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FOR USE WITH:

- Group III** R12, R134a, R401C, R406A, R500
Group IV R22, R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509
Group V R407A, R404A, R402A, R507, R407B, R410A

UL CERTIFIED

Per ARI Standard 740-98

To meet or exceed EPA regulations.
For use with class III, IV and V refrigerants.

Features

- Refrigerant-isolated crankcase eliminates bearing contamination
- Solid-mounted pistons eliminate wrist pins and bushing wear
- 7-inch, 10-blade turbine fan blasting 600 CFM of cooling air
- 550 PSI high pressure shut off for R410A
- Pumps direct liquid and vapor
- Simple, easy-to-use design; no purge cycle required
- Pumps virgin refrigerant; no oil required
- Field serviceable
- **UL certified per ARI Standard 740-98**

Specifications

Power: 1/2 HP, 115 VAC, 60 Hz, 10 Amps

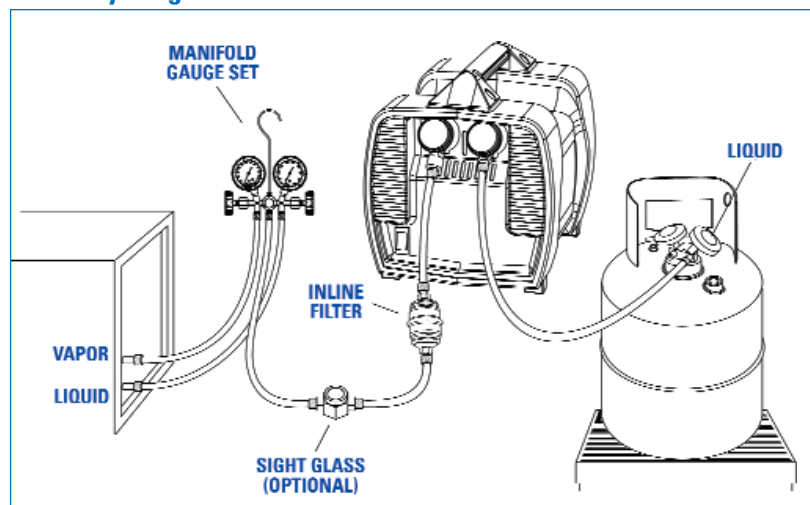
Weight: 22 Lbs

Dimensions: 11.38" L x 9.40" W x 10.30" H

Applications

- Commercial A/C
- Commercial Refrigeration
- Residential A/C
- Appliances
- Roof Top Units
- Ductless Splits
- Heat Pumps
- PTACs
- Vending Machines
- Ice Machines

Recovery Diagram



RATED IN ACCORDANCE WITH ARI STANDARD 740-98

Refrigerant Groups	Push/Pull Liquid Refrigerant	Liquid Refrigerant	Vapor Refrigerant
III	10.78 lbs./min.	8.53 lbs./min.	0.26 lbs./min.
IV	11.31 lbs./min.	5.83 lbs./min.	0.31 lbs./min.
V	12.14 lbs./min.	4.31 lbs./min.	0.26 lbs./min.



PORTABLE REFRIGERANT RECOVERY UNIT, OIL-LESS, TWIN CYLINDERS

G5TWIN



Manufactured by
APPION
Star Performance

FOR USE WITH:

- Group III** R12, R134a, R401C, R406A, R500
Group IV R22, R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509
Group V R407A, R404A, R402A, R507, R407B, R410A



Features

- Suitable for high-volume recovery
- Twin cylinders/twin condensers
- Refrigerant-isolated crankcase eliminates bearing contamination
- Solid-mounted pistons eliminate wrist pins and bushing wear
- 7-inch, 10-blade turbine fan blasting 600 CFM of cooling air
- 550 PSI high pressure shut off for R410A
- Simple, two-valve operation; no purge cycle required
- Pumps direct liquid and vapor with no throttling required
- Pumps virgin refrigerant; no oil required
- Field serviceable

Specifications

Power: 1/2 HP, 115 VAC, 60 Hz, 10 Amps

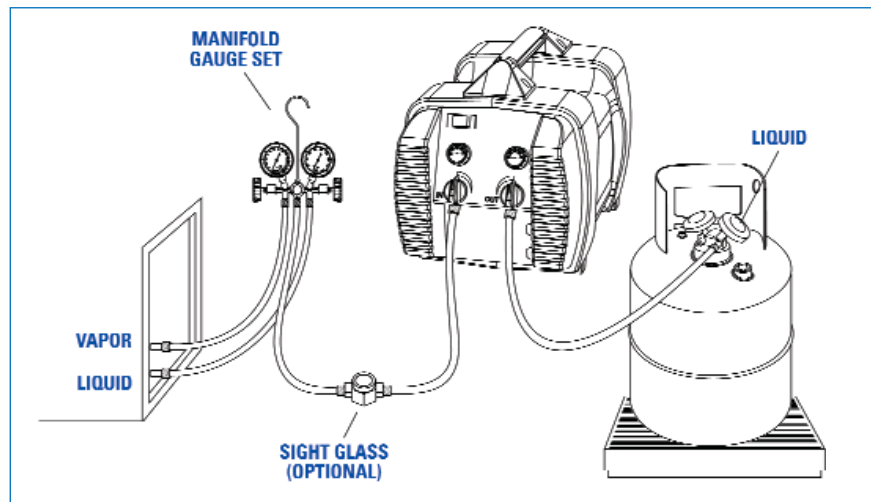
Weight: 24 Lbs

Dimensions: 13.75" L x 9.40" W x 10.30" H

Applications

- Commercial A/C
- Commercial Refrigeration
- Residential A/C
- Chillers
- Supermarkets
- Ocean Vessels
- Factory/Production Lines
- Pumping Stations
- Salvage Yards
- Ice Rinks
- Roof Top Units

Recovery Diagram



RATED IN ACCORDANCE WITH ARI STANDARD 740-98

Refrigerant Groups	Push/Pull Liquid Refrigerant	Liquid Refrigerant	Vapor Refrigerant
III	16.59 lbs./min.	6.20 lbs./min.	0.61 lbs./min.
IV	17.58 lbs./min.	6.99 lbs./min.	0.55 lbs./min.
V	10.19 lbs./min.	3.47 lbs./min.	0.66 lbs./min.





GS3700



RECOVERY EQUIPMENT



PORTABLE REFRIGERANT RECOVERY UNIT, OIL-LESS

FOR USE WITH:

Group III R12, R134a, R401C, R406A, R500

Group IV R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509

Group V R407A, R404A, R402A, R507, R407B, R410A



UL CERTIFIED

Per ARI Standard 740-98

To meet or exceed EPA regulations.
For use with class III, IV and V refrigerants.

Features: GS3700

- Fastest overall recovery rates in its class
- Rugged high density double walled housing
- Self purge to prevent cross contamination
- Pumps liquid or vapor at the same time
- Powerful 1 HP oil-less compressor
- Built in suction filter
- Low pressure shut-off
- High pressure shut-off for R410A

Specifications

Power: 1 HP, 115 Volt, 50/60 Hz

Weight: 36 Lbs

Dimensions: 14.50" L x 8" W x 12" H

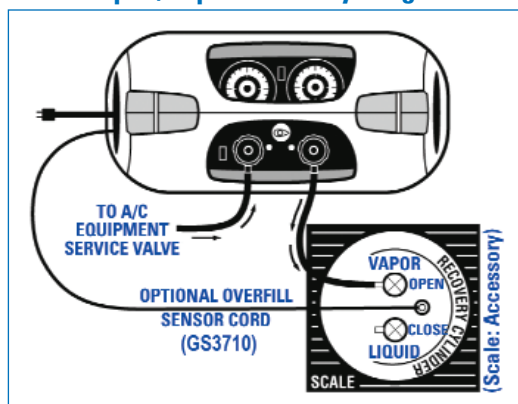
Applications

- Commercial A/C
- Commercial Refrigeration
- Roof Top Units
- Ice Machines
- Residential A/C
- Appliances

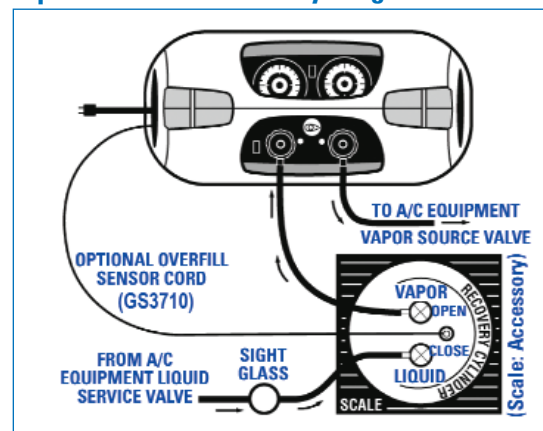
Features: GS3710

- Same as above
- Overfill sensor cord

Direct Liquid/Vapor Recovery Diagram



Liquid Push-Pull Recovery Diagram



RATED IN ACCORDANCE WITH ARI STANDARD 740-98

Refrigerant Groups	Push/Pull Liquid Refrigerant	Liquid Refrigerant	Vapor Refrigerant	Shut-Off Vacuum
III	13.88 lbs./min.	4.74 lbs./min.	0.33 lbs./min.	10"
IV	15.80 lbs./min.	6.86 lbs./min.	0.49 lbs./min.	10"
V	15.36 lbs./min.	6.50 lbs./min.	0.51 lbs./min.	10"



For use with:

- Group III** R12, R134a, R401C, R406A, R500
- Group IV** R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509
- Group V** R407A, R404A, R402A, R507, R407B, R410A

Features: LV2000

- Patented pump-out feature
- Patented compressor sight glass for monitoring of oil level and easy access compressor oil drain
- Electrical cord wrap
- Low cost
- Easy to use
- Attractive, compact design

Specifications

Power: 8 Amps, 115 Volt, 60 Hz, 1PH (**LV2000, LV2001**)
4 Amps, 220 Volt, 50 Hz, 1PH (**LV2002**)

Unit Weight: 47 Lbs

Shipping Weight: 54 Lbs

Dimensions: 20" L x 10.50" W x 15" H

Connections: 1/4" MFL

Oil Charge: 150 Alkyl Benzene

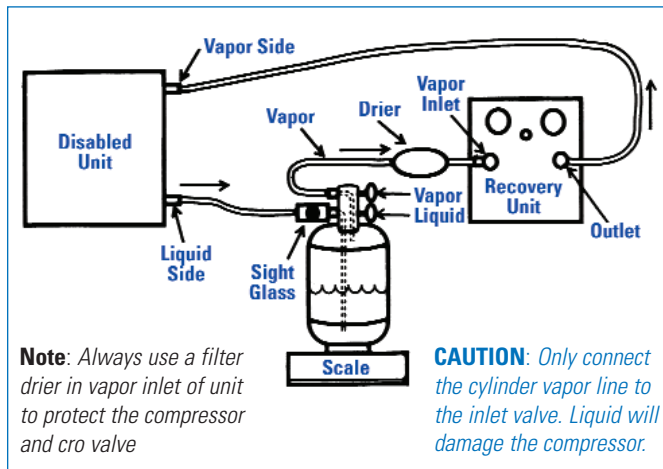
Features: LV2001

- Same as above
- 3 positive shut-off hoses and liquid sight/glass

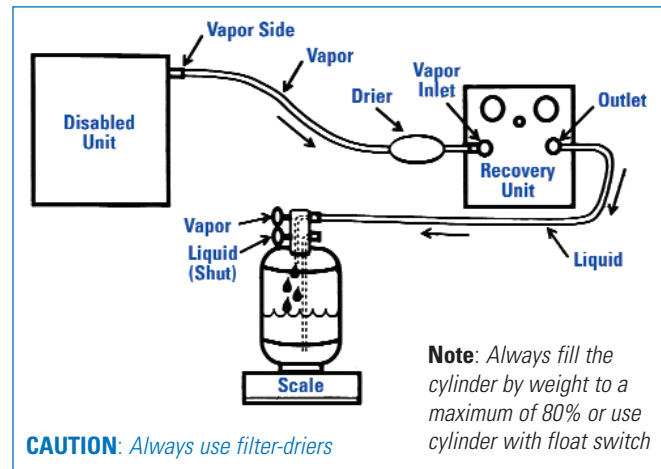
Applications

- Commercial A/C
- Commercial Refrigeration
- Roof Top Units
- Ice Machines
- Residential A/C
- Appliances

Liquid Recovery Diagram



Vapor Recovery Diagram



RATED IN ACCORDANCE WITH ARI STANDARD 740-98

Refrigerant Groups	Push/Pull Liquid Refrigerant	Vapor Refrigerant	Shut-Off Vacuum
GR III	10.25 lbs./min.	0.48 lbs./min.	10"
GR IV	11.00 lbs./min.	0.46 lbs./min.	10"
GR V	8.30 lbs./min.	0.33 lbs./min.	10"



COMBINATION OIL-LESS REFRIGERANT RECOVERY UNIT AND VACUUM PUMP



FOR USE WITH

Group III R12, R134A, R401C, R406A, R500
Group IV R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509 & Blends*

**Patented True Vacuum Pump
Pulls 500 Microns!**

Features for REVAC

- Two units in one!
- 1 HP compressor (1.5 CFM)
- Accessory compartment
- Attractive tool box design
- True vacuum pump - 500 microns
- Manual or auto switching to system evacuation
- 1/4" hose adapters
- 053 drier supplied

Additional Features for REVAC-UL

- Tank overfill protection
- UL listed
- Comes with 3 hoses, a 50 lb. cylinder and sight glass
- Patented pump out feature

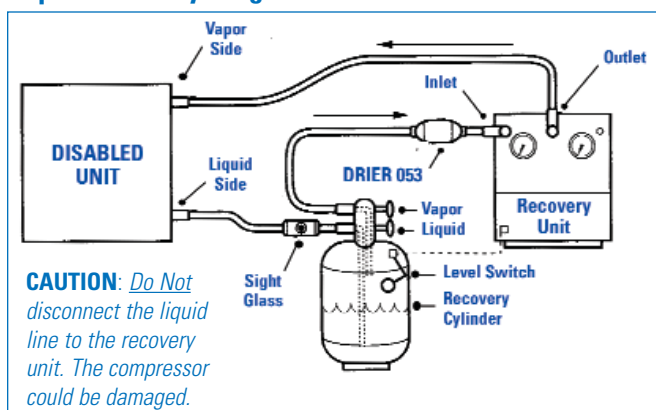
Specifications

Power: 1 HP, 12.5 Amps, 115 Volt, 60 Hz, 1PH
Unit Weight: 50 Lbs
Shipping Weight: 58 Lbs
Dimensions: 10.25" L x 22" W x 11" H
Connections: 3/8" MFL

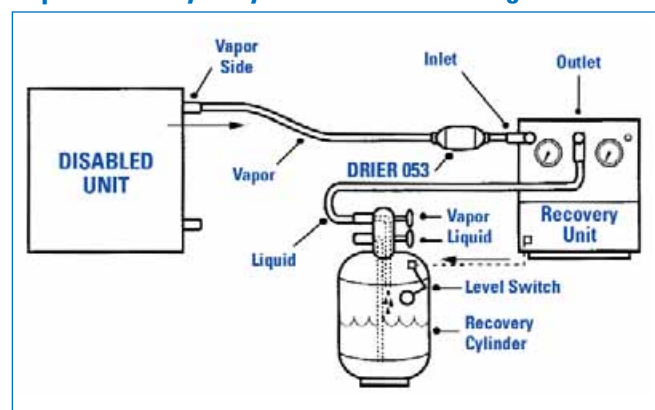
Applications

- Commercial A/C
- Commercial Refrigeration
- Roof Top Units
- Ice Machines
- Residential A/C
- Appliances
- Vending Machines

Liquid Recovery Diagram



Vapor Recovery & System Evacuation Diagram



RATED IN ACCORDANCE WITH ARI STANDARD 740-98

Refrigerant Groups	Push/Pull Liquid Refrigerant	Vapor Refrigerant	Shut-Off Vacuum
GR III	12.35 lbs./min.	0.40 lbs./min.	10"
GR IV	13.05 lbs./min.	0.42 lbs./min.	10"

* May not be applicable for all refrigerant blends. Consult factory for proper application.

TOTALLY AUTOMATIC PORTABLE REFRIGERANT RECOVERY UNIT, OIL-LESS



AR1UL



FOR USE WITH

Group III R12, R134A, R401C, R406A, R500
Group IV R401A, R409A, R401B, R412A, R411A,
R407D, R22, R411B, R502, R407C,
R402B, R408A, R509 & Blends*

**One Step Recovery
No Switching Hoses!
SUBCOOL FEATURE**



RECOVERY EQUIPMENT

Features

- One step recovery
- Automatic sensing of liquid and vapor
- No switching hoses
- Attractive tool box design
- Tool and accessory compartment
- Tank overfill protection
- Self clearing mode
- Comes with 4 positive shut-off hoses and 50 Lb. cylinder
- Automatic shut-off at 10" Vacuum
- 053 drier supplied

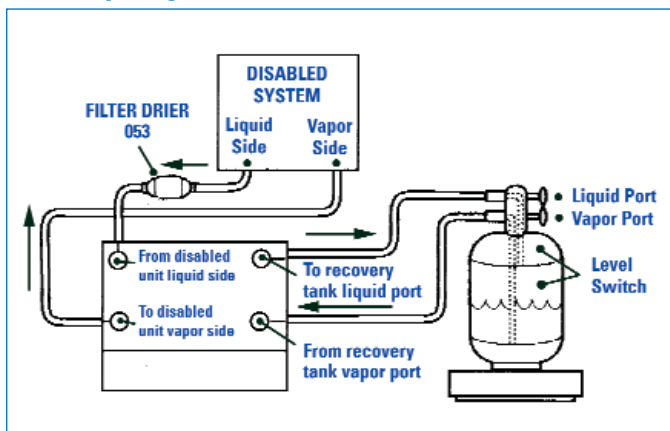
Specifications

Power: 9 Amps, 115 Volt, 60 Hz, 1PH
Unit Weight: 46 Lbs
Shipping Weight: 59 Lbs
Connections: 3/8" MFL
Dimensions: 10.25" L x 22" W x 11" H

Applications

- Commercial A/C
- Commercial Refrigeration
- Roof Top Units
- Ice Machines
- Residential A/C
- Appliances
- Vending Machines

Recovery Diagram



RATED IN ACCORDANCE WITH ARI STANDARD 740-98

Refrigerant Groups	Push/Pull Liquid Refrigerant	Vapor Refrigerant	Shut-Off Vacuum
III	10.8 lbs./min.	0.35 lbs./min.	10"
IV	11.5 lbs./min.	0.50 lbs./min.	0"

* May not be applicable for all refrigerant blends. Consult factory for proper application.



LIQUID AND VAPOR RECOVERY/RECYCLING UNIT

For use with:

Group III R12, R134a, R401C, R406A, R500

Group IV R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509

Group V R407A, R404A, R402A, R507, R407B, R410A

The RLV700 is a recycling unit to be used in the contractor shop or in an equipment room. It is designed to recycle refrigerant in batches up to 160 pounds, to a quality within the IRG2 standard. The RLV700 has been tested in accordance with ARI-740 standard.

Features

- Easy to use
- Patented pump out feature
- Recycles liquid and vapor the same way - no need to change hoses
- Filters out acids, moisture, oil, chlorides, particulate and disposes of non-condensables to IRG2 quality up to 160 lbs. before a filter change is required
- Patented compressor sight glass and oil drain
- Comes with 2 positive shut-off hoses, 50 Lb. cylinder & liquid sight glass
- Electrical cord wrap
- Tank overfill protection
- 053 filter drier supplied

Specifications

Capacity: Liquid recovery / Recycling up to .60 lb./min.

Vapor recovery / Recycling up to .40 lb./min.

