HIGH PRESSURE RECIPROCATING PUMPS

DPD, NDPD, CDR, LXR WARM END DRIVE ............................................. $1,695.00
DPD, NDPD, LXR COLD END ................................................................. $625.00
SPD, CDR, CO2 COLD END ................................................................. $450.00
CRYOCHEM, P1600, P1700, P1800 WARM END DRIVE .................. $1,995.00
CRYOCHEM P1600, P1700, P1800 COLD END ...................................... $725.00

CENTRIFUGAL PUMPS

1” x 2” x 4 ½” CENTRIFUGAL COLD END MINOR OVERHAUL ......... $645.00
1 x 2 x 4 ½ CENTRIFUGAL COLD END MAJOR OVERHAUL ...... $845.00
VACUUM PUMPS

INCLUDES:

Bearings
Discharge valve
Shaft seal
Sight glass kit
Gaskets

KINNEY KC-15.......................................................... $1,495.00
KINNEY KD-30, KD-50............................................. $1,995.00

* REBUILD KITS AVAILABLE

CARDOX CO2 PUMP

INCLUDES:

Bearings
Packing set
Piston
Suction/Discharge valves
Gaskets

CARDOX CO2 PUMP REPAIR....................................... $1,995.00

* REBUILD KITS AVAILABLE
Includes the following:

- 9 HAT SEALS
- 3 PISTON RINGS
- 1 RIDER RING
- 1 SILICONE O-RING
- DISCHARGE GASKET
- SUCTION GASKET
- SUCTION ADAPTER GASKET
- DISCHARGE POPPET

- PULL A VACUUM ON THE COLD END CHAMBER
- LAP THE SUCTION VALVE AND SEAT
- LAP THE DISCHARGE PORT
- ENSURE TOLERANCES AND CLEARANCES ARE WITHIN SPECIFICATIONS
- CLEAN, ASSEMBLE AND PACKAGE FOR OXYGEN SERVICE

HIGH PRESSURE COLD END CUT OUT

Veite Cryogenic Equipment and Service Corp.
SPECIALIZING IN CRYOGENIC PUMPING SYSTEMS, PIPING DISTRIBUTION SYSTEMS AND MANIFOLDING
34435 MILLS ROAD • NORTH RIDGEVILLE, OHIO 44039 • 440-327-2492 or FAX 440-327-0163
Includes the following:

- CROSSHEAD PISTON
- CONNECTING ROD BEARINGS
- WRIST PIN
- THRUST WASHERS
- CRANKSHAFT BEARINGS
- D.U. BUSHING (CYLINDER SLEEVE)
- DUST SEAL
- GREASE SHIELD

- ALL DRIVES ARE DEGREASED, SANDBLASTED AND PAINTED.
- CHECK TO MAKE SURE ALL TOLERANCES AND CLEARANCES ARE WITHIN SPECIFICATIONS.
- ALL PUMPS ARE CLEANED FOR OXYGEN SERVICE
Includes the following:

- CROSSHEAD PISTON
- CONNECTING ROD BEARINGS
- WRIST PIN
- THRUST WASHERS
- CRANKSHAFT BEARINGS
- D.U. BUSHING (CYLINDER SLEEVE)
- DUST SEAL
- GREASE SHIELD

- ALL DRIVES ARE DEGREASED, SANDBLASTED AND PAINTED.
- CHECK TO MAKE SURE ALL TOLERANCES AND CLEARANCES ARE WITHIN SPECIFICATIONS.
- ALL PUMPS ARE CLEANED FOR OXYGEN SERVICE.
Designed specifically for pumping cryogenic liquids for to gas for filling high pressure storage cylinders and various testing, purging and process requirements.

**FEATURES:**
- Vacuum jacket cold-end
- Minimum maintenance requirements
- Rugged, compact, heavy duty construction
- Minimum cool-down time
- Lightweight
- Reliable
- Pressure to 6000 psi
- Time proven, performance tested

**FLUIDS:**
- OXYGEN
- NITROGEN
- ARGON
- HYDROGEN
- METHANE
LXC SERIES HIGH SPEED CENTRIFUGAL PUMP

VCE CRYOGENIC GAS PUMPING SYSTEMS

1” x 2” x 4 -1/2”

Designed specifically to pump cryogenic liquids for filling liquid cylinders and storage tanks. The gear driven design offers proven reliability and longer bearing life than similar belt driven designs. The high pressure bellows seal significantly outperforms and outlasts others, keeping your maintenance costs down.

