



# YÜNEL

ELEKTROMEKANİK  
SİSTEM VE TESİSLERİ  
SANAYİ LİMİTED ŞİRKETİ



## SİLO and CONVEYOR BELT ACCESSORIES





# SUPER SHOCK AIR CANNONS

IMPROVED  NEW MECHANICAL PISTON TECHNOLOGY

THOUSANDS OF APPLICATIONS WITH THE MOST PREFERRED TECHNOLOGY  
FOR BUNKER, SILO, CYCLONE, ROTARY KILN INLET, CHUTE, PRE-HEATER,  
COLD AND HOT REGIONS



The production rate may slow down or even stop if sticking and blocking problems occurred in your silos, bunkers, other zones like rotary kiln ducts, cyclones, chutes.

But;

Thanks to Super Shock Air Cannons

- Production, laborship and energy losses will be minimized.
- Prevent unnecessary worn-out of the bunker and chutes due to the hammer impacts.
- The production program runs without any interruption and User's responsibilities will be carried out on time.
- Payback period is short and the system serves for many years without any problem.

# SUPER SHOCK AIR CANNONS



MANY YEARS IN SERVICE WITH LOW MAINTENANCE AND  
MINIMUM PART REQUIREMENT

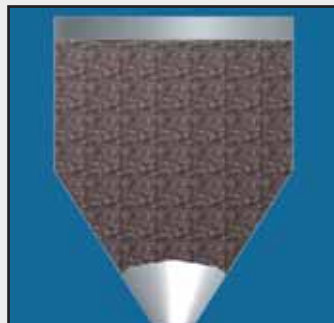


- Only CE marked Super Shock Air Cannon System manufactured in Turkey.
- High level of quality and technology ensure superior operation that can not be found in competitors and imitations.
- Activation period is adjusted to any time interval by electronic control panel. They system works automatically.
- Low air pressures (6-8kg/cm<sup>2</sup>) are enough for operation. The pneumatic control equipment is designed to work under harsh environmental conditions.
- Air consumption is very low.
- Tank volume range varies between 20lt. to 320lt.
- Air cannons don't work with vibration and can be applied to any type of concrete or steel constructed silos, bunkers, chutes etc.
- The only moving part of air cannons is the piston mechanism. The piston is rated for many cycles between inspections.
- The quantities and capacities will be determined by experienced technical staff of YUNEL.
- Mostly applied and preferred air cannon system in Turkey, and delivered to many companies abroad.
- Operated continuously until 1150°C exposure.
- Special design nozzle is applied to various bunker geometries.

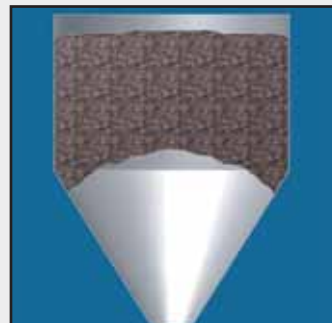
## WHATEVER THE PROBLEM IS



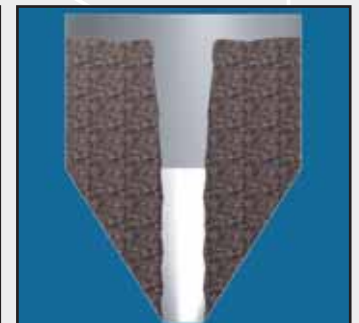
Sticking



Clogging



Bridging



Rat Holing



# SUPER SHOCK AIR CANNONS



IN THE PAST, THEY WERE ATTEMPTING TO OPEN IN THIS WAY, BUT NOW THEY ARE USING THE SAFEST WAY; YUNEL AIR CANNONS.



CONCRETE SILO - CEMENT FACTORY



UNDER SIEVE APPLICATION - HARBOUR FACILITIES

**YUNEL SUPER AIR SHOCK CANNONS ARE PRODUCED UNDER THE CONTROL OF ISO 9001-2008 QUALITY MANAGEMENT SYSTEM, AUDITED BY “MOODY INTERNATIONAL”.**

