Product Guide

Compressor

Crushers

Ideal solutions for treating metal chips and grinding sludge

—A Company and the Environment: A Symbiotic Relationship—

— Support for an Earth-Friendly Recycling Society —

三愛エコシステム

SAN-AI ECOSYSTEM

From waste to valuables
Creating new value

Rising social awareness of environmental issues has generated demand for rapid improvements in industrial waste treatment. This in turn has made industrial waste treatment an urgent issue for manufacturers. SAN-AI ECO SYSTEM proposes ideal solutions for treating the chips and grinding sludge generated in processes at metal processing plants. Crushing or solidifying the considerable volumes of chips and grinding sludge generated at plants helps address the long-standing problems and achieve clean working environments.

Example of benefits of introducing SAN-AI ECO SYSTEM's solutions

Social benefits of better chip treatment

- Acclaimed activities that protect the environment strengthen corporate longevity.
- Appropriate treatment reduces environmental risks, furthers environmental conservation, and cuts costs.
- Appropriate treatment improves working environments, boosts productivity, and reduces workplace accident.

Economic benefits of introducing crushers

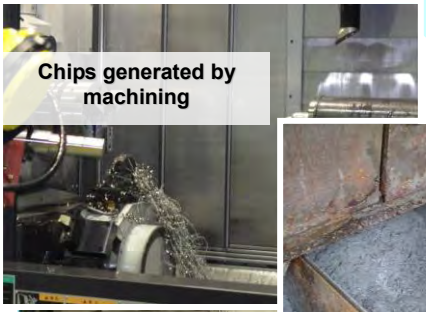
- Crushers reduce waste collection requirements (work subcontracted to waste disposal contractors) to 1/3 to 1/10 previous rates and suppress costs.
- Crushers reduce the incidence of shutdowns caused by facility problems and can improve productivity.
- Crushers reduce the time and cost associated with treatment and reduce problems involving disposal transport.

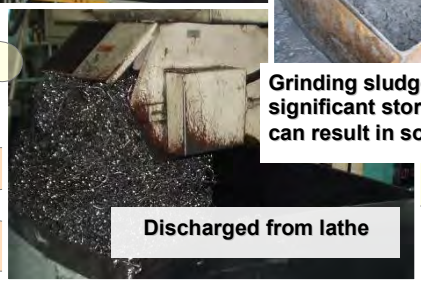
Economic benefits of introducing compressors

- Compressors reduce disposal costs associated with grinding sludge and grinding coolant.
- Compressors contribute to higher resale value of aluminum, stainless steel, brass, and other nonferrous metals.
- Compressors allow cost recoupment through the sale of solidified grinding sludge.

Treatment of chips and grinding sludge that clutter and soil plants…

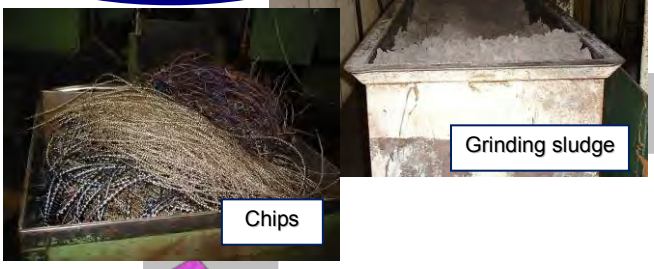
SAN-AI ECO SYSTEM helps clients solve such chip problem.


Chips generated by machining


Discharged from lathe

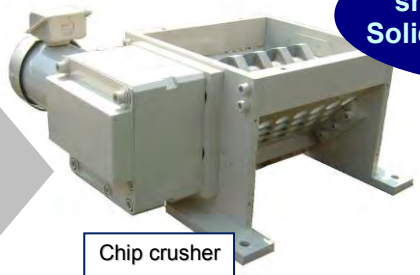
Grinding sludge requires significant storage volumes and can result in soil pollution…

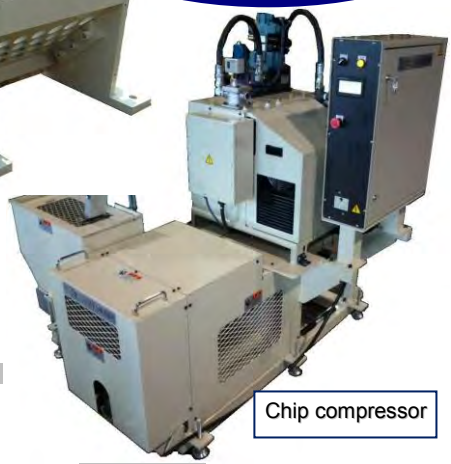
Metal processing plant Chips and sludge generated


Chips

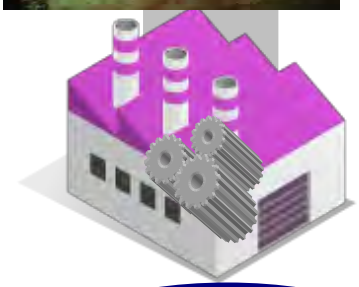
Grinding sludge

Finely shredded by crusher Solidified by compressor


Chip crusher

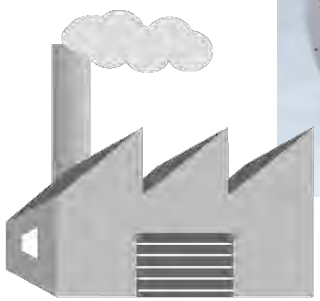

Chip compressor

Collecting cutting fluid

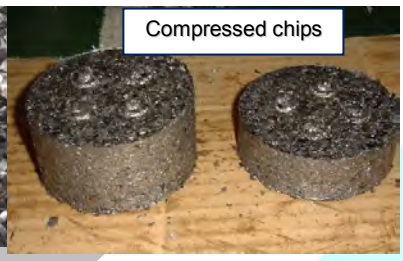


Recycled for reuse as materials

Iron ingots extracted by remelting




Crushed chips


Compressed chips

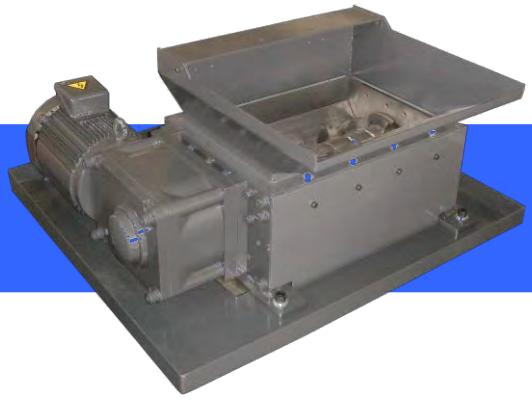
Conveyed to material manufacturers for use as source of iron

Contracting with industrial waste disposal contractors to treat and dispose of the chips and grinding sludge that clutter and soil plants entails considerable costs—costs that have trended up in recent years. Additionally, while grinding sludge has conventionally been disposed of in controlled landfills, recent environmental issues have put disposal grinding sludge front and center as a key environmental issue to be addressed in earnest by automotive and other manufacturers. Chips foul plant worksites, degrade work efficiency, and generate significant disposal costs. All these aspects make treating chips and grinding sludge a serious challenge. Lastly, the dumping of cutting fluid produced during chip processing has emerged as a major problem that can lead to soil pollution and other problems.

Product Categories

To solve the problems under various conditions, SAN-AI ECO SYSTEM offers product lines that focus on crushers and compressors with auxiliary equipment to make them function more effectively. SAN-AI ECO SYSTEM responds to customer requests in its role as a comprehensive chip treatment machine manufacturer.

Chip crushers



Chip compressors

Auxiliary equipment

Typical chip forms

Ribbon chips

Flat helical chips

Long, cylindrical helical chips

Spiral chips

Long comma chips

Tangled chips

Examples of solidification of major materials

Aluminum

Magnesium

Brass

Iron

Bearing steel

Slurry

Rust iron

Contents

Chip crusher

Chip compressors

Auxiliary equipment

Examples of installation

Additional document

SSC Series

Ideal for real-time treatment following one-to-one installation to each processing machine. Small crushers for attaching directly to conveyors for small lathes.

~ Example of installation ~

Patent No. 4751055

- ☑ Installation in narrow spaces
- ☑ Machining by NC lathe
- ☑ Long, curly forged iron chips
- ☑ One-to-one installation to each processing machine
- ☑ Crushed chips collected and conveyed on conveyor
- ☑ Operations linked to conveyor

SSC-040-50 * Hopper attached; shown in user-specified paint color

SSC-040-50

☑ Hopper open/close door

☑ Measures to prevent scattering of chips to surrounding areas

SSC-040-25

☑ Attached directly to chip conveyor outlet

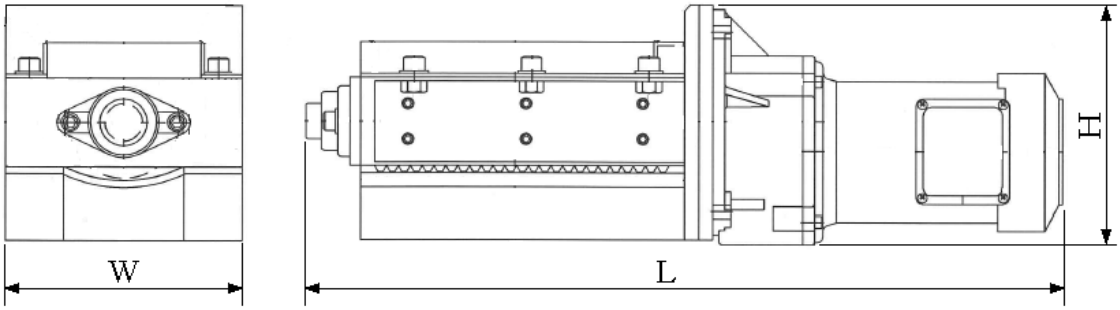
☑ Crushed chips conveyed on conveyor

* Photos show products with optional equipment attached.

Machine specifications

Chip form	Ribbon chips	Flat helical chips	Spiral chips	Long comma chips	Tangled chips	Long curly chips	Mixed with foreign matter
Applicability	△	△	△	○	○	×	×

SSC-040 *** Product photo shows product with hopper attached.**



Model	Motor capacity	Major dimensions	Operating voltage	Main unit weight
SSC-040-50	**0.4 kW**	**L640 × W200 × H202**	**200 V AC**	**45 kg**

Standard paint color

5Y8/1.5 N2.5

Major options

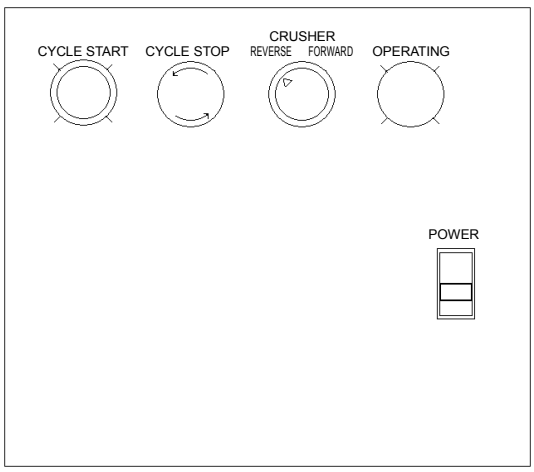
* Not included in price of main unit

Hopper/mount/control panel/hopper door open/close sensor/other safety measures/ customer-specified paint color /power cable/installation work, etc.

