



**SF Series**

VARIOUS PATENTS APPLY

**Submersible Pumps**

Models  
**SFV3B SFEV3B**  
**SFV3B-X SFEV3B-X**

**Size 3"**



**APPROVED**  
X-PROOF MOTORS FOR CLASS I,  
DIV. 1, GROUPS C&D LOCATIONS  
(X-Proof Version Only)

The Gorman-Rupp Infinity® brand of SF Series® vortex pumps provide superior pumping efficiency while maintaining a 3-inch (76,2 mm) spherical solids passage.

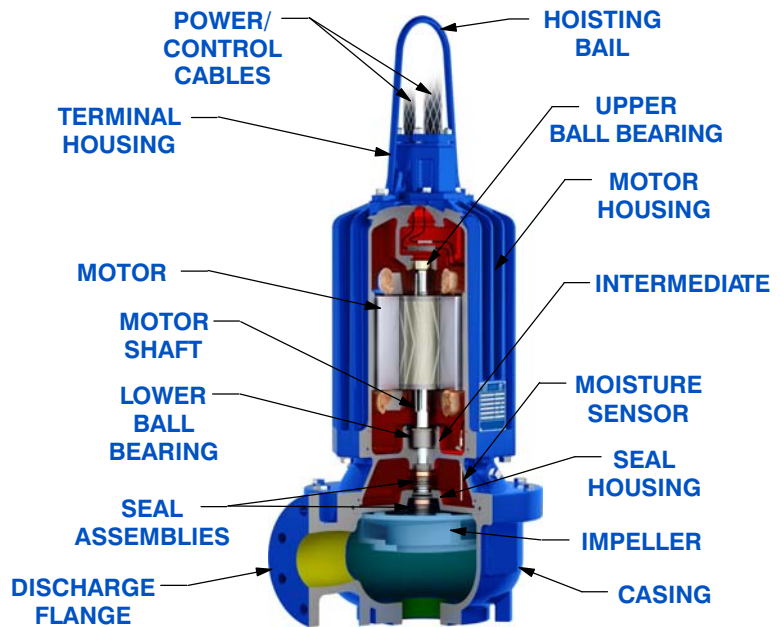
**Key Features:**

- NEMA premium efficiency motors (3 Phase)
- Vortex pump technology
- Press-fit motor with finned motor housing provides superior motor cooling, even in a submersed state, resulting in increased motor life
- NEMA Class H motor insulation
- Easy, in-the-field cable changes
- Standard moisture detection in both the seal and motor chambers
- CSA-C/US and Factory Mutual (FM) Approved for Class I, Division I, Group C and D Haz Loc Applications (X-Proof Model)



**Optional Accessories:**

- G-R Hard Iron Impeller
- Control Panel (Consult [SF Series Motor Data Reference](#) for Customer-Supplied Control Panel)
- Submersible Transducer or Ball Type Float Switches
- Slide Rail Installation Components
  - Guide shoe w/Rubber Seal
  - Base Elbow and Rail Brackets
- Trash Stand Installation Components
  - Trash Stand
  - Discharge Elbow



TYPICAL VOTEX CROSS-SECTION



**GORMAN-RUPP PUMPS**

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## PUMP DETAILS

Pump Models	SFV3B SFEV3B/SFV3B-X SFEV3B-X		
Agency Approvals	FM/CSA-C/US		
Discharge Flange	3" ANSI w/ Flat Face		
Impeller Type	Vortex		
Impeller Material	Ductile Iron		
Spherical Solids Handling	3" (76 mm) Non-Deformable Diameter		
Motor Housing (Including Seal Plate and Intermediate)	Gray Iron 30		
Pump Casing	Gray Iron 30		
Motor Shaft	17-4 PH Stainless Steel		
O-Rings	Buna-N and Fluorocarbon (DuPont Viton® or Equivalent)		
Bearings: Type/Lubrication	Upper	Single Row Ball/Permanent Lubrication	
	Lower	Double Row Ball/Permanent Lubrication	
External Hardware	303/304 Stainless Steel		
External Surface Protection	Epoxy Paint		
Seal Type	Tandem, Mechanical, Oil Lubricated Upper, Self-Lubricated Lower		
Sealing Faces: Rotating/Stationary	Upper	Carbon/Ni-Resist	
	Lower	Silicon Carbide/Silicon Carbide	
Seal Elastomers	Buna-N Upper, Fluorocarbon (DuPont Viton® or Equivalent) Lower		
Max. Liquid Temperature	104°F (40°C)		

