



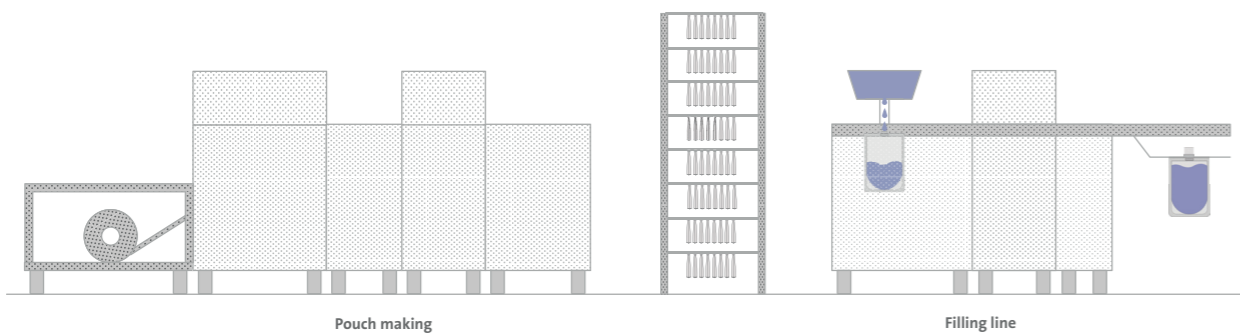
Efficient and sustainable
concept for the production of
recyclable spouted pouches



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Maximum efficiency & packaging reliability



With their innovative solution for the in-house production of stand-up pouches with spouts, the cooperation partners SN Maschinenbau, SÜDPACK and Menshen are breaking new ground and providing the producers and fillers of pasty and liquid food products, such as fruit purées, smoothies and other liquids, with a sustainable and economical alternative to pre-made pouches.

The overall concept relies on powerful packaging technology and high-performance, recyclable packaging components made of polypropylene that are perfectly coordinated and offer users not only simple handling, but also maximum process and packaging reliability. The concept is also pioneering in terms of quality, profitability and flexibility, and offers sustainability as an extra benefit thanks to the use of recyclable mono materials.

High efficiency and reduced handling effort

With the overall concept, we are offering our customers an attractive alternative to pre-made pouches, the processing and filling of which often entails a great deal of logistical effort. Our solution makes it possible for the producers and fillers of pasty and liquid food products to manufacture spouted pouches in-house that can then be filled and sealed as usual on their existing filling machines.

Our concept is based on a user-friendly pouch making machine combined with films and spouts that are perfectly coordinated, which means they can be reliably processed. The film can be processed from the reel, which provides many advantages in terms of efficiency and profitability without having to make compromises when it comes to quality. This makes the concept an economically attractive overall solution for all production quantities. Producing pouches on site eliminates the complex handling and logistics needed for finished pouches, which would usually be delivered on rails in cardboard boxes. The space that is necessary for reels is roughly one third of what is needed for pre-made spout pouches. In addition to reduced transport costs, this also simplifies warehousing. Furthermore, the cardboard packaging from pre-made pouches is no longer required.

Maximum pouch quality and packaging reliability

The sustainable SÜDPACK films are ideal for the SN machines, which reliably and efficiently process them into spouted pouches. This guarantees highest product quality and packaging reliability with pouches that are easily as good as pre-made pouches.

Crucial to the high quality are the perfectly compatible spouts and sealing layers in combination with SN's proven sealing technology. The excellent sealing performance ensures that the packaging is highly leak-proof and prevents liquids from escaping. The machine's user-friendly operation prevents errors, which also boosts process reliability.

Strictly defined standards are applied to evaluate the pouch quality and ensure every product meets top quality requirements. Customers can depend on consistent quality.

High level of flexibility and a shorter time-to-market

When it comes to flexibility, the concept for in-house spout pouch production also provides substantial benefits.

The machine can be flexibly adapted for the production of pouches of various shapes, sizes, and materials, whether with simple round corner punching at the top or bottom or with full contour and different spout shapes. This allows producers to quickly adapt to changes in demand and shortens their lead times and time-to-market. Last but not least, the concept can offer added value by providing more resilience in case of disruptions in the supply chain.



PurePP films for stand-up pouches with spouts

An optimal solution in terms of recyclability, processability and packaging reliability

The sustainable SÜDPACK films are perfectly aligned to the SPM 50 and can be safely and efficiently processed into pouches with spouts. This ensures the highest product quality and packaging reliability, with the bag quality being in no way inferior to that of pre-made bags. The film material was developed on the basis of SÜDPACK's many years of expertise, particularly in the production of innovative sealing layers.

High recyclability

The PP-based Pure-Line films are classified as 96%* recyclable due to their mono-structure. In combination with PP-based spouts, they can be used to produce recyclable stand-up pouches that meet the same technical requirements as stand-up pouches made from conventional and non-recyclable materials. What's more, the carbon footprint of the PP-based mono film is up to 52% lower than that of conventional film laminates – without compromising on product protection. The use of innovative SPQ technology can improve the carbon footprint even further. *According to an internal prognosis based on the Chira database.

Excellent sealing performance

The spouted pouch film features a sealing layer with optimized seal initiation temperature (SIT). Thanks to the combination with a high-performance carrier material, the film offers a wide processing window. This enables safe, efficient processing during the packaging and filling process and makes sealing in the spouts easy. The excellent sealing performance contributes to outstanding package quality, especially in terms of maximum tightness and burst-pressure resistance of the pouches.

Product-specific barrier

The barrier against water vapor, oxygen, and UV light can be designed specifically to meet the requirements of the packaged product. This ensures optimal product protection and shelf life.

