



DEKKER VACUUM TECHNOLOGIES, INC.

SYSTEM SPECIFICATION

DATE : February 28, 2002  
 CUSTOMER : Compressed Air Solutions  
 OUR REF : Q03962-01T (REVISION A)  
**"Vmax" Heavy Duty Industrial Vacuum Pump System**

**SYSTEM MODEL: VMX0452KA1- 00**

**PUMP ASSEMBLY:**

- (1) - DVT single stage, high efficiency, liquidring vacuum pump model DV0451A-KA0
  - Pump Capacity : 450 ACFM @ 20" Hg.
  - Ultimate vacuum : 29.5" Hg
  - Power consumption : 25 HP
  - Pump materials : All iron construction with ductile iron impeller and mechanical shaft seals with Viton elastomers. *- is shaft st. stl.?*

*- is mech. seal solid carbon per # 2.1.51?*

**VMAX SYSTEM COMPONENTS:**

- (1) - Electric Motor 25Hp, TEFC, 460 Volt, 3 phase, EPAC , 1.3 SF
- (1) - Flexible coupling assembly
- (1) - Coupling guard
- (1) - Fabricated steel base plate
- (1) - Patented DX-5 oil separator/ reservoir, c/w five stage air/oil separator arrangement with less than 5ppm carryover.
- (1) - Oil scavenger line
- (1) - Back-pressure gauge
- (1) - Sealant stop valve
- (1) - Y-strainer
- (1) - Solenoid valve
- (1) - Separator drain valve
- (1) - Separator sight/level gauge
- (1) - Discharge temperature gauge
- (1) - Standard air-cooled, heat exchanger package c/w main motor driven cooling fan and fan guard.
- (1) - High temperature switch
- (1) - Temperature control valve
- (1) - Low level switch
- (1) - High level switch
- (1) - High back pressure switch
- (1) - Set of vibration pads
- (1) - Full charge of sealing fluid

**INLET COMPONENTS:**

- (1) - Inlet check valve
- (1) - Vacuum gauge
- (1) - Inlet filter *- to be 10 micron efficiency. filter area to be 450/150 = 9 sq ft.*

*- Where is information on vacuum relief valve + silencer*  
*- Provide thermometers for inlet air temp, discharge air temp + sealing oil temp.*

PEASE & SONS, INC. POB 44100 TACOMA, WA 98444 206-331-7700	SUBMITTAL NO. <u>02</u> SECTION NO. <u>11216-2.1</u> DRAWING NO. _____
This submittal has been reviewed by Pease & Sons Inc with regard to conformance to the design concept represented by the project plans & specifications. Review by the contractor or the engineer does not relieve the subcontractor/supplier from responsibility for compliance with the contract requirements. Submittal is	
<input type="checkbox"/> APPROVED <input checked="" type="checkbox"/> APPROVED WITH DEVIATIONS NOTED <input type="checkbox"/> SUBMITTAL AS SPECIFIED <input type="checkbox"/> SUBSTITUTE ITEM AT NO CHANGE IN COST	
WYCKOFF / EAGLE HARBOR SUPERFUND SITE JOB # 8160	
Reviewed by: <u>JJK</u>	Date <u>3/15/02</u>

