



Beijer Ref India – Uniwled HVAC & R Tools & Instruments Training-(2020)

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 –

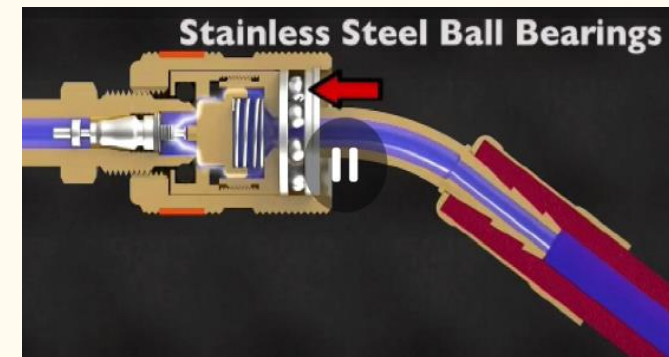
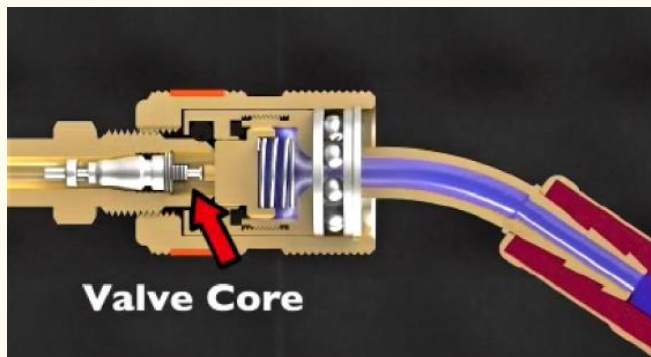
- a) VRP-22 134A-36-RYB (3 X ¼" – ¼" Connection)
- b) VRP-410A-36-RYB (1 X ¼" – ¼" & 2 X ¼"-5/16" Connection)
- c) VRP-22 134A-60-RYB (3 X ¼" – ¼" Connection)
- d) VRP-410A-60-RYB (1 X ¼" – ¼" & 2 X ¼"-5/16" Connection)

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 |
| HUMM-VAC® Pumps *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) |
|----------------------------|---------|-------|--------------------------------------------------|----------------------|---------------------------------------------|----------------|-------------------------------|
| 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 Positive Safety Release Reduces comfort grip

HT44 Twister® Hand Torch

HT7U

Swivels 360°

TARGET HEAT

PROANE 1750° F [954 °C]

MAP//Pro™ 2400° F [1316 °C] (Propylene)

| 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

RP3T3 Triple Twister® Tip

UT2 Double Twister® Tip

UT3 Triple Twister® Tip

DOUBLE THE POWER DOUBLE THE HEAT

TRIPLE THE POWER TRIPLE THE HEAT

| Part# | 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

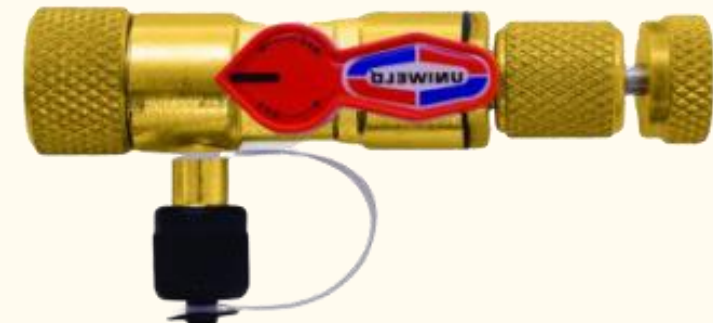
Refrigeration system resulting in premature failure. If the ball does not rise in the tube there is no flow of nitrogen only static pressure and oxygen is not being displaced. The NV1 must be connected to a Nitrogen Regulator with the delivery pressure set at 60 PSI to control the nitrogen gas pressure.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



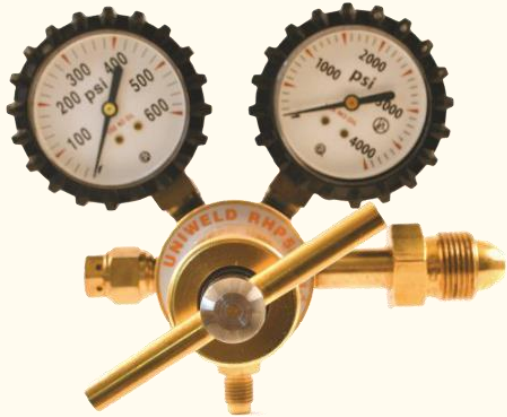
Refrigeration Tools

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

RESEATABLE SAFETY BLOWOFF

MACHINED SOLID BRASS BODY

HARDENED STEEL THREADED INSERT ELIMINATES GALLING

CGA580 INLET STANDARD (optional inlets available)

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