



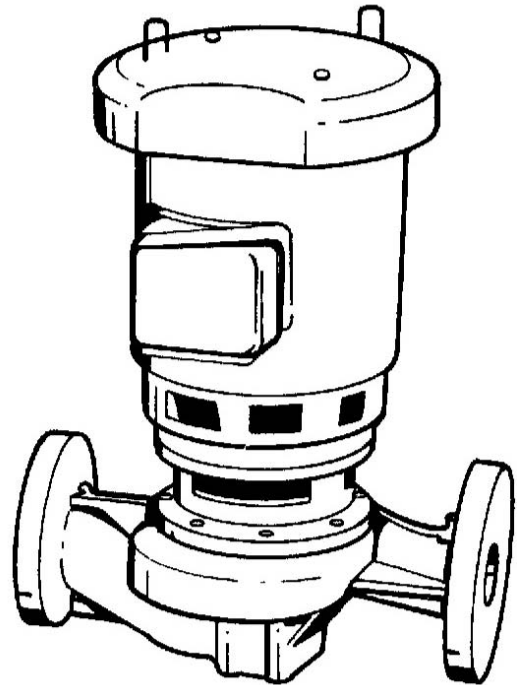
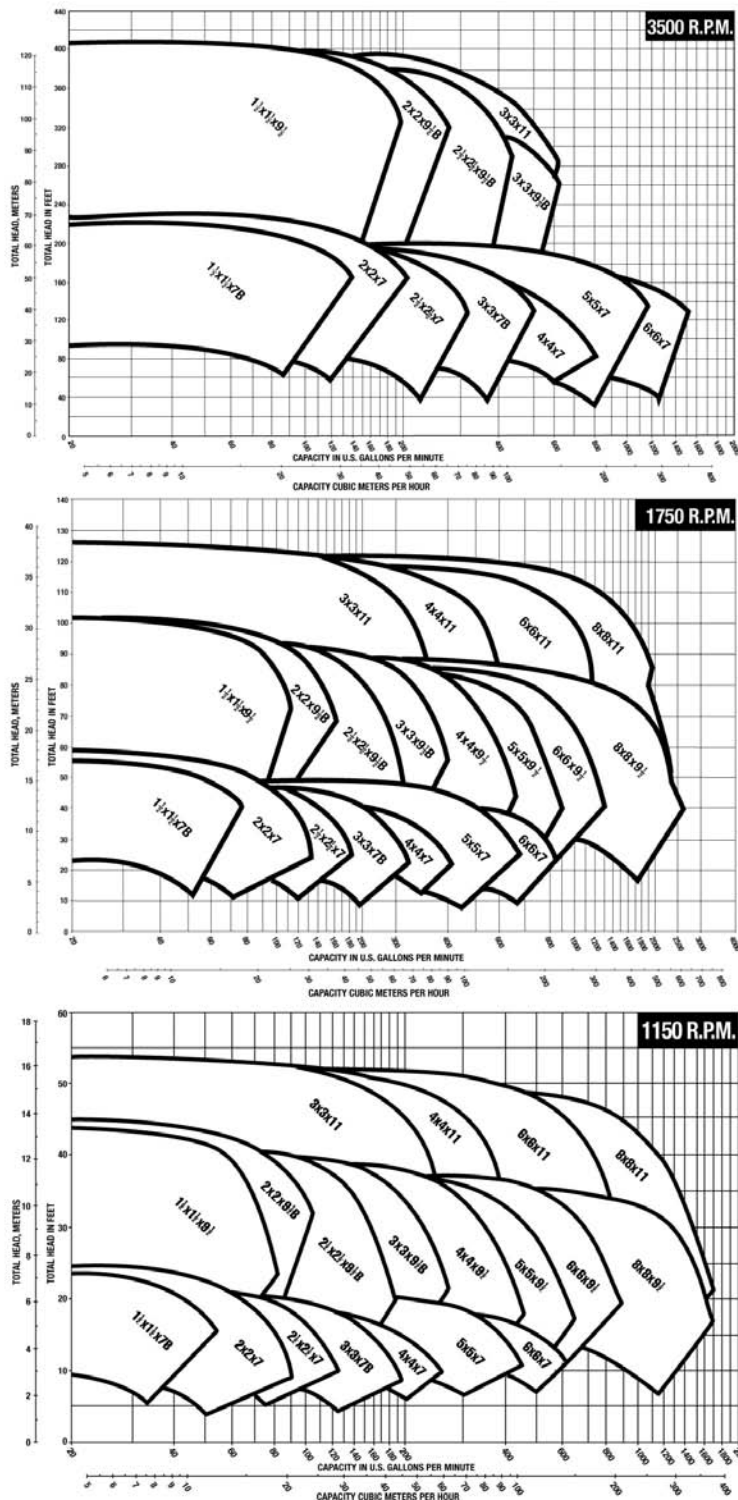
Bell & Gossett
a xylem brand

CURVES

B-170E

SERIES 80

IN-LINE MOUNTED CENTRIFUGAL PUMP PERFORMANCE CURVES - 60 HZ



SERIES 80 STANDARD PUMPS

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USEFUL PUMP FORMULAS

$$\begin{aligned} \text{Pressure (PSI)} &= \frac{\text{Head (Feet)} \times \text{Specific Gravity}}{2.31} \\ \text{Head (Feet)} &= \frac{\text{Pressure (PSI)} \times 2.31}{\text{Specific Gravity}} \\ \text{Vacuum (Inches of Mercury)} &= \frac{\text{Dynamic Suction Lift (Feet)} \times .883}{\text{Specific Gravity}} \\ \text{Horsepower (Brake)} &= \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960 \times \text{Pump Efficiency}} \\ \text{Horsepower (Water)} &= \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960} \\ \text{Efficiency (Pump)} &= \frac{\text{Horsepower (Water)}}{\text{Horsepower (Brake)}} \times 100 \text{ Per Cent} \\ \text{NPSH (Available)} &= \text{Positive Factors} - \text{Negative Factors} \end{aligned}$$

Affinity Laws: Effect of change of speed or impeller diameter on centrifugal pumps.

	GPM Capacity	Ft. Head	BHP
Impeller Diameter Change	$Q_2 = \frac{D_2}{D_1} Q_1$	$H_2 = \left(\frac{D_2}{D_1}\right)^2 H_1$	$P_2 = \left(\frac{D_2}{D_1}\right)^3 P_1$
Speed Change	$Q_2 = \frac{RPM_2}{RPM_1} Q_1$	$H_2 = \left(\frac{RPM_2}{RPM_1}\right)^2 H_1$	$P_2 = \left(\frac{RPM_2}{RPM_1}\right)^3 P_1$

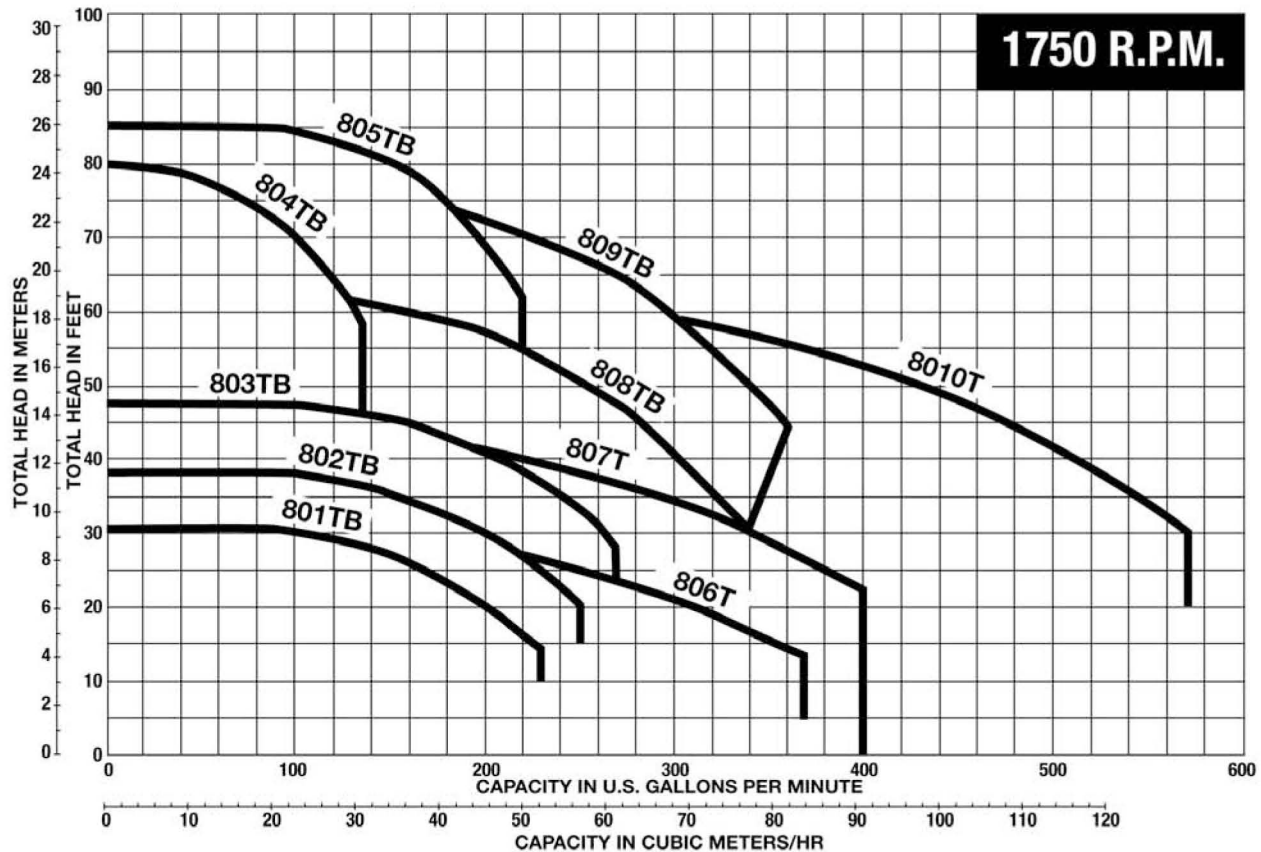
Where Q = GPM, H = Head, P = BHP, D = Impeller Dia., RPM = Pump Speed

SERIES 80 STANDARD PUMPS

Designed with preselected impeller diameters and motor horsepower sizes to offer better availability.

Pump Construction: Bronze Fitted
Standard Mechanical Seal
Maximum Working Pressure 175 psi
with 125# ANSI Flanges

Motors: 208-230/460 Volts
3 Phase, 60 Hertz
Open Dripproof



UNIT NO.	PUMP SIZE	MOTOR HP
801TB	3x3x7B	1.5
802TB		2
803TB		3
804TB	2x2x9 ¹ / ₂ B	5
805TB	2 ¹ / ₂ x2 ¹ / ₂ x9 ¹ / ₂ B	

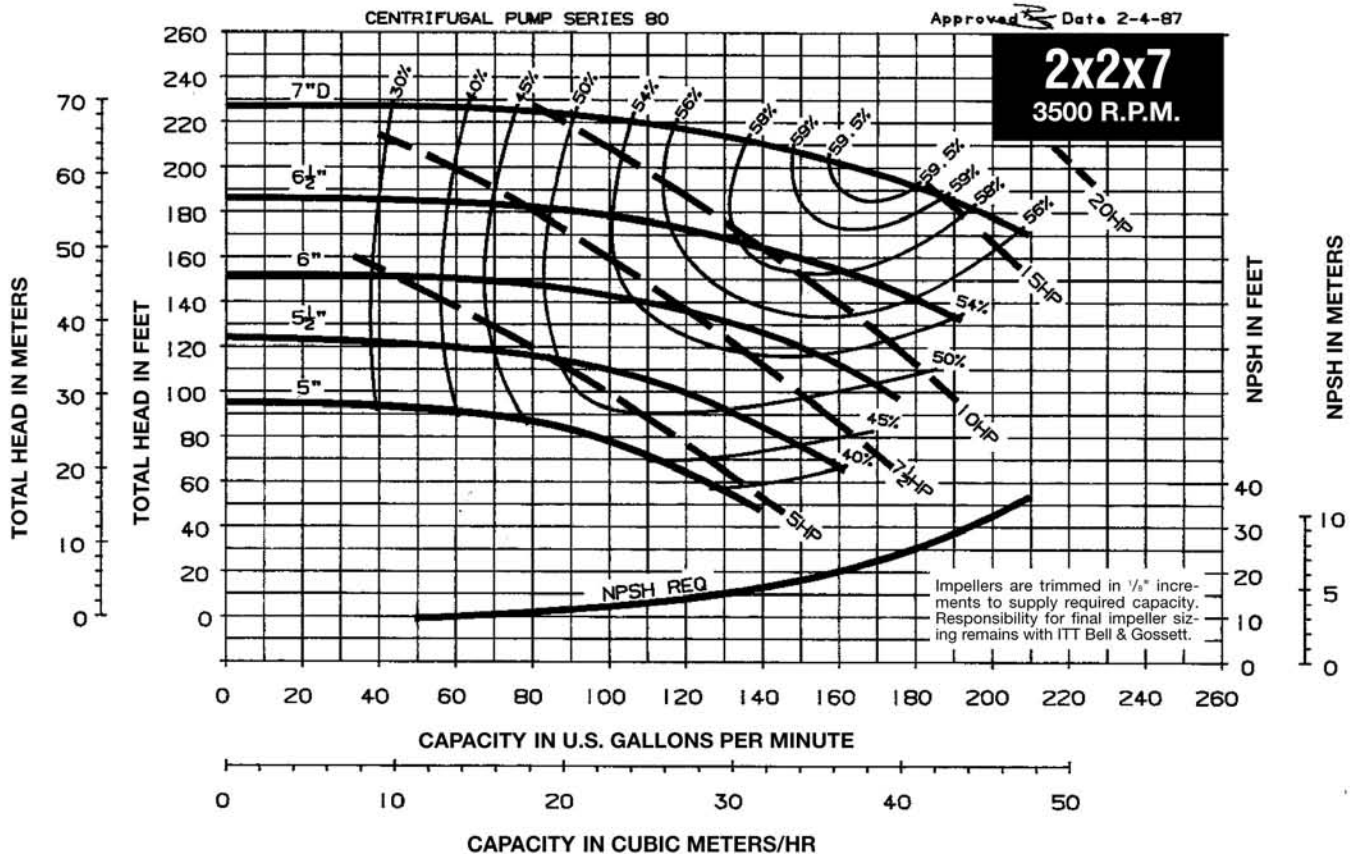
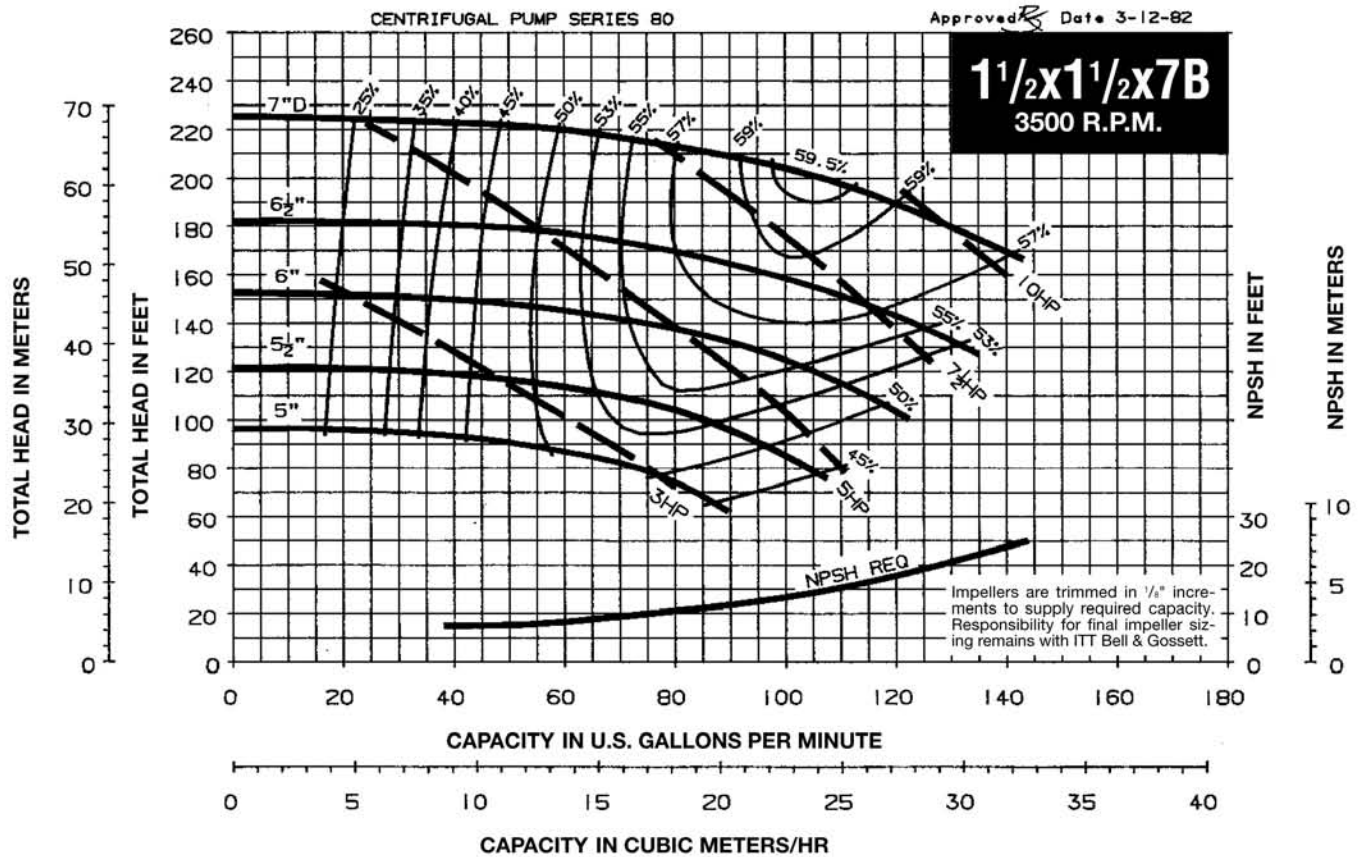
UNIT NO.	PUMP SIZE	MOTOR HP
806T	4x4x7	2
807T		3
808TB	3x3x9 ¹ / ₂ B	5
809TB		7 ¹ / ₂
8010T	4x4x9 ¹ / ₂	

HOW TO USE THIS BOOKLET

- Determine the Pump Model number from the quick selection charts on the cover of this Booklet. Required data: Pump Flow and Head and desired RPM. Use the Standard Pumps shown on this page when possible.
- Consult the individual pump curve for the desired pump model to determine the required motor horsepower, pump efficiency and NPSHR.
- For faster, computerized pump selections, consult your Bell & Gossett Representative about ESP-PLUS, Bell & Gossett's Equipment Selection Program for personal computers.

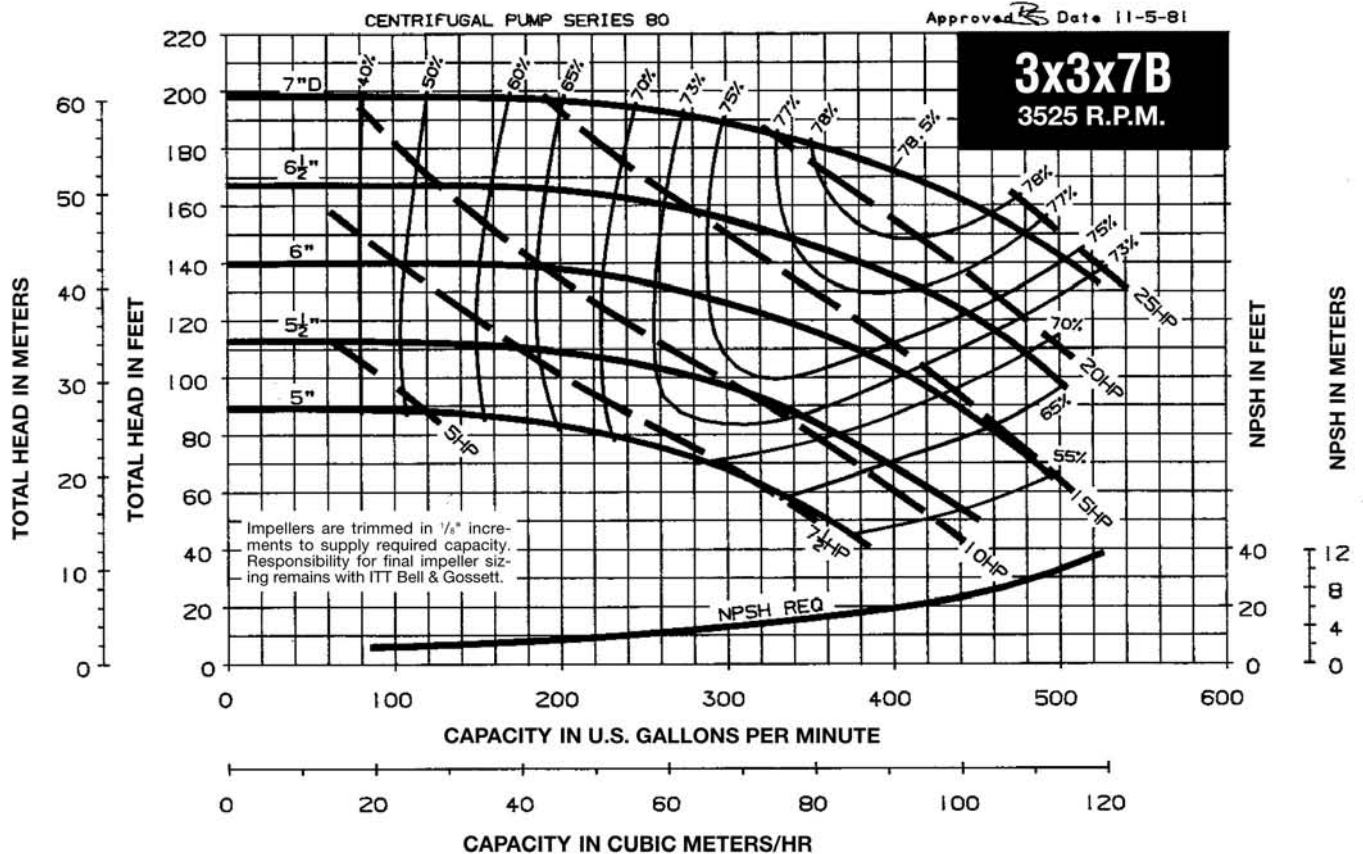
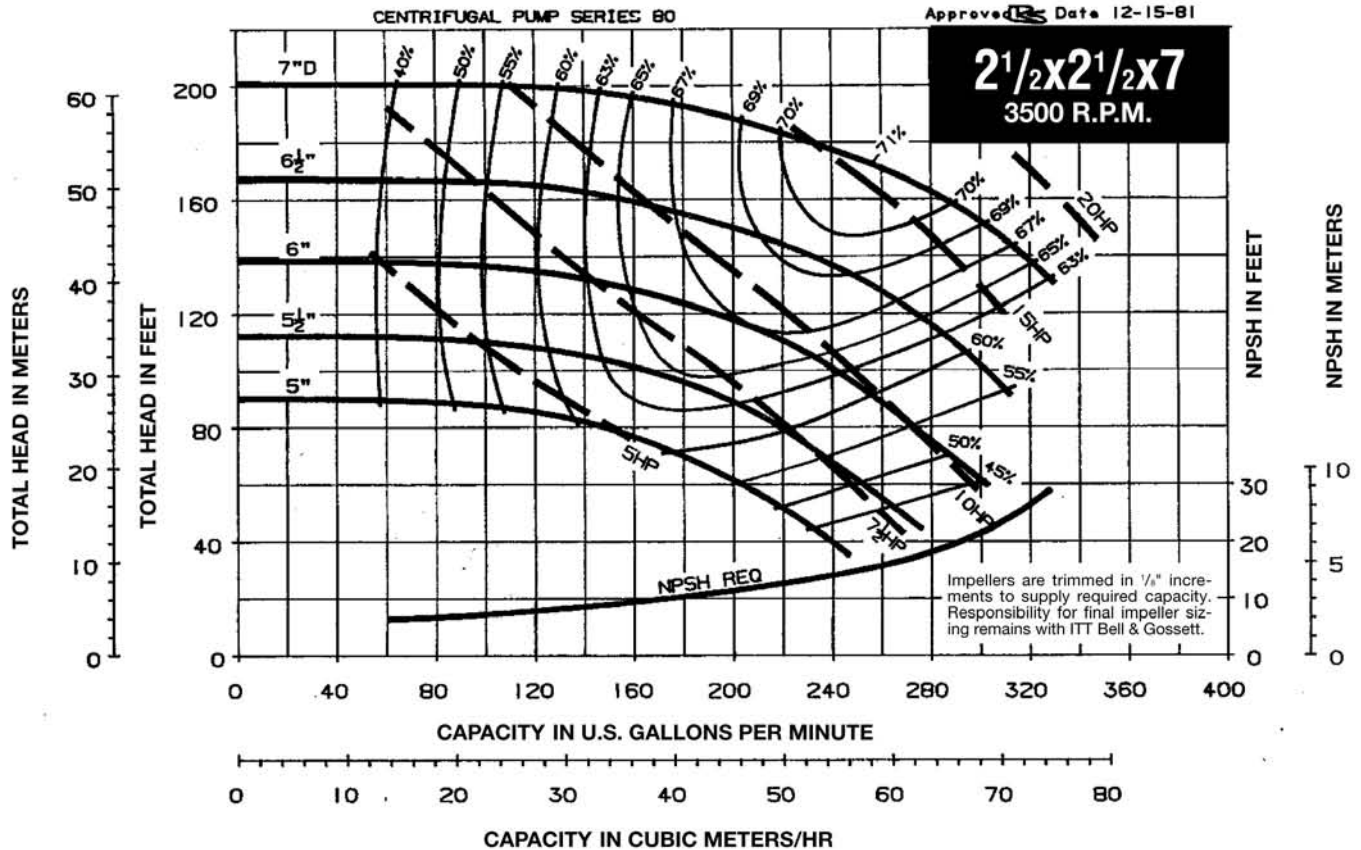
SERIES 80 STANDARD PUMPS

