

DAVI

MCE e-POWER



The **ONLY** complete line
of **FULLY ELECTRIC** plate rolls



COMPONENTS SIMPLIFICATION

What is not there, does not break: less breakage because there are far fewer components to keep track of.



EASY INTEGRATION

For AI-Vision and all available accessories.



LOW CONSUMPTION

Start&Stop system allows for zero consumption.



UNRIVALED PRECISION

Next-generation actuators ensure the highest accuracy.



SIMULTANEOUS MOVEMENTS

The machine can potentially move all axes at the same time.



INCREASED PRODUCTIVITY

The rolling process is accelerated across multiple axes.



SILENT OPERATION

Maximum silence both in standby and operational mode.



REPEATABILITY ASSURED

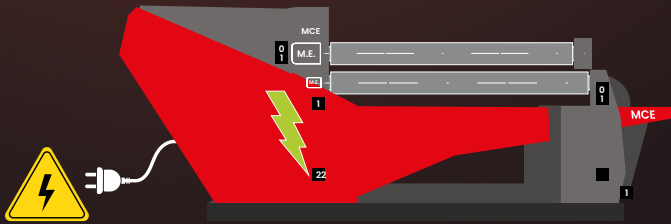
With the greatest precision in terms of rolls positioning.



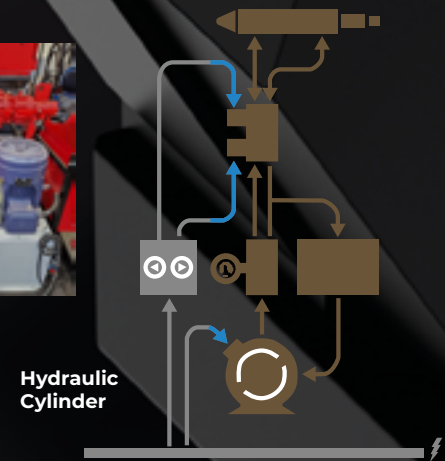
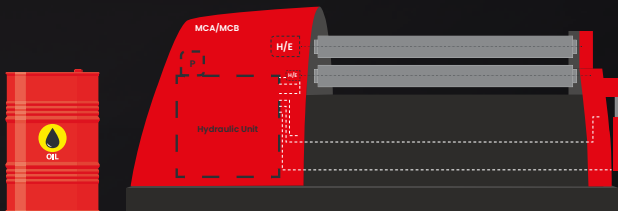
REDUCED MAINTENANCE

No lubrication required due to the absence of hydraulic control units.

MCE e-POWER



HYDRAULIC (also hybrid solutions still have the hydraulic unit)



COMPONENTS SIMPLIFICATION

What is not there, does not break: less breakage because there are far fewer components to keep track of.

- ▶ **SIMPLIFICATION** in terms of **ROLLS POSITIONING**
- ▶ **SIMPLIFICATION** in terms of **ROTATION**

