

PUMP STATION

Remote Pump Station & Recovery Funnel

Designed to pump engine oils, fuel oils, anti-freeze & much more

A Safe & Cost Effective Solution for Transferring Product

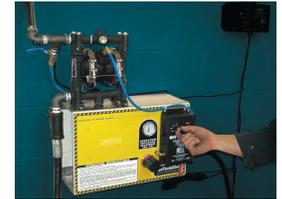
Remote Pump Station Standard Design Features:

- Air-operated diaphragm pump c/w high or low alarm
- Quick, efficient and safe pump package
- Manufactured to pump & transfer the following:
 - used oils, engine oils, hydraulic fluids
 - diesel and other similar combustible liquids
 - anti-freeze, water and much more
- High or low level alarm stops air supply to pump
- Visual and sound alarm, test button, manual operation
- Available with pump timer so you don't have to wait next to unit, timer will shut down pump

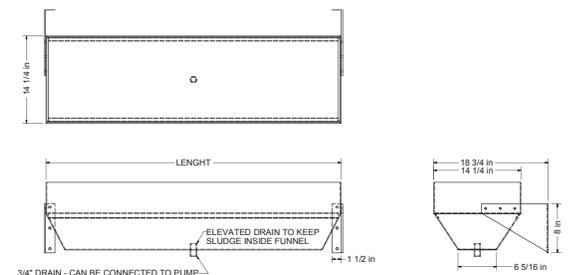
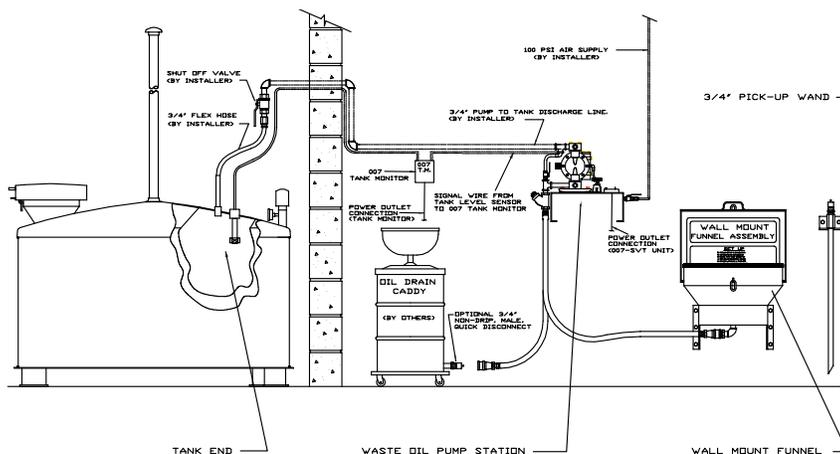


Wall Mount Funnel Standard Design Features:

- Fabricated from 1/8" steel or aluminum
- Removable 1/4" perforated filter plate
- Sludge trap
- 3/4" line fittings and 3/4" non drip, male, quick disconnect
- Steel blast clean and paint, 5 mil dry film, high gloss epoxy (steel model only)
- Optional lockable cover and hinge
- Optional seal and anti-splash guard



Technical Drawings :



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Installation, Operation and Maintenance Instructions For Remote Pump Station (Samson PN75-2833 pump)

