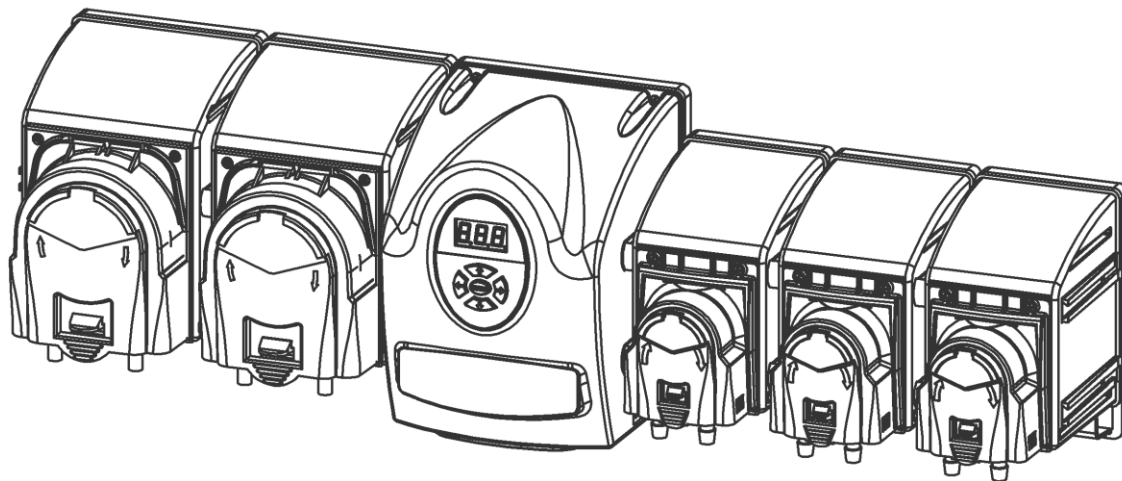


Trident

Chemical Delivery System



Installation and Setup Guide

The DEMA® Trident is a complete delivery system for agricultural chemical batch blending applications. The Trident features Bluetooth connectivity for programming using the Trident App on smart devices and PC.

Warnings



Installation of DEMA products must meet all applicable electrical codes and regulations established by national, city, county, parish, provincial or other agencies. It is possible that electrical codes and regulations require that a certified electrical contractor or engineer perform the electrical installation. For questions, contact a certified electrician.



All installations must conform to local plumbing codes and use approved backflow prevention devices. A pressure indicating tee is to be installed with existing faucets according to local plumbing codes in the state of Wisconsin and any other state that requires the use of a pressure indicating tee.



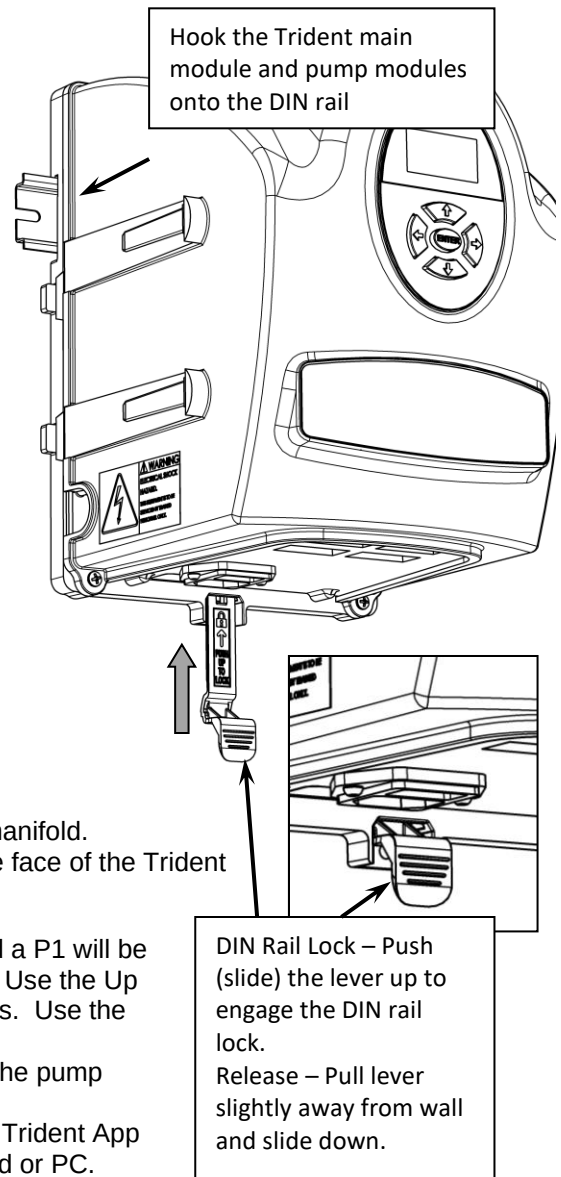
ALWAYS WEAR PROTECTIVE CLOTHING AND EYEWEAR WHEN WORKING WITH CHEMICAL PRODUCTS.

