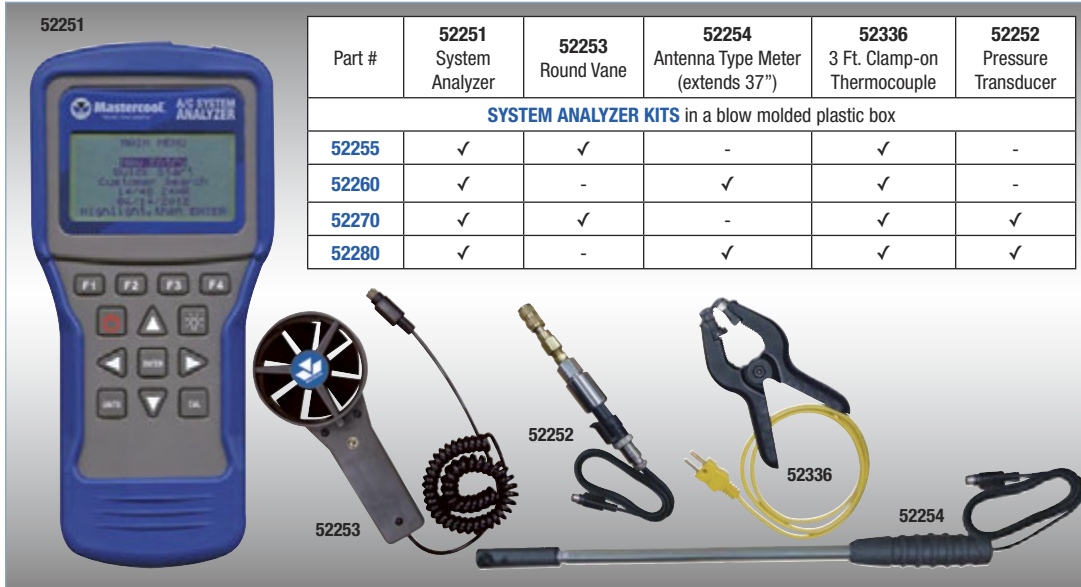




Mastercool[®] Inc.
"World Class Quality"

Complete A/C System Diagnostic Tool



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

FEATURES:

- Calculates actual superheat and subcool temperatures for the following refrigerants: R22, R114, R123, R124, R134a, R141, R142, 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 93mm x 41mm
- Weight: (meter w/ batteries & round vane) 500g
- 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

ACCESSORY SPECIFICATIONS:

- ROUND VANE (52253):**
Temp. Range/Resolution/Accuracy:
• -20 to 60°C (-4 to 140°F)
• 0.1°C (0.2°F)
• ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range
Humidity Range/Resolution/Accuracy:
• 0.1% to 99.9% RH
• 0.1% RH
• ±3% RH (at 25°C (77°F), 10 to 90% RH), ±5% RH at other range
Windspeed Range/Resolution/Accuracy:
• 0.6 to 32 m/s
• 0.1 m/s
• ±2% of full scale

- ANTENNA TYPE METER (52254):**
Temp. Range/Resolution/Accuracy:
• -20 to 60°C (-4 to 140°F)
• 0.1°C (0.2°F)
• ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range
Humidity Range/Resolution/Accuracy:
• 0.1% to 99.9% RH
• 0.1% RH
• ±3% RH (at 25°C (77°F), 10 to 90% RH), ±5% RH at other range
Windspeed Range/Resolution/Accuracy:
• 0.5 to 25 m/s
• 0.1 m/s
• ±2% of reading +0.3 m/s

- PRESSURE TRANSDUCER (52252):**
• Operating Pressure Range: 0-750 psi (0-52 bar)
• 1/4FL Swivel nut connection
• Accuracy: ±0.5, ±1% F.S.
• Operating Temperature: -40 to 100°C (-40 to 212°F)
- CLAMP-ON THERMOCOUPLE (52336):**
Temp. Range/Resolution
• -40 to 121°C (-40 to 250°F)
• 0.1°C (0.2°F)

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.

ACTUAL SUPERHEAT
Refrigerant R22
attach pressure gauge to instrument & place side port of cond. Sat. Temp 43.0°F
press ENTER to save
redo/next/1 T/S EXIT

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

SUPERHEAT ANALYSIS
Actual S.H. 15.3°F
Target S.H. 21.0°F
Difference -4.1°F
if diff is over 5°F (-2.8°C) add below 5°F (-2.8°C) remove refrigerant
1 T/S EXIT

System will compare target and actual superheat.

TEMP SPLIT 1
Insert combo gauge to instrument & place gauge in return air by evaporator
DB 75.6°F WB 61.3°F
press ENTER to save
redo/next/1 T/S EXIT

TEMP SPLIT ANALYSIS
Target Split 16.2°F
Actual Split 19.8°F
Difference 3.6°F
if diff is over 3°F (1.7°C) then airflow is low
1 T/S EXIT

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

DB/WB/RH/DP/Air Vel
use combo gauge to instrument & place gauge in return air
DB 75.7°F WB 63.5°F
RH 51.0% DP 56.3°F
VEL 0.0ft/min
for air flow volume
press ENTER
HOLD MAX 1 T/S EXIT

TARGET SUPERHEAT 1
combo gauge into instrument & place gauge in return air
DB 77.7°F
WB 67.8°F
press ENTER to save
redo/next/1 T/S EXIT

TARGET SUPERHEAT 2
combo gauge into instrument & place gauge in return air going to condenser
DB 81.1°F
press ENTER to save
redo/next/1 T/S EXIT

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.