CPS®

Advanced Tools
Smart Solutions

2020

HVAC/R PRODUCT CATALOG

HVAC/R Technicians Earn More Profits With CPS

Advanced Tools
Smart Solutions

CPS Products serves multiple industries with Advanced Tools and Smart Solutions. Innovation and advancements in technology are at the heart of CPS Products. The CPS innovation team consists of engineers, product managers, technicians, contractors and customers across many diverse fields. In addition, CPS starts with the Voice of the Customer to drive industrial design, functionality, aesthetics and ease-of-use. Our primary goal is to develop and manufacture products that enable service technicians to work smarter, win more business and make more money with CPS.

CPS® link™

Download on the App Store

GET IT ON Google Play

MOST SENSITIVE, RELIABLE AND ACCURATE LEAK DETECTION WITH LONGEST SENSOR LIFE

FEATURES

- Detects refrigerants including those with hydrocarbon components (CFC, HCFC, 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 alarm speaker
- Designed and manufactured in U.S.A. with U.S. and globally sourced components.

LS2
LEAK-SEEKER®II

Fully automatic sensitivity selection and control.
Simply turn it on and pinpoint the leak.
- Six sensitivity levels
- Fully automatic
- Simple, intuitive bar graph LED display
- Bar graph displays relative leak size
- High output alarm speaker
- 56 levels of sensitivity automatically selected by proprietary Powershift™ software
- Patented E_MOS Technology # 8,555,701
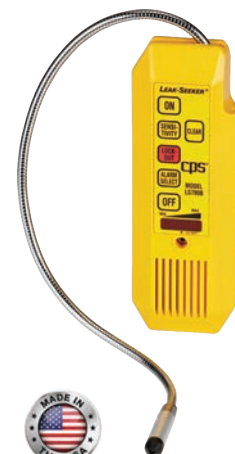
LS1
LEAK-SEEKER®I

- **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 leak sizes.
- **Threshold Alarm Mode:** Provides a quick go, no/go verifying a leak has been found and approximate size.
- One button operation for reset,changing of audible alarm range, and power off
- Sensor inside protective
- metal housing with filter

REPLACEMENT PARTS (LS1, LS2)

EMOS2		E_MOS Technology Sensor
LS2XF		E_MOS Technology Sensor Filters (10-Pk)
LS2XVF		Vapor Filter Sensing Tip

REPLACEMENT PARTS LS790B

LSXSF		Selective Filter Housing
LSXBMK		Maintenance Kit: (1) LSXS + (1) LSXSF (replaces LSXMK)
LSXS		Ion-Pump Sensor

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
- 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
- Selectable 10 sensitivity ranges detects leaks of all refrigerants

SPECIFICATIONS	LS1	LS2	LS790B
Detector Type	Patented E_Mos Detection Technology		Proprietary Ion-Pump sensor with built-in selective filter housing
Sensitivity	Better than 0.1 oz (3g) / year		Better than 0.25 oz (7g) / year leak rate of HFC
Sensitivity Selection	Manual	Fully automatic	Manual
Refrigerant Sensitivity	All, including those with hydrocarbon components (CFC, HCFC, HFC, HFO, NH3, HC. Hydrogen trace gas in 95% N2, 5% H2 mixture)		All, including those with hydrocarbon components (CFC, HCFC, HFC, HFO, NH3, HC)
Visual Alarm	Visual tachometer-like bar graph display with 8 high intensity LEDs		High intensity bar graph display
Flex Probe	15.5" flexible probe for hard-to-reach areas		18" metal flex probe
Lock-Out Mode	N/A		Yes
Controls	One button controls on/off and all functions		6 button keypad
Battery Life	3 "C" batteries (>50 hours continuous use)		4 "AA" alkaline batteries (>40 hours continuous use)
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 precisely guide user to the source of the leak
Low Battery Indication	Green (middle) LED turns off when batteries at 10% capacity	Rightmost (No Battery) LED stays on when batteries at 10% capacity	Center LED above "*" lights during operation
Operating Temperature	0 to 140ºF (-18 to 60ºC)		
Auto-Off	Yes, after 10 minutes of inactivity		Yes, after 15 minutes of inactivity
Sensor Life	>500 hours continuous use		Replace seasonally
Weight	18 oz (500g)		
Warranty	1 year	2 years	2 years
Standards	CE, Complies with European Standard EN14624: 2012		CE, SAE J1627
Certifications	Individually Calibrated To NIST Traceable Leak Standard		

GS40
GAS-SEEKER® 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 iso-butane, with a virtually instantaneous alarm response period.

REPLACEMENT PARTS

GSX4   Replacement Sensor Element

SPECIFICATIONS

Detecting Range	0 - 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

FAST, EFFECTIVE AND ACCURATE METHOD FOR LOW PRESSURE LEAK TESTING

MADE IN THE USA

3 Ways to catch the leak!

Visually with the WHITE vapor

Smell the citrus scent

Trace amount of UV dye
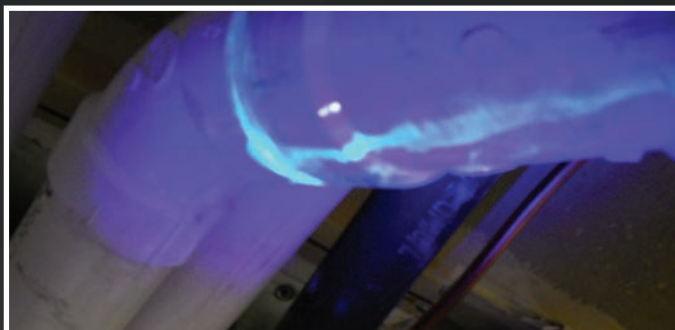
DYE MARKS THE SPOT

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.

FAST, VERIFIABLE 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.

EZSMOKE CE-9i
LEAK DETECTION SYSTEM

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 non-toxic 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.

SPECIFICATIONS

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

ACCESSORIES INCLUDED WITH CE-9I

CEA-099
Accessory bag for smoke supply hose

CEA-063
25 ft. smoke supply hose. Connect as many hoses to each other as needed

CEA-060
Remote Control

CEO716UV
UltraTrace UV (16 OZ.) Smoke Producing Solution. (one bottle)

CEA-064
3/4" NPT Plastic Ball Valve, cam and groove connector and clip (connects to end of smoke supply hose CEA-63)

CEA-065
Adapter cone-standard size. (For introducing Diagnostic Smoke intro any system 1" to 3 1/2" diameter). Threads on to adapter CEA-64

CEA-066
Adapter cone-large size. (For introducing Diagnostic Smoke intro any system 3 1/2" to 6" diameter). Threads on to adapter CEA-64

TAKE CONTROL WITH TANKTRACKER™
Supply and recovery tank inventory management system exclusively from CPS

The Tank Tracker™ feature (Patent Pending), developed by CPS Products, Inc., provides a convenient way to manage and track your inventory of refrigerant supply and recovery tanks in the field. Tank Tracker is included within the CPS Link app (U.S. Patent) and it allows technicians to set up an electronic inventory of all their supply and recovery tanks.

Information such as tank size, type and amount of refrigerant contained in each can be entered. Tank Tracker will then record the addition or subtraction of refrigerant from a tank, along with the date, place and time the tank was used, as well as the name of the job and the customer it was used for. All of this information can be e-mailed to clients, technicians, a home office, or others. The Tank Tracker feature is available when the CPS Link app has been activated, and any CPS wireless scale has been paired to a mobile device. This allows technicians to perform programmable charging or recovery.

For automatic charging or recovery, pair any CPS wireless scale and the SVW Wireless Solenoid Valve to a mobile device running the CPS Link app. The SVW will turn ON or OFF to automatically control refrigerant flow.

Log refrigerant usage/disposal per EPA requirements

Track who, when, where and how much refrigerant is used on every job

SVW
WIRELESS SOLENOID VALVE

The SVW is a compact, battery operated solenoid valve with ¼" SAE IN/OUT male ports that open and close in 100 milliseconds to control refrigerant flow. Operate it manually, or in automatic mode for more precise control. Works with all CPS wireless scales using our patented CPS Link™ technology.

- Operate manually for instantaneous On/Off control of refrigerant.
- Or, pair to any CPS wireless scale for automatic, precise control of refrigerant during service routines.
- Saves time, reduces cost and extends service equipment life
- Compatible with all common CFC, HFC, HCFC, HFO refrigerants and blends
- Operates with CPS Link app
- Designed by CPS Products, Inc. in USA

Use with the CPS Link app for enhanced features

SPECIFICATIONS

Transmission Range (Line Of Sight)	Up to 150 feet
Continuous Battery Life	Up to 500 hours
Maximum Working Pressure	500 Psig (34.5 Bar)
IN/OUT Fittings	Brass, 1/4 SAE male
Approvals	FCC, IC, CE
Dimensions	3" x 2-3/4" x 4.5" (76 x 70 x 114mm)
Packaging	Color box
Warranty	1 Year

RECOVER   SVW   CHARGE

COMPUTE-A-CHARGE®

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.

- Ideal for critical charging of large or small systems and all refrigerant recovery applications

- Environmentally sealed and temperature compensated for reliable operation in extreme environments

- Rugged cast aluminum platform and base assemblies for stability and long life

- Electronic and mechanical overload protected to withstand 150% of capacity

- Calibrated to strict NIST standards (National Institute of Standards & Technology)

- Designed and manufactured in the USA with U.S. and globally sourced components

Use with the CPS Link app for enhanced features

Bluetooth®
CC220EW
ENHANCED WIRELESS REFRIGERANT CHARGING SCALE

- 220 lb (100 kg) capacity
- Accurate to 0.015% of Reading [or ± selected resolution, whichever >]
- 4 adjustable resolution settings
- 8.75" (22.3 cm) square platform
- 7 button corded/wireless control - For manual or programmable operation
- Mobile device control - For added functions, including Tank Tracker™
- Audible and visual alarms for use during charging and recovery

REFRIGERANT CHARGING

CPS Link app running on iOS or Android devices

REFRIGERANT RECOVERY

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 is greater
- 3 button corded control with large, high contrast, wide angle, display
- Cast aluminum platform and base
- 3 point non-rocking foot pattern for best stability
- Heavy duty rubber platform mat
- Owner's manual
- Padded storage case with shoulder strap
- Unique patent pending "delta" shaped design
- Designed by CPS Products, Inc. in USA

3 POINT BASE FOR BEST STABILITY

1 2 3

CC220
REFRIGERANT CHARGING SCALE
The original. Time tested. An industry standard!
- 220 lb (100 kg) capacity
- Accurate to 0.015% of Reading [or ± 0.25 oz (10 g) whichever is greater
- 0.25 oz (10 g) resolution
- 8.75" (22.3 CM) square aluminum platform
- 3 button corded control with large LCD display
- Hard storage case
- Designed by CPS Products, Inc. in USA

CC800A
PROGRAMMABLE REFRIGERANT CHARGING SCALE
- 220 lb (100 kg) capacity
- Accurate to 0.015% of Reading [or ± 0.25 oz (10 g) whichever is greater
- 0.25 oz (10 g) resolution
- 8.75" (22.3 CM) square aluminum platform.
- Programmable for automatic charging or recovery via built-in solenoid valves
- 7 button corded control
- Hard storage case
- Designed by CPS Products, Inc. in USA

	CCD110	CC220 **Bluetooth**	CC220EW	CC800A
Model #	CCD110	CC220	CC220EW	CC800A
Maximum Load	110 lb (50 Kg)	220 lb (100 kg)		
CONTROLS				
Control To Scale Connection	Flexcord		Flexcord Or Wireless (CPS Link™)	Flexcord
Control Mount	360 swivel hook	Magnet back & 360 swivel hook		
Control Buttons (Physical Functions)	3 (On/Off, Lb/Kg, Tare)	7 (On/Off, Lb/Kg, Tare, Go/Hold, Increase, Set/Reset, Decrease)		
Tare (Empty) Weight Mode	Yes			
Programmable Solenoid	n/a	Pair With Wireless SVW	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).
Auto Power Off Feature (DISABLED)	Display shows "APO OFF" at power up [Display will be constant ON]	Display shows "APO OFF" at power up [Display will be constant ON]		
Smart Awake	Display shows last weight measurement at time of Auto-Off, updated to current value	Scale displays last weight measurement at time of Auto-Off, updated to current value		
CHARGE/RECOVER ALARMS				
Charge/Recover Alarm	n/a		Audible & visual alarms during charge and recovery	Continuous beep during charge
WIRELESS				
Wireless Connectivity	n/a		Yes	n/a
Transmission Range	n/a		150' (45.7m) direct line of sight	n/a
Frequency Range	n/a		2.4 GHz, ISM Band (Worldwide)	n/a
BATTERY				
Power Source	Hand Control: (1 or 2) 9V Alkaline (1 Included)	(1 or 2) 9V Alkaline (2 Included)	Hand Control: (2) 9V Alkaline (Included)	
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
Battery Status Indicator	2 Segment Battery Icon	2 Segment Battery Icon	3 Segment Battery Icon	4 Segment Battery Icon
LCD DISPLAY				
Units (Weight) Readout	lb & oz, or kg & gm			
Weight Accuracy	0.015% of Reading [or ± 0.2 Oz (5 g) whichever >]	0.015% of Reading [or ± 0.25 oz (10 g) whichever >]	0.015% of Reading [or ± selected resolution whichever >]	0.015% of reading, or ± 0.25 oz/10 gm (whichever greater)
Display Resolution (Increments)	0.20 Oz (5 g)	0.25 Oz (10 g)	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)
WEIGHTS, DIMENSIONS, MATERIALS				
Platform Dimensions	Delta shape [fits w/I 10.4" (26.4 cm) circle]	8.75˝ x 8.75˝ (22.3 x 22.3 cm)		
Scale Weight (With Case)	5.5 Lb (2.5 Kg)	5.68 lb (2.6 kg)	5.62 lb (2.55 kg)	8.5 lb (3.9 kg)
Length Of Control Cord	6' (1.8 m), Extended			
Maximum Working Pressure	n/a			500 Psig (34,5 Bar)
Maximum Operating Differential	n/a			485 Psig (33,5 Bar)
Rubber Platform Cover	Yes	No		
Storage Case	Soft Case	Molded 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)		
Operating Humidity Range	0% to 95% (Non-Condensing)	0% to 95% (Non-Condensing)		
APPROVALS, CALIBRATION, WARRANTY				
Approvals	CE		FCC,IC,CE	CE
Calibrated To NIST Standards	Yes			
Declaration Of Conformity	EN 61326-1:2013, CISPR 11:2009/A1:2010	EN 61326-1:2013, CISPR 11:2009/A1:2010	n/a	
Warranty	1 Year			

CHARGE FASTER IN COLD WEATHER

REFRIGERANT CYLINDER HEATER STRAPS

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, reducing refrigerant transfer time.

