



PRODUCT CATALOG 50







JB INDUSTRIES is pleased to  
celebrate 50 years of providing  
superior products to the HVAC/R industry.  
We wish to convey our sincere gratitude to  
our loyal customers for their ongoing support  
in helping us achieve this milestone.



As we celebrate 50 years of serving the HVAC/R industry, we are reminded that our success is built upon a foundation of commitment to core values—quality manufacturing, valued employees, and providing outstanding service to our customers.

It is the colorful history of JB Industries, typical of so many American small companies, that we reflect on during this 50 year celebration. From its inception in 1967 when JB was founded by Greg Brinda and Stan Jarrow, JB has been a market leader with strong brand recognition. The newly founded JB Industries became a leader in access valves and fittings and continued distributing Jarrow gaskets. JB also launched the patented M2 manifold with its innovative, free floating o-ring sealing system. In the late 1970's, JB introduced the first direct drive pump and the JB name became synonymous with vacuum pumps. Under the leadership of Greg Brinda, Ron Hill, Sr., and Lee Larsen, the JB brand meant product innovation, quality Made in America products, and on-time delivery.

In 1981, JB Industries moved its manufacturing and headquarters within Aurora, Illinois. This move rescued a historical manufacturing site that dated back to the 1890's and allowed JB to expand its production areas. In 2006, JB was relaunched under the direction of the new and current owners Ron Hill, Jr. and Jeff Cherif. Over the last decade, JB has received numerous accolades and industry design awards for the ongoing development of quality, innovative products. JB has also invested heavily in bringing more production in-house and never moving away from its core principals. JB continues to reinforce ease-to-do business and increased partnership with its customers in accordance with our original mantras.

JB's history is rich in manufacturing excellence and a commitment to investing in the improvement of our facility, processes, and people—and our future will continue to support the JB motto of providing quality American made, Just Better products. In the years ahead, JB's success will depend upon our ability to remain innovative and competitive to meet the challenges of the markets we serve. While we have come a long way, our work is not done, and we will continue to strive to exceed customer expectations.

We are excited and eager to meet the challenges ahead, and our passion and commitment to excellence will remain the foundation of our next 50 years. As we celebrate, we say "Thank You" to the loyal customers, hard-working employees, sales representatives, vendors, and distributors who have made us the industry leader we are today. We look forward to 2017 with optimism and the hope that it will be a memorable year for all.

Yours sincerely,

Jeff Cherif



## Employee Spotlight

Christine Sterio has been with JB Industries longer than any other employee—44 years!

She has played an instrumental role throughout the years by ensuring production runs smoothly and that every part is quality made in our product assembly process. Christine loves working at JB because of the dynamic management team and the great employee benefits. When she is not working, Christine enjoys time with her grandchildren and watching her favorite television shows.

*“I like all of JB’s products—my experience over the years has made them easier to produce, and our processes more efficient.”*

— Christine Sterio



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# NEW PRODUCT PREVIEW

## COREMAX®

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LEAK DETECTOR

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## SH-35N WIRELESS DIGITAL GAUGE

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## VL-100 VELOCITY RAPID EVACUATION KIT

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### *Employee Spotlight*

Shannon Larsen is one of JB's newest employees and is part of the dynamic and knowledgeable customer service department.

Shannon enjoys working with everyone at JB, as well as the many customers she interacts with daily.

Shannon's love for people doesn't stop at JB. If she were to win the lottery her plans include founding a non-profit homeless shelter to assist single mothers and children.

When she is not working, Shannon loves being a mom and spending time with her two adorable girls.

***"My favorite product is the Platinum® Vacuum Pump! It's a customer favorite and made in the USA."***

– Shannon Larson



# VACUUM PUMPS

# PLATINUM<sup>®</sup>

<b>WARRANTY</b> 24 MONTHS OTC	<b>100%</b> FIELD REPAIRABLE	<b>15 MICRONS</b> VACUUM RATING	<b>2-STAGE</b> DIRECT DRIVE	<b>100%</b> FACTORY TESTED
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## THE BEST VACUUM PUMP IN THE INDUSTRY



American pride and expertise backed by an unprecedented 24 month over-the-counter warranty. Subjected to rigorous performance standards and testing, the Platinum<sup>®</sup> series is the top of the line for both quality and durability. Platinum<sup>®</sup> vacuum pumps feature a gas ballast and blank-off valve.

### FEATURES

- 1/2 HP Capacitor start
  - 1/4", 3/8" and 1/2" Intake tee
  - Ergonomic 1/2" break resistant exhaust handle with lift ring
  - Blank-off/Isolation valve for testing system leaks
  - Gas ballast keeps oil cleaner to extend pump life
  - All metal construction, brass fittings and stainless steel valving
  - 2-Stage direct drive to achieve deep vacuum
  - Tethered safety cap prevents oil spills
  - O-Ring sealed drain valve prevents leaks
  - Thermal overload protection
  - Low profile rocker power switch
  - Aluminum fins for superior heat dissipation
  - Check valve prevents oil back flow during power failure
  - Pair with Velocity VL-100 for faster evacuation
- Available in 115v and 230v



*Completely field repairable, the Platinum<sup>®</sup> series is designed to last. See page 92 for a complete list of repair parts. Subject to warranty as set forth on page 90.*

*To check vacuum accurately, use the DV-40 SUPERNOVA, DV-40S or the DV-22N. Operating instructions available online.*



## SPARK-PROOF MOTOR

New Spark-Proof Motor has the same features as our other pumps with the addition of spark-free, dual-voltage operation.

For use with A2L refrigerant gases such as R32 and 1234YF.

**Part No. DV-200N-250SP**



PLATINUM® Pump Assembly

PLATINUM® PUMPS					
	DV-42N	DV-85N	DV-142N	DV-200N/ DV-200N-250SP	DV-285N
<b>CFM</b>	1.5 CFM (42 l/m)	3 CFM (85 l/m)	5 CFM (142 l/m)	7 CFM (200 l/m)	10 CFM (285 l/m)
<b>MOTOR</b>	1/2 HP, 1725 RPM				
<b>VOLTAGE</b>	115v, 60Hz				
<b>PLUG</b>	US 110v				
<b>INTAKE PORT</b>	1/4"	1/4" x 3/8"	1/2" x 1/4" x 3/8"	1/2" x 1/4" x 3/8"	1/2" x 1/4" x 3/8"
<b>OIL CAP</b>	26 oz (798 cc)	26 oz (798 cc)	21 oz (680)	21 oz (680)	26 oz (798 cc)
<b>SHIP DIMENSIONS</b>	17-5/8" h 9-1/8" w 14" l				
<b>WEIGHT</b>	29 lbs (13.2 kg)	30 lbs (13.6 kg)	32 lbs (14.5 kg)	32 lbs (14.5 kg)	34 lbs (15.4 kg)
EUROPEAN					-250EU
	DV-42N-250EU	DV-85N-250EU	DV-142N-250EU	DV-200N-250EU	DV-285N-250EU
<b>MOTOR</b>	1/2 HP, 1425 RPM				
<b>VOLTAGE</b>	230v/50Hz	230v/50Hz	230v/50Hz	230v/50Hz	230v/50Hz
<b>PLUG</b>	European	European	European	European	European
DUAL VOLTAGE					-250
	DV-42N-250	DV-85N-250	DV-142N-250	DV-200N-250	DV-285N-250
<b>MOTOR</b>	1/2 HP, 1725 (1425) RPM				
<b>VOLTAGE</b>	115v, 60Hz and 230v/50Hz	115v, 60Hz and 230v/50Hz	115v, 60Hz and 230v/50Hz	115v, 60Hz and 230v/50Hz	115v, 60Hz and 230v/50Hz
<b>PLUG</b>	US 220v				
UNITED KINGDOM					-250UK
	DV-42N-250UK	DV-85N-250UK	DV-142N-250UK	DV-200N-250UK	DV-285N-250UK
<b>MOTOR</b>	1/2 HP, 1425 RPM				
<b>VOLTAGE</b>	230v/50Hz	230v/50Hz	230v/50Hz	230v/50Hz	230v/50Hz
<b>PLUG</b>	UK	UK	UK	UK	UK

# VACUUM PUMPS

# ELIMINATOR®

<b>WARRANTY</b> 24 MONTHS OTC	<b>100%</b> FIELD REPAIRABLE	<b>25 MICRONS</b> VACUUM RATING	<b>2-STAGE</b> DIRECT DRIVE	<b>100%</b> FACTORY TESTED
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## THE BEST AMERICAN MADE ECONOMY PUMP



Backed by an unprecedented 24 month over-the-counter warranty. Built for the air conditioning serviceman who wants a high quality, dependable vacuum pump, the Eliminator® series offers many higher end features with an affordable price. American made and 100% tested to JB's stringent quality standards, the Eliminator® is the best economy vacuum pump in the industry.

### FEATURES

- 1/2 HP Capacitor start
- 1/4" and 3/8" Intake tee
- Ergonomic 1/2" break resistant exhaust handle
- Large, easy to see oil level sight glass
- 2-Stage direct drive to achieve deep vacuum
- Oil fill located on cover for easy access
- Intake tee spaced away from handle for easy access
- Tethered safety cap prevents oil spills
- Well protected o-ring sealed drain valve prevents leaks
- All metal construction, brass fittings and stainless steel valving
- Increased oil capacity for cooler running temperature and reduced contamination
- Pair with Velocity VL-100 for faster evacuation
- Available in 115v and 230v



*Completely field repairable, the Platinum® series is designed to last. See page 94 for a complete list of repair parts. Subject to warranty as set forth on page 90.*

*To check vacuum accurately, use the DV-40 SUPERNOVA, DV-40S or the DV-22N. Operating instructions available online.*



# VACUUM PUMPS

## CHOOSING CFM

CFM<sup>2</sup> = Maximum Tonnage Rating. Take the CFM rating of a pump and multiply it by that number to find the maximum number of tons the pump is rated for:

**3 CFM pump (3 x 3) is rated for 9 tons**

**7 CFM pump (7 x 7) is rated for 49 tons**

Depending on the system line sizes of large tonnage systems, it is better to put two or more smaller, easily maneuverable pumps at different locations. This will overcome some of the pressure drop problems and evacuate faster than a single, large pump. Pumps in the 1.5 to 10 CFM class are adequate to handle 99% of the work.

JB pumps are built to last. To learn how to properly care for your pump, visit us online at [www.jbind.com](http://www.jbind.com).



## HOW TO MEASURE EVACUATION

A micron is a unit of pressure starting from a perfect vacuum (no pressure) expressed in linear increments. One inch equals 25,400 microns. The last inch of pressure below zero on the low side compound gauge is 25,400 microns.

A compound gauge only indicates that a vacuum is being produced, but does not tell you if moisture or contaminants are still in the system. Evacuation is complete when the last inch of pressure as indicated on the gauge is 25,400 microns. A system holds 500 microns to ensure dehydration is complete.

Therefore, there is a small fraction of an inch difference between a complete evacuation and an inadequately evacuated system. A compound gauge cannot measure this pressure at these levels accurately.

Only a micron gauge like the Supernova™ DV-40S or our DV-22N can accurately read the low pressures produced when evacuation/dehydration is complete.



DV-40S  
Wireless Digital Micron Gauge

ELIMINATOR® PUMPS			
	<b>DV-3E</b>	<b>DV-4E</b>	<b>DV-6E</b>
<b>CFM</b>	3 CFM (85 l/m)	4 CFM (113 l/m)	6 CFM (170 l/m)
<b>MOTOR</b>	1/2 HP, 1725 RPM	1/2 HP, 1725 RPM	1/2 HP, 1725 RPM
<b>VOLTAGE</b>	115v, 60Hz	115v, 60Hz	115v, 60Hz
<b>PLUG</b>	US 110v	US 110v	US 110v
<b>INTAKE PORT</b>	1/4" x 3/8"	1/4" x 3/8"	1/4" x 3/8"
<b>OIL CAP</b>	28 oz (828 cc)	25 oz (739 cc)	25 oz (739 cc)
<b>SHIP DIMENSIONS</b>	17-5/8" h x 9-1/8" w x 14" l	17-5/8" h x 9-1/8" w x 14" l	17-5/8" h x 9-1/8" w x 14" l
<b>WEIGHT</b>	29 lbs (13.2 kg)	30 lbs (13.6 kg)	30 lbs (13.6 kg)
<b>DUAL VOLTAGE</b>			<b>-250</b>
	<b>DV-3E-250</b>	<b>DV-4E-250</b>	<b>DV-6E-250</b>
<b>MOTOR</b>	1/2 HP, 1725 (1425) RPM	1/2 HP, 1725 (1425) RPM	1/2 HP, 1725 (1425) RPM
<b>VOLTAGE</b>	US 110v	US 110v	US 110v
<b>PLUG</b>	1/4" x 3/8"	1/4" x 3/8"	1/4" x 3/8"
<b>EUROPEAN</b>			<b>-250EU</b>
	<b>DV-3E-250EU</b>	<b>DV-4E-250EU</b>	<b>DV-6E-250EU</b>
<b>MOTOR</b>	1/2 HP, 1425 RPM	1/2 HP, 1425 RPM	1/2 HP, 1425 RPM
<b>VOLTAGE</b>	230v/50Hz	230v/50Hz	230v/50Hz
<b>PLUG</b>	European	European	European
<b>UNITED KINGDOM</b>			<b>-250UK</b>
	<b>DV-3E-250UK</b>	<b>DV-4E-250UK</b>	<b>DV-6E-250UK</b>
<b>MOTOR</b>	1/2 HP, 1425 RPM	1/2 HP, 1425 RPM	1/2 HP, 1425 RPM
<b>VOLTAGE</b>	230v/50Hz	230v/50Hz	230v/50Hz
<b>PLUG</b>	UK	UK	UK

# PUMP ACCESSORIES

## BLACK GOLD

## THE TANK

### BEST OIL IN THE INDUSTRY



### PUMP OIL ACTS AS A COOLANT, LUBRICANT AND SEALANT—SIMULTANEOUSLY

Black Gold Vacuum Pump Oil is the gold standard in vacuum pump care for use in any vacuum pump. Extremely pure and non-detergent, Black Gold is hydro processed which means it goes through a series of catalytic steps rendering the oil extremely refined, more viscous, and more stable. The result is clear mineral oil which will alert you to contamination sooner as it becomes cloudy or milky. In extreme temperatures, the oil will be more resistant to contaminants. JB recommends the oil be changed after every evacuation for maximum performance and pump efficiency.

The best test to check for oil contamination is through a micron gauge. In a leak-free system, if DV-22N micron gauge is not reading a deep vacuum, the oil is contaminated and should be changed. If the micron gauge pulls down to 50 microns, the oil is good. Testing process is the only time we recommend having a micron gauge attached directly to pump.

### VACUUM PUMP OIL CADDY



Deep vacuum can not be achieved with contaminated oil, laden with moisture and acid which damage pumps and shorten pump life. The Tank Vacuum Pump Oil Caddy helps to extend the life of vacuum pumps, maintaining clean oil in the pump and ensuring that the pump operates at peak efficiency. Note: vacuum pumps require changing oil after every use.

### FEATURES

- Change oil between jobs
- No more mess and spills
- Easy, convenient, and portable
- Capacity for five oil changes



#### BLACK GOLD VACUUM PUMP OIL

PART NO.	DESCRIP.	QTY.	SHIPPING WEIGHT	DIMENSIONS
DVO-1	Pint	24	25 lb./11.4 kg	9" x 14-1/4" x 12-1/2"
DVO-12	Quart	12	24 lb./10.9 kg	11" x 13" x 10"
DVO-24	Gallon	6	47 lb./21.4 kg	12-1/2" x 15-1/2" x 12-1/2"

#### THE TANK VACUUM PUMP OIL CADDY

PART NO.	DESCRIP.	QTY.	SHIP. WEIGHT	DIMENSIONS
DV-T1	Empty tank	1	3 lb./1.34 kg	19" x 10.5" x 6"

# PUMP ACCESSORIES

## OIL MIST FILTER

Eliminates oil mist from pump handle. DV-F8 fits 1/2" exhaust pipe on Platinum® (2008+ models) and Eliminator® (2011+ models). DV-F6 fits 3/8" exhaust pipe for all pre-2011 Eliminator® series and pre-2008 model Platinum®.



DV-F8  
1/2" Oil Mist Filter



### OIL MIST FILTER

PART NO.	DESCRIPTION
DV-F6	Oil mist filter 3/8"
DV-F8	Oil mist filter 1/2"

## SWIVEL COUPLERS

Features an o-ring seal



D10244  
1/4" Female Swivel Coupler



### SWIVEL COUPLERS

D10244	1/4" Female swivel coupler
D10266	3/8" Female swivel coupler
P90009	1/4" Replacement o-ring (10 pack)
P90012	3/8" Replacement o-ring (10 pack)

## SHUT-OFF VALVE

O-ring quick coupler shut-off valves are great for blanking off any vacuum system; works for pressures up to 800 lbs.



D10162  
1/4" Shut-off valve



### SHUT OFF VALVE

D10162	1/4" Female QC x 1/4" flare
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## QUICK COUPLERS

Features o-ring seal and no depressor. Refer to page 71 for a complete list of elbow, straight, and female NPT thread couplers and valves.



QC-E64  
3/8" QC x 1/4" SAE Elbow  
Quick Coupler



### QUICK COUPLERS

QC-E64	3/8" QC x 1/4" SAE elbow
QC-S64	3/8" QC x 1/4" SAE straight
P90009	1/4" Replacement o-ring (10 pack)
P90012	3/8" Replacement o-ring (10 pack)

## VL-100 VELOCITY RAPID EVACUATION KIT

The Velocity Rapid Evacuation Kit paired with a vacuum pump allows technicians to remove restrictive valve cores and perform AC/R system evacuations up to 10X faster through a large, 1/2" diameter hose; 3/8" x 1/4" SAE flare.



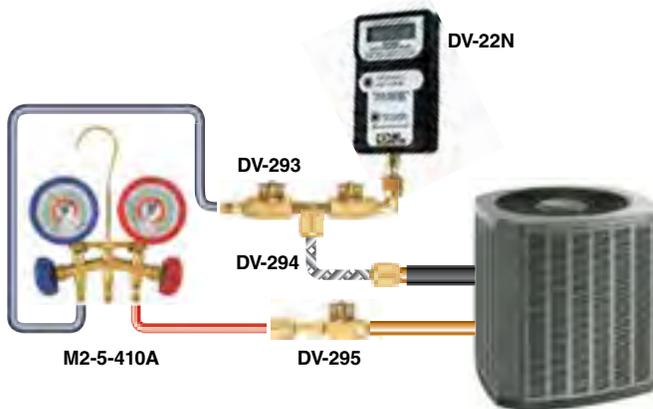
### EVACUATION KIT

PART NO.	DESCRIPTION
VL-100	Evacuation kit w/hose and valve core removal tool
A32525N	Valve core removal tool

## DV-29 MICRON HOOK-UP TEST UNIT

Used in conjunction with micron gauges DV-40S, DV-40, or DV-22N, the DV-29 ensures a leak-proof set-up. The DV-29 works with all micron gauges and creates a closed system, eliminating any leakage under deep vacuum.

If the micron gauge is attached directly to the vacuum pump with a 3' (91.4 cm) dedicated hose, you will get a lower reading as the gauge is sensing what the pump is doing and not what the pump is doing to the system.



### DV-29 MICRON HOOK-UP TEST UNIT

PART NO.	DESCRIPTION
DV-29	Leak-proof micron hook-up test kit, includes: DV-292, DV-293, DV-294, and DV-295
DV-291	Replacement 1/4" SAE swivel coupler
DV-292	Replacement 90° male flare with 1/4" o-ring QC
DV-293	Replacement valve assembly 1/4" MFL connector
DV-294	Replacement 10" (25.4 cm) metal hose with o-ring
DV-295	Replacement ball valve with o-ring QC and depressor
P90009	Replacement o-ring (10 pack)



DV-291



DV-292



P90009

# REFRIGERANT RECOVERY

## F6™ DUAL PISTON REFRIGERANT RECOVERY UNIT

**D** 2016  
DEALER DESIGN  
AWARDS  
theNEWS | GOLD

<b>COMPRESSOR</b> DUAL PISTON	<b>MOTOR</b> FULL ONE HORSEPOWER	<b>CONDENSER</b> MICRO-CHANNEL FOR SUPERIOR COOLING	<b>WARRANTY</b> UNPRECEDENTED THREE YEAR OTC
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The F6-DP Recovery Unit features a full one horsepower motor and is backed by an unsurpassed three year over-the-counter warranty. The F6's dual piston compressor and high efficiency micro-channel condenser design recovers refrigerant at industry leading speeds.

### FEATURES

Micro-channel condenser provides exceptional heat exchange allowing unit to maintain recovery rates throughout entire recovery cycle

Full one horsepower dual piston compressor for industry leading recovery rates

Simple two-valve operation

Over-sized cooling fan for superior heat dissipation

Self-purge without changing hoses

Full size protected gauges for suction and tank pressure

Filter/drier included

Heavy-duty handle with comfortable rubber grip

Circuit breaker prevents blown fuses on the job site

Detachable power cord

Heavy-duty noise absorbing blow molded case

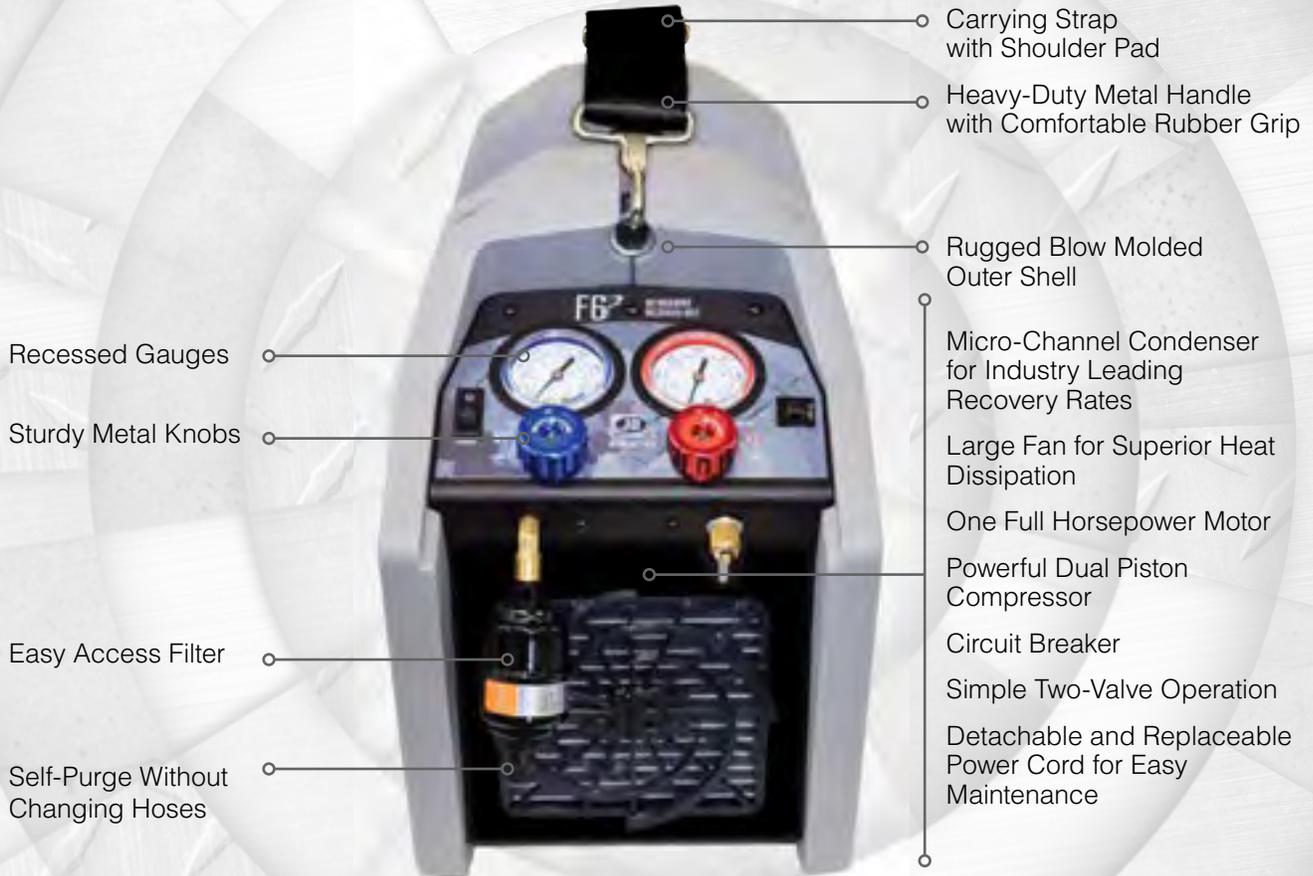
For use with all Class III, IV and V Refrigerants, including R410A



### F6-DP DUAL PISTON REFRIGERANT RECOVERY UNIT

PART NO.	DESCRIPTION
<b>F6-DP</b>	F6 Refrigerant recovery unit (115v)
<b>F6-DP-250</b>	F6 Refrigerant recovery unit (230v)
<b>F6-FLT</b>	Filter/drier attachment
<b>F6-STRAP</b>	Replacement carrying strap
<b>F6-BH</b>	Replacement blue knob and screw
<b>F6-RH</b>	Replacement red knob and screw
<b>F6-110-CRD</b>	Replacement power cord
<b>F6-RBFT</b>	Replacement rubber foot
<b>F6-RHP</b>	Replacement gauges
<b>REC-TANK-30</b>	30 lb. Empty refrigerant tank cylinder
<b>REC-TANK-50</b>	50 lb. Empty refrigerant tank cylinder







## Employee Spotlight

Hermila Garcia has been employed with JB Industries for over 40 years. Her hard work and dedication in the assembly process have not only made her a valued employee, but also a key component in the success and quality of JB's products. When it comes to JB's products, Hermila doesn't play favorites—she finds satisfaction in building them all, because they are all quality products. When she is not busy working, Hermila enjoys experimenting with do-it-yourself projects at home. With 40 years of hard work behind her, Hermila would use lottery winnings to take a nice, long relaxing vacation.

*“I like everything about my job – the people, the products, and contributing to our company's success”*

– Hermila Garcia



# SH-35N

**WARRANTY**  
12 MONTH

**BLUETOOTH**  
WIRELESS  
CONNECTIVITY

**FACTORY CALIBRATED**  
ACCURATE FROM  
0 - 29" OF HG

## WIRELESS DIGITAL GAUGE

The SH-35N Digital Pressure/Temperature Gauge provides a wireless connection to smartphone devices, allowing for system testing without loss of refrigerant—hoses and manifolds not necessary.

The free download of the SH-35N app wirelessly calculates and displays system pressure, temperature, superheat and sub-cooling in an easy-to-read, color format.

## FEATURES

- Wireless connection to your smart device with SH-35N app
- OLED sunlight readable screen
- Sealed touch buttons protect against dirt and dust
- Convenient carrying case
- Test system without losing refrigerant (hoses and manifolds not necessary)
- Built-in Schrader valve ports to easily adjust refrigerant charge
- Range up to 400' (unobstructed)
- Simplify and automate measurements
- Saves time and reduces cost
- Share screenshots right from your phone
- Easily track and store service history
- Rechargeable lithium polymer battery with 10 hours battery life

### SH-35N PRESSURE/TEMPERATURE WIRELESS DIGITAL GAUGE

PART NO.	DESCRIPTION
SH-35N	Hand-held digital vacuum gauge
SH-35CL	Temperature Clamp
SH-56	Socks (5)
SH-35N-CS	Carrying Case

# NEW



## Employee Spotlight

Carla Fonseca has been a dedicated, hard working employee with JB Industries for over 39 years in the assembly process. Her years of expertise and experience have contributed to the successful growth of the JB product line. She finds enjoyment in her interactions with long time coworkers each day and loves everything about her daily routine. In her free time, Carla enjoys swimming and spending time with her grandchildren. Always thinking of others, if Carla won the lottery she would help the needy and spend time traveling.

*"All of our products are wonderful and quality made, I love being a part of the process"*

*– Carla Fonseca*



**AVAILABLE IN THE APPLE APP STORE AND  
GOOGLE PLAY FOR ANDROID AS "SH-35N"**



# DV-40S

**WARRANTY**  
12 MONTHS

**UNITS OF MEASURE**  
MICRONS, PSIA, INHG, PASCALS,  
TORR, MTORR AND MBAR

**BLUETOOTH**  
WIRELESS  
CONNECTIVITY 

## WIRELESS MICRON GAUGE

The DV-40S Wireless Micron Gauge puts the power in your hands with data logging capabilities, programmable alarms, and wireless connection for iOS and Android smart devices via the JB DV-40S app.

### FEATURES

Factory calibration accurate vacuum range  
12,000 microns to 10 microns

Backup display on the gauge

Heavy-duty water resistant

Rechargeable battery

USB charging adapter for wall or computer charging

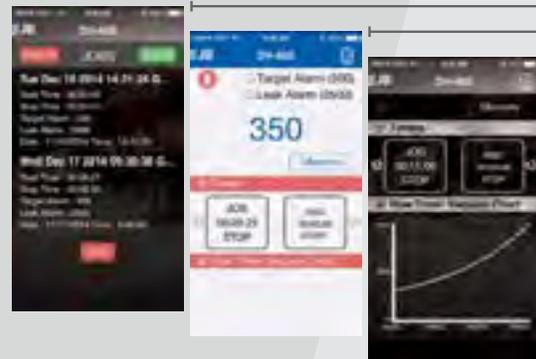
Free smart device access through the JB DV-40S app

Remote management capability

Programmable alarm system for low/high  
limits and approaching/leaking

Data logging system for recording and sharing  
Job Statistics

Light or dark app theme for visibility in  
different lighting environments



### DV-40S WIRELESS MICRON GAUGE

PART NO.	DESCRIPTION
<b>DV-40S</b>	Wireless micron gauge with case and charging adapter
<b>DV-40S-CS</b>	Protective carrying case for the DV-40S
<b>DV-40S-AC</b>	Charging adapter with cord
<b>A34000D</b>	1/4" QC x 1/4" access tee w/depressor
<b>P90009</b>	Replacement o-ring (10 pack)

# ELECTRONIC INSTRUMENTS



## DV-40S APP

### FEATURES

- Main app menu button—all advanced features can be found here as well as color theme options and scanning for a DV-40S to connect to
- Clipboard button accesses the data logging and sharing features. Save data and email it as simple text
- Check boxes arm the target and leak alarms separately and can be silenced by unchecking them
- Main vacuum reading display
- Unit of measure selection
- Overall job and rise test timers can be managed and recorded separately
- The rise vacuum chart will give a line graph display of the change in vacuum during the rise test

### AVAILABLE IN THE APPLE APP STORE AND GOOGLE PLAY FOR ANDROID AS “DV-40S”

Access the advanced features of the DV-40S wireless micron gauge with the touch of the screen. Features include remote management, programmable alarms and data logging.



Visit our YouTube Channel for an operation demonstration

# SUPERNOVA



<b>WARRANTY</b> 12 MONTHS OTC	<b>FLEXIBLE SENSOR</b> BRASS FITTING ON A FLEXIBLE CORD FOR HARD TO REACH PLACES	<b>FACTORY CALIBRATED</b> ACCURATE VACUUM RANGE FROM 12,000 TO 10 MICRONS
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## DV-41 DIGITAL MICRON GAUGE

The award winning Supernova® is innovation at its best. Customizable digital gauge allows service technicians to be certain when a system is properly evacuated of air and moisture.

