



MISSION: PRECISION

UMILL 630

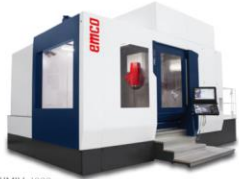


PRODUCT RANGE MILLING

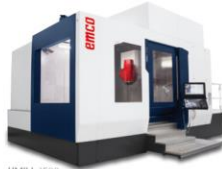
UMILL

UNIVERSAL MACHINING CENTRES FOR 5-AXIS SIMULTANEOUS MACHINING

EMCO MMV



UMILL 1000



UMILL 1500



UMILL 750



UMILL 630



MMV 3200



MMV 2000

VERTICAL

HIGH-PERFORMANCE MILLING CENTRES FOR LARGE-VOLUME PARTS



DYNAMILL G5



DYNAMILL



MEGAMILL



POWERMILL

HORIZONTAL

HIGH-PERFORMANCE MILLING CENTRES FOR LARGE-VOLUME PARTS



ECOMILL



ECOMILL PLUS



MECMILL



MECMILL PLUS

MAXXMILL

VERTICAL MACHINING CENTRES

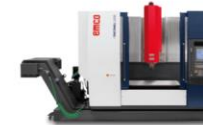
EMCOMILL



MAXXMILL 750



MAXXMILL 630



ECOMILL 1200



ECOMILL 750



ECOMILL E350

UMILL 630

- / Machine based on MM 630, machine bed is modified
- / Main differences:
Torque drive for C-axis, special drive
(sprocket and 2 motors) → 5-Axis simultaneous machining
- / Spindle 15,000 rpm, HSK-63A and 30 tools magazine Standard
- / direct drive X / Y / Z
- / linear scales in X / Y / Z Standard
- / counter support Standard



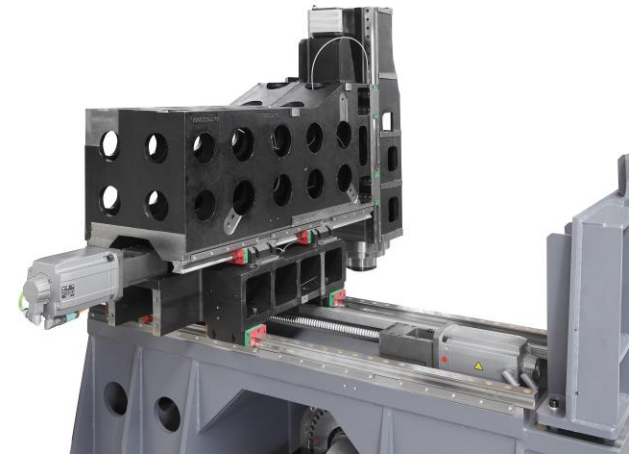


UMILL 630

Travel X-Achse	500 mm*
Travel Y-Achse	460 mm*
Travel Z-Achse	450 mm*
Swivelling area B-axis	$\pm 100^\circ$ *
Rotary area C-axis	n x 360° *
Distance spindle nose - table	150 - 600 mm*
Weight	5,300 kg**

