

G321S & G323S

3-HP High Flow Single Phase and Three Phase Grinder Pump



The AMFI G321S and G323S series centrifugal grinder pumps easily handle residential, commercial or industrial sanitary waste, reducing it to a fine slurry. Both models are designed for use in pressure sewer applications or any piping network.

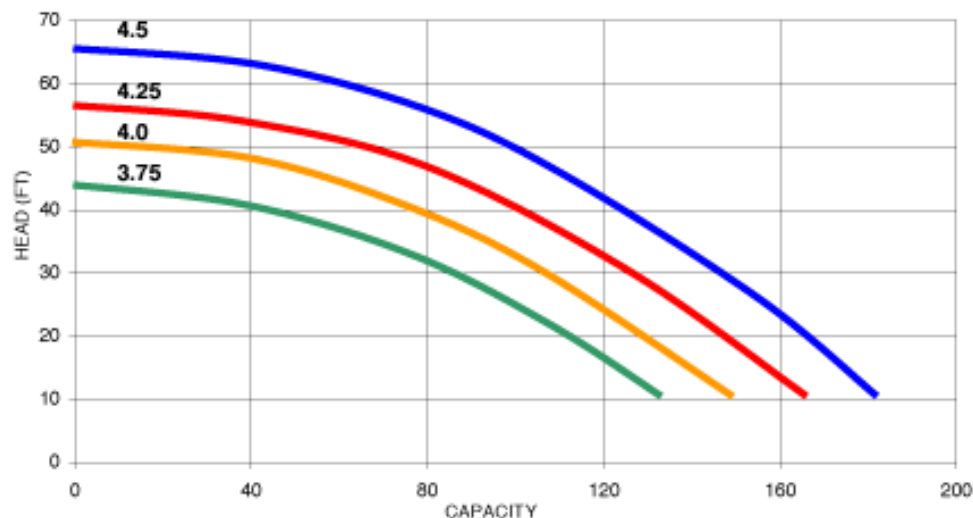
The recessed vortex impeller design provides trouble-free, non-overloading operation over the entire performance curve.

The modular design provides quick and easy serviceability. The hardened stainless steel grinder assembly provides many years of dependable operation.

The G321S and G323S series pumps feature:

- 3 support bearings (upper / lower ball, sleeve)
- Dual mechanical seals (silicon carbide)
- Internal moisture detection
- Class H motor
 - 208/230 volt, 1-phase (G321S)
 - 208/230/460, 3 - phase (G323S)

Performance Curve

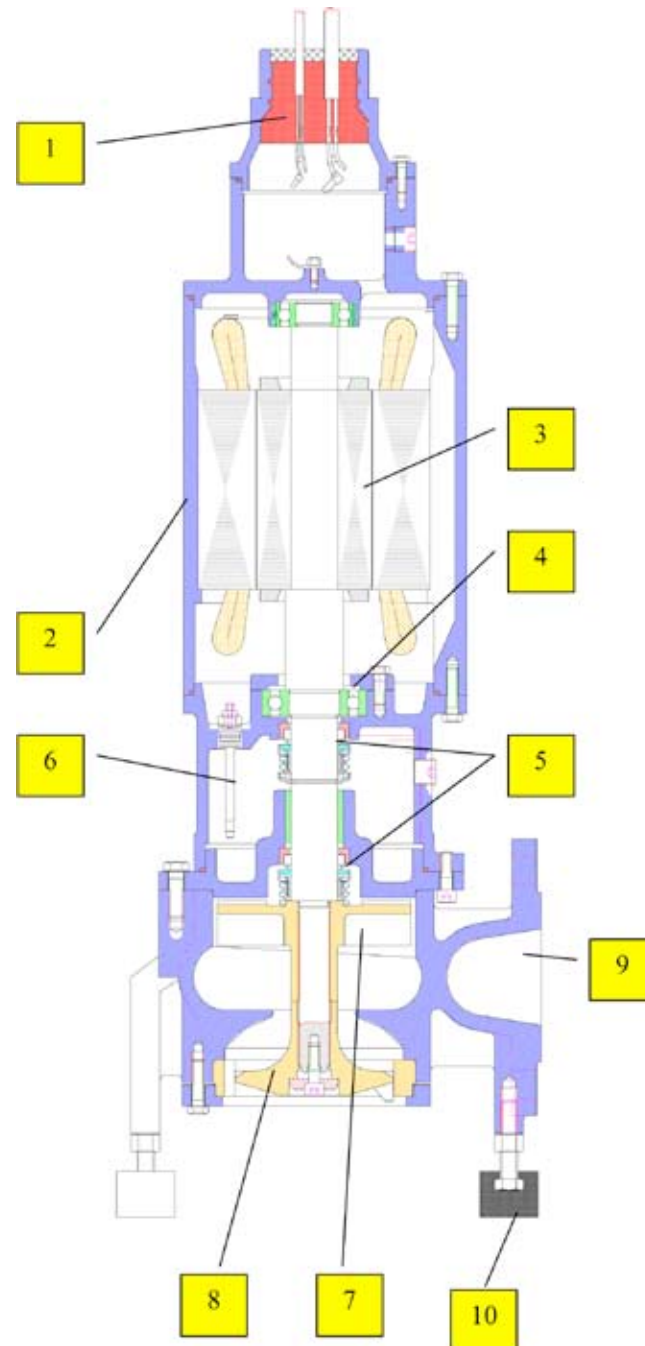


G321S & G323S

Features and Benefits

- 1. Triple-Sealed Cable Entrance**
Stainless steel strain relief cord grip with compression grommet protects outer cord jacket. Epoxy-filled inner cord cap with individually soldered wires provides anti-wicking moisture protection to the motor even if power cable is cut or damaged.
- 2. Modular Pump Design**
Commonality of parts across the AMFI product line minimizes the number of parts required for servicing. Heavy duty ASTM A48, Class 30 cast iron components.
- 3. Strong Motor**
Powerful 208/230 V, 1-phase or 208/230/460 V, 3-phase high torque motor for reliable pump operation. Pressed stator securely holds motor and efficiently transfers heat. Class H insulation with overload protection in oil-filled chamber for cool operation and long motor life.
- 4. 3-Bearing Support**
Motor / pump shaft securely held with upper and lower ball bearing plus addition sleeve bearing in lower seal chamber. Long 50,000-hour B-10 bearing life.
- 5. Double Mechanical Seal Protection**
Dual silicon carbide mechanical shaft seals provide twice the moisture protection for the motor. Dual seals are housed in a secondary oil filled seal chamber. Tougher silicon carbide seals better handle sand, grit and abrasive materials.
- 6. Moisture Detection**
Seal leak probe signals alarm in control panel for scheduled maintenance.
- 7. Non-Overloading Hydraulic Design**
The recessed centrifugal impeller allows 100% performance curve operation from shut-off to maximum flow without damage to the pump or system. The recessed vortex impeller is out of the passageway of fluid flow, eliminating concerns of blockage or wear.
- 8. Proven Grinder Assembly**
Hardened (Rockwell 56-60) stainless steel grinder assembly has 30+ years proven field experience. The reversible grinder ring and grinder impeller effectively reduce solids into a fine slurry, easily passable in a piping system without concerns of clogging.
- 9. Versatile Flange Connection**
Combination 2.5 " and 3" horizontal flange. Industry standard ANSI 125# dimensions.
- 10. Accessories Included**
Anti-vibration rubber mounting feet are included with the pump.

3-HP High Flow, 1-Phase and 3-Phase Grinder Pump



ISO 9001
CERTIFIED PUMP

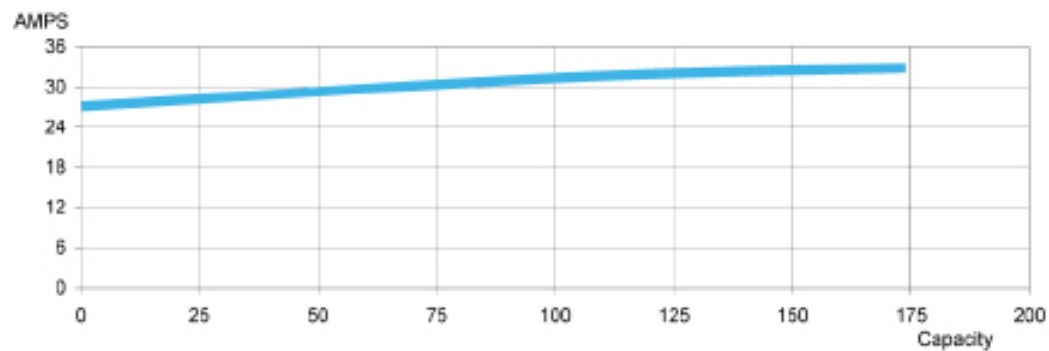
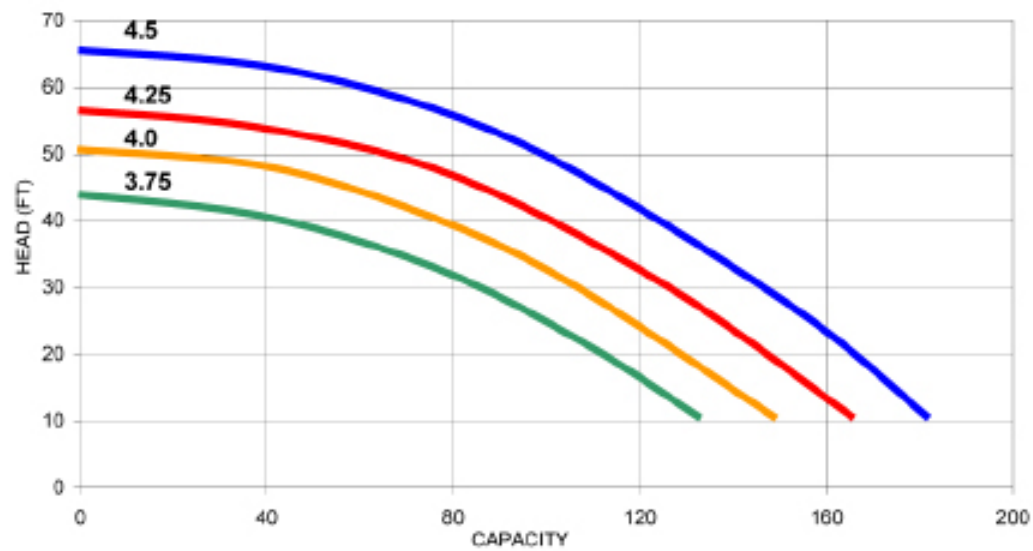
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G321S

208/230 V, Single-Phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
General		Motor Data	
Project Name		HP / Service Factor	3 HP / 3.96
Date / Curve No.	/	Start Relay	AMFI Model RE-5
Pump Data		Start Capacitor	274-324 mfd, 250 Volt
Model No.	G321S	Run Capacitor	30 mfd, 370 volt
Discharge	2.5" / 3" Horz. Flange	Rated Power	208 / 230 volt, 1-Phase
Grinder Ring	25 Slots	Rated Current	37 / 34 amps
Impeller Dia.	4 1/2" Max Dia.	Starting Current	72 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
Performance Curve			



