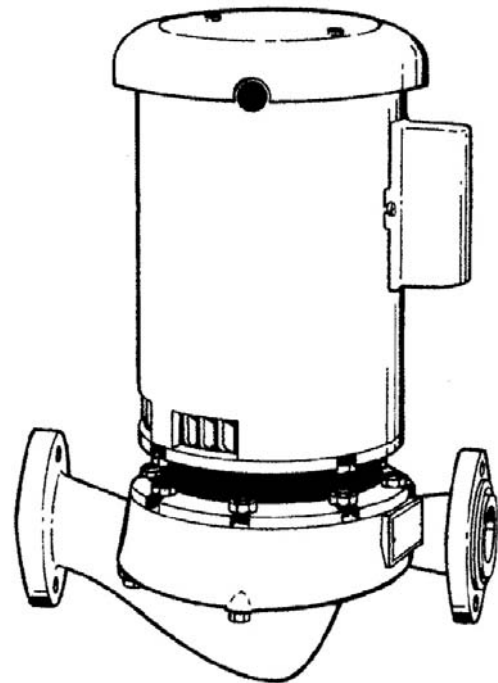
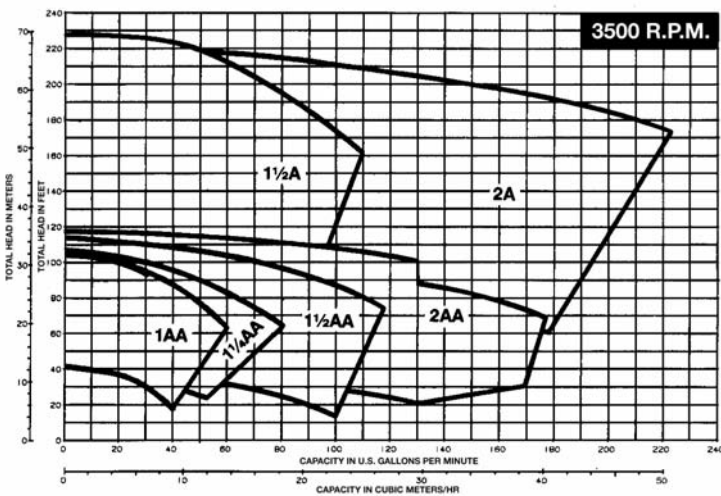
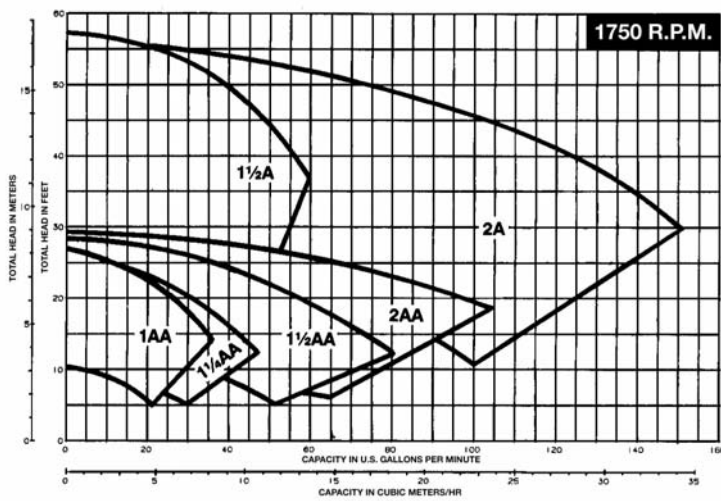




SERIES 90

IN-LINE MOUNTED CENTRIFUGAL PUMP PERFORMANCE CURVES



SERIES 90 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

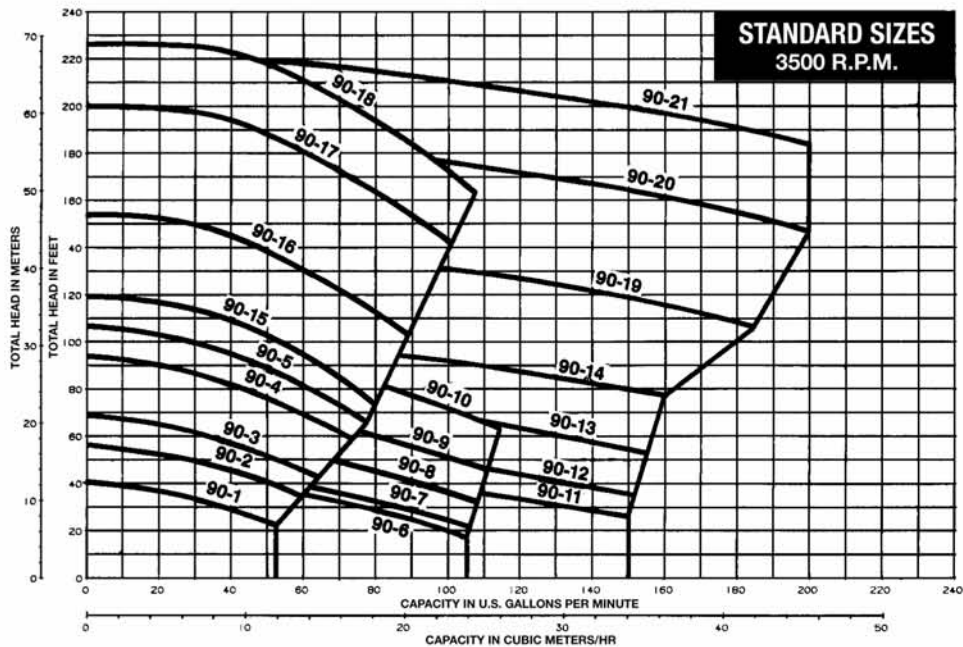
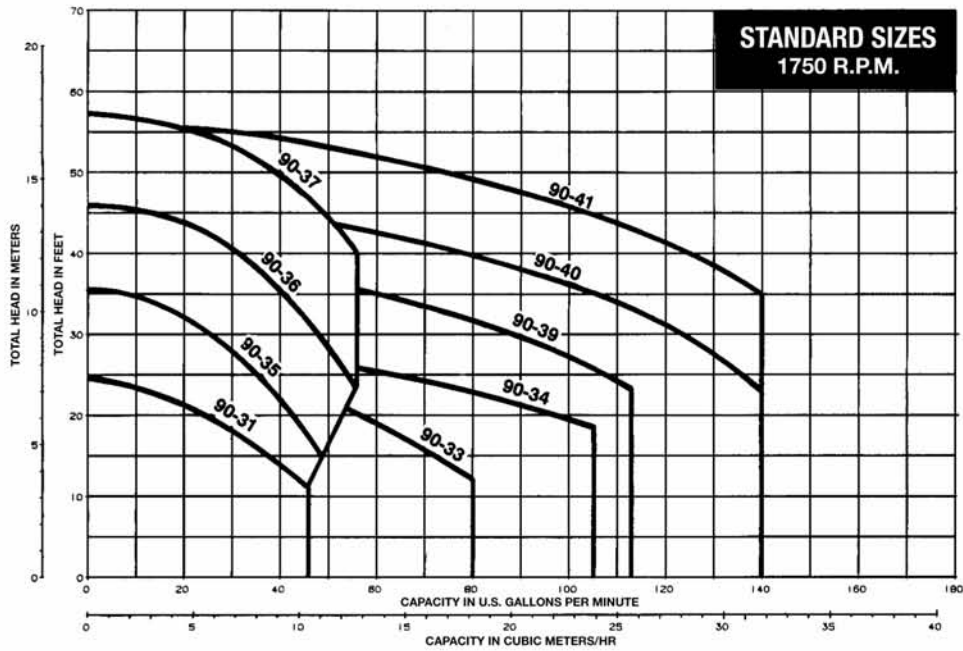
SERIES 90 STANDARD PUMPS

