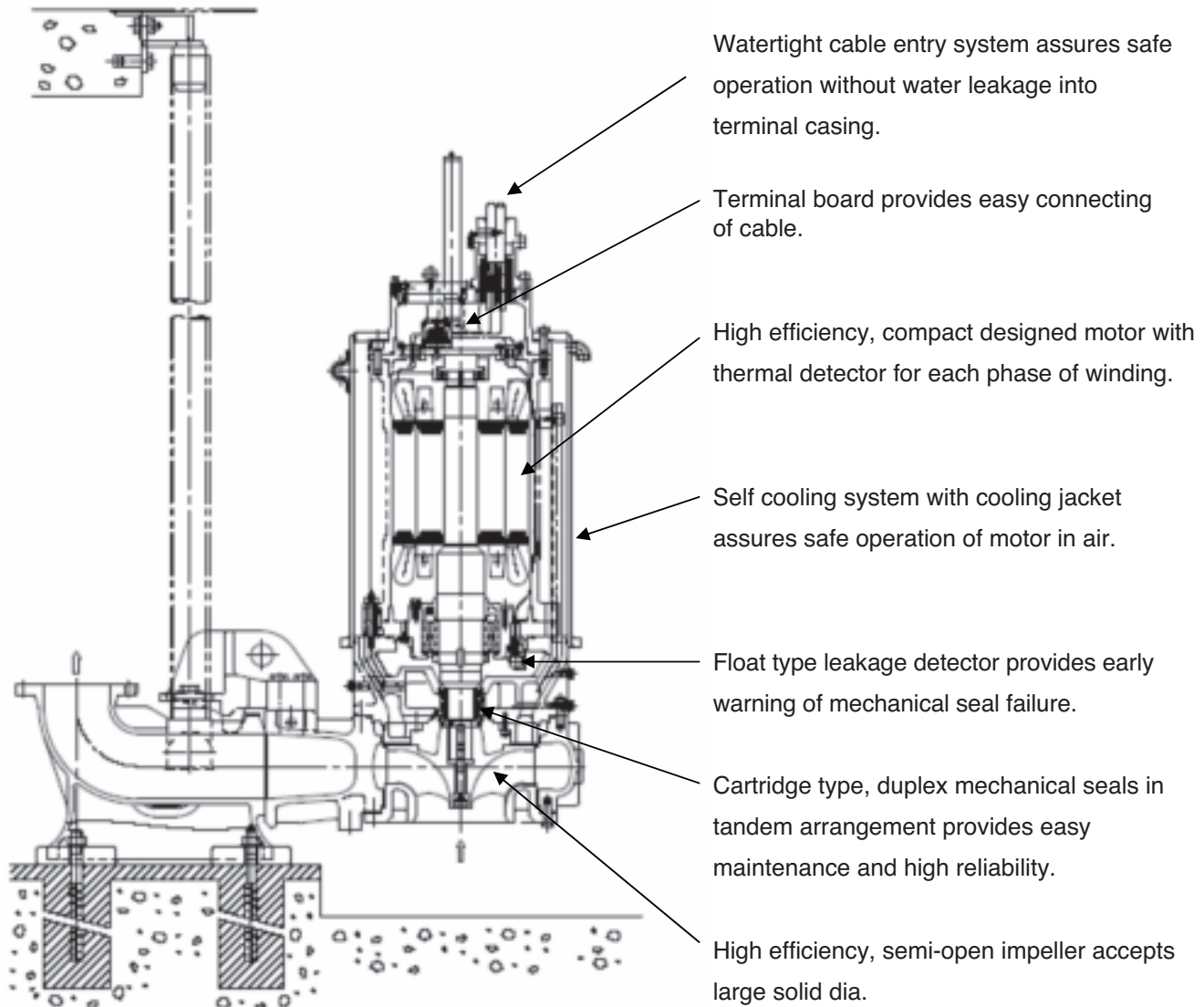


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Features - DSC4

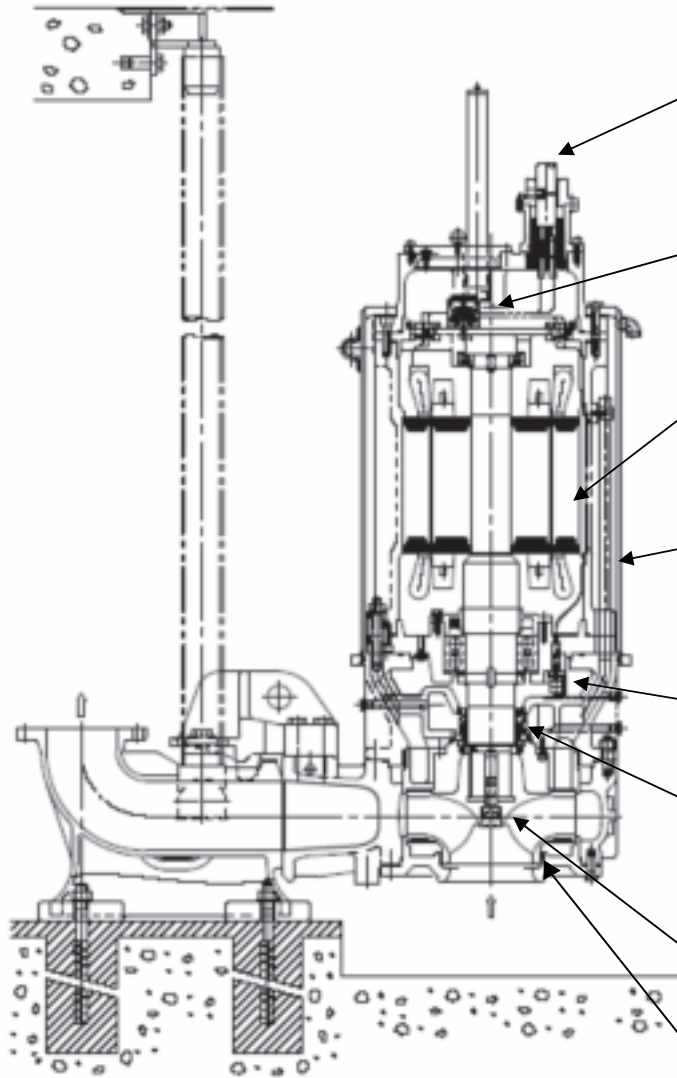
Semi-open Impeller



Typical Construction (Semi-open Impeller)

Features - DSC4

Enclosed Impeller



Watertight cable entry system assures safe operation without water leakage into terminal casing.

Terminal board provides easy connecting of cable.

High efficiency, compact designed motor with thermal detector for each phase of winding.

Self cooling system with cooling jacket assures safe operation of motor in air.

Float type leakage detector provides early warning of mechanical seal failure.

Cartridge type, duplex mechanical seals in tandem arrangement provides easy maintenance and high reliability.

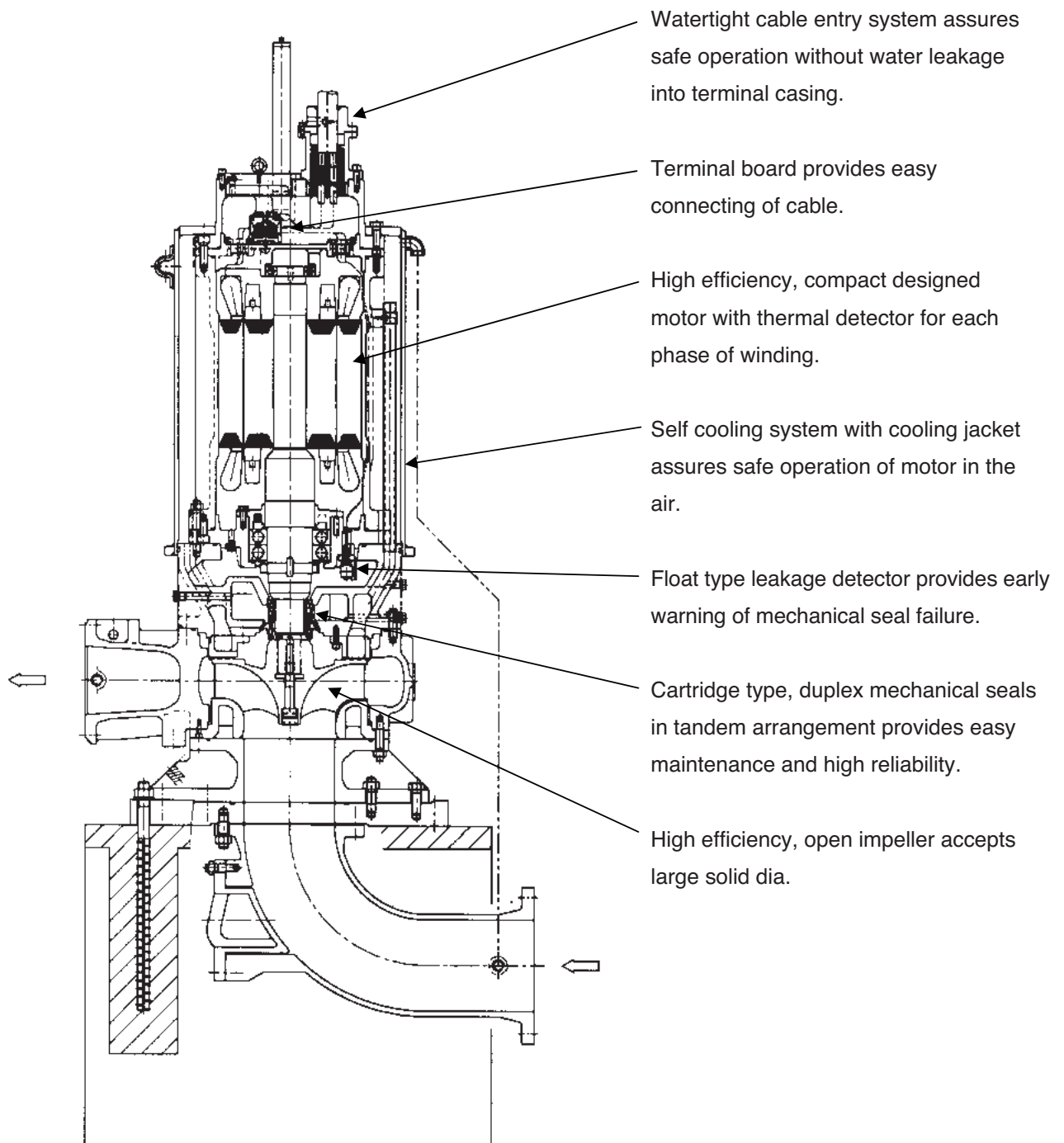
High efficiency, enclosed impeller accepts large solid dia.

Replaceable casing ring and optional impeller ring maintains working clearances while reducing maintenance costs

Typical Construction (Enclosed Impeller)

Features - DSCA4

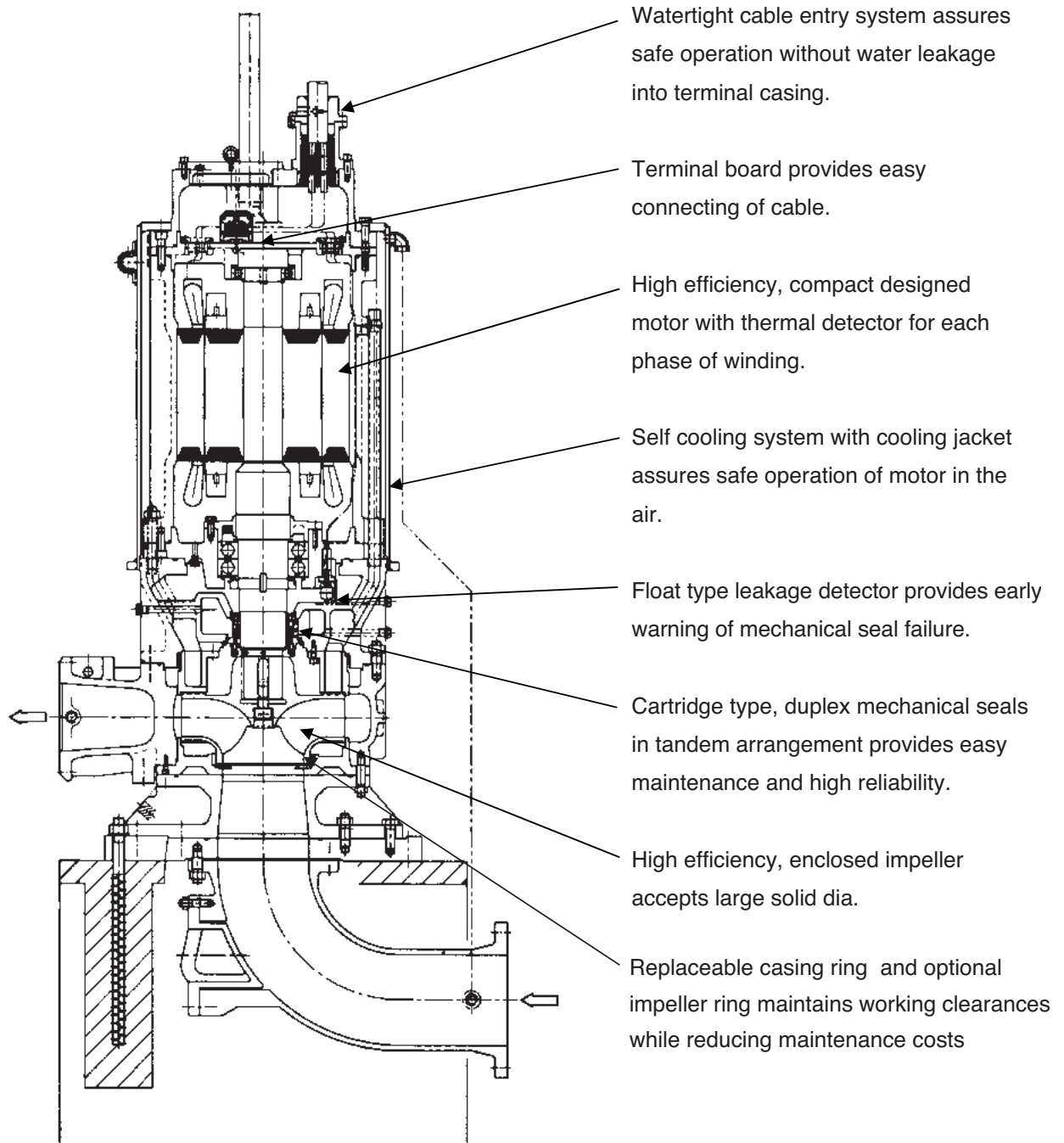
Semi-open Impeller



Typical Construction (Semi-open Impeller)

Features - DSCA4

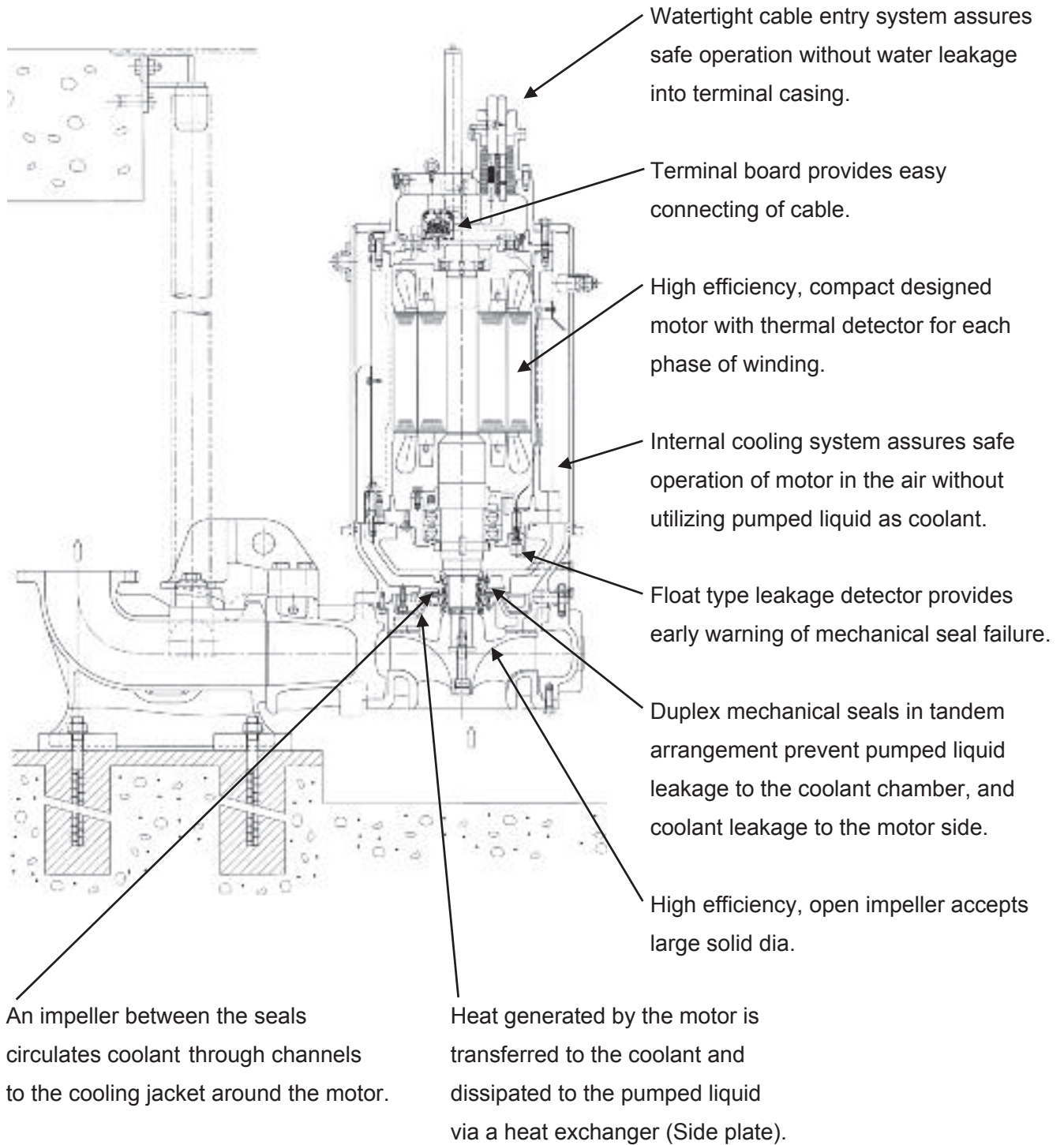
Enclosed Impeller



Typical Construction (Enclosed Impeller)

Features - DSC4C - 4P/6P 50-145HP Models

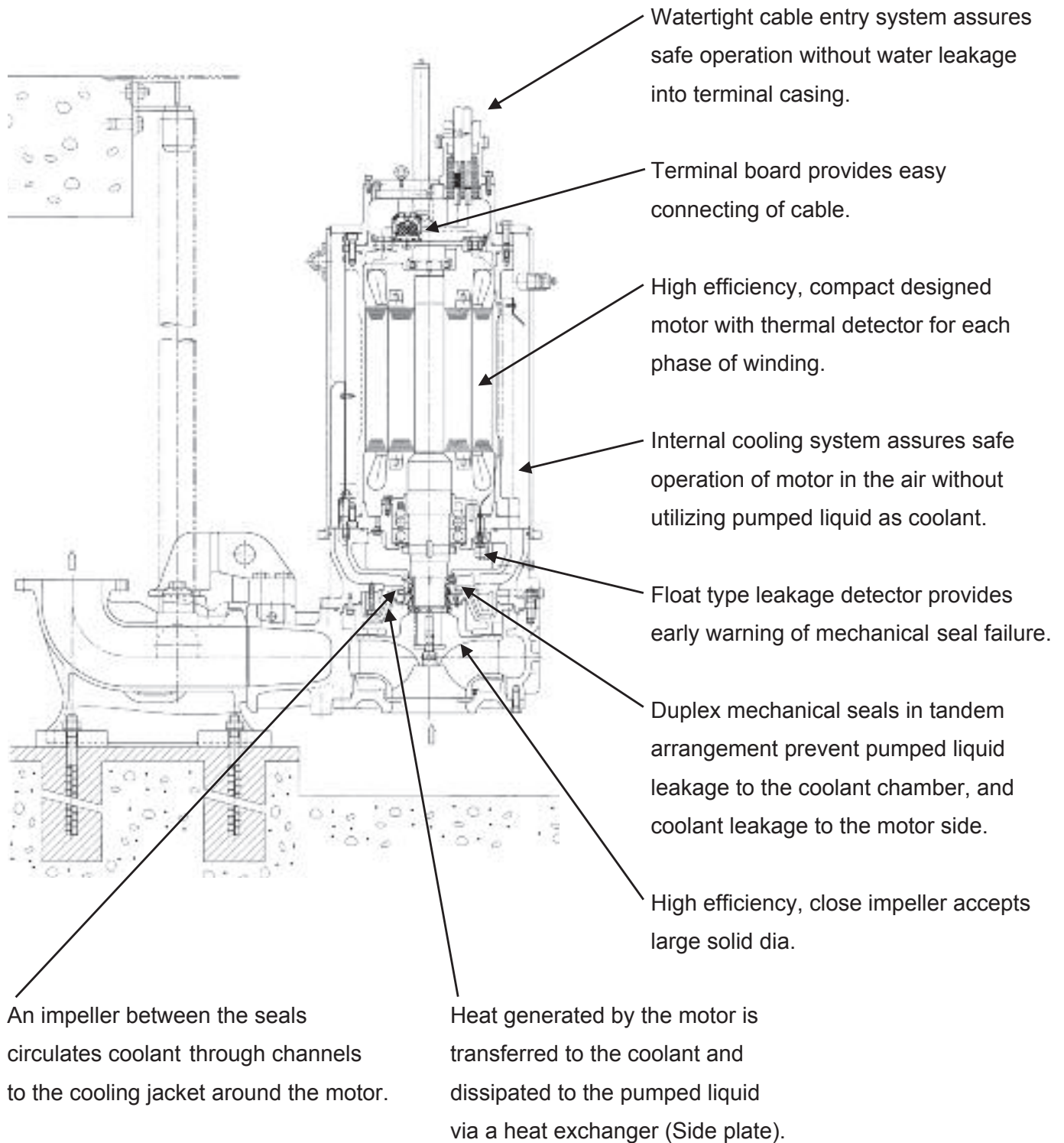
Semi-open Impeller (ICS option)



Typical Construction (Semi-open Impeller)

Features - DSC4C - 4P/6P 50-145HP Models

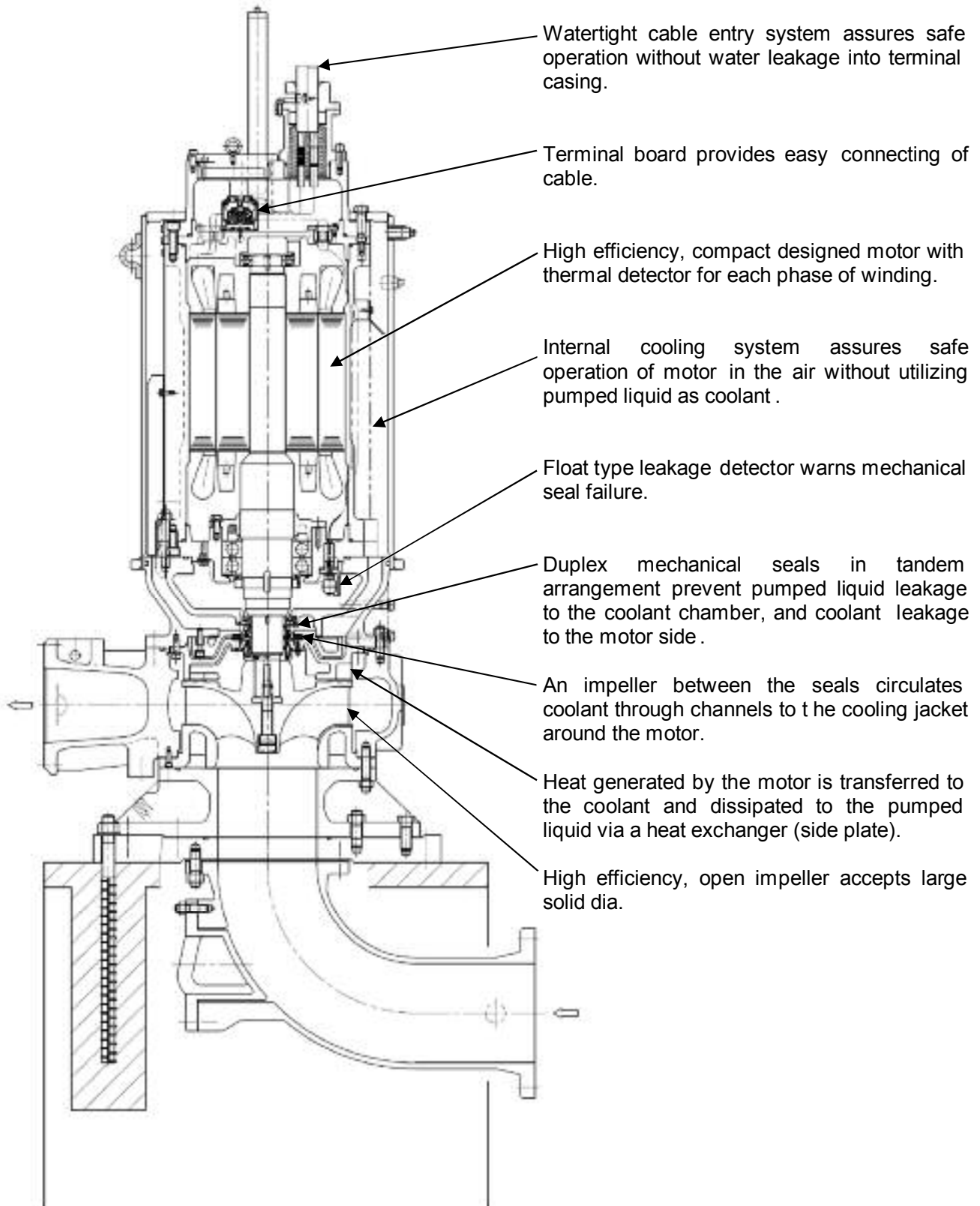
Enclosed Impeller (ICS option)



Typical Construction (Enclosed Impeller)

Features – DSCA4C – 4P/6P 50-145HP Models

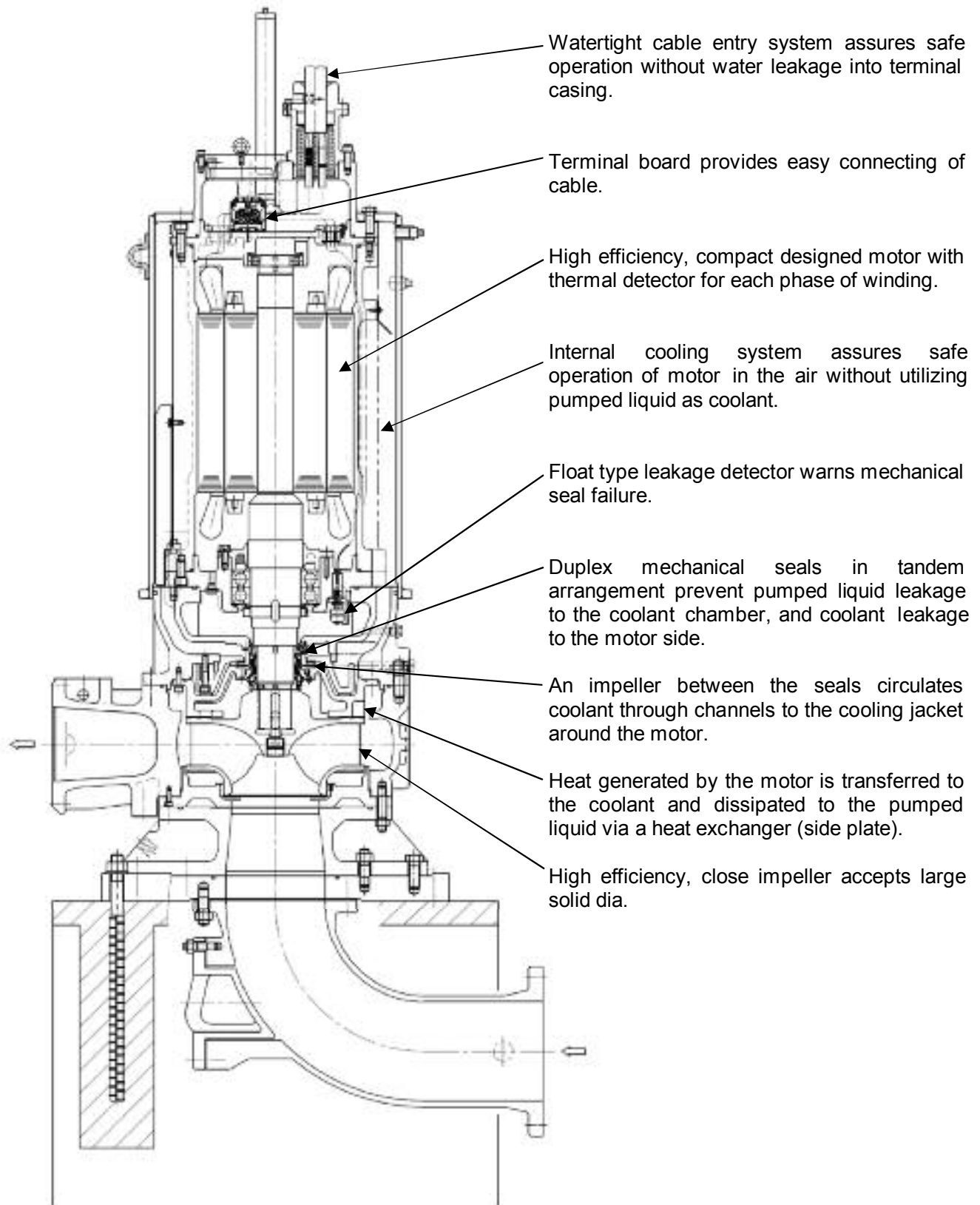
Semi-open Impeller (ICS option)



Typical Construction (Semi-open Impeller)

Features – DSCA4C – 4P/6P 50-145HP Models

Enclosed Impeller (ICS option)



Typical Construction (Enclosed Impeller)

Standard Specifications

	STANDARD SPECIFICATIONS		OPTIONAL
Design	Capacity	530 to 12500 USGPM (2 to 48 m ³ /min)	
	Total head	12 to 300 ft (3.8 to 91 m)	
	Liquid temp.	32°F to 104°F (0° to 40°C)	
	Max. submergence	114 ft (35 m)	
Materials	Casing	Cast Iron	
	Impeller	Cast Iron	
	Casing Ring	420 Stainless Steel (enclosed impeller models)	
	Shaft	420 Stainless Steel (4P/6P 50-145HP models) 403Q Stainless Steel (4P/6P/8P 175-245HP, 10P 50-145HP models)	
	Motor Frame	Cast Iron	
	Cooling Jacket	Steel	
	Fasteners	304 Stainless Steel	
Construction	Impeller	Semi-open/Enclosed	Impeller ring (enclosed impeller models)
	Shaft seal	Cartridge type duplex mechanical seals in tandem arrangement Upper: Carbon/Ceramic Lower: Silicon Carbide/Silicon Carbide	Consult factory for optional seal material
	Bearing	Grease lubricated ball bearing	
	Motor	Air filled water tight electric motor with cooling jacket Starting method: D.O.L. 60 Hz, 460V Built-in winding temperature detector Built-in float type leak detector	FM Explosion proof Class 1, Group C, D Temp. detector for thrust bearing
	Mounting method	Wet Pit: Quick discharge connector (QDC) Dry Pit: with baseplate	
	Cooling System	Pumpage re-circulation	Internal Cooling System (ICS) Coolant: Propylen glycol solution 4P/6P 50-145HP models
Accessories	50 ft (15.24 m) water tight rubber insulated flexible cable	Consult factory for additional cable lengths	

Specifications – DSC4/DSC4C

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. 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. 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 (%)

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. 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 one (1) coat of zinc rich primer paint and two (2) 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.

1. Impellers

- a. The impeller shall be a non-clog, enclosed, multi-vane mixed flow type. It shall be 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. A replaceable casing ring shall be provided, manufactured of AISI 420SS material, to maintain working clearances and hydraulic efficiencies. The design shall include an optional, replaceable impeller ring manufactured of AISI 304SS material to maintain working clearances and hydraulic efficiencies.
- b. The impeller shall be a mixed flow multi-vane semi-open design. It shall be 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 bolt. The design shall include a replaceable cast iron suction cover. The suction cover shall be designed such that it may be adjusted to maintain working clearances and hydraulic efficiencies.

2. Mechanical Seals

The mechanical seal system shall be a cartridge mounted double mechanical seal in a tandem

Specifications – DSC4/DSC4C

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 and D. The design shall be an air filled induction type with 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 356°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 ANSI420SS for 4 pole and 6 pole 50hp to 145hp, ANSI403Q for 4 pole, 6 pole, and 8 pole 175hp to 245hp and 10 pole 50hp to 145hp, 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 1.15 and capable of up to 15 starts per hour for 4 pole and 6 pole 50hp to 145hp, 10 starts per hour for 4 pole, 6 pole, and 8 pole 175hp to 245hp and 10 pole 50hp to 145hp. 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 shall be provided. (Thrust bearing RTD is optional) Motor over temperature protection shall be provided by three miniature thermal protectors (one per phase) 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 316SS 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.

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 at least 114'. 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 stripped 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.

1. Cooling

- a. 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.
- b. The motor design shall include a propylene glycol closed loop integral cooling system. The system shall consist of a steel cooling jacket. An impeller, integral to the cooling system and driven by the pump shaft, shall provide the necessary circulation of the cooling liquid through the jacket. The

Specifications – DSC4/DSC4C

coolant shall be cooled using a heat exchanger mounted in the base of the motor housing. The jacket cooling system shall provide heat dissipation for the motor whether the unit is submerged or operating in air.

F. Guide Rail system:

The QDC shall be manufactured of cast iron, ASTM A48 Class 35. 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 wetwell floor. The face of the inlet QDC flange shall be perpendicular to the floor of the wetwell. 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.

Design requires 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.

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

Specifications – DSCA4/DSCA4C

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. 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 (%)

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 elbow 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. 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 two (2) 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. Exposed surfaces shall be surface prepared to SSPC-SP-10 and coated with one (1) coat of zinc chromate primer and one (2) coats of coal tar epoxy paint.

1. Impellers

- a. The impeller shall be a non-clog, enclosed, multi-vane mixed flow type. It shall be 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. A replaceable casing ring shall be provided, manufactured of AISI 420SS material, to maintain working clearances and hydraulic efficiencies. The design shall include an optional, replaceable impeller ring manufactured of AISI 304SS material to maintain working clearances and hydraulic efficiencies.
- b. The impeller shall be a mixed flow multi-vane semi-open design. It shall be 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 bolt. The design shall include a replaceable cast iron suction cover. The suction cover shall be designed such that it may be adjusted to maintain working clearances and hydraulic efficiencies.

2. Mechanical Seals

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

Specifications – DSCA4/DSCA4C

the seal faces, and in contact with the pumpage on the outside. 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 356°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 ANSI420SS for 4 pole and 6 pole 50hp to 145hp, ANSI403Q for 4 pole, 6 pole, and 8 pole 175hp to 245hp and 10 pole 50hp to 145hp, 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 1.15 and capable of up to 15 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 shall be provided. (Thrust bearing RTD is optional) Motor over temperature protection shall be provided by three miniature thermal protectors (one per phase) 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 316SS 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.

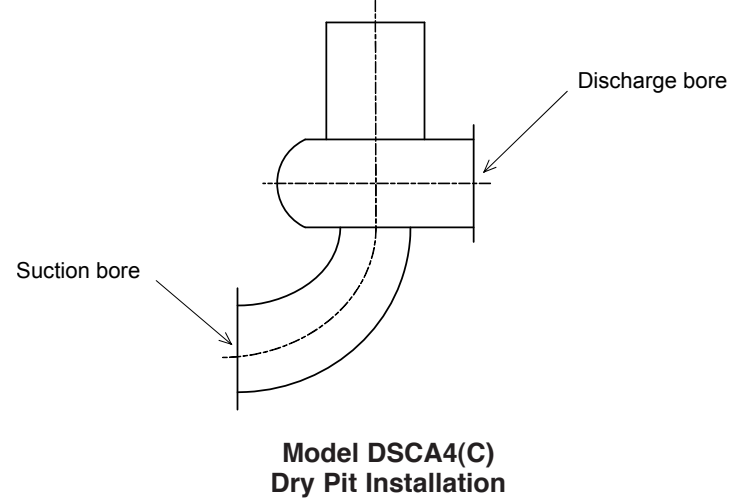
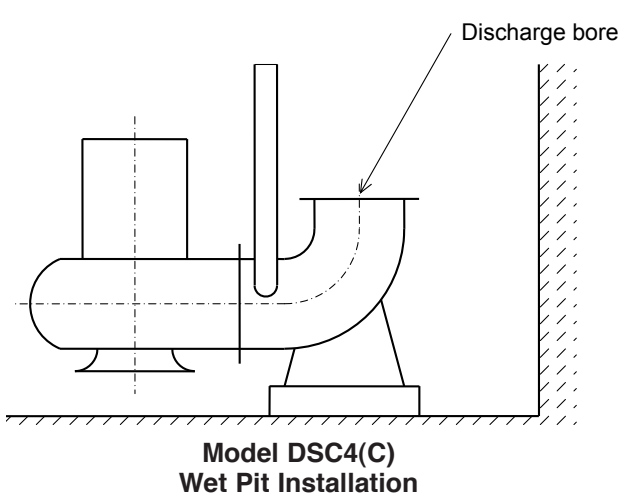
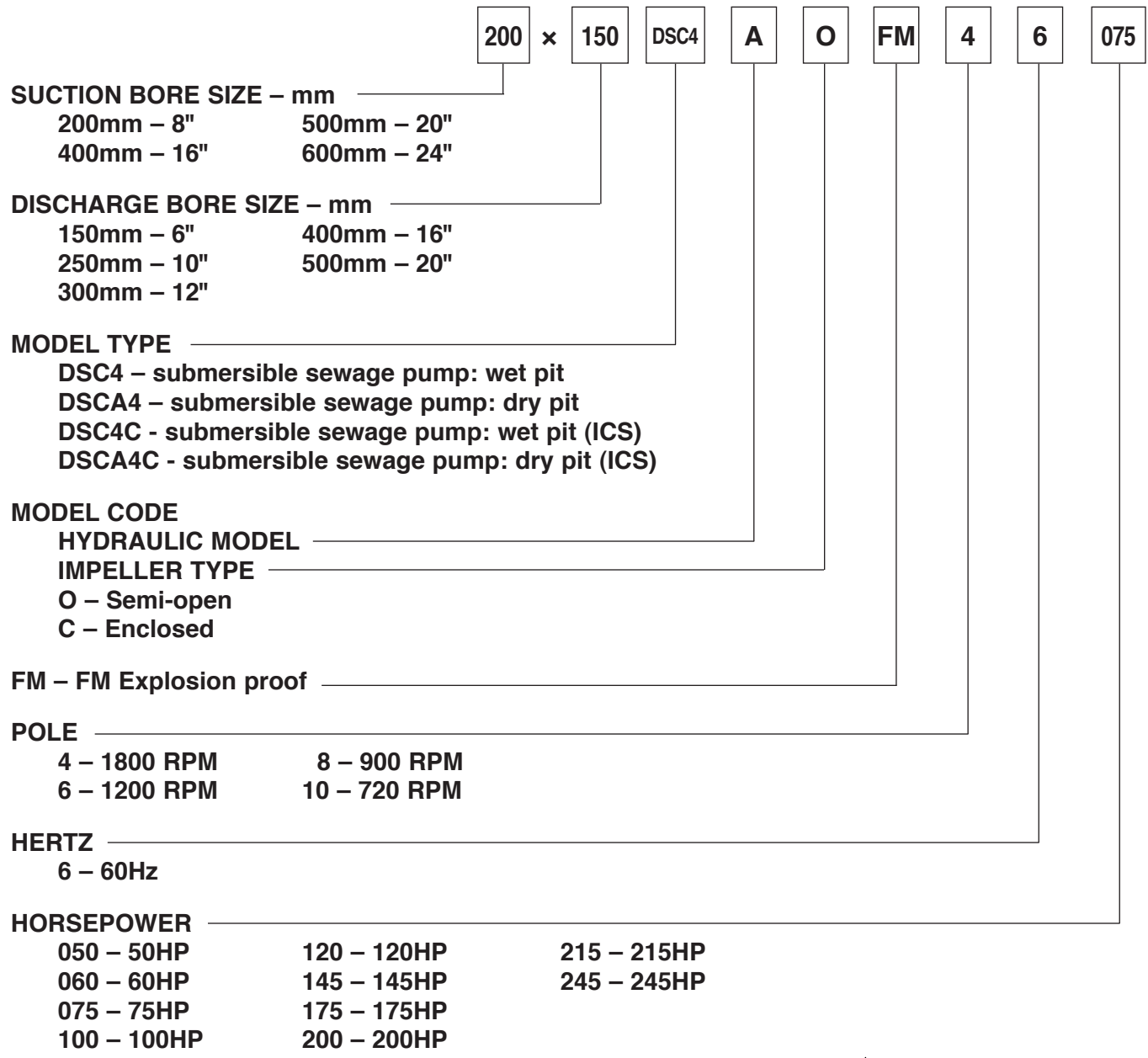
Power cable jacket shall be manufactured of an oil resistant chloroprene rubber material, designed for submerged applications. Cable shall be watertight to a depth of at least 114'. The cable entry system shall comprise of primary, secondary, and tertiary sealing methods. The primary seal shall be achieved 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.

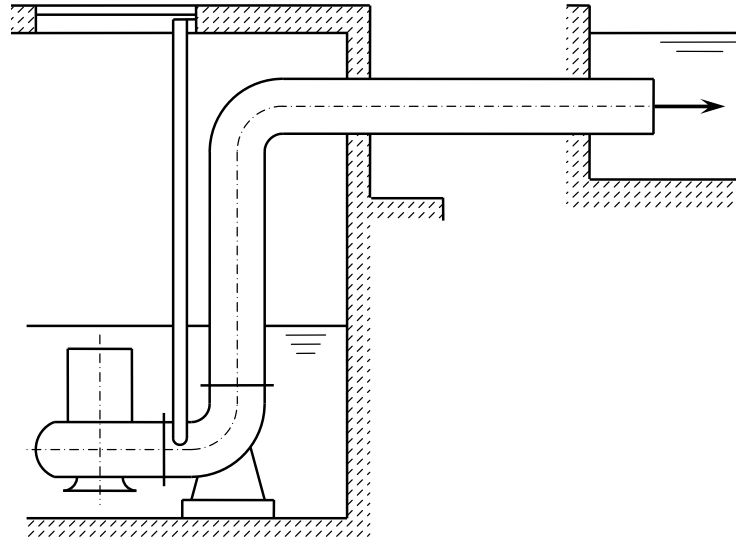
Cooling

- a. 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.
- b. The motor design shall include a propylene glycol closed loop integral cooling system. The system shall consist of a steel cooling jacket. An impeller, integral to the cooling system and driven by the pump shaft, shall provide the necessary circulation of the cooling liquid through the jacket. The coolant shall be cooled using a heat exchanger mounted in the base of the motor housing. The jacket cooling system shall provide heat dissipation for the motor whether the unit is submerged or operating in air.

