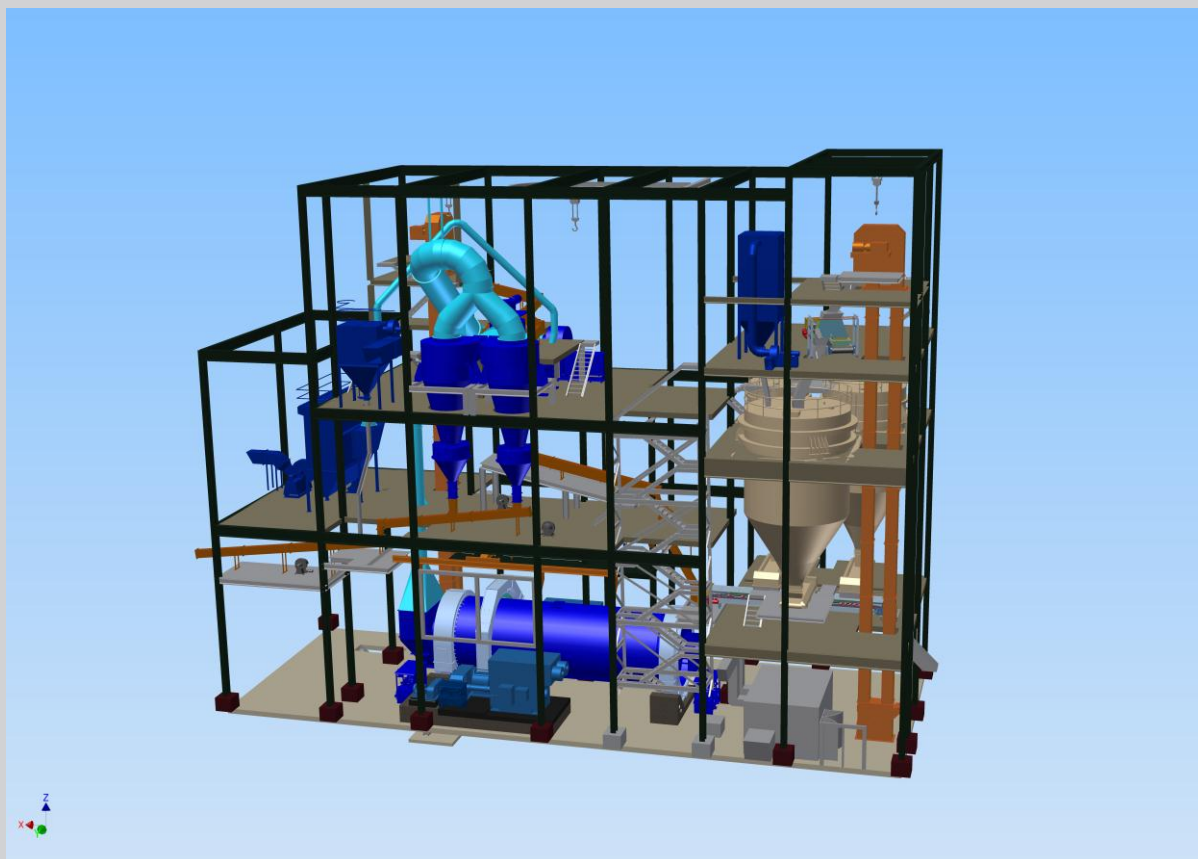


Used equipment

For sale by InterCem

1 pre-owned clinker grinding plant with ball mill \varnothing 4,0m x 13.5 m for approx. 90 t/h OPC at 3000 Blaine (I01033)



Example of a cement grinding plant with used / refurbished ball mill and partial new auxiliary equipment