Installation

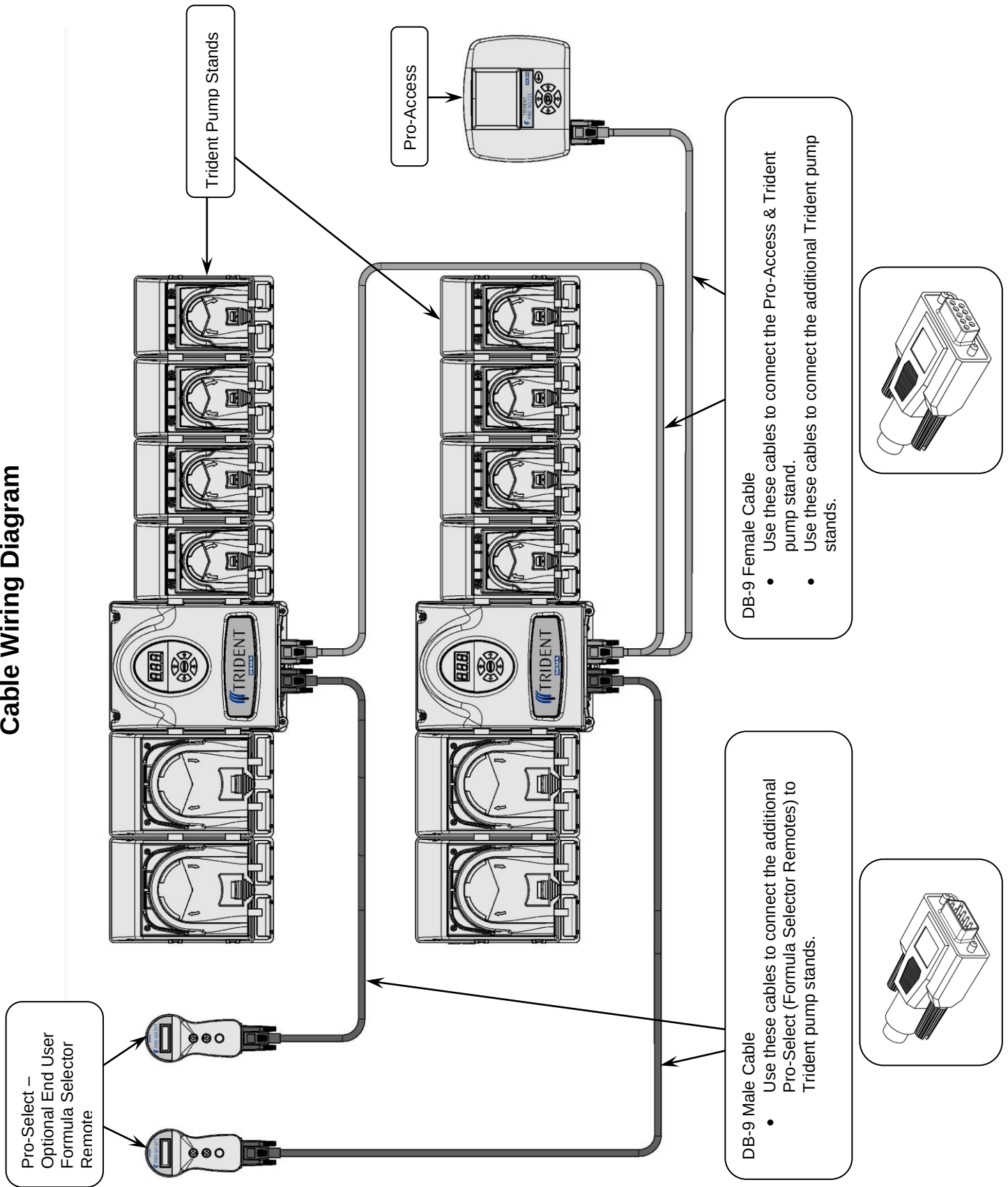


WARNING: INSTALLATION OF DEMA PRODUCTS MUST MEET ALL APPLICABLE ELECTRICAL CODES AND REGULATIONS ESTABLISHED BY NATIONAL, CITY, COUNTY, PARISH, PROVINCIAL OR OTHER AGENCIES. IT IS POSSIBLE THAT ELECTRICAL CODES AND REGULATIONS REQUIRE THAT A CERTIFIED ELECTRICAL CONTRACTOR OR ENGINEER PERFORM THE ELECTRICAL INSTALLATION. FOR QUESTIONS, CONTACT A CERTIFIED ELECTRICIAN.