**ALSO YUNEL ARE AUTHORIZED TO MARK CE BRAND UNDER AUTHORIZATION OF “BUREAU VERITAS”**

# SUPER SHOCK AIR CANNONS APPLICATION PHOTOS



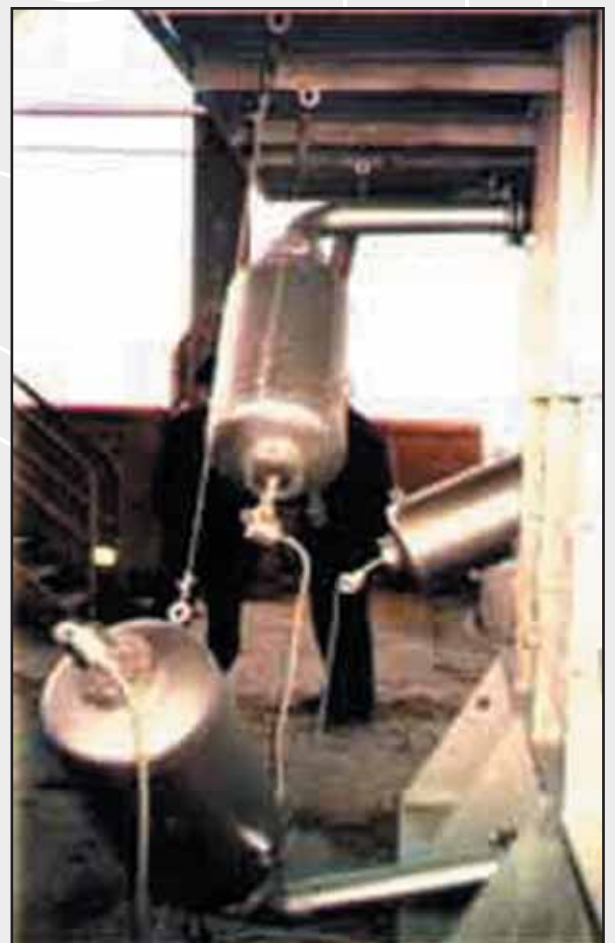
CRUSHER SURFACE-THERMAL POWER  
PLANT



END PRODUCT SILO-MINING FACILITY



SODA SILO-GLASS FACTORY



ROTARY KILN INLET-CEMENT FACTORY



# AUTOMATIC LEVEL INDICATOR AND SYSTEM AUTOMATION

## WHY YUNEL AUTOMATIC LEVEL INDICATOR?

### ALL PLANTS WITH CONTINUOUS MATERIAL STORAGE IN SILOS AND BUNKERS

- Without use of any manpower, at any desired moment, controlled in any remote location, applied to very distant silos, and high-tech system.
- The level of material inside the silos can be measured at 10cm accuracy and display digitally the value. Automatic and manual measurement available on control panel.
- The system can be connected to a local PC. The empty and full portions of the silo can be monitored simultaneously.
- The silo loading and discharging cycles can be operated through the output signal received by Automatic Level Indicator.



### THE WORKING PRINCIPLE OF YUNEL AUTOMATIC LEVEL INDICATOR

- The Yunel level indicator is composed of two units:
  - Level indication unit placed on top of the silos.
  - The digital level control panel is positioned at any desired control room or point.
- The system has two types of operation. Either fully automatic by programming the measuring period on the digital time display or manually by pushing the start button.
- The weight on the level indication head, accompanied with a specially made strip, descent to the surface of material to measure the level in the silo. It returns back to stand-by position for subsequent measurements.
- The signals received from the electronic sensors are converted to level measurement values as the weight and strip moves down.

### THE SUPERIORITY OF YUNEL AUTOMATIC LEVEL INDICATOR

- The system operates efficiently under harsh conditions such as vacuum discharging, pressure loading and high working temperatures.
- The accuracy is stable with the sticky solid or liquid material.
- It works also in dusty environments.
- Manufacturer's warranty with spare parts are always given to Customer's service.
- It is designed with all necessary precautions to serve customers for years without having any failures.



