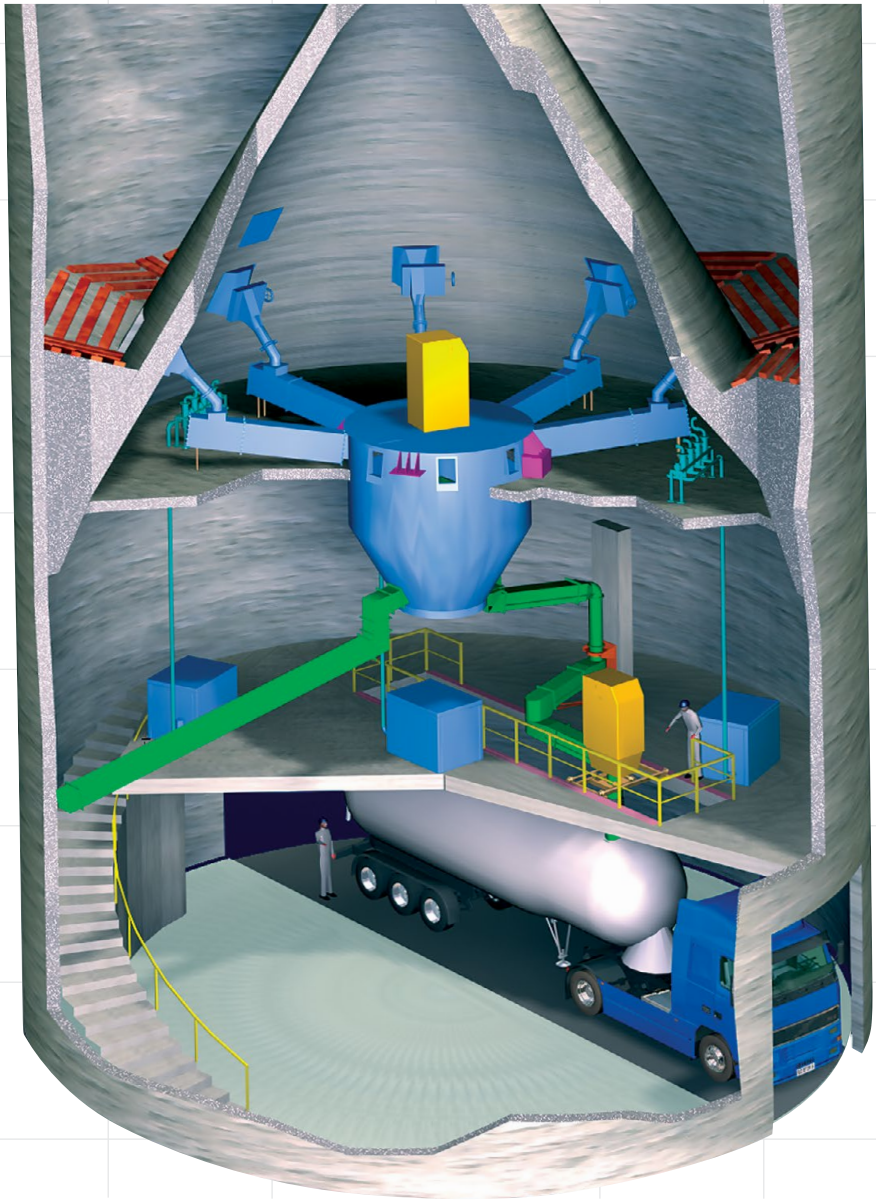
FULLER®



CFI SILO

MORE MOVEMENT, LESS AERATION

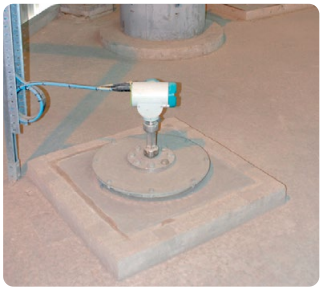
Fuller Technologies has developed the CFI silo for storage of cement and related products based on the experience gained with the CF (Controlled Flow) raw meal blending and storage silo.

The key word in the design of the CFI storage silo is reliability. The challenge facing the designer of a storage silo is to ensure that the silo empties 100%, while keeping the specific power consumption for aeration at a minimum. The CFI meets the challenge in the following way:

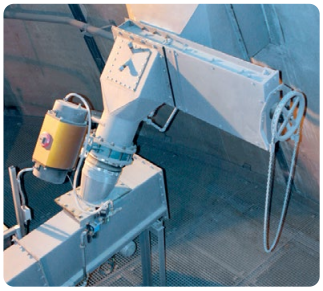
- The specific power consumption is kept low by aerating only two sections at the same time.
- The inverted cone at the silo base reduces the need for aeration.
- A large part of the silo contents is kept moving during the extraction process due to the change of outlet every five minutes.
- The inverted cone type silo requires no columns under the silo bottom, which allows more space for equipment.
- Each aeration section slopes 15 degrees towards its outlet.

Aeration filter (optional)

Silo cone seen from inside



Manhole and nivopilot on top of the silo



Manhole and nivopilot on top of the silo

As an optional extra, the aeration system may be provided with filters that prevent material from entering and possibly blocking up the entire aeration system.

