

1.888.610.7664

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1.888.610.7664

# **Introducing Smart, Connected, Tools From CPS**

# Using CDS<sup>®</sup> Link Technology





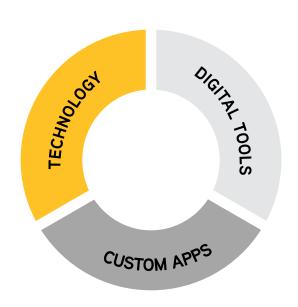
Technology so advanced, CPS was awarded a patent. CPS Link™ combines the power of smart devices with our patented measurement technology and custom app to enhance diagnostic and service capabilities.



All CPS digital tools and test instruments are designed exclusively for use with our technology, making CPS products the most accurate measuring instruments with unsurpassed speed and reliability.



CPS Link<sup>™</sup> for Android and iOS devices acts as the interface between the measurement technology built into CPS digital products and the user. This allows the most integrated and cross-platform flexibilty of any other product to date.





**P**ATENTED **TECHNOLOGY** 



INNOVATIVE



**J**UST





#### Unclutter and untether with One Smart App.

When you choose CPS., you get much more than just precision instruments. You get years of trouble-free performance, industry leading accuracy and the best value for your money.

On your smart phone or tablet, perform HVAC/R measurements and analysis while using one or more CPS wireless tools simultaneously-all made possible by our CPS Link app.

CPS Link™ combines our patented communication technology built inside every CPS wireless tool with powerful analytical and integrated management software that allows you to access the following features:

- Data From Multiple Wireless Devices: Simultaneiously gather data from one or more wireless CPS devices
- Client Lists: Create and save client historical information
- **Job Checklist:** Create and retain job reminders
- Job Tracker: Create and retain record of services performed
- Geolocation: Record and store where jobs were completed
- Time Stamp: Record and store time and date
- Monitor readings: Remotely
- Share/Send Data: Conveniently e-mail or save data
- Selectable Language: Choose from different languages to work in

#### CPS Link™ enabled products include:

- Digital Manifolds
- Vacuum Gauge
- Temperature and Pressure Gauge
- Refrigerant Charging Scales
- Airflow & Environmental Meter
- Airflow Capture Hood
- Temperature & Humidity Data Logger
- Static Pressure Meter & Probe Kit



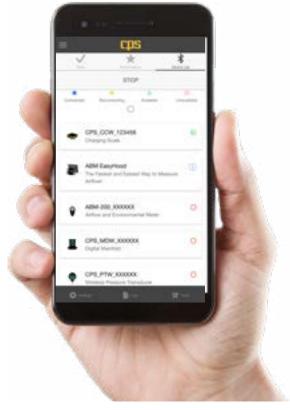














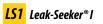


#### THE LEAK-SEEKER® BRAND HAS **BEEN SYNONYMOUS WITH HIGH** PERFORMANCE ELECTRONIC REFRIGERANT LEAK **DETECTION FOR OVER 30 YEARS.**

The manual-select Leak-Seeker® I and fully automatic Leak-Seeker® II, featuring our patented E\_MOS® leak detection technology are the most sensitive, stable, reliable and accurate detection products, with the longest sensor life on the market today.

\*U.S. Patent # 8,555,701

- Detects refrigerants including those with hydrocarbon components (CFC, HCFC, HFC, HFO, NH3, HC. Hydrogen trace gas in 95% N2, 5% H2 mixture)
- Patented E\_MOS detection technology increases battery and sensor life, with replaceable sensor, filter and tip
- One button controls On/Off and all functions.
- Microprocessor controlled sensor improves sensitivity and reduces false alarms
- Metal sensor housing with patented water vapor stabilizing filter eliminates false alarms due to condensate
- Optimal leak-finding performance under a broad range of conditions
- Simple, intuitive bar graph LED display
- Software managed sensor rejuvenation at startup ensures highest sensitivity
- Ergonomic, high-impact housing with high output
- Designed and manufactured in U.S.A. with U.S. and globally sourced components.







PROGRESSIVE ALARM MODE: Alarm pitch and number of lighted LEDs progressively increase as the leak source is approached. Allows searching for a broad range of

THRESHOLD ALARM MODE: Provides a quick go, no/go verifying a leak has been found and approximate size.







### **LS2** Leak-Seeker® li





- Simple, intuitive bar graph LED display
- 56 levels of sensitivity automatically selected by proprietary Powershift<sup>TM</sup>

THE ONLY LEAK DETECTOR WITH FULLY AUTOMATIC SENSITIVITY SELECTION AND CONTROL. SIMPLY TURN IT ON AND PINPOINT THE LEAK.

~ (				
X	REPLACEMENT	<b>PARTS</b>	(LS1.	LS2

EMOS2	R	E_MOS Technology Sensor
LS2XF	s} देश	E_MOS Technology Sensor Filters (10-Pk)
LS2XVF	6	Vapor Filter Sensing Tip









COMPARISON	Leak-Seeker <sup>°</sup> l	Leak-Seeker <sup>°</sup> II	Tech-Set <sup>™</sup> LS780C	Leak-Seeker <sup>®</sup> LS790B	
Detector Type	Patented E_Mos	Detection Technology	Proprietary lon-Pump sensor with built-in selective filter housing		
Sensitivity	Better than 0	0.1 oz (3g) / year	Better than 0.25 oz	(7g) / year leak rate of HFC	
Sensitivity Selection	Manual	Fully automatic	1	Manual	
Refrigerant Sensitivity	All, including those with hydrocarbon of Hydrogen trace gas in	components (CFC, HCFC, HFC, HFO, NH3, HC. 195% N2, 5% H2 mixture)	All, including those w (CFC, HCFC, I	All, including those with hydrocarbon components (CFC, HCFC, HFC, HFO, NH3, HC)	
Visual Alarm	Visual tachometer-like bar grap	oh display with 8 high intensity LEDs	High intensity LED (Varies in brightness)	High intensity bar graph display	
Flex Probe	15.5" flexible probe	e for hard-to-reach areas	18" me	etal flex probe	
Operating Temperature		0 to 140°l	F (-18 to 60°C)		
Controls	One button controls on/off and all functions		OFF, LO & HI sensitivity modes	6 button keypad	
Battery Life	3 "C" batteries (>50 hours continuous use)		4"AA" alkaline batteries (>40 hours continuous use)		
Weight	180		oz (500g)		
Audible Alarms	In Progressive Mode: Extended tone range In Threshold Mode: Single high pitch tone	2 user selectable alarm ranges	128 computer generated tones to pr	recisely guide user to the source of the leak	
Lock-Out Mode	N/A		N/A	Yes	
Low Battery Indication	Green (middle) LED turns off when batteries at 10% capacity when batteries at 10% capacity		Center LED above "*" lights during operation		
Auto-Off	Yes, after 10 minutes of inactivity		No	Yes, after 15 minutes of inactivity	
Sensor Life	>500 hours continuous use		Replace seasonally		
Warranty	1 year	2 years	1 year	2 years	
Standards	CE, Complies with European Standard EN14624: 2012		CE, SAE J1627	CE, SAE J1627	
Certifications		Individually Calibrated To	NIST Traceable Leak Standard		

### **LEAK-SEEKER® LEAK DETECTORS** WITH ION-PUMP® SENSOR **TECHNOLOGY**

- Detects refrigerants including those with hydrocarbon components (CFC, HCFC, HFC, HFO, NH3, HC)
- Ion-pump sensor with built-in selective filter housing
- 128 computer-generated tones and display alerts the user to varying halogen concentrations.



#### **LS790B** Leak-Seeker

Combines the most advanced microcomputer circuitry with field proven Ion-pump® sensor technology creating a highly sensitive, accurate electronic refrigerant leak detector. Over 128 computer generated tones and a high intensity bar graph display quickly alerts the user to varying halogen concentrations. Patented automatic calibration design eliminates the need for manual balance or tick rate adjustments while the user selectable 10 sensitivity ranges enables the LS790B to detect leaks of all refrigerants.



#### **LS780C** Leak-Seeker

Easy-to-use rugged, 3-position slide switch to turn the instrument on and select either LO or HI sensitivity ranges. Visual indication of the leak size is provided by a high intensity LED varying in brightness with the concentration of the refrigerant detected.

		,
LSXSF	100	Selective Filter Housing
LSXBMK	12	Maintenance Kit: (1) LSXS + (1) LSXSF (replaces LSXMK)
LSXS	5	Ion-Pump Sensor
LSXBC	4	Battery Compartment Cover (Yellow)
LSXC		Carrying Case (Fabric)
LSXE	-	Earphone



www.calcert.com



EZSMOKE allows a technician to use low pressure, non-toxic smoke, with a pleasant lemon scent and UV dye, to quickly locate annoying sewer gas leaks that are often difficult and time consuming to find in cuts, cracks, fractures, punctures, porosity or unsealed fittings inside or outside residential or commercial buildings.

EZSmoke uses patented technology to send nontoxic smoke containing a trace dye (UltraTrace UV) through the air (not a liquid) that is contained within pipes, wall cavities, or other forms of enclosed spaces. Any visible smoke immediately provides an indication of a large leak.

If white smoke alone does not locate the source of sewer gas odor, technicians can rely on UltraTrace UV, that is carried within the smoke vapor, to pinpoint the source of very small leaks of annoying sewer gas.

Patented in the U.S. and foreign countries.

SPECIFICATIONS

- OI EUII IUATIUNU	
Height	26" (56.0 cm)
Width	16.5" (33.0 cm)
Depth	10.5" (24.0 cm)
Weight	40 lb. (18.1 kg)
Shipping weight	44 lb. (20 kg)
Power supply	100-240V 50/60 Hz
Power consumption	10 amps
Max. UltraTrace UV Vol.	32 oz. (0.9 Liter)
Inlet pressure required	50 to 175 psi (3.4 to 12 bar)
Supply pressure	5 psi (0.34 bar   34 kPa)
Supply volume	26.4 Gal (100 L) per min
Smoke supply line hose	25 feet (7.6 m)
Power cord	10 feet (3 m)
Remote starter cable	12 feet (3.6 m)
Operating temp. range	45°F to 140°F (7.2°C TO 60°C)
Max altitude	Up to 2000 M (6,561 Ft)
Fuse	10A (two required)
Warranty	1 year





#### Fast, Verifable Results

EZSMOKE provides fast, verifiable results and easy testing of all repairs. After locating and repairing any leaks run a pressure decay test on the system again. If no pressure decay is found, all repairs are successful.



#### Dye Marks the Spot

EZSMOKE patented UltraTraceUV® dye travels with the white smoke and settles outside most leaks in the system, The included UV light UltraTraceUV® dye pinpoints the exact location of any leak.

#### ACCESSORIES INCLUDED WITH CE-91

CEO716UV	UltraTrace UV (16 OZ.) Smoke Producing Solution. Part No. is for one bottle
CEA-60	Remote Control
CEA-35	Combination white/ UV LED light, 2 'D' batteries and yellow glasses
CEA-63	25 ft. smoke supply hose. Connect as many hoses to each other as needed
CEA-64	3/4" NPT Plastic Ball Valve, cam and groove connector and clip (connects to end of smoke supply hose CEA-63)
CEA-65	Adapter cone-standard size. (For introducing Diagnostic Smoke intro any system 1" to 3 ½" diameter). Threads on to adapter CEA-64
CEA-66	Adapter cone-large size. (For introducing Diagnostic Smoke intro any system 3 1/2" to 6" diameter). Threads on to adapter CEA-64
CEA-99	Accessories bag for smoke supply hose







**CE0716UV** 







**CEA-63** 



**CEA-35** 

#### OPTIONAL ACCESSORIES FOR CE-91

CEA-36 Powerful Focused-Beam UV Light, yellow glasses, 12-VDC cigarette lighter adapter and 120-VAC charger









#### **GS40** Gas-Seeker® Portable Combustible Gas Detector

The **GS40** is a low maintenance, easy-to-use portable combustible gas leak detector engineered to pinpoint leaks in residential, commercial and industrial appliances. Advanced semiconductor sensor and electronic control package enables detection of gases commonly found in service applications including; carbon monoxide, natural gas, propane, ammonia, methane, acetone, hydrogen and isobutane, with a virtually instantaneous alarm response period.

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Detecting Range	O - 100% LEL referenced to methane.
Alarm Indication	Both visual and audible (>40db) alarm indicators
Low Level Alarm	Preset at 10% Methane LEL
High Level Alarm	Preset at 30% Methane LEL
Operating Conditions	0°F to 140°F (-20°C to +40°C) at less than 98% RH (non-condensing)
Power	3VDC working voltage using four 1.5V AA batteries
Battery Life/Indicator	20 hr continuous use. Orange LED constant on when low battery
Sampling	Natural diffusion
Dimensions	7.2" x 0.71" (183 x 18 mm)
Weight	18 oz (500g) including battery

# **X** REPLACEMENT PARTS

RMX12	Replacement Sensor
LSXC	Fabric Carrying Case
LSXE	Earphones



Refrigerant Monitor	Detects Refrigerant	Replacement Sensor
RM134	R-134	RMX12
RM22	R-22	RMX11
RM404	R-404	RMX12
RM407	R-407	RMX11
RM407a	R-407A	RMX12
RM410	R-410A	RMX12
RM502	R-502	RMX12
RM507	R-507A	RMX12

#### **RM** Refrigerant Monitor Control Box and Sensor Housing

Compact, highly reliable, yet economical refrigerant leak monitoring system designed to monitor a single refrigerant in a single zone. Provides early audible and visual warning of refrigerant leakage with adjustable sensitivity settings between 100 to 1000 PPM with an auxiliary 1/2 HP N.O. and N.C. dry contact control function for operating an additional alarm or other safety device. Replacement sensors are interchangeable enabling the replacement of a failed sensor directly in the field without recalibration, minimizing downtime.

# RM SERIES SPECIFICATIONS

Sensitivity	100 to 1,000 ppm
Accuracy	±3% of setting (or ± 25 ppm)
Visual Alarms	High intensity LED display
Audible Alarm	85 dB @ 12"
Operating Temperature (Control Module & Sensor)	14 to 150°F (-10 to 65°C)
Relative Humidity Range (Control Model & Sensor)	10 to 95% (Non-condensing)
Power	12 to 24V AC or DC
Sensor Failure Indicator	Visual indication in control module
Weight	18 oz (500 g)
Warranty	1 year

#### **UV55** Referigerant Uv Dye Leak Detection Kit

Conduct a fast, easy, mess-free air conditioning leak test with our ultra-flourescent universal dye.

#### KIT INCLUDES

- MoonLight<sup>™</sup> flashlight with 9, true ultraviolet LEDs and 3 AAA batteries
- MoonShine™ blue light-blocking glasses
- UVNJS Mess-free and easy-to-use squeeze injector
- UVS2 universal (orange) OEM approved dye cartridge
- R-34a 90° low side snap coupler
- Carrying case and instructions

#### **UVPRO** Moonlight™ Flashlight And Moonshine™ Glasses

Our MoonLight<sup>™</sup> flashlight is the most compact and efficient ultraviolet light we have ever designed. It contains nine high intensity, true ultraviolet LED engineered to maximize the fluorescing capabilities of today's most commonly used detection dyes used in AC systems, while greatly reducing the amount of "nuisance" background blue light

- Operates 8 hr (continuous on)
- Inspection range up to 3' (0.9 m)
- 100,000 hour LED life
- Instant "ON" with no heat produced
- Works with all common dye additives

X	REPLACEMENT PARTS
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UVXG	UV Enhancing Safety Glasses
UVXB	12V Rechargeable Battery Pack for 50W or 100W Light
UVXBC	Battery Carrying Case
UVXC	110V Battery Charger

#### **UVAL** 50w 90° auto swivel light w/ battery clips

MoonShine™ glasses, when used in conjunction with the MoonLight™ Auto Swivel light, block visible blue light, which provides an ideal means of viewing a fluorescing dye that might leak from a closed, pressurized AC system, thereby indicating where a repair is needed.

#### **REPLACEMENT PARTS**

UVAL	50W 90° Auto Swivel Light w/ Battery Clips
UVXB	12V Rechargeable Battery Pack for 50W or 100W Light
UVXBLB	UV Bulb for 50W Light

#### **UVNJS** Squeeze Injector

The squeeze gun™ injection system is the easiest, cleanest and fastest method of injecting dye into a system. Simply match the appropriate pre-filled, pre-measured universal dye cartridge with the size of the system being serviced then place it into the Squeeze Gun. Make your connection and inject the dye. It's that simple.

- Refillable and expandable universal dve injector (dve cartridges sold separately)
- 1/4" F BV Hose
- 1/2 oz. capacity



Step 1: Load cartridge.



Step 2: Connect and bleed hose



Step 3: Inject, then discard



#### **UVNJ** Anodized Aluminum Flow Through Injector

- Refillable and expandable universal dye injector (dye cartridges sold separately)



- In-Line AC&R 1/4"
- 1/4 to 1/2oz. 7.5 to 14ml



#### **TLJ2** Anodized Aluminum Injector

- Refillable and expandable universal dye injector (dye cartridges sold separately)
- 1/4 oz. / 7.5 ml to 2 oz. / 60 ml capacity
  R-12 1/4" SAE Oil Dye Injector



TLJX2H Replacement Oil Injector Hose





#### MOONSHINE™ IN-LINE DYE CAPSULES

- Universal OEM approved dyes formula
- All MoonShine™ dye meets SAE J2297 standard
- See statement below
- All dyes include I.D. labels



#### Ice machines, window AC units, autos, refrigerators

- For AC & R systems containing up to 2.9 lb (1.3 kg) refrigerant charge
- OR 15 fl. oz (0.4 L) of oil



#### **Residential systems**

- For AC & R systems containing up to 4.9 lb (2.2 kg) refrigerant charge
- OR 1.6 qt (1.8 L) of oil



#### Light commercial and large residential systems

- · For AC & R systems containing up to 5 to 9.9 lb (2.3 to 4.5 kg) refrigerant charge
- OR 1.7 to 3.2 qt. (1.9 to 3.7 L) of oil



#### Commercial and light industrial, including all split systems

- For AC & R systems containing up to 10 to 25 lb (4.6 to 11.4 kg) refrigerant charge
- OR 3.3 to 2 gal (3.8 to 9.1 L) of oil















6 pack

#### **MOONSHINE DYE CARTRIDGES**

- Use with UVNJS Squeeze Gun Injector
- · Cleanest, easiest and fastest method of injection
- 4 sizes to match capacity of system
- Locates source of air entering system
- Eliminates over-injection of dye
- All dyes include I.D. labels



**UVS101** 

6 pack



UVS1

6 pack



6 pack









UVS3 6 pack



#### **UVUD6**

#### Moonshine™ Bottled Universal Refrigerant Dye 6 pack

- Built-in measuring cap
- 8 oz (237 ml)
- Lowest cost per application
- Excellent for large systems



#### UVUDS

#### Moonshine™ Universal Refrigerant Dye 6 pack

· Lowest cost per application

• 1 oz (30 ml) bottles



#### **UVCLNR**

#### Moonshine™ Dye Cleaner

1 pack

• 32 oz (946 ml)

MOONSHINE Dye is an OEM approved UNIVERSAL DYE for usewith: Mineral, Ester, PAG and Alkyl Benzene lubricants.



#### **OPEB6S** eB00ST™ AC/R Performance Enhancer

- Restores older AC/R systems to original efficiencies
- Improves coil heat transfer
- Increases cooling capacity
- Increases lubricity of compressor oil
- Reduces compressor friction, vibration
- Extends compressor oil and system life
- Reduces energy and maintenance costs
- 1 Oz (30 ml)



#### **OPEBF6S** eB00ST™ AC/R De-Icer

- Compatible with all refrigerant gases (including CFC, HFC and HCFC)
- Won't affect performance of refrigerant gas
- Neutralizes and prevents formation of
- Effective in all sizes of systems
- 1 Oz (30 ml)



#### **OPEBA6S** eBOOST™ AC/R Moisture Remover

eBOOST™ AC/R Moisture Remover is a dehyrading additive that eliminates moisture and prevents water molecules from forming in AC/R systems. Safe for all systems, compatible with all AB, mineral, POE and PAG oils used in refrigeration systems. Will not break down or leave behind any type of particulate matter, acids, gels or polymers. 1 Oz (30 ml)



#### **OPEBM6S** eBOOST™AC/R Acid Neutralizer

- · Prevents acids from forming
- Neutralizes acids caused by compressor burnout
- Neutralizes acids introduced by A/C recovery units
- Safe with all system components
- Ideal for preventive maintenance
- · Fast and immediate results
- 1 Oz (30 ml)







Fast, easy and reliable way to determine the relative pH of any lubricant used in air-conditioning or refrigeration compressors. For all air-conditioning and refrigeration system lubricants. Enough for 4 tests. 1 oz (30 ml)

#### KIT INCLUDES

4 Vials (blue liquid) Lubricant pH Detect

4 Pipettes

1 Plastic Carrying Case





# **COMPUTE-A-CHARGE®**

**WIRELESS REFRIGERANT CHARGING SCALES** 



**CPS Link<sup>™</sup> App** U.S. Patent No. 9,043,161

Easily input or access:

- Job data (name, client, invoice #)
- Client list (name, address, e-mail, phone)
- Tank Tracker™ tank and refrigerant management system
- Optional cloud storage
- Custom alarms for weight set-points
- E-mail customer and job information
- Operates in ISM band for international use

Watch the video by scanning these QR codes











# Take control with TankTracker™

INVENTORY | COSTS | RECORD-KEEPING | USAGE | LOCATION

Supply and recovery tank inventory managment system exclusively from CPS



#### THE MOST TRUSTED BRAND OF CHARGING/RECOVERY SCALES

Recommended by OEMs and professional service technicians for over 30 years, the Compute-A-Charge series of scales have become the preferred tool for accurate, reliable charging of todays advanced AC/R systems.

