



**WEAVER CONSTRUCTION MANAGEMENT, INC.**

3679 S. Huron St., Suite 404

Englewood, CO 80110

Phone: (303) 789-4111 FAX: (303) 789-4310

**SUBMITTAL TRANSMITTAL**

August 8, 2011

**WCM Submittal No: 11314-001**

**PROJECT:** Harold Thompson Regional WRF  
Birdsall Rd.  
Fountain, CO 80817  
Job No. 2908

**ENGINEER:** GMS, Inc.  
611 No. Weber St., #300  
Colorado Springs, CO 80903  
719-475-2935 Roger Sams

**OWNER:** Lower Fountain Metropolitan  
Sewage Disposal District  
901 S. Santa Fe Ave.  
Fountain, CO 80817  
719-382-5303 James Heckman

**CONTRACTOR:** Schloss Engineered Equipment, Inc.  
10555 E. Dartmouth Ave., Suite 230  
Aurora, CO 80014  
303-695-4500 Linda Wood

**SUBJECT:** Recessed Impeller Grit Pumps (GP-1 & GP-2)

**SPEC SECTION:** 11314 - Recessed Impeller Pumps

**PREVIOUS SUBMISSION DATES:**

**DEVIATIONS FROM SPEC:** \_\_\_ YES  X  NO

**CONTRACTOR'S STAMP:** This submittal has been reviewed by Weaver General Construction and approved with respect to the means, methods, techniques, & safety precautions & programs incidental thereto. Weaver General Construction also warrants that this submittal complies with contracted documents and comprises on deviations thereto:

**Contractor's Stamp:**

**Engineer's Stamp:**

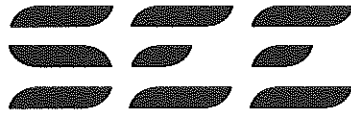
Date: 8/8/11

Reviewed by: H.C. Myers

( X ) Reviewed Without Comments

( ) Reviewed With Comments

**ENGINEER'S  
COMMENTS:** \_\_\_\_\_



**SCHLOSS ENGINEERED EQUIPMENT, INC.**

10555 East Dartmouth Avenue, Suite 230  
(303) 695-4500 OFFICE

Aurora, Colorado 80014  
FAX (303) 695-4507

# **SUBMITTAL**

**HAROLD D. THOMPSON  
REGIONAL WATER RECLAMATION FACILITY  
FOUNTAIN, COLORADO**

**SPECIFICATION SECTION 11314 – RECESSED IMPELLER PUMPS**

**SCHLOSS ENGINEERED EQUIPMENT, INC.  
PROJECT NO. 1757-11**

# **SUBMITTAL**

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# **SECTION I**

## **COMMENTS**

## SUBMITTAL COMMENTS

HAROLD D. THOMPSON REGIONAL WATER RECLAMATION FACILITY  
FOUNTAIN, COLORADO

ENGINEER: GMS, INC.  
CONTRACTOR: WEAVER GENERAL CONSTRUCTION

SPECIFICATION SECTION 11314 – RECESSED IMPELLER PUMPS

SCHLOSS ENGINEERED EQUIPMENT, INC.  
PROJECT NO. 1757-11

Schloss Engineered Equipment, Inc. (SEE) is submitting on two (2) Essco recessed impeller pumps for the above referenced project. Included with this submittal are Essco submittal data and catalog information. The following comments are furnished in direct response to the above referenced specification section, however, comments are provided only for clarification or exception.

1.2 Please refer to the attached Essco submittal package. As directed by Mr. Roger Sams with GMS, the controls will be included in the main panel submitted with the vortex grit chamber submittal. Please verify the pumps design for 220 GPM at 28 ft. TDH.

2.4 Anchor bolts by contractor.

2.5 The following spare parts will be provided:

- A. one Nihard wear plate
- B. one set pump bearings
- C. one silicon carbide seal
- D. one set V belts

3.2 Installation, lubricants and finish paint by others.

3.3 & 3.4 SEE will provide a factory trained technician for start up, testing and training. Please note that SEE can't legally supervise the installation/erection work of others.

Contractor to verify voltage and all dimensions.

8/4/11

# **SECTION II**

## **TECHNICAL DATA**



PUMPS  
AND  
CONTROLS

SUBMITTAL No.1

Recessed Impeller Grit Pumps  
GP-1, GP-2  
Section 11314

Project

Headworks Building

Owner

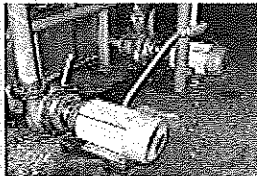
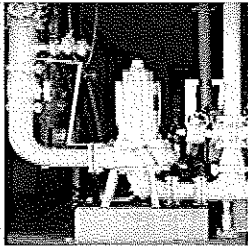
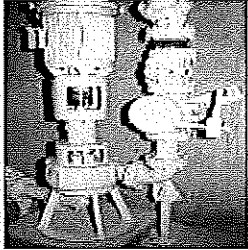
City of Fountain Colo.

**Equipment Manufacturer**

ESSCO Pumps and Controls  
Job Number 11143



# Reliable Long-Term Solutions For Your Toughest Pump



## STYLES

- Horizontal with Power Frame
- Horizontal Close Coupled
- Vertical with Power Frame
- Vertical Close Coupled
- Vertical Dry Pit with Submersible Motor
- Submersible
- Column

## SIZES

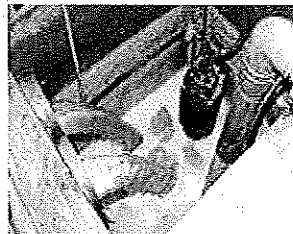
- 1" Thru 6" Vortex
- 3" Thru 12" Non-Clog

## Municipal

- Raw Sewage
- Grit Handling
- Sludge Recirculation
- Digester Cleaning
- Thickened Sludge
- Storm Water
- Sump Pump (Pipe Gallery)
- Head Works

## Industrial

- Coal Wash
- Coal Pile Runoff
- Coal Slurry
- Citrus Waste Handling
- Sugar Waste Handling
- Leather Tannery Waste
- Rendering
- Plant Wash Down
- Clarifier Under Flow
- Stone Washed Jeans
- Industrial Laundries
- Automobile Shredding



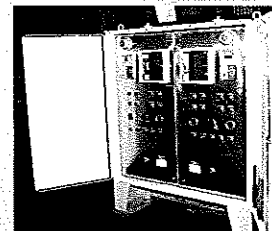
## MATERIALS

- Cast Iron
- Stainless Steel
- Ni-Hard
- High Chrome Iron (HCl)
- 20+ Other Alloys



## U.L. LISTED CUSTOM CONTROL PANELS

- Air Bubbler- Pressure Switch
- Air Bubbler-Transducer
- Float Switch
- Variable Speed Drive Systems
- Sonic Level Controllers
- Motor Control Centers
- PLC Controls
- Calibration Test Benches
- Custom NEMA Enclosures in Epoxy Coated Steel and Stainless Steel



## ESSCO Pumps & Controls

4935 Telegraph Rd.  
Los Angeles, Ca 90022

(323) 261-2181  
Fax (323) 261-1523

Website: [www.esscopumps.com](http://www.esscopumps.com)  
Email: [sales@esscopumps.com](mailto:sales@esscopumps.com)

Member of the Hydraulic Institute

Form G-01a





**ENGINEERS SALES-SERVICE COMPANY, INC.**

4935 Telegraph Rd. | Los Angeles, CA 90022  
Phone (323)261-2181 FAX (323)261-1523

**- Submittal -**

Quote No: **JR11052S**

**July 15, 2011**

Attention: **Chuck Schloss**  
Firm: **Schloss Engineered Equipment**

Ref: **Fountain, Colorado**  
**Grit Pumps:GP-1& GP-2**

ESSCO Pumps & Controls is pleased to quote the following pumping equipment:

**CONDITION POINT: 220 GPM at 28 FT. TDH**

Two - **ESSCO** model 4x16 HDPL large power frame heavy duty horizontal pump with a **recessed vortex style Cupped impeller**, dynamically balanced in two planes, capable of passing 4" diameter and long length solids. **Each unit shall be constructed of heavy duty engineered Ni-Hard 650** with Ni-Hard 650 impeller, Ni-Hard 650 volute, Ni-Hard 650 suction cover, Ni-Hard 650 wear plate, **Cast Iron seal box with a single inside Silicon Carbide mechanical seal** and Buna-N seal elastomers, with oil lubricated bearings w/ **oiler sight glass**, heavy duty Steel pump shaft, and 416 Stainless Steel shaft sleeve. The pump shall be fitted with a .5" vent.

