Model DSC/DSCA3

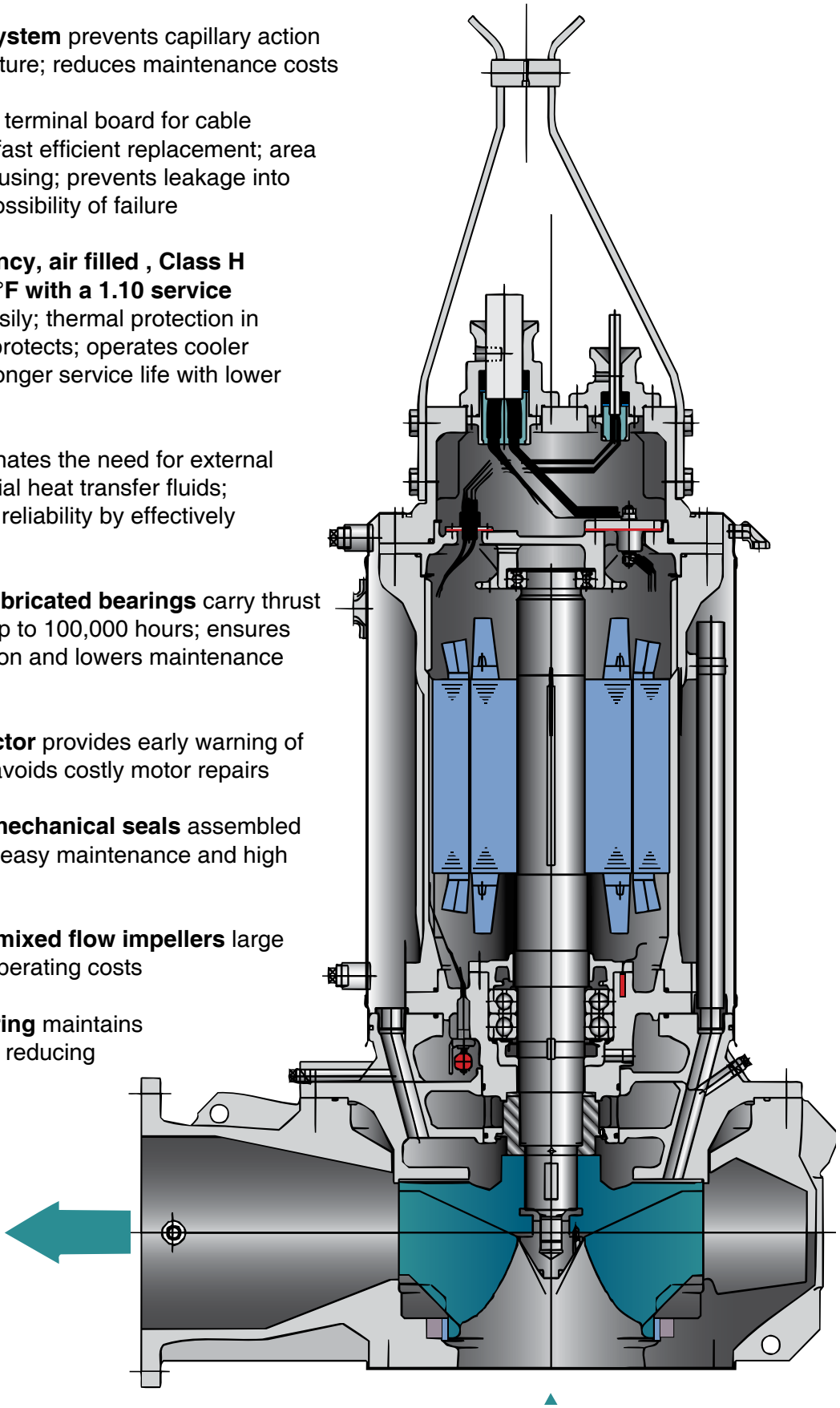
Technical Data

EBARA

EBARA Pumps Americas Corporation

Features

- **Watertight cable entry system** prevents capillary action and protects against moisture; reduces maintenance costs
- **Junction area** includes a terminal board for cable connections allowing for fast efficient replacement; area sealed from the stator housing; prevents leakage into the motor; reduces the possibility of failure
- **Heavy duty, high efficiency, air filled , Class H insulated, rated for 311°F with a 1.10 service factor** dissipates heat easily; thermal protection in each phase of windings protects; operates cooler with higher efficiencies; longer service life with lower operating costs
- **Self cooling jacket** eliminates the need for external pumping devices or special heat transfer fluids; offers simplicity and high reliability by effectively dissipating heat
- **Double and triple row lubricated bearings** carry thrust loading with L-10 life of up to 100,000 hours; ensures long, dependable operation and lowers maintenance costs
- **Float type leakage detector** provides early warning of mechanical seal failure; avoids costly motor repairs
- **Cartridge type, duplex mechanical seals** assembled in tandem arrangement; easy maintenance and high reliability
- **High efficiency, closed mixed flow impellers** large diameter solids; lowers operating costs
- **Replaceable case liner ring** maintains working clearances while reducing casing costs



Standard Specifications

	Standard	Optional
Design		
Discharge Size	6 to 24 inch	
Range of HP	20 to 600HP *)	
Range of Performance	Capacity 530 to 35000 GPM Head 8 to 300 feet	
Liquid Temperature	32° to 104°F	
Maximum (allowed) Submergence	114 feet (35 m)	
Speed	1800, 1200, 900, 700, 600 RPM	
Materials		
Casing	Cast Iron	
Impeller	Cast Iron	
Shaft	403 Stainless Steel	Ductile Cast Iron, Bronze, Stainless Steel
Motor Frame	Cast Iron	
Cooling Jacket	Steel	
Fastener	304 Stainless Steel	
Construction		
Impeller Type	Enclosed Mixed Flow	Impeller Wearing Ring
Shaft Seal	Cartridge Type Duplex Mechanical Seal in Tendem Arrangement	
Material - Upper Side	Carbon/Ceramic	Carbon/Tungsten Carbide
Material - Lower Side	Silicon Carbide/Silicon Carbide	Tungsten Carbide/Tungsten Carbide
Bearing	Grease Lubricated Ball Bearing	
Mounting Method	Wet Pit: with QDC Dry Pit: with Base Plate	
Motor		
Type	Air-filled with cooling jacket	FM Explosion Proof, Class 1, Division 1, Group C, D
Starting Method	Direct online	
Hz, Voltage	60Hz, 460V	
Protection	Built-in winding temperature detector Built-in float type leakage dettector	Thrust bearing temperature detector
Accessories	Submersible cable 33 ft.	
Codes & Standards	ISO 9000 ISO 9001	

*) FM explosion proof motor is available for the range as below

Pole	Speed [rpm]	Output [kW]	Output [hp]	Frequency/Voltage
4P	1800	37 to 280	50 to 375	60Hz / 440, 460V 50Hz / 380, 400, 415V
6P	1200	30 to 250	40 to 335	
8P	900	18.5 to 280	25 to 375	
10P	750	15 to 250	20 to 335	
12P	600	22 to 220	30 to 295	

Standard Specifications - DSC3-FM

A. **General:**
Provide FM explosion proof submersible sewage pumps suitable for continuous duty operation underwater without loss of watertight integrity to a depth of 114 feet (35 m). Pump system design shall include a guide rail system such that the pump will be automatically connected to the discharge piping when lowered into place on the discharge connection.The pump shall be easily removable for inspection or service, requiring no bolts, nuts, or other fasteners to be disconnected, or the need for personnel to enter the wet well. The motor and pump shall be designed, manufactured, and assembled by the same manufacturer.

B. **Manufacturer:**
Ebara International Corporation

C. **Pump Characteristics:**
Pumps shall conform to the following requirements:

Number of units	
Design flow (gpm)	
Design TDH (ft)	
Minimum shut off head (ft)	
RPM	
Maximum HP	
Minimum hydraulic efficiency at design (%)	
Minimum power factor at design (%)	
Voltage/HZ	460V / 60
Phase	3

D. **Pump Construction:**
All major parts of the pumping unit(s) including casing, intermediate casing, impeller, motor frame shall be manufactured from gray cast iron, ASTM A-48 Class 35. Castings shall have smooth surfaces devoid of blow holes or other casting irregularities. Casing design shall be centerline discharge with a large radius on the cut water to prevent clogging. Units shall be furnished with a discharge elbow and 125lb. flat face ANSI flange. A replaceable casing ring shall be provided, manufactured of AISI 403SS material, to maintain working clearances and hydraulic efficiencies. All exposed bolts and nuts shall be 304 stainless steel. All mating surfaces of major components shall be machined and fitted with NBR O-rings where watertight sealing is required. Machining and fitting shall be such that sealing is accomplished by automatic compression of o-rings in two planes and o-ring contact is made on four surfaces without the requirement of specific torque limits. Surfaces in contact with the pumpage shall be surface prepared to SSPC-SP-10 and coated with three (3) coats of coal tar epoxy paint. The internal surface of the motor shall be surface prepared to SSPC-SP-3 and coated with one (1) coat of zinc rich primer paint. Surfaces in air shall be surface prepared to SSPC-SP-10 and coated with one (1) coat of zinc chromate primer and one (1) coat of alkyd resin enamel paint.

The impeller shall be a non-clog, enclosed, multi-vane mixed flow type. It shall be dynamically balanced and shall be designed for solids handling with a long thrulet without acute turns. The inlet edge of the impeller vanes shall be angled toward the impeller periphery so as to facilitate the release of objects that might otherwise clog the pump. The design shall also include back pump out vanes to reduce the pressure and entry of foreign materials into the mechanical seal area. Impellers shall be direct connected to the motor shaft with a slip fit, key driven, and secured with an impeller nut. The design shall include an optional, replaceable wear ring manufactured of AISI 304SS material to maintain working clearances and hydraulic efficiencies.

The mechanical seal system shall be a cartridge mounted double mechanical seal in a tandem arrangement. Each seal shall be positively driven and act independently with its own spring system. The upper seal operates in an oil bath, while the lower seal is lubricated by the oil from between the shaft and the seal faces, and in contact with the pumpage. The oil filled seal chamber shall be designed to prevent over-filling and include an anti-vortexing vane to insure proper lubrication of both seal faces. Lower face materials shall be Silicon Carbide, upper faces Carbon vs. Ceramic. NBR elastomers shall be provided in the oil chamber and viton elastomers where in contact with the pumpage. The mechanical seal hardware shall be 304SS. Seal system shall not rely on pumping medium for lubrication.

E. **Motor Construction:**

The pump motor shall be FM Explosion Proof, Class 1, Division 1, Groups C, D. The design shall be an air filled induction type with a squirrel cage rotor, shell type design, built to NEMA MG-1, Design B specifications. Stator windings shall be copper, insulated with moisture resistant Class H insulation, rated for 311°F. The stator shall be dipped and baked three times in Class H varnish and heat shrunk fitted into the stator housing. Rotor bars and short circuit rings shall be manufactured of cast aluminum. The motor junction area shall include a terminal strip for wire connections and shall be sealed with gaskets and o-rings from the motor stator housing. The motor shaft shall be one piece AISI403SS material, rotating on two permanently lubricated ball bearings designed for a minimum B-10 life of up to 100,000 hours. Motor service factor shall be 1.10 and capable of up to 10 starts per hour. The motor shall be designed for continuous duty pumping at a maximum sump temperature of 104°F. Voltage and frequency tolerances shall be a maximum 10 / 5% respectively. A thrust bearing RTD temperature monitor is optional.

Motor over temperature protection shall be provided by miniature thermal protectors embedded in the windings. Mechanical seal failure protection shall be provided by a mechanical float switch located in a chamber above the seal. This switch shall be comprised of a magnetic float that actuates a dry reed switch encapsulated within the stem. Should the mechanical seal fail, liquid shall be directed into the float chamber, in which the rising liquid activates the switch opening the normally closed circuit. The float switch components shall be 304SS material. The motor shall be non-overloading over the entire specified range of operation and be able to operate at full load continuously with the motor unsubmerged in air.

Power cable jacket shall be manufactured of an oil resistant chloroprene rubber material, designed for submerged applications. Cable shall be watertight to a depth of a least 114 feet (35 m). The cable entry system shall comprise of primary, secondary, and tertiary sealing methods. The primary seal shall be achieved by a cylindrical elastomeric grommet compressed between the cable housing and cable gland. Secondary sealing is accomplished with a compressed o-rings made of NBR material. Compression and subsequent sealing shall preclude specific torque requirements. The system shall also include tertiary sealing to prevent leakage into the motor housing due to capillary action through the insulation if the cable is damaged or cut. The cable wires shall be cut, stripped, re-connected with a copper butt end connector, and embedded in epoxy within the cable gland. This provides a dead end for leakage through the cable insulation into the motor junction area. The cable entry system shall be the same for both the power and control cables.

The motor design shall also include an integral cooling jacket constructed of steel, A283, Grade D. The cooling medium shall be the pumpage. Re-circulation through the jacket shall be achieved by discharging the pumpage into the cooling jacket from the periphery, high pressure area, of the impeller, and returning it into the low pressure behind the impeller, at the hub. Riser pipes within the jacket shall be utilized to facilitate circulation. The cooling passage ways shall be non clogging by virtue of the dimensions; screening solids from entering the jacket. The jacket shall have external NPT connections to be used for external cooling as an option, as well as for venting the jacket. The jacket cooling system shall provide heat dissipation for the motor whether the unit is submerged or operating in air.

F. **Guide Rail system:**

Design shall include two (2) 304SS schedule 40 guide rails sized to mount directly to the quick discharge connector, QDC, at the floor of the wetwell and to a guide rail bracket at the top of the wetwell below the hatch opening, (refer to project drawings). Intermediate guide brackets are recommended for rail lengths over 15 feet.

Guide rails are not part of the pump package and shall be supplied by others.

The QDC shall be manufactured of cast iron, A48 Class 30. It shall be designed to adequately support the guide rails, discharge piping, and pumping unit under both static and dynamic loading conditions with support legs that are suitable for anchoring it to the wet well floor. The face of the inlet QDC flange shall be perpendicular to the floor of the wet well. The discharge flange of the QDC shall conform to ANSI B16.1 Class 125.

The pump design shall include an integral self-aligning sliding bracket. Sealing of the pumping unit to the QDC shall be accomplished by a single, linear, downward motion of the pump. The entire weight of the pump unit shall be guided to and wedged tightly against the inlet flange of the QDC, making metal to metal contact with the pump discharge forming a seal without the use of bolts, gaskets or o-rings.

Lifting chain, either galvanized or stainless steel, is suitable for removing and installing the pump unit.

Standard Specifications - DSC3-Non-FM

A. **General:**
Provide submersible sewage pumps suitable for continuous duty operation underwater without loss of watertight integrity to a depth of 114 feet (35 m). Pump system design shall include a guide rail system such that the pump will be automatically connected to the discharge piping when lowered into place on the discharge connection.The pump shall be easily removable for inspection or service, requiring no bolts, nuts, or other fasteners to be disconnected, or the need for personnel to enter the wet well. The motor and pump shall be designed, manufactured, and assembled by the same manufacturer.

B. **Manufacturer:**
Ebara International Corporation

C. **Pump Characteristics:**
Pumps shall conform to the following requirements:

Number of units	
Design flow (gpm)	
Design TDH (ft)	
Minimum shut off head (ft)	
RPM	
Maximum HP	
Minimum hydraulic efficiency at design (%)	
Minimum power factor at design (%)	
Voltage/HZ	460V / 60
Phase	3

D. **Pump Construction:**
All major parts of the pumping unit(s) including casing, intermediate casing, impeller, motor frame shall be manufactured from gray cast iron, ASTM A-48 Class 35. Castings shall have smooth surfaces devoid of blow holes or other casting irregularities. Casing design shall be centerline discharge with a large radius on the cut water to prevent clogging. Units shall be furnished with a discharge elbow and 125lb. flat face ANSI flange. A replaceable casing ring shall be provided, manufactured of AISI 403SS material, to maintain working clearances and hydraulic efficiencies. All exposed bolts and nuts shall be 304 stainless steel. All mating surfaces of major components shall be machined and fitted with NBR O-rings where watertight sealing is required. Machining and fitting shall be such that sealing is accomplished by automatic compression of o-rings in two planes and o-ring contact is made on four surfaces without the requirement of specific torque limits. Surfaces in contact with the pumpage shall be surface prepared to SSPC-SP-10 and coated with three (3) coats of coal tar epoxy paint. The internal surface of the motor shall be surface prepared to SSPC-SP-3 and coated with one (1) coat of zinc rich primer paint. Surfaces in air shall be surface prepared to SSPC-SP-10 and coated with one (1) coat of zinc chromate primer and one (1) coat of alkyd resin enamel paint.

The impeller shall be a non-clog, enclosed, multi-vane mixed flow type. It shall be dynamically balanced and shall be designed for solids handling with a long thrulet without acute turns. The inlet edge of the impeller vanes shall be angled toward the impeller periphery so as to facilitate the release of objects that might otherwise clog the pump. The design shall also include back pump out vanes to reduce the pressure and entry of foreign materials into the mechanical seal area. Impellers shall be direct connected to the motor shaft with a slip fit, key driven, and secured with an impeller nut. The design shall include an optional, replaceable wear ring manufactured of AISI 304SS material to maintain working clearances and hydraulic efficiencies.

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E. **Motor Construction:**

The pump motor shall be an air filled induction type with a squirrel cage rotor, shell type design, built to NEMA MG-1, Design B specifications. Stator windings shall be copper, insulated with moisture resistant Class H insulation, rated for 311°F. The stator shall be dipped and baked three times in Class H varnish and heat shrunk fitted into the stator housing. Rotor bars and short circuit rings shall be manufactured of cast aluminum. The motor junction area shall include a terminal strip for wire connections and shall be sealed with gaskets and o-rings from the motor stator housing. The motor shaft shall be one piece AISI403SS material, rotating on two permanently lubricated ball bearings designed for a minimum B-10 life of up to 100,000 hours. Motor service factor shall be 1.10 and capable of up to 10 starts per hour. The motor shall be designed for continuous duty pumping at a maximum sump temperature of 104°F. Voltage and frequency tolerances shall be a maximum 10 / 5% respectively. A thrust bearing RTD temperature monitor is optional.

Motor over temperature protection shall be provided by miniature thermal protectors embedded in the windings. Mechanical seal failure protection shall be provided by a mechanical float switch located in a chamber above the seal. This switch shall be comprised of a magnetic float that actuates a dry reed switch encapsulated within the stem. Should the mechanical seal fail, liquid shall be directed into the float chamber, in which the rising liquid activates the switch opening the normally closed circuit. The float switch components shall be 304SS material. The motor shall be non-overloading over the entire specified range of operation and be able to operate at full load continuously with the motor unsubmerged in air.

Power cable jacket shall be manufactured of an oil resistant chloroprene rubber material, designed for submerged applications. Cable shall be watertight to a depth of a least 114 feet (35 m). The cable entry system shall comprise of primary, secondary, and tertiary sealing methods. The primary seal shall be achieved by a cylindrical elastomeric grommet compressed between the cable housing and cable gland. Secondary sealing is accomplished with a compressed o-rings made of NBR material. Compression and subsequent sealing shall preclude specific torque requirements. The system shall also include tertiary sealing to prevent leakage into the motor housing due to capillary action through the insulation if the cable is damaged or cut. The cable wires shall be cut, stripped, re-connected with a copper butt end connector, and embedded in epoxy within the cable gland. This provides a dead end for leakage through the cable insulation into the motor junction area. The cable entry system shall be the same for both the power and control cables.

The motor design shall also include an integral cooling jacket constructed of steel, A283, Grade D. The cooling medium shall be the pumpage. Re-circulation through the jacket shall be achieved by discharging the pumpage into the cooling jacket from the periphery, high pressure area, of the impeller, and returning it into the low pressure behind the impeller, at the hub. Riser pipes within the jacket shall be utilized to facilitate circulation. The cooling passage ways shall be non clogging by virtue of the dimensions; screening solids from entering the jacket. The jacket shall have external NPT connections to be used for external cooling as an option, as well as for venting the jacket. The jacket cooling system shall provide heat dissipation for the motor whether the unit is submerged or operating in air.

