## **WIRELESS AND ELECTRONIC INSTRUMENTS**



**2. GAUGES** 

1. CHARGING Systems

**3. RECOVERY** MACHINES

4. VACUUM PUMP

5. VACUUM AND

**6. HOSE ADAPTERS, VALVES & PARTS** 

**7. WIRELESS AND** ELECTRONIC

8. LEAK

INSTRUMENTS **9. HEATING** 

**10. SYSTEM TOOLS** 

7.1



## **Wireless and Electronic Instruments**

Convenient wirelsss measurements for complete HVAC/R diagnostics.



8. LEAK Detectors and Monitors

> 9. HEATING 10. INSTRUMENTS

**10. SYSTEM TOOLS** 



YJACK<sup>®</sup> PROBES & TITANMAX<sup>™</sup> MANIFOLD - SEE CHARGING SYSTEM & DIAGNOSTIC TOOLS

## WIRELESS REFRIGERANT CHARGING SCALE



## **Convenient Wireless Measurements!**

With a 220 lb. capacity, large platform and wireless Bluetooth<sup>®</sup> communication, this accurate scale makes refrigerant charge measurements fast and easy. Just connect with any smart device and you are ready to go...with .05% accuracy and 0.2 oz. resolution, service technicians can count on precision measurements every time. Save the charging measurements to your smart device, and you have a permanent record for that installation or service call.

#### **Features and Benefits**

- Low Energy Bluetooth® communication
- Lightweight, durable design
- Stability control for accurate measurements
- 220 lb. (100kg) capacity
- +/- 0.05% accuracy & 0.2 oz. resolution
- Overload protection
- Oversized platform (12 in./ 300mm)
- Integrated handle
- Carrying case included
- 9V battery included
- One-year warranty



The Wireless Refrigerant Scale 68864 is controlled and operated with any Smart Device via Bluetooth<sup>®</sup> and the YJACK VIEW<sup>®</sup> app.

## **READINGS SCREEN OVERVIEW**

#### YJACK VIEW<sup>®</sup> READINGS SCREEN OVERVIEW

- Readings screen will display the scale weight and will also display the weight change and elapsed time since the last set
- Both readings can be set/reset by pressing on the corresponding box
- Weights are displayed as lb./oz. or kg



#### Specifications

Weight Capacity: Overload Protection: Measurement Units:

Reading Accuracy: Reading Resolution: Operating Temperature: Scale Platform Diameter: Scale Weight: Power: Battery Life: App OS Compatibility: Bluetooth® Technology: 220 lb. / 100 kg Yes Pounds and ounces (lb & oz) or kilograms (kg) 0.05% of reading 5g 32°F - 122°F (0°C - 50°C) 11.8 in (300mm) 6.4 lb. (2.9 kg) 9V battery (included) 40+ hours iOS or Android Bluetooth<sup>®</sup> Low Energy (BLE)

UPC# Description

68864 Wireless refrigerant scale, 220 lb.



CHARGING

**SYSTEMS** 

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3. RECOVERY MACHINES

4. VACUUM PUMP

**SYSTEMS** 

9. HEATING INSTRUMENTS

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**SYSTEM TOOLS** 

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## **REFRIGERANT CHARGING SCALE**



## Accurate, compact and economical!

With a 220 lb. capacity and solid accuracy, this compact YELLOW JACKET<sup>®</sup> charging scale can handle the job, no matter what the size. Service technicians can count on precise information while on the job with 0.05% accuracy and 0.17 oz. resolution.

