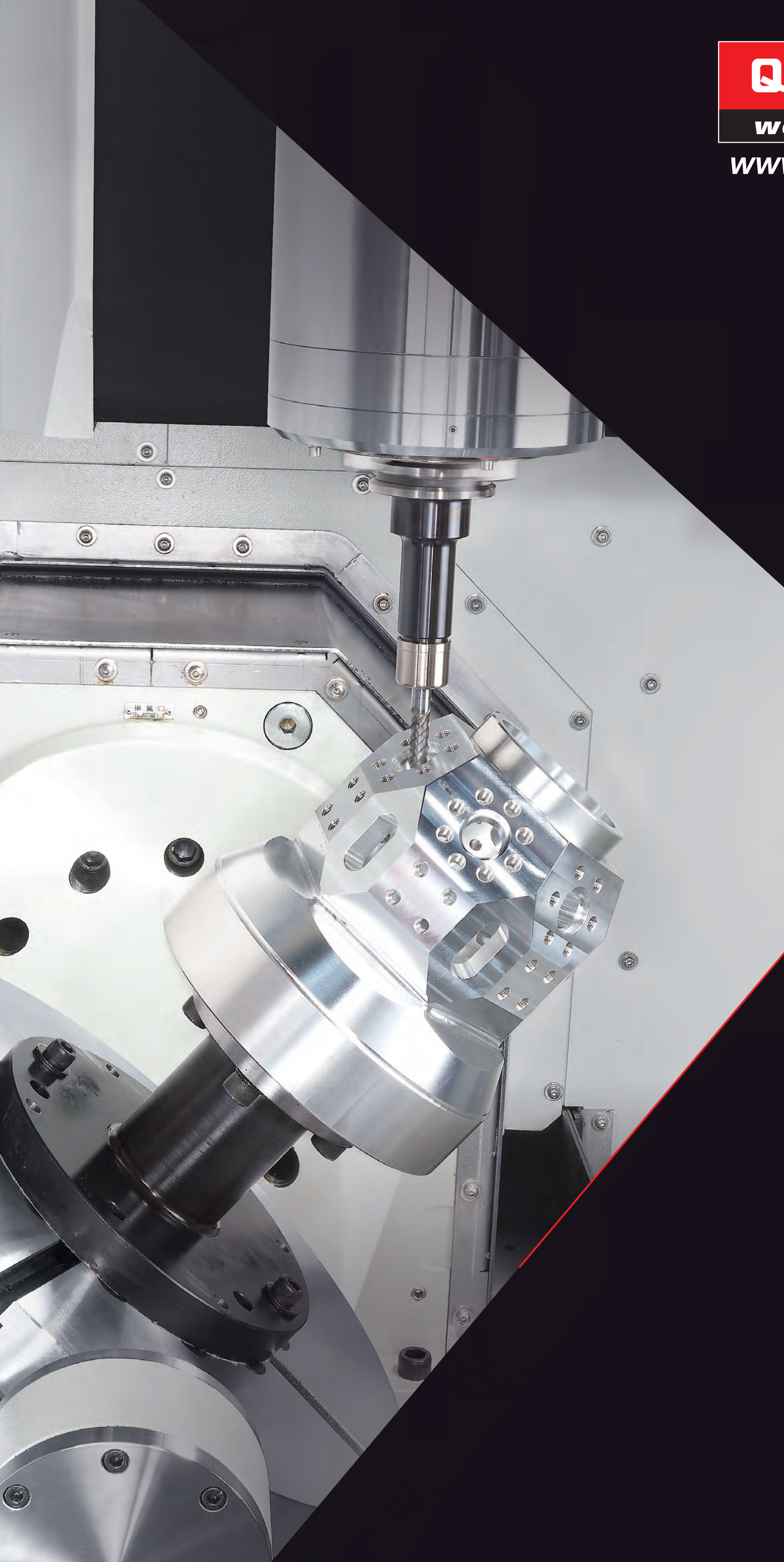
QUASER

we cut faster

www.quaser.com



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.

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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.

CONTENTS

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.

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1992

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

- V M / C MK-60.

1994

Developed and produced for "H" company.

ODM for company "H"

1996

The factory was moved to Daya Town in Taichung County.

1997

H M / C MK60IIH.

1996

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

2000

Celebrated H M / C sales exceeded 100 units.

2001

5 Axes M / C MK70U.

2002

National Outstanding Small and Medium Enterprise Award

2002

5 Axes M / C MV204IIU.

2003

5 Axes M / C MK603U.

V M / C MV154.

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.

2005

Pallets M / C MV154APC.

2006

5 Axes M / C UX600.

H M / C HX805.

2007

Owned factory in Taichung Taiwan.

2007

5 Axes M / C UX300.

H M / C HX504.

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

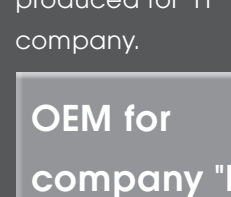
2018

General stock board listed in July

2010

H M / C HX635.

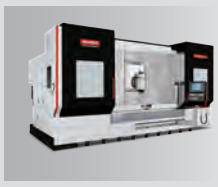
H M / C HX505.



Multi face M / C MF400.

2012

5 Axes M / C MK5U.



2011

Multi face M / C MF500.

Multi face M / C MF630.

2014

V M / C MV234 & MV235.

H M / C HX404

FMC MF400 Cell & MF500 Cell

2013

FMC HX 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

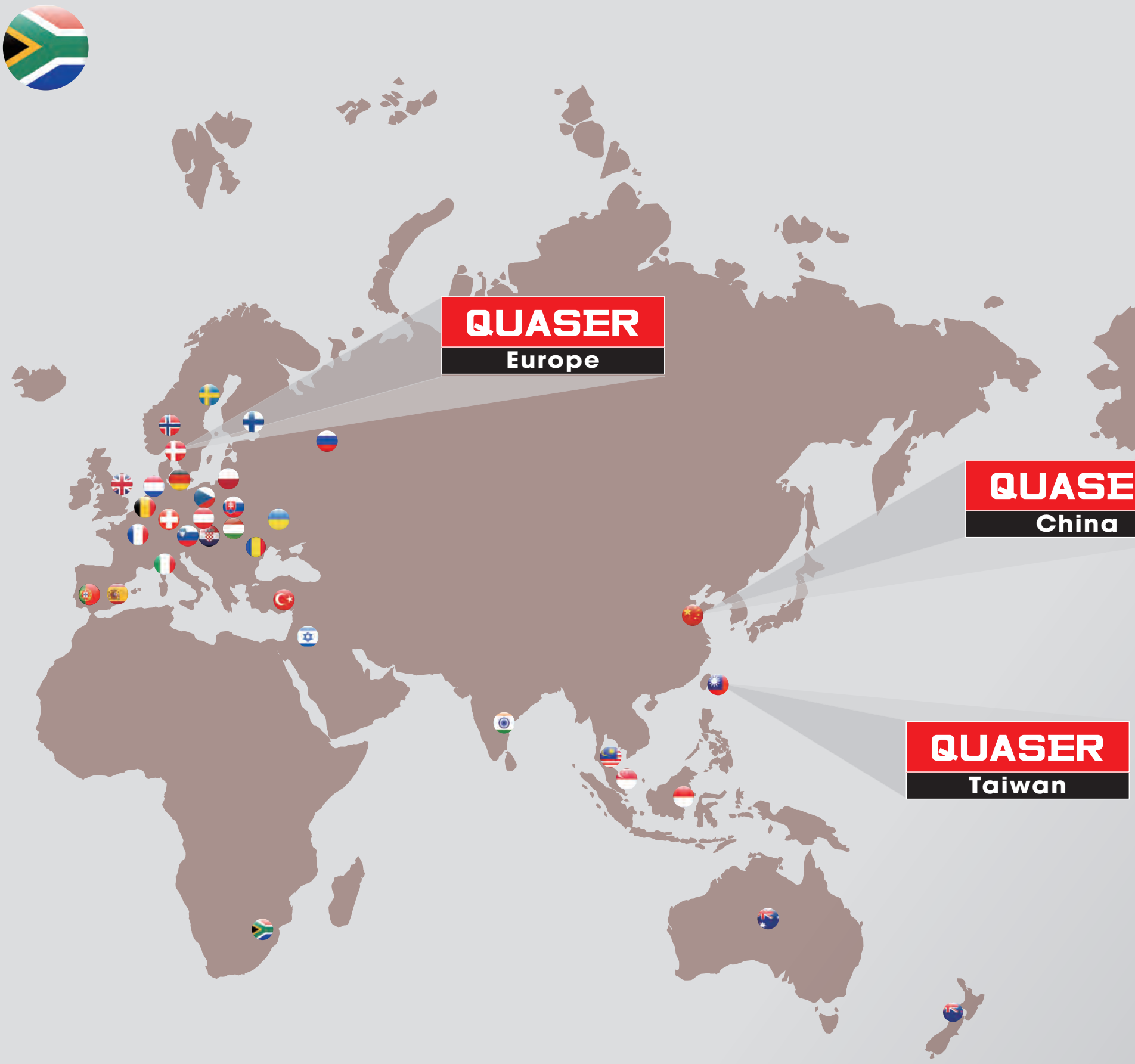
New generation V M / C MV1

New generation V M / C MV2

Global Sales Network

::: Europe :::

::: Africa :::

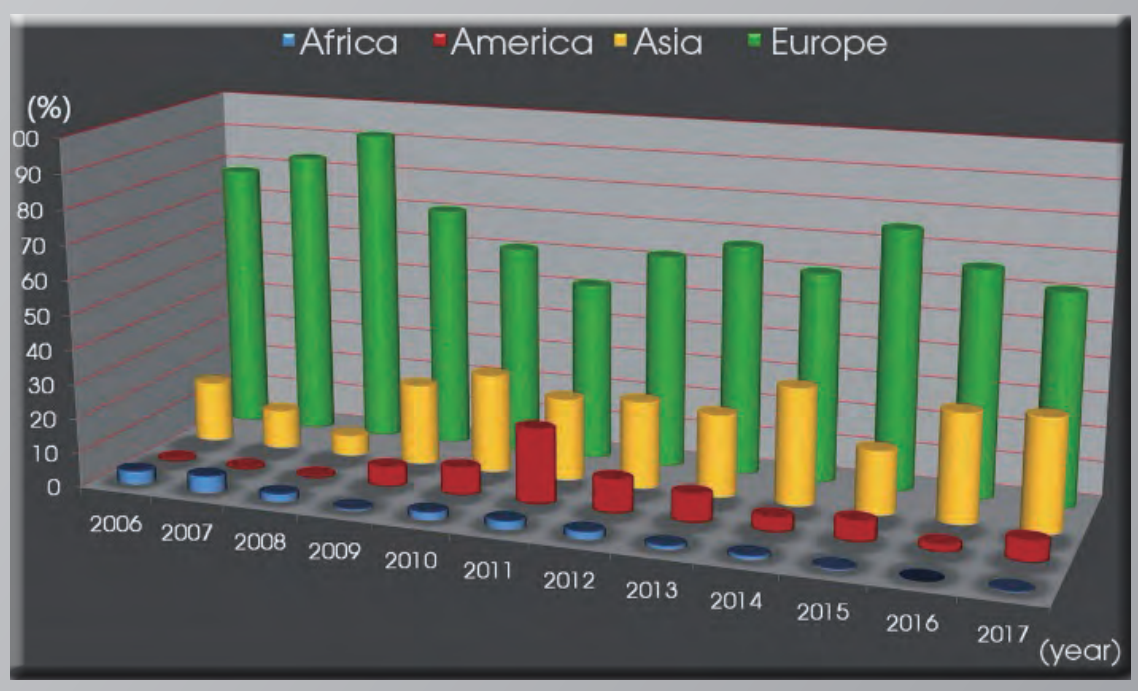


::: Asia :::

::: America :::

::: Oceania :::

QUASER
America



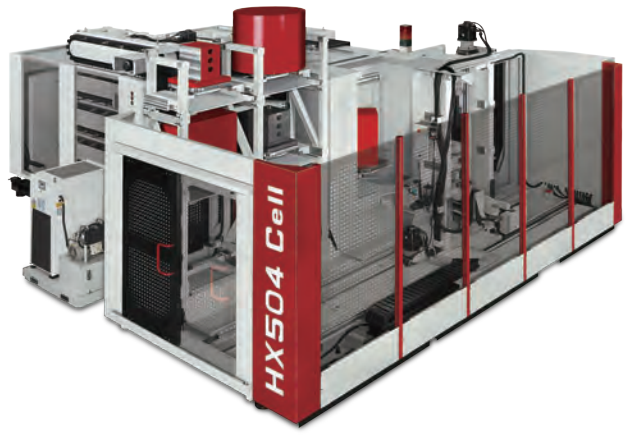
Global Market Revenue Share

Products

::: Automation :::

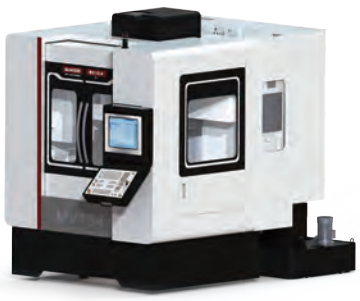
MF400+Halter robot

MF Cell (5-axes M/C FMC)



HX Cell (horizontal M/C FMC)