## MOTOR DETAILS

Speed	60 Hz, 1750 RPM		
Motor Design	Inverter-Duty Rated, Air-Filled Enclosure, Squirrel Cage, Induction Start		
Motor Efficiency Rating	NEMA Premium Efficiency (IEC IE3)		
Insulation	Class H, Rated 356°F (180°C)		
Max. Submergence	65 Feet (20 Meters)		
Min. Submergence	1/2 Motor Covered		
Max. Starts per Hour	10		
Max. Rated Power	4.0 HP (3,0 kW)	7.0 HP (5,2 kW)	7.0 HP (5,2 kW)
Amp Draw @ Max. Rated Power: Full Load/ Locked Rotor	230V/1P	18.2/80.6	
	208V/3P		18.1/106.1
	230V/3P		16.4/96.0
	460V/3P		8.2/48.0
			6.6/38.4
575V/3P			
NEMA Motor Code	E	F	F
Service Factor	1.15	1.0	1.15
Efficiency: 100%/75%/50% Load	79%/79%/76%	86%/87%/87%	86%/87%/87%
Power Factor: 100%/75%/50% Load	0.97/0.97/0.94	0.86/0.84/0.74	0.86/0.84/0.74
Field Connection	Across-the-Line		
Moisture Sensor	Single Probe Monitoring Both Seal and Motor Chambers		
Thermal Overload	One Thermostat per Phase, Self-Resetting		

## CABLE DETAILS

Voltage	All		
Power Cable	No. Cables/Conductors per	1/4	
	Gauge	10 AWG	
	Type/Material	SOOW/EPDM	
	Nominal Cable O.D.	0.75" (19,0 mm)	
Control Cable	No. Cables/Conductors per	1/4	
	Gauge	14 AWG	
	Type/Material	CPE	
	Nominal Cable O.D.	0.61" (15,5 mm)	
Length	32 Feet (10 Meters) Standard, 164 Feet (50 Meters) Maximum		



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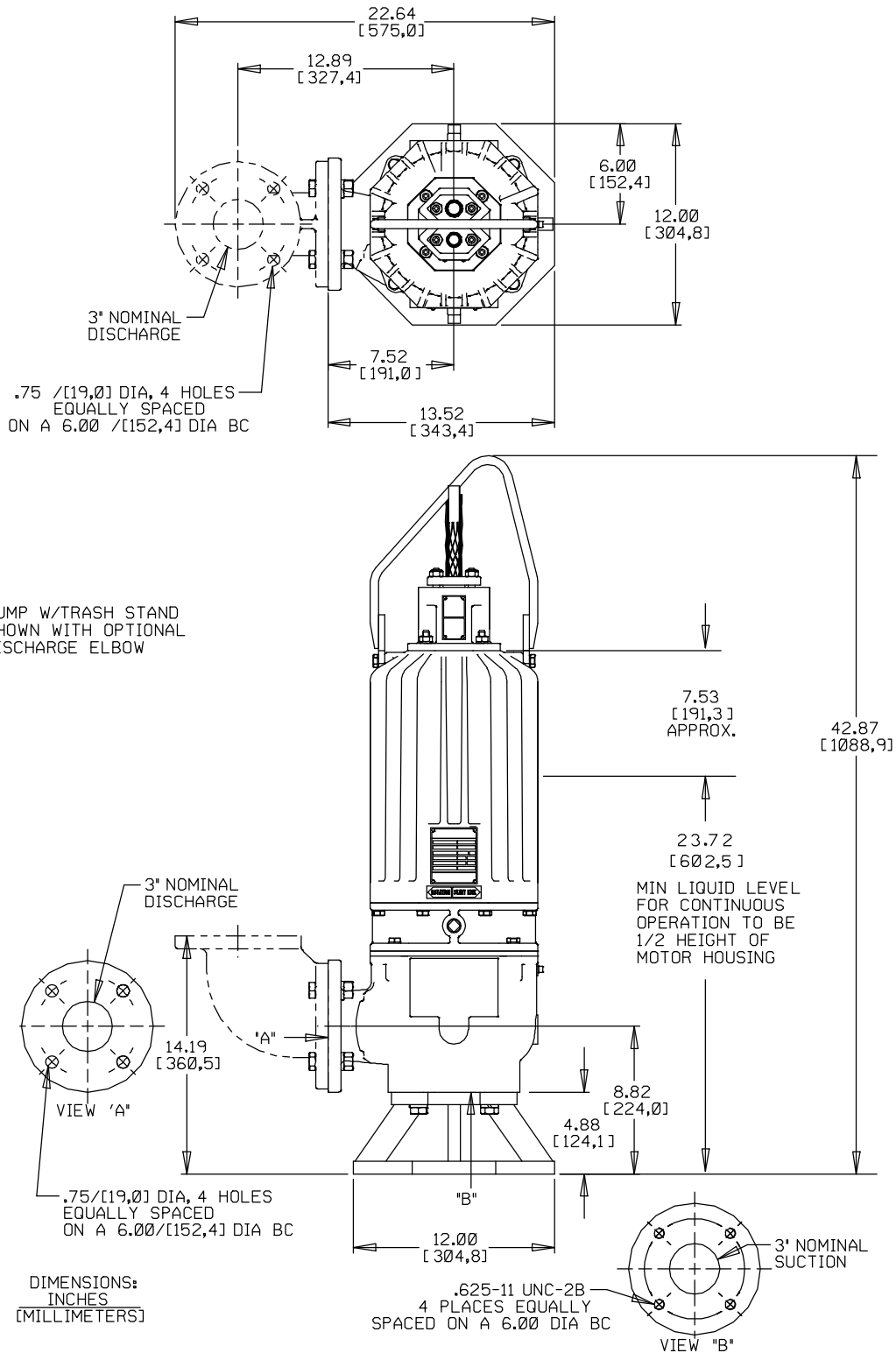
**Specification Data**

