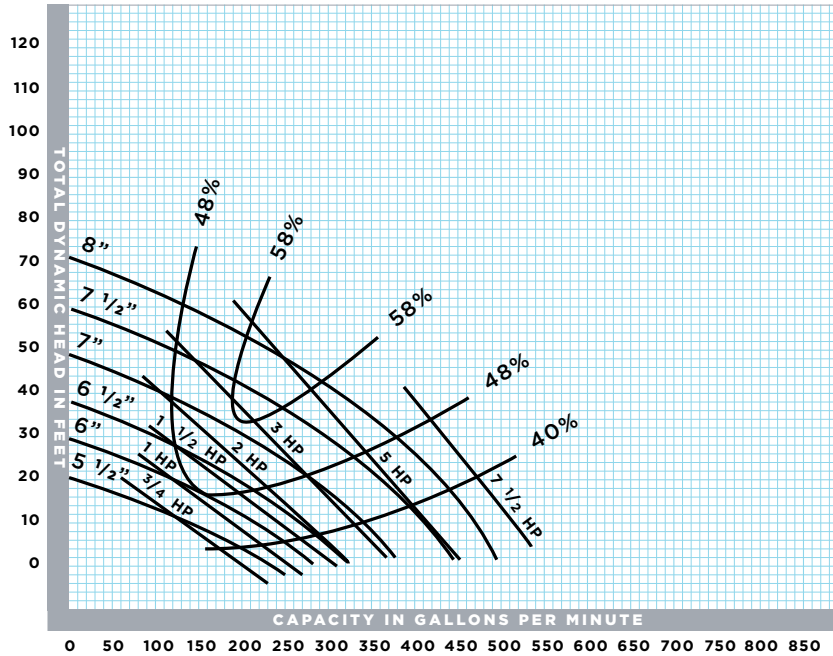


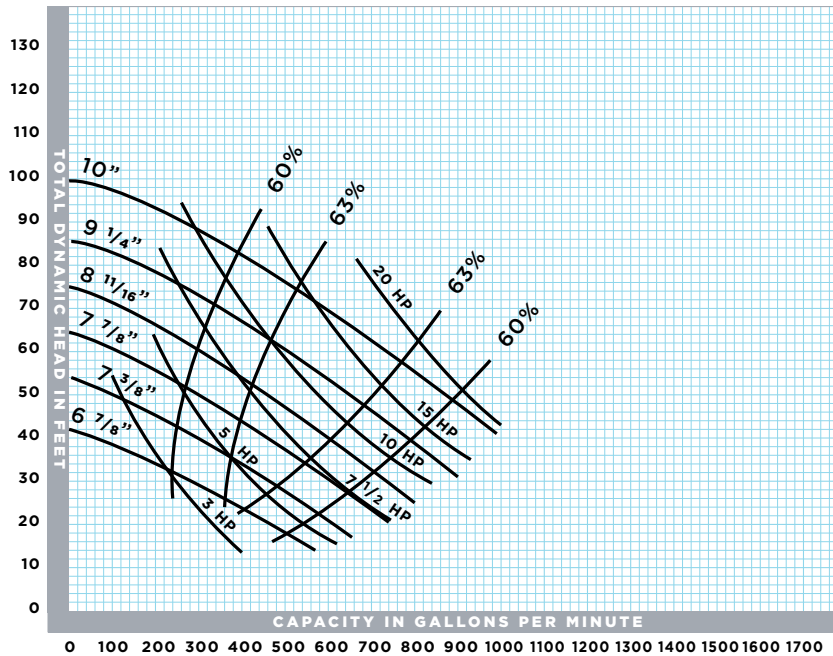
### Performance Chart



**TYPE VSS-QD QUICK-DISCONNECT**  
**SUBMERSIBLE SEWAGE PUMPS**  
 BULLETIN 233

Section 4  
 Curve Page VSS-QD-1  
 January, 1988

**1750 RPM**  
**MODEL: VSS-QD-4A QUICK-DISCONNECT**  
**DISCHARGE SIZE: 4"**  
**IMPELLER: VSS/VSA-4A-2**



**TYPE VSS-QD QUICK-DISCONNECT**  
**SUBMERSIBLE SEWAGE PUMPS**  
 BULLETIN 233