::: Vertical M / C :::



MV154

MV184

MV204C

MV204

MV214

MV234

::: Multi Face & 5 Axes M / C :::

MF400

MF500

MF630

UX500

::: 5-Axes Mill-Turn M / C :::

MT400U

::: Pallet M / C :::

MK603S

MK154 (MV154APC)

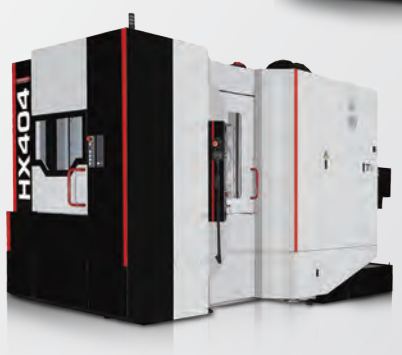
UX600

UX800

UH800

::: Horizontal M / C :::

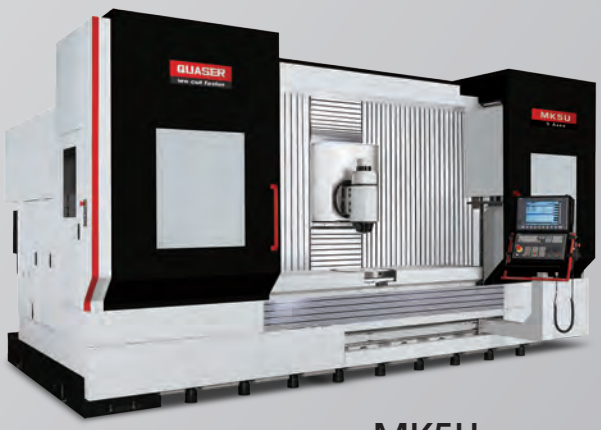
HX635



HX404

HX805

HX504 / 505



MK5U

Research & Development

::: EMC Certificate :::

Safenet Limited
Denford Garage, Denford, Kettering, Northants., NN14 4EQ, U.K.
Tel: +44 1832 732774 E-mail: office@safenet.co.uk
European Notified Body 1674
EU Type Examination Certificate
This is to certify that
Quaser Machine Tools Co., Ltd.
No. 3, Gong 6th Road, Youshih Industrial Park, Dajia District, Taichung City (437), Taiwan
Has had a range of Machining Centres examined with regard to the Electromagnetic Compatibility Directive 2014/30/EU.
With reference to model MF400
Manufactured by:
Quaser Machine Tools Co., Ltd.
No. 3, Gong 6th Road, Youshih Industrial Park, Dajia District, Taichung City (437), Taiwan
1. The technical construction file contains all the relevant information.
2. Having verified that the appropriate tests have been conducted, with regard to the MF400 representing the range.
2.1. The example has been manufactured in accordance with the technical construction file and may be used under the intended conditions.
2.2. The standards and transposed standards as the case may be, have been applied correctly.
2.3. The example has conformity with the protection requirements of Electromagnetic Compatibility Directive 2014/30/EU.
2.4. The technical file contains all the information required to include the following models UX300, UX600, UX3000yn, UX7300yn, MV184U, MV134U, MD1200, MF400, MF500, MF630, UX630, UG630, UG1020, MK5U, PRO FLEX6, PRO S6, PRO S10, UX800 and UX500.
Certificate Number: 7674160818
Date: 12/09/2018 Expiry Date: 12/09/2021
Signed for Safenet Limited
Peter McNicol
Technical Manager

::: EC Certificate :::

Safenet Limited
Denford Garage, Denford, Kettering, Northants., NN14 4EQ, U.K.
Tel: +44 1832 732775 E-mail: office@safenet.co.uk
EC Examination Certificate
This is to certify that
Quaser Machine Tools Co., Ltd.
No. 3, Gong 6th Road, Youshih Industrial Park, Dajia District, Taichung City (437), Taiwan
Has had a range of Machining Centres examined to the Machinery Directive 2006/42/EC, as amended and the Low Voltage Directive 2014/35/EU.
With reference to model UX730Dyn
Manufactured by:
Quaser Machine Tools Co., Ltd.
No. 3, Gong 6th Road, Youshih Industrial Park, Dajia District, Taichung City (437), Taiwan
1. The technical file contains all the relevant information.
2. Having verified that the appropriate tests have been conducted.
2.1. The standards and transposed standards have been applied correctly.
2.2. The example representing series production of the item, complies with the essential health and safety requirements of the Directive 2006/42/EC, as amended.
2.3. The technical file contains all the information to include the following models in the certificate: UX300, UX600, UX3000yn, UX7300yn, MV204CU, MV154U, MF400, MF500, MF630, UX630, UG630, UG1020, MK5U, PRO FLEX6, PRO S6, PRO S10, UX800 and UX500.
2.4. Compliance with EN 60204-1:2006+A1:2009 gives compliance with the Low Voltage Directive 2014/35/EU.
Certificate Number: 7673150818
Date: 12/09/2018 Expiry Date: 12/09/2021
Signed for Safenet Limited
Peter McNicol
Technical Manager

::: GB Certificate :::

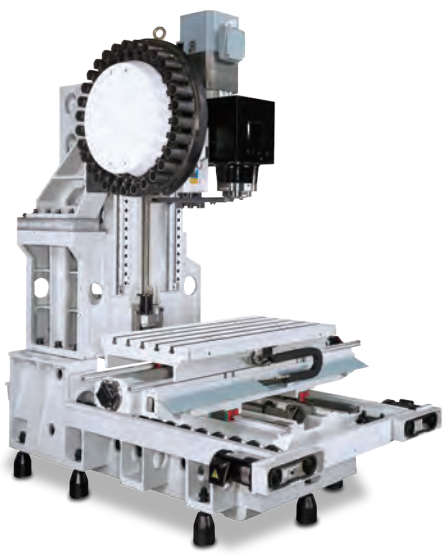
国家机床质量监督检验中心
全国金属切削机床标准化技术委员会
标准认定证书

国家机床质量监督检验中心
全国金属切削机床标准化技术委员会
标准认定证书附件

::: Patent certificate :::