* as MM 630

** + 500kg



UMILL 630

Rapid feed X / Y / Z

Feed force X / Y / Z

Acceleration

Size guiding X / Y / Z

Diameter ballscrew X / Y / Z

Central Lubrication system guides,
ballscrews and motorspindle

50 m/min**

5,000 N*

6 m/s²***

45 / 35 / 35*

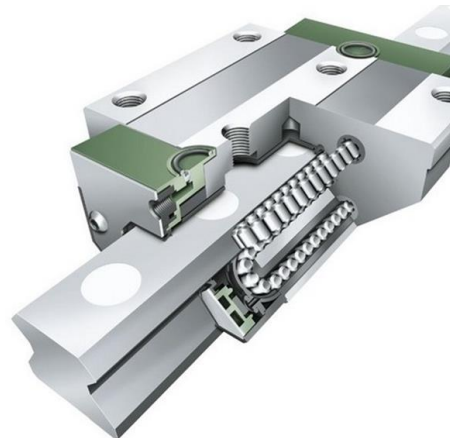
40 mm*

Grease*

* as MM 630

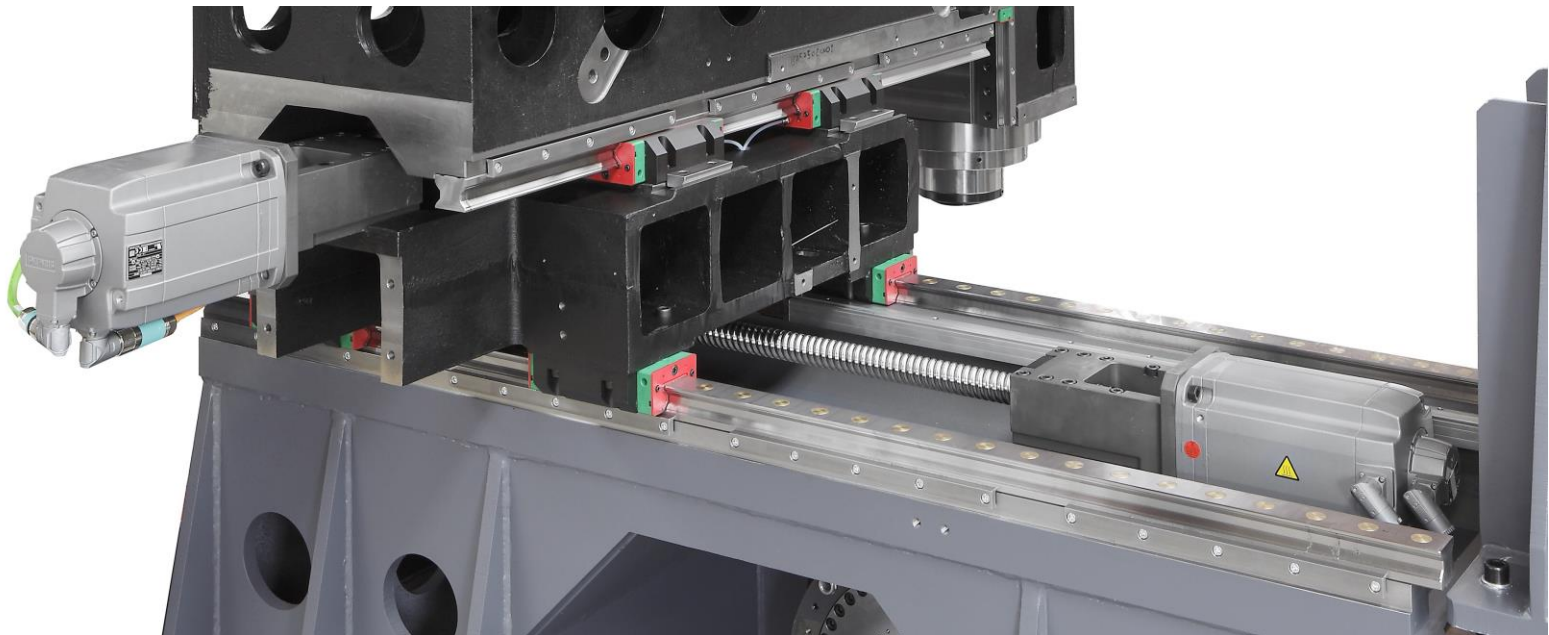
** from 30 m/min to 50 m/min

*** from 3 m/s² to 6 m/s²



UMILL 630

- ✓ The motors of X / Y / Z-Axis are directly coupled to the ballscrews. As a result, higher dynamics can be achieved, and the (continuous) precision increases significantly compared to belt drive.



UMILL 630

Table dimension	630 x 500 mm*
Distance floor - table	855 mm**
T-slots (Mid H7, others H12)	14 mm*
Number of T-slots	5*
Distance of T-slots	75 mm*
Max. speed B-Axis	50 rpm***
Max. speed C-Axis	100 rpm***
Max. weight of workpiece (equally spread)	200 kg*

