



Mastercool[®] Inc.

"World Class Quality"



Distributing Air Conditioning, Refrigeration,
Service Tools & Equipment Worldwide

2017
English

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:

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

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Corporate Office
Manufacturing and USA Warehouse



European Sales Office and Warehouse



Brazil Sales Office and Warehouse



Australian Sales Office



Mastercool®
"World Class Quality"

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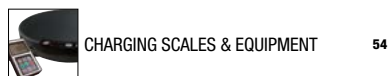
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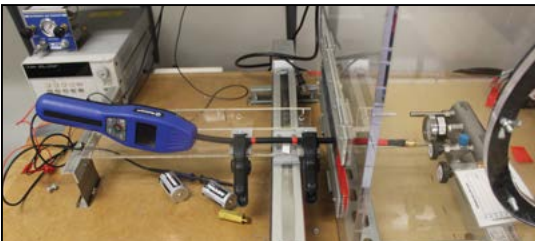
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MASTERCool PRODUCTS ARE
MADE/ASSEMBLED IN THE USA



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

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





MANIFOLDS

THE BEST KEEPS GETTING BETTER.....

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

Patent Pending



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



90413

90430

90433

99333

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 3-150 cm 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 3-180 cm 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

99961-EU Complete Kit in a blow molded case includes: manifold with a set of 3-150 cm ball valve hoses with manual shut-off valves and one black vacuum hose, vacuum sensor with cable, clamp-on thermocouple, 2-straight adapter fittings (90413), data logger CD and USB cable

99963-EU Same as 99961-EU less vacuum sensor with cable

* Manifolds assembled with Teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

OPTIONAL ACCESSORIES

52336	Clamp-on Thermocouple (extends 1 m)	90433	1/4 x 5/16" Swivel Ball Valve
52337	Clamp-on Thermocouple (extends 3 m)	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)	99334-220	220 V AC/DC Adapter (schuko plug)
90430	1/4 x 1/4" Swivel Ball Valve	99903-PBA	Plastic Carrying Case



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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, 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.



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

Patent Pending



- 99103-A** 2-Way Digital Manifold only
- 99103-A-2** Manifold with (2) clamp-on thermocouples in a blow molded case
- 99661-A** Complete Kit in a blow molded case includes: manifold with a set of 3-150 cm hoses, vacuum sensor with cable and clamp-on thermocouple
- 99772-A** Complete Kit in a blow molded case includes: manifold with a set of 3-180 cm hoses, vacuum sensor with cable and clamp-on thermocouple
- 99661-A-EU** Complete Kit in a blow molded case includes: manifold with a set of 3-150 cm ball valve hoses with manual shut-off valves, vacuum sensor with cable, clamp-on thermocouple and 2-straight adapter fittings (90413)
- 99663-A-EU** Same as 99661-A-EU less vacuum sensor with cable
- * Manifolds assembled with Teflon gasket hoses, add a -T
- * Manifolds assembled with ball valves at the end of hoses, add a -E

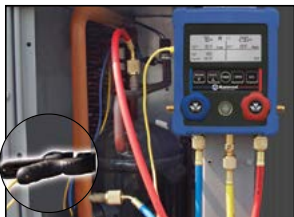
OPTIONAL ACCESSORIES

52336	Clamp-on Thermocouple (extends 1 m)	90433	1/4 x 5/16" Swivel Ball Valve
52337	Clamp-on Thermocouple (extends 3 m)	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)	99334-220	220 V AC/DC Adapter (schuko plug)
90430	1/4 x 1/4" Swivel Ball Valve	99903-PBA	Plastic Carrying Case



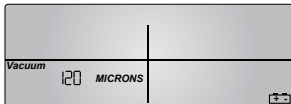
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**NOW COMPATIBLE WITH R744 (CO₂)
SENSORS ABLE TO WITHSTAND
PRESSURE UP TO 750 PSI (50 BAR)**



SUPERHEAT & SUBCOOL CALCULATIONS

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



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!*

REFRIGERANTS INCLUDED:

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



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R134a DIGITAL MANIFOLD

Patent Pending



This manifold offers a large easy to read LCD that displays temperature, pressure and vacuum readings for R134a. The unit easily allows the technician to obtain refrigerant and oil capacity readings for 55 automobile manufacturers. This unit also performs systems leak check at the conclusion of the evacuation process. 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!



SPECIFICATIONS

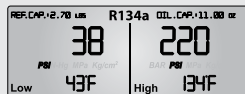
- Refrigerant: R134a
- Pressure & Vacuum Display: Low Side - PSI, Bar, MPa, Kg/cm² & IN-Hg
High Side - PSI, Bar, MPa, Kg/cm²
- Temperature Display: -40 to 200°F (-4 to 93°C)
- Response Time: 250 mSec.
- Connection: 1/4" FL-M
- Operating Temperature: 32 to 122°F (0 to 45°C)
- Power: 9V DC battery
- Battery Life: 50-60 hours continuous use
- Low Battery Indicator: Special ICON on LCD
- Auto-Off: 15 min. with disabling capability

MANUFACTURERS INCLUDE:

Acura	Hummer	Mercury	Saab
Audi	Hyundai	Mini	Saturn
BMW	Infiniti	Mitsubishi	Scion
Buick	Isuzu	Mercedes Benz	Smart
Cadillac	Jaguar	Nissan	Subaru
Chevrolet	Jeep	Oldsmobile	Suzuki
Chrysler	Kia	Peugeot	Toyota
Dodge	Lancia	Plymouth	Volkswagen
Fiat	Land Rover	Pontiac	Volvo
Ford	Lexus	Porsche	
GMC	Lincoln	Renault	
Honda	Mazda	Rover	



MANUFACTURER/MODEL/YEAR REFRIGERANT (LB/KG) & OIL CAPACITY (OZ/ML) DISPLAY



TEMPERATURE/PRESSURE DISPLAY

99134-1/4-A Manifold only with 1/4 FL-M (7/16"-20 UNF) connection

99860-1/4-A Complete Kit in a blow molded case includes: manifold with a set of 3-150 cm hoses and a set of manual couplers (82834-E & 82934-E).

99872-1/4-A Complete Kit in a blow molded case includes: manifold with a set of 3-180 cm hoses and a set of manual couplers (82834-E & 82934-E).

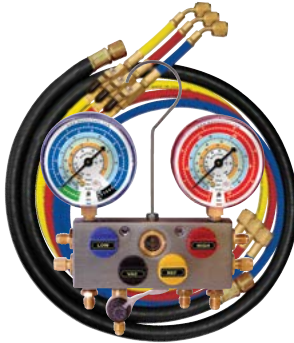
* Manifolds assembled with Teflon gasket Hoses, add a -T

* Capable of Software Upgrade



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3/8" BORE 4-WAY BALL VALVE MANIFOLD



Mastercool is the leading manufacturer of professional quality A/C manifold gauge sets. Our manifold gauge sets are constructed of the finest materials and machined with precision to the highest quality standards. At Mastercool, every manifold we build is built to last.

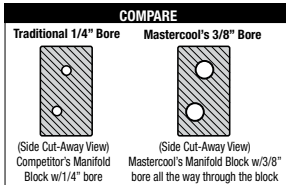


All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

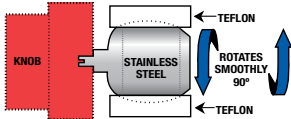
- Full 3/8" bore through the block increases flow considerably, faster charging & recovery
- Ball valve rotates 90° between two teflon washers requiring little effort to turn, even under pressure
- Opens and closes quickly with only a quarter turn
- Knob position shows whether valves are open or closed
(Vertical = OPEN, Horizontal = CLOSED)

All fittings 1/4" SAE, tee with branch 3/8"

Assemblies packed in custom molded plastic carrying case, p/n 86772-PB.



Mastercool's Aluminum 4-Way Manifolds feature PREMIER SERIES BALL VALVE DESIGN.



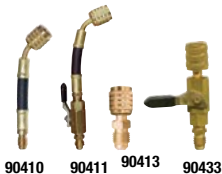
Gauge class – diameter		1.6 - 80 mm			
Units	Bar/PSI/°C	Bar/°C	Bar/PSI/°C	Bar/°C	
Refrigerant scales	R134a	R134a		R22	
	R22	R404A	R410A	R422A	
	R12	R407C	R407C	R427A	
	R404A	R22	R22	R422D	
		R507A		R417A	
Gauge p/n (HP/LP)	MRBH MRBL	MBH MBL	EBH EBL	EBRL EBRH	
Manifold body only	95102	95102	95102	95102	
Manifold with gauges only	96203-MRB	96203-MB	96203-EB	96203-EBR	
Manifold (as above) with 3 - 150 cm ball valve hoses (p/n 49262-60) + 1 - 150 cm black 3/8" hose (p/n 94160)	96261-MRB	96261-MB	96261-EB	96261-EBR	
Manifold (as above) with 3 - 180 cm ball valve hoses (p/n 49262-72) + 1 - 180 cm black 3/8" hose (p/n 94172)	96272-MRB	96272-MB	96272-EB	96272-EBR	

* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



-410	to include 2 pieces of 90410 flex adapters to convert 1/4 SAE hose into 5/16 SAE
-411	to include 2 pieces of 90411 flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE
-413	to include 2 pieces of 90413 straight adapter fittings to convert 1/4 to 5/16 SAE
-433	to include 2 pieces of 90433 adapter with fittings to convert 1/4 to 5/16 SAE

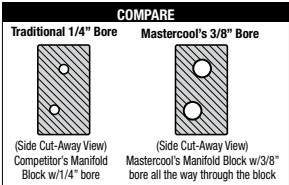


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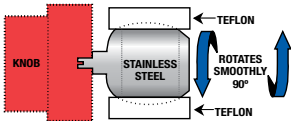
4-WAY BALL VALVE MANIFOLD FOR AUTOMOTIVE A/C



86972-MRB



Mastercool's Aluminum 4-Way Manifolds feature PREMIER SERIES BALL VALVE DESIGN.



Mastercool is the leading manufacturer of professional quality A/C manifold gauge sets. Our manifold gauge sets are constructed of the finest materials and machined with precision to the highest quality standards. At Mastercool, every manifold we build is built to last.



All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

- Full 3/8" bore through the block increases flow considerably, faster charging & recovery
- 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
- Knob position shows whether valves are open or closed (Vertical = OPEN, Horizontal = CLOSED)

All fittings 1/4" SAE, blind connections for automotive quick couplers. Assemblies packed in custom molded carrying case, inclusive quick couplers (p/n 82834-E and 82934-E)

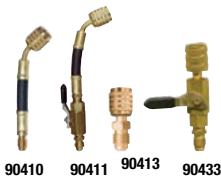
Gauge class – diameter	1.6 - 80 mm	
Units	Bar/°C	Bar/PSI/°C
Refrigerant scales	R134a	R134a
	R404A	R22
	R407C	R12
	R507A	R404A
	R22	
Gauge p/n (HP/LP)	MBH - MBL	MRBH - MRBL
Manifold body only, 1/4"	86102-1/4	86102-1/4
Manifold with gauges only	86103-MB	86103-MRB
Manifold (as above) with (3) 180 cm 1/4" hoses (p/n 40372) + (1) 180 cm black 1/4" hose (p/n 47724) - No quick couplers	86572-MB	86572-MRB
Manifold (as above) with (3) 180 cm 1/4" hoses (p/n 40372) + (1) 180 cm black 1/4" hose (p/n 47724) - Manual quick couplers	86972-MB	86972-MRB
Manifold (as above) with (3) 250 cm 1/4" hoses (p/n 40396) + (1) 250 cm black 1/4" hose (p/n 47964) - No quick couplers	86596-MB	86596-MRB
Manifold (as above) with (3) 250 cm 1/4" hoses (p/n 40396) + (1) 250 cm black 1/4" hose (p/n 47964) - Manual quick couplers	86996-MB	86996-MRB

* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



- 410 to include 2 pieces of 90410 flex adapters to convert 1/4 SAE hose into 5/16 SAE
- 411 to include 2 pieces of 90411 flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE
- 413 to include 2 pieces of 90413 straight adapter fittings to convert 1/4 to 5/16 SAE
- 433 to include 2 pieces of 90433 adapter with fittings to convert 1/4 to 5/16 SAE

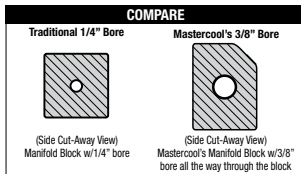


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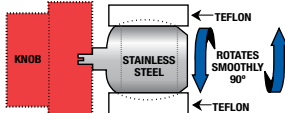
2-WAY SIGHT GLASS MANIFOLD – BALL VALVES



57261-MR



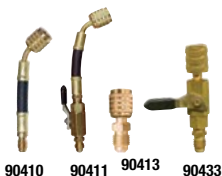
Mastercool's Aluminum 2-Way Manifolds feature PREMIER SERIES BALL VALVE DESIGN.



Optional 90° 3/8" swivel ball valve **90530** for 3/8" vacuum, makes 2-valve into 3-valve full control 4-way manifold

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



90410

90411

90413

90433

All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

- Full 3/8" bore all the way through the block increases flow considerably – faster charging and time savings
- 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
- Knob position shows whether valves are open or closed
- Includes nylon barrier GY5 hoses with manual ball valves
- Assemblies packed in plastic carrying case
- Plastic carrying case, p/n 58102-PBR



1.6 GAUGE CLASS – 63 MM DIAMETER

Units	Bar/PSI/°C	Bar/PSI/°C	Bar/°C
Refrigerant scales	R410A-R507 R404A-R22	R134a-R22 R12-R404A	R134a-R404A R407C-R22 R507A
Gauge p/n (HP/LP)	EH-EL	MRH-MRL	MH-ML
Hoses 1/4" SAE	nylon barrier with in-line ball valve		
Manifold with gauges 2 x 1/4" fittings + central tee 1/4" SAE with branch 3/8"	58103-E	58103-MR	58103-M
Manifold with 3-90 cm ball valve hoses	57236-E	57236-MR	57236-M
Manifold with 3-150 cm ball valve hoses	57261-E	57261-MR	57261-M
Manifold with 3-180 cm ball valve hoses	57272-E	57272-MR	57272-M
R410A Manifold with 3-150 cm nylon barrier with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	57261-E-JT	-	-

1.6 GAUGE CLASS – 80 MM DIAMETER

Units	Bar/PSI/°C	Bar/PSI/°C	Bar/°C	Bar/°C
Refrigerant scales	R410A R407C R22	R134a R22 R12 R404A	R134 R404A R407C R22 R507A	R22 R422A R427A R422D R417A
Gauge p/n (HP/LP)	EBH-EBL	MRBH-MRBL	MBH-MBL	EBRL-EBRH
Hoses 1/4" SAE	nylon barrier with in-line ball valve			
Manifold with gauges 2 x 1/4" fittings + central tee 1/4" SAE with branch 3/8"	58103-EB	58103-MRB	58103-MB	58103-EBR
Manifold with 3-90 cm ball valve hoses	57236-EB	57236-MRB	57236-MB	57236-EBR
Manifold with 3-150 cm ball valve hoses	57261-EB	57261-MRB	57261-MB	57261-EBR
Manifold with 3-180 cm ball valve hoses	57272-EB	57272-MRB	57272-MB	57272-EBR
R410A Manifold with 3-150 cm nylon barrier with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	57261-EB-JT	-	-	-

* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

-410 to include **2 pieces of 90410** flex adapters to convert 1/4 SAE hose into 5/16 SAE

-411 to include **2 pieces of 90411** flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE

-413 to include **2 pieces of 90413** straight adapter fittings to convert 1/4 to 5/16 SAE

-433 to include **2 pieces of 90433** adapter with fittings to convert 1/4 to 5/16 SAE



Mastercool®
"World Class Quality"

2-WAY ALUMINUM MANIFOLD – PISTON VALVES



93636-MR

All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

- 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



Mastercool's 2-Way Manifolds feature FREE FLOATING PISTON VALVE DESIGN.

