MRI Hoseless Cable-Vac eliminates the hose.

Only the MRI Hoseless Cable-Vac™ sludge collector* delivers all the benefits of suction sludge removal without the need for hoses. Perfect for use in new or existing basins, the patented system has four key components:

- Tandem header pipes with tangential flow nozzle* optimize sludge removal
- Telescoping sludge conduit* eliminates the need for hoses and is self-priming
- Reel-to-Reel Drive* ensures reliable power without tensioning
- MRI’s signature control system combines sophisticated operation with communications

MRI U/S Ultra-Scraper doubles performance.

Equipped with double-acting, reciprocating linear blades, the MRI U/S Ultra-Scraper is two times more effective than conventional scrapers. The high-capacity system has four key components:

- Two transport racks with scraper blades are assembled without field welding
- Reliable drive unit uses either hydraulic or electric power
- Cross collector optimizes sludge removal
- MRI’s signature control system offers easy adaptability

MRI Retro Cable-Vac available as new system or retrofit.

In addition to the Hoseless Cable-Vac and U/S Ultra-Scraper, MRI offers the Retro Cable-Vac, with flexible hoses and guide rails. The Retro Cable-Vac is based on the original “Trac-Vac” system created by MRI in 1980. With well over 2,000 Trac-Vac systems sold, many have been refurbished to become like-new Cable-Vac sludge collectors. The Retro Cable-Vac is also available as a new system and consists of five main components:

- A single header pipe mounted on a traveling carriage
- A guide rail which extends the full tank length
- A header pipe to transport the sludge from the header pipe out of the basin
- A Reel-to-Reel cable drive
- Control system

Meurer Research, Inc. began developing high-quality equipment in 1978 to provide water and wastewater treatment facilities with effective, reliable and economical methods of removing sludge from sedimentation basins. Over the years, MRI has built upon these standards by incorporating new ideas and technology into the design and manufacture of its products. The result is three fully engineered devices: one based on suction, the Hoseless Cable-Vac; one based on scraping, the U/S Ultra-Scraper; and one based on tradition, the Retro Cable-Vac.

MRI’s signature control system builds on experience.

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Adaptable control system enables sophisticated operation.

The operator-friendly control system automatically displays and manages all functions of the sludge collector. Through a programmable, menu-driven LCD touch screen, the collector can be programmed to fully meet a treatment plant’s specific needs. Variables include duration, speed, and frequency of operation which can be triggered by sludge depth, time, or signals from SCADA.

Innovative tandem collectors maximize efficiency.

The key to the Hoseless Cable-Vac’s ability to deliver increased solids removal is the innovative design of its tandem collectors.* Unlike conventional equipment, MRI’s system has two collectors instead of one, with sludge collection orifices located on the side and facing forward, rather than pointing downward. This allows for enhanced, one-way directional sludge extraction as the assembly moves forward. On the reverse stroke, suction ceases. The orifices direct the sludge into the collection pipe tangentially (see illustration above), organizing the flow to remove more solids with less water and prevent clogging.

Unlike other systems, MRI’s Hoseless Cable-Vac operates without guide rails on the basin floor enabling quick, simple installation. It can be used in new or existing basins with flat, sloping or slanted floors. Even in continuous operation, the collector is virtually maintenance free due to all stainless steel construction, long-life wheels and bearings, and a simple cable-winch drive.

Built for simplicity, MRI’s Reel-to-Reel Drive* makes the Hoseless Cable-Vac the ultimate in dependability. The above-water drive combines take-up and pay-out cables on one shared reel saving space and allowing a compact drum with the cable wrapped in a single layer without tensioning. Designed for continuous operation, the robust and energy efficient AC drive with variable frequency control can withstand a stall without sustaining damage.

Conventional Sludge Collector

A conventional sludge collector (Figure A), the incoming flow enters at the bottom and continues upward, radially towards the central outlet. This causes the two flows to collide at the center, disrupting the flow pattern and decreasing sludge removal.

MRI’s Exclusive Tandem Collector

With MRI’s tandem collection design (Figure B), the incoming flow enters tangentially at the bottom of both collectors, causing the incoming flow to turn, in a spiral, towards the central outlet. As the incoming flow from each collector is maintained by the incoming flow. This creates an organized, organized flow pattern that increases sludge removal and prevents clogging.

*Patented
MRI Hoseless Cable-Vac: low profile, floor-hugging and powerful.

MRI’s Hoseless Cable-Vac features a floor-hugging, telescoping sludge removal pipe and a simple, powerful cable-winch movement. Durable enough for continuous operation, treatment plants generally run the Hoseless Cable-Vac from one to several times a day. Offering a highly scaleable design, the MRI Hoseless Cable-Vac is available in flow rates from 25 gpm to 2,000 gpm.

MRI U/S Ultra-Scraper: double-acting blades increase effectiveness.

MRI’s U/S ultra-Scraper’s unique design houses a series of scraper blades mounted on two racks. Each rack moves in opposition to the other creating a backward and forward action of approximately 2’. The reciprocating design greatly increases solids removal, delivering unsurpassed effectiveness.

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for ultimate performance.

Engineered for integration, MRI’s Plate Settlers and Sludge Collectors provide standardized and high performance— from clarification to solids removal. MRI’s Plate Settlers allow increased water flow and settling area, greatly enhancing clarifier effectiveness and productivity, unlike MRI’s sludge collection products that maximize solids removal.

Installation of the MRI u/S Ultra-Scraper is quick and simple. Substantially fabricated at the factory, the on-site contractor simply assembles the unit. No measuring, cutting, or welding is required. Efficient and fast action removes the heaviest solids. Low profile blades scrub at a thin layer of sludge with only one cycle making efficient removal of thick, heavy sludge and some grit and small rock. This also results in much higher travel velocity than Chain & Flight and other high profile devices. Generally, Chain & Flight travel at about 1 fpm compared to the MRI Ultra-Scraper’s 20,000 lbs or more. The MRI Ultra-Scraper’s arm corresponds to a sludge removal rate of 150 gpm in a 25′ wide basin. Alternate single head sludge off the unit at 20 fpm after they reach back and forth. The sludge moves to the end or center of the basin where it is extracted by a cross collector.

Installation of the MRI u/S Collector’s in a stand-alone or cross collector: MRI u/S Ultra-Scraper is also used as a cross collector at the end of the basin. (above) MRI Power Pivot transmits a 20,000 lb. force and enables removal of dense sludge.

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Experience, reliability, creativity and know-how. These are the qualities that have enabled Meurer Research to lead advancements in water and wastewater treatment solutions since 1978.

Now Meurer Research is pleased to offer a choice in superior sludge collection products—continuing the innovative and efficient designs in MRI’s more than 30-year history of advancements.

With over 50 patents and thousands of installations, from design, engineering and production to installation, education and after-market customer service, MRI has helped utility companies, municipalities and engineers find solutions to complex issues.

Trust MRI for trend-setting innovation.

Other products available from Meurer Research are:

- Inclined Plate Settlers
- Hoseless Cable-Vac™ Sludge Collectors
- U/S Ultra-Scraper Sludge Collectors
- Paddle Wheel and Turbine Flocculators
- Membrane Pre-Treatment
- Package Plants
- Floating Plate Settlers
- Backwash and Residuals Reclaim
- Baffles
- Tube Settlers
- Pilot Plants
- Membrane Filters

MRI has installed thousands of water treatment products worldwide since 1978. Our expertise and innovative treatment solutions include protocols to the MRI Inclined Settler at Lancaster, KY, and MRI U/S Inclined at Gainesville, FL and Denver, CO.