FEATURES:

- Rugged, compact, heavy duty construction
- Lightweight
- Single stage design
- High pressure bellows seal assembly
- High efficiency impeller and volute design
- Minimum cool down required
- Ideal for station refilling medical vans and mobile tank truck
- High flow with low head transfer

FLUIDS:

- LIQUID OXYGEN
- LIQUID NITROGEN
- LIQUID ARGON
- LIQUID HYDROGEN
- LIQUID METHANE

Veite Cryogenic Equipment and Service Corp.
SPECIALIZING IN CRYOGENIC PUMPING SYSTEMS, PIPING DISTRIBUTION SYSTEMS AND MANIFOLDING
34435 MILLS ROAD • NORTH RIDGEVILLE, OHIO 44039 • 440-327-2492 or FAX 440-327-0163
CDR SERIES RECIPROCATING PUMP

FEATURES:
• 3.0 g.p.m. at 1000 psi
• 1500 psi maximum operating pressure
• 5 h.p. motor
• Rugged, compact, heavy duty construction
• Lightweight
• Reliable
• Low maintenance requirements
• Time proven, performance tested

FLUIDS:
Carbon dioxide
Nitrous oxide
VCE'S state-of-the-art facility combined with our expert staff enables us to repair all cryogenic pumps on the market at competitive rates. We rise to the challenge by embracing technology and you can rest assured knowing your pump is in the hands of qualified people you can trust. Thanks to our large inventory and expert staff most pump models can be repaired and returned in 24 hours. Compare maintenance costs and service life, we can't be beat.

PARTS, SALES & SERVICE FOR:

A.C.D. Paul, Cardox, C.C.I, Cryogenic Components, Cryo-chem, Cryogenic Machinery, Cryomec, CS&P, WCP.

SPARE PUMPS AVAILABLE FOR SAME DAY SHIPMENT

<table>
<thead>
<tr>
<th>DPD Drive / Cold End</th>
<th>3&quot; Centrifugal</th>
<th>Cardox Drive / Cold End</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDPD Drive / Cold End</td>
<td>4 -1/2&quot; Centrifugal</td>
<td>Omega Drive / Cold End</td>
</tr>
<tr>
<td>LXR Drive / Cold End</td>
<td>6&quot; Centrifugal</td>
<td>LXR Drive / Cold End</td>
</tr>
<tr>
<td>CDR Drive / Cold End</td>
<td>TC-21</td>
<td>Kinney KC-15 Vacuum Pump</td>
</tr>
<tr>
<td>SPD Drive / Cold End CO2, N2O</td>
<td>Cryo-Chem Drive / Cold End</td>
<td>Kinney KD-30 Vacuum Pump</td>
</tr>
</tbody>
</table>

Veite Cryogenic Equipment and Service Corp.

SPECIALIZING IN CRYOGENIC PUMPING SYSTEMS, PIPING DISTRIBUTION SYSTEMS AND MANIFOLDING

34435 MILLS ROAD • NORTH RIDGEVILLE, OHIO 44039 • 440-327-2492 or FAX 440-327-0163
Series KC compound high vacuum pumps are designed to maintain lower pressures than are attainable with single stage vacuum pumps. These pumps are engineered for long life and easy maintenance making them ideal for high volume cylinder evacuation.

**FEATURES:**

- Produce lower ultimate pressures than are attainable with single stage vacuum pumps.
- High pumping speed at low pressures
- Rugged construction, compact design
- Vibration free operation
- Air – cooled