- The world's most advanced strain gauge bridge load cell technology providing unparalleled accuracy, precision and reliability
- Calibrated to strict NIST standards (National Institute of Standards & Technology)
- Rugged cast aluminum platform and base assemblies for stability and long
- · Electronic and mechanical overload protected to withstand 150% of capacity
- Environmentally sealed and temperature compensated for reliable operation in extreme environments
- Ideal for critical charging of systems large or small and all refrigerant recovery applications
- - Designed and manufactured in the USA with U.S. and globally sourced components

#### **CC220W** Wireless Refrigerant Charging Scale

- 220 lb (100 kg) capacity
- Accurate to .015% of reading (or +/- 0.25 oz/10g (whichever greater)
- 0.25 oz (5 g) resolution
- 8.75" platform
- For use with CPS Link<sup>™</sup> app and Android or iOS mobile device
- Comes with padded carrying case #CCXSC

· Battery operated



#### **CC240W** Wireless High Capacity Scale

- 240 lb (108 kg) capacity
- Accurate to .015% of reading (or +/- 0.25 oz/10g (whichever greater)
- 0.25 oz (5 g) resolution
- 10" platform

 For use with CPS Link<sup>™</sup> app and Android or iOS mobile device

· Comes with molded carrying case • Battery operated



#### **CC840W** Programmable Wireless High Capacity Scale

- 240 lb (108 kg) capacity
- Accurate to .015% of reading (or +/- 0.25 oz/10g (whichever greater)
- 0.25 oz (10 g) resolution
- 10" platform
- For use with CPS Link<sup>™</sup> app and Android or iOS mobile device
- Programmable for automatic charging or recovery via integrated solenoid valves
- Includes molded carrying case
- · Battery operated









#### **CCD110** Refrigerant Charging Scale

- 110 lb (50 kg) capacity
- 0.20 oz (5 g) display resolution
- Accurate to 0.015% of reading (or +/- 0.2 oz/5g (whichever)
- 3 button corded control with large, high contrast, wide angle,
- Cast aluminum platform and base
- 3 point non-rocking foot pattern for best stability
- Heavy duty rubber platform mat
- Padded carrying case with shoulder strap
- Unique patent pending "delta" shaped design

#### **CC220** Refrigerant Charging Scale

#### THE ORIGINAL. TIME TESTED. AN INDUSTRY STANDARD!

- 220 lb (100 kg) capacity
- Accurate to 0.015% of Reading [or  $\pm$  0.25 oz (10 g) whichever >]
- 0.25 oz (10 g) resolution
- 8.75" (22.3 CM) square aluminum platform
- 3 button corded control





#### **CC220EW** Enhanced Refrigerant Charging Scale

- 220 lb (100 kg) capacity
- Accurate to 0.015% of Reading [or  $\pm$  selected resolution, whichever >]
- 4 adjustable resolution settings
- 8.75" (22.3 CM) square aluminum platform.
- Programmable for automatic charging or recovery
- Audible and visual alarms for use during charging and recovery.
- 7 button corded/wireless control

# 🔀 REPLACEMENT PARTS FOR CC220, CC220E, CC220EW

CCXC | Protective carrying case CCX220BC | Battery door with magnet

#### **CC800A** Programmable Refrigerant Charging Scale

- 220 lb (100 kg) capacity
- Accurate to 0.015% of Reading [or ± 0.25 oz (10 g) whichever >]
- 0.25 oz (10 g) resolution
  8.75" (22.3 CM) square aluminum platform.
- Programmable for automatic charging or recovery via built-in solenoid valve
- 7 button corded control





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Model #		CC220	CC220EW	CC800A	CC220W	CC240W	CC840W
Maximum Load	110 lb (50 Kg)		220 lb (10	-		240 lb (1	108 kg)
			Control				
Control To Scale Connection		xcord	Flexcord Or Wireless (CPS Link™)	Flexcord	Wireless (CPS Link™)		
Control Mount			Magnet back & 360 swivel hook		n/a (Mobile Device)		
Control Buttons (Physical Functions)	3 (On/Off, L	Lb/Kg, Tare)	7 (On/Off, Lb/Kg, Tare, Go/Hold, I	Increase, Set/Reset, Decrease)		n/a (Mobile Device)	
Tare (Empty) Weight Mode	<u> </u>			Yes			
Programmable Solenoids		n/a		Yes	n	n/a	Yes
Auto Power Off Feature (ENABLED)	Display shows "APO ON" at power up. [Display will turn OFF after 10 minutes inactivity]. Selectable	Display Turns OFF After 10 Minutes Inactivity	Default = Display Turns OFF After 10 Minutes Inactivity (Can re-set in increments of 5, 10, 15, 30, 60 mins or OFF)	10 mins (if weight on platform does not change by more than 1oz (30g) within 10 mins).	SI	Sleep mode when disconnected from a	рр
Auto Power Off Feature (DISABLED)	constant ON]	Display shows "	"APO OFF" at power up [Display will b	oe constant ON]		No override	
Smart Awake	Display shows last weight measurement at time of Auto-Off, updated to current value	Scale displays last weig	ght measurement at time of Auto-Off, u	updated to current value		n/a	
CHARGE/RECOVER ALARMS							
Charge/Recover Alarm	n/	√a	Audible & visual alarms during charge and recovery	Continuous beep during charge		n/a	
Transmission Range	р	ı√a	150' (45.7m) direct line of sight	n/a		30' (9.1 m)	
Frequency Range		√a	2.4 GHz, ISM Band (Worldwide)	n/a		2.4 GHz, ISM Band (Worldwide)	
BATTERY							
Power Source	Alkaline (1 Included)	(1 or 2 ) 9V Alkaline (2 Included)	Hand Control: (2) 9V	! Alkaline (Included)	Sc	Scale Platform: (4) AA Alkaline (Include	ed)
Continuous Battery Life	One 9V = 75 hrs; Two 9V = 150 hrs.	One 9V = 75 hrs; Two 9V = 150 hrs.	One 9V = 50 hrs; Two 9V = 100 hrs.	30 Hrs		75 Hrs	
Battery Status Indicator		2 Segment Battery Icon	3 Segment Battery Icon	4 Segment Battery Icon		via CPS Link™ app	
LCD DISPLAY							
Units (Weight) Readout				lb & oz, or kg & gm			
Weight Accuracy		0.015% of Reading [or ± 0.25 oz			0.015% of reading, or ± 0.25	5 oz/10 gm (whichever greater)	
Display Resolution (Increments)	(5 g) whichever >] 0.20 Oz (5 g)	(10 g) whichever >] 0.25 Oz (10 g)	resolution whichever >] Selectable: 0.1 Oz (2 g): 0.2 Oz (5g): 0.25 Oz (10 g): or 0.50 Oz (25g)	0.25 Oz (10 g)		.25 az (5 g)	
WEIGHTS, DIMENSIONS, MATERIA							
Platform Dimensions	Delta shape [fits w/l 10.4" (26.4 cm) circle]		8.75" x 8.75" (22	2.3 x 22.3 cm)		10" x 10" (25.4	cm x 25.4 cm)
Scale Weight (With Case)		5.68 lb (2.6 kg)	5.62 lb (2.55 kg)	8.5 lb (3.9 kg)	5.35 lb (2.4 kg	8.64 lb	(4 kg)
Length Of Control Cord	, ,	, 0,	n), Extended	5.5 15 (6.1. 1.5)	0.00 10 (20	n/a (Mobile Device Control)	(118)
Maximum Working Pressure		n/a	,, 1	500 Psig 34,5 Bar	l l	n/a	500 Psig 34,5 Bar
Maximum Operating Differential		n/a		485 Psig 33,5 Bar			485 Psig 33,5 Bar
Rubber Platform Cover			No		Yes		·
Storage Case	Soft Case		Molded Case		Soft Case Molded Case		1 Case
Overload Protection	Mechanical (Internal Overload Stop)		Mechanical (Internal Overload Stop)				
Operating Temperature Range	14°F to 122°F (-10°C to 50°C)		14°F to 122°F (-10°C to 50°C)				
	O% to 95% (Non-Condensing)		0% to 95% (Non-Condensing)				
APPROVALS, CALIBRATION, WAR							
Approvals	C	CE	FCC,IC,CE	CE		FCC, CE	
Calibrated To NIST Standards				Yes			
Declaration Of Conformity	11:2009/A1:2010	EN 61326-1:2013, CISPR 11:2009/A1:2010			n/a		
Warranty				1 Year			



# BLACKMA

TR700 Series

## THE ULTIMATE IN DEPENDABILITY.

Designed for servicing residential and commercial refrigeration systems, the BlackMax TR700 Series are the industry's best-performing refrigerant recovery machines incorporating non-restrictive piston manifold valves, a powerful two cylinder oil-less reciprocating compressor and twin fans. The resulting system provides superior airflow and condensing, which maximizes speed in both direct liquid and direct vapor recovery.

#### **FEATURES:**

- Powerful 2 cylinder, 2/3 HP oil-less reciprocating compressor
- Exceptional compressor, condensing and cooling systems allow fast recovery in high temperature énvironments
- Automatic low pressure shut-off feature turns unit off when recovery is complete
- Rugged high density, double-wall, contemporary plastic housing with easy-view top mounted controls
- R-410a ready with 550 psi high pressure shut-off switch
- Ergonomic well balanced design for easy transport (includes shoulder strap)
- Built-in, removable, replaceable suction filter located under suction port
- Compact design with easy 4 bolt access
- Externally serviceable valves and gauges
- Integrated component mounts for guiet operation
- Less parts provide greater reliability
- · Worldwide patents pending



# REPLACEMENT PARTS

TR21X1	Valve Rebuild Kit
TR21X3	Piston/Connecting Rod Replacement
TR21X2	Complete Rebuild Kit
TR21X5	Eccentric Crank Set
TR700X1	Head Replacement
CRXF3	(6) Suction Filters



Twin fans, high density polyethylene case, 4 skid-resistant rubber feet



Selectable manual or automatic shut-off mode settings



Large 2-1/4" diameter gauges and indicator lights for high pressure or low pressure status



Replaceable, cleanable filter







Adjustable carrying strap

# Pro-Set\*

#### TR600 Series

#### FAST. COMPACT. RELIABLE.

We took six recovery machines and their verified recovery rates. The Pro-Set TR600 was the undisputed fastest recovery machine for R410a and fastest overall for R22, R134a and R407c.

- Powerful 2/3 HP oil-less 2 cylinder reciprocating recovery compressor
- Exceptional compressor, condensing and cooling systems allow fast recovery in high temperature environments
- Fastest R-410A flow rates in class!
- 550 psi high pressure shut-off switch
- Durable inlet and outlet ball valve construction with 1/4 turn gauges
- Integrated component moorings for quiet operation
- High impact injection molded housing
- Ergonomic well balanced design for easy transport
- No tool access suction housing for easy filter clean/change
- Quiet operation
- Worldwide patents pending



TR21X1	Valve Rebuild Kit
TR21X2	Complete Rebuild Kit
TR700X1	Head Replacement
CRXF3	(6) Suction Filters
TR21X3	Piston/Connecting Rod Replacement



Easy-to-read In and Out gauges (2 1/4" diameter)



In/Out ports with protective cap and cleanable 100 mesh filter



Air intake



Air exhaust



#### **TRS600** Series PRO-SET® Ignition-Proof Refrigerant Recovery Machine

The TRS600 includes the same features as the TR600, but with an ignition proof design for Class A1, A2, A3 refrigerants.

- Designed and tested to meet ANSI 12:12.01 Ignition Proof
- For use with Class A1, A2, A2L and A3 refrigerants
- Maintenance free oil-less compressor
- Permanently lubricated and sealed main bearings
- Ignition proof power switch
- Sealed start relay
- Hard wired 9.8 ft. (3m) power cord







#### RECOVERY MACHINE PERFORMANCE AND SPECIFICATION COMPARISON



		PRO-S	SET® TR21 SERIE	ES .			TECH	-SET® TR19 SE	RIES
R-S2 ready					9				
TR21 TR21C	TR215	TR21E	TRS21	TR22	TR2.25	TR19	TRS19	TR19S	TR19K
115V (60 Hz)	230 V (50Hz)	220-240 V (50Hz)		115V (60Hz)		115V (6	50Hz)	220-240V (50 Hz)	220-240 V 50 / 60 Hz
			2/3 HP				'	1/2 HP	,
		Tv	vo cylinder, oilless					Two cylinder, oilless	
<b>X</b> 13 Amp	×	10 Amp	×	×	×			×	
			1000W					550W	
550 psig 450 psig	<b>550 psig</b>		<b>5</b> 50 psig		√ 50 psig	550 Psig (38 bar)	450 Psig (31	×	
Auto Reset Auto Reset	Auto Reset	36 bar ✓	Auto Reset	Aut	to Reset	Auto Reset	Bar)	550 Psig (:	38 bar) Auto Reset
X	×	•	<b>✓</b>		×	×	<b>✓</b>	×	×
No Gauges No Gauges									
D 22	D 401A/D D 4		4A, R-401C, R-406A, R-		E00.4	D 22 D 401A/D	R-12, R-134A, R-401C, R-406A, R-500 R-22, R-401A/B, R-402B, R-407/C/D/E/F, R-408A, R-409A, R-411A/B, R-412A, R-502, R-509A		
N-22	, K-40 IA/D, K-4		E/F, R-408A, R-409A, R-41 A, R-407A/B, R-410A/B,		-3U9A	R-402A, R-404A, R-407A/B, R-410A/B, R-507A			
	A1		A1, A2, A2L, A3	A1		A1	A1, A2, A2L, A3		A1
			6 Ft.			6 Ft.	9.8 ft (3.0 m)		6 Ft.
			9″ (15cm x 30cm x 23cr	n)		6" x 11" x 9" (15cm x 28cm x 23cm)			
			24.3 lb (11.0 kg ) to 120° (0°C to 49° C)				32°	18.7 lb (8.5 kg) F to 120° (0°C to 49° C	)
UL* CSA	CE	CE, TUV	UL*, ANSI**	UL*	CE	UL*	UL*, ANSI**		CE
			1					1	
Direct Vapor	Direct Liq	uid	Push - Pull Liquid	High 1	emp Vapor Rate	Direct Vapor	Direct Liquid	Push - Pull Liquid	High Temp Vapor Rate
.703 lb/min (0.319 kg/min)	11.95 lb/r (5.42 kg/n	min nin)	31.7 lb/min (14.38 kg/min)	0 (.	.816 lb/min 37 kg/min)	.273 lb/min (0.124 kg/min)	8.36 lb/min (3.79 kg/min)	24.25 lb/min (11 kg/min)	n/a
.597 lb/min (0.271 kg/min)	8.86 lb/m (4.02 kg/n	nin nin)	31.53 lb/min (14.3 kg/min)	(0	0.86 lb/min .39 kg/min)	.311 lb/min (0.141 kg/min)	6.97 lb/min (3.16 kg/min)	24.25 lb/min (11 kg/min)	.280 lb/min (.127 kg/min)
.503 lb/min (0.228 kg/min)	7.8 lb/m (3.54 kg/n	in nin)	25.66 lb/min (11.64 kg/min)		n/a	.291 lb/min (0.132 kg/min)	4.30 lb/min (1.95 kg/min)	20.66 lb/min (9.37 kg/min)	n/a
.536 lb/min (0.243 kg/min)	9.50 lb/m (4.31 kg/n	nin nin)	29.14 lb/min (13.22 kg/min)		n/a	.320 lb/min (0.145 kg/min)	6.64 lb/min (3.01 kg/min)	23.61 lb/min (10.71 kg/min)	n/a



#### **TR21 SERIES** Refrigerant Recovery Machines

# The <u>smallest</u>, <u>lightest</u>, <u>fastest</u> and <u>most reliable</u> recovery machine in its class!

- Weighs only 25 pounds!
- Fastest ARI recovery rates in its class, best speed-to-weight ratio in the industry!
- Five unique patented and patent pending design elements
- Vapor or liquid recovery, including R-410A
- Compact and easy to carry
- Multi-language color box

REPLACEMENT PARTS				
TR21X1	Valve Rebuild Kit			
TR21X3	Piston/Connecting Rod Replacement			
TR19X2	Eccentric Crank Set			
TR21X5	Eccentric Set			
TR21X4	Complete Head Replacement			
TD04\/0	0 11 0 1 111111			







#### **TRS21** Ignition Proof Refrigerant Recover Machine

- Designed and tested to meet ANSI 12:12.01 Ignition Proof standards
- Ignition proof ON-OFF switch
- Sealed start relay
- For use on refrigeration systems utilizing:

Class A1 (nontoxic, nonflammable),

Class A2L (nontoxic, low flammability)

Class A2 (nontoxic, flammable) and

Class A3 (nontoxic, flammable)

- Maintenance free oilless compressor
- Permanently lubricated and sealed main bearings

AVAILABLE IN SPARKLESS (R-32 READY) #TRS19

- Improved piston seal design for less leakage and deeper vacuums
- 550 Psig high pressure cutoff switch with LED indicator
- Cleanable 100 mesh inlet filter
- Fastest recovery rates in its class
- Multi-language color box

# **TR19 SERIES** Tech-Set Refrigerant Recovery Machines

- Critical oilless compressor components use high temperature resistant materials
- Main bearing is completely sealed and isolated from refrigerant contact.
- Maintenance free oilless compressor design
- Precision machined from aluminum and steel components
- Permanently lubricated and sealed main bearings
- Improved piston seal design for less leakage and deeper vacuums
- Weighs less than 19 pounds
- Special cooling system design improves compressor longevity
- Efficient suction and discharge valve design for faster recovery
- Durable crankshaft design for improved reliability
- Unique head design for superior performance

### REPLACEMENT PARTS













# MOLECULAR TRANSFORMATOR DRAMATICALLY INCREASES THE **SPEED** OF ANY RECOVERY MACHINE.

#### **MT69**

#### **CUT YOUR RECOVERY TIME IN HALF.**

This MT69 is the only commercialized recovery sub-cooler manufactured for the professional A/C & R technician to work with ALL refrigerants. Use the MT69 in-line with the discharge line of any recovery machine to dramatically increase the speed of recovery!

- Increases the speed and performance of your recovery machine up to 95%! For example: The time needed to recover 15 lb of R-22 at 120oF is 32 minutes. Using the MT69, it takes only 17 minutes.
- Functions as a submersible condenser or evaporator

- Rugged, compact and easy to use
- Essential for recovering R410A on hot days and eliminates the need to change tanks
- Eliminates annoying shutdown due to high pressure switch limit

#### The hotter it is, the better it works

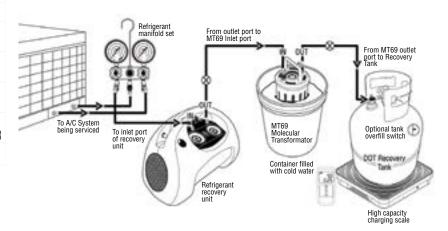
- Essential for recovering liquid refrigerant on cold days
- Eliminates liquid slugging at colder temperatures
- Patents Pending
- Designed and manufactured in USA with U.S. and globally source components



### SPECIFICATIONS

	MT69	MT69SS	
Dimensiones	4.25" x 9" (10	.9 cm x 22.9 cm)	
Weight	3.50 lb (1.58 kg)	3.10 Lb (1.40 kg)	
Maximun Operation Pressure	500	O Psig	
Discharge Pressure Gauge	O to 600 Psig		
Inlet/Outlet Connections	0 to 600 Psig		
Refrigerant Compatibility	CFC, HCFC, HFC, HC, and HFO	CFC, HCFC, HFC, HC, HFO, and NH3	
Coil	Copper	Stainless Steel	

# **HOW THE MT69/ MT69SS MOLECULAR** TRANSFORMATOR WORKS:





The effects of ambient temperature and elevated tank pressures on the speed of the refrigerant recovery process are in many cases more important than the speed of the recovery machine itself. As ambient temperature increases, pressure in the recovery cylinder increases, reducing the recovery speed and in many cases can lead to a high pressure shutdown as the recovery equipment and tank pressure limits are reached. The Molecular Transformator reduces the temperature and pressure of recovered refrigerant during the recovery process, dramatically improving the recovery speed and high ambient temperature performance of all commercially available recovery machines in addition to extending the life of the equipment.

## MOLECULAR TRANSFORMATOR MT69SS

With stainless steel coil- for use on refrigerant systems utilizing



Class A1, A2, A2L and A3 refrigerants

#### REFRIGERANT RECOVERY TANKS Charge faster in cold weather!

Ideal for use on portable refrigerant charging or recovery tanks, especially in cold weather when transfer times increase, or when a tank is low on refrigerant. These durable straps create a positive pressure between the refrigerant tank and an A/C or refrigeration system, thereby reducing refrigerant transfer time.