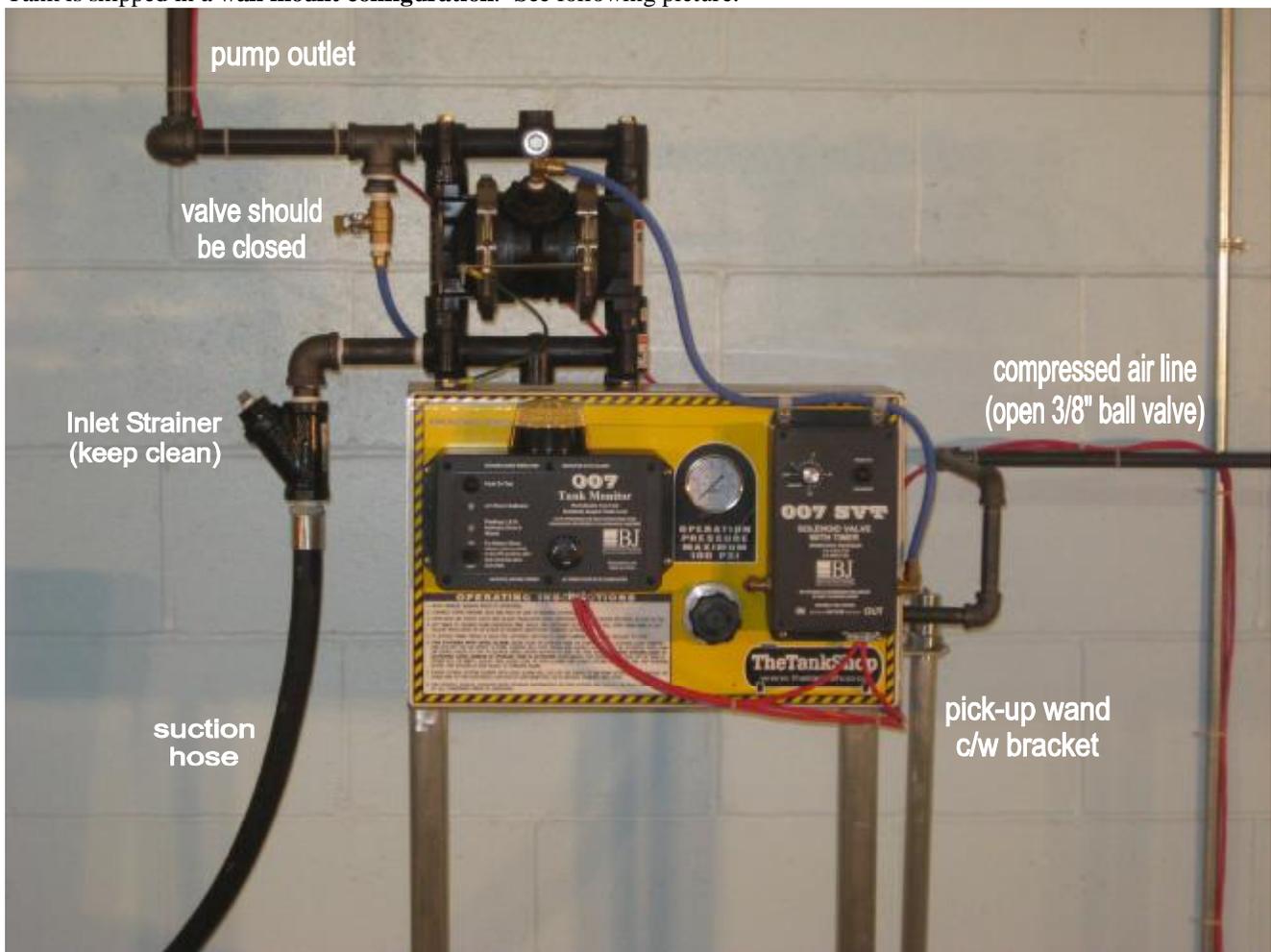
Upon receiving, **inspect all parts** to ensure no damage has occurred during transport.

For system sold with storage tank: Place the waste oil storage system the appropriate distance from building air intakes, operable windows, sources of ignition etc in accordance to requirement of the local authority having jurisdiction.

- a. Install the tank on a level, non-porous and non-flammable surface.
- b. The installed location of the storage system shall be protected from impact form vehicular traffic by use of bollards, guardrails or other means at least 5 feet from the tank assembly along the accessible perimeter around the site.
- c. Follow local regulation of authorities having jurisdiction.

INSTALLATION:

1. Tank is shipped in a **wall mount configuration**. See following picture:



2. Unit comes with 12ft. power cords for both 007SVT and 007Tank Monitor and 50ft of signal wire between the *level sensor* installed on the storage container and the 007Tank Monitor. **Choose pump location accordingly.**
3. Use appropriate **fasteners** depending on wall material and thickness.
4. **Connect both power supplies** (12V transformer) once unit is attached in its location.
5. **Close ball valve** located on the right of the control panel and **connect compressed air supply** into this ball valve.

