

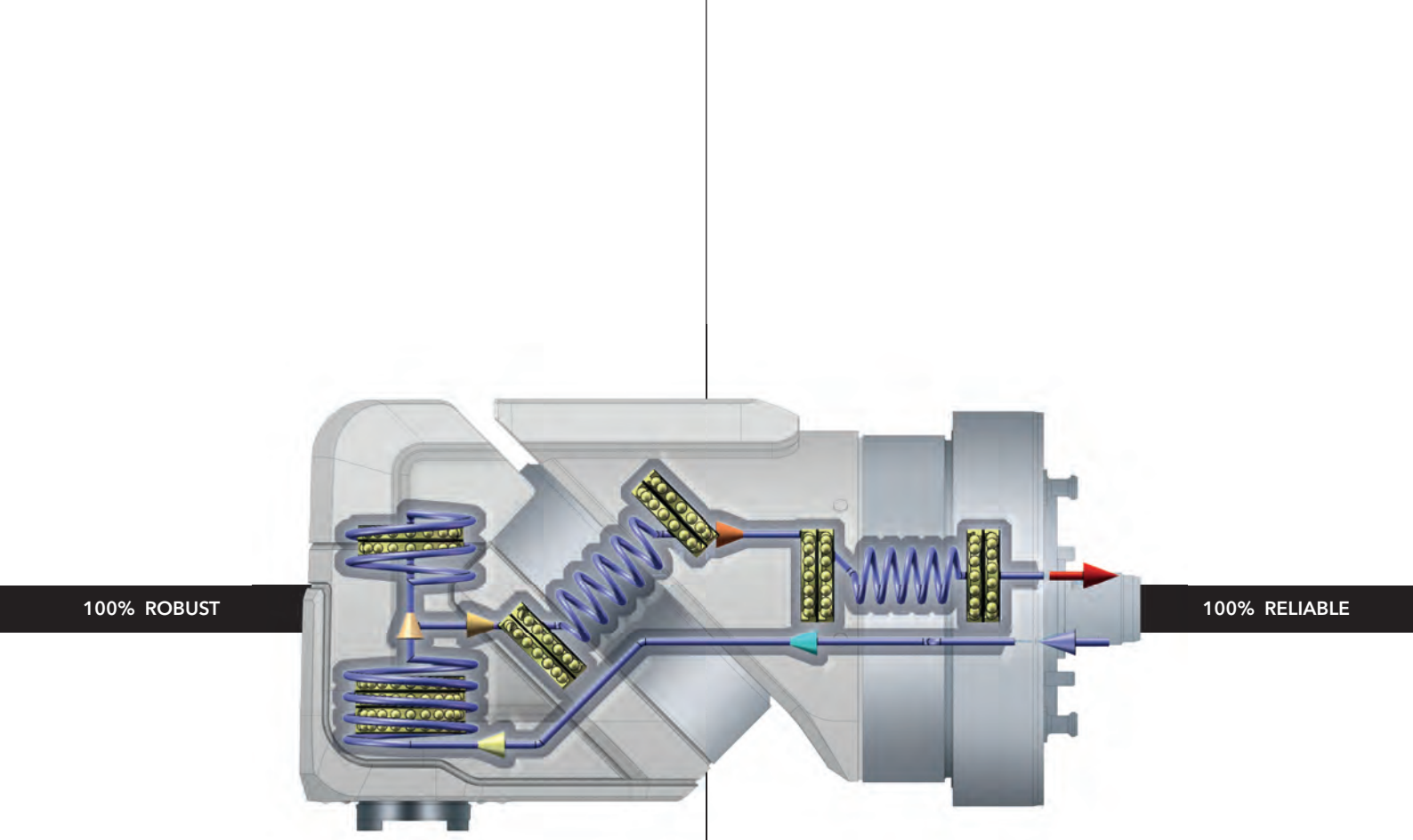
correa

HEAD TECHNOLOGY

WARRANTY



UAD | OAD TECHNOLOGY



UAD | OAD TECHNOLOGY

FLEXIBILITY

Rotation/indexation every 0.02° thanks to the double Hirth coupling patented worldwide.

6000 rpm with no limitations.

Adjustable coolant through spindle 17 - 70 bar.

RELIABILITY

Design and fabrication entirely by NCSA. The whole assembly process is monitored by NCSA.

Head assembly in a cleanroom with constant temperature 22°C.

Milling head run in the test bench for 60 hours performing body & spindle rotations.

ROBUSTNESS

4+2 Bearings in the main spindle.