CCXHB 120V   **CCXHBV** 220V/240V

SPECIFICATIONS	CCXHB	CCXHBV
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˝ (0.50 m)	
Adjustable Velcro Strap Max Length	19˝ (0.48 m)	
Heater Strap Width	3˝ (76 mm)	
Heater Strap Length	24˝ (.60 m)	
Heater Strap Color	Dark Orange	
Electrical Connection Type	Nema 5-15P	IEC320 Inlet

REFRIGERANT RECOVERY TANKS

- DOT Certified for refrigerant storage
- Refrigerant compatible sealant used on all mechanical connection points
- Auxiliary port for optional overfill sensor
- Liquid and Vapor UL listed Y-valve
- Powder coated for maximum rust protection
- 1/4˝ SAE Male

30 lb CRX430T
CRX430TB (40/pallet)

50 lb CRX400T
CRX400TB (24/pallet)

90 lb CRX390T

SPECIFICATIONS		Weight Of Empty Tank		Tank Water Capacity		Total Weight (Tank & Refrigerant)		Tank Foot Ring Diameter		Tank Outside Diameter		Tank Height		Max. Pressure Rating
		lb	kg	lb	kg	lb	kg	in	mm	in	mm	in	mm	(psig)
30 Lb	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
	CRX430TB	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
	CRX400TB	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

CPS

DRAMATICALLY INCREASES THE SPEED OF ANY RECOVERY MACHINE

CUT YOUR RECOVERY TIME IN HALF!

The only commercialized recovery sub-cooler manufactured for the professional A/C & R technician to work with ALL refrigerants. Use 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 120°F 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
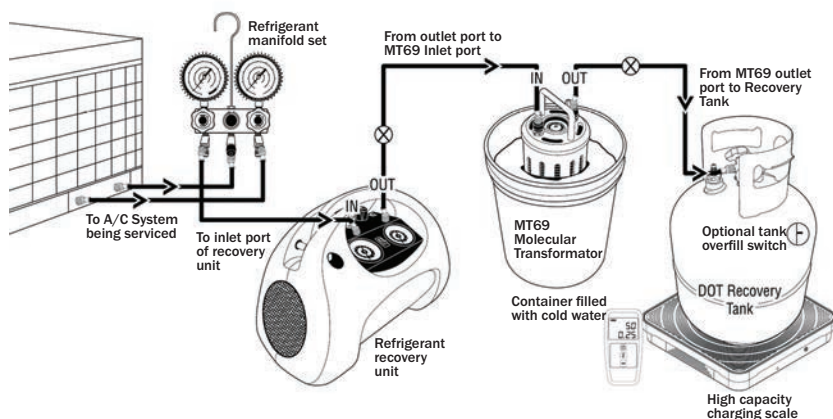
MT69
The original molecular transformator with copper coil

MT69SS
With stainless steel coil- for use on refrigerant systems utilizing Class A1, A2, A2L and A3 refrigerants

HOW THE 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.

SPECIFICATIONS	MT69	MT69SS
Dimensions	4.25 ˝ x 9 ˝ (10.9 cm x 22.9 cm)	
Weight	3.50 lb (1.58 kg)	3.10 Lb (1.40 kg)
Maximum Operation Pressure	500 Psig	
Discharge Pressure Gauge	0 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

THE ULTIMATE IN DEPENDABILITY

TR700
BLACKMAX® REFRIGERANT RECOVERY MACHINE

Designed for 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 environments
- 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 quiet operation
- Less parts provide greater reliability
- Designed by CPS Products, Inc. in USA

REPLACEMENT PARTS

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

		BLACKMAX® TR700 SERIES			PRO-SET® TR600 SERIES			PRO-SET® TR21 SERIES			TECH-SET® TR19 SERIES
		TR700	TR700C	TR700E	TR600K	TR600E	TRS600	TR21	TR21E	TRS21	TR19K
Voltage (Hz)		115V (60 Hz)		220-240V (50 Hz)	220V (50 Hz) 230V (60 Hz)	220-240V (50 Hz)	115V (60 Hz)	115V (60 Hz)	220-240 V (50 Hz)	115V (60Hz)	220-240 V (50-60 Hz)
Motor Size		2/3 HP			2/3 HP		2/3 HP	2/3 HP			1/2 HP
Display		Twin Gauge			Twin Gauge		Twin Gauge	NA			NA
Overload Protection		15 Amp	13 Amp	10 Amp	10 Amp	10 Amp	10 Amp	✗	10 Amp	✗	✗
Power Consumption		1000 W			1000 W			1000W			550W
High Pressure Shut-Off		550 psig (38 bar)	450 psig (31 bar)	38 bar	550 psig (38 bar)	36 bar	550 psig (38 bar)	550 psig Auto Reset	36 bar	550 psig Auto Reset	
Manual Reset Button		✗	✗	✓	✗	✓	✗	✗	✓	✗	✗
Ignition Proof Design		✗	✗	✗	✗	✗	✓	✗	✗	✓	✗
Suction Pressure Gauge	Outer Scale	-30˝ Hg to 500 psig		-1 to 20 bar	-30˝ Hg to 500 psig	3500 kPa	-30˝ Hg to 500 psig	No Gauges			No Gauges
	Inner Scale	-76 cm Hg to 35 kg/cm		115V (60Hz)	-76 cm Hg to 35 kg/cm	35 bar	-30˝ Hg to 500 psig				
Discharge Pressure Gauge	Outer Scale	0 to 1000 psig		0 to 70 bar	0-550 psig	3800 kPa	0-550 psig	No Gauges			No Gauges
	Inner Scale	0 to 70 kg/cm		0 to 7000 kPa							
ASHRAE Refrigerant Code		A1	A1	A1	A1	A1	A1, A2, A2L, A3	A1	A1	A1, A2, A2L, A3	A1
Power Cord Length		6' (1.82 m) Detachable	6' (1.82 m) Detachable	6' (1.82 m) Detachable	3.5 ft (1.06 m)	3.5 ft (1.06 m)	9.8 ft (3.0 m)	6 Ft.			6 Ft.
Dimensions		9.75˝ x 21˝ x 14.0˝ (24.7 cm x 53.3 cm x 35.6 cm)			8.5˝ x 16.7˝ x 12.3˝ (21.6 cm x 42.4 cm x 31.2 cm)			6˝ x 12˝ x 9˝ (15cm x 30cm x 23cm)			
Weight		32 Lb (14.5 kg)			28 Lb (12.7 kg)		28 Lb (12.7 kg)	24.3 lb (11.0 kg)			

IGNITION PROOF

TRS600
PRO-SET® IGNITION PROOF REFRIGERANT RECOVERY MACHINE FOR CLASS A1, A2, A2L, A3 REFRIGERANTS

- Designed and tested to meet ANSI 12:12.01 Ignition proof standards
- Powerful 2/3 HP oil-less 2 cylinder reciprocating recovery compressor
- Exceptional compressor, condensing and cooling systems allow fast recovery in high temperature environments
- 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
- 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 fitting for easy filter clean/change
- Quiet operation
- Designed by CPS Products, Inc. in USA

REPLACEMENT PARTS
TR21X1	Valve Rebuild Kit
TR21X2	Complete Rebuild Kit
TR21X3	Piston/Connecting Rod
TR21X4	Complete Head Replacement
TR21X5	Eccentric Set

Ignition proof power switch

High pressure shut off indicator

TRS21
PRO-SET® IGNITION PROOF REFRIGERANT RECOVERY MACHINE FOR CLASS A1, A2, A2L, A3 REFRIGERANTS

- Designed and tested to meet ANSI 12:12.01 Ignition Proof standards
- Ignition proof ON-OFF switch
- Sealed start relay
- Maintenance free oilless compressor
- Permanently lubricated and sealed main bearings
- Improved piston seal design for less leakage and deeper vacuum
- 550 Psig high pressure cutoff switch with LED indicator
- Cleanable 100 mesh inlet filter
- Fastest recovery rates in its class
- Multi-language color box

REPLACEMENT PARTS
TR21X1	Valve Rebuild Kit
TR21X2	Complete Rebuild Kit
TR21X3	Piston/Connecting Rod
TR21X4	Complete Head Replacement
TR21X5	Eccentric Set

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,

FEATURES
- All models are for use with class A1 (non-toxic,non-flammable), class A2 (non-toxic, low-flammable) refrigerants
- Oil filled rotary vacuum pump cartridge construction

- Air cooled, thermally protected motors encased in a durable aluminum housing
- Large oil-fill port with proprietary, mist-free 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

	TWO STAGE VACUUM PUMP SPECIFICATIONS											
	VP2D	VP2DE	VP4D	VP4DE	VP6D	VP6DE	VPS6DE	VPS6DU	VP8DE	VP10D	VPS12DU	VP15W
Stage	2		2			2			2	2	2	2
Ultimate Vacuum	10 Microns								25 Microns			
Refrigerant Class	A1, A2						A1, A2, A3		A1, A2	A1, A2	A1, A2, A3	A1, A2, A3
Ignition Proof	✗	✗	✗	✗	✗	✗	✓	✓	✗	✗	✓	✓
Dimensions (Inches)	12.2" x 5" x 9.6"		13.1" x 5.5" x 10"						14.9" x 5.7" x 10.6"			15" x 6" x 11"
Weight	17.7 lb (8.0 kg)		22.1 lb (10.0 kg)		22.5 lb (10.2 kg)				29.8 lb (13.5 kg)	30.3 lb (13.7 kg)	30.9 lb (14.0 kg)	26.0 lb (11.7 kg)
Free Air Displacement	2 CFM @ 60Hz (48 l/m @ 50Hz)		4 CFM @ 60Hz (96 l/m @ 50Hz)		6 CFM @ 60 Hz (144 l/m @ 50 Hz)				8 CFM @ 60 Hz (192 l/m @ 50 Hz)	10 CFM @ 60Hz (240 l/m @ 50Hz)	12 CFM @ 60Hz (288 l/m @ 50Hz)	15 CFM
Motor Size (HP), RPM @ 50/60Hz	$1/3$ HP (1440, 1720 RPM)		$1/2$ HP (2880, 3440 RPM)						$2/3$ HP (2880, 3440 RPM)	$3/4$ HP (2880, 3440 RPM)	1 HP (2880, 3440 RPM)	1 HP (4200 RPM Max)
Voltage	110-120V Or 220-240V @ 50/60Hz	220-240V, 50 Hz	110-120V Or 220-240V @ 50/60Hz	220-240V, 50 Hz	110-120V Or 220-240V @ 50/60Hz	220-240V, 50 Hz		115V 60Hz	220-240V, 50 Hz	220-240V, 50 Hz	115V 60Hz	100-120VAC 50/60 Hz
Power Cord Connection to Pump	Universal IEC Socket & Voltage Selector Switch	Universal IEC Socket	Universal IEC Socket & Voltage Selector Switch	Universal IEC Socket	Universal IEC Socket & Voltage Selector Switch	Universal IEC Socket	Hard Wired Schuko Plug	Hard Wired	Universal IEC Socket	Universal IEC Socket, Voltage Selector Switch	Hard wired	10 ft. NEMA 5-15 plug
On/Off Power Switch	Yes						Yes (Ignition-proof sealed starting components)		Yes			Yes (Ignition-proof sealed starting components)
Operating Temperature Range	32°F to 125°F (0°C to 52°C)								32°F to 125°F (0°C to 52°C)			
Pro-Set® Vacuum Pump Oil Capacity	11.5 oz (330 ml)		15.5 oz (450 ml)		16 oz (470 ml)				29 oz (860 ml)	28 oz (830 ml)	27 oz (800 ml)	
Gas Ballast Valve	Yes								Yes			
Intake Fittings	SAE: $1/4$", $3/8$", ACME: $1/2$"						SAE $1/4$", $3/8$", $1/2$"		SAE $1/4$", $3/8$", $1/2$"			SAE $1/4$", $3/8$
Warranty (Years)	2	1	2	1	2	1			1	2	1	1

LEGEND
VP= Vacuum Pump; **C**= Compact; **2,4,6** = CFM; **S**= Single Stage;
VOLTAGE: **E**= 220-240VAC 50 Hz; **U** = 115VAC, 50/60 Hz.
DUAL VOLTAGE = 110-120VAC or 220-240VAC 50/60 Hz.
REFRIGERANT CLASSES: A1 (lower toxicity, non-flammable); A2 (lower toxicity, flammable); A3 (lower toxicity, higher flammability)

CE N11445

CPS

● PRO-SET® TWO 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

● 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® 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 operation and are hardwired with NEMA 115VAC plugs. Best of all, these pumps feature some of the smallest, lightest and most compact aluminum housings in the industry.