Each pump shall include the following:

- A coating of standard factory paint.
- Side x Side belt drive system with 316 SS belt guard.
- Reliance brand TEFC, Explosion Proof Energy Efficient motor rated for 7.5 HP, 1150 RPM, 460Volts/3Phase/60hz., with Class F insulation
- Certified Performance test
- One Set Spare parts:
  - 1-Nihard wear plate
  - 1-set-pump bearings
  - 1-Silicon carbide seal
  - 1-set-V-belts

As always, if I can be of further service please feel free to contact me.

Respectfully,  
Jon Rogers  
ESSCO Pumps & Controls

## Horizontal Recessed Impeller Pump Data Sheet

### PUMP

Job Number: JR11052S  
Attention: Chuck Schloss  
Firm Name: Schloss Engineered Equipment  
Reference: Fountain, Colorado  
Grit Pumps: GP-1& GP-2  
GPM: 220  
TDH: 28 ft.  
Pump Quantity: Two  
Model: 4x16  
Power Frame: Large  
Impeller Type: Cupped  
Dynamic. Bal. Impeller: Two plane  
Solid Size: 4"  
Pump Material: Ni-Hard 650  
Impeller Material: Ni-Hard 650  
Volute Material: Ni-Hard 650  
Suction Cover: Ni-Hard 650  
Wear Plate: Ni-Hard 650  
Box Type: Seal box  
Bearings: oil  
Pump Shaft: Steel  
Shaft Sleeve: 416 Stainless Steel  
Special Coating: Standard Factory Paint  
Motor Manufacturer: Reliance  
Horse Power: 7.5  
RPM: 1150  
Volts: 460  
Phase: 3  
Hertz: 60  
Motor Type: Explosion Proof Energy Efficient  
Insulation: Class F



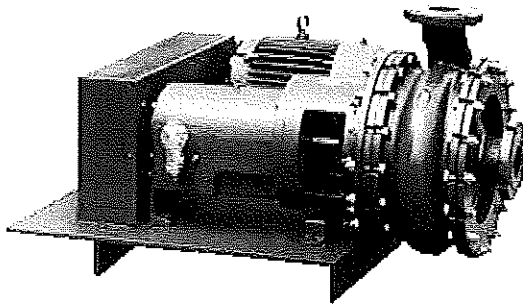
PUMPS  
AND  
CONTROLS

## Pump Data

**Equipment Manufacturer**  
**ESSCO Pumps and Controls**  
**Job Number 11143**



**HORIZONTAL RECESSED  
IMPELLER PUMPS  
CUP STYLE IMPELLER  
For Waste Water Treatment Plants**



Pictured above is an ESSCO 3x14 HDPL belt driven side by side heavy duty horizontal pump with large power frame and recessed cup style impeller.

ESSCO has been designing and manufacturing recessed style cupped impeller horizontal pumps since 1985. ESSCO includes all the features dictated by the needs of our customers in the area of wear and abrasion resistance and has improved on many of these features. ESSCO surveyed their valued customers prior to designing this series of pumps to eliminate the problems they experienced using other manufacturer's products. Customer suggestions were instrumental in the design of this product. After final assembly of the first units customers were invited to the factory to inspect the units. Their additional suggestions were incorporated into the final design the pump, which proved to be a remarkable contribution to a well designed product. ESSCO has always had a policy of listening to our customers and imple-

menting product changes when it makes sense to do so. ESSCO's recessed cup style impeller horizontal pump is designed to handle grit, sludge, rags and long stringy material without plugging. These types of solids are commonly found in waste water treatment plants and other sever duty installations. **ESSCO offers a prorated 5 YEAR WARRANTY as an option.** Consult factory for details.

**VOLUTE:** Each ESSCO back pullout style volute is designed for ease of assembly and maximum life and is manufactured from extremely abrasion resistant materials. Extra material is provided in high wear areas as well as special designs to handle heavy grit slurries and sludges. Due to the Brinnell hardness of the volute all bolting flanges are slotted to allow for ease of assembly. ESSCO has a standard centerline discharge volute which allows it to be self venting and automatically releases air trapped in the pump volute (also known as an air bound pump). Air bound pumps are a common complaint of users who have tangential discharge volutes. The centerline discharge also eliminates the need for a right hand and left hand pump case. An optional conventional tangential design is available upon request.

**SUCTION COVER:** A contoured suction cover is provided to insure passage of suction sized solids from grit, rags or sludge laden liquids. The suction cover thickness ranges from .75" at the volute bolt flange to a massive 1.5" thickness at the point of highest wear. The generous amount of material provided will

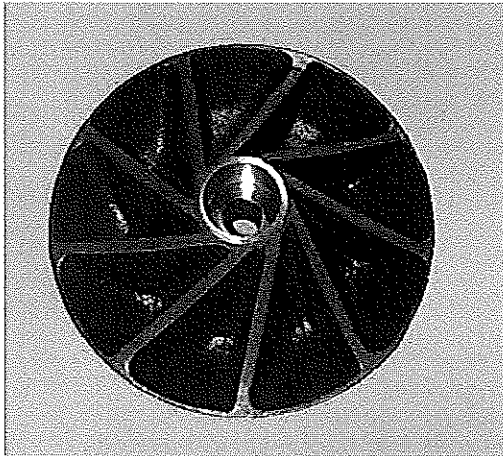
**ESSCO Pumps & Controls**

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www.esscopumps.com  
Email sales@esscopumps.com

Distributed By:



**HORIZONTAL RECESSED  
IMPELLER PUMPS  
CUP STYLE IMPELLER  
For Waste Water Treatment Plants**



The impeller pictured above is from a model 3x14. ESSCO uses a straight machined bore and keyway to allow for the best possible shaft attachment.

provide the owner the maximum possible life of the suction cover which in turn reduces the overall cost of ownership for the life of the unit. The suction flange is slotted for easy connection to suction piping and has a raised face to allow for proper gasket sealing. Suction flange match ANSI 150# dimensions. All gasket surfaces are ground to a smooth finish which allows for the best possible gasket seal. ESSCO eliminated an O-Ring glued to an "as cast" irregular surface groove. This eliminated leakage associated with the O-Ring method of sealing.

**IMPELLER:** The ESSCO cup style impeller was given thorough design consideration. Utilizing modern methods of manufacturing, ESSCO was able to produce impellers with a straight, accurate

bore and keyway. Specification requirements using a tapered shaft with a flat section to act as a keyway, coupled to a soft lead babbitt material in the bore of the impeller, was improved upon with the use of a straight bore design. By using up to date manufacturing practices and methods a major complaint of maintenance personnel was alleviated. Another added design benefit was recessing the impeller bolt area to protect it from grit and debris. The ESSCO impeller bolt is protected from wear. ESSCO included extra thick tapered impeller vanes, deep vane pockets, extra sacrificial material in high wear areas, heavy duty rear impeller shroud and a contoured impeller face which matches the shape of the suction cove. All of these features insure the maximum impeller life.

