Solids Handling Vortex
Electric Motor Driven

Submersible Pumps

Models
SFV3B SFEV3B
SFV3B-X SFEV3B-X
Size 3”

ISO 9001:2008 REGISTERED COMPANY
GORMAN-RUPP PUMPS USA

SF Series®

VARIOUS PATENTS APPLY

C/US

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

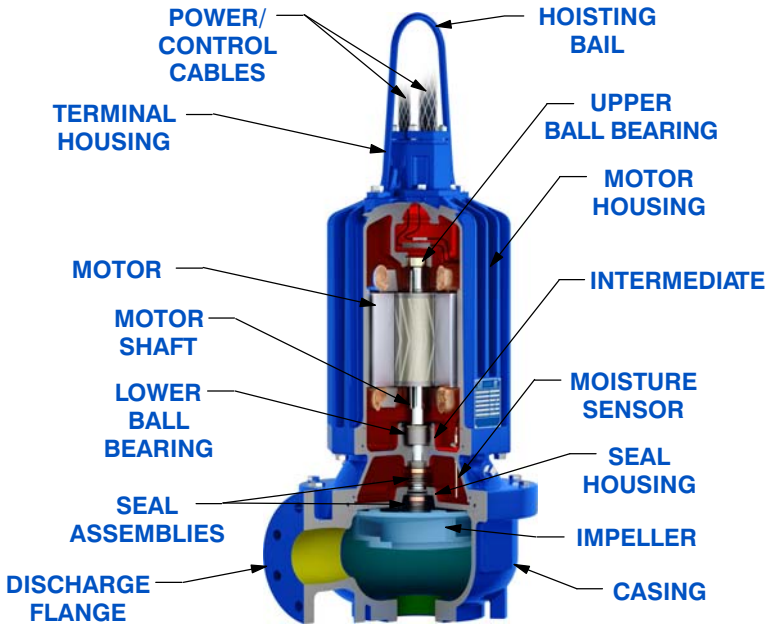
The Gorman-Rupp Infinity® brand of SF Series® vortex pumps provide superior pumping efficiency while maintaining a 3-inch (76,2 mm) spherical solids passage.