* as MM 630

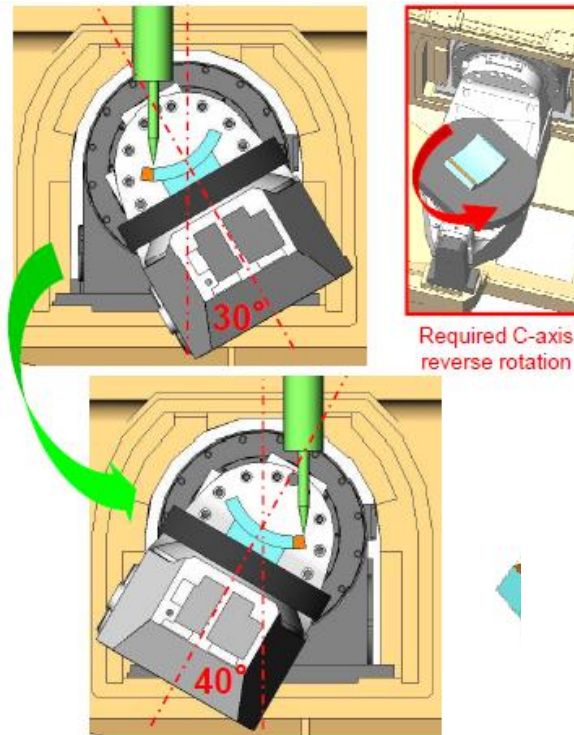
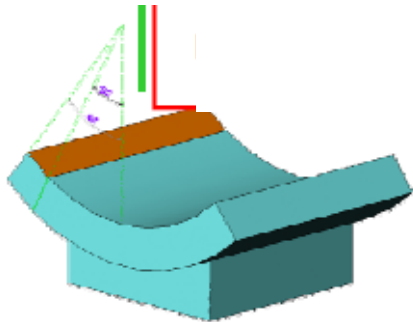
** MM 630 = 805 mm

*** MM 630 B = 16 rpm, C = 25 rpm



UMILL 630

✓ Swivelling area B-axis $\pm 100^\circ$



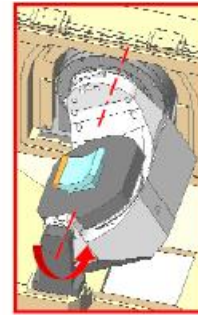
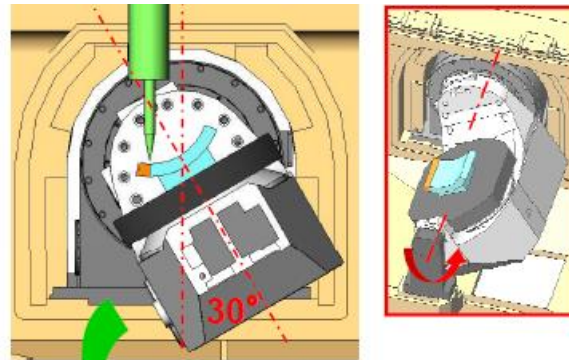
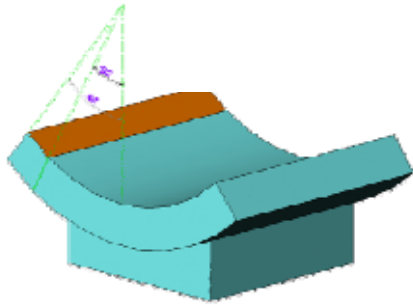
Required C-axis
reverse rotation

Competitors with
non-symmetrical B-axis,
f.e. DMG DMU 50 with
 $-35^\circ +110^\circ$

To do the machining, C-axis has to turn 180° and
The B-axis has to swivel – less precision

