Scavenger Supplies confidently have over 40 years combined knowledge and experience in the field of materials handling engineering design, installation and conveyor component selection and installation. Scavenger Supplies manufacture in house a comprehensive range of primary and secondary belt cleaners/scrapers, return belt ploughs, belt training devises, skirt containment systems.

With the assistance of internationally recognised conveyor components manufacture PT. Vortex Conveyor International whom are located in Delta Silicon Industrial Park, approximately 60 km South East of Jakarta, the capital city of Indonesia. We specialized in manufacturing wide range of heavy duty conveyor rollers & frames. The operation commences in 2002 for domestic market, and at present has been exported to: Malaysia, Singapore, Brunei Darussalam, Laos, Thailand, Taiwan, Australia, New Zealand, and Italy.

Our products comply with universal standards: JIS, DIN, CEMA, and ISO. And has been supplied satisfactorily to industries, such as: Mining, Cement, Pulp & Paper, Fertilizer, Quarry, Steel, Glass & Ceramics, and Power Plant.

We have been certified with ISO 9001:2008 for Quality Management since 2006. Continuous improvement has been implemented for: Material selection, Fabrication process, Finish product testing to ensure premium quality of our products.

Steel Roller

With elaborate design, selective choice of materials and strict quality control in every steps of the production process, VORTEX'S Roller Feature:

1. Dynamic Balance.
2. Low Rotation Resistance.
3. Dust & Water Proof.
Scavenger Supplies confidently have over 40 years combined knowledge and experience in the field of materials handling engineering design, installation and conveyor component selection and installation. Scavenger Supplies manufacture in house a comprehensive range of primary and secondary belt cleaners/scrapers, return belt ploughs, belt training devices, skirt containment systems.

With the assistance of internationally recognised conveyor components manufacture PT. Vortex Conveyor International whom are located in Delta Silicon Industrial Park, approximately 60 km South East of Jakarta, the capital city of Indonesia. We specialized in manufacturing wide range of heavy duty conveyor rollers & frames. The operation commences in 2002 for domestic market, and at present has been exported to: Malaysia, Singapore, Brunei Darussalam, Laos, Thailand, Taiwan, Australia, New Zealand, and Italy.

Our products comply with universal standards: JIS, DIN, CEMA, and ISO. And has been supplied satisfactorily to industries, such as: Mining, Cement, Pulp & Paper, Fertilizer, Quarry, Steel, Glass & Ceramics, and Power Plant.

We have been certified with ISO 9001:2008 for Quality Management since 2006. Continuous Improvement has been implemented for: Material selection, Fabrication process, finishing product testing to ensure premium quality of our products.

Steel Roller

With elaborate design, selective choice of materials and strict quality control in every steps of the production process, VORTEX'S Roller feature:

1. Dynamic Balance.
2. Low Rotation Resistance.
3. Dust & Water Proof.
Fiber Roller

Synthetic Fiber Roller is most suitable for operation environment where chemical or corrosive substance is presence. Due to its: Non-Corrosive, Non-Sticking surface, and Light weight characteristics.

The polymer rollers which are a new generation product, heavy duty alternative to steel rollers, with material of construction being glass-filled fibre, high density polyethylene (HDPE), which has proven to substantially outlast steel rollers.

The significant advantages which apply to your application utilizing K-Poly Conveyor Rollers: Less damage to belting in event of roller collapse. Noise reduction of poly surface up to 90% reduction over conventional steel rollers. Wear resistant. Reduced material build up upon roller shell. Light weight up to 60% lighter than conventional rollers subject to size.

Impact Roller

Impact Roller
Best applied for heavy duty operation. As the impact bed minimize the gap under the conveyor belt, it alleviates the sagging of conveyor belt at the loading point. The impact bar is cushioned with rubber to absorb impact, while the teflon surface enables the conveyor belt to slide smoothly over the impact bars.
### PRODUCT SPECIFICATIONS