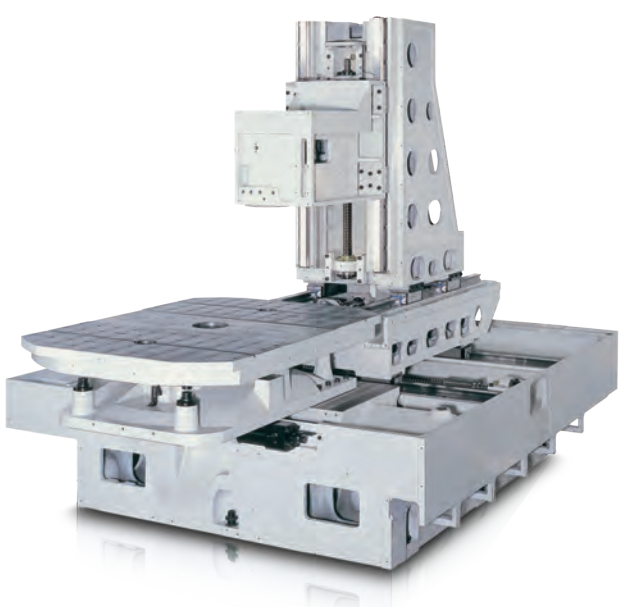
The United States of America

MF400

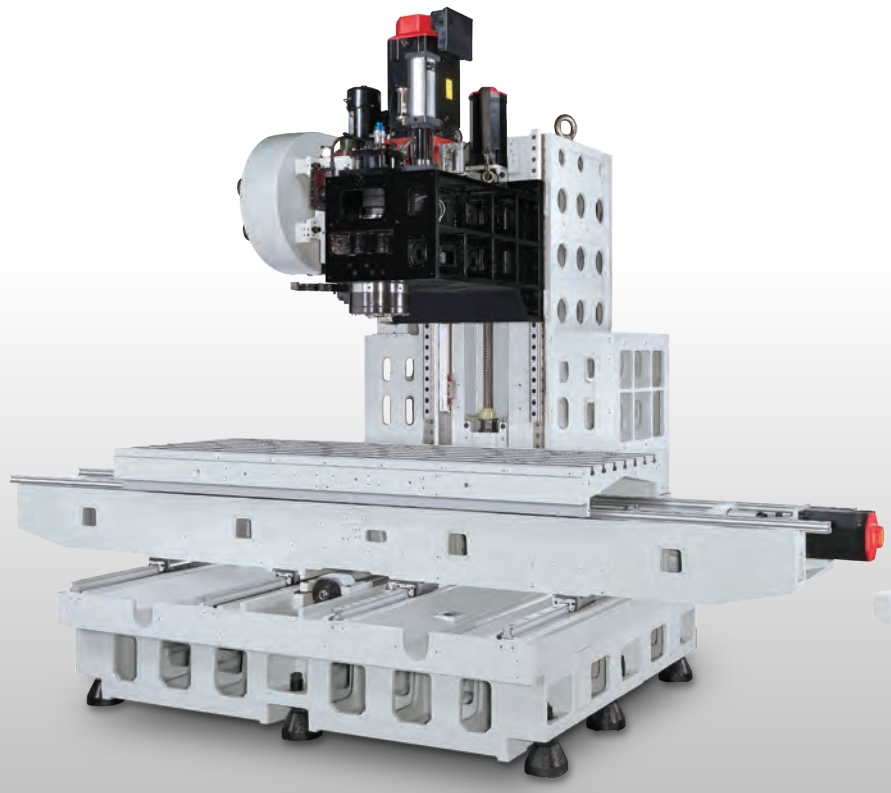


MV184

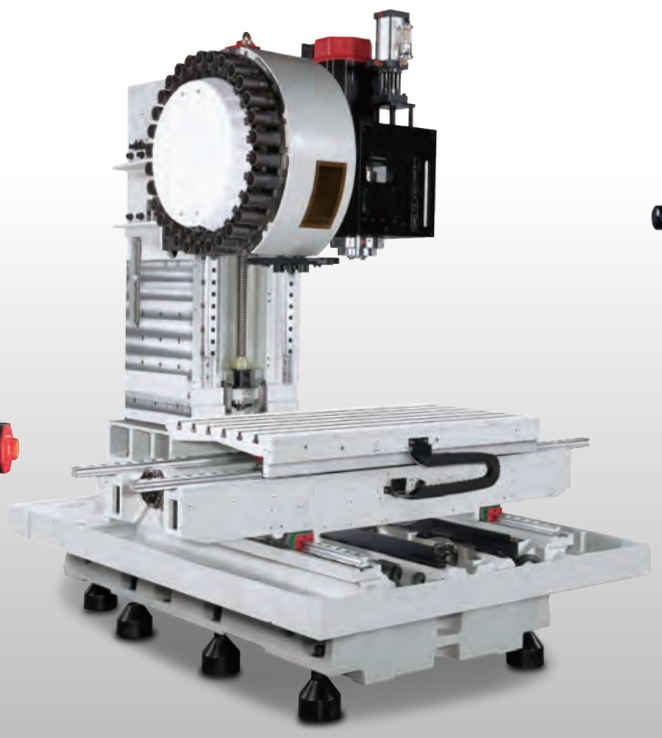
MV134



MK603S

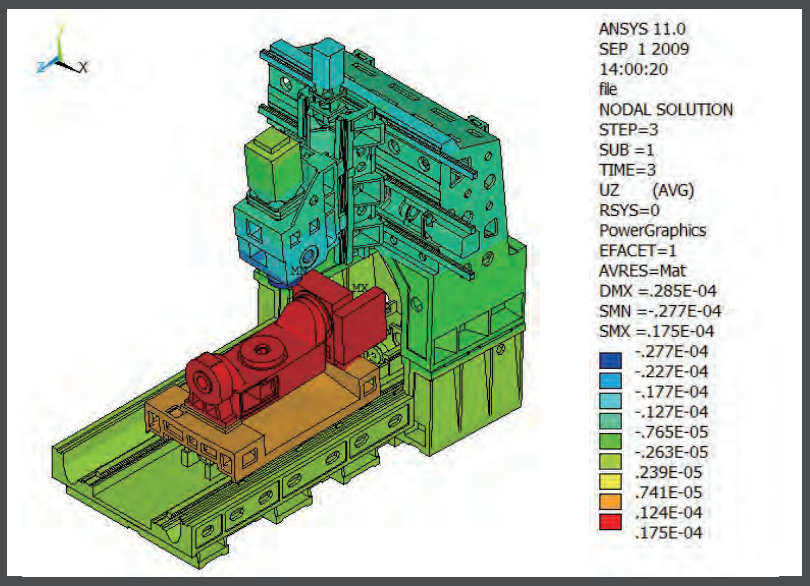


MV234/235



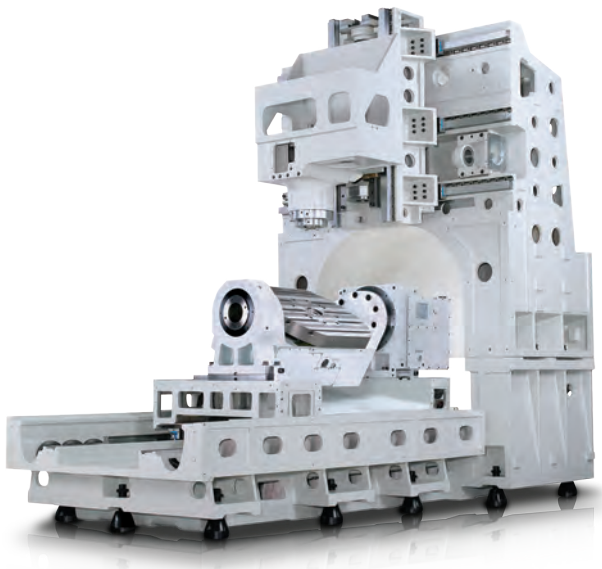
MV204

MF630

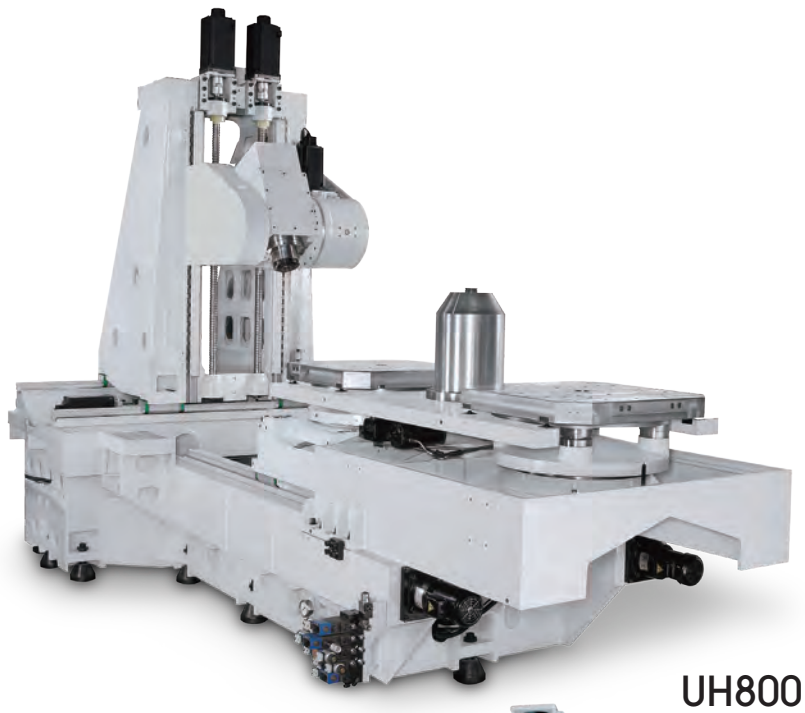


QUASER devotes itself to the research and development of advanced technology. We adopt the latest generation of CAD software and Finite Element Analysis software for machine design. We cooperate with international partners in the fields of advanced motion control, high speed spindle technology, thermal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

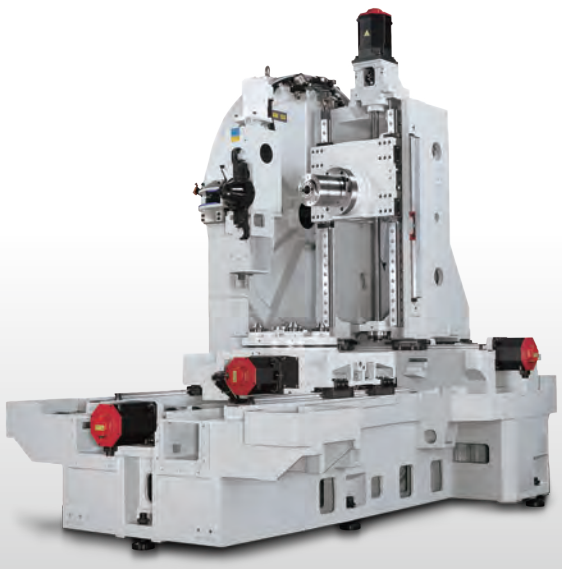
UX500



UX600

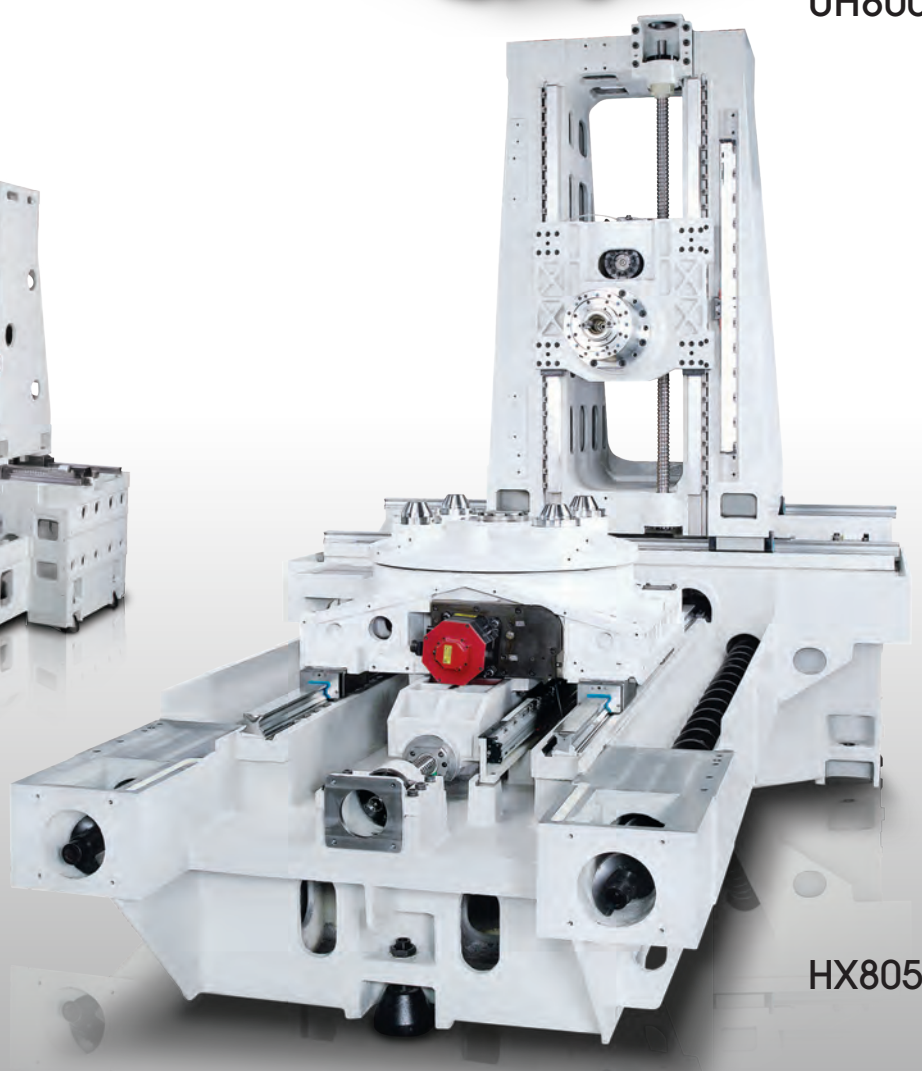


UH800



HX404

HX504



HX805

Quaser Technology

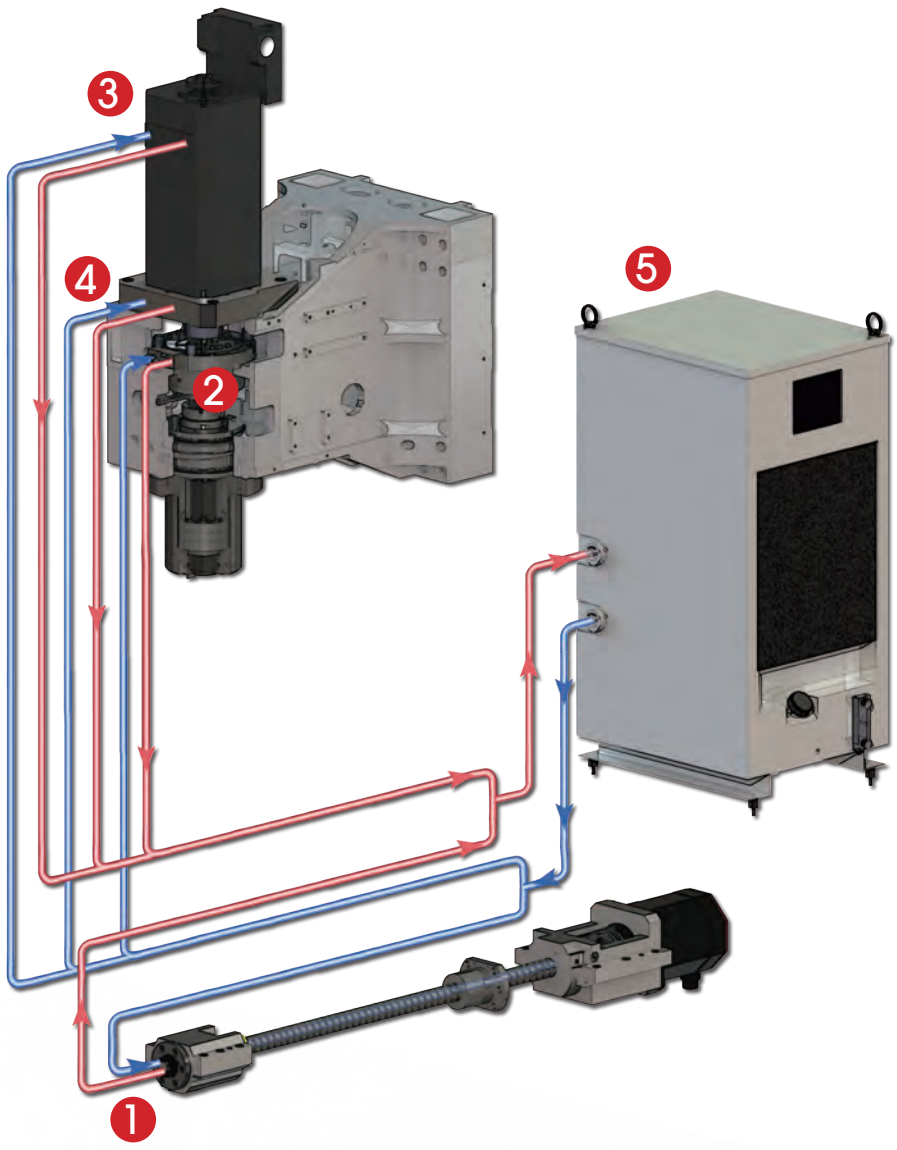
Thermal Control

::: Cooling circuit :::

❶ Coolant through ballscrew (C.T.B.) to keep repeatability accuracy on X/Y/Z axes.
❷ Spindle cooling circuit
❸ Motor cooling circuit (for coupling spindle)
❹ Motor mounting block cooling circuit (for coupling spindle)
❺ Large capacity oil cooler

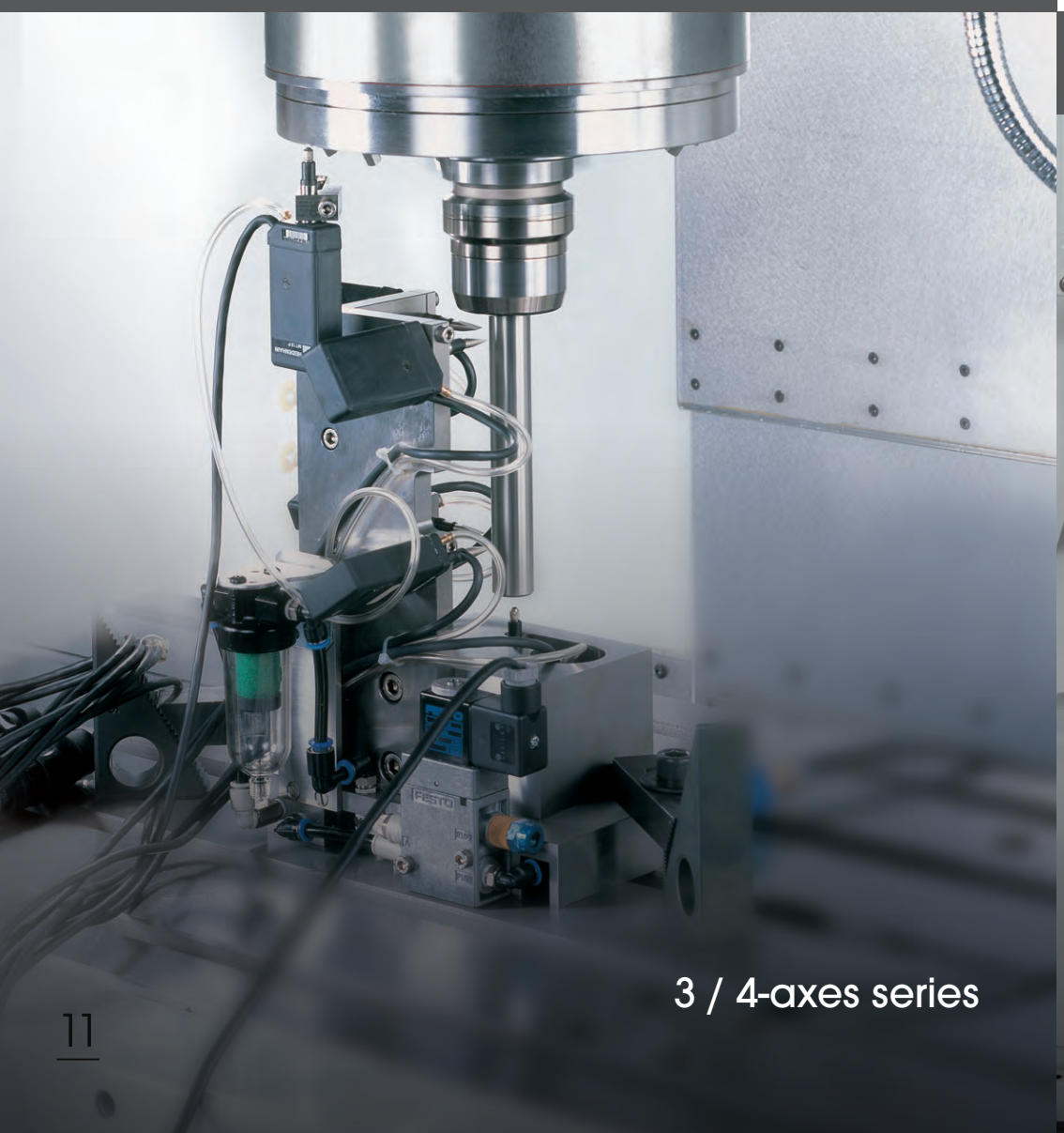
	Belt spindle	Coupling spindle	Built-in spindle
❶	● *	● *	● *
❷	●	●	●
❸	×	●	●
❹	×	●	×
❺	●	●	●

* Depending on models, please reference machine catalog.