	SINGLE STAGE VACUUM PUMP SPECIFICATIONS (Standard Size)			SINGLE STAGE VACUUM PUMP SPECIFICATIONS (Compact Size)	
	VP2S	VP4S	VP6S	VPC2SU	VPC4SU
Stage	1			1	
Ultimate Vacuum	50 Microns			100 Microns	
Refrigerant Class	A1, A2			A1, A2	
Ignition Proof	✗	✗	✗	✗	✗
Dimensions (Inches)	12.2" x 5" x 9.6"		13.1" x 5.5" x 10"	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)	9.3 lb (4.2 kg)	11.0 lb (5 kg)
Free Air Displacement	2 CFM @ 60Hz (48 l/m @ 50Hz)	4 CFM @ 60Hz (96 l/m @ 50Hz)	6 CFM @ 60 Hz (144 l/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	$1/4$ HP (1440 1720 RPM)	$1/3$ (HP) 2880/3440	$1/2$ HP (2880, 3440 RPM)	$1/5$ HP (2880, 3440 RPM)	$1/4$ HP (2880, 3440 RPM)
Voltage	Dual (110-120V Or 220-240V @ 50/60Hz)			115V @ 60 Hz	115V @ 60 Hz
Power Cord Connection to Pump	Universal IEC Socket, Voltage Selector Switch, Nema 15 Plug			Hardwired, Nema 115V Plug	Hardwired, Nema 115V Plug
On/Off Power Switch	Yes			Yes	
Operating Temperature Range	32°F to 125°F (0°C to 52°C)			32°F to 125°F (0°C to 52°C)	
Pro-Set® Vacuum Pump Oil Capacity	16 oz (470 ml)		19 oz (540 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: $1/4$", ACME: $1/2$"	
Warranty (Years)	2			1	

LEGEND
VP= Vacuum Pump; **C**= Compact; **2,4,6** = CFM; **S**= Single Stage;
VOLTAGE: **E**= 220-240VAC 50 Hz; **U** = 115VAC, 50/60 Hz.
DUAL VOLTAGE = 110-120VAC or 220-240VAC 50/60 Hz.
REFRIGERANT CLASSES: A1 (lower toxicity, non-flammable); A2 (lower toxicity, flammable); A3 (lower toxicity, higher flammability)

CE ✓ N11445

CPS®

CPS
Use with the
CPS Link app
for enhanced
features

Bluetooth®

VP15W WIRELESS VACUUM PUMP
The VP15W is the world's first wireless vacuum pump with an integral solenoid and ignition proof starting components. Weighing just 19.5lbs and built around a lightweight, variable speed DC motor, the VP15W is designed for efficient and safe operation. It can be paired to a mobile device running the CPS Link app to automate service routines.

Fast and easy to use
Variable speed, high torque DC motor for ramp up starts and a built-in solenoid for programmable evacuation routines. At 26 lbs, lightest weight in its category for easy transport to jobsites.

Safe to operate
Ignition proof starting components provide safe jobsite start up.

Instantly share a job snap-shot
The CPS Link app automatically logs jobsite readings for instant e-mailing to clients, home office, others

FEATURES AND BENEFITS:
- 2 stage, variable speed, brushless, 1 HP DC motor for deeper ultimate vacuum, greater efficiency, lighter weight and longer pump life
- Conventional or wireless operation with automatic evacuation (when paired to a mobile device with CPS Link and paired to CPS VG200W Wireless Vacuum Gauge
- Ignition proof design for safe operation using Class A1, A2, A2L, A3 & Ammonia
- Solenoid valve control inlet port prevents oil siphoning, allows for automatic vacuum
- Gas ballast valve reduces moisture level in oil and extends oil life
- Performance verification
- Designed by CPS Products, Inc in USA

SMART FEATURES:
- Built-in solenoid valve for automatic operation
- Set test parameters for your specific needs
- Convenient, remote monitoring and/or operation from your mobile device for long evacuations up to 150 ft. (46m) away (line of sight)
- Log and store job data, and e-mail or export job files for paperless reference
- Geotag feature identifies where and when work performed
- Multi-language; Select from English, Spanish, French or German

SPECIFICATIONS

Stage	2
Ultimate Vacuum	20 Microns
Refrigerant Class	A1, A2, A2L, A3
Dimensions (Inches)	15" x 6" x 11"
Weight	26.0 lb (11.7 kg)
Maximum Free Air Displacement	15 CFM
Motor Size (HP), RPM @ 50/60Hz	1 HP (4200 RPM Max)
Voltage	100-120VAC 50/60Hz
Power Cord Connection to Pump	Hard Wired Nema 5-15 Plug 10 Ft (3 m)
Ignition Proof Construction	Meets ANSI 12.12.1
Operating Temperature Range	32°F to 125°F (0°C to 52°C)
Vacuum Pump Oil Capacity	27 Oz (800 ml)
Intake Fittings	1/4" & 3/8" SAE Male
Agency Approvals	CE, FCC, TUV, ICES-003
Warranty (Years)	1

WHEN PAIRED TO A MOBILE DEVICE

Wireless Communication	Bluetooth
Wireless Transmission Range	150 Ft (45.7m) Direct Line Of Sight
View, Log Or Export Files	Vacuum Level, Total Run Time, Run Time Since Last Oil Change, On/Off Cycles, RPM, Watts
Integrate Other CPS Wireless Devices Into Service Routine	VG200W (Wireless Vacuum Gauge) to Automate Vacuum Procedures
Geotag Feature	Time, Date, Location

Gas Ballast Valve   Hoist Feature   Built-in Solenoid

CPS®
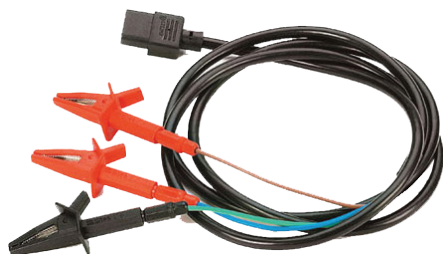
VPXJ220
JUMPER CORD KIT
220 VAC jumper power cord for locations where 110 voltage is not available.

OIL PORT CAPS
Oil mist preventer exhaust port.
VPXOMP for 2-6 CFM
VPXOMP2 for 8-12 CFM

AVCVAC
VACUUM PUMP CAP KIT
Vacuum pump cap kit with chains on one common ring.

1/2˝ ACME
1/4˝ SAE
1/2˝ SAE
3/8˝ SAE

TLOP
HAND OIL PUMP
- Removes oil from systems for recovery and conversion
- Adds oil to systems (2.6 oz /78 ml) per stroke against 200 psi pressure
- Universal stopper fits standard openings in 1, 2-1/2 and 5 gallon oil containers
- Automatic bleed valve equalizes pressure inside and outside of the oil container
- Use with alkyl-benzene, ester-based, polyol ester, mineral and synthetic oils. (not for use with ammonia laden oil)
- Suction transfer hose and fittings included

PRO-SET® PREMIUM VACUUM PUMP OILS
Pro-Set Premium Vacuum Pump Oil is an extremely high quality, severely hydro-treated vacuum pump oil and can be used in pumps made by most manufacturers.

Vacuum pump oil should always be clean and free of contaminants such as moisture, acids, vapors, dirt etc., to extend the life of your pump. So, change it after each use with Pro-Set Premium Vacuum Pump oil (available in pints, quarts and gallons).

VPOG6 (1 Gallon, 6/Case)
VPOQ12 (1 Quart, 12/Case)
VPOP12 (1 Pint, 12/Case)

SPECIFICATIONS	VG200W Bluetooth®	VG200		PT200W Bluetooth®
Description	Wireelss Vacuum Gauge	Vacrometer Digital Vacuum Gauge		Wireless Pressure / Temperature Gauge
Accuracy	+/- 10% Of Reading	+/- 10% Of Reading		1% of reading ± 0.1PSIG (0.01 bar)
Display Type	Large, 5 digit LCD display with low battery indicator	5 digit LCD display with continual digital readout		LCD, 5 Digit
Display Auto-Off	After 10 minutes of no use	After 5 minutes of operation		10 minutes = default if no key pressed, no wireless connection, gauge not logging data
Operating Vacuum Range	Atmospheric pressure to 0 microns			n/a
Maximum Working Pressure	400 Psig			750 PSIG MWP, 3000 PSIG Burst
Operating Temperature Range	Compensated (Accuracy as stated): 32°F to 122°F (0°C to 50°C); Non-Compensated: Add +/- 0.5% error for every °C; Outside Compensated: -22° F to 158° F (-30° C to 70° C)			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 Alkaline Battery (ANSI 1604AC – IEC 6LR61), included			
Battery Life	20 hr continuous use			Up to 40 hours continuous use
Battery Indicator	Battery symbol with 3 segments	Battery symbol with 3 segment Power Level Bar Graph		Battery symbol with 3 segments
Mechanical Connection	Standard 1/4" Female SAE refrigerant hose with core depressor	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

Bluetooth®

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.

Use with the CPS Link app for enhanced features

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 clamshell
• Designed and manufactured in the USA with US and foreign components

INCLUDES
#AVT45SS Stainless Steel Adapter
#VGXH Swivel Hanging Hook
#VGXC Padded Vinyl Storage Case

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 performed
• **Geolocation**- Record where (global coordinates) and when (time stamp) jobs performed
• Set low and high alarms
• Cloud backup of data

CPS®

◆ Bluetooth®

PT200W WIRELESS PRESSURE, TEMPERATURE 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.

Use with the CPS Link app for enhanced 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.

INCLUDES
#AVT45SS Stainless Steel Adapter
#VGXH Swivel Hanging Hook

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

VG200
VACROMETER™ DIGITAL VACUUM GAUGE

- Advanced sensor design with self-heated thermistor bridge and automatic temperature compensation
- Field cleanable sensor designed to withstand 400 Psi of positive pressure
- Brass T adapter (AVT45), hanging hook (VGXH) and carrying case (VGXC) included with VG200
- Calibrated to strict NIST standards for best-in-class accuracy and reliability
- Designed and manufactured in the USA with U.S. and globally sourced components

INCLUDES
#AVT45 Brass Adapter
#VGXH Swivel Hanging Hook
#VGXC Padded Vinyl Storage Case
OPTIONAL
#AVT45SS Stainless Steel Adapter

GAUGE ACCESSORIES

AVT45
Brass Adapter
- 1/4" SAE female knurl x ¼" SAE male x ¼" SAE male core

VGXH
Swivel Hanging Hook
- For VG200, VG200W, PT200W

Use with the CPS Link app for enhanced features

Bluetooth®

VOLT-100 WIRELESS CLAMP POWER METER

- Use with or without the CPS Link app. Connects to Apple and Android smart phones & tablets via Bluetooth
- Power factoring to determine true power consumption
- Data logging of electrical readings
- Utility data feed calculates actual cost/hour of appliances
- CAT. III 1,000 V rating
- True RMS measurements
- Non-contact voltage tester
- Maximum Voltage: 750 V AC; 1000 V DC
- Autorange and manual measuring
- Measuring range overload protection
- Display auto-off
- Display back light
- Automatic polarity indication
- Max/Min and relative measuring function

MEASURE:
- Inrush current
- AC current
- Resistance
- AC/DC voltage Phase angle
- Harmonics
- Frequency
- Capacitance
- Duty cycle
- Diode connection

INCLUDES:
- 39˝ (1 m) test leads
- Durable storage case
- 9V battery
- Owner's manual
- One year warranty

SPECIFICATIONS

Data Logging	Up to 1,000 samples
Sampling Rate	1X/sec. for max of 16 mins., 40 secs.
Maximum Input Current	1000A AC
Maximum Input Voltage	750V AC (TRMS); 1000V DC
Wattage	3W/100W/4000W/10kW/100kW/750kW
AC Current	60A/600A/1000A
Inrush Current	60A/600A/1000A
Resistance	600Ω/6kΩ/60kΩ/600kΩ 6MΩ/60MΩ
Capacitance	9.999nF/99.99nF/999.9nF/9.999μF 99.99μF/999.9μF/9.999mF/99.99mF
Jaw Opening	1.6˝ (42mm) Max.
Size (H x W x D)	9.4˝ x 1.9˝ x 3.6˝ (238 x 50 x 92 mm)
Weight	0.92 lb (420 g)

Bluetooth® CE cETLus Intertek FC RoHS CAT III 1000V
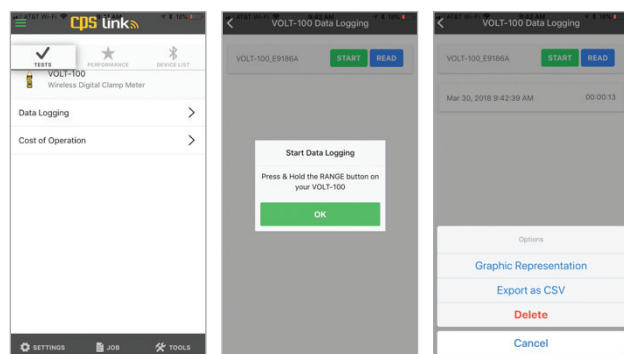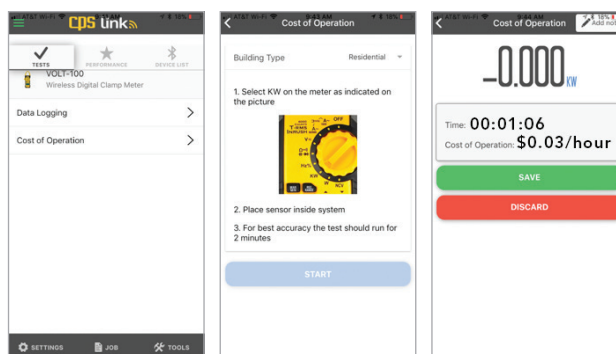
Clamshell package   Included items

Screen Shots (When Paired To A Mobile Device Running The CPS Link App

Data Logging Capability

Cost Of Operation Capability

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 inrush measurements and non-contact voltage detection.

