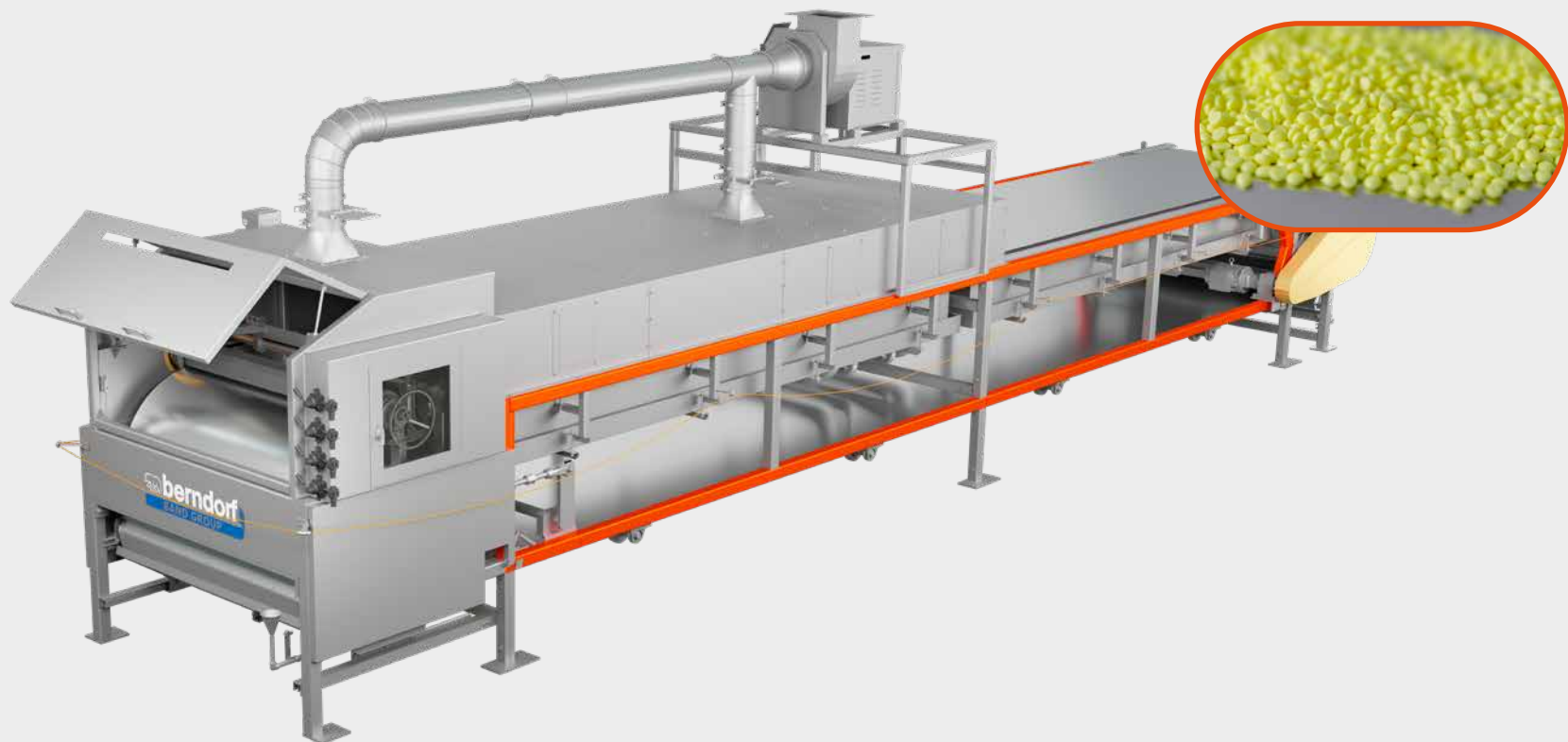


COOLING & SOLIDIFICATION SYSTEMS FOR SULPHUR PROCESSING



PROCESS EQUIPMENT FOR SULPHUR PROCESSING

The Berndorf Band Group has stood for quality and innovation in the fields of engineering and manufacturing since 1843. We continue to be a leading company in the sulphur industry with dozens of successful Cooling and Solidification System installations for the processing of sulphur and sulphur derivatives worldwide. Our expertise extends far beyond the solidification process. Berndorf Band Group is your reliable partner for turn-key applications.

