

QUASER

we cut faster

www.quaser.com

QUASER

we cut faster

QUASER MACHINE TOOLS, INC.

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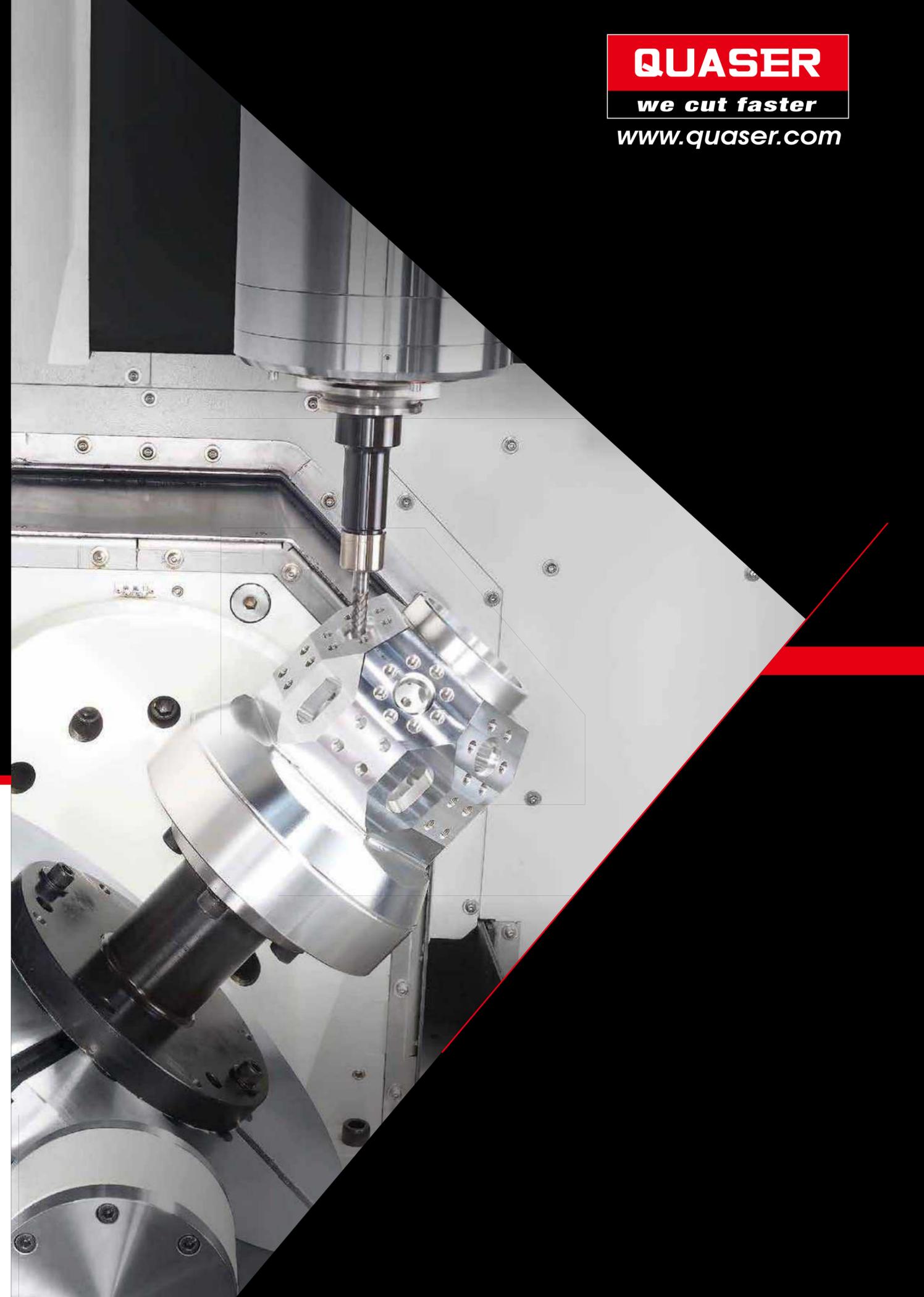
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Company Profile

QUASER MACHINE TOOLS, INC. was established by Mr. Edward Shar and Mr. Samuel Shieh in 1991.

The company name is based on important principles for success in the machine tool industry - QUALITY, SERVICE (QUA SER) and continuous DESIGN INNOVATION.



QUASER's operation mainly focus on own-brand selling while running OEM/ODM business. In cooperation with powerful supply chain and stable sales network, QUASER have been developing innovative mechanics technology and building global customer base for products.

To maintain the leading position in global machine tools market, QUASER is committed to providing employees training on competencies and skills to reach high standards in productivity and quality.



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QUASER TAIWAN

The new factory was opened in 2007

Main products are:

- Vertical M / C (MV1 \ MV2)
- Horizontal M / C (HX)
- Multi Face M / C (MF)
- 5 Axes M / C (UX \ UH \ MK5U)
- Pallet M / C & System (MK603S \ MK154*)
- FMC (HX Cell & MF Cell)
- 5 Axes Mill-Turn M / C (MT400U)

Note: *MK154(MV154APC)



QUASER technical centers provide end users and dealers the product with shorter lead time and faster value added service on technical, spare parts, application support.



QUASER EUROPE

2009 Quaser Europe Technical Center AG was established in Switzerland.



QUASER AMERICA

2016 Quaser America Machine Tools Inc. was established in Rock Hill, South Carolina.



QUASER KUNSHAN

2012 Kunshan Quaser Machine Tools, Inc. was established in Kunshan, China.

Company History

::: Milestones :::

1991

QUASER MACHINE TOOLS, INC. was established by Mr. Edward Shar and Mr. Samuel Shieh in May.



1996

The factory was moved to Daya Town in Taichung County.



1994

Developed and produced for "H" company.

ODM for company "H"



2002

National Outstanding Small and Medium Enterprise Award



2004

Developed and produced for "B" company.

ODM for company "B"



2005

Ranked in the top 1000 manufacturing.



Constructed a new factory in Dajia town of Taichung county in October.



