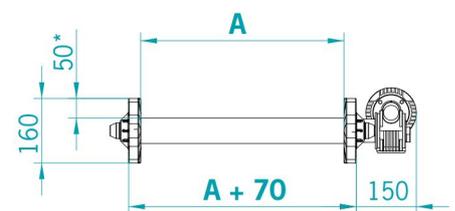
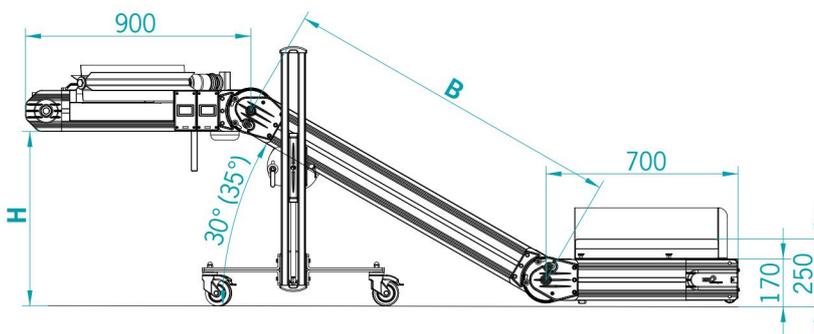


# N-CPST conveyor with paddle separator

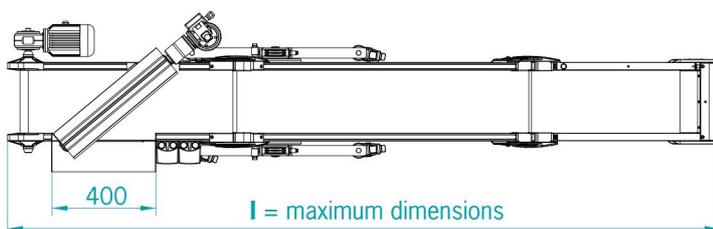


- Sturdy frame made of primary extrusion aluminium section, Alloy 6060, protected by anodisation treatment thickness 15 micron.
- Standard cut-proof, oil-proof belt, with high grip green PVC covering (ref. Pantone 320); vulcanised belt joint.
- Minimum and maximum temperature resistance of belt -10°C to +60°C.
- Standard transmission group of the conveyor consisting of 0.12 kW three-phase, asynchronous motor coupled with worm reduction unit with permanent lubrication.
- Standard transmission group of the separator consisting of 0.09 kW three-phase, asynchronous motor coupled with worm reduction unit with permanent lubrication and torque limiter.
- Fixed standard conveyor speed 3 m/min.
- Conveyor complete with Siemens Start and Stop double switch/motor cut-out (one for the conveyor and one for the separator), with 5 m cable and 4P CE plug (3 phases + ground).
- Standard motor supply voltage 400 Volts/50 Hz.

## STANDARD DIMENSIONAL FEATURES



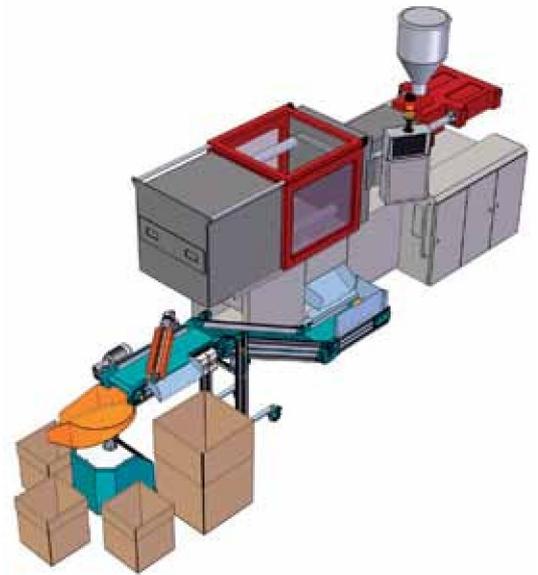
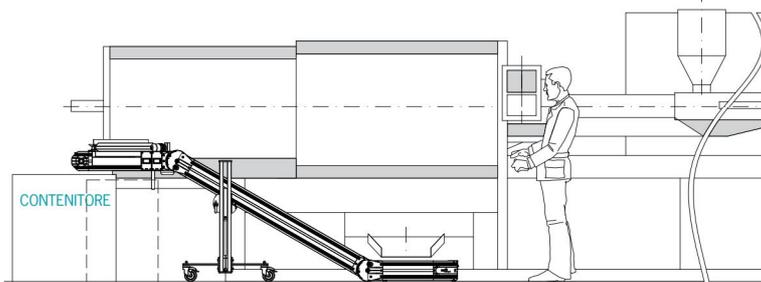
\*Standard side panels 50 mm h that are not removable



