

TCU SERIES - 2-WHEEL DOLLY

APPLICATION AND INTENDED USE

The Dixon Pumps Tank Cleaning Unit (TCU) is a complete mobile tank cleaning and fuel filtration solution for cleaning underground and aboveground storage tanks. The TCU provides a full 360° cleaning of the entire internal surface area of the tank walls, and filtering the contaminated product inside the dirty tank, limiting product losses due to contamination.

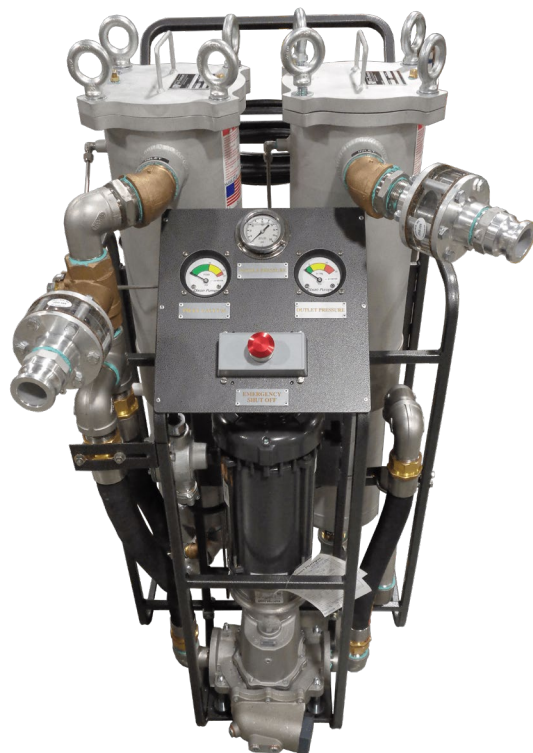
FEATURES AND BENEFITS

- **Water Removal** - Removes damaging water helping to control microbial growth in tanks. The two-stage 8" aluminum housing uses a 6"x18" coalescer filter and 7" water separator to meet engine manufacturer's purity standards. Coalescing and water separation efficiently removes water from fuel.
- **Particulate Removal** - The aluminum bag filter housing can pre-filter particulate down to .5 microns and the coalescer down to 3 microns for fine contaminate removal. The combination provides optimal liquid filtration capable of meeting today's stringent ISO specifications.
- **Tank Cleaning** - Not only can the TCU filter fluid, it can also clean the tank. Pairing the system with a tank cleaning nozzle allows for non-manned entry tank cleaning for above-ground and under-ground storage tanks. The system is designed to operate either the Gamma Jet GJ9.2 (2" access) or GJ10 (4" access) tank cleaning nozzles helping remove contaminants and breaks up dirt and sludge, allowing for extraction using the TCU filters to minimize valuable product loss.
- **Dry-Run durability** means no priming necessary – just turn on the pump! Pulling fluid through an empty pipe or hose is no problem.
- **Light-weight aluminum housings** make this unit easier to move around, through doorways and into hard-to-reach areas in and on top of buildings.
- **Differential gauges** for bag filter and coalescer housing to indicate when filters need to be changed out
- **Pressure gauge** for real-time jet head pressure reading
- **Water sight** indicator showing water content in coalescer housing
- **Grounding Reels** for safe grounding of the unit
- **Explosion-Proof** system
- **Housing drains** for draining of the system for transportation
- **Emergency stop** switch makes it easy to shut down the system in a hurry
- **Ground rod** for use when additional grounding is necessary
- **Drip containment and Accessory Tubes** system for keeping things clean and organized

PERFORMANCE – FLOW AND PRESSURE

PERFORMANCE DATA (Flow Rate For 3 cSt Fluid At 80% of Bypass Pressure Setting)						
FLOW (gpm) / Bypass Pressure (PSI)						
	EP	PH	H _z	HP	GR:	
AC Motor	YES	1	60	1.5		4.1 : 1 35/50

EP = Explosion-Proof, PH = Phase, Hz = Herz, HP = Horse Power, GR = Gear Reducer



TCU Series 2-Wheel Dolly

PUMP

Our systems feature patented Tri-Lobe positive displacement pump impeller technology that provides dry-run, dry suction lift, and flow performance like no other positive displacement pump in the industry.