1.6 GAUGE CLASS - 63 MM DIAMETER

Units	Bar/PSI/°C	Bar/PSI/°C	Bar/°C
Refrigerant scales	R410A- R507A R404A-R22	R134a-R22 R12-R404A	R134a-R404A R407C-R22 R507A
Gauge p/n (HP/LP)	EH-EL	MRH-MRL	MH-ML
Hoses 1/4" SAE	standard		
Manifold with gauges, fittings + central tee 1/4" SAE	93103-E	93103-MR	93103-M
Manifold with 3-90 cm hoses	93636-E	93636-MR	93636-M
Manifold with 3-150 cm hoses	93661-E	93661-MR	93661-M
Manifold with 3-150 cm ball valve hoses	92661-E	92661-MR	92661-M
Manifold with 3-180 cm hoses	93772-E	93772-MR	93772-M
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	92661-E-JT	-	-

1.6 GAUGE CLASS - 80 MM DIAMETER

Units	Bar/PSI/°C	Bar/PSI/°C	Bar/°C	Bar/°C
Refrigerant scales	R410A R407C R22	R134a R22 R12 R404A	R134a R404A R407C R22 R507A	R22-R422A R427A R422D R417A
Gauge p/n (HP/LP)	EBH-EBL	MRBH-MRBL	MBH-MBL	EBRL-EBRH
Hoses 1/4" SAE	standard			
Manifold with gauges, fittings + central tee 1/4" SAE	93103-EB	93103-MRB	93103-MB	93103-EBR
Manifold with 3-90 cm hoses	93636-EB	93636-MRB	93636-MB	93636-EBR
Manifold with 3-150 cm hoses	93661-EB	93661-MRB	93661-MB	93661-EBR
Manifold with 3-150 cm ball valve hoses	92661-EB	92661-MRB	92661-MB	92661-EBR
Manifold with 3-180 cm hoses	93772-EB	93772-MRB	93772-MB	93772-EBR
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	92661-EB-JT	-	-	-

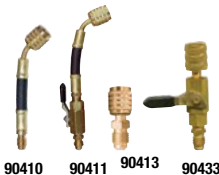
* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

* For packaging please see page 18

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



90410

90411

90413

90433

-410 to include 2 pieces of 90410 flex adapters to convert 1/4 SAE hose into 5/16 SAE

-411 to include 2 pieces of 90411 flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE

-413 to include 2 pieces of 90413 straight adapter fittings to convert 1/4 to 5/16 SAE

-433 to include 2 pieces of 90433 adapter with fittings to convert 1/4 to 5/16 SAE



Mastercool®
"World Class Quality"

2-WAY BRASS MANIFOLD – PISTON VALVES



33661-MR

All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

- 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



Mastercool's 2-Way Manifolds feature FREE FLOATING PISTON VALVE DESIGN.

1.6 GAUGE CLASS - 63 MM DIAMETER

Unit	Bar/PSI/°C	Bar/PSI/°C	Bar/°C
Refrigerant scales	R410A-R507A R404A-R22	R134a-R22 R12-R404A	R134a-R404A R407C-R22 R507A
Gauge p/n (HP/LP)	EH-EL	MRH-MRL	MH-ML
Hoses 1/4" SAE	standard		
Manifold with gauges, 3 x 1/4" SAE fittings	33103-E	33103-MR	33103-M
Manifold with 3 – 90 cm hoses	33636-E	33636-MR	33636-M
Manifold with 3 – 150 cm hoses	33661-E	33661-MR	33661-M
Manifold with 3 – 150 cm ball valve hoses	32661-E	32661-MR	32661-M
Manifold with 3 – 180 cm hoses	33772-E	33772-MR	33772-M
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	33661-E-JT	-	-

1.6 GAUGE CLASS - 80 MM DIAMETER

Unit	Bar/PSI/°C	Bar/PSI/°C	Bar/°C	Bar/°C
Refrigerant scales	R410A R407C R22	R134a R22 R12 R404A	R134a R404A R407C R22-R507A	R22-R422A R427A R422D R417A
Gauge p/n (HP/LP)	EBH-EBL	MRBH-MRBL	MBH-MBL	EBRL-EBRH
Hoses 1/4" SAE	standard			
Manifold with gauges, 3 x 1/4" SAE fittings	33103-EB	33103-MRB	33103-MB	33103-EBR
Manifold with 3 – 90 cm hoses	33636-EB	33636-MRB	33636-MB	33636-EBR
Manifold with 3 – 150 cm hoses	33661-EB	33661-MRB	33661-MB	33661-EBR
Manifold with 3 – 150 cm ball valve hoses	32661-EB	32661-MRB	32661-MB	32661-EBR
Manifold with 3 – 180 cm hoses	33772-EB	33772-MRB	33772-MB	33772-EBR
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	32661-EB-JT	-	-	-

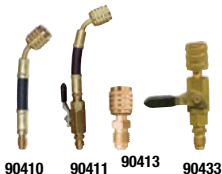
* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

* For packaging please see page 18

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



90410

90411

90413

90433

-410 to include **2 pieces of 90410** flex adapters to convert 1/4 SAE hose into 5/16 SAE

-411 to include **2 pieces of 90411** flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE

-413 to include **2 pieces of 90413** straight adapter fittings to convert 1/4 to 5/16 SAE

-433 to include **2 pieces of 90433** adapter with fittings to convert 1/4 to 5/16 SAE



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2-WAY PISTON VALVE MANIFOLD FOR AUTOMOTIVE A/C - R134a



89772-M

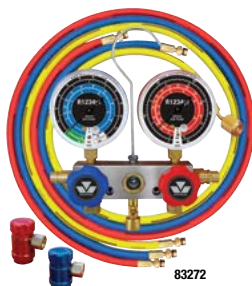
All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

- 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
- Solid extruded aluminum body
- Extra access port for vacuum line
- Silicone dampened gauges smooth out needle movement
- Gauges can be easily re-calibrated in the field to maintain accuracy
- Extra large sight glass for visual refrigerant check
- Large easy-to-grip knobs



Gauge class – diameter	1.6 - 63 mm	1.6 - 80 mm	
Units	Bar/°C	Bar/°C	Bar/PSI/°C
Refrigerant scales	R134a	R134a	R134a
	R404A	R404A	R22
	R407C	R407C	R12
	R22	R22	R404A
	R507A	R507A	
Gauge p/n (HP/LP)	MH-ML	MBH-MBL	MRB-MRBL
Manifold body only (1/4" SAE)	85102-1/4	85102-1/4	85102-1/4
Manifold with gauges only (1/4" SAE)	85103-M	85103-MB	85103-MRB
Manifold (as above) with 3 - 180 cm hoses, 1/4" SAE (p/n 40372) w/quick couplers (p/n 82834-E & 82934-E)	89772-M	89772-MB	89772-MRB
Manifold (as above) with 3 - 250 cm hoses, 1/4" SAE (p/n 40396) w/quick couplers (p/n 82834-E & 82934-E)	89996-M	89996-MB	89996-MRB

2-WAY PISTON VALVE MANIFOLD FOR AUTOMOTIVE A/C - R1234yf



83272

- Anti-flutter gauges smooth out needle movement
- E-Z to read temperature scales on gauge face
- E-Z to recalibrate gauges to insure accuracy
- Extra large sight glass for visual checks of refrigerant
- Easy grip front-facing knobs
- Piston type free-floating valves reduce o-ring wear
- Manifold block assembled with (3) 12 mm-F fittings per SAE J2888
- Red & Blue nylon barrier hoses with 12 mm-M fittings on both sides meets SAE J2888, EPA, SAE & UL standards
- Yellow hose 12 mm fitting on one side and 1/2 x 16 ACME LH on the other meets SAE J2888
- R1234yf high and low side couplers with extended disconnect protection sleeve meets SAE J639 & J2888



Gauge class – diameter	1.6 - 80 mm
Unit	Bar/PSI
Refrigerant scales	R1234yf
Gauge p/n (HP/LP)	87500-87350
Manifold with gauges, 3 x 12 mm-F fittings	83102
Manifold with 3 - 180 cm hoses and R1234yf couplers packaged in a clam shell	83272

83634 VACUUM PUMP ADAPTER FITTING



1/4 FL-F x 1/2 ACME LH male vacuum pump adapter fitting for R1234yf systems

*Packaging Note



clamshell



cardboard box



58102-PBR

- All piston valve 2-way manifold gauge sets are packaged in a clamshell

- European Standard Packaging - Cardboard Box

- For Plastic Carrying Case, please order Part# 58102-PBR



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2-WAY ALUMINUM MANIFOLD – PISTON VALVES – CLASS 1.0 GAUGES



93661-EB1



93661-MRB1

All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.



1.0 GAUGE CLASS - 80 MM DIAMETER

Units	Bar/PSI/°C	Bar/PSI/°C
Refrigerant scales	R22-R407C R32-R410A	R22-R404A R407F-R134a
Gauge p/n (HP/LP)	EBH1-EBL1	MRBH1-MRBL1
Hoses 1/4" SAE	standard	
Manifold with gauges, fittings + central tee 1/4" SAE	93103-EB1	93103-MRB1
Manifold with 3-90 cm hoses	93636-EB1	93636-MRB1
Manifold with 3-150 cm hoses	93661-EB1	93661-MRB1
Manifold with 3-150 cm ball valve hoses	92661-EB1	92661-MRB1
Manifold with 3-180 cm hoses	93772-EB1	93772-MRB1
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	92661-EB1-JT	-

* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

* For packaging please see page 18

2-WAY ALUMINUM MANIFOLD – PISTON VALVES – ISOBUTANE GAUGES



93661-RB

All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.



1.6 GAUGE CLASS - 80 MM DIAMETER

Units	Bar/PSI/°C
Refrigerant scales	R1270-R290 R600a
Gauge p/n (HP/LP)	RBH-RBL
Hoses 1/4" SAE	standard
Manifold with gauges, fittings + central tee 1/4" SAE	93103-RB
Manifold with 3-90 cm hoses	93636-RB
Manifold with 3-150 cm hoses	93661-RB
Manifold with 3-150 cm ball valve hoses	92661-RB
Manifold with 3-180 cm hoses	93772-RB

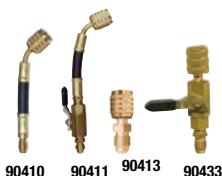
* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

* For packaging please see page 18

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



90410

90411

90413

90433

-410 to include 2 pieces of 90410 flex adapters to convert 1/4 SAE hose into 5/16 SAE

-411 to include 2 pieces of 90411 flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE

-413 to include 2 pieces of 90413 straight adapter fittings to convert 1/4 to 5/16 SAE

-433 to include 2 pieces of 90433 adapter with fittings to convert 1/4 to 5/16 SAE



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2-WAY PISTON VALVE MANIFOLD FOR C02 (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 1.0, 70 mm 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	1.0 - 70 mm
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 - 150 cm braided hoses	55661

CLASS 1.0 REPLACEMENT GAUGE FOR C02



High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
55102-2400	55102-1400	70 mm	PSI/MPa	R744

STEEL BRAIDED HOSES FOR C02



Steel Braided Hoses, Working Pressure 200 BAR, Burst 800 BAR	
HOSE LENGTH	150 cm
Steel braided hose for CO2	55601
SET of 3 steel braided hoses for CO2	55360



1/4" SINGLE VALVE MANIFOLD – BALL VALVE



92103-MRL

(packaged in a clamshell)



Single Valve Manifold	Gauge Class Diameter	Unit	Refrigerant Scales	Gauge p/n (HP/LP)
92103-EL	1.6 63 mm	Bar/PSI/°C	R410A-R507A-R404A-R22	EL
92103-MRL		Bar/PSI/°C	R134a-R22-R12-R404A	MRL
92103-ML		Bar/°C	R134a-R404A-R407C-R22-R507A	ML
92103-EBL	1.6 80 mm	Bar/PSI/°C	R410A-R407C-R22	EBL
92103-MRBL		Bar/PSI/°C	R134a-R22-R12-R404A	MRBL
92103-MBL		Bar/°C	R134a-R404A-R407C-R22-R507A	MBL
92103-EBRL		Bar/°C	R22-R422A-R427A-R422D-R417A	EBRL
92103-RB		Bar/PSI/°C	R1270-R290-R600a	RBL
92103-MRB1	1.0 80 mm	Bar/PSI/°C	R22-R404A-R407F-R134a	MRBL1
92103-EB1		Bar/PSI/°C	R22-R407C-R32-R410A	EBL1

* Manifolds assembled with gauge guards, add a -G

5/16" SINGLE VALVE MANIFOLD – BALL VALVE



92103-EBL-5/16

(packaged in a clamshell)



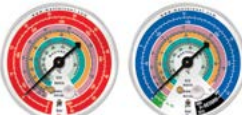
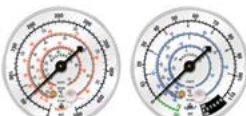
Single Valve Manifold	Gauge Class Diameter	Unit	Refrigerant Scales	Gauge p/n (HP/LP)
92103-EL-5/16	1.6 63 mm	Bar/PSI/°C	R410A-R507A-R404A-R22	EL
92103-MRL-5/16		Bar/PSI/°C	R134a-R22-R12-R404A	MRL
92103-ML-5/16		Bar/°C	R134a-R404A-R407C-R22-R507A	ML
92103-EBL-5/16	1.6 80 mm	Bar/PSI/°C	R410A-R407C-R22	EBL
92103-MRBL-5/16		Bar/PSI/°C	R134a-R22-R12-R404A	MRBL
92103-MBL-5/16		Bar/°C	R134a-R404A-R407C-R22-R507A	MBL
92103-EBRL-5/16		Bar/°C	R22-R422A-R427A-R422D-R417A	EBRL
92103-RB-5/16		Bar/PSI/°C	R1270-R290-R600a	RBL
92103-MRB1-5/16	1.0 80 mm	Bar/PSI/°C	R22-R404A-R407F-R134a	MRBL1
92103-EB1-5/16		Bar/PSI/°C	R22-R407C-R32-R410A	EBL1

* Manifolds assembled with gauge guards, add a -G



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CLASS 1.6 REPLACEMENT GAUGES

	High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
	MH	ML	63 mm	Bar/°C	R134a R404A R407C R22 R507A
	MRH	MRL	63 mm	Bar/PSI/°C	R134a R22 R404A R12
	EH	EL	63 mm	Bar/PSI/°C	R410A R404A R507A R22
	MRKH	MRKL	63 mm	PSI/kg/cm ² /°C	R12 R404A R22 R134a
	MBH	MBL	80 mm	Bar/°C	R134a R404A R407C R22 R507A
	MRBH	MRBL	80 mm	Bar/PSI/°C	R134a R22 R404A R12
	EBH	EBL	80 mm	Bar/PSI/°C	R410A R407C R22



CLASS 1.6 REPLACEMENT GAUGES

	High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
	EBRH	EBRL	80 mm	Bar/°C	R22 R422A R427A R422D R417A
	RBH	RBL	80 mm	Bar/PSI/°C	R1270 R290 R600a
	87500	87350	80 mm	Bar/ PSI/F/°C	R1234yf

CLASS 1.0 REPLACEMENT GAUGES

	High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
	EBH1	EBL1	80 mm	Bar/PSI/°C	R22 R407C R32 R410A
	MRBH1	MRBL1	80 mm	Bar/PSI/°C	R22 R404A R407F R134a

63 MM GAUGE PROTECTORS



93553-E

93253-E	63 mm Blue Gauge Protector
93503-E	63 mm Red Gauge Protector
93553-E	63 mm Set (Red & Blue)

80 MM GAUGE PROTECTORS



91553-EE

91253-EE	80 mm Red Gauge Protector
91503-EE	80 mm Blue Gauge Protector
91553-EE	80 mm Set (Red & Blue)

