

**SF Series**<sup>®</sup>  
VARIOUS PATENTS APPLY

**Submersible Pumps**  
Models  
**SFV4C SFEV4C**  
**SFV4C-X SFEV4C-X**  
Size 4"



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

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

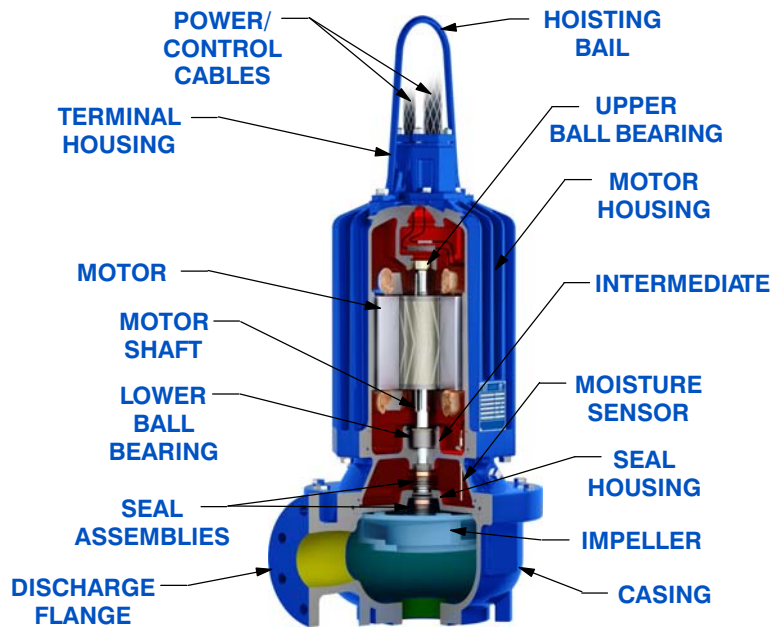
**Key Features:**

- NEMA premium efficiency motors
- 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 <sup>w</sup>/Rubber Seal
  - Base Elbow and Rail Brackets
- Trash Stand Installation Components
  - Trash Stand
  - Discharge Elbow



TYPICAL VORTEX CROSS-SECTION



**GORMAN-RUPP PUMPS**

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**PUMP DETAILS**

Pump Models	SFV4C SFEV4C SFV4C-X SFEV4C-X		
Agency Approvals	FM/CSA-C/US		
Discharge Flange	4" 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 Output Power	10 HP (7,5 kW)	12.5 HP (9,3 kW)	14.0 HP (10,4 kW)
Amp Draw @ Max. Rated Power: Full Load/ Locked Rotor	208V/3P	30.0/184.7	36.6/184.7
	230V/3P	27.0/167.0	37.6/167.0
	460V/3P	13.5/83.5	18.8/83.5
	575V/3P	10.8/66.8	15.0/66.8
NEMA Motor Code	H	F	E
Service Factor	1.15	1.0	1.15
Efficiency: 100%/75%/50% Load	92%/92%/92%	86%/87%/86%	86%/87%/87%
Power Factor: 100%/75%/50% Load	0.81/0.75/0.62	0.82/0.80/0.71	0.82/0.81/0.74
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	208-230/460V	575V	
Power Cable	No. Cables/Conductors per	1/6	1/4
	Gauge	(3) 8 AWG PWR & (3) 10 AWG GND/GC	10 AWG
	Type/Material	GGC/CPE	SOOW/EPDM
	Nominal Cable O.D.	0.91" (23,1 mm)	0.75" (19,0 mm)
Control Cable	No. Cables/Conductors per	1/4	
	Gauge	14 AWG	
	Type/Material	SOOW/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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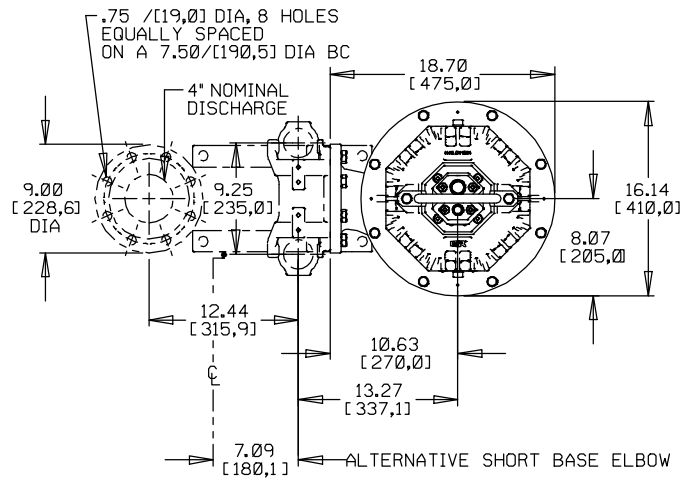
**Specification Data**