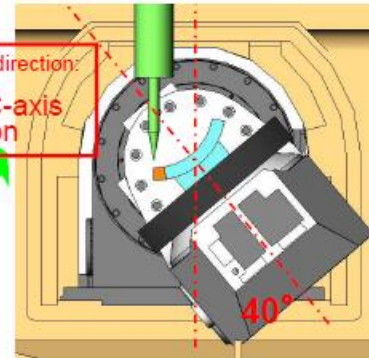
UMILL 630

Swivelling area B-axis $\pm 100^\circ$



EMCO

B-axis inclination to plus direction:
Not required for C-axis
reverse rotation



To do machining, only B-axis has to swivel

UMILL 630

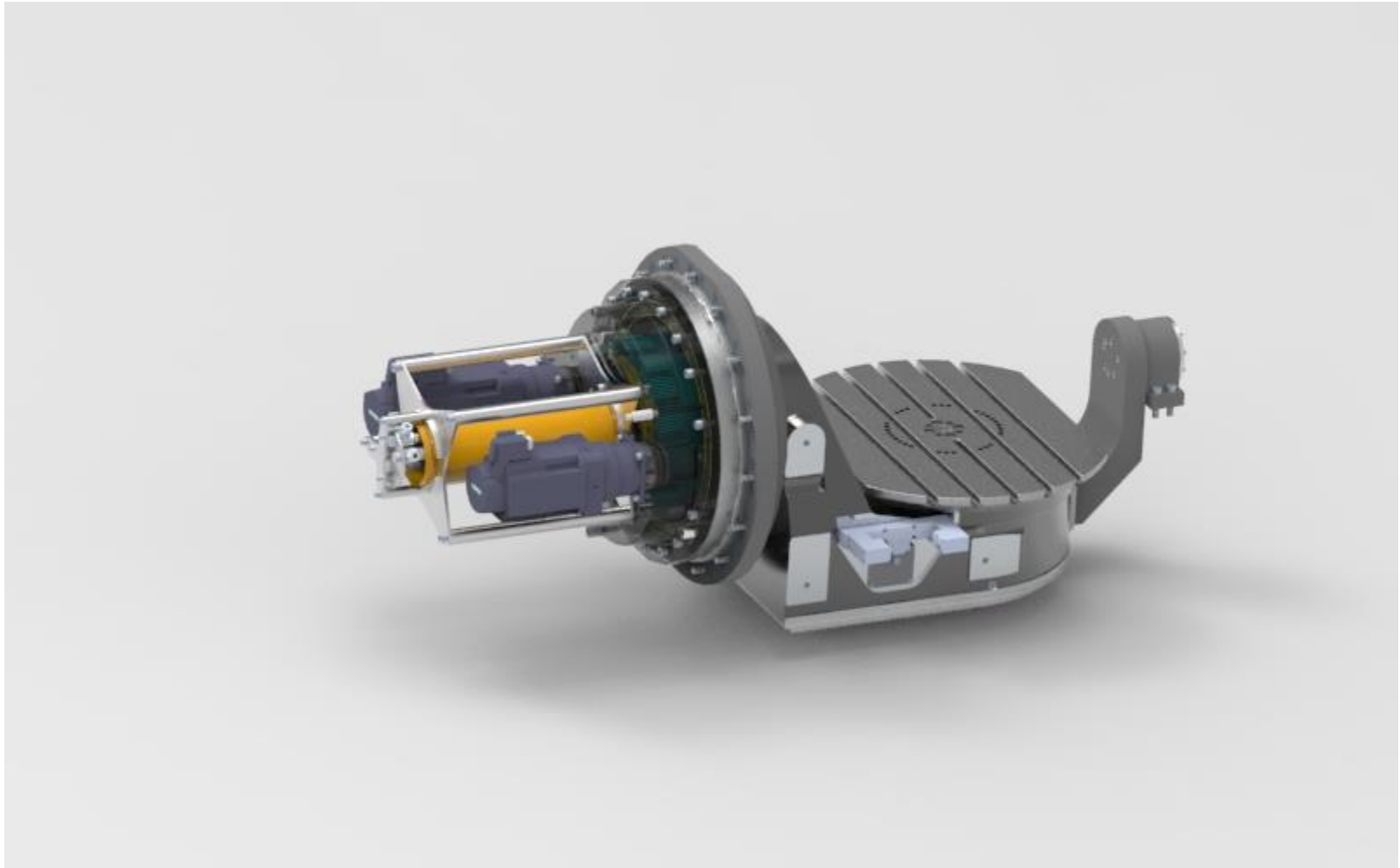
- ✓ The C-Axis is driven by torque motor, the B-Axis is driven by special sprocket and 2 motors, eliminating the wear
- ✓ This ensures the highest dynamics and precision
- ✓ Long-lasting accuracy because of wear-free and no backlash
- ✓ Supplier EMCO Hallein – Key component made In-House!!



The first 5 tables were designed with a plate diameter of 630mm, can be changed to 630 x 500mm on customer request...