**Roll Diameter – Bearing Series**

<table>
<thead>
<tr>
<th>Pipe Diameter</th>
<th>Bearing Series</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6204</td>
</tr>
<tr>
<td>60</td>
<td>✓</td>
</tr>
<tr>
<td>70</td>
<td>✓</td>
</tr>
<tr>
<td>80</td>
<td>✓</td>
</tr>
<tr>
<td>90</td>
<td>✓</td>
</tr>
<tr>
<td>101</td>
<td>✓</td>
</tr>
<tr>
<td>108</td>
<td>✓</td>
</tr>
<tr>
<td>114</td>
<td>✓</td>
</tr>
<tr>
<td>127</td>
<td>✓</td>
</tr>
<tr>
<td>133</td>
<td>✓</td>
</tr>
<tr>
<td>139</td>
<td>✓</td>
</tr>
<tr>
<td>152</td>
<td>-</td>
</tr>
<tr>
<td>159</td>
<td>-</td>
</tr>
<tr>
<td>165</td>
<td>-</td>
</tr>
<tr>
<td>178</td>
<td>-</td>
</tr>
<tr>
<td>Designation</td>
<td>D</td>
</tr>
<tr>
<td>-------------</td>
<td>---</td>
</tr>
<tr>
<td>SA</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>50</td>
</tr>
<tr>
<td>SB</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>50</td>
</tr>
<tr>
<td>SC</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>50</td>
</tr>
<tr>
<td>SD</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>50</td>
</tr>
<tr>
<td>SE</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>50</td>
</tr>
<tr>
<td>SF</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

Note: Other dimension and shape will be available upon request. For shaft dia 20 with pipe 80, F' = +9
The FLEXAL Impact Saddle is a patented French invention that has proven itself over a period of many years throughout Europe. The unique concept absorbs impact energy produced when material transfers from one conveyor to the receiving load point of the next conveyor.

The existing conveyor belt is supported by an “Elastic Mattress” which consist of several transverse abrasion resistant polyurethane saddles. Upon each saddle Ultra High abrasion and wear resistant UHMW wear plates are fitted allowing the conveyor belt to pass over the mattress medium. These plates are the actual wearing component of the FLEXAL Impact saddle arrangement and are easily replaced when required. The overall cost saving of existing impact rollers or where fitted conventional Slider Bed Trays is significantly reduced in cost and labour time.

The absorption of energy is achieved by elongation of the saddle and thanks to this phenomenon, the efficiency of this system has proven to be superior to any known impact system working by direct absorption.

Traditional Trough idlers are used prior to entry and upon leaving the impact area, these idlers are solely there to steer and shape the belt through the impact area. Within the impact zone the impacting material has a tendency to centre itself on the belt thus reducing the lateral spillage of material from the stilt containment systems.

The system can be used on conveyors with trough angles ranging from 20 deg through to 75 deg and belt width from 500mm to over 2000mm wide. The system is relatively easy to install and retrofit to existing structures.
**FLEXAL® Device**

*Patented Art No 52 2785589*

**Elastic Device for Products Loading on Belt Conveyors**

Consists of cross belt elastic straps which, though their flexibility and their elongation ability absorb impact energy and weight of loaded products.

The straps, more or less numerous, are supported by a metal framework, adjustable in all 3 dimensions in order to fit the system to every trough angle, from 20 to 70°. Each strap is fitted with sliding pads made of very high molecular weight HDPE. They are replaceable and their number is flexible, depending on the application.

Pad's fixing to the strap is designed such that its elongation is not hindered. The belt is in contact with a large number of pads which automatically distribute strains and frictions due to elastic supporting.

Pressure is then very low which generates:
- very little wear and therefore long lifetime for pads
- negligible energy absorption.

---

**Benefits**

The matchless elasticity of the system can effectively contend aggressions against the belts, linked to:
- the nature of the product
- the edge grain angle (cutting products)
- the weight of large blocks
- the dropping height
- the belt speed
- the abrasiveness of the product.

---

**Setting Up**

FLEXAL® has always to be set up between 2 idler stations having the same trough angle. (fusilo type or 5 rollers stations) when troughing angles are more than 45°.

These idlers provide trough shaping of the belt respecting the transition zone and limiting strains.

When the transition zone is short, troughing angle must be limited to the same value as the first station located in the impact zone.

Easy and fast assembling (2 cross pieces to be bolted to the conveyor's framework).

---

**Maintenance**

Extremely simple in design, FLEXAL requires no special maintenance. Working visibility and visual inspection of condition are always possible.