F. **Guide Rail system:**

Design shall include two (2) 304SS schedule 40 guide rails sized to mount directly to the quick discharge connector, QDC, at the floor of the wetwell and to a guide rail bracket at the top of the wetwell below the hatch opening, (refer to project drawings). Intermediate guide brackets are recommended for rail lengths over 15 feet.

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The pump design shall include an integral self-aligning sliding bracket. Sealing of the pumping unit to the QDC shall be accomplished by a single, linear, downward motion of the pump. The entire weight of the pump unit shall be guided to and wedged tightly against the inlet flange of the QDC, making metal to metal contact with the pump discharge forming a seal without the use of bolts, gaskets or o-rings.

Lifting chain, either galvanized or stainless steel, is suitable for removing and installing the pump unit.

Standard Specifications - DSCA3-FM

A. **General:**
Provide FM explosion proof dry pit submersible sewage pumps suitable for continuous duty operation underwater without loss of watertight integrity to a depth of 114 feet (35 m). Pump system design shall include permanently mounted suction elbow on which the pump/motor unit is mounted. The motor and pump shall be designed, manufactured, and assembled by the same manufacturer.

B. **Manufacturer:**
Ebara International Corporation

C. **Pump Characteristics:**
Pumps shall conform to the following requirements:

Number of units	
Design flow (gpm)	
Design TDH (ft)	
Minimum shut off head (ft)	
RPM	
Maximum HP	
Minimum hydraulic efficiency at design (%)	
Minimum power factor at design (%)	
Voltage/HZ	460V / 60
Phase	3

D. **Pump Construction:**
All major parts of the pumping unit(s) including casing, intermediate casing, impeller, motor frame, suction shall be manufactured from gray cast iron, ASTM A-48 Class 35. Castings shall have smooth surfaces devoid of blow holes or other casting irregularities. Casing design shall be centerline discharge with a large radius on the cut water to prevent clogging. Units shall be furnished with suction and discharge elbows with 125 lb. flat face ANSI flange. A replaceable casing ring shall be provided, manufactured of AISI 403SS material to maintain working clearances and hydraulic efficiencies. All exposed bolts and nuts shall be 304 stainless steel. All mating surfaces of major components shall be machined and fitted with NBR o-rings where watertight sealing is required. Machining and fitting shall be such that sealing is accomplished by automatic compression of o-rings in two planes and o-ring contact is made on four surfaces without the requirement of specific torque limits. Surfaces in contact with the pumpage shall be surface prepared to SSPC-SP-10 and coated with three (3) coats of coal tar epoxy paint. The internal surface of the motor shall be surface prepared to SSPC-SP-3 and coated with one (1) coat of zinc rich primer paint. Surfaces in air shall be surface prepared to SSPC-SP-10 and coated with one (1) coat of zinc chromate primer and one (1) coat of alkyd resin enamel paint.

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Motor over temperature protection shall be provided by miniature thermal protectors embedded in the windings. Mechanical seal failure protection shall be provided by a mechanical float switch located in a chamber above the seal. This switch shall be comprised of a magnetic float that actuates a dry reed switch encapsulated within the stem. Should the mechanical seal fail, liquid shall be directed into the float chamber, in which the rising liquid activates the switch opening the normally closed circuit. The float switch components shall be 304SS material. The motor shall be non-overloading over the entire specified range of operation and be able to operate at full load continuously with the motor unsubmerged in air.

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Standard Specifications - DSCA3-Non-FM

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Ebara International Corporation

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Maximum HP	
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Voltage/HZ	460V / 60
Phase	3

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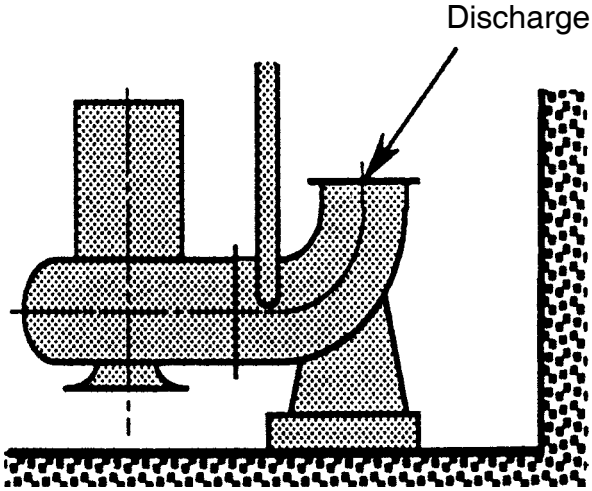
Pump Model Name

Pump Description

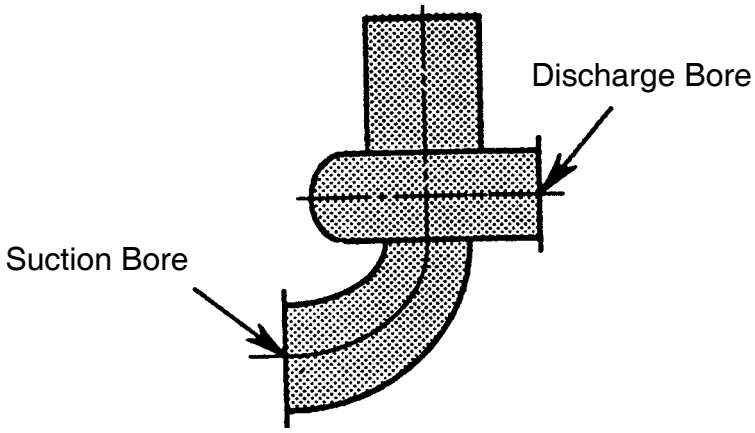
500 x 350 DSCA3

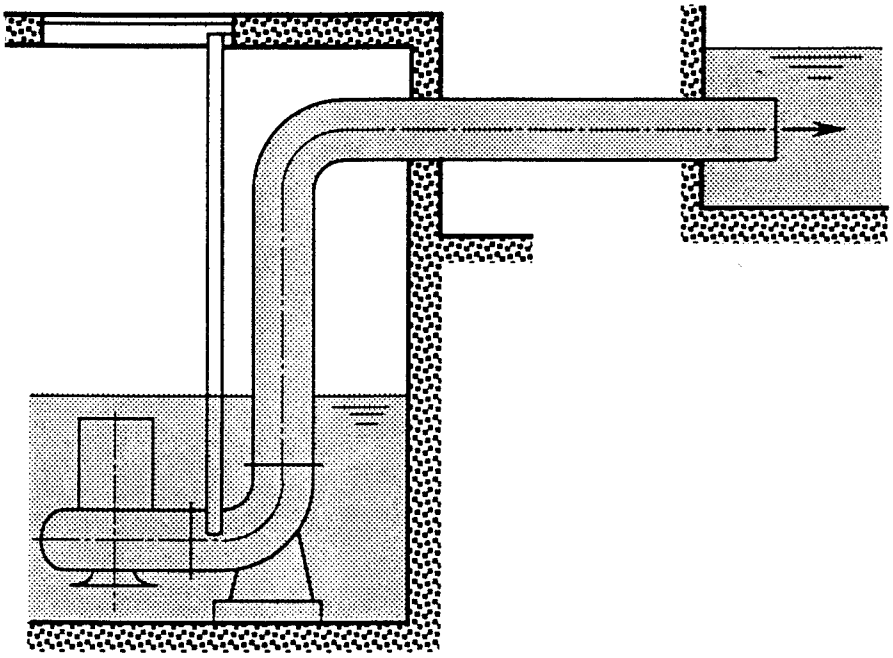
- 500 — SUCTION BORE SIZE (NO INDICATION FOR WET PIT INSTALLATION)
- 350 — DISCHARGE BORE SIZE
- DSCA3 — PUMP MODEL DSC3 : WET PIT INSTALLATION; DSCA3 : DRY PIT INSTALLATION

Model DSC3
Wet Pit Installation

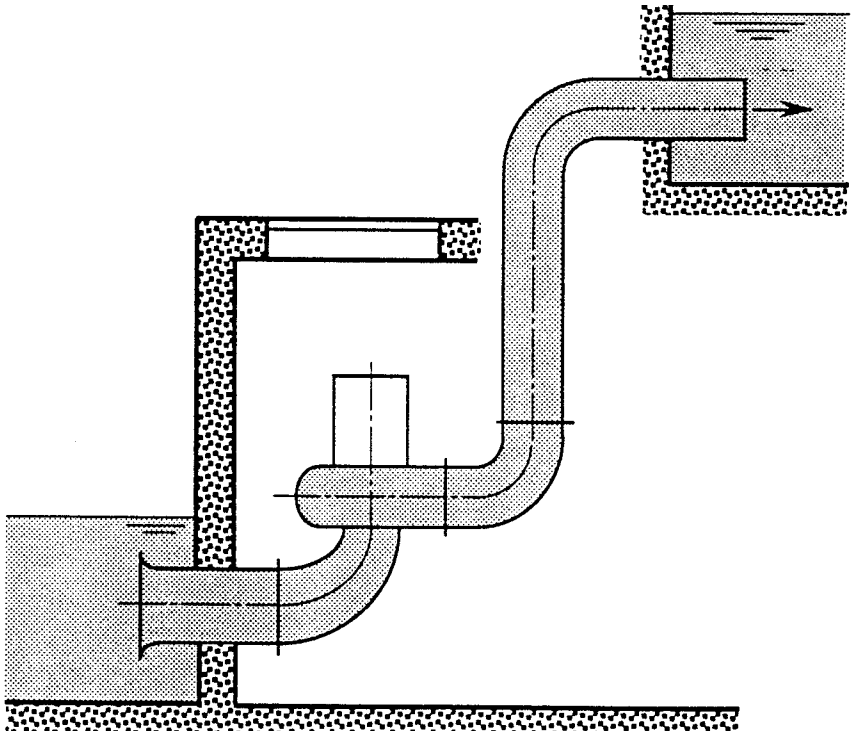


Model DSCA3
Dry Pit Installation





MODEL DSC3
(WET PIT INSTALLATION)



MODEL DSCA3
(DRY PIT INSTALLATION)

Specifications

Impeller Design

Size	Model	Type of Impeller	Nos. of Blades	Max. Solids Dia.	Size	Model	Type of Impeller	Nos. of Blades	Max. Solid Dia.
300	C1103	Closed Mixed Flow	3	3 1⁄16 inch (77m)	150	E0852	Closed Mixed FLow	2	3 1⁄16 inch (77m
300	C1203			3 5⁄16 inch (84mm)	200	E0952			3 3⁄8 inch (85mm)
350	C1463			4 inch (102mm)	200	E1052			3 11⁄16 inch (94mm)
400	C1583			4 5⁄16 inch (110mm)	250	E1152			4 1⁄16 inch (103mm)
400	C1793			5 inch (125mm)	250	E1262			4 7⁄16 inch (113mm)
500	C1943			5 5⁄16 inch (135mm)	300	E1543		3	4 5⁄8 inch (117mm)
500	C2113			5 13⁄16 inch (147mm)	500	E2244		4	4 inch (100mm)
600	C2373			6 ½ inch (165mm)	500	E2424			4 1⁄8 inch (104mm)
600	C2573			7 1⁄16 inch (179mm)	150	F0852	Closed Mixed FLow	2	3 1⁄16 inch (77mm)
750	C2953			8 1⁄8 inch (206mm)	200	F1102			4 inch (100mm)
200	D0852	Closed Mix Flow	2	3 1⁄16 inch (77mm)	250	F1302			4 5⁄8 inch (117mm)
200	D0922			3 1⁄4 inch (82mm)	300	F1593		3	4 inch (100mm)
250	D1002			3 9⁄16 inch (90mm)	150	G0852	Closed Mixed FLow	2	3 1⁄16 inch (77mm)
300	D1262			4 7⁄16 inch (113mm)	150	G0932			3 1⁄4 inch (83mm)
400	D1553		3	4 5⁄8 inch (117mm)	150	G1012			3 9⁄16 inch (90mm)
600	D2503			7 ½ inch (190mm)	200	G1102			4 inch (100mm)
					200	G1232			4 5⁄16 inch (110mm)

Material Specifications

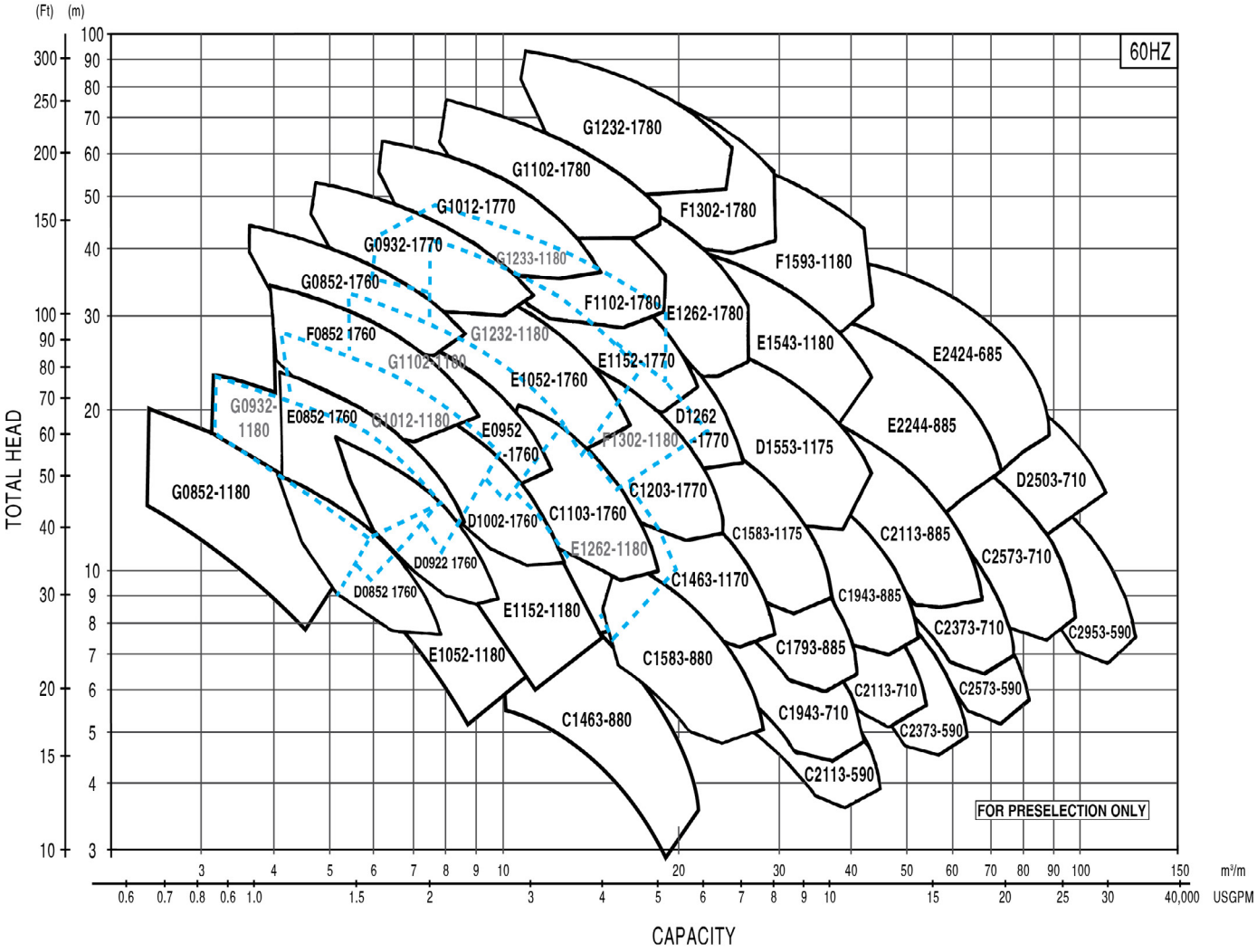
	STANDARD			
Parts	**Type I**		**Type II**	**Type III**
Pump Casing	Cast Iron ASTM A48 CL35	→	→	→
Impeller	Cast Iron (see note 2) ASTM A48 CL35	Ductile Cast Iron ASTM A536 60-40-18	Bronze ASTM B584 C90300	Stainless Steel ASTM A743 Cf8
Shaft	Stainless Steel AISI 403	→	→	→
Case Ring	Stainless Steel AISI 403	→	→	→
Motor Frame	Cast Iron ASTM A48 CL35	→	→	→
Cooling Jacket	Mild Steel ASTM A283 Gr. D	→	→	→
Mechanical Seal	Upper: Carbon/Ceramic Lower: Silicon Carbide/Silicon Carbide			

Option		
Impeller Ring	Stainless Steel AISI 403	
Mechanical Seal	Upper: Carbon/Tungsten Carbide	Lower: Tungsten Carbide/Tungsten Carbide
Cooling Jacket	Stainless Steel AISI 403	

Note:

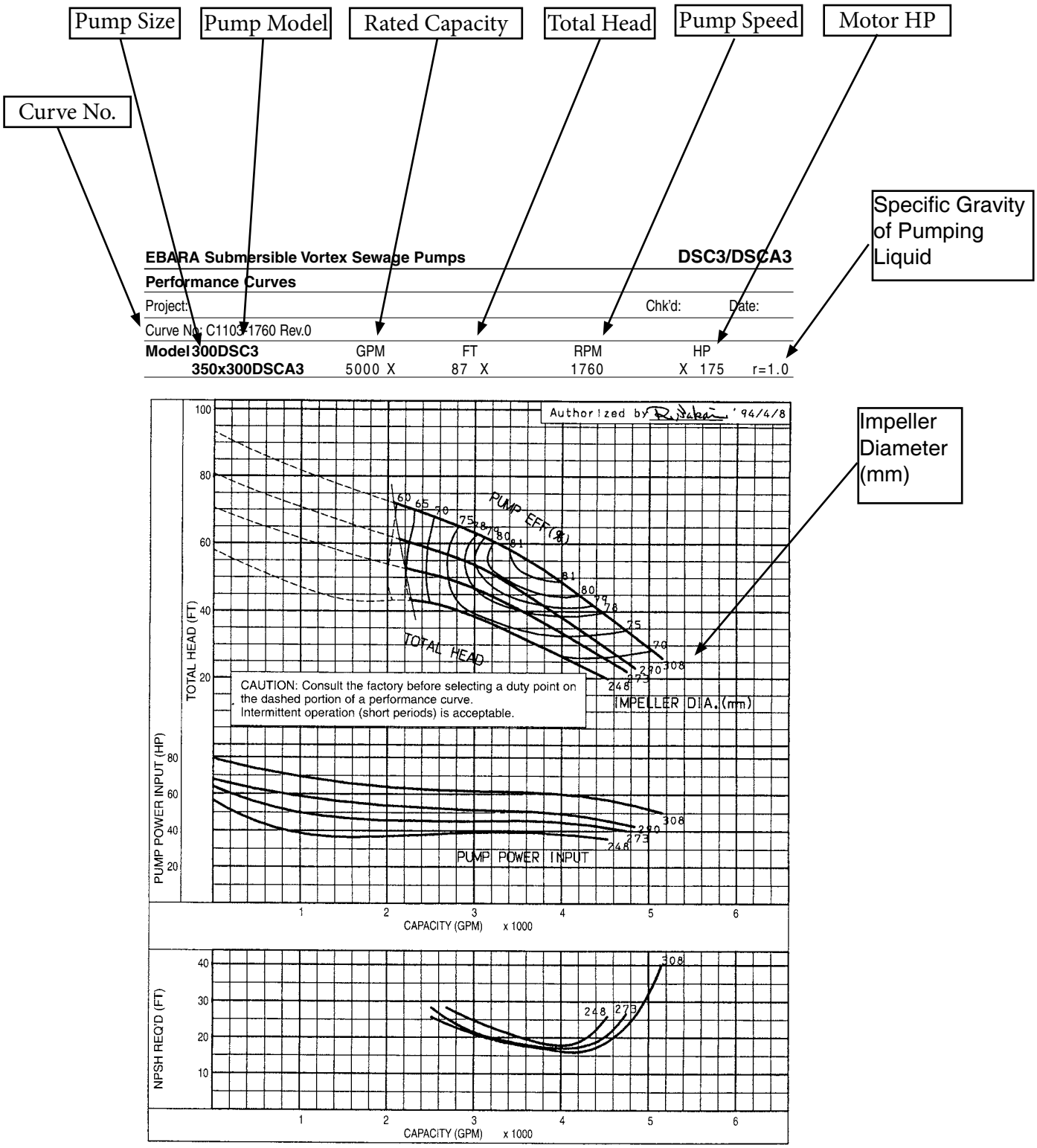
1. Other materials may be used is requested
2. For the following models, ductile cast iron impeller is provided:
   60Hz x 4P: E1262-1780, F1102-1780, F1302-1780. G1012-1770, G1102-1780, G1232-1780
   60Hz x 6P: F1593-1180