2007

Owned factory in Taichung Taiwan.



2009

Quaser Europe Technical Center was established officially in Switzerland.



2010

Developed and produced for "H" company.

OEM for company "H"



2012

KUNSHAN QUASER was established officially in KUNSHAN, CHINA.



Developed and produced for "M" company.

ODM for company "M"



Developed and produced for "W" company.

OEM for company "W"



2015

Digitized process



Developed and produced for "L" company.

ODM / OEM for company "L"



2016

Quaser America Machine Tools Inc. establish in 2016 in Rock Hill, South Carolina.



- IPO application approved in April (Stock Code: 4563)

- Emerging stock board registered in May



2018

General stock board listed in July



1992

First generation: - V M / C MV-204.



- V M / C MK-60.



1997

H M / C MK60IH.



1996

Committed to developing and producing H M / C MK60H, V M / C MV204II and MK60II.



2001

5 Axes M / C MK70U.



2000

Celebrated H M / C sales exceeded 100 units.



2003

5 Axes M / C MK603U.



V M / C MV154.



2002

5 Axes M / C MV204IIU.



2006

5 Axes M / C UX600.



H M / C HX805.



2005

Pallets M / C MV154APC.



2007

5 Axes M / C UX300.



H M / C HX504.



2010

H M / C HX635.



H M / C HX505.



Multi face M / C MF400.



2011

Multi face M / C MF500.



Multi face M / C MF630.



2012

5 Axes M / C MK5U.



2013

FMC HX Cell



2014

V M / C MV234 & MV235.



H M / C HX404



FMC MF400 Cell & MF500 Cell



2016

5 Axes Mill-Turn M / C MT400U.



2015

MV / MF +HALTER Robot



2017

V M / C MV134.



5 Axes M / C UH800.



2018

5 Axes M / C UX500



5 Axes M / C UX630



5 Axes M / C UX630APC



New generation V M / C MV1



New generation V M / C MV2



Global Sales Network

Europe



Africa



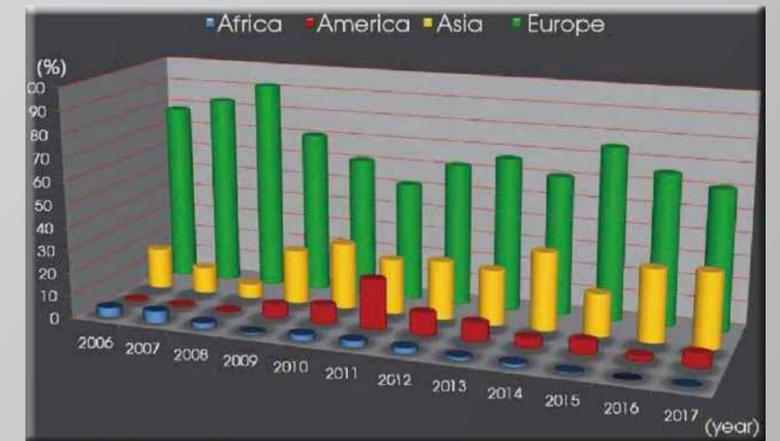
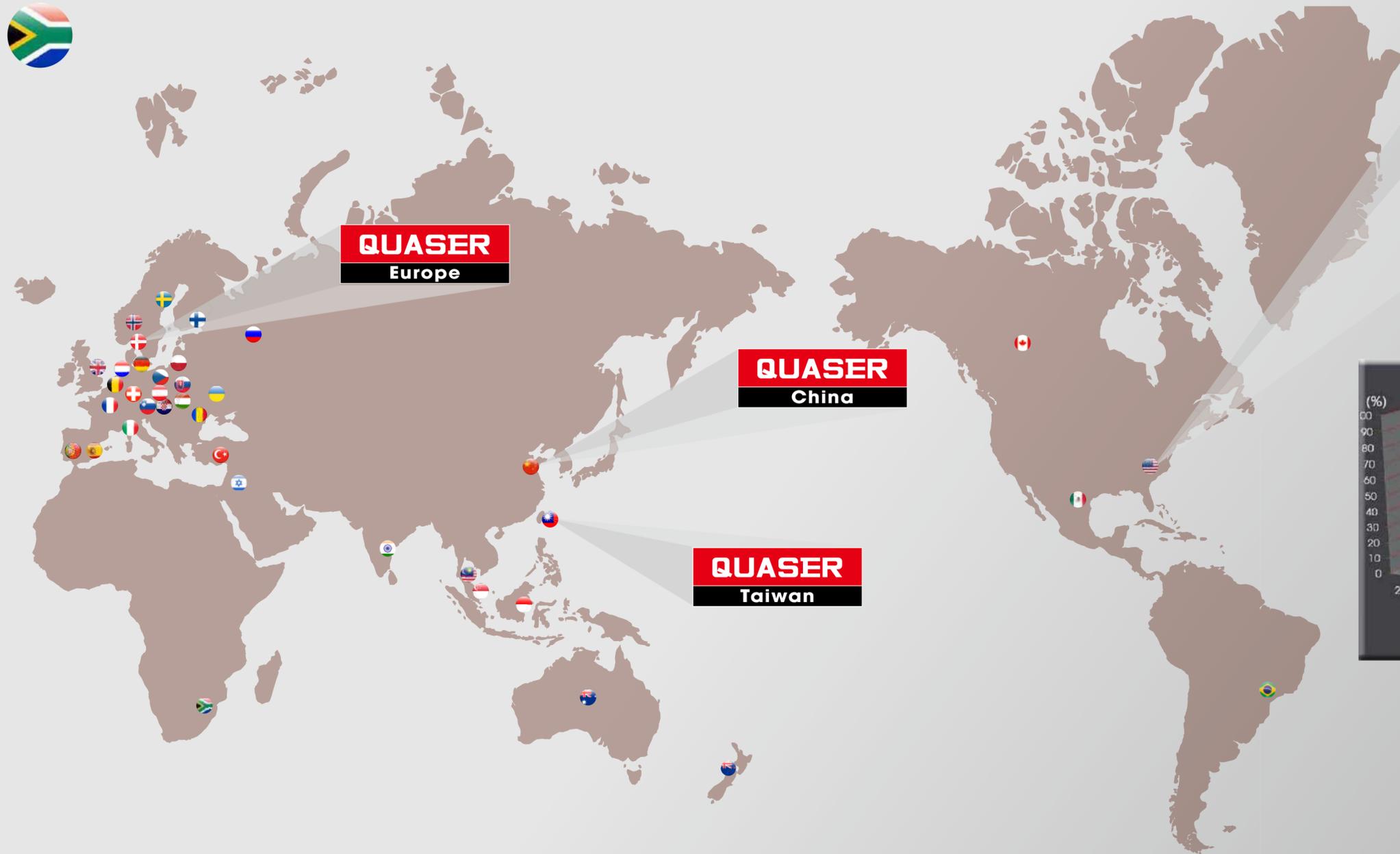
Asia



