

# Sidecut

*Pelletizer*

Cuts anything a pair  
of scissors can,  
and more...



**Patented  
worldwide**

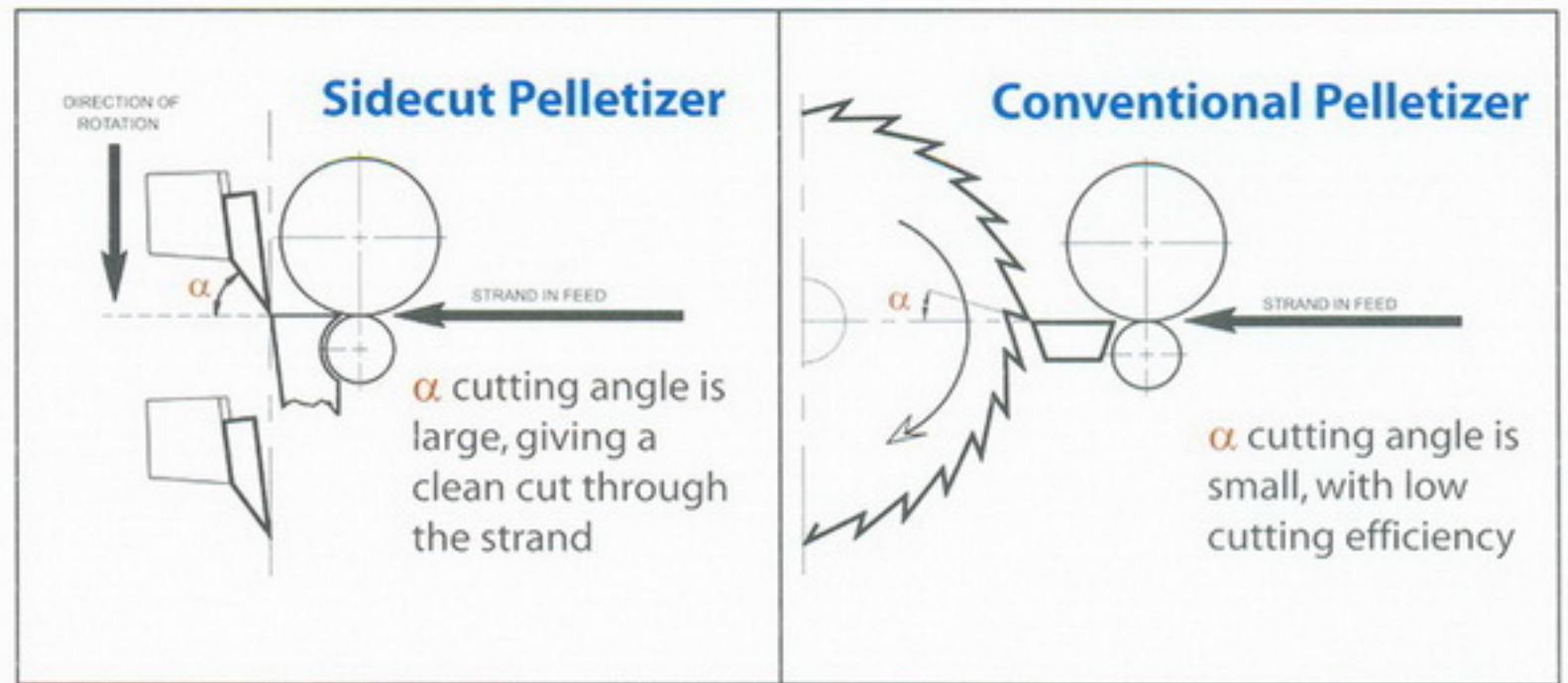
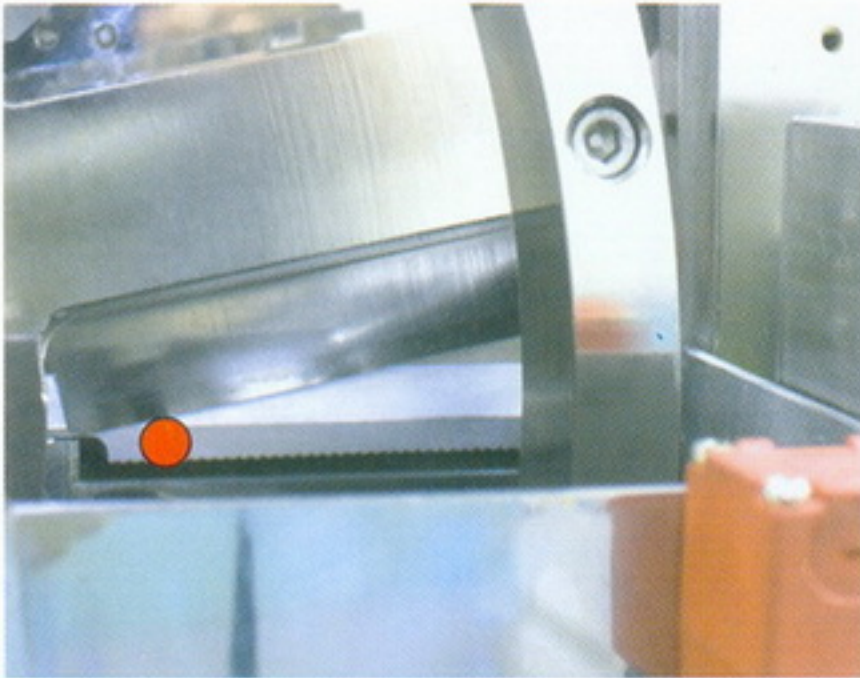
**Produced by  
Labtech  
Engineering  
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from  
Hoshipla Inc.  
Japan**