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

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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	12.2/106.1	18.1/106.1	
	230V/3P	11.0/96.0		16.4/96.0
	460V/3P	5.50/48.0		8.2/48.0
	575V/3P	4.40/38.4		6.6/38.4
NEMA Motor Code		L	F	F
Service Factor		1.15	1.0	1.15
Efficency: 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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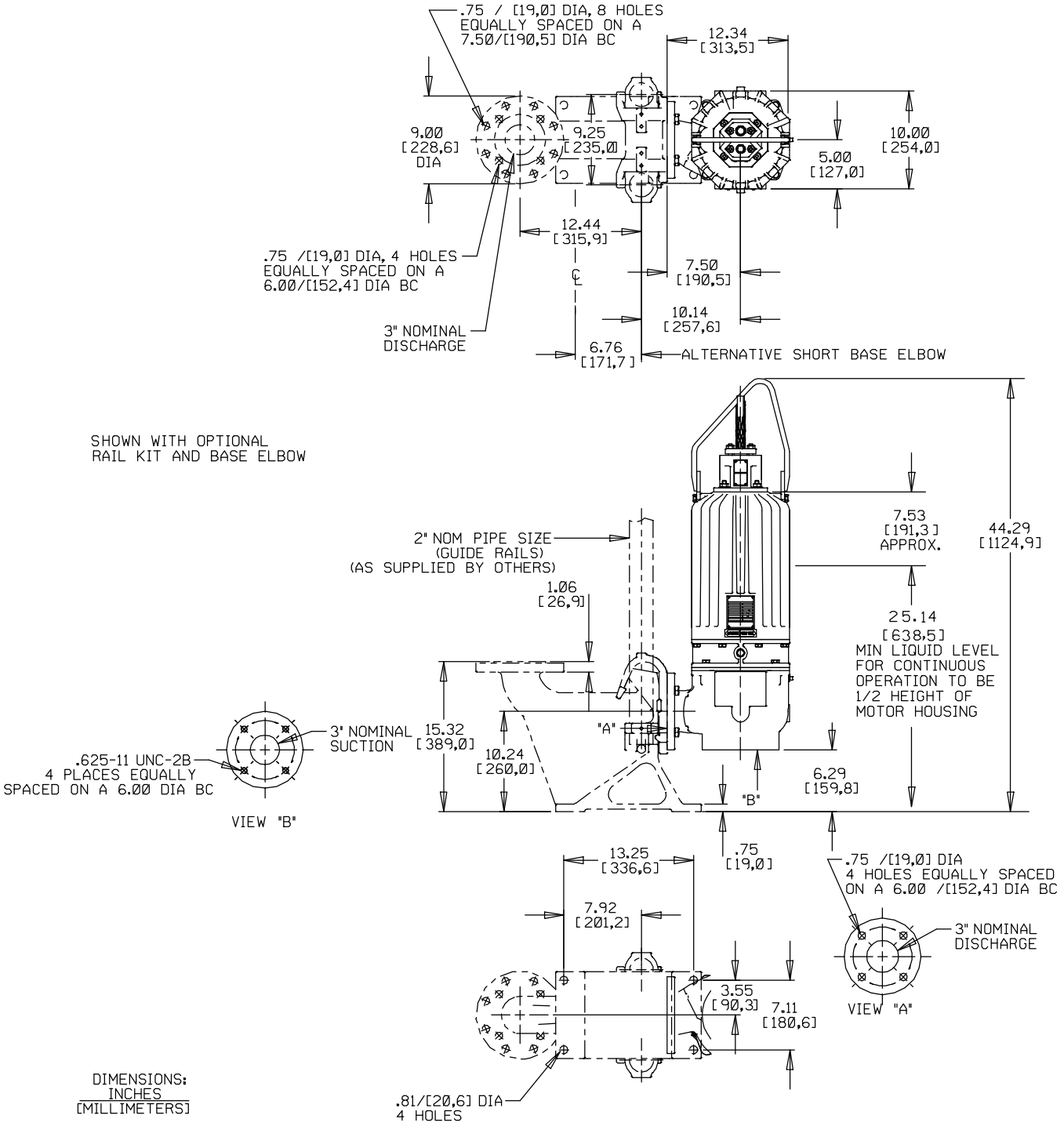
Specification Data	ALL SFV3B/SFEV3B MODELS SLIDE RAIL VERSION APPROXIMATE DIMENSIONS and WEIGHTS	NET WT: (pump only)	283 LBS. [128,4 KG.]
		(comb. cable wt. per meter [3.2 ft.])	1.97 LBS. [0,89 KG.]
SECTION 133, PAGE 110.2		SHIPPING WT: (pump only)	313 LBS. [141 KG.]
		CRATE SIZE:	7.5 CU. FT. [0,21 CU. M.]



