

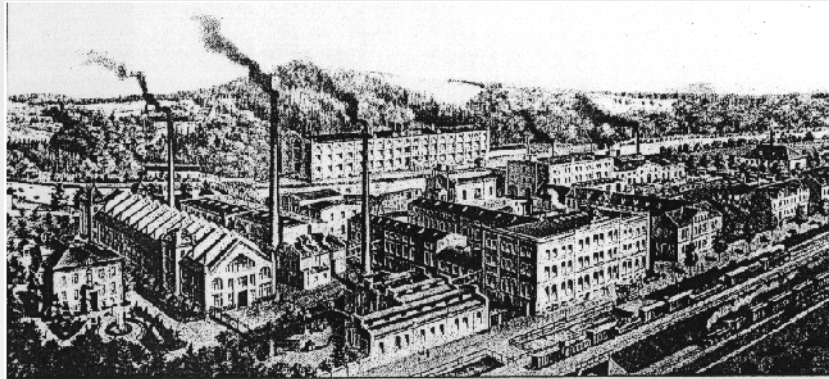


# **UNIQUE PACKAGING SOLUTIONS FROM BLEMA KIRCHEIS IN SAXONY**

## **METAL FORMING SOLUTIONS SHAPING**

# HISTORY

## BLEMA KIRCHEIS



- **BLEMA KIRCHEIS ESTABLISHED IN 1861**
- **OLDEST EXISTING CAN MAKING MANUFACTURER WORLDWIDE**

## TODAY

- **MEMBER OF THE LEONHARDT GROUP**
- **COMPLETELY RECONSTRUCTED PRODUCTION SITE AND FACILITIES**
- **MOST MODERN AND STATE-OF-THE-ART-PRODUCER OF CAN MAKING EQUIPMENT**



# PRODUCTION PROFIL

MACHINE SERIES – BLEMA KIRCHEIS

KAPPA I	THETA I - V	GAMMA II	RHO I
STRIP FEEDER	MULTI-FUNCTION METAL FORMER  ➤ DEEP-DRAWN PARTS	MODULAR CAN MAKER FOR FOOD + AEROSOL CANS  ➤ WELDED + DRAWN CAN BODIES	MODULAR LID SEALER  ➤ PEELABLE MEMBRANES ONTO RINGS
KAPPA II+III		GAMMA III	RHO II
SHEET FEEDER FOR ALL C-FRAME CRANK PRESSES	➤ LIDS ➤ CLOSURES ➤ RINGS	HIGH-SPEED MODULAR CAP FORMER  ➤ DEEP-DRAWN PARTS  ➤ LIDS ➤ CLOSURES ➤ TO/PT-CAPS	MODULAR CAN SEALER  ➤ PEELABLE MEMBRANES TO CARDBOARD OR METAL CANS  ➤ CARDBOARD BOTTOMS TO CARDBOARD CANS

# SHAPING CANS

## ADVANTAGES OF SHAPED CANS

- OUTWARD APPEARANCE FEATURES PRODUCT CHARACTERS – CONSUMERS EXPERIENCE THE BRAND
- PLEASANT DESIGN GAINS HIGHER MARKET SHARE AND DRAWS CONSUMERS' ATTENTION AT POINT-OF-SALE
- SHAPING ALLOWS FOR INDIVIDUAL FORMS AND COMBATS COUNTERFEIT ISSUES



FOOTBALL CAN



BOWLING CAN



GIRL HEAD CAN



CANS WITH HANDHOLD FEATURE



- ENHANCED CONVENIENCE FOR CONSUMERS WITH EASY TO GRIP-SHAPES
- INDIVIDUAL DESIGN SUPPORTS EASY HANDLING AND ALLOWS FOR FACILITATE PRODUCT DISPENSING
- COST REDUCTION BY INCREASING MATERIAL EFFICIENCY WITH ENLARGEMENT OF THE FILLING VOLUME

