

MillScan DSP2000

Fill-Level Measuring System of Ball Mills

State-of-the-Art Digital Signal Processing (DSP) Measurement

3

Ball Mill
DSP2000

Digital Control Lab. 가

MillScan

MillScan DSP2000

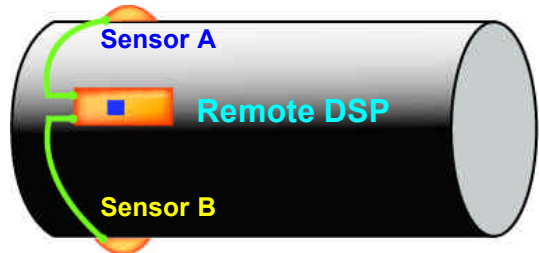
Ball Mill

MillScan DSP2000

Ball Mill



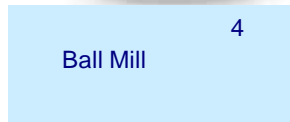
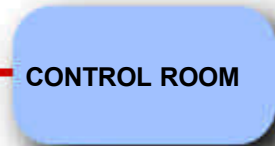
418 Mhz RF



RS232



4-20mA



MillScan DSP2000

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- 3
- 5가

MillScan DSP2000

- Raw Meal Ball Mills
- Finish Ball Mills
- Vertical Mills
-

	ITECA	FLS	HASLER	MillScan
	Partial	No	Partial	<i>Perfect</i>
1 가	1	1	1	2
가	1	1	1	8
	No	No	No	Yes
	No	No	No	Yes
	No	No	No	Yes
	No	No	No	Yes
	No	No	No	Yes
	No	No	No	Yes

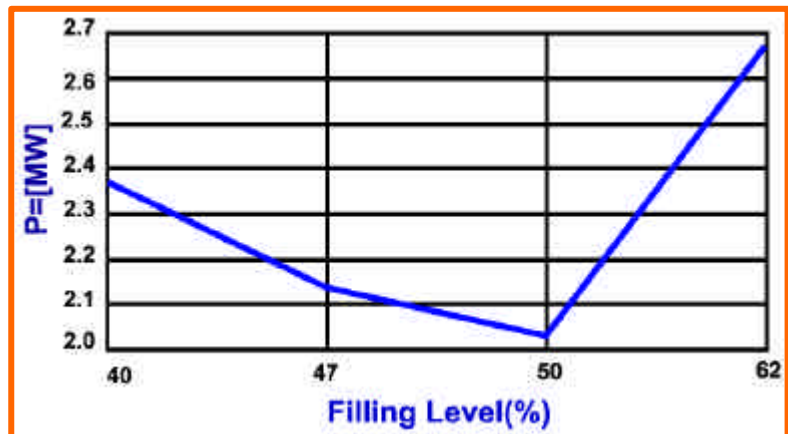
Ball Mill

[Ball Mill]

