



# CHETO<sup>®</sup>

CNC DEEP HOLE DRILLING WITH MILLING

[www.cheto.eu](http://www.cheto.eu)

IXN Series 6 and 7 Axes



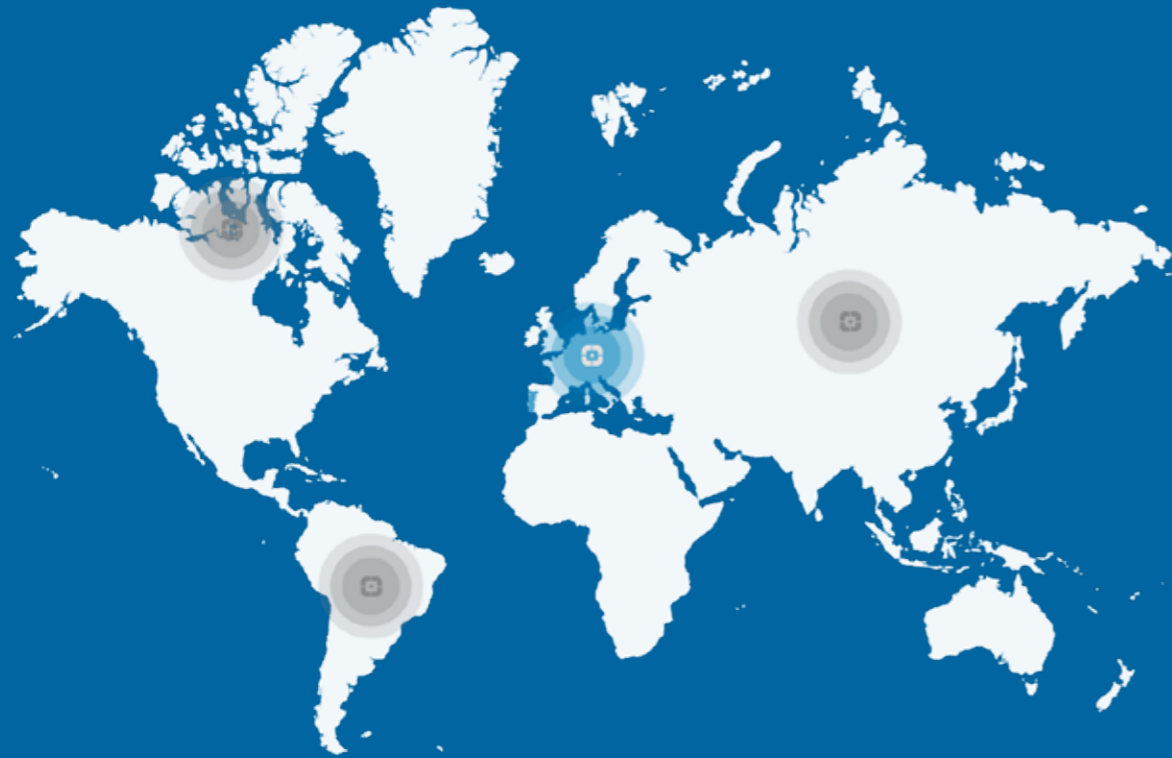
# Location

CHETO TECHNOLOGICAL CENTER:

Área de Acolhimento Empresarial  
UI-Loureiro, Lotes 13-21  
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Portugal  
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WORLDWIDE PRESENCE

■  
INNOVATIVE CONCEPT  
TO OPTIMIZE  
DEEP HOLE DRILLING,  
STANDARD DRILLING  
AND MILLING  
■



inovadora'21



PME líder



PME  
excelência'16

# CHETO<sup>®</sup>

## CNC DEEP HOLE DRILLING WITH MILLING

### INNOVATIVE machine tools

CHETO was officially established in 2009, when the founders started a project to fully develop a deep hole drilling and milling machine-tool up to 7-axis, specialized for the mold making and energy industry.