FULL SOLUTION PROVIDER

- » Engineering and manufacturing of required process equipment, from molten sulphur handling over solidification to final pastille handling and bagging
- » Start-up and process technology support
- » Plant layout design
- » Equipment specifications



OUR EXPERTISE



**+100 MACHINES
IN OPERATION**



**PROJECTS FROM
1 – 8 MACHINES FOR
PROCESSING
ELEMENTAL SULPHUR**



**MACHINE DESIGN THAT ALLOWS
FOR SWITCHING BETWEEN
PRODUCING SULPHUR &
SULPHUR BENTONITE**



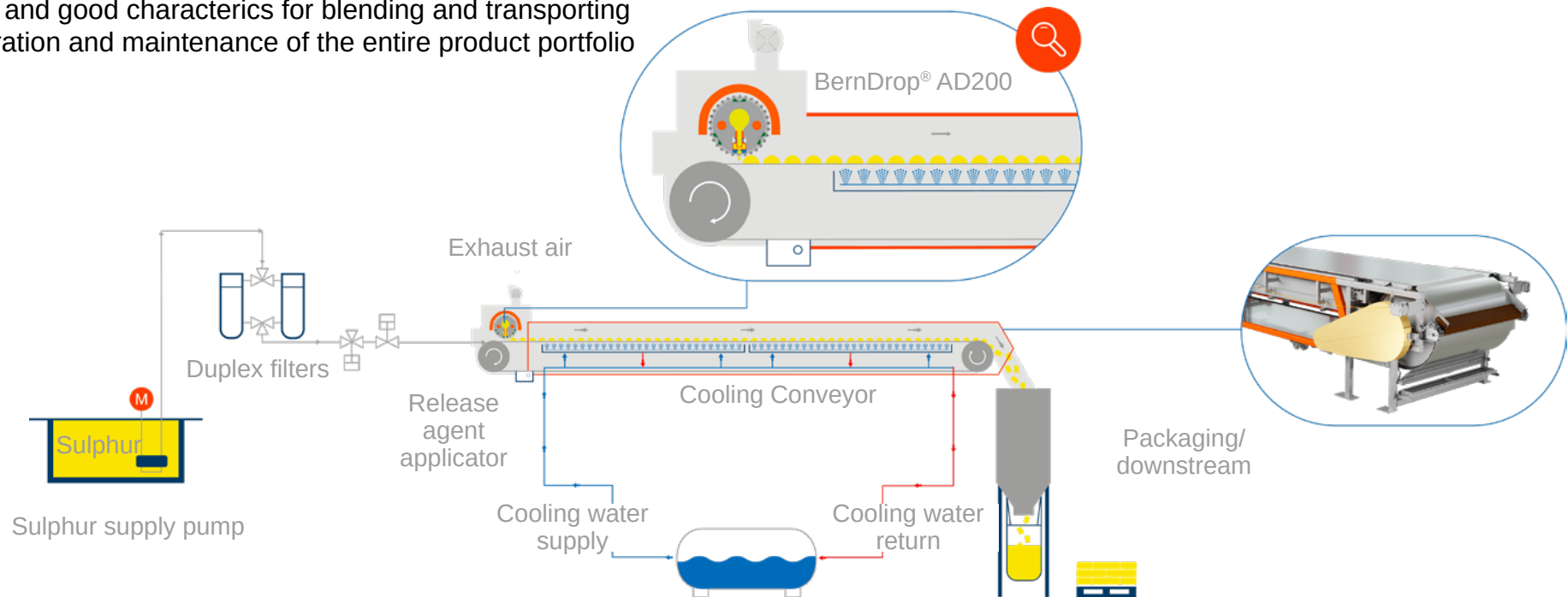
**PROJECT SPECIFIC SCOPE FROM
PASTILLATOR & STEEL BELT COOLER
TO COMPLETE ENGINEERING
PACKAGES FOR UP- & DOWNSTREAM**

THE FINAL PRODUCT: SUDIC QUALITY SULPHUR PASTILLES

Berndorf Band Group Process Equipment meets the special requirements for the production of high quality pastilles. Experts are continuously developing our Solidification and Cooling Systems to meet the specifications of SUDIC premium quality.

Our main objective is to offer our customers high-quality equipment designed specifically for making sulphur pastilles that meet the strict SUDIC standards. This ensures that sulphur can be transported easily and safely.