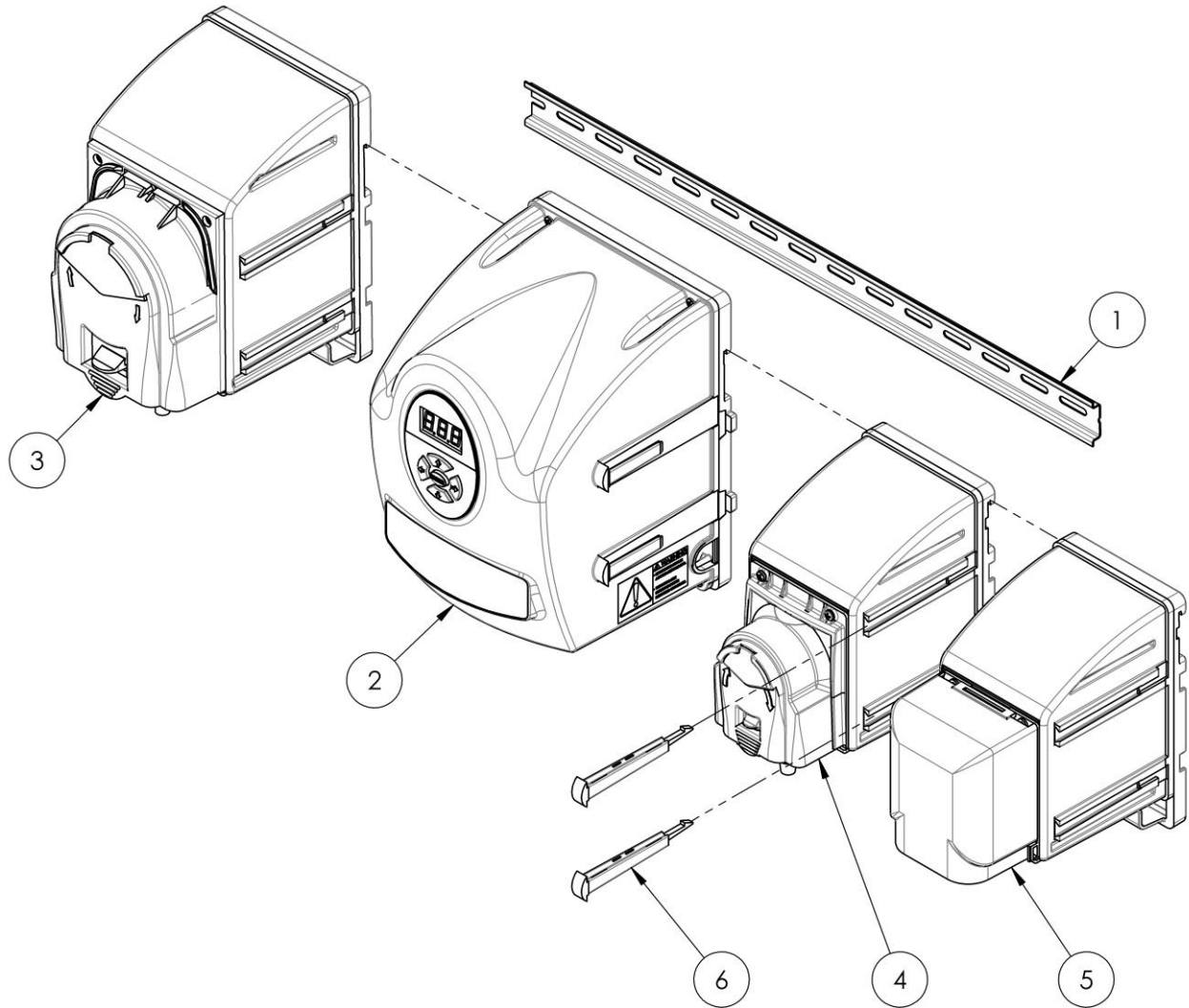
1. Determine a suitable location to mount the Trident. The following should be considered:
 - a. Length of power cord. The power cord is 10ft long and includes an 115VAC plug for wall outlet. The plug can be cut off so that the power cord can be hardwired or retrofitted with a different type of plug. Electrical requirements described on step 7.
 - b. Length of Trident communication cables. The standard cable lengths are:
 - i. 25ft - Trident Pump Stands to Pro Access - and – Trident Pump Stand to Trident Pump Stand
 - ii. 8ft - Pro-Select (formula selector remote).
 - c. Avoid wet areas
 - d. Easy access for interfacing the buttons and display on pump stands and Pro-Access
 - e. Chemical container location
 - f. Wall or mounting surface must be suitable to attach (screw) the DIN mounting bracket.
 - g. Do Not mount in direct sunlight.
2. Mount the mounting bracket on the wall or on the DIN rail. Appropriate screws and anchors must be used based on the type of wall material. A level should be used when mounting the DIN rail.
3. Mount the Trident by hooking it onto the DIN mounting bracket.
4. Lock the Trident to the DIN rail by sliding the DIN Rail lock up and locks into place. Use the bracket supplied to secure the pump(s) furthest from the pump stand.
5. Install and mount the Pro-Access, Pro-Connect and Pro-Select (see individual instruction guides for each component)
6. Connect the cable - See Cable Wiring Diagram on next page for cable connections
7. Connect main power cord by plugging into a 115/230VAC wall outlet. The power cord has an 115VAC plug. The plug can be cut off and the power can be hardwired to a power source or an alternate plug. The Trident will accept power between 100 and 250VAC 50/60Hz 2.0A.
8. Connect chemical pickup and discharge tubing to the chemical pumps. Trident is equipped with either John Guest push-on fittings or barb fittings at chemical pumps.
9. Install chemical lines at the chemical containers and flush manifold.
10. Prime chemical pumps either using the Pro-Access or at the face of the Trident pump stand or the Trident App.
 - a. Trident pump stand – push the left arrow button and a P1 will be displayed. Press Enter to start and stop the pump. Use the Up and Down arrow buttons to choose additional pumps. Use the right arrow button to exit priming.
 - b. Pro-Access and App – Find the priming function in the pump stand menu
11. See Pro-Access manual for programming. Additionally, the Trident App can be used to program the Trident using a smart phone/pad or PC.



