



Public Works Department • Water & Wastewater Services

WATER & WASTEWATER ENGINEERING DIVISION

2555 West Copans Road • Pompano Beach, Florida 33369 • 954-831-0745 • FAX 954-831-0798/0925

STANDRARD LIFT STATION PUMPS AND WETWELL SIZING REQUIREMENTS

Date: June 28, 2011

Date Last Issued: October 8, 2008

Date First Issued: January 3, 2006

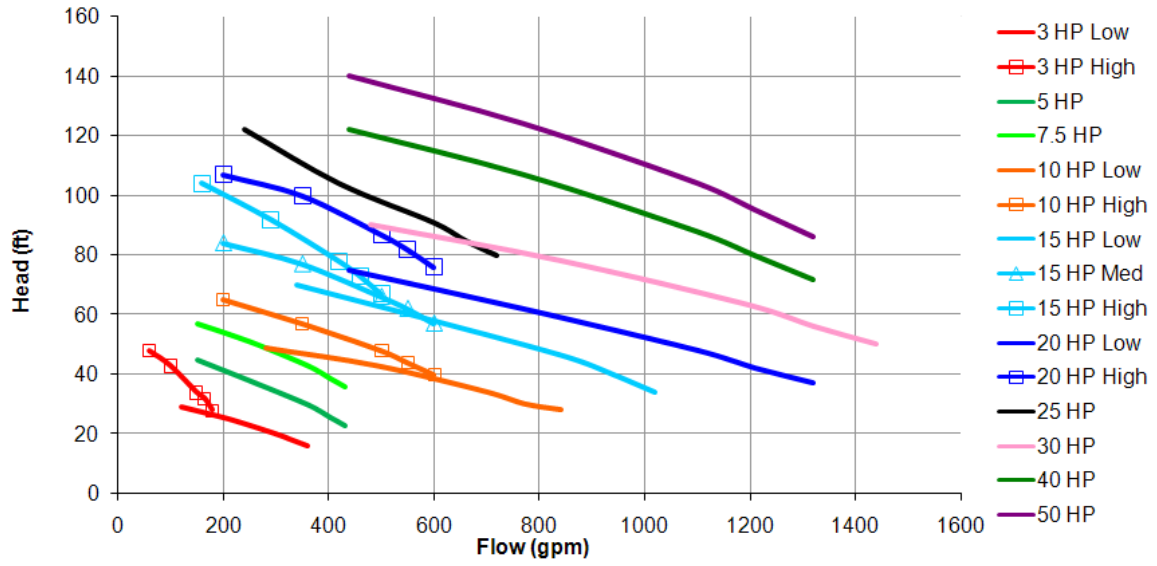
This document approved by the Broward County Water & Wastewater Services Technical Standards Committee.

A handwritten signature in blue ink, appearing to read "Stu Uhrick".

Steven W. Uhrick, P.E., Chair

No technical changes were made to this document since its last issuance. Only the letterhead and format were updated.