- » Good flow characteristics as well as consistent high purity and quality
- » Minimized dust and moisture levels in the pastilles
- » Maximum versatility, uniform quality, and steep angle of repose
- » Minimal environmental impact
- » Even size and good characteristics for blending and transporting
- » Easy operation and maintenance of the entire product portfolio



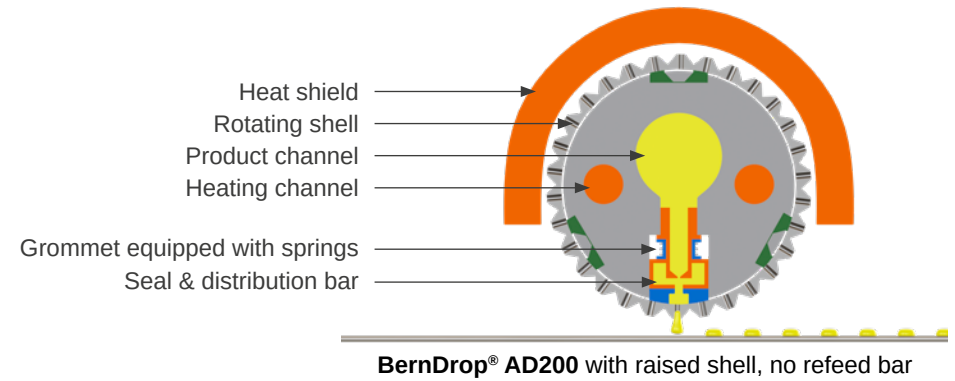
FEEDING DEVICE FOR PRODUCING UNIFORM DROPS OF SULPHUR

The variety of Berndorf feeding devices has been developed to meet different process requirements for a wide range of products. The **BernDrop® AD200** is the world's preferred feeding device for the solidification of sulphur and sulphur derivatives. The rotating, special shaped shell design eliminates the possibility of product deposits on the outer surface of the shell. Any product which remains on the shell surface is forced to the peak to join the next drop.

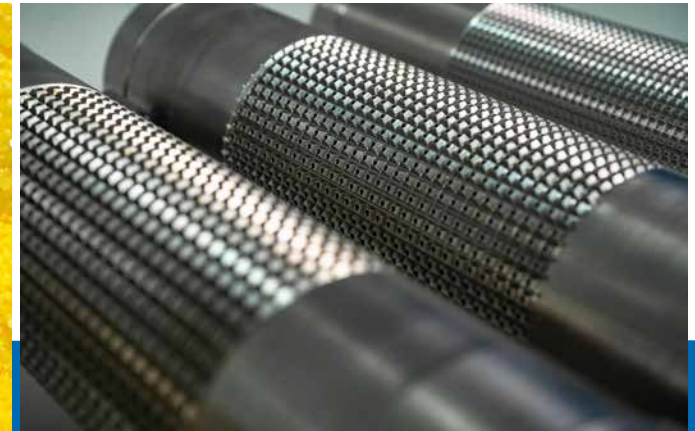


BERNDROP® AD200

In addition, this increased surface area causes forced convection, which pre-cools the product and slightly increases viscosity. As a result it can achieve higher production speeds than the competition. The shell design enables a production of sulphur and sulphur derivative pastilles without refeed bar and external seals. Consequently, the **BernDrop® AD200** has the advantage of lower operating costs.



