

SHAPER™

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Meeting the Demand

FOR OVER THIRTY YEARS BELVAC has set Production Standards in the metal container industry Worldwide with state of the art can forming machinery.

As the world's Global Brands continue to drive increased volume and competitive costs for differentiated metal containers for the beverage, aerosol, and food industries, the demand for high-speed production machinery that produces cost effective branded containers is also growing.

Belvac Production Machinery meets this demand with machinery and complete process solutions of producing metal containers at high speeds, with high throughput, and reduced metal consumption.



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CONTAINERS THAT REQUIRE vertical sidewall shaping and need to be finished as a can require a high-speed, dependable, and proven container shaping solution. The **Belvac Shaper** is the perfect choice.

The Belvac Shaper will effortlessly add distinction to both cans and bottles by shaping the sidewall of the container up to 200 mm from the top edge and within 16 mm of the can outside dimension at the top of the chime profile.



Features of the SHAPER™

THE SHAPER is a multi-drive system. The number of required drives is dependent on the required number of operations and subsequent number of stages needed to arrive at the desired shaped container.

The Belvac Shaper also demonstrates pocket-to-pocket integrity as the can moves through the necking process. Cans in feed and transfer with 20 pocket star wheels and are shaped on active turrets with 12 pocket star wheels with a 270 degree working arc.

The number of turrets required is a function of the progressions necessary to achieve the desired reductions and expansions.

Can height range is from 95.3 mm up to 254 mm, and the can body size range from 45.0 mm to 73 mm. Both height and diameter adjustments have quick-change capabilities.





Modular Design Features

The modular design of the Belvac Shaper platform features automatic cam lubrication, an add on waxer, and air assisted discharge track work. Belvac's stand alone 450QC container waxer is designed to apply mineral oil or hot wax lubricant to the exterior open ends of the container prior to the necking operations.

The modular platform can accommodate up to 20 processing modular bases and additional stages for can inspection modules.



Infeed Track

Belvac's infeed track work is compatible with many systems designed by many manufacturers. The infeed uses a constant velocity vacuum starwheel which brings cans into the machine at a steady rate.



Ram Assembly

The ram assembly has a dual action cam stroke on a vertical main shaft. The push stroke is 129.5 mm and the die cam stroke is 101.1 mm. The dual stroke design allows for both the depth of the shaping process and the high rotational speeds of the turret.

Complete Process Solutions

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BELVAC'S SHAPER is an integral part of Belvac's complete process solutions capable of producing shaped metal containers at high speeds, with high throughput, and with reduced metal consumption.

Belvac full service solutions supports container design and engineering, manufacturing process design and integration, provides a broad range of machinery for container shaping solutions as well as machinery installation and start up.

Belvac will also support full container qualification processes. The Belvac partnership solution is the right choice for all your metal container shaping needs.



Technical Specifications for the Shaper™

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Technical Specifications	Shaper	
Can Body Size Range	1.772" (45.0 mm) to 2.875" (73.00 mm)	
Can Neck Size Range	As Required	
Can Neck Expansion	Material Spec. Dependent	
Maximum Can Height	10" (254 mm)	
Minimum Can Height	3.75" (95.3 mm)	
Number of Pockets per Working Turret	12	
Number of Pockets per Transfer Turret	20	
Pocket-to-Pocket Integrity	Yes	
"Active" Pockets (Linear)	12	
Shaped Can	Yes	
"Active" Pockets (Recirculation)	Not Applicable	
Rated Speed (CPM)	1200 CPM (100RPM)	
Required Utilities	Pressure Requirements	Flow Requirements
Dual Compressor Setup	90 psig (6.2 BAR) Process Air 80 psig (5.5 BAR) Pumps, etc. 80 psig (5.5 bar) cam auto lube (intermittent)	125 CFM (Compressed Air (59 LPS) per Necker or Expander Turret 40 CFM Compressed Air (19 LPS) for Pumps, etc.
Single Compressor Setup	90 psig (6.2 BAR)	125 CFM Compressed Air (59 LPS) per Necker or Expabder Turret 40 CFM Compressed Air (19 LPS) for Pumps, etc.
Inspection Blow-Off	80 psig (5.5BAR) minimum	100 CFM Compressed Air (24 L/s) per Blow-Off
Trimmer Scrap Vacuum Utilities (Minimum)	Not Applicable	
Required Utilities: Vacuum	18 In/HG @ 90 CFM (457 mm HG @ 42 LPS) /Module	

