

REFERENCES
INDUSTRIAL AUTOMATION
MEDIUM and HIGH POWER
INVERTERS

Lifting and Transport Systems | Verona - Italy



Industrial Sector: **Steel Industry**

Applications: Cranes

Products: Sinus Penta from 15 kw to 315 kw

Connection date: 2008

Customer: CPM Milano

Key Notes: CPM is an engineering company specialised in the lifting and transport systems sector. Is one of the big italian company for industrial cranes.



Mining | Cerro Lindo - Peru



Industrial Sector:	Mining
Application:	Overflowing Water recovery pumps
Products:	Sinus Penta 600 HP
Connection date:	2009
Customer:	Compañía Minera Milpo S.A.A.

Key Notes:

MILPO is a Peruvian mining group dedicated to the development and operation of medium-sized mines, production of copper, zinc, lead, silver and gold. It currently has five operational units: the Mine El Porvenir (Pasco), the Mine Atacocha (Pasco) acquired in November 2008, the Mine and refinery Ivan (Antofagasta - Chile), the Mine Chapi (Moquegua) and Mine Cerro Lindo (Ica) since July 2007.



Mining | Calama - Chile



Industrial Sector: Mining

Application: Conveyor Belt

Products: Sinus Penta

Connection date: 2010

Customer: Sociedad Contractual
Minera El Abra

Key Notes: El Abra is an open-pit copper mining complex. During 2011, El Abra commenced production from its newly commissioned stacking and leaching facilities to transition from oxide to sulfide ores. Located 47 miles north of Calama, in Chile's El Loa province, Region III.



Industrial Sector:	Mining
Application:	Regenerative Conveyor Belt
Products:	3 Sinus Penta 0831 1 Sinus Penta 0457
Type:	Drive + RGN
Connection date:	2009
Customer:	

Key Notes: The 5km belt conveyor is used to transport the coal from the mine to the thermoelectric power station.

The communication between inverters and PLC is via Ethernet.

➤ **Technical Specification:**

- Length 1st conveyor: 300m
- Length 2nd conveyor: 5 Km
- N.3 AC motors 900kW 50Hz @ 690Vac
- N.1 AC motor 500kW 50Hz @ 690Vac
- Conveyor belt speed: 5m/s



Application: Centrifugal slurry pump

Customer: IECCO

Inverters: SINUS PENTA – 630 kW – 690 V



Electrical Systems | Larderello (PI) - Italy



Industrial Sector: **Energy Industry**

Application: Geothermal Power Station

Products: Sinus Penta from 5,5 to 500kw
Soft-Start series ASA

Connection date: 2005

Customer: Icet Industrie SpA

Key Notes: Italy was the first country in the world to exploit geothermal energy, with the first generation plant built in 1913 in Larderello.



Industrial Sector:	Waste Management
Application:	Crane
Products:	Sinus Penta from 5,5 kw to 250kw
Connection date:	2008
Customer:	CPM Milano

Key Notes: CPM Milano Company was formed out of an industrial group that had operated in Milan since 1940 in the iron and steel and mechanics sectors. Experience, know-how and customer base were integrated into CPM in the early 90s creating a new, dynamic and modern outfit.

CPM is an engineering company specialised in the lifting and transport systems sector.

- The lifting “spider” is regulated by the Sinus Penta Inverter to allow sliding, lifting and translation



Cement Industry | Travesio (PN) - Italy



Industrial Sector: **Cement**

Application: Rotating cylinder

Products: Sinus Penta
IP20 0005-0831 4TBA2K2
Cabinet 0030-0831 4TBA2K2

Connection date: 2001

Customer: Buzzi Unicem SpA

Key Notes: Buzzi Unicem is an International multi-regional, heavy-side group, focused on cement, ready-mix and aggregates. Long-term view of the business and dedicated management towards a sustainable development.



Cement Industry | Robilante (CN) - Italy



Industrial Sector:	Cement
Application:	Conveyor Belt
Products:	Sinus Penta Cabinet 0524 4TXA2K318
Type:	Drive + RGN
Connection date:	2000
Customer:	Buzzi Unicem SpA

Key Notes:

The plant is connected to quarries by a 6-km conveyor belt, inside a tunnel: in the picture the belt at Monfranco quarry. Robilante will be the first Italian plant to have the NF certification for two products.

Therefore, after a long and complex effort (it took us almost 4 years), Robilante cement plant becomes one of the few European plants that can take pride in achieving official recognitions by prestigious Italian and International Institutes.



Sugar Production | Minerbio (BO) - Italy



Industrial Sector: **Food & Beverages**

Application: Sugar refinery centrifuge

Products: Sinus Penta from 0005 to 0399 4TBA2K2

Connection date: 2009

Customer: COPROB Cooperativa Produttori Bieticoli

Key Notes:

CoPROB It's the only Italian cooperative sugar producer, with legal configuration similar to that in EU countries with the highest vocation where over 60% of the sugar industry is controlled by cooperatives.

- Centrifuges refinery operated with SINUS PENTA fed DC Bar DCREG2



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