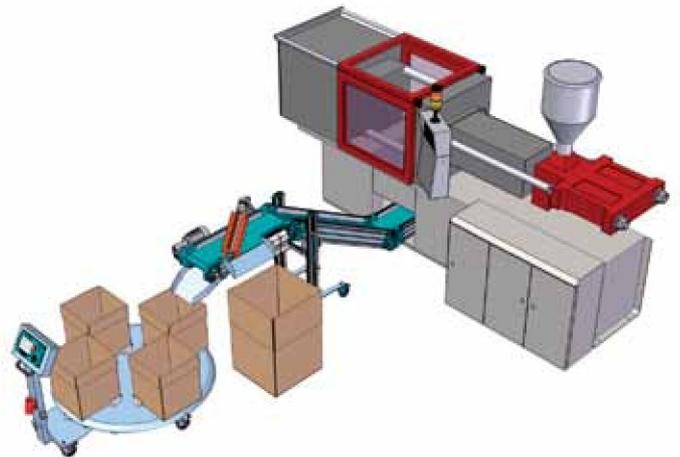
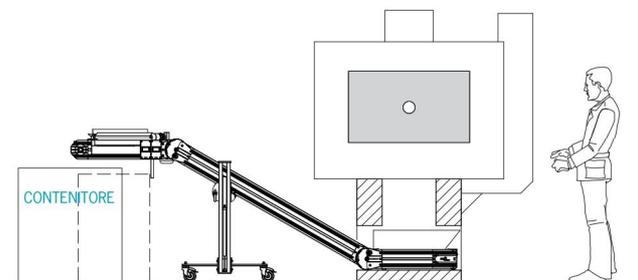
	A	B	H min	H max	I a 30°
<b>N-CPST.0</b>	140 mm	1300 mm	650 mm	750 mm	2800 mm
<b>N-CPST.1</b>	240 mm	1300 mm	650 mm	750 mm	2800 mm
<b>N-CPST.2</b>	340 mm	1800 mm	900 mm	1030 mm	3250 mm
<b>N-CPST.3</b>	440 mm	1800 mm	900 mm	1030 mm	3250 mm

EXAMPLES OF POSITIONING BESIDE THE IMM

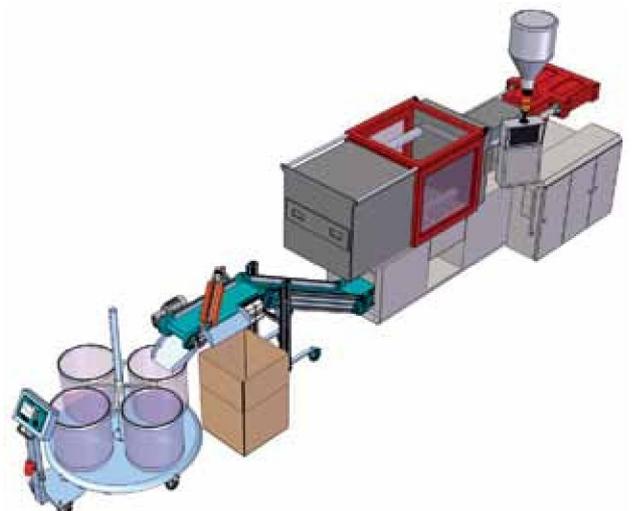
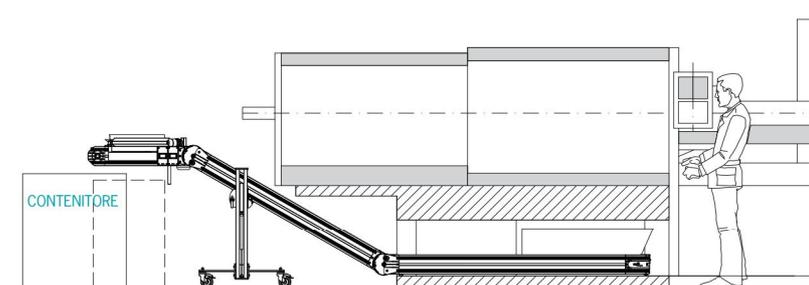
P1 - Standard lateral positioning