Power: 6.70 Amps, 115 Volt, 60 Hz, 1PH (**RLV700**)

4.5 Amps, 220 Volt, 50 Hz, 1PH, (**RLV700E**)

Unit Weight: 120 Lbs

Shipping Weight: 164 Lbs

Dimensions: 15" L x 16" W x 35" H

Vacuum: 10" Hg

Connections: 3/8" MFL

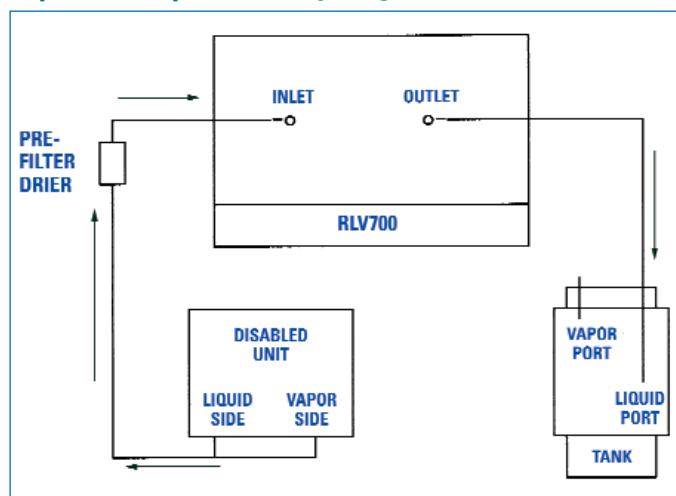
Oil Charge: 150 Alkyl Benzene

Standard (R12)	RLV700	IRG2
Water	10 PPM	10 PPM
Acidity	1 PPM	1 PPM
Chloride	Pass	Pass
Oil Residue	0.02%	0.02%
Non-Condensables	2%	2%
Particulates	Pass	Pass

Applications

- Contractor shop
- Equipment room

Liquid and Vapor Recovery Diagram



* May not be applicable for all refrigerant blends. Consult factory for proper application.

For use with:

- Group III** R12, R134a, R401C, R406A, R500
Group IV R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509
Group V R407A, R404A, R402A, R507, R407B, R410A

The RAD700 is a recycling unit to be used on the job site in conjunction with a LV2000, LV1, ULV1, LV1C, LV1CUL, GS1, GS1UL, GS2, REVAC, and AR1UL or other recovery units. It is designed to recycle refrigerant in batches of 40lbs., to a quality within the IRG2 standard. The RAD700 has been tested in accordance to the ARI-740 standard.

Features

- Easy to use
- Recycles liquid and/or vapor - no need to change hoses
- Recycles to IRG2 standard in 40 lbs. batches before a filter change is required
- Low cost and portable for job site recycling
- Efficient compact design
- Easily accessible contaminants drain
- Convenient electrical cord wrap
- 052 drier supplied

Specifications

Capacity: Liquid recovery/recycling rate of .35 lb./min.
 Vapor recovery/recycling rate of .35 lb./min.

Power: 6.10 Amps, 115 Volt, 60 Hz, 1PH (**RAD700**)
 3.5 Amps, 220 Volt, 50 Hz, 1PH, (**RAD700E**)

Unit Weight: 35 Lbs

Shipping Weight: 44 Lbs

Connections: 1/4" MFL

Dimensions: 15" L x 12" W x 12" H

Vacuum: 10" Hg

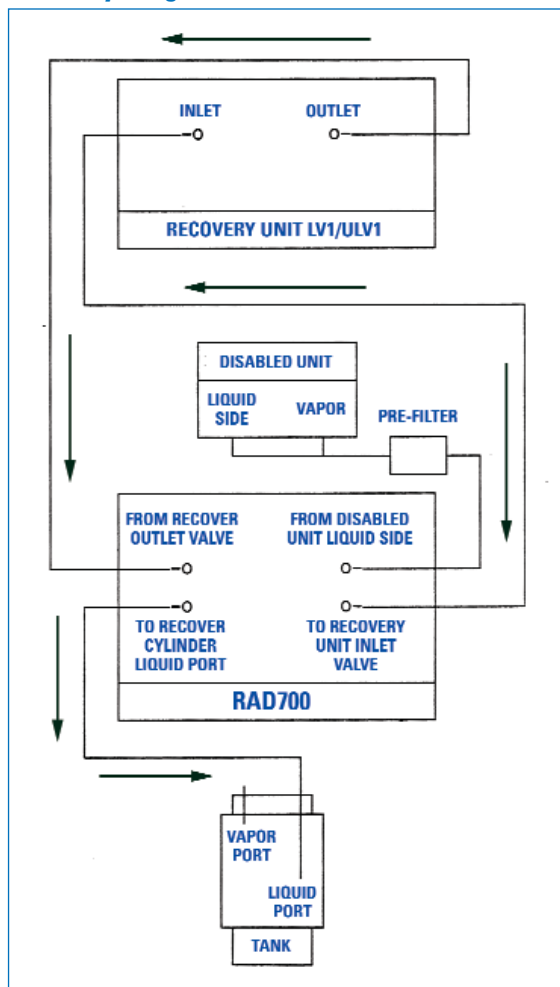
Standard (R12)	RAD700	IRG2
Water	10 PPM	10 PPM
Acidity	1 PPM	1 PPM
Chloride	Pass	Pass
Oil Residue	0.02%	0.02%
Non-Condensables	2%	2%
Particulates	Pass	Pass

Applications

- Commercial A/C
- Commercial refrigeration
- Residential A/C
- Rooftop units



Recovery Diagram



For use with:

- Group II** R114
Group III R12, R134a, R401C, R406A, R500
Group IV R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509
Group V R407A, R404A, R402A, R507, R407B, R410A



Specifications

Air supply capacity: 40 CFM air at 100 PSI
 Vapor recovery: 1.40 lbs./min.
 Liquid recovery: 52 lbs./min.
 Unit weight: 125 Lbs
 Shipping weight: 158 Lbs
 Dimensions: 28" L x 26" W x 45" H
 Connections: 3/8" MFL Inlet, 3/8" MFL Outlet

Applications

- Best suited for the industrial application where plant air is available
- Ideal for marine application
- Excellent for quick recovery in supermarkets or food plant systems which cannot afford downtime

RATED IN ACCORDANCE WITH ARI STANDARD 740-98

Refrigerant Groups	Push/Pull Liquid Refrigerant	Liquid Refrigerant	Vapor Refrigerant	Shut-Off Vacuum
II	22 lbs./min.	9.4 lbs./min.	0.50 lbs./min.	15"
III	44 lbs./min.	16 lbs./min.	0.88 lbs./min.	15"
IV	52 lbs./min.	16 lbs./min.	1.25 lbs./min.	10"
V	20 lbs./min.	18 lbs./min.	1.26 lbs./min.	20"

* May not be applicable for all refrigerant blends. Consult factory for proper application.

To recover 200 lbs. or more, in high pressure systems.

The LV20 is designed for larger installations to transfer large quantities of liquid refrigerant.

The unit is mobile and mounted on a rugged steel frame for easy handling.

The LV20 can pump clean or contaminated refrigerant liquid or vapor quickly and reliably without risk of damages due to slugging or running dry.

The transfer system is an air driven oil-less positive displacement pump. The LV20, which includes a condenser/subcooler coil, will pump vapor and condense it for faster transfer.

The transfer unit can also be effectively used to charge systems with refrigerant. 40 CFM of compressed air at 100 PSI is required to operate the LV20 effectively.

With a lower air CFM or pressure, the capacity of the unit decreases. If plant air is not available, a 15 HP air compressor can be used.

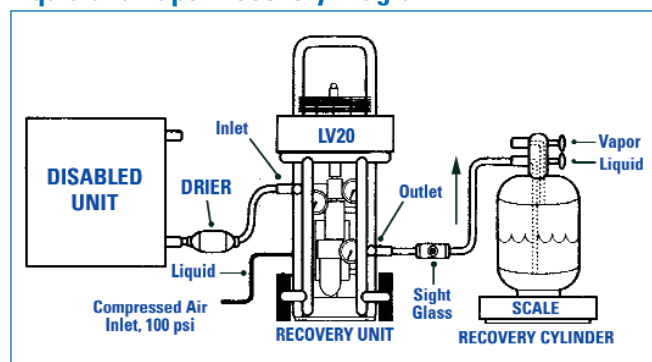
The LV20 does not require electric power. The condenser fan air motor is factory piped to the air regulator. The two stage standard pumping feature allows for refrigerant recovery to 25" vacuum if required.

The LV20 is supplied with a unique patented condenser pump out system to avoid unnecessary venting of refrigerants.

The LV20 is also available in a base mounted configuration. This version, Model LV20B, is convenient when it is necessary to carry the unit through small passages or access hatches.

Filter Drier 163F supplied.

Liquid and Vapor Recovery Diagram



For use with:

- Group III** R12, R134a, R401C, R406A, R500
Group IV R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509
Group V R407A, R404A, R402A, R507, R407B, R410A

The LV5 is designed for commercial installations. It consists of a belt-driven open-type compressor, which will recover systems to 20" Hg vacuum.

The LV5 has been designed to be simple to operate and service.

The unit is mobile with all components mounted on a sturdy steel frame. It utilizes a rugged open compressor which eliminates all problems related to the handling of contaminated refrigerant. Any recovery cylinder with one or two valves can be used.

For large systems, the LV5 can work as a supplementary unit to handle vapor recovery in combination with liquid recovery pump.

C163F filter drier is supplied.



Specifications

Power: 1.5 HP, 20 Amps, 230 Volt, 60 Hz, 1PH (**LV5**)
 1.5 HP, 16 Amps, 220 Volt, 50 Hz, 1PH (**LV5E**)

Unit Weight: 236 Lbs

Shipping Weight: 267 Lbs

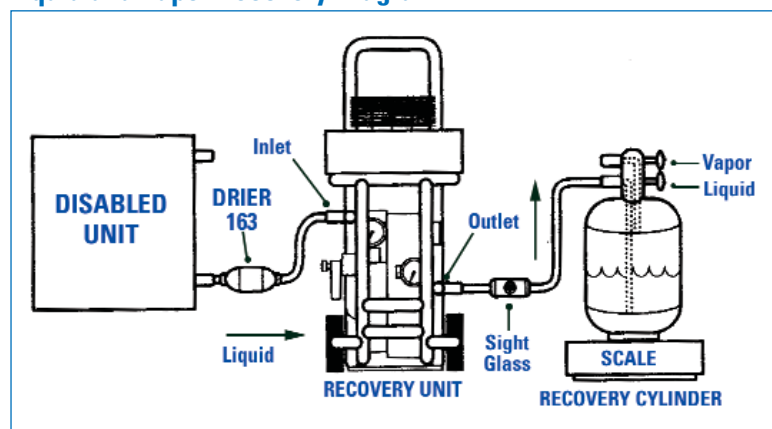
Dimensions: 24" L x 22" W x 45" H

Connections: 3/8" MFL Inlet, 3/8" MFL Outlet

Applications

- Large field erected systems with long piping runs
- System requiring large vapor capacity
- Supermarkets
- Salvage yards

Liquid and Vapor Recovery Diagram



RATED IN ACCORDANCE WITH ARI STANDARD 740-98

Refrigerant Groups	Push/Pull Liquid Refrigerant	Liquid Refrigerant	Vapor Refrigerant	Shut-Off Vacuum
III	27.50 lbs./min.	7.85 lbs./min.	1.00 lbs./min.	15"
IV	31.50 lbs./min.	10.25 lbs./min.	1.20 lbs./min.	10"
V	15.56 lbs./min.	7.8 lbs./min.	0.88 lbs./min.	22"

* May not be applicable for all refrigerant blends. Consult factory for proper application.



For use with:

Group II R114
Group III R12, R134a, R401C, R406A, R500
Group IV R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509

The LV8 recovery system is an air driven positive displacement pump which includes a 1.5 HP oil-less air compressor to power it.

The LV8, which includes a condenser/sub cooler coil, will pump vapor and condense it for faster transfer.

Any recovery cylinder with one or two valves can be used.

The NRP LV8 is very easy to use because it will pump either refrigerant liquid or vapor in the same way.

There is no need to change piping or setting of the unit. There is no risk of slugging the pump or risk of damage by running the pump dry. The LV8 will recover systems to 20" Hg vacuum.

The transfer unit may also be used very effectively to charge systems with refrigerant.

The LV8 can be used with plant air at 10 cfm, 100 PSI when available, instead of unit mounted air compressor.

The unit is supplied with a unique patented condenser pump out system to avoid unnecessary venting of refrigerant.

C163F filter drier is supplied.

Specifications

Air Supply Capacity: 10 CFM air at 100 PSI

Power: 1.5 HP, 10 Amps, 230 Volt, 60 Hz, 1PH, (LV8)
 1.5 HP, 8.5 Amps, 220 Volt, 50 Hz, 1PH, (LV8E)
 1.5 HP, 20 Amps, 115 Volt, 60 Hz, 1PH, (LV8/115)
 1.5 HP, 3 Amps, 460 Volt, 60 Hz, 3PH, (LV8/460)

Unit Weight: 169 Lbs

Shipping Weight: 202 Lbs

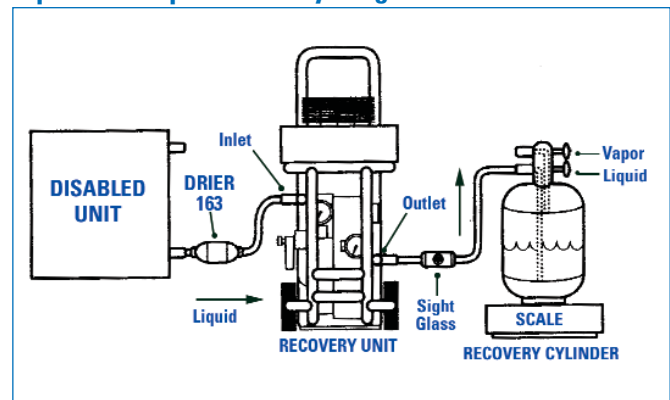
Dimensions: 24" L x 22" W x 45" H

Connections: 3/8" MFL Inlet, 1/2" FPT Outlet

Applications

- High pressure chillers
- Supermarkets
- Large packaged A/C units
- In factory units
- Salvage yards

Liquid and Vapor Recovery Diagram



RATED IN ACCORDANCE WITH ARI STANDARD 740-98

Refrigerant Groups	Direct Liquid Refrigerant	Push/Pull Liquid Refrigerant	Vapor Refrigerant	Shut-Off Vacuum
GR II	9.20 lbs./min.	11.50 lbs./min.	0.22 lbs./min.	15"
GR III	15.00 lbs./min.	30.10 lbs./min.	0.30 lbs./min.	15"
GR IV	16.50 lbs./min.	32.45 lbs./min.	0.29 lbs./min.	10"

* May not be applicable for all refrigerant blends. Consult factory for proper application.

The VR11 unit is easily transportable and can be used for both liquid and vapor recovery.

The VR11 will help you recover the refrigerant charge from a chiller to meet the requirements of the Clean Air Act.

The VR11 will evacuate the chiller to 29" Hg vacuum using its 1 HP belt-driven vacuum pump rated at 40 microns and 10.6 cfm.

Rated in accordance with ARI Standard 740-98.

Unit Includes

- 1 NC50U Recovery Cylinder for Vapor
- 1 15 foot 3/4" hose
- 2 10 foot 3/4" hoses
- 1 6 foot 1/4" hose
- 1 Relief valve, set at 20 psig to purge non-condensables, if required
- 1 C165 filter drier

Specifications

Vapor recovery: 0.86 lbs./min.

Liquid recovery: Push/Pull 84 lbs./min.

Vacuum capacity: 29" Hg (20 AMP Service Required)

Power: 1 HP, 18.50 Amps, 115 Volt, 60 Hz, 1PH, (VR11)
1 HP, 6 Amps, 220 Volt, 50 Hz, 1PH, (VR11E)

Unit Weight: 246 Lbs

Shipping Weight: 296 Lbs

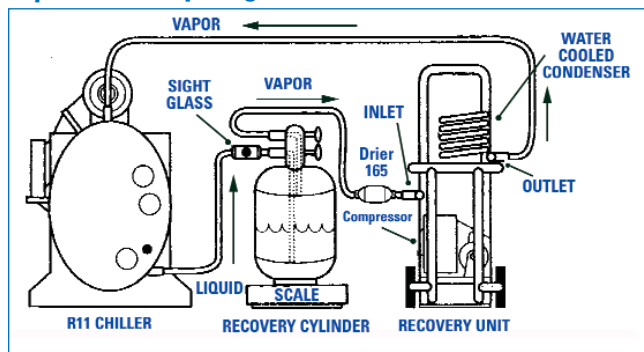
Dimensions: 28" L x 26" W x 45" H

Connections: 5/8" MFL

Applications

- Low pressure chillers
- Transportable by van or truck
- Easily removable within equipment and mechanical rooms

Liquid Recovery Diagram



Liquid recovery is done by using the push-pull method as shown in the diagram above. A lower pressure is created in the recovery cylinder which forces the liquid refrigerant from the chiller into the cylinder.

The pumping rate will increase if the chiller pressure is raised from 5 to 10 psig by raising the water temperature. The rate will also improve if a 3/4" or 1" connection is used at the chiller.

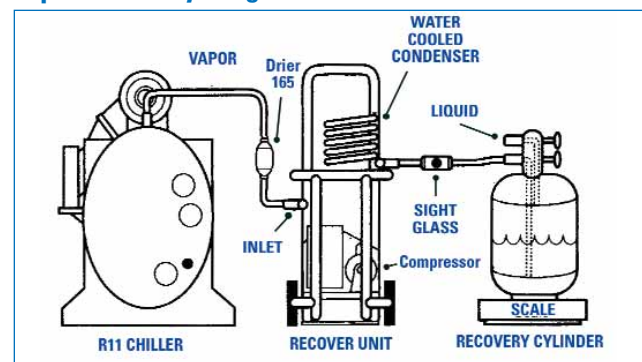
The VR11 includes one 50 pound recovery cylinder NC50U with a float-type shut-off switch. This switch will shut off the VR11 when the recovery cylinder is 80% full.

Additional, larger tanks, NRP model N250T, N665T etc. can be purchased separately if required.



For use with Group I
R11, R113, R123

Vapor Recovery Diagram



Once all the liquid has been recovered, the remaining vapor can be extracted with the recovery unit as shown in the diagram above.

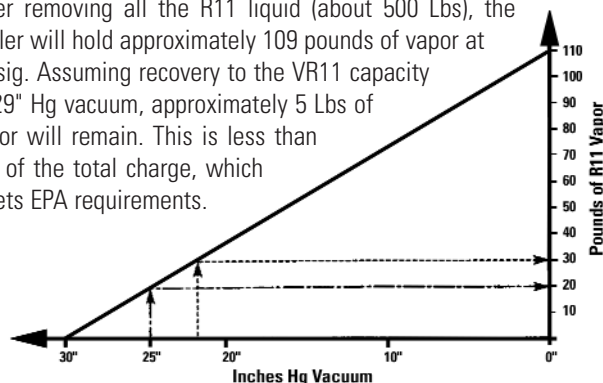
The VR11 utilizes a water cooled condenser which requires approximately 3 gpm of water between 40°F and 75°F.

As with liquid recovery, the recovery time is improved if the connections at the chiller are changed to 3/4" or 1".

R11 Vapor must also be recovered to meet EPA requirements

To illustrate the need to recover both liquid and vapor, take an example of a 350 ton chiller which has a charge of about 600 pounds of R11.

The chiller, which is about 15 feet long, has a combined evaporator/condenser volume of about 300 cubic feet. From standard refrigerant tables, 0 psig R11 vapor weighs .364 lb./ft³. After removing all the R11 liquid (about 500 Lbs), the chiller will hold approximately 109 pounds of vapor at 0 psig. Assuming recovery to the VR11 capacity of 29" Hg vacuum, approximately 5 Lbs of vapor will remain. This is less than 1% of the total charge, which meets EPA requirements.