*** Specifications may differ significantly depending on conditions at the actual installation site or other factors. Please consult with our sales staff.**

Standard control panel

* Not included in price of main unit



Basic performance	Housing dimensions W300 × H300 × D160 Paint color 5Y7/1 (both inside and outside)
	Externally mounted earth leakage breaker (30 mA)
	Automatic operation (automatic reverse retry function on overload)
	Manual operation (push button with selector)
	Combined automatic and emergency stop (push-lock button)
	Mitsubishi Electric's FX1S-10MR PLC (compatible with 5DM Display)
	With MG thermal
	Primary power 200 V AC In-panel control voltage 200 V AC

* Special specifications are available other than the above, including user-specified specifications.

SBD Series

Solves the problem of chips mixed with foreign matter. Ideal for real-time treatment following direct one-to-one installation to conveyors of small automatic lathes.

~ Example of installation ~

Patent No. 5221927

- ☑ Allows treatment of chips mixed with foreign matter
- ☑ Machining by NC lathe
- ☑ Attached directly to conveyor
- ☑ One-to-one installation to each processing machine
- ☑ Crushed chips can be conveyed on conveyor.
- ☑ Allows operations linked to conveyor

SBD-075
* Attached directly to conveyor
Available in user-specified paint color

This equipment allows treatment of chips mixed with conventionally untreatable ends of bar materials generated by cutting off.

Handles materials mixed with ends of bar materials

- ☑ Outer diameter of foreign material: Up to 32 mm
- ☑ Length of foreign material: Up to 100 mm

Unique mechanism discharges both foreign materials and chips.

- ☑ Crushed foreign matters are discharged downward, together with chips.
- ☑ Crushed foreign matters and chips can be conveyed on conveyor.

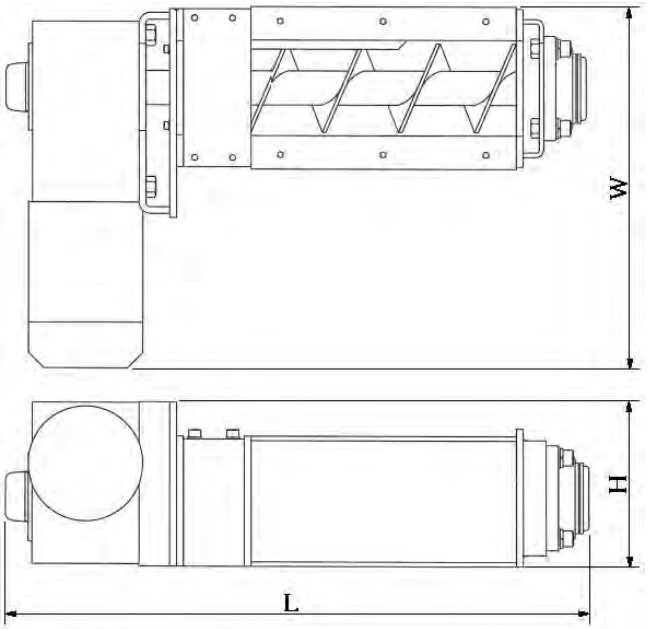
* Photos show products with optional equipment attached.

Machine specifications

Chip form	Ribbon chips	Flat helical chips	Spiral chips	Long comma chips	Tangled chips	Long curly chips	異物混入
Applicability	○	○	○	○	×	○	○(*)

* Mixed foreign materials must be smaller than specified dimensions. Please consult with us in advance.

SBD-075-300　* Product photo shows main unit only.



Model	Motor capacity	Major dimensions	Voltage	Weight
SBD-075M	**0.75 kW**	**L764 × W477 × H211**	**200 V AC**	**78 kg**

Standard paint color

5Y8/1.5　N2.5

Major options

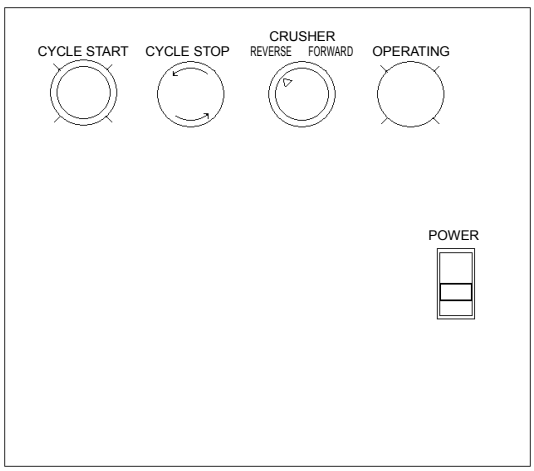
* Not included in price of main unit

Hopper/mount/control panel/hopper door open/close sensor/other safety measures/ customer-specified paint color /power cable/installation work, etc.

*** Specifications may differ significantly depending on conditions at the actual installation site or other factors. Please consult with our sales staff.**

Standard control panel

* Not included in price of main unit



Basic performance	Housing dimensions W300 × H300 × D160　Paint color 5Y7/1 (both inside and outside)
	Externally mounted earth leakage breaker (30 mA)
	Automatic operation (automatic reverse retry function on overload)
	Manual operation (push button with selector)
	Combined automatic and emergency stop (push-lock button)
	Mitsubishi Electric's FX1S-10MR PLC (compatible with 5DM Display)
	With MG thermal
	Primary power 200 V AC　In-panel control voltage 200 V AC

* Special specifications are available other than the above, including user-specified specifications.

SKE Series

Idea for real-time treatment following one-to-one installation to each processing machine. This equipment also treats long curly chips. Recommended by SAN-AI ECO SYSTEM for handling various chip types.

Patent No. 4485242

~ Example of installation ~

- ☑ Machining by NC lathe
- ☑ Long curly forged iron chips
- ☑ One-to-one installation to each processing machine
- ☑ Crushed chips collected and conveyed on conveyor
- ☑ Hopper open/close sensor
- ☑ Operations linked to conveyor

SKE-150N-60-490R　* Available in user-specified paint color

SKE-075S-60-320R

☑ Hopper open/close door

☑ Chip sensor in the hopper

SKE-075S-60-320R

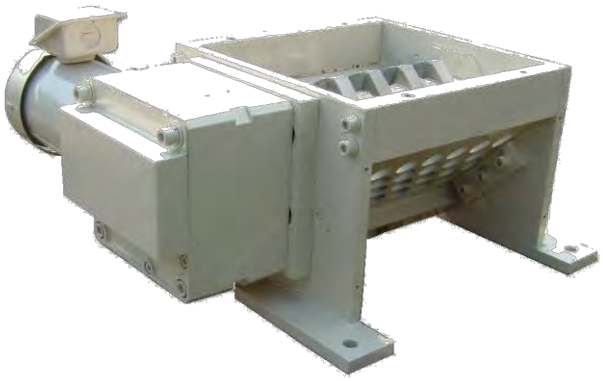
☑ Hung above the chip conveyor

☑ Direct discharge to chip box

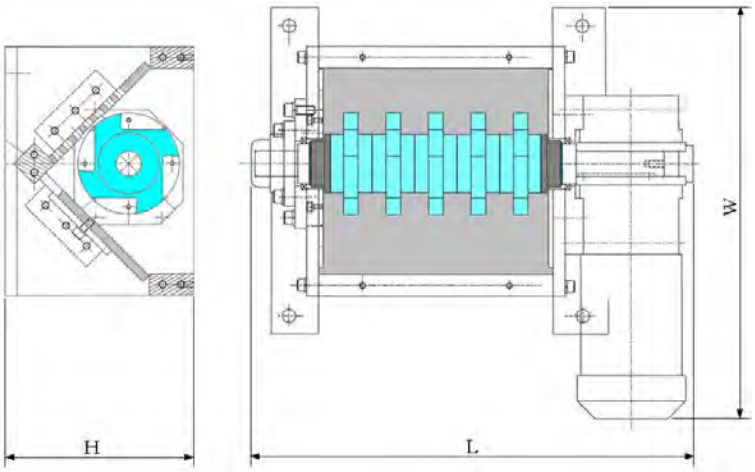
*** Photos show products with optional equipment attached.**

Machine specifications

Chip form	Ribbon chips	Flat helical chips	Spiral chips	Long comma chips	Tangled chips	Long curly chips	Mixed with foreign matter
Applicability	○	○	○	○	○	○	×



SKE-075S-60-320R　* Product photo shows the standard main unit.



Model	Motor capacity	Major dimensions	Voltage	Weight
SKE-075S-60-320R/L	0.75 kW	L630 × W580 × H260	200 V AC	115 kg
SKE-075S-60-490R/L		L800 × W580 × H260		125 kg
SKE-150N-60-320R/L	1.5 kW	L680 × W650 × H260		125 kg
SKE-150N-60-490R/L		L850 × W650 × H260		135 kg
SKE-220N-60-320R/L	2.2 kW	L730 × W650 × H290		130 kg
SKE-220N-60-490R/L		L900 × W650 × H290		140 kg

Standard paint color

5Y8/1.5　　N2.5

Major options

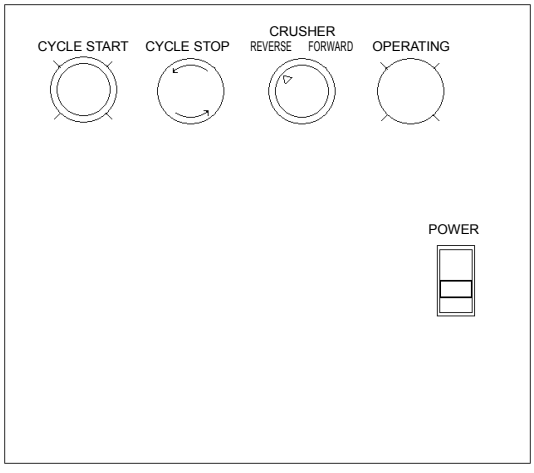
* Not included in price of main unit

Hopper/mount/control panel/hopper door open/close sensor/other safety measures/ customer-specified paint color /power cable/installation work, etc.

*** Specifications may differ significantly depending on conditions at the actual installation site or other factors. Please consult with our sales staff.**

Standard control panel

* Not included in price of main unit



Basic performance	Housing dimensions W300 × H300 × D160　Paint color 5Y7/1 (both inside and outside)
	Externally mounted earth leakage breaker (30 mA)
	Automatic operation (automatic reverse retry function on overload)
	Manual operation (push button with selector)
	Combined automatic and emergency stop (push-lock button)
	Mitsubishi Electric's FX1S-10MR PLC (compatible with 5DM Display)
	With MG thermal
	Primary power 200 V AC　In-panel control voltage 200 V AC

* Special specifications are available other than the above, including user-specified specifications.