- Versatile for testing AC/DC voltage, AC/DC current, resistance, capacitance, and frequency
- True RMS Measurement
- Inrush Current Measurement
- Relative Measurement
- Non-Contact Voltage Detection
- Auto & Manual Ranging
- Diode Open Voltage 3.2V
- MAX/MIN
- Data Hold
- Display 6000 Counts
- Jaw Opening: 1.6" (40mm)
- Auto Power Off
- Continuity Buzzer <50Ω
- Display Backlight
- Work Light
- Low Battery Display
- Secondary injection molded case, safety as per IEC1010 1000V CAT III

SPECIFICATIONS

DC Voltage	60mV/600mV/6V/60V/600V
AC Voltage	60mV/600mV/6V/60V/600V
DC Current	60A/600A/1000A
AC Current	60A/600A/1000A
Inrush Current	60A/600A/1000A
Resistance	600Ω/6kΩ/60kΩ/600kΩ 6MΩ/60MΩ
Capacitance	10nF/100nF/1000nF/10µF 100µF/1000µF/10mF/100mF
Frequency (A)	100Hz/1000Hz
Frequency (V)	100Hz/1000Hz/10kHz
Frequency (Hz/Duty)	10Hz/100Hz/1000Hz/10kHz 100kHz/1000kHz/10MHz
Duty Cycle	0.1%~99.9%
Battery	9V battery
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)

Clamshell package   **Included items**   **Back view**

TM360
4 STATION THERMO-PSYCHROMETER

TM360 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

INCLUDES
- Accessory probes TMX2A, TMX2G, TMX2S

TMX2A
Moving Air Probe, 15' (4.5 m) Lead
COMMON USES
Air: Ducting, registers, air movement across condensers, ambient air
OPERATING TEMP RANGE
-40˚F to 221˚F
-40˚C to +105˚C

TMX2G
General Purpose Probe, 15' (4.5 m) Lead
COMMON USES
Surface, Air, Liquids: Copper pipe, ambient air, RH wet sock method
OPERATING TEMP RANGE
-40˚F to 257˚F
-40˚C to +125˚C

TMX2GA
General Purpose Air Probe, 15' (4.5 m) Lead
COMMON USES
Air, Surface, Liquids: Ambient air, ducting, registers, air movement across condensers.
OPERATING TEMP RANGE
-40˚F to 257˚F
-40˚C to +125˚C

TMX2P
Puncture Probe , 15' (4.5 m) Lead
COMMON USES
Surface, Liquids (Shaft Only): Internal temperatures of frozen materials, air ducts
OPERATING TEMP RANGE
-40˚F to 257˚F
-40˚C to +125˚C

TMX2S
Velcro Strap Pipe Probe, 15' (4.5 m) Lead
COMMON USES
Surface: Temperatures of Copper Tubing
OPERATING TEMP RANGE
-40˚F to 257˚F
-40˚C to +125˚C

TMX3C
Clamp-On Surface Probe, 15' (4.5 m) Lead
COMMON USES
Surface: temperatures of copper tubing
OPERATING TEMP RANGE
-40˚F to 221˚F
-40˚C to +105˚C

TMX3RH
Relative Humidity / Dry Bulb / Wet Bulb / Dew Point Probe
COMMON USES
Specialty RH Probe: Measure indoor air quality, set/troubleshoot humidity devices
OPERATING TEMP RANGE
-40˚F to 194˚F
-40˚C to +90˚C

TMX3WB
Wet Bulb Socks
COMMON USES
for use With TM360
OPERATING TEMP RANGE
-40˚F to 194˚F
-40˚C to +90˚C

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

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	±2ºC (±4ºF) or ±2% of reading
Display	Digital Backlit LCD
Resolution	1ºC/ºF
Batteries	2 AAA
Warranty	1 year

Built in LED Light

	TMAP	**TMDP**
	Analog Pocket Thermometer	**Digital Pocket Thermometer**
Temperature Scale:	Fahrenheit	ºF & ºC (selectable)
Thermal Response:	Instant	Instant
Dial Size/ Lens	1" Clear polycarbonate	LCD Power: One 1.5V button-cell battery (included), Auto-Off: After 45 minutes non-use
Probe/Case:	5" stainless steel, with protective pen type case & clip	Stainless steel (5" (127mm) with Protective Plastic Sleeve for clip-on pocket
Measuring Range:	0~220°F	-58°F ~ 302°F, -50°C ~ 150°C
Graduation:	2°F	Resolution (C): 0.1C (Temps < 100C); 0.5C (Other Ranges)\
Accuracy:	+/- 2°F (30°F ~90°F); +/-5°F (other ranges)	Fahrenheit: +/- 1.8°F (30°F ~90°F); +/-3.6°F (Other Ranges) Celsius: +/-1°C (0°C ~100°C); +/- 2°C (Other Ranges) Meets RoHS/CE standard
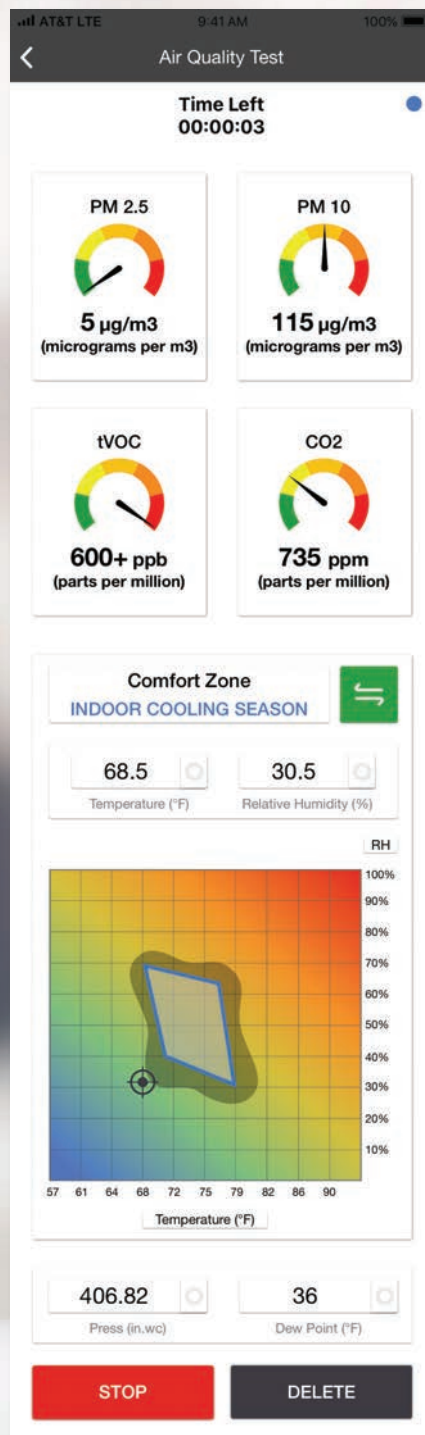
SMARTAIR™ QUALITY SOLUTIONS

 Bluetooth®

IAQPRO SMARTAIR
PROFESSIONAL INDOOR AIR QUALITY METER

The industry's first smart tool that helps HVAC professionals identify indoor air quality issues, determine potential causes, and recommend effective solutions. The SmartAir™ diagnostic program is designed for the residential market, but has the accuracy and performance to measure indoor air quality in commercial environments as well.

BECOME AN AIR QUALITY PROFESSIONAL

The SmartAir's sensors test 8 air quality factors every second. Simply place the SmartAir device in the area to be tested and begin the test. Test results include numerical air quality data plus recommendations to solve air quality problems.

SELL ADDITIONAL PRODUCTS AND SERVICES

The CPS Link™ app generates a customizable report of products, services and prices for the technician to resolve any air quality problems.

INSTANTLY SHARE A JOB SNAP-SHOT

While viewing live air quality data on a mobile device, technicians can take a snapshot or generate a full report for instant e-mailing to clients, the company office, others.
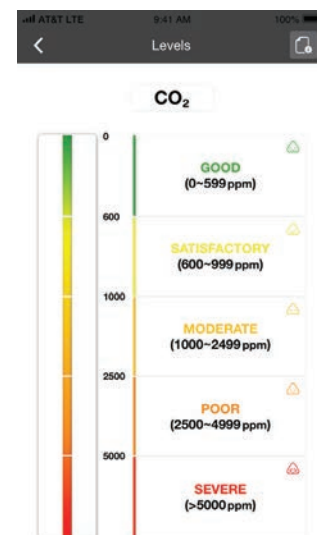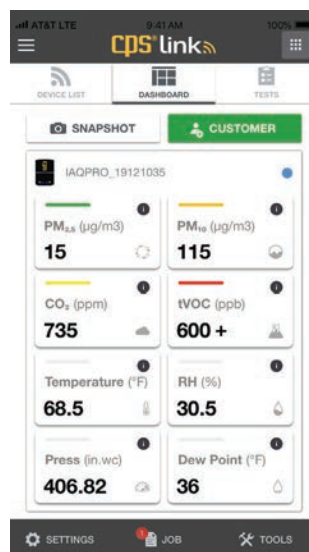
SPECIFICATIONS

Size (HWD)	5" x 3.5" x 2.9" (12.7 x 8.9 x 7.4 cm)
Weight	0.65 Lb (0.3 kg)
Wireless Transmission Range	Up to 150 Ft (45.7m) Direct Line Of Sight
Air Quality Test	30 Minutes (Default)
Power Cord	6.66 Ft. (2.02 m)
Storage Case	Molded Soft Case, With Carrying Handle
Agency Approvals	FCC, CE, ICES-003
Warranty	1 year
Geotag Feature	Time, Date, Location (Where Work Done)
Designed In USA	✓
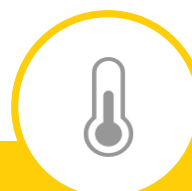
Tests 8 Indoor Air Quality Factors

Total Volatile Organic Compounds - Detects the presence of tVOCs (chemical pollution) commonly given off by interior building materials such as carpet, paint, upholstery, vinyl flooring, cleaning products, cosmetics, burning wood etc.

Carbon Dioxide (CO₂) - Detects combustible gases and non-combustible inert gases (carbon dioxide, nitrogen, etc.) any of which may pose a threat to humans if found in high enough concentrations inside a home or business.

Particulate Matter (PM2.5, PM10) - Measures the amount of inhalable particle matter that can penetrate the lungs and cause health problems. Examples include dust, pet dander, pollen and other airborne allergens with a diameter below 2.5 and 10 microns.

Temperature, Relative Humidity, Dew Point and Pressure - Measure indoor air Temperature and Dew Point in Fahrenheit or Celsius, Relative Humidity (%) and Building Pressure (in Hg, atm, kPa, or mb units).

CPS Link (Patent # 9,043,161)

ACCURATE, AFFORDABLE REAL-TIME AIRFLOW READINGS IN A MATTER OF SECONDS.

LIGHTWEIGHT AND COMPACT
Weighs less than 5 pounds

AFFORDABLE
The Easy-Hood costs hundreds or thousands less than competitive models!

EASY OPERATION
No complicated data entry needed. No traversing a grille like competitive models. Automatically generates test and balance reports. Easily share job data to validate performance.

ABM-HOOD
ABM EASYHOOD™ AIRFLOW CAPTURE HOOD
FOR USE WITH ABM-100 OR ABM-200 AIRFLOW METERS
• Adjustable spring-lock smartphone platform
• Vortex air straightener
• Rubber grip handles
• Durable molded housing
• Built-in rubber airflow seal

ABM-HOOD-200
INCLUDES ABM-HOOD AND ABM-200 AIRFLOW METER
• ABM-200 Airflow Environmental Meter
• #ABM-HOOD Airflow capture hood with expansion hood
• Integrated vortex air straightener
• Low airflow adapter plate
• Protective storage case
*** Smart phone not included**

Up to 12" x 12" vents

Up to 24"x 24" vents with Expansion Hood

Low airflow adapter plate

REPLACEMENT PARTS
ABMHOODX1   Phone Base Door
ABMHOODX3   Expansion Base
ABMHOODX5   Extension Pole Assembly
ABMHOODX6   Low Airflow Plate

Easy operation with online guidance and visual instruction

EASY-TO-USE CPS LINK™ APP MAKES AIRFLOW ANALYSIS A BREEZE!

MEASURE AND RECORD:	USING ABM-100	USING ABM-200
AIRFLOW VOLUME Minimum, Average, Maximum	✓	✓
AIRFLOW VELOCITY	✓	
TEMPERATURE		✓
WET BULB		✓
DEW POINT		✓
RELATIVE HUMIDITY		✓

Bluetooth®

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

Use with the CPS Link app for enhanced features

- Portable, fits in your pocket
- Easy to use — no math or formulas to remember
- Automatically generates and emails detailed reports
- 2.5" H x 1.75" W x .75" D
- Plastic storage case with color sleeve

Bluetooth®

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.

Use with the CPS Link app for enhanced features

- On-screen guidance ensures accurate readings
- Rugged housing with 1/4" 20 mount fitting for hands-free use
- Attach to the EXP-64 – a 64" aluminum extension pole (sold separately) to take readings without using a ladder
- Connects over 20X faster than traditional Bluetooth
- Emails personalized, professional reports
- 3.3" H x 1.8" W x 0.6" D
- Plastic storage case with color sleeve

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 has a rubber grip handle and telescopes from 18" to 64". It has a second 1/4"-20" threaded fitting on the handle end 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 tripods for longer term analysis of airflow from wall or ceiling vents

---

TRI-MIN
MINI-TRIPOD

This mini tripod has a 1/4"-20 top fitting to attach the TS-100 or ABM-200. It adjusts from 6-8" in height and is collapsible for compact storage.

Makes extended environmental condition readings easy.

Bluetooth®

TS-100 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 ¼"-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
- Plastic storage case with color sleeve

Bluetooth®

TS-100-6PK TEMPERATURE AND HUMIDITY DATA LOGGERS

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.