::: Above figure is coupling spindle :::

::: Thermal compensation :::

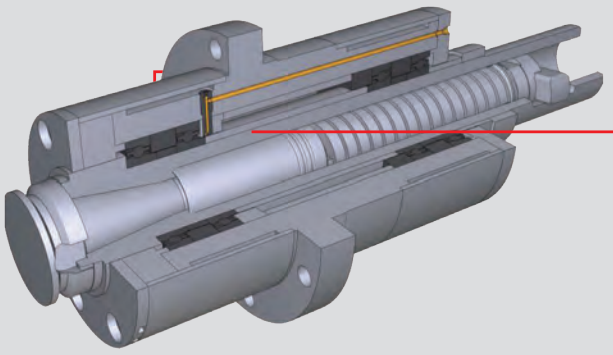


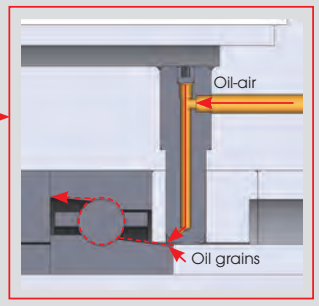
3 / 4-axes series

::: Real-time **time measuring & compensation** :::

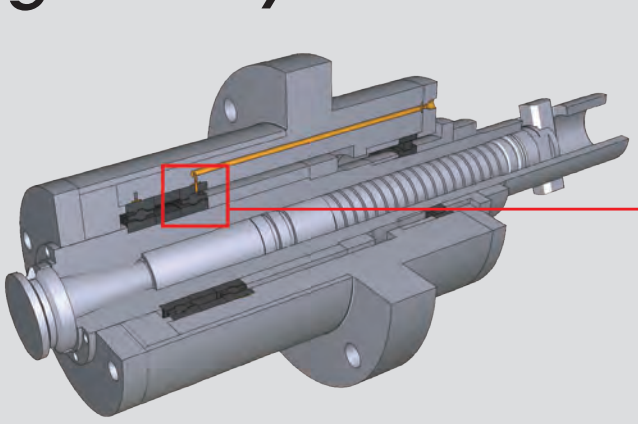
Multi Face & 5 Axes series

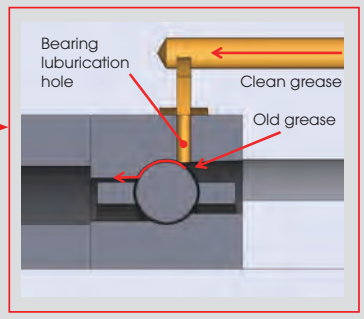
Oil-air system



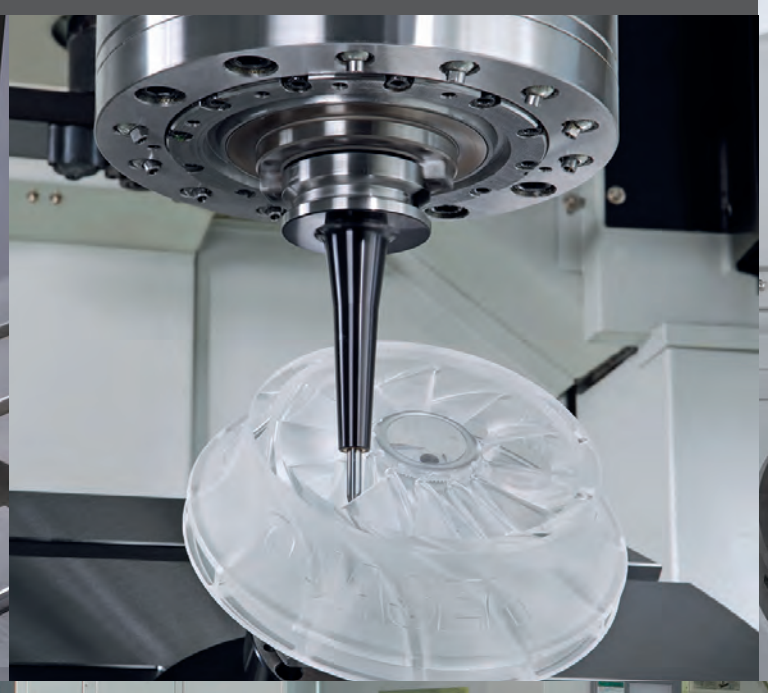


Re-grease system



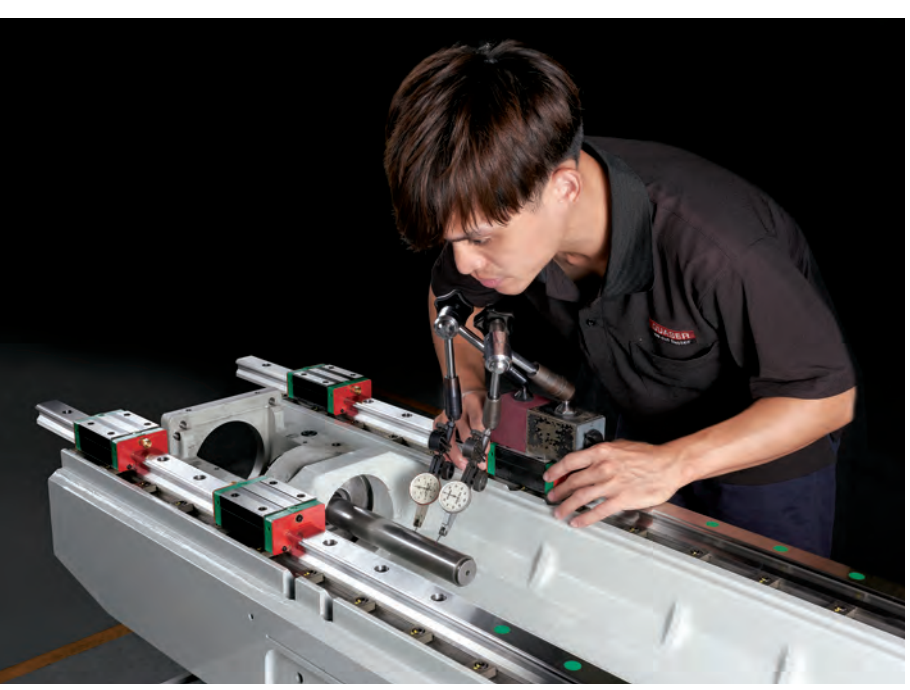


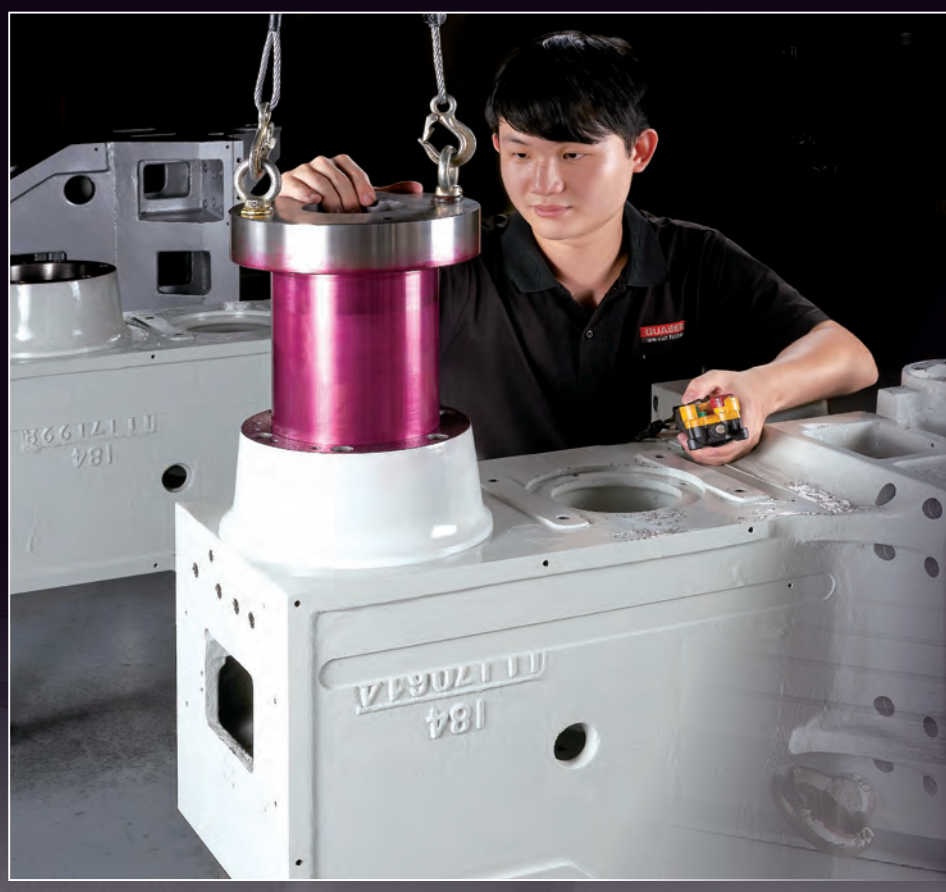
5 Axes Application

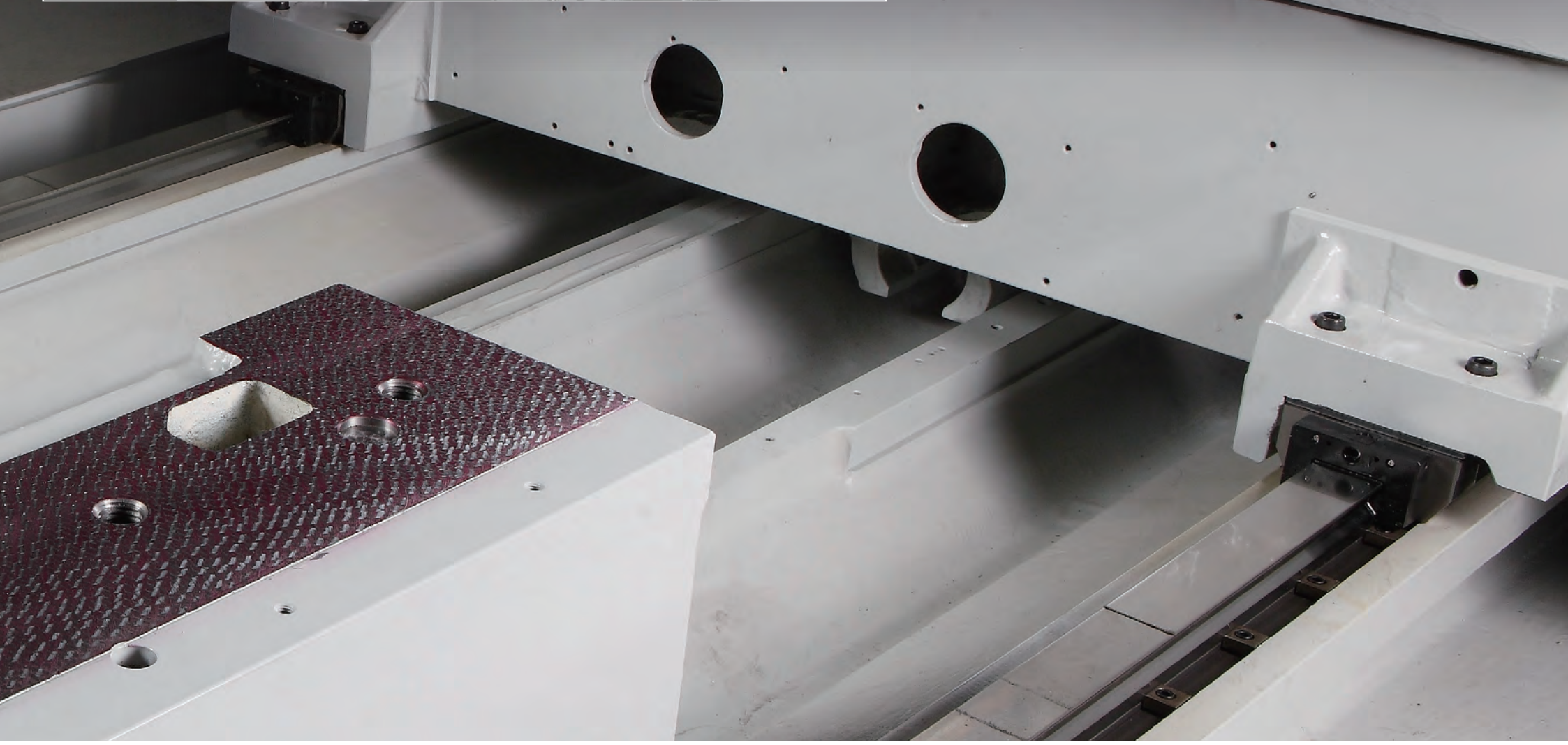