**THE  
NEW**

**GENERATION OF  
STRAND PELLETTIZERS**

## Principle of the Sidecut Pelletizer

As shown in the illustrations on the right, the Sidecut Pelletizer has a much larger cutting angle,  $\alpha$ , than that of conventional pelletizers. This gives a clean cut straight through the entire strand. The conventional type, because of the limitation of space on the drum knife, has only a small cutting angle. This results in only the top of the strand being cut while the rest of the strand is torn off.



The design of the rotary knife enables mounting of the cutting knives at a large angle as shown on the picture to the left. This results in a true cutting action where the knives shears right through the strands. The same principle as when cutting with a pair of scissors.

A conventional pelletizer often leaves 'tails' on the pellets because the blades do not cut cleanly through the whole strand. Instead, it cuts only on the upper part of the strand while the rest is torn away. With soft resins the blades cannot cut the strands at all, and with hard, brittle resins a conventional drum type cutter may crush the strands, causing a lot of dust.

## The Sidecut Pelletizer enables you to:

### ★ Produce compounds and masterbatches never possible before

The Sidecut Pelletizer enables you to pelletize very soft resins, as low as 10 Shore A, and even hot melt resins. It is equally efficient for pelletizing conventional as well as very hard and brittle resin types.

### ★ Minimize scrap from classifier with increased productivity

Because it produces very clean cut pellets with a 'soft' cutting action, you will minimize mis-cut pellets.

### ★ Increase your output on existing formulas

The Sidecut Pelletizer can produce pellets at very high speed without sacrificing quality. For highly filled compounds it will minimize pellet breakage since there is no crushing tendency, as with conventional pelletizers.

### ★ Produce clean, uniform pellets appreciated by your customer

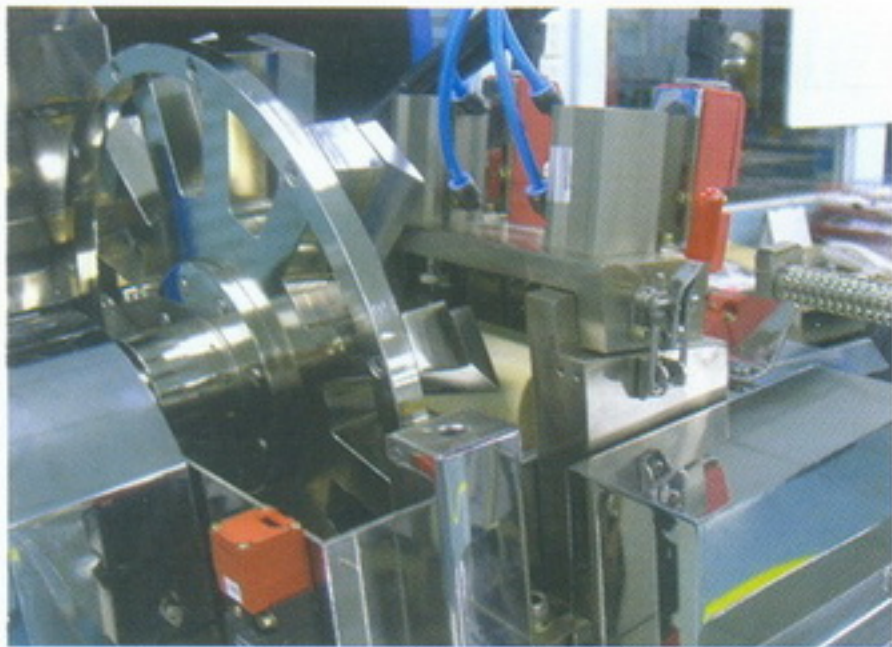
Clean cut, regularly shaped and uniform pellets without tails will result in increased and improved production from your customers' machines. The pellets will blend better with virgin resins, and compounds will give better feeding in the screws, filling up the channels in the in-feed section with minimum bridging.