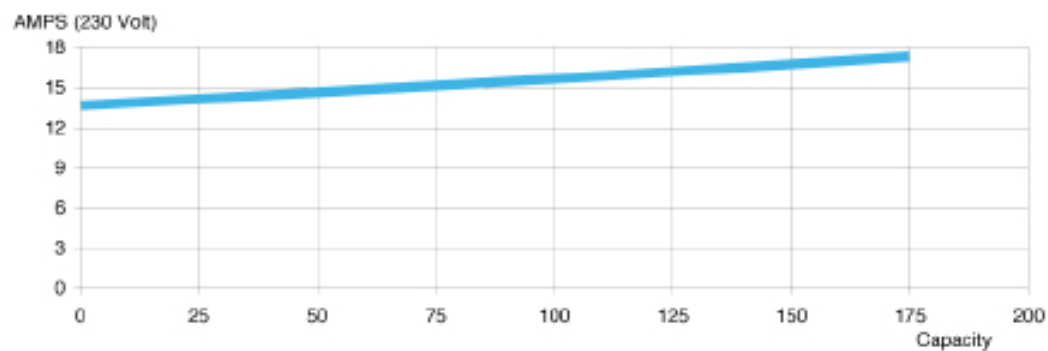
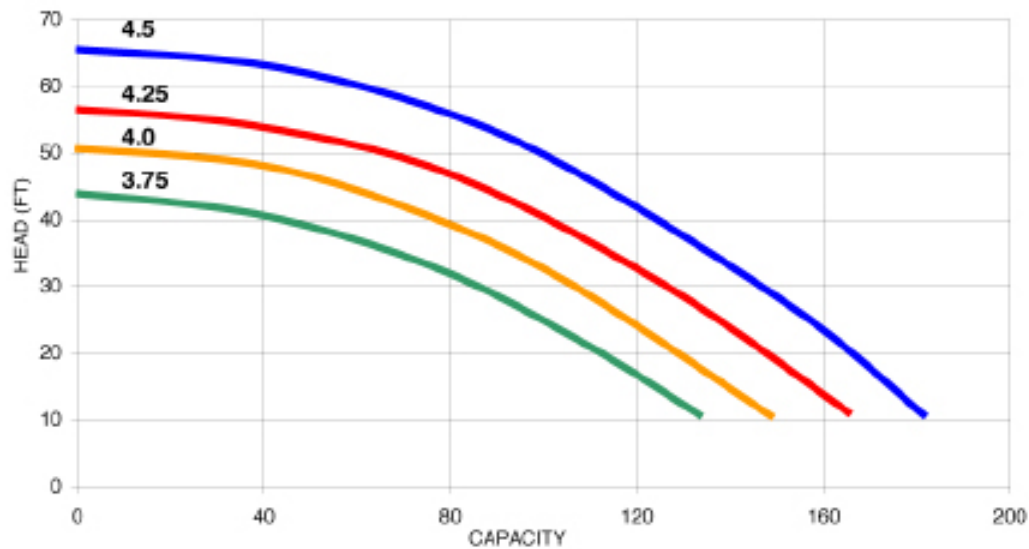
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G323S

208/230/460 V, Three-Phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
General		Motor Data	
Project Name		HP / Service Factor	3 HP / 3.50
Date / Curve No.	/	Efficiency (%)	
Pump Data		Start Capacitor	
Model No.	G323S	Run Capacitor	
Discharge	2.5' / 3" Horz. Flange	Rated Power	208 / 230 / 460 volt, 3-Phase
Grinder Ring	25 Slots	Rated Current	21 / 18 / 9 amps
Impeller Dia.	4 1/2" Max Dia.	Starting Current	38 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
Performance Curve			



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G321S & G323S

AMFI Pumps

3-HP High Flow Grinder Pumps

G321S & G323S

Performance Specifications

Pump Model – Pump shall be of the centrifugal type, G321S or G323S, with an integrally built-in grinder unit and submersible type motor. The grinder unit shall be capable of macerating all material in normal domestic and commercial sewage, including reasonable amounts of foreign objects such as sanitary napkins, disposable diapers, thin rubber, small wood, plastic and the like to a fine slurry that easily passes through the pump and 2" discharge pipe. Discharge shall be standard 2.5"/3", 150 lbs ANSI horizontal flange.

Operating Conditions – The pump shall have a capacity of _____ GPM at a total head of _____ feet, and shall use a motor rated at _____ HP and 3450 RPM.

Pump Impeller – Ductile iron and threaded on a stainless steel shaft. The impeller shall be of the recessed vortex type to provide an unobstructed passage through the volute for the ground solids.

Grinder Construction – Both grinder impellers and shredding ring shall be of 440C stainless steel hardened to 56-60 Rockwell C. The grinder assembly shall consist of a grinder impeller and shredding ring mounted directly below the volute passage. The grinder impeller is threaded to a stainless steel shaft, locked with a screw and washer. The shredding ring shall be pressed into an iron holding flange for easy removal. The flange shall be provided with tapped back-off holes so screws can be used to push the shredding ring from the housing. All grinding of solids shall be from the action of the grinder impeller against the shredding ring. There shall be 17,250 cuts / second.

Seals – Type 21, dual mechanical seal construction, mounted in tandem, shall protect the motor. Primary seal shall be silicon / carbide. Secondary seal shall be silicon / carbide. The seal face shall be lapped to a flatness of one light band. A double electrode shall be mounted in the seal chamber to detect water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop the motor, but shall act as a

warning only, indicating service is required.

Motor – The pump motor shall be of the submersible type, rated 3 HP, 3450 RPM. The motor shall be for 60 Hz, either 208/230 volt single-phase or 208/230/460 volt three-phase operation. Major operating temperature must not exceed Class B ratings.

The stator winding shall be of the open type with Class H insulation. Oil-filled motors for maximum heat transfer efficiencies and continuous bearing lubrication.

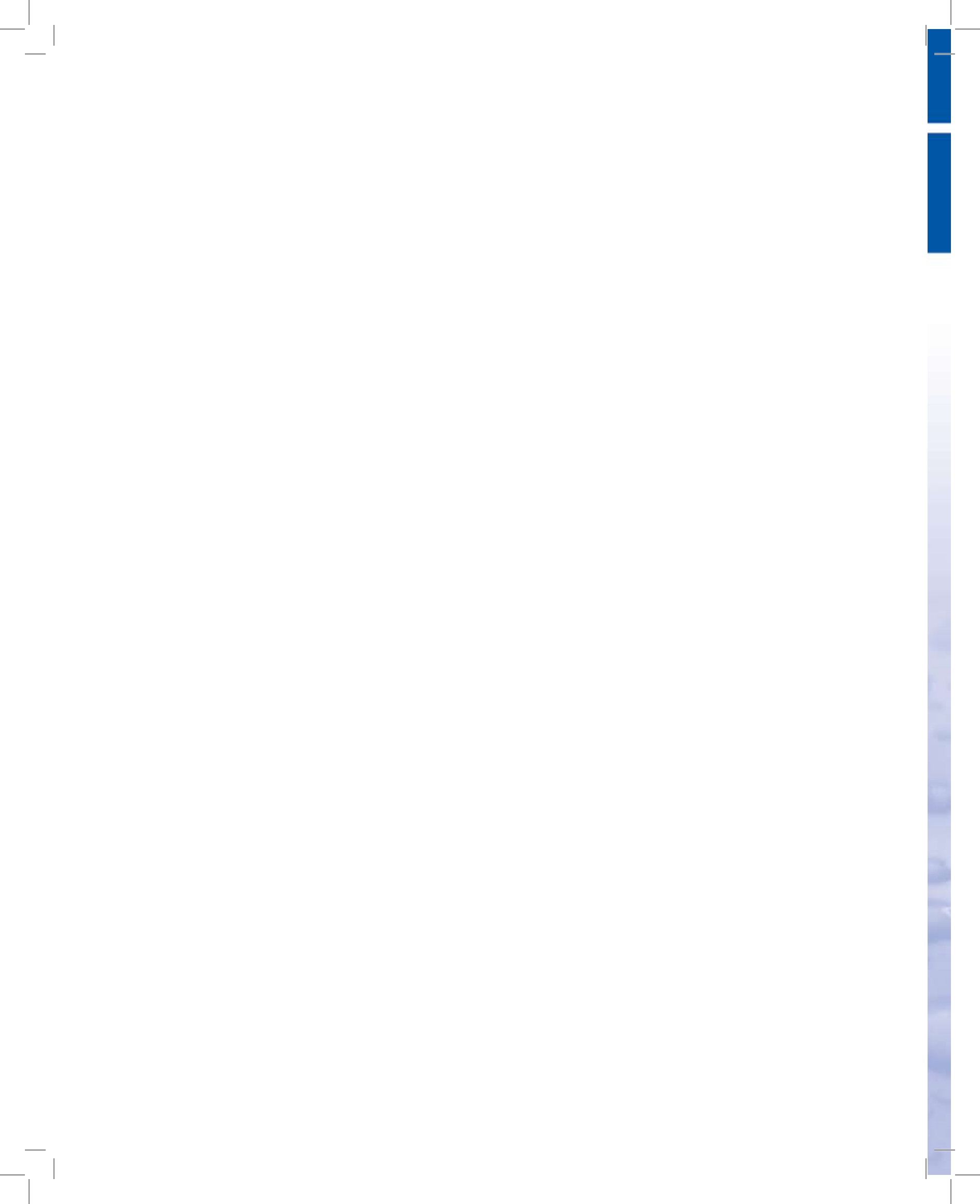
An upper motor bearing cap shall be a separate casting for easy mounting and replacement. The motor shall have two heavy-duty ball bearings to support the pump shaft, taking radial and thrust loadings. A sleeve guide bushing is mounted directly above the lower seal to take radial load and act as a flame path for the seal chamber. Ball bearings shall be designed for a minimum 50,000 hours B-10 life. The stator shall be pressed into the motor housing. The common motor pump and grinder shaft shall be of 416 SST, threaded to take the pump and grinder impeller.

Motors shall have a heat sensor thermostat attached to the top end of the motor windings to stop the motor if the motor winding temperature reaches 200 degrees F. The high-temperature shut-off will cause the pump to cease operation, should a control failure cause the pump to run in a dry wet well. The thermostat shall automatically reset when the motor cools to a safe operating temperature.

Power Cord / Control Cord – The motor power cord shall be 10 Ga. SOW/SOWA or SOOW. The control cord shall be 18 Ga. SJOW / SOW. Both cable jackets shall be sealed at the motor entrance by means of a rubber compression washer and compression nut. An epoxy-filled cord cap shall seal the outer cable jackets and individual leads to prevent water from entering the motor housing. Individual conductor strands shall be soldered within the epoxy seal. Cords shall withstand a pull of 300 pounds.

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G521S & G523S

5-HP High-Flow Single-Phase and Three-Phase Grinder Pumps



The AMFI G521S and G523S series centrifugal grinder pumps easily handle residential, commercial or industrial sanitary waste, reducing it to fine slurry. Both models are designed for use in pressure sewer applications or any piping network.

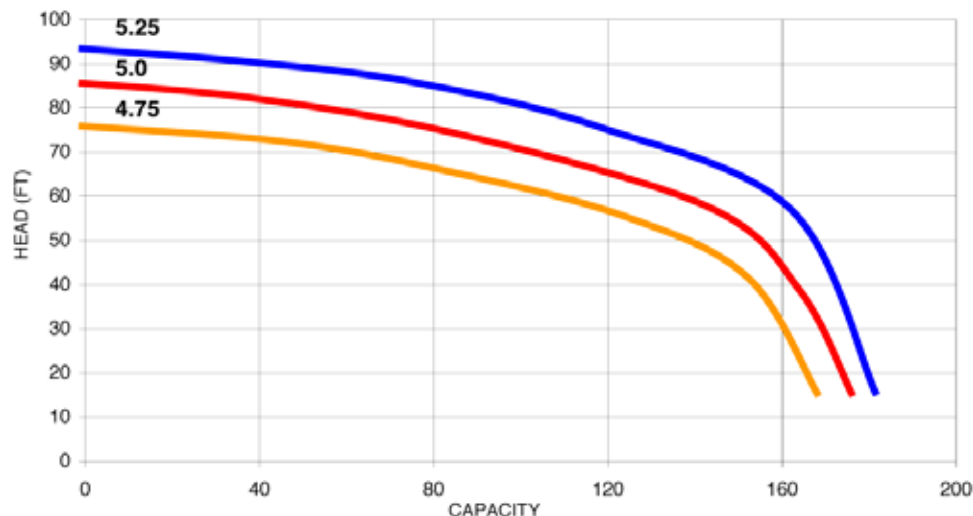
The recessed vortex impeller design provides trouble-free, non-overloading operation over the entire performance curve.