Since then, a continuous improvement and investigation allowed CHETO to offer the market a versatile product with high levels of accuracy and reliability.

This concept quickly positioned CHETO as a world-renowned brand. With machines sold in four continents, it is our goal to keep improving and innovating, to offer a highly competitive and value-creating product.





# Technical Data

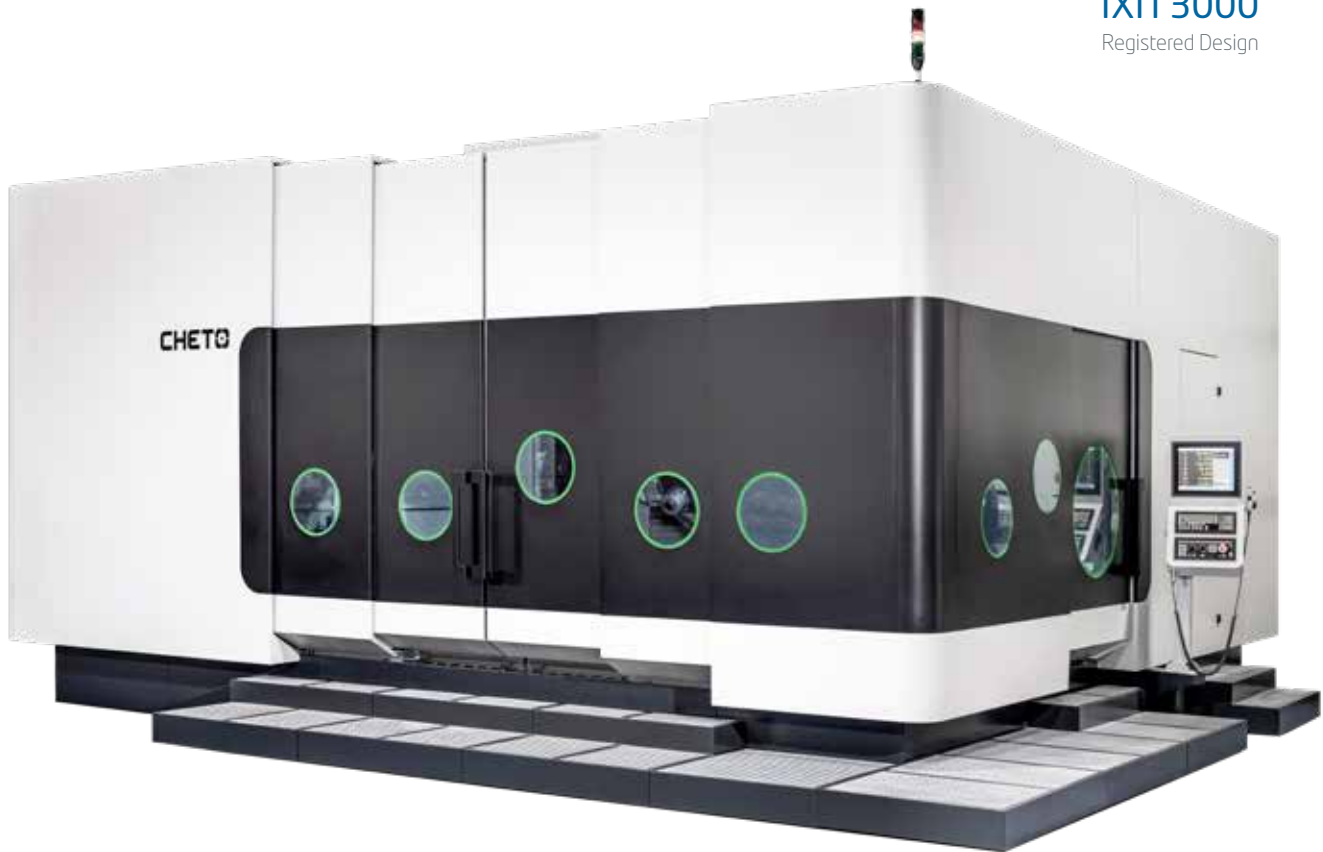
	1000		2000		3000	
<b>CNC Axis</b>						
W drilling one stroke	1700 mm	67 in	1700 mm	67 in	1700 mm	67 in
X longitudinal travel	1000 mm	39.4 in	2000 mm	78.7 in	3000 mm	118.1 in
Y vertical travel	1000 mm	39.4 in	1200 mm	47.2 in	1200 mm	47.2 in
Z cross travel	800 mm	31.5 in	800 mm	31.5 in	800 mm	31.5 in
B table rotation	360,000		360,000		360,000	
A tilting rotation	+35°/-25°		+35°/-25°		+35°/-25°	
<b>Drilling capacity</b>						
Max. drilling stroke W+Z	1700+800 mm	67+31.5 in	1700+800 mm	67+31.5 in	1700+800 mm	67+31.5 in
Drilling capacity	ø5-40 mm	ø0.2-1.58 in	ø5-40 mm	ø0.2-1.58 in	ø5-40 mm	ø0.2-1.58 in