WWS Standard Pump Selection Curves

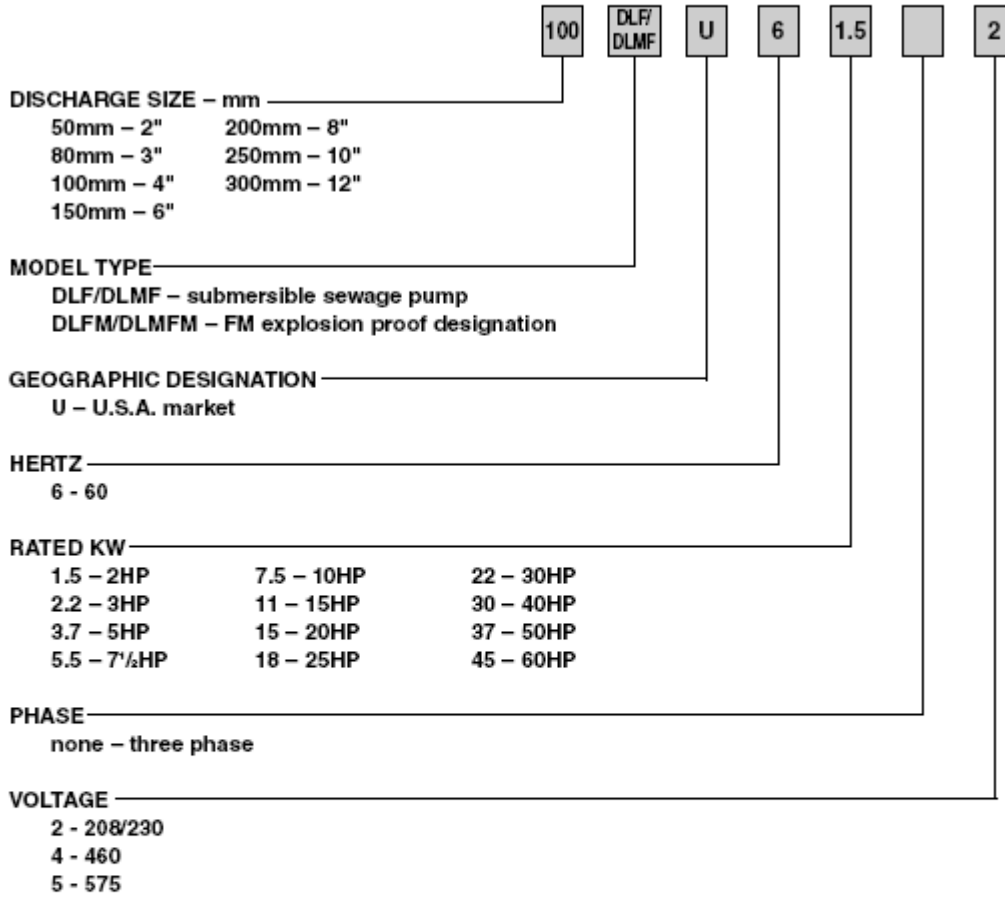


HP	Ebara Model Number	Impeller	Pump Discharge Size	Acceptable Pump Operating Range (gpm)	Minimum Wet Well Diameter	Minimum Distance Between Pumps Off and Wet Well Bottom (inches)	Minimum Distance Between Influent Pipe Invert and Wet Well Bottom (inches)
3 Low Head	100DLFU62.2	160mm	4-inch	120-360	6-feet	16	60
3 High Head	80DLMFU62.2	188mm	4-inch	60-180	6-feet	16	60
5	100DLMFU63.7	189mm	4-inch	150-430	8-feet	16	82
7.5	100DLMFU65.5	207mm	4-inch	150-430	8-feet	19	82
10 Low Head	100DLFU67.5	235mm	4-inch	280-840	8-feet	19	82
10 High Head	100DLMFU67.5	238mm	4-inch	200-600	8-feet	19	82
15 Low Head	100DLFU611	254mm	4-inch	340-1020	10-feet	21	114
15 Medium Head	100DLMFU611	263mm	4-inch	200-600	8-feet	21	82
15 High Head	80DLCMFU611	281mm	4-inch	160-500	8-feet	21	82
20 Low Head	150DLFU615	268mm	6-inch	330-1320	10-feet	22	114
20 High Head	100DLMFU615	287mm	4-inch	200-600	8-feet	22	82
25	100DLMFU618	307mm	4-inch	240-720	8-feet	22	82
30	150DLFU622	296mm	6-inch	480-1440	10-feet	23	114
40	150DLFU630	-----	6-inch	440-1320	10-feet	27	114
50	150DLFU637	-----	6-inch	440-1320	10-feet	28	114

1. Electrical service must be 3 phase. 240 volt service is acceptable for pumps 20 horsepower and smaller, but 480 volt service is strongly preferred. 480 volt service is required above 20 horsepower.
2. For pumps 30 horsepower and smaller, the impeller shown is the only impeller allowed. For pumps larger than 30 horsepower, the impeller can be shaved to better match operating conditions.

3. Pumps larger than 50 horsepower will be treated as a special case. Pump selection, wet well diameter and wet well distance between influent pipe invert and wetwell bottom must be approved by the Technical Standards Committee.
4. Acceptable pump operating range based on 40% to 120% of best operating efficiency point. Force main velocities must be between 2.0 and 5.0 feet per second.
5. "Minimum Distance Between Pump Off and Wet Well Bottom" is based on half the pump height.
6. "Minimum Distance Between Influent Pipe Invert and Wet Well Bottom" is based on the largest pump that fit into the wet well operating at 120% of BEP with the pumps off point set at half the pump height, 12 inches between first pump on and second pump on, 6 inches between second pump on and alarm, 1 inch between alarm and influent pipe invert and operating ranges based on the following cycle times:
 - Under 15 horsepower: 5 minutes per pump
 - 15 HP to 25 horsepower: 7 minutes per pump
 - Over 25 horsepower: 10 minutes per pump