Reading Increments	Data Log Capacity	
	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

Use with the CPS Link app for enhanced features

Use with the CPS Link app for enhanced features

Bluetooth®

SPM-100
STATIC PRESSURE METER

Harnessing the power of your smart phone or tablet with a free app that provides on-screen 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 with color sleeve

PRB-KIT
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 with color sleeve

Bluetooth®

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 smart phone 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 with color sleeve

THREE SIZES OF AIRFLOW BALANCING VALVES FOR DIFFERENT ROOM SIZES

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

SPECIFICATIONS	ABMHBK410 (10 Pack Kit) ABMHBV4* (Single Pack)	ABMHBK510 (10 Pack Kit) ABMHBV5* (Single Pack)	ABMHBK610 (10 Pack Kit) ABMHBV6* (Single Pack)
Outside Diameter (Rubber Gasket)	3.8" (97mm)	4.8" (122mm)	5.7" (149 mm)
Height	3.5" (88mm)	3.8" (122mm)	5.2" (134mm)
Weight (One Valve)	.203 Lb (90g)	.437 lb (200g)	.609 Lb (280g)
Number of Unique Set Points (CFM)	20	20	24
Airflow Range (CFM)	25-130 CFM	25-130 CFM	50-275 CFM
Airflow Lab Tested at Each Set Point	Yes		
Airflow Accuracy Range	±10% Within 0.2 to 2.0 w.c.		
Temperature Range (Suitable Applications)	25F to 150F (-4C to 65C)		
Static Pressure Range	0.2 to 2.0 Inches w.c.		
Rubber Gasket (Insertion Into Round Duct)	Reversible- Use on either end		
Blade Damper for Quiet Operation	Yes		
Anti-Microbial Plastic Compound	Yes		
UL Tested & Classified	UL 2043		
Warranty	1 Year		

*Min. order qty = 4

HOME BALANCING VALVES

Traditional airflow balancing devices cannot respond to system changes. Too much ventilation means wasted energy, while too little ventilation leads to poor air quality. CPS Home Balancing Valves are designed to maintain a constant, accurate airflow volume when installed in residential forced air ductwork. Each Home Balancing Valve 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.

FEATURES

- Eliminates hot/cold areas in your home
- Provides greater comfort
- Reduces energy use
- Improves indoor air quality
- Easy to set airflow volumes

APPLICATIONS

- Precise airflow regulation in forced air ventilation systems in residential buildings.
- Automatic balancing of supply grilles in residential forced air heating and cooling systems.
- Any HVAC application with a static pressure between 0.2 and 2.0 inches w.c.
- For temperatures ranging from 25° to 150°F (-4° to 65°C)

TYPICAL USES

Multi-family condos, apartments, hotels, dorms, state energy efficiency programs, housing projects, assisted living facilities.

Use the convenient "Room Airflow Calculator" within the CPS Link app to determine the CFM setting of the Home Balancing Valves to use in each room of your home.
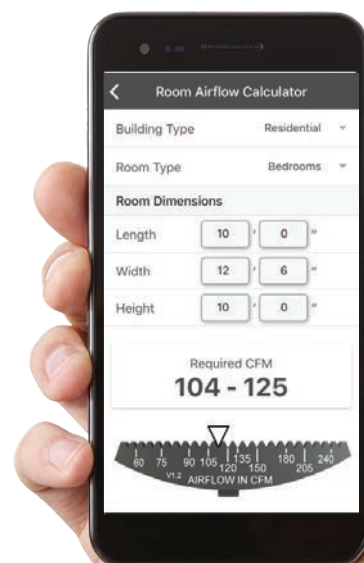
BLACKMAX® WIRELESS MD SERIES

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°C (+/- 0.4°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

Use with the CPS Link app for enhanced features

Bluetooth®

Bluetooth®

SIMPLICITY & VERSATILITY
- Preloaded with over 100 refrigerants with quick access to your favorite five
- 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

Connections For Therm-istor Sensors

9V DC Charger Port

USE WITH CPS LINK™ FOR ENHANCED FUNCTIONS
- 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.

Accessories (Included Or Purchase Separately)			
Wireless Digital Manifolds	Three 5' Black & Chrome Ball Valve Charging Hoses HP5BKEZ3	One 5' Heavy Duty Black & Chrome Vacuum Hose HV5Z	Soft Case For All Digital Manifolds
MD100W	✗	✗	Optional
MD100WVHE	✓	✓	Optional

MD100W DIGITAL MANIFOLD SPECIFICATIONS

Accuracy	+/- 10% of reading or +/- 10 microns, whichever is greater	
Sensor Type	Self - heated thermistor bridge with integral temperature compensation from 0 to 50 °C (32 to 122 °F).	
Operating Temperature Range	Compensated (accuracy as stated): 0°C TO 50°C (32°F TO 122°F)	
	Non-compensated (add +/- 0.5% of reading error for every °C outside compensated range): -10 to 0°C (14 to 32°F)	
Operating and Storage Humidity	0 to 95%, non-condensing	
Storage Temperature	-40 to 85°C (-40 to 185°F)	
Display Pressure Range	AUTO-RANGING SCALES:	
	0 to 99 microns	1 micron resolution
	100 to 990 microns	10 micron resolution
	1000 to 9900 microns	20 micron resolution
	10000 to 25000 microns	50 micron resolution
High side pressure range	-14.5 to 800.0 PSIG (-1.0 to 55 bar)	
Low side pressure range	-14.5 to 800.0 PSIG (-1.0 to 55 bar)	
Pressure reading accuracy	+/- 1% of reading or +/- 0.5 PSIG (+/- 0.05 bar)	
Pressure reading resolution	0.5 PSIG (0.05 bar)	
High and low side burst pressure	1500.0 PSIG (103.4 bar)	
High side temperature range	-58.0 °F to 302 °F (-50 °C to 150°C)	
Low side temperature range	-58.0 °F to 302 °F (-50 °C to 150°C)	
Temperature reading accuracy	+/- 0.36 °F (+/- 0.2°C)	
Vacuum indication accuracy	+/- 10 microns (requires MDXVG accessory)	
SH, SC & saturation temperature accuracy	+/- 0.5°F (+/- 0.3°C)	
Instrument working temperature	-4.0 °F to 122°F (-20°C to 50°C)	
Communication range (with CPS Link™)	300 ft. (max) (Depends on device capabilities)	
Instrument working RH range	0% to 100% non-condensing	
APO (Automatic Power Off)	10 minutes. Can be disabled by user.	
4 valve 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)	
Display Life using 4 industrial alkaline AA batteries (included)	Backlight full ON:	25+ hrs. continuous duty
	Backlight full OFF:	60+ hrs. continuous duty
Display Life using 4 Rechargeable NiMH AA batteries (not included)	Backlight full ON:	20+ hrs. continuous duty from full charge
	Backlight full OFF:	50+ hrs. continuous duty from full charge

BLACKMAX® BLACK & CHROME™ VORTECH™ VALVE SERIES

- Two and four valve black anodized aircraft aluminum machined body
- Vortech™ 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 fittings; 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

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

- Two valve black anodized aircraft aluminum machined body
- Vortech™ deep vacuum valves
- Triple Seal™ piston valves
- Available in 3-1/8" (80 mm) class 1.0 accuracy gauges or 2-5/8"(68 mm) class 1.6 accuracy gauges built with internal silicon dampening cup for flutter-free operation
- Nickel plated 1/4" SAE fittings; 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

Manifold Body			Refrigerant(s)				Gauges						Manifold and Gauge Set	
Description	Valves	Fittings	R-22	R-134 A	R-404 A	R-410 A	Gauge Size	Accuracy	Scale	Pressure	Low Gauge	High Gauge	With (3) 5' Premium Black & Chrome™ Hoses	With (3) 5' with Ball Valve
BLACK AND CHROME™ VORTECH™ VALVE SERIES	4	1/4" SAE 45°	●	●	●	●	3-1/8"	Class 1.0	°F	Psi	RGH4L	RGH4H	MV4H4P5Z	MV4H4P5EZ
BLACK AND CHROME™ TRIPLE SEAL™ SERIES	2	1/4" SAE 45°	●	●	●	●	2-5/8"	Class 1.6	°F	Psi	RGH5L	RGH5H	MBH5P5Z	MBH5P5EZ
			●	●	●	●	3-1/8"	Class 1.0	°F	Psi	RGH4L	RGH4H	MBH4P5Z	MBH4P5EZ

PRO-SET® WORKINGMAN'S CHOICE SERIES

- 3-1/8" (80 mm) class 1.0 accuracy gauges
- Two valve anodized aluminum black body
- Triple Seal™ 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

PRO-SET® PREMIUM PISTON SERIES BLACK BODY

- 2-5/8" (68 mm) class 1.6 accuracy gauges
- Two valve anodized aluminum black body
- Triple Seal™ 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

Manifold Body			Refrigerant(s)				Gauges						Manifold and Gauge Set			
Description	Valves	Fittings	R-22	R-134 A	R-404 A	R-410 A	Gauge Size	Accuracy	Scale	Pressure	Low Gauge	High Gauge	Manifold and Gauge only (No Hoses)	with (3) 5' Premium Pro-Set® Barrier Hoses	with (3) 3' Premium Pro-Set® Barrier Hoses with Anti-Blowback valves	with (3) 3' Premium Pro-Set® Barrier Hoses with Ball Valves
WORKINGMAN'S CHOICE SERIES	2	1/4" SAE 45°	●	●	●	●	3-1/8"	Class 1.0	°F	Psi	RGH7L	RGH7H	MT2H7	MT2H7P5	MT2H7P5A	MT2H7P5E
BLACK BODY SERIES	2	1/4" SAE 45°	●	●	●		2-5/8"	Class 1.6	°F	Psi	RGDL	RGDH	MBD	MBDP5	–	–
			●		●	●					RGHL	RGHH	MBH	MBHP5	MBHP5A	MBHP5E
PINK BODY SERIES	2	1/2"-20 UNF				●	2-5/8"	Class 1.6	°F/°C	Psi/kPa	RGBL	RGBH	–	–	–	–
		1/4" SAE 45°				●	2-5/8"	Class 1.6	°F/°C	Psi/kPa	RGBL	RGBH	–	–	–	–
			●		●	●			°F	Psi	RGHL	RGHH	–	–	–	–
BALL VALVE SERIES	2	1/4" SAE 45°	●		●	●	2-5/8"	Class 1.6	°F	Psi	RGHL	RGHH	–	–	–	–

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

MXMH
Hanging hook for all manifolds

MXPV
Complete BlackMax® piston valve assembly

MXPK
Replacement valve handle w/ labels for BlackMax® manifolds

PRO-SET® PREMIUM REFRIGERANT SERVICE HOSES

- UL recognized assemblies (File SA11622)
- Nylon permeation barrier (meets SAEJ2196 requirements for CFC, HCFC and HFC refrigerants)
- Rated for 4000 psi minimum burst and 800 psi maximum working pressure
- Extra deep knurling on nuts for easy grip
- Adjustable valve core depressor
- Made in USA

PRO-SET® STANDARD REFRIGERANT SERVICE HOSES

- Rated for 3000 psi minimum burst and 750 psi maximum working pressure

1/4" Hoses for all refrigerants

1/4" Hoses w/45° ball valve on end

1/4" Hoses w/ Microseal™ anti-blowback valve

1/4" In-line ball valve hoses

		PREMIUM	STANDARD	PREMIUM	STANDARD	PREMIUM	STANDARD	PREMIUM	STANDARD
3' (90 cm)	Yellow	HP3Y	HS3Y*	–	–	–	–	–	–
	Blue	–	HS3B*	–	–	–	–	–	–
	Red	–	HS3R	–	–	–	–	–	–
	3-Pack	HP3*	HS3	–	–	HP3A*	–	–	–
5' (150 cm)	Yellow	HP5Y*	HS5Y*	HP5YE	–	HP5YA	HS5YA	HP5YL	HS5YL*
	Blue	HP5B	HS5B*	HP5BE	–	HP5BA	HS5BA	HP5BL	HS5BL*
	Red	HP5R	HS5R	HP5RE*	–	HP5RA*	HS5RA	HP5RL	HS5RL*
	3-Pack	HP5*	HS5*	HP5E	–	HP5A*	HS5A	HP5L*	HS5L
6' (180 cm)	Yellow	HP6Y*	HS6Y*	–	–	HP6YA*	–	–	–
	Blue	HP6B	HS6B*	–	–	HP6BA	–	–	–
	Red	HP6R	HS6R	–	–	HP6RA*	–	–	–
	3-Pack	HP6*	HS6	–	HS6E*	HP6A*	–	–	–

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

HP5BKEZ3

HP5BKZ3

HV5Z

HV3

PRO-SET® PREMIUM BARRIER CHARGING HOSES WITH 1/4" SAE FITTINGS

	HP5BKEZ3	HP5BKZ3	HP5BKAZ3	HP5BKEZ	HP5BKZ
Length	5 ft.				
Hose Ends	Straight & BV (RYB)	Straight	Straight & ABB	Straight & BV	Straight
Qty Hoses	3	3	3	1	1
Neoprene Gaskets	✓				
Permeation Barrier	Nylon				
Working Pressure	800 psig				
Burst Rating	4000 psig				
Ferrule Finish	Bright Nickel				
Crimp	8 Sided				
Qty/Pack	3	3	3	1	1

PRO-SET 3/8" PREMIUM HEAVY DUTY VACUUM HOSES

	HV5	HV5E	HV5Z	HV6	HV6E
Length	5 ft.			6 ft.	
Hose I.D.	5/16"				
Hose Color	Black				
Hose Ends	Straight	BV, Straight	Straight	Straight	BV, Straight
Neoprene Gaskets	✓				
Working Pressure	460 psig				
Burst Rating	2300 psig				
Ferrule Finish	Deep Knurl, Brass				
Crimp	8 Sided				
Qty/Pack	1				

HXG
(10) Hose 1/4˝ SAE Neoprene Gaskets

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

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

HXTG
(10) Hose Gaskets, 1/4˝ SAE 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

	CPS #	Qty/Pk	Female	Male	Other
	BV	1	$^1/_4$" SAE	$^1/_4$" SAE	Straight
	BV3	3	$^1/_4$" SAE	$^1/_4$" SAE	Straight
	BV38	1	$^3/_8$" SAE	$^3/_8$" SAE	Straight
	BV410A	1	5/16" (½" - 20 UNF)	$^1/_4$" SAE	Straight
	BV45	1	$^1/_4$" SAE 45°	$^1/_4$" SAE	45°
	BV453	3	$^1/_4$" SAE 45°	$^1/_4$" SAE	45°
	BV90	1	$^1/_4$" SAE 90°	$^1/_4$" SAE	90°
	BVM	1	$^1/_4$" SAE	$^1/_4$" SAE	Straight

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

PRO-SET® PREMIUM 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 "SAE	
	6" (15,2 cm)	12" (30,5 cm)
Yellow	HTYE	HT1YE
Blue	HTBE	–
Red	HTRE	–
3-Pack	HTE	–

PRO-SET® MICROSEAL™ ANTI-BLOW BACK VALVES

	CPS #	Qty/Pk	Female	Male	Other
	AB3	3	$^1/_4$" SAE	$^1/_4$" 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	$^1/_4$" SAE 45°	1/8" FPT	$^1/_8$" FNPT is not an AB
	AB45	1	$^1/_4$" SAE 45°	1/4" SAE	Straight

BLACKMAX® PREMIUM TUBE CUTTERS

Featuring patented Set N Cut™ technology, spring-loaded center groove rollers and cutting wheels for a fast and smooth cut every time, even on slightly deformed tube.