ADVANTAGES OF BERNDROP® AD200



RAISED SHELL FOR OPTIMAL
PASTILLE QUALITY



REFEED BAR AND EXTERNAL
SEALS NOT REQUIRED



HIGH PRODUCTION RATES
AND LOW OPERATING COSTS



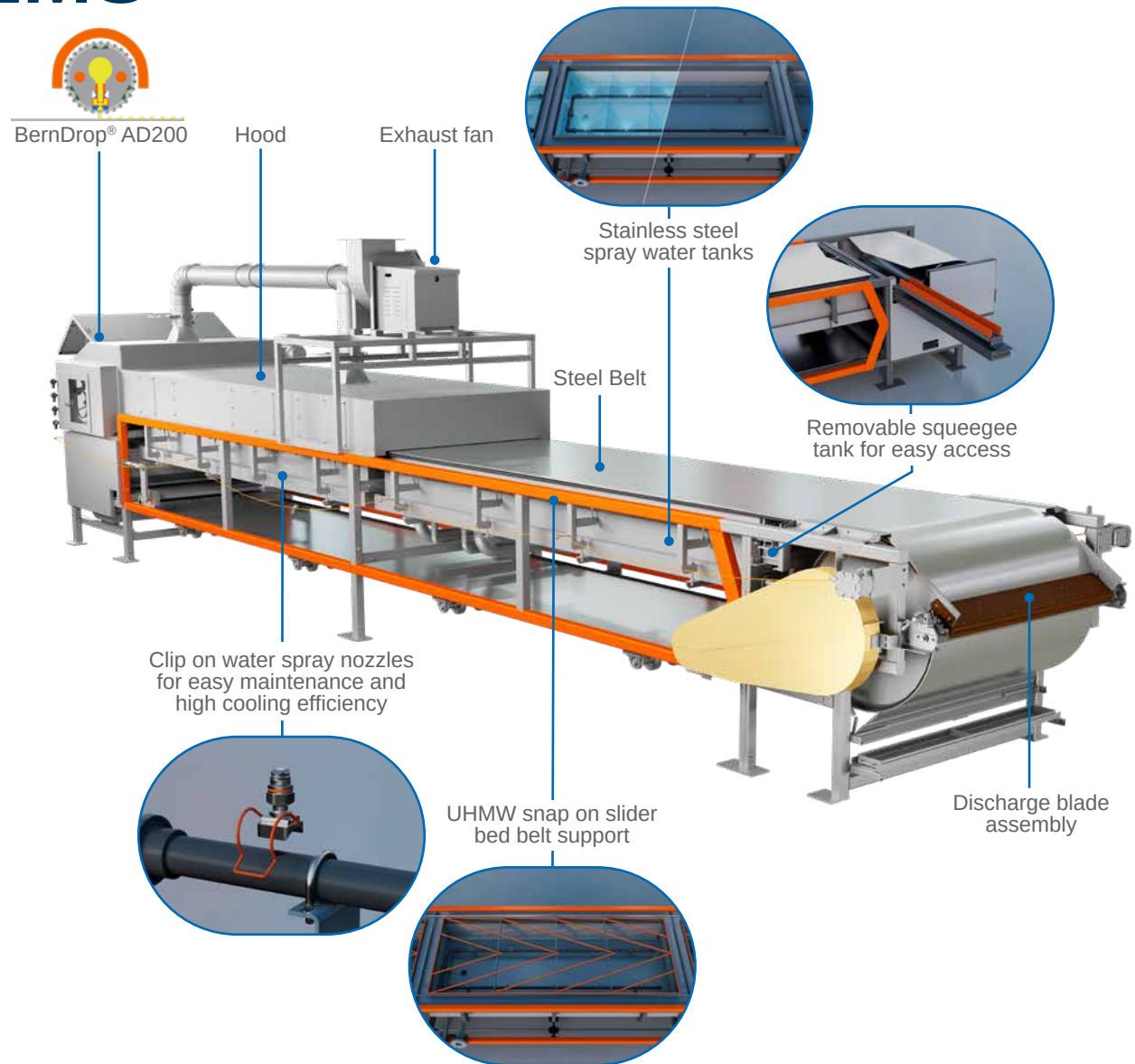
EASY ACCESSIBILITY FOR
SERVICE & MAINTENANCE

SINGLE BELT COOLING SYSTEMS

Berndorf Cooling Systems excel in heat transfer, efficiently evacuating escaping heat during the cooling and hardening processes of diverse products through our cutting-edge indirect cooling technology.

The Single Belt Coolers are equipped with unique features such as the **clip on water spray nozzles**, the **UHMW snap on slider bed belt support**, and a **removable squeegee tank assembly**, ensuring the highest cooling efficiency and easy maintenance. The high-quality **Steel Belt** guarantees a reliable operation.

- ✓ Solidification of the pastilles formed on the Steel Belt occurs due to heat transfer caused by cooling water being sprayed on the underside of the Steel Belt
- ✓ Exhaust ventilation system and hood in the first cooling zone for efficient fume removal
- ✓ Release agent applicator to avoid pastilles sticking to the Steel Belt



