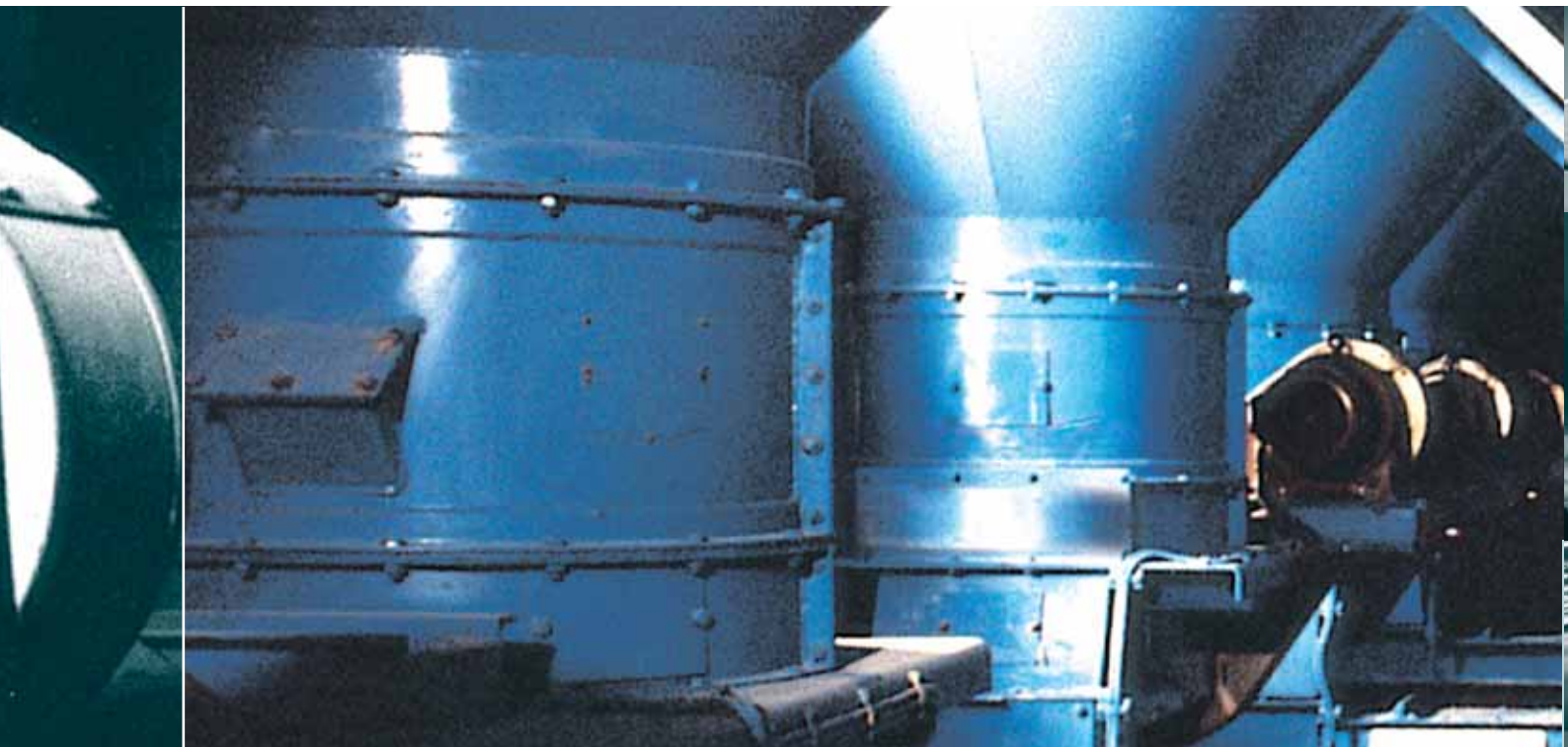


FloMaster Circular Bin Discharger



Continuous Product Flow At A Controllable Rate

Introduction

Members of the Schenck Process Group, Stock Redler Ltd are leading providers of feeding, automation and bulk solids handling solutions.

The Schenck Process Group are global market leaders for solutions in measuring and process technologies in industrial weighing, feeding, screening and automation. Always close to the customer, with an unrivalled global network of operating companies we are your competent global partner for weighing, feeding, screening and automation solutions throughout the process industries.