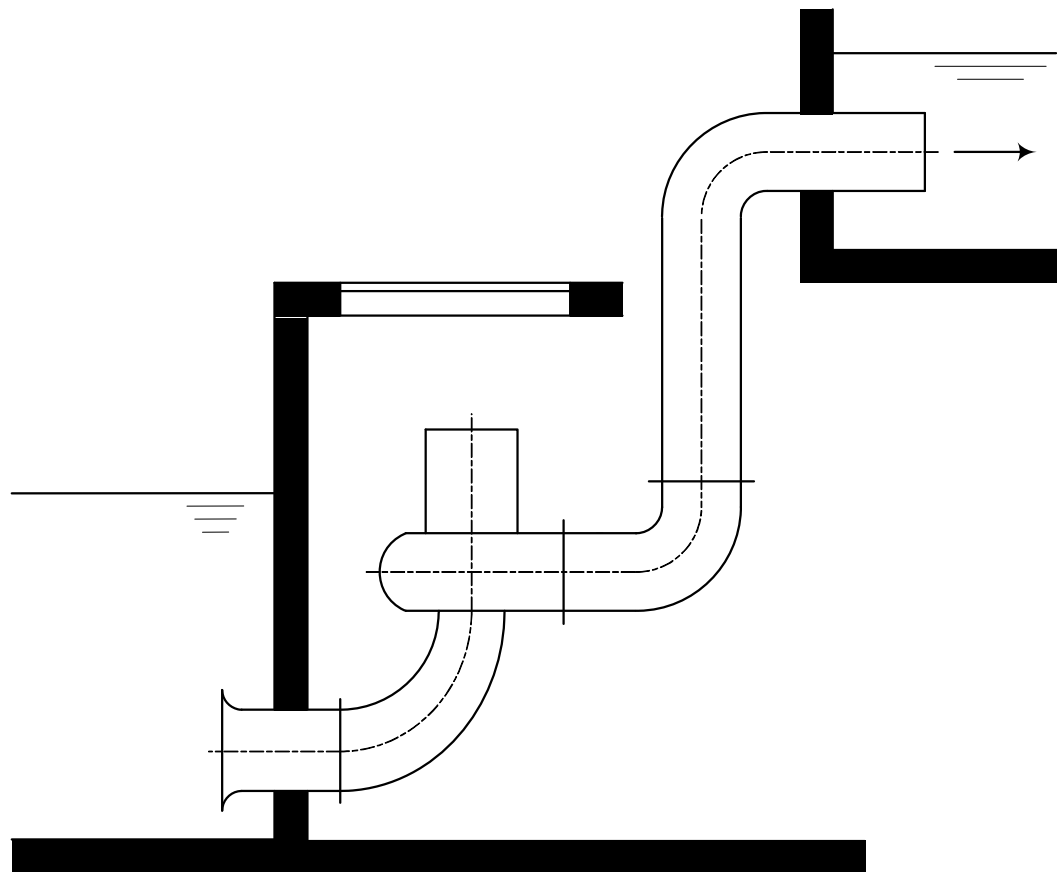
Model Designation



Configurations



MODEL DSC4(C)
(WET PIT INSTALLATION)



MODEL DSCA4(C)
(DRY PIT INSTALLATION)

Specifications
Impeller Design

Pump Model	Model Code	Impeller Type	No. of Vanes	ICS Opt.			
150DSC4 200x150DSCA4	AC-46050	Enclosed	2	Y			
	AC-46060						
	AC-46075						
	BC-46100						
	BC-46120						
	CC-46120						
	CC-46145			N			
	CC-46175						
	C1C-46175						
	C1C-46200						
	C1C-46215						
	C1C-46245						
	HC-46050				Y		
	HC-46060						
HC-46075							
250DSC4 400x250DSCA4	EC-66100	3	N				
EC-66120							
EC-66145							
300DSC4 400x300DSCA4	FC-66050	Enclosed	3	N			
	FC-66060						
	GC-66075						
	EEC-66175						
	EEC-66200						
	EEC-66215						
EEC-66245							
400DSC4 500x400DSCA4	D1C-106050	Enclosed	3	N			
	D1C-106060						
	D1C-106075						
500DSC4 600x500DSCA4	D2C-106100				Enclosed	3	N
	G1C-106120						
	G1C-106145						
	G2C-86175						
	G2C-86200						
	G2C-86215						
	G2C-86245						
	G2C-86245						

Pump Model	Model Code	Impeller Type	No. of Vanes	ICS Opt.			
150DSC4 200x150DSCA4	AO-46050	Semi-open	2	Y			
	AO-46060						
	AO-46075						
	HO-46050						
	HO-46060						
	HO-46075						
250DSC4 400x250DSCA4	EO-66100	Semi-open	3	Y			
	EO-66120						
	EO-66145						
300DSC4 400x300DSCA4	FO-66050				Semi-open	3	Y
	FO-66060						
	GO-66075						

Material Specifications – DSC4

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

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/Ceramics Lower: Silicon Carbide/Silicon Carbide
Impeller for coolant	Corrosion-resistant cast steel ASTM A351 CF8
Side plate (Heat exchanger)	Cast iron ASTM A48 CL35 (4P 50-100HP, 6P 50-145HP) Copper alloy casting ASTM B584 C83600 (4P 120-145HP)
Lifting Handle	Stainless Steel AISI 304

Note:
¹Enclosed impeller models only

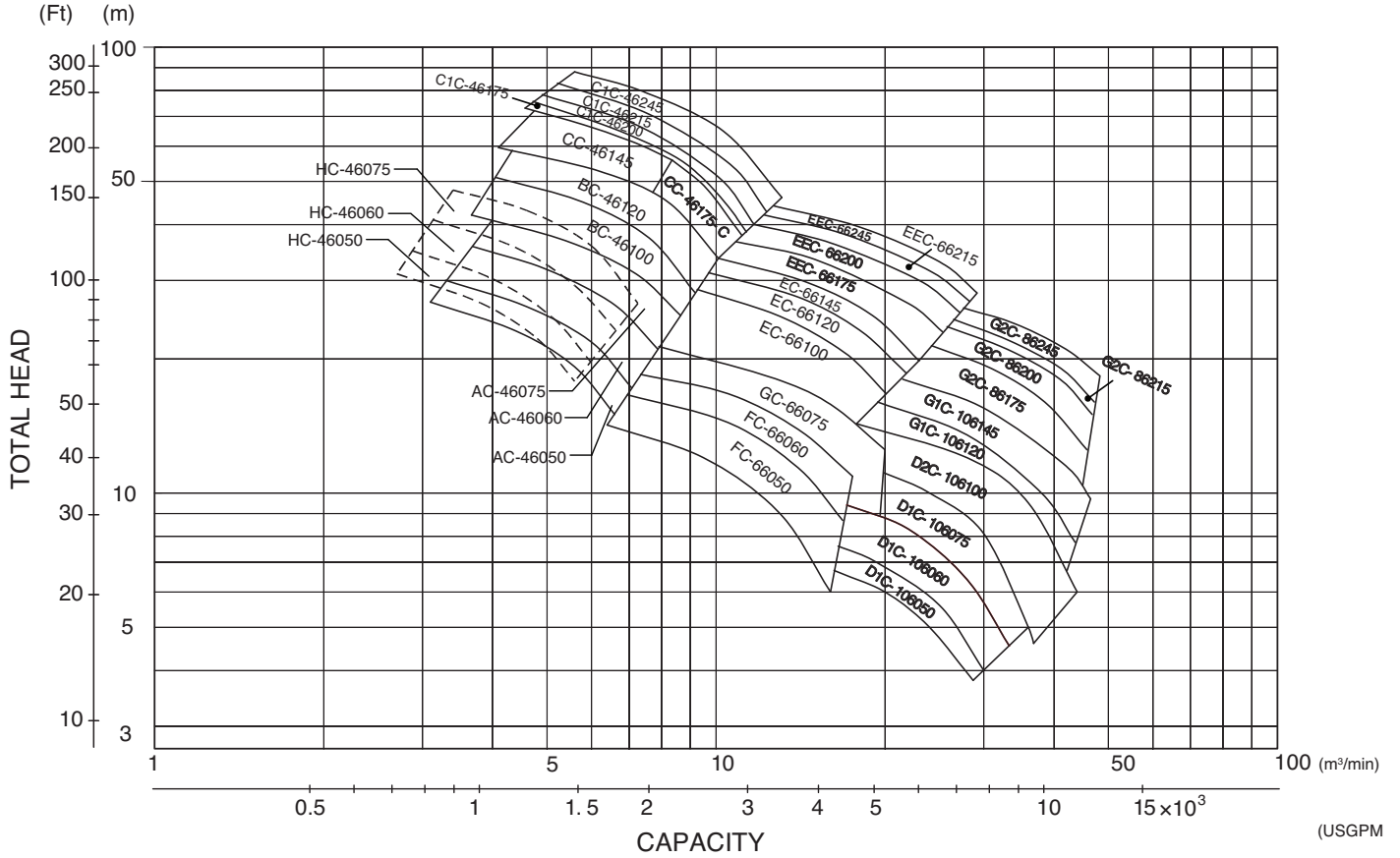
²Semi-open impeller models only

³Optional 304 SS impeller ring available for enclosed models

Selection Chart

Project: _____ Model: _____ Chk'd: _____ Date: _____

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

Project:

Chk'd:

Date:

**MODEL: 250DSC4
400x250DSCA4
100HP - 145HP**

Rated Capacity

Rated Total Head

Pump Speed

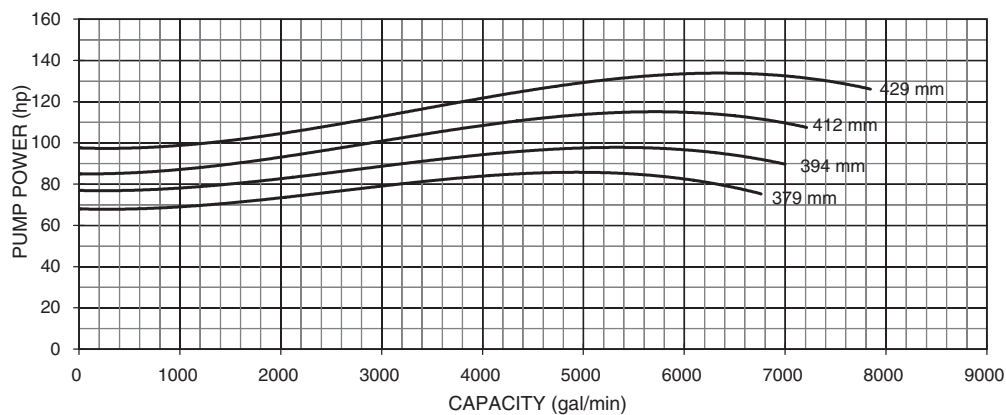
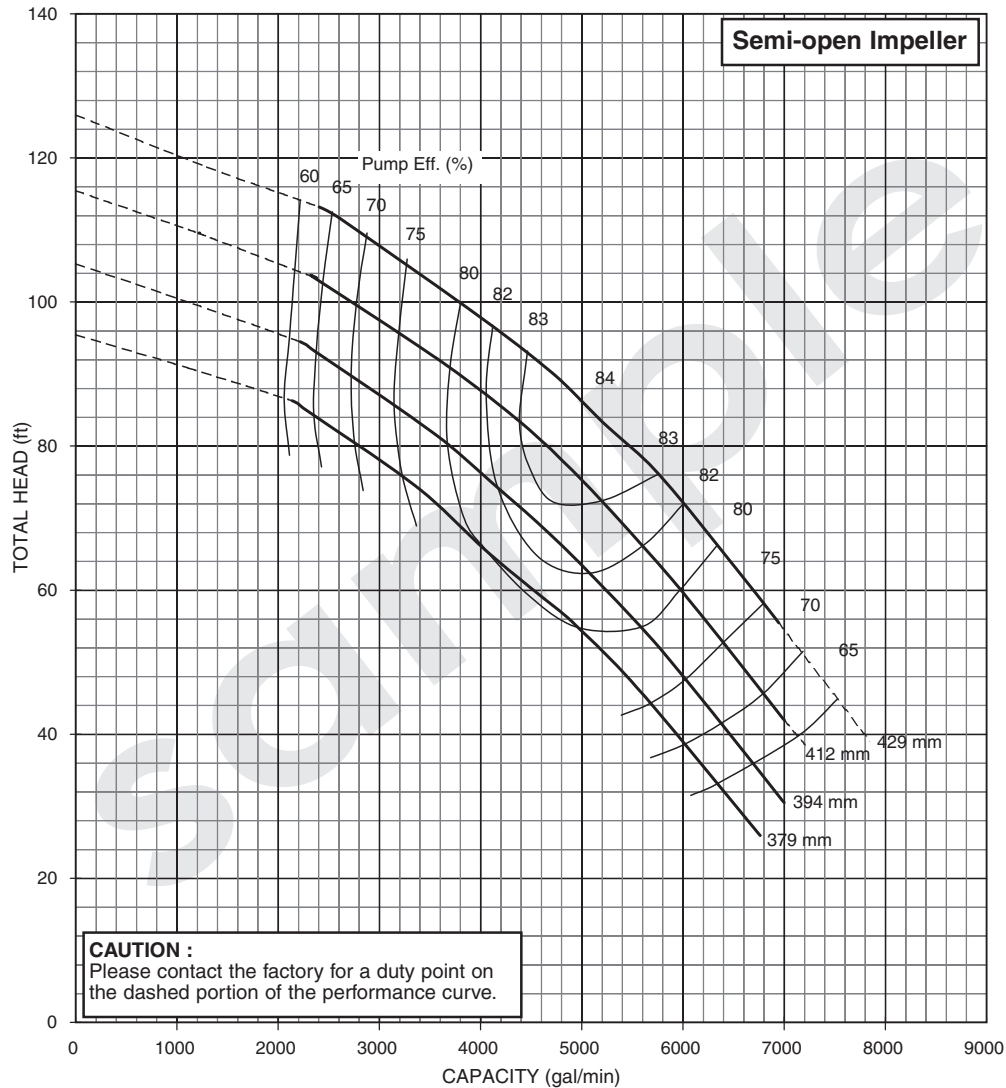
Motor Output Power

GPM
(3800)

FT
(100)

RPM
1800

HP
(145)



Project:

Chk'd:

Date:

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

GPM

FT

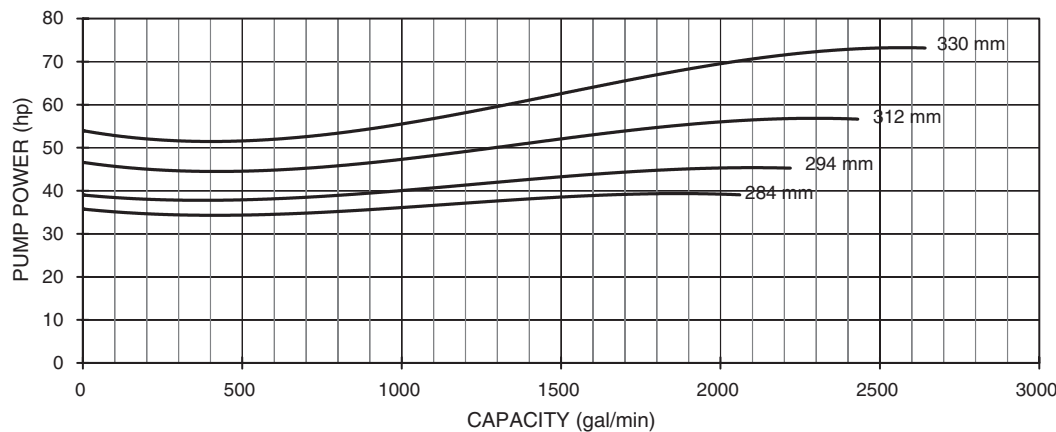
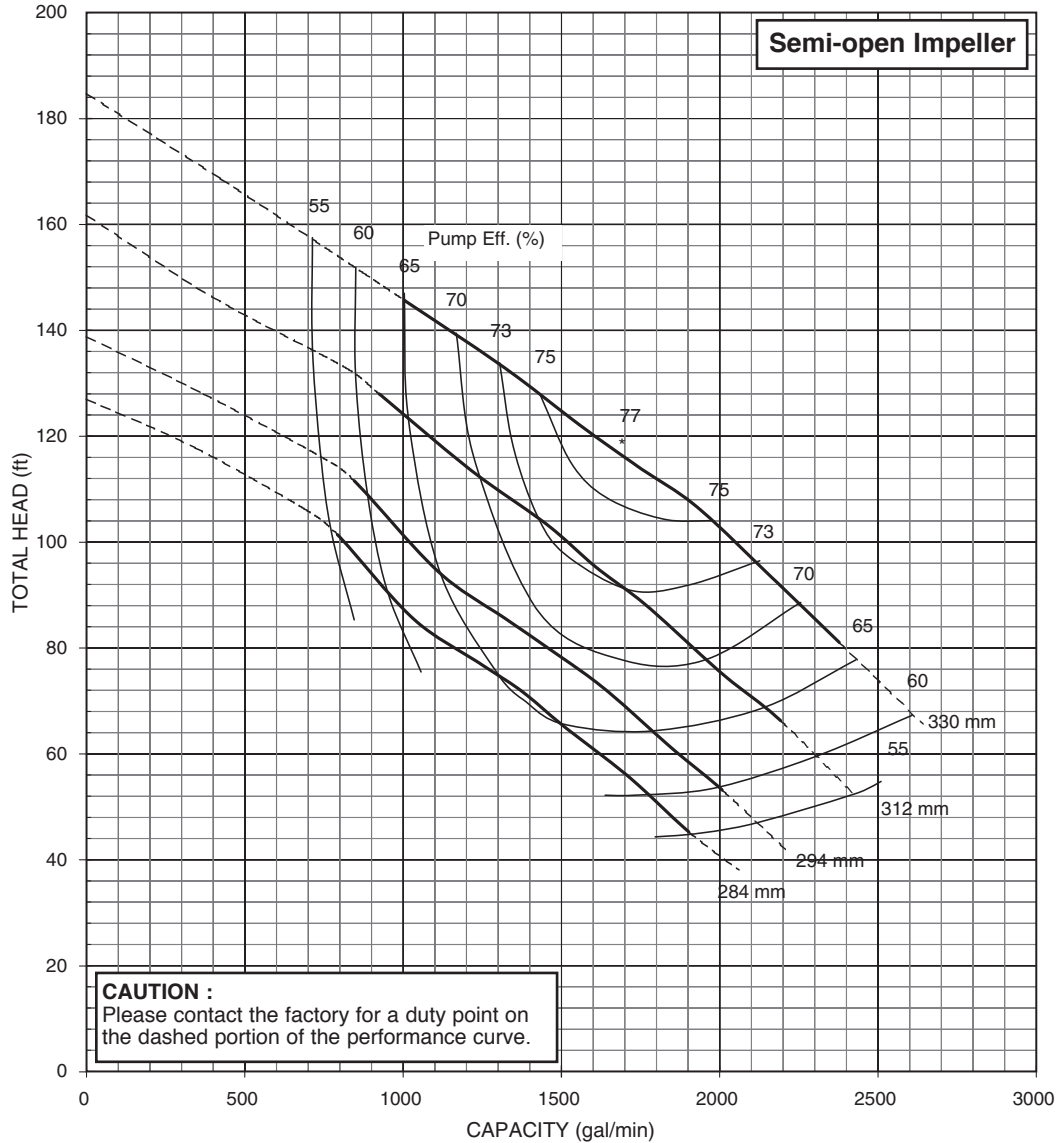
RPM

HP

×

×

×



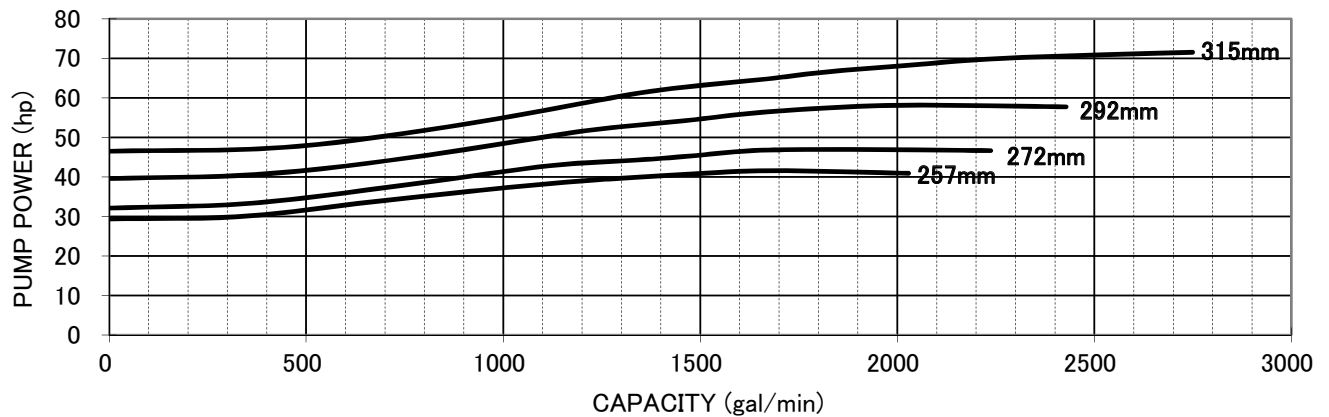
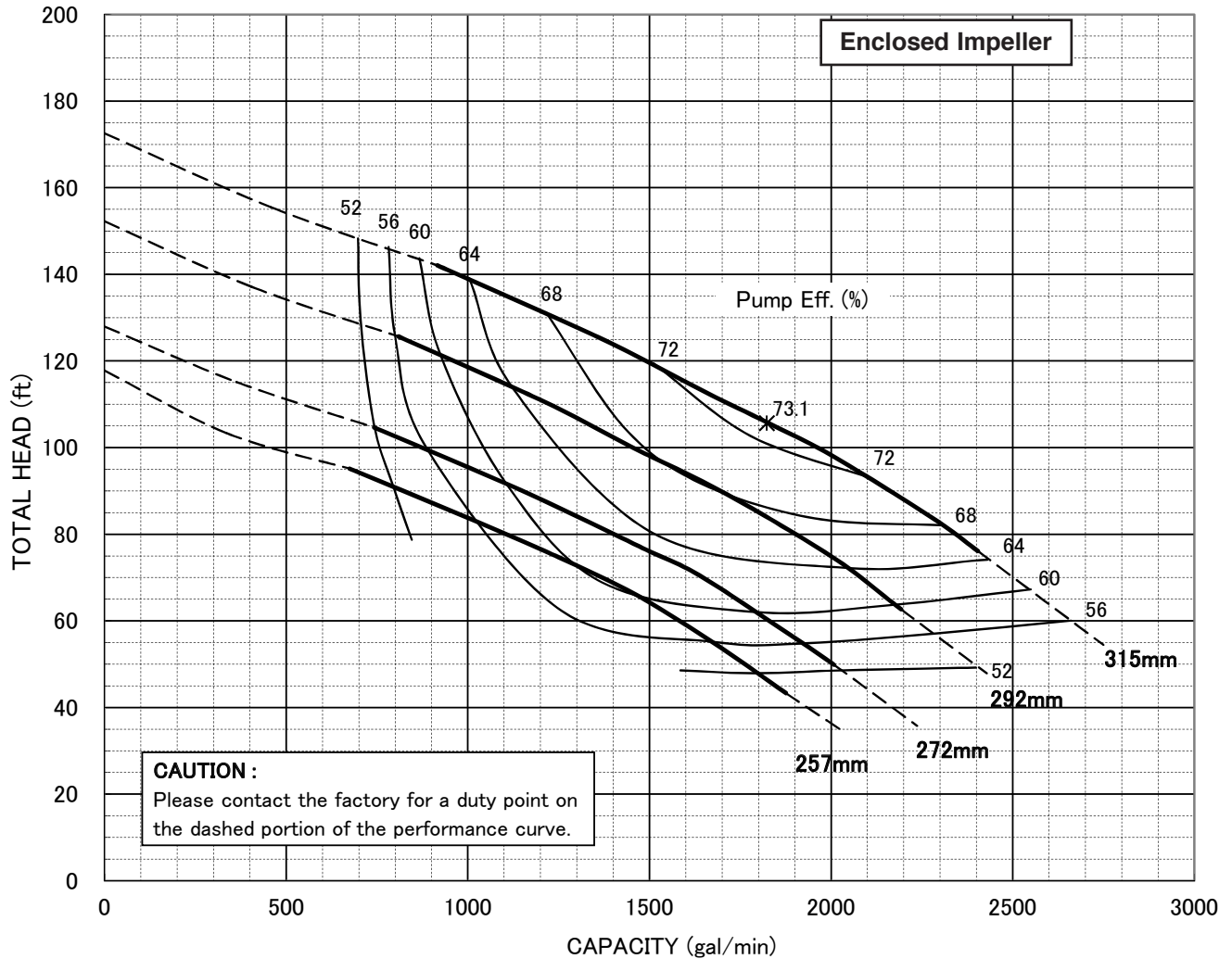
Project:

Chk'd:

Date:

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

GPM × FT × RPM × HP
1800 ×



Project:

Chk'd:

Date:

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

GPM

FT

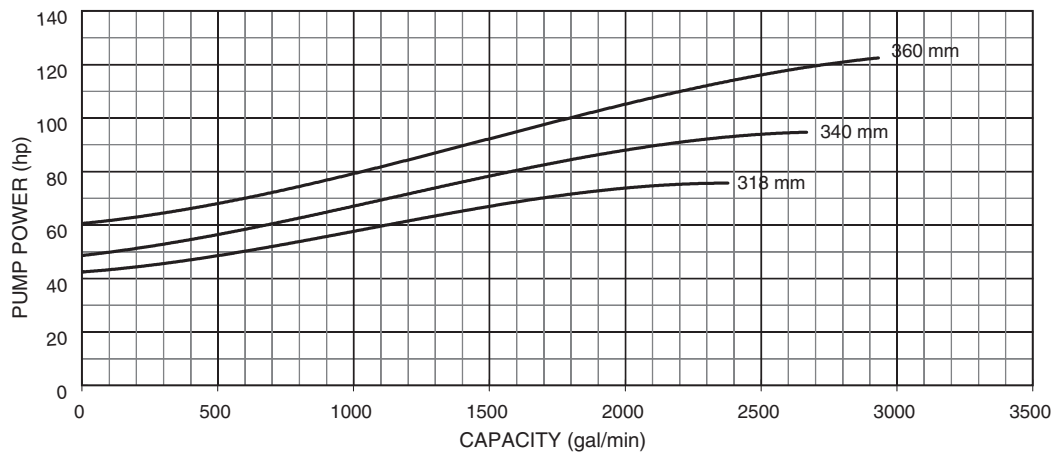
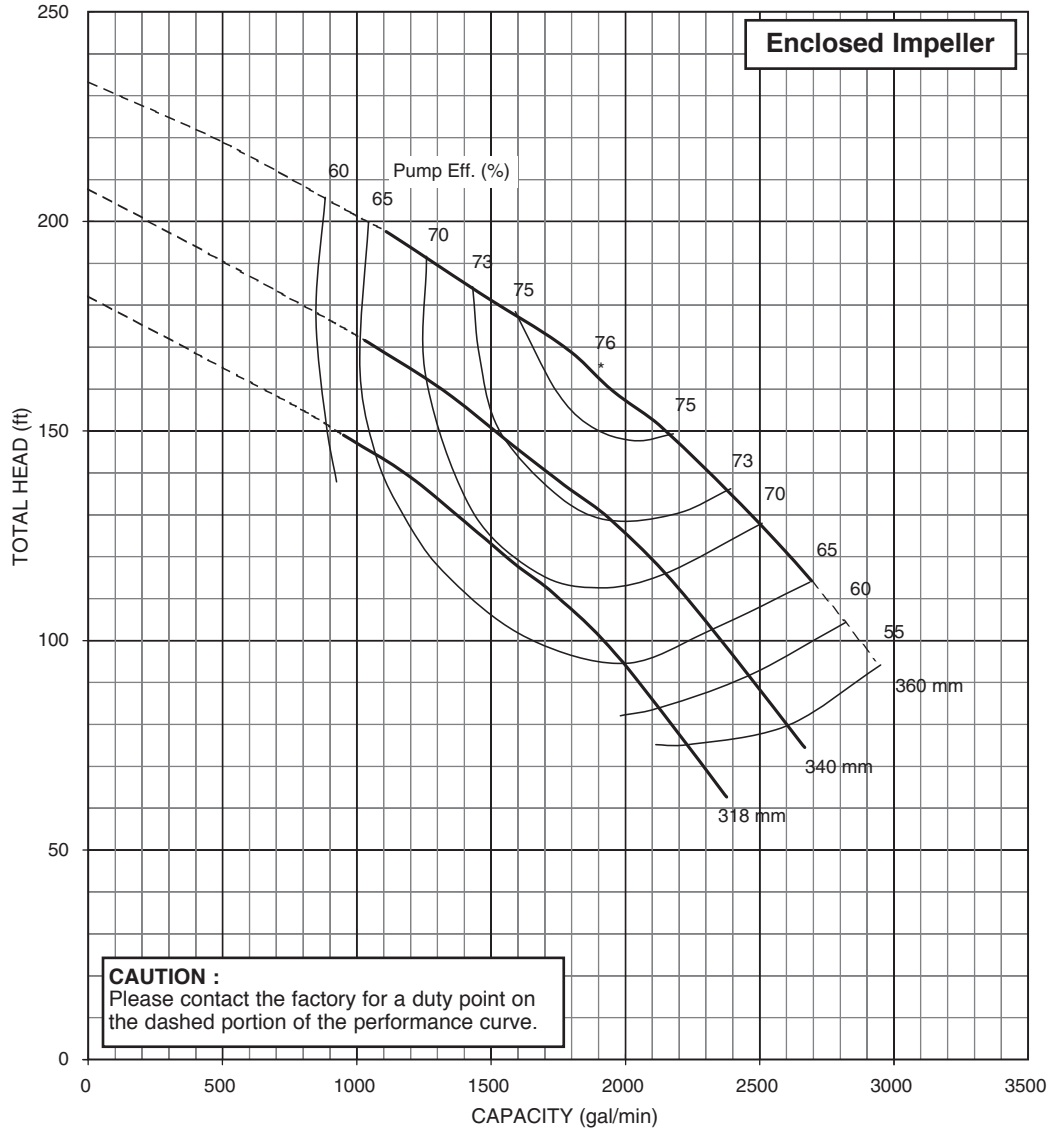
RPM

HP

x

x

x



Project:

Chk'd:

Date:

**MODEL: 150DSC4/DSC4C
200x150DSCA4/DSCA4C
120HP - 175HP***

GPM

FT

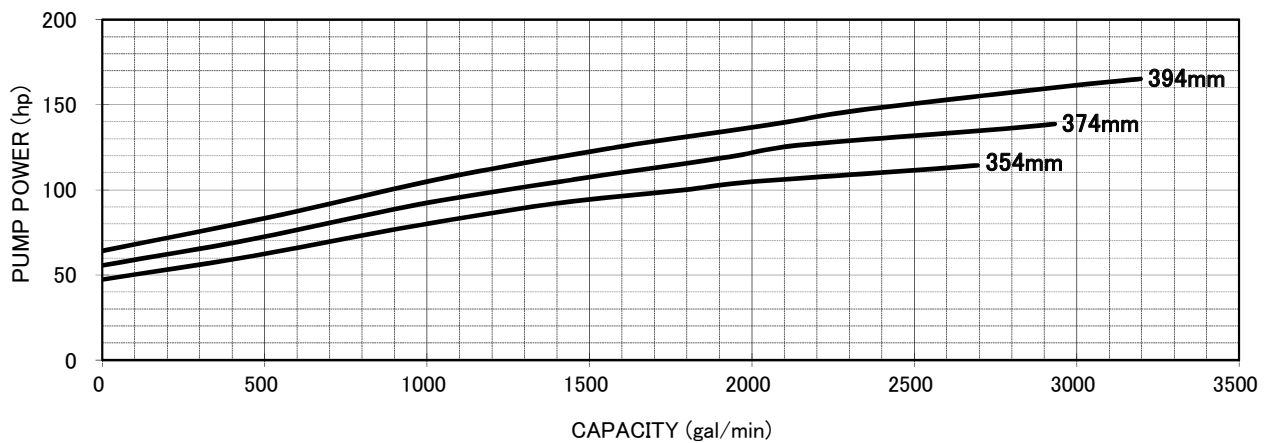
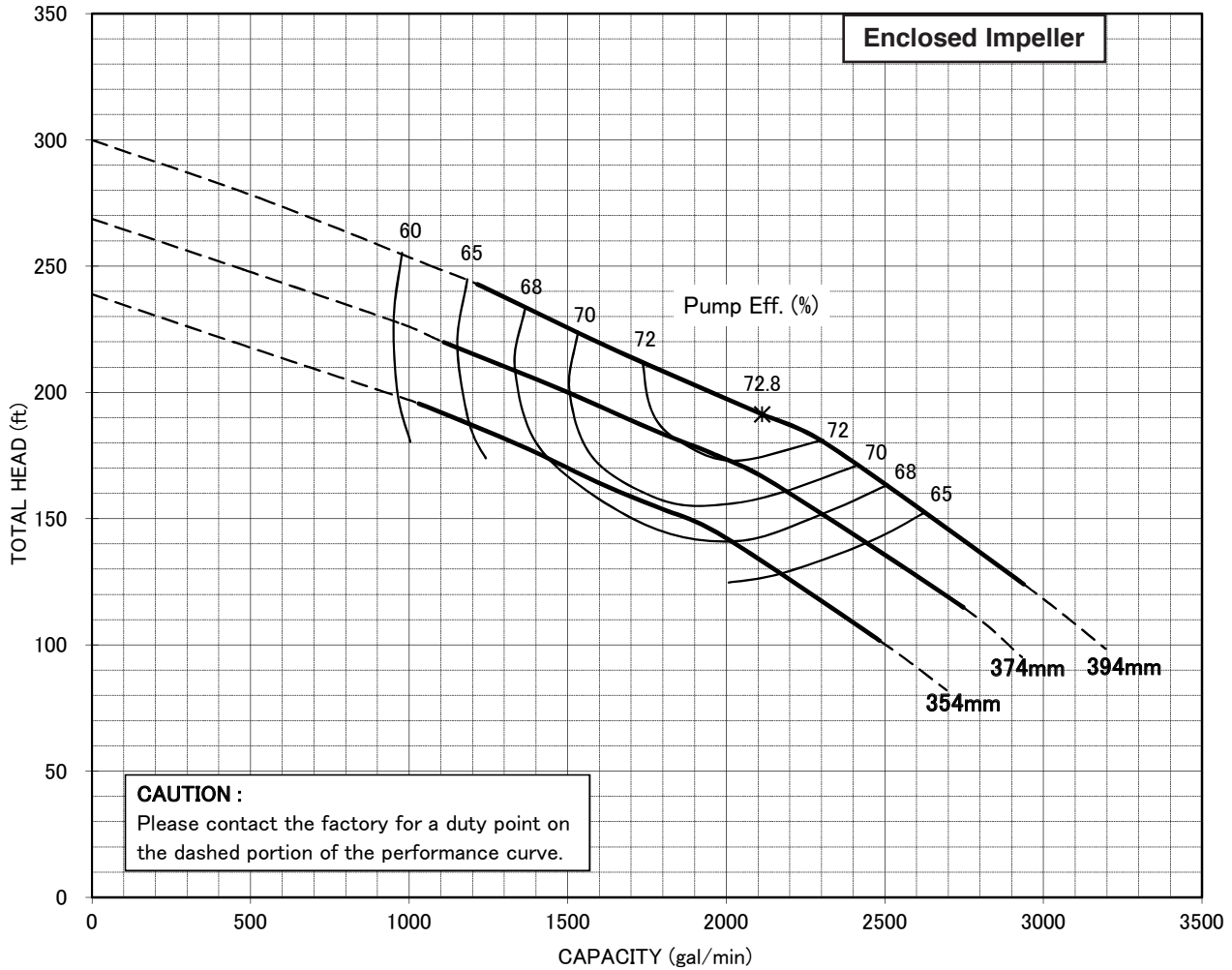
RPM

HP

×

×

×



*Note: 175HP Model is not available in ICSÉ

Project:

Chk'd:

Date:

**MODEL: 150DSC4
200×150DSCA4
175HP - 245HP**

GPM

FT

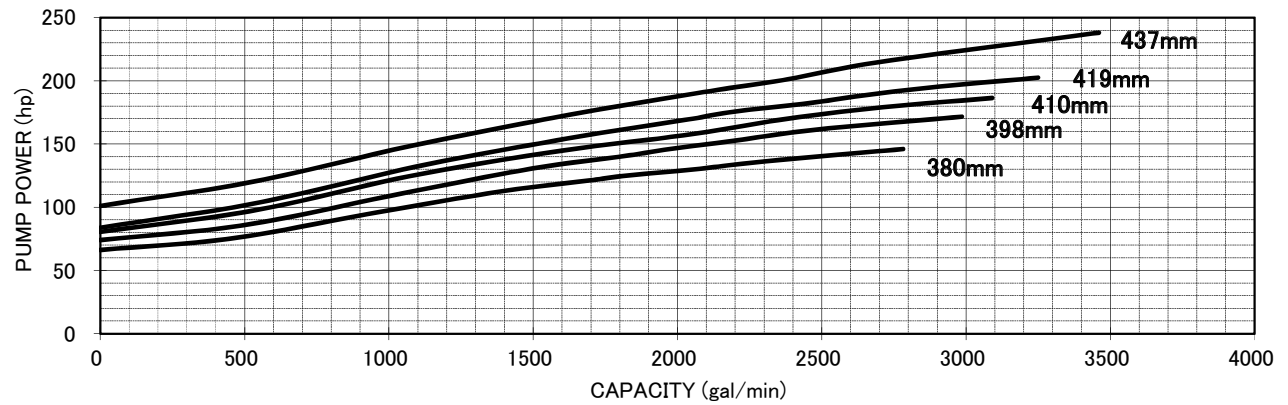
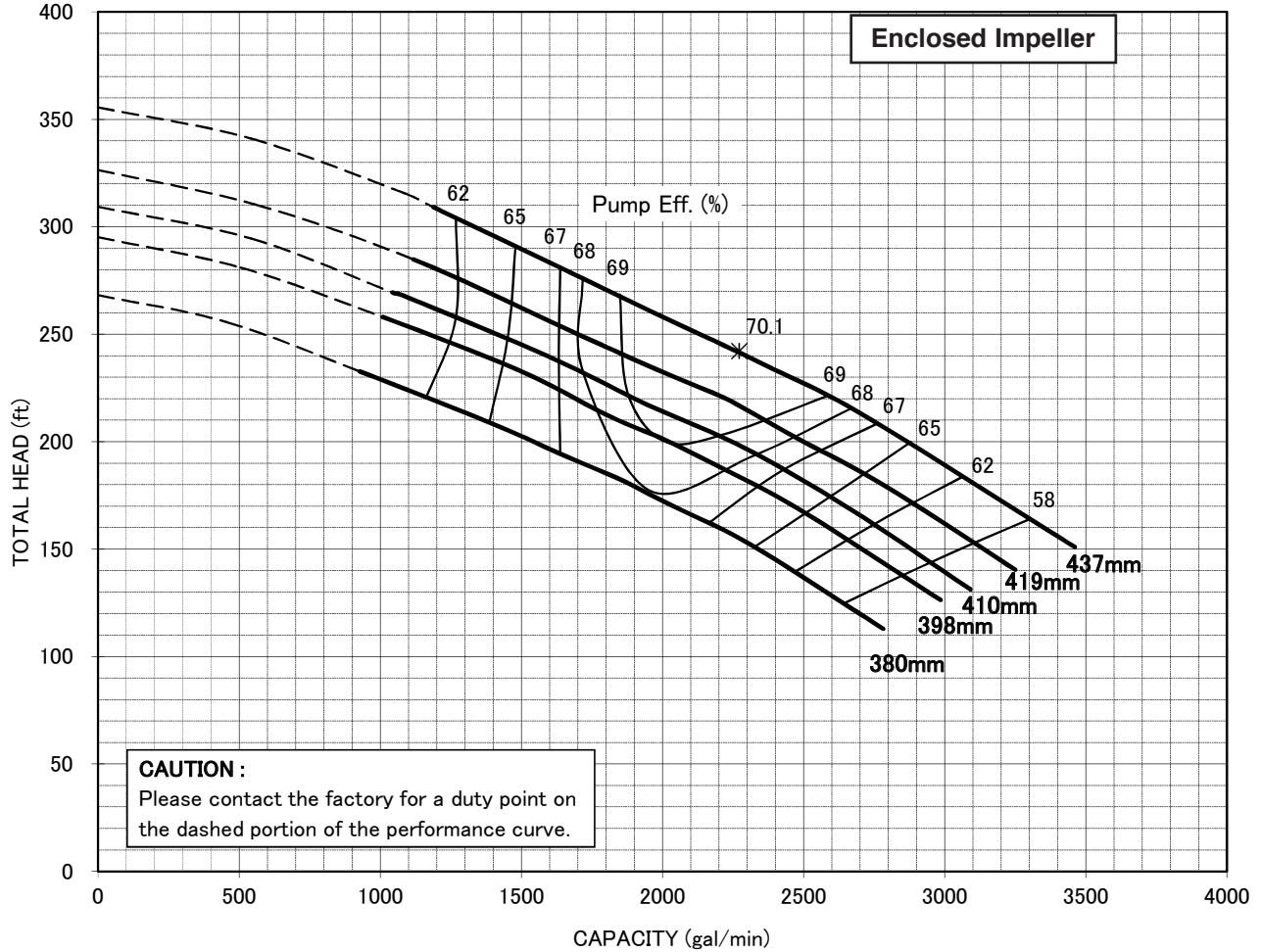
RPM

HP

×

×

×



Project:

Chk'd:

Date:

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

GPM

FT

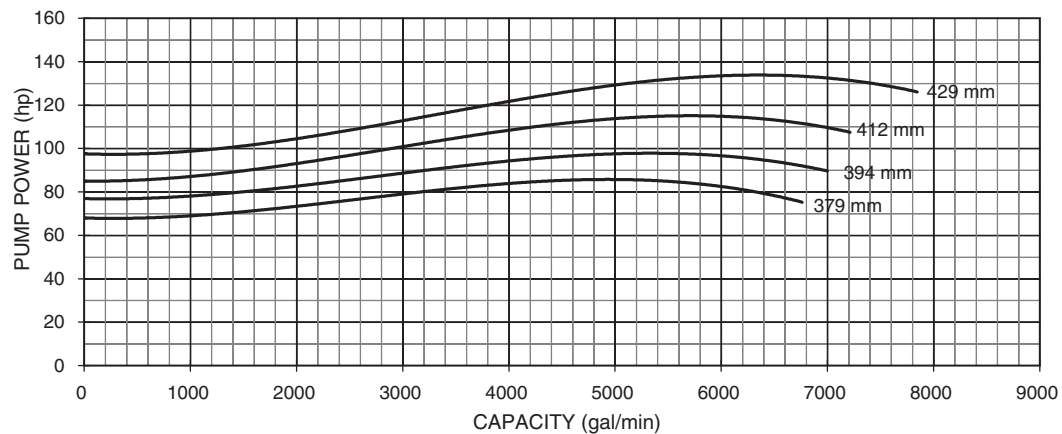
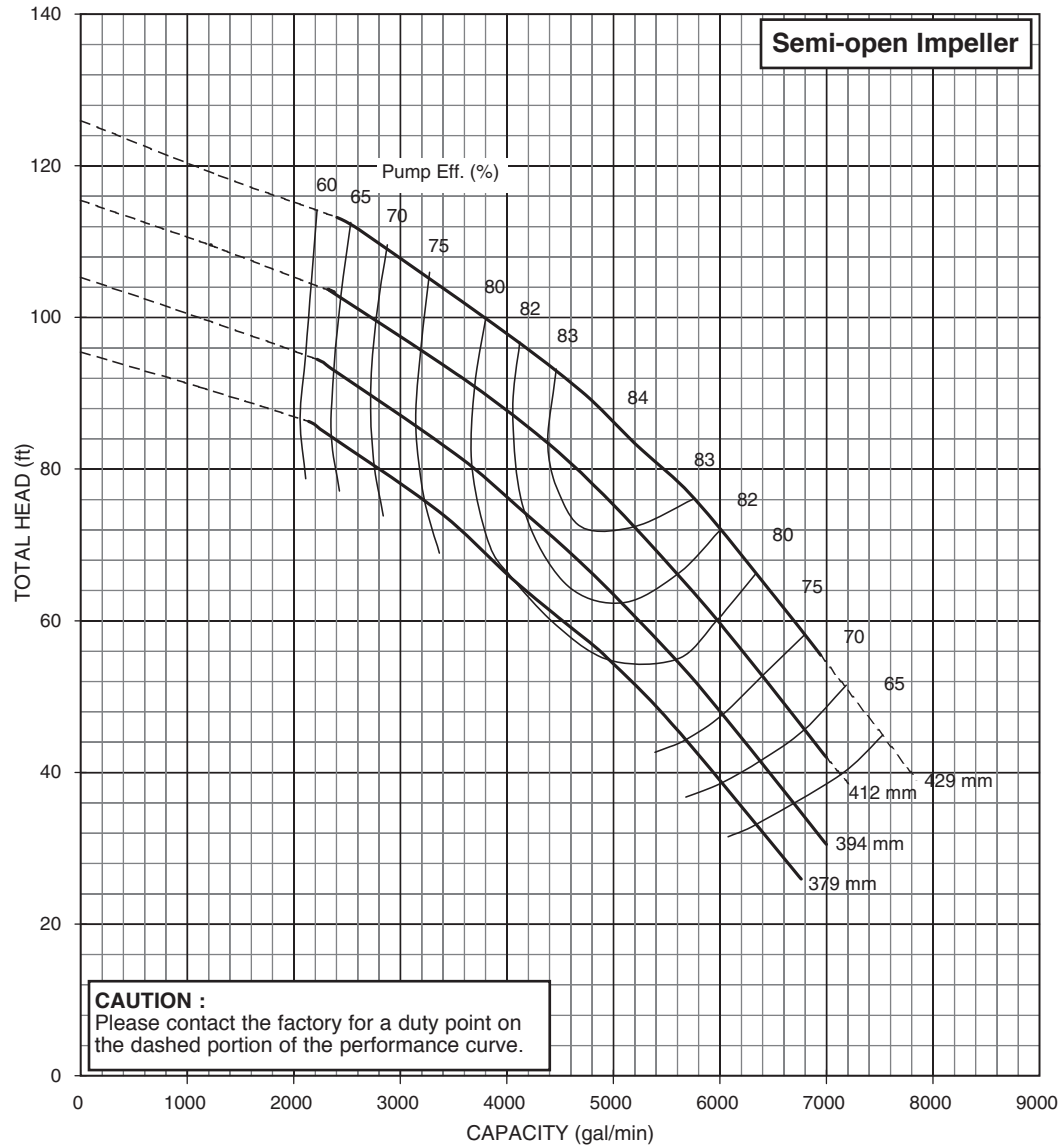
RPM

HP

×

×

×



Project:

Chk'd:

Date:

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

GPM

FT

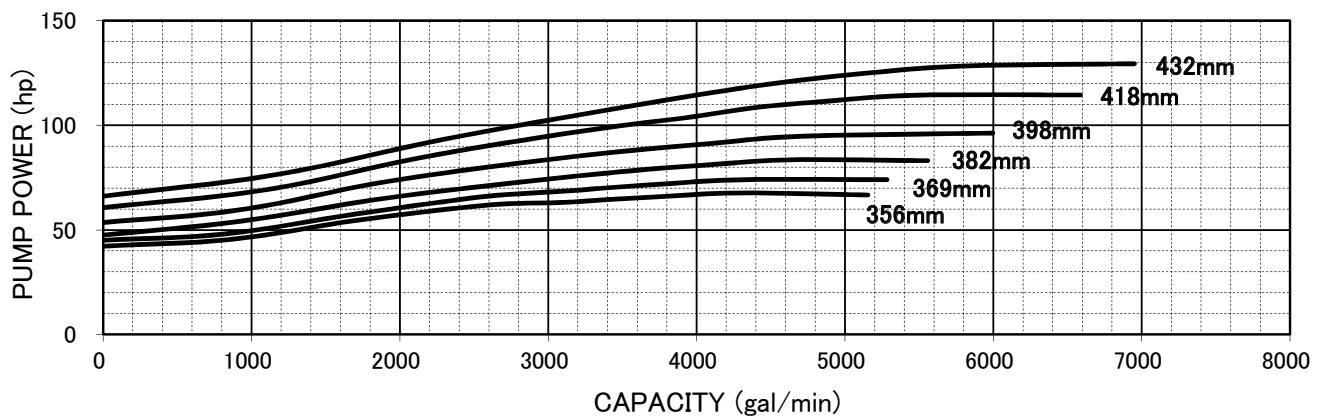
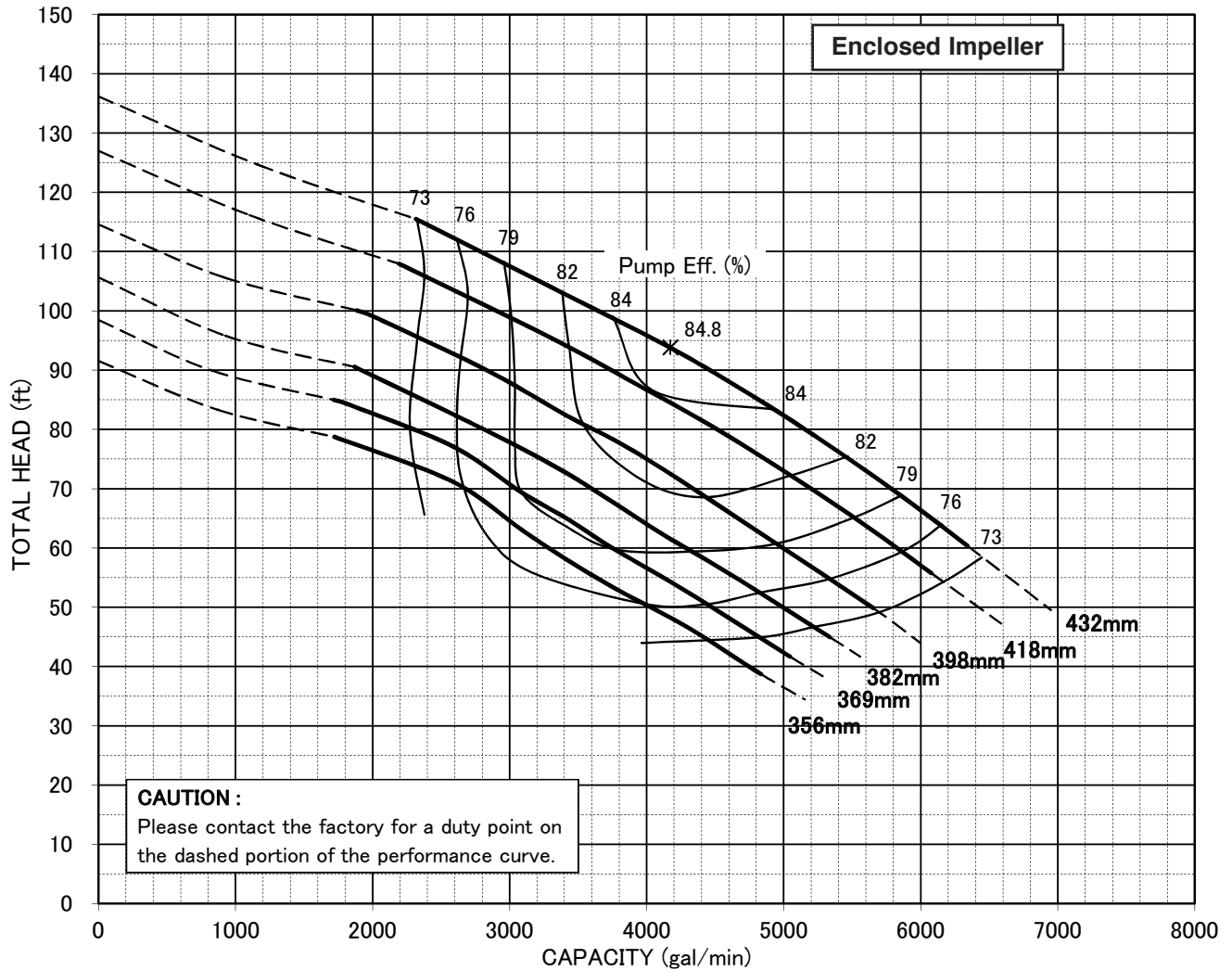
RPM

HP

×

×

×



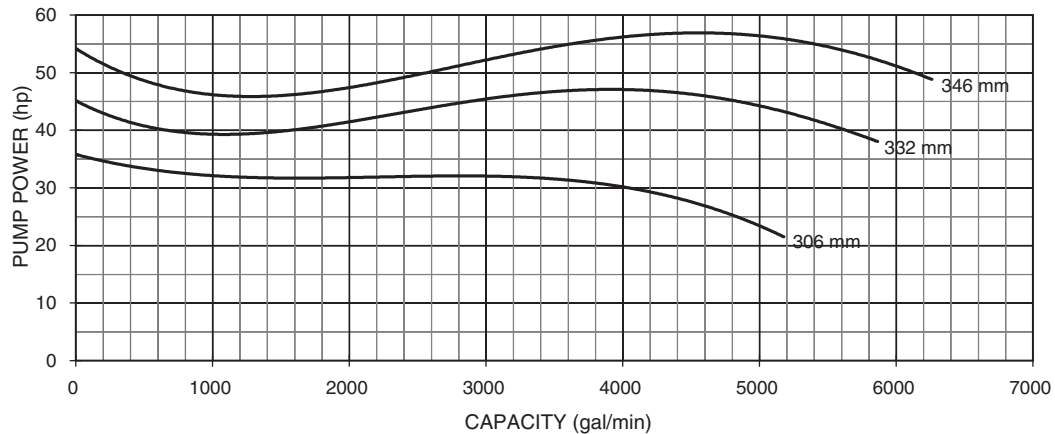
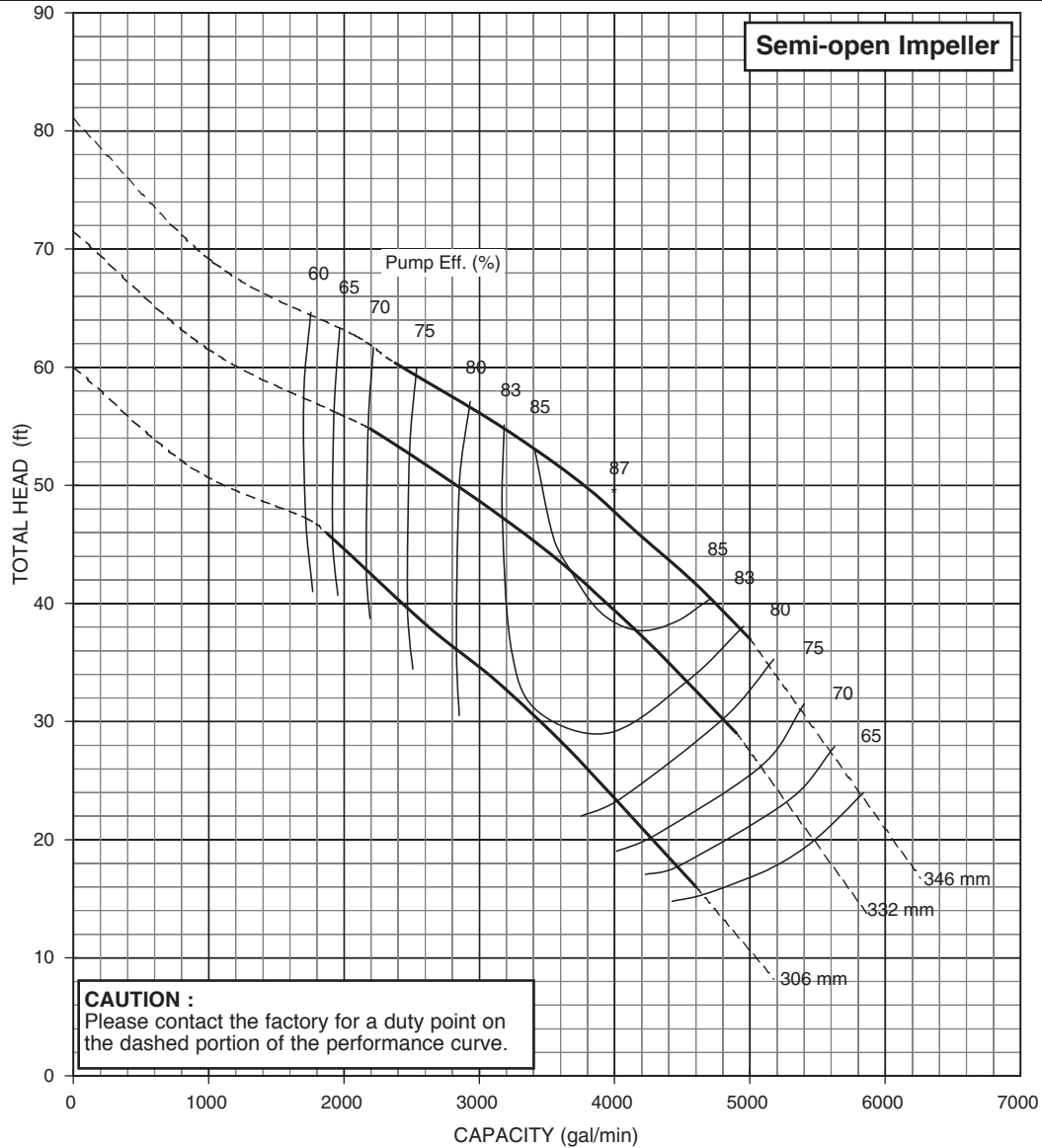
Project:

Chk'd:

Date:

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

GPM × FT × RPM × HP
1200



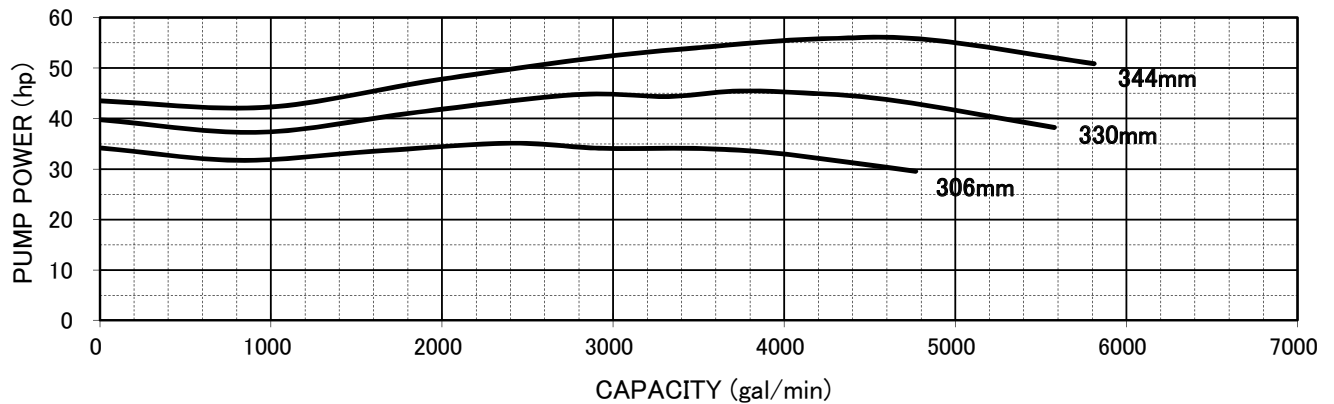
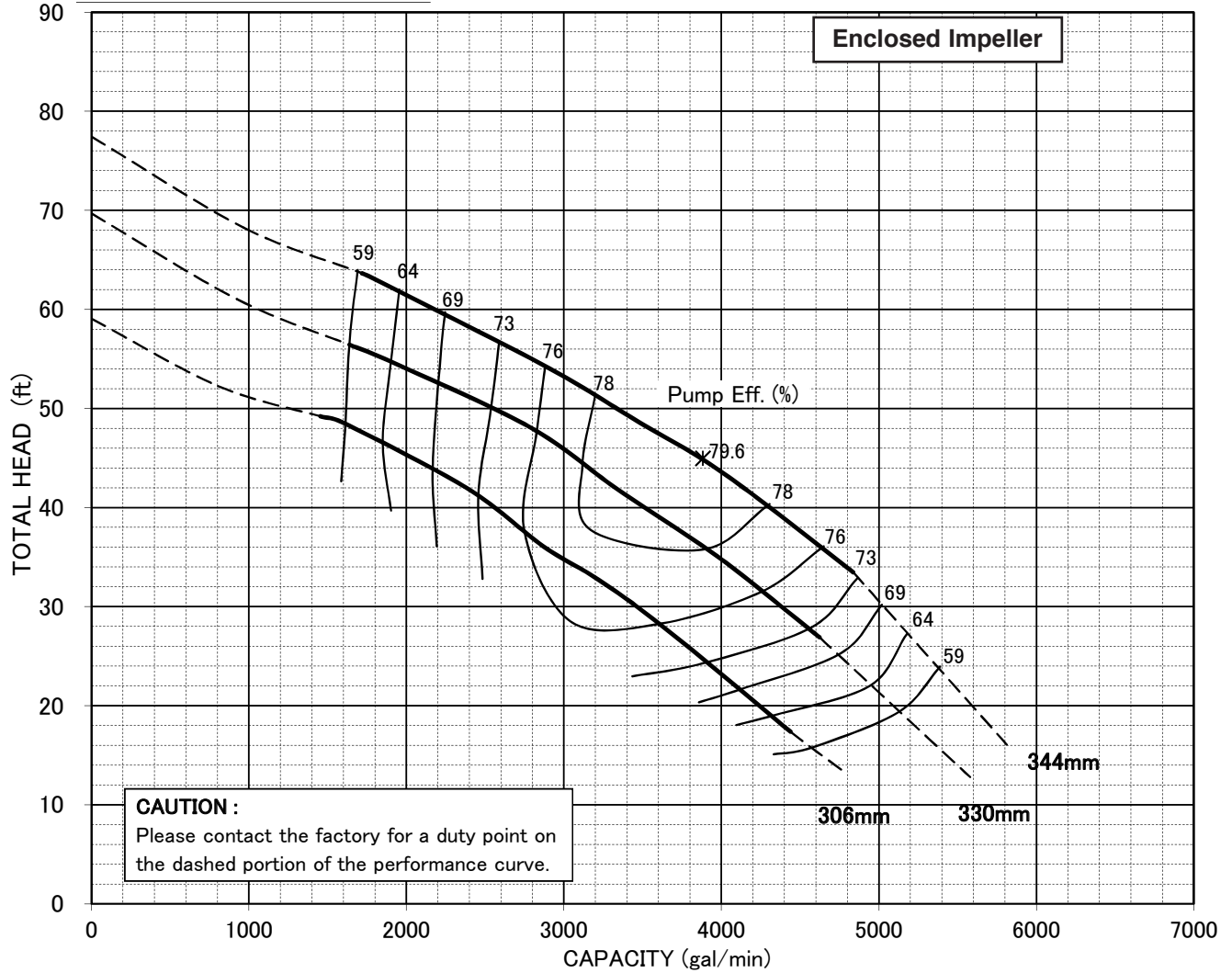
Project:

Chk'd:

Date:

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

GPM FT RPM HP
 × × 1200 ×



Project:

Chk'd:

Date:

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

GPM

FT

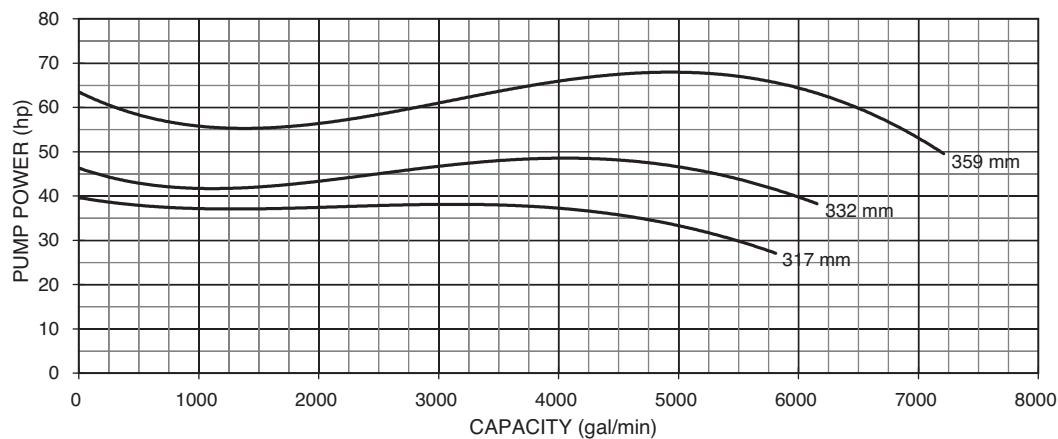
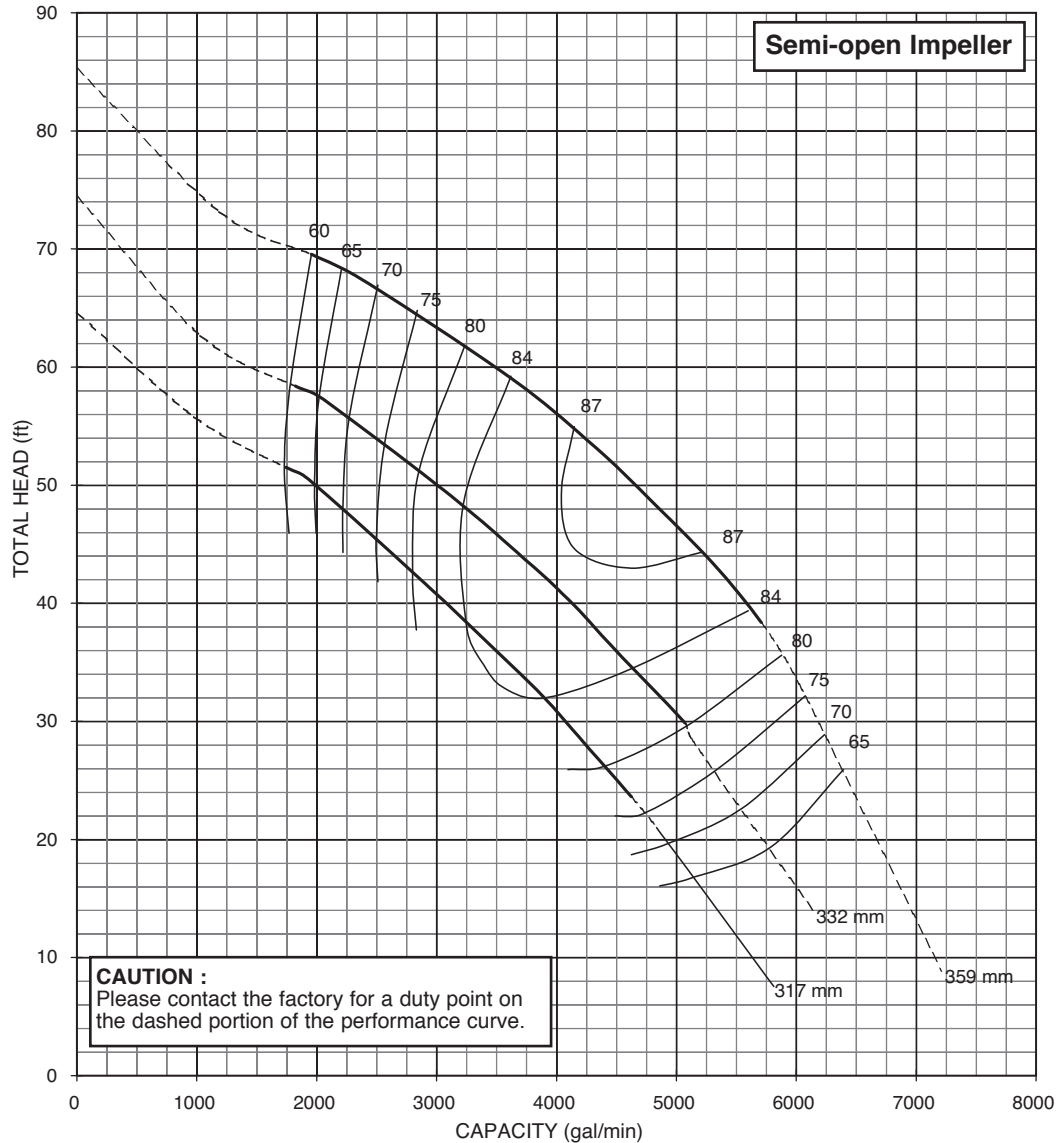
RPM

HP

×

×

×



Project:

Chk'd:

Date:

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

GPM

FT

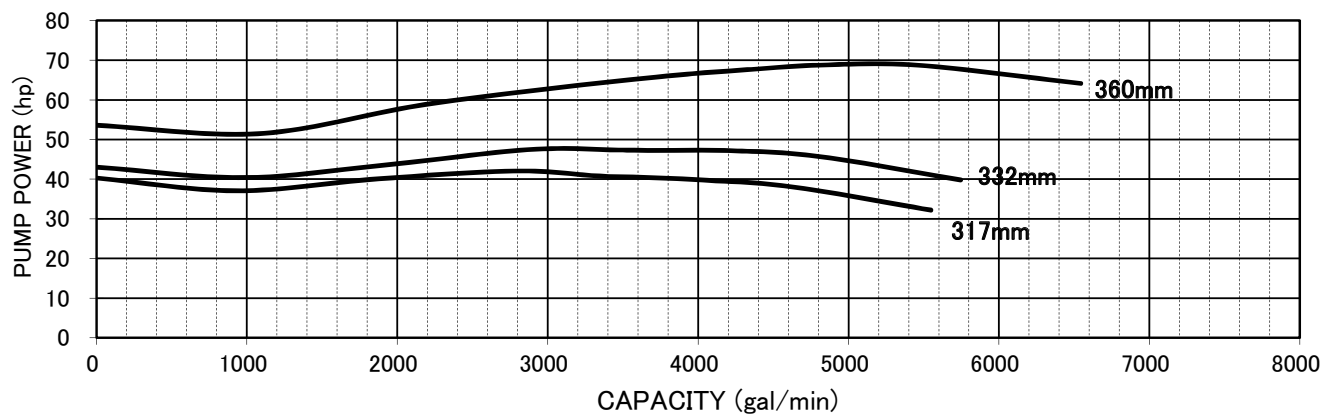
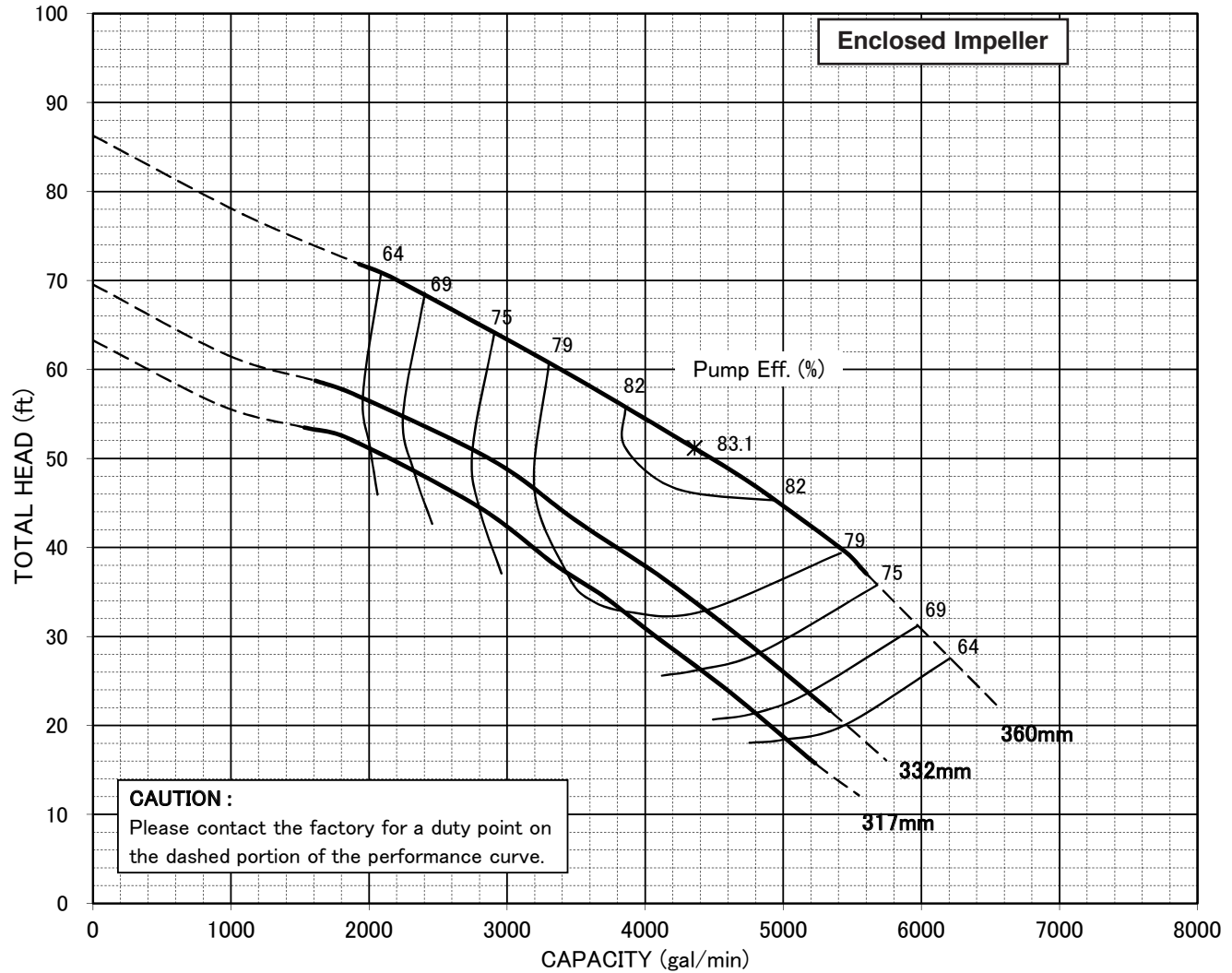
RPM

HP

×

×

×



Project:

Chk'd:

Date:

**MODEL: 300DSC4
400x300DSCA4
175HP - 245HP**

GPM

FT

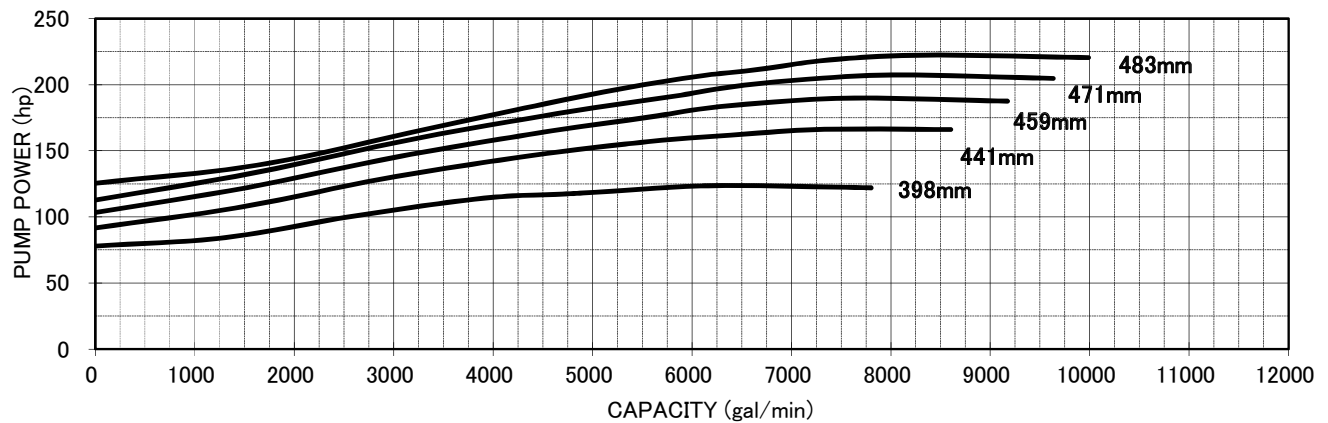
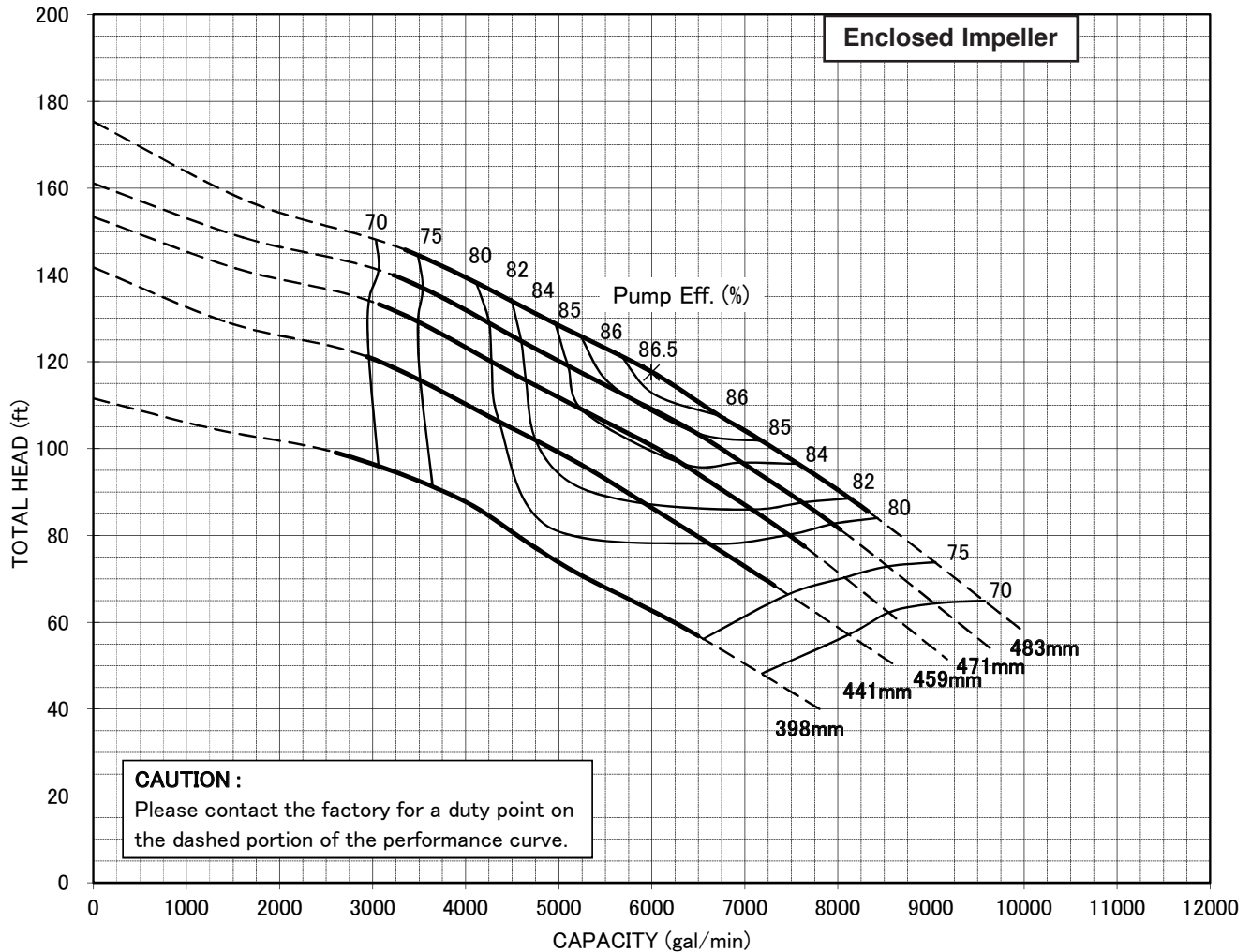
RPM

HP

×

×

×



Project:

Chk'd:

Date:

**MODEL: 400DSC4
500x400DSCA4
50HP - 75HP**

GPM

FT

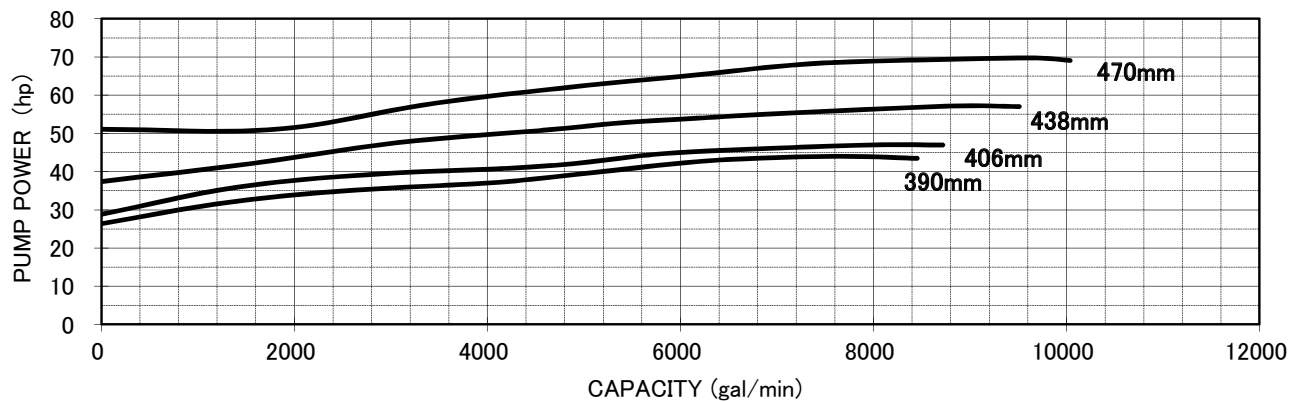
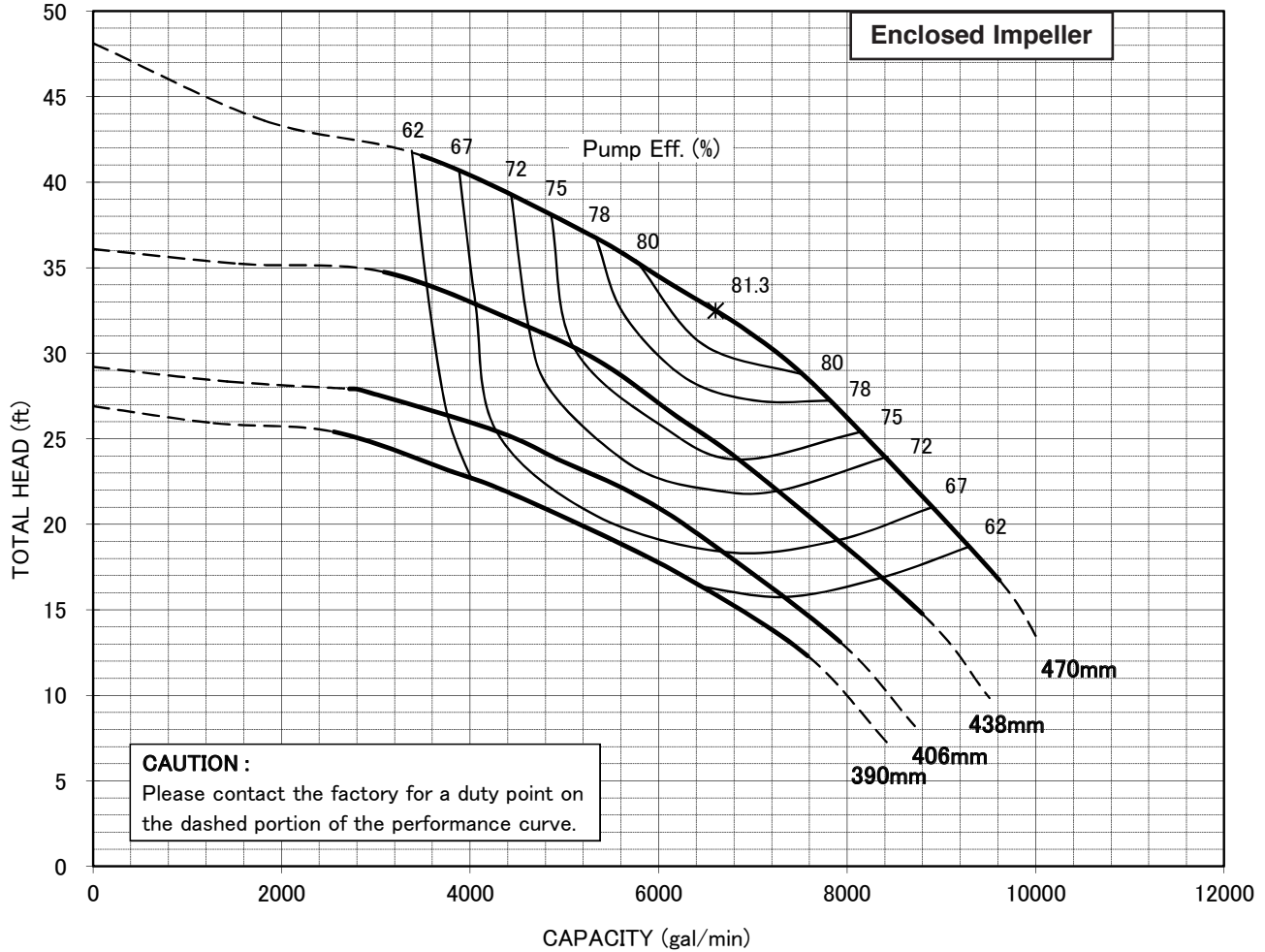
RPM

HP

×

×

×



Project:

Chk'd:

Date:

**MODEL: 500DSC4
600x500DSCA4
100HP**

GPM

FT

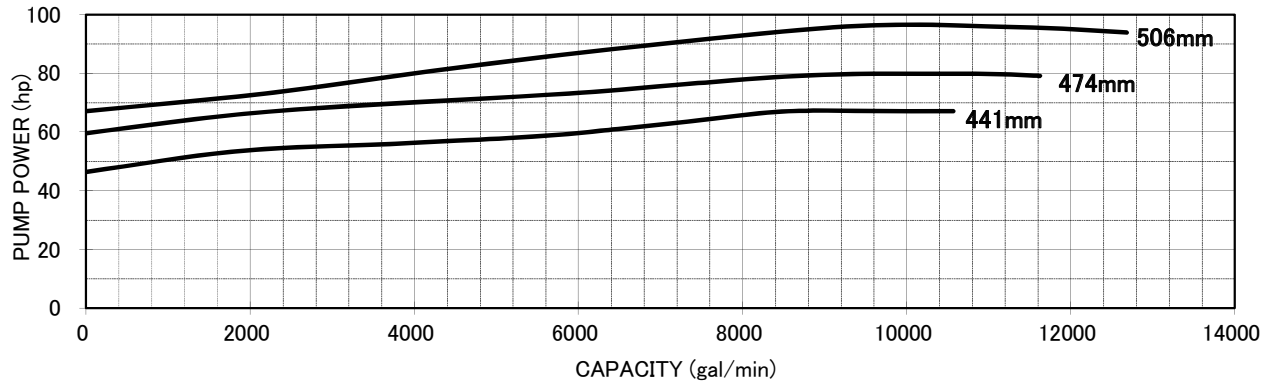
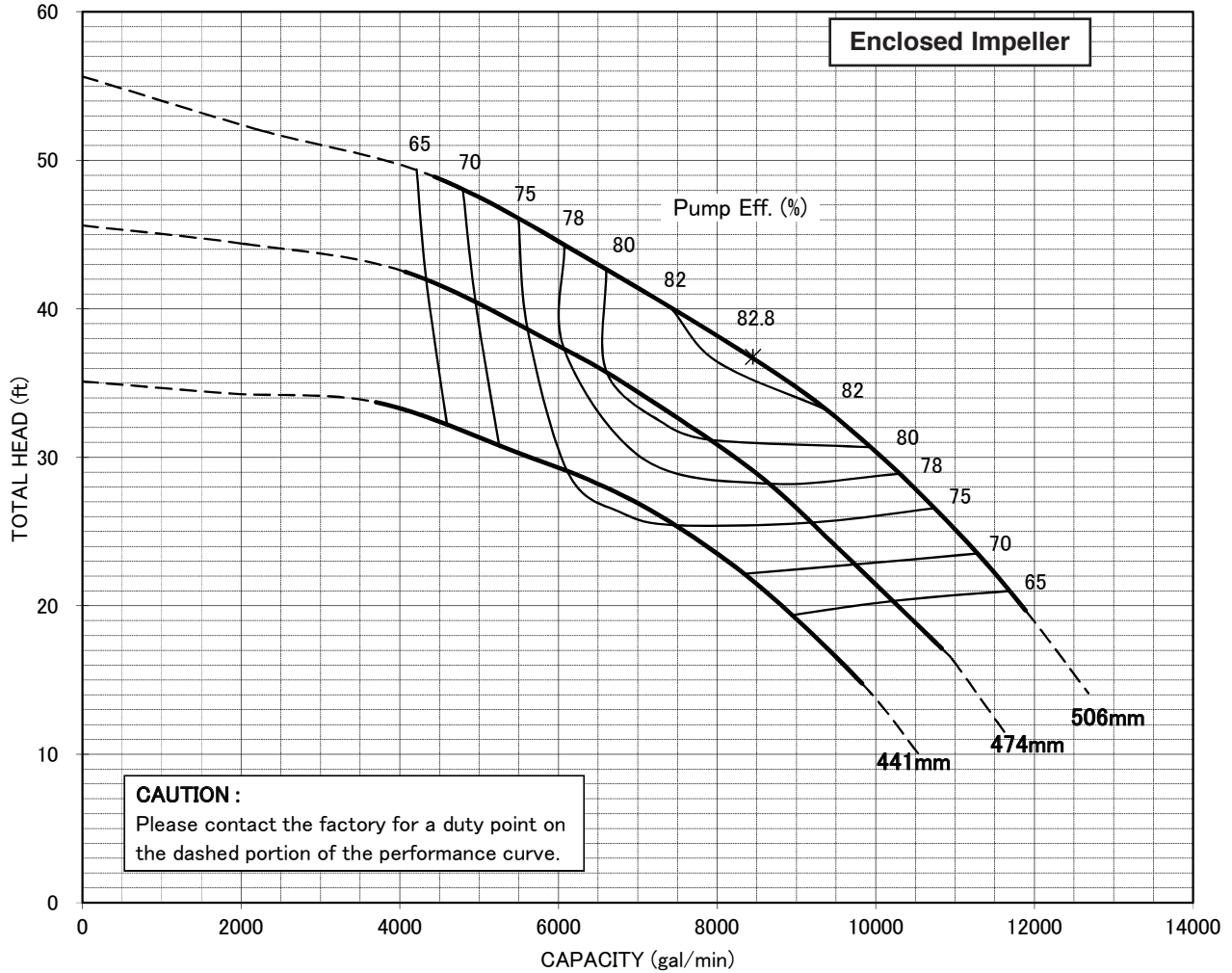
RPM

HP

×

×

×



Project:

Chk'd:

Date:

**MODEL: 500DSC4
600x500DSCA4
120HP - 145HP**

GPM

FT

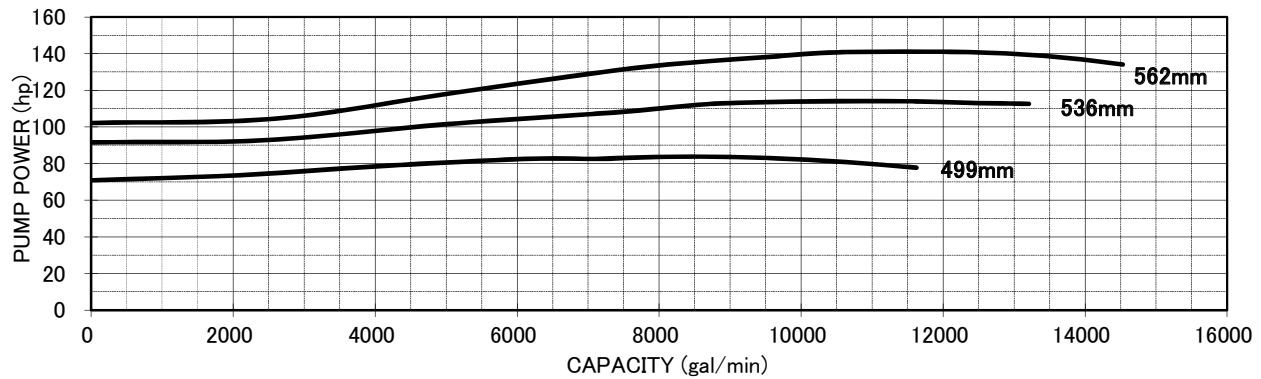
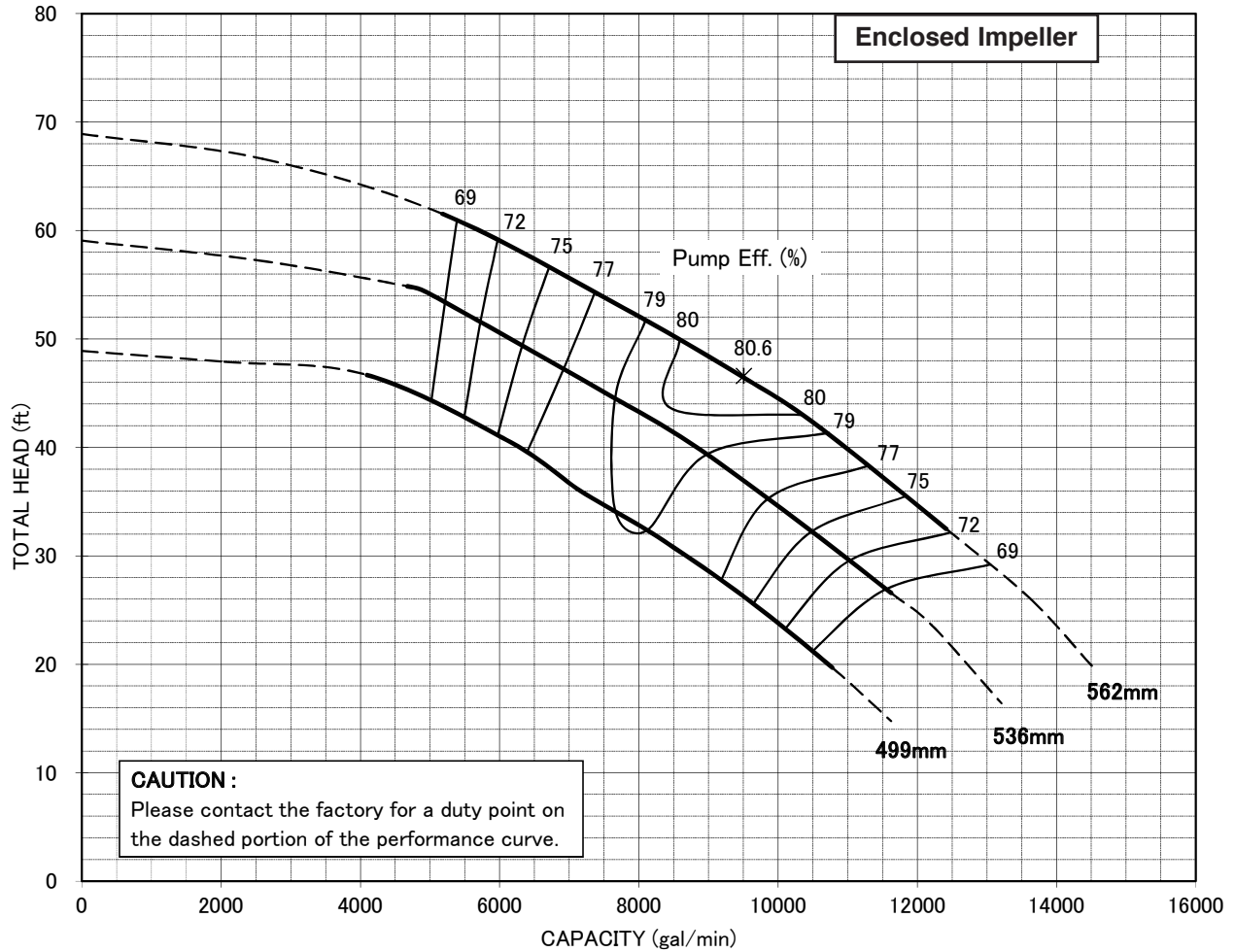
RPM

HP

×

×

×



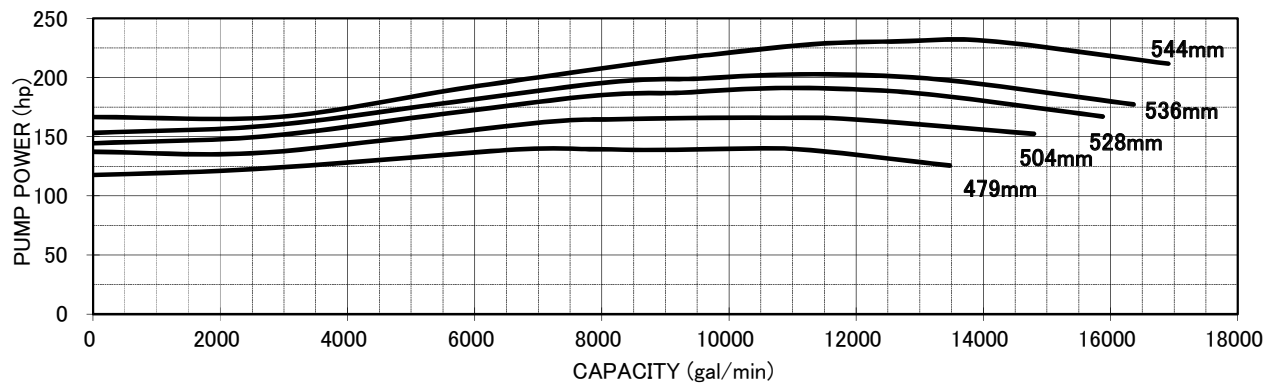
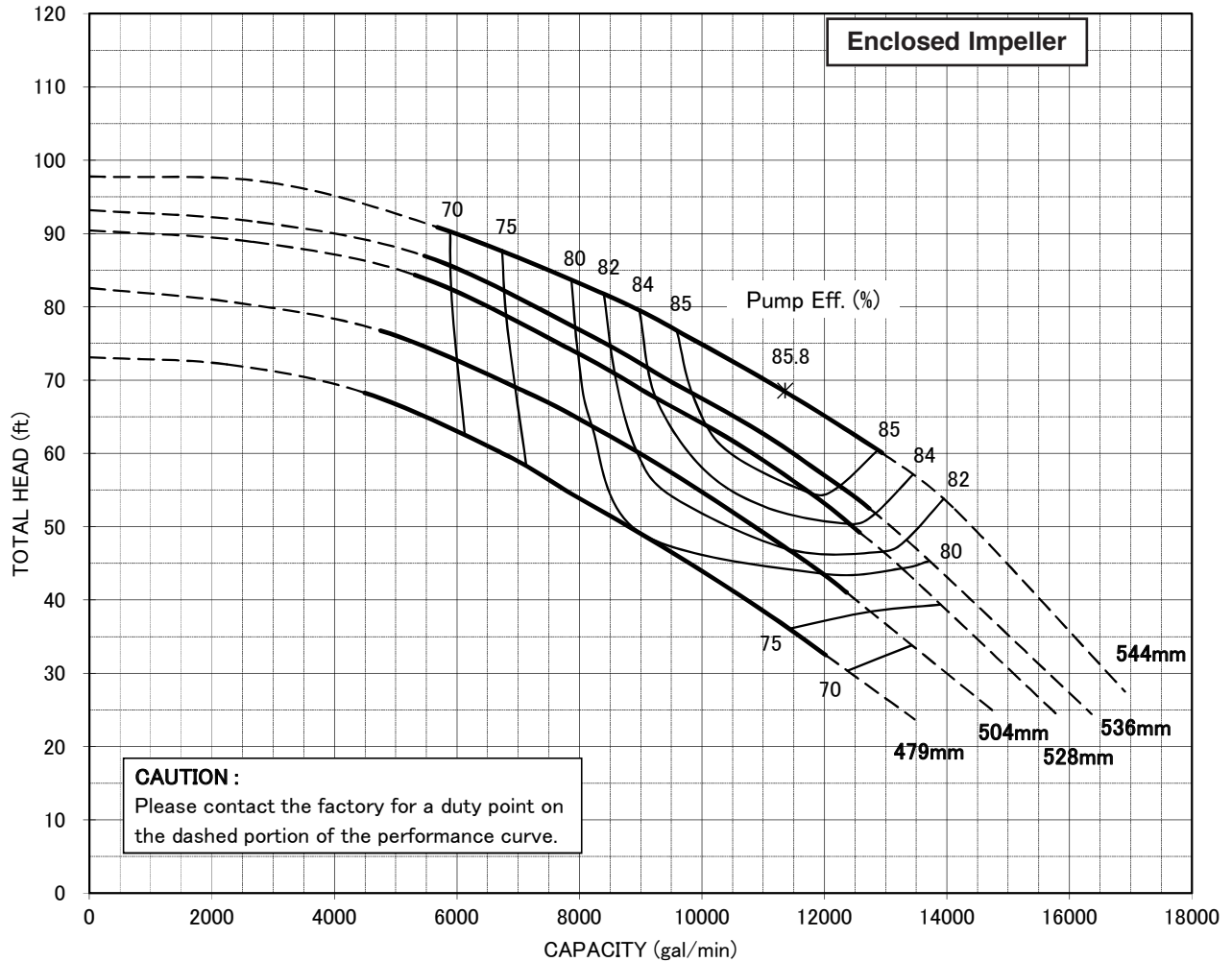
Project:

Chk'd:

Date:

**MODEL: 500DSC4
600x500DSCA4
175HP - 245HP**

GPM FT RPM HP
 × × 900 ×



Project:

Chk'd:

Date:

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

GPM

FT

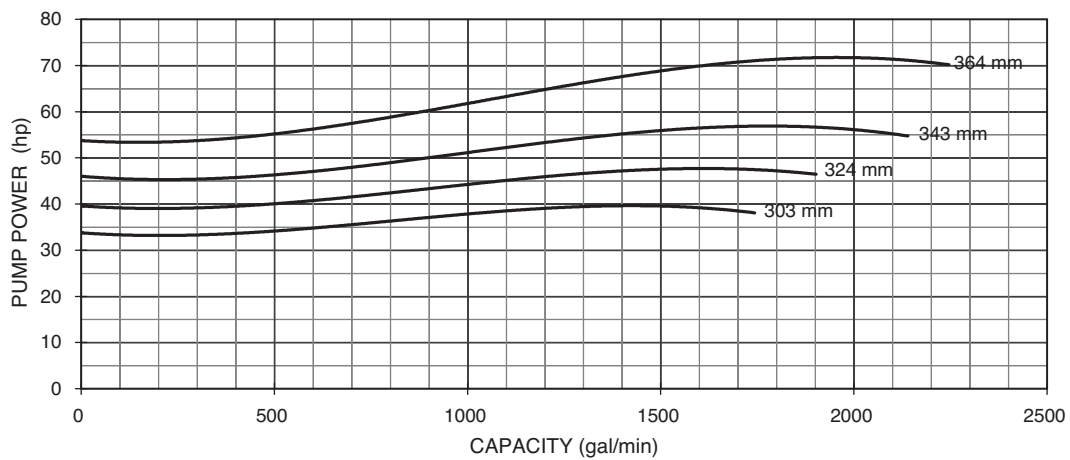
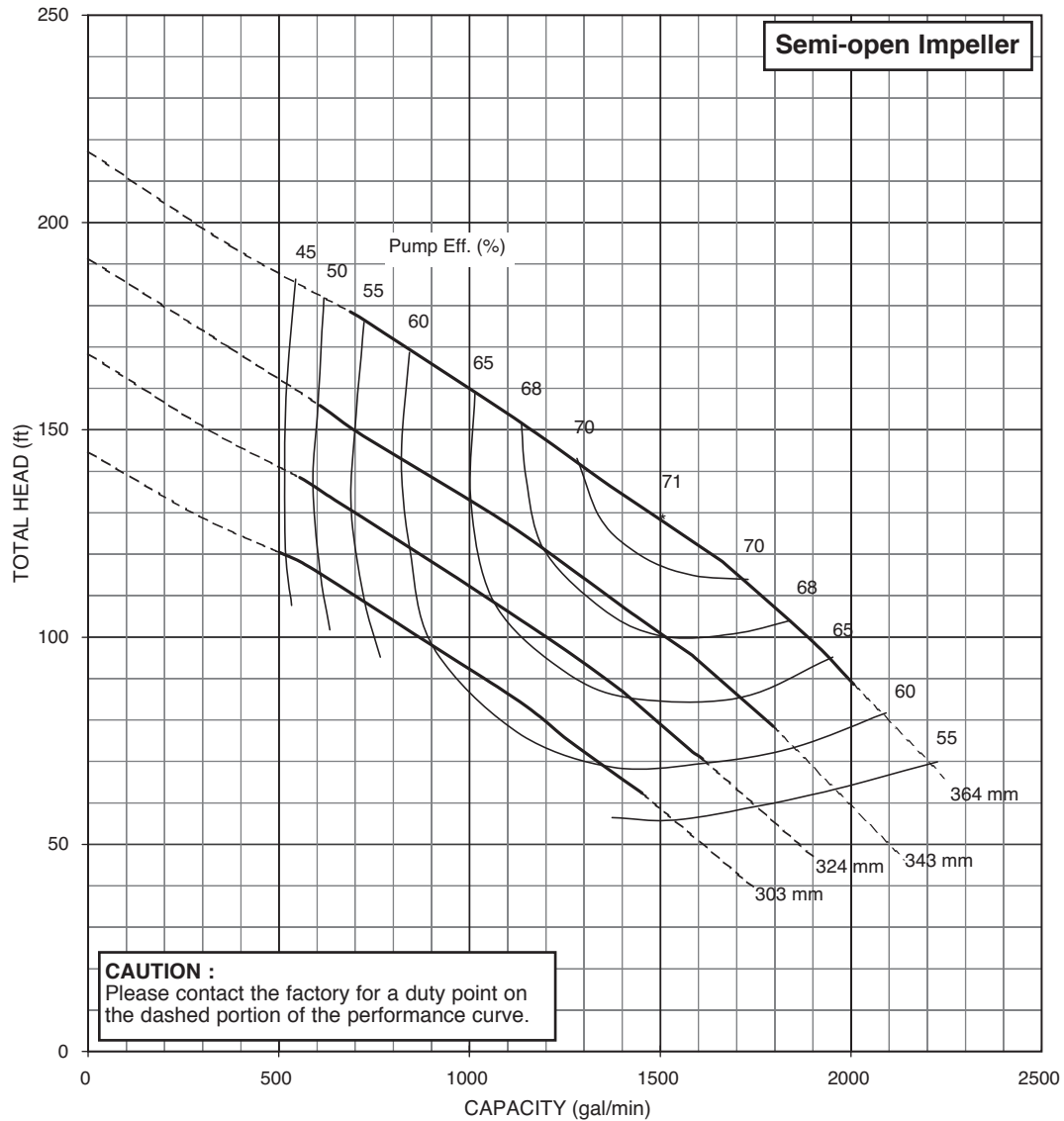
RPM

HP

×

×

×



Project:

Chk'd:

Date:

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

GPM

FT

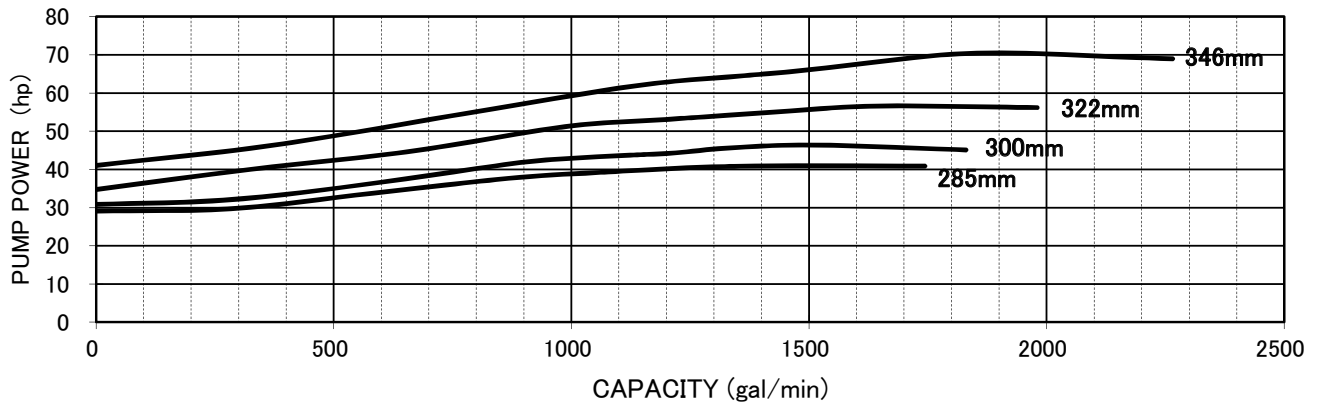
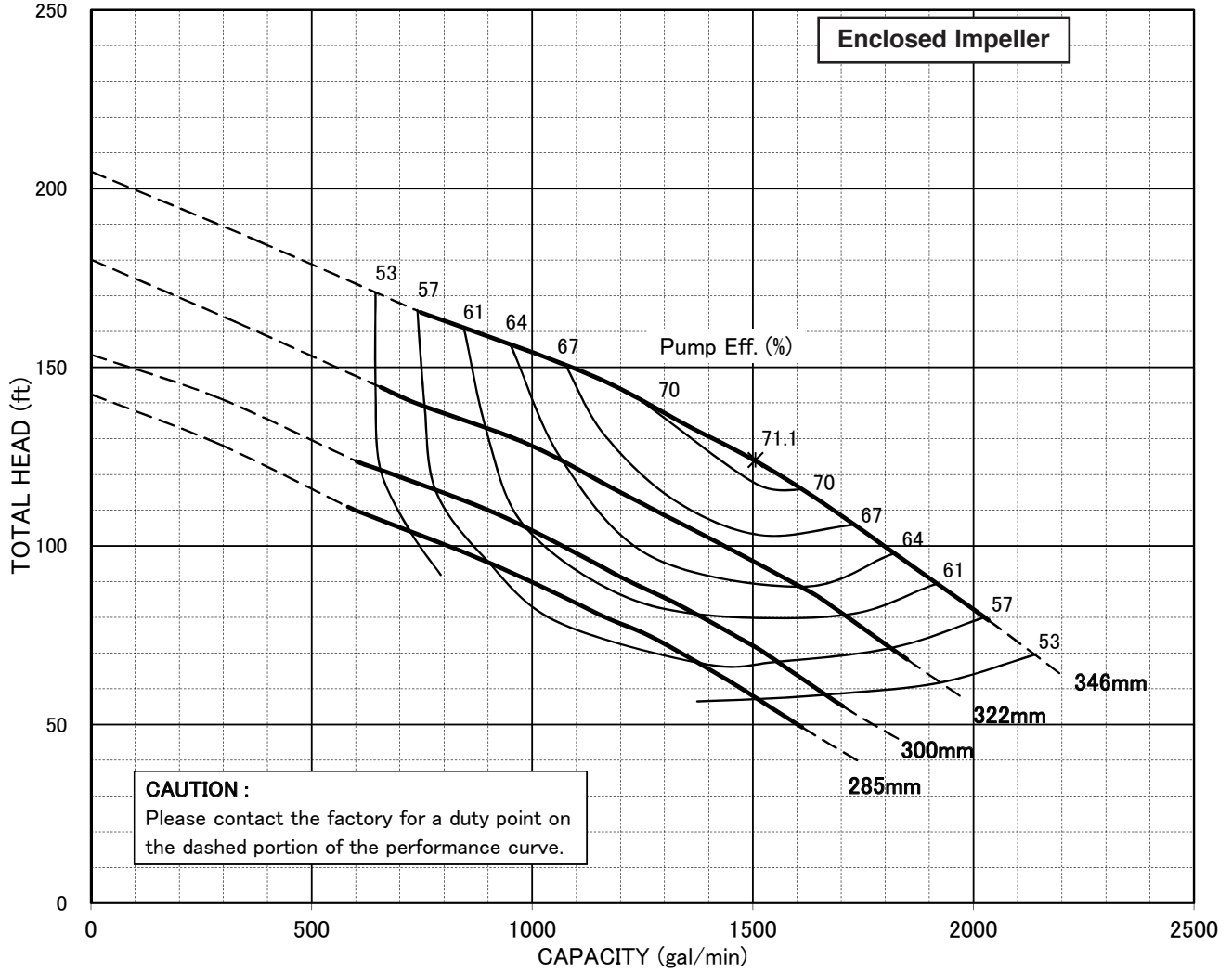
RPM

HP

×

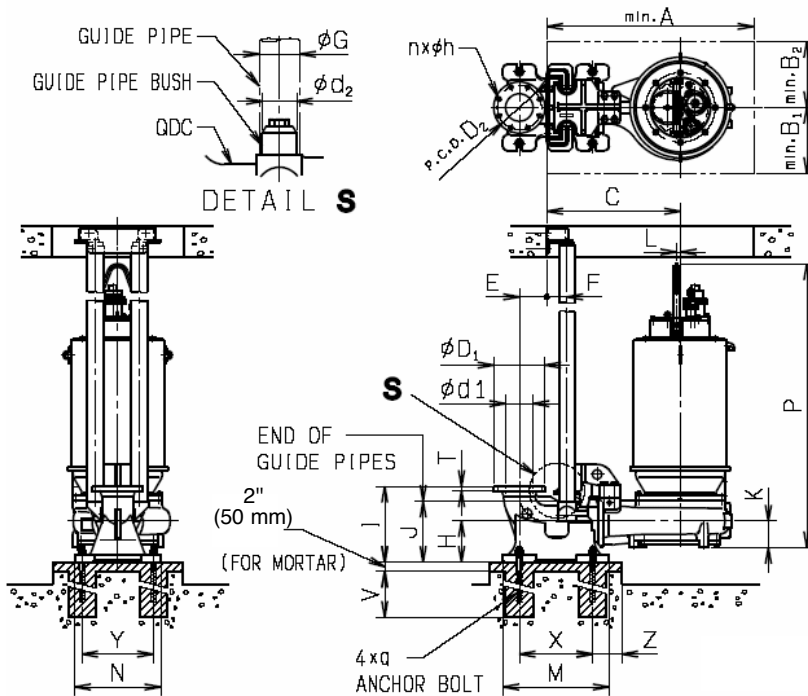
×

×



Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

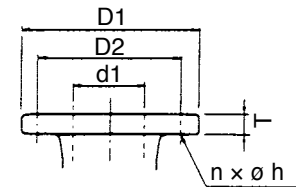
Model 150DSC4/DSC4C Model Code AO(C)* with Quick Discharge Connector

Weights[†]

Unit: lbs.

Model	HP	Pump	QDC
AO(C)-46050	50	1811	243
AO(C)-46060	60	1877	
AO(C)-46075	75	1987	

Unit: kg

Model	kW	Pump	QDC
AO(C)-46050	37	822	110
AO(C)-46060	45	952	
AO(C)-46075	55	901	


Flange Detail

Unit: inches

D1	D2	T	n	h
11	9 1/2	1	8	7/8

Unit: mm

D1	D2	T	n	h
279.4	241.3	25.4	8	23

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
AO(C)-46050	50	6	44 1/2	14 3/16	14 3/16	28 3/4	5 7/8	4 5/16	3 1/2	8 7/8	16 5/16	13 1/8
AO(C)-46060	60											
AO(C)-46075	75											

Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
AO(C)-46050	50	5 11/16	13/16	22 13/16	18 1/2	57 1/8	17 11/16	15 3/4	15 3/8	6 5/16	1	3
AO(C)-46060	60					59 1/2						
AO(C)-46075	75					61 1/16						

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
AO(C)-46050	37	150	1130	360	360	730	150	110	89.1	225	415	333
AO(C)-46060	45											
AO(C)-46075	55											

Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
AO(C)-46050	37	145	20	580	470	1451	450	400	390	160	24	75
AO(C)-46060	45					1511						
AO(C)-46075	55					1551						

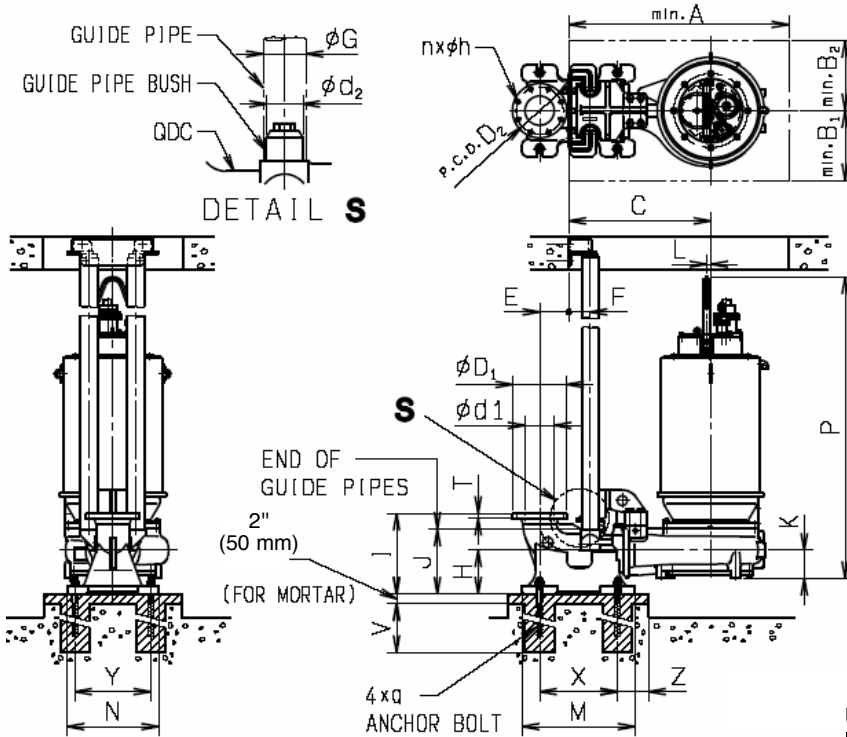
Notes:

*AO = Semi-open impeller model; AC = Enclosed impeller model

[†]The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.


Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

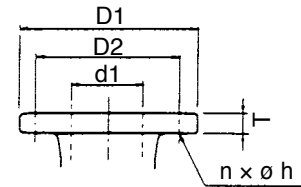
Model 150DSC4/DSC4C Model Code BC with Quick Discharge Connector

Weights†

Unit: lbs.

Model	HP	Pump	QDC
BC-46100	100	2185	243
BC-46120	120	2776	

Unit: kg

Model	kW	Pump	QDC
BC-46100	75	991	110
BC-46120	90	1259	


Flange Detail

Unit: inches

D1	D2	T	n	h
11	9 1/2	1	8	7/8

Unit: mm

D1	D2	T	n	h
279.4	241.3	25.4	8	23

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
BC-46100	100	6	44 1/2	14 3/16	14 3/16	28 3/4	5 7/8	4 5/16	3 1/2	8 7/8	16 5/16	13 1/8
BC-46120	120		45 1/4	14 15/16	14 15/16							

Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
BC-46100	100	5 11/16	13/16	22 13/16	18 1/2	64 3/16	17 11/16	15 3/4	15 3/8	6 5/16	1	3
BC-46120	120		1 3/16			67 3/8						

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
BC-46100	75	150	1130	360	360	730	150	110	89.1	225	415	333
BC-46120	90		1150	380	380							

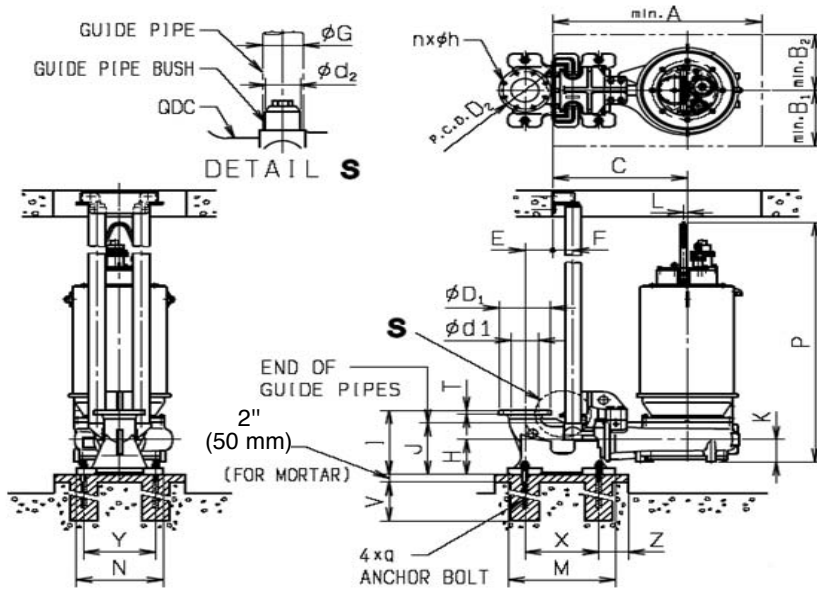
Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
BC-46100	75	145	20	580	470	1631	450	400	390	160	24	75
BC-46120	90		30			1712						

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

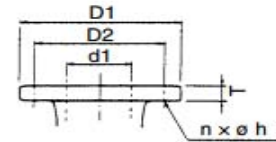
Model 150DSC4/DSC4C* Model Code CC with Quick Discharge Connector

Weights

Unit: lbs.

Model	HP	Pump	QDC
CC-46120	120	2906	243
CC-46145	145	3067	
CC-46175	175	3396	

Unit: kg

Model	kW	Pump	QDC
CC-46120	90	1318	110
CC-46145	110	1391	
CC-46175	132	1540	


Flange Detail

Unit: inches

D1	D2	T	n	h
11	9 1/2	1	8	7/8

Unit: mm

D1	D2	T	n	h
279.4	241.3	25.4	8	23

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
CC-46120	120	6	48 1/16	15 3/4	14 15/16	30 11/16	5 7/8	4 5/16	3 1/2	8 7/8	16 5/16	13 1/8
CC-46145	145											
CC-46175	175											
Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
CC-46120	120	5 11/16	1 3/16	22 13/16	18 1/2	67 3/8	17 11/16	15 3/4	15 3/8	6 5/16	M24	2 15/16
CC-46145	145					70 15/16						
CC-46175	175					75 1/4						

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
CC-46120	90	150	1220	400	380	780	150	110	89.1	225	415	333
CC-46145	110											
CC-46175	132											
Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
CC-46120	90	145	30	580	470	1712	450	400	390	160	M24	75
CC-46145	110					1802						
CC-46175	132					1912						

Notes:

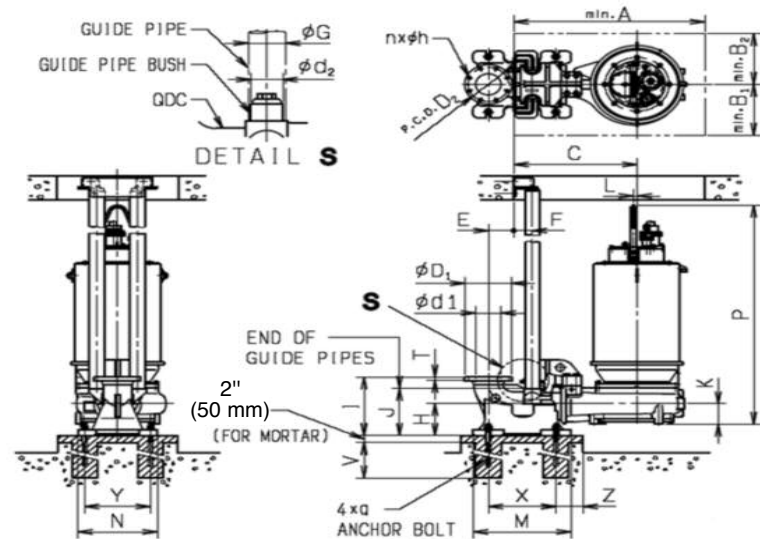
†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

*175HP Model is not available in ICS.



Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

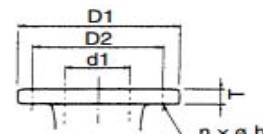
Model 150DSC4 Model Code C1C with Quick Discharge Connector

Weights

Unit: lbs.

Model	HP	Pump	QDC
C1C-46175	175	3605	243
C1C-46200	200	4575	
C1C-46215	215	4597	
C1C-46245	245	4994	

Unit: kg

Model	kW	Pump	QDC
C1C-46175	132	1635	110
C1C-46200	150	2075	
C1C-46215	160	2085	
C1C-46245	185	2265	


Flange Detail

Unit: inches

D1	D2	T	n	h
11	9 1/2	1	8	7/8

Unit: mm

D1	D2	T	n	h
279.4	241.3	25.4	8	23

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
C1C-46175	175	6	51 3/16	17 5/16	17 5/16	31 7/8	5 7/8	4 5/16	3 1/2	8 7/8	16 5/16	13 1/8
C1C-46200	200											
C1C-46215	215											
C1C-46245	245											

Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
C1C-46175	175	6 1/2	1 3/16	22 13/16	18 1/2	76 1/16	17 11/16	15 3/4	15 3/8	6 5/16	M24	2 15/16
C1C-46200	200					80 1/16						
C1C-46215	215					80 1/16						
C1C-46245	245					85 9/16						

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
C1C-46175	132	150	1300	440	440	810	150	110	89.1	225	415	333
C1C-46200	150											
C1C-46215	160											
C1C-46245	185											

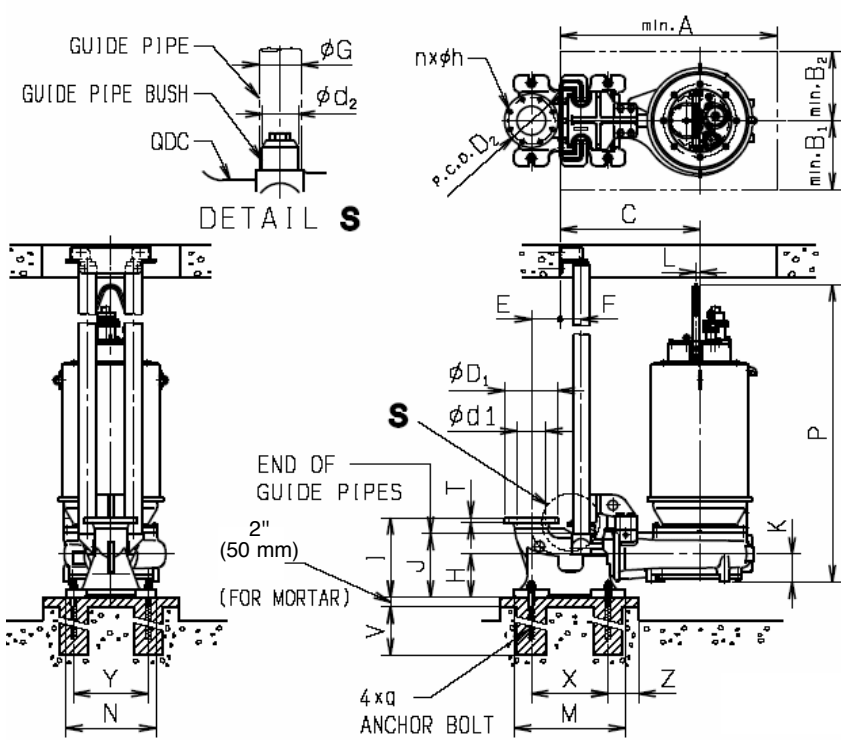
Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
C1C-46175	132	165	30	580	470	1932	450	400	390	160	M24	75
C1C-46200	150					2034						
C1C-46215	160					2034						
C1C-46245	185					2174						

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

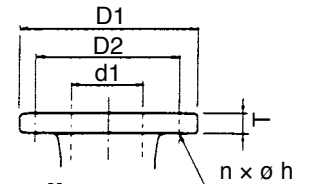
Model 250DSC4/DSC4C Model Code EO(C)* with Quick Discharge Connector

Weights[†]

Unit: lbs.

Model	HP	Pump	QDC
EO(C)-66100	100	3354	375
EO(C)-66120	120	3393	
EO(C)-66145	145	3617	

Unit: kg

Model	kW	Pump	QDC
EO(C)-66100	75	1521	170
EO(C)-66120	90	1539	
EO(C)-66145	110	1640	


Flange Detail

Unit: inches

D1	D2	T	n	h
16	14 1/4	1 3/16	12	1

Unit: mm

D1	D2	T	n	h
406.4	362	30.3	12	26

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
EO(C)-66100	100	10	55 1/2	19 5/16	15 3/8	35 5/8	8 7/16	4 5/16	3 1/2	11 7/16	22 13/16	17 5/8
EO(C)-66120	120											
EO(C)-66145	145											

Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
EO(C)-66100	100	8 1/4	1 3/16	24 13/16	21 5/8	73 11/16	17 11/16	17 11/16	18 1/2	6 5/16	1	3
EO(C)-66120	120					75 11/16						
EO(C)-66145	145					78 13/16						

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
EO(C)-66100	75	250	1410	490	390	905	215	110	89.1	290	580	448
EO(C)-66120	90											
EO(C)-66145	110											

Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
EO(C)-66100	75	210	30	630	550	1872	450	450	470	160	24	75
EO(C)-66120	90					1922						
EO(C)-66145	110					2002						

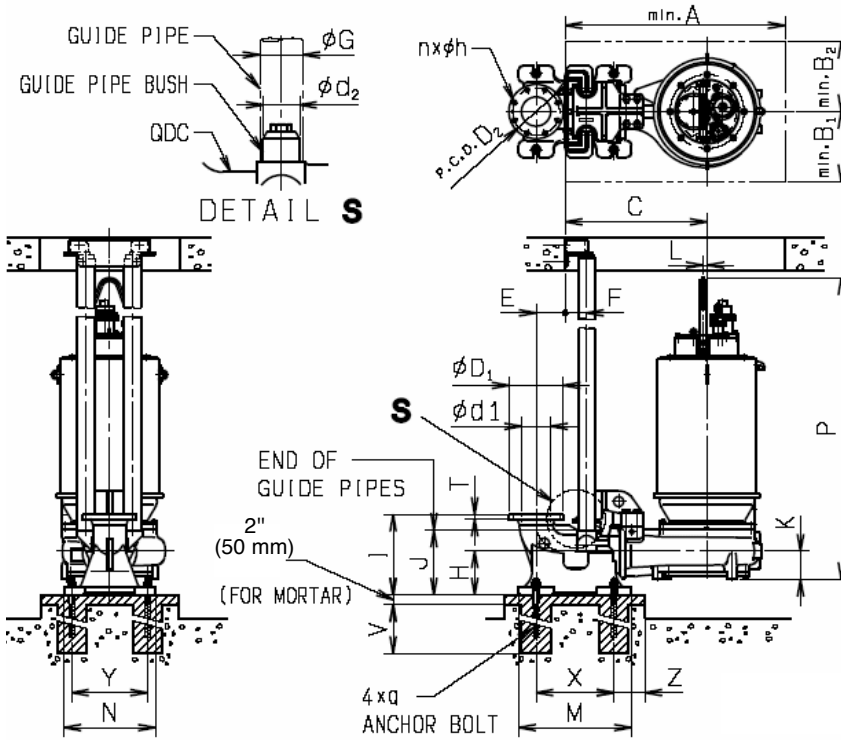
Notes:

*EO = Semi-open impeller model; EC = Enclosed impeller model

[†]The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

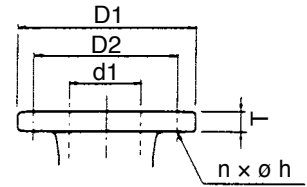
Model 300DSC4/DSC4C Model Code FO(C)* with Quick Discharge Connector

Weights†

Unit: lbs.