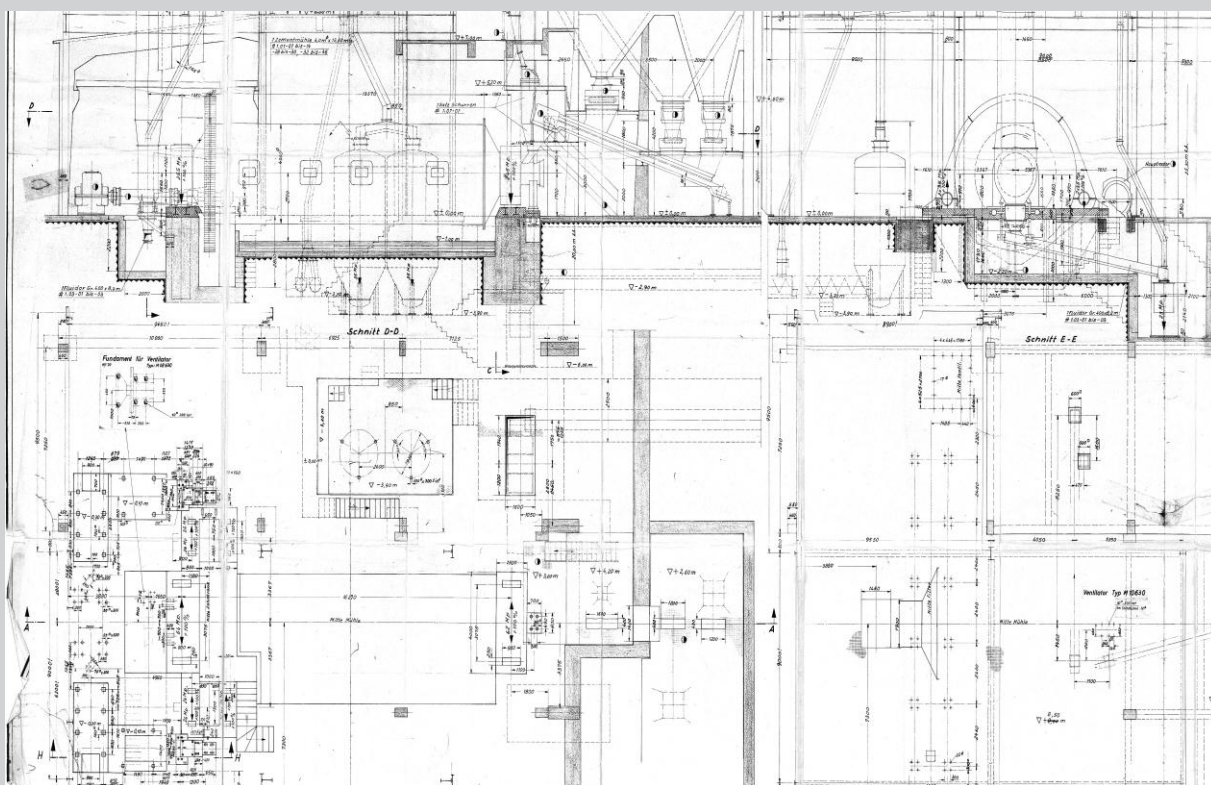
If interested, please contact:

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InterCem Engineering GmbH
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InterCem Engineering is a leading company for the supply of pre-owned and new equipment and services for the cement industry. Turn key plants are designed as combination of used and (where necessary) new equipment. A top notch team of engineers also provides comprehensive engineering of the technology and design of complete new production lines. The component described above could be implemented in a comprehensive solution upon demand.

On offer: a pre-owned clinker grinding plant with a two compartment ball mill, a feeding bucket elevator, a circuit bucket elevator, a set of weigh feeders for mill feeding, a mill dedusting bag filter and various electrical cranes. This offer includes other than below mentioned machinery various connecting pipes, ducts and air-slides. Also included are various spare-parts for the equipment as far as available. Additional customized solutions (e.g. engineering, modifications, etc.) are available on demand.



Overview of the actual ball mill installation

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Technical specification:**1.01 1 Feeding chain bucket elevator**

The feeding chain bucket elevator is manufactured by Polysius / Germany.