Our philosophy is based on...

- ❖ Continuous product development
- ❖ Best practice approach to applications
- ❖ Raising industry standards

Capabilities

- ❖ Single machine
- ❖ Multiple machines
- ❖ System solutions
- ❖ Installation & commissioning
- ❖ Plant layout & integration
- ❖ Engineering & contract management
- ❖ Professional customer service approach

Industries

- ❖ Power, Coal, Steel, Cement, Mineral, Chemical, Grain Processing, Brewing/Malting, Flour/Feed, Food, Particle Board, Waste Water Treatment

The Schenck Process Group develops, manufactures and markets a full range of solutions, products and turnkey systems on the basis of combining process engineering expertise, reliable components and field-proven technology.

Members of the Schenck Process Group are:



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Description

The FloMaster Circular Bin Discharger (CBD) is a well proven and established positive discharge aid for hoppers and silos where the material is to be handled has characteristics which make it difficult to discharge or control. A rotating arch breaker arm travels around the hopper bottom section of the silo breaking any bridge of material which may have formed. This ensures a flow of material to the discharger which can be supplied as a single, two or three stage unit to suit the characteristics of the material to be handled and the throughputs required.

The standard range comprises of two sizes: 800mm and 1000mm diameter.

Besides functioning as a bin discharger, the FloMaster can be used to maintain a head of normalised material in the outlet chute, thus assisting the accuracy of subsequent metering or weighing equipment. Material in excess of the take away rate is re-cycled.

The FloMaster is driven by a single drive controlling the rotation of both the discharger and arch breaker arm. Actual drive arrangements vary according to the application or customer requirements.





Applications

The FloMaster has solved discharge problems in a variety of industries including: Food, chemical, process, coal, brewing, cement and particle board. The FloMaster size and type selection is dependent upon the features of the material to be handled and the storage capacity of the bin. Generally, the storage bin should be of circular construction and have an Aspect Ratio of between 2 and 3 i.e $\text{Aspect Ratio} = \frac{\text{Vertical Barrel Height}}{\text{Silo Diameter}}$

The external angle of the hopper bottom should be 50 degrees to suit standard FloMaster circular bin dischargers. Please refer to Stock Redler Ltd for specific recommendations to suit your particular discharge problem.

We can also advise and supply details regarding bin design and submit proposals for the supply of the silo if necessary. In its standard form, the FloMaster is fabricated generally from mild steel.

For corrosive or special applications, contact parts can be supplied in stainless steel or a material grade to suit customer requirements. Access and inspection doors are incorporated in each stage as standard. Outlet position can be specified in one of three positions and special 'blister' or large outlets can be incorporated for light bulky materials.

Features and Benefits

❖ Positive Discharge

Archbreaker arm is immersed within the material to be discharged promoting positive flow.

❖ Compact

The FloMaster forms an integral part of the silo and occupies minimal space.

❖ Versatile

Can control the discharge of non free flowing materials and those subject to fluidisation.

❖ Cost Effective

Simple design ensures cost effective solution to discharge problems.

❖ Safe

All moving parts are totally enclosed.

❖ Minimal Wear

Machines operate at slow speeds for long life

❖ Quiet

Operation is virtually silent making the unit environmentally acceptable.