SKE-HL Series

Ideal for real-time treatment following one-to-one installation to each processing machine.
Space-saving models in the SKE series suitable for treating various chip types.

Patent pending

~ Example of installation ~

- ☑Installation in narrow spaces
- ☑Machining by NC lathe
- ☑Long curly forged iron chips
- ☑One-to-one installation to each processing machine
- ☑Crushed chips collected and conveyed on conveyor
- ☑Operations linked to conveyor

SKE-150HL-60-400R　* Available in user-specified paint color

SKE-075HL-60-400R

☑Hopper open/close sensor

☑Installed directly below the processing machine

SKE-150HL-60-400R

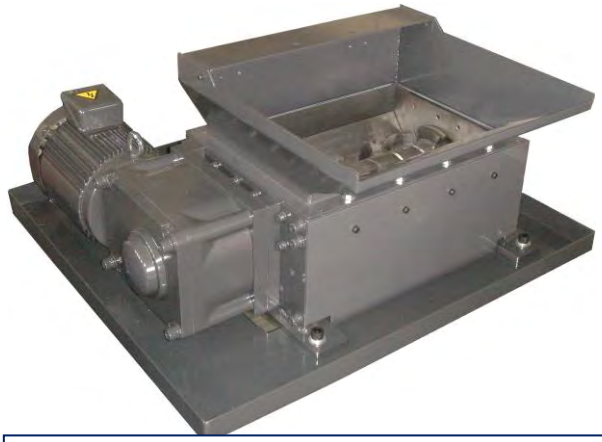
☑Attached directly to chip conveyor outlet

☑Direct discharge to chip box

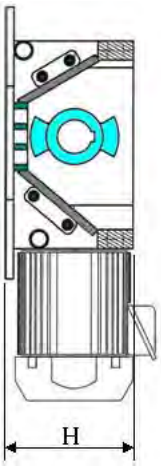
* Photos show products with optional equipment attached.

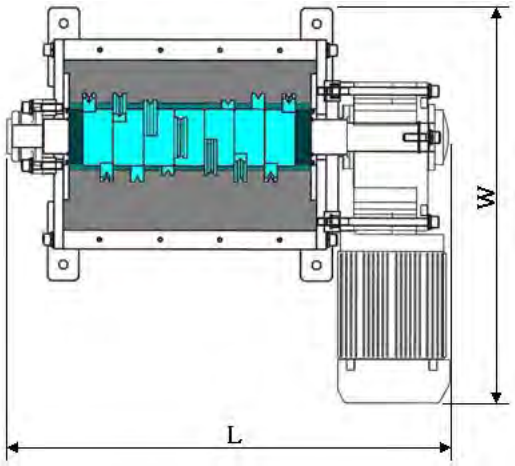
Machine specifications

Chip form	Ribbon chips	Flat helical chips	Spiral chips	Long comma chips	Tangled chips	Long curly chips	Mixed with foreign matter
Applicability	○	○	○	○	○	○	×



SKE-075HL-60-400R
* Product photo shows product with hopper and oil pan attached.





Model	Motor capacity	Major dimensions	Operating voltage	Main unit weight
SKE-075HL-60-400R/L	0.75 kW	L700 × W469 × H163	200 V AC	86 kg
SKE-075HL-60-530R/L		L830 × W469 × H163		95 kg
SKE-150 HL-60-400R/L	1.5 kW	L720 × W623 × H200		125 kg
SKE-150 HL-60-530R/L		L850 × W623 × H200		135 kg

Standard paint color

5Y8/1.5 N2.5

Major options

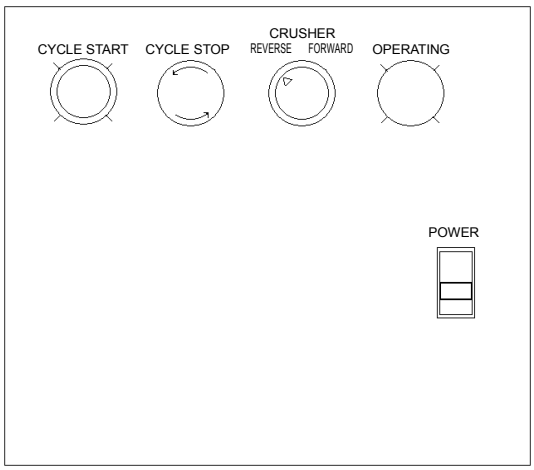
* Not included in price of main unit

Hopper/mount/control panel/hopper door open/close sensor/other safety measures/ customer-specified paint color /power cable/installation work, etc.

*** Specifications may differ significantly depending on conditions at the actual installation site or other factors. Please consult with our sales staff.**

Standard control panel

* Not included in price of main unit



Basic performance	Housing dimensions W300 × H300 × D160 Paint color 5Y7/1 (both inside and outside)
	Externally mounted earth leakage breaker (30 mA)
	Automatic operation (automatic reverse retry function on overload)
	Manual operation (push button with selector)
	Combined automatic and emergency stop (push-lock button)
	Mitsubishi Electric's FX1S-10MR PLC (compatible with 5DM Display)
	With MG thermal
	Primary power 200 V AC In-panel control voltage 200 V AC

* Special specifications are available other than the above, including user-specified specifications.

SKR Series

Ideal for batch treatment from a chip bucket and for mass and batch treatment by feeding from collecting conveyor.

~ Example of installation ~

- ☑Machining by NC lathe
- ☑Long curly forged iron chips
- ☑Direct feeding from a chip bucket
- ☑Crushed chips collected and conveyed on conveyor
- ☑7.5 kW large capacity model
- ☑Operations linked to Bucket Lifter

SKR-750EW-75　* Available in user-specified paint color

SKR-750EW-75

☑Feeding from rotating forklift　☑Crushed chips discharged by conveyor

SKR-370EW-50

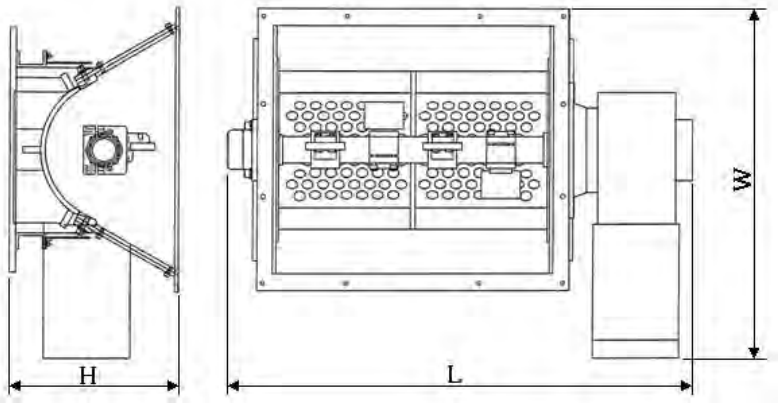
☑Installed directly on chip conveyor　☑Direct discharge to chip box

* Photos show products with optional equipment attached.

Machine specifications

Chip form	Ribbon chips	Flat helical chips	Spiral chips	Long comma chips	Tangled chips	Long curly chips	Mixed with foreign matter
Applicability	○	○	○	○	○	○	△

* Mixed foreign materials must be smaller than specified dimensions. Please consult with us in advance.



SKR-750EW-60 * Product photo shows product with hopper and control panel attached.

Model	Motor capacity	Major dimensions	Voltage	Weight
SKR-220N-60-320R/L	**2.2 kw**	**L1100 × W900 × H400**	**200 V AC**	**200 kg**
SKE-370EW-50-700R/L	**3.7 kw**	**L1200 × W1000 × H430**		**400 kg**
SKE-550EW-50-700R/L	**5.5 kw**	**L1200 × W1100 × H450**		**500 kg**
SKE-750EW-70-1000R/L	**7.5 kw**	**L1800 × W1200 × H670**		**650 kg**

Standard paint color

5Y8/1.5 N2.5

Major options

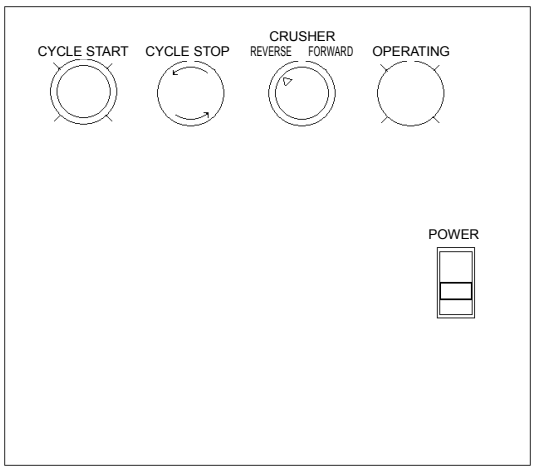
* Not included in price of main unit

Hopper/mount/control panel/hopper door open/close sensor/other safety measures/ customer-specified paint color /power cable/installation work, etc.

*** Specifications may differ significantly depending on conditions at the actual installation site or other factors. Please consult with our sales staff.**

Standard control panel

* Not included in price of main unit



Basic performance	Housing dimensions W300 × H300 × D160 Paint color 5Y7/1 (both inside and outside) * W 400 x H 400 x D 200 for products with 3.7 kW or higher capacity
	Externally mounted earth leakage breaker (30 mA)
	Automatic operation (automatic reverse retry function on overload)
	Manual operation (push button with selector)
	Combined automatic and emergency stop (push-lock button)
	Mitsubishi Electric's FX1S-10MR PLC (compatible with 5DM Display)
	With MG thermal
	Primary power 200 V AC In-panel control voltage 200 V AC

* Special specifications are available other than the above, including user-specified specifications.

