

RHO III
METAL CAN SEALER

CAN
DIRECT SEALING
SOLUTIONS.
2-/3-PIECE
METAL.



GEBRÜDER LEONHARDT
BLEMA KIRCHEIS



WE CREATE WHAT YOU IMAGINE

RHO **///** METAL CAN SEALER



OVERVIEW continuously running processing modular machine in rotary turret design

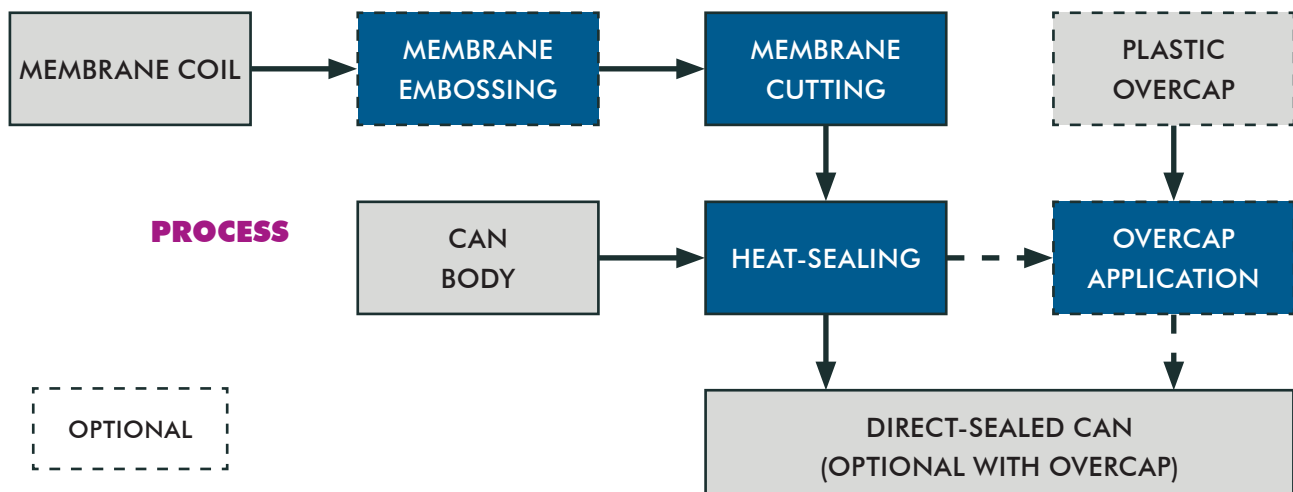
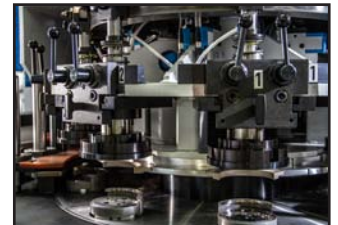
heat-sealing of peelable composite membranes onto

- welded or deep-drawn metal cans without additional ring end
- cardboard and plastic cans (optional)

POTENTIAL FOR COST REDUCTION

enormous potential for cost savings compared to the use of conventional peel-off-ends while maintaining comparable barrier and convenience properties

- eliminating the tinplate from the ring!
- tight seal even in the area of the welding seam



RHO **III** METAL CAN SEALER

DESIGN AND FUNCTION

- sealing machine with a modular design
- four or eight working stations on a turret
- robust welded machine frame
- Siemens PLC S7 (Allen Bradley on request)

INFEEED OF CAN BODIES

- can body separation by driven stop star and acceleration by infeed screw
- inductive pre-heating and transfer to the heat-sealing station

MEMBRANE FEED

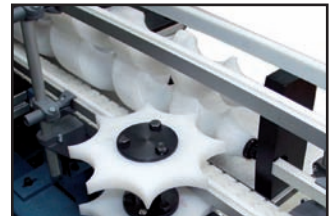
- effective material utilization using optimised coil layout and using a double cutting die
- double-sided decoiler for stop-free coil change
- servo-driven take-off rolls for smooth decoiling
- automatic scrap web discharge
- patented servo transfer system using vacuum handling

DIRECT-SEALING

- heat-sealing of cans under adjustable pressure
- creation of a hermetically tight seal
- long times of operation and trouble-free production
- aligning of upper and lower sealing tool using high-precision linear guidings and cam-driven advance
- isolation of the tooling and the guidance with high quality polymeric material for high thermal load
- long sealing times of more than 0.6s
- equalization of discontinuities in the area of the welding seam using an elastic sealing stamp