Tool clamping force: 2500 kg.

Hirth coupling's locking force: 22000 kg.

The milling head's design allows 52 kW - 1375 Nm in S1.

Milling head body made of casted steel GGG-50.

PRECISION

Maximum coupling repeatability error + - 3".

The bearing's cages of the main spindle & the external spacers of the secondary axes' bearings, are cooled with water.

	Material	Ø (mm)	Ap (mm)	Ae (mm)	F (mm/min)	Q (cm³/min)
Face Mill	Ck-45 (60 kg/mm²)	125	5	94	2150	1010
Porcupine	Ck-45 (60 kg/mm²)	80	46	30	700	966
Drill	Stainless Steel 17-4PH (42 HRC)	94	-	94	157	1089
High feed Mill	Ck-45 (60 kg/mm²)	80	1	60	18000	1080

5 AXIS TECHNOLOGY



100% ROBUST

100% RELIABLE



5 AXIS TECHNOLOGY

ROBUSTNESS

C axis working torque: 2200 Nm (Motor-Torque).
 C axis braking torque: 4000 Nm.
 B axis working torque: 2026 Nm (Motor + reduction + gears).
 B axis braking torque: 4000 Nm.
 Superior quality Kessler or Fischer electrospindle.

RELIABILITY

Head designed and manufactured in Nicolás Correa.
 Head assembled in white room at 22°C.
 Kessler / Fischer electrospindle.
 More demanding cutting tests.
 Automatic lubrication.

PRODUCTIVITY

C axis rotation speed: 45 rpm.
 C axis acceleration: 10 rev / sec².
 B axis rotation speed: 25 rpm.
 B axis acceleration: 10 rev / sec².

PRECISION

Temperature-based pivoting distance correction main axis bearings.
 Mean Ps error < 0.001°.
 Total P error < 0.002°.
 B axis encoder placed on last rotation axis.

Completely symmetrical transmission in the B axis. The heat generated during the transmission in the B axis is uniformly distributed among the milling head.

FLEXIBILITY

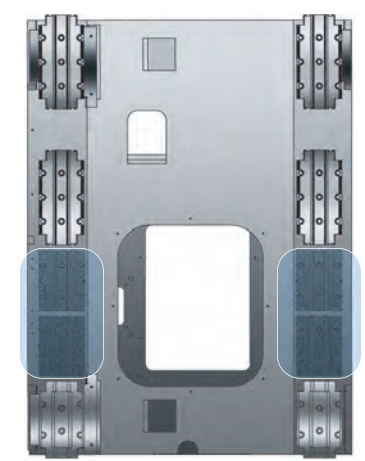
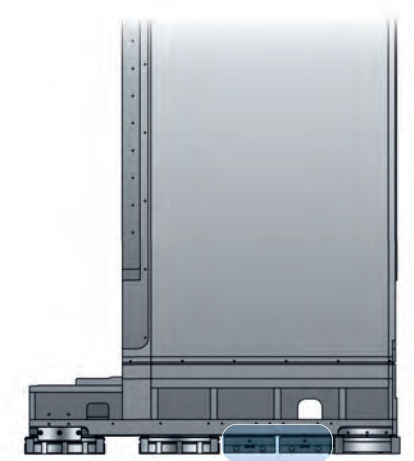
Axis C rotation, from -200° to +200°
 *Optional -360° to +360°.
 Axis B rotation, from -110° to +110°.
 3 configurable electrospindles on the same boring head.
 Cutting fluid and/or air through the spindle, which can be adjusted from 17 to 70 bar.
 Cutting fluid and/or outside air with integrated adjustable nozzles.

	Material	Ø (mm)	Ap (mm)	Ae (mm)	F (mm/min)	Q (cm ³ /min)
Face Mill	Aluminium AW-5083	63	7	50	15000	5250
High feed Mill	Ck-45 (60 kg/mm ²)	52	0.5	37	12000	222
Drill in 5X	Ck-45 (60 kg/mm ²)	4	40	4	-	-

MILLING-TURNING TECHNOLOGY

MACHINE TECHNOLOGY

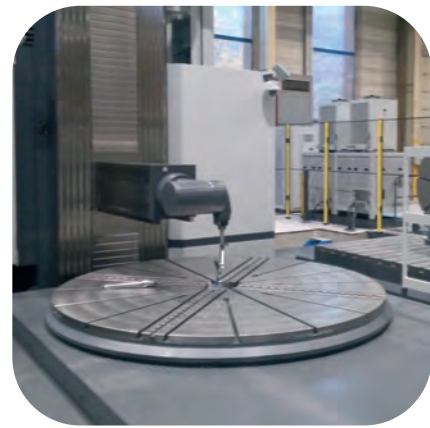
4 brake rollers are added in X axis
When turning mode is active, X axis position is secured by these rollers