**ALL SFV3B/SFEV3B MODELS  
TRASH VERSION  
APPROXIMATE  
DIMENSIONS and WEIGHTS**

**NET WT:** (pump only)  
(cable wt per meter [3.2 ft.])  
**SHIPPING WT:**  
**CRATE SIZE:**

**293 LBS. [132,9 KG.]**  
**0.85 LBS. [0,38 KG.]**  
**323 LBS. [146,5 KG.]**  
**10.3 CU. FT. [0,29 CU. M.]**

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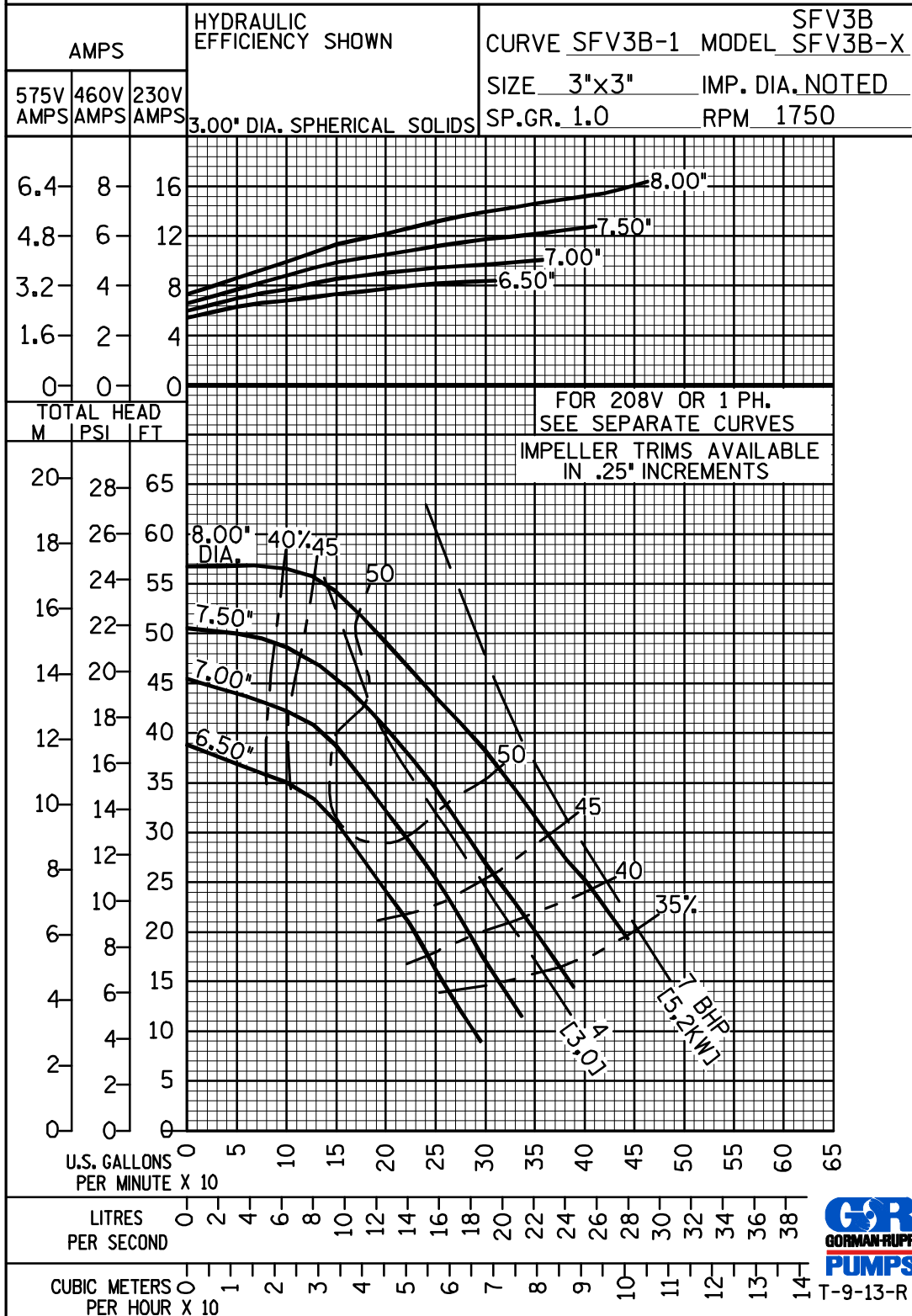
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# PERFORMANCE CURVE



