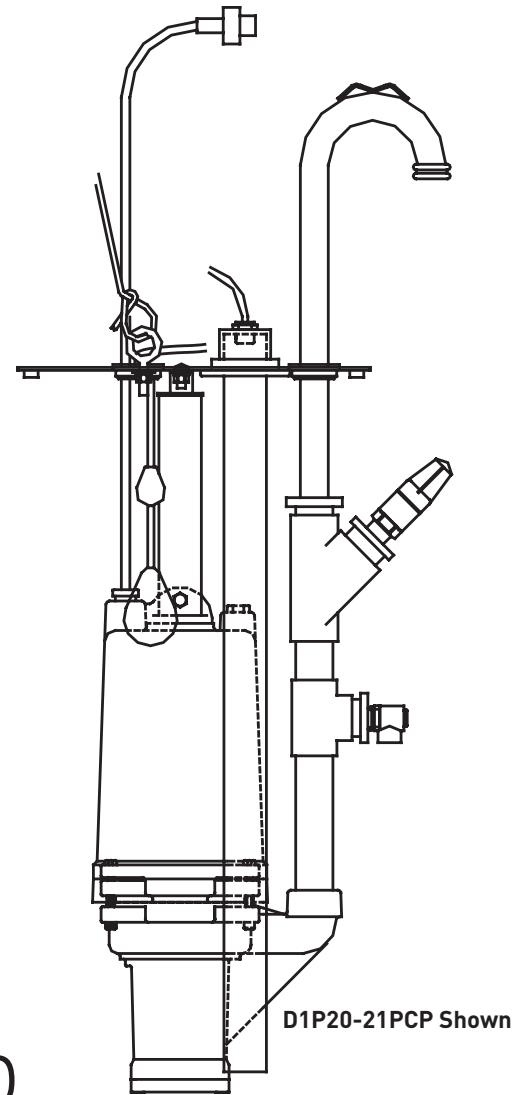




DELTA ENVIRONMENTAL[®]



MODELS D1P20-21PCP, D1P20-21PCF, D1C20-21PCP and D1C20-21PCF **RETROFIT SYSTEMS**

SAFETY INSTRUCTIONS, INSTALLATION AND SERVICE MANUAL

Engineered for quick and easy replacement of existing progressive cavity grinder systems.

- Fully assembled
- Uses existing ball valve and latch
- Uses existing underground wiring and alarm panel

NOTE! To the installer: Please make sure you provide this manual to the owner of the equipment or to the responsible party who maintains the system.

NOTE: READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL PUMP.

GENERAL INFORMATION

Attention: This manual contains important information for the safe use of this product. Read this manual completely before using this product and refer to it often for continued safe product use. DO NOT THROW AWAY OR LOSE THIS MANUAL.

Check local codes and requirements before installation.

▲ WARNING! BEFORE HANDLING THESE PUMPS AND CONTROLS, ALWAYS DISCONNECT THE POWER FIRST. DO NOT SMOKE OR USE SPARKABLE ELECTRICAL DEVICES OR FLAMES IN A SEPTIC (GASEOUS) OR POSSIBLE SEPTIC SUMP.

CALIFORNIA PROPOSITION 65 WARNING:

▲ WARNING This product and related accessories contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

INSTALLATION INSTRUCTIONS

This manual covers retrofit systems with either semi-positive displacement (D1P20-21) or centrifugal (D1C20-21) grinder pumps utilizing either pressure controls or mechanical floats. Please make sure you know which system you are installing. If you are unsure which version you have, please refer to the diagrams below.

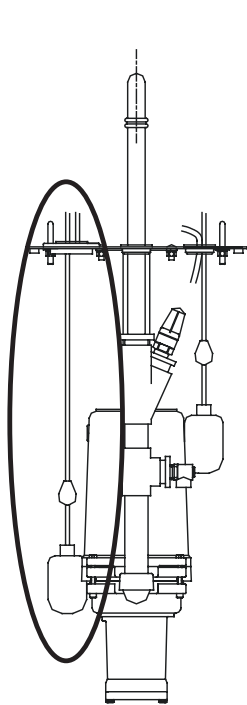
GRINDER INSTALLATION INSTRUCTIONS

1. Remove existing pump and pipe system.
2. Make sure pump compartment is clean of any debris.
3. Clean bolt hole (mating) surface.