In most cases, pads have a very long lifetime, and their replacement requires no special skill or special tools.
FLEXAL® MANUFACTURING RANGE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>ELIGIBLE WIDTHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLEXAL® 650</td>
<td>500 and 600 mm</td>
</tr>
<tr>
<td>FLEXAL® 800</td>
<td>600 mm</td>
</tr>
<tr>
<td>Adjustable trough 650 / 800</td>
<td>650 at to 800 mm</td>
</tr>
<tr>
<td>FLEXAL® 1000</td>
<td>1000 mm</td>
</tr>
<tr>
<td>FLEXAL® 1200</td>
<td>1200 mm</td>
</tr>
<tr>
<td>Adjustable trough 1000 / 1200</td>
<td>1000 at to 1200 mm</td>
</tr>
<tr>
<td>FLEXAL® 1400</td>
<td>1400 mm</td>
</tr>
<tr>
<td>FLEXAL® 1600</td>
<td>1600 mm</td>
</tr>
<tr>
<td>FLEXAL® 1800 / 2000</td>
<td>1800 and 2000 mm</td>
</tr>
<tr>
<td>Adjustable trough 1400 / 2000</td>
<td>1400 at to 2000 mm</td>
</tr>
</tbody>
</table>

The more efficient system to prevent belt attacks, to increase lifetime and to reduce operating costs.
Impact Cradle

Best applied for heavy duty operation. As the impact bed minimizes the gap under the conveyor belt, it alleviates the sagging of conveyor belt at the loading point. The impact bar is cushioned with rubber to absorb impact, while the teflon surface enables the conveyor belt to slide smoothly over the impact bars.

The strongest and most complete construction for installing impact area is to use a Mounting Cradle. This replaces existing impact idlers. The sides of the cradle are articulated, making the installation of the system and replacement of worn-out impact bars and impact idler assemblies simple and quick. The belt edge is given the support required to allow skirt sealing system to work in the optimum way.

IMPACT CRADLE / SKIRT CONTAINMENT

The side assemblies are standard as fixed angle to suit existing impact idler replacement to the exact profile, however side assemblies can be designed as an adjustable unit upon request.

Additionally Scavenger Supplies have designed an improved curved saddle assembly which incorporates either single block assemblies or full length wear strips.
Belt Cleaning Systems

The following points made herein this introduction are designed to stimulate the thinking of plant operators and engineering personal involved in the operation and servicing of belt conveyor systems.

During the past twenty years there has been significant improvements made in major component design and efficiency of operation for belt cleaning systems. Scavenger Supplies have identified the need to ensure high equipment availability is maintained with belt cleaning systems which deliver a effectively high percentage of material carry back removal, whilst maintaining a simple approach to maintenance and accessibility.

Head Scraper

Head Pulley conveyor belt cleaners are designed especially for the high-cycle, high-speed vulcanized and clipped belts used in the Mining and Quarry Industry along with Coal-Fired power plants, Coal loading facilities and coal prep plants. The Scraper is designed to offer high conveyor belt cleaning efficiency, reduced maintenance and superior durability in every model.

Urethane Blades

The primary cleaner blades are constructed from 90 duro Polyurethane Material selected with virgin raw material specially formulated, abrasion-resistant urethane for increased blade life with an effective useable blade tip depth of 60mm. The easy to see Coloured Built-In Blade Wear Gauge ensures the active cleaning tip which is colour-coded orange, will making it easy to see when blade replacement is required. The 200mm wide blade segments quickly conform to the contours of the belt and maintain full blade-to-belt contact for continuous cleaning, through mechanically adjust torque arm arrangement. Additionally upon request spring self tensioning arrangement can be adopted to suit all models.

Secondary Scraper W

Secondary conveyor belt cleaners are designed especially for high-speed vulcanized and clipped belts used in the Mining and Quarry Industry along with Coal-Fired power plants, Coal loading facilities and coal prep plants. The engineered Scraper is designed to offer high conveyor belt cleaning efficiency, reduced maintenance.
Urethane Blades

The secondary cleaner blades are constructed from 90 duro Polyurethane. Material selected with virgin raw material specially formulated for abrasion-resistant urethane for increased blade life with an effective usable blade tip depth of 30mm. The easy to see Coloured Built-In Blade Wear Gauge ensures the active cleaning tip which is colour-coded orange, will make it easy to see when blade replacement is required. The 150mm wide blade segments quickly conform to the contours of the belt and maintain full blade-to-belt contact for continuous cleaning, through mechanically adjust torque arm arrangement. Additionally, upon request spring self tensioning arrangement can be adopted to suit all models.

The Belt clear assemblies suitable for conveyor belt widths up to 1200mm wide and belt speeds to 4.5 m/sec as standard design. For application where belt width or speeds are greater than that noted above, our qualified service representatives will inspect and provide recommendations based upon the clients unique applications.

