

# INFICON Service Tools

A Catalog for Service Professionals



# D-TEK™ Select

## Refrigerant Leak Detector – innovative infrared technology delivers enhanced sensitivity, selectivity and longer life.

As the first accurate, reliable, highly sensitive, cordless refrigerant leak detector, the original D-TEK revolutionized the field. Now we have built on that technology leadership to create D-TEK Select. This next-generation refrigerant leak detector uses an innovative infrared absorption sensing cell that is extremely sensitive to all refrigerants – and only refrigerants.

D-TEK Select maintains that sensitivity over time for consistent, accurate and reliable performance, even with the newer refrigerant blends. Best of all, the sensing cell lasts for approximately 800 hours – almost 10 times longer than the original D-TEK sensor – to lower your cost of ownership and improve job site productivity.

Additional enhancements include a charging status indicator, sensor failure indication, and NiMH (nickel metal hydride) batteries. All in an easy-to-use unit with the quality and durability you've come to expect from INFICON.



### FEATURES AT A GLANCE

- 0.10 oz (3 gm)/year sensitivity
- equally sensitive to all refrigerants, including R-22, R-134a, R-404a, R-410a, R-507 (AZ-50) and all CFCs, HCFCs and HFCs
- 800-hour infrared cell life for low cost of ownership
- infrared cell does not weaken over time, so response remains consistent and accurate
- infrared cell cannot be overloaded or “poisoned” by exposure to large amounts of refrigerant
- selective to refrigerants only; will not react to smoke, humidity, airflow or temperature changes
- high-efficiency air sampling pump provides quick response and quick clearing (“zeroing”)
- on-board diagnostics indicate charging status and warn of low battery or infrared cell failure
- NiMH power stick is environmentally friendly, won't corrode, and provides greater charging capacity
- includes hard plastic case, NiMH power stick, 12V and 120V adapter/recharger, tip filters and infrared cell
- made with pride in the USA

## TECHNICAL NOTES

At the heart of the D-TEK Select Refrigerant Leak Detector is an infrared absorption filterometer. It consists of a sampling cell with an infrared source (or emitter) at one end, an infrared energy detector at the other end, and an optical filter in between them.

Like the visible light we see, infrared energy is part of the electromagnetic energy spectrum. Most materials absorb specific and known wavelengths of infrared energy. The particular wavelengths of energy absorbed by a material are known as its absorption spectra. All refrigerants have similar absorption spectra in the range of 7.5–14 micrometers.

The infrared source (emitter) creates a high-intensity stream of energy incorporating all wavelengths in the infrared spectrum. The stream passes through the optical filter, which blocks all wavelengths except those that refrigerants absorb. The filtered infrared energy strikes the detector and causes it to heat up. When refrigerant is drawn through the sampling cell by the internal pump, some of the infrared energy is absorbed by the refrigerant. This causes a decrease in the amount of infrared energy reaching the detector and a corresponding drop in the detector's temperature, which triggers the D-TEK Select to alarm. This whole process takes a fraction of a second.

By utilizing an optical filter with precise characteristics, INFICON has made D-TEK Select sensitive to all refrigerants, while eliminating false alarms. In addition, because there is no depletion of chemicals like in heated sensor detectors, the sensor will not be harmed by high refrigerant doses nor degrade over time. The detector recovery time is also immediate after the refrigerant clears the cell.

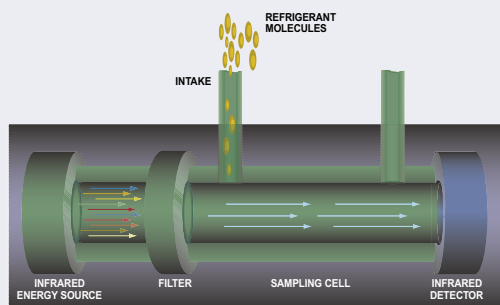
## SPECIFICATIONS

Base unit includes	Infrared cell, NiMH power stick, spare filters, 110VAC adapter with 6' cord, 12V adapter with cigarette lighter plug, and a hard plastic carrying case.
Minimum sensitivity to R-12, R-134a, R-404a	0.10 oz/yr (3 gm/yr)
Controls	Power: on/off Sensitivity: high/low
Power	NiMH power stick
Battery life	6.5 hours
Charging options	<ul style="list-style-type: none"> <li>■ 110VAC adapter with 6' cord</li> <li>■ 12V adapter w/cigarette lighter plug</li> </ul>
Weight with power stick	1.19 lb (0.54 kg)
Probe	Chrome-plated flexible metal, approx. 17" (43 cm) long
Recharger	Built in
Operating temperature	32°F to 122°F (0°C to 50°C)
Storage temperature	14°F to 140°F (-10°C to 60°C)
Case material	Self-extinguishing, per UL94HB
Certifications	CE Marking Power Safety and EMC. SAEJ1627
Warranty	2-year replacement