Technical data:

Bucket width	1000 mm
Distance c-t-c	20 m

Motor:	BBC
Motor power	45 kW, 380 V, 50Hz
Motor speed	1470 rpm

Gear box:	SDNW 970
Gear box speed	1.290 / 20,5 rpm

1.02 1 Belt conveyor

Material:	clinker / gypsum / additives
Feed material temperature	< 80°C
Feed size	max. 50 mm
Conveying capacity:	approx. 120 t/h
Belt width	800 mm
Belt length c-t-c	approx. 34 m
Motor power	4,4 kW, 380 V, 50 Hz

1.03 1 Weigh feeder for clinker

Manufacturer:	Schenk, Germany
Type:	DMI 12
Feed material:	clinker
Feed size:	0 - 30 mm (less than 95 %), max. 50 mm (less than 5 %)
Feed moisture:	< 0,5 %
Bulk density:	approx. 1.3 t/m ³
Feed rate:	approx. 100 t/h
Belt width:	1200 mm
Belt length c-t-c:	1300 mm



Weigh feeder for clinker (Original place of installation)

1.04 1 Weigh feeder for gypsum

Manufacturer	Schenk, Germany
Type	DMILV 8
Feed material	gypsum
Feed size	0 - 30 mm, max. 50 mm
Feed moisture	< 1.0 %
Bulk density	approx. 1,3 t/m ³
Feed rate	approx. 20 t/h
Belt width	800 mm
Belt length c-t-c	3300 mm



Weigh feeder for gypsum (Original place of installation)

1.05 1 Weigh feeder for additives

Manufacturer	Schenk, Germany
Type	DMILV 8/2
Feed material	additives
Feed size	0 - 30 mm, max. 50 mm
Feed moisture	< 1.0 %
Bulk density	approx. 1,3 t/m ³
Feed rate	approx. 20 t/h
Belt width	800 mm
Belt length c-t-c	1200 mm



Weigh feeder for additives (Original place of installation)

1.06 1 Belt conveyor to ball mill

for transport of mill feed material to ball mill

Material:	clinker / gypsum / additives
Belt width:	650 mm, wear resistant belt
Belt length:	approx. 8,0 m
Feed material temperature:	< 80°C
Feed size:	max. 50 mm
Conveying capacity:	max. 100 t/h

2.00 1 Ball mill**a) Process data of the mill**

Altitude:	max. 100 m a.s.l
Ambient temperature:	Max. 45 °C Min. +5 °C
Humidity:	average 60-95 %
Mill type:	ball mill
Type of circuit:	closed with air separator
Type of mill discharge:	discharge wall
Feed material:	clinker, gypsum, additives
Bulk density of feed material:	1.3 to/m ³
Feeding grain size:	80% < 12 mm
Moisture content of feed material:	max. 1 %
Filling degree:	27 %
Grinding media weight:	approx. 195 to (not included)
Type of grinding media:	balls (not in InterCem delivery)
Grinding media size:	20 – 90 mm