#### **Features and Benefits**

- Compact and lightweight
- Rugged, low profile design
- Maximum weight: 220 lb. (100 kg)
- Large, backlit LCD
- Control module with six foot cord stores under the scale when not in use
- Stability indicator shows when the scale is ready to take a reading
- Over-range indicator
- Auto power off
- Long battery life 40 hours continuous battery life
- Battery life indicator
- Carrying case with storage pouch and shoulder strap included

Specifications	
Veight Capacity:	220 lb. / 100 kg
Resolution:	0.17 oz. / 0.011 lb. / 5g
Accuracy:	<u>+</u> 0.05% of reading + 10g
Display:	05" (1.27 cm) LCD (7-segment)
Readout Options:	Lbs. / oz. / kg
Overall Size:	10.6" x 10.6" x 2.9" (27.1 cm x 27.1 cm x 7.4 cm)
Overall Weight:	8 lbs. (3.6 kg)
Battery Type:	5 x 1.5V AAA alkaline batteries
Battery Life:	40 hours continuous
Varranty:	1 year
Operating Temperature:	14° F to 104° F (-10° C to 40° C
emperature Fluctuation Ra	nge: 41° F / hr. (5° C)
Storage Temperature:	5° F to 122° F (-15° C to 50° C)
Relative Humidity:	50 - 85%

# Control module stores inside the platform when not in use.





8. LEAK DETECTORS AND MONITORS

## **DIGITAL ELECTRONIC CHARGING SCALES**

Electronic charging scales show the progress of the charge as it's happening, indicating when to close the valves and stop the charge. Works with any refrigerant in any system.

- Calibration standards traceable to NIST
- Removable control module on retractable 5' coiled cord
- Mechanical overload protection and "OL" alert on LCD
- Industrial grade circuitry for long life performance
- · Minus (-) reading shows weight removed from the platform
- Single point load cell strain gauge for long-term stability and accuracy



Full bridge configuration with four strain gauges for accuracy.

Programmable electronic charging scales have added capabilities for automated, faster and more economical charging. Simply program the charging weight and the valve will close automatically when the charge is complete.

- Mesh filter in charging module protects solenoid valve from debris
- Low flow triggers automatic hold to extend solenoid life
- Schrader valve prevents backflow through solenoid

Convert standard 68802 and 68800 scales to programmable with upgrade kits 68804 and 68805. Each kit includes a charging module, power pack, instruction manual and larger carrying case to hold all parts.



UPC#	Description
68802	Electronic charging scale 110 lbs. (50 kg)
68812	Electronic charging scale 220 lbs. (100 kg)
68803	Programmable electronic charging scale 110 lbs. (50 kg)
68813	Programmable electronic charging scale 220 lbs. (100 kg)
68800	Metric electronic charging scale 50 kg (110 lbs.)
68810	Metric electronic charging scale 100 kg (220 lbs.)
68801	Metric programmable charging scale 50 kg (110 lbs.)
68811	Metric programmable charging scale 100 kg (220 lbs.)
68804	115V Upgrade kit
68805	230V Upgrade kit
68806	115V Adapter
68807	230V Adapter
68818	230V Adapter (UK)
68835	Replacement battery cover (black)
69089	Replacement battery cover (blue)
68808	Charging module

- Charging accuracy is equal to scale accuracy +/- 0.25 oz.
- Solenoid valve with 400 psi maximum operating pressure differential (MOPD) allows metering broad range of refrigerants
- Made in the USA





#### **Specifications**

Resolution: 0.1 oz./0.01 lb./0.01 kg Display: Sealed LCD with high resolution 0.5" characters Keypad: Moisture resistant membrane keypad with tactile metal domes Operating temperature range: 32° to 122°F (0° to 50°C) Storage temperature range: -4° to 158°F (-20° to 70°C) Power: 9V battery, battery life approximately 25 hours

Specifications: 110 lbs. (50 kg) scale

Platform size: 9" x 9" (228 mm x 228 mm) Case size: 15.5" x 12.25" x 3.25" (394 mm x 311 mm x 83 mm) Accuracy: ± 0.5 oz./ ± 0.03 lb./ ± 0.015 kg or 0.1% of reading, whichever is greater Total unit weight: 9 lbs. (4.1 kg)

Specifications: 220 lbs. (100 kg) scale

Platform size: 11.3" x 11.3" (287 mm x 287 mm) Case size: 18" x 13" x 4.25" (457 mm x 330 mm x 108 mm) Accuracy: ± 1.0 oz./ ± 0.06 lb./ ± 0.03 kg or 0.1% of reading, whichever is greater Total unit weight: 12 lbs. (5.4 kg)