The modular design provides quick and easy serviceability. The hardened stainless steel grinder assembly provides many years of dependable operation.

The G521S and G523S series pumps feature:

- 3 support bearings (upper / lower ball, sleeve)
- Dual mechanical seals (silicon carbide)
- Internal moisture protection
- Class H motor
 - 208/230 volt, 1-phase (G521S)
 - 208/230/460 volt, 3 - phase (G523S)

Performance Curve



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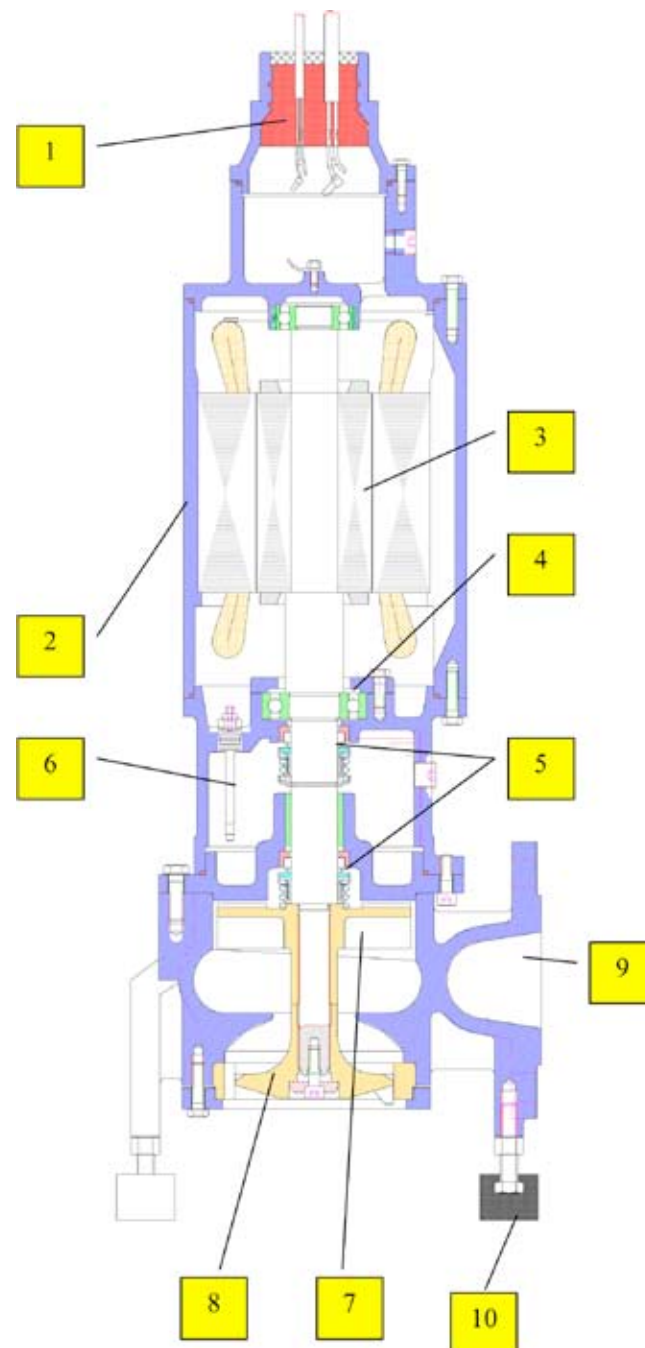


G521S & G523S

Features and Benefits

- 1. Triple-Sealed Cable Entrance**
Stainless steel strain relief cord grip with compression grommet protects outer cord jacket. Epoxy-filled inner cord cap with individually soldered wires provides anti-wicking moisture protection to the motor even if power cable is cut or damaged.
- 2. Modular Pump Design**
Commonality of parts across the AMFI product line minimizes the number of parts required for servicing. Heavy duty ASTM A48, Class 30 cast iron components.
- 3. Strong Motor**
Powerful 208/230 V, 1-phase or 208/230/460 V, 3-phase high torque motor for reliable pump operation. Pressed stator securely holds motor and efficiently transfers heat. Class H insulation with overload protection in oil-filled chamber for cool operation and long motor life.
- 4. 3-Bearing Support**
Motor / pump shaft securely held with upper and lower ball bearing plus addition sleeve bearing in lower seal chamber. Long 50,000-hour B-10 bearing life.
- 5. Double Mechanical Seal Protection**
Dual silicon carbide mechanical shaft seals provide twice the moisture protection for the motor. Dual seals are housed in a secondary oil filled seal chamber. Tougher silicon carbide seals better handle sand, grit and abrasive materials.
- 6. Moisture Detection**
Seal leak probe signals alarm in control panel for scheduled maintenance.
- 7. Non-Overloading Hydraulic Design**
The recessed centrifugal impeller allows 100% performance curve operation from shut-off to maximum flow without damage to the pump or system. The recessed vortex impeller is out of the passageway of fluid flow, eliminating concerns of blockage or wear.
- 8. Proven Grinder Assembly**
Hardened (Rockwell 56-60) stainless steel grinder assembly has 30+ years proven field experience. The reversible grinder ring and grinder impeller effectively reduce solids into a fine slurry, easily passable in a piping system without concerns of clogging.
- 9. Versatile Flange Connection**
Combination 2.5 " and 3" horizontal flange. Industry standard ANSI 125# dimensions.
- 10. Accessories Included**
Anti-vibration rubber mounting feet are included with the pump.

5-HP High Flow, 1-Phase & 3-Phase Grinder Pumps



ISO 9001
CERTIFIED PUMP

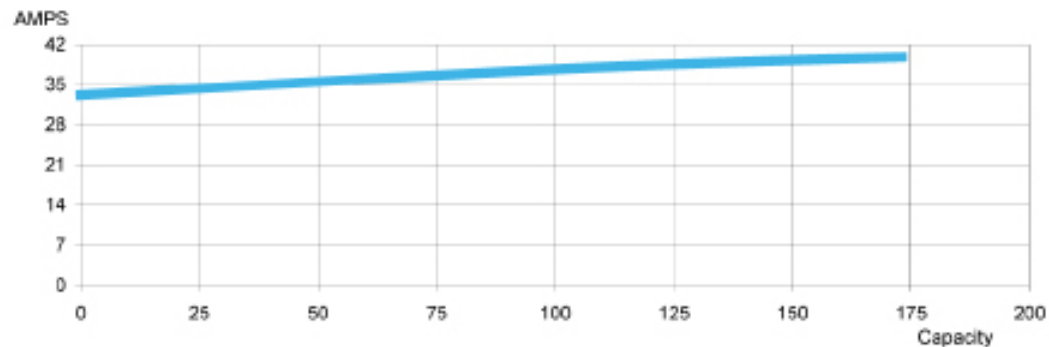
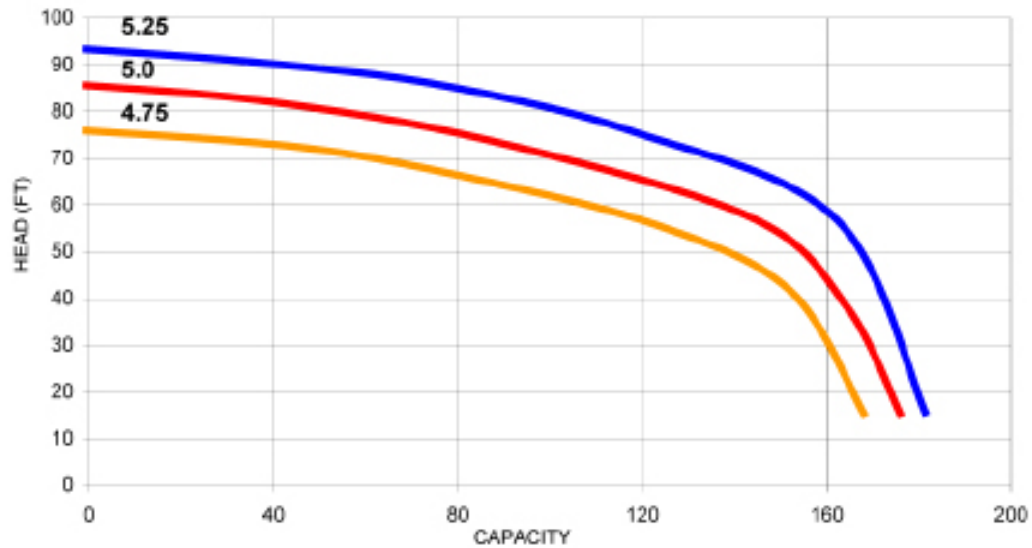
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G521S

208/230 V, Single-Phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
<i>General</i>		<i>Motor Data</i>	
Project Name		HP / Service Factor	5 HP / 2.37
Date / Curve No.	/	Start Relay	AMFI Model RE-5
<i>Pump Data</i>		Start Capacitor	274-324 mfd, 250 Volt
Model No.	G521S	Run Capacitor	30 mfd, 370 volt
Discharge	2.5' / 3" Horz. Flange	Rated Power	208 / 230 volt, 1-Phase
Grinder Ring	25 Slots	Rated Current	44 / 40 amps
Impeller Dia.	5 1/4" Max Dia.	Starting Current	78 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
<i>Performance Curve</i>			



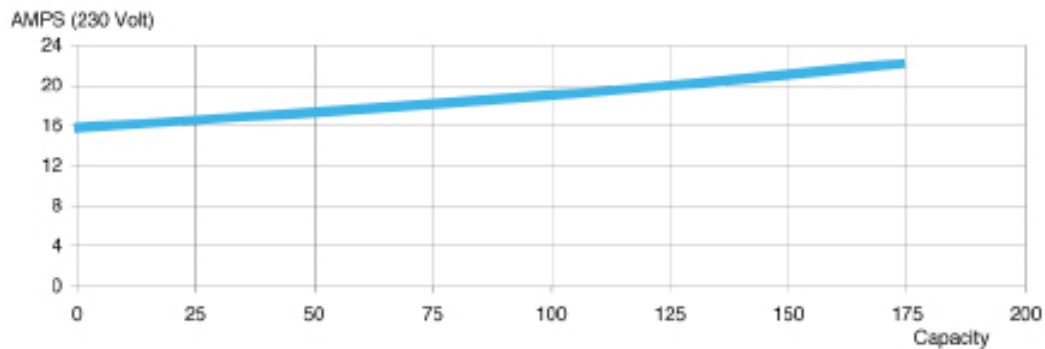
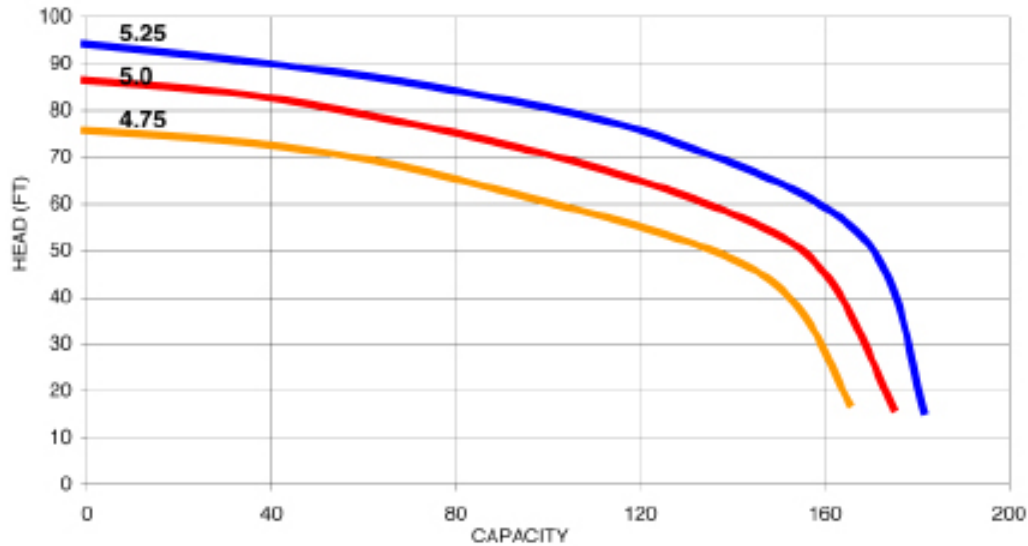
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G523S

208/230/460 V, Three-Phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
<i>General</i>		<i>Motor Data</i>	
Project Name		HP / Service Factor	5 HP / 2.10
Date / Curve No.	/	Efficiency (%)	
<i>Pump Data</i>		Start Capacitor	
Model No.	G523S	Run Capacitor	
Discharge	2.5" / 3" Horz. Flange	Rated Power	208 / 230 / 460 volt, 3-Phase
Grinder Ring	25 Slots	Rated Current	29 / 25 / 13 amps
Impeller Dia.	4 1/4" Max Dia.	Starting Current	56 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
<i>Performance Curve</i>			



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G521S & G523S

AMFI Pumps

5-HP High Flow Grinder Pump

G521S & G523S

Performance Specifications

Pump Model – Pump shall be of the centrifugal type, G521S or G523S, with an integrally built-in grinder unit and submersible type motor. The grinder unit shall be capable of macerating all material in normal domestic and commercial sewage, including reasonable amounts of foreign objects such as sanitary napkins, disposable diapers, thin rubber, small wood, plastic and the like to a fine slurry that easily passes through the pump and 2" discharge pipe. Discharge shall be standard 2.5"/3", 150 lbs ANSI horizontal flange.

