

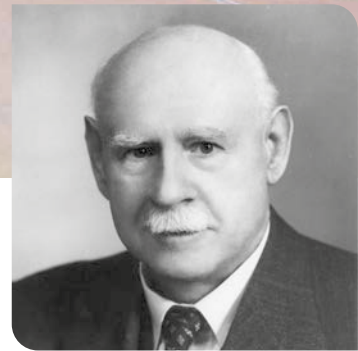


# Materials Handling **for Process Industries**

Innovative products for transporting  
raw materials efficiency with high  
levels of reliability



# Company History



## Historical Materials Handling

Based in one of the UK's historical materials handling manufacturing locations and with a long history, spanning over 100 years, Redler Limited are specialist in the design, manufacture, and supply of high quality materials handling equipment and systems to customers in a range of industries and territories across the globe.

Our highly skilled team of Sales, Design and Project Engineers have the flexibility required to deliver a quality solution, whether it be a single machine or a turnkey system.

With over 100 years of history Redler Limited prides itself on the level of customer care and after sales service delivered to our customers. We have a team of dedicated and experienced Service Engineers ready to provide onsite service inspections, scheduled maintenance or emergency cover, backed up by an efficient after sales department we can assure you of speedy service to keep your process running



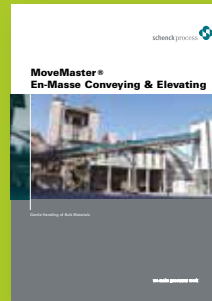
- 1918** Arnold Redler invented the 'en-masse' chain conveyor
- 1920** Redler Company formed & product range established
- 1950-1970** Complete systems supplied all over the world
- 1995** Redler becomes part of Buhler AG of Switzerland
- 2002** Redler becomes part of SPX Corporation of USA
- 2003** Redler becomes part of Stock Equipment Company of USA
- 2003** Redler becomes part of Schenck Process Group of Germany



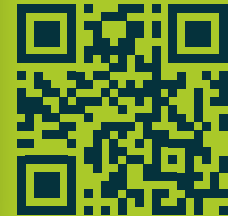
# Redler

## Capabilities and Products

Redler design and manufacture a range of mechanical handling equipment able to compliment any bulk materials handling system. Whether you require a single machine or a complete process plant, Redler have the experience and expertise to design and manufacture equipment best able to add value to your process. Redler Ltd operates a flexible and efficient Aftermarket department able to provide spare parts, technical assistance, and on-site services to keep your process running smoothly.



Scan the QR code and download the brochure.



### MoveMaster

MoveMaster En-Masse Chain Conveyors and Elevators, incorporating Redler High Strength Drop Forged Chain and capable of throughput rates up to 2000T/Hr.



### IntraBulk

The IntraBulk is a road transport bulk reception unit that minimises vehicle unloading times whilst allowing downstream equipment to be sized in a proportionate and cost-effective manner. The flexible design can be installed above or below ground.



### FloMaster

FloMaster Circular Bin Discharger providing positive discharge of non free flowing materials, totally enclosed dust free operation and compact design.



### FulFiller

FulFiller High speed container filling of granular materials, maximises available container capacity and provides fast vehicle turnaround.



### PortBulk

PortBulk Mobile portside hopper system ship unloading and loading applications, provides a flexible and efficient link between the vessel and various land storage installations.



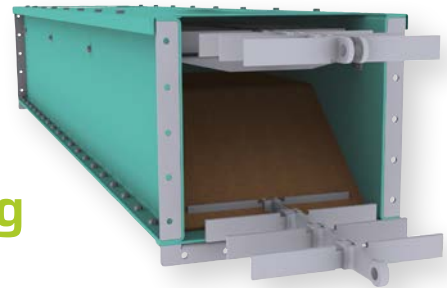
### MaxiStore

The MaxiStore is a flat storage bridge distribution system that provides a cost-effective storage solution as an alternative to traditional bulk silos. The system maximises building storage capacity whilst elevating the need for an expensive load bearing roof structure.

