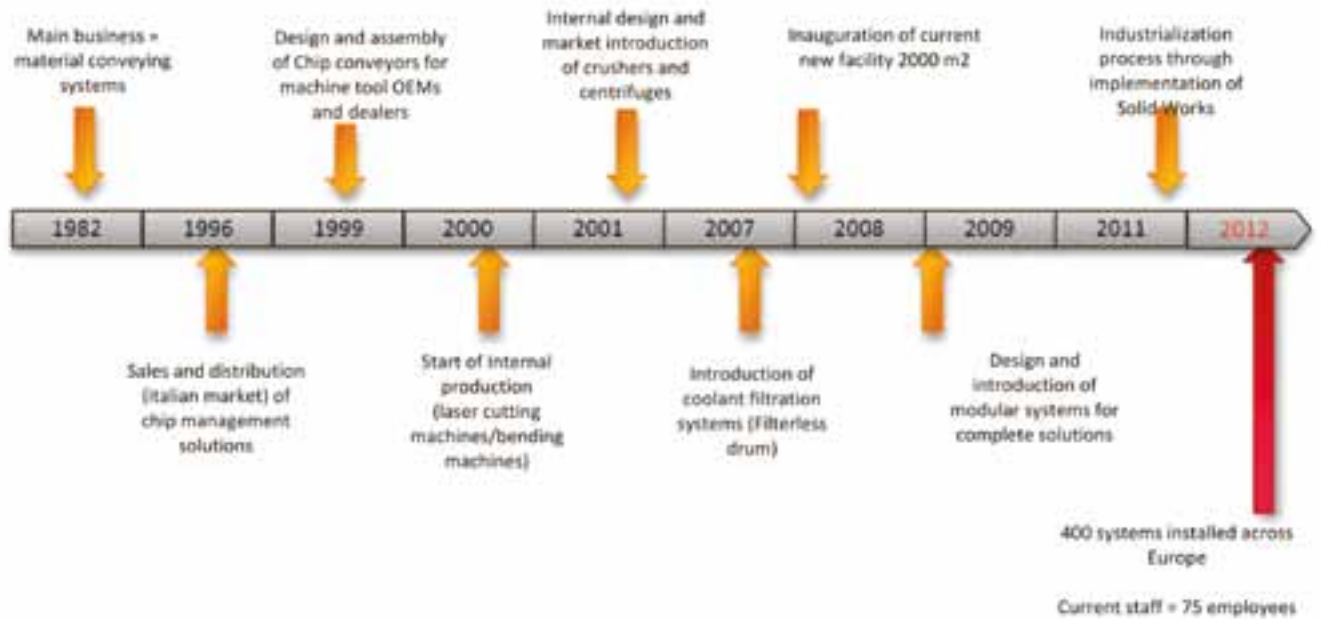




METAL CHIP AND COOLANT MANAGEMENT PLANTS



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

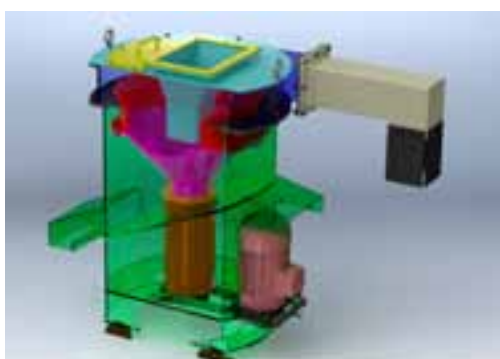


Centrifuge SCED5 equipped with support and vibrating screen

MODEL SCED10:



Basic centrifuge SCED10



Model	SCED 5	SCED 10
Throughput kg/h*	100	130-150
Power	0,5 kw	4 kw
Dimensions (mm)	500 x 500 x 495	860 x 710 x 960
Centrifuges weight	95 kg	315 Kg

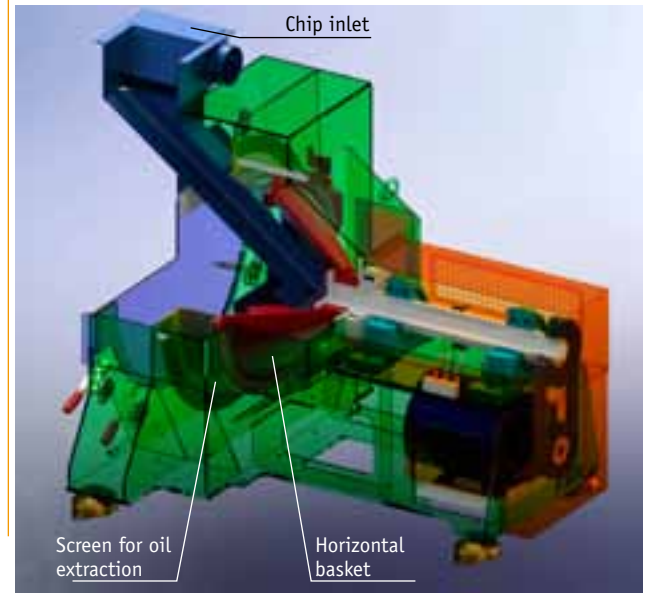
* Indicative data

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 been switched off. This feature allows handling different materials within 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.



