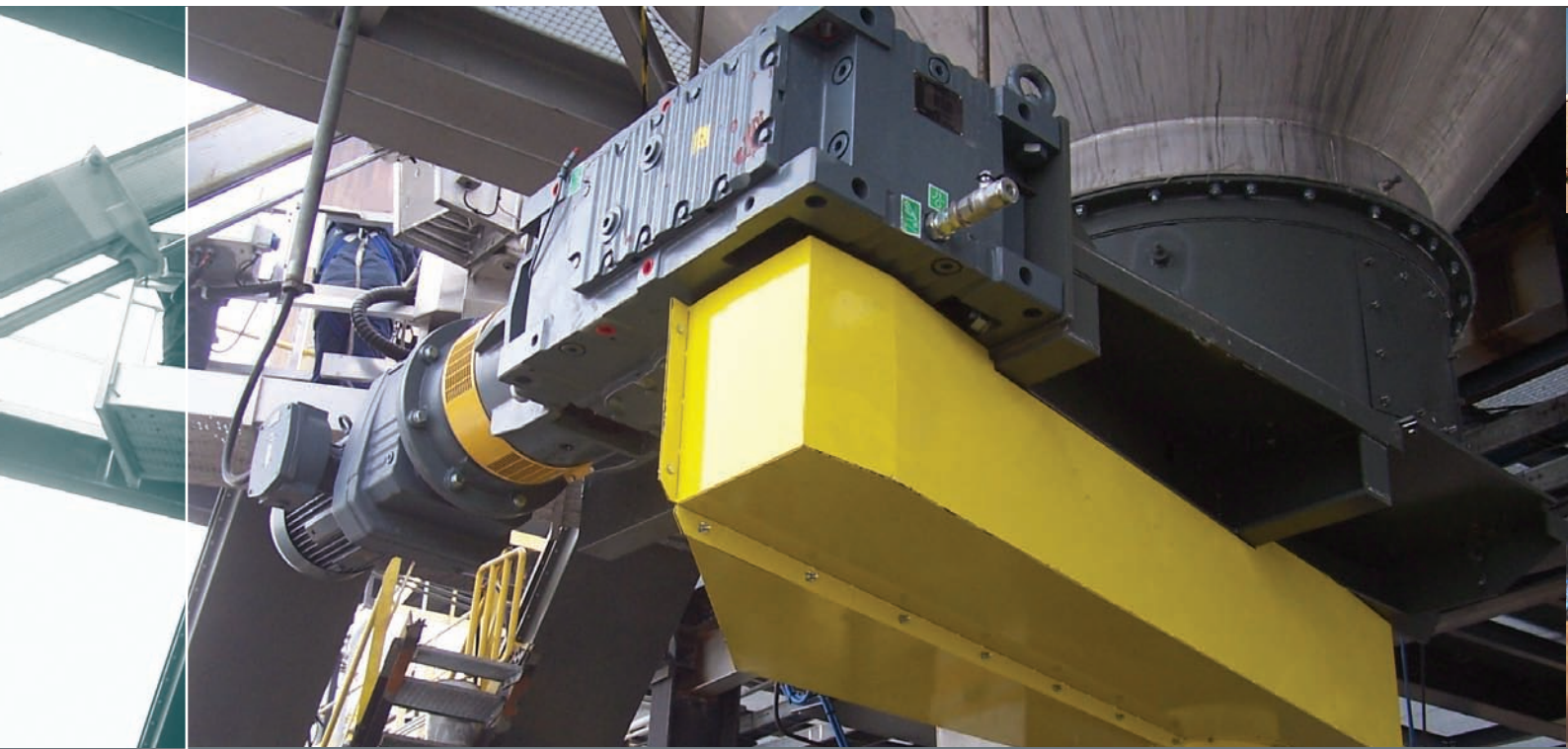


# FloMaster® Circular Bin Discharger



Continuous Product Flow At A Controllable Rate

## Introduction

Schenck Process Group, are leading providers of feeding, automation and bulk solids handling solutions.