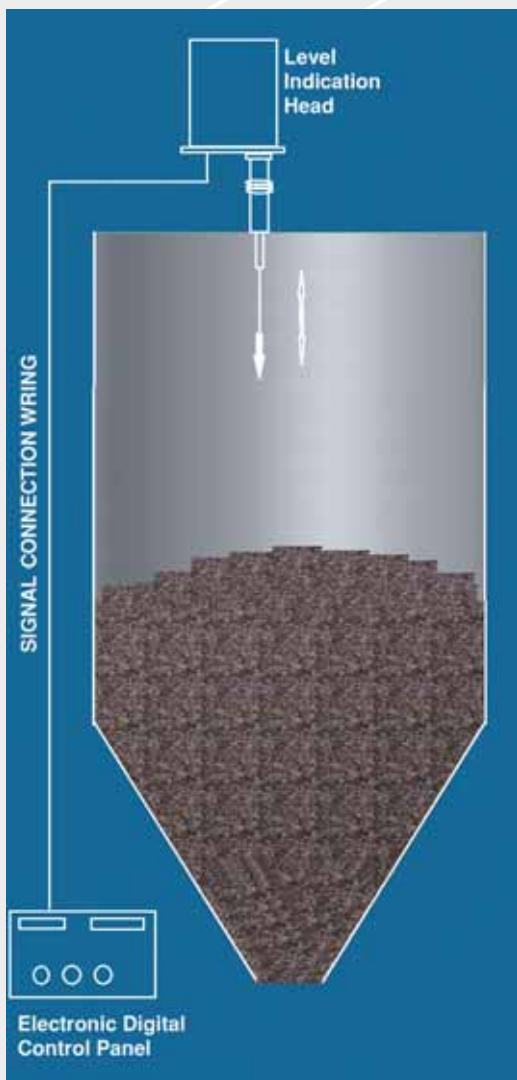
# AUTOMATIC LEVEL INDICATOR AND SYSTEM AUTOMATION



## TECHNICAL SPECIFICATIONS OF AUTOMATIC LEVEL INDICATOR

### LEVEL INDICATION UNIT

- Installation : Aluminum Flange, PN16
- Working Temperature : -20°C to + 95°C (+350°C with optional connection system)
- Current : 380 VAC (3ph), 50-60 Hz
- Accuracy : 10 cm in 99,9 meters (+/- 0,1%)
- Indication Height : Between 0,1-99,90 meters
- Cover : Fiber-Glass
- Frame : Aluminum Cast, IP 54



### ELECTRONIC DIGITAL CONTROL PANEL

- Cover : IP 54
- Current : 220 VAC, 50-60 Hz
- Working Temperature : -20°C to + 70°C
- Operating Method : Instant contact – 12 V DC (automatic or manual)
- Measured level value is displayed instantly.
- 4-20mA analog output.
- PLC connection is available.
- Period of the measurement can be set by minutes basis.
- Silo empty and filled contacts and alarms available on the panel.
- Minimum silo level indication will be achieved with weight + strip safety.
- System will turn off to prevent any failure in case of weight strip blockage.
- The operating period is not affected from energy cut off.



# ROTARY VALVE



## ROTARY VALVES (STANDARD TYPE)

- It can work successfully with abrasive materials like cement and fly ash.
- Inlet and outlet dimensions will be determined according to different capacities.
- Equipment with wear-resistant hardox rotor blades in special application.
- 8-section chamber is designed for maximum performance.
- It serves smoothly for many years due to durable inner and outer casing structure.
- It doesn't need any maintenance due to high durability.

## ROTARY VALVES (AIR LOCK TYPE)

- It provides a regular transmission of the materials where the systems have pressure differences and high vacuum.
- Maximum air tightness will be maintained.
- Long life due to robust cast iron body structure.
- Inlet and outlet openings can be designed according to different capacities for the perfect flow.
- Counter flange system provides ease of installation.
- Air lock rotary valves are used mainly in vacuum and pneumatic conveying applications.





# CONVEYOR BELT EQUIPMENTS

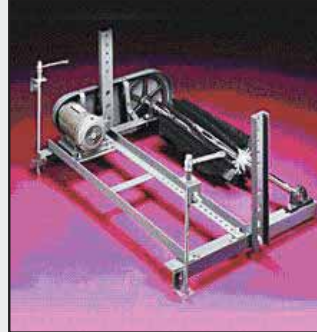


## CONVEYOR BELT CLEANERS



**Standart Type Cleaner**

- “Float Action” spring system.
- Save on clean-up expense.
- New spring design greatly extends belt life.



**Brush Type Cleaner**



**V-Type Cleaner**

- Eliminates build-up on return idlers.
- Removes wet, dry or sticky materials.
- Stops belt run-off.
- Operation smoothly belt clips and profiled belts.



### **MOTION CONTROL ROTATION MONITOR**

The system gives alarm, when the drum type rotating equipment fails on rotating, accelerating, slowing down or deadlock.



### **DAMAGED BELT DETECTOR**

Damaged belt detector looks for punctures, tears, or protrusions through the conveyor belt and provides a means of automatic shutdown to limit the amount of damage to the conveyor belt.

### **BELT ALIGNMENT CONTROL**

The system stops the conveyor belt automatically, when a conveyor belt has drifted off to a dangerous misalignment condition.



### **SAFETY STOP CONTROL**

Safety stop control is used to stop the conveyor, lifter etc., which is working on the production line, under an emergency condition.



