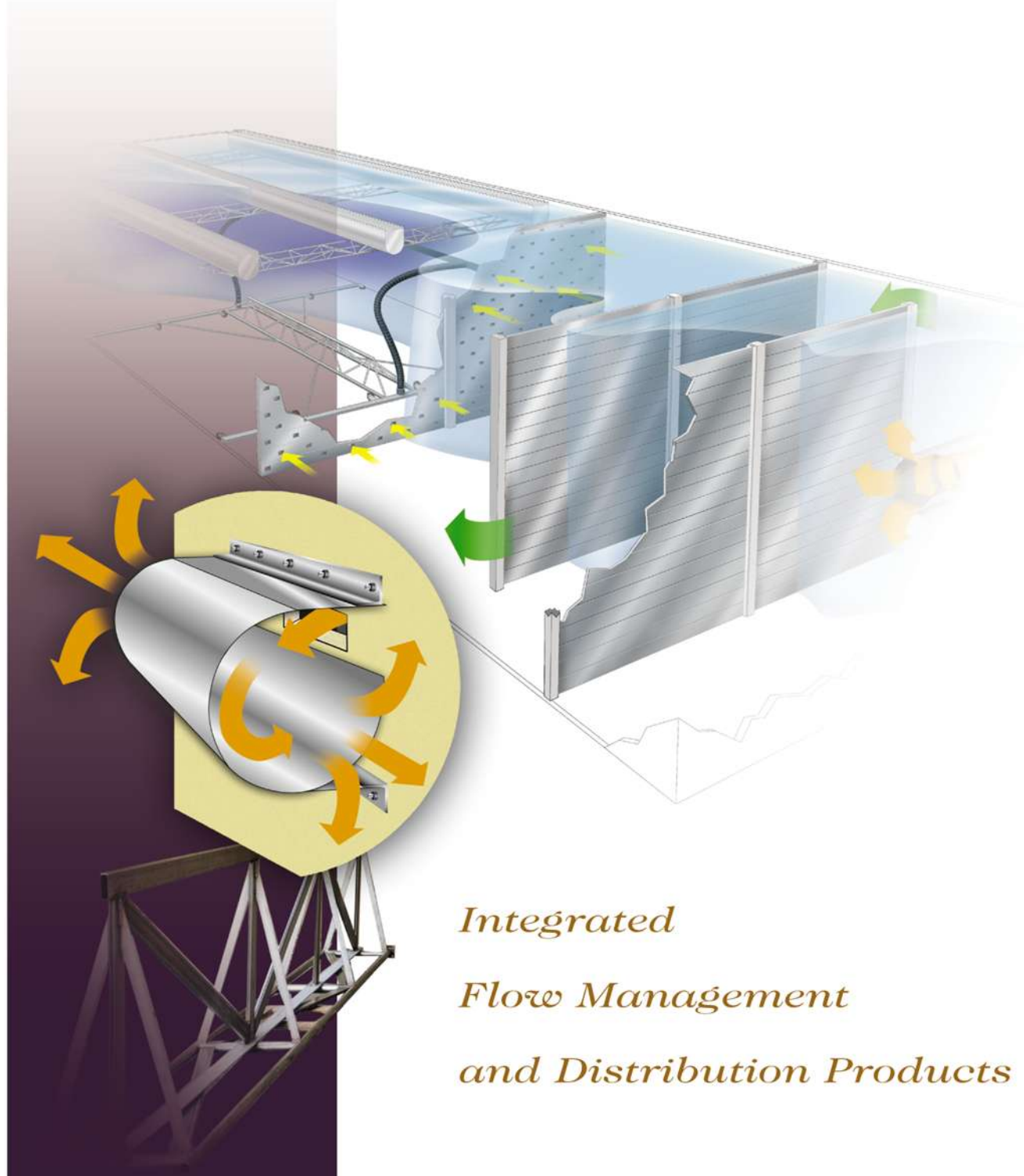




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# MRI FLOW MANAGEMENT

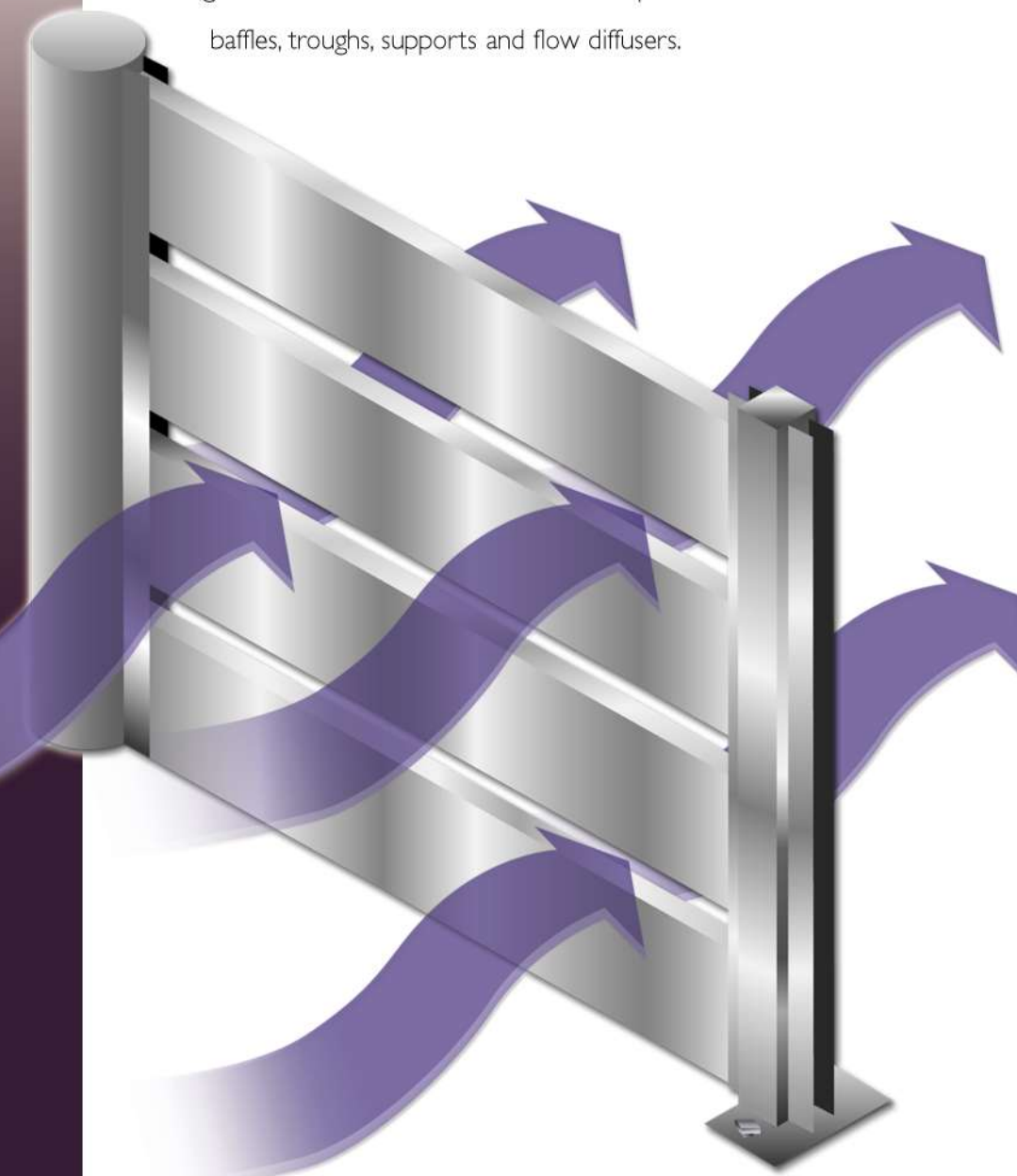


*Integrated  
Flow Management  
and Distribution Products*

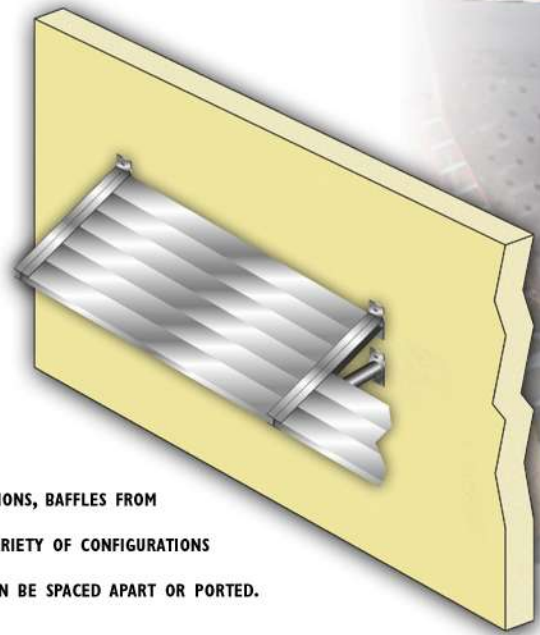
# MRI baffles: The key to efficient flow management.

For more than 25 years, Meurer Research, Inc. (MRI) has been developing innovative sedimentation technology such as its patented inclined plate and tube settler systems, as well as the Cable-Vac™ sludge collector system. To achieve maximum performance in water and waste water clarifiers, MRI's considerable experience in settleable solids removal processes has led to the development of a complete family of flow management devices. These all-stainless steel products include baffles, troughs, supports and flow diffusers.

