



White Paper

Silo Dischargers for Non Free-Flowing Bulk Materials

Edited by on 6. Jan. 1981

[Published in bulk solids handling, Vol. 1 \(1981\) No. 1](#)

The problems associated with the discharge of non free-flowing bulk materials from silo storage is outlined and a range of mechanical dischargers are described in detail. On the grounds of economy, cylindrical silos provide the most efficient method of storing a wide range of industrial bulk materials. Land use is minimised, spoilage and contamination avoided and stocking levels easily checked with accuracy.

However, for a number of widely used bulk materials, silo storage has not really been practicable in the past because satisfactory discharge arrangements could not be made.

These are the non free-flowing bulk solids which will not discharge by gravity alone and which tend by their nature to stick, clog, cake and bind. The consequence of these properties is bridging and ratholing leading to at best, intermittent and incomplete discharge whether via cone or flat floor. The worst result is the formation of a bridge with either no discharge at all, or sudden breaking of that bridge with consequent overstressing of the silo.