<b>B</b> SPECIFICATIONS			
	ССХНВ	ССХНВУ	
Voltage (Hz)	120 VAC (50/60 Hz)	240 VAC (50/60 Hz)	
Watts	340	W	
Amps	2.8	1.4	
For Cylinder Sizes	From 8" (20 cm) to 14" (	35 cm) Diameter Tanks	
Control (Overheat Protection)	Automatic Thermal Cutoff (Encapsulated Thermostat)		
Minimum Surface Temperature Of Tank	115°F (46°C)		
Maximum Thermostat Temperature	130°F (55°C)		
Power Cord Length	20" (0.5	50 m)	
Adjustable Velcro Strap Max Length	19" (0.4	48 m)	
Heater Strap Width	a" (76 mm)		
Heater Strap Length	24" (.6	24" (.60 m)	
Heater Strap Color	or Dark Orange		
Electrical Connection Type	Nema 5-15P IEC320 Inlet		
Packaging	Header Card + C	Clear Poly Bag	

#### REFRIGERANT RECOVERY TANKS

- DOT Certified for refrigerant storage
- Refrigerant compatible sealant used on all mechanical connection points
- Auxillary port for optional overfill sensor
- Liquid and Vapor UL listed Y-valve
- Powder coated for maximum rust protection







**CRX400TS** with overfill sensor

• 1/4" SAE Male



• 1/2" ACME Male fitting



• 1/4" SAE Male fitting

#### REFRIGERANT **RECOVERY TANKS**

- DOT Certified for refrigerant storage
- Refrigerant compatible sealant used on all mechanical connection points
- Auxillary port for optional overfill sensor
- Liquid and Vapor UL listed Y-valve
- Powder coated for maximum rust protection

# SPECIFICATIONS

		Em	ht Of pty nk	Tank Capa	Water acity	(Tar	Veight ık & erant)	R	k Foot ing neter	Out	ank tside neter	Tank l	leight	Max. Pressure Rating
		lb	kg	lb	kg	lb	kg	g in mm in mm	in	mm	(psig)			
	For HVAC/R Use													
2016	CRX430T	17.5	7.9	26.2	11.9	43.7	19.8	7.8	198.1	9.5	241.3	18.1	459.7	400
30 Lb	CRX430TS	17.5	7.9	26.2	11.9	43.7	19.8	7.8	198.1	9.5	241.3	18.1	459.7	400
50 Lb	CRX400T	28.3	12.8	47.4	21.5	75.7	34.3	8	203.2	12.5	317.5	19.75	501.7	400
30 LD	CRX400TS	28.3	12.8	47.4	21.5	75.7	34.3	8	203.2	12.5	317.5	19.75	501.7	400
90 Lb	CRX390T	49.5	22.5	92.5	42	142.0	64.4	9.5	241.3	12	304.8	31.75	806.5	350
90 LD	CRX390TS	49.5	22.5	92.5	42	142.0	64.4	9.5	241.3	12	304.8	31.75	806.5	350
						For A	utomotiv	e Use						
50 Lb	ARX134T	28.3	12.8	47.4	21.5	75.7	34.3	8	203.2	12.5	317.5	19.75	501.7	400
30 LD	ARX134TS	28.3	12.8	47.4	21.5	75.7	34.3	8	203.2	12.5	317.5	19.75	501.7	400



# **PRO-SET® VACUUM PUMPS**

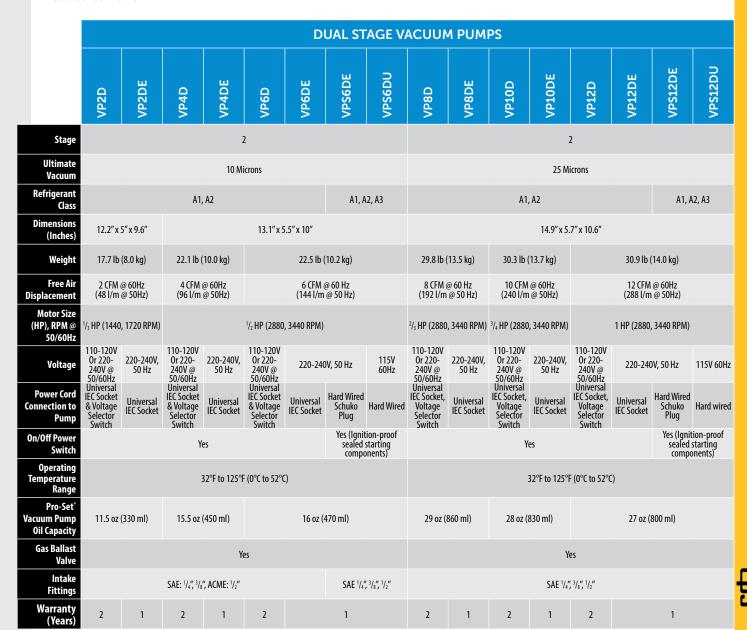
Pro-Set has the product line breadth and depth to suit just about any HVAC/R job or fit any job site requirement you might have!. Pumps are offered in a variety of single and dual stage models with numerous voltage, horsepower and free air displacement (CFM) options,

#### PRO-SET® VACUUM PUMP KEY FEATURES

- All models are for use with class A1 (non-toxic. non-flammable), class A2 (non-toxic, low-flammable) refrigerants
- Air cooled, thermally protected motors encased in a durable aluminum housing
- Oil filled rotary vacuum pump cartridge construction
- Large oil-fill port with proprietary, mistfree exhaust cap
- Easily accessible oil drain port
- Large oil sight glass
- Multiple SAE and ACME intake fittings with check valve
- On/Off power switch
- Rubber lined handle, skid resistant rubber feet
- Gas ballast valve

#### PRO-SET® DUAL STAGE VACUUM PUMPS

Pro-Set dual stage vacuum pumps are your premium solution for obtaining the deepest ultimate vacuum (10 to 25 microns, depending on model), the greatest range of horsepower (1/3 to 1) and free air displacement (from 2 CFM to 12 CFM) within the Pro-Set line. These pumps also include a gas ballast valve which speeds attainment of deep vacuum and are offered in both single and dual voltage models. All models are for use with Class A1 (non-toxic, non-flammable) and A2 (non-toxic, low flammable) refrigerants. The VPS Series with its sealed components is also for use with Class A3 (non-toxic, explosive) refrigerants and ammonia systems



nd. VD - Vacuum Pumn VDC - I





#### **PRO-SET® SINGLE STAGE VACUUM PUMPS**

Pro-Set single stage standard size vacuum pumps provide a deep vacuum (down to 50 microns), with horsepower ratings from 1/3 to 1, and free air displacement from 2 CFM to 12 CFM. These pumps include a gas ballast valve and are offered in both single and dual voltage and have a voltage selector switch.

#### PRO-SET® DUAL OR SINGLE STAGE COMPACT VACUUM PUMPS

The Pro-Set line of dual or single stage compact vacuum pumps provide an ultimate vacuum ranging from 15 to 100 microns, horsepower ratings from 1/5 to 1/4, and free air displacement from 2 CFM to 4 CFM. These pumps offer dedicated 115VAC or 220-240VAC operation and are hardwired with either NEMA 115VAC or 220-240VAC plugs. Best of all, these pumps feature some the smallest, lightest and most compact aluminum housings in the industry.

		FAGE VACUU (Standard Size)			DUAL OR	SINGLE STA (Compa		IM PUMPS			
	VP2S	VP4S	VP6S	VPC2DU	VPC2DE	VPC2SU	VPC2SE	VPC4SU	VPC4SE		
Stage		1		2				l			
Ultimate Vacuum		50 Microns		15 Mi	crons	100 Microns					
Refrigerant Class		A1, A2				A1, A2					
Dimensions (Inches)	12.2″x	5" x 9.6"	13.1"x 5.5"x 10"	11.3″x 4.	5" x 8.0"	9.1″x 4.	5" x 8.0"	11.3″x 4	.5"x 8.0"		
Weight	13.7 lb (6.2 kg)	15.0 lb (6.8 kg)	18.3 lb (8.3 kg)	12.1 lb	(5.5 kg)	9.3 lb (4.2 kg)		s kg) 9.3 lb (4.2 kg)		11.0 lb (5 kg)	
Free Air Displacement	2 CFM @ 60Hz (48 I/m @ 50Hz)	4 CFM @ 60Hz (96 I/m @ 50Hz)	6 CFM @ 60 Hz (144 I/m @ 50 Hz)		2 CFM @ 60Hz (	(48 l/m @ 50Hz)		4 CFM @ 60 Hz (	96 l/m @ 50 Hz)		
Motor Size (HP), RPM @ 50/60Hz	<sup>1</sup> / <sub>4</sub> HP (1440 1720 RPM)	<sup>1</sup> / <sub>3</sub> (HP) 2880/3440	<sup>1</sup> / <sub>2</sub> HP (2880, 3440 RPM)	<sup>1</sup> / <sub>4</sub> HP (2880 )	, 3440 RPM)	¹/₅ HP (2880	, 3440 RPM)	¹/ <sub>4</sub> HP (2880	, 3440 RPM)		
Voltage	Dual (11	0-120V Or 220-240V @ 5	0/60Hz)	115V @ 60 Hz	220-240V @ 50 Hz	115V @ 60 Hz	220-240V @ 50 Hz	115V @ 60 Hz	220-240V @ 50 Hz		
Power Cord Connection to Pump	Universal IEC Sock	et, Voltage Selector Swit	ch, Nema 15 Plug	Hardwired, Nema 115V Plug	Universal IEC, Schuko Plug	Hardwired, Nema 115V Plug	Universal IEC, Schuko Plug	Hardwired, Nema 115V Plug	Universal IEC, Schuko Plug		
On/Off Power Switch		Yes				Ye	es				
Operating Temperature Range	3	2°F to 125°F (0°C to 52°C	<u>.</u> )			32°F to 125°F	F (0°C to 52°C)				
Pro-Set° Vacuum Pump Oil Capacity	16 oz ( <i>4</i>	470 ml)	19 oz (540 ml)	9 oz (250 ml)		9 oz (250 ml)		10 oz (.	300 ml)		
Gas Ballast Valve		No		No							
Intake Fittings		SAE: 1/4" & 3/8", ACME: 1/2"				SAE: 1/4", A	ACME: 1/2"				
Warranty (Years)		2					1				

**Legend: VP=** Vacuum Pump; **C=** Compact; **2,4=** CFM; **E=** 220-240VAC 50 Hz; **C=** Single Stage: **II=** 115VAC 50/60 Hz

Legend: VP= Vacuum Pump; 2,4,6 = CFM; S = Single Stage; Dual Voltage = 110-120VAC or 220-240VAC 50/60 Hz.



#### **ANTI-SIPHON VALVE KITS**

The CPS anti-siphon valve is an essential accessory to any vacuum pump application. The anti-siphon valve prevents the cross-contamination of vacuum pump oil and the compressor oil in the A/C or refrigeration system being serviced. Mixing of vacuum pump oil and compressor oil can cause premature failure in the A/C or refrigeration system. CPS makes three models that fit all CPS and other brands of vacuum pumps.



VPAS4

1/4" SAE female knurl nut



**VPAS8** Anti-Siphon Valve Kit

3/8" SAE female knurl nut



**VPASU** Anti-Siphon Valve Kit

1/4" SAE, 3/8" SAE, 1/2"-20 UNF female knurl nut





# **AVCVAC** Vacuum Pump Cap Kit

Vacuum pump cap kit with chains on one common ring.



#### Oil Port Caps

Oil mist preventer exhaust port.





#### VPXJ220 Jumper Cord Kit

220 VAC jumper power cord for locations where 110 voltage is not available.



#### **PRO-SET® PREMIUM VACUUM PUMP OILS**

Pro-Set® Premium Vacuum Pump Oil is an extremely high quality, severely hydrotreated vacuum pump oil. The oil is compatible for use in pumps made by most manufacturers. Pro-Set Premium Vacuum Pump Oil should always be clean and free of contaminants such as moisture, acids, vapors, dirt etc. It is strongly recommended that the vacuum pump oil be changed after each use to improve service and the life of the pump.



**VPOP12** (1 PINT, 12/CASE)



**VPOQ12** (1 QUART, 12/CASE)





**VPOG6** (1 GALLON, 6/CASE)



#### GT1

- 0-30 Psi (0-2 bar)
- 1 Psi (0.05 bar) increments
- 3/4" FPT Brass Bell



#### GT2

- 0-100 Psi (0-7 bar)
- 2 Psi (0.20 bar) increments
- 3/4" FPT Brass Bell



- 0-30 Psi (0-2 bar)
- 1 Psi (0.05 bar) increments
- 1" FPT Brass Bell



Test the integrity of new installations for pressure leaks by simply connecting the gauge, pressurize the system, using the supplied access port, and monitor the easy-to-read 3-1/2" (80 mm) gauge for potential pressure drops that would indicate a leak.



#### **GT3** Fuel Oil Test Kit

The GT3 is a comprehensive test kit which includes the components necessary to test oil fuel pump performance while diagnosing related burner efficiency issues such as cleaner light-offs and coasting stops. **INCLUDES** 2-1/2" gauge, scale 30", 0-150 lbs 2-1/2" gauge, scale 30", 0-300 lb 12" hose 1/4" female swivel x 1/4" female 45° swivel 1/8 NPT x 1/4 Male SAE adapter 1/8 NPT x 1/4 Male SAE 90° adapter 1/4 NPT x 1/4 Male SAE adapter 1/4 NPT x 1/4 Male SAE 90° adapter Carrying Case



#### **VG200W** Wireless Vacuum Gauge

The VG200W is a precision digital vacuum gauge for obtaining accurate pressure measurements during evacuations of HVAC and refrigeration systems. It is also ideal for obtaining vacuum data while conducting time, target, dynamic and static vacuum tests. The VG200W may be used as a standalone gauge, or it may be paired with a mobile device (using the free CPS Link app) for greatly enhanced jobsite capabilities.

#### **PT200W** Wireless Pressure Gauge

The PT200W is a compact, portable instrument for accurately measuring and calculating HVAC/R data such as pressure, SuperHeat, SubCool, and temperature differential (tH-tL) that are critical to properly servicing HVAC/R equipment. Use the PT200W as a stand-alone gauge or pair with a mobile device to set up, store or e-mail client and job lists, jobsite data, invoices and other convenient, time saving features.

#### **FEATURES:**

- High & low temperature probe connections
- Take measurements directly from system access ports
- Large, 5 digit LCD display with low battery indicator
- Compatible with all refrigerant gases (including ammonia)
- Includes thermistor sensor (clamp, with 6 ft. lead), stainless steel T connector, hanger hook, double wall cloth storage case, and quick start guide - all packed in a clear clamshell
- Designed and manufactured in the USA with US and foreign components.

#### **FEATURES:**

- Large, 5 digit LCD display with low battery indicator
- Easy 2 button control (On/Off and Units)
- Select from 4 different vacuum units (at any time).
- Atmospheric to 0 micron pressure range
- Auto-Off after 10 minutes of no use
- Operates up to 20 continuous hours on one 9V alkaline battery (included)
- Compatible with all refrigerant gases (including ammonia)
- Field cleanable sensor
- Includes stainless steel T connector, hanger hook, vinyl storage case, and Quick Start Guide - all packed in a clear
- Designed and manufactured in the USA with US and foreign components

#### WHEN USED WITH CPS LINK™ APP

- Choose from 8 different languages to work in
- Log vacuum test data (viewable in real time graphs)
- Client Lists- Enter and retain client information
- Job Checklist- Create and retain job reminders
- Job Tracker- Create and retain record of services

• Geolocation- Record where (global coordinates) and when (time stamp) jobs performed





#### WHEN USED WITH CPS LINK™ APP

- Client Lists Enter and retain client information
- Job Checklist Create and retain job reminders
- Job Tracker Create and retain record of services performed
- Geolocation Record where (global coordinates) and when (time stamp) jobs were performed
- Monitor readings remotely without refrigerant loss caused by manifolds and long hoses
- Share/Send Data Conveniently e mail data to client, home office, others.
- Selectable Language Choose from English or Spanish
- P/T tables for 105 refrigerants, and ability to add/delete
- Data Log Pressure, temperature (tH, tL)
- Cloud backup of data













	VG200W	VG2	200	VG10	00A	PT200W
Accuracy	+/- 10% Of Reading	+/- 10% 0	f Reading	+/- 10% Value	Of Lighted LED	1% of reading ± 0.1PSIG (0.01 bar)
Display Type	Large, 5 digit LCD display with low battery indicator	5 digit LCD displa digital r		9 High Inte	nsity LEDs	LCD, 5 Digit
Display Auto-Off	After 10 minutes of no use		After 5 minute	s of operation		10 minutes = default if no key pressed, no wireless connection, gauge not logging data
Operating Vacuum Range	Atmospheric pr	essure to 0 microns		Atmospheric press	ure to 25 microns	-
Operating Temperature Range			-			23 °F to 149 °F (-5 °C to 65 °C)
Maximum Working Pressure	400 Psig 750 PSIG N				750 PSIG MWP, 3000 PSIG Burst	
Operating Temp Range	Compensated (accuracy as stated): 32°F - 122°F (0°C - 50°C) Non-compensated: Add +/- 0.5% error for every °C outside compensated range					23 °F to 149 °F (-5 °C to 65 °C)
Storage Temperature		-22° F to 185° F	(-30° C to 85° C)			-40 °F to 185 °F (-40 °C to 85 °C)
Operating & Storage Humidity			0 - 95%, Non	-condensing		
Power Source		One 9V Alk	aline Battery (ANSI	1604AC – IEC 6LR61),	included	
Battery Life	20 hr cor	ntinuous use		18 hr continuous use Up to 40 hours continuou		Up to 40 hours continuous use
Battery Indicator		Battery symbol with Level Ba		Symbol for 500	Microns Glows	Battery symbol with 3 segments
Mechanical Connection		Standard 1/4" female SAE refrigerant hose w/core depressor	1/8″ NPT thread connection	Standard 1/4″ female SAE refrigerant hose w/ core depressor	1/8″ NPT thread connection	Standard 1/4" Female SAE refrigerant hose with core depressor









PTXC

- 5.5" x 10" (13 x 26 cm)
- Zipper closure + carabiner

# **X** GAUGE REPLACEMENT PARTS

	VG200W	VG200	VG100A	PT200W
Brass Adapter <b>#AVT45*</b>	n/a	Included	Included	n/a
Stainless Steel Adapter #AVT45SS*	Included	Optional	Optional	Included
Swivel Hanging Hook <b>#VGXH</b>	Included	Included	Included	Included
Storage Case (Padded Vinyl) #VGXC	Included	Included	Included	n/a
Embroidered Cloth Case (Double Wall) PTXC	Optional	Optional	Optional	Included



#### **AC750** Digital Clamp Meter

The AC750 is a multi-functional AC/DC clamp meter and hosts an array of enhanced features such as ability to capture true In-Rush measurements, non-contact voltage detection.

- Versatile for testing AC/DC voltage, AC/DC current, resistance and frequency
- True RMS AC measurement
- Max/min value measurement
- Audible continuity and diode test
- Non-contact voltage detection
- Integrated clamp light and LCD backlight
- Auto zero key for DCA measurement
- Auto/Manual range, auto power off
- Secondary injection molded case, safety as per IEC1010 1000V CAT III
- Includes **DMXTL** CAT 3, 1000V test leads (shown below)







Included items







# SPECIFICATIONS

Display	6000 count dual display
Range Control	Auto range mode
Battery	9V battery (one piece)
Dimensions (W,H,D)	8.8" x 3.4" x 1.3" (225 mm x 86 mm x 33 mm)
Weight	0.70 lb (320 g)



DMXTL (Replacement Probes For AC750)

#### **DMXTL** 1000V Cat 3 Test Leads

- Captures True Motor In-Rush Current
- Includes Built-in Data Logging with Software









#### **AM50** Velocitor™ Air Velocity Meter

A professional grade, precision, hand held, detached vane anemometer that provides fast, accurate air velocity measurements for balancing HVAC systems or determining CFM calculations. Includes large 3/4" display digits and low battery indicator, as well as Data Hold, Max Hold (°F, °C); Function Selection (°F, °C, Anemometer); Units Selection (m/s, ft/min, Knots, Km/Hr). Kit also includes a convenient K Type thermocouple integrated into the remote vane providing quick measurement of grill/duct outflow temperatures from 32° to 122°F (0° to 50°C). An easy-to-read chart allows quick conversion of air velocity measurements into CFM data. Also included is an instruction manual, CFM Chart (Grill Size, Free Air), 9 V battery, molded carrying case. Factory calibrated.