SERIES 90 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

Motors: 115/230 Volt, Single Phase or
 208-230/460 Volt, Three Phase
 60 Hertz
 Open Dripproof



For more exact matches of required performance, consult the Built to Order Performance Curves

SERIES 90 STANDARD PUMPS

3500 RPM

MODEL NO.	PUMP SIZE	SUCTION & DISCHARGE SIZE INS. NPT	MOTOR H.P.
90-1S	1 1/4AA	1 1/4	1/2
90-1T			
90-2S			3/4
90-2T			
90-3S			1
90-3T			
90-4S			1 1/2
90-4T			
90-5T			2
90-6S			
90-6T	1 1/2AA	1 1/2	3/4
90-7S			
90-7T			1
90-8S			
90-8T			1 1/2
90-9T			
90-10T			2
90-11S			
90-11T			3
90-12T			
90-13T	2AA	2	1 1/2
90-14T			2
90-15T			3
90-16T			5
90-17T	1 1/2A	1 1/2	7 1/2
90-18T			10
90-19T			7 1/2
90-20T	2A	2	10
90-21T			15

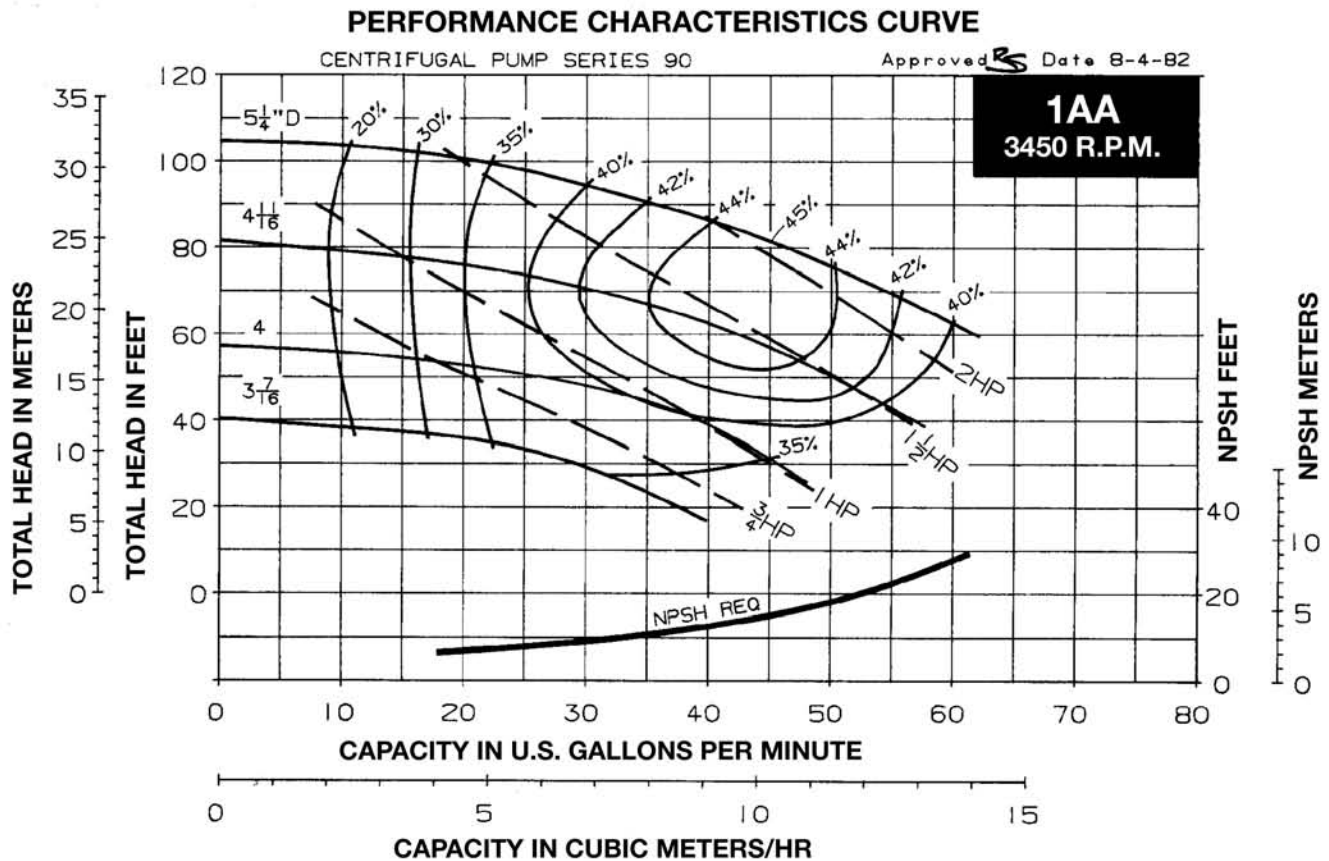
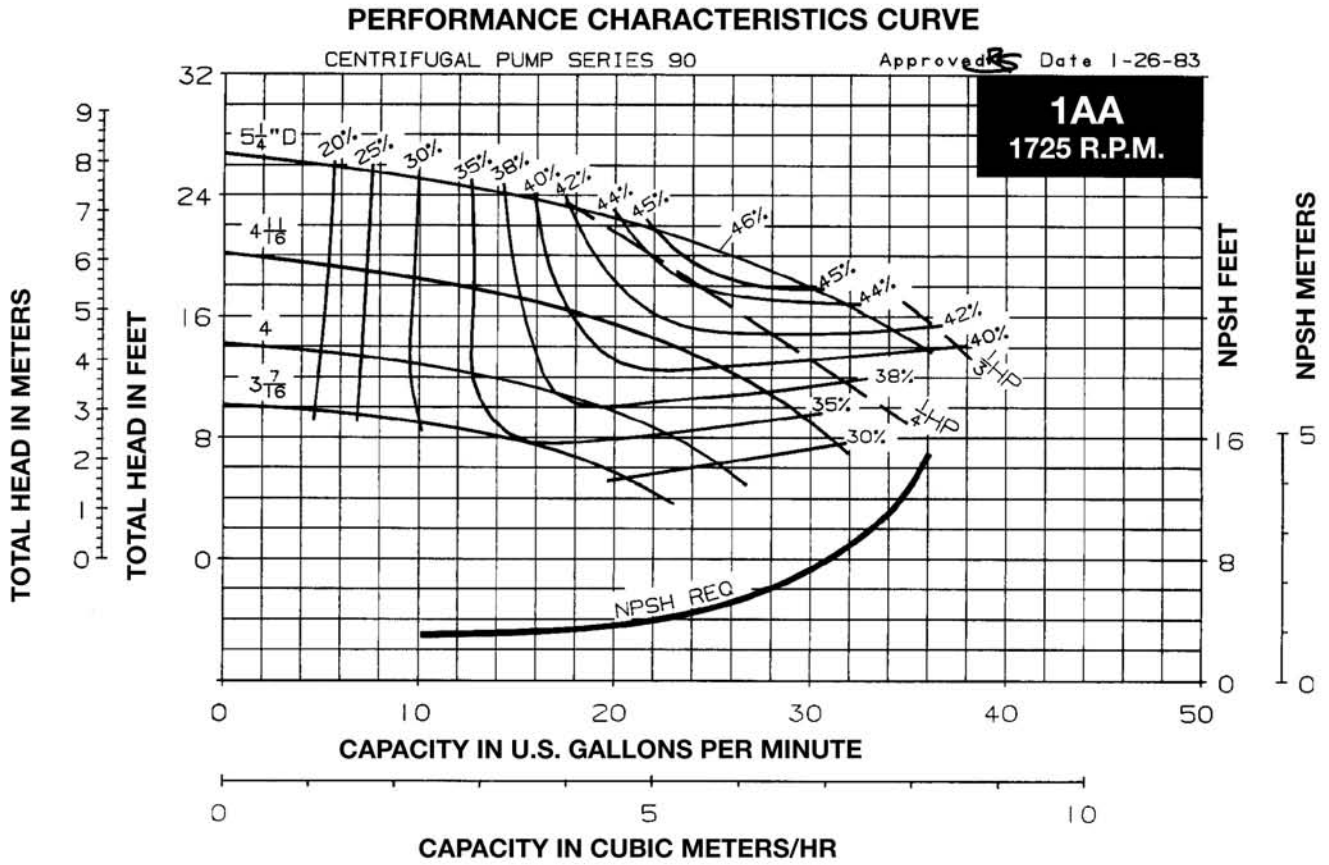
1750 RPM