LENS



98251-E

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

4-WAY MANIFOLD REPLACEMENT KNOBS

58211 / 58212



58213 / 58214

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

2-WAY MANIFOLD REPLACEMENT KNOBS

85212-R / 85211-R



85212 / 85211

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

PARTS FOR PISTON MANIFOLDS

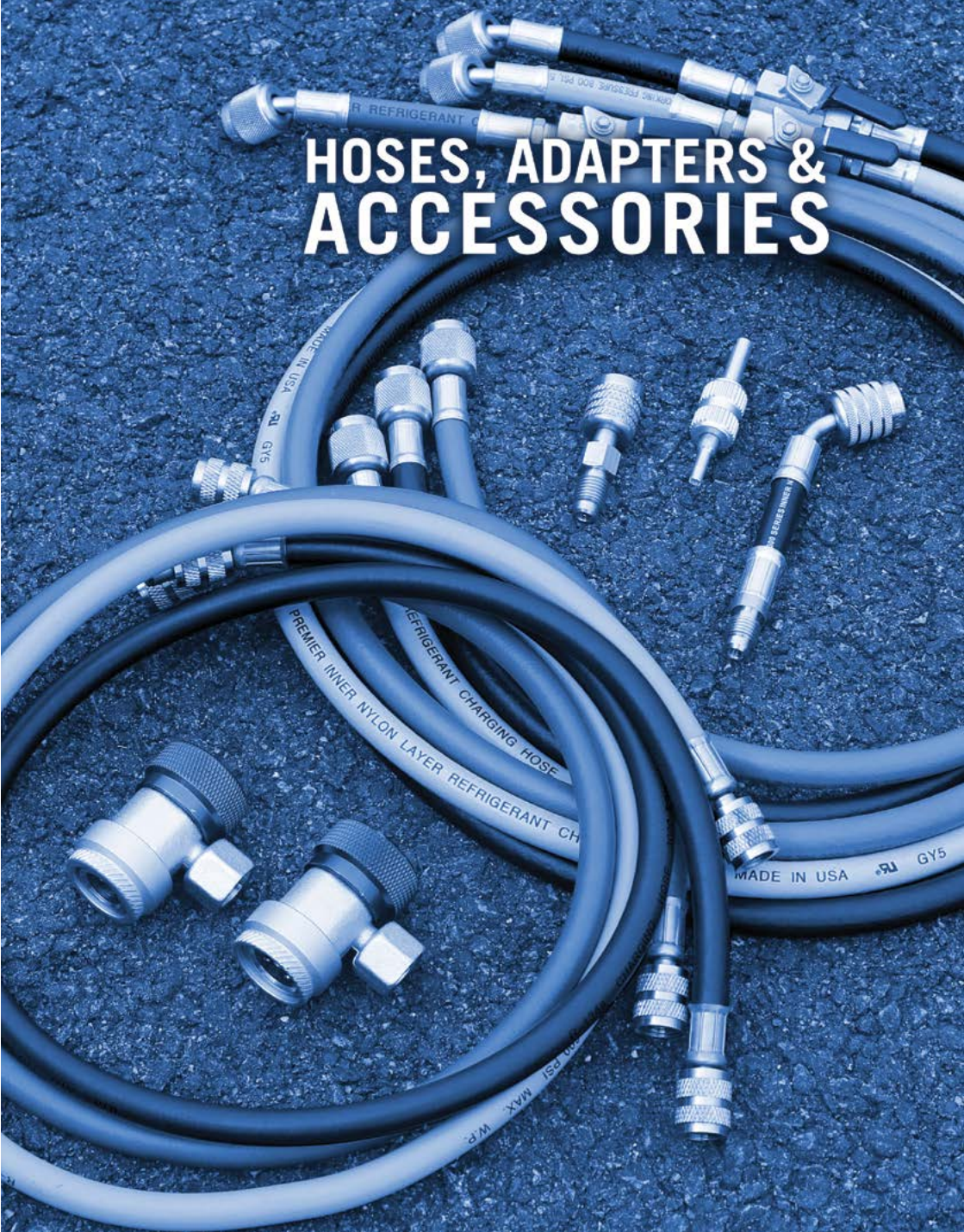
85215	O-rings (4 pcs)
85216	Seal & Seat Assembly (2 pcs)

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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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
- Hoses assembled with teflon gaskets, add a -T to the p/n
- For special length hoses, please inquire

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



47360

Standard Hoses, Working Pressure 52 BAR, Burst 210 BAR						
HOSE LENGTH	90 cm	150 cm	180 cm	250 cm	3 m	5 m
Blue 1/4" x 1/4"	41361	41601	41721	41961	41961-120	41961-200
Yellow 1/4" x 1/4"	41362	41602	41722	41962	41962-120	41962-200
Red 1/4" x 1/4"	41363	41603	41723	41963	41963-120	41963-200
SETS 1/4" x 1/4"	40336	40360	40372	40396	40396-120	40396-200
Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR						
Blue 1/4" x 1/4"	47361	47601	47721	47961	47961-120	47961-200
Yellow 1/4" x 1/4"	47362	47602	47722	47962	47962-120	47962-200
Red 1/4" x 1/4"	47363	47603	47723	47963	47963-120	47963-200
Black 1/4" x 1/4"	47364	47604	47724	47964	N/A	N/A
SETS 1/4" x 1/4"	47336	47360	47372	47396	47396-120	47396-200
Black 1/4" hose w/(3/8" x 3/8" fitting)	48364	48604	48724	48964	N/A	N/A
Black 3/8" hose w/(3/8" x 3/8" fitting)	94136	94160	94172	N/A	N/A	N/A

R410A HOSES



49360-J

Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR		
HOSE LENGTH	90 cm	150 cm
Blue 5/16" SAE x 5/16" SAE	49361-J	49601-J
Yellow 5/16" SAE x 5/16" SAE	49362-J	49602-J
Red 5/16" SAE x 5/16" SAE	49363-J	49603-J
SETS 5/16" SAE x 5/16" SAE	49336-J	49360-J
Blue 1/4" x 5/16"	-	96411
Red 1/4" x 5/16"	-	96413
SETS Blue/Red 1/4" x 5/16" and Yellow 1/4" x 1/4"	49336-JT	49360-JT

R134a HOSES WITH 1/2" ACME-F AND 14 MM-M AUTO A/C FITTINGS



84372

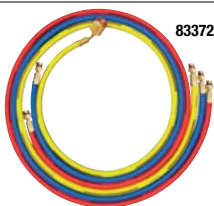
Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR				
HOSE LENGTH	90 cm	150 cm	180 cm	240 cm
Blue-14 mm-M x 1/2" ACME-F	84361	84601	84721	84961
Yellow w/Shut-off Valve 1/2" ACME-F x 1/2" ACME-F	84362	84602	84722	84962
Red-14 mm-M x 1/2" ACME-F	84363	84603	84723	84963
Black-1/2" ACME-F x 1/2" ACME-F	84364	84604	84724	84964
Yellow w/o Shut-off Valve 1/2" ACME-F x 1/2" ACME-F	84365	84605	84725	84965
SETS Blue/Red 14 mm-M x 1/2" ACME-F and Yellow w/Shut-off Valve 1/2" ACME-F x 1/2" ACME-F	84336	84360	84372	84396

Mastercool R134a charging hoses meet SAE J2196 specifications and are UL tested.



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R1234yf HOSES (Meets J2888, EPA, SAE & UL Standards)

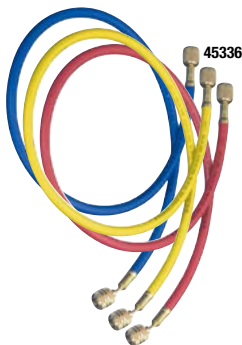


83372

Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR

HOSE LENGTH	180 cm
Blue-12 mm-M x 12 mm-M	83721
Yellow-12 mm fitting x 1/2 x 16 ACME LH	83722
Red-12 mm-M x 12 mm-M	83723
SET Blue/Red 12 mm-M x 12 mm-M and Yellow 12 mm fitting x 1/2 x 16 ACME LH	83372

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



45336

Standard Hoses, Working Pressure 52 BAR, Burst 210 BAR

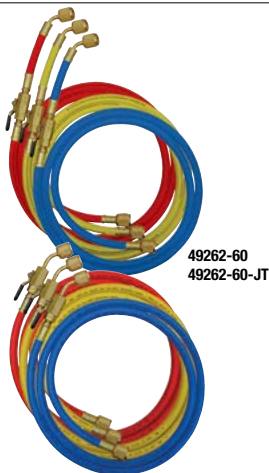
HOSE LENGTH	90 cm	150 cm	180 cm	250 cm
Blue 1/4" x 1/4"	45361	45601	45721	45961
Yellow 1/4" x 1/4"	45362	45602	45722	45962
Red 1/4" x 1/4"	45363	45603	45723	45963
Black 1/4" x 1/4"	N/A	N/A	N/A	N/A
SETS 1/4" x 1/4"	45336	45360	45372	45396

Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR

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	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)

49262-60
49262-60-JT

Standard Hoses, Working Pressure 52 BAR, Burst 210 BAR

HOSE LENGTH	90 cm	150 cm	180 cm
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

Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR

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	49262-72
Black 3/8" Hose with (3/8" x 3/8" fitting)	94236	94260	94272
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

Add a -E for Ball Valve at the end hoses

49262-60-E
49262-60-JT-E

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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

AUTOMATIC SHUT-OFF VALVES



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

<< QUICK DISCONNECT : NO LOSS OF REFRIGERANT >>

90333-R	90° 1/4 x 1/4"
90333-UV	90° 1/4" FFL x 13 mm
90335-R	Straight 1/4 x 1/4"
90337	Straight 1/4 x 3/16"

CONTROL VALVE



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



90328	1/4" FFL x 1/4" MFL
90328-5/16	5/16" x 5/16"

MANUAL SHUT-OFF BALL VALVES



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

90430	1/4 x 1/4" Swivel Ball Valve
90433	1/4 x 5/16" Swivel Ball Valve

SERVICE HOSE REPLACEMENT PARTS



	1/4" SAE		1/2" ACME		14 mm-M	3/8"	UNF 1/2 - 20"	
	GASKET	DEPRESSOR	GASKET	DEPRESSOR	O-RING	GASKET	GASKET	DEPRESSOR
Charging Hoses	42010-10	42014-10						
	42010-T-10 (Teflon)	42016-10 (Screw-Type)	82010-10	42014-10	83341-10	48010-10	82010-10	42016-10
Shut-Off Valve	90336-10	N/A	90336-10	N/A	N/A	N/A	N/A	N/A



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

91390 R12 SERVICE PORT THREAD REPAIR TOOL

Recuts stripped R12 service port threads. All-in-one design for 1/8", 3/16" and 1/4" service ports. An excellent retrofit tool - it will ensure that the R134a retrofit adapters will fit securely.

R134a OCTAGON SERVICE PORT SOCKETS

98134 R134a Low Side Octagon Socket

98234 R134a High Side Octagon Socket

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.

CAN TAP VALVES

85510-E



85510-J

85510-E 1/4" SAE Can Tap Valve - Screw-On Model
(European Standard)

85510-J R134a Can Tap Valve - Screw-On Model
(Japanese Standard) M14-F x M10-FL-M



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MANUAL COUPLERS



82834 82934



82834-E 82934-E

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

82834-J High-Side Manual R134a M12 x 1.75 x 16 mm Quick Coupler

82934-J Low-Side Manual R134a M10 x 1.5 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)

SAFETY-LOCK MANUAL COUPLERS



82834-SL 82934-SL

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. Color coded.

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

82834-SL-J High Side Manual R134a Safety Lock Coupler M12 x 1.75 x 16 mm

82934-SL-J Low Side Manual R134a Safety Lock Coupler M10 x 1.5 x 13 mm

80034 O-ring for 16 mm Quick Coupler (10 pcs)

80134 O-ring for 13 mm Quick Coupler (10 pcs)

E-Z SNAP™ COUPLERS



82214 82224



82214-E 82224-E

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

82214-J High-Side E-Z Snap R134a M12 x 1.75 x 16 mm Quick Coupler

82224-J Low-Side E-Z Snap R134a M10 x 1.5 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)



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ECONOMY COUPLERS



Specially designed to work in the tightest quarters. Attaches to your existing 1/4" flare 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)

R1234yf COUPLERS



- High and low couplers with extended disconnect protection sleeve
- Meets SAE J639 & J2888
- Allows recovery of entire refrigerant, including the space between the coupler and fitting.

- 83834** High Side R1234yf Coupler
- 83934** Low Side R1234yf Coupler

R134a EXTRA LONG COUPLERS



Extra Long High Side R134a coupler used on BMW E60 (2003-2009 5 series), Volvo and Renault models. This extra long high side coupler can easily reach the service port.

- 82836** High Side Extra Long 14 mm-F x 16 mm
- 82836-E** High Side Extra Long 1/4" SAE-M x 16 mm

MALE x MALE CONNECTORS



- 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



- 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

93000 SPRING LOCK COUPLING TOOL SET



Four sizes 3/8" (#6), 1/2" (#8), 5/8" (#10) and 3/4" (#12) used on Fords and Chryslers. Durable spring loaded design for long life and reliable fit.

Set includes:

- | | | | |
|--------------|----------------|--------------|------------------|
| 93098 | 3/8" (#6) Red | 93100 | 5/8" (#10) Black |
| 93099 | 1/2" (#8) Blue | 93101 | 3/4" (#12) Beige |



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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	42010	42014
B	90340*	1/4" MFL x 1/8" FFL (High Side) Ford 1977-1980	90341	90368
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	-
F	82634-M	1/4" FFL x 1/2" ACME-M Without Core Valve	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	-	-

90413 STRAIGHT ADAPTER FITTING



Convert 1/4 to 5/16 SAE (1/2-20 UNF) swivel female nut with depressor.

FLEX ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
L	90355*	1/4" MFL x 3/16" FFL (High-Side) GM 1976 & Later, Ford 1981 & Later	90369	90368
L	90356*	1/4" MFL x 1/4" FFL	42010	42014
L	90373*	1/4" MFL x 1/8" FFL (High-Side) Ford 1977-1980	90341	90368

90410 FLEX ADAPTER



Convert 1/4 SAE hose into 5/16 SAE, 1/2-20 UNF swivel connection for R410A.

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



M

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

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

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

RETROFIT ADAPTERS

82357 GM HIGH FLOW ADAPTER W/VALVE CORE & SERVICE PORT CAPS



GM High Flow Adapter

INDIVIDUAL TERMINATION (BLOCK OFF) CAPS



81297	1/4 (7/16"- 20) alum.
81379	3/16 (3/8"- 24) alum.
82297	Low Side R134a blue cap
82379	High Side R134a red cap

STRAIGHT ADAPTERS W/VALVE CORE & SERVICE PORT CAPS



82274	Low Side, 1/4 (7/16"- 20) x 13 mm
82332	High Side, 1/4 (7/16"- 20) x 16 mm
82358	High Side, 3/16 (3/8"- 24) x 16 mm

90° ADAPTERS W/VALVE CORE & SERVICE PORT CAPS



82275	Low Side, 1/4 (7/16"- 20) x 13 mm
82333	High Side, 1/4 (7/16"- 20) x 16 mm
82354	High Side, 3/16 (3/8"- 24) x 16 mm



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91207 CHARGING AND DEPRESSOR ASSORTMENT



Replacement gaskets, o-rings and depressors for charging hoses and adapters.

Consists of:

42010	1/4" Gasket (3 pcs)
42014	1/4" Depressor (3 pcs)
90368	3/16" Depressor (3 pcs)
90369	3/16" Gasket (3 pcs)
90341	1/8" O-ring (3 pcs)

91334 CHARGING ADAPTER REPAIR KIT



55 piece assortment of replacement gaskets, o-rings and depressors for charging hoses and adapters.