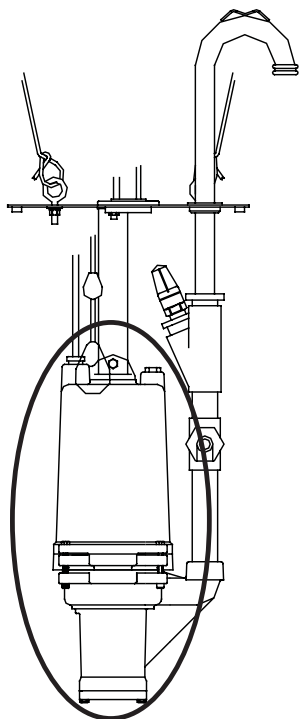
4. Make sure there is sufficient amount of power/control/alarm cord to be able to splice into power/control/alarm cords at the new junction box.
5. Lift pre-assembled unit into place using lift rope supplied.
6. Be sure that gasket stays in place beneath cover.
7. Grease o-ring.
8. Guide tabs will line up with existing alignment brackets. Retrofit system discharge piping should mate with existing female socket.
9. After gooseneck is lined up directly above ball valve socket, drop into place. Make certain that adapter is forced all the way into socket to ensure a pressure tight seal.
10. Rotate ball valve handle/latch to secure piping and open valve. If gooseneck is not completely forced into the female socket as described above, ball valve handle/latch will not close completely over gooseneck piping.
11. Attach cover with screws, sleeves and washers provided.
12. Power, control cords, pressure tubing (for PCP units only), and high water alarm to be routed through junction box.
13. Properly calibrate operation of the unit by ensuring that the liquid level in the basin is at its lowest level when the control panel cycles off. Make sure to cut off excess pressure tubing to prevent condensation from forming inside tubing.

ELECTRICAL NOTE: ENSURE THAT EXISTING WIRING IS ADEQUATE FOR THE PUMP SERVICE REQUIREMENTS.

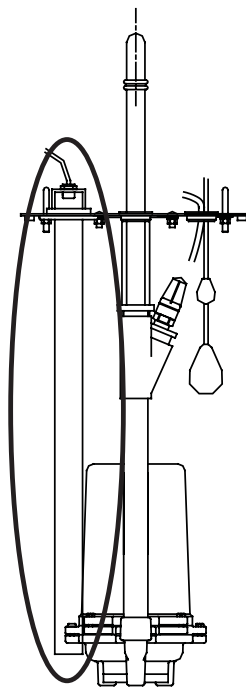
Pump	Full Load Amps	Circuit Breaker
D1P20-21	12	20 amp
D1C20-21	15	20 amp



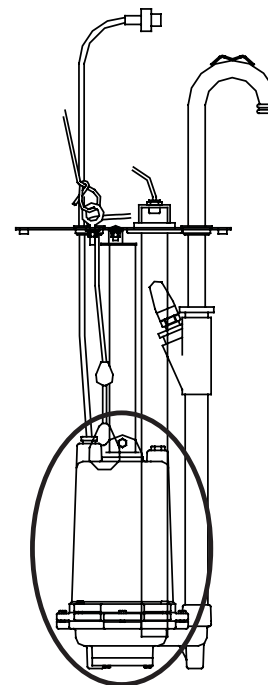
Mechanical Floats (PCF)



Semi-Positive Displacement (D1P) Pump



Pressure Control (PCP)