MODEL NO.	PUMP SIZE	SUCTION & DISCHARGE SIZE INS. NPT	MOTOR H.P.
90-31S	1 1/4AA	1 1/4	1/4
90-31T			
90-33S	1 1/2AA	1 1/2	1/2
90-33T			
90-34S	2AA	2	3/4
90-34T			
90-35S	1 1/2A	1 1/2	1/2
90-35T			3/4
90-36S			
90-36T			
90-37S			1
90-37T			
90-39S			
90-39T	2A	2	1 1/2
90-40S			
90-40T			2
90-41T			

Single Phase – unit no. ending “S” 115/230 volt, single phase, 60 hertz, Open Dripproof
 Three Phase – unit no. in “T” 208-230/460 volt, three phase, 60 hertz, Open Dripproof

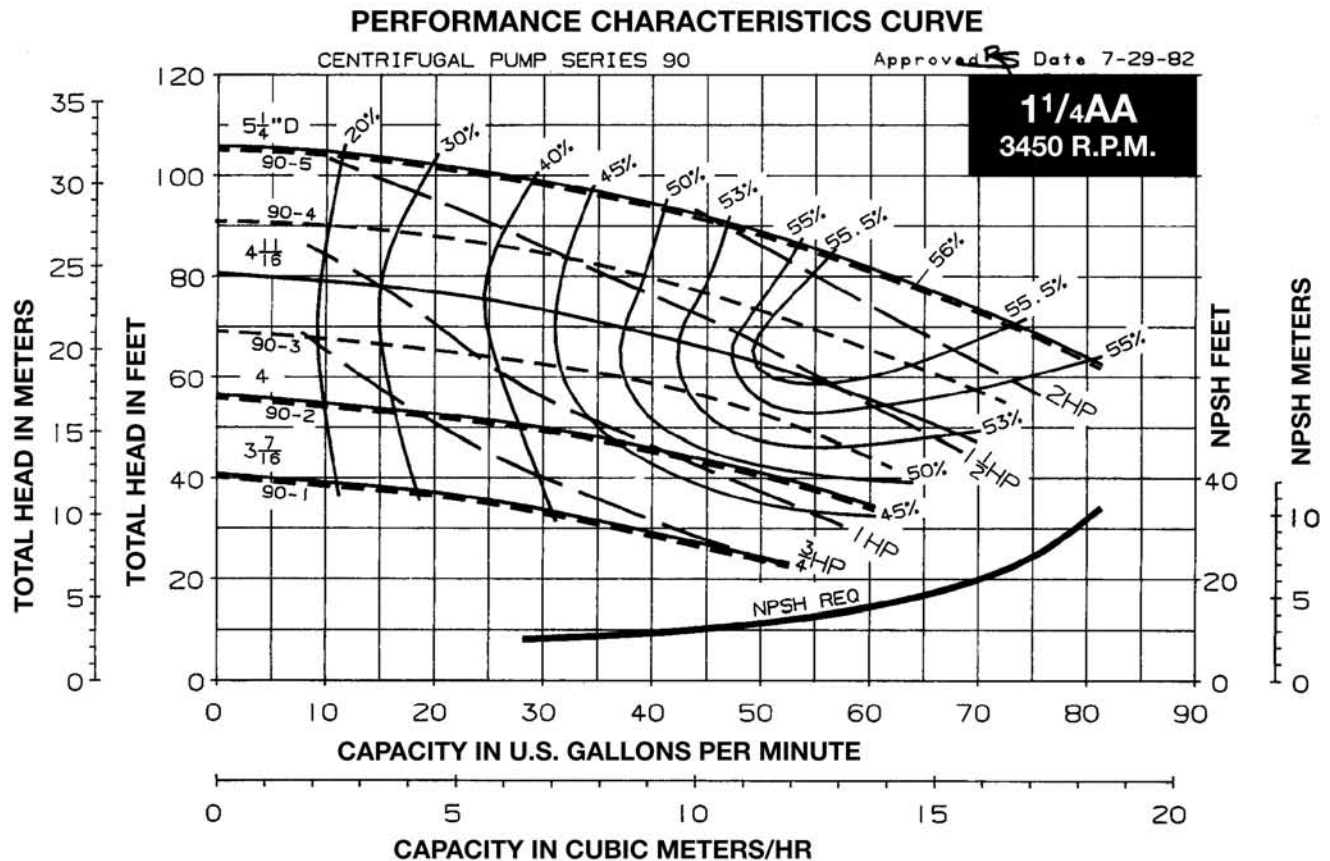
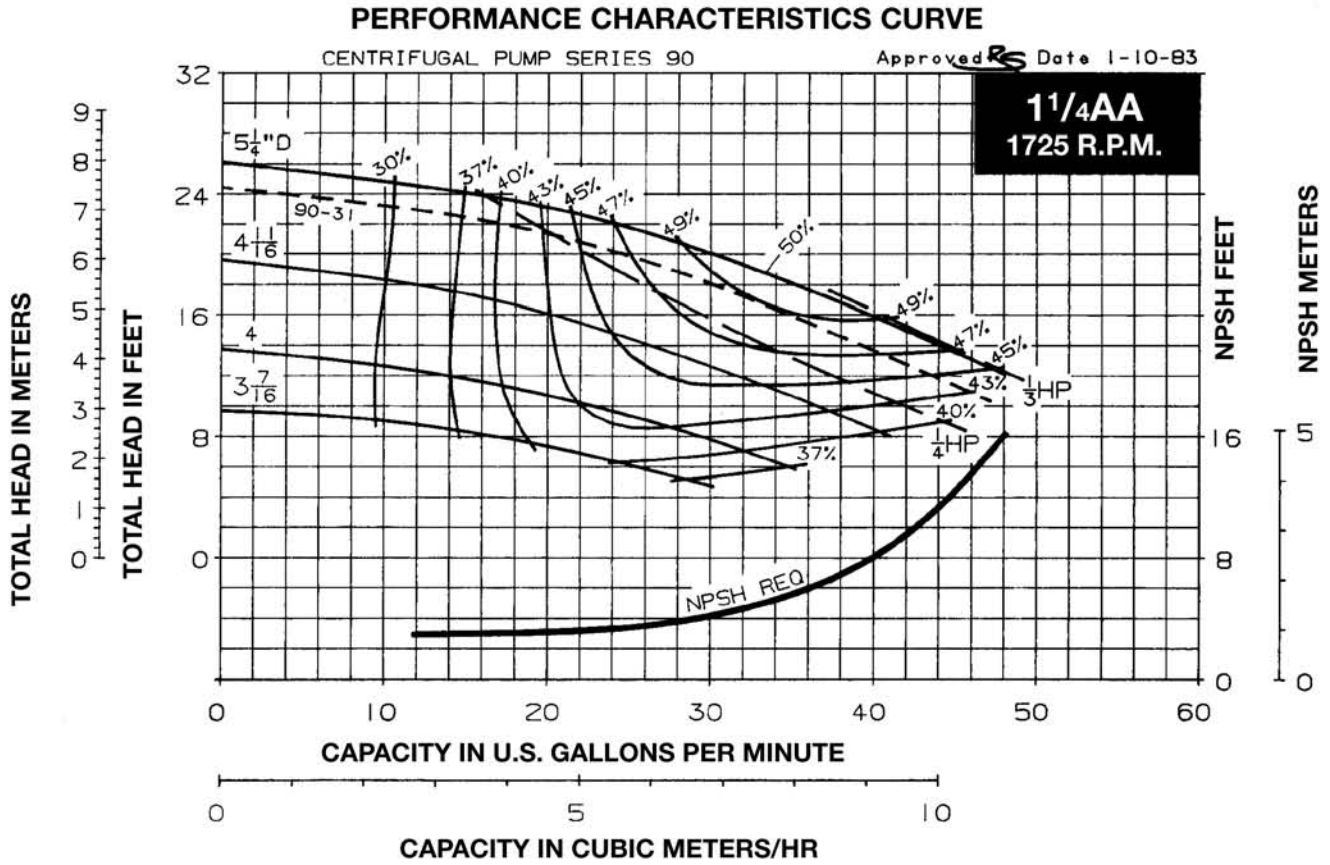
SERIES 90 STANDARD PUMPS