America



Oceania



Global Market Revenue Share

Products

Automation



MF400+Halter robot



MF Cell (5-axes M/C FMC)



HX Cell (horizontal M/C FMC)

5-Axes Mill-Turn M / C

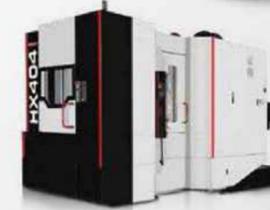


MT400U

Horizontal M / C



HX635



HX404



HX805



HX504 / 505

Vertical M / C



MV154



MV184



MV204C



MV204



MV214



MV234

Pallet M / C



MK603S



MK154 (MV154APC)

Multi Face & 5 Axes M / C



MF400



MF500



MF630



UX500



UX600



UX800



MK5U



UH800

Research & Development

EMC Certificate



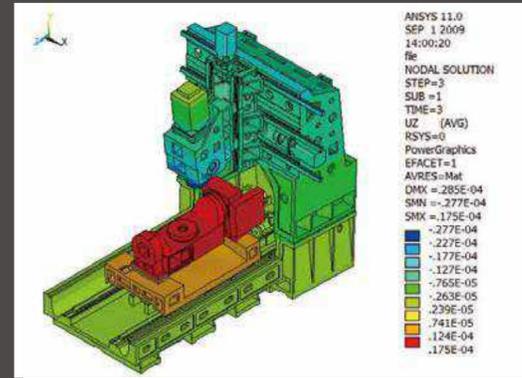
EC Certificate



GB Certificate



Patent certificate



QUASER devotes itself to the research and development of advanced technology. We adopt the latest generation of CAD software and Finite Element Analysis software for machine design. We cooperate with international partners in the fields of advanced motion control, high speed spindle technology, thermal management, and vibration damping components.