Pounds of vapor left in a 350 Ton chiller at various vacuum levels

For use with Group VI:
R13, R23, R508, R508A, R503



Specifications

Liquid Capacity: 5 lbs./min.
Unit Weight: 76 Lbs
Shipping Weight: 112 Lbs
Dimensions: 24" L x 22" W x 45" H

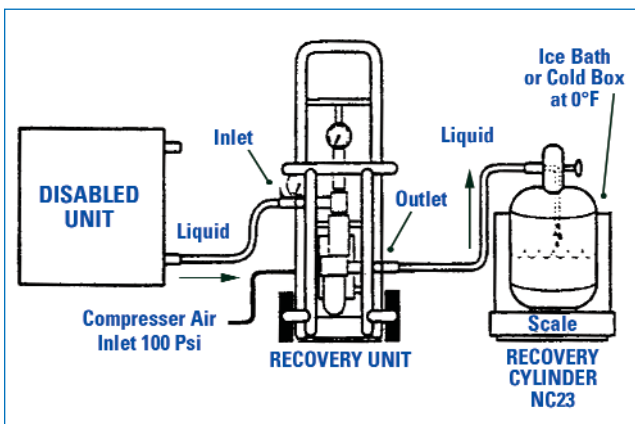
The LP13 pump will recover at a rate of 5 pounds per minute depending on available air pressure and CFM. The LP13 includes an oil-less air driven pump which requires 30 CFM of air at 100 PSIG.

Use only with cylinders rated to 2000 PSI working pressure.

The LP13 pump will not transfer vapor, but will not be damaged if it runs with vapor only.

Two 6 ft. braided hoses with 5/16" SAE connections are included.

Liquid Recovery Diagram - LP13



Specifications

Vapor Capacity: 1.5 lbs./min.
Vacuum: 0 psig
Unit Weight: 95 Lbs.
Shipping Weight: 131 Lbs
Dimensions: 24" L x 22" W x 45" H

The VR13 recovery unit will recover at a rate of 1.5 pounds per minute. Recovery rate will vary with compressed air and refrigerant pressure. The VR13 includes an oil-less, air driven pump which requires 30 CFM of air at 100 PSI.

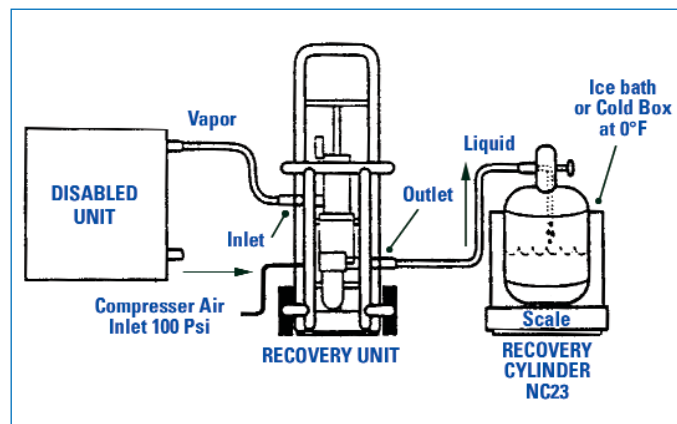
Use only with cylinders rated to 2000 PSI working pressure.

The VR13 will not pump liquid refrigerant.

Recovers systems to 0 psig as required by the EPA

Two 6 ft. braided hoses with 5/16" SAE connections are included.

Vapor Recovery Diagram - VR13



REFRIGERANT TRANSFER STATION

TS4



The TS4 will pump liquid or vapor in the same way without resetting the unit. There is no risk of damage by running the pump dry or slugging it.

The TS4 evacuates refrigerant from cylinders to 4" vacuum and automatically shuts off. The TS4 can be field adjusted to evacuate cylinders to a lower vacuum level if required.

The unit is supplied with a unique patented pump-out system to avoid venting or mixing of different refrigerants.

Easy to use:

1. Connect cylinders.
2. Turn power on.
3. The TS4 will stop automatically when the tanks to be emptied are under vacuum.

Needs little maintenance. Trouble-free for wholesaler personnel. Just clean mesh strainer as needed.

Versatile Transfers from single valve or dual valve cylinders into larger single valve or dual valve cylinders.

Will prevent mixing refrigerants. Patented pump-out system evacuates the transfer station before pumping a different refrigerant.

Fast Four 30 or 50 Lb cylinders are emptied & under vacuum in less than 25 minutes. The TS4 control panel is simple and easy to use.

Specifications

Power: 30 Amps, 230 Volt, 60 Hz, 1PH, (TS4)
30 Amps, 220 Volt, 50 Hz, 1PH, (TS4E)

Weight: 375 Lbs

Dimensions: 55" L x 27" W x 40" H

Unit is supplied with four 3' x 3/8" hoses and one 8' x 3/8" hose.

The most practical transfer station for the wholesaler. Practical participation in reclamation programs can begin in the warehouse. NRP's TS4 unit allows the wholesaler or contractor to consolidate small cylinders of refrigerant into large reclamation cylinders.

The TS4 unit consists of two 1-1/2 HP compressors, a condenser coil and a fan. It is supplied with four 3' x 3/8" hoses and one 8' x 3/8" hose. All the components are mounted on a rugged steel cart.

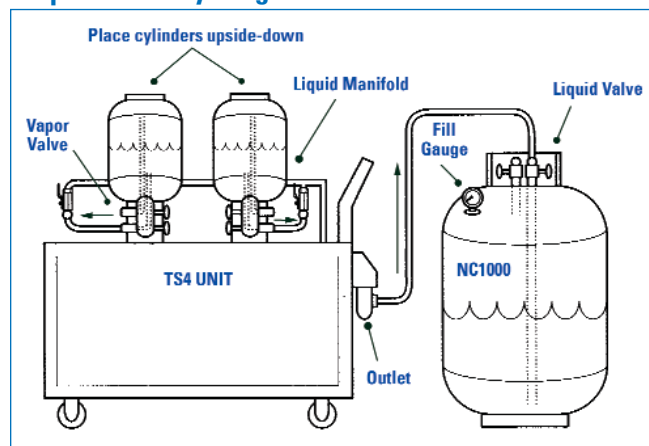
The transfer unit top holds four 50 lb cylinders. Any cylinder with one or two valves can be used.

For use with:

Group III R12, R134a, R401C, R406A, R500
Group IV R401A, R409A, R401B, R412A, R411A, R407D, R22, R411B, R502, R407C, R402B, R408A, R509



Vapor Recovery Diagram



DESICCANT

One 30 pound charge of **MS30** will remove and hold approximately 5 pounds of water.

Shipping Weight: 32 Lbs



RECOVERY EQUIPMENT



Liquid Refrigerant Pumps

PRACTICAL APPLICATIONS FOR LIQUID REFRIGERANT PUMPS

Recovery - system to cylinder transfer:

Fast, safe and portable liquid refrigerant removal without venting. Saves wear and tear on vapor recovery units. Liquid pump and small vapor recovery unit does the job of a large recovery machine at a fraction of the cost. Upgrading unsealed recovery systems to sealed units. Permanent recovery pump installations

Charging - cylinder to system transfer:

Fast, safe and portable filling systems, on production line or in the field. Charging system to 300 PSI differential.

Consolidation - cylinder to large cylinder transfer:

Permits emptying of small cylinders on the spot and reusing or returning to the customer. When the cylinder will be reused for the same refrigerant, the residual vapors (4% of cylinder capacity) can be left behind. Reduces number of cylinders required in inventory. Reduces freight and paperwork for reclaim programs.

Distribution - large cylinder to service cylinder transfer:

Economic purchase of refrigerant. Simplifies handling and storage for service fleet. Fill cylinder(s) in refrigerant processing plants.

Filtration - refrigerant or oil in cylinders or systems:

Circulate through filter/drier to clean liquids. Reduce down time by filtering with system on line. Extend service intervals and reduce maintenance.



LP11

LP11

This fast and trouble free 1/2 HP self-priming pump has a flow rate of 30 pounds of R11 per minute. It is well suited for large commercial applications that have a charge of several hundred pounds to sometimes more than 1000 pounds of R11 or R113.

The LP11 pump should never be run with vapors or the seals will be damaged. The LP11 pump has BUNA-N seals and a maximum discharge pressure of 40 PSI.

The LP11 must not be used with R12 or other high pressure refrigerants.

For best results use NRP Hose Kit Model HK11 and place the pump at a lower elevation than the chiller.

Not for use with R123 which will damage the BUNA-N seals.



LP12

LP12

This 1/3 HP, maintenance free, self-lubricating vane pump has a flow rate of approximately 16 pounds of R12 per minute. The LP12 has a working pressure of 200 PSI and should not be used to transfer R22 or R502.

LP22

The LP22 is a gear pump with neoprene seals and a MOP of 300 PSI with a DWP of 150 PSI. This self-lubricated pump has a flow rate of approximately 20 pounds per minute and is supplied with a 1/2 HP motor.

3/8" or 1/2" hoses are required.



LP22/LPO

LPO

The LPO is a gear pump which works like our LP22 model. It has a MOP of 200 PSI and a differential pressure of 100 PSI. It is supplied with a 1/2 HP motor. Transfers refrigeration oil.

Part No.	Capacity	Power	Dimensions (In.)	Connections (In.)	Use with Refrigerants	Weight (Lbs)
LP11	30 Lbs/Min	1/2 HP, 115 V, 60 Hz	10 L x 6 W x 8 H	3/4 Male Hose	R11, R113	12.5
LP12	16 Lbs/Min	1/3 HP, 115 V, 60 Hz	12 L x 6 W x 8 H	1/2 FPT	R12	18.5
LP22	20 Lbs/Min	1/2 HP, 115 V, 60 Hz	12 L x 10 W x 8 H	3/8 FPT	R11, R12, R22, R113, R123, R500, R502, R134a & Blends*	33
LP22E		1/2 HP, 220 V, 50 Hz				33
LPO	1.2 Gal/Min	1/2 HP, 115 V, 60 Hz	12 L x 10 W x 8 H	3/8 FPT	Transfers Refrigeration Oil	31
LPOE		1/2 HP, 220 V, 50 Hz				31

* May not be available for all refrigerant blends. Consult factory for proper application.

Liquid Refrigerant Pumps

Flow Ratings

Liquid pumps are typically rated in gallons/min. and their capacity is determined by measurements made on water or light oils. To convert from gpm to lbs./min. multiply the gpm rating by the density (lb/gal) of the refrigerant (chart below). Since vapor is almost always present, the actual flow is often quite a lot lower. Tests have indicated that a refrigerant pump capacity is reduced by 5 to 40% due to vapor displacing the liquid in actual field conditions where restrictions have been minimized. A sub cooler on the suction side reduces vapor formation and is an effective way of increasing flow rate.

Refrigerant No.	114	12	502	113	500	11	22	121	123	134a	404	507
Density Lb./Gal.	12.0	10.8	10.2	13.0	9.5	12.2	9.8	N/A	12.3	10.2	8.9	8.9

Maximizing Capacity

Using a larger pump often will not yield higher flow rates because a larger pump merely creates more vapor that displaces the liquid. The following chart can be used as a guide to determine the maximum practical pump size to install.

Diameter of Smallest Passage On Inlet Side of the Pump (Inches)	Hose Size I.D. (Inches)	Rated Flow Lbs./Min. Ideal Conditions ¹	Approx. Flow Lbs./Min. With Equalizer Line ²	Approx. Flow Lbs./Min. Without Equalizer Line ³
0.22	3/8	38	20	10 - 15
0.22	1/2	38	24	12 - 18
0.62	5/8	130	40	20 - 30
0.75	3/4	130	90	45 - 60

¹ Rated flow is with a vapor pressure equalizer line and no vaporization present

² Typical flow for average hook up using a vapor pressure equalizer line

³ Without a vapor pressure equalizer line, flow will also be dependent on discharge pressure and can be less than half of rated flow.

Special pumps are available.

If an equalizer cannot be used, keep flow rates per minute to less than 2.5% of the tank's capacity. For example a 1,000 lb. cylinder can handle up to 25 lbs./min. without excessive cavitation, depending on temperature and inlet line restrictions.

Extended Life

Larger motors are available for higher pressure operation, but the best method is an efficient one that reduces the line restrictions to minimize load on the pump and motor and maximizes net flow rate.

Refrigerants can be void of lubricants and provide very little lubrication to the pump. Modular Products Inc. liquid refrigerant pumps are designed and constructed such that the wearing components minimize the need for lubrication.

Cavitation is inevitable when pumping low boiling point liquids and some pump damage may occur. Cavitation damage looks like pitting erosion of the parts on the inlet side of the pump, especially on sharp edges. Many Modular Products, Inc. liquid refrigerant gear pumps that have been in service for extended periods of time show no evidence of such damage when used properly.

Chemical attack of components is possible. Elastomers must be compatible with the refrigerant being pumped and compressor oils. Acids such as HF and HCL form when water is present. Decomposition can form dangerous by-products (mostly acids) and is generally due to exposing the refrigerant to high temperatures from flames, heater or motor burnouts. The pump should be cleaned thoroughly if exposed to acids to reduce corrosion damage. If in process the pump will continuously be exposed to high concentrations of acids, consider using a Modular Products, Inc. stainless steel pump configured for liquid refrigerant pumping.

Solids such as rust, welding debris, dirt, wood chips etc. are an invitation to pump seizure, use a 40 mesh strainer on the inlet to protect the pump.

Storage: Always add some compressor oil to pump and seal and/or cap all ports and lines from atmosphere to reduce rust and corrosion between use.





Vacuum Pumps

NEW

GLOBESAVER™



**GVP3
FAST!**



**GVP6
FASTER!!**



**GVP12
FASTEST!!**

- Isolation valve (GVP6 and GVP12 only)
- Dual intake connections
- Two stage design: second stage starts pump at a lower pressure to pull a deeper ultimate vacuum

- Ergonomic sure-grip handle
- High vacuum rating
- Gas ballast feature: helps keep the pump oil clean by reducing condensation of moisture

Vacuum Pump	GVP3	GVP6	GVP12
Free Air Displacement (CFM)	3	6	12
Stages	2 stage rotary vanes	2 stage rotary vanes	2 stage rotary vanes
Field Blankoff	15 microns	15 microns	15 microns
Intake Male Flare (In.)	1/4 MFL x 3/8 MFL	1/4 MFL x 3/8 MFL	3/8 MFL x 1/2 MFL
Horsepower	1/4	1/2	1/2
RPM	1720 @ 60 Hz	1440 @ 50 Hz, 1730 @ 60 Hz	1440 @ 50 Hz, 1730 @ 60 Hz
Voltage	115	115/220	115/220
Oil Capacity	14.0 Oz.	34 Oz.	34 Oz.
Length (In.)	14	16.93	18.89
Width (In.)	5.71	5.71	5.71
Height (In.)	10.5	10.43	11.81
Unit Weight (Lbs.)	23	31	39
Shipping Weight (Lbs.)	27	38	49

TEZ8

TEZ8



TZM1PK

- Three intake connections
- 5-second oil change™
- High speed turbine fan keeps pump and oil cool
- Exhaust system vents moisture remotely (standard garden hose connection) without breaking vacuum
- Wide, low stance prevents accidental tipping
- TEZOM cartridges are available in the following quantities:

Vacuum Pump	TEZ8
Free Air Displacement (CFM)	8
Field Blankoff	<20 Microns
Intake Male Flare (In.)	1/4, 3/8, 1/2
Horsepower	1/2
Power	115 VAC, 60 Hz, 10 Amps
Oil Capacity	34 Oz.
Length (In.)	14.25
Width (In.)	9.4
Height (In.)	10.3
Unit Weight (Lbs.)	28

Part No.	Description
TZM1PK	TEZ8 Oil Cartridge (1 Cartridge)
TZM3PK	TEZ8 Oil Cartridge (3 Cartridges/Pack)
TZMCRT	TEZ8 Oil Cartridge (24 Cartridges/Cartron)

TEZ8 is Manufactured by
APPION
S L I T P U R E F O R M A T I O N

Recovery Cylinders

STANDARD CYLINDERS FOR USE WITH

R11, R12, R22, R113, R114, R134a, R500, R502 & Blends*

VERY HIGH PRESSURE CYLINDERS FOR USE WITH

R13, R23, R503

All NRP recovery cylinders meet ARI guidelines and DOT specifications.

It is very important to evacuate the recovery cylinders and purge the hoses to avoid introducing non-condensables in cylinders which would increase the discharge pressure. Also, a separate cylinder must be used for each type of refrigerant to avoid cross contamination.

Caution: for safety reasons it is very important to fill all cylinders by weight in accordance with the cylinder supplier's instructions and ARI guidelines.

- Do not overfill cylinders. Do not fill to more than 80% of the cylinder's rated capacity.
- Do not mix different refrigerants in one cylinder. Mixtures cannot be separated.
- Always wear rubber gloves and safety goggles when transferring refrigerant.
- Always use cylinders approved for recovery.
- Cylinder for use with R410A must be DOT spec 4BA400.
- NC30, NC30U, NC50, NC50U are **approved for R410A**.



ARI
Air Conditioning &
Refrigeration Institute



RECOVERY EQUIPMENT

STANDARD RECOVERY CYLINDERS

Model	Nominal Cap (Lbs.)	Water Cap (Lbs.)	PSI	Max. Recovery Cap @ 80% (Lbs.)	Valves	Weight (Lbs.)
NC30	30	26.2	400	24	One 2 Port	16
NC30U ¹	30	26.2	400	24	One 2 Port	17
NC50	50	47.7	400	40	One 2 Port	28
NC50U ¹	50	47.7	400	40	One 2 Port	29
NC100	125 ³	122	300	100	One 2 Port	51
NC100U ¹	125 ³	122	300	100	One 2 Port	52
NC240	240 ³	240	250	192	Two 1 Port	80
NC240U ¹	240 ³	240	250	192	Two 1 Port	81
NC1000 ²	1000 ³	1000	260	800	Two 1 Port	391

¹With float switch ²With float gauge ³Available in 400 Lb. pressure

R11 LARGE RECOVERY CYLINDERS

Models N250T and N665T are supplied with protective collars (top and bottom), 0-100 PSIG gauge, pressure relief valve, sight glass @ 1/3 and 2/3 levels, non-condensable purge tap, float switch.

Model	Nominal Cap (Lbs.)	Water Cap (Lbs.)	PSI	Max. Recovery Cap @ 80% (Lbs.)	Valves	Weight (Lbs.)	Use With
N250T	250	250	165	200	Two 1 Port	107	VR11
N665T	665	665	200	532	Two 1 Port	265	VR11

VERY HIGH PRESSURE RECOVERY CYLINDERS

Model	Nominal Cap (Lbs.)	Water Cap (Lbs.)	Max. Recovery Cap @ 80% (Lbs.)	Valves	Weight (Lbs.)	Use With
NC23	28	23.8	23	One 1 Port	43	R13, R23, R503 — LP13, VR13
NC80	106	89	84	One 1 Port	113	R13, R23, R503 — LP13, VR13



Accessories

TANK ALARM



Provides positive shut-off for recovery units without tank overflow protection. With power cord-to-tank adapters (see below), the TA1 can be used on any tank utilizing a float. The TA1 comes with 5 feet of float cord and a velcro strap for easy mounting.