Consists of:

42010	1/4" Gasket (10 pcs)
42014	1/4" Depressor (10 pcs)
90368	3/16" Depressor (10 pcs)
90369	3/16" Gasket (10 pcs)
90341	1/8" O-ring (10 pcs)
92107	Quick Disconnect Gasket (5 pcs)

91334-A R12/R134a CHARGING HOSE REPLACEMENT PARTS ASSORTMENT



Consists of:

42010	1/4" FL Gasket (10 pcs)
42014	1/4" FL Depressor (5 pcs)
42016	Screw Type Depressor (5 pcs)
90336	Gasket for 90335 (5 pcs)
82010	Black Gasket for R134a Hose (10 pcs)
83341	O-Ring for R134a Hose (5 pcs)
80034-2	Black O-Ring for High Side (5 pcs)
80134-2	Black O-Ring for Low Side (5 pcs)

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)
42014	1/4" Depressor (10 pcs)
80034	O-ring for 82834 (10 pcs)
80034-1	High Side Nylon Guide (5 pcs)
80134	O-ring for 82934 (10 pcs)
80134-1	Low Side Nylon Guide (5 pcs)
82010	Gasket for R134a Hose (10 pcs)
82336	Gasket for 82335 (10 pcs)
83341	O-ring for R134a Hose (10 pcs)
90336	Gasket for 90335 Shut-off Valve (10 pcs)



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91335 MASTER A/C CHARGING ADAPTER REPAIR KIT

126 piece assortment of replacement gaskets, o-rings and depressors for charging hoses and adapters. Also includes valve core removal tool and replacement valve cores.

Consists of:

42010	1/4" Gasket (20 pcs)
42014	1/4" Depressor (20 pcs)
90368	3/16" Depressor (20 pcs)
90369	3/16" Gasket (20 pcs)
90341	1/8" O-ring (20 pcs)
92107	Quick Disconnect Gasket (10 pcs)
0377-001	Refrigeration Valve Core (10 pcs)
90378	GM Large Bore Valve Core (5 pcs)

91336 FORD SPRING LOCK REPLACEMENT O-RING AND GARTER SPRING ASSORTMENT

Compatible with R12 and R134a systems.

Consists of:

1336-006	#6 O-ring (10 pcs)
1336-008	#8 O-ring (10 pcs)
1336-010	#10 O-ring (10 pcs)
1336-012	#12 O-ring (10 pcs)
1336-016	#6 Garter Spring (5 pcs)
1336-018	#8 Garter Spring (5 pcs)
1336-110	#10 Garter Spring (5 pcs)
1336-112	#12 Garter Spring (5 pcs)

91337 R12/R134a VALVE CORE REPAIR KIT

Replacement valve cores for valve core removers & installers.

Consists of:

0377-001	Access Valve Core (20 pcs)
0378-001	Valve Core (10 pcs)
0531-001	R134a JRA High/Low Import Valve Core (10 pcs)
0768-001	R134a Domestic High Flow Valve Core M8 (5 pcs)
0769-001	R134a Domestic High Flow Valve Core M10 (5 pcs)
81290	R12/R134a Valve Core Remover/Installer (1 pc)

91339 AUTOMOTIVE R12 & R134a O-RING ASSORTMENT (270 PIECE HNBR)

Consists of:

91339-01	7/32" x 1/6" (5.29 x 1.78 mm) (25 pcs)	91339-10	11 x 2 mm (15 pcs)
91339-02	1/4" x 1/16" (6.07 x 1.78 mm) (20 pcs)	91339-11	12 x 2 mm (15 pcs)
91339-03	6.8 x 1.9 mm (20 pcs)	91339-12	13.9 x 1.8 mm (10 pcs)
91339-04	5/16" x 1/16" (7.65 x 1.78 mm) (20 pcs)	91339-13	9/16" x 3/32" (13.95 x 2.62 mm) (10 pcs)
91339-05	7.8 x 1.9 mm (20 pcs)	91339-14	14 x 2 mm (10 pcs)
91339-06	8 x 2 mm (20 pcs)	91339-15	15 x 2 (10 pcs)
91339-07	8.8 x 1.9 mm (20 pcs)	91339-16	17 x 2 (10 pcs)
91339-08	7/16" x 1/16" (10.82 x 1.78 mm) (15 pcs)	91339-17	11/16" x 1/16" (17.17 x 1.78 mm) (10 pcs)
91339-09	7/16" x 3/32" (10.77 x 2.62 mm) (15 pcs)	91339-18	11/16" x 1/8" (17.04 x 3.53 mm) (10 pcs)



Mastercool®
"World Class Quality"

58490 UNIVERSAL R12/R134a MASTER KIT



Kit covers all R12 & R134a system valve cores for Standard, JRA, Eaton and GM Large Bore.

PATENT# 6,253,436



VALVE CORE REMOVERS



81290

91290

81290 R134a UNIVERSAL LARGE BORE REMOVER

Used on R12/R134a Standard and JRA/EATON Large Bore R134a Valve Cores.

91290 UNIVERSAL VALVE CORE REMOVER

Double ended for easy replacement of Standard and GM R12 Large Bore Valve Cores.

81490 R134a VALVE CORE REMOVER AND INSTALLER



- For 13 mm and 16 mm high and low service port standard type valve
- Built-in ball valve retains charge and allows access to A/C system
- Excellent for replacing Valve Cores without discharging the system and for speeding recovery and recharging large systems

90376 VALVE CORE REMOVER W/VALVE CORES FOR R12



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

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

91490 STANDARD VALVE CORE REMOVER/INSTALLER



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

91496 Valve Core Remover/Installer with 1/4" MFL side port

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 1/2"-20 UNF 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.



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: 0 to 50°C (32 to 122°F), humidity <80%
- Storage Temperature: -20 to 50°C (-4 to 122°F), humidity <90%
- Dimensions with boot: 191mm x 93 mm x 41 mm
- Weight: (meter w/ batteries & round vane) 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	✓	-	✓	✓	✓



52253 ROUND VANE**Temp. Range/Resolution/Accuracy:**

- -20 to 60°C (-4 to 140°F)
- 0.1°C (0.2°F)
- $\pm 0.6^\circ\text{C}$ (1.1°F) (-20 to 50°C (-4 to 122°F), $\pm 1.2^\circ\text{C}$ (2.2°F) at other range

Humidity Range/Resolution/Accuracy:

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

Windspeed Range/Resolution/Accuracy:

- 0.6 to 32 m/s
- 0.1 m/s
- $\pm 2\%$ 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:**

- -20 to 60°C (-4 to 140°F)
- 0.1°C (0.2°F)
- $\pm 0.6^\circ\text{C}$ (1.1°F) (-20 to 50°C (-4 to 122°F), $\pm 1.2^\circ\text{C}$ (2.2°F) at other range

Humidity Range/Resolution/Accuracy:

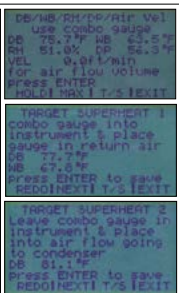
- 0.1% to 99.9% RH
- 0.1% RH
- $\pm 3\%$ RH (at 25°C (77°F), 10 to 90% RH), $\pm 5\%$ RH at other range

Windspeed Range/Resolution/Accuracy:

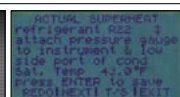
- 0.5 to 25 m/s
- 0.1 m/s
- $\pm (2\% \text{ of reading} + 0.3 \text{ m/s})$

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

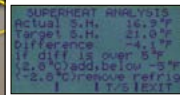
Get target superheat temperature by following screen instructions for two simple measurements with the probe.

**52252 PRESSURE TRANSDUCER**

- Operating Pressure Range: 0-750 psi (0-52 bar)
- 1/4 FL Swivel nut connection
- Accuracy: ± 0.5 , $\pm 1\%$ 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 121°C (-40 to 250°F)
- 0.1°C (0.2°F)

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



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"World Class Quality"

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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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
- 0.1dB 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

52733



52775

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)



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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:	-50 to 500°C (-58 to 932°F)
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:	±2°C (4°F) 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 carrying case



52224-C INFRARED THERMOMETER WITH DUAL LASER



Features both infrared and dual laser technologies.



SPECIFICATIONS:

Non-Contact Temperature Range:	-60 to 550°C (-76 to 1022°F)
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:	±2°C (4°F) 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 carrying case



52224-D MULTI-LASER INFRARED THERMOMETER



The multi-laser infrared thermometer safely monitor 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:	-60 to 760°C (-76 to 1400°F)
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°C/0.1°F at -76 to 999.9 (°C/°F), otherwise 1°C/1°F
Modes:	E, MAX, MIN, DIF and AVG
Accuracy:	(Tobj=15-35°C, Tamb=25°C): ±1.0°C (1.8°F) (Tamb=23 ±1.0°C): 0-550°C: ±2% of reading or 2°C (4°F) whichever is greater -60-0°C: ±1.0°C (1.8°F) +/- (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 carrying case



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52225-A DUAL TEMP PLUS INFRARED THERMOMETER

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:	-60 to 760°C (-76 to 1400°F)
Thermocouple Temperature Range:	-64 to 1400°C (-83 to 1999°F)
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:	±2°C (4°F) 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 carrying case
Optional Accessories:	3 m Wire Thermocouple Probe, Piercing Penetration Probe, Surface Probe, Air Probe

**52225-B ULTRA TEMP DUAL LASER THERMOMETER**

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:	-60 to 1000°C (-76 to 1832°F)
Thermocouple Temperature Range:	-64 to 1400°C (-83 to 1999°F)
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:	±2°C (4°F) 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 carrying case
Optional Accessories:	1 m, 3 m Wire Thermocouple Probes, Piercing Penetration Probe, Surface Probe, Air Probe



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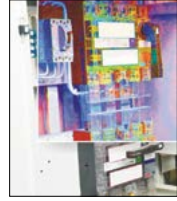
TAKE TEMPERATURE MEASURING TO ANOTHER LEVEL WITH MASTERCOOL'S NEW THERMAL IMAGING CAMERA...



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

SPECIFICATIONS:

Thermal Image	82 x 62 pixels
Resolution:	
Measurement Range:	-20 to 350°C (-4 to 662°F)
Accuracy	±2% of reading, or 2°C (4°F) whichever is greater
(Tamb=20~26°C):	
Thermal Sensitivity:	0.1°C (0.1°F)
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	32 x 31 pixels
Resolution:	
Measurement Range:	-20 to 350°C (-4 to 662°F)
Accuracy (Tamb=20	±2% of reading, or 2°C (4°F) whichever is greater
to 26°C):	
Thermal Sensitivity:	0.1°C (0.1°F)
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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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-C	25 mm	-10 to 100°C
52161	35 mm	-40 to 70°C (-40 to 160°F)
91120	44.5 mm	0 to 220°F

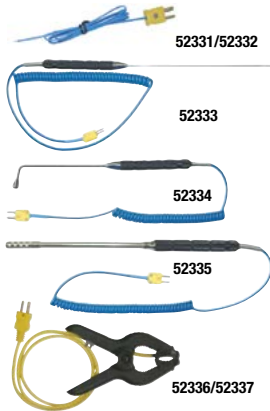
POCKET DIGITAL DESIGN



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

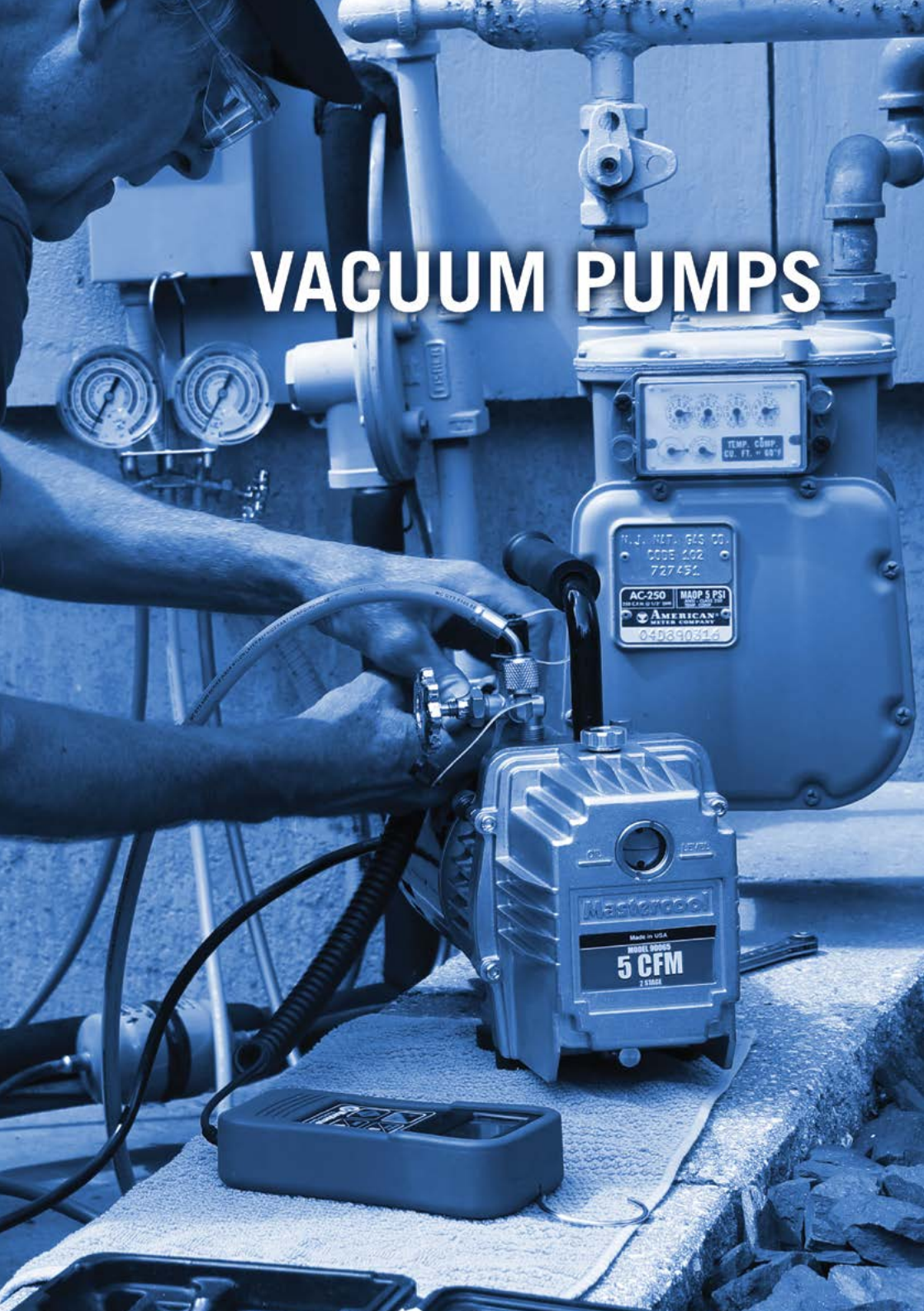
Item#	Dial Size	Temperature Scale
52223-A	25 mm	-50 to 150°C (-58 to 302°F)

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)

VACUUM PUMPS



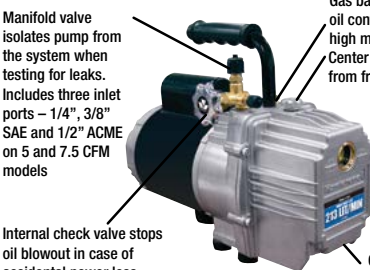
2 STAGE ELITE BALL BEARING DESIGN VACUUM PUMPS



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

Gas ballast valve helps prevent oil contamination caused by high moisture

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

Durable lightweight die cast aluminum housing

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

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

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



119 LIT/MIN - 142 LIT/MIN - 5 CFM VACUUM PUMP

*Japanese Standard



MODEL	90065-220	90065	90065-J*
NO. OF STAGES	2	2	2
FREE AIR DISPLACEMENT	119 lit/min 142 lit/min	5 CFM	119 lit/min 142 lit/min
ULTIMATE VACUUM	25 Microns	25 Microns	25 Microns
MOTOR	1/3 HP	1/3 HP	1/3 HP
PUMP SPEED	1425 RPM 1725 RPM	1425 RPM 1725 RPM	1425 RPM 1725 RPM
ELECTRICAL SPECS	220 V / 50 HZ 220 V / 60 HZ	110 V / 60 HZ	100 V / 50/60 HZ
WEIGHT	13.2 kg (29 lbs)	13.2 kg (29 lbs)	13.2 kg (29 lbs)
DIMENSIONS IN CM	37 x 15.5 x 27.5 x 24	37 x 15.5 x 27.5 x 24	37 x 15.5 x 27.5 x 24