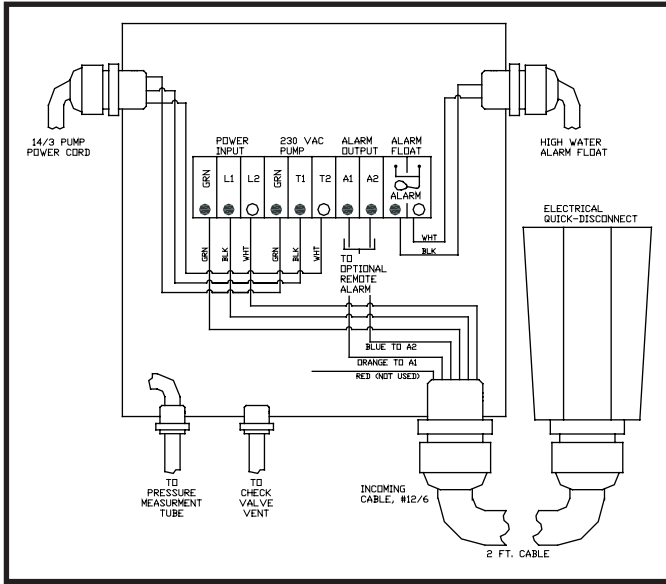


Centrifugal (D1C) Pump

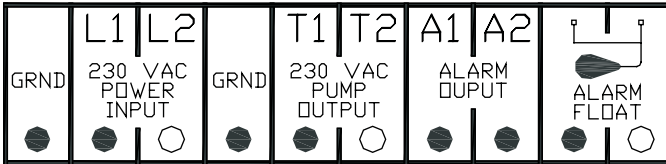
RETROFIT PRESSURE LEVEL CONTROL JUNCTION BOX WIRING DIAGRAMS

Part No. 27480A300

Incoming 12/6 Power Cord

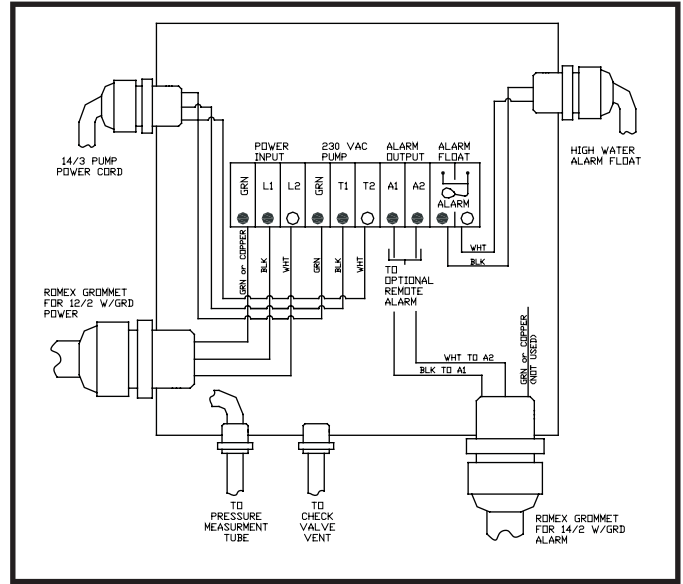


Terminal Label

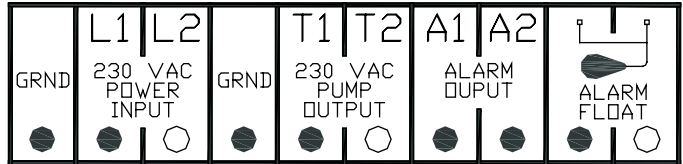


Part No. 27480A200

Incoming 12/2 or 14/2 Power Cord



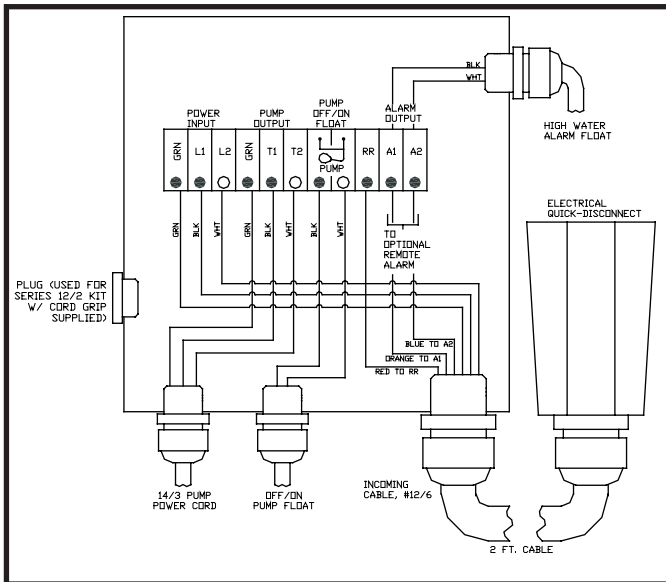