SPECIFICATIONS
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Temperature Sensor	K-type thermo	couple		
	Feet/Minute		~1.2	
Average Period (Seconds) for Wind	Meters/Secon	nd	~0.6	
Speed Measurement	Knots		~1.2	
	Km/Hr		~2.2	
Flex Cord	5'			
Power Consumption	Approx 6 mA			
Battery Life	9V			
Battery Type	50 hr (for 30	0 mA-hr batter	-y)	
Operating Pressure	500 mb ~ 2 E	Bar		
Operating Temperature Range (Meter)	32°F to 122°	°F (0°C to 50°	C)	
Operating Temperature Range (Vane)	32°F to 140°	°F (0°C to 60°	C)	
Operating Humidity for Thermocouple	<80% RH			
Storage Temperature Range	-40°F to 140	°F (-40°C to 6	60°C)	
Bearing	Ultra-low fric	tion sapphire je	ewel	
Weight	12.3 oz (350	g)		
Mounting Nut	1/4" x 20			
Dimensions (LxWxH)	6.6" x 3.5" x	1"; (168 mm x	88 mm x 26 m	m)
Units	Range	Threshold	Resolution	Accuracy
Feet/Minute	0 to 8,800	60		
Meters/Second	0 to 45	0.3	0.1	+3% or 0.1
Kilometers/Hour	0 to 140	1.0	0.1	±3/0 UI U.I
Knots	0 to 88	0.6		

## **DM350** TECH-SET™ Auto-Ranging Digital Multimeter Cat lii 600V

The **DM350** is a Multi-Functional Meter and is designed to international safety standard IEC1010 CAT III 600V. The DM350 is encased in a secondary injection mold and supports such features as auto ranging, data hold and maximum value measurement.

# SPECIFICATIONS

4 digit large character LCD
Auto range mode
(2) 1.5V AA batteries
158 x 74 x 31mm
Approx. 220g (including batteries)
200m / 2 / 20 / 200 / 600V ±0.7%
200m / 2 / 20 / 200 / 600V ±0.7%
200μ / 2000 μ / 20m / 200mA ±1.2%, 2/10A±2.0%
200/2000A (0.1mV/0.1A) ±1.2%
200 μ / 2000 μ / 20m / 200mA ±1.5%, 2/10A±3.0%
200/2000A (0.1mV/0.1A) ±1.5%
200 / 2k / 20k / 200k / 2M ± 1.2%: 20M ± 2.0%
-20°C - 1000°C ± 3.0%, 0°F ~ 1800°F ± 3.0%
20n / 200n / 2μ / 20μ / 200μ / 2000μF ± 4.0%









#### **SM150** Sound Level Meter

A professional grade, hand held, lightweight sound level meter for measuring noise levels from 35 to 130dB. Common applications include monitoring sound output from HVAC/R compressors, blowers, health and safety requirements, offices, factory machinery, airports, auditoriums, studio acoustics, etc. Features switches for Hi/Lo dB, slow/fast/impulse, and A & C Weighting. Includes a large, 4 digit LCD display, maximum hold (captures & holds maximum noise level), Over/under range indicator, peak and average response settings. Includes a 3.5 mm output jack for downloading AC or DC signals to a frequency analyzer, level recorder, FFT analyzer, graphic recorder, etc. Kit includes instruction manual, foam windscreen, 3.5 mm plug, calibration screwdriver, 9 V battery, foam padded carrying case. Factory calibrated. CE approved. Meets or exceeds ANSI S1.4 Type 2; IEC 61672-1 Class 2.

### SM150 SPECIFICATIONS

SWITOU SPECIFICATION	nuo
Frequency Range	20 Hz ~ 8KHz
Measuring Level Range	35 ~ 130 dB
Frequency Weighting	A/C
Time Weighting	Fast (125 mS), Slow (1 sec.) Impulse (35 mS)
Microphone	1/2" Electret Condenser
Display	LCD (4 Digits)
Resolution	0.1 dB
Display Period	0.5 sec.
Level Ranges	Lo (35-95dB); Hi (65~130dB)
Accuracy	±1.4dB (Under Reference Conditions)
Dynamic Range	65 dB
Alarm Function	"OVER" displays when input out of range
Weight	12.3 oz (350 g)
Mounting Nut	1/4" x 20
Dimensions (LxWxH)	Inch: $6.6$ " x $3.5$ " x $1$ "; mm: $168$ x $88$ x $26$
Maximum Hold	Hold readings, with decay , $1\mathrm{dB/3}$ minutes
Calibration	Electrical calibration via internal oscillator (1 KHz) sine wave
AC Output	0.6 Vrms at FS (full scale), output impedance approx. $5\text{K}\Omega$
DC Output	10mV/dB, output impedance approx. $5\text{K}\Omega$
Power Supply	One 9V battery
Power Life	Approx 50 hr (alkaline)
Operating Temperature Range	32° F to 104°F (0°C to 40°C)
Operating Humidity Range	25% to 90% RH
Storage Temperature	14°F to 140°F (-10°C to 60°C)
Storage Humidity	10% to 70% RH
Dimensions (L x W x H)	Inch: 9.4" x 2.7" x 0.98" mm: 240 x 68 x 25
Weight	7.5 oz (215 g)

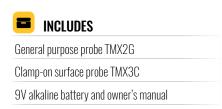
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#### **SH450** Multi-Function Superheat Thermometer & System Analyzer

The SH450 system analyzer is a versatile diagnostic tool for accurately measuring and evaluating the performance of today's advanced HVAC/R systems. Optional accessory probes are available and offer the convenience of interchangeable use with other CPS manufactured products including our advanced line of digital manifolds.

#### **FEATURES:**

- Integrated 90+ refrigerant PT (pressure/temperature) table
- Four discrete temperature channels
- Superheat and subcool measuring functions
- Displays bubble and vapor saturation temperatures
- Direct relative humidity and wet bulb measurements
- Temperature differential with min / max memory
- High accuracy silicon humidity transducer probe port
- Large 4-digit backlit display
- Calibrated to NIST traceable standards







# TM360 SERIES 4 Station Thermo-Psychrometer

TM360 Series can accommodate all your temperature, humidity, dry/ wet bulb and dew point measurements. TM360 incorporates 4 discrete temperature ports capable of min/max and memory functions including temperature differential between any 2 of the 4 available ports. A dedicated special purpose port accommodates an optional humidity transducer probe for fast and accurate measurements during superheat calculations. A generous probe storage area is provided to contain all your job specific probes.

#### **FEATURES:**

- High accuracy silicon humidity transducer probe port
- · Large 4-digit, easy-to-read, backlit display
- Min/Max and memory functions
- Temperature differential between any 2 of the 4 temperature ports
  Direct relative humidity and wet bulb measurements
- Calibrated to NIST traceable standards
- Integrated battery eliminator jack
- Rugged polyethylene carrying case

8	INCLUDES

TM360	includes accessory probes TMX2A, TMX2G, TMX2S
TM360C	includes accessory probes TMX2A, TMX2S, TMX3C

ACCESSORIES & SPECIFICATIONS	FOR USE	WITH <b>SH450</b> , <b>TM360</b> /	AND TN	M360C	FU	OR USE WITH	
ltem	Description	Common Uses	Qty	Operating Temperature Range	TM360	TM360C	H450
TMX2A	Moving Air Probe, 15' (4.5 m) Lead	Air: Ducting, registers, air movement across condensers, ambient air	1	-40°F to 221°F (-40C to +105°C)	Yes*	Yes*	Yes
TMX2G	General Purpose Probe, 15' (4.5 m) Lead	Surface, Air, Liquids: Copper pipe, ambient air, RH wet sock method	1	-40°F to 257°F (-40C to +125°C)	Yes*	n/a	Yes*
TMX2GA	General Purpose Air Probe, 15' (4.5 m) Lead	Air, Surface, Liquids: Ambient air, ducting, registers, air movement across condensers.	1	-40°F to 257°F (-40C to +125°C)	n/a	n/a	Yes
TMX2P	Puncture Probe , 15' (4.5 m) Lead	Surface, Liquids (Shaft Only): Internal temperatures of frozen materials, air ducts	1	-40°F to 257°F (-40C to +125°C)	Yes	n/a	Yes
TMX2S	Velcro Strap Pipe Probe, 15' (4.5 m) Lead	Surface: temperatures of copper tubing	1	-40°F to 257°F /-40°C to +125°C	Yes*	Yes*	Yes
ТМХЗС	Clamp-On Surface Probe, 15' (4.5 m) Lead	Surface: temperatures of copper tubing	1	-40°F to 221°F (-40C to +105°C)	Yes	Yes*	Yes*
CDS TMX2RH	Relative Humidity / Dewpoint Probe	Specialty RH Probe: Measure indoor air quality, set/ troubleshoot humidity devices	1	-40°F to 194°F (-40C to +90°C)	TM	For use with 150 and TM250	)
TMX3RH	Relative Humidity / Dry Bulb / Wet Bulb / Dew Point Probe	Specialty RH Probe: Measure indoor air quality, set/ troubleshoot humidity devices	1	-40°F to 194°F (-40C to +90°C)	Yes	Yes	Yes
тмхзwв	Wet Bulb Socks	for Use With TM360	6	-40°F to 194°F (-40C to +90°C)	Yes	Yes	n/a
тмхзрѕ	AC Adapter for 100 to 240V (40-60 Hz)- USA Plug	for TM360, SH450	1	32°F to 140°F (0 C to +60°C)	Yes	Yes	Yes

\*Indicates accessory is included with the model



#### **TMINI12** Non-Contact Thermometer

The TMINI12 infrared thermometer provides easy, instant temperature measurement over a wide range of applications. **TMINI12** offers convenient one-hand operation, 8 point laser sighting, a backlit LCD display, °F/°C selection, automatic power off feature, built-in LED light, K-Type input for use with optional accessory temperature probes.

Use the TMINI12 to quickly and easily measure temperatures of registers, ductwork, furnaces, evaporators, condensers, compressors, relays, manifolds, radiators, exhaust systems, thermostats, bearings and more. Includes carrying case and 9V alkaline battery.

	SPECIFICATIONS
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<u> </u>			
Temperature Range	-76°F to 932°F (-60°C to 500°C)		
D:S (Distance to Spot Size)	12:1		
Emissivity	Pre-set at 0.95 - adjustable		
Accuracy	$\pm 2^{\circ}$ C ( $\pm 4^{\circ}$ F) or $\pm 2\%$ of reading		
Display	Digital Backlit LCD		
Resolution	1°C/°F		
Batteries	2 AAA		
Warranty	1 year		



#### TMXSK90 K-Type Temperature Probe

The TMXSK90 is the fastest and most accurate handheld K-type surface probe providing accurate readings in less than 5 seconds. The sensor is made from flat-spring ribbons of thermocouple material for contact on uneven surfaces. A square, ribbed handle for grip and a 3' coiled lead for durability and long reach. The exposed junction provides for fast response and is compatible with any other instrument with a K-type input.

- K-Type Surface Probe (Angled, 90 Degree Head)
- Max Temp: 752°F (400°C)



Coiled lead



Flat-spring ribbons



K-type accessory probe

Used as seen above on the CPS TMINI12 and is compatible with any other instrument with a K Type input.







Identical to the TMXSK90, but with a straight probe and round, ribbed handle.

- K-Type Surface Probe (Straight Head)
- Max Temp: 752°F (400°C)



#### **TMAP**

#### **Analog Pocket Thermometer**

- Fahrenheit scale
- 1" dial and stainless steel probe and pocket clip
  • 0°F to 220°F
- 5" (127 mm)



#### **TMAPC**

#### **Analog Pocket Thermometer**

- Celsius scale
- 1" dial and stainless steel probe and pocket clip
- -40°C to 80°C
- 5" (127 mm)



#### **TMDP**

#### Digital Pocket Thermometer

- Celsius scale-58° to 302°F (-50° to 150°C)
- 5" (127 mm)





#### **ABM HOOD**



Up to 12" x 12" vents







Low airflow adapter plate

# Capture more than just airflow readings with the ABM EasyHood™.

- Use smartphone and CPS Link™ app to measure, display, store and send data
- Measures temperature, wet bulb, dew point and relative humidity (ABM-200)
- Easy operation with online guidance and visual instruction

#### **ABM-HOOD-200 includes:**

- ABM-200 Airflow Environmental Meter
- Airflow capture hood with expansion hood
- Integrated vortex air straightener
- Low airflow adapter plate
- Protective storage case

## **X** Replacement Parts

, itch	A Reptacement raits							
ABMH00DX1	Phone Base Door							
ABMH00DX2	Rubber Seal							
ABMH00DX3	Expansion Base							
ABMHOODX4	Extension Fabric							
ABMH00DX5	Extension Pole Assembly							
ABMHOODX6	Low Airflow Plate							

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#### **ABM-100**

#### Airflow Meter

The ABM-100 easily plugs into a smart device and instantly converts air speed into air volume and records the data.

#### Accurately measures airflow in:

Linear feet per minute, cubic feet per minute, cubic meters per hour, linear meters per second

- Portable, fits in your pocket
- Easy to use no math or formulas to remember
- Automatically generates and emails detailed reports
- Rugged packaging serves as a reusable storage case
- 2.5" H x 1.75" W x .75" D





Current Conditions Screen











Data Displayed in Current Conditions Screen

#### ABM-200

#### Airflow And Environmental Meter

Measures and records a variety of data, including: Airflow velocity, airflow volume, dry bulb temperature, wet bulb temperature, relative humidity, feels like temperature, dew point, air density, wind speed/direction/gusts, indoor vs. outdoor conditions and barometric pressure.

- On-screen guidance ensures accurate readings
- Rugged housing with 1/4" 20 mount fitting for handsfree use
- Attach to the EXP-64 a 64" aluminum extension pole (sold separately) to take readings without using
- Connects over 20X faster than traditional Bluetooth
- Emails personalized, professional reports
- 3.3" H x 1.8" W x 6" D



#### Temperature and Humidity Data Logger

Easy to use and accurate, produces readings for: dry & wet bulb temperatures, relative humidity, feels like temperature, dew point

- Data Log stores the last 20,000 temperature and humidity readings that can be uploaded to your smart device for review and to generate professional reports
- Increases productivity, safety & enhances professionalism
- Includes a 1/4"-20 metal D-ring connector, key chain split-ring and alligator clip for mounting in various configurations
- Can be mounted on the EXP-64 Extension Pole & TRI-MIN Tripod – no ladder needed!
- Emails professional personalized reports
- Rugged, weather resistant housing



Data Displayed In Starting Conditions Screen



Reading	Data Log Capacity					
Increments	Hours	Days				
5 Seconds	28	1.2				
30 Seconds	167	7				
1 Minute	333	14				
5 Minutes	1,667	69				
30 Minutes	10,000	417				
Hourly	20,000	833				
Daily	480,000	20,000				



#### TS-100-6PK

#### Temperature and Humidity Data Logger

Our convenient 6-pack data logger kit makes it easy and cost effective to deploy multiple meters. Each meter can be individually named to make tracking data easy.



#### SPM-K1

#### Static Pressure Meter & Probe Kit

The SPM-K1 kit is the must-have smart tool that combines our popular SPM-100 manometer with our PRB-KIT and a brass gas fitting. This powerful and accurate dual port manometer harnesses the power of the smartphone to perform tests quickly, easily and accurately. Simple, intuitive and accurate readings for: static pressure, pressure differential, indoor vs. outdoor pressure, total external static pressure, gas pressure.

- Imports local weather data to ensure accurate testing
- Rugged housing with magnetic back for hands-free operation
- Two color coded (Red and Blue) stainless steel probes
- Two 6 ft. (1.8 m) rubber tubes
- One gas manifold fitting (brass)
- Plastic storage case.













Static Pressure

Indoor/Outdoor Pressure

Gas Pressure

Static Pressure

Pressure Differential

## SPM-100

#### Static Pressure Meter

Harnessing the power of your smartphone or tablet with a free app that provides onscreen guidance, the SPM-100 takes the guesswork out of accurately measuring static pressure!

Simple, intuitive, and accurate readings for: static pressure, pressure differential, indoor vs. outdoor pressure, system external static pressure.

- Automatically imports local weather data based on GPS location
- · Easily emails professional, detailed reports
- Rugged, weather resistant housing with hands-free magnetic holder
- Color display box





#### Static Pressure Probe Kit

Accurately measure and record: Static pressure, pressure differential, indoor/outdoor pressure, system external static pressure, gas pressure test.

#### Includes:

- Two color coded (lower case Red and Blue) stainless steel probes with magnetic bases
- Two 6 ft. (1.8 m) rubber tubes
- One gas manifold fitting (brass)
- Plastic storage case.





#### HBK

#### Airflow Balancing Valves

Traditional airflow balancing devices cannot respond to system changes. Whereas too much ventilation equals wasted energy, tool little ventilation leads to poor air quality.

CPS Airflow Balancing Valves (ABV) are designed to maintain a constant, accurate airflow volume when installed in residential and commercial HVAC ductwork. Each ABV has an engineered damper calibrated to automatically adjust to varying pressures, which gives the airflow valves true pressure independence. This leads to greater comfort, saves energy and improves indoor air quality.



#### **Applications**

- Precise airflow regulation in supply or exhaust ventilation systems in residential or commercial buildings.
- · Automatic balancing of supply grilles in forced air heating and cooling systems in homes.
- Any HVAC application with a static pressure between 0.2 and 2.0 inches w.c.
- Controlled volume of make-up air.
- OEM applications such as chilled beams, fan coil and PTAC units, centralized fan systems, fresh/make-up air systems, and HRV/ERV's.
- For temperatures ranging from 25° to 150°F (-4° to 65°C)

#### **Typical Uses**

Multi-family condos, apartments, hotels, schools, dorms, state energy efficiency programs, housing projects, assisted living facilities, industrial applications, government facilities, cruise lines, marine applications.

#### **Features**

- Desired airflow is set by moving the set-point adjustment arm to the desired airflow in CFM (cubic feet per minute).
- The fixed stator blade applies the exact amount of tension on the moving damper blade to hold airflow at the targeted airflow.
- The pressure differential across the moving damper blade gives the blade lift to automatically adjust to changes in static pressure & air velocity.

#### Airflow Balancing Valves constrain airflow to precise factory calibrated volumes as marked on the front of the valve.



	AAB Model ABV
Can be provided in a UL rated assembly with UL rated fire damper	Yes
Effective Opertating Pressure Range	0.2-2.0 ln. WG
Engineered for use in Imperial Measurements	Yes
Qualifies for ARRA section 1605 and Buy america 49 U.S.C. section 50101 for use in all FAA, FHWA, AMTRAK and FTA projects.	Yes
Bi-Directional to be used for Supply or Exhaust Applications	Yes
Anti-Microbial agent infused into plastic to deter mold & bacterial growth	Yes - Steri-Balance™
Quick Connect adapter ring to be used to attach to almost any adapter plate	Yes
Total Unique Set-Points (4" and 5" model)	20
Total Unique Set-Points (6" model)	24
Set Point Range (CFM) (4" model)	25-130
Set Point Range (CFM) (6" model)	50-275
Airflow Accuracy range	+/- 10% within 0.2-2.0" WG
Hydraulic blade dampener for extremely quiet operation	Yes
1-Year Warranty	Yes



#### Smart Indoor Air Quality Meter

Measures Air for:

- Smoke
- Methane
- Iso-butane
- Carbon monoxide
- Hydrogen
- Ethanol
- Temperature
- · Humidity
- Dust (air born allergens)
- · Pet Dander
- Pollen
- Carbon dioxide

LED lights change color based on air quality Mounts on tabletops or countertops



#### SPECIFICATIONS

Size (HWD) 5" x 3.5" x 2.9" (12.7 x 8.9 x 7.4 cm) Weight | Approximately 1 lb (0.45 kg) with storage case



#### **SMART TOOL ACCESSORIES**

#### EXP-64

#### **Telescopic Extension Pole**

Take Accurate Airflow Readings Without Using a Ladder. Mount an ABM-200 or TS-100 to the 1/4"-20 universal threaded end to obtain fast, easy readings from vents mounted on ceilings, high walls or other hard to reach places.

The EXP-64 telescopes from 18" to 64". Adjustable angle end and rubber handle grip with 1/4"-20 threaded fitting to allow the EXP-64 to be mounted on a floor tripod.





Attach the ABM-200, or TS-100 to the end of the EXP-64, to access hard-to-reach areas.



Thumbwheel for attaching/removing threaded universal end



The EXP-64 can be mounted on tri-pods for longer term analysis of airflow from wall or ceiling vents





## TRI-MIN

#### Mini-Tripod

Makes Taking Environmental Readings Easy The TRI-MIN is a collapsible 6-8" tripod with 1/4"- 20 universal mount. It is designed for use with the ABM-200 and/or TS-100 when taking environmental condition readings.

## **SMART TOOL CENTER (END CAP)**



Our new gondola end caps are an excellent way organize and display CPS products in your showroom. All end caps are available in either slatwall or pegboard configurations. A semi-gloss black or Sahara beige enamel finish can be specified.

End caps are ready-to-assemble (no tools required), made of long lasting, heavy gauge, 100% steel and feature high load uprights with adjustable leg levelers and optional shelves. Other "Madix" and "Lozier" style shelves are compatible with these end caps.

These gondola end caps are used at the end of an aisle, against a wall or another end cap. End caps (without optional header) measure  $60^{\circ}\text{H} \times 36^{\circ}\text{W} \times$ 16"D (1.5 x .91 x .40m). Other optional accessories (below) can be purchased to further enhance the effectiveness of your display. Thirty percent of all store sales come from end-of-aisle displays, so contact your local CPS sales representative for more information on this stylish and durable display and the CPS products they'll contain.