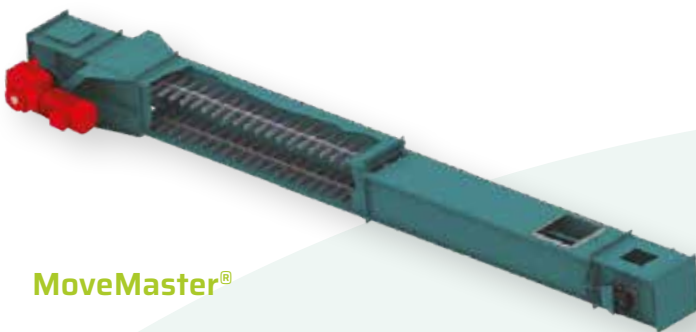
# MoveMaster<sup>®</sup> En-Masse Conveying & Elevating



## The Mechanics of En-Masse Conveying & Elevating



- En-Masse movement is the term used to describe the unique method of conveying bulk materials smoothly, gently and economically.
- Material is induced to move like a liquid through a slender dust tight steel casing, horizontally, on an inclined plane, vertically and around bends.
- The conveyor feeds itself at any point with a uniform load. The skeletal flight configuration induces the material to flow in a solid, placid column.
- There is no internal disturbance or pressure on the material and the load can be discharged at any opening, where it is permitted to fall away from the flights.
- The conveyor is not a scraper conveyor. There is no dragging or scraping action, material simply moves forward in a solid placid column, 'En-Masse'.



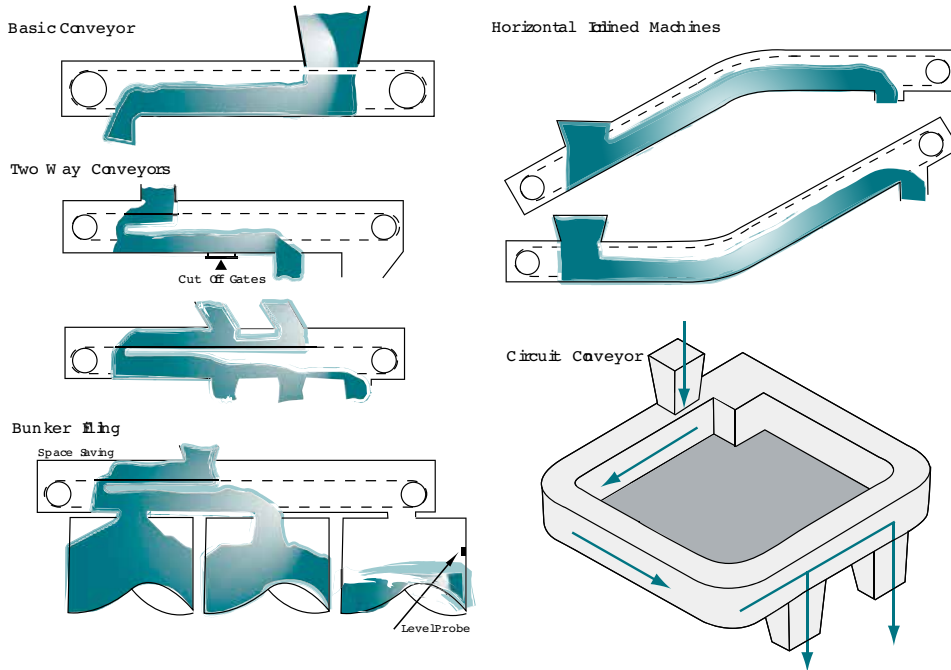
### MoveMaster<sup>®</sup>

Movement of the chain when buried in the material will induce the whole mass to move forward gently in a solid, placid column 'En-Masse'. Material dragging, particle tumbling or rolling DOES NOT occur. MoveMaster<sup>®</sup> Conveyors are manufactured in a standard range of sizes from 200mm wide upwards, enabling them to meet every requirement.