## D-TEK Select / ACCESSORIES

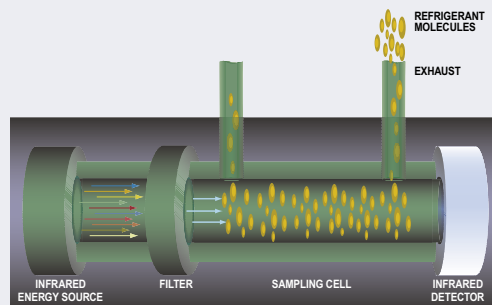
D-TEK Select	712-202-G1
Headphones	032-404
12V power cord with cigarette lighter plug	703-055-P1
120V adapter and cord	033-0019
NiMH power stick	712-700-G1
Infrared cell	712-701-G1
Tip/filter kit	705-600-G1
Storage case	712-702-G1

### READY STATE



The filtered infrared energy passes through the sampling cell, striking the infrared detector. D-TEK Select is ready to sense any refrigerant.

### ALARM STATE



Filtered infrared energy is absorbed by the refrigerant present in the sampling cell, causing D-TEK Select to alarm.

# TEK-Mate®

## The Affordable, Portable Leak Detector.



If you're looking for a moderately priced, hand-held leak detector with proven INFICON heated diode sensor technology—TEK-Mate is the tool for you.

Equal sensitivity to CFCs, HCFCs, and HFCs eliminates resetting or switching for different refrigerants. Automatically compensates for changing background contamination. And it's reliable, even under damp conditions.

TEK-Mate uses a variable intensity audible alarm and a single flashing LED to help pinpoint leaks. It's dependable for long-lasting performance on two D-size batteries.

### SPECIFICATIONS

Base unit includes	Sensor, 2 D-size alkaline batteries, spare filters, and a hard plastic carrying case.
Sensitivity to CFCs, HCFCs, HFCs	0.4 oz/yr. (11 g/yr.)
Controls	3-position slide switch – off, low sensitivity, high sensitivity
Power	2 D-size (1.5V) alkaline batteries
Contamination adjustment	Automatic
Weight with batteries	1.54 lb (700 g)
Operating temperature range	+32°F to +113°F 0°C to +45°C
Probe	Chrome-plated flexible metal, approx. 17" (43 cm) long
Sampling system	Positive displacement pump
Certifications	CE marking per Safety and EMC. SAEJ1627.
Warranty	2 years

### TEK-Mate / ACCESSORIES

TEK-Mate	705-202-G1
Sensor	703-020-G1
Filter kit	705-600-G1
Storage case	705-401-P2

# GAS-Mate™

## The Combustible Gas Leak Detector with High Sensitivity and Low Price.

Now there's a high-quality, economical and portable gas leak detector. GAS-Mate is perfect for checking leaks in residential and commercial combustion appliances, such as natural gas or propane fired heating systems, or gas pipelines.

GAS-Mate uses leading-edge technology to detect hydrocarbons and other gases with *twice the sensitivity of competing models.*

As you can see, GAS-Mate is a precision instrument. With its rugged construction and high-impact case, GAS-Mate will stand up to plenty of real-world use.

In fact, we double the standard one-year warranty time of other instruments with a full, two-year replacement warranty.