Operating Conditions – The pump shall have a capacity of _____ GPM at a total head of _____ feet, and shall use a motor rated at 5 HP and 3450 RPM.

Pump Impeller – Ductile iron and threaded on a stainless steel shaft. The impeller shall be of the recessed vortex type to provide an unobstructed passage through the volute for the ground solids.

Grinder Construction – Both grinder impellers and shredding ring shall be of 440C stainless steel hardened to 56-60 Rockwell C. The grinder assembly shall consist of a grinder impeller and shredding ring mounted directly below the volute passage. The grinder impeller is threaded to a stainless steel shaft, locked with a screw and washer. The shredding ring shall be pressed into an iron holding flange for easy removal. The flange shall be provided with tapped back-off holes so screws can be used to push the shredding ring from the housing. All grinding of solids shall be from the action of the grinder impeller against the shredding ring. There shall be 17,250 cuts / second.

Seals – Type 21, dual mechanical seal construction, mounted in tandem, shall protect the motor. Primary seal shall be silicon / carbide. Secondary seal shall be silicon / carbide. The seal face shall be lapped to a flatness of one light band. A double electrode shall be mounted in the seal chamber to detect water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop the motor, but shall act as a warning only, indicating service is required.

Motor – The pump motor shall be of the submersible type, rated 5 HP, 3450 RPM. The motor shall be for 60 Hz, either 208/230 volt, single-phase or 208/230/460 volt, three-phase operation. Major operating temperature must not exceed Class B ratings.

The stator winding shall be of the open type with Class H insulation. Oil-filled motors for maximum heat transfer efficiencies and continuous bearing lubrication.

An upper motor bearing cap shall be a separate casting for easy mounting and replacement. The motor shall have two heavy-duty ball bearings to support the pump shaft, taking radial and thrust loadings. A sleeve guide bushing is mounted directly above the lower seal to take radial load and act as a flame path for the seal chamber. Ball bearings shall be designed for a minimum 50,000 hours B-10 life. The stator shall be pressed into the motor housing. The common motor pump and grinder shaft shall be of 416 SST, threaded to take the pump and grinder impeller.

Motors shall have a heat sensor thermostat attached to the top end of the motor windings to stop the motor if the motor winding temperature reaches 200 degrees F. The high-temperature shut-off will cause the pump to cease operation, should a control failure cause the pump to run in a dry wet well. The thermostat shall automatically reset when the motor cools to a safe operating temperature.

Power Cord / Control Cord – The motor power cord shall be 10 Ga. SOW/SOWA or SOOW. The control cord shall be 18 Ga. SJOW / SOW. Both cable jackets shall be sealed at the motor entrance by means of a rubber compression washer and compression nut. An epoxy-filled cord cap shall seal the outer cable jackets and individual leads to prevent water from entering the motor housing. Individual conductor strands shall be soldered within the epoxy seal. Cords shall withstand a pull of 300 pounds.

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G321SH & G323SH

3-HP High-Head Single-Phase and Three-Phase Grinder Pumps



The AMFI G321SH and G323SH series centrifugal grinder pumps easily handle residential, commercial or industrial sanitary waste, reducing it to fine slurry. Both models are designed for use in pressure sewer applications or any piping network.

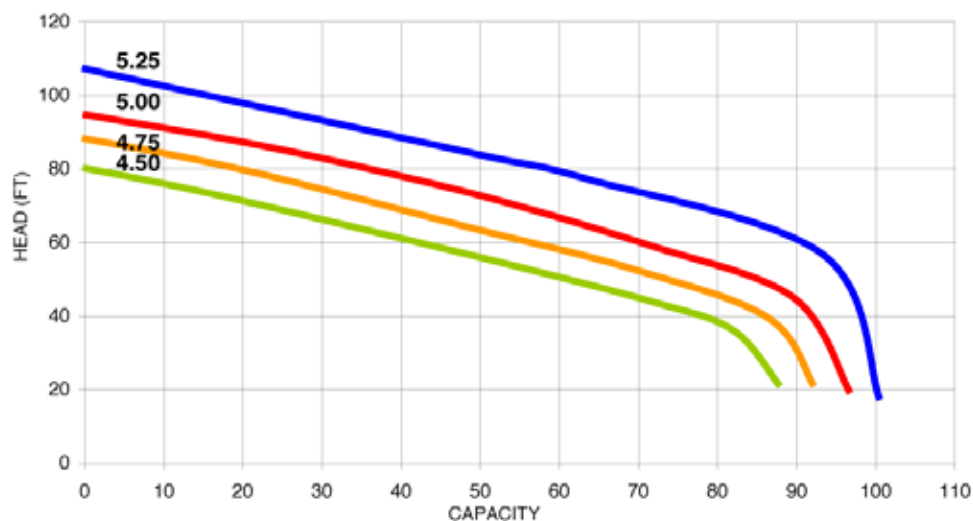
The recessed vortex impeller design provides trouble-free, non-overloading operation over the entire performance curve.

The modular design provides quick and easy serviceability. The hardened stainless steel grinder assembly provides many years of dependable operation.

The G321SH & G323SH series pumps feature:

- 3 support bearings (upper / lower ball, sleeve)
- Dual mechanical seals (silicon carbide)
- Internal moisture detection
- Class H motor
 - 208/230 volt, 1-phase (G321SH)
 - 208/230/460 volt, 3-phase (G323SH)

Performance Curve

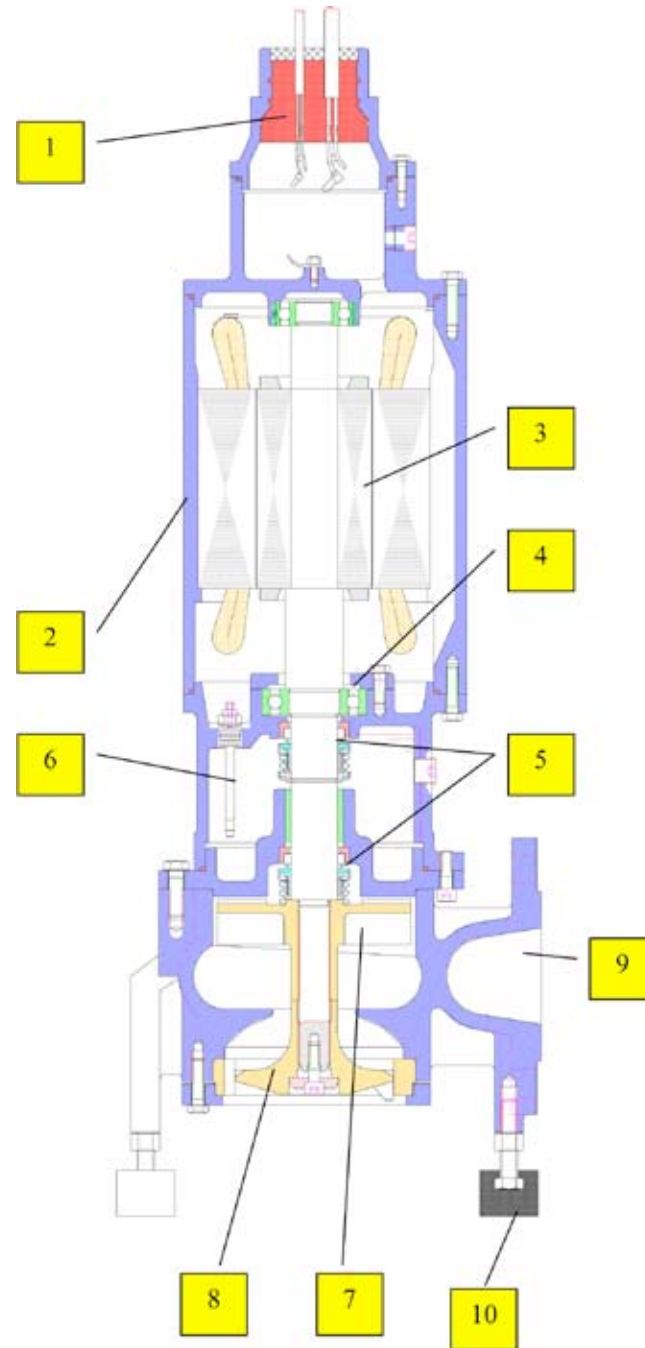


G321SH & G323SH

Features and Benefits

- 1. Triple-Sealed Cable Entrance**
Stainless steel strain relief cord grip with compression grommet protects outer cord jacket. Epoxy-filled inner cord cap with individually soldered wires provides anti-wicking moisture protection to the motor even if power cable is cut or damaged.
- 2. Modular Pump Design**
Commonality of parts across the AMFI product line minimizes the number of parts required for servicing. Heavy duty ASTM A48, Class 30 cast iron components.
- 3. Strong Motor**
Powerful 208/230 v, 1-phase or 208/230/460 v, 3-phase, high-torque motor for reliable pump operation. Pressed stator securely holds motor and efficiently transfers heat. Class H insulation with overload protection in oil-filled chamber for cool operation and long motor life.
- 4. 3- Bearing Support**
Motor / pump shaft securely held with upper and lower ball bearing plus addition sleeve bearing in lower seal chamber. Long 50,000-hour B-10 bearing life.
- 5. Double Mechanical Seal Protection**
Dual silicon carbide mechanical shaft seals provide twice the moisture protection for the motor. Dual seals are housed in a secondary oil filled seal chamber. Tougher silicon carbide seals better handle sand, grit and abrasive materials.
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- 7. Non-Overloading Hydraulic Design**
The recessed centrifugal impeller allows 100% performance curve operation from shut-off to maximum flow without damage to the pump or system. The recessed vortex impeller is out of the passageway of fluid flow, eliminating concerns of blockage or wear.
- 8. Proven Grinder Assembly**
Hardened (Rockwell 56-60) stainless steel grinder assembly has 30+ years proven field experience. The reversible grinder ring and grinder impeller effectively reduce solids into a fine slurry, easily passable in a piping system without concerns of clogging. Highly efficient 12,400 cuts per second.
- 9. Versatile Flange Connection**
Combination 2.5 " and 3" horizontal flange. Industry standard ANSI 125# dimensions.
- 10. Accessories Included**
Anti-vibration rubber mounting feet are included with the pump.

