



**Beijer Ref India – Uniwled HVAC & R Tools & Instruments Training-(2022)**

## **Brief History & Profile of Uniweld**

It is a family business founded by David S. Pearl Sr. and is now directed by his two sons David S. Pearl Jr. and Douglas B Pearl.

Uniweld Products, Inc. was basically manufacturer of Oxy-fuel equipment and accessories since 1949 based in the United States.

The Company offers welding, cutting, brazing and heating outfits.

The company is also dominant manufacturer of HVAC tools and as well as refrigeration tools, vacuum pumps and charging hoses, accessories, pressure gauges, and alloys.

## **Types of Tools**

Tubing Tools  
Refrigeration tools

## Tubing tools

1. Tube cutter – 70000 (1/8" – 7/8")



70001 (5/16" – 1 5/8")



70002 (1/4" – 2 5/8")



2. Pinch off plier – 70076



3. Flaring tool 45 -- 70003



4. 45 Flare / burnish and swaging tool kit - 70007



## **Tubing tools**

### **1. Crossbow Ratchet Tube bender :**

- Ratchet Tube Bender can make bends up to 90° with soft copper and aluminum tubing.
- The low friction mandrels and rotating side support blocks provide precision bending in confined spaces.
- Bend tubing sizes: 3/8", 1/2", 5/8", 3/4", 7/8", 1-1/8" O.D.
- Can make consecutive alternate bends with minimum distortion
- This comes in plastic blow case.



## Tubing tools

### EXPANDER SWAGE TOOL KIT – UEK-1




- Hydraulic Swage Tool is useful for swaging of soft drawn copper tubing and also hard drawn tubes after annealing.
- This expander tool help technicians to quickly swage a piece of tubing with just one hand.
- It is very helpful in projects involving number of swages within limited time frame.
- The kit includes the Hydraulic Swage Tool, a 70079 de burring tool, and 3/8", 1/2", 5/8", 3/4", 7/8", and 1-1/8" O.D. expander heads.



## Refrigeration Tools

### 1. Charging hoses –

Working pressure – 800 psi / Burst pressure -4000 psi

Soft Magic			BM Enviro Set		EZ Turn Hoses
					
Hoses 3" Soft Magic (HC3SM)	Hoses 5" Soft Magic (HC5SM)	Hose 6' Soft Magic Set Rd, YI, B HC6SM	Hos 36" BM Enviro Set Bl, YI, Rd 90724	Hose 60" BM Enviro Set Bl, YI, Rd 90726	EZ Hose

## **Refrigeration Tools**

### **1. Charging hoses –**

- a) VRP-22 134A-36-RYB (3 X ¼" – ¼" Connection)
- b) VRP-410A-36-RYB (1 X ¼" – ¼" & 2 X ¼"-5/16" Connection)
- c) VRP-22 134A-60-RYB (3 X ¼" – ¼" Connection)
- d) VRP-410A-60-RYB (1 X ¼" – ¼" & 2 X ¼"-5/16" Connection)

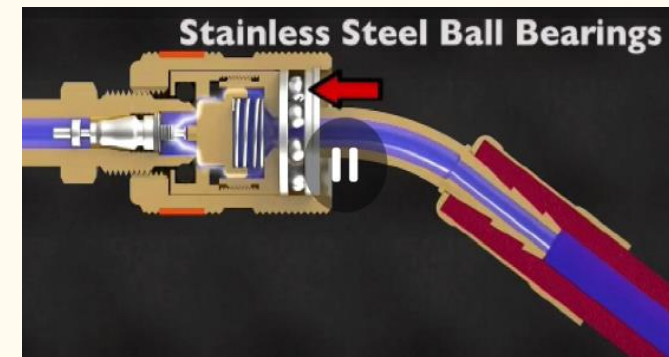
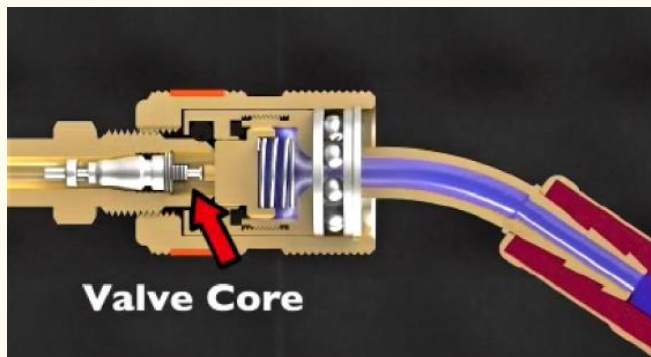
### **NOTE :-**

