Operating Manual BA 1123/11.1 E

(Original operating instructions)

Fine Impact Mill

500 UPZ

Plate Beater Grinding Unit

This BA 1123/ 11.1 E is an integral part of the operating manual for the 500 UPZ basic machine

Manufacturer's address

HOSOKAWA ALPINE Aktiengesellschaft

Peter-Dörfler-Str. 13–25
D-86199 Augsburg, Germany

Tel.: +49 8 21 59 06-0
Fax: +49 8 21 59 06-457

Keep in a safe place for future reference! 06.99 / BO

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The following form part of this manual:

Spare parts drawing	EZ 1123/11.1-01	
Spare parts list	EL 1123/11.1-01 ...	order-specific

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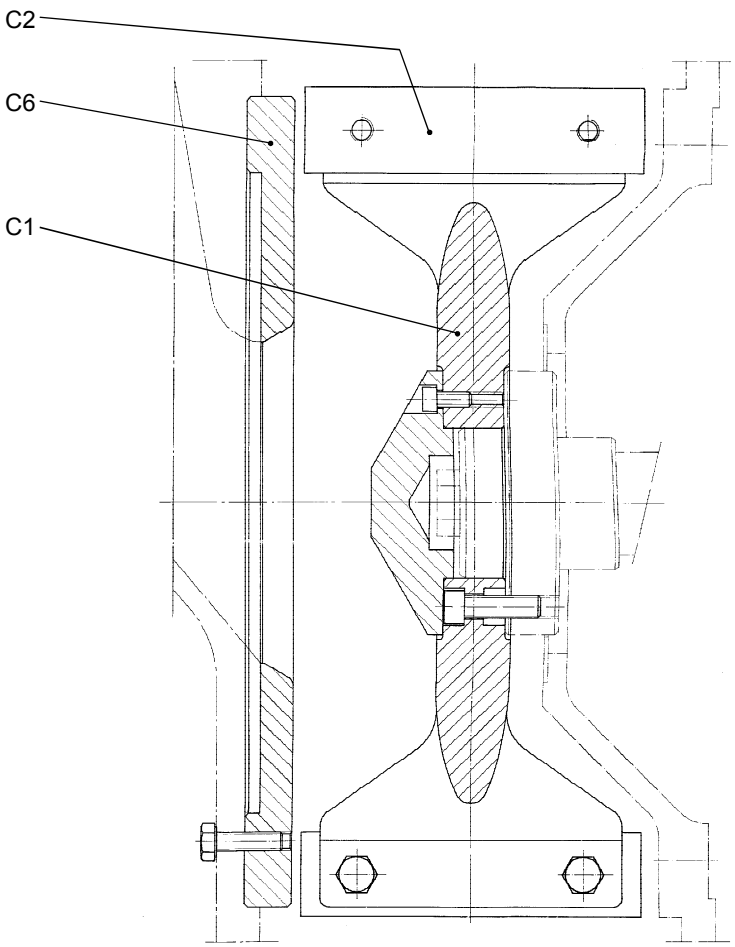
1 General Information

The plate beater grinding unit is employed in the 500 UPZ fine impact mill for the medium to fine range.

The grinding unit is always operated with the matching grinding track – with or without a sieve insert, but seldom with a sieve grate.

The main components of the plate beater grinding unit are:

- a fixed cover disc (C6), screw-connected to the mill door;
- a rotating beater disc (C1) with attached plate beaters (C2), seated on the hub of the mill shaft.



C1 Beater disc
C2 Plate beater
C6 Cover disc

Figure 1: Plate beater grinding unit

2 Technical Specifications

Diameter of beater unit	440 mm
Number of plate beaters	12
Motor output (dependent on speed & order)	18.5 – 45 kW

2.1 Speed

NOTICE
Breakage of rotating parts (beater disc, shaft)
Never exceed the max. permissible speed of 4500 rpm!

2.2 Direction of rotation

Dependent on the type of grinding track or sieve grate employed, both anticlockwise and clockwise rotation are possible.

To this end, the complete beater unit can be turned on the mill shaft through 180°.

If the **mill has a tangential discharge**, however, the beaters must rotate towards the discharge, i.e. when looking at the mill door, the direction of rotation in this case is to the left or anticlockwise.

The product must impact against the front side of the beaters.

