METAL CHIP AND COOLANT MANAGEMENT PLANTS
INDUSTRIE ASSOCIATE’S HISTORY

Industrie Associate’s factory

Production department
VERTICAL CENTRIFUGES

Wet metal swarf can contain up to 25% of coolant. The centrifuge allows removal of coolant from short chips. Available as stand alone unit it can also be integrated into the MINISYSTEM. Depending on the material and cutting fluid it is possible to obtain dryness of less than 2%. It is designed for heavy-duty continuous operation and include hardened components to reduce wear and prolong life. Chips are automatically blown out while at the same time coolant is separated.

FEATURES OF VERTICAL CENTRIFUGES:
- Minimal footprint area
- Automatic operation
- Can be placed under the machine tool conveyor discharge
- Easy maintenance
- SCED10 model can be integrated into the spinning system “Minisystem”

MODEL SCED5:

**Basic centrifuge SCED5**

**Centrifuge SCED5 equipped with support**

**Centrifuge SCED5 equipped with support and vibrating screen**

MODEL SCED10:

**Basic centrifuge SCED10**

**Table:**

<table>
<thead>
<tr>
<th>Model</th>
<th>SCED 5</th>
<th>SCED 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughput kg/h*</td>
<td>100</td>
<td>130-150</td>
</tr>
<tr>
<td>Power</td>
<td>0.5 kw</td>
<td>4 kw</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>500 x 500 x 495</td>
<td>860 x 710 x 960</td>
</tr>
<tr>
<td>Centrifuges weight</td>
<td>95 kg</td>
<td>315 Kg</td>
</tr>
</tbody>
</table>

* Indicative data
HORIZONTAL CENTRIFUGE

The drying process of the horizontal centrifuge is designed on a horizontally suspended drum where the coolant is separated by means of a wedge bar screen. The centrifuge is entirely emptied out of dry chips and coolant and automatically cleaned (with compressed air) after being switched off. This feature allows handling different materials within the same unit and is ideal for installations and works with no manual service. It handles any type of swarf shorter than 30mm. SCE line can also be integrated into the SYSTEM.

Technical data

<table>
<thead>
<tr>
<th></th>
<th>SCE 20</th>
<th>SCE 30</th>
<th>SCE 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughput Kg/h*</td>
<td>300-500</td>
<td>1000-1500</td>
<td>3000-5000</td>
</tr>
<tr>
<td>Power</td>
<td>4 Kw</td>
<td>11 Kw</td>
<td>18.5 Kw</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>1115x1015x835</td>
<td>1145x1355x1492</td>
<td>1550x2250x1850</td>
</tr>
<tr>
<td>Max cap. volume</td>
<td>2,3 m³/h</td>
<td>5,7 m³/h</td>
<td>7,6 m³/h</td>
</tr>
<tr>
<td>Weight kg</td>
<td>415</td>
<td>800</td>
<td>1400</td>
</tr>
</tbody>
</table>

* Indicative data

MAIN FEATURES:
- Easy maintenance
- Heavy duty construction
- High productivity
- Designed for modularity
- Can handle different materials
- Automatic self-cleaning function
GRINDERS

Suitable for cutting long chips. It doesn’t accept solids or bar ends among chips. The ejection of any piece must be done manually. It is equipped with a single rotating shaft with inserts and pusher to push the material against the shaft, so that it could be hooked and cut.

CRUSHERS

Metal chips of any kind and shape can be conveyed into the hopper where the rotating arm directs the material on its side where the crusher’s fixed knives contribute to reduce the metal curls into smaller pieces. Final crushing stage is achieved on the lower section by the fixed rotating cutting gears. The ejector systems automatically discharges bar-ends and parts, maximizing uptime and protecting equipment from damage.

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**Technical data**

<table>
<thead>
<tr>
<th></th>
<th>TR250</th>
<th>TR400</th>
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</thead>
<tbody>
<tr>
<td>Power kw</td>
<td>2,2</td>
<td>7,5</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>1245 x 714 x 500</td>
<td>1450 x 800 x 600</td>
</tr>
<tr>
<td>Weight kg</td>
<td>336</td>
<td>450</td>
</tr>
</tbody>
</table>

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**Technical data**

<table>
<thead>
<tr>
<th></th>
<th>SCR10</th>
<th>SCR20</th>
<th>SCR25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power kw</td>
<td>7,5</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>Throughput kg/h*</td>
<td>500</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>Voltage</td>
<td>400</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>Weight kg</td>
<td>980</td>
<td>1600</td>
<td>1960</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>600x900</td>
<td>750x1500</td>
<td>1200x2000</td>
</tr>
</tbody>
</table>

*Indicative data
MINISYSTEM

The MINISYSTEM is the ideal plug and play integrated solution for drying chips and for coolant recovery. Easy to install and to be positioned inside the factory.