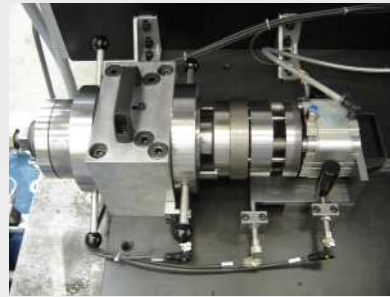
# SERIES GAMMA II

## SHAPING CANS - PROTOTYPE UNIT

**INPUT  
WELDED  
CAN BODY**



**POSITIONING AND  
ORIENTING CAN**



**CLOSING + SECURING  
TESTING DEVICE**



**PROGRAM RUN AND  
DISCHARGE**

**OUTPUT  
SHAPED  
CAN BODY**



### REALIZED FEATURES:

**LONGITUDINAL  
BEADS / LOGOS  
+ LETTERS**



**SMOOTH TRANSITIONS**

**SOFT CURVED FORMS**

**ASYMMETRIC  
SHAPES ON  
CIRCUMFERENCE**

**INTERRUPTED BEADS  
ON CIRCUMFERENCE**

**FLEXIBLE COMBINATION OF  
FEATURES ACCORDING TO  
CUSTOMERS' DEMANDS**



**PREPARATION OF SAMPLES  
GAMMA II – MODULAR CAN  
SHAPER**

# SERIES GAMMA II

## SHAPING CANS - PROTOTYPE UNIT

### WORKING PRINCIPLE:

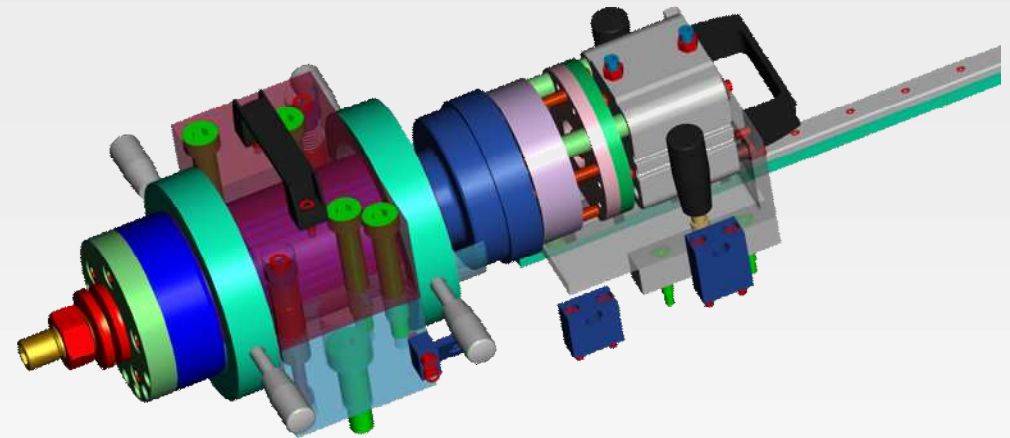
- ENDS OF THE WELDED CAN BODIES ARE POSITIONED AND ORIENTED IN WORKING STATION
- FLUID MEDIUM CAUSES EXPANSION OF THE ELASTOMER BODY (INNER TOOLING)
- CAN BODY IS PUSHED INTO MOULD HALVES AND OBTAINS ITS SHAPED DESIGN WHILE DIAMETER OF THE ENDS REMAINS CONSTANT
- TO COMPENSATE CHANGES OF THE BODY LENGTH THE WHOLE CAN IS SHIFTED DURING SHAPING
- SEMI-AUTOMATIC PROCEDURE

# SERIES GAMMA II

## SHAPING CANS - PROTOTYPE UNIT

### ADVANTAGES

- CAPABLE OF DIFFERENT SHAPING FORMS
- SIMPLE CHANGING OF THE MOULD HALVES
- EASY MODIFICATION OF REQUIRED PRESSURE FOR EXPANDING A ELASTOMER PART
- DETERMINATION OF NEEDED SHAPING TIMES OR SIMULATION OF A MACHINE-LIKE SHAPING PROCESS
- MANUFACTURING OF SAMPLES



### PARAMETERS

- SHAPING TIME UP TO 0,5 s
- MAX. PRESSURE 200 bar
- EXPANSION RATE UP TO 40 %

# SERIES GAMMA II

## MODULAR CAN SHAPER – MACHINE SPECIFICATIONS

### TECHNICAL DATA:

SERIES	GAMMA II	
TYPE	KEADF 100	
PRODUCTS	WELDED 3-PIECE CAN BODIES DRAWN CAN BODIES	
PERFORMANCE	200	400
WORKING STATIONS	4	8
CAN DIAMETER	45 – 127 mm	
CAN HEIGHT	50 – 250 mm	
MATERIAL SPECIFICATION	TINPLATE, ALUMINIUM	
SHEET THICKNESS	max. 0,25 mm	
EXPANSIONS RATE	max. 40 %	
PRESSURE RATE	max. 200 bar    2900 psi	