Installation of Belt cleaners in most applications can be retrofitted to existing structure and head chutes with minimal modification to existing plant. The life of Poly blades will vary upon the material being conveyed and moisture content retained in the material. Similar the effectiveness of the cleaners will vary upon moisture containment within the material, and surface condition of the belt.

Return Belt Ploughs

In many conveying applications material spillage which is carried back on the top side of the return belt, will pass between the tail pulley and belting which causes excessive belt tracking issues, and where large product lump size is evident damage through puncturing the belt can occur. Where small dust material build up has occurred this can increase the diameter of the tail pulley and subsequently incur belt tracking issues.

Scavenger Supplies have developed the WEARTUFF Plough arrangement to be positioned on the inside of the belt towards the direction of belt travel, and is located prior to the tail pulley. This arrangement will clean fine materials and remove larger lump product. The plough has an adjustment tumbuckle arrangement to reduce the potential of blades scalping the belt.

Conveyor Pulleys

Scavenger Supplies an extensive range of drive and non drive pulleys for replacement or new capital project works. Shaft configuration is either welded shaft or locking assembly arrangement. Crowned, Flat and Self Cleaning styles are available. Bearings supplied are plumber block type housings, unless otherwise stated by client, sealing is felt seal, labyrinth and tachonite seals are available.

Pulley lagging is selected based upon the application, a general rule drive pulleys are flat faced diamond pattern, Bend Pulleys, GTU and Tali Pulleys are crowned with plain lagging. Live shaft or dead shaft assemblies are available and is selected based upon the application.
Bucket Elevators

Scavenger Supplies utilizing experience gained for over 20 years in the design, manufacture and installation of bucket elevators. Bucket elevators are designed to move flowing powdery or bulk solids vertically.

Bucket elevators use an endless belt or chain and have a series of buckets attached to it. Bulk material is spread into an inlet hopper. Buckets dig into the material and convey it up and over the head sprocket/pulley, and then throw the material out a discharge throat.

Bucket elevators are not self-feeding, and are fed at a controlled rate. The buckets are usually where the chain or belt path is vertical or steeply inclined in a single plane. The buckets are returned back down to a tail pulley or sprocket at the bottom.

There are four broad classifications of bucket elevators: centrifugal, continuous, positive, and internal discharge. The most commonly used are the centrifugal and continuous discharge elevators.

Scavenger Supplies Industrial bucket elevators are made in a variety of shapes, weights and sizes, all utilizing centrifugal buckets or continuous buckets. Centrifugal bucket elevators are most commonly used to convey all free-flowing, powdered bulk solids such as grains, animal feed, sand, minerals, sugar, aggregates, chemicals and more. They operate at high speeds, which throw the materials out the buckets into discharge throats by centrifugal force.
<table>
<thead>
<tr>
<th>Date</th>
<th>28/10/03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client</td>
<td>Scavenger Supplies</td>
</tr>
<tr>
<td>Elevator No</td>
<td>1</td>
</tr>
<tr>
<td>Desired Capacity</td>
<td>120 tph 109 m3/hr</td>
</tr>
<tr>
<td>Material</td>
<td>Fertiliser</td>
</tr>
<tr>
<td>Density</td>
<td>1.1 t/m³</td>
</tr>
<tr>
<td>Fill of Bucket</td>
<td>0.8 %</td>
</tr>
<tr>
<td>Intake Angle</td>
<td>55 degrees</td>
</tr>
<tr>
<td>Note: 0.9 to .95 grain zone 2, 0.7 to 0.9 cement, water level</td>
<td></td>
</tr>
<tr>
<td>Note: 45 degs grain, 50 degs meats, 55 degs industrial</td>
<td></td>
</tr>
</tbody>
</table>

### Details of Existing Elevator:
- **Head Pulley Dia**: 500 mm
- **Boot Pulley Dia**: 500 mm
- **Height**: 12.3 mts
- **Width of Trunking**: 1116 mm
- **Depth of Trunking**: 572 mm
- **Dist Between Trunks**: 480 mm