6. NOTE:
 - a. Pressure regulator is factory preset to 100 psi (max.).
 - b. This remote pump unit has been tested before shipping using vegetable oil. Pump as been drain but some oil residue may still be inside the pump mechanism.

7. The **level sensor is equipped with 50ft of signal wire**. When the installation requires running the signal wire through walls or other structures, unthread cap from level sensor and disconnect wiring. Once signal wiring is installed through walls or structure, reconnect wiring inside level gauge cap and replace cap tightly.

8. **Test and Install level sensor:**
 - a. Make sure pump unit is energized (12V transformers are plug into wall power outlet),
 - b. Lift the small float on the level gauge. An alarm siren and strobe light should both be activated. Siren should be on the "ON" position.
 - c. Install level gauge into a 2" female NPT opening on storage container / tank:



9. **Connect 1" piping** between storage tank and air diaphragm pump (top 1" port). This piping is not supplied with remote pump. Metal piping (ex.: steel) is preferred. The use of plastic piping is not recommended because of the ease of breaking down leading to leaks.

10. **Connect pump inlet** (suction hose) to the bottom 3/4" port on the air diaphragm pump.
 - a. A flexible suction hose is supplied with pump and comes with a 3/4" quick coupler that can be attached to a wall mount funnel, a 36" long aluminum pick-up wand or any other accessories.

HOW TO OPERATE REMOTE PUMP STATION:

1. **Open ball valve for compressed air supply.** Pump should not run.
2. **PRESS & HOLD THE “PUSH TO ACTIVATE” BUTTON TO START PUMPING OPERATION. RELEASE TO STOP.**

OR
3. **TURN TIMER TO DESIRED DURATION** of operation. Press button “PUSH TO ACTIVATE” to start pumping.
 - a. In a situation where the storage container becomes full during the fluid transfer, the high level sensor will send a signal to the control panel cutting the air supply to the pump.
 - b. Pump will operate until timer is back to zero “0” OR if a high liquid level condition is attained.

NOTE:

- a. The level sensor on this remote pump can be used to empty a storage container. In this situation, the level sensor can be set to be a “low” level type that will stop the pump when liquid level is below a certain point.
- b. **Siren can be turn off.** A LED light will indicate that the siren is turned off. The strobe light will flash until liquid level condition is resolved.
- c. The level sensor comes standard with a 6” long extension which means that when the liquid level reaches 6” down from the fitting opening where it is installed, the level sensor will be activated. When longer length of tubing is required, simply replace the standard 6” length with a longer one of the same material (PVC). The float on the end of the level sensor can be un-clipped and turn around so that the level sensor will now be activated when there is a low liquid level situation. The pump system will accept both settings.
- d. **POWER OUTAGE:** SYSTEM EQUIPED WITH LEVEL ALARM(S) WILL AUTOMATICALLY CUT-OFF AIR SUPPLY TO AIR PUMP DURING A POWER OUTAGE OR WHEN ONE OF THE ELECTRICAL CIRCUITS IS DISCONNECTED OR BROKEN. PUMPING WILL AUTOMATICALLY STOP.

GENERAL NOTES:

The 007 Tank Monitor should never be used to monitor gasoline or highly flammable or combustible liquids. When a tank condition occurs (i.e.: high or low level sensor activated) the Tank Monitor 007 will go into an alarm mode, activating siren(s), strobe light(s) and the 007SVT solenoid valve or any other accessories used. Siren(s) may be silenced by moving toggle switch on front cover to “OFF” position. The flashing yellow LED is a reminder that siren(s) is muted to “OFF” position. Strobe light(s) will remain activated until tank condition has been corrected.

- (a) READ BJ Tank Monitor OWNERS’ MANUAL PRIOR TO OPERATING,
- (b) CONNECT STATIC GROUND LEAD,
- (c) OPEN MAIN AIR SUPPLY VALVE. PRESSURE REGULATOR SHOULD BE SET BETWEEN 60 AND 70 psi TO ACHIEVE SMOOTHEST PUMPING ACTION,

MAINTENANCE:

1. Test unit weekly.
2. Depending on environment and location it is advisable to periodically remove tank sensor(s) from tank and inspect. Manually raise and lower float assuring the 007 Tank Monitor and any other accessories like the 007SV Solenoid Valve, sirens, strobe lights or other accessories are functioning properly.