#### Facts and figures

- Totally enclosed casing
- Integral or independently mounted drives
- Safety choke detector
- Single or multiple outlets
- Schenck Process high strength conveyor chain
- Single or multiple inlets
- 'RoCon' underspeed safety control switch

## Popular Conveying Arrangements

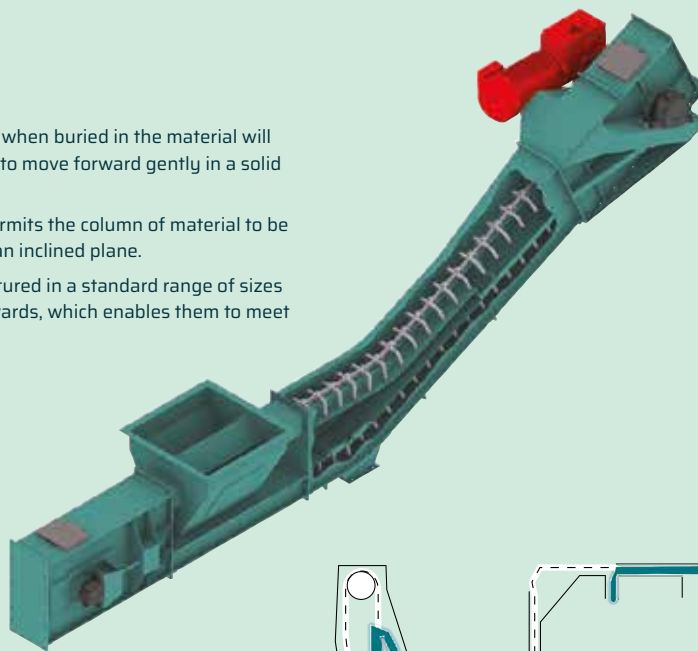


## MoveMaster®

Movement of the chain when buried in the material will induce the whole mass to move forward gently in a solid column.

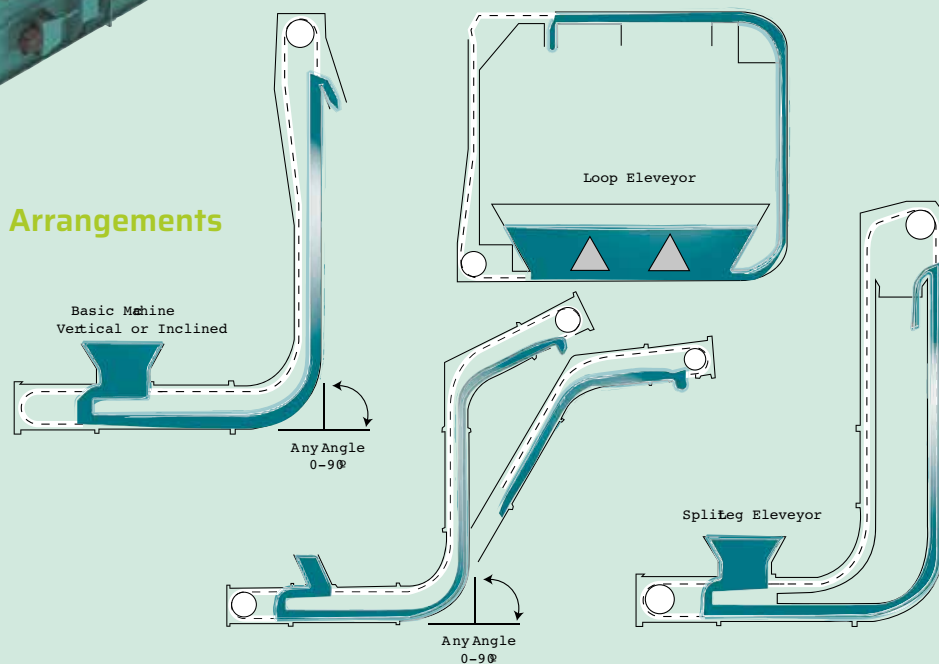
The Elevator design permits the column of material to be moved vertically or on an inclined plane.

Elevators are manufactured in a standard range of sizes from 200mm wide upwards, which enables them to meet every requirement.