Terminal Label



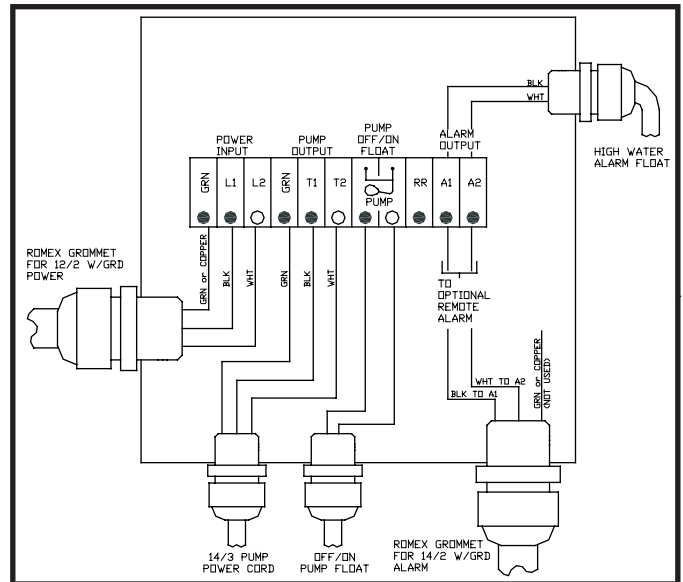
RETROFIT FLOAT LEVEL CONTROL JUNCTION BOX WIRING DIAGRAMS

Part No. 27480A104

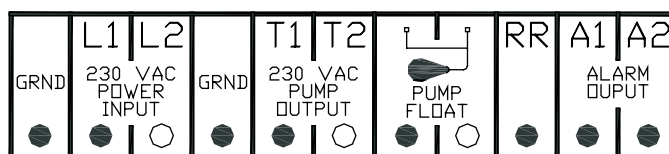
Incoming 12/6 Power Cord



Incoming 14/2 Power Cord

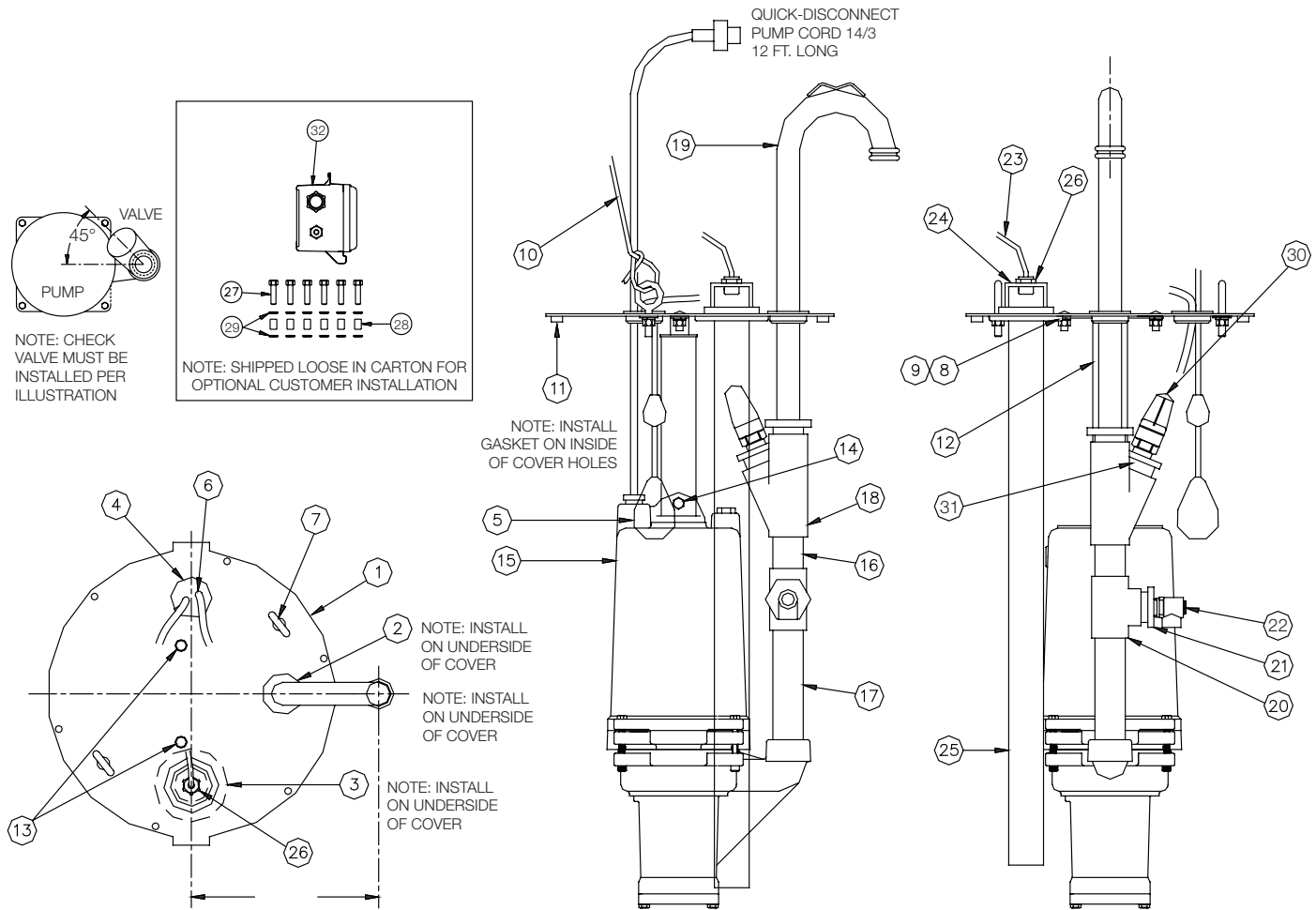


Terminal Label



PCP RETROFIT SYSTEM REPLACEMENT PARTS

D1P20-21PCP System Shown



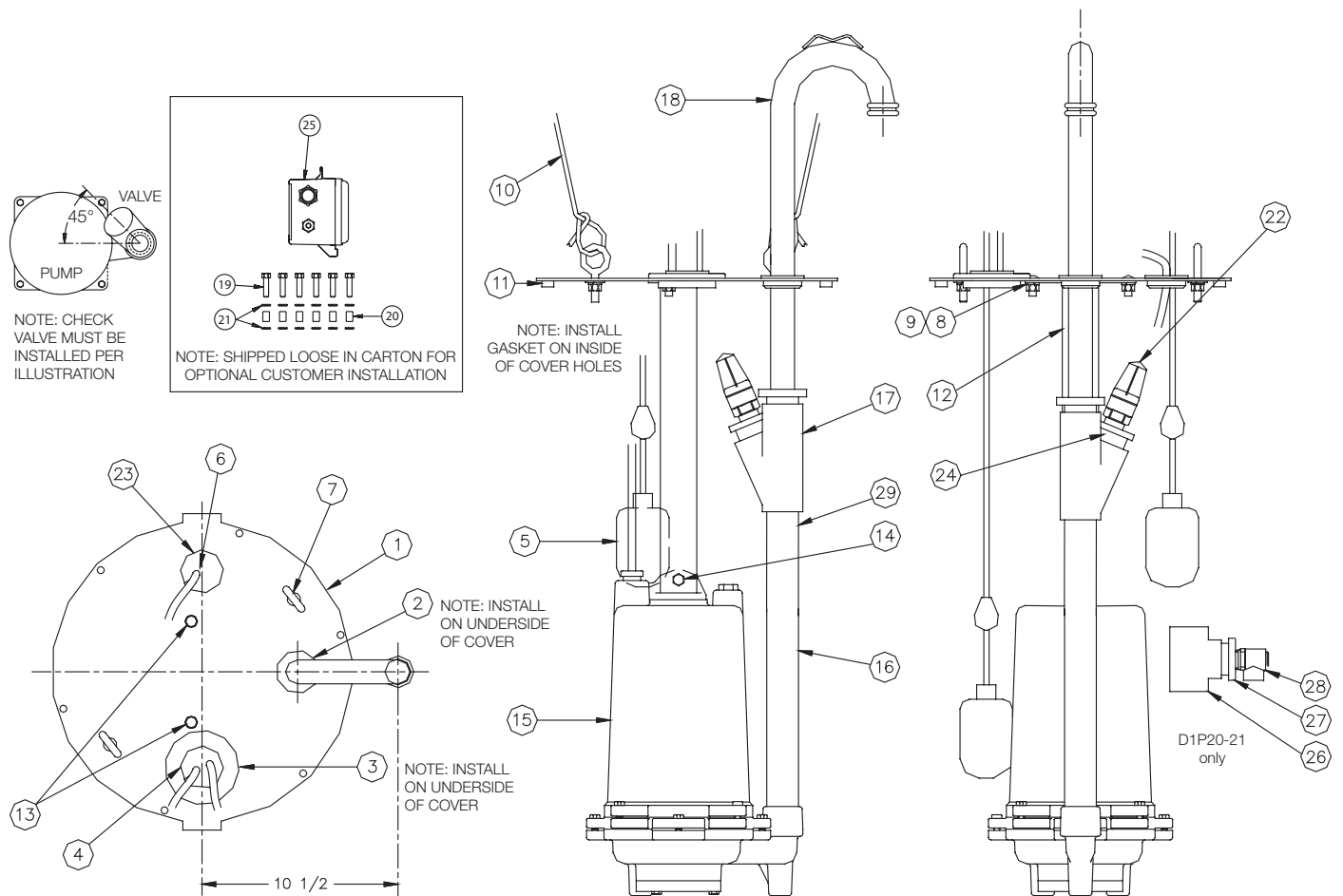
ORDERING REPLACEMENT PARTS: Product improvements are made from time to time. The latest part design will be furnished as long as it is interchangeable with the old part. When ordering replacement parts, always furnish the following information: (1) pump serial number; (2) pump model and size; (3) part description; (4) part number; (5) impeller diameter (if ordering impeller); (6) quantity required; and (7) shipping instructions.