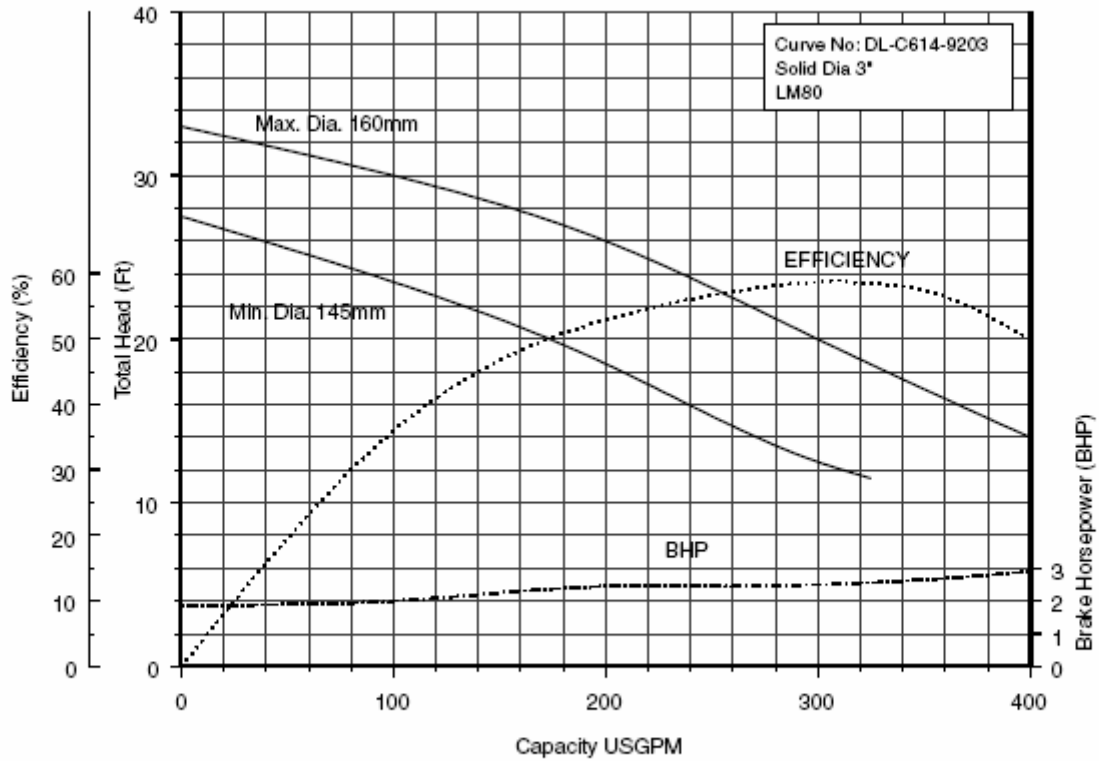
Model Designation



3 HP LOW HEAD (Use 4-inch discharge)

100DLF62.2 (3HP) Synchronous Speed: 1800 RPM

3, 4 inch Discharge



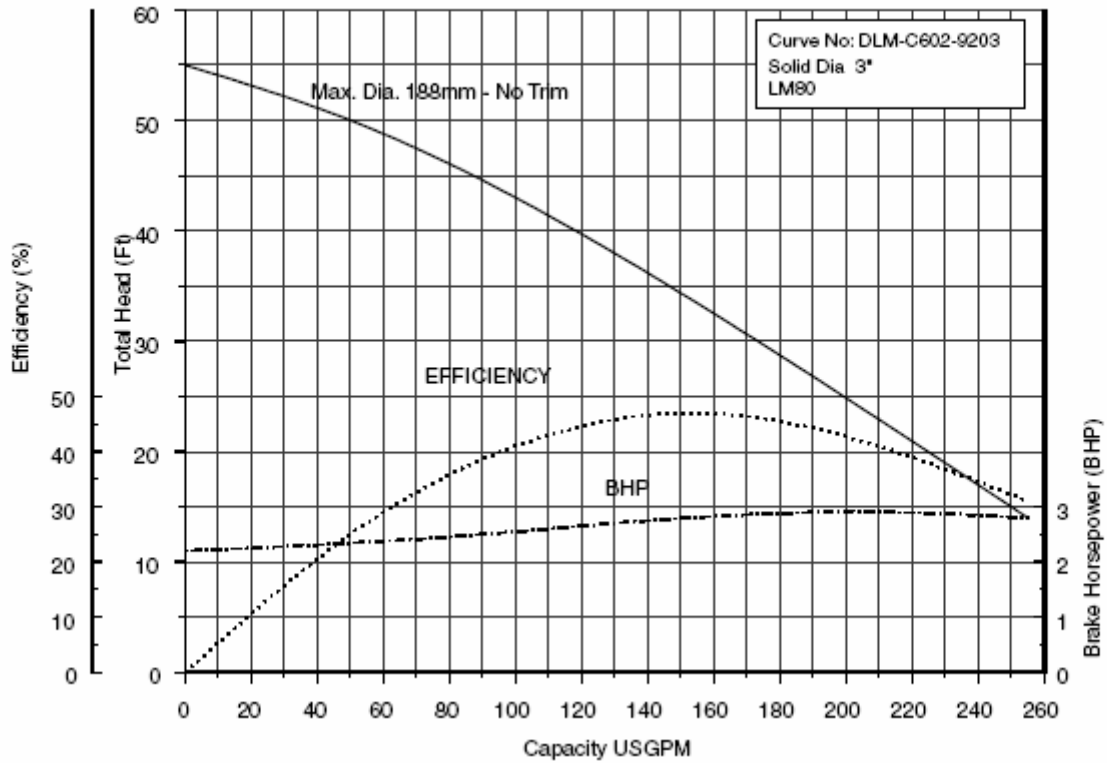
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3 HP HIGH HEAD (Use 4-inch discharge)

