

AUTOMATIC DRUM BODY WELDERS

DMB



**NEW MODULAR DESIGN
AND STATE-OF-THE ART
TECHNOLOGY**

ENERGY SAVINGS UP TO 60 %

HIGH-QUALITY WELD SEAM

**EASY AND FAST FORMAT
CHANGEOVER**

**EASY TO HANDLE AND
OPERATE**



Soudronic

Technology that keeps you ahead

MAIN FEATURES OF DMB DRUM BODY WELDERS

VERY FLEXIBLE IN CHANGE-OVER

- Motorized adjustment of rounding station
- Calibration tool mounted on guide-rails with carriage for easy removal
- Automatic synchronisation of servo-motors
- Former format parameters are restorable to reduce resetting/adjustment time

HIGH-QUALITY WELD SEAM

- The accurate calibration crown ensures a scratch-free final product
- Smooth weld seam surface is guaranteed as no skew rolls and knurl drives are used
- The UNISOUND frequency converter cares for a constant and reproducible weld quality

EASY TO OPERATE

- UNICONTROL with easy to understand window-based touch-screen panel
- Monitoring of parameters related to the actual welding process
- Easy accessibility to all key machine components

REDUCED PRODUCTION COSTS

Up to 66% energy and up to \$ 70 000.-/year can be saved in comparison to conventional equipment owing to an integrated power compensation. A sturdy machine frame enables keeping very tight material tolerances and constant overlaps. This contributes to additional material cost savings.

FUTURE-ORIENTED MODULAR AND FLEXIBLE DESIGN

LOADING AND LIFTING TABLE [1]

The level of the blank stack on the lifting table is monitored automatically.

After the last blank has been taken from the stack, the table resets automatically to bottom position so that a new blank stack can be loaded.

DESTACKER UNIT WITH DOUBLE SHEET CONTROL [2]

Five pneumatic cylinders with suction cups take the blanks from the stack and transfer them to the roll-former unit.

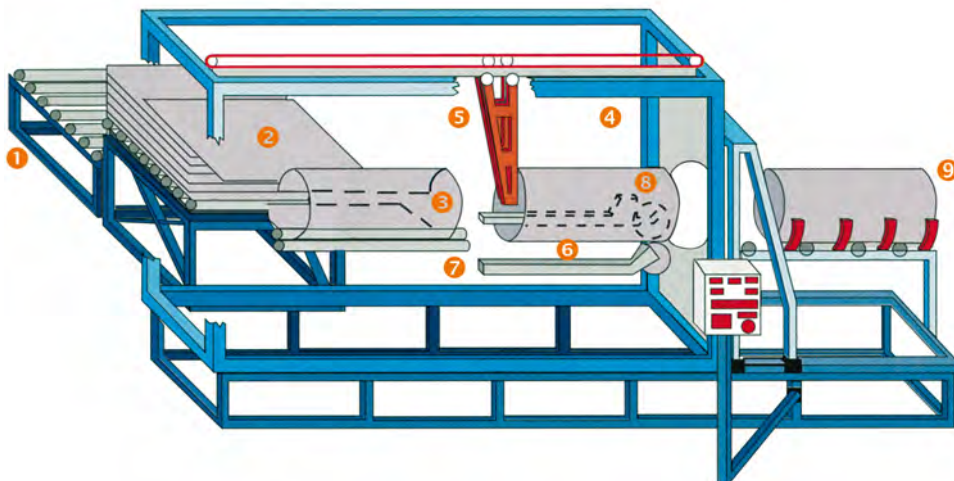
The double sheet detection ensures that only one blank at a time is pushed into the roll-former unit.

ROLL-FORMER UNIT [3]

No need to adjust the roll-former unit after changing to another sheet thickness. Belleville springs compensate different sheet thicknesses.



Roll-former Unit



Operation Flow

POSITIONING OF THE ROUNDED BODY [4]

The front and rear shell edge catch segments are pneumatically controlled. The guiding system ensures a smooth insertion of the rounded body into the Z-bars.