UMILL 630 - Table



UMILL 630 - C-Axis

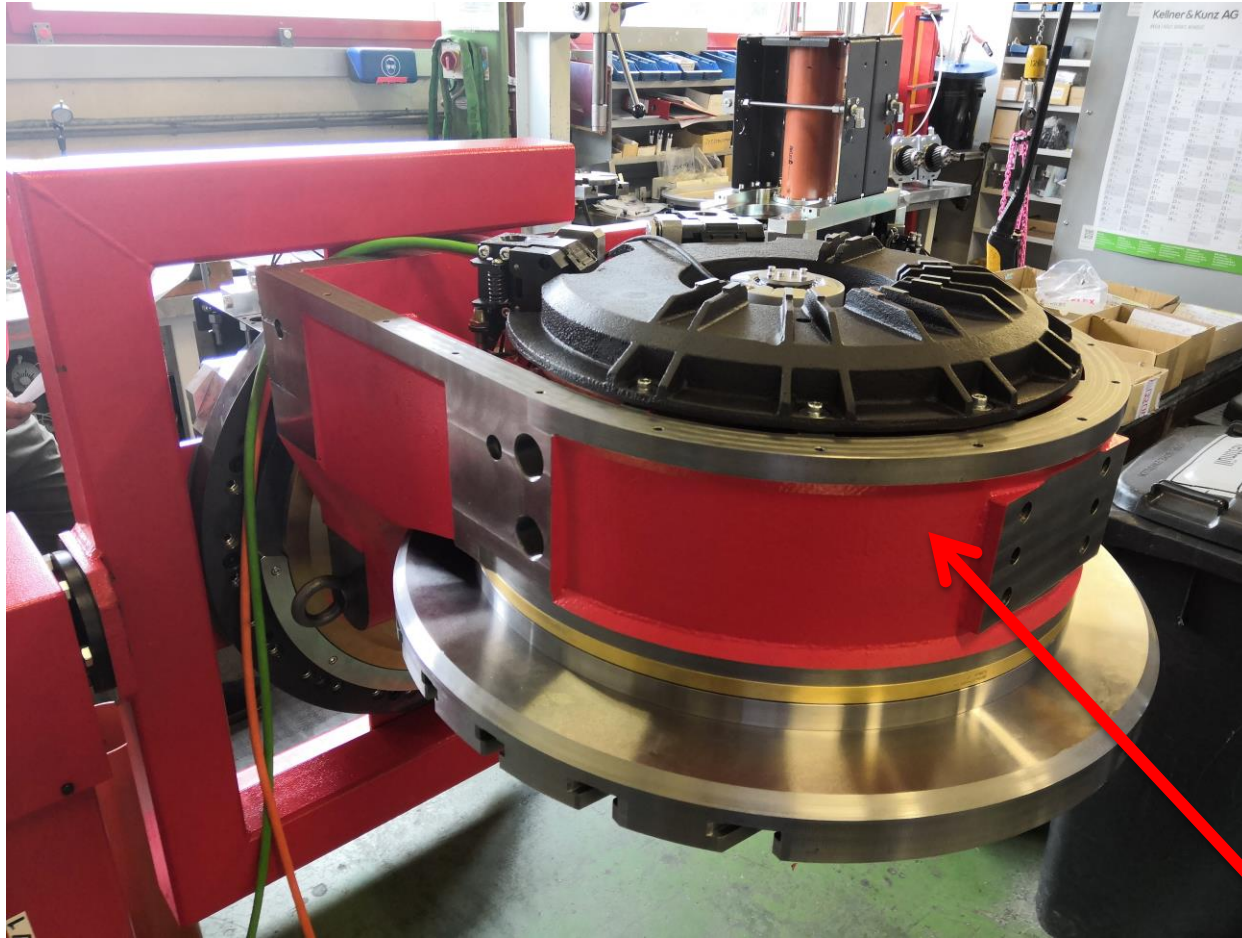