### FEATURES

Fully programmable including approach alarm and leak alarm settings, shut-off and back-light duration

Large, easy-to-read LCD screen

Factory calibrated; requires no additional calibration

Measures in Microns, PSIA, INHG, Pascals, TORR, MTORR, and MBAR

Adjustable alarm frees you to perform other tasks

Sensor contamination easily cleaned with simple alcohol

Brass fitting on lengthy flexible cord for hard to reach places

Three AA alkaline batteries (included) or AC adapter

Adjustable auto-off to conserve battery life

*\*The DV-41 is not recommended for connection to vacuum pump when blanking off isolation valve.*

*The preferred hook-up uses the DV-29 when the valve is engaged as illustrated on page 15.*



### DV-41 DIGITAL MICRON GAUGE

PART NO.	DESCRIPTION
DV-41	DV-40 with protective carrying case and A/C adapter
DV-40C	Protective carrying case and adapter only
DV-40AC	A/C Adapter (Not a battery charger)
DV-40HK	Replacement hanging hook
A34000D	1/4" QC x 1/4" access tee w/depressor
P90009	Replacement o-ring (10 pack)

# DV-22N

<b>WARRANTY</b> 12 MONTHS OTC	<b>UNITS OF MEASURE</b> MICRONS, PSIA, INHG, PASCALS, TORR, MTORR AND MBAR	<b>FACTORY CALIBRATED</b> ACCURATE VACUUM RANGE FROM 9,000 TO 20 MICRONS
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## DIGITAL VACUUM GAUGE



The DV-22N has a micron range of 20 to 9,000 microns and reads vacuum in seven international units. Attach micron gauge to vacuum pump before evacuation to ensure pump pulls down to at least 50 microns. If not, pump oil is contaminated and should be changed.

A compound gauge only indicates that a vacuum is being produced, but does not tell if moisture and acids are present in the system. Micron gauges are the only tool to accurately read low pressure produced when evacuation/dehydration is complete. Refer to page 13 under “How to Measure Evacuation” for more information.

## FEATURES

Saves last vacuum readout after shut-down

The female connection on this unit allows for direct connection to the A/C unit without need of hose connection—JB does not recommend connection through a hose as it negatively affects accuracy

Leak-proof with o-ring coupler to ensure proper register of vacuum

Digital display with solid state circuitry; automatically adjusts for fluctuating temperature

Powers off after 10 minutes of non use to preserve battery life; low battery indicator alert

+32°F to 120°F (+0°C to 48.9°C) ambient temperature

DV-22N Gauge is not NIST traceable, but calibrated with NIST traceable gauges such as MKS baratrons

T2-4 Flare tee used to attach hoses to gauge (sold separately)

One 9v alkaline battery (included)

*\*The DV-22N is not recommended for connection to vacuum pump when blanking off isolation valve.*

*The preferred hook-up uses the DV-29 when the blank-off valve is engaged as illustrated on page 15.*



DV-22N DIGITAL VACUUM GAUGE	
PART NO.	DESCRIPTION
DV-22N	Hand-held digital vacuum gauge
DV-24N	DV-22N with protective carrying case
DV-26N	Protective carrying case only
DV-18	A/C Adapter
P90009	1/4" replacement o-ring (10 pack)
A34000D	1/4" QC x 1/4" access tee w/depressor
T2-4	1/4" SAE flare tee

# LEAK DETECTION

# PROWLER

<b>WARRANTY</b> 24 MONTHS	<b>SENSOR LIFE</b> UP TO 10 YEARS	<b>ALARM</b> AUDIBLE, VISUAL BAR GRAPHS, AND SILENT VIBRATING HANDLE	<b>NEW</b> MANUAL RESET
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## LD-5000 REFRIGERANT LEAK DETECTOR



The Prowler features manual calibration mode and reset control. It's highly sensitive electrochemical sensor detects all HFC, HCFC, and HFO refrigerants, helping you find even the smallest of leaks.

### FEATURES

Certified to ASHRAE standard 173-2012

Sensitivity can be programmed to high, medium, low

Proprietary electrochemical sensor does not diminish over time or with use

Warm up time < 30 seconds; response time immediate

Mutable audio alarm backed up by silent vibrating handle alarm

Adjustable back-lit LCD screen tilts upward for easy viewing at any angle

17" Flexible probe

Leak indicator bar graph displays leak intensity

Low battery consumption and excellent circuit stability

Four AA alkaline batteries (included)

Extremely accurate for all HFC, HCFC and blended refrigerants as well as new HFO refrigerants



<b>R410A</b> .05 oz/yr	<b>R22</b> .025 oz/yr
<b>R404A</b> .05 oz/yr	<b>R134a</b> .05 oz/yr
<b>R407A</b> .05 oz/yr	<b>R427A</b> .05 oz/yr
<b>R1234yf</b> .0125 oz/yr	

R1234yf is a low GWP alternative HFO refrigerant for HFC and HCFC refrigerants that are currently being phased out by the U.S. EPA. It is an A2L flammable refrigerant as defined by ASHRAE 34.

### CERTIFICATIONS

CE, ASHRAE 173-2012, EN 14624: 2012, SAE J2791, and SAE J2913

LD-5000	
PART NO.	DESCRIPTION
LD-5000	Prowler leak detector in case
LD-S100	Replacement sensor (3 prong)
LD-S101	Replacement sensor (6 prong)
LD-RF5	Replacement filters (5 pack)
LD-TV	Replacement leak test vial
LD-PK	Parts kit (6-prong sensor, filter kit and test vial)
LD-CS	Carrying case

# LEAK DETECTION

# LDC-4000

<b>WARRANTY</b> 24 MONTHS	<b>SENSOR LIFE</b> 300 HOURS	<b>&lt;5 PPM</b> METHANE SENSITIVITY	<b>ALARM</b> AUDIBLE
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## COMBUSTIBLE GAS AND HC REFRIGERANT LEAK DETECTOR



The easy-to-use LDC-4000 Combustible Gas and HC Refrigerant Leak Detector has a solid state heated sensor for high sensitivity to all HC refrigerants and combustible gases including Methane (Natural Gas), Propane (R290), Isobutene (R600A), Butane, (LPG), Ethane (R170), as well as Acetylene, Methanol, Acetone, Gasoline and others.

The LDC-4000 has a sensor life of over 300 hours and an instantaneous response time of detecting leaks as low as 5 ppm of Methane.

The LDC-4000's intuitive technology features automatic calibration and is operated with one on/off power and sensitivity button. It's long, flexible probe allows for easy access into hard to reach places.

The detector is certified by the Mine Safety and Health Administration (MSHA) to be Intrinsically Safe in a combustible atmosphere.

### FEATURES

- Long life, stable sensor
- Automatic calibration and reset to ambient
- Comfortable sanoprene grip
- Intrinsically safe certified
- Low battery indicator
- Four AA alkaline batteries (included)

### CERTIFICATIONS

CE, ASHRAE 173-2012, EN 14624: 2012, SAE J2791, and SAE J2913



LDC-4000	
PART NO.	DESCRIPTION
LDC-4000	Combustible gas and HC refrigerant leak detector
LDC-4000-1	LDC-4000 Replacement sensor (4-prong)
LDC-4000-2	LDC-4000 Replacement sensor cover
LDC-4000-3	Combustible leak test vial
LDC-4000-4	LDC-4000 Carrying case
LDC-4000-5	LDC-4000 Instruction manual

# LEAK DETECTION

# AURORA

<b>WARRANTY</b> 12 MONTHS	<b>SENSOR LIFE</b> UP TO 10 YEARS	<b>LED DISPLAY</b> VISIBILITY EVEN IN BRIGHT CONDITIONS	<b>ALARM</b> AUDIBLE AND VISUAL LED GRAPH
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## LD-6000IR INFRARED REFRIGERANT LEAK DETECTOR

Collisions of energetically charged particles with atoms create the light spectaculars known as “auroras,” part of the inspiration behind the Aurora Leak Detector. Put the power of light to good use, to find the smallest of leaks.

### FEATURES

- Infrared sensor life tested to last up to 10 years
- Sensitivity can be programmed to high, medium and low
- Accurate to 0.10 oz./year
- Convenient carrying case
- Magnetic hanger
- Eight segment easy-to-read LED display
- Peak function stores the highest change in refrigerant Concentration achieved while continuing to detect leaks
- 8-Hour rechargeable lithium ion battery
- Sensor won't trigger on oil or moisture

### CERTIFICATIONS

ASHRAE 173, SAE J2791 and SAE J2913

<b>R410A</b>	<b>R22</b>
<b>R404A</b>	<b>R134a</b>
<b>R407A</b>	<b>R427A</b>
<b>R502</b>	<b>R1234yf</b>

*\*R1234yf is a replacement for all HFC (134A) and HCFC (R22) refrigerants that are currently being phased out. It is an A2L flammable refrigerant as defined by ASHRAE 34.*



AURORA LD-6000IR LEAK DETECTOR	
PART NO.	DESCRIPTION
<b>LD-6000IR</b>	Aurora leak detector in case
<b>LDA-WE9</b>	Wand extension – 9"
<b>LDA-NNP4</b>	Needle nose probe – 4-3/4"
<b>LDA-NNP9</b>	Needle nose probe – 9"
<b>LDA-VCH</b>	12v vehicle charger
<b>LDA-WCH</b>	120-240v wall charger
<b>LDA-WCHUS</b>	Wall charger – US connector
<b>LDA-WCHUK</b>	Wall charger – UK connector
<b>LDA-WCHEU</b>	Wall charger – European connector
<b>LDA-LI</b>	3.7v Lithium ion battery 1800 mAh
<b>LDA-WTP</b>	Wand tip
<b>LDA-PK</b>	Filters for wand and probes plus o-rings (10 filters and 5 o-rings per package)

# QUEST

<b>WARRANTY</b> 24 MONTHS	<b>SENSOR LIFE</b> UP TO 10 YEARS	<b>ALARM</b> AUDIBLE
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## LD-3000 REFRIGERANT GAS LEAK DETECTOR



The new, easy-to-use QUEST Refrigerant Gas Leak Detector features a long-life, highly sensitive electrochemical sensor and is designed to detect all CFC, HFC, HFO and HCFC refrigerants, and hydrocarbon blends.

### FEATURES

- Long life, stable sensor
- Automatic calibration and reset to ambient levels
- Three adjustable sensitivity levels
- Low battery indicator
- Audio mute function
- Comfortable neoprene grip
- Rugged carrying case (included)
- Four AA alkaline batteries (included)

### CERTIFICATIONS INCLUDE:

CE, ACSI SAE J2791 and Euro EN1462



<b>R410A</b> .05 oz/yr	<b>R22</b> .025 oz/yr
<b>R404A</b> .05 oz/yr	<b>R134a</b> .05 oz/yr
<b>R407A</b> .05 oz/yr	<b>R427A</b> .05 oz/yr
<b>R1234yf</b> .0125 oz/yr	

*R1234yf is a low GWP alternative HFO refrigerant for HFC and HCFC refrigerants that are currently being phased out by the U.S. EPA. It is an A2L flammable refrigerant as defined by ASHRAE 34.*

QUEST LDC-3000 LEAK DETECTOR	
PART NO.	DESCRIPTION
LD-3000	Refrigerant gas leak detector in case
LD-3000-S100	Refrigerant sensor with filter
LD-3000-RFS	Refrigerant sensor filters (5 pack)
LD-3000-TV	Refrigerant leak test reference vial
LD-3000-PK	Refrigerant parts kit (includes: sensor, test vial, & filter kit)
LD-3000-CS	Carrying case
LD-3000-ST	Sensor tip

# REFRIGERANT CHARGING SCALES

# ATLAS

<b>WARRANTY</b> 24 MONTHS	<b>250 LBS</b> WEIGHT CAPACITY (115 KG)	<b>BLUETOOTH</b> WIRELESS CONNECTIVITY	<b>APP</b> DS-20000S APP
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## DS-20000S WIRELESS REFRIGERANT CHARGING SCALE

The ATLAS wireless refrigerant charging scale is the go-to heavy-duty charging scale for industry professionals. This innovative newcomer with bluetooth accessible scale features and a wide slip-resistant surface to accommodate even large European refrigeration tanks with a weight capacity of 250 pounds (115 kg).

The DS-20000S app provides unprecedented controls, including: unit of measurement setting, user defined alarms, job timing, and data logging.

### FEATURES

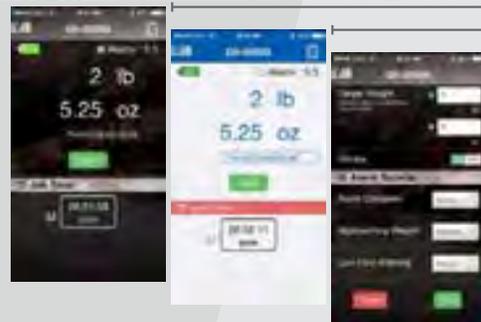
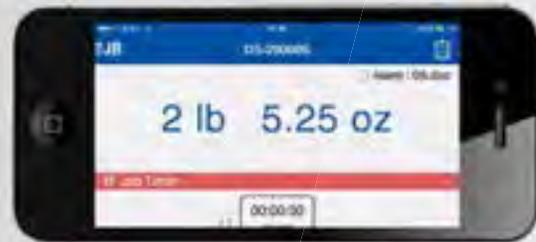
- User defined weight and approaching alarms
- Job time recording and email accessible data logging
- Adjustable unit of measurement
- Integrated app based manual
- LED Connectivity and power lights
- Water-resistant design
- Rugged carrying case (included)
- Four AA batteries (included)



### DS-20000S APP

AVAILABLE IN THE APPLE APP STORE AND GOOGLE PLAY FOR ANDROID AS "DS-20000S"

- Job time recording and email accessible data logging
- Programmable alarm system for approaching alarms
- Data logging system for recording and sharing job statistics
- Light or dark app theme for visibility in different lighting environments



ATLAS DS-20000S WIRELESS SCALE	
PART NO.	DESCRIPTION
DS-20000S	250 lb. weight capacity, wireless ATLAS scale
TECHNICAL INFORMATION	
USAGE	Indoor/outdoor use; not waterproof
OPERATING TEMP.	+32°F to 122°F (0°C to +50°C)
STORAGE TEMP.	+14°F to 140°F (-10°C to +60°C)
HUMIDITY	85% RH @ 113°F (45°C), non-condensing
BATTERY LIFE	Approximately 60 hours

# REFRIGERANT CHARGING SCALES

# ATLAS



<b>WARRANTY</b> 24 MONTHS	<b>220 LBS</b> WEIGHT CAPACITY (100 KG)	<b>SOLID STATE</b> LOAD CELL ACCURATE TO .25 OZ/10 G	<b>LCD SCREEN</b> ON HAND-HELD CONTROLLER
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## DS-20000 REFRIGERANT CHARGING SCALE

The ATLAS refrigerant charging scale has advanced solid state load cell for superior sensitivity (0.25 oz/10 gm) and accuracy.

The ATLAS's 220 pound (100 Kg) weight capacity and all metal construction with easy-to-read hand-held control make it an industry favorite.



### FEATURES

Solid state load cell accurate to 0.25 oz/10 gm without need of cylinder directly on center of weighing platform

LCD Screen on hand-held can be read from a distance or in direct sunlight

Cable and hand-held remote are easily replaced

Displays weight in decimal/pounds, pounds/ounces, and kilograms

Auto shut-off option

Rugged carrying case (included)

One 9v alkaline battery (included)

### ATLAS DS-20000 CHARGING SCALE

PART NO.	DESCRIPTION
DS-20000	220 lb. weight capacity ATLAS scale
DSR10	Replacement communication cable
DSR20	Replacement hand-held remote
DSR30	Replacement weighing platform

### TECHNICAL INFORMATION

USAGE	Indoor/outdoor use; not waterproof
OPERATING TEMP.	+32°F to 122°F (0°C to +50°C)
STORAGE TEMP.	+14°F to 140°F (-10°C to +60°C)
HUMIDITY	85% RH @ 113°F (45°C), non-condensing
ALTITUDE	6500 ft (2000 m)
BATTERY LIFE	Approximately 60 hours

## MSKIT1, MSKIT2 AND MSKIT3

### EVERYTHING YOU NEED FOR R410A DUCTLESS MINI-SPLITS IN ONE CONVENIENT KIT

JB offers three versatile kits featuring everything you need to install and service mini-split units. MSKIT1 and MSKIT2 contain all essential tools to get the job done including the Dealer Design Award winning Patriot™ 2-Valve Manifold, a KOBRA® Secure Seal hose set that is UL approved for R410A and a heavy-duty 6-spanner head torque wrench.

The MSKIT3 is an affordable solution for service technicians who already have a few basic tools in their tool box.



For each Patriot™, MSKIT1, or MSKIT2 sold, JB will donate to **Operation Homefront**.

To learn more about **Operation Homefront**, visit [www.operationhomefront.net](http://www.operationhomefront.net)



MSKIT1 & MSKIT2 BACKPACK

INCLUDED IN MSKIT1 BACKPACK		1/4"
PART NO.	DESCRIPTION	
JB-BACKPACK1	JB backpack	
22500	Patriot™ manifold with R410A gauges	
CCLS-60	1/4" KOBRA® UL approved "Secure Seal" hose set	
T30605	Metric (2 - 8mm) and imperial (5/64" - 1/4") hex key set	
T30600	Ratcheting eccentric cone flare tool	
TRQ1080	Torque wrench set with 6 spanner heads	
A32525N	1/4" Female x 1/4" SAE valve core remover w/side port	
SHLD-P4	SHIELD® locking cap R410A (4 pack)	
A31656	5/16" Female x 1/4" SAE brass adapters (2 included)	
NFT5-4	1/4" Brass caps (5 included)	

INCLUDED IN MSKIT2 BACKPACK		5/16"
PART NO.	DESCRIPTION	
JB-BACKPACK1	JB backpack	
22505	Patriot™ manifold with R410A gauges	
CCLS5-60	5/16" KOBRA® UL approved "Secure Seal" hose set	
T30605	Metric (2 - 8mm) and imperial (5/64" - 1/4") hex key set	
T30600	Ratcheting eccentric cone flare tool	
TRQ1080	Torque wrench set with 6 spanner heads	
A32535N	5/16" Female x 5/16" SAE valve core remover w/side port	
SHLD-E4	SHIELD® locking cap R410A (4 pack)	
A31665	1/4" Female x 5/16" SAE brass adapters (2 included)	
NFT5-5	5/16" Brass caps (5 included)	

INCLUDED IN MSKIT3 TOOLBAG		1/4" AND 5/16"
PART NO.	DESCRIPTION	
JB-TOOLBAG1	JB tool bag	
T30605	Metric (2 - 8mm) and Imperial (5/64" - 1/4") hex key set	
T30600	Ratcheting eccentric cone flare tool	
TRQ1080	Torque wrench set with 6 spanner heads	
NFT5-4	1/4" Brass caps (5 included)	
NFT5-5	5/16" Brass caps (5 included)	
A31656	5/16" Female x 1/4" SAE brass adapters (2 included)	



MSKIT3

# MINI-SPLIT TOOL KITS

## PRODUCT DESCRIPTIONS



**22500 1/4" | 22505 5/16"**  
Patriot™ manifold with surge dampened R410A gauges and 360° swiveling hose holders



**CCLS-60 | CCLS5-60 5/16"**  
KOBRA® Secure Sealed refrigerant charging hoses with low-loss, UL-approved for R410A



**TRQ1080**  
7.375-59.004 pound-feet (10-80 N-M) torque wrench with 6 spanner heads (17, 22, 24, 26, 27 and 29 mm) and 1/2" DR Ratchet head



**T30600**  
Ratcheting, eccentric cone flaring tool with internal clutch to prevent over-torquing. For tube OD: 3/16", 1/4", 5/16", 3/8", 1/2", 5/8" and 3/4"



**A32525N 1/4" | A32535N 5/16"**  
Valve core remover tool with side port for removing valve cores without losing system charge



**SHLD-P4 1/4" | SHLD-E4 5/16"**  
SHIELD® Refrigerant locking cap with water-resistant rubber sleeves color coded for R410A



**T30605**  
Metric (2-8 mm) and Imperial (5/64" - 1/4") hex key sets



**NFT5-4 1/4" | NFT5-5 5/16"**  
Five finger-tight 1/4" o-ring sealed brass caps



**A31656 1/4" | A31665 5/16" male**  
Brass adapters for 5/16" - 1/4" SAE connections

## ACCESSORIES



**JB-TOOLBAG1**  
Heavy-duty canvas JB tool bag



**JB-BACKPACK1**  
Heavy-duty JB canvas backpack

5/8", 13/16"  
15/16", 1-1/8"



**TRQ-IMP**  
Torque wrench imperial heads for TRQ1080

# MANIFOLDS

## PATRIOT


  
 2014  
 DEALER DESIGN  
 AWARDS  
 the NEWS | BRONZE

### 2-VALVE MANIFOLD



The Patriot™ 2-Valve Brass Manifold has a sleek bar design paired with easy-to-grip metal handles and 3-1/8" metal Class 1 illuminating gauges making it the go-to manifold for HVAC technicians. Available with assorted gauge options, including new 3-1/8" propane gauges.



22225

### FEATURES

Original free floating dual o-ring sealing system for faster evacuation/charging

Surge dampened gauges for reduced needle movement

All metal, Class 1 (1%) gauges

360° Swiveling hose holders

Pull-out proof hanging hook

Easy turning metal hand wheels

Solid brass forging

Replaceable intake/hose holder fittings for storage

*Gauge features and replacements are detailed on page 46. Gauge boots are featured on page 49. Metric replacement gauges are detailed on page 48. KOBRA® hoses are detailed beginning on page 50.*

R22	R404A	R410A
INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)		3-1/8" GAUGES LED 1% Class
Manifold only		22225L
CCLE 60" KOBRA® Hoses		22233L
INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)		3-1/8" GAUGES Illuminating Camo 1% Class
Manifold only		22225CM
CCLE 60" KOBRA® Hoses		22233CM
CCLS 60" KOBRA® Hoses UL R410A SECURE SEAL		22246CM

R22	R134a	R404A
INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)		3-1/8" GAUGES Illuminating Class
Manifold only		---
CCLE 60" KOBRA® Hoses		22131

R410A		
INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)	2-1/2" GAUGES R410A Only (3/23 %)	3-1/8" GAUGES R410A Only
Manifold only	22500	22525
CCLE 60" KOBRA® Hoses	---	22531
Manifold only - 5/16" Hose holders	22505	---

R290	R32	R600A
INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)		3-1/8" PROPANE GAUGES
Manifold only		22725
CCLE 36" KOBRA® Hoses		22733

# MANIFOLDS

## PATRIOT™ THE MANIFOLD THAT GIVES BACK

For each Patriot™, MSKIT1, or MSKIT2 sold, JB will donate to Operation Homefront in support of their vision to be the provider of choice for emergency financial and other assistance to families of service members and wounded warriors. Together, we hope to give back to those who have given so much.



Visit [www.operationhomefront.net](http://www.operationhomefront.net) for more information



L to R: Patricia Cruz (wife of Carlos Cruz), Kari McClellan (Operation Homefront), Jeff Cherif (JB Industries), and Carlos Cruz (Operation Homefront).

Patriot™ Manifold available in the MSKIT1 and MSKIT2



## Employee Spotlight

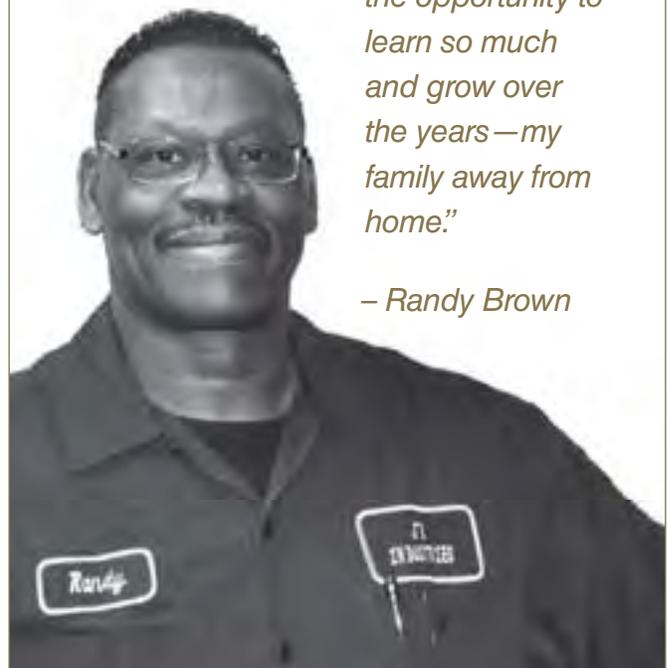
Randy Brown has been working on and maintaining JB's Davenport machines for 35 years. Randy's "can do" multi-tasking attitude has him jumping in wherever and whenever he's needed.

Randy is hard pressed to pick a favorite JB product—having worked on such a variety over the years. He believes JB's quality manufacturing makes them all superior products.

When he is not working, Randy is a drag racing enthusiast and owner of his own car, which he also races. When there isn't a race, he can be found building engines. If he won the lottery, first thing on the shopping list (after taking care of family) would be his own race track and fleet of cars.

*"JB has given me the opportunity to learn so much and grow over the years—my family away from home."*

*— Randy Brown*



## M2 STANDARD MANIFOLD

### THE INDUSTRY STANDARD 2-VALVE CLASSIC BRASS



M2-22231

An industry standard for countless years, the M2 series of manifolds features our full flow design for faster evacuation/charging. Coupled with an angled bar for better knuckle clearance in rotating the hand wheels, and the original free floating dual o-ring sealing system, the M2 is the classic American made manifold. All brass manifolds are equipped with heavy-duty metal gauge cases for added durability.

### FEATURES

- Surge dampened gauges for reduced needle movement
- All metal gauges
- Available in 2-1/2" and 3-1/8" size gauges with and without boots
- Color-coded refrigerant dials for easy reading
- Pull-out proof hanging hook
- Replaceable intake/hose holder fittings for storage
- Easy turning plastic hand wheels; metal available on select models

### METRIC INFORMATION

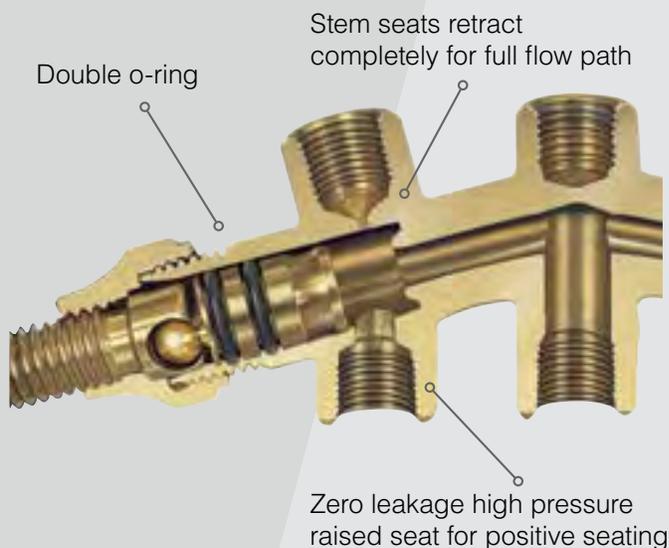
Offered with 63.5mm (2-1/2") metric gauges reading BAR/PSI, kPa/PSI, and kg/cm<sup>2</sup>.

Gauge features and replacements are detailed on pages 46-49. Gauge boots are featured on page 49. Metric replacement gauges are detailed on page 48. KOBRA<sup>®</sup> hoses are detailed beginning on page 50.

Refer to repair parts beginning on page 96 for all JB manifolds. If you do not see a refrigerant combination, please contact us at 800.323.0811.



### ORIGINAL FREE FLOATING DUAL O-RING SEALING SYSTEM FOR FASTER EVACUATION AND CHARGING



# MANIFOLDS

<b>R22</b>	<b>R404A</b>	<b>R410A</b>		
<b>INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)</b>	<b>2-1/2" GAUGES</b>	<b>2-1/2" GAUGES w/Boots</b>	<b>3-1/8" GAUGES Illuminating 1% Class</b>	<b>3-1/8" GAUGES Illuminating</b>
Manifold only	<b>M2-8-410A*</b>	<b>M2-8-410AB</b>	<b>M2-23225</b>	<b>M2-22225</b>
CCLE 60" KOBRA® Hoses	<b>M2-5-410A*</b>	<b>M2-5-410AB</b>	<b>M2-23231</b>	<b>M2-22231</b>
CCLS 60" KOBRA® Hoses UL R410A SECURE SEAL	<b>M2-5-410A-SS</b>	---	---	<b>M2-22244</b>

\* Silver metal handles available; order **M2-8-410AM** or **M2-5-410AM**

<b>R22</b>	<b>R134a</b>	<b>R404A</b>		
<b>INCLUDES DESIGNATED HOSE SET 3-PACK (UNLESS NOTED)</b>	<b>2-1/2" GAUGES</b>	<b>2-1/2" GAUGES w/Boots</b>	<b>3-1/8" GAUGES Illuminating 1% Class</b>	<b>3-1/8" GAUGES Illuminating</b>
Manifold only	<b>M2-21125</b>	<b>M2-21125B</b>	<b>M2-23125</b>	<b>M2-22125</b>
CCLE 60" KOBRA® Hoses	<b>M2-21131</b>	<b>M2-21131B</b>	<b>M2-23131</b>	<b>M2-22131</b>

<b>R12</b>	<b>R22</b>	<b>R502</b>		
<b>INCLUDES DESIGNATED HOSE SET 3-PACK (UNLESS NOTED)</b>			<b>2-1/2" GAUGES</b>	<b>2-1/2" GAUGES w/Boots</b>
Manifold only			<b>M2-8</b>	<b>M2-8B</b>
CL 36" Red and blue hoses, CL 60" yellow hose			<b>M2-6</b>	<b>M2-6B</b>
CCL 60" Standard hose			<b>M2-5</b>	<b>M2-5B</b>
CCL 36" Standard hose			<b>M2-36</b>	<b>M2-36B</b>

<b>R410A</b>			
<b>INCLUDES DESIGNATED HOSE SET 3-PACK (UNLESS NOTED)</b>	<b>2-1/2" GAUGES R410A Only</b>	<b>2-1/2" GAUGES R410A Only</b>	<b>3-1/8" GAUGES R410A Only</b>
Manifold only	<b>M2-21525</b>	<b>M2-21525B</b>	<b>M2-22525</b>
CCLE 60" KOBRA® Hoses	<b>M2-21531</b>	<b>M2-21531B</b>	<b>M2-22531</b>

<b>R427A</b>	<b>R422B</b>	<b>R407A</b>	
			<b>3-1/8" GAUGES Illuminating</b>
Manifold only			<b>M2-22325</b>

<b>R22</b>	<b>R410A</b>	<b>R407C</b>	
			<b>3-1/8" GAUGES Illuminating</b>
Manifold only			<b>M2-22425</b>



Easy turning plastic hand wheels being installed in Aurora, IL

## ZEPPELIN®

### 2-VALVE ALUMINUM MANIFOLD



24225

The American made 2-valve Zeppelin® series of aluminum manifolds are machined from durable, solid aluminum billets and feature rigid, durable, molded, “soft grip” rubber handles with fingertip grooves that eases opening and closing while the improved stem design means “full open” in only 2-1/2 turns. The aluminum Zeppelin® series, also available in 4-valve, incorporates cutting edge styling and technology to significantly reduce the weight of the manifold.