### ★ Produce Micropellets as small as 0.5 x 0.5 mm

Extremely small pellets can be produced in our special Micropellet versions (Type M) with sizes as low as 0.5 x 0.5 mm. But the standard Sidecut Pelletizer versions can also produce pellets as small as 1 x 1 mm, or even smaller, depending on resin type.

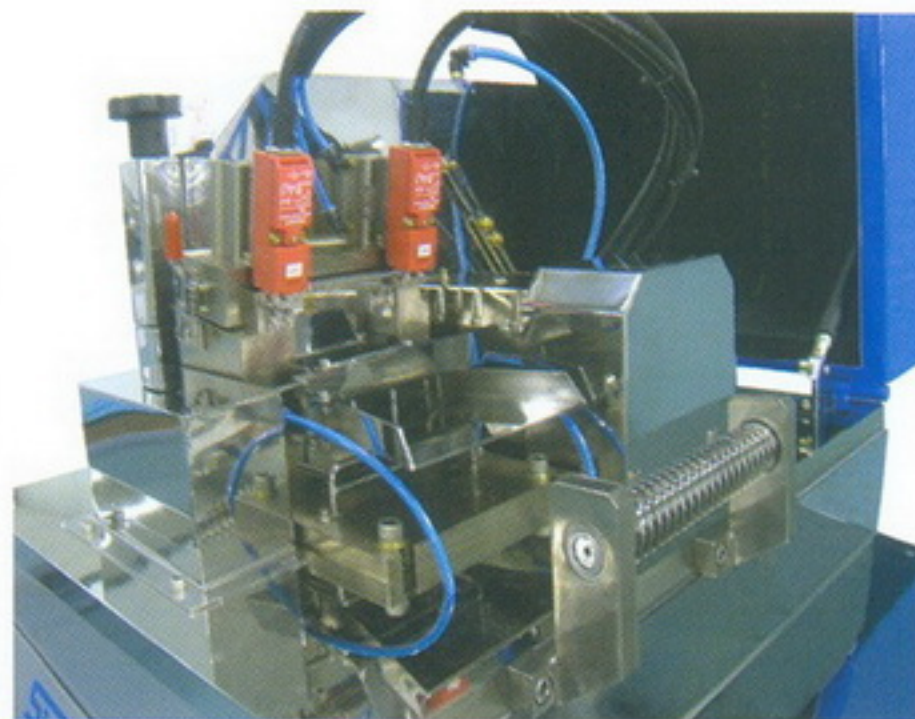
### ★ Increase your total plant capacity and profitability on new products with very short payback on your investment in Sidecut Pelletizers

Many of the products you produce with the Sidecut Pelletizer can also be made on water-cooled die face cutting pelletizers, but these machines are expensive and difficult to clean, making them more suitable for very long runs of the same compound. With the strand pelletizing system you have much more flexibility. But only with the addition of the Sidecut Pelletizer will you have practically unlimited possibilities to pelletize any compound or masterbatch that you only dreamed of before, and with higher profits. And as an additional bonus your production capacity will increase with lower manufacturing costs.



### The unique cutting rotor

The large diameter rotor shown here can be equipped with various numbers of cutting blades, depending on the Sidecutter version. The rotor is mounted on a set of heavy duty bearing blocks ensuring precision alignment with no play. The rotor is driven via a timing belt by a variable speed AC motor with speed regulation from a programmable frequency inverter.



### Strand feeding section

The Sidecut Pelletizer is, as standard, equipped with infinitely variable speed control of the strand feeding roller.

Within the strand cutting area there is minimum distance between the feed roll and cutting blades and the Sidecut Pelletizer is also equipped with an exclusive 'strand follower' that holds down the strands in the cutting area, thus minimizing strand jumping and ensuring clean, straight cut pellets.

The in-feed section of the pelletizer has a large feed chute with easy-to-adjust strand guiding pins. The whole in-feed assembly, including the upper rubber roll, is equipped with quick locks for fast removal and assembly.