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# PERFORMANCE CURVE

HYDRAULIC EFFICIENCY SHOWN

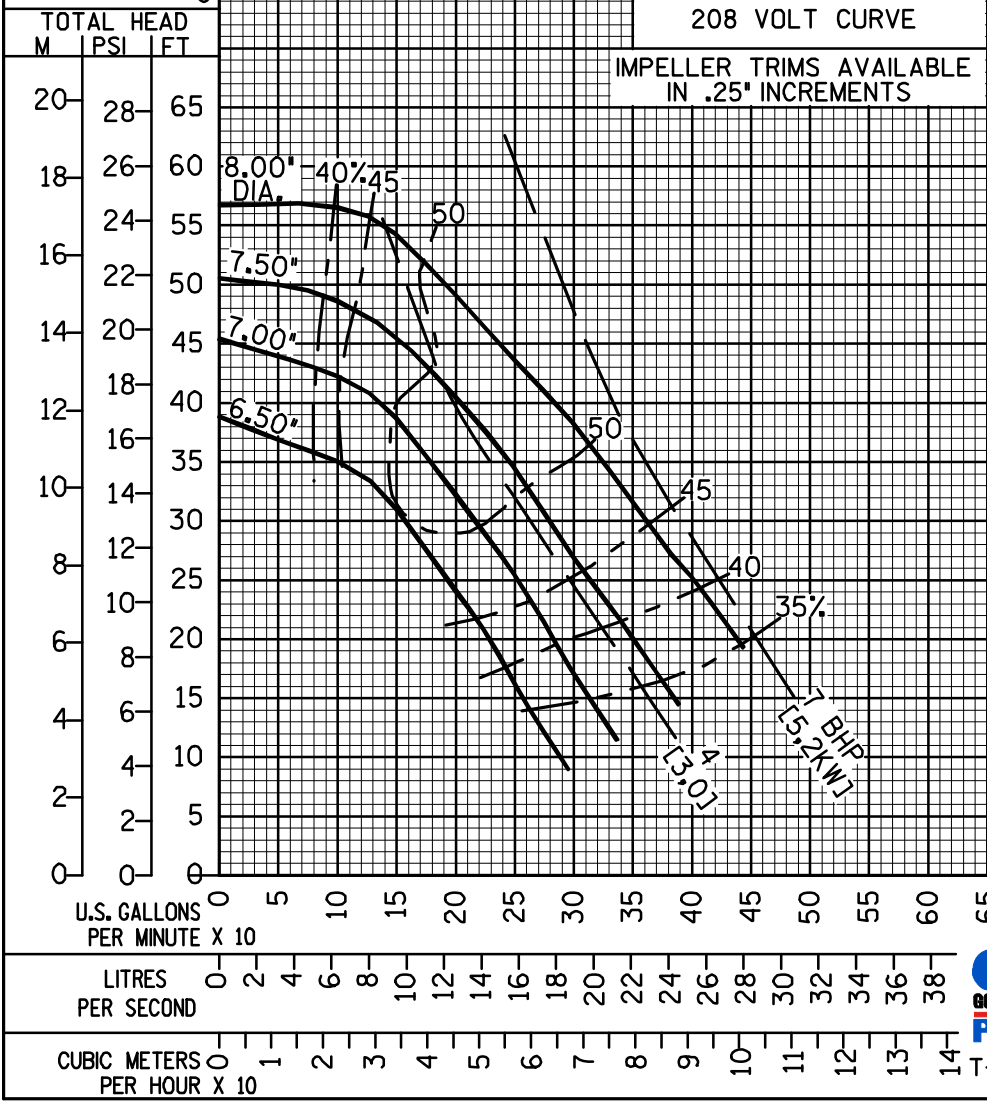
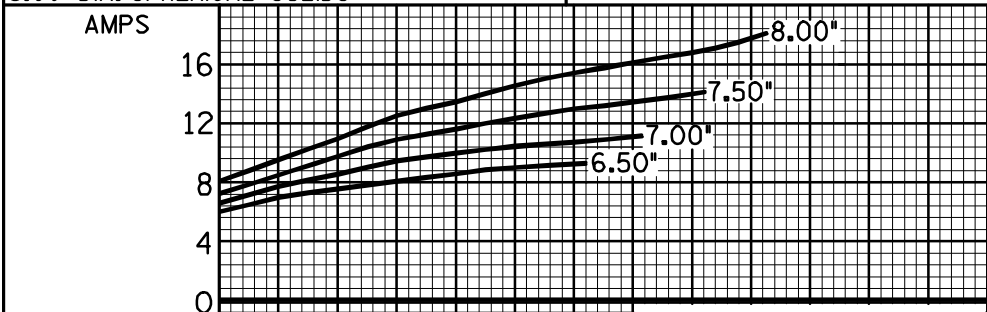
CURVE SFV3B-2 MODEL SFV3B-X