Technical Data

A. Standard model: Samson 28 GPM _ Air-Operated Diaphragm Pump. Max operating pressure: 70 psi.

PN-75	
Air Motor	Aluminum
Wetted Section	Aluminum
Seats	Stainless Steel
Guides	Aluminum
Balls	Buna-N
Diaphragms	Buna-N
Air Inlet	1/4" FPT
Fluid Inlet	1" FPT
Outlet	1" FPT
Suction Lift	18'
Capacity	28 GPM
Mounting Hole "X"	7-11/16" x 5-1/2"

B. OPTIONAL PUMP: 1in. Graco Air-Operated Diaphragm Pump S/N: 647016**

Maximum fluid working pressure	100 psi (0.7 MPa, 7.0 bar)
Air pressure operating range	20-100 psi (0.14-0.7 MPa, 1.4-7.0 bar)
Air consumption at 70 psi (0.48 MPa, 4.8 bar), 20 gpm (76 lpm).	25 scfm
Air consumption at 50 psi (0.35 MPa, 3.5 bar), full flow.	25 scfm
Fluid displacement per cycle	0.17 gal. (0.64 liters)
Maximum values with water as media under submerged inlet conditions at ambient temperature:	
Maximum air consumption.	64 scfm
Maximum free-flow delivery.	50 gpm (189 lpm)
Maximum pump speed.	275 cpm
Maximum suction lift (varies based on ball/seat, wear, operating speed, material properties, and others var.):	16 ft (4.9 m) dry, 29 ft (8.8 m) wet
Maximum size pumpable solids	1/8 in. (3.2 mm)
Recommended cycle rate for continuous use	93 - 140 cpm
Recommended cycle rate for circulation systems	20 cpm
Sound Power*	
at 70 psi (0.48 MPa, 4.8 bar) and 50 cpm	78 dBa
at 100 psi (0.7 MPa, 7.0 bar) and full flow	90 dBa
Sound Pressure**	
at 70 psi (0.48 MPa, 4.8 bar) and 50 cpm	84 dBa
at 100 psi (0.7 MPa, 7.0 bar) and full flow	96 dBa
Operating temperature range.	10°F-150°F (-12°C-65°C)
Air inlet size	1/2 npt(f)
Fluid inlet size	1 in. npt(f)
Fluid outlet size	1 in. npt(f)
Weight	23 lb. (10.5 kg)
Wetted parts.	aluminum, TPC-ET, Acetal, PTFE
Non-wetted external parts	aluminum, coated carbon steel

* Sound power measured per ISO-9614-2.

** Sound pressure was tested 3.28 ft (1 m) from equipment.

- C. **Air Pressure Regulator.** 3/8" Ports, 250 psi maximum inlet air pressure. *NOTE: gauge is installed on pump dash panel.*

- D. **Level Alarm System** (*automatically stops air supply to pump when level condition occurs*)
 - Level Sensor opening required 2in N.P.T. female
 - Level Sensor wire type 18/2 twisted shielded alarm wire. This wire size is acceptable up to 150ft. long.
 - Length of level sensor wire 50 ft. (15.2m)
 - Level Sensor Signal. 100 milliamps, normally Close.
 - Pump Dash Panel Power Supply. 12V, The supplied transformer connects into a standard 115V power outlet.

- E. **Pump Station Dash Panel.** Aluminum Body, 3/16in thick. Wall mounted.

List of Item Supplied

- 1" Double Air Diaphragm Pump System. 28 gpm, Compatible with the following products: New/Used engine oil, Hydraulic oils, New/Used Antifreeze, Water, Diesel Fuel and/or similar products. Ask manufacturer for other product.
- Automatic high level alarm sensor (shuts off air supply to pump). *NOTE: This level sensor needs a 2" NPT female opening on the container or tank.*
- Alarm module with Audible (siren) & Visual alarm (strobe light).
- Timer for hand-free operation. In case of high or low level situation, the pump will still shut down automatically.
- 3/16" thick Aluminum Pump Station dash/panel c/w instructions,
- Brushed 36" long aluminum suction tube c/w wall bracket,
- 12 ft long suction hose that is used to connect the suction tube OR the wall mount funnel to the pump station (see drawing CFTB-3B) c/w quick connect for connecting either pick-up wand OR wall mount funnel,
- 50 ft of signal wire between the level gauge sensor and the pump station dash panel,
- Two(2) - Power supply, low voltage(12V) transformer c/w 10 ft long cords, for the pump station dash control unit and alarm module,
- One(1) – 3/8" ball valve to cut the main air supply to the pump station unit,