3500 RPM PUMP CURVES



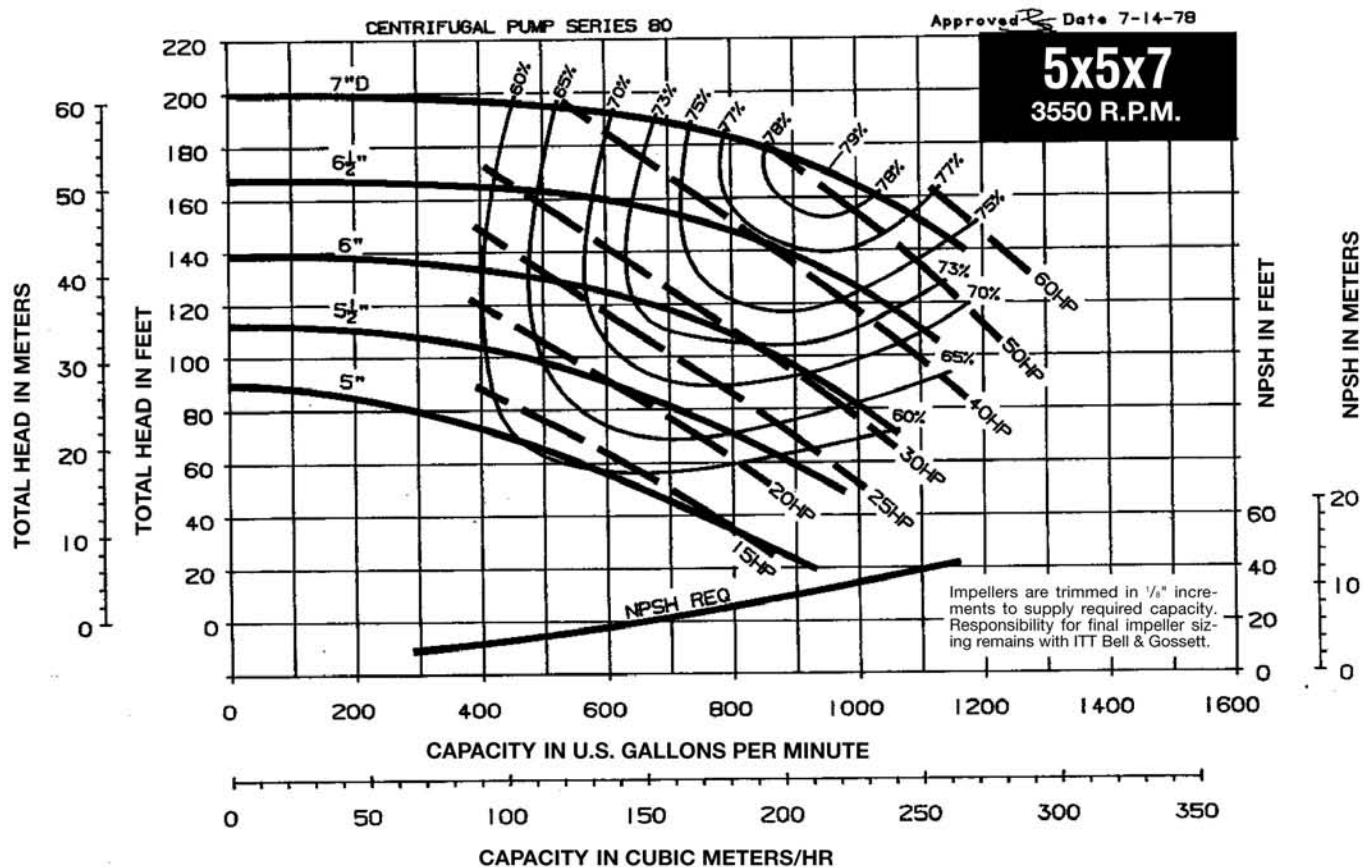
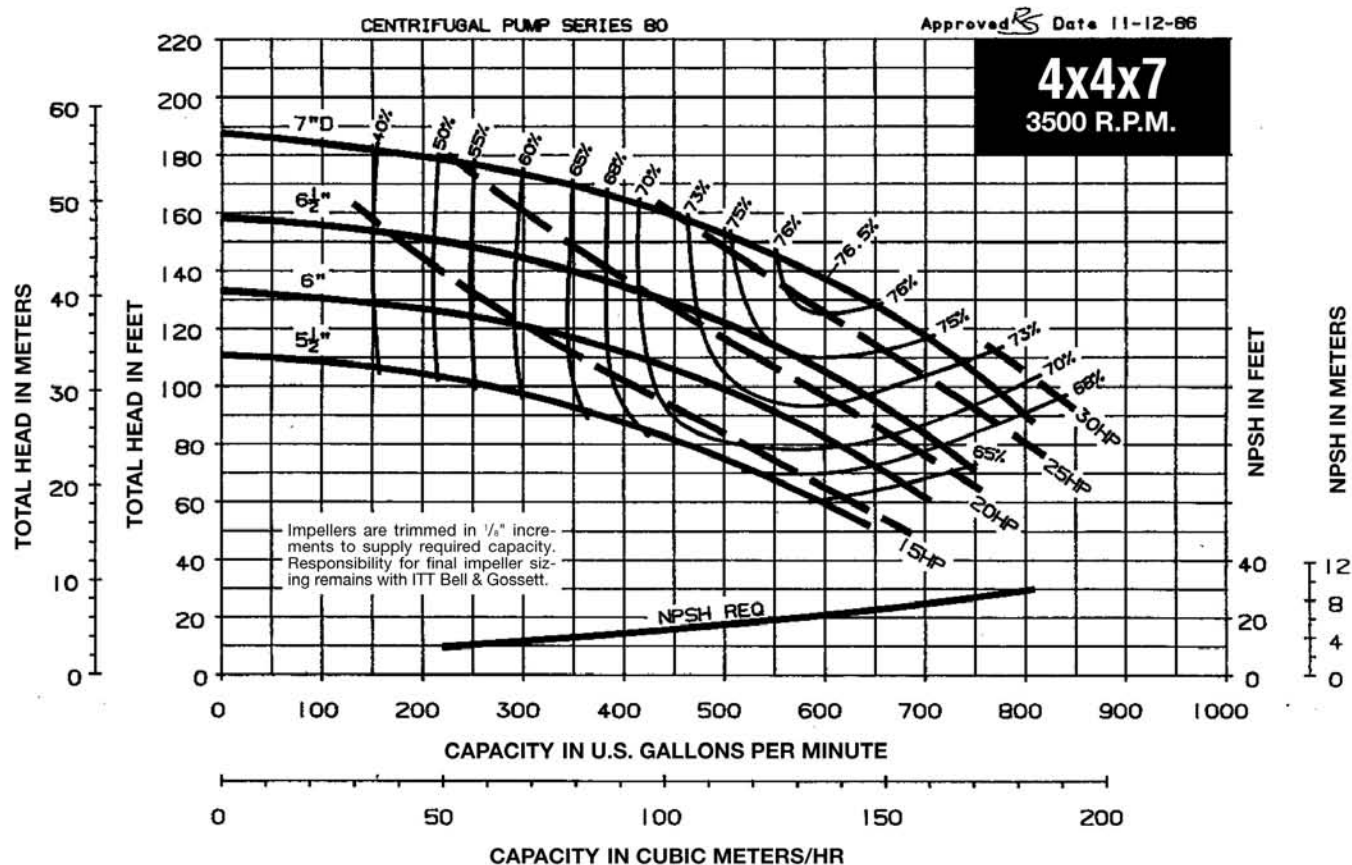
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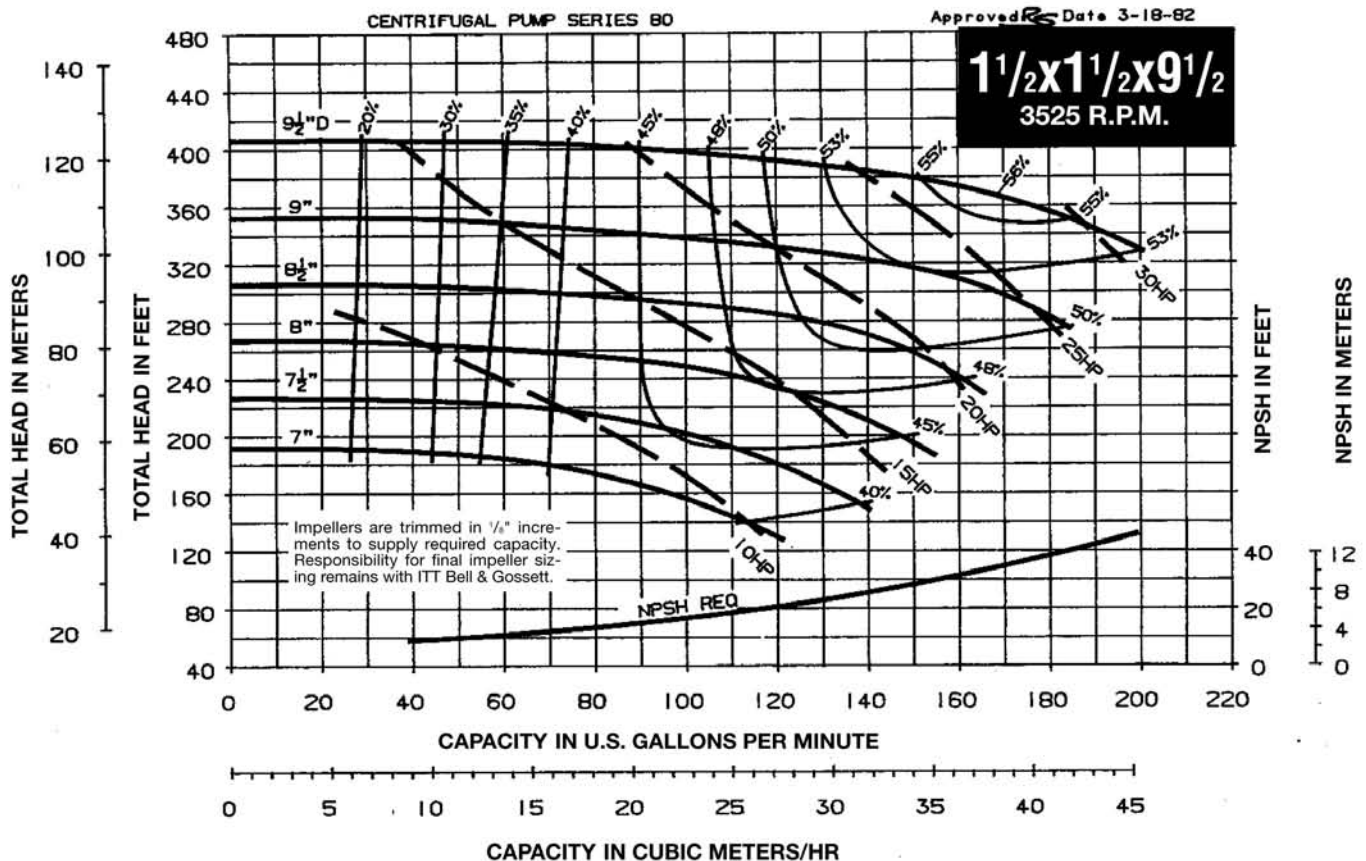
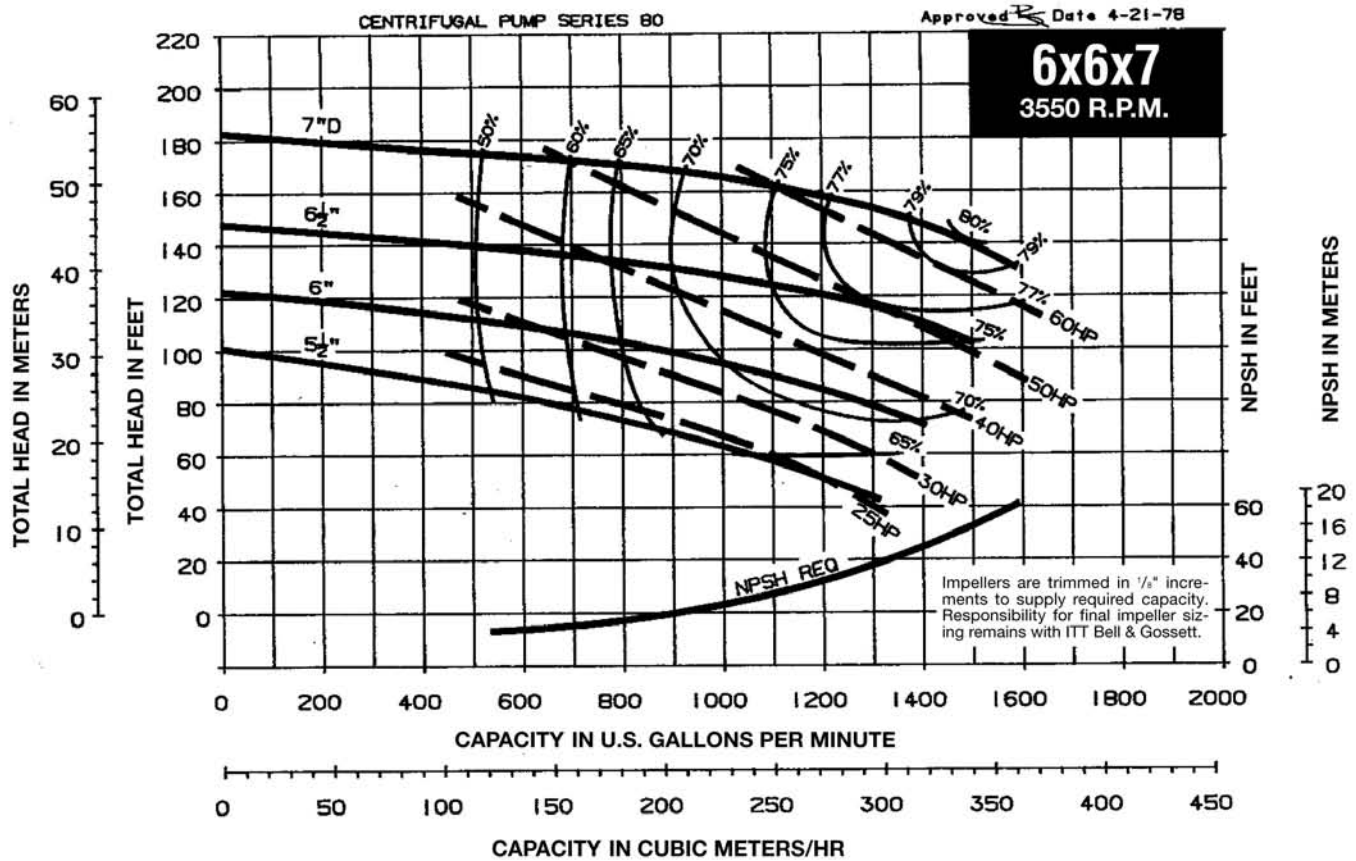
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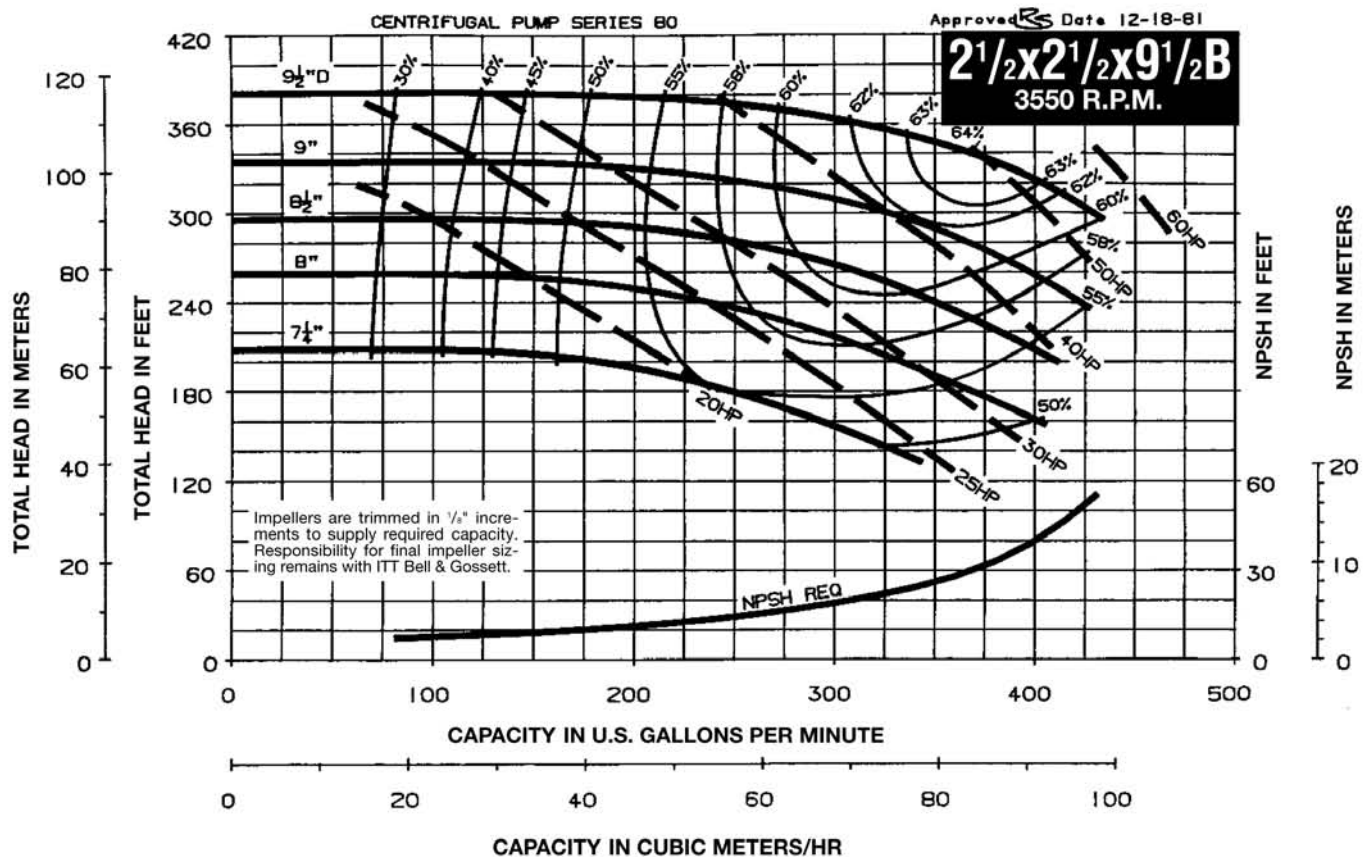
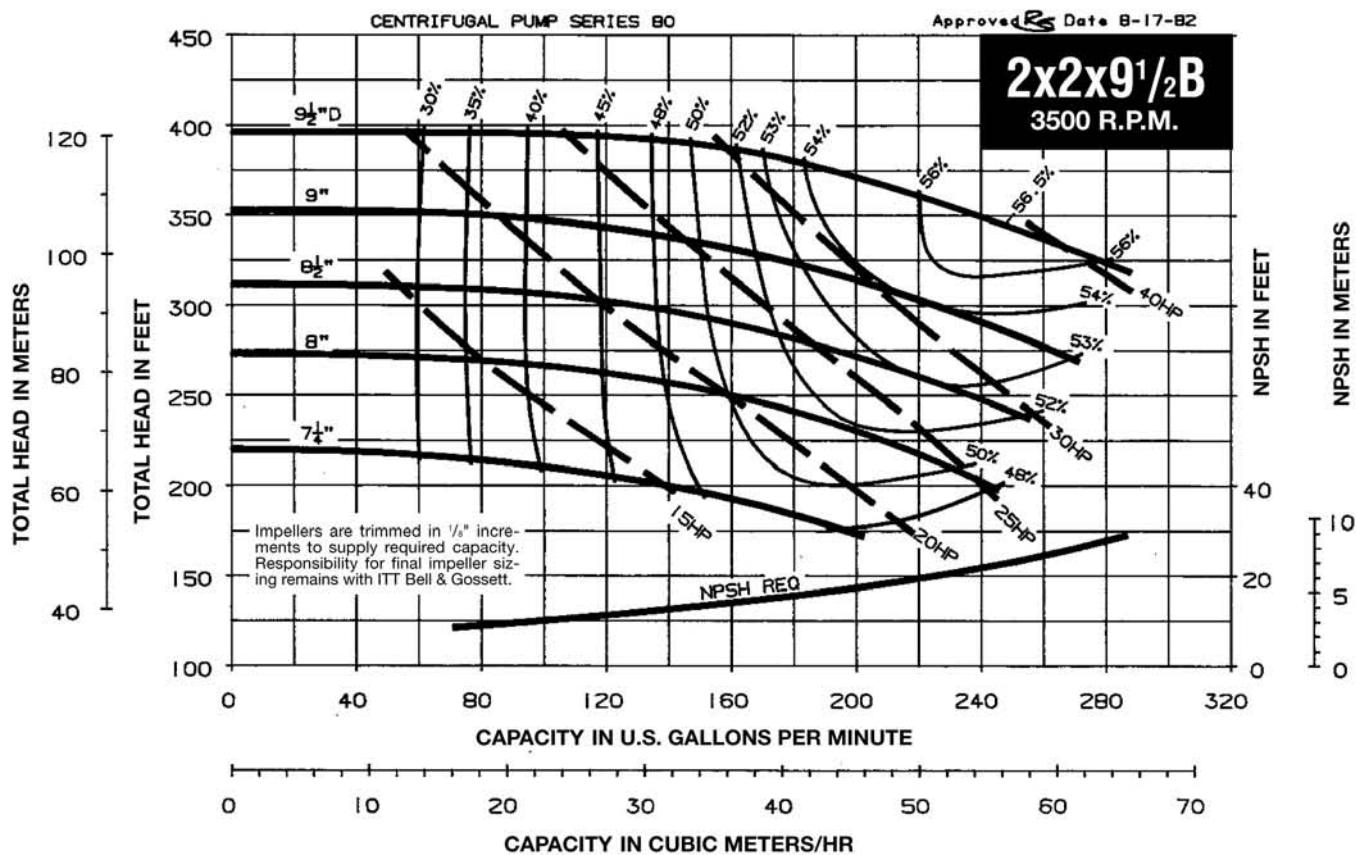
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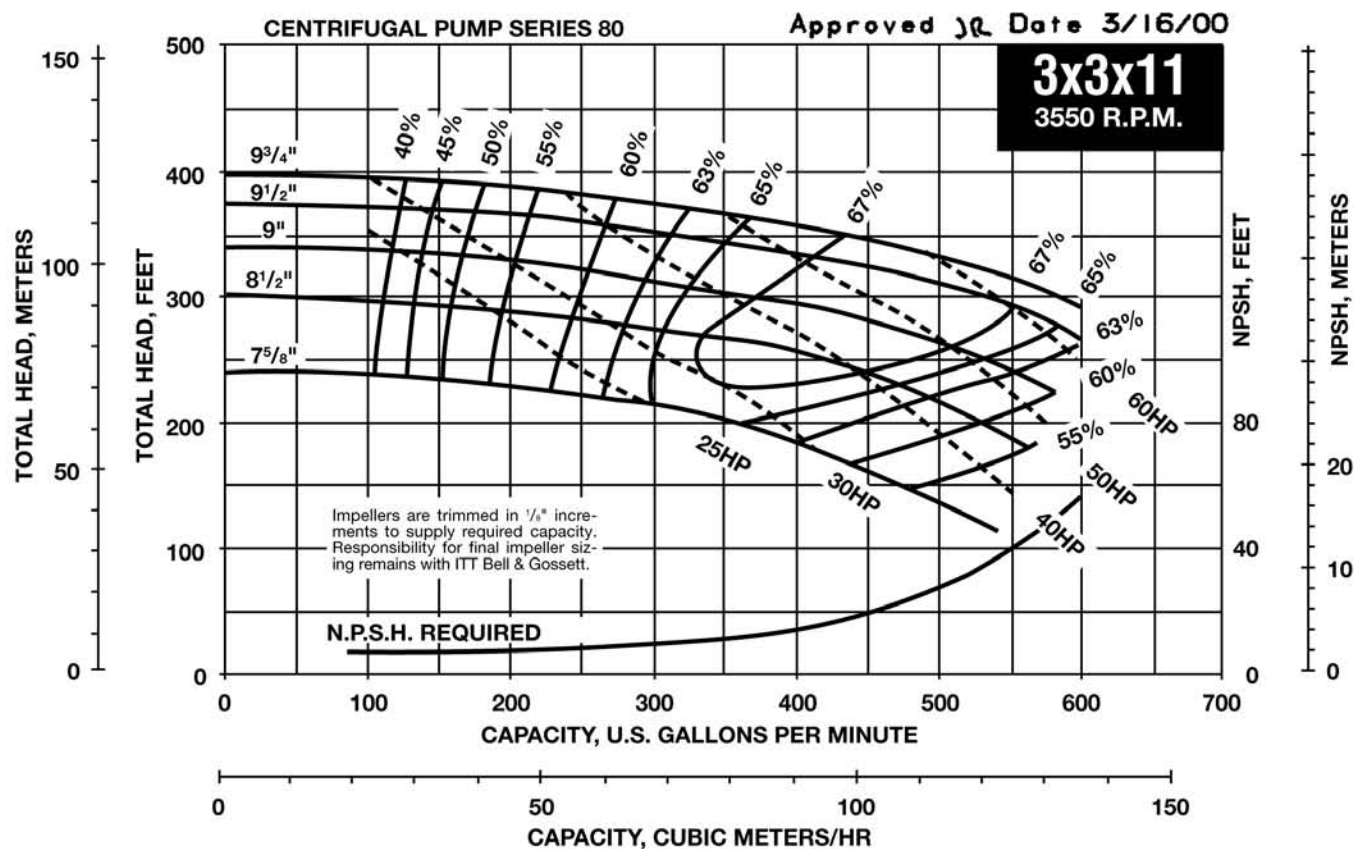
