

ANDRITZ

Pump solutions for the starch industry



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Decades of experience in hydraulic machine manufacturing and comprehensive process know-how form the basis of our pumps' top performance. Our high-quality products and in-depth knowledge of starch production processes generate reliable pumping solutions to meet the needs of our customers.

ANDRITZ HYDRO offers innovative and targeted pumping solutions throughout the entire starch production process – from raw material preparation to extraction and fiber separation, on to final washing and concentration.

Depending on the branch of industry of the facility concerned, we supply centrifugal pumps with a closed, open, or semi-open impeller and an integrated vacuum pump.

Foaming liquids, in particular, create one of the most challenging conditions for centrifugal pumps. The combination of a single-stage centrifugal pump with an integrated vacuum pump prevents accumulations of air at the impeller inlet and guarantees highly efficient pumping operations, even with fluids at higher viscosities (e.g. fibrous pulp slurries containing up to 40% air). The vacuum pump removes the gas content in the medium in order to ensure that fluids can be conveyed without any difficulties. As a result of these design features, self-priming centrifugal pumps from the AD series are excellently suited for trouble-free handling of crucial processes.

With the company's own technical center ASTRÖ, we have an internationally recog-

nized institute for hydraulic development and testing at our disposal. Optimization on a computer using CFD and numerous model tests are responsible for the high economic efficiency of the ACP, S, ISO, and AD pump series.

Professional expertise and our understanding of customer requirements make us a valuable partner, offering development to model tests, design, manufacturing, project management and installation, to service and training – all from a single source. Customers around the world trust us. They value our many years of experience throughout the value chain.