Model 68802 - 110 lbs. (50 kg) 9" x 9" (228 mm x 228 mm)

Model 68812 - 220 lbs. (100 kg) 11.3" x 11.3" (287 mm x 287 mm)

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DETECTORS AND

8. LEAK

MONITORS

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**9. HEATING** 

**SYSTEM TOOLS** 

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## **MANTOOTH® WIRELESS VACUUM GAUGE AND P/T GAUGE COMBINATION**



The YELLOW JACKET® ManTooth®-PTV (67023) shown above provides vacuum and high- and low-side P/T readings. This full set includes dual non-tethered pressure/temperature gauges, two wired temperature clamps, and one interchangeable vacuum gauge. The single ManTooth® PTV (67021) can be combined with an existing ManTooth® P/T device (67001) for adding wireless vacuum capability and/or expanding it to a full system analysis tool. Simply update your ManTooth® P/T app to version 2.0, connect to the 67020 hardware, and you're ready to go!

To enable mounting on 5/16" systems, add coupler 19221 (90°) or 19121 (straight).

#### Pressure/Temperature Specifications

#### **Product Features:**

- Interchangeable/removable vacuum gauge
- Easy-to-clean vacuum sensor •
- Built-in Schrader cores for easy refrigerant charging •
- Operates with and without hoses attached
- Two year warranty •
- High impact glass reinforced housing .
  - Rechargeable LiPo battery for long battery life
- Robust/rugged vacuum sensor
- Integral magnet for mounting on framework •
- Integrated rubber side grip for easy handling

#### **App Features:**

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- Available in English, French, Spanish, Dutch, and German.
- Data logging to record and document values during servicing •
- Improved connectivity and reconnect process if signal is lost
- Ability to download logged data for graphing in Excel
- For iOS and Android devices
- Backwards compatible with existing ManTooth® Devices (excluding vacuum gauge)

UPC#	Description		
67020	ManTooth <sup>®</sup> -V (Vacuum only) with side grip		
67021	ManTooth <sup>®</sup> -PTV Single with side grip		
67023	ManTooth <sup>®</sup> -PTV Dual with side grip		
69030	Vacuum sensor cleaning kit		
UPC#	Replacement Parts		
67044	Vacuum sensor		
67012	USB cord		
67014	Carrying case		
93394	Tether cap		
19020	Hose gaskets (10 pak)		
19121	Straight 5/16" Flare quick connect x 1/4" Male coupler		
19221	90° 5/16" Flare quick connect x 1/4" Male coupler		
19302	Valve depressor (10 pak)		
19305	Schrader valve (10 pak)		

Pressure Sensing Resolution Pressure Sensing Accuracy Working Pressure Proof Pressure Burst Pressure Temperature Sensor Range (Instrument) Temperature Display Resolution Temperature Accuracy (Instrument) Working Temperature Storage Temperature Working Humidity	0.1 psi, 0.1 bar, 1 kPa, 0.001 MPa, 0.01 kg/cm <sup>2</sup> 0.5% of full scale at 25°C; 1% of full scale 55°F to 130°F; 2% of full scale -40°F to 248°F 0 – 700 psia (48.3 bar) Tolerable pressure without internal damage 1000 psia Tolerable pressure without loss of seal 1500 psia Sensing element: -40°F to 266°F (-40°C to 130°C); Max Cord temp: 176°F (80°C); Max Clamp Temp: 203°F (95°C) 0.1°F or °C $\pm 0.2°C (\pm 0.36°F)$ -4°F to 160°F (-20°C to 71°C) Limited by battery -4°F to 160°F (-20°C to 71°C) - for best battery performance do not store at over 100°F (38°C) 0-95% RH (non-condensing)
IP Class	IP 50
Bluetooth Range	70-90 ft. (Class 1) or 30-40 ft. (Class 2) in most cases (varies depending on the Bluetooth capability of smart device used). Under perfect conditions (clear line of sight and low interference) communications can extend up to 300 feet.
Bluetooth Radio	Class 1 Bluetooth 2.1 Radio
Size and weight	6" long x 1.6" wide x 2.3" thick (15.3 x 4 x 5.8 cm): 0.5 lbs (225 grams)
Superheat and Subcool	Automatically calculated by the ManTooth® App
Max, and Min. Pressures	Displays and records the maximum and minimum pressures
Refrigerant Database	98 NIST refrigerant profiles included: upgradeable
Screenshot Feature	Save pressure and temperature readings from your sessions: automatically organize
Temperature Sensors	Capable of measuring 2 temperatures using high accuracy NTC thermistors
Pressure Transducers	67001/67003 – one pressure transducer; 67002 – two pressure transducers
System Attachment	Very small internal volume minimizes refrigerant loss during system analysis.
Pressure Zeroing	Simple single button zeroing at the start of each session
Elevation Compensation	Enter elevation at the start of the session for effortless psia compensation
Battery	Rechargeable LiPo battery for 10+ hours continuous life
Vacuum Specifications	
Cord Length	Approximately 33"
Magnet Strength	8 lbs. holding force
Operational Temperature Range	10 – 122F 12 – 50C
Calibration	Calibration standards traceable to NIST
Resolution	.1 micron
Warm-Up Time and Response Time	Instant