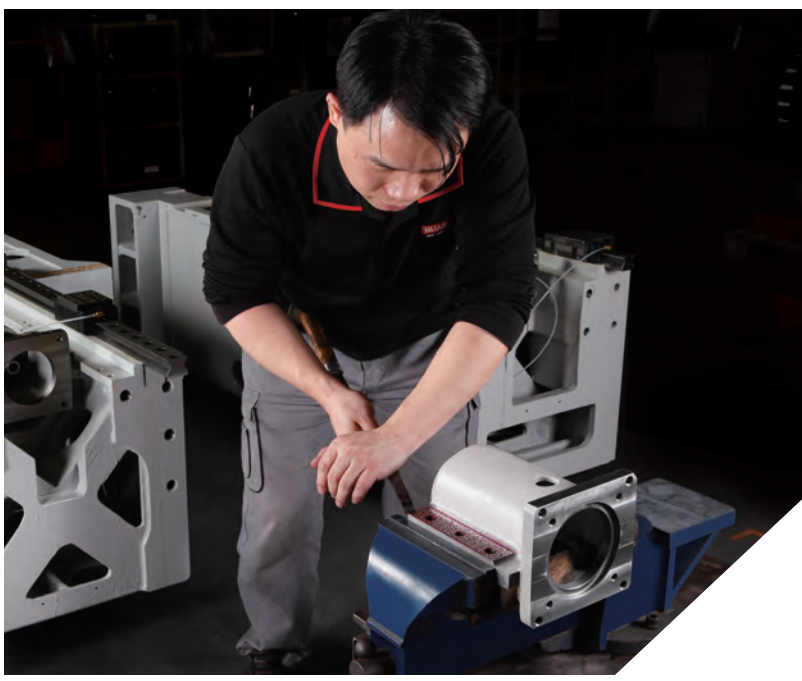
- CAD / CAM
- NC programming
- Tooling technology
- Machining operation

Assembly Technology





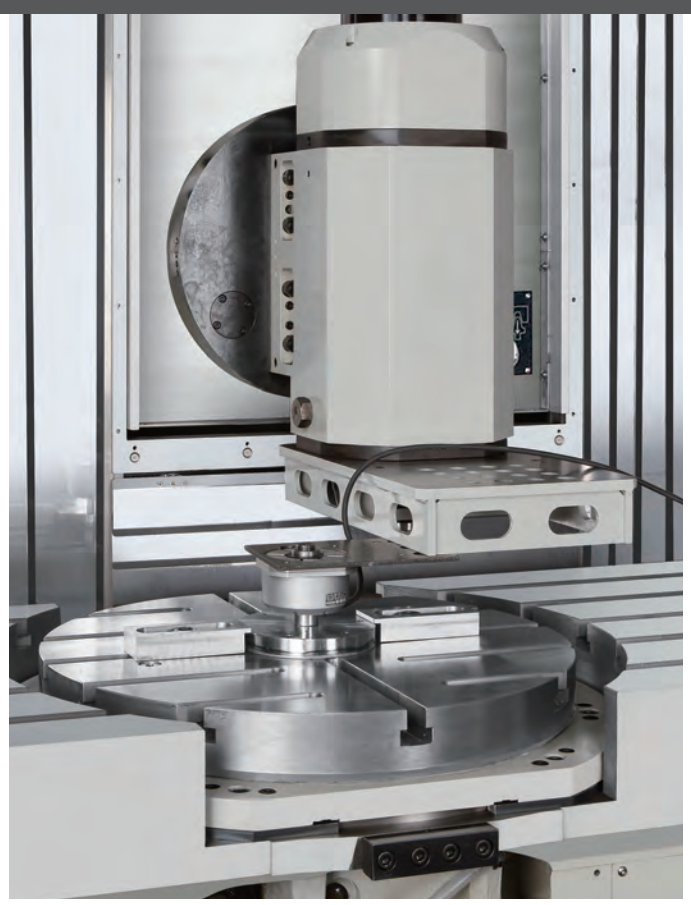




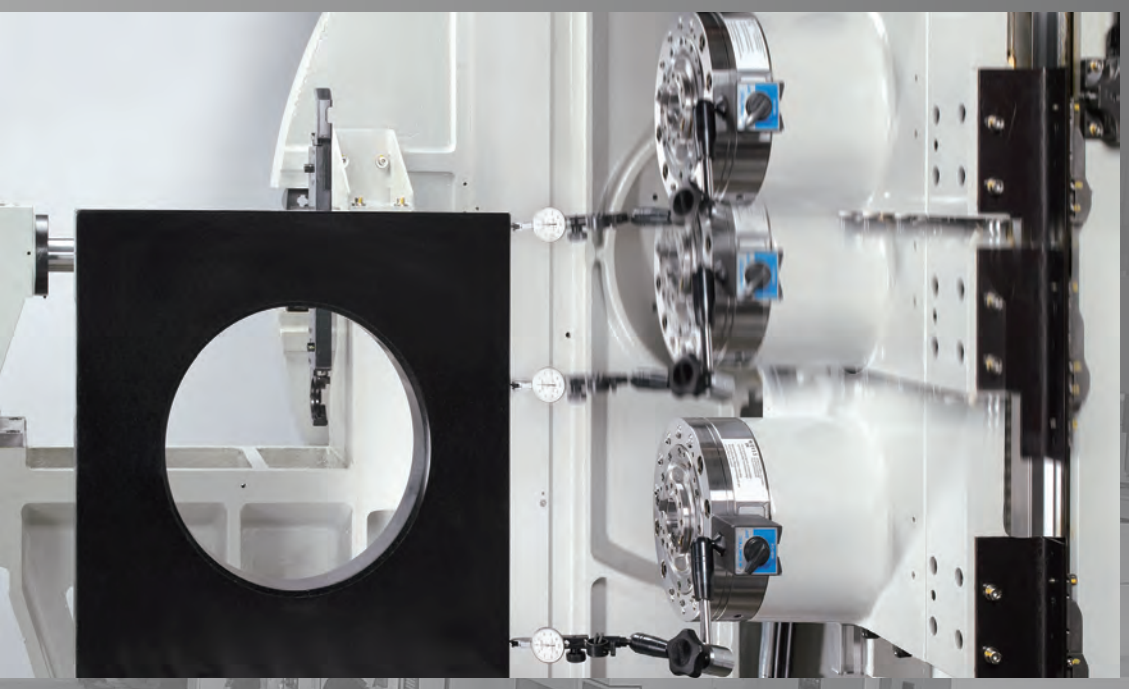
Measurement & Calibration

Static stiffness measurement

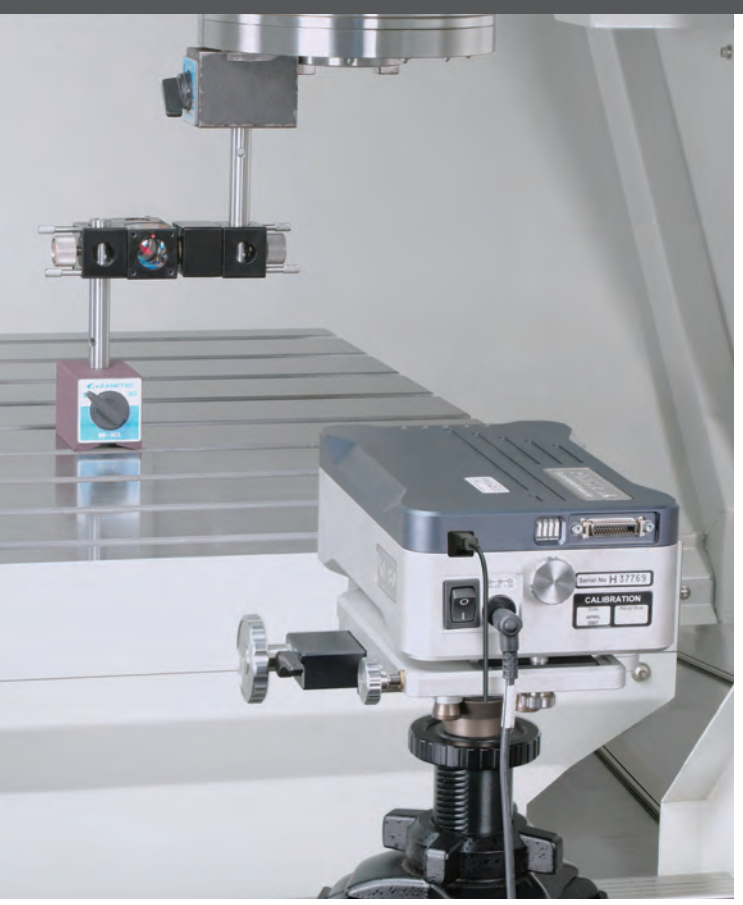
Tilting and rotating axes measurement



Geometric accuracy inspection



Laser & Double ball-bar inspection.

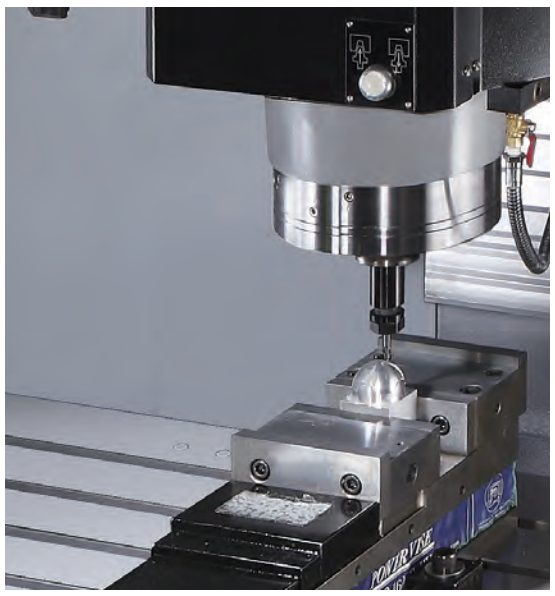


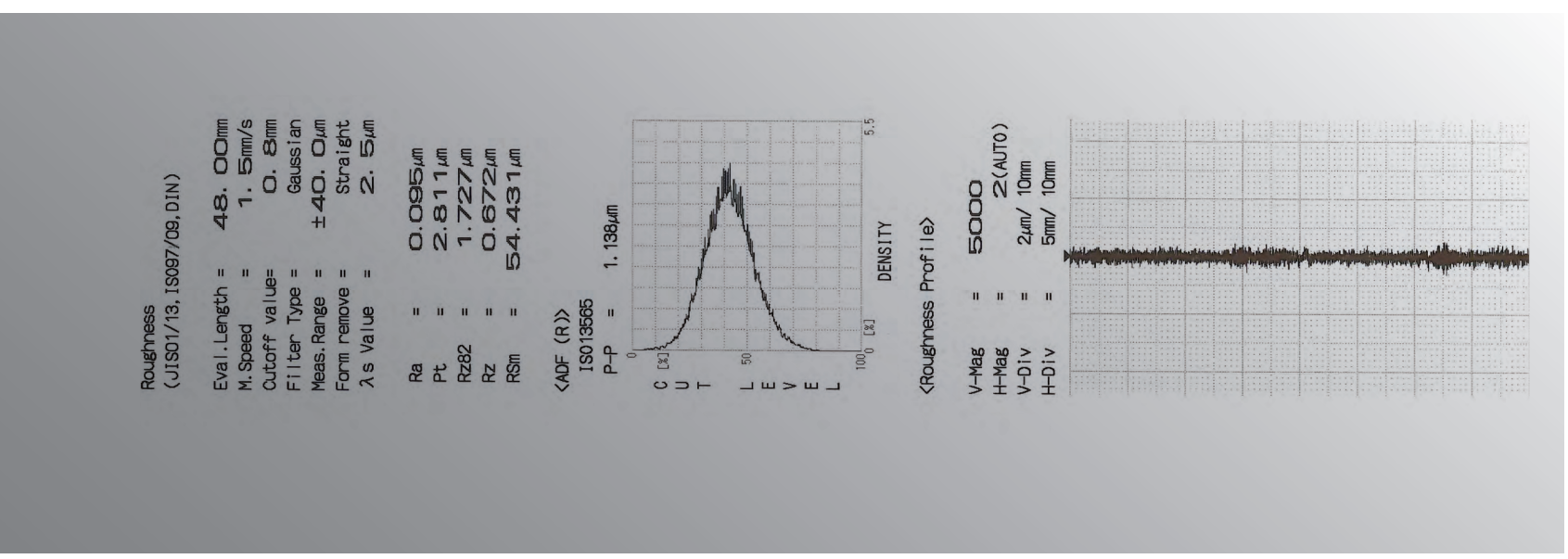
Ballbar Trace (ISO 10791-6)