TURNING TABLE TECHNOLOGY

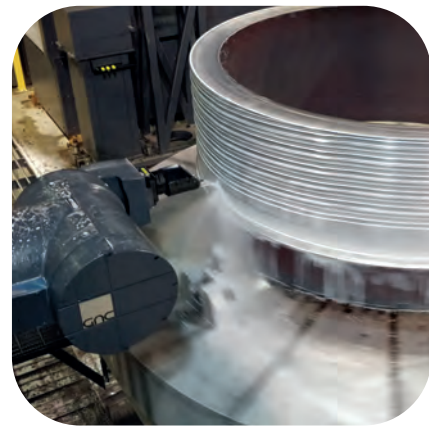
GEAR BOX TECHNOLOGY

Heavy Duty Turning



DIRECT DRIVE TECHNOLOGY

Medium Duty Turning



HEAD TECHNOLOGY

HEAVY DUTY TURNING

CAC system technology



LAD T Head
Rotation every 0,02° in both bodies
Milling-turning head
Automatic tool change
Spindle brake ON in turning mode

TU Head
Rotation every 2.5°
Automatic tool change



CT2M Head
Double tool taper
Manual tool change

MEDIUM DUTY TURNING

Built-in system technology



Tool holder for internal turning developed by Correa with a tuned mass absorber (TMA)

	Material	Ø (mm)	Ap (mm)	Vc (m/min)	F (mm/min)	Q (cm³/min)
Medium Duty Roughing	Ck-45 (60 kg/mm²)	1090	4.5	210	0.5	471
Medium Duty Finishing	Ck-45 (60 kg/mm²)	1100	0.5	200	0.4	Ra= 0.65-1.2
Heavy Duty Roughing	Ck-45 (60 kg/mm²)	1200	10	210	0.7	1450
Heavy Duty Finishing	Ck-45 (60 kg/mm²)	1100	0.5	200	0.4	Ra= 0.5-1

LDX TECHNOLOGY



100% ROBUST

100% RELIABLE



LDX TECHNOLOGY

FLEXIBILITY

Rotation/indexation every 0.02° thanks to the double Hirth coupling patented worldwide.
 10000 rpm with no limitations.
 Adjustable coolant through spindle 17 - 70 bar.

RELIABILITY

Design and fabrication entirely by NCSA. The whole assembly process is monitored by NCSA.
 Head assembly in a cleanroom with constant temperature 22°C.
 Milling head run in the test bench for 60 hours performing body & spindle rotations.

ROBUSTNESS

4+2 Bearings in the main spindle.
 Tool clamping force: 2500 kg.
 Hirth coupling's locking force: 22000 kg.
 The milling head's design allows 42 kW - 620 Nm in S1.
 Milling head body made of casted steel GGG-50.