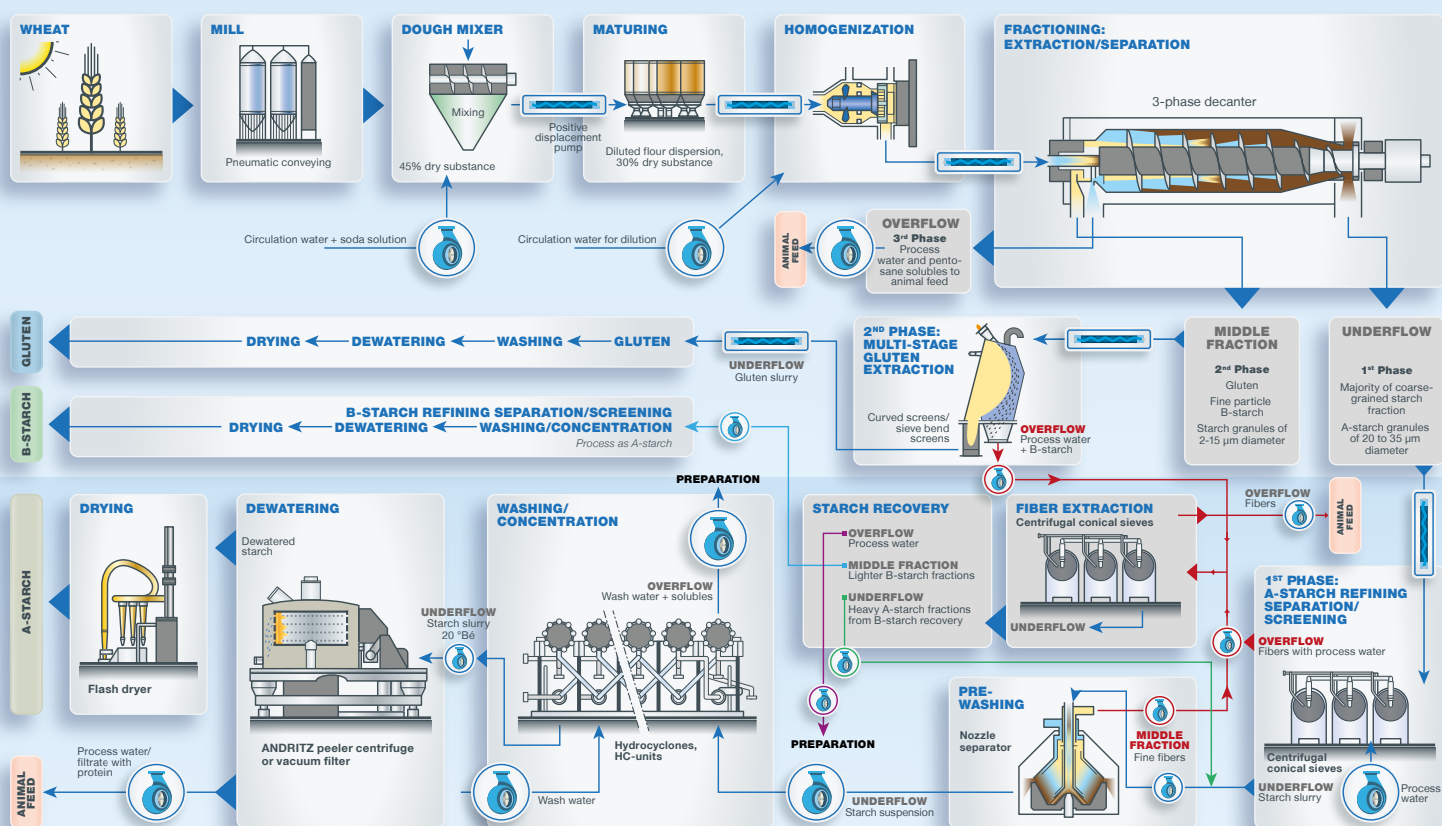
The advantages at a glance

- Efficiencies of up to 90%
- Assembly system
- Highly cost-effective thanks to high efficiency and long service life
- Cost reduction if self-priming centrifugal pumps are used instead of positive displacement pumps
- Decades of experience and comprehensive process know-how guarantee a high standard