Testing

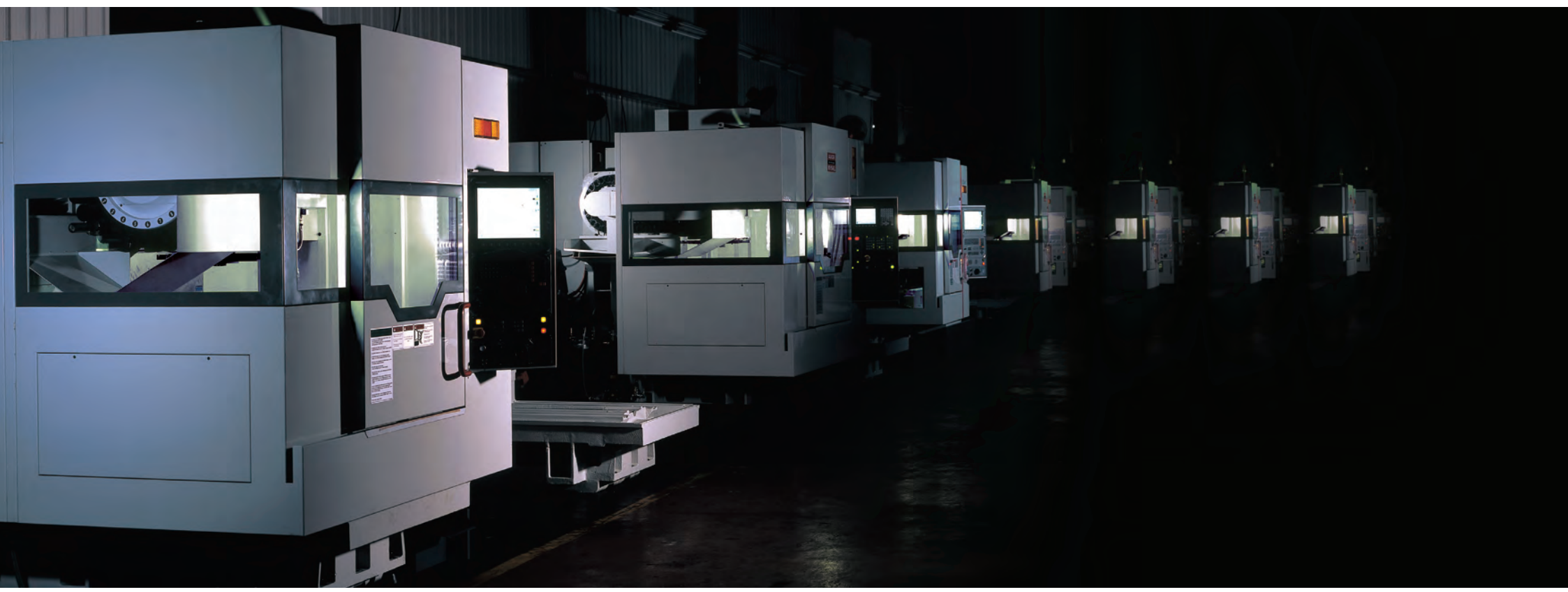
Cutting test

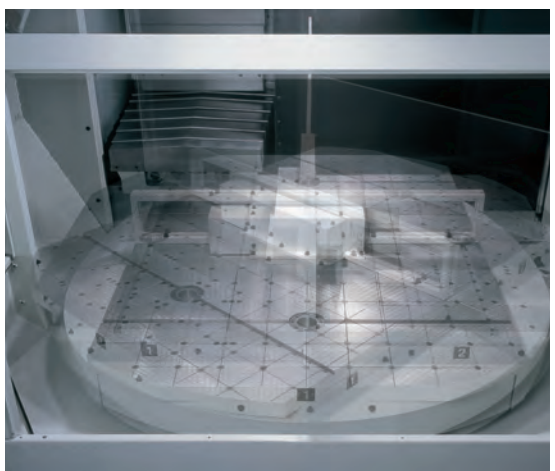
::: All series :::

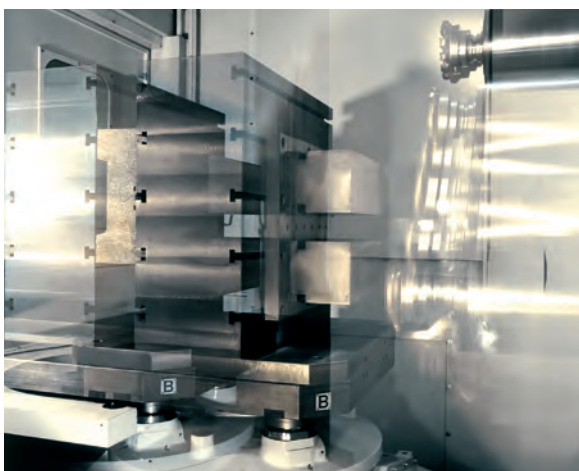




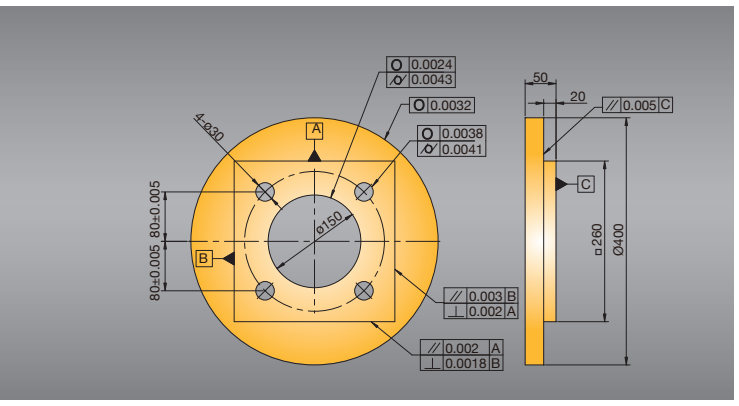
Running 48 hours non-stop reliability test on all functions (tool changer, spindle, multi-axis, coolant system, leak-proof).



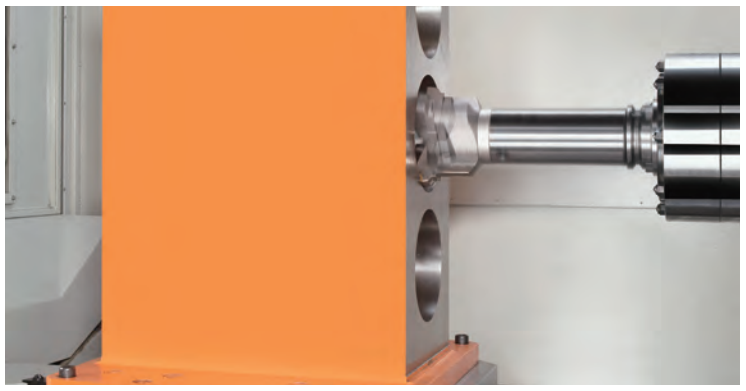


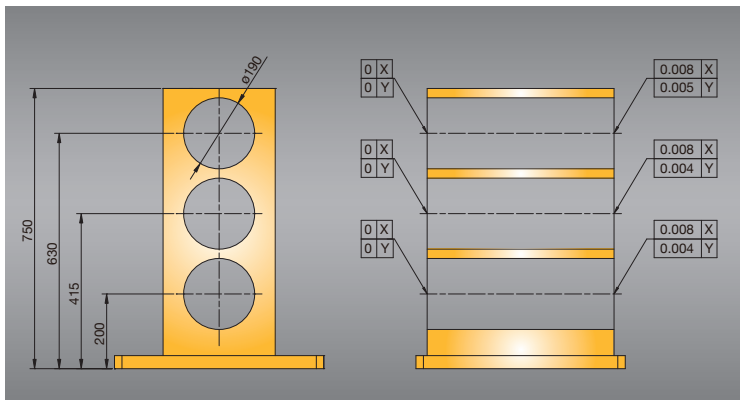


::: M series :::

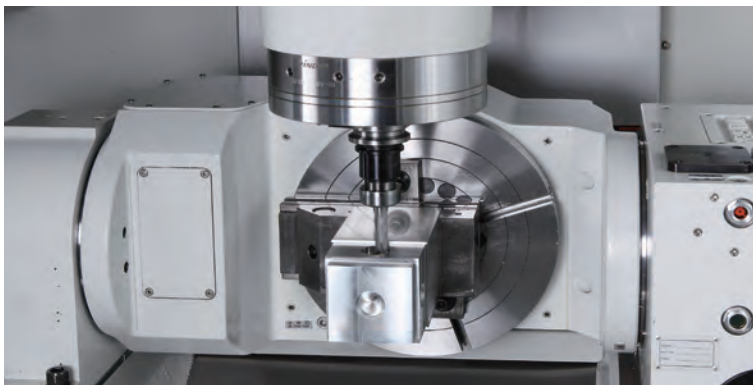


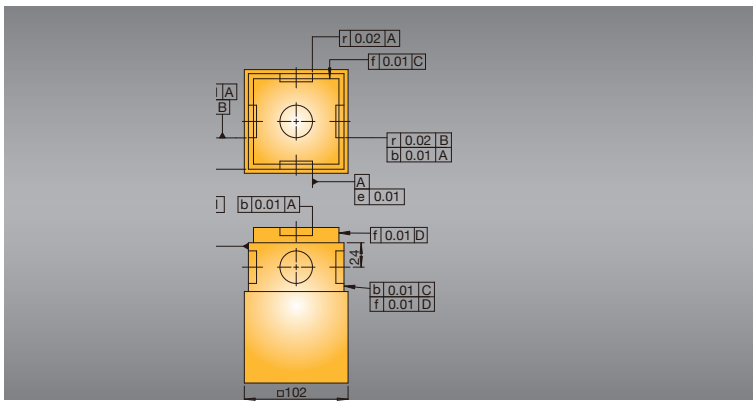
::: HX series :::

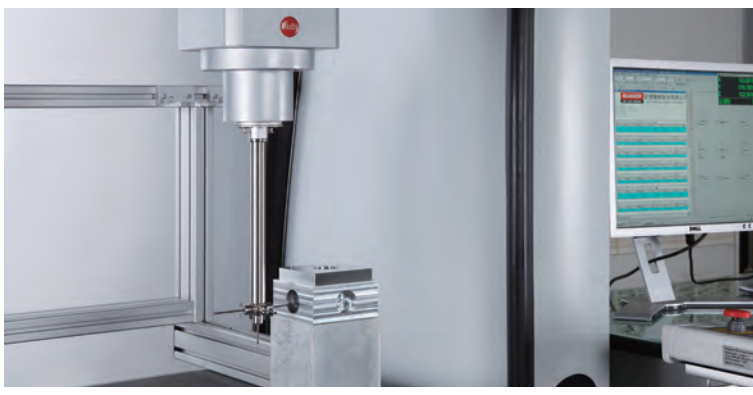




::: 5 Axes / Multi Face series :::







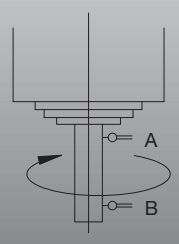
Half of ISO accuracy standard

1. Straightness of axis motion	
ISO	QMT
500 < L ≦ 800 0.015	500 < L ≦ 800 0.008
800 < L ≦ 1250 0.02	800 < L ≦ 1250 0.01
1250 < L ≦ 2000 0.025	

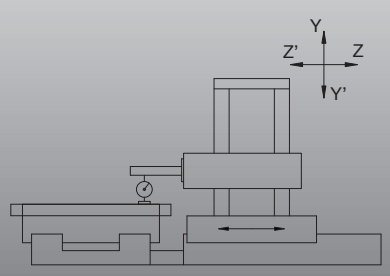
2. Squareness between linear motions	
ISO	QMT
0.02 / 500	0.008 / 400

3. Periodic axial slip of the spindle	
ISO	QMT
0.005	0.002

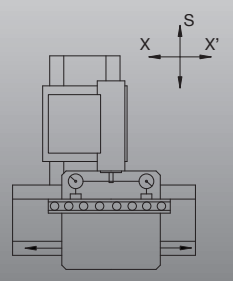
4. Run-out of internal taper of the spindle a) at the spindle nose; b) at a distance of 300 mm from the spindle nose	
ISO	QMT
(a) 0.01	(a) 0.005
(b) 0.02	(b) 0.01



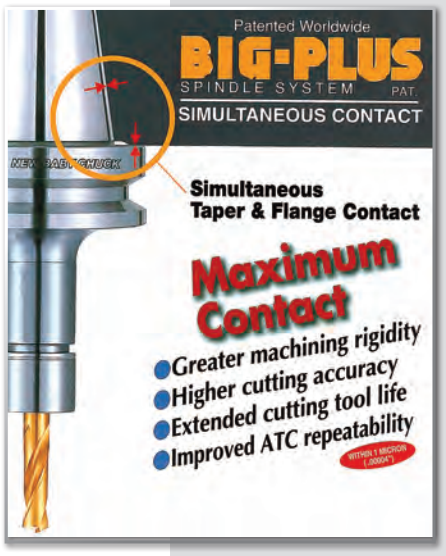
5. Parallelism between the spindle axis and the Z-axis motion	
ISO	QMT
0.015 / 300	0.008 / 400



