



Date: December 12, 2022

To: Donnie Sherwood

Ref: West Windsor Equipment Replacement

Koester Associates is pleased to offer the following equipment solutions. Refer to the attached data sheets for additional information.

Barnes model 4SE113_4L submersible non-clog pumps rated for 150 gpm at 53' TDH and 200 gpm at 40' TDH with 15 HP, 1800 rpm, 460/3/60 motors, 42% efficiency, 7.75" impeller, break away fitting, upper guide rail bracket and 3" sphere capability.

Total Equipment PRICE:
\$11,300

Estimated Shipping Cost (to be billed at actual rate):
\$750

Quote Type	Terms	Quote Validity	Freight:	Submittal lead time, ARO:	Delivery after approval of prints:
Budget	NET 30	30 Days	FOB Factory, Freight Allowed to Jobsite	1-3 weeks	14-16 Weeks

Koester Associates Contact Information	
Name:	Gregg Palmer
Cell:	315-897-0698
Email:	gpalmer@koesterassociates.com

Notes/Comments/Clarifications:

- Only items and services explicitly listed in this proposal shall be provided
- Installation, wiring field painting is not included, unless otherwise specified
- Factory lead times are based upon current workload. Lead times are subject to change dependent upon incoming orders.
- If supervisory startup is purchased equipment shall be fully installed and power brought to the unit if applicable. Please notify KAI at least 2 weeks in advance of requested startup dates.
- Standard Terms and Conditions, on the attached page, are incorporated in this quotation. Except for shipping charges, which may be subject to change at date of shipment, prices quoted shall remain firm 60 days. Payment is due net 30 days after shipment. No holdbacks or credits will be allowed.

Accepted on (Insert Date): _____

Purchaser: _____

Address: _____

Accepted by KAI on date: _____

Prepared by: _____

Koester Associates, Inc.

3101 Seneca Turnpike

Canastota, NY 13032

(315) 697-3800 phone

(315) 697-3888 fax

info@koesterassociates.com

www.koesterassociates.com

Terms and Conditions

An order will constitute a contract between the Company and the Buyer when accepted in writing by the Company at its home office in Canastota, NY. A contract resulting from the acceptance of an order may be canceled or altered by the Buyer only if agreed to in writing by the Company at its home office, subject to payment of reasonable charges necessary to protect the Company from loss. Until accepted, as provided herein, an order shall constitute an offer to purchase. Neither the acceptance of any deposit made with an order nor the cashing of any check or other instrument therefore, nor the holding of such deposit by the Company shall be deemed an acceptance of an order, but if the order is not accepted, the Company will promptly refund such deposit.

The Company shall not be liable for any failure to make delivery, for late delivery, or other default by reason of any occurrence or contingency beyond the reasonable control of the Company or of any of its sources of supply or for failure to give notice of any delay. In the event of any such occurrence or contingency, the Company may extend delivery schedules or may, at its option, cancel the order in whole or in part without the liability other than to return any deposit or pre-payment should the whole order be canceled.

The Buyer will reimburse the Company for all taxes, excises and similar charges based upon or measured by the production, storage, sale, transportation or use of the products described herein.

The Company warrants that the products (except products made by the Company to drawings or specifications of the Buyer) will not in themselves infringe any United States patent, but the Company assumes no obligation in regard to patent infringement resulting from the use of the products in combination with equipment or other products not furnished by the Company. Liability under this warranty is limited to the aggregate amount (exclusive of taxes and transportation) to be paid hereunder and is conditioned upon the Buyer's giving the Company prompt written notice of any claim of patent infringement and granting the Company exclusive control of the settlement or litigation thereof.

The Company shall not be bound by any terms, conditions, or representations, which are not stated herein.

The Company shall not be obligated to perform hereunder if, at any time, Buyer's credit rating becomes impaired.

The Company shall retain a security interest in the products supplied hereunder to secure performance of Buyer's obligations and Buyers shall execute all financing statements and other instruments that the Company deems necessary to protect its security interest. If the Buyer defaults in any of its obligations hereunder or is unable to pay its debts as they mature, the Company shall have the right to repossess the products, exercise all legal options to collect the debt and cancel unshipped balances with or without resort to legal process, and Buyer agrees to pay all reasonable collection costs (including reasonable attorney fees) incurred by Company.

