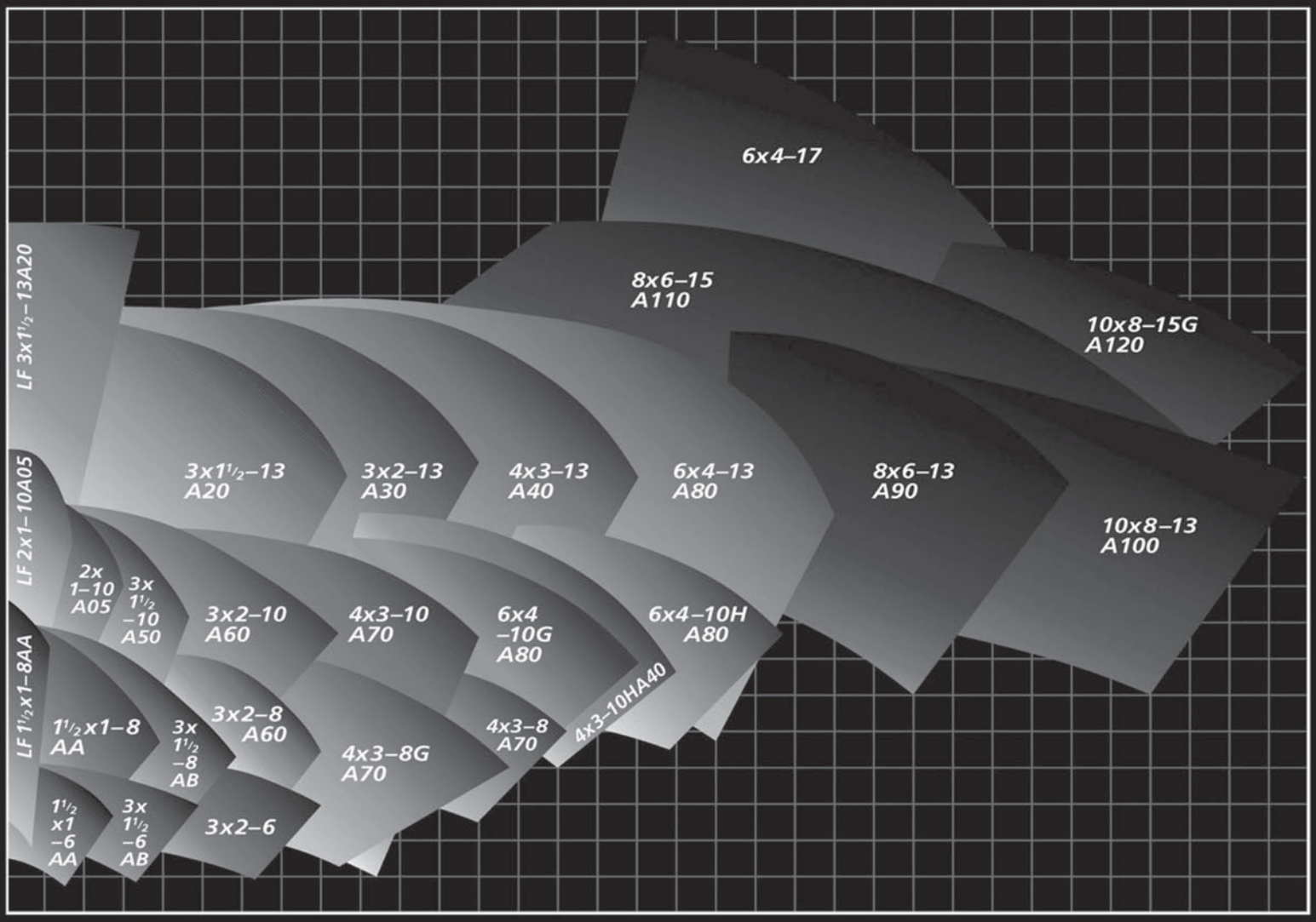
GRISWOLD™
A DOVER COMPANY

811

PERFORMANCE CURVES



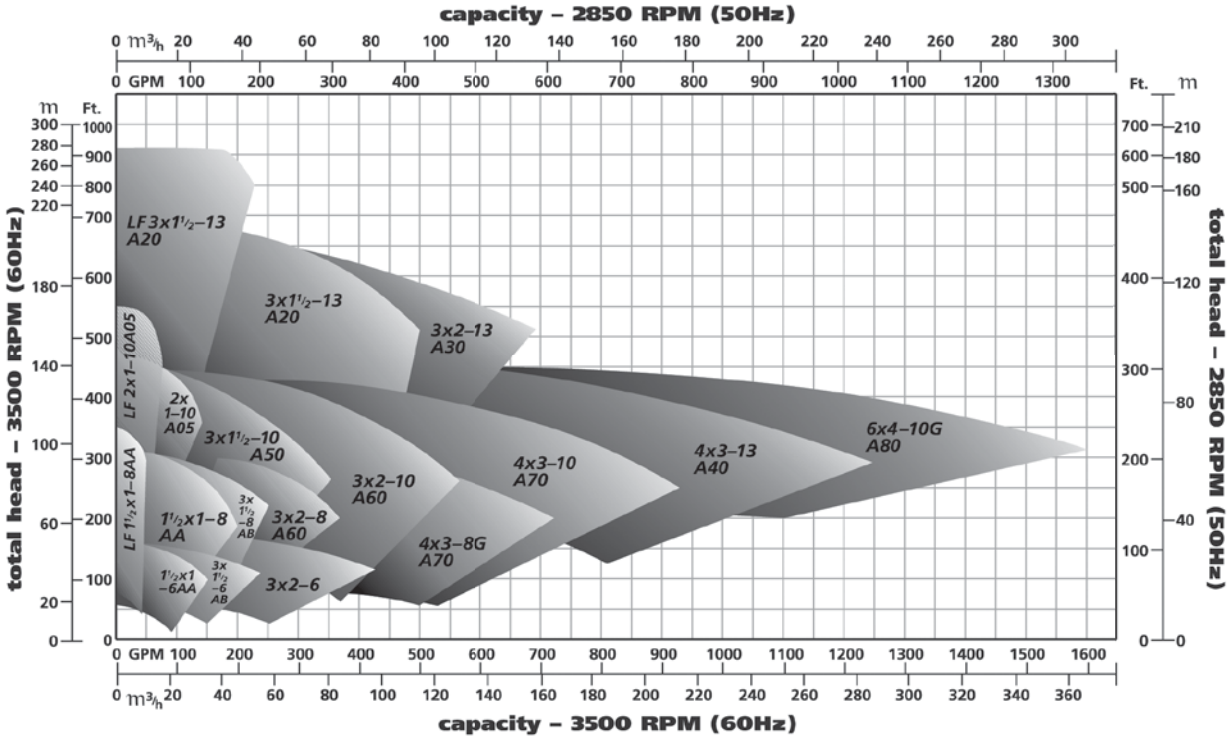
PERFORMANCE

DARE TO **COMPARE**

GRISWOLD™
A DOVER COMPANY

811 ANSI Performance

3500/2850 RPM



1750/1450 RPM

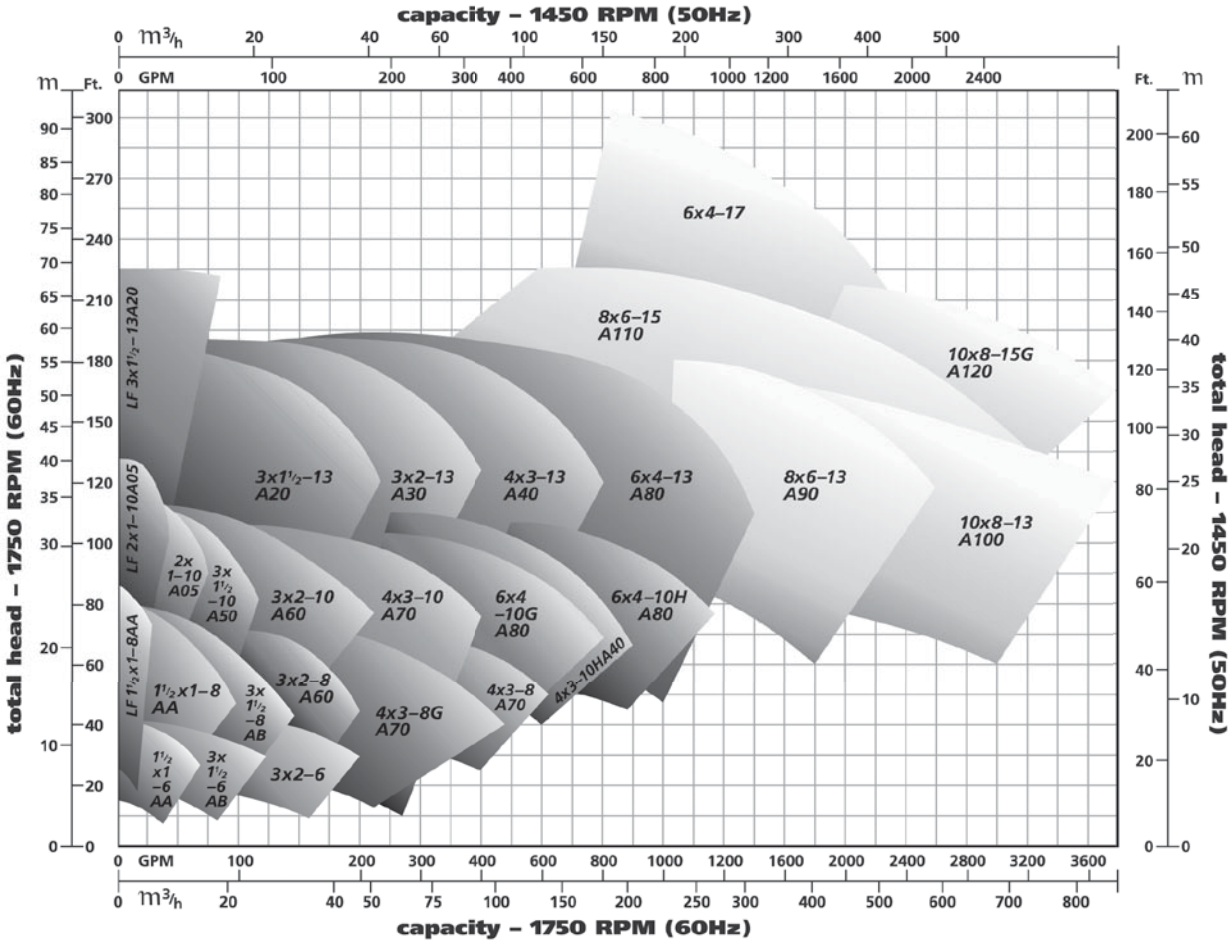
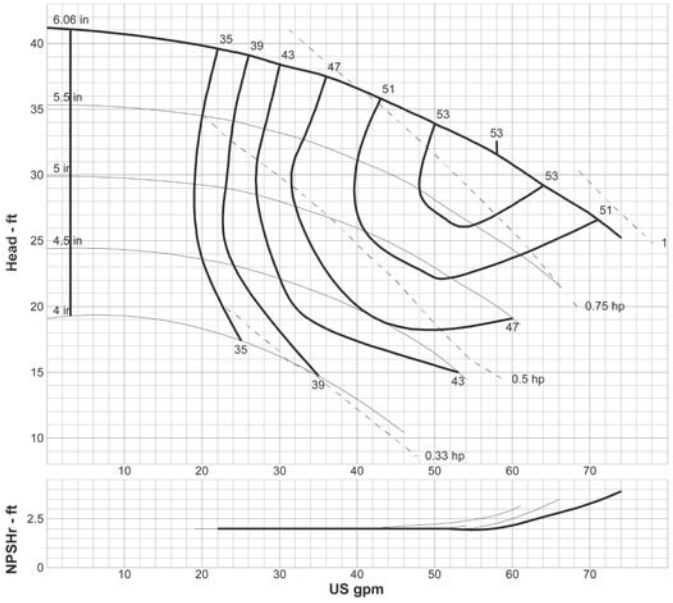