Ball Mill chamber 가 50% 가

2 Ball Mill 60ton/hr 가

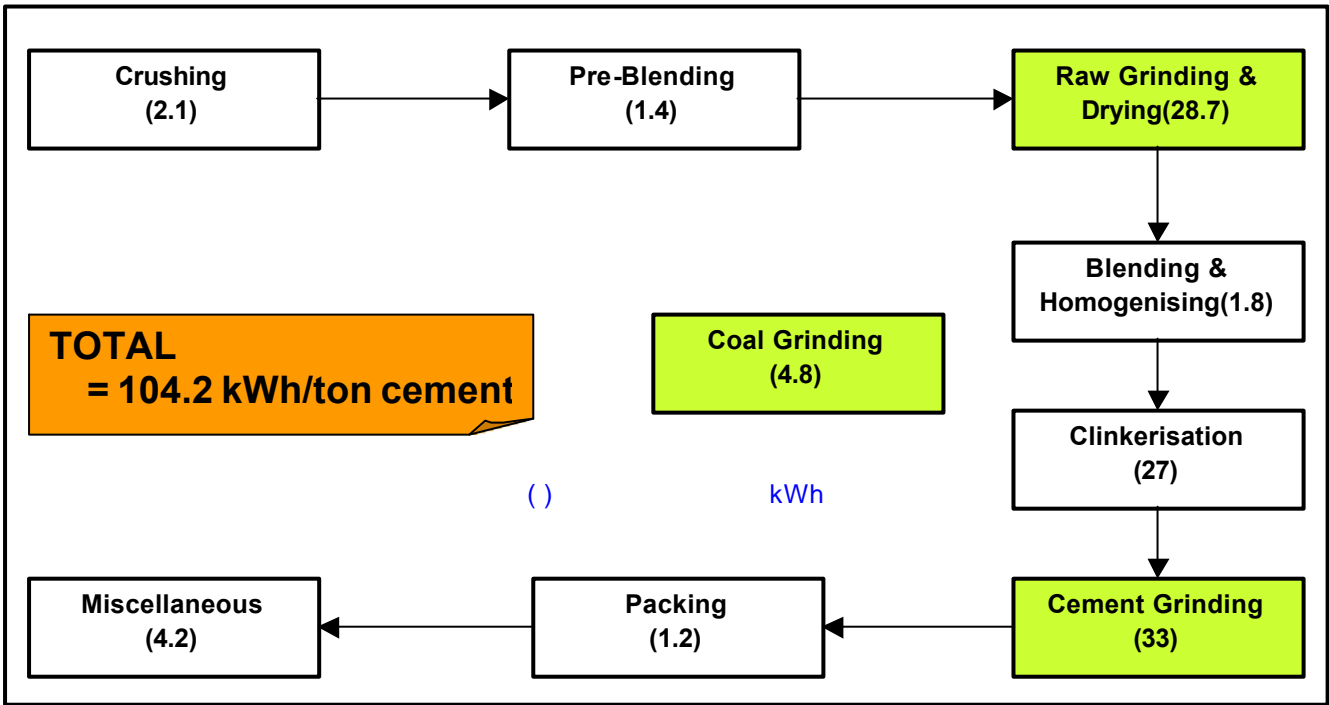
40% 가 50% 가



Ball Mill

가

Grinding 가 1 Grinding 1 ~ 1.5 가 12% Grinding 30% Grinding Steel Balls
 Steel Ball 2002 10% 가 2004 가가 가 95%
 Steel Liner MillScan DSP2000 Ball Mill 가



Vertical Mill

Fill-Level

MillScan DSP2000

Vertical Mill

가

가 Milling

가

MillScan

Vertical Mill

MillScan DSP2000

Cemex Tepeaca in Mexico
 Mountain Cement in Wyoming
 Australian Cement in Kandos, Australia

Puerto Rican Cement in PR
 Cemex in Michigan
 Fujiwara Works in Japan

Tarmac in Miami, FL
 Monarch in Kansas
 Ashgrove Cement in Idaho

For more detailed information

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Specifications



General Specifications

Power supply	230/115 VAC, 50/60 Hz
Enclosures	Nema 12 (base unit) and Nema 4 (remote unit)
Dimensions (Base Unit)	6"D x 14"L x 16"W
Dimensions (Remote Unit)	6"D x 9"L x 8"W
Dimensions (Heat Sink)	4"D x 6"L x 6"W
Analog inputs	Up to eight accelerometers
Analog outputs	Up to eight 4-20 mA into 750 Ohms max.
Digital inputs	16 TTL level
Digital outputs	8 dry contact reed relay 24VAC@5A.max.
Digital outputs	12 TTL level
Mills	Up to 4 mills
Software	Windows 95, 98, NT, 2000 and XP monitoring and configuration software
Resolution	At least three times higher than traditional instruments

Sensors Technology

Type	High resolution accelerometers
Frequency response +/- 0.25 dB	20 to 20,000 Hz
Temperature conditions	-40° to 85° centigrade
Sensitivity	100 mV/G

CODECS (ADC,DAC converters):

Type	Sigma-Delta 64X over-sampling
ADC resolution	16 Bits
Dynamic range	95 dB
Total harmonic distortion	0.006%
Interchannel isolation	80 dB
DAC resolution	12 Bits
Analog outputs	4-20 mA current sink mode

Digital Signal Processor (DSP)

Type	TMS320C3X Floating point CPU
Bus width	32 Bits
Instruction cycle	33 nanoseconds
Processor speed	60 MFLOPS
Serial EEPROM	8K words
Static RAM	128K words @15 nSec
Communication Interfaces	Parallel port and RS232 serial port RF Digital Communications link