## Inflatek® Valve



### Advantages

Inflatek® valves can be used in every production line efficiently. Inflatek® valves can be implemented, where common valve applications will fail to operate.

### In Abrasive Materials

It can be used in mud, bulk powder, grain and dusty gases as well as abrasive materials without any problem.

### Pressure Difference

It prevent the abrasion caused by the difference of pressure in the environment.

### High Temperature

Standard types are used between 0°C - 350°C as well as. Special designs are available for high temperatures.

### Positive Seal

Thanks to its patented technology, positive seal is provided under any condition.

### Drive System

Besides drive systems with actuator control, there are also types working with hand control.

### Reliability

It has heavy duty design. It operates under harsh environmental conditions, where conventional valves can not operate.

### It can be used in every production line in the world.

More than 100.000 Inflatek® Valve are still used throughout the world in the various production lines.

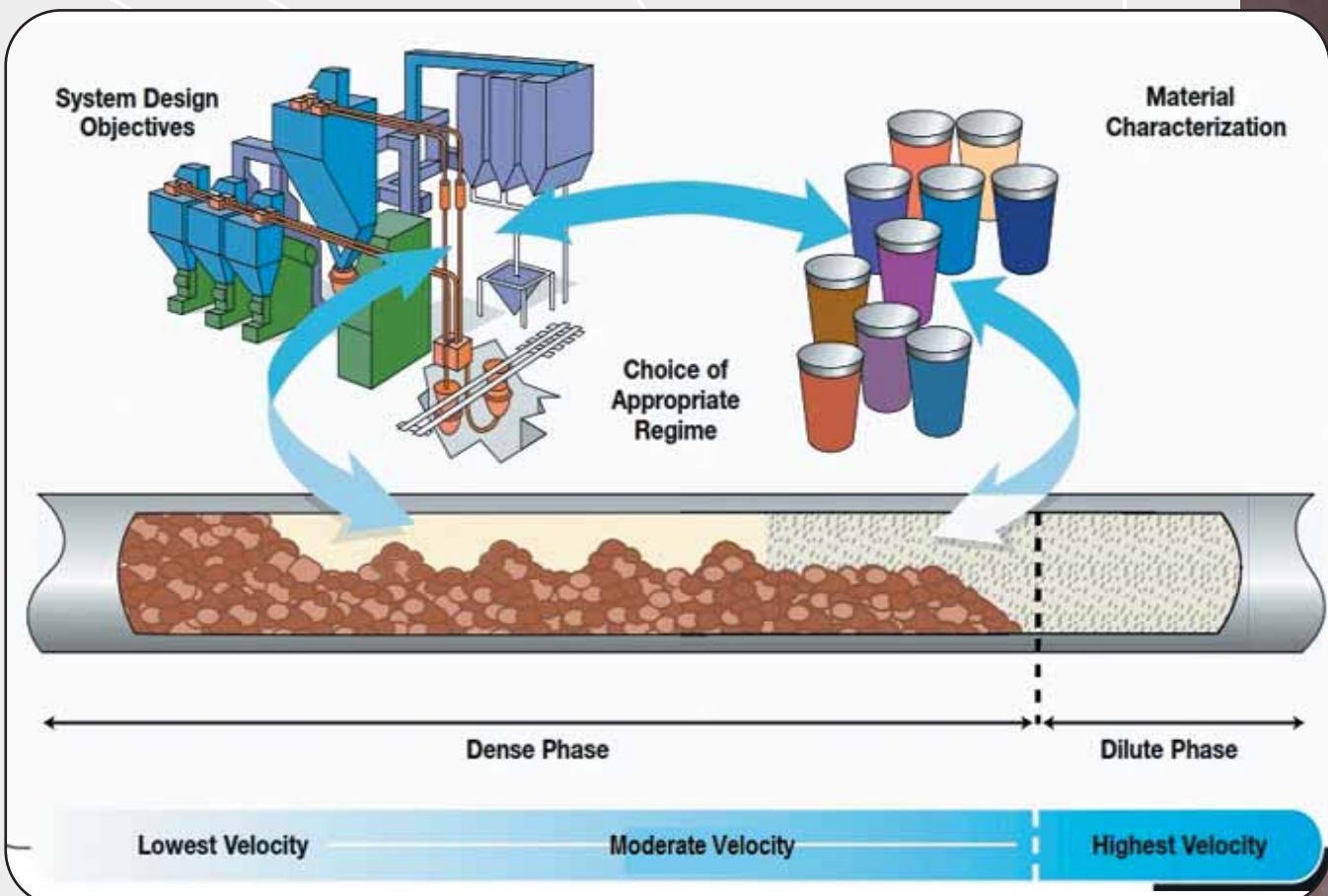
# PNEUMATIC CONVEYING SYSTEMS FOR BULK MATERIALS