80DLMF62.2 (3HP) Synchronous Speed: 1800 RPM

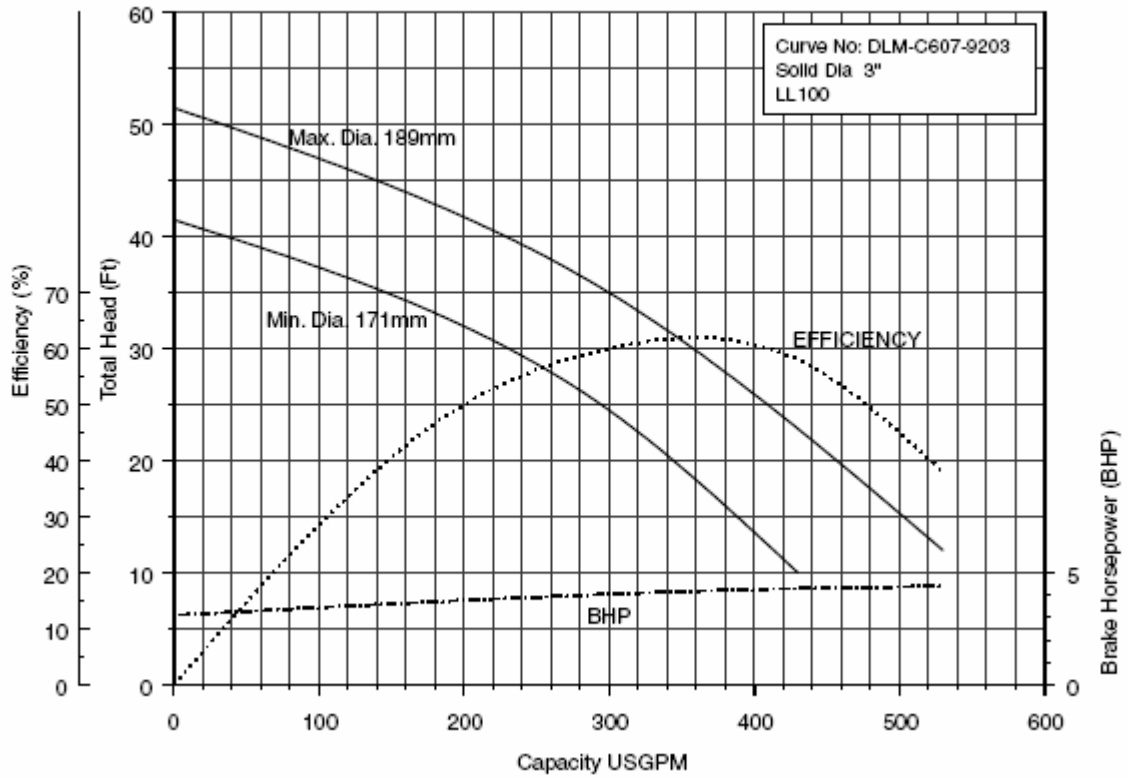
3, 4 inch Discharge



5 HP (Use 4-inch discharge)

100DLMF63.7 (5HP) Synchronous Speed: 1800 RPM

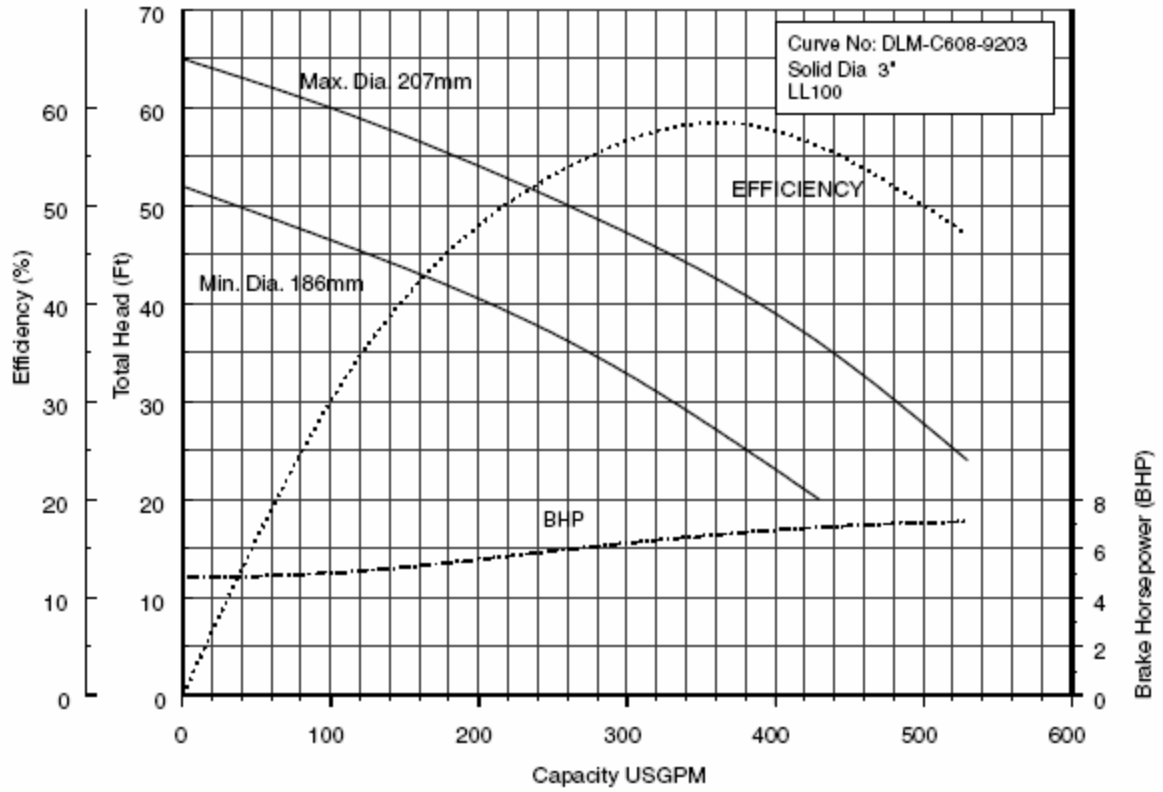
3, 4 inch Discharge



7.5 HP (Use 4-inch discharge)

100DLMF65.5 (7½HP) Synchronous Speed: 1800 RPM

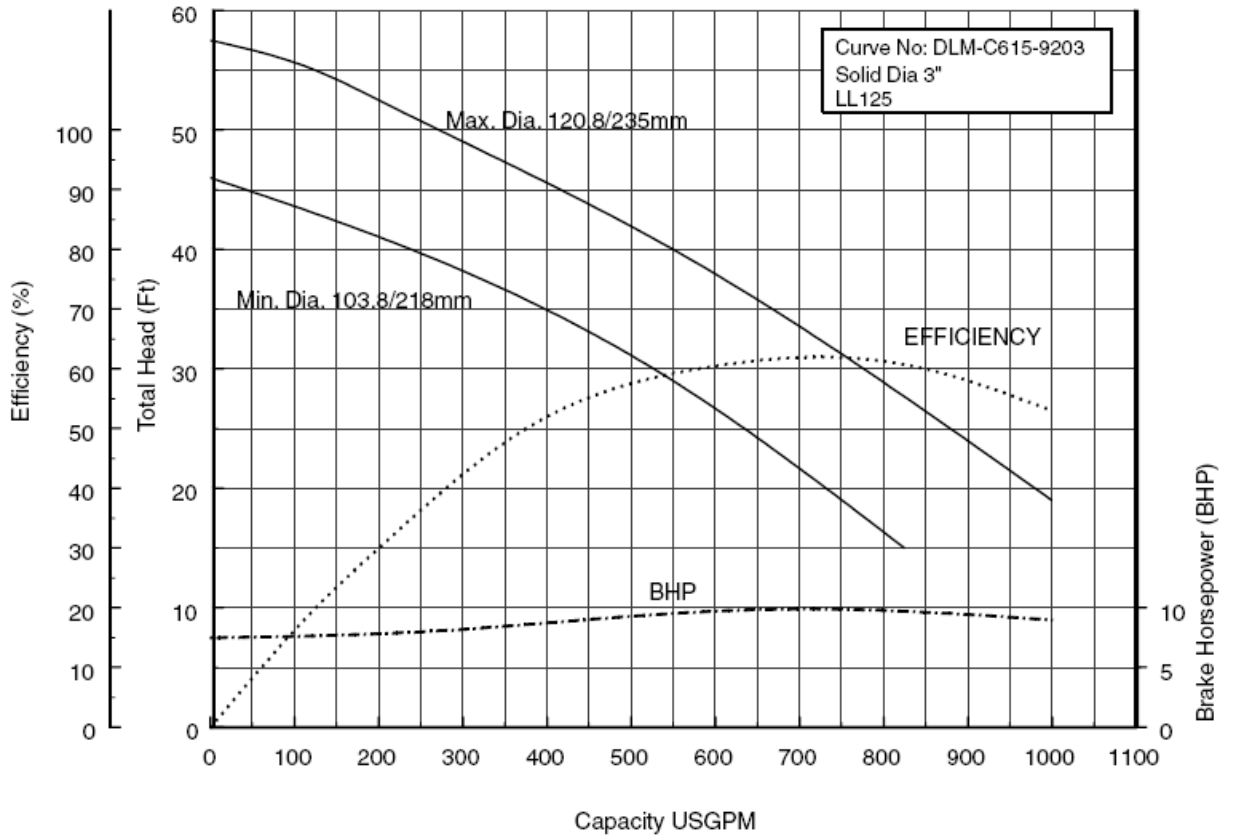
3, 4 inch Discharge



10 HP Low Head (Use 4-inch discharge)