Heat resistance and dimension stability

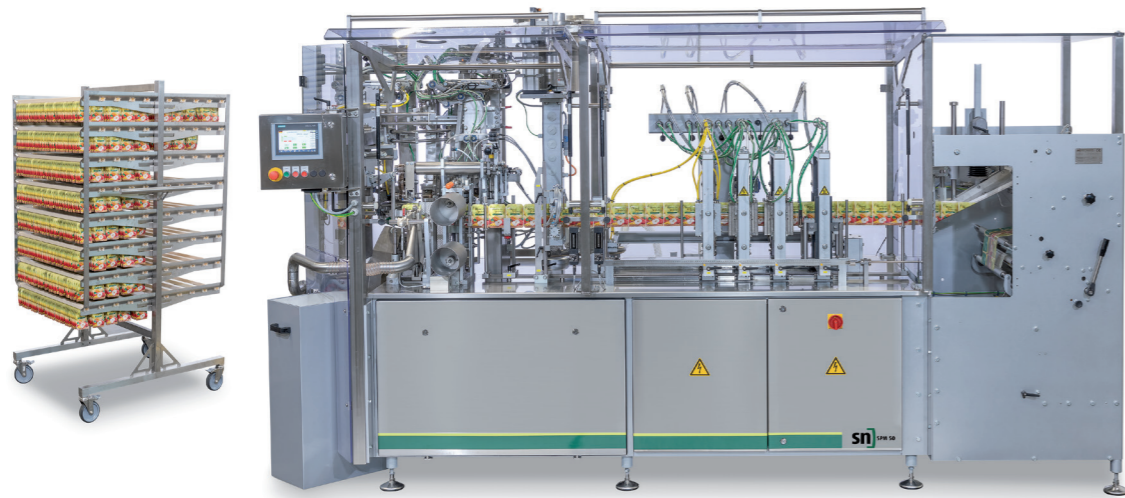
Due to their heat resistance, PurePP films are also suitable for the manufacture of pouches for hotfilling and pasteurization. The high dimensional stability of our films, also under fluctuating conditions, helps ensure reliable processing and packaging.

Technical information

Barrier properties	Oxygen transmission rate (OTR) ≤ 1 Water vapor transmission rate (WVTR) ≤ 1
Thickness and grammage	116 μm 106 g/m ²
Recommended sealing window	120-160 °C
Tear resistance	
Tear elongation	
Compound adhesion	



Spouted Pouch Maker SPM 50



Maximum packaging efficiency and reliability

On the SPM 50 horizontal pouch making machine from SN Maschinenbau, the spout pouches are manufactured horizontally from the film reel and the spouts are sealed in. They are then automatically inserted into the commercially available rail systems and are stored on a transport cart. Every rail can then be easily and ergonomically inserted into the existing pouch-filling machines to allow filling of the empty spout pouches. Compared to pre-made pouches, this significantly simplifies handling and allows staff to process an increased number of pouches more efficiently, for example because the time-consuming and labor-intensive process of separating the rails is eliminated. The low-maintenance machine is highly efficient and can be used in tight production spaces thanks to its compact design. This allows flexible placement, either right next to the filling machine or on its own in a separate room.

Pouch production can be insourced easily because the machine is extremely user-friendly and can usually be operated by the existing machine operator of the filler. One of the many advantages is that the reel change has to be performed at most once every shift and requires minimal set-up time. The SPM 50 from SN Maschinenbau makes up to 4,200 pouches per hour and can achieve continuous production of over 30,000

spout pouches per eight-hour shift with just one film reel. This results in an annual production volume of seven million spout pouches in one-shift operation and up to 21 million in three-shift operation.

The factors mentioned above make investing in this pouch concept extremely attractive in economic terms. In combination with substantially improved ergonomics for spout and rail handling and a high level of flexibility regarding different pouch and spout designs, the SPM 50 is an excellent investment that can also enhance your own value creation.

Technical data	SPM 50
Pouch size	80-100 mm Pouch width 70-210 mm Pouch length
Machine output	up to 4,200 spouted pouches per hour (70 cycles/min.)
Electricity supply	3x400V + N + PE, 50/60Hz, ca. 4 kWh
Air consumption	approx. 800-900 NI/Min., 6 bar
Dimensions basic machine	3.760 x 1.250 x 2.300 mm

MENSHEN LoTUS™ Spouts

For baby food and fruit purees/juices

The optimal, efficient weld

The machines effectively weld mono-material laminates of different thicknesses. This is due to the optimized heat distribution and conductivity in the MENSHEN LoTUS™ process. If used correctly, the solution saves energy and ensures an optimal production process.

Spouted pouches and sustainability

Sealing process. Multimaterial vs. Monomaterial:

- Sealing of Weldspouts with multimaterial.
Required temperature: 190-200 °C (374-292 °F)
- Monomaterial sealing limitations: 130 °C (266 °F)

Energy savings are possible when the individual components (machine, laminate, spouts) are perfectly matched to each other

Benefits of MENSHEN-LoTUS™ platform

- Simplified welding with monomaterials
- Recyclable mono material solution
- Improved sealing quality and visual appearance of sealed area
- Coordinated with machine manufacturers
- Works with PE and PP
- No impact on machine capacity

Weldspouts

Highlights:

- Orifice - 8.5 mm;
- Snap-on & screw-on options;
- Available in PE and PP;
- No drop band.

Superior Tamper Evidence – Fenestra

- Clearly visible & audible for the end consumer;
- No loose parts.





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