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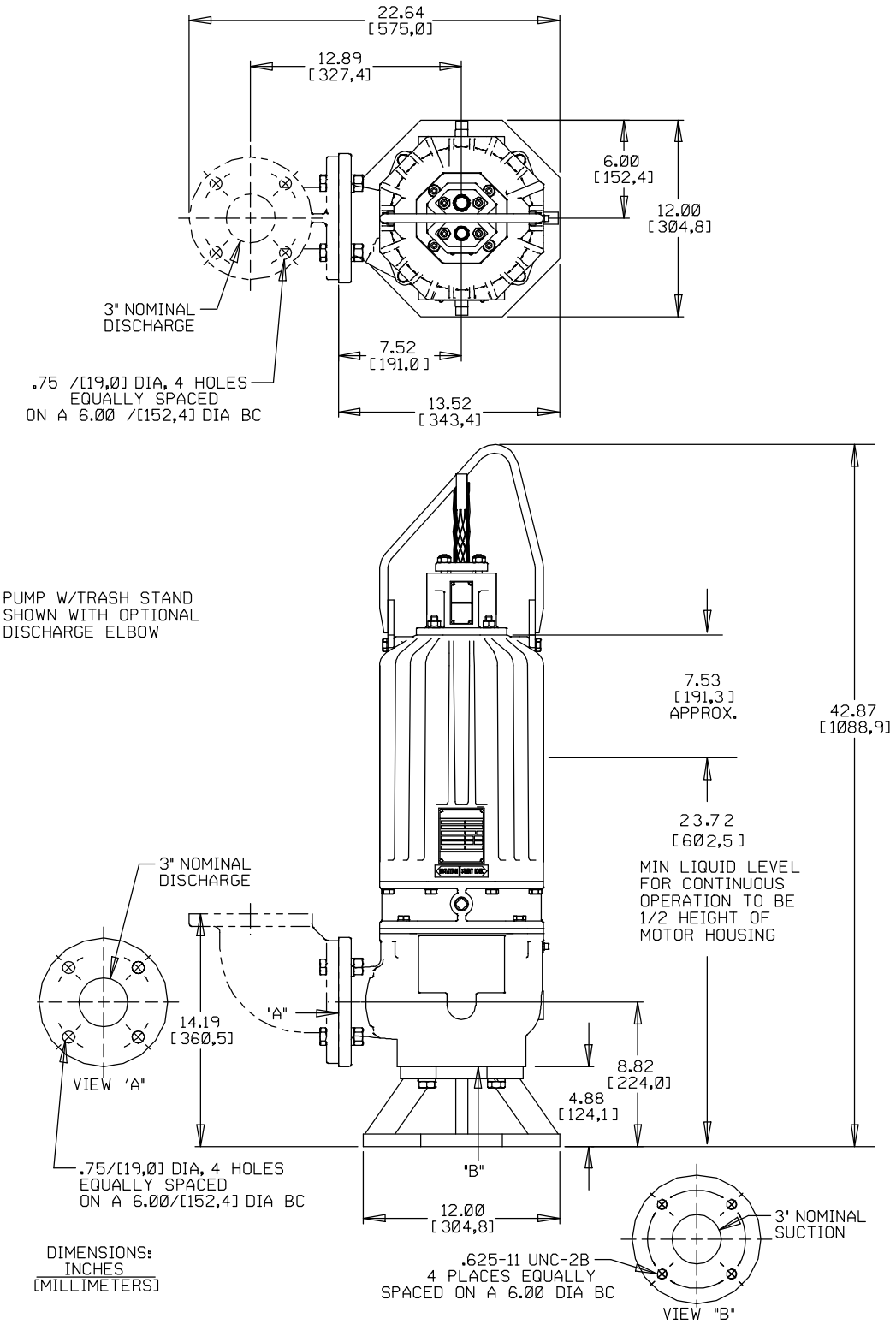
Specification Data	ALL SFV3B/SFEV3B MODELS TRASH VERSION APPROXIMATE DIMENSIONS and WEIGHTS			
SECTION 133, PAGE 110.3		**NET WT:** (pump only)	**293 LBS.**	**[132,9 KG.]**