SERIES 90 PUMP PERFORMANCE CURVES



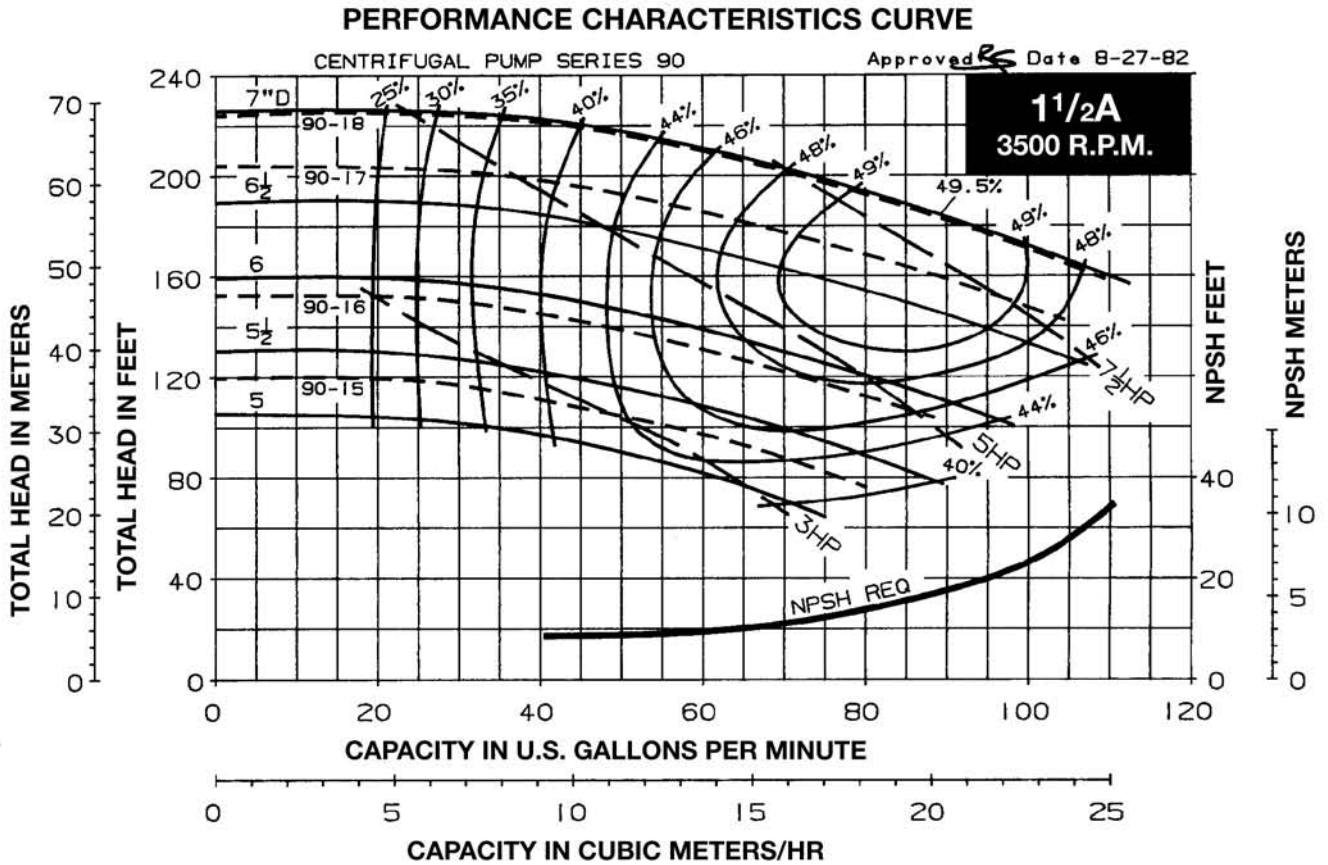
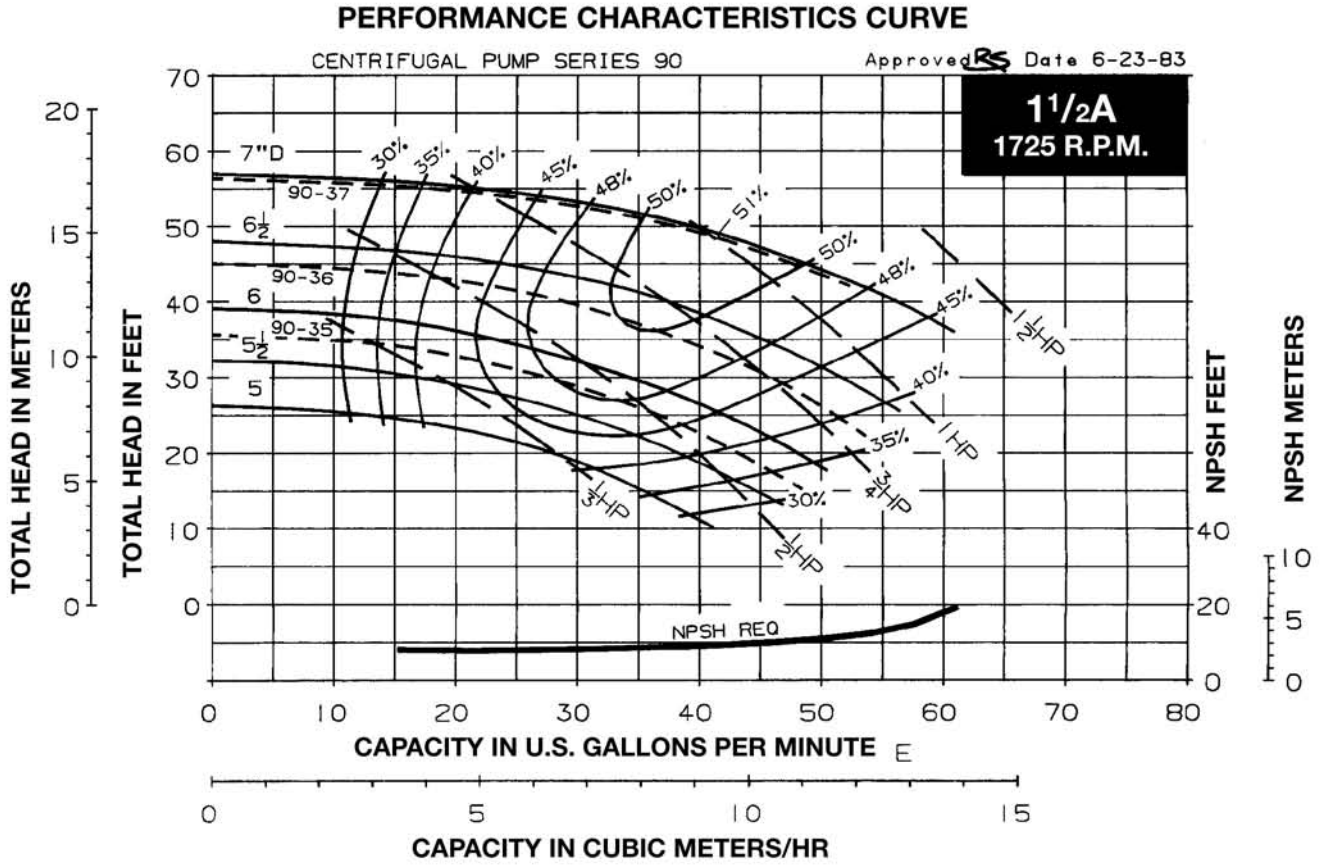
SERIES 90 STANDARD PUMPS