Model	HP	Pump	QDC
FO(C)-66050	50	2279	507
FO(C)-66060	60	2560	

Unit: kg

Model	kW	Pump	QDC
FO(C)-66050	37	1034	230
FO(C)-66060	45	1161	


Flange Detail

Unit: inches

D1	D2	T	n	h
19	17	1 1/4	12	1

Unit: mm

D1	D2	T	n	h
482.6	431.8	31.8	12	26

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
FO(C)-66050	50	12	53 1/4	17 11/16	13 3/4	34 7/16	10 1/4	4 5/16	3 1/2	13	26	19 13/16
FO(C)-66060	60											

Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
FO(C)-66050	50	9 13/16	13/16	26 3/4	22 7/16	64 13/16	17 11/16	19 11/16	19 5/16	6 5/16	1	3
FO(C)-66060	60					66 3/8						

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
FO(C)-66050	37	300	1350	450	350	875	260	110	89.1	330	660	503
FO(C)-66060	45											

Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
FO(C)-66050	37	250	20	680	570	1646	450	500	490	160	24	75
FO(C)-66060	45					1686						

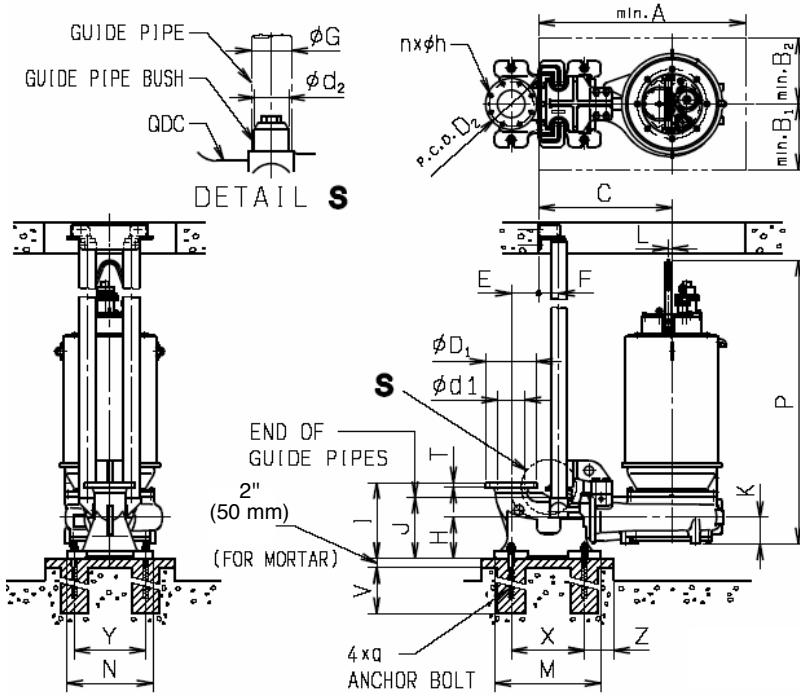
Notes:

*FO = Semi-open impeller model; FC = Enclosed impeller model

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

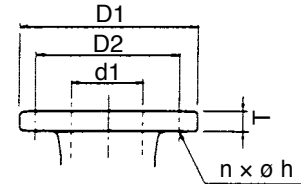
Model 300DSC4/DSC4C Model Code GO(C)* with Quick Discharge Connector

Weights†

Unit: lbs.

Model	HP	Pump	QDC
GO(C)-66075	75	3119	508

Unit: kg

Model	kW	Pump	QDC
GO(C)-66075	55	1415	230


Flange Detail

Unit: inches

D1	D2	T	n	h
19	17	1 1/4	12	1

Unit: mm

D1	D2	T	n	h
482.6	431.8	31.8	12	26

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
GO(C)-66075	75	12	54 3/4	18 1/2	14 15/16	35 1/16	10 1/4	4 5/16	3 1/2	13	26	19 13/16
Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
GO(C)-66075	75	9 13/16	1 3/16	26 3/4	22 7/16	71 3/4	17 11/16	19 11/16	19 5/16	6 5/16	1	3

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
GO(C)-66075	55	300	1390	470	380	890	260	110	89.1	330	660	503
Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
GO(C)-66075	55	250	30	680	570	1822	450	500	490	160	24	75

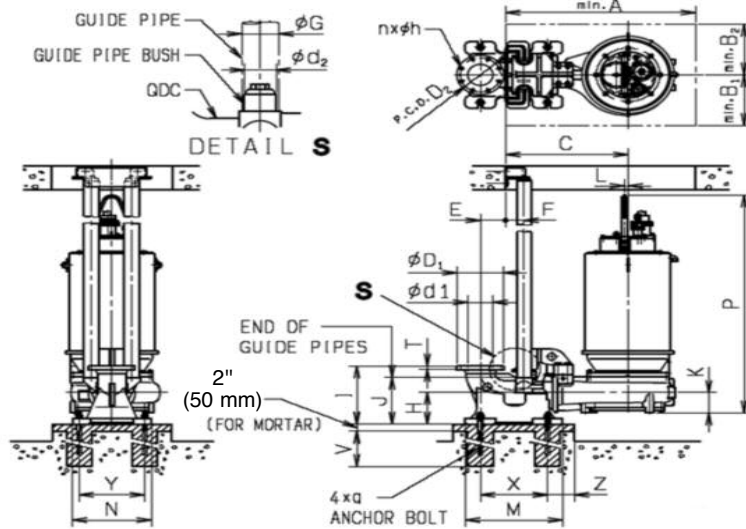
Notes:

*GO = Semi-open impeller model; GC = Enclosed impeller model

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

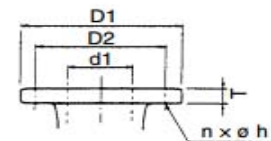
Model 300DSC4 Model Code EEC with Quick Discharge Connector

Weights

Unit: lbs.

Model	HP	Pump	QDC
EEC-66175	175	4873	507
EEC-66200	200	5248	
EEC-66215	215	5270	
EEC-66245	245	5645	

Unit: kg

Model	kW	Pump	QDC
EEC-66175	132	2210	230
EEC-66200	150	2380	
EEC-66215	160	2390	
EEC-66245	185	2560	


Flange Detail

Unit: inches

D1	D2	T	n	h
19	17	1 1/4	12	1

Unit: mm

D1	D2	T	n	h
482.6	431.8	31.8	12	26

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
EEC-66175	175	12	59 7/16	21 1/4	16 15/16	37 13/16	10 1/4	4 5/16	3 1/2	13	26	19 13/16
EEC-66200	200											
EEC-66215	215											
EEC-66245	245											
Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
EEC-66175	175	9 13/16	1 3/16	26 3/4	22 7/16	85	17 11/16	19 11/16	19 5/16	6 5/16	M24	2 15/16
EEC-66200	200					90 1/2						
EEC-66215	215					90 1/2						
EEC-66245	245					92 7/8						

Unit: mm

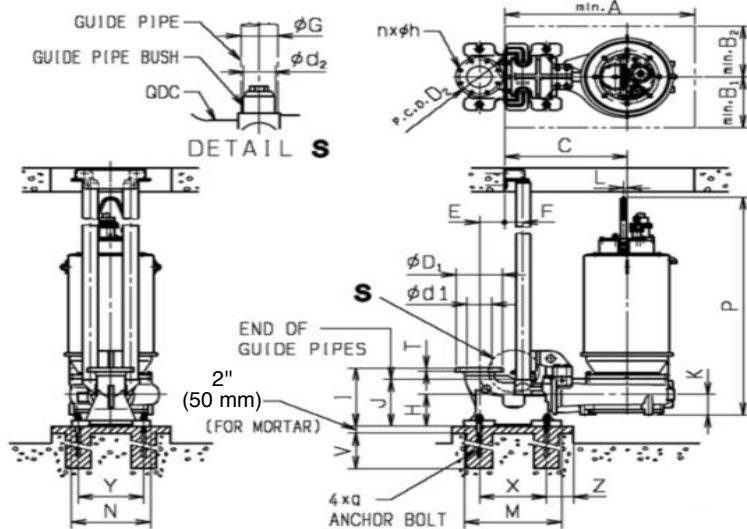
Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
EEC-66175	132	300	1510	540	430	960	260	110	89.1	330	660	503
EEC-66200	150											
EEC-66215	160											
EEC-66245	185											
Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
EEC-66175	132	250	30	680	570	2159	450	500	490	160	M24	75
EEC-66200	150					2299						
EEC-66215	160					2299						
EEC-66245	185					2359						

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

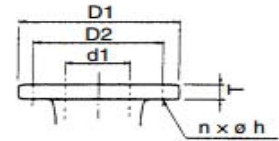
Model 400DSC4 Model Code D1C with Quick Discharge Connector

Weights

Unit: lbs.

Model	HP	Pump	QDC
D1C-106050	50	3947	1169
D1C-106060	60	4167	
D1C-106075	75	4388	

Unit: kg

Model	kW	Pump	QDC
D1C-106050	37	1790	530
D1C-106060	45	1890	
D1C-106075	55	1990	


Flange Detail

Unit: inches

D1	D2	T	n	h
23 1/2	21 1/4	1 7/16	16	1

Unit: mm

D1	D2	T	n	h
596.9	539.8	36.6	16	26

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
D1C-106050	50	16	66 1/8	23 5/8	18 1/2	42 1/8	13	5 1/2	4 1/2	15 3/4	31 7/8	24 13/16
D1C-106060	60											
D1C-106075	75											
Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
D1C-106050	50	12 5/8	1 3/16	32 5/16	24 13/16	75 11/16	17 11/16	25 3/16	21 5/8	7 7/8	M24	3 7/8
D1C-106060	60					80						
D1C-106075	75					83 1/8						

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
D1C-106050	37	400	1680	600	470	1070	330	140	114.3	400	810	630
D1C-106060	45											
D1C-106075	55											
Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
D1C-106050	37	320	30	820	630	1922	450	640	550	200	M24	99
D1C-106060	45					2032						
D1C-106075	55					2112						

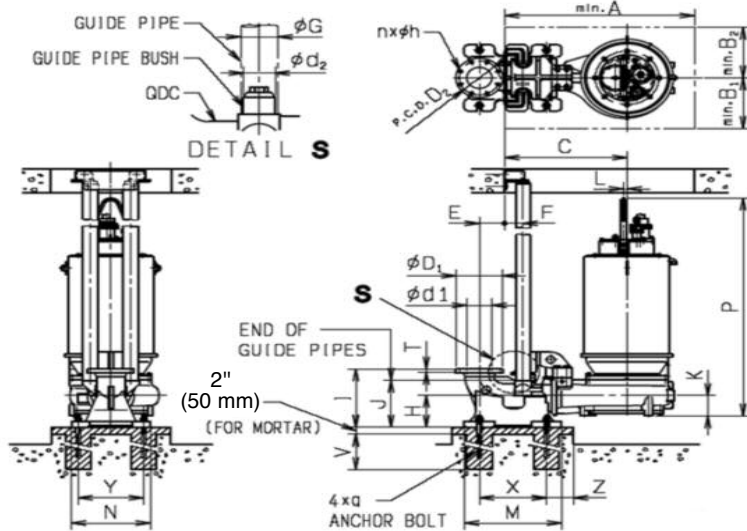
Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.



Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

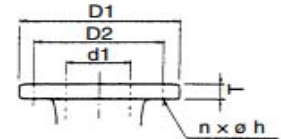
Model 500DSC4 Model Code D2C with Quick Discharge Connector

Weights

Unit: lbs.

Model	HP	Pump	QDC
D2C-106100	100	5424	1962

Unit: kg

Model	kW	Pump	QDC
D2C-106100	75	2460	890


Flange Detail

Unit: inches

D1	D2	T	n	h
27 1/2	25	1 11/16	20	1 1/4

Unit: mm

D1	D2	T	n	h
699	635	43	20	32

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
D2C-106100	100	20	74	25 3/16	19 11/16	48 7/16	15 3/8	5 1/2	4 1/2	19 11/16	39 3/8	31 1/8

Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
D2C-106100	100	14 3/16	1 3/16	39	28 3/4	86 9/16	17 11/16	29 1/2	25 9/16	7 7/8	M24	3 7/8

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
D2C-106100	75	500	1880	640	500	1230	390	140	114.3	500	1000	790

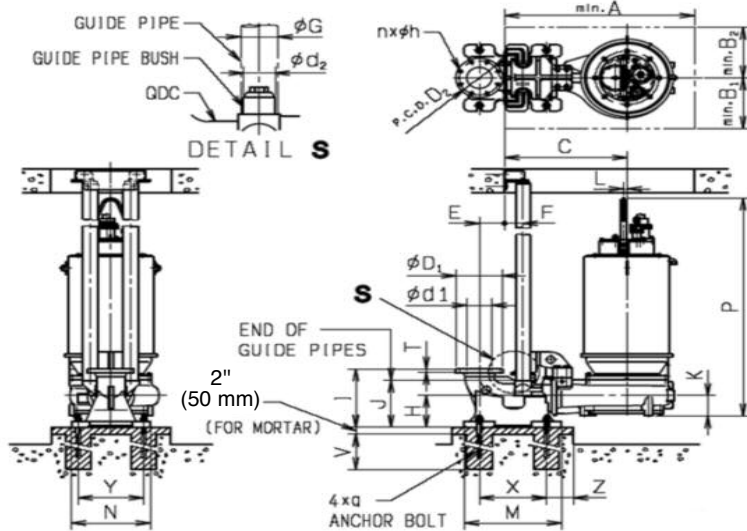
Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
D2C-106100	75	360	30	990	730	2199	450	750	650	200	M24	99

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

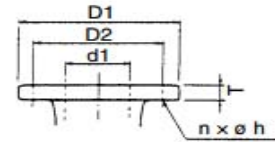
Model 500DSC4 Model Code G1C with Quick Discharge Connector

Weights

Unit: lbs.

Model	HP	Pump	QDC
G1C-106120	120	6273	1962
G1C-106145	145	6626	

Unit: kg

Model	kW	Pump	QDC
G1C-106120	90	2845	890
G1C-106145	110	3005	


Flange Detail

Unit: inches

D1	D2	T	n	h
27 1/2	25	1 11/16	20	1 1/4

Unit: mm

D1	D2	T	n	h
699	635	43	20	32

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
G1C-106120	120	20	79 15/16	28 3/4	22 7/16	51 3/8	15 3/8	5 1/2	4 1/2	19 11/16	39 3/8	31 1/8
G1C-106145	145											
Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
G1C-106120	120	14 3/16	1 3/16	39	28 3/4	89 1/2	17 11/16	29 1/2	25 9/16	7 7/8	M24	3 7/8
G1C-106145	145					95 1/16						

Unit: mm

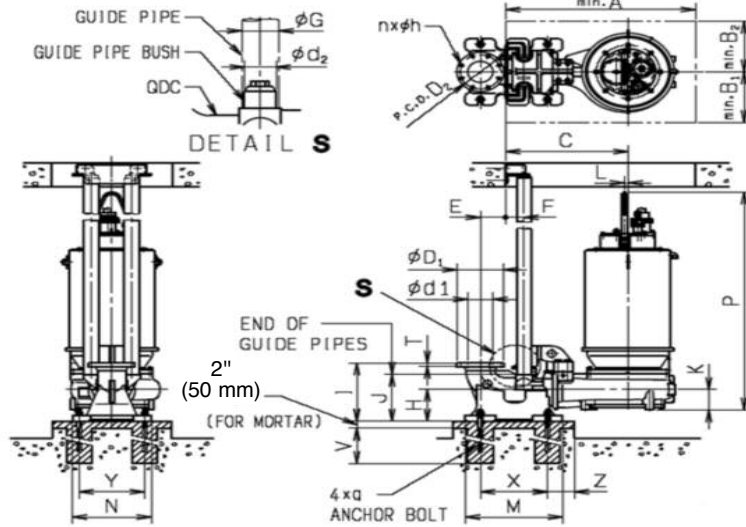
Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
G1C-106120	90	500	2030	730	570	1305	390	140	114.3	500	1000	790
G1C-106145	110											
Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
G1C-106120	90	360	30	990	730	2274	450	750	650	200	M24	99
G1C-106145	110					2414						

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

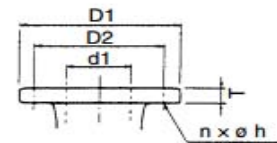
Model 500DSC4 Model Code G2C with Quick Discharge Connector

Weights

Unit: lbs.

Model	HP	Pump	QDC
G2C-86175	175	6615	1962
G2C-86200	200	6880	
G2C-86215	215	6990	
G2C-86245	245	8445	

Unit: kg

Model	kW	Pump	QDC
G2C-86175	132	3000	890
G2C-86200	150	3120	
G2C-86215	160	3170	
G2C-86245	185	3830	


Flange Detail

Unit: inches

D1	D2	T	n	h
27 1/2	25	1 11/16	20	1 1/4

Unit: mm

D1	D2	T	n	h
699	635	43	20	32

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
G2C-86175	175	20	78 3/4	27 9/16	21 5/8	50 9/16	15 3/8	5 1/2	4 1/2	19 11/16	39 3/8	31 1/8
G2C-86200	200											
G2C-86215	215											
G2C-86245	245											

Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
G2C-86175	175	14 3/16	1 3/16	39	28 3/4	95 1/16	17 11/16	29 1/2	25 9/16	7 7/8	M24	3 7/8
G2C-86200	200					97 3/8						
G2C-86215	215					97 3/8						
G2C-86245	245					101 3/16						

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
G2C-86175	132	500	2000	700	550	1285	390	140	114.3	500	1000	790
G2C-86200	150											
G2C-86215	160											
G2C-86245	185											

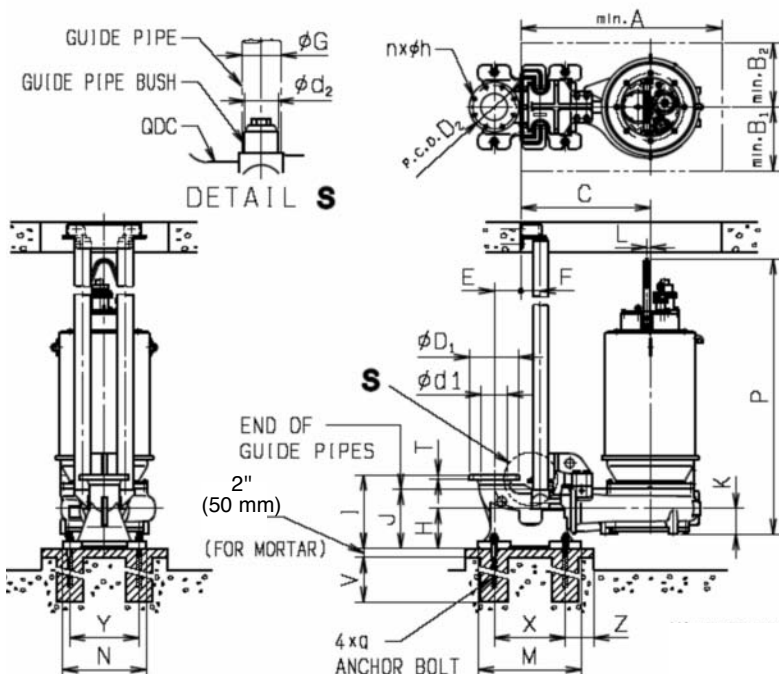
Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
G2C-86175	132	360	30	990	730	2414	450	750	650	200	M24	99
G2C-86200	150					2474						
G2C-86215	160					2474						
G2C-86245	185					2570						

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

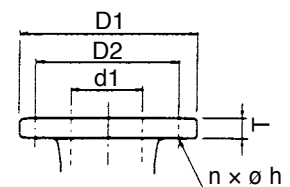
Model 150DSC4/DSC4C Model Code HO(C)* with Quick Discharge Connector

Weights[†]

Unit: lbs.

Model	HP	Pump	QDC
HO(C)-46050	50	1904	243
HO(C)-46060	60	1970	
HO(C)-46075	75	2080	

Unit: kg

Model	kW	Pump	QDC
HO(C)-46050	37	864	110
HO(C)-46060	45	894	
HO(C)-46075	55	944	


Flange Detail

Unit: inches

D1	D2	T	n	h
11	9 1/2	1	8	7/8

Unit: mm

D1	D2	T	n	h
279.4	241.3	25.4	8	23

Unit: inches

Model	HP	d1	A	B1	B2	C	E	F	G	H	I	J
HO(C)-46050	50	6	44 1/2	14 3/16	14 3/16	28 3/4	5 7/8	4 5/16	3 1/2	8 7/8	16 5/16	13 1/8
HO(C)-46060	60											
HO(C)-46075	75											

Model	HP	K	L	M	N	P	V	X	Y	Z	q	d2
HO(C)-46050	50	5 11/16	13/16	22 13/16	18 1/2	57 15/16	17 11/16	15 3/4	15 3/8	6 5/16	1	3
HO(C)-46060	60					60 1/4						
HO(C)-46075	75					61 7/8						

Unit: mm

Model	kW	d1	A	B1	B2	C	E	F	G	H	I	J
HO(C)-46050	37	150	1130	360	360	730	150	110	89.1	225	415	333
HO(C)-46060	45											
HO(C)-46075	55											

Model	kW	K	L	M	N	P	V	X	Y	Z	q	d2
HO(C)-46050	37	145	20	580	470	1471	450	400	390	160	24	75
HO(C)-46060	45					1531						
HO(C)-46075	55					1571						

Notes:

*HO = Semi-open impeller model; HC = Enclosed impeller model

[†]The weight of pump includes the weight of 50 ft. (15.25 m) of cables, and does not include the weight of the guide pipes and the water in pump.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 200x150DSCA4/DSCA4C Model Code AO(C)*
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
AO(C)-46050	50	2031	220	463	265
AO(C)-46060	60	2087			287
AO(C)-46075	75	2208			287

Unit: kg

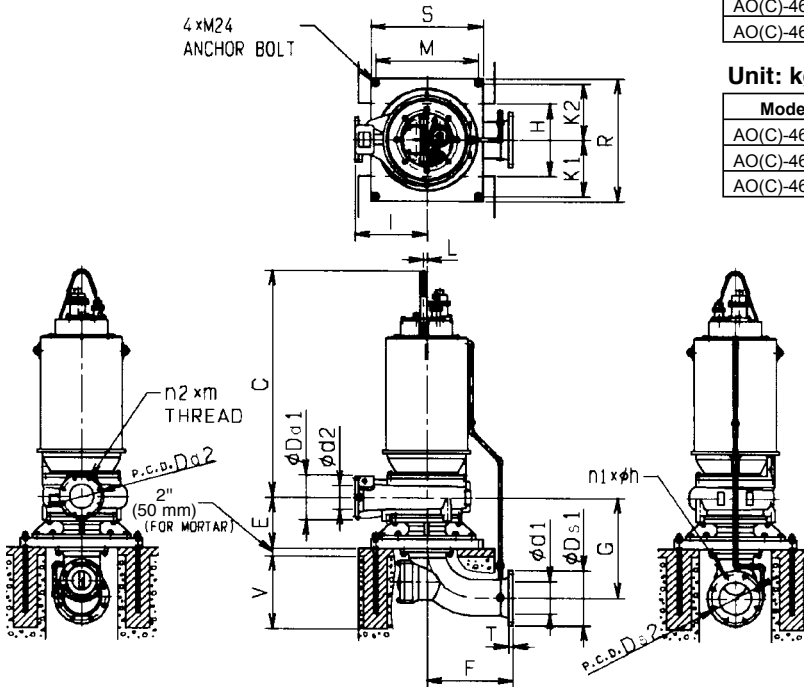
Model	kW	W1	W2	W3	W4
AO(C)-46050	37	921	100	210	120
AO(C)-46060	45	951			130
AO(C)-46075	55	1002			130

W1: Pump weight†

W3: Base weight

W2: Suction elbow weight

W4: Water in pump weight


Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
13 1/2	11 3/4	1	8	7/8

Unit: mm

Ds1	Ds2	T	n1	h
342.9	298.4	28.5	8	23

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
11	9 1/2	8	3/4-10UNC

Unit: mm

Dd1	Dd2	n2	m
280	241.3	8	3/4-10UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
AO(C)-46050	50	8	6	51 1/2	12 7/16	21 1/4	24 1/2	17 11/16	17 11/16
AO(C)-46060	60			53 3/4					
AO(C)-46075	75			55 1/4					

Model	HP	K1	K2	L	M	R	S	V
AO(C)-46050	50	13 3/4	13 3/4	13/16	25 3/16	29 15/16	27 9/16	17 11/16
AO(C)-46060	60							
AO(C)-46075	75							

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
AO(C)-46050	37	200	150	1306	316	540	621	450	450
AO(C)-46060	45			1366					
AO(C)-46075	55			1406					

Model	kW	K1	K2	L	M	R	S	V
AO(C)-46050	37	350	350	20	640	760	700	450
AO(C)-46060	45							
AO(C)-46075	55							

Notes:

*AO = Semi-open impeller model; AC = Enclosed impeller model

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

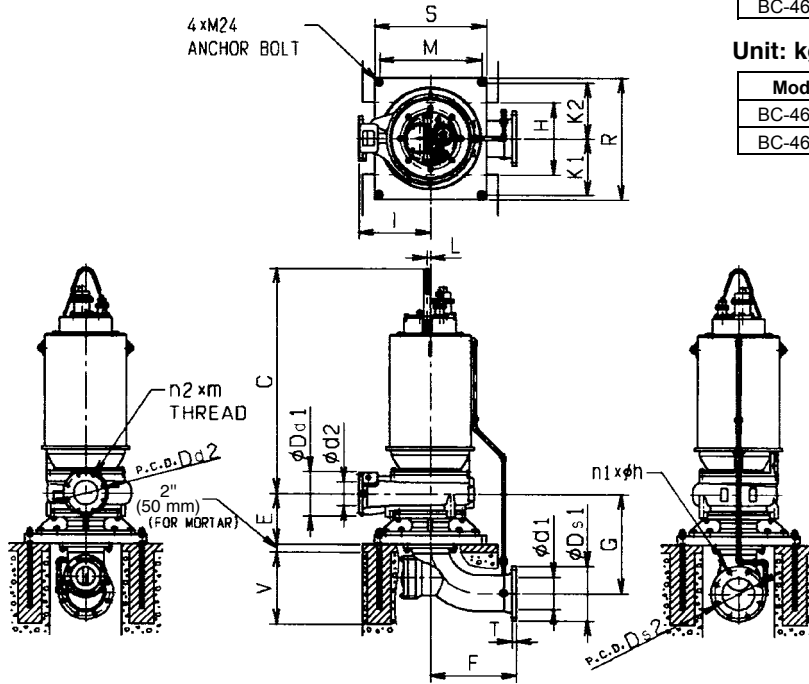
Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 200x150DSCA4/DSCA4C Model Code BC
Drypit Application**
Weights
Unit: lbs.

Model	HP	W1	W2	W3	W4
BC-46100	100	2450	220	463	287
BC-46120	120	3040			

Unit: kg

Model	kW	W1	W2	W3	W4
BC-46100	75	1111	100	210	130
BC-46120	90	1379			

 W1: Pump weight[†] W3: Base weight
 W2: Suction elbow weight W4: Water in pump weight

Suction Flange
Unit: inches

Ds1	Ds2	T	n1	h
13 1/2	11 3/4	1	8	7/8

Unit: mm

Ds1	Ds2	T	n1	h
342.9	298.4	28.5	8	23

Discharge Flange
Unit: inches

Dd1	Dd2	n2	m
11	9 1/2	8	3/4-10UNC

Unit: mm

Dd1	Dd2	n2	m
280	241.3	8	3/4-10UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
BC-46100	100	8	6	58 1/2	12 7/16	21 1/4	24 7/16	17 11/16	17 11/16
BC-46120	120			61 11/16					

Model	HP	K1	K2	L	M	R	S	V
BC-46100	100	13 3/4	13 3/4	13/16	25 3/16	29 15/16	27 9/16	17 11/16
BC-46120	120			1 3/16				

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
BC-46100	75	200	150	1486	316	540	621	450	450
BC-46120	90			1567					

Model	kW	K1	K2	L	M	R	S	V
BC-46100	75	350	350	20	640	760	700	450
BC-46120	90			30				

Notes:
[†]The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 200x150DSCA4/DSCA4C Model Code CC
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
CC-46120	120	3192	221	463	309
CC-46145	145	3354			
CC-46175	175	3682			

Unit: kg

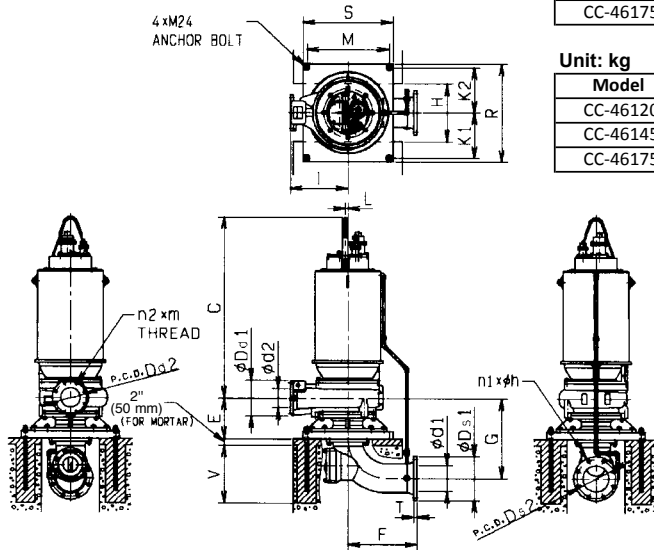
Model	kW	W1	W2	W3	W4
CC-46120	90	1448	100	210	140
CC-46145	110	1521			
CC-46175	132	1670			

W1 : Pump weight

W3 : Base weight

W2 : Suction elbow weight

W4 : Water in pump weight


Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
13 1/2	11 3/4	1 1/8	8	7/8

Unit: mm

Ds1	Ds2	T	n1	h
342.9	298.4	28.5	8	23

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
11	9 1/2	8	3/4-10UNC

Unit: mm

Dd1	Dd2	n2	m
280	241.3	8	3/4-10UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
CC-46120	120	8	6	61 11/16	12 7/16	21 1/4	24 7/16	17 11/16	19 11/16
CC-46145	145			65 1/4					
CC-46175	175			69 9/16					
Model	HP	K1	K2	L	M	R	S	V	q
CC-46120	120	13 3/4	13 3/4	1 3/16	25 3/16	29 15/16	27 9/16	17 11/16	M24
CC-46145	145								
CC-46175	175								
Model	HP	U	X	Y	Z				
CC-46120	120	G3/8	3 1/8	G3/8	1				
CC-46145	145								
CC-46175	175								

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
CC-46120	90	200	150	1567	316	540	621	450	500
CC-46145	110			1657					
CC-46175	132			1767					
Model	kW	K1	K2	L	M	R	S	V	q
CC-46120	90	350	350	30	640	760	700	450	M24
CC-46145	110								
CC-46175	132								
Model	kW	U	X	Y	Z				
CC-46120	90	G3/8	80	G3/8	26				
CC-46145	110								
CC-46175	132								

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

*175HP Model is not available in ICS.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

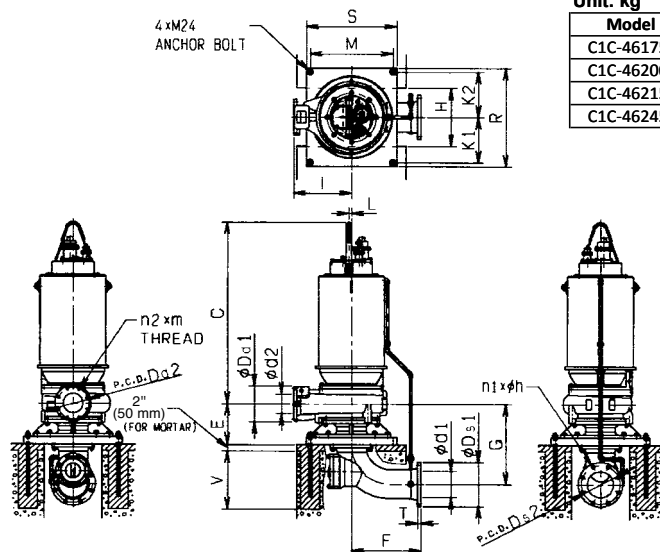
**Model 200x150DSCA4 Model Code C1C
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
C1C-46175	175	3914	221	463	397
C1C-46200	200	4884			
C1C-46215	215	4906			
C1C-46245	245	5303			

Unit: kg

Model	kW	W1	W2	W3	W4
C1C-46175	132	1775	100	210	180
C1C-46200	150	2215			
C1C-46215	160	2225			
C1C-46245	185	2405			

 W1 : Pump weight
 W2 : Suction elbow weight
 W3 : Base weight
 W4 : Water in pump weight

Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
13 1/2	11 3/4	1 1/8	8	7/8

Unit: mm

Ds1	Ds2	T	n1	h
342.9	298.4	28.5	8	23

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
11	9 1/2	8	3/4-10UNC

Unit: mm

Dd1	Dd2	n2	m
280	241.3	8	3/4-10UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
C1C-46175	175	8	6	69 9/16	12 13/16	12 1/4	25	17 11/16	20 7/8
C1C-46200	200			73 9/16					
C1C-46215	215			73 9/16					
C1C-46245	245			79 1/8					
Model	HP	K1	K2	L	M	R	S	V	q
C1C-46175	175	13 3/4	13 3/4	1 3/16	25 3/16	29 15/16	27 9/16	17 11/16	M24
C1C-46200	200								
C1C-46215	215								
C1C-46245	245								
Model	HP	U	X	Y	Z				
C1C-46175	175	G3/8	3 1/8	G3/8	1				
C1C-46200	200								
C1C-46215	215								
C1C-46245	245								

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
C1C-46175	132	200	150	1767	325	540	635	450	530
C1C-46200	150			1869					
C1C-46215	160			1869					
C1C-46245	185			2009					
Model	kW	K1	K2	L	M	R	S	V	q
C1C-46175	132	350	350	30	640	760	700	450	M24
C1C-46200	150								
C1C-46215	160								
C1C-46245	185								
Model	kW	U	X	Y	Z				
C1C-46175	132	G3/8	80	G3/8	25				
C1C-46200	150								
C1C-46215	160								
C1C-46245	185								

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 400x250DSCA4/DSCA4C Model Code EO(C)*
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
EO(C)-66100	100	3618	529	794	728
EO(C)-66120	120	3658			705
EO(C)-66145	145	3882			705

Unit: kg

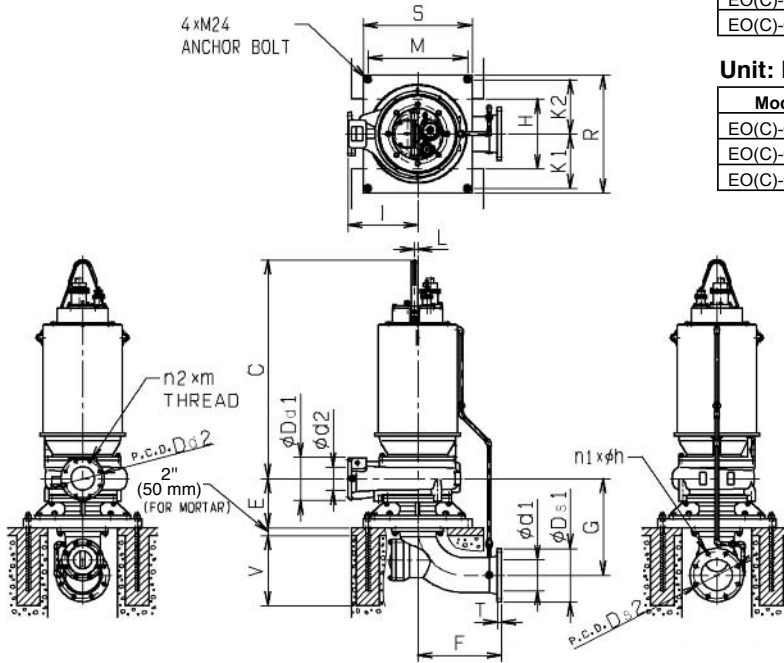
Model	kW	W1	W2	W3	W4
EO(C)-66100	75	1641	240	360	330
EO(C)-66120	90	1659			320
EO(C)-66145	110	1761			320

W1: Pump weight†

W3: Base weight

W2: Suction elbow weight

W4: Water in pump weight


Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
23 1/2	21 1/4	1 7/16	16	1

Unit: mm

Ds1	Ds2	T	n1	h
596.9	539.8	36.6	16	29

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
16	14 1/4	12	7/8-9UNC

Unit: mm

Dd1	Dd2	n2	m
406	362	12	7/8-9UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
EO(C)-66100	100	16	10	65 7/16	16 3/4	25 1/4	40 3/8	29 1/2	23 5/8
EO(C)-66120	120			67 3/8					
EO(C)-66145	145			70 9/16					

Model	HP	K1	K2	L	M	R	S	V
EO(C)-66100	100	19 11/16	19 11/16	1 3/16	31 1/8	41 3/4	33 7/16	17 11/16
EO(C)-66120	120							
EO(C)-66145	145							

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
EO(C)-66100	75	400	250	1662	426	640	1026	750	600
EO(C)-66120	90			1712					
EO(C)-66145	110			1792					

Model	kW	K1	K2	L	M	R	S	V
EO(C)-66100	75	500	500	30	790	1060	850	450
EO(C)-66120	90							
EO(C)-66145	110							

Notes:

*EO = Semi-open impeller model; EC = Enclosed impeller model

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

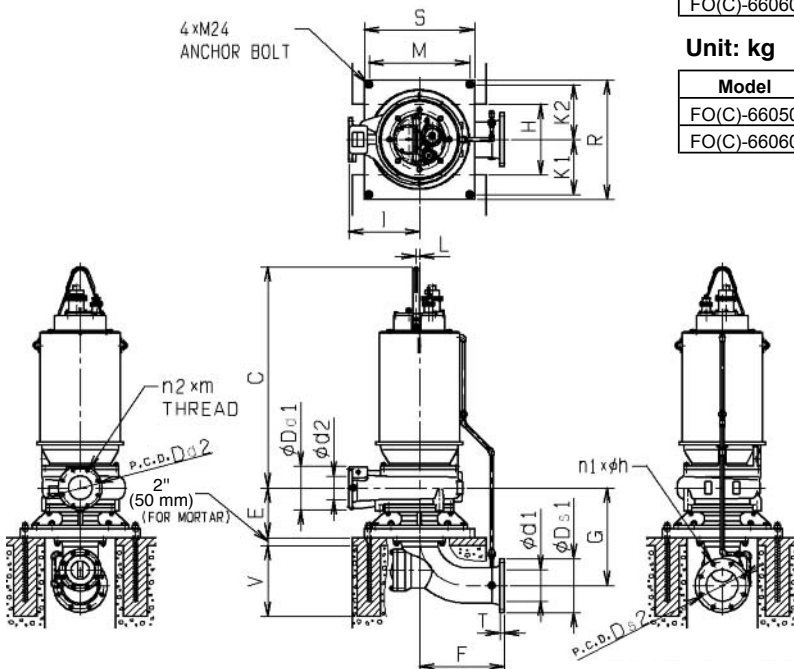
**Model 400x300DSCA4/DSCA4C Model Code FO(C)*
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
FO(C)-66050	50	2500	529	794	661
FO(C)-66060	60	2781			

Unit: kg

Model	kW	W1	W2	W3	W4
FO(C)-66050	37	1134	240	360	300
FO(C)-66060	45	1261			

 W1: Pump weight[†] W3: Base weight
 W2: Suction elbow weight W4: Water in pump weight

Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
23 1/2	21 1/4	1 7/16	16	1

Unit: mm

Ds1	Ds2	T	n1	h
596.9	539.8	36.6	16	29

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
19	17	12	7/8-9UNC

Unit: mm

Dd1	Dd2	n2	m
483	431.8	12	7/8-9UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
FO(C)-66050	50	16	12	54 15/16	16 3/4	25 3/16	40 3/8	29 1/2	22 1/4
FO(C)-66060	60			56 9/16					

Model	HP	K1	K2	L	M	R	S	V
FO(C)-66050	50	19 11/16	19 11/16	13/16	31 1/8	41 3/4	33 7/16	17 11/16
FO(C)-66060	60							

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
FO(C)-66050	37	400	300	1396	426	640	1026	750	565
FO(C)-66060	45			1436					

Model	kW	K1	K2	L	M	R	S	V
FO(C)-66050	37	500	500	20	790	1060	850	450
FO(C)-66060	45							

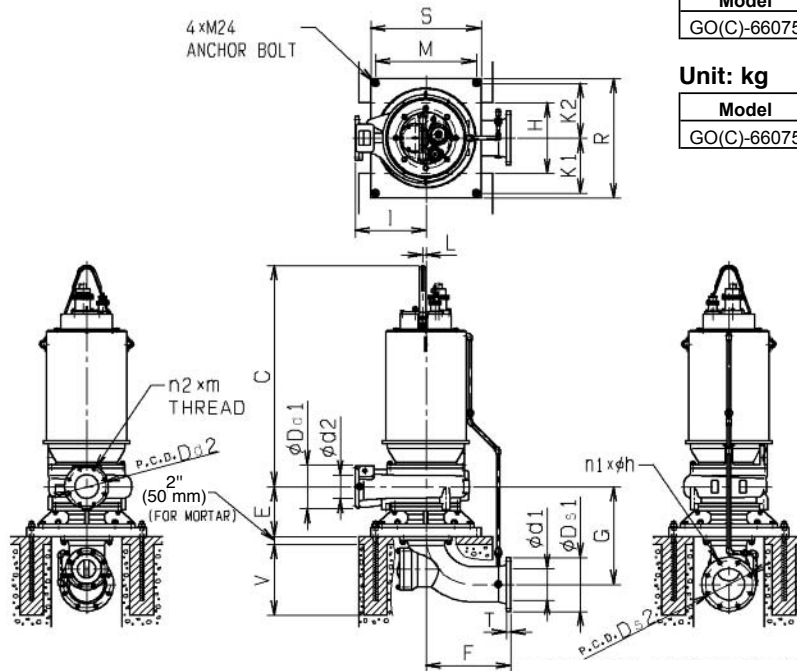
Notes:

*FO = Semi-open impeller model; FC = Enclosed impeller model

[†]The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 400x300DSCA4/DSCA4C Model Code GO(C)*
Drypit Application**

Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
GO(C)-66075	75	3119	508	796	685

Unit: kg

Model	kW	W1	W2	W3	W4
GO(C)-66075	55	1415	230	360	310

 W1: Pump weight[†]

W3: Base weight

W2: Suction elbow weight

W4: Water in pump weight

Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
23 1/2	21 1/4	1 7/16	16	1

Unit: mm

Ds1	Ds2	T	n1	h
596.9	539.8	36.6	16	29

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
19	17	12	7/8-9UNC

Unit: mm

Dd1	Dd2	n2	m
483	431.8	12	7/8-9UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
GO(C)-66075	75	16	12	61 7/8	16 3/4	25 3/16	40 3/8	29 1/2	22 13/16

Model	HP	K1	K2	L	M	R	S	V
GO(C)-66075	75	19 11/16	19 11/16	1 1/4	31 1/8	41 3/4	33 7/16	17 11/16

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
GO(C)-66075	55	400	300	1572	426	640	1026	750	580

Model	kW	K1	K2	L	M	R	S	V
GO(C)-66075	55	500	500	30	790	1060	850	450

Notes:

*GO = Semi-open impeller model; GC = Enclosed impeller model

[†]The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 400x300DSCA4 Model Code EEC
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
EEC-66175	175	5204	529	794	794
EEC-66200	200	5579			
EEC-A66215	215	5601			
EEC-A66245	245	5976			

Unit: kg

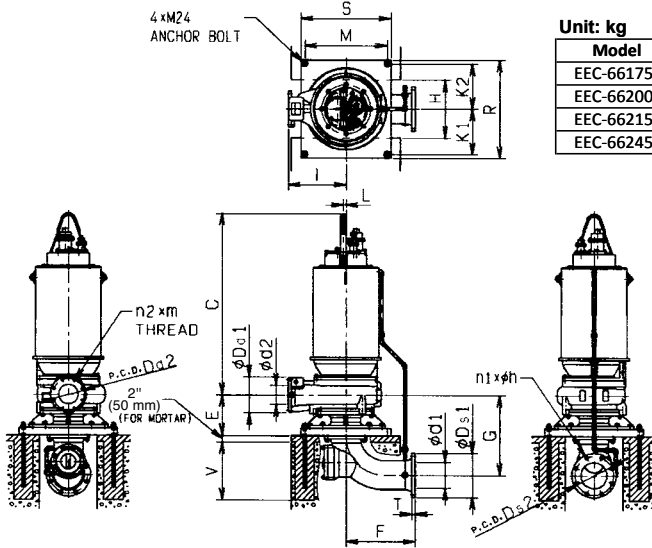
Model	kW	W1	W2	W3	W4
EEC-66175	132	2360	240	360	360
EEC-66200	150	2530			
EEC-66215	160	2540			
EEC-66245	185	2710			

W1 : Pump weight

W3 : Base weight

W2 : Suction elbow weight

W4 : Water in pump weight


Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
23 1/2	21 1/4	1 7/16	16	1 1/8

Unit: mm

Ds1	Ds2	T	n1	h
596.9	539.8	36.6	16	29

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
19	17	12	7/8-9UNC

Unit: mm

Dd1	Dd2	n2	m
483	431.8	12	7/8-9UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
EEC-66175	175	16	12	75 3/16	17 9/16	25 3/16	41 3/16	29 1/2	25 9/16
EEC-66200	200			80 11/16					
EEC-66215	215			80 11/16					
EEC-66245	245			83 1/16					

Model	HP	K1	K2	L	M	R	S	V	q
EEC-66175	175	19 11/16	19 11/16	1 3/16	31 1/8	41 3/4	33 7/16	17 11/16	M24
EEC-66200	200								
EEC-66215	215								
EEC-66245	245								

Model	HP	U	X	Y	Z
EEC-66175	175	G3/8	3 15/16	G3/8	1 1/4
EEC-66200	200				
EEC-66215	215				
EEC-66245	245				

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
EEC-66175	132	400	300	1909	446	640	1046	750	650
EEC-66200	150			2049					
EEC-66215	160			2049					
EEC-66245	185			2109					

Model	kW	K1	K2	L	M	R	S	V	q
EEC-66175	132	500	500	30	790	1060	850	450	M24
EEC-66200	150								
EEC-66215	160								
EEC-66245	185								

Model	kW	U	X	Y	Z
EEC-66175	132	G3/8	100	G3/8	32
EEC-66200	150				
EEC-66215	160				
EEC-66245	185				

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 500x400DSCA4 Model Code D1C
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
D1C-106050	50	4300	860	948	1213
D1C-106060	60	4520			
D1C-106075	75	4741			

Unit: kg

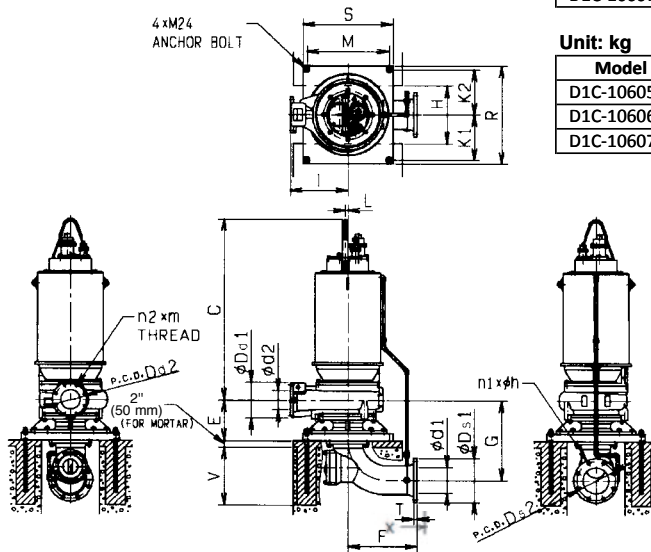
Model	kW	W1	W2	W3	W4
D1C-106050	37	1950	390	430	550
D1C-106060	45	2050			
D1C-106075	55	2150			

W1 : Pump weight

W3 : Base weight

W2 : Suction elbow weight

W4 : Water in pump weight


Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
27 1/2	25	1 11/16	20	1 1/4

Unit: mm

Ds1	Ds2	T	n1	h
699	635	43	20	32

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
23 1/2	21 1/4	16	1-8UNC

Unit: mm

Dd1	Dd2	n2	m
597	539.8	16	1-8UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
D1C-106050	50	20	16	63 1/16	22 7/16	29 1/2	51 15/16	31 1/2	27 15/16
D1C-106060	60			67 3/8					
D1C-106075	75			70 9/16					

Model	HP	K1	K2	L	M	R	S	V	q
D1C-106050	50	21 5/8	21 5/8	1 3/16	34 5/8	46 1/16	37 3/8	22 13/16	M30
D1C-106060	60								
D1C-106075	75								

Model	HP	U	X	Y	Z
D1C-106050	50	G3/8	4 3/4	G3/8	1 3/16
D1C-106060	60				
D1C-106075	75				

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
D1C-106050	37	500	400	1602	570	750	1320	800	710
D1C-106060	45			1712					
D1C-106075	55			1792					

Model	kW	K1	K2	L	M	R	S	V	q
D1C-106050	37	550	550	30	880	1170	950	580	M30
D1C-106060	45								
D1C-106075	55								

Model	kW	U	X	Y	Z
D1C-106050	37	G3/8	120	G3/8	30
D1C-106060	45				
D1C-106075	55				

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 600x500DSCA4 Model Code D2C
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
D2C-106100	100	5821	1191	1433	1499

Unit: kg

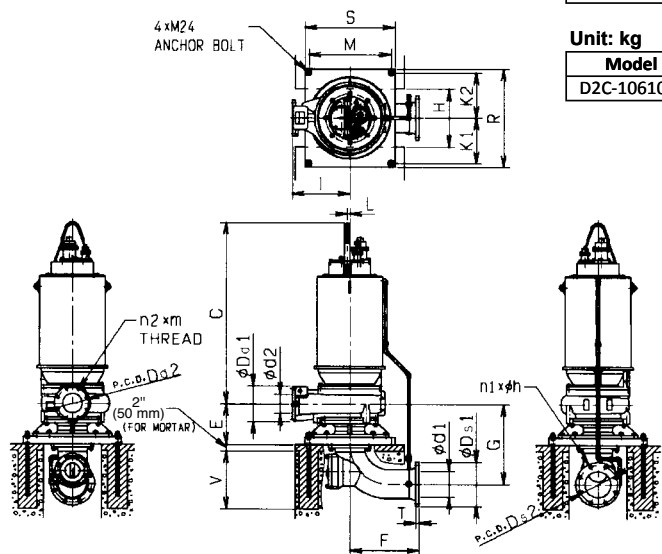
Model	kW	W1	W2	W3	W4
D2C-106100	75	2640	540	650	680

W1 : Pump weight

W3 : Base weight

W2 : Suction elbow weight

W4 : Water in pump weight


Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
32	29 1/2	1 7/8	20	1 3/8

Unit: mm

Ds1	Ds2	T	n1	h
812.8	749.3	47.8	20	35

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
27 1/2	25	20	1 1/8-7UNC

Unit: mm

Dd1	Dd2	n2	m
699	635	20	1 1/8-7UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
D2C-106100	100	24	20	72 3/8	24 5/8	35 7/16	59 13/16	36 1/4	32 5/16
Model	HP	K1	K2	L	M	R	S	V	q
D2C-106100	100	24 13/16	24 13/16	1 3/16	40 9/16	52 3/8	43 1/4	22 13/16	M30
Model	HP	U	X	Y	Z				
D2C-106100	100	G3/8	4 3/4	G3/8	1 3/16				

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
D2C-106100	75	600	500	1839	625	900	1520	630	820
Model	kW	K1	K2	L	M	R	S	V	q
D2C-106100	75	630	630	30	1030	1330	1100	580	M30
Model	kW	U	X	Y	Z				
D2C-106100	75	G3/8	120	G3/8	30				

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables.



Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 600x500DSCA4 Model Code G1C
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
G1C-106120	120	6703	1191	1433	1874
G1C-106145	145	7056			

Unit: kg

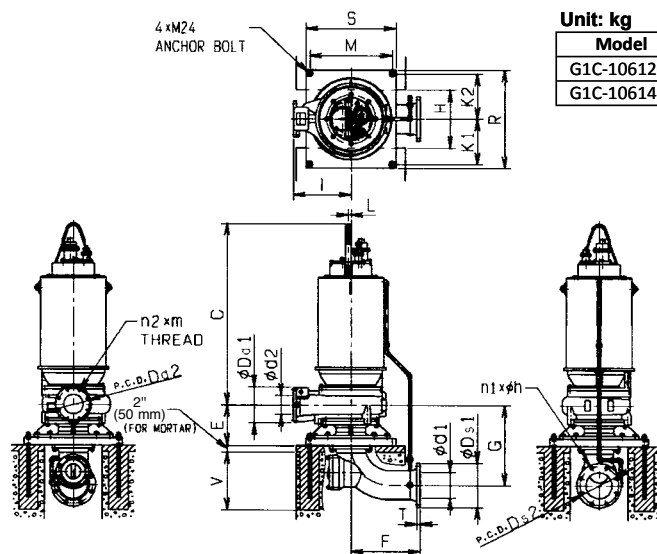
Model	kW	W1	W2	W3	W4
G1C-106120	90	3040	540	650	850
G1C-106145	110	3200			

W1 : Pump weight

W2 : Suction elbow weight

W3 : Base weight

W4 : Water in pump weight


Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
32	29 1/2	1 7/8	20	1 3/8

Unit: mm

Ds1	Ds2	T	n1	h
812.8	749.3	47.8	20	35

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
27 1/2	25	20	1 1/8-7UNC

Unit: mm

Dd1	Dd2	n2	m
699	635	20	1 1/8-7UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
G1C-106120	120	24	20	75 3/8	24 5/8	35 7/16	59 13/16	36 1/4	35 1/4
G1C-106145	145			80 7/8					

Model	HP	K1	K2	L	M	R	S	V	q
G1C-106120	120	24 13/16	24 13/16	1 3/16	40 9/16	52 3/8	43 5/16	22 13/16	M30
G1C-106145	145								

Model	HP	U	X	Y	Z
G1C-A106120	120	G3/8	4 3/4	G3/8	1 3/16
G1C-A106145	145				

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
G1C-106120	90	600	500	1914	625	900	1520	920	895
G1C-106145	110			2054					

Model	kW	K1	K2	L	M	R	S	V	q
G1C-106120	90	630	630	30	1030	1330	1100	580	M30
G1C-106145	110								

Model	kW	U	X	Y	Z
G1C-106120	90	G3/8	120	G3/8	30
G1C-106145	110				

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

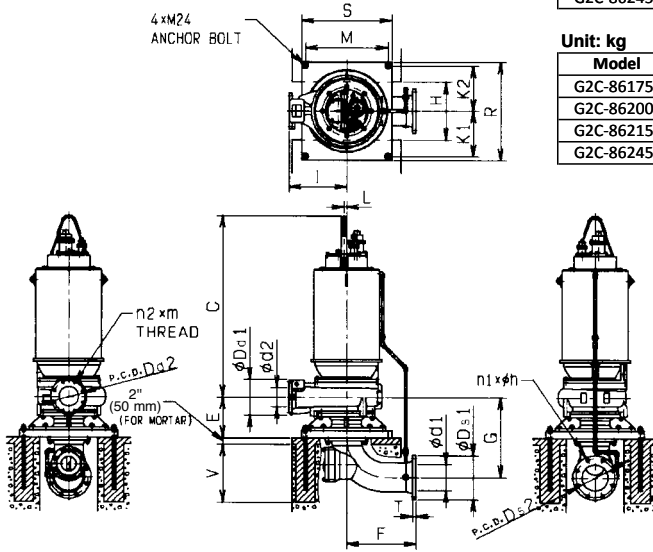
Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model 600x500DSCA4 Model Code G2C
Drypit Application**
**Weights
Unit: lbs.**

Model	HP	W1	W2	W3	W4
G2C-86175	175	7034	1191	1433	1786
G2C-86200	200	7299			
G2C-86215	215	7409			
G2C-86245	245	8864			

Unit: kg

Model	kW	W1	W2	W3	W4
G2C-86175	132	3190	540	650	810
G2C-86200	150	3310			
G2C-86215	160	3360			
G2C-86245	185	4020			

 W1 : Pump weight W3 : Base weight
 W2 : Suction elbow weight W4 : Water in pump weight

Suction Flange
Unit: inches

Ds1	Ds2	T	n1	h
32	29 1/2	1 7/8	20	1 3/8

Unit: mm

Ds1	Ds2	T	n1	h
812.8	749.3	47.8	20	35

Discharge Flange
Unit: inches

Dd1	Dd2	n2	m
27 1/2	25	20	1 1/8-7UNC

Unit: mm

Dd1	Dd2	n2	m
699	635	20	1 1/8-7UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
G2C-86175	175	24	20	80 7/8	24 5/8	35 7/16	59 13/16	36 1/4	34 7/16
G2C-86200	200			83 1/4					
G2C-86215	215			83 1/4					
G2C-86245	245			87					
Model	HP	K1	K2	L	M	R	S	V	q
G2C-86175	175	24 13/16	24 13/16	1 3/16	40 9/16	52 3/8	43 5/16	22 13/16	M30
G2C-86200	200			1 3/16					
G2C-86215	215			1 3/16					
G2C-86245	245			1 9/16					
Model	HP	U	X	Y	Z				
G2C-86175	175	G3/8	4 3/4	G3/8	1 3/16				
G2C-86200	200								
G2C-86215	215								
G2C-86245	245								

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
G2C-86175	132	600	500	2054	625	900	1520	920	875
G2C-86200	150			2114					
G2C-86215	160			2114					
G2C-86245	185			2210					
Model	kW	K1	K2	L	M	R	S	V	q
G2C-86175	132	630	630	30	1030	1330	1100	580	M30
G2C-86200	150			30					
G2C-86215	160			30					
G2C-86245	185			40					
Model	kW	U	X	Y	Z				
G2C-86175	132	G3/8	120	G3/8	30				
G2C-86200	150								
G2C-86215	160								
G2C-86245	185								

Notes:

†The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

Dimensions

Project: _____ Model: _____ Chk'd: _____ Date: _____

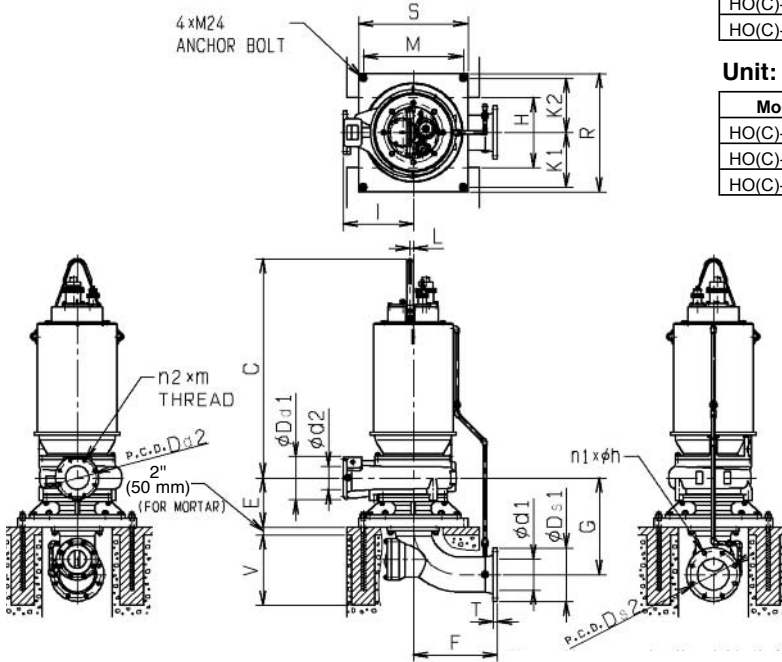
**Model 200x150DSCA4/DSCA4C Model Code HO(C)*
Drypit Application**
Weights

Unit: lbs.

Model	HP	W1	W2	W3	W4
HO(C)-46050	50	2169	221	464	309
HO(C)-46060	60	2235			265
HO(C)-46075	75	2345			265

Unit: kg

Model	kW	W1	W2	W3	W4
HO(C)-46050	37	984	100	210	140
HO(C)-46060	45	1014			120
HO(C)-46075	55	1064			120

 W1: Pump weight[†] W3: Base weight
 W2: Suction elbow weight W4: Water in pump weight

Suction Flange

Unit: inches

Ds1	Ds2	T	n1	h
13 1/2	11 3/4	1	8	7/8

Unit: mm

Ds1	Ds2	T	n1	h
342.9	298.4	28.5	8	23

Discharge Flange

Unit: inches

Dd1	Dd2	n2	m
11	9 1/2	8	3/4-10UNC

Unit: mm

Dd1	Dd2	n2	m
280	241.3	8	3/4-10UNC

Unit: inches

Model	HP	d1	d2	C	E	F	G	H	I
HO(C)-46050	50	8	6	52 3/16	12 7/16	21 1/4	24 7/16	17 11/16	17 11/16
HO(C)-46060	60			54 9/16					
HO(C)-46075	75			56 1/8					

Model	HP	K1	K2	L	M	R	S	V
HO(C)-46050	50	13 3/4	13 3/4	13/16	25 3/16	29 15/16	27 9/16	17 11/16
HO(C)-46060	60							
HO(C)-46075	75							

Unit: mm

Model	kW	d1	d2	C	E	F	G	H	I
HO(C)-46050	37	200	150	1326	316	540	621	450	450
HO(C)-46060	45			1386					
HO(C)-46075	55			1426					

Model	kW	K1	K2	L	M	R	S	V
HO(C)-46050	37	350	350	20	640	760	700	450
HO(C)-46060	45							
HO(C)-46075	55							

Notes:

*HO = Open impeller model; HC = Enclosed impeller model

[†]The weight of pump includes the weight of 50 ft. (15.25 m) of cables.

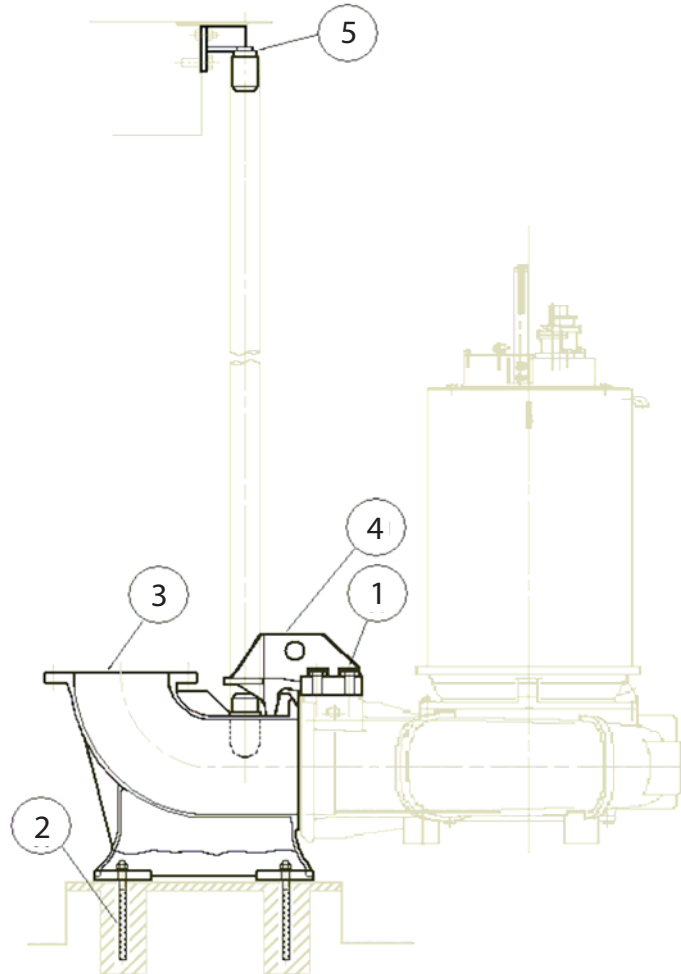
Sectional View

Project: _____

Model: _____

Chk'd: _____

Date: _____

QDC (Quick Discharge Connector) for Model DSC4


Part #	Part name	Material	Number for set
1	Bolt	Stainless steel	4
2	Anchor bolt, nut, washer	Stainless steel	4
3	Quick discharge connector	Cast iron	1
4	Sliding guide	Ductile iron	1
5	Guide pipe support	Carbon steel	1

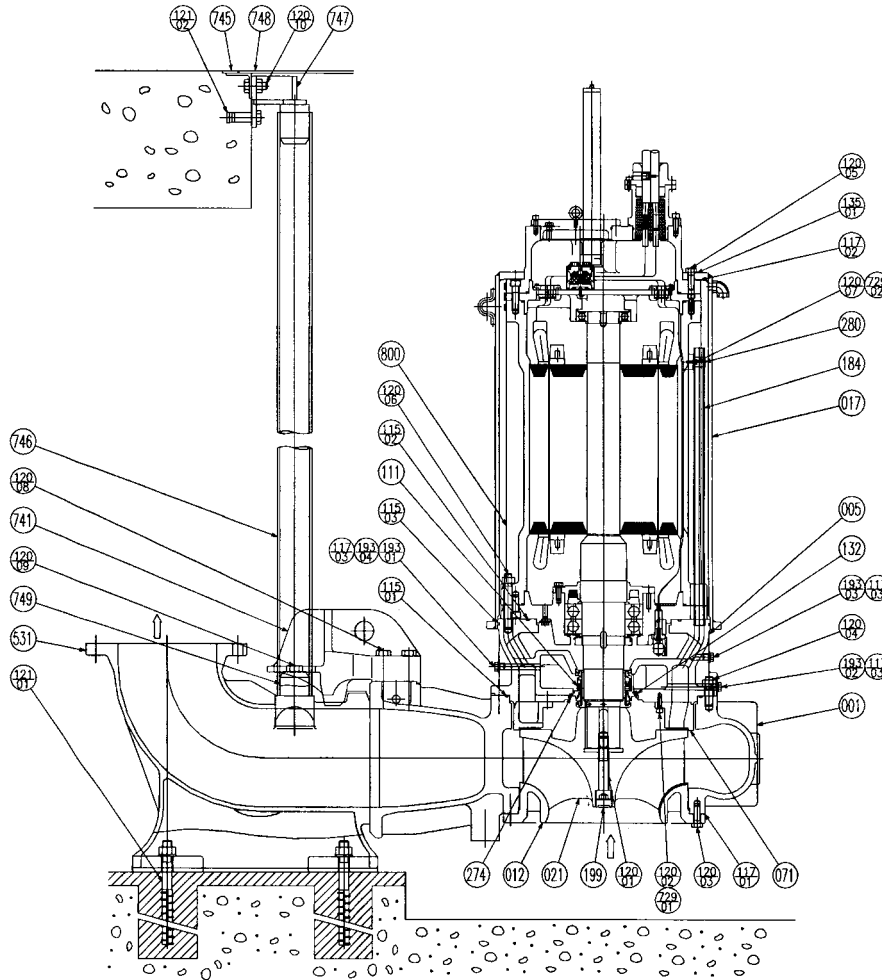
Sectional View

Project:

Model:

Chk'd:

Date:

**Model DSC4 with Quick Discharge Connector
Semi-Open Impeller**


Part No.	Part Name	Material	No. for 1 Unit
800	Motor	-	1 Set
749	Guide Pipe Bush	AISI 304	2
748	Floor Plate	ASTM A283	1
747	Guide Pipe Holder	ASTM A283	1
746	Guide Pipe	AISI 304	2
745	Floor Frame	ASTM A283	1
741	Sliding Guide	ASTM 536	1
729-02	Spring Washer	AISI 304	4
729-01	Spring Washer	AISI 304	6
531	Quick Discharge Connector	ASTM A48 CL35	1
280	Pipe Clamp	AISI 304	2
274	Snap Ring	AISI 304	1
199	Impeller Bolt Cap	ASTM A48 CL30	1
193-04	Plug (Air Vent)	AISI 304	1
193-03	Plug (Leak Check)	AISI 304	1
193-02	Plug (Oil Drain)	AISI 304	1
193-01	Plug (Oil Port)	AISI 304	1
184	Cooling Water Pipe	SGP	2
135-01	Seal Washer	AISI304/NBR	12
132	Parallel Pin	AISI 304	2
121-02	Hole-in Anchor	AISI 304	2
121-01	Anchor Bolt	AISI 304	4
120-10	Holder Bolt	AISI 304	2
120-09	Hex. Head Bolt	AISI 304	2
120-08	Hex. Head Bolt	AISI 304	4
120-07	Hex. Head Bolt	AISI 304	4
120-06	Stud Bolt/Nut	AISI 304	8
120-05	Hex. Head Bolt	AISI 304	12
120-04	Stud Bolt/Nut	AISI 304	12
120-03	Hex. Head Bolt	AISI 304	16
120-02	Hex. Socket Cap Screw	AISI 304	6
120-01	Impeller Bolt	AISI 403	1
117-03	Sheet Gasket	-	4
117-02	Sheet Gasket	NBR	1
117-01	Sheet Gasket	Non-Asbestos	1 Set
115-03	O-Ring	NBR	1
115-02	O-Ring	NBR	1
115-01	O-Ring	NBR	1
111	Mechanical Seal	-	1 Set
071	Side Plate	ASTM A48 CL35	1
021	Impeller	ASTM A48 CL35	1
017	Cooling Jacket	ASTM A283 Gr. D	1
012	Suction Cover	ASTM A48 CL35	1
005	Intermediate Casing	ASTM A48 CL35	1
001	Pump Casing	ASTM A48 CL35	1

**For reference only;
consult spare parts pricing for available spare parts**



Sectional View

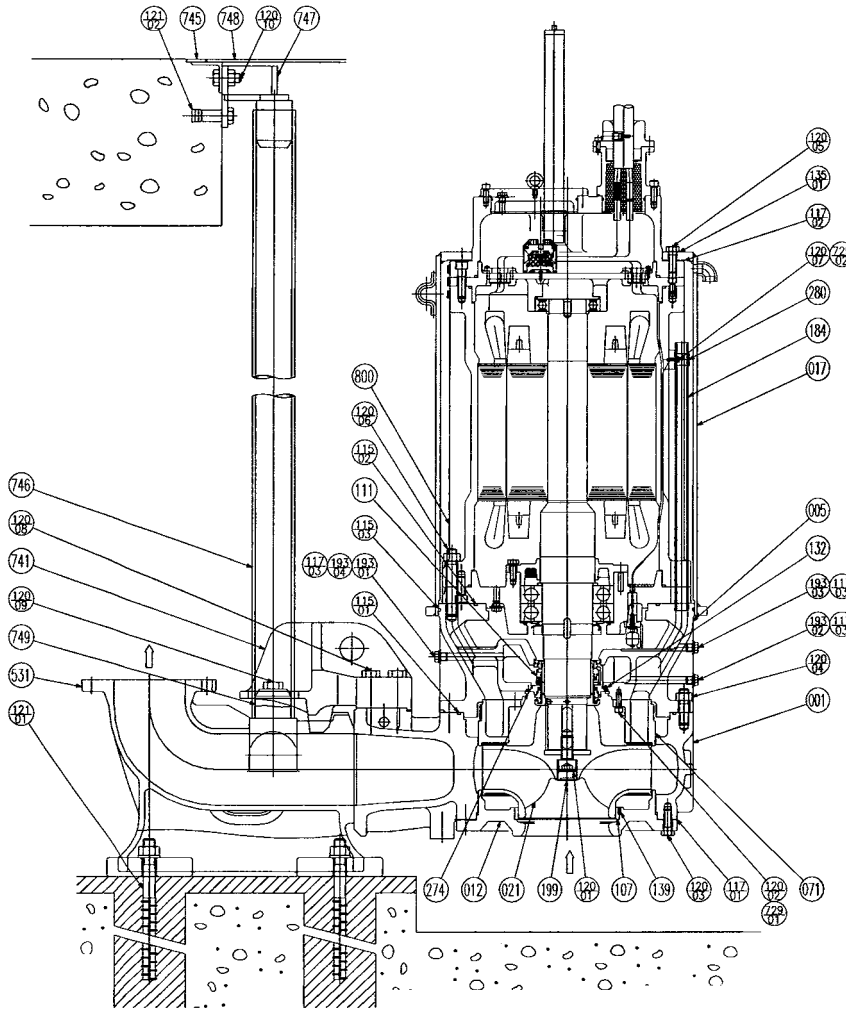
Project:

Model:

Chk'd:

Date:

**Model DSC4 with Quick Discharge Connector
Enclosed Impeller**



Part No.	Part Name	Material	No. for 1 Unit
800	Motor	-	1 Set
749	Guide Pipe Bush	AISI 420	2
748	Floor Plate	ASTM A283	1
747	Guide Pipe Holder	ASTM A283	1
746	Guide Pipe	AISI 304	2
745	Floor Frame	ASTM A283	1
741	Sliding Guide	ASTM 536	1
729-02	Spring Washer	AISI 304	4
729-01	Spring Washer	AISI 304	6
531	Quick Discharge Connector	ASTM A48 CL35	1
280	Pipe Clamp	AISI 304	2
274	Snap Ring	AISI 304	1
199*	Impeller Bolt Cap	See below*	1
193-04	Plug (Air Vent)	AISI 304	1
193-03	Plug (Leak Check)	AISI 304	1
193-02	Plug (Oil Drain)	AISI 304	1
193-01	Plug (Oil Port)	AISI 304	1
184	Cooling Water Pipe	SGP	2
139	Spring Pin	AISI 304	2
135-01	Seal Washer	AISI304/NBR	12
132	Parallel Pin	AISI 420	2
121-02	Hole-in Anchor	AISI 304	2
121-01	Anchor Bolt	AISI 304	4
120-10	Holder Bolt	AISI 304	2
120-09	Hex. Head Bolt	AISI 304	2
120-08	Hex. Head Bolt	AISI 304	4
120-07	Hex. Head Bolt	AISI 304	4
120-06	Stud Bolt/Nut	AISI 304	8
120-05	Hex. Head Bolt	AISI 304	12
120-04	Stud Bolt/Nut	AISI 304	12
120-03	Hex. Head Bolt	AISI 304	16
120-02	Hex. Socket Cap Screw	AISI 304	6
120-01	Impeller Bolt	AISI 403	1
117-03	Sheet Gasket	-	4
117-02	Sheet Gasket	NBR	1
117-01	Sheet Gasket	Non-Asbestos	1
115-03	O-Ring	NBR	1
115-02	O-Ring	NBR	1
115-01	O-Ring	NBR	1
111	Mechanical Seal	-	1 Set
107	Casing Ring	SUS420	
071	Side Plate	ASTM A48 CL35	1
021	Impeller	ASTM A48 CL35	1
017	Cooling Jacket	ASTM A283 Gr. D	1
012	Suction Cover	ASTM A48 CL35	1
005	Intermediate Casing	ASTM A48 CL35	1
001	Pump Casing	ASTM A48 CL35	1

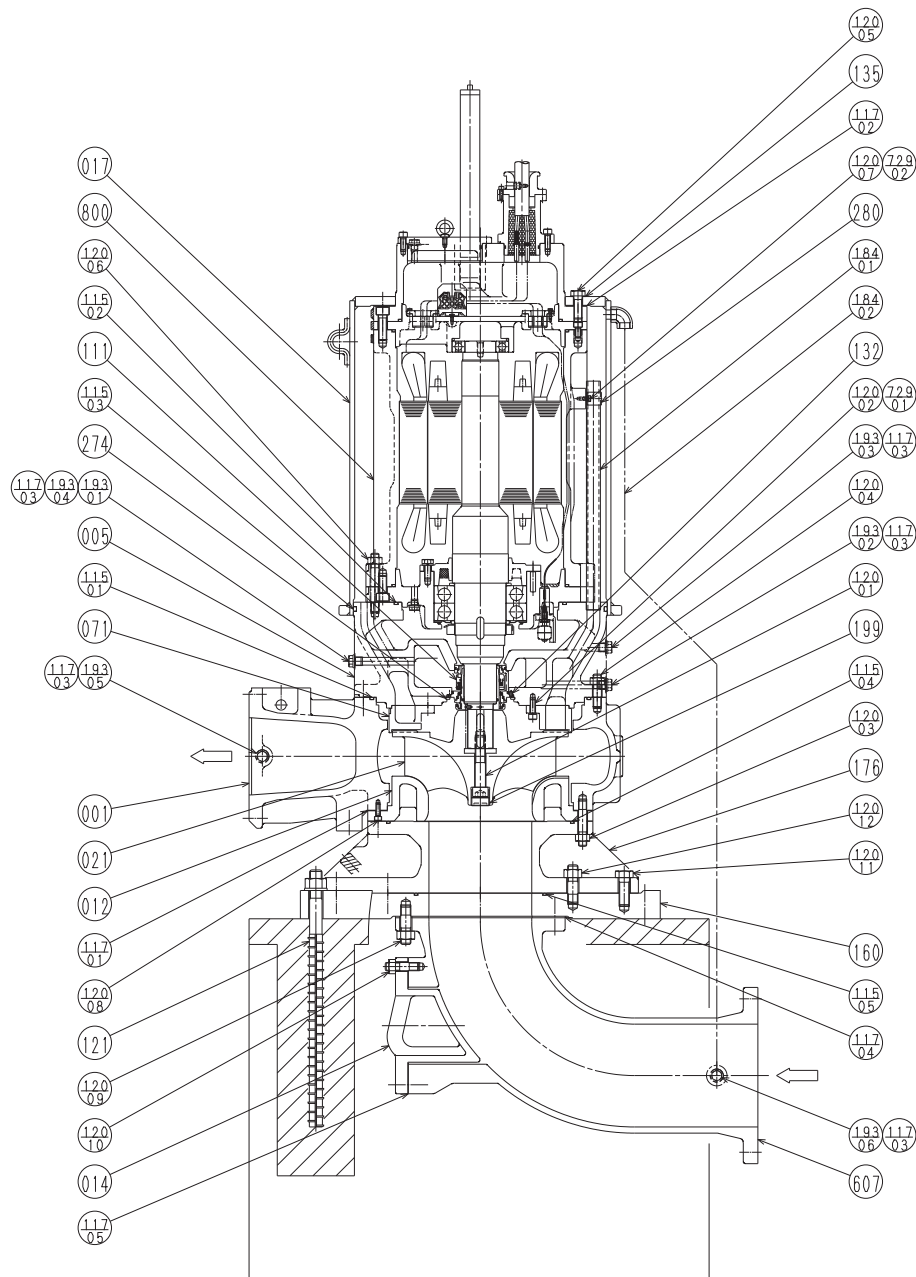
Part No.	Part Name	Material	No. for 1 Unit
199*	Impeller Bolt Cap	ASTM A48 CL30 (4P/6P 50-145HP) 304 SS (4P/6P/8P 175-245HP, 10P 50-145HP)	1 1

**For reference only;
consult spare parts pricing for available spare parts**

Sectional View

Project: _____ Model: _____ Chk'd: _____ Date: _____

**Model DSCA4 Drypit Application
Semi-Open Impeller**



Part No.	Part Name	Material	No. for 1 Unit
800	Motor	-	1 Set
729-02	Spring Washer	AISI 304	4
729-01	Spring Washer	AISI 304	6
607	Suction Elbow	ASTM A48 CL35	1
280	Pipe Clamp	AISI 304	2
274	Snap Ring	AISI 304	1
199	Impeller Bolt Cap	ASTM A48 CL30	1
193-06	Plug (Gauge Connection)	AISI 304	1
193-05	Plug (Gauge Connection)	AISI 304	1
193-04	Plug (Air Vent)	AISI 304	1
193-03	Plug (Leak Check)	AISI 304	1
193-02	Plug (Oil Drain)	AISI 304	1
193-01	Plug (Oil Port)	AISI 304	1
184-02	Return Pipe	SGP/FCMB	1 Set
184-01	Cooling Water Pipe	SGP	2
176	Suction Stand	ASTM A48 CL35	1
160	Base	ASTM A283	1
135	Seal Washer	AISI304/NBR	8
132	Parallel Pin	SUS420	2
121	Anchor Bolt	SD295A	4
120-12	Stud Bolt/Nut	ASTM A283	8
120-11	Hex. Head Bolt	ASTM A283	8
120-10	Stud Bolt/Nut	ASTM A283	8
120-09	Stud Bolt/Nut	ASTM A283	12
120-08	Hex. Socket Cap Screw	AISI 304	4
120-07	Hex. Head Bolt	AISI 304	4
120-06	Stud Bolt/Nut	AISI 304	8
120-05	Hex. Head Bolt	AISI 304	8
120-04	Stud Bolt/Nut	AISI 304	12
120-03	Stud Bolt/Nut	ASTM A283	12
120-02	Hex. Socket Cap Screw	AISI 304	6
120-01	Impeller Bolt	AISI 403	1
117-05	Sheet Gasket	Non-Asbestos	1
117-04	Sheet Gasket	Non-Asbestos	1
117-03	Sheet Gasket	-	6
117-02	Sheet Gasket	NBR	1
117-01	Sheet Gasket	Non-Asbestos	1 Set
115-05	O-Ring	NBR	1
115-04	O-Ring	NBR	1
115-03	O-Ring	NBR	1
115-02	O-Ring	NBR	1
115-01	O-Ring	NBR	1
111	Mechanical Seal	-	1 Set
071	Side Plate	ASTM A48 CL35	1
021	Impeller	ASTM A48 CL35	1
017	Cooling Jacket	ASTM A283 Gr. D	1
014	Handhole Cover	ASTM A48 CL35	1
012	Suction Cover	ASTM A48 CL35	1
005	Intermediate Casing	ASTM A48 CL35	1
001	Pump Casing	ASTM A48 CL35	1

**For reference only;
consult spare parts pricing for available spare parts**

Sectional View

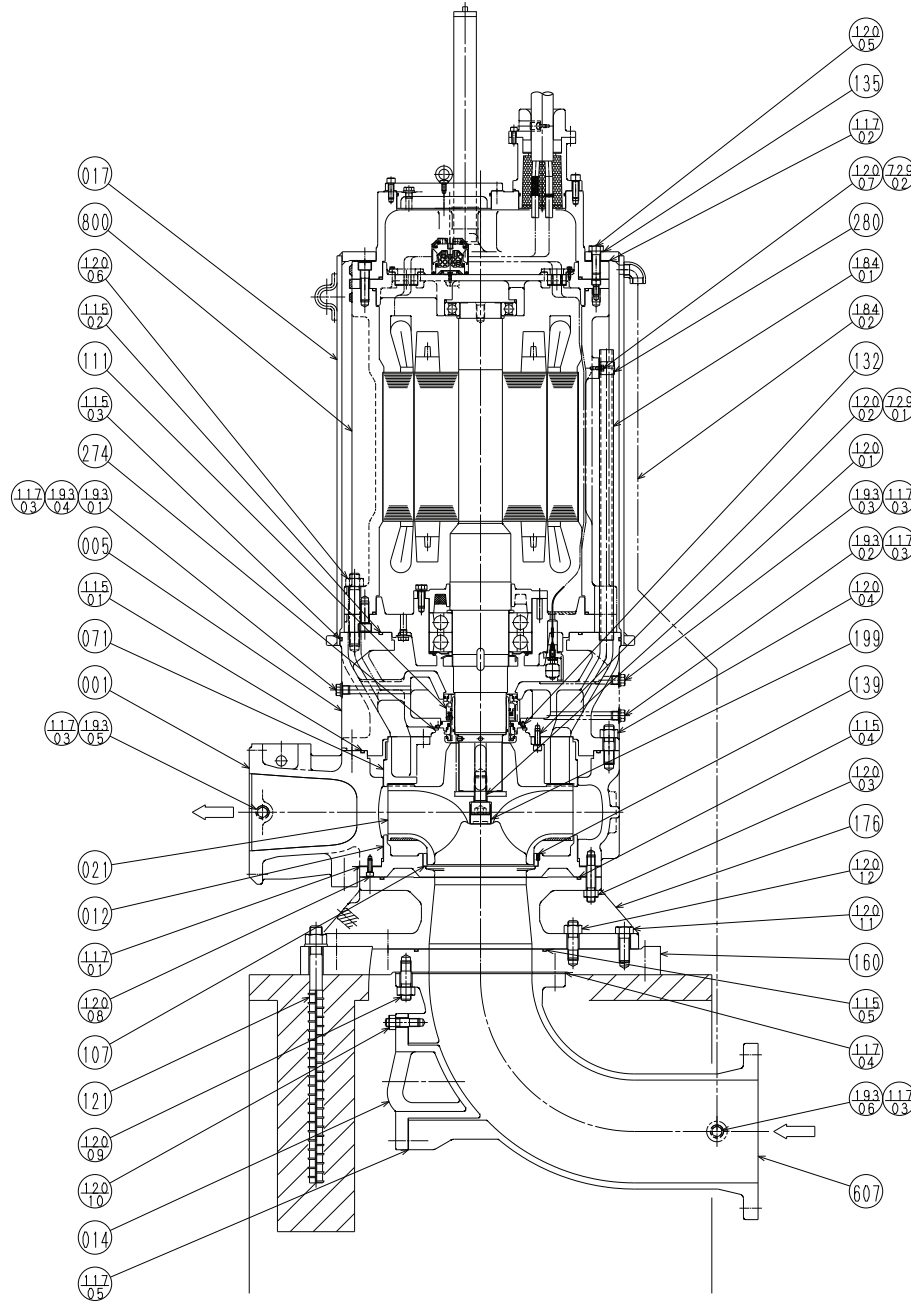
Project:

Model:

Chk'd:

Date:

**Model DSCA4 Drypit Application
Enclosed Impeller**



Part No.	Part Name	Material	No. for 1 Unit
800	Motor	-	1 Set
729-02	Spring Washer	AISI 304	4
729-01	Spring Washer	AISI 304	6
607	Suction Elbow	ASTM A48 CL35	1
280	Pipe Clamp	AISI 304	2
274	Snap Ring	AISI 304	1
199*	Impeller Bolt Cap*	See below	1
193-06	Plug (Gauge Connection)	AISI 304	1
193-05	Plug (Gauge Connection)	AISI 304	1
193-04	Plug (Air Vent)	AISI 304	1
193-03	Plug (Leak Check)	AISI 304	1
193-02	Plug (Oil Drain)	AISI 304	1
193-01	Plug (Oil Port)	AISI 304	1
184-02	Return Pipe	SGP/FCMB	1 Set
184-01	Cooling Water Pipe	SGP	2
176	Suction Stand	ASTM A48 CL35	1
160	Base	ASTM A283	1
139	Spring Pin	AISI 304	2
135	Seal Washer	AISI304/NBR	8
132	Parallel Pin	SUS420	2
121	Anchor Bolt	SD295A	4
120-12	Stud Bolt/Nut	ASTM A283	8
120-11	Hex. Head Bolt	ASTM A283	8
120-10	Stud Bolt/Nut	ASTM A283	8
120-09	Stud Bolt/Nut	ASTM A283	12
120-08	Hex. Socket Cap Screw	AISI 304	4
120-07	Hex. Head Bolt	AISI 304	4
120-06	Stud Bolt/Nut	AISI 304	8
120-05	Hex. Head Bolt	AISI 304	12
120-04	Stud Bolt/Nut	AISI 304	12
120-03	Stud Bolt/Nut	ASTM A283	16
120-02	Hex. Socket Cap Screw	AISI 304	6
120-01	Impeller Bolt	AISI 403	1
117-05	Sheet Gasket	Non-Asbestos	1
117-04	Sheet Gasket	Non-Asbestos	1
117-03	Sheet Gasket	-	6
117-02	Sheet Gasket	NBR	1
117-01	Sheet Gasket	Non-Asbestos	1 Set
115-05	O-Ring	NBR	1
115-04	O-Ring	NBR	1
115-03	O-Ring	NBR	1
115-02	O-Ring	NBR	1
115-01	O-Ring	NBR	1
111	Mechanical Seal	-	1 Set
107	Casing Ring	SUS420	1
071	Side Plate	ASTM A48 CL35	1
021	Impeller	ASTM A48 CL35	1
017	Cooling Jacket	ASTM A283 Gr. D	1
014	Handhole Cover	ASTM A48 CL35	1
012	Suction Cover	ASTM A48 CL35	1
005	Intermediate Casing	ASTM A48 CL35	1
001	Pump Casing	ASTM A48 CL35	1