**IMPELLER BOLT PROTECTOR:** As an added feature, ESSCO includes an impeller bolt protector on each pump. Even though the impeller bolt is located in a recessed area of the impeller there was a potential for grit to cause wear on the bolt head making it very difficult for removal of the bolt. ESSCO manufactures the bolt protector from the same material as the impeller to completely cover the head of the bolt. This protects the head of the bolt from the pumped material thereby insuring no damage to the impeller bolt.

**WEAR PLATE:** Located behind the impeller and in front of the stuffing box is a heavy duty wear plate. The wear plate is designed as a single monolithic piece to provide maximum protection to the stuffing box or optional mechanical seal housing. ESSCO does not use

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IMPELLER PUMPS  
CUP STYLE IMPELLER  
For Waste Water Treatment Plants**

cast in soft metal inserts on the wear plate. Maintenance personnel complained about constant leaking around the inserts cast into other manufacturers wear plates. The problem was easily solved by simply not using inserts. The ESSCO wear plate is contoured to match the impeller back shroud which reduces the possibility of grit and sludge getting between the wear plate and the impeller shroud causing excess wear.

**STUFFING BOX:** The stuffing box is a two piece design, consisting of "stuffing box ring" and a "stuffing box cartridge". The stuffing box cartridge is bolted to the stuffing box ring which allows for the two pieces to be manufactured from different materials. ESSCO has supplied many customers with a cast iron stuffing box ring and an optional stainless or bronze stuffing box cartridge. This eliminates many problems associated with corrosion as experienced with standard cast iron stuffing boxes. The standard packing gland is bronze, but is available in an optional stainless or alloy material.

**POWER FRAME:** ESSCO provides a heavy duty, cast iron, cartridge type power frame. The power frame contains heavy duty bearings which are available for grease or oil lubrication. ESSCO utilizes state of the art bearing designs which are supplied by major bearing manufacturers. A unique feature of ESSCO's pump design is the option of upgrading to a one size larger power frame. A pump with a small power frame can be upgraded to a medium sized power frame and a unit with a medium power frame as standard can be upgraded to a large power frame. This option is popular with owners who wish to keep a minimum of spare parts while spanning multiple pump sizes.

**SHAFT AND BEARINGS:** ESSCO has designed the shaft and bearing combination around a minimum B10 (L10) life of 100,000 hours. ESSCO furnishes heavy duty pump shafts from the best quality steel standard which have a tensile strength of 150,000 PSI and a yield strength of 130,000 PSI. Each shaft and bearing set provides the maximum life possible. 316 SS shafts are available as an option.

**SHAFT SLEEVE:** ESSCO offers a wide variety of shaft sleeve materials. Standard shaft sleeves are hardened 400 series stainless steel. Each shaft sleeve has an internal O-ring to seal between the shaft and the sleeve which prevents the pumped liquid from damaging the shaft. The standard shaft sleeve is key driven to insure rotational integrity. Typical options for shaft sleeves are 316 SS, Stellite, Hastaloy along with many others.

**PACKING AND MECHANICAL SEALS:** ESSCO furnishes graphite impregnated non-asbestos braided packing as a standard. Each packed stuffing box contains (5) five rings of packing and a Teflon lantern ring. The standard packing box can accommodate double mechanical seals as well as cartridge style mechanical seals.

- MATERIALS:** (Check desired material)  
 Nihard 550 Brinnell (Standard Material)  
 Nihard 650 Brinnell  
 Nihard 650-750 Brinnell  
 HCl 550 Brinnell (Alternate Standard Material)  
 HCl 650 Brinnell  
 HCl 650-750 Brinnell

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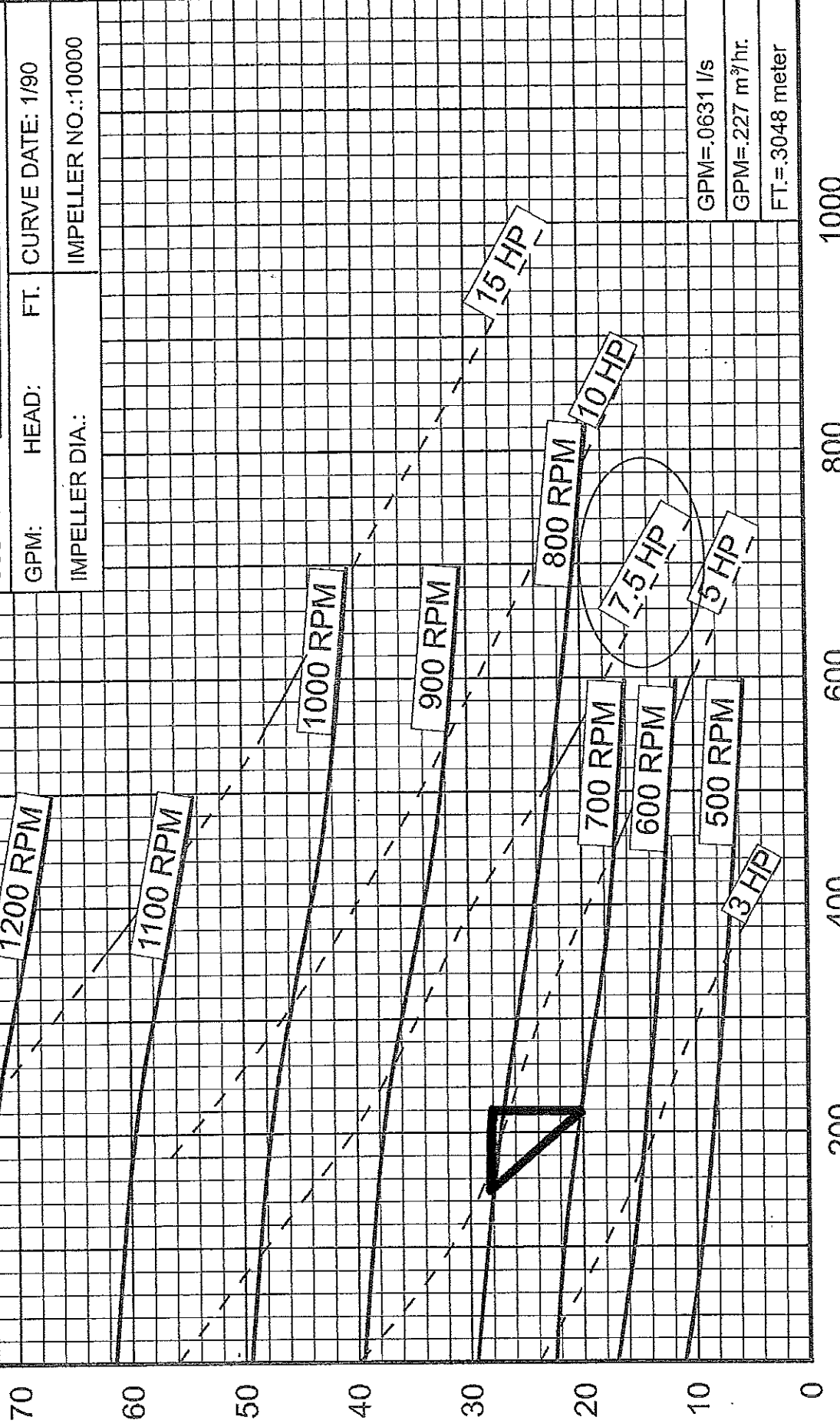
Distributed By:

# ESSCO PUMPS

4935 TELEGRAPH ROAD  
 LOS ANGELES CA. 90022  
 (323) 261-2181 FAX: (323) 261-1523  
 MEMBER OF THE HYDRAULIC INSTITUTE

ESSCO PUMP MODEL NO.: 4 x 16 CUP  
 RPM: VARIES IMPELLER DIA.: FULL  
 TYPE: HORIZONTAL  
 IMPELLER TYPE: VORTEX 9 VANE  
 DIAMETER OF SPHERE: 4 INCH  
 CERTIFIED BY:  
 JOB NUMBER:  
 JOB NAME:

GPM: HEAD: FT. CURVE DATE: 1/90  
 IMPELLER DIA.: IMPELLER NO.: 10000



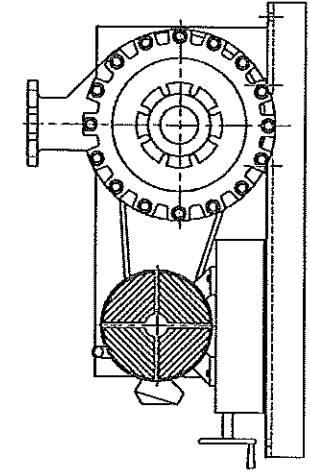
GPM=.0631 l/s  
 GPM=.227 m³/hr.  
 FT.=.3048 meter

TOTAL HEAD IN FEET

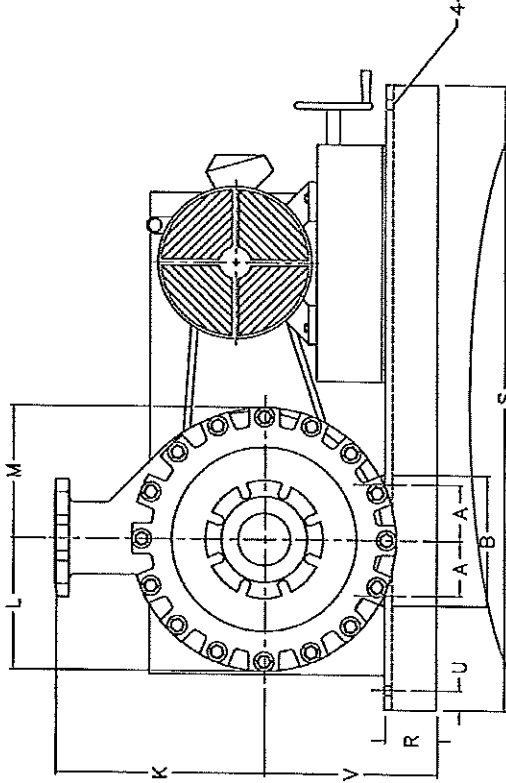
US GPM

JOB #:	SIZE	SUCT(2)	DISCH(2)	A	B	J	K	L	M	N	O	Q	R	S	U	V	X
	4x16	4	4	4.25	10.9	2.5	16.0	10.1	13.7	2.5	8.7	20.7	5.4	48.1	5.1	3.2	5.1

CONSTRUCTION
NIHARD 550
NIHARD 650
HCI 550
HCI 650
OTHER



RIGHT HAND ARRANGEMENT



LEFT HAND ARRANGEMENT

JOB NAME: \_\_\_\_\_  
 CERTIFIED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

- (2) COMPLIES WITH ANSI STD. FOR FOR 150# DRILLING
- (1) WITH WEAR PLATE ADD .75 TO P & O DIMENSIONS

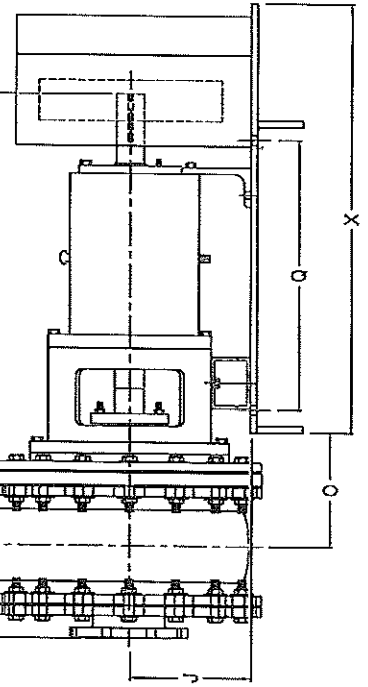
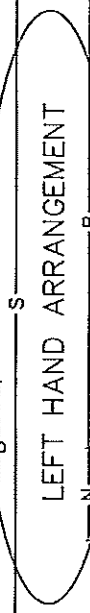
# TYPICAL

ALL DIMENSIONS ARE IN INCHES

DATE:	9/1/01
FILE NAME:	HDPLHIB
DRAWN BY:	BRIAN B.
CHECKED BY:	J.L.
REVISED BY:	
REV. DATE:	

**ES&CO** PUMPS  
 HORIZONTAL DRY PIT  
 LARGE POWER FRAME  
 HARD IRON

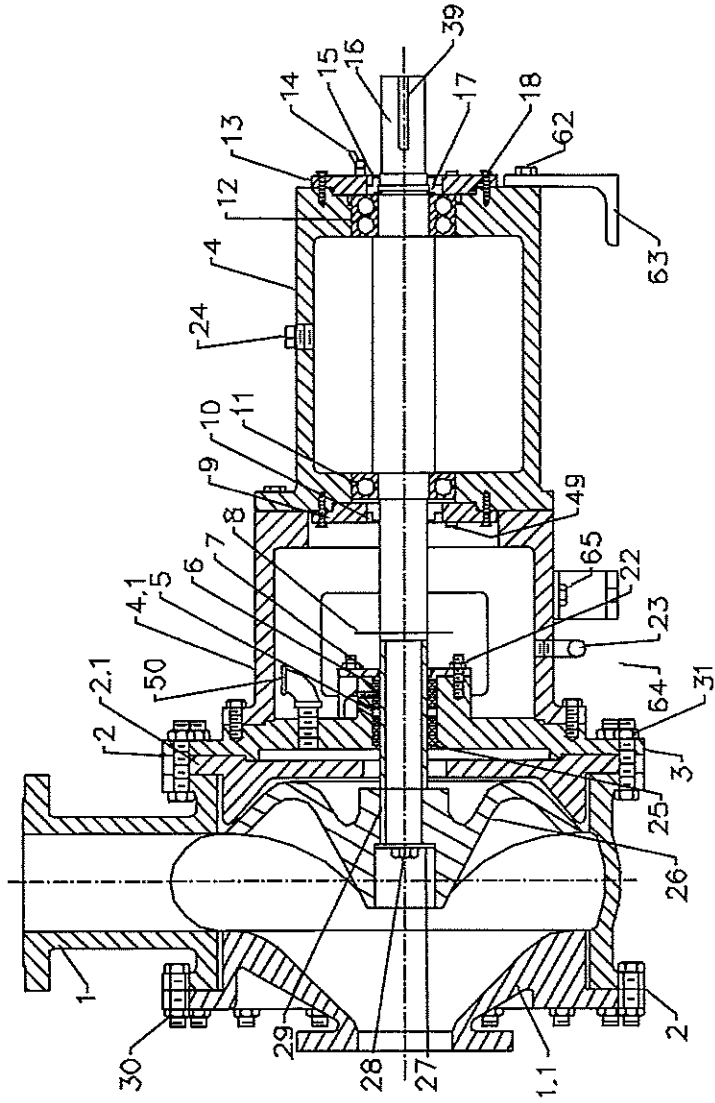
4--.75 THRU HOLES





JOB #:

# TYPICAL



PARTS LIST		MATERIALS	
NO.	DESCRIPTION	NIHARD	HCI
1	VOLUTE	NIHARD	HCI
1.1	SUCTION COVER	NIHARD	HCI
2	VOLUTE GASKET	NEOPRENE	NEOPRENE
2.1	WEAR PLATE	NIHARD	HCI
3	STUFFING BOX	CAST IRON	CAST IRON
4	POWER FRAME	CAST IRON	CAST IRON
4.1	STUFFING BOX HOUSING	CAST IRON	CAST IRON
5	LANTERN RING	TEFLON	TEFLON
6	PACKING	GRAPHITE	GRAPHITE
7	GLAND	BRONZE	BRONZE
8	SLINGER	PVC	PVC
9	BEARING CAP	CAST IRON	CAST IRON
10	GREASE (3)/OIL SEAL	RUBBER	RUBBER
11	INBOARD BEARING	-----	-----
12	OUTBOARD BEARING	-----	-----
13	BEARING CAP	CAST IRON	CAST IRON
14	GREASE FITTING (3)	PLATED STEEL	PLATED STEEL
15	GREASE (3)/OIL SEAL	RUBBER	RUBBER
16	SHAFT	std 160 STEEL	std 160 STEEL
17	SNAP RING	STEEL	STEEL
18	O-RING	BUNA N	BUNA N
22	STUD, NUT AND WASHER	304 S.S.	304 S.S.
23	DRAIN PLUG	PLATED STEEL	PLATED STEEL
24	PIPE PLUG/AIR VENT	PLATED STEEL	PLATED STEEL
25	SHAFT SLEEVE	S.S. SEE NOTE (1)	S.S. SEE NOTE (1)
26	IMPELLER	NIHARD	HCI
27	IMPELLER WASHER	304 S.S.	304 S.S.
28	IMPELLER BOLT	304 S.S.	304 S.S.
29	IMPELLER KEY	304 S.S.	304 S.S.
30	STAND/SUCTION COVER BOLT	304 S.S.	304 S.S.
31	VOLUTE BOLT	304 S.S.	304 S.S.
39	COUPLING END KEY	304 S.S.	304 S.S.
49	GREASE RELIEF FITTING (3)	PLATED STEEL	PLATED STEEL
50	VENT	GAL. MAL. IRON	GAL. MAL. IRON
62	OUTBOARD LEG BOLT	304 S.S.	304 S.S.
63	OUTBOARD LEG	STEEL	STEEL
64	INBOARD LEG	STEEL	STEEL
65	INBOARD LEG BOLT	304 S.S.	304 S.S.

BRINELL	HARDNESS	SCHEDULE
550	BRN	
850	BRN	
700	BRN	

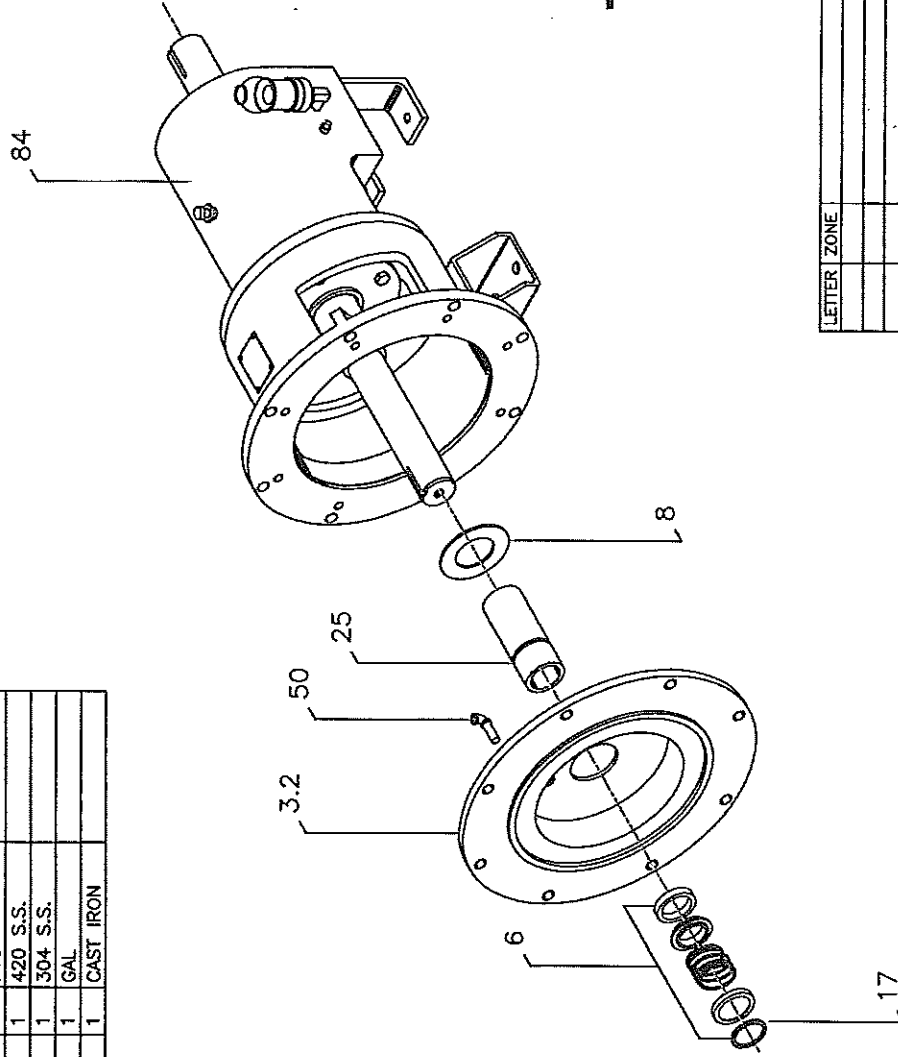
- NOTES:
- (1) HARDENED TO 450 BRN. MINIMUM.
  - (2) ALL FASTENERS ARE 304 OR 316 S.S.
  - (3) USE ON GREASE LUBE PUMPS ONLY.

DATE:	12/20/88
FILE NAME:	HDPPLX
DRAWN BY:	J.I.
CHECKED BY:	J.I.
REV. BY:	K PADGETT
REV. DATE:	8/23/93

# ASCO PUMPS

HORIZONTAL LARGE  
POWER FRAME HARD  
IRON CONSTRUCTION  
CUP STYLE IMPELLER

PARTS LIST		MATERIAL	OPTIONS
NO.	DESCRIPTION	QTY	
3.2	SEAL PLATE	1	CAST IRON
6	MECHANICAL SEAL	1	CAST IRON
8	SLINGER	1	PVC
17	SNAP RING	1	420 S.S.
25	SHAFT SLEEVE	1	304 S.S.
50	VENT	1	GAL
84	HDPL ASSEMBLY	1	CAST IRON



TYPICAL

LETTER	ZONE	REVISIONS	REV. DATE:
DATE:		CONTRACT NO:	
1/21/98			
FILE NAME:		CONTRACTORS:	
AHDPLG			
DRAWN BY:		ARTICLE NUMBER:	
K. PADGETT			
CHECKED BY:		OIL LUBED	
J.J.		LARGE POWER FRAME	
		ASSEMBLY WITH SINGLE	
		MECHANICAL SEAL BOX	
		PARTS LIST	

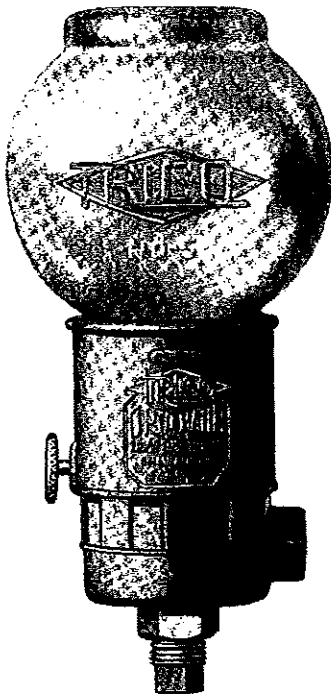
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TRICO MFG. CORP.

## GLASS BOTTLE OPTO-MATIC CONSTANT LEVEL OILER

TRICO glass Opto-Matic constant level oilers have been used in every major industry and have proven their value for over forty years. Some of the reasons for their popularity are the exclusive engineering features not found in the other competitive types. When choosing a constant level oiler, the following features should be considered:



### ONE PIECE GLASS RESERVOIR

The Opto-Matic oiler permits visual inspection of the oil at any time for proper level and condition of the oil. The one piece glass reservoir eliminates the danger of air entering the lubricator bottle through leaky gaskets on the reservoir bottle. This exclusive TRICO feature prevents leakage of oil from the reservoir, flooding the bearing and rendering the lubricator useless.