**MODELS SFV4C SFEV4C  
SFV4C-X SFEV4C-X  
SLIDE RAIL VERSION  
APPROXIMATE  
DIMENSIONS and WEIGHTS**

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

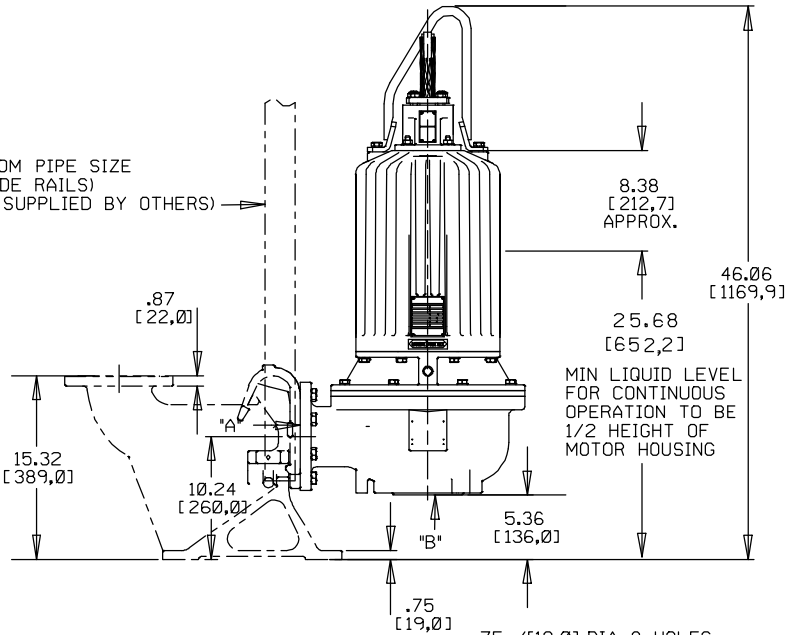
**507 LBS. [230 KG.]  
2.9 LBS. [1,3 KG.]  
537 LBS. [244,0 KG.]  
15.3 CU. FT. [0,43 CU. M.]**

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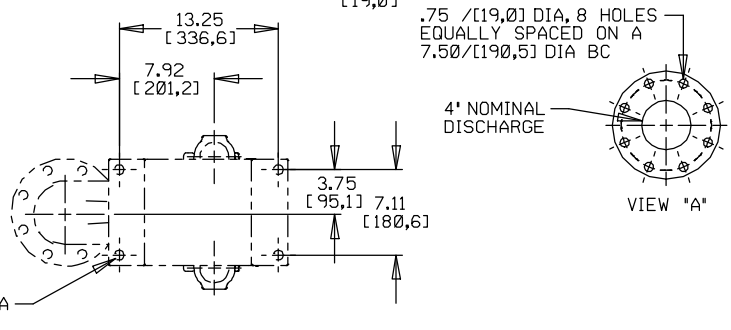
SHOWN WITH OPTIONAL  
RAIL KIT AND BASE ELBOW

2" NOM PIPE SIZE  
(GUIDE RAILS)  
(AS SUPPLIED BY OTHERS)



.625-11 UNC-2B, 8 PLACES  
EQUALLY SPACED ON A  
7.50 / [190,5] DIA BC

VIEW "B"



DIMENSIONS:  
INCHES  
(MILLIMETERS)