MF400



MV184



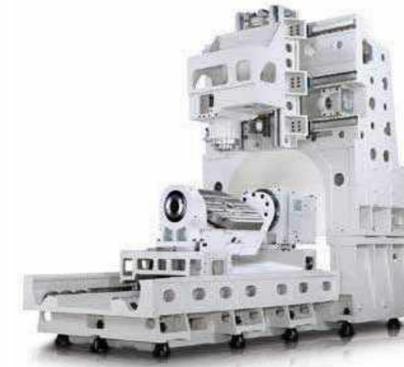
MV134



MK603S



UX500



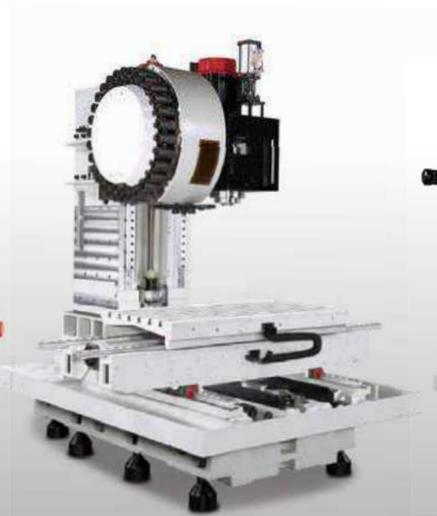
UX600



UH800



MV234/235



MV204



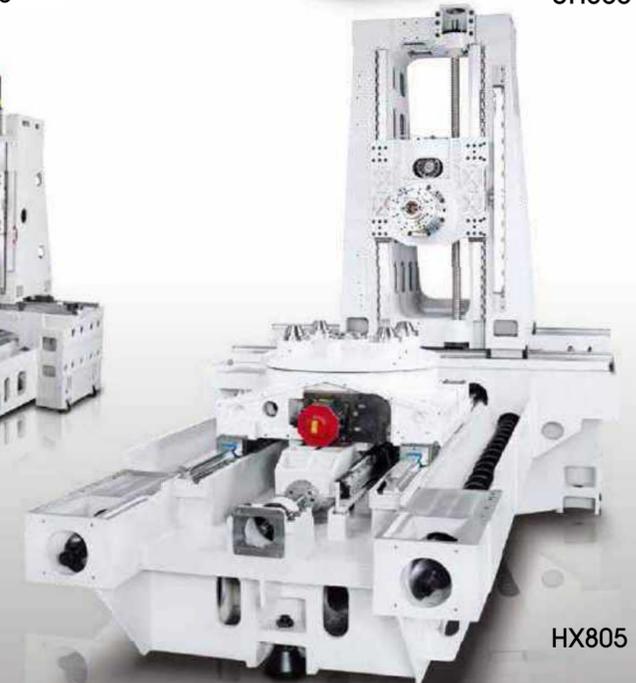
MF630



HX404



HX504



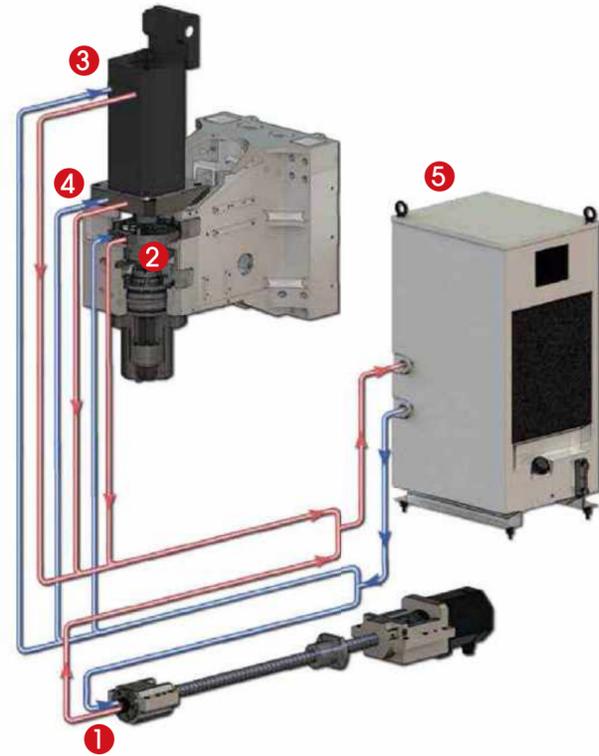
HX805

Quaser Technology

Thermal Control

∴ Cooling circuit ∴

- ① Coolant through ballscrew (C.T.B.) to keep repeatability accuracy on X/Y/Z axes.
- ② Spindle cooling circuit
- ③ Motor cooling circuit (for coupling spindle)
- ④ Motor mounting block cooling circuit (for coupling spindle)
- ⑤ Large capacity oil cooler



∴ Above figure is coupling spindle ∴

	Belt spindle	Coupling spindle	Built-in spindle
①	●*	●*	●*
②	●	●	●
③	×	●	●
④	×	●	×
⑤	●	●	●

* Depending on models, please reference machine catalog.

