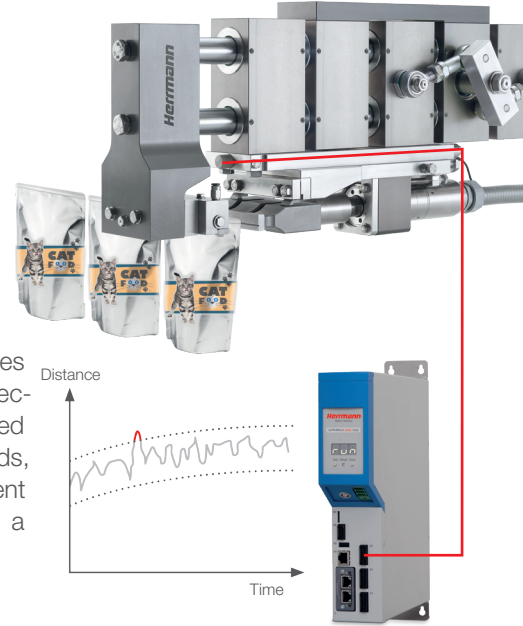# Ultrasonic welding technology.
For packaging.

HDM ProcessControl

The "High Precision Distance Measurement" function is a quality control which recognizes faulty pouch conditions in the sealing stations and enables suspect pouches to be rejected. The HDM sensor determines the distance of the sealing tools. The signal is evaluated directly on the ultrasonic generator that allows for exceptionally high evaluation speeds, which are particularly advantageous on high-speed packaging systems. The intelligent generator management is able to compensate for thermal influences, which means a constant quality control is guaranteed throughout the entire machine running time.
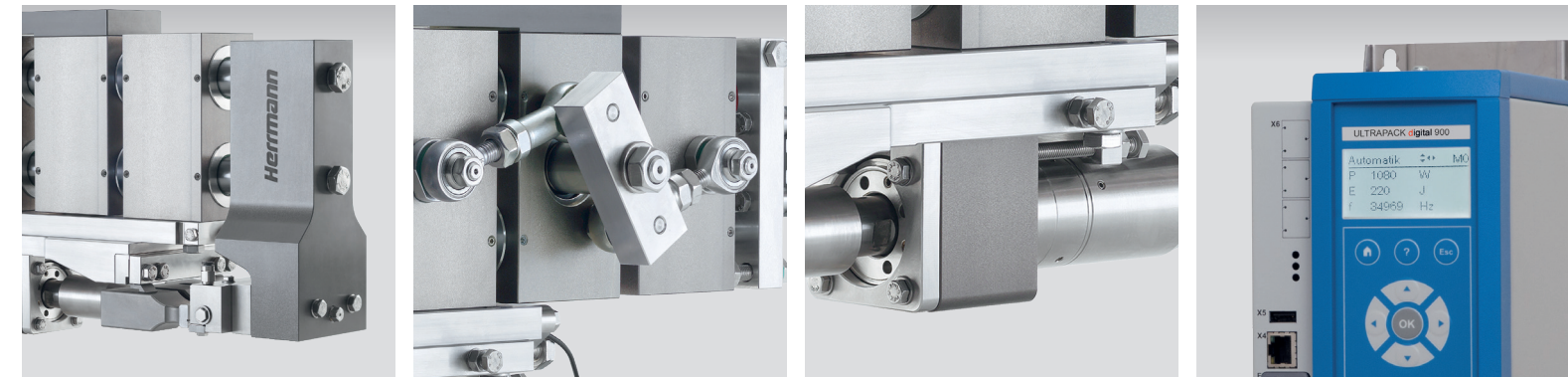
Distance

Time

Technical data Top Seal Module TSM

TYPE DESIGNATION	TSM35	TSM30
Frequency [kHz]	35 kHz	30 kHz
Sealing length [mm] [inch]	40 - 130	1.57 - 5.12	80 - 207	3.15 - 8.15
Generator output [W]	1200	1800
Weld force max. 6 bar [N]	750 / 1200	
Opening width max. [mm] [inch]	50 / 100	1.97 / 3.94	
Possible drives	Servo, rotary cam, pneumatic	
Dimension L x W x H [mm] [inch]	615 x 150 x 210	24.22 x 5.90 x 8.27	
Power requirement [V]	230 +10% -15%	

TSM

ULTRASONIC WELDING TECHNOLOGY

Global Headquarters

Japan Headquarters

China Headquarters

North America Headquarters

■ Headquarters
● Tech-Center
○ Local Sales Office

FIRST CLASS TECHNOLOGY. WORLDWIDE. 24 LOCATIONS IN 18 COUNTRIES.

Herrmann Ultrasonics

Top Seal Module TSM.
For ultrasonic sealing of pouches.

The top seal module from Herrmann Ultrasonics brings together the experiences from more than 1000 top-seal sealing stations on the market. With its modular design, it is configurable for a variety of packaging machine types. The top seal module is optimally suited for integration in new machinery or as retrofit for existing machine designs. If the tools are designed with protection class IP65/67, the top seal module is also suitable for use in wet environments with advanced cleaning capability requirements. For advanced requirements regarding space a TSM Slim Version is available as well as a TSM Double including two independent stacks on one drive unit.

Modular setup

The TSM product range has a modular configuration to meet the demands of different installations. Various tool widths and cylinder sizes are available. It is possible to choose between two opening ranges and the drive can be mounted either on the left or on the right side of the module. This is particularly advantageous for multi-systems.