		(cable wt per meter [3.2 ft.])	**0.85 LBS.**	**[0,38 KG.]**
		SHIPPING WT:	**323 LBS.**	**[146,5 KG.]**
		CRATE SIZE:	**10.3 CU. FT.**	**[0,29 CU. M.]**



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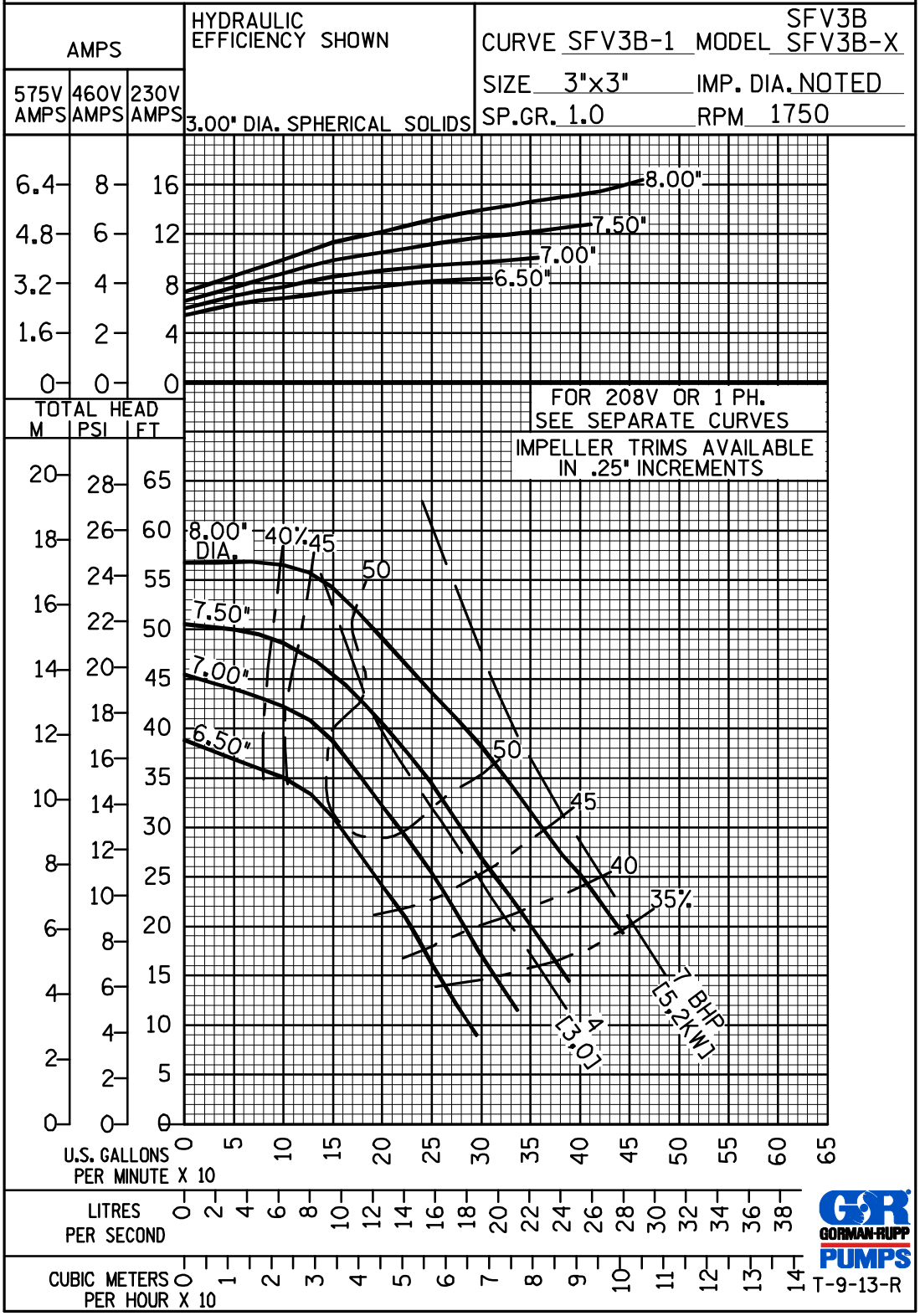
PERFORMANCE CURVE



