

Trac-Vac[®]

Versatile Sludge Removal System for New and Existing Clarifiers



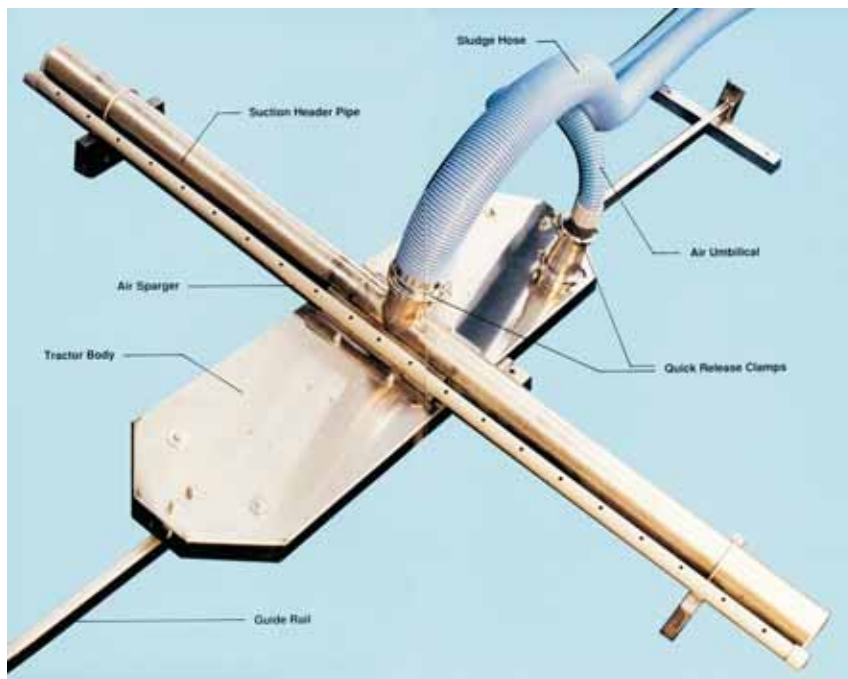
- Low installed cost
- Low maintenance
- Fits any basin
- Flexible controls
- Remove/replace without dewatering

The Logical Choice for Sludge Removal

Specify Trac-Vac for Economy and Performance

Versatility, reliability and economy make the Trac-Vac sludge collectors the logical choice when cost-effective solids removal is required. Hundreds of units installed in new and existing clarifiers have earned a reputation among engineers, operators and administrators for flexible design, ease of installation and dependable operation.

Pneumatically driven Trac-Vac collectors remove solids from sedimentation basins by means of suction generated through pumping or differential head. Key components are of modular design and corrosion-resistant and long service life.



Pneumatic Technology Drives a Time-Tested Design

Tractor - Propulsion is supplied by a highly reliable, all-pneumatic drive assembly, requiring a 90 PSIG (minimum) air supply. Less than 2 CFM is consumed at normal operating speeds of 0.5 to 2 feet per minute. All drive assembly materials are corrosion-resistant and the tractor housing is stainless steel. If the tractor's path is blocked, the drive mechanism can withstand an indefinite stall without damage. A locator jet establishes the unit's position without use of trailing floats.

Suction Header Pipe - Length and diameter of the stainless steel header pipe, and the size and number of suction orifices are determined by the application

Air Sparger - An optional air sparge system provides air scour cleaning of inclined plate settling services.

Sludge Hose - Durable, high density polyethylene hose carries sludge away from the tractor unit. Hoses are smooth on the interior for low head loss and ribbed on the outside for flexibility.

Guide Rail - Tubular stainless steel rails guide tractor units through the basin. Interlocking sections are easily transported and assembled.

Air Umbilical - Air Supply lines between the local pneumatic panel and the tractor are enclosed in a protective sheath fabricated from the same high-density polyethylene material as the sludge hose.

Quick Release Clamps - Stainless steel toggle clamps allow faster, more convenient removal/ replacement of hoses than screw type clamps.

Guide Rail - Tubular stainless steel rails guide tractor units through the basin. Interlocking sections are easily transported and assembled.



Performance Features and Options

Extractor Makes Drive Service Quick, Convenient

On those infrequent occasions when a tractor mechanism requires service, our exclusive Trac-Vac Extractor lifts the unit out of the basin for easy maintenance access. When service is complete, the tractor is quickly reinserted and precisely indexed with the guide rail. Periodic maintenance is easily accomplished without dewatering the clarifier.

Tape Drive Systems

Where an exterior drive system is desired or specified, an excellent tape drive mechanism is available.

A pneumatic or electric drive is mounted on the basin end wall, above the waterline, and stainless steel tape is used to move collector units across the basin floor.