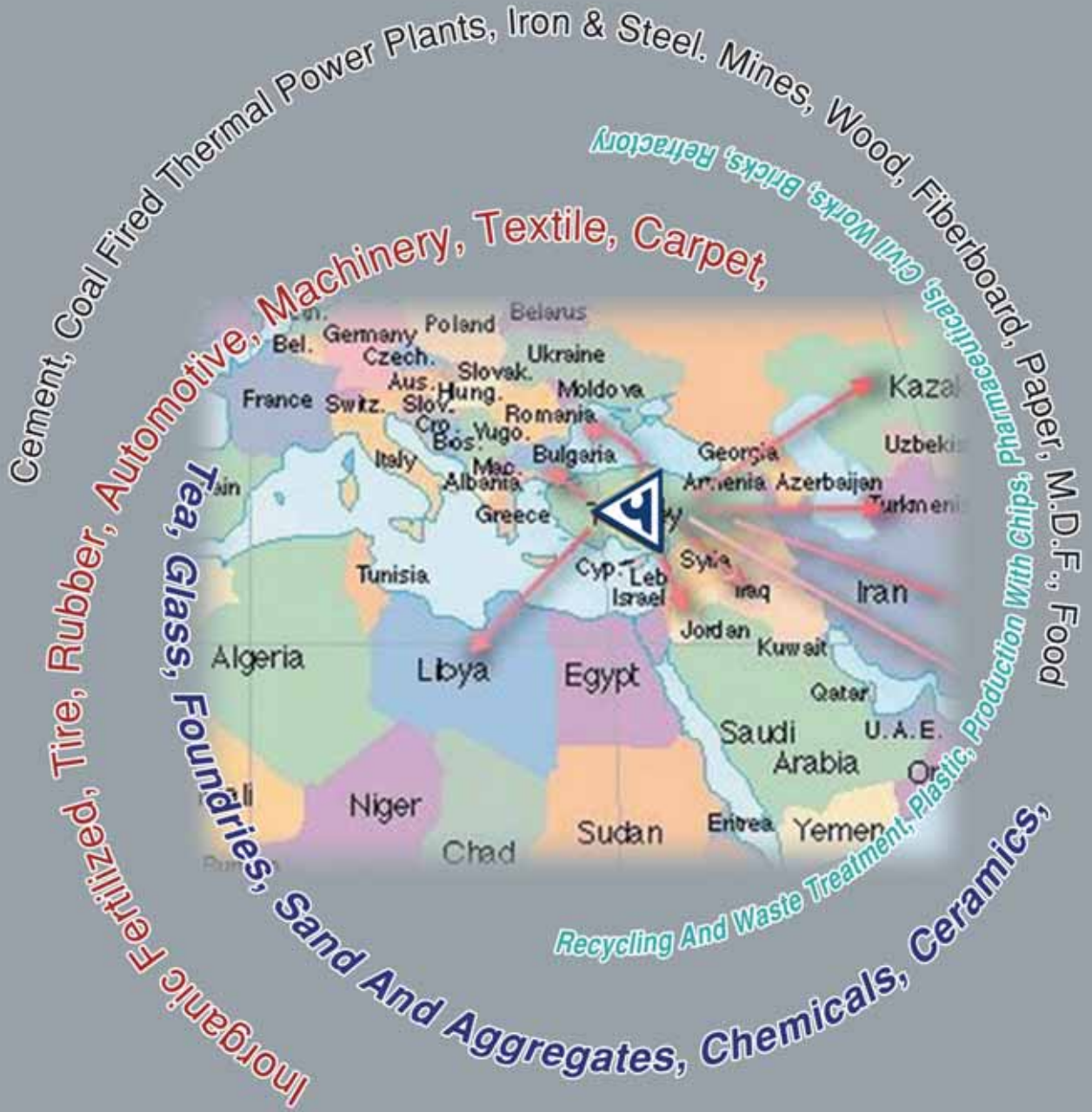
## Scientific Approach

Our philosophy is to approach the design scientifically with the experience in pneumatic conveying and unique inventions. We know that every system is different and every company has different needs.

That is why, the characteristics of the material and needs of the system design are analyzed with experience.

Afterwards, the optimum design will be realized based on the Customer's application requirements.





**General Directorate:**

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