❖ Easily Maintained

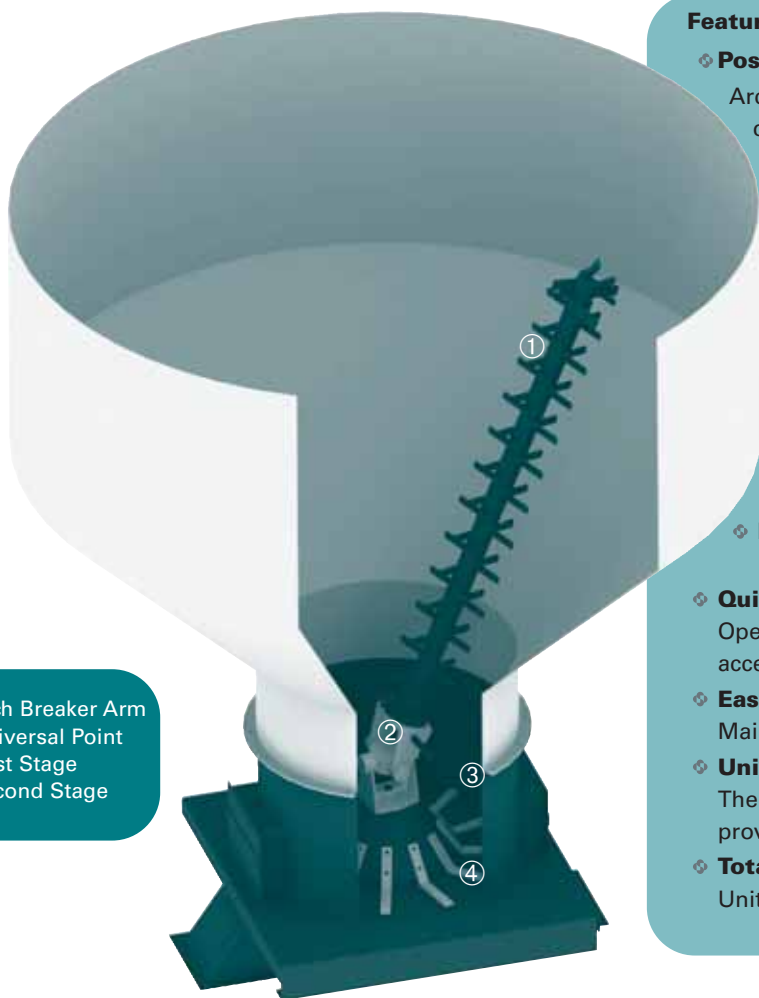
Main shaft assembly removed from below.

❖ Unique

The FloMaster is a unique Redler® product and has been proven over 80 years.

❖ Totally Enclosed

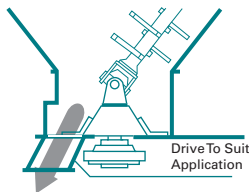
Unit is totally enclosed ensuring dust tight operation.



- ① Arch Breaker Arm
- ② Universal Point
- ③ First Stage
- ④ Second Stage

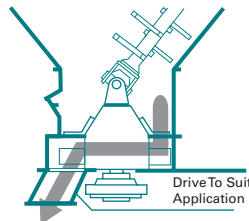
FloMaster Continuous Product Flow At a Controllable Rate

Configurations



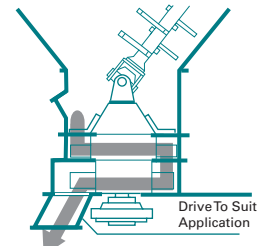
❖ Single Stage FloMaster

The simplest form of FloMaster, for the free discharge of materials which have a tendency to arch or bridge. The output is dependent upon the flow or break away rate of material due to the action of the arch breaker and the speed of the FloMaster. Capacities up to 200 TPH have been achieved with certain materials.



❖ Two Stage FloMaster

A second stage can be added to bring the material flow rate under control. Material leaves the first stage to be contained by flights in the second stage prior to discharge through a single outlet port. Volumetric discharge within reasonable degree of accuracy is possible with many materials.



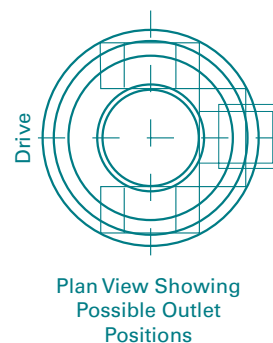
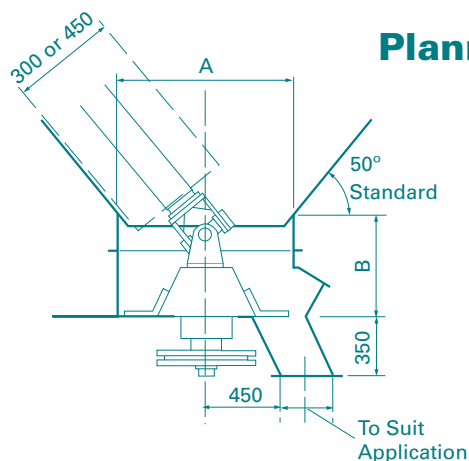
❖ Three Stage FloMaster

Materials which are prone to fluidise and flow uncontrollably can be brought under control and discharged consistently through a three stage unit. The addition of a third stage creates a form of labyrinth to contain and control the flow prior to discharge. Typical applications would include cement, fly ash and plaster.