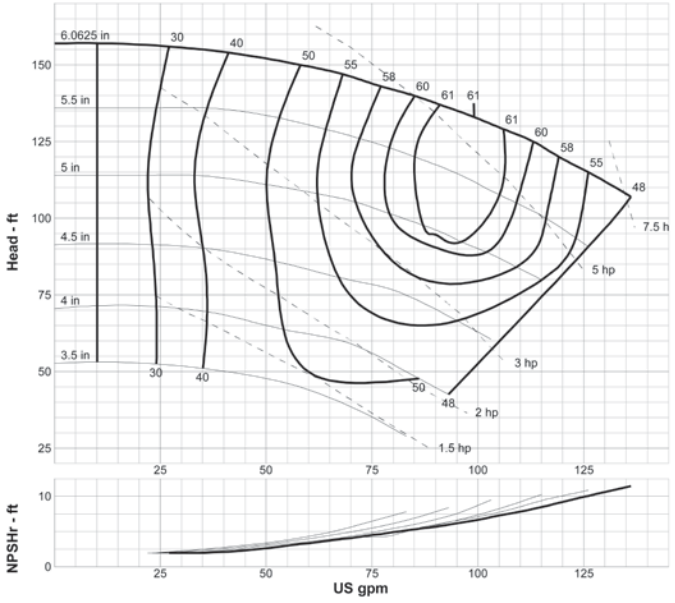
TABLE OF CONTENTS

PERFORMANCE CURVES

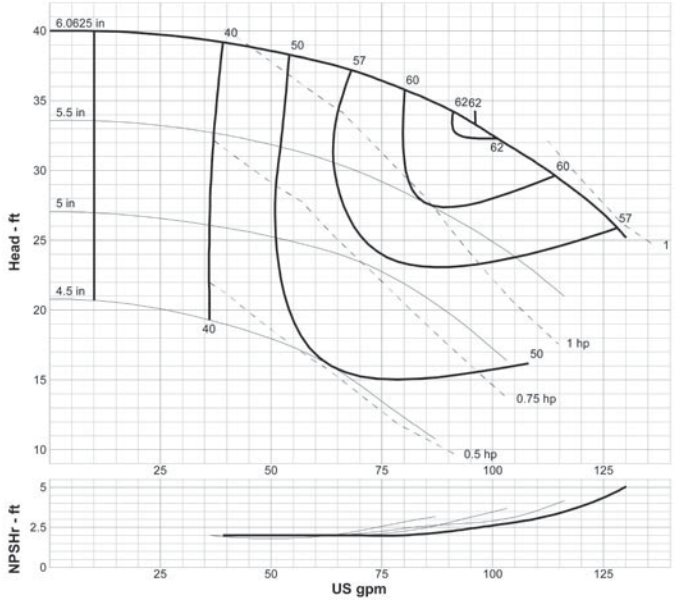
1 1/2 x 1 - 6AA 1800 RPM Curve: G-1801



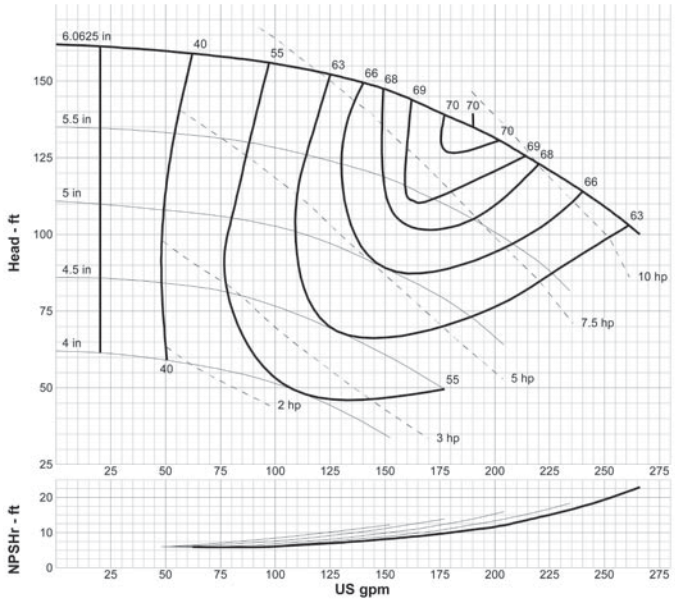
1 1/2 x 1 - 6AA 3600 RPM Curve: G-3601



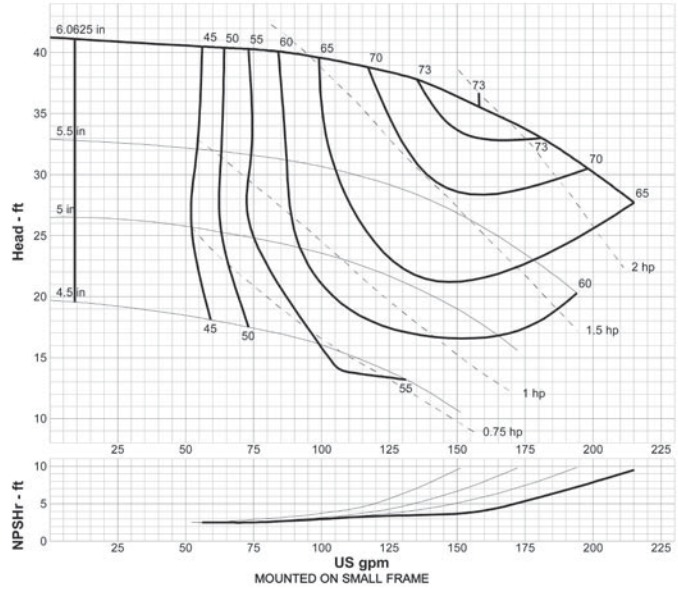
3 x 1 1/2 - 6AB 1800 RPM Curve: G-1802



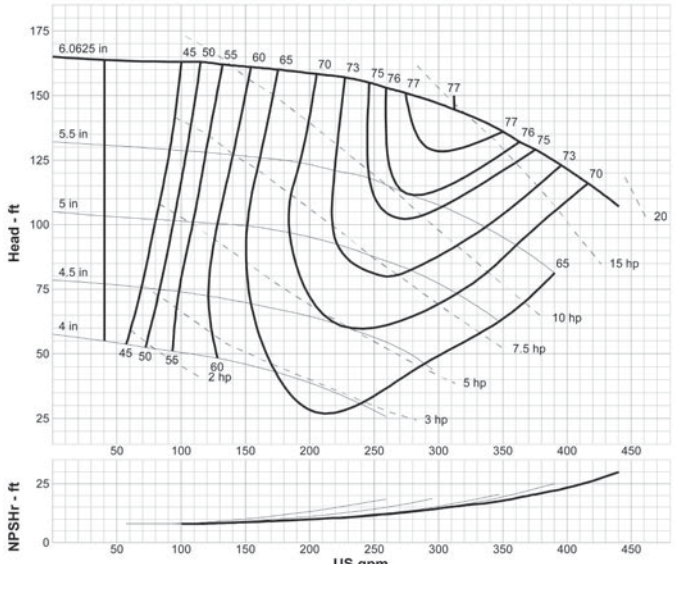
3 x 1 1/2 - 6AB 3600 RPM Curve: G-3602



3 x 2 - 6AC 1800 RPM Curve: G-1803

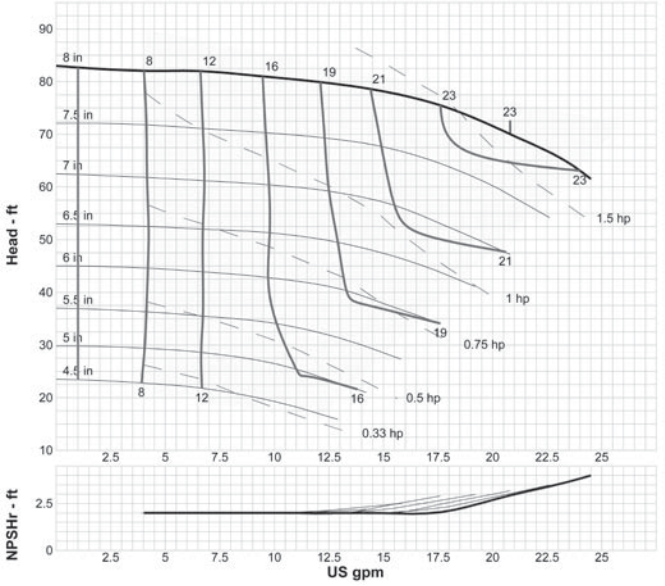


3 x 2 - 6AC 3600 RPM Curve: G-3603

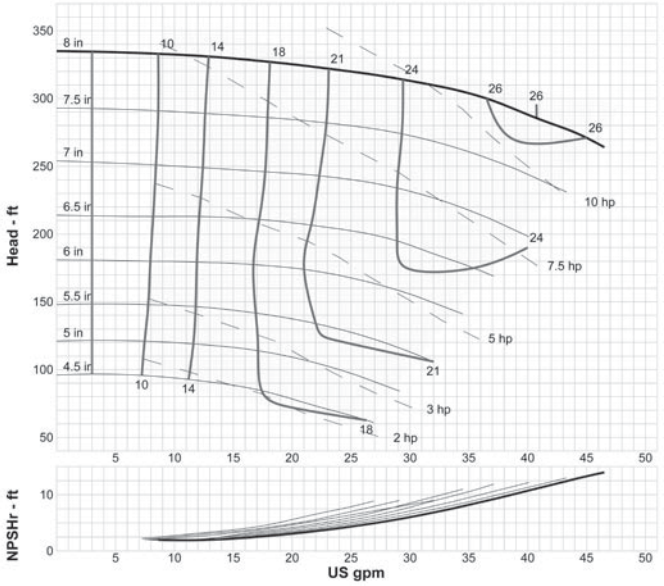


PERFORMANCE CURVES

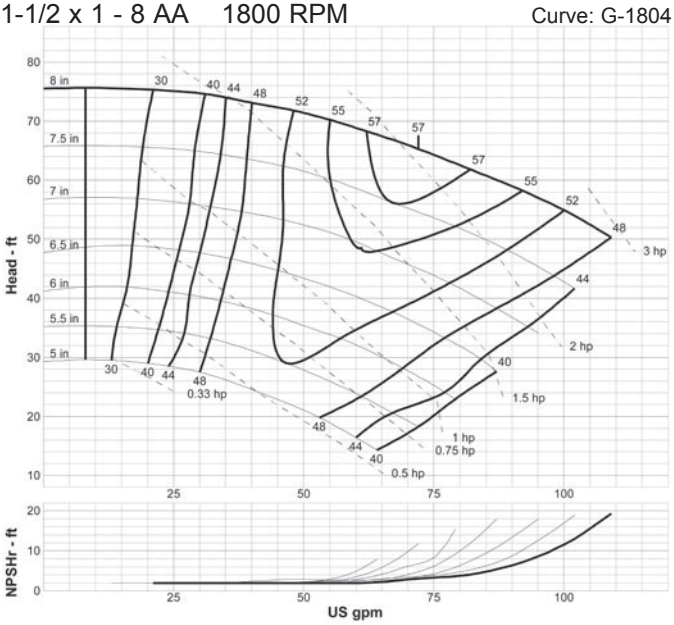
LF1-1/2 x 1 - 8 AA 1800 RPM Curve: GLF-1804



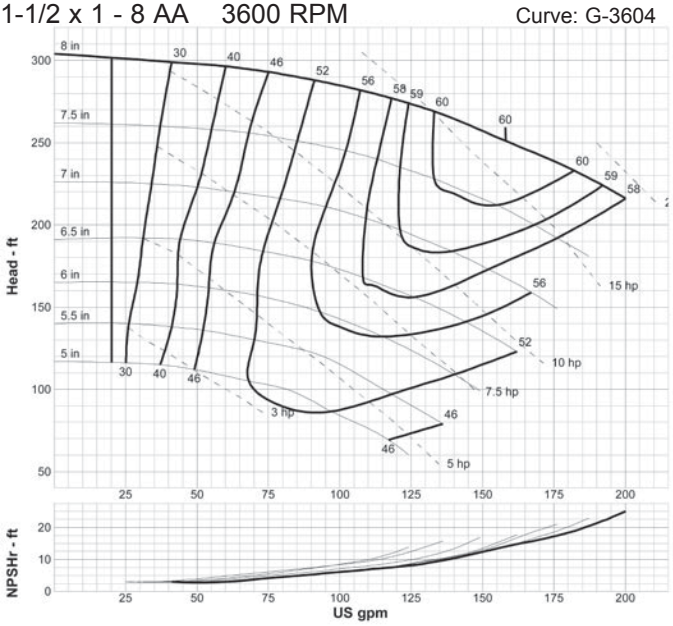
LF1-1/2 x 1 - 8 AA 3600 RPM Curve: GLF-3604