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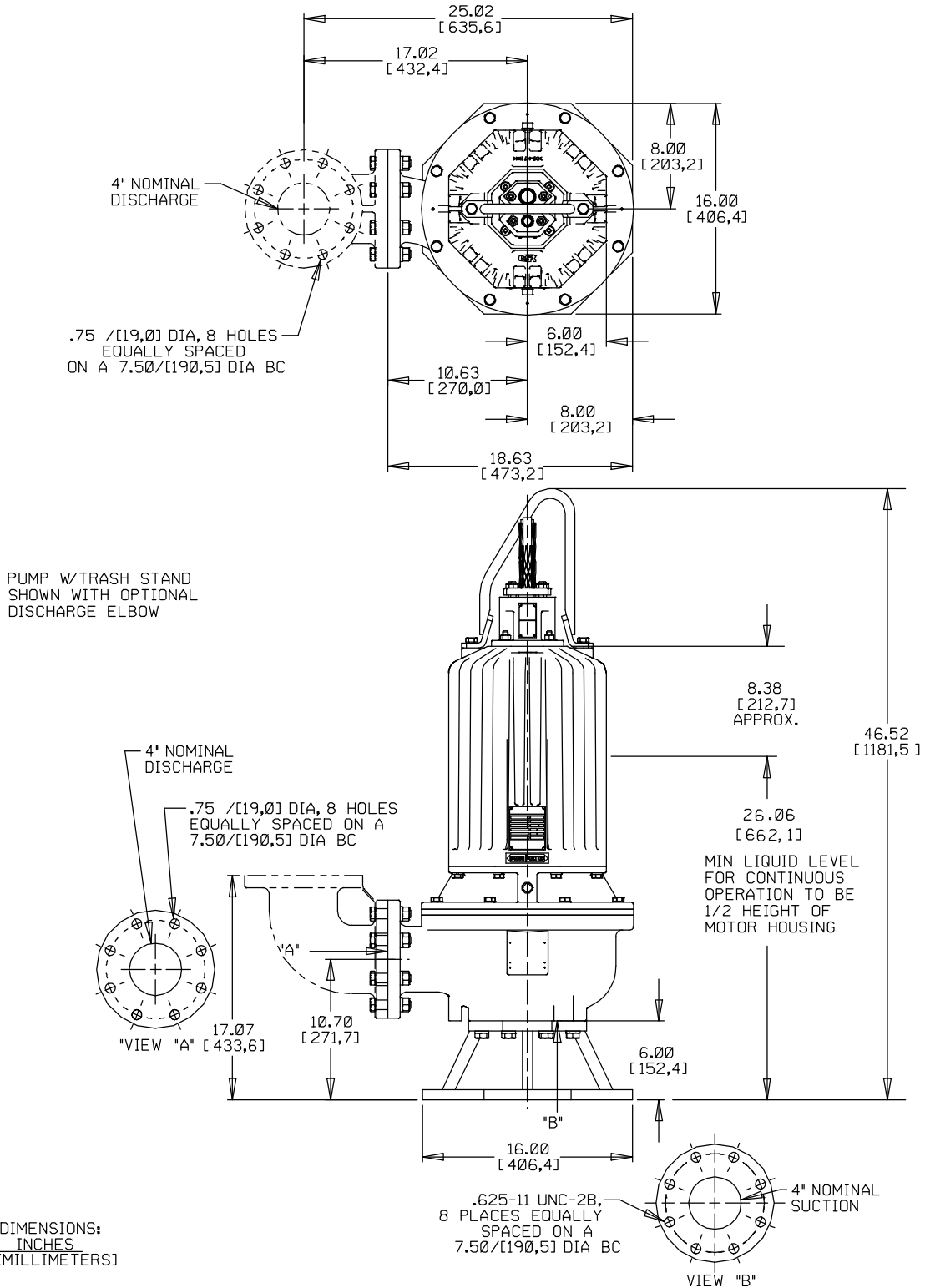
**Specification Data**