With a global network of sites and competent partners, the name Schenck Process is synonymous throughout the world with process expertise and well-engineered measuring technology for industrial weighing, feeding, conveying, screening, automation and air filtration technology.



### 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, Recycling, 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 through-puts 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.  $\text{Aspect Ratio} = \frac{\text{Vertical Barrel Height}}{\text{Silo Diameter}}$

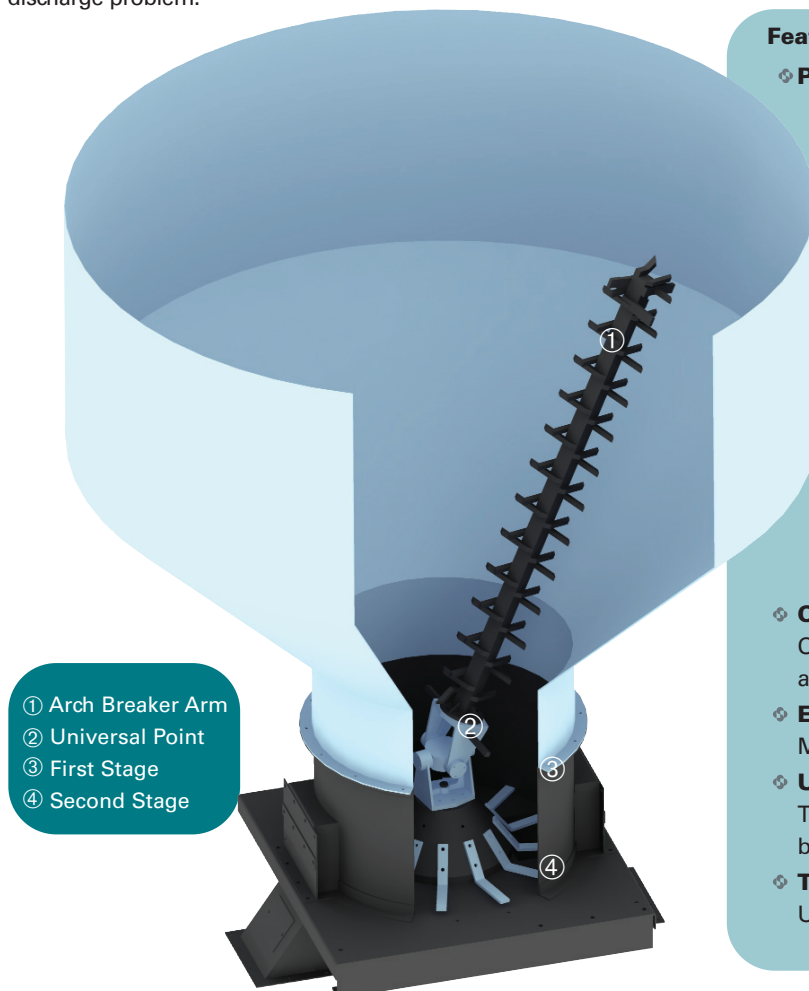
Silo Diameter

The external angle of the hopper bottom should be 50 degrees to suit standard FloMaster® circular bin dischargers. Please refer to Schenck Process 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.

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 fluidsation.

### ❖ 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 Schenck Process product and has been proven over 50 years.

### ❖ Totally Enclosed

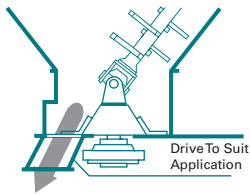
Unit is totally enclosed ensuring dust tight operation.



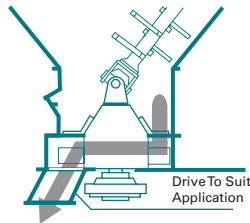
# FloMaster®

## Continuous Product Flow At A Controllable Rate

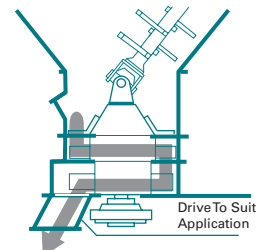
### Configurations



❖ **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.