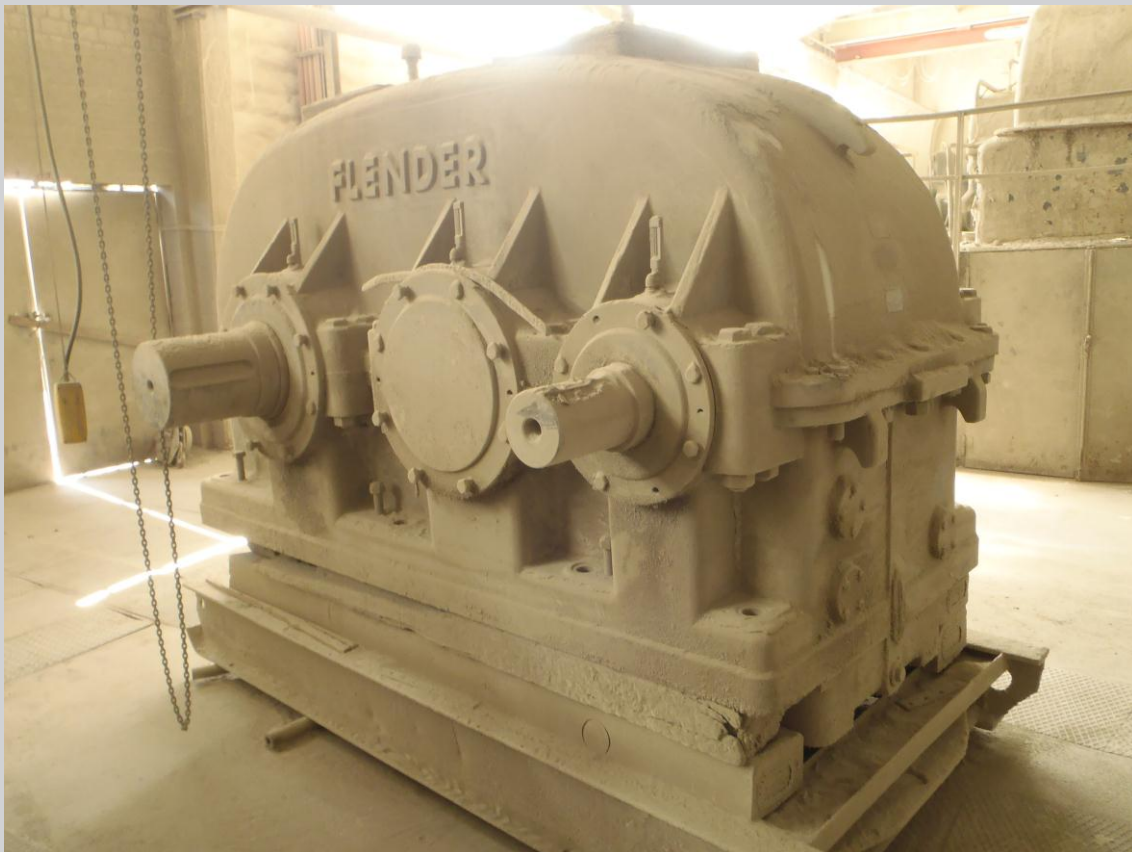
b) Mechanical data of mill:

Manufacturer:	Polysius / Germany
Year of manufacturing:	1973
Inside diameter of mill tube:	4.000 mm
Cylindrical length of mill tube:	13.500 mm
Kind of bearing:	trunnion bearing
Mill drive:	double girth gear / pinion
Effective grinding path:	12.550 mm
Length of grinding chamber I:	4.200 mm
Length of grinding chamber II:	8.350 mm
Lining - inside mill diameter:	approx. 3.820 mm
Mill speed (=72,6 % cs):	15,6 rpm
Critical mill speed:	84,6 rpm
Motor speed:	988 rpm
Grinding capacity:	approx. 2.600 kW
Installed main drive capacity:	2 x 1.450 kW = 2.900 kW
Main gear box:	2 x Flender SZNG 1610
Main:	990 / 122 rpm
Main motor power:	2 x 1.450 kW
Voltage:	6.000 V / 50 Hz
Main motor speed:	988 rpm

Auxiliary drive gear box:	2 x Flender DFO
Auxiliary gear box speed:	1450 / 13,2 rpm

Auxiliary drive motor:	2 x 30 kW
Voltage:	380 V / 50 Hz
Auxiliary motor speed:	1475 rpm

- 2 starter for main motor included
- Gear box lubrication included
- Trunnion bearing lubrication included
- Girth gear / pinion lubrication included