### FEATURES AT A GLANCE

- sensitive to 5 ppm methane (twice as sensitive as nearest competitor)
- also detects natural gas, propane, butane, cyclopentane, ethane, ethanol, isobutane and ammonia
- variable audio alarm and flashing LED indicate leak strength
- adjustable sensitivity helps pinpoint leaks fast
- auto zeroing for ignoring background gas levels in leak test area
- small sensor and probe tip permit leak checking in tighter places
- runs continuously for 60 hours on two alkaline "D" cells
- 2-year replacement warranty

### SPECIFICATIONS

Base unit includes	Sensor, two D-size alkaline batteries, and a hard plastic carrying case
Sensitivity to methane	5 ppm
Controls	3-position switch (off/high sensitivity/adjustable sensitivity); sensitivity slide switch
Power	2 D-size (1.5V) alkaline batteries (use Duracell® MN1300 to maintain intrinsically safe approval)
Battery life	60 hours
Probe	Chrome-plated flexible metal, approx. 17" (43 cm) long
Alarm indicators	Variable flashing yellow LED and audible tick rate dependent on gas concentration
Dimensions	8.8" x 2" x 3" (22.4 cm x 5.1 cm x 7.6 cm)
Weight with batteries	1.54 lbs. (700 gm.)
Operating temperature	+32°F to +113°F (0°C to +45°C)
Storage temperature	+14°F to +140°F (-10°C to +60°C)
Certifications	CE UL913 Class I, Division I, Group A, B, C and D, Met Laboratories Listing #E112145

### GAS-Mate / ACCESSORIES

GAS-Mate	706-600-G1
Sensor	706-700-G1
Storage case	706-701-G1

# Wey-TEK™

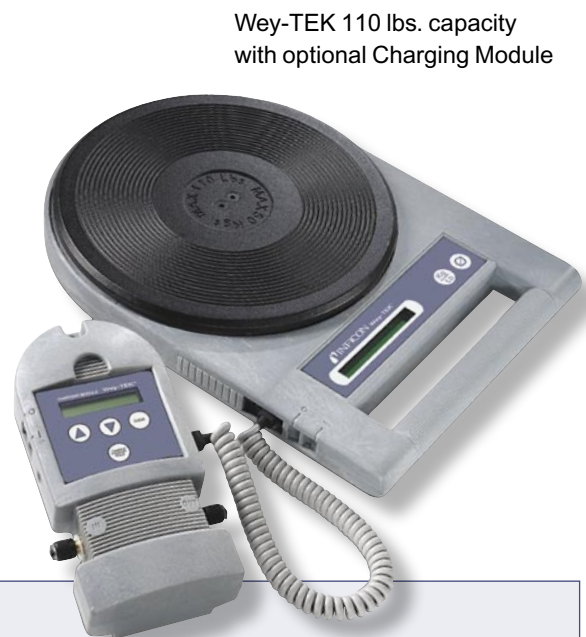
## The Affordable, Accurate Refrigerant Charging Scale.

The Wey-TEK™ Refrigerant Charging Scale is an affordable, precision electronic scale that lets you easily weigh and charge from the same large platform. Its high-accuracy load cell gives the correct reading each time—no matter where the cylinder is on the weighing platform. The large LCD display is easy to see at a distance, even in direct sunlight.

The optional charging module will allow you to turn your Wey-TEK scale into an automatic charging station. This charging module is compatible with either the 110 lbs. or 220 lbs. version.



Wey-TEK  
220 lbs. capacity



Wey-TEK 110 lbs. capacity  
with optional Charging Module

### Wey-TEK FEATURES

- precision-designed for refrigerant charging and recovery
- lightweight, modular design of high-impact foam-mold (no case required)
- large LCD display for easy viewing
- transfers all refrigerants by weight
- automatic and manual zeroing
- measures in lbs., kgs. or decimal lbs.
- high-accuracy load cell won't drift
- simple on/off controls
- 1-year warranty
- made with pride in the USA

### CHARGING MODULE FEATURES

- charge / hold key allows interruption of the charging process
- displays target charge and total refrigerant transferred
- provides power to the scale
- programmable in 1/4 oz. increments
- 1/4" inlet and outlet flare fitting
- made with pride in the USA

## SPECIFICATIONS

### Wey-TEK Scale

(unless otherwise noted, specifications apply to both models)

Weighing capacity	707-600-G1: 110 lbs. (50 kg.) 707-220-G1: 220 lbs. (100 kg.)
Accuracy	707-600-G1: ± 0.25 oz. (10 gm.) 707-220-G1: ± 0.50 oz. (20 gm.)
Controls	On/Off, Zero Units selection (English/metric)
Power	9V alkaline battery (included) for approximately 20 hours of continuous operation
Display	LCD visible in direct sunlight Units: lbs./oz. or kg./gm. or decimal lbs. Low-battery indication Over-range indication
Scale zeroing	Auto with power-on; Manual
Weight	6 lbs. (2.7 kg.)
Dimensions (W x L x D)	12" x 16 <sup>3</sup> / <sub>4</sub> " x 1 <sup>3</sup> / <sub>4</sub> " (30.5 cm x 42.5 cm x 4.5 cm)
Operating temperature	+32°F to 122°F(0°C to +50°C)
Storage temperature	+14°F to 140°F(-10°C to +60°C)