SCE20 centrifuge



Technical data	SCE 20	SCE 30	SCE 40
Throughput Kg/h*	300-500	1000-1500	3000-5000
Power	4 Kw	11 Kw	18,5 Kw
Dimensions (mm)	1115x1015x 835	1145x1355x1492	1550x2250x1850
Max cap. volume	2,3 m ³ /h	5,7 m ³ /h	7,6 m ³ /h
Weight kg	415	800	1400

* Indicative data

MAIN FEATURES:

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



SCE20 centrifuge



SCE30 centrifuge

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.



TR400 grinder equipped with support



TR400 grinder equipped with support and vertical centrifuge SCED5



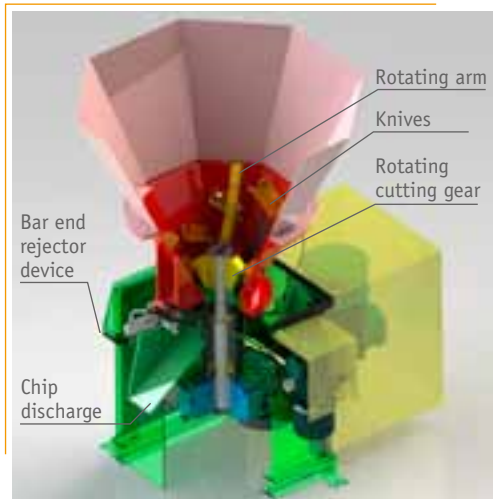
Technical data	TR250	TR400
Power	2,2 kw	7,5 kw
Dimensions (mm)	1245 x 714 x 500	1450 x 800 x 600
Weight	336 kg	450 kg

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.



SCR20 crusher



Crusher capacity:
1000 kg/h for cast iron



Crusher capacity: 800-1000 kg/h for steel

Technical data	SCR10	SCR20	SCR25
Power kw	7,5	15	22
Throughput kg/h*	500	1000	3000
Voltage	400	400	400
Weight kg	980	1600	1960
Dimensions (mm)	600x900	750x1500	1200x2000

* 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

Technical data	MINISYSTEM
Throughput kg/h*	130-150
Power	4,5 kw
Dimensions (mm)	3300 x 600 x 1800
System weight	800 kg

* Indicative data

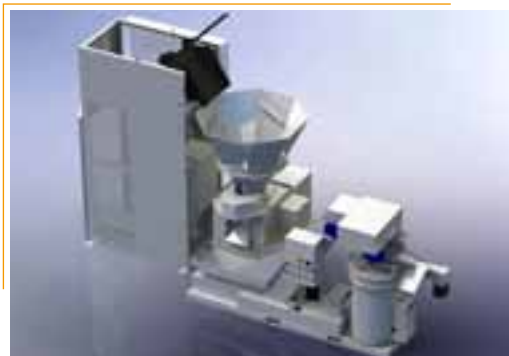
MINISYSTEM INTEGRATIONS WITH ADDITIONAL MODULES:



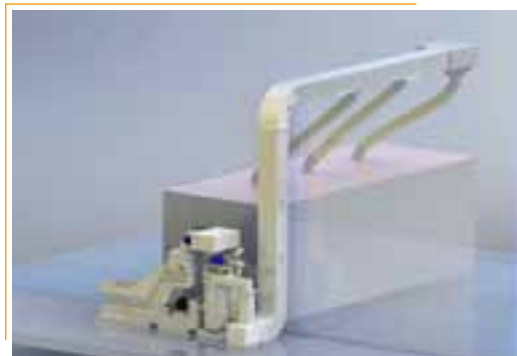
Minisystem with hopper 800 lt + skiphoist 250-300 lt



Minisystem with hopper 500 lt + crusher and vibrating screen



Minisystem with turner skiphoist + crusher + vibrating screen



Minisystem with conveyor to feed the container

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.

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

* depending on the material

SYSTEM INTEGRATIONS WITH ADDITIONAL MODULES:



System with crusher SCR20



System with turner skiphoist and crusher

INSTALLATIONS



Minisystem with 800 lt hopper



Raised Minisystem to load big bags



Minisystem with 800 lt hopper



Double Minisystem for two materials

SOME EXAMPLES
OF INSTALLATIONS



Minisystem with turner skipoist



Minisystem with crusher and turner skipoist

INSTALLATIONS



Crusher SCR20 + centrifuge SCE20
400 kg/h for steel



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



Centrifuge SCE20 and conveying system
400 kg/h for aluminium



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

SOME EXAMPLES OF INSTALLATIONS



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



Filtration systems for coolant coming from grinding machines and machining centers



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

FILTRATION SYSTEMS FOR THE TREATMENT OF COOLANT, COMING FROM CHIP SPINNING PROCESSES



Drag conveyor equipped with drum filter



Drag conveyor equipped with drum and self cleaning filter

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



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.

FEATURES:

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



Chip and lubricant treatment plants
Swarf conveying lines

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