Part No.	Part Name	Material	No. for 1 Unit
199*	Impeller Bolt Cap	ASTM A48 CL30 (4P/6P 50-145HP) 304 SS (4P/6P/8P 175-245HP, 10P 50-145HP)	1 1

**For reference only;
consult spare parts pricing for available spare parts**

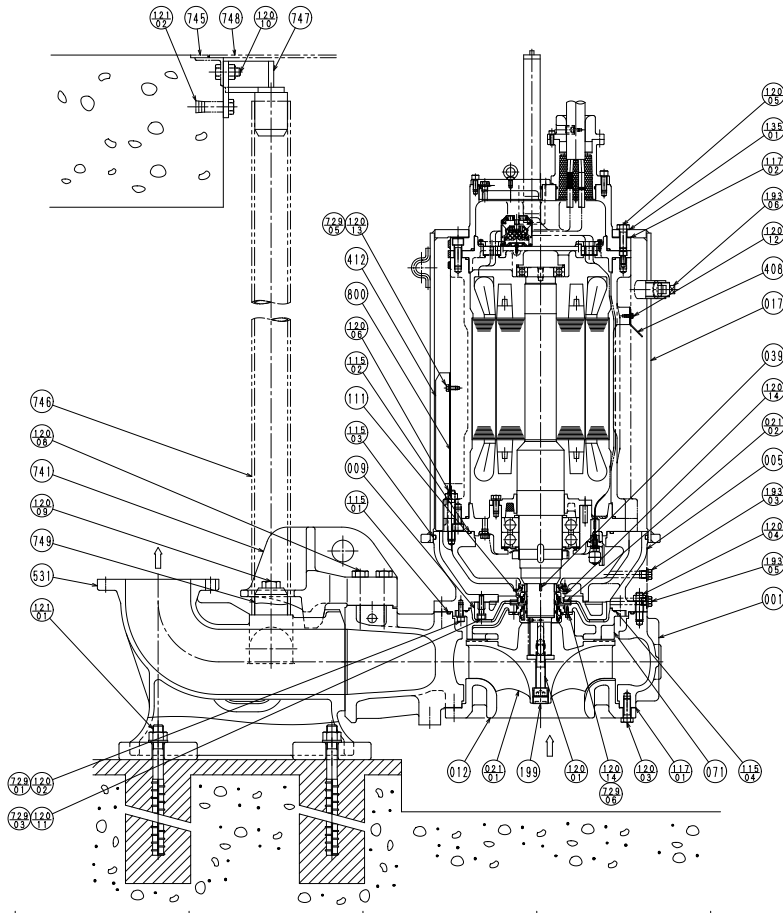
Sectional View

Project:

Model:

Chk'd:

Date:

**Model DSC4C with Quick Discharge Connector
Semi-open Impeller – ICS option**


Part No.	Part Name	Material	No. for 1 Unit
800	Motor	-	1 Set
749	Guide Pipe Bush	AISI 420	2
748	Floor Plate	ASTM A283	1
747	Guide Pipe Holder	ASTM A283	1
746	Guide Pipe	AISI 304	2
745	Floor Frame	ASTM A283	1
741	Sliding Guide	ASTM 536	1
729-06	Spring Washer	AISI 304	8
729-05	Spring Washer	AISI 304	8
729-04	Spring Washer	AISI 304	4
729-03	Spring Washer	AISI 304	4
729-01	Spring Washer	AISI 304	8
531	Quick Discharge Connector	ASTM A48 CL35	1
412	Guide Plate	AISI 304	4
408	Baffle Plate	AISI 304	2
199	Impeller Bolt Cap	ASTM A48 CL30	1
193-06	Plug (Coolant Supply)	AISI 304	2
193-05	Plug (Coolant Drain)	AISI 304	1
193-03	Plug (Leak Check)	AISI 304	1
135-01	Seal Washer	AISI 304/NBR	8
121-02	Hole-In Anchor	AISI 304	2
121-01	Anchor Bolt	AISI 304	4
120-14	Hex. Socket Cap Screw	AISI 304	8
120-13	Hex. Head Bolt	AISI 304	8
120-12	Hex. Head Bolt	AISI 304	4
120-11	Hex. Socket Cap Screw	AISI 304	4
120-10	Holder Bolt	AISI 304	2
120-09	Hex. Head Bolt	AISI 304	2
120-08	Hex. Head Bolt	AISI 304	4
120-06	Stud Bolt/Nut	AISI 304	8
120-05	Hex. Head Bolt	AISI 304	8
120-04	Stud Bolt/Nut	AISI 304	12
120-03	Hex. Head Bolt	AISI 304	12
120-02	Hex. Socket Cap Screw	AISI 304	8
120-01	Impeller Bolt	AISI 304	1
117-03	Sheet Gasket	-	2
117-02	Sheet Gasket	NBR	1
117-01	Sheet Gasket	Non-Asbestos	1 Set
115-04	O-Ring	NBR	1
115-03	O-Ring	NBR	1
115-02	O-Ring	NBR	1
115-01	O-Ring	NBR	1
111	Mechanical Seal	-	1 Set
071*	Side Plate	See Left*	
039	Key	AISI 316	1
021-02	Impeller	ASTM CF8	1
021-01	Impeller	ASTM A48 CL35	1
017	Cooling Jacket	ASTM A283 Gr. D	1
012	Suction Cover	ASTM A48 CL35	1
009	Inner Casing	ASTM A48 CL35	1
005	Intermediate Casing	ASTM A48 CL35	1
001	Pump Casing	ASTM A48 CL35	1

Part No.	Part Name	Model PH/HP	Material	No. for 1 Unit
071*	Side Plate	4P 50HP-100HP/6P 50HP-145HP	Cast iron ASTM A48 CL35	1
		4P 120HP-145HP	Copper alloy casting ASTM B584 C83600	1

**For reference only;
consult spare parts pricing for available spare parts**



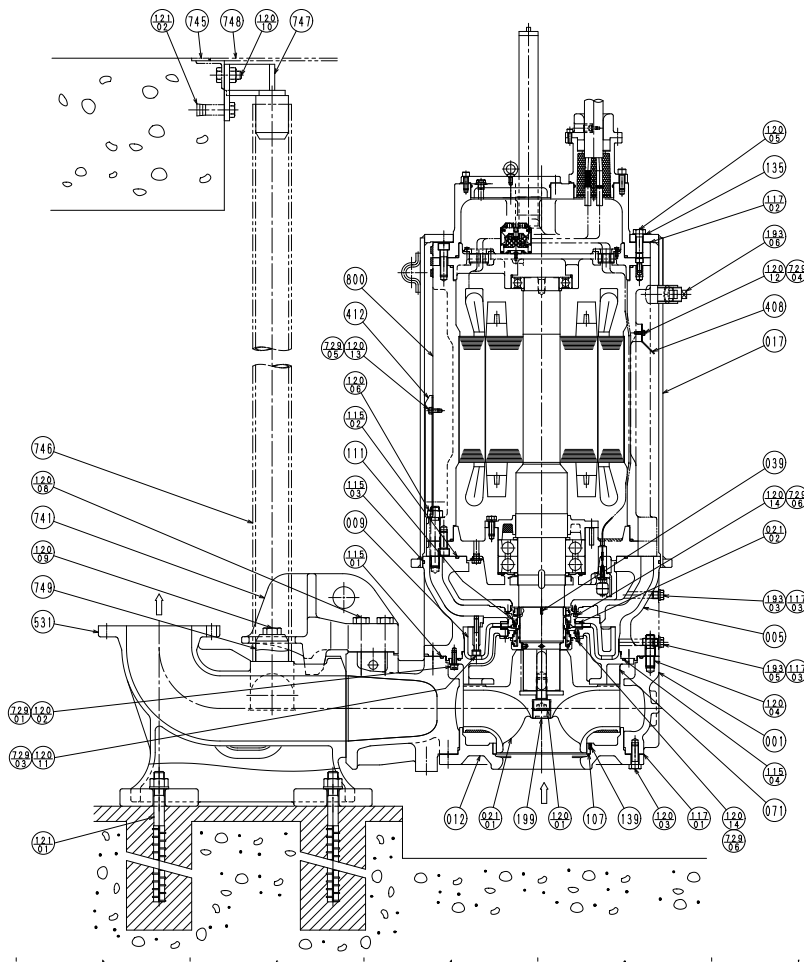
Sectional View

Project:

Model:

Chk'd:

Date:

**Model DSC4C with Quick Discharge Connector
Enclosed Impeller – ICS option**


Part No.	Part Name	Material	No. for 1 Unit
800	Motor	-	1 Set
749	Guide Pipe Bush	AISI 420	2
748	Floor Plate	ASTM A283	1
747	Guide Pipe Holder	ASTM A283	1
746	Guide Pipe	AISI 304	2
745	Floor Frame	ASTM A283	1
741	Sliding Guide	ASTM 536	1
729-06	Spring Washer	AISI 304	8
729-05	Spring Washer	AISI 304	8
729-04	Spring Washer	AISI 304	4
729-03	Spring Washer	AISI 304	4
729-01	Spring Washer	AISI 304	8
531	Quick Discharge Connector	ASTM A48 CL35	1
412	Guide Plate	AISI 304	4
408	Baffle Plate	AISI 304	2
199	Impeller Bolt Cap	ASTM A48 CL30	1
193-06	Plug (Coolant Supply)	AISI 304	2
193-05	Plug (Coolant Drain)	AISI 304	1
193-03	Plug (Leak Check)	AISI 304	1
139	Spring Pin	AISI 304	2
135	Seal Washer	AISI 304/NBR	12
121-02	Hole-In Anchor	AISI 304	2
121-01	Anchor Bolt	AISI 304	4
120-14	Hex. Socket Cap Screw	AISI 304	8
120-13	Hex. Head Bolt	AISI 304	8
120-12	Hex. Head Bolt	AISI 304	4
120-11	Hex. Socket Cap Screw	AISI 304	4
120-10	Holder Bolt	AISI 304	2
120-09	Hex. Head Bolt	AISI 304	2
120-08	Hex. Head Bolt	AISI 304	4
120-06	Stud Bolt/Nut	AISI 304	8
120-05	Hex. Head Bolt	AISI 304	12
120-04	Stud Bolt/Nut	AISI 304	12
120-03	Hex. Head Bolt	AISI 304	16
120-02	Hex. Socket Cap Screw	AISI 304	8
120-01	Impeller Bolt	AISI 304	1
117-03	Sheet Gasket	-	2
117-02	Sheet Gasket	NBR	1
117-01	Sheet Gasket	Non-Asbestos	1 Set
115-04	O-Ring	NBR	1
115-03	O-Ring	NBR	1
115-02	O-Ring	NBR	1
115-01	O-Ring	NBR	1
111	Mechanical Seal	-	1 Set
107	Casing Ring	AISI 420	1
071*	Side Plate	See Left*	1
039	Key	AISI 316	1
021-02	Impeller	ASTM CF8	1
021-01	Impeller	ASTM A48 CL35	1
017	Cooling Jacket	ASTM A283 Gr. D	1
012	Suction Cover	ASTM A283 CL35	1
009	Inner Casing	ASTM A48 CL35	1
005	Intermediate Casing	ASTM A48 CL35	1
001	Pump Casing	ASTM A48 CL35	1

Part No.	Part Name	Model PH/HP	Material	No. for 1 Unit
071*	Side Plate	4P 50HP-100HP/6P 50HP-145HP	Cast iron ASTM A48 CL35	1
		4P 120HP-145HP	Copper alloy casting ASTM B584 C83600	1

**For reference only;
consult spare parts pricing for available spare parts**



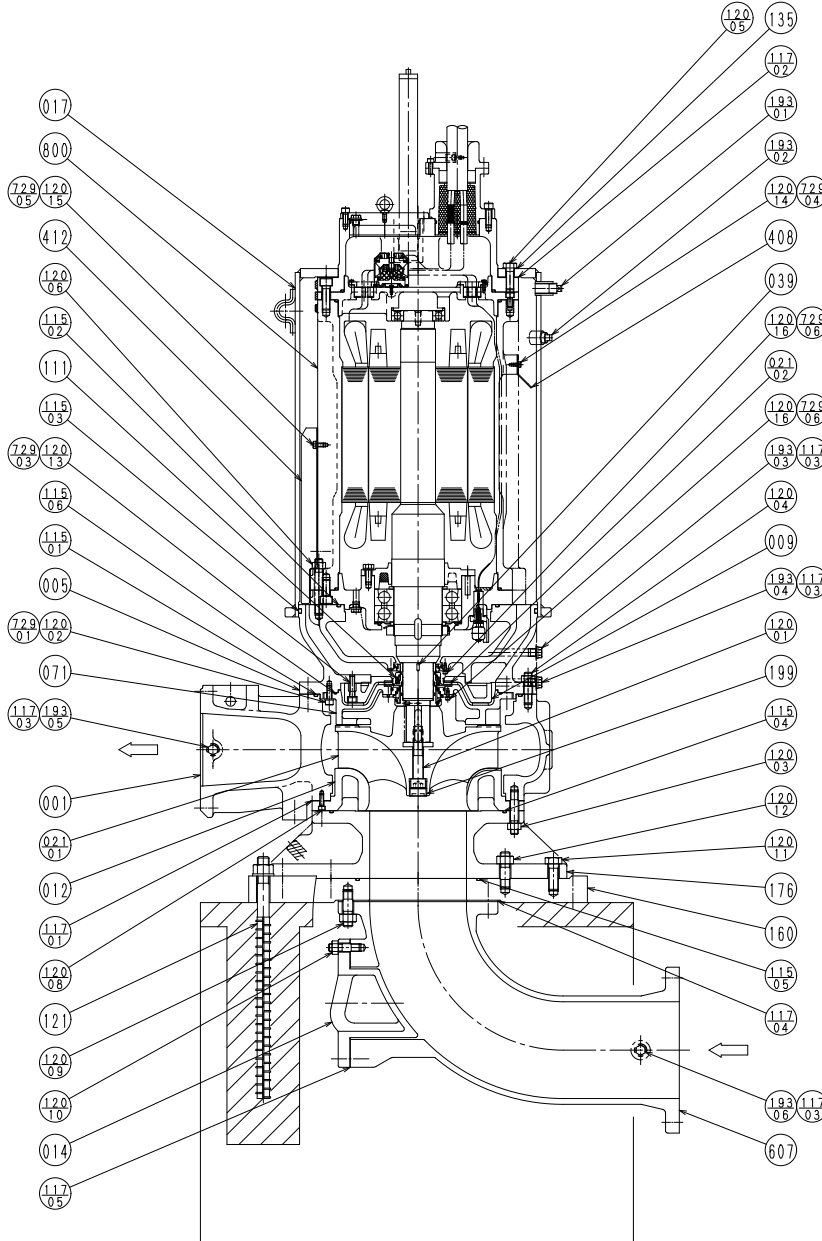
Sectional View

Project:

Model:

Chk'd:

Date:

**Model DSCA4C Drypit Application
Semi-Open Impeller – ICS option**


Part No.	Part Name	Material	No. for 1 Unit
800	Motor	-	1 Set
729-06	Spring Washer	AISI 304	8
729-05	Spring Washer	AISI 304	8
729-04	Spring Washer	AISI 304	4
729-03	Spring Washer	AISI 304	4
729-01	Spring Washer	AISI 304	8
607	Suction Elbow	ASTM A48 CL35	1
412	Guide Plate	AISI 304	4
408	Baffle Plate	AISI 304	2
199	Impeller Bolt Cap	AISI 304	1
193-06	Plug (Gauge Connection)	AISI 304	1
193-05	Plug (Gauge Connection)	AISI 304	1
193-04	Plug (Coolant Drain)	AISI 304	1
193-03	Plug (Leak Check)	AISI 304	1
193-02	Plug (Coolant Full Level)	AISI 304	1
193-01	Plug (Coolant Supply)	AISI 304	1
176	Suction Stand	ASTM A48 CL35	1
160	Base	ASTM A283	1
135-01	Seal Washer	AISI 304/NBR	8
121	Anchor Bolt	AISI 304	4
120-16	Hex. Socket Cap Screw	AISI 303	8
120-15	Hex. Head Bolt	AISI 304	8
120-14	Hex. Head Bolt	AISI 304	4
120-13	Hex. Socket Cap Screw	AISI 304	4
120-12	Stud Bolt/Nut	ASTM A283	8
120-11	Hex. Head Bolt	ASTM A283	8
120-10	Stud Bolt/Nut	ASTM A283	8
120-09	Stud Bolt/Nut	ASTM A283	12
120-08	Hex. Socket Cap Screw	AISI 304	4
120-06	Stud Bolt/Nut	AISI 304	8
120-05	Hex. Head Bolt	AISI 304	8
120-04	Stud Bolt/Nut	AISI 304	12
120-03	Stud Bolt/Nut	AISI 400	12
120-02	Hex. Socket Cap Screw	AISI 304	8
120-01	Impeller Bolt	AISI 403	1
117-05	Sheet Gasket	Non-Asbestos	1
117-04	Sheet Gasket	Non-Asbestos	1
117-03	Sheet Gasket	-	4
117-02	Sheet Gasket	NBR	1
117-01	Sheet Gasket	Non-Asbestos	1 Set
115-06	O-Ring	NBR	1
115-05	O-Ring	NBR	1
115-04	O-Ring	NBR	1
115-03	O-Ring	NBR	1
115-02	O-Ring	NBR	1
115-01	O-Ring	NBR	1
111	Mechanical Seal	-	1 Set
071	Side Plate	ASTM A48 CL35	1
039	Key	AISI 316	1
021-02	Impeller	ASTM CF8	1
021-01	Impeller	ASTM A48 CL35	1
017	Cooling Jacket	ASTM A283 Gr. D	1
014	Handhole Cover	ASTM A48 CL35	1
012	Suction Cover	ASTM A48 CL35	1
009	Inner Casing	ASTM A48 CL35	1
005	Intermediate Casing	ASTM A48 CL35	1
001	Pump Casing	ASTM A48 CL35	1

**For reference only;
consult spare parts pricing for available spare parts**



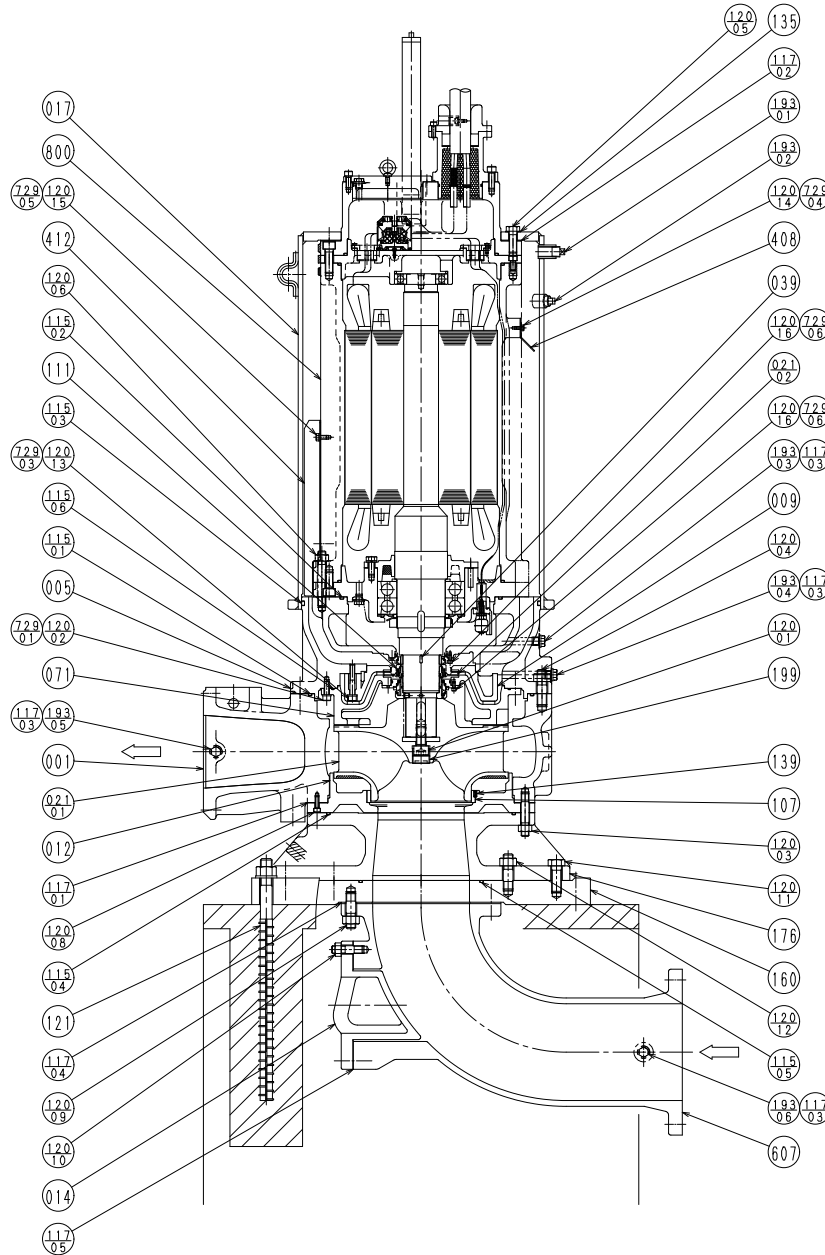
Sectional View

Project: _____

Model: _____

Chk'd: _____

Date: _____

**Model DSCA4C Drypit Application
Enclosed Impeller – ICS option**


Part No.	Part Name	Material	No. for 1 Unit
800	Motor	-	1 Set
729-06	Spring Washer	AISI 304	8
729-05	Spring Washer	AISI 304	8
729-04	Spring Washer	AISI 304	4
729-03	Spring Washer	AISI 304	4
729-01	Spring Washer	AISI 304	8
607	Suction Elbow	ASTM A48 CL35	1
412	Guide Plate	AISI 304	4
408	Baffle Plate	AISI 304	2
199	Impeller Bolt Cap	AISI 304	1
193-06	Plug (Gauge Connection)	AISI 304	1
193-05	Plug (Gauge Connection)	AISI 304	1
193-04	Plug (Coolant Drain)	AISI 304	1
193-03	Plug (Leak Check)	AISI 304	1
193-02	Plug (Coolant Full Level)	AISI 304	1
193-01	Plug (Coolant Supply)	AISI 304	1
176	Suction Stand	ASTM A48 CL35	1
160	Base	ASTM A283	1
139	Spring Pin	AISI 304	2
135-01	Seal Washer	AISI 304/NBR	8
121	Anchor Bolt	AISI 304	4
120-16	Hex. Socket Cap Screw	AISI 303	8
120-15	Hex. Head Bolt	AISI 304	8
120-14	Hex. Head Bolt	AISI 304	4
120-13	Hex. Socket Cap Screw	AISI 304	4
120-12	Stud Bolt/Nut	ASTM A283	8
120-11	Hex. Head Bolt	ASTM A283	8
120-10	Stud Bolt/Nut	ASTM A283	8
120-09	Stud Bolt/Nut	ASTM A283	12
120-08	Hex. Socket Cap Screw	AISI 304	4
120-06	Stud Bolt/Nut	AISI 304	8
120-05	Hex. Head Bolt	AISI 304	8
120-04	Stud Bolt/Nut	AISI 304	12
120-03	Stud Bolt/Nut	AISI 400	12
120-02	Hex. Socket Cap Screw	AISI 304	8
120-01	Impeller Bolt	AISI 403	1
117-05	Sheet Gasket	Non-Asbestos	1
117-04	Sheet Gasket	Non-Asbestos	1
117-03	Sheet Gasket	-	4
117-02	Sheet Gasket	NBR	1
117-01	Sheet Gasket	Non-Asbestos	1 Set
115-06	O-Ring	NBR	1
115-05	O-Ring	NBR	1
115-04	O-Ring	NBR	1
115-03	O-Ring	NBR	1
115-02	O-Ring	NBR	1
115-01	O-Ring	NBR	1
111	Mechanical Seal	-	1 Set
107	Casing Ring	AISI 420	1
071	Side Plate	ASTM A48 CL35	1
039	Key	AISI 316	1
021-02	Impeller	ASTM CF8	1
021-01	Impeller	ASTM A48 CL35	1
017	Cooling Jacket	ASTM A283 Gr. D	1
014	Handhole Cover	ASTM A48 CL35	1
012	Suction Cover	ASTM A48 CL35	1
009	Inner Casing	ASTM A48 CL35	1
005	Intermediate Casing	ASTM A48 CL35	1
001	Pump Casing	ASTM A48 CL35	1

**For reference only;
consult spare parts pricing for available spare parts**

Motor Specifications

Project: _____ Model: _____ Chk'd: _____ Date: _____

1. MOTOR SPECIFICATIONS

Type	Air-filled watertight three phase induction motor
Frequency and Voltage	60Hz, 460V
Insulation class	H
Service factor	1.15
Max. allowable starts	15 starts per hour (4P/6P 50-145HP) 10 starts per hour (4P/6P/8P 175-245HP, 10P 50-145HP)
Protection	Thermal detector for each phase Float type leakage detector Thermal detector for thrust bearing (optional)

2. STARTING METHOD

Direct on line (DOL) starting and variable frequency drive (VFD) starting apply to Ebara submersible motor pump, type DSC4.

If a VFD drive is selected, minimum frequency is 30Hz.

3. CABLE

Watertight rubber-insulated flexible cable conforming to UL & CSA is provided.

Detailed specifications are shown in **Table 5-2 CABLE DATA**.

Cables provided for the motor consist of the following:

Protection : AWG #14/5C (AWG#14/8C if thermal detector for thrust bearing is required)

Power supply : See **Table 5-1 MOTOR DATA**.

Standard length of cables : 50 ft. (15.25 m.)

Electrical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

Table 5-1 Motor Data 60Hz 460V
1800 RPM

Pole	kW	HP	Frame	Full Load (A)	Efficiency (%)			Power Factor (%)		
					1/2 Load	3/4 Load	1/1 Load	1/2 Load	3/4 Load	1/1 Load
4	37	50	315	65	80.4	84.2	85.9	71.5	79.5	82.9
	45	60	315	77	82.3	85.9	87.2	72.4	80.3	83.7
	55	75	315	93	83.7	87.0	88.2	72.9	80.6	83.8
	75	100	315	124	85.1	88.0	89.0	76.0	82.8	85.1
	90	120	380	144	85.0	88.3	89.6	77.2	84.5	87.4
	110	145	380	176	85.7	88.9	90.2	75.4	83.4	86.9
	132	175	380	204	86.7	89.6	90.7	82.9	88.0	89.6
	150	200	480	233	86.7	89.8	91.2	78.1	85.4	88.4
	160	215	480	253	86.7	89.8	91.2	74.9	83.2	86.9
	185	245	480	288	86.8	89.9	91.3	77.5	84.9	88.1

Pole	kW	HP	Start		Cable		Mech. Seal size	Bearing size	
			Current (%)	Torque (%)	Size (AWG#)	Number		Lower	Upper
4	37	50	570	227	4	1	63	7220BDB	6212ZZ
	45	60	566	217	4	1	63	7220BDB	6212ZZ
	55	75	610	226	1	1	63	7220BDB	6212ZZ
	75	100	581	219	1	1	75	7220BDB	6212ZZ
	90	120	708	261	2/0	1	100	7222BDB	6216ZZ
	110	145	752	288	4/0	1	100	7222BDB	6216ZZ
	132	175	740	168	4/0	1	100	7222BDB	6216ZZ
	150	200	777	182	1	2	100	7322BDB	6218ZZ
	160	215	790	187	1	2	100	7322BDB	6218ZZ
	185	245	791	186	2/0	2	100	7326BDB	6218ZZ

Electrical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

Motor Data 60Hz 460V
1200 RPM

Pole	kW	HP	Frame	Full Load (A)	Efficiency (%)			Power Factor (%)		
					1/2 Load	3/4 Load	1/1 Load	1/2 Load	3/4 Load	1/1 Load
6	37	50	315	64	83.2	86.2	87.0	72.6	80.2	83.1
	45	60	315	82	79.6	83.7	85.3	67.1	76.1	80.4
	55	75	380	94	83.1	86.7	88.1	70.8	79.3	83.2
	75	100	380	129	82.9	86.6	88.2	68.3	77.9	82.3
	90	120	380	152	83.8	87.2	88.7	72.1	80.0	83.4
	110	145	380	184	85.5	88.5	89.7	71.6	79.7	83.3
	132	175	480	202	86.9	89.7	90.8	83.3	88.5	90.4
	150	200	480	226	87.7	90.3	91.3	84.9	89.5	91.1
	160	215	480	244	86.9	89.7	90.9	83.5	88.6	90.5
	185	245	480	283	86.6	89.6	90.8	82.4	88.0	90.0

Pole	kW	HP	Start		Cable		Mech. Seal size	Bearing size	
			Current (%)	Torque (%)	Size (AWG#)	Number		Lower	Upper
6	37	50	546	189	4	1	63	7220BDB	6212ZZ
	45	60	544	208	4	1	63	7220BDB	6212ZZ
	55	75	691	264	1	1	75	7222BDB	6216ZZ
	75	100	744	274	1	1	100	7222BDB	6216ZZ
	90	120	707	260	2/0	1	100	7222BDB	6216ZZ
	110	145	713	271	4/0	1	100	7222BDB	6216ZZ
	132	175	681	152	4/0	1	120	7226BDB	6218ZZ
	150	200	681	150	1	2	120	7226BDB	6218ZZ
	160	215	687	153	1	2	120	7226BDB	6218ZZ
	185	245	701	156	2/0	2	120	7228BDB	6218ZZ

Electrical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

Motor Data 60Hz 460V
900 RPM

Pole	kW	HP	Frame	Full Load (A)	Efficiency (%)			Power Factor (%)		
					1/2 Load	3/4 Load	1/1 Load	1/2 Load	3/4 Load	1/1 Load
8	132	175	480	214	85.9	88.8	90.0	75.3	82.7	85.8
	150	200	480	242	86.7	89.5	90.6	74.7	82.4	85.5
	160	215	480	258	86.8	89.6	90.6	74.8	82.4	85.6
	185	245	590	298	87.8	90.6	91.8	74.1	81.8	84.9

Pole	kW	HP	Start		Cable		Mech. Seal size	Bearing size	
			Current (%)	Torque (%)	Size (AWG#)	Number		Lower	Upper
8	132	175	589	142	4/0	1	120	7226BDB	6218ZZ
	150	200	593	142	1	2	120	7226BDB	6218ZZ
	160	215	592	142	2/0	2	120	7226BDB	6218ZZ
	185	245	617	138	2/0	2	120	7228BDB	6222ZZ

720 RPM

Pole	kW	HP	Frame	Full Load (A)	Efficiency (%)			Power Factor (%)		
					1/2 Load	3/4 Load	1/1 Load	1/2 Load	3/4 Load	1/1 Load
10	37	50	380	66.5	83.7	86.6	87.6	65.0	75.2	80.3
	45	60	380	79	81.9	85.4	86.7	68.8	78.0	82.3
	55	75	380	96	83.0	86.2	87.4	68.4	77.7	82.1
	75	100	480	124	84.4	87.6	88.8	73.7	81.9	85.4
	90	120	480	152	84.4	87.6	88.9	70.1	79.2	83.5
	110	145	480	186	84.4	87.6	88.9	70.4	79.3	83.4

Pole	kW	HP	Start		Cable		Mech. Seal size	Bearing size	
			Current (%)	Torque (%)	Size (AWG#)	Number		Lower	Upper
10	37	50	574	155	4	1	75	7222BDB	6216ZZ
	45	60	582	155	4	1	75	7222BDB	6216ZZ
	55	75	578	153	1	1	100	7222BDB	6216ZZ
	75	100	681	157	2/0	1	100	7222BDB	6218ZZ
	90	120	697	163	2/0	1	100	7222BDB	6218ZZ
	110	145	683	160	4/0	1	120	7226BDB	6218ZZ

Electrical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

Table 5-2 Cable Data

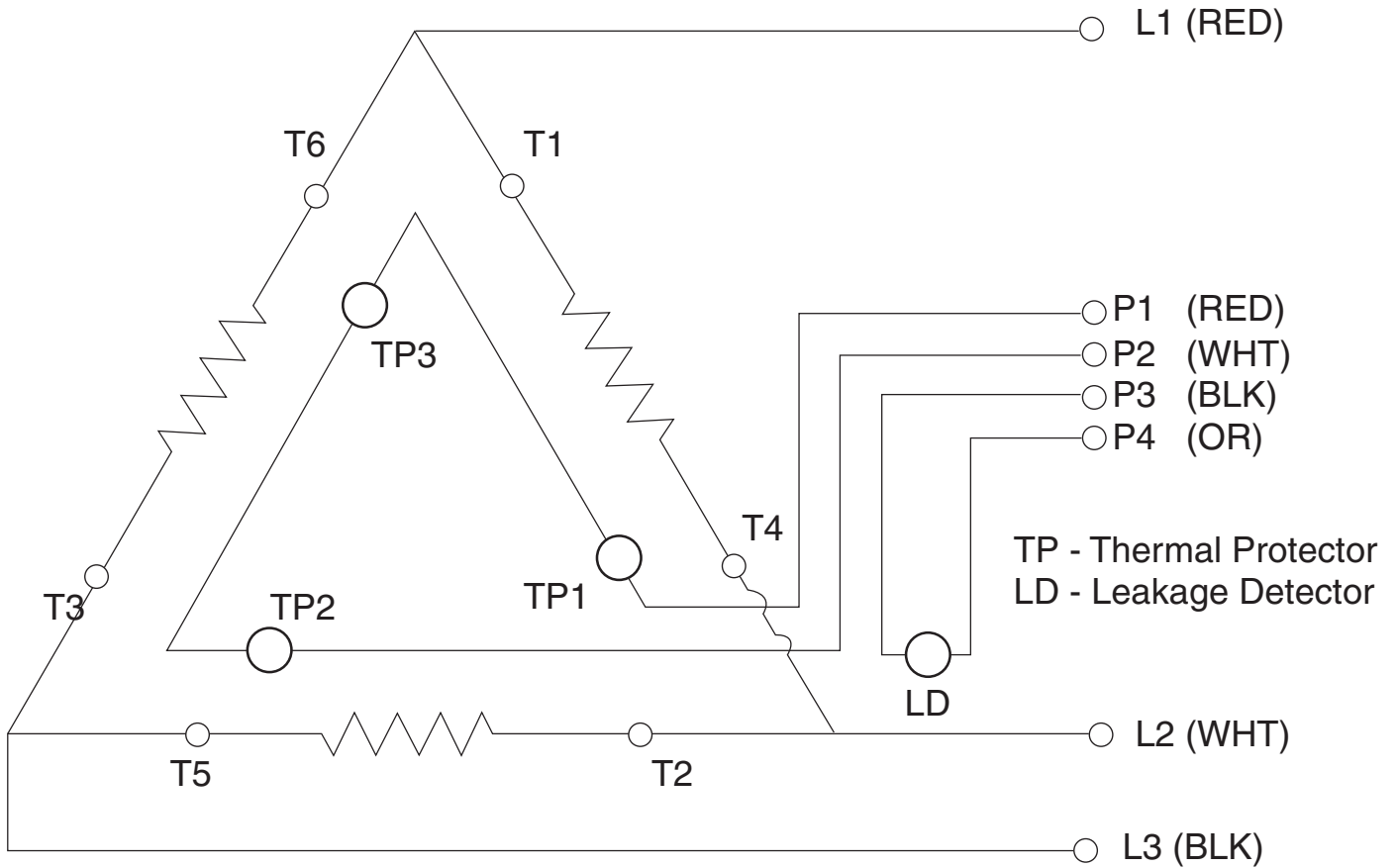
AWG	No. of Cond.	Type	Cond. Strand	Nom. Ins. Thickness		Nominal O.D.	
				inch	mm	inch	mm
14	5	SOOW	41/30	0.045	1.14	0.645	16.26
14	8	SOOW	41/30	0.045	1.14	0.810	20.57
4	4	W	259	0.060	1.52	1.210	30.73
1	4	W	259	0.080	2.03	1.595	40.51
2/0	4	W	259	0.080	2.03	1.845	46.86
4/0	4	W	259	0.080	2.03	2.145	54.48

AWG	No. of Cond.	Type	Resistance at 20°C		Approx. Weight	
			Ω/MFT	Ω/km	LBS/MFT	kg/km
14	5	SOOW	2.53	8.29	269	400
14	8	SOOW	2.53	8.29	430	640
4	4	W	0.249	0.815	1040	1548
1	4	W	0.124	0.407	2045	3044
2/0	4	W	0.078	0.256	2950	4391
4/0	4	W	0.049	0.161	3885	5783

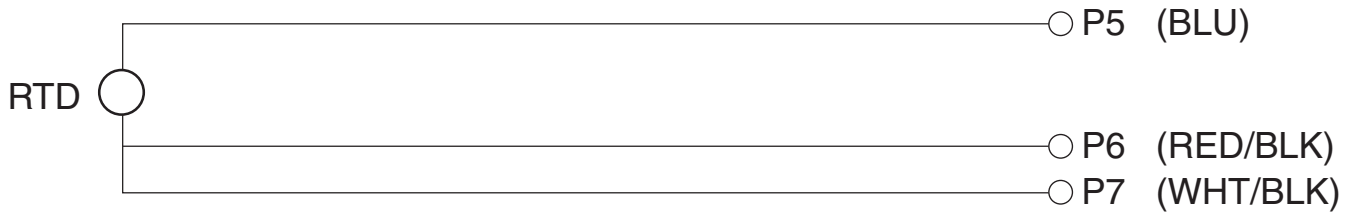
Wiring Diagram

Project: _____ Model: _____ Chk'd: _____ Date: _____

Single Power Cable (50HP-175HP models)



OPTION:

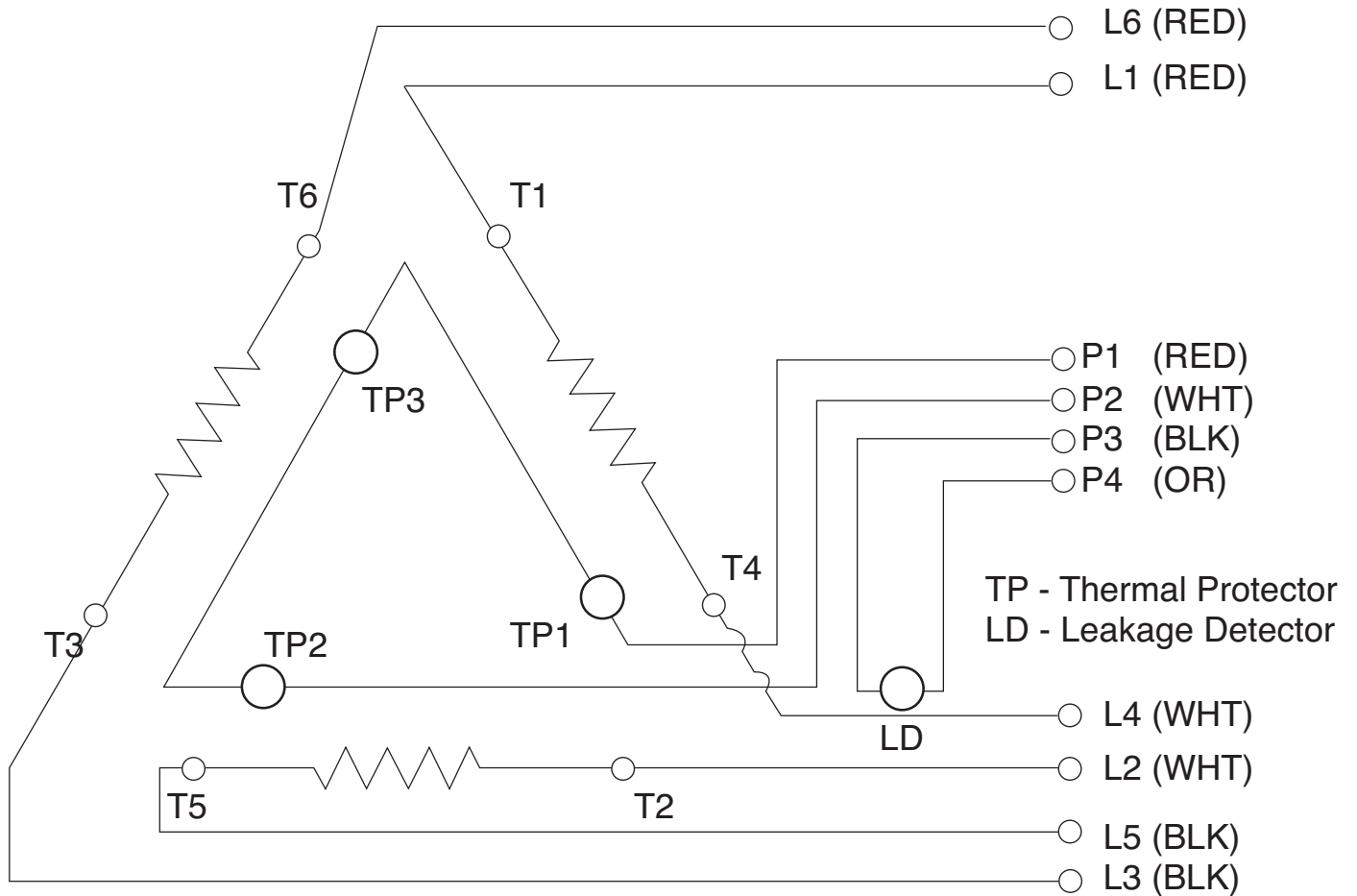


RTD - Resistance Temperature Detector

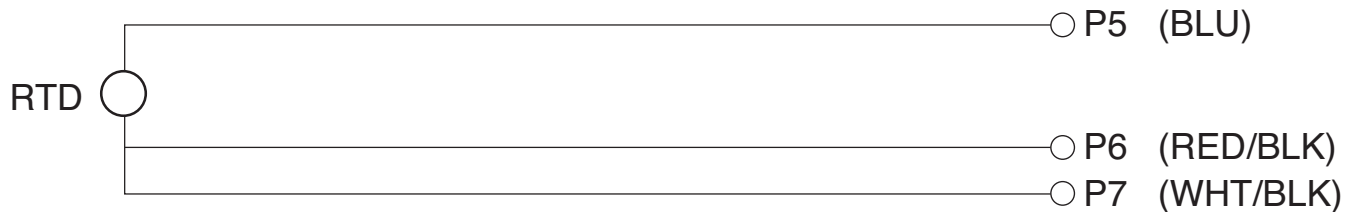
Wiring Diagram

Project: _____ Model: _____ Chk'd: _____ Date: _____

Dual Power Cable (200HP-245HP models)



OPTION:



RTD - Resistance Temperature Detector

Technical Data - DSC4

Project:	Model:	Chk'd:	Date:
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Mechanical Seal

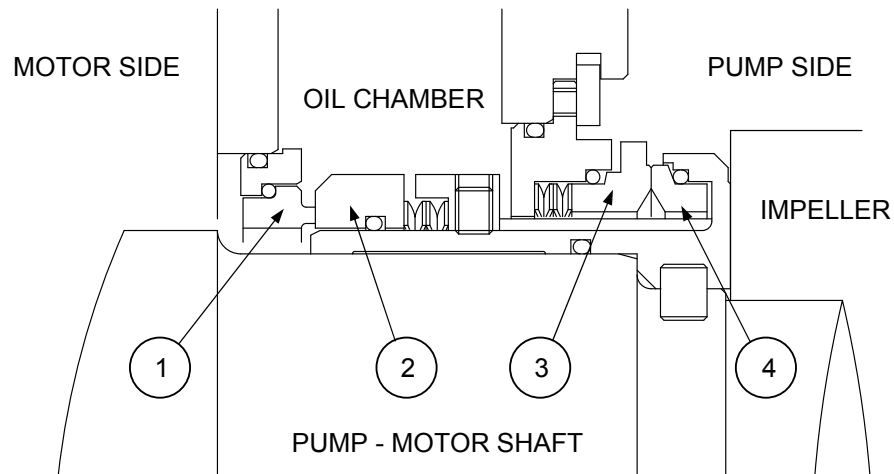
Ebara DSC4 pumps employ **cartridge type, duplex mechanical seals in tandem arrangement**.