100DLF67.5 (10HP) Synchronous Speed: 1800 RPM

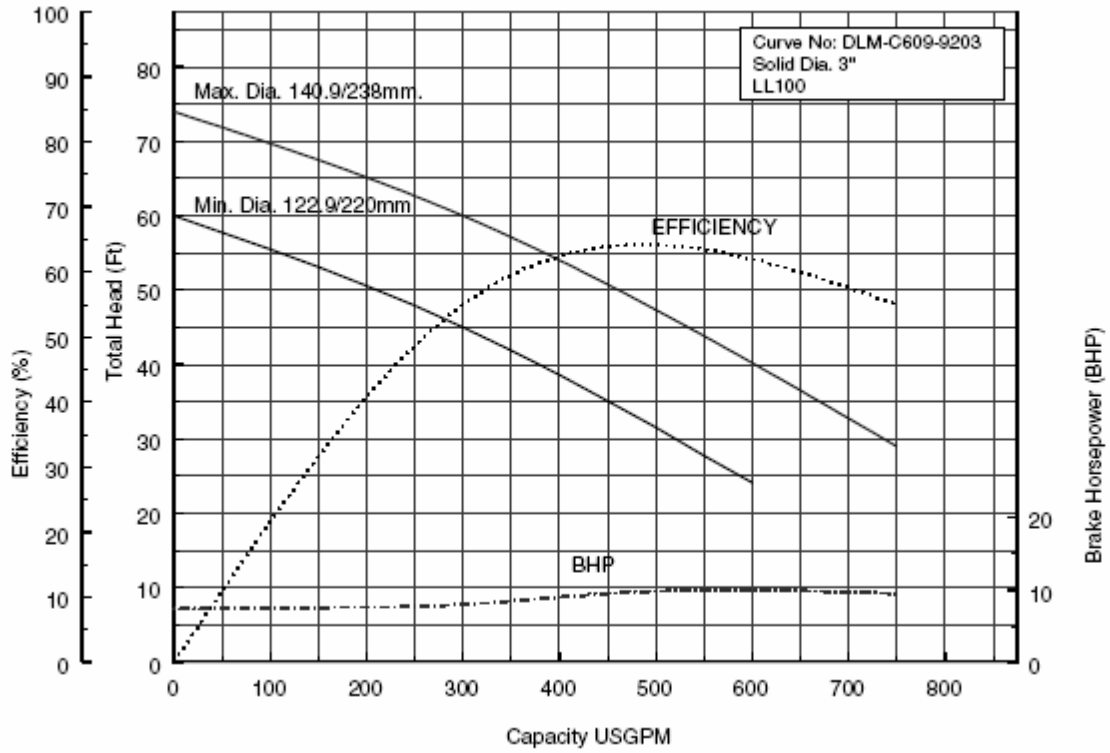
4, 6 inch Discharge



10 HP High Head (Use 4-inch discharge)

100DLMF67.5 (10HP) Synchronous Speed: 1800 RPM

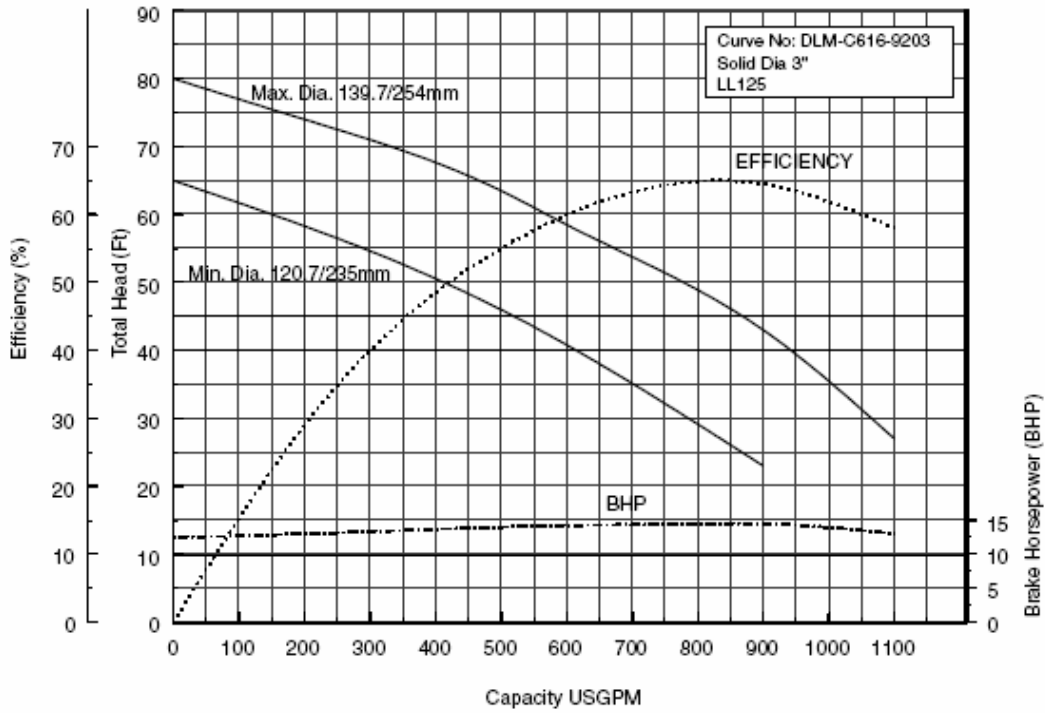
3, 4 inch Discharge



15 HP LOW HEAD (Use 4-inch discharge)

100DLF611 (15HP) Synchronous Speed: 1800 RPM

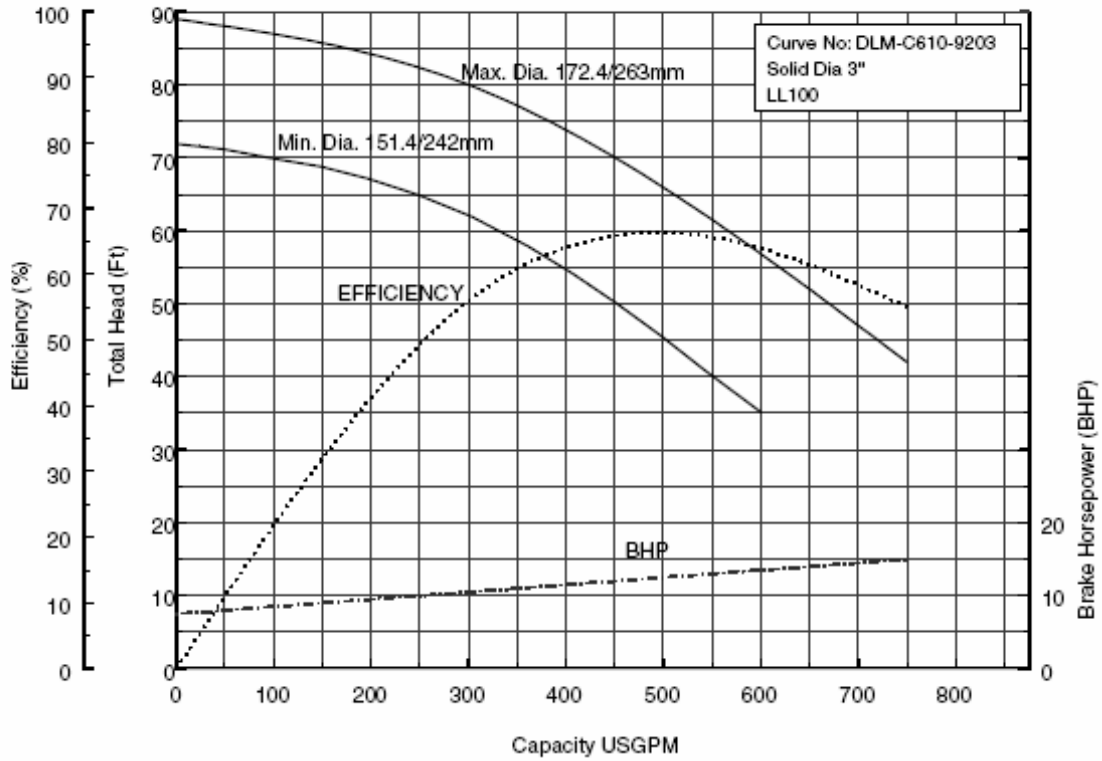