Second Gear box as spare part



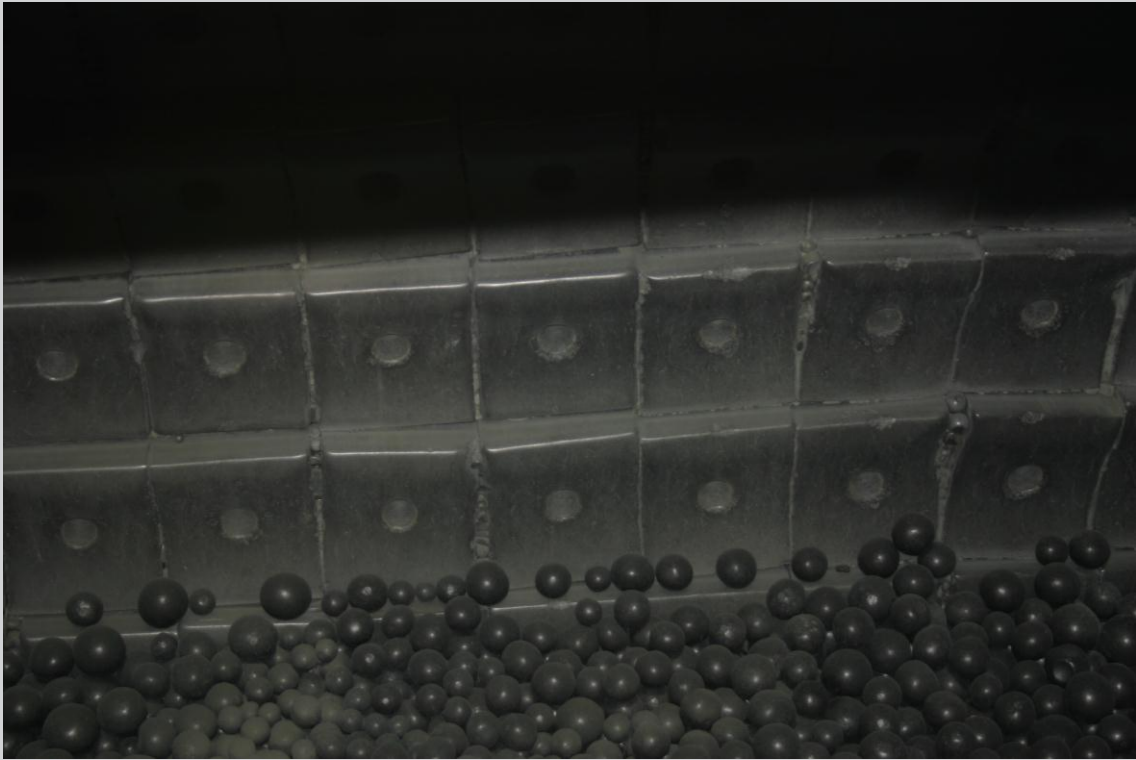
Last refurbishment of mill main motor 04/2004



Ball mill tube with gear rim and lubrication unit (Original place of installation)



Ball mill tube with gear ring, view from mill inlet (Original place of installation)