3-HP High Head, 1-Phase & 3-Phase Grinder Pumps



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CERTIFIED PUMP

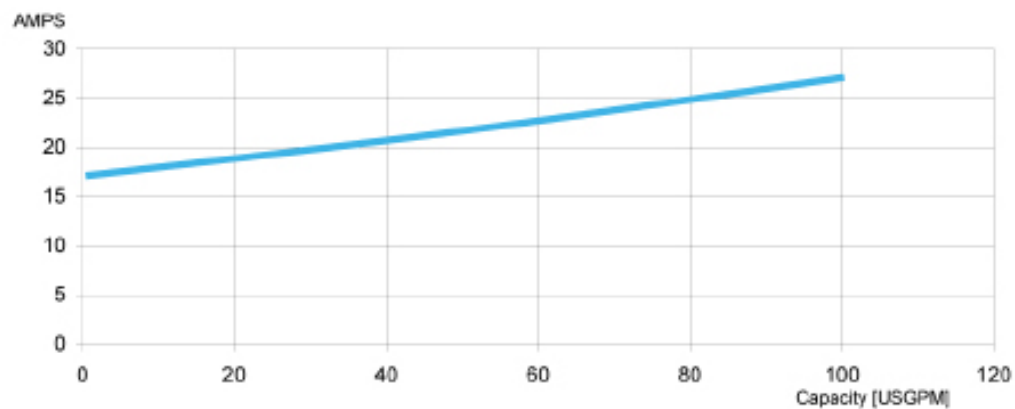
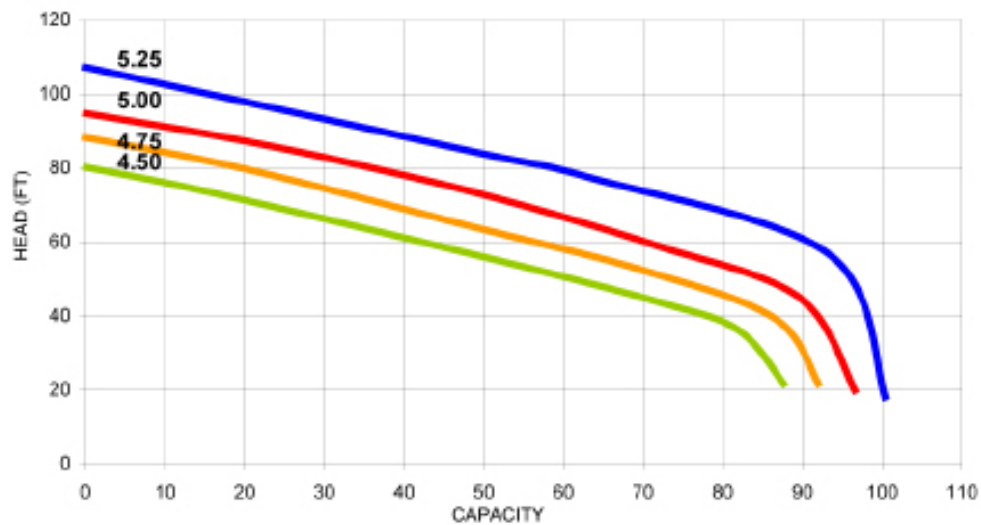
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G321SH

208/230 V, Single-Phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
<i>General</i>		<i>Motor Data</i>	
Project Name		HP / Service Factor	3 HP / 3.96
Date / Curve No.	/	Start Relay	AMFI Model # RE-5
<i>Pump Data</i>		Start Capacitor	274 / 324 mfd, 250 Volt
Model No.	G321SH	Run Capacitor	30 mfd, 370 volt
Discharge	2.5" / 3" Horz. Flange	Rated Power	208 / 230 volt, 1-Phase
Grinder Ring	18 Slots	Rated Current	37 / 34 amps
Impeller Dia.	5 1/4" Max Dia.	Starting Current	72 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
<i>Performance Curve</i>			



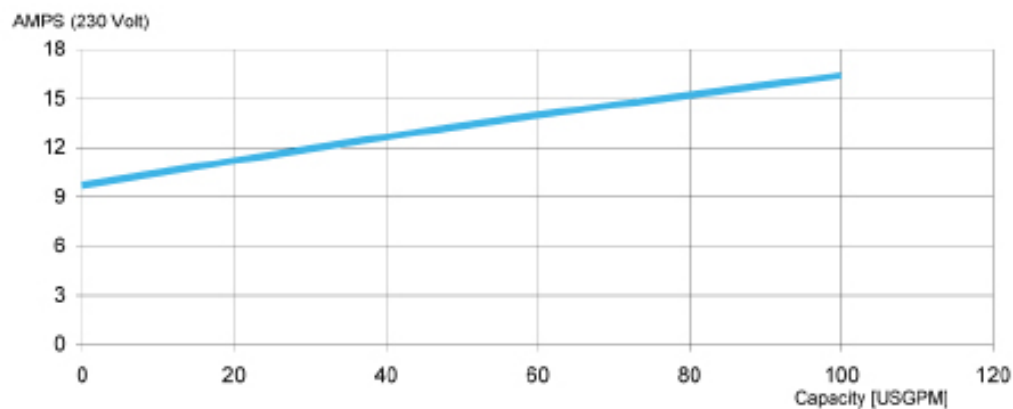
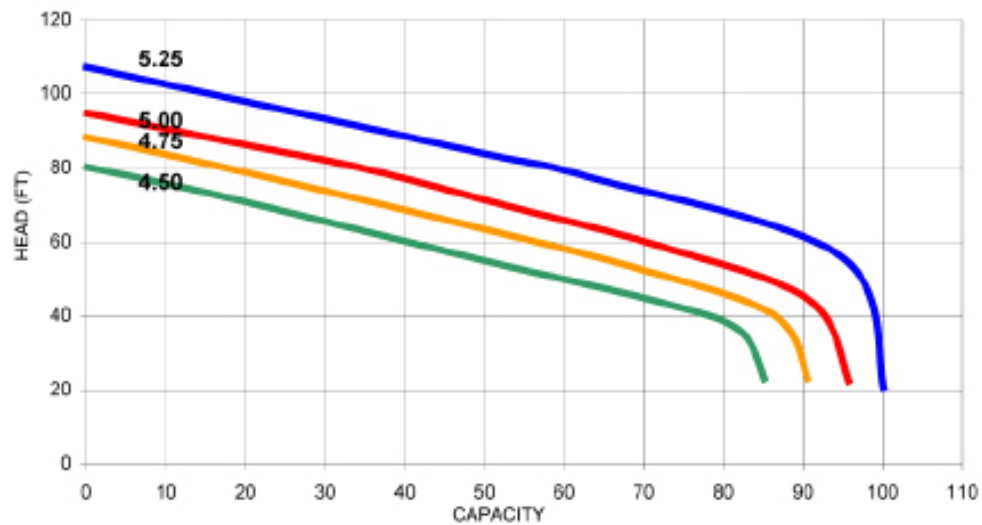
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G323SH

208/230/460 V, Three-Phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
<i>General</i>		<i>Motor Data</i>	
Project Name		HP / Service Factor	3 HP / 3.50
Date / Curve No.	/	Efficiency (%)	
<i>Pump Data</i>		Start Capacitor	
Model No.	G323SH	Run Capacitor	
Discharge	2.5' / 3" Horz. Flange	Rated Power	208 / 230 / 460 volt, 3-Phase
Grinder Ring	18 Slots	Rated Current	21 / 18 / 9 amps
Impeller Dia.	5 1/4" Max Dia.	Starting Current	38 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
<i>Performance Curve</i>			



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AMFI Pumps

3-HP High Head Grinder Pumps

G321SH & G323SH

Performance Specifications

Pump Model – Pump shall be of the centrifugal type, G321SH or G323SH, with an integrally built-in grinder unit and submersible type motor. The grinder unit shall be capable of macerating all material in normal domestic and commercial sewage, including reasonable amounts of foreign objects such as sanitary napkins, disposable diapers, thin rubber, small wood, plastic and the like to a fine slurry that easily passes through the pump and 2" discharge pipe. Discharge shall be standard 2.5" / 3", 150 lbs ANSI flange.

Operating Conditions – The pump shall have a capacity of _____ GPM at a total head of _____ feet, and shall use a motor rated at 3 HP and 3450 RPM.

Pump Impeller – Ductile iron and threaded on a stainless steel shaft. The impeller shall be of the recessed vortex type to provide an unobstructed passage through the volute for the ground solids.

Grinder Construction – Both grinder impellers and shredding ring shall be of 440C stainless steel hardened to 56-60 Rockwell C. The grinder assembly shall consist of a grinder impeller and shredding ring mounted directly below the volute passage. The grinder impeller is threaded to a stainless steel shaft, locked with a screw and washer. The shredding ring shall be pressed into an iron holding flange for easy removal. The flange shall be provided with tapped back-off holes so screws can be used to push the shredding ring from the housing. All grinding of solids shall be from the action of the grinder impeller against the shredding ring. There shall be 12,400 cuts / second.

Seals – Type 21, dual mechanical seal construction, mounted in tandem, shall protect the motor. Primary seal shall be silicon / carbide. Secondary seal shall be silicone / carbide. The seal face shall be lapped to a flatness of one light band. A double electrode shall be mounted in the seal chamber to detect water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop the motor, but shall act as a warning only, indicating service is required.

Motor – The pump motor shall be of the submersible type, rated 3 HP, 3450 RPM. The motor shall be for 60 Hz, either 208/230 volt, single-phase or 208/230/460 volt, three-phase operation. Major operating temperature must not exceed Class B ratings.

The stator winding shall be of the open type with Class H insulation. Oil-filled motors, for maximum heat transfer efficiencies and continuous bearing lubrication.

An upper motor bearing cap shall be a separate casting for easy mounting and replacement. The motor shall have two heavy-duty ball bearings to support the pump shaft, taking radial and thrust loadings. A sleeve guide bushing is mounted directly above the lower seal to take radial load and act as a flame path for the seal chamber. Ball bearings shall be designed for a minimum 50,000 hours B-10 life. The stator shall be pressed into the motor housing. The common motor pump and grinder shaft shall be of 416 SST, threaded to take the pump and grinder impeller.

Motors shall have a heat sensor thermostat attached to the top end of the motor windings to stop the motor if the motor winding temperature reaches 200 degrees F. The high-temperature shut-off will cause the pump to cease operation, should a control failure cause the pump to run in a dry wet well. The thermostat shall automatically reset when the motor cools to a safe operating temperature.

Power Cord / Control Cord – The motor power cord shall be 10 Ga. SOW/SOWA or SOOW. The control cord shall be 18 Ga. SJOW / SOW. Both cable jackets shall be sealed at the motor entrance by means of a rubber compression washer and compression nut. An epoxy-filled cord cap shall seal the outer cable jackets and individual leads to prevent water from entering the motor housing. Individual conductor strands shall be soldered within the epoxy seal. Cords shall withstand a pull of 300 pounds.

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G521SH & G523SH

5-HP High Head Single-Phase and Three-Phase Grinder Pump



The AMFI G521SH and G523SH series centrifugal grinder pumps easily handle residential, commercial or industrial sanitary waste, reducing it to fine slurry. Both models are designed for use in pressure sewer applications or any piping network.

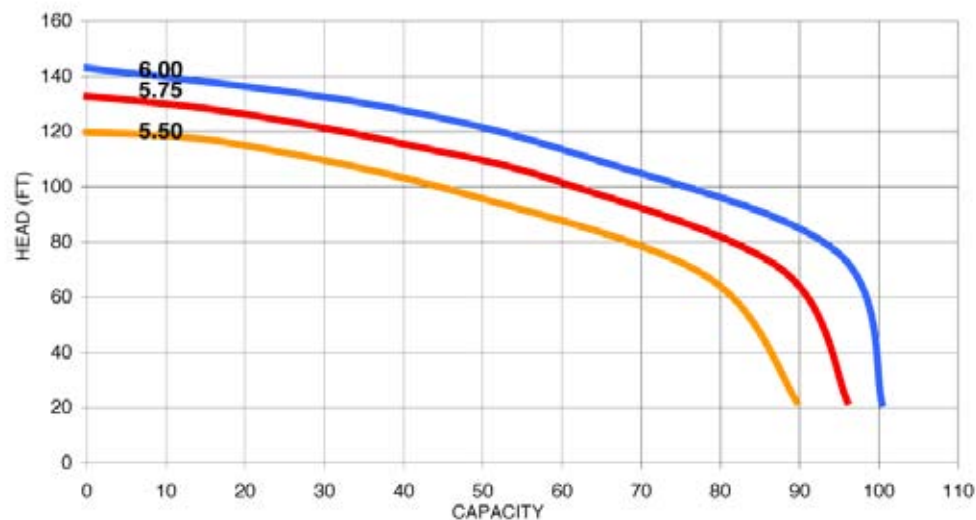
The recessed vortex impeller design provides trouble-free, non-overloading operation over the entire performance curve.