MRI's STAINLESS STEEL PLANKS SLIDE INTO SUPPORT CHANNELS MOUNTED ON CONCRETE OR STAINLESS STEEL COLUMNS. PLANKS ARE TYPICALLY 12" WIDE X 1-1/2" THICK AND UP TO 10' LONG. OTHER WIDTHS ARE ALSO AVAILABLE.

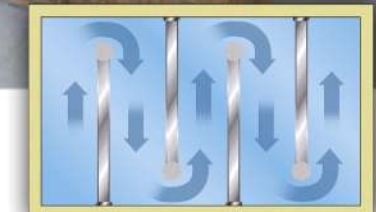


**IN CIRCULAR CLARIFIERS, MRI'S ANTI-ROLL BAFFLES STOP DENSITY CURRENTS WHICH MOVE UP THE OUTER WALL OF THE CLARIFIER, CREATING FLOC CARRY-OVER.**

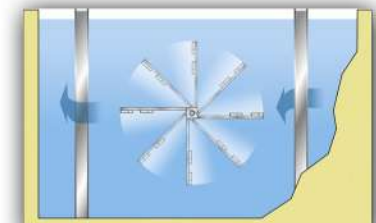


**IN FLOW DISTRIBUTION APPLICATIONS, BAFFLES FROM MEURER CAN BE SET UP IN A VARIETY OF CONFIGURATIONS AS SHOWN AT RIGHT. PLANKS CAN BE SPACED APART OR PORTED.**

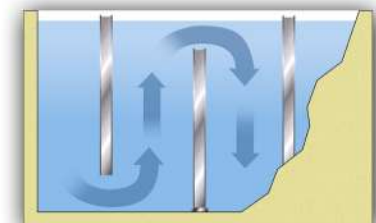
The strategic placement of baffles in flocculators, clarifiers and aerators helps control flow distribution and the duration of treatment at various stages in the process. MRI's stainless steel plank baffles provide a better alternative to redwood planks, fiberglass and concrete. They are quicker and easier to install or reconfigure, and—in the case of redwood planks—save natural resources and prevent possible chemical contamination from treated wood. Baffles can be installed or retrofitted in virtually any basin to improve efficiency, and may be slotted, ported or solid depending on the application.



SERPENTINE BAFFLING (OVERHEAD VIEW)



STAGING BAFFLES (SIDE VIEW)



UNDER/OVER BAFFLING (SIDE VIEW)

# High-quality products for every part of the treatment process.

Meurer Research, Inc. brings together all the components necessary for improved flow management and distribution to boost settling efficiency in clarifiers. Manufactured at MRI's facility in Colorado, the company's flocculation, distribution and aeration baffles can be retrofit to replace redwood planks. MRI baffles, \* helical flow diffusers, \* troughs\* and trusses\* are NSF-61 approved and manufactured of T304/316 stainless steel.