Product Range

CBD DIA. DIMN.A.	Dimension 'B'			Arch Breaker
	Single Stage	Two Stage	Three Stage	
800mm	644	803	On Application	300
	547	686	""	450
1000mm	783	922	""	300
	666	805	""	450

Planning Details



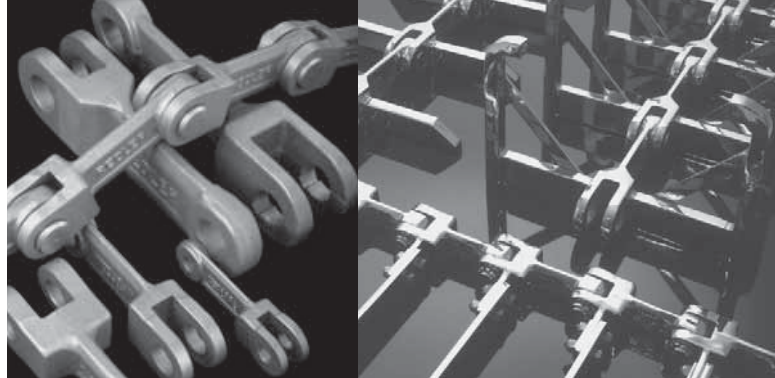


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Typical Materials Handled

- | | |
|---------------------------|---------------------------|
| ❖ Alloprene | ❖ Leather Shavings |
| ❖ Alumina Hydrate | ❖ Light Soda Ash |
| ❖ Anthracite Coal | ❖ Lime |
| ❖ Anthracite Dust | ❖ Meat & Bone Meal |
| ❖ Ash | ❖ Mica |
| ❖ Ball Clay | ❖ Mineral Wood Dust |
| ❖ Calined Alumina | ❖ Mixed Screenings |
| ❖ Calcium Fluoride | ❖ Nephylene Syenite |
| ❖ Calcium Sulphate | ❖ Oat Floor |
| ❖ Cattle Feed Ingredients | ❖ Peat |
| ❖ Caustic Prills | ❖ Phosphate Rock (Ground) |
| ❖ Cellulose Pulp | ❖ Phosphorous Anhydride |
| ❖ Cement | ❖ Phosphorous Pentoxide |
| ❖ Cereal Screenings | ❖ Phthalic Anhydride |
| ❖ China Clay | ❖ Radox |
| ❖ Chocolate Crumb | ❖ Rice Bran |
| ❖ Coal | ❖ Rock Salt |
| ❖ Cocoa Cake | ❖ Sawdust |
| ❖ Cocoa Nibs | ❖ Soda Ash |
| ❖ Cocoa Powder | ❖ Sodium Sulphate |
| ❖ Crushed Peat | ❖ Soya Bean Meal (Dry) |
| ❖ Detergent Additive | ❖ Spent Grains |
| ❖ Electrolytic Manganese | ❖ Spent Hops |
| ❖ Feldspar | ❖ Starch |
| ❖ Fine Wet Coal | ❖ Sugar |
| ❖ Fish Meal | ❖ Titanium Dioxide |
| ❖ Flock Pulp | ❖ Winnofil |
| ❖ Fluorspar | ❖ Wood Chips |
| ❖ Gypsum | ❖ Wood Flour |
| ❖ Hydrated Lime | |
| ❖ Iron Oxide Dust | |
| ❖ Lead Fume Dust | |



MoveMaster Conveyors & Elevators

Where industrial processes require materials to be transported horizontally, vertically or up inclines, Stock Redler Ltd select the appropriate equipment based on a careful analysis of each specific set of conditions within the process.

- ❖ Capacities 1-2000 tonnes per hr
- ❖ Worldwide references



Other Redler Technologies

FulFiller Container Loader System

- ❖ Modular portable unit
- ❖ High speed filling of containers
- ❖ Maximises available storage capacity
- ❖ Meets logistics industry criteria
- ❖ Safe/good access for maintenance



IntraBulk Bulk Reception Unit

- ❖ Above ground intake
- ❖ Feed from road vehicle or loader
- ❖ Fast vehicle turn around time
- ❖ Can act as a buffer store
- ❖ Controlled discharge into process
- ❖ Modular heavy duty construction
- ❖ Quick installation & commissioning