- i) Working pressure for R22/ R134A/ R12 hoses : 0 – 500 psi
- ii) Working pressure for R410A hoses : 0 – 800 psi
- iii) R32 refrigerant has same working pressure as R410A.  
So hoses for R410A can be used for R32.



## Refrigeration Tools

Why Ez Turn?



## Refrigeration Tools

Refrigerant	Analogue gauges		Analogue Gauge Manifold	
	(-)30 to 300 psi	0 to 500 psi		
R 12/22/134a	Refrigerant Gauge LP LPF BI Pls (G30LD-5)	Refrigeration Gauge HP Rd Pls (G29LD-5)	QAL3SM	Manifold LPF 3" Soft Hoses (QAL3SM-5) (22/404/134)
R410/404A	(-)30 to 250 psi Ga Ref LP LPF BI Pls PSI G530LD-5	0 to 800 psi Ga Ref HP LPF Rd Pls PSI G529LD-5	QS4L3H-5	Manifold LPF 3" HP Hose (QS4L3H-5) (FOR 410)
R32/410A			QS8N3SM	Manifold LPF 3" HP Hose (QS8N3SM) (FOR R32/ 410)

## Refrigeration Tools

- Uniweld's SmarTech™ Digital Vacuum Gauge conveniently connects to the EZ Access "T" Fitting™ on the Blue EZ Turn™ hose .
- The unit has a large backlit LCD screen.
- Digital Vacuum Gauge is durable with rubber guard .
- It is small enough to fit in your shirt pocket.
- Includes 1/4" F.F. brass adaptor, protective rubber boot and (2) 'AAA' batteries.
- Oil Sensor Indicates when Gauge needs Cleaning & Eliminates False Readings
- Self-Calibration with No Reference Needed
- Sensor Withstands Overpressure Up to 500 PSI



Range	Resolution	Accuracy	Temperature	Battery Life
0-25,000 microns	1 Micron (<1,000 Microns), Pa,.001 mBar,.001 mmHg	5% of Reading +/-5 Microns	(-)10 °F to 122°F/ -12 °C to 50 °C	Up to 100 Hours

## Refrigeration Tools

### SMARTTECH DIGITAL MANIFOLD

**USMAN5** SmarTech™ Wireless Digital Manifold combines the technology of your Android with the site requirement.

This Digital Manifold is also equipped with highly precise sensors that gives output of accurate pressure & temperature readings.