## Slatwall End Cap (60" H, 36"W, 16"D)

GECBS603616 (black)

**GECSBS603616** (sahara beige)

## Pegboard End Cap (60" H, 36"W, 16"D)

GECBP603616 (black)

**GECSBP603616** (sahara beige)

## Adjustable Shelf (36"W, 16" D)

**GSB3616** (black)

**GSSB3616** (sahara beige)

#### **GHMC** Header Mounting Clip

(2 recommended per header)

- For headers up to 1/8" (3 mm) thick
- Clear plastic





GFCHS Hondor - For Smart Tool Contor



Smart Tool Center

999999

Header

Header Mounting



#### **END CAP ACCESSORIES**

## **OPTIONAL ACCESSORIES FOR END CAP**



**GML** Peg Hook Lock



**GMK** Magnetic Key (For Peg Hook Lock)



Slatwall Hooks (Black or Chrome Finish)

· Chrome Finish

GHSC4 4" GHSC6 6". GHSC8 8" **GHSC10** 10"

Black Finish

GHSB4 4" **GHSB6** 6" GHSB8 8" GHSB10 10"



**Pegboard Hooks** (Black or Chrome Finish)

· Chrome Finish

**GHPC4** 4" **GHPC6** 6". **GHPC8** 8" **GHPC10** 10"

Black Finish

**GHPB4** 4" **GHPB6** 6" **GHPB10** 10" **GHPB8** 8"

Note: Above pegboard hooks are for use with steel pegboard (not wood)

#### GAP7

#### Advertising player with motion detector

- 7"(18 CM) diagonal color screen
- Outer dimensions (HWD): 6" x 8.5" x 0.8" (22 x 15 x 2 cm)



## **ACCESSORIES INCLUDED WITH ADVERTISING PLAYER**



**Desktop Stand** (Arm For Advertising Player)



**GPS US Power Supply** 



GRC Remote Control

Includes the following functions to control the advertising player: Power, Set Up, Enter, Volume Control, Mute, Play, Repeat, Stop, Exit, and others.



5" Phillips Screwdriver Includes 4 screws for attaching Advertising Player to Steel Mounting Bracket

## **OPTIONAL ACCESSORIES FOR ADVERTISING PLAYER**



**GAPBRP** 

Steel Mounting Bracket Mounts advertising player to metal

pegboard



**GAPBRS** 

Steel Mounting Bracket Mounts advertising

player to metal slatwall



GCL

Cable lock (64"/1.6 m)

Secures Advertising Player to a stationary object.



GSC16

#### 16 GB Storage Card

Comes preloaded with a short video overview of: 1. CPS Smart products and CPS Link; 2. BLACK-MAX Tools; 3. 5-2-1 Products



www.calcert.com

# BLACK**MAX**®

#### **WIRELESS MD SERIES**

BLACKMAX® wireless digital manifolds combine industry-leading accuracy with a rugged nylon water-resistant housing, durable elastomeric keypad and large backlighted LCD display. For use with or without CPS Link™ app— can work as a standalone device.

#### **Best-in-class accuracy**

- Pressure: 1% of reading pressure
- Temperature: superior thermistor sensors for +/-  $0.2^{\circ}$ C (+/-  $0.4^{\circ}$ F) accuracy
- Vacuum: direct system attachment achieves +/- 10 microns from 0 to 25,000 microns

#### **Rugged Design**

- Water-resistant, high-strength, glass-filled nylon housing
- Precision machined anodized aluminum manifold body
- Proprietary Vortech valve system certified to 10 microns
- High-impact polycarbonate LCD window
- · Advanced sight glass design

#### Simplicity & Versatility

- Preloaded with over 100 refrigerants with quick access to your favorite five
- Compatible with R744 subcritical CO2 refrigerants
- One-touch access to your 5 favorite refrigerants

## **Full System Measurement**

- 2 Pressures, 2 temperatures and vacuum (using MDXVG accessory)
- Vacuum hold and pressure hold test functions
- Simultaneously displays:

HI and LO pressures, superheat and subcooling

HI and LO pressures, T1 and T2

HI and LO pressures, saturation T1 and saturation T2

HI and LO pressures, displays T1, T2 and Delta T

# R-32 ready VALVES



CPS Link allows HVAC/R technicians the convenience of running and monitoring a BLACKMAX digital manifold (from up to 300 feet away), while also providing additional capabilities not found in non-wireless versions.

- Fast, convenient touch screen control
- Comprehensive views of system measurements
- Graphical depictions of test functions
- Data logging
- · Geolocation data and more
- Perform and monitor system measurements—in real time without the need to physically touch the manifold
- · Color scheme change according to refrigerant
- Pressure or vacuum tests can be saved, stored or emailed as a graph
- Select from different languages to work in.

## **DIGITAL MD SERIES**

BLACKMAX® digital manifolds have the same features as the wireless models, without the patented built-in sensor technology access to CPS Link™.



Digital 2 valve series

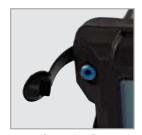


MD100
Digital 4 valve series

6	DESCRIPTION.	a share	min.	Inc	ludes: (items may be	e purchased separat	ely)	Optional Accessories	
			Two thermistor sensors with 6' leads MDXCP	Three 5' Black & Chrome Ball Valve Charging Hoses <b>HP5BKEZ</b>	One 5' Heavy Duty Black & Chrome Vacuum <b>Hose HV5Z</b>	Vacuum Gauge Accessory Kit* MDXVG	Rechargeable NiMH Battery and Universal Plug Kit** MDXBK		
Wire	eless	Dig	jital	-0		0	(a)		
2 Valve	4 Valve	2 Valve	4 Valve			6			
MD50W	MD100W	MD50	MD100	$\checkmark$	×	×	×	Soft Case For All MD Series MDXSC	
MD50WHE	-	MD50HE	-	<b>√</b>	$\checkmark$	×	×		
-	MD100WHE	-	MD100HE	<b>√</b>	$\checkmark$	$\checkmark$	×	1	
MD50WVHE	MD100WVHE	MD50VHE	MD100VHE	<b>√</b>	$\checkmark$	$\checkmark$	$\checkmark$		

\*Includes Vacuum Accessory & 1 AVT45 ¼" SAE Brass Tee Connector. \*\*Includes 1 Universal Charger With 5' Cord; 4 rechargeable NiMH batteries, 1 U.S. Plug, 1 Euro Plug, 1 Australia/ New Zeland/China Plug, 1 UK/Ireland/Singapore/Hong Kong Plug.





Connections For Thermistor Sensors



9V DC Charger Port

High	side pressure range	-14.5 to 800.0 PSIG (-1.0 to 55 bar)	Sensor Type	Self - heated thermistor bridg	e with integral temperature compensation	
Low	side pressure range	-14.5 to 800.0 PSIG (-1.0 to 55 bar)	Selizoi Type	1101110 to 30 0 (32 to 122 1).		
Pressu	re reading accuracy	+/- 1% of reading or +/- 0.5 PSIG (+/- 0.05 bar)		AUTO-RANGING SCALES:		
Pressur	e reading resolution	0.5 PSIG (0.05 bar)		O to 99 microns	1 micron resolution	
High and low	side burst pressure	1500.0 PSIG (103.4 bar)	Display Pressure Range	100 to 990 microns	10 micron resolution	
High side	temperature range	-58.0 °F to 302 °F (-50 °C to 150 °C)		1000 to 9900 microns	20 micron resolution	
Low side	temperature range	-58.0 °F to 302 °F (-50 °C to 150°C)		10000 to 25000 microns	50 micron resolution	
		+/- 0.36 °F (+/- 0.2°C)	Accuracy	+/- 10% of reading or +/- 10	microns, whichever is greater	
	-	+/- 10 microns (requires MDXVG accessory)	Operating Temperature	Compensated (accuracy as stated): 0°C TO 50°C (32°F TO 122°F)		
SH, SC & saturation ter		77	Range	Non-compensated (add +/- 0.5% of reading error for every °C outside compensated range): -10 to 0°C (14 to 32°F)		
Instrument w	orking temperature	-4.0 °F to 122°F (-20°C to 50°C)		O to 95%, non-condensing		
Communication rang	re (with CPS Link™)	300 ft. (max) (Depends on device capabilities)				
Instrumen	t working RH range	0% to 100% non-condensing	Storage Temperature	-40 to 85°C (-40 to 185°F)		
APO (Au	utomatic Power Off)	10 minutes. Can be disabled by user.				
4 va	alve size (L x H x W)	8.1" x 3.5" x 7.0" (20.5 cm x 8.9 cm x 17.8cm)				
	4 valve weight	3.3 lb. (1.5 kg)				
2 va	alve size (L x H x W)	8.1" x 2.5" x 7.0" (20.5 cm x 6.4 cm x 17.8cm)				
	2 valve weight	3.0 lb. (1.4 kg)				
Display Life using 4	Backlight full ON:	25+ hrs. continuous duty				
industrial alkaline AA batteries (included)	Backlight full OFF:	60+ hrs. continuous duty				
Display Life using 4	Backlight full ON:	20+ hrs. continuous duty from full charge				
Rechargeable NiMH AA batteries (not included)	Backlight full OFF:	50+ hrs. continuous duty from full charge				



## **BLACK & CHROME MANIFOLDS**



#### TRIPLE-SEAL™ VALVES

Our proprietary Triple-Seal Valve System is engineered for superior performance using an innovative three Neoprene™ o-ring design

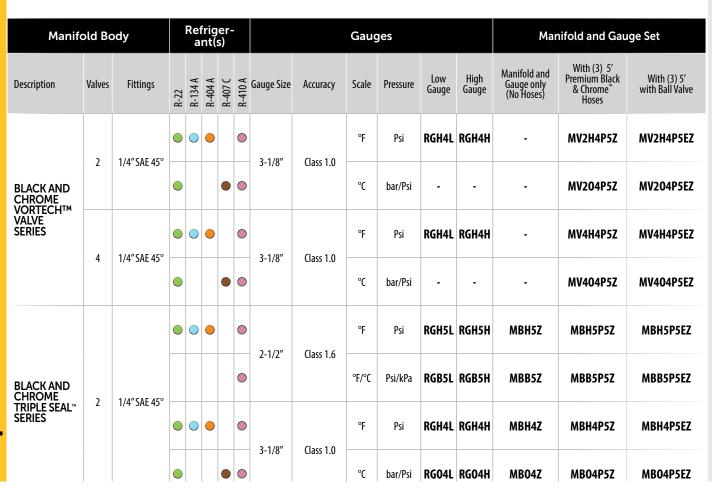
- Back-seating o-ring seals valve nut when fully open
- Floating nylon sealing disk
- Valve stems retract fully to provide maximum flow
- Mirror-like port finish for smooth valve movement



#### **VORTECH® VALVES**

Superior performance that actually can be measured!

The Vortech Deep Vacuum Valve System is an advanced diaphram valve system, certified 15 micron vacuum rating using precisionmachined virgin Teflon™ core provides a full, unrestricted refrigerant flow and allows a light touch valve operation.



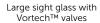
LACKINA

#### BLACK**MAX**\*

#### BLACK & CHROME™ VORTECH™ VALVE SERIES

- Two and four valve black anodized aircraft aluminum machined body
- Vortech<sup>™</sup> deep vacuum valves
- 3-1/8" (80 mm) class 1.0 accuracy gauges built with internal silicon dampening cup for flutter-free operation
- Nickel plated 1/4" SAE fitings; 3/8" SAE fitting (4 valve units)
- · Large sight glass
- · Heavy duty nickel plated metal handles
- · Auxiliary center access port with Schrader valve
- Protective gauge boots
- Packaged in display tin
- Designed and manufactured in USA with US and globally sourced components







Protective gauge boots #RGX80B



VALVES

American made non-permeating premium refrigerant hose(s)



#### BLACK & CHROME™ TRIPLE-SEAL™ SERIES (includes VORTECH™ Valves)

- Two valve black anodized aircraft aluminum machined body
- Vortech<sup>™</sup> deep vacuum valves
- Triple Seal™ piston valves
- Available in 3-1/8" (80 mm) class 1.0 accuracy gauges or 2 ½" (68 mm) class 1.6 accuracy gauges built with internal silicon dampening cup for flutter-free operation
- Nickel plated 1/4" SAE fitings; 3/8" SAE fitting (4 valve units)
- Auxiliary center access port with Schrader valve
- Protective gauge boots
- Packaged in display tin
- Designed and manufactured in USA with US and globally sourced components





Protective gauge boots



Packaged in display tin







Manif	old	Bod	y		Rei	friç	jera	n	t(s)	Gauges						Manifold and Gauge Set											
Description	,	/alves	Fittings	R-12	R-22	R-134 A	R-404 A	R-407 C	R-410 A R-502	Gauge Size	Accuracy	Scale	Pressure	Low Gauge	High Gauge	Manifold and Gauge only (No Hoses)	with (3) 3' Premium Pro-Set <sup>®</sup> Barrier Hoses	with (3) 5' Premium Pro-Set <sup>®</sup> Barrier Hoses	with (3) 3' Premium Pro-Set <sup>*</sup> Barrier Hoses with Anti-Blowback valves	with (3) 3' Premium Pro-Set <sup>®</sup> Barrier Hoses with Ball Valves							
WORKINGMA	N'S	,	1/4//5 \$ \$ 450			0				2.4/0//	Cl 10	°F	Psi	RGH7L	RGH7H	MT2H7		MT2H7P5	MT2H7P5A	MT2H7P5E							
CHOICE SERIES		2	1/4" SAE 45°		•					3-1/8"	Class 1.0	°C	bar/Psi	RG07L	RG07H	MT207		MT207P5	MT207P5A	MT207P5E							
				C								°F/°C	Psi/kPa	RGZL	RGZH	MBZ	MBZS3	MBZS5									
				C									Psi	RGCL	RGCH	MBC	MBCS3	MBCS5									
BLACK BODY	,	2 1/4" SAE 45°	1/4//5 \$ \$ 450		0					2.4/2//	Cl 16	°F	Psi	RGDL	RGDH	MBD	MBDP3	MBDP5	MBDP5A	MBDP5E							
SERIES			2 1	2  1/4	2 1	2   1/4	2   1,	1/4" SAE 45"		0					2-1/2"	Class 1.6		Psi	RGHL	RGHH	МВН	МВНР3	MBHP5	МВНР5А	MBHP5E		
																		0		•					0.5	Psi/kPa	RGTL
									0				°C	Psi/kPa	RGOL	RGOH	МВО	МВОР3	MBOP5	MBOP5A	MB0P5E						
			1/2"-20 UNF						0	2-1/2"	Class 1.6	°F/°C	Psi/kPa	RGBL	RGBH	МСВ	MCBJ3	MCBJ5	MCBJ5A	MCBJ5E							
PINK BODY SERIES		2	1/4// CAF 4F0		0	2 4 12 11 61 4 6	°F/°C	Psi/kPa	RGBL	RGBH	MEB	MEBP3	MEBP5	MEBP5A	MEBP5E												
			1/4" SAE 45°		0				0	2-1/2"	Class 1.6	°F	Psi	RGHL	RGHH	MEH	MEHP3	MEHP5	MEHP5A	MEHP5E							
					0							°F		RGH2LB	RGH2HB	MV3H2		MV3H2P5	MV3H2P5A	MV3H2P5E							
									0	2.1/0//			Psi	RGH3L*	RGH3H*	MV3H3*		MV3H3P5*	MV3H3P5A*	MV3H3P5E*							
		2	1/4" SAE 45°						0	3-1/8"	Class 1.6	°C	Psi/bar	RG02LB	RG02HB	MV302		MV302P5	MV302P5A	MV302P5E							
DEEP VACUL	ım								0			°F/°C	Psi/kPa	RGB3L*	RGB3H*	MV3B3*		MV3B3P5*	MV3B3P5A*	MV3B3P5E*							
SERIES					0							0.5		RGH2LB	RGH2HB	MV13H2		MV13H2P5	MV13H2P5A	MV13H2P5E							
			1/4// CAF 4F0		0				0	2.1/0//	(l 1 (	°F	Psi	RGH3L*	RGH3H*	MV13H3		MV13H3P5*	MV13H3P5A*	MV13H3P5E*							
	4	4	1/4" SAE 45°		•			3-1/8"	Class 1.6	°C	Psi/bar	RG02LB	RG02HB	MV1302		MV1302P5	MV1302P5A	MV1302P5E									
												°F/°C	Psi/kPa	RGB3L*	RGB3H*	MV13B3*		MV13B3P5*	MV13B3P5A*	MV13B3P5E*							
BALL VALVE			1/4// 645 450		0		•			2.4/2"		°F	Psi	RGHL	RGHH	MGH		MGHP5	MGHP5A	MGHP5E							
SERIES								2-1/2"	Class 1.6	°C	bar/Psi	RGOL	RGOH	MGO		MGOP5	MGOP5A	MGOP5E									



- 3-1/8" (80 mm) class 1.0 accuracy gauges
- Two valve anodized aluminum black body
- Triple Seal<sup>TM</sup> piston valves
- 1/4" SAE 45° fittings
- Sure grip rubber over metal valve handles
- Protective gauge boots
- Extra access port in center with Schrader valve and hanging hook



- 2 ½" (68 mm) class 1.6 accuracy gauges
- Two valve anodized aluminum black body
- Triple Seal<sup>TM</sup> piston valves
- 1/4" SAE 45° fittings
- Sure grip rubber over metal valve handles
- Protective gauge boots
- Extra access port in center with Schrader valve and hanging hook



- 2 ½" (68 mm) class 1.6 accuracy gauges
- Two valve anodized aluminum pink body
- Triple Seal<sup>TM</sup> piston valves
- 1/4" SAE 45° fittings
- Sure grip rubber over metal valve handles
- Protective gauge boots
- Extra access port in center with Schrader valve and hanging hook



- 3-1/8" (80 mm) class 1.0 accuracy gauges
- Two and four valve anodized aluminum pink block body
- Vortech<sup>™</sup> deep vacuum valves
- 1/4" SAE 45° fittings
- Extra large sight glass
- Protective gauge boots
- Extra access port in center with Schrader valve and hanging hook

#### Pro-Set\*

#### **BALL VALVE BODY SERIES**

- 2½" (68 mm) Class 1.6 accuracy gauges
- Two valve anodized aluminum block body
- 1/4" SAE 45° fittings
- Full-flow ball valve design





1.888.610.7664

MGHDSF

MCODEE

Manifold Body F				efriç	ger	ant	(s)	Gauges				Manifold and Gauge Set	
Description	Valves	Fittings	R-22	R-134 A	R-404 A	R-410 A	R-507 A	Gauge Size	Accuracy	Scale	Pressure	with (3) 3' Prem-Flex Hoses	with (3) 5' Prem-Flex Hoses
Tech-Set Brass Body Series					•		3-1/8"	3-1/8"	Class 1.6	°C	bar/Psi	-	M61PF5
	,	1/4// CAF 450			•					°F	Psi/bar	-	M62PF5
	2	1/4" SAE 45°						2.5/0//		°C	bar/Psi	M63G3	-
									°F	Psi/bar	M64G3	-	



- 2 valve forged brass body
- 1/4" SAE 45° fittings
- TripleSeal<sup>™</sup> piston valves
- Quality forged brass body
- Full sized porting for maximum flow
- No flutter gauges with rugged molded housings
- Large easy-to-grip knobs
- Integrated hose storage fittings
- Hanging hook
- Trilingual clamshell packaging



#### MANIFOLD ACCESSORIES AND REPLACEMENT PARTS

A complete line of repair kits, parts and accessories to keep your manifold in brand-new condition. If you are looking for something or are unsure of the part you need, give us a call and let our specialists assist you.



MXC2

Rugged canvas carrying case for manifolds



MXC

Plastic carrying case for manifolds



**MVXK** 

Replacement valve handle w/ plugs for Vortech™ manifolds



**MXK** 

Replacement valve handle w/labels for diaphragm manifolds



**MXPK** 

Replacement valve handle w/ labels for BlackMax® manifolds



мұмн

Hanging hook for all manifolds



Diaphragm valve repair kit: services 2 valves



**MXPV** 

Complete BlackMax® piston valve assembly



M2XHA

2-way hose anchor bracket for Vortech™ & diaphragm



**MXPVO** 

BlackMax® piston valve seals repair kit: services 2 valves

1.888.610.7664



www.calcert.com

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A	4	1	
	388	=	10
6	E	3	9
	HE	US!	

# Let us help you choose the right

PRO-SET® PREMIUM UL/ SAE BARRIER REFRIGERANT SERVICE HOSES	PRO-SET® STANDARD REFRIGERANT SERVICE HOSES	TECH-SET™ PREM-FLEX HOSES	TECH-SET™ ECONOMY HOSES
$\checkmark$	$\checkmark$	<b>✓</b>	<b>✓</b>
$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
800	750	800	750
4,000	3,000	4,000	3,000
<b>√</b>	<b>√</b>	×	×
<b>√</b>	$\checkmark$	×	×
$\checkmark$	$\checkmark$	×	×
$\checkmark$	×	X	X
	SAE BARRIER REFRIGERANT SERVICE HOSES	SAE BARRIER REFRIGERANT SERVICE HOSES  REFRIGERANT SERVICE HOSES  V V 800 750	SAE BARRIER REFRIGERANT SERVICE HOSES         REFRIGERANT SERVICE HOSES         PREM-FLEX HOSES           Image: Control of the contro



\*Non-stock item (made to order). Call Customer Service for price and lead time.