Section 4  
 Curve Page VSS-QD-1  
 January, 1988

**1750 RPM**  
**MODEL: VSS-QD-4C QUICK-DISCONNECT**  
**DISCHARGE SIZE: 4"**  
**IMPELLER: VSA-4C-2-20**

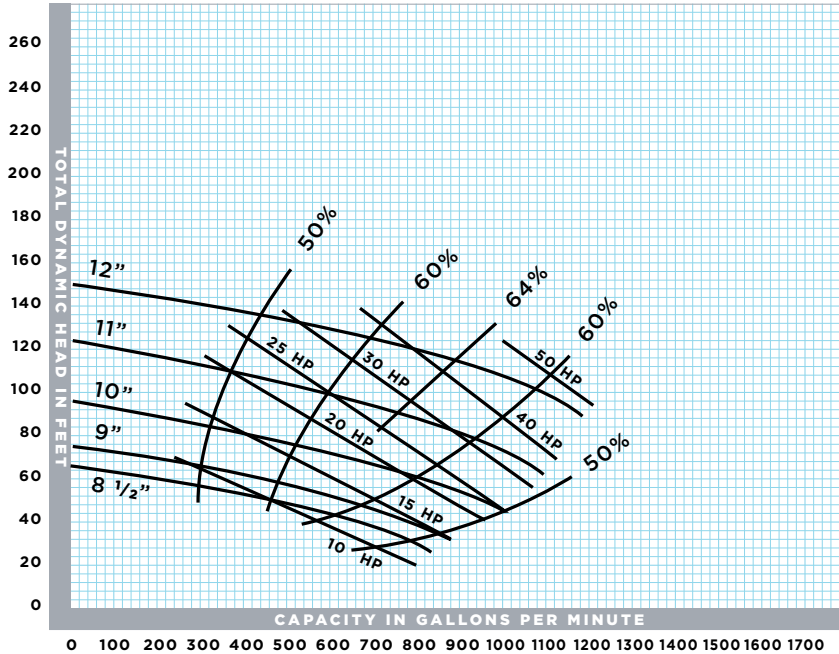


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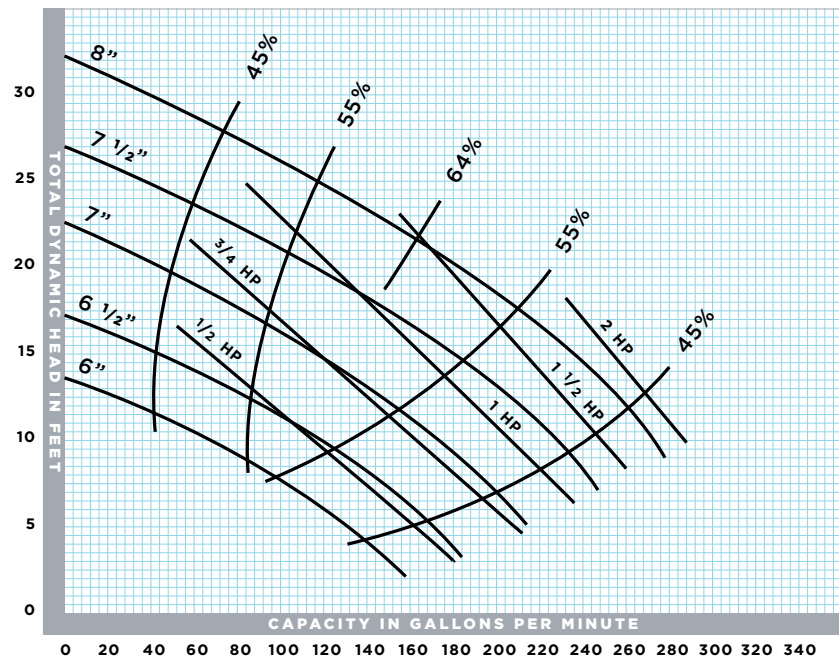
### Performance Chart