In addition, JB also offers an increased selection of gauges in metal cases and refrigerant combinations. Standard 2-1/2", large glow-in-the-dark 3-1/8", and liquid-filled 3-1/8" gauges can be coupled with different refrigerant combinations and JB's multiple hose options to serve any application. All manifolds include a 60" (152.3 cm) hose set unless noted otherwise.

#### FEATURES

Surge dampened gauges for reduced needle movement

Original free floating dual o-ring sealing system for faster evacuation and charging

Available with 2-1/2" and 3-1/8" size gauges

Color-coded refrigerant dials for easy reading

Pull-out proof hanging hook

Precisely machined anodized aluminum body

Replaceable intake/hose holder fittings for storage

Soft grip rubber hand-wheels reduce turning to open/close

All metal gauges

*Gauge features and replacements are detailed on page 46-49. Gauge boots are featured on page 49. Metric replacement gauges are detailed on page 48. KOBRA® hoses are detailed beginning on page 50.*

*Refer to Manifold Rebuild Kits on page 95 for all JB manifold repair parts. If you do not see a refrigerant combination contact customer service.*



*Zeppelin manifolds are made from a single billet of solid aluminum*

# MANIFOLDS

<b>R22</b>	<b>R404A</b>	<b>R410A</b>	
<b>INCLUDES DESIGNATED HOSE SET 3 PACK (UNLESS NOTED)</b>		<b>2-1/2" GAUGES</b>	<b>3-1/8" GAUGES</b> <i>Liquid Filled 1%</i>
			<b>3-1/8" GAUGES</b> <i>Illuminating</i>
Manifold only	<b>24200</b>	<b>24250</b>	<b>24225</b>
CCLE 60" KOBRA® Hoses	<b>24208</b>	<b>24258</b>	<b>24233</b>
CCLV 60" KOBRA® Whip end ball valve hoses	---	<b>24265</b>	<b>24240</b>
CCLS 60" KOBRA® Hoses <i>UL R410A SECURE SEAL</i>	---	---	<b>24244</b>

<b>R22</b>	<b>R134a</b>	<b>R404A</b>	
<b>INCLUDES DESIGNATED HOSE SET 3 PACK (UNLESS NOTED)</b>		<b>2-1/2" GAUGES</b>	<b>3-1/8" GAUGES</b> <i>Liquid Filled 1%</i>
			<b>3-1/8" GAUGES</b> <i>Illuminating</i>
Manifold only	<b>24100</b>	<b>24150</b>	<b>24125</b>
CCLE 60" KOBRA® Hoses	<b>24108</b>	<b>24158</b>	<b>24133</b>
CCLBV 60" KOBRA® Ball valve hoses	---	<b>24165</b>	<b>24140</b>
CCLS 60" KOBRA® Hoses <i>UL R410A SECURE SEAL</i>	---	<b>24169</b>	<b>24144</b>

<b>R12</b>	<b>R22</b>	<b>R502</b>	
<b>INCLUDES DESIGNATED HOSE SET 3 PACK (UNLESS NOTED)</b>		<b>2-1/2" GAUGES</b>	<b>3-1/8" GAUGES</b> <i>Liquid Filled 1%</i>
			<b>3-1/8" GAUGES</b> <i>Illuminating</i>
Manifold only	<b>24000</b>	<b>24050</b>	<b>24025</b>
CCLE 60" KOBRA® Hoses	<b>24008</b>	<b>24058</b>	<b>24033</b>
CCLBV 60" KOBRA® Ball valve Hoses	---	<b>24065</b>	<b>24040</b>
CCLS 60" KOBRA® Hoses <i>UL R410A SECURE SEAL</i>	---	<b>24069</b>	<b>24044</b>

<b>R410A</b>		
<b>INCLUDES DESIGNATED HOSE SET 3 PACK (UNLESS NOTED)</b>		<b>2-1/2" GAUGES</b> <i>R410A Only</i>
		<b>3-1/8" GAUGES</b> <i>R410A Only</i>
Manifold only	<b>24500</b>	<b>24525</b>
CCLE 60" KOBRA® Hoses	<b>24508</b>	<b>24533</b>

<b>R427A</b>	<b>R422B</b>	<b>R407A</b>	
			<b>3-1/8" GAUGES</b> <i>Illuminating</i>
Manifold only			<b>24325</b>

<b>R22</b>	<b>R410A</b>	<b>R407C</b>	
			<b>3-1/8" GAUGES</b> <i>Illuminating</i>
Manifold only			<b>24425</b>

<b>R22</b>	<b>R134a</b>	<b>R404A</b>	<b>R410A</b>	
<b>INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)</b>				<b>3-1/8" GAUGES</b> <i>Liquid Filled 1%</i>
Manifold only				<b>24600</b>
CCLE KOBRA® Hoses				<b>24608</b>
CCLBV 60" KOBRA® Ball valve hoses				<b>24615</b>



## Employee Spotlight

Jeff Bodner has been making JB products for over 21 years in his role as a machine shop production manager.

During his career he has seen many new products launched at JB Industries. Having worked very closely with the engineering of JB's access valve line and deep vacuum pumps, he puts them at the top of his favorite products list.

When Jeff is not working, he enjoys the outdoors and traveling. Everything from ATV riding and fishing to walks and hiking.

*“Everyone at JB works together. We are a very tight family here.”*

*– Jeff Bodnar*



## ZEPPELIN®

### 4-VALVE FORGED ALUMINUM MANIFOLD



The American made 4-Valve Forged Aluminum Manifold Zeppelin® series is machined from durable, solid aluminum billets and features rigid, durable molded “soft grip” rubber handles with fingertip grooves to ease opening and closing. The improved stem design means “fully open” in only 2-1/2 turns. Also available in 2-valve; cutting edge styling and technology significantly reduce the weight of the manifold.

JB also offers a wide selection of metal gauges and refrigerant combinations. Standard 2-1/2", large 3-1/8", and a four refrigerant 4" gauge (available only on the 4-valve Zeppelin®). Gauges can be coupled with different refrigerant combinations and multiple hose options to serve any application. All manifolds include a 60" (152 cm) hose set unless noted.

### FEATURES

Surge dampened gauges for reduced needle movement

Full 3/8" bore evacuates 40% faster than the competing 4-valve manifold

Available with 2-1/2", 3-1/8" and 4" size gauges

Replaceable intake/hose holder fittings for storage on back

Color-coded refrigerant dials for easy reading

Pull-out proof hanging hook

Precisely machined anodized aluminum body

Soft grip rubber hand wheels reduce turning to open/close

Heavy-duty forged aluminum body is rugged and durable

*Gauge features and replacements are detailed on page 46-49. Gauge boots are featured on page 49. Metric replacement gauges are detailed on page 48. KOBRA® hoses are detailed beginning on page 50.*

*Refer to Manifold Rebuild Kits on page 95 for all JB manifold repair parts. If you do not see a refrigerant combination contact customer service.*



*Zeppelin manifolds ready to package and ship*

# MANIFOLDS

<b>R22</b> <b>R404A</b> <b>R410A</b>				
INCLUDES DESIGNATED 3 HOSE SET PLUS A 3/8" KOBRA® BLACK CHARGING HOSE (UNLESS NOTED)	2-1/2" GAUGES	3-1/8" GAUGES <i>Liquid Filled 1%</i>	3-1/8" GAUGES <i>Illuminating</i>	3-1/8" GAUGES <i>Coin-cell battery LED Gauges</i>
Manifold only	25200	25250	25225	25225L
CCE 60" KOBRA® Hoses	25208	25258	25233	25233L
CCLBV 60" KOBRA® Ball valve hoses	---	25265	25240	---
CCLV 60" KOBRA® Whip end ball valve hoses	---	25269	25244	---
CCLS 60" KOBRA® Hoses - <i>UL R410A SECURE SEAL</i>	---	---	25246	---

<b>R22</b> <b>R134a</b> <b>R404A</b>				
INCLUDES DESIGNATED 3 HOSE SET PLUS A 3/8" KOBRA® BLACK CHARGING HOSE (UNLESS NOTED)	2-1/2" GAUGES	3-1/8" GAUGES <i>Liquid Filled 1%</i>	3-1/8" GAUGES <i>Illuminating</i>	
Manifold only	25100	25150	25125	
CCE 60" KOBRA® Hoses	25108	25158	25133	
CCLBV 60" KOBRA® Ball valve hoses	---	25165	25140	
CCLS 60" KOBRA® Hoses - <i>UL R410A SECURE SEAL</i>	---	25169	25144	

<b>R12</b> <b>R22</b> <b>R502</b>				
INCLUDES DESIGNATED 3 HOSE SET PLUS A 3/8" KOBRA® BLACK CHARGING HOSE (UNLESS NOTED)	2-1/2" GAUGES	3-1/8" GAUGES <i>Liquid Filled 1%</i>	3-1/8" GAUGES <i>Illuminating</i>	
Manifold only	25000	25050	25025	
CCE 60" KOBRA® Hoses	25008	25058	25033	
CCLBV 60" KOBRA® Ball valve hoses	---	25065	25040	
CCLS 60" KOBRA® Hoses - <i>UL R410A SECURE SEAL</i>	---	25069	25044	

<b>R410A</b>				
INCLUDES DESIGNATED 3 HOSE SET PLUS A 3/8" KOBRA® BLACK CHARGING HOSE (UNLESS NOTED)	2-1/2" GAUGES <i>R410A Only</i>	3-1/8" GAUGES <i>Liquid Filled R410A Only</i>	3-1/8" GAUGES <i>R410A Only</i>	
Manifold only	25500	25550	25525	
CCE 60" KOBRA® Hoses	25508	25558	25533	
CCLV 60" KOBRA® Whip end ball valve hoses	25523	25573	25548	

<b>R427A</b> <b>R422B</b> <b>R407A</b>			
INCLUDES DESIGNATED 3 HOSE SET PLUS A 3/8" KOBRA® BLACK CHARGING HOSE (UNLESS NOTED)		3-1/8" GAUGES <i>Liquid Filled 1%</i>	3-1/8" GAUGES <i>Illuminating</i>
CCE 60" KOBRA® Hoses		25608	25325

<b>R22</b> <b>R410A</b> <b>R407C</b>		
		3-1/8" GAUGES <i>Illuminating</i>
Manifold only		25425

<b>R22</b> <b>R134a</b> <b>R404A</b> <b>R410A</b>		
INCLUDES DESIGNATED 3 HOSE SET PLUS A 3/8" KOBRA® BLACK CHARGING HOSE (UNLESS NOTED)		4" GAUGES <i>Illuminating</i>
CCE 60" KOBRA® Hoses		25708
CCLV 60" KOBRA® Whip end ball valve hoses		25713

# MANIFOLDS

## REVOLVER®

### 4-VALVE BALL MANIFOLD



The Revolver® features four internal metering ball valves that adjust to do finite openings for liquid charging and features a sturdy brass construction with hose holders that swivel to the front or back for greater flexibility.

Handles are a quarter turn to full open and close with gradient marks to help in liquid charging. The full 3/8" bore lets you work quickly and efficiently.

### FEATURES

Integrated liquid charging capability

Adjusts to finite openings for liquid charging

Quarter turn full open/close handle

Four internal ball valves

3/8" Port for faster evacuation

Available with 2-1/2" and 3-1/8" size gauges

360° Swiveling hose holders for greater flexibility

Pull-out proof hanging hook

Soft grip rubber hand wheels reduce turning to open/close

Surge dampened gauges for reduced needle movement

All metal gauges

*Gauge features and replacements are detailed on page 46-49. Gauge boots are featured on page 49. Metric replacement gauges are detailed on page 48. KOBRA® hoses are detailed beginning on page 50.*

*Refer to page 97 for manifold repair parts. If you do not see a refrigerant combination contact customer service.*



Revolver® —the first ball valve manifold on the market

# MANIFOLDS

<b>R22</b>	<b>R404A</b>	<b>R410A</b>
<b>INCLUDES DESIGNATED 3 HOSE SET PLUS A 3/8" KOBRA® BLACK CHARGING HOSE (UNLESS NOTED)</b>	<b>2-1/2" GAUGES</b>	<b>3-1/8" GAUGES Illuminating</b>
		<b>3-1/8" GAUGES Coin-cell battery LED Gauges</b>
Manifold only	<b>26200</b>	<b>26225</b>
CCLC 60" KOBRA® Hoses	<b>26208</b>	<b>26233</b>
CCLBV 60" KOBRA® Ball valve hoses	---	<b>26240</b>
CCLV 60" KOBRA® Whip end ball valve hoses	---	<b>26244</b>
CCLS 60" KOBRA® Hoses <i>UL R410A SECURE SEAL</i>	---	<b>26246</b>

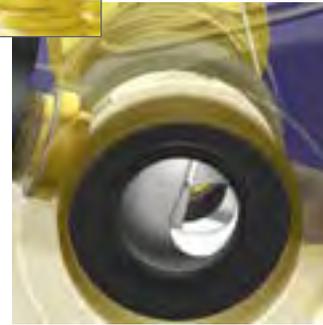
<b>R22</b>	<b>R134a</b>	<b>R404A</b>
<b>INCLUDES DESIGNATED 3 HOSE SET PLUS A 3/8" KOBRA® BLACK CHARGING HOSE (UNLESS NOTED)</b>	<b>2-1/2" GAUGES</b>	<b>3-1/8" GAUGES Illuminating</b>
Manifold only	<b>26100</b>	<b>26125</b>
CCLC 60" KOBRA® Hoses	<b>26108</b>	<b>26133</b>
CCLBV 60" KOBRA® Ball valve hoses	---	<b>26140</b>
CCLS 60" KOBRA® Hoses - <i>UL R410A SECURE SEAL</i>	---	<b>26144</b>

<b>R12</b>	<b>R22</b>	<b>R502</b>
<b>INCLUDES DESIGNATED 3 HOSE SET PLUS A 3/8" KOBRA® BLACK CHARGING HOSE (UNLESS NOTED)</b>	<b>2-1/2" GAUGES</b>	<b>3-1/8" GAUGES Illuminating</b>
Manifold only	<b>26000</b>	<b>26025</b>
CCLC 60" KOBRA® Hoses	<b>26008</b>	<b>26033</b>
CCLBV 60" KOBRA® Ball valve hoses	---	<b>26040</b>
CCLS 60" KOBRA® Hoses <i>UL R410A SECURE SEAL</i>	---	<b>26044</b>

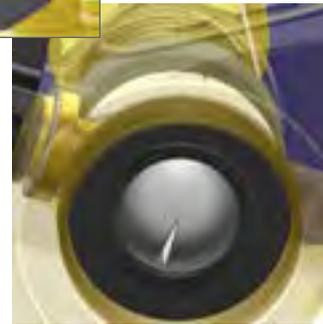
## REVOLVER® LIQUID CHARGING



1. Revolver® Full Open Position



2. Revolver® Liquid Charging Position (1st dash)



3. Revolver® Closed Position



# DMG2-5

**WARRANTY**  
12 MONTHS

**UNIT OF MEASURE**  
BAR, PSI, KPA AND MPA

**COMPATIBLE REFRIGERANTS**  
80+ PREPROGRAMMED

## 2-VALVE DIGITAL MANIFOLD

The DMG2-5 features an easy-to-read screen with intuitive buttons, 80+ preprogrammed refrigerants and simultaneous calculation of superheat and subcooling.

### FEATURES

- Preprogrammed with 80+ refrigerants
- Data logging capability
- Robust transducer design
- Simultaneous calculation of superheat and subcooling
- Sturdy body designed for resiliency
- Heavy duty K-type thermal couples included
- Simple and accessible data display
- Vacuum sensor and data recording modules sold separately
- Rugged carrying case (included)



### DMG2-5 2-VALVE DIGITAL MANIFOLD

PART NO.	DESCRIPTION
DMG2-5	2-Valve digital manifold with 60" KOBRA® CCLE Hose set
DMG2-8	2-Valve digital manifold
DMG2-CASE	Heavy-duty protective carrying case
DMG2-TC	Heavy-duty K-type thermal couple
DMG2-DATA	DMG2 data recording module
DMG2-VAC	DMG2 vacuum sensor module

### TECHNICAL INFORMATION

PRESSURE DISPLAY	bar, psi, kPa, mPa
TEMP. DISPLAY	°F and °C
VACUUM DISPLAY	microns, mbar, mmHg, pascals, mtorr
POWER SOURCE	9V battery, included
MONITOR (DIAGONAL)	4-1/3" or 11 cm
PRESSURE MEASUREMENT RANGE	-14.5 to 870 PSI
PRECISION (AT 72°C)	+/- 0.5% FS
TEMPERATURE MEASUREMENT RANGE	-58°F to 392°F
WORKING TEMP.	14°F to 122°F
CONNECTIONS	1/4" SAE (7/16" UNF)

# MANIFOLDS



Preprogrammed with  
**80+ Refrigerants**  
 Includes all HFC, HCFC, HFO  
 and blended refrigerants

R410A	R22
R404A	R134a
R407A	R427A
R12	R422B
R502	

**DMG2-Case**  
 Heavy-duty carrying case included



**DMG2-Data**  
 Data recording module for storage of job information and data uploading

**DMG2-TC**  
 Heavy-duty K-Type Thermal Couples



**DMG2-Vac**  
 Vacuum sensor module to record vacuum readings

## M2 HEAT PUMP MANIFOLD

### FORGED BRASS BODY



Heat pumps use the same refrigeration cycle for heating and cooling. A heat pump can change which coil is the condenser and which is the evaporator by way of a reversing valve. Using a traditional manifold to service a heat pump is not advisable as the low side of the gauge will be damaged when the system goes into heating mode. Therefore, both gauges of the manifold must be designed to handle the high pressures of the heating mode.

The M2 heat pump manifold has two 3-1/8" glow-in-the-dark Class 1, 1% accuracy, gauges designed for 800 psi to handle the heat pump pressures. Because of the significant temperature glide on R407C, the pressure/temperature scale has two sections. For temperatures below 50°, the scale is based on saturated vapor (dew point DP). For temperatures above 50 degrees, the scale is based on saturated liquid (bubble point BP). Use the DP for superheat calculations and the BP for subcooling calculations.



### FEATURES

Class 1, illuminating metal gauges designed for 800 psi heat pump pressures

Available with KOBRA® high pressure black hoses

Replaceable intake and hose holder fittings

Classic forged brass body

### GAUGE BOOTS

See page 49 for more information.



**R22** **R410A** **R407C**

INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)	
Manifold only	<b>M2-HP</b>
Three 60" KOBRA® black charging hoses	<b>M2-HP-5</b>



**M2-808**  
Replacement  
Heat Pump Gauges

# MANIFOLDS

## METRIC MANIFOLDS

### BAR/PSI • KPA/PSI • KG/CM2

All manifolds come with 63.5 mm (2-1/2") metric gauges in BAR/PSI, kPa/PSI, and kg/cm2 as well as standard CL and KOBRA® CLE series hoses.

Refer to the M2 Brass, 2-Valve Zeppelin®, and 4-Valve Zeppelin® pages for a full list of features for each. Also available with 80mm (3-3/8") metric gauges in select quantities. For more information, contact customer service.

INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)	M2 BRASS			2-VALVE ZEPPELIN®			4-VALVE ZEPPELIN®		
	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>
Manifold only	28592	28292	28192	28752	28852	28952	27752	27852	27952
CCL 60" KOBRA® hoses (60"/152 cm)	28596	28296	28196	28754	28854	28954	27754	27854	27954
5/16" CCL KOBRA® hoses (1/4" yellow hose)	28597	28297	28197	---	---	---	---	---	---
CCLBV KOBRA® Ball valve hoses	28599	28299	28199	28759	28859	28959	27759	27859	27959

INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)	M2 BRASS			2-VALVE ZEPPELIN®			4-VALVE ZEPPELIN®		
	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>
Manifold only	28572	28272	28172	28772	28872	28972	27772	27872	27972
CCL Standard hoses (36"/91 cm)	28570	28270	28170	28770	28870	28970	27770	27870	27970
CCL Standard hoses (60"/152 cm)	28574	28274	28174	28774	28874	28974	27774	27874	27974
CCLs KOBRA® hoses (60"/152 cm) UL R410A SECURE SEAL	28576	28276	28176	28776	28876	28876	27776	27774	27776

INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)	M2 BRASS			2-VALVE ZEPPELIN®			4-VALVE ZEPPELIN®		
	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>
Manifold only	28582	28282	28182	28782	28882	28982	27782	27882	27982
CCL Standard hoses (36"/91 cm)	28580	28280	28180	28780	28880	28980	27780	27880	27980
CCL Standard hose (60"/152 cm)	28584	28284	28184	28784	28884	28984	27784	27884	27984
CCL 60" KOBRA® hoses (60"/152 cm)	28586	28286	28186	28786	28886	28986	27786	27886	27986
CCLs KOBRA® hoses (60"/152 cm) UL R410A SECURE SEAL	28588	28288	28188	28788	28888	28988	27788	27888	27988

INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)	M2 BRASS			2-VALVE ZEPPELIN®			4-VALVE ZEPPELIN®		
	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>	BAR/PSI	kPa/PSI	Kg/cm <sup>2</sup>
Manifold only	28502	28202	28102	28732	28832	28932	---	---	---
CCL Standard hose (36"/91 cm)	28505	28205	28105	28735	28835	28935	---	---	---



## LED GAUGES M2-820L COMPOUND AND M2-825L PRESSURE



### FEATURES

LED back-lit illuminating gauge face for easy viewing in dark environments

3-1/8" metal gauges

Rocker off/on switch

One 3v lithium coin cell battery (included)

250+ hour battery life



## PROPANE GAUGES M2-600 COMPOUND AND M2-605 PRESSURE



### FEATURES

New Propane Gauges include Pressure/Temperature relationships for hydrocarbon refrigerants R290, R600, and R32

3-1/8" metal gauges

High impact clear view Lexan lens

Full size brass movements

INDIVIDUAL/REPLACEMENT GAUGES				
			COMPOUND	PRESSURE
R22	R404A	R410A	M2-820L	M2-825L
LED GAUGES AVAILABLE ON FOLLOWING MANIFOLDS				3-1/8" LED GAUGES
2-Valve Patriot™				22225L/22233L
4-Valve Zeppelin®				25225L/25233L
4-Valve Revolver®				26225L/26233L

INDIVIDUAL/REPLACEMENT GAUGES				
			COMPOUND	PRESSURE
R290	R600A	R32	M2-600	M2-605
INCLUDES DESIGNATED HOSE SET (UNLESS NOTED)				3-1/8" PROPANE GAUGES
Patriot™ w/propane gauges – manifold only				22725
Patriot™ w/propane gauges – CCLE 36" KOBRA® hoses				22733



# MANIFOLD GAUGES

1/8" MPT CONNECTIONS

## 2-1/2" METAL GAUGES



These high quality, 2-1/2" (63.5 mm) all steel cased standard gauges are identical to the gauges used on our manifold sets. They are surge dampened for accuracy. Gauges are sensitive instruments and therefore should not be subjected to pressures beyond scale.

High impact clear view Lexan lens

Recalibrating screw

Full size brass movements



	COMPOUND	PRESSURE
R22 R404A R410A	M2-460	M2-465
R22 R134a R404A	M2-430	M2-435
R134a	M2-350	M2-355
R410A	M2-410	M2-415
R12 R22 R502	M2-250	M2-500
R134a R404A R507A	M2-420	M2-425

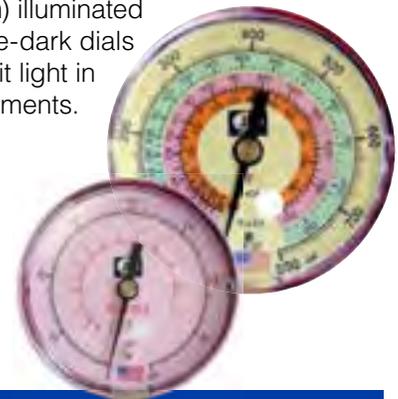
## 3-1/8" ILLUMINATING



JB offers 3-1/8" (80 mm) illuminated gauges with glow-in-the-dark dials that store energy to emit light in dimly lit or dark environments.

**R410A Only**

The pink non-illuminating 410A only gauges are available in 2-1/2" and 3-1/8"



	COMPOUND	PRESSURE
R22 R404A R410A	M2-820	M2-825
R22 R134a R404A	M2-851	M2-856
R410A Non-illuminating	M2-810	M2-815
R12 R22 R502	M2-800	M2-805
R22 R410A R407C	M2-830	M2-831
R427A R422B R407A	M2-828	M2-829

## 3-1/8" 1% CALIBRATED CAMO ILLUMINATING GAUGES



JB offers 3-1/8" (80 mm) illuminated gauges with glow-in-the-dark dials that store energy to emit light in dimly lit or dark environments.



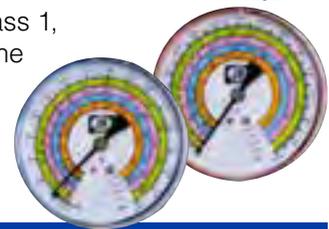
	COMPOUND	PRESSURE
R22 R404A R410A	M2-924CM	M2-925CM

## 4" 1% CALIBRATED REFRIGERANT GAUGES



These 4" gauges feature Class 1, 1% accuracy. Available on the Zeppelin® 4-valve manifold.

*Note: gauges may not fit on all manufacturer's manifold bodies due to the width.*



	COMPOUND	PRESSURE
R22 R134a R404A R410A	M2-400	M2-405

## 3-1/8" 1% CALIBRATED LIQUID FILLED REFRIGERANT GAUGES

Made with European craftsmanship and quality standards, these Class 1 3-1/8" (80 mm) liquid-filled gauges are +/- 1% accurate. Offered with an exclusive four refrigerant combination dial for most applications; tensile strength. Temperature compensated for changes in case pressure for accuracy.

Compound/Pressure liquid-filled case

Class 1 gauges calibrated for 1% accuracy

30" Vacuum, 0 to 500 psi

No leak system prevents glycerin loss

Heavy-duty enclosure



LIQUID FILLED	COMPOUND	PRESSURE
R22 R134a R404A R410A	M2-860	M2-865

# MANIFOLD GAUGES

## 3-1/8" 1% CALIBRATED GAUGES



### LIQUID FILLED

These liquid-filled gauges are simply the toughest in the industry. Features include an internal breathing diaphragm that eliminates air bubbles which can distort the reading; recalibrating screw on the back of the gauge.

LIQUID FILLED					
			COMPOUND	PRESSURE	
R22	R404A	R410A	M2-890	M2-895	
R22	R134a	R404A	M2-880	M2-885	
R12	R22	R502	M2-870	M2-875	

### ILLUMINATING

Illuminated gauges also available as Class 1; refer to the gauge tables for availability.

ILLUMINATING					
			COMPOUND	PRESSURE	
R22	R404A	R410A	M2-924	M2-925	
R22	R134a	R404A	M2-951	M2-956	

## METRIC GAUGES

These high quality 63.5 mm (2-1/2") metric gauges are identical to the gauges used on our manifold sets. Featuring high impact Lexan lenses for better durability and visibility. Gauges are sensitive instruments and therefore should not be subjected to pressures beyond scale. Please refer to page 45 for product information on metric manifolds.

Available in BAR/PSI, kPa/PSI, and kg/cm<sup>2</sup> measurements and full size brass movements

COMPOUND	BAR/PSI	K/PSI	KG/CM <sup>2</sup>
R22 R404A R410A	29310	29311	29312
R22 R134a R404A	29333	---	---
R134a R404A R507	29290	---	29292
R12 R22 R502	29280	29260	29384
R134a	29330	29331	29332

## SINGLE TEST GAUGES

All brass quick connect fitting gauges designed for quick pressure checks on large systems or refrigerant tanks. Perfect for permanent attachment to large systems. Available with any replacement gauge offered by JB or in different size connections upon request.



AVAILABLE IN OTHER REFRIGERANT COMBINATIONS				
			2 1/2"	3 1/8"
			COMPOUND	PRESSURE
R22	R404A	R410A	QC-G460	QC-G465
			COMPOUND	PRESSURE
R22	R404A	R410A	QC-G820	QC-G825
			COMPOUND	PRESSURE
R22	R134a	R404A	QC-G430	QC-G434
			COMPOUND	PRESSURE
R22	R134a	R404A	QC-G851	QC-G856



For safety reasons, gauges and hoses not specified for R410A can damage product and cause injury.

# MANIFOLD GAUGES

## PROTECTIVE GAUGE BOOTS AND REPLACEMENT LENSES

Protective gauge boots add increased durability to both 2-1/2" (63.5 mm) and 3-1/8" (80 mm) gauges on your manifold.



GAUGE BOOTS AND REPLACEMENT LENSES	
MR-590	2-1/2" Black boot
MR-593	3-1/8" Black boot
MR-594	3-1/8" Red boot for M2-865 liquid filled
MR-595	3-1/8" Blue boot for M2-860 liquid filled
MR-596	Set of two 2-1/2" black boots
MR-598	Set of two black JB 2-1/2" black boots
MR-593CM	Set of two 3-1/8" camo style boots
MR-593SP	Set of two 3-1/8" sportsman style boots
MR-517	2-1/2" Screw-on lens fits both plastic and metal gauges
MR-533	3-1/8" Snap-on lens



### Employee Spotlight

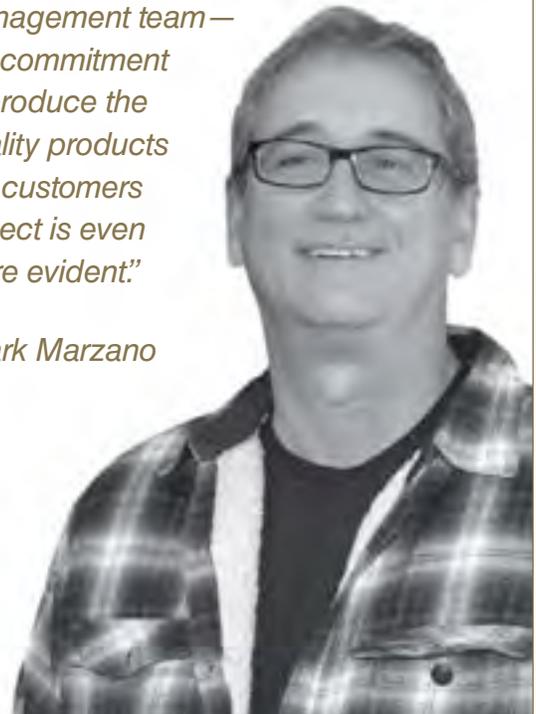
Mark Marzano has been JB's factory production manager for eight years. He was drawn to JB by the integrity of its employees.

The Platinum® Series Pump is his favorite product because it is such a great quality item which has lasted the test of time.

His favorite activities outside of work are Nascar, golf, fishing, and travel. His greatest enjoyment is spending time with his granddaughter.