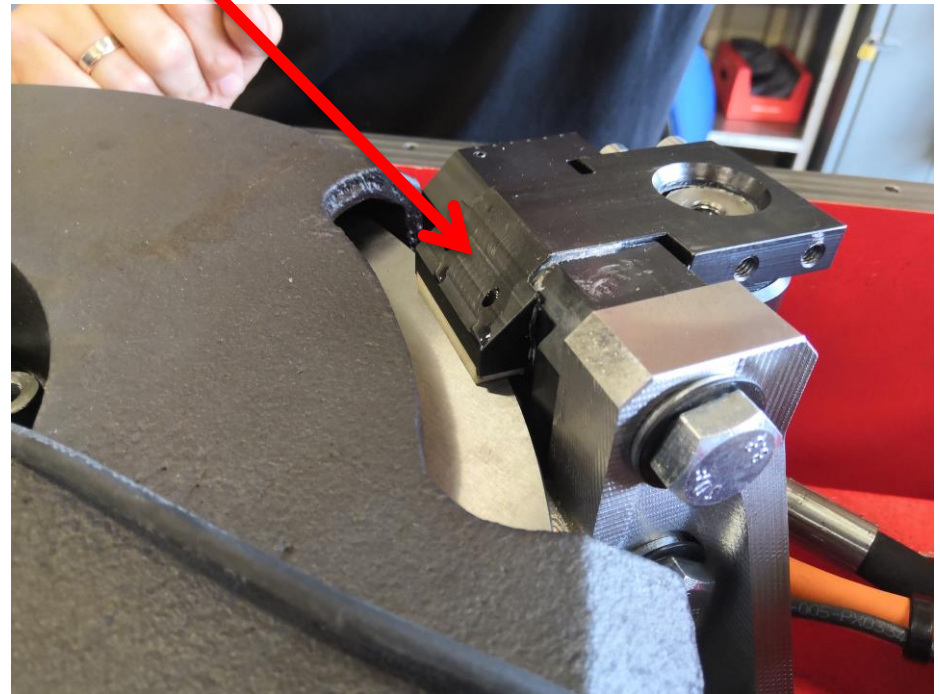
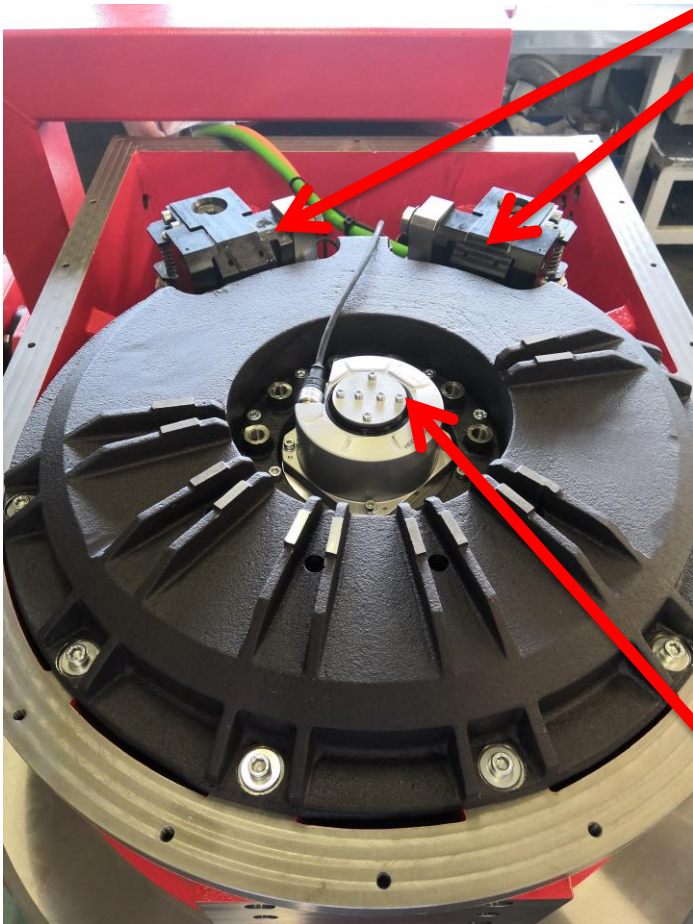