∴ Thermal compensation ∴



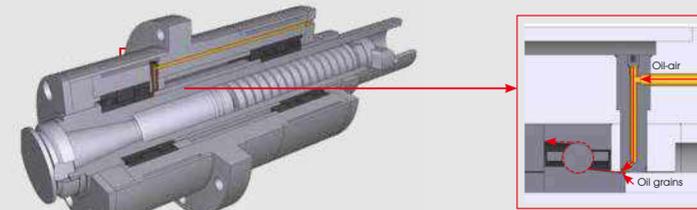
3 / 4-axes series

∴ Real-time time measuring & compensation ∴

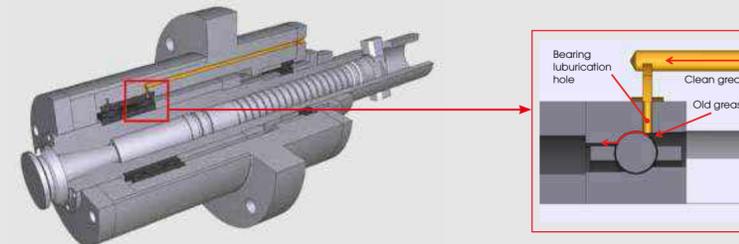


Multi Face & 5 Axes series

Oil-air system



Re-grease system

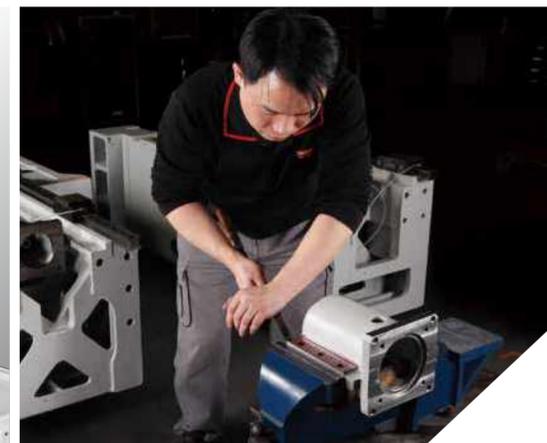


5 Axes Application



- CAD / CAM
- NC programming
- Tooling technology
- Machining operation

Assembly Technology

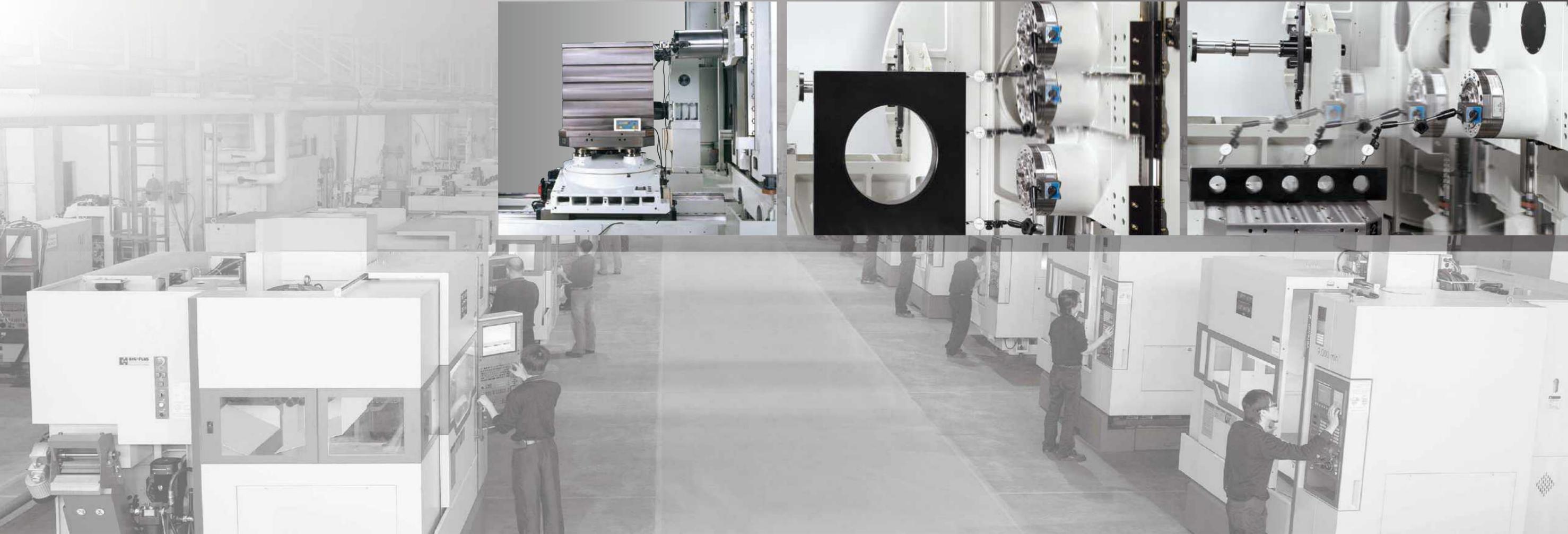


Measurement & Calibration

Static stiffness measurement



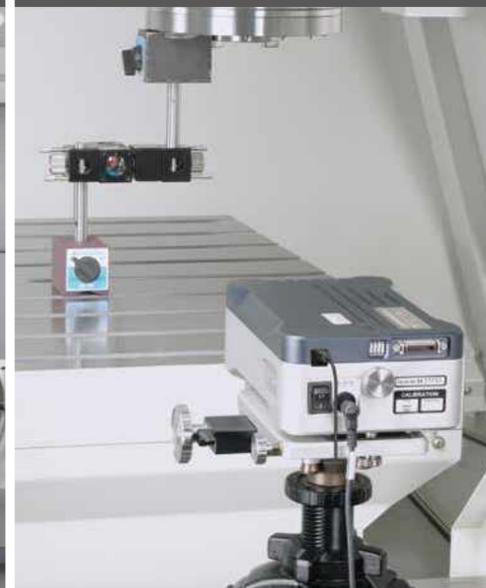
Geometric accuracy inspection



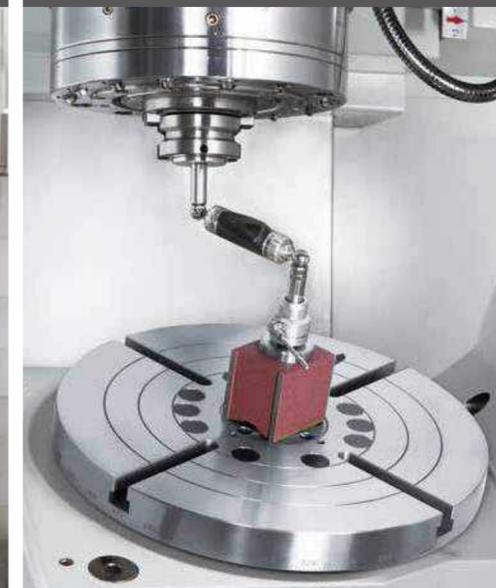
Tilting and rotating axes measurement



Laser & Double ball-bar inspection.



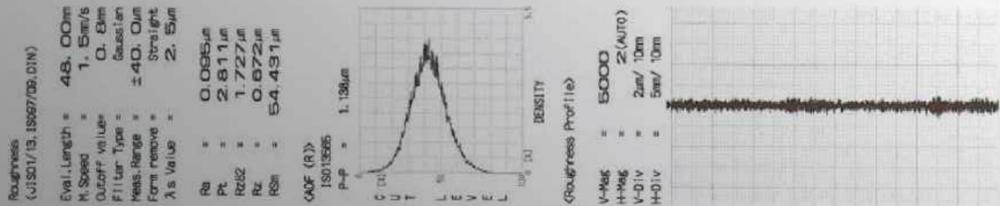
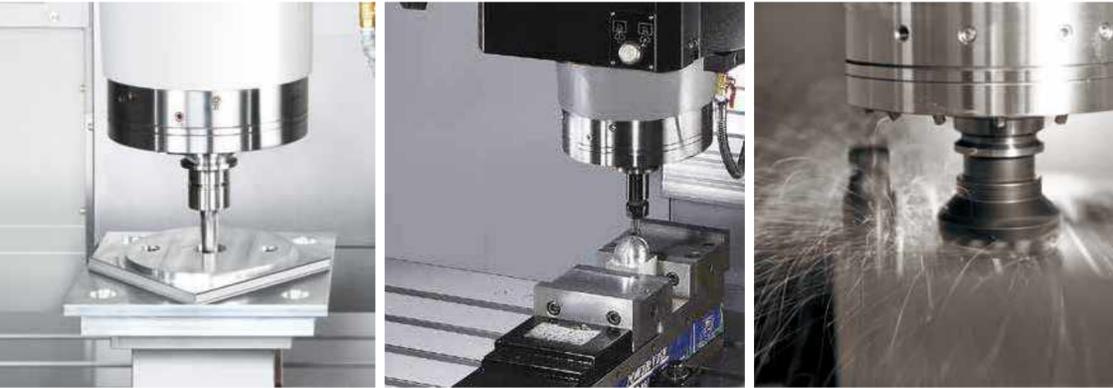
Ballbar Trace (ISO 10791-6)



Testing

Cutting test

⋮ All series ⋮



Running 48 hours non-stop reliability test on all functions (tool changer, spindle, multi-axis, coolant system, leak-proof).

⋮ M series ⋮

⋮ HX series ⋮

⋮ 5 Axes / Multi Face series ⋮



Half of ISO accuracy standard



1. Straightness of axis motion		2. Squareness between linear motions		3. Periodic axial slip of the spindle	
ISO 500 < L ≤ 800 0.015 800 < L ≤ 1250 0.02 1250 < L ≤ 2000 0.025	QMT 500 < L ≤ 800 0.008 800 < L ≤ 1250 0.01	ISO 0.02 / 500	QMT 0.008 / 400	ISO 0.005	QMT 0.002
4. Run-out of internal taper of the spindle a) at the spindle nose; b) at a distance of 300 mm from the spindle nose		5. Parallelism between the spindle axis and the Z-axis motion		6. Squareness between the spindle axis and the X-axis motion	
ISO (a) 0.01 (b) 0.02	QMT (a) 0.005 (b) 0.01	ISO 0.015 / 300	QMT 0.008 / 400	ISO 0.015 / 300	QMT 0.008 / 400