<b>Milling capacity</b>						
Milling	300 cm <sup>3</sup> /min	18.3 in <sup>3</sup> /min	400 cm <sup>3</sup> /min	24.4 in <sup>3</sup> /min	500 cm <sup>3</sup> /min	30.5 in <sup>3</sup> /min
Rigid tapping	M30		M32		M34	
Helical threading	Standard		Standard		Standard	
<b>Spindle</b>						
Spindle taper	ISO 50 DIN 69871		ISO 50 DIN 69871		ISO 50 DIN 69871	
Speed	0-6000 rpm		0-6000 rpm		0-6000 rpm	
Power	15/25 kW	20/33 hp	20/30 kW	26/40 hp	24/38 kW	32/51 hp
Torque	134/223 Nm	99/165 ft-lbs	178/267 Nm	131/197 ft-lbs	214/338 Nm	158/249 ft-lbs
<b>Automatic rotary table</b>						
Table size	1300x1300 mm	51.2x51.2 in	1600x1300 mm	63.0x51.2 in	1800x1800 mm	70.9x70.9 in
Positioning type	360,000		360,000		360,000	
Max. load in rotation	10 Ton	22,047 lbs	20 Ton	44,093 lbs	30 Ton	66,139 lbs
<b>Layout dimensions</b>						
Total weight	29 Ton	63,934 lbs	34 Ton	74,957 lbs	39 Ton	85,980 lbs
Total Weight #GDATC			44 Ton	97,003 lbs	52 Ton	114,640 lbs
*Foot print (WxL)	7140x5760 mm	281.1x226.8 in	8690x6160 mm	342.1x242.5 in	9520x7410 mm	374.8x291.7 in