The modular design provides quick and easy serviceability. The hardened stainless steel grinder assembly provides many years of dependable operation.

The G521SH and G523SH series pumps feature:

- 3 support bearings (upper / lower ball, sleeve)
- Dual mechanical seals (silicon carbide)
- Internal moisture detection
- Class H motor
 - 208/230 volt, 1-phase (G521SH)
 - 208/230/460 volt, 3-phase (G523SH)

Performance Curve



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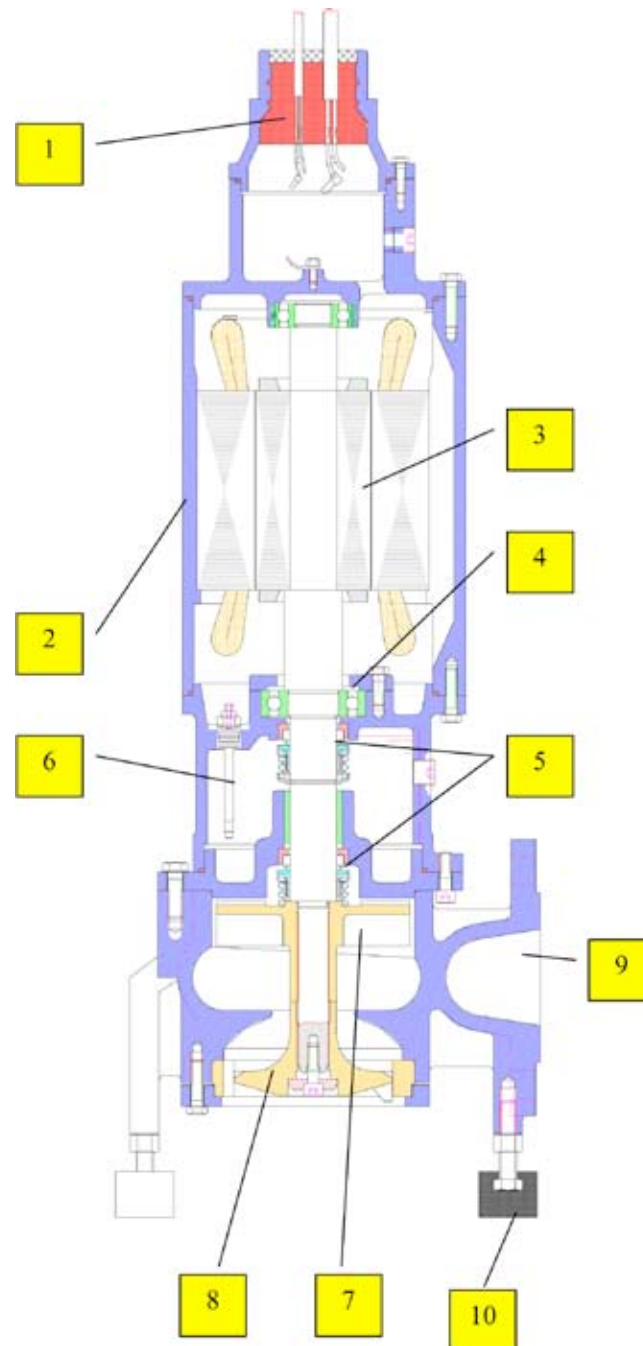


G521SH & G523SH

Features and Benefits

- 1. Triple-Sealed Cable Entrance**
Stainless steel strain relief cord grip with compression grommet protects outer cord jacket. Epoxy-filled inner cord cap with individually soldered wires provides anti-wicking moisture protection to the motor even if power cable is cut or damaged.
- 2. Modular Pump Design**
Commonality of parts across the AMFI product line minimizes the number of parts required for servicing. Heavy duty ASTM A48, Class 30 cast iron components.
- 3. Strong Motor**
Powerful 208/230 V, 1-phase or 208/230/460 V, 3-phase high-torque motor for reliable pump operation. Pressed stator securely holds motor and efficiently transfers heat. Class H insulation with overload protection in oil-filled chamber for cool operation and long motor life.
- 4. 3- Bearing Support**
Motor / pump shaft securely held with upper and lower ball bearing plus addition sleeve bearing in lower seal chamber. Long 50,000-hour B-10 bearing life.
- 5. Double Mechanical Seal Protection**
Dual silicon carbide mechanical shaft seals provide twice the moisture protection for the motor. Dual seals are housed in a secondary oil filled seal chamber. Tougher silicon carbide seals better handle sand, grit and abrasive materials.
- 6. Moisture Detection**
Seal leak probe signals alarm in control panel for scheduled maintenance.
- 7. Non-Overloading Hydraulic Design**
The recessed centrifugal impeller allows 100% performance curve operation from shut-off to maximum flow without damage to the pump or system. The recessed vortex impeller is out of the passageway of fluid flow, eliminating concerns of blockage or wear.
- 8. Proven Grinder Assembly**
Hardened (Rockwell 56-60) stainless steel grinder assembly has 30+ years proven field experience. The reversible grinder ring and grinder impeller effectively reduce solids into a fine slurry, easily passable in a piping system without concerns of clogging. Highly efficient 12,400 cuts per second.
- 9. Versatile Flange Connection**
Combination 2.5 " and 3" horizontal flange. Industry standard ANSI 125# dimensions.
- 10. Accessories Included**
Anti-vibration rubber mounting feet are included with the pump.

5-HP High Head 1-Phase & 3-Phase Grinder Pump



ISO 9001
CERTIFIED PUMP

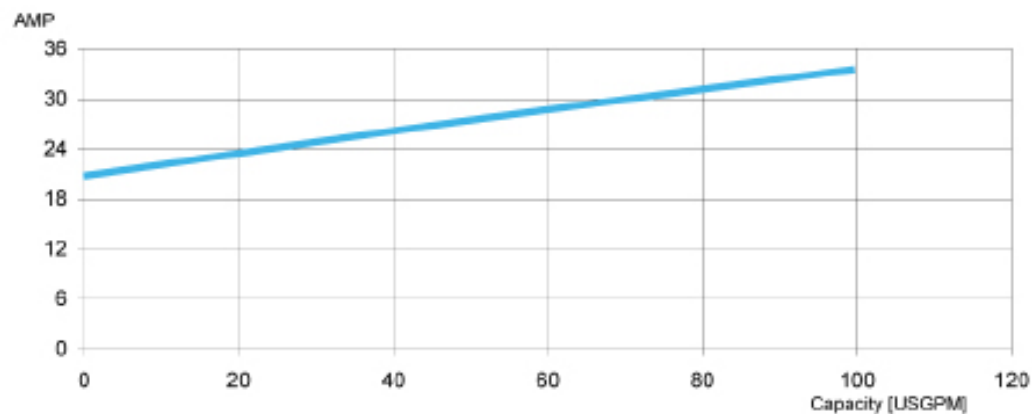
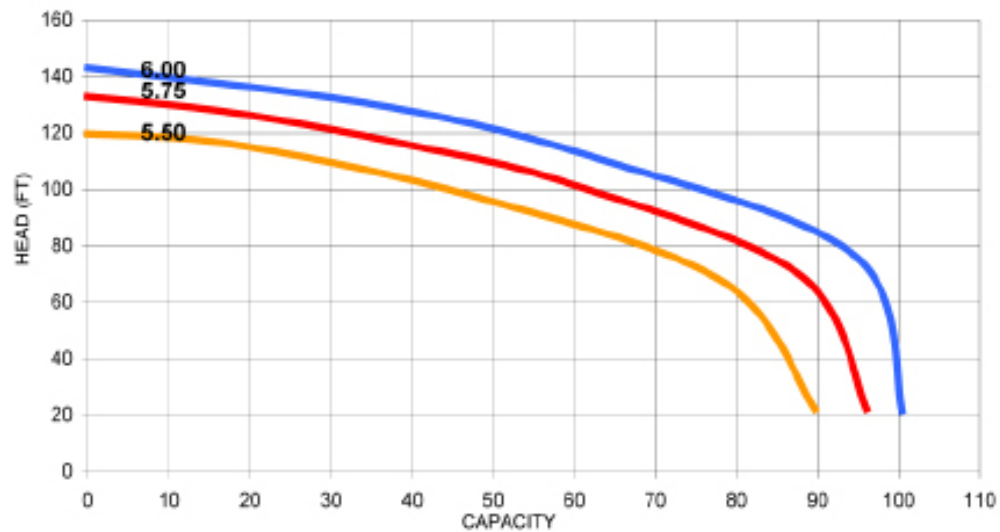
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G521SH

208/230 V, Single-Phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
General		Motor Data	
Project Name		HP / Service Factor	5 HP / 2.37
Date / Curve No.	/	Start Relay	AMFI Model # RE-5
Pump Data		Start Capacitor	274 / 324 mfd, 250 Volt
Model No.	G521SH	Run Capacitor	30 mfd, 370 volt
Discharge	2.5' / 3" Horz. Flange	Rated Power	208 / 230 volt, 1-Phase
Grinder Ring	18 Slots	Rated Current	40 / 34 amps
Impeller Dia.	6" Max Dia.	Starting Current	78 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
Performance Curve			



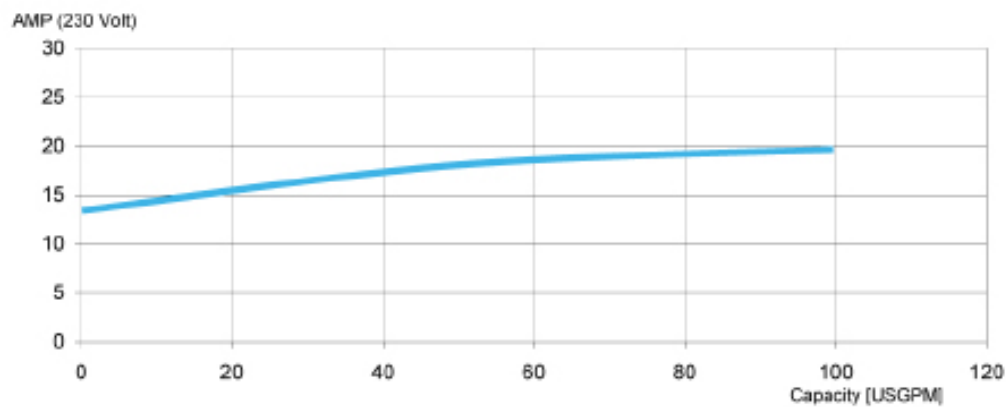
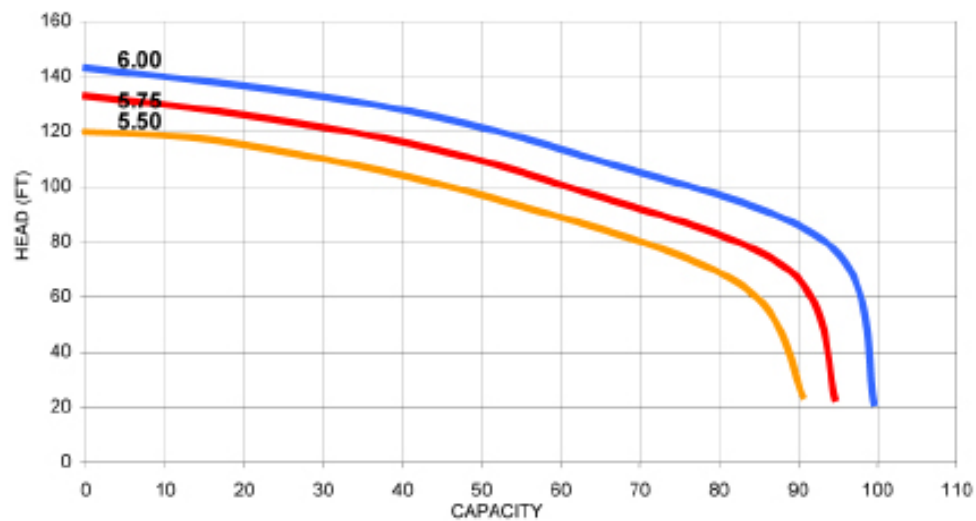
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G523SH