Part No.	Power	Dimensions L x W x H (In.)
TA1	120 Volt, 15 Amps, 60 Hz	1.74 x 2.33 x 4.33

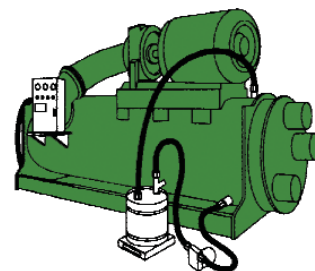
TANK ADAPTERS



Part No.	Description
NC50FLOAT	Replacement float mechanism for positive shut-off cylinders (30 lb, 50 lb)
NULVTANK P	4 Pin male amp x 3 pin female Brad Harrison connectors. Adapts NRP 30 Lb and 50 Lb tanks to an OZ, Thermal, Reklame, Aes-Ntron and CPS unit cords.
NOZTANK P	4 Pin female amp x 3 pin male Brad Harrison connectors Adapts an OZ, Thermal, Reklame, Aes-Ntron and CPS
NULVP	Completes wiring for an 80% fill protective circuit. Compatible with Robinair, Sercon, Trane, Katy, CFC-TEK, Dupont and other manufacturers' units

HOSE KIT

FOR USE WITH
R11 & R113



Part No.	Description	Unit Weight (Lbs.)
HK11	3/4" Hoses (3), with accessories for use with LP11	20

SIGHT GLASS

Flow indication and moisture sensing



Part No.	Connection (In.)	Length (In.)
SG14	1/4 MFL x 1/4 FFL	3.06
SG38	3/8 MFL x 3/8 FFL	3.25

FILTER/DRIER



Part No.	Connection (In.)	Length (In.)	Master Carton
052	1/4 MFL x 1/4 FFL	4.75	25
053	3/8 MFL x 3/8 FFL	5.19	25

FILTER-DRIER CORE

Fits 48 cu. in. filter shells



Part No.	Description	Use With
RH-48	High Capacity Refrigerant Recycling Filter Drier Core	RLV700, RAD700

Premium Refrigerant Charging/Vacuum Hoses



Features

- All assemblies and components made in USA
- Quality brass fittings to ensure longer life and safety
- GY5 refrigerant hose, manufactured by Goodyear Engineered Products
- Nylon, veneer-lined hose for low permeation applications meeting EPA requirement
- Double-barrier design of black, neoprene rubber for additional permeation protection
- Braided Kevlar yarn added for strength with a nitrile/PVC rubber cover for protection

- -20°F to 180°F (-29°C to 82°C) temperature range
- 800# PSI working pressure / 4000# PSI burst pressure
- Suitable for R12, R134a, R22, R500, R502, R404A, R410A and HCFC blends
- UL approved R410A assemblies available - one hose for CFC, HCFC and HFC refrigerants
- 1/4" straight x 1/4" 45° angle fitting or 1/4" straight x 1/4" straight available

STANDARD HOSES*



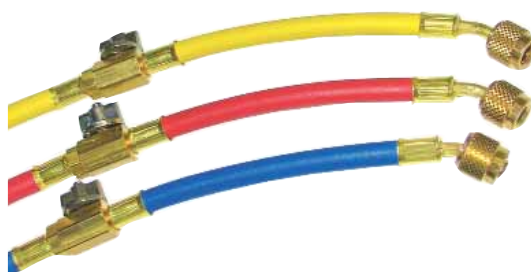
1/4"

Length (In.)	NRP Part No.			
	Red	Blue	Yellow	3-Pak
36	N36R	N36B	N36Y	N36RBY
48	N48R	N48B	N48Y	N48RBY
60	N60R	N60B	N60Y	N60RBY
72	N72R	N72B	N72Y	N72RBY
96	N96R	N96B	N96Y	N96RBY
144	N144R	N144B	N144Y	-
300	N300R	N300B	N300Y	-
600	N600R	N600B	N600Y	-

3/8"

Length (In.)	NRP Part No.			
	Red	Blue	Yellow	3-Pak
36	N3836R	N3836B	N3836Y	N3836RBY
48	N3848R	N3848B	N3848Y	N3848RBY
60	N3860R	N3860B	N3860Y	N3860RBY
72	N3872R	N3872B	N3872Y	N3872RBY
96	N3896R	N3896B	N3896Y	N3896RBY
144	N38144R	N38144B	N38144Y	-
300	N38300R	N38300B	N38300Y	-
600	N38600R	N38600B	N38600Y	-

POSITIVE SHUT-OFF HOSES*



- Premium refrigerant charging/vacuum hose with in-line positive shut-off ball valves
- 8" length of hose between ball valve and fitting for easy accessibility
- Female flare straight x female flare 45° angle connection

1/4"

Length (In.)	NRP Part No.			
	Red	Blue	Yellow	3-Pak
36	NBV36R	NBV36B	NBV36Y	NBV36RBY
48	NBV48R	NBV48B	NBV48Y	NBV48RBY
60	NBV60R	NBV60B	NBV60Y	NBV60RBY
72	NBV72R	NBV72B	NBV72Y	NBV72RBY
96	NBV96R	NBV96B	NBV96Y	NBV96RBY

3/8"

Length (In.)	NRP Part No.			
	Red	Blue	Yellow	3-Pak
36	NBV3836R	NBV3836B	NBV3836Y	NBV3836RBY
48	NBV3848R	NBV3848B	NBV3848Y	NBV3848RBY
60	NBV3860R	NBV3860B	NBV3860Y	NBV3860RBY
72	NBV3872R	NBV3872B	NBV3872Y	NBV3872RBY
96	NBV3896R	NBV3896B	NBV3896Y	NBV3896RBY

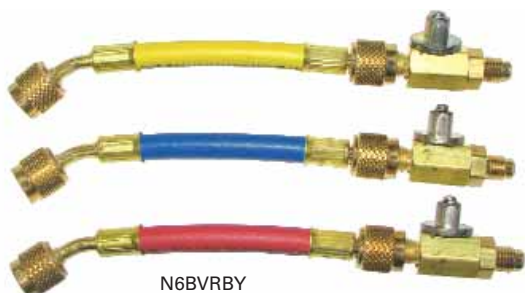
*** Consult NRP for custom lengths and fittings on all 1/4" and 3/8" hoses**

REFRIGERANT SERVICE PRODUCTS



Premium Refrigerant Charging/Vacuum Hoses

BALL VALVE HOSES*



N6BVRBY

- Premium refrigerant charging/vacuum hose with positive shut-off ball valve end
- 1/4" MFL or 1/4" FFL ball valve connections available
- 3/8" MFL or 3/8" FFL ball valve connections available

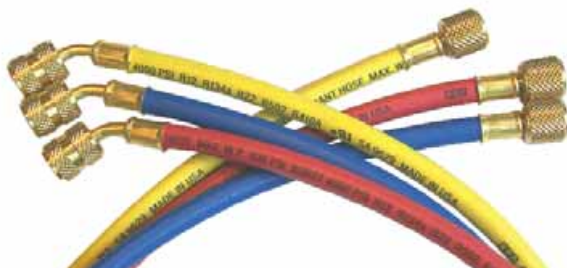
1/4"

Length (In.)	NRP Part No.			
	Red	Blue	Yellow	3-Pak
6	N6BVR	N6BVB	N6BVY	N6BVRBY
12	N12BVR	N12BVB	N12BVY	N12BVRBY
18	N18BVR	N18BVB	N18BVY	N18BVRBY
24	N24BVR	N24BVB	N24BVY	N24BVRBY
36	N36BVR	N36BVB	N36BVY	N36BVRBY
60	N60BVR	N60BVB	N60BVY	N60BVRBY

3/8"

Length (In.)	NRP Part No.			
	Red	Blue	Yellow	3-Pak
6	N386BVR	N386BVB	N386BVY	N386BVRBY
12	N3812BVR	N3812BVB	N3812BVY	N3812BVRBY
18	N3818BVR	N3818BVB	N3818BVY	N3818BVRBY
24	N3824BVR	N3824BVB	N3824BVY	N3824BVRBY
36	N3836BVR	N3836BVB	N3836BVY	N3836BVRBY
60	N3860BVR	N3860BVB	N3860BVY	N3860BVRBY

ANTI-BLOW BACK HOSES*



- 1/4" premium refrigerant charging/vacuum hose with anti-blow back fittings
- Low-loss, 45° fittings that eliminate refrigerant venting and finger burns
- Knurled nut for easy access to tight areas
- Super-neoprene gaskets for long-life, slow deterioration

1/4"

Length (In.)	NRP Part No.			
	Red	Blue	Yellow	3-Pak
36	NAB36R	NAB36B	NAB36Y	NAB36RBY
48	NAB48R	NAB48B	NAB48Y	NAB48RBY
60	NAB60R	NAB60B	NAB60Y	NAB60RBY
72	NAB72R	NAB72B	NAB72Y	NAB72RBY
96	NAB96R	NAB96B	NAB96Y	NAB96RBY

Heavy Duty Pressure Control Hoses



- All assemblies and components made in USA
- Stainless steel refrigerant hose
- 600# PSI working pressure / 3000# PSI burst pressure
- 3/16" ID, 5/16" OD
- 90° x Straight, 1/4" FFL connects
- Straight x Straight, 1/4" FFL connects available
- For installation or replacement of copper capillary tubing on cut-out and pressure controls

Part No.	Length (In.)
NPCH18	18
NPCH24	24
NPCH30	30
NPCH36	36
NPCH48	48
NPCH60	60

* Consult NRP for custom lengths and fittings on all 1/4" and 3/8" hoses

Heavy Duty Premium Black Refrigerant Charging/Vacuum Hoses*



Features

- 1/4", 3/8" and 1/2" heavy-duty refrigerant hoses constructed by Goodyear Engineered Products
- GY5 premium, permeation resistant, double barrier hose
- Suitable for R12, R134a, R22, R500, R502, R404A, R410A and HCFC blends
- 1/4" and 3/8" rated @ 4000# PSI (276 bar) min. burst pressure and 800# PSI (55 bar) max. working pressure
- 1/2" rated @ 3200# PSI (220 bar) min. burst pressure and 640# PSI (44 bar) max. working pressure

STANDARD HOSES



NHD1436

Length (In.)	NRP Part No.		
	1/4"	3/8"***	1/2"***
36	NHD1436	NHD3836S	NHD1236S
48	NHD1448	NHD3848S	NHD1248S
60	NHD1460	NHD3860S	NHD1260S
72	NHD1472	NHD3872S	NHD1272S
96	NHD1496	NHD3896S	NHD1296S
144	NHD14144	NHD38144S	NHD12144S
300	NHD14300	NHD38300S	NHD12300S
600	NHD14600	NHD38600S	NHD12600S
900	NHD14900	NHD38900S	NHD12900S
1200	NHD141200	NHD381200S	NHD121200S

POSITIVE SHUT-OFF HOSES



NHDBV1436

- Heavy duty, premium refrigerant charging/vacuum hose with in-line positive shut-off ball valves
- 8" length of hose between ball valve and fitting for easy accessibility

Length (In.)	NRP Part No.		
	1/4"	3/8"***	1/2"***
36	NHDBV1436	NHDBV3836	NHDBV1236
48	NHDBV1448	NHDBV3848	NHDBV1248
60	NHDBV1460	NHDBV3860	NHDBV1260
72	NHDBV1472	NHDBV3872	NHDBV1272
96	NHDBV1496	NHDBV3896	NHDBV1296

BALL VALVE HOSES



NHD146BV

- Heavy duty, premium refrigerant charging/vacuum hose with ball valve end
- Full flow ball valve with positive shut-off

Length (In.)	NRP Part No.	
	1/4"	3/8"***
6	NHD146BV	NHD386BV
12	NHD1412BV	NHD3812BV
18	NHD1418BV	NHD3818BV
24	NHD1424BV	NHD3824BV
36	NHD1436BV	NHD3836BV
60	NHD1460BV	NHD3860BV
72	NHD1472BV	NHD3872BV

** Consult NRP for custom lengths and fittings on all 1/4", 3/8", 1/2" heavy duty hoses*

*** Straight x Straight Flare (S)*

REFRIGERANT SERVICE PRODUCTS





Valves, Hose Adapters & Accessories

SHUT-OFF VALVES



NBV14FM

- Compact design shut-off ball valves for ease of application and use
- Make tank and unit switching easy and fast
- Prevent unnecessary venting and finger burns
- Excellent for maintaining vacuum integrity
- Connect to any 1/4", 3/8" FFL hose fitting

Part No.	Description
NBV14MM	1/4" MFL x 1/4" MFL
NBV14FM	1/4" MFL x 1/4" FFL
NBV38MM	3/8" MFL x 3/8" MFL
NBV38FM	3/8" MFL x 3/8" FFL

ANTI-BLOW BACK HOSE ADAPTERS, 1/4"



NABS



NAB45



NAB90

- Low-loss, fittings that eliminate refrigerant venting and finger burns
- Available in 45°, 90° and straight fittings
- Knurled nut for easy access to tight areas
- Super-neoprene gaskets for long-life, slow deterioration

Part No.	Connection
NABS	Straight Adapter, 1/4" FFL x 1/4" MFL
NAB45	45° Adapter, 1/4" FFL x 1/4" MFL
NAB90	90° Adapter, 1/4" FFL x 1/4" MFL

HOSE REPAIR KITS



NH06KIT



NABKIT

For replacement/repair of all 1/4" anti-blow back fittings

Part No.	Description	Quantity
NH06KIT	3/8" Seal Gasket	10
	1/4" Seal Gasket	10
	Depressor	10
	3/8" Finger Tight O-Ring Cap	2
	1/4" Finger Tight O-Ring Cap	6
	Valve Core	5
	Plastic Valve Core Tool	2
NABORING	Replacement O-Ring for Anti-Blow Back Fittings	5
NABKIT	Anti-Blow Back Fitting Repair Kit Bard Head with O-Ring, Replacement O-Rings	7

HOSE ACCESSORIES



CRT



NH05001



NH05007

Part No.	Description	Quantity
CRT	1/4" Core Extractor	1
CD5555	CRT O-Ring Repair Kit	1
NH05001	1/4" Hose Gasket	10
NH01013	3/8" Hose Gasket	10
NH01012	1/2" Hose Gasket	10
NH03016	1/4" Valve Core	5
NH05007	1/4" Hose Core Depressor	10

Manifolds & Gauges

MANIFOLDS



- All assemblies and components made in USA
- Forged brass body with metal valve handles
- Hose anchors forged @ 45°
- Full porting for maximum capacity
- Heavy-duty swivel hook
- Vibration free gauges for minimal needle movement, accurate reading

Part No.	Refrigerant	Includes
RM1	R12, R22, R502	Manifold Only
RM136	R12, R22, R502	(3) 36" Hoses, Red, Blue, Yellow
RM160	R12, R22, R502	(3) 60" Hoses, Red, Blue, Yellow
RM2	R134a, R404A, R22	Manifold Only
RM3	R410A	Manifold Only
RM336	R410A	(3) 36" Hoses, Red, Blue, Yellow
RM360	R410A	(3) 60" Hoses, Red, Blue, Yellow
RM4	R22, R404A, R410A	Manifold Only
RM436	R22, R404A, R410A	(3) 36" Hoses, Red, Blue, Yellow
RM460	R22, R404A, R410A	(3) 60" Hoses, Red, Blue, Yellow
RM5	R22, R407A, R407C	Manifold Only
RM536	R22, R407A, R407C	(3) 36" Hoses, Red, Blue, Yellow
RM560	R22, R407A, R407C	(3) 60" Hoses, Red, Blue, Yellow

PRESSURE GAUGES



N2001



N2000



N2000G

Part No.	Gauge	Diameter	Refrigerant	Scale Range (PSI)	Color
N2000	High Side	2"	R12, R22, R502	0- 500	Red
N2001	Compound	2"	R12, R22, R502	30" - 0 - 120	Blue
N2002	Compound	2"	R134a, R404A, R22	30" - 0 - 120	Blue
N2003	High Side	2"	R134a, R404A, R22	0- 500	Red
N2004	High Side	2"	R410A, R22, R407C	0- 800	Red
N2005	Compound	2"	R410A, R22, R407C	30" - 0 - 250	Blue
N2006	High Side	2"	R410A	0- 800	Red
N2007	Compound	2"	R410A	30" - 0 - 500	Blue
N2008	High Side	2"	R22, R404A, R410A	0- 800	Red
N2009	Compound	2"	R22, R404A, R410A	30" - 0 - 250	Blue
N2010	High Side	2"	R22, R407A, R407C	0- 500	Red
N2011	Compound	2"	R22, R407A, R407C	30" - 0 - 250	Blue
N3000	High Side	3"	R22, R404A, R410A	0- 800	Red
N3001	Compound	3"	R22, R404A, R410A	30" - 0 - 500	Blue
N3002	High Side	3"	R22, R134a, R404A	0- 500	Red
N3003	Compound	3"	R22, R134a, R404A	30" - 0 - 120	Blue
N2000G	High Side, Glycerine Filled	2"	R12, R22, R502	0- 500	Red
N2001G	Compound, Glycerine Filled	2"	R12, R22, R502	30" - 0 - 120	Blue
N2006G	High Side, Glycerine Filled	2"	R410A	0- 800	Red
N2007G	Compound, Glycerine Filled	2"	R410A	30" - 0 - 500	Blue
Part No.	Description				
GRK	Replacement Glycerine				
GFP	Glycerine Gauge Replacement Fill Plug (3/pack)				



Refrigerant Ball Valves

BALL VALVES



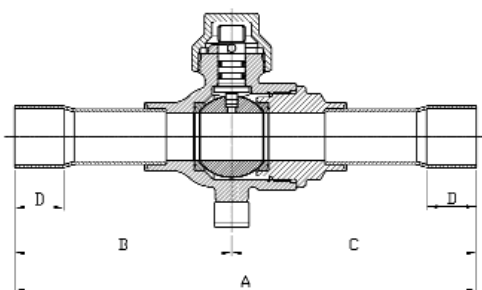
With Access Port



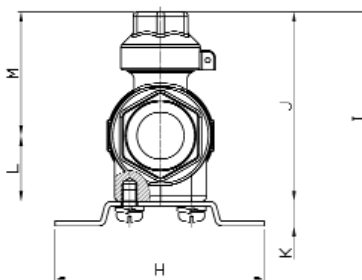
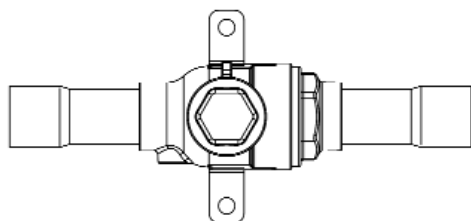
Without Access Port

- Max. working pressure 700 PSI
- Temperature rating: -40°F to 300°F
- Bi-directional application
- Improved internal parts designed to guarantee 0% leakage
- 100% helium tested & max working pressure
- Robust brass body and cap design
- Full range of sizes from 1/4" to 3 1/8" ODF
- Charge port available as an option for all sizes
- UL and CE listed

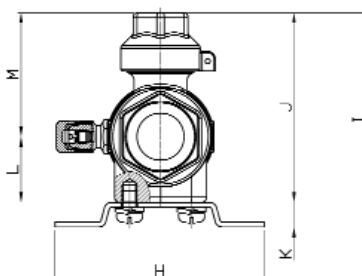
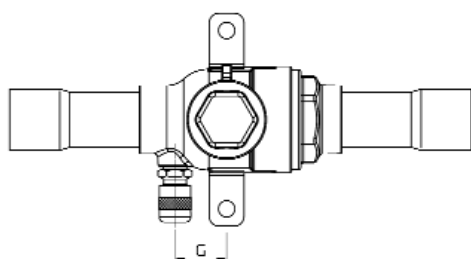
Part No.		Connection	Ball Port Diameter (In.)	Dimensions (In.)							Maximum Width (In.)	Weight (Lbs.)	Flow (Cv)
With Access Port	Without Access Port	ODF (In.)		A	B	C	D	E	F	G			
14BVT	14BV	1/4	0.5	5.5	2.6	2.9	0.3	0.8	1.6	0.6	2.3	0.92	2.2
38BVT	38BV	3/8	0.5	5.5	2.6	2.9	0.4	0.8	1.6	0.6	2.3	0.93	4.4
12BVT	12BV	1/2	0.5	6.33	3	3.4	0.5	0.8	1.6	0.6	2.3	0.95	7.2
58BVT	58BV	5/8	0.5	6.33	3	3.4	0.6	0.8	1.6	0.6	2.3	0.96	14.3
34BVT	34BV	3/4	0.75	7.32	3.4	3.9	0.7	1	2	0.8	2.5	1.69	20.8
78BVT	78BV	7/8	0.75	7.32	3.4	3.9	0.8	1	2	0.8	2.5	1.69	29.7
118BVT	118BV	1-1/8	1	9.1	4.5	4.6	1	1.3	2.1	1.07	2.8	2.48	60
138BVT	138BV	1-3/8	1.25	9.66	4.7	5	1	1.5	2.6	1.2	3.2	3.81	83.5
158BVT	158BV	1-5/8	1.5	11	5.4	5.6	1	1.8	2.8	1.35	3.7	5.43	206
218BVT	218BV	2-1/8	2	11.75	5.8	6	1.2	2.1	3.3	1.8	4.4	10.90	279
258BVT	258BV	2-5/8	2	11.75	5.8	6	1.2	2.1	3.3	1.8	4.4	11.35	232.8
—	318BV	3-1/8	2.5	14.68	7.2	7.4	1.2	2.7	3.8	2.3	5.3	20.51	318



Dimensional Drawings



Without Access Port



With Access Port

Labels & Tags

NRP labels and tags provide an easy and accurate means of identifying recovery cylinders and their contents.

This enables the contractor and the reclaiming to quickly handle and manage refrigerant stocks for transportation, reprocessing and reuse. All labels have a self-adhesive backing.