*"I had the chance to interact with several JB team members while working as a manufacturers rep. JB was always accommodating and listened to the needs of their customers. Now that I'm part of the management team—the commitment to produce the quality products our customers expect is even more evident."*

— Mark Marzano



# HOSES

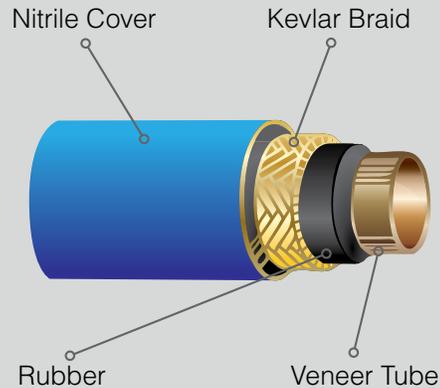
## KOBRA® FAST - FIERCE - FLEXIBLE



### KOBRA® HOSE OVERVIEW

- Kevlar lined for strength and flexibility
- All brass fittings open to maximum flow
- No blow-outs at high pressures
- UV protective bag to protect color fading
- Hose fittings field repairable with replacement parts and rebuild kits
- Provides an industry superior 5-1 safety factor
- Custom length and fitting combos available; contact customer service

### ANATOMY OF THE KOBRA® HOSE



### GASKET SEAL HOSES (CLE)

**800 PSI WORKING – 4000 PSI BURST\*** 

KOBRA® CLE series feature a new 14 TPI pitch knurl to provide an improved grip for easier sealing and greater comfort with a blow-out resistant gasket. The patent pending design features a hood that locks the gasket into the fitting with a straight edge to straight edge force that eliminates the blow-out of the gasket. The barbed depressor locks into the gasket exerting more outward force pushing the gasket further into place. The depressor is precisely machined, has a dimple that guides the valve core into place, and is designed to provide maximum flow.

*\* 3/8" Gasket Sealed Hoses are 600 psi working – 3000 psi burst*



CCLE-60

### SECURE SEAL HOSES (CLS)

**800 PSI WORKING – 4000 PSI BURST** 

The Secure Seal Hose is one of the only UL recognized hoses for use with R410A. Our CCLS series of KOBRA® hoses open to full flow and have a low loss fitting that traps the refrigerant inside the hose to help meet non-venting requirements. The internal thrust washer ensures free rotation. The secure seal fitting is rebuildable with a parts kit. The low loss fitting is offered on our Kevlar-lined KOBRA® high pressure hose.



CCLS-60



# HOSES

## KOBRA® CLS SERIES HOSE



CLS Hoses feature a UL R410A approved secure-seal, specially designed to lock refrigerant inside the hose without the need for a ball valve attachment. CLS Series Hoses are fully field repairable with low-loss UL approved fittings.

800 - 4000 PSI

Fully rebuildable with kit and snap ring pliers

Stainless steel thrust washer insures free rotation even under high pressure

Three point contact on depressor

*Full rebuild/repair instructions for CLS hose fittings (33112N and 33113N) on page 55.*



### CLS SERIES - KOBRA® SECURE SEAL HOSE

LENGTH	BLUE	YELLOW	RED	BYR (3 PACK)	BYR PLUS BLACK 3/8" (4 PACK)
36" (91 cm)	CLS-36B	CLS-36Y	CLS-36R	CCLS-36	CCLS4-36
48" (122 cm)	CLS-48B	CLS-48Y	CLS-48R	CCLS-48	CCLS4-48
60" (152 cm)	CLS-60B	CLS-60Y	CLS-60R	CCLS-60	CCLS4-60
72" (182 cm)	CLS-72B	CLS-72Y	CLS-72R	CCLS-72	CCLS4-72
10' (3 m)	CLS-120B	CLS-120Y	CLS-120R	---	---
25' (7.6 m)	CLS-300B	CLS-300Y	CLS-300R	---	---
50' (15.2 m)	CLS-600B	CLS-600Y	CLS-600R	---	---
75' (22.8 m)	CLS-900B	CLS-900Y	CLS-900R	---	---
100' (30.5 m)	CLS-1200B	CLS-1200Y	CLS-1200R	---	---

### CLS5 SERIES - 5/16" KOBRA® SECURE SEAL HOSE

LENGTH	BLUE	YELLOW	RED	BYR (3 PACK)	BYR PLUS BLACK 3/8" (4 PACK)
36" (91 cm)	CLS5-36B	CLS5-36Y	CLS5-36R	CCLS5-36	---
48" (122 cm)	CLS5-48B	CLS5-48Y	CLS5-48R	CCLS5-48	---
60" (152 cm)	CLS5-60B	CLS5-60Y	CLS5-60R	CCLS5-60	---
72" (182 cm)	CLS5-72B	CLS5-72Y	CLS5-72R	CCLS5-72	---

*BYR set includes 5/16" blue and red hose with 1/4" yellow, 4-Pack includes a 3/8" KOBRA® black charging hose. For large nut KOBRA® CLS series hoses contact customer service.*

### SECURE SEAL KOBRA® REBUILD PARTS AND QUICK COUPLER SHUT-OFF FITTINGS

<b>33112N</b>	1/4" QC x 1/4" SAE
<b>33113N</b>	1/4" QC x 1/4" SAE 90°
<b>33112RK</b>	1/4" QC rebuild kit
<b>33115N</b>	5/16" QC x 1/4" SAE
<b>33116N</b>	5/16" QC x 1/4" SAE 90°
<b>33115RK</b>	5/16" QC rebuild kit
<b>T21295</b>	Snap ring pliers for rebuilding KOBRA® CLS and CLS5 Secure Seal fittings
<b>P90022</b>	Replacement o-ring for T21295 and 33112RK

# HOSES

# KOBRA®

FAST - FIERCE - FLEXIBLE



CCLC-60

## KOBRA® CLE SERIES HOSE



Gasket-sealed, high pressure charging hose.

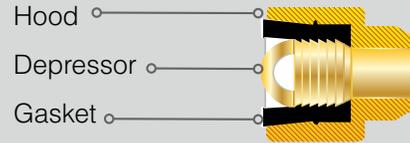
800 – 4000 PSI

Blow-out resistant gasket locked into the hood fitting with a straight edge to straight edge force to eliminate blow-outs

Barbed depressor precisely machined to guide the valve core into place

Maximum flow – No blow-outs

Easy grip 14 TPI pitch knurl



*JB's ultra-coarse 14 TPI pitch knurl provides an improved grip for easier sealing and greater comfort*

CLE SERIES - KOBRA® GASKET-SEALED ENVIRO HOSE					
LENGTH	BLUE	YELLOW	RED	BLUE, RED YELLOW, (3 PACK)	BLUE, RED YELLOW, PLUS BLACK 3/8" (4 PACK)
36" (91 cm)	CLE-36B	CLE-36Y	CLE-36R	CCLC-36	CCLC4-36
48" (122 cm)	CLE-48B	CLE-48Y	CLE-48R	CCLC-48	CCLC4-48
60" (152 cm)	CLE-60B	CLE-60Y	CLE-60R	CCLC-60	CCLC4-60
72" (182 cm)	CLE-72B	CLE-72Y	CLE-72R	CCLC-72	CCLC4-72
10' (3 m)	CLE-120B	CLE-120Y	CLE-120R	---	---
25' (7.6 m)	CLE-300B	CLE-300Y	CLE-300R	---	---
50' (15.2 m)	CLE-600B	CLE-600Y	CLE-600R	---	---
75' (22.8 m)	CLE-900B	CLE-900Y	CLE-900R	---	---
100' (30.5 m)	CLE-1200B	CLE-1200Y	CLE-1200R	---	---

KOBRA® ENVIRO HOSE REPAIR AND REPLACEMENT PARTS	
<b>P511</b>	1/4" CLE, CLV and CLB Series replacement gasket
<b>P90514</b>	CLE, CLV and CLB Series replacement depressor
<b>P90016</b>	3/8" KOBRA® black and yellow charging hose replacement o-ring for CL6HD, CCLV, CL6 and CLV6 series hoses
<b>P90008</b>	1/2" Heavy-duty black charging hose replacement o-ring

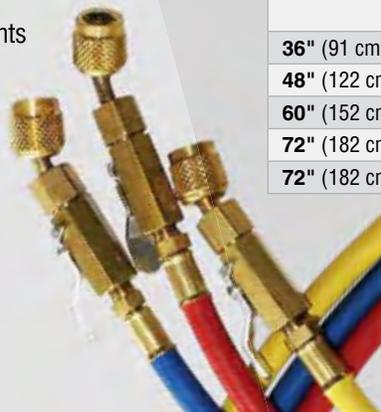
## KOBRA® CLBV SERIES HOSE



Gasket-sealed charging hose with quarter turn lever ball valve fittings.

800 – 4000 PSI

Meet non-venting requirements by trapping refrigerant with ball valve fittings



CLBV SERIES - KOBRA® HOSE WITH BALL VALVE					
LENGTH	BLUE	YELLOW	RED	BLUE, RED YELLOW, (3 PACK)	BLUE, RED YELLOW, PLUS BLACK 3/8" (4 PACK)
36" (91 cm)	CLBV-36B	CLBV-36Y	CLBV-36R	CCLBV-36	CCLBV4-36
48" (122 cm)	CLBV-48B	CLBV-48Y	CLBV-48R	CCLBV-48	CCLBV4-48
60" (152 cm)	CLBV-60B	CLBV-60Y	CLBV-60R	CCLBV-60	CCLBV4-60
72" (182 cm)	CLBV-72B	CLBV-72Y	CLBV-72R	CCLBV-72	CCLBV4-72
72" (182 cm)	CLBV-72B	CLBV-72Y	CLBV-72R	CCLBV-72	CCLBV4-72

CCLBV-60

# HOSES

## KOBRA® CLV SERIES HOSE



Gasket-sealed charging hose with quarter turn ball valve and whip end fittings.

800 – 4000 PSI

Quarter turn lever ball valves with 6" whip ends

Meet non-venting requirements by trapping refrigerant with ball valve fittings

**CLV-6** Ball valve with whip end replacements

**CLP** Whip end only replacements

CLV SERIES KOBRA® HOSE WITH BALL VALVE WHIP END					
LENGTH	BLUE	YELLOW	RED	BLUE, RED YELLOW, (3 PACK)	BLUE, RED YELLOW, PLUS BLACK 3/8" (4 PACK)
36" (91 cm)	CLV-36B	CLV-36Y	CLV-36R	CCLV-36	CCLV4-36
48" (122 cm)	CLV-48B	CLV-48Y	CLV-48R	CCLV-48	CCLV4-48
60" (152 cm)	CLV-60B	CLV-60Y	CLV-60R	CCLV-60	CCLV4-60
72" (182 cm)	CLV-72B	CLV-72Y	CLV-72R	CCLV-72	CCLV4-72
CLV SERIES KOBRA® HOSE BALL VALVE WHIP END ONLY					
1/4" x 6"	CLV-6B	CLV-6Y	CLV-6R	CCLV-6	CLV-6BL
3/8" x 6"	---	CLV6-6Y	---	---	CLV6-6BL
CLP SERIES KOBRA® HOSE WHIP END ONLY					
6" (15 cm)	CLP-6B	CLP-6Y	CLP-6R	---	---

## KOBRA® CLV6 AND CL6 SERIES HOSE



3/8" Black and yellow charging hose. These hoses feature gasket seal fittings. Both colors of charging hose have a 600 psi working pressure and 3000 psi burst. Lined with Kevlar®, these hoses are tough and dependable. Black hoses are available with and without UL approved shut-off ball valve.

600 – 3000 PSI

CLV6 AND CL6 SERIES KOBRA® 3/8" CHARGING HOSE			
LENGTH	BLACK	BLACK WITH BALL VALVE	YELLOW
36" (91 cm)	CL6-36	CLV6-36	CL6-36Y
48" (122 cm)	CL6-48	CLV6-48	CL6-48Y
60" (152 cm)	CL6-60	CLV6-60	CL6-60Y
72" (182 cm)	CL6-72	CLV6-72	CL6-72Y



## 3/8" AND 1/2" EVACUATION HOSE



New heavy-duty evacuation hose features no valve core depressors for faster evacuation and deeper vacuums. The fittings are different on each end and handle 800 psi working, 4000 psi burst. Available in black only. Straight fittings by straight fittings.

800 – 4000 PSI

3/8" AND 1/2" EVACUATION HOSE		
LENGTH	1/4" X 1/2"	1/4" X 3/8"
60" (152 cm)	CL84-60	CL64-60

# HOSES

# KOBRA®

FAST - FIERCE - FLEXIBLE

## 1/4", 3/8" AND 1/2" HEAVY-DUTY BLACK CHARGING HOSE



Heavy-duty charging hose reduces permeation and handles 900 psi working, 3500 psi burst. Straight fittings by straight fittings.

900 – 3500 PSI

### HEAVY-DUTY BLACK CHARGING HOSE

LENGTH	1/4"	3/8"	1/2"
36" (91 cm)	CL4HD-36	CL6HD-36	CL2HD-36
48" (122 cm)	CL4HD-48	CL6HD-48	CL2HD-48
60" (152 cm)	CL4HD-60	CL6HD-60	CL2HD-60
72" (182 cm)	CL4HD-72	CL6HD-72	CL2HD-72



CL4HD-60

## 1/4" STANDARD CHARGING HOSE

With a pressure rating of 750 psi working and 3000 psi burst, these hoses are ideal for use with all standard refrigerants (except high pressure refrigerants). Permeation can be detected and will vary with refrigerant type and time of exposure.

700 – 3000 PSI

### 1/4" STANDARD CHARGING HOSE

LENGTH	BLUE	YELLOW	RED	BYR (3 PACK)
36" (91 cm)	CL-36B	CL-36Y	CL-36R	CCL-36
48" (122 cm)	CL-48B	CL-48Y	CL-48R	CCL-48
60" (152 cm)	CL-60B	CL-60Y	CL-60R	CCL-60
72" (182 cm)	CL-72B	CL-72Y	CL-72R	CCL-72

## DEEP VACUUM FLEXIBLE METAL HOSE



Unlike charging hoses, flexible metal lines will not permeate under vacuum. Our metal lines feature finger-tight o-ring coupler ends.

900 – 3500 PSI



D10472

### DEEP VACUUM FLEXIBLE METAL HOSE

PART NO.	DESCRIPTION
D10436	1/4" x 36" Flexible metal line (one 45° fitting)
D10472	1/4" x 72" Flexible metal line (one 45° fitting)
D10636	3/8" x 36" Flexible metal line (one 45° fitting)
D10660	3/8" x 60" Flexible metal line (one 45° fitting)
DV-294	1/4" x 10" Flexible metal line (one 45° fitting)
P90009	1/4" Replacement o-ring (10 pack)
P90012	3/8" Replacement o-ring (10 pack)



CCL-60

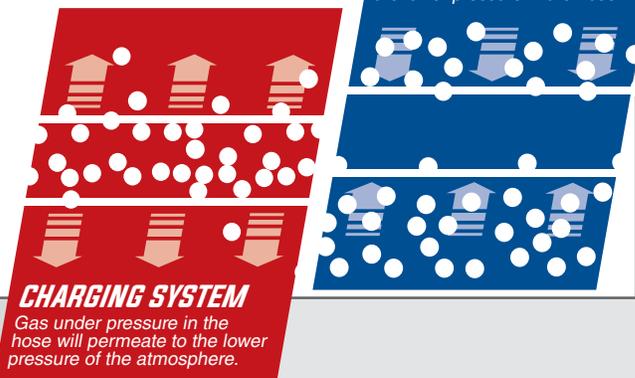
## Permeation

Even with the advanced technology of today's hoses, permeation through the hose compound still exists.

When checking pressure rise, the atmosphere will permeate to the lower pressure in the hoses and the micron reading will slowly rise.

### EVACUATION

The atmosphere which has a higher pressure permeates to the lower pressure in the hose.



**CHARGING SYSTEM**  
Gas under pressure in the hose will permeate to the lower pressure of the atmosphere.

# HOSES

## SECURE SEAL REBUILD KIT

### CLS SERIES HOSES ARE FIELD REPAIRABLE WITH LOW-LOSS, UL APPROVED FITTINGS

**Step 1:** Hold the cup in one hand so that the slotted face of the cup is exposed. Pinch the cup seal o-ring and insert it into the large groove to seat it correctly as shown.



**Step 2:** Install the barb seal o-ring in the groove located between the hex feature and the back portion of thread. Gently stretch and pull it over the threads of the barb fitting. Ensure the seal is not torn or damaged.



**Step 3:** Insert bushing/seal into the thread side of the cup. Brass bushing side goes in first with seal facing up as shown.



**Step 4:** Insert depressor with 3 blade feature into the cup assembly. The depressor fits into the bushing/seal installed in the previous step. The depressor must sit flat and true to the seal surface.



**Step 5:** Place spring into cup assembly over the boss on the back side of the depressor.



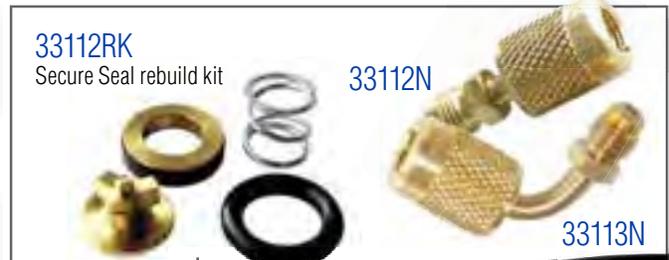
**Step 6:** Screw cup assembly, with spring in an upward position, onto hose barb fitting. Hand tighten the cup to the barb ensuring cup seats over the barb gasket (o-ring) and does not damage the o-ring.



**Step 7:** Tighten the cup and hose barb using the 9/16" open end wrench and 1/16" steel blade. Do not over tighten. Only 25 to 30 in/lbs is required.



**Step 8:** Insert barb/cup assembly into the coupler. Seat the thrust washer flat onto the hose barb and inside the coupler. Now install the internal snap ring and seat it into the groove of the coupler.



**33112RK**  
Secure Seal rebuild kit  
**INCLUDED WITH T21295 SNAP RING PLIERS**



**T21295**  
Snap ring pliers

### KOBRA® HOSE REPAIR AND REPLACEMENT PARTS

PART NO.	DESCRIPTION
P511	CLE, CLV and CLB Series replacement gasket
P90514	CLE, CLV and CLB Series replacement depressor
P90016	3/8" KOBRA® Black and yellow charging hose replacement o-ring for CL6HD, CCLV, CL6 and CLV6 series hoses
P90008	1/2" Heavy-duty black charging hose replacement o-ring

### SECURE SEAL KOBRA® REBUILD PARTS

PART NO.	DESCRIPTION
33112N	1/4" QC x 1/4" SAE
33113N	1/4" QC x 1/4" SAE 90°
33112RK	1/4" QC rebuild kit
33115N	5/16" QC x 1/4" SAE
33116N	5/16" QC x 1/4" SAE 90°
33115RK	5/16" QC rebuild kit
T21295	Snap ring pliers for rebuilding KOBRA® CLS and CLS5 Secure Seal fittings
P90022	Replacement o-ring for T21295 and 33112RK



**CCLS-60**  
Secure Seal  
KOBRA® Hose



For full secure-seal disassembly/re-assembly instructions, visit us online at [www.jbind.com](http://www.jbind.com).



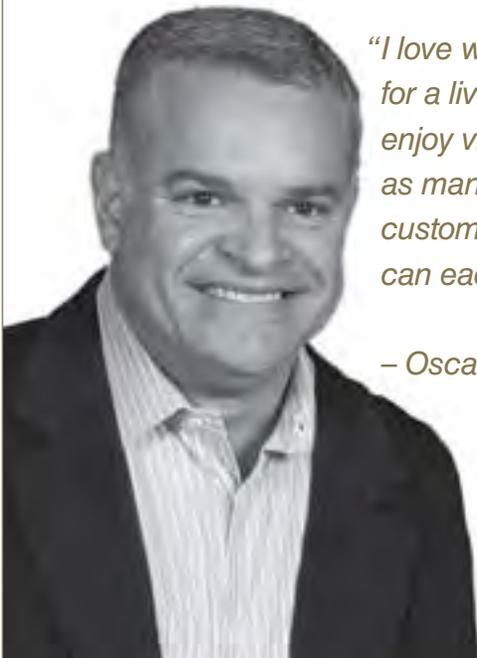
## Employee Spotlight

Oscar Lopez has been an integral part of JB's team for 10 years. As Vice President of Sales, Oscar is involved in all aspects of sales, marketing and new product creation.

Oscar believes the talent and experience of the JB team reduces customer service and quality issues, allowing the sales team to focus on helping our customers grow. That experience also extends to the engineering and manufacturing teams, who develop intuitive, high-quality products, making end users more efficient when servicing equipment.

Currently, his favorite product is the F6 Dual Piston Recovery unit because it was the perfect product to complete the JB line.

When he is not working, Oscar likes to spend time with his daughter, play tennis, and participate in crossfit.



*"I love what I do for a living and enjoy visiting as many of our customers as I can each year."*

*– Oscar Lopez*

# VELOCITY

## VL-100 RAPID EVACUATION KIT



The Velocity Rapid Evacuation Kit paired with a vacuum pump allows technicians to remove restrictive valve cores and perform AC/R system evacuations up to 10X faster through a large, 1/2" diameter hose.

### FEATURES

- 60-inch, 1/2" diameter evacuation hose
- 3/8" x 1/4" SAE flare
- Vacuum-rated to 20 microns
- Valve core tool removes restrictive cores
- Perform AC/R system evacuations up to 10x faster
- Vacuum-rated valve core tool removes restrictive cores
- Opens up over 90% of internal diameter of access port
- Vacuum-certified hose will not collapse or permeate

### EVACUATION KIT

PART NO.	DESCRIPTION
VL-100	Evacuation kit w/hose and valve core removal tool
A32525N	Valve core removal tool



**NEW**

# MBV4/MBV5

## MINI BALL VALVES



Compact ball valve features full flow for charging and recovery.

### FEATURES

1/4" ball valves for use up to 4000 psi (276 bar) minimum burst; 800 psi (55 bar) maximum working pressure

5/16" for R410A applications where 5/16" system ports are used

5/16" ball valves for use up to 4000 psi (276 bar) minimum burst; 800 psi (55 bar) maximum working pressure

### MINI BALL VALVES

PART NO.	DESCRIPTION
MBV4-03	1/4" Compact mini ball valve set (3 pack)
MBV4-01	1/4" Compact mini ball valve
MBV5-03	5/16" Compact mini ball valve set (3 pack)
MBV5-01	5/16" Compact mini ball valve



### Employee Spotlight

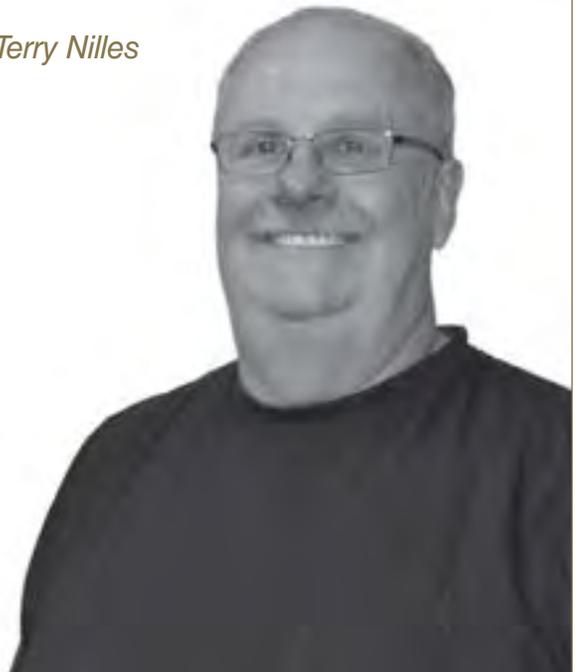
Terry Nilles has been with JB as a Brown/ Sharpe and CNC machine operator for 36 years. Before him, Terry's father was also a JB employee. As an experienced machinist he feels pride in seeing the finished products move through the shop—knowing that JB's people and machines have made it possible.

Terry's long-time favorite JB product is the swage tools. They are the first product he ran on Brown/Sharpe machines and they are easier to do today on the CNC machine.

When he is not working, Terry enjoys spending time with his family and friends, as well as traveling.

*"I've enjoyed all the people I've met along the way at JB and keeping them as friends for life"*

— Terry Nilles



# ACCESS VALVES



DD 2014  
DEALER DESIGN  
AWARDS  
the NEWS | BRONZE



## REFRIGERANT LOCKING CAPS



With the rise of refrigerant theft and huffing related deaths, it is now code to protect air conditioning unit refrigerant. The American made SHIELD® Refrigerant Locking Cap does just that by saving homeowners money and helping avoid liability issues by shielding them from theft, tampering, leaking and huffing related injuries. The SHIELD's durable, all brass design paired with color coded, water-proof caps makes it the best locking cap in the industry.

### FEATURES

Protection from inhalant abuse

Secure, tamper-resistant key

Stops leakage

Waterproof color-coded caps

Durable all brass design

**Meets codes IMC 1101.1 and Residential M1411.6**



Protect refrigerant with SHIELD® locking caps



SHLD-Multi



SHLD-3-Driver



SHLD-8-Driver

### SHIELD LOCKING CAPS

WATER RESISTANT SLEEVES INCLUDED

PART NO.	FITTING SIZE	SLEEVE COLOR CODE	DESCRIPTION
SHLD-U4	1/4"	Universal	(4 pack) Locking caps and 1 bit
SHLD-G4	1/4"	R22	(4 pack) Locking caps and 1 bit
SHLD-P4	1/4"	R410A	(4 pack) Locking caps and 1 bit
SHLD-E4	5/16"	Universal	(4 pack) Locking caps and 1 bit
SHLD-U12	1/4"	Universal	(12 pack) Locking caps and 1 bit
SHLD-G12	1/4"	R22	(12 pack) Locking caps and 1 bit
SHLD-P12	1/4"	R410A	(12 pack) Locking caps and 1 bit
SHLD-E12	5/16"	Universal	(12 pack) Locking caps and 1 bit
SHLD-U50	1/4"	Universal	(50 pack) Locking caps, 1 bit and 3" stubby driver
SHLD-G50	1/4"	R22	(50 pack) Locking caps, 1 bit and 3" stubby driver
SHLD-P50	1/4"	R410A	(50 pack) Locking caps, 1 bit and 3" stubby driver
SHLD-E50	5/16"	Universal	(50 pack) Locking caps, 1 bit and 3" stubby driver
SHLD-U100	1/4"	Universal	(100 pack) Locking caps, 2 bits and 8" long driver

# ACCESS VALVES

## SHLD—MULTI UNIVERSAL REFRIGERANT LOCKING CAP KEY

JB's Universal locking cap key allows you to unlock SHIELD®, C&D Valve, and NOVENT® Refrigerant Locking Caps with interchangeable bits that are conveniently stored inside the tool.

### FEATURES

- Magnetic tip
- Valve core remover
- Compact design
- 3 Unique bits
- Lightweight
- Internal storage

SHIELD® DRIVERS AND ACCESSORIES	
SHLD-CJ	Empty SHIELD® storage jar for storing 150 SHIELD® caps
SHLD-SLU20	Universal (black) SHIELD® sleeves (20 pack)
SHLD-SLG20	R22 (green) SHIELD® sleeves (20 pack)
SHLD-SLP20	R410A (pink) SHIELD® sleeves (20 pack)
SHLD-BIT	SHIELD® 2 pack bit
SHLD-3-DRIVER	SHIELD® 3" stubby driver, inc. 1 bit
SHLD-8-DRIVER	SHIELD® 8" long driver, inc. 2 bits
SHLD-COMBO-DRIVER	SHIELD® 3" and 8" drivers with 2 bits
SHLD-MULTI	Universal locking cap key for SHIELD®, Novent, and C&D locking caps



SHLD-MULTI

SHLD-P4  
R410A

SHLD-G4  
R22

SHLD-U4  
UNIVERSAL

CONVENIENT  
**1** TOOL  
UNLOCKS  
**4** LOCKING  
CAPS

SHIELD®  
R22, R410A and Universal

NOVENT®\*  
R22, Universal, R410A and Euro

C&D VALVE\*\*  
Universal



\* NOVENT® is a trademark of The Rectorseal Corp  
\*\* C&D is a trademark of The C&D Valve Company

## MEETS INTERNATIONAL MECHANICAL CODE 1101.1 AND RESIDENTIAL CODE M1411.6

Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper resistant caps.



Color coded caps make it easy to identify refrigerant

# CoreMax<sup>®</sup>

## RAPID CHARGE AND EVACUATION SYSTEM



The revolutionary CoreMax<sup>®</sup> system allows processing through the seat or valve. This integrated system design shortens processing times and provides up to 5x greater processing flow, dramatically improving sealing with faster access connections.

## FEATURES

- Process directly through the valve with additional flow
- Easy to use connector
- Automatic valve shutoff on both sides of connection
- Decreases evacuation time
- Designed for CFC, HCFC and HFC refrigerants



**JB INDUSTRIES**  
In Exclusive Partnership with *Fastest*<sup>®</sup>

## COREMAX® HIGH FLOW VALVE CORE



High flow processing valve for use with stub tube, panel, saddle and NPT mount CoreMax® seats.



Completely compatible with commonly used connections—caps use the same thread, taper and sealing surface as found on commonly used access valves.

COREMAX HIGH-FLOW VALVE	
PART NO.	DESCRIPTION
CM-VC003	High-Flow Valves with Caps (3 pack)
CM-VC010	High-Flow Valves with Caps (10 pack)
CM-VC100	High-Flow Valves with Caps (100 pack)

## COREMAX® SEATS



The CoreMax® seat is designed with gripping and sealing surfaces that work with the variety of CoreMax® tools.



The seat comes in a variety of styles such as stub tube, saddle mount, panel mount and NPT

Standard stub tube size fits OD of 1/4" - 3/8" tube

Side mounts, panel mounts and custom mounts also available

Tube stop for ease of assembly

COREMAX SEATS	
PART NO.	DESCRIPTION
CM-S370	3/8" Seats (3 pack)
CM-SS370	3/8" Saddle Seats (3 pack)
CM-S250	1/4" Seats (3 pack)
CM-SS250	1/4" Saddle Seats (3 pack)



Change high-flow valves fast with CoreMax®

## COREMAX® VALVE CORE REMOVAL TOOL



The valve core removal tool is sleeve actuated which allows removal and replacement of the CoreMax® valve core without loss of refrigerant.



Pressures up to 600 psi

COREMAX VALVE CORE REMOVAL TOOL	
PART NO.	DESCRIPTION
CM-CRTOOL	Valve Core Removal Tool

## SNAPMATE® SERVICE HIGH FLOW SERVICE CONNECTOR



SnapMate® connectors are designed to provide quick and easy connections to CoreMax® Valve Cores as well as standard 1/4" refrigeration access valves. For use on refrigeration hoses to provide better system access for quicker, deeper evacuations and faster refrigerant charging during field servicing.



Made of brass and hardened steel

Provides quick and easy connections to all 7/16-20, 45° flare standard refrigeration access valves

Approximate size is 1" diameter x 2" length

Pressures up to 625 psi

SNAPMATE® SERVICE	
PART NO.	DESCRIPTION
CM-SNAP	SnapMate® Service

## MANUAL TORQUE WRENCH



Installs the CoreMax® valve core into the seat with the proper torque; preset to 8 ft/lbs.



COREMAX MANUAL TORQUE WRENCH	
PART NO.	DESCRIPTION
CM-TRQ	Manual Torque Wrench

# ACCESS VALVES

## ACCESS VALVE OVERVIEW



JB machines access valves at our Aurora, Illinois facility using 100% American C360 alloy brass sourced from US mills. This gives our brass fittings and access valves high tensile strength while resisting corrosion. If you are not buying American made brass fittings, ask yourself: what is the metal content used in the imported versions? Do you trust it? Can you afford to have them fail? We machine all of our valves according to the strict specifications of ARI to ensure proper sealing of valve and core surfaces. Quality and dependability come standard from an American made product.