MADE IN THE USA

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INSTRUMENTS **9. HEATING** 

**10. SYSTEM TOOLS** 

0.1 psi, 0.1 bar, 1 kPa,

## **MANTOOTH® WIRELESS DIGITAL** PRESSURE/TEMPERATURE GAUGE



The YELLOW JACKET® ManTooth® Wireless Digital Pressure/ Temperature Gauge provides wireless connection to your smart device so you can test the system without losing refrigerant (no hoses or manifolds necessary)!

The free downloadable ManTooth® RSA app wirelessly calculates and displays the system's actual pressures, temperatures, superheat and subcooling in an easy-to-read color format on your iPhone<sup>®</sup>, iPad<sup>®</sup> or Android<sup>™</sup> device.

#### **Additional Features:**

- · Built-in Schrader ports to easily adjust refrigerant charge
- Range up to 400' (unobstructed)
- YELLOW JACKET® ManTooth® RSA app (free download)
- Two-year warranty
- Screenshot feature allows you to save pressure and temperature readings from your sessions which can be automatically organized by location and unit being serviced
- Share screenshots via e-mail right from your phone
- Easily track and store service history
- Rechargeable lithium polymer battery with 10 hours battery life

The ManTooth® Single Pressure Wireless Digital P/T Gauge includes a single hardware device and clamp. Two single units can be purchased in a case by ordering Part #67003.

For dual pressure readings, use two of the 67001 ManTooth<sup>®</sup> single pressure gauges or the 67002 ManTooth® Dual Pressure Unit which comes with a P/T module, tether unit and two temperature probe clamps. This unit also includes a convenient carrying case which can be purchased separately for the single pressure unit.

UPC#	Description
67001	ManTooth <sup>®</sup> Single Pressure Gauge (includes P/T Module with boot, temperature probe clamp, and USB cable)
67002	ManTooth <sup>®</sup> Dual Pressure Gauge Set (includes P/T Module and tether unit with boots, two temperature probe clamps, and USB cable in case)
67003	Two (2) ManTooth <sup>®</sup> Single Pressure Gauges (includes two P/T Modules with boots, two temperature probe clamps, and two USB cables in case)
UPC#	Replacement Parts
<b>UPC#</b> 67010	Replacement Parts Clamp
UPC# 67010 67012	Replacement Parts Clamp USB Cord
UPC# 67010 67012 67013	Replacement Parts Clamp USB Cord Blue boot
UPC# 67010 67012 67013 67014	Replacement Parts Clamp USB Cord Blue boot Carrying case
UPC# 67010 67012 67013 67014 93394	Replacement Parts         Clamp         USB Cord         Blue boot         Carrying case         Tether cap
UPC# 67010 67012 67013 67014 93394 19020	Replacement Parts         Clamp         USB Cord         Blue boot         Carrying case         Tether cap         Hose gaskets (10 pak)
UPC# 67010 67012 67013 67014 93394 19020 19302	Replacement PartsClampUSB CordBlue bootCarrying caseTether capHose gaskets (10 pak)Valve depressor (10 pak)