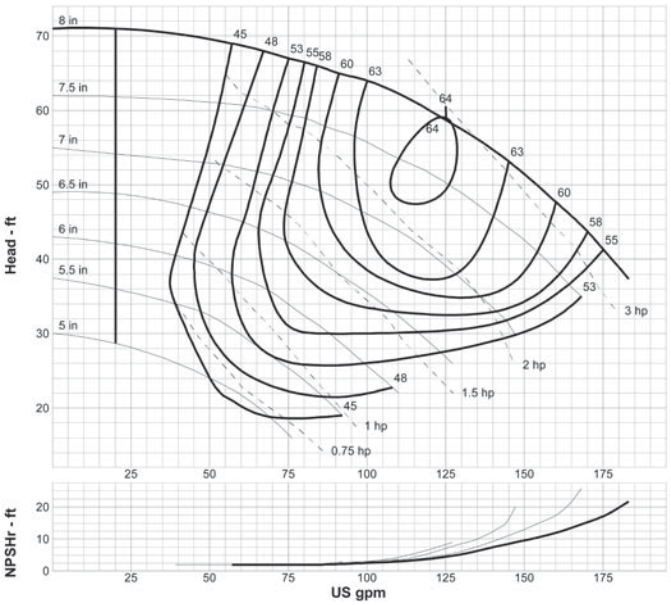
1-1/2 x 1 - 8 AA 1800 RPM Curve: G-1804



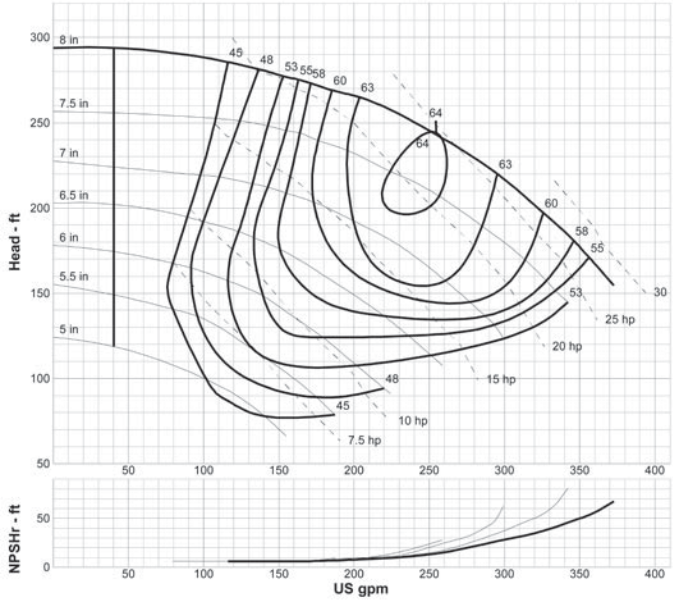
1-1/2 x 1 - 8 AA 3600 RPM Curve: G-3604



3 x 1-1/2 - 8 AB 1800 RPM Curve: G-1805

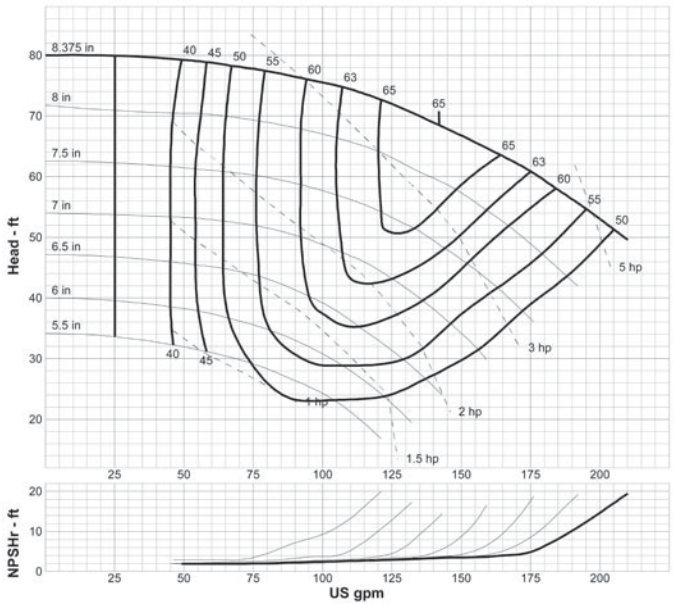


3 x 1-1/2 - 8 AB 3600 RPM Curve: G-3605

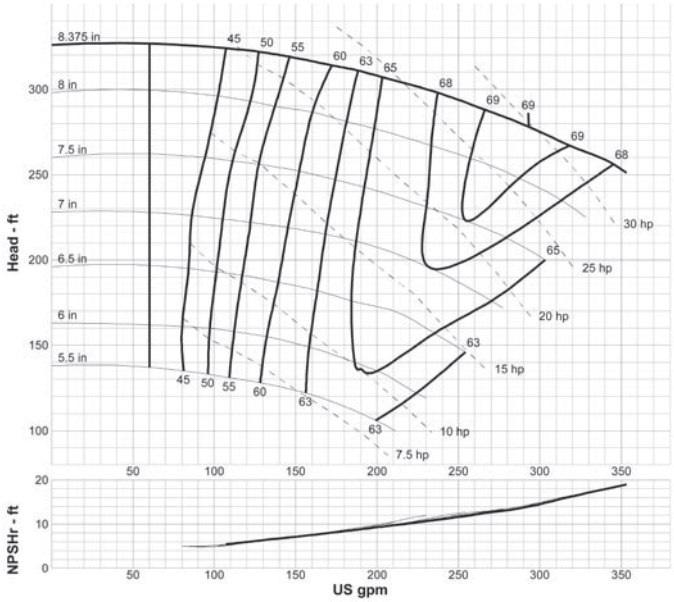


PERFORMANCE CURVES

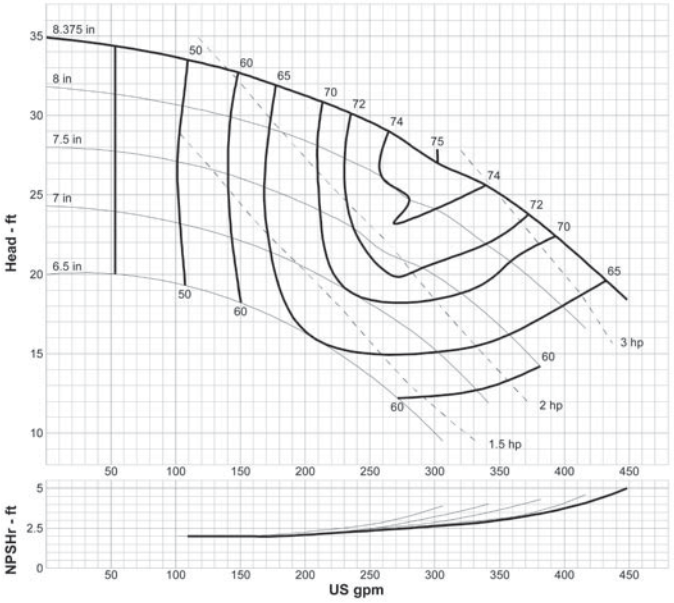
3 x 2 - 8 A60 1800 RPM Curve: G-1807



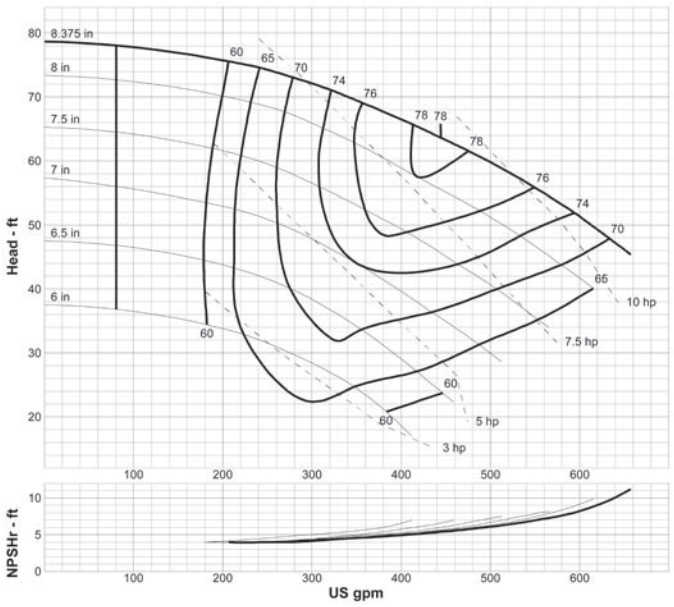
3 x 2 - 8 A60 3600 RPM Curve: G-3607



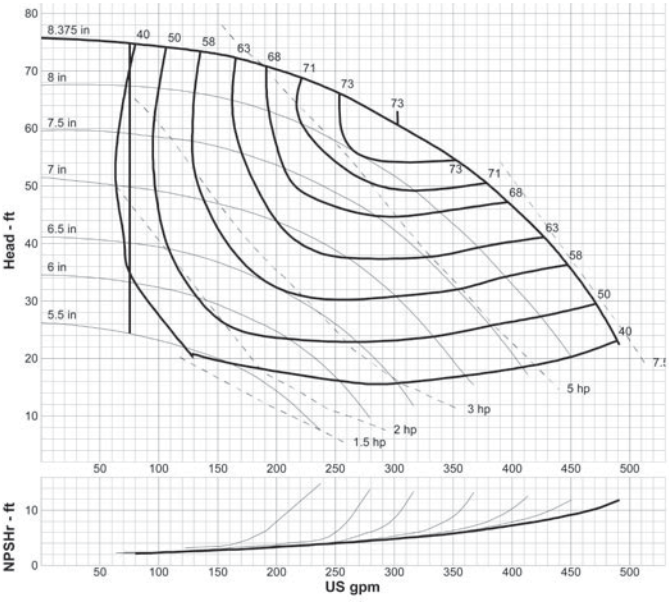
4 x 3 - 8 A70 1200 RPM Curve: G-1208



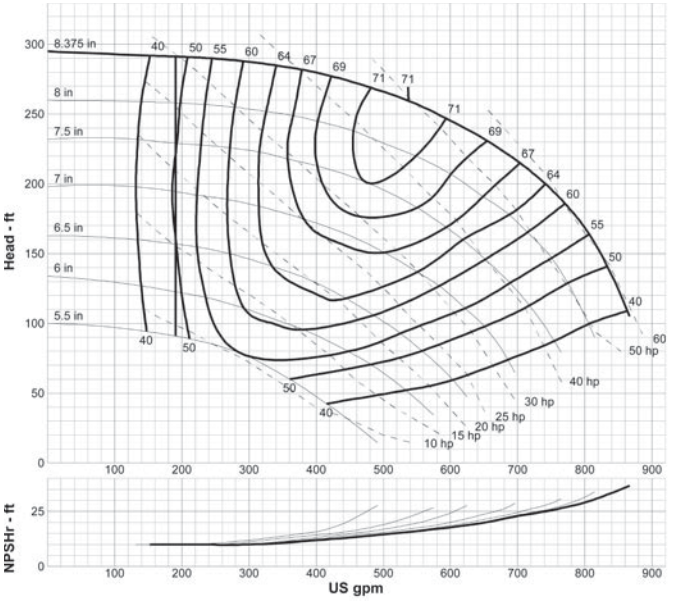
4 x 3 - 8 A70 1800 RPM Curve: G-1808



4 x 3 - 8G A70 1800 RPM Curve: G-1809

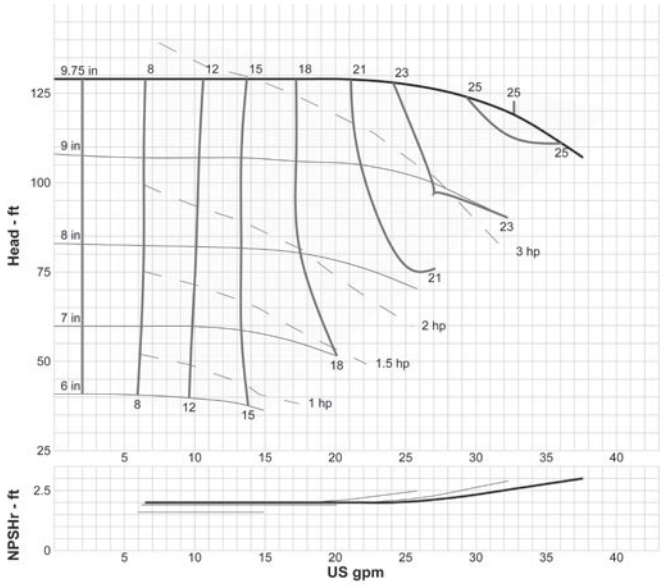


4 x 3 - 8G A70 3600 RPM Curve: G-3609

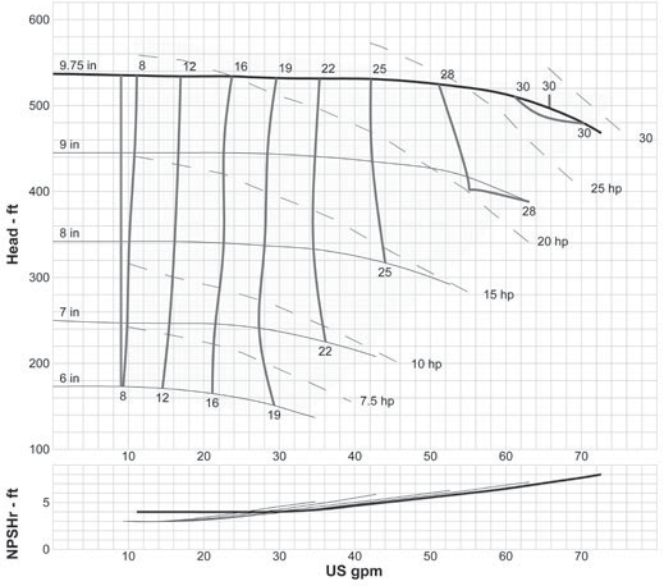


PERFORMANCE CURVES

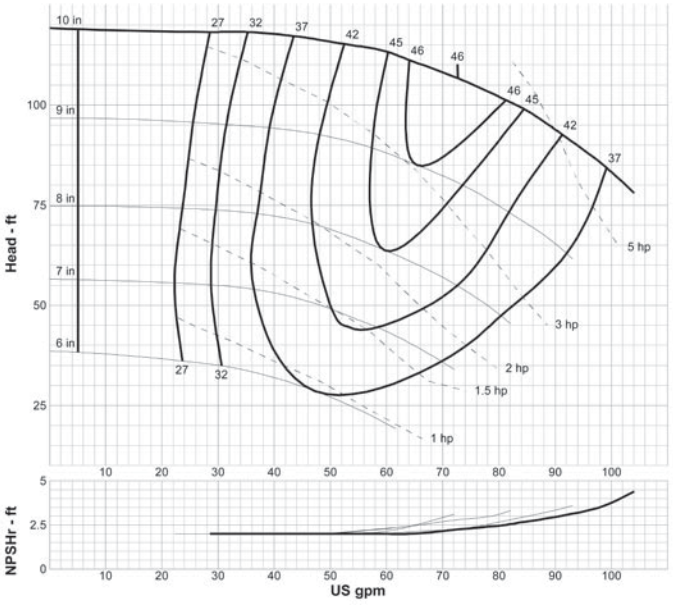
LF2 x 1 - 10 A05 1800 RPM Curve: GLF-1810



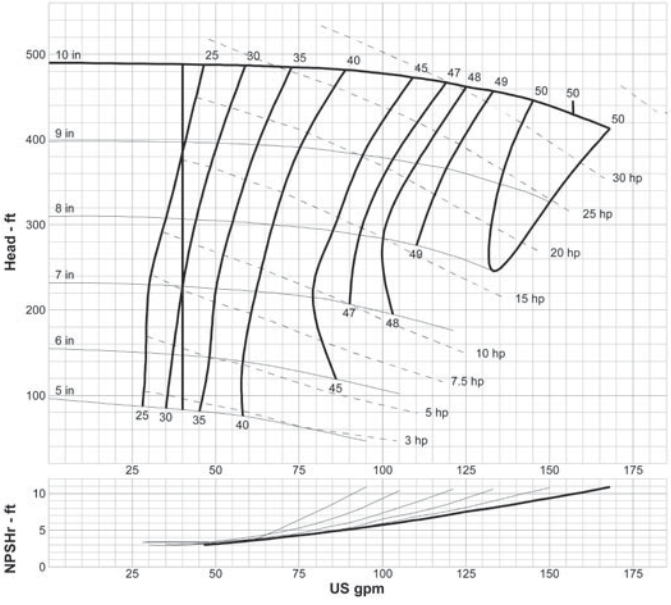
LF2 x 1 - 10 A05 3600 RPM Curve: GLF-3610