Centrifugal pumps –
S and ACP series ▶



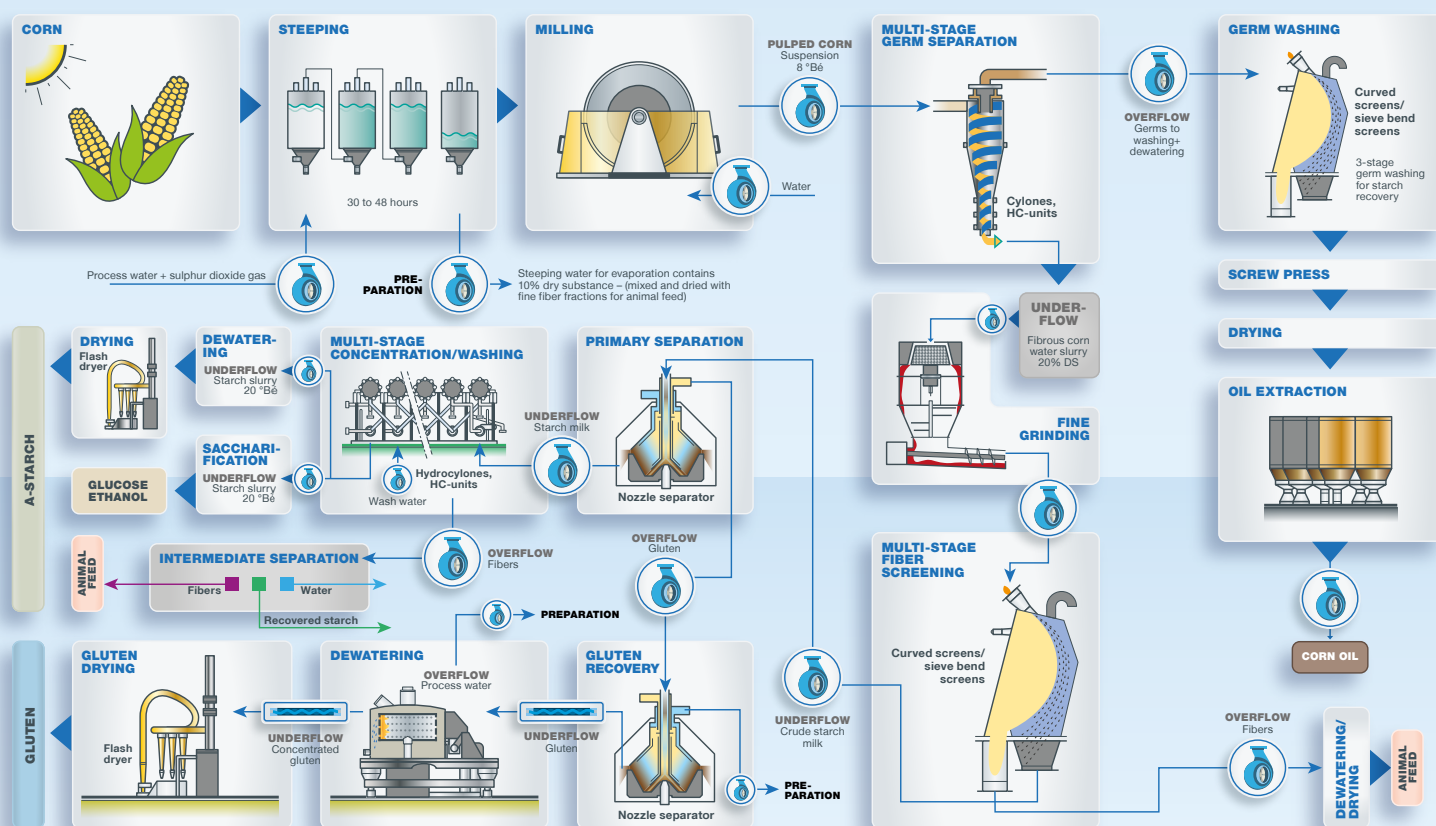
Wheat starch processing



ANDRITZ centrifugal pumps suitable for the entire process

Process stage	Wheat fractioning	Starch refining	Fiber/gluten extraction	Starch washing/ concentration/recovery	Process water auxiliaries
Applications	Overflow (3-phase process)	Starch milk	Starch milk	Starch milk	Dilution water
	Overflow (2-phase process)	Fiber fractions	Fiber fractions	Fiber fractions	Wash water
ISO pumps		■	■	■	■
AD pumps	■	■	■	■	
ACP pumps	■	■	■	■	■
S pumps	■	■	■	■	