SECTION 133, PAGE 140.3

**MODELS SFV4C SFEV4C  
SFV4C-X SFEV4C-X  
TRASH VERSION  
APPROXIMATE  
DIMENSIONS and WEIGHTS**

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

**540 LBS. [245 KG.]  
2.9 LBS. [1,3 KG.]  
570 LBS. [258,5 KG.]  
17.3 CU. FT. [0,49 CU. M.]**



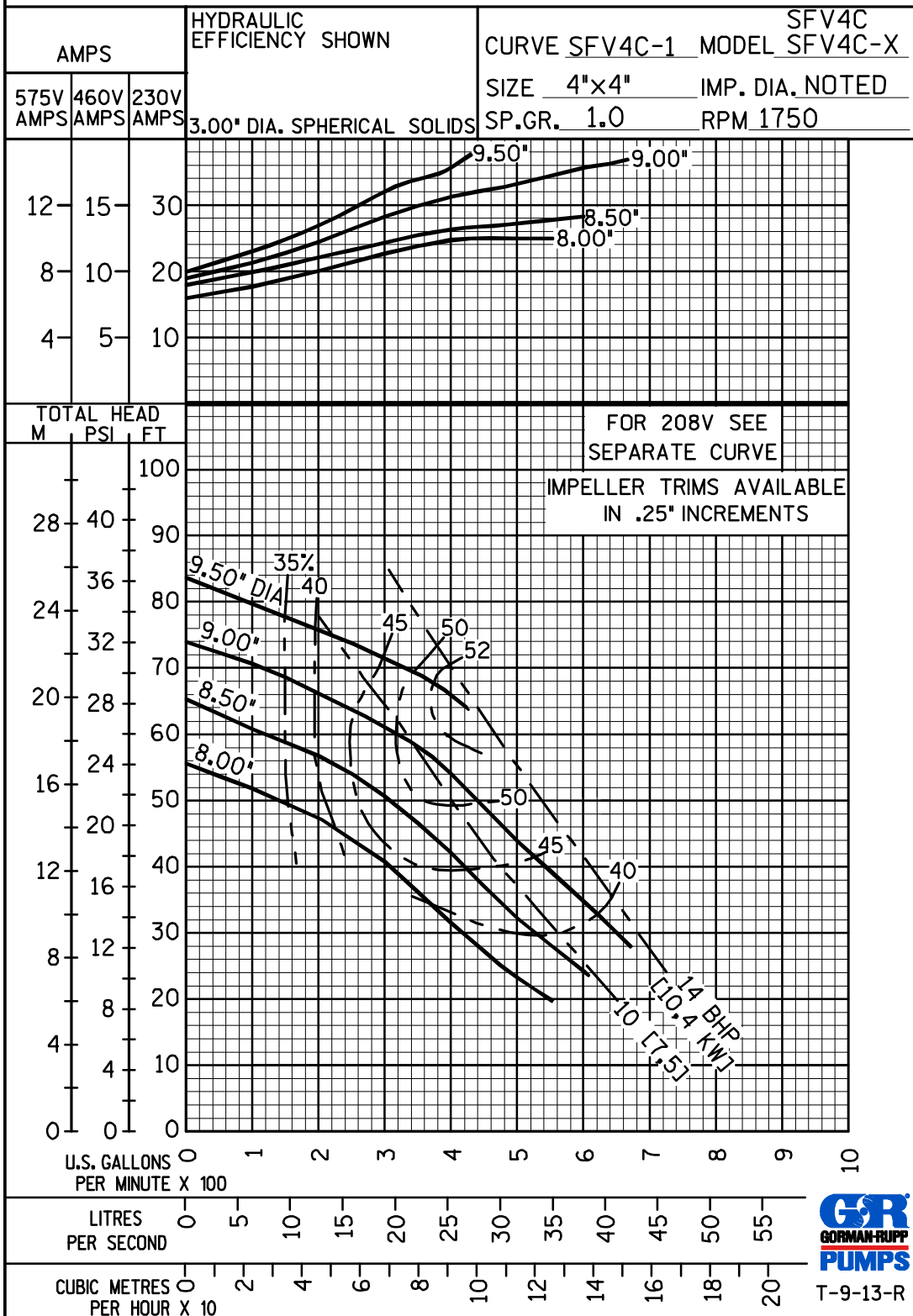
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# PERFORMANCE CURVE