### Bucket and Speed Suitable for the Required Capacity:
- **Max Speed Centrifugal**: 2.44 m/sec  
  Note: centrifugal discharge angle, max 8 deg min 32 degs
- **Average Speed**: 1.83 m/sec  
  19.9 degree discharge angle p/hr = 183.1
- **Min Speed Centrifugal**: 1.3 m/sec
- **Max Bucket Size**: 1026 mm long
- **Bkt Cap At Avg Spyd**: 472 mm proj
- **9.8 litres at 2.1 approx buckets per metre centrifugal discharge**
- **AVERAGE GRAVITY**: F
- **Discharge Speed**: 1.1 m/sec  
  70 deg d.a. for cement and stone

### Buckets and Belt to be Installed:
- **Special Max/mtr = 10.5 Bkt/mtr = 95.2 mm pitch**
- **Bkt Length**: 900 mm
- **Bkt Projection**: 350 mm
- **Bolts**: 6 bolts at 10 mm dia x 30 mm long  
  F
- **Bucket Capacity**: 26 hrs  
  for grain S,SP,SI buckets zone 2  
  OK  
  for J buckets w/level + 10%, AA buckets w/level too many
- **Rows of Bkts**: 1 rows  
  p/hr 1703.3
- **Bkts/mtr OK**: 2.5 per mtr but approx
- **Install Upto 10.5 bkt/mtr max for centrifugal discharge**
- **0.6 m/sec = 22.9 rpm 108 m3/hr = deg = 122.9**
- **Req Tph = 120 achieved = 118.8 t/hr + 0.12**  
  tph balance
- **Trunking Width**: 1116 mm
- **Trunking Depth**: 572 mm
- **Belt Width**: 1000 mm
- **Pulley Width**: 1100 mm
- **Belt Type**: SBR  
  Note: nbt, bkt, sbr, st core, or hi-temp
- **9.1 mts for grain, 12 for meats 14 for industrials**

### Output:
- **Capacity Achieved**: 116.8 tph 108 m³/hr
- **Capacity Required**: 120 tph 109.1 m³/hr  
  F  
  F
- **Drive Required**: 10.2 kW 13.7 hp  
  1  
  1
- **Factorised Drive**: 10.2 kW 13.7 hp  
  1  
  1
- **Motor Drive Installed**: 15 kW 20 hp  
  1
- **Belt Strength**: 600 kg/cm 442.9 kg/cm calc  
  Min 600 kg/cm

### Quantities:
- **65 PCS**: Special buckets
- **520 Bolts**: 10 mm dia x 30 long
- **520 Washers**: 10 mm dia
- **29 Mts Belt**: 1000 mm wide SBR belt  
  600 kgs/cm
- **550 Bolt Holes**: 10 mm dia

---

**Note**: If bucket proj is larger than 220mm add 10% to belt strength.
A sample of our design program is shown here:

### ELEVATOR

<table>
<thead>
<tr>
<th>REFERENCE ELEVATOR FOR A CAPACITY OF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
</tr>
<tr>
<td><strong>120</strong> TPH OF <strong>Fertiliser</strong></td>
</tr>
<tr>
<td><strong>AT A DENSITY OF</strong></td>
</tr>
<tr>
<td><strong>1.1</strong> t/m³ at <strong>12.3</strong> MTS HT</td>
</tr>
<tr>
<td><strong>UTILISE</strong></td>
</tr>
<tr>
<td><strong>1</strong> ROW special <strong>BUCKETS AT</strong></td>
</tr>
<tr>
<td><strong>0.6</strong> M/SEC <strong>22.9</strong> RPM</td>
</tr>
<tr>
<td><strong>AND A BELT SPEED OF</strong></td>
</tr>
<tr>
<td><strong>CAPACITY</strong></td>
</tr>
<tr>
<td>rows 25 3.6 2.5 0.6 1.1 0.8 118.6 108</td>
</tr>
<tr>
<td><strong>nominal 120 TPH</strong></td>
</tr>
</tbody>
</table>

### SPECIFICATIONS

- **Head Pulley:** 500 mm dia
- **Boot Pulley:** 500 mm dia
- **Height:** 12.3 mtrs
- **Motor Power:** 15 kw 20 hp
- **Belt:** 1000 mm wide at 600 kg/cm
- **Trunking:** 1118 mm width 572 mm between trunks 480 mm
- **Intake:** 1400 mm deep 95 degree angle 98 mm calculated depth
- **Outlet:** 1450 mm deep
- **head shaft:** 120 mm dia 103.9 mm dia calc
- **boot shaft:** 80 mm dia 81 mm dia calc

### QUANTITIES

- 65 pcs special buckets
- 520 bolts/hnuts 10 mm dia x 30 mm long
- 520 pcs 10 mm dia washers
- 29 mts 1000 mm wide SBR belt 600 kg/cm
- 580 holes in belt 10 mm dia
### Elevator Details