P2 - Orthogonal positioning under the IMM



P3 - Longitudinal positioning under the IMM





### Paddle Separator installed on N-CPST

- The separator consists of 6 PVC paddles fixed to an aluminium shaft which is, in turn, splined to the transmission group for rotation.
- The transmission group of the separator is provided with torque limiter, for safety reasons.
- The minimum length of the flat section of the conveyor where the paddle separator is installed is 900 mm.



### Paddle Separator installed on PA

- Solution proposed when:
  - the quality of the separation must be optimum;
  - for reasons of space, it is not possible to install a CPST conveyor and, as an alternative, we propose a CP conveyor and a PA conveyor with a paddle separator installed orthogonally to the loading conveyor.



### N-CPST complete with double paddle separators

- The photo alongside shows a solution proposed when the mould is multi-cavity and therefore, apart from the sprue, products of the same mould with different dimensions are to be separated.
- The flat upper section of the N-CPST conveyor with double paddle separator has a minimum length of 1100 mm.
- For optimum working of the conveyor it is advisable to carry out a separation pre-supply test of the product to be conveyed.



### Product conveying and orientation line

- The drawing alongside shows the alternative use of the paddle separator.
- In this application, the two separators have the function of rationalizing and ordering the flow of incoming product, an operation necessary to obtain its correct alignment.
- The second separator is installed for reasons of safety since the first allows correct rationalisation of the flow therefore the action of the second one is rarely necessary.



### Product conveyor and pick-up line

- The drawing alongside shows the use of the paddle separator for distributing the product on the conveyor surface preventing overlapping.
- The anthropomorphic robot, positioned above the back-lighted part of the conveyor, identifies and picks up the product at any point, as long as there is no overlapping.



### MB conveyor complete with flow regulator

- The drawing alongside shows another application of the paddle separator.
- This application is proposed when a continuous constant flow of product is necessary, so excess product must be removed from the conveyor slat.
- The paddle separator performs this operation efficiently and functionally.
- NOTE: in some cases, because of the features of the product the flaps of the separator will have to be replaced with a Nylon brush.



The SR – SM rotary drum separators are the most functional means for separating the product from the sprue.

### SR Separator

- Separator with rotary drum consisting of 24 PVC rollers having 50 mm diameter and 800 mm length (the distance between the rollers can be adjusted MANUALLY).