All material is sold F.O.B. shipping point and title and risk of loss passes to Buyer on delivery to the common carrier at shipping point. Orders for replacement material must be a new purchase order.

The Buyer shall have the right to inspect the products prior to payment and acceptance and if Buyer's inspection reveals any defects in the products, Buyer shall notify the Company within thirty (30) days after receipt of the products of any claim Buyer might have concerning such defects. Buyer's failure to notify the Company within such thirty-day period shall constitute a waiver by Buyer of all claims covering such defects in the products.

The Company's acceptance of order cancellation or order reduction requests is conditioned upon receiving Buyer's written agreement to assume termination charges.

The Company reserves the right to refuse to accept any order which does not meet quantity requirements which the Company may establish for any given product or group of products.

Prices are based on quality levels commensurate with normal processing. If a different quality level is required, Buyer must specify the requirements and pay any additional costs that may be applicable.

The Company reserves the right to correct clerical or stenographic errors or omissions.

THE PRODUCT WARRANTY IS AS SUBMITTED HERewith. NO OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WILL APPLY.

The terms of this agreement and all rights and obligations hereunder shall be governed by the laws of the State of New York. The foregoing terms and conditions will prevail notwithstanding any variance with the terms and conditions of Buyer's order for the products.

Company: koester
 Name: west windsor sludge transfer1
 Date: 12/06/2022



Pump:

Size: 4SE113*4L Dimensions:
 Type: Non-Clog 4"-1D Suction: ---
 Synch Speed: 1800 rpm Discharge: 4 in
 Dia: 7.75 in
 Curve: V84623

Fluid:

Name: Water
 SG: 1 Vapor Pressure: 0.256 psi a
 Density: 62.4 lb/ft³ Atm Pressure: 14.7 psi a
 Viscosity: 1.1 cP
 Temperature: 60 °F Margin Ratio: 1

Search Criteria:

Flow: 150 US gpm Near Miss: ---
 Head: 53 ft Static Head: 0 ft

Pump Limits:

Temperature: 104 °F Sphere Size: 3 in
 Wkg Pressure: ---

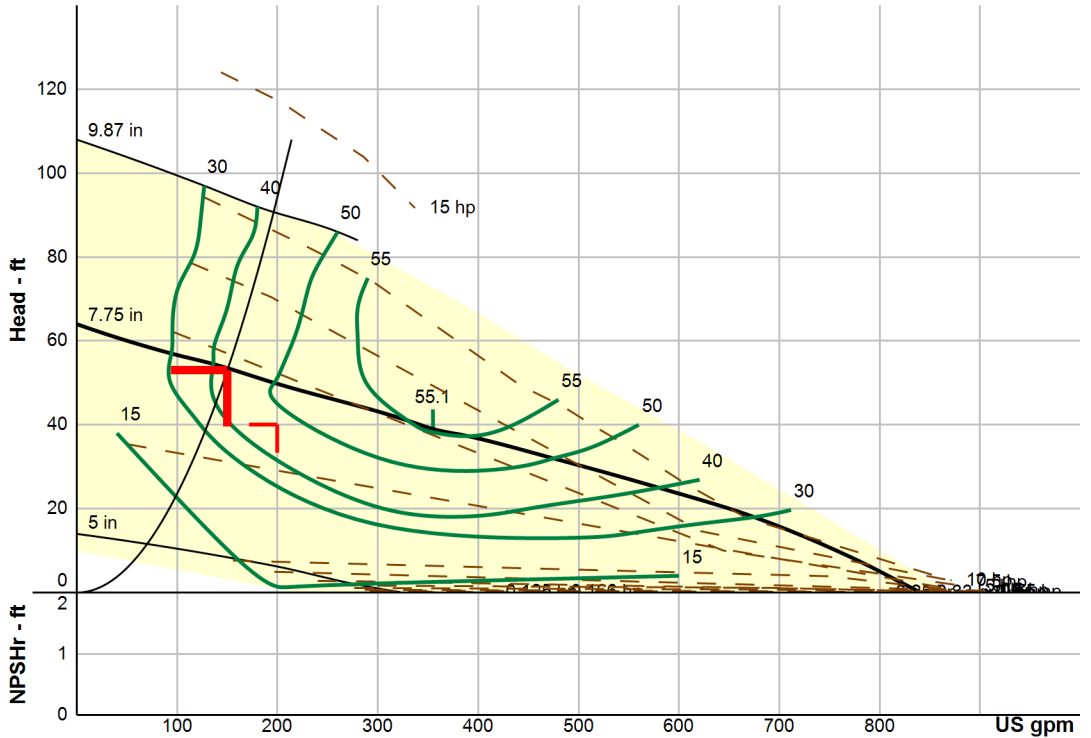
Motor:

Standard: NEMA Size: 15 hp
 Enclosure: TEFC Speed: 1800 rpm
 Frame: 254T
 Sizing Criteria: Max Power on Design Curve

Pump Selection Warnings:

None

--- Duty Point ---	
Flow:	151 US gpm
Head:	53.4 ft
Eff:	42.4%
Power:	4.75 hp
NPSHr:	---
Speed:	1750 rpm
--- Design Curve ---	
Shutoff Head:	64 ft
Shutoff dP:	27.7 psi
Min Flow:	--- US gpm
BEP:	55.1% @ 355 US gpm
NOL Power:	10.2 hp @ 675 US gpm
--- Max Curve ---	
Max Power:	11.6 hp @ 280 US gpm



Temp. 104½°F (40½°C) Continous.

Operating Points:

Data Point	Speed rpm	Flow US gpm	Head ft	NPSHr ft	Efficiency %	Power hp	Min Flow US gpm
Primary	1750	151	53.4	---	42.4	4.75	---
1	1750	220	48.4	---	50.9	5.19	---

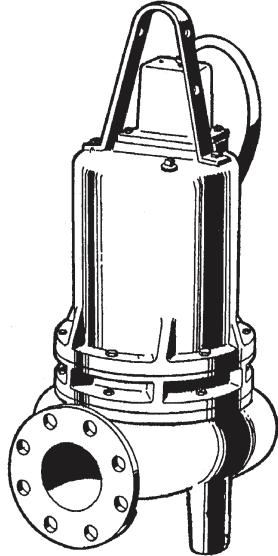
Series 4SE-L

3" Spherical Solids Handling

BARNES®

www.cranepumps.com

4" Horizontal Discharge - Submersible Non-Clog Pumps



DISCHARGE	4" 125lb., Flange Horizontal
LIQUID TEMPERATURE	104°F (40°C) Continuous
VOLUTE	Cast Iron ASTM A-48, Class 30
MOTOR HOUSING	Cast Iron ASTM A-48, Class 30
SEAL PLATE	Cast Iron ASTM A-48, Class 30
IMPELLER:	
<i>Design</i>	2 Vane, Open with pump out vanes on back side, Dynamically Balanced, ISO G6.3
<i>Material</i>	Cast Iron ASTM A-48, Class 30
SHAFT	416 Stainless Steel
SQUARE RINGS	Buna-N
DIAPHRAGM	Buna-N
HARDWARE	300 Series Stainless Steel
LIFTING BAIL	304 Stainless Steel
PAINT	Air Dry Enamel (Epoxy Optional)
SEAL:	
<i>Design</i>	Double Mechanical, Oil filled pressure equalized reservoir
<i>Material</i>	Carbon/Ceramic/Buna-N
	Hardware - 300 Series Stainless
CORD ENTRY	40 ft. (12.1 m) Cord. Epoxy Sealed Housing with secondary pressure grommet for sealing and strain relief
SPEED	1750 RPM (Nominal)
BEARINGS:	
<i>Upper</i>	Single Row, Ball, Oil Lubricated
<i>Load</i>	Radial
<i>Lower</i>	Single Row, Ball, Oil Lubricated
<i>Load</i>	Radial
<i>Life</i>	50,000 HR L10 Design
MOTOR:	
<i>Design</i>	NEMA L- Single Phase, NEMA B - Three Phase Torque Curve, Oil Filled, Squirrel Cage Induction
<i>Winding</i>	Class F, Class H rated Magnet Wire
<i>Service Factor</i>	1.15
SINGLE PHASE	Capacitor Start/Capacitor Run. Requires Barnes Starter/Panel which includes capacitors and overload protection
THREE PHASE	Dual Voltage motor 230/460/575. Requires Overload Protection to be included in Control Panel, VFD Suitable
MOISTURE SENSOR	Normally Open (N/O), Requires relay in control panel
TEMPERATURE SENSOR ..	Normally Closed (N/C), Requires relay in control panel.
OPTIONAL EQUIPMENT	Seal Material, Impeller Trims, Additional Cord, Epoxy Paint

RECOMMENDED:

Accessories..... Break Away Fitting (BAF)
 Check Valve
 Control Panel

Seal Kit PN 130179
 Service Kit PN. 130175

Series: 4SE-L 4.5 - 15HP, 1750RPM, 60Hz

Sample Specifications: Section 1 Page 16.

DESCRIPTION:

SUBMERSIBLE NON-CLOG SEWAGE PUMP DESIGNED FOR TYPICAL RAW SEWAGE APPLICATIONS



WARNING:
CANCER AND REPRODUCTIVE HARM -
WWW.P65WARNINGS.CA.GOV



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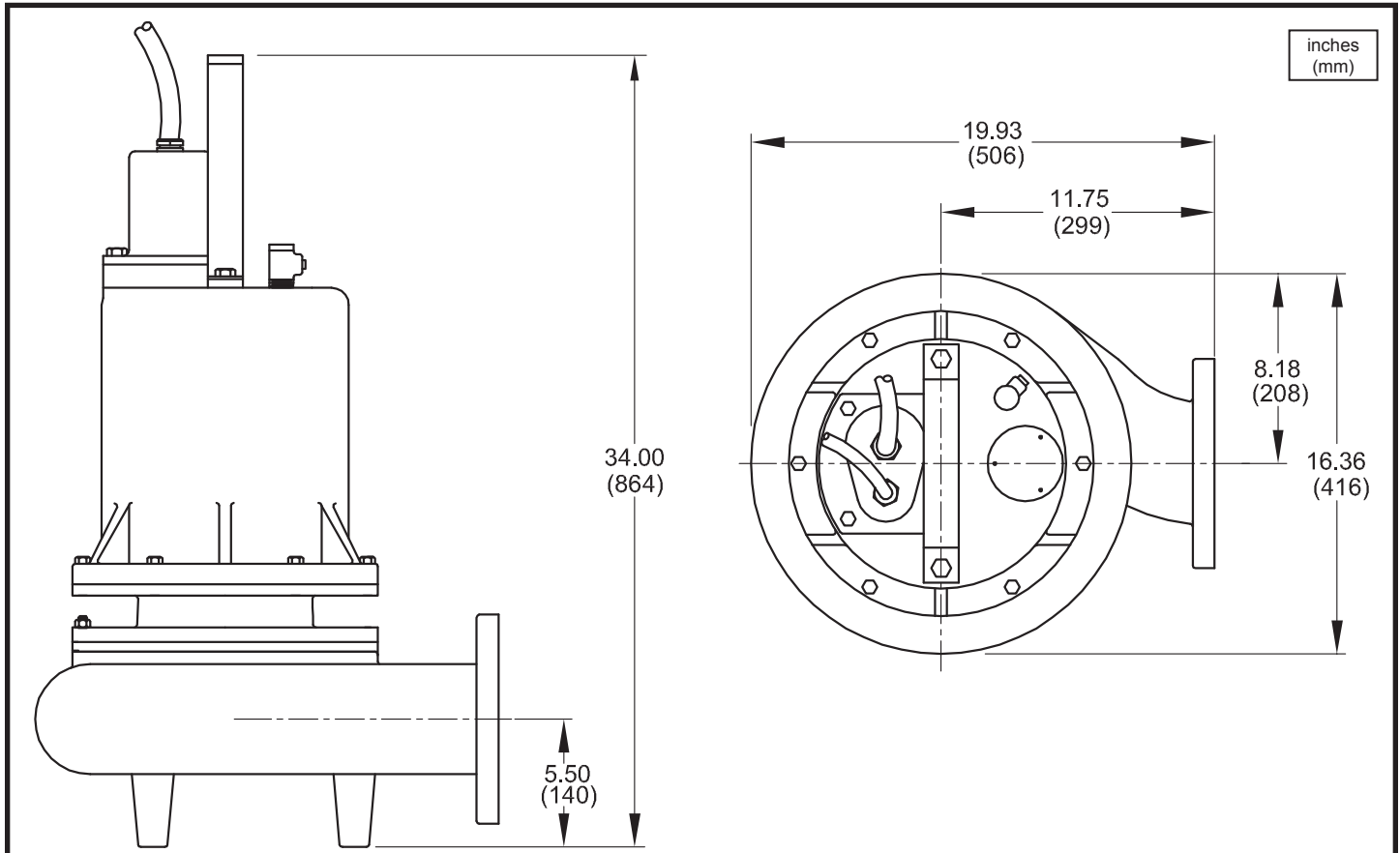
CRANE®

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PUMPS & SYSTEMS

USA: (937) 778-8947 • Canada: (905) 457-6223 • International: (937) 615-3598

4" Horizontal Discharge - Submersible Non-Clog Pumps



MODEL NO	PART NO	HP	VOLT/PH	Hz	RPM (Nom)	NEMA START CODE	FULL LOAD AMPS	LOCKED ROTOR AMPS	CORD SIZE	CORD TYPE	CORD O.D inch (mm)
4SE4524L	084623	4.5	230/1	60	1750	A	26.0	59.0	10/4	SOW	0.750 (19.1)
4SE4564L	084624	4.5	200/3	60	1750	C	20.9	48.6	10/4	SOW	0.750 (19.1)
4SE4534L	084625	4.5	230/3	60	1750	E	18.2	56.0	10/4	SOW	0.750 (19.1)
4SE4544L	084626	4.5	460/3	60	1750	E	9.1	28.0	10/4	SOW	0.750 (19.1)
4SE4554L	089306	4.5	575/3	60	1750	E	7.2	22.4	10/4	SOW	0.750 (19.1)
4SE7524L	084627	7.5	230/1	60	1750	A	39.0	96.0	6/4	SOW	1.06 (27)
4SE7564L	084628	7.5	200/3	60	1750	B	30.8	69.5	8/4	SOW	0.830 (21)
4SE7534L	084629	7.5	230/3	60	1750	D	26.8	80.0	8/4	SOW	0.830 (21)
4SE7544L	084630	7.5	460/3	60	1750	D	13.4	40.0	8/4	SOW	0.830 (21)
4SE7554L	089307	7.5	575/3	60	1750	D	10.7	32.0	10/4	SOW	0.750 (19.1)
4SE11364L	084631	11.3	200/3	60	1750	B	32.2	109.5	8/4	SOW	0.830 (21)
4SE11334L	084632	11.3	230/3	60	1750	D	28.0	126.0	8/4	SOW	0.830 (21)
4SE11344L	084633	11.3	460/3	60	1750	D	14.0	63.0	8/4	SOW	0.830 (21)
4SE11354L	089308	11.3	575/3	60	1750	D	11.2	50.4	10/4	SOW	0.750 (19.1)
4SE15034L	084634	15.0	230/3	60	1750	D	38.0	160.0	6/4	SOW	1.06 (27)
4SE15044L	084635	15.0	460/3	60	1750	D	19.0	80.0	6/4	SOW	1.06 (27)
4SE15054L	089309	15.0	575/3	60	1750	D	15.2	64.0	8/4	SOW	0.830 (21)

Moisture/Temperature sensor cord for all phase models is 18/5 SOW, 0.476 (12.1mm) O.D.

IMPORTANT !

- 1.) PUMP MAY BE OPERATED "DRY" FOR EXTENDED PERIODS WITHOUT DAMAGE TO MOTOR AND/OR SEALS.
- 2.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.

Series 4SE -L

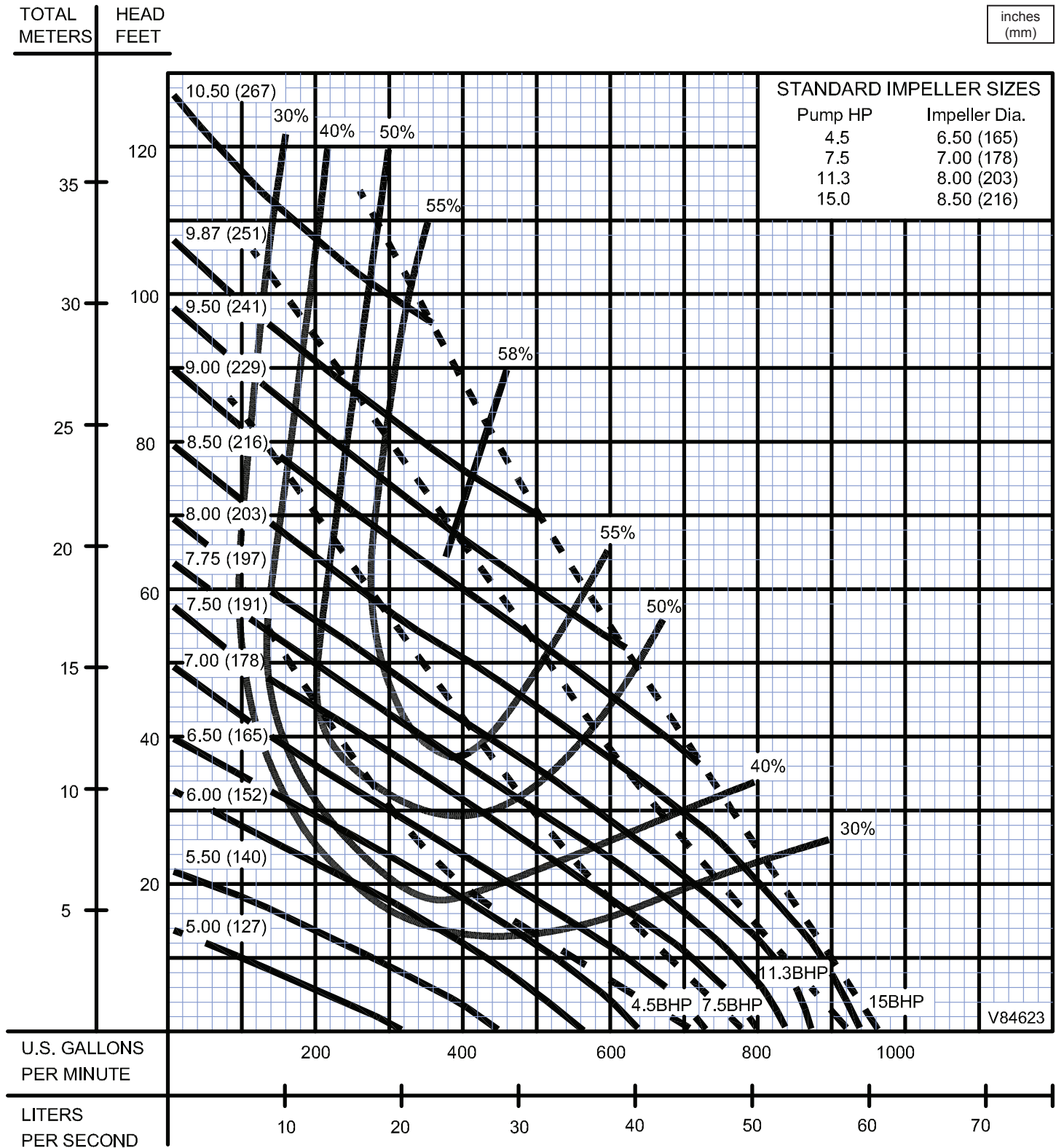
Performance Curve

4.5, 7.5, 11.3 & 15HP, 1750RPM, 60Hz

BARNES®

www.cranepumps.com

4" Horizontal Discharge - Submersible Non-Clog Pumps



Testing is performed with water, specific gravity 1.0 @ 68° F @ (20°C), other fluids may vary performance

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