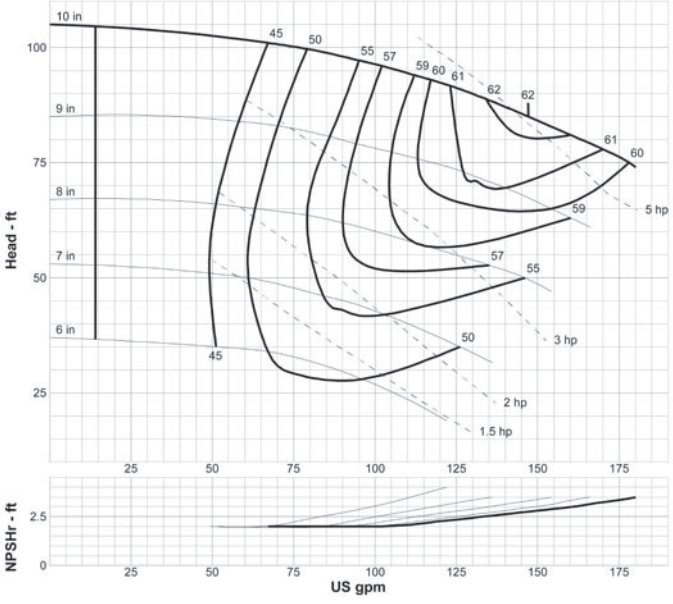
2 x 1 - 10 A05 1800 RPM Curve: G-1810



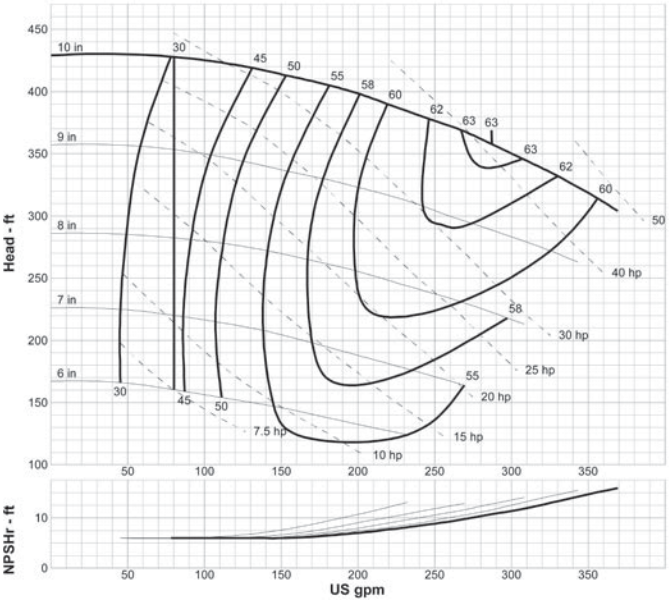
2 x 1 - 10 A05 3600 RPM Curve: G-3610



3 x 1-1/2 - 10 A50 1800 RPM Curve: G-1811

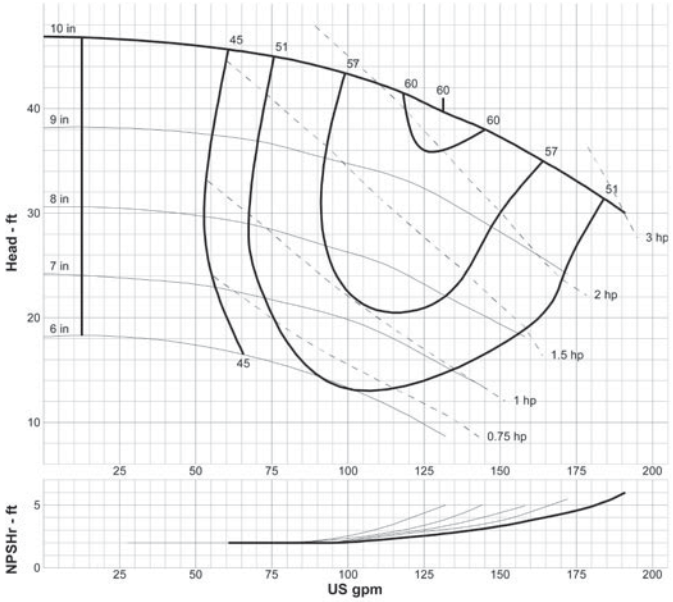


3 x 1-1/2 - 10 A50 3600 RPM Curve: G-3611

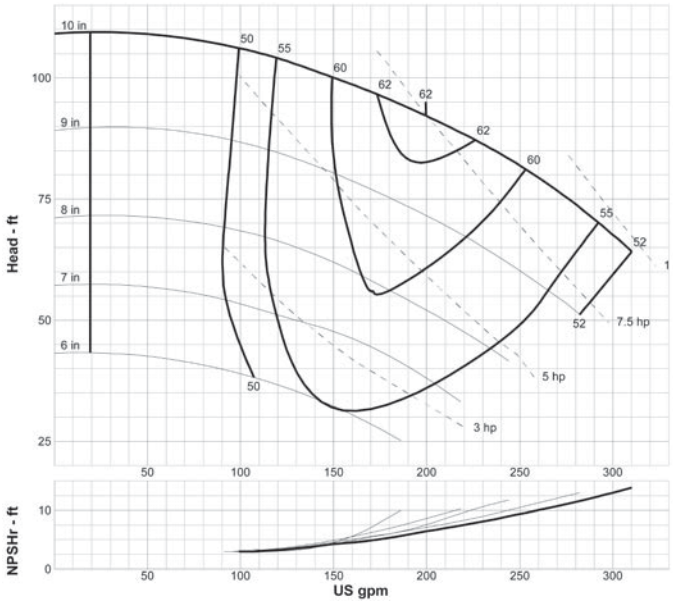


PERFORMANCE CURVES

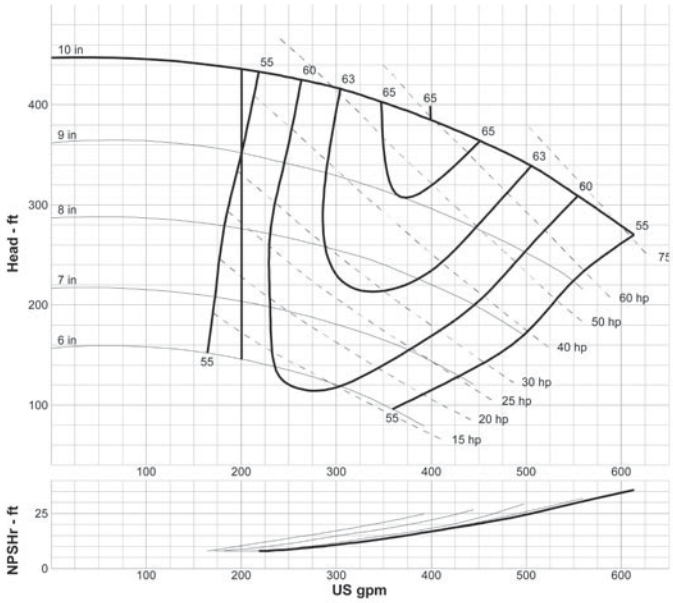
3 x 2 - 10 A60 1200 RPM Curve: G-1212



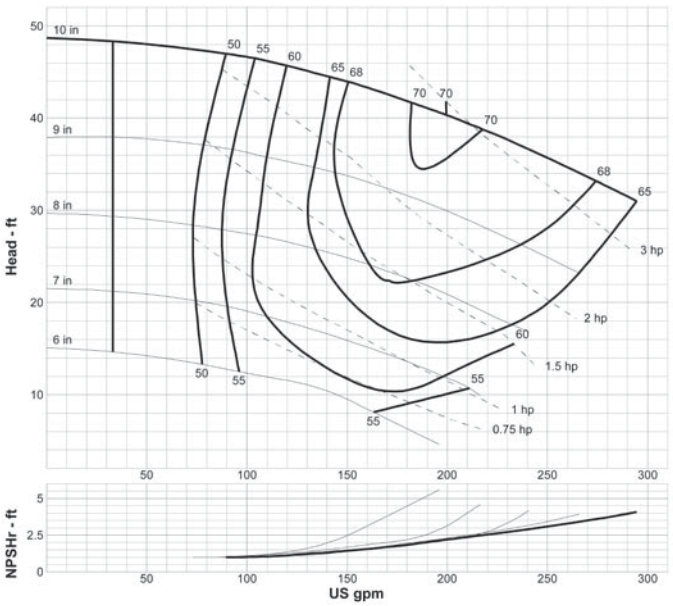
3 x 2 - 10 A60 1800 RPM Curve: G-1812



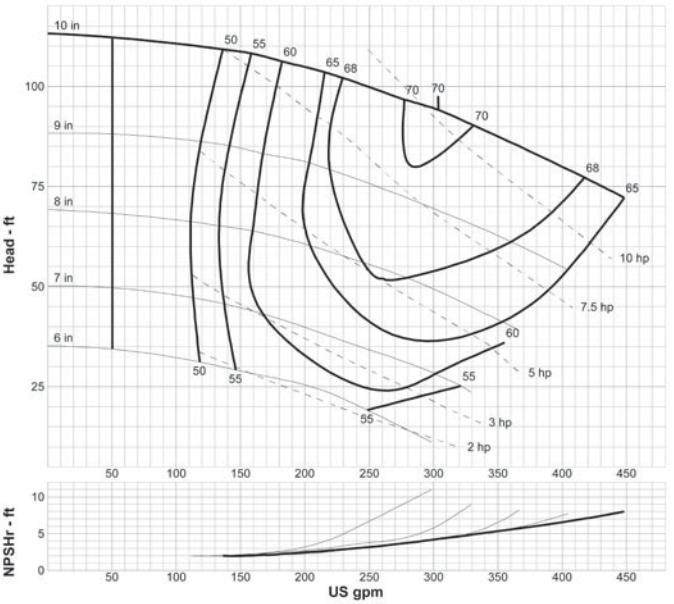
3 x 2 - 10 A60 3600 RPM Curve: G-3612



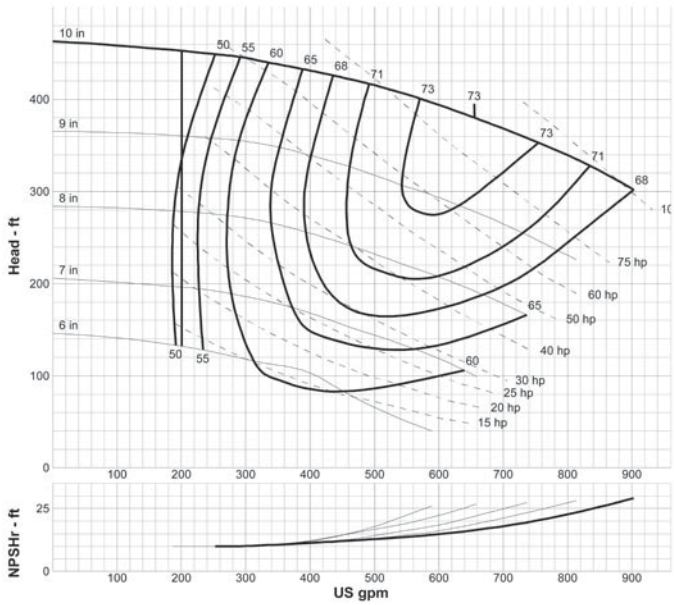
4 x 3 - 10 A70 1200 RPM Curve: G-1213



4 x 3 - 10 A70 1800 RPM Curve: G-1813

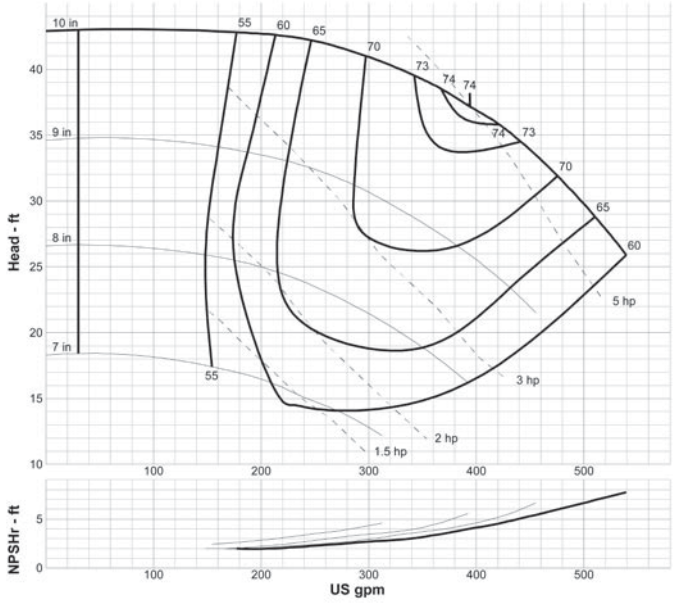


4 x 3 - 10 A70 3600 RPM Curve: G-3613

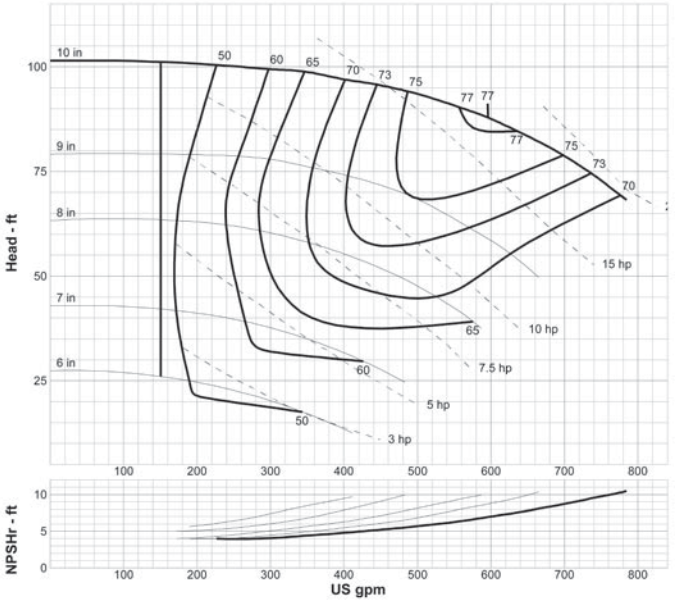


PERFORMANCE CURVES