Easy adjustment of the segments when changing to another diameter. Lower segments do not require any adjustment as they remain always in the same position.



Body Transport

BODY TRANSPORT [5]

A triple-rail carriage with built-in push-arms guarantees a smooth transport of the rounded but not yet welded body.

The rounded body can also be positioned manually into the shell rolling catch segments and then be transferred to the welding rollers.

This feature is unique and saves time and money.

INTERMEDIATE CONVEYOR CHAINS [6]

The chain dogs of the transport chains push the drum body into the welding area.

Correction of body edge offset by means of adjustable chain dogs.

BODY GUIDING TOOL – Z-BAR [7]

The Z-bar consists of three sections which are assembled on a water-cooled support. It is equipped with a quick-clamping device.

These sections are made of carbide or tempered steel and can be replaced without disassembling the welding heads or the Z-bar. This means reduced costs and change-over times.

DISCON ROLLER HEADS [8]

Both welding rollers are oscillating and of identical dimension (interchangeable).

The lower welding roller is driven. Both roller heads are equipped with a double cooling circuit. A pneumatically driven milling device cleans the electrodes and maintains their correct geometry. A pneumatic cylinder supplies the necessary welding pressure.



Calibration Tool

CALIBRATION TOOL

The calibration tool is mounted on an aluminium plate and forms one unit fixed on a moveable carriage support. It can be drawn out to max. 1200 mm, a feature which is considered unique. Easy access to the key components and maintenance parts of the machine is ensured.

The upper calibration roller unit is motorized. A pneumatic cylinder cares for a constant calibration pressure.

UNISOUD FREQUENCY CONVERTER

Main features:

- Maintenance-free static frequency converter with steplessly adjustable frequency to meet customer's weld application at optimum
- Worldwide proven Soudronic technology
- Quick and easy exchange of electric boards
- Different current wave forms available
- Trouble-shooting supported by LED display
- Substantial energy cost savings due to power compensation

DRUM BODY WELDERS

SQUEEZING ROLLERS

The squeezing rollers are water-cooled and located close to the welding rollers. The lower squeezing roller is driven and a pneumatic cylinder is used to build up the squeezing force.

EXIT BELT CONVEYOR/TILTING DEVICE [9]

The exit belt conveyor and the tilting device can be turned by 180°. It is possible to retract the calibration support carriage. The tilting device can be equipped with a side ejection on either side.

DRIVE SYSTEM

Easy handling and operation as well as less wear and tear are ensured owing to the consequent use of the frequency-controlled drive system for calibration rollers, roll former, squeezing rollers and exit conveyor.

The servo drives for body transport carriage, intermediate transport chains and welding rollers are all synchronised.

UNICONTROL

Main features:

- Window-based touch-screen panel
- Easy to understand graphics guide
- Extended operator support for setting, production and maintenance
- Automatic synchronisation
- Decentralised intelligence for optimum performance
- Easy error detection and minimised wiring and cabling
- Identical hardware throughout whole system allowing minimum stock keeping for spare parts

OPTIONS

- Loading preparation table
- Automatic feeding system
- Non-Stop feeding system
- DISCON Roller Heads
- Squeezing rollers
- Monitor SWM-2
- Calibration crown off line storage frame
- Calibration crown lifting frame
- Calibration crown off line gauge
- Automatic central lubrication
- Electro-motor for roll-former adjustment

DRUM BODY WELDERS

TYPE		DMB 11	DMB 12
Production max.	dph	600*	900*
Body diameter	mm	450–630	450–630
Body height	mm	420–1100	420–1100
Sheet thickness	mm	0.7–1.5	0.7–1.5
Calibration tool	Tool set	Standard	Standard
Welding speed	m/min	6–16 *	6–16 *
Welding frequency	Hz	55–100	55–100
Connected load cos.phi 0.90	kVA	110	110

* Depending on body size and material quality