<table>
<thead>
<tr>
<th>ELEVATOR NO.</th>
<th>120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor</td>
<td>15  kW</td>
</tr>
<tr>
<td>Belt</td>
<td>1000 mm wide</td>
</tr>
</tbody>
</table>

### Dimensions

<table>
<thead>
<tr>
<th>No</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 1</td>
<td>12.3 mts</td>
</tr>
<tr>
<td>No 2</td>
<td>500 mm</td>
</tr>
<tr>
<td>No 3</td>
<td>500 mm</td>
</tr>
<tr>
<td>No 4</td>
<td>572 mm</td>
</tr>
<tr>
<td>No 5</td>
<td>1118 mm</td>
</tr>
<tr>
<td>No 6</td>
<td>480 mm</td>
</tr>
<tr>
<td>No 7</td>
<td>900 mm</td>
</tr>
<tr>
<td>No 8</td>
<td>350 mm</td>
</tr>
<tr>
<td>No 9</td>
<td>1100 mm</td>
</tr>
<tr>
<td>No 10</td>
<td>912 mm</td>
</tr>
<tr>
<td>No 11</td>
<td>925 mm</td>
</tr>
<tr>
<td>No 12</td>
<td>812 mm</td>
</tr>
<tr>
<td>No 14</td>
<td>2362 mm</td>
</tr>
<tr>
<td>No 15</td>
<td>315 mm</td>
</tr>
<tr>
<td>No 16</td>
<td>100 mm</td>
</tr>
<tr>
<td>No 17</td>
<td>1450 mm</td>
</tr>
<tr>
<td>No 18</td>
<td>45 degs</td>
</tr>
<tr>
<td>No 19</td>
<td>1564 mm</td>
</tr>
<tr>
<td>No 20</td>
<td>810 mm</td>
</tr>
<tr>
<td>No 21</td>
<td>30 mm</td>
</tr>
<tr>
<td>No 22</td>
<td>1400 mm</td>
</tr>
<tr>
<td>No 24</td>
<td>1681 mm</td>
</tr>
<tr>
<td>No 25</td>
<td>55 degs</td>
</tr>
<tr>
<td>No 26</td>
<td>210 mm</td>
</tr>
<tr>
<td>No 27</td>
<td>1471 mm</td>
</tr>
<tr>
<td>No 28</td>
<td>1731 mm</td>
</tr>
<tr>
<td>No 29</td>
<td>300 mm</td>
</tr>
<tr>
<td>No 30</td>
<td>150 mm</td>
</tr>
</tbody>
</table>

---

**Centrifugal Discharge Head**

Use for grain and meals

**Bucket Special**

---

Date: 28/10/03

Head for gravity discharge

<table>
<thead>
<tr>
<th>TPH of Fertiliser</th>
<th>Industrial Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Scavenger Supplies

Page 3

---

14
Scavenger Supplies supply an extensive range of elevator components manufactured by internationally recognised pressed steel and industrial plastics component frame Elevator Components.

- **J TYPE**
  American Grain Steel
  Agricultural

- **CC-S (Stackable)**
  American Grain
  HDP/Nylon/Polyurethane
  Agricultural & Industrial

- **STARCO JUMBO**
  Steel
  Agricultural & Industrial

- **SUPER STARCO**
  Steel
  Agricultural & Industrial

- **SUPER STARCO**
  HDP/Nylon/Polyurethane
  Agricultural & Industrial

- **STARCO**
  Steel
  Agricultural & Industrial

- **COLUMBUS DIN 15232**
  Steel
  Agricultural

- **STARCO**
  HDP/Nylon/Polyurethane
  Agricultural & Industrial

- **GB SPIDEX Bottomless**
  Steel
  Powdery/Sticky

- **AA**
  Industrial/Sticky

- **CONTINENTAL DIN 15233**
  Steel
  Industrial

- **BUCKET BOLTS & ACCESSORIES**

- **Bolts**
Elevator Bucket Bolts

4B NORWAY BOLTS

- Steel: Zinc Plated / Stainless Steel 304
- 1 1/4" large bolt head diameter
- Rail bolt head - reduces risk of rip out of bolt
- Extensively tested and used in USA grain industry
- Suitable for recessed or non-recessed holes
- Packaged 100 count per bag