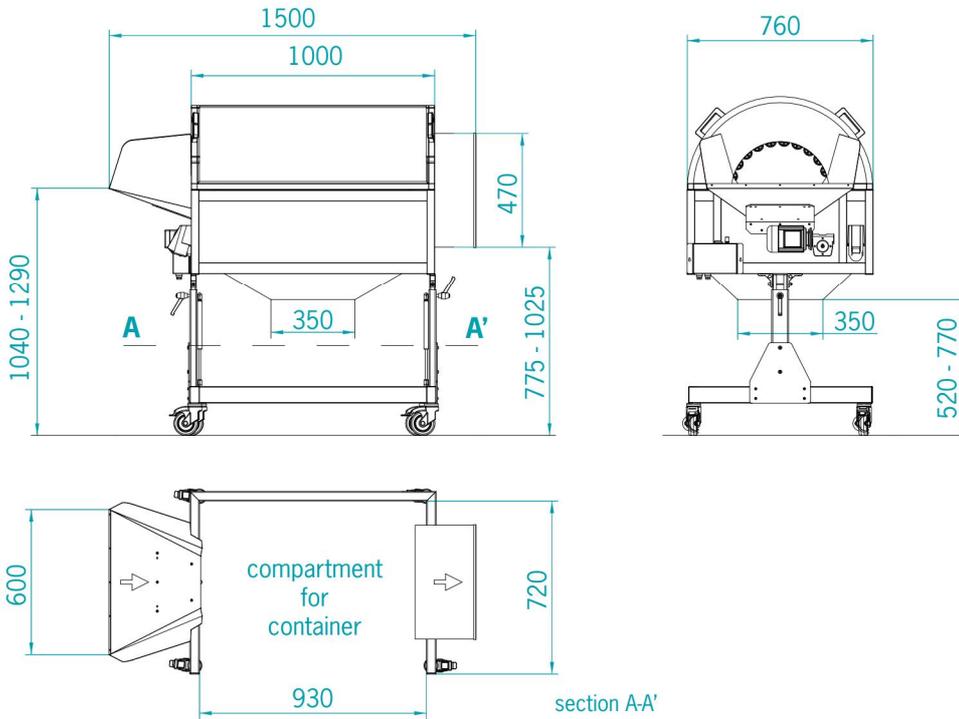
### SM Separator

- Separator with perforated rotary drum made of AISI 304 sheet usually complete with small sprues anti-grip tubes.

### SR-SM TECHNICAL CONSTRUCTIONAL FEATURES

- Each separator has its own Inverter for regulating the drum rotation speed; possible adjustment range: minimum 4 rotations/minute, maximum 20 rotations/minute.
- In the SR separator the adjustment of the distance between the rollers is manual.
- In the SM separator the diameter of the holes and the need for welding the anti-grip tubes depends on the shape of the product and the sprue.
- The drum frame is supported by two threaded rods which make it possible to adjust the inclination of the drum on both sides.
- Finding the correct ratio between the drum rotation speed and a slight counter-slope allows for effective separation of the product from the sprue.
- In standard separators the roller drum can be exchanged with the perforated drum.
- Motor connection voltage: 220 Volts/50 Hz, single-phase.

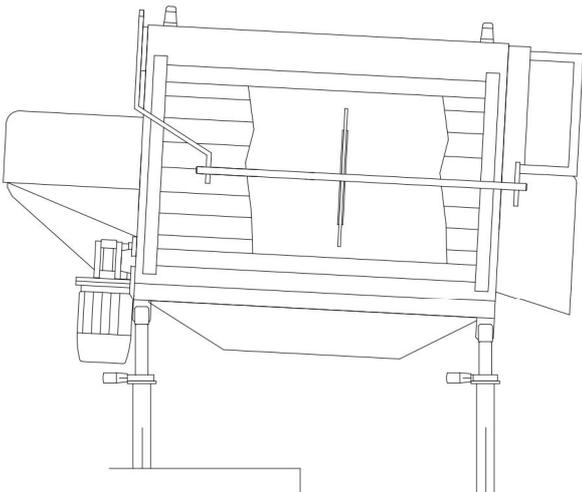
## TECHNICAL-DIMENSIONAL FEATURES (standard SR - SM)