Servomotor

Gearbox

Davi
Actuator

BRANDS OF THE MACHINE COMPONENTS

GEARBOXES



BREVINI
Motion Systems

Nidec

SAFETY DEVICES

ReeR

TRANSDUCERS

GEFRAN
BEYOND TECHNOLOGY

SERVOMOTORS & INVERTERS

ABB invt serpee

ELECTRONIC COMPONENTS

SIEMENS

EATON
Powering Business Worldwide

GESSMANN

POWER SUPPLY

**PHENIX
CONTACT**

BEARINGS

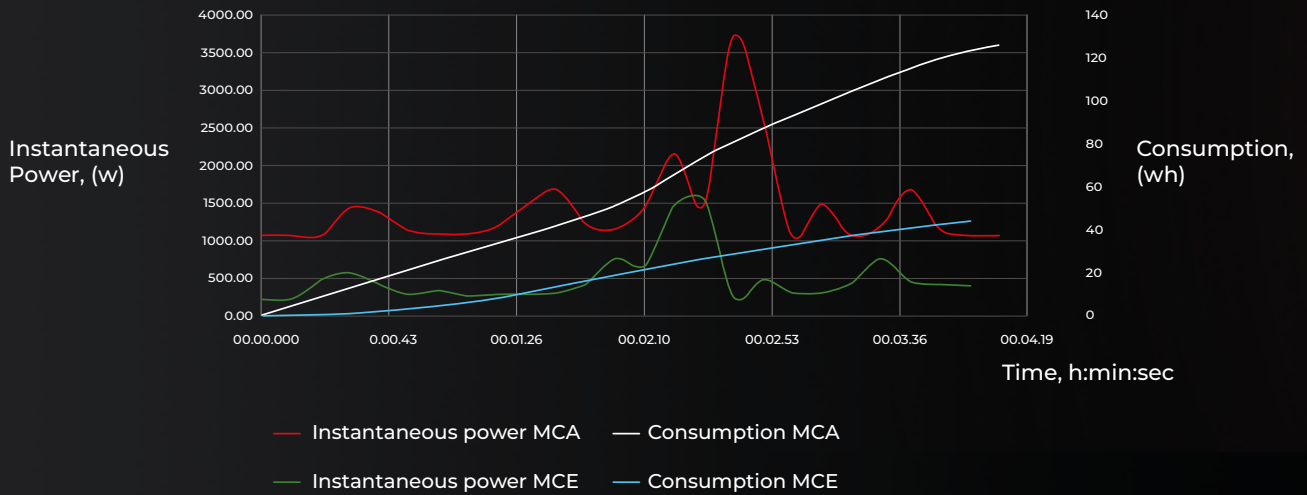
SKF **RKB**

MAIN SWITCH

ABB

**Rockwell
Automation**

E-POWER

MCA vs MCE


**What happens when
working a Ø630 mm (25"),
W=1000 mm (39"), Th=5mm
(0.2") plate in S355JR**

**In a year of work: 12
plates per hour per
8 hours per day per
220 days per year**



MCE: 12 x 8 x 220 x
44Wh = **929,3 kWh/y**

MCA: 12 x 8 x 220 x
127Wh = **2682,2 kWh/y**



LOW CONSUMPTION

Start&Stop system allows
for zero consumption.

Large motors, high absorption.
Small motors, low absorption.
The machine **absorbs power
ONLY when you really need it.**



All axes of the machine are **independent**.
If the process allows it, multiple movements can be
made at the same time.



SIMULTANEOUS MOVEMENTS

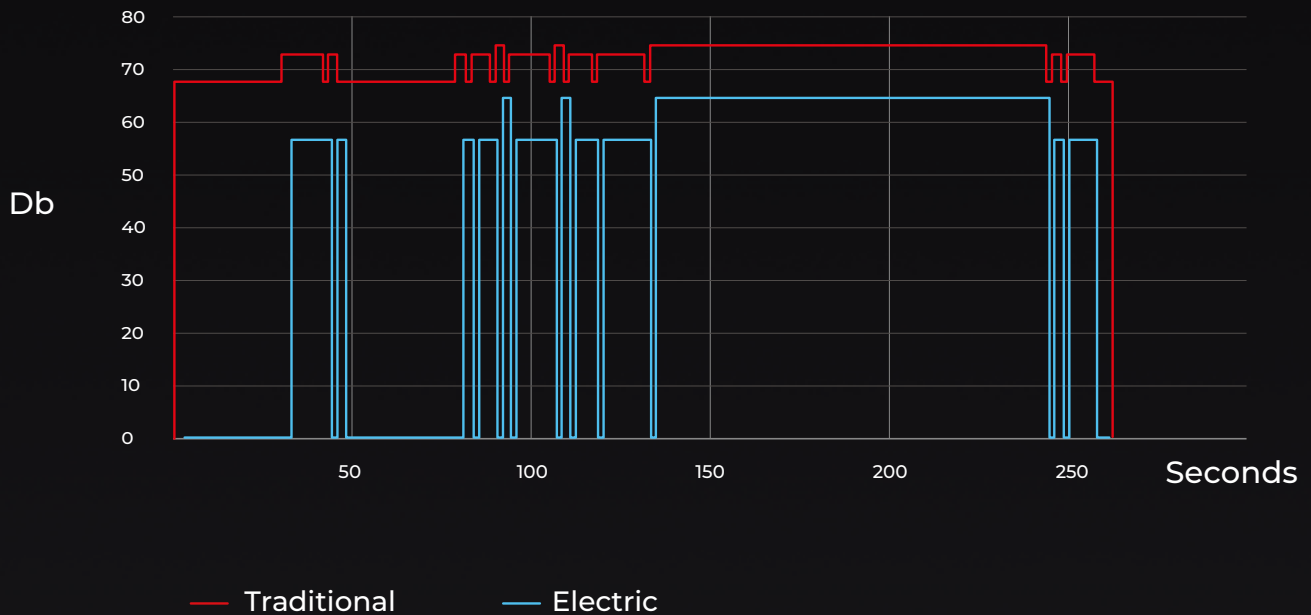
The machine can potentially
move all axes at the same time.



INCREASED PRODUCTIVITY

The rolling process is accelerated
across multiple axes.