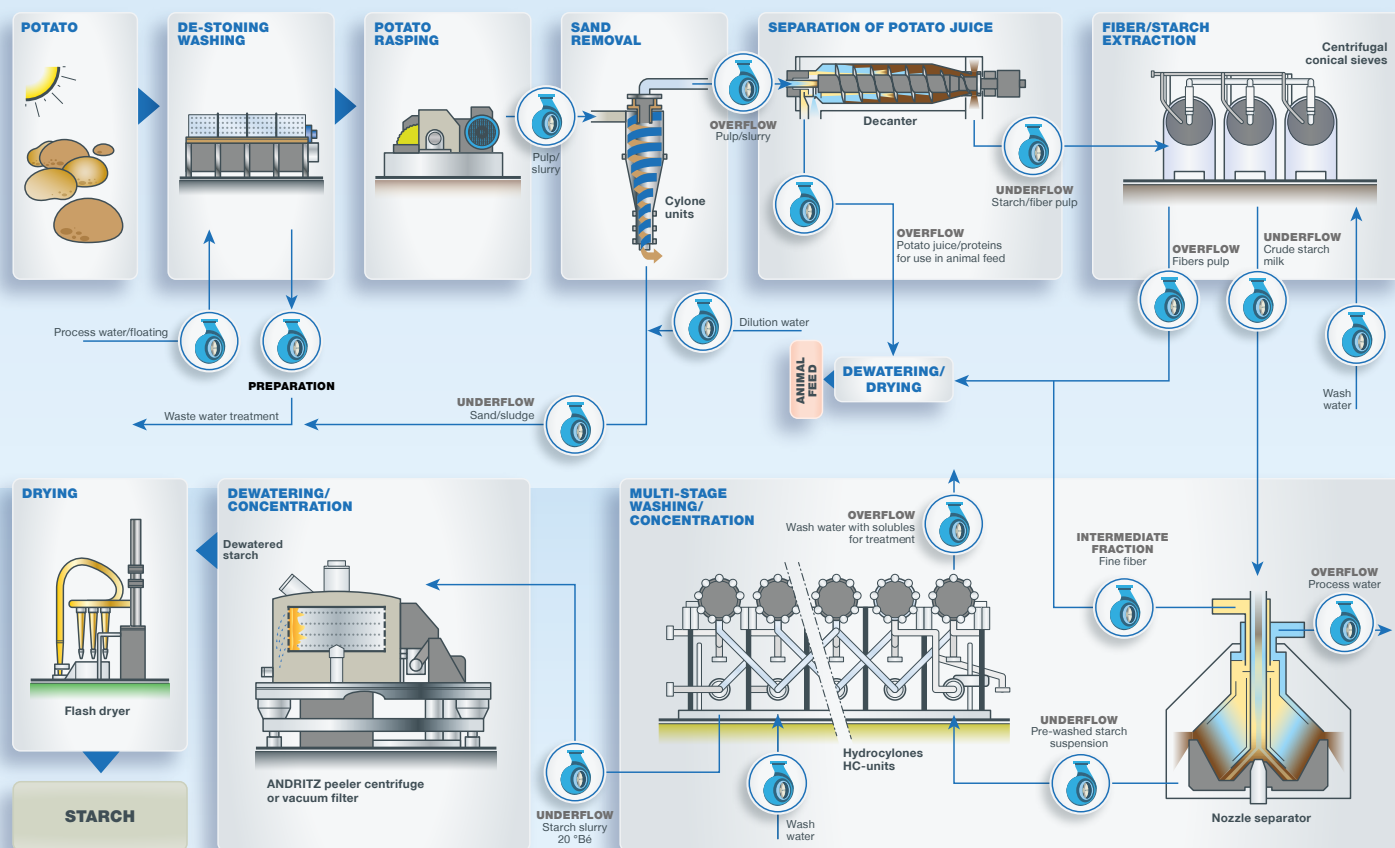
Corn starch processing



ANDRITZ centrifugal pumps suitable for the entire process

Process stage	Steeping	Wet milling	Germ separation	Fiber screening/ primary separation	Starch washing/ concentration	Gluten recovery/ corn oil processing
Applications	Process water Steeping water	Process water Pulped corn suspension	Germ slurry Corn slurry	Fiber fractions/ starch milk Crude starch milk (mill starch) Gluten water	Starch milk Starch slurry Wash water	Gluten water Corn oil
ISO pumps	■	■		■	■	■
AD pumps		■	■	■	■	
ACP pumps	■	■	■	■	■	■
S pumps	■	■	■	■	■	
ACP HW pumps	■					

Potato starch processing



ANDRITZ centrifugal pumps suitable for the entire process

Process stage	Preparation	Raspings/ extraction	Sand removal	Potato juice separation	Washing/ concentration	Process water auxiliaries
Applications	Wash water Waste water	Fibrous slurries Crude starch milk	Sand water	Potato juice Fibrous slurries/pulp	Starch milk Starch slurry	Dilution milk Wash water
ISO pumps				■	■	■
AD pumps		■		■	■	
ACP pumps	■	■			■	■
S pumps	■	■				■
ACP HW Pumps	■		■			

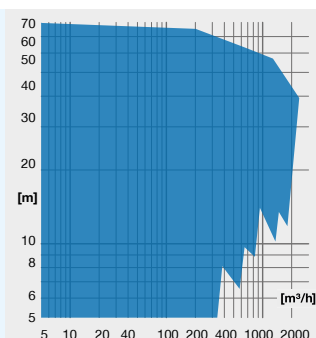
ANDRITZ centrifugal pumps

Starch processing



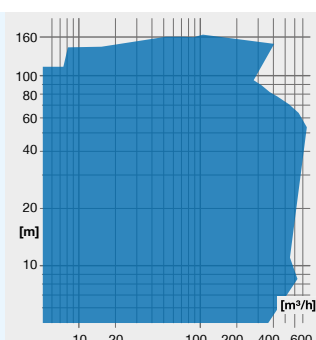
- Self-priming
- Integrated water ring vacuum pump
- Flow rate up to 2,000 m³/h
- Head up to 75 m
- Delivery pressure up to 16 bar

Pumping of liquids at high viscosity and/or high air content, e.g. fibrous slurries, starch milk, and potato juice