Selection Chart

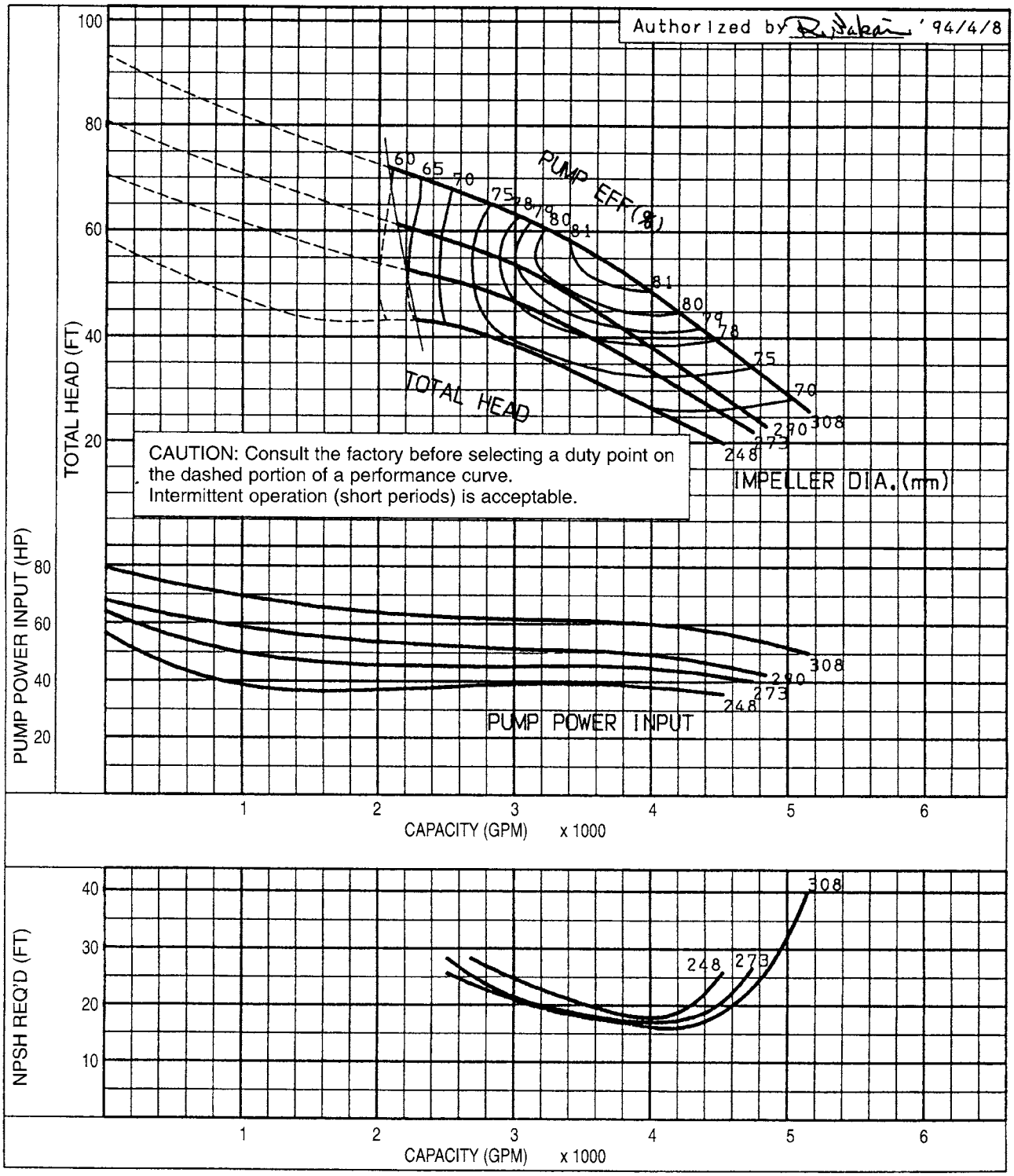


Please note: *Overlap in coverage is designated by the light blue dotted lines and model numbers in light blue.*

How to Use Performance Curve

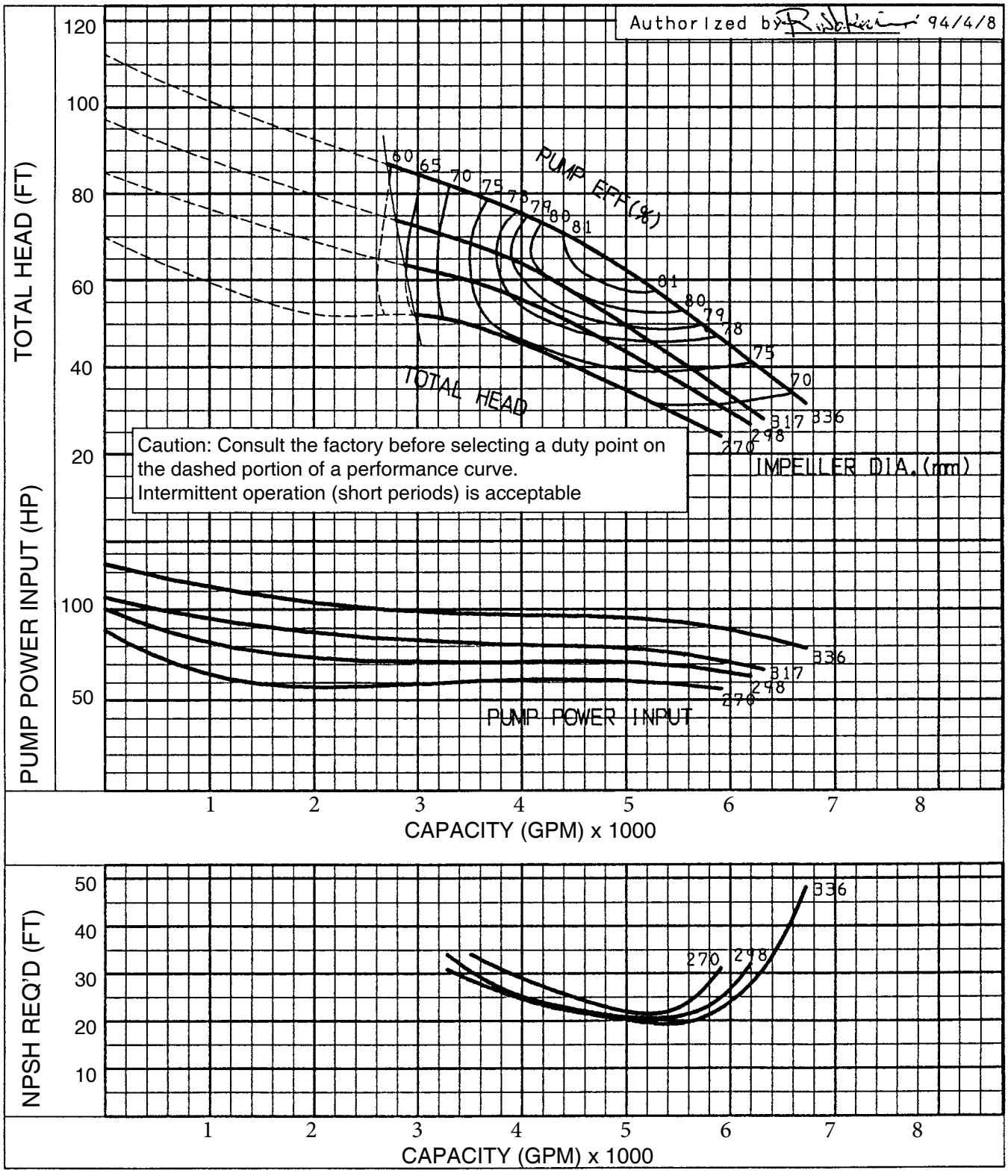


Model 300DSC3
350x300DSCA3 1760 RPM

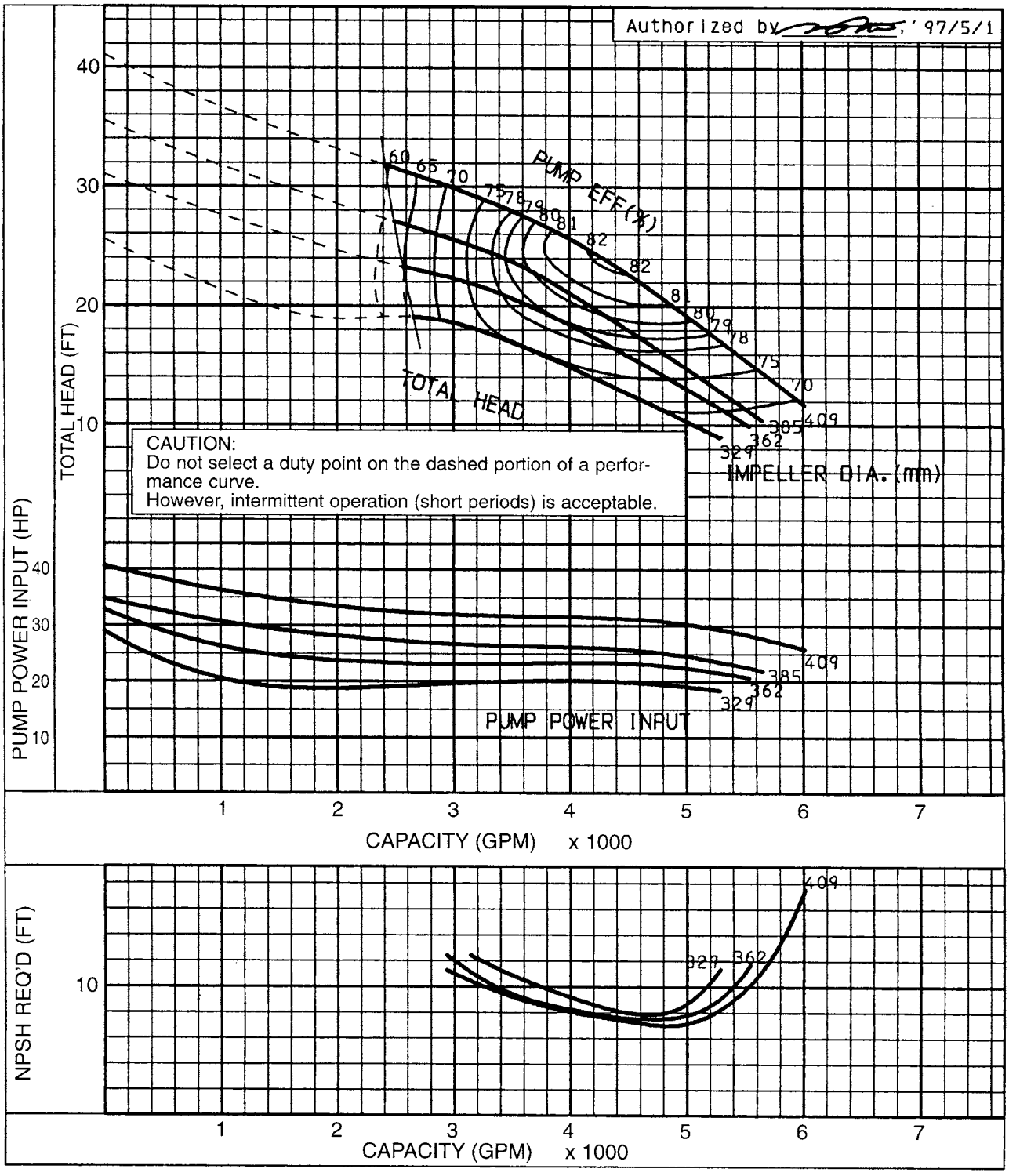


Model Designation

Model 300DSC3
400x300DSCA3 **1770 RPM**

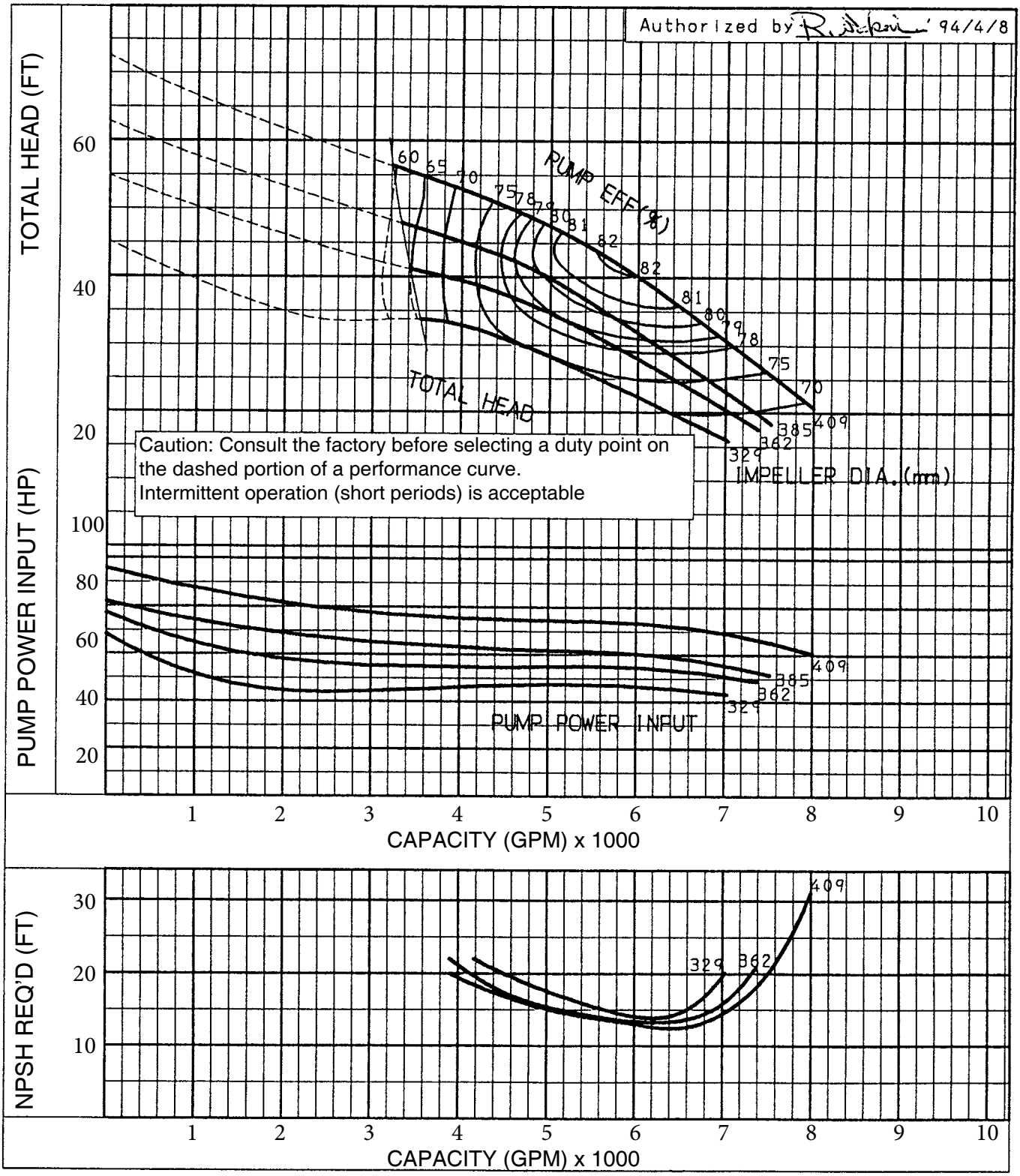


Model 350DSC3
400x350DSCA3 880 RPM



Model 350DSC3

400x350DSCA3 **1170 RPM**



PARTS	MATERIAL
Pump casing QDC	Cast iron ASTM A48 CL35
Impeller[3]	Cast iron ASTM A48 CL35
Shaft	Stainless Steel AISI 420 (4P/6P 50-145HP models) AISI 403Q (4P/6P/8P 175-245HP, 10P 50-145HP models)
Casing ring[1]	Stainless Steel AISI 420
Suction cover[2]	Cast iron ASTM A48 CL35
Motor Frame	Cast iron ASTM A48 CL35
Cooling Jacket	Rolled Steel ASTM A283 Gr.D
Mechanical Seal	Upper: Carbon/Ceramic Lower: Silicon Carbide/Silicon Carbide
Lifting Handle	Stainless Steel AISI 304

Note:
[1] Enclosed impeller models only
[2] Semi-open impeller models only
[3] Optional 304 SS impeller ring available for enclosed impeller models

Material Specifications – DSC4C 4P/6P 50-145HP Models

PARTS	MATERIAL
Pump casing QDC	Cast iron ASTM A48 CL35
Impeller[3]	Cast iron ASTM A48 CL35
Shaft	Stainless Steel AISI 420
Casing ring[1]	Stainless Steel AISI 420
Suction cover[2]	Cast iron ASTM A48 CL35
Motor Frame	Cast iron ASTM A48 CL35
Cooling Jacket	Rolled Steel ASTM A283 Gr.D
Mechanical Seal	Upper: Carbon/Ceramic Lower: Silicon Carbide/Silicon Carbide
Impeller for coolant	Corrosion-resistant cast steel ASTM A391 CF8
Side plate (Heat exchanger)	Cast iron ASTM A48 CL35 (4P50-100HP, 6P 50-145HP) Copper alloy casting ASTM B584 C83600 (4P 120-145HP)
Lifting Handle	Stainless Steel AISI 304

Note:

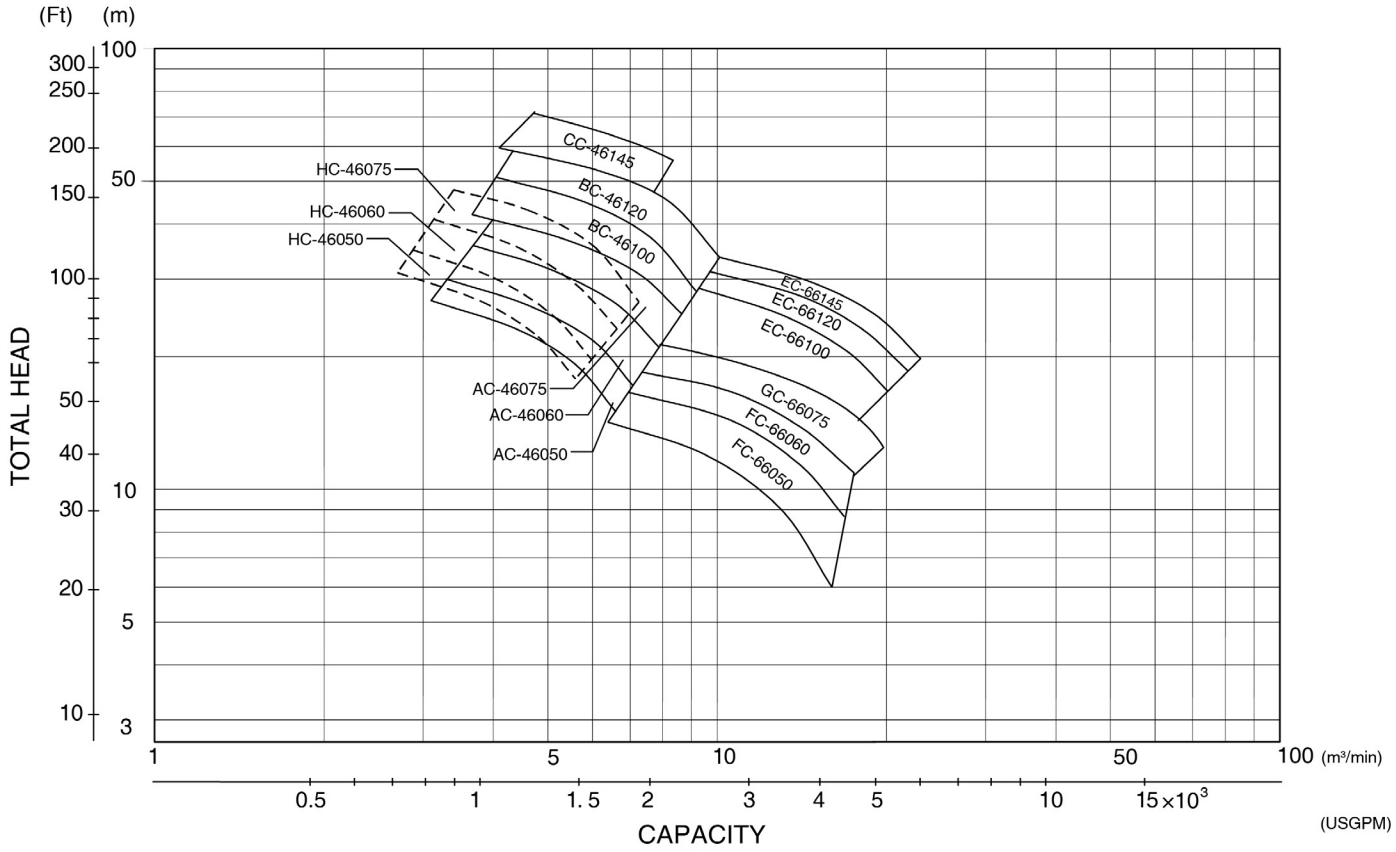
[1] Enclosed impeller models only

[2] Semi-open impeller models only

[3] Optional 304 SS impeller ring available for enclosed impeller models

Selection Chart

DSC4/DSCA4 Selection Chart

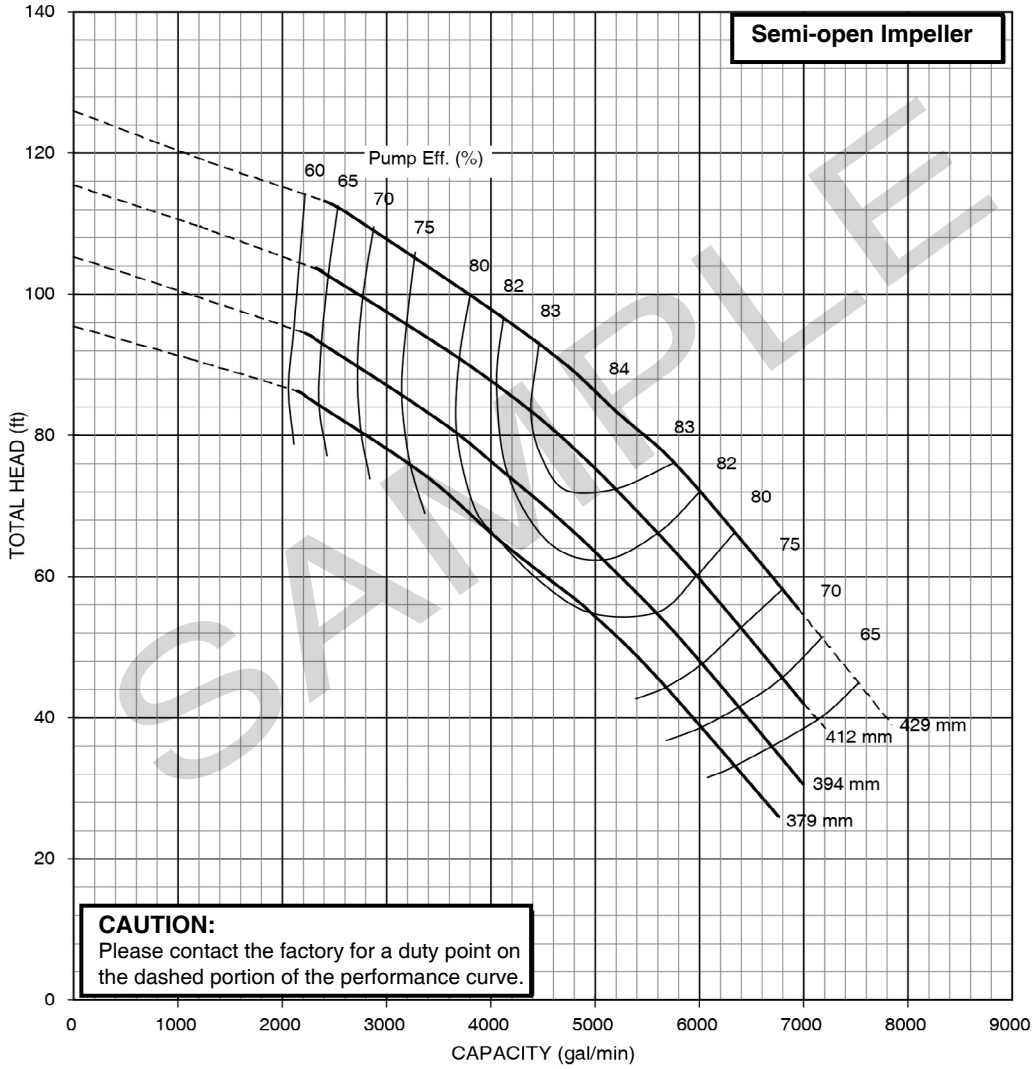


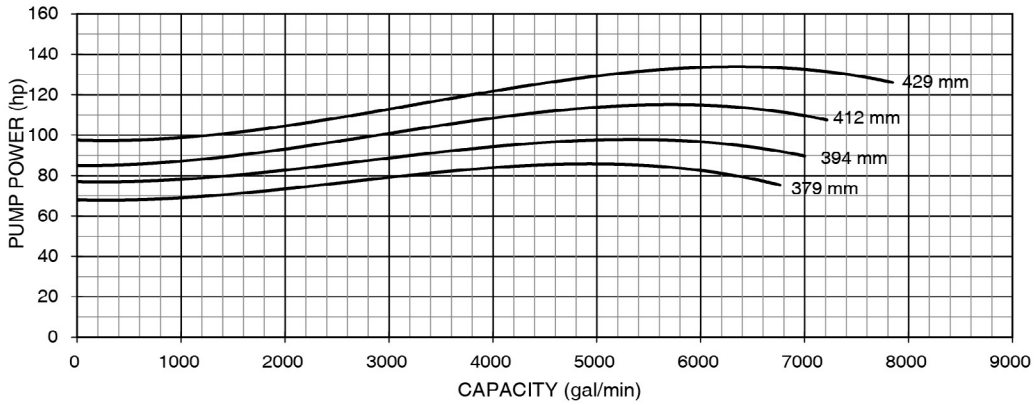
Please Note: Selection chart shows curves for the DSC4 enclosed impeller model. Please reference individual curve for impeller performance of semi-open impeller models.

Performance Curves

Rated Capacity	Rated Total Head	Pump Speed	Motor Output Power
GPM	FT	RPM	HP
(3800)	(100)	1800	(145)

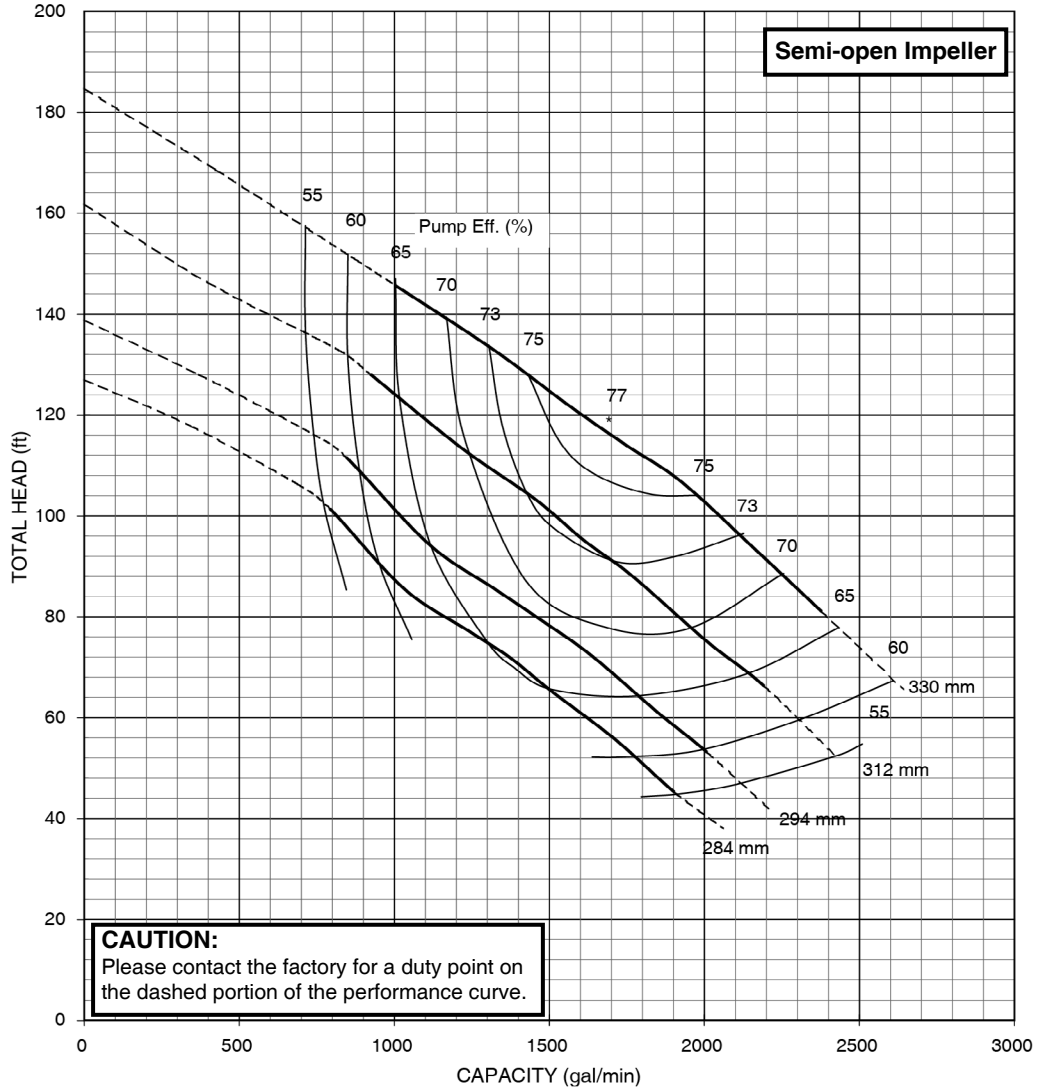
MODEL: 250DSC4
400×250DSCA4
100HP - 145HP