RECOVERED REFRIGERANT LABELS, LARGE



Meets DOT requirements for transporting refrigerants. All recovered refrigerant labels are designated with color code and shipping classification.

- Measures 5" x 10 1/2"
- 5 labels per pack

Part No.	Refrigerant
NL11	R11
NL12	R12
NL123	R123
NL134A	R134a
NL22	R22
NL502	R502

RECOVERED REFRIGERANT LABELS, SMALL



- Measures 3" x 4"
- 10 labels per pack

Part No.	Refrigerant
NR11	R11
NR12	R12
NR123	R123
NR134A	R134a
NR22	R22
NR500	R500
NR502	R502

EQUIPMENT CONTENTS LABELS



- Measures 2" x 4"
- 5 labels per pack

Part No.	Refrigerant
NRE134A	R134a
NRE23	R23
NRE401A	R401A
NRE401B	R401B
NRE402A	R402A
NRE402B	R402B
NRE404A	R404A
NRE406A	R406A
NRE407A	R407A
NRE407B	R407B
NRE408A	R408A
NRE409A	R409A
NRE410A	R410A
NRE422D	R422D
NRE507	R507

REFRIGERANT CYLINDER TAG



Wire tie for fastening to valve collar. For shipping R-12, R-22, R-114, R-500 and R-502.

- Measures 4" x 9"
- 5 tags per pack

Part No.	Description
NRT	Shipping Tag

CERTIFICATE OF REMOVAL LABEL



To identify that the refrigerant has been properly removed from a cooling unit, for disposal, in accordance with the 1990 Clean Air Act amendment requirements.

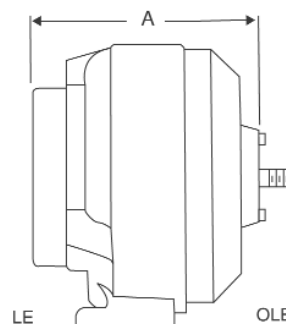
- Measures 3" x 4"
- 10 labels per pack

Part No.	Description
NL1	Certificate of Removal

51 FRAME - 3 1/2" DIAMETER, SHADED POLE SINGLE SHAFT



Cast Iron, 1-Speed
Single Rotation Viewed
Opposite Shaft End



Features

- Single speed
- 1/4" threaded shaft, 1/2" long
- All angle operation
- Quiet operation
- Side pad mounting
- Cast iron construction
- Shaded pole, air over
- Rear hub or base mount
- Rotation viewed opposite shaft end
- 60/50 Hertz
- Long life unit sleeve bearings
- Permanent lubrication
- 25" leads
- Continuous air over
- Impedance or overload protection
- UL recognized
- CSA certified

Applications

- Refrigerators
- Freezers
- Display cases
- Walk-ins

1550 RPM

1/4" Threaded Shaft - 1/2" Long

Part No.	Watts Output	Rotation	Volts	Amps	Case Length (In.) "A" Dimension	Weight (Lbs.)	Qty per Carton
NRP5111	2.5	CWLE	115/1	0.24	2 1/2	2	12
NRP5211	4	CWLE	115/1	0.35	2 1/2	2.2	12
NRP5212	4	CCWLE	115/1	0.35	2 1/2	2.2	12
NRP5221	4	CWLE	208-230/1	0.20	3 1/4	2.5	12
NRP5222	4	CCWLE	208-230/1	0.20	3 1/4	2.5	12
NRP5311	6	CWLE	115/1	0.50	2 1/2	3.3	12
NRP5312	6	CCWLE	115/1	0.50	3	3.3	12
NRP5411	9	CWLE	115/1	0.62	3	3.3	12
NRP5412	9	CCWLE	115/1	0.62	3	3.3	12
NRP5421	9	CWLE	208-230/1	0.33	3 1/4	3.4	12
NRP5422	9	CCWLE	208-230/1	0.33	3 1/4	3.4	12
NRP5811	16	CWLE	115/1	1.10	3 1/4	4	8
NRP5812	16	CCWLE	115/1	1.10	3 1/4	4	8
NRP5821	16	CWLE	230/1	0.60	3 1/4	4	8
NRP5822	16	CCWLE	230/1	0.60	3 1/4	4	8

CROSS REFERENCE

Part No.	Industry No.	Morrill	AO Smith	Emerson	Universal
NRP5111	5111	S58-947	UB02.5CWL	2102	—
NRP5211	5211	S58-950	UB04CWL	2115	232
NRP5212	5212	S88-043	UB04CCL	2103	233
NRP5221	5221	S58-767	UB04CWH	2122	234
NRP5222	5222	—	UB04CCH	2123	235
NRP5311	5311	S58-952	UB06CWL	2117	236
NRP5312	5312	S58-951	UB06CCL	2116	237
NRP5411	5411	S58-948	UB09CWL	2108	238
NRP5412	5412	S58-953	UB09CCL	2118	239
NRP5421	5421	S58-949	UB09CWH	2110	240
NRP5422	5422	S88-049	UB09CCH	2109	241
NRP5811	5811	S88-225	UB16CWL1	2112	242
NRP5812	5812	S88-226	UB16CCL1L	2111	243
NRP5821	5821	S88-227	UB16CWHV1	2114	244

CAST IRON CONDENSER FAN MOTORS COMMERCIAL, HEAVY DUTY DESIGN



NRP 35 and 50 watt condenser fan motors replace GE11 and 21 frame series motors, as well as EMS manufactured motors.

Features

- High efficiency
- Unit bearing
- Versatile mounting
- UL recognized
- CSA certified

Applications

- Commercial refrigeration units
- Large air conditioning units
- High air volume applications

1500 RPM

Part No.	Watts Output	Rotation	Volts	Amps	Shaft Dimensions (In.)	Weight (lbs)	Qty per Carton
NRP254V	35	CWLE	115	1.4	1/4 x 20 Thd.	4.5	8
NRP255V	35	CCWLE	115	1.4	1/4 x 20 Thd.	4.5	8
NRP256V	35	CWLE	208-230	0.7	1/4 x 20 Thd.	4.7	8
NRP257V	35	CCWLE	208-230	0.7	1/4 x 20 Thd.	4.7	8
NRP258V	50	CWLE	115	1.7	3/8 x 1 1/2	5.5	8
NRP259V	50	CCWLE	115	1.7	3/8 x 1 1/2	5.5	8
NRP260V	50	CWLE	208-230	0.85	3/8 x 1 1/2	6.2	8
NRP261V	50	CCWLE	208-230	0.85	3/8 x 1 1/2	6.2	8

CROSS REFERENCE

Part No.	EMS	AO Smith	Emerson	Universal
NRP254V	ESP35EM1	UB35CWL	2129	254
NRP255V	ESPL35EMR1	UB35CCL	2128	255
NRP256V	ESPL35EM2	UB35CWH	2131	256
NRP257V	ESPL35EMR2	UB35CCH	2130	257
NRP258V	ESPOL50EM1	UB50CWL	2133	258
NRP259V	ESPOL50EMR1	UB50CCL	2132	259
NRP260V	ESPOL60EM2	—	2135	9200
NRP261V	ESPOL50EMR2	UB50CCH	2134	261



Air-Acetylene Equipment

FEATHER FLAME ACETYLENE KIT



Economically priced air fuel kit which has a tip design that produces excellent flame characteristics for soldering and light brazing.

Contains NHA12 hose, NEA1G regulator, NAA1 handle and NBA4 Kit.

Part No.	Tip	Regulator Fitting
NKA37H	NBA4	"B" Cylinder

TARGET® TORCH ACETYLENE KITS



NKX4B

These kits feature the very hot compact adjustable Target® tips for professional soldering and brazing applications. Kits include quick disconnect handle, UL listed regulator, hose and accessories.

Part No.	Tip	Regulator Fitting
NKX4B	NGA5, NGA14	"B" Cylinder
NKX4BCW*	NGA5, NGA14	"B" Cylinder
NKX5B	NGA5	"B" Cylinder
NKX6MC	NGA3, NGA8	"MC" Cylinder

*Includes a tank stand

J TIPS



NGA3J

- Adjustable and quiet
- Heat resistant
- Fits NGG4 handle
- Air acetylene tip
- Tip includes filter

Part No.	Flame Diameter (In.)	Soft Solder (In.)	Silver Solder (In.)
NGA3J	5/16	3/8 to 1 1/8	1/8 to 1/2
NGA8J	3/8	1 1/8 to 2 5/8	5/8 to 1 1/8

TARGET® TIPS



NGA3

- Very hot turbine flame
- Tips have a filter and removable orifice
- Tips fit NGG-4 handle
- Interchangeable with other quick disconnect style tips
- Unique mixer design cuts brazing time by 30% over conventional tips
- Adjustable tips that do not burn up
- Made of heavy stainless steel and brass

Part No.	Flame Diameter (In.)	Soft Solder (In.)	Silver Solder (In.)
NGA2	1/4	1/8 to 1/2	1/8 to 1/4
NGA3	5/16	3/8 to 1 1/8	1/8 to 1/2
NGA5	5/16	7/8 to 1 5/8	3/8 to 7/8
NGA8	3/8	1 1/8 to 2 5/8	5/8 to 1 1/8
NGA11	7/16	1 5/8 to 3 3/8	7/8 to 1 5/8
NGA14	1/2	2 1/8 to 4 1/8	1 1/8 to 2 1/8
NGA32	3/4	3 1/8 to 6 1/8	1 5/8 to 4 1/8

EZE-LITE® TIPS



NGA3L

- Innovative spark igniting turbine flame tip ignites with the push of a button
- Interchangeable with other quick disconnect tips
- Removable/cleanable orifice
- Fits NGG4 handle

Part No.	Flame Diameter (In.)	Soft Solder (In.)	Silver Solder (In.)
NGA3L	1/4	3/8 to 1 1/8	1/8 to 5/8
NGA5L	5/16	Up to 1 1/2	Up to 3/4
NGA8L	3/8	1 1/8 to 2 5/8	5/8 to 1 5/8
NGA14L	1/2	2 1/8 to 4 1/8	1 1/8 to 2 1/8

ACET-O-LITE® TIPS



NBA3

- Threaded, screw-in
- Quiet, adjustable flame
- Fits NAA1 handle
- Replace Prestolite, Uniweld screw-in tips

Part No.	Flame Diameter (In.)	Soft Solder (In.)
NBA1	1/16	1 1/16 to 1/4
NBA2	1/8	1/4 to 3/8
NBA3	3/16	3/8 to 5/8
NBA4	1/4	5/8 to 1 1/8
NBA5	5/16	1 1/8 to 1 5/8
NBA6	7/16	2 1/8 to 4 1/8

ACET-O-LITE® HANDLE, SCREW-IN



- This handle has the adjustment valve in front for single hand operation
- Needle valve design enables very fine flame adjustments
- This torch will keep your tips burning efficiently in drafts, winds and adverse conditions
- Made with quality brass and durable materials
- Uses standard 3/8-24 LH "A" size hose fittings
- Acet-O-Lite® torch will work with all "NBA" style tips

Part No.	Description
NAA1	Acet-O-Lite® Screw-in Handle

SNAP-IN STYLE HANDLE



- This handle has a quick disconnect to rapidly change tips
- Comfortable grooved handle is made of very durable materials
- Use 3/5-24 LH "A" hose fittings
- The Target® Torch handle will work with all "NGA" style tips

Part No.	Description
NGG4	Target® Torch Snap-In Style Handle

SNAP ADAPTERS



Adapts the NRP wide variety of threaded pencils, brushes or Target® Tips to torch handles with snap-in design.

Part No.	Description
NBRS665	Thread Tip to Snap-In Handle Adapter
NBRS700	Air/Fuel Screw-In Tips to Acetylene Fuel Handle
NBRS770	Snap-In Tip to Screw-In Handles

CYLINDER ADAPTERS



NBRS364



NBRS365

Part No.	Description
NBRS364	"MC" Cylinder to "B" Regulator
NBRS365	"B" Cylinder to "MC" Regulator

ACETYLENE REGULATORS



NEA1G

- UL Listed regulators, manufactured of solid brass, are made for rugged use.
- Specially designed conical seat and neoprene diaphragm
- The inlets have filters to prevent dirt from entering the regulator
- "A" hose fitting 3/8-24 LH

Part No.	Description	Contents (PSI)
NEA1G	Single Gauge Acetylene Regulator for B Tank	0 to Full
NEA2G	Single Gauge Acetylene Regulator for MC Tank	0 to Full

ACETYLENE HOSES



- Constructed from quality 3/16" ID single ply, fabric reinforced grade "R" hose
- 200 PSI working pressure
- 3/8-24 "A" fittings

Part No.	Description
NHA36	Hose, 6' Long
NHA312	Hose, 12' Long
NHA325	Hose, 25' Long

ACETYLENE STANDS



NC850CW

- Heavy duty steel with hose rack, support base and handle
- Ideal stand for air-acetylene kits

Part No.	Description
NC800	Fits "MC" Cylinder
NC850	Fits "B" Cylinder
NC850CW	Fits "B" Cylinder, with wheels



Oxy-Fuel Equipment

WELDING AND BRAZING KITS



NKA125B

Kits are prematched to different tank sizes. Portable carts and carrying stands are available.

Each kit includes :

- Welding handle
- 12' hose
- Dual gauge O₂ regulator.
- Dual gauge "MC or B" regulator
- #1 & #3 welding tips
- Goggles, Lighter

Part No.	Description
NKA125M	For "MC" Tank
NKA125M12P	For "MC" Tank, w/ Plastic stand
NKA125B	For "B" Tank

FRONT VALVE/WELDING AND BRAZING KITS, STUBBY™ STYLE



NKA700M

Stubby™ style products are rugged and designed for commercial applications where size is a consideration. These tips give the user close up control and they maximize movement in tight areas. Various other tips are available. The torch is compact and durable.

Each kit includes:

- Welding handle
- #1 & #3 Stubby™ style welding tips
- 12' hose
- Dual gauge "MC" regulator
- Dual gauge O₂ regulator
- NKA725M12P includes a standard long tip
- Goggles, Lighter

Part No.	Description
NKA700M	Stubby™ Kit for MCTank
NKA700M12P	Stubby™ Kit for MCTank with Plastic Cart
NKA725M12P	Stubby™ Kit for MCTank with Plastic Stand

WELDING AND BRAZING TORCH



Part No.	Description
NTW10A	Welding Torch with "A" Hose Fittings and Rear Valve Design

WELDING AND BRAZING TORCH, STUBBY™ STYLE



- Use with Stubby™ style 2033 or standard style 3033 tips

Part No.	Description
NTW5A	Compact Brazing Torch with "A" Hose Fitting and Front Needle Valve

CUTTING ATTACHMENT



Part No.	Description
NTCA10CAT	Cutting Attachment with 2320 #1 Tip

REPLACEMENT CUTTING TIPS

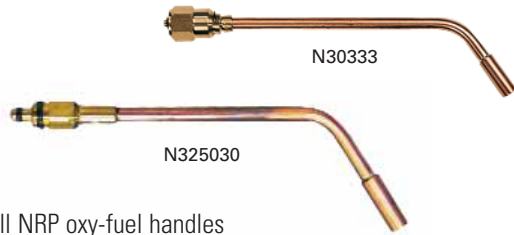


N23201

Part No.	Description
N23200	Replacement Cutting Tip, Small #0
N23201	Replacement Cutting Tip, Medium #1
N23202	Replacement Cutting Tip, Large #2

Oxy-Fuel Equipment

REPLACEMENT WELDING/BRAZING & HEATING TIPS



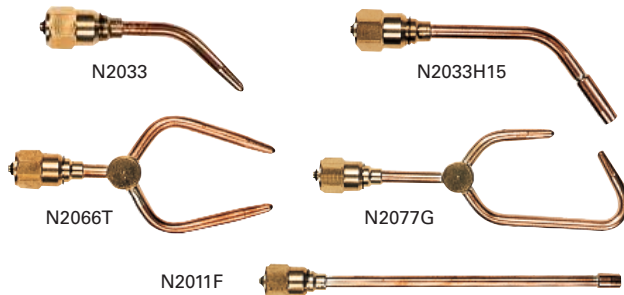
Fits all NRP oxy-fuel handles

Part No.	Description	Brazing Capacity (OD In.)
N30331	Welding Tip, #1	1/4 to 1 1/8
N30333	Welding Tip, #3	1/2 to 1 3/8
N3033H15	Heating Tip, #15	to 1 5/8
N3033H30	Heating Tip, #30	to 3 1/8

Fits Prestolite® oxy-fuel handles

Part No.	Description	Brazing Capacity (OD In.)
N325015	W200 Heating Tip, #15	to 1 5/8
N325030	W200 Heating Tip, #30	to 3 1/8

WELDING & BRAZING TIPS, STUBBY™ STYLE



- Fits all NRP oxy-fuel handles
- Rugged design for commercial applications
- Short heavy duty design
- Gives up close control and maximizes movement in tight areas
- Made of brass and copper

Part No.	Description	Tip#	Brazing Capacity (OD In.)
N20330		0	3/16 to 3/4
N20331	Welding and	1	5/16 to 1 1/8
N20332	Brazing Tip	2	3/16 to 3/4
N20333		3	5/8 to 1 3/8
N2033H15	Heating Tip	15	to 1 5/8
N2066T00		00	to 5/8
N2066T0	Twin Tip	0	to 1 1/8
N2066T1		1	to 2 1/8
N2077G00		00	to 5/8
N2077G0		0	to 1 1/8
N2077G1	G Brazing Tip	1	to 1 5/8
N2077G2		2	to 2 1/8
N2077G3		3	to 3 1/8
N2011F6	Flex Tip, 6" Long	—	to 1 5/8
N2011F10	Flex Tip, 10 Long	—	to 1 5/8

OXY-FUEL REGULATORS



These UL listed regulators are manufactured from durable brass with a neoprene rubber diaphragm, inlet filters and conical seat design. NRP regulators give the constant and accurate gas flow that is needed by professionals.

Part No.	Description	Contents (PSI)	Delivery (PSI)
NEA25MA	Dual Gauge Acetylene Regulator for MC Tank	0 to 400	0 to 30
NEA25BA	Dual Gauge Acetylene Regulator for B Tank	0 to 400	0 to 30
NE025A	Dual Gauge Oxygen Regulator	0 to 4000	0 to 100

NITROGEN REGULATOR



- Heavy duty regulator delivers pressure and volume most requested by professionals
- Forged brass body

Part No.	Description	Contents (PSI)	Delivery (PSI)
NEN450F	Nitrogen Regulator, 1/4" MFL outlet fitting	0 to 4000	5-450

DUAL OXY-ACETYLENE HOSES



NSW12A

- Constructed from quality 3/16" ID single ply, fabric reinforced grade "R" hose
- 200 PSI working pressure
- 3/8-24 "A" fittings

Part No.	Description
NSW12A	Dual Hose Kit, 12' Long
NSW25A	Dual Hose Kit, 25' Long



Oxy-Fuel Equipment

MAPP/PROPANE SWIVEL TORCHES



NPG360L

- Hot turbine flame
- Used with either propane or MAPP® gas
- 360 degree tip rotates to any position
- Heavy duty brass regulator
- Stainless steel tip ends

Part No.	Description
NPG360L	Mapp/Propane Torch, Self Igniting, Push Button
NPG360R	Mapp/Propane Torch, Match Lit, for Disposable Cylinders
NPG360J	Mapp/Propane Torch with J Tip

INSTANT IGNITION TRIGGER TORCH



- Hot turbine flame
- Flame adjustment valve
- Use Mapp® or propane fuel

Part No.	Description
NGP600	Mapp/Propane Torch, Trigger Light

BLOW GUN



- OSHA approved nozzle
- Durable construction
- ON/OFF lever
- 1/4" male flare inlet, 1/8" FPT outlet

Part No.	Description
NBG1	Quality Die Cast Blow Gun

REFRIGERANT HOSE



- Nylon lined, low porosity
- UL approved
- Suitable for R12, R134a, R22, R500, R404A, R410A and HCFC blends

Part No.	Description
NH72Y	6' Refrigerant Hose

NITROGEN PURGE & BLOW GUN KITS



NKPN1

Heavy duty high pressure regulator and hose

- 6' Hose
- Quality die-cast blow gun
- EN-460F high pressure regulator
- Multiple uses: purges, blow, leak tests

Part No.	Description
NKPN1	Nitrogen Purge and Blow Gun Kit
NKPN20S	Nitrogen Purge and Blow Gun Kit with Stand for 20 Cubic Ft. Cylinders
NKPN40S	Nitrogen Purge and Blow Gun Kit with Stand for 40 Cubic Ft. Cylinders

SINGLE FLINT LIGHTERS



N3011



N3011X

Part No.	Description
N3011	Single Flint Lighter (Flint Included)
N3011X	Renewal Flints (5 each)

CYLINDER WRENCH



Part No.	Description
NMA2	Cylinder Wrench

REPLACEMENT GAUGES



NSTE331

Quality gauges for the NRP air acetylene, oxygen, fuel and nitrogen regulators

Part No.	Application	Diameter (In.)	Scale
NMA8016F	Flat Gauge, NEA1G	1 1/2	0 to Full
NSTE331	Delivery, NEA25	2	0 to 30#
NSTE332	Contents, NEA25	2	0 to 400#
NSTE357	Delivery, NEO25	2	0 to 100#
NSTE334	Contents, NEO25	2	0 to 4000#
NSTE391	Delivery, NEN450F	2	0 to 1000#
NSTE392	Contents, NEN450F	2	0 to 4000#

FLAME GUARD



Protects wood, painted or metal surfaces from the heat and flame of a torch.

Designed for soldering and brazing using propane and MAPP gas.

Part No.	Description
NFG	9" x 12"

HALIDE LEAK DETECTOR



NGP18R

Cylinder NOT included



NDA8A

Leak detector for use with disposable propane or MAPP® gas cylinders.

The flame, when adjusted to heat the reactor plate, quickly changes color as the search hose passes a refrigerant leak.

Part No.	Description
NGP18R	Halide Leak Detector
NDA8A	Replacement Reactor Plate

OXY-FUEL CYLINDER STAND & CART



NC1300



NC1200P

Part No.	Description
NC1200P	Plastic Carry Stand, "R" Oxy, "MC"
NC1300	Steel Wheeled Cart, "Q" Oxy, "B"

ADAPTERS, TORCH/REGULATOR TO HOSE



NBRS341

Part No.	Description
NBRS341	"A" LHF to "B" LHM
NBRS342	"A" RHF to "B" RHM



Ergonomic Tools

SAWS



NRE80175



NRE30014

Part No.	Description
NRE30014	14" Wood/PVC Saw
NRE80175	Pistol Grip Mini Hacksaw
NRE80314	Replacement Mini Hacksaw Blade, Pkg. of 5

FILE



Part No.	Description
NRE22341	8" Mill Bastard File

WRENCH



Part No.	Description
NRE57771	10" Adjustable Pipe Wrench

PLIER/CUTTER



Part No.	Description
NRE82240	10" Slip Joint Plier
NRE82250	12" Slip Joint Plier

SCREWDRIVERS



NRE10653



NRE48250



NRE10776



NRE10776

Part No.	Description
NRE10653	Slotted screwdriver, 7 3/4" x 3" x 9/64"
NRE80105	Slotted screwdriver, insulated, 7" x 3" x 9/64"
NRE10721	Slotted screwdriver, 9 3/4" x 5" x 1/4"
NRE47758	Slotted screwdriver, 9 3/4" x 5" x 9/64"
NRE48250	Slotted screwdriver, insulated, 9 3/4" x 5" x 9/64"
NRE10776	Phillips screwdriver #1, 7 3/4" x 3" x 3/16"
NRE33133	Phillips screwdriver #1, insulated, 7 3/4" x 3" x 3/16"
NRE10783	Phillips screwdriver #2, 8 3/4" x 4" x 9/64"
NRE33140	Phillips screwdriver #2, insulated, 8 3/4" x 4" x 9/64"

Hand Tools

SLOTTED SCREWDRIVERS



Cushion Grip Handle

Part No.	Shank Type	Blade Width (In.)	Shank Length (In.)
N9002	Round	3/16	6
N9004		1/4	4
N9005		1/4	6
N9006		5/16	6
N9009	Square	1/4	4
N9010		5/16	6

PHILLIPS SCREWDRIVERS



Cushion grip handle

Part No.	Head Size	Shank Length (In.)
N9013	#1	4
N9014	#2	1 1/4
N9015	#2	4

Hand Tools

PRECISION SCREWDRIVER



N9024



N5021

Part No.	Description
N5021	6 Pc. Jewelers Set (Phillips: #0, #1, Slotted: 1.4mm, 2 mm, 2.4 mm, 3 mm)
N9024	Pocket Slotted, 1/8 x 2 1/4", with Pocket Clip

SIXPAC & STUBBY BY PICQUIC



STUBBY



SUPER8



N95006

Part No.	Description
SUPER8	8 in 1 Screwdriver, 6", with (6) 3 1/2" Powerbits
STUBBY	6 in 1 Screwdriver, 3 1/2", with (6) 1.3" Inset Bits
N95006	Phillips Multipack; 0, 1, 2, 3
N95001	Allen Key Multipack SAE; 7/64", 1/8", 9/64", 5/32", 3/16", 7/32"
N95003	Torx™ Multipack Bits; T15, T20, T25, T27, T30, T40
N95004	Torx™ Security Bits; T8, T10, T20, T25, T27
N95008	Slotted Multipack; 5/32", 3/16", 1/4", 9/32"

ADJUSTABLE WRENCHES



Phosphate with ergo plastic grip

Part No.	Description
D74PH	4" with Vinyl Cushion Grip
D76PH	6" with Vinyl Cushion Grip
D78PH	8" with Vinyl Cushion Grip
D710PH	10" with Vinyl Cushion Grip
D712PH	12" with Vinyl Cushion Grip

PLIERS



N9045



N9048



N9050



N9057



N9086

Part No.	Description
N9045	Diagonal cutter, 6" L
N9046	Diagonal cutter, 7" L
N9048	Lineman plier, 8" L
N9049	Long nose plier with cutter, 6" L
N9050	Long nose plier with needle nose, 6" L
N9054	Tongue and groove plier, 5 adjustments, 6 1/2" L
N9055	Tongue and groove plier, 5 adjustments, 9 1/2" L
N9056	Tongue and groove plier, 7 adjustments, 12" L
N9057	Angle nose plier, 8" L
N9058	Tongue and groove plier, 7 adjustments, 10" L
N9086	Griplock® tongue and groove plier, 9 1/2" L
N9087	Griplock® tongue and groove plier, 12" L

COMBINATION WRENCHES



N9073RR

Part No.	Description
N9028R	1 Wrench, 7/16"
N9029R	1 Wrench, 1/2"
N9030R	1 Wrench, 9/16"
N9073RR	7 Piece Set, 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4"





Hand Tools

FLARE NUT WRENCH



Part No.	Description
N9051	Flare Nut Wrench, Fits 1/4", 3/8" Flare Nut

RATCHET WRENCHES



N1001

Part No.	Description	Size (In.)
N1000	4 Size	3/16, 1/4, 5/16, 3/8"
N0999	4 Size, Offset 25°	3/16, 1/4, 5/16, 3/8"
N1001	2 Size	3/8, 1/2"

QUICKREAD POWER TAPES



N9060

By Lufkin. Rugged and durable. Exclusive no-drift locking action for accurate readings. Easy to read vertical numbering. Decimal equivalents for fast calculations

Part No.	Tape Length	Tape Width
N9060	16'	3/4"
N9061	25'	1"

LEVEL



Part No.	Description
N9064	Torpedo Level, 9" Aluminum

NUT DRIVERS



N9021



N9083M

Part No.	Description
N9018	1/4" Nut Driver
N9019	5/16" Nut Driver
N9021	3/8" Nut Driver
N9082M	1/4", Extra-Long, Magnetic, Hollow Shaft
N9083M	5/16", Extra-Long, Magnetic, Hollow Shaft
N9071R	5 Piece Nut Driver Set: 3/16", 1/4", 5/16", 11/32", 3/8"

AVIATION SNIPS



N9043



NP6510-R



NP6716-B



NP6510-R

Part No.	Description
N9042	Right Cut
N9043	Left Cut
N9044	Straight Cut
NP6510-L	Offset Left and Straight
NP6510-R	Offset Right and Straight
NP6716-B	Bulldog
N6900L	Upright Left Cut
N6900R	Upright Right Cut

VICE GRIPS



N00RR

Part No.	Description
N007R	Locking Plier, Straight Jaw, 7" L
N010R	Locking Plier, Straight Jaw, 10" L
N00RR	Locking Pinch-off Tool, 7" L

Hand Tools

NUT SETTERS



N0012

Part No.	Hex Size (In.)	Length (In.)
N0012	3/8	1 7/8
N0013	1/4	1 5/8
N0014	5/16	1 5/8

SCRAPERS & AWLS



N2426



N9041



N0485

Part No.	Description
N2425	Chisel Scraper, 1 1/4" W
N2426	Putty Scraper, 3" W
N0485	Gasket Scraper
N9041	Scratch Awl
N9065	5 Piece Punch & Chisel Set

UTILITY KNIVES



N66385

Part No.	Description
DMK6H	Standard Utility Knife, Retractable Blade
N66375	Heavy Duty, Auto Lock, 8 Pt. Breakaway Knife
N66385	Deluxe, Auto Lock, 13 Pt. Breakaway Knife
RBD6H	Replacement Blade DMK6H, 5 Pc.
N66372	Replacement Blade, 8 Pt., 5 Pc.
N66378	Replacement Blade, 13 Pt., 5 Pc.

INSPECTION MIRRORS



NUK20

Part No.	Description
NUC20	Telescoping Round Mirror
NUC2H	Refill Head for NUC20
NUK20	Telescoping Square Mirror
NUK2H	Refill Head for NUK20

CAULK GUN



Part No.	Description
N28CG	Caulking Gun

GREASE GUNS



N3100

Part No.	Description
N3100	Grease Gun, 14 Oz. Cartridge
N3132	Mini Grease Gun

GREASE GUN ACCESSORIES



N3124



N1218



N6312



N0531

Part No.	Description
N1212	Grease Hose, 12"
N1218	Grease Hose, 18"
N0531	Coupler, 1/8" FPT
N3124	Grease Cartridge, 14 Oz.
N3127	Mini Grease Cartridge (2)
N6312	1/8" FPT Straight (8)
N6310	29 Piece Fitting Assortment: 1/8" MPT Straight (8) 1/4" - 28 MPT straight (12) 1/8" MPT 90° (4) 1/4" - 28 MPT 90° (5)



SPRAYERS & ACCESSORIES



N4768



N1992A

Part No.	Description
N4768	1 Pint Hand Sprayer
N1985	1/2 Gallon Sprayer
N1992A	2 Gallon Acid Resistant Sprayer
N1993A	3 Gallon Acid Resistant Sprayer
1910V	N1985 Repair Parts Kit
1911V	Viton O-Ring Kit for N1985 Sprayer
955690	Nozzle Body, N1985
N956090	Poly Nozzle, N1985
N1910SGV	Repair Kit, N199* (Seals, Gaskets, Plunger Cup)
N1913PB	Repair Kit, N199* (Hose, Flow Control, Tube, Rod)

MAX FLO OIL PUMP



With this oil hand pump you can smoothly pump oil into the compressor on the down stroke while the system is under pressure. This makes pumping easier with a positive stroke.

- Automatic bleed valve with no moving parts equalizes pressure inside and outside of the oil container
- Pumps against 200 PSI pressure
- Comfort-grip rubber handle
- Compatible with all oil types (synthetic-mineral-polyolester)
- Fits all 1, 2 1/2 and 5 gallon containers

Part No.	Description
NFP	Max Flo Oil Pump

TUBE CLEANING



A1210

Part No.	Description
66510	Sand Cloth, 10 Yard Roll
66525	Sand Cloth, 25 Yard Roll
A1210	Scotch Brite™ Cleaning Pads, 4 1/2" x 6"

CLEAR PVC TUBING



FDA approved

Part No.	ID (In.)	Roll Length (Ft.)
14VT	1/4	100
38VT	3/8	100
12VT	1/2	100
58VT	5/8	100
34VT	3/4	100
78VT	7/8	50
1VT	1	25

SHOP TOWELS



N3125

Part No.	Description
N1200	Cotton Rags, 5 Pc.
N3125	Shop Towels, 10 Pc.

ROPE



High strength polyester, braided, low stretch

Part No.	Description
N120	1/2" Rope, 50 Feet
N380	3/8" Rope, 50 Feet

Miscellaneous Tools

PLASTIC TOOL CARRIERS



N26000

Part No.	Description
N26000	Handy Tote
N5444	Compartment Box with Lid and Handle: 13 3/8" L x 9 1/4" W x 2" H

TOOL TOTES



Part No.	Description
NBTOTE	Blue, Canvas, 6 x 6 x 12" Long
NWTOTE	White, Canvas, 6 x 6 x 12" Long

Safety Products

WORK GLOVES



Part No.	Description
A713	12" Long Blue Rubber Glove
A761	Knit Wrist Black Rubber Glove
A1321	Brown Jersey Glove
R5234	Industrial Leather Palm Glove
R5281	Leather Drivers Glove
R5286	Unlined Leather Glove
R5287	Lined Leather Glove
R5288	Powerdot Grip Glove, Large
R5289	Redboar Pigskin Glove, Large
R5290	Nitrile Palm Coated Glove, Large
NGXL	Nitrile, Ex. Large, 100 pc.

GOGGLES AND MASKS



N164002



A30022



N8500V

Part No.	Description
A30022	Liquid Splash Goggle, Fog Free
N164002	Uvex Astrospec Safety Glasses
N8500V	Disposable Dust Mask, pkg 5

FIRST AID KIT



Part No.	Description
N5290	Personal First Aid Kit



Solderless Terminals

RINGS, INSULATED



N6236L

N6216L

N6253L

Part No.	Wire Size (AWG)	Stud Size	Pkg. Qty.
N6236L	22-18	8	50
N6272L	16-14	8	50
N6216L	16-14	10	50
N6252L	12-10	10	50
N6253L	12-10	1/4"	50
N6257N	8	1/4"	25

BUTT CONNECTORS, INSULATED



N6231

N6217

Part No.	Wire Size (AWG)	Pkg. Qty.
N6232L	22-18	50
N6217	16-14	24
N6217L	16-14	50
N6231	12-10	19

BULLET PLUG AND RECEPTACLE, INSULATED



N6285L

Part No.	Wire Size (AWG)	Tab Size (In.)	Pkg. Qty.
N6285L	16-14	Plug/.157	50
N6286L	16-14	Receptacle/.157	50

SLIP-ONS, MALE, INSULATED



Part No.	Wire Size (AWG)	Tab Size (In.)	Pkg. Qty.
N6219	16-14	.250	24

SLIP-ONS, FEMALE, INSULATED



N6235L

N6218

N6251

Part No.	Wire Size (AWG)	Tab Size (In.)	Pkg. Qty.
N6235L	22-18	.250	50
N6214C*	16-14	.250	100
N6218	16-14	.250	24
N6218L	16-14	.250	50
N6251	12-10	.250	19
N6251L	12-10	.250	50
N6282L	22-18	.187	50
N6281L	16-14	.187	50

*Not Insulated

SLIP-ONS, FULLY INSULATED



N6234L

N6233L

Part No.	Wire Size (AWG)	Tab Size (In.)	Gender	Pkg. Qty.
N6229L ¹	16-14	.250	F	50
N6233L	16-14	.250	F	50
N6234L	16-14	.250	M	50

¹With insulated grip

FLAG SLIP-ONS, FEMALE



N6213C

N6277N

N6224C

Part No.	Wire Size (AWG)	Tab Size (In.)	Insulated	Pkg. Qty.
N6213C	16-14	.250	No	100
N6277N	16-14	.250	Yes	25
N6224C	12-10	.250	No	100

Solderless Terminals

FLAG SLIP-ONS FOR COMPRESSORS, FEMALE



N6271



N6258C



N6270L

Part No.	Wire Size (AWG)	Tab Size (In.)	Pkg. Qty.
N6271	18-16	.090 Pin	17
N6258C	16-14	.250	100
N6270L	12-8	.250	50

TERMINAL BLOCKS



N6183

Part No.	Description
N6183	6 Position, 20A, 250V, 14 AWG Maximum
N6185	10 Position, 20A, 250V, 14 AWG Maximum
N6187	14 Position, 20A, 250V, 14 AWG Maximum
N6193	6 Position, 30A, 600V, 12 AWG Maximum
N6195	10 Position, 30A, 600V, 12 AWG Maximum

SPADES, INSULATED



N6255L



N6227

Part No.	Wire Size (AWG)	Stud Size	Pkg. Qty.
N6237L	22-18	8	50
N6274L	16-14	6	50
N6227L	16-14	8	50
N6228L	16-14	10	50
N6255L	12-10	10	50

SPRING SPADES, INSULATED



N6238L

Part No.	Wire Size (AWG)	Stud Size	Pkg. Qty.
N6238L	22-18	8	50
N6239L	16-14	8	50
N6276L	16-14	8	50

TAB ADAPTERS



N6210



N6211C



N6212

Part No.	Description	Tab Size (In.)	Pkg. Qty.
N6210	1 Male / 1 Female	.250	24
N6211C	2 Male / 1 Female	.250	100
N6212	2 Male / 1 Female	.250	24

DEAD END CONNECTORS, INSULATED



N6223L

Part No.	Wire Size (AWG)	Pkg. Qty.
N6222L	22-14	50
N6223L	16-10	50
N6250N	18-8	25

TERMINAL REPAIR KITS



Each kit includes:

- Set of 3 color coded wires with brass cylinder and stainless steel set screws
- Application Wrench

Part No.	Description
TLC310	10 Gauge Compressor Stake Kit
TLC312	12 Gauge Compressor Stake Kit

Solderless Terminals

TERMINAL KITS



Kit Part No.	6211	6213	6216	6217	6218	6224	6231	6251	6252	6255	6227
N6200A Qty Included in Kit 16-14 Wire Range, Stud Sizes 8 & 10	15	20	10	10	15	—	—	—	—	—	10
N6200D Qty Included in Kit 12-10 Wire Range, Stud Size 10	10	—	—	—	—	10	10	10	10	15	—

Cable Ties & Clamps

NYLON CABLE TIES



Part No.	Color	Length (In.)	Max. Diameter (In.)	Tensile Strength	Package Qty.
N6261L	White	5	1 3/8	40 Lbs.	50
N6262L	White	7	1 3/4	50 Lbs.	50
N6262M	White	7	1 3/4	50 Lbs.	1,000
N6263D	White	11	3	50 Lbs.	500
N6263L	White	11	3	50 Lbs.	50
N6262BC	Black	7	1 3/4	50 Lbs.	100
N6262BM	Black	7	1 3/4	50 Lbs.	1,000
N6263BC	Black	11	3	50 Lbs.	100
N6263BD	Black	11	3	50 Lbs.	500
N6265BC	Black	14	4	50 Lbs.	100
N6264N	White	7	1 3/4	50 Lbs.	25

*Has mounting hole

DUCT TIES



Part No.	Color	Length (In.)	Max Diameter (In.)	Tensile Strength	Package Qty.
L24175	UV Black	24	7	175 Lbs.	50
L30175	Black	36	9	175 Lbs.	50
L36175N	Natural	36	11	175 Lbs.	50
L48175	Black	48	14	175 Lbs.	50

CABLE TIE MOUNT



Part No.	Description	Package Qty.
N6269L	1", Adhesive Backing	50

NYLON CABLE CLAMPS



Part No.	Pipe OD (In.)	Width (In.)	Thickness (In.)	Package Qty.
N5381	1/8	3/8	0.05	54
N5382	1/4	3/8	0.05	45
N5383	3/8	1/2	0.06	41
N5384	1/2	1/2	0.06	39
N5385	5/8	1/2	0.06	37

Wire & Service Cords

HOOK-UP WIRES



N632R

- Stranded
- Capacity—600V
- 48' lengths
- UL Listed

Part No.	Gauge	Color
N632B	16	Black
N632R	16	Red
N632W	16	White
N633B	14	Black
N633R	14	Red
N633W	14	White
N634B	12	Black
N634R	12	Red
N634W	12	White
N635B	10	Black
N635R	10	Red
N635W	10	White
N631B	8	Black
N631R	8	Red

THERMOSTAT WIRE



Part No.	Gauge	Conductors	Length (Ft.)
N6336	18	3	40
N6337	18	5	40

SJT SERVICE CORD



- 300V capacity
- UL listed

Part No.	Gauge	Conductors	Length (Ft.)
N6341	16	3	20
N6343	14	3	20

Electrical Supplies

WIRE NUTS



Color-coded connector shells are made from high dielectric, smooth polypropylene plastic to eliminate porosity and surface cracking. Resists practically all chemical action—unaffected by gasolines, oils, diluted acids and alkaline solutions. Heat-resistant up to 105°C (221°F).