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PERFORMANCE CURVE

HYDRAULIC
EFFICIENCY SHOWN

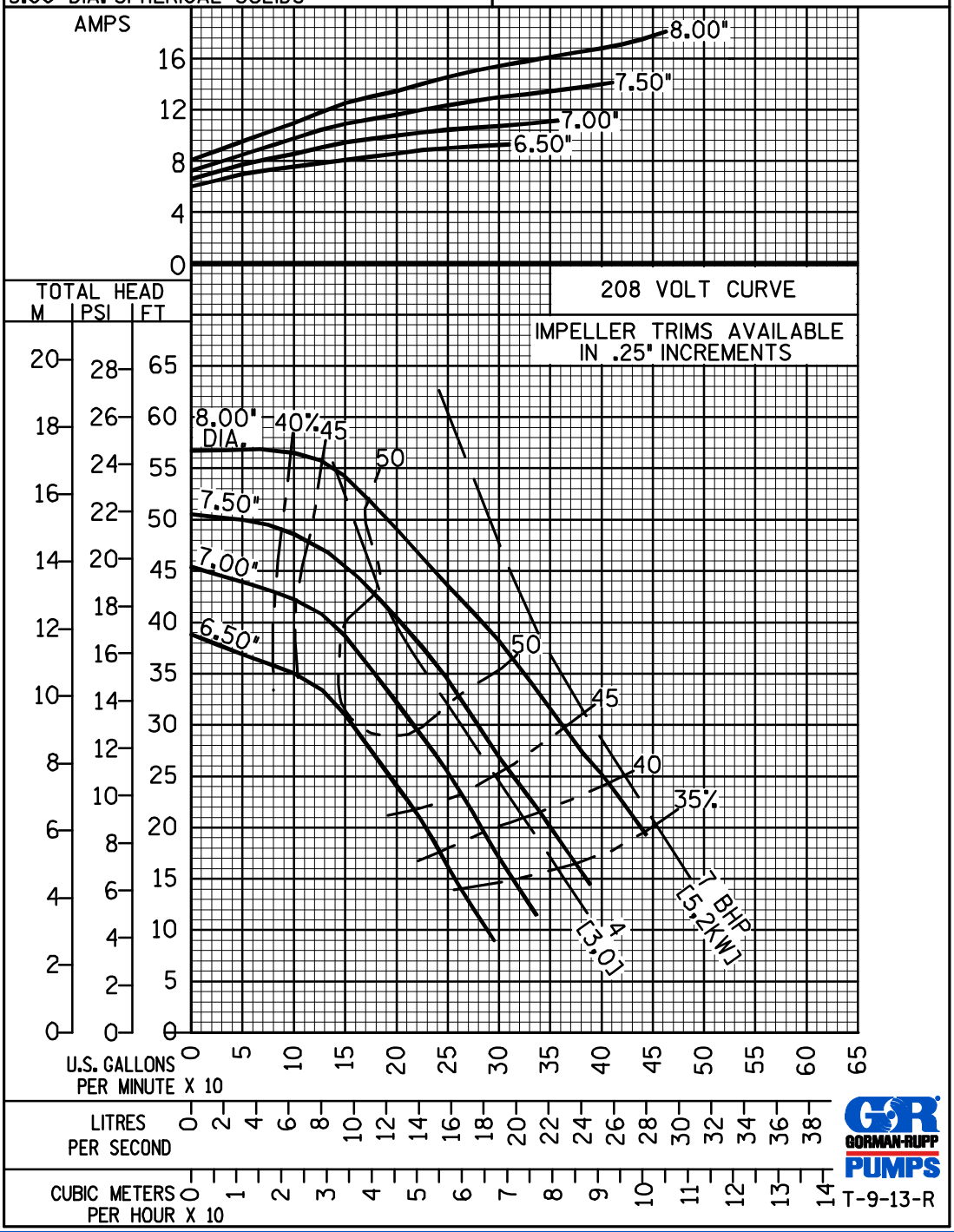
208 VOLT CURVE

3.00" DIA. SPHERICAL SOLIDS

CURVE SFV3B-2 MODEL SFV3B SFV3B-X

SIZE 3"x3" IMP. DIA. NOTED

SP.GR. 1.0 RPM 1750



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T-9-13-R

