



Cyclone deployed for **sand recovery from waste water** (from conveyor belt cleaning)
80 m³/h, 3 – 5 t/h,
separating cut at approx. 0.063 mm



Underflow screening machine, cyclones and pumps deployed for **sand classification**, for every 100 m³/h
Pump 1: for sand 0.5 – 2 mm, 50 t/h, separating cut approx. 0.063 mm
Pump 2: for sand 0 – 0.5 mm, 30 – 40 t/h, separating cut at approx. 0.063 mm



Cyclone deployed for **sand recovery from waste water** (from a log washer)
80 m³/h, for sand 0 – 4 mm, approx. 5 – 15 t/h,
separating cut approx. 0.063 mm



Cyclone deployed for **fine sand recovery from the waste water** of a gravel plant
Feed approx. 200 m³/h, solids up to 15 t/h,
separating cut at approx. 0.063 mm



WE WILL BE PLEASED TO ADVISE YOU –
EVEN DIRECTLY AT YOUR LOCATION.

PLEASE JUST GIVE US A CALL:

T + 49. 51 86. 94 14 - 0

OR FIND MORE INFORMATION AT:

smt-stichweh.com

**LEARN MORE ABOUT THE STICHWEH
PRODUCT RANGE:**

WE SUPPLY:

drag scrapers · bucket wheels · log washers ·
screening machines · jigs · complete solutions
and special solutions · pumps and hydrocyclones ·
electrical switching and control systems ·
spare parts

WE PROVIDE:

service engineering · installation service ·
maintenance and repair service

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Fine sand recovery

From the waste water
of a gravel plant
Feed approx. 180 m³/h,
Solids approx. 5 - 10 t/h
Separating cut at
approx. 0.063 mm



PREPARATION OF SAND AND GRAVEL

HYDROCYCLONES
FOR HIGHLY EFFICIENT CLASSIFICATION
OF SAND AND GRAVEL THROUGH
SOLID/LIQUID SEPARATION

Hydrocyclones deployed for sand classification
 1. Cyclone: 150 m³/h, 50 – 80 t/h, 0 – 2 mm
 2. Cyclone: 100 m³/h, 10 – 20 t/h, 0 – 0.25 mm
 Separating cut at approx. 0.063 mm



→ Find out more at www.smt-stichweh.com

HYDROCYCLONES – IDEAL FOR SEPARATING SOLIDS

Flexible systems are needed for the preparation and processing of sand and gravel for the building materials industry. Firstly, in order to meet the respective requirements. And secondly, to satisfy the current guidelines, e.g., on water recovery. The choice of systems for sand and gravel processing or for water recovery will be primarily motivated by the aggregate.

Besides the fractions, the deployment sites and operating conditions will be the decisive factors for the respective choice of a system.

Hydrocyclones are deployed on a standalone basis or as part of a complete system for sand and gravel processing. They likewise play a key role in water recovery at gravel plants.

Naturally, STICHWEH hydrocyclones are deployed **with the appropriate pumps**. These deliver the material that has to be classified/separated, along with the necessary inlet pressure, to the hydrocyclone.

→ AN OVERVIEW OF YOUR BENEFITS

- Precision classification in the fine and finest grain size ranges
- Recovery of usable raw materials from the waste water of preparation plants
- Lower space requirement and low weight – suitable for integration into buildings
- Advantages with respect to the separating cut: Separating cuts of up to 10 µm can be achieved with cyclones

BY PROFESSIONALS FOR PROFESSIONALS: PERFECT IN FUNCTION AND USAGE.



Hydrocyclones are deployed for the processing of sand and gravel on a standalone basis or in combination with bucket wheels, screening machines and jigs.

→ for sand and gravel processing

For example, combi

A) bucket wheel and hydrocyclone

The bucket wheel is used to dewater and discharge the coarse sand. Subsequently, a cyclone is used to separate particles from the waste water from the bucket wheel, or from partial amounts of the waste water. Only small quantities of mixtures or solids are fed into the cyclone. This has a favourable effect on the wear and tear and the energy requirements of the pump (a unit within the cyclone).

For example, combi

B) screening machine and hydrocyclone

During the washing and screening process, on the last screen deck, you get a mixture of water and sand. If it is not possible to separate this by means of a bucket wheel then here we would recommend using a cyclone. The cyclone separates the recoverable solids from the water and discharges these.

The waste water from the cyclone is then drained on site.

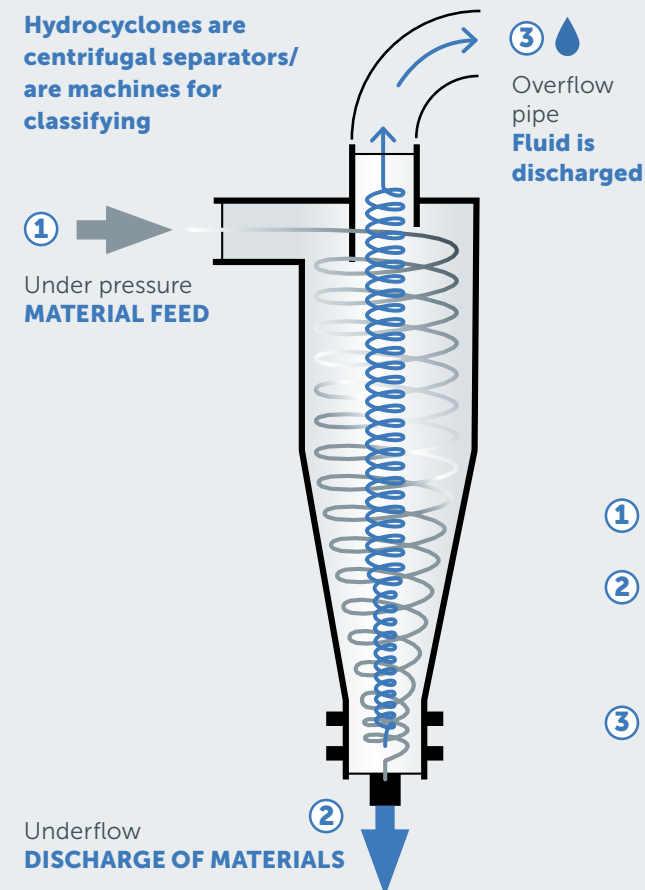
→ for water recovery

To enable gravel plant operators to purify their wash water and to feed the clear water back into their washing cycles, for the purpose of recovering the fine sand, STICHWEH is able to provide fine sand bucket wheels and hydrocyclones – individually or in combination – customised according to the requirements.

Both pieces of equipment thus carry out an important preliminary stage for waste water treatment systems. Since these work most effectively if the smallest sand particles have been removed in advance, too.

STICHWEH CAN SUPPLY SPARE PARTS FOR THE GP PUMP RANGE from Weir Minerals (formerly Warman). **ERSATZTEILE!** The main wear parts are available from stock – **JUST IN TIME.**

Hydrocyclones are centrifugal separators/ are machines for classifying



- 1 The material (water/solids mixture) is fed into the cyclone sideways (tangential inlet) and under pressure.
- 2 The pressure as well as the tangential inlet cause the mixture to develop a rotational movement. Through the action of the centrifugal force the solids slide down the walls of the cyclone to the underflow for removal.
- 3 A vortex is created in the centre of the rotating fluid that allows the fluid together with any non-separable materials to be discharged through the overflow pipe.

The defined separating cut is achieved through the conceptual design of the system.



Pumps for STICHWEH sand classification – the pumps deliver water/solids mixtures from a screen underflow in the cyclones.