



Barra Project International S.r.l. puts a more than 30-year-old experience and a flexible and agile structure at the Customer's disposal, as it is in a position to face and solve all various problems typically found in the complex world of handling, treatment, warehousing and extraction of bulk materials (against bridge and funnel) from silos and hoppers.

Firm's core business is based on the compressed air cannons plant design (in the family /AIRFLASH®-/AIRFOM®); the principal application is the silos and hoppers' emptying and cleanliness: the implementation of Our cannons has resulted a winning decision even if in those case where the traditional cleanliness and emptying systems of silos and hoppers (i.d. vibrators, with the relative cons, like vibration and noise) were inadequate (because of a strong tendency in constipation, some materials result very hard to manage).

These devices can be used also in other applications with very positive results:

- in the cement production cycles for the elimination of concretion and coatings inside the preheater: cyclone, riser duct, feed pipe, smoke chamber, kiln inlet, precalciner, grate and cooler.
- inside lime furnaces in order to help the flowing of the material in the critical zones.
- cleanliness of machine parts.
- against the consolidation of material inside wide silos that, over time, can reduce the stocking capability.

One of the innovation introduced in the last years, as a result of the R&D investments of Barra Project International S.r.l, is the **/PPI SYSTEM**. This system offers a very competitive alternative with respect to the traditional air cannon plants; it is particularly interesting for those applications concerning the areas characterized by restricted spaces or where high dispensed power is requested.

In range of the activation raw materials, moreover, Barra Project International S.r.l. produces cleaning system of conveyor belts, **/RASKIA® cleaners**, and dedusting system, **/ECOFOG® nebulizers**.

The majority of these products is protected by national and international patents.

/AIRFLASH®-/AIRFOM® AIR CANNONS

The operation of the air cannon is simple and effective: inside the cannon there is a pressurized fluid, usually air, at a maximum pressure of 10 bar; the cannon throws out all or a part of the volume stocked in its tank in an instant, causing a blast wave that breaks and fluidize the material allowing an easy way out from the stocking place. The use of air cannons for cleaning and emptying of silos and hoppers allows to achieve this advantages: removal of the human intervention; continuity and regularity of the production thanks to the elimination of arrests caused by the lack of material; removal of danger for workers; preventive cleaning action of wide areas and high temperature constructions; improvement of the material flow in the silos and hoppers; versatility in applicability; low exercising cost and easy management.

Main processed materials:

- Carbon black
- Cement
- Chalk
- Dolomite
- Fertilizers
- Fillers
- Flour
- Gunpowders
- Gypsum
- Kaolin
- Lignite
- Limestone
- Magnesium carbonate
- Ores
- Petrocke
- Pharmaceutical products
- Phosphate
- Plaster
- Plastic materials
- Potash
- Pyrites
- Salt
- Sand
- Saw dust
- Slag
- Slurry
- Sodium carbonate
- Sugar
- Talc
- Urea
- Wood chips
- Etc.

/AIRFLASH®-/AIRFOM® air cannons works usually in the following sectors:

- Cement
- Lime
- Concrete
- Chipping
- Inert treatment
- Mine
- Steel factories
- Foundry
- Thermoelectric plant
- Chemistry
- Filtration and recycling plan
- Fodder mill
- Mills
- Agriculture



[barra project international s.r.l.](http://barra.project.international.s.r.l.)

- Paper factory
- Glass factory
- Coke factory
- Carpentry
- Pharmaceutical
- Stocking areas next to harbour, salt mine and others
- Shipment
- Etc.

Even though the core field of the compressed air cannons is the cleanliness and emptying of silos and hoppers, these devices can be used also in other applications with very positive results, i.d. in the cement production cycles for the elimination of concretion and coatings inside the **preheater**: cyclone, riser duct, feed pipe, smoke chamber, kiln inlet, precalciner. **Grate** and **cooler**.

Inside lime furnaces in order to help the flowing of the material in the critical zones
Cleanliness of machine parts.

Against the consolidation of material inside wide silos that, over time, can reduce the stocking capability.

/PPI SYSTEM

The features of this typology of plants are the same of those one described above for the compressed air cannons. The difference with respect to the traditional air cannon is the way in which You install it: in the /PPI SYSTEM the tanks are substituted by a pipe network in which are obtained the points of utilization at which a firing valve is associated.

The /PPI SYSTEM (patented) allows to control the blast wave, using only the pick of power and reducing at a minimum level the energy consumption; this lead at a great management cost reduction and at an environmental pollution reduction.

/PPI plants allow to reduce cost and simplify the plant design according to:

- Ease in construction
- Ease in assembling and maintenance
- Reduction of the amount of space needed
- Safe management
- Very high versatility: the plant can easily be adapted to the different layout of the existing structures and it can be integrated and modified during time at very low cost



[barra project international](http://barra-project-international.com) s.r.l.

/ECOFOG® NEBULIZERS DEDUSTING SYSTEM

For what concerned the dedusting problems, Barra Project International S.r.l offers the /ECOFOG® nebulizer plants. These plants allow to produce fog right in the place where the dust is generated. In this way it is possible to improve the level of dedusting and reduce plant costs and energy consumption. The fog, obtained thanks to the micro-ionization of the water using the /AIROX® nebulizer, sticks at the dust particles, absorbing them. The particles, now heavier, falls on the material combining to it without make it getting wet (the use of H₂O is infinitesimal). This solution deletes both the necessity of possible following treatments of drying and problems linked to the removal of the created dust.

ADVANTAGES:

- More healthy work environment
- Easy assembling
- Easy management
- Low maintenance
- Low energy consumption
- Low cost

/RASKIA® CLEANERS FOR CONVEYOR BELTS

As far as concern the cleanliness of conveyor belts, Barra Project International S.r.l offers a wide range of cleaners , characterized by scraping elements made of elastomer and/or wear-resistant steel: these materials grant specific features regarding hardness, elasticity and high abrasion resistance.

These cleaners can be assembled on every type of belt for a wide range of materials. /RASKIA® blades are characterized by a particular shape (for frontal cleaners Barra Project International S.r.l. offers both cleaners with single and double blade) that allows, on one side, a continuous contact with the belt despite the presence of irregularities on this one and, on the other side, high performance in terms of wear, reliability and efficiency.



[barra project international s.r.l.](http://barra-project-international.s.r.l)