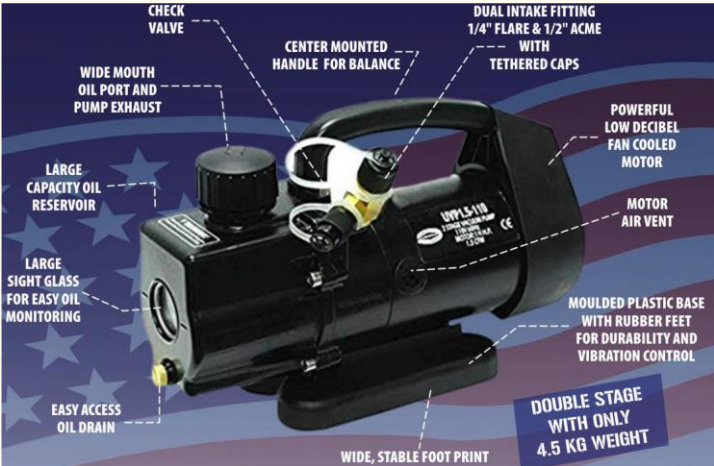
## Refrigeration Tools

Vacuum Pumps – Double stage

		OIL DRAIN			
Pump Specifications		UVP5.5	HVP6	HVP8	HVP12
<b>HUMM-VAC® Pumps</b>  *Optional Int'l Power Cord Available on request	Free Air Displacement	5.5 CFM, 155 liter/min	6.0 CFM, 170 liter/min	8.0 CFM, 226 liter/min.	12.0 CFM 340 liter/min.
	Number of Stages	2-Stage Rotary Vane	2-Stage Rotary Vane	2-Stage Rotary Vane	2-Stage Rotary Vane
	Factory Micron Rating	15 Microns	15 Microns	15 Microns	15 Microns
	Intake Fittings	1/4" and 3/8" Male Flare	1/4" & 3/8" Male Flare; 1/2" Acme	1/4", 3/8" & 1/2" Male Flare	1/4", 3/8" & 1/2" Male Flare
	Thermal Overload Protection	1/4 HP	1/2 HP	3/4 HP	3/4 HP
	Voltage	110/220V - 50/60Hz	110/220V - 50/60Hz	110/220V - 50/60Hz	110/220V - 50/60Hz
	Oil Capacity	15.2 Oz [450ml]	1 Quart [946ml]	31.3 Ounces [925 ml]	27.7 Ounces [820 ml]
	Power Cord*	India -Type D Plug	72" [1.83m], India -Type D Plug	72" [1.83m], India -Type D Plug	72" [1.83m], India -Type D Plug
	Dimensions	13.9" x 5.5" x 10.2" 35.3 cm x 40 cm x 26 cm	14.50" x 6.875" x 10.75" 36.83 cm x 17.46 cm x 27.30 cm	15.0" x 6.875" x 10.75" 38.1 cm x 17.46 cm x 27.3 cm	15.0" x 6.875" x 10.75" 38.1 cm x 17.46 cm x 27.3 cm
	Weight	22.05 lbs. [10 kg]	26 lbs. [11.80 kg]	34 lbs. [15.42 kg]	35 lbs. [15.88 kg]
	Shipping Weight	25.20 lbs. [11.4 kg]	30 lbs. [13.60 kg]	38 lbs. [17.24 kg]	39 lbs. [17.70 kg]
	Color		Yellow	Red	Black



# Refrigeration Tools



Part#	Free Air Displacement		Number of Stages	Factory Micron Rating	Intake Fittings [SAE]	Motor H.P.	Voltage	Power Cord 72" [1.83m] Plug Type	Oil Capacity	Dimensions Inches [cm]			Weight Lbs.[Kg]	
	CFM	L/Min								L	W	H	Net	Ship
UVP1.5-110	1.43	40.5	2	38	1/4" Male Flare and 1/2" Acme	1/4	110V 50/60Hz	U.S. -Type B	4.7 Oz. [140 ml]	10.23 [26.0]	3.5 [9.0]	6.4 [16.5]	10 [4.5]	14 [6.3]
UVP1.5-220	1.43	40.5	2	38	1/4" Male Flare and 1/2" Acme	1/4	220V 50/60Hz	Europe -Type F	4.7 Oz. [140 ml]	10.23 [26.0]	3.5 [9.0]	6.4 [16.5]	10 [4.5]	14 [6.3]
Part#		Description			Part#		Description							
Vacuum Pump Oil		42005 1 Quart [946 ml]			42006		1 Gallon [3.78 L]							

## Refrigeration Tools

### Digital Refrigerant Scale with Solenoid Valve



#### SPECIFICATIONS

- Capacity: 330lbs (150Kg)
- Accuracy: +/-0.05% of reading + 0.35 oz(10g)
- Units: lbs., oz., Kg
- Weight: 7.05 lbs (3.2kg)
- Dimensions: 10.7" x 10.7" (27.2cm x 27.2cm)
- Platform Size: 10.7" x 10.7" (27.2cm x 27.2cm)
- Battery Powered (5 - AAA batteries)

#### FEATURES


- Durable cloth carrying bag with shoulder strap
- Back lit display on control handle.
- Metal loop on handle to either hang or prop handle for easy reading.
- Programmable charging of refrigerant through included solenoid valve.