### AIR VENT SLOTS

These air vents permit air to enter the lubricator for proper functioning at all times. On TRICO Opto-Matic oilers, there are eight air vents spaced equally 360° around the lubricator. The chances of all of these air vents becoming clogged are almost impossible when compared to a single hole which can become clogged very easily and render the lubricator useless. The air intake of the lubricator is designed in such a way that air travels from the bottom of the lubricator upward around the body and over the top. The upper reservoir acts as a baffle to protect the incoming air from atmospheric contaminants in the immediate area.

### OIL LEVEL ADJUSTER MECHANISM

This unique device instantly and accurately raises or lowers the oil level in the bearing chamber or gear box. This is simply accomplished by moving the threaded arms up or down the leveling stem until the desired level is maintained. The leveling arms are then locked tight and maintain that setting. This is far simpler than taking a hack saw and cutting off a spout that eventually may end up too short or too long. It also allows the machine builder, who produces several different machines with different oil levels, to stock only one unit instead of several units for different oil levels. On special request, TRICO can suggest ways of making these lubricators tamper proof.

### LARGE SURGE CHAMBER

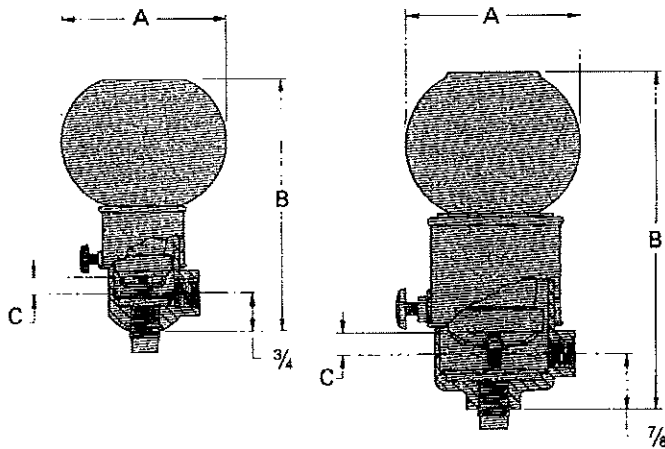
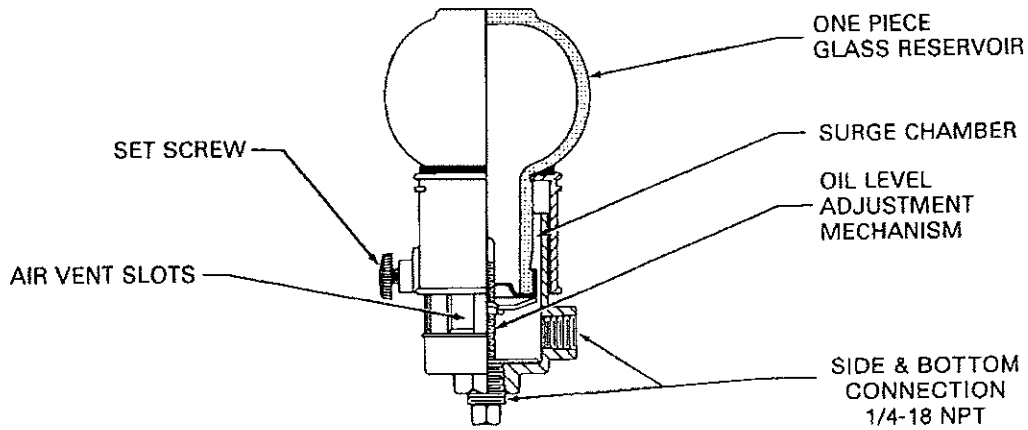
The surge capacity of the TRICO constant level oiler is very important inasmuch as oil adheres to mechanisms in motion as well as to gear box wall, bearing walls, etc. For large bearings, great quantities of oil may be needed to establish an operating oil level. When some machines shut down, there is a new level of oil established above the running level. As this surge of oil goes back to the lubricator, it must have adequate room in the lower reservoir to temporarily store the lubricant. Should this room not be adequate, it would result in oil overflowing the lower casting with excess oil ending up on the floor, causing both a messy condition as well as a safety hazard. Competitive models do not have this outstanding TRICO feature.

### SIDE AND BOTTOM CONNECTIONS

TRICO glass Opto-Matic oilers come with both side and bottom outlets at no additional cost. This allows you to choose the method that best suits your particular installation. And you only need to select one type of lubricator instead of several types.



## CONSTRUCTION FEATURES



No. 30001 and 30002  
Glass Opto-Matic

No. 30003, 30005, and  
30010 Glass Opto-Matic

### Material Specifications

Max. Operating Temp. . . . 250°F Continuous  
 Reservoir . . . . . One Piece Glass Bottle  
 (No Gaskets)  
 Materials . . . . . Steel  
 Castings . . . . . Zinc Die Cast  
 Finish . . . . . Bright Zinc Plated

CAP.	PIPE THREAD CONN.	DIMENSIONS					CAT. NO.
		A	B MIN.	B MAX.	C MIN.	C MAX.	
1 1/4 OZ.	1/4	1 15/16	3 3/8	3 1/16	1 1/32	5/16	30001
2 1/2 OZ.	1/4	2 1/2	3 13/16	4 1/4	1 1/32	1/16	30002
4 OZ.	1/4	2 11/16	5	5 3/4	9/32	1	30003
8 OZ.	1/4	3 3/16	5 15/16	6 1/16	9/32	1	30005
16 OZ.	1/4	4 1/8	6 3/16	7 3/16	9/32	1	30010

All dimensions shown are in inches.

## ACCESSORIES

### BREATHER TUBES

ITEM	DESCRIPTION		CAT. NO.
	TYPE "C"	1/8" NPT THREAD	30014
		WICK AIR FILTER	
	TYPE "E"	1/8" NPT THREAD	30015
		DUST CAP	

### WIRE GUARDS

ITEM	DESCRIPTION	CAT. NO.
	1 1/4 OZ. OILER WIRE GUARD	30011
	2 1/2 OZ. OILER WIRE GUARD	30012
	4 OZ. OILER WIRE GUARD	30013
	8 OZ. OILER WIRE GUARD	30016
	16 OZ. OILER WIRE GUARD	30020

**Accessory Item:** Breather tubes are accessories used in conjunction with the Glass Optomatic Oilers to help eliminate vacuums created by abnormally tight bearings or pressures created by high speed bearings. The breather tube helps maintain a constant atmospheric pressure in the bearing housing.

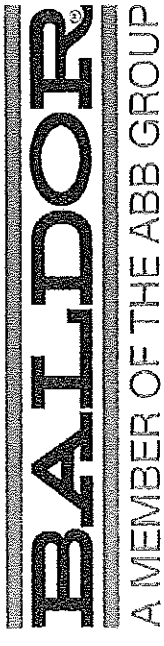
### HOW TO ORDER GLASS OPTO-MATIC OILERS

1. Specify Quantity \_\_\_\_\_ (2) 30003
2. Specify Catalog Number \_\_\_\_\_



## **Motor Data**

**Equipment Manufacturer**  
**ESSCO Pumps and Controls**  
**Job Number 11143**



**BALDOR • RELIANCE**

**Product Information Packet**

**EM7048T-I**

**7.5//5HP, 1180//980RPM, 3PH, 60//50HZ, 254T**

Part Detail									
Revision:	A	Status:	PRD/A	Change #:	Proprietary:	No			
Type:	AC	Prod. Type:	0950M	Elec. Spec:	CD Diagram:				
Enclosure:	XPFC	Mfg Plant:		Mech. Spec:	Layout:				
Frame:	254T	Mounting:	F1	Poles:	Created Date:	06-15-2010			
Base:	RG	Rotation:	R	Insulation:	Eff. Date:	07-13-2010			
Leads:	9#12	Literature:		Elec. Diagram:	Replaced By:				
Nameplate NP0977XP									
NO.				TEMP CODE		T3C			
SPEC.		09F369Z590G1		DE BRG		6309			
CAT.NO.		EM7048T-I		ODE BRG		6208			
HP		7.5/5		GREASE		POLYREX EM			
VOLTS		230/460/190/380		MOTOR WEIGHT		355			
AMPS		21.4/10.7/18.8/9.4		NEMA-NOM-EFF		91			
RPM		1180/980		FL PF		70			
CYCLE		60/50		PH		3	CL	F	FRAME
SER.F.		1.15		DES		B	CODE	J	CC
SER.									
RATING		40C AMB-CONT							
USABLE AT 208V		22.6							