#### PREMIUM HOSES



HP5BKEZ

5' premium barrier ball valve chrome charging hoses (black)



HP5BKZ

5' premium Black & Chrome™ charging hose



HV5Z

5' premium Black & Chrome™ 3/8" charging hose



#### PRO-SET® PREMIUM 6"TO 12" BALL VALVE HOSE EXTENSIONS

- Nylon permeation barrier (Meets SAE J2196)
- Leak-proof 8-sided crimp
- 800 Psi working pressure
- 4000 Psi burst pressure
- Extra deep knurling for easy grip
- Adjustable valve core depressor
- Blow off grooves (prevents spray back)
- R-410A compatible, as well as CFC, HCFC and HFC refrigerants and blends

	1/4	1/2" - 20 UNF	
	6" (15,2 cm)	12" (30,5 cm)	6" (15,2 cm)
Yellow	HTYE	HT1YE	HT410YEJ*
Blue	HTBE	HT1BE	HT410BEJ*
Red	HTRE	HT1RE	HT410REJ*
3-Pack	HTE	HT1E	HT410EJ



#### PRO-SET® PREMIUM PRESSURE CONTROL HOSES

Constructed with a thermoplastic polymer inner tube and cover to eliminate the vibration failures of copper capillary tube installations. The higher temperature ratings of the thermoplastic (to 266° F) eliminates failures caused by maximum load conditions on rubber type pressure control hoses.

	2' (60 cm)	3' (90 cm)	4' (120 cm)
90° x 90°	HHC2*	HHC3*	HHC4*
Straight x 90°	HHC2S	HHC3S	HHC4S*
Straight x Straight	HHC2SS*	HHC3SS*	HHC4SS*
Fitting	1/4" SAE Hex Style	e. Straight & 90°, W	ith Copper Gaskets

<sup>\*</sup>Non-stock item (made to order). Call Customer Service for price and lead time.



#### PRO-SET® PREMIUM 3/8" VACUUM/CHARGING HOSES (HEAVY DUTY)

- 5/16" I.D. heavy-duty hose
- 460 Psi working pressure; 2300 Psi burst
- Nylon permeation resistant barrier
- 3/8" SAE Leak Proof 8 Sided Crimp
- Deep Knurl Brass Fittings

	3′ (90 cm)	5′ (150 cm)	6' (180 cm)	8′ (240 cm)
Without Ball Valve	HV3*	HV5	HV6*	HV8*
With In-Line Ball Valve	na	HV5E	na	na



HXG

(10) Hose 1/4" SAE Neoprene Gaskets



HXGD

(10) Hose 1/4" SAE Neoprene Gasket & (10) Core Depressor



HXGD2

(6) 1/2" ACME, 1/2"-20 UNF Gaskets & (6) Core Depressors



HX38G

(10) Hose Gaskets, 3/8" SAE Neoprene



HXG2

(10) 1/2" ACME, 1/2"-20 UNF Replacement Hose Gaskets



#### **HXGA**

(6) Hose Gaskets, 1/4" SAE Microseal Antiblowback



#### HXGA410

(10) Replacement Gaskets for 1/2"-20 **UNF ABB Fittings** 



#### **HXTG**

(10) Hose Gaskets, 1/4" SAE Teflon®



#### HXTG2

(10) Hose Gaskets, 1/2"-20 UNF & 1/2" ACME Teflon®



#### **PRO-SET® COMPACT BALL VALVES**

Pro-Set® premium ball valves can be added to any existing hose to eliminate refrigerant loss and comply with EPA regulations.

- Easy 1/4 turn open/close with rugged plastic composite color-coded handles
- Oversized chrome ball for smooth operation and non-restrictive flow
- Individual valves include all three color-coded handle inserts

FPT: female(internal) National Pipe Taper Threads MPT: male(external) National Pipe Taper Threads

	ltem	Qty/Pk	Female	Male	Other
	BV	1	¹/₄″ SAE	¹/₄″ SAE	Straight
September 1	BV3	3	1/4" SAE	¹/₄″ SAE	Straight
	BV38	1	³/ <sub>8</sub> ″ SAE	³/ <sub>8</sub> ″ SAE	Straight
<b>*</b>	BV410	1	5/16" (½" - 20 UNF)	5/16" (½" - 20 UNF)	45°
1	BV410A	1	5/16" (½" - 20 UNF)	¹/₄″ SAE	Straight
	BV45	1	<sup>1</sup> / <sub>4</sub> " SAE 45°	1/4" SAE	45°
	BV453	3	<sup>1</sup> / <sub>4</sub> " SAE 45°	1/4" SAE	45°
	BV90	1	¹/₄″ SAE 90°	1/4" SAE	90°
	BV903	3	¹/₄″ SAE 90°	¹/₄″ SAE	90°
	BVAD38	1	³/ <sub>8</sub> ″ SAE	¹/₄″ SAE	Straight
	BVM	1	¹/₄″ SAE	¹/₄″ SAE	Straight
	BVM3	3	¹/₄″ SAE	¹/₄″ SAE	Straight
A	ВУХН	1 Ea	Replacement Ball V	alve Handle w/1 ea (Yellow,	Blue, Red) inserts

#### PRO-SET® MICROSEAL™ ANTI-BLOW BACK VALVES

	AB	1	¹/₄″ <b>SAE</b>	¹/₄″ <b>SAE</b>	Straight
	AB3	3	¹/ <sub>4</sub> ″ SAE	¹/ <sub>4</sub> ″ SAE	Straight
	AB410A	1	5/16" SAE (½" - 20 UNF)	¹/₄″ SAE	Straight
	AB41090A	1	5/16" SAE (½" - 20 UNF) 90°	¹/₄″SAE	90°
	AB90	1	¹/₄″ SAE 90°	¹/₄″ SAE	90°
	ABG18	1	<sup>1</sup> / <sub>4</sub> "SAE 45°	1/8″ FPT	<sup>1</sup> / <sub>8</sub> " FNPT is not an AB
C B	AB45	1	<sup>1</sup> / <sub>4</sub> "SAE 45°	1/4" SAE	Straight

# BLACK**MAX**® PREMIUM TUBE CUTTERS

WITH PATENTED Set N Cut

- All BLACKMAX tube cuttes feature our patented Set-N-Cut<sup>™</sup> spring-loaded center groove rollers or cutting wheels for a fast and smooth cut everytime, even on slightly deformed tube
- Quick release pin for fast replacement of cutting

#### **BTC100** BLACKMAX® Ultra Mini Tube Cutter

- Cutting Range: 1/8" 5/8" (4-16 mm) O.D.
- · Chromed, hardened cutting wheel
- For soft/hard copper, aluminum tube Soft/ Hard cutting settings
- Durable cast aluminum
- Great for confined spaces
- Size (HWD) 1.9" x 1.5" x 0.6" (50 x 37 x 15 mm)
- Clamshell package with color insert card





#### **BTC200** BLACKMAX® Mini Tube Cutter

- Cutting Range: 1/8" 7/8" (3-22 mm) O.D.
- · Chromed, hardened cutting wheel
- Provides a smooth cut, even for slightly deformed tube
- Soft/Hard cutting settings
- Durable aluminum and rubber knob
- Size (HWD): 2.75" x 1.6" x 0.8" ( 72 x 40 23 mm)
- · Clamshell package with color insert card



#### **BTC200R** BLACKMAX® Mini Ratchet Tube Cutter

- Cutting Range: 1/8" 7/8" (3-22 mm) O.D.
- Excellent for small tube, confined spaces
- Use with or without ratchet handle
- · Chromed, hardened cutting wheel
- Soft/Hard cutting settings
- Durable aluminum and rubber knob
- · Clamshell package with color insert card



#### **BTC300** BLACKMAX® Tube Cutter

- Cutting Range: 3/16" -1-1/4" (5 32 mm) O.D.
- Two quick-change, chromed, hardened cutting wheels
- Enclosed feed screw eliminates clogging, jamming
- Durable aluminum and rubber knob
- Clamshell package with color insert card



#### **BTC400** BLACKMAX® Heavy Duty Tube Cutter

- Cutting Range: 1/4" -1-1/4" (6 32 mm) O.D.
- Heavy duty performance from lightweight aluminum forged body for brass, copper, aluminum, stainless tube and electrical conduit
- Titanium finish cutting wheel included
- Durable aluminum/rubber knob
- Clamshell package with color insert card



#### **BTC500** BLACKMAX® Large Tube Cutter

- Cutting Range: 3/8" -2-5/8" (10 67 mm) O.D.
- Two hardened cutting wheels with quick-change pin
- Enclosed feed screw eliminates clogging and jamming
- Four grooved rollers for precise tube rotation
- Rapid adjustment with quick-slide feed mechanism
- Durable aluminum/rubber knob
- Clamshell package with color insert card



#### **BTLDB3** BLACKMAX® Deburring Tool

- Solid aluminum handle. For soft copper and aluminum tube. Includes (2) spare blades in handle
- · Clamshell package with color insert card



TLDB2X | Replacement Blade



🔀 REPL	ACEMENT PARTS FOR TUBE CUTTERS	BTC100	BTC200	BTC200R	BTC300	BTC400	BTC500
BTCXCT2*	Cutting Wheel (Titanium Coated)					Standard	Optional
BTCXC1	Cutting Wheel (Zinc Plated)		Standard	Standard	Standard		
BTCXC2	Cutting Wheel (Chrome Plated)					Optional	Standard
BTCXC3	Cutting Wheel (Nickel Plated)	Standard					
BTCXCT1	Cutting Wheel (Titanium Coated)		Optional	Optional	Optional		
BTCXP1	Quick Release Pin		Standard	Standard	Standard		
BTCXP2	Quick Release Pin					Standard	
BTCXP3	Quick Release Pin						Standard
BTCXP4	Quick Release Pin	Standard					
BTCXR	Plastic Ratchet (For BTC200R)		Optional	Standard			
·							
BTCXB**	Bearing				**		

\*Only for use with BTCXB Cutting Wheel Bearing and BTC400 (optional for BTC500) \*\*Only for use with BTCXCT2 cutting wheel.





#### **BLACKMAX® PREMIUM TUBE BENDER KIT**

- Imperial or metric kit
- For soft copper and aluminum tube
- Solid aluminum, color-coded mandrels
- Forward or reverse bends from 0° to 90°
- Reverse bend mechanism for tight quarters
- Durable molded carrying case
- Packaging: Color box





FORWARD BEND CONFIGURATION

REVERSE BEND CONFIGURATION

#### **BTB300** BLACKMAX® Imperial Tube Bender Kit

	ltem	Tube O.D.	Mandrel Color	Inside Radius Of Bent Tube	
	BTBX14	1/4″ O.D.	Chrome	1-1/8"	
<u>S</u>	BTBX516	5/16″ O.D.	Copper	1-1/4"	
Mandrels	BTBX38	3/8″ O.D.	Red	1-1/4"	
MS	BTBX12	1/2″ O.D.	Yellow-Orange	1-3/8"	
	BTBX58	5/8″ O.D.	Blue	1-5/8"	
	BTBX34	3/4" O.D.	Green	1-7/8"	
	BTBX78	7/8″ O.D.	Red-Violet	2"	
BTBXH Ratchet Tool					
BTBXA1 1/4"-3/8" Shoe Arm					
BTBXA2 1/2"-7/8" Shoe Arm					
	BTBXR1	Reverse Bender Mandre	el Arm		
	BTBXR2 Reverse Bender Shoe Arm				

"O.D." = Outside Diameter

#### **BTB300M** BLACKMAX® Metric Tube Bender Kit

	ltem	Tube O.D.	Mandrel Color	Inside Radius Of Bent Tube	
	BTBX6M	6 mm O.D.	Chrome	29mm	
	BTBX8M	8 mm O.D.	Copper	32mm	
Mandrels	BTBX10M	10 mm 0.D.	Red	32mm	
Janc	BTBX12M	12 mm O.D.	Yellow-Orange	35mm	
2	BTBX15M	15 mm O.D.	Yellow-Green	41mm	
	BTBX16M	16 mm O.D. (Optional for BTB300M)	Blue	41mm	
	BTBX18M	18 mm O.D.	Titanium	48mm	
	BTBX22M 22 mm O.D.		Red-Violet	51mm	
	BTBXHM	Ratchet Tool, Metric			
	BTBXA1	6-10 mm Shoe Arm			
BTBXA2 12 - 22 mm Shoe Arm					
	BTBXR1 Reverse Bender Mandrel Arm				
	BTBXR2	Reverse Bender Shoe Arm			

"O.D." = Outside Diameter

#### **BLACKMAX®** Lever Tube Benders

- Patented 2-position handle
- Imperial or metric
- For soft copper, aluminum tube
- Double hinged bending arms for tight quarters
- Two pull points for smooth, easy bends
- Bends from 0° to 180°
- Packaging: Color box



#### **BLACKMAX®** Imperial Lever Tube Benders

Item	Tube O.D.	Mandrel Color	Inside Radius Of Bent Tube	Bender Overall Length
BTB06	3/8"	Violet	15/16	15"
BTB08	1/2"	Gold	1-1/2"	20"
BTB10	5/8"	Blue	2-1/4"	29"
BTB12	3/4"	Green	3"	32"
BTB14	7/8"	Purple	3-1/4"	32"

#### BLACKMAX® Metric Lever Tube Benders

ltem	Tube O.D.	Mandrel Color	Inside Radius Of Bent Tube	Bender Overall Length
BTB10MM	10mm	Violet	24mm	31cm
BTB12MM	12mm	MM	38mm	51cm
BTB15MM	15mm	Blue	57mm	74cm
BTB16MM	16mm	Green	57mm	81cm
BTB18MM	18mm	Purple	76mm	81cm

















#### **BTLH5E** Hydraulic BLACKMAX® Tube Expander

- Includes hydraulic tool, plus 5 quick change, color coded expander heads and tube reamer
- Five heads for expanding 3/8", 1/2", 5/8", 3/4", 7/8" O.D. soft copper or aluminum tube
- Expander heads and replaceable blades are interchangeable with BLACKMAX BTLE9/BTLE9M
- Cast aluminum body with durable, rubber grip
- Extra storage for additional expander heads
- Hydraulic power- the easiest way to swage tubing!

#### **BTLE9** BLACKMAX® PREMIUM TUBE EXPANDER KIT

- Swaged ends means less couplings & less refrigerant leaks
- Imperial or metric
- For soft copper and aluminum tube
- Nine guick-change tube expanders (Imperial or Metric-See
- Durable, color-coded, aluminum heads
- Compact, professional, patented design
- Strong carrying case
- Packaging: Color box

## **X** REPLACEMENT PARTS FOR BTLH5E

BTLEXH | Tube Expander (Replacement Tool)









## **X** REPLACEMENT PARTS:

#### For BTLE9/BTLH5E Imperial Tube Expander Kit

		-	
0:	Expande	r Heads	Blades (6 Pk)
Size	Color	Item	Item
1/4″	Chrome	BTLEX14	BTLEX14B
5/16″	Copper	BTLEX516	BTLEX516B
3/8"	Red	BTLEX38	BTLEX38B
1/2″	Yellow-Orange	BTLEX12	BTLEX12B
5/8"	Blue	BTLEX58	BTLEX58B
3/4"	Green	BTLEX34	BTLEX34B
7/8″	Red-Violet	BTLEX78	BTLEX78B
1″	Black	BTLEX1	BTLEX1B

#### For **BTLE9M** Metric Tube Expander Kit

		-	
0.	Expande	Blades (6 Pk)	
Size	Color	Item	Item
6 mm	Chrome	BTLEX6M	BTLEX6MB
8 mm	Copper	BTLEX8M	BTLEX8MB
10 mm	Red	BTLEX10M	BTLEX10MB
12 mm	Yellow-Orange	BTLEX12M	BTLEX12MB
15 mm	Yellow-Green	BTLEX15M	BTLEX15MB
18 mm	Titanium	BTLEX18M	BTLEX18MB
22 mm	Red-Violet	BTLEX22M	BTLEX22MB
28 mm	Red-Orange	BTLEX28M	BTLEX28MB



## **BFT850D** BLACKMAX® Drill Powered Flaring Tool

- Dramatically reduces the amount of time to create a precise flare
- Seven quick change positions for flaring soft copper and aluminum tube
- Aluminum body- 50% lighter than steel designs
- Slide gauge sets tube at exact position
- Eccentric cone forms precise 45° flared ends For 3/16″, 1/4″ 5/16″, 3/8″, 1/2″, 5/8″, 3/4″ O.D. tube
- Built-in clutch prevents over-compression
- Compact, professional, patented design
- Packaging: Color box







Slide Gauge



Eccentric Forming



Molded Storage





#### **BFT850K** BLACKMAX® Flaring Tool KIT

- BFT850 Flaring Tool
- FTXSG Reversible R410A Flare Size Gauge
- BTLDB3 Deburring Tool
- BTC300 Premium Tube Cutter
- Packaging: Color box

#### **BFT850/BFT850M** BLACKMAX® Flaring Tool

- Aluminum body is 50% lighter than steel designs
- Internal clutch indicates when formed flare is complete
- Seven quick-change positions for flaring soft copper and aluminum tube
- Compact, professional, patented design
- Eccentric cone forms precise 45° flared
- Strong carrying case
- Imperial tool for 3/16", 1/4" 5/16", 3/8 1/2", 5/8", 3/4" O.D.
- Metric tool for 6, 8, 10, 12, 15, 16, 18 mm
- Built in slide gauge for tube height adjustment
- Packaging: Color box

	BFT850D	BFT850DM	BFT850K	BFT850	BFT850M
	Cordless Drill Powered (or manually operated) Flaring Tool		Manually Operated Flaring Tool Kit	Manually Operated Flaring Tool	
Tube Sizes (Outside Diameter)	3/16, 1/4, 5/16,3/8,1/2, 5/8, 3/4	6, 8, 19, 12, 15, 16, 18 mm	3/16, 1/4, 5/16,3/8,1/2, 5/8, 3/4	3/16, 1/4, 5/16,3/8,1/2, 5/8, 3/4	6, 8, 19, 12, 15, 16, 18 mm
Aluminum body / flaring bar	Yes				
Internal Clutch	Yes (Releases when flare is complete)				
1/4" Driver Bit Included?	Yes No				
Quick Change Removable Handles	Yes (Top and	side handles)		No	
Built In Slide Gauge	Yes (for fast tube alignment)				
Eccentric Hardened Steel Cone	Yes				
Durable Carrying Case	Yes				



## **BLACKMAX TOOL CENTER (END CAP)**



Our new gondola end caps are an excellent way organize and display CPS products in your showroom. All end caps are available in either slatwall or pegboard configurations. A semi-gloss black or Sahara beige enamel finish can be specified.

End caps are ready-to-assemble (no tools required), made of long lasting, heavy gauge, 100% steel and feature high load uprights with adjustable leg levelers and optional shelves. Other "Madix" and "Lozier" style shelves are compatible with these end caps.

These gondola end caps are used at the end of an aisle, against a wall or another end cap. End caps (without optional header) measure 60"H x 36"W x 16"D (1.5 x .91 x .40m). Other optional accessories (below) can be purchased to further enhance the effectiveness of your display. Thirty percent of all store sales come from end-of-aisle displays, so contact your local CPS sales representative for more information on this stylish and durable display and the BLACKMAX products it will contain.





**GECHB** Header - For BLACKMAX Tool Center

To order steel End Cap or End Cap Accessories, see item #'s on page 44-45



#### Pro-Set

#### PROFESSIONAL TITANIUM **TUBE CUTTERS**

- All cutter wheels are precision machined from high grade chromium steel and plated with titanium nitride to extend life—up to 5 times longer!
- Precision machined rollers feature cut-off groove to reduce tube loss in damaged flare removal
- Durable metal handle with industrial grade rubber boot provides comfortable grip
- Enclosed hardened steel, thrust bearing feed mechanism for smooth cutting action and trouble free operation
- Packaging: Clamshell



TCT127 PRO-SET® Mini Titanium Tube Cutter

• Cutting Range: 1/8" to 5/8", (3 to 16 mm)



TCT174 PRO-SET®

Mini Titanium Tube Cutter

• Cutting Range: 1/8" to 1-1/8", (3 to 30 mm)



**TCT206** Heavy Duty Titanium

#### Sliding Tube Cutter

• Cutting Range: 1/4" to 2-5/8 (6 to 68 mm)



**TCT274** 

#### Titanium Tube Cutter

• Cutting Range: 1/8" to 1-3/8" (3 to 35 mm)



#### **TCT312**

#### **Heavy Duty Titanium Tube Cutter**

• Cutting Range: 1/8" to 1-3/4", (3 to 45 mm)



#### **TCPVC**

#### Heavy Duty Titanium Pvc Tube Cutter

• Cutting Range: 1/4" to 2-5/8" (6 to 68 mm)



TC174

#### PRO-SET® Mini Tube Cutter

• Cutting Range: 3/8"-1-1/8" (10 - 29 mm)



#### TLRM

#### Reaming And Deburring Tool

- · Rugged die cast metal for long life
- Removes burrs from inside and outside edges of tube
- Ergonomic shape



#### FTXSG R410A

#### Flare Size Gauge

- 1/4", 6.4 mm 3/8", 9.5 mm
- 1/2", 12.7 mm
- 5/8", 15.9 mm
- 3/4", 19.1 mm



#### TLDB2

#### Pocket Deburring Tool

· Remove burrs and surface defects from inner/outer straight and hole edges.