MaxiStore Bridge Distribution System

- ❖ Portside or inland applications
- ❖ Used within new or existing storage facility
- ❖ Redler® En-Masse conveying principle
- ❖ Even distribution throughout the store
- ❖ Maximises storage capacity



PortBulk Mobile Reception Hopper

- ❖ Portside applications
- ❖ Grab entry into hopper
- ❖ Integral dust suppression
- ❖ Heavy duty construction
- ❖ Outloading to vehicles
- ❖ Outloading to transfer system

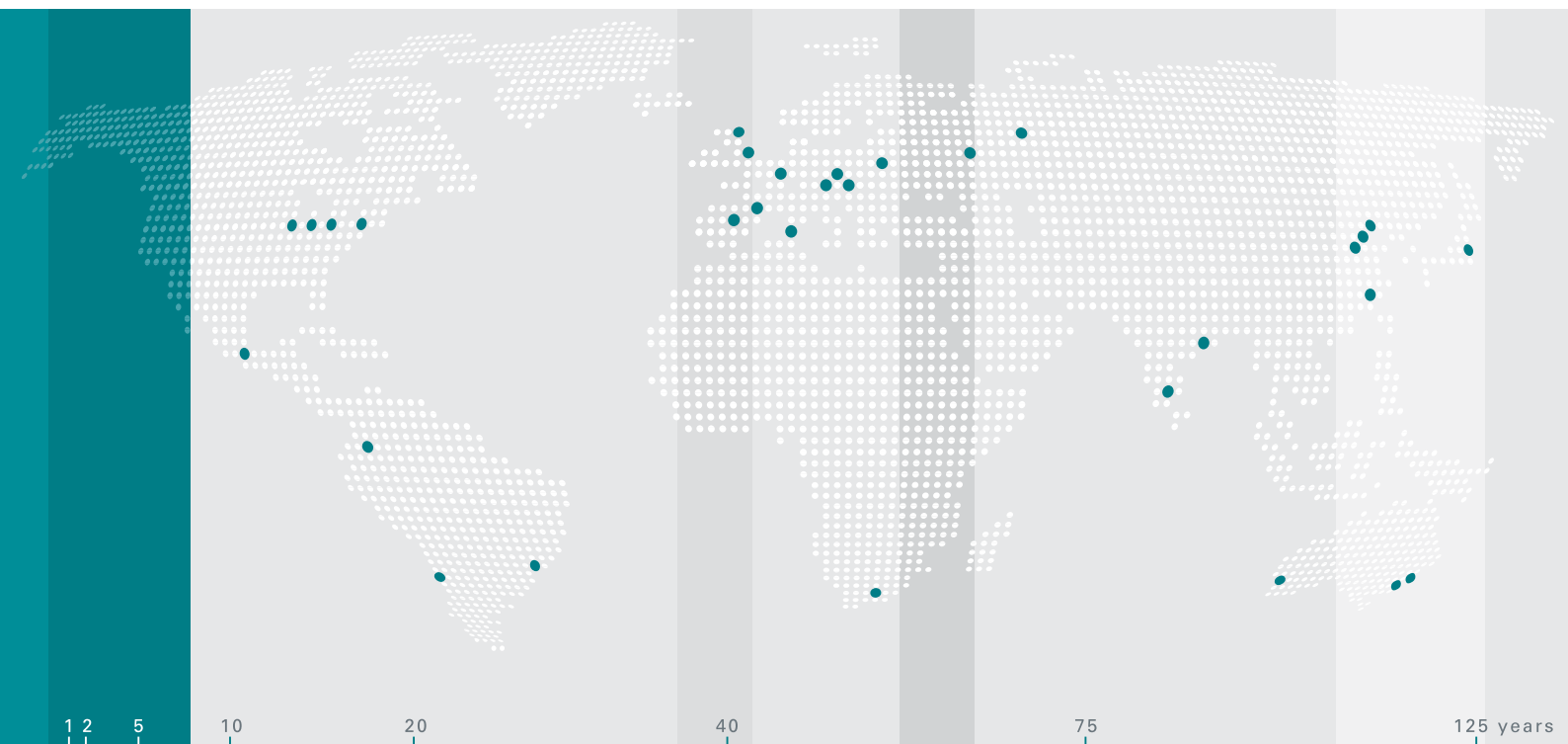


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