- **DRY-RUN** – Our pump can be operated without fluid in the pump chamber. Pulling fluid through an empty pipe or hose is no problem.

1500 Series	
PUMP	
Pump Technology	Patented Dixon Pumps Positive Displacement Tri-Lobe Impeller Technology
Inlet Size and Type	1.5 in. FNPT
Outlet Size and Type	1.5 in. FNPT
Pump Shaft Material	Carbon Steel
Impeller/Vane Material	Proprietary Engineered Resin
Pump Housing Material	Aluminum
Wetted O-Ring and Shaft Lip Seal	Viton®
Bypass Options*	50 psi
Maximum Particle Size Debris Removal**	74 micron / 200 mesh / .074 mm / .0029 in
Maximum Differential Pressure	125 psi / 8.6 bar
Maximum Viscosity	3,000 cSt
Maximum time in Bypass	5 min

* Bypass limits determined by power source overload limits

** Particle size tolerance depends on duration and volume of exposure. Larger particles can be tolerated during intermittent and incidental exposure. Long-term exposure when removing dirty oil and debris, or during tank cleaning can damage the pump, requiring filtration or screening to smaller particle size.

PERFORMANCE – DRY VACUUM, NPSHr

VACUUM (in Hg) AND DRY-LIFT (in Ft.)	
Pump RPM:	400
Vacuum (Inches of Hg)	9.8
Dry Lift of Water in Feet (SG=1)	11.2
Dry Lift of Gasoline in Feet (SG=.73)*	15.3
Dry Lift of Diesel in Feet (SG=.88)	12.7

NOTE: Dry lift capability varies, depending on the vapor pressure of the fluid

* Summer Fuel, RVP - 9 psi, at sea level

NET POSITIVE SUCTION HEAD REQUIRED (NPSHr)

Pump RPM:		450
Inlet	Fluid	
1.5"	Water (ft.)	18.0
1.5"	Diesel (ft.)	20.0

WEIGHT

TOTAL SYSTEM WEIGHT (Lbs.)