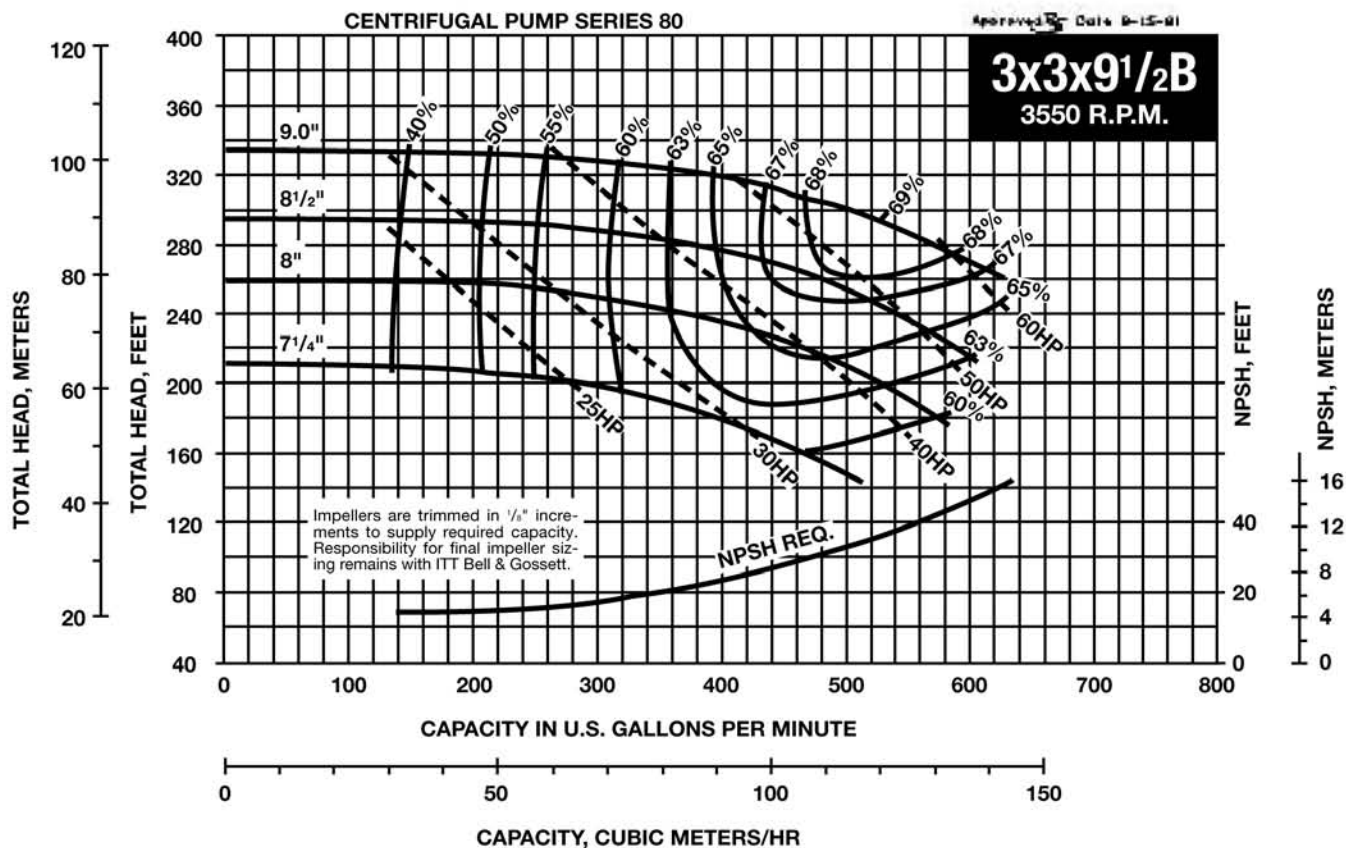
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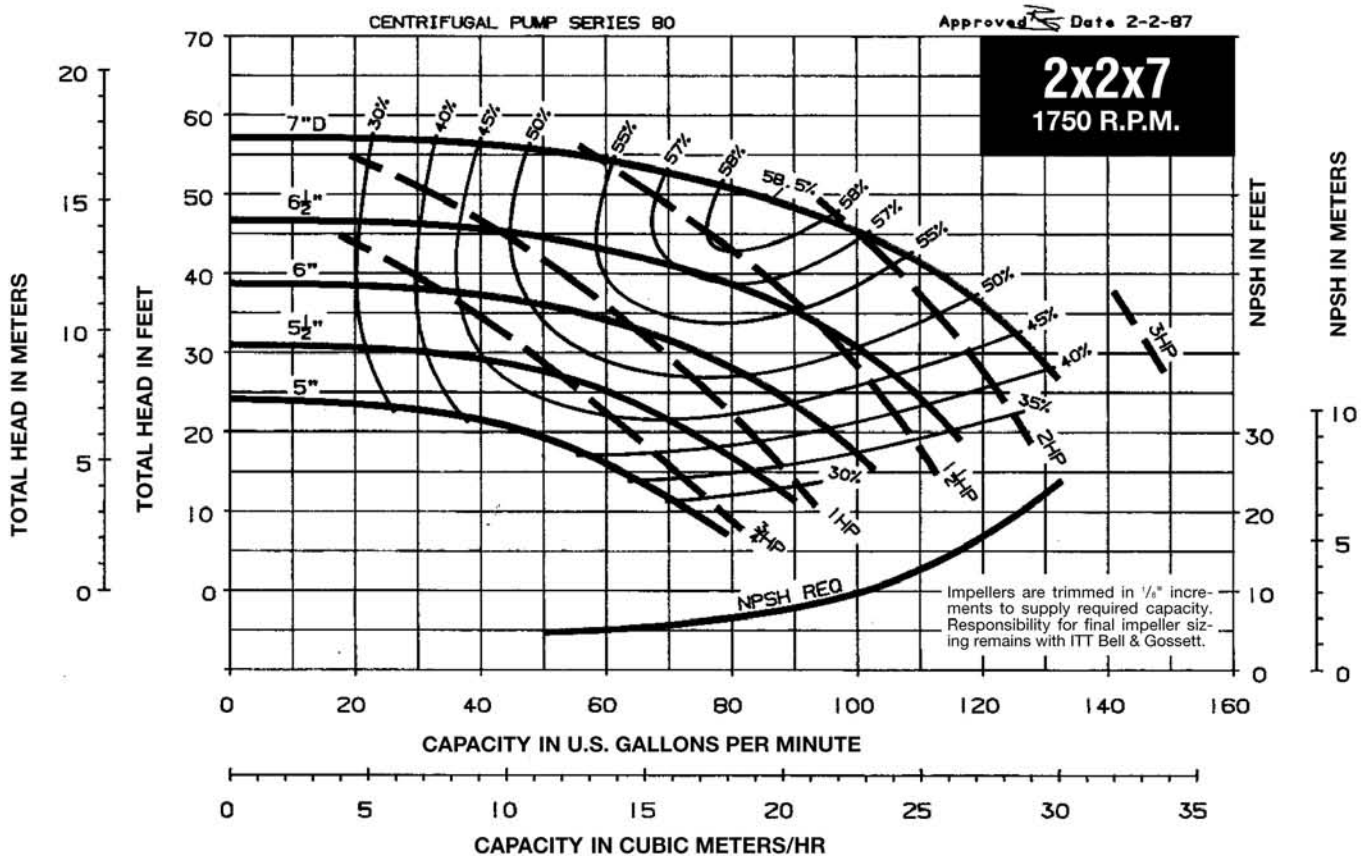
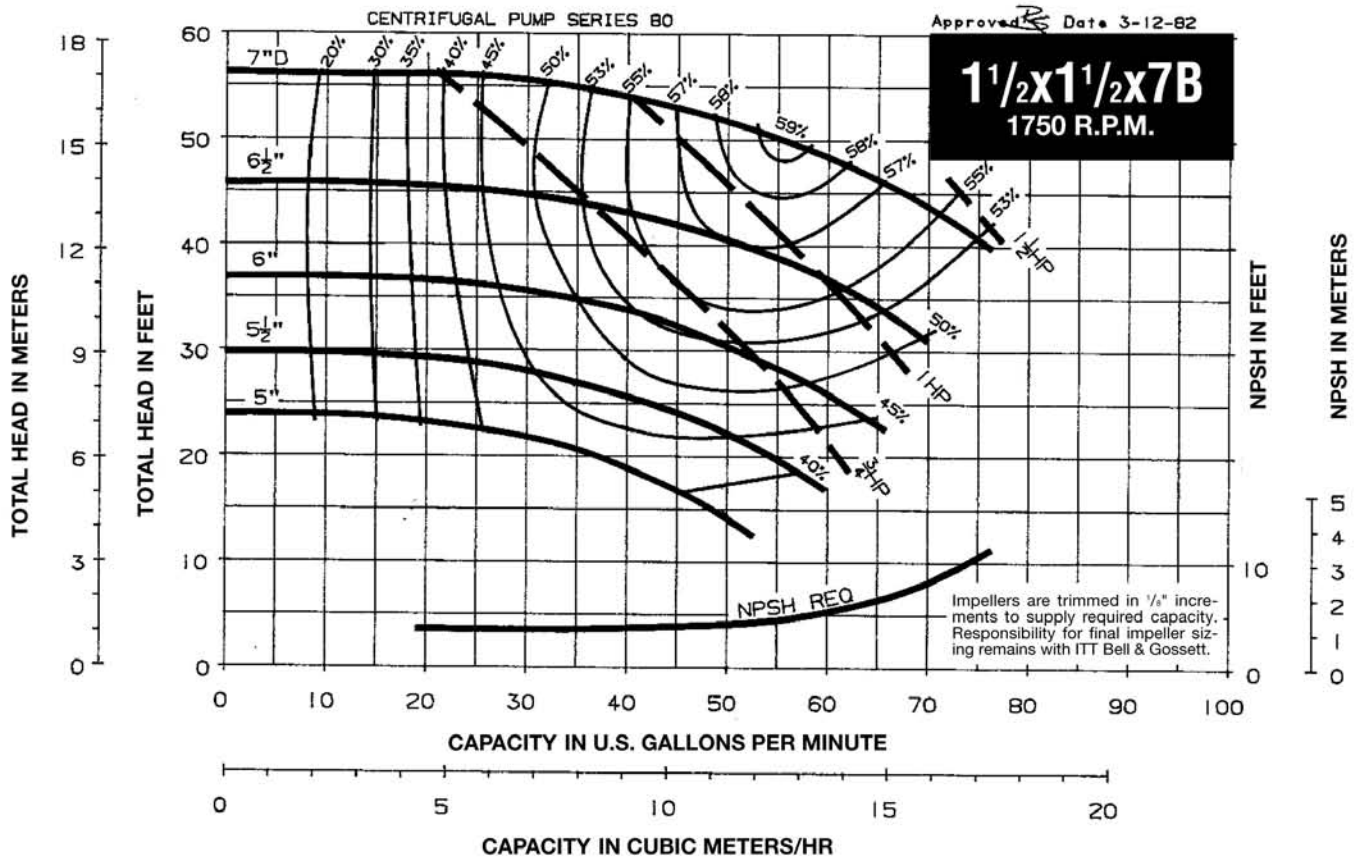
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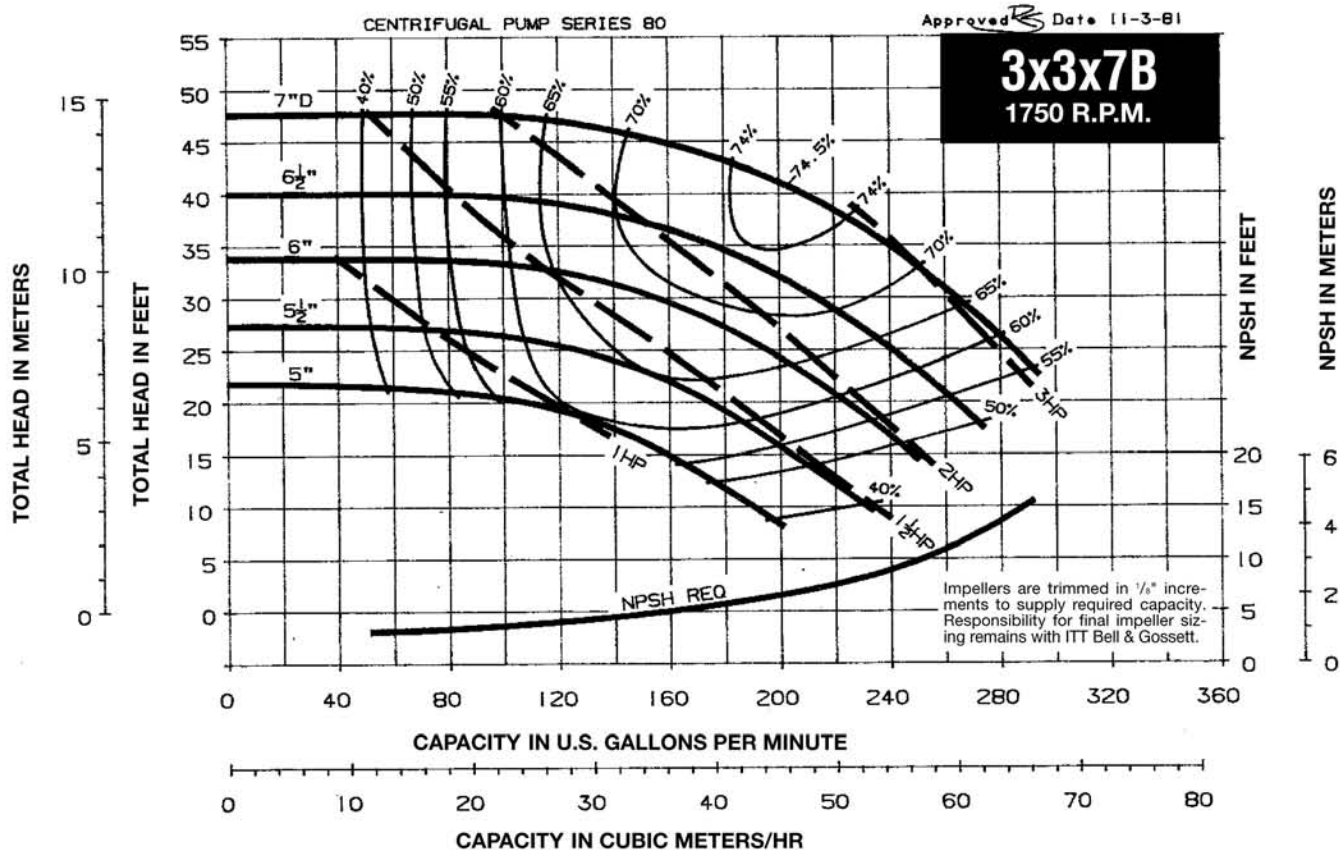
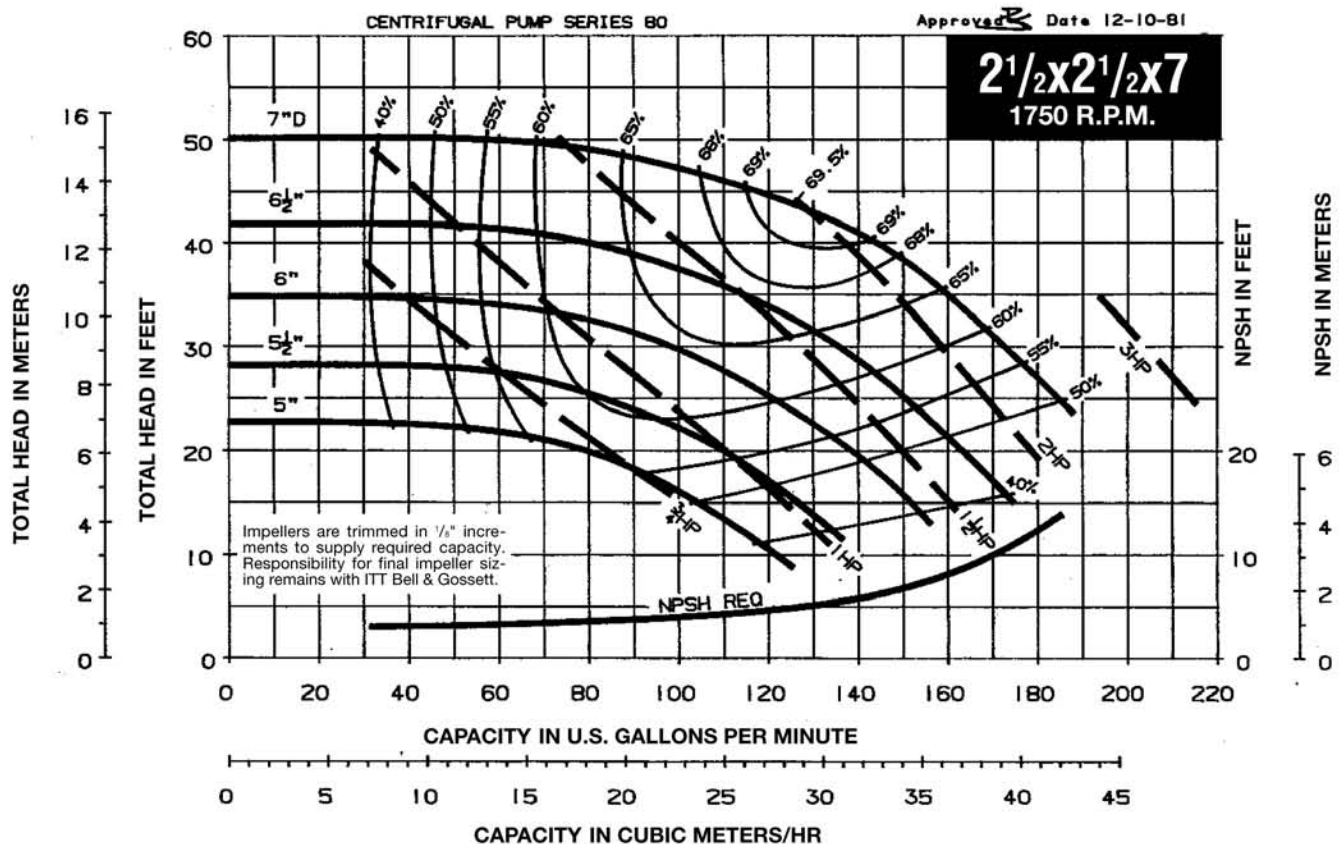
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1750 RPM PUMP CURVES



