

**MECHANICAL MILL GLACIS GC  
FOR GRINDING HEAT-SENSITIVE MATERIALS**



**HOSOKAWA MICRON CORPORATION**

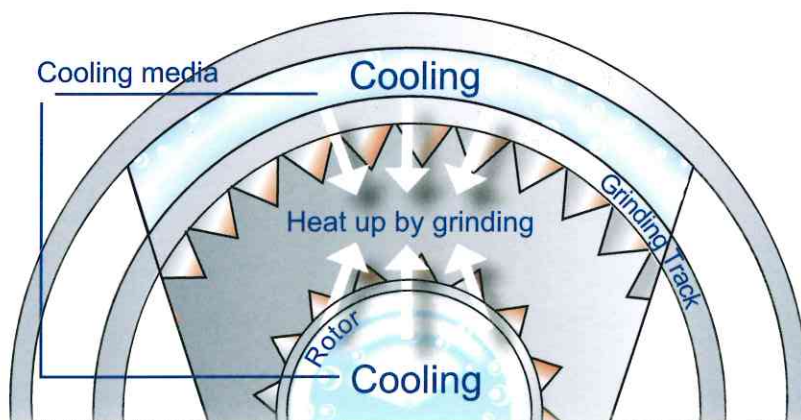
**PROCESS TECHNOLOGIES FOR TOMORROW™**



### Grinding machine with specially designed cooling mechanism

#### APPLICATIONS

This machine shows remarkable grinding performance for materials with low melting points and for heat-sensitive materials such as toner, by suppressing heat-up of the mill while grinding.



Grinding mechanism of Glacis

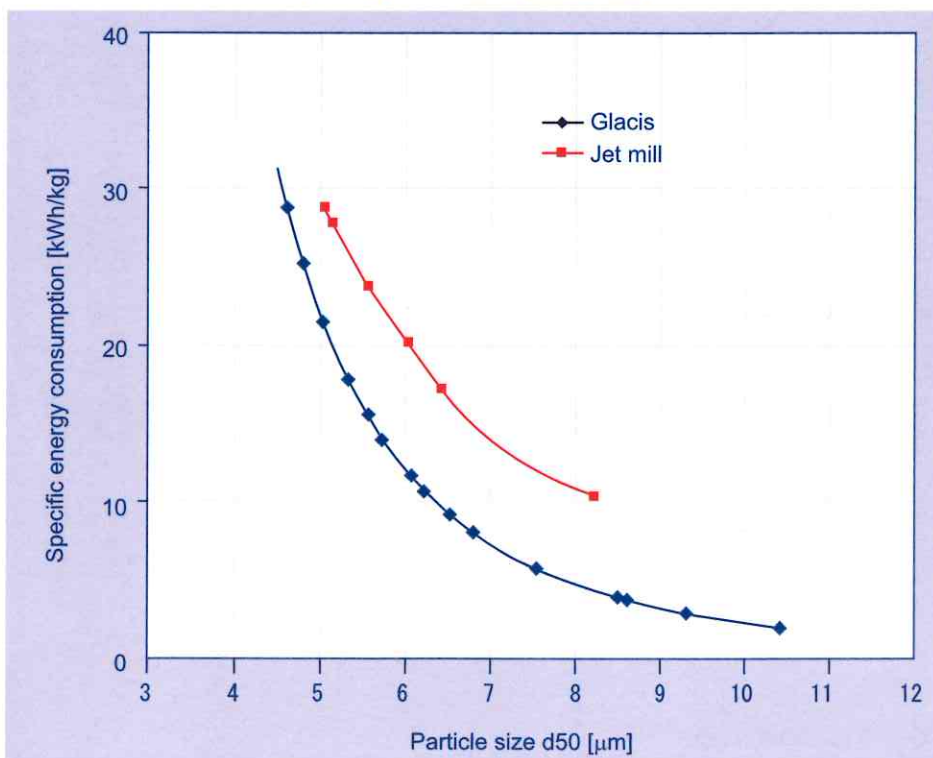
#### PRINCIPLE OF OPERATION

The raw material is supplied to the grinding chamber from the feed inlet with cooling air. The powder is ground by a strong impact force and shear force generated through the narrow gap between the high-speed rotor and the grinding track. The grinding rotor and the grinding track are specially designed for highly effective cooling. The fineness is controlled by adjusting the grinding rotor speed.