High Performance Spindle



Standard on all models

Spindle code : **HM4.0 / HM4.0A**

(Only for UX630 & UX630APC)

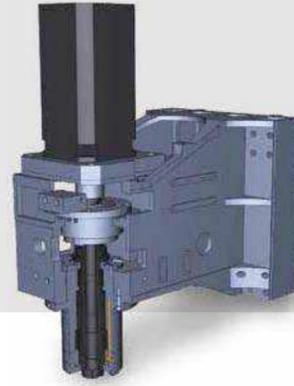
- Transmission : Built-in spindle
- Speed range :
12,000 min⁻¹
18,000 min⁻¹
- Lubrication :
Grease packed system
Oil-air system



Spindle code : **MT4.0 / MT4.0R**

(Only for 5 Axes Mill-Turn M / C)

- Transmission : Coupling
- Speed range :
12,000 min⁻¹
15,000 min⁻¹
- Lubrication :
Grease packed system
Re-grease system



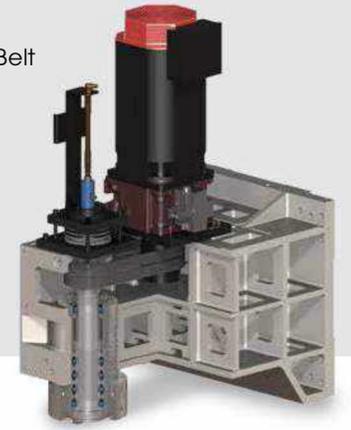
Spindle code : **MC-5.0A**

- Transmission : Coupling
- Speed range : 15,000 min⁻¹
- Lubrication : Oil air system



Spindle code : **SB-5.0A**

- Transmission : Belt driving
Gear box + Belt
- Speed range : 6,000 min⁻¹
7,500 min⁻¹
- Lubrication : Oil air system



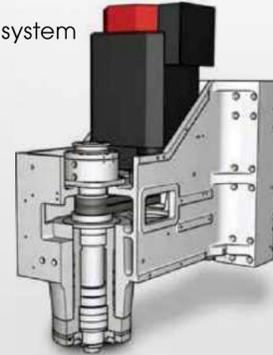
Spindle code : **AB-4.0**

- Transmission : Belt driving
- Speed range : 8,000 min⁻¹
~12,000 min⁻¹
- Lubrication : Grease packed system



Spindle code : **MB-4.0**

- Transmission : Belt driving
- Speed range : 9,000 min⁻¹
12,000 min⁻¹
- Lubrication : Grease packed system



Spindle code : **SB-5.0**

- Transmission : Belt driving
- Speed range : 6,000 min⁻¹
- Lubrication : Grease packed system



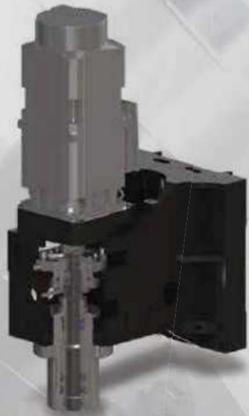
Spindle code : **SB-5.1A**

- Transmission : Gear box + Belt
- Speed range : 6,000 min⁻¹
7,500 min⁻¹
- Lubrication : Oil air system



Spindle code : **SC-4.2**

- Transmission : Coupling
- Speed range : 10,000 min⁻¹
12,000 min⁻¹
- Lubrication :
Grease packed system



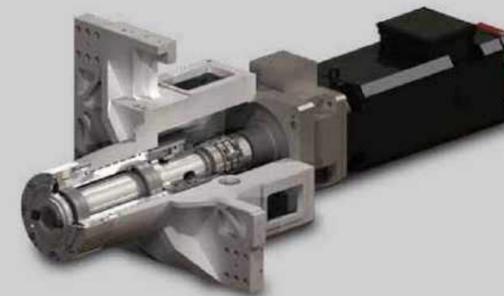
Spindle code : **MC-4.0R / MC-4.1R**

- Transmission : Coupling
- Speed range : 20,000 min⁻¹
15,000 min⁻¹
- Lubrication : Re-grease system



Spindle code : **SC-5.0**

- Transmission : Gear box + Coupling
- Speed range : 6,000 min⁻¹
- Lubrication : Grease packed system



Spindle code : **RC-5.0A**

- Transmission : Coupling
- Speed range : 10,000 min⁻¹
- Lubrication : Oil air system



Digitized process

Transparent real-time digitized production information



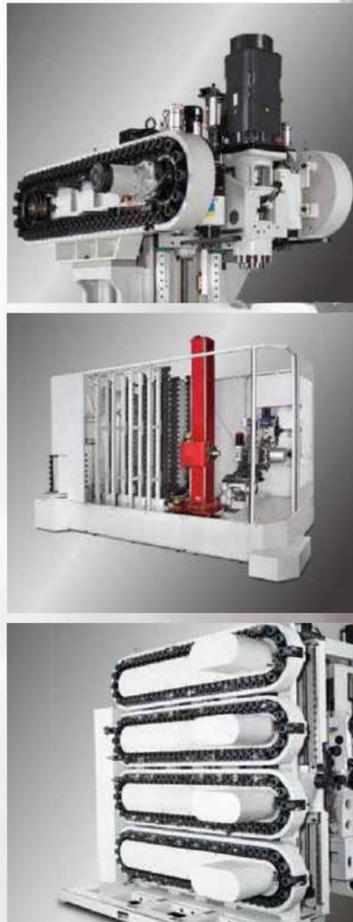
ESOP + production history database

IQS(Intelligent Quaser Software)