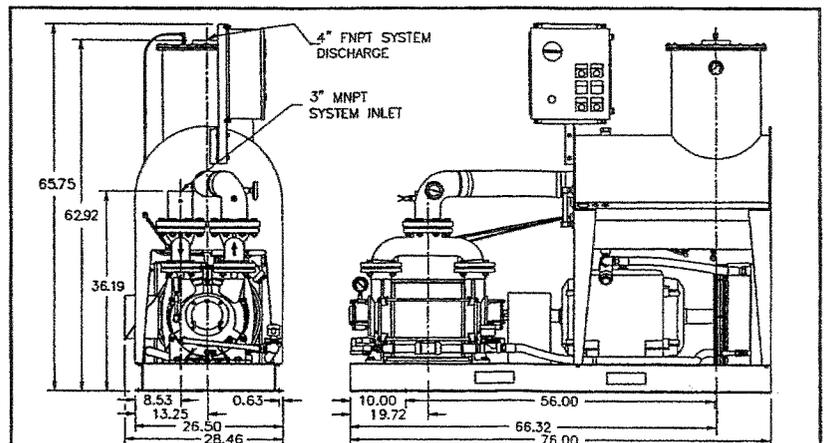
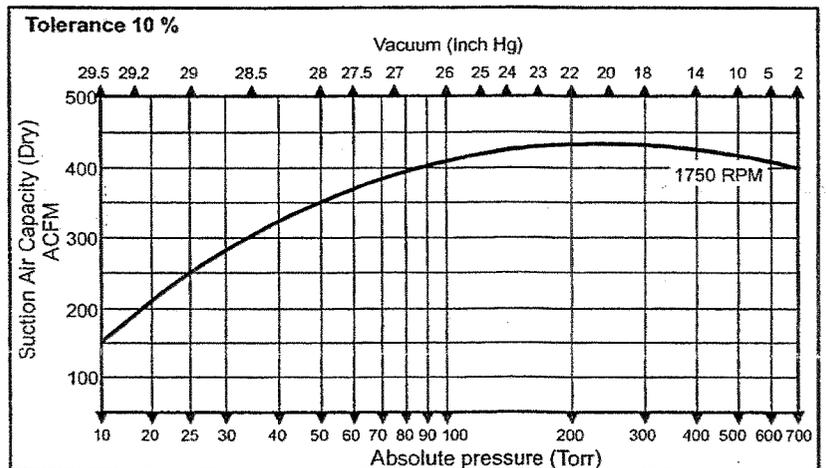
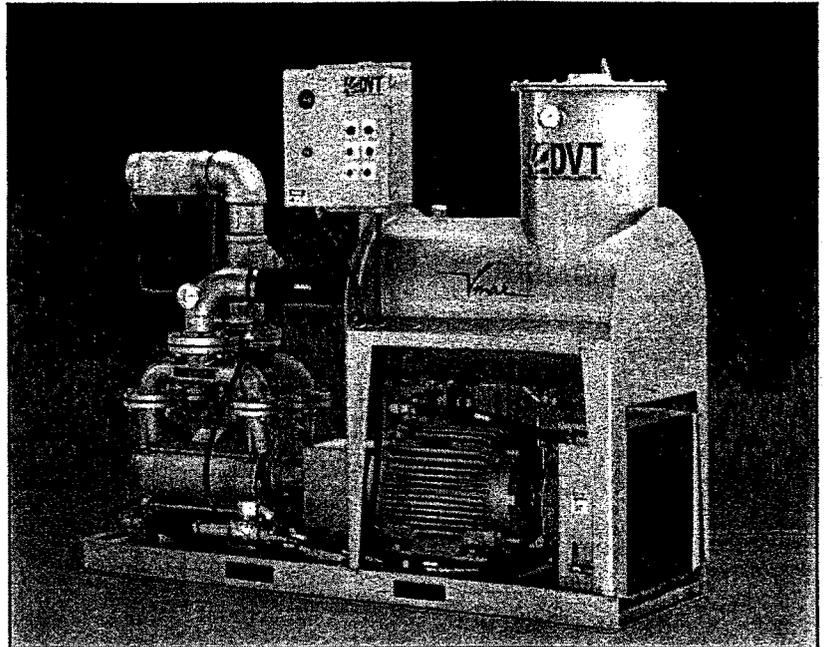


## 10. VMAX SYSTEMS

*Vmax* oil-sealed  
vacuum pump system  
VMX0452K

Why more and more customers are switching to the *Vmax* system:

- ✓ The only system on the market with a full 3-year warranty!
- ✓ New, patented, **high-efficiency DX-5 separator** eliminates oil carry-over concerns.
- ✓ Rugged, **high-quality, industrial system**, offering years of **trouble free operation**.
- ✓ **Extended-life seal-fluid** is not used as a lubricant. Change interval is not critical, resulting in a minimum of **10,000 hours of continuous operation**.
- ✓ **Direct drive at low speed (1750RPM)** eliminates the use of V-belts, resulting in very low maintenance and **zero downtime**.
- ✓ **Extremely low operating noise level** makes this system desirable in today's workplace.
- ✓ **Continuous operation over the full vacuum range** without overheating.
- ✓ **Carry-over of soft solids and/or minimal amounts of liquid does not cause damage** to the internal parts of the pump.
- ✓ **Electrical control panel is standard**.
- ✓ **Air-cooled design is standard** with water-cooling available at no extra charge.



### Performance Characteristics

Nominal capacity:	450CFM
Motor:	25HP
Speed:	1750RPM
Maximum vacuum:	29.5"Hg
Weight (approximate):	1750Lbs
Maximum gas inlet temperature:	212°F/100°C
Maximum noise level (at 3 feet):	78dBA
Oil capacity (approximate):	17 GAL
<i>Performance based on atmospheric pressure equal to 29.92"Hg</i>	

Information contained in this document is for reference only. Subject to change without notice.