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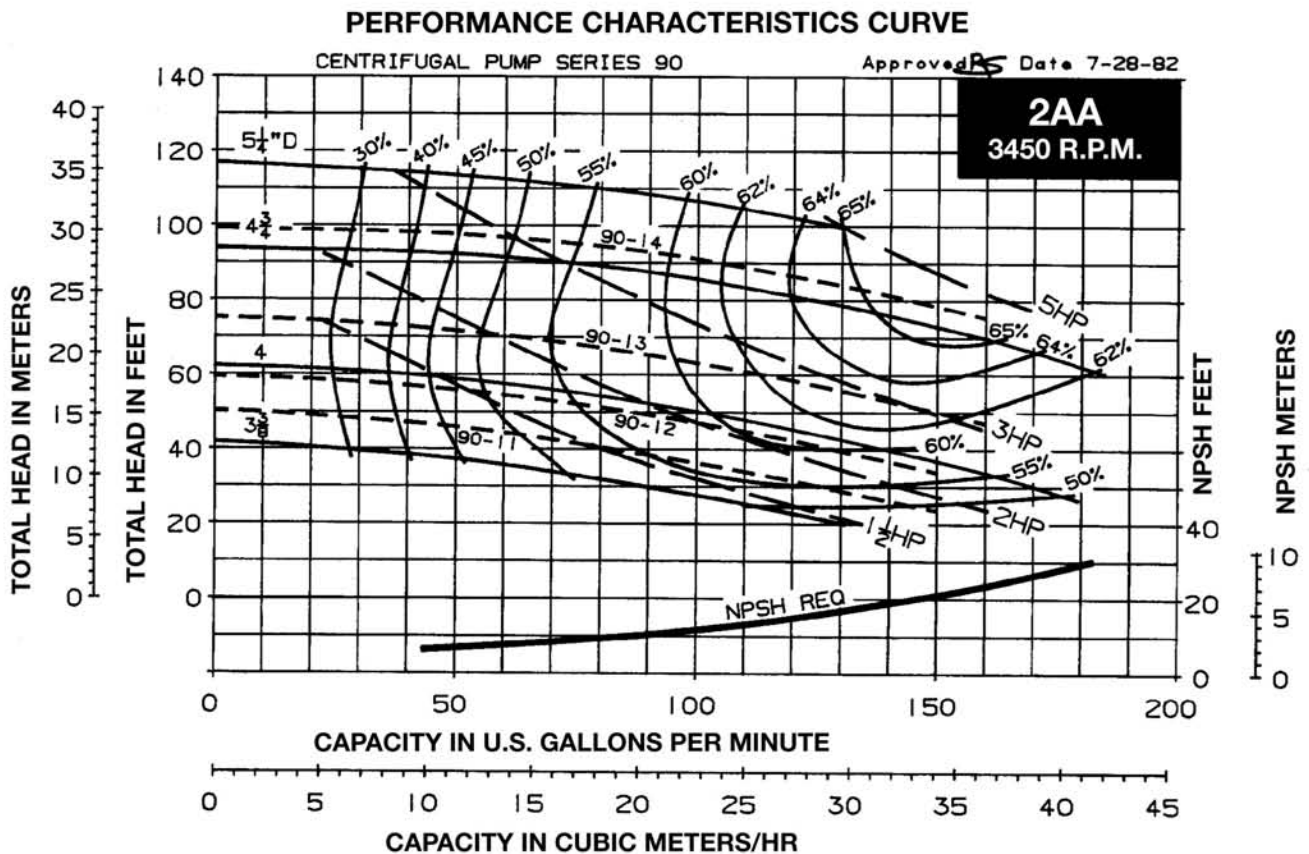
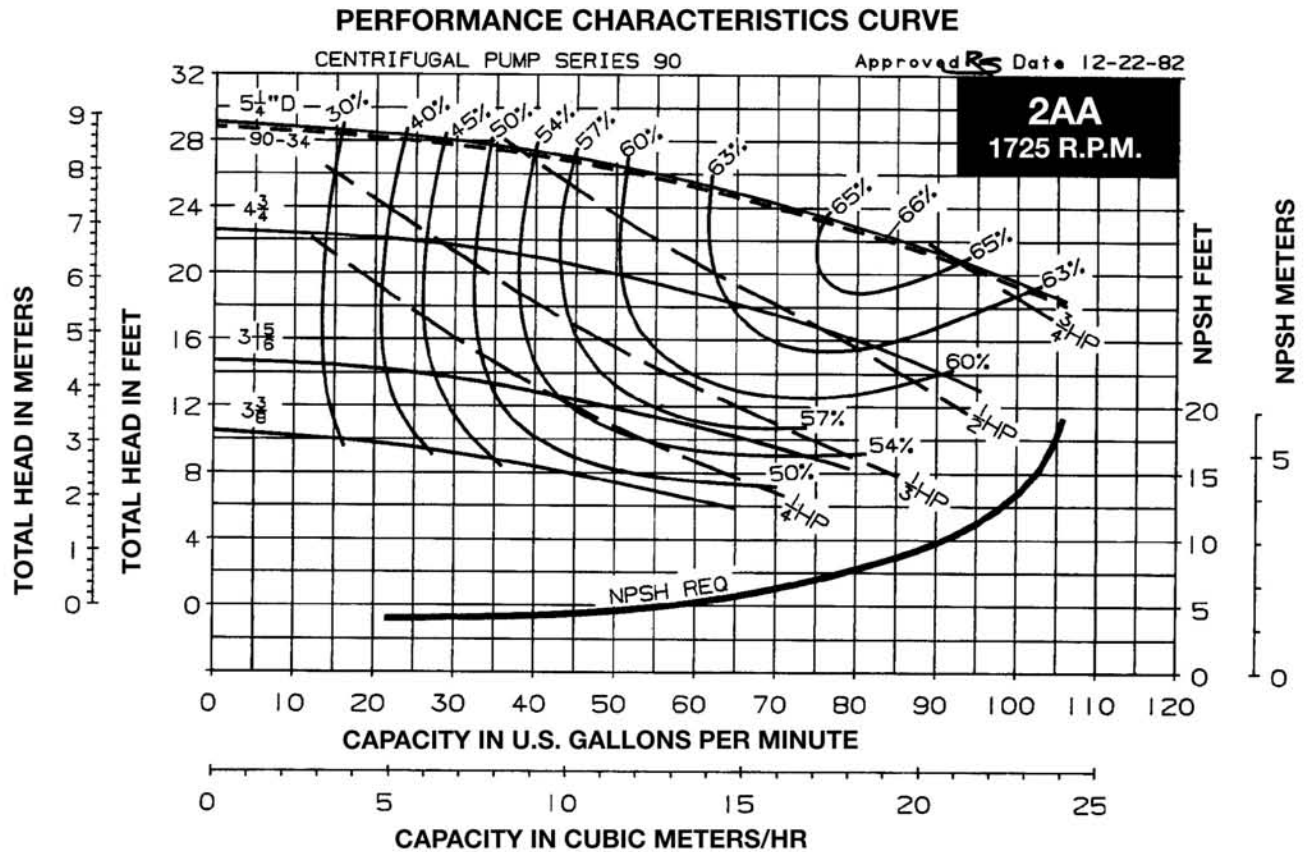