Cable Wiring Diagram

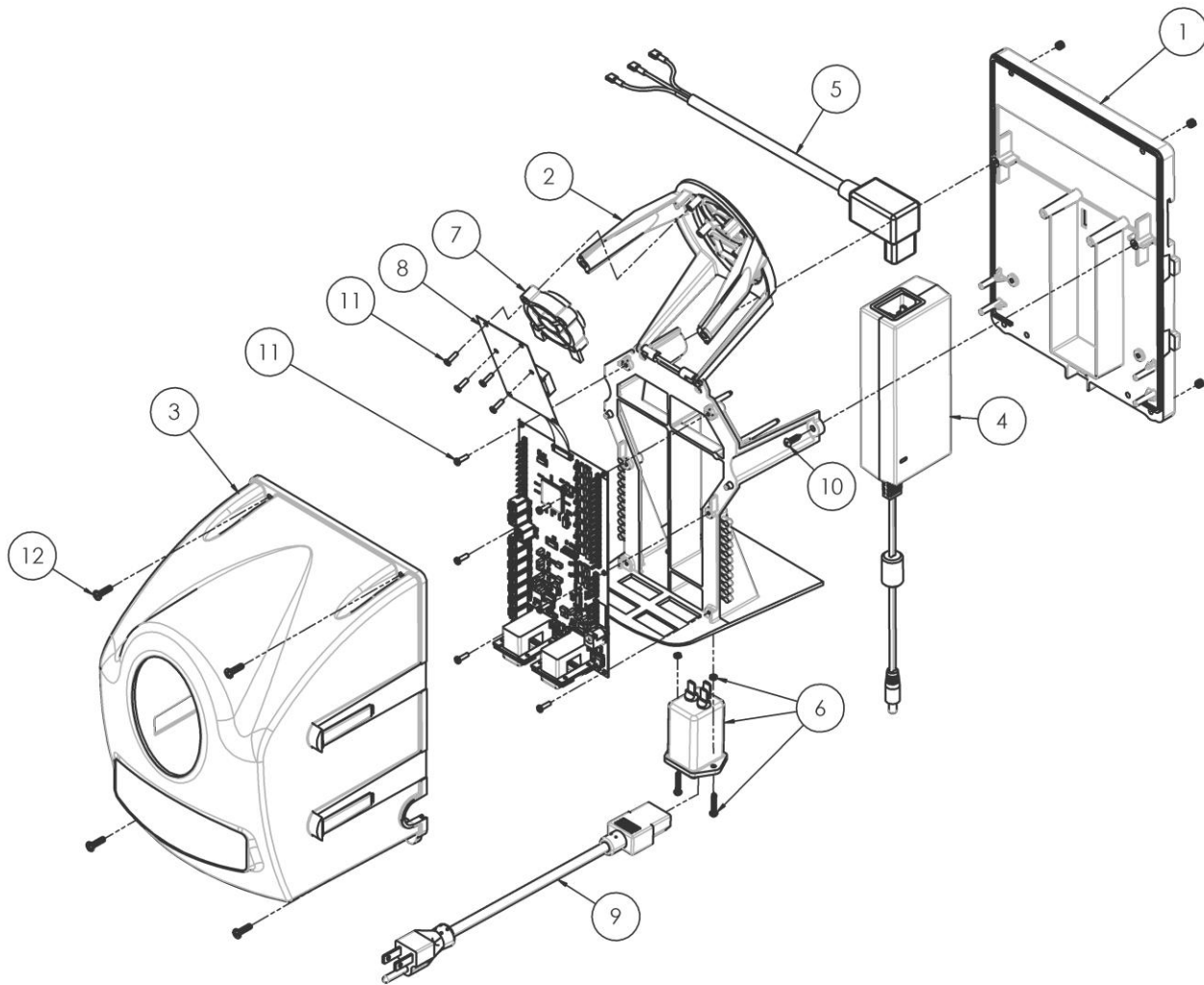


Replacement Modules



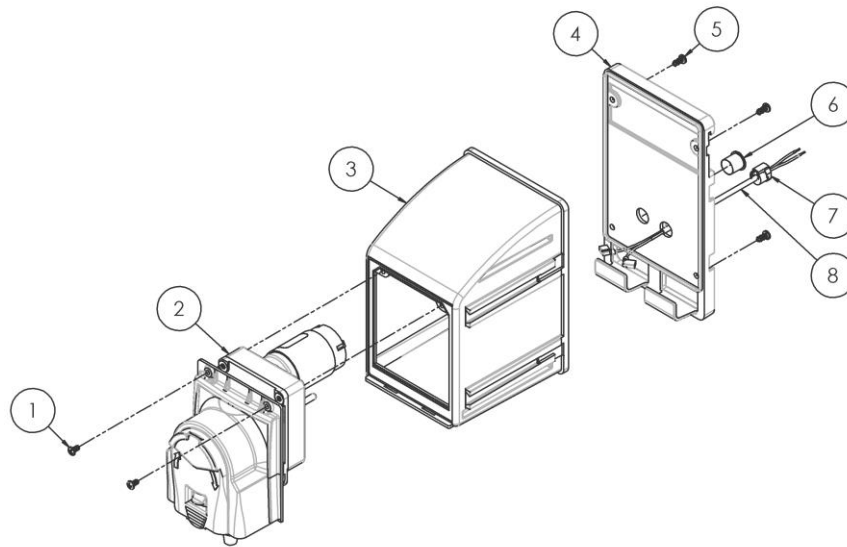
Trident Pump Driver Module Assembly Components		
Item No.	DEMA Part Number	Description
1	81.447.1	DIN Rail – 3 pump
2	86.100.17.1	Trident Pump Driver Module
3	87.100.1	Large Pump Module,105RPM, EPDM Squeeze Tube, 3/8" JG Ready
	86.100.19.AG	Large Pump Module,105RPM, EPDM Squeeze Tube, 3/8" Barb
4	87.100.2	Small Pump Module,105RPM, EPDM Squeeze Tube, 1/4" JG Ready
	84.65.30.AG	Small Pump Module,105RPM, EPDM Squeeze Tube, 3/8" Barb
5	86.100.18.24DV	Flush Valve Module
6	81.144.1	Pump Module Connecting Pins