## TUBE SIZING

### ODS AND ODF FIT DESCRIPTIONS

Descriptions for solder/braze access valves specify the connecting tube OD. Size and type fit illustrated right are the types of fit for A31723 valve. The connecting line slips around access fitting. Look under the ODF heading in the AC/R Copper Tube chart above.

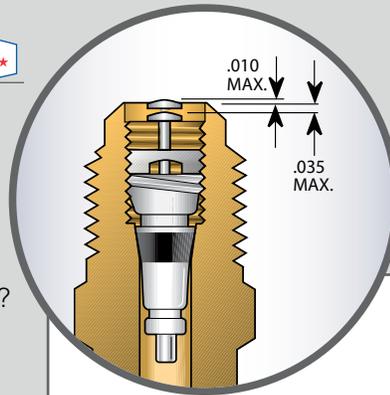
There are two types. JB access valve description for ODF is always "swage fit." The connecting tube OD is the same OD as the fitting end. Therefore, A31723 above will also slip into 5/16" OD tube. If connecting to wrought copper fitting, use ODF swage size.

CONNECTING TUBE SIZE			
TUBE SIZE	ODS Internal Tube Fit	ODF External Tube Fit	ODF Swage Fit
1/8"	---	3/16"	---
3/16"	1/8"	1/4"	3/16"
1/4"	3/16"	5/16"	1/4"
5/16"	1/4"	3/8"	5/16"
3/8"	5/16"	---	3/8"

## NOMENCLATURE

For easy reference, the last two numerals of our flare fittings correspond to their respective tube sizes.

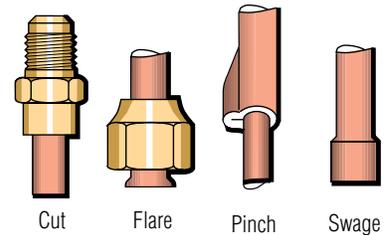
NOMENCLATURE			
NUMBER	TUBE SIZE	NUMBER	TUBE SIZE
02	1/8"	08	1/2"
03	3/16"	10	5/8"
04	1/4"	12	3/4"
05	5/16"	14	7/8"
06	3/8"	18	1-1/8"



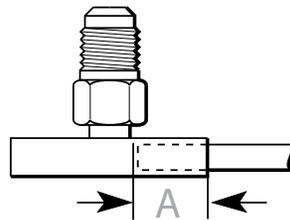
### Valve Core Pin Location

After valve installation, the valve core can be replaced with valve core tools. Torque to ARI specifications.

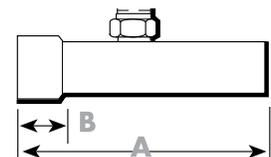
### Multi-Step Variants



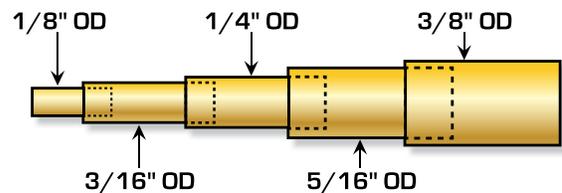
### Copper Braze Tees



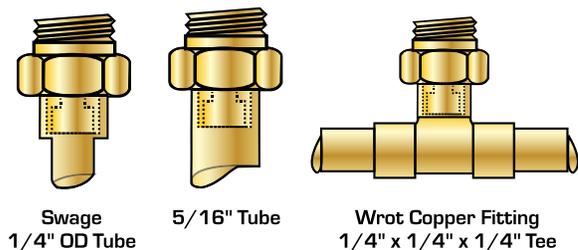
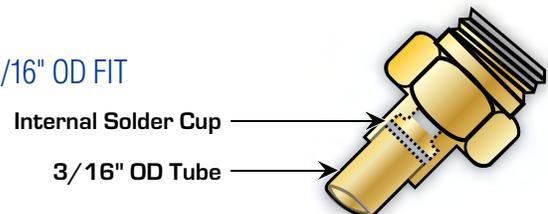
### Copper Access Unions



### AC/R Copper Tube Fitting Guide



### 3/16" OD FIT



# ACCESS VALVES

## COPPER TUBE EXTENSIONS



For use with sil-phos alloy and copper fittings. Install through the side of the larger line to extend length approximately two inches. Includes cap (NFT5-4) and valve core. 1/4" ID.



Generous counter bore allows removal of core if flare becomes damaged

All tees and crosses are tapped to receive an access core in all 1/4" SAE flare ends

All pipe connections have internal braze cups for dip tube applications

All valves are equipped with cap and one valve core (braze type loosely assembled)

### COPPER TUBE EXTENSIONS

PART NO.	QTY.	DESCRIPTION
A31002	5	1/8" OD
A31003	5	3/16" OD x 1/8" ID
A31004	5	1/4" OD x 3/16" ID
A31005	5	5/16" OD x 1/4" ID
A31006	5	3/8" OD x 5/16" ID
A31008	3	1/2" OD
A31004S	5	1/4" OD

NOTE: OD x ID sizes are for copper tube extension.

## MULTI-STEP COPPER TUBE EXTENSIONS



### MULTI-STEP COPPER TUBE EXTENSION

PART NO.	QTY.	DESCRIPTION
A31009	5	1/8" OD ext; 3/16", 1/4" and 5/16" ODF body steps
A31011	3	3/16" OD ext; 1/4" and 3/8" ODF body step
A31012	3	1/8" OD ext.; 1/8" and 3/16" body step

## COPPER SADDLE BRAZE/TAPPER



The A32800 series of saddles offer the best protection from leaks. Once brazed on, you can check for leaks before piercing the tube. The steel pin is inserted and the cap is tightened down to pierce the tube. Body sizes are contoured to match specific tube sizes. The braze/tapper has a hardened steel-piercing needle and is furnished with a cap.

### COPPER BRAZE TAPPER ONLY

PART NO.	QTY.	DESCRIPTION
A32804	5	1/4"
A32805	5	5/16"
A32806	5	3/8"
A32808	3	1/2"
A32810	3	5/8"
A32812	2	3/4"
A32814	2	7/8"
A32818	2	1-1/8"

### COPPER BRAZE SADDLE WITH TAPPER

PART NO.	QTY.	DESCRIPTION
A32904	5	1/4"
A32905	5	5/16"
A32906	5	3/8"
A32908	3	1/2"
A32910	3	5/8"
A32912	2	3/4"
A32914	2	7/8"

### ACCESS VALVES SPECIFICATIONS

ARI STANDARD	720-2002
ARI TORQUE	3.0 - 5.0 inches/pound
TEMP RANGE	-40° F to 250° F (-40° C to 121° C)
VALVE BODIES	Brass
VALVE CORE	Stainless steel and brass for use with all refrigerants such as R12, R22, R134a, R410A, and R502. Resistant to oils, alkalites, and diluted mineral acids



Made in the USA with 100% American brass from US mills

# ACCESS VALVES

## COPPER BRAZE TEES



Fully adjustable: bend, cut, flare, swage or pinch

Extra depth slip fit braze cups

Simple installation anywhere along the line

Use sil-phos alloy only

**A31134**

Copper Braze Tee 1/4" ODS x 5/16" ODF



## SWAGED COPPER BRAZE TEES



Simple installation anywhere along the line

Braze cup ends

Use sil-phos alloy only

**A31334**

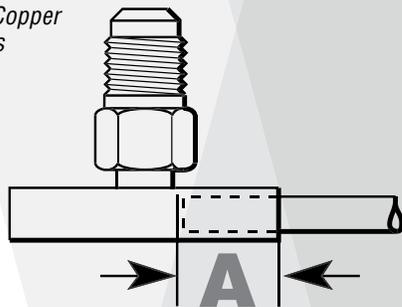
Swaged Copper Braze TEE 1/4" OD



COPPER BRAZE TEES				
PART NO.	QTY.	SLIP-FIT CONNECT LINE SIZE	OVER ALL LENGTH (OAL)	LENGTH FIG 1. (A)
A31134	3	1/4" ODS x 5/16" ODF	2-1/8"	1"
A31135	3	5/16" ODS x 3/8" ODF	2-1/8"	1"
A31136	3	3/8" ODS x 1/2" ODF	2-1/8"	1"
A31138	3	1/2 ODS	2-1/8"	1"
A31140	1	5/8" ODS	2-1/2"	1"
A31142	1	3/4" ODS	3"	1-1/4"
A31144	1	7/8" ODS	3-1/2"	1-1/2"
A31148	1	1-1/8" ODS	3-13/16"	1-5/8"
A31154	2	3/16" ODS x 1/4" ODF	4"	1-15/16"
A31155	2	1/4" ODS x 5/16" ODF	4"	1-15/16"
A31156	2	5/16" ODS x 3/8" ODF	4"	1-15/16"

SWAGED COPPER BRAZE TEES				
PART NO.	QTY.	SLIP-FIT CONNECT LINE SIZE	OVER ALL LENGTH (OAL)	
A31334	3	1/4" OD	2-1/8"	
A31335	3	5/16" OD	2-1/8"	
A31336	3	3/8" OD	2-1/8"	
A31338	3	1/2 OD	2-1/8"	
A31340	1	5/8" OD	2-1/2"	
A31342	1	3/4" OD	3"	
A31344	1	7/8" OD	3-1/2"	
A31348	1	1-1/8" OD	3-13/16"	

Figure 1. Copper Braze Tees



# ACCESS VALVES

## COPPER ACCESS UNIONS



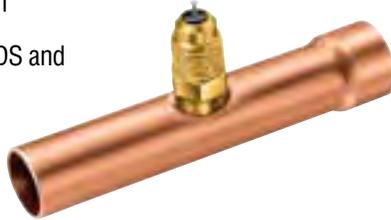
For use with sil-phos alloy and copper fittings

Includes cap (NFT5-4) and valve core

Install valve in any position

Connecting line size for ODS and ODF external tube ends

Use sil-phos alloy only

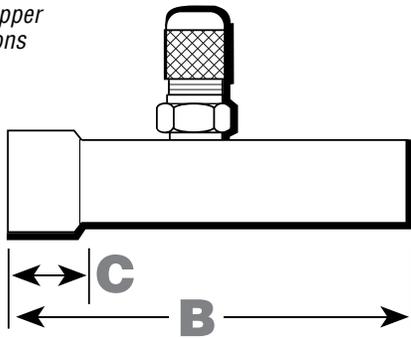


**A31199**

Copper Access Union 1/4" OD x 5/16" Min

COPPER ACCESS UNION				
PART NO.	QTY.	SLIP-FIT CONNECT LINE SIZE	OVER ALL LENGTH (OAL) FIG 2. (B)	MINIMUM LENGTH (MIN) FIG 2. (C)
A31199	2	1/4" OD	2-3/8"	5/16"
A31200	2	3/8" OD	2-3/4"	5/16"
A31201	2	1/2" OD	3"	3/8"
A31202	2	5/8" OD	3-1/4"	1/2"
A31204	2	7/8" OD	3-3/4"	3/4"

Figure 2. Copper Access Unions



## COPPER 90° ELBOW



Use sil-phos alloy only



**A31160**

Copper 90° Elbow 5/8" ODS

COPPER 90° ELBOW		
PART NO.	QTY.	SLIP-FIT CONNECT LINE SIZE
A31160	1	5/8" ODS
A31162	1	3/4" ODS
A31164	1	7/8" ODS
A31168	1	1-1/8" ODS

JB INDUSTRIES ACCESS VALVES SPECIFICATIONS	
ARI STANDARD	720-2002
ARI TORQUE	3.0 - 5.0 inches/pound
TEMP RANGE	-40° F to 250° F (-40° C to 121° C)
VALVE BODIES	Brass
VALVE CORE	Stainless steel and brass for use with all refrigerants such as R12, R22, R134a, R410A, and R502. Resistant to oils, alkalites, and diluted mineral acids

## ACCESS VALVE REPAIR AND REPLACEMENTS



All Brass fittings; o-ring sealed

ACCESS VALVE REPAIR & REPLACEMENTS		
PART NO.	QTY.	DESCRIPTION
NFT5-4	10	1/4" SAE Cap
P90010	10	Replacement 1/4" O-Ring
A31999	5	1/4" Valve Cores



# ACCESS VALVES

## SWIVEL FLARE CONNECTIONS



### ADD MULTIPLE PORTS WITH ONE FITTING

These valves offer a safe, simple installation without the need for brazing. All of the flare ends are tapped to receive access cores. JB provides a full range of various end configurations to provide greater flexibility. One core and cap are packaged with each valve.

#### SWIVEL TEE WITH DEPRESSOR

PART NO.	QTY.	DESCRIPTION
A31851	3	1/4" Female SAE swivel nut on run
A31852	3	1/4" Female SAE swivel nut on branch

#### SWIVEL TEE WITHOUT DEPRESSOR

A31854	3	1/4" Female SAE swivel nut on branch
A31864	3	1/4" Female SAE swivel nut on run

#### SWIVEL 3/8" SAE TEE

A31853	1	3/8" SAE x 3/8" Female SAE swivel nut x 1/4" access
A31856	1	3/8" SAE x 1/4" access x 3/8" Female SAE swivel nut

#### ACCESS VALVE COUPLER WITH DEPRESSOR

A33004	1	1/4" SAE swivel flare x male flare
--------	---	------------------------------------

## SWIVEL FLARE W/CORE DEPRESSOR

Add a new line or control

No refrigerant loss on charged system

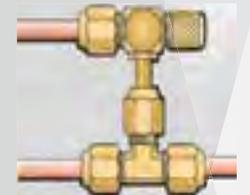


## SWIVEL FLARE W/OUT CORE DEPRESSOR

Multiple ports

Additional line or controls

Additional access site



A31851

Swivel TEE w/Depressor



A31854

Swivel Tee



A31853

Swivel 3/8" SAE TEE



A33004

1/4" SAE Swivel Flare



## BULKHEAD MOUNTING



### BULKHEAD MOUNTING

A31434*	1	Access x 1/4" SAE w/nut
A31727*	1	Access x 3/16" and 1/4" ODS or 3/8" ODF

\*Core pre-torqued to ARI

## CROSSES



### SWIVEL CROSS WITH DEPRESSOR

A31520	1	1/4" Female SAE swivel nut x access
--------	---	-------------------------------------

### CROSS WITH THREE ACCESS PORTS

A31522	1	1/8" MPT cross
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A31434

Bulkhead Mounting



A31522

1/8" MPT Cross



A31520

1/4" Swivel Nut Cross



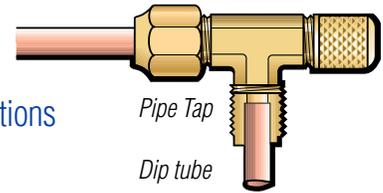
Access valve manufacturing

# ACCESS VALVES

## MPT CONNECTIONS



**ALL MPT CONNECTIONS HAVE INTERNAL BRAZE CUP FOR DIP TUBE INSTALLATION**



### MPT CONNECTIONS

PART NO.	QTY.	DESCRIPTION
A31482	5	1/8" MPT half union
A31484	5	1/4" MPT half union
A31492	3	1/8" MPT elbow
A31494	3	1/4" MPT elbow

### MPT CONNECTIONS TEE

A31452	3	1/8" MPT half union
A31454	3	1/4" MPT half union
A31512	3	1/8" MPT run
A31514	3	1/4" MPT run

### FORGED BRASS BRAZE TEES

A31234	3	1/4" ODS x 3/8" ODF
A31235	3	5/16" ODS x 3/8" ODF
A31236	3	3/8" ODS x 1/2" ODF
A31238	3	1/2" ODS x 5/8" ODF

### FLARED TUBE CONNECTION

A31424*	3	1/4" Female SAE union w/flare nut
A31444	3	1/4" Female SAE union w/flare nut

\*Core pre-torqued to ARI

### FLARE CONNECTION AND FLARE FITTING ADAPTER

A31614*	5	1/4" Female SAE w/copper gasket
A31734*	3	1/4" Female SAE swivel nut w/depressor

\*Core pre-torqued to ARI

### BRASS BODIES

A31722	3	1/8" ODS x 1/4" ODF
A31723	3	3/16" ODS x 1/4" ODF
A31724	3	1/4" ODS x 3/8" ODF
A31725	3	5/16" ODS x 1/2" ODF
A31726	3	3/8" ODS x 1/2" ODF
A31728	3	1/2" ODS x 5/8" ODF

### MULTI-STEP

A31720	5	3/16" ODS x 1/4" or 3/8" ODF steps
A31729	3	3/16", 1/4", 5/16", 1/2" ODF steps
A31736	3	1/8" ODS x 3/16", 1/4" or 5/16" ODF

A31482  
1/8" MPT Half Union



A31452  
1/8" MPT Half Union Tee



A31234  
1/4" ODS x 3/8" ODF Brass Tee



A31734  
1/4" SAE Swivel Nut w/Depressor



A31424  
1/4" SAE Union w/Flare Nut



A31722  
1/8" ODS x 1/4" ODF Brass Body



A31720  
3/16" ODS x 1/4" Steps



# ACCESS VALVES

## SAE 45° BRASS FLARED TUBE FITTINGS



SAE 45° BRASS FLARED TUBE FITTINGS		
PART NO.	QTY.	DESCRIPTION
A32600	10	1/4" (NS4-4)
A32601	5	5/16" (NS4-5)
A32602	10	3/8" (NS4-6)
A32603	5	1/2" (NS4-8)
A32604	5	5/8" (NS4-10)
A32605	2	3/4" (NS4-12)



A32600  
1/4" SAE 45° Tube Fitting

SWIVEL FEMALE FLARE X SOLDER ADAPTER		
PART NO.	QTY.	DESCRIPTION
A32700	4	1/4" x 1/4" (US5-44)
A32701	4	3/8" x 3/8" (US5-66)
A32702	4	1/2" x 1/2" (US5-88)
A32703	2	5/8" x 5/8" (US5-1010)
A32704	2	3/4" x 3/4" (US5-1212)



A32700  
1/4" x 1/4" Swivel Flare x Solder

## ACCESS VALVE SERVICE KIT

JB has taken the most popular access fittings used on service calls and created an access valve service kit with convenient storage case. Each kit is compartmentalized to house the following: A31002, A31003, A31004, A31005, A31006, NFT5-4, A31851, A31852, A32004 valve core tool with cores, A31998 plastic core removers, and A33500 thumbscrew core depressor. The interior of the label includes part numbers to make individual reordering and stocking convenient.

AVK-001 ACCESS VALVE SERVICE KIT	
PART NO.	DESCRIPTION
AVK-001	Access valve service kit in storage case
A31002 (x3), A31003 (x3), A31004 (x3), A31005 (x3), A31006 (x3), NFT5-4 (x6), A31851 (x1), A31852 (x1), A32004 (x1), A31998 (x3) and A33500 (x1)	



AVK-001  
Access Valve Service Kit

## BULK FITTING JARS

JB has taken a few of the best selling access valves and packaged them in a convenient display jar. Featuring individual labels with unique bar codes, the item can be scanned at the top of the jar rather than looking it up in the computer. Saves counter personnel time to directly sell single units without having to look up part numbers in the system. Order the jar once and restock as needed.

BULK FITTING JARS		
PART NO.	QTY.	DESCRIPTION
A31004-CJ	250	1/4" OD x 3/16" ID copper tube extension with bulk jar
NFT5-4-CJ	500	1/4" SAE cap with bulk jar



A31004-CJ  
Bulk A31004 Copper Tube Extension

# ACCESS VALVES

## EVACUATION AND CORE REMOVER TOOLS



Specifically designed to valve off the system to remove valve core, these tools feature a quarter turn ball valve shut-off and o-ring seals.

The valve core can be completely removed and replaced without losing system charge. Speed-up evacuation, recovery, or recharging time through the full-flow port. Both tools have a storage area to house spare valve cores.

### VALVE CORE REMOVER TOOL

PART NO.	QUICK CONNECT	FLARE RUN	SIDE PORT
A32500N	1/4"	1/4"	---
A32505N	5/16"	1/4"	---
A32525N	1/4"	1/4"	1/4"
A32530N	5/16"	1/4"	1/4"
A32535N	5/16"	5/16"	1/4"
A32501N	Core remover bit for A32500N replacement		
A32504	Core remover bit for A32525N replacement		

(QC) Quick Connect



A32525N  
1/4" Valve Core Remover Tool

Side Port

## EVACUATION RECOVERY TOOL

Our evacuation/recovery tool is a plier-type tool with a quick release trigger which punctures large holes into the line for discharge of a recovery unit. Fits 3/16" to 7/8" OD hard tubing.

### EVACUATION RECOVERY TOOL

PART NO.	QTY.	DESCRIPTION
A32100	1	Evacuation/recovery tool
A32101	1	Hardened steel needle and gasket



A32100  
Evacuation/  
Recovery Tool

## VALVE CORE TORQUE TOOL

Our valve core torque tool automatically sets proper torque to 5 pounds. Calibrated to precise torquing requirements for core valves, the tool will no longer tighten once proper torque is achieved. Eliminates guess work which results in under- and over-torquing. Works with all Schrader valve cores.

### VALVE CORE TORQUE TOOL

PART NO.	QTY.	DESCRIPTION
A32008	1	1/4" Valve core torque tool
A32008-B	12	1/4" Valve core torque tool bulk
A32008-BX	12	1/4" Valve core torque tool in display box



A32008-BX  
Box of Valve Core  
Torque Tools



A32008  
Valve Core Torque Tool

## 1/4" VALVE CORES AND TOOL



PTFE/neoprene seal replacement valve core; max 800 psi and 220°F (104°C)

### 1/4" VALVE CORES AND TOOL

PART NO.	QTY.	DESCRIPTION
A32004	1	1/4" Valve core tool with storage for 6 valve cores
A31999	5	1/4" Valve cores
A31999-25	25	1/4" Valve cores
A31999-100	100	1/4" Valve cores

A32004  
Valve Core Tool



A31999  
1/4" Valve Core

# CAPS AND COUPLERS

## O-RING QUICK SEAL CAPS



Deep vacuum and A/C refrigeration;  
Finger-tight sealing for all male  
SAE connections

NFT5-4



### O-RING QUICK SEAL CAPS

PART NO.	QTY.	DESCRIPTION
NFT5-4	10	1/4" SAE cap
NFT5-5	5	5/16" SAE cap
NFT5-6	3	3/8" SAE cap
NFT5-8	3	1/2" SAE cap
NFT5-4-100	100	1/4" SAE cap
NFT5-6-100	100	3/8" SAE cap
P90010	10	Replacement 1/4" o-ring
P90011	10	Replacement 3/8" o-ring

## QUICK SEAL GASKET CAPS



Deep vacuum and A/C refrigeration;  
finger-tight sealing for all male  
SAE connections

A31985



### QUICK SEAL GASKET CAPS

A31985	10	1/4" SAE cap
A31985-100	100	1/4" SAE cap
P509	6	Replacement gasket
P509-25	25	Replacement gasket

## O-RING SEAL LINE PIERCING



Our spring loaded needle automatically  
back-seats, forming a leak proof seal.  
A simple installation that is  
100% restriction-free. Both  
models fit 1/4", 5/16", 3/8",  
1/2", and 5/8" OD tubing.

LT-456



### O-RING SEAL LINE PIERCING

LT-456	1/4" - 3/8"	Line piercing valve
LT-810	1/2" - 5/8"	Line piercing valve

## E-Z TAPPER



The back-seating stem eliminates  
line restriction when servicing  
through access port or when  
using the valve for flow control.

EZ-40288



### E-Z TAPPER

EZ-40288	1	E-Z tapper piercing valve
EZ-40288-126	5	E-Z tapper gasket

## WRENCH STYLE SEAL CAP



For A/C refrigeration service;  
brass-to-brass positive seal  
and permanent installation

A31986



### WRENCH STYLE SEAL CAP

A31986	5	1/4" SAE cap
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## BACK-SEATING CONTROL VALVE



Ideal for use on pre-charged line sets.  
Eliminates spraying of leak detection  
dye and refrigerant. Compact brass  
body for long service. Swivel coupler  
with double safety grooves.

A33000



### BACK-SEATING CONTROL VALVE

A33000	1	1/4" SAE x 1/4" o-ring quick coupler
P90009	10	Replacement o-ring

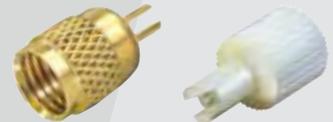
## EVACUATION RECOVERY TOOL



A31997 is a 1/4" SAE gasket seal  
cap with core remover feature.  
A31998 is a 1/4" plastic  
core remover.

A31997

A31998



### EVACUATION RECOVERY TOOL

A31997	10	1/4" SAE gasket seal caps with core removers
A31998	5	1/4" Plastic core removers

## SPECIALTY CAPS AND 1/2" 16 ACME CAPS

A31992



### SPECIALTY CAPS AND 1/2" 16 ACME CAPS

A31992	5	1/4" SAE cap
A31992-100	100	1/4" SAE cap
13493	2	Plastic cap with retainer strap
13494	1	Plastic cap

# CAPS AND COUPLERS

## QUICK COUPLERS



### QC-S5

5/16" female x 1/4" male adapter is designed to give the end user the ability to connect their standard refrigeration hoses to 5/16" (1/2" UNF) fittings being used on most R410A mini-splits. Swiveled so the adapter can remain on hoses for easy on/off application and installation.

### 3/8" Couplers:

Patented o-ring seal for deep vacuum

No depressor

### 5/16" Couplers:

For 410A connections

Valve core depressor

Safety channels

Rubber gasket seal

### 3/16" Couplers:

Valve core depressor

Safety channels

O-ring seal

### 1/4" Couplers:

Valve core depressor

Safety channels

Rubber gasket seal



STRAIGHT	
PART NO.	DESCRIPTION
QC-S3	3/16" QC x 1/4" SAE
QC-S4	1/4" QC x 1/4" SAE
QC-S46	1/4" QC x 3/8" SAE
QC-S5	5/16" QC x 1/4" SAE
QC-S5S	5/16" QC x 1/4" SAE (no depressor)
QC-S64	3/8" QC x 1/4" SAE (no depressor)
QC-S65	3/8" QC x 5/16" SAE (no depressor)
FEMALE NPT THREAD	
QC-S4A	1/4" QC x 1/8" Female NPT
QC-S4B	1/4" QC x 1/4" Female NPT
ELBOW	
QC-E3	3/16" QC x 1/4" SAE elbow
QC-E4	1/4" QC x 1/4" SAE elbow
QC-E5	5/16" QC x 1/4" SAE elbow
QC-E64	3/8" QC x 1/4" SAE elbow (no depressor)



SAE FEMALE ADAPTER	
A31656	1/4" SAE Male x 5/16" SAE Female Adapter
A31665	5/16" SAE Male x 1/4" SAE Female Adapter

## QUICK COUPLER ACCESS TEE



O-ring seal quick coupler.

Furnished with cap and valve core.



QUICK COUPLER ACCESS TEE		
PART NO.	QTY.	DESCRIPTION
A34000	1	1/4" QC x 1/4" access branch tee
P90009	10	Replacement o-ring

### CV-20004



SWIVEL CYLINDER VALVE	
PART NO.	DESCRIPTION
CV-20004	3/4" NPS x 1/4" M flare
CV-20006	3/4" NPS x 3/8" M flare

### A33500



CORE DEPRESSOR	
A33500	1/4" Thumbscrew core depressor
REPLACEMENT PARTS FOR QUICK COUPLERS	
P90009	10 Replacement o-ring
P509	6 1/4" Gasket
P90513	5 Depressor for 1/4" QC
P90012	10 3/8" o-ring

## LIQUID CHARGING ADAPTERS

Metering element reduces liquid flow to a level below capacity of compressor. This assures a safe, fast charge without damaging the compressor. Accepts liquid refrigerant from the cylinder and discharges into low side of the system. Liquid charging is recommended when charging blends into refrigeration and air conditioning systems, and a liquid charger adapter is necessary for safe and fast liquid charging through the low side of a system. Eliminates the time and effort of heating cylinders.



LIQUID CHARGING ADAPTERS	
LC-4	1/4" Liquid charging adapter
LC-5	5/16" Liquid charging adapter
REPLACEMENT O-RINGS	
P90010	1/4" Liquid charging adapter
P90011	5/16" Liquid charging adapter

# BALL VALVE ACTUATORS

## FULL FLOW REFRIGERATION BALL VALVES

### TWO TYPES OF BALL VALVES TO SUIT USER NEEDS

JB's refrigeration ball valves have a large port design that provides a minimum pressure drop with straight through flow. Copper end fittings reduce installation time without disturbing valve. There are two types of ball valves to suit your needs. Traditional Apollo ball valves have brass actuators and a working pressure rating of 500 psi. Our new E-Line ball valves feature stainless steel actuators and a working pressure rating of 700 psi. Both are UL listed.

### BALL VALVE BREAKDOWN

Fig 1 – Measurement chart key (Fig 1:1 - Fig 1:6 charts page 73)

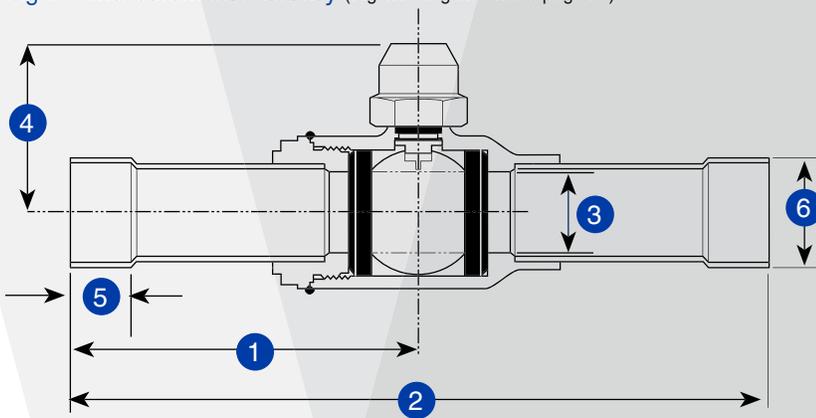
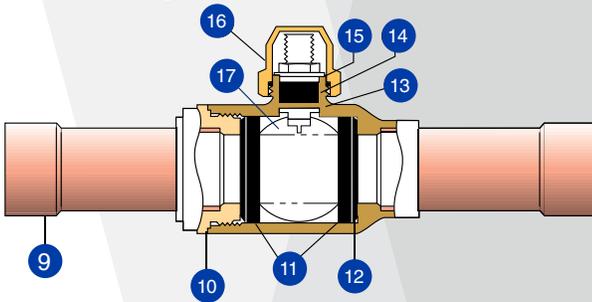


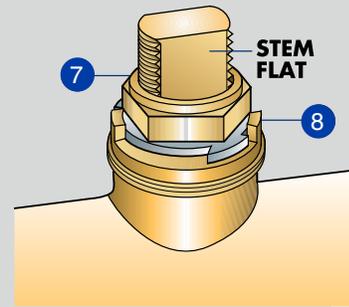
Fig 3 - Anatomy of a ball valve (9-17)



- 9 Copper tube extensions
- 10 Hermetic welded and brazed joints
- 11 Reinforced Teflon seats
- 12 One piece forged brass body
- 13 Bearing washer
- 14 Changeable reinforced PTFE stem packing
- 15 Packing gland
- 16 Stem cap assembly with neoprene seal
- 17 Chromium plated ball with vented valve

Fig 2 – Ball valve operation (7-8)

- 7 Quarter turn mechanical stop. Positive open and closed positions. Packing gland adjusting nut.