### Charging Module

Usage	Indoors or outdoors
Max. refrigerant transfer	707-600-G1: 110 lbs. (50 kg.) 707-220-G1: 220 lbs. (100 kg.)
Operating temperature	+32°F to 122°F(0°C to +50°C)
Storage temperature	+14°F to 140°F(-10°C to +60°C)
Input voltage range	12VDC ±5%
Input current	1.2 amps
Connection size	1/4" refrigerant flare
Weight (w/9V alkaline battery)	2.5 lbs. (1.1 kg.)

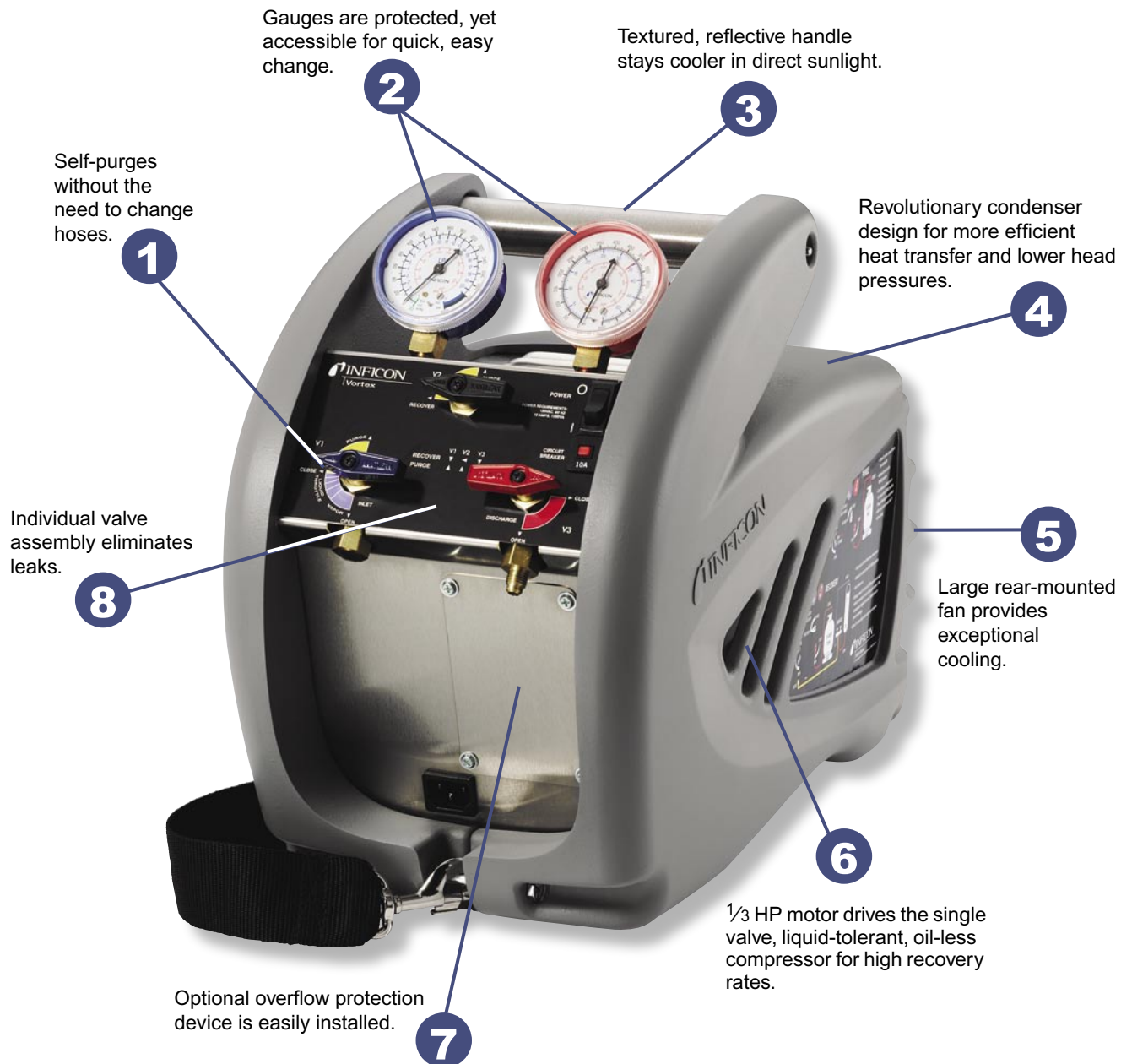
## Wey-TEK & CHARGING MODULE / ACCESSORIES

