

CoreDEF™ Submersible Turbine Pump (STP) for Diesel Exhaust Fluid

Configure Your Site in 3 Easy Steps

Motor Size Options:



2 HP Submersible Application (DP200):

- Fits sites with 3 - 7 fueling points
- Available in Single- or Three-Phase



3/4 HP Submersible Application (DP75):

- Fits sites with 1 - 2 fueling points
- Available in Single-Phase

Simple as
1-2-3

- 1 Final Assembly Configuration
- 2 Control Box Configuration
- 3 Isotrol™ Box Configuration



▶ ADJUSTABLE PRESSURE RELIEF OPTION

- **Design:** UMP connected directly to column piping. Adjustable Pressure Relief Valve is installed outside of the storage tank for future accessibility
- **Functionality:** Enables line pressure adjustment (from 20-45 PSI), allowing for fine-tuning of nozzle flow and squeeze

▶ FIXED PRESSURE RELIEF OPTION

- **Design:** Fixed Pressure Relief Valve and in-line Check Valve integrated into Column Piping in the storage tank
- **Functionality:** Maintains maximum line pressure of 45 PSI

▶ STEP 1: Final Assembly Configuration

Final Assembly Configuration Builder						Adjustable Pressure Relief Kits	
A UMP Size (HP)	B Phase	C Type of Pressure Relief	D Adjustment Range - See Manual Diagram	E Final Assembly Description	F Final Assembly P/N	G Adjustable Pressure Relief Kit P/N 410881-001	H Check Valve P/N 410875-001
3/4	1	Fixed	D1: 66.0" - 97.0"	DP75U1-D1 w/ relief	410870-001	Not Required	
			D2: 96.0" - 157.0"	DP75U1-D2 w/ relief	410870-002	Not Required	
	Adjustable	D1: 66.0" - 97.0"	DP75U1-D1 w/o relief	410870-005	Required	Recommended ¹	
		D2: 96.0" - 157.0"	DP75U1-D2 w/o relief	410870-006			
2	1	Fixed	D1: 73.0" - 104.0"	DP200U1-D1 w/ relief	410870-009	Not Required	
			D2: 103.0" - 164.0"	DP200U1-D2 w/ relief	410870-010	Not Required	
	Adjustable	D1: 73.0" - 104.0"	DP200U1-D1 w/o relief	410870-013	Required	Recommended ¹	
		D2: 103.0" - 164.0"	DP200U1-D2 w/o relief	410870-014			
	3	Fixed	D1: 73.0" - 104.0"	DP200U4-D1 w/ relief	410870-017	Not Required	
			D2: 103.0" - 164.0"	DP200U4-D2 w/ relief	410870-018	Not Required	
Adjustable	D1: 73.0" - 104.0"	DP200U4-D1 w/o relief	410870-019	Required	Recommended ¹		
	D2: 103.0" - 164.0"	DP200U4-D2 w/o relief	410870-020				

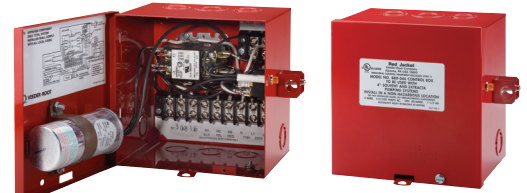
¹ Note: Adjustable Pressure Relief Option can be operated without a check valve, but will allow the system to depressurize to 0 PSI between dispense cycles. Line depressurization will not be noticed while dispensing. Finals with fixed pressure relief include a check valve in the piping assembly.

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▶ STEP 2: Control Box Configuration

A Control Box is recommended to activate the pump in response to a dispense request. In **Single-Phase applications**, the Control Box houses the Pump Start Capacitor. (Not required for Three-Phase.)

Control Box Configuration (Includes integrated capacitor for single-phase)				
A	B	C	D	E
Hook Signal Voltage	Phase	UMP Model	Control Box P/N	Control Box Description
120V	1	DP75U1 (3/4 HP)	880-045-5	Standard Control Box 17.5uF 120VAC for 3/4 HP
		DP200U1 (2 HP)	410861-001	Standard Control Box 40uF 120VAC for 2 HP
	3	DP200U4 (2 HP)	410648-001 & 410649-010	Magnetic Starter 115VAC for 3 Phase & (qty. 3) Heaters 2 HP 60Hz



Control Box

▶ STEP 3: Isotrol™ Box Configuration

The Isotrol Box is optional for sites that require dispenser hook isolation.