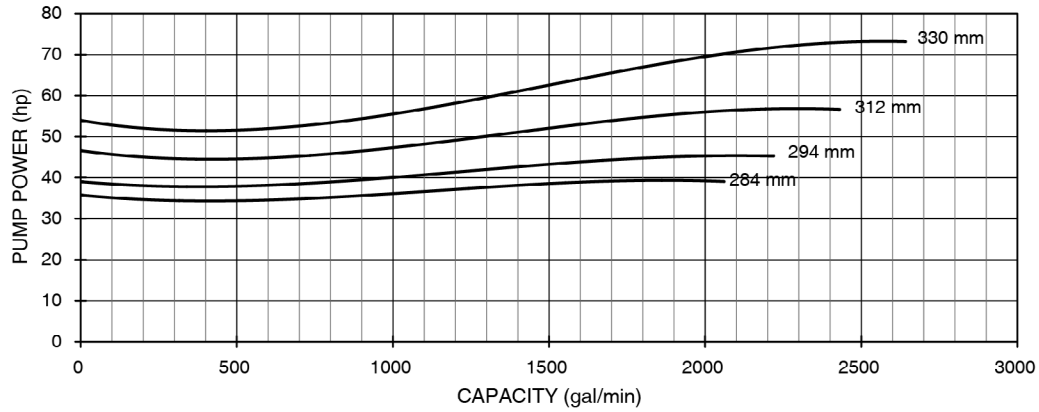




MODEL: 150DSC4/DSC4C
200x150DSCA4/DSCA4C
50HP - 75HP

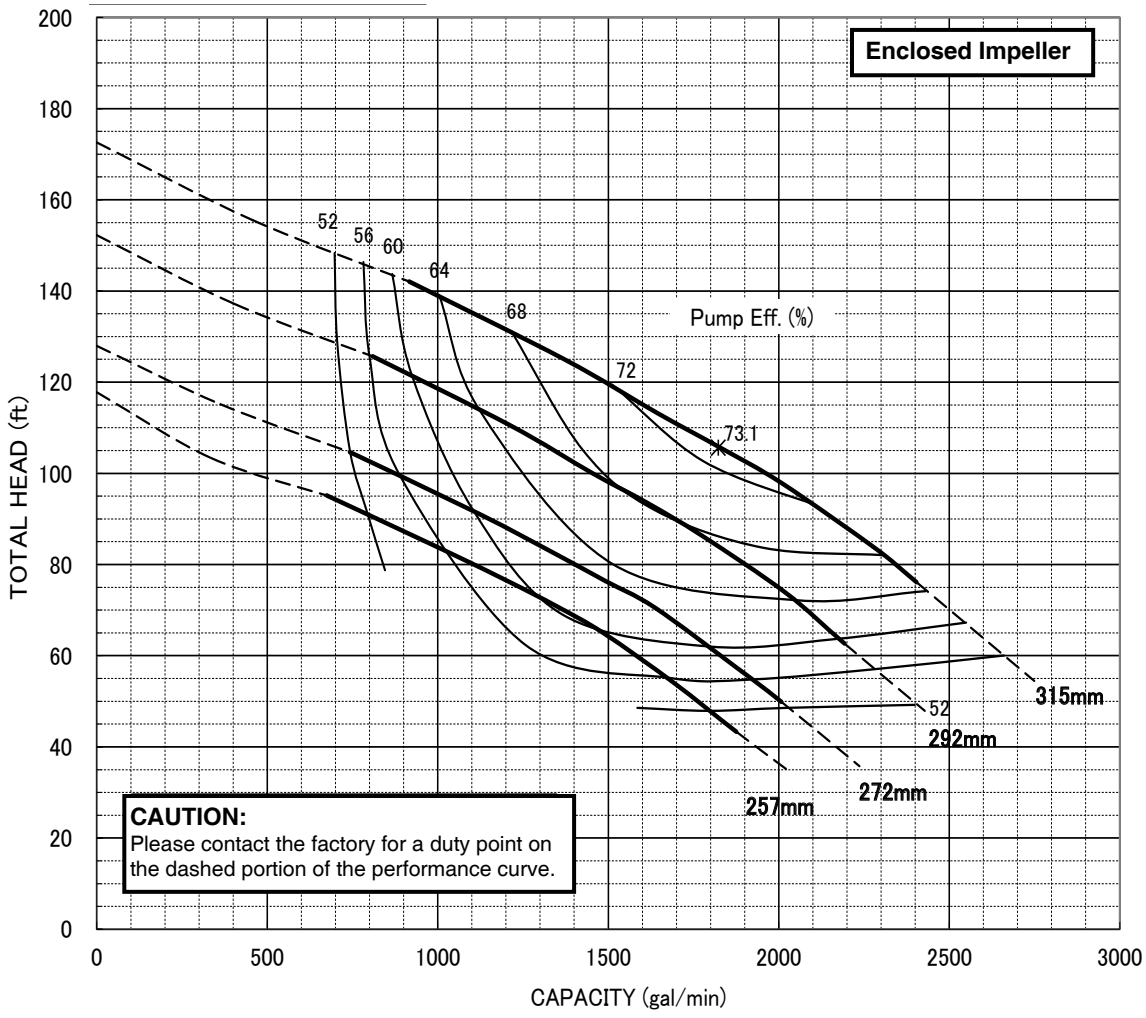
GPM		FT		RPM		HP
	X		X	1800	X	

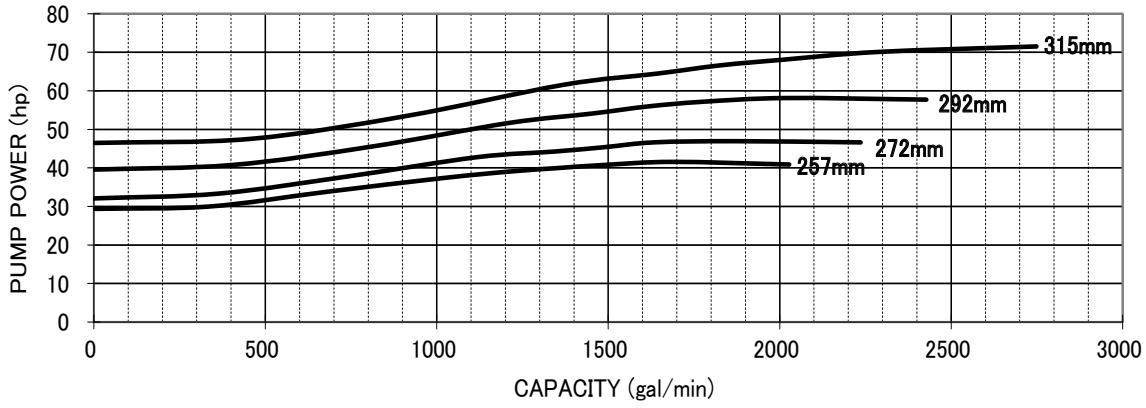




MODEL: 150DSC4/DSC4C
200x150DSCA4/DSCA4C
50HP - 75HP

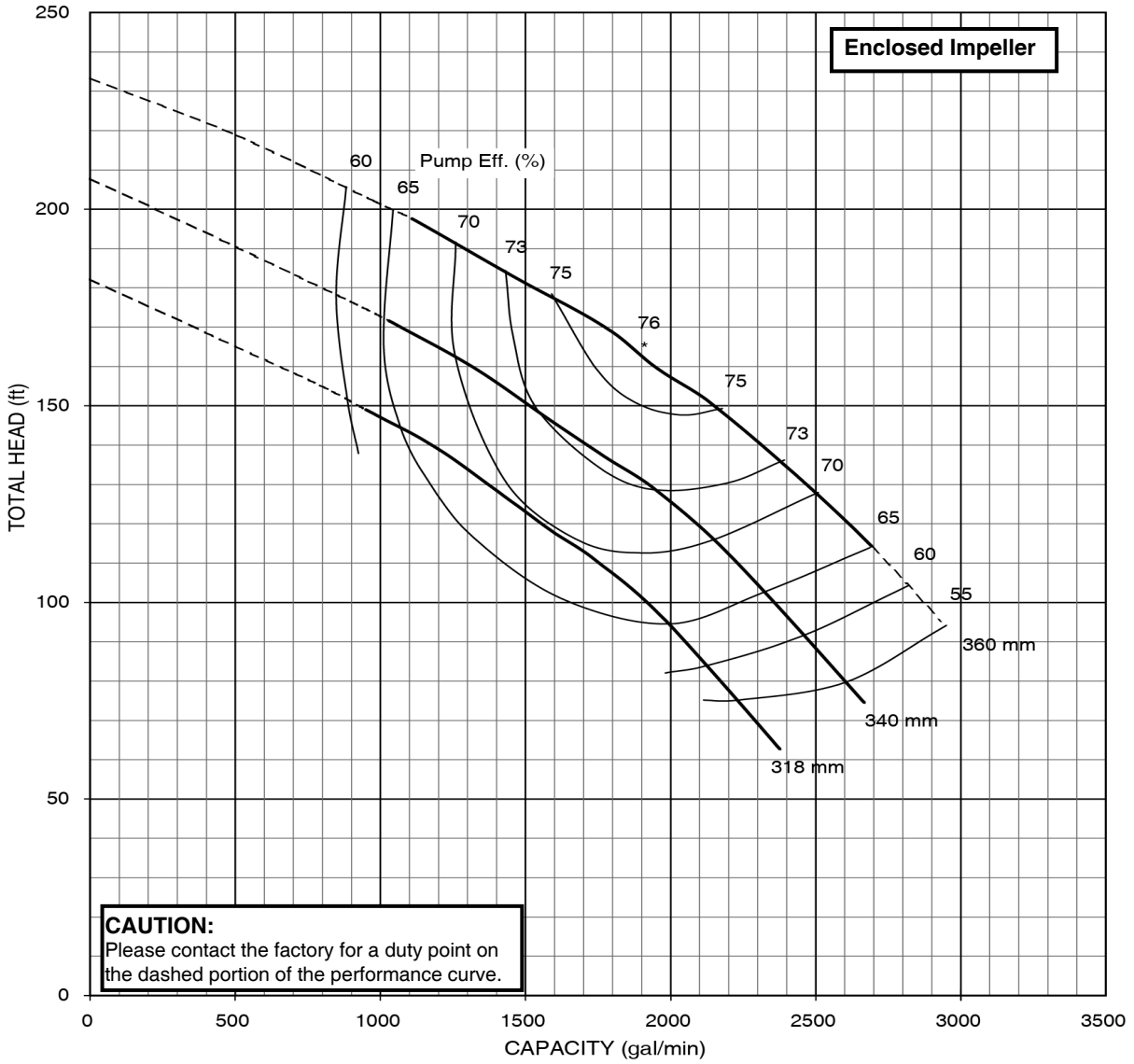
GPM		FT		RPM	HP
	X		X	1800	X

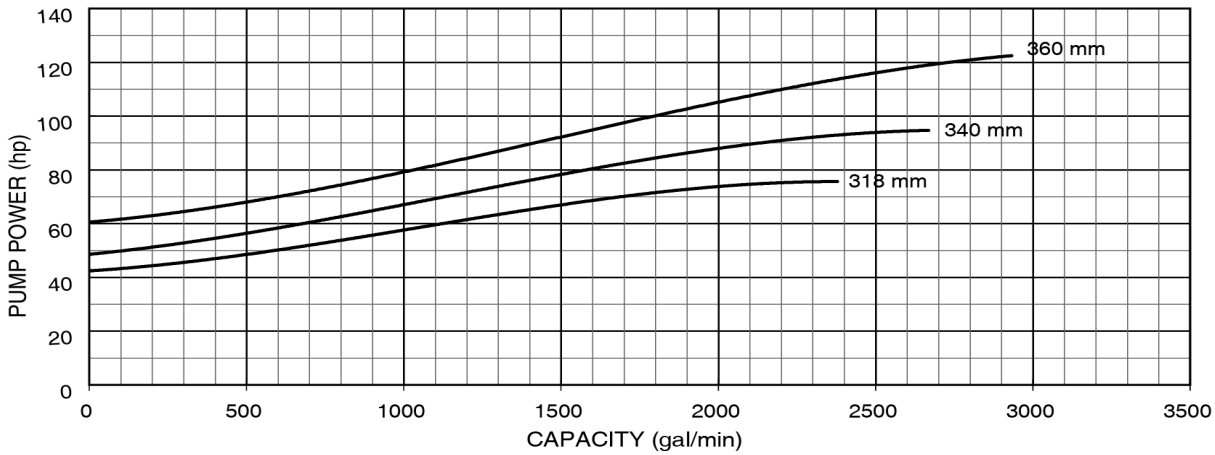




MODEL: 150DSC4/DSC4C
200x150DSCA4/DSCA4C
100HP - 120HP

GPM		FT		RPM	HP
	X		X	1800	X

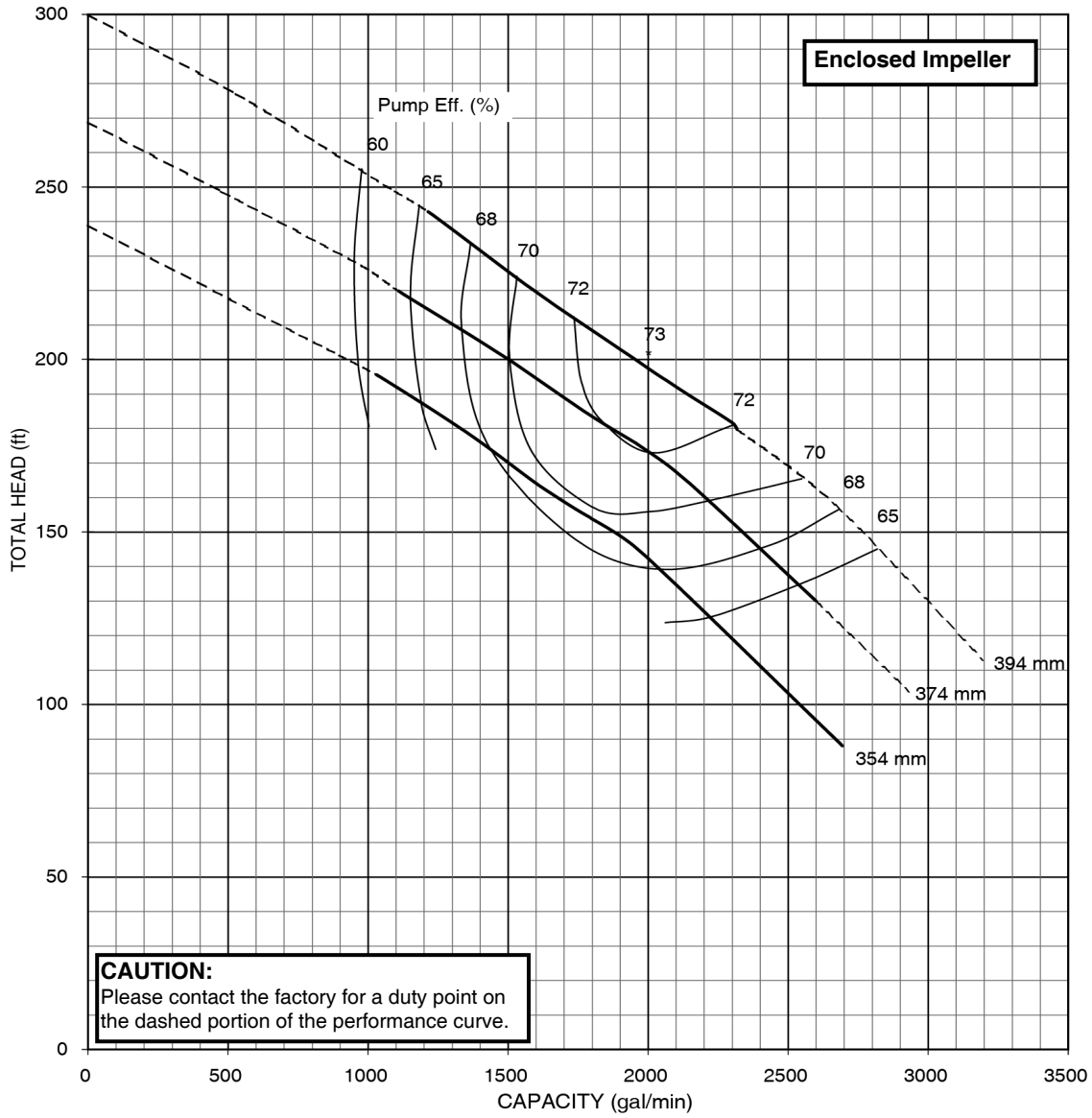


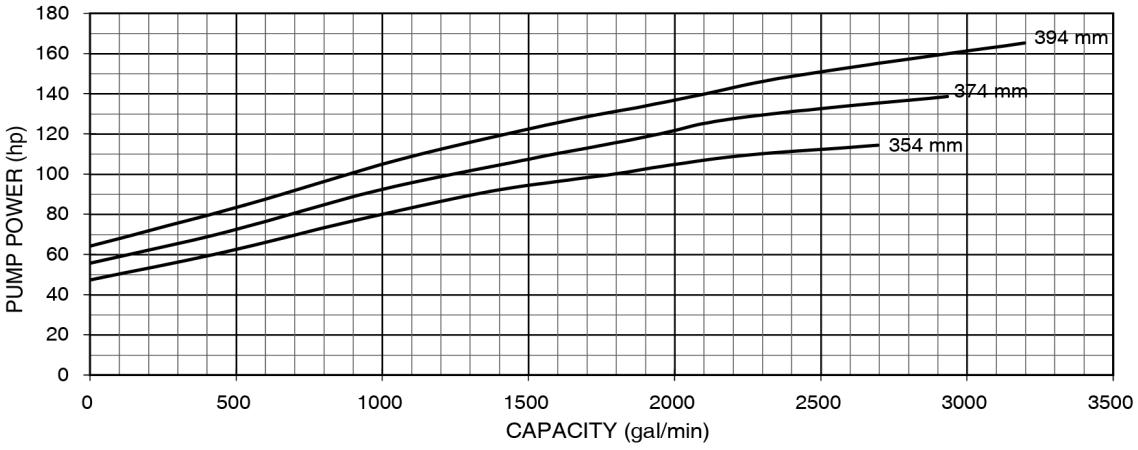


**Note: 175HP Model is not available in ICS*

MODEL: 150DSC4/DSC4C
200x150DSCA4/DSCA4C
120HP - 145HP

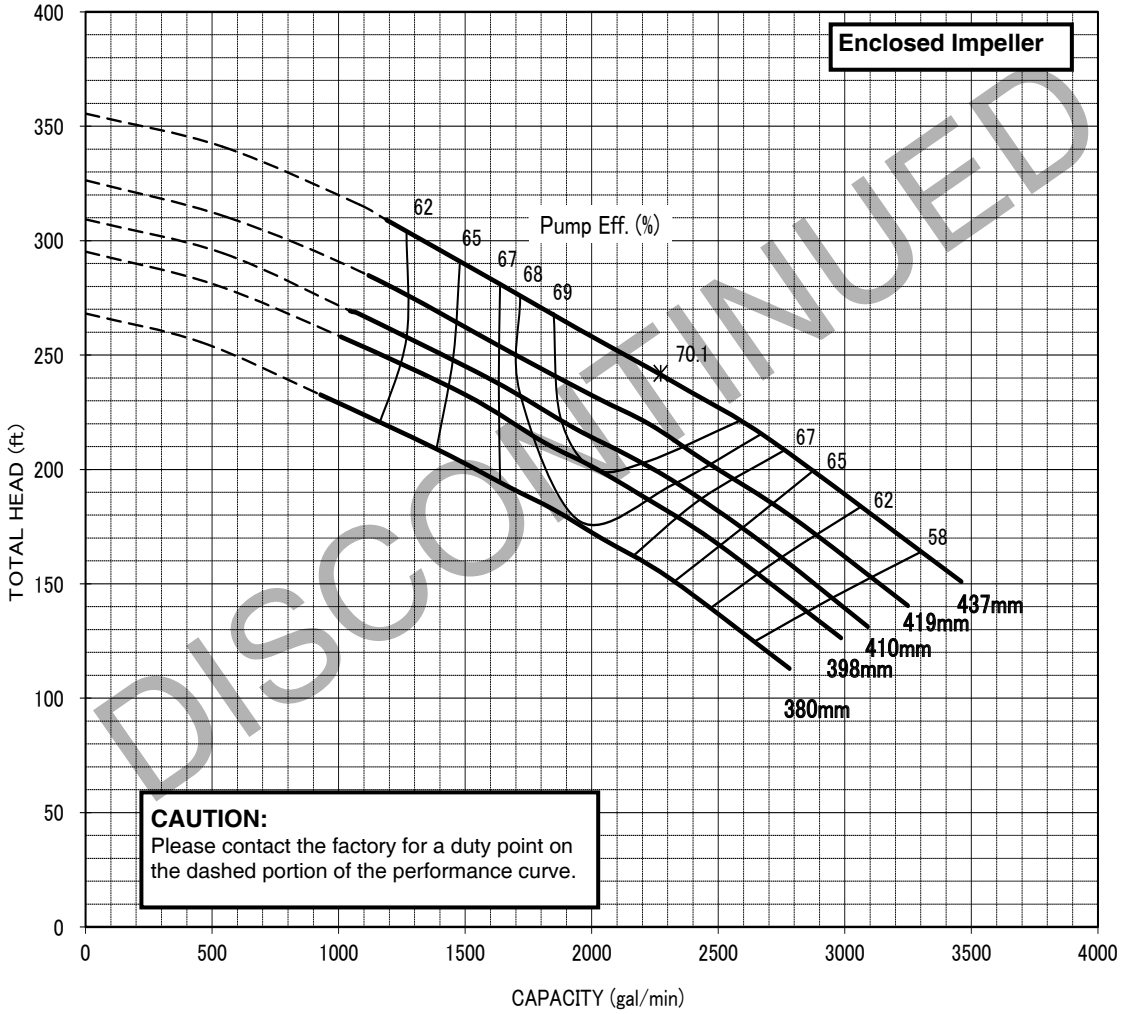
GPM		FT		RPM		HP
	X		X	1800	X	