TLDB2X | Replacement Blade www.calcert.com



TCXT274RB

Standard





#### Universal Ratchet Tube Bender Set

- Universal kit bends tube from 1/4" to 7/8" and 6mm to 22mm
- Metal ratcheting system built for long life
- Seven durable molded plastic mandrels
  Includes Pro-Set TC274 Tube Cutter
- Includes TLRM Reaming and Deburring Tool

×	REPLACEMENT PARTS
---	-------------------

TBXM6	Molded Plastic Mandrel 1/4" (6 mm)
TBXM8	Molded Plastic Mandrel 5/16" (8 mm)
TBXM10	Molded Plastic Mandrel 3/8" (10 mm)
TBXM14	Molded Plastic Mandrel 1/2" (14 mm)
TBXM16	Molded Plastic Mandrel 5/8" (16 mm)
TBXM19	Molded Plastic Mandrel 3/4" (19 mm)
TBXM22	Molded Plastic Mandrel 7/8" (22 mm)
TBXR	Ratchet Mechanism
TBXB1	Small bending bar replacement
TBXB2	Large bending bar replacement
TC274	Pro-Set Tube Cutter
TLR M	Reaming and Deburring Tool

#### **PRO-SET® LEVER TUBE BENDERS**

- Constructed of high strength steel for durability and long life
- Create smooth, tight radius bends up to 180° with minimal effort
  Bends without scoring or flattening of tubing
  Calibrated to show angle of bend
  Wide hook grips tubing securely



**TB04** 1/4" O.D.



**TB05 5/16**" O.D.



**TB06** 3/8" O.D.



**TB08** 1/2" O.D.



**TB10** 5/8" O.D.

TB10XH Replacement Hook with



**TB12** 3/4" O.D.

TB12XH Replacement Hook with Screw



**TB14 7/8**" O.D.



**TB6MM** 6 mm ○.D.



**TB10MM 10 mm** O.D.



**TB12MM 12 mm** O.D.





**TB16MM 16 mm** O.D.





1.888.610.7664



#### FT800FN

## PRO-SET® R-410A Imperial Concentric Flaring Tool

- Imperial clutch driven flaring tool with ratchet and case for 3/16 ,1/4 , 5/16 , 3/8 , 1/2 , 5/8 , 3/4 O.D. tubing
- Unique clutch driven feed screw and eccentrically mounted cone produces uniform, clean flare walls without galling
- Engineered specifically to create stronger flare joints for higher pressure
- R-410A systems
   Innovative 3/8 square drive incorporated directly in yoke handle for use of ratchet
- Rugged polyethylene storage case included

## INCLUDES

FTX800B410	R-410A flaring bar
FTX800R	Ratchet
FTX800Y	Yoke assembly
	-



#### FT806M

#### PRO-SET® Metric Flaring Tool & Ratchet

- Metric clutch driven flaring tool with ratchet and case for 6, 8, 10, 12, 15, 16 & 18mm O.D. tubing
- Unique clutch driven feed screw and faceted cone produce uniform, clean flare walls without thin spots or galling
  • Innovative 3/8 square drive
- incorporated directly in yoke handle for use of ratchet
- Rugged polyethylene storage case included.

#### INCLUDES

IIIOLODEO		
FTX800BM	Metric flaring bar	
FTX800R	Ratchet	
FTX800Y	Yoke assembly	



#### FT806A

#### PRO-SET® Imperial Eccentric Flaring Tool & Ratchet

- Standard imperial clutch driven flaring tool with ratchet and case for 3/16", 1/4", 5/16", 3/8", 1/2", 5/8" & 3/4" O.D. tubing
- Unique clutch driven feed screw and faceted cone produce uniform, clean flare walls without thin spots or galling
- Provides an exact amount of flaring
- torque with break away clutch system
   Innovative 3/8" square drive
  incorporated directly in yoke handle for use of ratchet
- Rugged polyethylene storage case included.

## **INCLUDES**

FTX800BA	Imperial flaring bar
FTX800R	Ratchet
FTX800Y	Yoke assembly



#### PRO-SET® TUBE EXPANDER/SETS

- Create professional grade one seam pipe unions in the field.
- Multi-faceted interchangeable heads ensure equal linear expansion of tubing and uniformed wall thickness.
- Extended handle length provides added leverage for ease of operation.
- Re-round deformed tubing and fabricate couplings.
- Components are heat treated for durability.
- Ideal for copper, aluminum and soft steel
- Includes storage case for long-term protection.

#### **TLE6** Imperial TUBE EXPANDER SET

#### **INCLUDES**

TLE601 Expander Tool		
TLRM	Reaming and Deburring Tool	
TLH06	3/8" Expander Head	
TLH08	1/2" Expander Head	
TLH10	5/8" Expander Head	
TLH12	3/4" Expander Head	
TLH14	7/8" Expander Head	
TLH18	1-1/8" Expander Head	
OPTIONAL		
TLH16	1" Expander Head	
TLH22	1-3/8" Expander Head	
TLH26	1-5/8" Expander Head	

#### **TLE6M** METRIC TUBE EXPANDER SET

#### INCLUDES

TLE601	Expander Tool	
TLRM	Reaming and Deburring Tool	
TLHM10	10 mm Expander Head	
TLHM12	12 mm Expander Head	
TLHM15	15 mm Expander Head	
TLHM18	18 mm Expander Head	
TLHM22	22 mm Expander Head	
TLHM28	28 mm Expander Head	
OPTIONAL		
TLHM16	16 mm Expander Head	
TLHM20	20 mm Expander Head	
TLHM35	35 mm Expander Head	







#### TC127 Mini Tube Cutter

- Cutting Range: 1/8" to 5/8" (3 to 16 mm)
- Ideal for cutting in limited access
- Ratchet mechanism speeds precision machined chromium steel cutting wheels



TCX7C	(10) Cutting wheels
TCX7S	(10) Cutting Wheel Screws
TCX7CTS	(1) Titanium Cutting Wheel & (1) Screw
TCX7CS	(1) Cutting Wheel and (1) Screw



#### TC206 Sliding tube cutter

- Cutting Range: 3/8" to 2-5/8" (10 to 67 mm)
- cutting wheel adjustment

TCX6CTS (1) Titanium Cutting Wheel & (1) Screw



#### TC274 Tube Cutter

- Cutting Range: 1/8" to 1-1/8" (3 to 29 mm)
- · Hardened steel thrust bearing feed mechanisms for smooth operation
- Precision machined chromium steel cutting wheels
- Foldaway hardened steel reamers for deburring

#### REPLACEMENT PARTS

TCX4R	(1) Reamer Blade
TCX4RS	(1) Reamer Blade Screw
TCX4C	(10) Cutting Wheels
TCX4CS	(1) Cutting Wheel and Screw
TCX4S	(10) Cutting Wheels and Screws



#### **TCSET** Tube Cutter Combo Pack

- Cutting Range: 1/8" to 1-1/8" (3 to
- Includes TC127 & TC274



#### TC312 Heavy duty tube cutter

- Cutting Range: 1/4" to 1-5/8" (6 to 41 mm)
- Spare cutting wheel located under retractable locking reamer

#### **REPLACEMENT PARTS**

TCX4R	(1) Reamer Blade
TCX4RS	(1) Reamer Blade Screw
TCX4C	(10) Cutting Wheels
TCX4CS	(1) Cutting Wheel and Screw
TCX4S	(10) Cutting Wheels and Screws



#### **TCAP** Capillary Tube Cutter

Cleanly cuts all types of refrigerant capillary tubing without constricting, swaging or flattening.



#### Spring Type Tube Benders

- For soft copper and aluminum tubing
- Special spring steel with zinc
- Hand bend tubing to any shape without collapsing walls
- End bell design for quick removal of tubing

**TBS04** 1/4" Spring Tube Bender

**TBS05** 5/16" Spring Tube Bender

**TBS06** 3/8" Spring Tube Bender

**TBS08** 1/2" Spring Tube Bender

**TB\$10** 5/8" Spring Tube Bender



#### **TB368** Universal Tube Bender

- Triple head lever type tube bender 1/4", 5/16", 3/8" (6, 8, 10 mm)
- For soft copper, aluminum and thin wall steel tubing



#### **TLDB** Pocket Deburring Tool With Blade Storage

- For soft copper and aluminum tubing
- Remove burrs and surface defects from inner/outer straight and hole edges



TLDBX Reamer Blade & Screw



TCX4S Cutting Wheel Replacement Screw (10 Pk). For TC274, TC312



Cutting Wheels (10 Pk) For TC174, TC274, TC312







#### FS275, FS275M 45° Flaring & Swaging Kit

**FS275** Imperial kit for 1/8" to 3/4"

FS275M Metric kit for 4 mm to 22 mm

- · Rugged forged steel slip-on yoke and hardened flaring bar
- Chrome finished flaring cone forms better flares with less effort
- · Positive grip flaring bar eliminates tube movement
- · Easy operation with professional results

#### REPLACEMENT PARTS

FSX501	FS275 Long Bar (7/16", 1/4", 1/8", 3/16", 5/16", 3/8")
FSX502	FS275 Short Bar (3/4", 1/2", 5/8")
FSX503	FS275 5/16" Swaging Adapter
FSX504	FS275 3/16" Swaging Adapter
FSX505	FS275 1/2" Swaging Adapter
FSX506	FS275 5/8" Swaging Adapter
FSX508	FS275 3/4" Swaging Adapter
FSX509	FS275 Yoke Assembly
FSX513	FS275 Compressor Cone

Metric Swaging Adapters, 5 Pce (8,12,14,16,22 mm)

	FSX507	FS275M 8,12,14,16,22 MM SWAG. ADPTRS-5PC
FS275 Metric	FSX511	FLARING BAR 4,6,8,12,15,16MM FOR FS275M
W ES	FSX512	FS275M 4,18,22MM FLARING BAR METRICFS275M
		4.18.22MM FLARING BAR METRIC







**FT203** 45° IMPERIAL FLARING TOOL

Flares 4 sizes of tubing -

5/8", 3/4", 7/8" & 1-1/8"

• Rugged forged steel slip-

on yoke and hardened



#### **FT525** 45° UNIVERSAL ADJUSTABLE FLARING TOOL

- Flares from 3/16" to 5/8" (5 to 16 mm)
- Unique faceted flaring cone automatically burnishes flare face during operation
- Produces perfect 45° flares while maintaining thickness at base of flare
- Rugged forged steel slip-on yoke
- · Compact design ideal for use in tight quarters

# **FT195** 45° IMPERIAL FLARING TOOL

- Flares 7 of the most common sizes of tubing from 3/16" to 5/8" (5 to 16
- Rugged forged steel slip-on yoke and hardened flaring
- Chrome finished flaring cone forms better flares with less effort
- Positive grip flaring bar eliminates tube movement

#### Chrome finished flaring cone forms better flares

· Positive grip flaring bar eliminates tube movement

with less effort

flaring bar

 Easy operation with professional results

#### FT500/FT500M 45° FLARING/ **BURNISHING TOOL**

- FT500 Imperial tool for 3/16", 1/4", 5/16", 3/8", 1/2" & 5/8
- FT500M Metric tool for (6 -16 mm)
- Heat treated sliding dies with lever clamping action hold tubing firmly in place
- Rugged forged steel slip-on yoke with large handle for ease of use

#### REPLACEMENT PARTS

<b>REPLACEMENT PARTS</b>		FTX500	Yoke assembly
FTX516	Yoke assembly	FTX501	Flaring bar
FTX517	Tube holding assembly	FTX509	Compressor cone
FTX518	Flaring cone	FTX510	Wing nut

#### REPLACEMENT PARTS

FTX500	Yoke assembly
FTX501	Imperial Flaring bar
FTX509	Compressor cone
FTX510	Wing nut
FTX514	FT500 Die Holder Assembly
FTX515	FT500M Die Holder Assembly







#### **MINI-SPLIT TOOL KITS**

Kit Contents	TLB410A	TLB410SAE	TLB410KIT	TLB410KIT2	TLB410AC	TLB410ACE	TLB410M
2 Valve Manifold	1/4″ SAE 4	on Pink Body 15° fittings #MEHP5E	Pro-Set® Premium Piston Series Manifold #MT2HP	BlackMax® Black and Chrome Series Manifold #MV4HP410A	BlackMax <sup>®</sup> Black & Chrome 1/4″ SAE 45° fittings "H5" Gauge #MBH5P5Z	BlackMax* Black & Chrome 1/4" SAE 45° fittings "H5" Gauge #MBH5P5EZ	No Manifold
Hoses		Pro-Set® Premiun (3) 5′ red/blue/yello ball valve hoses	•	BlackMax® Black & Chrome Premium Hose Set #HP5BKEZ and Vacuum Hose #HV5BK	Pro-Set* Premium (3) 5' Black & Chrome hoses	Pro-Set* Premium (3) 5' Black & Chrome ball valve hoses	No Hoses
Flaring Tool	FT8	00N	BFT850	BFT850		FT800N	
Flare Gauge		No		#FTXSG		No	
Torque Wrench Set	Metric #TLTWSM	SAE/Imperial #TLTWSAE	Universal Handle with SAE/Imperial & Metric Heads	#BTLDTW Digital torque wrench		Metric #TLTWSM	
Tube Cutter		No		#BTC300		No	
Deburring Tool		No		#BTLDB3		No	
Hex Wrench Set				(1) # TLSWHM (metric) ar	nd (1) # TLSWH (imperial)		
Valve Core Tool		TLVC410A		TLVC410A. TLVCS410		TLVC410A	
Brass Adapters and Brass Caps	Includes; (10) A	VC410 1/2"-20 UNF			SAE 55D; female; 1/2″-20 UNF SW ″-20 UNF) w/Valve Core Tool	VL w/ Valve Core Tool, and (2) AD879	Brass Adapter
Tool Organizer		TLBAG1		TLBAG2		TLBAG1	

## CPS® EXTRA DURABLE TOOL BAGS

Organize and protect your tools with extra strong, premium built tool bags from CPS.



Square Tool Organizer 10" x 10" (25 x 25 cm)



TLBAG2 Rubber Bottom Tool Organizer 9" x 16" (23 x 41 cm)



TLBAG3 **Tool Belt Tool Organizer** 

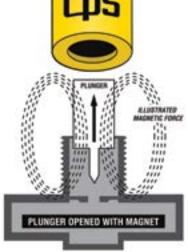


#### **TLMKC18** Solenoid Magnet

The **TLMKC18** is designed to manually open solenoid valves by magnetically lifting the stem assembly and plunger. Simply slide the TLMKC18 over the valve's enclosing tube and the industrial grade magnets incorporated inside the rugged ABS plastic housing does the rest. It is an ideal tool for trouble shooting/servicing both direct connected or pilot operated 2-way solenoid, 3-way reclaim or 4-way reversing valves.

• 0.75"/18 mm opening fits all common manufactured valves





#### **TLMAG1** Compact Magnetizer/Demagnetizer

Use the **TLMAG1** to magnetize tools in order to keep small screws and nuts in position, especially helpful when working in confined spaces. Or demagnetize tools when working on or near electronic circuit boards. Simply insert a screwdriver or nut driver into the (+) opening, slowly draw it out and it's magnetized. Leave the magnetizer on the tool for extra strength. To demagnetize, slowly draw the tool through the smallest area of the (-) opening.

- Instantly magnetize or demagnetize steel tools & parts
- Incorporates two C5 industrial strength magnetsImpact resistant ABS molded plastic
- No batteries or electricity required
- Compact design: 2" x 2" x 1"







#### **BTLDTW** BLACKMAX® Digital Torque Wrench

Ideal for HVAC mini-split installations or where OEM-specified torque settings are critical, the BlackMax digital torque wrench exceeds the capabilities of mechanical-only torque wrenches by offering a variety of user-friendly features in a lightweight, durable and ergonomic housing.

Large display numbers prevent misreading torque data, a common problem when using wrenches without digital displays. View "Peak" and "Track" torque data with audible (tone), visual (LED) and tactile (vibration) "torque alerts" to prevent overtightening by providing advance warning when approaching or exceeding predefined torque settings. Operates on 2 AAA batteries (included).

- Ensures OEM torque setting compliance
- Ideal for HVAC mini-split installations
- **Jaw opening**: 3/16" to 1-7/16" (5 to 35mm)
- Torque settings: Lbf.ft, Lbf.in, N-m, Kgf.m
- Pre-set and actual torque values:- View both same time
- LED Torque Alerts: Green= within 50-98%, Red= within
- Memory Presets: 5 factory programmed, 5 open to enter custom torque values
- Track mode: View real-time torque value during use
- Peak mode: Maximum torque value reached is stored temporarily
- Auto-Off (Selectable): Conserves battery life
- Backlighted display

#### **KEY FEATURES**







Torque Units (Selectable)	Lbf.ft	Lbf.in	N-m	Kgf.m
Torque Measurement Range	6-63	71-752	8-85	1-8
Display Resolution	0.1 Lbf.ft	1.0 Lbf.in	0.1 N-m	0.1 Kgf.m
Accuracy	± 2% cloc	kwise and counter-clockwise of	reading, 10% to 100% of full	scale
Jaw Opening		3/16" — 1-7/16" (	5 - 35 mm)	
Operating Voltage		3V (2 x AAA batteri	es, supplied)	
Operating Temperature		32°F~104°F (0°	C ~ 40°C)	
Storage Temperature		-4ºF ∼113ºF (-20	°C ~ 45°C)	
Wrench (+ Case) Weight		2.79 lb (1.2	7 kg)	
Wrench Length		15.25" (0.38	37 m)	
Green LED Flashes	With	n 50% to 98% of programmed t	orque (in Peak or Track mode	)
Intermittent Tone		Within +/- 5N-m of progra	mmed torque value	
Red LED On		Within 2% of programn	ned torque value	
Faster Tone		Within +/- 2 N-m of progra	mmed torque value	
Continuous Tone + Constant Green LED & Handle Vibrates		When >2% over program	nmed torque value	
Display Constant On:		Battery life = appro	x. 120 hours	
Display & Backlight Constant On:		Battery life = appr	ox. 96 hours	
Replacement Battery Cap		BTLDTW	X	



#### **PRO-SET TORQUE WRENCHES**



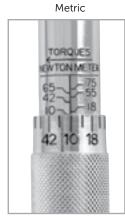
#### **PRO-SET® MECHANICAL TORQUE WRENCHES**

Professional interchangeable jaw torque wrench sets ensure compliance with OEM torque settings for high pressure systems.