Item	Part No.	Description	Qty.
1	21920C017	Cover – Retrofit System	1
2	21925A008	Grommet – 1-1/4" Discharge	1
3	24335A006	Grommet – Pipe 1-1/2"	1
4	21925A006	Plug – Pump/Float Cables	1
5	27580A015	Float – Alarm, 15' lg.	1
6	17190A001	Tie – Wire	1
7	21929A012	Bolt – Eye, 3/8" SST	2
8	05454A015	Washer – Lock 3/8" SST	5
9	19109A018	Nut – 3/8" SST	5
10	23019252100	Rope – 3/8" Poly	15 ft.
11	23150074000	Tape – Foam Gasket	4 ft.
12	26517C006	Adapter – Pump Support (D1C20-21)	1
12	26517A005	Adapter – Pump Support (D1P20-21)	1
13	05660A033	Bolt – Carriage 3/8" SST	2
14	19101A050	Screw – 3/8" x 2-3/4" SST	1
15	26465D800	Pump – D1C20-21	1
15	27315D812	Pump – D1P20-21	1
16	05917A139	Pipe – 1-1/4" x 2" SST (D1P20-21 only)	1
17	05917A212	Pipe – 1-1/4" x 14-7/8" SST (D1C20-21)	1
17	05917A211	Pipe – 1-1/4" x 6-11/16" SST (D1P20-21)	1
18	21903A012	Valve – Ball Check 1-1/4"	1

Item	Part No.	Description	Qty.
18	21903A012	Valve – Ball Check 1-1/4"	1
19	22418A016	Elbow – 1-1/4" Discharge, SST	1
20	05126A059	Tee – 1-1/4" SST (D1_20-21 only)	1
21	05004A120	Bushing – Pipe, 1-1/4" x 1/2" SST (D2P20-21 only)	1
22	149850001	Valve – Relief 1/2" (D1P20-21 only)	1
23	005090011	Tube – Pressure 1/4" OD	15 ft.
24	05737A027	Cap – Pipe, 1-1/2" PVC	1
25	13126A207	Pipe – 1-1/2" x 30" PVC	1
26	18696A028	Connector – Pressure Tube	1
27	19100A800	Screw – 5/16" x 2-1/4" SST	6
28	05151A426	Ferrule – 1/2" OD x 3/4" Lg. SST	6
29	05030A263	Washer – 5/16" SST	6
30	21903A100	Valve – Anti-Siphon	1
31	05004A124	Bushing – Pipe, 1-1/2" x 1" SST	1
32	27480A300	Panel – Junction Box for Incoming 12/6 Power Cord	1
	27480A200	Panel – Junction Box for Incoming 14/2 Power Cord	1