T-9-13-R



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# PERFORMANCE CURVE

HYDRAULIC  
EFFICIENCY SHOWN

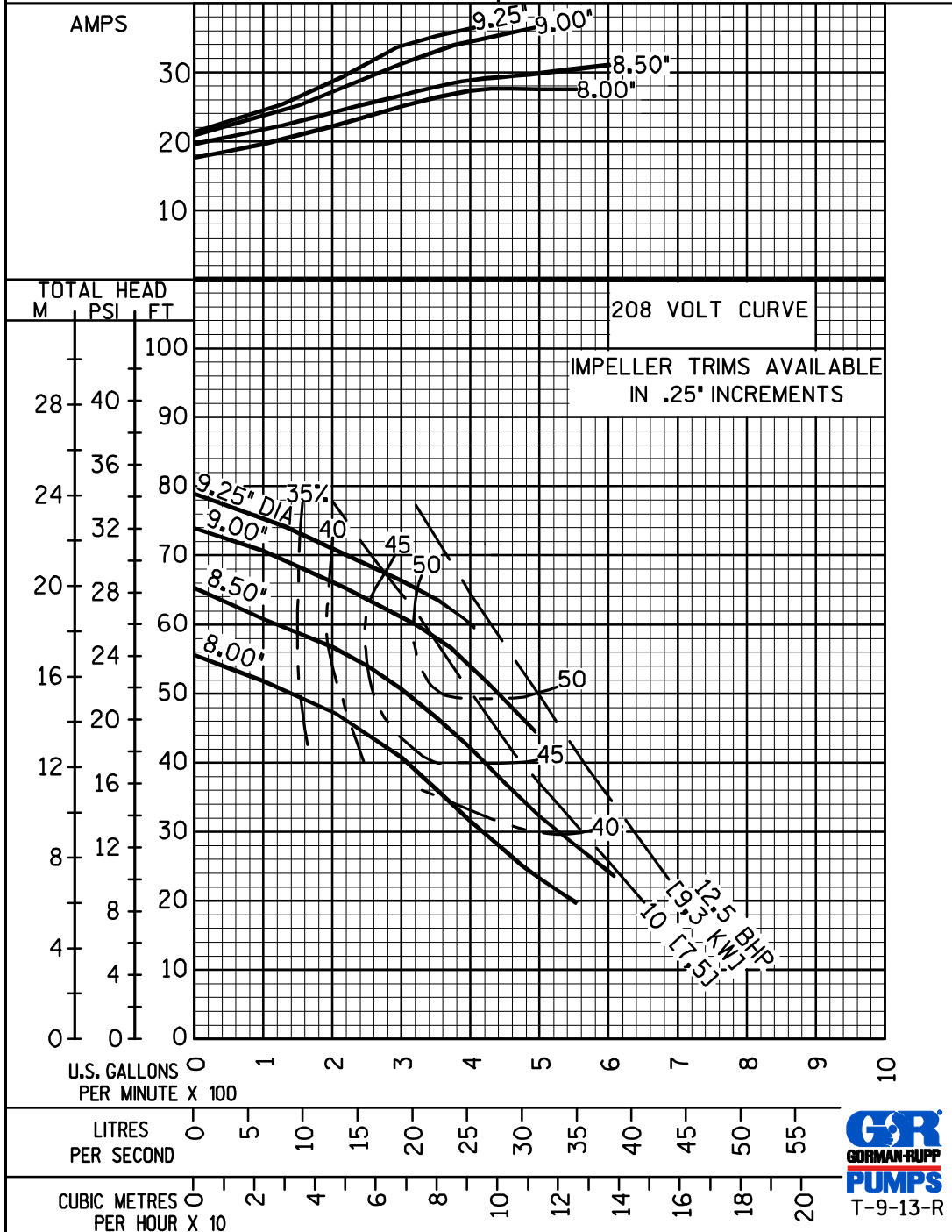
SFV4C  
CURVE SFV4C-2 MODEL SFV4C-X

208 VOLT CURVE