208 VOLT CURVE

SIZE 3"X3" IMP. DIA. NOTED

3.00' DIA. SPHERICAL SOLIDS

SP.GR. 1.0 RPM 1750



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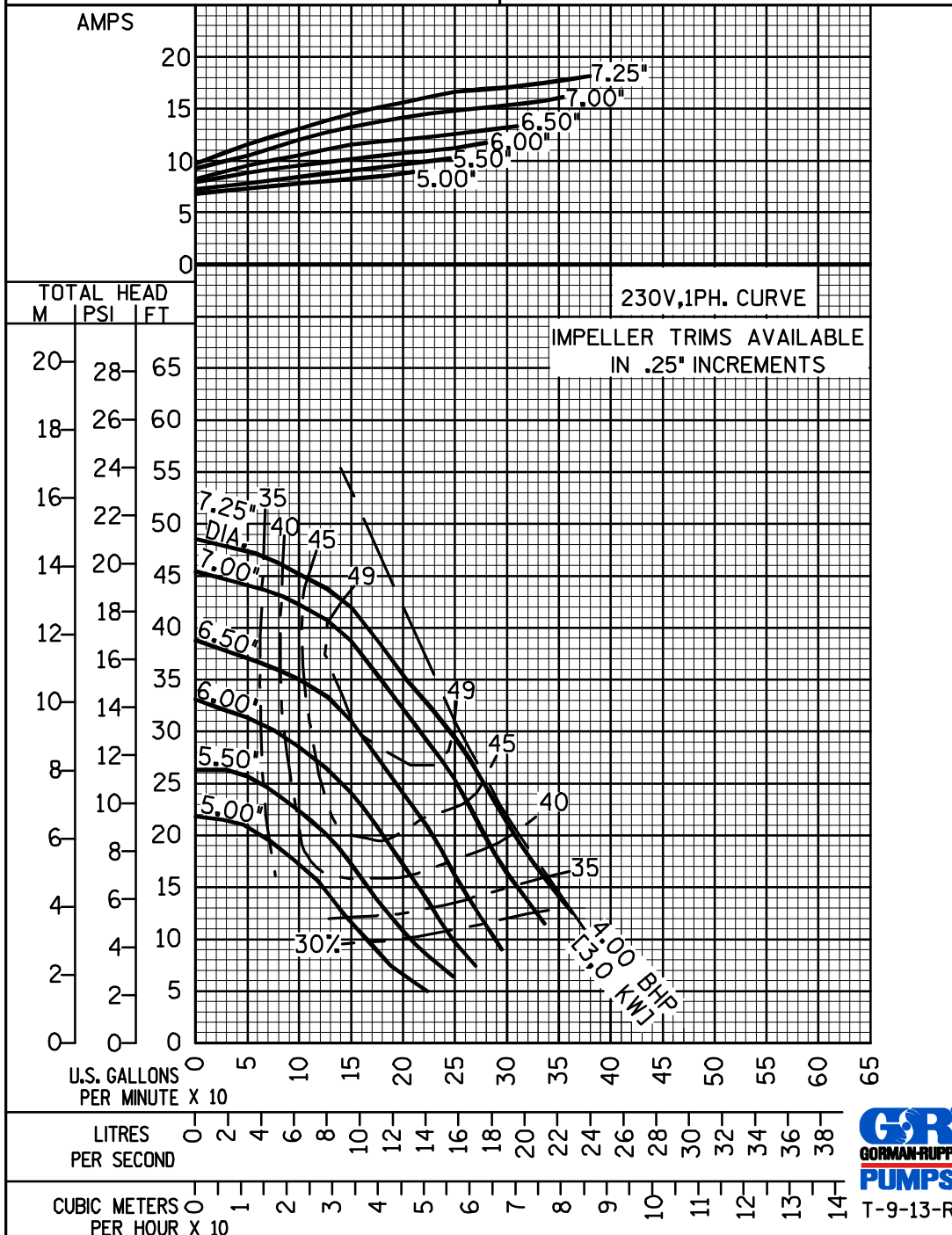
CURVE SFV3B-3 MODEL SFV3B-X