PCF RETROFIT SYSTEM REPLACEMENT PARTS

D1C20-21PCF System Shown

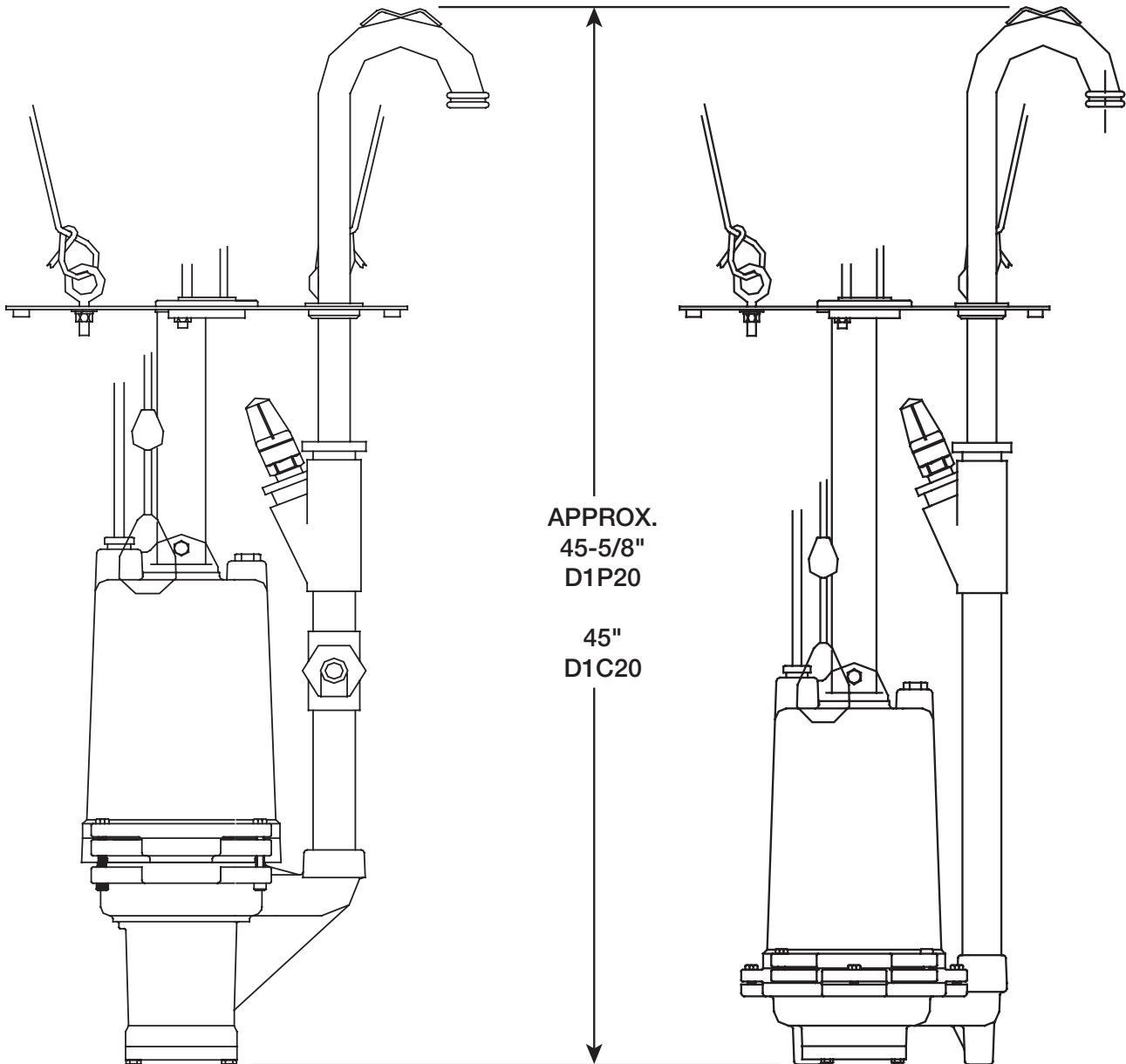
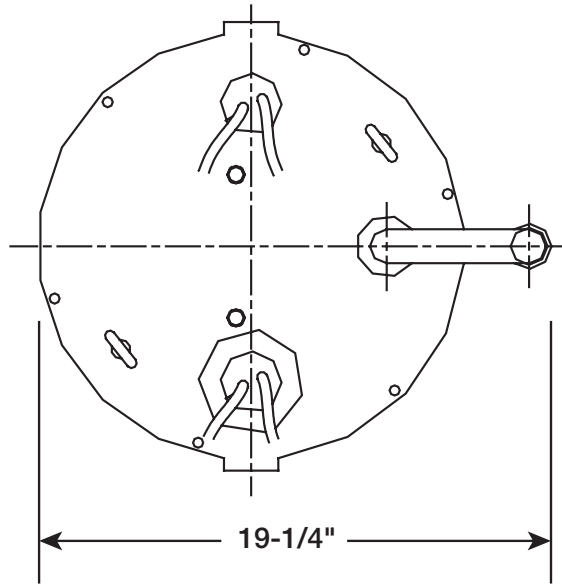


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Item	Part No.	Description	Qty.
1	21920C017	Cover – Retrofit System	1
2	21925A008	Grommet – 1-1/4" Discharge	1
3	24335A006	Grommet – Pipe 1-1/2"	1
4	21925A006	Plug – Pump/Float Cables	1
5	27599A020	Float – Control, 25' lg.	2
6	17190A001	Tie – Wire	4
7	21929A012	Bolt – Eye, 3/8" SST	2
8	05454A015	Washer – Lock 3/8" SST	5
9	19109A018	Nut – 3/8" SST	5
10	23019252100	Rope – 3/8" Poly	15 ft.
11	23150074000	Tape – Foam Gasket	4 ft.
12	26517C006	Adapter – Pump Support (D1C20-21)	1
12	26517A005	Adapter – Pump Support (D1P20-21)	1
13	05660A033	Bolt – Carriage 3/8" SST	2
14	19101A050	Screw – 3/8" x 2-3/4" SST	1
15	26465D800	Pump – D1C20-21	1
15	27315D812	Pump – D1P20-21	1