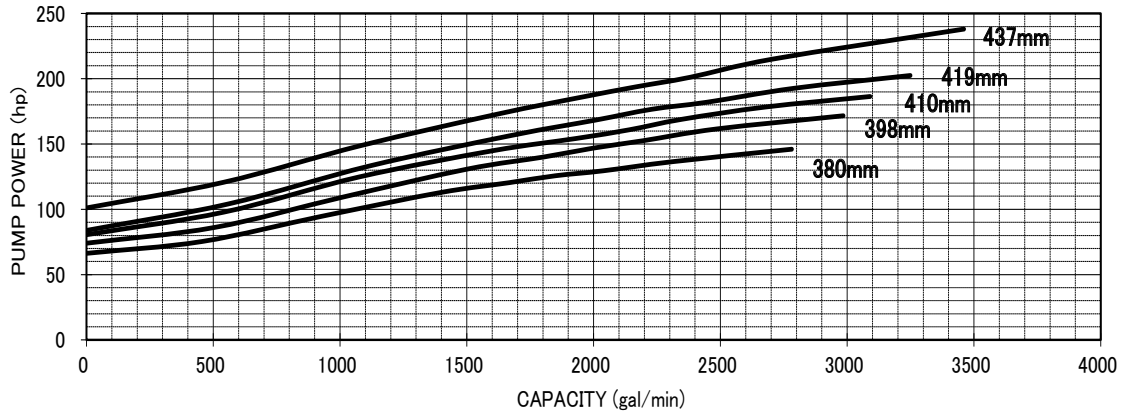




MODEL: 150DSC4
200x150DSCA4
175HP - 245HP

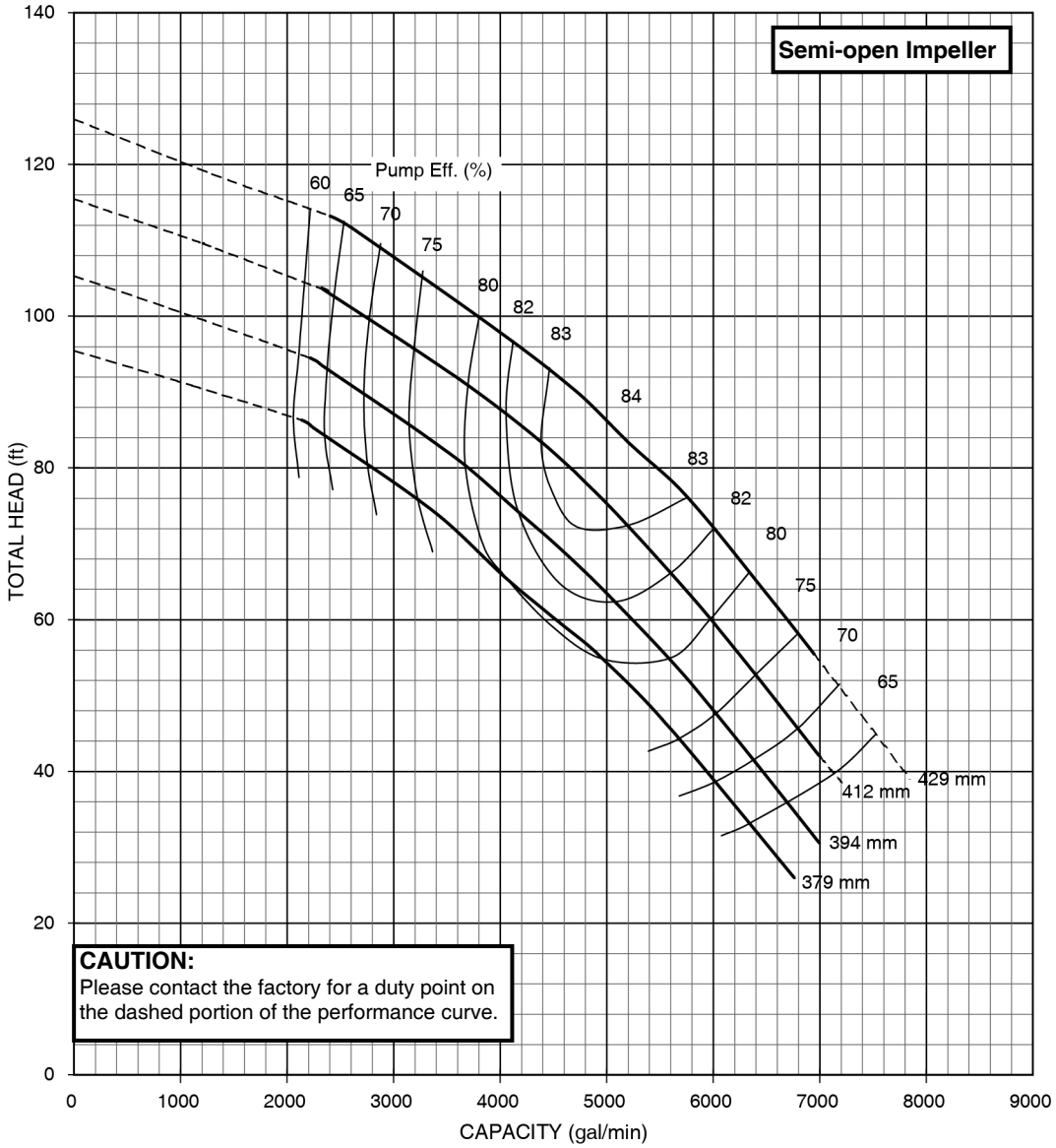
GPM		FT		RPM		HP
	X		X	1800	X	

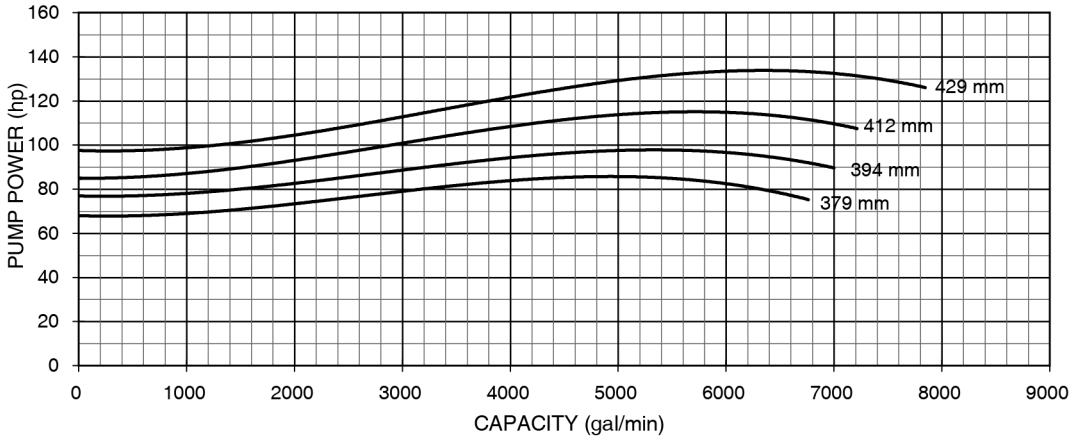




MODEL: 250DSC4/DSC4C
400x250DSCA4/DSCA4C
100HP - 145HP

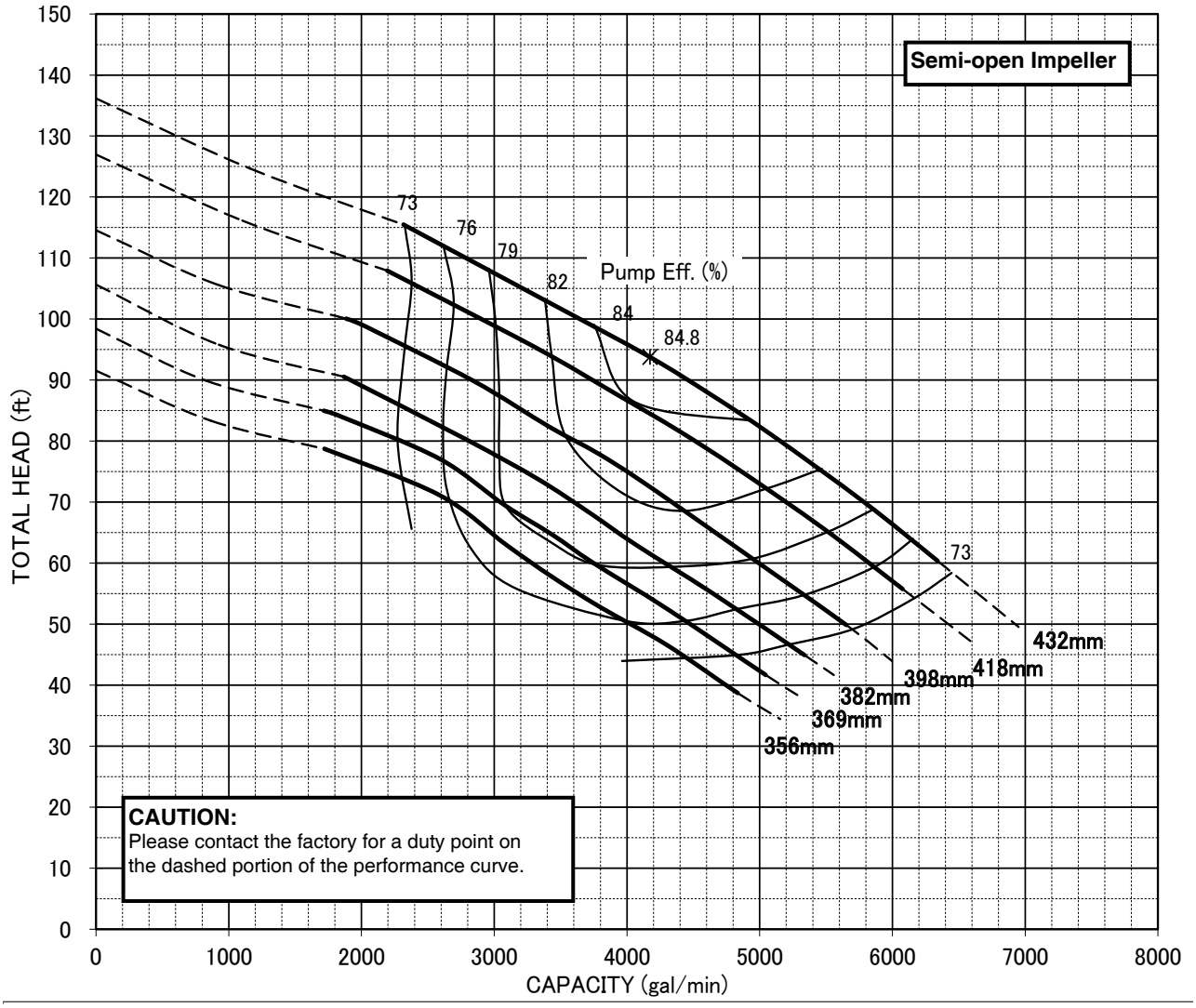
GPM		FT		RPM		HP
	X		X	1200	X	

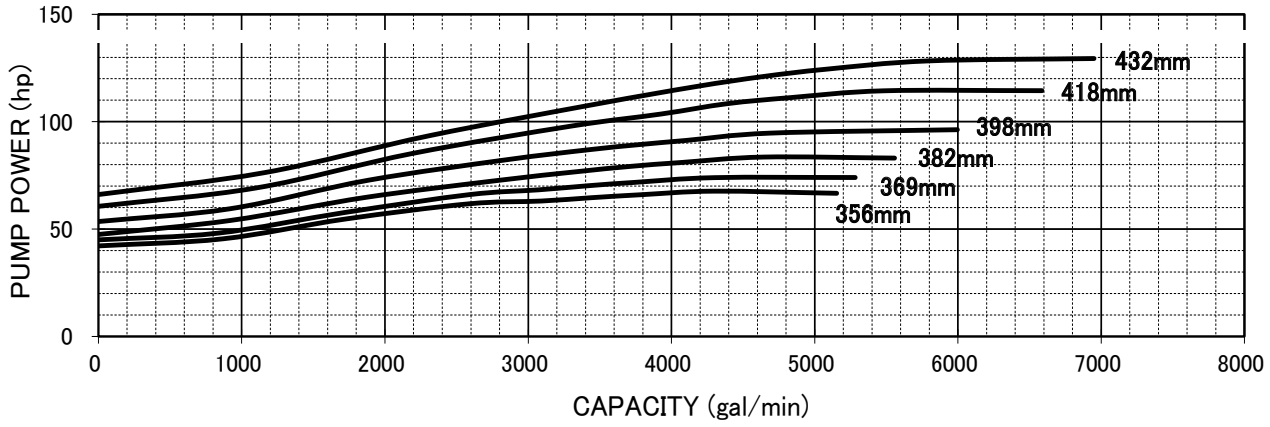




MODEL: 250DSC4/DSC4C
400x250DSCA4/DSCA4C
100HP - 145HP

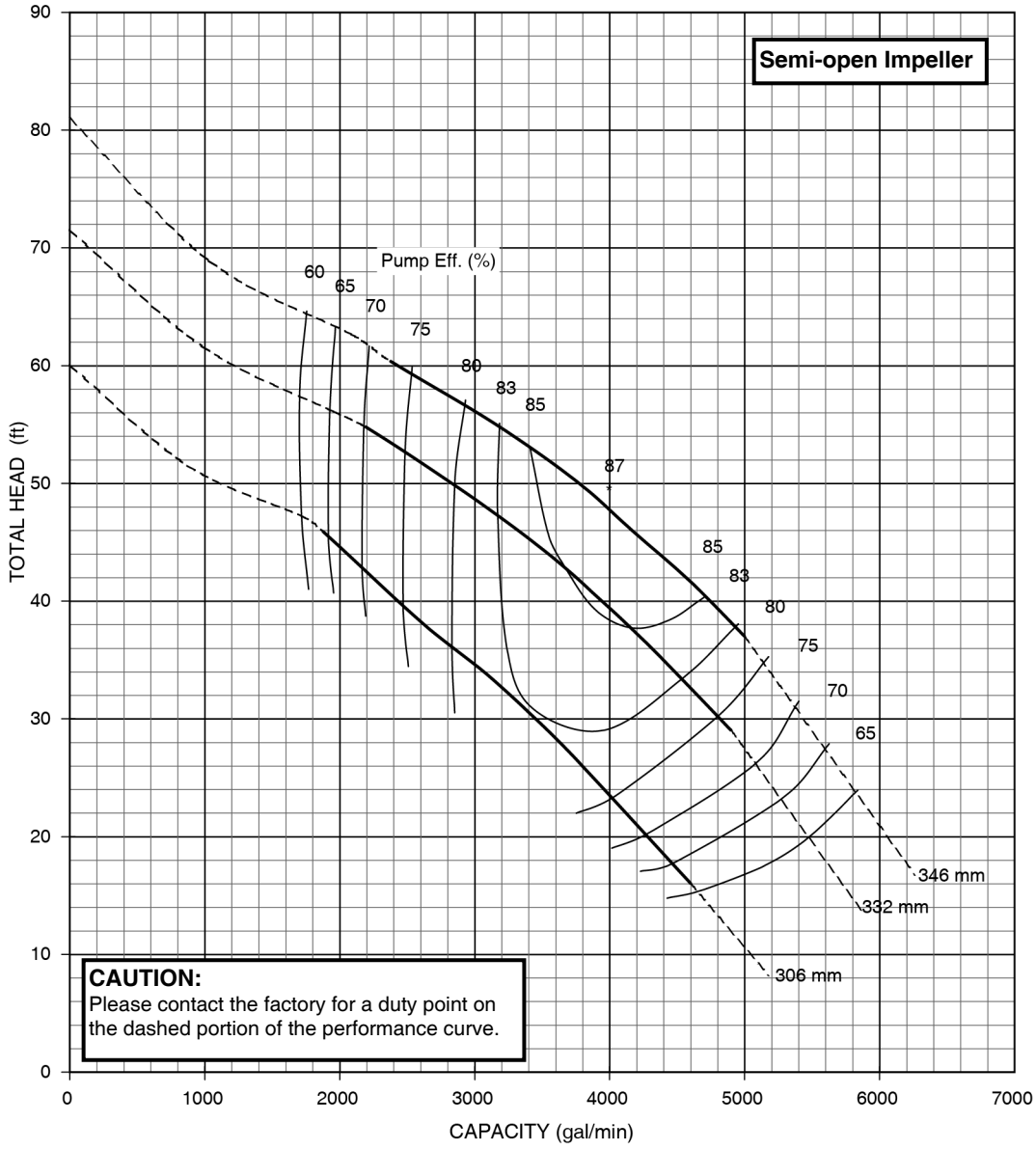
GPM		FT		RPM	HP
	X		X	1200	X

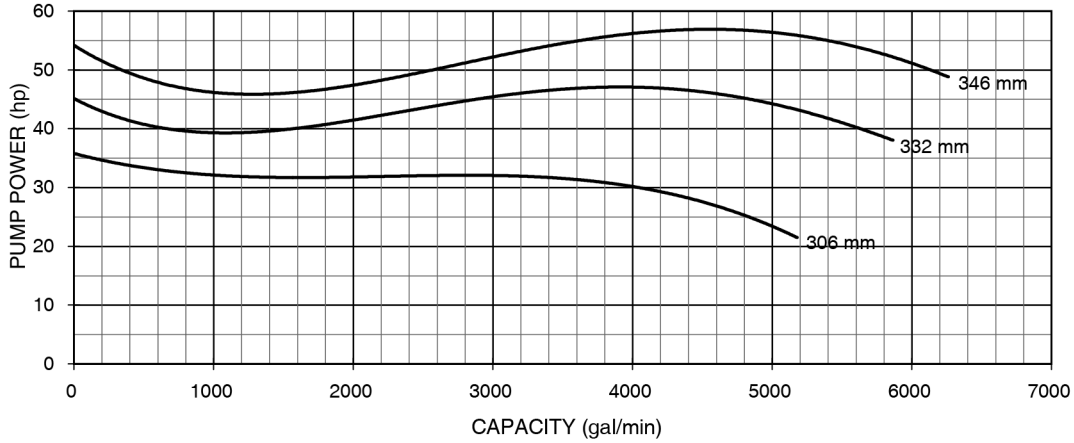




MODEL: 300DSC4/DSC4C
400x300DSCA4/DSCA4C
50HP - 60HP

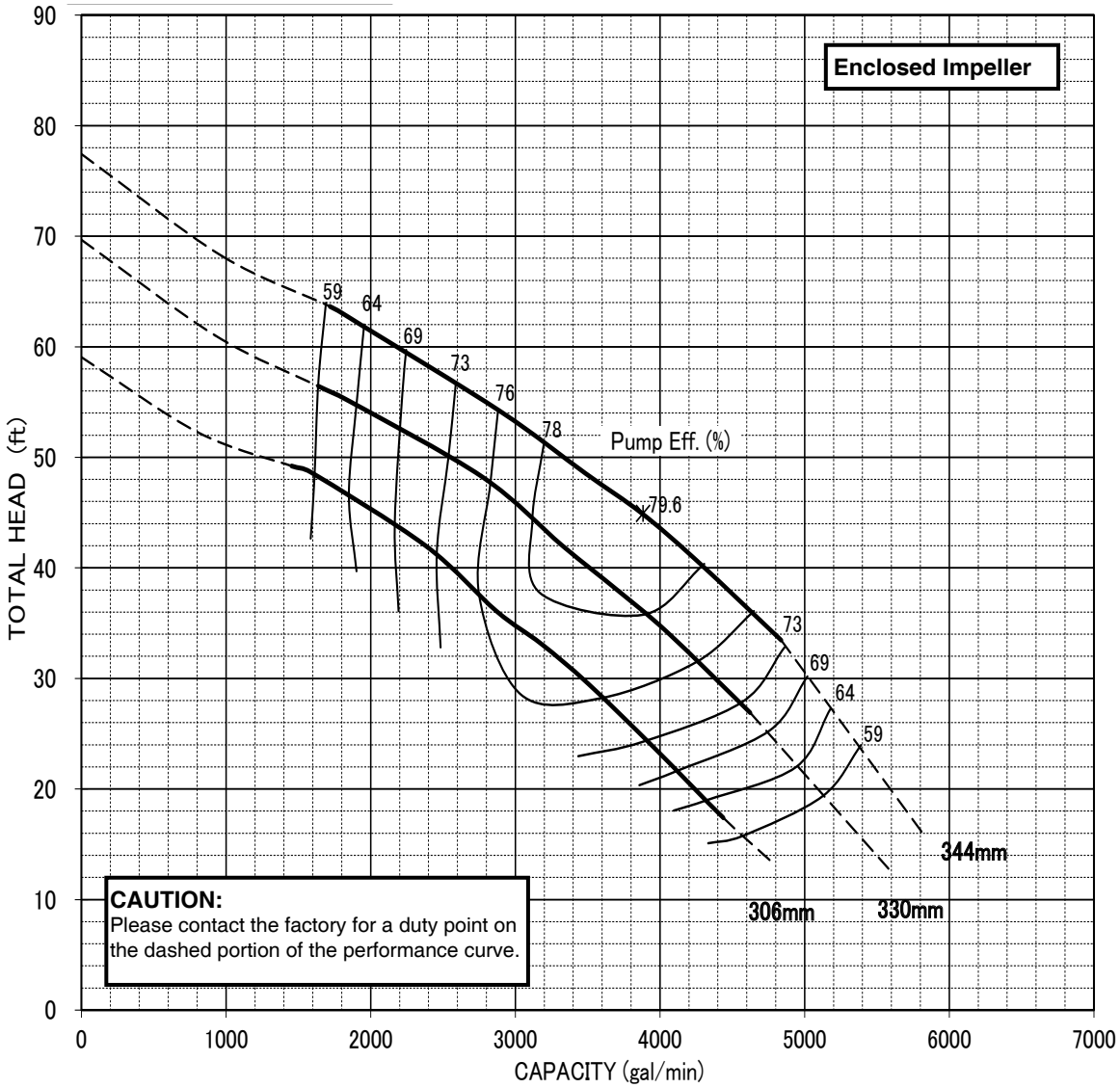
GPM		FT		RPM		HP
	X		X	1200	X	

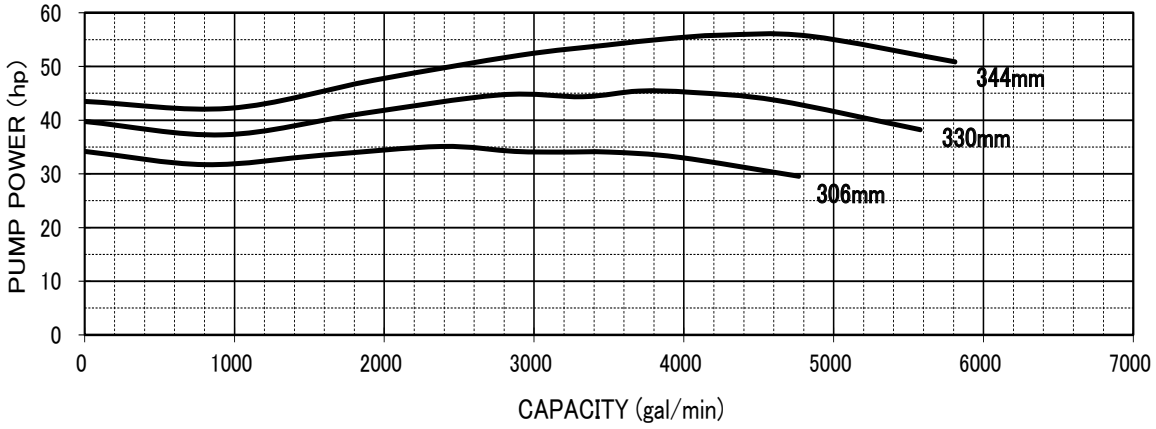




MODEL: 300DSC4/DSC4C
400x300DSCA4/DSCA4C
50HP - 60HP