SPS-25HYR

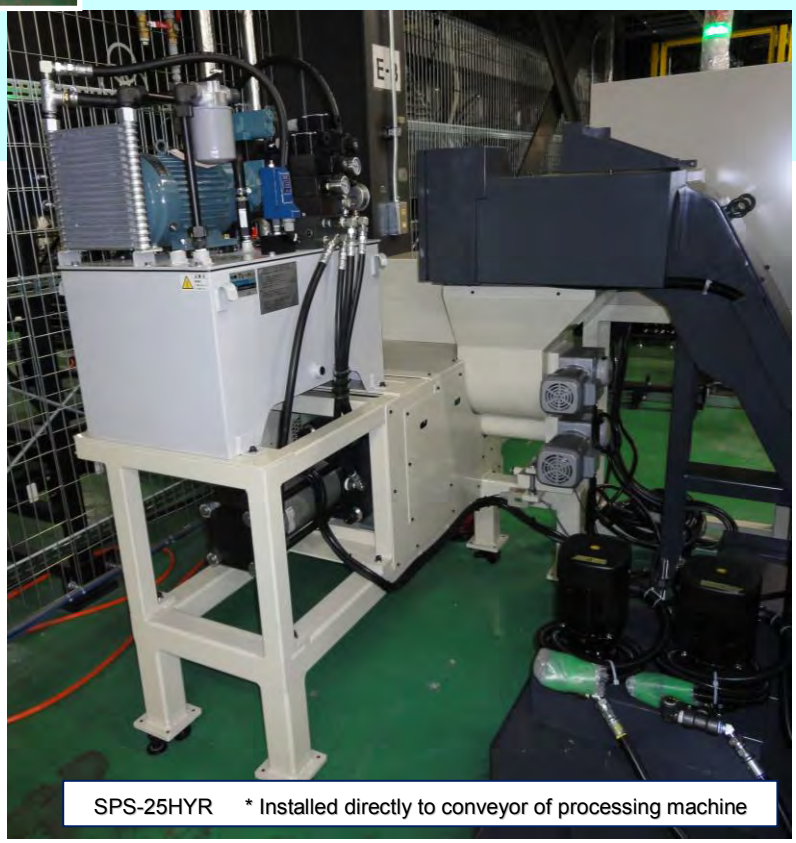
Compresses and solidifies chips. Removes adhering cutting fluid by compression. Also ideal for real-time treatment following one-to-one installation to each processing machine.

Patent No. 2949664

~ Example of chip treatment installation ~

- ☑Chip solidification and volume reduction
- ☑Removing adhering liquid by compression
- ☑Compatible with various metals, including iron, aluminum, cast iron, and SUS
- ☑Compatibility with various peripherals, letting operators expand product functionality

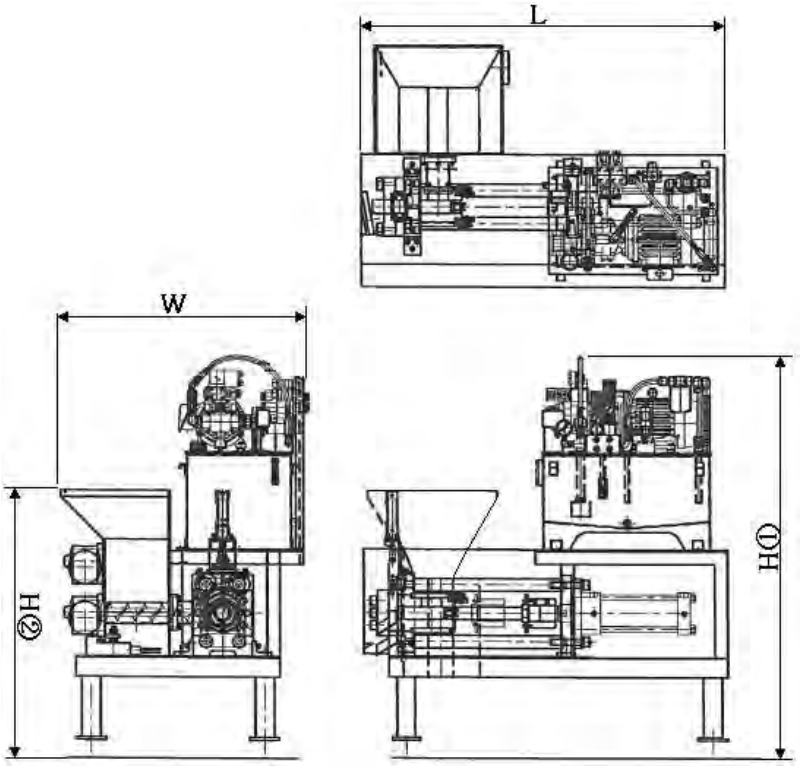
- ☑One-to-one standalone installation to each processing machine
- ☑Operations linked to conveyor of processing machine
- ☑Ideal for installation on unmanned processing lines
- ☑Compatibility with various peripherals, letting operators expand product functionality



* Photos show products with optional equipment attached.

Machine specifications

* Product photo shows standard main unit.



Model	Major dimensions	Weight
SPS-25HYR	L1450 × W920 × H①1580 × H②1060	650 kg

Basic performance and specifications	Primary power supply	200 V AC, 50/60 Hz		Control voltage	200 V AC, 50/60 Hz	
	Control panel housing	Dust-proof water-draining housing Housing dimensions: W600 × H700 × D200 Paint color: 5Y7/1 (both inside and outside)				
	Compression cylinder thrust	25T	Hydraulic pump capacity	2.2 kw	Hydraulic pump pressure	21 Mpa
	Recommended hydraulic oil	#VG46 (60 liters)			Hydraulic oil cooling	Pump drain type (air-cooling cooler)
	Operational specifications	Externally mounted earth leakage breaker (30 mA)				
		PLC Mitsubishi Electric's FX1S PLC (compatible with 5DM Display)				
		Touch panel allows selection of operating mode.				
		Automatic and manual individual operation (arbitrarily selectable)				
		Emergency stop push-lock button				
		Supports linked operations based on external signal input and output				

* Special specifications are available other than the above, including user-specified specifications.

Standard paint color

5Y8/1.5 N2.5

Major options

* Not included in price of main unit

Hopper/mount/control panel/hopper door open/close sensor/other safety measures/ customer-specified paint color /power cable/installation work, etc.

*** Specifications may differ significantly depending on conditions at the actual installation site or other factors. Please consult with our sales staff.**

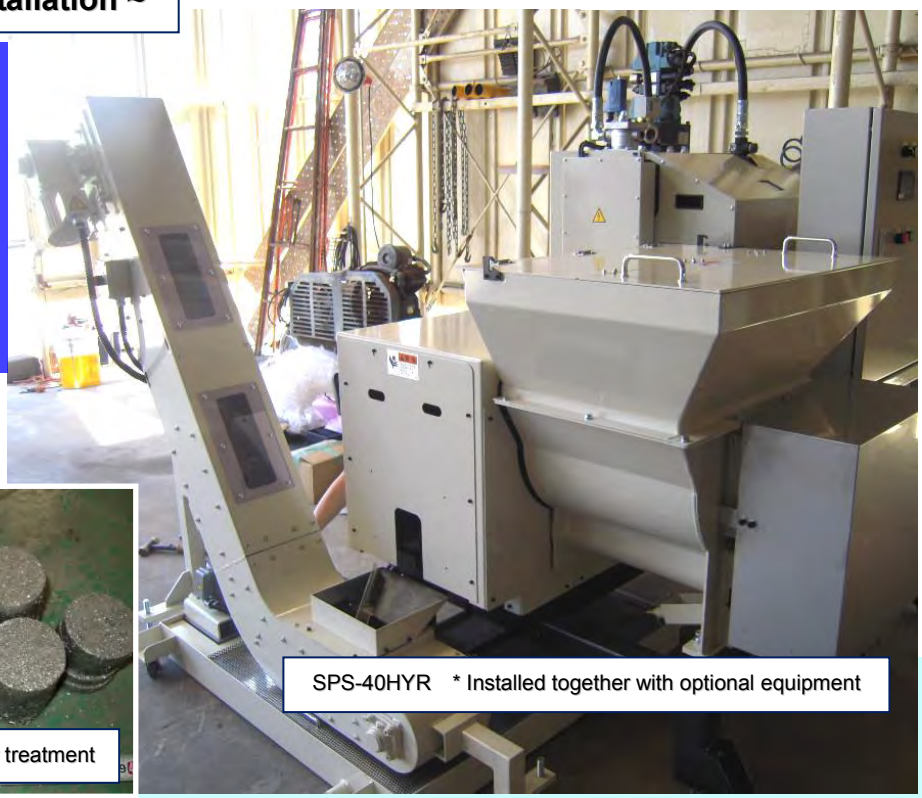
SPS—40H(S)YR

Compresses and solidifies chips and grinding sludge. Removes adhering cutting fluid by compression.

Patent No. 2949664

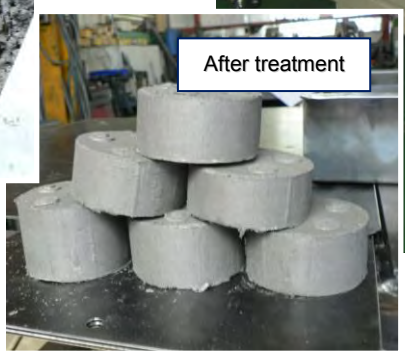
~ Example of chip treatment installation ~

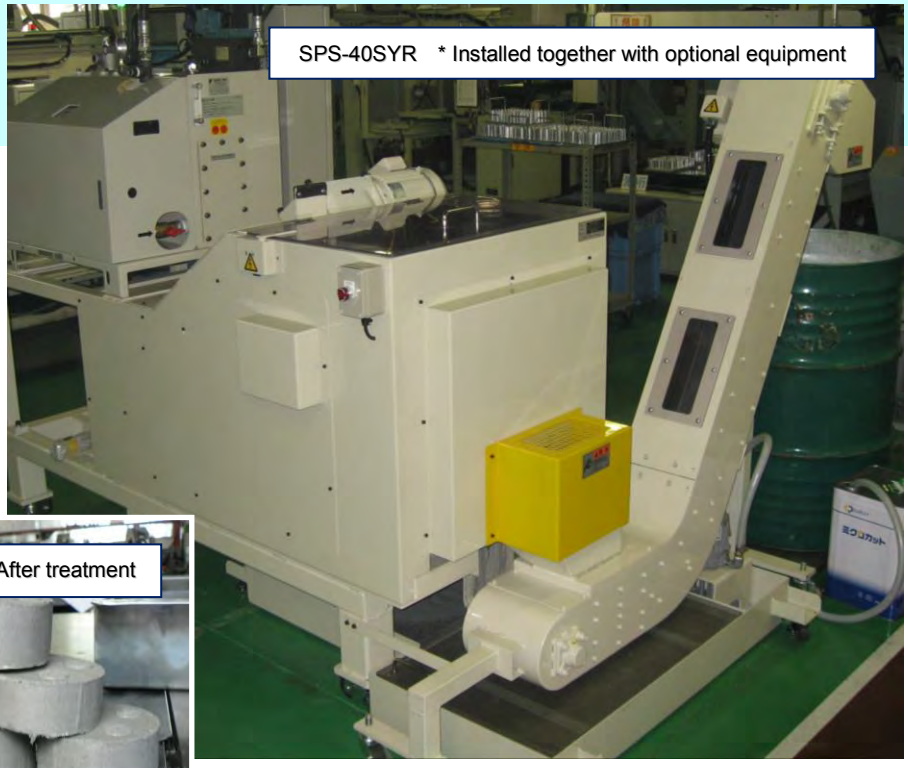
- ☑ Chip solidification and volume reduction
- ☑ Removing adhering liquid by compression
- ☑ Compatible with various metals, including iron, aluminum, cast iron, and SUS
- ☑ Compatibility with various peripherals, letting operators expand product functionality



