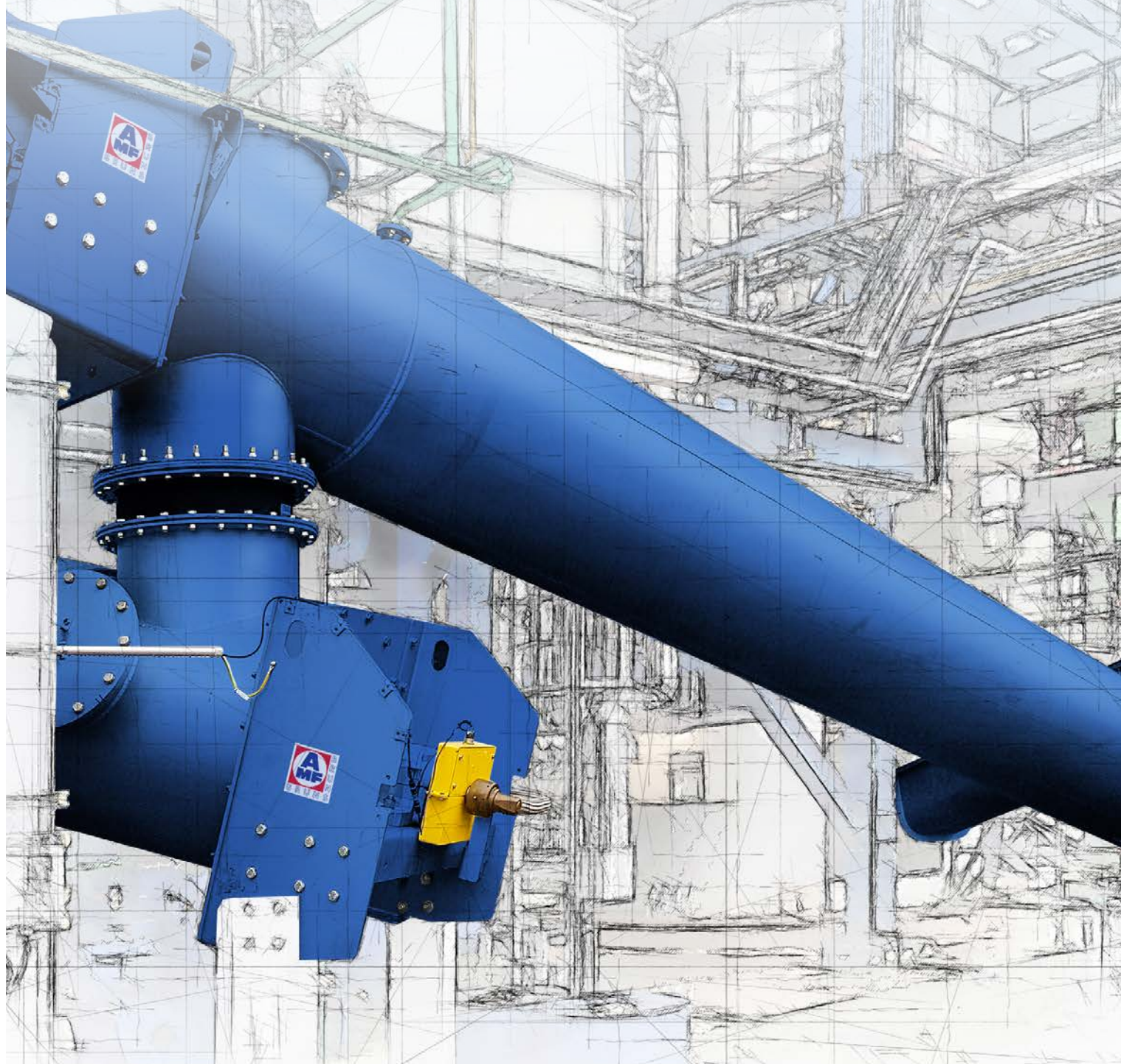


Screw heat exchangers

For pressure, vacuum- and high-temperature applications



CONVEYORS
INDUSTRIAL SOLUTIONS

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Screw heat exchangers – we ensure a quick heat transfer

Whether cooling or heating – AMF-Bruns plans, produces, delivers and assembles cooling and heating screw conveyors to cool and heat products for continuous processes in the engineering process. The application areas here range from power stations and the chemical industry through to the food industry. The heat is exchanged through the contact with the metal surfaces. This guarantees a very good heat transfer. Water, hot steam, thermal oil or gas act as heat media in this respect. AMF-Bruns screw heat exchangers work prefe-

rably with a high filling level of up to 90%. This makes optimal use of the installed heat exchange areas on the screw shaft and conveyor trough.

Up to 75% of the heat exchange capacity from the screw heat exchangers, which are equipped with a combined trough and shaft exchange surface, is achieved via the screw shaft. Based on this knowledge, it follows that an exchange surface as large as possible should be installed in the screw shafts in order to achieve a good heat transfer.

