

Key Process Fluid Control Applications

Cooling

Process cooling is used to remove heat from a process to protect it against overheating or to achieve / maintain a certain temperature. Many cooling applications use water as a medium to absorb heat, because water has a high boiling point and high specific heat. There are many different ways to set up an industrial cooling system: once-through-, closed recirculating and open recirculating cooling system.

Typical cooling applications

- > Food processing (tunnel cooling, spiral freezing and blast chambers)
- > Molding & extrusion
- > Textile production
- > Medical imaging equipment
- > Machine tools

Set of cooling towers



Key Products and Solutions

	Product Solution	Use in application
	Proportional valves	Transforming an electrical input into a pneumatic output and controls flow and/or pressure
	Solenoid valves	To operate (open / close) main valves such as ball valves, butterfly valves or damper
	Directional control valves	Control valves in hydraulic auxiliary circuit
	2oo3 hydraulic control units	In the heat transfer process to safely control shut off valves
	Pneumatic high pressure cylinder	Steering of shut off valves in the secondary water circuit
	DLA- motorized control valve	Injection moulding
	Flange valves	Hydraulic oil cooler Roller Mill cooling
	Dome and Spring loaded pressure regulators	Regulation of cooling system Regulation of the launching rocket system Biogas engine
	Dome and Spring loaded back pressure maintaining valves	Regulation of cooling system Regulation of the launching rocket system
	Filters	Regulation of cooling system Regulation of the launching rocket system
	Check valves	Regulation of cooling system Regulation of the launching rocket system
	Globe valves	Regulation of cooling system Regulation of the launching rocket system

Key Process Fluid Control Applications

Heating

Process heating refers to various types of heat transfer techniques using fuel to release heat and a delivery mechanism for transfer of the heat to the process. There are a wide range of fuels used: electricity, natural gas, oil, LPG and coal. Heat can be transferred to the process by flue gases, hot water / steam, by radiation or in air. The main processes driven by heating are physical- and chemical change.











Typical heating applications

- > Molding & Extrusion
- > Fuel gas conditioning
- > Dew point heating
- > Heated paper rolls
- > Ammonia Heating

*Industry boiler
gas burner*



Key Products and Solutions

	Product Solution	Use in application
	Proportional valves	Transforming an electrical input into a pneumatic output and controls flow and/or pressure
	Solenoid valves	To operate (open / close) main valves such as ball valves, butterfly valves or damper Drain condense
	Steam valves	Feed screw Heating plant Surface technologies
	Steam valves	Steam generator
	Dome and Spring loaded pressure regulators	Furnace oxygen Hydrogen and nitrogen injection Frame control of processes Hydrogen commissioning process
	Dome and Spring loaded back pressure maintaining valves	Furnace oxygen Hydrogen and nitrogen injection Frame control of processes Hydrogen commissioning process
	Filters	Frame control of processes
	Check valves	Frame control of processes
	Globe valves	Frame control of processes
	Safety valves	Furnace oxygen Hydrogen and nitrogen injection Frame control of processes Hydrogen commissioning process

Key Process Fluid Control Applications

Washing

Washing is the separation of undesired layers from surfaces, such as in industrial partial cleaning. Washing processes are classified according to their physical active principle. A distinction is made between blast cleaning, mechanical cleaning, fluidic cleaning, solvent cleaning, chemical cleaning and thermal cleaning. The cleaning process is about preparing a product for the next process step.










Typical washing applications

- > Surface preps
- > Bottle and Container cleaning
- > Vegetable washing machine
- > Gantry car washes
- > Industrial bin washer machines

Automatic machine for washing glass bottles



Key Products and Solutions

	Product Solution	Use in application
	Proportional valves	Transforming an electrical input into a pneumatic output and controls flow and/or pressure
	Solenoid valves	To operate (open / close) main valves such as ball valves, butterfly valves or damper Drain condense
	Directional control valves	Control valves in hydraulic auxiliary circuit
	Hydraulic tie rod cylinders	Steering of shut off valves in the secondary water circuit
	Piston valves	Ozone generation
	Pilot actuated piston valves	Liquid gas facilities
	Dome and Spring loaded pressure regulators	Regulation systems
	Dome and Spring loaded back pressure maintaining valves	Regulation systems
	Safety valves	Regulation systems

Key Process Fluid Control Applications

Filtration

Filtration is a physical process for the mechanical separation or purification of substances. During the filtration process, the mixture to be separated passes through a filter or repository containing a filter mass. For industrial applications many different filter systems have been developed. In general, a distinction is made between clarification and separation filtration. During the clarification process, a liquid will be purified, whereas in separation filtration the source liquid will be divided into solids and liquid.

Typical filtration applications

- > Ballst water filtration
- > Recycling of waste
- > Water treatment
- > Seawater desalination
- > Boiler feed

Reverse osmosis system



Key Products and Solutions

	Product Solution	Use in application
	Proportional valves	Transforming an electrical input into a pneumatic output and controls flow and/or pressure
	Solenoid valves	To operate (Open / Close) main valves such as ball valves, butterfly valves or damper
	Directional control valves	Control valves in hydraulic auxiliary circuit
	Hydraulic tie rod cylinders	Steering of shut off valves in the secondary water circuit
	ASU (Set of products)	PET - Blowing
	Dome regulators	PET - Blowing
	Spring loaded pressure regulators	CO ₂ in Food & Beverage processes High pressure system for delivery of pure gas under accurate pressure and flow rate
	Dome and Spring loaded back pressure maintaining valves	CO ₂ in Food & Beverage processes High pressure system for delivery of pure gas under accurate pressure and flow rate
	Filters	CO ₂ in Food & Beverage processes High pressure system for delivery of pure gas under accurate pressure and flow rate
	Check valves	CO ₂ in Food & Beverage processes High pressure system for delivery of pure gas under accurate pressure and flow rate
	Globe valves	CO ₂ in Food & Beverage processes High pressure system for delivery of pure gas under accurate pressure and flow rate
	Safety valves	CO ₂ in Food & Beverage processes High pressure system for delivery of pure gas under accurate pressure and flow rate
	Dust filter valves	Concrete processing

Key Process Fluid Control Applications

Drying





Drying is a process consisting of the removal of a solvent from a solid, semi-solid or liquid. A source of heat and an agent to remove the vapor produced by the process are involved. Some general methods of drying are direct drying (e.g. gas stream), indirect drying (e.g. heating through a hot wall), dielectric drying (radiofrequency or microwaves being absorbed inside the material) and freeze drying.

Typical drying applications

- > Compressed air preparation
- > Industrial tumble dryer
- > Rotary dryer
- > Freeze dryer
- > Air drying for train brake system



Key Products and Solutions

	Product Solution	Use in application
	Solenoid valves	To operate (Open / Close) main valves such as ball valves, butterfly valves or damper
	Valve manifold	Air dryer
	Diaphragm valves	Air dryer
	AMT Dryer	Air dryer

Industrial tumble dryer