4, 6 inch Discharge



15 HP MEDIUM HEAD (Use 4-inch discharge)

100DLMF611 (15HP) Synchronous Speed: 1800 RPM

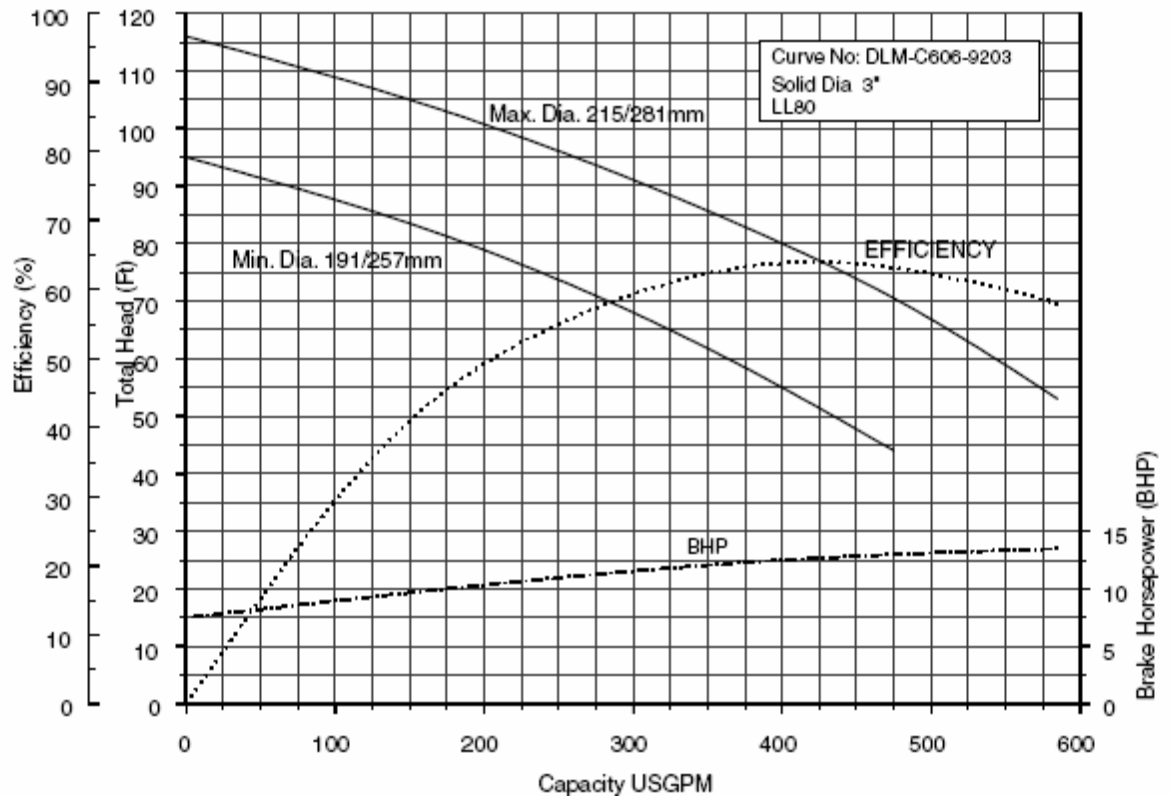
3, 4 inch Discharge



15 HP HIGH HEAD (Use 4-inch discharge)

80DLCMF611 (15HP) Synchronous Speed: 1800 RPM

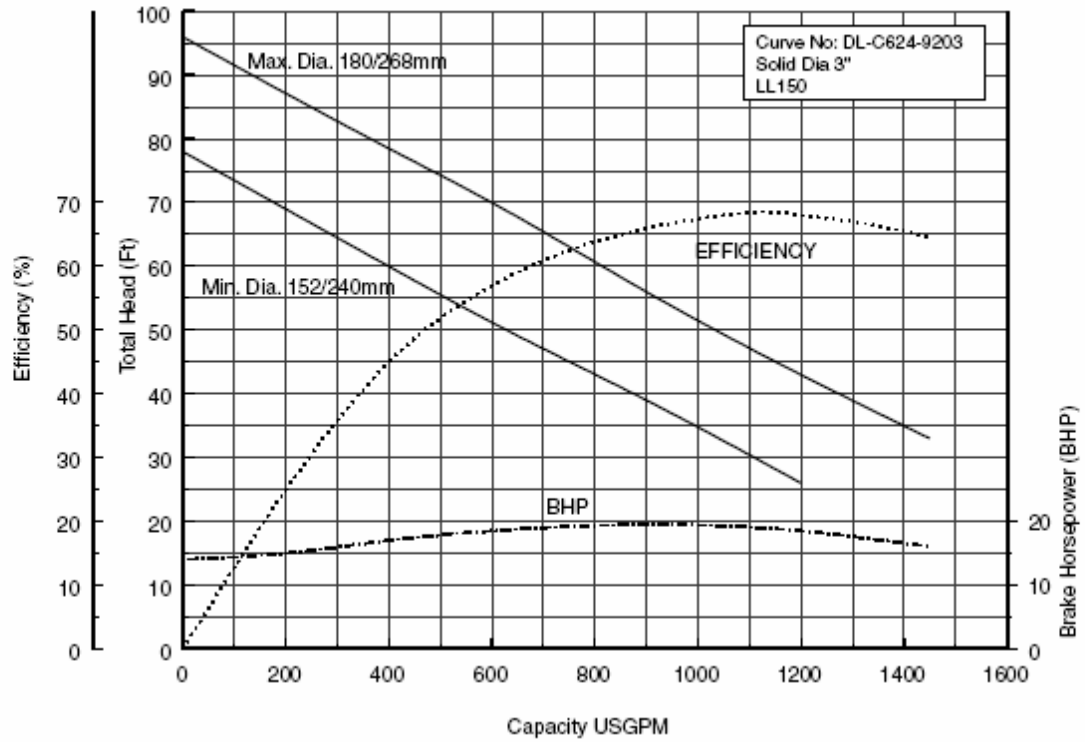
3, 4 inch Discharge



20 HP LOW HEAD (Use 6-inch discharge)

150DLF615 200DLF615 (20HP) Synchronous Speed: 1800 RPM