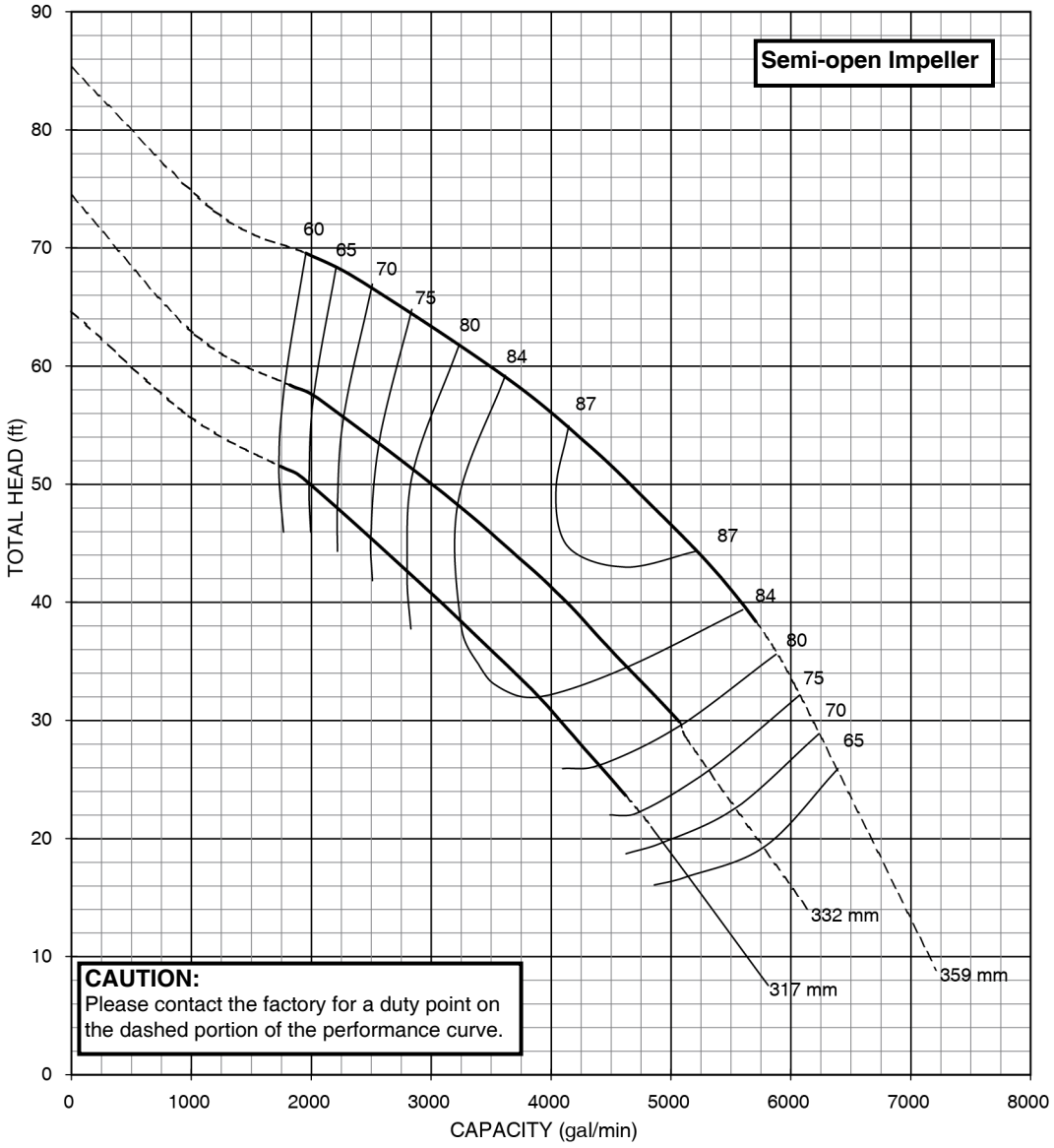
GPM		FT		RPM		HP
	X		X	1200	X	

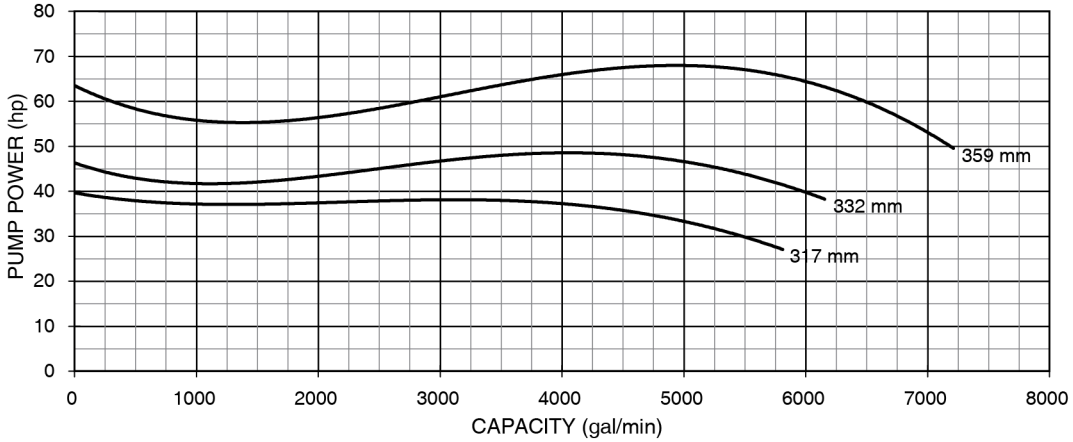




MODEL: 300DSC4/DSC4C
400x300DSCA4/DSCA4C
75HP

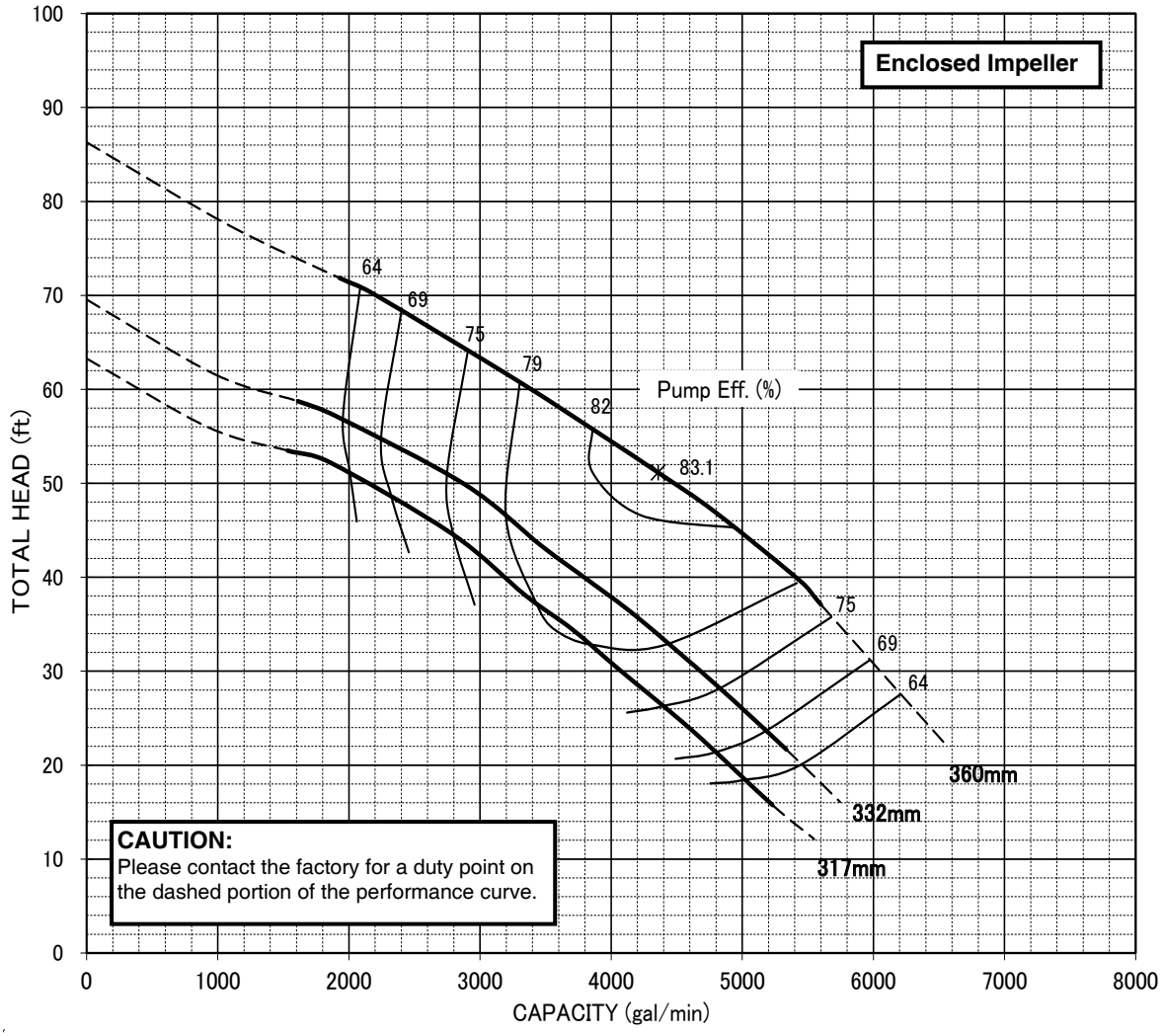
GPM		FT		RPM		HP
	X		X	1200	X	

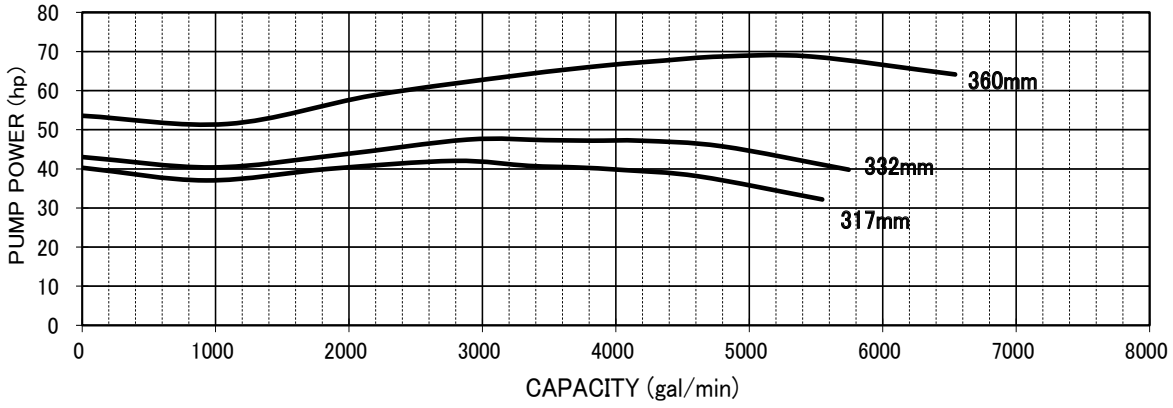




MODEL: 300DSC4/DSC4C
400x300DSCA4/DSCA4C
75HP

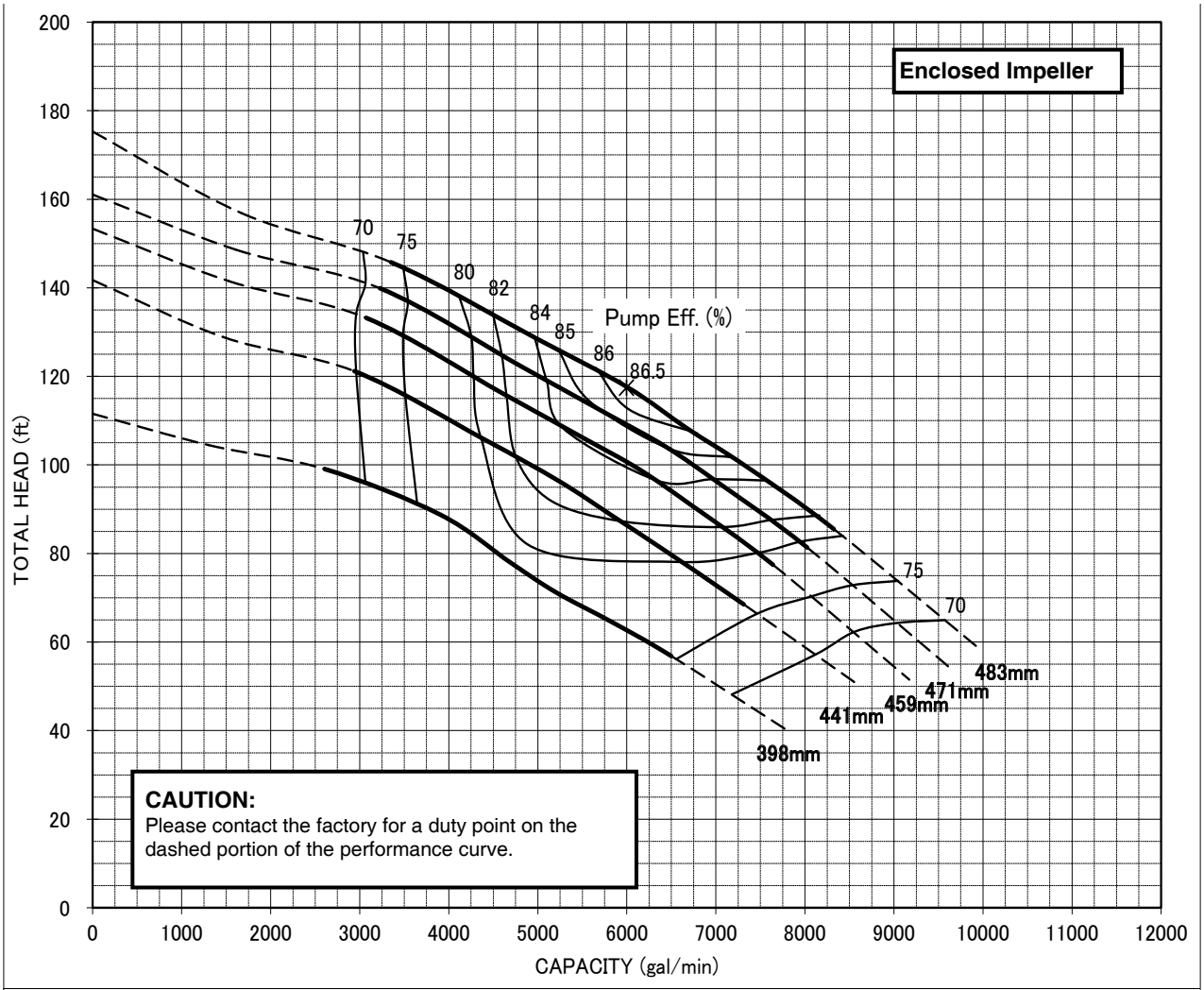
GPM		FT		RPM		HP
	X		X	1200	X	

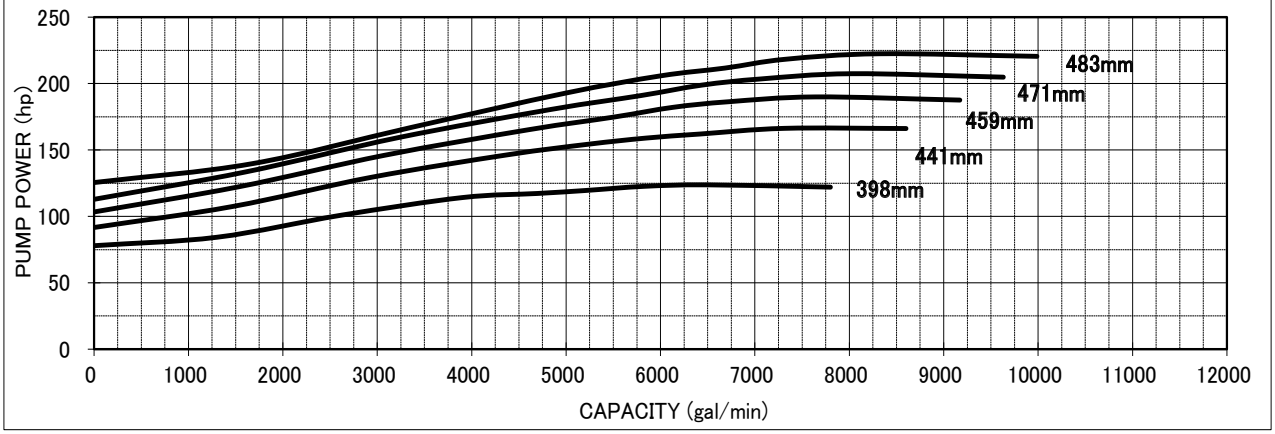




MODEL: 300DSC4
400x300DSCA4
175HP - 245HP

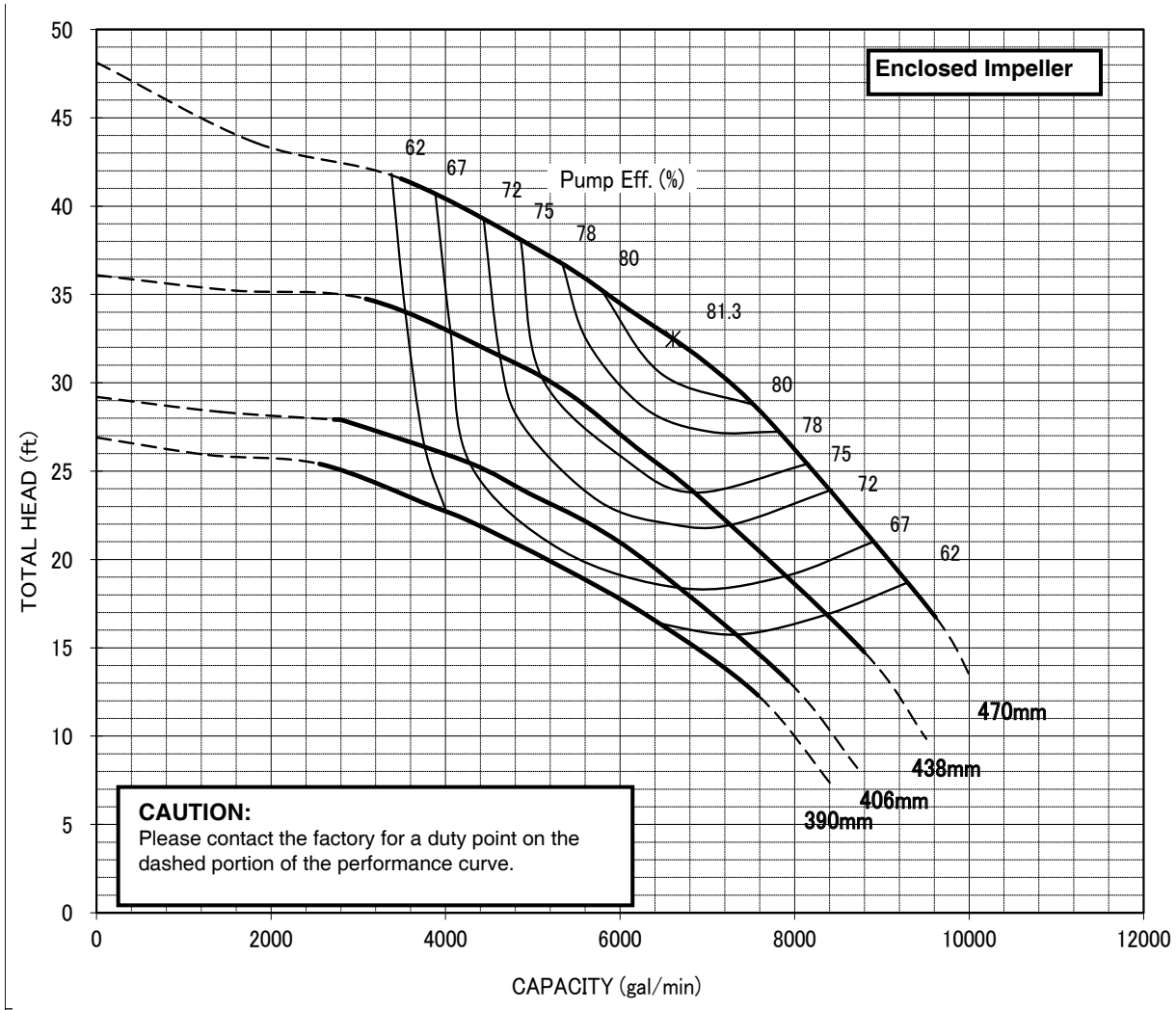
GPM		FT		RPM	HP
	X		X	1200	X

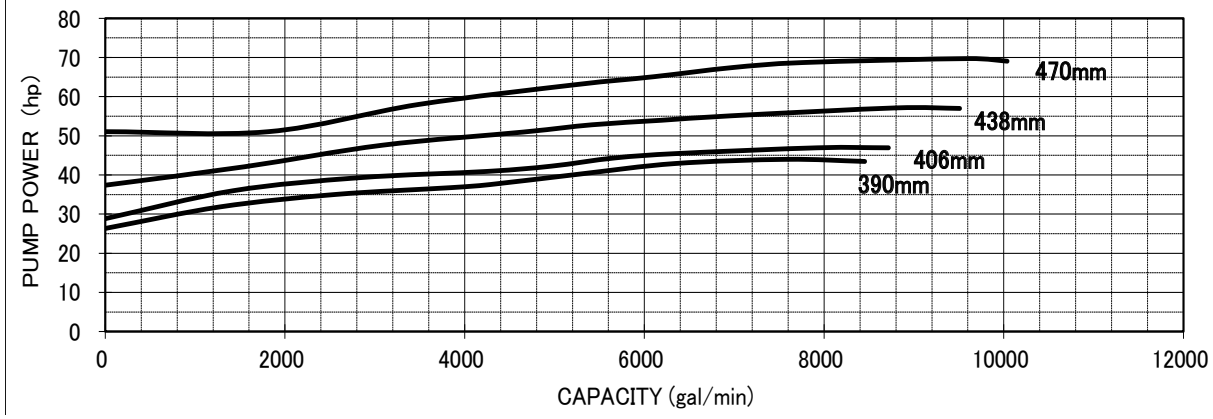




MODEL: 400DSC4
500x400DSCA4
50HP - 75HP

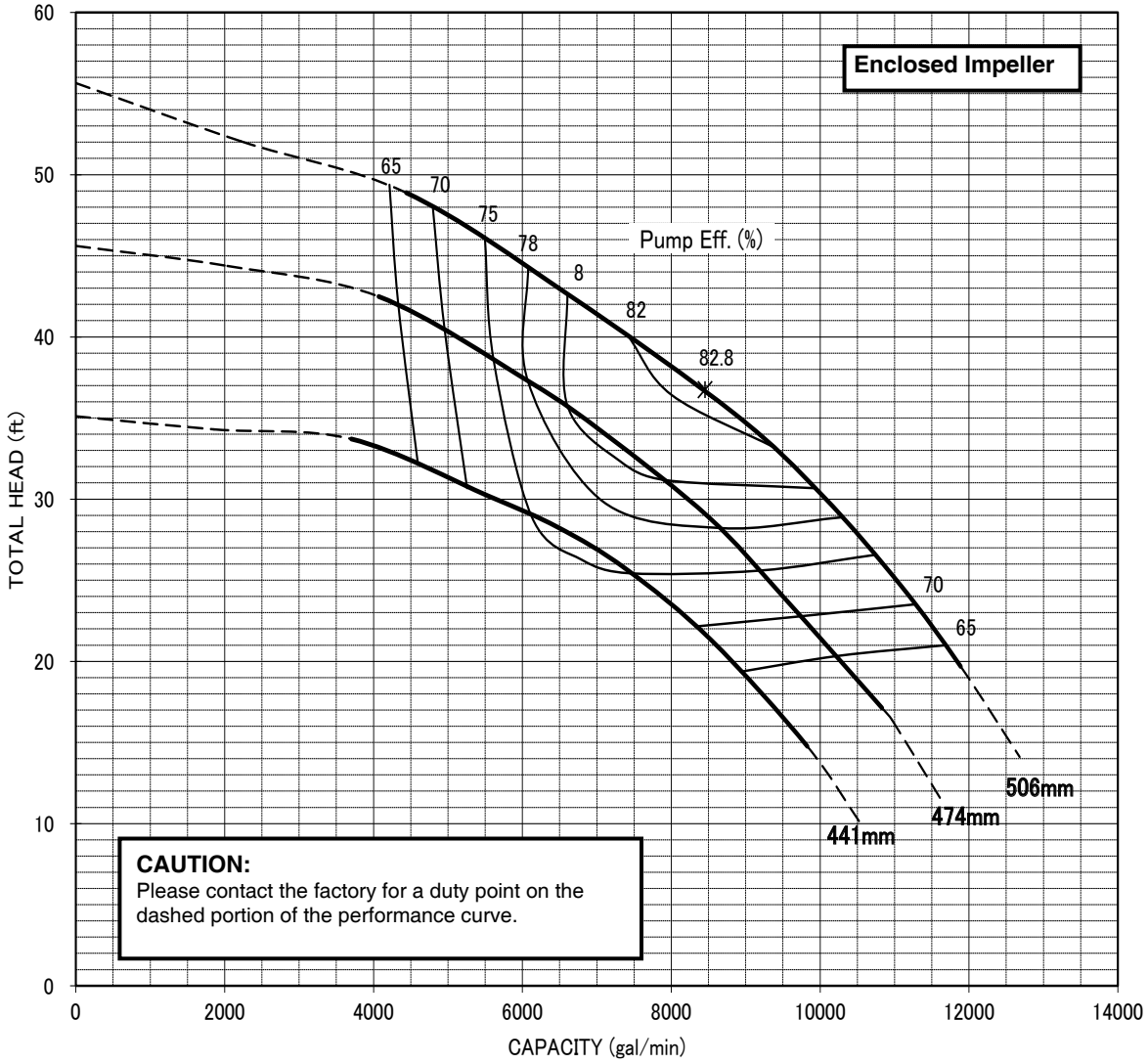
GPM		FT		RPM		HP
	X		X	720	X	

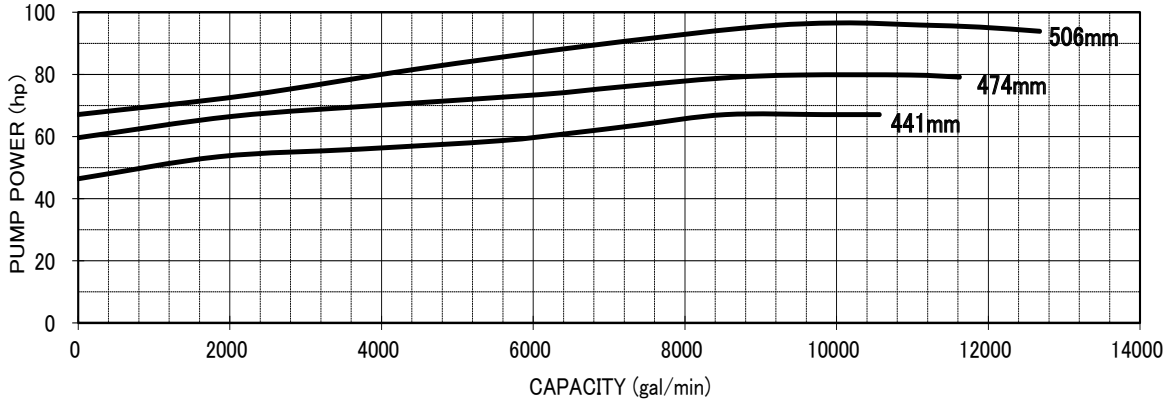