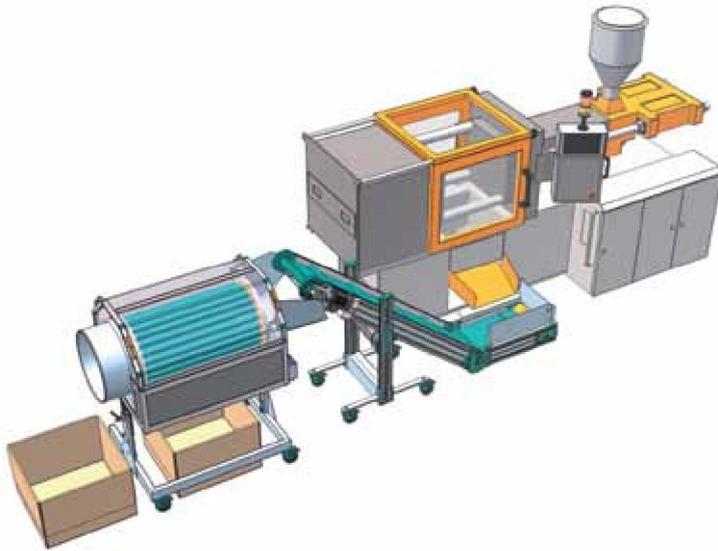
- Each separator has safety protection for the rotation of the rotary drum. If required, this protection can be set in safety condition by installing a special limit switch connected to the MB TOP CONTROL panel which has this function.
- Adjustment of the height of the upper frame which supports the rotary drum is facilitated by two gas pumps installed on the lower base.
- Each SR – SM separator is provided with an inlet and outlet chute made of stainless steel AISI 304 sheet. Sometimes the separator is not positioned in line with the loading conveyor, but is rotated at 90° in relation to it: in this case a suitable inlet chute will be provided.
- Separators base resting on swivel wheels with 100 mm diameter complete with locking brake.

### Flow regulator for SR Separators

- The drawing alongside shows the flow regulator which we usually install to “brake” the speed with which the product/sprues sometimes pass through the roller drum, thereby escaping separation.
- On other occasions it has the function of creating a product/sprues block to give greater separation time, and thereby normalizing the flow.

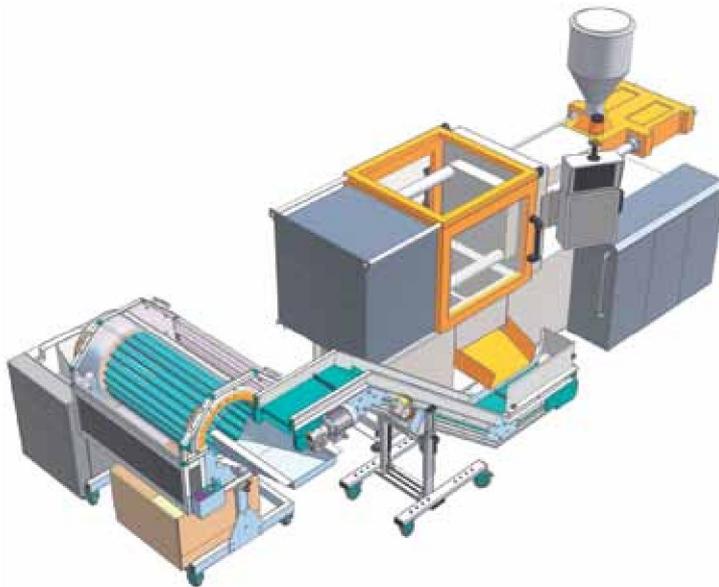


## EXAMPLES OF POSITIONING Beside THE IMM



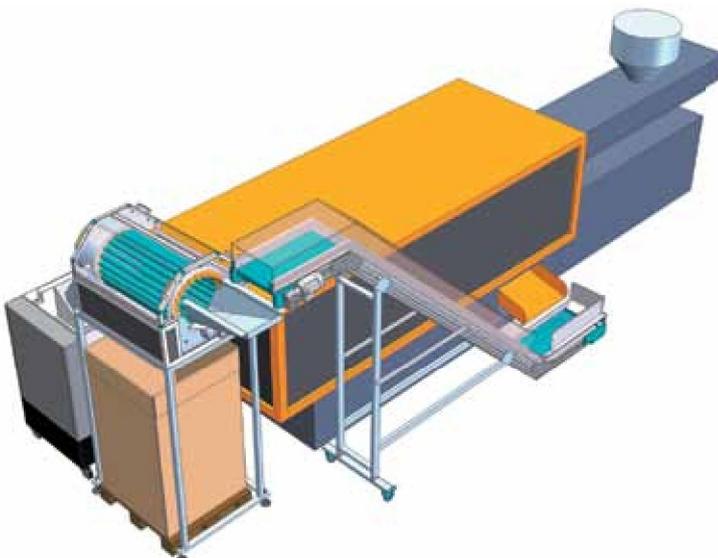
### P1 - Positioning in line with the conveyor

