



SPEED, SIMPLICITY, PRECISION

# AK 900 DIGITAL REFRIGERATION SYSTEM ANALYZER

*Advanced, durable tool for the professional HVAC&R technician*

A great deal of information lies hidden behind the vibrating needle of a typical pressure gauge. Is the TEV valve modulating properly, or is there liquid flooding back in the system?

Digi-Cool offers unprecedented diagnostic power with the Digital Refrigeration System Analyzer (DRSA). The patented pressure bar graphs allow you to see pressure dynamics intuitively for quick diagnosis. Automatic saturation, subcooling and superheat readings mean no more wallet cards. Conceived by a technician with modern engineering, the unit will endure years of field use.



2-valve ball manifold included

The new AK 900 features an integrated dual temperature probe to automatically calculate superheat and subcooling, and pressure extremes monitoring for simple pressure controls set-up, for even greater convenience during start-ups.

**FEATURES:** Includes profiles for 45 common refrigerants within:



R-12	R-245fa	R-407C	R-421A	R-428A
R-1234yf	R-290	R-408A	R-421B	R-434A
R-22	R-401A	R-409A	R-422A	R-437A
R-123	R-401B	R-410A	R-422B	R-438A
R-124	R-402A	R-413A	R-422C	R-500
R-134A	R-402B	R-414B	R-422D	R-502
R-236ea	R-404A	R-416A	R-424A	R-507
R-236fa	R-406A	R-417A	R-426A	R-508B
R-245ca	R-407A	R-420A	R-427A	R-600A

- "Dynamic Offset" bar graph clearly shows modulation of control valves, system behavior and faults
- Dual temperature probes for automatic superheat and subcooling readings
- Max and min pressure monitoring for control set-up
- Auto zero key eliminates manual recalibration
- Detects vacuums in "Hg
- Easy to read LCD screen with large digits
- Upgradeable for additional refrigerants
- Green backlight for clarity and crisp character display in low light conditions.
- Splash resistant and wide temperature range for indoor & outdoor use; tough case with protective boot resistant to typical oils, acids and sun exposure

## HOW IT WORKS:

- Bar graph segments shows changes from digital reading
  - Range of  $\pm 2$ psi on low-side,  $\pm 8$ psi on high-side
  - In example below, low-side has dropped  $\frac{1}{2}$  psi to 99.8 psig since update, high-side has increased 7psi to 440psig since update
- Digital readings have  $\frac{1}{4}$  psi resolution on low side, 1 psi resolution on high side
- Temperature directly below low and high side pressures are the corresponding dew point and bubble point temperatures for the corresponding pressures respectively. (saturation temperature for pure compounds)
- Temperature with derived superheat are listed below the low side pressure/temperature readings whereas the temperature and derived subcooling are listed below the high side temperature (eg 72degF sensor temp./41degF superheat and 71degF sensor temp./51degF subcool)
- dt is calculated temperature of low side (SH) sensor subtracted from high side(SC) sensor.
- R- $\uparrow$  /  $\downarrow$  selects active refrigerant
- ZERO automatically calibrates to current atmospheric pressure
- UNIT changes between traditional (PSI, "Hg,  $^{\circ}$ F) and SI (kPa, bar,  $^{\circ}$ C) units
- 1SEC / 5SEC / HOLD changes the rate digits are updated
- LCD  $\uparrow$  /  $\downarrow$  changes contrast to fit lighting conditions
- MIN / MAX CLR resets peak pressure memory
- MODE selects temperature, superheat, subcooling, max pressure, or min pressure displays



## One-year limited warranty against manufacturing defects

### AK 900 SPECIFICATIONS:

ACCURACY:	0.6% F.S. $\pm$ 1 least significant digit, calibration traceable to NIST	
PRESSURE PORTS:	1/8" NPT supplied with swivel joints on manifold	
WORKING PRESSURE:	Low side: 0-200psia (1350 kPa)	High side: 0-550psia (3000 kPa)
PROOF PRESSURE:	Low side: 600psia (4100 kPa)	High side: 1500psia (10300 kPa)
BURST PRESSURE:	Low side: 2000psia (13500 kPa)	High side: 5000psia (34500 kPa)
TEMPERATURE SENSE:	-40 to 250 $^{\circ}$ F (-40 to 125 $^{\circ}$ C), $\pm$ 0.9 $^{\circ}$ F ( $\pm$ 0.5 $^{\circ}$ C) between 32 to 158 $^{\circ}$ F (0 to 70 $^{\circ}$ C)	
USAGE ENVIRONMENT:	Indoor/Outdoor	AMBIENT TEMPERATURE: -4 to 122 $^{\circ}$ F (-20 to 50 $^{\circ}$ C)
MOISTURE EXPOSURE:	Dew, splash and rain resistant; do not immerse in water	
POWER SUPPLY:	9V Battery	BATTERY LIFE: approx. 6 months under normal use
WEIGHT:	1.6lb (740g)	DIMENSIONS: 7.3 x 4.9 x 2.7" (18.5 x 12.5 x 6.8cm)