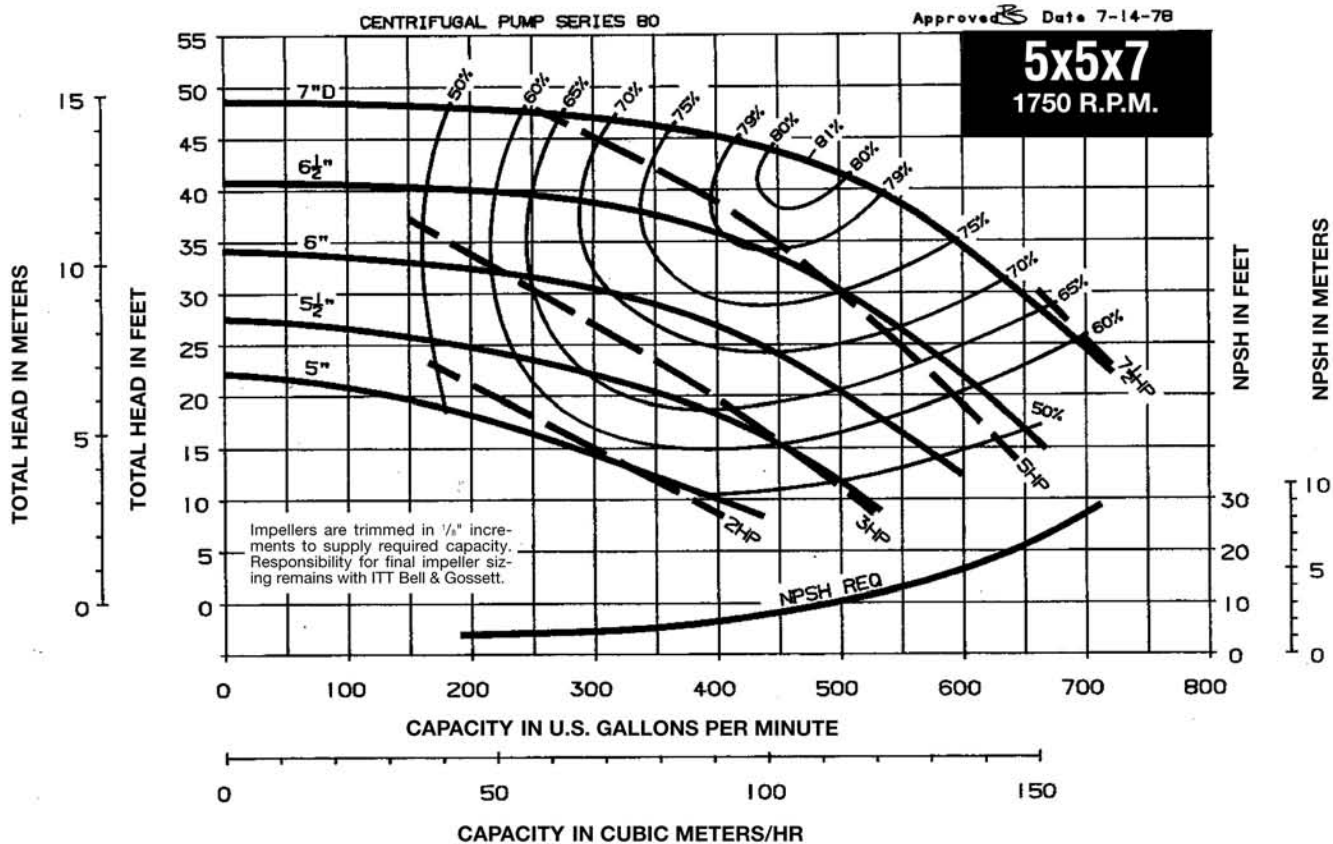
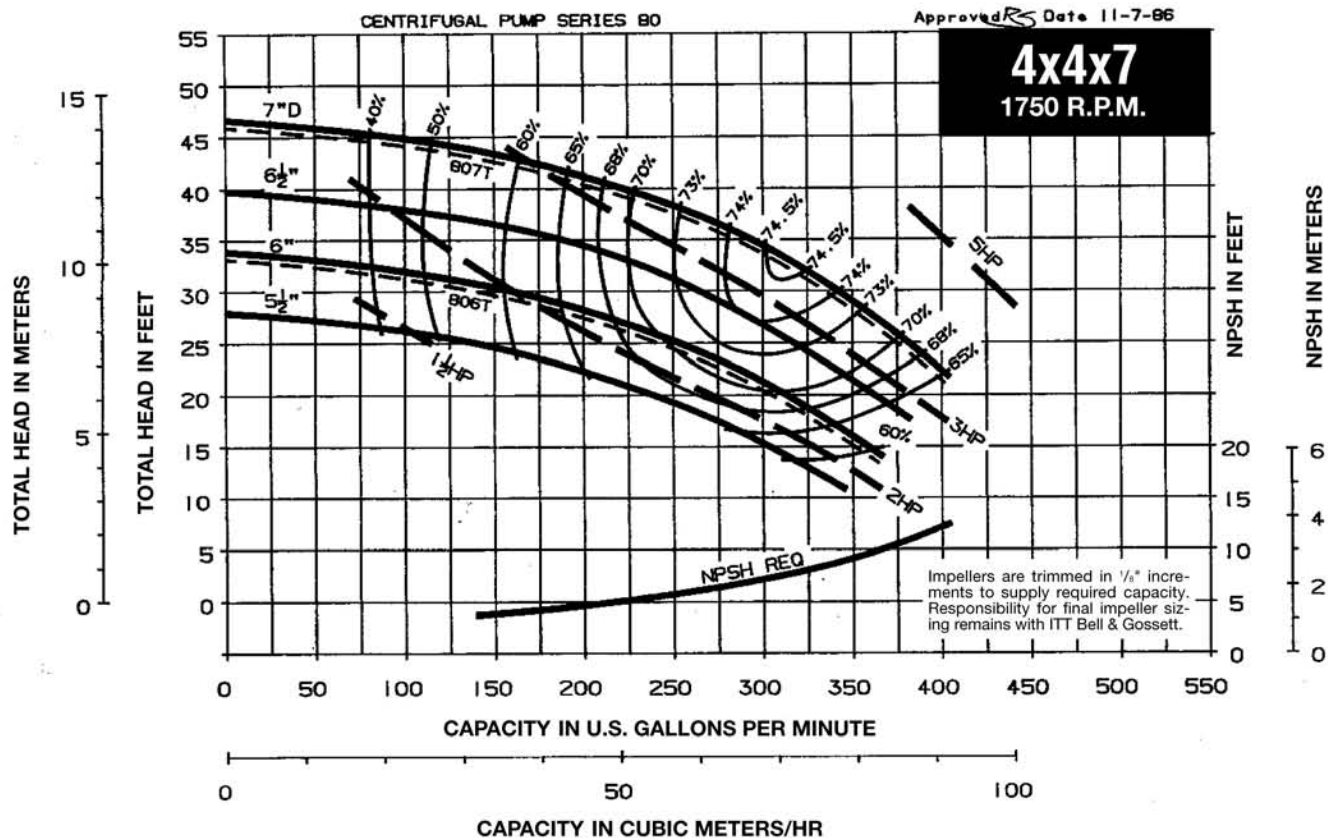
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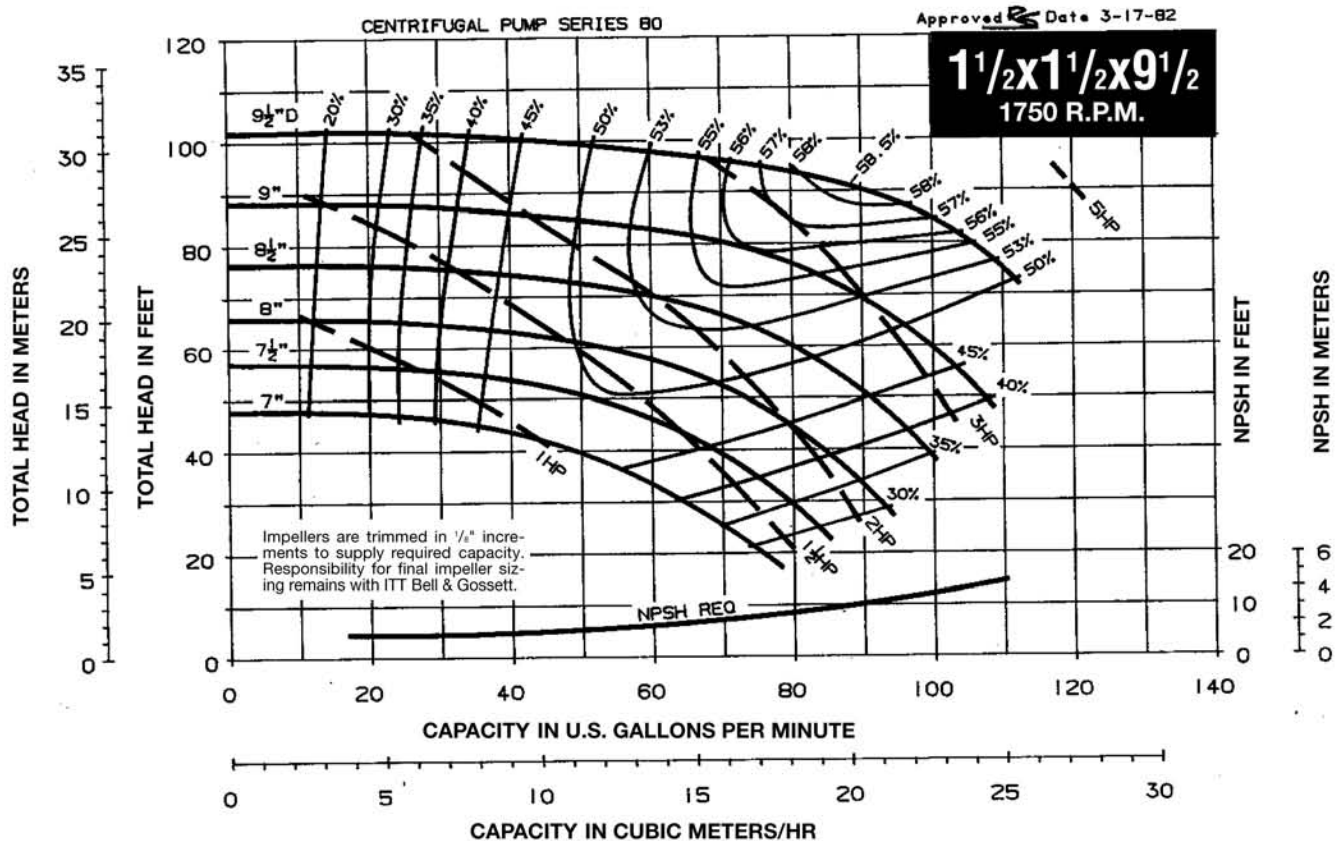
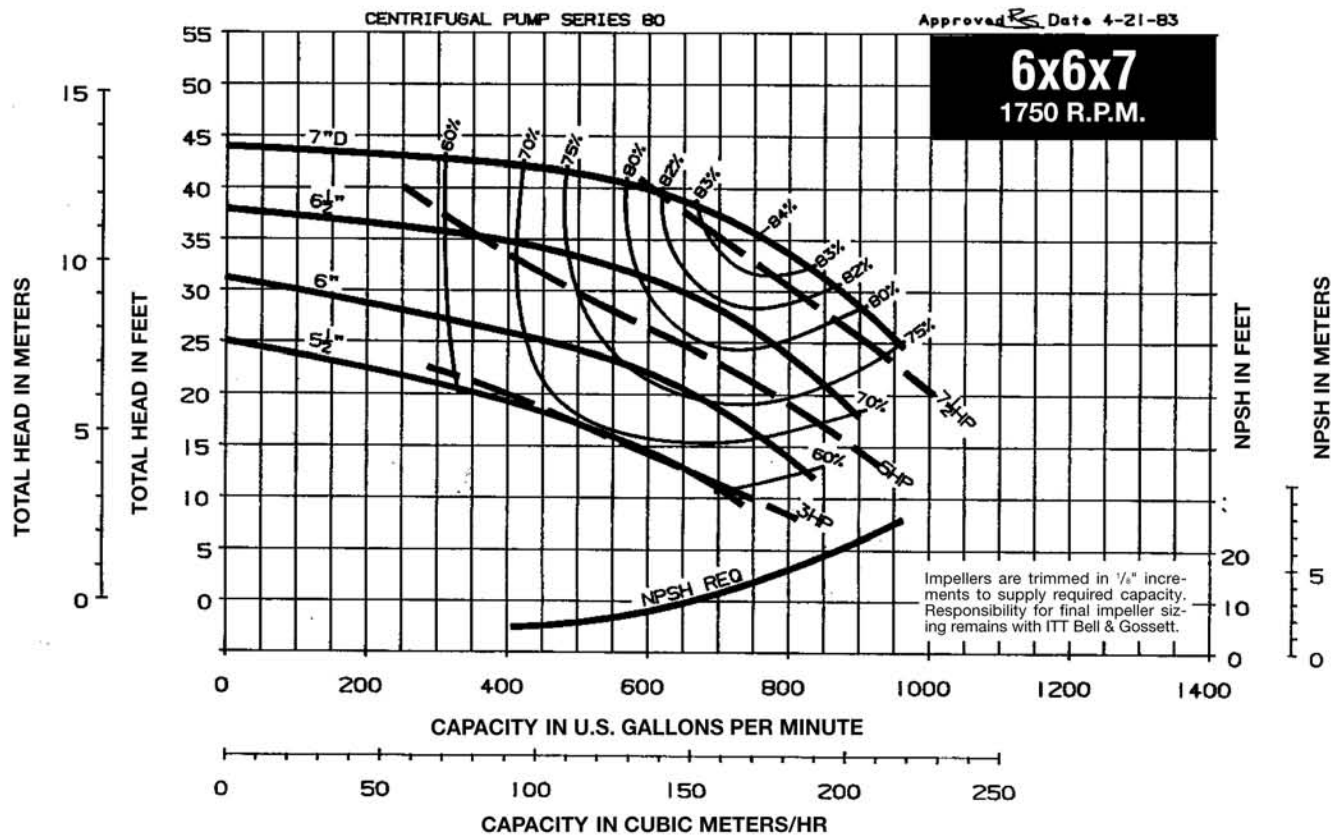
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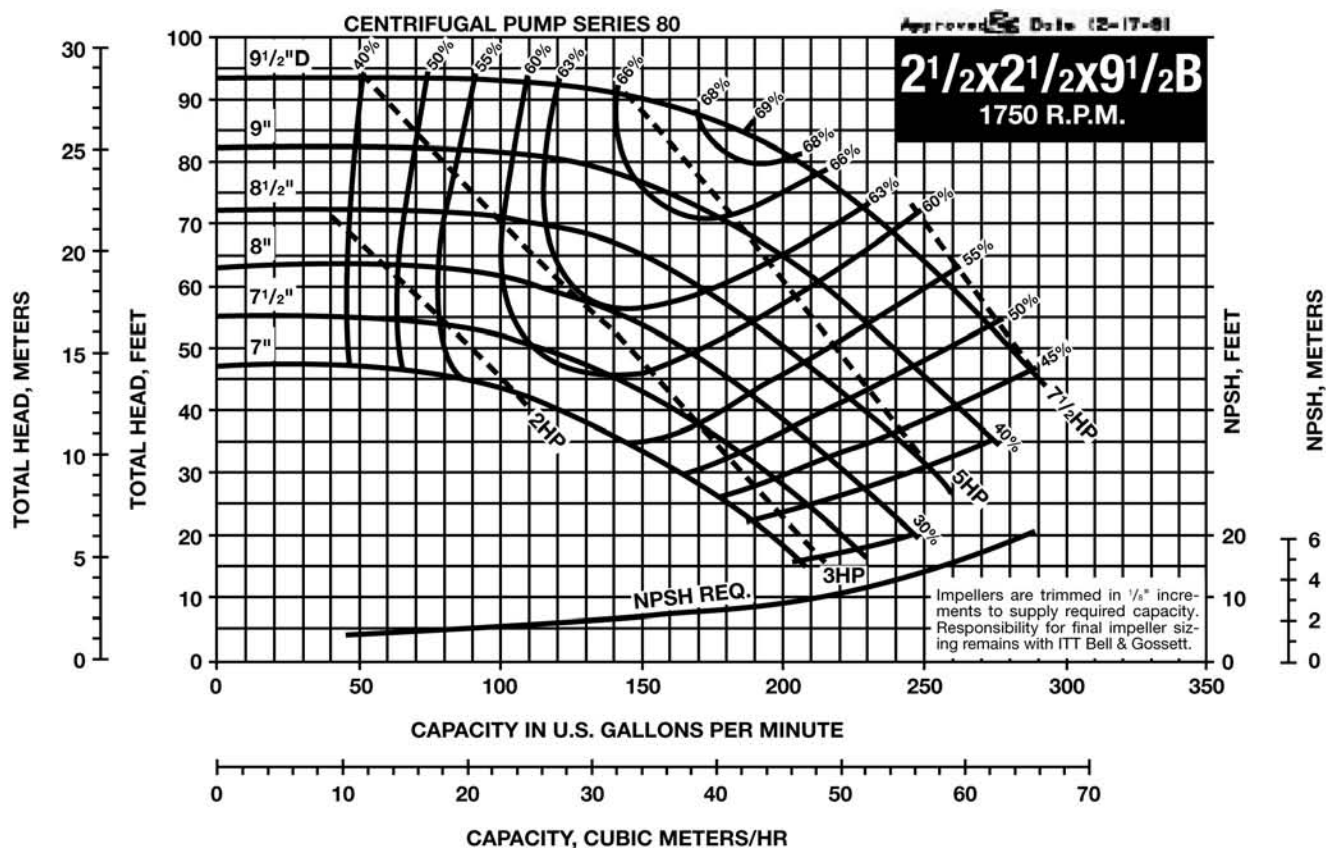
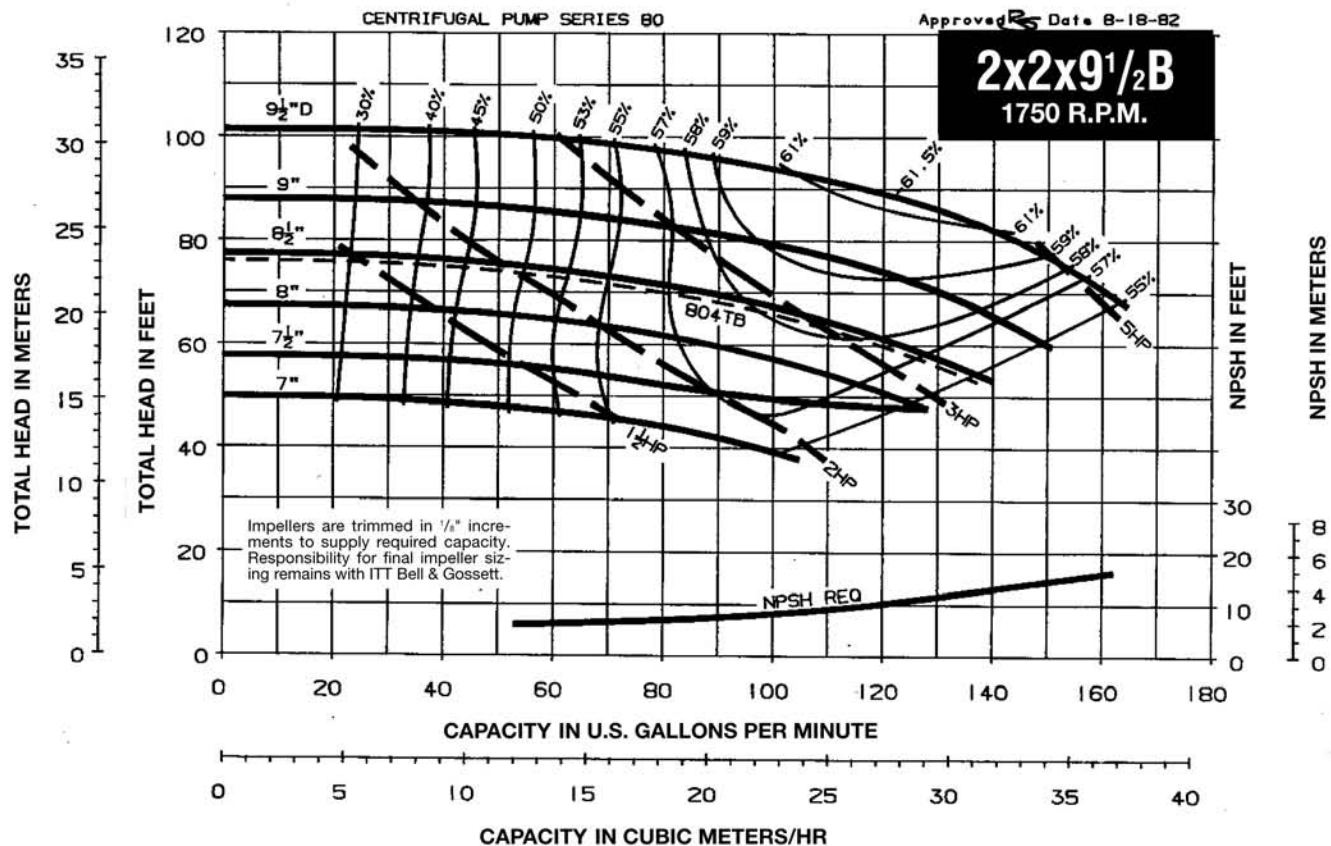
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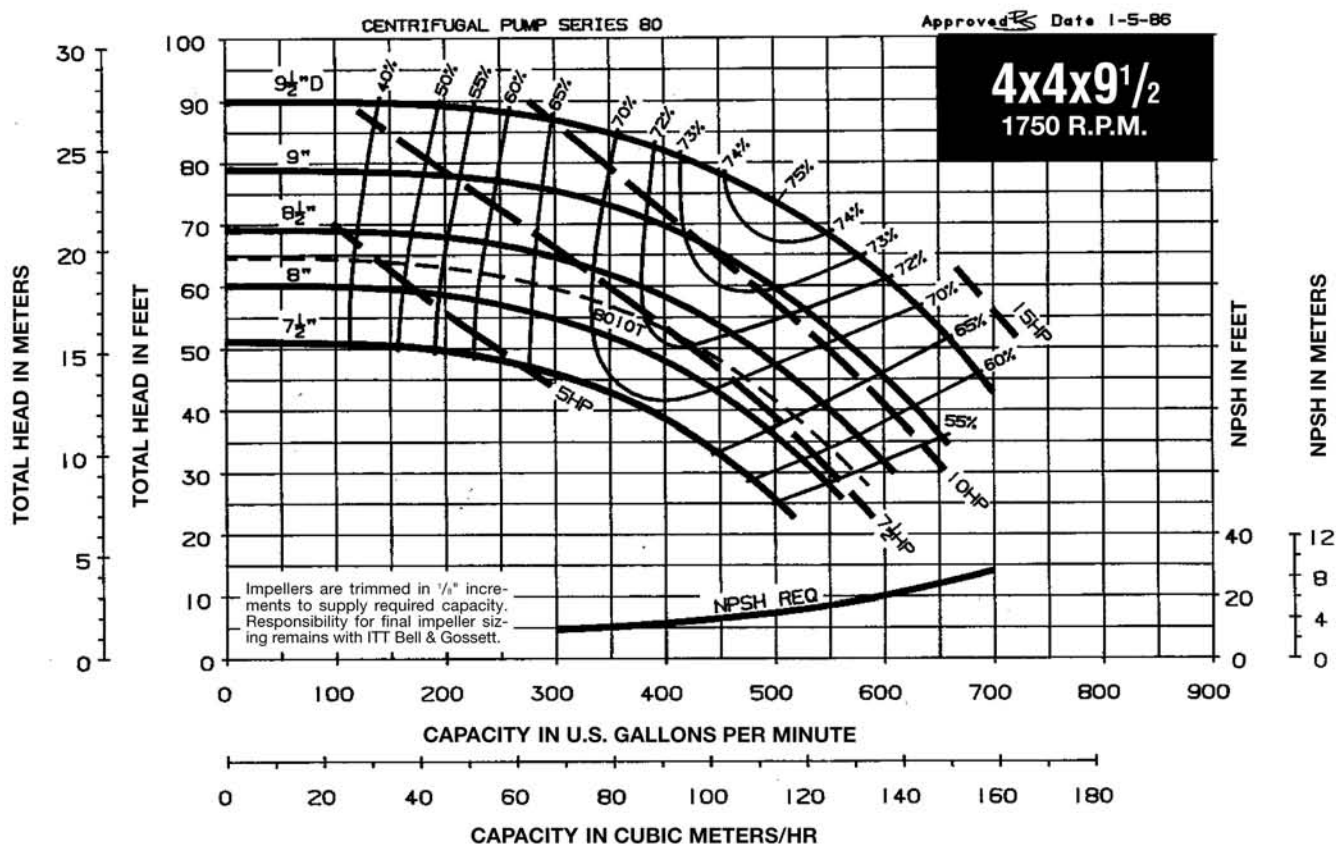
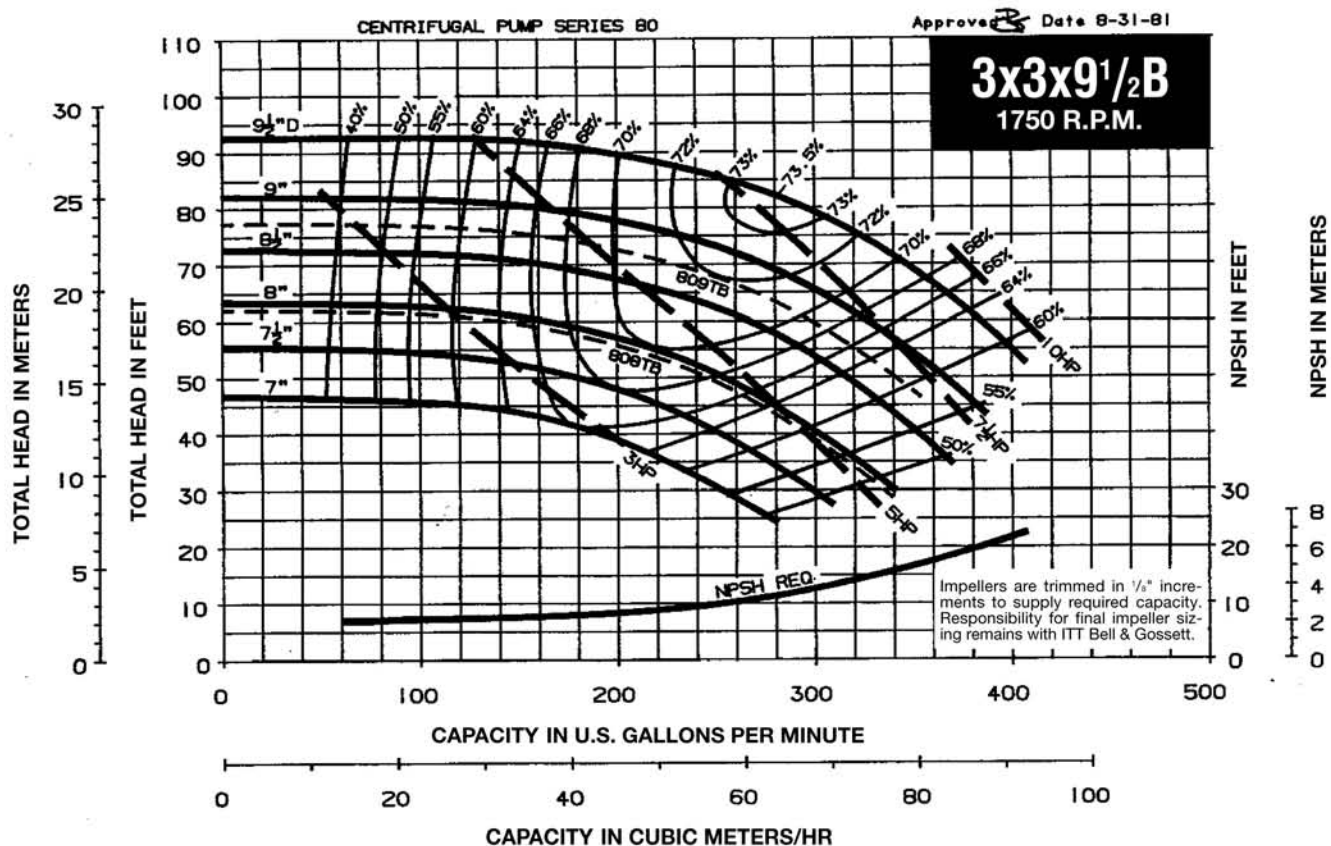