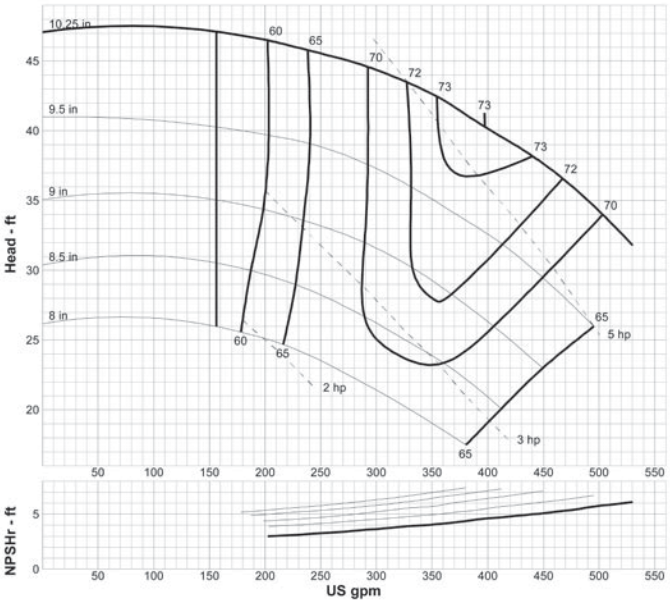
4 x 3 - 10H A40 1200 RPM Curve: G-1214



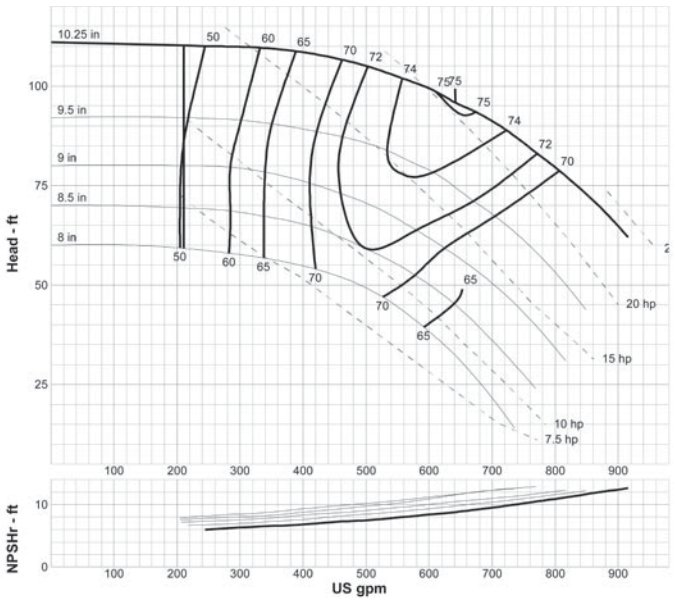
4 x 3 - 10H A40 1800 RPM Curve: G-1814



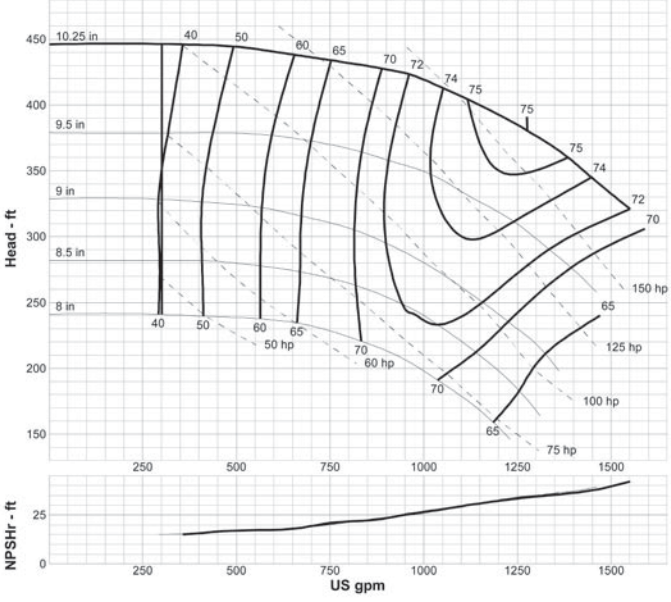
6 x 4 - 10G A80 1200 RPM Curve: G-1215



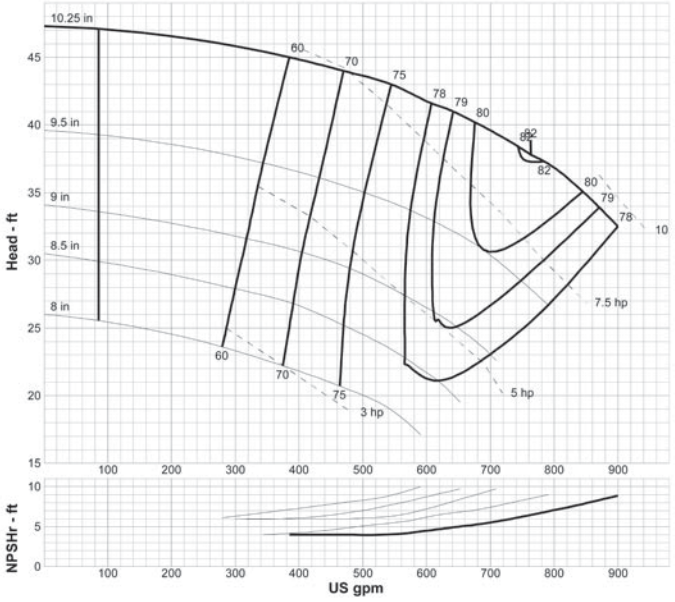
6 x 4 - 10G A80 1800 RPM Curve: G-1815



6 x 4 - 10G A80 3600 RPM Curve: G-3615

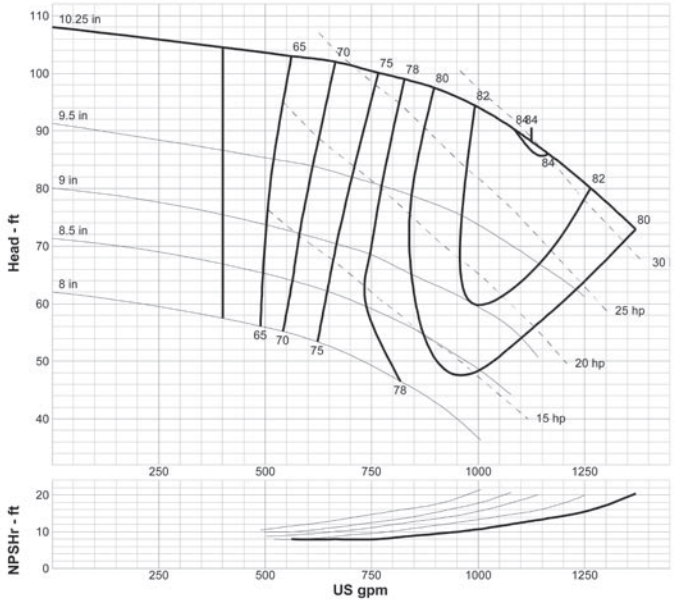


6 x 4 - 10H A80 1200 RPM Curve: G-1216

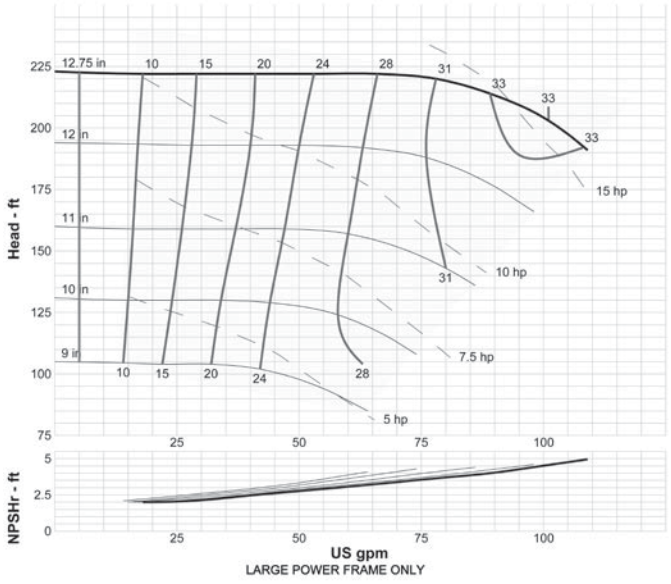


PERFORMANCE CURVES

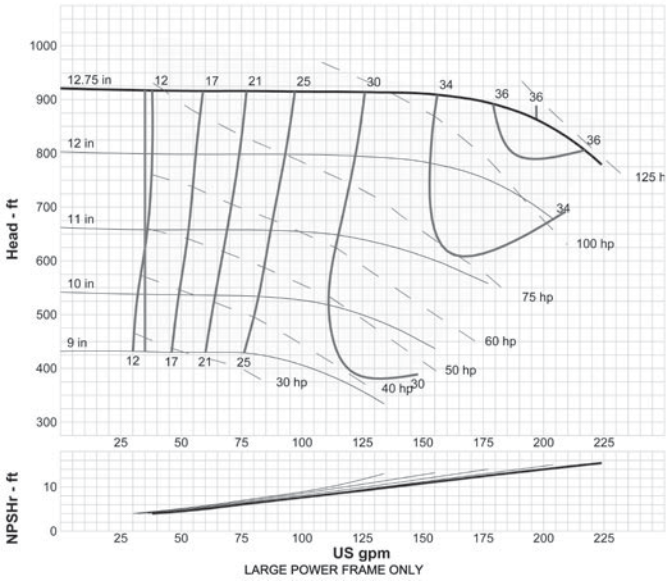
6 x 4 - 10H A80 1800 RPM Curve: G-1816



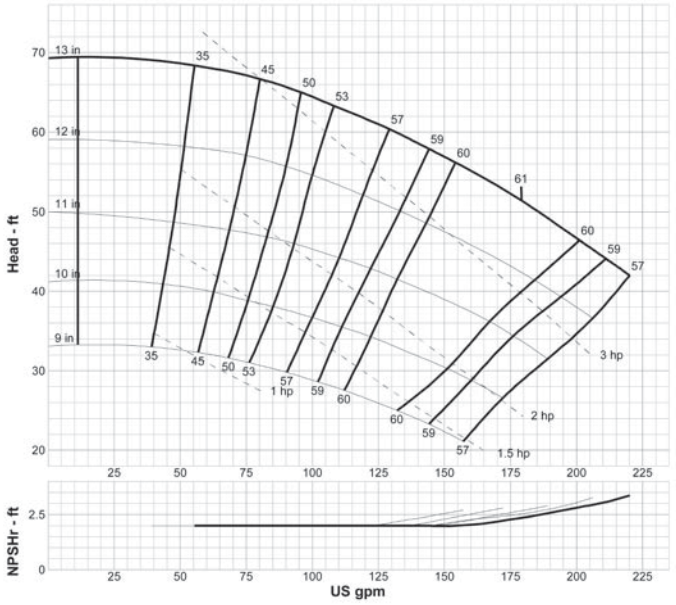
LF 3 x 1-1/2 - 13 A20 1800 RPM Curve: GLF-1817



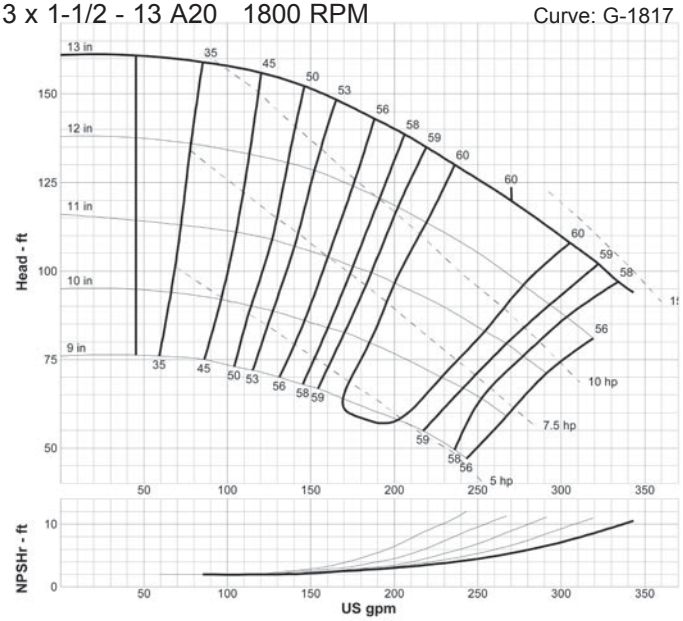
LF 3 x 1-1/2 - 13 A20 3600 RPM Curve: GLF-3617



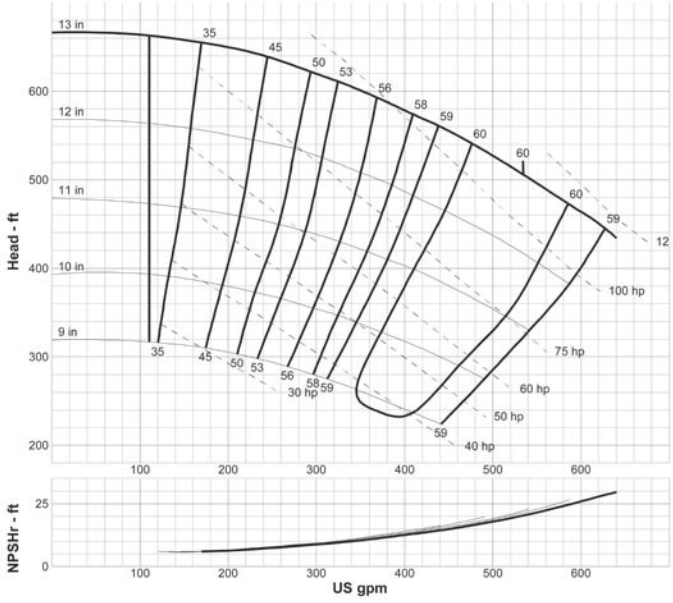
3 x 1-1/2 - 13 A20 1200 RPM Curve: G-1217