178 LIT/MIN - 213 LIT/MIN - 7 CFM VACUUM PUMP

*Japanese Standard



MODEL	90067-220	90067	90067-J*
NO. OF STAGES	2	2	2
FREE AIR DISPLACEMENT	178 lit/min 213 lit/min	7.5 CFM	178 lit/min 213 lit/min
ULTIMATE VACUUM	25 Microns	25 Microns	25 Microns
MOTOR	1/2 HP	1/2 HP	1/2 HP
PUMP SPEED	1425 RPM 1725 RPM	1425 RPM 1725 RPM	1425 RPM 1725 RPM
ELECTRICAL SPECS	220 V / 50 HZ 220 V / 60 HZ	110 V / 60 HZ	100 V / 50/60 HZ
WEIGHT	16.0 kg (35.5 lbs)	16.0 kg (35.5 lbs)	16.0 kg (35.5 lbs)
DIMENSIONS IN CM	41 x 15.5 x 27.5 x 24	41 x 15.5 x 27.5 x 24	41 x 15.5 x 27.5 x 24



2 STAGE DUAL VOLTAGE VACUUM PUMPS

- New U.S. Design
- Stronger Motor
- Field Serviceable



70 LIT/MIN - 58 LIT/MIN - 3 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90063-2V-110-B	90063-2V-220-B
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	3 CFM	70 lit/min (60Hz) 58 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns
MOTOR	1/3 HP	1/3 HP
PUMP SPEED	1720 RPM	1440 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	220 V, 50/60 HZ
POWER CORD	110 V Cable (US Standard)	220 V Cable (Schuko)
WEIGHT	7 kg (15.43 lbs)	7 kg (15.43 lbs)
DIMENSIONS IN CM	27 x 15 x 25	27 x 15 x 25

170 LIT/MIN - 142 LIT/MIN - 6 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90066-2V-110-B	90066-2V-220-B
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	6 CFM	170 lit/min (60Hz) 142 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns
MOTOR	1/2 HP	1/2 HP
PUMP SPEED	1720 RPM	1440 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	220 V, 50/60 HZ
POWER CORD	110 V Cable (US Standard)	220 V Cable (Schuko)
WEIGHT	11 kg (24.25 lbs)	11 kg (24.25 lbs)
DIMENSIONS IN CM	37.9 x 16.7 x 27.5	37.9 x 16.7 x 27.5

227 LIT/MIN - 189 LIT/MIN - 8 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90068-2V-110-B	90068-2V-220-B
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	8 CFM	227 lit/min (60Hz) 189 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns
MOTOR	3/4 HP	3/4 HP
PUMP SPEED	1720 RPM	1440 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	220 V, 50/60 HZ
POWER CORD	110 V Cable (US Standard)	220 V Cable (Schuko)
WEIGHT	15.43 kg (34 lbs)	15.43 kg (34 lbs)
DIMENSIONS IN CM	38 x 18 x 27	38 x 18 x 27

340 LIT/MIN - 283 LIT/MIN - 12 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90612-2V-110-B	90612-2V-220-B
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	12 CFM	340 lit/min (60Hz) 283 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns
MOTOR	1 HP	1 HP
PUMP SPEED	1720 RPM	1440 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	220 V, 50/60 HZ
POWER CORD	110 V Cable (US Standard)	220 V Cable (Schuko)
WEIGHT	15.88 kg (35 lbs)	15.88 kg (35 lbs)
DIMENSIONS IN CM	39 x 18 x 27	39 x 18 x 27



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2 STAGE VACUUM PUMPS WITH SOLENOID VALVE



DUAL VOLTAGE SERIES WITH SOLENOID VALVE



MODEL	90063-2V-220SVB	90066-2V-220SVB	90068-2V-220SVB	90612-2V-220SVB
NO. OF STAGES	2	2	2	2
FREE AIR DISPLACEMENT	70 lit/min (60Hz), 58 lit/min (50Hz)	170 lit/min (60Hz), 142 lit/min (50Hz)	227 lit/min (60Hz), 189 lit/min (50Hz)	340 lit/min (60Hz), 283 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns	15 Microns	15 Microns
MOTOR	1/3 HP	1/2 HP	3/4 HP	1 HP
PUMP SPEED	1440 RPM	1440 RPM	1440 RPM	1440 RPM
ELECTRICAL SPECS	220 V, 50/60 HZ	220 V, 50/60 HZ	220 V, 50/60 HZ	220 V, 50/60 HZ
POWER CORD	220 V Cable (Schuko)	220 V Cable (Schuko)	220 V Cable (Schuko)	220 V Cable (Schuko)
WEIGHT	7.37 kg (16.2 lbs)	11.33 kg (25 lbs)	15.76 kg (34.75 lbs)	16.32 kg (36 lbs)

ELITE BALL BEARING DESIGN WITH SOLENOID VALVE



MODEL	90065-220-SV	90067-220-SV
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	119 lit/min, 142 lit/min	178 lit/min, 213 lit/min
ULTIMATE VACUUM	25 Microns	25 Microns
MOTOR	1/3 HP	1/2 HP
PUMP SPEED	1425 RPM 1725 RPM	1425 RPM 1725 RPM
ELECTRICAL SPECS	220 V / 50 HZ, 220 V / 60 HZ	220 V / 50 HZ, 220 V / 60 HZ
POWER CORD	220 V Cable (Schuko)	220 V Cable (Schuko)
WEIGHT	13.6 kg (30 lbs)	17 kg (36.5 lbs)

90066-SV-220 UNIVERSAL SOLENOID VALVE AND GAUGE ASSEMBLY



Mastercool's universal solenoid valve and gauge assembly can be assembled on any vacuum pump for protection of pump and systems with full control by solenoid valve. Gauge assembly will also allow for vacuum leak test.

- 3/8 NPT vacuum connection port
- 1/4" flare hose connection port

*Note: Some internal wiring assembly necessary

90066-SV-G Replacement gauge for universal solenoid valve and gauge assembly



SINGLE STAGE VACUUM PUMPS



42 LIT/MIN - 35 LIT/MIN / 1.8 CFM SINGLE STAGE VACUUM PUMP



90059-R-220

MODEL	90059-R-220	90059-B
NO. OF STAGES	1	1
FREE AIR DISPLACEMENT	42 lit/min, 35 lit/min	1.8 CFM
ULTIMATE VACUUM	75 Microns	80 Microns
MOTOR	1/6 HP	1/4 HP
PUMP SPEED	2850 RPM, 3450 RPM	1720 RPM
ELECTRICAL SPECS	220 V, 50/60 HZ	110/120 V, 60 HZ
WEIGHT	7.25 kg (16 lbs)	6.2 kg (13.6 lbs)
DIMENSIONS IN CM	29.5 x 11.5 x 21.5 x 18	30 x 15 x 26

170 LIT/MIN - 141 LIT/MIN / 6 CFM SINGLE STAGE VACUUM PUMP



90066-2V-220-A

MODEL	90066-2V-220-A	90066-B
NO. OF STAGES	1	1
FREE AIR DISPLACEMENT	170 lit/min, 141 lit/min	6 CFM
ULTIMATE VACUUM	75 Microns	80 Microns
MOTOR	1/4 HP	1/3 HP
PUMP SPEED	1720 RPM	1700 RPM
ELECTRICAL SPECS	220 V, 50/60 HZ	110/120 V, 60 HZ
WEIGHT	10.2 kg (22 lbs)	6.35 kg (14 lbs)
DIMENSIONS IN CM	35 x 14.3 x 26.5	30 x 15 x 27

* PLEASE NOTE:

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

All vacuum pumps are available with either a UK or Australian Cable, please add a:

-AUS for an Australian cable

-UK for a UK cable

SERVICE INFORMATION

	90065 90065-220	90067 90067-220	90063-2V-110-B 90063-2V-110-B	90066-2V-110-B 90066-2V-220-B	90068-2V-110-B 90068-2V-220-B	90612-2V-110-B 90612-2V-220-B	90059-B 90059-220-B	90066-B 90066-220-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) - 295 ml / 10 oz bottles (90063-2V-B)
90018-6	(Six) - 531 ml / 18 oz bottles (90065, 90066-2V-B, 90612-2V-B, 90066-B)
90024-6	(Six) - 708 ml / 24 oz bottles (90067, 90068-2V-B)
90061-8	236 ml / 8 oz bottle (90059-R-220)
90016-6	(Six) - 450 ml / 16 oz bottles (90059-B, 90066-2V-220-A)



Mastercool[®] Inc.
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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. (packaged in blow molded case)

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: $\pm 10\%$ of reading
1000 - 100 Microns: $\pm 7\%$ of reading,
100 - 1 Micron: $\pm 5\%$ of reading

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



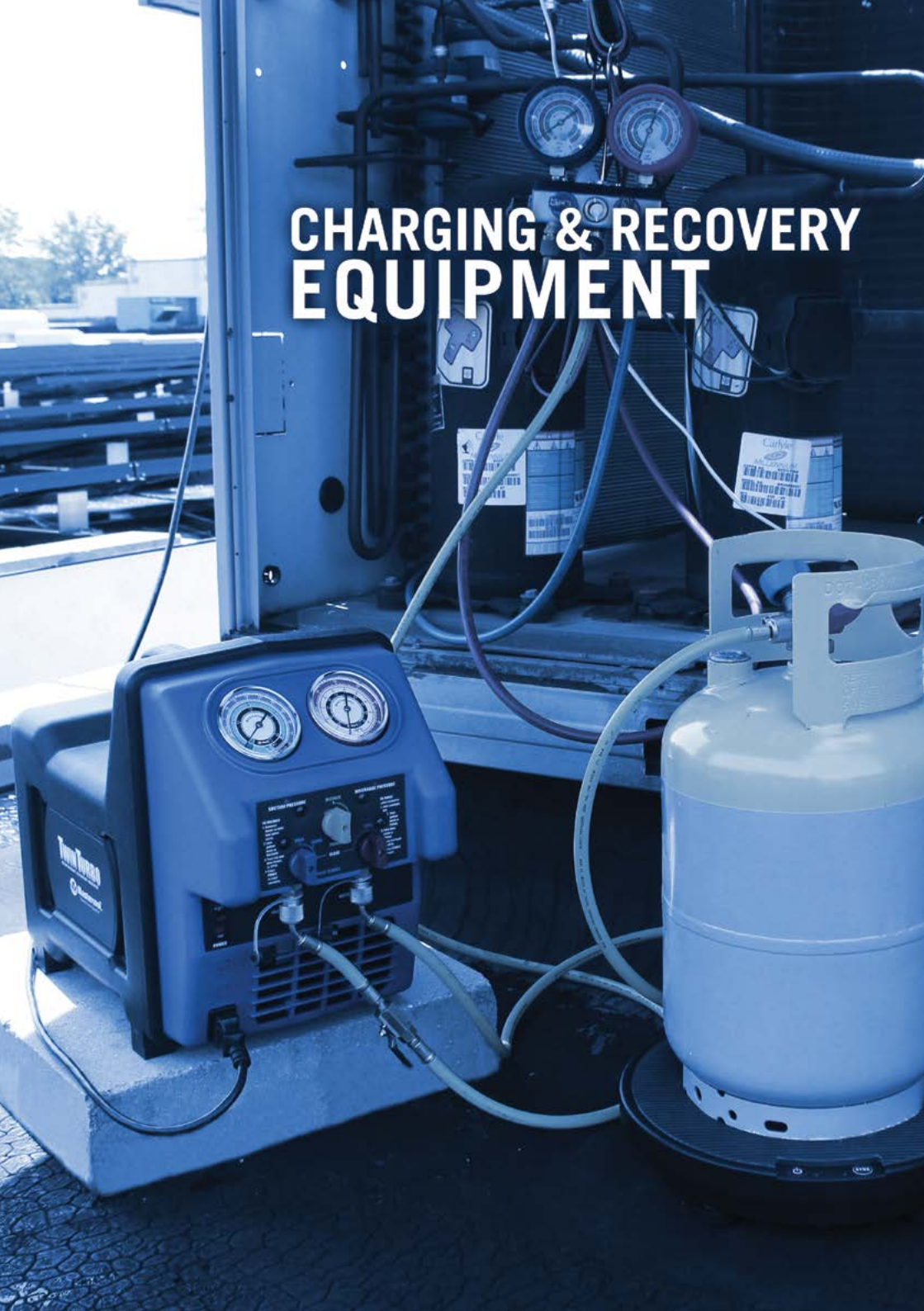
Optional Accessories

98061-SENSOR	Replacement Sensor
99334-110	110 V AC/DC Adapter
99334-220	220 V AC/DC Adapter
99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee



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CHARGING & RECOVERY EQUIPMENT



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: ± 0.01 lb / ± 0.005 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: 110 kg (240 lbs)
- Accuracy: ± 0.01 kg or ± 0.16 oz or ± 0.01 lb } or 0.1% of reading (whichever is greater)
- Resolution: 0.01 kg / 0.02 lb
- 3 hrs Auto Off Function
- Operating Temperature is 0 to 49°C (32 to 120°F)
- Battery Life (approximately 40 hrs)
- Works w/110 or 220V Transformer (part no. 99334-110 or 99334-220)
- 22 x 22 cm (9 x 9") Platform



Platform Level Eye

Adjustable Leveling Feet



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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 0 to 49°C (32 to 120°F)
- Battery Life (approximately 40 hrs)
- 22 x 22 cm (9 x 9") Platform

**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: 5000 g / 176 oz
- Sensitivity: 1 g / .035 oz
- 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.
- Quick working 300W heater element
- An excellent complement to all Mastercool Refrigerant Scales

98250 110 V

98250-220 220 V



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REFRIGERANT/RECOVERY CYLINDERS

Features:

- Y-valve for liquid/vapour TPED approved
- Raised collar for ease of handling and protection
- CE and TÜV approved
- Single valve for vapour TPED approved
- Tanks Conform to PED and ADR regulations
- Used for storage and transport of refrigerant gases

6 LITER REFRIGERANT/RECOVERY CYLINDERS

61009-EUGRY-1/4 61009-EUGRY-1/4 61009-EUGRN



61009-EUGRY 61010-EUGRN 61010-EUGRY

- Size (w x h): 185 mm x 338 mm
- Tare Weight: 5.18 Kg
- Standard Specification: ADR/RID2009, EN13322-1N D TUV 1
- Nominal Water Capacity: 6 l
- Tank Test Pressure: 48 bar
- Air Tightness Test Pressure: 32 bar
- Bursting Pressure: >108 bar
- Bursting Volumetric Expansion Rate: >20%
- Body Material: HP295
- Service Pressure: 32 bar

SINGLE VALVE (available from US factory)		
Model	61009-EUGRY-1/4 (grey tank)	61009-EUGRY (grey tank)
	61009-EUGRN-1/4 (green tank)	61009-EUGRN (green tank)
DOUBLE VALVE		
Model	61010-EUGRY (grey tank)	NA
	61010-EUGRN (green tank)	NA
Connection	1/4" FL-M (7/16-20)	W21.8-14.M

12.5 LITER REFRIGERANT/RECOVERY CYLINDERS

62009-EUGRY-1/4 62009-EUGRN-1/4 62010-EUGRY



62010-EUGRN 62009-EUGRY 62009-EUGRN

- Size (w x h): 228 mm x 516 mm
- Tare Weight: 8 Kg
- Standard Specification: ADR/RID2009, EN13322-1N D TUV 1
- Nominal Water Capacity: 12.5 l
- Service Pressure: 32 bar
- Tank Test Pressure: 48 bar
- Air Tightness Test Pressure: 32 bar
- Bursting Pressure: >108 bar
- Bursting Volumetric Expansion Rate: >20%
- Body Material: HP295