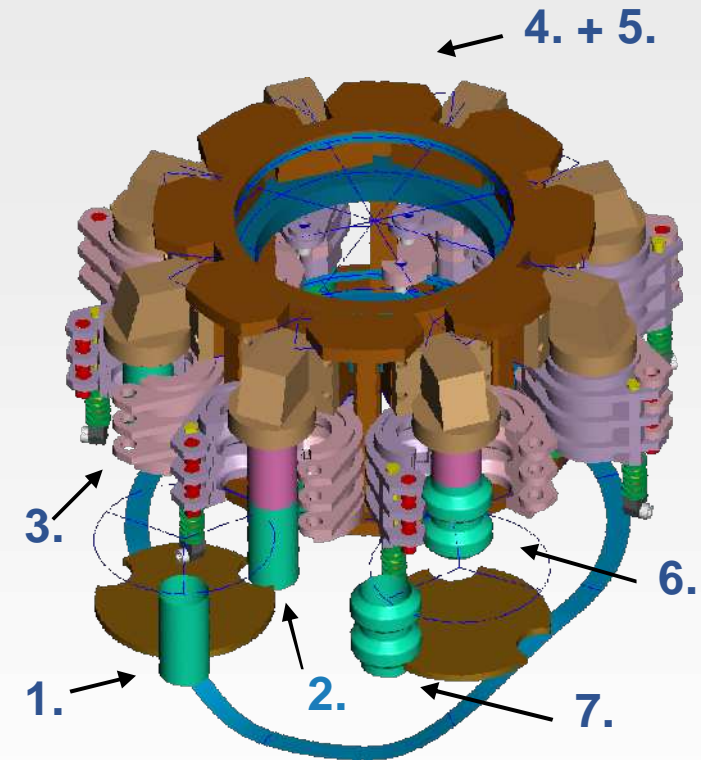
**FOLLOWING TECHNOLOGICAL STEPS:**

- **NECKING,**
- **FLANGING,**
- **SEAMING BOTTOM AND TOP SIDE**

# SERIES GAMMA II

## MODULAR CAN SHAPER – ROTARY WORKING PRINCIPLE

1. CANS ARE FED INTO THE WORKING STATION
2. TRANSFER, POSITIONING AND ORIENTING THE CAN BODY IN THE FORMING DIE
3. CLOSING AND SECURING THE MOULD HALVES
4. PRESSURISATION FOR FILLING THE VOLUME OF THE INNER TOOLING AND SHAPING
5. CAN IS SPRING-LOADED DURING THE SHAPING PROCESS TO COMPENSATE FOR LENGTH CHANGES
6. AFTER PRESSURE DECREASE TOOL UNLOCK AND OPENING OF THE MOULD HALVES
7. REMOVING THE INNER TOOLING AND EJECTION OF THE SHAPED CAN BODIES WITH AN EXIT STAR



**TURRET WITH 8  
WORKING STATIONS**

# SERIES GAMMA II

## SHAPING CANS

### **SERVICE:**

- **SHAPING OF DRAWN 2-PIECE AND WELDED 3-PIECE CAN BODIES MADE OF TINPLATE OR ALUMINIUM**
- **TESTING OF CUSTOMERS' DEVELOPED SHAPED CAN DESIGN CONCERNING TECHNOLOGICAL PRACTICABILITY**
- **DETERMINATION AND IMPROVEMENT OF REQUIRED PRESSURE RATE FOR OUTSTANDING RESULTS ( 50 - 200 bar)**
- **MANUFACTURING OF SAMPLES**
- **ENHANCEMENT OF OPERATIONS REALIZED WITH GAMMA II – NEW: STAND-ALONE UNIT FOR CAN SHAPING**

**THANK YOU FOR YOUR INTEREST!**  
**IF YOU HAVE ANY QUESTIONS, PLEASE DO NOT  
HESITATE TO CONTACT US.**

**Gebrüder Leonhardt GmbH & Co KG Blema Kircheis**  
**Website [www.blema.de](http://www.blema.de)**

**Lutz Enderlein**  
**MANAGER R&D – METAL FORMING**

**E-mail: [le@blema-kircheis.de](mailto:le@blema-kircheis.de)**

**Telephone: +49 3771 278 240**

**Facsimile: +49 3771 278 280**

**Mobile Phone: +49 173 278 0872**

**Reimar Friess**  
**SALES MANAGER**

**E-mail: [friess@blema-kircheis.de](mailto:friess@blema-kircheis.de)**

**Telephone: +49 3771 278 220**

**Facsimile: +49 3771 278 241**

**Mobile Phone: +49 173 278 0867**