SIZE 4"x4" IMP. DIA. NOTED

3.00" DIA. SPHERICAL SOLIDS

SP.GR. 1.0 RPM 1750

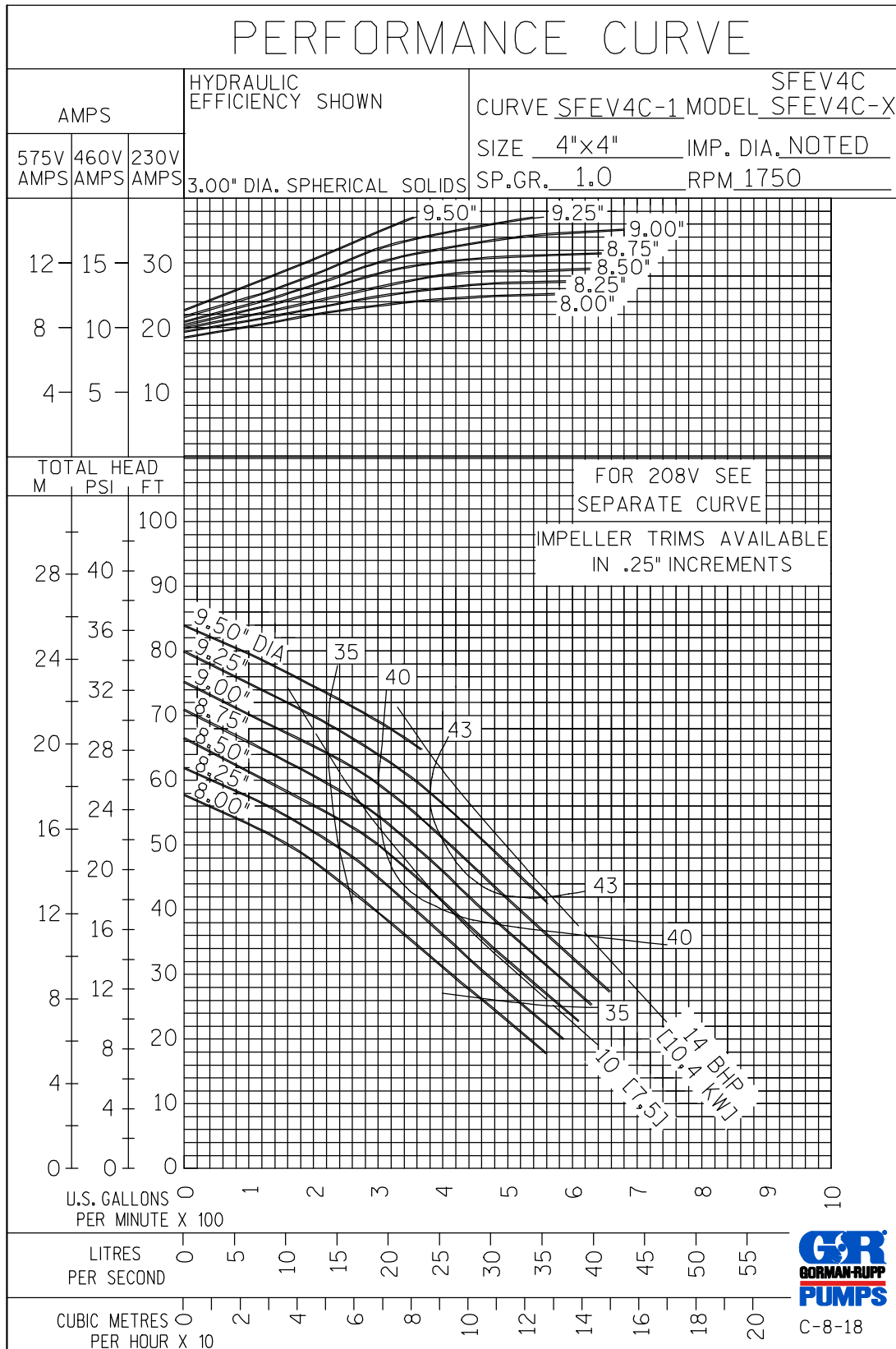


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# PERFORMANCE CURVE

HYDRAULIC EFFICIENCY SHOWN

208V CURVE