SINGLE VALVE (available from US factory)		
Model	62009-EUGRY-1/4 (grey tank)	62009-EUGRY (grey tank)
	62009-EUGRN-1/4 (green tank)	62009-EUGRN (green tank)
DOUBLE VALVE		
Model	62010-EUGRY (grey tank)	NA
	62010-EUGRN (green tank)	NA
Connection	1/4" FL-M (7/16-20)	W21.8-14.M

27.2 LITER REFRIGERANT/RECOVERY CYLINDERS

63009-EUGRN-1/4 63009-EUGRY-1/4 63010-EUGRN



63010-EUGRY 63009-EUGRN 63009-EUGRY

- Size (w x h): 298 mm x 613 mm
- Tare Weight: 15.7 Kg
- Standard Specification: ADR/RID2009, EN13322-1N D TUV 1
- Nominal Water Capacity: 27.2 l
- Service Pressure: 32 bar
- Tank Test Pressure: 48 bar
- Air Tightness Test Pressure: 32 bar
- Bursting Pressure: >108 bar
- Bursting Volumetric Expansion Rate: >20%
- Body Material: HP295

SINGLE VALVE (available from US factory)		
Model	63009-EUGRY-1/4 (grey tank)	63009-EUGRY (grey tank)
	63009-EUGRN-1/4 (green tank)	63009-EUGRN (green tank)
DOUBLE VALVE		
Model	63010-EUGRY (grey tank)	NA
	63010-EUGRN (green tank)	NA
Connection	1/4" FL-M (7/16-20)	W21.8-14.M

TANK ADAPTERS



90639	W21.8-14 x 1/4" FL (EU Standard)	90640	Gasket for 90639
90637	3/4-16 x 1/4" FL (US Standard)	90638	Gasket for 90637



Mastercool[®]
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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 & 1/4" SAE 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 & 1/4" SAE 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



68010

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

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

ENVIRO TANK (REFILLABLE CYLINDER)

30 LB. REFILLABLE CYLINDER



62020-W

- 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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ARCTIC COMMANDER



Mastercool introduces its new ARCTIC COMMANDER line of RRR machines. Equipped with the latest technology, all models come standard with an 8" command center. The graphic user interface (GUI) will enable navigation through all functions and features with the greatest of ease. There is no longer a need to read any external instructions or paper manuals, simply sit back, watch and learn how to use your machines. All machines are also equipped with Wi-Fi capabilities; allowing for realtime, interactive communication and troubleshooting. ***It's about time somebody introduced RRR machines for the 21st century!***



COMMANDER4000-E



COMMANDER3000-E



COMMANDER2000-E



COMMANDER1000-E

	COMMANDER4000 (110V) COMMANDER4000-E (220V) R1234YF	COMMANDER3000 (110V) COMMANDER3000-E (220V) R134A HYBRID	COMMANDER2000 (110V) COMMANDER2000-E (220V) R134A FULLY AUTOMATIC	COMMANDER1000 (110V) COMMANDER1000-E (220V) R134A MANUAL
8" Color Command Center with Touch Screen	X	X	X	X
Automatic and Manual Procedures	X	X	X	X
Refrigerant Database	X	X	X	NA
Automatic Vacuum Leak Test: Programmable	X	X	X	X
Auto Oil Discharge	X	X	X	X
Auto and Manual Air Purge	X	X	X	X
Auto Filter and Full Tank Alarm	X	X	X	X
Low Refrigerant Alarm	X	X	X	X
Auto Oil Injection	X	X	X	NA
Thermal Printer	X	X	NA	NA
Hose Flushing	X	X	NA	NA
Vehicle A/C System Flushing	X	X	NA	NA
Tank Heater	X	X	X	X
6 CFM Vacuum Pump	X	X	X	NA
3 CFM Vacuum Pump	NA	NA	NA	X
Refrigerant Identifier	X	NA	NA	NA
On-board Instruction Manual	X	X	X	X
Multiple Languages	X	X	X	X
On-board Unit Conversion Calculator	X	X	X	X
New Cabinet Design for Increased Air Flow	X	X	X	X
Large Analog Gauges	X	X	X	X
Hard Wired Power Cord	X	X	X	X
Hose Coupler Storage	X	X	X	X
Solid Durable Wheels with Locking Casters	X	X	X	X
Multi-colored LED Status Bar	X	X	X	NA
Self-Diagnostic Check	X	X	X	X
Wi-Fi Capable	X	X	X	X
Dimensions (mm): 1150 (h) x 600 (w) x 770 (d)	X	X	X	X

For R1234yf machine without a refrigerant identifier, please use COMMANDER4000-X (for 110V model) or COMMANDER4000-E-X (for 220V model)



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8" COLOR TABLET WITH TOUCH SCREEN FEATURES:



Home Screen

allows for quick touch selection of options



Status Screen

for quick reference of resources



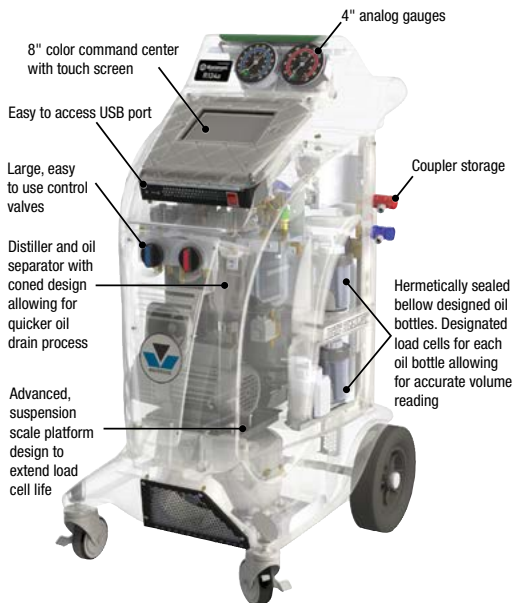
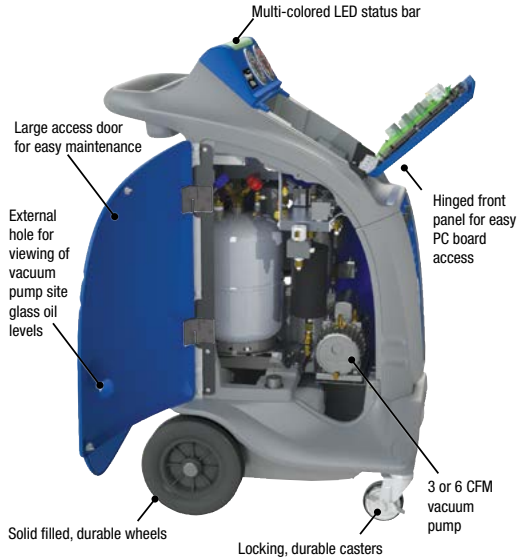
Maintenance Screen

offered only to authorized service technicians allowing for quick and easy diagnosis



Maintenance Screen

offered only to authorized service technicians allowing for quick and easy diagnosis



Mastercool®
"World Class Quality"

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

TWINTURBO
REFRIGERANT RECOVERY MACHINE



69300-220



DUAL VOLTAGE
69300-2V-220

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:

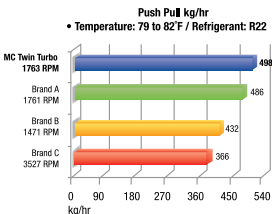
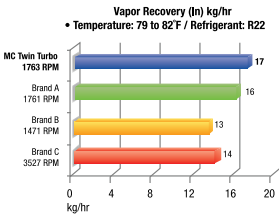
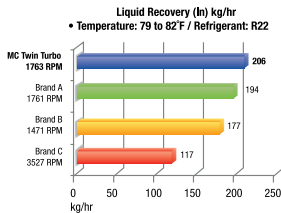
- 1/2 hp oil less compressor
- Recovery Rate:

R134a	R22
• Direct vapor up to 14 kg/hr	• Direct vapor up to 17 kg/hr
• Direct liquid up to 130 kg/hr	• Direct liquid up to 206 kg/hr
• Push pull up to 318 kg/hr	• Push pull up to 498 kg/hr

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



69300	115 V - 60 Hz
69300-220	220 V - 50/60 Hz
69300-220-EU	220 V - 50/60 Hz Includes a manual restart button per EU standards
69300-2V-110	Dual Voltage 110/220 V - 50/60 HZ - 110 V Cable
69300-2V-220	Dual Voltage 110/220 V - 50/60 HZ - 220 V Cable (Schuko)
69300-2V-UK	Dual Voltage 110/220 V - 50/60 HZ - UK Cable



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TWIN TURBO REFRIGERANT RECOVERY MACHINE



69350-220

This unit offers all the same functions and features as the 69300. In addition it has an oil separation module, filter dryer and sight glass.



69350	115 V - 60 Hz
69350-220	220 V - 50/60 Hz
69350-220-EU	220 V - 50/60 Hz Includes a manual restart button per EU standards
69350-2V-110	Dual Voltage 110/220 V - 50/60 HZ - 110 V Cable
69350-2V-220	Dual Voltage 110/220 V - 50/60 HZ - 220 V Cable (Schuko)
69350-2V-UK	Dual Voltage 110/220 V - 50/60 HZ - UK Cable
69500-DR	Replacement Filter Dryer

CONTAMINATED MOBILE RECOVERY MACHINE FOR R1234yf



69390-220

COMPATIBLE WITH COMBUSTIBLE GASES

FOR CONTAMINATED MOBILE A/C SYSTEMS DESIGNED FOR R1234yf

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

- Meets all requirements of SAE J2851, contaminated recovery only device
- 60" R1234yf blue hose and low side (1/4 FL-M x 13 mm) coupler
- 60" yellow transfer hose



69390	115 V - 60 Hz Comes equipped with overfill protection switch cutting off at 80% tank capacity (Recovery tanks must have floats using 3 pin Brad Harris plug)
69390-220	220 V - 50/60 Hz
69395-220	HVAC Combustible Gas Recovery Machine (220 V - 50/60 Hz) Comes as pictured less hoses and couplers with 1/4" flare fittings

mini TWIN TURBO
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
69400-220	220 V - 50/60 Hz

All Twin Turbo Recovery Machines are available with either a UK or Australian Cable, please add a:
-AUS for an Australian cable
-UK for a UK cable



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REFRIGERANT RECOVERY SYSTEM



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 12 kg/h
 - direct liquid up to 71 kg/h
 - push-pull up to 326 kg/h
- Operating Temp. Range: 0 to 50°C (32 to 122°F)
- Weight: 16 kg (38 lbs)
- Dimensions: 432 mm (l) x 254 mm (w) x 305 mm (h) (17" (l) x 10" (w) x 12" (h))
- Refrigerants: CFC's, HCFC's, HFC's

69000	115 V - 60 Hz
69000-220	220 V - 50/60 Hz
69000-220-TUV	220 V - 50 Hz Certified to TUV/GS and E35-421
69000-J	100 V - 50 Hz (Japanese Standard)

69200-220 COMPLETE A/C RECOVERY SYSTEM



This unit offers all the same functions and features as the reliable 69000 recovery machine. In addition, Mastercool has strategically placed an oil separation module inside the unit that will dispense used oil effortlessly. Together with its filter dryer and sight glass this unit allows for the technician to actually clean the used refrigerant and potentially re-use.



69500-DR Replacement Filter Dryer

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: 38 cm (15")
- Height: 43 cm (17")
- Includes hoses
- Width: 10 cm (4")
- Weight: 5.5 kg (12.25 lbs)



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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
- Large 80 mm gauges make it easy to read the pressure and temperature scales
- 109 kg (240 lb) capacity scale with long lasting 9V battery (60 hrs)
- Deep micron, rotary vane vacuum pumps.
Available in 119 lit/min and 178 lit/min.
- Includes set of 180 cm (72") hoses

ALSO AVAILABLE:

- Refrigerant tank heater blanket #98250 and #98250-220
- R134a Automotive Service Couplers not included

VACUUM PUMP	5 CFM	119 lit/min (50 Hz) 142 lit/min (60 Hz)	7.5 CFM	178 lit/min (50 Hz) 213 lit/min (60 Hz)
MANIFOLD	110 V	220 V	110 V	220 V
2 Way Alum Block	91585	91585-220	91587	91587-220
4 Way Alum Block	91586	91586-220	91588	91588-220

DUAL VOLTAGE PORTABLE CHARGING STATION

VACUUM PUMP	90063-2V-220-B	90066-2V-220-B
MANIFOLD	110/220 V	110/220 V
2 Way Alum Block	91583-2V-220	91585-2V-220
4 Way Alum Block	91584-2V-220	91586-2V-220

MOBILE ELECTRONIC CHARGING STATION



Keeping the same ideals in mind as the Portable Electronic Charging Station, the mobile unit is directed towards the garage technician. With an enlarged carry cart and larger wheels, this unit can get around the shop with the greatest of ease!



- Dimensions: 45" x 18" x 16.5" (114 cm x 46 cm x 42 cm)

VACUUM PUMP	5 CFM	119 lit/min	7.5 CFM	178 lit/min
MANIFOLD	110 V	220 V	110 V	220 V
2 Way Alum Block	91685	91685-220	91687	91687-220
4 Way Alum Block	91686	91686-220	91688	91688-220

DUAL VOLTAGE MOBILE CHARGING STATION

VACUUM PUMP	90063-2V-220-B	90066-2V-220-B
MANIFOLD	110/220 V	110/220 V
2 Way Alum Block	91683-2V-220	91685-2V-220
4 Way Alum Block	91684-2V-220	91686-2V-220

All charging stations are available with either a UK or Australian Cable, please add a:

- AUS for an Australian cable
- UK for a UK cable



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69134-A REFRIGERANT IDENTIFIER FOR R134a



Keeps Equipment Safe, Prevents Contamination, Detects Air Contamination. The Refrigerant Identifier helps confirm the presence and quality of R134a refrigerant in vehicle air conditioning systems. This process will help avoid potential damage from refrigerant contamination.

SPECIFICATIONS:

- Weight: 0.8 kg
- Refrigerant Detected: R134a (Tetrafluoroethane)
- Accuracy: PASS/FAIL - 95% Pure R134a
- Power Requirements: 12 VDC
- User Interface: Membrane type with visual indicators and function key
- Calibration Method: Manual pump aspirator
- Minimum Input Pressure: 1.38 Bar (20 Psig), Maximum Input Pressure: 20.70 Bar (300 Psig)
- Storage Temperature: -10° to 50°C / Operating Temperature: 10 to 45°C
- Construction Material: Molded ABS housing/molded rubber sleeve



691234YF ULTIMA ID 1234YF REFRIGERANT ANALYZER



The Ultima ID 1234yf refrigerant analyzer is certified to the SAE J2912 Refrigerant Analyzer Standard. Its portability and USB integration with the R/R/R machine, provides a versatile and efficient method of validating the refrigerant purity during service.

SPECIFICATIONS:

- Refrigerant Measured: R1234yf, R134a
- Accuracy: Better than $\pm 1.0\%$
- Refrigerant % Displayed: R1234yf, R134a, R22, HC, Air
- Ambient Operating Temperature Range: 50° to 120°F
- Power: 110/220V 50/60Hz
- Communication Protocols: USB 2.0
- Displays % air in pure R1234yf and R134a
- Built-in rechargeable power pack
- User Interface: LCD + 3 switches
- Approvals: CE, UL, SAE
- Integral Pressure/Flow Control: Yes
- Integral Calibration Pump: Yes
- Oil Contamination: User Replaceable Oil Trap
- Filtration: User Replaceable
- Built-in printer to easily print test results
- Connects directly to SAE J2843 R/R/R machine
- Comes with complete kit:
 - R134a adapter fitting for ACME ported cylinders
 - Identifier and accessories housed in a portable case
 - R1234yf adapter for cylinders
 - R1234yf and R134a sample hoses

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



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" FL sample hose, 110/220VAC power adapter, identifier and accessories in a rugged case

SPECIFICATIONS:

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

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

69HVAC-PRO2 ULTIMA ID™ PRO HVAC REFRIGERANT IDENTIFIER



The Ultima ID Pro2 HVAC/R Refrigerant Analyzer enables fast, accurate testing of refrigerant, reducing the need for costly and time-consuming gas chromatography.