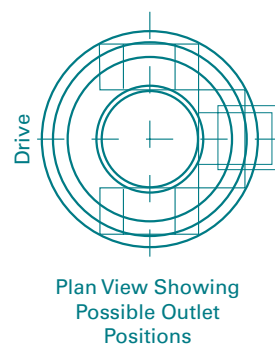
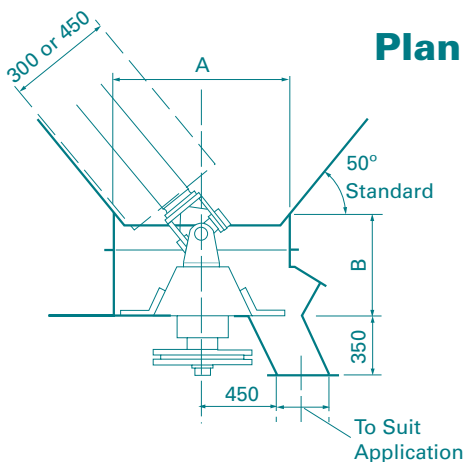


❖ **Three Stage FloMaster®**  
 Materials which are prone to fluidise and flow uncontrollably can be brought under control and discharged consistently through a three stage unit. The addition of a third stage creates a form of labyrinth to contain and control the flow prior to discharge. Typical applications 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
- ❖ Alumina Hydrate
- ❖ Anthracite Coal
- ❖ Anthracite Dust
- ❖ Ash
- ❖ Ball Clay
- ❖ Calined Alumina
- ❖ Calcium Fluoride
- ❖ Calcium Sulphate
- ❖ Cattle Feed Ingredients
- ❖ Caustic Prills
- ❖ Cellulose Pulp
- ❖ Cement
- ❖ Cereal Screenings
- ❖ China Clay
- ❖ Chocolate Crumb
- ❖ Coal
- ❖ Cocoa Cake
- ❖ Cocoa Nibs
- ❖ Cocoa Powder
- ❖ Crushed Peat
- ❖ Detergent Additive
- ❖ Electrolytic Manganese
- ❖ Feldspar
- ❖ Fine Wet Coal
- ❖ Fish Meal
- ❖ Flock Pulp
- ❖ Fluorspar
- ❖ Gypsum
- ❖ Hydrated Lime
- ❖ Iron Oxide Dust
- ❖ Lead Fume Dust
- ❖ Leather Shavings
- ❖ Light Soda Ash
- ❖ Lime
- ❖ Meat & Bone Meal
- ❖ Mica
- ❖ Mineral Wood Dust
- ❖ Mixed Screenings
- ❖ Nephylene Syenite
- ❖ Oat Flour
- ❖ Peat
- ❖ Phosphate Rock (Ground)
- ❖ Phosphorous Anhydride
- ❖ Phosphorous Pentoxide
- ❖ Phthalic Anhydride
- ❖ Radox
- ❖ Rice Bran
- ❖ Rock Salt
- ❖ Sawdust
- ❖ Soda Ash
- ❖ Sodium Sulphate
- ❖ Soya Bean Meal (Dry)
- ❖ Spent Grains
- ❖ Spent Hops
- ❖ Starch
- ❖ Sugar
- ❖ Titanium Dioxide
- ❖ Winnofil
- ❖ Wood Chips
- ❖ Wood Flour



### **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

## **Other Schenck Process 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



### **MaxiStore® Bridge Distribution System**

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



### **MoveMaster® Conveyors & Elevators**

Where industrial processes require materials to be transported horizontally, vertically or up inclines, Schenck Process 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