#### 19305 Schrader valve (10 pak)

Specifications: Pressure Sensing Resolution

Pressure Sensing Accuracy

Working Pressure Proof Pressure

**Burst Pressure** 

Temperature Sensor Range (Instrument)

Temperature Display Resolution Temperature Accuracy (Instrument) Working Temperature Storage Temperature Working Humidity **IP** Class Battery Life Range

**Bluetooth Radio** Size

Weight Superheat and Subcool

Max. and Min. Pressures

**Refrigerant Database** 

Screenshot Feature

**Temperature Sensors** 

Pressure Transducers

System Attachment

Pressure Zeroing

**Elevation Compensation** 

Battery



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- Android is a trademark of Google Inc.
- The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Ritchie Engineering is under license. Other trademarks and trade names are those of their respective owners.

0.001 MPa, 0.01 kg/cm<sup>2</sup> 0.5% of full scale at 25°C; 1% of full scale 55°F to 130°F; 2% of full scale -40°F to 248°F 0 - 700 psia (48.3 bar) Tolerable pressure without internal damage 1000 psia Tolerable pressure without loss of seal 1500 psia Sensing element: -40°F to 266°F (-40°C to 130°C) Max Cord temp: 176°F (80°C): Max Clamp Temp: 203°F (95°C) 0.1°F or °C ±0.2°C (±0.36°F) -4°F to 160°F (-20°C to 71°C) -4°F to 160°F (-20°C to 71°Ć) 0-95% RH (non-condensing) IP 50 10+ hours continuous 70-90 ft. (Class 1) or 30-40 ft. (Class 2) in most cases (varies depending on the Bluetooth capability of smart device used). Under perfect conditions (clear line of sight and low interference) communications can extend up to 300 feet. Class 1 Bluetooth 2.1 Radio 6" long x 1.6" wide x 2.3' thick (15.3 x 4 x 5.8 cm) 0.5 lbs (225 grams) Automatically calculated by the ManTooth App Displays and records the max and min pressures 126 NIST refrigerant profiles included; upgradeable Save pressure and tem perature readings from your sessions which can be automatically organized by location and serviced unit Capable of measuring 2 temperatures using high accuracy NTC thermistors 67001/67003 - one 67002 – two Very small internal volume minimizes refrigerant loss during system analysis. Simple single button zeroing at the start of each session Enter at start of session for effortless psia compensation Rechargeable LiPo battery





SYSTEM TOOLS

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**3. RECOVER** MACHINES

CHARGING **SYSTEMS** 

**CHARGING HOSES** VACUUM AND

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HOSE ADAPTERS,

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**DETECTORS AND** 

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**9. HEATING** 

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**VALVES & PARTS** 

## OMNI<sup>™</sup> DIGITAL VACUUM GAUGE



The YELLOW JACKET<sup>®</sup> OMNI<sup>™</sup> Digital Vacuum Gauge is an easy-to-use, compact vacuum gauge that is loaded with features for the price. And it's rugged, too. Made with high impact, glass reinforced housing, it survives moisture and accidental drops or attachment to a high pressure line. The easy-to-clean vacuum sensor handles 450 psi positive pressure and reads several units of vacuum (microns, millibar, Torr and Pascal).

- · Visual signal when target vacuum level is reached
- Electronic paper display for clear visibility even in direct sunlight
- Rich and intuitive user interface turn it on and it is ready to use with default settings
- 45° bend for fitting (1/4" or 5/16")
- · Automatic power down and time out
- · Power savings multiple time-out selections
- Low battery indicator and automatic power-down when inactive
- · Adapter fittings available
- Made in the USA