3 x 1-1/2 - 13 A20 1800 RPM Curve: G-1817

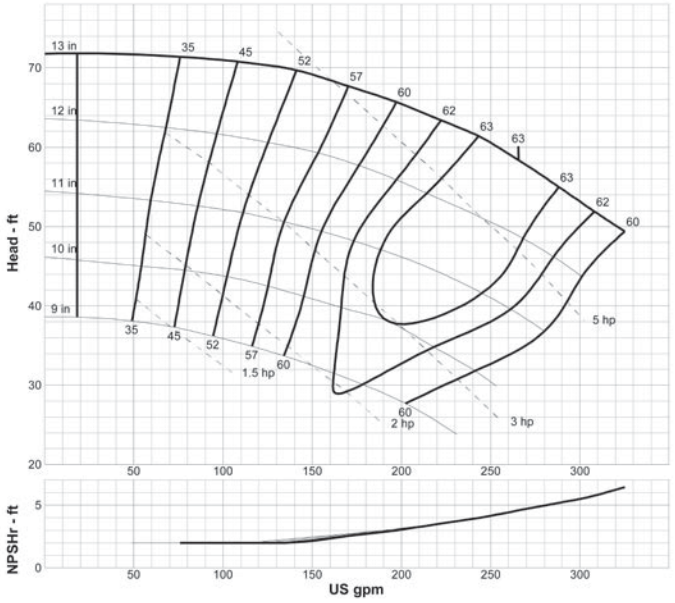


3 x 1-1/2 - 13 A20 3600 RPM Curve: G-3617

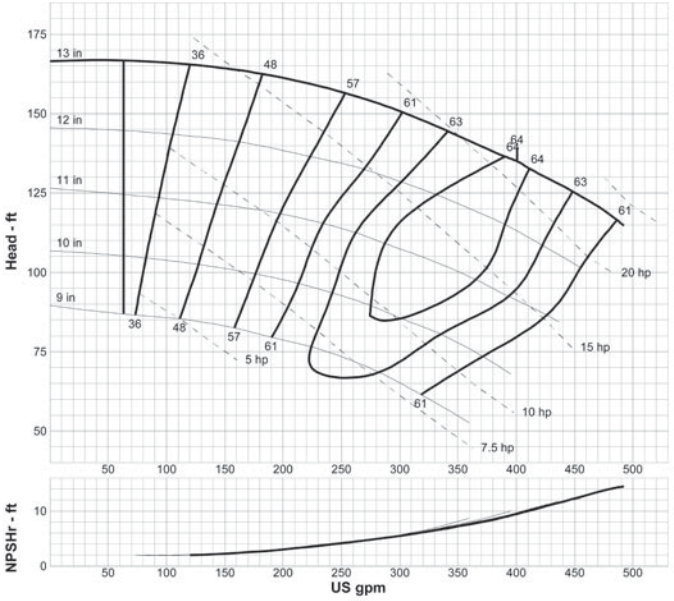


PERFORMANCE CURVES

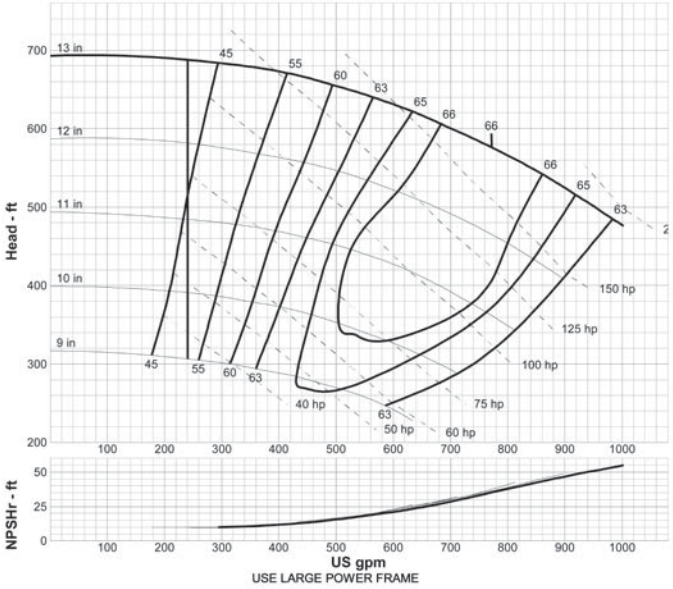
3 x 2 - 13 A30 1200 RPM Curve: G-1218



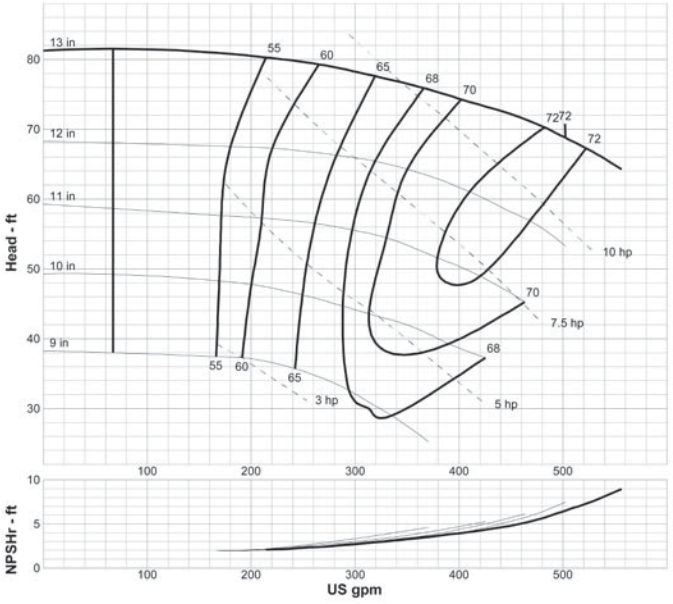
3 x 2 - 13 A30 1800 RPM Curve: G-1818



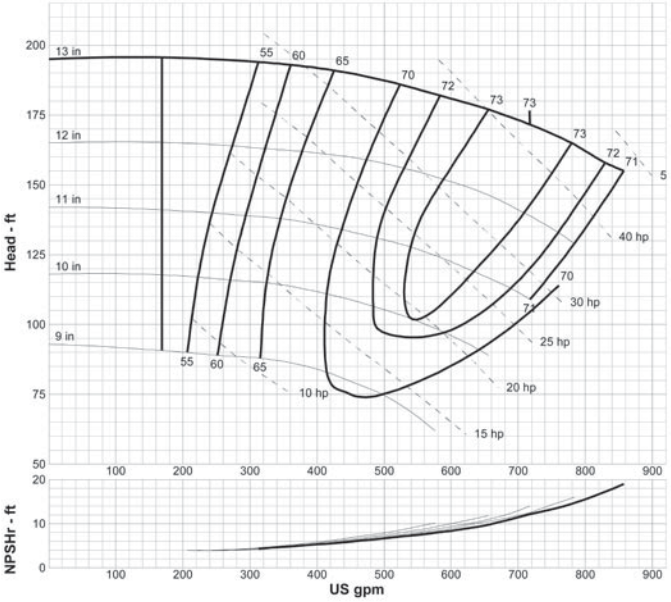
3 x 2 - 13 A30 3600 RPM Curve: G-3618



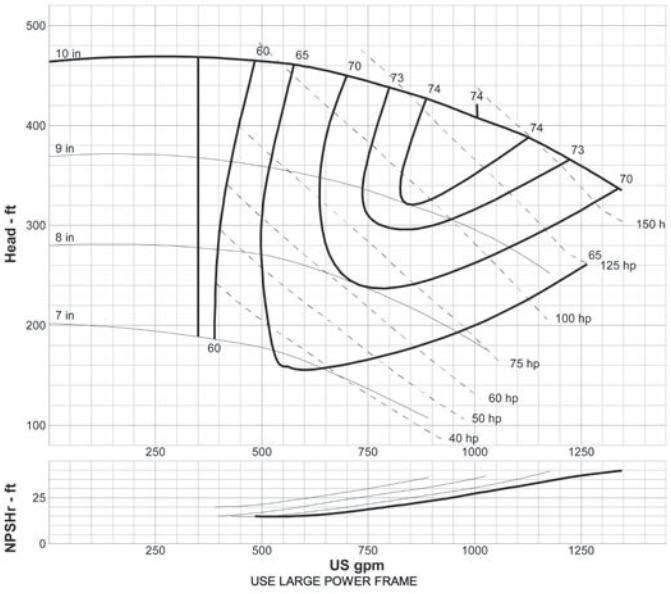
4 x 3 - 13 A40 1200 RPM Curve: G-1219



4 x 3 - 13 A40 1800 RPM Curve: G-1819

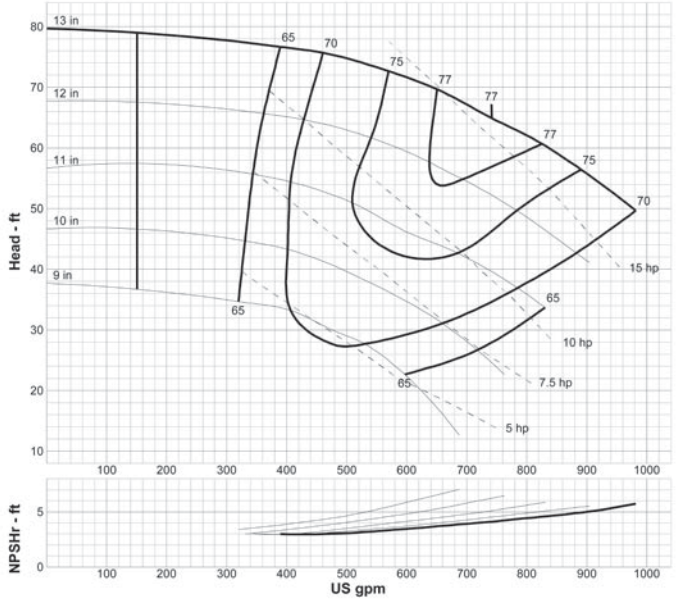


4 x 3 - 13 A40 3600 RPM Curve: G-3619

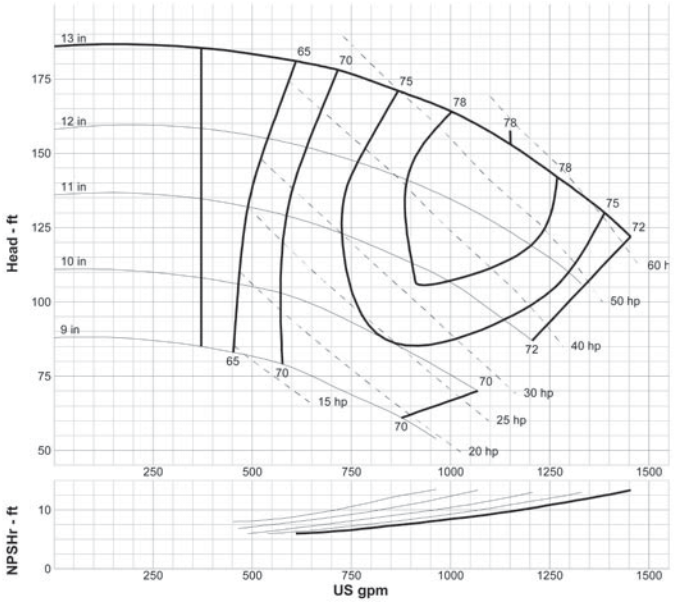


PERFORMANCE CURVES

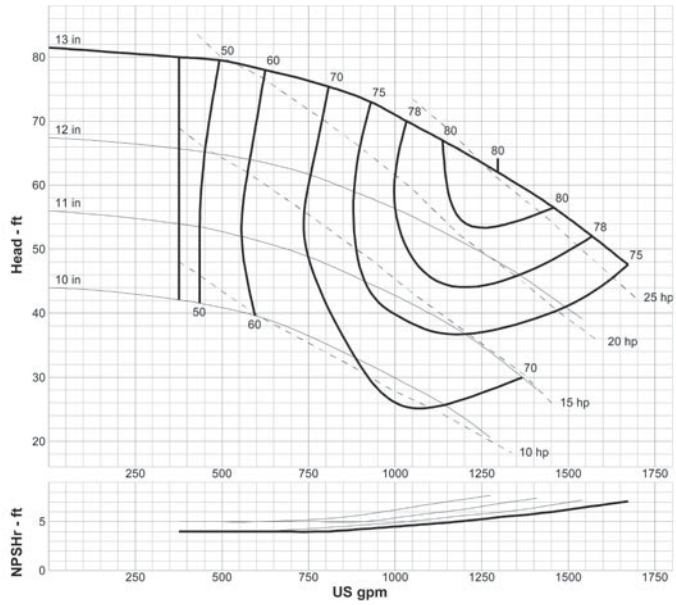
6 x 4 - 13 A80 1200 RPM Curve: G-1220



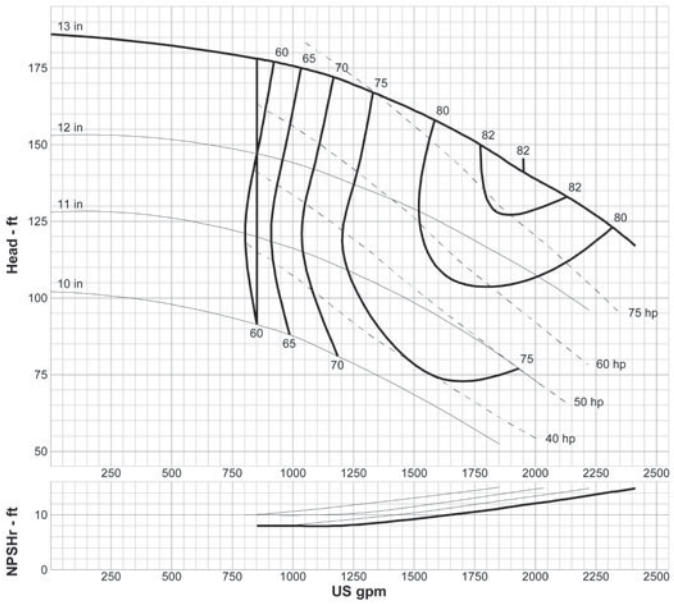
6 x 4 - 13 A80 1800 RPM Curve: G-1820



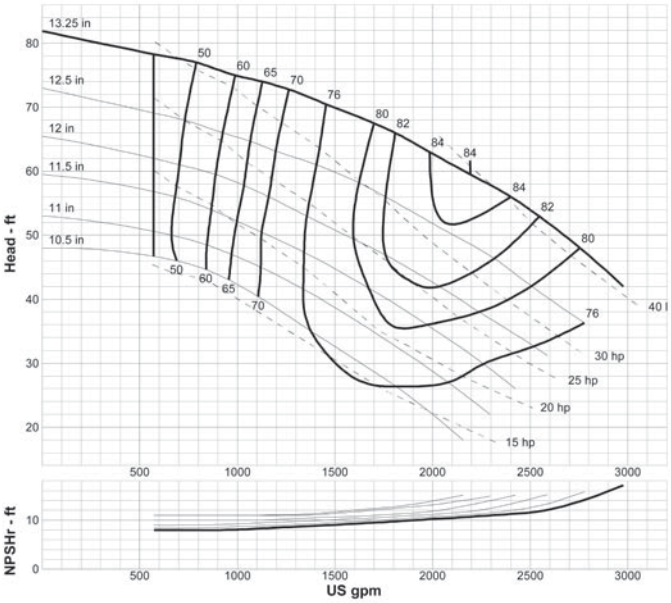
8 x 6 - 13 A90 1200 RPM Curve: G-1221



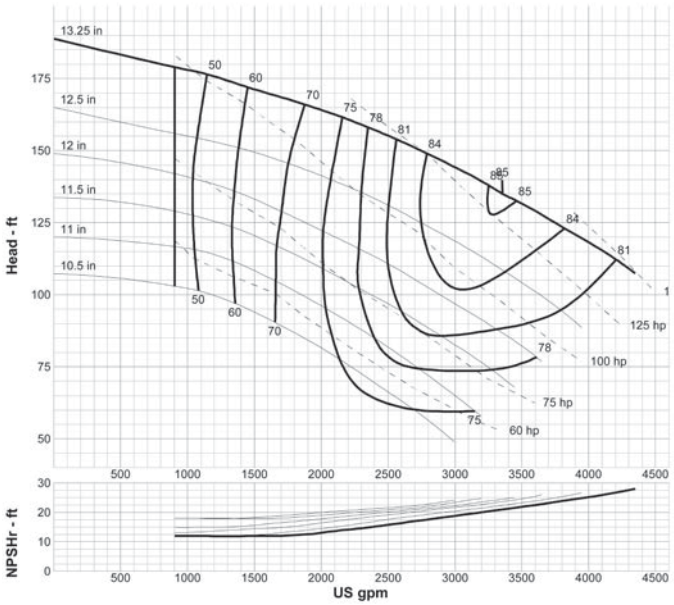
8 x 6 - 13 A90 1800 RPM Curve: G-1821



10 x 8 - 13 A100 1200 RPM Curve: G-1222

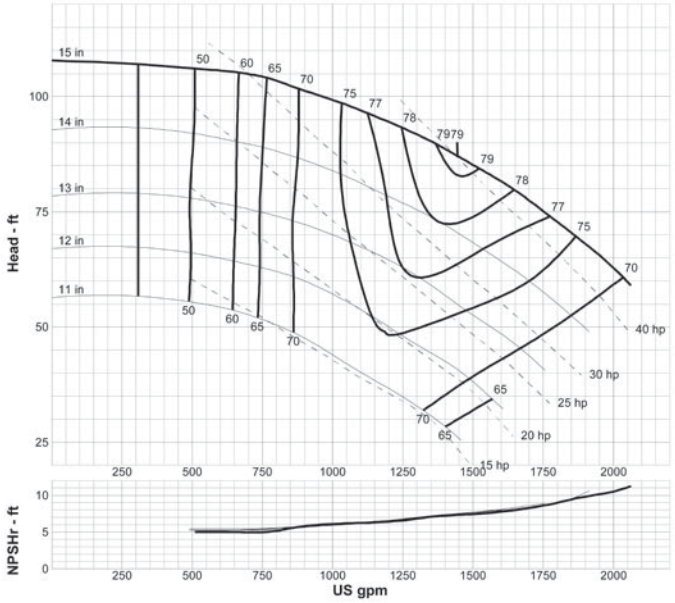


10 x 8 - 13 A100 1800 RPM Curve: G-1822

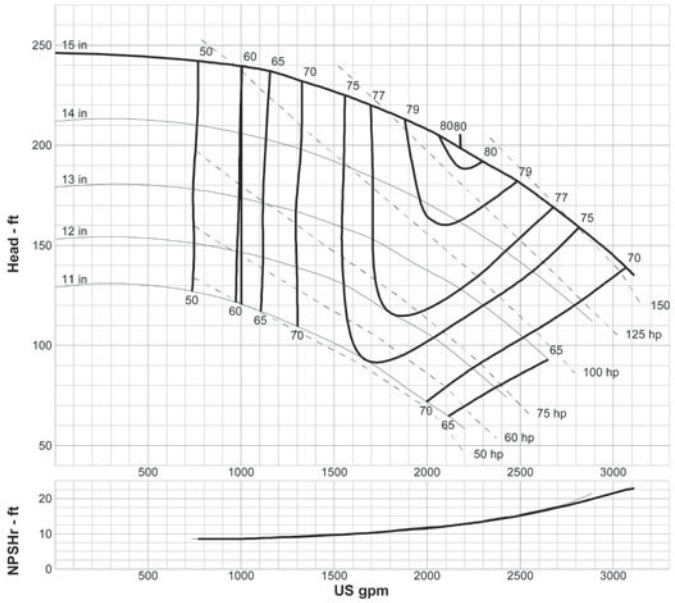


PERFORMANCE CURVES

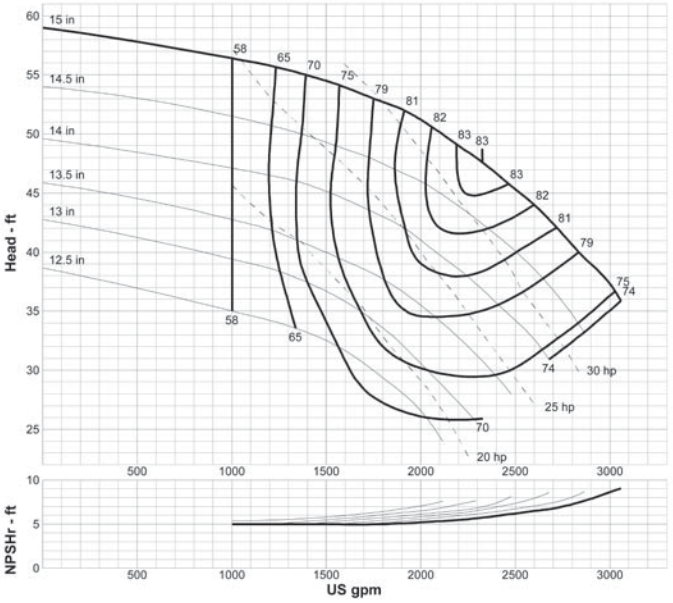
8 x 6 - 15 A110 1200 RPM Curve: G-1223



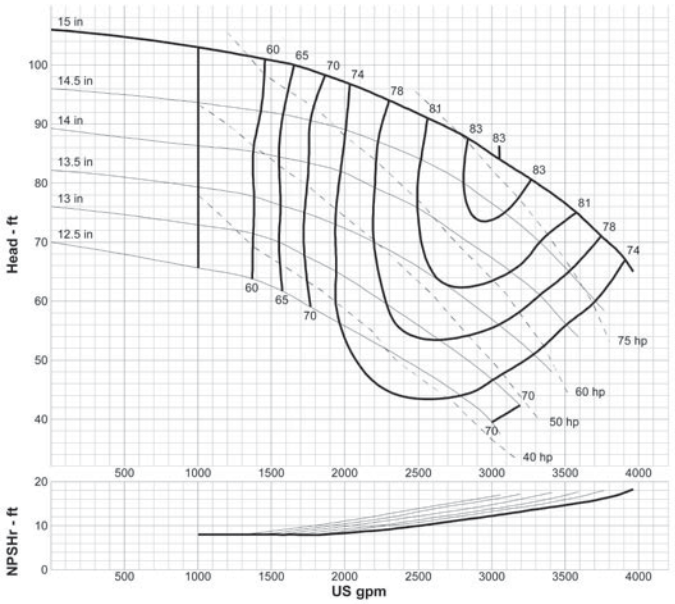
8 x 6 - 15 A110 1800 RPM Curve: G-1823



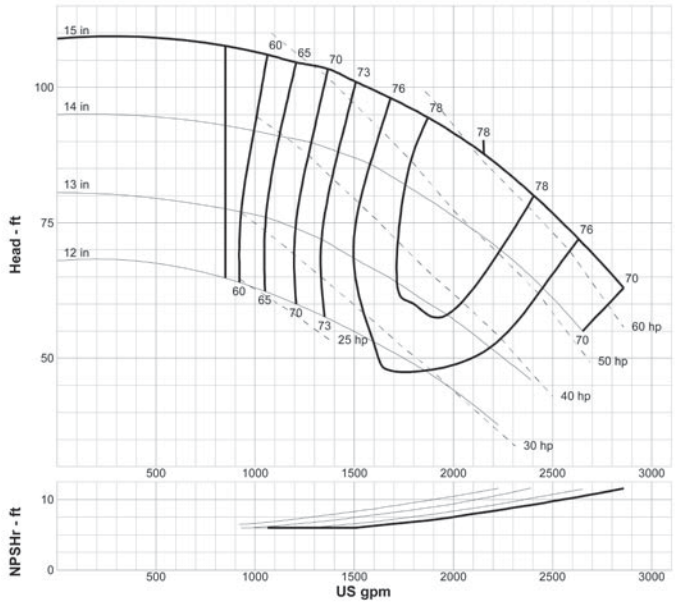
10 x 8 - 15 A120 900 RPM Curve: G-0824



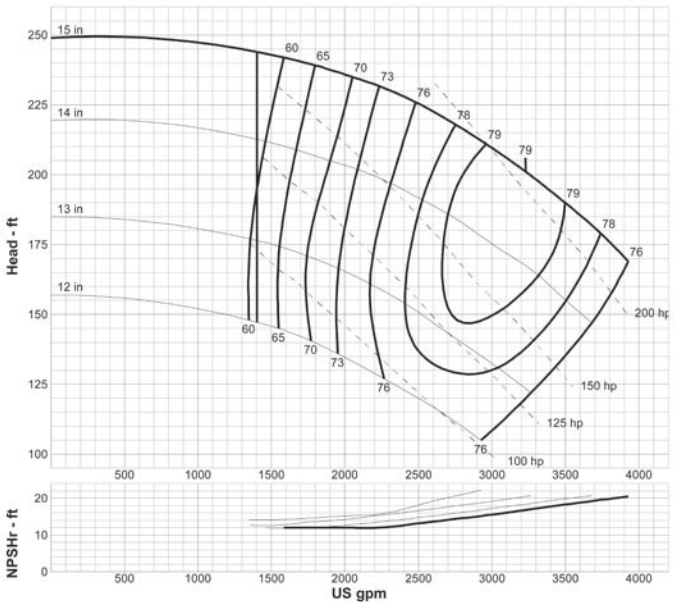
10 x 8 - 15 A120 1200 RPM Curve: G-1224



10 x 8 - 15G A120 1200 RPM Curve: G-1225

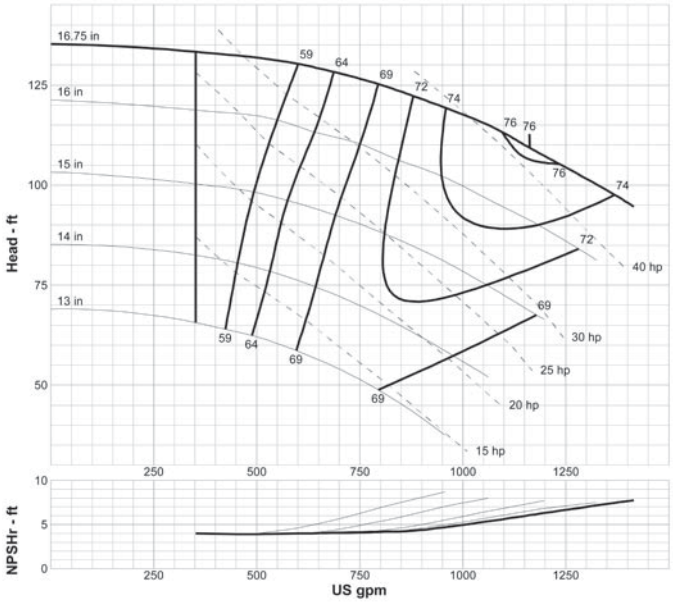


10 x 8 - 15G A120 1800 RPM Curve: G-1825

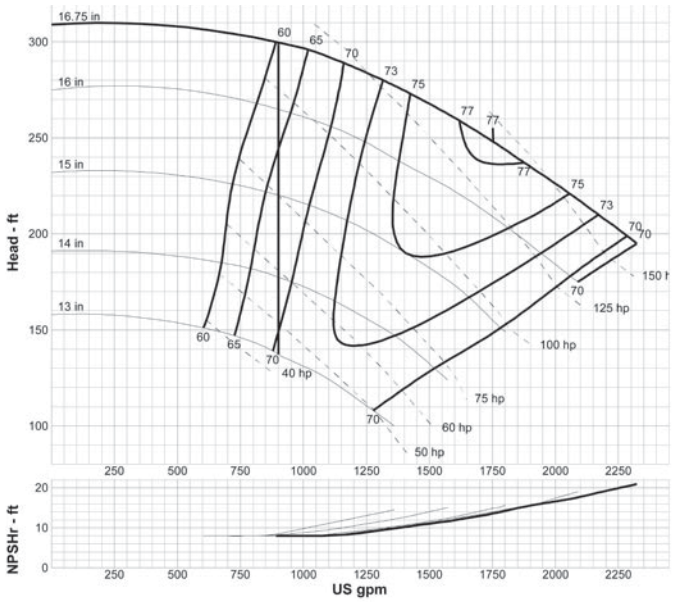


PERFORMANCE CURVES

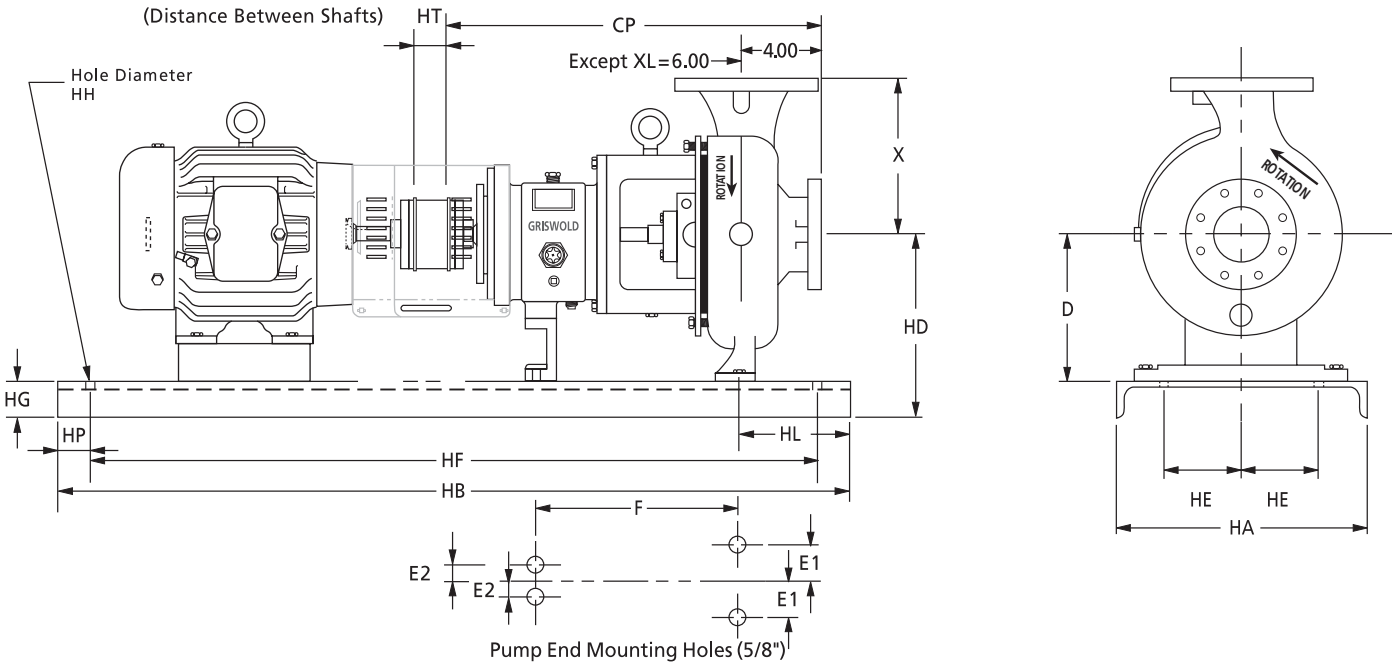
6 x 4 - 17 A105 1200 RPM Curve: G-1227



6 x 4 - 17 A105 1800 RPM Curve: G-1827



811 DIMENSIONAL DATA



	Pump Size & Designation	ANSI Designation	Discharge	Suction	D	X	CP	E1	E2	F	Impeller Eye (sq in)	Max Dia Solids
SMALL	1 1/2 x 1 - 6	AA	1	1 1/2	5 1/4	6 1/2	17 1/2	3	0	7 1/4	3.1	11/32
	3 x 1 1/2 - 6	AB	1 1/2	3	5 1/4	6 1/2	17 1/2	3	0	7 1/4	7.1	7/16
	3x2 - 6	AC	2	3	5 1/4	6 1/2	17 1/2	3	0	7 1/4	6.5	3/8
	LF- 1 1/2 x 1 -8	AA	1	1 1/2	5 1/4	6 1/2	17 1/2	3	0	7 1/4	3.1	3/16
	1.5 x 1 - 8	AA	1	1 1/2	5 1/4	6 1/2	17 1/2	3	0	7 1/4	3.5	11/32
	3 x 1 1/2 - 8	AB	1 1/2	3	5 1/4	6 1/2	17 1/2	3	0	7 1/4	4.4	7/16
MEDIUM	3 x 2 - 8	A60	2	3	8 1/4	9 1/2	23 1/2	4 7/8	3 5/8	12 1/2	5.4	1/2
	4 x 3 - 8	A70	3	4	8 1/4	11	23 1/2	4 7/8	3 5/8	12 1/2	12.5	1-1/8
	4 x 3 - 8G	A70	3	4	8 1/4	11	23 1/2	4 7/8	3 5/8	12 1/2	11	11/16
MEDIUM or LARGE (LF3X1-1/2-13 available with large frame only)	LF- 2 X 1 - 10	A05	1	2	8 1/4	8 1/2	23 1/2	4 7/8	3 5/8	12 1/2	4.9	3/16
	2 x 1 - 10	A05	1	2	8 1/4	8 1/2	23 1/2	4 7/8	3 5/8	12 1/2	4.9	7/16
	3 X 1-1/2 - 10	A50	1 1/2	3	8 1/4	8 1/2	23 1/2	4 7/8	3 5/8	12 1/2	6.5	7/32
	3 X 2 - 10	A60	2	3	8 1/4	9 1/2	23 1/2	4 7/8	3 5/8	12 1/2	3.1	3/8
	4 X 3 - 10	A70	3	4	8 1/4	11	23 1/2	4 7/8	3 5/8	12 1/2	12.5	5/8
	4 x 3 - 10H	A40	3	4	10	12 1/2	23 1/2	4 7/8	3 5/8	12 1/2	17.5	5/8
	6 x 4 - 10G	A80	4	6	10	13 1/2	23 1/2	4 7/8	3 5/8	12 1/2	25.9	1
	6 x 4 -10H	A80	4	6	10	13 1/2	23 1/2	4 7/8	3 5/8	12 1/2	27.1	1
	3 X 1-1/2 - 13	A20	1 1/2	3	10	10 1/2	23 1/2	4 7/8	3 5/8	12 1/2	4.9	7/32
	LF-3 x 1-1/2 -13	A20	1 1/2	3	10	10 1/2	23 1/2	4 7/8	3 5/8	12 1/2	4.9	7/32
	3 X 2 - 13	A30	2	3	10	11 1/2	23 1/2	4 7/8	3 5/8	12 1/2	3.1	3/8