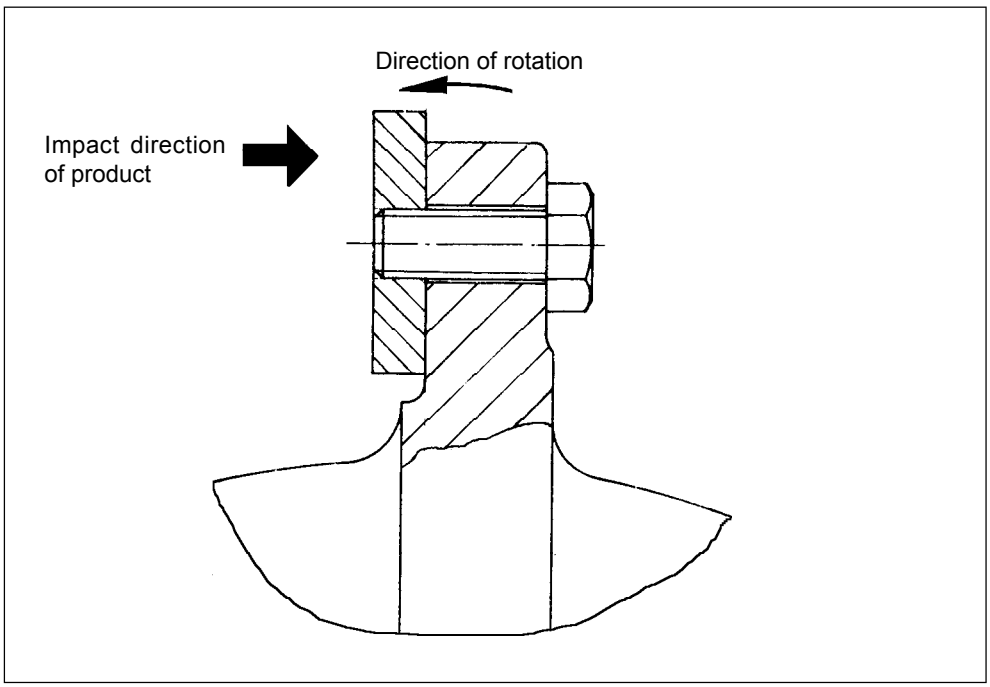


Figure 2: Impact and rotational direction

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2.3 Weights

Cover disc (C6)	approx. 15 kg
Rotating grinding unit (C1, C2)	approx. 35 kg

3 Grinding Element Removal and Installation

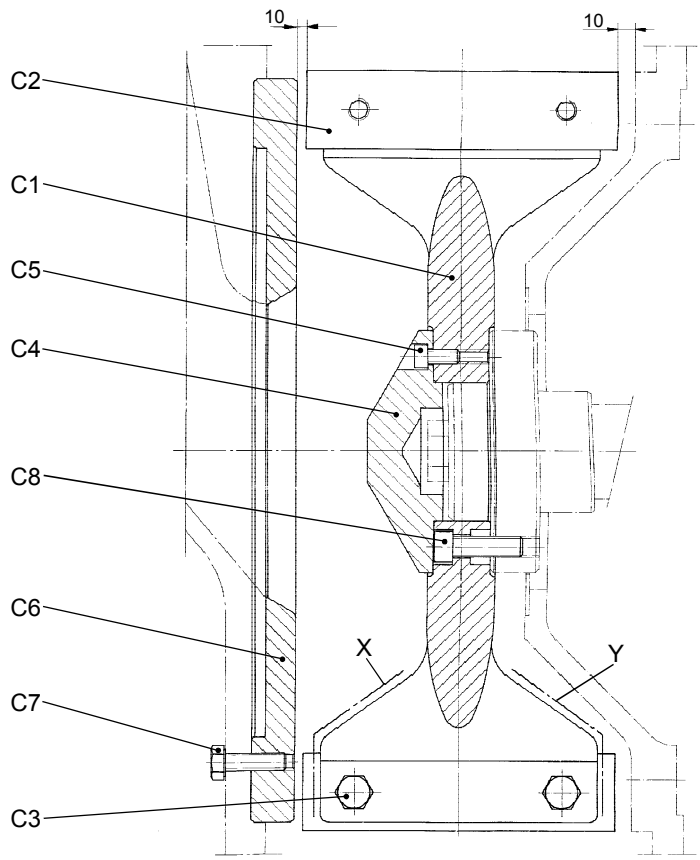
The exchangeable grinding unit elements are fastened to the hub of the mill shaft and in the mill door.

See also the operating manual for the 500 UPZ basic machine.
Pay attention to the safety regulations!

WARNING
Rotating machine parts, ejecting products.
Injuries possible when reaching into or opening the machine.

- Switch off the master switch and secure it against unauthorised or unintentional switching on.
- Wait until the drive comes to a standstill.

Clean all parts thoroughly prior to assembly!



C1	Beater disc	C6	Cover disc
C2	Plate beater	C7	Screw
C3	Screw	C8	Screw
C4	Cover	x / y	Material removal when balancing
C5	Screw		

Figure 3: Plate beater grinding unit

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3.1 Removal

Switch off the mill, secure against restarting and open the machine door (see the operating manual for the 500 UPZ basic machine).