## *Compact, easy-to-use, and more unique features than any other unit on the market.*

**Specifications** 

Vacuum Reading Reso 1 micron (fro 10 microns 100 microns	olution: om 1,000 to 5 microns) (from 10,000 to 1,000 microns) s (from 99,999 to 10,000 microns)		
Display Vacuum Meas	surement Accuracy:		
+/- 20% of r	reading (from 10,000 to 25 microns)		
Vacuum Reading Range: 5 to 99,999 Microns (133.3 mBar, 100 Torr, 13,333 Pa); Progress bar-graph from Atmosphere (ATM) to 99,999 Microns			
Proof Pressure:	450 psi		
Working Temperature:	32°F to 104°F (0°C to 40°C)		
Storage Temperature: -4°F to 140°F (-20°C to 60°C)			
Working Humidity:	0-95% RH (non-condensing)		
Class:	IP-50		
Battery Life:	150+ hours continuous		
Battery:	(2) AAA batteries (included)		
Size:	6" long x 1.6" wide x 1.6" thick including fitting (15.3 x 4 x 4 cm)		
Weight:	0.39 lb (175 grams)		
Warranty	One year		

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## **VACUUM SENSOR CLEANING KIT**

OMNI<sup>™</sup> Digital Vacuum Gauge with 1/4" Coupler

OMNI<sup>™</sup> Digital Vacuum Gauge with 5/16" Coupler

Follow cleaning procedure for these YELLOW JACKET<sup>®</sup> vacuum gauges: 69020 series OMNI<sup>™</sup>, 67044 series used with P51 digital manifold and Mantooth gauges or 69086 digital vacuum gauge.



UPC#

69020

69021

Description

UPC# Description
69030 Vacuum Sensor Cleaning Kit



### **DIGITAL VACUUM GAUGE** Seven units of vacuum for confidence

This easy-to-use gauge shows that air and moisture have been removed from the system. A simple push of a button changes the display readout between 7 units of measurement. Each displays from atmosphere to 10 microns (bargraph indication above 25000 microns) of vacuum to let you know that your vacuum pump is clean and performing properly. If the sensor gets dirty, simply plug a new sensor into the gauge, run through a quick calibration process and be back on the job within minutes.



This product is protected by one or more of U.S. Patent Number: 6,779,350; 6,832,491; 7,073,346; 7,310,965; and 7,428,822.

- Unique patented thermal conductivity sensor automatically compensates for temperature
- Replaceable, cleanable, plug-in sensor (Part #69087) handles 450 psi positive pressure
- Displays seven different units of vacuum (microns, milliTorr, Torr, millimeters of mercury, millibar, kiloPascal and Pascal)
- 12" coiled sensor cord stretches to 24" for easy reach, connectivity and readability of display
- Low battery indicator
- Automatic shut-off after 20 minutes
- · Calibration standards traceable to NIST
- 32° to 122°F (0° to 50°C) operating temperature range
- 14 oz. (392 g) with battery
- Approximately 25 hours continuous battery life
- Accuracy ±20% of reading
- Made in the USA

UPC#	Description
69086	Hand-held vacuum gauge with fabric carry pouch
69087	Replacement sensor for older models without detachable cords
69088	Replacement cable for original version - not detachable
40819	Replacement cable for new version - detachable
69101	Replacement sensor and cord assembly
69091	Replacement fabric pouch
69030	Vacuum Sensor Cleaning Kit

**IO. SYSTEM TOOLS** 

1. CHARGING Systems

**2. GAUGES** 

**3. RECOVERY** MACHINES

4. VACUUM PUMP **SYSTEMS** 

5. VACUUM AND CHARGING HOSES

HOSE ADAPTERS, **VALVES & PARTS** 

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### **SUPEREVAC® LCD VACUUM GAUGE** Full range from atmosphere to 1 micron

The SUPEREVAC® LCD vacuum gauge combines thermocouple sensor technology with advanced electronics for precise readings and repeatability not found with thermistor sensors or analog meters.

Thermocouple technology has long been proven in laboratory and precision industrial instrumentation for sensing the deep vacuum range. Thermocouple sensors are factory calibrated and exhibit few of the electronic variances of thermistor sensors found in many other electronic gauges. Durable molded case with storage for sensor, cable and brass connector.