ATC System

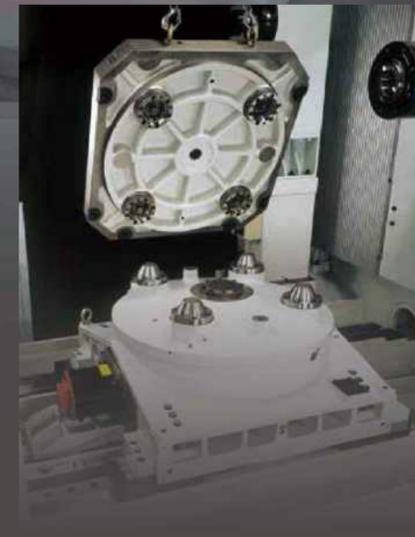
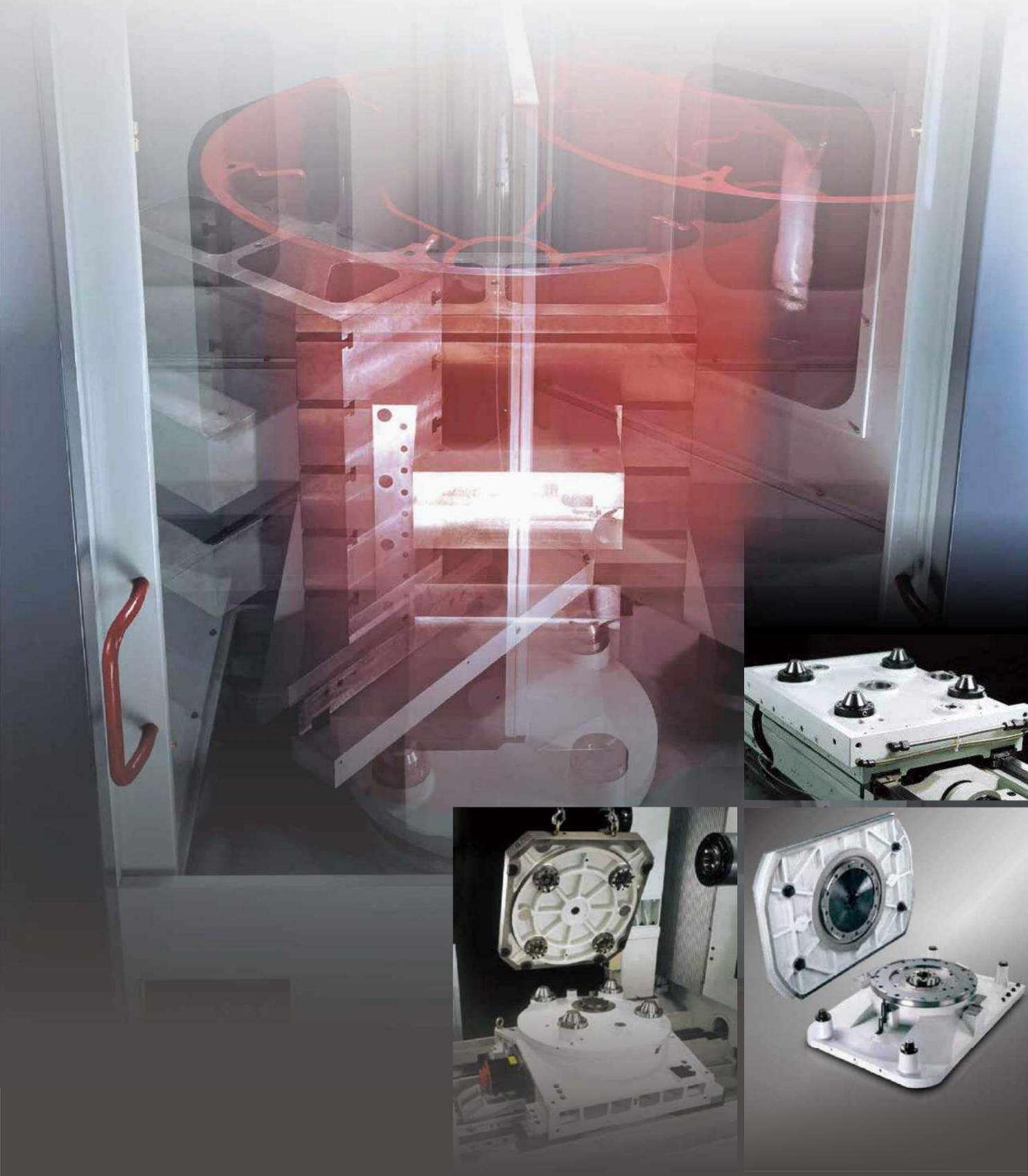
Different types of magazines with large capacity are available



Products	Model	#40	#50
Vertical series	MV154 / 184 / 204	30、48、60	-
	MV214 / 234	48、60	-
	MV205 / 235	-	30、40
Pallets series	MK603S / MK154 (MV154APC)	48、60	-
5 Axes series	MK5U	L:30、48、60 R:40、60	-
	UX300 / 600 / 730	48、60	-
Multi Face series	MF400 / 500 / 630	30、48、60	-
	MF Cell	120	-
5 Axes Mill-Turn series	MT400U	48、60、120	-
	HX404	60	-
Horizontal series	HX504	60、120、240、360~520	-
	HX505 / 635	-	40、60、120、150
	HX805	-	60、120、150
	HX Cell	120、240	120、150

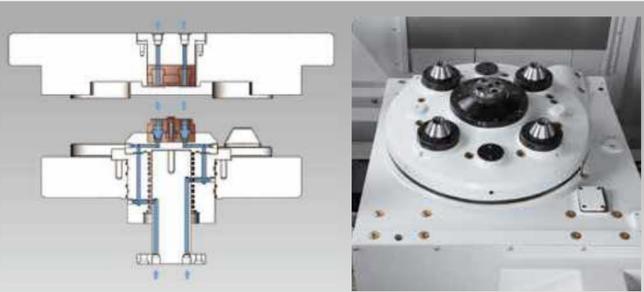
Pallet System & 4th axis system

APC testing with maximum load



Cell - Automation System

Cell series is suitable for high mix low volume manufacturing. The FMC system enables a 2nd/3rd shift unmanned operation.