- Features and Benefits**
- Simple chain tensioning
  - Hoppered inlet
  - Schenck Process high strength chain
  - Integral or independently mounted drives

## Popular Elevating Arrangements



# The Benefits of MoveMaster® En-Masse Handling



## Cost Effective

- Capital costs prove very competitive with other forms of handling equipment, thus giving quicker 'payback period'.
- Power Running Costs significantly lower than most other forms of equipment, i.e they can be as low as 1/10 of dense phase conveying.
- Low Cost Maintenance. Heavy duty rigid construction in simple modules, high strength chain, choke detectors, overload and underspeed switches all ensure easy maintenance at infrequent intervals.

## Labour Saving

- Manual to fully automatic control of single or multiple machine systems provided by proven basic control systems.
- No specialised maintenance staff required.

## Environmentally Acceptable

- Totally enclosed machines and transfer points of dust-tight and weatherproof construction.
- Safe as all moving parts are totally enclosed.

## Versatile

- Specialised features of 'En-Masse' equipment offer versatility to plant layout.
- Handles virtually all types of dry bulk products.

## Size

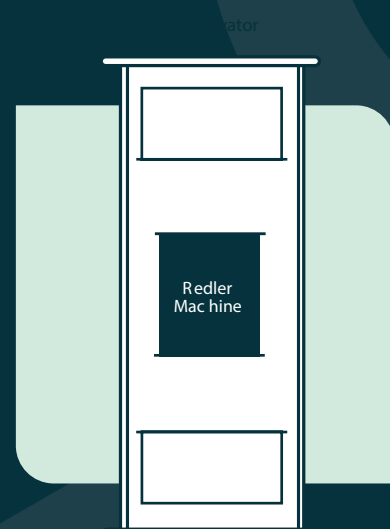
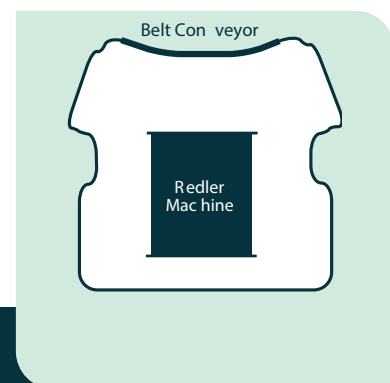
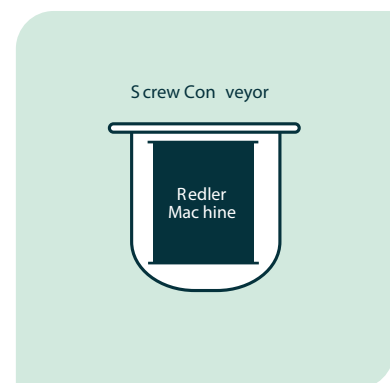
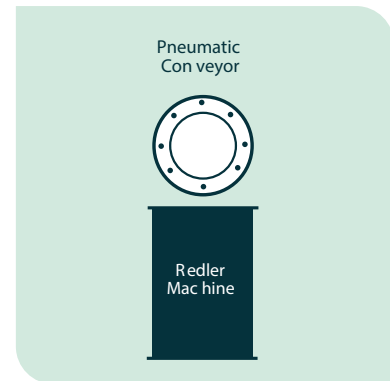
- Size and duty comparison with alternative forms of handling equipment.

## Gentle Handling

- Materials moves 'En-Masse' slowly in a solid placid column with the conveying elements; thus degradation is virtually eliminated.
- Chain design permits material column to change direction through bends, without degradation.

## Proven

- Over 90 years experience of handling hundreds of bulk materials worldwide within a wide range of industries



# Drop Forged Chain For Conveyors & Elevators



Scan the QR code and download the brochure.



## Quality Components for Chain Conveyors & Elevators

Redler, the originators of the world renowned “En-Masse” system of dry bulk materials handling continue to be at the forefront of systems development and component supply.

With over 75 years of experience the Redler “En-Masse” system of handling is well proven. Redler have supplied many thousands of conveyors and elevators to handle hundreds of different dry bulk materials.

At the heart of these machines is our high quality Redler Chain.