- A conveyor is positioned in front of the IMM chute to collect the product output from the mould and convey it into the SR2 separator.
- Separation between the product and the sprues takes place inside the rotary drum.
- The different dimensions determine the passage between the rollers of the smaller component of the moulded item (usually the product) which drops into the container below, while the larger parts (usually the sprues) are routed outside the separator.



### P2 - Orthogonal positioning to the conveyor

- Solution where, because of the dimension, the separator is positioned orthogonally to the loading conveyor. It is thus possible to limit the non-standard dimensions to a considerable extent.
- This solution is completed by the installation of a sprues recovery granulator positioned at the separator outlet.



### P3 - Orthogonal positioning to the conveyor

- Solution similar to the previous one but with certain features depending on the product storage container dimensions: 800 x 1200 x h. 1200 mm.
- A granulator placed in front of the outlet chute of the separator completes this system.
- Loading conveyor and separator complete with polycarbonate guards.



#### SR - Interior detail of roller drum

- The photo alongside shows the inside of a roller drum made of yellow coloured plastic material, diameter 50 mm.
- The product, complete with sprue, enters the drum through the chute.
- The roller drum rotation, together with the counter-rotation of the rollers, provides optimum conditions for separation of the sprue from the product.
- The distance between the rollers must be adjusted manually.  
If this operation is frequent, it is advisable to purchase a number of special rotary drums and replace these as required.



#### SM - Interior detail of perforated drum

- The photo alongside shows the inside of a perforated drum made of AISI 304 stainless steel sheet complete with linear and spiral insert for internal movement of the product.
- The perforated drum cannot be adjusted but it is found to be specially effective for separation and is recommended for large production batches.
- In all the SR - SM separator series, the roller drum and perforated drum are interchangeable.
- Note the internal spiral applied on the drum, in counter-rotation, to brake the speed of the product passing through.



#### SR inserted in a conveyor system with cooling and drying

- The photo alongside shows a water bath conveyor which collects, cools, conveys, and releases the wet product to the roller separator installed orthogonally.
- The water inside the tank cools the product, while the helicoid electric fans installed on the tank and on the SR separator “dry” it.
- In this application, the SR separator does not separate but moves the product to make the drying action more effective.



### SR inserted in a conveyor system

- The photo alongside shows a solution for separating the product from the sprue and storing it in large containers.
- Consequently, the separator is installed on top of the special base and the product with sprue is conveyed by a EV model elevator.
- The photo also shows the CP conveyor to be installed inside the IMM in the longitudinal position.

### SR - Detail of rotary drum with steel rollers

- The photo alongside shows the inside of a separator with metallic rollers.
- This solution finds application when:
  - a separator drum longer than 1000 mm is required, therefore the PVC rollers cannot guarantee the necessary parallelism between them;
  - the product temperature is higher than 50/60°C;
  - the product to be separated is made of metallic and/or thermo-setting alloy.

### SR with metal roller drum with sound-proofing

- The photo alongside shows an SR separator with mechanical rollers complete with chute for orthogonal entry and sound-proofing cover.
- The fixing blocks for the metal rollers are made of aluminium instead of plastic.
- The 1200 mm long, 50 mm diameter rollers comprising the rotary drum are made of galvanized steel, but can be made of AISI 304 tubes if necessary.
- The supporting base is made of painted steel tubing with the possibility of adjustment of the inclination on all four supporting points.