Item	Part No.	Description	Qty.
16	05917A212	Pipe – 1-1/4" x 14-7/8" SST (D1C20-21)	1
16	05917A211	Pipe – 1-1/4" x 6-11/16" SST (D1P20-21)	1
17	21903A012	Valve – Ball Check 1-1/4"	1
18	22418A016	Elbow – 1-1/4" Discharge, SST	1
19	19100A800	Screw – 5/16" x 2-1/4" SST	6
20	05151A426	Ferrule – 1/2" OD x 3/4" Lg. SST	6
21	05030A263	Washer – 5/16"	6
22	21903A100	Valve – Anti-Siphon	1
23	21925A000	Plug – Float Cables	1
24	05004A124	Bushing – Pipe, 1-1/2" x 1" SST	1
25	27480A104	Panel – Junction Box	1
26	05126A059	Tee – 1-1/4" SST (D1P20-21 only)	1
27	05004A120	Bushing – Pipe, 1-1/4" x 1/2" SST (D1P20-21 only)	1
28	14985D001	Valve – Relief, 1/2" (D1P20-21 only)	1
29	05917A139	Pipe – 1-1/4" x 2" SST (D1P20-21 only)	1

DIMENSIONS



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STANDARD LIMITED WARRANTY

Delta Environmental warrants its products against defects in material and workmanship for a period of 24 months from the date of shipment from Delta Environmental or 27 months from the manufacturing date, whichever occurs first – provided that such products are used in compliance with the requirements of the Delta Environmental catalog and technical manuals for use in pumping raw sewage, municipal wastewater or similar, abrasive free non-corrosive liquids.

During the warranty period and subject to the conditions set forth, Delta Environmental, at its discretion, will repair or replace to the original user, the parts which prove defective in materials and workmanship. Delta Environmental reserves the right to change or improve its products or any portions thereof without being obligated to provide such a change or improvement for prior sold and/or shipped units.

Start-up reports and electrical schematics may be required to support warranty claims. Warranty is effective only if Delta Environmental authorized control panels are used. All seal fail and heat sensing devices must be hooked up, functional and monitored or this warranty will be void. Delta Environmental will only cover the lower seal and labor thereof for all dual seal pumps. Under no circumstance will Delta Environmental be responsible for the cost of field labor, travel expenses, rented equipment, removal/reinstallation costs or freight expenses to and from the factory or an authorized Delta Environmental service facility.

This limited warranty will not apply: (a) to defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with the printed instructions provided; (b) to failures resulting from abuse, accident or negligence; (c) to normal maintenance services and parts used in connection with such service; (d) to units which are not installed in accordance with applicable local codes, ordinances and good trade practices; (e) if the unit is moved from its original installation location; (f) if unit is used for purposes other than for what it is designed and manufactured; (g) to any unit which has been repaired or altered by anyone other than Delta Environmental or an authorized Delta Environmental service provider; (h) to any unit which has been repaired using non factory specified/OEM parts.

Warranty Exclusions: DELTA ENVIRONMENTAL MAKES NO EXPRESS OR IMPLIED WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. DELTA ENVIRONMENTAL SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE.

Liability Limitation: IN NO EVENT SHALL DELTA ENVIRONMENTAL BE LIABLE OR RESPONSIBLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES RESULTING FROM OR RELATED IN ANY MANNER TO ANY DELTA ENVIRONMENTAL PRODUCT OR PARTS THEREOF. PERSONAL INJURY AND/OR PROPERTY DAMAGE MAY RESULT FROM IMPROPER INSTALLATION. DELTA ENVIRONMENTAL DISCLAIMS ALL LIABILITY, INCLUDING LIABILITY UNDER THIS WARRANTY, FOR IMPROPER INSTALLATION. DELTA ENVIRONMENTAL RECOMMENDS INSTALLATION BY PROFESSIONALS.

Some states do not permit some or all of the above warranty limitations or the exclusion or limitation of incidental or consequential damages and therefore such limitations may not apply to you. No warranties or representations at any time made by any representatives of Delta Environmental shall vary or expand the provision hereof.



DELTA ENVIRONMENTAL®

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