



*Martin*

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# CEMENT

## CAPABILITIES

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**Applications:**

Conveying

Screw Feeders

Silos

Stock Piles

Hoppers

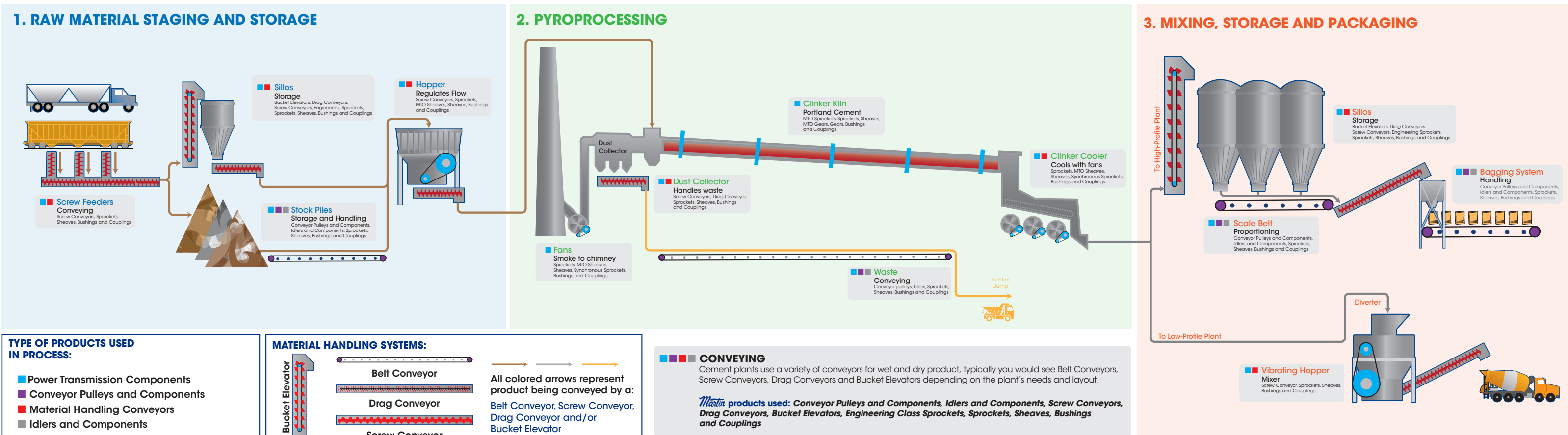
Kilns / Dryers

Scale Belts

Shaker Hoppers

Bagging Systems

# Martin CEMENT PLANT FLOW DIAGRAM



## 1. RAW MATERIAL STAGING AND STORAGE

### ■ ■ Screw Feeders

Materials are brought in by truck or rail and the material is unloaded and transported by Screw Feeders.

*Martin* products used: **Screw Conveyors, Sprockets, Sheaves, Bushings and Couplings**

### ■ ■ Silos

The material is stored in silos, which are loaded from the top, typically requiring Bucket Elevators or Drag Conveyors.

*Martin* products used: **Bucket Elevators, Drag Conveyors, Screw Conveyors, Engineering Sprockets, Sprockets, Sheaves, Bushings and Couplings**

### ■ ■ ■ Stock Piles

In some plants the material is stored in Stock Piles. These piles are typically loaded and unloaded by Belt Conveyor.

*Martin* products used: **Conveyor Pulleys and Components, Idlers and Components, Sprockets, Sheaves, Bushings and Couplings**

### ■ ■ Hopper

Raw materials enter the loading hopper and through a Screw Feeder are loaded onto the conveyor leading to the Kiln.

*Martin* products used: **Screw Conveyors, Sprockets, MTO Sheaves, Sheaves, Bushings and Couplings**

## 2. PYROPROCESSING

### ■ ■ Clinker Kiln

The clinker is made by heating a homogeneous mixture of raw materials in a rotary kiln at high temperature. For Portland cement clinker a little gypsum is added after.