Wey-TEK Scale 110 lbs. (50 kg.)	707-600-G1
Wey-TEK Scale 220 lbs. (100 kg.)	707-220-G1
Charging module HVAC&R	709-700-G1
Charging module automotive	709-700-G1A
Wey-TEK scale 110 lbs. (50 kg.) and charging module HVAC&R	707-700-G1
Wey-TEK scale 110 lbs. (50 kg.) and charging module automotive	707-700-G1A
Softsided briefcase for scale and charging module	707-404-P1
Softsided case for scale	707-406-P1



Protect INFICON Wey-TEK with this soft-sided carrying case, custom-made for either model of the Wey-TEK scale. This lightly padded sleeve keeps out dust and light moisture and protects the scale during transport or set-up at the job site.

# Vortex™ Refrigerant Recovery Machine.





## VORTEX REFRIGERANT RECOVERY MACHINE

Vortex is the recovery machine for technicians who want a high performance, durable and compact unit at a competitive price. Vortex provides rapid recovery of all refrigerants. Individual valves with dual-sealed stems greatly reduce the potential for leaks. The enlarged, strategically placed fan provides for better airflow over the condenser as well as the compressor, allowing for improved cooling and lower pressures. Its cutting-edge condenser design makes for less air restriction, more

direct heat transfer and improved durability. The single-valve, liquid-tolerant, oil-less compressor with 1/3 HP DC motor drive, can stand up to heavy use and liquid slugs. And of course, Vortex is backed up with the superior support and service you expect from INFICON.

Vortex comes with a sturdy carrying strap. An optional overflow protection device is sold separately.

### SPECIFICATIONS

Refrigerants	Recovers commonly used CFCs, HCFCs, and HFCs including blends such as R404A and R410A
Weight	26 lbs. (11.8 kg)
Dimensions	18"L x 9.5"W x 14.5"H
High-pressure shut-off	550 psi
Gauge ranges	Low pressure 30" Hg Vac – 500 psig High pressure 0-800 psig
Compressor	1/3 HP oil-less, single valve, DC motor drive
Power	120 VAC, 60 Hz, 10 Amps
Warranty	1 year over-the-counter replacement

### VORTEX / ACCESSORIES

Vortex	708-202-G1	Base unit 120 volt operation. Includes shoulder strap, 6 foot power cord, and user manual.
Accessory	708-203-G1	80% Tank overflow protection device and cable.

### CERTIFICATIONS

INFICON Vortex is an EPA Certified machine in accordance with Section 608 of the Clean Air Act. It has been independently tested and certified to be in conformance with ARI standard 740-1998 by Underwriters Laboratories, Inc.

Representative Refrigerant	Category	Push-Pull Rate (lb/min)	Liquid Rate (lb/min)	Vapor Rate (lb/min)
R134a	III	8.10	2.80	0.22
R22	IV	12.67	2.10	0.30
R407C	IV	11.97	2.58	0.37
R410A	V	11.00	2.69	0.80

# Pilot™ Vacuum Gauge

## Accurately Measures the Entire Vacuum Cycle .

With its technologically advanced Pirani sensor, the INFICON Pilot Vacuum Gauge works throughout the entire evacuation process of air conditioning or refrigeration systems. Its easy-to-read digital display accurately shows the vacuum level at every stage in the evacuation cycle, from atmosphere down to one micron. Using the Pilot Vacuum Gauge, there's no waiting until the pumping process is well underway before you know whether your connections are tight.

And that's the problem with vacuum gauges currently being used. If your gauge or pump is not properly connected to the system, you may never get down to the vacuum level required to get a reading on your gauge. Unlike these gauges, Pilot works at atmosphere, so you'll know right away if a vacuum is being pulled properly.