- SAE (Inch) or Metric Sets: Both include 6 sizes of interchangeable ends
- Polished chrome finish
- Provides consistently accurate readings and rugged, trouble-free performance
- Includes easy instructions sheet and molded storage case







Front

Back

Front





#### Imperial Wrench Set

- Inch wrench settings in inch-pounds (60-960) or foot-pounds (5-80)
- Includes: SAE multi-head torque wrench set with handle, heads and case (5/8", 11/16", 13/16", 15/16", 1-1/16", 1-5/16")



#### **TLTWSM**

#### Metric Wrench Set

- Metric wrench settings in newton-meters (10-75)
   Includes: metric multi-head torque wrench set with
- handle, heads and case (17, 22, 24, 26, 27, 29 mm)

X	RFPI	<b>ACEMENT</b>	<b>PARTS</b>
	1/111	ALSI IVII IVI	IAILL

TLXTWSAE	Complete Set of (6) SAE Wrench Heads
TLXTWSAEW	SAE Torque Wrench Handle
TLXTW58	5/8" Head
TLXTW1116	11/16" Head
TLXTW1316	13/16" Head
TLXTW1516	15/16" Head
TLXTW1L116	1-1/16" Head
TI VT W11 F10	1 5/10"11

#### REPLACEMENT PARTS

TLXTWM	Complete Set of (6) Metric Wrench Heads
TLXTWMW	Metric Torque Wrench Handle
TLXTWM17	17mm
TLXTWM22	22mm
TLXTWM24	24mm
TLXTWM26	26mm
TLXTWM27	27mm
TLVTVAAAOO	00

#### **PRO-SET WRENCHES**

#### **PRO-SET®** ADJUSTABLE JAW HANDLE WRENCHES

- Precision machined for smooth operation
- Comfortable grip, permanently molded rubber handles reduces fatigue
- Durable and environment-resistant
- With printed display card
- Packed in clear sealed clamshell
- One year warranty
- Jaw opening (inch marks) on front



	TLAW06	TLAW08	TLAW10	TLAW12
Size	6″	8″	10″	12″
Jaw capacity	1" (25 mm)	1-1/4"(30 mm)	1-3/8" (35 mm)	1-1/2" (40 mm)

#### **PRO-SET SERVICE WRENCHES**









#### SHAPE -



- Large, straight. Square & hex drive
- 3/16", 1/4" Square Drive 1/2", 9/16" Hex Drive
- Embossed fractions and logo

#### **TLSWLB IN BULK (100 PCS)**

#### **TLSWO**

#### SHAPE -

- Small, offset. Square drive
  3/16", 1/4", 5/16", 3/8" Square Drive
  Offset ends
- Embossed fractions and logo
- Durable, high quality, polished chrome finish Durable, high quality, polished chrome finish

TLSWOB IN BULK (100 PCS) TLSWOA WRENCH PLUS 3/16" & 5/16" HEX DRIVER BIT

## TLSWS

#### SHAPE -



- Small, straight. Square drive
- 3/16", 1/4", 5/16", 3/8" Square Drive
- Embossed fractions and logo
- Durable, high quality, polished chrome finish

TLSWSB IN BULK (100 PCS) TLSWSA WRENCH PLUS 3/16" & 5/16" HEX DRIVER BIT

#### **TECH-SET SERVICE WRENCHES**



• Square Drive: 3/16", 1/4", 5/16", 3/8"

· Metal handles with frosted finish and

blister card packaging



## **TSWSO**

- Square Drive: 3/16", 1/4", 5/16", 3/8"
- · Metal handles with frosted finish and blister card packaging



#### **TSWSH**

- Square Drive: 3/16 & 1/4
- Hex Drive: 1/2 & 9/16
- · Metal handles with frosted finish and blister card packaging



TSWS



#### PRO-SET HEX, TORX, BALL END FOLDING WRENCHES



#### TLSWH

## SHAPE -

- Hex ends (Inch)
- Nickel Plated
- 5/64″, 7/64″, 1/8″, 9/64″, 5/32″, 3/16″, 7/32″, 1/4″
- Clamshell packaging with display card



## **TLSWHM**

#### SHAPE -

- Hex ends (Metric)
- Nickel Plated
- 1.5, 2, 2.5, 3, 4, 5, 6, 8 mm
- Clamshell packaging with display card



#### TLSWT



- Torx ends
- Nickel Plated



#### **TLSWB**

#### SHAPE -

- Ball point ends (Inch)
- Nickel Plated
- 5/64", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4"
- Clamshell packaging with display card

 ${\tt\#TLSWHB\ Combo\ Set:\ Includes\ TLSWH\ (Inch\ Hex\ Key)\ \&\ TLSWB\ (Inch\ Ball\ Point\ Key\ Set)}$ 

#### **TECH-SET INSPECTION MIRRORS**



#### TLMIR1

- Circular Telescoping Mirror
- 1-1/4" diameter



#### TLMIR2

- Circular Telescoping Mirror
- 2-1/4" diameter



#### TLMIR3

- Rectangular Telescoping Mirror
- 3-1/2" x 2



#### TLMIR4

- Oval Pocket Mirror
- 1" x 2"

#### **CPS DUCT KNIFE**

Used to cut fiberglass duct board. Stainless steel double edge resharpenable blade facilitates easy piercing for inside cuts. The double edge is also ideal for tapping into and trimming flex duct. Ergonomic cushioned handle.

#### **TLDKRH**

- 6" (152 mm) Duct Knife With Rubber Handle
- One edged serrated for sawing.





#### **TECH-SET FIN COMBS**







## TLFC6

#### Universal 6-sided fin comb straightening tool

- Repair bent condenser fins
- For 8,9,10,12, 14 or 15 fins per inch



#### **TLFC2** Fin Straightener

• Large durable, easy grip handle

#### **TECH-SET PLIERS**



#### **TLPO** Pinch-Off Pliers

- Tool locks onto tubing to prevent loss of refrigerant during service
- Rounded jaws to avoid cutting tubing
- 1 year warranty



- Tube Piercing Pliers 1/4"
- TLPPX Replacement Tip
- Quick release handle



#### **TLPK** Swage Punch Set

• 5 Punches (1/4", 5/16", 3/8", 1/2", 5/8")



#### **TLMSP** 6-in-1 Swaging Punch

- (3/16", 1/4", 5/16", 3/8", 1/2", 5/8")
- Swages six sizes of tubing
- Chrome plated for strength and durability



#### **TLPORR**

- PRO-SET Pinch-Off & Re-Round Tool
- Pinch-Off tool & rerounds 1/4", 5/16", 3/8", and 1/2" copper and tubing



## GEAR & **PULLEY REMOVERS**

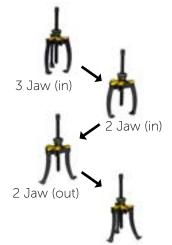




BTLGP7

#### BTLGP4

Description	3" to 4" (76 to 102mm)	3" to 7" (76 to 178mm)
Jaw Reach	3.75"(95mm)	5.5"(140mm)
Jaw Spread	11.5"(292mm)	17"(432mm)
Max. Force	24,000 Lbs(106,500 N)	42,000 Lbs(186,500 N)
Removable Jaws	2 or 3 (Quick Change, Spring Loaded)	2 or 3 (Quick Change, Spring Loaded)





3 Jaw (out)

#### **PRO-SET REGULATOR**



#### **BRRN1** Nitrogen Regulator

- UL Listed
- Delivery Pressure 0-400 PSI
- Easy-to-read gauges with protective rubber gauge boots

#### **TECH-SET TORCH**



#### **BRHTS1** Swivel Hand Torch

- Manual Ignition
- Adjustable flame control
- For use with propylene (MAPPRO), MAPP and Propane
- CGA600 Inlet Connection
- · Clamshell packaging



BRXHTS1 | Replacement Torch Burner Tube Assembly

#### **PRO-SET TORCHES**



#### **BRHT1** Hand Torch

- Auto-ignite torch
- Adjustable flame control
- For use with propylene (MAPPRO), MAPP and Propane
- CGA600 Inlet Connection
- Cast aluminum and stainless steel burn tube construction
- · Flame lock button, precise flame adjustment
- · Clamshell packaging

# BRHTS1A Swivel Hand Torch

- Auto-ignite torch
- Adjustable flame control
- For use with propylene (MAPPRO), MAPP and Propane
- CGA600 Inlet Connection
- Brass regulator & stainless steel burn tube
- Torch tube swivels 360 degrees, operates in any position
- Clamshell packaging

## **X** REPLACEMENT PARTS

BRXHTST1 | Replacement Torch Tip



#### **BRHT5** Hand Torch With 5' Hose & Valve

- Auto-ignite torch
- Adjustable flame control
- For use with propylene (MAPPRO), MAPP and Propane
- CGA600 Inlet Connection
- Brass regulator, composite handle  $\uptheta$  stainless steel burn tube
- New brass regulator with 5 ft hose and valve
- · Clamshell packaging





BRXHTST1 Replacement Torch Tip

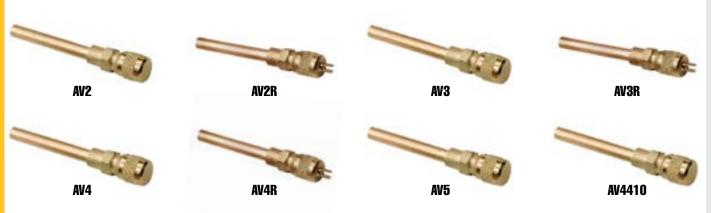
# **BRASS ADAPTERS, FITTINGS & VALVE CORE TOOLS**



Female	Male	Description	Application	Qty / Pk	Iten
	1/4″ SAE	no valve core	TLVC Valve Core Tool for R-12 Auto. HI-side	1	AD3
3/16" SAE	1/4 SAE	with valve core	Automotive adapter	1	AD3
	1/4″ SAE 90°	w/ valve core	Automotive adapter	1	AD36
	1/8″ SAE		Manifolds, compressors	1	AD1
	1/4″ SAE 90°	w/ valve core	Automotive adapter	1	AD14
1/4″ SAE	1/2″ ACME	.,	Vacuum pumps/manifolds/recovery/tanks	3 50	AD4
1,1 0,12	3/8″ SAE	w/core & depressor	Vacuum pumps	1	ADG
				1	AD7
	5/16″ SAE	w/ valve core	R-410A International	100	AD7
5/16″ SAE	1/4″ SAE			1	AD8
5/16" (Swivel)	1/4″ SAE 55°	w/ valve core	R-410A International	100 1	AD8
3/10 (SWIVEI)	3/8″ SAE	w/core & depressor	Vacuum pumps	3	ADO
	Low side R-134a	-	R-134a automotive tanks	1	AD1
1/2" ACME	2011 0100 11 10 10	3	3	AD8	
	1/4″ SAE	no valve core	Vacuum pumps/manifolds/recovery/tanks	100	AD8
		w/ valve core		3	AD8
1/2" ACME (90°)	1/4″ SAE	w/ valve core	Automotive adapter	3	AD84
1/2″ SAE	3/8″ SAE	w/core & depressor	Vacuum pumps	1	AD6
	3/8″ SAE			1	AD6
	J/O JAL			100	AD6
3/4″ -14	1/4″ SAE	w/ gasket	Large 125 lb tank adapters	1	AD4
0/1 11	5/16″ SAE	w/ gushot	Largo 120 to tank adaptors	100 1	AD4
	·			1	AD
	1/2″ ACME			100	AD8
	1/4" SAE x 1/8" MNPT	w/ cap and valve core	Manifolds, compressors	6 100	AD2
	1/4″ SAE x 1/4″ MNPT	w/ cap and valve core	Vacuum Pumps, compressors	6	AD4
-		w/ cap and valve core		100	AD4
	14 mm x 1/4" SAE		R-134a automotive couplers	1	AD.
	1/4" SAE x 1/4" SAE Union		1/4" Hose union	1 100	AD4
21.8 Whitworth	3/8″ SAE	w/ gasket	Large cylinder adapter	1	AD9
ZI.O WIIILWOILII	J/U JAL	w/ yashul	Large Gymnuer auapter	100	AD9



ADAPTERS -TEES	CONNECTORS			
	Description		Qty/ Pk	Item
		x 1/4" SAE FM hex	3	AVT64
		X 1/4 SAE FIVITIEX	100	AVT64B
1/4" SAE M	x 1/4" SAE M	x 1/8" MNPT	3	AVT2P
(with cap and core)		x 1/4" MNPT	3	AVT4P
		x 1/4"SAE FM, no depressors	1	AVT64Z
	x 1/8" MNPT	x 1/4" SAE M	3	AVT4
	d /// CAE face all live and	x 1/4" SAE Male	3	AVT45
1/4″ SAE M	x 1/4" SAE female knurl	x 1/2" ACME M	1	AVT48
1/4 SAE IVI	x 1/8″ MNPT	x 1/4" SAE M w/ Core	3	AVT4M
	x 5/16" SAE female knurl	x 1/2"-20 M Adapter Fitting	1	AVT87
1/4" SAE Female Hex	x 1/4" SAE M	x 1/4" SAE M with cap and core	3	AVT44



COPPER TUBE EXTENSIO	N VALVES				
De	scription	Standa	ard Cap	Wrei	nch Cap
Outer Diameter	Inner Diameter	6pk	100pk	6pk	100pk
1/8″	1/16″	AV2	AV2B	AV2R	AV2RB*
3/16″	1/8″	AV3	AV3B	AV3R	AV3RB
4 ///	3/16″	AV4	AV4B	AV4R	AV4RB*
1/4″	3/16" W/4" COP-TB EXT	AV4L	AV4LB*	AV4LR	AV4LRB
5/16″	1/4″	AV5	AV5B*	AV5R	AV5RB*
5/16" (1/2"- 20) ACCES,1/4"	3/16″	AV4410	AV4410B	N/A	N/A
3/8″	5/16″	AV6	AV6B	AV6R	AV6RB*
6 mm	5 mm	AV6MM	AV6MB	AV6MR	AV6MRB
*Non-stock item. Call for availability					













MULTI-STEP BO	DIES			
Inner Diameter	Outer Diameter	Notes		ITEM
			6pk	100pk
1/8″	3/16″, 1/4″, 5/16″ SLDR		AVB456	AVB456B
	1/4″ SLDR		AVB34	AVB34B
0.40%		(assembled)		AVB346B
3/16″	1/4" x 3/8" SLDR	(unassembled)	AVB346	AVB346BU
	1/4 × 3/0 3LDN	(cap w/core tool)	(assembled)	AVB346RB
				AVB346B0
1/4″	3/8″ SLDR		AVB46	AVB46B
	6-8-10mm SLDR	(w/caps)	AVB6	AVB6B
	0-0-10111111 OLDI1	(w/o caps)	AVDU	AVB6BC



Thread	Description	Qty / Pk	ITEM
	ACME brass cap w/chain tether	2	AVC134C
1/2″	ACME plastic cap w/ straps	2	AVC134PS
	SAE brass cap w/chain tether	2	AVC8C
		10	AVC4
	SAE brass caps	25	AVC425
		100	AVC4B
	SAE brass cap w/chain tether	2	AVC4C
1/4″	SAL Diass cap w/chain tetrier	100	AVC4CB
1/4	SAE plastic caps	6	AVC4P
	ONE plastic caps	100	AVC4PB
	SAE plastic caps w/ straps	6	AVC4PS
	SAE brass cap w/core remover	6	AVC4R
	SAL DIASS CAP W/COTE TETHOVE	100	AVC4RB
	D 410A brace can	10	AVC410
5/16″	R-410A brass cap	100	AVC410B
3/10	hrace can w/ahain tathar	2	AVC410C
	brass cap w/chain tether	100	AVC410CB
	CAE brace can w/obain tother	2	AVC6C
3/8″	SAE brass cap w/chain tether	100	AVC6CB
	SAE plastic caps	3	AVC6P
na	R-134a hl side caps	10	AVC134H
na	R-134a low side caps	10	AVC134L



COPPER TUBE TEES				
Description	Outer Diameter Qty / Pk		ITEM	
1/4″ SAE	5/16″	3	AVCT5	
	3/8″	3	AVCT6	
	1/4″	3	AVCT4	
	1-1/8″	1	AVCT18	
1/4″	5/8″	1	AVCT10	
	1/2″	3	AVCT8	
	3/4″	1	AVCT12	
	7/8″	1	AVCT14	



VALVE CORES		
Description	Qty / Pk	Item
	10	AVS1
Valvo coros	25	AVS125
Valve cores	100	AVS1B
	1000	AVS1BC
Tech-Set valve cores w/1 cap in vial	1	AVS1V
1/4" SAE x 1/4" F swivel	3	AVS44



VALVE CORE TOOLS				
Description	Qty / Pk	Item		
1/4″ SAE Core Remover / Installer Tool	1	TLVC		
Pocket Valve Core Tool w/ 4 Spare Cores	1	TLVC1		
Dual Valve Core Tool (1/4" SAE Valves & Auto R-134a Valves)	1	TLVC2		
Valves & Auto R-134a Valves)	100	TLVC2B		
4-Way 1/4" & 3/16" SAE Valve Core / Thread Chaser	1	TLVC4		
5/16″ SAE Valve Core Remover / Installer Tool	1	TLVC410		
Mini-Split 5/16″ F x 1/4″ M Valve Core Tool	1	TLVC410A		
1/4″ SAE Valve Core Remover / Installer Tool w/ Side Port	1	TLVCS		
5/16" FM x 5/16" Male Valve Core Remover / Installer Tool w/ 5/16" Side Port	1	TLVCS410		
5/16″ FM x 1/4″ SAE Male Valve Core Remover / Installer Tool w/ 1/4″ Male Side Port	1	TLVCS410A		



BACK-SEATING CONTROL VALVES			
Description	Qty / Pk	Item	
1/4" SAE M X 1/4" SAE FM Back-Seating Valve	1	TLVCD1	
5/16" SAE M X 5/16" SAE FM Back-Seating Valve	1	TLVCD2	
1/4" SAE M X 5/16" SAE FM Back-Seating Valve	1	TLVCD3	





MICROSEAL™ QUICK COUPLERS				
Female	Male	Description	Qty / Pk	Item
	1/4″ SAE	Straight	1	AB
			3	AB3
1//″ САЕ		45° female	1	AB45
1/4″ SAE		90° female	1	AB90
			3	AB903
	1/8″	FPT Adapter	1	ABG18
5/16″ SAE	E/IG"CAE		1	AB410
	5/16″ SAE		3	AB4103
	1/4″ SAE	90° female	1	AB41090A
		Straight	1	AB410A
1/2″ACME	1/2″ACME	Straight	1	AB12



AB410A

AB41090A

COMPACT BALL VALVES					
Female	Male	Other	Qty / Pk	ITEM	
1/8" MPT	5/16″	MPT	1	BV41018	
0.0%045	3/8″ SAE	Ctroight	1	BV38	
3/8″ SAE	1/4″ SAE	Straight	1	BVAD38	
	1/4″ SAE	Straight	1	BV	
			3	BV3	
1/4″ SAE		45° female	1	BV45	
			3	BV453	
		90° female	1	BV90	
			3	BV903	
1/2" ACME	1/2″ ACME		1	BV12	
	1/4″ SAE			BVAD24	
5/16″	5/16″	Straight	1	BV410	
		for R-410A systems w/neoprene gaskets	1	BV410A	
	3/10	1/4″ SAE	for R-410A Systems w/Teflon® gaskets	1	BV410AJ
		90° female	1	BV41090A	
	1/4″ SAE x 1/4″ SAE	Straight	1	BVM	
			3	BVM3	
Replacement Ball Valve Handle w/Yellow, Blue, Red inserts ( 1/each)			3	BVXH	









## **REDUCES DAMAGING IN-RUSH CURRENT BY UP TO 50%!**

#### 5-2-1° COMPRESSOR SAVER°

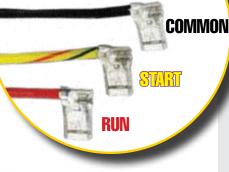
Start-up is the most punishing task for any type of electrical equipment due to the surge of current when power is first applied. A/C compressors can consume up to 45,000 watts!

The 5-2-1 Compressor Saver <u>significantly</u> reduces the time the compressor draws high amperage at start-up by combining a powerful multi-layer starting capacitor with a smart switch to safely give the compressor the burst it needs to start up quickly and reliably, while drawing less power. Less power means lower energy bills, too.

- Perfect add-on service for HVAC technicians—high profit, easy and fast to install, and easy to sell.
- Customers experience immediate results.
- Adds years to the life of your compressor and other electrical components associated with your A/C system.
- Reduce damaging in-rush current by up to 50%.









Watch the video by scanning the QR Code.



CSRU1 For 1 to 3 Ton units



CSRU2 For 3-1/2 to 5 Ton units



CSRU3 For 4 to 5 Ton units



#### **MAXIMUM SURGE PROTECTION**

#### 5-2-1® SURGE PROTECTOR

The 5-2-1 Surge Protection device incorporates the latest in patented surge protection technology providing up to 70% MORE PROTECTION than similar value priced alternatives\*. Plus, no other brand has a separate visible alarm that indicates when the unit has suffered significant damage and needs to be replaced.

#### **Professionally Installed Surge Protection**

- Protects against power surges
- Protects against lightning strike surges
- Protects against utility grid "Spikes"
- Protects vital system components

#### **Dual Visual Indicators**

Home owners and contractors alike love our dual indicator lights. No more wasting time or money dealing with a single indicator light. Our products come with two lights - a red light to indicate if power is present and a green light to indicate that the product is providing protection. With two lights on, you can rest assured knowing that the system is properly protected.

#### **Features:**

- Device built with patented MOV parts
- Green LED indicates surge protection is present
- Red LED indicates that power is present independent of the surge protection status
- TUV Certified UL 1449 3rd Edition
- Type 4X enclosure
- Easy installation
- Low cost, high performance

#### **Contractor Benefits:**

- Promote additional profits
- Marketing materials available FREE of charge
- Protect your customer's equipment
- Reduce callbacks
- Increase customer referrals

#### **Single Phase Surge Protection**

- Circuit Boards
- Air Conditioners
- Furnaces
- Heat Pumps
- Refrigeration Systems



Watch the video by scanning the QR Code.



Rated up to 60,000 amps



Rated up to 100,000 amps

\*Based on maximum energy dissipation (Joule) rating



## 5-2-1 TOOL CENTER (END CAP)



Our new gondola end caps are an excellent way organize and display CPS 5-2-1 products in your showroom. All end caps are available in either slatwall or pegboard configurations. A semi-gloss black or Sahara beige enamel finish can be specified.

End caps are ready-to-assemble (no tools required), made of long lasting, heavy gauge, 100% steel and feature high load uprights with adjustable leg levelers and optional shelves. Other "Madix" and "Lozier" style shelves are compatible with these end caps.

These gondola end caps are used at the end of an aisle, against a wall or another end cap. End caps (without optional header) measure 60"H x 36"W x 16"D (1.5 x .91 x .40m). Other optional accessories (below) can be purchased to further enhance the effectiveness of your display. Thirty percent of all store sales come from end-of-aisle displays, so contact your local CPS 5-2-1 sales representative for more information on this stylish and durable display and the 5-2-1 products it will contain.





**GECH521** Header - For 5-2-1 Tool Center

To order steel End Cap or End Cap Accessories, see item #'s on page 44-45