- 90 PSIG (minimum) source of clean, dry, oil-free air
- Sludge pump - for pumped sludge withdrawal, or...
- Pneumatic or electric sludge valve - for gravity sludge withdrawal

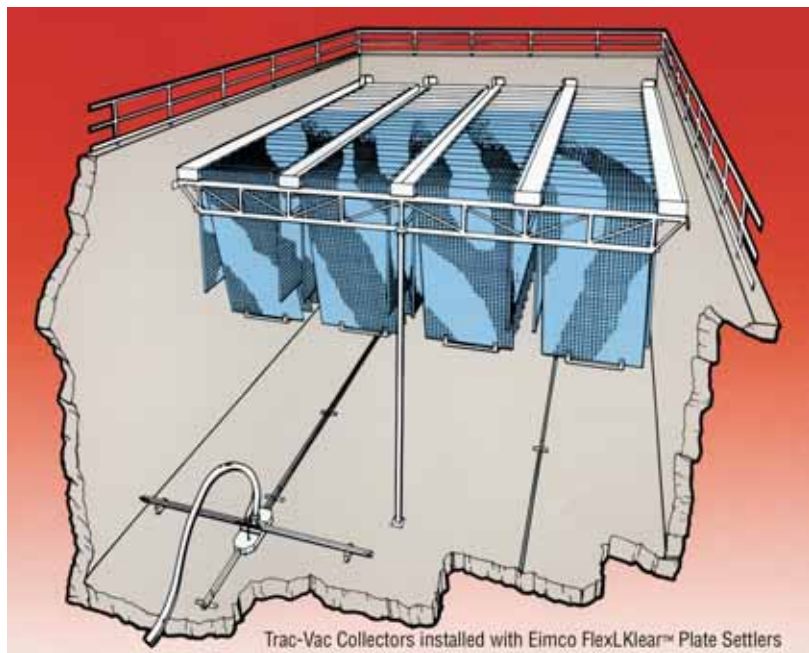
Note: A minimum of 5 feet of head at the tank is required for satisfactory gravity suction performance.

Designed to Improve Plate Settler Performance

Trac-Vac sludge collectors are an ideal means of removing accumulated solids under laminar settling devices, as collection can be easily tailored to accommodate any rate and pattern of deposition. When Trac-Vac collectors equipped with air spargers

are used in conjunction with the FlexKlear™ self-cleaning plate settlers, both effective plate

cleaning and solids removal can be achieved without dewatering the basin.



Control Flexibility and Quick, Easy Installation



Versatility Starts at the Control Panel

A programmable electronic controller directs the collector units and activated sludge valves or pumps. Air flow is managed through an interface of electrically activated solenoid valves. A single control panel can operate as many as fifty collector units and associated valve panels. All cabinets are constructed of anodized aluminum and meet NEMA-4 specifications for outdoor service.

The programmable control unit allows flexibility in the patterns of solids collection available to plant operators. By varying combinations of tractor speed, short or long trip, and one-way or round-trip travel, a customized sludge removal program may be established for every clarifier.

Programmable Controls Help Solve Tough Settling Problem for Louisville, Colorado
Operators at the Louisville, Colorado water treatment plant face a problem others might find enviable. Turbidity of influent water is so low (normally less than 1 NTU) that settling those solids that do exist is extremely difficult. Their

solution has been to stockpile sludge from the clarifiers and recycle it to the flocculator. In this manner, turbidities in excess of 1,000 NTU are achieved, allowing excellent floc formation and good polishing performance in the clarifiers. Periodically, a waste cycle sends excess solids back to the clarifier which then functions as a thickener, with flow from the sludge collectors discharging to the municipal wastewater system.

Successful operation of the system is dependent on the ability of the sludge removal mechanism to accommodate fluctuation in both the rate of solids loading and pattern of deposition. To accomplish this, our engineers programmed Trac-Vac controls to provide several collection modes.

In normal operation with solids recycling, collectors run short trips started by a clock in the controller, with one long trip in each 24-hour period. During wasting, collectors run continuously in alternating long and short trips. Operators also have the ability to select short or long trip only travel to accommodate any deposition pattern that may occur.

Lightweight, Modular Components Keep Installed Costs Low
Trac-Vac systems are easily installed in any existing clarifier basin - square, circular or rectangular - without costly concrete

modifications. All components of the Trac-Vac system are light enough to be carried into the basin by one man. Easily assembled modular componentry allows installation in a fraction of the time required for competitive equipment, providing substantial savings on time and labor.

Flexible Design is Perfect for Retrofits

Our engineers tailored a retrofit sludge collection system for this challenging basin at the Roanoke, Alabama water treatment plant. Two Trac-Vac units were installed on converging rails in the upper end of the sloping, wedge-shaped tank, with the connecting span of sludge collection pipe supported by a custom fabricated stainless steel truss. A third pivoting collector was installed in a circular rail, replacing a conventional rake mechanism.