NOTE: The storage tank equipped with this pump unit (with level alarm) require to have One(1) x 2" NPT and One(1) x 3/4" NPT females for level sensor and pump outlet respectively,

AIR OPERATED FLUID DIAPHRAGM PUMPS

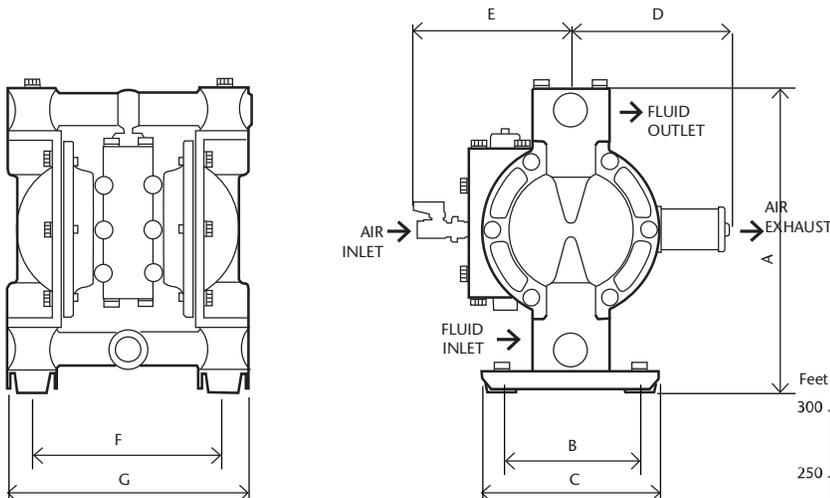
MODEL PN-75 (2833)
MODEL PN-75-UL (2834)

ALUMINUM 1" DIAPHRAGM PUMP

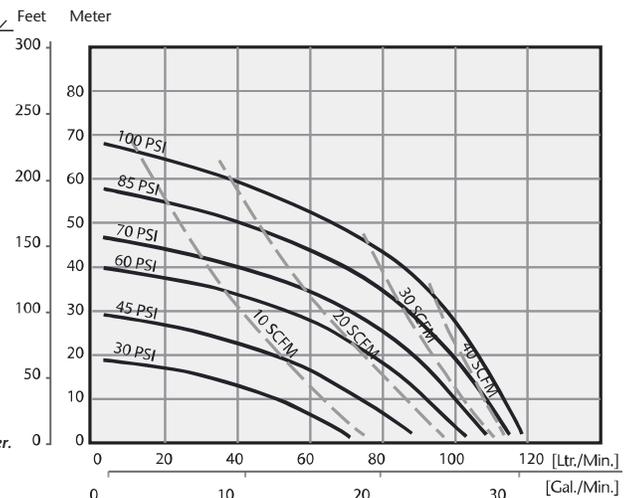
Air operated 1:1 ratio double diaphragm pump constructed with aluminum chambers and equipped with Buna-N diaphragms and balls. Air motor center section features aluminum construction with a long life patented self lubricated Ekonol® ring spool valve utilizing a unique stainless non-centering spring and reset button. Air inlet ball valve included with pump.