## SHUT-OFF BALL VALVES

Ideal for building your own vacuum or charging system, our straight through flow design has no restriction. A quarter turn and the valve is fully open or closed.



REFRIGERATION SHUT-OFF BALL VALVES	
PART NO.	DESCRIPTION
V34900	1/8" Female NPT x 1/8" Female NPT
V34901	1/4" SAE x 1/8" MPT
V34905	1/4" SAE x 1/4" MPT
V34910	3/8" Female NPT x 3/8" Female NPT

## NEEDLE VALVES

The packing used in the needle seat valves is resistant to gasoline, oils, and water while providing excellent sealing characteristics over the life of the valve. Metal to metal seating provides ease in shut-off to working pressures of 105 psi.



NEEDLE VALVES	
PART NO.	DESCRIPTION
NV62-4	1/4" COMP x 1/4" COMP

# BALL VALVE ACTUATORS

## APOLLO ACTUATORS



## ESSEN ACTUATORS

### PRESSURE TO 500 PSI, UL LISTED 57R7

Up to +500° F working temperature at 0 psi

Up to +300° F working temperature at 500 psi

No bolted or screwed bonnets or flanges to leak

Apollo registered to ISO 9001



V34202  
5/8" OD Apollo Actuator

### PRESSURE TO 700 PSI, UL LISTED 32DC

No bolted or screwed bonnets or flanges to leak



V34507  
1-3/8" OD E-Line Actuator  
with Port

V34307  
1-3/8" OD E-Line Actuator

APOLLO FULL FLOW REFRIGERANT BALL VALVES				PRESSURE TO 500 PSI UL LISTED 57R7			
PART NO. WITHOUT PORT	PART NO. WITH PORT	OD (FIG 1: 6)	FIG 1: 1	FIG 1: 2	FIG 1: 3	FIG 1: 4	FIG 1: 5
V34200	V34400	3/8"	3.18"	6.09"	0.30"	1.55"	3/8"
V34201	V34401	1/2"	3.18"	6.09"	0.45"	1.55"	3/8"
V34202	V34402	5/8"	3.43"	6.59"	0.50"	1.55"	1/2"
V34203	---	3/4"	3.45"	7.27"	0.69"	1.89"	3/4"
V34204	V34404	7/8"	3.69"	7.07"	0.75"	1.83"	3/4"
V34206	V34406	1-1/8"	4.20"	8"	1"	2.01"	2-9/32"
V34207	V34407	1-3/8"	4.54"	8.63"	1.25"	2.61"	3-1/32"
V34208	V34408	1-5/8"	4.47"	8.85"	1.50"	2.79"	1-3/32"
V34209	V34409	2-1/8"	4.84"	9.59"	2"	3.17"	1-11/32"
V34210	---	2-1/8"	5"	10"	2.43"	3.90"	1-31/64"
V34211	---	3-1/8"	7"	14"	2.50"	3.90"	1-43/64"

E-LINE FULL FLOW REFRIGERANT BALL VALVES				PRESSURE TO 700 PSI UL LISTED 32DC			
PART NO. WITHOUT PORT	PART NO. WITH PORT	OD (FIG 1: 6)	FIG 1: 1	FIG 1: 2	FIG 1: 3	FIG 1: 4	FIG 1: 5
V34350	V34525	1/4"	3.25"	6.5"	0.50"	1.51"	3/8"
V34300	V34500	3/8"	3.18"	6.09"	0.30"	1.55"	3/8"
V34301	V34501	1/2"	3.18"	6.09"	0.45"	1.55"	3/8"
V34302	V34502	5/8"	3.43"	6.59"	0.50"	1.55"	1/2"
V34303	V34503	3/4"	3.45"	7.27"	0.69"	1.89"	3/4"
V34304	V34504	7/8"	3.69"	7.07"	0.75"	1.83"	3/4"
V34306	V34506	1-1/8"	4.20"	8"	1"	2.01"	2-9/32"
V34307	V34507	1-3/8"	4.54"	8.63"	1.25"	2.61"	3-1/32"
V34308	V34508	1-5/8"	4.47"	8.85"	1.50"	2.79"	1-3/32"
V34309	V34509	2-1/8"	4.84"	9.59"	2"	3.17"	1-11/32"
V34310	V34510	2-5/8"	5"	10"	2.43"	3.90"	1-31/64"
V34311	V34511	3-1/8"	7"	14"	2.50"	3.90"	1-43/64"

# TOOLS AND ACCESSORIES

## ROTHENBERGER

The partnership of ROTHENBERGER and JB brings together the best of German engineering and European craftsmanship with American distribution to create the highest quality tools in the HVAC/R marketplace.

ROTHENBERGER tools are made of the highest quality materials to the strictest quality standards to ensure they will not fail when you need them the most.

Should you not see a particular tool of interest, please contact customer service. For the entire ROTHENBERGER product line and technical features, visit us online at [www.jbind.com](http://www.jbind.com).

### MINI TUBE CUTTERS

Used for cutting copper tubes, these mini tube cutters have a large knurled knob and handy design to produce fatigue-free pressure control.



**RT70105**  
Copper Minicut  
1/8" to 7/8" OD

MINI TUBE CUTTERS		
PART NO.	QTY.	DESCRIPTION
RT70401	1	Copper 1/8" to 5/8" OD
RT70402	1	Copper 1/4" to 7/8" OD
RT70105	1	Copper MINICUT 1/8" to 7/8" OD
RT70015	1	Copper MINI MAX 1/8" to 1-1/8" OD
RT70017B	2	Replacement cutter wheel
RT70017D	5	Replacement cutter wheel
RT70041	1	Replacement axle screw/pin

### PROFESSIONAL TUBE CUTTER

For tubes made out of copper, brass and aluminum, this tube cutter features a retractable deburrer blade and a spare cutter wheel in the handle. The smooth adjustment knob allows for quick adjustment.



**RT70027**  
1/4" to 1-1/8" OD  
Tube Cutter

PROFESSIONAL TUBE CUTTER		
PART NO.	QTY.	DESCRIPTION
RT70027	1	1/4" to 1-1/8" OD copper, brass and aluminum pipe
RT70029	1	1/4" to 1-5/8" OD copper, brass and aluminum pipe
RT21652B	10	Replacement deburring blade
RT70017B	2	Replacement cutter wheel
RT70017D	5	Replacement cutter wheel
RT70056D	5	Replacement cutter wheel for stainless steel

### ROTRAC PLUS

JB precision tube cutters for copper tube are manufactured by ROTHENBERGER for JB and designed with smooth-running telescopic action for a consistent working radius. Features include a protected screw spindle to shield against dirt and jamming, and a lightweight cast aluminum body. The deburrer swivels up, and a spare cutter wheel is stored in the handle. Each Rotrac Plus comes with 3 spare cutter wheels.



**RT70020**  
1/8" to 1-1/8" OD  
Rotrac Plus



ROTRAC PLUS		
PART NO.	QTY.	DESCRIPTION
RT70020	1	Copper tube 1/8" to 1-1/8" OD
RT70021	1	Copper tube 1/4" to 1-5/8" OD
RT70007B	2	Replacement cutter wheel
RT70007X	10	Replacement cutter wheel
RT99016	1	Replacement clip and axle

### WATER PUMP PLIERS

Complies with DIN 5321 D, these pliers are made with heavy-duty box joint, chrome vanadium steel, drop forged, tempered, and polished head and joint. The longer, thinner pliers with measurements for corners are ideal for hard to reach places. The self-clamping jaws will not slip, even on smooth surfaces.

**RT70522**  
10" Pliers Max.  
1-1/4" OD



WATER PUMP PLIERS	
PART NO.	DESCRIPTION
RT70521	7" Pliers Max. 1" OD
RT70522	10" Pliers Max. 1-1/4" OD
RT70523	12" Pliers Max. 1-1/2" OD

# TOOLS AND ACCESSORIES

## RATCHET TUBE CUTTER

For copper, brass, aluminum, thin-walled steel, and plastic coated tubes, this ratchet tube cutter has a retractable internal deburring tool and spare cutter wheel in the handle so they are always within reach. The ratchet telescopic guide with automatic spring-driven withdrawal allows for quick adjustment and fast opening.

**RT70030**  
1/8" TO 2-5/8" OD  
Ratchet Tube Cutter



RATCHET TUBE CUTTER		
PART NO.	QTY.	DESCRIPTION
RT70030	1	1/8" to 2-5/8" OD
RT70142	1	2" to 5" OD
RT70017B	2	Replacement cutter wheel for RT70030
RT70017D	5	Replacement cutter wheel for RT70030
RT70057D	2	Replacement cutter wheel for RT70142
RT21652B	10	Replacement deburring blade pack
RT75007	1	Replacement pin and axle

## ROLOCK

Professional-grade water pump pliers with a jaw locking system providing a secure grip on round, square, or hex-shaped items with a push of a button. The ROLOCK has 14 groove opening positions with an opening capacity of 2-1/3".

**RT70533**  
12" RoLock



ROLOCK		
PART NO.	QTY.	DESCRIPTION
RT70531	1	ROLOCK 7"
RT70532	1	ROLOCK 9"
RT70533	1	ROLOCK 12"

## RO-GRIP RT70558

With a perfect grip and better leverage, our self-adjusting pliers offer many advantages over conventional pliers. Made of drop forged chrome vanadium steel, the rhombus-shaped jaws securely grab round, hex, sheets, and other shapes up to 1-5/8" OD.



## PIPE SHEARS

For precise cutting of PVC, PP, PE, PEX, PB, CPVC and PVDF, our pipe shears are the finest you can find. The quick release lever provides automatic opening of the blade at the push of a button. A double-sided stainless steel blade with v-shaped edges pierce the pipe to prevent deformation. The wide pipe rest ensures a square cut every time. A locking lever secures the blade during transport.

**RT52010**  
Max OD 2" Pipe Shears



PIPE SHEARS		
PART NO.	QTY.	DESCRIPTION
RT52000	1	Max. OD 1-5/8", Schedule 40 PVC 1-1/4"
RT52010	1	Max. OD 2", Schedule 40 PVC 1-1/2"
RT52011	1	Replacement blade for RT52010
RT52030	1	ROCUT® 63TC, Max. OD 2-1/2"
RT52042	1	Replacement blade for RT52000

## DEBURRING TOOLS

Internal/External deburring tools for copper and plastic tubes

**RT21655**  
Deburring Tool

**RT70075**  
Copper and Stainless  
Steel Reamer

**RT11006**  
Copper and Stainless  
Steel Reamer



**RT21660**  
Deburring Tool

DEBURRING TOOLS		
PART NO.	QTY.	DESCRIPTION
RT11006	1	Copper and stainless steel internal/external reamer 1/8" to 1-5/8" OD
RT70075	1	Copper and stainless steel internal/external reamer 1/8" to 2" OD
RT21660	1	Deburring tool (blade non-replaceable)
RT21655	1	Deburring tool
RT21652B	10	Replacement deburring blade (10 pack)

## MINIBEND® TUBE BENDER RT25151

For exact, two-handed bending up to 180° for tubes made out of soft copper, brass, aluminum, and precision steel. 1/4", 5/16", and 3/8" OD.



# TOOLS AND ACCESSORIES

## HAND TUBE BENDER RT90614

This universal hand bender provides bending of 1/2", 5/8", 3/4" and 7/8" OD soft copper, aluminum, and light grade stainless steel tubing.



## STANDARD TUBE BENDER PRO

For exact bending radius up to 180° for tubes made up of soft copper, aluminum, and precision steel. The light construction results in fatigue-free hand operation. The clamp mechanism better holds the tube and enables the bending of even the shortest of tube pieces. The Tube Bender Pro is for 1/2" and 3/4" semi-hard and hard copper pipes and features a case iron body for longer life along with self adjusting shoe.



STANDARD TUBE BENDER PRO	
PART NO.	DESCRIPTION
RT25140	1/4" OD radius (0.71")
RT25131	5/16" OD radius (0.95")
RT25913	Tube Bender Pro 1/2" OD radius
RT25914	Tube Bender Pro 3/4" OD radius
RT25142	1/2" OD radius
RT25136	5/8" OD radius (2.28")

## TORQUE WRENCH KIT WITH INTERCHANGEABLE WRENCH HEADS TRQ1080

Torque range of 7.375 - 59.004 Pound-feet or 10-80 Nm

6 spanner heads: 17, 22, 24, 26, 27 and 29 mm

1/2" DR ratchet head

Perfect for servicing R410A mini splits

Includes convenient carrying case



## TRQ-IMP

Imperial spanner heads for TRQ1080 torque wrench

Four spanner heads: 5/8", 13/16", 15/16" and 1-1/8"



## MAXI TUBE BENDER SET RT23022

The smooth-running feed lever of this tube bender makes it ideal in restricted spaces and one-handed operations. The side lever allows for quick release and reset of bending former. The pliers feature a bayonet catch to easily change bending formers. The open bending frame makes it possible to repeatedly produce alternate angled bends. The set consists of the basic tool, bending support, bending formers, and steel case. For use on copper and soft aluminum 3/8", 1/2", 5/8", 3/4", and 7/8" OD.



## FIN STRAIGHTENERS



FIN STRAIGHTENERS	
PART NO.	DESCRIPTION
T20351	For 8, 9, 10, 12, 14, and 15 spacings per inch
T20352	Stainless steel fin straightener
T20353	Stainless steel fin straightener with larger, easy to grip handle

# TOOLS AND ACCESSORIES

## FLARING TOOLS

FLARING TOOLS	
PART NO.	DESCRIPTION
T20195	3/16", 1/4", 5/16", 3/8", 7/16" (Nom: 1/8", 1/4", 3/8" and 1/2")
T20203	5/8", 3/4", 7/8", and 1-1/8" OD
T20500	3/16", 1/4", 5/16", 3/8", 1/2", and 5/8" OD
T30600	Eccentric cone type flaring tool: 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4"
RT222402	1/8", 1/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" OD
RT222601	Adjustable from 3/16" to 5/8" OD

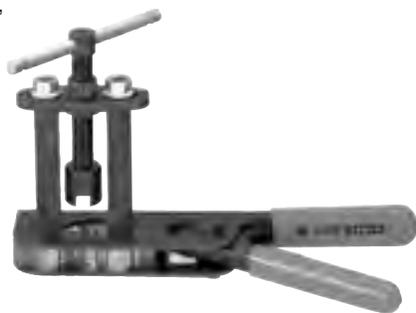
## RATCHETING FLARE TOOL T30600

Eccentric cone flaring for tubes with an OD of: 3/16", 1/4", 5/16", 3/8", 1/2", 5/8" and 3/4". Internal clutch prevents over-torquing. Perfect for servicing 410A Mini-Splits



## 45° FLARING TOOL RT26036

For making precise 45° flares on copper, brass, aluminum, and precision steel tubes up to 0.04" (1 mm) in wall thickness. The special screw thread allows proper, efficient handling of material. The "Multi-block" multi-clamping calipers provide a firm, quick off-center clamping of the tube and automatic self-centering. Flares 3/16", 1/4", 5/16", 3/8", 1/2", and 5/8".



## TUBE EXPANDER KIT RT12318

The high strength, forged aluminum body make for lower weight and easy handling of our expander set. The longer lever arms reduce effort and the automatic pin guide retracts for faster operation. The set includes expander with riveted expander heads in 3/8", 1/2", 5/8", 3/4", 7/8", and 1-1/8", internal/external deburring tool, steel case. Replacement heads are interchangeable with Yellow Jacket and Rigid tube expanders.



## SWAGING KIT RT26715

For precise 45° single flares and sockets on copper, brass, aluminum, and steel tubes. Set includes flaring tool, 45° cone, expander pin, internal/external deburrer, tube cutter, and plastic case. Includes swages for 3/16", 1/4", 5/16", 3/8", 1/2", and 5/8".



## TEE EXTRACTOR SET RT22124

Extract your own tees on soft, semi-hard and hard copper or aluminum to save time and money on T-pieces. The ergonomic, compact design fits into the tightest spaces. The set includes tee-extractors for 1/2", 5/8", 7/8" and 1-1/8", ratchet handle, cam pincer, high-speed drill, and steel case.



## ROPRESS TOOLS RT16101/RT16001

For JB's full line of Rothenberger tools including Ropress crimping tools, visit us online at [www.jbind.com](http://www.jbind.com).



RT16101  
Corded and Cordless  
Press Tool



RT16001  
Compact Cordless  
Press Tool

# TOOLS AND ACCESSORIES

## SPRING TYPE TUBE BENDER AND SINGLE SPRINGS



Ideal for irregular bends, these spring type benders are available in single springs and packaged sets. Used for soft copper, aluminum, brass, and steel.

**BS-55**  
Spring-type Tube Bender



### SPRING TYPE TUBE BENDER

PART NO.	DESCRIPTION
<b>BS-55</b>	1/4", 5/16", 3/8", 1/2", and 5/8" in pouch
<b>BS-77</b>	All seven sizes in pouch

### SINGLE SPRINGS

PART NO.	TUBE OD	NOM
<b>BS-4</b>	1/4"	1/8"
<b>BS-5</b>	5/16"	-----
<b>BS-6</b>	3/8"	1/4"
<b>BS-7</b>	7/16"	-----
<b>BS-8</b>	1/2"	3/8"
<b>BS-10</b>	5/8"	1/2"
<b>BS-12</b>	3/4"	5/8"
<b>BS-12</b>	7/8"	3/4"

## MULTI-SWAGE T21000



T21000 consists of three pieces that work with OD sizes including 3/16", 3/4", and 7/8" producing perfect solder cups for 9 OD tube sizes. OD sizes are 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", and 7/8". Nominal 1/8", 1/4", 3/8", 1/2", 5/8", and 3/4".



## MULTI-SWAGE T20095

Handy all-in-one tool. T20095 is a single piece that works with 1/4", 5/16", 3/8", 7/16", 1/2", and 5/8" OD.



## 45° FLARE/SWAGE T20275

Heavy-duty wide-range bar-type flaring tool. The rugged, forged steel slip-on self centering yoke has a hardened chrome plate swivel-type cone to form quality flares with minimal effort. Hardened bars provide positive clamping action with minimum distortion and are fully hinged with king-sized forged steel wing nuts for easy use. The second bar extends our flaring tool to nine OD tube sizes.

### 45° FLARE/SWAGE T20275

<b>T20275</b>	<b>Flare:</b> 1/8", 3/16", 1/4", 5/16", 3/8", 7/16" and 3/4"	<b>Nominal Flare:</b> 1/8", 1/4", 1/2", and 5/8"
	<b>Swage:</b> 3/16", 1/4", 5/16", 3/8", 1/2", 5/8" and 3/4"	<b>Nominal Swage:</b> 1/8", 1/4", 3/8", 1/2", and 5/8"

## SINGLE SIZE – SWAGE SIZE STAMPED OD AND NOMINAL



Packaged Swage Set



### SINGLE SIZE – SWAGE SIZE STAMPED OD AND NOMINAL

PART NO.	TUBE OD	NOM
<b>T21002</b>	1/8"	---
<b>T21003</b>	3/16"	---
<b>T21004</b>	1/4"	1/8"
<b>T21005</b>	5/16"	---
<b>T21006</b>	3/8"	1/4"
<b>T21007</b>	7/16"	---
<b>T21008</b>	1/2"	3/8"
<b>T21010</b>	5/8"	1/2"
<b>T21012</b>	3/4"	5/8"
<b>T21014</b>	7/8"	3/4"
<b>T21018</b>	1-1/8"	1"
<b>T21024</b>	Packaged Set: 1/4", 3/8", 1/2", and 5/8"	Packaged Set: 1/8", 1/4", 3/8", and 1/2"

## PINCH-OFF TOOL T21294

This plier-type pinch-off tool temporarily closes off line while making repairs. The quick release trigger and rounded jaws prevent cutting while allowing for reopening and rounding using a standard flare bar. For 1/8" to 5/8" OD (1/8" to 1/2" Nominal).



## BRAZE-RITE ADAPTER BRZ1000

Nitrogen purging adapter for AC/R pipe. Quickly connects to manifold gauge hose, and slips easily and securely into pipe. The BRZ-1000 allows for bleed of nitrogen through pipe being brazed, keeping the pipes clean and oxide-free. Stepped to fit most common AC/R pipe sizes, making it fast to go from one tube to the next. Saves time and money and helps maintain equipment manufacturer's system performance and installation guidelines. No more duct taping your hose to the pipe!

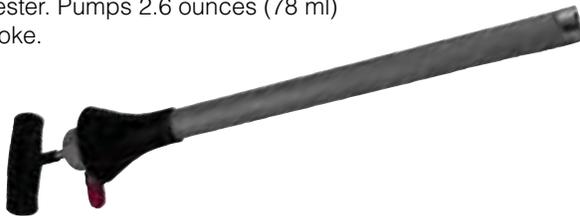
Range: 5/16" – 1-3/64" Copper Tube OD



## OIL TRANSFER PUMP T30251

Designed to pump oil into the system while unit is operating without shutting down for charging. Smoothly pumps oil into the compressor on the down stroke while system is under pressure, resulting in easier pumping on the positive stroke. The universal tapered rubber adapter is designed to fit all 1, 2-1/2, and 5 gallon containers without additional adapters.

Works against 200 psi of pressure and is compatible with all oil types including synthetic, mineral, and polyolester. Pumps 2.6 ounces (78 ml) per stroke.



## SERVICE WRENCHES

Double end reversible ratchet wrenches feature accurately broached multiple openings and offer the greatest number of uses in a single unit. Choose offset or hex and square ends.



T21127U  
Service Wrench

### SERVICE WRENCHES

PART NO.	DESCRIPTION
T21124U	3/16", 1/4" Square end and 1/2", 9/16" hex port end
T21127U	1/4", 3/16" On one end 3/8", 5/16" on other end
T21126U	Offset 1/4", 3/16" on one end 3/8", 5/16" on other end
T21125U	3/8" Square end and 1/2" square end

## GAS PRESSURE TEST KIT

This diaphragm gauge scale comes complete in case with hose and hook-up fitting.

29435  
Natural and LP  
Gas Pressure Test



### GAS PRESSURE TEST KIT

PART NO.	DESCRIPTION
29435	Natural and LP gases. Scales 0-20 oz/sq. in; 0-35" of water column
29436	Natural gas only. Scales 0-6 oz/sq. in; 0-10" of water column

## GAS TEST GAUGE

To test system pressure for leaks in new installs, use these 3-1/2" easy-to-read test gauges. Fits 3/4" and 1" pipes.

GTBG-12  
3-1/2" Test Gauge



### GAS TEST GAUGE

GTBG-12	3-1/2" Test gauge 0-30 lb. 3/4" end
GTBG-16	3-1/2" Test gauge 0-30 lb. 1" end

## HEX KEY ADAPTER T2-HKA

Heat treated black oxide plated hex key adapter for accessing liquid and suction based valves. Works for 3/16" and 5/16" hex valves.



## STEEL STRAP

Our steel straps are zinc plated and alternate between nail and bolt holes. Hole sizes alternate 1/8", 1/4".



### STEEL STRAP

PS-10	10' (3 m) Steel strap
PS-25	25' (7.6 m) Steel strap
PS-50	50' (15 m) Steel strap
PS-100	100' (30.5m) Steel strap

# CAPILLARY TUBING

## CAPILLARY TUBING



Short coils are boxed with application charts. Cut from 100' (30.5 m) sealed and dehydrated tube. S/B 100' (30.5 m) coils are boxed with conversion and application charts.



**TC-26-16**  
Short coil  
capillary tubing

Available in cartons of 10. Add suffix -101 to part number.

CAPILLARY TUBING		
SHORT COIL	100' COILS	DESCRIPTION
TC-26-16	TC-26-100	0.026 ID x 0.072 OD x 16'
TC-31-12	TC-31-100	0.031 ID x 0.083 OD x 12'
TC-36-12	TC-36-100	0.036 ID x 0.087 OD x 12'
TC-42-12	TC-42-100	0.042 ID x 0.093 OD x 12'
TC-44-12	TC-44-100	0.044 ID x 0.109 OD x 12'
TC-49-11	TC-49-100	0.049 ID x 0.099 OD x 11'
TC-50-11	TC-50-100	0.050 ID x 0.114 OD x 11'
TC-54-11	TC-54-100	0.054 ID x 0.106 OD x 11'
TC-55-11	TC-55-100	0.055 ID x 0.125 OD x 11'
TC-59-10	TC-59-100	0.059 ID x 0.112 OD x 10'
TC-64-10	TC-64-100	0.064 ID x 0.125 OD x 10'
TC-70-12	TC-70-100	0.070 ID x 0.125 OD x 12'
TC-75-9	TC-75-100	0.075 ID x 0.125 OD x 9'
TC-80-10	TC-80-100	0.080 ID x 0.145 OD x 10'
TC-85-9	TC-85-100	0.085 ID x 0.145 OD x 9'
TC-90-7	TC-90-100	0.090 ID x 0.145 OD x 7'
TC-100-10	TC-100-100	0.100 ID x 0.156 OD x 10'

## ACID BRUSHES

Our acid brushes are ideal for thread sealant, flux, and past solders. Made of 100% long and stiff horsehair bristles that are evenly placed and securely crimped into tinned acid-resisting handles.



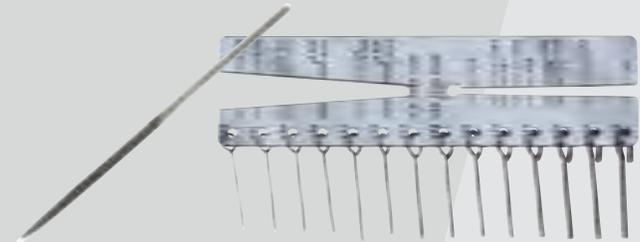
**C33804**  
1/4" Flux brush  
(12 pack)

ACID BRUSHES	
PART NO.	DESCRIPTION
<b>C33804</b>	1/4" Flux brush (12 pack)
<b>C33808</b>	1/2" Flux brush (10 pack)
<b>C33808-CTN</b>	1/2" Flux brush (144 bulk)

## GAUGE FILE AND CUTTING TOOL



### A10971 CAP TUBE AND FILE IN POUCH A10972 CAP TUBE FILE

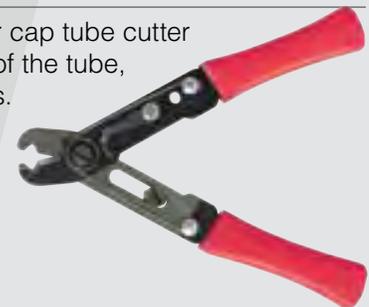


Precision engineered with stainless steel wire plugs. Features a specially designed file to cut and open tubes. The numbers are etched in black for better legibility. Fourteen ID sizes from 0.026 units to 0.090 units and 22 OD sizes from 0.072" to 7/16" (5 to 12 mm). Use both the ID and OD calibrations to correctly determine tube size. Place tube in "V" slot to measure OD. Pin gauge measures ID.

The cap tube file is designed to cut and open the tube by filing a notch around the tubing at desired cutting point. Snap tube by bending at the notch and clean burrs by reaming out with the special file tip.

## CAP TUBE CUTTING TOOL A10973

The sturdy design of our cap tube cutter results in no collapsing of the tube, no chips, and clean cuts.





## R134A AUTOMOTIVE COUPLERS

Quick connect/disconnect valve actuation without refrigerant venting. Safety sleeve holds coupler securely to service port. Color-coded knobs.

**AC-13430**  
14 mm High Side 90°  
Snap Coupler



**AC-15530**  
1/4" High Side 90°  
Snap Coupler



### 134A AUTOMOTIVE COUPLERS

PART NO.	DESCRIPTION
<b>AC-13430</b>	High side 90° snap coupler x 14 mm
<b>AC-13435</b>	Low side 90° snap coupler x 14 mm
<b>AC-15530</b>	High side 90° snap coupler x 1/4" SAE
<b>AC-15535</b>	Low side 90° snap coupler x 1/4" SAE

## R134A AUTOMOTIVE QUICK ADAPTER

Retrofit existing SAE flare fitting for R134a auto service.

**QC-13445-134a**  
1/2" ACME QC x 1/4" Male Flare



**QC-S4A-134a**  
1/4" QC x 1/2" Male ACME Thread



### 134A AUTOMOTIVE QUICK ADAPTER

PART NO.	QC GASKET	DESCRIPTION
<b>QC-S4A-134A</b>	P509	1/4" QC x 1/2" male ACME thread
<b>QC-13445-134A</b>	P510	1/2" ACME QC x 1/4" male flare

## 1/2" ACME THREAD HALF UNION

**AF-13451**  
1/4" NPTF Acme Thread  
Half Union



**AF-13451**  
1/4" NPTF Acme Thread  
Half Union



### 1/2" ACME THREAD HALF UNION

PART NO.	DESCRIPTION
<b>AF-13450</b>	1/8" NPTF
<b>AF-13451</b>	1/4" NPTF
<b>AF-13452</b>	3/8" NPTF
<b>AF-13455</b>	1/4" Female SAE
<b>AF-13457</b>	3/8" Female SAE

## AUTOMOTIVE OIL TAP TUBE A33600

End the mess in oil changes and save time on service calls with JB's oil tap access tube. This access tube reduces motor burnout by simplifying acid tests and can be left in place for future tests and changes.



## 1/2" ACME SERVICE VALVE AF-13550

1/2" ACME x 1/8" NPTF w/13494 cap



## COOL GEL™ HEAT DISSIPATING SPRAY 11509

Heat dissipating spray helps prevent heat damage to components and surrounding materials during soldering, brazing, and welding. It protects painted and finished surfaces from discoloration due to adjacent torch operations. This product also reduces the danger of fire to surrounding surfaces such as studs, drywall, and insulation. The unique non-staining gelled formula sticks to surfaces without dripping or running off and leaves no residue. Safe, non-toxic, and odorless. The spray pattern is adjustable from stream to mist. One quart spray bottles sold in cases of 12.



## VALVE ACTION™ PAINT MARKER 96822 RED/96823 BLACK

This long-lasting, weather-, water-, and UV-resistant paint marker dries in 3 minutes. Marks on all surfaces including metal, wood, glass, plastic, rubber, cardboard, and paper.

Lead-free paint meets California VOC regulations. Marking range is -50° F to 150° F (-46°C to 66°C). Sold in bulk cases of 12.



## SLIC-TITE® PASTE WITH PTFE 42019

Premium thread sealant for sealing water, air, steam, natural gas, LP gas, refrigerants, ammonia, gasoline, and oil. For use on metal, PVC, CPVC, and ABS plastic threads. Do not use on Oxygen service; use PTFE tape or LA-CO Oxytite®. Sealing temperature -50° F to 500° F (-46° C to 260° C). Pressures 3,000 psi (204 bar) for gas, 10,000 psi (680 bar) for liquid. NSF, UPC, CSA, cULus, FGG/BM/CZ approved. Half pints sold in cases of 12.



## PIPETITE-STIK® 11175

Non-toxic and lead-free, the Pipetite-Stik® is for use for water, steam, air, natural gas, and LP gas. Use on metal threads. Do not use on Oxygen service; use PTFE tape or LA-CO Oxytite®. Sealing temperature is up to 350° F (177° C) and pressures to 2,000 psi (136 bar) for liquids and 350 psi (24 bar) for gases. Certified by NSF to meet ANSI/NSF Standard 61 for use on potable water. 1-1/4 oz. sticks sold in cases of 12.



