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DAVI MCA 3022 (1125-2400014)

Control type
konventionell

Construction year
2026

Machine no.
1125-2400014

Make
DAVI

Location
49779 Niederlangen

Features

- Machines include the following DAVI standard specification:
The components of the machine structure
(machine stand, frame and swivel bearings, etc.) have been calculated and
designed to withstand the loads required for the applications
and performance levels. The robust and heavy-duty machine construction absorbs
the loads generated during
the bending process without transferring them to the foundation.

- High-quality surface finish:
For forming delicate surfaces and/or soft materials without leaving marks
Hydraulic-mechanical parallelism system, supported by
electronics for fine-tuning.
There are two
INDEPENDENT & SYMMETRICAL hydraulic circuits for the left and right
cylinders of each roller.
The oil flow is regulated by two DOUBLE PUMPS, which are mounted on the
same motor shaft and are fully synchronised.

The two symmetrical hydraulic circuits move the cylinders and supply
the rollers with the SAME amount of oil in a fully synchronised manner.
Electronic control is activated only for extremely precise
fine-tuning.

- Smooth transmission of the drive

Both the hydraulic motors and the gearboxes (top and bottom)
can follow the deflection of the roll
without load when bending narrow sheets.
This ensures perfectly symmetrical deflection of the rolls under load.
This system also allows the rollers to deflect freely,
without the risk of breakage under excessive load.

- ?Roll-by-Wire?© digital technology

Since 2004, DAVI has revolutionised the way sheet metal rollers are wired
(similar to ?fly-by-wire? technology in the aerospace,
FMS and automotive industries) and introduced ?Roll-by-Wire? technology.
This allows the entire control system of the roller to be controlled via digital
signals rather than, as was previously the case, via numerous relays and contacts.
Digital technology is much faster and more reliable.

Action	Benefit
Reduction in the number of components	- Reduction in potential component failures
Very compact design	- Improved accessibility for maintenance work
Improved accessibility for maintenance work	- Damaged parts can be identified more easily
More reliable	- Greater accuracy thanks to the use of ?digital signals?

Permanent lubrication technology

The lever-arm feed system eliminates all linear friction during the movement

of the side rollers, as the roller support arms, which house the bushings, rotate simply and smoothly around two large, strong pivot points made of alloy steel, ensuring precise and friction-free rotation. This guarantees reduced wear and safety during unlimited use.
Further advantages of the lubrication-free lever-arm feed mechanism are:

?NO daily maintenance required (lower operating costs).
?More production time available.
?The bearings are sealed to protect against scale, dust and rust

- Hardened rollers

?Excellent heat treatment of the induction-hardened rollers
?A much harder surface than unhardened rollers to reduce wear and scratches
?Surface-hardened to between 48?62 HR Rockwell C, depending on roller size

- Cone production package

It comprises:

?Electronic, software-controlled tilting of the side rollers (return automatically to the horizontal position)
?Mechanical counter-tilting of the lower roller to assist the feed of the cones (hydraulic counter-tilting available on request)
?Cone stop (cone shoe) made from hardened chrome steel alloy

Control:
?DAVI iRoll®- EXTREME? CNC Control with LIVE! 3D machine view

Key features		Programmable axes
Operating system: Windows	-	All axes are programmable
21.5? touch screen	-	Operating mode
Joystick with dead man?s switch	-	Manual
On/Off (S-axis)		
Variable rotational speed	-	Automatic via manual
(S-axis)		data input (MDI)

Customisable widgets - Flexible automation
Smartphone-like visualisation - Programming options
in high resolution
LIVE! 3D machine view - Editor mode: a programme is
written manually
using the keyboard
Live 3D simulation - Teach-in mode: rolling the
sheet metal and saving
the movements
Unlimited number of programmes - Programming aid for workpieces
with single radii and
multiple radii
Radius correction for shapes with - Programming aid for cones
a single radius and multiple radii

Material properties ? - Programming aid for
self-learning input system customised parts
Graphical display of - Programming aid for
clamping pressure ? optional - rolling programmes with multiple
work steps
Production report for - Programming aid for
series production ?apple shape?
Basic App Fault-Free Machine (FFM) - Optional functions
Maintenance alarms - Joystick with deadman?s switch
(On/Off) (other axes)

Special equipment included in the price:
- Hardened rollers
- Package for conical production
- ?DAVI iRoll®- EXTREME? CNC control with LIVE! 3D machine view

Translated with DeepL.com (free version)

Machine attributes

sheet width:	3100 mm
plate thickness:	9 mm
pre-bending:	6 mm
diameter of upper rolls:	220 mm
diameter of lower rolls:	200 mm
side roll diameter:	170 mm
min. dia.:	250 mm
roll speed:	6 m/min
total power requirement:	10,3 kW
weight of the machine ca.:	4651 kg
dimensions of the machine ca.:	4915 x 1120 x 1235 mm

Machine images