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PERFORMANCE CURVE

HYDRAULIC
EFFICIENCY SHOWN

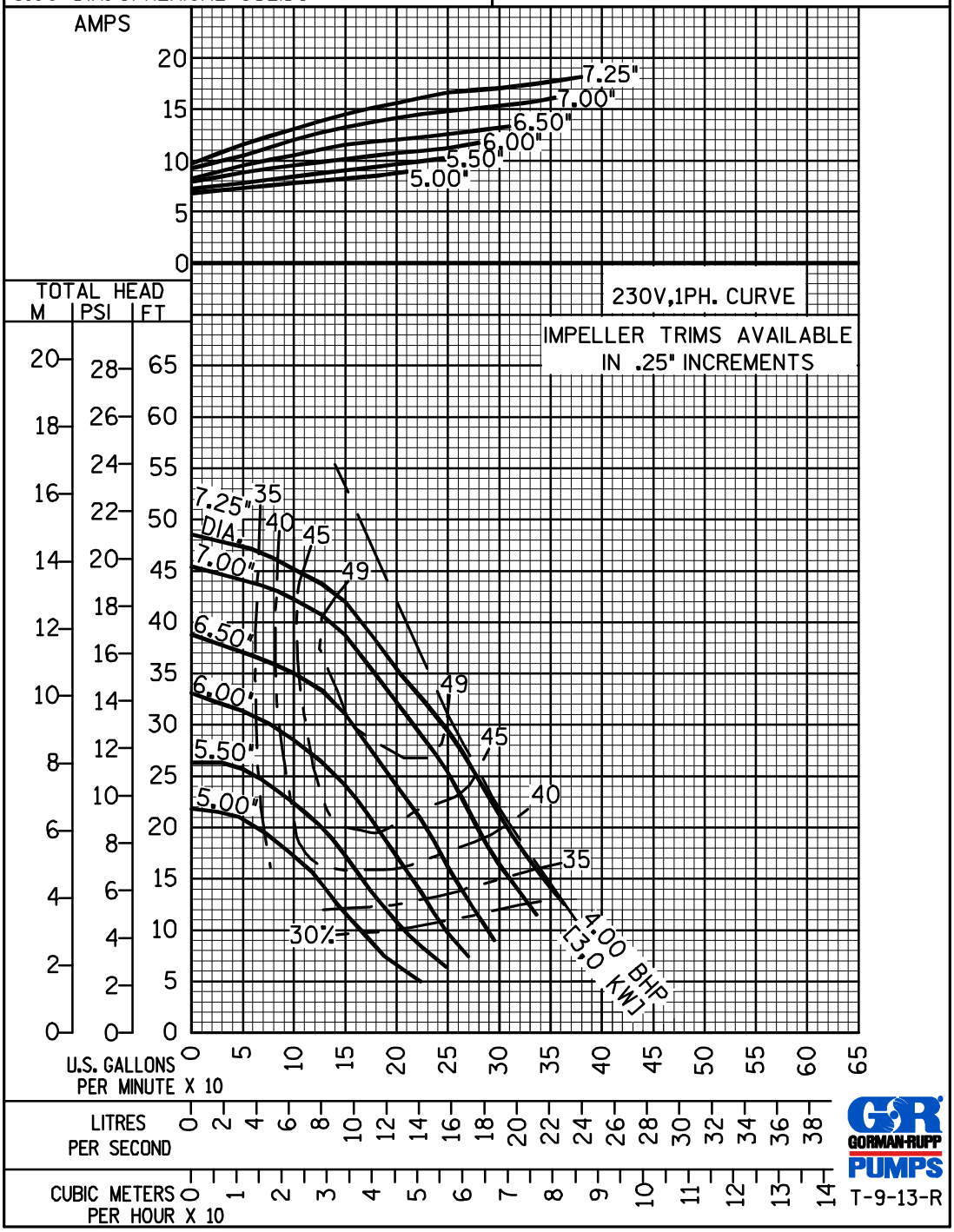
230V,1PH. CURVE

3.00" DIA. SPHERICAL SOLIDS

CURVE SFV3B-3 MODEL SFV3B SFV3B-X

SIZE 3"x3" IMP. DIA. NOTED

SP.GR. 1.0 RPM 1750



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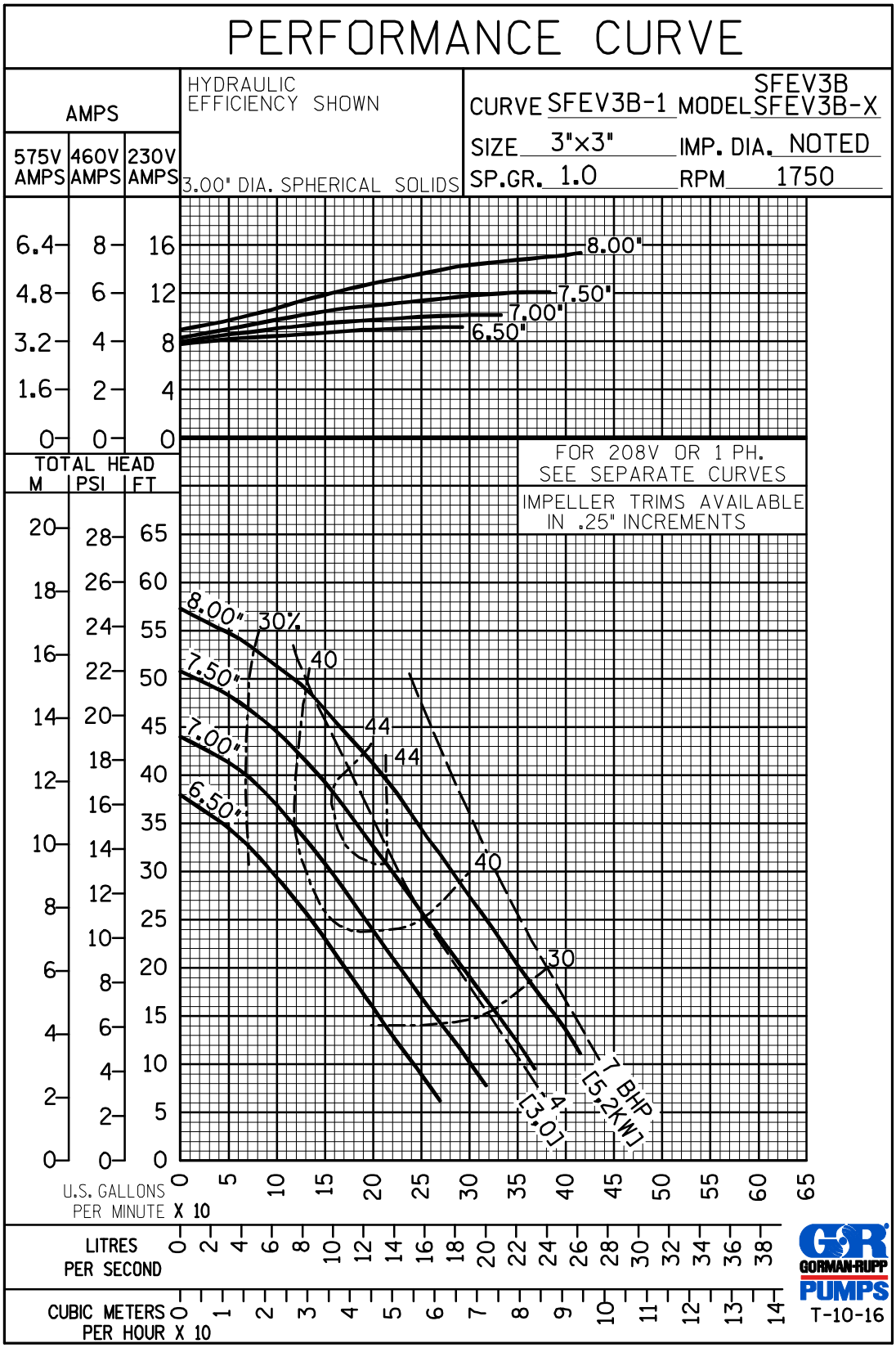
PERFORMANCE CURVE