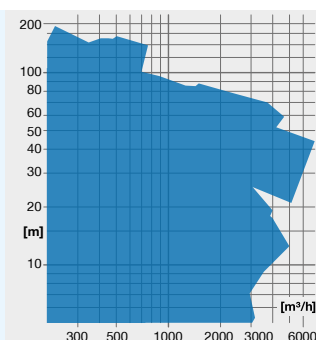
- Closed impeller
- Head up to 160 m
- Flow rate up to 300 m³/h
- Differential pressure up to 16 bar
- Temperature up to 140 °C

Pumping of starch milk between 3 and 24 °Bé, wash water, filtrate, and auxiliaries



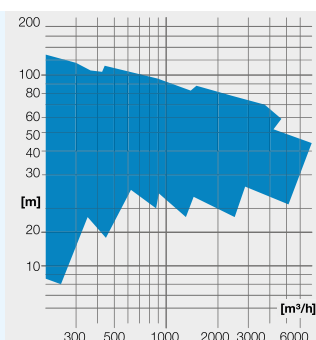
- Open and semi-open impeller
- Head up to 160 m
- Flow rate up to 6,000 m³/h
- Differential pressure up to 25 bar
- Temperature up to 200 °C

Pumping of liquids containing solids and/or fibers, e.g. fibrous slurries, steeping water, and corn suspensions, also used for wheat fractioning and pumping of auxiliaries



- Open and semi-open impeller
- Head up to 160 m
- Flow rate up to 6,000 m³/h
- Differential pressure up to 25 bar
- Temperature up to 200 °C

Pumping of abrasive liquids e.g. wash water and waste water



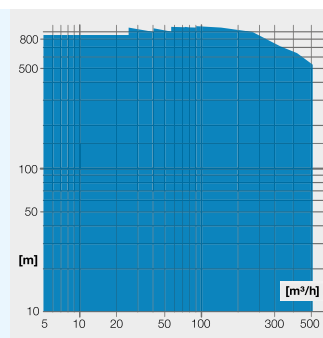
ANDRITZ centrifugal pumps

Starch processing



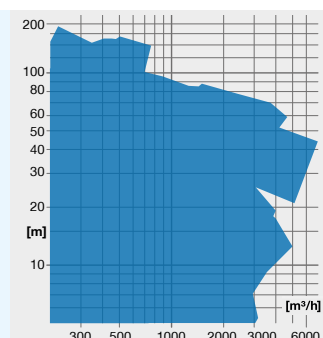
- Multi-stage high-pressure pumps
- Head up to 500 m
- Flow rate up to 800 m³/h
- Differential pressure up to 100 bar
- Temperature up to 140 °C

High-pressure pumps for water supply



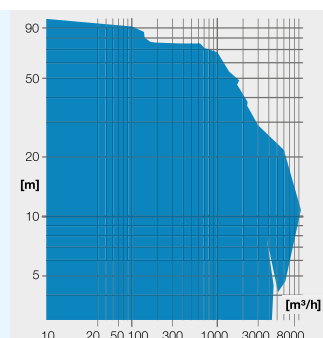
- Single-stage volute casing pumps according to DIN EN 733
- Head up to 100 m
- Flow rate up to 4,000 m³/h
- Differential pressure up to 16 bar
- Temperature up to 140 °C

Centrifugal pumps for water supply



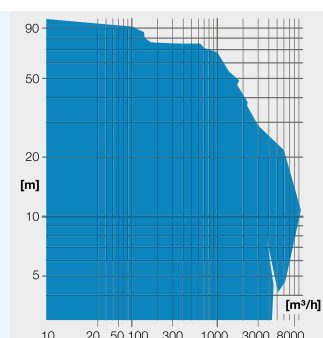
- Single-stage pumps in close-coupled design
- Impeller: Single-channel, double-channel, vortex, multi-channel "T"-type
- Head up to 80 m
- Flow rate up to 2,600 m³/h
- Differential pressure up to 10 bar
- Temperature up to 40 °C

Centrifugal pumps for waste water



- Single-stage, channel impeller
- Impeller: Single-channel, double-channel, vortex, multi-channel "T"-type
- Head up to 100 m
- Flow rate up to 10,000 m³/h
- Differential pressure up to 16 bar
- Temperature up to 140 °C

Centrifugal pumps for waste water



Close to our customers



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