230V,1PH. CURVE

SIZE 3"x3" IMP. DIA. NOTED

3.00" DIA. SPHERICAL SOLIDS

SP.GR. 1.0 RPM 1750



GORMAN-RUPP PUMPS

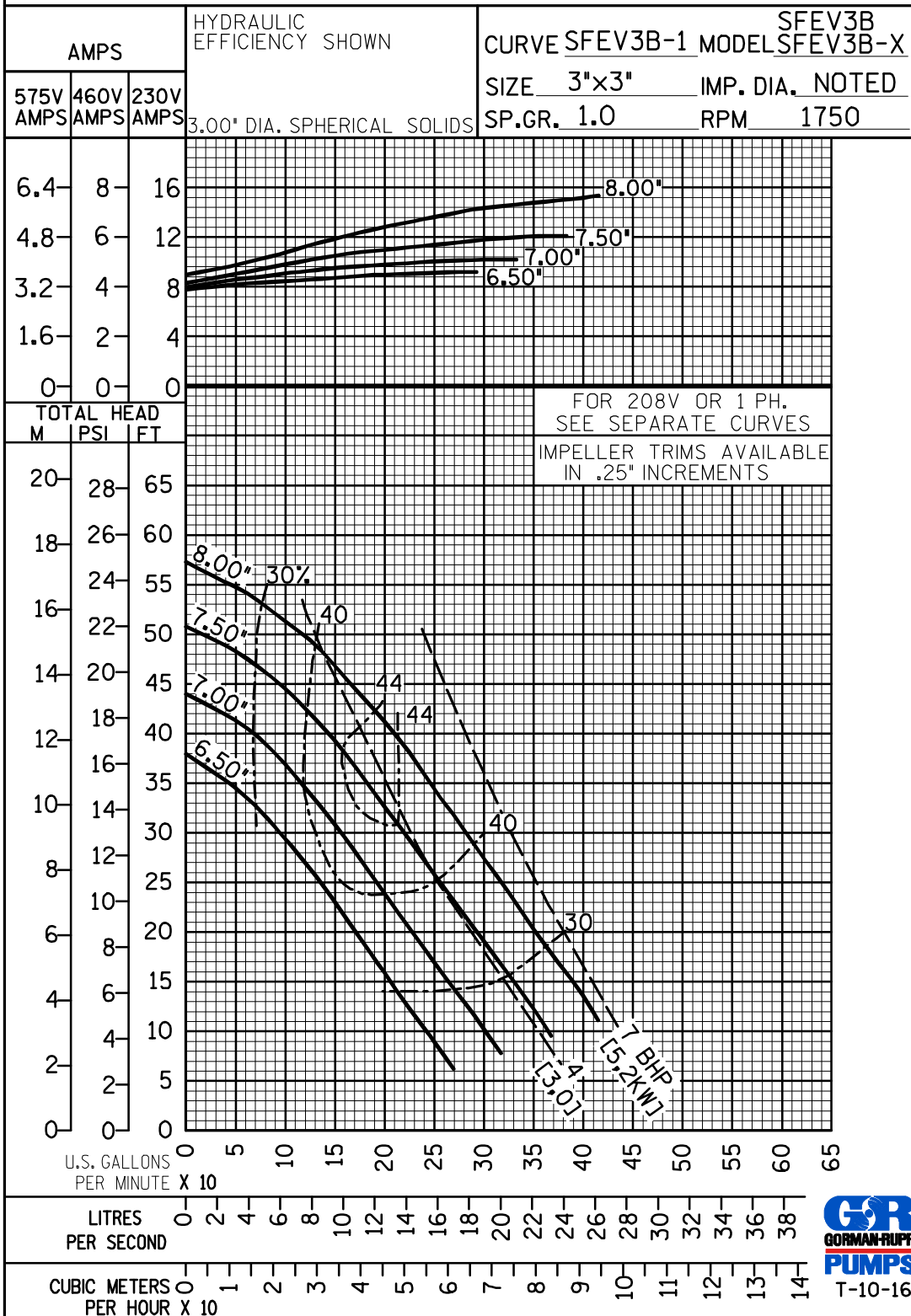
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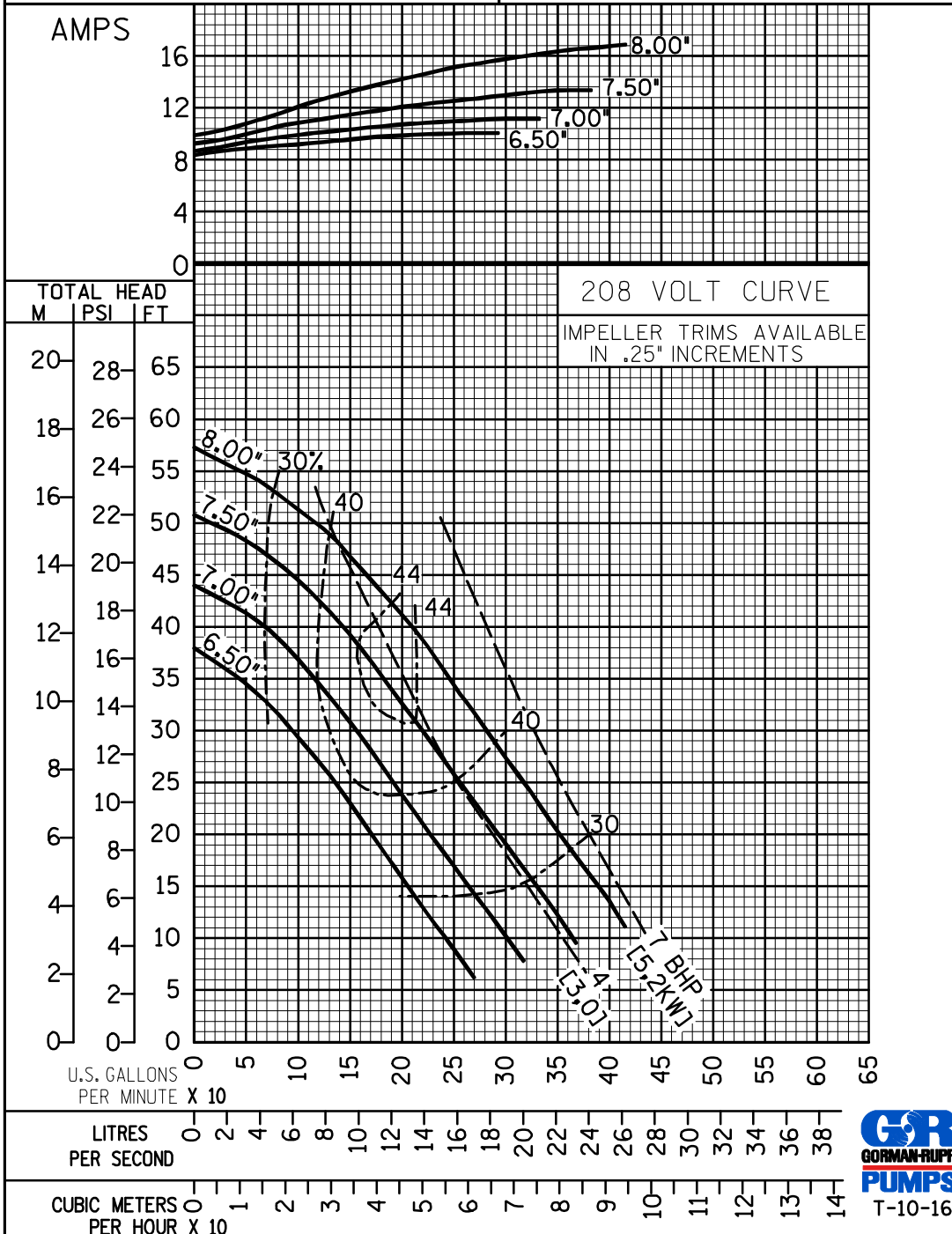
208 VOLT CURVE