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PERFORMANCE CURVE

HYDRAULIC
EFFICIENCY SHOWN

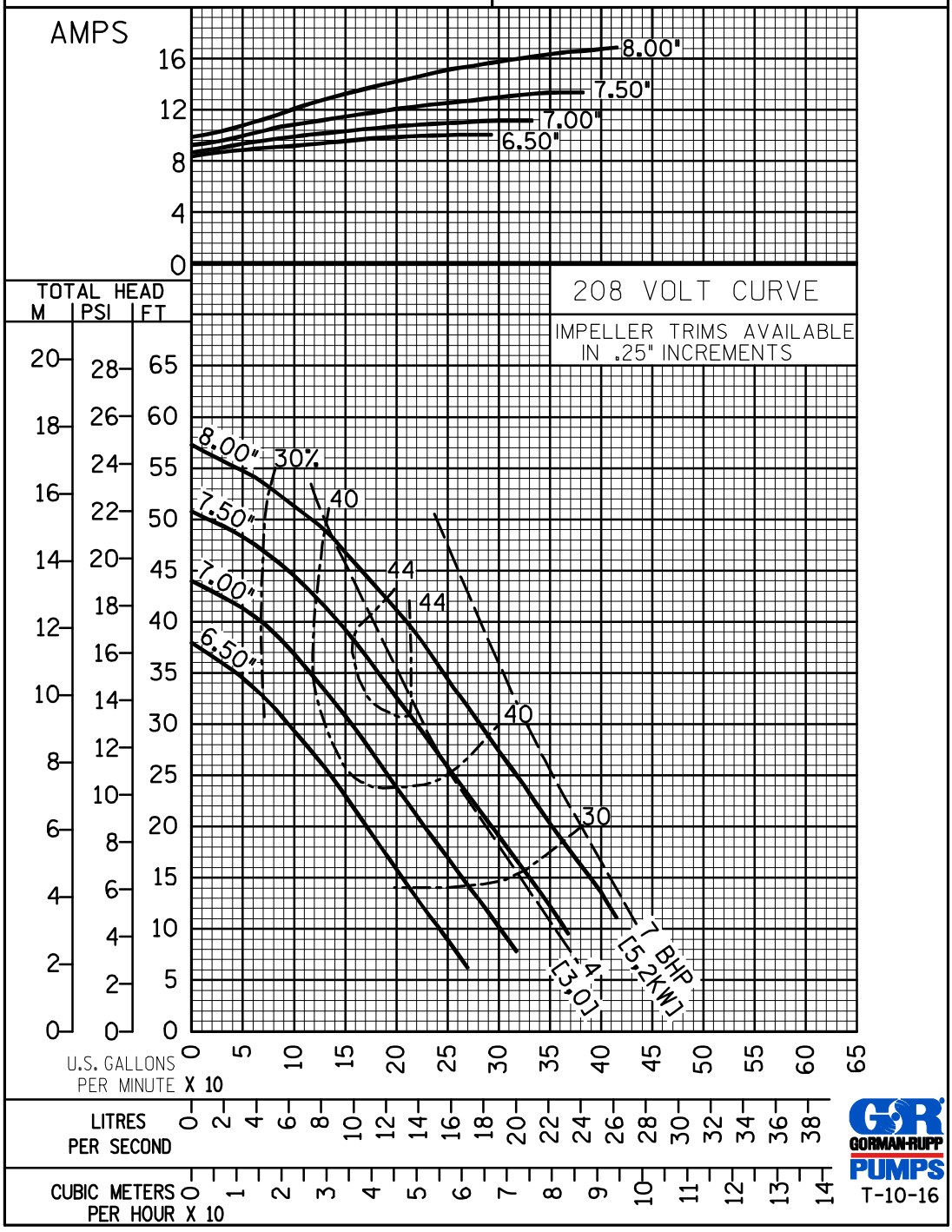
208 VOLT CURVE

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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T-10-16