208/230/460 V, Three-phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
General		Motor Data	
Project Name		HP / Service Factor	5 HP / 2.10
Date / Curve No.	/	Efficiency (%)	
Pump Data		Start Capacitor	
Model No.	G523SH	Run Capacitor	
Discharge	2.5" / 3" Horz. Flange	Rated Power	208 / 230 / 460 volt, 3-Phase
Grinder Ring	18 Slots	Rated Current	29 / 25 / 13 amps
Impeller Dia.	6" Max Dia.	Starting Current	56 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
Performance Curve			



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G521SH & G523SH

AMFI Pumps

5-HP High Head Grinder Pumps

G521SH & G523SH

Performance Specifications

Pump Model – Pump shall be of the centrifugal type, G521SH or G523SH, with an integrally built-in grinder unit and submersible type motor. The grinder unit shall be capable of macerating all material in normal domestic and commercial sewage, including reasonable amounts of foreign objects such as sanitary napkins, disposable diapers, thin rubber, small wood, plastic and the like to a fine slurry that easily passes through the pump and 2" discharge pipe. Discharge shall be standard 2.5" / 3", 150 lbs ANSI horizontal flange.

Operating Conditions – The pump shall have a capacity of _____ GPM at a total head of _____ feet, and shall use a motor rated at 5 HP and 3450 RPM.

Pump Impeller – Ductile iron and threaded on a stainless steel shaft. The impeller shall be of the recessed vortex type to provide an unobstructed passage through the volute for the ground solids.

Grinder Construction – Both grinder impellers and shredding ring shall be of 440C stainless steel hardened to 56-60 Rockwell C. The grinder assembly shall consist of a grinder impeller and shredding ring mounted directly below the volute passage. The grinder impeller is threaded to a stainless steel shaft, locked with a screw and washer. The shredding ring shall be pressed into an iron holding flange for easy removal. The flange shall be provided with tapped back-off holes so screws can be used to push the shredding ring from the housing. All grinding of solids shall be from the action of the grinder impeller against the shredding ring. There shall be 12,400 cuts / second.

Seals – Type 21, dual mechanical seal construction, mounted in tandem, shall protect the motor. Primary seal shall be silicon / carbide. Secondary seal shall be silicon / carbide. The seal face shall be lapped to a flatness of one light band. A double electrode shall be mounted in the seal chamber to detect water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop the motor, but shall act as a warning only, indicating service is required.

Motor – The pump motor shall be of the submersible type, rated 5 HP, 3450 RPM. The motor shall be for 60 Hz, either 208/230 volt, single-phase or 208/230/460 volt, three-phase operation. Major operating temperature must not exceed Class B ratings.

The stator winding shall be of the open type with Class H insulation. Oil-filled motors for maximum heat transfer efficiencies and continuous bearing lubrication.

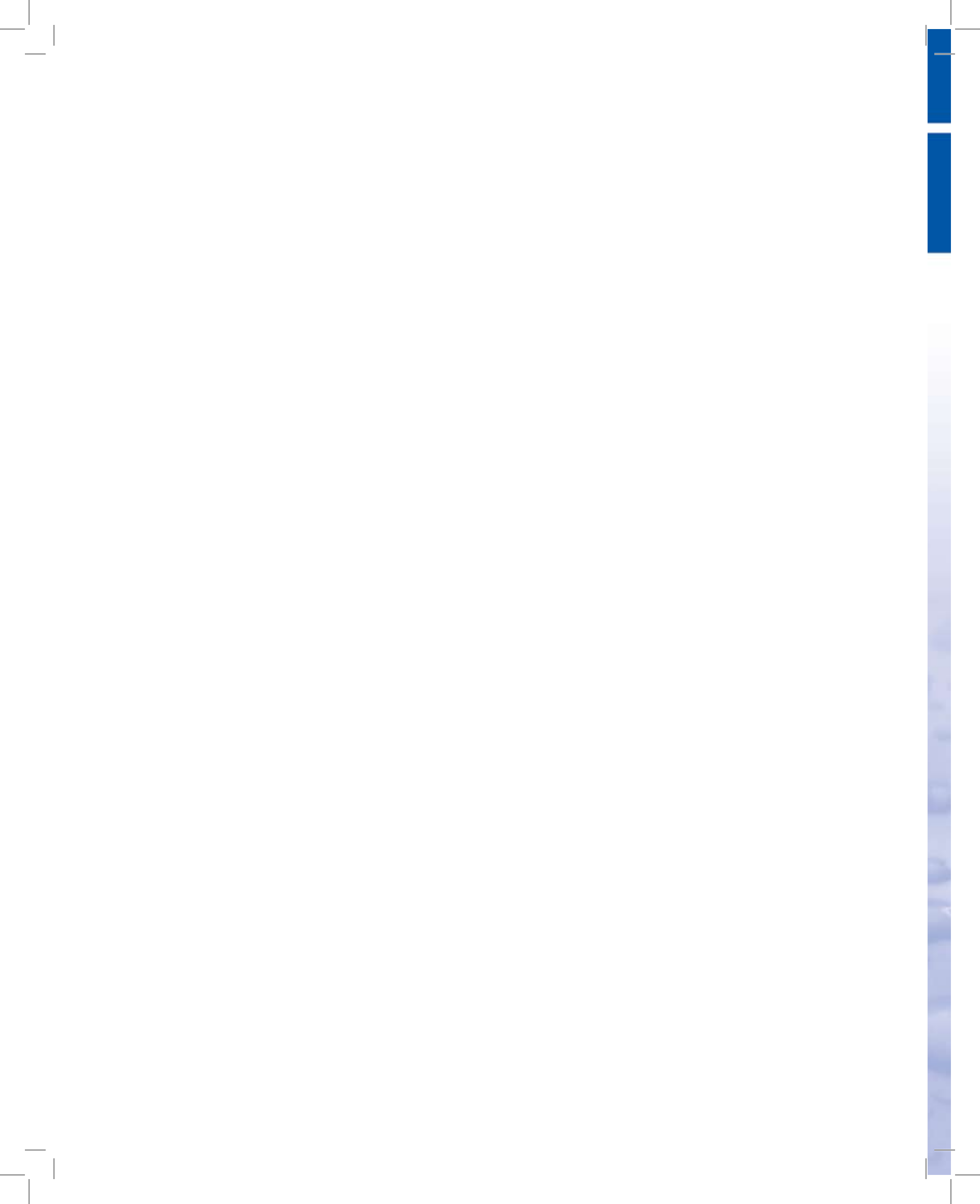
An upper motor bearing cap shall be a separate casting for easy mounting and replacement. The motor shall have two heavy-duty ball bearings to support the pump shaft, taking radial and thrust loadings. A sleeve guide bushing is mounted directly above the lower seal to take radial load and act as a flame path for the seal chamber. Ball bearings shall be designed for a minimum 50,000 hours B-10 life. The stator shall be pressed into the motor housing. The common motor pump and grinder shaft shall be of 416 SST, threaded to take the pump and grinder impeller.

Motors shall have a heat sensor thermostat attached to the top end of the motor windings to stop the motor if the motor winding temperature reaches 200 degrees F. The high-temperature shut-off will cause the pump to cease operation, should a control failure cause the pump to run in a dry wet well. The thermostat shall automatically reset when the motor cools to a safe operating temperature.

Power Cord / Control Cord – The motor power cord shall be 10 Ga. SOW/SOWA or SOOW. The control cord shall be 18 Ga. SJOW / SOW. Both cable jackets shall be sealed at the motor entrance by means of a rubber compression washer and compression nut. An epoxy-filled cord cap shall seal the outer cable jackets and individual leads to prevent water from entering the motor housing. Individual conductor strands shall be soldered within the epoxy seal. Cords shall withstand a pull of 300 pounds.

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G721SH & G723SH

7-1/2 HP High-Head Single-Phase and Three-Phase Grinder Pumps



The AMFI G721SH and G723SH series centrifugal grinder pump easily handles residential, commercial or industrial sanitary waste, reducing it to fine slurry. Both models are designed for use in pressure sewer applications or any piping network.

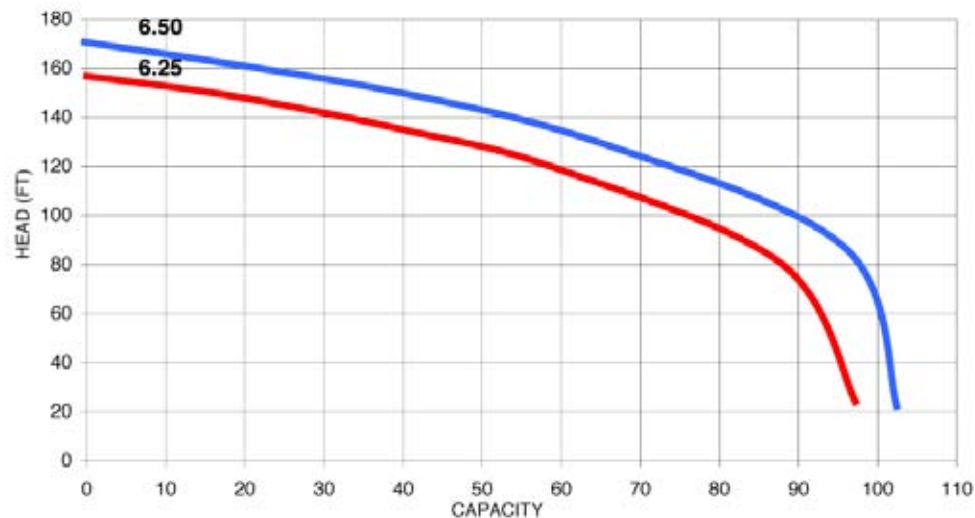
The recessed vortex impeller design provides trouble-free, non-overloading operation over the entire performance curve.

The modular design provides quick and easy serviceability. The hardened stainless steel grinder assembly provides many years of dependable operation.

The G721SH series pump features:

- 3 support bearings (upper / lower ball, sleeve)
- Double mechanical seals
- Internal moisture detection
- Class H motor
 - 208/230 volt, 1-phase (G721SH)
 - 208/230/460 volt, 3-phase (G723SH)

Performance Curve



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G721SH & G723SH

Features and Benefits

- 1. Triple-Sealed Cable Entrance**
Stainless steel strain relief cord grip with compression grommet protects outer cord jacket. Epoxy-filled inner cord cap with individually soldered wires provides anti-wicking moisture protection to the motor even if power cable is cut or damaged.
- 2. Modular Pump Design**
Commonality of parts across the AMFI product line minimizes the number of parts required for servicing. Heavy duty ASTM A48, Class 30 cast iron components.
- 3. Strong Motor**
Powerful 208/230 volt, 1-phase or 208/230/460 volt, 3-phase high-torque motor for reliable pump operation. Pressed stator securely holds motor and efficiently transfers heat. Class H insulation with overload protection in oil-filled chamber for cool operation and long motor life.
- 4. 3- Bearing Support**
Motor / pump shaft securely held with upper and lower ball bearing plus addition sleeve bearing in lower seal chamber. Long 50,000-hour B-10 bearing life.
- 5. Double Mechanical Seal Protection**
Dual silicon carbide mechanical shaft seals provide twice the moisture protection for the motor. Dual seals are housed in a secondary oil filled seal chamber. Tougher silicon carbide seals better handle sand, grit and abrasive materials.
- 6. Moisture Detection**
Seal leak probe signals alarm in control panel for scheduled maintenance.
- 7. Non-Overloading Hydraulic Design**
The recessed centrifugal impeller allows 100% performance curve operation from shut-off to maximum flow without damage to the pump or system. The recessed vortex impeller is out of the passageway of fluid flow, eliminating concerns of blockage or wear.
- 8. Proven Grinder Assembly**
Hardened (Rockwell 56-60) stainless steel grinder assembly has 30+ years proven field experience. The reversible grinder ring and grinder impeller effectively reduce solids into a fine slurry, easily passable in a piping system without concerns of clogging. Highly efficient 12,400 cuts per second.
- 9. Versatile Flange Connection**
Combination 2.5 " and 3" horizontal flange. Industry standard ANSI 125# dimensions.
- 10. Accessories Included**
Anti-vibration rubber mounting feet are included with the pump.

