

## Concept Eurosilo

The success of the Eurosilo storage concept has been a key factor in the widespread application of enclosed storage systems. An important feature of the Eurosilo concept is the ingenious screw-reclaim mechanism. The mechanism is designed with a slotted column that enables reclamation of even such sticky bulk solids as FGD gypsum, making the notorious 'flow-no flow' criteria a thing of the past. Even more impressive, this proven concept also meets the requirements of environmental protection agencies worldwide. And with more than 40 years' experience in these types of storage systems, ESI Eurosilo has built more than 120 units around the world.

Capacity ESI Eurosilo has the knowledge and experience for large engineered systems. We can offer clients turnkey delivery of storage handling facilities with available storage capacities varying from 1,000 up to 100,000 m<sup>3</sup> per unit. We also deliver key items to acting main contractors (as a part of local supply), and we can even conduct engineering studies in advance to approve the feasibility and/or to support the permitting procedures.

Eurosilo Operation Principles In the Eurosilo, the bulk solid contents accumulate in horizontal layers. The material enters the silo through the top center of the silo, descends through a telescopic spout and is distributed uniformly by means of a screw conveyor system suspended from a slewing-bridge structure. The Eurosilo offers three main reclaim principles. The first is the core-flow, for coal storage. The Core-flow with Centre Column is ideal for use with borax, coal, potato starch and soybeans. Finally, the Central Slotted column is used in applications such as fertiliser, potash, salt and FGD gypsum.

Coal storage silo without column Coal storage silo with column Salt storage silo with slotted column Why Eurosilo? The patented Eurosilo system offers many significant advantages, not least of which is that the system causes no pollution through dust or groundwater percolation – a benefit that is highly significant in our environmentally conscious times. The system also prevents moisture increase by rain, snow and so on, which eliminates product degradation or keeps it to an absolute minimum. In addition the Eurosilo system requires considerably less space than other storage systems: up to 40% less space than open stockpiles for the same storage capacity. The Eurosilo system enables reclamation of very cohesive materials, such as FGD gypsum, even after three months, which eliminates the limitation on storage periods of other systems. Another major advantage lies in the possibility for 'dynamic coal blending' when simultaneously reclaiming from two or more silos at a controlled rate. The system also ensures a high availability of equipment. Perhaps most importantly, however, the significant advantages that the system offers are cost savings, including low operating and maintenance costs. Options Eurosilos are custom-made. However, several standard sizes are also available. The silo structure, can be built as a steel structure with a wooden inner wall and a standard outer wall cladding, as a slip-formed concrete silo or as a steel tank. Tracing and/or insulation of the outer wall is also available. Additional dewatering can be achieved through the silo drainage and by installing an optional vacuum unit. Systems can also be equipped with complete remote control operation based on data bus systems. Extended silo structures for mounting equipment, for example, a dewatering station at the top of an FGD gypsum silo. Truck and train loading facilities, including a weighing system, can be constructed directly below the silo.