**TYPE VSS-QD QUICK-DISCONNECT**  
**SUBMERSIBLE SEWAGE PUMPS**  
**BULLETIN 233**

Section 4  
 Curve Page VSS-QD-2  
 January, 1988

**1750 RPM**  
**MODEL: VSS-QD-4E QUICK-DISCONNECT**  
**DISCHARGE SIZE: 4"**  
**IMPELLER: VSA-4C-2-50**



**TYPE VSS-QD QUICK-DISCONNECT**  
**SUBMERSIBLE SEWAGE PUMPS**  
**BULLETIN 233**

Section 4  
 Curve Page VSS-QD-2  
 January, 1988

**1150 RPM**  
**MODEL: VSS-QD-4A QUICK DISCONNECT**  
**DISCHARGE SIZE: 4"**  
**IMPELLER: VSS/VSA-4A-2**

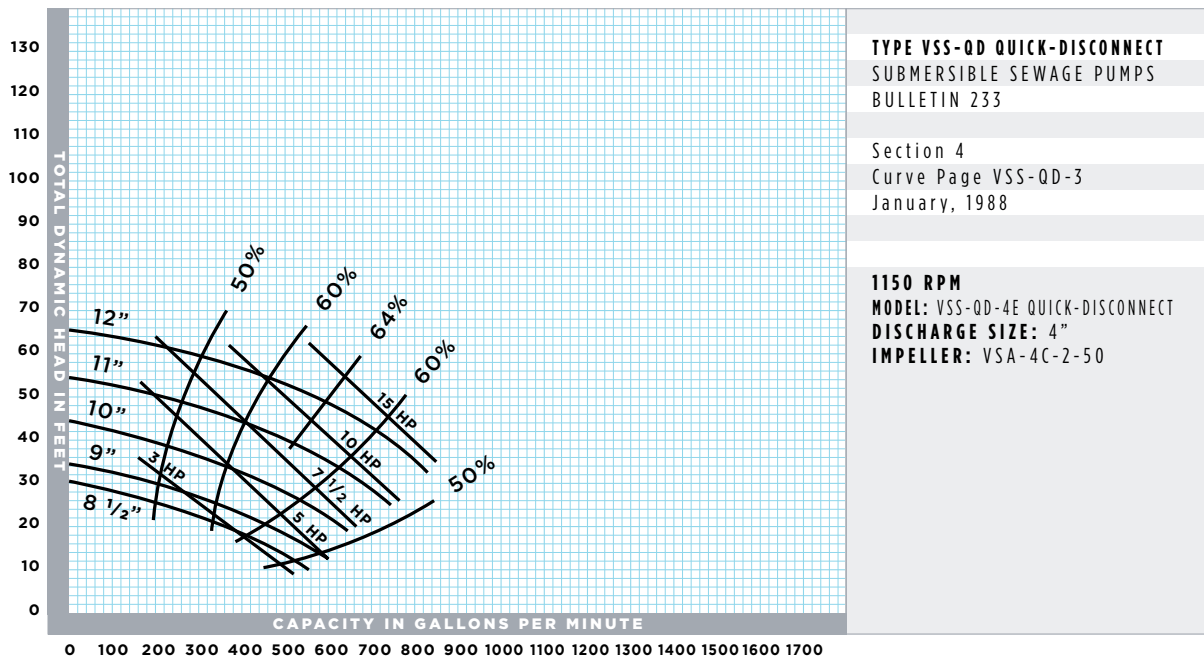
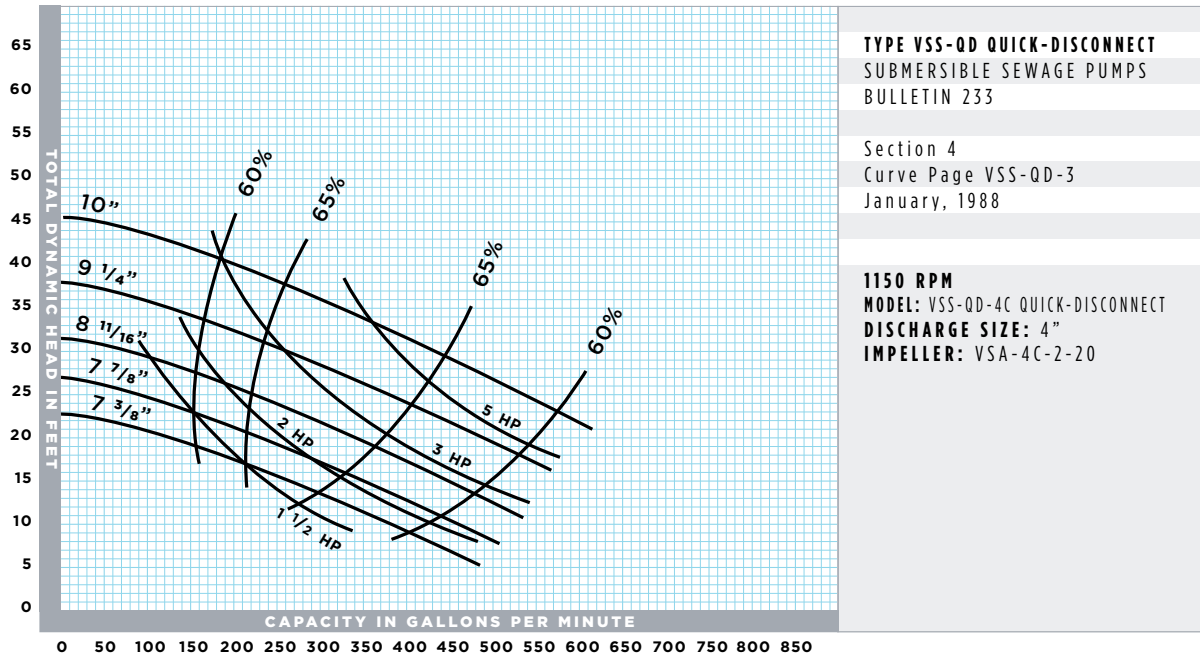


