GRÜNTECHNOLOGY

SOFT STARTER

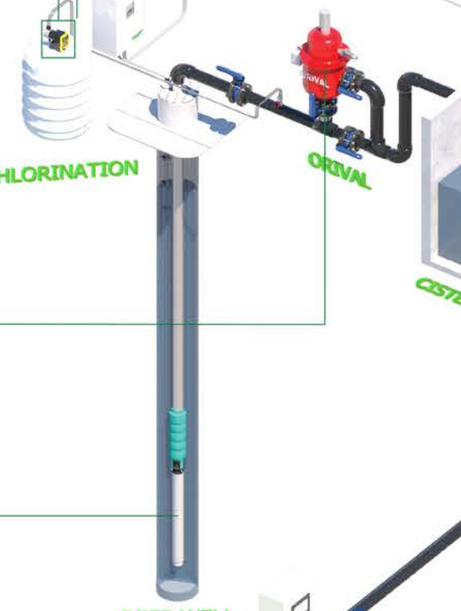
Soft Starter is a controller with thyristors used for torque-controlled soft starting and stopping of three-phase squirrel cage asynchronousmotors. It offers soft starting and deceleration functions along with machine and motor protection functions, as well as function for communicating with control systems. These functions are designed for use in the most common applications for centrifugal pumps, which is primarily to be found in constructions, food and beverage & chemical Industries.

LEVEL SENSOR

Level sensors detect the level of water or liquids that exhibit anupper free surface. Substances that flow become essentially horizontal in their containers because of gravity. The substance to be measured can be inside a container because of gravity. The substance to be measured can be either continuous or point values. Continuous level sensors measure level within a specified range and determine the exact amount of substance in a certain place, while point-level sensors only indicate whether the substance is above or below the sensing point. Generally the latter detect levels that are excessively high or low.

DIAPHRAGM METERING PUMPS

A dosing pump is a small, positive displacement pump. it its designed to pump a very precise flow rate of a chemical or substance into either a water. A dosing pump will deliver this precise flow rate of chemical or other product by a number of different methods but it generally involves drawing a measured amount into a chamber and then injecting this volume of chemical into the pipe or tank being dosed. A dosing pump is generally quite small and is powered by either a small electric motor or air actuator. They are controlled either by an external control system or more commonly an internal pump controller that can alter the flow rate, the on/off function and also things like alarms and warnings for run dry, degassing and low product levels.



AUTOMATIC SELF-CLEANING FILTER

Automatic, self-cleaning, line pressure powered water filter. Units can be installed in parallel to handle larger flow rates. Fine screens available down to 5 microns in a variety of constructions, including standard stainless steel mesh, multi-layer sintered stainless steel and wedgewire. High efficiency rinse cycle consumes a fraction of the water of standard filters.

BOREHOLE PUMP

Submersible centrifugal pump of multi-stage design which can be submerged at large depth. They are typically designed to fit in narrow holes called boreholes which are drilled to extract water from water tables or aquifers deep below ground.

Borehole pumps can be installed vertically or horizontally, depending on what's needed. The reduced weight ensures easy handling and installation. Due to the stable design, all units are very wear-resistant, even for high sand content up to 50mg/l. Long lasting durability and high operating reliability are then guaranteed.

BOOSTER PUMP SYSTEMS

Booster pump sysmtems are fully assembled, tested and ready for installation pressure dependent pump with common base and controller. It maintains and adapts to the pressure needed by the process or machine. It has 1 running and 1 stand-by pumps and can also be running simultaneously dependent on actual demand. Pumps, inlet/outlet pipe, bladder tank, controller and related accessories are mounted on common frame for easy transport and installation.

OUR PARTNERS :