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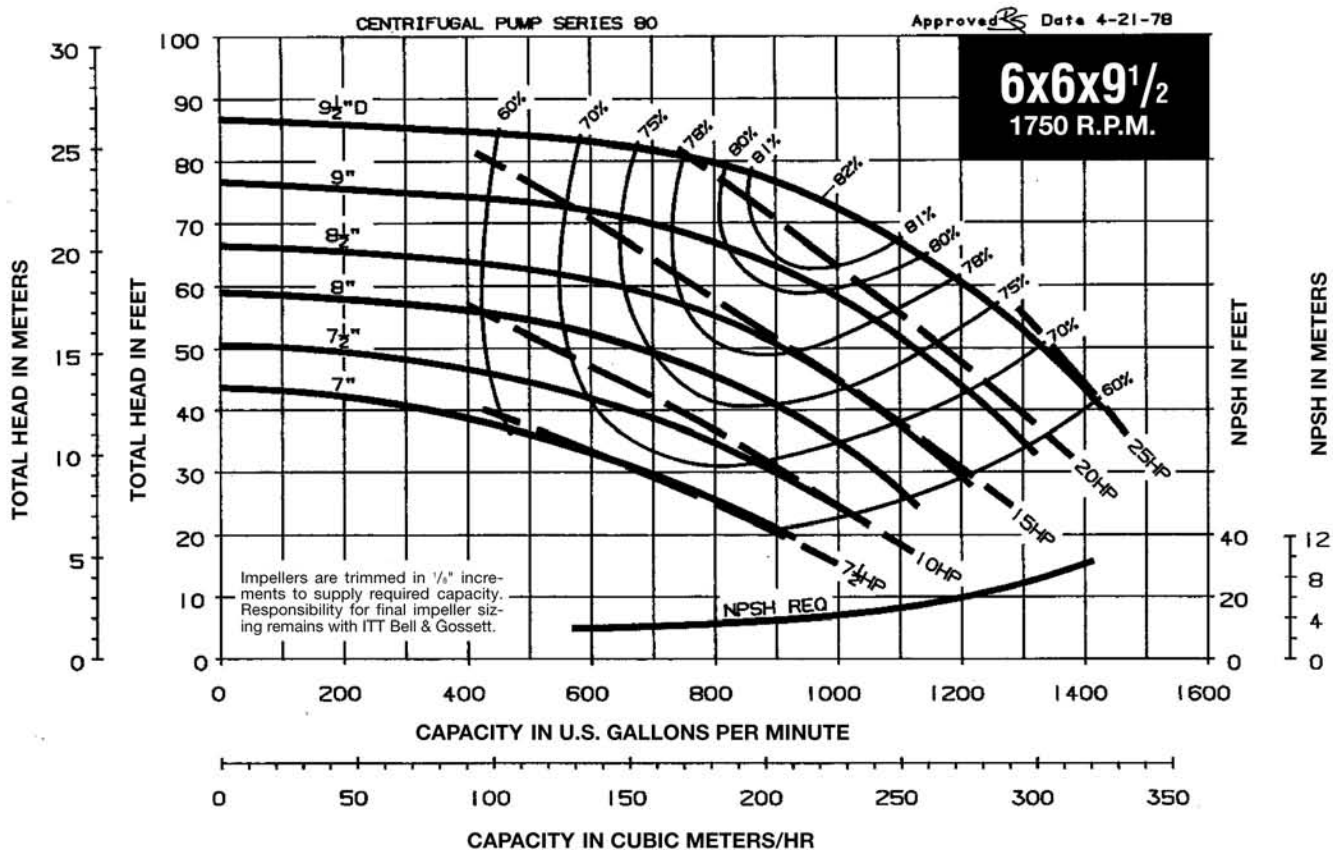
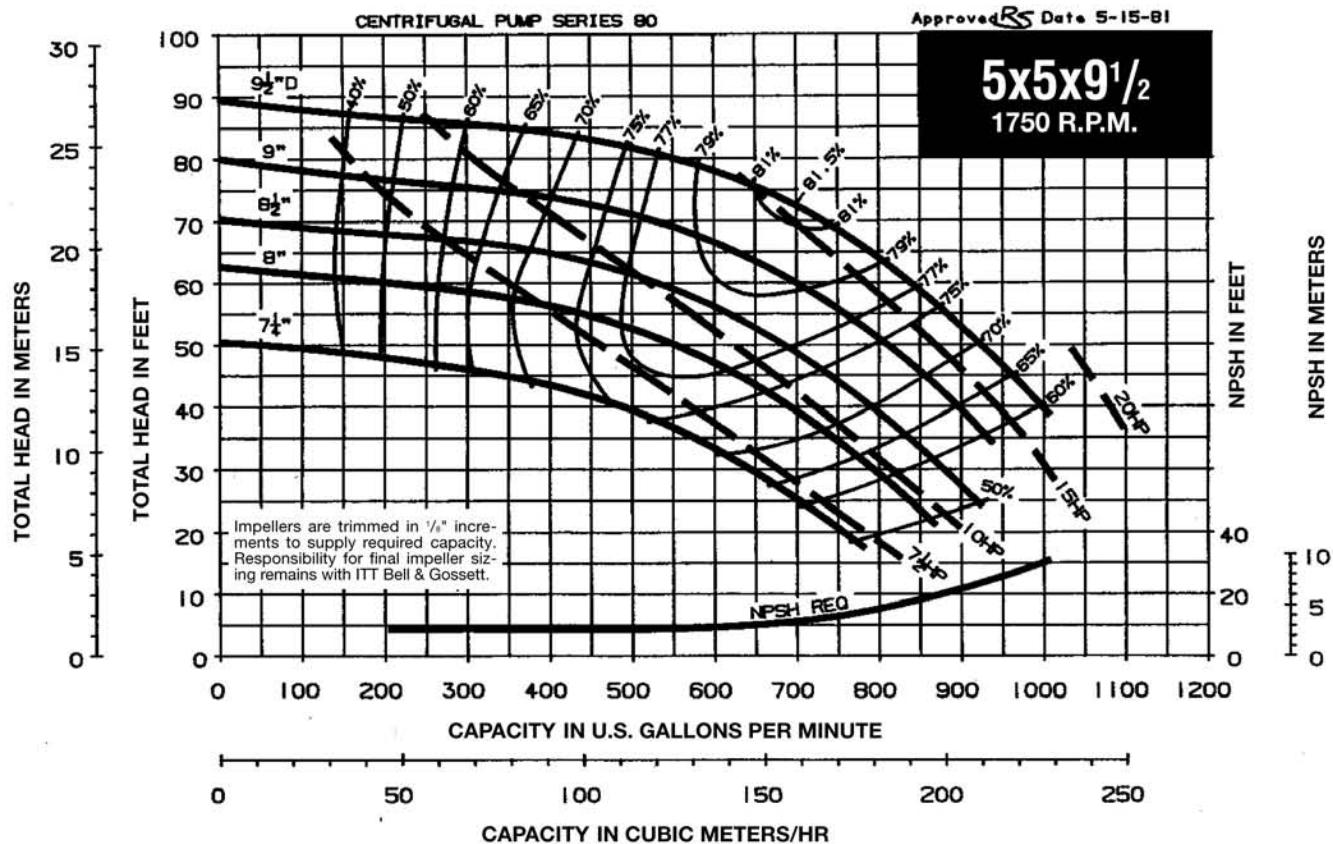
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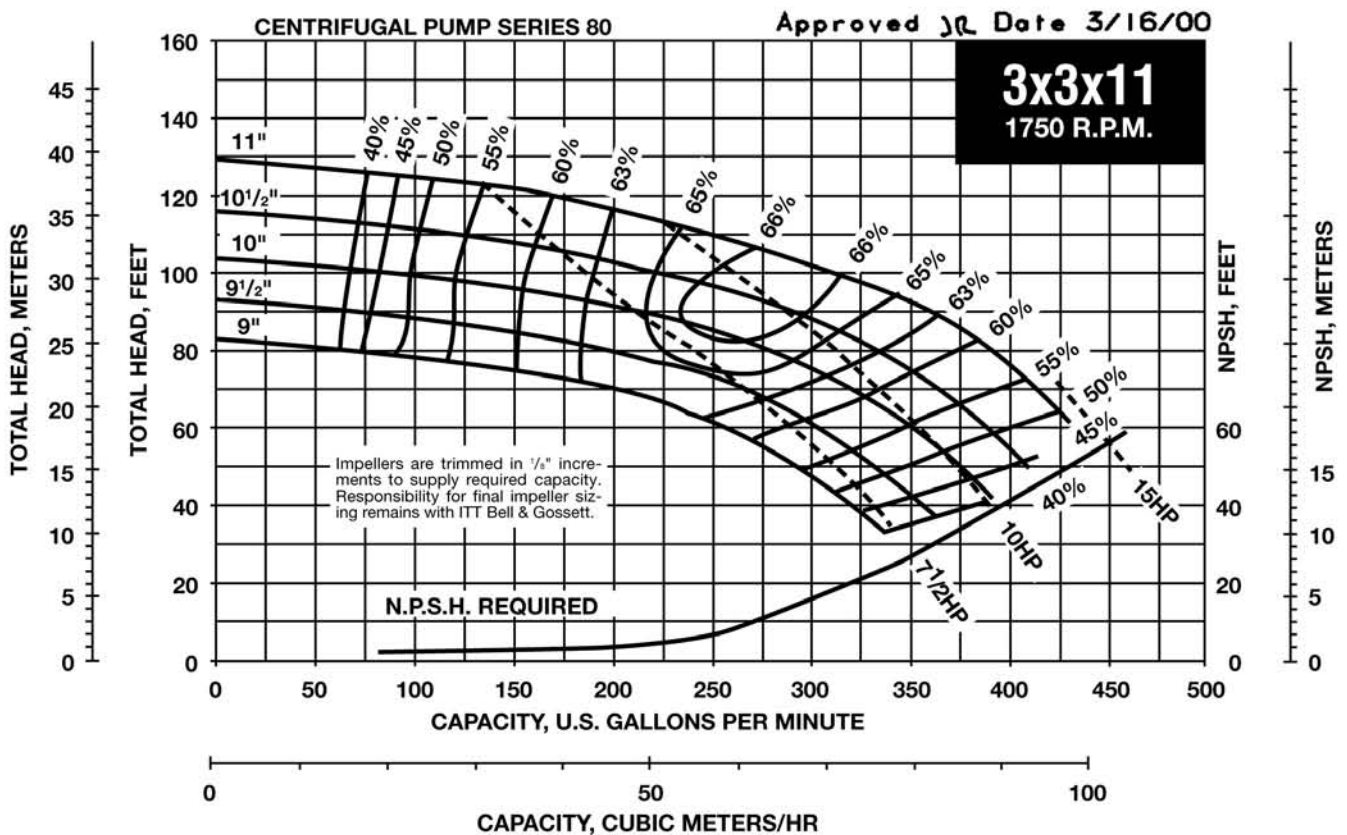
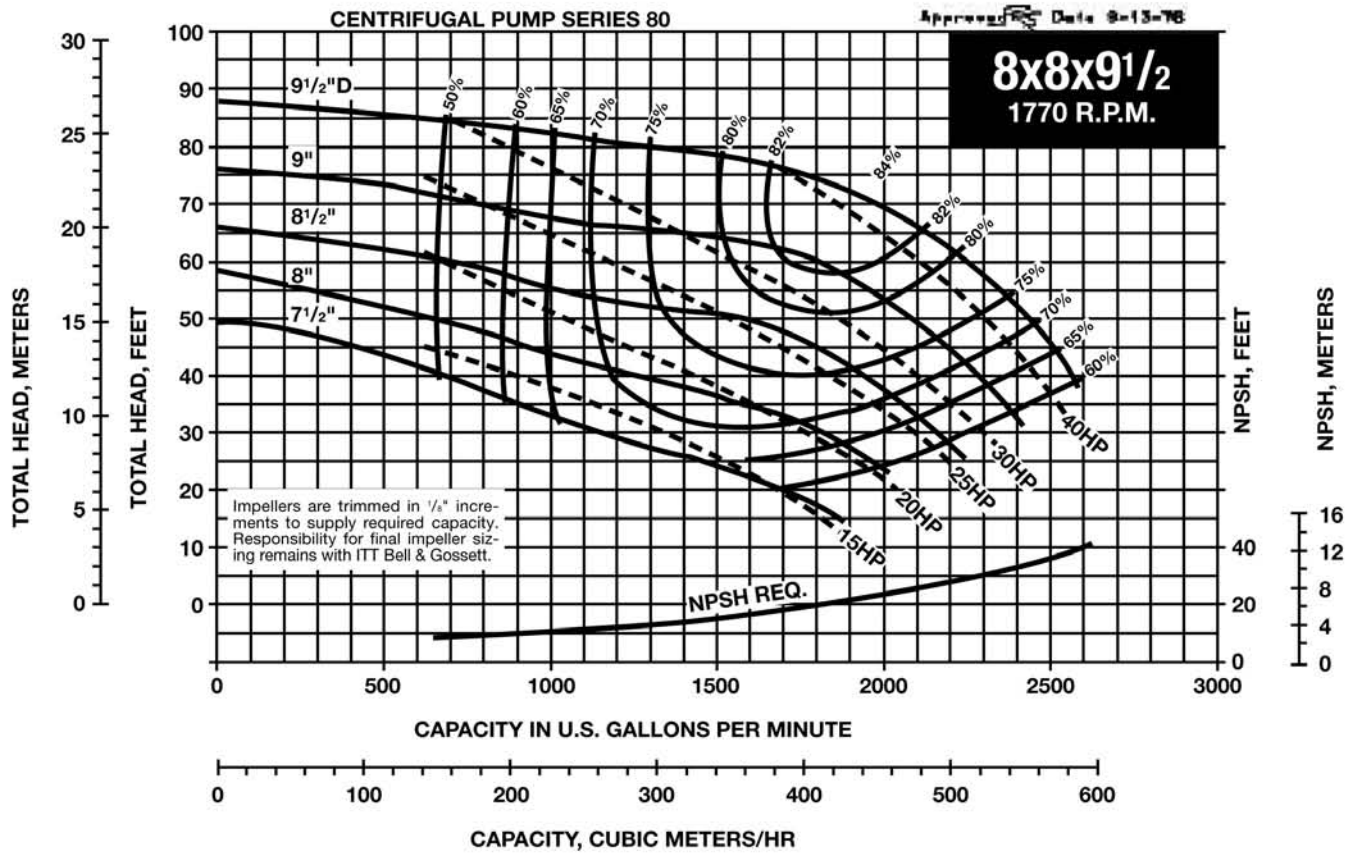
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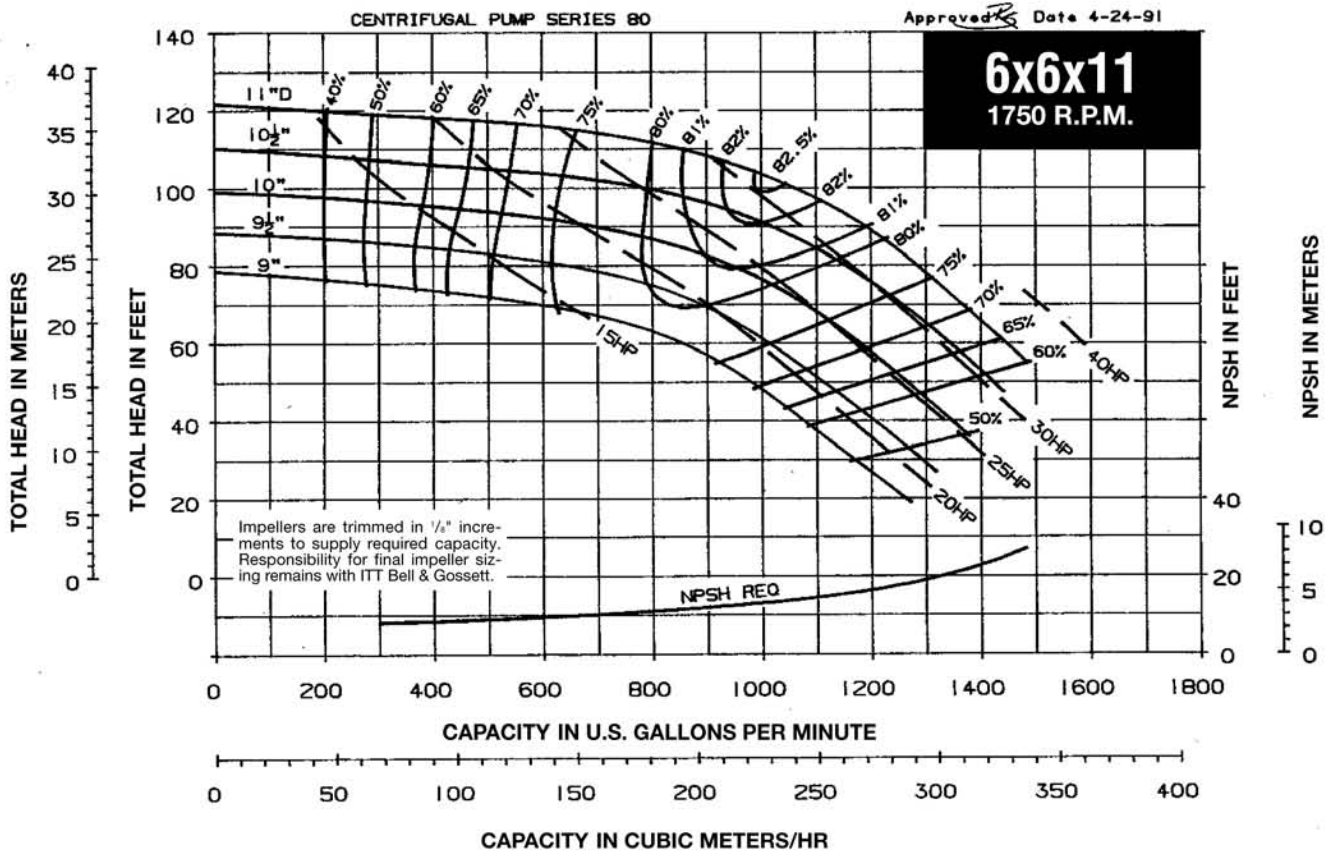
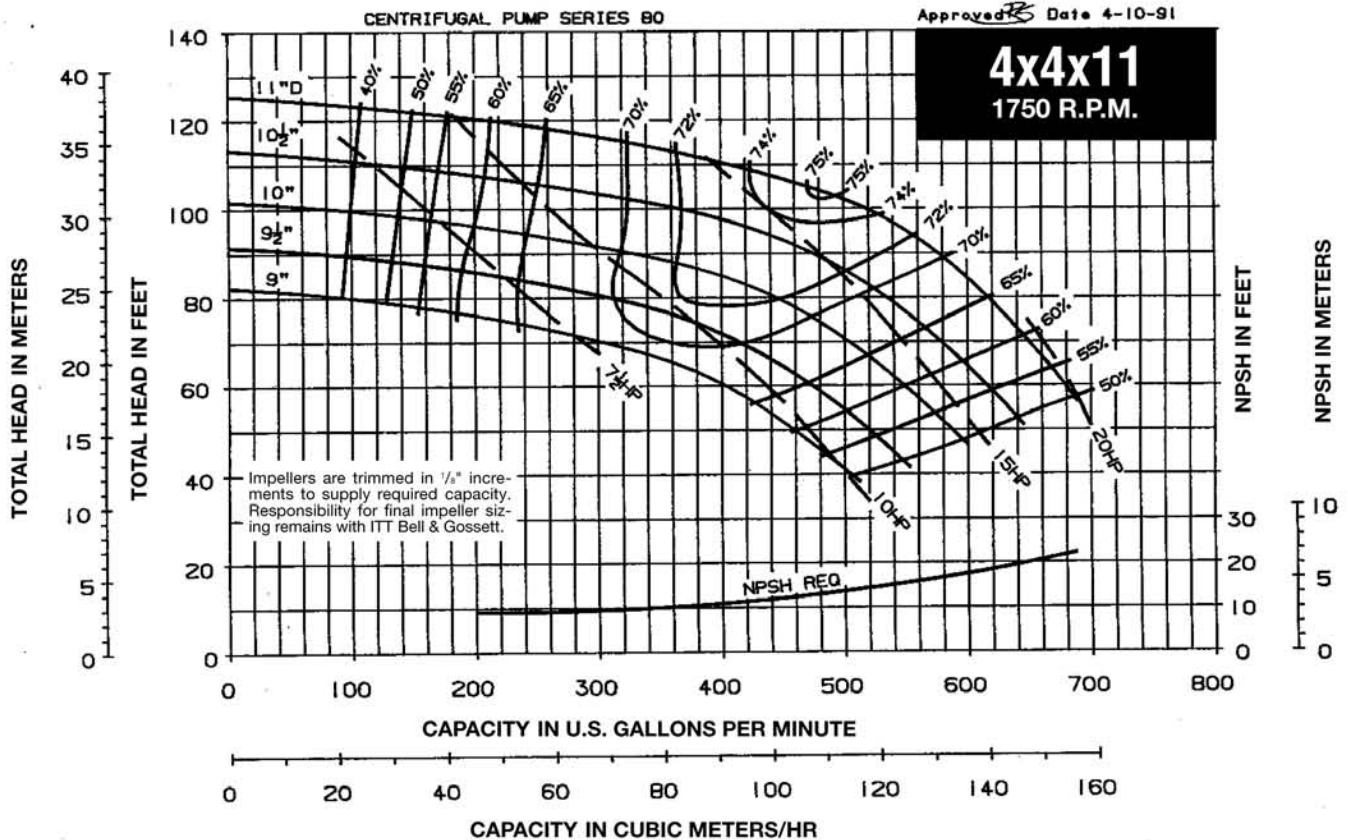
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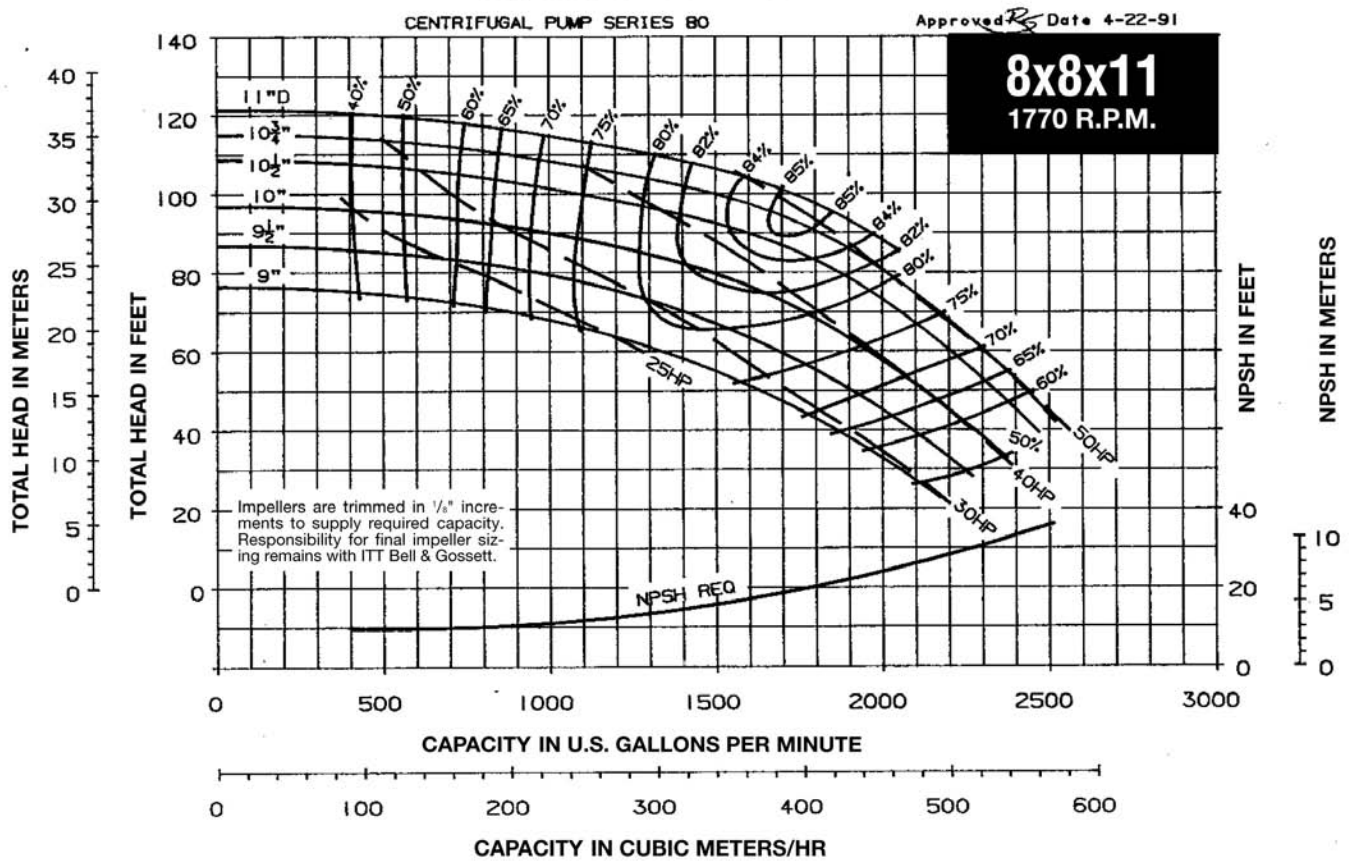