~ Example of grinding sludge treatment installation ~

- ☑ Solidification and volume reduction of grinding sludge
- ☑ Removing adhering liquid by compression
- ☑ Compatible with various metals, including iron, aluminum, and SUS
- ☑ Compatibility with various peripherals, letting operators expand product functionality

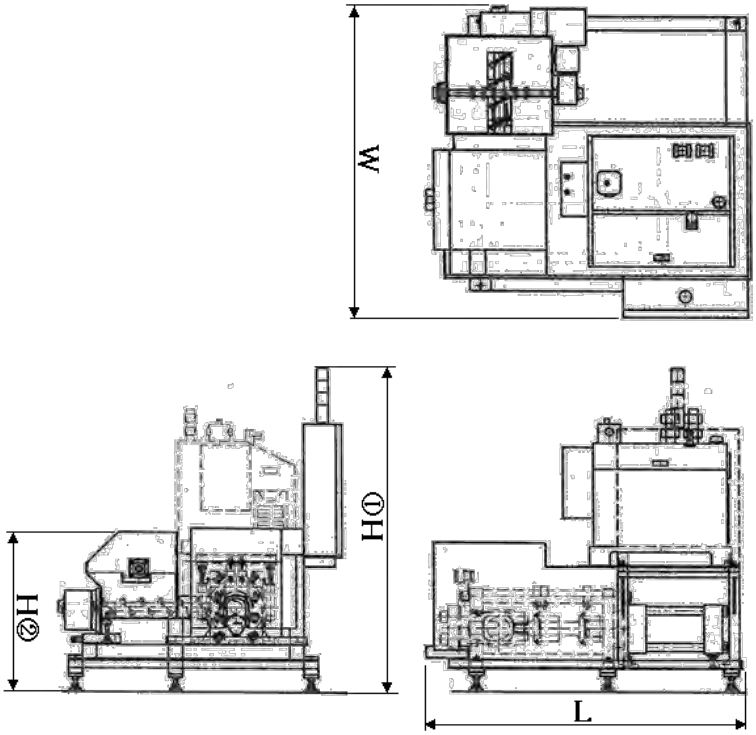




* Photos show products with optional equipment attached.

Machine specifications

SPS-40HYR　* Product photo shows standard main unit.



Model	Major dimensions	Weight
SPS-40HYR	L1500 × W1000 × H①1750 × H②950	950 kg

Basic performance and specifications	Primary power supply	200 V AC, 50/60 Hz		Control voltage	200 V AC, 50/60 Hz	
	Control panel housing	Dust-proof water-draining housing　Housing dimensions: W600 × H700 × D200 Paint color: 5Y7/1 (both inside and outside)				
	Compression cylinder thrust	40T	Hydraulic pump capacity	Equivalent to 5 kW	Hydraulic pump pressure	21 Mpa
	Recommended hydraulic oil	#VG46 (100 liters)			Hydraulic oil cooling	Pump drain type (air-cooling cooler)
	Operational specifications	Externally mounted earth leakage breaker (30 mA)				
		PLC Mitsubishi Electric's FX1S PLC (compatible with 5DM Display)				
		Touch panel allows selection of operating mode.				
		Automatic and manual individual operation (arbitrarily selectable)				
		Emergency stop push-lock button				
		Supports linked operations based on external signal input and output				

* Special specifications are available other than the above, including user-specified specifications.

Standard paint color

5Y8/1.5　N2.5

Major options

* Not included in price of main unit

Hopper/mount/control panel/hopper door open/close sensor/other safety measures/ customer-specified paint color /power cable/installation work, etc.

*** Specifications may differ significantly depending on conditions at the actual installation site or other factors. Please consult with our sales staff.**

SPS-80/100/150H(S)YR

Allows treatment of greater volumes than model SPS40HYR. Installation of optional peripheral devices enables various layouts.

Patent No. 2949664

~ Example of chip treatment installation ~

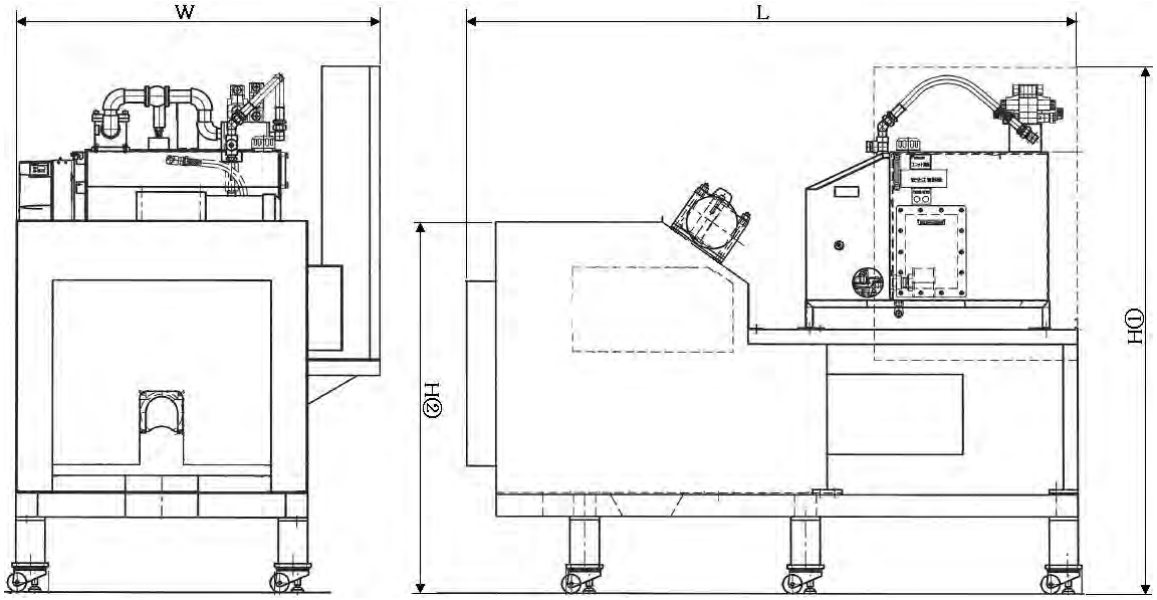
- ☑ Chip solidification and volume reduction
- ☑ Removal and collection of adhering liquid by compression
- ☑ Compatible with various metals, including iron, aluminum, cast iron, and SUS
- ☑ Compatibility with various peripherals, letting operators expand product functionality

~ Example of grinding sludge treatment installation ~

- ☑ Solidification and volume reduction of grinding sludge
- ☑ Removal of adhering liquid by compression
- ☑ Compatibility with various peripherals, letting operators expand product functionality

* Photos show products with optional equipment attached.

Machine specifications



Model	Major dimensions	Weight
SPS-80H(S)YR	**L1800 × W1250 × H①1800 × H②1200**	**1800 kg**
SPS-100H(S)YR	**L1800 × W1250 × H①1800 × H②1200**	**1900 kg**
SPS-150H(S)YR	**L2400 × W1300 × H①2400 × H②1350**	**2500 kg**

Basic performance and specifications	Primary power supply	200 V AC, 50/60 Hz		Control voltage	200 V AC, 50/60 Hz
	Control panel housing	Dust-proof water-draining housing Housing dimensions: W800 × H1000 × D200 Paint color: 5Y7/1 (both inside and outside)			
		SPS-80H(S)YR	**SPS-100H(S)YR**		**SPS-150H(S)YR**
	Compression cylinder thrust	80T	100T		150T
	Hydraulic pump capacity(*)	Equivalent to 7 kW	7 kw ~ 11 kw		7 kw ~ 15 kw
	Hydraulic pump pressure	21 Mpa			
	Hydraulic oil cooling	Return line air-cooling fan cooler			
	Recommended hydraulic oil	#VG46 (60 liters)			
	Operational specifications	Externally mounted earth leakage breaker (30 mA)			
		PLC Mitsubishi Electric's FX1S PLC (compatible with 5DM Display)			
		Touch panel allows selection of operating mode.			
		Automatic and manual individual operation (arbitrarily selectable)			
		Emergency stop push-lock button			
		Supports linked operations based on external signal input and output			

* Special specifications are available other than the above, including user-specified specification.

(*) Select pump capacity appropriate for treatment capacity.

Standard paint color

5Y8/1.5 N2.5

Major options

* Not included in price of main unit

Hopper/mount/control panel/hopper door open/close sensor/other safety measures/ customer-specified paint color /power cable/installation work, etc.

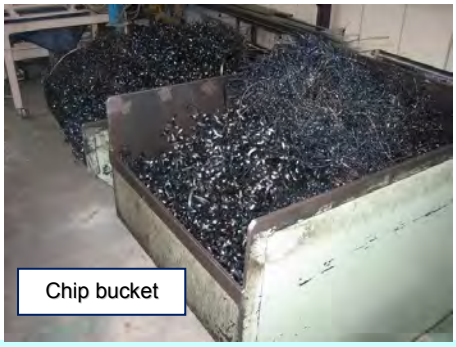
*** Specifications may differ significantly depending on conditions at the actual installation site or other factors. Please consult with our sales staff.**

Auxiliary

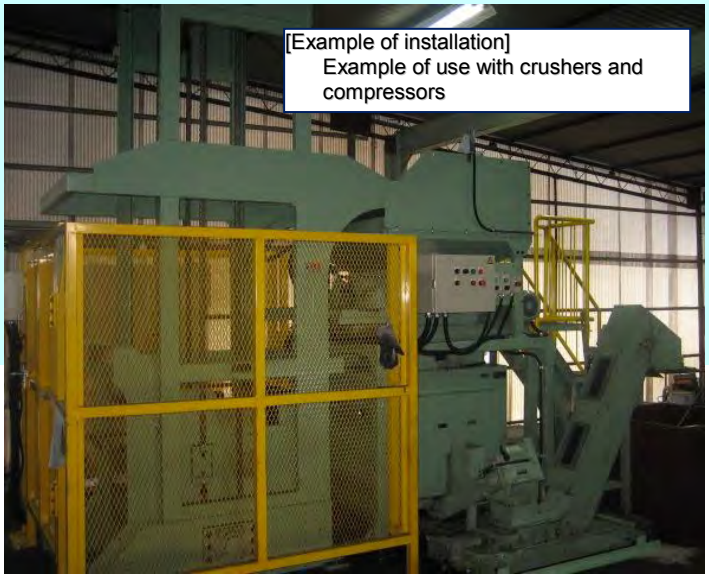
A range of peripheral devices lets operators expanded the functionality of their equipment and makes crushers and compressors function even more effectively.