Type	1.5 HP
w/ EP SINGLE Phase Motor	412

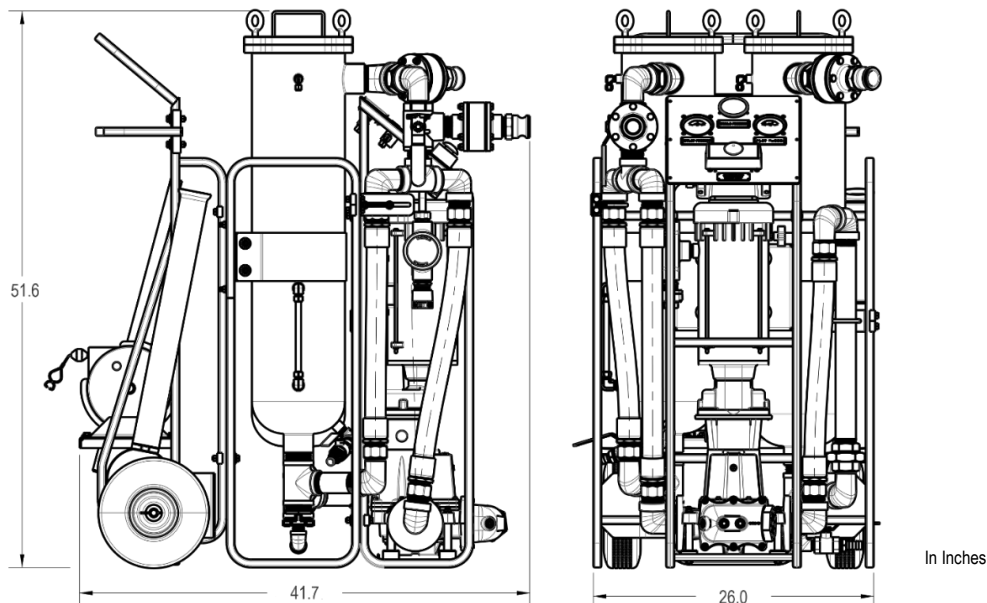
FILTER ELEMENTS

FILTER RECOMMENDATIONS

Filter Type	Part Number	µm*	Efficiency Rating	ΔP**	Size
Pro Series Bag Filter	BAG2FELT0005	0.5	Nominal	10 in Hg	P2
Pro Series Bag Filter	BAG2FELT0010	1	Nominal	10 in Hg	P2
Pro Series Bag Filter	BAG2FELT0050	5	Nominal	10 in Hg	P2
Pro Series Bag Filter	BAG2FELT0100	10	Nominal	10 in Hg	P2
Pro Series Bag Filter	BAG2FELT0500	50	Nominal	10 in Hg	P2
Coalescer	COA6182N	2	Nominal	15 PSID	6.0"x18"
Coalescer	COABETA1000-6X18	3	BETA	15 PSID	6.0"x18"
Water Separator	WS720150AT		Absolute	20 PSID	7.7"x20"
Cartridge Filters	Various	2 - 10	Nominal & Absolute	20 to 25 PSID	6.0"x18"

*µm = Micron Size, **ΔP = Gauge reading indicating filter should be exchanged (in Hg for bag filter housing, PSID for coalescer/water separator/cartridge filter housing)

DIMENSIONS



AVAILABLE POWER OPTIONS

The TCU Series 2-Wheel dolly comes with a premium Marathon AC motor and a 50 ft. power cord, wired according to the "Wired as" column in the following table.

POWER SOURCE SPECIFICATION

Type:	EP	HP	Hz	PH	Voltage	Wired as	Duty	FLA	RPM	Switch	Encl	EP Class
AC Motor	YES	1.5	60	1	115/230	115	C	12.4/6.2	1725	On Motor	EPFC	②

① C11 Grp D Div1

② C11 Grp D Div1 + C12 Grp F&G T3B

ACCESSORIES

Hoses, nozzles, suction drop pipes, and grounding rod are available for purchase separately

- Hose kits – 10ft, 20ft, and 30 ft, sections with FxM Camlock fittings for easy extension add-ons
- 1.5" Mechanical Nozzle with Camlock fitting
- 1.5", 3 ft. Drop Pipe with Camlock fitting
- 1.5", 7 ft. Drop Pipe with Camlock fitting
- 1.5", 7 ft. Debris Pipe with Camlock fitting
- Gamma Jet Spray Jet assembly for 4" access
- Gamma Jet GJ9.2 with bung fitting for 2" access
- Individual Gamma Jet Spray Heads – 4" and 2" access
- Grounding rod



Pro Series Bag Filters - Silicone free, nonwoven, fiber-free polyester felt; Chemically resistant plastic retainer ring with handle; Fully welded - thermally bonded seams.

Coalescer - Our multi-layer coalescer filter has a Beta rating of B3 = 1000 and is 99.9% efficient. It is constructed of four layers: 2 wire mesh layers, 1 fiberglass layer and 1 absolute micro-glass layer with a high strength 100 PSI collapse metal support tube and synthetic jacket. Made to remove emulsified water and damaging particulate contaminants from hydrocarbon fluids in critical applications, this filter is used as the first stage element in our two-stage filtration housings. This filter offers more surface area for longer life cycles and less downtime.

Water Separator - These filters can be cleaned and re-used. They perform a superior water barrier as the second stage filter in our two-stage filtration housings, and are constructed of durable Teflon™, hydrophobic media and stainless steel to resist corrosion.

Cartridge Filters - Various cartridge filters available for special filtration needs. Call Dixon Pumps for options.