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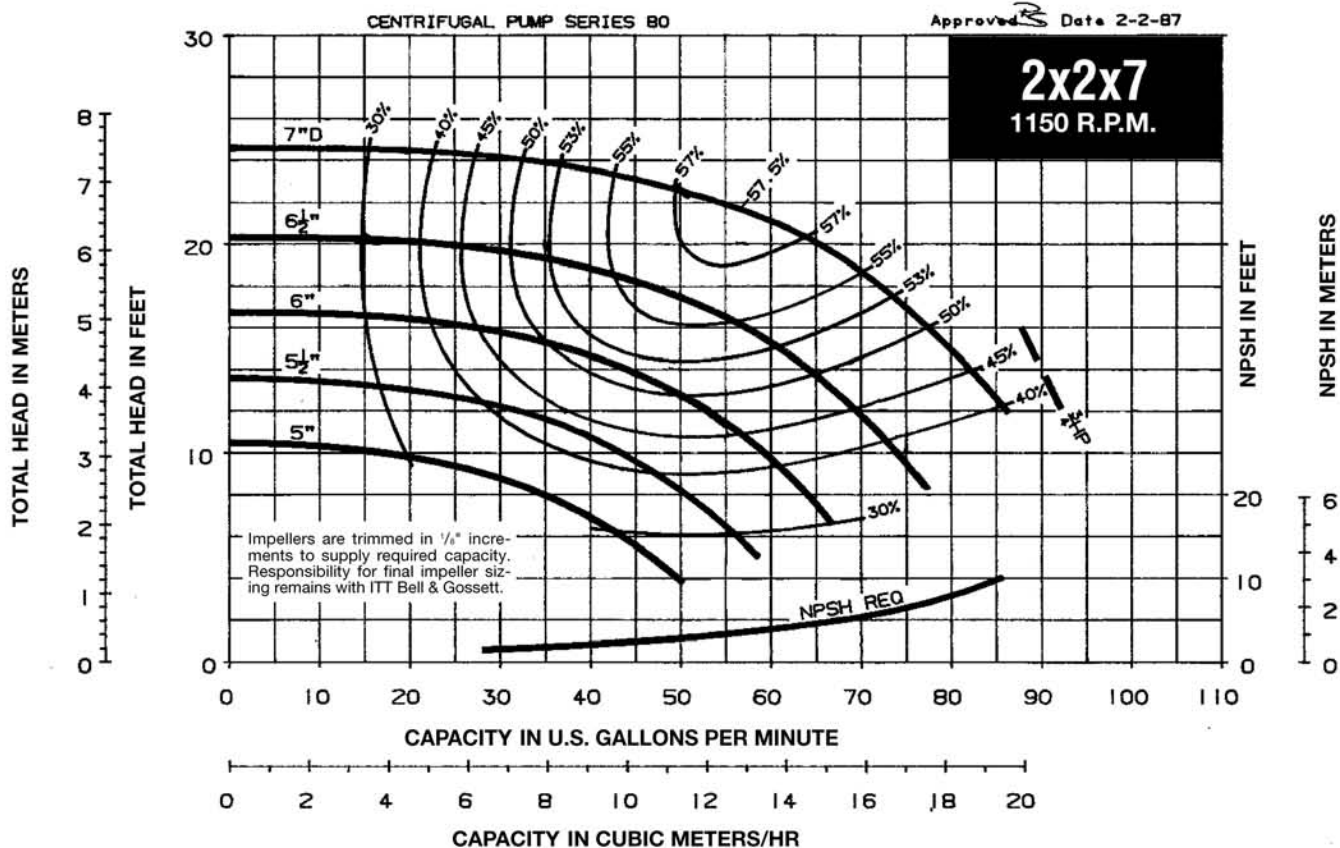
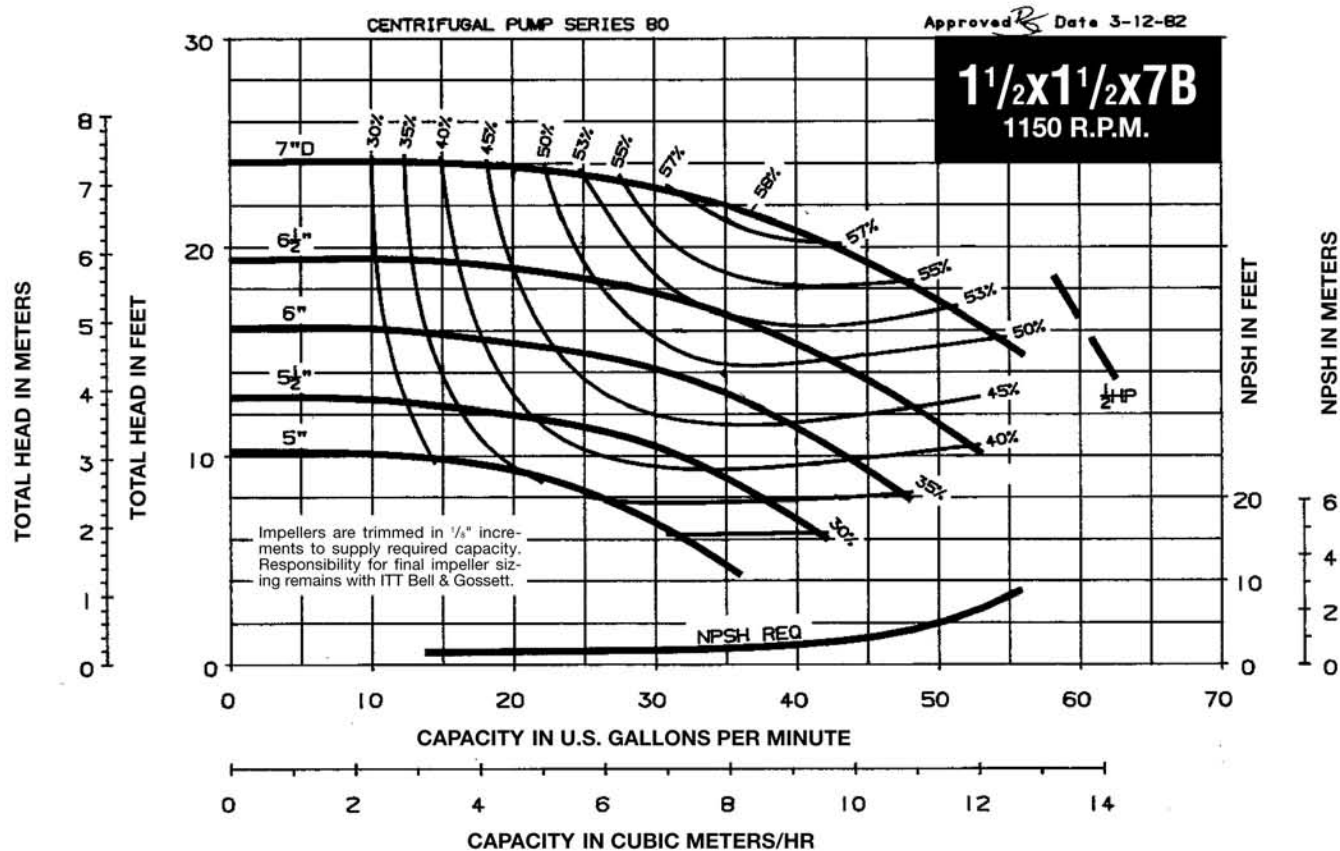
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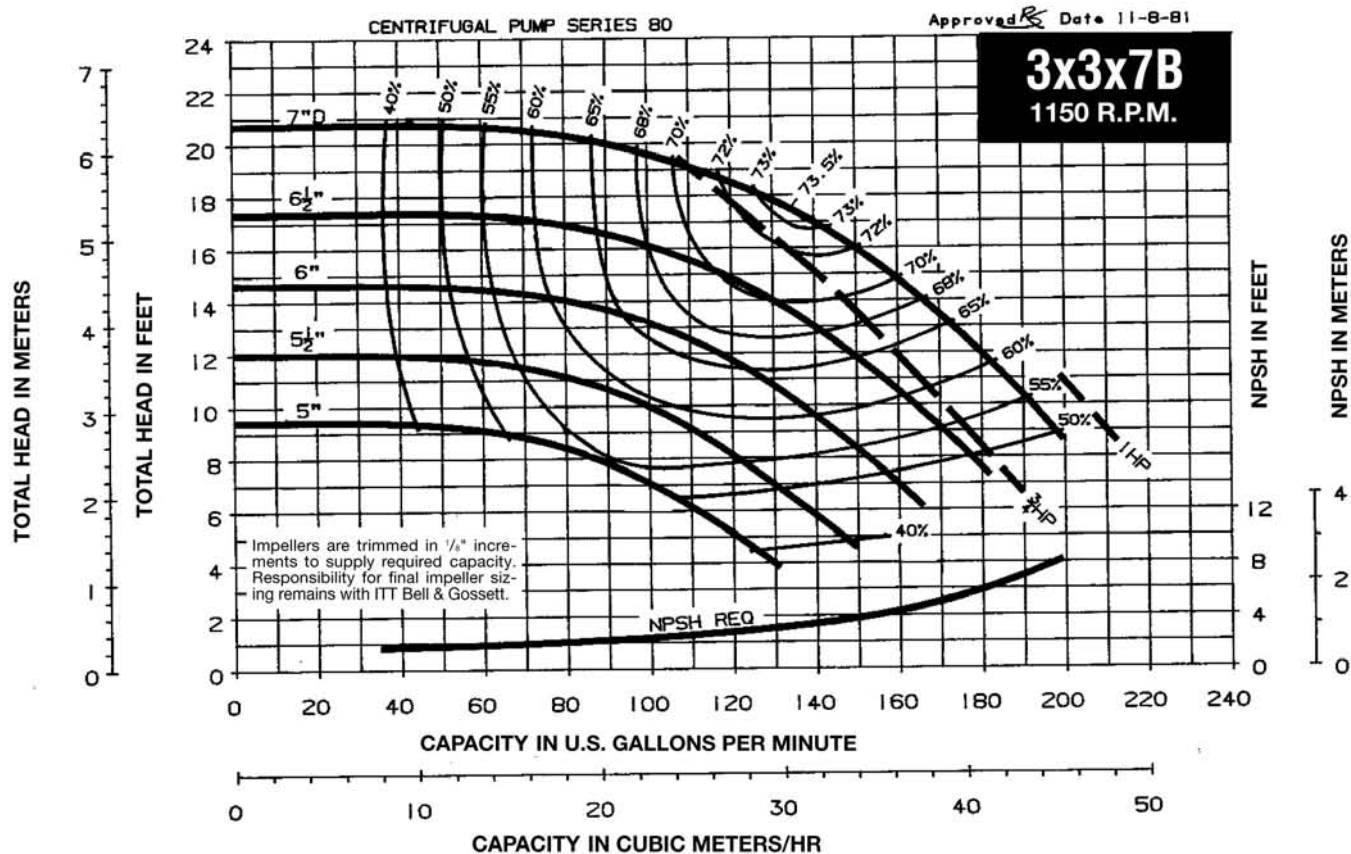
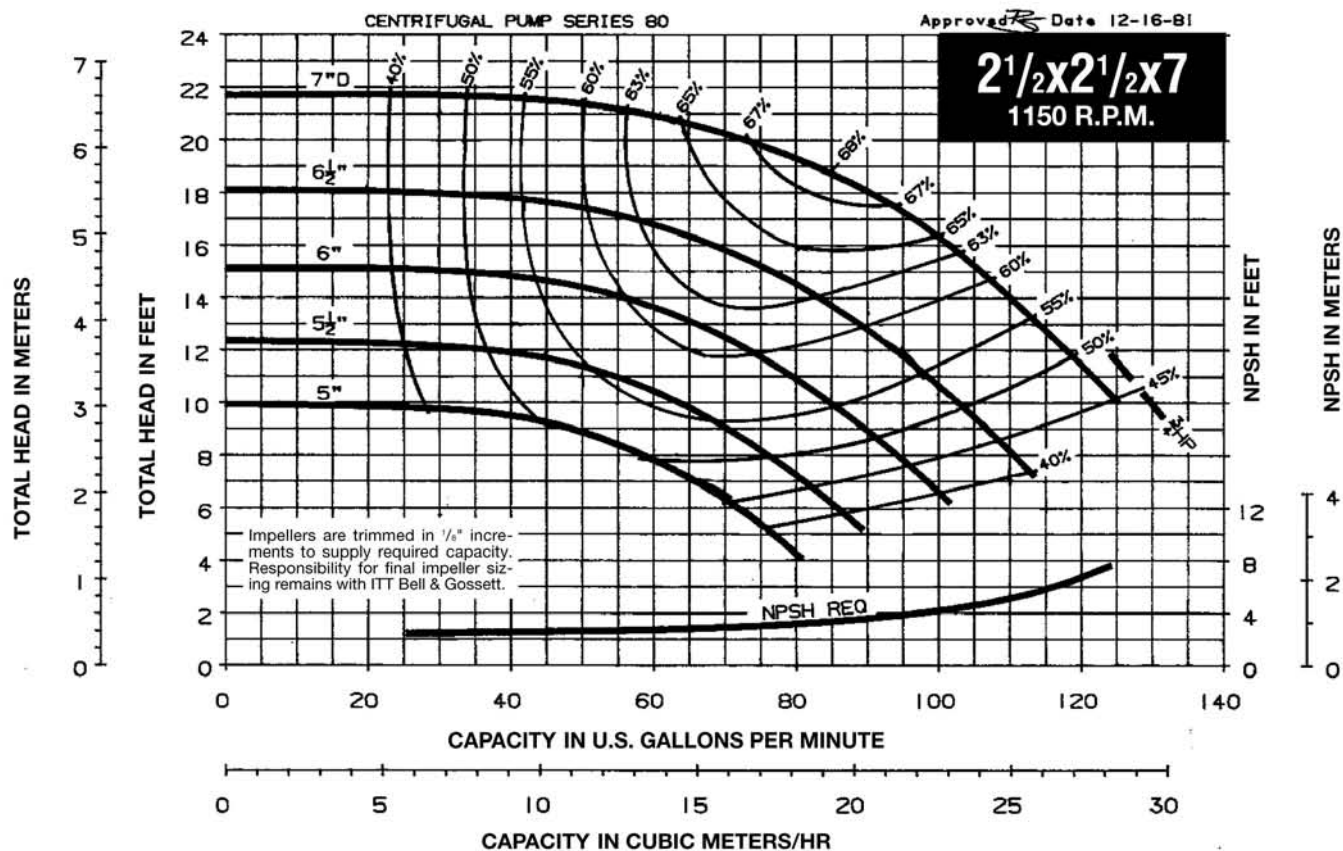
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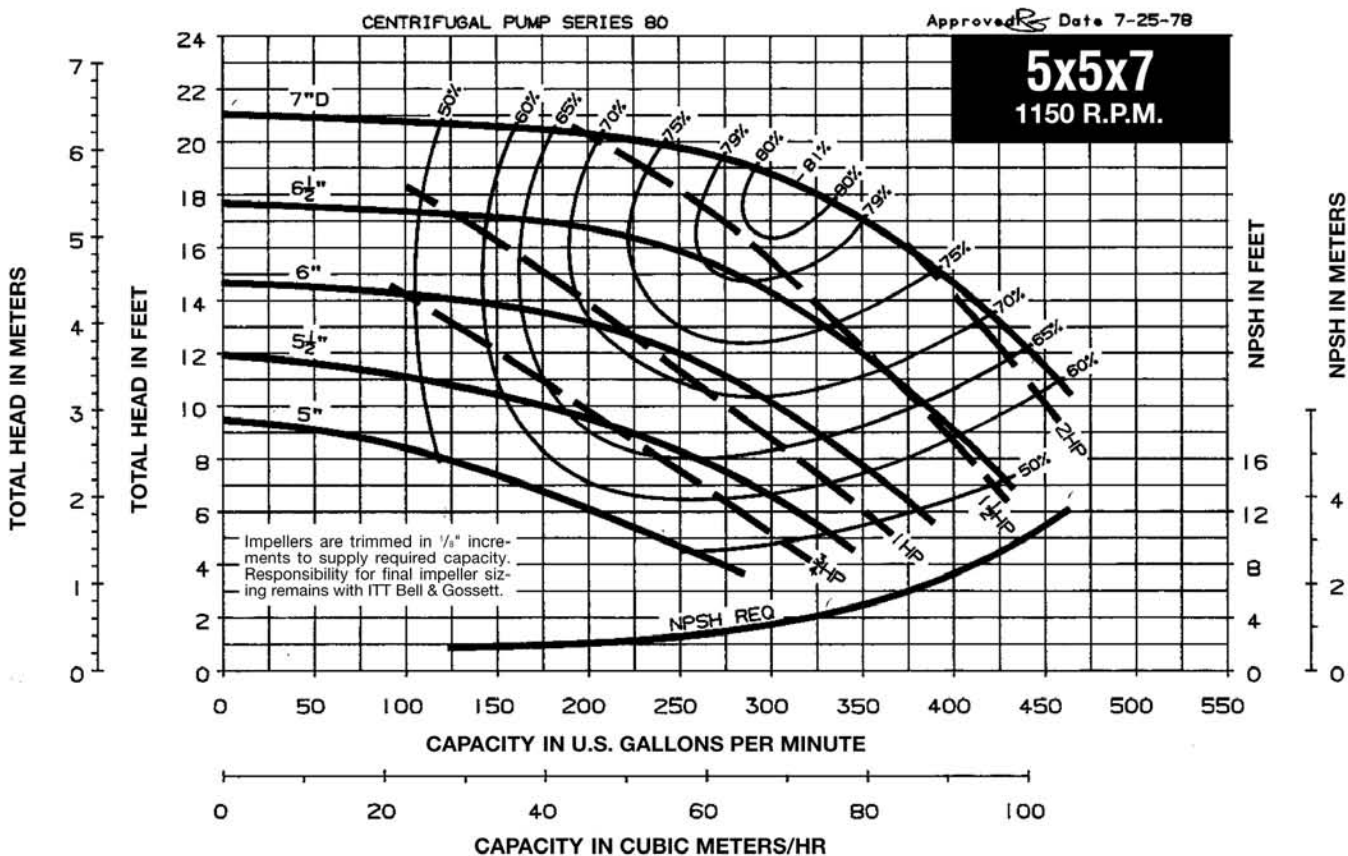
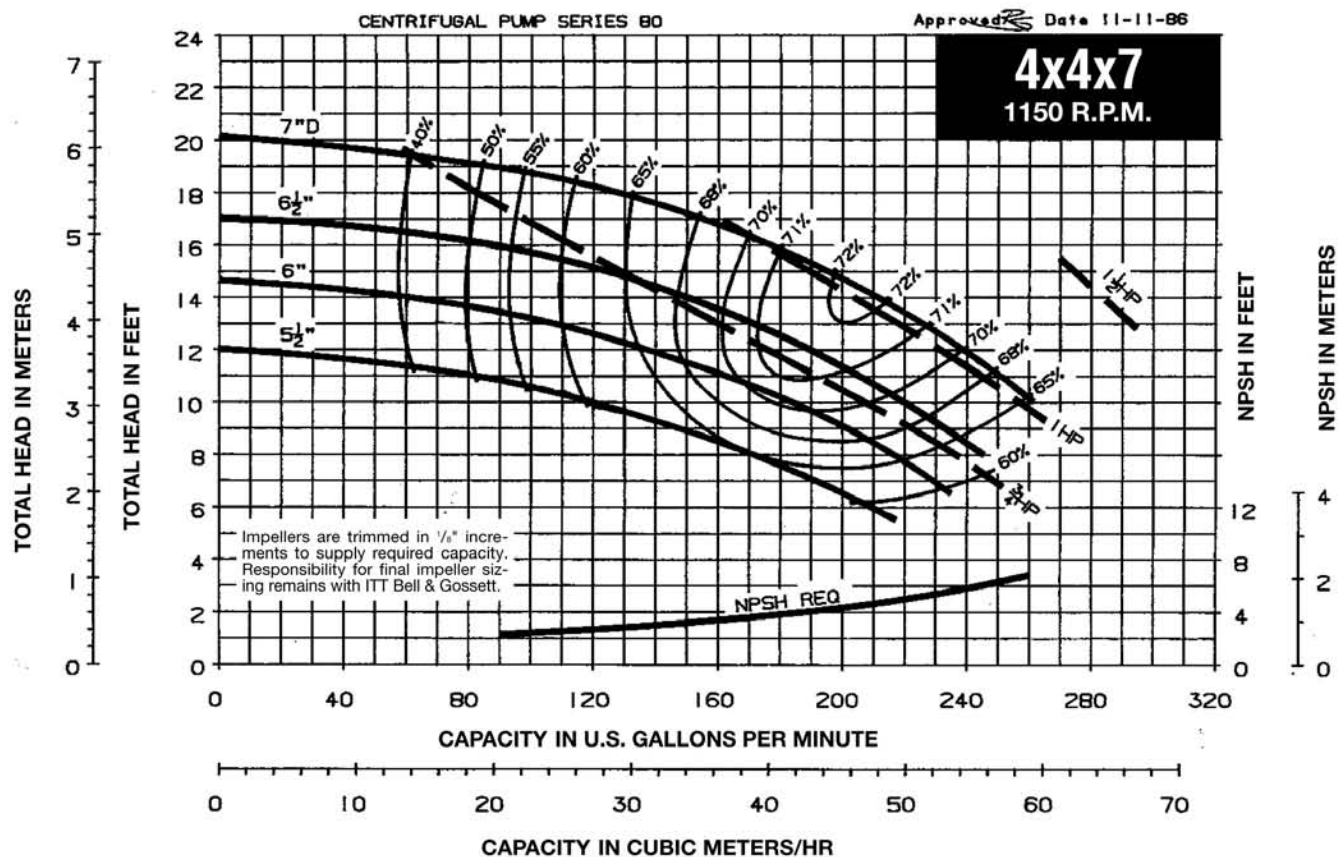
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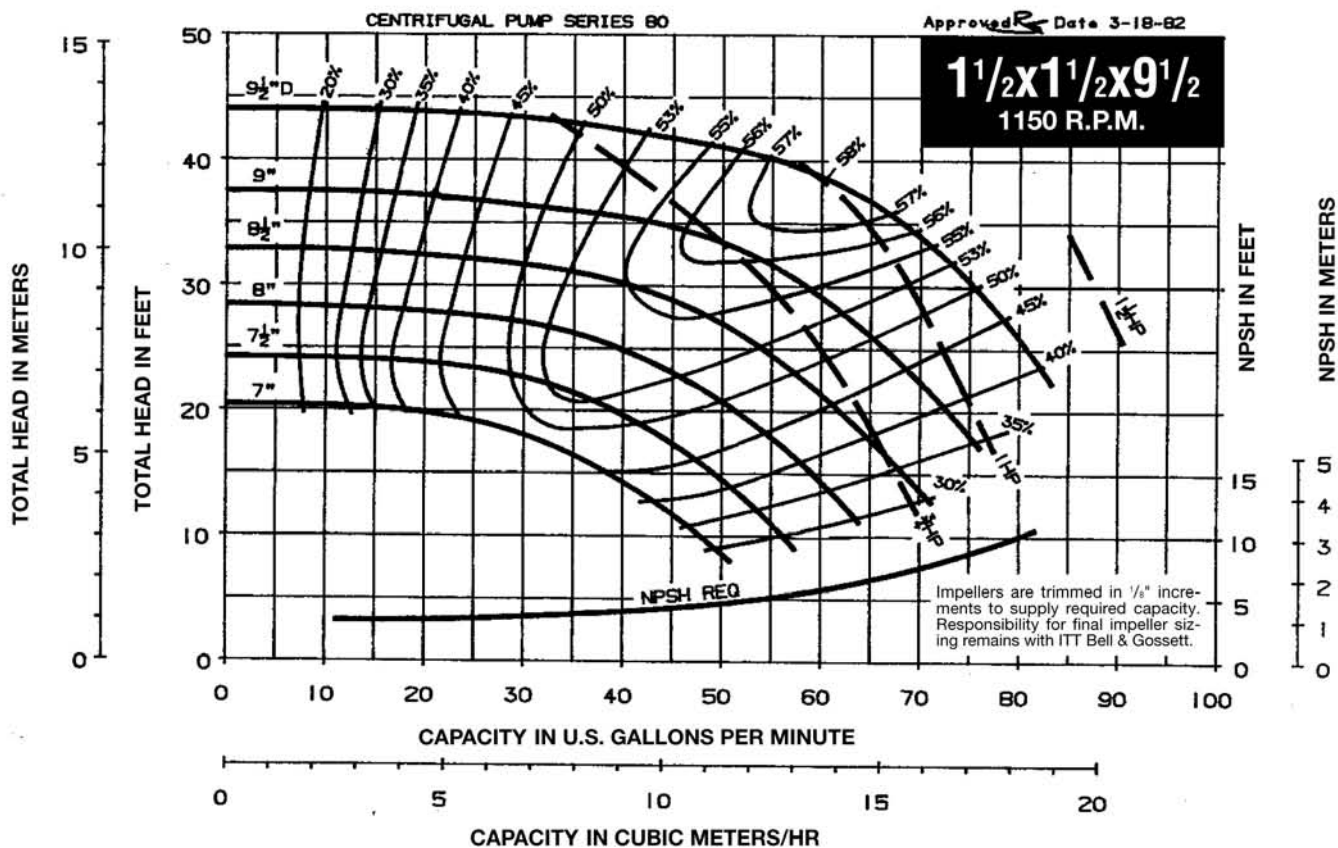