### SKIDMORE CONDENSATE RETURN SYSTEM

Simplex, 15 gallon

## Description

The Protector Series condensate units are capable of handling hot (210°F) or cold water. They feature a 1/3 horsepower pump that handles 18 gpm at 20 psi with an open drip proof single phase motor. The Protector Series is available in simplex or duplex; either condensate return, or boiler feed. Many units have low profiles for low headroom applications, and are expertly designed to meet many applications.

## Applications

- Condensate transfer
- Air conditioning
- Heating
- Liquid transfer
- Residential effluent
- Remote liquid transfer
- Assembly line drainage

## Features

- Multiple profiles for specific applications
- Expertly designed for maneuverability
- Simplicity in field hook up
- Versatile compatibility of handling 210°F water
- Competitively priced
- Manufactured in the U.S. by a team of professional craftsmen
- Industry leader in prompt delivery
- Largest selection to fit many different applications

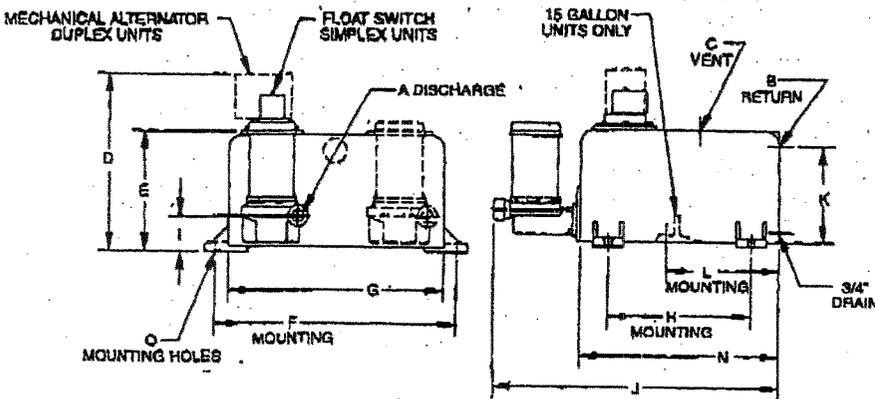
ENGR. NOTE:  
CONDENSATE RECEIVER  
FOR HX-3 ON SUCTON  
SIDE OF VACUUM PUMPS  
IS SUBMITTED UNDER  
SEPARATE COVER.

- Receiver: Steel or cast iron
- Volute: Cast iron
- Seal plate: Cast iron
- Impeller: Non-ferrous material
- Mechanical seal: John Crane type 6 or equal, ceramic and CraneCarb seal faces, neoprene, EPT and Buna-N elastomers, stainless steel metal parts (Crane Packing Co. CraneCarb is a phenolic bonded carbon graphite)
- Float switch: Simplex units normally open contacts which energize pump on demand (liquid rise)
- Mechanical alternator: Duplex unit equalizes running time between two pumps and provides emergency backup in case of excessive liquid return or pump failure.
- 3/8" Make-up valve: Maximum inlet psi 80 (boiler feed operation)
- Casing gasket: Cellulose fiber chloroprene
- Water slinger: Neoprene
- Hardware: Stainless steel, brass (cadmium plated)
- Maximum limits: Liquid temperature 210°F, ph range: 4-9.
- Close coupled motor: Square flange, 1/3 hp, 115/230 ODP, 3450 RPM, permanently grease lubricated shielded ball bearings, threaded stainless steel shaft. Capacitor start, induction run, built-in thermal overload protection with automatic reset.
- Suction isolation valve: (optional)

CORPS OF ENGINEERS  
NORTHWEST AREA OFFICE

JUL 11 2002

APPROVAL DETAILS ON 4025  
FORM 4025 ACTION CODE



End view  
Cast iron 15 and 21 gallon  
Simplex and duplex units

Side view  
Cast iron 15 and 21 gallon  
Simplex and duplex units

Pages Construction

Job: DACAL67-99-D-1017/0019  
 Date: 6-19-02  
 Title: 25-Hem 2  
 Drawn: Dwg. M.T. 4

Review: [Signature]  
 Approved: [Signature]  
 Remains the property of the Company

By: *John B. Pease*

# SKIDMORE

## PUMP PERFORMANCE CURVES