Brazing Tools



# Cap'n Hook®

The patented Uniweld Cap'n Hook® Tip with concentrated heat up to 5600°F. The 40° flame angle flows onto copper tubing and away from sensitive areas, thus minimizing the chances of burning adjacent components. You get 100% wraparound for even heat distribution.



Part # Cap'n Hook Set  
Includes : Connector, 12 ft. Oxygen and LPG / Acetylene Hoses and Free Single Tip Nozzle.

40° Flame Angle



	Part#	UPC#	Acetylene Consumption SCFH	Oxygen Pressure PSIG	Acetylene Pressure PSIG	Overall Length	Brazing Copper Tubing (up to)
Acetylene	MTF-5	30590	4-6	8	5	5½"	1"
	MTF-9	30591	5-9	10	7	8½"	2"
	MTF-17	30592	8-14	18	12	11"	3"

	Part#	UPC#	MAP/Pro™ [Propylene] /Propane Consumption LBS/HR	Oxygen Pressure PSIG	MAP/Pro™ [Propylene] /Propane Pressure PSIG	Overall Length	Brazing Copper Tubing (Up to)
POCO MAP/Pro™ [Propylene] /Propane SHOT ON POCO F1	MTFM-5	30595	2.6	10	5	5½"	1"
	MTFM-9	30596	3.1	15	7	8½"	2"
	MTFM-17	30597	5.6	20	10	11"	3"

All Cap'n Hook® Tips ft 71, WH550 & WH250 Handles.



Brazing Tools

MAP Gas Pro Can & Torch

UNIWELD

Hand Torches

Self-igniting Swirl Combustion Tips

Uniweld Self-igniting Hand Torches eliminate the need for a flint lighter. Lightweight and portable, these flame tools can be operated with Propane or MAP//Pro™ (Propylene).

Easy Start Electric Self-igniting

HT89U

Trigger Lock with Inverse Safety Release

HT44

Twister-2 Hand Torch

HT7U

Swivels 360°

TARGET HEAT

PROANE 1750 F [954 °C]

MAP//Pro™ 2400 F [1316 °C]

Part#	Solder Propane	Braze Propane	Solder MAP//Pro™ [Propylene]	Braze MAP//Pro™ [Propylene]
HT44	Up to 3"	Up to 1"	Up to 4"	Up to 1-1/4"
HT7U	Up to 1"	Up to 5/8"	Up to 1/5"	Up to 7/8"
HT89U	Up to 1"	Up to 5/8"	Up to 1/5"	Up to 7/8"

Thruster®, Twister®, Double & Triple Twister®

Uniweld Hand Torches are the right choice for small jobs in tight areas with limited access. These lightweight, portable flame tools can be operated with Propane or MAP//Pro™ (Propylene). Hand torches are shipped on display cards or in clamshell packaging.

RP3T5 Hand Torch

PCV25 Pencil Flame Hand Torch

RP3T2 Hand Torch

UT2 Double Twister™ Tip

RP3T3 Triple Twister™ Tip

DOUBLE THE POWER DOUBLE THE HEAT

TRIPLE THE POWER TRIPLE THE HEAT

Solder MAP//Pro™ [Propylene]

Braze MAP//Pro™ [Propylene]

PCV25	Up to 1"	Up to 5/8"
RP3T2	Up to 4"	Up to 3"
RP3T3	Up to 6"	Up to 4"
RP3T5	Up to 3-1/2"	Up to 1-3/4"

## Brazing Tools

### **COOL BLUE™ HEAT SINK PASTE**

- Cool Blue™ Heat Sink Paste protects the rubber and plastic seals in ball valves, solenoid valves, reverse valves, TXVs and heat-sensitive materials.
- To prevent overheating, a heat transfer cool indicator has been added. As the paste absorbs heat, it changes to a dark blue.
- Safe to use, non-toxic, harmless to skin and odorless.
- Easy to clean: wipe with a cloth or wash with water.
- Net weight – 312 gm.