\* Approximated values # GunDrill Automatic Tool Changer

# IXN 1000 | 2000 | 3000 | 4000\*

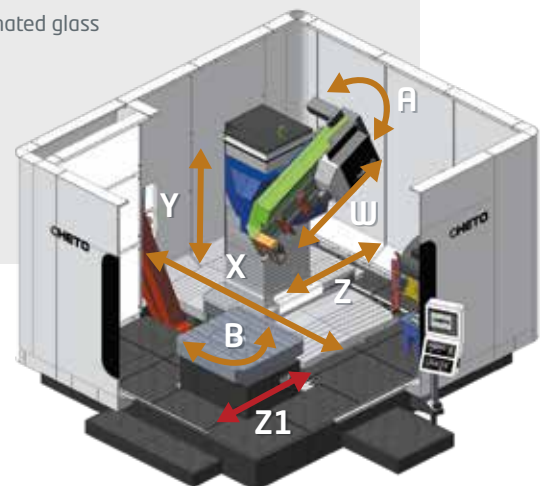
— 6 AXES — 7 AXES

IXN 3000  
Registered Design



## STANDARD EQUIPMENT

- CNC HEIDENHAIN TNC 640
- CNC FAGOR 8065 as optional equipment
- Electronic handwheel
- Digital drives
- Nitrogen double counterweight
- Absolute linear encoders in axes X, Y and Z
- Absolute angular encoders in axis A and B
- Automatic chip conveyor
- Kinematics / RTCP
- Rigid tapping
- Quick change between drilling/milling
- Coolant tank with automatic filtering
- Submerged pumps for oil recirculation
- High-pressure pump up to 80 bar, 100 l/min | 1,160 psi, 26.5 gal/min
- Telescopic covers in all axes (except drilling axis)
- Complete cover with doors, laminated glass windows and acrylic ceiling
- Automatic Gundrill Tool Change as optional



\*Data to be provided on request



### ADAPT MACHINING PARAMETERS ONLINE

- Spindle torque
- Feed
- Coolant pressure
- Coolant flow
- Vibration



TWO CONTROL OPTIONS



### INTERSECTION

The system automatically detects intersections in the process and sets the parameters accordingly to keep the quality of the operation and to protect the tool lifetime.



### PROCESS

The system detects variations of the efforts of the process and automatically adjust the drilling parameters online to keep a continuous process.

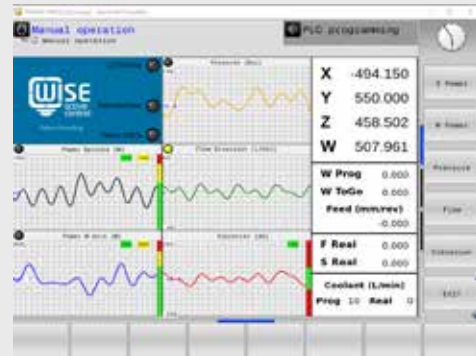


INTERFACE REQUIREMENTS

HEIDENHAIN  
TNC 640

SIEMENS  
SINUMERIK 840

FAGOR  
CNC 8065



END OF  
EXTRAORDINARY COSTS



### END OF EXTRAORDINARY COSTS OF NONCONFORMANCE

The diversity of operations, the lack of raw materials homogeneity, the deficient parameter settings, and intersection holes often lead to the reduction of the tool lifetime. As hole intersections are a constant matter on mold making, and considering the difficulty of these operations, it's common to have problems on final results as unexpected hole drifts, premature tool wear or tool break.