## Chain Configuration

- Links are assembled in a configuration to match individual applications.
- This configuration can include scavenger, cleaning or pad flights as required.
- Within a complete chain, flighted links are usually supplied at every single, second or third pitch. See sketch showing typical arrangement of a ‘T’-type chain. Alternative configurations available.
- Chain is usually supplied pre-assembled into 3-metre lengths complete with connecting pins.
- All assembled chains supplied with an appropriate protective coating.

## Special Flight Designs

- A wide range of designs are readily available including: Scavenger, Pad or Scoop Flights
- Chains are supplied to accommodate specific “En-Masse” conveying and elevating applications.

### High Strength Chain Links

- Drop forged from alloy steel
- Precision machined
- Case hardened to Rockwell 57 minimum
- High tensile strength
- The Redler® link minimum tensile strength is our competitor's average
- Consistent dimensional accuracy
- Manufactured to stringent quality procedures

### How to Order

- Contact the Redler Sales Team for information and to discuss your specific application requirements
- For Redler machines ALWAYS quote the machine serial number. This will help us to identify and confirm your chain details.
- For non Redler replacement components please provide a fully dimensional sketch with as much information as possible or a sample of the flighted link.

### Information to include:

- Chain pitch (P).
- Link reference number and details shown on the link
- Number of links required.
- Type of flight attachments with full dimensional details- overall width, depth and thickness of material
- Configuration of flighted links required.
- Any special additional features like Scavenger, Pad or Scoop Flights and quantity required.

# MoveMaster® -



## MoveMaster® Belt and Bucket, Chain and Bucket Elevator

Schenck process' range of Belt and Bucket, as well as Chain and Bucket Elevators, is ideally suited for handling heavy materials such as coal, raw meal, limestone, and alternative fuels. These elevators are robust, economical, and resistant to abrasion. They can be designed to be dustless and able to handle materials at temperatures up to 350°C.

The Belt and Bucket or Chain and Bucket Elevators can be configured in a single, double, or triple-row bucket arrangement to suit the required tonnage rates. Schenck process' experience in designing and installing elevator systems worldwide can help specify the correct configuration and dimensions.

Chain and Bucket Elevators are recommended for heavy loads and large lumps of material and are adaptable for materials that tend to pack together.

They are more suitable for very heavy-duty service.

Belt and Bucket Elevators are recommended for lighter, free-flowing materials with a small amount of lumps. The belts have a high degree of durability and can run at higher speeds.





# MoveMaster® Belt Conveyor

## Commitment to Sustainability

Schenck Process provide belt conveyors that are able to transport a wide variety of materials horizontally or for inclines and declines. The conveyor framework is constructed for high strength loading with integrated cover plates for ease of installation and inspection. Conveyor covers, head, snub and tail assemblies are designed to ensure smooth passage of the material, to improve drive efficiency and facilitate belt tracking.

The belt conveyor range is designed for a wide number of applications that allow for ease of transfer of materials from one conveyor to another. The specification of the belt conveyor depends upon the type of material to be handled and the extensive range of standard designs can also be adapted to special requirements.

### Standard belt widths are:

- 650mm
- 800mm
- 1000mm
- 1200mm
- 1400mm
- 1600mm
- 1800mm



# IntraBulk Bulk Reception Unit



## Overview

The IntraBulk is an above ground bulk material reception solution providing a user friendly, cost effective alternative to conventional below ground intake pits.

The reduction and consequent cost savings achieved from eliminating the need for expensive civil works has seen the IntraBulk selected across a diverse range of industries.

The IntraBulk is capable of receiving bulk materials from a range of bulk handling vehicles including:- road tipping trucks, front end loading units and walking floor trailers.

The wide Apron-Belt design permits a very low loading height allowing the trucks to discharge direct to the entry section with only a small access ramp.

