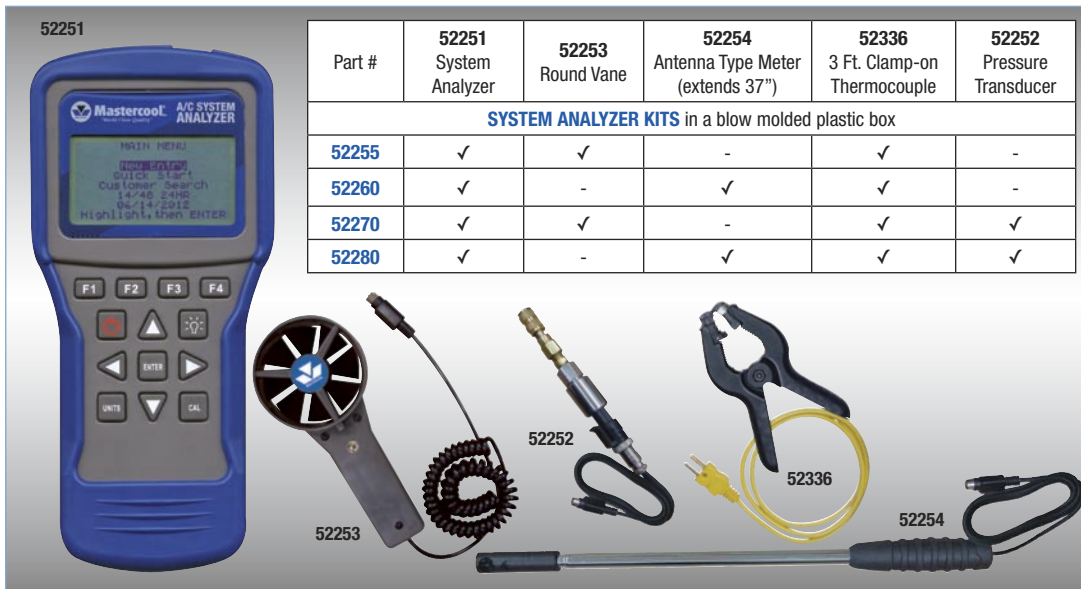




Mastercool[®] Inc.

"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 | ✓ | - | ✓ | ✓ | ✓ |

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, 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)



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

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

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

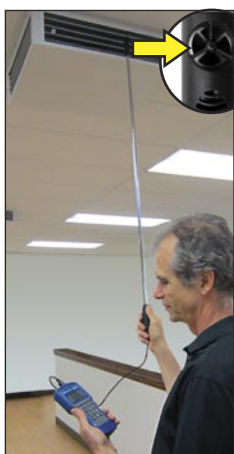
System will compare target and actual superheat.



```
TEMP SPLIT 1
Insert combo gauge to
instrument & place
gauge in return air
by evaporator
DB 75.6°F WB 61.9°F
Press ENTER to save
REDO|NEXT| T/S|EXIT
```

```
TEMP SPLIT ANALYSIS
Target Split 18.2°F
Actual Split 19.8°F
Difference 1.6°F
if diff is over 3°F
(1.7°C) then airflow
is low
| T/S|EXIT
```

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



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

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

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

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

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