Set N Cut™

Set N Cut™

Set N Cut™

BTC100 BLACKMAX® ULTRA MINI TUBE CUTTER
- Great for confined spaces
- Cutting Range: 1/8˝ - 5/8˝ (4-16 mm) O.D.
- Chromed, hardened cutting wheel
- Quick-release pin for fast cutting wheel replacement
- Soft/Hard cutting settings for copper and aluminum
- Durable cast aluminum
- Size (HWD) 1.9" x 1.5" x 0.6" (50 x 37 x 15 mm)

REPLACEMENT PARTS
BTCXC3   Nickel Plated Cutting Wheel
BTCXP4   Quick Release Pin

BTC200 BLACKMAX® MINI TUBE CUTTER
- Cutting Range: 1/8˝ - 7/8˝ (3-22 mm) O.D.
- Chromed, hardened cutting wheel
- Quick-release pin for fast cutting wheel replacement
- Provides a smooth cut, even for slightly deformed tube
- Soft/Hard cutting settings
- Durable aluminum and rubber knob

REPLACEMENT PARTS
BTCXC1   Zinc Plated Cutting Wheel
BTCXP1   Quick Release Pin

OPTIONAL REPLACEMENTS
BTCXCT1 Titanium Coated Cutting Wheel
BTCXR   Plastic Ratchet (For BTC200R)

## 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
- Quick-release pin for fast cutting wheel replacement
- Soft/Hard cutting settings
- Durable aluminum and rubber knob

REPLACEMENT PARTS
BTCXC1   Zinc Plated Cutting Wheel
BTCXP1   Quick Release Pin
BTCXR   Plastic Ratchet

OPTIONAL REPLACEMENTS
BTCXCT1 Titanium Coated Cutting Wheel

Set N Cut™

Set N Cut™

NEW PRODUCT

Set N Cut™
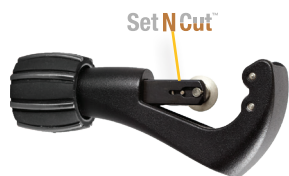
BTC300 BLACKMAX® TUBE CUTTER
- Cutting Range: 3/16˝ -1-1/4˝
- (5 - 32 mm) O.D.
- Two chromed, hardened cutting wheels
- Quick-release pin for fast cutting wheel replacement
- Enclosed feed screw eliminates clogging, jamming

REPLACEMENT PARTS
BTCXC1 Zinc Plated Cutting Wheel
BTCXP1 Quick Release Pin

OPTIONAL REPLACEMENTS
BTCXCT1 Titanium Coated Cutting Wheel

BTC350 BLACKMAX® MEDIUM TUBE CUTTER
- Cutting Range: 1/8" ~ 1-5/8" (3~41mm) O.D.
- Lightweight aluminum forged body for brass, copper, and aluminum
- Quick-release pin for fast cutting wheel replacement
- Chromed, hardened finish cutting wheel included

REPLACEMENT PARTS
BTCXC4   Nickel Plated Cutting Wheel

BTC500 BLACKMAX® LARGE TUBE CUTTER
- Cutting Range: 3/8˝ -2-5/8˝
- (10 - 67 mm) O.D.
- Two chromed, hardened cutting wheels
- Quick-release pin for fast cutting wheel replacement
- 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

REPLACEMENT PARTS
BTCXC2   Chrome Plated Cutting Wheel
BTCXP3   Quick Release Pin

OPTIONAL REPLACEMENTS
BTCXCT2 Titanium Coated Cutting Wheel
BTCXB   Bearing for BTCXCT2 Cutting Wheel

BTLDB3 BLACKMAX® DEBURRING TOOL
- Solid aluminum handle
- For soft copper and aluminum tube
- Includes (2) spare blades in handle

REPLACEMENT PARTS
TLDB2X   Replacement Blade

PRO-SET® PROFESSIONAL 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 TUBE CUTTER
- Cutting Range: 1/8˝ to 5/8˝, (3 to 16 mm)

REPLACEMENT PARTS
TCXT127C Titanium nitride coated cutting wheel/screw

TCT174
PRO-SET® MINI TUBE CUTTER
- Cutting Range: 1/8˝ to 1-1/8˝, (3 to 30 mm)

REPLACEMENT PARTS
TCXT174C Cutting wheel/screw

TCT274
PRO-SET® TUBE CUTTER
- Cutting Range: 1/8˝ to 1-3/8˝ (3 to 35 mm)

REPLACEMENT PARTS
TCX4CTS Cutting Wheels/Screw
TCXT274C Cutting Wheels/Screw
TCXT274RB Reamer Blade

TCPVC
PRO-SET® HEAVY DUTY PVC TUBE CUTTER
- Cutting Range: 2-5/8˝ to 1-5/8˝ (68mm to 42 mm)

TC174
MINI TUBE CUTTER
- Cutting Range: 3/8˝-1-1/8˝ (10 - 29 mm)

TC127
MINI TUBE CUTTER
- Cutting Range: 1/8˝ to 5/8˝ (3 to 16 mm)
- Ideal for cutting in limited access areas
- Ratchet mechanism speeds precision machined chromium steel cutting wheels

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

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


TCSET
TUBE CUTTER COMBO PACK
- Cutting Range: 1/8˝ to 1-1/8˝ (3 to 29 mm)
- Includes TC127 & TC274

BTB300/BTB300M
BLACKMAX® PREMIUM TUBE BENDER KITS
• Available in 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
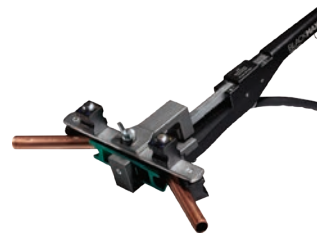
Reverse bend configuration
(Great For Confined Spaces)

BTB300
BLACKMAX® IMPERIAL TUBE BENDER KIT

MANDRELS			
CPS#	Description	Color	Inside Radius Of Bent Tube
BTBX14	Mandel 1/4˝ O.D.	Chrome	1-1/8"
BTBX516	Mandel 5/16˝ O.D.	Copper	1-1/4"
BTBX38	Mandel 3/8˝ O.D.	Red	1-1/4"
BTBX12	Mandel 1/2˝ O.D.	Yellow-Orange	1-3/8"
BTBX58	Mandel 5/8˝ O.D.	Blue	1-5/8"
BTBX34	Mandel 3/4˝ O.D.	Green	1-7/8"
BTBX78	Mandel 7/8˝ O.D.	Red-Violet	2"
OTHER			
BTBXH	Ratchet Tool, Imperial		
BTBXA1	1/4˝-3/8˝ Shoe Arm		
BTBXA2	1/2˝-7/8˝ Shoe Arm		
BTBXR1	Reverse Bender Mandrel Arm		
BTBXR2	Reverse Bender Shoe Arm		

BTB300M
BLACKMAX® METRIC TUBE BENDER KIT

MANDRELS			
CPS#	Description	Color	Inside Radius Of Bent Tube
BTBX6M	Mandel 6 mm O.D.	Chrome	29mm
BTBX8M	Mandel 8 mm O.D.	Copper	32mm
BTBX10M	Mandel 10 mm O.D.	Red	32mm
BTBX12M	Mandel 12 mm O.D.	Yellow-Orange	35mm
BTBX15M	Mandel 15 mm O.D.	Yellow-Green	41mm
BTBX16M	Mandel 16 mm O.D. (Optional for BTB300M)	Blue	41mm
BTBX18M	Mandel 18 mm O.D.	Titanium	48mm
BTBX22M	Mandel 22 mm O.D.	Red-Violet	51mm
OTHER			
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		

BLACKMAX® IMPERIAL LEVER TUBE BENDERS
• Patented 2-position handle
• Available in Imperial or metric
• For soft copper, aluminum tube
• Double hinged bending arms for tight quarters
• Two pull points for smooth, easy bends
• Bends from 0º to 180º
• Packaging: Color box

BTB06
Tube O.D.	3/8"
Mandrel Color	Violet
Inside Radius Of Bent Tube	15/16
Bender Overall Length	15"

BTB08
Tube O.D.	1/2"
Mandrel Color	Gold
Inside Radius Of Bent Tube	1-1/2"
Bender Overall Length	20"

BTB10
Tube O.D.	5/8"
Mandrel Color	Blue
Inside Radius Of Bent Tube	2-1/4"
Bender Overall Length	29"

BTB12
Tube O.D.	3/4"
Mandrel Color	Green
Inside Radius Of Bent Tube	3"
Bender Overall Length	32"

BTB14
Tube O.D.	7/8"
Mandrel Color	Purple
Inside Radius Of Bent Tube	3-1/4"
Bender Overall Length	32"

CPS

BTLH5E
BLACKMAX® HYDRAULIC TUBE EXPANDER KIT

- Hydraulic power- the easiest way to swage tubing!
- 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
- Cast aluminum body with durable, rubber grip handle.
- Extra storage for additional expander heads

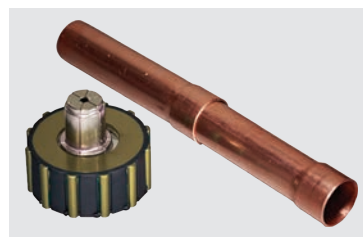| REPLACEMENT EXPANDER HEADS FOR USE WITH BTLH5E								
Size	1/4˝	5/16˝	3/8˝	1/2˝	5/8˝	3/4˝	7/8˝	1˝	1-1/8˝
Color	Chrome	Copper	Red	Yellow-Orange	Blue	Green	Red-Violet	Black	Pink
CPS#	**BTLEX14**	**BTLEX516**	**BTLEX38**	**BTLEX12**	**BTLEX58**	**BTLEX34**	**BTLEX78**	**BTLEX1**	**BTLEX118**

All heads are interchangeable with BLACKMAX BTLE9

BTLE9
BLACKMAX® TUBE EXPANDER KIT

- Swaged ends means less couplings & less refrigerant leaks
- Imperial or metric
- For soft copper and aluminum tube
- Nine quick-change tube expanders
- Durable, color-coded, aluminum heads
- Compact, professional, patented design
- Expander heads are interchangeable with #BTLH5E
- Strong carrying case
- Packaging: Color box

REPLACEMENT PARTS

BTLEXH   Tube Expander (Replacement Tool)

REPLACEMENT EXPANDER HEADS INCLUDED WITH BTLE9								
Size	1/4˝	5/16˝	3/8˝	1/2˝	5/8˝	3/4˝	7/8˝	1˝	1-1/8˝
Color	Chrome	Copper	Red	Yellow-Orange	Blue	Green	Red-Violet	Black	Pink
CPS#	**BTLEX14**	**BTLEX516**	**BTLEX38**	**BTLEX12**	**BTLEX58**	**BTLEX34**	**BTLEX78**	**BTLEX1**	**BTLEX118**

All heads are interchangeable with BLACKMAX BTLH5E

BFT850DR
BLACKMAX® RATCHET OR
DRILL- POWERED FLARING TOOL

- Innovative ratchet handle dramatically reduces time to make flares
- Remove ratchet handle and use with cordless drill for fastest flaring
- Innovative sight gauge shows if formed flare is correct size
- Redesigned, stronger collar for longer tool life
- For 3/16˝, 1/4˝ 5/16˝, 3/8˝, 1/2˝, 5/8˝, 3/4˝ O.D. tube
- Aluminum body is 50% lighter than steel designs

- Quick change removable and interchangeable handles
- Seven quick change positions for flaring soft copper and aluminum tube
- Slide gauge set tube at exact position before flaring
- Eccentric hardened steel cone forms precise 45° flared ends
- Built-in clutch prevents over-compression
- Compact, professional, patented design
- Includes ¼" Driver Bit
- Durable molded storage case
- Packaging: Color box

Ratchet handle with forward and reverse speeds flaring	Use with or without cordless drill for fastest flaring	Sliding depth gauge sets tube at exact height	Laser etched sight gauge verifies proper flare

BFT850D
BLACKMAX® MANUAL OR
DRILL- POWERED FLARING TOOL

- Use with or without cordless drills
- For 3/16˝, 1/4˝ 5/16˝, 3/8˝, 1/2˝, 5/8˝, 3/4˝ O.D. tube
- Aluminum body is 50% lighter than steel designs
- Internal clutch indicates when formed flare is complete
- Quick change removable and interchangeable handles
- Dramatically reduces time to create a precise flare

- Seven quick change positions for flaring soft copper and aluminum tube
- Built in slide gauge for fast tube height adjustment
- Eccentric hardened steel cone forms precise 45° flared ends
- Built-in clutch prevents over-compression
- Compact, professional, patented design
- Includes ¼" Driver Bit
- Durable molded storage case
- Packaging: Color box

Quick change	Sliding depth gauge sets tube at exact height	Eccentric forming cone for easier flaring	Molded Storage Case

BFTXR
BLACKMAX® RATCHET HANDLE ACCESSORY

- Innovative ratchet handle dramatically reduces time to make flares
- Knurled forward/reverse thumbwheel selector
- Included with BFT850DR
- Optional accessory for use with BFT850D