## TROUGHS

Effluent collection troughs allow for efficient flow, and feature cross-beam stiffeners to prevent oscillation.

## TRUSS SUPPORTS

Long-lasting, ultra-rigid truss support structures provide the ultimate in strength and precision stiffness.

## MRI FLOW MANAGEMENT AND DISTRIBUTION APPLICATIONS IN USE

Baffles (pictured here in a serpentine configuration) are used in the flocculation chamber(s) for controlling distribution of flow and to separate each stage to facilitate the agglomeration of sludge particles. The flow then enters the sedimentation basin through diffusion baffles which introduce the flow evenly across the full width of the basin. Baffles, with or without metering orifices, are also used to direct flow throughout the basin. Clarified water exits the system via MRI collection troughs supported by high-strength trusses.

\*Patented

## CABLE-VAC™ SLUDGE COLLECTOR

MRI's state-of-the-art sludge collector system provides optimal solids removal.

## DISTRIBUTION BAFFLES

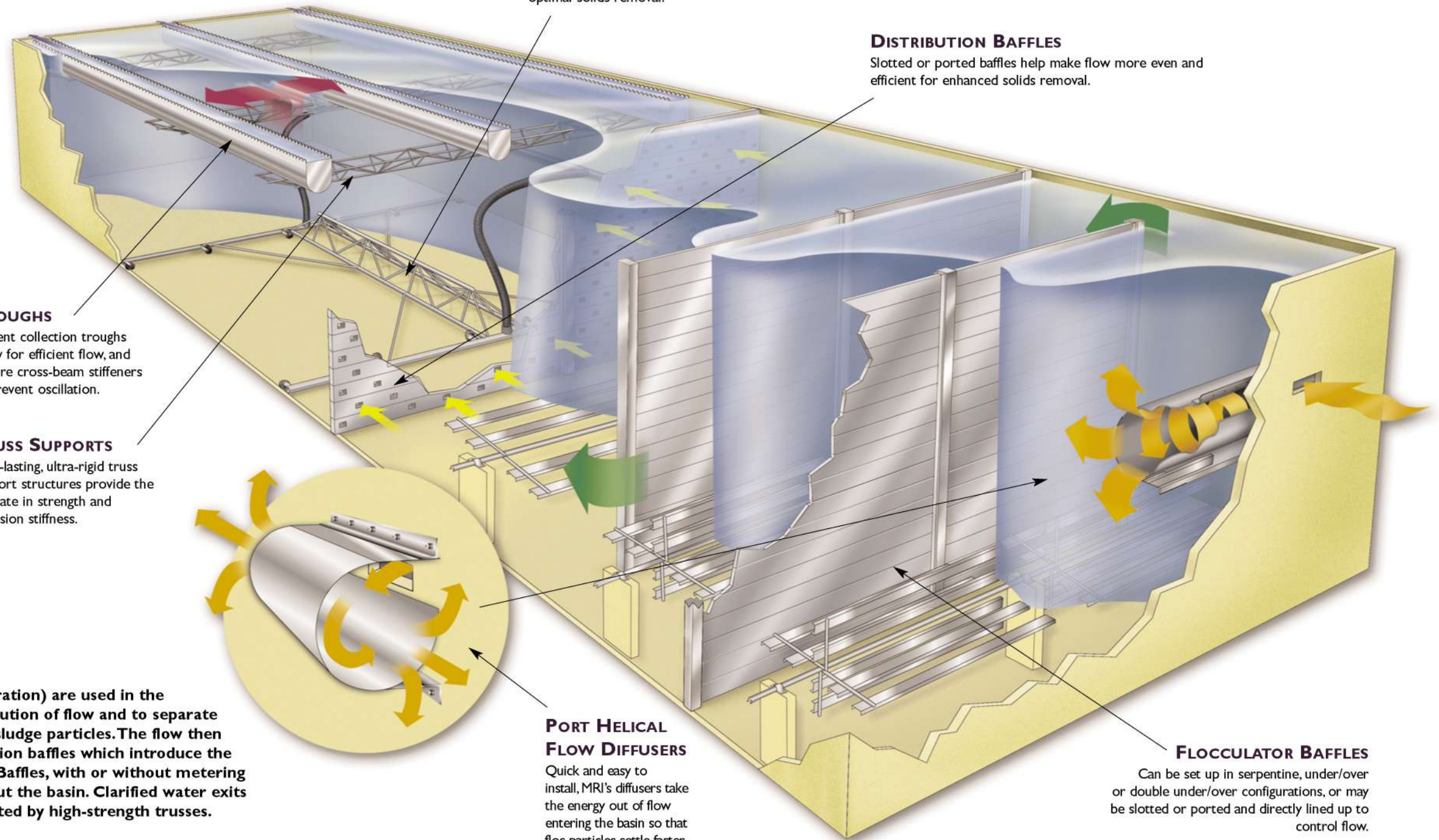
Slotted or ported baffles help make flow more even and efficient for enhanced solids removal.