Secure sealing due to PreLoad

The integrated pneumatic cylinder is equipped with the necessary operating pressure. As a result, the entire sealing force of the tools is immediately available. This PreLoaded concept allows process stability – even with high machine speeds.

Integrated process control

The TSM has an integrated HDM sensor, which detects faulty pouches in the sealing area prior to welding. In addition, the generator provides further process parameters of each seal for evaluation. This feature allows the recognition and automatic rejection of faulty pouches. (See back)
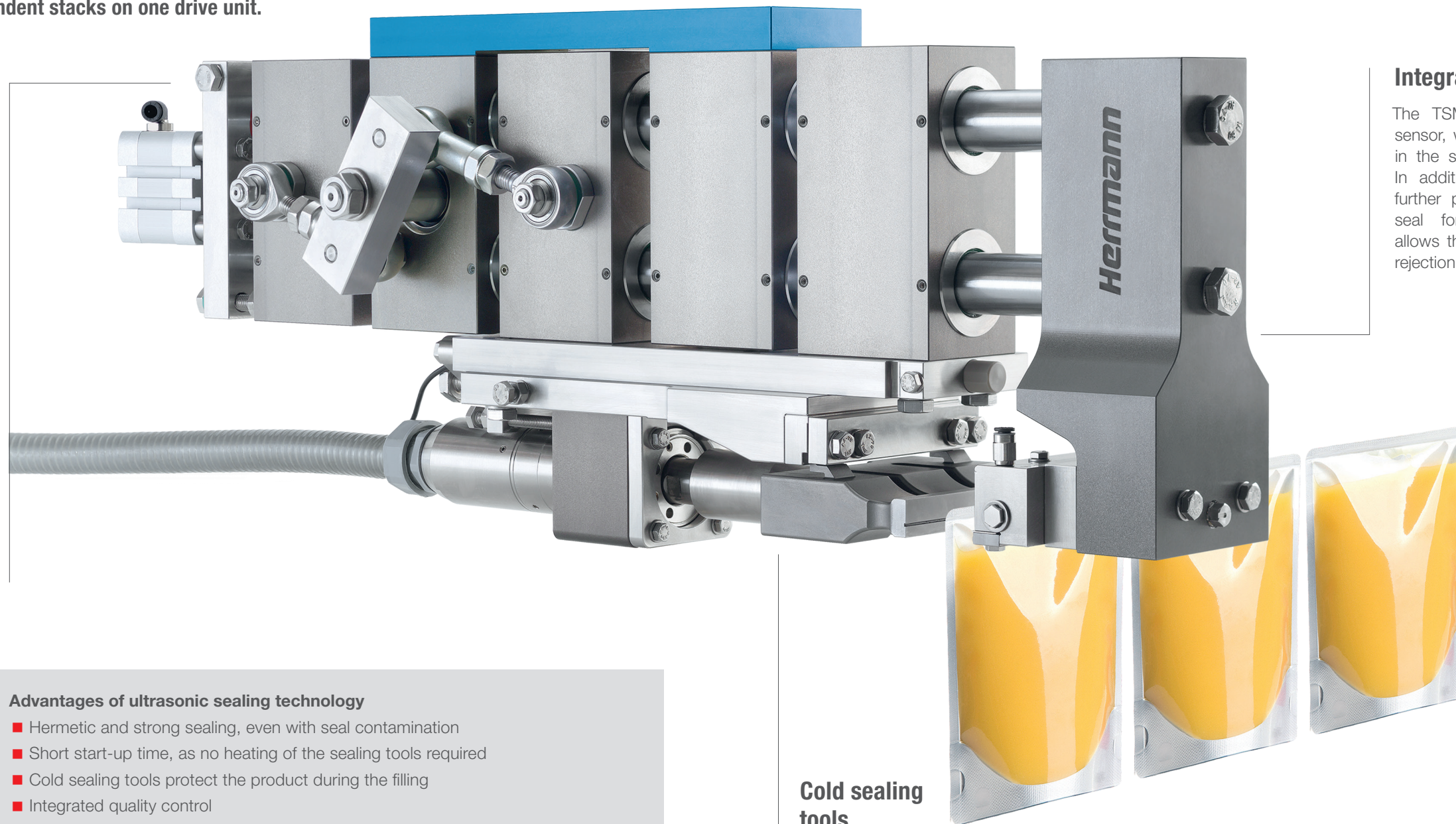
Flexible drive options

The drive shaft can be adjusted to various pneumatic and electrical drives. A mechanical connection with the main drive shaft of the packaging machine is also feasible.

Advantages of ultrasonic sealing technology

- Hermetic and strong sealing, even with seal contamination
- Short start-up time, as no heating of the sealing tools required
- Cold sealing tools protect the product during the filling
- Integrated quality control
- Suitable for wet cleaning due to protection class IP65/67

Application examples

- Wet pet food
- Ready meals
- Pickled cabbage / red cabbage
- Drinks
- Herbs and spices

Cold sealing tools

The sealing tools of the TSM do not have to be heated. The ultrasonic vibrations generate heat directly in the sealing area without the need to induce heat into the packaging material from the outside. The tools remain cold, which is very advantageous for the packaging material as well as the product.

Herrmann *Ultrasonics*