3.00" DIA. SPHERICAL SOLIDS

CURVE SFEV3B-2 MODEL SFEV3B  
SFEV3B-X

SIZE 3"x3" IMP. DIA. NOTED

SP.GR. 1.0 RPM 1750



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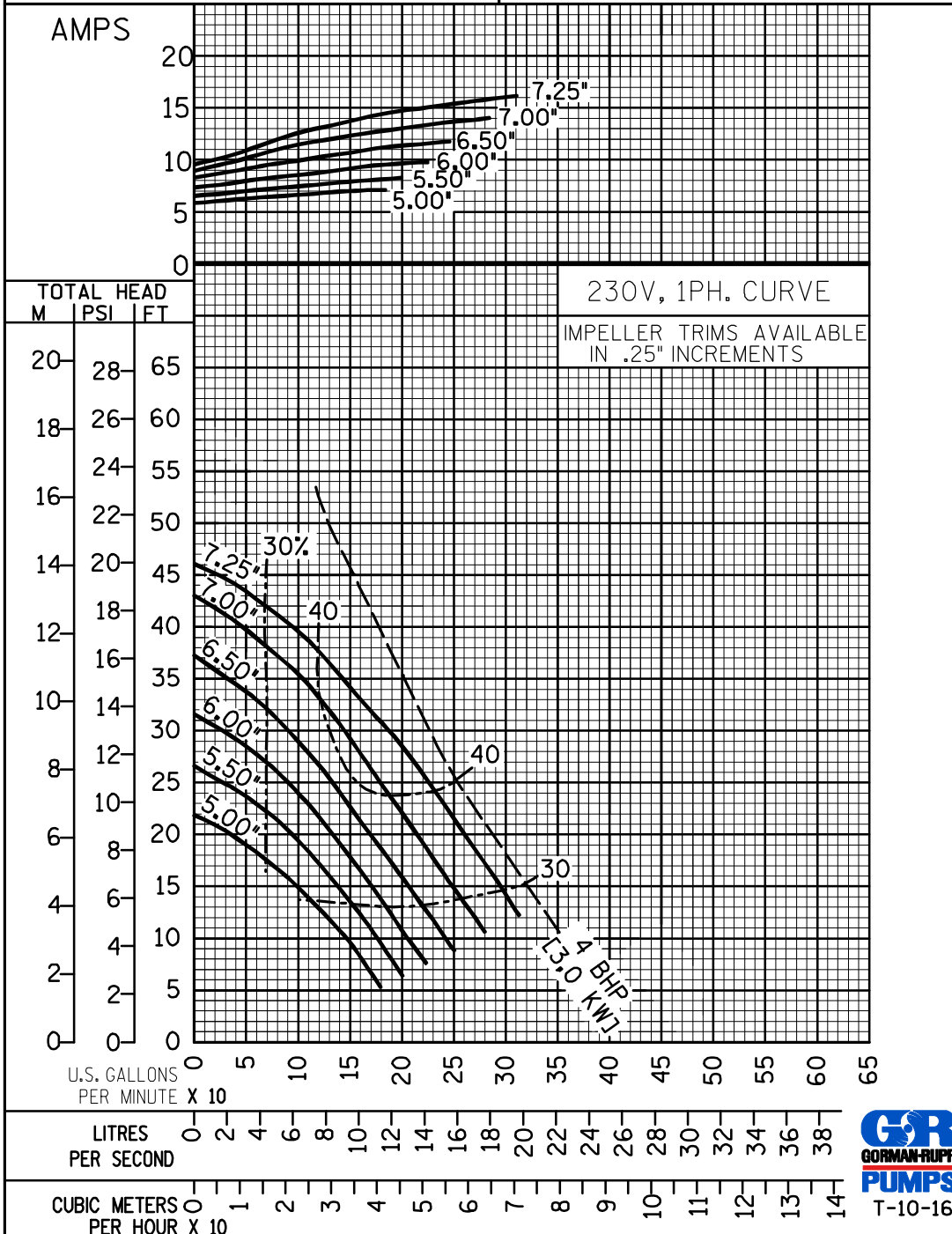
230 VOLT, 1PH. CURVE

3.00" DIA. SPHERICAL SOLIDS

CURVE SFEV3B-3 MODEL SFEV3B  
SFEV3B-X

SIZE 3"x3" IMP. DIA. NOTED

SP.GR. 1.0 RPM 1750



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