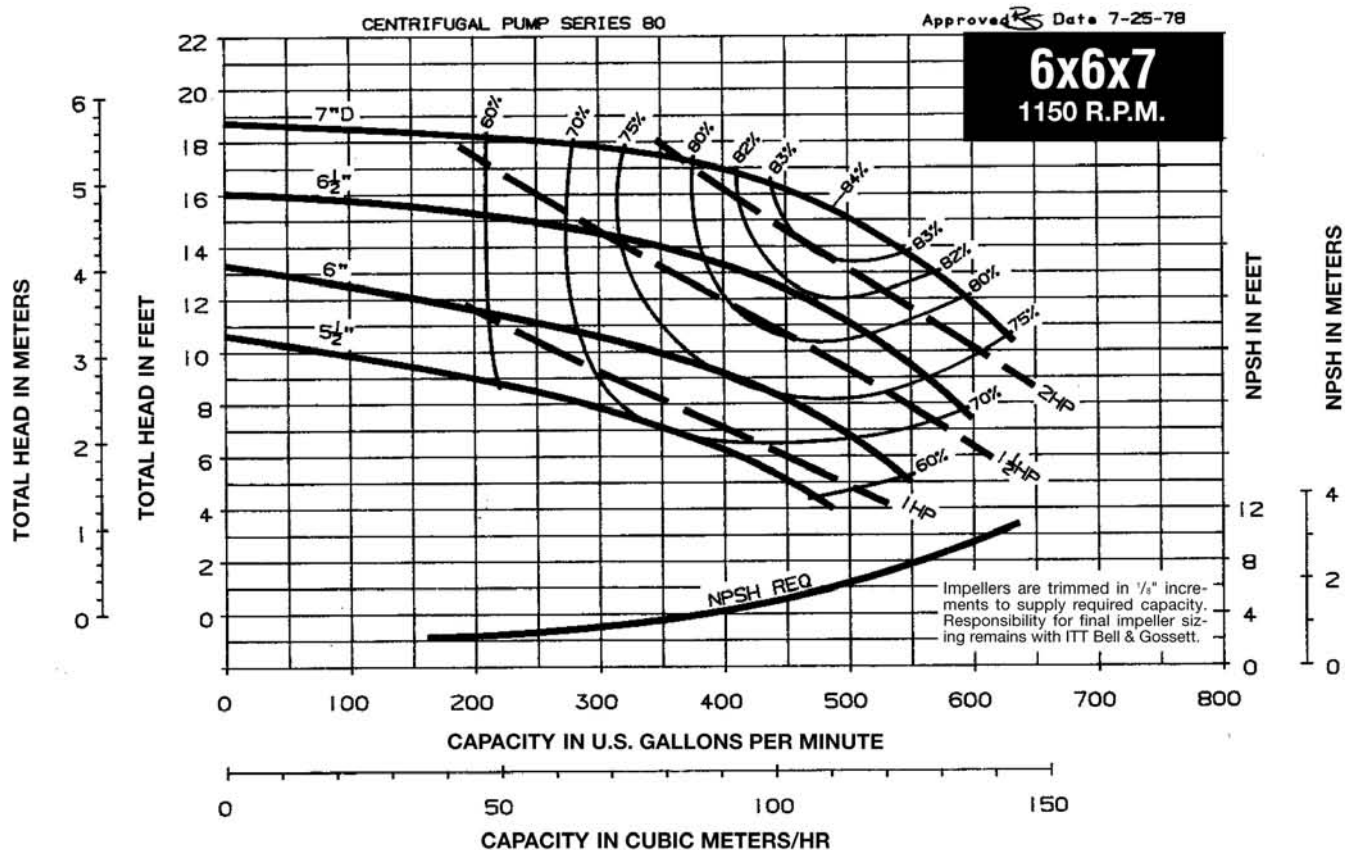
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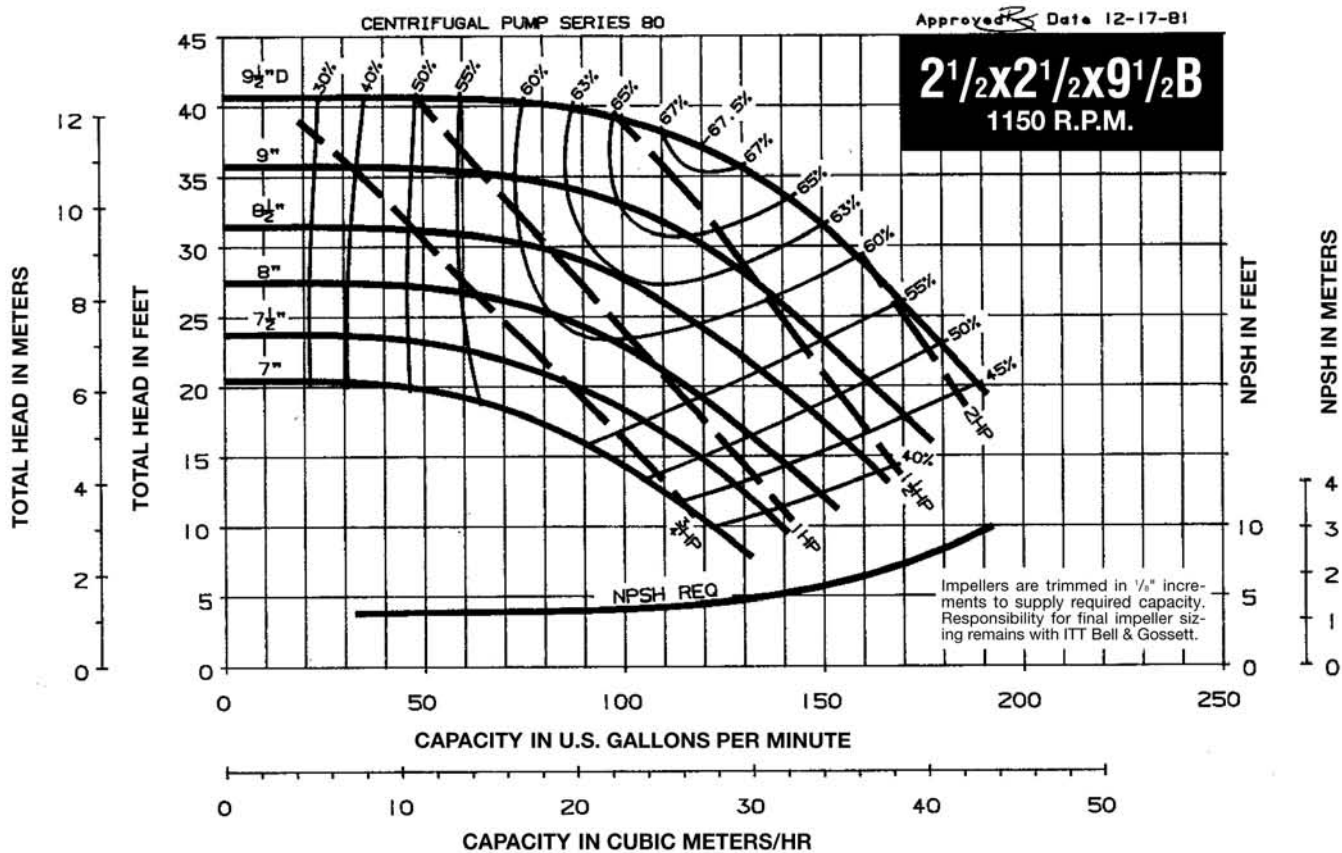
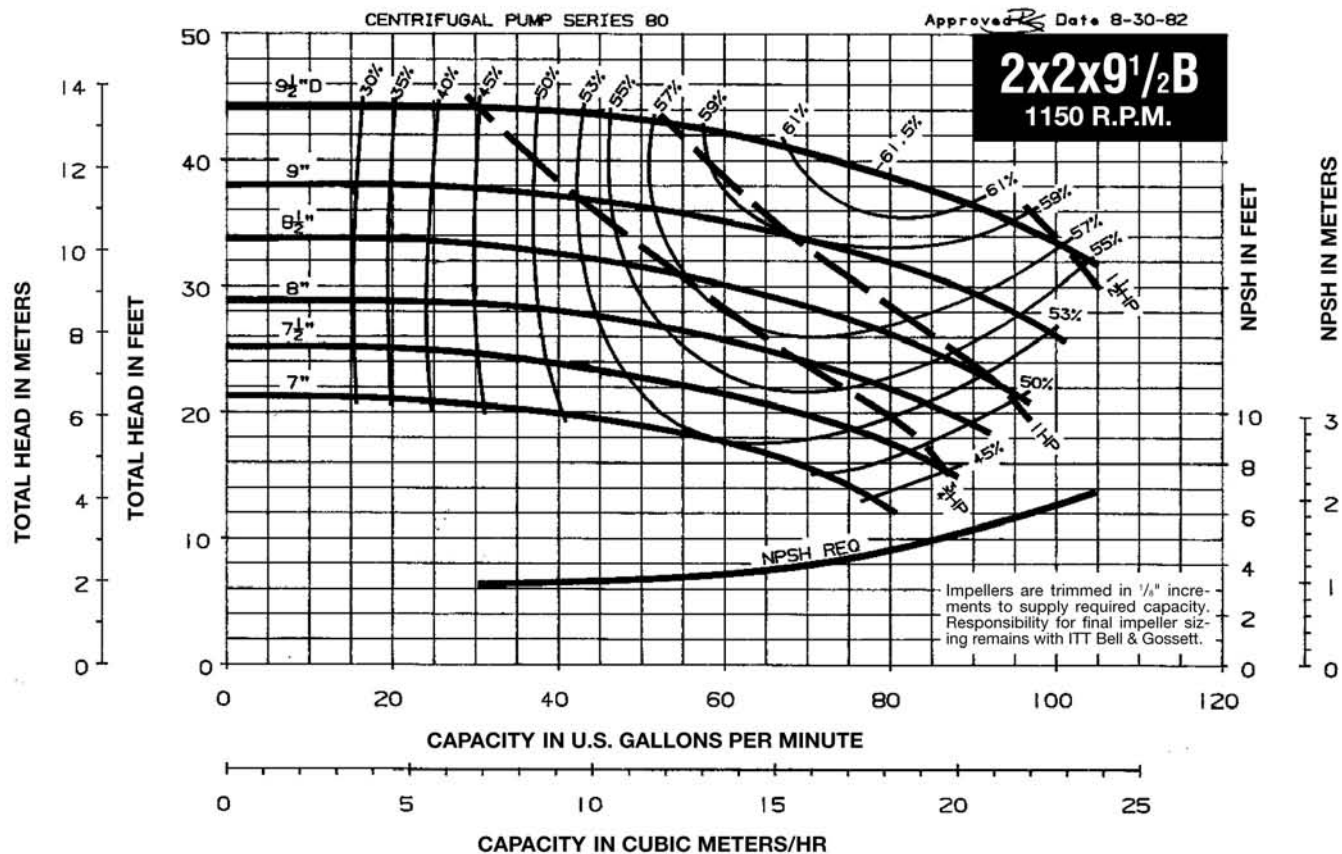
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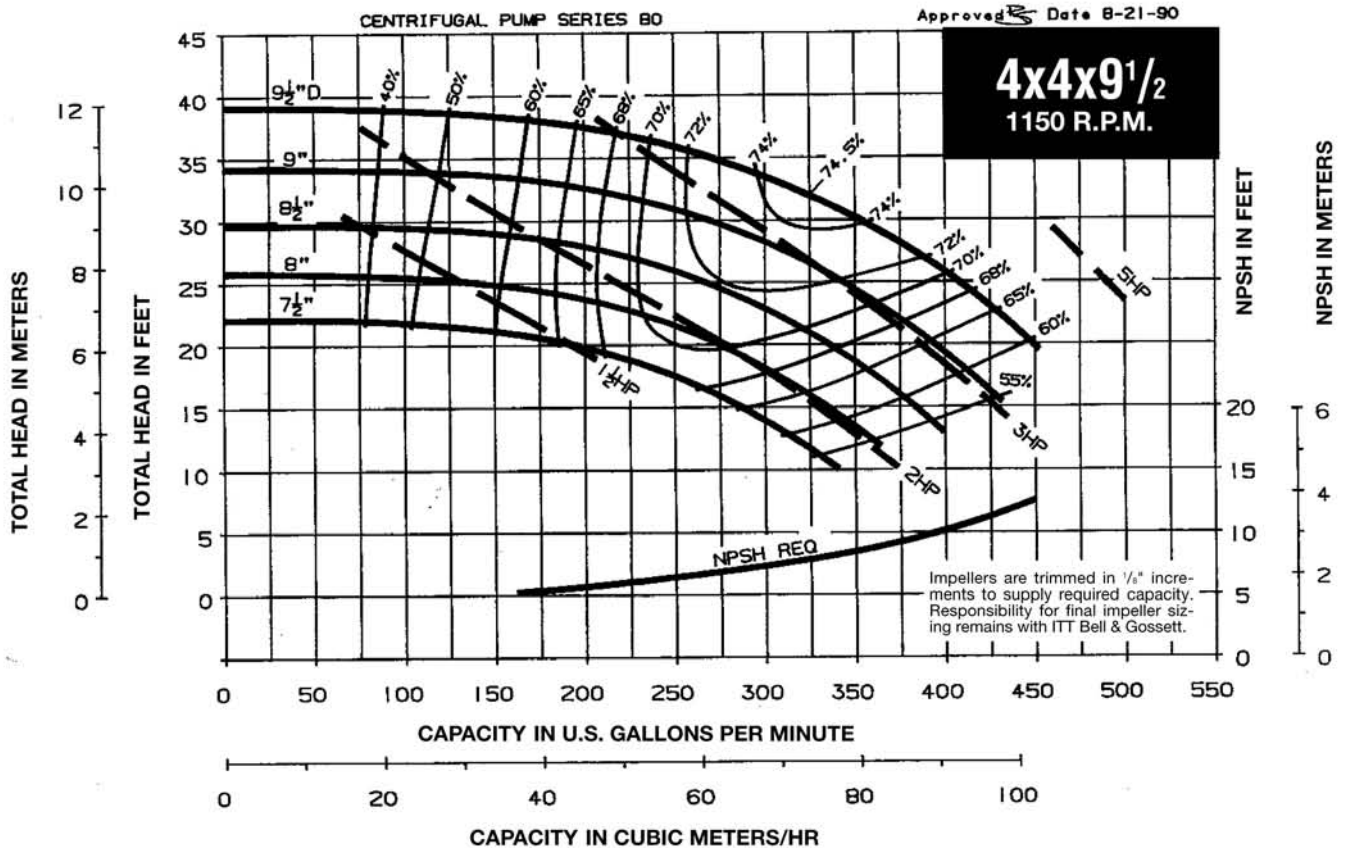
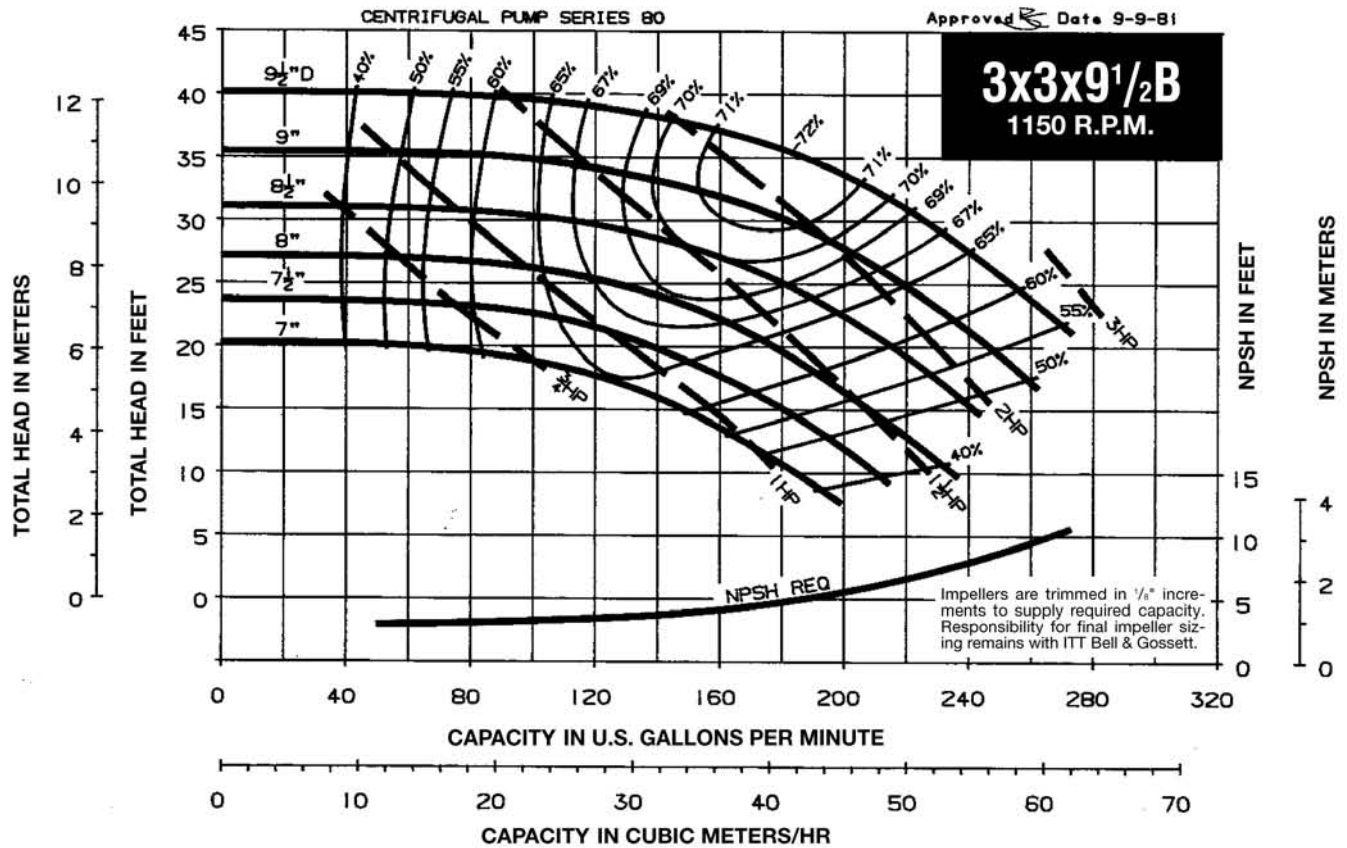
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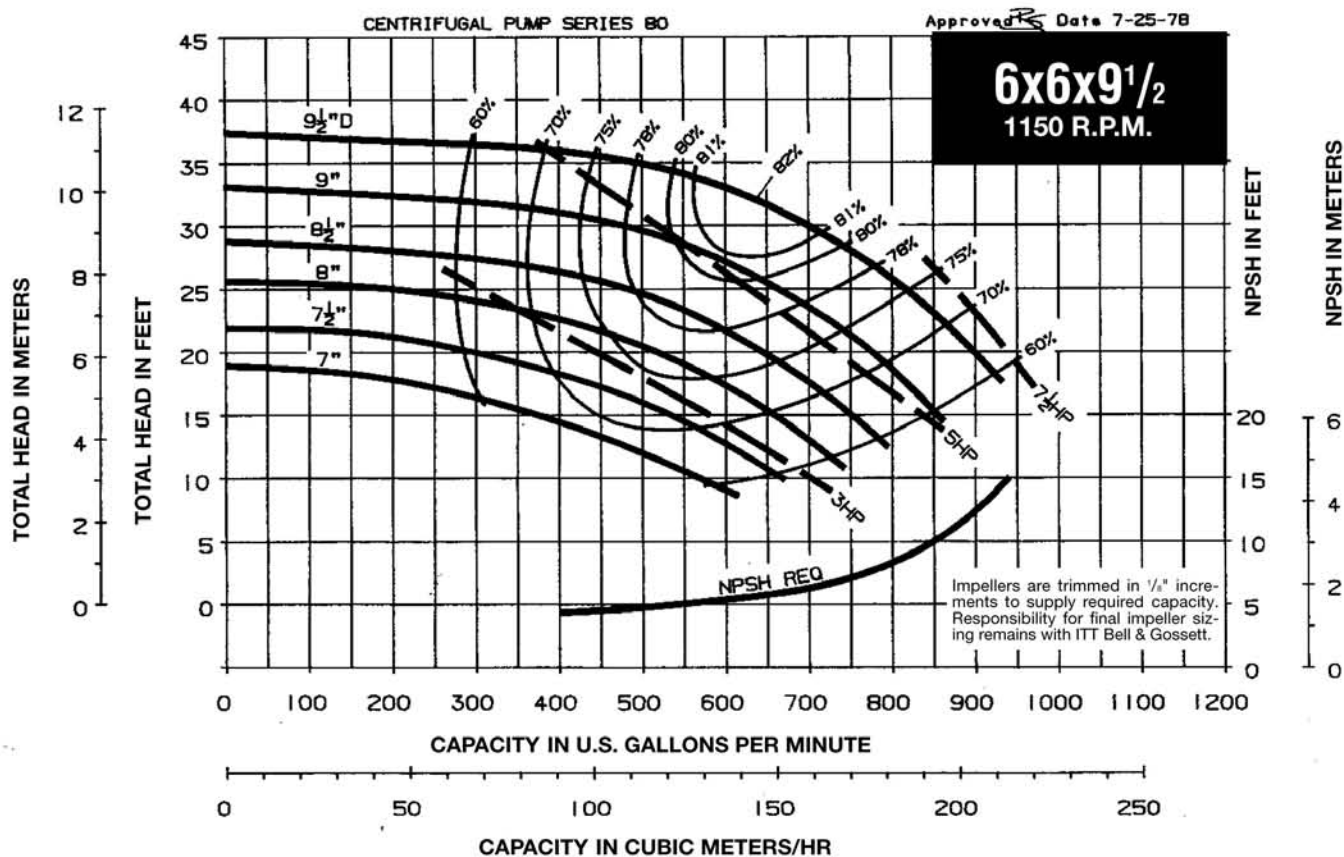
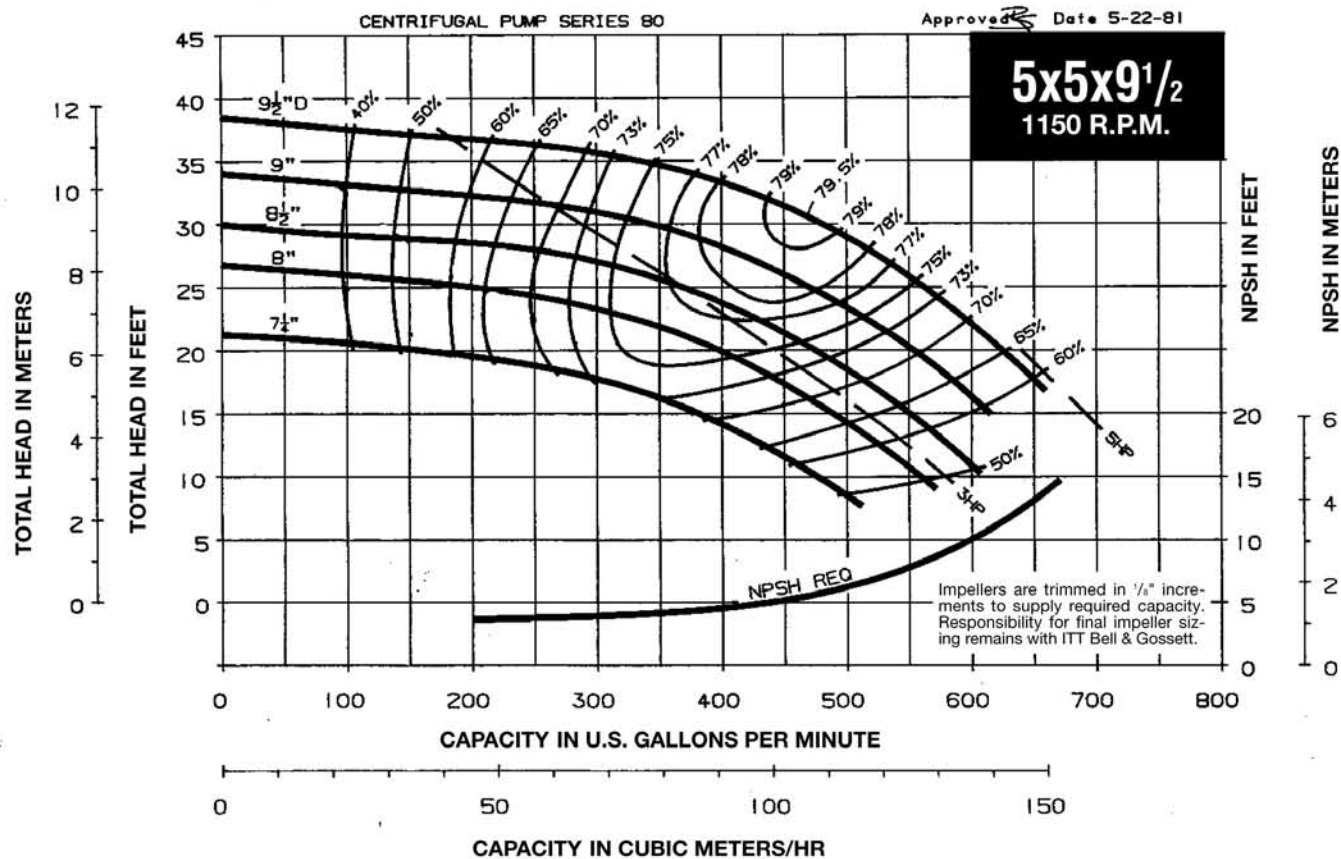