4B FANG BOLTS

- Steel: Zinc Plated / Stainless Steel 304
- Unique fangs - lock bolt in place while nut is tightened
- 1 1/4" large bolt head diameter
- Rail bolt head - reduces risk of rip out of bolt
- Extensively tested and used in USA grain industry
- Suitable for recessed or non-recessed holes
- Packaged 100 count per bag

4B EASIFIT

- Steel: Stainless steel 316
- Shank formed with hexagon tip (easy fastening with special tool)
- Speedy fitting & removal of bolts
- Improves elevator safety
- Reduces belt damage caused by standard bolts

EURO BOLT

- Steel: Stainless steel 304 & 316

Jackson or 4B REF 70

- Steel: Stainless steel 304 & 316
- Concave head with 4 lugs on the underside to prevent rotation when tightening
- Whitworth or metric
Scavenger Supplies represent a number of international screen manufacturers all leaders in their field of experience. Together Scavenger Supplies and these manufacturers can produce a screening material which best suit your specific screening requirements.

Vibrating Screens

The vibrating screens are used for filtering, segregating and separating particles of various shapes, sizes and composition in industries like Chemical, Pharmaceutical, Food Processing, Ceramic, Chemical Industry, Plastic Rubber Industry, Paint Manufacturing, Brewing, Environment Protection, Mining. The high performance Screens are designed to reduce the operating cost by effectively filtering, segregating and separating particles at relatively shorter period of time.

Scavenger Supplies offers a variety of custom hook screens to meet all your sifting and sizing needs. Scavenger Supplies offers a large range of mesh specifications and can reinforce these with backing meshes.

Standard Hook Configuration – Usually for wire screens 6.3mm and heavier.

Hooks with welded inserts
Standard Hook Strips (reinforced hooked edges) generally the reinforcement is 1.25mm galvanised or stainless steel. Canvas or polyurethane inserts for finer mesh can be supplied. This type of hook strip is usually fitted to 6.3mm wire and finer.

To meet the needs of Australian Mining requirements, Scavenger Supplies offer a full range of screens including light and heavy duty woven wire screen material, Cloth, Perforated Plate Screens, PIPO modular panel screens, Rubber Screens and stainless steel woven material.
Scavenger Supplies Commitment to service, an understanding of plant operators need to reduce cost of inventory, yet still maintain effective high percentage of equipment availability from the services of screens material register. Have a computer catalogue register of the model, size and aperture of screen used for each individual client's screening plants. With regular stock inventory and close inspection of screens we can arrange for replacement of worn screens prior to failure.

Availability
Where possible Scavenger Supplies endeavours to maintain a high volume of stand screen sizes, and material at our Wollongong Office to ensure the quickest reply to your needs. However some screen sizes may need to be specifically manufactured to suit individual applications, and lead times may vary subject to manufacturing schedules.
Our Special Projects product range covers all aspects of bulk materials handling and is strengthened by associations with high profile international companies, all leaders in their field, who provide technical assistance where necessary and basic componentry to compliment Scavenger Supplies engineering expertise. This ensures that our clients have access to the latest technology but with maximum local content.

Together with their standard products Scavenger Supplies also provide several specially designed machines such as Rockbreakers, Vibratory Spillage Decks, and complete Co-Mingle MRF Plants for Recycling Industry that compliment the industries in which they operate. These special purpose machines and systems are all designed to meet the industry standards with regard to quality, ruggedness and reliability.

Scavenger Supplies manufacturing is sub-contracted to specialist companies but all design, quality control and inspection is carried out by Scavenger Supplies engineers and the work is fully warranted and guaranteed by Scavenger Supplies.

Scavenger Supplies prides itself on providing reliable equipment that is supported with excellent after sales service which ensures that the client is completely satisfied with the quality and performance of his purchase. This service extends to installation, commissioning and training, with the majority of our turnover being repeat business from existing clients.

Scavenger Supplies offers flexibility to adapt to the clients' specific requirements and we trust the above information, and this product catalogue will emphasise our capabilities and enable you to consider our company as a possible supplier for any future projects handled by your company.
1. INSTALLATION
Scavenger Supplies can provide turnkey packages for all equipment and systems supplied and this service would include design, project management, inspection, quality control, transport and installation.

All work is carried out under the Scavenger Supplies quality control system, with all checks being monitored and ITP’s issued.