### **PortBulk® Mobile Reception Hopper**

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

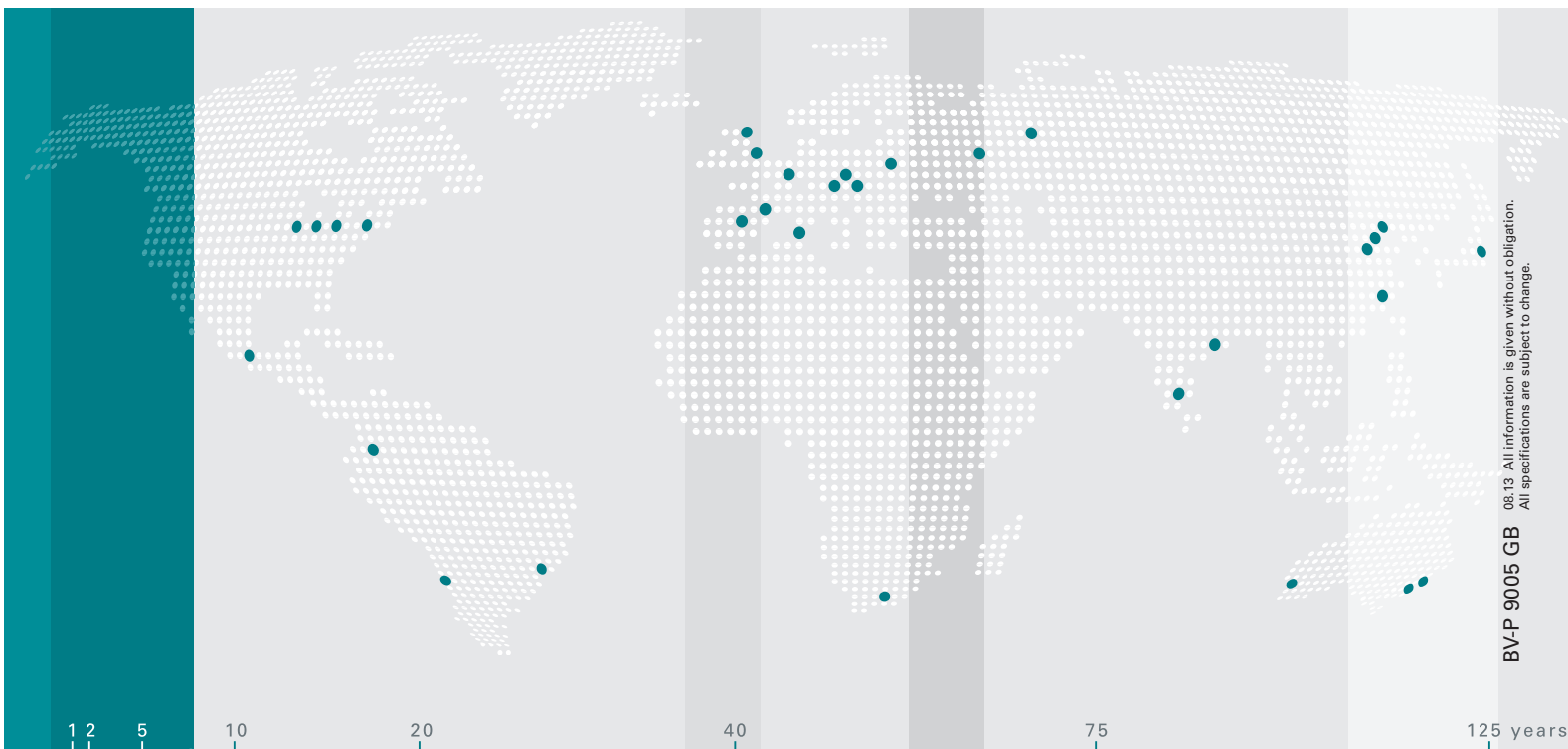
weighing

feeding

conveying

filtration

automation



BV-P 9005 GB 08.13 All information is given without obligation. All specifications are subject to change.

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