FEATURES:

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

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: $\pm 2\%$ 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



Mastercool
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LEAK DETECTION



THE ONLY LEAK DETECTOR YOU WILL EVER NEED



LCD Display



Keypad

IntellaSense 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 gasses 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.



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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 all refrigerants
- 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 enable 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



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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

R32
Compatible

CE



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

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



- Tri-Colored Visual Leak Level Indicator
- Inject the A/C System with Dye! The UV Light Button will illuminate the Leak!
- Mute Function
- Use Reset to Ignore Current Level of Leak and look for Higher Level of Concentration

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

R32
Compatible



CE



53515-B LED Bulb for 55200, 55300 & 55400



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Inc.
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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



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53518-UV RECHARGEABLE 110 V UV FLASHLIGHT (LED) 53518-UV-220 RECHARGEABLE 220 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



53512-UV MINI UV FLASHLIGHT (LED)



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

53517-UV COMPACT UV FLASHLIGHT (LED)



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

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

53012 UV SWIVEL HEAD LIGHT (12 V/100 WATTS)



- 180° Swivel Heads Get Into Tight Places
- Heavy Duty Metal Construction
- Instant ON
- Includes UV Enhancing Safety Glasses

53012-B Light Bulb

53012-L Lens

53312 UV MINI LIGHT (12 V/50 WATTS)



- High Intensity
- 16ft. (5m) Cord
- Compact & Lightweight
- Instant ON
- Includes UV Enhancing Safety Glasses



53312-B Light Bulb

53312-L Lens

COMPACT UV LEAK LOCATOR KITS



53451-110



53587



53585



53100



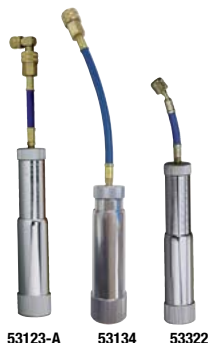
53500

Leading the way in UV LEAK DETECTION, Mastercool offers a variety of compact UV Leak Locator Kits. Each kit offers a powerful inspection lamp, a "Refillable" or "Cartridge Type" Dye Injector and accessories. All kits are packaged in a clamshell or custom molded carrying case.

KIT PART#	INJECTOR / LIGHT	CONTENTS OF EACH KIT	VOLTAGE/ WATT
53451-110	53123/ 53518-UV	Rechargeable UV light, Batteries, Rechargeable Batteries, Battery Holder, Refillable 2 oz Dye Injector, 2 oz Concentrated Universal A/C Fluorescent Dye (25 Application), 4 oz Dye Remover, 25 Service Information Labels, UV Enhancing Safety Glasses	LED
53451-220	53123/ 53518-UV-220	Rechargeable UV light, Batteries, Rechargeable Batteries, Battery Holder, Refillable 2 oz Dye Injector, 2 oz Concentrated Universal A/C Fluorescent Dye (25 Application), 4 oz Dye Remover, 25 Service Information Labels, UV Enhancing Safety Glasses	LED
53451-C-110	53223/ 53518-UV	Same as 53451-110 but with Replaceable 2 oz Dye Cartridge (25 Applications)	LED
53451-C-220	53223/ 53518-UV-220	Same as 53451-220 but with Replaceable 2 oz Dye Cartridge 25 Applications)	LED
53587	53809/ 53517-UV	Compact UV Flashlight (53517-UV), 1 oz die injector with replaceable 1 oz die cartridge (10 application), Low Side Hose, 1/4" FL adapter, UV Enhancing Safety Glasses, Service Information Labels, Packaged in a clam shell	LED
53580	53809/ 53515	MACH IV Flexible LED UV Light w/1 oz (30 ml) Dye Injector, w/Replaceable 1 oz (30 ml) Dye Cartridge (10 Appl.), Low-Side Hose w/R134a Coupler, 1/4" FL Adapter, 10 Serv. Info. Lbls. & UV Enhancing Safety Glasses	LED
53585	53809/ 53515	Same as above, but w/1 oz OIL/ATF/Gas (53610) & Diesel Fluorescent Dye and 1oz (30ml) Engine Coolant Fluorescent Dye (53609)	LED
53100	53123/ 53012	High Intensity Swivel Head Light, w/ Refillable 2 oz (60 ml) Dye Injector, 2 oz (60 ml) Concentrated Universal A/C Fluorescent Dye (25 Appl.), 4 oz (1200 ml) Dye Remover, 25 Serv. Info. Lbls. & UV Enhancing Safety Glasses	12 V/100 WATT
53100-C	53223/ 53012	Same as 53100, but with Replaceable 2 oz (60 ml) Dye Cartridge (25 Appl.)	12 V/100 WATT
53500	53123/ 53312	High Intensity Mini Light w/Refillable 2 oz (60 ml) Dye Injector, 2 oz (60 ml) Concentrated Universal A/C Fluorescent Dye (25 Appl.), 4 oz (120 ml) Dye Remover, 25 Serv. Info. Lbls. & UV Enhancing Safety Glasses	12 V/50 WATT
53500-C	53223/ 53312	Same as 53500, but with Replaceable 2 oz (60 ml) Dye Cartridge (25 Appl.)	12 V/50 WATT



REFILLABLE UNIVERSAL OIL/DYE INJECTOR



53123-A 53134 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
- 53134** Refillable Oil/Dye Injector with (R134a 13 mm Connection) and 2 oz (60 ml) Bottle of Concentrated A/C Dye (25 Applications)
- 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)

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.

53809 MINI DYE INJECTOR



"Cartridge Type" Dye Injector (10 Applications) Concentrated Dye.

53123-YF REFILLABLE R1234yf OIL/DYE INJECTOR



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. The injector hose comes complete with a R1234yf coupler.



OIL INJECTOR



Excellent method for adding refrigerant oil or large amounts of UV leak detection dye to the A/C system. Add oil by allowing vacuum to pull it in after evacuation process, or use refrigerant to push it in using the recharge system.

- 90375** Standard 1/4" FFL x 1/4" MFL
- 82375** ACME 1/2" FFL x 1/2" MFL

STANDARD UNIVERSAL ULTRAVIOLET A/C DYES



- 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) Bottle - 32 Applications
- 92732** Standard Universal Dye
32 oz (1 L) Bottle - 128 Applications

R1234yf
Compatible

CONCENTRATED UNIVERSAL ULTRAVIOLET A/C DYES



- 53825** Concentrated Universal Dye Cartridge
Replaceable Cartridge - 25 Applications
- 53810** Concentrated Universal Dye Cartridge
Replaceable Cartridge - 10 Applications
- 53625** Concentrated Universal Dye
2 oz (60 ml) Bottle - 25 Applications

R1234yf
Compatible

FLUORESCENT DYE



- 53609** Engine Coolant (1 oz. (30 ml) bottle)
• 1 oz for 1 vehicle application per 16 quarts (15 L) of fluid
- 53610** Engine Oil (1 oz. (30 ml) bottle)
• Engine Oil (Gas & Diesel) - 1 vehicle application per 4-5 quarts (4 L-5 L) of oil
• Automatic Transmission Fluid - 1 vehicle application per 4-5 quarts (4 L-5 L) of fluid
• Gasoline & Diesel Fuel - 1 vehicle application per 2 gallons (8 L) of fuel



- 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



LEAK DETECTION

Intertek LABORATORY TESTED
✓ NO DAMAGE
✓ NO RESTRICTION

- 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



Mastercool®
"World Class Quality"



- Lubricates system and helps prevent leaks
- Seals small leaks in evaporator, condenser, hoses, o-rings and gaskets
- Illuminates larger leaks through the use of high quality universal fluorescent dye
- For R134a A/C systems
- Safe for hybrid and electric compressors



53909 Mini Auto A/C Master Leak Shield Dye Injector
"Cartridge Type" 1 oz injector with Auto A/C Master Leak Shield Sealant with Dye, low side hose, 1/4" FL adapter

53910 Auto A/C Master Leak Shield
1 oz replacement cartridge of Auto A/C Master Leak Shield Sealant with Dye

53592 Mini UV Flashlight Kit
53512-UV Mini UV Flashlight (12 LED), "cartridge type" 1 oz Injector with Auto A/C Master Leak Shield Sealant with Dye, low side hose, 1/4" FL adapter, UV safety glasses, service info, labels, packaged in clam shell

53597 Compact UV Flashlight Kit
53517-UV Compact UV Flashlight (17 LED), "cartridge type" 1 oz Injector with Auto A/C Master Leak Shield Sealant with Dye, low side hose, 1/4" FL adapter, UV safety glasses, service info, labels, packaged in clam shell



Easy to use! Stops leaks in metal and rubber automotive air conditioner parts including evaporators, condensers, o-rings, gaskets and hoses.

- For use in R134a, HFO-1234yf, hybrid and electronic A/C systems.
- Includes o-ring conditioner, proprietary anti-wear and anti-oxidant additives.
- Adds 1 oz. (30 ml) leak stop with U/V leak detection dye.
- Patented delivery system, does not contain refrigerant.
- Safe, does not contain harmful polymers
- HFC Free Aerosol

US Patent No. 8,074,009, other US and foreign patents pending



53615-A Auto Master Leak Shield
1 oz can of Auto Master Leak Shield Sealant with Dye





SERVICE ACCESSORIES AND CONSUMABLES

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NITROGEN PRESSURE REGULATORS

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.

- 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)
- Kits come with leak testing gauge and charging hose, packaged in a blow molded case



Model #	53001	53002	53003	53004	53005
Standard	CGA580 (US)	DIN477#6 and DIN477#10 (This unit includes an adapter to convert DIN477#6 to DIN477#10) (France/Germany)	BS3 (England)	AS2473.2 (Australia)	5-UNI11144 (Italy)

1/4 FL-M outlet connection

PRESSURE TESTING REGULATOR KITS



- 53010 PRESSURE TESTING REGULATOR KIT (US)**
53001 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), Blow molded case (53000-PB)
- 53020 PRESSURE TESTING REGULATOR KIT (France/Germany)**
53002 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), R410a Straight Adapter 1/4 FL-M x 5/16 Swivel-F (90413), Blow molded case (53000-PB)
- 53030 PRESSURE TESTING REGULATOR KIT (England)**
53003 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), R410a Straight Adapter 1/4 FL-M x 5/16 Swivel-F (90413), Blow molded case (53000-PB)
- 53040 PRESSURE TESTING REGULATOR KIT (Australia)**
53004 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), Blow molded case (53000-PB)
- 53050 PRESSURE TESTING REGULATOR KIT (Italy)**
53005 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), Blow molded case (53000-PB)

53042-YF LEAK TESTING ADAPTER FOR R1234YF



- 80 mm gauge
- R1234yf low side coupler



OPTIONAL ACCESSORIES

66434-R	High Side Standard R134a 1/4" FL-M x 13 mm Economy Coupler	53000-70	Low Pressure Regulator Gauge
82834	High Side Manual R134a 14 mm-F x 16 mm Coupler	53000-300	High Pressure Regulator Gauge
90413	R410a Straight Adapter 1/4" FL-M x 5/16" Swivel-F	47482	48" Yellow Charging Hose
53042	Leak Testing Adapter	93254-E	Black Gauge Guard
53000-42	Leak Testing Gauge	53000-W	Teflon Washer



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PRESSURE TESTING REGULATOR KITS*

ONLY FOR SALE IN EUROPE



53025

53025 PRESSURE TESTING REGULATOR KIT (France/Germany) 53002 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), R410a Straight Adapter 1/4 FL-M x 5/16 Swivel-F (90413), Regulator Adapter (53002-AD), 1 liter bottle of nitrogen (91150), Blow molded case (53015-PB)



53035 PRESSURE TESTING REGULATOR KIT (England) 53003 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), R410a Straight Adapter 1/4 FL-M x 5/16 Swivel-F (90413), 1 liter bottle of nitrogen (91150), Regulator Adapter (53003-AD), Blow molded case (53015-PB)

53055 PRESSURE TESTING REGULATOR KIT (Italy) 53005 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), 1 liter bottle of nitrogen (91150), Regulator Adapter (53004-AD), Blow molded case (53015-PB)

53025-NH PRESSURE TESTING REGULATOR KIT (France/Germany) 53002 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), R410a Straight Adapter 1/4 FL-M x 5/16 Swivel-F (90413), 1 liter bottle of NitroH (91151), Regulator Adapter (53002-AD), Blow molded case (53015-PB)

53035-NH PRESSURE TESTING REGULATOR KIT (England) 53003 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), R410a Straight Adapter 1/4 FL-M x 5/16 Swivel-F (90413), 1 liter bottle of NitroH (91151), Regulator Adapter (53003-AD), Blow molded case (53015-PB)

53055-NH PRESSURE TESTING REGULATOR KIT (Italy) 53005 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), 1 liter bottle of NitroH (91151), Regulator Adapter (53004-AD), Blow molded case (53015-PB)

* add a **-A** to include a low side manual R134a 1/4" FL-M x 13mm quick coupler (82934-e)

* add a **-AYF** to convert the leak testing adapter to a R1234yf leak testing adapter (53042-yf)



REGULATOR ADAPTER

ONLY FOR SALE IN EUROPE

53003-AD



These adapters are designed to work with Mastercool's line of Nitrogen Pressure Regulators and allow for the use of our new 1 Liter Nitrogen and NitroH bottles.



53002-AD France/Germany **53003-AD** England **53005-AD** Italy

1 LITER NITROGEN BOTTLE (max filling pressure 110 bar)

ONLY FOR SALE IN EUROPE



Mastercool introduces its new offering of 1 liter portable Nitrogen bottles.

The nitrogen bottles are commonly used for:

- Testing for leaks in pressure of HVAC & A/C
- Flushing of HVAC & A/C systems
- Fluxing during soldering in HVAC & A/C
- Calibration of pressure switches
- Gauge calibration and much more



91150-6 (6 pcs.) 1 liter bottle of Nitrogen

91150-48 (48 pcs.) 1 liter bottle of Nitrogen

91150-96 (96 pcs.) 1 liter bottle of Nitrogen

1 LITER NITRO H BOTTLE (max filling pressure 110 bar)

ONLY FOR SALE IN EUROPE



Mastercool introduces its new offering of 1 liter portable NitroH bottles. NitroH is a mixture of 95% nitrogen and 5% hydrogen. This unique combination allows this gas to be used for leak detection in conjunction with Mastercool's 55800 IntelliSense Refrigerant Leak Detector.



91151-6 (6 pcs.) 1 liter bottle of NitroH

91151-48 (48 pcs.) 1 liter bottle of NitroH

91151-96 (96 pcs.) 1 liter bottle of NitroH



Mastercool®
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TOTAL A/C QUICK FLUSH



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

- O-Ring safe
- Non-Flammable
- Non-Corrosive
- For Professional Use
- Pressurized container ready to use



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 Cans

91046-A A/C SYSTEM FLUSH KIT



Includes flush gun, hose, canister and canister adapter. Designed to work with any light weight flushing agent which can be mixed with pressurized air. Excellent for quickly and effectively removing refrigerant oil debris during retrofitting or compressor replacement.



A/C FLUSH SOLVENT



- Effectively removes debris and sludge from A/C components
- Solvent-based
- Evaporates quickly
- Leaves no residue
- O-Ring safe
- Non-Flammable
- Non-Corrosive
- Professional use only
- Flush any A/C system



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

92707 HYBRID A/C COMPRESSOR OIL

- Formulated for Vehicles with Electric A/C Compressors
- High Dielectric Formula Provides Advanced Compressor Protection
- Synthetic lubricant specifically created for electric hybrid air conditioning compressors
- For replenishing hybrid or electric compressor oil in accordance with the quantity evacuated or the quantity recommended by the compressor manufacturer
- Provides outstanding lubricity and compressor protection
- Compatible replacement lubricant for compressors using Honda 38899RCJA01, ND-10, ND-OIL 11 (ND-11), and SE-10Y
- High dielectric protection formula has excellent "resistivity" to potential electrical current leakage in high voltage hybrid A/C systems
- Contains conditioners, inhibitors and anti-wear agents
- Net contents 7 oz. (210 mL)

COMPRESSOR OILS

Maximum protection with excellent thermal & oxidative stability. Moisture tolerant. OEM approved.