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### Performance Chart



Supplemental # 0210

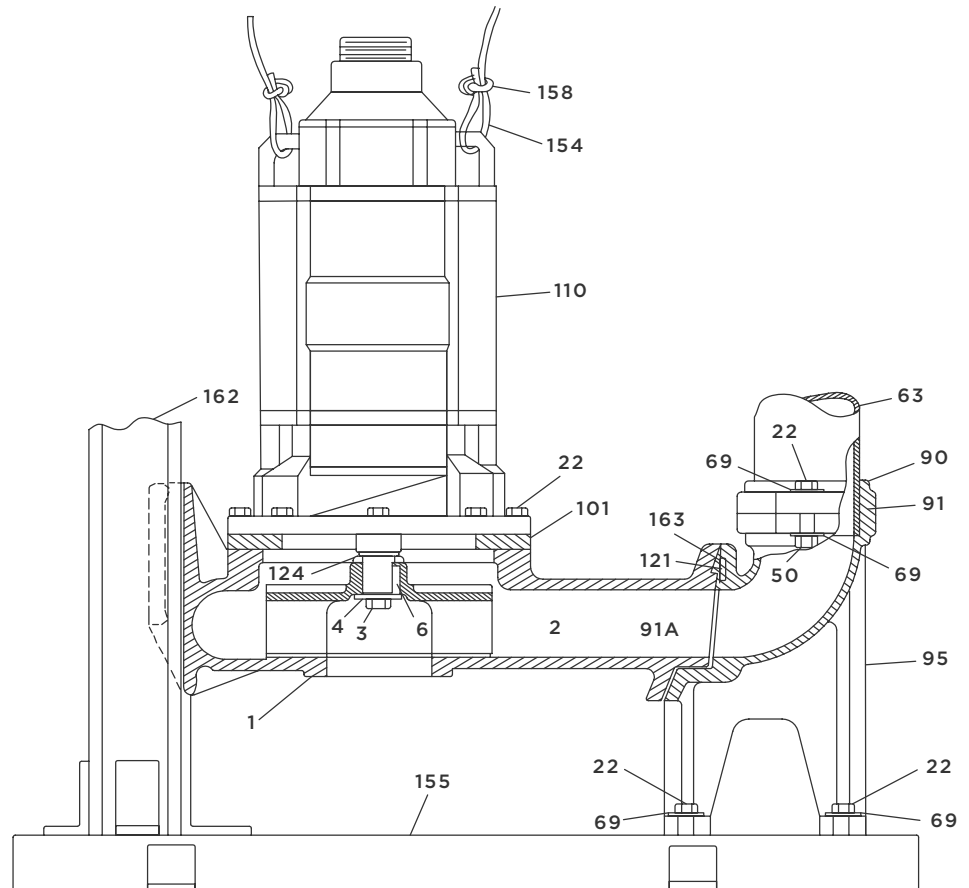
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## Parts List & Diagram

PARTS LIST		
NUMBER	NAME	REQUIRED
1	CASING	1
2	IMPELLER	1
3	IMPELLER CAP SCREW	1
4	IMPELLER WASHER	1
6	IMPELLER KEY	1
22	CAPSCREW	-
50	NUT	-
63	DISCHARGE PIPE**	-
69	WASHER	1
90	DISCHARGE FLANGE	1
91	DISCHARGE PIPE GASKET	1
91A	MATING FLANGE GASKET	1
95	DISCHARGE BASE ELBOW	1
101	MOTOR ADAPTOR PLATE	3
110	MOTOR	1
121	MACHINE SCREW	1
124	IMPELLER HUB SPACER	1
154	LIFTING CABLE	1
155	BASE	1
156	TOP HOLDING BRACKET*	1
157	TOP BRACKET CLIP*	1
158	LIFTING CABLE CLAMP	1
162	GUIDE RAIL**	1
163	GASKET CLIP	1

\*not shown  
 \*\*generally by others



## Specifications

### SUGGESTED SPECIFICATION

#### FOR DUPLEX VSS-QD UNIT WITH TYPE SBS CONTROLLER FOR INSTALLATION IN CONCRETE PIT

Furnish and install, as shown on plans, a Federal Pump Corporation Type VSS-QD Quick-Disconnect duplex submersible sewage pump unit. The pumps shall be of cast iron construction with non-clog, balanced impellers, and rated as shown in the pump schedule.