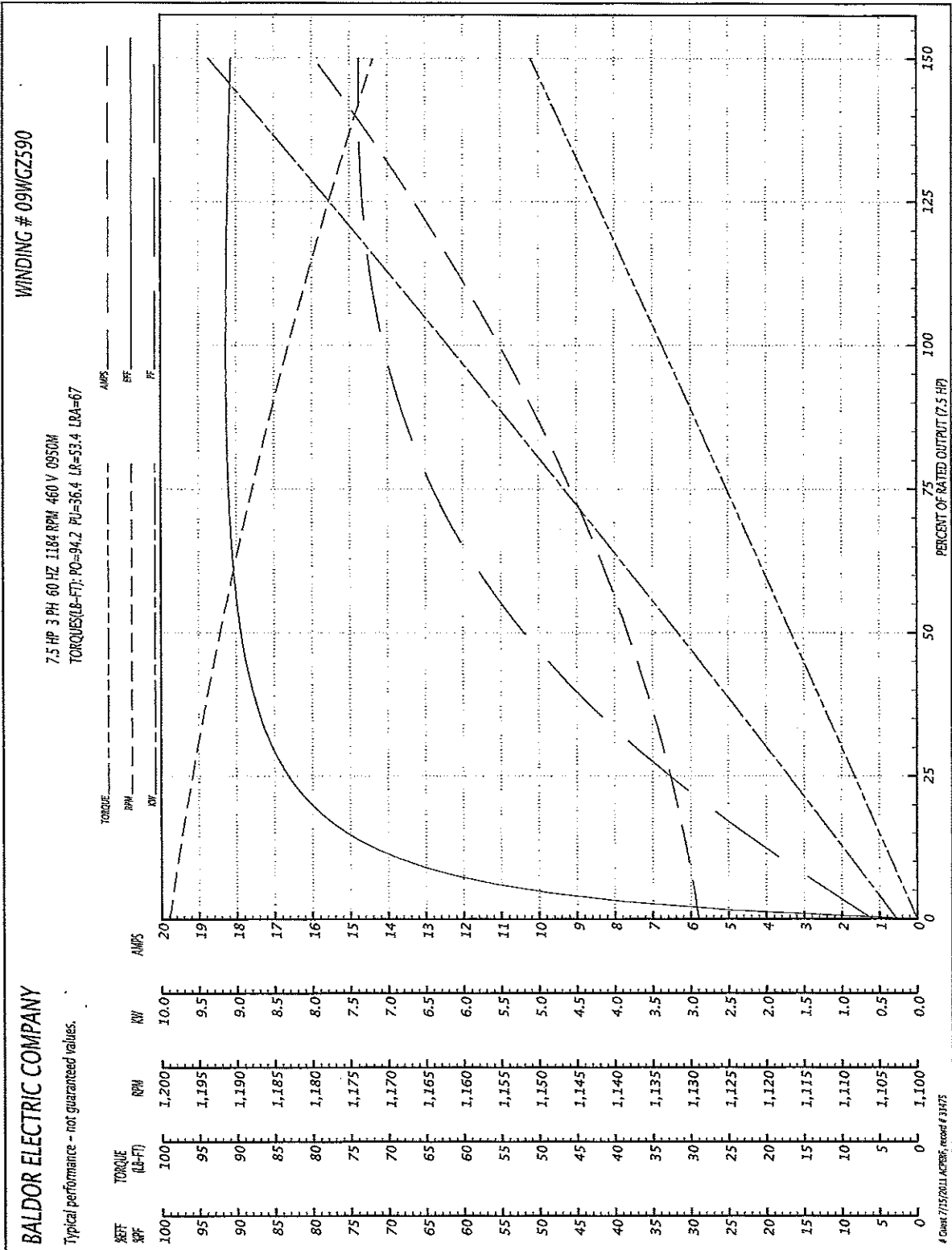
Parts List		
Part Number	Description	Quantity
SA198391	SA 09F369Z590G1	1.000 EA
RA185759	RA 09F369Z590G1	1.000 EA
MJ5000A01	SEALANT, CHICO A COMPOUND	0.050 LB
09CB1003A01	CONDUIT BOX MACH. GROUP C MTRS	1.000 EA
10XN3118K24	5/16-18 X 1.50" HEX HD, GRADE 5	4.000 EA
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 EA
WD1000B25	BURNDY TERMINAL L125HP	1.000 EA
10XN3118K12	5/16-18 X .75 GRADE 5, ZINC PLATED	1.000 EA
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	1.000 EA
09EP1700A33P	FR ENDPLATE, MACH, XPFC W/DRN HW4505A02	1.000 EA
HW3023E06	.125 X .625 SPIRAL SPRING PIN	1.000 EA
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
HW5100A08	W3118-035 WVY WSHR (WB)	1.000 EA
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
09EP1707A16P	PU E.P., MACH. W/DRAIN HW4505A02 W/PRIME	1.000 EA
HW3023E06	.125 X .625 SPIRAL SPRING PIN	1.000 EA
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
09FH1004A03	FAN COVER, MACH	1.000 EA
10XN2520K12	1/4-20 X.75 GRD 5	3.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	3.000 EA
HA2066A01	SLINGER, ALUM (AUTO)	1.000 EA