Part No.	Description	Pkg. Qty.
N6291C	Grey, Mini, Non-Winged	100
N6292C	Blue, Mini, Non-Winged	100
N6293C	Orange, Small, Non-Winged	100
N6294C	Yellow, Medium, Winged	100
N6296C	Red, Large, Winged	100
N6295	Assortment: Yellow (15), Orange (15), Grey (15), Red (10)	55

HEAT SHRINK TUBING



- Assorted 6" lengths.
- Includes 2 of each

Part No.	Includes
N6370	1/8" Black, 1/8" White, 1/4" Black, 1/4" White, 1/2" Black, 1/2" White

CABLE STAPLES



N0274

Part No.	Description	Pkg. Qty.
N0273	Insulated Staples, 5/8" x 1/4"	50
N0274	Romex Staples, 1/2" x 1"	350

Electrical Supplies

CABLE MARKERS



Made of vinyl impregnated cloth and mounted on dispenser cards in a portable book. All markers are designed for both above and below ground applications.

Part No.	Description
N1002	"A-Z" and "0-15"
N1003	"#1 to #45"

TEST LEADS AND CLIPS



N5032

N5035

N5036

N5031

N5042

Part No.	Description	Package Qty.
N5031	Leads, Color Coded, Alligator Clip, Small	8
N5032	Leads, 18" Wire, Alligator Clip, Medium	2
N5035	Alligator Clip, 2", Medium	4
N5036	Test Clip, 2 1/2", Large	2
N5042	EZ Hook, 18 Ga.	2
N6025	Compressor Lead Kit	3

ELECTRICAL TAPE



Part No.	Description	Width (In.)	Roll Length (Yd.)
N5255	General Purpose Vinyl Tape	3/4	66

PLUGS AND ADAPTERS



N0179R



N2867



N2887

Part No.	Description	Package Qty.
N0179R	Plastic Handle Plug w/Flexible Spring Prongs, 2 Pole, 2 Wire, 13/32" Cord Hole 15A-125V	2
N2867	Armored Plug, Male, 2 Pole, 3 Wire 15A-125V	1
N2887	Armored Connector, Female, 2 Pole, 3 Wire, 15A-125V	1

TROUBLE LIGHTS AND EXTENSION CORDS



N5231



N5200

Part No.	Description
N5200	Trouble Lamp, 25' Cord, 13A, 125 V
N5201	Trouble Lamp, 50' Cord, 13A, 125V
N5231	75W Rough Service Bulb
N5232	100W Rough Service Bulb
N5230	Extension Cord (3 Outlets), 25'
N5229	Extension Cord, 50', 15A, 125 V
N5228	Heavy Duty Clamp On Light with Reflector

CONDUIT FITTINGS



Part No.	Description	Package Qty.
N1311	BX Connector, 1/2" Knockouts, 3/8" Trade	25
N1315	90° Connector, Steel Cover, 1/2" Knockouts, 3/8" Trade	3
N1318	Duplex Connector, Clamp Type, 1/2" Knockouts, 3/8" Trade	2
N1320	Romex Connector, Clamp Type, 1/2" Knockouts, 3/8" Trade	25
N1327	Split Bolt Connector, #8 Wire	3
N1328	Split Bolt Connector, #6 Wire	3
N1301	Conduit Bushing, 1/2" Offset	2
N1303	Conduit Bushing, 1/2" Straight	2
N0028	Bushing, Screw-On Washer	5
N0331	Anti-Short Bushing, 14/2, 14/3, 12/2, 5/16	35
N0310	Reducing Washer, 3/4"-1/2"	28
N1306	One Hole EMT Strap, 1/2"	20
N1307	One Hole EMT Strap, 3/4"	12
N1304	One Hole EMT Strap, 1"	8
N1305	One Hole EMT Strap, 1 1/4"	8

CONDUIT TUBING



Part No.	Description
12SEALTITE	1/2" Non-Metallic Liquid Tight Conduit, 100' L
34SEALTITE	3/4" Non-Metallic Liquid Tight Conduit, 100' L

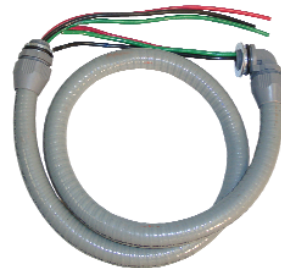
FLEXIBLE CONDUITS



- Non-metallic liquid tight conduit fitting
- Sealtight connection x box fitting

Part No.	Description
LT7500	1/2" Straight Connection
LT7501	3/4" Straight Connection
LT7504	1/2" 90° Connection
LT7505	3/4" 90° Connection
LT7508	1/2" 45° Connection
LT7509	3/4" 45° Connection

HVAC WHIPS



Part No.	Length (Ft.)	Connector (In.)	Wire Size
N63124	4	1/2	#10
N63126	6	1/2	#10
N63344	4	3/4	#8
N63346	6	3/4	#8

Boxes & Covers

FUSE, RECEPTACLE & COVER



Part No.	Description
N0381	Fuse/Outlet and Cover, 1/2 HP, Single Pole Switch, 125V

Boxes & Covers

ELECTRICAL BOXES



N0360



N0362

Part No.	Description	Dimensions (In.)		
		W	L	D
N0360	Utility, 1/2" Knockouts	2 1/8	4	1 7/8
N0361	Utility, 1/2" Knockouts, Deep	2 1/8	4	2 7/8
N0362	1900 Shallow, 21.0 cu. in., 1/2" and 3/4" Knockouts	4	4	1 1/2
N0363	1900 Deep, 30.3 cu. in., 1/2" and 3/4" Knockouts	4	4	2 1/8
N0364	Octagon, 1/2" and 3/4" Knockouts	4	4	1 1/2

BOX & SWITCH COVERS



N0365



N0366



N0375



N0369



N0373



N0384

Part No.	Description	Size (In.)	Finish
N0365	Wall Switch Utility Cover	2 1/8 x 4 1/8	Plated
N0366	Duplex Receptacle Cover	2 1/8 x 4 1/8	Plated
N0367	Utility Cover, Blank	2 1/8 x 4 1/8	Plated
N0372	Octagon, Electrical Box Cover, Blank	3 5/8 x 3 5/8	Plated
N0375	Utility Box Cover, 250V Receptacle	2 1/8 x 4 1/8	Plated
N0368	Wall Toggle Duplex Cover	4 x 4	Plated
N0369	Square Cover/Duplex Receptacle	4 x 4	Plated
N0371	Square Cover, Blank	4 x 4	Plated
N0377	Single Wall Toggle Utility Cover	4 x 4	Plated
N0373	Oil Burner Cover	4 x 2 1/8	Red
N0374	Gas Burner Cover	4 x 2 1/8	Red
N0384	Weatherproof Box with Switch and Cover	4 9/16 x 2 7/8 x 2 1/8	Plated

Receptacles & Switches

RECEPTACLES



N1876



N0270

Part No.	Description
N0270	Duplex Receptacle, 2 Pole, 3 Wire, 15A-125V
N0877	Duplex Receptacle, 2 Pole, 3 Wire, 20A-125V
N1876	Single Receptacle, 2 Pole, 3 Wire, 20A-250V

WALL SWITCHES



N1238

Part No.	Description
N0777	On-Off, 15A, 120V
N1238	Silent, 1 Pole, 20A-120/277 Vac
N1262	Silent, 2 Pole, 15A-120/277 Vac

TOGGLE SWITCHES



N0447

- Bat handle
- All switches rated 15A, 125/250 Vac

Part No.	Description
N0447	SPST, On-Off
N0454	SPDT, On-On
N0455	DPST, On-Off
N0494	DPDT, On-Off-On

COIL FLUSH



Specifically formulated for use to clean out complete systems and/or individual components in A/C and refrigeration systems after a compressor burnout or in retrofit situations such as line sets when switching from mineral to POE oil.

Low cost alternative to high priced one time disposable pressurized flushing cylinders.

Breaks down carbon deposits, sludge, tar, oil and greases.

- CFC free
- Non-chlorinated
- Low VOC
- Phased evaporation rate
- Non-flammable
- Leaves no residue
- Will not contaminate oil or refrigerant
- Biodegradable
- Eliminates any acid
- Safe and easy to use

CF20 Delivery Systems

The CF20 flush injector kit (75-502) comes complete with a reusable cylinder with check valve, hose and blow gun attachment. Cylinder is filled with CF20 and pressurized with nitrogen for quick and easy application into line sets, components or small systems.

Part No.	Description	Size
CF20	Internal Coil System Cleaner and Acid Remover	1/5/55 Gal
CF40	Internal Coil Cleaner and Acid Remover for Cascade and Super Low Temperature Systems	1/5/55 Gal
75-500	CF20 and Oil Pump (115/60)	Work Box
75-502	CF20 Re-Usable Flush Injector Kit	32 Oz Cylinder

LEAK DETECTORS



NRP Leak Detectors are specifically formulated to produce easy to see and long lasting bubbles. They can be applied with a dauber or sprayed on. As effective as the high priced electric leak detectors at a lower cost.

- Freeze protection at -30°F (Blue) and -5°F (Clear)
- Fluorescent yellow for dark areas (Yellow)
- Extra thick viscosity to stay in place (Clear)
- Biodegradable
- Non-flammable
- Safe, easy and effective

Part No.	Description	Net Weight
NLDB	Blue Leak Detector with Sprayer	16 Oz.
NLDB1G	Blue Refill	1 Gal.
NLDC	Blue Leak Detector with Dauber	8 Oz.
NLDC1G	Clear Refill	1 Gal.
NLDF	Fluorescent Yellow with Dauber	8 Oz.

OILERS

Zoom Spout Oiler - D01

NRP's all purpose turbine oil for use on: electric motors, bushings, tools, linkages, hinges, heaters, bearings, air conditioners, engines, fans, switches, shafts, etc...

- Paraffin base/non-gumming
- Rust and oxidation inhibited
- Use on electric motor bearings (1/5 to 5 HP)
- Withstands high temperatures
- A must for heaters and blowers



Zoom Spout Rust Buster - DR1

NRP's "Rust Busting" solution loosens rusty or corroded parts in seconds. Rust Buster quickly frees "frozen" fittings, bolts, nuts, shafts, bushings, etc...

- Ideal for reaching hard-to-reach spots
- No lingering color

Part No.	Description	Quantity
D01	Zoom Spout Oiler	12/Case
DR1	Zoom Spout Rust Buster	12/Case



Pipe Support Accessories

INSULCLAMPS



NIC-1-1/8

Insulclamps provide a simple yet innovative solution to the problem of effective pipe support in the air conditioning and refrigeration industries.

- Complete range of 14 sizes to fit 1/4" to 4 1/8" OD pipes
- Insulates against heat loss and reduces vibrations

- Plastic inserts are designed to withstand temperatures between -40°F and +300°F
- Easy and quick to install with integral lock nuts
- All metal parts are zinc plated and color passivated to resist corrosion
- Fixes to standard channel

Part No.	Description	Pkg. Qty.
NIC-1/4	1/4" OD	50
NIC-3/8	3/8" OD	50
NIC-1/2	1/2" OD	50
NIC-5/8	5/8" OD	50
NIC-3/4	3/4" OD	50
NIC-7/8	7/8" OD	50
NIC-1-1/8	1-1/8" OD	50
NIC-1-3/8	1-3/8" OD	50
NIC-1-5/8	1-5/8" OD	25
NIC-2-1/8	2-1/8" OD	25
NIC-2-5/8	2-5/8" OD	25
NIC-3-1/8	3-1/8" OD	20
NIC-3-5/8	3-5/8" OD	15
NIC-4-1/8	4-1/8" OD	10

QUICK POSITIONING CLIPS



QPC-7/8

The QPC is a fast and effective pipe support system designed to save the installer time and money with its ease of use.

- Available in 8 sizes from 1/4" to 1-3/8"
- No tools required, easy installation to channel
- Positive fixing, simply twist clip through 90°
- Fits all standard 1 1/2" channel
- Clip has insulation value
- Material withstands temperatures from -22°F to +275°F
- 5 pieces per bag

Part No.	Description
QPC-1/4	1/4" OD
QPC-3/8	3/8" OD
QPC-1/2	1/2" OD
QPC-5/8	5/8" OD
QPC-3/4	3/4" OD
QPC-7/8	7/8" OD
QPC-1-1/8	1-1/8" OD
QPC-1-3/8	1-3/8" OD

Insulation Products

CORK INSULATION TAPE



NRP cork insulation tape will prevent condensation and dripping of cold pipes. Cork insulation tape can be used in a wide range of applications for wrapping cold or hot pipes, valves and fittings from -20°F to +160°F. NRP cork insulation tape assures you easy and long lasting installation. Tape stays flexible to -20°F and no extra adhesives are needed. NRP rubberized cork tape adheres firmly to metal and to itself.

Specifications

Composition: synthetic rubber-asphalt
Filler: cork, contains no asbestos
Solids: approximately 99.8% (ASTM C771-74)
Color: black (ASTM D1729-69)
Weight: approximately 6 Lbs.
Odor: slight, non-contamination to sweet butter
Water Absorption: 0.02% (ASTM 1056)
Thermal Conductivity: 1.26 BTU/hr.(sq.ft.) (°F/in.) (ASTM C177-76)
Temperature Range: -20°F to +190°F

Part No.	Description	Case Qty
NRP1	30' Roll, 1/8" Thick, 2" Wide	12

FOAM INSULATION TAPE



NRP foam insulation tape will prevent pipe condensation when used as recommended. Can be used in a wide range of applications for wrapping cold and hot pipes, valves and fittings up to 180°F. NRP foam insulation tape assures you an easy and long lasting installation

because of its specially formulated adhesive. NRP pressure sensitive tape adheres firmly to metal and to itself.

Physical Properties

Thermal Conductivity: 0.27 K Factor. (ASTM C 177)

Water Absorption, by volume: 0.2% (ASTM C 209)

Thickness to Prevent Pipe Sweat

Air Temperature & Relative Humidity	Pipe Temperature	
	50°F	35°F
80°F & 50° RH	Single Layer	50% Overlap
80°F & 70° RH	50% Overlap + Single Layer	50% Overlap + 50% Overlap

Part No.	Description	Case Qty
N5	30' Roll, 1/8" Thick, 2" Wide	12

SEALING GUM & CORDS



NRP38

NRP sealing gum and cords can be easily pressed in place by hand to seal out air and moisture. NRP sealing gum adheres to clean and dry wood, metal, plastic and glass. It can also be painted.

Applications

NRP sealing gum and cords are designed to seal refrigeration cabinets and display cases as well as around room air conditioners. It can also be used in a number of commercial or industrial applications to seal metal buildings, trailers and mobile homes, etc.

Specifications

Base: non-drying, synthetic polymers
Filler: Inert materials
Color: off-white/grey
Odor: non-contaminating to sweet butter
Weight: 13 Lbs.
High resistance to: Water, water vapor, physical shock, temperature (service range -30°F to +220°F), mild acids and bases.
Excellent adhesion to: wood, metal, plastic and glass.

Consistency: soft, pliable, thumbable. Consistency is tested with standard penetrometer according to ASTM D217 using 300 gram cone.

Cone penetration, 5 seconds @ 77°F: 11.0-15.0 mm. Modeling clay, a material of similar consistency, tests 6.2. The higher readings show greater penetration and a softer material.

Part No.	Description	Case Qty
NRP2	Sealing Gum, 2 Lb. Slug/Box	24
NRP38	Sealing Cord, 3/8" Bead, 25'	12



Sheet Metal Screws

HEX HEAD



- Slotted hex washer head
- Zinc plated steel

Part No.	Size	Length (In.)	Pkg. Qty.
N6843H	8	1/2	84
N6845H	8	3/4	70
N6846H	8	1	58
N6853H	10	1/2	62
N6855H	10	3/4	52
N6856H	10	1	47
N6858	10	1 1/2	34
N6859	10	2	24
N6865	12	3/4	38
N6866	12	1 1/2	33

TEKS TIP



- Hex washer head
- Self-drilling
- Zinc plated steel

Part No.	Size	Length (In.)	Package Qty.
N6943C	8	1/2	100
N6943D	8	1/2	500
N6945C	8	3/4	100
N6945D	8	3/4	500
N6946C	8	1	100
N6953C	10	1/2	100
N6955C	10	3/4	100
N6955D	10	3/4	500
N6956C	10	1	100
N6956D	10	1	500

PAN HEAD



- Combination: phillips/slotted
- Zinc plated steel

Part No.	Size	Length (In.)	Pkg. Qty.
N6876	14	1	21
N6858PH	10	1 1/2	29
N6859PH	10	2	21

ZIP TIP



- Slotted hex washer head
- Self-piercing
- Zinc plated steel

Part No.	Size	Length (In.)	Package Qty.
N6933C	8	1/2	100
N6933M	8	1/2	1000
N6853Z	10	1/2	51
N6845Z	8	3/4	55
N6845ZM	8	3/4	1000

Threaded Fasteners

HEX HEAD CAP SCREWS



- Grade 2 steel
- Zinc plated
- USS classification

Part No.	Size-Threads (In.)	Length (In.)	Package Qty.
N6601	1/4"-20	3/4	24
N6602	1/4"-20	1	23
N6603	1/4"-20	1 1/2	17
N6621	5/16"-18	3/4	17
N6622	5/16"-18	1	15
N6623	5/16"-18	1 1/2	15
N6641	3/8"-16	3/4	11
N6642	3/8"-16	1	10
N6643	3/8"-16	1 1/2	8
N6644	3/8"-16	2	6

Threaded Fasteners

STOVE BOLTS



- Combination: phillips/slotted
- Round head
- Zinc plated Steel
- Nuts included

Part No.	Size-Threads (In.)	Length (In.)	Package Qty.
N6401	3/16"-24	1/2	33
N6402	3/16"-24	3/4	30
N6403	3/16"-24	1	25
N6412	1/4"-20	3/4	20
N6413	1/4"-20	1	17
N6414	1/4"-20	1 1/2	14
N6415	1/4"-20	2	12
N6416	1/4"-20	2 1/2	10

FLAT WASHERS



- Zinc plated steel

Part No.	Size (In.)	Package Qty.
N6701	3/16	127
N6702	1/4	86
N6703	5/16	45
N6704	3/8	34
N38WL	3/8	50
N38WC*	3/8	100
N6706	1/2	16
N6700A	6 Assorted sizes	107

*Packaged in plastic screwtop jar

FENDER WASHERS



- Zinc plated steel

Part No.	Nominal Size (In.)	OD (In.)	Package Qty.
N6722	1/4	1 1/4	23
N6722C	1/4	1 1/4	100
N6724	3/8	1 1/2	18

SPLIT LOCK WASHERS



Part No.	Nominal Size (In.)	Package Qty.
N6731	1/4	85
N6732	5/16	70
N6733	3/8	48

FINISHED HEX NUTS



- Zinc plated steel

Part No.	Size-Threads (In.)	Package Qty.
N6501	1/4"-20	57
N6501C	1/4"-20	100
N6502	5/16"-18	37
N6503	3/8"-16	26
N38HNL	3/8"-16	50
N38HNC	3/8"-16	100 (Jar)
N6505	1/2"-13	11
N6505L	1/2"-13	50 (Jar)

MACHINE SCREW HEX NUTS



- Grade 2 steel
- Zinc plated

Part No.	Description	Package Qty.
N6500A	Assortment, #6-32, #8-32, #10-32	60

HEX SOCKET SET SCREWS



- Cup point

Part No.	Description	Package Qty.
N6000	Assortment, 1/4"-20, 5/16"-18, 3/8"-16	16
N6001	Assortment, #8-32, #10-32, 1/4"-28	23



Anchors

MOLLY SCREWS



Part No.	Diameter (In.)	Wall Thickness (In.)	Hole Size (In.)	Package Qty.
N7302	1/8 Short	1/2	1/4	6
N7303	1/8 Long	3/4	1/4	6

TOGGLE BOLTS



- Combination: phillips/slotted
- Round head
- Zinc plated steel

Part No.	Length (In.)	Bolt Size (In.)	Package Qty.
N7033	4	3/16	6
N7034	4	1/4	5
N7036X	4	3/8	4
N7063	6	3/16	5
N7066X	6	3/8	4

EZ-ANCHOR KITS



NPK92



NZK92

- Phillips pan head sheet metal screws
- Plastic self drilling anchors ideal for drywall installations

Part No.	Description	Package Qty.
N7317L	EZ-Anchor Lite (30 Lb) Plastic with 6 x 1-1/4" Screws	50
NPK92	EZ-Anchor Medium (50 Lb) Plastic with 8 x 1-1/4" Screws	50
NZK92	EZ-Anchor Zinc with 8 x 1-1/4" Screws	50

WEDGE ANCHOR KIT



- With drill bit

Part No.	Description	Package Qty.
NWK38	3/8" x 2 3/4" Wedge Anchor with 3/8" x 4" Masonry Drill Bit	20

TAPCON KITS



- Hex washer head tapcons with drill bit

Part No.	Description	Package Qty.
NTK14	Tapcon, 1/4" x 1 1/4"	25
NTK34	Tapcon, 1/4" x 1 3/4"	25

DROP-IN THREADED ANCHORS



NSD38

- For concrete

Part No.	Description	Package Qty.
NSD14	Steel Drop In Anchor, 1/4"	4
NSD38	Steel Drop In Anchor, 3/8"	25
NDIT14	Setting Tool for 1/4" Drop-Ins	1
NDIT38	Setting Tool for 3/8" Drop-Ins	1

ROD ANCHORS



NRH2W



NRH2WS



NRHWT

- One piece threaded rod hanging system for wood, similar to "Sammy Screws"
- Applications include HVAC ductwork and strut channels, hanging pipe and sprinkler systems, suspending conduit and cable trays, and lighting systems and overhead utilities, among others.