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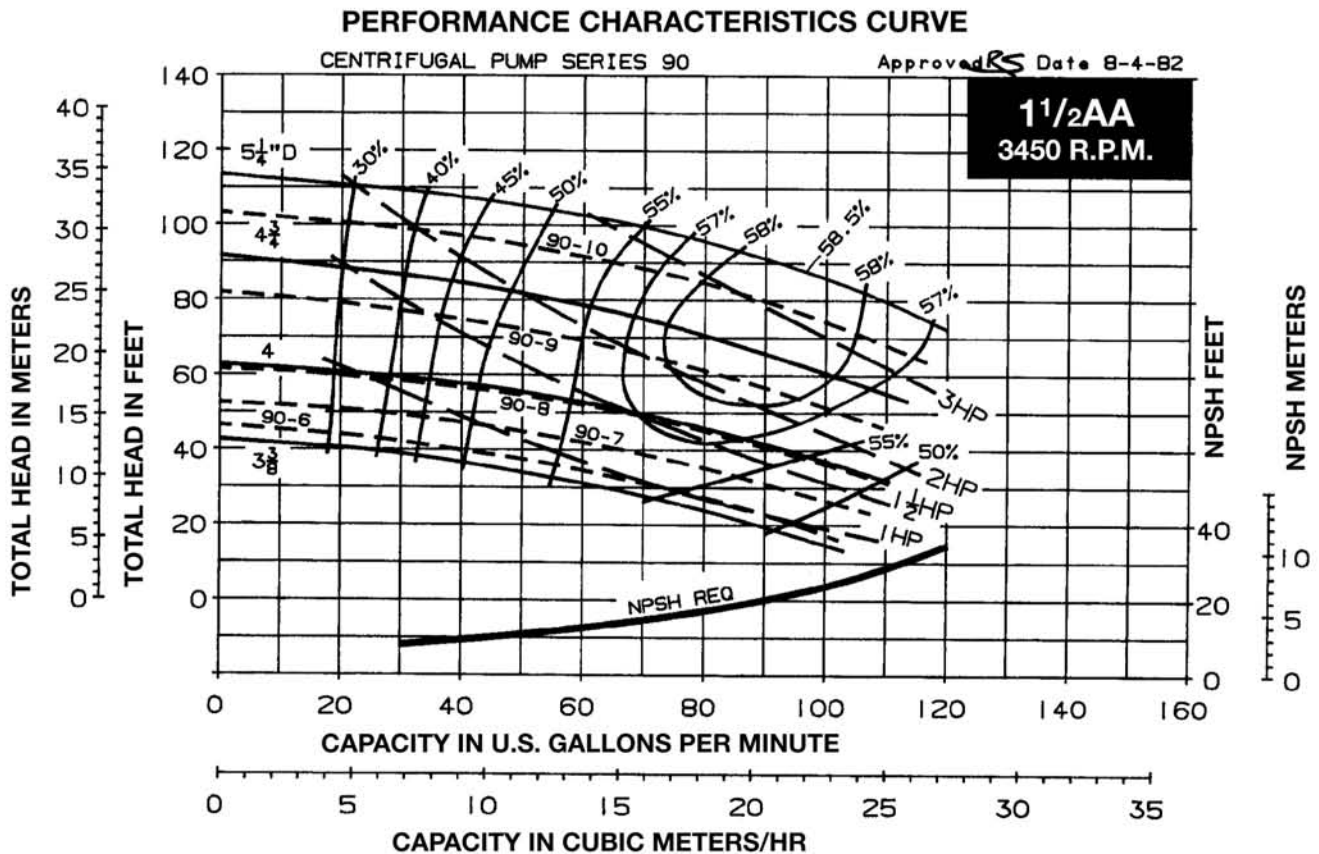
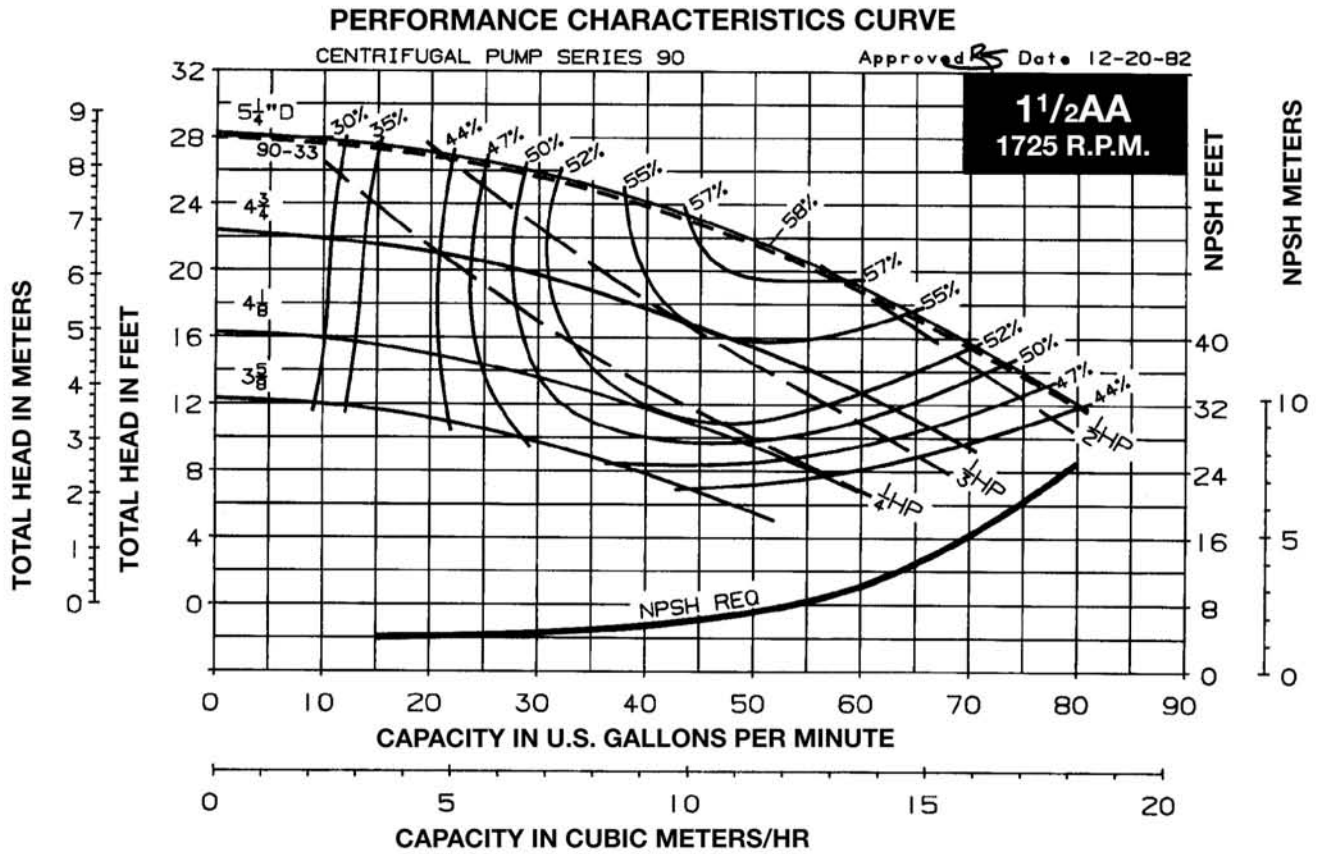
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