CPS®

BFS300QC
BLACKMAX® FLARING & SWAGING TOOL

- Seven quick change positions for flaring soft copper and aluminum tube
- For flaring 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" O.D tube
- Six quick change positions for swaging soft copper and aluminum tube
- For swaging 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" O.D tube

- Hardened, 12 sided cone forms precise 45 flared ends
- Slide gauge sets tube at exact position before flaring
- Aluminum body- 50% lighter than steel designs
- Compact, professional patented design
- Durable molded storage case
- Packaging- Color box

NEW PRODUCT

Swages and flares

Quick change flaring and swaging heads

12 sided flaring cone

Swaging head

BFT850
BLACKMAX® FLARING TOOL

- For 3/16˝, 1/4˝ 5/16˝, 3/8˝, 1/2˝, 5/8˝, 3/4˝ O.D. tube
- 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 hardened steel cone forms precise 45° flared ends
- Durable, molded carrying case
- Built in slide gauge for fast tube height adjustment
- Durable molded storage case
- Packaging: Color box

BFT850K
BLACKMAX® FLARING TOOL KIT

- For 3/16˝, 1/4˝ 5/16˝, 3/8˝, 1/2˝, 5/8˝, 3/4˝ O.D. tube

INCLUDES
- #BFT850 Flaring Tool
- #FTXSG Reversible R410A Flare Size Gauge
- #BTLDB3 Deburring Tool
- #BTC300 Premium Tube Cutter
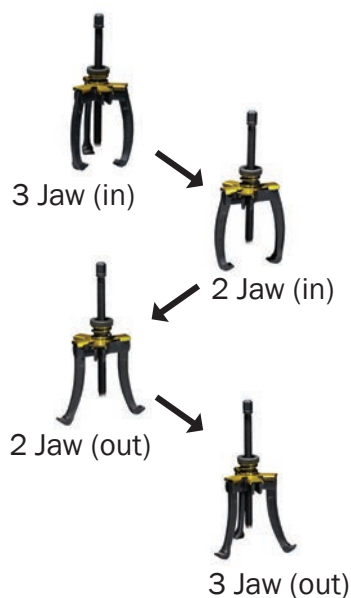- Durable, molded carrying case
- Packaging: Color box

Reconfigures in seconds
to suit your needs

3 Jaw (in)

2 Jaw (in)

2 Jaw (out)

3 Jaw (out)

BLACMAX® GEAR & PULLEY REMOVERS

	BTLGP4	BTLGP7
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 and Reversable Jaws	2 or 3 (Quick Change, Spring Loaded)	2 or 3 (Quick Change, Spring Loaded)

TLRM
REAMING AND DEBURRING TOOL
- For 3/16" to 1-1/2" (5mm ~ 38mm) for copper, aluminum and brass tube
- Removes burrs from inside and outside edges of tube
- Rugged 3 blade die cast metal for long life
- Ergonomic shape for clockwise or counterclockwise use

TLDB2
POCKET DEBURRING TOOL
- Remove burrs and surface defects from inner/outer straight and hole edges

REPLACEMENT PARTS
TLDB2X   Replacement Blade

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

REPLACEMENT PARTS
TLDBX   Reamer Blade & Screw

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

TCAP
CAPILLARY TUBE CUTTER
- Cleanly cuts all types of refrigerant capillary tubing without constricting, swaging or flattening

CPS®

TB250
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
TC274   Pro-Set Tube Cutter
TLRM   Reaming and Deburring Tool

FT800FN
R-410A IMPERIAL CONCENTRIC FLARING TOOL & RATCHET
- 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

FS275
45° FLARING & SWAGING KIT
- 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

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 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

FT500
45° FLARING/BURNISHING TOOL
- FT500 Imperial tool for 3/16˝, 1/4˝, 5/16˝, 3/8˝, 1/2˝ & 5/8˝

ESSENTIAL MINI-SPLIT TOOL KITS

STARTER KIT

TLB410A
- Pro-Set Piston Pink Body 1/4˝ SAE 45° fittings with "H" Gauge #MEHP5E
- Pro-Set Premium (3) 5' red/blue/yellow ball valve charging hoses
- FT800N Flaring Tool
- Metric Handle and Metric Heads #TLTWSM (17, 22, 24, 26, 27, 29 mm)
- Hex Wrench Sets (1) # TLSWHM (metric) and (1) #TLSWH (imperial)
- #TLVC410A Valve Core Tool
- #TLBAG1 Square Tool Organizer
- #TLVC410A Valve Core Tool 5/16 FM x 1/4M, 1/4M Side Port
- (10) #AVC410, (2) #AD87, (2) #AD87S
- Assembled in USA

**TLBAG1
SQUARE TOOL ORGANIZER**
10" x 10" (25 x 25 cm)

GREAT VALUE

TLB410KIT
- Pro-Set Premium Piston Series Manifold #MT2HP
- Pro-Set Premium (3) 5' red/blue/yellow ball valve charging hoses
- #BFT850 Flaring Tool
- #FTXSG Flare Gauge
- Universal Handle with SAE Heads #TLTWSAE (5/8, 11/16, 13/16 15/16, 1-1/16, 1-5/16) and Metric Heads #TLTWSM (17,22,24,26,27,29mm)
- Hex Wrench Sets (1) # TLSWHM (metric) and (1) #TLSWH (imperial)
- #BTC300 Tube Cutter
- #BTLDB3 Deburring Tool
- #TLVC410A Valve Core Tool
- #TLBAG2 Rubber Bottom Tool Organizer
- #TLVC410A Valve Core Tool 5/16 FM x 1/4M, 1/4M Side Port
- (10) #AVC410, (2) #AD87, (2) #AD87S
- Assembled in USA

CPS

PREMIUM KIT

TLB410KIT2

- BlackMax Black and Chrome Series Manifold #MV4HP410A
- BlackMax Black & Chrome Premium Charging Hose Set #hp5bkez and Vacuum Hose #hV5bk
- #BFT850 Flaring Tool
- #FTXSG Flare Gauge
- #BTLDTW Digital torque wrench
- #BTC300 Tube Cutter
- #BTLDB3 Deburring Tool
- Hex Wrench Set (1) # TLSWHM (metric) and (1) # TLSWH (imperial)
- #TLBAG2 Rubber Bottom Tool Organizer
- #TLVC410A, #TLVCS410 Valve Core Tool 1/2-20 Remover Tool With Side Port
- (10) #AVC410, (2) #AD87, (2) #AD87S
- Assembled in USA

TLBAG2
RUBBER BOTTOM TOOL ORGANIZER
9" x 16" (23 x 41 cm)

MINI-SPLIT TOOL KITS	TLB410A	TLB410KIT	TLB410KIT2
2 Valve Manifold	Pro-Set® Piston Pink Body 1/4˝ SAE 45° fittings with H" Gauge MEHP5E	Pro-Set® Premium Piston Series Manifold MT2HP	BlackMax® Black and Chrome Series Manifold MV4HP410A
Hoses	(3) Pro-Set® Premium 5' red/blue/yellow ball valve charging hoses HP5E	(3) Pro-Set® Premium 5' red/blue/yellow ball valve charging hoses HP5E	BlackMax® Black & Chrome Premium Charging Hose Set HP5BKEZ and Vacuum Hose HV5Z
Flaring Tool	FT800N	BFT850	BFT850
Flare Gauge	No	FTXSG	FTXSG
Torque Wrench Set	Metric Handle and Metric Heads TLTWSM (17,22,24,26,27,29mm)	Universal Handle with SAE Heads TLTWSAE (5/8, 11/16, 13/16 15/16, 1-1/16, 1-5/16) and Metric Heads TLTWSM (17,22,24,26,27,29mm)	BTLDTW Digital torque wrench
Tube Cutter	No	BTC300	BTC300
Deburring Tool	No	BTLDB3	BTLDB3
Hex Wrench Set	(1) TLSWHM (metric) and (1) TLSWH (imperial)	(1) TLSWHM (metric) and (1) TLSWH (imperial)	(1) TLSWHM (metric) and (1) TLSWH (imperial)
Valve Core Tool	TLVC410A (5/16 FM x 1/4M Core Tool, 1/4M Side Port	TLVC410A (5/16 FM x 1/4M Core Tool, 1/4M Side Port	TLVC410A, TLVCS410, (1/2-20 Valve Core Remover Tool With Side Port)
Tool Organizer	TLBAG1	TLBAG2	TLBAG2
Brass Adapters and Brass Caps		(10) #AVC410, (2) #AD87, (2) #AD87S	

Inch scale (Metric on reverse)

Green LED (torque within 50-98% of preset value)

Lighted Display

On/Off

Scroll

Durable Molded Handle

Rubber Grips

Movable Jaw

Pivot Point

Speaker

Red LED (torque within 2% of preset value)

Reset

Memory/Mode

Next Entry/Display Light

Battery Compartment

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 over-tightening by providing advance warning when approaching or exceeding predefined torque settings. Operates on 2 AAA batteries (included).

FEATURES

- **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 2%
- **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
- Display: Backlighted
- Owner's Manual: Included

Color Box

Molded Storage Case

SPECIFICATIONS

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% clockwise 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 batteries, supplied)			
Operating Temperature	32ºF~104ºF (0ºC ~ 40ºC)			
Storage Temperature	-4ºF ~113ºF (-20ºC ~ 45ºC)			
Wrench (+ Case) Weight	2.79 lb (1.27 kg)			
Wrench Length	15.25˝ (0.387 m)			
Green LED Flashes	Within 50% to 98% of programmed torque (in Peak or Track mode)			
Intermittent Tone	Within +/- 5N-m of programmed torque value			
Red LED On	Within 2% of programmed torque value			
Faster Tone	Within +/- 2 N-m of programmed torque value			
Continuous Tone + Constant Green LED & Handle Vibrates	When >2% over programmed torque value			
Display Constant On:	Battery life = approx. 120 hours			
Display & Backlight Constant On:	Battery life = approx. 96 hours			

Removable Wrench End
Arrow Indicates Tightening Direction
Pivot Point
Handle Edge
Torque Values
Handle Scale (0 to 5)
Locking Knob

Imperial

Metric

Front   **Back**   **Front**

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
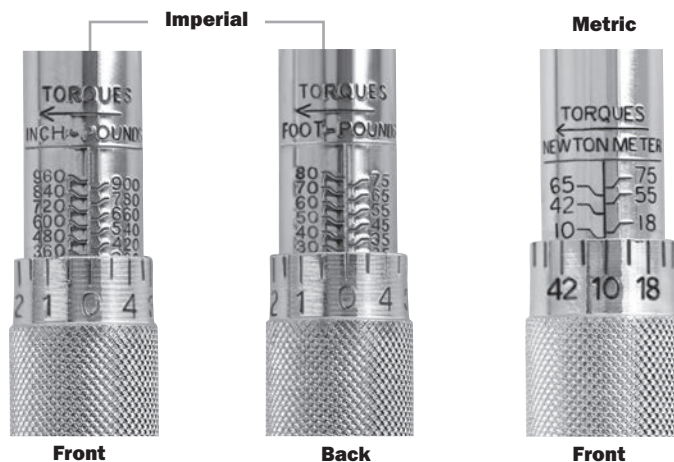
TLTWSAE
IMPERIAL TORQUE WRENCH SET

- 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˝)

REPLACEMENT PARTS
TLXTWSAE	Complete Set of (6) SAE Wrench Heads
TLXTWSAEW	SAE Torque Wrench Handle
TLXTW58	5/8˝ Head (Discontinued)
TLXTW1116	11/16˝ Head (Discontinued)
TLXTW1316	13/16˝ Head (Discontinued)
TLXTW1516	15/16˝ Head (Discontinued)
TLXTW1L116	1-1/16˝ Head (Discontinued)
TLXTW1L516	1-5/16˝ Head (Discontinued)

TLTWSM
METRIC TORQUE 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)

REPLACEMENT PARTS
TLXTWM	Complete Set of (6) Metric Wrench Heads
TLXTWMW	Metric Torque Wrench Handle (Discontinued)
TLXTWM17	17mm (Discontinued)
TLXTWM22	22mm (Discontinued)
TLXTWM24	24mm (Discontinued)
TLXTWM26	26mm (Discontinued)
TLXTWM27	27mm (Discontinued)
TLXTWM29	29mm (Discontinued)

PRO-SET SERVICE WRENCHES

TLSWL
SHAPE ▢ ⬡

- Large, straight. Square & hex ratchet drive
- 3/16″, 1/4″ Square Drive
- 1/2″, 9/16″ Hex Drive
- Embossed fractions and logo
- Durable, high quality, polished chrome finish
- TLSWLB In Bulk (100 pcs)

TLSWO
SHAPE ▢

- Small, offset. Square ratchet drive
- 3/16″, 1/4″, 5/16″, 3/8″ Square Drive
- Offset 25 degree ends
- Embossed fractions and logo
- 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 ratchet 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

PRO-SET HEX, TORX, BALL END FOLDING WRENCHES

TLSWHB Combo Set: Includes TLSWH (Inch Hex Key) & TLSWB (Inch Ball Point Key Set)

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
SHAPE ✦

- Torx ends
- Nickel Plated

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″

TLFC1
UNIVERSAL METAL FIN COMB

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

TLPO
PINCH-OFF PLIERS
• Tool locks onto tubing to prevent loss of refrigerant during service
• Rounded jaws to avoid cutting tubing
• 1 year warranty

TLPP
TUBE PIERCING PLIERS
• Tube Piercing Pliers 1/4˝
• TLPPX Replacement Tip
• Quick release handle

TLDKRH
DUCT KNIFE
For cutting 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.
• 6" (152 mm)
• Rubber handle
• One edge serrated for sawing

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

SPRING TYPE TUBE BENDERS
• For soft copper and aluminum tubing
• Special spring steel with zinc finish
• 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
TBS10 5/8˝ Spring Tube Bender
TBS12 3/4˝ 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