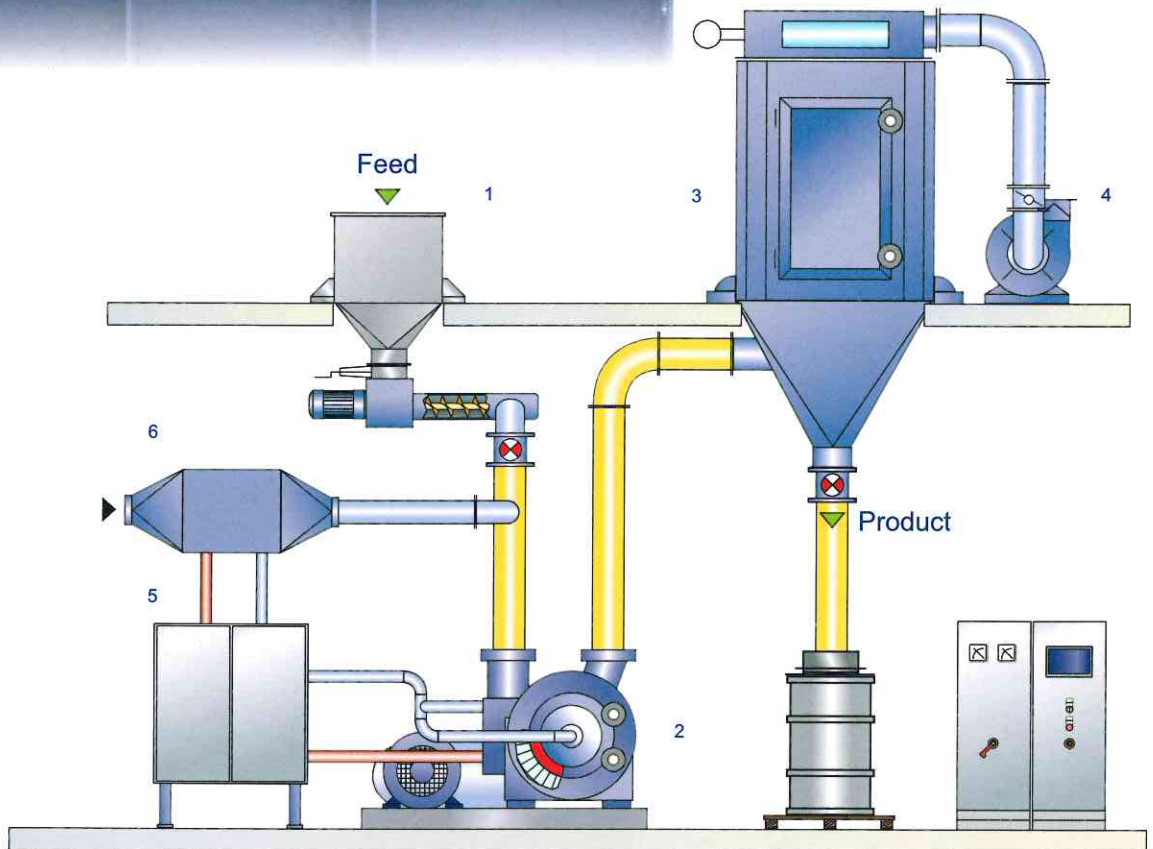
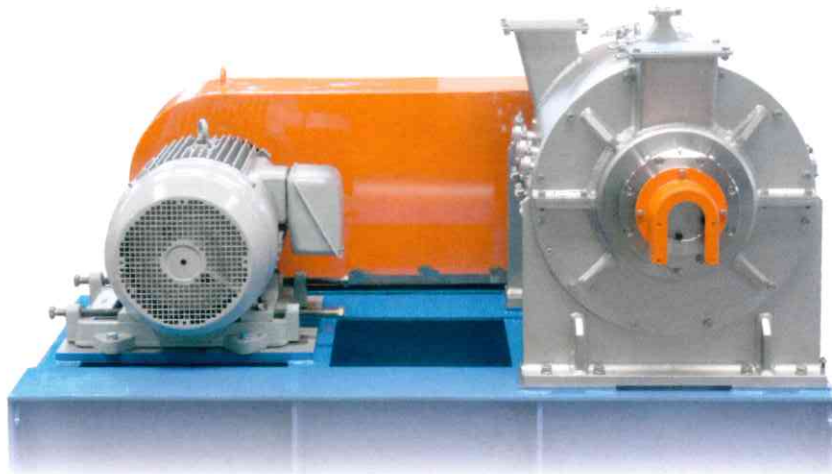
#### FEATURES

- **Energy saving**  
GLACIS reduces grinding energy by 50% compared with jet mills.
- **Extraordinary cooling effect**  
The machine shows high cooling efficiency as the result of charging a refrigerant into the grinding rotor as well as the cooling jacket. It enables the grinding of materials with low melting points and heat-sensitive materials which could not be ground by conventional machines. The cooling effect of GLACIS is 7.5 times higher than with a conventional impact mill.
- **Compact system**  
Because less air volume per grinding capacity is required, installation space and costs can be saved by installing smaller ancillaries such as the blower and the collector. The air volume required for GLACIS is about 80% less than with conventional mechanical mills.
- **Facilities for testing the actual production size**  
For the customers test, Hosokawa provide a series of Glacis (GC-250, 430, 600) for confirming the performance with the actual material.

GRINDABILITY OF GLACIS AND JET MILL (Toner)  
(Energy : Total system kW)







- 1 Feeder
- 2 GLACIS GC
- 3 Bag filter
- 4 Fan
- 5 Chiller
- 6 Heat exchanger

Material	Model	Feed size	End product fineness	Capacity
Toner, Monochrome	GC-430	30 $\mu\text{m}$	6 $\mu\text{m}$	150 kg/h
Toner, Monochrome	GC-430	1 mm	30 $\mu\text{m}$	1000 kg/h
Toner, Color	GC-430	1 mm	5 $\mu\text{m}$	75 kg/h
Resin	GC-430	500 $\mu\text{m}$	5 $\mu\text{m}$	60 kg/h
Silica Gel	GC-250	10 mm	150 $\mu\text{m}$	90 kg/h
Powder paint	GC-250	20 mm	30 $\mu\text{m}$	80 kg/h
Tea	GC-250	1 - 3 mm	15 $\mu\text{m}$	70 kg/h
Buckwheat flour	GC-250	500 $\mu\text{m}$	8 $\mu\text{m}$	100 kg/h

Product line	GLACIS GC Type	GC-250	GC-430	GC-600	GC-800
Scale-up Factor		0.3	1	2	3.5
Mill drive kW		11	37	75	132
Air flow rate m <sup>3</sup> /min		1.5	5	10	17.5
Length W mm		1200	1500	2000	3500
Width D mm		800	1200	2000	3000
Height H mm		700	1200	1400	1800
Weight kg		600	2000	4000	6000

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