6. Squareness between the spindle axis and the X-axis motion	
ISO	QMT
0.015 / 300	0.008 / 400



High Performance Spindle



Standard on all models

Spindle code：HM4.0 / HM4.0A

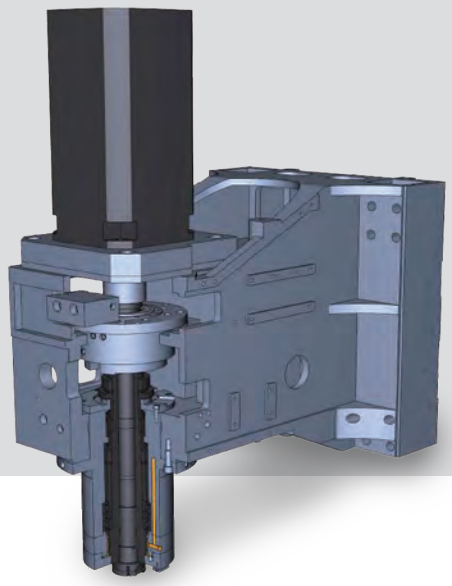
(Only for UX630 & UX630APC)

- 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

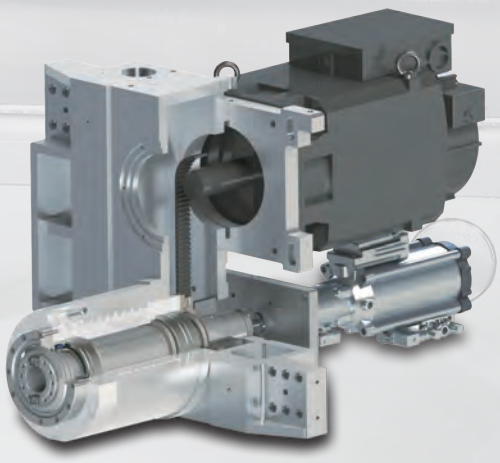
(Only for 5 Axes Mill-Turn M / C)

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



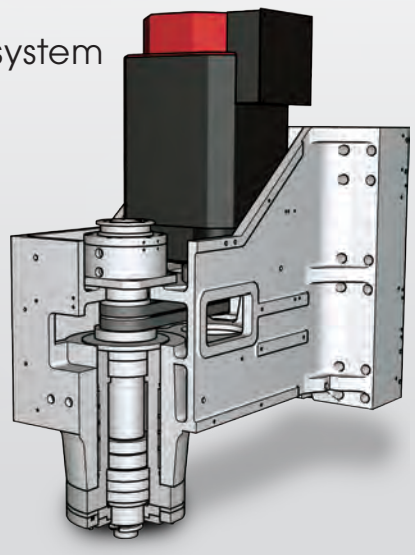
Spindle code：AB-4.0

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



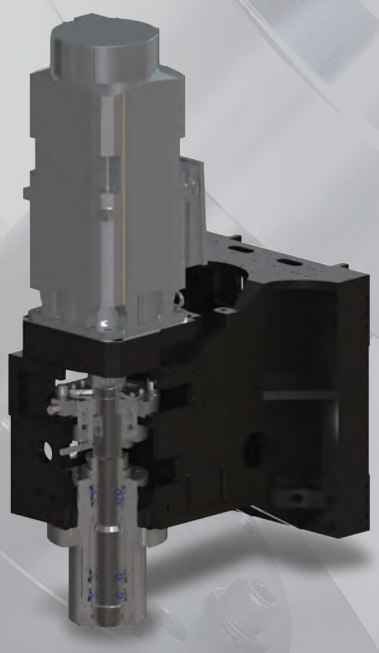
Spindle code：MB-4.0

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



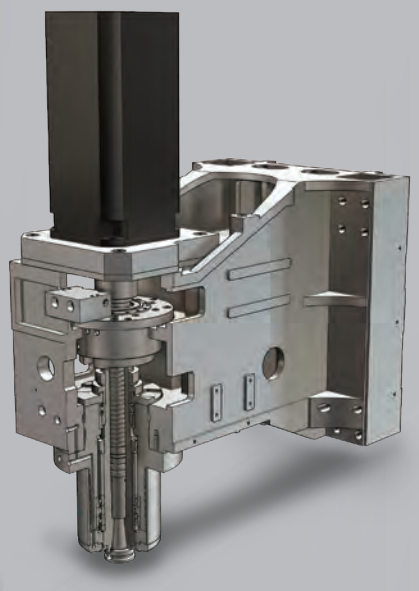
Spindle code：SC-4.2

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



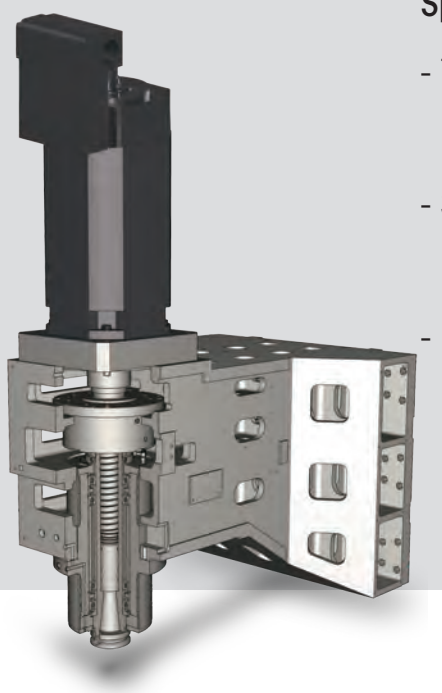
Spindle code：MC-4.0R / MC-4.1R

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



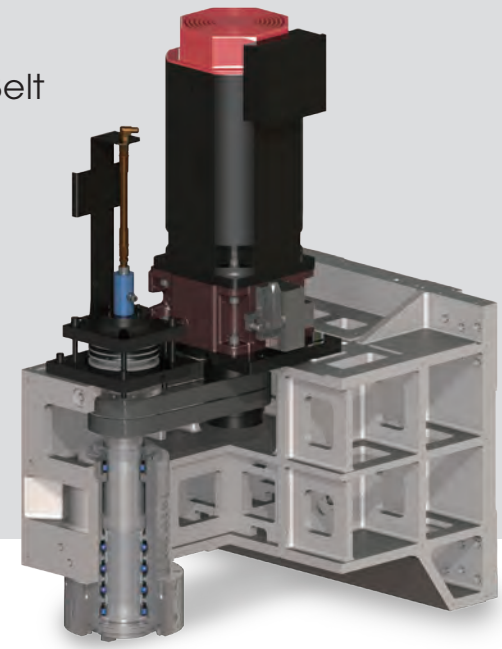
Spindle code : MC-5.0

- Transmission : Coupling
- Speed range : 15,000 min^{-1}
- Lubrication : Oil air system



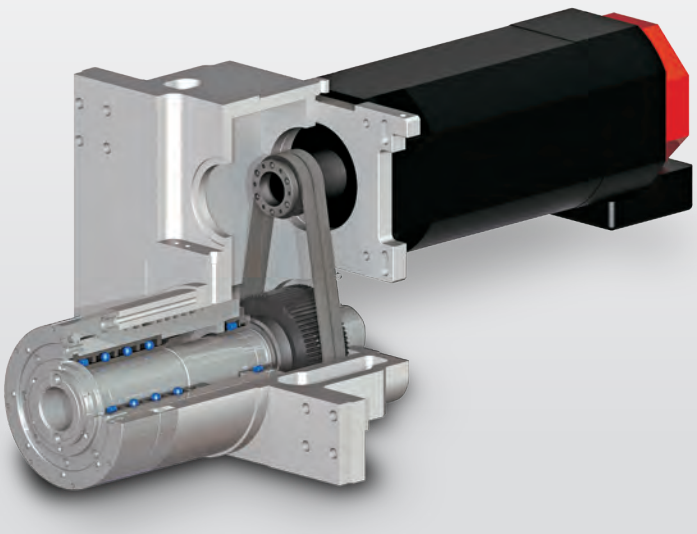
Spindle code : SB-5.0A

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



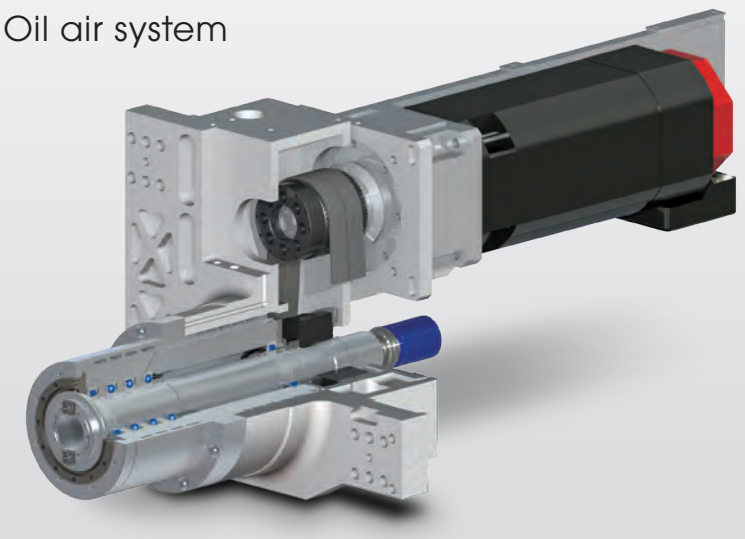
Spindle code : SB-5.0

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



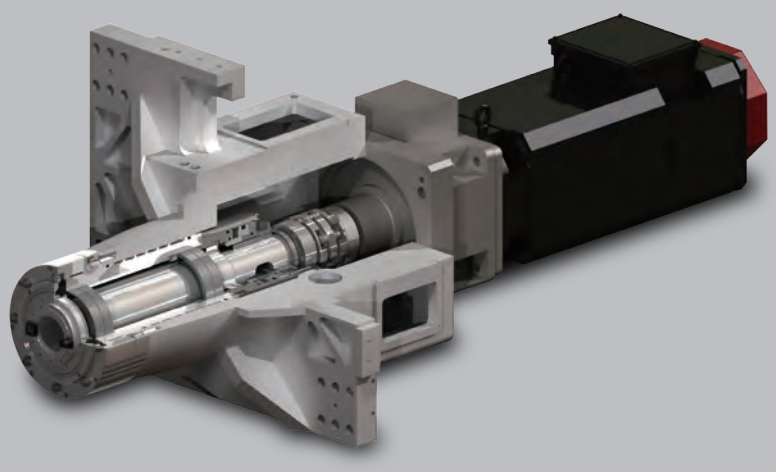
Spindle code : SB-5.1A

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



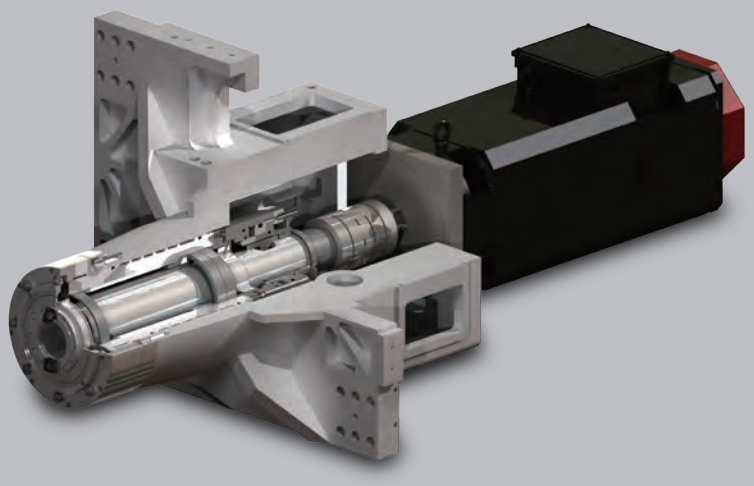
Spindle code : SC-5.0

- 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)