Isotrol Box Configuration			
A	B	C	D
Hook Signal Voltage	Manifold Pumps?	Isotrol Part Number ¹	Isotrol Description
120V	Yes	880-047-1	Isotrol 120V w/ relay
	No	880-049-1	Isotrol 120V w/o relay

¹ **Note:** An Isotrol *with relay* is utilized to activate the second pump when operating manifolded pumps. Reference the CoreDEF Installation Manual (577014-360).



Isotrol Control Box

▶ Piping Accessories

If you are using the Adjustable Pressure Relief Valve, considering a DEF Recirculation system or expanding an existing site. Select optional plumbing accessories based on the following scenarios.

Optional Piping Accessories			
Pressure Gauge		NPT to BSP Adapters	
Need Gauge for Pressure Tuning? ¹	Recommended Pressure Gauge ³	Need to transition from NPT to BSP?	NPT to BSP Adapter
Using Adjustable Pressure Relief?	410880-001 (¼" NPT fitting)	No	Not Required
Using DEF Recirculation? ²		Female 1¼" BSP	410878-001
		Female 2" BSP	410879-001

¹ **Note:** Additional information can be found in the DEF Recirculation Installation Manual.

² **Note:** DEF recirculation was developed as a solution for DEF sites affected by extreme temperature conditions.

³ **Note:** Though not required, a pressure gauge (P/N: 410880-001) can be used in any CoreDEF application.

Specifications

	Single-Phase DP75U1	Single-Phase DP200U1	Three-Phase DP200U4
Operating Phase/Frequency/Voltage	1 phase, 60Hz, 208-230V	1 phase, 60Hz, 208-230V	3 phase, 60Hz, 208-230V
Rated Output	3/4 HP	2 HP	2 HP
Rated Speed	3450 RPM	3450 RPM	3450 RPM
Rating-Duty	40C AMB	40C AMB	40C AMB
Duty Cycle	Continuous duty, greater than 30 start/stop cycles per hour	Continuous duty, greater than 30 start/stop cycles per hour	Continuous duty, greater than 30 start/stop cycles per hour
UMP Length	16.81" (427 mm)	23.94" (608 mm)	23.94" (608 mm)
UMP Weight	22 lbs. (10 kg)	34.2 lbs. (15.5 kg)	34.2 lbs. (15.5 kg)
Pump Length Dimensions	Fixed Pressure Relief 66" – 97" P/N: 410870-001	Adjustable Pressure Relief 66" – 97" P/N: 410870-005	Fixed Pressure Relief 73" – 104" P/N: 410870-017
D1		Adjustable Pressure Relief 73" – 104" P/N: 410870-013	Adjustable Pressure Relief 73" – 104" P/N: 410870-019
D2	96" – 157" P/N: 410870-002	96" – 157" P/N: 410870-006	103" – 164" P/N: 410870-018
Column Piping	Schedule 40 Stainless Steel	Schedule 40 Stainless Steel	Schedule 40 Stainless Steel
Special Application Features	Optional adjustable pressure relief valve for line pressure control of 20-45 PSI Variable Length Range Adjustment	Optional adjustable pressure relief valve for line pressure control of 20-45 PSI Variable Length Range Adjustment	Optional adjustable pressure relief valve for line pressure control of 20-45 PSI Variable Length Range Adjustment
DEF Fluid - Operating Temperature Range	+12 °F to +104 °F (-11 °C to +40 °C)	+12 °F to +104 °F (-11 °C to +40 °C)	+12 °F to +104 °F (-11 °C to +40 °C)
Run Dry Protection	Must ensure positive pump shut-off	Must ensure positive pump shut-off	Must ensure positive pump shut-off
Elastomers	FKM	FKM	FKM
Tank Flange Interface	APR: 2" NPT, 6" ID minimum for pass through FPR: 2" NPT, 6" ID minimum for pass through	APR: 2" NPT, 6" ID minimum for pass through FPR: 2" NPT, 8" ID minimum for pass through	2" NPT, 8" ID minimum for pass through
Max Pressure Rating	50 PSI	50 PSI	50 PSI
Submersion Requirements	Minimum 6"	Minimum 6"	Minimum 6"
Tank Bottom Clearance Requirements	Minimum 3"	Minimum 3"	Minimum 3"