	4 X 3 - 13	A40	3	4	10	12 1/2	23 1/2	4 7/8	3 5/8	12 1/2	14.2	5/8
	6 X 4 - 13	A80	4	6	10	13 1/2	23 1/2	4 7/8	3 5/8	12 1/2	28	1
X-LARGE	8 x 6 -13	A90	6	8	14 1/2	16	33 7/8	8	4 1/2	18 3/4	45.5	11/16
	10 x 8 -13	A100	8	10	14 1/2	18	33 7/8	8	4 1/2	18 3/4	56.7	1
	8 x 6 - 15	A110	6	8	14 1/2	18	33 7/8	8	4 1/2	18 3/4	50	13/16
	10 x 8 - 15	A120	8	10	14 1/2	19	33 7/8	8	4 1/2	18 3/4	74.6	1 1/8
	10 x 8 - 15G	A120	8	10	14 1/2	19	33 7/8	8	4 1/2	18 3/4	63	1 1/8
	6 x 4 - 17	A105	4	6	14 1/2	16	33 7/8	8	4 1/2	18 3/4	39.59	1 1/8

	Max NEMA Frame	Baseplate #	HA	HB	HT Min	*If pump D=8.25* HD	*If pump D=10* HD	HD	HE	HF	HG Max	HH	HL	HP
SMALL	184T	139	12	39	3.5	9	N/A	NA	4.5	36 1/2	3 3/4	0.75	4.5	1 1/4
	256T	148	15	48	3.5	10 1/2	N/A	NA	6	45 1/2	4 1/8	0.75	4.5	1 1/4
	326TS	153	18	53	3.5	12 7/8	N/A	NA	7.5	50 1/2	4 3/4	0.75	4.5	1 1/4
MEDIUM OR LARGE	184T	245	12	45	3.5	12	13 3/4	NA	4.5	42 1/2	3 3/4	0.75	4.5	1 1/4
	215T	252	15	52	3.5	12 3/8	14 1/8	NA	6	49 1/2	4 1/8	0.75	4.5	1 1/4
	286T	258	18	58	3.5	13	14 3/4	NA	7.5	55 1/2	4 3/4	1	4.5	1 1/4
	365T	264	18	64	3.5	13 7/8	14 3/4	NA	7.5	61 1/2	4 3/4	1	4.5	1 1/4
	405TS	268	24	68	3.5	14 7/8	14 7/8	NA	9.5	65 1/2	4 3/4	1	4.5	1 1/4
	449TS	280	24	80	3.5	15 7/8	15 7/8	NA	9.5	77 1/2	4 3/4	1	4.5	1 1/4
X-LARGE	286T	368	24	68	5	NA	N/A	19 1/4	9.5	65 1/2	4 3/4	1	6.5	1 1/4
	405T	380	24	80	5	NA	N/A	19 1/4	9.5	77 1/2	4 3/4	1	6.5	1 1/4
	449T	398	24	98	5	NA	N/A	19 1/4	9.5	95 1/2	4 3/4	1	6.5	1 1/4

1.0 Pump Design
- 1.1 The pump must conform in all respects to the latest edition of ANSI Specification B73.1M.
- 1.2 The pump should be back pullout design. A machined fit between the pullout assembly and the casing to insure alignment is required.
- 1.3 Pump will be top centerline, self-venting discharge.
- 1.4 100% of the pump shall be manufactured in the USA excluding outside purchased items like bearings and hardware that may or may not be produced in the USA.

2.0 Casing
- 2.1 Class 150 pumps shall incorporate class 300 wall thickness as standard, extending casing life under corrosive / erosive conditions.
- 2.2 Casing shall be machined as to accommodate a fully confined casing gasket to prevent leakage.
- 2.3 The casing shall be furnished with a minimum 1/8" corrosion allowance.
- 2.4 The pump casing, when produced in Ductile Iron, Stainless Steel or CD4Mcu, shall include a drain plug and a discharge tap connection.

3.0 Impeller
- 3.1 A fully open impeller shall be provided to facilitate the handling of solid and stringy material.
- 3.2 The impeller shall be self-tightening.
- 3.3 The impeller shall be furnished with back pump out vanes to reduce pressure in the seal chamber and to minimize axial thrust.
- 3.4 The pump shall be provided with an open impeller design to allow for re-establishment of original clearances and hydraulic performance and efficiencies without pump disassembly.
- 3.5 Impeller connection to the shaft shall allow for metal-to-metal contact with a control squeeze TeflonÆ o-ring.
- 3.6 The impeller shall be balanced to minimize vibration in accordance with ISO 1940 Grade 6.3 after final machining.
- 3.7 The impeller shall be produced with ultra-smooth investment castings to improve hydraulic and mechanical balance.

4.0 Bearing Frame and Adapter
- 4.1 Non-pressure retaining castings (bearing housing, medium - large - extra large bearing frames, frame feet) shall be produced in cast iron with a minimum tensile strength of 30,000 lbs.