TECHNICAL DATA

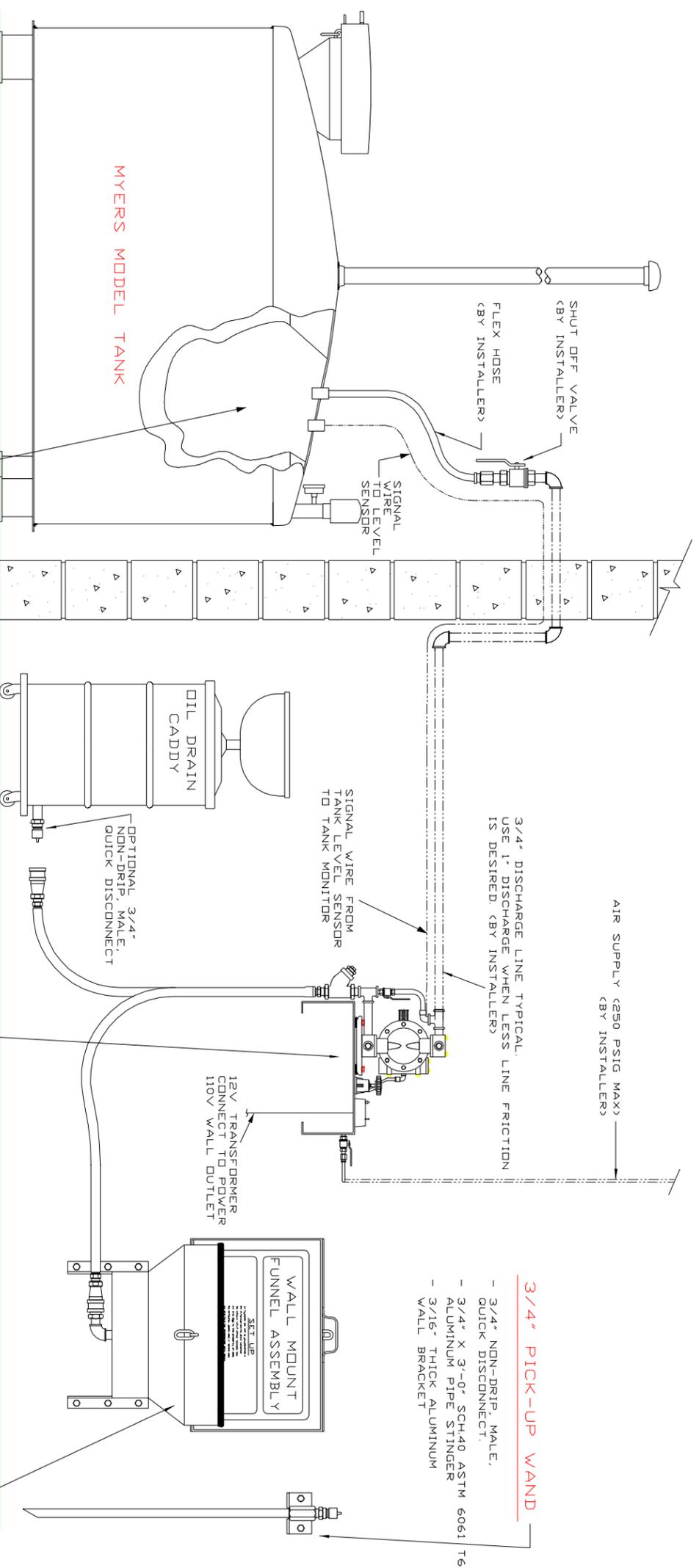
Pressure Ratio	1:1
Wetted Materials	Aluminum, Buna N (NBR)
Maximum Liquid Temperature	180 °F (82 °C)
Maximum Vertical Suction Head	18 Feet (6 m)
Maximum Free Flow Capacity	31.7 gpm (120 lpm) @ 100 psi
Maximum Solid size	1/16" (2 mm)
Air pressure operating range	20 to 100 psi
Maximum Cycles per Minute	195
Discharge Volume Per Cycle	0.163 gallons (615 cc)
Air Inlet	3/8" NPTF
Fluid Inlet	1" NPTF Side Port
Fluid Outlet	1" NPTF Side Port
dB(A) @ 70 psi	89
Net Weight	19.8 lbs



DIMENSIONS				
A	B	C	D	E
12.5"	5.5"	7.1"	6.3"	6.1"
F	G			
7.7"	9.8"			



(ANR): Atmospheric standard conditions. Tested at room temperature with water.