## HEAT-SEAL STIK® PREMIXED EPOXY SEALER 11575

Ideal for use on high and low side of refrigeration systems, the Heat-Seal Stik® can be used on aluminum, copper, other metals, glass, and ceramics. Works on R410A based systems. Sticks, melts, seals, and cures in one 90 second operation. One part epoxy, there is no mixing or measuring needed. Sealing temperature is up to 350° F (177° C) and pressures to 450 psi (31 bar). 3/8 oz. sticks sold in cases of 12.



## BLOC-IT® HEAT ABSORBING PASTE 11511

Heavy paste effectively absorbs surface heat and protects adjoining surfaces that may be damaged by excessive heat. Typically used to protect rubber, plastic, distortion, painted and finished surfaces during soldering, brazing or welding. Safe to use, Bloc-It® is non-toxic, harmless to skin, odorless, and does not contain asbestos. Wipe off with cloth or wash with water, Bloc-It® will not leave stains. 10 oz. tubes sold in cases of 24.



## AMERICAN MADE BRASS SAE 45° FLARED TUBE FITTINGS

American made brass SAE 45° flared tube fittings may be used with copper, brass, aluminum, steel, and plastic tube provided an acceptable flare could be generated with the material.

Vacuum and pressures of 5,000 psi can be handled depending upon the size, material, and conditions. Using a 4:1 safety factor, the following general rule (excluding plastic tube) is used:

*3,000 psi to 1/4" 2,000 psi to 1/2" 1,500 psi to 1"*

Long nuts are recommended when vibration is a factor. Tubing should be double-flared in extreme applications to minimize flare thinning on over-tightening.

Fittings listed generally comply with SAE, ASA, ASME, and MS standards; however, when design makes dimensions critical, please contact customer service for samples and/or prints for testing and evaluation.

Tube sizes listed are OD (outside diameter). To determine nominal (water tube) size, subtract 1/8", thus 5/8" OD equals 1/2" nominal. Pipe sizes listed are standard nominal pipe size and threads are to dry seal taper pipe standards.

JB will provide flare fitting to SAE Standard J513 whenever possible. In some cases, slight deviations will occur when full compliance fittings are not available.

### FEATURES

Make and break

Good vibration resistance (improved by using long nuts)

Low cost

Easy assembly

Wide selection

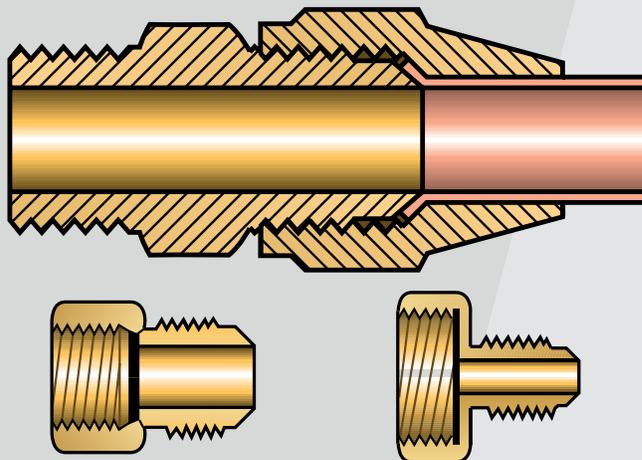
Heavy-duty ACR tube fittings generally conform to SAE, ASA, and ARI Standards for hydraulic, marine, and refrigeration service. Long dry seal pipe threads minimize leakage and provide more clearance for tightening flare nuts. Shapes, elbows, tees, etc., are made from brass forgings to maximize strength and eliminate cracks.

### ASSEMBLY INSTRUCTIONS

- 1 Cut tube square and remove cut-off burr
- 2 Slide nut on tube, threaded end facing end of tube
- 3 Flare tube following flaring tool manufacturers instructions (check flare quality)
- 4 Thread nut on to fitting body "hand tight"
- 5 With proper wrench, tighten to a solid feel

**CAUTION:** Over-tightening and dirt can damage fittings and/or tube causing leaks.

**NOTE:** Lubrication of flare faces and threads is recommended when practical.



Copper seal gaskets (B2) series furnished with all female flares.

Fiber gaskets (K1 and D/E) furnished with all drum adapters (K1-1 through 8).

### THREAD SIZE OF TUBE ENDS

OD TUBE	SAE - FLARE	OD TUBE	SAE FLARE
1/8"	5/16" - 24	1/2"	3/4" - 16
3/16"	3/8" - 24	5/8"	7/8" - 14
1/4"	7/16" - 20	3/4"	1-1/16" - 14
5/16"	1/2" - 20	7/8"	1-1/4" - 12
3/8"	5/8" - 18	1"	1-3/8" - 12
7/16"	11/16" - 16	-----	-----

### TORQUE POUNDS FOR FLARE FITTING DRY THREAD

SIZE	FT. LBS.
1/4"	8-10
3/8"	15-25
1/2"	25-35
5/8"	40-55
3/4"	50-60

## COPPER FLARE BONNET

Use with flare nut to cap a fittings



COPPER FLARE BONNET		
PART NO.	SIZE	QTY.
B1-3	3/16"	5
B1-4	1/4"	25
B1-6	3/8"	5
B1-8	1/2"	5
B1-10	5/8"	10
B1-12	3/4"	10

## COPPER FLARE GASKET

Used on brass-to-brass or brass-to-steel connections to prevent leaks.



COPPER FLARE GASKET		
PART NO.	SIZE	QTY.
B2-3	3/16"	5
B2-4	1/4"	25
B2-5	5/16"	5
B2-6	3/8"	25
B2-8	1/2"	25
B2-10	5/8"	10
B2-12	3/4"	10

## FLARE X FEMALE SOLDER ELL

Used on brass-to-brass or brass-to-steel connections to prevent leaks



FLARE X FEMALE SOLDER ELL		
PART NO.	SIZE	QTY.
ES2-44	1/4" x 1/4"	5
ES2-66	3/8" x 3/8"	5
ES2-68	3/8" x 1/2"	2
ES2-88	1/2" x 1/2"	2

## FLARE X MALE PIPE ELL



FLARE X MALE PIPE ELL		
PART NO.	SIZE	QTY.
E1-2A	1/8" x 1/8"	5
E1-3A	3/16" x 1/8"	2
E1-4A	1/4" x 1/8"	10
E1-4B	1/4" x 1/4"	10
E1-4C	1/4" x 3/8"	5
E1-5A	5/16" x 1/8"	5
E1-5B	5/16" x 1/4"	5
E1-5C	5/16" x 3/8"	5
E1-6A	3/8" x 1/8"	5
E1-6B	3/8" x 1/4"	10
E1-6C	3/8" x 3/8"	10
E1-6D	3/8" x 1/2"	5
E1-6E	3/8" x 3/4"	2
E1-8B	1/2" x 1/4"	5
E1-8C	1/2" x 3/8"	5
E1-8D	1/2" x 1/2"	10
E1-8E	1/2" x 3/4"	2
E1-10C	5/8" x 3/8"	2
E1-10D	5/8" x 1/2"	2
E1-10E	5/8" x 3/4"	2
E1-12D	3/4" x 1/2"	2
E1-12E	3/4" x 3/4"	2

## FLARE ELL AND REDUCING FLARE ELL



FLARE ELL		
PART NO.	SIZE	QTY.
E2-2	1/8"	5
E2-3	3/16"	5
E2-4	1/4"	5
E2-5	5/16"	5
E2-6	3/8"	5
E2-8	1/2"	5
E2-10	5/8"	2
E2-12	3/4"	2

REDUCING FLARE ELL		
PART NO.	SIZE	QTY.
ER2-64	3/8" x 1/4"	5
ER2-84	1/2" x 1/4"	2
ER2-86	1/2" x 3/8"	5
ER2-108	5/8" x 1/2"	2

## FLARE X FEMALE PIPE ELL



FLARE X FEMALE PIPE ELL		
PART NO.	SIZE	QTY.
E3-4A	1/4" x 1/8"	5
E3-4B	1/4" x 1/4"	2
E3-5B	5/16" x 1/4"	2
E3-6A	3/8" x 1/8"	5
E3-6B	3/8" x 1/4"	2
E3-6C	3/8" x 3/8"	2
E3-6D	3/8" x 1/2"	2
E3-8C	1/2" x 3/8"	2
E3-8D	1/2" x 1/2"	2
E3-8E	1/2" x 3/4"	2
E3-10D	5/8" x 1/2"	2
E3-10E	5/8" x 3/4"	2

## SWIVEL FEMALE FLARE X FLARE ELL



SWIVEL FEMALE FLARE X FLARE ELL		
PART NO.	SIZE	QTY.
ES4-44	1/4" x 1/4"	2
ES4-66	3/8" x 3/8"	2
ES4-88	1/2" x 1/2"	2
ES4-1010	5/8" x 5/8"	2
ES4-1212	3/4" x 3/4"	2

## FEMALE FLARE X FLARE ELL

Includes copper gasket



FEMALE FLARE X FLARE ELL		
PART NO.	SIZE	QTY.
E4-44	1/4" x 1/4"	5
E4-66	3/8" x 3/8"	2
E4-88	1/2" x 1/2"	2

## FUSIBLE PIPE PLUG



FUSIBLE PIPE PLUG		
PART NO.	SIZE	QTY.
<b>168°F</b>		
FP-A-168	1/8"	5
FP-B-168	1/4"	5
FP-C-168	3/8"	2
<b>210°F</b>		
FP-A-210	1/8"	5
FP-B-210	1/4"	5
FP-C-210	3/8"	2
<b>283°F</b>		
FP-A-283	1/8"	5
FP-B-283	1/4"	2
FP-C-283	3/8"	2

## REFRIGERANT DRUM ADAPTER

NPS cylinder x male flare; furnished with fiber gasket



REFRIGERANT DRUM ADAPTER		
PART NO.	SIZE	QTY.
K1-1	3/4" x 1/4"	10
K1-3	3/4" x 3/8"	2
K1-5	3/4" x 1/2"	2
K1-8	1/2" x 1/4"	2

## CROSS



CROSS		
PART NO.	SIZE	QTY.
C1-4	1/4"	2
C1-6	3/8"	2

## FIBER DRUM ADAPTER SEAL GASKET



### FIBER DRUM ADAPTER SEAL GASKET

PART NO.	SIZE	QTY.
K1-D	1/2"	10
K1-E	3/4"	10

## FUSIBLE FLARE X PIPE ADAPTER



### FUSIBLE FLARE X PIPE ADAPTER

#### 168° F

FU-4B-168	1/4" x 1/4"	2
FU-4C-168	1/4" x 3/8"	2
FU-6C-168	3/8" x 3/8"	2

#### 210° F

FU-4B-210	1/4" x 1/4"	2
FU-4C-210	1/4" x 3/8"	2
FU-6C-210	3/8" x 3/8"	2

#### 283° F

FU-4B-283	1/4" x 1/4"	2
FU-4C-283	1/4" x 3/8"	2
FU-6C-283	3/8" x 3/8"	2

## LONG FORGED REFRIGERATION NUT

Increase vibration resistance



### LONG FORGED REFRIGERATION NUT

N4-4	1/4"	10
N4-5	5/16"	5
N4-6	3/8"	10
N4-8	1/2"	5
N4-10	5/8"	5
N4-12	3/4"	2

## FLARE CAP



### FLARE CAP

PART NO.	SIZE	QTY.
N5-3	3/16"	5
N5-4	1/4"	25
N5-5	5/16"	5
N5-6	3/8"	25
N5-8	1/2"	10
N5-10	5/8"	10
N5-12	3/4"	2

## SHORT FORGED REFRIGERATION NUT AND REDUCING



### SHORT FORGED REFRIGERATION NUT

NS4-3	3/16"	10
NS4-4	1/4"	25
NS4-4-CS	1/4"	1000
NS4-5	5/16"	10
NS4-6	3/8"	25
NS4-6-CS	3/8"	500
NS4-8	1/2"	25
NS4-8-CS	1/2"	350
NS4-10	5/8"	10
NS4-10-CS	5/8"	200
NS4-12	3/4"	5
NS4-12-CS	3/4"	100
NS4-14	7/8"	2

### REDUCING SHORT FORGED REFRIGERATION NUT

NRS4-43	1/4" x 3/16"	5
NRS4-54	5/16" x 1/4"	5
NRS4-64	3/8" x 1/4"	10
NRS4-65	3/8" x 5/16"	10
NRS4-86	1/2" x 3/8"	10
NRS4-108	5/8" x 1/2"	5
NRS4-1210	3/4" x 5/8"	2

## OLD STYLE EXTRA HEAVY PRE-1968 NUT



### OLD STYLE EXTRA HEAVY PRE-1968 NUT

PART NO.	SIZE	QTY.
HNS4-4	1/4" (3/4" hex)	25
HNS4-6	3/8" (7/8" hex)	25
HNS4-8	1/2" (1" hex)	10
HNS4-10	5/8" (1-1/8" hex)	10
HNS4-12	3/4" (1-3/8" hex)	2

## FROST-PROOF FORGED REFRIGERATION NUT

Holes relieve frost in thread area



### FROST-PROOF FORGED REFRIGERATION NUT

NST4-4	1/4"	5
NST4-6	3/8"	5
NST4-8	1/2"	10
NST4-10	5/8"	2

## FLARE PLUG



### FLARE PLUG

P2-3	3/16"	5
P2-4	1/4"	10
P2-5	5/16"	5
P2-6	3/8"	10
P2-8	1/2"	10
P2-10	5/8"	5
P2-12	3/4"	2

## FINGER TIGHT FLARE CAP

Neoprene seal; small packs



### FINGER TIGHT FLARE CAP

NFT5-4-101	1/4"	1000
NFT5-6-101	3/8"	500

## FLARE X FLARE X MALE PIPE TEE



### FLARE X FLARE X MALE PIPE TEE

PART NO.	SIZE	QTY.
T1-4A	1/4" x 1/4" x 1/8"	10
T1-4B	1/4" x 1/4" x 1/4"	10
T1-4C	1/4" x 1/4" x 3/8"	2
T1-5B	5/16" x 5/16" x 1/4"	2
T1-6B	3/8" x 3/8" x 1/4"	5
T1-6C	3/8" x 3/8" x 3/8"	5
T1-6D	3/8" x 3/8" x 1/2"	2
T1-8B	1/2" x 1/2" x 1/4"	2
T1-8C	1/2" x 1/2" x 3/8"	2
T1-8D	1/2" x 1/2" x 1/2"	2
T1-10C	5/8" x 5/8" x 3/8"	2
T1-10D	5/8" x 5/8" x 1/2"	2

## FLARE TEE AND REDUCING



### FLARE TEE

T2-3	3/16"	5
T2-4	1/4"	10
T2-5	5/16"	5
T2-6	3/8"	10
T2-8	1/2"	5
T2-10	5/8"	2
T2-12	3/4"	2

### REDUCING FLARE TEE

TR2-446	1/4" x 1/4" x 3/8"	5
TR2-664	3/8" x 3/8" x 1/4"	5
TR2-668	3/8" x 3/8" x 1/2"	2
TR2-886	1/2" x 1/2" x 3/8"	2

## FLARE X MALE PIPE X FLARE TEE



FLARE X MALE PIPE X FLARE TEE		
PART NO.	SIZE	QTY.
T3-4A	1/4" x 1/8" x 1/4"	5
T3-4B	1/4" x 1/4" x 1/4"	5
T3-5B	5/16" x 1/4" x 5/16"	2
T3-6B	3/8" x 1/4" x 3/8"	5
T3-6C	3/8" x 3/8" x 3/8"	2
T3-6D	3/8" x 1/2" x 3/8"	2
T3-8C	1/2" x 3/8" x 1/2"	2
T3-8D	1/2" x 1/2" x 1/2"	2
T3-10D	5/8" x 1/2" x 5/8"	2

## FLARE X MALE PIPE ADAPTER



FLARE X MALE PIPE ADAPTER		
PART NO.	SIZE	QTY.
U1-2A	1/8" x 1/8"	5
U1-3A	3/16" x 1/8"	5
U1-3B	3/16" x 1/4"	5
U1-4A	1/4" x 1/8"	25
U1-4B	1/4" x 1/4"	25
U1-4C	1/4" x 3/8"	10
U1-4D	1/4" x 1/2"	10
U1-5A	5/16" x 1/8"	5
U1-5B	5/16" x 1/4"	5
U1-5C	5/16" x 3/8"	5
U1-6A	3/8" x 1/8"	10
U1-6B	3/8" x 1/4"	10
U1-6C	3/8" x 3/8"	10
U1-6D	3/8" x 1/2"	10
U1-6E	3/8" x 3/4"	5
U1-8A	1/2" x 1/8"	2
U1-8B	1/2" x 1/4"	5
U1-8C	1/2" x 3/8"	10
U1-8D	1/2" x 1/2"	10
U1-8E	1/2" x 3/4"	5
U1-10B	5/8" x 1/4"	5
U1-10C	5/8" x 3/8"	5
U1-10D	5/8" x 1/2"	10
U1-10E	5/8" x 3/4"	5
U1-12C	3/4" x 3/8"	2
U1-12D	3/4" x 1/2"	2
U1-12E	3/4" x 3/4"	2
U1-14E	7/8" x 3/4"	2

## FLARE UNION AND REDUCING



FLARE UNION		
PART NO.	SIZE	QTY.
U2-2	1/8"	5
U2-3	3/16"	5
U2-4	1/4"	25
U2-5	5/16"	10
U2-6	3/8"	25
U2-8	1/2"	10
U2-10	5/8"	10
U2-12	3/4"	2
U2-14	7/8"	2

REDUCING FLARE UNION		
PART NO.	SIZE	QTY.
UR2-43	1/4" x 3/16"	5
UR2-54	5/16" x 1/4"	5
UR2-64	3/8" x 1/4"	10
UR2-65	3/8" x 5/16"	5
UR2-84	1/2" x 1/4"	5
UR2-86	1/2" x 3/8"	10
UR2-106	5/8" x 3/8"	5
UR2-108	5/8" x 1/2"	5
UR2-128	3/4" x 1/2"	2
UR2-1210	3/4" x 5/8"	2

## FEMALE FLARE X FLARE ADAPTER



FEMALE FLARE X FLARE ADAPTER		
PART NO.	SIZE	QTY.
UR3-43	1/4" x 3/16"	2
UR3-46	1/4" x 3/8"	10
UR3-48	1/4" x 1/2"	5
UR3-64	3/8" x 1/4"	20
UR3-68	3/8" x 1/2"	10
UR3-84	1/2" x 1/4"	10
UR3-86	1/2" x 3/8"	10
UR3-810	1/2" x 5/8"	10
UR3-108	5/8" x 1/2"	5
UR3-1012	5/8" x 3/4"	2
UR3-1210	3/4" x 5/8"	2

## FLARE X FEMALE PIPE ADAPTER



FLARE X FEMALE PIPE ADAPTER		
PART NO.	SIZE	QTY.
U3-2A	1/8" x 1/8"	5
U3-3A	3/16" x 1/8"	5
U3-4A	1/4" x 1/8"	10
U3-4B	1/4" x 1/4"	10
U3-4C	1/4" x 3/8"	5
U3-5A	5/16" x 1/8"	5
U3-5B	5/16" x 1/4"	5
U3-6A	3/8" x 1/8"	5
U3-6B	3/8" x 1/4"	5
U3-6C	3/8" x 3/8"	5
U3-6D	3/8" x 1/2"	5
U3-8B	1/2" x 1/4"	5
U3-8C	1/2" x 3/8"	5
U3-8D	1/2" x 1/2"	5
U3-8E	1/2" x 3/4"	2
U3-10C	5/8" x 3/8"	5
U3-10D	5/8" x 1/2"	5
U3-10E	5/8" x 3/4"	2

## FLARE X FLARE X FEMALE FLARE TEE



FLARE X FLARE X FEMALE FLARE TEE		
PART NO.	SIZE	QTY.
T6-4	1/4"	2

## FLARE X SOLDER ADAPTER

Furnished with copper gasket



FLARE X SOLDER ADAPTER		
PART NO.	SIZE	QTY.
US3-44	1/4" x 1/4"	10
US3-45	1/4" x 5/16"	5
US3-46	1/4" x 3/8"	5
US3-64	3/8" x 1/4"	5
US3-65	3/8" x 5/16"	5
US3-66	3/8" x 3/8"	10
US3-68	3/8" x 1/2"	5
US3-610	3/8" x 5/8"	5
US3-86	1/2" x 3/8"	2
US3-88	1/2" x 1/2"	5
US3-810	1/2" x 5/8"	2
US3-108	5/8" x 1/2"	2
US3-1010	5/8" x 5/8"	5
US3-1012	5/8" x 3/4"	2
US3-1014	5/8" x 7/8"	2
US3-1212	3/4" x 3/4"	5
US3-1214	3/4" x 7/8"	2

## BRASS PIPE FITTINGS

JB's American made forged brass pipe fittings are manufactured from CA 377 alloy and are threaded to Dry seal Taper Pipe Standards to generally comply with SAE, ASA, ASME, and MS Standards. Forgings can be used on vacuums to pressures of 5,000 psi depending on size, material, and conditions.

### FEATURES

Good vibration resistance (improved by using long nuts)

Low cost

Easy assembly

American made quality

Wide selection

JB recommends the use of a compatible thread sealant and tightening 2-1/2 full turns past hand tight. Vacuum and pressures of 5,000 psi can be handled depending upon the size, material, and conditions.

**Caution:** Over-tightening and dirt can damage fittings

JB brass fittings are sold in box quantities only. For more information, please contact customer service.

NOMINAL PIPE SIZE THREADS			
NOM. PIPE	THD. / IN.	NOM. PIPE	THD. / IN.
1/16"	27	2"	11.5
1/8"	27	2-1/2"	8
1/4"	18	3"	8
3/8"	18	3-1/2"	8
1/2"	14	4"	8
3/4"	14	5"	8
1"	11.5	6"	8
1-1/4"	11.5	8"	8
1-1/2"	11.5	---	---

### FEMALE FLARE X FEMALE FLARE CONNECTOR

Includes two copper seal gaskets



FEMALE FLARE X FEMALE FLARE CONNECTOR		
PART NO.	SIZE	QTY.
U4-4	1/4"	10
U4-6	3/8"	10
U4-8	1/2"	2
U4-10	5/8"	2
U4-12	3/4"	2

### FEMALE FLARE X FEMALE PIPE ADAPTER

Includes copper seal gasket



FEMALE FLARE X MALE PIPE ADAPTER		
PART NO.	SIZE	QTY.
U5-4A	1/4" x 1/8"	5
U5-4B	1/4" x 1/4"	10
U5-6B	3/8" x 1/4"	5
U5-8C	1/2" x 3/8"	2
U5-8D	1/2" x 1/2"	2

### SWIVEL FEMALE FLARE CONNECTOR



SWIVEL FEMALE FLARE CONNECTOR		
PART NO.	SIZE	QTY.
US4-4	1/4"	10
US4-5	5/16"	5
US4-6	3/8"	10
US4-8	1/2"	10
US4-10	5/8"	5

### FEMALE FLARE X MALE PIPE ADAPTER



FEMALE FLARE X FEMALE PIPE ADAPTER		
PART NO.	SIZE	QTY.
U6-4A	1/4" x 1/8"	2
U6-4B	1/4" x 1/4"	2

### SWIVEL FEMALE FLARE X SOLDER ADAPTER

A32700 series, see page 68



SWIVEL FEMALE FLARE X SOLDER ADAPTER		
PART NO.	SIZE	QTY.
US5-44	1/4" x 1/4"	5
US5-66	3/8" x 3/8"	5
US5-88	1/2" x 1/2"	5
US5-1010	5/8" x 5/8"	5
US5-1212	3/4" x 3/4"	2

### EXTRA LONG FLARE X MALE PIPE ADAPTER



EXTRA LONG FLARE X MALE PIPE ADAPTER		
PART NO.	SIZE	QTY.
UX1-4A	1/4" x 1/8"	2
UX1-4B	1/4" x 1/4"	5

### EXTRA LONG FLARE UNION



EXTRA LONG FLARE UNION		
PART NO.	SIZE	QTY.
UX2-4	1/4"	5

## HEX BRUSHING (R1)



HEX BRUSHING (R1)		
PART NO.	SIZE	QTY.
110-BA	1/4" x 1/8"	10
110-CA	3/8" x 1/8"	5
110-CB	3/8" x 1/4"	10
110-DA	1/2" x 1/8"	5
110-DB	1/2" x 1/4"	10
110-DC	1/2" x 3/8"	10
110-EA	3/4" x 1/8"	2
110-EB	3/4" x 1/4"	5
110-EC	3/4" x 3/8"	5
110-ED	3/4" x 1/2"	5
110-FD	1" x 1/2"	2
110-FE	1" x 3/4"	2

## LONG NIPPLE



LONG NIPPLE		
PART NO.	SIZE	QTY.
113-A15	1/8" x 1-1/2"	5
113-A2	1/8" x 2"	5
113-A25	1/8" x 2-1/2"	5
113-A3	1/8" x 3"	5
113-A35	1/8" x 3-1/2"	5
113-B15	1/4" x 1-1/2"	5
113-B2	1/4" x 2"	5
113-B25	1/4" x 2 -1/2"	5
113-B3	1/4" x 3"	5
113-B35	1/4" x 3-1/2"	5
113-C15	3/8" x 1- 1/2"	5
113-C2	3/8" x 2"	5
113-C25	3/8" x 2 -1/2"	5
113-C3	3/8" x 3"	5
113-D15	1/2" x 1-1/2"	5
113-D2	1/2" x 2"	5
113-D25	1/2" x 2-1/2"	5
113-D3	1/2" x 3"	2
113-D35	1/2" x 3-1/2"	2

## STREET ELL



STREET ELL		
PART NO.	SIZE	QTY.
116-A	1/8" Forged	5
116-B	1/4" Forged	5
116-C	3/8" Forged	5
116-D	1/2" Forged	2

## HEX NIPPLE (U10)



HEX NIPPLE (U10)		
PART NO.	SIZE	QTY.
122-A	1/8"	5
122-B	1/4"	10
122-C	3/8"	5
122-D	1/2"	5
122-E	3/4"	5

## CLOSE NIPPLE



CLOSE NIPPLE		
PART NO.	SIZE	QTY.
112-A	1/8"	5
112-B	1/4"	10
112-C	3/8"	5
112-D	1/2"	5
112-E	3/4"	5

## HEX HEAD PLUG (P3)



HEX HEAD PLUG (P3)		
PART NO.	SIZE	QTY.
121-A	1/8"	10
121-B	1/4"	10
121-C	3/8"	5
121-D	1/2"	5
121-E	3/4"	5
121-F	1"	2

## TEE



TEE		
PART NO.	SIZE	QTY.
101-A	1/8"	5
101-B	1/4"	10
101-C	3/8"	5
101-D	1/2"	2
101-E	3/4"	2

## COMPRESSION BREAK-OFF SLEEVE (PILOT) NUT



COMPRESSION BREAK-OFF SLEEVE (PILOT) NUT		
PART NO.	SIZE	QTY.
81LB-4	1/4"	10

## SWIVEL FEMALE FLARE CONNECTOR



ELL		
PART NO.	SIZE	QTY.
100-A	1/8"	5
100-B	1/4"	5
100-C	3/8"	5
100-D	1/2"	2
100-E	3/4"	2

## SWIVEL FEMALE FLARE CONNECTOR



COUPLING (PC)		
PART NO.	SIZE	QTY.
103-A	1/8"	5
103-B	1/4"	10
103-C	3/8"	5
103-D	1/2"	5
103-E	3/4"	5



# WARRANTY AND RETURNS

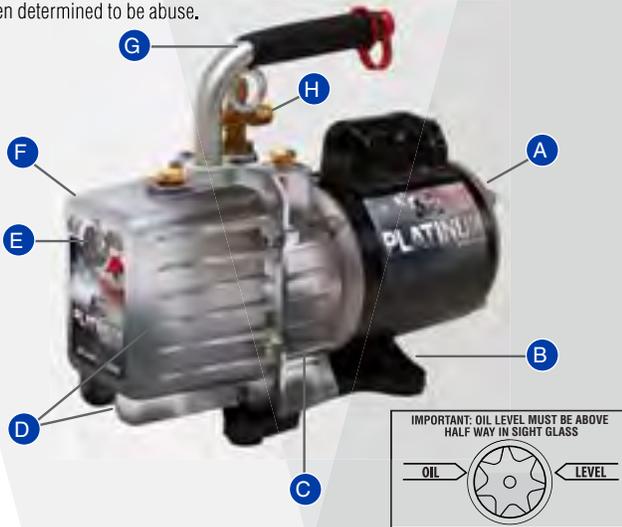
## WARRANTY PROGRAM

The entire limited warranty and over-the-counter warranty can be found at [www.jbind.com](http://www.jbind.com). Products sold by JB Industries, Inc. are warranted for a period of 12 months from the date of sale with the following exceptions:

### VACUUM PUMPS: 24 MONTHS

**\*All warranty statements apply to both Platinum® and Eliminator® Pumps.**

Pumps that are in warranty are examined as soon as they arrive at the warehouse so that we may contact the wholesaler regarding our determination. The over-the-counter warranty applies only to the manufacturing defects and is VOID if the problem has been determined to be abuse.



### NOT CHANGING OIL WILL VOID WARRANTY

#### Check for signs of abuse:

- A. Bell back housing area
- B. Base is broken or missing corners
- C. Side of trap
- D. Damage to protective fins and drain valve
- E. Sight glass shows build-up
- F. Flat hit marks on top and bottom of corners
- G. Handle bent down or broken
- H. Intake damaged or missing

#### The warranty is void if:

- 1. Oil has not been used in pump or changed
- 2. Corrosive substances have been introduced in the pump
- 3. The pump has been altered or any components removed or missing

### MANIFOLDS: LIFETIME BAR ONLY

Manifolds carry a lifetime warranty on the bar only and does not include coverage of any parts. The 12 month over-the-counter warranty covers manufacturing defects only, not abuse. Signs of abuse include lens cracked or missing, gauges that can be loosened by hand, and drop marks on manifolds or unions. Check calibration with the set screw on the gauge as well.

### DIGITAL INSTRUMENTS, DIGITAL MICRON GAUGES, AURORA, GAUGES, MANIFOLDS: 12 MONTHS

For the DV-22N, check the last recorded vacuum and then press twice to clear the last recorded vacuum to see if it resets (if the numbers are jumping around, it may be a cold pump or oil contaminant inside the thermistor). If the numbers are jumping around after you have disconnected the gauge from the vacuum and it will not return to one, wait until the gauge auto calibrates. Unit will display JB and turn off before it reads 1 if batteries are low. JB vacuum gauges utilize a thermistor, which if contaminated, can result in faulty readings. Make sure that the sensors are cleaned with rubbing alcohol (Isopropyl) if readings seem erratic or as part of a regular maintenance regiment. DV-22N will display a "1" if vacuum reading is above 9,000 microns. The DV-40/DV-41 will display "00000000" when the vacuum level is above 12,000 microns. Check for signs of abuse which include a cracked case, the coupler is loose at the base of the case, the O-ring/gasket is chewed up or damaged or missing, there are pliers or channel locks on couplers, and the hook is broken or missing.