- 4.2 Pressure retaining castings (small bearing frame, all adapters) shall be produced in Ductile Iron with a minimum tensile strength of 65,000 lbs.
- 4.3 Interior surfaces of all bearing frames shall be coated with a Fusion Bonded Epoxy Coating to provide for long-term quality and cleanliness of the lubricating oil.
- 4.4 The bearing frames shall be assembled in a clean room environment to eliminate contamination.
- 4.5 The bearing frame and adapter mating surfaces must be machined with a register fit to guarantee precise alignment. Additionally, dowel pins shall be utilized to eliminate torsion.
- 4.6 The bearing housing with adjusting bolts shall be provided to allow for axial adjustment of the impeller to regain hydraulic performance and efficiencies without pump disassembly.
- 4.7 To minimize shaft misalignment due to flange loading on the pump, the frame foot, if separate from the bearing frame, shall be rigidly attached at two points and constructed of cast iron with a minimum tensile strength of 30,000 lbs.
- 4.8 The shaft shall be provided to keep deflection within ANSI B73.1 limits at all operating points.
- 4.9 The shaft sleeve when provided will be hook type sleeve 316 stainless steel as a minimum or sleeveless solid shafts as an option.
- 4.10 Bearing shall be designed for a minimum life (L@10) of two years and a 10-year average life as required by the latest edition of ANSI B73.1M specifications as manufactured by SKF or equal.
- 4.11 Radial and thrust bearings shall not be pressed onto the shaft. Bearings shall be installed utilizing stress-free bearing induction heater.
- 4.12 To prevent thrust bearing loosening during pump operation, thrust bearings shall be positively locked to the shaft by means of a locknut and lock washer.
- 4.13 To retain lubricant and prevent contamination, bronze InproÆ labyrinth oil seals shall be provided.
- 4.14 A one-inch sight glass with reflective baffle shall be provided to monitor oil level and condition.
- 4.15 A magnetic drain plug shall be provided to collect damaging metallic particles.
- 4.16 Condition-monitoring sites shall be provided to facilitate consistent checking of vibration and temperature.
- 4.17 If lubricant cooling is required a finned tube-cooling element shall be provided.
- 4.18 In high load applications beyond ANSI 811M bearing frame limits an 811L frame shall be specified incorporating an oversized shaft with an oil slinger, higher load carrying radial bearing and duplex angular contact thrust bearings.

5.0 Seal Chamber
- 5.1 Seal chambers shall be engineered to provide the optimum seal environment for heat dissipation, solids, trapped air and vapor.

6.0 Pump Bases
- 6.1 A rigid, high-strength base shall be provided to insure pump-to-motor shaft misalignment not to exceed 0.005" due to base plate distortion.

7.0 Coupling Guard
- 7.1 A coupling guard shall be provided with the pump that conforms to both ANSI and OSHA requirements.

8.0 Warranty
- 8.1 Pumps shall be backed by a 5-year whole pump unconditional guarantee against defects in material and workmanship.

Notes

Notes

Notes

22069 Van Buren Street • Grand Terrace, CA 92313-5607
Phone: (229) 226-5255 • (800) 843-9222
Fax (229) 226-5567 • (909) 422-1787
email: griswold@griswoldpump.com
website: www.griswoldpump.com

Your Distributor:

Printed in the U.S.A.

GRS-10000-T-01