## PORT HELICAL FLOW DIFFUSERS

Quick and easy to install, MRI's diffusers take the energy out of flow entering the basin so that floc particles settle faster.

## FLOCCULATOR BAFFLES

Can be set up in serpentine, under/over or double under/over configurations, or may be slotted or ported and directly lined up to control flow.

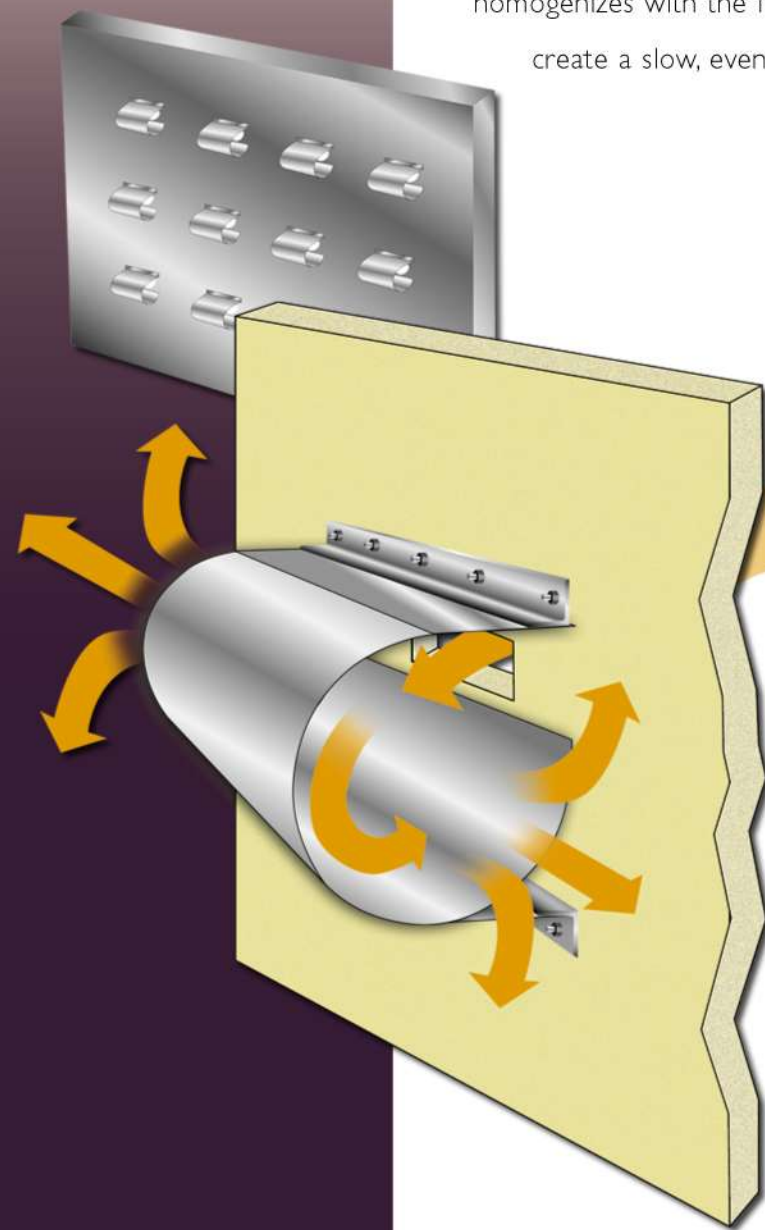


# MRI FLOW MANAGEMENT

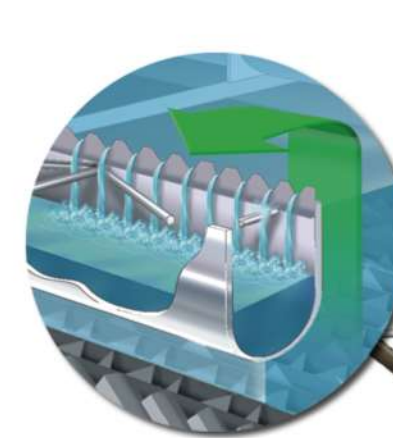
*Port diffusers for more effective control of flow velocity.*

FLOW DIFFUSERS ARE INSTALLED OVER EACH BAFFLE INLET PORT TO INTRODUCE AND BLEND FLOW INTO CLARIFIERS, AS WELL AS FLOCCULATORS.

Over time, higher treatment demand creates higher flows and velocities through inlet ports, which can prevent floc particles from settling in the sedimentation basin. MRI's patented port helical flow diffuser is designed as an inexpensive means of eliminating high flow rates entering the basin from the flocculators through the diffusion wall. Port diffusers are installed over each port on the wall. Each diffuser splits the flow in half—thereby reducing the velocity—and spirals it out each end. The exiting flow then homogenizes with the flow from adjacent diffusers to create a slow, even flow throughout the basin.



THE PATENTED DESIGN OF THE PORT HELICAL FLOW DIFFUSER FROM MRI RAPIDLY DIFFUSES INLET VELOCITIES IN THE CLARIFIER TO PREVENT DISRUPTION OF THE FLOC. FLOW ENTERING THE DIFFUSER IS GENTLY SPLIT IN HALF, AND EXITS THE ENDS IN A SPIRALING MOTION AT LESS THAN .5 FPS. AS IT EXITS, THE FLOW COVERS A 180° AREA, WHICH FURTHER CUTS DOWN THE VELOCITY, ASSURING EVEN DISTRIBUTED FLOW IN THE REST OF THE BASIN.