## Operating Procedure

### Receiver / Buffer Storage / Feeder into Process

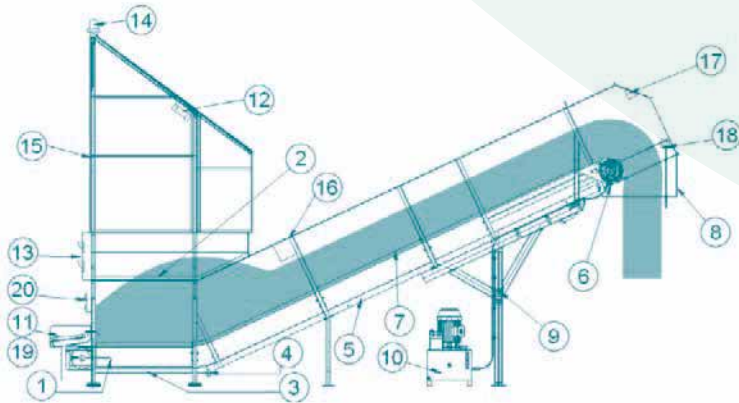
- Material is discharged from the truck into the IntraBulk receiving hopper and also starts to convey further into the holding section of the unit
- Once the truck has completely discharged its contents into the IntraBulk it leaves the unloading area. The IntraBulk now moves the discharged material forward into the process system or acts as a buffer store
- The next truck arrives and starts the process of material discharge again

### Receiver / Feeder into Process

- High capacity discharge from trucks can be achieved at rates of up to 500m<sup>3</sup>/hr. By using a load regulating plough device the material can be accurately controlled in conjunction with the belt operating speed
- Once the IntraBulk has been commissioned, trucks can rapidly discharge their loads with minimum vehicle turnaround



# The Features



## IntraBulk Product Range

- **RU2000**  
Low Density materials
- **RU3000**  
Medium Density Materials
- **RU4000**  
High Density Materials

- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>1. Tension Unit</li> <li>2. Intake Hopper</li> <li>3. Horizontal Section</li> <li>4. Bend Section</li> <li>5. Inclined Section</li> <li>6. Drive Unit</li> <li>7. Conveying Chain &amp; Belt</li> </ul> | <ul style="list-style-type: none"> <li>8. Outlet Chute</li> <li>9. Inclined Section Support</li> <li>10. Hydraulic / Mechanical Drive</li> <li>11. Intake Ramp &amp; Curtain</li> <li>12. Ultrasonic Vehicle Detection</li> <li>13. Traffic Lights</li> <li>14. Warning Beacon</li> </ul> | <ul style="list-style-type: none"> <li>15. Enclosure</li> <li>16. Plough Unit</li> <li>17. Head Chute Level Detector</li> <li>18. Head Chute High Level Switch</li> <li>19. Rotation / Speed Monitor</li> <li>20. Manual Stop / Start</li> </ul> |
|--|---|--|

## IntraBulk Bulk Reception Unit

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Scan the QR code and download the brochure.



# FloMaster® Circular Bin Discharger



## 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 recycled.

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.



## 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

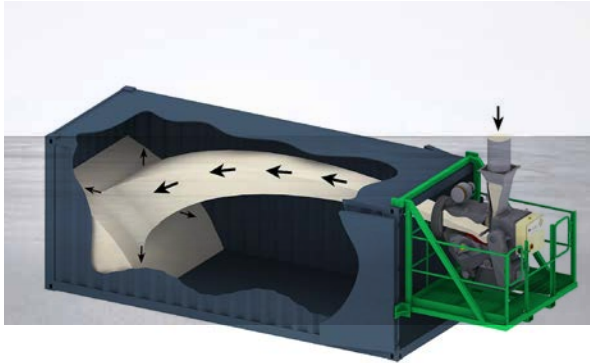
The FloMaster® is a unique Schenck Process product and has been proven over 50 years.

### Totally Enclosed

Unit is totally enclosed ensuring dust tight operation.