PAG 65

92709-65-8 PAG 65 Oil (8 oz (240 ml) bottle)

92709-65-32 PAG 65 Oil (32 oz (1 L) bottle)

PAG 100

53826 PAG 100 Oil (2 oz (60 ml) cartridge)

92709-100-8 PAG 100 Oil (8 oz (240 ml) bottle)

92709-100-32 PAG 100 Oil (32 oz (1 L) bottle)

PAG 150

92709-150-8 PAG 150 Oil (8 oz (240 ml) bottle)

92709-150-32 PAG 150 Oil (32 oz (1 L) bottle)

Ester Oil

53827 Ester Oil (2 oz (60 ml) cartridge)

92710 Ester Oil (8 oz (240 ml) bottle)

92712 Ester Oil (32 oz (1 L) bottle)

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.



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91000-B DELUXE CLUTCH HUB PULLER/INSTALLER KIT



Kit contains a complete offering of A/C compressor clutch hub pullers and installers for GM, Ford, Chrysler and Imports. Includes a universal clutch holding tool and comes in a custom molded case.

92311 DELUXE ORIFICE TUBE SERVICE KIT



This 5 piece universal kit will remove and install any style orifice tube. Comes in custom molded box.

92329 TOYOTA A/C DISCONNECT TOOL



The new Toyota spring lock A/C hose couplings require this special disconnect tool. Simply insert the end of the tool into the coupling to disengage the hose.

ALUM BOND



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/°C
- 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 hrs application time): 650 psi

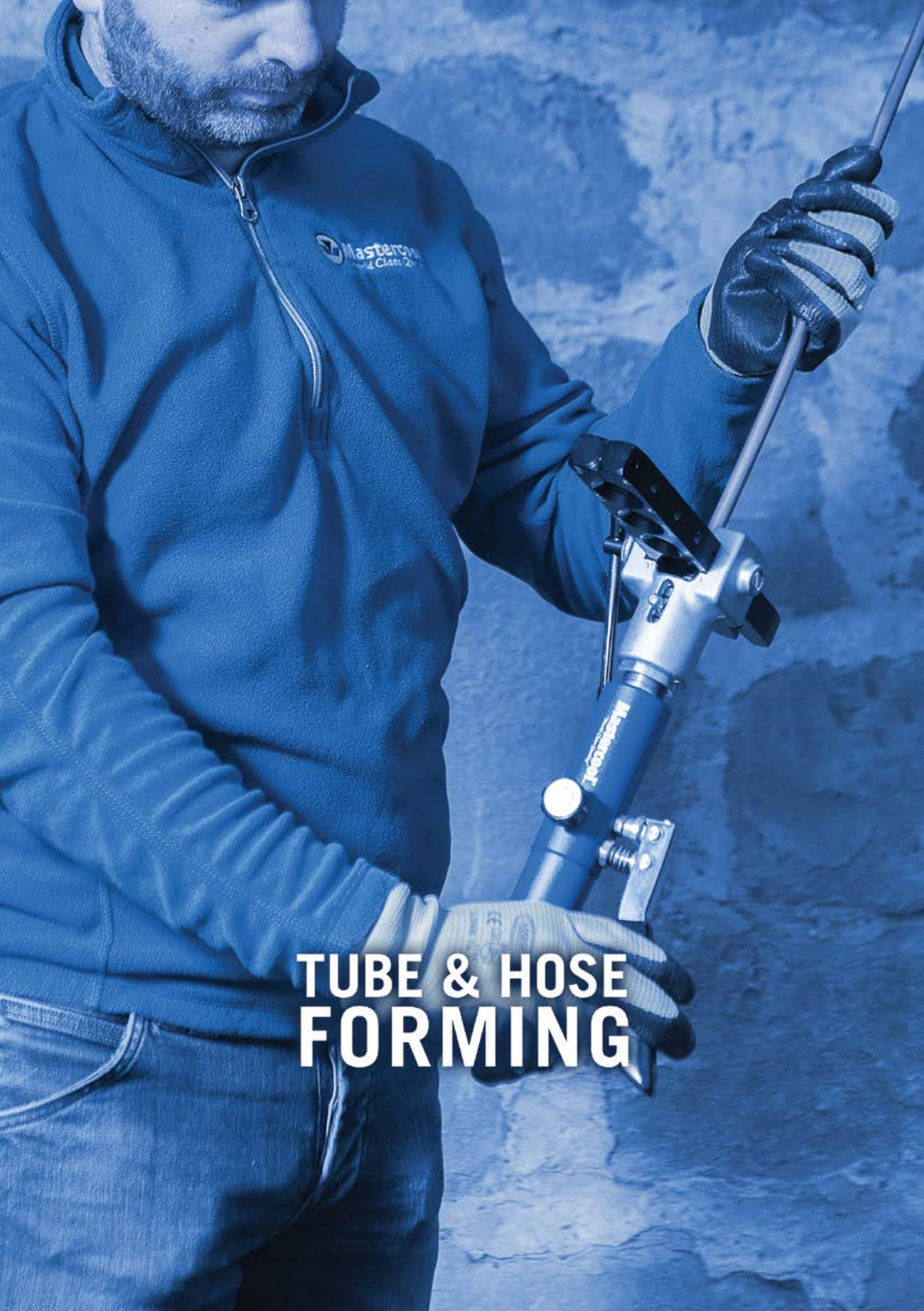
90935 Aluminum Repair Kit (6.5 oz package)

90934 Aluminum Repair Kit (2 oz package)

90935-12 Aluminum Repair Kit - box of 12 (each box contains Hardener & Resin (3.25 oz. (94g) each)



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A man with a beard, wearing a blue zip-up jacket and blue work gloves, is using a Mastercraft tube and hose forming tool. The tool is blue and silver, with a black handle and a silver body. The man is holding the tool with both hands, and a metal rod is visible extending from the top. The background is a textured, light blue surface. The text "Mastercraft" is visible on the man's jacket.

Mastercraft
Forming Class 200

**TUBE & HOSE
FORMING**

71500-A HYDRA-KRIMP



Fabricating A/C Hoses Just Got Easier...
Mastercool's Patented "Hydra - Krimp" makes crimping barbed and beaded fittings as easy as 1 - 2 - 3! The lightweight hand-held hydraulic press is very portable and ideal for shop and field applications. The kit comes with a complete set of dies covering hose sizes #6, #8, #10, #12 and reduced barrier #6, #8, #10 and #12. The dies snap quickly into the press fixture requiring no pins or screws.

PATENT# 6,324,884

Kit comes in a custom molded case and includes:

71500-001AB	Hydra - Krimp Pump
71500-001B	Hydra - Krimp Yoke
71500-001C	Complete Die Set Assembly (7 pc. set)
71500-6	Die Set - #6 (5/16") Die Set - #8 (13/32" Reduced Barrier)
71500-8	Die Set - #8 (13/32")
71500-10	Die Set - #10 (1/2")
71500-12	Die Set - #12 (5/8")
71500-6SRB	Die Set - #6 (5/16" Reduced Barrier)
71500-10SRB	Die Set - #10 (1/2" Reduced Barrier)
71500-12SRB	Die Set - #12 (5/8" Reduced Barrier)
71500-PB	Custom Molded Box



The die snaps quickly into the press fixture requiring no pins or screws.



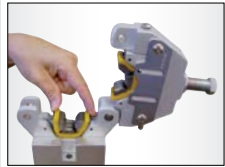
71550 A/C HOSE CRIMPER



The 71550 is our "manual style" A/C hose crimper. The dies snap quickly into place requiring no pins or screws. The unit can be easily mounted to a bench using the holding fixture or held securely in a vice. This kit comes with a complete set of dies covering standard hose sizes #6, #8, #10 and #12.

PATENT# 6,324,884

***Optional reduced barrier sizes are available.**



The die snaps quickly into the press fixture requiring no pins or screws.



Kit comes in a custom molded case and includes:

71500-001	Hydra - Krimp Pump
71550-002	Arbor Assembly
71550-003	Holding Fixture Assembly
71500-6	Die Set - #6 (5/16")
71500-8	Die Set - #8 (13/32")
71500-10	Die Set - #10 (1/2")
71500-12	Die Set - #12 (5/8")
71550-PB	Custom Molded Carrying Case



Mastercool®
"World Class Quality"

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
- 71600-A-M (7 HEAD KIT)** Same as 71600, but using Metric Expander Heads 10, 12, 15, 16, 18, 22 and 28 mm.
- 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)
71600-10M	Expander Head	10 mm
71600-12M	Expander Head	12 mm
71600-15M	Expander Head	15 mm
71600-16M	Expander Head	16 mm
71600-18M	Expander Head	18 mm
71600-22M	Expander Head	22 mm
71600-28M	Expander Head	28 mm



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HYDRAULIC FLARING AND EXPANDING



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. **PATENT# 6,619,099**



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

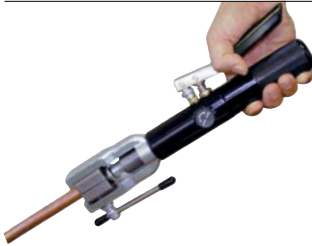


71680 HYDRAULIC FLARING ACCESSORY



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. Flares 7 sizes: 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8."



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

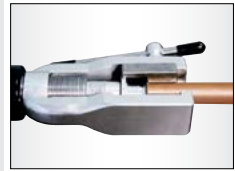
71700-110 5/8" Die Set

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.

**71475 UNIVERSAL HYDRAULIC FLARING TOOL SET**

This kit fabricates:

- Push Connect 1/4, 5/16 and 3/8"
- GM Fuel Line Flare
- Brake Lines and Transmission 5/16 and 3/8"
- Flare/Double Flare 3/16, 1/4, 5/16, 3/8 and 1/2"
- Metric Bubble Flare 4.75, 6, 8, and 10 mm
- Comes in a custom molded box.

PATENT# 5,782,128



Push
Connect

GM Fuel

45° Double
Flare

ISO Bubble
Flare

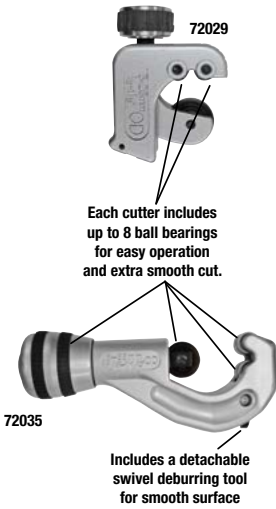


71485-PB Custom Molded Plastic Box for 71475



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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!



COMPARE	
	
Standard steel cutting wheel used on competing cutters	Re-enforced steel cutting wheel with internal ball bearings for extra smooth cut

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

TUBE CUTTERS



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)



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RATCHET STYLE TUBE CUTTER



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

70030 (1/4 to 7/8" O.D. Tubing)

70031 (5/16 to 1 1/8" O.D. Tubing)

70025 CAPILLARY TUBE CUTTER



Cuts all sizes of capillary tubes without collapsing the tube.

80021 PLUMBERS TYPE MINI CUTTER



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

80121 Spare Cutting Wheel for 80021

REPLACEMENT CUTTER WHEELS



70028



70034

70028 Replacement Cutting Wheels for 70027 (10 pcs).

70034 Replacement Cutting Wheels for 70029, 70030, 70031, 70033, 70035, 70037 (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.

INNER-OUTER REAMERS



70085



71685

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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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.

70057-AM Flares 7 Metric Sizes: 6, 8, 10, 12, 14, 16 and 18 mm 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).

70058-AM Same as Kit 70058-A, but with Metric Eccentric Flaring Tool 70057-AM.



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STANDARD 45° FLARING TOOL

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.

70051-M Metric 45° Flaring Tool
Flares 7 Metric Sizes: 4, 6, 8, 10, 12, 15 and 16 mm O.D. Tubing.

70052 SLIDING DIE-BLOCK 45° FLARING TOOL

Sliding Die-Block 45° Flaring Tool Flares and Burnishes 6 Sizes: 3/16, 1/4, 5/16, 3/8, 1/2 and 5/8" 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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PUNCH-TYPE SWAGING TOOLS



70049



70048



70040

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

70078-25 25 mm

70078-28 28 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"

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.

70069-AM Complete 180° bend all metal multi-purpose tube bender for 6, 8, 10 mm O.D. Tubing.

SPRING STYLE TUBE BENDERS

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

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

70076 SPRING STYLE TUBE BENDER SET

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

LEVER STYLE TUBE BENDERS

70061



70066

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

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



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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



70070-M "Ratchet Style" Metric Tube Bender Kit
Same as 70070 less 70033 Cutter & 70085 Reamer. Bends 8, 10, 12, 14, 16, 18 & 22 mm O.D. soft tubing.

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



70200-MSK-INT MINI-SPLIT TOOL KIT

Consists of:

MC HVAC-BAG	HVAC Utility Bag
57261-E-G	Ball Valve Manifold Gauge Set with Gauge Guards & Set of 3-60" ball valve hoses
70078	Torque Wrench
90413	Straight Adapter Fittings (2 pcs)
70058	Eccentric Flaring Tool Kit
91498	Universal Valve Core Remover/Installer Kit

70200-BSK-INT BASIC STARTER KIT

Consists of:

MC HVAC-BAG	HVAC Utility Bag
33661-E-G	Brass Manifold Gauge Set with gauge guard & Set of 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-INT PREMIUM KIT

Consists of:

MC HVAC-BAG	HVAC Utility Bag
33661-E-G	Brass Manifold Gauge Set with gauge guard & Set of 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-INT PRO KIT

Consists of:

MC HVAC-BAG	HVAC Utility Bag
57261-E-G	Ball Valve Manifold Gauge Set with Gauge Guards & Set of 3-60" ball valve hoses
52246	Compact Subcool/Superheat Calculator
98061	Digital Vacuum Gauge

70200-HK-INT 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 Thermocouple (extends 3 feet)



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MC-GLASS-DISP LIGHTED GLASS DISPLAY



Lighted Glass Display to promote Mastercool products.
Dimensions: 2000 mm (h) x 750 mm (w) x 500 mm (d)

MC-CRDBD-DISP FULL COLOR DISPLAY



3 Level, Full Color Cardboard Display to promote Mastercool products.
Dimensions: 1828 mm (h) x 508 mm (w) x 724 mm (d)

MC-LCD-DISP LCD MONITOR



17" LCD monitor that mounts to ceiling. This monitor displays video containing information and operation procedures of various Mastercool products.
Dimensions: 370 mm (h) x 540 mm (w)

APPAREL



This T-shirt is made with 100% combed ringspun, preshrunk cotton material and features Mastercool's screenprinted logo on the front.
Adult-size solid-color cotton hat features Mastercool's embroidered logo on the front. Cloth strap with buckle closure in back.

MC-SHIRT-SS	Small Silver T-Shirt
MC-SHIRT-MS	Medium Silver T-Shirt
MC-SHIRT-LS	Large Silver T-Shirt
MC-SHIRT-XLS	Extra Large Silver T-Shirt
MC-SHIRT-SB	Small Black T-Shirt
MC-SHIRT-MB	Medium Black T-Shirt
MC-SHIRT-LB	Large Black T-Shirt
MC-SHIRT-XLB	Extra Large Black T-Shirt
MC-HAT	Hat

MC-BANNER12-LG LARGE VINYL BANNER



Heavy-Duty vinyl banner with grommets for easy hanging.
Dimensions: 48" (w) x 24" (h)

MC-SIGN12-SM CARDBOARD SIGN



Cardboard sign for top of display
Dimensions: 30" (w) x 6" (h)

COUNTERPAD-15 COUNTERPAD



Counterpad features a scratch resistant surface and non-slip base to provide durability.
Dimensions: 20" (w) x 14" (h)

POSTERS



Gloss finish poster
Dimensions: 24" (w) x 36" (h)

MC-POSTER-HVAC	HVAC Poster
MC-POSTER-AUTO	Auto Poster



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