*Martin* products used: **MTO Gears, MTO Sprockets, Gears, Sprockets, Sheaves, Bushings & Couplings**

### ■ ■ Dust Collection

Dust particles are recaptured in the dust collection chambers and later disposed back to the mine pit or dump.

*Martin* products used: **Screw Conveyors, Drag Conveyor, Sprockets, Sheaves, Bushings and Couplings**

### ■ ■ Fans

Fans extract the smoke from the Kiln to the chimney.

*Martin* products used: **Sprockets, MTO Sheaves, Sheaves, Synchronous Sprockets, Bushings and Couplings**

### ■ ■ Clinker Cooler

After the kiln the material is cooled on a special conveyor with large industrial fans.

*Martin* products used: **Sprockets, MTO Sheaves, Sheaves, Synchronous Sprockets, Bushings and Couplings**

### ■ ■ ■ Waste

The waste is returned to the mining pit or taken to a dump site/tailling.

*Martin* products used: **Conveyor Pulleys, Conveyor Pulley Components, Idlers, Idler Components, Sprockets, Sheaves, Bushings and Couplings**

## 3. MIXING, STORAGE AND PACKAGING

### ■ ■ Silos

The material is stored in silos, which is loaded from the top, typically requiring Bucket Elevators or Drag Conveyors.

*Martin* products used: **Bucket Elevators, Drag Conveyors, Screw Conveyors, Engineering Sprockets, Sprockets, Sheaves, Bushings & Couplings**

### ■ ■ ■ Scale Belt

Special Belt Conveyors with a scaling system proportion the materials.

*Martin* products used: **MTO Conveyor Pulleys, Conveyor Pulleys & Components, Idlers & Components, Sprockets, Sheaves, Bushings & Couplings**

### ■ ■ Vibrating Hopper

Here the material is mixed before the product is sent to a truck.

*Martin* products used: **Screw Conveyors, Sprockets, MTO Sheaves, Sheaves, Bushings & Couplings**

### ■ ■ ■ Bagging Belt System

Special Belt Conveyor system where the bags are filled with material and transported to their storage or shipping.

*Martin* products used: **MTO Conveyor Pulleys, Conveyor Pulleys & Components, Idlers & Components, Sprockets, Sheaves, Bushings & Couplings**



# Martin Products at Work in the Cement Industry



Roller Chain Sprockets



Engineering Class  
Sprockets



Gears



MTO Gears



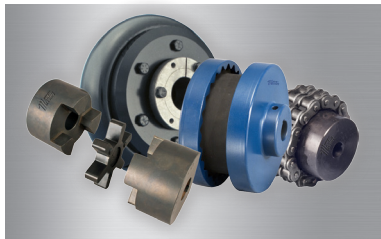
Bushings



Sheaves



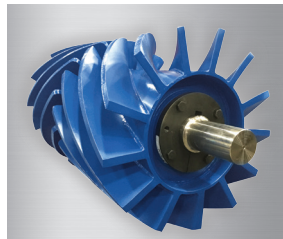
MTO Sheaves



Couplings



Bucket Elevators



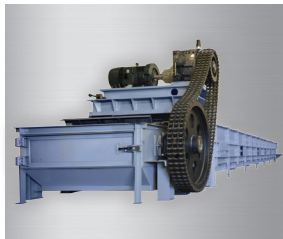
Clean Flight Wing Pulley



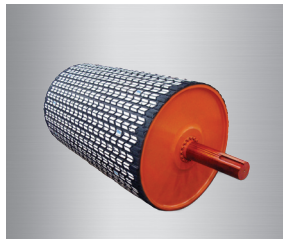
Screw Conveyors



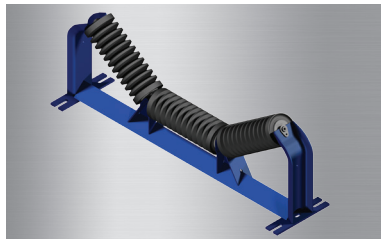
Shaftless Screw Conveyors



Drag Conveyor



Conveyor Pulleys



Idlers

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