### SPECIFICATIONS

Base unit	Includes 9-volt battery, storage case, and manual.
Weight (with battery)	7.25 oz (0.2 kg)
Power source	9V battery
Refrigeration fitting	1/4" male flare
Controls	On/Off/Unit Selection Button
Display units	microns, Pascal, millibars
Display range	atm (760,000 microns) to 1 micron
Auto shut-off	After 15 min; last reading displayed when restarted
Accuracy	< 20,000 microns ±5%, > 20,000 microns ±10% of reading
Resolution (increments)	microns: down to 1-micron Pascal: down to 1-Pa mbar: down to 0.01-mbar
Operating temperature	0° to +50 °C
Storage temperature	-10° to +60 °C
Maximum overpressure	150 psi (7.76 x 106 microns)
Warranty	1 year

### FEATURES AT A GLANCE

- unlike competing units, it starts measuring from the beginning of the evacuation cycle (i.e., full atmosphere)
- first and only HVAC/R vacuum gauge to use Pirani sensor technology for more precise readings
- competitively priced
- displays in microns, Pascal or millibars
- accurate readings from atmosphere (760,000 microns) down to one micron
- 1/4" stainless steel refrigeration fitting for easy access
- low-battery indicator and automatic shut-off after 15 minutes
- saves last reading with auto shut-off and displays it again at start-up
- 9V battery operation
- one-year, over-the-counter warranty
- can be used with any vacuum pump

### PILOT / ACCESSORIES

Pilot Vacuum Gauge	710-202-G1
Carrying Case	710-600-G1
Vacuum Gauge Manifold	710-617-G1

# Whisper™ Ultrasonic Leak Detector.

INFICON Whisper Ultrasonic Leak Detector is ideal for detecting and locating sources of ultrasonic sound through the use of sophisticated electronic circuitry. Unaffected by audible noise, Whisper incorporates an Internal Noise Control allowing for use in extremely

noisy environments, such as mechanical rooms, and around operating chillers. Because Whisper is designed to detect ultrasound at 40.5 kHz, not even a murmur will escape detection.



## APPLICATIONS AT A GLANCE

- refrigerant leaks
- locating worn bearings
- leaks in pneumatic control systems
- leaks in natural gas, LPG leaks
- leaks in compressed air systems
- leaks in vacuum systems
- butane / propane storage tank leaks
- line set leaks in foundations / walls
- diagnosing solenoid operations
- steam traps
- electrical arcing

## SPECIFICATIONS

Base unit includes	9V battery, rubber probe extension, headphones and storage case.
Controls	On / Off switch Sensitivity: maximum / minimum knob
Power	One 9V alkaline battery
Weight with battery	9 oz (0.25 kg)
Operating temperature	+32°F to +122°F; 0°C to +50°C
Storage Temperature	+14°F to +140°F; -10°C to +60°C
Warranty	2 years

## WHISPER / ACCESSORIES

Whisper Ultrasonic Leak Detector	711-202-G1
Transmitter	711-600-G1
Headphones	032-404
Storage case	711-701-G1

# SHARK™ Vacuum Pump.



## SHARK VACUUM PUMP

The INFICON SHARK Vacuum Pump is designed for the Service Professional for quick deep evacuation, simplified maintenance/repair, and durability.

SHARK is a two-stage rotary vane pump, with 6 CFM rated displacement for ultimate vacuum down to 15 microns. The pump, with features such as a large oil capacity, gas ballast, internal oil pump, and

fan, allow service technicians to make easier, more efficient service calls. The unique molded design of SHARK allows for easy carrying to the job while giving extraordinary durability.

### SPECIFICATIONS

Base Unit	Self-contained, 110V operation. Includes power cord, 1qt. turbo oil T32, and user manual.
Free air displacement	6 CFM (170 liter/minute)
Vacuum pump design	Two-stage rotary vane
Motor	1/3 HP AC; 1700 RPM
Oil capacity	1.0 qt (0.95 liters )
Weight	24 lb (10.89 kg)
Dimensions (L x W x H)	19.6" x 11.8" x 7.1" (49.8 cm x 30.0 cm x 18.03 cm)
Warranty	1 year