# FulFiller® Container Loading Systems



## Materials Handled / Typical Capacities

The following materials are examples of those handled by the FulFiller® and in a typical installation will be loaded at the rates shown:

→ Plastic granules	100 Te/hr
→ Chemical / fertilizer granules	120 Te/hr
→ Wood pellets	80 Te/hr
→ Grain	90 Te/hr
→ Pellet feeds and meals	100 Te/hr
→ Soya beans	150 Te/hr
→ Refined sugar	200 Te/hr
→ Rice	140 Te/hr



### MFF - MOBILE FORKLIFT FRAME

The thrower assembly can be mounted on a Forklift Frame for maximum flexibility in operation. The frame locates to the standard container lugs and guarantees that the thrower is in the optimum position for loading. Once mounted, the container and FulFiller® can be driven under the required silo and connected. The unit is supplied ready to use and comes complete with a power cable and plug for connection to a local power supply.



### CFF - CUSTOMER FIXED FRAME

For single silo operations, the thrower can be mounted on a fixed platform and permanently connected to the silo and power supply. The container is reversed into position and the thrower outlet position adjusted using the hydraulic lift and turntable before connection of the liner to the thrower outlet.



### DMF - DEDICATED MOBILE FRAME

For multiple silo, driver controlled operations - or where no forklift is available - the thrower can be mounted on a mobile platform. The platform is moved under the required silo and connections made to the silo drop chute before the container is reversed into position and the liner connected to the thrower outlet.

\* Alternative custom designs also available

# FulFiller® Container Loading Systems

The high speed FulFiller® allows a 20' container to be loaded in just 10 minutes.

Many other materials can be loaded using the FulFiller®. Contact Schenck Process to discuss your application. FulFiller® trials at your site can also be organised for tests on your materials, normally on a free of charge basis.



Scan the QR code and download the brochure.





# Our Commitment After Market Support



## Serving our customers for over 100 years

Spares - Our dedicated aftermarket stand ready to assist you in the identification and supply of genuine Redler spare parts.

Site Services - redler's highly skilled service engineers are on hand to visit your site in order to carry out a machine inspection, install spare parts during a machine overhaul or repair or manage the installation of a new piece of Redler equipment.

### Aftermarket Services

- Machine Inspections
- Breakdown assistance
- Spare Parts
- Technical Information
- Spare Parts Lists
- Machine Upgrades
- Machine Re-purposing
- Installations
- Commissioning

# Redler Plus . Machine Fostering Programme

## Objective

Redler have a long history supplying a wide range of mechanical handling equipment to customers around the globe. As a company with over 100 years of service to the industry, we are now handling a large install base of equipment that requires regular aftermarket and service interventions.

Building on these existing relationships, Redler Plus aims to allow our customers to have existing third party machines serviced through the same Redler After Sales and Service network. Redler Plus is essentially a machine fostering programme, providing the opportunity to have machines retrofitted with genuine Redler spare parts and maintained by our highly skilled service engineers.

## Process

Redler Plus has been devised to follow a planned fostering process that allows specific machine technical specifications and requirements to be assessed and recoded prior to any site work being carried out. The process would typically follow the following steps.

## Machine Identification

Following a request to the Redler Sales Department a site visit would be arranged with one of our Sales Engineers to discuss the complete Redler Plus process. At this stage Redler will require general machine information such as the original manufacturer, serial number and site machine designation.

A general inspection of the machine will also take place in order to make an initial assessment of the machine's technical specification and condition.

## Initial Acceptance

On receipt of the Sales Engineers report the information will be assessed internally by the Redler Engineering and Service teams. A decision will then be made as to the machine's suitability for the Redler Plus programme and this decision will then be confirmed to the customer.

## Technical Inspection

A full technical inspection is carried out by our engineering and service technicians. During the Technical Inspection Visit our Engineers will record all essential data concerning the existing machine, allowing the creation of a machine specific Redler Spare Parts list.

## Spare Parts List Creation

Once the Technical Inspection has been completed a Spare Parts List will be created specifically for the fostered machine. This list will include all the part numbers for the Redler Spare Parts recommended to be fitted to the machine in order to carry out a complete refit.

## Service Visit

After discussions with the customer, a suitable time for the service visit will be agreed, dependant on the amount of work required this will again normally take place during a scheduled shutdown.





Still questions? Contact us:  
[www.schenckprocess.com/contact](http://www.schenckprocess.com/contact)

10.23 · All information is given without obligation.  
All specifications are subject to change.

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