MAIN FEATURES:
• Small and compact dimensions
• Plug and play
• Easy handling
• Designed for modularity
• Excellent price/quality ratio
• Low energy consumption

MINISYSTEM INTEGRATIONS WITH ADDITIONAL MODULES:

Technical data

<table>
<thead>
<tr>
<th>MINISYSTEM</th>
<th>Throughput kg/h*</th>
<th>Power</th>
<th>Dimensions (mm)</th>
<th>System weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>130-150</td>
<td>4,5 kw</td>
<td>3300 x 600 x 1800</td>
<td>800 kg</td>
</tr>
</tbody>
</table>

* Indicative data
SYSTEMS

Modular and flexible systems, placed on a skid. The system is designed with modularity concept. This means that adding modules to feed, treat and stock chips is simple. Here some examples of possible integration with additional modules to solve most common needs.

MAIN FEATURES:
- Heavy duty construction
- Large output production
- Plug and play
- Designed for modularity
- Equipped with drag conveyor for sludge for recirculating heavy particles and filtering the oil.

<table>
<thead>
<tr>
<th>TECHNICAL DATA</th>
<th>SYSTEM 20</th>
<th>SYSTEM 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughput kg/h*</td>
<td>400-600</td>
<td>1000-1500</td>
</tr>
<tr>
<td>Power consumption</td>
<td>5,54 kW</td>
<td>12,54 kW</td>
</tr>
<tr>
<td>dimensions (mm)</td>
<td>4650 X 2000 X H 2660</td>
<td>5150 X 2000 X H 3445</td>
</tr>
<tr>
<td>System weight</td>
<td>1610</td>
<td>2830</td>
</tr>
</tbody>
</table>

* depending on the material

SYSTEM INTEGRATIONS WITH ADDITIONAL MODULES:
- System with crusher SCR20
- System with turner skiphoist and crusher
INSTALLATIONS

SOME EXAMPLES OF INSTALLATIONS

Minisystem with 800 lt hopper

Raised Minisystem to load big bags

Minisystem with 800 lt hopper

Double Minisystem for two materials

Minisystem with turner skiphoist

Minisystem with crusher and turner skiphoist
SOME EXAMPLES OF INSTALLATIONS

Crusher SCR20 + centrifuge SCE20
400 kg/h for steel

Centrifuge SCE20 and conveying system
400 kg/h for aluminium

Crusher SCR25 + centrifuge SCE30
800 kg/h for stainless steel - Inconel

Turner skiphoist + crusher SCR20 + centrifuge SCE20
500 kg/h for stainless steel

Centrifuge SCE20
400 kg/h for steel

Centrifuge SCE30
1500 kg/h for brass
FILTRATION SYSTEMS

Metalworking fluids affect the financial health of a company not only in terms of what they cost to manage, but also in how they perform. An efficient management can lead to improving:

• Tool life
• Equipment life
• Process downtime
• Scrap and rework
• Reduced waste

OPERATION

Suitable for coolant coming from grinding machines and machining centers. Modules of 250, 500, 750 up to 2000 lt/min

The dirty coolant comes from the machine tools and enters the self-cleaning filter. When the electro-level signals a high level of fluid, due to the clogging of the cloth, the reductor starts and make the brush for a first cleaning, the cloth and the drag conveyor move. The second cleaning is a done in backwash, using the clean oil coming from the tank placed under the filtration system. A magnetic separator could be added before the filtration system, in case of magnetic material to be filtered. Filtration level up to 15 microns.
FILTRATION SYSTEMS

OPERATION
Suitable for filtering the coolant coming from the centrifuges. The drag conveyor could be equipped with a rotary drum filter for a filtration level up to 85-100 microns, or with rotary drum filter and self-cleaning, for a filtration degree up to 20-25 microns.

FEATURES:
• Low maintenance
• Small overall dimensions

FILTRATION SYSTEMS FOR MACHINING CENTERS

Centrifugal coolant filter FC1100, version “A”.
The coolant, after the centrifugal process, goes back into the conveyor tank of the machine tool, via tubes, because the centrifuge is placed lower compared to the conveyor tank. The version “A” is not equipped with booster pump and tank

FEATURES:
• Filtration level up to 5-10 microns
• Not self-cleaning
• Mobile unit

Centrifugal coolant filter FC1100 version “B”.
The version “B” is equipped with booster pump and tank to allow the coolant, after the centrifugal process, to go back into the conveyor tank of the machine tool. The centrifuge is placed higher compared to the conveyor tank.