Pump Driver Replacement Parts

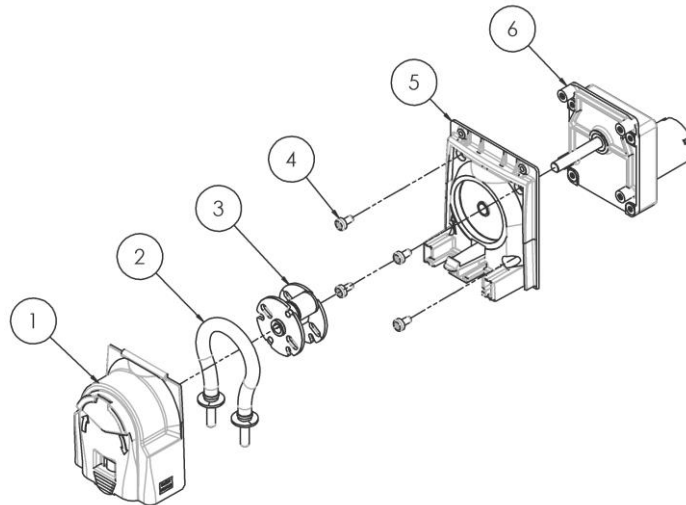


Trident Pump Driver Module Assembly Components		
Item No.	DEMA Part Number	Description
1	86.100.11	Pump Driver Enclosure Back Assembly
2	86.100.12	Control Board Mounting Bracket Assembly
3	86.100.13	Pump Driver Enclosure with labels and mounting screws
4	86.100.14	Power Supply Kit
5	84.125.12	Power cable (internal)
6	86.100.15	Power Connector/Switch Module with mounting hardware
7	81.147.1	Key Pad
8	86.100.16	Trident Control Board Assembly (includes main board & display)
9	84.440.3	Power Cord w/115VAC Plug
10	58.60	#6 x 1/2" Hi-Lo Screw (for plastic)
11	81.20.2	#4 x 3/8" Hi-Lo Screw (for plastic)
12	41.40.2	#6-32 x 1/2" Screw

Small Green Pump Replacement Parts

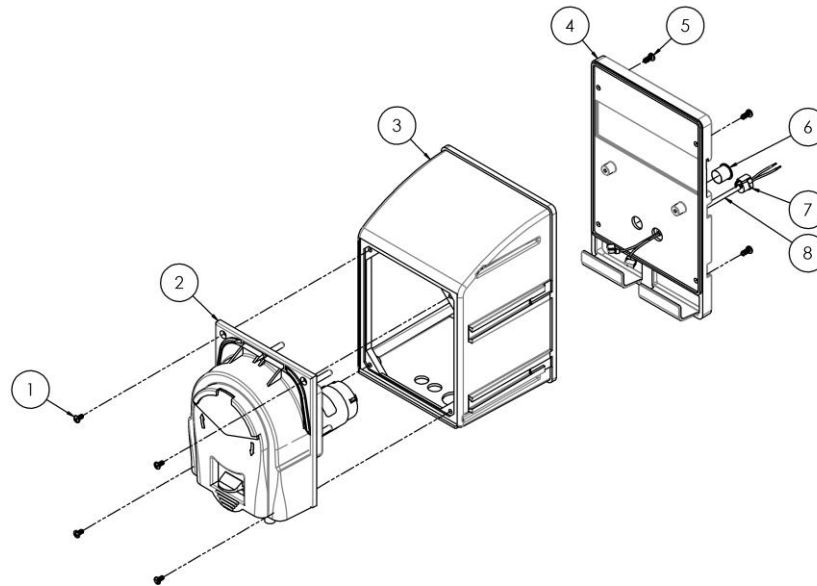


Trident Quick Change Pump Replacement Parts - Small green pump 16oz/min or (460ml/min)		
Item No.	DEMA Part Number	Description
1	41.40.2	#6-32 x 1/2" Screw
2	81.118.29.35	Pump and Motor Assembly 105 RPM
3	81.197.1	Pump Module Enclosure Assembly
4	84.434.1	Pump Module Enclosure Back
5	44.116.2	#8 x 3/8" Hi-Lo Screw (for plastic)
6	81.47.1	1/2" Hole Plug
7	81.183.5	1/2" Cable Strain Relief
8	81.196.10	Cable Assembly