---

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Free air displacement (CFM)</th>
<th>Pump Speed (RPM)</th>
<th>Motor Horse Power</th>
<th>Oil Capacity</th>
<th>Height</th>
<th>Depth</th>
<th>Length</th>
<th>Weight Complete Assembly (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KC-2</td>
<td>2</td>
<td>767</td>
<td>1/4</td>
<td>1 pt.</td>
<td>15-1/2&quot;</td>
<td>10-1/2&quot;</td>
<td>15-7/8&quot;</td>
<td>61</td>
</tr>
<tr>
<td>KC-3</td>
<td>3</td>
<td>1150</td>
<td>1/3</td>
<td>1 pt.</td>
<td>16&quot;</td>
<td>11-3/4&quot;</td>
<td>18-1/2&quot;</td>
<td>80</td>
</tr>
<tr>
<td>KC-5</td>
<td>5</td>
<td>638</td>
<td>1/3</td>
<td>1-1/3 pt.</td>
<td>16-3/16&quot;</td>
<td>13-1/4&quot;</td>
<td>19-1/8&quot;</td>
<td>125</td>
</tr>
<tr>
<td>KC-8</td>
<td>8</td>
<td>1022</td>
<td>1/2</td>
<td>1-1/3 pt.</td>
<td>16-3/16&quot;</td>
<td>12-5/16&quot;</td>
<td>19-1/2&quot;</td>
<td>150</td>
</tr>
<tr>
<td>KC-15</td>
<td>15</td>
<td>571</td>
<td>1</td>
<td>3-1/2 qt.</td>
<td>25-3/4&quot;</td>
<td>18-1/16&quot;</td>
<td>22-1/2&quot;</td>
<td>250</td>
</tr>
<tr>
<td>KD-30</td>
<td>33</td>
<td>571</td>
<td>1/2</td>
<td>1 gal.</td>
<td>27&quot;</td>
<td>20&quot;</td>
<td>20-3/8&quot;</td>
<td>200</td>
</tr>
<tr>
<td>KD-50</td>
<td>52</td>
<td>900</td>
<td>2</td>
<td>3 gal.</td>
<td>32-1/2&quot;</td>
<td>20&quot;</td>
<td>20-5/8&quot;</td>
<td>230</td>
</tr>
<tr>
<td>KDH-80</td>
<td>83</td>
<td>546</td>
<td>5</td>
<td>4-1/2 gal.</td>
<td>31-7/16&quot;</td>
<td>29-1/4&quot;</td>
<td>35-5/16&quot;</td>
<td>510</td>
</tr>
<tr>
<td>KDH-130</td>
<td>134</td>
<td>546</td>
<td>5</td>
<td>6 gal.</td>
<td>39-1/4&quot;</td>
<td>27-9/16&quot;</td>
<td>38-7/8&quot;</td>
<td>730</td>
</tr>
</tbody>
</table>
CPR-VPO VCE Houghton – Safe vacuum pump oil recommended for use in vacuum pumps for nitrogen, argon, helium and hydrogen. Available in 1 gallon or 5 gallon cans.

CPR-HO VCE Halocarbon Oil – Especially recommended for use with oxygen vacuum pumps and liquid oxygen centrifugal pumps. Available in 1 quart containers.

KC-15 RA Vacuum Trap Riser Assembly - This is an essential safety device for vacuum pump applications. The riser assembly holds 2.5 times the pumps oil capacity and provides a fail-open solenoid valve which will relieve to atmosphere in the event of power loss. This is a necessary feature required to prevent back feed oil contamination of the tank, pipeline or cylinders being evacuated.

DV-6R Vacuum Gauge Tubes - VCE vacuum tubes are rugged, sensitive and accurate. The standard metal tubes are constructed of nickel plated steel with plastic bases color coded to prevent mixup. All vacuum gauge tubes are matched and interchangeable within their respective ranges. The heavy duty gauge tube has a gold plated hermetic seal base with model housing for maximum corrosion resistance. They connect to the vacuum system by means of a standard 1/8” NPT male pipe thread. Vacuum tubes should be mounted vertically with the open end down.

KS-1 VCE Kinseal Vacuum Sealer - A thermoplastic sealer for use on metal to metal threads. Recommended for use on vacuum gauges, tubes and valves. Available in 1 quart can.

DC-HVG VCE High Vacuum Grease - A superior lubrication at high vacuum ranges. For use at pressures down to 10-6mm. Available in 5.3 oz. tube.

Diaphragm Valve - This rugged and reliable vacuum valve is regarded as the standard in the vacuum industry. Ideal for compressed gas fill plant applications. Available in sizes ½” thru 3”.

VG-500-TC Battery Operated Vacuum Gauge – Range: 0-1000 micron Hg – This lightweight, portable, battery-operated gauge provides accurate repeatable readings from 1000 To 1 micron (1 to 10-3 torr).
Lubricants, greases, pastes, sealants and tape for cryogenic and compressed gas applications. Oxy-safe products have been developed as commercially economical industrial materials for cryogenic medical and compressed gas applications especially for oxygen and LOX.

**OXY-8 GREASE** - Recommended for oxygen and nitrous oxide service – valves, pumps, motors, gears, bearings, LOX systems. Lubricates in gas, liquid or vacuum service. 1 lb. jar, 100 gram plunger, 100 gram jar.

**OXY-8 PASTE** - Recommended for use as a joint/thread sealer in oxygen gas and LOX systems. 100 gram plunger, 100 gram jar, 1 pound jar.

**FORMULA-8** - A superior general purpose Teflon paste joint sealer for threads In material. USDA approved for oxygen use. An excellent anti-gall compound for stainless steel fittings. 3.5 oz. tube.

**FOMBLIN GREASE UT-18** - Recommended for oxygen and nitrous oxide service. Excellent properties for lubricating valve seat threads on master control and cylinder manifold valves. Superior lubrication in any gas application - nitrogen, argon, helium, CO2. 3.5 oz. tube.

**KRYTOX GREASE KRYG-1** - Recommended for lubrication of pump motors, gears and bearings. Ideal for packing cryogenic and high pressure pump bearings. 1 lb. jar, 1.75 lb. tube.