Result – the AMF-Bruns design:

- Large tubular screw shafts
- High number of screw blades
- Thick-walled screw blades
- Screw blades fully welded on both sides to the tubular shaft
- Tubular shaft with displacer unit and spirals for guidance of the cooling and heating media

High filling level provides benefits:

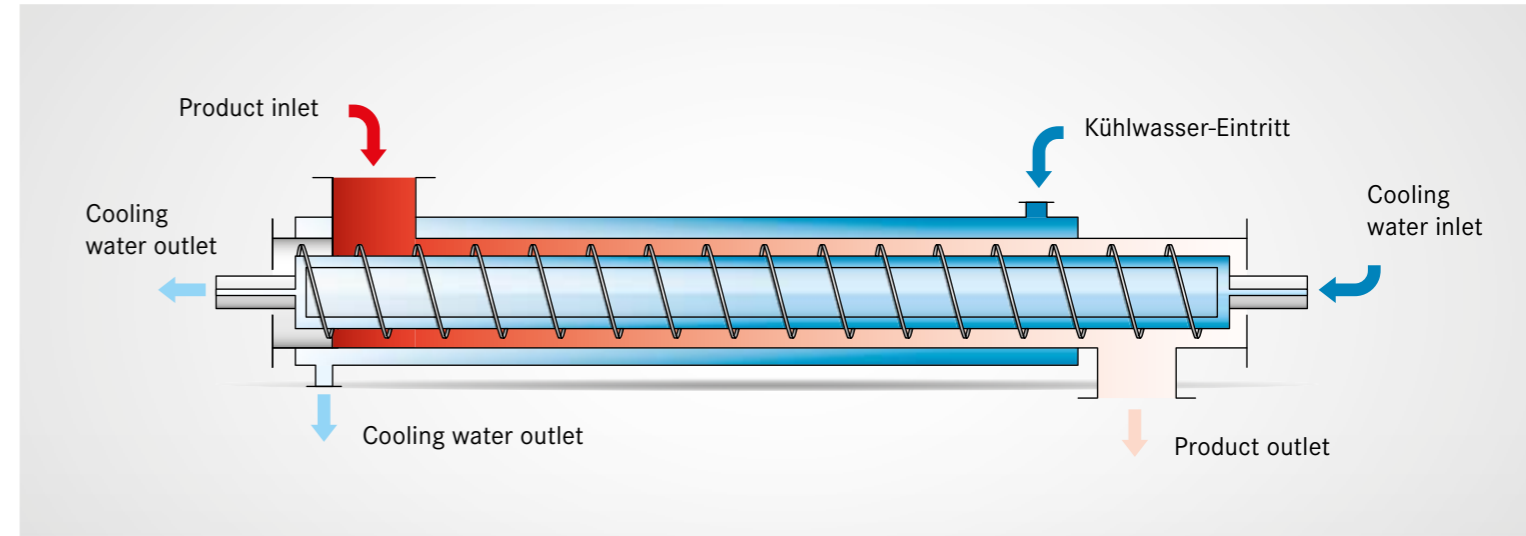
- Optimal utilisation of the installed areas = compact, cost-effective plants
- Minimum speeds = maximum service lives
- High product dwell times = compact, cost-effective plant

Typical products:

Bed ash, Fly ash, Pyrolysis products, Bypass dust, Coal dust, Iron oxide, Petroleum coke, Animal feed, Animal by-products, Rape, Chemical products

Suitable structural shapes and materials enable a wide range of use:

- For pressure, vacuum and high temperature applications
- Transport and cooling from 1000° C to 200° C
- With abrasive and corrosive products
- Single, double and multiple-shaft screw heat exchanger
- In case of slow-flowing products, automatic cleaning of the heat exchanger surfaces possible
- product prewarming for different processes
- Special functions such as mixing, compressing, loosening, dosing



1. Trough cooling screw conveyor

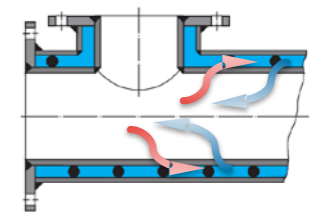
Material conveyed:	Bottom ash
Temp. in-/outlet:	900°C/150°C
Conveying cap.:	1,5 t/h
Water temperature:	30°C/45°C
Cooling water qant.:	20 m3/h
Size:	650x7.000 mm



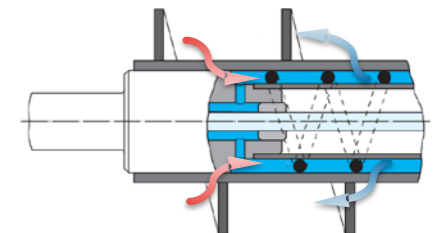
2. Double cooling screw conveyor

Material conveyed:	Steel dust
Temp. in-/outlet:	300°C/120°C
Conveying cap.:	20 t/h
Water temperature:	35°C/55°C
Cooling water qant.:	50 m3/h
Size:	850x10.000 mm

Heat transfer



Detail of cooling trough intake
Trough cooling capacity approx. 25%



Detail of cooling shaft
Shaft cooling capacity approx. 75%



3. Trough cooling screw conveyor

Material conveyed:	Ash
Temp. in-/outlet:	850°C/80°C
Conveying cap.:	1 t/h
Water temperature:	25°C/35°C
Cooling water qant.:	8 m3/h
Size:	400x3.100 mm



4. Double cooling screw conveyor

Material conveyed:	Starch
Temp. in-/outlet:	55°C/30°C
Conveying cap.:	8 t/h
Water temperature:	-2°C/+5°C
Cooling water qant.:	30 m3/h
Size:	650x8.000 mm



5. Double cooling screw conveyor

Material conveyed:	Bed material
Temp. in-/outlet:	600°C/200°C
Conveying cap.:	20 t/h
Water temperature:	30°C/60°C
Cooling water qant.:	20 m3/h
Size:	485x6.000 mm



Please feel free to contact us.



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