KSB · SIEMENS · Schneider Electric · +GF+ · CONTROL TECHNIQUES

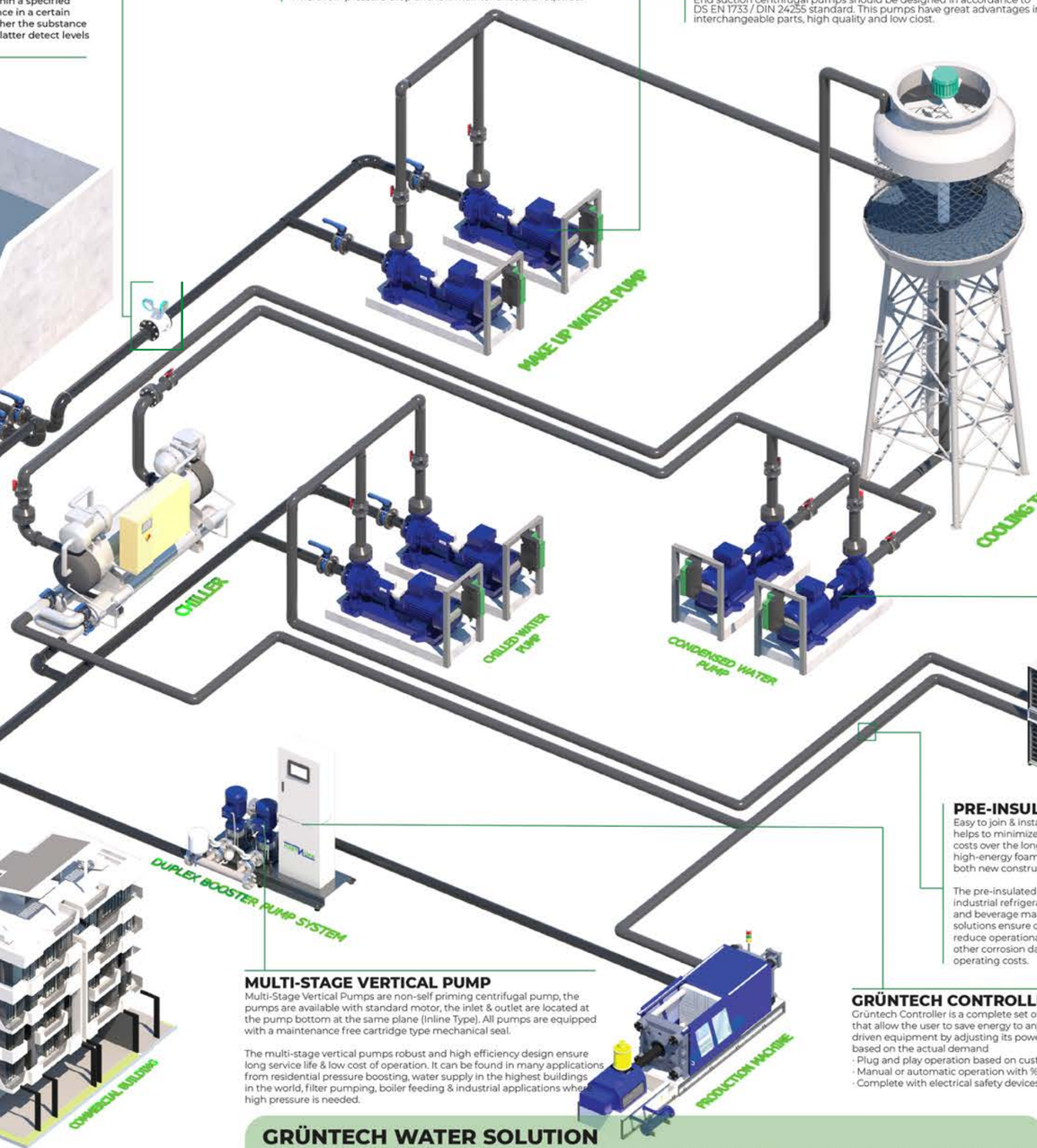
ULTRASONIC FLOW METER

An ultrasonic flow is a type of flow meter that measures the velocity of a fluid with ultrasound to calculate volume flow. Using ultrasonic transducers, the flow meter can measure the average velocity along the path of an emitted beam of ultrasound, by averaging the difference in measured transit time between the pulses of ultrasound propagating into and against the direction of the flow.

The ultrasound flow meter uses the proven clamp-on transit-time correlation technique. The ultrasonic transducers are simply clamped onto the outside of the pipe and never come in contact with the fluid.

ELECTROMAGNETIC FLOW METER

Electromagnetic flow meter (mag flow meter) is a volumetric flow meter which does not have any moving parts and is ideal for water or wasterwater applications or any dirty liquid which is conductive or water based. This instruments measures fluid flow by the voltage induced across the liquid by its flow through a magnetic field. A magnetic field is apllied to the metering tube. Which results in a potential diffrence proportional to the flow velocity perpendicular to the flux lines. The physical prinsiple at work is electromagnetic induction. Electromagnetic flow meters are ideal for applications where low-pressure drop and low maintenance are required.



GRÜNTECHNOLOGY

END SUCTION CENTRIFUGAL PUMP

Centrifugal pumps are used to transport fluids by the conversion of rotational kinetic energy to the hydrodynamic energy of the fluid flow. The rotational energy typically comes from an engine or electric motor. The fluid enters the pump impeller, along or near to the rotating axis and is accelerated by the impeller, flowing radially outward into a diffuser or volute chamber (casing), from which it exits.

End suction centrifugal pumps should be designed in accordance to DS EN 1733 / DIN 24255 standard. This pumps have great advantages in interchangeable parts, high quality and low ciost.

VARIABLE FREQUENCY DRIVE (VFD)

Variable Frequency Drive used in electro-mechanical systems to control AC motor speed and torque by varying motor input frequency and voltage.

VFDs are used in applications ranging fromsmall appliances to large compressors and pumps. Most of the Industrial plants electrical energy is consumed by electric motors which can be more efficient when using VFDs.

VFDs can help improve equipment performance and reduce operating cost by optimizing energy consumption and user comfort.

PRE-INSULATED PIPES

Easy to join & install, lightweight pre-insulated pipes helps to minimize energy loss and reduce running costs over the long-term. Insulated with efficient, high-energy foam, pre-insulated pipes are ideal for both new constructions and retrofitting.

The pre-insulated piping system for commercial & industrial refrigeration is particularly beneficial for food and beverage manufacturers and processors. These solutions ensure continuous production processes, reduce operational downtimes due to leakages and other corrosion damage, and cut your maintenance and operating costs.

MULTI-STAGE VERTICAL PUMP

Multi-Stage Vertical Pumps are non-self priming centrifugal pump, the pumps are available with standard motor, the inlet & outlet are located at the pump bottom at the same plane (Inline Type). All pumps are equipped with a maintenance free cartridge type mechanical seal.

The multi-stage vertical pumps robust and high efficiency design ensure long service life & low cost of operation. It can be found in many applications from residential pressure boosting, water supply in the highest buildings in the world, filter pumping, boiler feeding & industrial applications where high pressure is needed.

GRÜNTECH CONTROLLER

Grüntech Controller is a complete set of electrical device that allow the user to save energy to any electric motor driven equipment by adjusting its power consumption based on the actual demand

- Plug and play operation based on customer application
- Manual or automatic operation with % energy savings display
- Complete with electrical safety devices and switches

GRÜNTECH WATER SOLUTION

Water is a vital part of the manufacturing process. Grüntech has the complete solution for your needs. From design, audit, installation, servicing, system improvement and training. We can supply and support your requirements of pumps, instruments, demand base controllers, soft starters, variable frequency drives (VFD) and up to the sophisticated centralized control and monitoring systems of your water line.