AIR SUPPLY (250 PSIG MAX)
(BY INSTALLER)

3/4" DISCHARGE LINE TYPICAL.
USE 1" DISCHARGE WHEN LESS LINE FRICTION IS DESIRED. (BY INSTALLER)

- 3/4" PICK-UP WAND**
- 3/4" NON-DRIP, MALE, QUICK DISCONNECT.
 - 3/4" X 3'-0" SCH40 ASTM 6061 T6 ALUMINUM PIPE STINGER
 - 3/16" THICK ALUMINUM WALL BRACKET

12V TRANSFORMER
CONNECT TO POWER
WALL OUTLET

MYERS MODEL TANK

TANK END ASSEMBLY (TYPICAL)

- 2" N.P.T. FEMALE OPENING CONNECTED TO PUMP DISCHARGE. USE BUSHING REDUCER TO ADAPT TO 3/4" or 1" FROM PUMP DISCHARGE.
- 2" N.P.T. FEMALE OPENING TO RECEIVE LEVEL SENSOR. INDICATE IF HIGH or LOW LEVEL ALARM WHEN ORDERING. MORE PROTECTION for THE LEVEL SENSOR.
- TANK IS TO BE VACUUM MONITORED.
- OPTIONAL: NORMALLY CLOSED VACUUM SWITCH FOR REMOTE VACUUM MONITORING.
- ACCEPTABLE ULC CODE for TANK:
 1. CAN/ULC-S652-08 or UL-142
 2. ULC-S601-07 DOUBLE WALL** for USED OIL.
 **ONLY IF TANK IS SET-UP as HEATER SUPPLY. ALWAYS VERIFY REGULATIONS & WITH AUTHORITIES HAVING JURISDICTION.

WASTE OIL PUMP STATION

- PUMP
- AIR OPERATED DOUBLE DIAPHRAGM PUMP, 28 GPM, 100psi (max)
 - GALLONS PER MINUTE: 28GPM (LARGER GPM AVAILABLE)
 - MOUNTED TO CONTROL PANEL. PUMP MUST BE VERTICAL.
 - IN-LINE 1/2" SUCTION STRAINER, 50 MESH SIZE
 - FABRICATED FROM 3/16" ALUMINUM AND FITTURED TO FACILITATE THE MOUNTING OF ALL COMPONENTS ON WALL AND/OR TABLE TOP
- TANK MONITOR 007
- MOUNT ON WALL WHERE ALARM WILL BE MOST VISIBLE.
 - CONNECT 12V TRANSFORMER TO POWER OUTLET.
- AIR CONTROLS
- MAIN AIR SHUT-OFF VALVE (MANUAL).
 - OPERATING PRESSURE REGULATOR VALVE AND GAUGE
 - PUSH BUTTON CONTROL TO START PUMP C/W TIMER
 - EMERGENCY HIGH (or LOW) LEVEL SENSOR SHUT-OFF SYSTEM, C/W SOUND & VISUAL ALARM AND AIR SUPPLY CUT-OFF SOLENOID VALVE.
 - TIMER ON UNIT ENABLE AUTOMATIC PUMP OPERATION FOR 1 TO 15 MINUTES WHILE STILL HAVING THE SECURITY OF PUMP SHUT-OFF SYSTEM
 - ALL AIR FITTINGS AND LINES TO BE SIZED TO SUIT PUMP OPERATION REQUIREMENTS

WALL MOUNT FUNNEL ASSEMBLY

- TO BE FABRICATED FROM 1/8" ALUMINUM (or STEEL)
- 30"/48"/60" LONG FUNNEL ALSO AVAILABLE (ALU)
- OPTIONAL: LOCKABLE COVER & HINGE
- OPTIONAL: SEAL & ANTI-SPLASH GUARD
- REMOVABLE 1/4" PERFORATED FILTER PLATE.
- SLUDGE TRAP
- 3/4" LINE FITTINGS AND 3/4" NON DRIP, MALE, QUICK DISCONNECT.
- MODEL AVAILABLE IN STEEL.
- SSPC-SP6,BLAST CLEAN AND PAINT, 5 MIL DRY FILM
- 1XCOAT EPOXY PRIMER & 1XPOLYURETHANE TOP COAT

OIL LINES - 3/4" or 1" SCH40 PIPING AND FITTINGS. 1" BETTER FOR LONGER RUNS or WHEN MULTIPLE ELBOWS.