MRI MANUFACTURES STAINLESS STEEL TROUGHS FOR CLARIFIERS AND FILTERS.



COUPLED WITH ULTRA-RIGID TRUSS SUPPORT SYSTEMS, MRI TROUGHS OFFER UNMATCHED STABILITY IN CLARIFIER FUNCTIONS. TROUGHS CAN BE MANUFACTURED WITH A FLANGED END OR CAN PROTRUDE THROUGH BASIN WALLS WITH A WATER STOP INCORPORATED INTO THE TROUGH. SLIDE GATES ARE ALSO AVAILABLE FOR ISOLATING INDIVIDUAL TROUGHS.



*Troughs and trusses to keep the flow going strong.*

Engineered for strength and longevity, MRI's stainless steel effluent collection troughs and filter troughs are designed with a special "tulip" round-bottom shape. Built-in cross-beam stiffeners guarantee stability with no oscillation during system operation. In addition, they come equipped with micro-adjustable weirs allowing for precise control.

Meurer's truss systems provide a "backbone" of stable support for troughs and baffles, as well as plate settlers and tube settlers. The structures utilize high-strength, stainless steel tubing designed into three-dimensional trusses resulting in stronger, yet lighter-weight alternatives to conventional steel beams. MRI truss support systems are also quicker and easier to install.

Since 1978, municipalities, utility companies and consulting engineers around the world have used Meurer Research, Inc. as their complete source for shallow depth sedimentation products. Integrated flow management and distribution components represent one more way in which MRI provides efficient, cost-effective water and waste water treatment solutions.