Part No.	Description	Package Qty.
NRH1W	Vertical (Straight) Entry for 3/8" Threaded Rod, 1" Long	36
NRH2W	Vertical (Straight) Entry for 3/8" Threaded Rod, 2" Long	24
NRH2WS	Horizontal (Side) Entry for 3/8" Threaded Rod, 2" Long	24
NRHWT	Drive Socket for NRH Series Rod Anchors	1

Anchors

ANCHOR KITS



N7101C



N7104BC



N7111C

Part No.	Description	Package Qty.
N7101C	8 x 1" Combination (Phillips/Slotted) Sheet Metal Screws with 8-10 x 7/8" Blue Plastic Conical Anchors and 3/16" x 4" Masonry Drill Bit	100
N7104BC	8 x 1" Slotted Hex Washer Head Sheet Metal Screws with 7-9 x 1" Red Straight Fluted Anchors and 3/16" x 4" Masonry Drill Bit	100
N7106BC	10 x 1" Slotted Hex Washer Head Sheet Metal Screws with 10-12 x 1" Green Straight Fluted Anchors and 1/4" x 4" Masonry Drill Bit	100
N7124BC	10 x 1" Slotted Hex Washer Head Sheet Metal Screws with Grey Lip Anchors and 1/4" x 4" Masonry Drill Bit	100
N7102C	10 x 1-1/4" Combination (Phillips/Slotted) Pan Head Sheet Metal Screws with 10-12 x 1" Blue Plastic Conical Anchors and 1/4" x 4" Masonry Drill Bit	100
N7111C	14 x 1" Combination (Phillips/Slotted) Pan Head Sheet Metal Screws with 14 x 1" Blue Straight Fluted Anchors and 5/16" x 4" Masonry Drill Bit	100
N7103C	4 x 3/4" Combination (Phillips/Slotted) Sheet Metal Screws with 6-8 x 3/4" Blue Plastic Conical Anchors and 5/32" x 3" Masonry Drill Bit	100

Miscellaneous

HOSE CLAMPS



- Stainless steel band, housing
- Plated steel screw

Part No.	S.A.E. No.	Dia. Range (In.)		Package Qty.
		Min.	Max.	
N6202	—	.25	.62	6
N6203	6	.44	.78	6
N5410	10	.56	1.06	6
N5416	16	.81	1.50	6
N5420	20	.81	1.75	6
N5424	24	1.06	2.00	6
N5436	36	1.81	2.75	4

COTTER PINS



Part No.	Description	Package Qty.
N6011	Assortment, 1/16-1", 3/32 x 1 1/2"	66

MOTOR SHAFT KEYS



N6101

Part No.	Description
N6101	Small assortment: 1/8 x 1 1/4" (2), 3/16 x 1 1/8" (4), 1/4 x 1 3/4" (2), 3/16 x 1/4 x 1 1/8" (2)
N6102	Large assortment: 1/4 x 1 3/4" (3), 5/16 x 3" (2), 3/8 x 3" (2)

HIGH SPEED DRILL BITS



- Jobber length
- Black finish

Part No.	Size (In.)	Decimal Equivalent	Overall Length (In.)	Pkg. Qty.
N2008P	1/8	.1250	2 3/4	3

Numerical Index

052	20	D710PH	37	N0274	45	N1318	47
053	20	D712PH	37	N0310	47	N1320	47
118BV	26	D74PH	37	N0331	47	N1327	47
118BVT	26	D76PH	37	N0360	48	N1328	47
12BV	26	D78PH	37	N0361	48	N144B	21
12BVT	26	DMK6H	39	N0362	48	N144R	21
12SEALTITE	47	DR1	49	N0363	48	N144Y	21
12VT	40	G1SINGLE	2	N0364	48	N164002	41
138BV	26	G5TWIN	3	N0365	48	N1876	48
138BVT	26	GFP	25	N0366	48	N18BVB	22
14BV	26	GRK	25	N0367	48	N18BVR	22
14BVT	26	GS3700	4	N0368	48	N18BVRBY	22
14VT	40	GS3710	4	N0369	48	N18BVY	22
158BV	26	GVP12	18	N0371	48	N1910SGV	40
158BVT	26	GVP3	18	N0372	48	N1913PB	40
1910V	40	GVP6	18	N0373	48	N1985	40
1911V	40	HK11	20	N0374	48	N1992A	40
1VT	40	L24175	44	N0375	48	N1993A	40
218BV	26	L30175	44	N0377	48	N2000	25
218BVT	26	L36175N	44	N0381	47	N2000G	25
258BV	26	L48175	44	N0384	48	N2001	25
258BVT	26	LP11	16	N0447	48	N2001G	25
318BV	26	LP12	16	N0454	48	N2002	25
34BV	26	LP13	14	N0455	48	N2003	25
34BVT	26	LP22	16	N0485	39	N2004	25
34SEALTITE	47	LP22E	16	N0494	48	N2005	25
34VT	40	LPO	16	N0531	39	N2006	25
38BV	26	LPOE	16	N0777	48	N2006G	25
38BVT	26	LT7500	47	N0877	48	N2007	25
38VT	40	LT7501	47	N0999	38	N2007G	25
58BV	26	LT7504	47	N1000	38	N2008	25
58BVT	26	LT7505	47	N1001	38	N2008P	55
58VT	40	LT7508	47	N1002	46	N2009	25
66510	40	LT7509	47	N1003	46	N2010	25
66525	40	LV20	10	N120	40	N2011	25
75-500	49	LV2000	5	N1200	40	N2011F10	33
75-502	49	LV5	11	N1212	39	N2011F6	33
78BV	26	LV5E	11	N1218	39	N20330	33
78BVT	26	LV8	12	N1238	48	N20331	33
78VT	40	LV8E	12	N1262	48	N20332	33
955690	40	LV8/115	12	N12BVB	22	N20333	33
A1210	40	LV8/460	12	N12BVR	22	N2033H15	33
A1321	41	N0012	39	N12BVRBY	22	N2066T0	33
A30022	41	N0013	39	N12BVY	22	N2066T00	33
A713	41	N0014	39	N1301	47	N2066T1	33
A761	41	N0028	47	N1303	47	N2077G0	33
AR1UL	7	N007R	38	N1304	47	N2077G00	33
CD5555	24	N00RR	38	N1305	47	N2077G1	33
CF20	49	N010R	38	N1306	47	N2077G2	33
CF40	49	N0179R	46	N1307	47	N2077G3	33
CRT	24	N0270	48	N1311	47	N23200	32
D01	49	N0273	45	N1315	47	N23201	32

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N23202	32	N3824BVB	22	N5021	37	N6210	43
N2425	39	N3824BVR	22	N5031	46	N6211C	43
N2426	39	N3824BVRBY	22	N5032	46	N6212	43
N24BVB	22	N3824BVY	22	N5035	46	N6213C	42
N24BVR	22	N38300B	21	N5036	46	N6214C	42
N24BVRBY	22	N38300R	21	N5042	46	N6216L	42
N24BVY	22	N38300Y	21	N5200	46	N6217	42
N250T	19	N3836B	21	N5201	46	N6217L	42
N26000	41	N3836BVB	22	N5228	46	N6218	42
N2867	46	N3836BVR	22	N5229	46	N6218L	42
N2887	46	N3836BVRBY	22	N5230	46	N6219	42
N28CG	39	N3836BVY	22	N5231	46	N6222L	43
N3000	25	N3836R	21	N5232	46	N6223L	43
N3001	25	N3836RBY	21	N5255	46	N6224C	42
N3002	25	N3836Y	21	N5290	41	N6227L	43
N3003	25	N3848B	21	N5381	44	N6228L	43
N300B	21	N3848R	21	N5382	44	N6229L	42
N300R	21	N3848RBY	21	N5383	44	N6231	42
N300Y	21	N3848Y	21	N5384	44	N6232L	42
N3011	34	N38600B	21	N5385	44	N6233L	42
N3011X	34	N38600R	21	N5410	55	N6234L	42
N30331	33	N38600Y	21	N5416	55	N6235L	42
N30333	33	N3860B	21	N5420	55	N6236L	42
N3033H15	33	N3860BVB	22	N5424	55	N6237L	43
N3033H30	33	N3860BVR	22	N5436	55	N6238L	43
N3100	39	N3860BVRBY	22	N5444	41	N6239L	43
N3124	39	N3860BVY	22	N6000	53	N6250N	43
N3125	40	N3860R	21	N6001	53	N6251	42
N3127	39	N3860RBY	21	N600B	21	N6251L	42
N3132	39	N3860Y	21	N600R	21	N6252L	42
N325015	33	N386BVB	22	N600Y	21	N6253L	42
N325030	33	N386BVR	22	N6011	55	N6255L	43
N36B	21	N386BVRBY	22	N6025	46	N6257N	42
N36BVB	22	N386BVY	22	N60B	21	N6258C	43
N36BVR	22	N3872B	21	N60BVB	22	N6261L	44
N36BVRBY	22	N3872R	21	N60BVR	22	N6262BC	44
N36BVY	22	N3872RBY	21	N60BVRBY	22	N6262BM	44
N36R	21	N3872Y	21	N60BVY	22	N6262L	44
N36RBY	21	N3896B	21	N60R	21	N6262M	44
N36Y	21	N3896R	21	N60RBY	21	N6263BC	44
N380	40	N3896RBY	21	N60Y	21	N6263BD	44
N3812BVB	22	N3896Y	21	N6101	55	N6263D	44
N3812BVR	22	N38HNC	53	N6102	55	N6263L	44
N3812BVRBY	22	N38HNL	53	N6183	43	N6264N	44
N3812BVY	22	N38WC	53	N6185	43	N6265BC	44
N38144B	21	N38WL	53	N6187	43	N6269L	44
N38144R	21	N4768	40	N6193	43	N6270L	43
N38144Y	21	N48B	21	N6195	43	N6271	43
N3818BVB	22	N48R	21	N6200A	44	N6272L	42
N3818BVR	22	N48RBY	21	N6200D	44	N6274L	43
N3818BVRBY	22	N48Y	21	N6202	55	N6276L	43
N3818BVY	22	N5	51	N6203	55	N6277N	42

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N6281L	42	N6603	52	N6955D	52	N9051	38
N6282L	42	N6621	52	N6956C	52	N9054	37
N6285L	42	N6622	52	N6956D	52	N9055	37
N6286L	42	N6623	52	N6BVB	22	N9056	37
N6291C	45	N66372	39	N6BVR	22	N9057	37
N6292C	45	N66375	39	N6BVRBY	22	N9058	37
N6293C	45	N66378	39	N6BVY	22	N9060	38
N6294C	45	N66385	39	N7033	54	N9061	38
N6295	45	N6641	52	N7034	54	N9064	38
N6296C	45	N6642	52	N7036X	54	N9065	39
N6310	39	N6643	52	N7063	54	N9071R	38
N6312	39	N6644	52	N7066X	54	N9073RR	37
N63124	47	N665T	19	N7101C	55	N9082M	38
N63126	47	N6700A	53	N7102C	55	N9083M	38
N631B	45	N6701	53	N7103C	55	N9086	37
N631R	45	N6702	53	N7104BC	55	N9087	37
N632B	45	N6703	53	N7106BC	55	N95001	37
N632R	45	N6704	53	N7111C	55	N95003	37
N632W	45	N6706	53	N7124BC	55	N95004	37
N63344	47	N6722	53	N72B	21	N95006	37
N63346	47	N6722C	53	N72R	21	N95008	37
N6336	45	N6724	53	N72RBY	21	N956090	40
N6337	45	N6731	53	N72Y	21	N96B	21
N633B	45	N6732	53	N7302	54	N96R	21
N633R	45	N6733	53	N7303	54	N96RBY	21
N633W	45	N6843H	52	N7317L	54	N96Y	21
N6341	45	N6845H	52	N8500V	41	NAA1	31
N6343	45	N6845Z	52	N9002	36	NAB36B	22
N634B	45	N6845ZM	52	N9004	36	NAB36R	22
N634R	45	N6846H	52	N9005	36	NAB36RBY	22
N634W	45	N6853H	52	N9006	36	NAB36Y	22
N635B	45	N6853Z	52	N9009	36	NAB45	24
N635R	45	N6855H	52	N9010	36	NAB48B	22
N635W	45	N6856H	52	N9013	36	NAB48R	22
N6370	45	N6858	52	N9014	36	NAB48RBY	22
N6401	53	N6858PH	52	N9015	36	NAB48Y	22
N6402	53	N6859	52	N9018	38	NAB60B	22
N6403	53	N6859PH	52	N9019	38	NAB60R	22
N6412	53	N6865	52	N9021	38	NAB60RBY	22
N6413	53	N6866	52	N9024	37	NAB60Y	22
N6414	53	N6876	52	N9028R	37	NAB72B	22
N6415	53	N6900L	38	N9029R	37	NAB72R	22
N6416	53	N6900R	38	N9030R	37	NAB72RBY	22
N6500A	53	N6933C	52	N9041	39	NAB72Y	22
N6501	53	N6933M	52	N9042	38	NAB90	24
N6501C	53	N6943C	52	N9043	38	NAB96B	22
N6502	53	N6943D	52	N9044	38	NAB96R	22
N6503	53	N6945C	52	N9045	37	NAB96RBY	22
N6505	53	N6945D	52	N9046	37	NAB96Y	22
N6505L	53	N6946C	52	N9048	37	NABKIT	24
N6601	52	N6953C	52	N9049	37	NABORING	24
N6602	52	N6955C	52	N9050	37	NABS	24

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NBA1	30	NBV72R	21	NGP360R	34	NHD386BV	23
NBA2	30	NBV72RBY	21	NGP600	34	NHD3872S	23
NBA3	30	NBV72Y	21	NGXL	41	NHD38900S	23
NBA4	30	NBV96B	21	NH01012	24	NHD3896S	23
NBA5	30	NBV96R	21	NH01013	24	NHDBV1236	23
NBA6	30	NBV96RBY	21	NH03016	24	NHDBV1248	23
NBG1	34	NBV96Y	21	NH05001	24	NHDBV1260	23
NBRS341	35	NC100	19	NH05007	24	NHDBV1272	23
NBRS342	35	NC100U	19	NH06KIT	24	NHDBV1296	23
NBRS364	31	NC1000	19	NH72Y	34	NHDBV1436	23
NBRS365	31	NC1200P	35	NHA312	31	NHDBV1448	23
NBRS665	31	NC1300	35	NHA325	31	NHDBV1460	23
NBRS700	31	NC23	19	NHA36	31	NHDBV1472	23
NBRS770	31	NC240	19	NHD121200S	23	NHDBV1496	23
NBTOTE	41	NC240U	19	NHD12144S	23	NHDBV3836	23
NBV14FM	24	NC30	19	NHD12300S	23	NHDBV3848	23
NBV14MM	24	NC30U	19	NHD1236S	23	NHDBV3860	23
NBV36B	21	NC50	19	NHD1248S	23	NHDBV3872	23
NBV36R	21	NC50FLOAT	20	NHD12600S	23	NHDBV3896	23
NBV36RBY	21	NC50U	19	NHD1260S	23	NIC-1/2	50
NBV36Y	21	NC80	19	NHD1272S	23	NIC-1/4	50
NBV3836B	21	NC800	31	NHD12900S	23	NIC-1-1/8	50
NBV3836R	21	NC850	31	NHD1296S	23	NIC-1-3/8	50
NBV3836RBY	21	NC850CW	31	NHD141200	23	NIC-1-5/8	50
NBV3836Y	21	NDA8A	35	NHD1412BV	23	NIC-2-1/8	50
NBV3848B	21	NDIT14	54	NHD14144	23	NIC-2-5/8	50
NBV3848R	21	NDIT38	54	NHD1418BV	23	NIC-3/4	50
NBV3848RBY	21	NE025A	33	NHD1424BV	23	NIC-3/8	50
NBV3848Y	21	NEA1G	31	NHD14300	23	NIC-3-1/8	50
NBV3860B	21	NEA25BA	33	NHD1436	23	NIC-3-5/8	50
NBV3860R	21	NEA25MA	33	NHD1436BV	23	NIC-4-1/8	50
NBV3860RBY	21	NEA2G	31	NHD1448	23	NIC-5/8	50
NBV3860Y	21	NEN450F	33	NHD1460	23	NIC-7/8	50
NBV3872B	21	NFG	35	NHD14600	23	NKA125B	32
NBV3872R	21	NFP	40	NHD1460BV	23	NKA125M	32
NBV3872RBY	21	NGA11	30	NHD146BV	23	NKA125M12P	32
NBV3872Y	21	NGA14	30	NHD1472	23	NKA37H	30
NBV3896B	21	NGA14L	30	NHD1472BV	23	NKA700M	32
NBV3896R	21	NGA2	30	NHD14900	23	NKA700M12P	32
NBV3896RBY	21	NGA3	30	NHD1496	23	NKA725M12P	32
NBV3896Y	21	NGA32	30	NHD381200S	23	NKPN1	34
NBV38FM	24	NGA3J	30	NHD3812BV	23	NKPN20S	34
NBV38MM	24	NGA3L	30	NHD38144S	23	NKPN40S	34
NBV48B	21	NGA5	30	NHD3818BV	23	NKX4B	30
NBV48R	21	NGA5L	30	NHD3824BV	23	NKX4BCW	30
NBV48RBY	21	NGA8	30	NHD38300S	23	NKX5B	30
NBV48Y	21	NGA8J	30	NHD3836BV	23	NKX6MC	30
NBV60B	21	NGA8L	30	NHD3836S	23	NL1	27
NBV60R	21	NGG4	31	NHD3848S	23	NL11	27
NBV60RBY	21	NGP18R	35	NHD38600S	23	NL12	27
NBV60Y	21	NGP360J	34	NHD3860BV	23	NL123	27
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NPCH18	22	NRE80314	36	NSW12A.....	33	RM160	25
NPCH24	22	NRE82240	36	NSW25A.....	33	RM2	25
NPCH30	22	NRE82250	36	NTCA10CAT	32	RM3	25
NPCH36	22	NRH1W	54	NTK14	54	RM336	25
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