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Machine Overall Dimensions	Length	[45.5" (1156 mm) x # Modules]
	Depth	106" (2692 mm)
	Width	111" (2819 mm)
Maximum Neck Shoulder Dimension	Approx 7.87" (200 mm)	
Maximum Neck Length	Not Applicable	
Minimum Neck Length	Not Applicable	
Effective Push Cam Stroke (Less BIS) Max	5.10" (129.5 mm)	
Die Cam Stroke Max	3.98" (101.1 mm)	
Cam Dynamics	Reduced Dynamics Cam (RDC)	
Cam Working Arc	270 Degrees	
Diameter Change Capability	One QC parts kit per can diameter	
Height Change Capability	"Quick Change"	
Ram Assembly Style	Precision linear bearings with Dual Cam Followers	
Main Shaft Style	Vertical	
Guard Style	Aluminum Extruded Modular	
Main Drive Motor and Gearbox	Multiple Drive: Configuration Dependent	
Gearbox	Vertical Parallel Shaft, Helical Gear	
Drive Gearing	Spur Gear, Steel Oil Drip Lube	
Transfer Shaft Assembly	Quick Change Modular	
Blowers	Floor Standing	
Infeed Star Wheel	20-Pocket Quick Change Modular	
Waxer	Optional 450QC Waxer – Stand Alone	
Transfer Starwheel	20-Pocket Quick Change Modular	
Discharge Starwheel	20-Pocket Quick Change Modular	
Face Seal Manifold	Modular FSM with HyComp Lining	
Main Drive Side Bearing	2-Single Row Taper Roller Bearings	
Die Side Bearing	Deep Groove Ball Bearing	

ABOUT BELVAC

Belvac is the clear choice for sustainable competitive advantage and the best option for new and innovative manufacturing processes.

BELVAC IS THE PREFERRED CHOICE OF THE world's two piece can makers and the most trusted source for canmaking technology worldwide. Belvac leads the industry with its design and production of continuous motion rotary technology. Belvac provides beverage canmakers with high-speed trimming, necking, base reprofiling and reforming, bottom rim coating, flanging and inspection technology. Belvac has enabled their customers to steadily increase line speeds and improve quality and productivity, while significantly reducing materials costs. Belvac customers have a sustainable competitive advantage in their market.

With nearly half a century of experience developing cutting edge machinery and almost 100% of its machines still in use, Belvac is the best option for new and innovative manufacturing processes. A testament to Belvac's dedication to quality, defect free products and precision engineering is that nearly all their machines are still in service — the oldest was made in the 1970s. Belvac engineers design their machines with industry leading precision. This technology is backed by Belvac's highly trained engineers who have installed and serviced machines in 49 countries.



Belvac...*the* choice for all your can making needs.

Belvac USA

237 Graves Mill Road
Lynchburg, VA 24502
Toll Free: 800.423.5822
Tel: 434.239.0358
Fax: 434.239.1964
info@belvac.com

Belvac Europe

Tylova 1/57
301 00 Plzen
Czech Republic
Tel: +420.378.011.322
Fax: +420.378.011.325
sales-europe@belvac.com

Belvac Middle East FZE

JAFZA Business Plus
Warehouse No. S3B5WH01
JAFZ South, UAE, PO Box 18334
Tel: +971.488.08.337
Fax: +971.488.07.838
sales-europe@belvac.com

Belvac China

Building No. 4
Hua Sheng Technology Area
No. 7 Chun Jui Road
Suzhou Industrial Park
Suzhou, China 215122
Tel: +86.512.62890910
Fax: +86.512.62890911
info@belvac.com

SHEAPER™

 **Belvac
Production
Machinery, Inc.**
A  **DOVER** COMPANY

Corporate Headquarters

237 Graves Mill Road
Lynchburg, VA 24502 USA