Y AXIS = 1200 mm | 47.2 in  
OPTION = 1500 mm | 59.0 in

X AXIS  
UP TO 4000

TABLE SIZE  
ACCORDING TO CLIENT SPECIFICATIONS  
UP TO 40 Ton | 88,185 lbs

OPTION Z1 AXIS = 700 mm | 27.6 in  
UP TO 1900 mm

W AXIS = 1700 mm | 67 in  
UP TO = 2100 mm | 82.7 in

Z AXIS = 800 mm | 31.5 in

ATC GUNDRILL  
UP TO 5 TOOLS



TILTING = +35°/-25°

SPINDLE GEARBOX



ATC 40/60 TOOLS  
L = 300/600 mm  
11.8/23.6 in



ATC UP TO 120 TOOLS  
L = 600 mm | 23.6 in



\*AIR CLEANING UNIT



PAPER FILTRATION SYSTEM



\*IMMERSION CHILLER FOR OIL/EMULSION



**FILTER UNIT**  
2000 / 3000 L  
528 / 793 gal





**HIGH-PRESSURE PUMP**  
80 bar 100 l/min | 1,160 psi, 26.5 gal/min  
others upon request



**\*COOLING UNIT**  
AC TO COOL THE ELECTRICAL CABINET



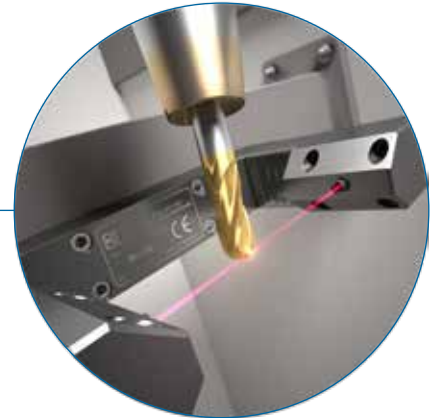
Registered Design

**EASY ACCESS TO THE  
ELECTRICAL CABINET**



**CHIP CONVEYOR**

\*LASER MEASURING SYSTEM  
BLUM MCA7



\*ELECTRIC PROBE  
BLUM TC60



\*TOOL CABINET



\*CHETO RE100  
GUNDRILL GRINDER Ø5-32 mm | Ø0.2-1.26 in



# OUR PRODUCTS & DESIGN



### CC MODEL

1000

5 Axes

### PWN MODEL

1000 / 2000 / 3000



### IXN MODEL

1000 / 2000 / 3000 / 4000

6 & 7 Axes



### SiC MODEL

650 / 1000

6 Axes with Gun Drill Arm

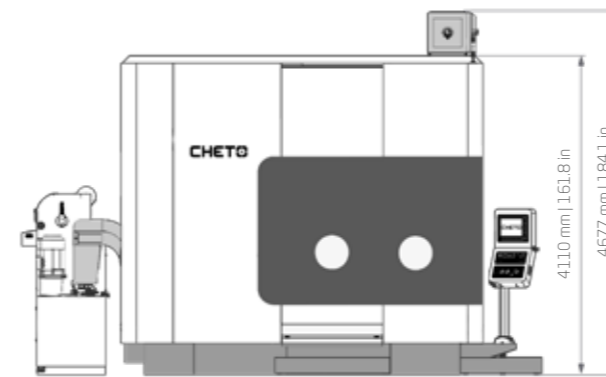
- Efficient **Deep Hole Drilling** with **Milling** for **Small Size Parts**
- Working **5 Faces** on a **Single Setup**
- **3+2 milling / 5 axes**
- **No Angle Limitation**



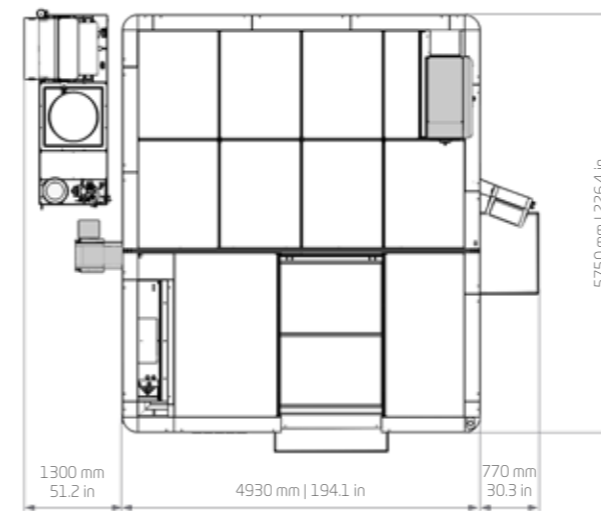
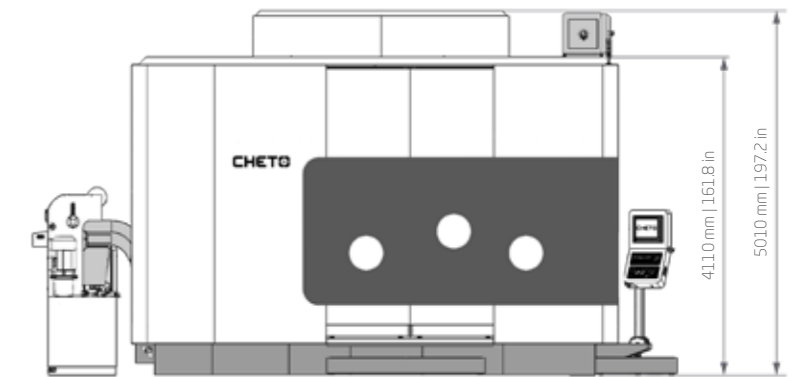
Registered Design