The rubber feed roll is pneumatically laid onto the strands and the pressure on the strands can be set from zero to full force. This allows for precise feeding and ensures no strand deformation, even for the softest resins or compounds. With this and the cool cutting action of the rotor, the Sidecut Pelletizer is also capable of pelletizing very hot strands at up to 140°C



### Operator friendly control panel

Equipped with clearly visible digital control instruments and simple push buttons and selector switches with easy-to-understand symbols. The digital control system for pellet size and strand feed rate has been developed in-house with built in microprocessors. Pellet length is set on the lower control instrument to an accuracy of 0.1 mm. The upper digital control instrument regulates the in-feed speed, which is displayed in meters per minute.

When the in-feed speed is increased, the rotor and feed rollers will automatically follow so that the pellet length always stays the same. Likewise, if the length of the pellet is changed, the in-feed and rotor speed will change accordingly.

This synchronized control is a very timesaving feature, eliminating frequent measurements of pellet size followed by speed adjustments over and over again. The control panel also has a manual selector switch that allows the in-feed rolls direction to be reversed in case the strands get tangled up when being fed into the pelletizer.

### Up to 10 fold increase in lifetime of the cutting knives

The rotary knife blade shown here is equipped with near carbide type inlay and this, combined with the carbide tipped fixed knife, ensures a very long lifetime for the knives. Because of the very gentle scissor action of the cutters, the lifetime of the knives is up to 10 times longer than for conventional drum type pelletizers. An added bonus is that re-sharpening of the knives is easily carried out using a straight grinding machine.



### Enlarged pictures of pellets cut on the Sidecut Pelletizer



Polyurethane 25 Shore A



SBS 40 Shore A



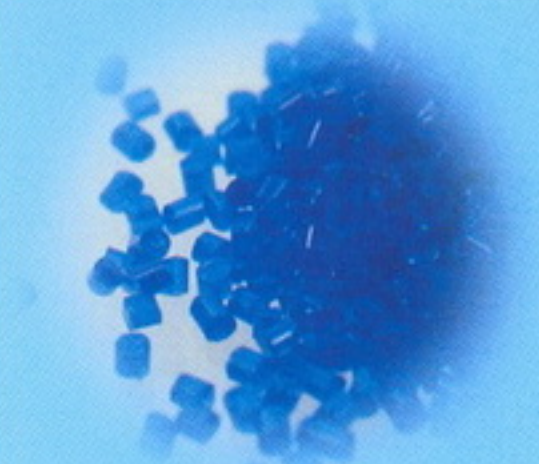
PET



PC



LDPE Masterbatch



Nylon Micropellets 0.5 x 0.5 mm

## Micropellet Version

The Sidecut Pelletizer is also available in a special Micropellet Version which enables the production of micropellets down to as small as 0.5 x 0.5 mm. This version uses special in-feed rollers as well as a special strand follower and is also equipped with a larger number of cutting blades to enable higher output capacity. The pellets produced have a very clean and straight cut through the whole strand, as with our standard Sidecut Pelletizers.



## Full safety features

All removable parts of the in-feed and cutting section, as well as the rotor cover, are double interlocked for optimum safety, in full compliance with CE and other world safety standards. The main electric supply is cut off when any of these parts are removed. The restart button on the control panel has to be pressed before the start button can be activated.



## Standard machine colours

The smaller Sidecut Pelletizers are painted in our Labtech yellow colour to match to our laboratory extruders. However the larger production versions, starting from LSC 1512, are painted in silver grey and blue colours to better match your production machines.



## TECHNICAL DATA FOR SIDECUT PELLETTIZERS

STANDARD VERSION						
Model	Max output (kg/h) with 3 x 3 mm pellets	Number of rotary knives	Maximum feed speed (m/min)	Knife rotor drive (kW)	Feed roller drive (kW)	Maximum number of strands
LSC 108	110	8	50	0.75	0.37	6
LSC 1512	370	12	90	1.5	0.75	18
LSC 1516	480	16	90	2.2	0.75	18
LSC 2512	570	12	53	2.2	0.75	25
LSC 2516	940	16	89	3.7	0.75	25

MICROPELLET VERSION						
Model	Max output (kg/h) with 0.5 x 0.5 mm pellets	Number of rotary knives	Maximum feed speed (m/min)	Knife rotor drive (kW)	Feed roller drive (kW)	Maximum number of strands
LSC 112M	5.5	12	40	0.75	0.37	36
LSC 1520M	25	20	60	2.2	0.75	108

Agent

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