Lining system 1st compartment



Mill intermediate diaphragm



Sprocket of ball mill



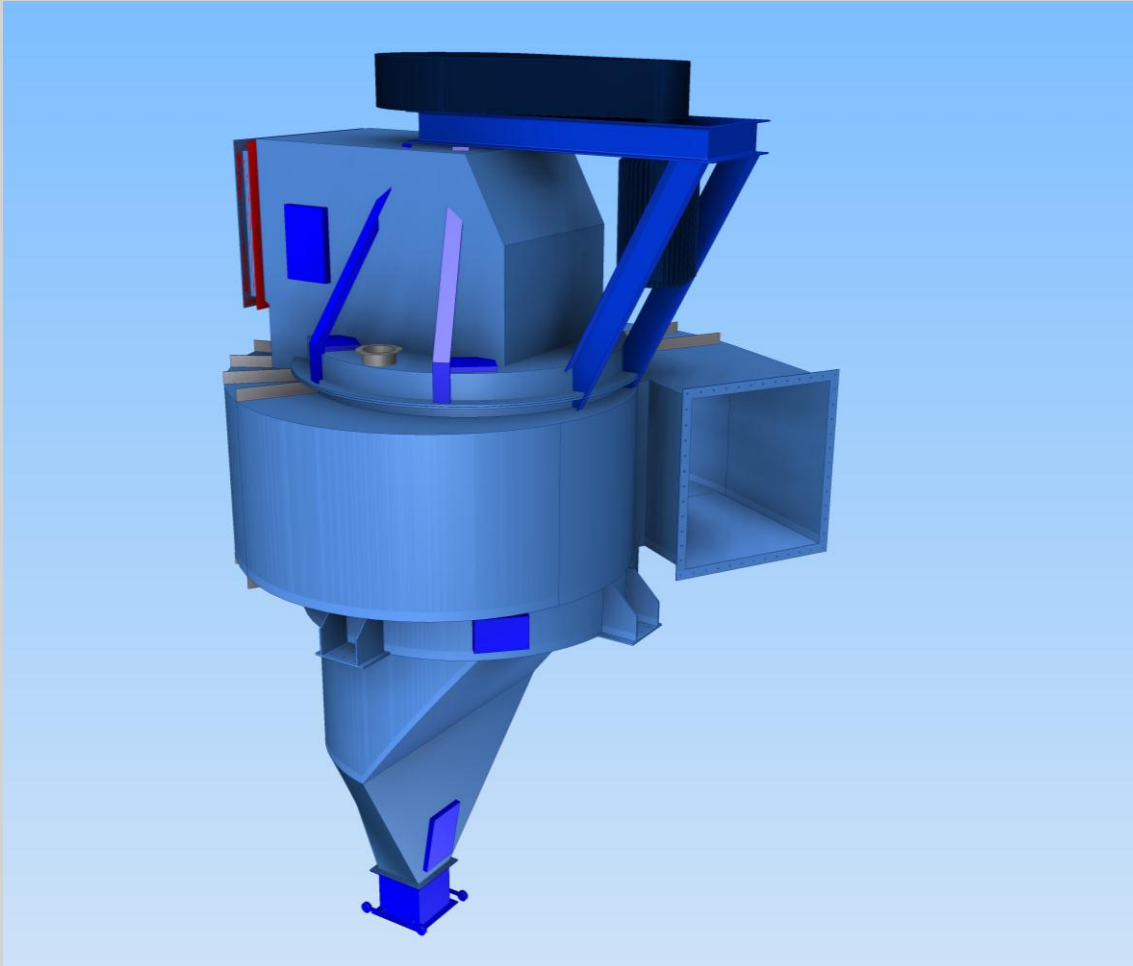
Mill main drive with gear box and auxiliary drive (Original place of installation)



Auxiliary drive with main motor (Original place of installation)

3.00 1 Air separator

The existing separator is one of the 1st generation and should be changed to a new separator of the 3rd generation due to higher efficiency.



Example for an ICS 125 (InterCem high efficiency separator)
3rd generation

4.00 1 Mill main filter

Manufacturer	Lühr / Germany
Type	EK 2.5/12/1.8/153
Number of compartments	12
Air capacity	74.880 m ³ /h
Van motor	AEG
Van motor power	160 kW
Voltage	380 V / 50 Hz
Van motor speed	1.485 rpm



Mill main filter (Original place of installation)



Fan and chimney for mill main filter (Original place of installation)



Inlet piping at the mill main filter (Original place of installation)

5.00 1 Circulating chain bucket elevator

The feeding chain bucket elevator is manufactured by Polysius / Germany.

Technical data:

Bucket width 1000 mm

Distance c-t-c 27,5 m

Motor AEG

Motor power 55 kW, 380 V, 50Hz

Motor speed 1475 rpm

Gear box Flender

Gear box speed 1.630 / 26 rpm



Circulating chain bucket elevator



Chain from bucket elevator



Buckets from the bucket elevator

6.00 1 Set of Air slides

6.01 1 Air slide for mill discharge to circulating bucket elevator

6.02 1 Air slide for feeding air separator

6.03 1 Air slide for reject to mill inlet

6.04 1 Air slide underneath cyclone for finish product



Set of air slides (Original place of installation)