Silent Operation



Large motors, high noise. **Small motors, low noise.**

MCB F30 mounts a 30Hp 50Hz 4 pole motor → 65db

MCE F30 mounts many engines, the largest one emits → 58db



65db

Cars in the highway
at 130km/h (81mph)



58db

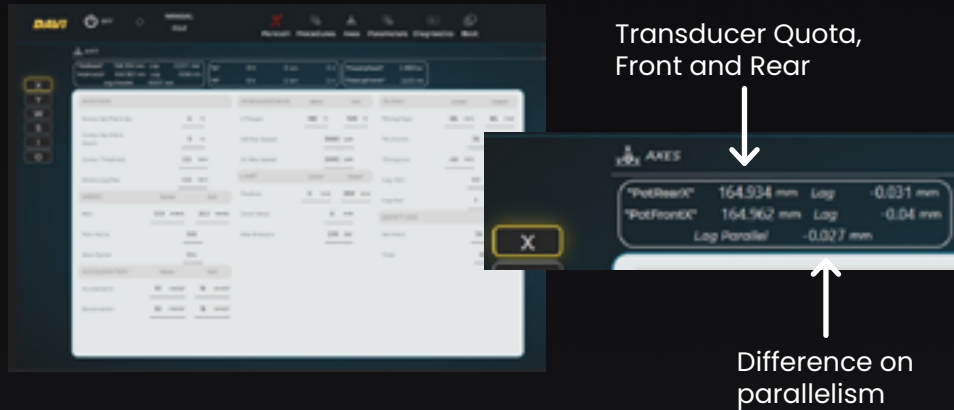
People talking
in a room



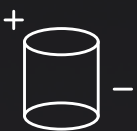
SILENT OPERATION

Maximum silence both in
standby and operational mode.

All axes are controlled by the CNC, acquiring the third decimal place
(in the hydraulic version, it's one decimal place)



Actuators are controlled with many more parameters. Actuators, constructed with components such as gears and ball screws with low backlash, allow for high stiffness between the rotation of the servomotor and the actuator's displacement. These objects therefore have a **deflection of 0.04 mm (0.0016") over a traveled stroke of 300 mm (12")**.



UNRIVALED PRECISION

Next-generation actuators ensure the highest accuracy.



REPEATABILITY ASSURED

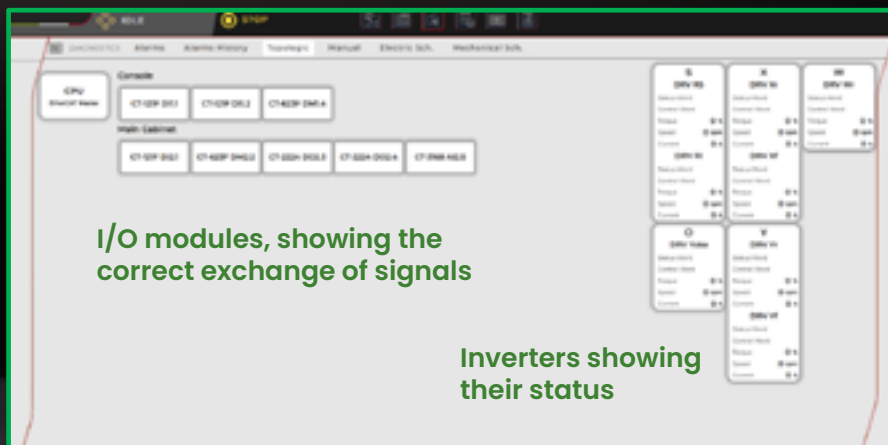
With the greatest precision in terms of rolls positioning.

The problem is localized; and the component speaks to us.



Errors are coded, so it is easy to diagnose; the software dialogues with the inverter.

Everything under control, from the operator panel you have an overview.



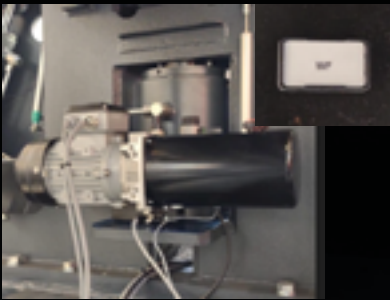
I/O modules, showing the correct exchange of signals

Inverters showing their status

MCE fully electric plate roll **does not have:**

- High amounts of oil degrading
- So many components that it is difficult to associate a function with, if you are not an expert
- Filters
- Lots of piping

The problem is localized; all it takes to move an axis is physically:



ON THE AXIS ITSELF



ON THE INVERTER DEDICATED TO THAT AXIS

e-POWER



REDUCED MAINTENANCE

No lubrication required due to the absence of hydraulic control units.



EASY INTEGRATION

For AI-Vision and all available accessories.

- With **AI-Vision**, laser radius measuring device with AI-self correction (the perfect integration happens with **iRoll eXtreme control system**); this is possible thanks to the precision MCE can reach
- With **all (electric) accessories** available also on hydraulic plate rolls



e-POWER

iRoll
EXTREME



★**AI-VISION**



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www.davi.com



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The machines shown in the pictures enclosed in this brochure may be samples and can refer to other models, have a special design, or may have been equipped with special options. DAVI Copyright© 2025.