2. COMMISSIONING AND TRAINING
Commissioning can be carried out at our workshop or on site, either as a total service using Scavenger Supplies personnel, or by supervision of the client’s staff. Scavenger Supplies offices or at the client’s workplace, whichever is convenient.

3. MAINTENANCE
Scavenger Supplies can provide a regular maintenance service for all equipment provided and this can be arranged to suit the various shut-downs of client operations. We are also flexible and can react at short notice should there be a need for urgent attention to equipment.

Any maintenance contract can be as simple, or complete, as the client requires and Scavenger Supplies would be pleased to discuss your requirements at your convenience.

We have several current maintenance contracts in operation and would be pleased to provide any references you might require.

4. GENERAL
Scavenger Supplies provides an excellent after sales service through provision of information, assistance in plant integration and problem solving, all aimed at ensuring that the client is happy with his purchase. We think this service is important and hope you will give us the opportunity to prove it.
As a Bulk Materials Handling Company, specialising in lime delivery systems and due to our involvement with the mining industry, where we have supplied several silo installations throughout Australia, Scavenger Supplies have developed in-house engineering design experiences. We utilise factors gained by these experiences to enable accurate sizing and powers to be selected for metering and feeding equipment.

While the majority of our projects have been on Lime (either Hydrate or Quicklime) a variety of other powdered materials have been handled, including Cement, Sugar, Ferro Silica, Precipitator Dust, Flour, Grain, Manganese Dioxide, Fly Ash and Electric Arc Furnace Dust. Scavenger Supplies offer a complete materials management system, from receipt of dry product into storage silo, to withdrawal on demand and metering into the required process. Each system is individually engineered to handle the requirements of the particular material.
Activators eliminate bridging, rat-holing and arching and ensure a positive discharge of material on a ‘First in-First out’ basis without the introduction of air or contaminants.

Scavenger Supplies bin and storage pile flow activators are all of heavy duty construction and include an integral shut-off gate as a standard feature. A unique keyed seal with its inner liner provides a positive material seal that cannot slip or move. Noiseless, with low power draw, they are available with an electrical control package for integration into any process.

The low head room design offers savings in silo construction and compact plant layout. Activators from 900mm to 3500mm cover all difficult to handle materials and may be easily retro-fitted to existing plant. Their use with downstream metering and feeding equipment for either batch or continuous processing results in low maintenance, dust tight and reliable materials handling.

Custom built bucket elevators suit many applications, from abrasive to free flowing materials, using either belt or chain systems. Scavenger Supplies bucket elevators are made to a simple heavy duty, state-of-the-art design to provide a strong, reliable and easy-to-operate machine with standard modular casing sections for quick and cost effective maintenance.

Bucket options range from pressed mild or stainless steel to HDPE plastic, with different design geometry to suit the type of discharge required.

Drive systems range from shaft mounted to foot mounted.
Scavenger Supplies are designers and manufacturers of custom vibratory conveyors. Each unit is designed to be almost noiseless in operation and give dust tight conveying. Single units can convey up to 7.5m long with greater distance from multiple units or countermass configurations. With low power draw and no internal moving parts, the "Microhopper" conveyor provides excellent transportation of dusty, abrasive or high temperature materials.

Scavenger Supplies' screw conveyors and feeders are individually designed to robust mining specifications which provide reliable and efficient operation whilst retaining the strength to withstand arduous duties. The unique standard design incorporates outboard bearings and heavy duty gland seals to ensure no leakage or contamination and provide a reliable delivery of material.

The casing construction is simple, compact and can be supplied with robust or tubular design, in mild, stainless or special steel. Drive systems can be supplied floor mounted using chain or belt drive, or direct shaft mounted, with either fixed or variable speed.
Belt Conveyors and Feed Hoppers

Examples of feeder hopper assemblies are shown here with bulk loader hopper complete with grizzly screen deck positioned above.

Scavenger Supplies as a Bulk Materials Handling Company, specialising in materials handling systems and due to our involvement with the mining, quarry and smelting industries, where we have designed and supplied several medium to heavy duty conveyors and hopper feed out systems. A computerised design performance program and assistance from Certified Design Engineers ensures we manufacture system to suit the applications nominated first time every time.

Additionally special purpose feeder hoppers, can be designed and manufactured to suit the needs of clients and special purpose application, the following hopper assembly was designed as Bulk Bag breaking and receipt hopper. The Bulk Material storage Bulk Bags are dropped onto breaking spike with fork lift, and material is immediately released quickly, and in safe condition for operators.