Rotating grinding unit elements

- Undo the screws (C5) and remove the cover (C4).
- Screw the supplied assembly mandrel onto the mill shaft and pull it against the hub.
- Remove the screws (C8).
- Pull the beater disc (C1) on the assembly mandrel to the front
- Remove the beater disc (C1).

Cover disc

Remove the cover disc (C6) after undoing the screws (C7).

3.2 Installation

Cover disc

Locate the cover disc (C6) in the door centering groove and secure to the mill door with the screws (C7).

Rotating grinding unit elements

- Screw the supplied assembly mandrel onto the mill shaft and pull it against the hub.
- Push the beater disc (C1) onto the assembly mandrel.
- Push the beater disc (C1) on the assembly mandrel home to the stop in the machine.
- Insert and tighten the screws (C8).
- Remove the assembly mandrel.
- Replace the cover (C4) and fasten to the beater disc (C1) with the screws (C5).

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4 Wear Control

See also the operating manual for the 500 UPZ basic machine.
Pay attention to the safety regulations!

All components that are subject to wear must be checked by skilled personnel for wear and function every 500 operating hours or more frequently if the product being processed is strongly abrasive. The user is charged with determining the inspection intervals and with carrying out the inspections.

The following must be checked:

- Plate beaters (C2)
- Cover disc (C6)
- Cover (C4)
- The product-contact parts of the beater disc (C1)
- The exchangeable plate beaters for secure seating on the beater disc
- The grinding elements for secure seating on the mill shaft or in the housing or door

Maximum permissible wear factors:

- To the plate beaters (C2): max. 20% or until the edges are so worn that the grinding function is impaired; use your own experience in judging.
- To the cover disc (C6): max. 5 mm.
- To the cover (C4): max. 3 mm.
- To the product-contact parts of the beater disc (C1): max. 2 mm.

In evaluating the degree of wear, the point where wear is worst is always decisive.

If in doubt, contact HOSOKAWA ALPINE's Customer Service Department.

Parts displaying signs of advanced wear must be exchanged promptly.



DANGER
Wear parts that are not exchanged promptly pose a safety hazard to the operating personnel and can also lead to machine damage.

Advanced wear can be recognised by a deterioration in output or of the grinding fineness.

Uneven machine running is an indication of irregular wear patterns on the rotating parts (e.g. plate beaters).

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5 Servicing

See also the operating manual for the 500 UPZ basic machine.
Pay attention to the safety regulations!

Never carry out servicing procedures personally unless adequate expertise (skilled personnel) and facilities (tools, workshop) are available.

The quality of servicing or repair procedures can only be guaranteed if they are carried out by the manufacturer.

Worn parts (see Section 4) must be exchanged promptly.

5.1 Exchanging the plate beaters

- Remove the plate beater grinding unit as described in Section 3.1.
- Undo the screws (C3) – they are secured with liquid sealant, making them difficult to unscrew – and lift the plate beaters (C2) off the beater disc (C1).
- Check the plate beaters (C2) for damage and renew if necessary.
- Screw-connect the plate beaters (C2) to the beater disc (C1).



NOTICE
After exchanging the plate beaters, always use **new** screws and washers!
Apply liquid sealant to the screws!

Recommended sealant:

Omnifit 30 H (Omnitechnik Ltd., Hanover, Germany),
or any other make of equivalent quality.

Pay attention to the setting time of the sealant!

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5.2 Balancing

The plate beater grinding unit was balanced in the factory.

The weight of the impact beaters (C2) in sets is practically identical. Max. weight deviation 5 g.

An imbalance to the grinding unit is usually cause by irregular wear patterns. Exchange worn parts promptly, and always install beaters of identical weight opposite each other.

Recommendation:

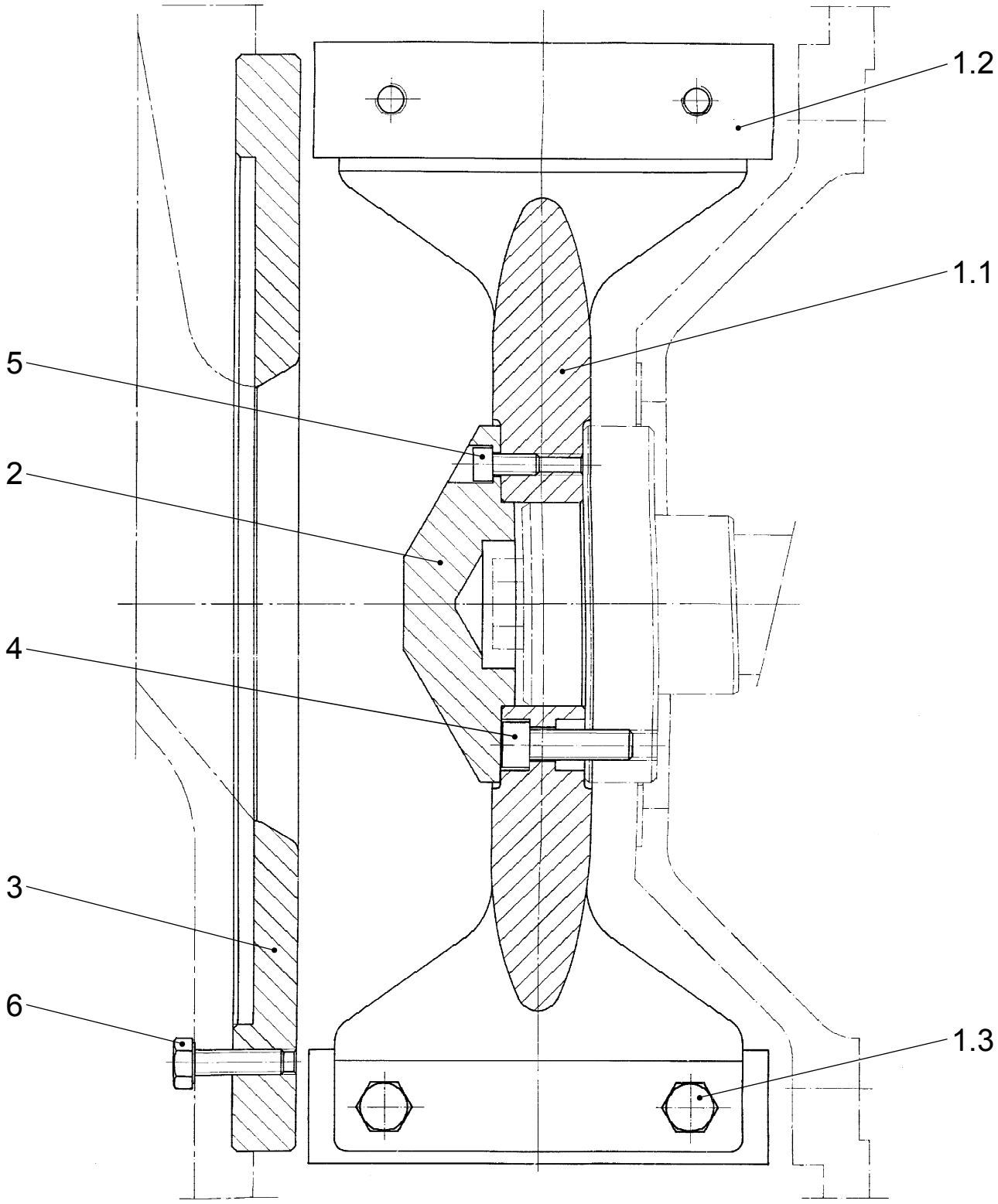
Dynamically balance the beater disc (C1) after all alterations or servicing procedures.

Balancing quality Q = 6.3 Balancing speed n = 4500 rpm

Material removal:

Remove material at "x" and "y" (Figure 2)

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Bei Bestellung von Ersatzteilen
Maschinentyp, Maschinen-Nummer und Bestell-Nummer angeben.

When ordering spare parts please specify
machine type, serial number and order number.

Si vous commandez des pièces de rechange, veuillez bien indiquer
le type de machine, le numéro de série ainsi que, le numéro de la commande.

Ersatzteilzeichnung
Spare parts drawing
Voir schéma des pièces de rechange

EZ 1123/11.1-01

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Blatt-Nr. 1

Blattzahl 1

Item	Order-No.	Additional information	Standard p.	Material	Quant.
1.1	122962	Beater disc		1.7231	1
1.2	185353	Plate beater with hardfacing		S235	12
1.3	123150	Hexagon head screw M12x30	ISO 4017	10.9 Zn	24
2	122965	Cover		C45 N	1
3	245128	Cover plate		Naxtra	1
4	123149	Cheese-head screw M12x45	ISO 4762	10.9	4
5	008911	Cheese-head screw M8x20	ISO 4762	8.8	2
6	008528	Hexagon head screw M10x40	ISO 4017	8.8 Zn	3
	013456	Safety washer 10		A2	3
	148107	Sealing ring A 10x16x1.5	DIN 7603	V-Fiber	3

Fine Impact Mill
500 UPZ

Plate beater grinding unit / steel

Spare parts list
EL 1123/11.1-01.08

See Spare parts drawing
EZ 1123/11.1-01

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