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PERFORMANCE CURVE

HYDRAULIC
EFFICIENCY SHOWN

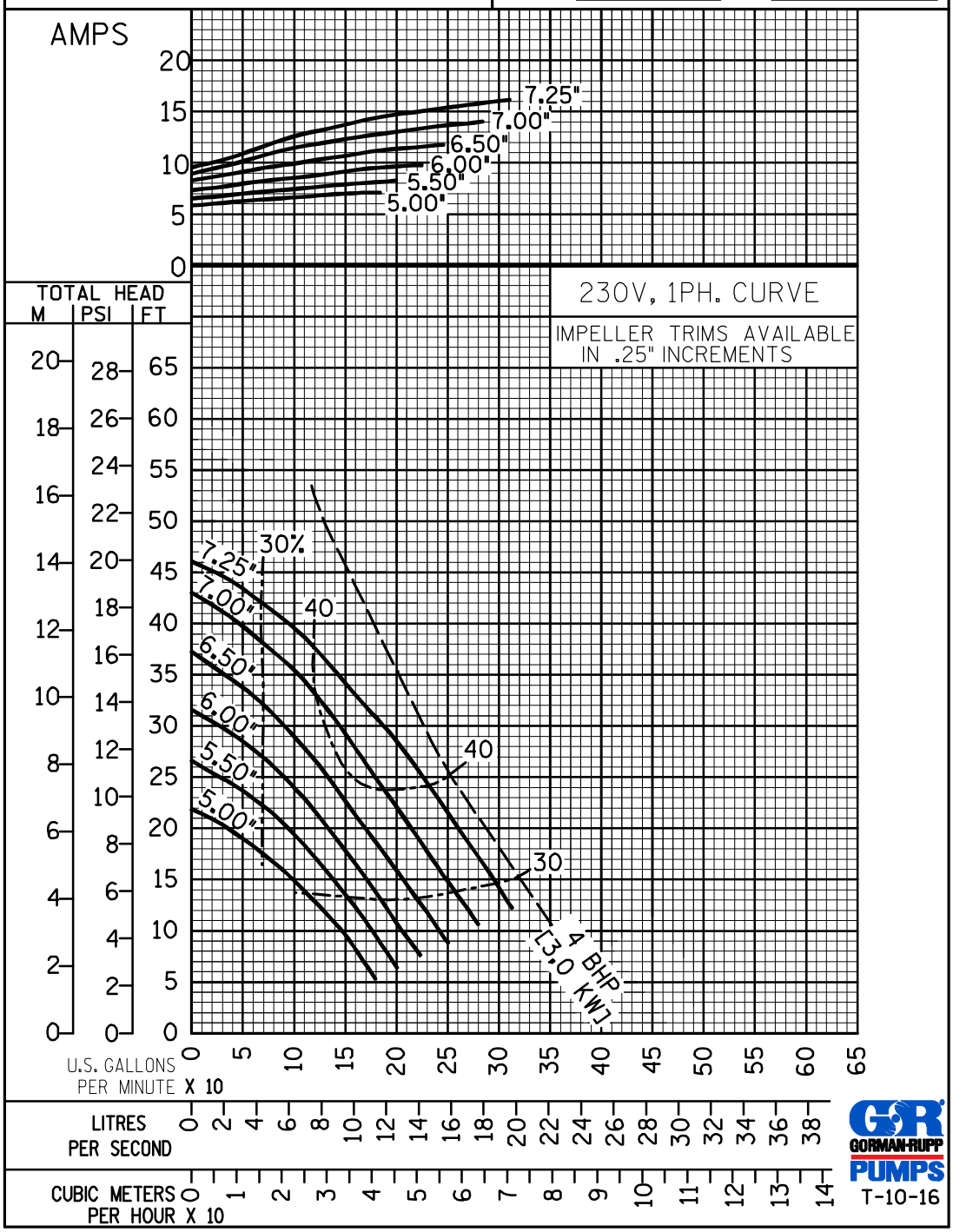
230 VOLT, 1PH. CURVE

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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