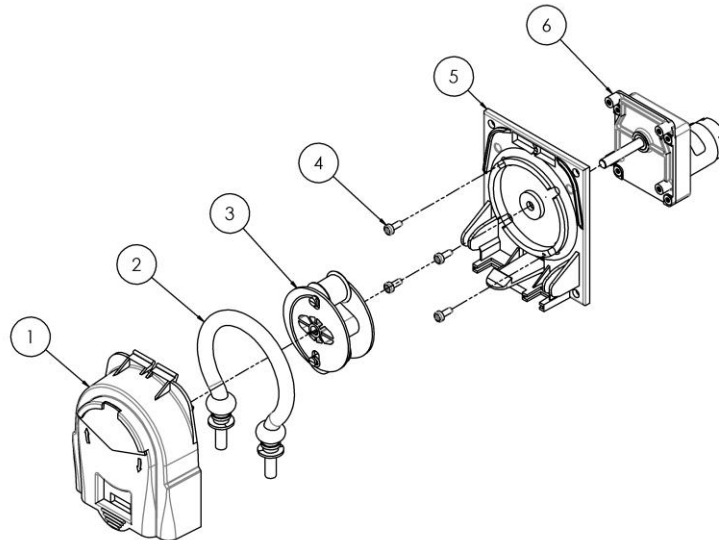


Trident Quick Change Pump Replacement Parts - Small green pump 16oz/min (460ml/min)		
Item No.	DEMA Part Number	Description
1	81.174.2	Small Pump Cover, Green
2	81.177.1	Squeeze tube EPDM 7/16" OD x 1/4" ID JG Ready 1/4" Stem
	81.177.6	Squeeze tube EPDM 5/8" OD x 3/8" ID 3/8" Barb
3	81.118.28.1	Roller Block Assembly
4	25.85.2	10-32 x1/2" Screw
5	81.128.3	Small Pump Base, Green
6	80.59.105MK	105 RPM Motor 24VDC