MODEL: 500DSC4
600x500DSCA4
100HP

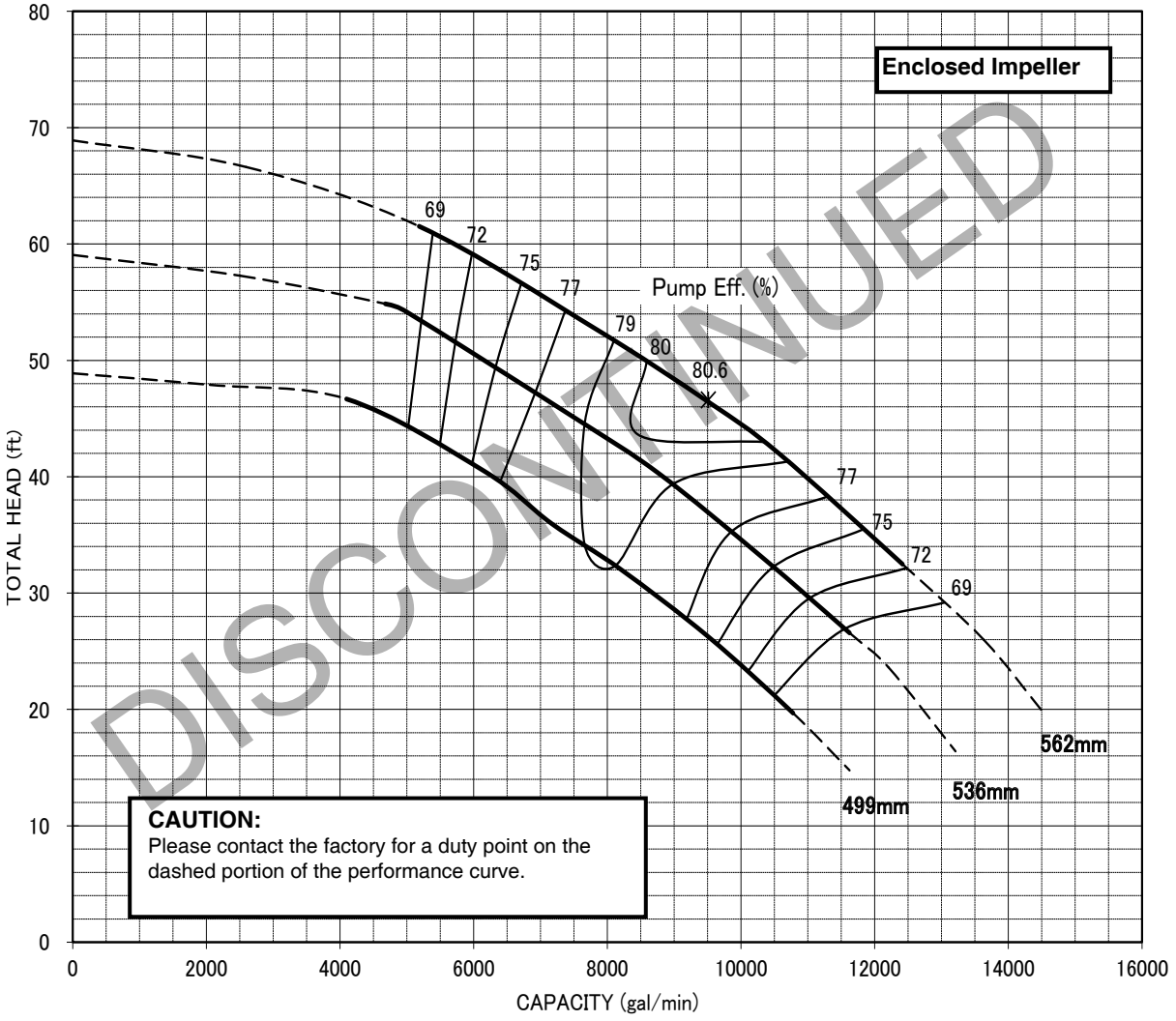
GPM		FT		RPM		HP
	X		X	720	X	

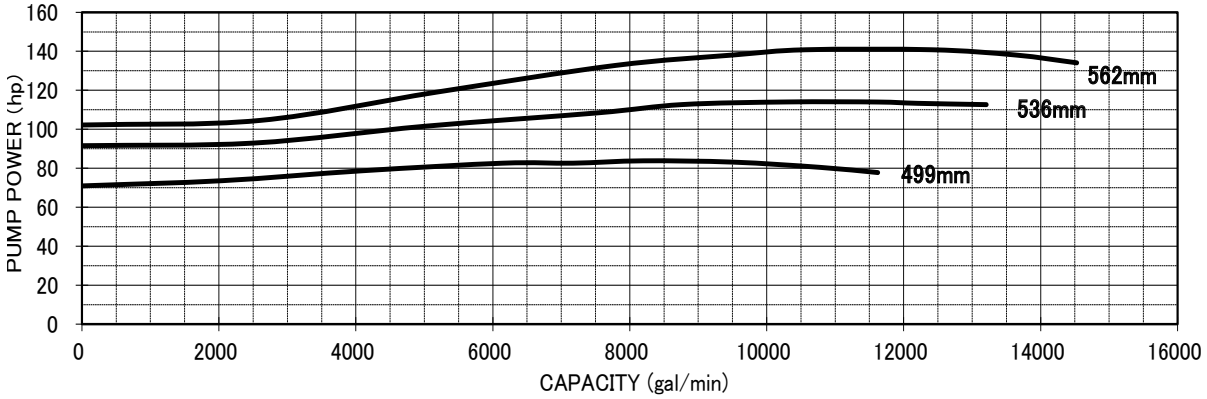




MODEL: 500DSC4
600x500DSCA4
120HP - 145HP

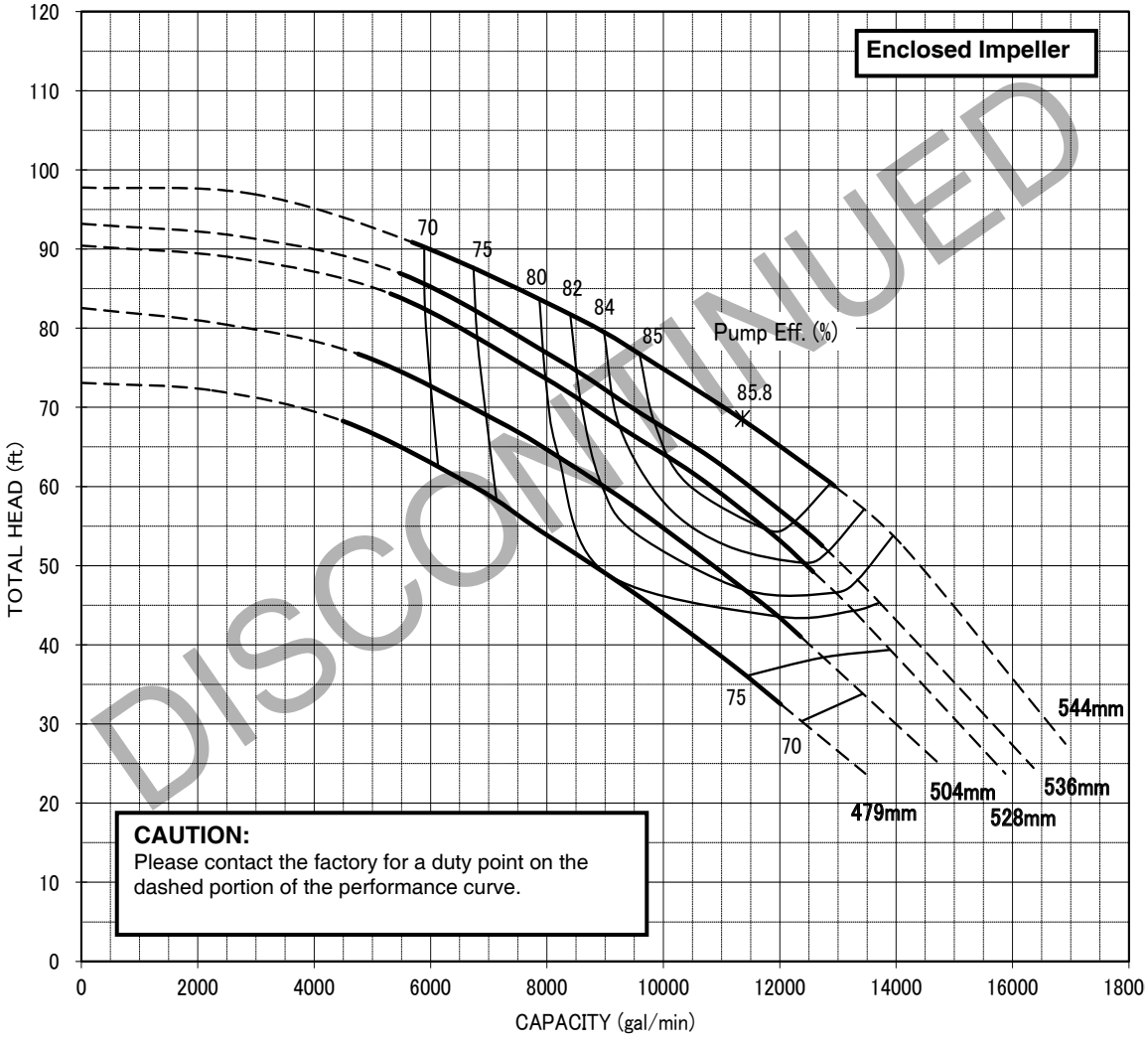
GPM		FT		RPM		HP
	X		X	720	X	

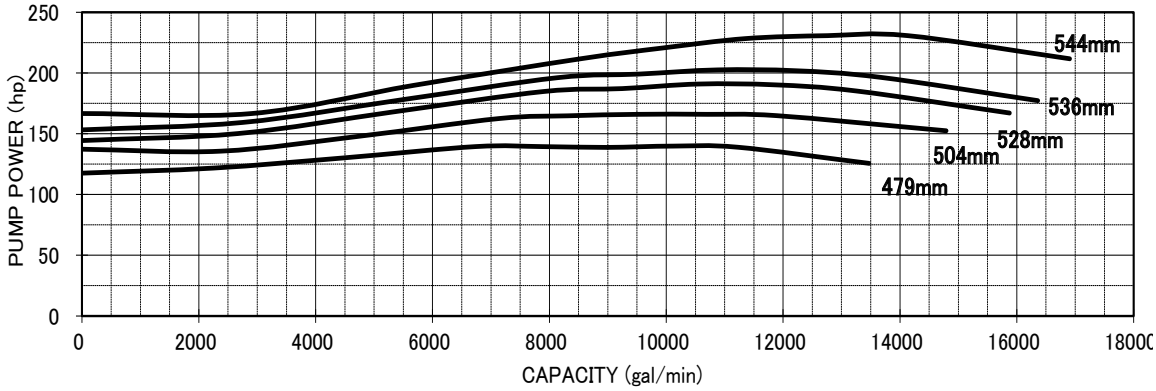




MODEL: 500DSC4
600x500DSCA4
175HP - 245HP

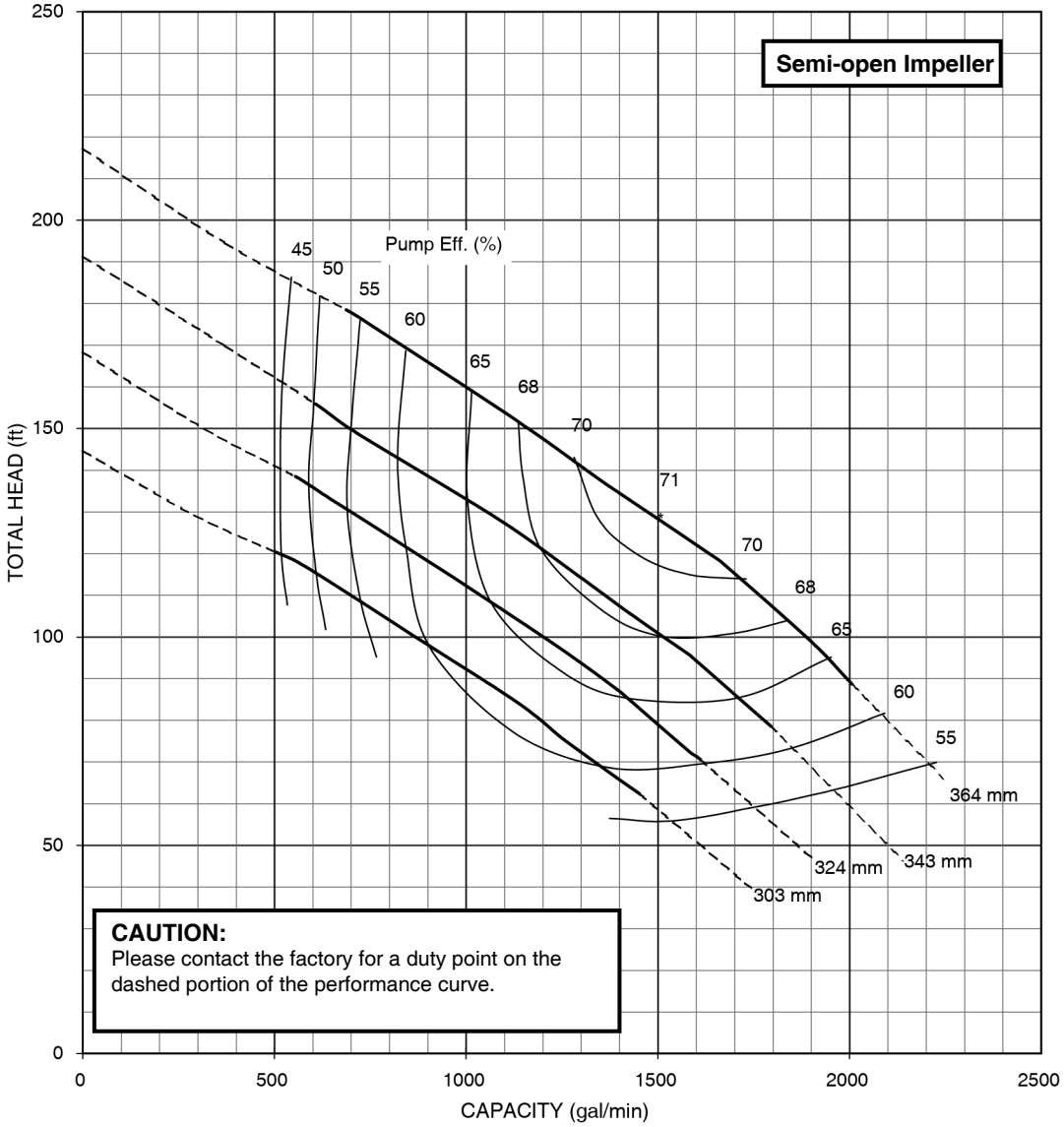
GPM		FT		RPM		HP
	X		X	900	X	



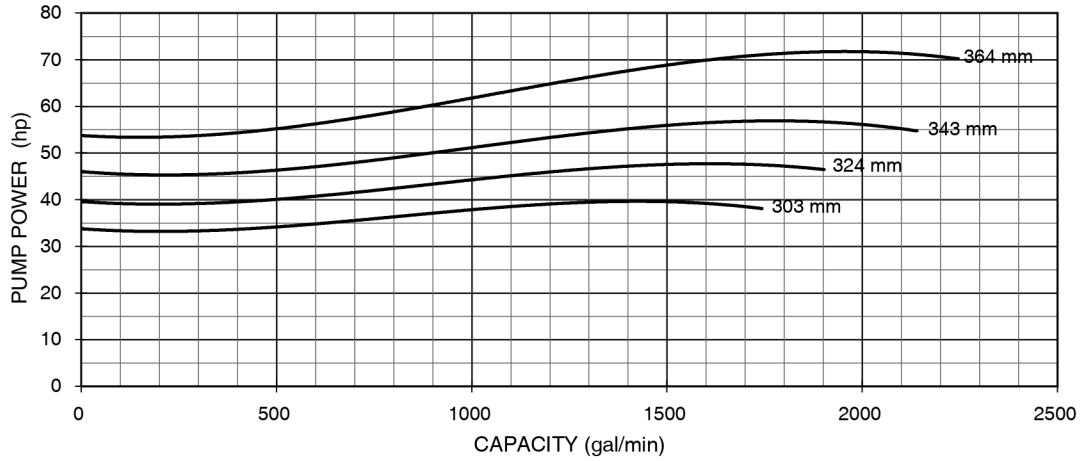


MODEL: 150DSC4/DSC4C
200x150DSCA4/DSCA4C
50HP - 75HP

GPM		FT		RPM		HP
	X		X	1800	X	



CAUTION:
Please contact the factory for a duty point on the dashed portion of the performance curve.



MODEL: 150DSC4/DSC4C
200x150DSCA4/DSCA4C
50HP - 75HP

GPM		FT		RPM		HP
	X		X	1800	X