KÄLLSTRÖM
ENGINEERING

Acid Dilution (semi-automatic)

The equipment is intended for diluting of acid. The starting acid (H_2SO_4) density is diluted with de-ionized water (H_2O) to obtain the required densities. The mixing is done in batches of approximately 0.5-1.0m^3 (other sizes available).

The mixing process is semi-automatic and the density is measured by a differential pressure transmitter.
The mixing tank is made PE, piping is made in PVC and the heat exchanger is made in Hastelloy (graphite or plastic on request). The complete mixing unit is mounted in a protection tub for easy installation.
The unit can also be assembled and delivered directly in a steel container for direct and outdoor use (option)
The system is controlled by a PLC.

Acid mixing unit

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Acid Dilution (semi-automatic)

Principle of operation:

The operator will start the mixing cycle by choosing the acid density the press start.

Water is pumped from the water tank to the mixing tank until a preset volume is reached. Concentrated acid is then pumped into the mixing tank until the correct acid density is reached (controlled by the density meter). During this time the acid is circulated through the heat exchanger for cooling.
When the correct acid density and the correct temperature are reached the mixing cycle is complete. To ensure good mixing the agitator will work during the whole mixing cycle.

When the mixing cycle is completed the operator has to distribute the mixed acid by by starting the distribution pump.

An overflow protection will shut off the valves if the tank is full.

A mixed batch would typically be from 500-1000 litres.

Källström can also supply storage tanks, cooling unit, de-ionising plant for water, dosing unit for Na_2O_4/NaOH and sedimentation/filtering unit for waste acid.

FEATURES:	**TECHNICAL DATA (Standard)**	
• Semi-automatic operation	Capacity	Typically 0.5-1 m^3/h
• Batch operation	Accuracy	± 0.003g/cm^3
• Simple and reliable	Dimensions	3000x1300x2000mm (mixing unit)
• Minimum space required	Voltage	3x400V-50Hz or 3x480V-60Hz
• Easy to install	Power consumption	Depends on design
	Pressure	6 bar
OPTIONS:	Air consumption	Depends on design
• Coriolis mass flow meter	PLC system/OP	Siemens Siematic or Allen Bradley (other brands/models available on request)
• Storage tanks		
• Chiller/Cooler		
• De-ionized water		
• Filtration & Sedimentation of waste acid		
• Adding of Na_2SO_4 or NaOH		

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