Bucket Lifter for chip bucket

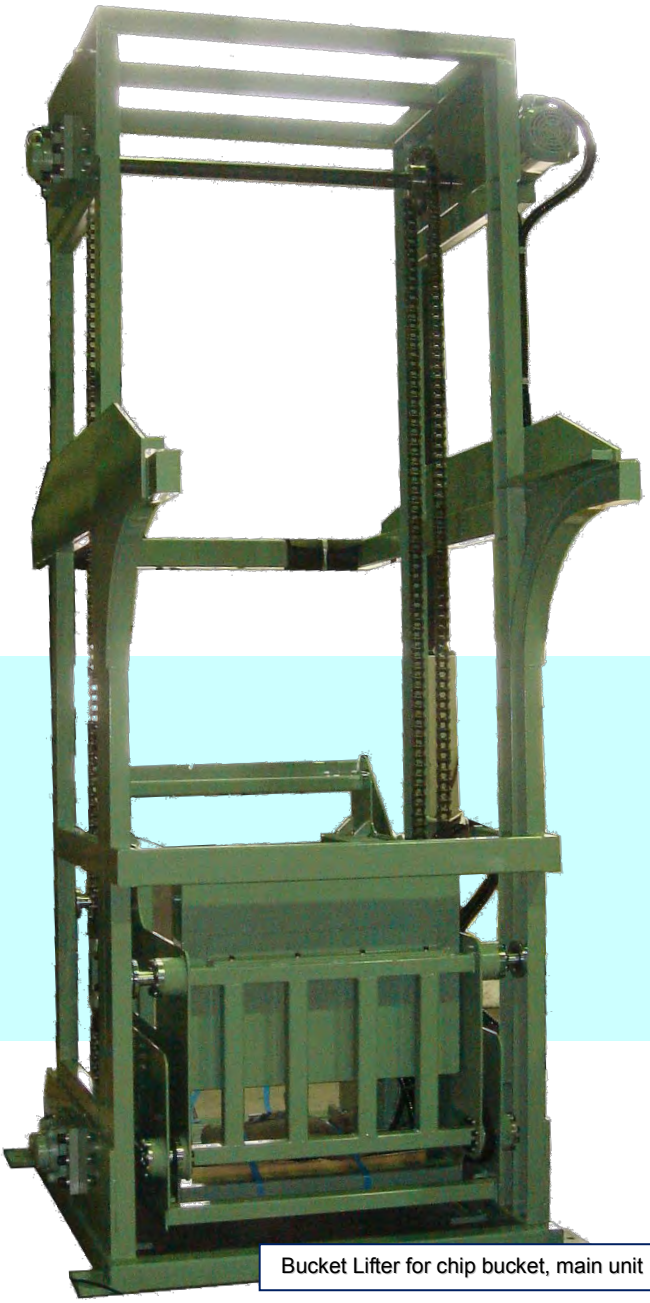
- ☑Helps feed chips
- ☑Design tailored to existing customer buckets
- ☑Automatic feed into compressor or crusher
- ☑Design emphasizing safety and ease of use



Chip bucket



[Example of installation]
Example of use with crushers and compressors



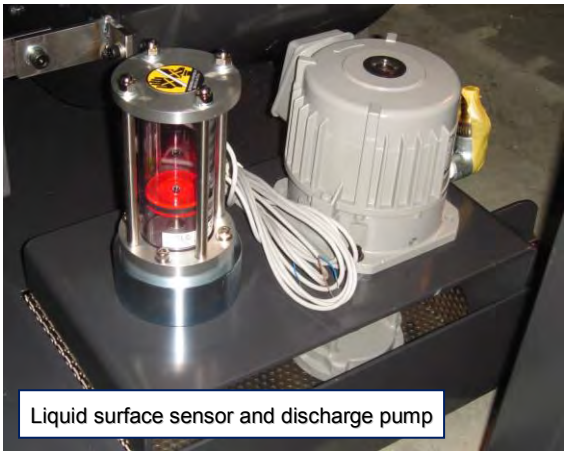
Bucket Lifter for chip bucket, main unit

Example of special applications ~ We draw on our extensive experience to meet any special requirement you may have.

Bucket loading component

Waste liquid collector

- ☑ Collects cutting liquid separated during crushing or compression
- ☑ The collected liquid is automatically returned by pump to the processing line.
- ☑ Simple design ensures ease of maintenance.



Liquid surface sensor and discharge pump

Used with cutting fluid collection tank

Briquette discharging device

Chips solidified by compression are referred to as briquettes.

- ☑ Collects chips solidified by compression
- ☑ Operators can adjust discharge height and direction to suit site conditions.
- ☑ Simple design ensures ease of maintenance.

Automatic discharge linked to compressor

Briquettes are conveyed into a drum and collected easily.

Introducing Unique proprietary technologies

SAN-AI ECO SYSTEM's unique technological improvements enhance functionality.

~ Innovation driven by a wealth of experience ~

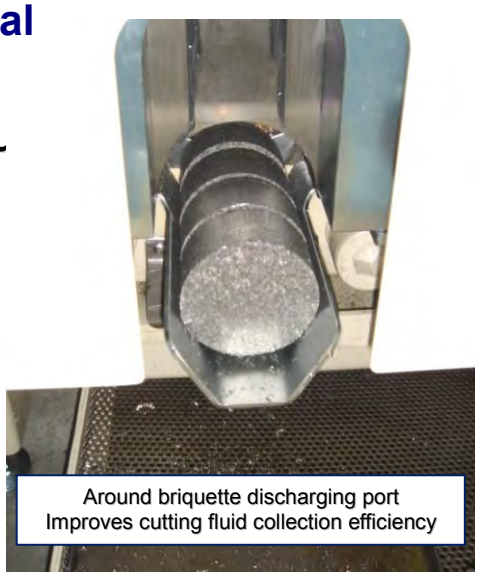
SAN-AI ECO SYSTEM draws on its extensive experience and track record of delivered products to ensure consistent basic compression performance and to improve aspects that affect operating efficiency.

"Solidification is no problem, but durability is not good."

"We can separate the cutting fluid, but doing so creates a mess around the equipment."

"Low treatment capacity hampers operational efficiency."

We strive constantly to improve our products in response to customer comments like the above.



Around briquette discharging port
Improves cutting fluid collection efficiency

Bridge breaking mechanism inside chip feeding hopper

An inverter-control hydraulic unit is standard equipment.
Compression speeds can be varied according to the characteristics of the treated material.
The product supports treatment of a wide range of materials.

Facility combining compressor, crusher, and conveyor

—— A touch panel is provided for operational control ——

A clear, easy to read character display makes it easy to check settings and error confirmations. Specifications can be custom-tailored to suit specific facilities.

SAN-AI ECO SYSTEM emphasizes its ability to provide solutions.

~ Chips and site conditions vary widely. ~

For example, iron chips actually require differing crushing or compression conditions, depending on processing conditions and differences in physical characteristics. The shapes of chip conveyors, machine layout, and work conditions at customer plants vary widely as well.
SAN-AI ECO SYSTEM emphasizes its ability to provide solutions to suit a wide range of needs and conditions.

“Can the product be installed in this space?”

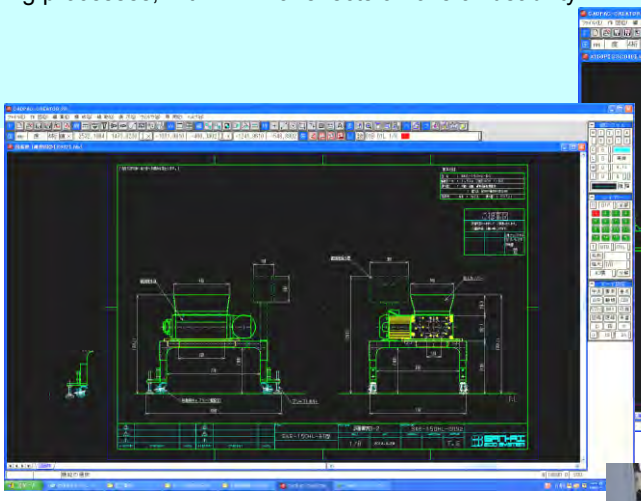
We draw on our extensive experience to respond to questions like this.
To get started, contact us.

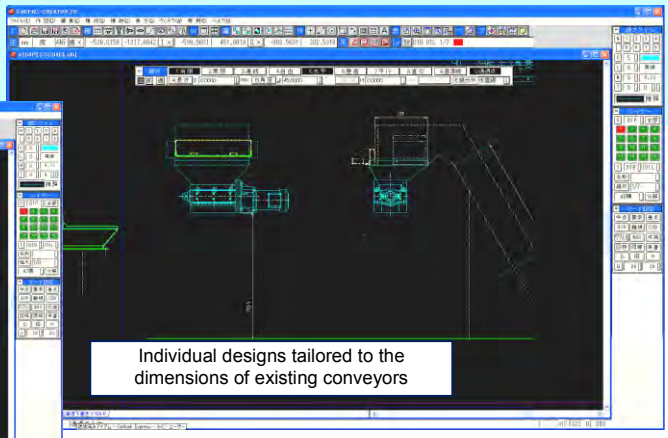
Discharge from conveyor of the processing machine to collecting box

Transfer from conveyor of the processing machine to floor conveyor

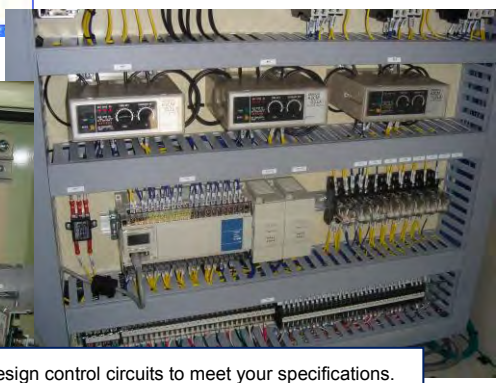
~ Designs tailored to existing facilities ~

To achieve the most efficient chip treatment, SAN-AI ECO SYSTEM proposes plans tailored to meet the needs of your existing plant facilities.
Our goal is to provide equipment customers will find useful as extensions of existing working processes, with minimal effects on overall usability.





Individual designs tailored to the dimensions of existing conveyors



We can also design control circuits to meet your specifications.