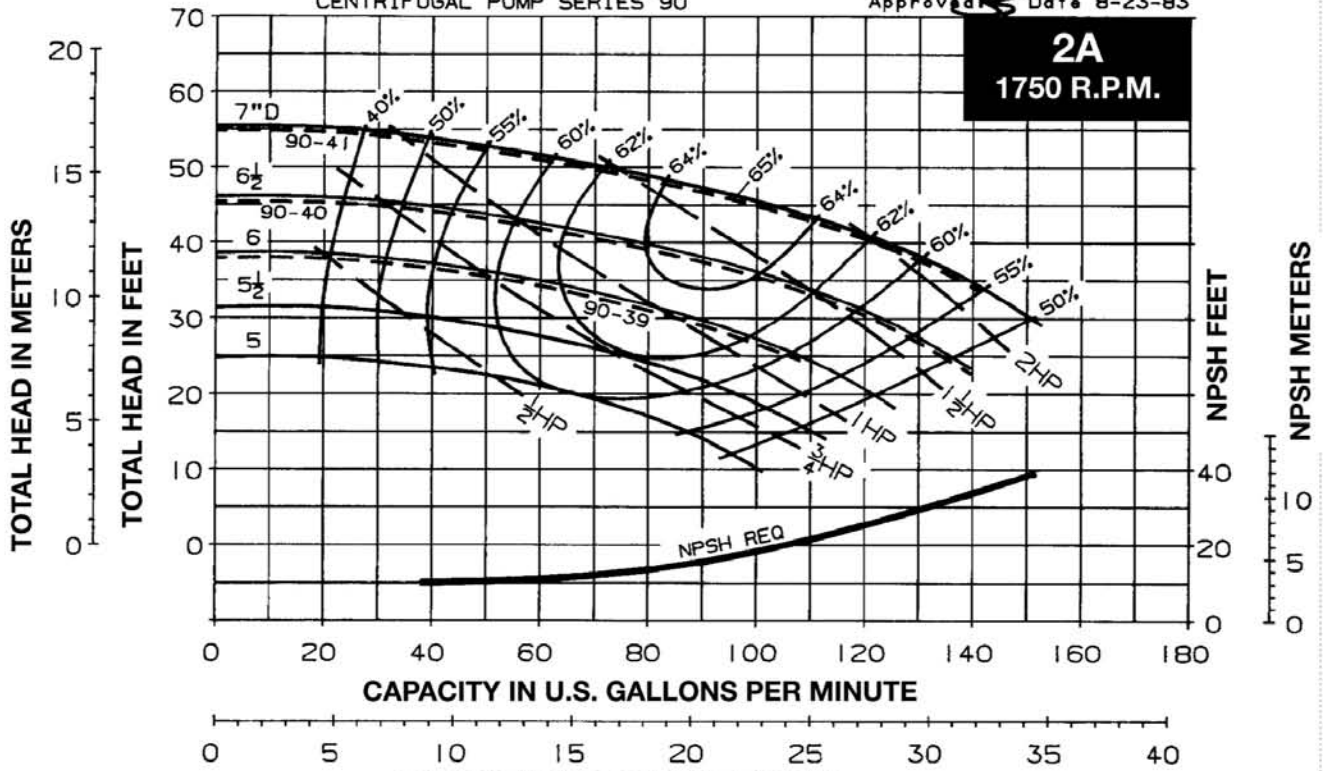
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SERIES 90 PUMP PERFORMANCE CURVES