#### **Specifications**

Response time: 3 seconds Calibration: Automatic Warm up: 3 seconds Sensor cable: 5.5' (167 cm) coiled Sensor connection: 1/4" Male flare Maximum pressure: To avoid sensor damage, do not exceed 5 psig Operating temperature range: 32° to 120°F (0° to 49°C) Display: 0.5" LCD with battery check Automatic shut-off: Yes Power: D cell battery, 70 hours continuous battery life Dimensions: 9" x 12.25" x 2.37" (230 mm x 310 mm x 60 mm) Accuracy: ± 20% of reading from 10 to 10,000 microns UPC# Description 69075 SUPEREVAC® LCD vacuum gauge full range complete in case

69067 Optional ball valve to add to sensor 1/8" NPT Female 1/4" Female flare	Х
69071 Brass connector 1/4" Female flare x 1/4" Female flare	
69073 Replacement sensor for 69070, 69075	
19110 Optional coupler to add to sensor 1/8" NPT Female x 1/4" Female flare	
69058 Replacement cord	



#### Thermocouple sensor features:

- No adjustments or warm-up. Stays calibrated after on/off switching and long evacuations
- Automatic battery compensation
- Automatic ambient temperature compensation
- Replacement sensor requires no calibration

#### LCD gauge features:

- Automatic off 20 minutes after power up and no change
- Normal handling and jarring will not affect the LCD reading
- · Case protects electronic circuitry and sensor
- Calibration standards traceable to NIST
- Precision circuitry controls sensor and translates sensor input into micron readings
- Made in the USA

## **DIGITAL LCD ECONOMY VACUUM GAUGE**



This product is protected by one or more of U.S. Patent Number:  $6,779,350;\,6,832,491;\,7,073,346;\,7,310,965;\,and\,7,428,822.$ 

The digital LCD economy vacuum gauge indicates air and moisture have been removed from the system. Track down the 14 level bargraph from atmosphere to 25 microns to know that the system is clean and the vacuum pump is performing properly. Packaged complete with 9V alkaline battery and hanging hook.

- Unique thermal conductivity sensor automatically compensates for temperature with no calibration
- Simple On/Off controls
- Easy-to-clean sensor handles 450 psi positive pressure
- Rugged contractor-grade construction with tough ABS housing and solid state circuitry for accuracy
- Automatic battery saver shuts gauge off after 20 minutes with no reading changes
- · Low battery indicator
- Calibration standards traceable to NIST
- · Patented technology
- Made in the USA

To keep the 69080 vacuum gauge accurate, it is best to avoid oil contamination. Keep the sensor vertical whenever possible and connect the gauge directly to the system, away from the pump.

UPC#	Description
69080	Digital LCD vacuum gauge with battery, hook and pouch
69081	Replacement soft-sided protective case
69079	Replacement battery door and screw
69095	Tee fitting

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DETECTORS AND

. LEAK

MONITORS

**10. SYSTEM TOOLS** 

## **POCKET THERMOMETERS**

1" and 1-3/8" dial thermometers are adjustable with a 5" stainless steel stem. Colored sheath with pocket clip.

• Individually calibrated

Description

1" Dial 0° to 220°F (12 pak)

1" Dial 40° to 160°F (12 pak)

1" Dial 50° to 550°F (12 pak)

1-3/8" Dial -40° to 160°F

(-40° to 70°C) (12 pak) 1-3/8" Dial 0° to 220°F

(-10° to 110°C) (12 pak) 1" Dial 0° to 70°C (12 pak)

Shock resistant

UPC#

69251

69252

69253

69255

69256

69265





## **POCKET DIGITAL THERMOMETER**



Digital head rotates 180° for easy reading.

- On/off button
- Auto off after 10 minutes
- · Reading updates every second
- 5" (125 mm) stem

UPC#	Description
69107	Digital thermometer -58° to 302°F (-50° to 150°C)
69250	69107 display (12 pak)
69110	Battery

## **PISTOL-GRIP INFRARED** THERMOMETER

With wide measurement of -40° to 932°F, this easy-to-use tool is the effective choice for high or low temperature and refrigeration applications. For accuracy and resolution, the focal point is a tight 10:1 ratio with laser sighting.