PICK-UP LINE - 3/4" X 12'-0" FLEX SUCTION HOSE COMPLETE WITH IN-LINE STRAINER AND NON-DRIP FEMALE QUICK DISCONNECT.

GROUNDING - 3/8" GROUND LUG AND WING NUT
- 6'-0" 14 Ga. GROUND WIRE C/W BOLT-LUG AND DRUM CLAMP.

GENERAL OVERVIEW

THE DEPICTED PUMP SYSTEM IS INTENDED TO SAFELY TRANSFER USED PETROLEUM PRODUCT OR USED OIL FROM A COLLECTION STATION ON THROUGH TO A HOLDING TANK. THE SYSTEM CONSISTS OF AN AIR OPERATED DOUBLE DIAPHRAGM PUMP STATION C/W CONTROLS, PICK-UP WAND & FILTER SCREEN AND QUICK COUPLING AND IN-TANK SAFETY SHUT-DOWN HIGH LEVEL SENSORS. OPTIONAL ACCESSORIES INCLUDE A WALL MOUNT FUNNEL ASSEMBLY, A PICK-UP WAND AND MATCHING MALE COUPLING FOR USE WITH OWNER SUPPLIED FIXTURES.

THE PUMP SYSTEM OPERATES SAFELY ON COMPRESSED AIR OF 100 PSI OR LESS AND A LOW VOLTAGE (12V) POWER SUPPLY. INCLUDES AIR PRESSURE REGULATOR THAT REDUCES SHOP AIR PRESSURE FROM 250 PSIG (max) TO DESIRED PUMP WORKING PRESSURE.

THE PUMPING CYCLE STARTS WITH CONNECTING THE PICK-UP LINE TO THE DESIRED SOURCE, OPENING THE AIR SUPPLY VALVE AND PRESSING THE START BUTTON or TIMER. THE ACTIVATED PUMP DRAWS FLUID IN THROUGH THE PICK-UP LINE AND FILTER SCREEN AND SENDS IT ON TO THE HOLDING TANK. THE REGULATOR AND PRESSURE GAUGE ALLOW THE OPERATOR TO ADJUST THE FLOW RATE AND COMPENSATE FOR ANY PUMPING IRREGULARITIES WHICH MAY OCCUR DUE TO VARYING VISCOSITIES. WHEN THE PUMP SYSTEM HAS REMOVED ALL OF ITS SUPPLY OF FLUID, THE PUMP WILL SPEED UP LETTING THE OPERATOR KNOW IT IS TIME TO SHUT THE SYSTEM OFF. PRESSING THE START BUTTON (or TIMER COUNTDOWN TO ZERO) AND CLOSING THE AIR SUPPLY VALVE COMPLETES THE OPERATION.

THE IN-TANK LEVEL SENSOR ALARM SYSTEM IS DESIGNED TO STOP THE PUMPING OPERATION ONCE THE TANK HAS REACHED IT'S FULL/HIGH LEVEL. THE NORMAL SHUT-DOWN IS CONTROLLED BY THE SHUT-OFF SOLENOID VALVE. THE SHUT-OFF VALVE IN THIS SYSTEM IS DESIGNED TO WORK UNDER ADVERSE CONDITIONS. AS THE CHANGING LIQUID LEVEL IN THE TANK ACTIVATE THE SENSORS WHICH IN TURN SIGNAL THE SHUT-OFF VALVE TO CUT AIR SUPPLY TO THE PUMP AND STOPS ANY LIQUID TRANSFER.

NOTES

- ALL SYSTEMS ARE TO BE ASSEMBLED, TESTED AND PACKAGED FOR QUICK INSTALLATION C/W ALL NECESSARY SAFETY AND OPERATION MANUALS.
- INSTALLER SHALL SUPPLY PUMP STATION TO TANK PIPING AND MISCELLANEOUS MATERIALS TO FACILITATE INSTALLATION AS EACH INDIVIDUAL SITE MAY REQUIRE.
- ALL SYSTEMS TO BE SUPPLIED WITH COMPLETE OPERATING, SERVICE AND PARTS MANUALS.