Table on assembly device in Hallein

Torque motor

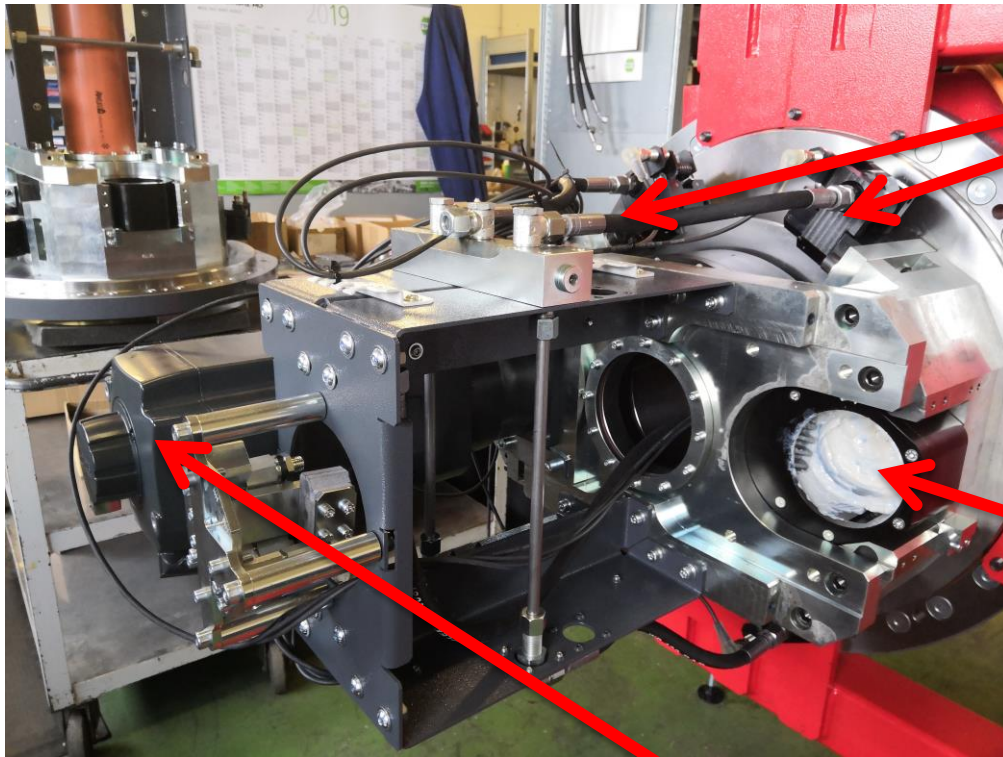
UMILL 630 - C-Axis

Disc brakes – hydraulically clamped



Encoder by Heidenhain

UMILL 630 - B-Axis



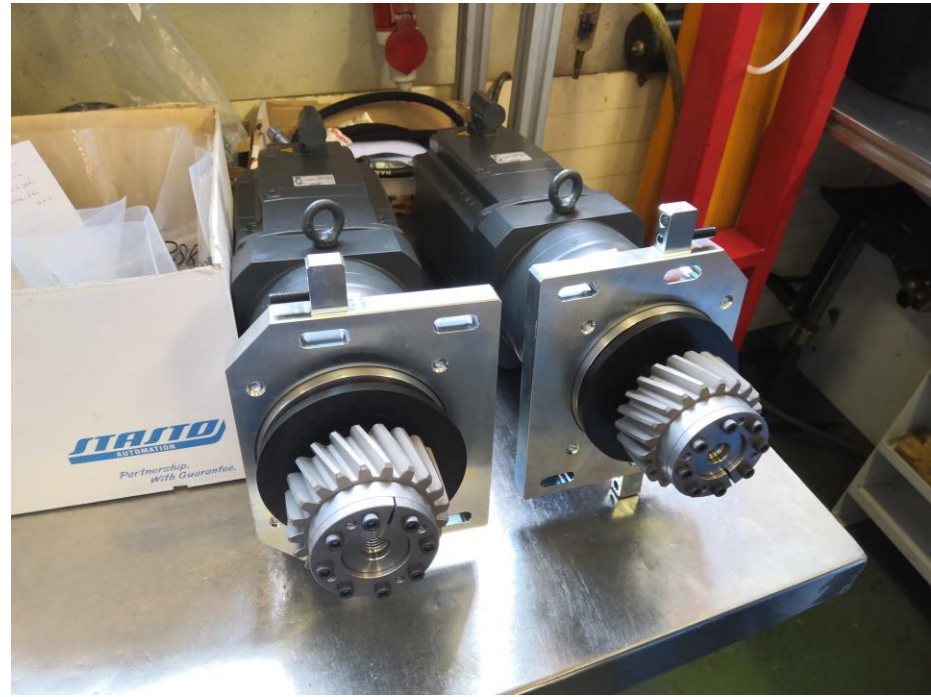
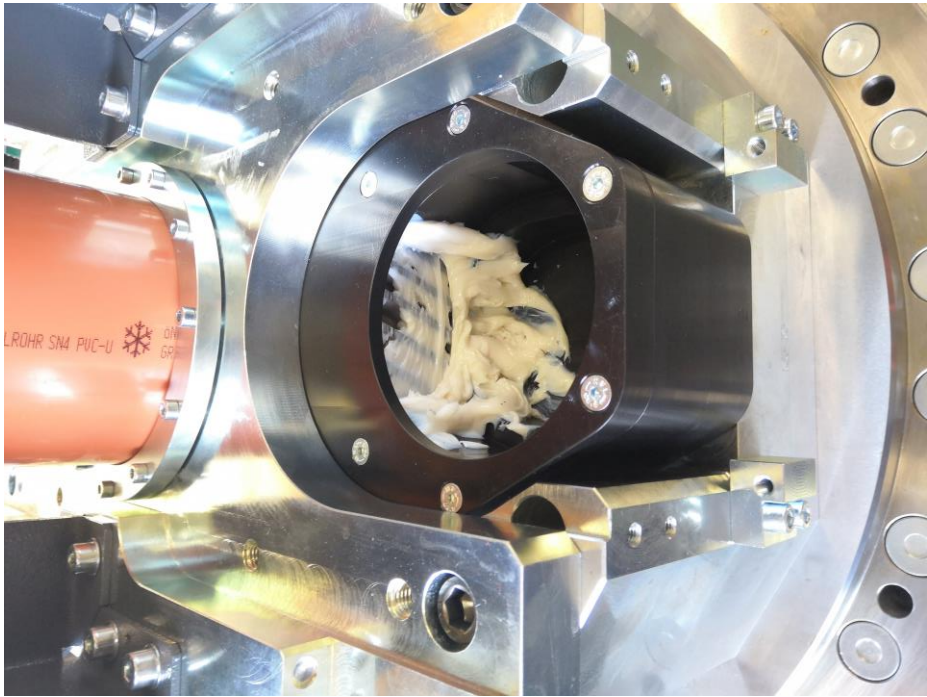
Disc brakes –
hydraulically clamped