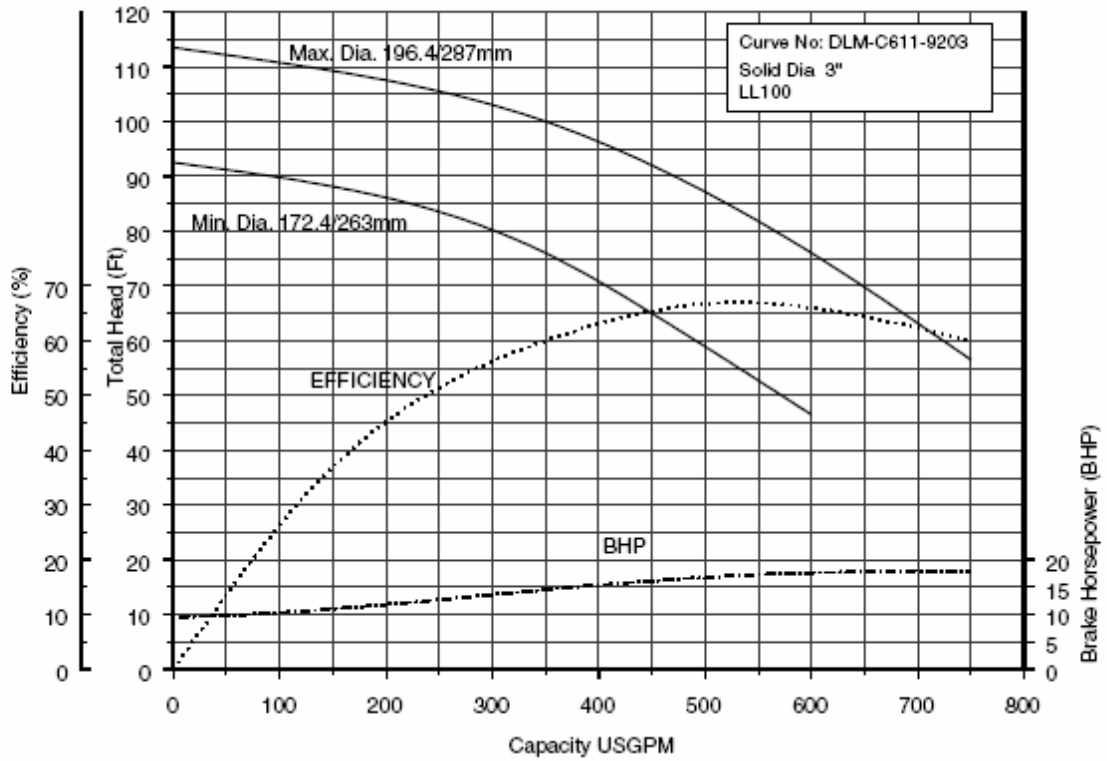
6, 8 inch Discharge



20 HP HIGH HEAD (Use 4-inch discharge)

100DLMF615 (20HP) Synchronous Speed: 1800 RPM

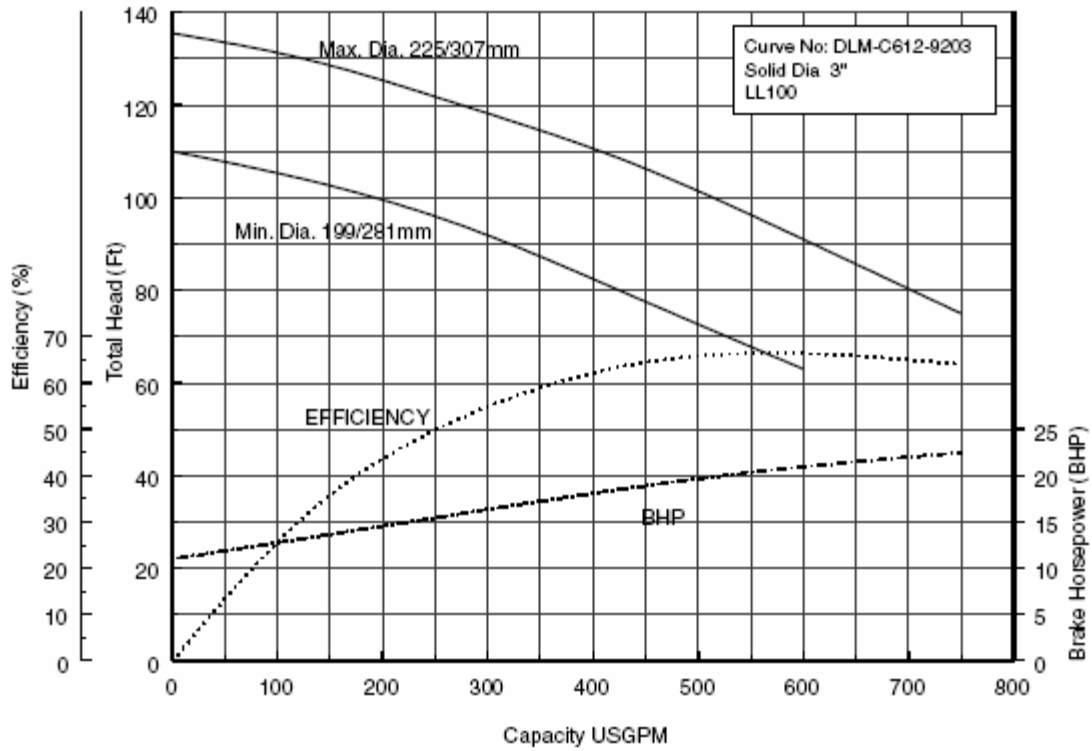
3, 4 inch Discharge



25 HP (Use 4-inch discharge)

100DLMF618 (25HP) Synchronous Speed: 1800 RPM

3, 4 inch Discharge



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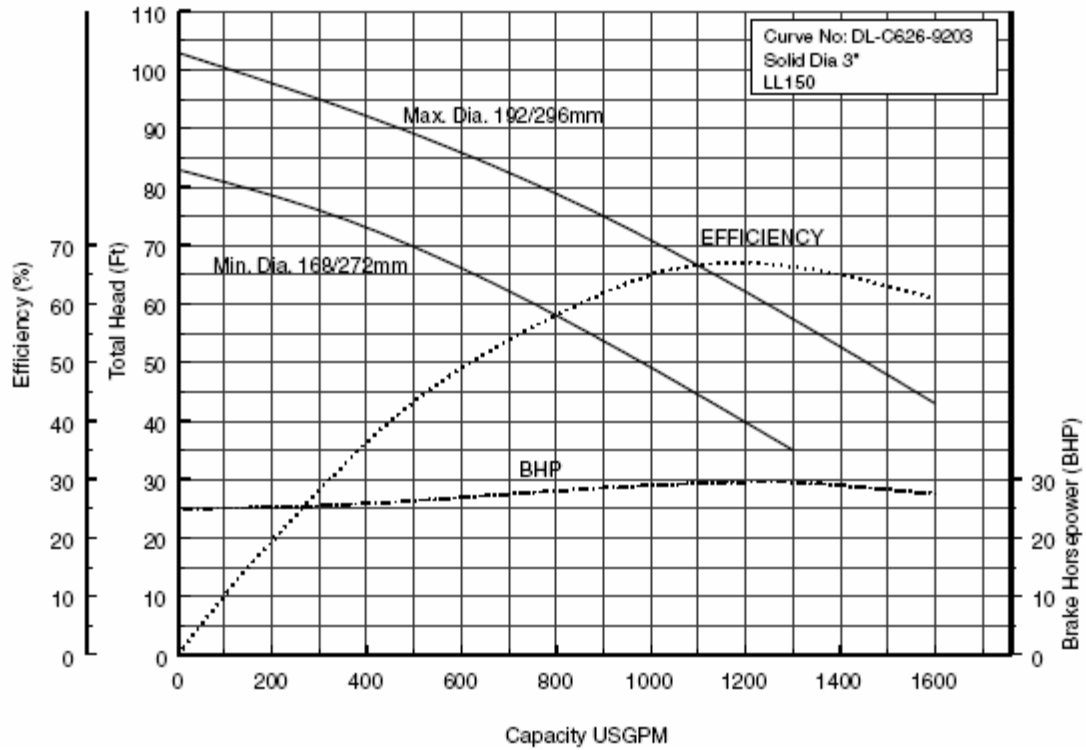