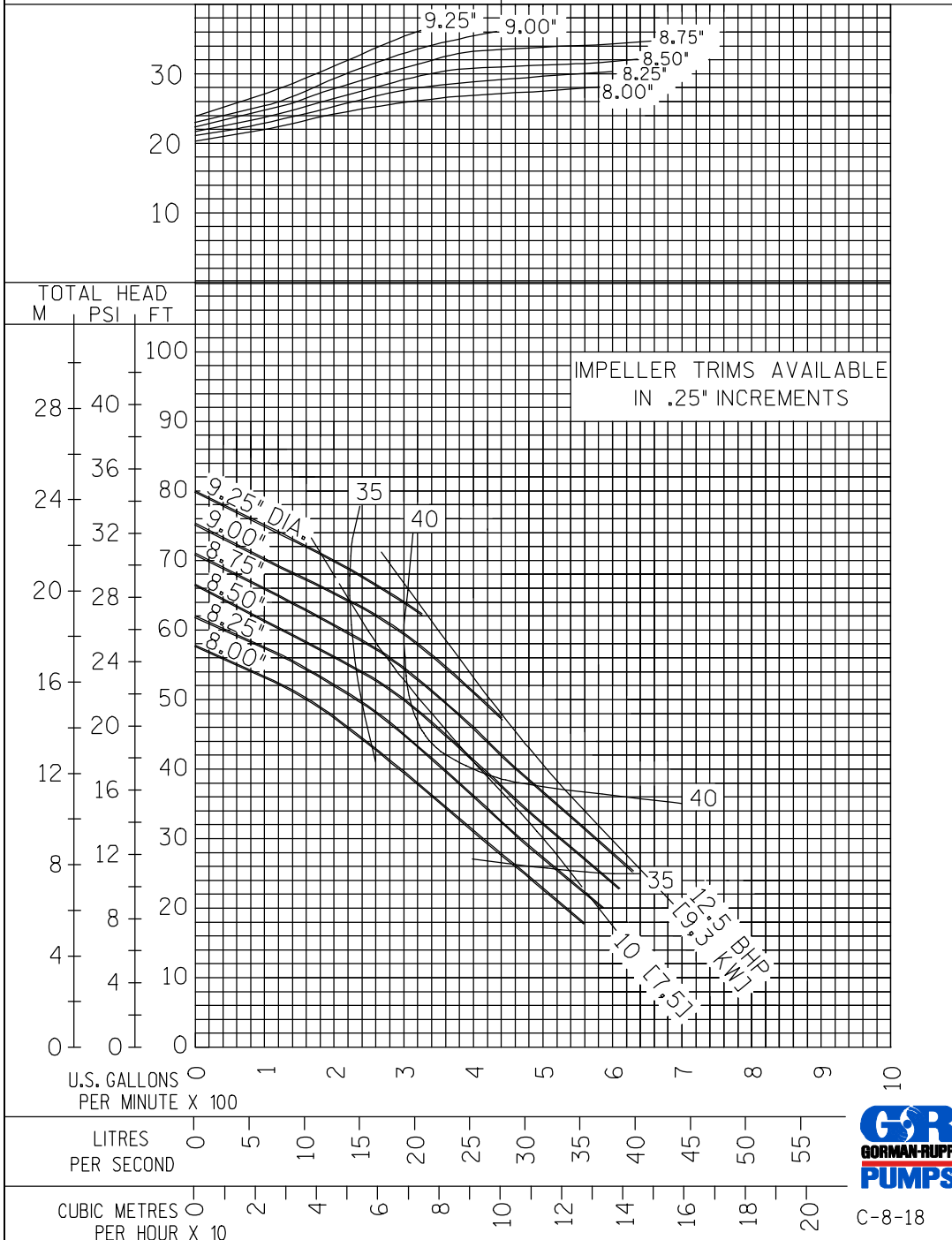
3.00" DIA. SPHERICAL SOLIDS

SFEV4C

CURVE SFEV4C-2 MODEL SFEV4C-X

SIZE 4"x4" IMP. DIA. NOTED

SP.GR. 1.0 RPM 1750



C-8-18



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