KEY BENEFITS

01 Continuously operating storage silo

02 System of several outlets ensures highly reliable extraction

03 More free space under inverted cone bottom

04 Controlled flow

05 Only part of the silo bottom is aerated at the same time

06 Low maintenance costs

07 Optional aeration filters prevent material from blocking the system

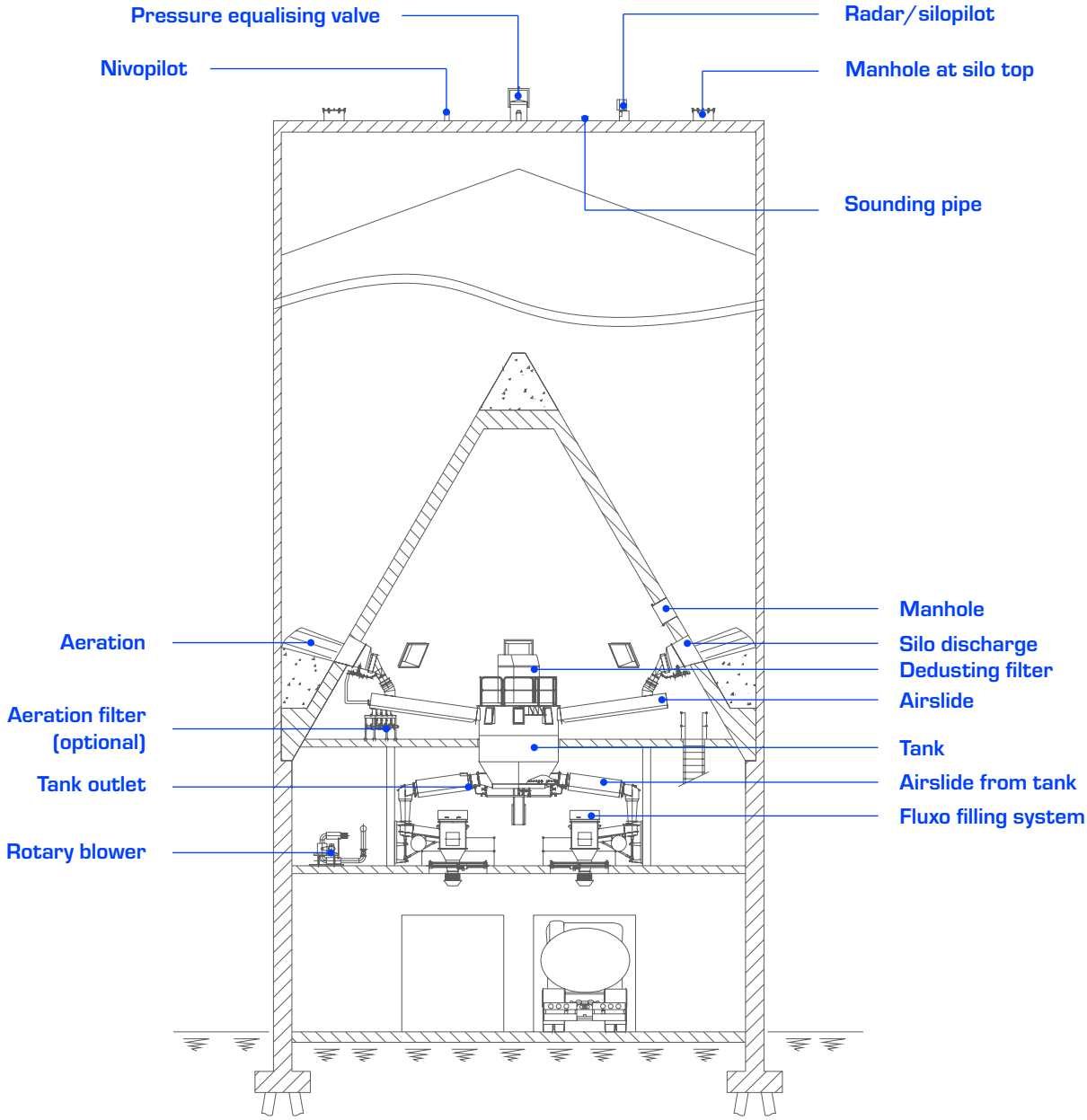
TECHNICAL FEATURES

Silo diameters ranging from 10 to 25 m are available based on the same configuration. The material is supplied continuously to the silo either by a bucket elevator or by an air-controlled lifting device. The top deck of the silo is provided with all the necessary standard features such as manholes, over- and underpressure valves and level indicators.

The silo bottom is divided into six, eight or ten sections (depending on the silo diameter), each sloping 15 degrees towards their respective outlets at the base of the inverted cone. Each of the sections is fitted with aeration boxes. Two sections at a time are aerated for approximately 5 minutes.

The air supply system to each section may include a filter that cleans the air and prevents material from entering if a pipe breaks inside the silo. The air is supplied to the aeration boxes by two rotary blowers at a pressure of up to 0.8 bar. The air is distributed via a pipe system with two-way solenoid valves, one for each silo bottom section. The rotary blowers have noise-reduced blow off pipes that let out the fluidisation air when the pressure reaches a certain level.

The extraction outlets at the base of the inverted cone can be cleaned manually by air lances. Each outlet has a manually operated slide gate and a pneumatically regulated cut-off gate. From the silo outlets the material proceeds via airslides to the feed tank. The airslides each have a separate fan that only operates while the airslide is in use. The feed tank is aerated by a single rotary blower operating at a pressure of up to 0.8 bar. On the tank top is a dedusting filter, and the tank bottom has one or more pneumatically regulated flow control gates. These gates close quickly (within two seconds) and allow regulating the rate of flow to packers or bulk loading devices.



FULLER TECHNOLOGIES

fuller-technologies.com

C 1-26 100-3-ENG