Cartridge type mechanical seal provide:

- Easy maintenance because it is handled as one unit
- High reliability due to assembly and adjustment separate from the bowl unit

Duplex mechanical seals in tandem arrangement provide:

- High reliability because of dual seals construction
- Long life operation with oil lubrication



Part No.	Part Name	Material
1	STATIONARY RING (UPPER)	CARBON
2	SEAL RING (UPPER)	CERAMIC+STAINLESS STEEL
3	STATIONARY RING(LOWER)	SILICON CARBIDE
4	SEAL RING (LOWER)	SILICON CARBIDE

Technical Data - DSC4C

Project:

Model:

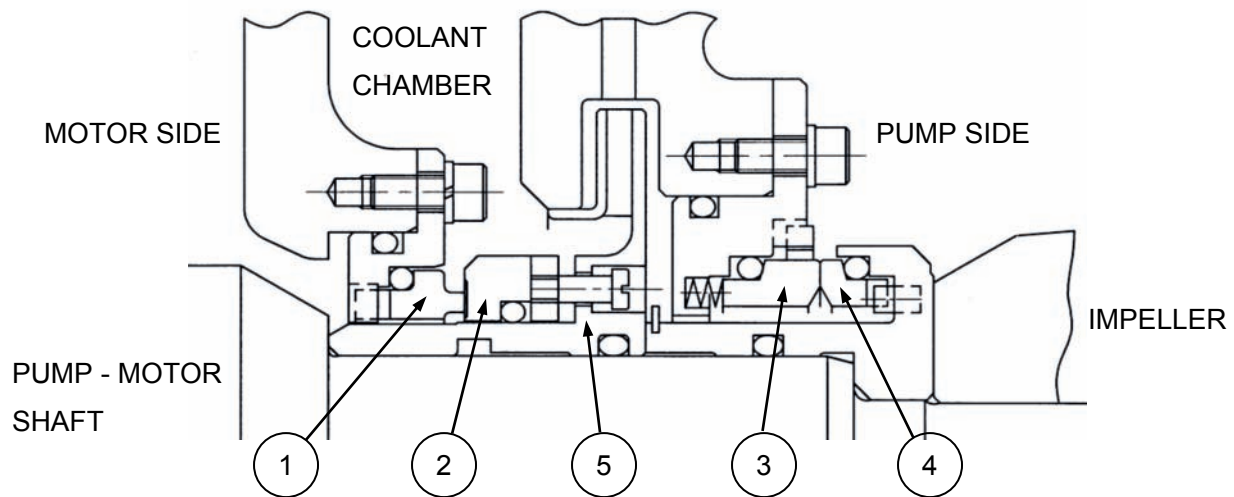
Chk'd:

Date:

Mechanical Seal - ICS Option

Ebara DSC4C pump employs the **duplex mechanical seals in tandem arrangement between which an impeller for circulating coolant is located.**

The seals prevent pumped liquid leakage to the coolant chamber and coolant leakage to the motor side, providing long-life operation with lubrication by propylene glycol in coolant.



NO.	DESCRIPTION	MATERIAL
1	STATIONARY RING (UPPER)	CARBON
2	SEAL RING (UPPER)	CERAMIC+STAINLESS STEEL
3	STATIONARY RING (LOWER)	SILICON CARBIDE
4	SEAL RING (LOWER)	SILICON CARBIDE
5	IMPELLER FOR COOLANT	STAINLESS STEEL CASTING

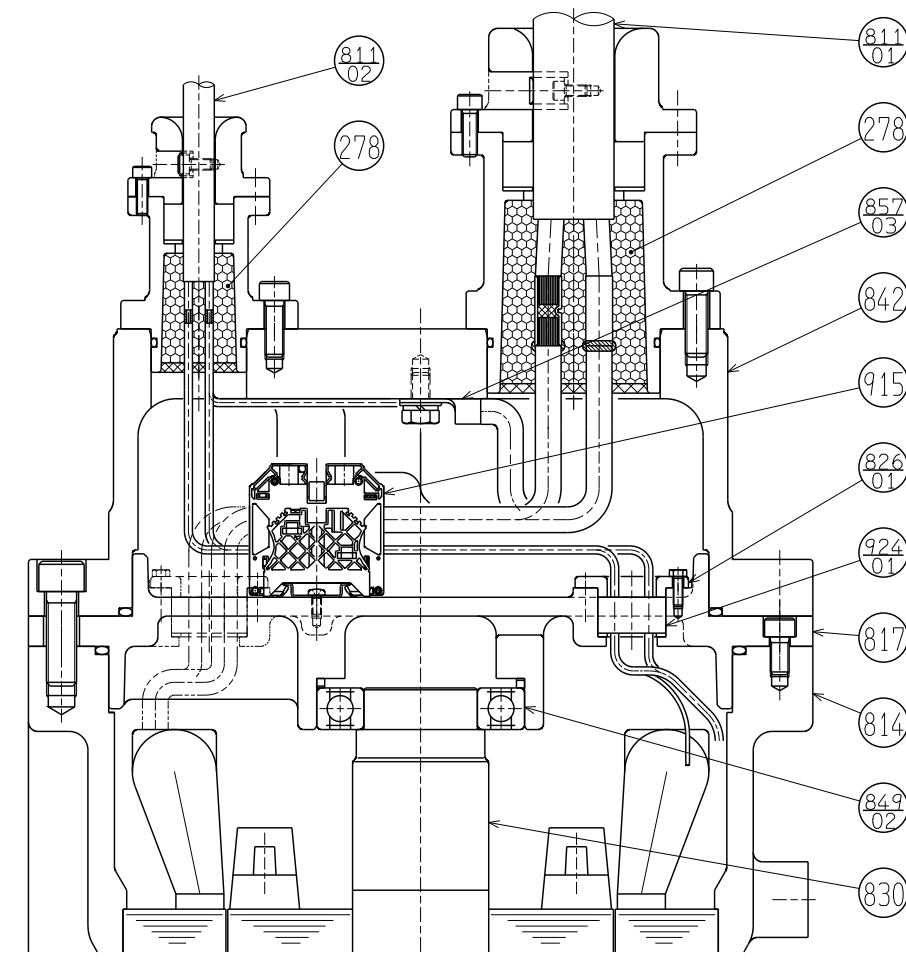
Technical Data

Project: _____

Model: _____

Chk'd: _____

Date: _____

Cable Entry – Sectional View


Part No.	Part Name	Material	No. for 1 Unit
278	Sealing Compound	Epoxy Resin	-
811-01	Line Cord	Type W 50 -175HP	1
		200 - 245HP	2
811-02	Control Cord	Type SOOW	1
814	Frame	Cast Iron	1
817	Opposite Side Bracket	Cast Iron	1
826-01	Gland	Cast Iron	1
830	Shaft	420 SS (4P/6P 50-145HP) 403Q SS (4P/6P/8P 175-245HP, 10P 50-145HP)	1
842	Motor Cover	Cast Iron	1
849-02	Ball Bearing	-	1
857-03	Ground Terminal	Copper	-
915	Terminal Board Assy.	-	1
924-01	Packing	NBR	1

Technical Data

Project:

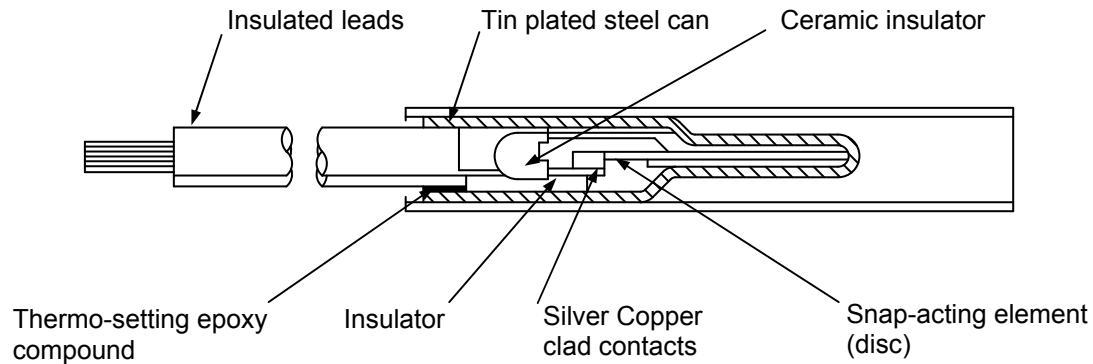
Model:

Chk'd:

Date:

2. THERMAL DETECTOR FOR MOTOR WINDING

The motor shall be equipped with a Miniature Thermal Protector (MTP). This MTP is embedded in the windings and will act to protect the motor from over-heating. If the motor winding temperature reaches the MTP acting point it will activate and open the circuit.


Switch Rating

CONTACT RATING : AC115V 18A / AC230C 13A
 CONTACT TYPE : B – CONTACT (NORMALLY CLOSED)
 OPEN TEMP. : 140±5° C (284 ± 9° F)

Fig.6-2 THERMAL DETECTOR FOR MOTOR WINDING
CHARACTERISTICS

The circuit is normally closed.

The disc is operated both by the current passing through it and by heat received from the windings. When the temperature of the disc reaches a predetermined point corresponding to the maximum allowable temperature of winding, the disc snaps open to interrupt the circuit.

When the winding temperature returns to the safe operation range, the circuit is restored automatically.

Technical Data

Project:

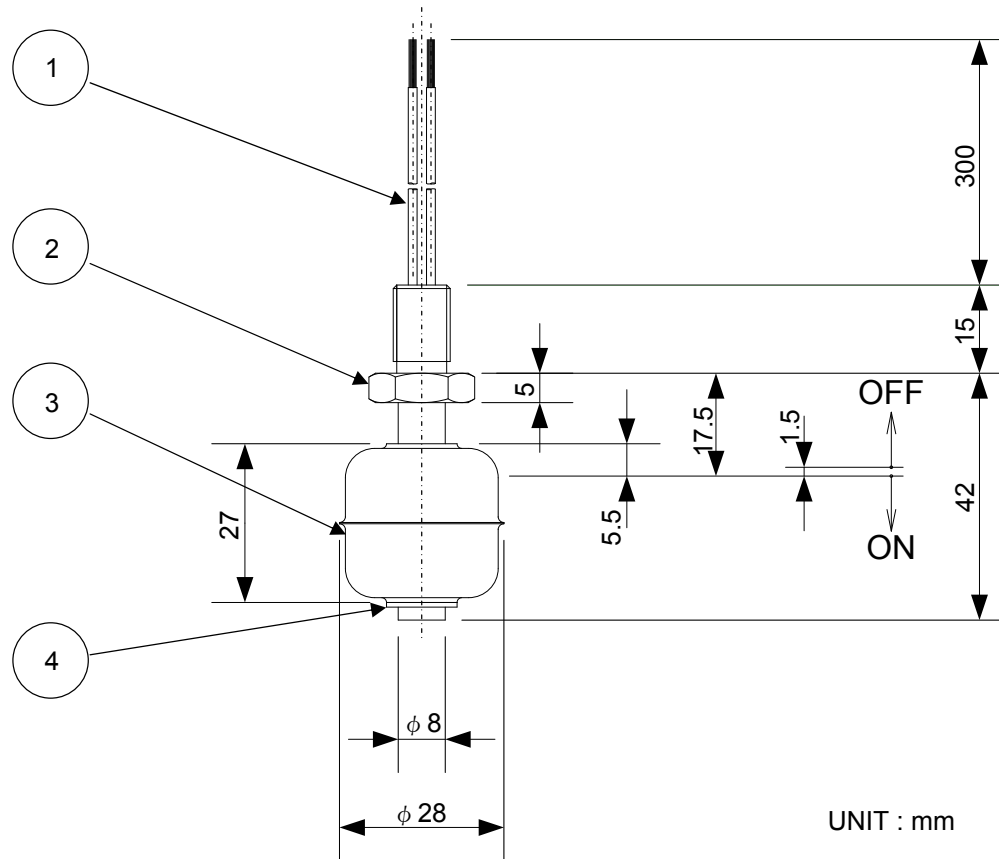
Model:

Chk'd:

Date:

3. LEAKAGE DETECTOR

A built-in float type leakage detector is fitted to sense leaking of pumping water and/or seal oil into the motor as a result of failure of the mechanical seal.


Switch Rating

CONTACT RATING : Breaking capacity : AC50VA/DC50W
 Max. breaking current : AC0.5A/DC0.5A
 Max. operating voltage : AC300V/DC300V

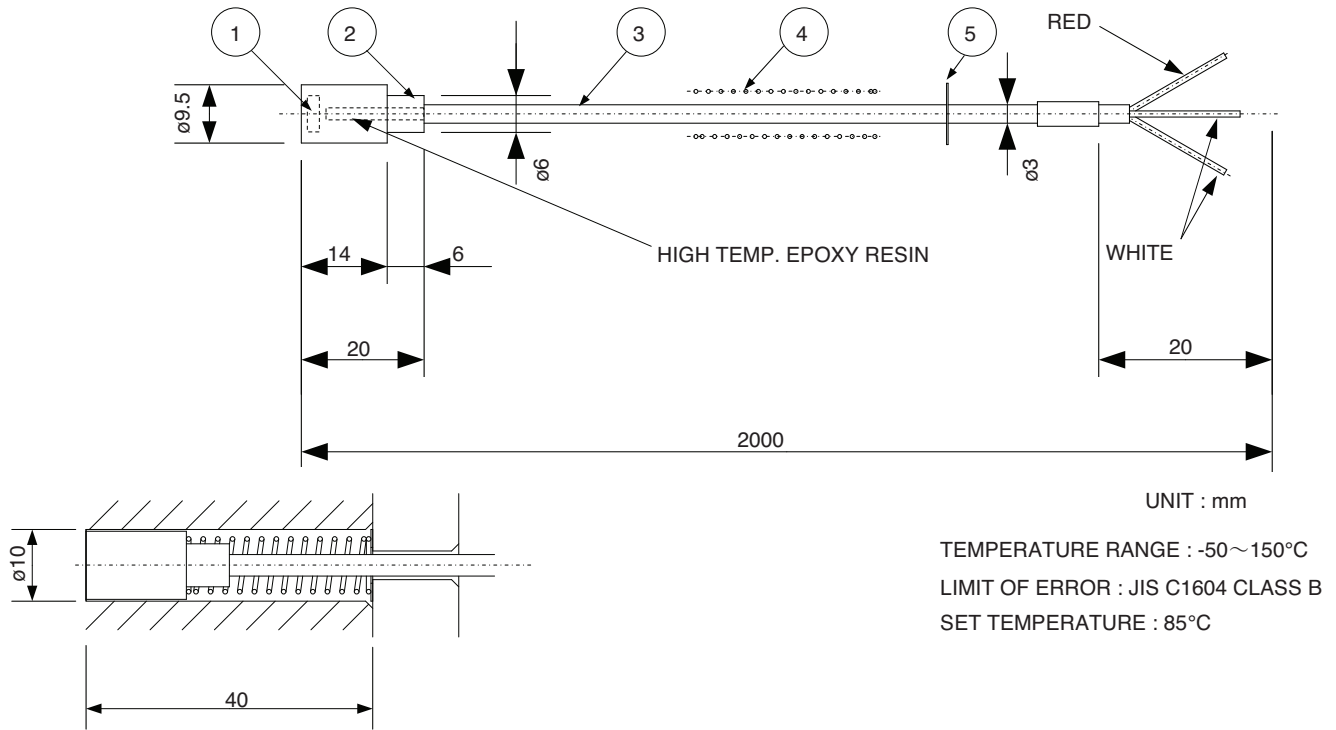
CONTACT TYPE : B-CONTACT (NORMALLY CLOSED)

Part No.	Part Name	Material	Qty/Set
1	LEAD WIRE	Heatproof Polyvinyl Chloride Wire (0.3mm)	2
2	HOUSING	316 Stainless Steel	1
3	FLOAT	316 Stainless Steel	1
4	STOPPER	316 Stainless Steel	1

Technical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

4. THERMAL DETECTOR FOR THRUST BEARING (OPTION)



ASSEMBLY OF BEARING TEMP. DETECTOR

Fig. 6-4 THERMAL DETECTOR FOR THRUST BEARING

Part No.	Part Name	Material	Qty	Remarks
1	Resistance Bulb	-	1	Pt100Ω at 0°C 3W 5mA
2	Cap	Stainless Steel	1	
3	Lead Wire	-	1	7/Ø 0.16 Teflon-Teflon
4	Spring	Stainless Steel	1	
5	Self Lock Retaining Ring	Spring Steel	1	

Technical Data

Project:	Model:	Chk'd:	Date:
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7. LUBRICATION

		Lower Bearing	Upper Bearing	Shaft Seal
Lubricant		GREASE		Turbo Oil (See Note)
Standard		NLGI grade 3		ISO VG32
MFG.	EXXON	UNIREX N3	-	TERESSO 32
	MOBIL	MOBILITH AW3	POLYREX EM	DTE OIL, OIL LIGHT

Note : Other lubricants may be used where the oil is not allowed to use.

8. SHOP PAINTING

Coating spec. No.	I	II
Preparation	SSPC – SP - 10	SSPC – SP - 3
Materials & coating nos.	Zinc rich primer x 1 Epoxy paint x 2	Zinc rich primer x 1
Color	Black	Gray
Total dry film thickness (μ m)	140	10

Spec. No.I : Surfaces contacting pumping liquid

Spec. No.II : Internal surface of motor

Note : Non ferrous material and stainless steel are not painted.

Technical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

1. PUMP RATED CAPACITY AND TOTAL HEAD

Pumping requirements in the system are stated as **Rated Capacity** and **Rated Total Head**.
 Rated capacity is the flow rate determined by the total design capacity of the pumping station and the number of operating pumps.

$$\text{Rated Capacity} = \frac{\text{Total design capacity of pumping station}}{\text{Number of operating pumps}}$$

Rated Total Head = System head at the rated capacity.

The pump is operated at the cross point of the pump Q-H (capacity-head) curve and the **System Head Curve** as shown in Fig. 1-1. The head at the cross point is defined as the rated total head of pump.

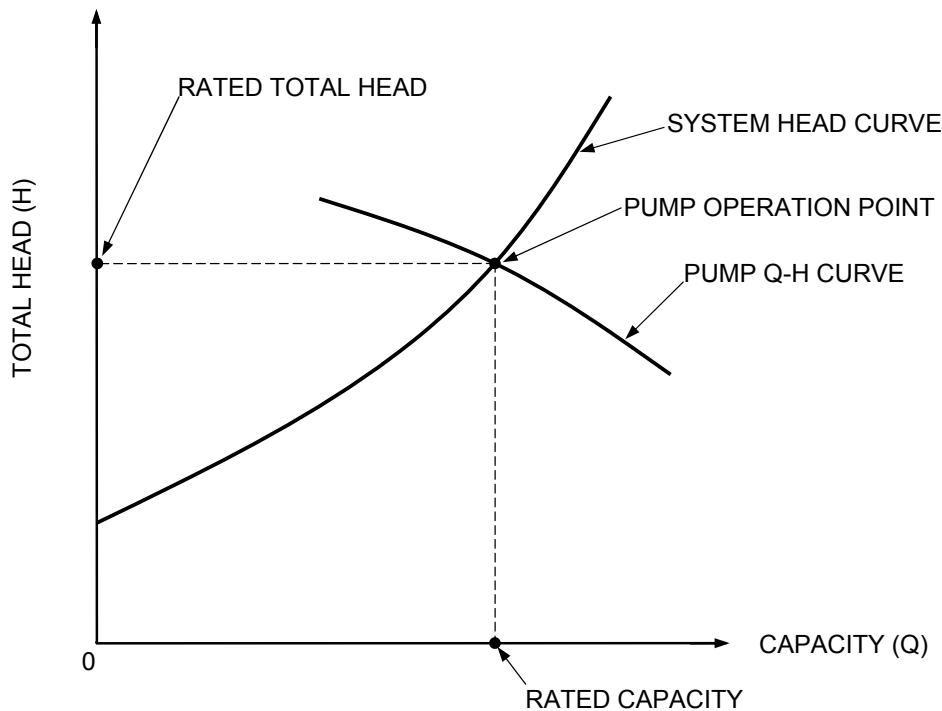


Fig. 1-1 PUMP OPERATION POINT

Technical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

2. SYSTEM HEAD

System head of the system is the sum of the **Static Head** and the **Dynamic Head**, and its curve is a quadratic curve of the flow rate as shown in Fig. 1-2.

System Head = Static head (Ha) + Dynamic Head (Hd)

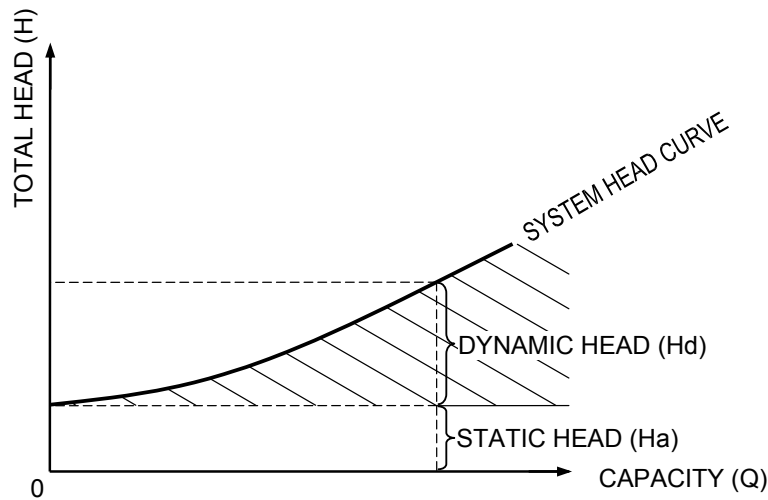


Fig. 1-2 SYSTEM HEAD CURVE

Technical Data

Project:	Model:	Chk'd:	Date:
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Static Head (Ha)

Static head arises from the difference between the pump suction pit water level and the discharge water level.

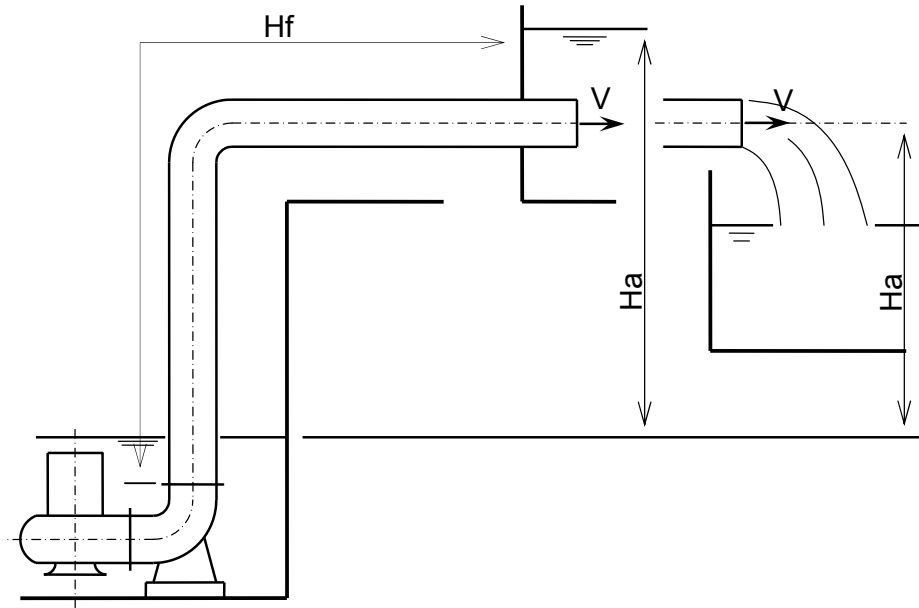


Fig. 1-3-1 STATIC HEAD

Dynamic Head (Hd) – Wet Pit

Dynamic head for Fig. 1-3-1 is as follows:

$$H_d = H_f + \frac{V^2}{2g}$$

Where, H_f : Hydraulic loss from the discharge of the QDC to the system discharge end

$\frac{V^2}{2g}$: Velocity head at the system discharge end

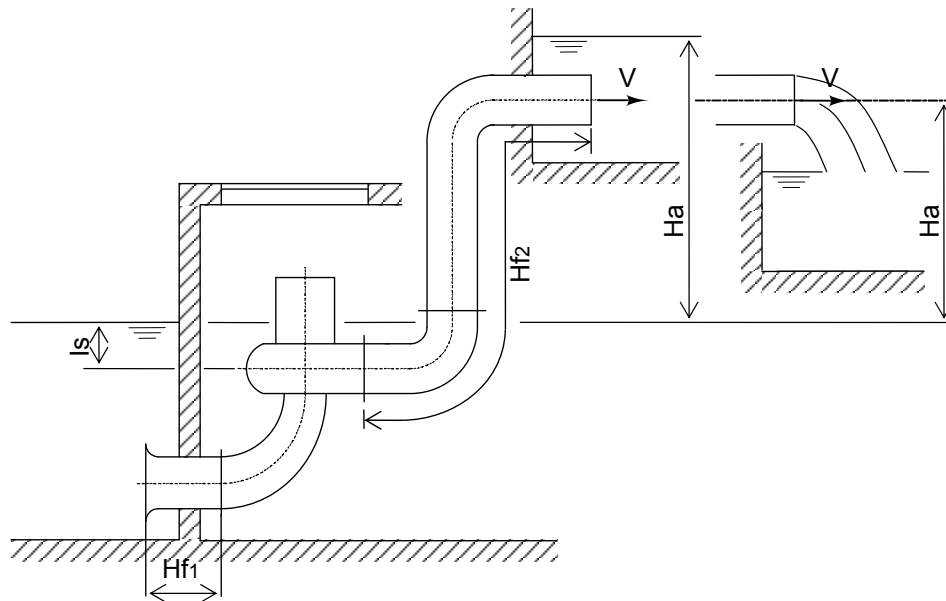
Technical Data

Project:

Model:

Chk'd:

Date:


Fig. 1-3-2 STATIC HEAD
Dynamic Head (Hd) – Dry Pit

Dynamic head for Fig. 1-3-2 is as follows:

$$Hd = Hf + \frac{V^2}{2g}$$

 Where, Hf : Hydraulic losses of piping ($Hf = Hf1 + Hf2$)

 $\frac{V^2}{2g}$: Velocity head at the system discharge end

Pump Total Head (Ht) The pump total head is a sum of the static head and the dynamic head. The pump total head may be obtained from the following equation:

$$\text{Pump Total Head (Ht)} = \text{Static Head} + \text{Dynamic Head} = (Ha + Hd)$$

 Where, Ha : **Static Head**
 Hd : **Dynamic Head**

Technical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

3. PUMP OPERATION RANGE

As stated in paragraph 1, the pump is operated at the cross point of its Q-H curve and the system head curve. Therefore, so long as the system head curve is not changed, the pump is operated at a design point. In an actual pumping system, however, the static head varies depending on the suction and/or discharge water level. As a result, the system head curve shifts as shown in Fig. 1-4.

With this shift in the system head curve, the cross point with pump Q-H varies, and this variation is termed as the **Pump Operation Range**.

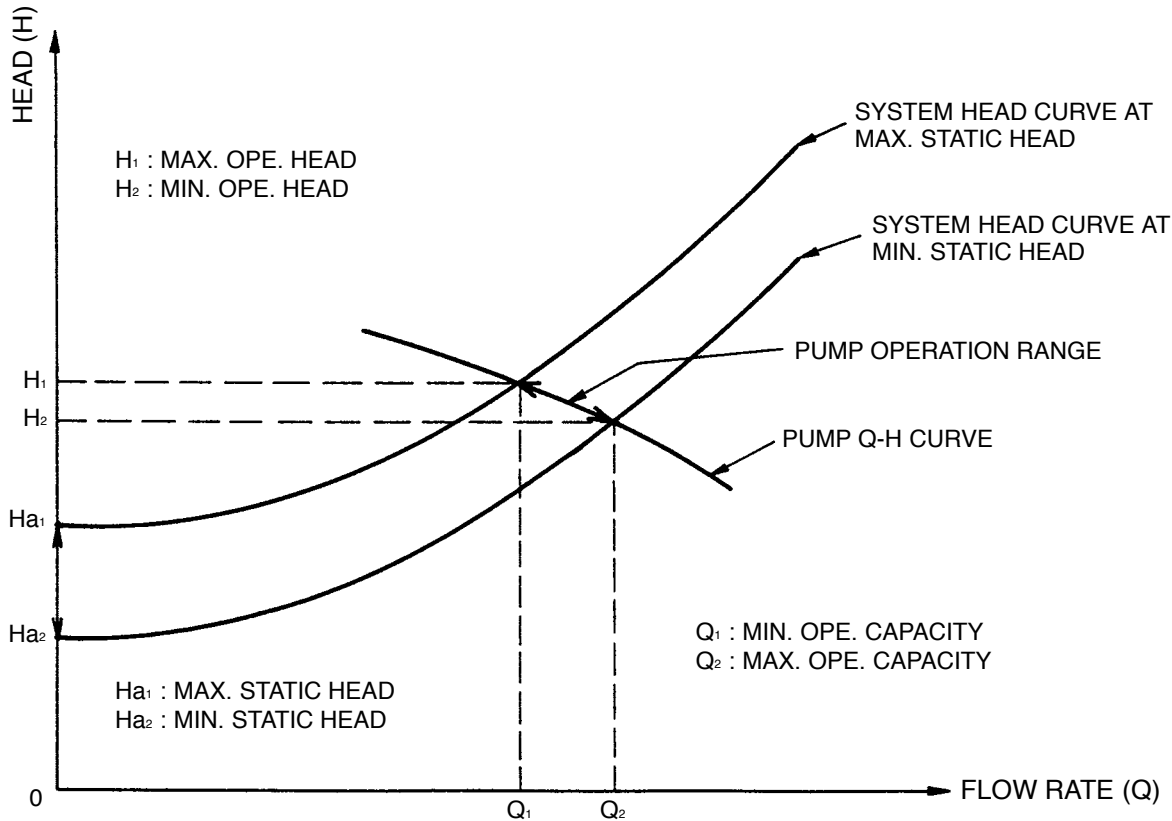


Fig. 1-4 PUMP OPERATION RANGE

Technical Data

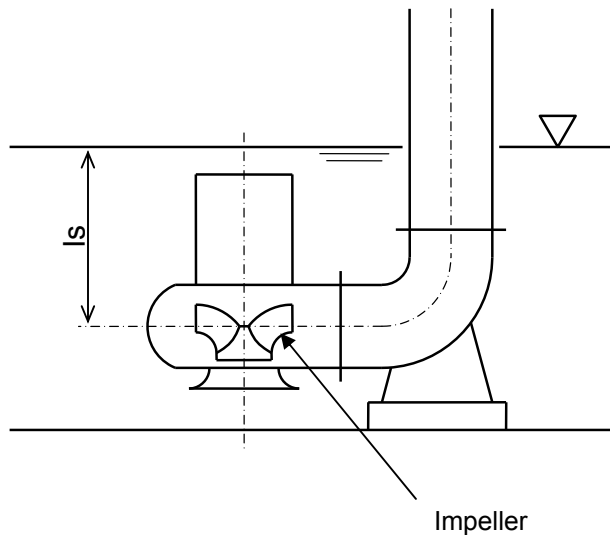
Project:	Model:	Chk'd:	Date:
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4. NPSH

Adequate suction pressure at the impeller inlet is necessary for the pump to perform as designed. This suction pressure (absolute) converted into water head is called **NPSH req.** and is shown on the pump performance curve as one of the pump characteristics.

On the other hand, actual suction pressure (absolute) converted into water head is called **NPSH av.** and is defined as shown in Fig. 1-5.

NPSH req. shall not exceed NPSH av. in the continuous operation range.



NPSH available (m)
 $NPSH_{av.} = I_s + P_a - P_v$

Where,

I_s : Submergence of impeller (m)

P_a : Atmospheric pressure (m)
 under 1 atm, $P_a = 10.3\text{m}$

P_v : Vapour pressure (m)
 water at 20c, $P_v = 0.24\text{ (m)}$

Fig. 1-5 NPSH av.

Technical Data

Project:

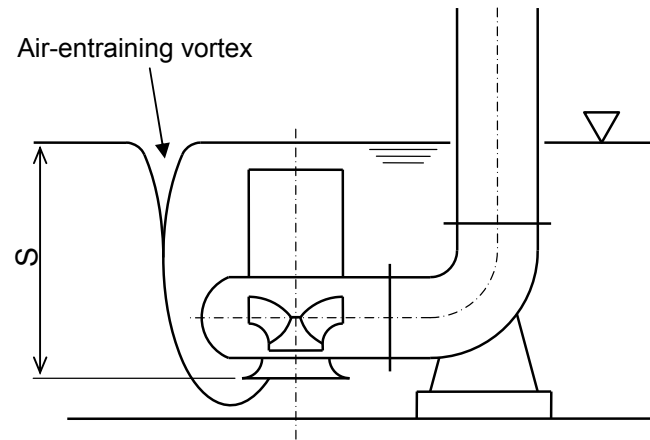
Model:

Chk'd:

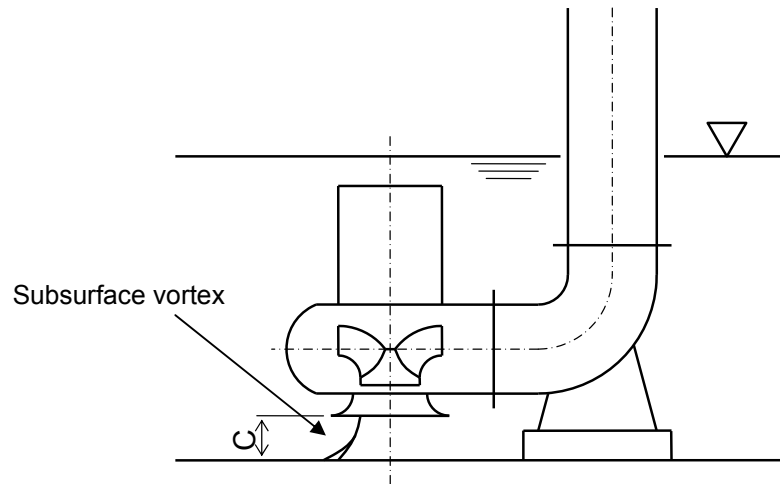
Date:

5. AIR-ENTRAINING VORTEX

Lack of enough submergence causes the generation of harmful air-entraining vortices as shown in Fig. 1-6. The submergence at which generation of vortices can be avoided is termed as the **Minimum Submergence (S)**.


Fig. 1-6 AIR-ENTRAINING VORTEX
6. SUBSURFACE VORTEX

In cases where the clearance between pump and bottom of the pit is not adequate, harmful subsurface vortices generates as shown in Fig.1-7.


Fig. 1-7 SUBSURFACE VORTICES

Technical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

7. SUBMERGENCE AND CLEARANCE

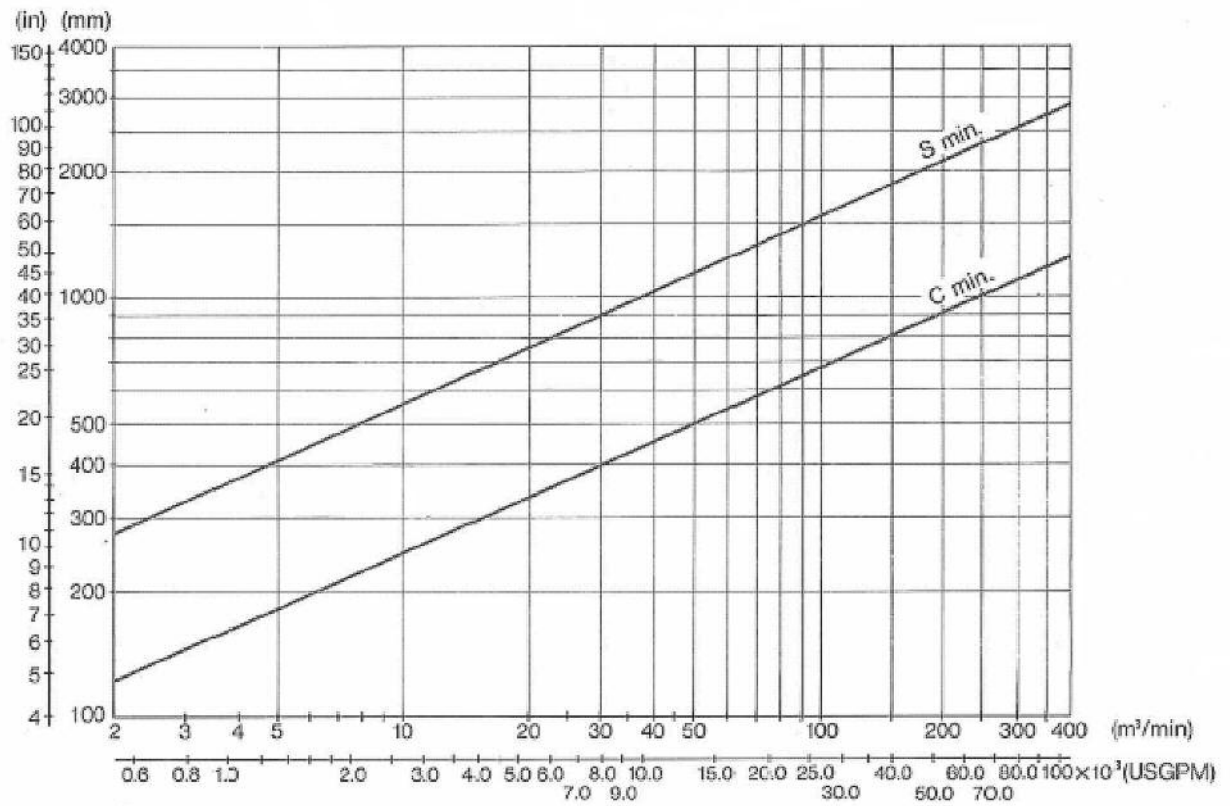
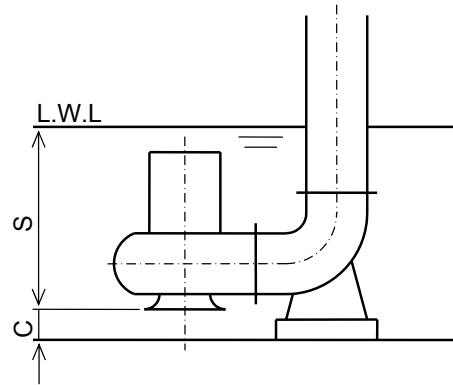


Fig. 1-8 SUBMERGENCE AND CLEARANCE

Technical Data

Project: _____ Model: _____ Chk'd: _____ Date: _____

8. PUMP SELECTION

In this paragraph, a sample selection of the DSC4 pump is demonstrated by using a simple wet pit case.

Conditions **Rated capacity: 4500 GPM**

Ha: 70 ft

Hd: 15 ft

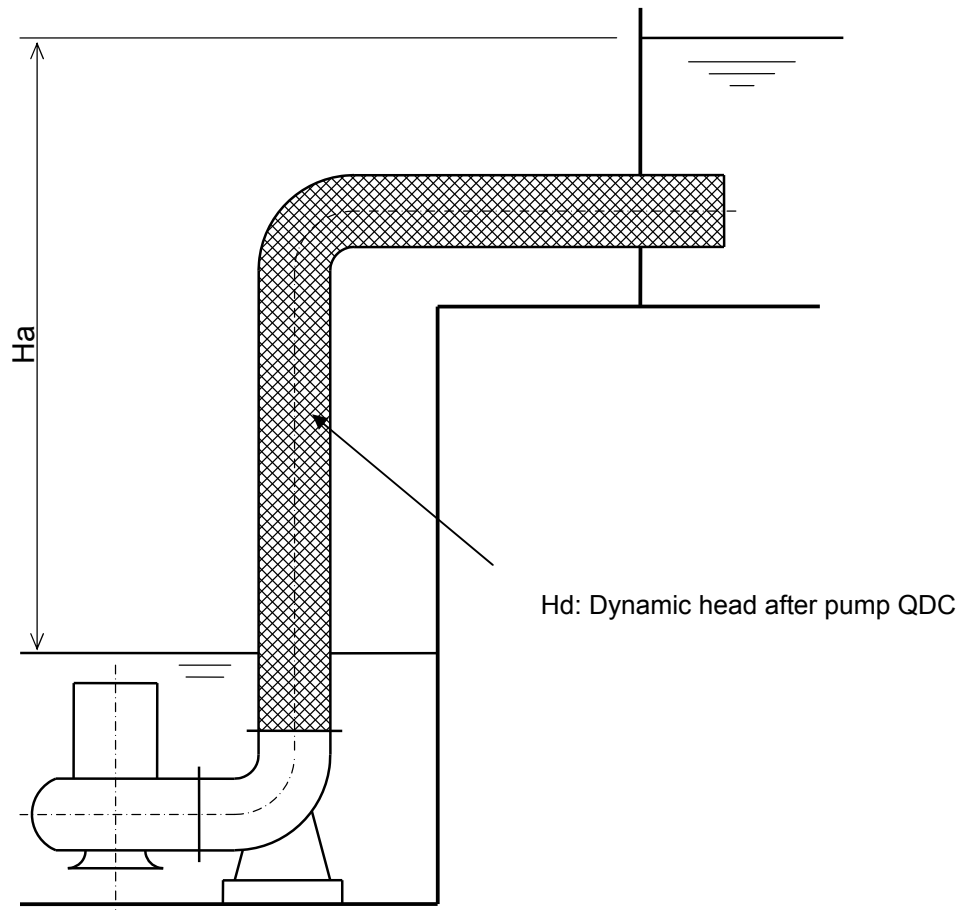


Fig.3-2 Dynamic Head

Step 1: Selection of pump model

Assuming a sum of Ha and Hd as pump total head, select pump from **DSC4 FAMILY CURVES**. In this case, the assumed total head is 85 ft, and EO-66145 is selected from family curves.

Technical Data

Project:

Model:

Chk'd:

Date:

Step 2: Check Items on the Selected Pump

Check the selected pump for the following items:

- Pump continuous operation range

Confirm that the pump continuous operation range based on the system head variation is within the continuous operable range of the performance curve.

- NPSH

NPSH req. shall not exceed NPSH av. in the continuous pump operation range.

- Motor rating

Pump power input shall not exceed motor rating in the pump operation range.

- Starting method and cable size

Check starting method and cable size with Part 5. ELECTRICAL DATA.