7-1/2 HP High-Head 1-Phase & 3-Phase Grinder Pump



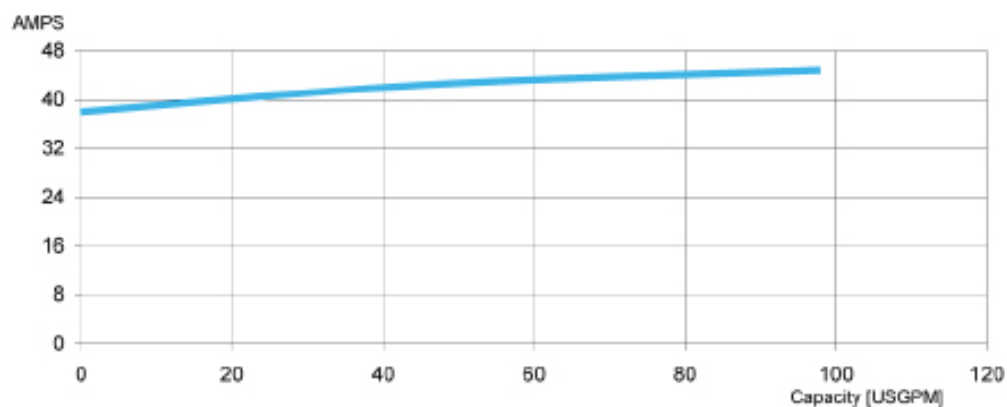
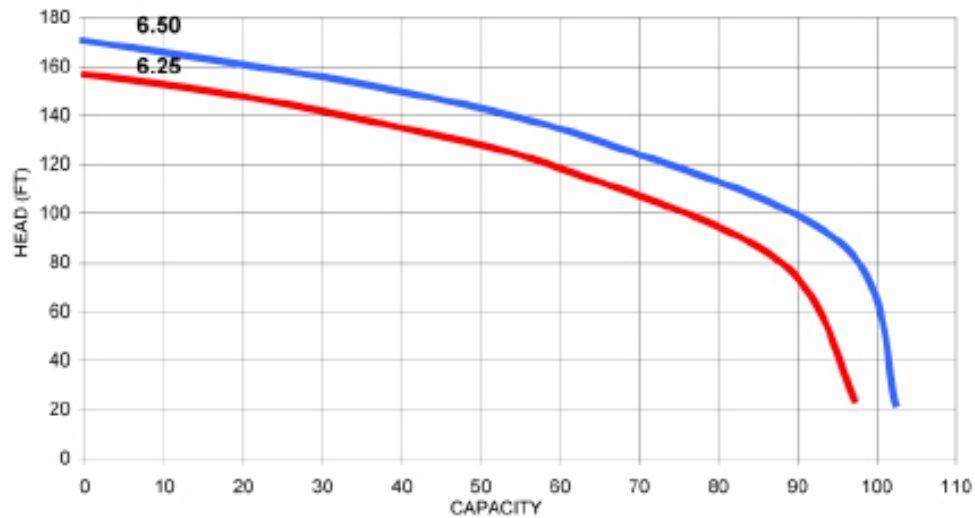
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G721SH

208/230 V, Single-Phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
<i>General</i>		<i>Motor Data</i>	
Project Name		HP / Service Factor	7.5 HP / 1.40
Date / Curve No.	/	Start Relay	AMFI Model RE-5
<i>Pump Data</i>		Start Capacitor	274 / 324 mfd, 250 Volt
Model No.	G721SH	Run Capacitor	30 mfd, 370 volt
Discharge	2.5' / 3" Horz. Flange	Rated Power	230 volt, 1-Phase
Grinder Ring	18 Slots	Rated Current	47amps
Impeller Dia.	6 1/2" Max Dia.	Starting Current	86 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
<i>Performance Curve</i>			



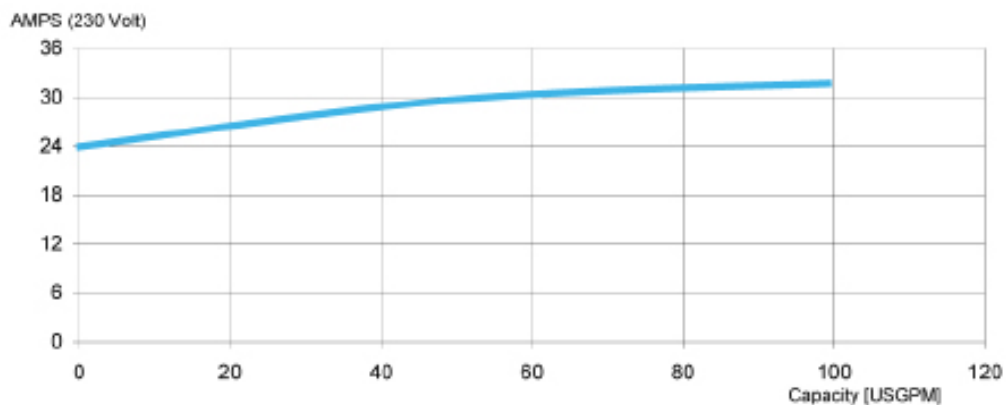
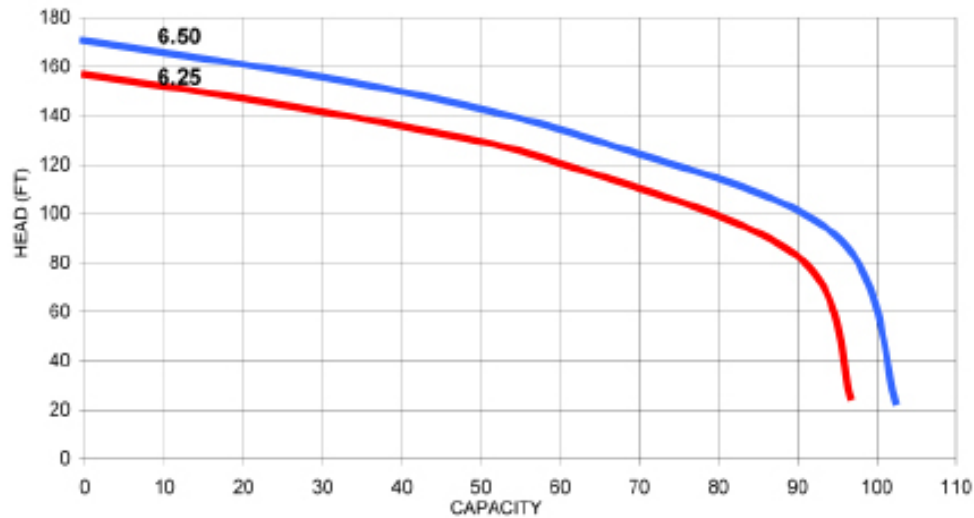
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G723SH

208/230/460 V, Three-phase

<i>AMFI Pumps</i>		<i>Submersible Grinder Pumps</i>	
General		Motor Data	
Project Name		HP / Service Factor	7.5 HP / 1.25
Date / Curve No.	/	Efficiency (%)	
Pump Data		Start Capacitor	
Model No.	G723SH	Run Capacitor	
Discharge	2.5' / 3" Horz. Flange	Rated Power	230 / 460 volt, 3-Phase
Grinder Ring	18 Slots	Rated Current	32 / 16 amps
Impeller Dia.	6 1/2" Max Dia.	Starting Current	72 amps
Impeller Vanes	10	Pole / Rate Speed	2 Pole / 3450 RPM
Impeller Type	Recessed Vortex	Insulation Class	H
Performance Curve			



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G721SH & G723SH

AMFI Pumps

7-1/2 HP High Head Grinder Pump G721SH & G723SH

Performance Specifications

Pump Model – Pump shall be of the centrifugal type, G721SH & G723SH, with an integrally built-in grinder unit and submersible type motor. The grinder unit shall be capable of macerating all material in normal domestic and commercial sewage, including reasonable amounts of foreign objects such as sanitary napkins, disposable diapers, thin rubber, small wood, plastic and the like to a fine slurry that easily passes through the pump and 2" discharge pipe. Discharge shall be standard 2.5" / 3", 150 lbs ANSI flange.

Operating Conditions – The pump shall have a capacity of _____ GPM at a total head of _____ feet, and shall use a motor rated at 7 1/2 HP and 3450 RPM.

Pump Impeller – Ductile iron and threaded on a stainless steel shaft. The impeller shall be of the recessed vortex type to provide an unobstructed passage through the volute for the ground solids.

Grinder Construction – Both grinder impellers and shredding ring shall be of 440C stainless steel hardened to 56-60 Rockwell C. The grinder assembly shall consist of a grinder impeller and shredding ring mounted directly below the volute passage. The grinder impeller is threaded to a stainless steel shaft, locked with a screw and washer. The shredding ring shall be pressed into an iron holding flange for easy removal. The flange shall be provided with tapped back-off holes so screws can be used to push the shredding ring from the housing. All grinding of solids shall be from the action of the grinder impeller against the shredding ring. There shall be 12,400 cuts / second.

Seals – Type 21, dual mechanical seal construction, mounted in tandem, shall protect the motor. Primary seal shall be silicon / carbide. Secondary seal shall be silicone / carbide. The seal face shall be lapped to a flatness of one light band. A double electrode shall be mounted in the seal chamber to detect water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop the motor, but shall act as a warning only, indicating service is required.

Motor – The pump motor shall be of the submersible type, rated 7 1/2 HP, 3450 RPM. The motor shall be for 60 Hz, either 208/230 volt, single-phase or 208/230/460 volt, 3-phase operation. Major operating temperature must not exceed Class B ratings.

The stator winding shall be of the open type with Class H insulation. Oil-filled motors, for maximum heat transfer efficiencies and continuous bearing lubrication.

An upper motor bearing cap shall be a separate casting for easy mounting and replacement. The motor shall have two heavy-duty ball bearings to support the pump shaft, taking radial and thrust loadings. A sleeve guide bushing is mounted directly above the lower seal to take radial load and act as a flame path for the seal chamber. Ball bearings shall be designed for a minimum 50,000 hours B-10 life. The stator shall be pressed into the motor housing. The common motor pump and grinder shaft shall be of 416 SST, threaded to take the pump and grinder impeller.

Motors shall have a heat sensor thermostat attached to the top end of the motor windings to stop the motor if the motor winding temperature reaches 200 degrees F. The high-temperature shut-off will cause the pump to cease operation, should a control failure cause the pump to run in a dry wet well. The thermostat shall automatically reset when the motor cools to a safe operating temperature.

Power Cord / Control Cord – The motor power cord shall be 10 Ga. SOW/SOWA or SOOW. The control cord shall be 18 Ga. SJOW / SOW. Both cable jackets shall be sealed at the motor entrance by means of a rubber compression washer and compression nut. An epoxy-filled cord cap shall seal the outer cable jackets and individual leads to prevent water from entering the motor housing. Individual conductor strands shall be soldered within the epoxy seal. Cords shall withstand a pull of 300 pounds.

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