SAFETY STANDARDS

- Machinery Directiv 2006/42/EG (CE conformity)
- PILZ safety control for highest levels of operator safety
- safe servo technology of the newest generation
- safety enclosure in new design with noise level reduction



INFEEED SCREW & STOP STAR



MEMBRANE PUNCH



MEMBRANE TRANSFER SYSTEM

RHO **III** METAL CAN SEALER

ADVANTAGES PROCESS CONTROL

- permanent monitoring of all process parameters
- individually adjustable sealing pressure
- automatic temperature conditioning for every sealing head
- manually adjustable inductive energy transfer to the can body
- missing can body - no processing initiated
- can transfer control using reflection light barriers
- overheat control
- integrated end monitoring

FLEXIBLE MACHINE CONCEPT

- performance increase by adding stations to the turret (e.g. upgrading from four to eight stations)
- combination with additional operations / modules before or after heat sealing
- heat sealing to different packaging materials

FAST FORMAT CHANGE CAN DIAMETER / HEIGHT CHANGE

- fully automatic height change without need for changing of parts
- short changeover time by using pre-set sealing heads
- easy access for service jobs
- low maintenance through the use of wear resistant materials

OPTIONS OPTIONS

- tab folding
- embossing of heat sealed membrane
- application of a plastic cap within additional module
- optical crude leak detection
- video monitoring and pneumatic ejection of faulty cans
- print mark detection for printed membrane material



SENSOR-CONTROLLED INFED



INDUCTIVE PRE-HEATING OF CAN BODIES



DIRECT-SEALING STATION

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FEATURES OF THE CAN

ENHANCED PRODUCT VALUE

- easy opening, very low pop and tear forces
- no sharp edges - extraction of product without risk of injury to the customer
- 100% product removal possible - opening diameter is not reduced by the use of a ring
- stackable and recloseable using a plastic overcap

TECHNOLOGICAL ADVANTAGES

NO NEED FOR POE

- significant savings in material consumption and cost
- simplified manufacturing process
- low investment into production machinery
- no shell and ring manufacturing necessary
- expensive ring sealing equipment not necessary
- can seaming equipment for POEs obsolete

LINE COMPETENCE

FOR CAN BODY FORMING AND HEAT SEALING

- can body forming

GAMMA II MODULAR CAN MAKER

- direct heat sealing

RHO II METAL CAN SEALER.

- seaming of sealed cans using conventional equipment

PERMEABILITY PROPERTIES

GAS- AND WATER-VAPOR-TIGHT SEAL

including the area of the welding seam

- helium flow rate $Q = 2.2 \cdot 10^{-7}$ mbar l/s
- burst pressure
 - 1.2 bar (inner/outer roll)
 - 0.7 bar (flat surface)
 - 0.3 bar (concical surface)

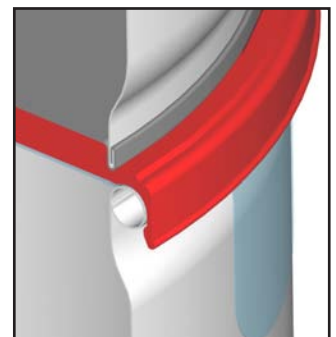
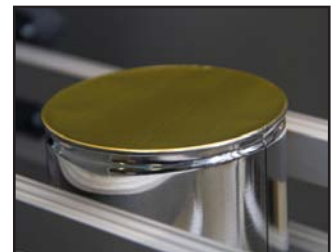
SEALING AREAS



OUTER ROLL | FLAT | CONICAL



DIRECT-SEALED CAN



STACKABILITY

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TECHNICAL DATA

RHO III METAL CAN SEALER	VRZS1 100/4	VRZS1 100/8
performance max.*	150 cpm	300 cpm
stations per module	4	8
number of modules**	1 (standard version) or 2 (plastic cap application)	
products	welded cans (tinplate) drawn cans (aluminum, tinplate) cardboard and plastic cans	
can diameter**	50...127 mm (200...502)	65...99 mm (211...401)
can height	80...250 mm (300...913)	
can material***	tinplate (plain / lacquered)	
sheet thickness***	0,13...0,25 mm	
membrane material**	aluminum membrane with PE sealing layer	

* depending on product dimensions

** other formats on request

*** for welded can bodies

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