# FOOT PRINT IXN MODELS

### \*IXN1000



### \*IXN2000

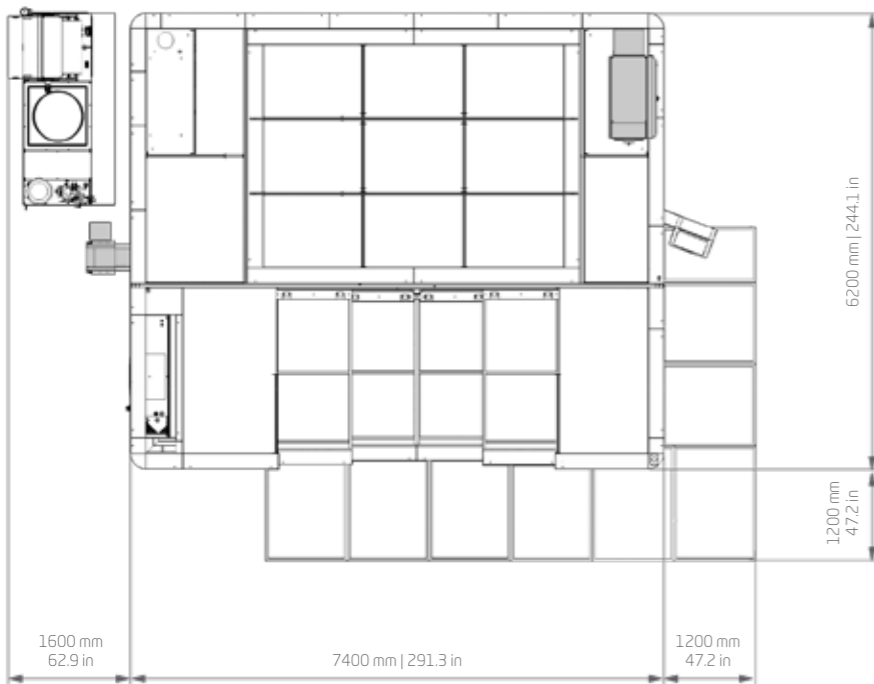
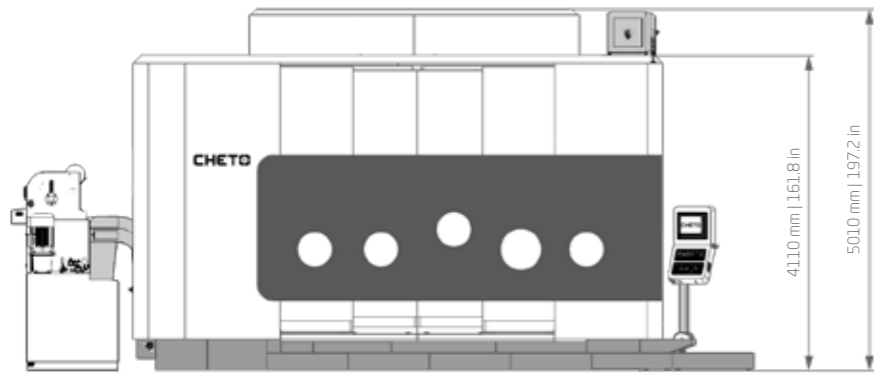


\* Dimensions are subjected to modifications depending on the selected optional equipments



Registered Design

\*IXn3000 —



\* Dimensions are subjected to modifications depending on the selected optional equipments

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**CHETOCORPORATION, S.A.**

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