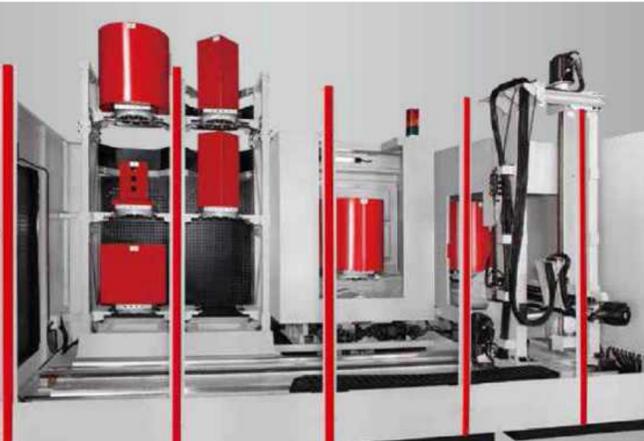


Hydraulic through pallet (opt.)



Tool management control system

Loading station



HX Cell horizontal M/C is equipped with a pallet loader and a large pallet storage and tool magazine (standard 240tools ;option up to 500 tools).The system can be integrated with 31iB Fanuc or 840D Siemens NC system.

HX504 Cell :

Pallet size : □500 (mm)
 Travel X / Y / Z : 762 / 640 / 810 (mm)
 ATC capacity : 240
 Pallet capacity: 8 or 14(opt.)

HX505 Cell :

Pallet size : □500 (mm)
 Travel X / Y / Z : 762 / 640 / 800 (mm)
 ATC capacity :150
 Pallet capacity : 8 or 14(opt.)



This factory automation solution can be apply to a broad range of application.

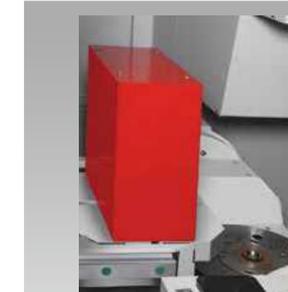
MF Cell 5 Axes M/C. this machine system is equipped with a dual magazine with max capacity 120 tools. The pallet storage tower is capable of storing 40 pallets (MF400) and 28 pallets (MF500) in a small foot print. It can be integrated to Fanuc 0iMF and Siemens 828D NC systems, for 5 Axes positioning model; Fanuc 31iB5 and Siemens 840D NC systems for 5 Axes simultaneously model.

MF400C/U Cell :

Pallet size : □265 (mm)
 Travel X / Y / Z : 680 / 610 / 510 (mm)
 ATC capacity : 120
 Pallet capacity: 40

MF500C/U Cell :

Pallet size : □350 (mm)
 Travel X / Y / Z : 550 / 630 / 610 (mm)
 ATC capacity : 120
 Pallet capacity : 28



Pallet clamping system



Pallet loader



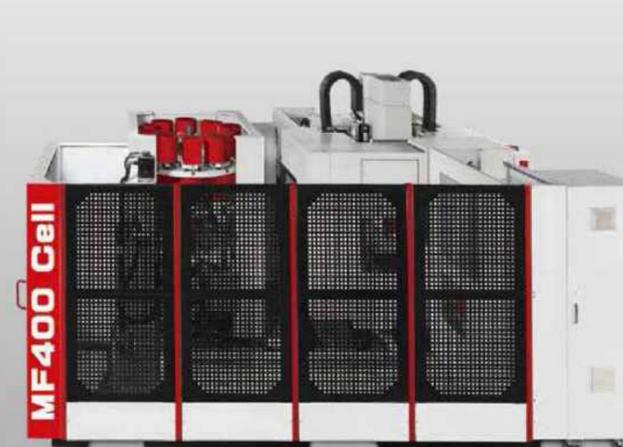
System controller



Manual operation position & Loading station

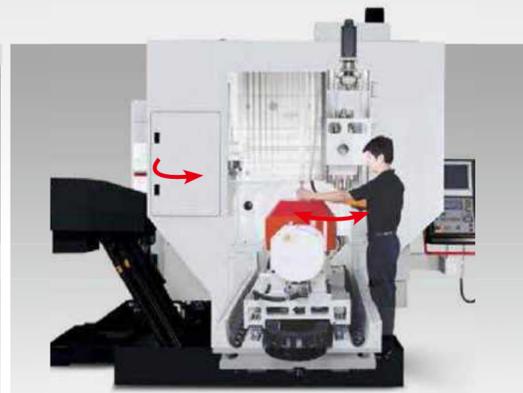


Pallet storage tower



Ease of Use

⋮ Ergonomic operation panel with adjustable angle ⋮



⋮ Excellent accessibility to the table & spindle ⋮

⋮ Wide-opening door for loading ⋮



Coolant & Chip Management

⋮ Nozzle coolant ⋮



⋮ Coolant through spindle ⋮



⋮ Ceiling coolant HX series ⋮



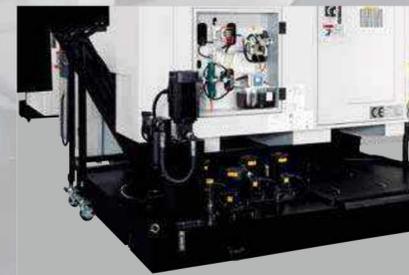
⋮ Wash down coolant ⋮



⋮ Wash gun ⋮



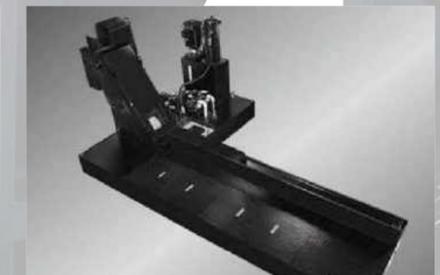
⋮ Large capacity coolant tank ⋮



⋮ Paper filtering system (opt.) ⋮



⋮ Drum type chip conveyor (opt.) ⋮



⋮ Chip conveyor ⋮



⋮ Chip auger ⋮



Curly iron



Metallic



Foundry



Curly Aluminum



Aluminum



High Quality Components

FANUC



MITSUBISHI ELECTRIC



HEIDENHAIN



SIEMENS