STEEL BELTS

PHYSICAL & MECHANICAL PROPERTIES – TYPICAL VALUES

Material			Nicro 12.1	Nicro 94
Type			CrNi 17 7	CrNiMoN 22 5 3
Similar material			DIN AISI 1.4310 301	1.4462
Tensile strength	at 20 °C	N/mm ²	1,150	1,400
	at 68 °F	psi	166,800	203,100
0.2 %-offset yield strength	at 20 °C	N/mm ²	950	1,050
	at 68 °F	psi	137,800	152,300
Hardness	Rockwell HRC		37.0	36.0
	Vickers HV 10		360	350
Elongation 50 mm 1.97 in			% 18	9.5
Welding factor			0.70	0.65
Fatigue strength under reversed bending stress*	at 20 °C	N/mm ²	480	450
	at 68 °F	psi	69,600	65,300
Modulus of elasticity	at 20 °C	N/mm ²	200,000	200,000
	at 200 °C	N/mm ²	180,000	184,000
	at 68 °F	ksi	29,000	29,000
	at 392 °F	ksi	26,100	26,700
Density	kg/dm ³		7.90	7.80
	lb/in ³		0.29	0.28
Mean coefficient of thermal expansion	20-100 °C	10 ⁻⁶ /m°C	16.0	13.3
	20-200 °C	10 ⁻⁶ /m°C	17.0	13.8
	20-300 °C	10 ⁻⁶ /m°C		14.2
	20-400 °C	10 ⁻⁶ /m°C		
	68-212 °F	10 ⁻⁶ /in°F	8.9	7.4
	68-392 °F	10 ⁻⁶ /in°F	9.4	7.7
	68-572 °F	10 ⁻⁶ /in°F		7.9
	68-752 °F	10 ⁻⁶ /in°F		
Specific heat	J/g°C		0.50	0.50
	BTU/lb°F		0.12	0.12
Thermal conductivity	at 20 °C	W/m°C	15	15
	at 68 °F	BTU/lb°F	8.7	8.7
Specific electric resistance	at 20 °C	Ω mm ² /m	0.73	0.80
	at 68 °F	μΩ in	28.74	31.50
Min. permissible operating temperature	°C		-196	-50
	°F		-321	-58
Max. permissible operating temperature	°C		250	250
	°F		482	482
Tensile strength at max. permissible operating temp.	N/mm ²		940	1,130
	psi		136,300	163,900
0.2 %-offset yield strength at max. permissible oper. temp.	N/mm ²		770	990
	psi		111,700	143,600



HIGH QUALITY STEEL BELTS

- » Optimum flatness & straightness due to special production method
- » Corrosion resistant
- » Smooth Surface
- » Perfect adhesion of vee-ropes

VEE-ROPES

We ensure perfect adhesion of vee-ropes.

Vee-rope-material	Operating temperatures
Nitrile rubber	-20 °C to +100 °C -4 °F to +212 °F
Natural rubber	-60 °C to +60 °C -76 °F to +140 °F

*50 % of the test specimens withstand 2,000,000 load cycles. If not otherwise specified, the values given apply at room temperature. Subject to change due to technological progress. Errors and omissions excepted. Special materials available upon request.



OUR WORLDWIDE SALES AND SERVICE NETWORK

FIND YOUR
LOCAL CONTACT



Berndorf Band GmbH & Berndorf Band Engineering GmbH

Leobersdorfer Strasse 26
2560 Berndorf, Austria
T: +43 2672 800 0
E: band@berndorf.co.at

Berndorf Belt Technology, Inc. & SBS Steel Belt Systems USA, Inc.

59 Prairie Parkway
Gilberts, Illinois 60136, USA
T: +1 847 841 330 0
E: sales@berndorf-usa.com

Berndorf Band Latinoamerica S.A.S.

Calle 62 sur # 30 a 75
Barrio las Brisas, Sabaneta
Antioquia, Colombia
T: +57 313 605 31 99
E: office@berndorf-lat.com

Berndorf Band India, Pvt. Ltd.

925, Iconic Shyamal
Shyamal Cross Road
Satellite, Ahmedabad
380015, Gujarat, India
T: +91 93276 77183
E: band@berndorf.co.in

Berndorf Steel Belt Systems Ltd., Co.

#15, Bodeum 2-ro
Seo-gu, 22664 Incheon,
South Korea
T : +82 328 160 432
E: bsbs@berndorf.co.kr

Beijing Berndorf Technology Development China Co., Ltd.

No 17, Xinggu West
RD, Xinggu Economic &
Development Zone,
Pinggu 101200 Beijing, China
T: +86 108 072 390 1
E: sales@berndorf.com.cn

ベルンドルフバンドジャパン株式会社 Berndorf Band Japan Co., Ltd.

1-24-6, Kanda Suda-cho
Chiyoda-ku 101-0041,
Tokyo, Japan
T: +81 3 3257 3050
E: info@berndorf.co.jp

Exclusive Agent for Brazil

BBS do Brasil

Avenida Guido Caloi, 1985
Prédio 9 05802-140
São Paulo-SP, Brazil
T: +55 11 4450 1677
E: contato@bbsdobrasil.com.br