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30 HP (Use 6-inch discharge)

150DLF622 200DLF622 (30HP) Synchronous Speed: 1800 RPM

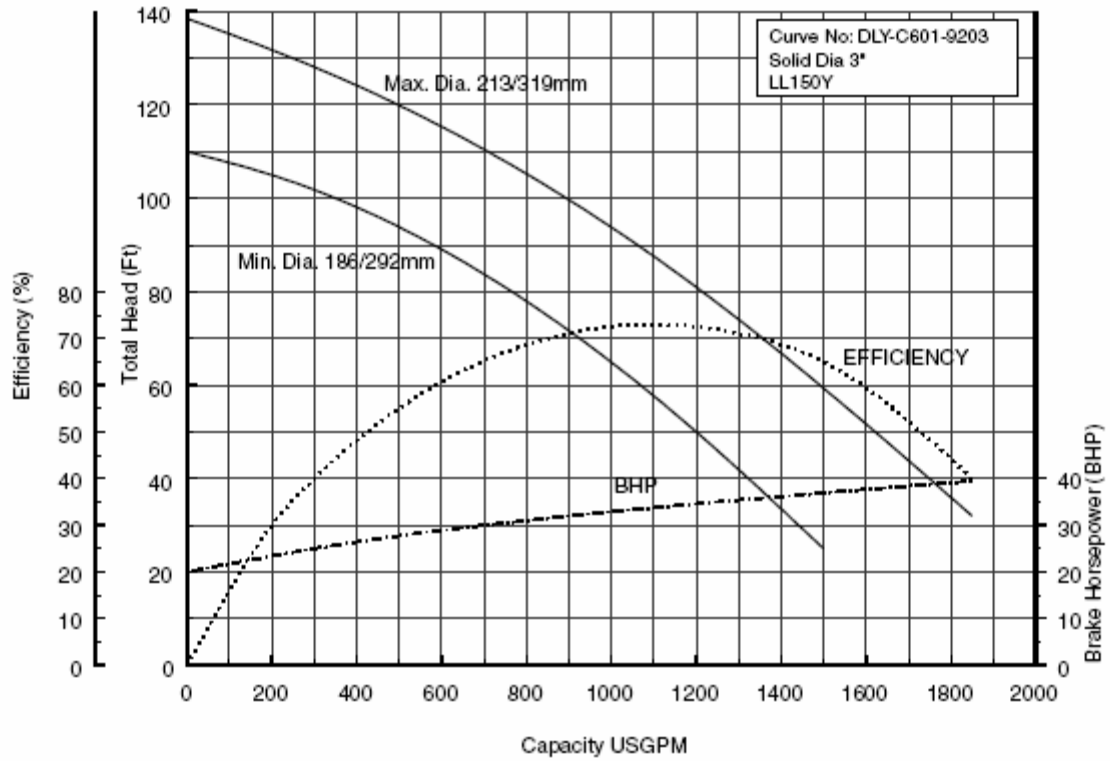
6,8 inch Discharge



40 HP

150DLF630 (40HP) Synchronous Speed: 1800 RPM

6 inch Discharge



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rev. 01/02

50 HP

150DLF637 (50HP) Synchronous Speed: 1800 RPM

6 inch Discharge