Each pump shall have Quick-Disconnect fittings including base plate, guide brackets, base elbow and lifting cable.

Each pump shall be removable from the pit by riding up on the guide rail (4x4 wide flange beam), without disconnecting any piping or electrical connection, and without anyone entering the pit. Pumps shall be relowered to their operating position in the same manner.

Each motor shall be air filled, protected by double-sealed oil chamber, and shall have a stainless steel shaft, thermal sensors, moisture sensing probe in the seal chamber, and 25 ft. waterproof cable. Motors shall be rated as shown in the pump schedule.

Pump control shall be by a Type SBS Submers-a-bulb controller, including four mercury tube bulbs on Style 1 suspension bracket. A NEMA-4 junction box shall be provided together with a control panel in a NEMA-1 wall-mounting enclosure, including therein fusible disconnect switches, magnetic starters, HOA selector switches, automatic pump alternator, required relays and transformers, pump-run lights plus an alarm bell and silencer with lights to indicate high water and outer seal failure conditions.

For concrete pit and thru-cover pump discharge, add the following specification paragraph:

Furnish a Style PF-1 angle iron pit frame and steel cover for the concrete wet pit. The pit cover shall be gas-tight with pump removal plates, flanged openings for pump discharge pipes, vent connection and control openings. The frame and cover shall have a corrosion-resistant coating plus required brackets for the Quick-Disconnect guide rails, and shall be fabricated for a pit size and top opening size as shown in the pump schedule.

For concrete pit and under-cover pump discharge, add the following specification paragraph:

The pumps shall discharge through the side wall of the wet pit. Provision shall also be made in the side wall for venting and for control and power wires. Furnish a Federal Type Q access door for installation in the top slab of the concrete pit. Pit size and door size shall be as shown in the pump schedule.

The access door shall be single-leaf with steel frame, diamond steel leaf, steel hinges and torsion bars for easy opening. The door and frame shall have a corrosion resistant coating plus required brackets for the Quick-Disconnect guide rails.

Also furnish a concrete valve chamber of the size shown in the pump schedule, with steel-covered top access opening, to house the discharge check valves, gate valves and wye fitting.

Pump Schedule:

Pump model Number:

\_\_\_\_\_GPM per pump \_\_\_\_\_FT. TDH

Motor HP: \_\_\_\_\_ RPM \_\_\_\_\_

Phase: \_\_\_\_\_ Cycles: 60 Volts: \_\_\_\_\_

Pump Pit Size: \_\_\_\_\_ in. x \_\_\_\_\_ in. x \_\_\_\_\_ in. deep

Top Opening (or Access Door) Size: \_\_\_\_\_ in. x \_\_\_\_\_ in.

Valve Chamber Size (If Any): \_\_\_\_\_ in. x \_\_\_\_\_ in. x \_\_\_\_\_ in. deep



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## Features

### **PUMP FEATURES:**

The cast iron pump casing has a smooth waterway to insure maximum efficiency when handling sewage. Rabbeted construction insures complete alignment of the rotating element. The cast iron impeller is of non-clog design for handling water containing solids, and is balanced prior to assembly. The vertical discharge flange and gasket permit easy installation of plain-end discharge pipe.

### **MOTOR FEATURES:**

Motors are available for 1750, 1150 and 870 R.P.M. operation with both single phase and three phase windings. Single phase motors are furnished with a separate capacitor box. All motors have prelubricated ball bearings. Explosion proof motors are also available.

They are rated for intermittent duty in air at full load, continuous duty in air at reduced load, and, if furnished with modified frames, for continuous duty in air at full load. Shaft and fasteners are stainless steel. End bracket and frame are cast iron. All leads are epoxy sealed.

Double seals provide protection for the electrical parts. If the outer seal fails, the inner seal protects the motor while water enters the oil-filled chamber. Optional moisture sensing probe can detect the entry of water into the chamber and sends a signal to the appropriate alarm.

Motors are furnished with 25-feet of power and control cable and grounding wire. The standard motors are rated for operation in 40 degrees C (104 F) water, but can be modified for higher ambient temperatures. Thermal protection is a standard feature.

### **QUICK-DISCONNECT FEATURES:**

Each pump is furnished with a Quick-Disconnect assembly so that it can be easily lifted from the pit for inspection or service. Discharge piping and electrical connections need not be disturbed and the removal can be accomplished without anyone entering the sewage pit. The pump is lowered into the pit, held in position by its guide rail and automatically completes the discharge connection. The angled discharge mating flange is designed to assure a complete discharge seal.



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