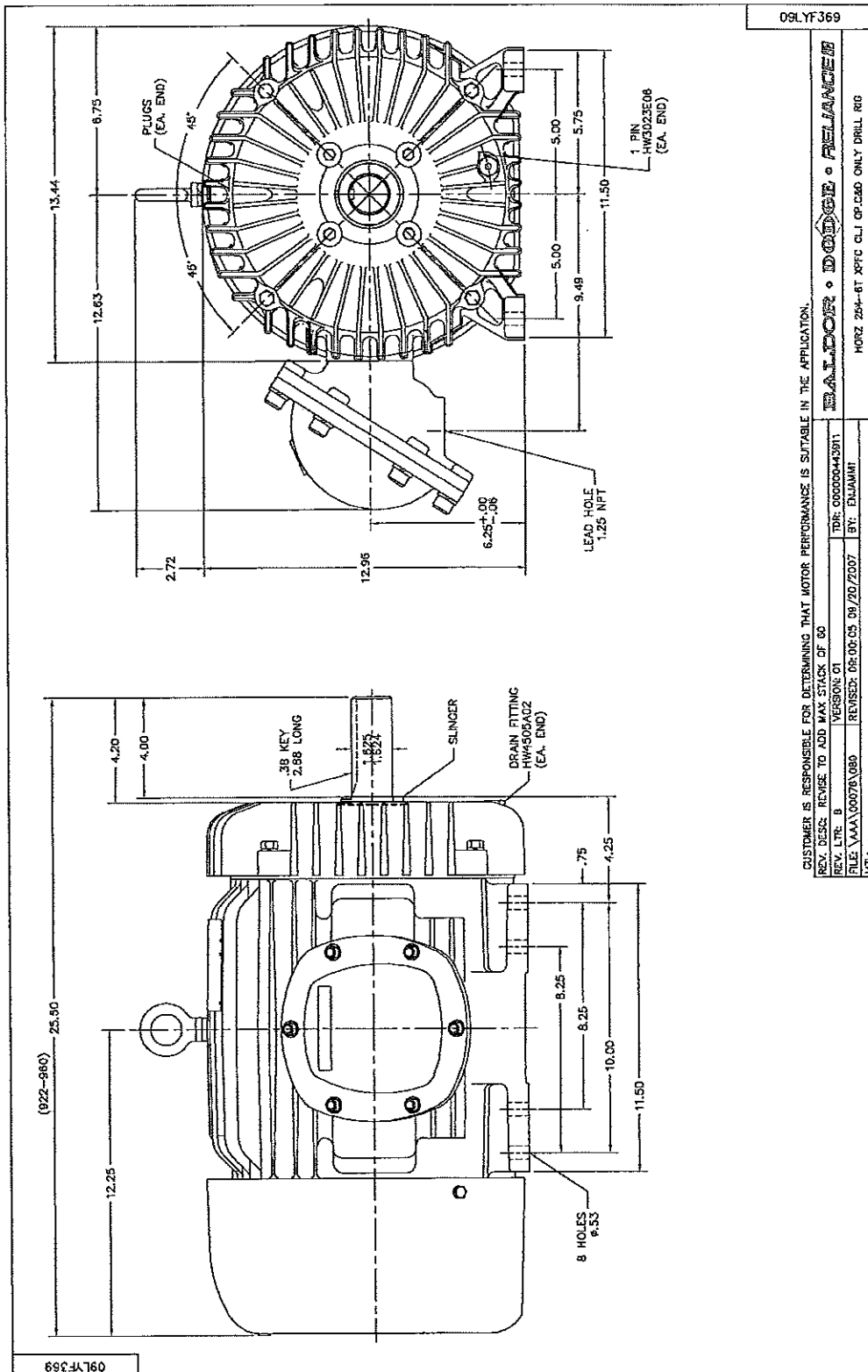


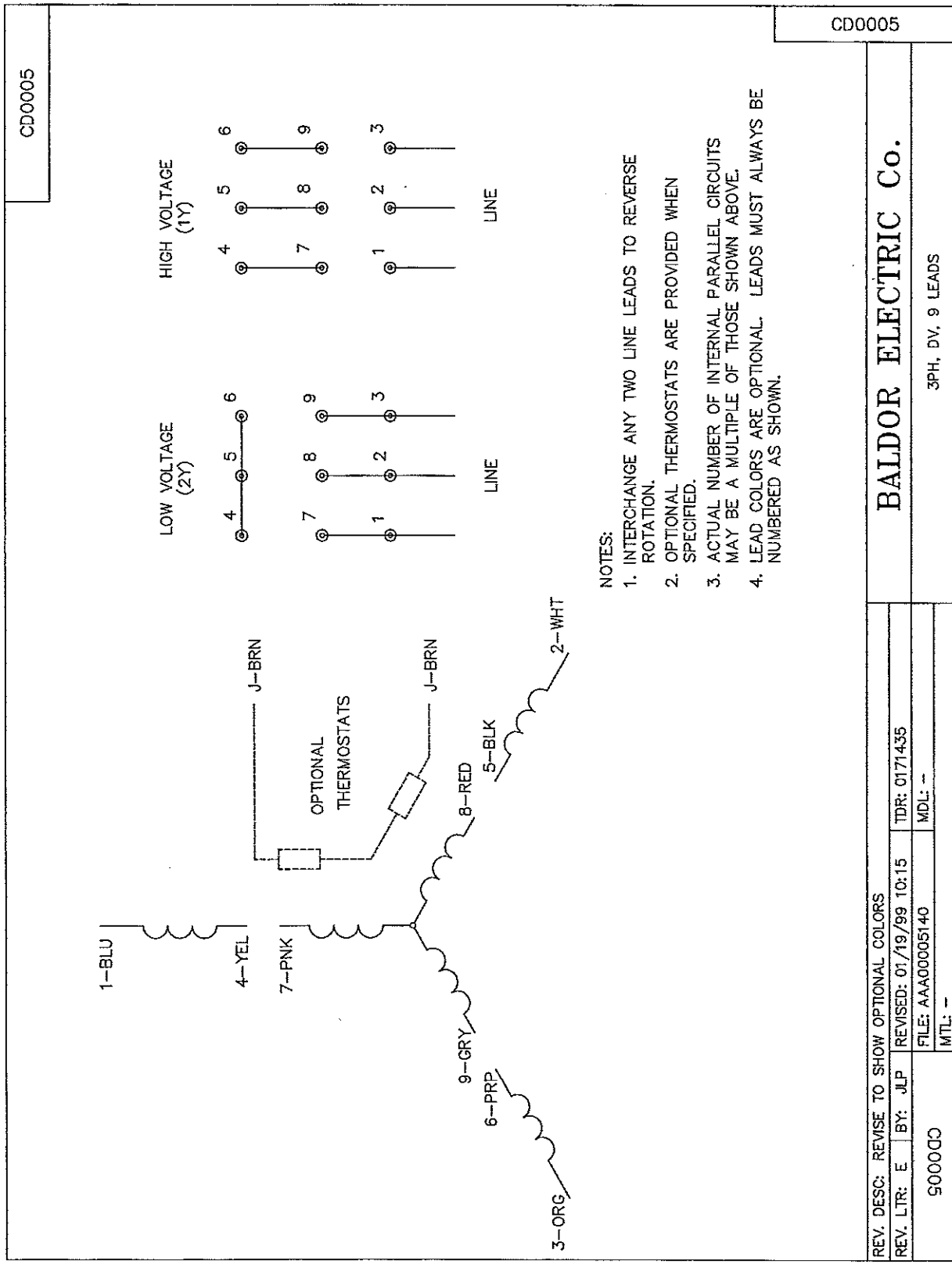
**Parts List (continued)**

Part Number	Description	Quantity
80XN1032A07	SET SCREW, HEX XOCK, ZN	1.000 EA
09CB1502A01	CONDUIT BOX LID MACH. GROUP C MTRS	1.000 EA
84XN5013J24	1/2-13 X 1-1/2 HEX SOCKET HD CAP SCREW	6.000 EA
HW1001A50	LOCKWASHER 1/2, ZINC PLT., 879 OD, .509 I	6.000 EA
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 EA
LB1115	LABEL LIFTING DEVICE	1.000 EA
HW4500A20	1/8NPT SL PIPE PLUG	2.000 EA
HW4505A02	BREATHER/DRAIN-EXP PROOF-.250-18 PTF AIS	1.000 EA
MJ1000A75	GREASE, POLYREX EM EXXON	0.080 LB
HW4500A20	1/8NPT SL PIPE PLUG	2.000 EA
HW4505A02	BREATHER/DRAIN-EXP PROOF-.250-18 PTF AIS	1.000 EA
09FN3001A01SP	EXTERNAL FAN, PLASTIC	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 EA
MG1025G05	PAINT 789.201 (WILCO) DARK GRAY METALLIC	0.050 GA
85XU0407A04	#4-7 X 1/4 DRIVE PIN	6.000 EA
LB1081	LABEL CSA XPROOF	1.000 EA
LB5040	INSTRUCTION TAG, AC & DC	1.000 EA
LB1119	WARNING LABEL	1.000 EA
LB1125C02	SUPER-E (STOCK CTN LABEL SUPER-E WITH FL	4.000 EA
LB1357	ENERGY GUIDE LABEL (BOX LABEL)	1.000 SH
LC0145B01	CONNECTION LABEL	1.000 EA
NP0977XP	UL/CSA, CLI GP-C&D, CC	1.000 EA
40PA1005	PACKAGING GROUP, 09 STD	1.000 EA

Performance Graph at 460V, 60Hz, 7.5HP Typical performance - Not guaranteed values







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REV. LTR: E BY: JLP REVISED: 01/19/99 10:15 TDR: 0171435

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MTL: -

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS