



# DAKOTA PUMP INC.

*The Total Solution*

255424 413th Ave. - Mitchell, SD 57301 - (O) 605.996.6636 - (F) 605.996.6067  
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## Transmittal Letter

To: Kevin Kuebler  
Banner Associates  
Brookings, SD 57007  
605-692-6342

From: Will Lind,  
Dakota Pump Inc. Mitchell,  
SD 57301  
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(605) 996-6067 fax  
[will@dakotapump.com](mailto:will@dakotapump.com)

Date: April 6 2018

Re: Lake P Lift Station Pumps

Notes:

Kevin,

The following is Dakota Pump Inc's submittal for providing pumps for the above referenced project.

Thank you,  
Will

Designers and Fabricators of Water & Wastewater Pumping Stations

PROJECT:	_____	UNIT TAG:	_____	QUANTITY:	_____
REPRESENTATIVE:	_____	TYPE OF SERVICE:	_____	DATE:	_____
ENGINEER:	_____	SUBMITTED BY:	_____	DATE:	_____
CONTRACTOR:	_____	APPROVED BY:	_____	DATE:	_____
		ORDER NO.:	_____	DATE:	_____

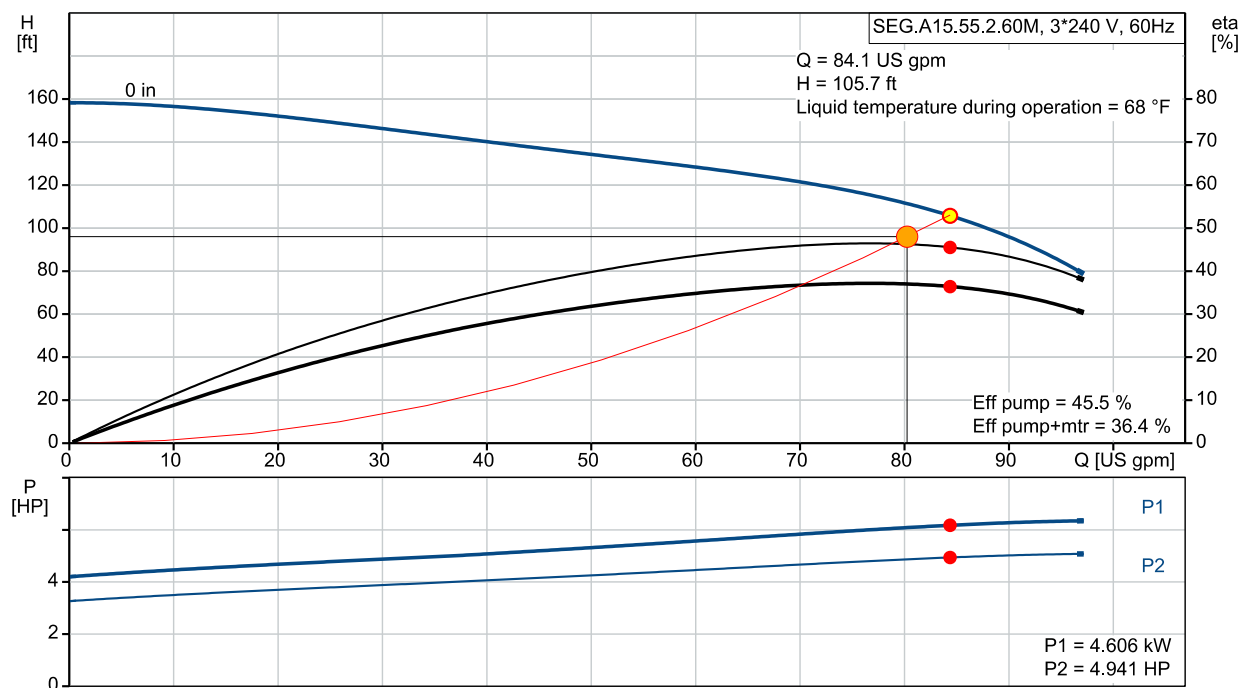


## SEG.A15.55.2.60M

### Grinder pumps

Product photo could vary from the actual product

Conditions of Service		Pump Data		Motor Data	
Flow:	84.1 US gpm	Maximum operating pressure:	87 psi	Rated voltage:	200-230 V
Head:	105.7 ft	Liquid temperature range:	32 .. 104 °F	Main frequency:	60 Hz
Efficiency:	36.4 %	Maximum ambient temperature:	104 °F	Number of poles:	2
Liquid:	Water	Approvals:	PA-I	Enclosure class:	IP68
Temperature:	68 °F	Flange standard:	ANSI	Insulation class:	F
NPSH required:	32.81 ft	Product number:	98280858	Motor protection:	THERMAL SWITCH
Viscosity:	1 cSt			Thermal protection:	external
Specific Gravity:	1.002				



PROJECT: _____	UNIT TAG: _____	QUANTITY: _____
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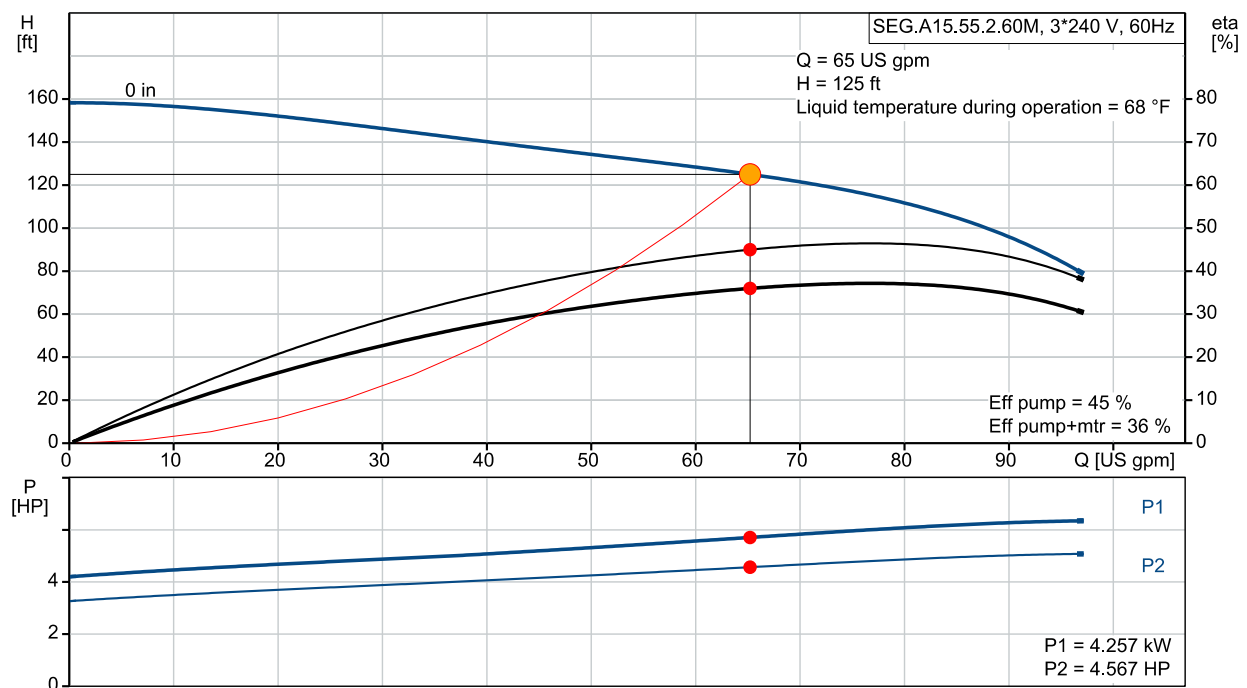


SEG.A15.55.2.60M

Grinder pumps

Product photo could vary from the actual product

Conditions of Service		Pump Data		Motor Data	
Flow:	65 US gpm	Maximum operating pressure:	87 psi	Rated voltage:	200-230 V
Head:	125 ft	Liquid temperature range:	32 .. 104 °F	Main frequency:	60 Hz
Efficiency:	36 %	Maximum ambient temperature:	104 °F	Number of poles:	2
Liquid:	Water	Approvals:	PA-I	Enclosure class:	IP68
Temperature:	68 °F	Flange standard:	ANSI	Insulation class:	F
NPSH required:	32.81 ft	Product number:	98280858	Motor protection:	THERMAL SWITCH
Viscosity:	1 cSt			Thermal protection:	external
Specific Gravity:	1.002				



PROJECT: _____	UNIT TAG: _____	QUANTITY: _____
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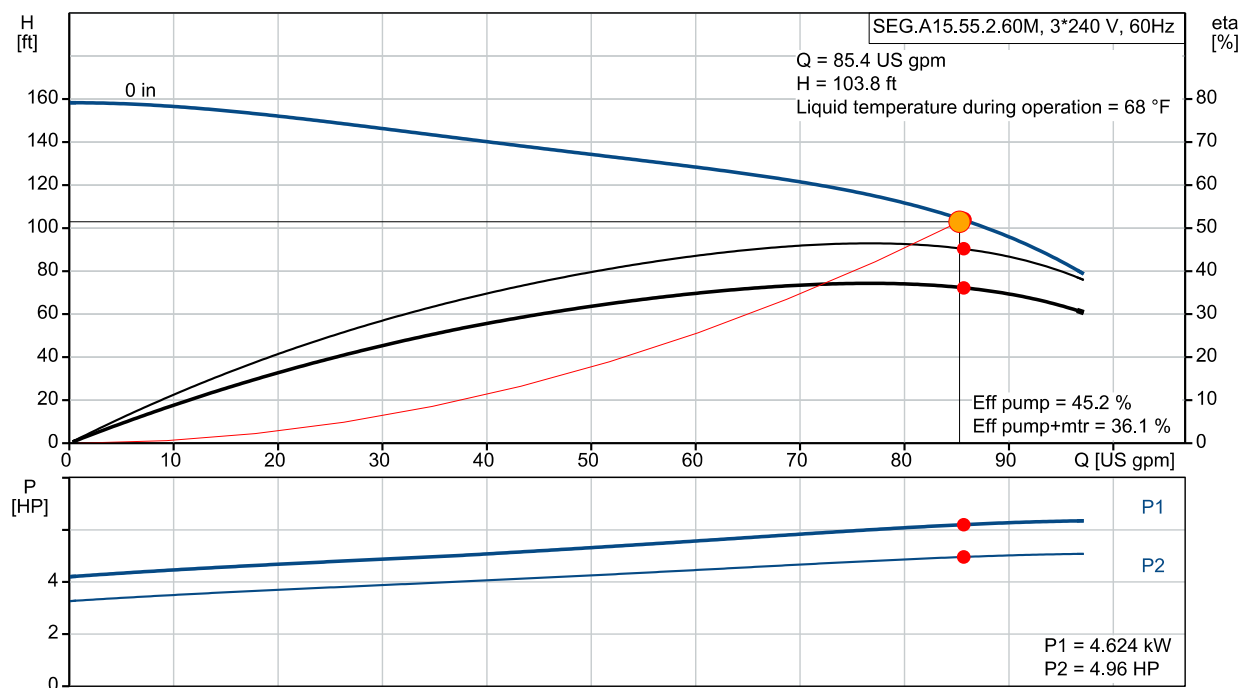


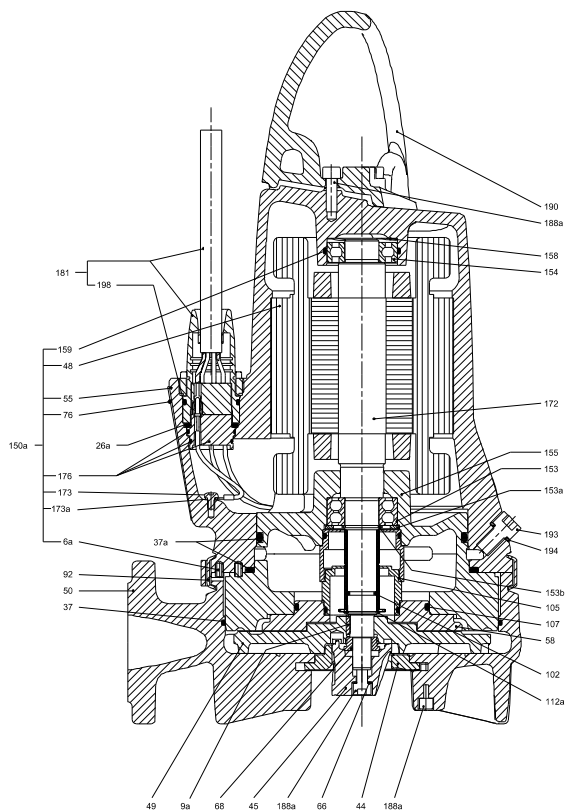
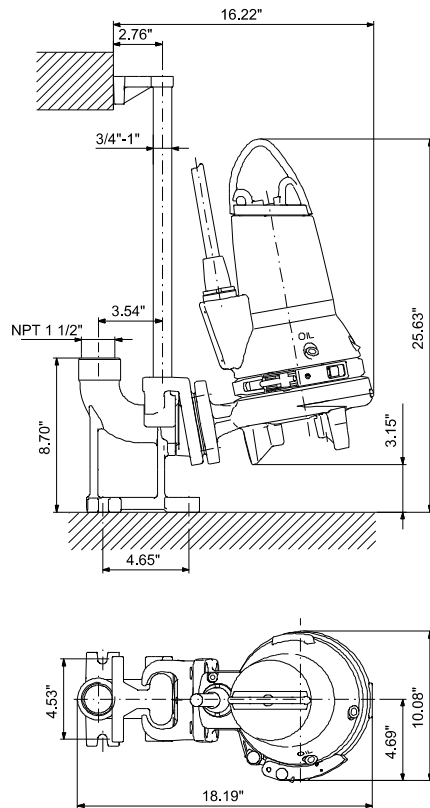
## SEG.A15.55.2.60M

### Grinder pumps

Product photo could vary from the actual product

Conditions of Service		Pump Data		Motor Data	
Flow:	85.4 US gpm	Maximum operating pressure:	87 psi	Rated voltage:	200-230 V
Head:	103.8 ft	Liquid temperature range:	32 .. 104 °F	Main frequency:	60 Hz
Efficiency:	36.1 %	Maximum ambient temperature:	104 °F	Number of poles:	2
Liquid:	Water	Approvals:	PA-I	Enclosure class:	IP68
Temperature:	68 °F	Flange standard:	ANSI	Insulation class:	F
NPSH required:	32.81 ft	Product number:	98280858	Motor protection:	THERMAL SWITCH
Viscosity:	1 cSt			Thermal protection:	external
Specific Gravity:	1.002				






**Materials:**

Pump housing: Cast iron  
EN1561 EN-GJL-200  
ASTM A48 30B

**Impeller:**

Cast iron  
EN1561 EN-GJL-200  
ASTM A48 30B

Position	Count	Description																																
	1	<div><div></div><div>Product photo could vary from the actual product</div></div> <p>Product No.: <a href="#">98280858</a></p> <p>Grundfos SEG pumps are submersible pumps with horizontal discharge port, specifically designed for pressurized pumping of wastewater with discharge from toilets.</p> <p>The SEG pumps are equipped with a grinder system, grinding destructible solids into small pieces so that they can be fed away through pipes of a relatively small diameter.</p> <p>The surface of the pump is smooth to prevent dirt and impurities from sticking to the pump. The pump is primarily made of cast iron. The clamp securing the motor to the pump housing is made of stainless steel to prevent corrosion and allow for ease of service of the pump.</p> <p>The power cable of the pump also incorporates wires for the thermal sensors in the motor winding. The cable connection is a plug solution. The totally sealed plug connection prevents moisture from entering the pump through the cable in case of cable breakage or adverse and/or careless handling of the pump cable.</p> <p>The pump must be connected to a control box or a controller.</p> <p>The pump has been tested by CSA.</p> <p><b>Controls:</b></p> <table><tr><td>Moisture sensor:</td><td>with moisture sensors</td></tr><tr><td>AUTOADAPT:</td><td>NO</td></tr></table> <p><b>Liquid:</b></p> <table><tr><td>Pumped liquid:</td><td>Water</td></tr><tr><td>Liquid temperature range:</td><td>32 .. 104 °F</td></tr><tr><td>Liquid temperature during operation:</td><td>68 °F</td></tr><tr><td>Density:</td><td>62.4 lb/ft³</td></tr><tr><td>Kinematic viscosity:</td><td>1 cSt</td></tr></table> <p><b>Technical:</b></p> <table><tr><td>Actual calculated flow:</td><td>84.1 US gpm</td></tr><tr><td>Resulting head of the pump:</td><td>105.7 ft</td></tr><tr><td>Type of impeller:</td><td>Grinder System</td></tr><tr><td>Primary shaft seal:</td><td>SIC/SIC</td></tr><tr><td>Secondary shaft seal:</td><td>CARBON/CERAMICS</td></tr><tr><td>Approvals on nameplate:</td><td>PA-I</td></tr><tr><td>Curve tolerance:</td><td>ANSI/HI11.6:2012 3B2</td></tr></table> <p><b>Materials:</b></p> <table><tr><td>Pump housing:</td><td>Cast iron</td></tr><tr><td></td><td>EN1561 EN-GJL-200</td></tr></table>	Moisture sensor:	with moisture sensors	AUTOADAPT:	NO	Pumped liquid:	Water	Liquid temperature range:	32 .. 104 °F	Liquid temperature during operation:	68 °F	Density:	62.4 lb/ft³	Kinematic viscosity:	1 cSt	Actual calculated flow:	84.1 US gpm	Resulting head of the pump:	105.7 ft	Type of impeller:	Grinder System	Primary shaft seal:	SIC/SIC	Secondary shaft seal:	CARBON/CERAMICS	Approvals on nameplate:	PA-I	Curve tolerance:	ANSI/HI11.6:2012 3B2	Pump housing:	Cast iron		EN1561 EN-GJL-200
Moisture sensor:	with moisture sensors																																	
AUTOADAPT:	NO																																	
Pumped liquid:	Water																																	
Liquid temperature range:	32 .. 104 °F																																	
Liquid temperature during operation:	68 °F																																	
Density:	62.4 lb/ft³																																	
Kinematic viscosity:	1 cSt																																	
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Resulting head of the pump:	105.7 ft																																	
Type of impeller:	Grinder System																																	
Primary shaft seal:	SIC/SIC																																	
Secondary shaft seal:	CARBON/CERAMICS																																	
Approvals on nameplate:	PA-I																																	
Curve tolerance:	ANSI/HI11.6:2012 3B2																																	
Pump housing:	Cast iron																																	
	EN1561 EN-GJL-200																																	



Company name:

Created by:

Phone:

Date:

4/6/2018

Position	Count	Description
		ASTM A48 30B Impeller: Cast iron EN1561 EN-GJL-200 ASTM A48 30B  <b>Installation:</b> Maximum ambient temperature: 104 °F Maximum operating pressure: 87 psi Flange standard: ANSI Pipework connection: 1 1/2" /2" Size of outlet port: 1 1/2 inch Pressure stage: PN 10 Maximum installation depth: 32.81 ft Auto-coupling: 98245788  <b>Electrical data:</b> Power input - P1: 5 kW Rated power - P2: 5.5 HP Main frequency: 60 Hz Rated voltage: 3 x 200-230 V Voltage tolerance: +6/-10 % Max starts per. hour: 30 Rated current: 16-14 A Starting current: 89.5 A Rated current at no load: 4.5 A Cos phi - power factor: 0,91 Cos phi - p.f. at 3/4 load: 0,79 Cos phi - p.f. at 1/2 load: 0,66 Rated speed: 3463 rpm Moment of inertia: 0.622 lb ft <sup>2</sup> Motor efficiency at full load: 80 % Motor efficiency at 3/4 load: 80 % Motor efficiency at 1/2 load: 76 % Number of poles: 2 Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Insulation class (IEC 85): F Explosion proof: no Length of cable: 33 ft Cable type: SEOOW 600V Type of cable plug: NO PLUG  <b>Others:</b> Net weight: 154 lb Country of origin: HU Custom tariff no.: 8413.70.2015

PROJECT: _____	UNIT TAG: _____	QUANTITY: _____
REPRESENTATIVE: _____	TYPE OF SERVICE: _____	DATE: _____
ENGINEER: _____	SUBMITTED BY: _____	DATE: _____
CONTRACTOR: _____	APPROVED BY: _____	DATE: _____
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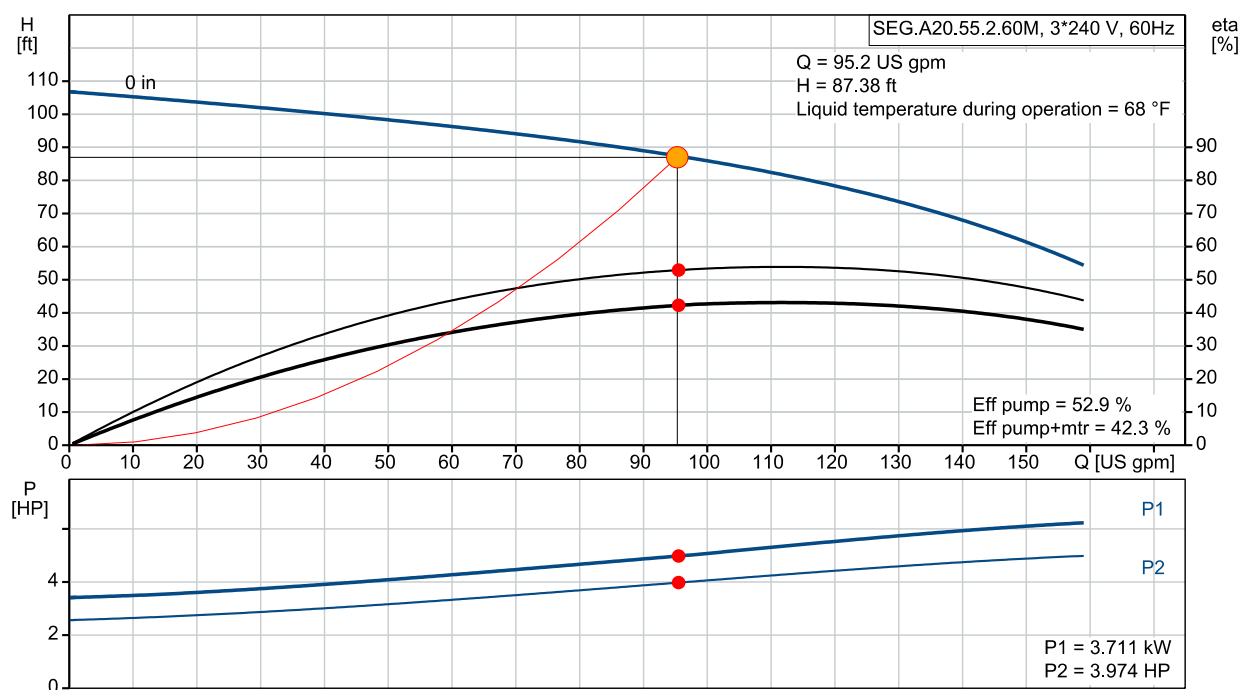


**SEG.A20.55.2.60M**

Grinder pumps

Product photo could vary from the actual product

Conditions of Service	Pump Data	Motor Data
Flow: 95.2 US gpm	Maximum operating pressure: 87 psi	Rated voltage: 200-230 V
Head: 87.38 ft	Liquid temperature range: 32 .. 104 °F	Main frequency: 60 Hz
Efficiency: 42.3 %	Maximum ambient temperature: 104 °F	Number of poles: 2
Liquid: Water	Approvals: PA-I	Enclosure class: IP68
Temperature: 68 °F	Flange standard: ANSI	Insulation class: F
NPSH required: 32.81 ft	Product number: 98280865	Motor protection: THERMAL SWITCH
Viscosity: 1 cSt		Thermal protection: external
Specific Gravity: 1.002		



PROJECT: _____	UNIT TAG: _____	QUANTITY: _____
REPRESENTATIVE: _____	TYPE OF SERVICE: _____	DATE: _____
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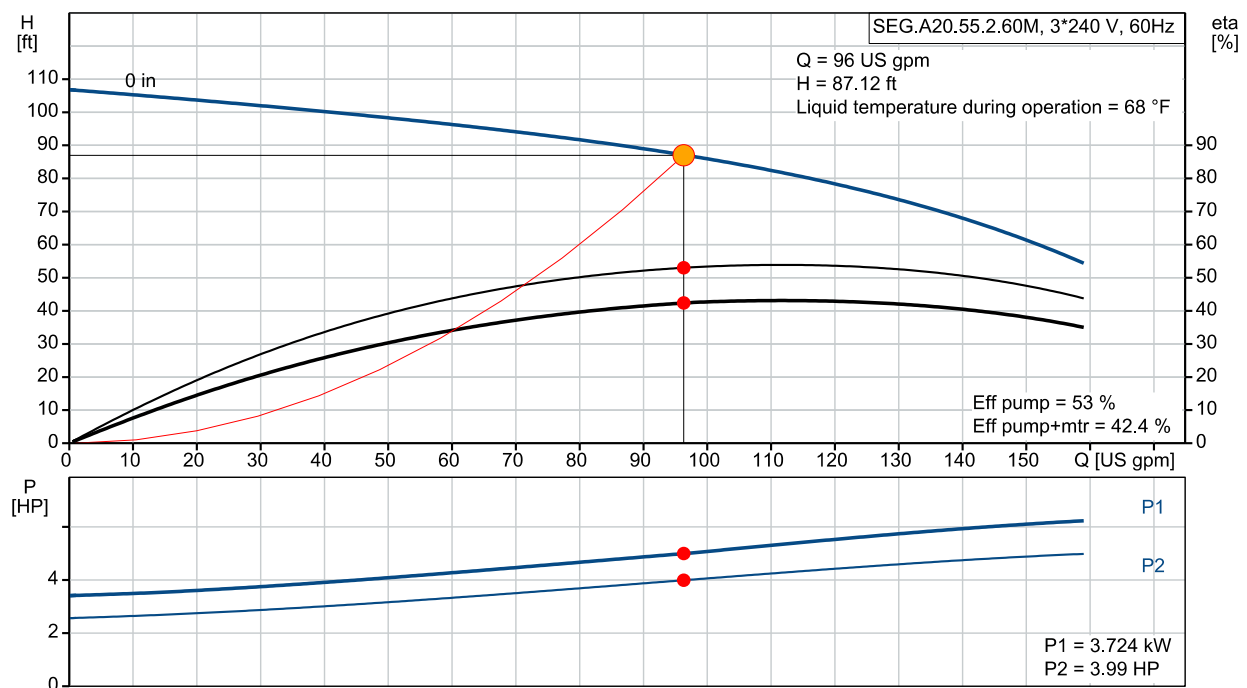


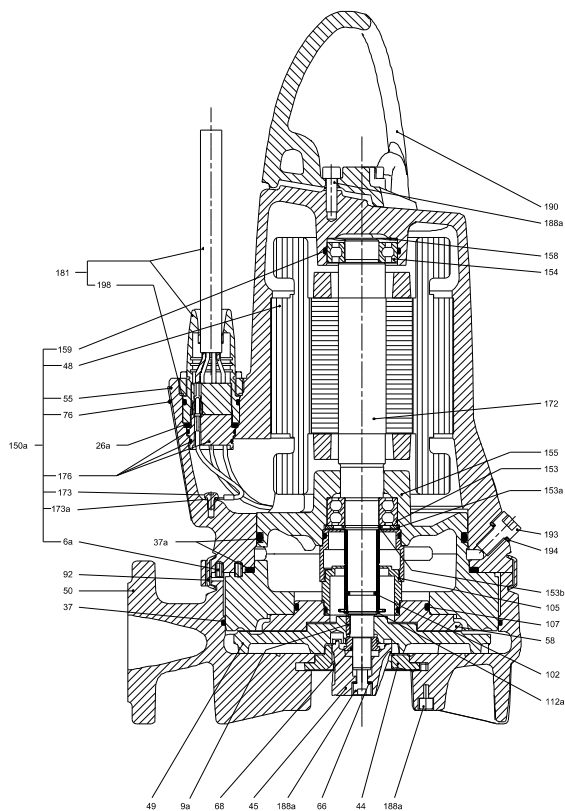
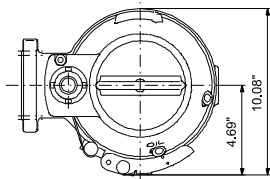
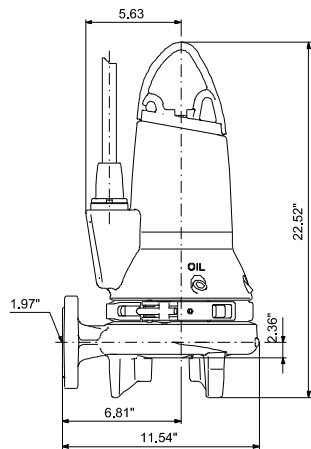
## SEG.A20.55.2.60M

Grinder pumps

Product photo could vary from the actual product

Conditions of Service		Pump Data		Motor Data	
Flow:	96 US gpm	Maximum operating pressure:	87 psi	Rated voltage:	200-230 V
Head:	87.12 ft	Liquid temperature range:	32 .. 104 °F	Main frequency:	60 Hz
Efficiency:	42.4 %	Maximum ambient temperature:	104 °F	Number of poles:	2
Liquid:	Water	Approvals:	PA-I	Enclosure class:	IP68
Temperature:	68 °F	Flange standard:	ANSI	Insulation class:	F
NPSH required:	32.81 ft	Product number:	98280865	Motor protection:	THERMAL SWITCH
Viscosity:	1 cSt			Thermal protection:	external
Specific Gravity:	1.002				






**Materials:**

Pump housing: Cast iron  
EN1561 EN-GJL-200  
ASTM A48 30B

**Impeller:**

Cast iron  
EN1561 EN-GJL-200  
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Position	Count	Description																																
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Company name:

Created by:

Phone:

Date:

4/6/2018

Position	Count	Description
		<p>ASTM A48 30B Impeller: Cast iron EN1561 EN-GJL-200 ASTM A48 30B</p> <p><b>Installation:</b> Maximum ambient temperature: 104 °F Maximum operating pressure: 87 psi Flange standard: ANSI Pipework connection: 2" Size of outlet port: 2 inch Pressure stage: PN 10 Maximum installation depth: 32.81 ft Auto-coupling: 98245790</p> <p><b>Electrical data:</b> Power input - P1: 5 kW Rated power - P2: 5.5 HP Main frequency: 60 Hz Rated voltage: 3 x 200-230 V Voltage tolerance: +6/-10 % Max starts per. hour: 30 Rated current: 16-14 A Starting current: 89.5 A Rated current at no load: 4.5 A Cos phi - power factor: 0,91 Cos phi - p.f. at 3/4 load: 0,79 Cos phi - p.f. at 1/2 load: 0,66 Rated speed: 3463 rpm Moment of inertia: 0.57 lb ft<sup>2</sup> Motor efficiency at full load: 80 % Motor efficiency at 3/4 load: 80 % Motor efficiency at 1/2 load: 76 % Number of poles: 2 Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Insulation class (IEC 85): F Explosion proof: no Length of cable: 33 ft Cable type: SEOOW 600V Type of cable plug: NO PLUG</p> <p><b>Others:</b> Net weight: 179 lb Country of origin: HU Custom tariff no.: 8413.70.2015</p>