASIC STARTER KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 59161-G** Brass Manifold Gauge Set w/gauge guards & 3-60" hoses
- 70082** Ratchet Wrench
- 70040** All in One Swaging Punch
- 70076** Spring Style Tube Bender
- 70091** 45° Flaring & Cutting Tool
- 70085** Reamer
- 90376** Valve Core Remover w/Valve Cores
- 70088** 1/4" Tube Piercing Plier
- 52227** Pocket Infrared Thermometer

70200-PK PREMIUM KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 59161-G** Brass Manifold Gauge Set w/gauge guards & 3-60" hoses
- 70082** Ratchet Wrench
- 70053** Flaring and Swaging Tool Kit
- 70069-A** 4-1 Lever Style Tool Bender
- 72029** Ball Bearing Tube Cutter
- 71685** Pen Type Inner/Outer Reamer
- 91498** Universal Valve Core Remover/Installer
- 252219** 8:1 Infrared Thermometer

70200-PRK PRO KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 58203-G** Ball Valve Manifold (Gauges Only) with Gauge Guards
- 49262-60** 60" Set of High Pressure hoses with manual shut-off valve fittings
- 52246** Compact Subcool/Superheat Calculator
- 98061** Digital Vacuum Gauge

70200-HK HAND TOOL KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 70082** Ratchet Wrench
- 70088** 1/4" Tube Piercing Plier
- 70083** Pinch Off Plier
- 71685** Pen Type Inner/Outer Reamer
- 52227** Pocket Infrared Thermometer
- 52336** Clamp-On Thermocoupler (extends 3 feet)



TUBING TOOL SELECTION CHART

TUBING TOOL SELECTION CHART

+ Tubing should be torch annealed before flaring.

		TYPES OF TUBING												
		COPPER					STEEL					STAINLESS		
Type of Tool	Size Range Tube O.D.	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
			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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