### PROWLER, LDC-4000, QUEST: 24 MONTHS

Check the batteries. The product will provide a low battery warning with flashing dots at the bottom of the display. Plug in and toggle through the settings as well as the temperature setting to check if the sensors are working. If the sensors are working, push the on/off button to auto cal to see if it will return to zero. If any of the readings are off, check to see what the temperature sensor is for both sensors. A few degrees difference between the two can cause a problem with the readings. Check for signs of abuse which include a cracked case, drop marks on fittings, display is dimmed or damaged, sensor is pinched or sliced, and the hook is bent or missing.

### F6-DP REFRIGERANT RECOVERY UNIT: 36 MONTHS

JB Industries warrants the F6-DP Refrigerant Recovery Machine to be free from defects of materials or workmanship for three years from the date of purchase. JB Industries does not warrant any machine that has been subjected to misuse, negligence, or accident, or has been repaired or altered by anyone other than JB Industries.

The compressor is warranted for a period of three years by the manufacturer. To keep this warranty in force, a filter (included) must be used on the inlet port or hose at all times to prevent particulates from entering the compressor. Failure to use the included filter will void the compressor warranty.

JB Industries liability is limited to repairing or replacing, at its option, a defective machine or part. If a defect arises, a valid claim must be received by JB Industries, with transportation prepaid, no later than thirty (30) days after the warranty period expires. JB Industries will determine whether the machine has malfunctioned due to defective materials or workmanship.

### ROTHENBERGER TOOLS: 24 MONTHS

Check for signs of abuse.

# WARRANTY AND RETURNS

## PRODUCT RETURNS

Prior to returning any product to JB, you are required to obtain a Return Goods Authorization number (RGA). Contact customer service at 800-323-0811 to obtain your RGA. Insure that all returned products are packed adequately to avoid damage during shipment as we will not honor warranty claims for items damaged in transit. The recommended packing procedure for pumps is detailed below. Paperwork should be placed in a separate plastic bag and should include your assigned RGA, a description of the problem, a copy of the invoice, and any customer assigned repair or purchase order number (if applicable). Please provide contact information of whom to inform of package receipt as well as the person authorized to accept repair charges should the warranty be void.

**PLEASE MAKE SURE THAT ALL ITEMS ARE PACKAGED CORRECTLY TO PREVENT DAMAGE IN SHIPMENT.**

**WE WILL NOT HONOR WARRANTY CLAIMS FOR ITEMS DAMAGED IN TRANSIT.**

**DO NOT PUT STICKERS OR STRONG TAPE ON FACES OF PRODUCTS AS ITEM MAY COME BACK WITH NO MANUFACTURER DEFECTS.**

The recommended packing procedure for vacuum pumps is outlined below.

## RETURNING VACUUM PUMP FOR REPAIR

Before returning pump to factory, follow these steps to ensure that no additional charges are incurred because of poor packaging.

1. Completely drain oil from pump and close off all valves.  
If red cap is on pump put in end of handle to prevent leakage during transit.
2. Place pump in plastic bag and seal.
3. Cushion bottom of carton with packing paper or crumpled newspaper before putting pump in carton. Use packing paper or crumpled newspaper around all sides and the top. **DO NOT USE PACKING PEANUTS.**
4. Place all paperwork in a separate plastic bag and seal.  
Please include RGA number issued by JB and a detailed description of the problem.
5. If an estimate is required prior to repair, be certain this is clearly specified and highlighted.
6. Depending on the time of year, allow 2-4 weeks for repair service.

## LIMITED WARRANTY

JB limits this warranty to the repair, replacement or credit at invoice price (JB's option) of products that in JB's opinion are defective due to defects in workmanship and/or materials. Warranty claims resulting from obvious product abuse, misuse such as broken parts or lack of maintenance including failure to keep the vacuum pump filled with clean oil, abnormal use or normal wear and tear will not be honored as warranty repair and will be subject to JB's published repair costs. This express warranty is in lieu of and excludes all other warranties, guarantees and/or representations, express or implied, of JB and/or the manufacturer of such products that make **NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.** Technical information, recommendations and advice as to properties and usages of materials, design, installation and use of products, engineering and other matters are provided as an accommodation and are intended only as suggestions. Although they are believed to be accurate, based on JB's knowledge and experience, JB assumes no obligation or liability for any results obtained in their use or application, and they are not to be construed as establishing any warranty, express or implied. In no event shall JB be liable for claims for any damages whatsoever (whether direct, foreseeable, consequential or special) suffered by buyer or anyone else arising out of any breach by JB. JB makes no warranty to those defined as consumers in the Magnuson-Moss Warranty-Federal Trade Commission Improvement Act.

Disclaimers: All product items pictured, described, or otherwise displayed herein are subject to changes, alterations, and/or modifications at anytime by JB Industries, Inc. The terms and conditions for the purchase of JB Industries, Inc. products are subject to changes, alterations, and/or modifications at any time by JB Industries, Inc. and will be made available upon request to JB Industries Inc. and shall be provided to customers of JB Industries, Inc. at time of purchase.

## SHIPPING INFO

### For Vacuum Pump Repairs Only:

Customers in Alaska, Arizona, California, Idaho, Montana, Nevada, Oregon, Utah, and Washington have the option of sending vacuum pump repairs to JB or Merced Wholesale:

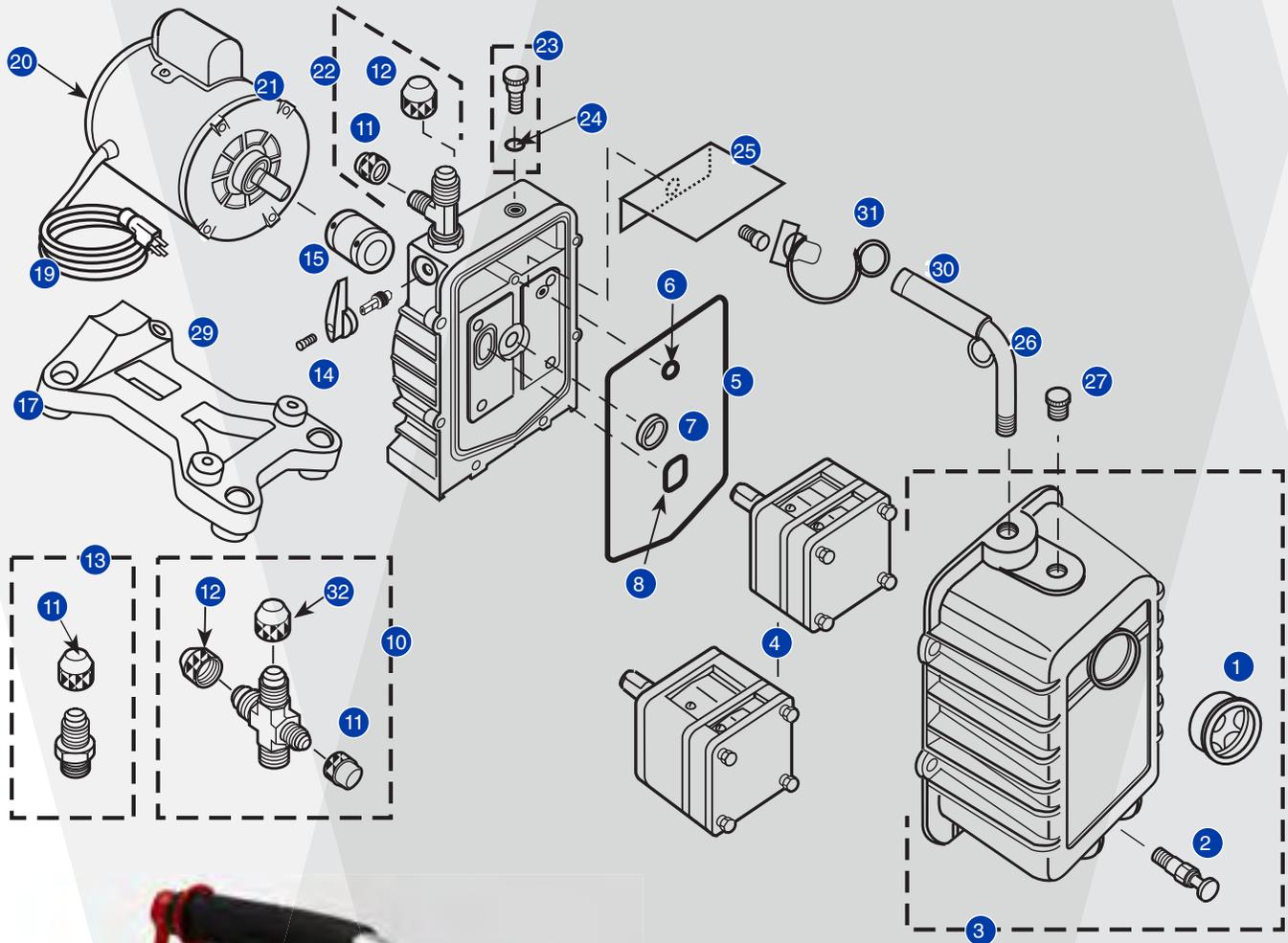
**JB Industries  
Repair Department  
601 N. Farnsworth Ave.  
Aurora, IL 60505**

**Merced AC Equipment Service  
805 S. Fremont  
Alhambra, CA 91803  
Phone: 626.293.5710  
Fax: 626.289.1961**

# REPAIR PARTS

## VACUUM PUMP REPAIR

## DV-42N THROUGH DV-285N PLATINUM® SERIES



### PLEASE INCLUDE WITH ORDERS

1. Model number
2. Four digit serial number
3. Part number and description

# REPAIR PARTS

## VACUUM PUMP REPAIR

## DV-42N THROUGH DV-285N PLATINUM® SERIES

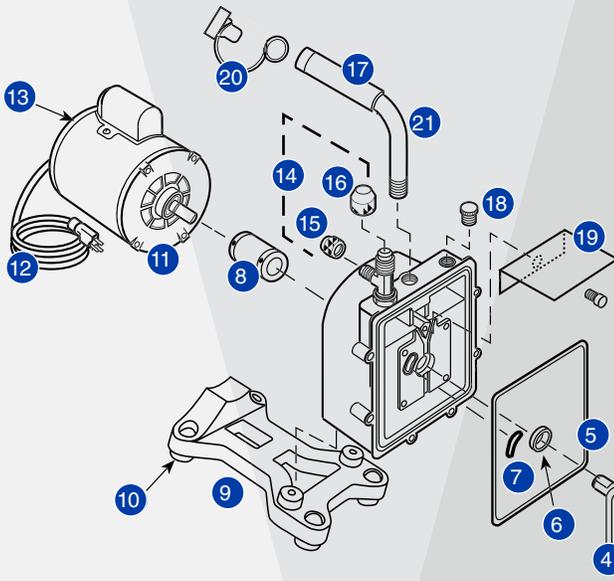
PLATINUM® PUMP REPAIR PARTS – ALL PUMPS		
REF.NO.	PART NO.	DESCRIPTION
1	PR-1	Sight glass
2	PR-2	Drain valve
6	PR-211	Trap o-ring, gas ballast
7	PR-3	Shaft seal
8	PR-315	Trap o-ring, intake
9	PR-4	Rubber foot and screw assembly (1 per package)
10	PR-76	Intake caps w/cross
11	NFT5-4	1/4" O-ring, intake
12	NFT5-6	3/8" O-ring cap
12	NFT5-8	1/2" O-ring cap
14	PR-209	Plastic isolation valve handle and screw w/stem, O-rings and retainer (not interchangeable w/PR-210)
15	PR-208	Flexible coupler
15	PR-308	Flexible section only
15	PR-6	Flexible coupler
15	PR-77	Flexible section only
16	PR-42	Motor foot w/screw
17	PR-59	Base Foot
19	PR-31	Line cord (Emerson motor)
19	PR-58	Line cord (Marathon motor)
20	PR-54	Rocker switch w/wire leads (Emerson)
21	PR-206	1/2 Hp, 115v, 60 Hz Motor w/line cord and switch
21	PR-207	1/2 Hp, 115/230v, 50/60 Hz Motor w/ line cord and switch
22	PR-5	Intake tee w/caps
23	PR-7	Gas ballast valve w/o-ring
24	P90009	O-ring, gas ballast valve
25	PR-40	Splash guard and screw (excludes 3 CFM manufactured before 1/01; use PR-39)
26	PR-75	Cushioned handle w/lift ring 1/2" NPT and DV-EP-8 as of 2008
26	PR-205	Cushioned handle 3/8" NPT
27	PR-22	Oil fill plug w/o-ring
28	PR-56	Adapter nut w/nut o-ring
30	PR-500	Cushion and cap 3/8" NPT
30	PR-501	Cushion and cap 1/2" NPT
31	DV-EP6	Tethered safety cap 3/8"
31	DV-EP8	Tethered safety cap 1/2"
32	NFT5-8	1/2" Cap w/o-ring

PLATINUM® PUMP REPAIR PARTS – MANUFACTURED AFTER JANUARY 2001		
3	PR-300	DV-42N through DV-200N cover assembly w/sight glass and drain valve
3	PR-301	DV-285N Cover assembly w/sight glass and drain valve
4	PR-302	DV-42N and DV-85N Cartridge w/o-rings and cover seal
4	PR-303	DV-142N Cartridge w/o-rings and cover seal
4	PR-304	DV-200N Cartridge w/o-rings and cover seal
4	PR-314	DV-285N Cartridge w/o-rings and cover seal
13	PR-32	1/4" Intake w/cap
5	PR-311	Cover seal
20	PR-35	Rocker switch w/prongs (Marathon 1101-0105)
29	PR-62	Pump base (includes feet)
PLATINUM® PUMP REPAIR PARTS – MANUFACTURED BEFORE JANUARY 2001		
3	PR-200	No longer available; can substitute PR-201
3	PR-201	DV-142N and DV-200N Cover assembly w/sight glass and drain valve
5	PR-217	Cover seal
8	PR-215	Trap o-ring, intake
14	PR-210	Metal isolation valve handle and screw
NOT SHOWN		
PR-18	Cartridge valve repair kit (includes DV-285N as of 2007 models)	
PR-52	DV-285N Cartridge valve repair kit prior to 2007 models	
PR-45	PR-1, PR-2, PR-4(2), PR-42, PR-208	
PR-62	Fits all pumps with serial #0101 and higher	

# REPAIR PARTS

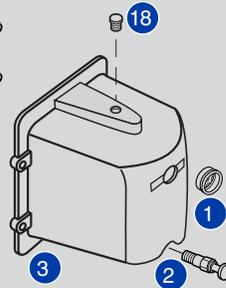
## VACUUM PUMP REPAIR

## DV-3E, DV-4E AND DV-6E ELIMINATOR® SERIES

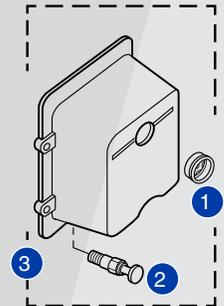


### PLEASE INCLUDE WITH ORDERS

1. Model number
2. Four digit serial number
3. Part number and description



Current chrome cover will fit older black Eliminator® models.



Black hammertone cover no longer available

ELIMINATOR® PUMP REPAIR PARTS		
REF. NO.	PART NO.	DESCRIPTION
1	PR-1	Sight glass
2	PR-2	Drain valve
3	PR-10	DV-3E, DV-4E And DV-6E Cover assembly w/sight glass, drain valve and oil fill plug
4 <i>New</i>	PR-403	DV-3E Cartridge complete w/o-rings and cover seal
4 <i>New</i>	PR-404	DV-4E Cartridge complete w/o-rings and cover seal
4 <i>New</i>	PR-406	DV-6E Cartridge complete w/o-rings and cover seal
5 <i>New</i>	PR-217	Cover seal
6	PR-3	Shaft seal
7	PR-315	Trap intake o-ring
8	PR-208	Flexible coupler
8	PR-308	Middle section; used w/PR-208
8	PR-6	Flexible coupler
8	PR-77	Middle section; used w/PR 6
9	PR-62	Pump base (includes rubber feet)
10	PR-59	Rubber foot
<i>Not Shown</i>	PR-18	Cartridge valve repair kit

ELIMINATOR® PUMP REPAIR PARTS		
REF. NO.	PART NO.	DESCRIPTION
11	PR-207	1/2 Hp, 115/230 V, 50/60 Hz Motor w/line cord and switch
11	PR-206	1/2 Hp Motor w/line cord and switch
12	PR-31	Line cord (Emerson motor)
12 <i>New</i>	PR-58	Line cord (Marathon motor)
13	PR-54	Motor switch, rocker
14	PR-63	Intake tee w/cap
15	NFT5-4	1/4" O-ring cap
16	NFT5-6	3/8" O-ring cap
17 <i>Black</i>	PR-500	3/8 Rubber grip and cap
17 <i>Hammertone</i>	PR-501	1/2" Rubber grip and cap
18	PR-22	Oil fill plug w/o-ring
19	PR-39	DV-3E Splash guard w/screw
19	PR-40	DV-4E and DV6E Splash guard w/screw
20 <i>Black</i>	DV-EP6	Tethered safety plug 3/8"
20 <i>Hammertone</i>	DV-EP8	Tethered safety plug 1/2"
21 <i>Black</i>	PR-205	Cushioned handle 3/8" NPT
21 <i>Hammertone</i>	PR-65	Cushioned handle 1/2" NPT

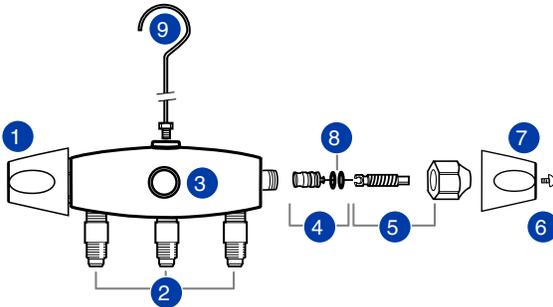
# REPAIR PARTS

## MANIFOLD REBUILD KITS

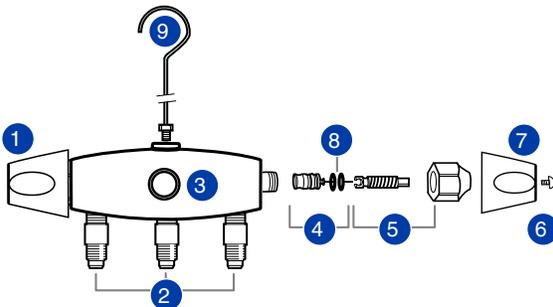
Rebuild kits are available for all manifold series. Standard rebuild kits include a stem, nut, piston with seat, and o-rings. Premium rebuild kits feature two standard kits plus two hand wheels and screws.

Caution: gauges and hoses not specified for R410A can damage product and cause injury.

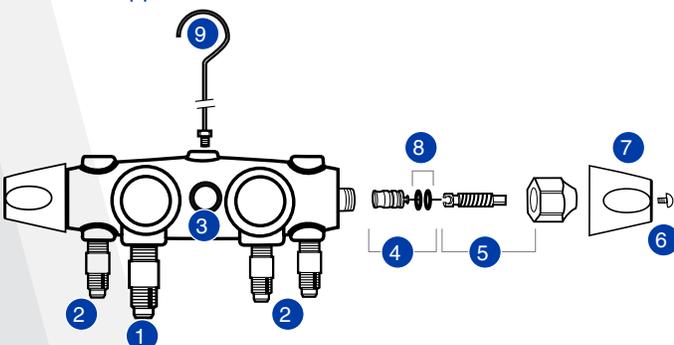
### Zeppelin Brass Series



### 2-Valve Zeppelin Aluminum Series



### 4-Valve Zeppelin Aluminum Series



## MANIFOLD REBUILD KITS

PART NO.	DESCRIPTION
<b>M2RS</b>	Standard M2 rebuild (also fits M5 through M9 series)
<b>M2RP</b>	Premium M2 rebuild (fits M2 series only)
<b>M4RS</b>	Standard M4 rebuild
<b>M4RP</b>	Premium M4 rebuild
<b>2VZRS</b>	Standard Zeppelin® 2-valve rebuild (fits both aluminum and brass)
<b>2VZRP</b>	Premium Zeppelin® 2-valve rebuild (fits both aluminum and brass)
<b>4VZRS</b>	Standard Zeppelin® 4-valve rebuild
<b>4VZRP</b>	Premium Zeppelin® 4-valve rebuild

## GAUGE MOUNTING BRACKETS

<b>M2-106</b>	1/8" FPT
<b>M2-108</b>	1/4" FPT

## ZEPPELIN® BRASS SERIES MANIFOLD

REF NO.	PART NO.	DESCRIPTION
1	<b>MR601</b>	Hand wheel and screw
2	<b>U1-4A</b>	1/4" Intake
3	<b>MR525</b>	Sight glass
4	<b>MR505</b>	Piston w/seat and o-rings
5	<b>MR516</b>	Stem and nut
6	<b>MR601</b>	Hand wheel and screw
7	<b>MR503</b>	Hand wheel screws (two)
8	<b>MR509</b>	O-rings (two)
9	<b>M2-102N</b>	Hanging hook

## 2-VALVE ALUMINUM ZEPPELIN®

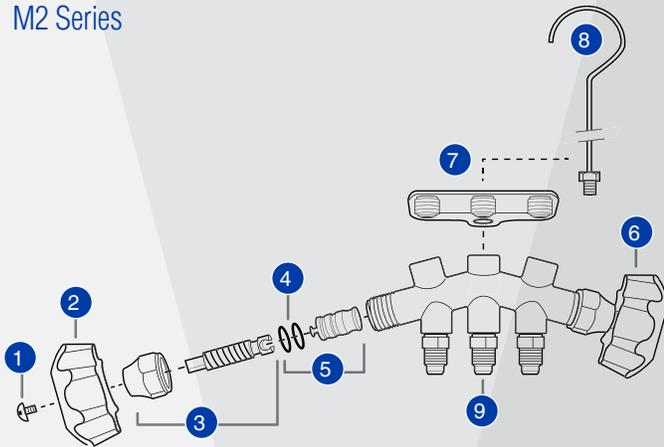
1	<b>MR601</b>	Hand wheel and screw
2	<b>U1-4A</b>	1/4" Intake
3	<b>MR525</b>	Sight glass
4	<b>MR505</b>	Piston w/seat and o-rings
5	<b>MR516</b>	Stem and nut
6	<b>MR601</b>	Hand wheel and screw
7	<b>MR503</b>	Hand wheel screws (two)
8	<b>MR509</b>	O-rings (two)
9	<b>M2-102N</b>	Hanging hook

## 4-VALVE ALUMINUM ZEPPELIN®

1	<b>U1-6B</b>	3/8" Intake
2	<b>U1-4A</b>	1/4" Intake
3	<b>MR525</b>	Sight glass
4	<b>MR605</b>	Piston w/seat and o-rings
5	<b>MR607</b>	Stem and nut
6	<b>MR601</b>	Hand wheel and screw
7	<b>MR503</b>	Hand wheel screws (two)
8	<b>MR409</b>	O-rings (two)
9	<b>M2-102N</b>	Hanging hook

# REPAIR PARTS

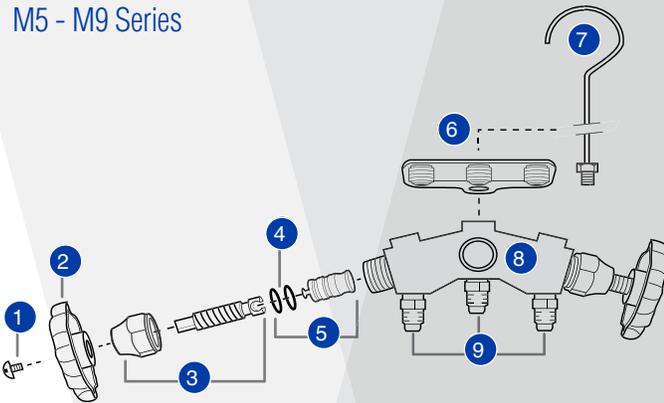
## M2 Series



### M2 SERIES MANIFOLDS

REF NO.	PART NO.	DESCRIPTION
1	MR503	Hand wheel screw (two)
2	MR501B	Blue hand wheel and screw
3	MR516	Stem and nut
4	MR509	O-ring (two)
5	MR505	Piston w/seat and o-rings
6	MR501R	Red hand wheel
7	M2-300	Hose holder
8	M2-102N	Hanging hook
9	U1-4A	Intake

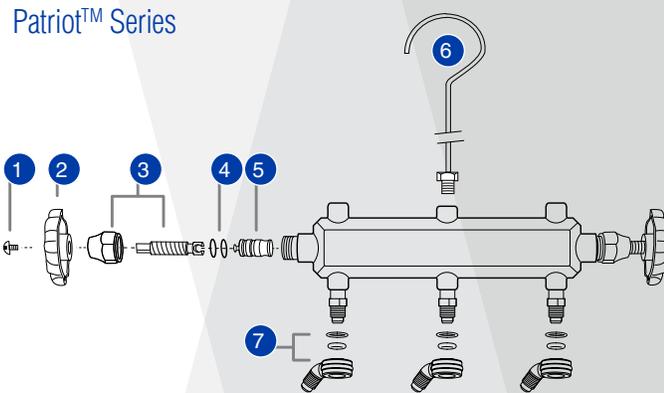
## M5 - M9 Series



### M5 - M9 SERIES MANIFOLDS

1	MR503	Hand wheel screw (two)
2	MR508	Metal hand wheel and screw
3	MR516	Stem and nut
4	MR509	O-ring (two)
5	MR505	Piston w/seat and o-rings
6	M2-300	Hose holder
6	MR521	Acme thread hose holder
7	M2-102N	Hanging hook
8	MR525	Sight glass
9	U1-4A	Intake
9	AF-13450	Acme intake for automotive application

## Patriot™ Series

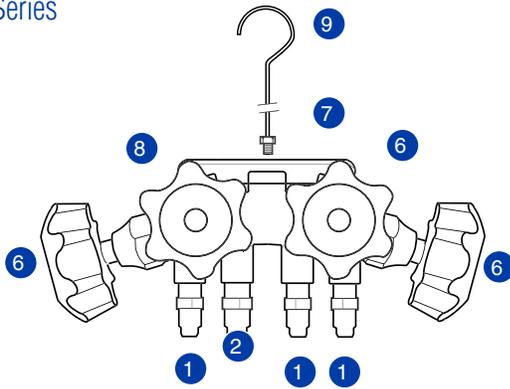


### PATRIOT™ SERIES MANIFOLDS

1	MR503	Hand wheel screw (two)
2	MR508	Metal hand wheel and screw
3	MR516	Stem and nut
4	MR509	O-ring (two)
5	MR505	Piston w/seat and o-rings
6	M2-102N	Hanging hook
7	MR504	1/4" Hose holder sleeve and o-rings

# REPAIR PARTS

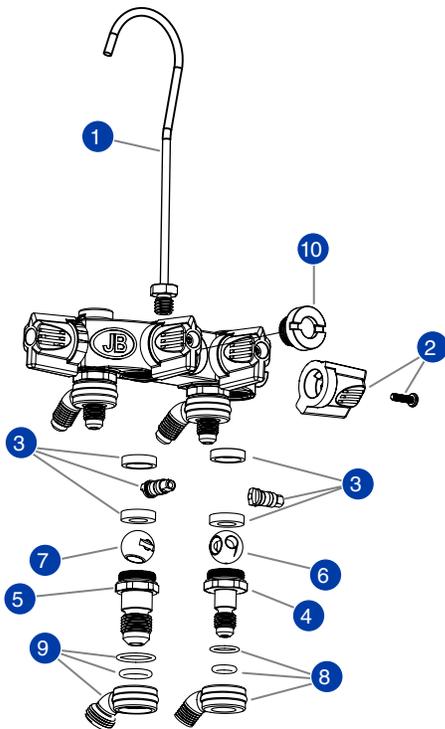
## M4 Series



### M4 SERIES MANIFOLD

REF NO.	PART NO.	DESCRIPTION
1	U1-4A	1/4" Intake
2	U1-6A	3/8" Intake
3	MR505	Piston w/seat and o-rings
4	MR516	Stem and nut
5	MR503	Hand wheel screws
6	MR501B	Blue hand wheel and screw
6	MR501Y	Yellow hand wheel and screw
6	MR504B	Black hand wheel and screw
6	MR501R	Red hand wheel and screw
7	MR531	Hose holder
8	MR509	O-ring (two)
9	M2-102N	Hanging hook

## Revolver® Series



### REVOLVER® 4-VALVE BALL SERIES MANIFOLD

REF NO.	PART NO.	DESCRIPTION
1	M2-102N	Hanging hook
2	MR502	Handle and screw
3	MRBVK	Ball valve kit including: (two) seals, (one) stem, (two) O-rings and (one) washer
4	MR444	1/4" Retainer fitting
5	MR446	3/8" Retainer fitting
6	MR611	Throttle ball
7	MR610	Ball
8	MR504	1/4" Hose holder sleeve and o-rings
9	MR506	3/8" Hose holder sleeve and o-rings
10	MR525	Sight glass w/o-ring

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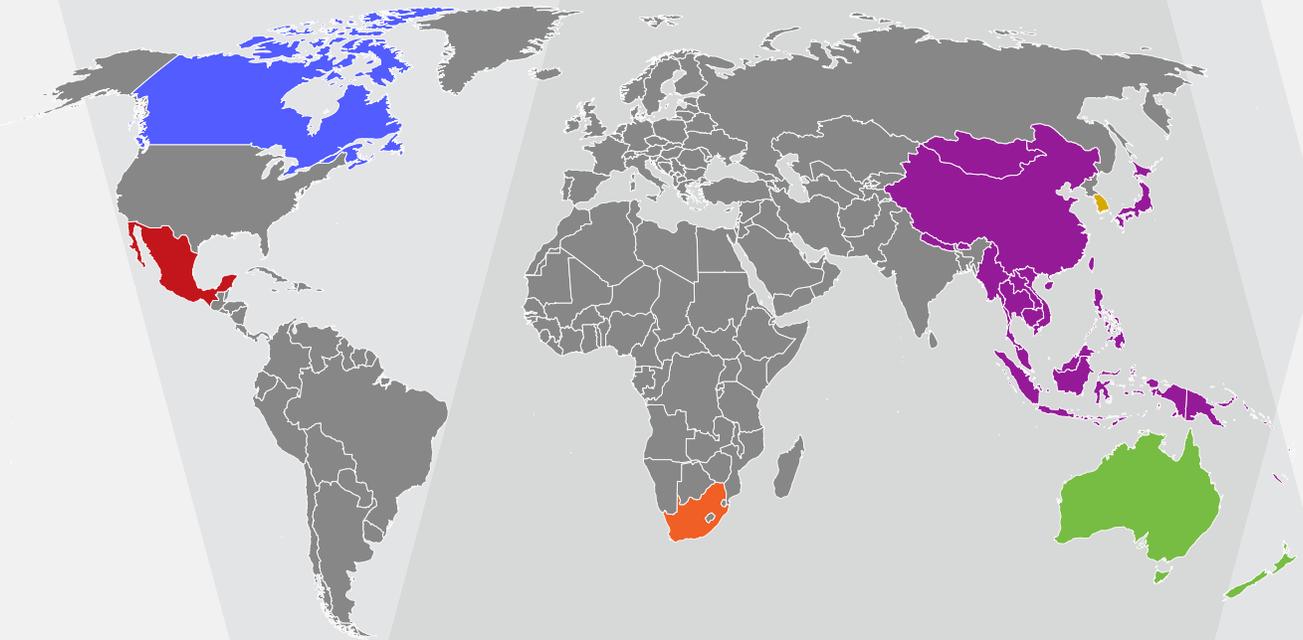
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