### SHARK / ACCESSORIES

SHARK	VNR-172-1
Turbo oil T32 (6 qts./case)	071-0730

### FEATURES AT A GLANCE:

- rotary vane two-stage pump – provides the ability to quickly pull a deep vacuum.
- gas ballast – allows pumped water vapor to be exhausted to atmosphere instead of accumulating in oil reservoir without affecting the vacuum pump's performance.
- anti-suck back on inlet – prevents oil from entering system if a power disruption occurs.
- large oil capacity – offers higher cooling for longer component life and greater moisture pumping capability.
- internal oil pump – provides lubrication by throwing oil back on bearings and seal area increasing life expectancy of the vacuum pump.
- replaceable one-piece cartridge – allows the HVAC/R professional to repair the vacuum pump without any hassles.
- fan – directs airflow for maximum surface area heat transfer keeping unit cooler.
- bigger bearings – 1" shaft supports cartridge and ensures pump lasts longer.
- molded plastic housing – unique design offering durability, ease of maintenance, and convenience.
- oil trapping exhaust filter – minimizes oil loss through the exhaust system and prevents oil accumulation on pump.

# Manifold Gauge Sets

## Precise, Dependable Measurement.

The patented gauge movement in our manifold gauges delivers pulse/vibration free measuring and gauges that can withstand 2 1/2 times over pressure without damaging the gauges. The large, easy-to-read gauge face is available in several configurations for your most demanding HVAC/R and automotive applications.

The manifold gauge sets come with a two year warranty, that's twice the warranty of any other manufacturer.



### GAUGE FEATURES

- pulse/vibration free measuring
- 1% accuracy
- withstands 2 1/2 times over pressure
- large, 3", easy-to-read gauge face
- high and low set gauges
- hanging hook

### MANIFOLD FEATURES

- insertion valve for easier metering
- large sightglass for visual contact of refrigerant flow
- rebuildable valves, replacement seals available
- durable metal knobs
- 1/4" SAE connections

## MANIFOLD GAUGE SETS

Temperature Scale Ranges	Light Manifold Gauge Sets 2-way w/gauge protectors	Light Manifold Gauge Sets 2-way w/out gauge protectors
R12, R134a Automotive	710-602-G11A	710-602-G10A
R22, R134a, R404A	710-602-G21	710-602-G20
R410A	710-602-G31	710-602-G30
R12, R22, R502	710-602-G41	710-602-G40

Temperature Scale Ranges	Aluminum Manifold Gauge Sets 2-way w/gauge protectors	Aluminum Manifold Gauge Sets 4-way w/gauge protectors
R12, R134a Automotive	710-612-G11A	710-614-G11A
R22, R134a, R404A	710-612-G21	710-614-G21
R410A	710-612-G31	710-614-G31
R12, R22, R502	710-612-G41	710-614-G41

# Service Tools Accessories

Get increased performance from your INFICON products through the use of these specially designed accessories.

## **TEK-Check™ R134A REFERENCE LEAK – 703-080-G1**

Use this reference leak to verify the functionality of your D-TEK Select, D-TEK or TEK-Mate Refrigerant Leak Detector. Leak rate of 0.4 oz./yr of R-134a with a lifetime of approximately one year. Small, compact canister easily fits in your leak detector's carrying case.



## **Vortex OVERFILL PROTECTION DEVICE – 708-203-G1**

For use with the Vortex Refrigerant Recovery Machine. This kit provides an easily installed panel that fits in the front of the Vortex and connects to a cable (provided) that plugs into the refrigerant cylinder. This allows for easy, safe recovery of the refrigerant and automatic shut-off of Vortex when the refrigerant cylinder is 80% full. The cable uses a three pin Brad Harrison connector; refrigerant cylinders must be equipped with a refrigerant level tank float sensor. (Contact the cylinder manufacturer for more information.)



## **Pilot VACUUM GAUGE MANIFOLD – 710-617-G1**

This one-valve manifold assembly comes with a 1/4" female flare swivel fitting on top to attach Pilot (or other vacuum gauge) and connect your vacuum pump to the system under evacuation. The center valve isolates all ports and seals vacuum tight. Comes with a large hook so that you can easily hang the manifold in the right spot during use.



## **Whisper ULTRASONIC TRANSMITTER – 711-600-G1**

This ultrasonic transmitter for use with the Whisper Ultrasonic Leak Detector provides quick, accurate leak checking in walk-in coolers/freezers, wall and ceiling joints, around doors and windows, ducts, etc. Turn the transmitter on and place it in the enclosed system you need to leak check. If the Whisper detects the ultrasonic frequency generated by the transmitter, you will know the presence and location of the leak.

Dimensions (L x W x H): 2 1/4" x 3 3/4" x 1"



**Call 1.800.344.3304 for your nearest distributor.**



**GLOBAL HEADQUARTERS**

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