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
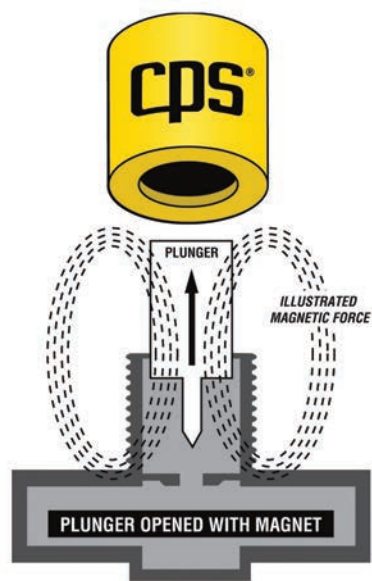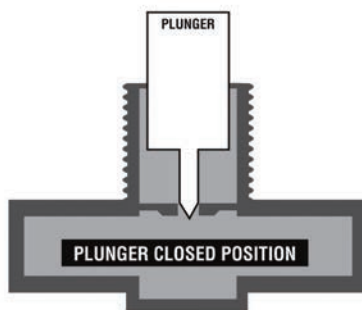
BRHT1
HAND TORCH

• 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

REPLACEMENT PARTS
BRXHTST1 Torch Tip

BRHTS1
SWIVEL HAND TORCH

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

REPLACEMENT PARTS
BRXHTS1 Torch Burner Tube Assembly

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 & stainless steel burn tube
• New brass regulator with 5 ft hose and valve
• Clamshell packaging

| AD14 | AD24/AD24B | AD41 | AD44 | AD47 | AD84 | AD87 | AD87S |

BRASS ADAPTER FITTINGS

Female	Male	Description	Application	QNTY	Item
1/4″ SAE	3/8″ SAE	w/core & depressor	Vacuum pumps	1	AD64
5/16″ SAE	1/4″ SAE	w/ valve core	R-410A International	1	AD87
				3	AD873
5/16″ (Swivel)	1/4″ SAE 55°			1	AD87S
				3	AD87S3
1/2″ ACME	1/4″ SAE	no valve core	Vacuum pumps/manifolds/recovery/tanks	3	AD84
3/4″ -14	1/4″ SAE	w/ gasket	Large 125 lb tank adapters	1	AD41
–	1/4″ SAE x 1/8″ MNPT	w/ cap and valve core	Manifolds, compressors	6	AD24
				100	AD24B
	1/4″ SAE x 1/4″ MNPT	w/ cap and valve core	Vacuum Pumps, compressors	6	AD44
	14 mm x 1/4″ SAE	-	R-134a automotive couplers	1	AD14
	1/4″ SAE x 1/4″ SAE Union		1/4″ Hose union	1	AD47

| AVT2P | AVT4 | AVT44 | AVT45 | AVT48 |

ADAPTERS –TEES CONNECTORS

Description			QNTY	Item
1/4″ SAE M (with cap and core)	x 1/4″ SAE M	x 1/4″ SAE FM hex	3	AVT64
		x 1/8″ MNPT	3	AVT2P
	x 1/8″ MNPT	x 1/4″ SAE M	3	AVT4
1/4″ SAE M	x 1/4″ SAE female knurl	x 1/2″ ACME M	1	AVT48
		x 1/4″ SAE Male	3	AVT45
	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

ACCESS FITTINGS

Description		Standard Cap		Wrench Cap
Outer Diameter	Inner Diameter	6pk	100pk	6pk
1/8″	1/16″	AV2	AV2B	AV2R
3/16″	1/8″	AV3	AV3B	AV3R
1/4″	3/16″	AV4	AV4B	AV4R
5/16″	1/4″	AV5	AV5B*	AV5R
5/16″ (1/2″- 20) ACCES,1/4″	3/16″	–	AV4410B	N/A
3/8″	5/16″	AV6		AV6R

*Non-stock item. Call for availability

MULTI-STEP BODIES

Inner Diameter	Outer Diameter	QNTY	CPS#
1/8˝	3/16˝, 1/4˝, 5/16˝ SLDR	6	AVB456
3/16˝	1/4˝ SLDR	6	AVB34
	1/4˝ x 3/8˝ SLDR	6	AVB346

AVB34 AVB346 AVB456

QUICK SEAL O-RING CAPS

Thread	Description	QNTY	CPS#
1/4˝	SAE brass caps	10	AVC4
		25	AVC425
		100	AVC4B
	SAE brass cap w/chain tether	2	AVC4C
	SAE plastic caps	100	AVC4PB
	SAE brass cap w/core remover	6	AVC4R
5/16˝	R-410A brass cap	10	AVC410
3/8˝	SAE plastic caps	3	AVC6P
1/4", 1/2", 3/8"	SAE Vacuum pump brass cap kit w/chain	1	AVCVAC

AVC4/ AVC425/ AVC4B AVC410 AVC4R AVC4PB AVC6P

AVCVAC AVC4C

COPPER TUBE TEES

Description	Outer Diameter	QNTY	CPS#
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

AVCT4 AVCT5 AVCT6 AVCT8

AVCT10 AVCT12 AVCT14 AVCT18

VALVE CORES

Description	QNTY	CPS#
Valve cores	10	AVS1
	25	AVS125
	100	AVS1B
Tech-Set valve cores w/1 cap in vial	1	AVS1V
1/4˝ SAE x 1/4˝ F swivel	3	AVS44

AVS1/AVS1B AVS1V AVS44

BACK-SEATING CONTROL VALVE

Description	QNTY	CPS#
1/4˝ SAE M X 1/4˝ SAE FM Back-Seating Valve	1	TLVCD1

VALVE CORE TOOLS

Description	QNTY	CPS#
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**
5/16˝ SAE Valve Core Remover / Installer Tool 3/16"I.D.X1/4"O.D.X3/8"OD SLDR	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**
Rebuild kit for TLVD4, TLVCS	1	**TLXVC**

TLVC

TLVC1

TLVC2

TLVC410

TLVC410A

TLVCS

TLVCS410

MICROSEAL™ QUICK COUPLERS

Size	Description	QNTY	CPS#
1/4˝ SAE	Straight	3	**AB3**
	45° female	1	**AB45**
	90° female	1	**AB90**
1/8˝	FPT Adapter	1	**ABG18**
1/4˝ SAE	90° female	1	**AB41090A**
	Straight	1	**AB410A**

AB3

AB45

AB90

ABG18

AB41090A

AB410A

BALL VALVE HOSE ADAPTERS

Female	Male	Other	QNTY	CPS#
3/8˝ SAE	3/8˝ SAE	Straight	1	**BV38**
1/4˝ SAE	1/4˝ SAE	Straight	1	**BV**
			3	**BV3**
		45° female	1	**BV45**
			3	**BV453**
		90° female	1	**BV90**
5/16˝	1/4˝ SAE	For R-410A systems w/neoprene gaskets	1	**BV410A**
		90° female	1	**BV41090A**
1/4˝ SAE x 1/4˝ SAE		Straight	1	**BVM**

BV/BV3

BV45/BV453

BV90

BVM

BV41090A

BV38

5-2-1® COMPRESSOR SAVER®

PROTECT YOUR CUSTOMERS WHILE EARNING ADDITIONAL PROFITS

WITHOUT COMPRESSOR SAVER
92.6

WITH COMPRESSOR SAVER
45.7

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

Unique wire colors allow for easy installation and testing of residential A/C systems

Remember: 5-2-1 Common-Start-Run

COMMON
START
RUN

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 significantly 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%

CSRU1	CSRU2	CSRU3
For 1 to 3 Ton units	For 3½ to 5 Ton units	For 4 to 5 Ton units

Scan for video installation

Please visit our website to become a 5-2-1 dealer

Visit us online at **www.five-two-one.com**

5-2-1® COMPRESSOR SAVER®

PROTECT THE MOST EXPENSIVE EQUIPMENT IN YOUR HOME

Air Conditioners, Mini-splits, Furnaces, Heat Pumps, Appliances, Circuit boards, Motors and more

The 5-2-1® Surge Protective devices are designed to protect HVAC equipment and other high-end appliances from damaging electrical surges produced by proximity lightning strikes and other power line transients. Engineering using the latest in Thermally Protected Metal Oxide Varistor (MOV) technology, and independently tested to ensure superior protection and reliability.

Features:
- Patented Thermal Protected MOV technology
- UL certified highest SCC Rating offering unsurpassed safety
- No hassle, easy warranty
- Marketing materials available free of charge

E492946

c(UL)us

C61328309

Maximum Surge Current: 100,000 Amps

Service Voltage (VAC): 120/240 (Single - Split Phase), 50 or 60 Hz

Short Circuit Rating (SCCR): 200kA

Nominal Discharge Current Rating: 20kA

Maximum Continuous Operating Voltage (MCOV): 150VAC L-N   300VAC L-L

Voltage Protection Rating (VPR): 800VAC L-N/G   1200VAC L-L

Operating Temperature: 14˚F (-10˚C) to 122˚F (50˚C)

Approvals: UL 1449 4th Edition, ANSI, cUL

Warranty: 3 years and a Connected Equipment warranty up to $10,000

TPSPD THERMALLY PROTECTED SURGE PROTECTION DEVICE

Features:
- The SPD60 offers 70% more protection than similar value priced alternatives by achieving the highest joule rating
- Only surge to have the certified waterproof IP67 rating
- Only surge that offers a separate visible alarm that indicates when the unit needs to be replaced
- Low cost, high performance
- Marketing materials available free of charge

Maximum Surge Current: 60,000 Amps

Service Voltage (VAC): 120/240 (Single-Split Phase), 50 or 50 Hz

Nominal Discharge Current Rating: 20kA

Short Circuit Rating (SCCR): 20kA

Diagnostic Indicators: Green LED indicates surge protection status, Red LED indicates power

Approvals: UL 1449 4th Edition

Enclosure: IP67, Waterproof rating

Installation: Disconnect, Junction Box, Electrical Panel

Warranty: 3 years and a Connected Equipment warranty up to $10,000

IP 67   SPD60

Watch the video by scanning the QR Code.

Visit us online at **www.five-two-one.com**

MERCHANDISE CPS PRODUCTS IN YOUR STORE

#GAP7
ADVERTISING PLAYER
• Advertising Player with 7" diagonal screen pre-loaded with short videos on;
      CPS Wireless Airflow Tools
      BLACKMAX Tools
      5-2-1 Products
• Use on store countertops to attract customer's attention

#GHMC
END CAP HEADER CLIP
• Clear allow headers to attach to top of end caps

#GECHS
CPS SMART TOOL CENTER HEADER
• Attach to top of end cap
• 33.75" L x 8" H x 1/8"

Recommended product mix for CPS® Smart Tools

ABM-HOOD Airflow Balancing Hood 2
ABM-100 Airflow Meter 6
ABM-200 Airflow And Environmental Meter 6
TS-100 Temperature and Humidity Data Logger 6
TS-100-6PK Temperature and Humidity Data Logger .. 3
SPM-K1 Static Pressure Meter & Probe Kit 3
SPM-100 Static Pressure Meter 3
PRB-KIT Static Pressure Probe Kit 3
IAQ PRO Professional Indoor Air Quality Meter 2
EXP-64 Telescopic Extension Pole 4
TRI-MIN Mini-Tripod 4
MD100WVHE Digital Manifold 3
CC220EW Enhanced Wireless Scale 3

#GECHB
BLACKMAX TOOL CENTER HEADER
- Attach to top of end cap
- 33.75" L x 8" H x 1/8"

Recommended product mix for BlackMax® Premium Tools

BTC-100 Ultra Mini Tube Cutter.............................8
BTC-200 Mini Tube Cutter.......................................6
BTC-200R Mini Ratchet Tube Cutter 3
BTC-300 Tube Cutter..4
BTC-350 Medium Tube Cutter 3
BTC-500 Large Tube Cutter 3
BTLDB3 Debur Tool..8
BTB300 Tube Bender Set 4
BTLE9 Tube Expander Set.......................................4
BTLH5E Hydraulic Tube Expander...........................4
BFS300QC Flaring/Swaging Tool 3
BFT850DR Ratchet/Drill Powered Flaring Tool.........3
BTLDTW Digital Torque Wrench...............................2
BTLGP4 Gear & Pulley Remover 3" to 4".................2
BTLGP7 Gear & Pulley Remover 3" to 7"..................2
TR700 Blackmax 2 Cylinder Recovery Machine 2
MV4H4P5EZ Spider Manifold 2

#GECH521
5-2-1 PRODUCTS HEADER
- Attach to top of end cap
- 33.75" L x 8" H x 1/8"

Recommended product mix for 5-2-1 Products

CSRU1 Compressor Saver 25
CSRU2 Compressor Saver 25
CSRU3 Compressor Saver 25
SPD60 Surge Protector 20

CPS Products, Inc. USA (Headquarters)
3600 Enterprise Way, Miramar, Florida 33025, USA
Tel: 305-687-4121, 1-800-277-3808, Fax: 305-687-3743
E-mail: info@cpsproducts.com
Website: www.cpsproducts.com

CPS Products N.V
Krijgsbaan 241, 2070 Zwijndrecht, Belgium
Tel: (323) 281 30 40, Fax: (323) 281 65 83
E-mail: info@cpsproducts.be
Website: www.cpsproducts.be

CPS Products Canada Ltd.
1324 Blundell Road, Mississauga, ON, L4Y 1M5
Tel: 905-615-8620, Fax: 905-615-9745
E-mail: info@cpsproducts.com
Website: www.cpsproducts.com

CPS Australia PTY. LTD.
109 Welland Avenue, Welland, South Australia 5007
Tel: +61 8 8340 7055, Fax: +61 8 8340 7033
E-mail: sales@cpsaustralia.com.au

CPS®

Advanced Tools
Smart Solutions

PRODUCT GUARANTEE

CPS guarantees all products are free of manufacturing and material defects for one year from the date of purchase. If a product should fail during the guarantee period due to defective material or workmanship, it will be repaired or replaced (at our office) at no charge. This guarantee does not apply to products that have been altered, misused, or are in need of field service maintenance. All repaired products will carry an independent 90 day warranty.

MKG-LT2020