DRY ULTRAFINE GRINDING

WITH AGITATED BALL MILL ATR









The Alpine ATR agitated ball mills are ideally suited for the dry production of superfine mineral powders < 10 μ m. Products with fineness values of up to 95% < 2 μ m and a high specific surface can be achieved. The ATR technology ensures optimum energy efficiency combined with maximum system reliability. These process qualities guarantee an extremely cost-effective operation.

APPLICATION

Typical applications for ATR mills are mineral fillers, glazing raw materials and hard materials. Examples: limestone, aluminium hydrate, quartz, zircon sand, talc, ceramic colours and frits, titanium dioxide, etc.

EXAMPLE

Product:		soft CaCO	
Feed:		< 200 µm	
Agitated ball mill:		900 ATR	
Classifier:		315/6 ATP	
Drive:		600 kW	
Power consumption:		420 kW	
Throughput:	700 ka/h	90 % < 2 L	

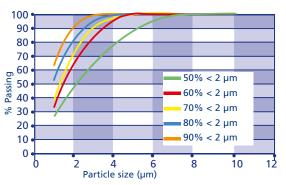
3500 kg/h 50 % < 2 μm

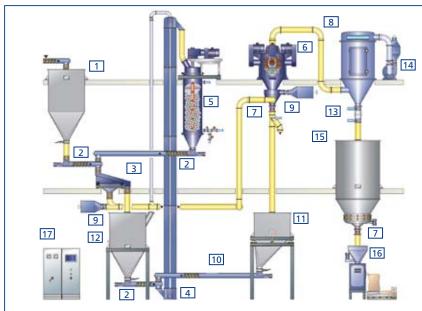
LININGS

Depending on the processed product are either used aluminium oxide or other wearproof materials. Grinding beads of between 2 mm and 5 mm in diameter guarantee maximum energy intensity and an effective surface enlargement in the end product.

COATING

The product can be coated during grinding, which substitutes the normally required grinding aid.

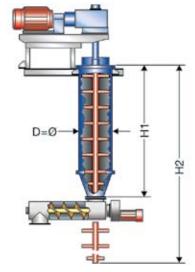




- 1 Feed bin
- 2 Dosing screw
- 3 Sieving machine
- 4 Bucket elevator
- 5 Agitated ball
- mill ATR

 6 Turboplex
- classifier ATP
- 7 Rotary valve
- 8 Autom. reverse-jet filter
- 9 Butterfly valve
- 10 Conveying screw

- 11 Weighing bin
- 12 Supply bin and temporary storage for grinding pearls
- 13 Flap valve
- 14 Fan
- End product bin with activated discharge
- Sack filling and weighing unit
- 17 Process control



Product range

Type	Drive	$D = \emptyset$	H 1	H 2
	kW	mm	approx.	mm
315 ATR	18.5-37	315	1810	3800
400 ATR	45-55	400	1500	3300
500 ATR	55-90	500	2460	5100
630 ATR	110-160	630	2920	6500
710 ATR	160-250	710	3350	6800
800 ATR	250-355	800	4050	8300
900 ATR	315-450	900	4460	9200

D = Nominal mill diameter H 1 = Mill height H 2 = Set-up height HOSOKAWA ALPINE Aktiengesellschaft Minerals & Metals Division P. O. Box 10 11 51 86001 Augsburg, Germany

Phone + 49 821 5906-0 Fax + 49 821 5906-610

E-mail: mineral@alpine.hosokawa.com www.alpinehosokawa.com

Delivery address Peter-Doerfler-Str. 13-25 86199 Augsburg, Germany

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