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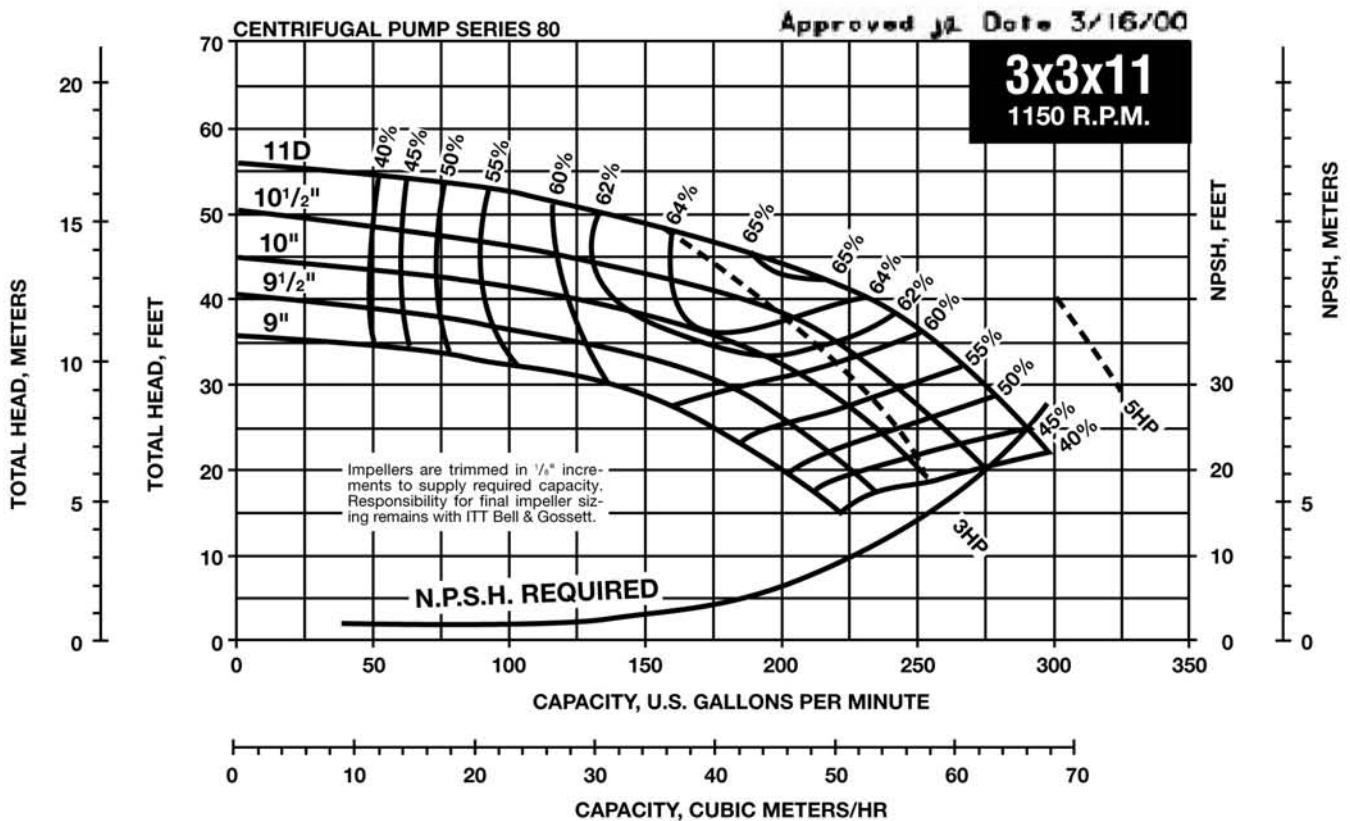
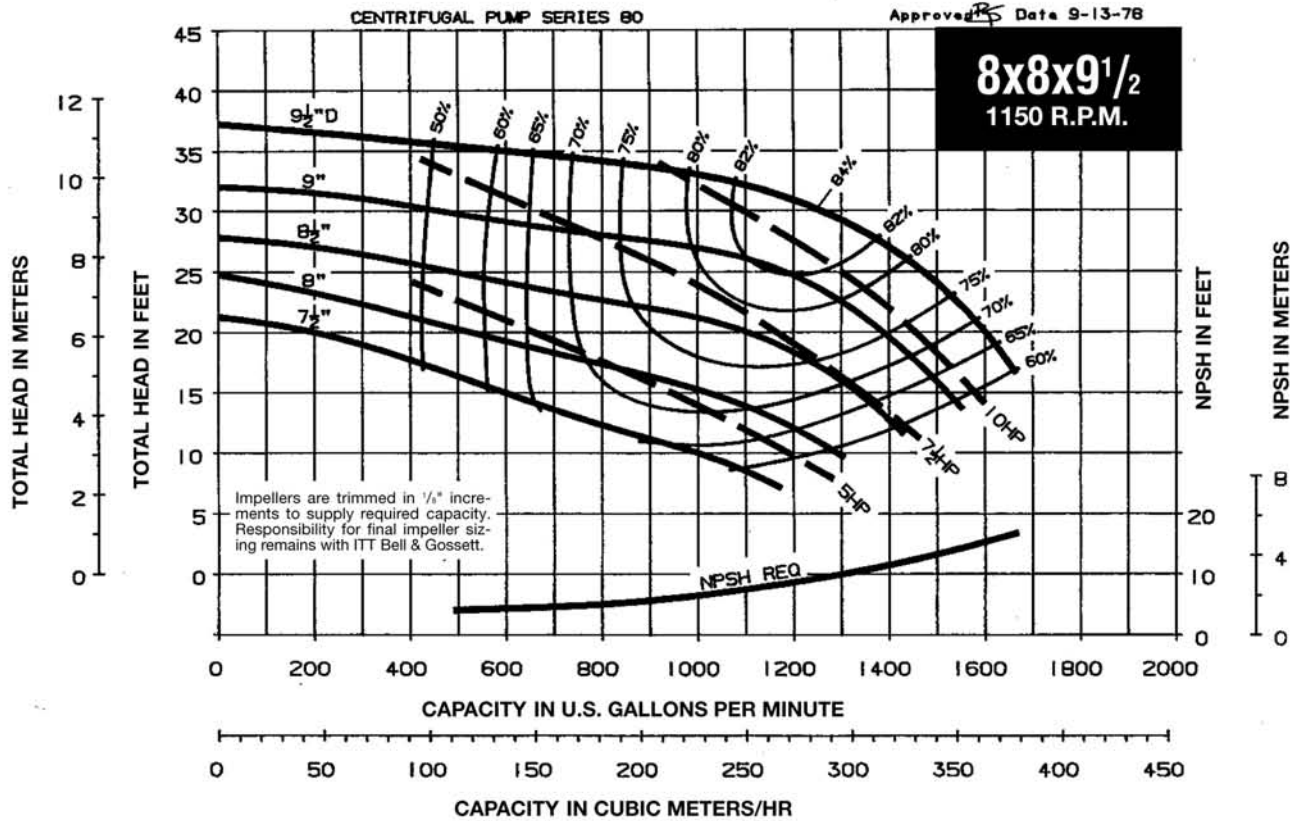
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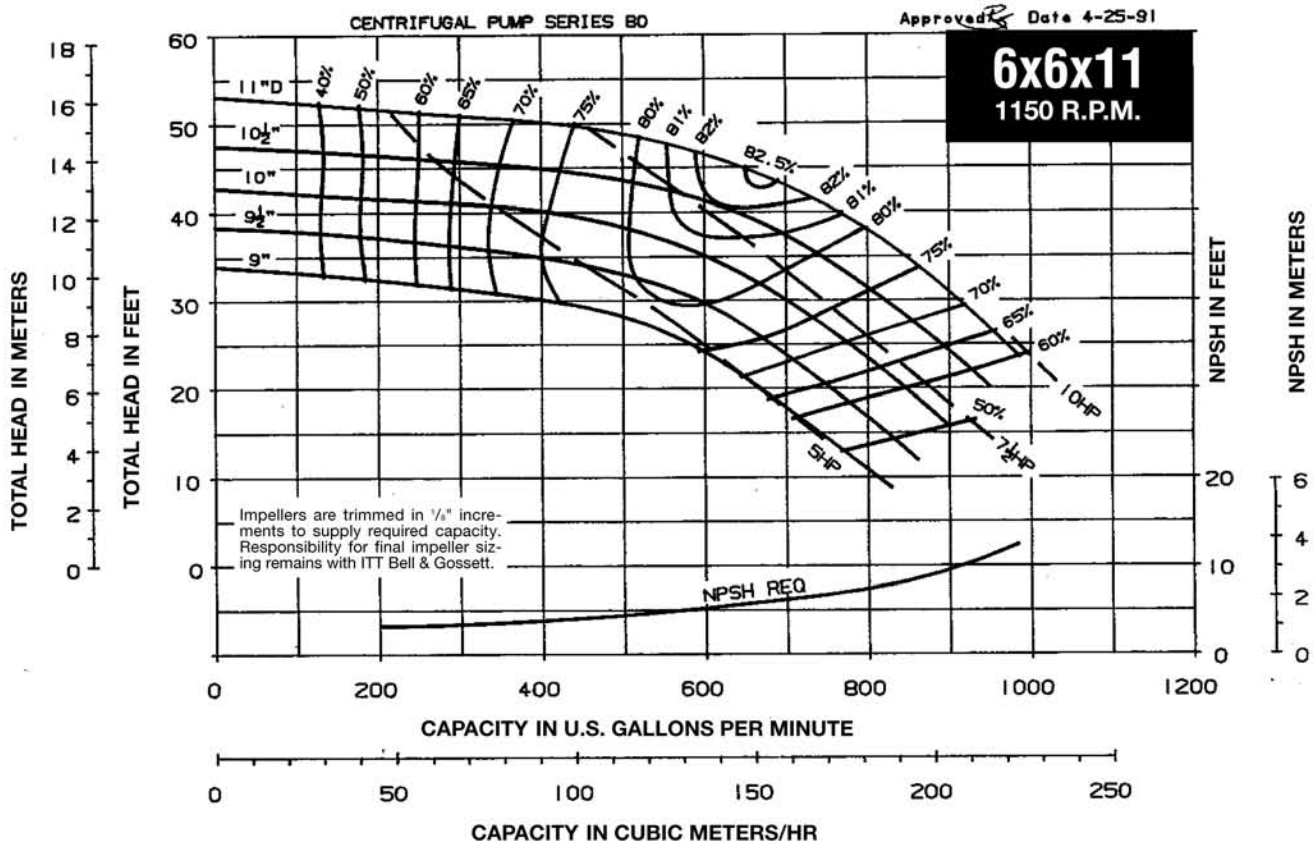
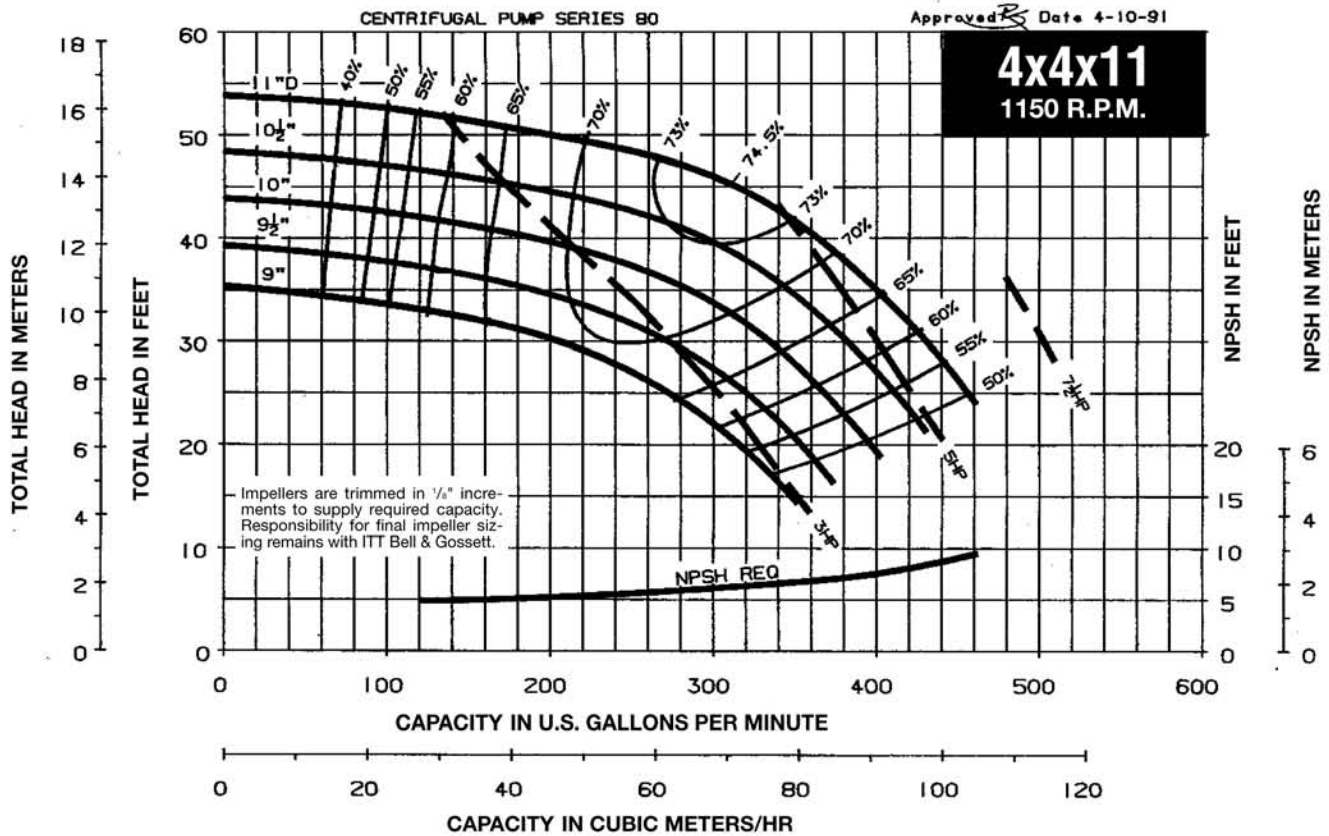
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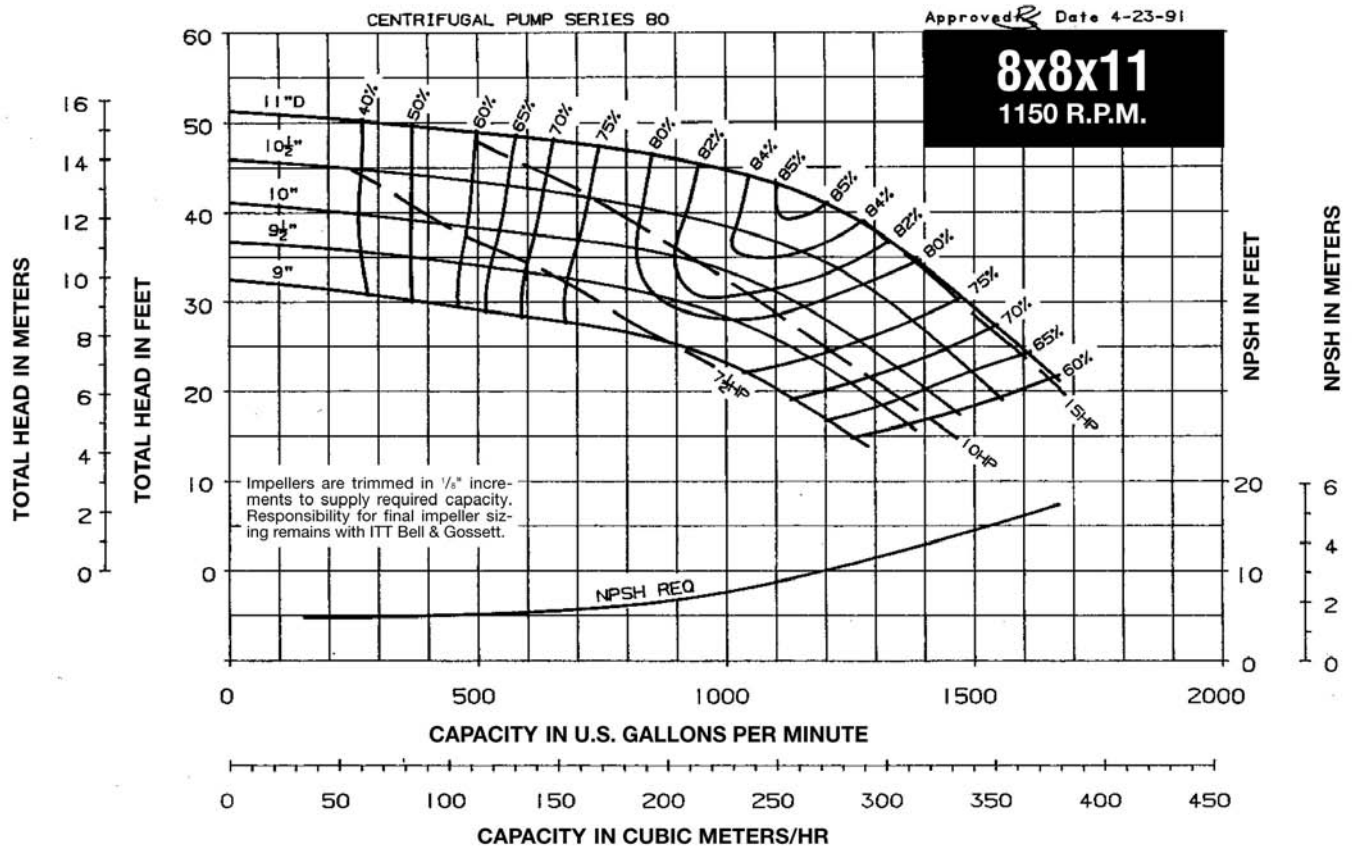
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NOTES

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NOTES

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