## Refrigeration Tools

### NITROVUE™ FLOW INDICATOR

- NitroVue™ is used purging of nitrogen during the brazing of copper tubing in Air Conditioning and Refrigeration systems.
- It has an “easy” to read flow indicator label and a precision adjustable valve to control the low flow of nitrogen gas.
- The bright orange float ball and tube are fortified and protected in the aluminum body with window for a clear view.
- The easy to see orange float ball visually confirms the nitrogen is flowing and allows the technician to – first “PURGE” the copper lines at 20+ SCFH and then reduce the flow to “BRAZE” at 3-5 SCFH during the brazing process .

**Note :** The nitrogen must be flowing to displace the oxygen inside the tubing during the brazing process, preventing internal oxidation and the resulting scale. Scale build up inside the tubing can cause blockage in the TXV and within the Air Conditioning and

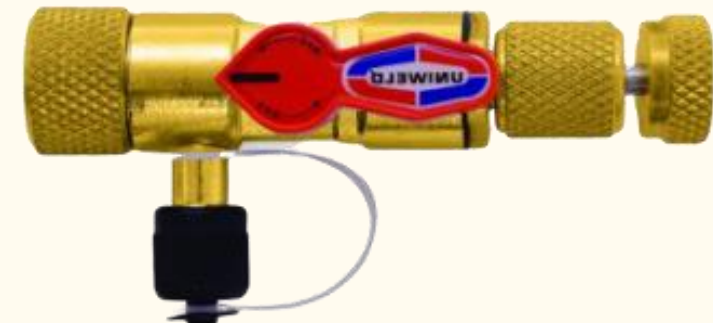
Refrigeration system resulting in premature failure. If the ball does not rise in the tube there is no flow of nitrogen only static pressure and oxygen is not being displaced. The NV1 must be connected to a Nitrogen Regulator with the delivery pressure set at 60 PSI to control the nitrogen gas pressure. The NV1 is protected from over pressure with a reseal able safety blow off that opens at 200+ PSI.



## Refrigeration Tools

### VALVE CORE REMOVAL

- Uniweld's Valve Core Removal Tool can remove and replace valve cores without losing the system's refrigerant charge.
- By this we can temporarily remove valve cores for unrestricted line flow, providing faster recovery, evacuation and recharge of a system.
- The 3/8" full flow ball valve, with positive 1/4 turn on/off, swivels 360° for easy access to the system service valves.
- Attach and isolate a micron gauge at the system using the Valve Core Removal Tool with 1/4" or 5/16" side port adaptor.





Refrigeration Tools





# Regulator

**2" GAUGES WITH RUBBER BOOTS**

**RHP800 EXCEEDS MINI SPLIT PRESSURE TESTING REQUIREMENTS**

**HARDENED STEEL THREADED INSERT ELIMINATES GALLING**

**CGA580 INLET STANDARD (optional inlets available)**

**RESEATABLE SAFETY BLOWOFF**

**MACHINED SOLID BRASS BODY**

**BRASS T-HANDLE WITH STAINLESS STEEL PRESSURE ADJUSTING SCREW**

Medium duty single stage oxygen regulator with 2-Inch Dual scale gauges, for general gas control applications. Reseating pressure relief valve for safety and low pressure gauge protection. Superior flow capacity.



R250-540

**Description**

Easy-To-Read Dual Scale 2-Inch Gauges, 200 and 4000 PSI/Kg  
CGA540 Inlet, Maximum Inlet: 3000 PSIG  
Large Brass T-Handle For Smooth, Accurate Adjustments  
Reseating Pressure Relief Valve Where Needed For Added Regulator Protection  
Forged Brass Bonnet and Body



R260-300

**Description**

Easy-To-Read Dual Scale 2" Gauges, 30 Red Line and 400 PSI/Kg  
CGA300 Inlet, Maximum Inlet: 300 PSIG  
Large Brass T-Handle For Smooth, Accurate Adjustments  
Forged Brass Bonnet and Body



**Thank you**