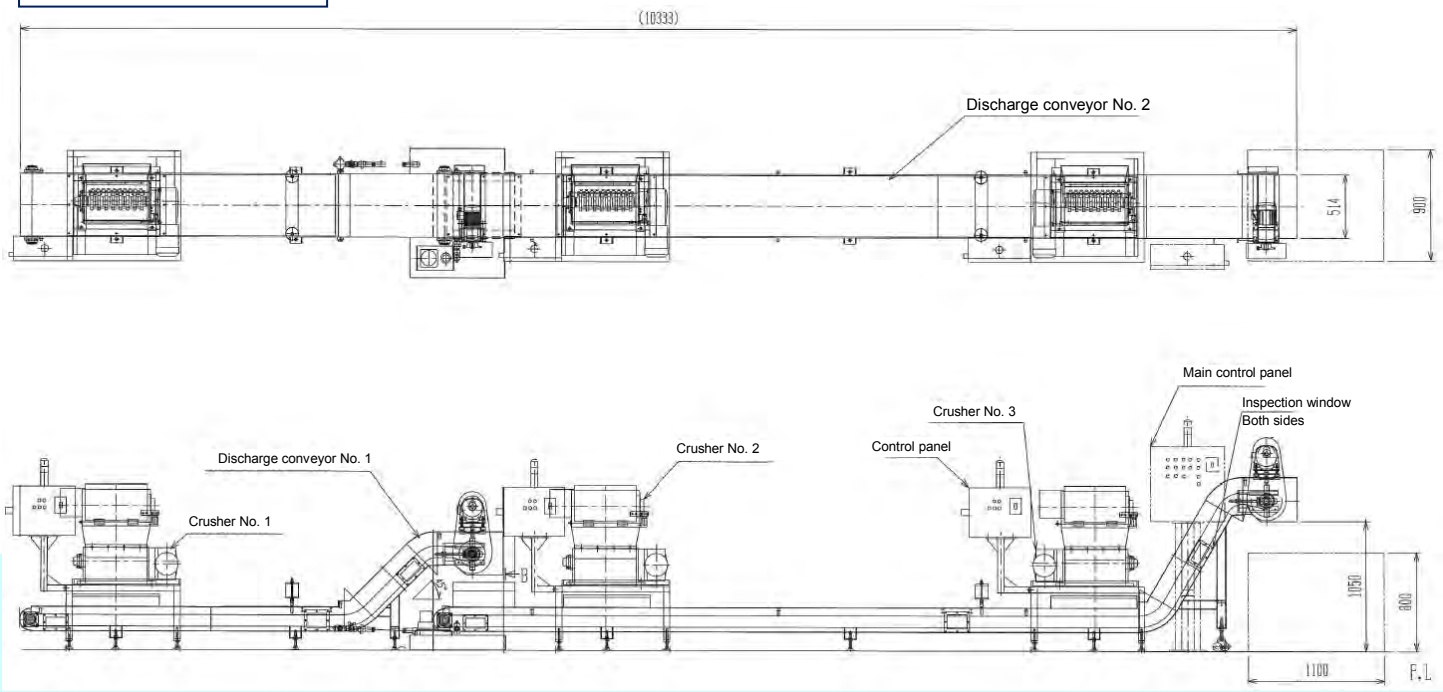
Chip crusher installation examples

Example 1: Chips discharged from the lathe are crushed, collected, and conveyed → collected in chip bucket

SKE-150N-500 x 3, Chip conveyor x 2

In this example, the crusher is installed one-to-one in a line with two or more lathes. Crushed chips are collected and conveyed on the conveyor and collected in a dedicated box.

Installation layout



In this example, a work site is improved by installing crushers and conveyors.
Installing a crusher and conveyor for each processing machine cuts chip treatment labor requirements and helps keep the plant safe and clean. Reducing labor requirements also has profound implications for occupational safety and health and can prevent declines in work efficiency caused by conveyor problems like chip clogging.

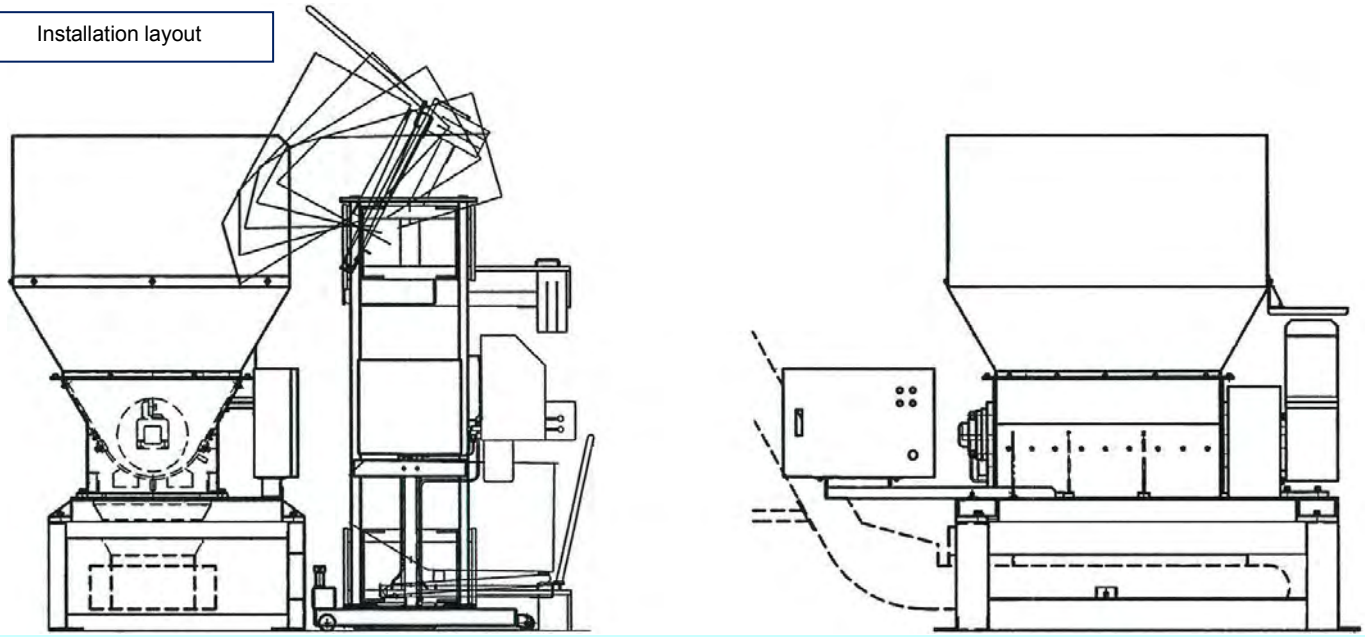
Photo of installed SKE-150N system

Example 2: Chips collected in a dedicated bucket are crushed by batch feeding → conveyed on conveyor and collected in chip box

SKR-750EW-70 x1, Bucket Lifter x1, Chip conveyor x1

In this example, the crusher is installed one-to-one in a line with two or more lathes. Crushed chips are collected and conveyed on the conveyor, then collected in a dedicated box.

Installation layout



Chips collected in a bucket

This facility combines a crusher, conveyor, and Bucket Lifter that feeds chips from the bucket. In this system, the chip bucket is set in the Bucket Lifter, and the chips automatically are fed into the crusher when the operator pushes a button.
Crushed chips are conveyed on the chip conveyor into a collection box for batch treatment.

Photo of installed SKR-750 system

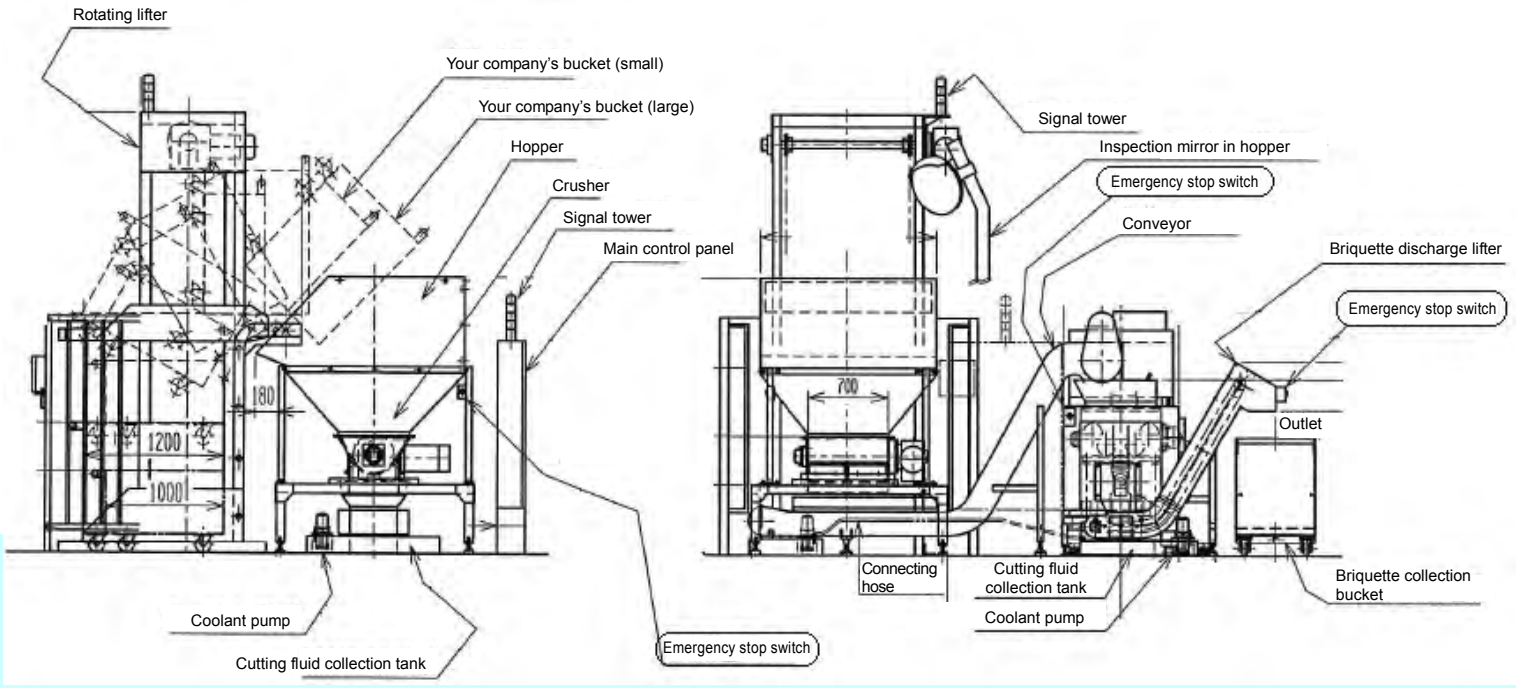
Chip compressor installation examples

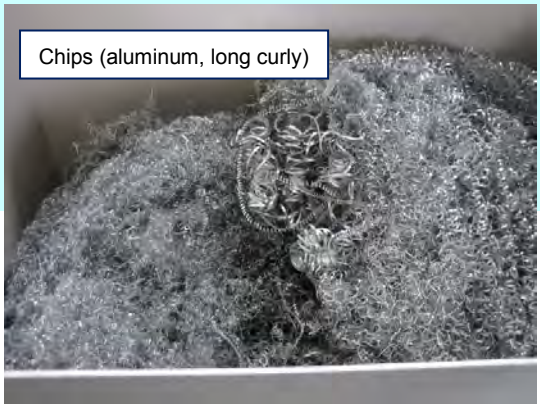
Example 1: Chips are fed from the bucket into the crusher. Crushed chips are conveyed to the compressor for solidification and collected in a dedicated box.