Large Green Pump Replacement Parts

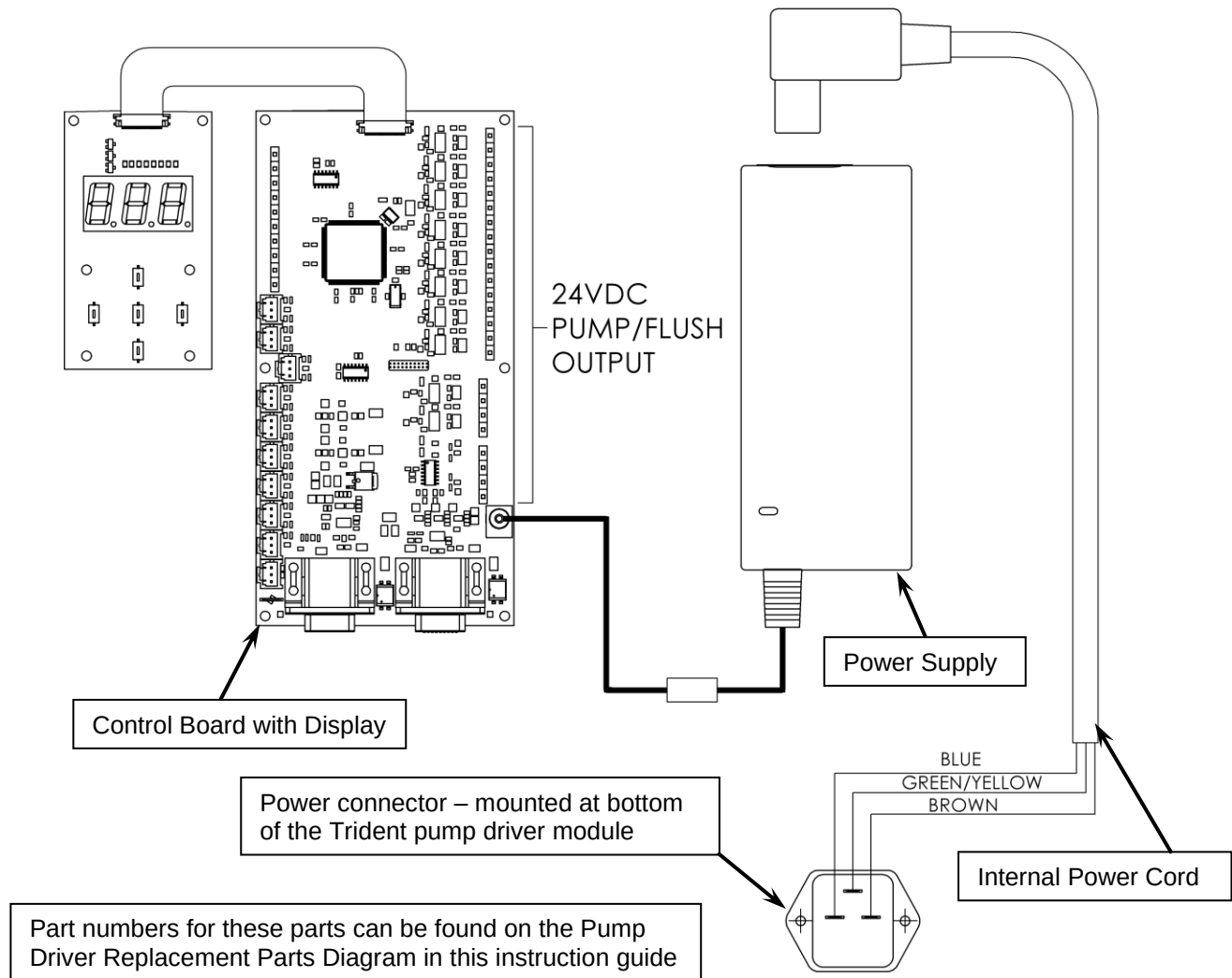


Trident Quick Change Pump Replacement Parts - Large green pump 50oz/min or (1500ml/min)		
Item No.	DEMA Part Number	Description
1	41.40.2	#6-32 x 1/2" Screw
2	84.65.93	Pump and Motor Assembly 105 RPM
3	84.65.94	Pump Module Enclosure Assembly
4	84.433.1	Pump Module Enclosure Back
5	44.116.2	#8 x 3/8" Hi-Lo Screw (for plastic)
6	81.47.1	1/2" Hole Plug
7	81.183.5	1/2" Cable Strain Relief
8	81.196.2	Cable Assembly



Trident Quick Change Pump Replacement Parts - Large green pump 50oz/min (1500ml/min)		
Item No.	DEMA Part Number	Description
1	84.209.2	Large Pump Cover, Green
2	84.208.1C	Squeeze tube EPDM 5/8" OD x 3/8" ID JG Ready 3/8" Stems
	84.208.2C	Squeeze tube EPDM 5/8" OD x 3/8" ID 3/8" Barb
3	41.219.1	Roller Block Assembly
4	25.85.2	10-32 x 1/2" Screw
5	84.188.2	Large Pump Base, Green
6	80.59.105MK	105 RPM Motor 24VDC

Pump Driver Control Board and Power Supply Wiring Diagram



Kit and Accessory Items

DEMA Part No.	Description
81.182.3	3/8" x 3/8" John Guest Union (2 included with Trident for each large blue pump)
81.182.5	3/8" x 1/4" John Guest Union (2 included with Trident for each small blue pump)
58.110.1	1/4" John Guest Tee
58.110.2	3/8" John Guest Tee
58.103.2	1/4" John Guest x 1/4" MPT Straight Fitting
58.104.2	1/4" John Guest x 1/4" MPT Elbow Fitting
81.195.1	1/4" Male Stem (JG) x 1/4" Female (JG) Elbow Fitting
95.31	1/4" JG x Garden Hose Adapter
95.32	3/8" JG x Garden Hose Adapter