- Selectable 3-point emissivity for simple set-up
- Backlight for dark area use
- °F/°C switchable
- ± 2% or 2°C accuracy
- 0.1°F resolution at -40° to 212°F (-40° to 100°C)
- Fast response time of 500 msec

#### Description UPC#

69228 Pistol-grip infrared thermometer





GAUGES

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**3. RECOVERY** MACHINES

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HOSE ADAPTERS, **VALVES & PARTS** 

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**IO. SYSTEM TOOLS** 

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### **DIGITAL THERMOMETER PROBES Differential and single**

#### Single Probe "K" type:

- Single "K" type input
- °F/°C switchable
- Maximum and minimum hold
- · Low battery indicator
- Power off after 30 minutes

#### Differential "K" type:

- Dual "K" type thermocouple inputs
- T1, T2 or T1-T2 differential readings
- Resolution 1°

#### **Specifications**

Temperature range: -58° to 1999°F (-50° to 1300°C) Resolution: 0.1 or 1° Display: LCD 5/8" (16 mm) Operating temperature range: 32° to 120°F (0 to 49°C) Storage temperature range: -20° to 130°F (-29 to 54°C) Power: 9V, battery life approximately 200 hours Dimensions: 7.2" x 2.75" x 1.6" (180 mm x 70 mm x 40 mm) Accuracy: -58° to 1800°F ± (0.3% of reading  $+ 2^{\circ}F$ ; -50° to 982°C  $\pm$  (0.3% of reading + 1°C)



UPC#	Description	Maximum temperature	Length	Response time (sec.)
69215	Type "K" air probe (A)	1112°F (600°C)	4 ft. (1.21 m)	5
69217	Type "K" 1.375 clamp-on probe (D)	248°F (120°C)	10 ft. (3.05 m)	3
69218	Type "K" general purpose probe (E)	500°F (260°C)	3 ft. (0.91 m)	3
69220	Type "K" surface probe (C)	1650°F (900°C)	4 ft. (1.21 m)	3
69222	Type "K" puncture probe (B)	1112°F (600°C)	4 ft. (1.21 m)	12

## ANEMOMETER



This hand-held instrument reads both air velocity and temperature simultaneously when balancing air conditioning/heating ventilation systems.

UPC#	Description
68915	Anemometer kit
68916	Replacement 2.75" (70 mm) diameter probe assembly

- Microprocessor controller
- · Calculates cfm air volume
- · Records minimum and maximum readings
- · Averages air velocity
- Display "hold" button freezes LCD reading
- °F/°C switchable
- Auto off after 20 minutes
- RS232 output

#### **Specifications**

- Air flow ranges: 125 4900 ft/min Resolution: 1 ft/min and 0.01 m/sec.
- Accuracy: ±2%
- Temperature: 14° to 122°F (-10° to 50°C) Resolution: 0.01°F and 0.1°C Accuracy: ±1.0°F (±0.6°C)
- Power: 9V battery, battery life approximately 100 hours
- Fan diameter: 2-7/8" (70 mm)

## **DIGI-ALARM** THERMOMETER

Extended

reach stainless

Digi-Alarm

This compact unit measures from -58° to

392°F (-50° to 200°C) and triggers an alarm at the high and low programmed

• Key tone for operation confirmation

• Maximum/minimum temperature memory

• Automatic self test after battery installation

Measurement range: -50 to 200°C / -58 to 392°F

Accuracy: ±1°C between -19.9 to 119.9°C

±2°C between 120 to 199.9°C

+1.8°E between -3.8 to 183.8°E

±3.6°F between 248 to 391.8°F

Alarm resolution: 1° over full range

Display resolution: 0.1° over full range

(6

temperatures. No calibration °F/°C switchable Data hold function

Foldaway stand

**Specifications** 

otherwise ±3°C

otherwise ±5.4°F

Sampling rate: 1 second

equivalent (included)

steel probe.

#### UPC# Description

69239

Battery: Requires one 1.5 volt size AAA/UM4 or

Ambient temperature: 0 to 50°C / 32 to 122°F

- Digi-alarm thermometer