Interface
motor 2

motor 1

emco

UMILL 630 - B-Axis



UMILL 630

Speed range

50 – 15,000 rpm

Torque (S6)

110 Nm

Power (S6)

26 kW

Taper size

HSK-63A

Drive

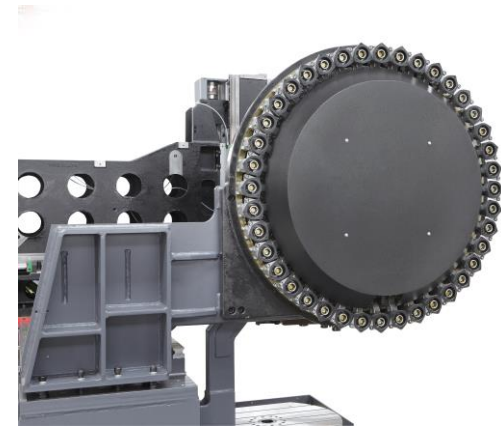
Motorspindle

Supplier

Weiss



UMILL 630



No. of tools	30 (60 / 90)
Tool change system	S-Arm
Tool management	Random
Chip-to-Chip time	4.9 s
Max. tool diameter	80 mm
Max. tool diameter (with adjacent tool)	125 mm
Max. tool length	250 mm
Max. tool weight	8 kg
Max. drum load	130 kg

UMILL 630

Variants of controls

SIEMENS 840D Solution Line

OPERATE 22" TFT monitor

emcoNNECT



HEIDENHAIN TNC 640

19" TFT monitor





UMILL 630 - DESIGN

- / New color
- / New sheet metal
- / LED progress bar
- / New operator panel, height adjustable and pivotable





UMILL 630

- / Torque drive C-Axis, special drive with 2 motors in the B-Axis
- / Counter support
- / Linear scales X / Y / Z as STD
- / Performance spindle 15,000 rpm, 110 Nm, 26kW
- / B-Axis $\pm 100^\circ$
- / Stable base construction
- / Ergonomical operation (loading area, accessibility of the table, control panel)
- / Rapid tool change, high acceleration and precision
- / Modern Design
- / Good value (price/performance)
- / EMCONNECT as STD (Siemens)

In favor of EMCO...

- ✓ Solution Provider: complete processes and solutions, not only machines
- ✓ Turning and milling machines with customizable automation concepts
- ✓ Customer proximity: flexible, regional service and spare parts supply
- ✓ European technology and production

beyond standard /