83.16.1	Velcro Patch (2 included with Trident)
86.100.10.2	Trident Connect w/25' Cable Kit (included with Trident)
86.100.8.1	Trident Pro Select w/8" Cable Kit (optional end user formula selector)
86.100.9DR	Trident Pro Access Kit
25.115.100	3/8" OD x 100' LDPE Tubing
25.163.100	3/8" OD x 100' EVA Tubing
25.164.100	1/2" OD x 100' EVA Tubing

Specifications

Main Power	115/230VAC 50/60Hz 2A
Pump Motor/Valve Output	24VDC 1.25A
Operation Temperature	40°F – 115°F (5°C – 45°C)
CE	
Bluetooth	

Warranty

Merchandise Returns

No Merchandise will be Returned for Credit Without DEMA’S Written Permission. Returned Merchandise Authorization Number is Required in Advance of Return.

Product Warranty

DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products that have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, physical abuse, or misapplication. Rubber and synthetic rubber parts such as “o”-rings, diaphragms, PVC tubing, and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of DEMA products. If products are altered or repaired without prior approval of DEMA, this warranty is void.

Defective units or parts should be returned to the factory with transportation prepaid. If inspection shows them to be defective, they will be repaired or replaced without charge, F.O.B. factory. DEMA assumes no liability for damages. Return merchandise authorization number must be granted in advance of returned units for repair or replacement (See “Merchandise Returns” above).