SPS-100HYR, SKR-370EW-30, Bucket Lifter, Chip conveyor, Briquette conveyor

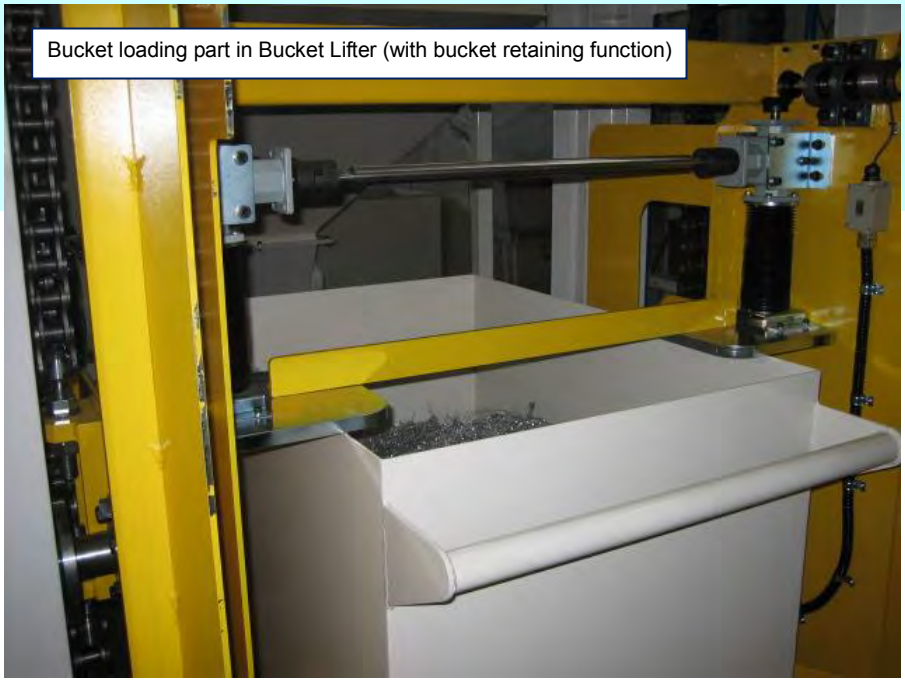
In this system, chips are fed from the dedicated bucket and subjected to batch treatment from crushing through compression.

Installation layout





Chips (aluminum, long curly)



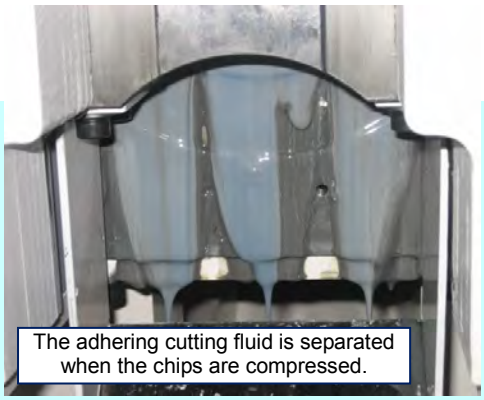
Bucket loading part in Bucket Lifter (with bucket retaining function)

This facility combines a crusher, compressor, conveyor, and Bucket Lifter that feeds chips from the bucket. In this system, the chip bucket is set in the Bucket Lifter, and the chips are automatically fed into the crusher when the operator pushes a button. Crushed chips are conveyed to the compressor on the chip conveyor for automatic solidification. Solidified briquettes can then be conveyed to the collection box in batches. Cutting fluid on the chips is removed and collected when the chips are compressed.

This compression facility is designed to handle long curly aluminum chips.
This facility recycles the aluminum widely used in automobiles and other products, increasing bulk specific gravity by compression and solidification.
Pressure generated by compression separates cutting fluid from chips.
Re-use and re-dissolution of aluminum often require chips free of water and oil, which in turn requires compression and solidification at high pressures.

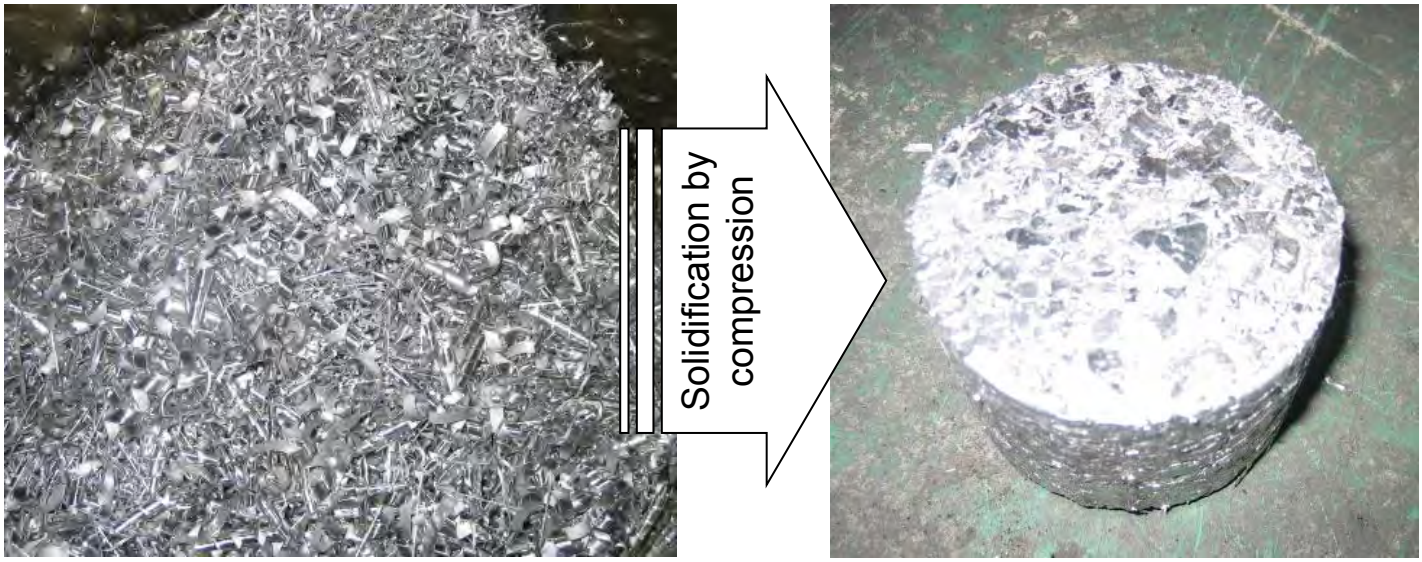
Bucket Lifter when feeding chips

Standalone control panel for Bucket Lifter



The adhering cutting fluid is separated when the chips are compressed.

SPS100HYR and auxiliary peripheral equipment



Request for sending test samples

SAN-AI ECO SYSTEM offers a free sample test based on customer inquiries.
Please use this service to state your requirements and to allow us to formulate a proposal.

Caution! **Please send chips and sludge for testing to the address indicated below.**

○Address for sample deliveries

Sales staff
SAN-AI ECO SYSTEM CO., LTD.
260-57, Hase, Atsugi, Kanagawa, 243-0036, Japan
TEL：046-290-0106
FAX：046-248-0185
Email：info@san-ai-eco.com

– Requests –

* When you request sample testing, please complete the request form on the next page and send to SAN-AI ECO SYSTEM by fax or e-mail.

* We will use the information provided in the test request form solely for sample testing. We will not disclose this information to any third parties.

* Provide at least approximately two 20-liter pails of test chips. Please inquire with the sales staff as regards the actual amount of test chips as this may vary in accordance with the test.

* Customers are responsible for shipping costs required to submit chips. We will return the chips at our expense.

* Please inform our sales staff in advance of the shipping date.

* Please inform us in advance if the sample material is covered in hazardous cutting fluid or is associated with high risk of ignition.

*** Please make a copy of this page for use with test requests.**

Sample Test Request Form (for Customers)

Date of entry (Year) (Month) Date)

Name of SAN-AI ECO SYSTEM staff in charge:

Request form sent to

FAX 046-248-0185 **Please provide the information requested in the fields in the tables below and send the form to the destination indicated to the left.**

◆ **Please inform us in advance if the sample material is covered in hazardous cutting fluid or is associated with high risk of ignition.**

Basic information	Name of your company	Name of sales agent				
	Address	〒				
	Department		Managerial position		Name	
	TEL		FAX			
	Style of packing	Pail	Plastic container	Other	Date of shipment	
	Number of packages				Transporter	
Test information	Purpose	1. Cost reductions 2. Recycling 3. Environmental improvement 4. Productivity improvement				
	Treatment	1. Solidification and volume reduction 2. Crushing and volume reduction 3. Cutting fluid extraction 4. Other				
	Form	1. Sludge 2. Slurry 3. Chips (Form:)				
	Cutting fluid	1. Water soluble 2. Oil-based 3. Other ( )				
	Material	1. Ferrous	2. Non-ferrous	3. Grinding sludge (raw/sintered)	4. Other	
	JIS code					
	Amount generated	kg/hour kg/date		Operating hours	hours/day	
	Treatment	1. Manual feeding 2. Automatic feeding 3. Other		Method	1. Batch 2. Real-time	

◆**Any confidential information provided by your company will be used solely for sample testing.**

Treatment/Report/Results	Compression conditions	1. Surface pressure ( ) 2. Form (φ × L) 3. Amount of cutting fluid ( )				
	Treatment capacity	kg/hour	Bulk specific gravity before treatment	cm^3	Bulk specific gravity after treatment	cm^3
	Crushing capacity	kg/hour				
	Volume reduction rate	/	Amount of extracted cutting liquid	kg		
	Compression result	1. Good 2. Moderate 3. Poor		Crushing result	1. Good 2. Moderate 3. Poor	
	Report needed	1. Yes 2. No		Photograph required	1. Yes 2. No	
	Address for sending report			Treatment cost		
	Accommodates test residue	1. Disposal 2. Return 3. Other				
	Test date	(Month) (Date)	Shipping date	(Month) (Date)	Transporter	

Remarks (Provide any important information not provided above.)

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Package received by	Test requested by	Test performed by	Report created by	Post-treatment	Confirmed by

◆**Customers are responsible for shipping costs required to submit chips.**

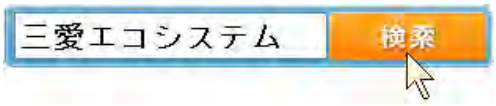
Creativity Challenge

— Creativity and Challenge —

Since our founding, creativity and challenge have defined SAN-AI ECO SYSTEM's policies and guidelines for the future.
As well as performing all that needs to be done in accordance with correct procedures, we continue to seek out new goals and strive to provide essential manufacturing services as a company essential to society.

Manufacturer

三愛エコシステム
SAN-AI ECO SYSTEM



Company name:	SAN-AI ECO SYSTEM CO., LTD.
Headquarters and plant:	260-57, Hase, Atsugi, Kanagawa, 243-0036, Japan
TEL	046-290-0106 (Main)
FAX	046-248-0185
E-mail	info@san-ai-eco.com
URL	http://www.san-ai-eco.com

Distributor

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