PERFORMANCE CHARACTERISTICS CURVE

CENTRIFUGAL PUMP SERIES 90

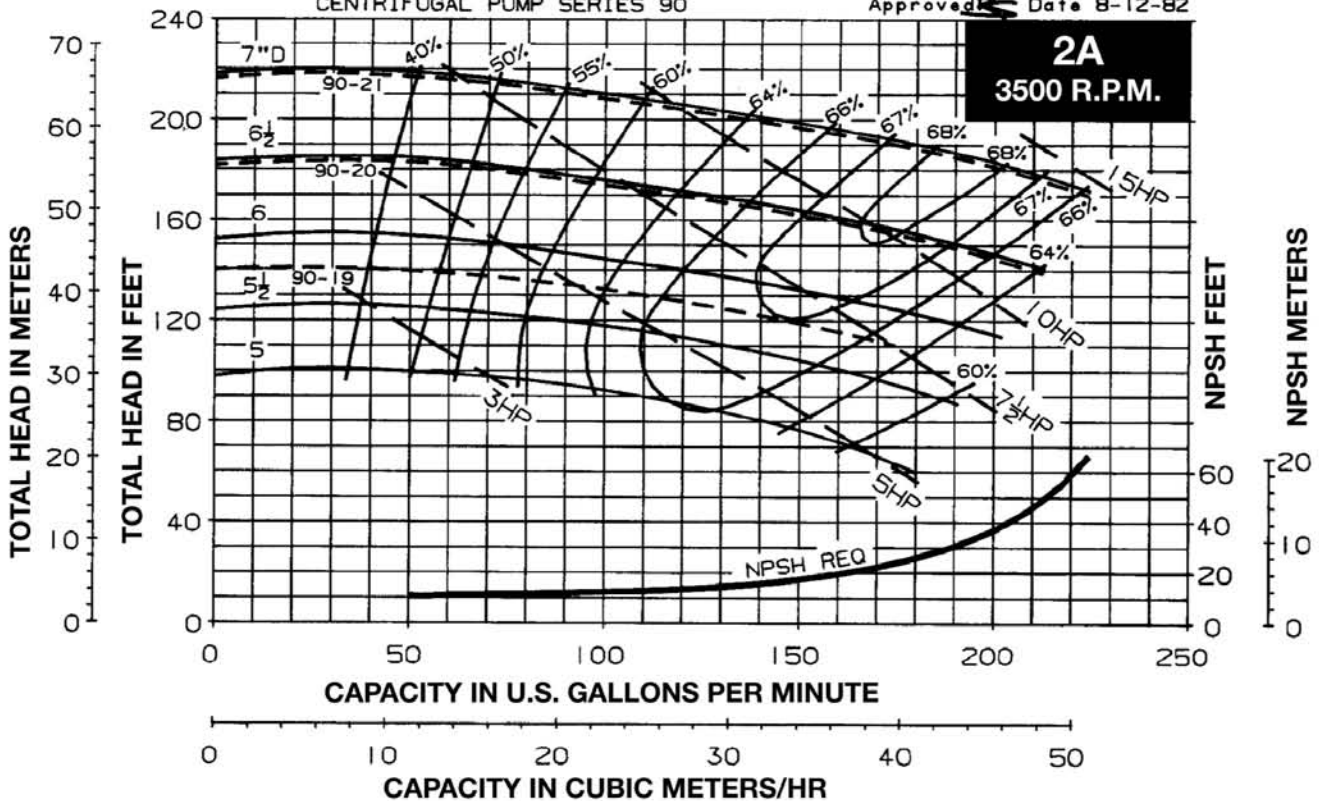
Approved  Date 8-23-83



PERFORMANCE CHARACTERISTICS CURVE

CENTRIFUGAL PUMP SERIES 90

Approved  Date 8-12-82



SERIES 90 STANDARD PUMPS

NOTES

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www.xyleminc.com/brands/bellgossett



Bell & Gossett

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