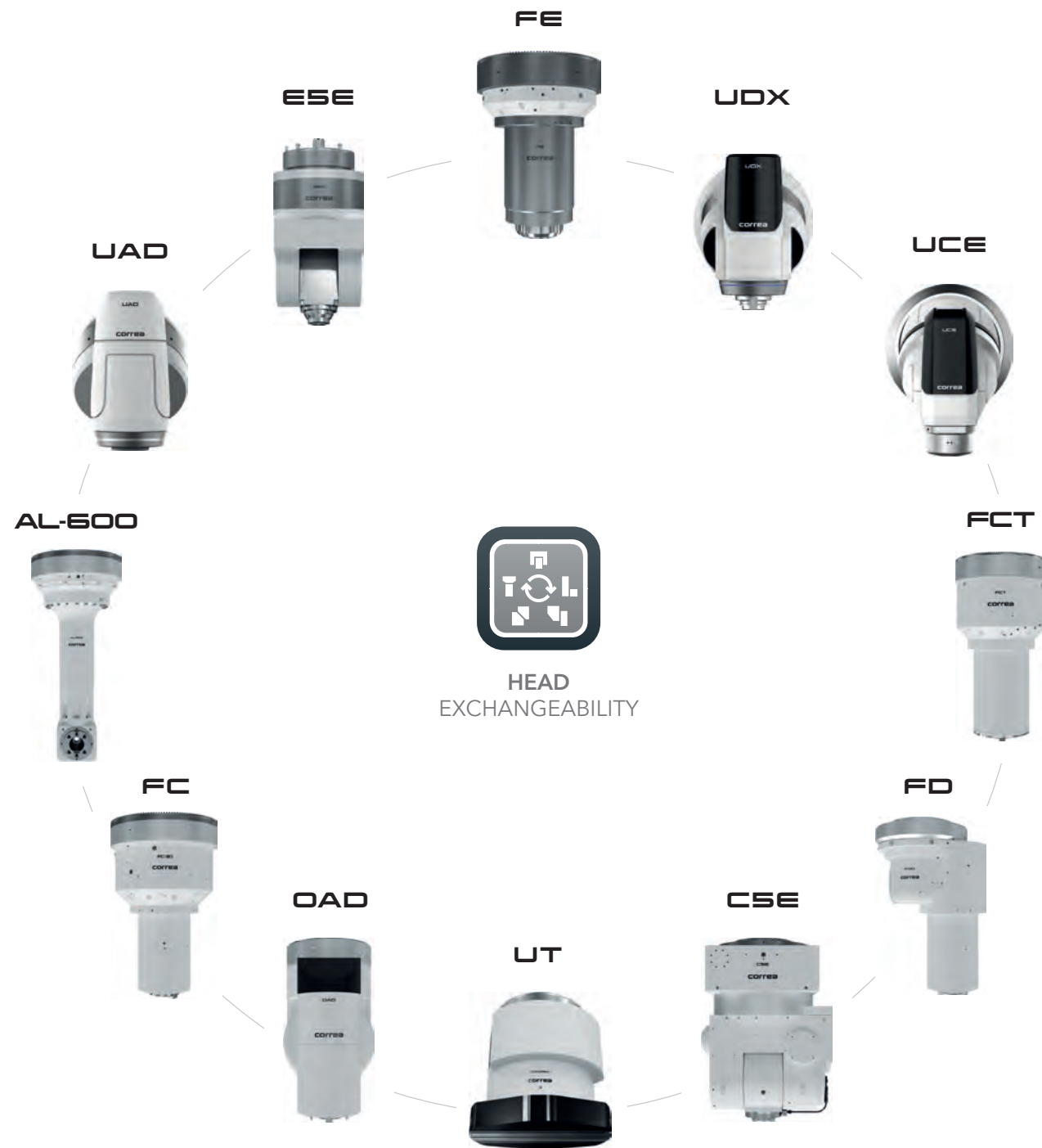
PRECISION

Maximum coupling repeatability error + - 3".
 The bearing's cages of the main spindle & the external spacers of the secondary axes' bearings, are cooled with water.

	Material	Ø (mm)	Ap (mm)	Ae (mm)	F (mm/min)	Q (cm³/min)
Face Mill	Ck-45 (60 kg/mm²)	125	4	90	2250	810
Face Mill	1.2311 (110 kg/mm²)	100	2.5	70	2000	350
Face Mill Round insert	Ck-45 (60 kg/mm²)	80	3	60	3500	630
High feed Mill	Ck-45 (60 kg/mm²)	52	1	39	16000	624

MILLING HEAD CHANGER TECHNOLOGY

The widest head range in the market



MILLING HEAD CHANGER TECHNOLOGY

Roughing 3+2	Roughing 5 axes		Finishing 5 axes	Finishing 3+2
ESE FE UCE	ESE	AEROSPACE ALUMINIUM	ESE	ESE FE UCE
UAD FCT	CSE	AEROSPACE TITANIUM OR HARD ALLOYS	CSE	UAD CSE
UDX UAD OAD	-	AUTOMOTIVE DIES	ESE UCE	UDX UAD OAD UCE
UDX UAD OAD	-	AUTOMOTIVE PLASTIC MOULDS	UCE	UDX UCE
UAD OAD AL-600 FD	-	RAILWAY BOGIES	-	UAD OAD AL-600 FD
FCT	-	RAILWAY POINTS AND CROSSINGS	-	FCT
UAD OAD FCT UT	-	WIND ENERGY HUBS AND FRAMES	-	UAD OAD FCT UT
UAD FC UT	-	WIND ENERGY GEAR BOXES	-	UAD FC UT
UAD OAD UDX	CSE	DEFENSE	CSE ESE	UAD OAD UDX UCE ESE
UAD UDX	-	OIL & GAS ROLLER REAMER / STABILIZER	-	UAD UDX
UAD UT	-	OIL & GAS FLUID END	-	UAD UT

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