### Conveyor and separation system for metallic products

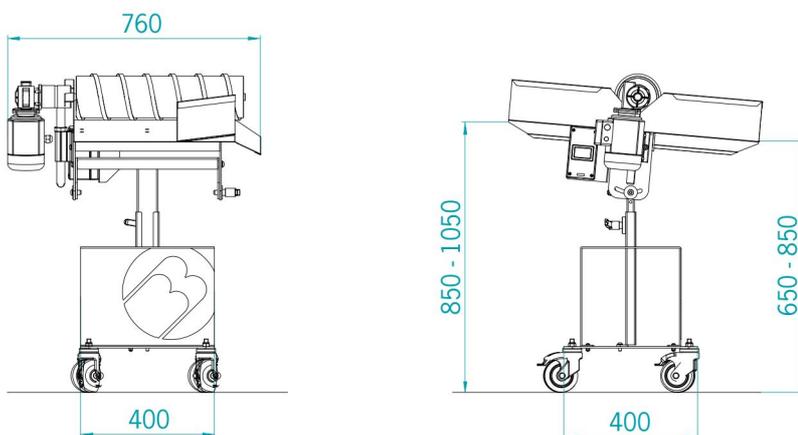
- The photo alongside shows the SR separator with 1200 mm rollers complete with loading conveyor.
- These systems are mainly used in the die-casting (zamak/ aluminium alloys) or thermo-setting field.
- To ensure the functionality of the system, the product coming out of the mould must already be separated from the sprue.

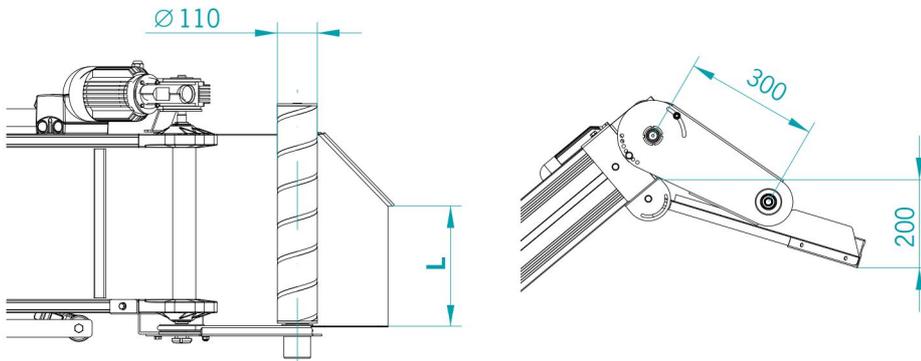
# FSRV spiral separator with base



- Separator unit with independent base on the ground (for positioning in front of the conveyor only when required).
- Separator chute made of mirror-polished AISI 304.
- Transmission group positioned on the right side, power 0.09 kW, complete with torque limiter.
- Separator roller rotation speed: 70 rpm.
- Separator Start/Stop by means of Siemens switch/motor cut-out.
- Standard motor supply voltage 400 Volts/50 Hz.

## STANDARD DIMENSIONAL FEATURES





- Three N-FSRV separator models are available:
  1. N-FSRV 1 model for conveyor with working width 240 mm
  2. N-FSRV 2 model for conveyor with working width 340 mm
  3. N-FSRV 3 model for conveyor with working width 440 mm



- This image shows the FSRV separator with independent base positioned in front of a N-CPR conveyor.

- In the operating logic of this separator the bigger component, usually the sprue, comes out on the left side, while the smaller component, usually the product, comes out of the front chute.

- Before making the commercial offer, a separation test must be carried out at our factory for this separator model.



- The N-FSRV sprues separator is installed directly on the conveyor from which the spiral gets its rotation movement.

- Transmission of movement from the conveyor to the spiral roller is brought about by means of Pu belt. For safety reasons, the belt is tightened enough for the rotation. Whenever there is even the slightest obstruction, the spiral roller stops.