IQS_Availability

Program

Tool

Fixture

Part

Customer

IQS_Order

Priority

Operator

Status

Machine

Database

FANUC

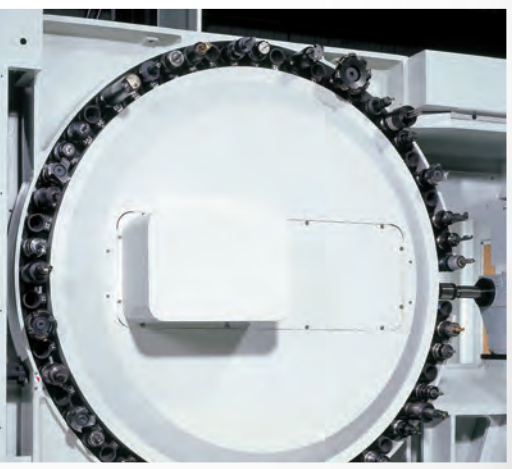
HEIDENHAIN

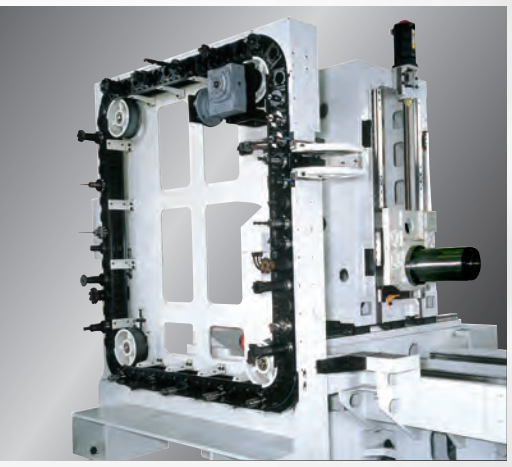
SIEMENS

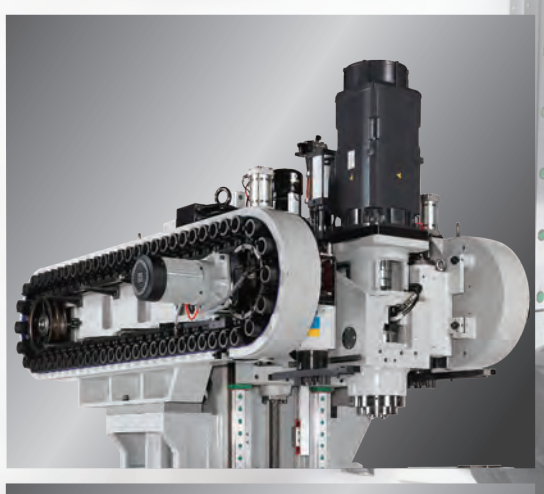
MITSUBISHI ELECTRIC

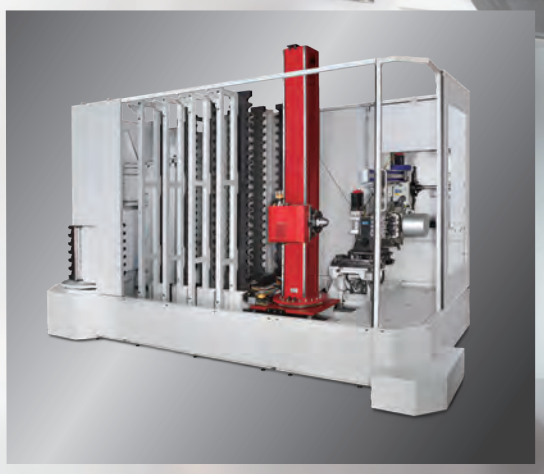
ATC System

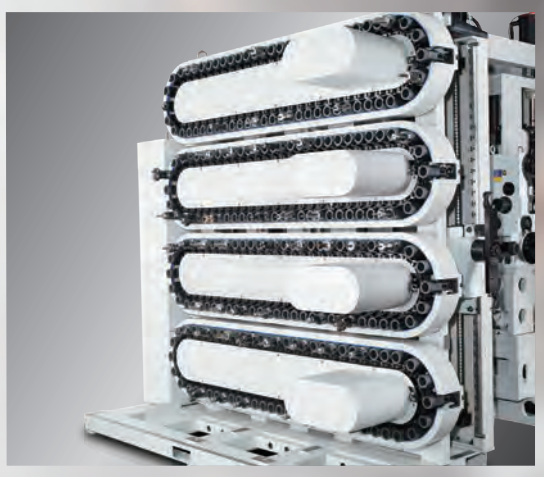
Different types of magazines with large capacity are available







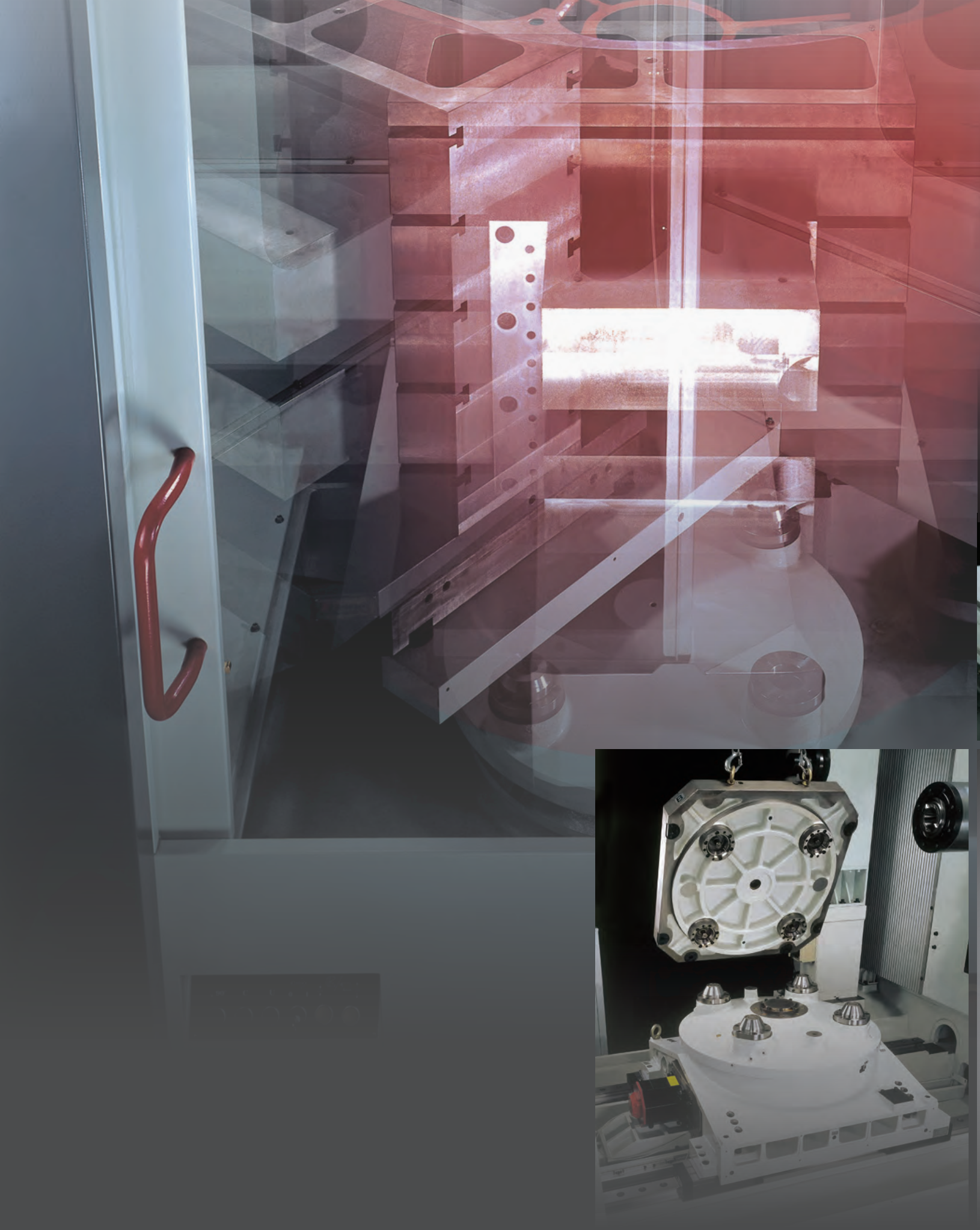


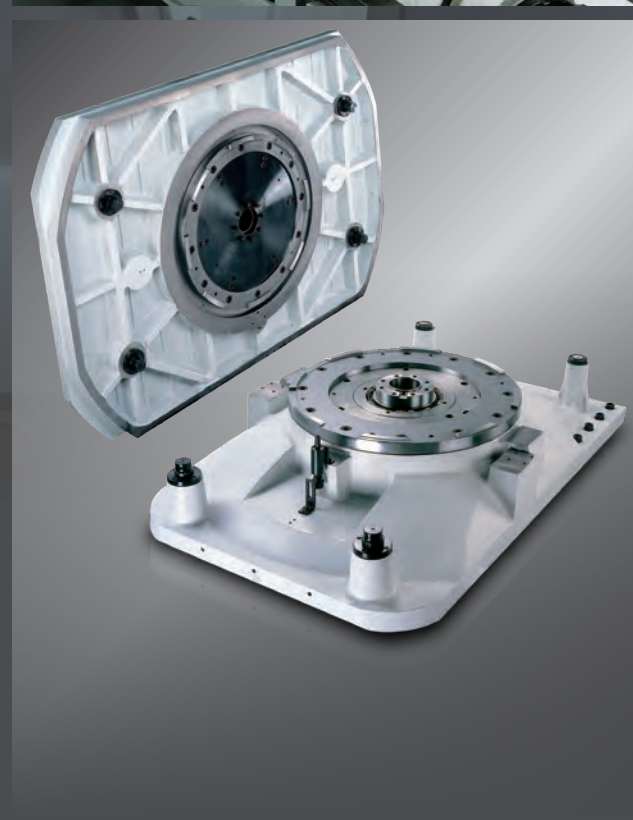


Products	Model	#40	#50
Vertical series	MV154 / 184 / 204	30、48、60	-
	MV214 / 234	48、60	-
	MV205 / 235	-	30、40
Pallets series	MK603S /MK154 (MV154APC)	48、60	-
5 Axes series	MK5U	L:30、48、60 R:40、60	-
	UX300 / 600 / 730	48、60	-
Multi Face series	MF400 / 500 / 630	30、48、60	-
	MF Cell	120	-
5 Axes Mill-Turn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

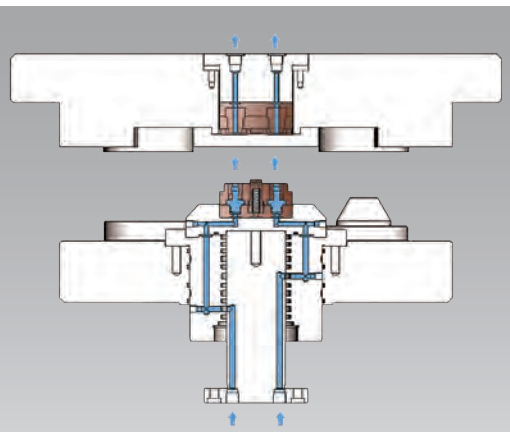
APC testing with maximum load

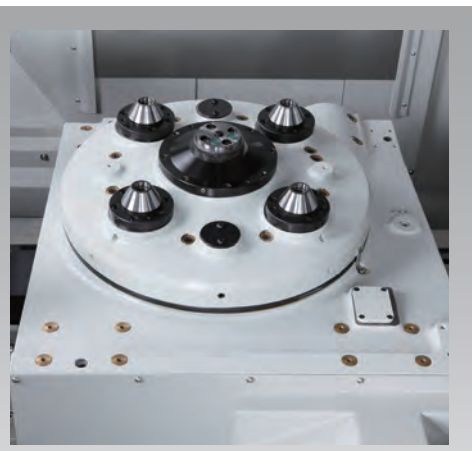




Cell - Automation System

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

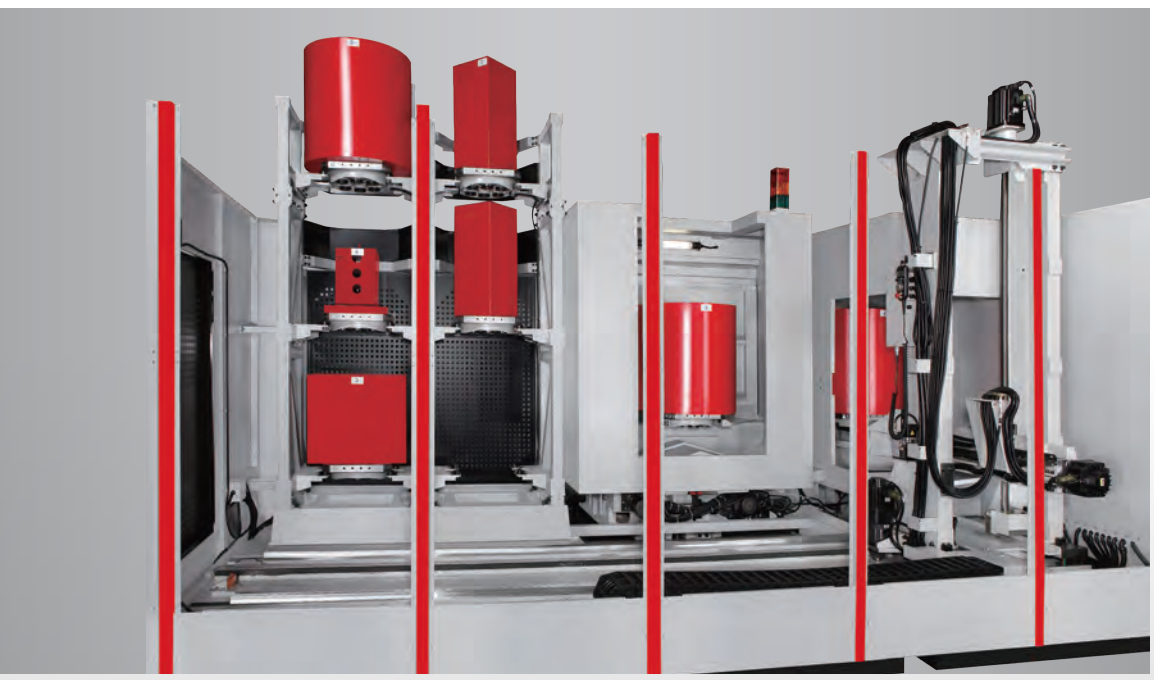




Hydraulic through pallet (opt.)

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.)

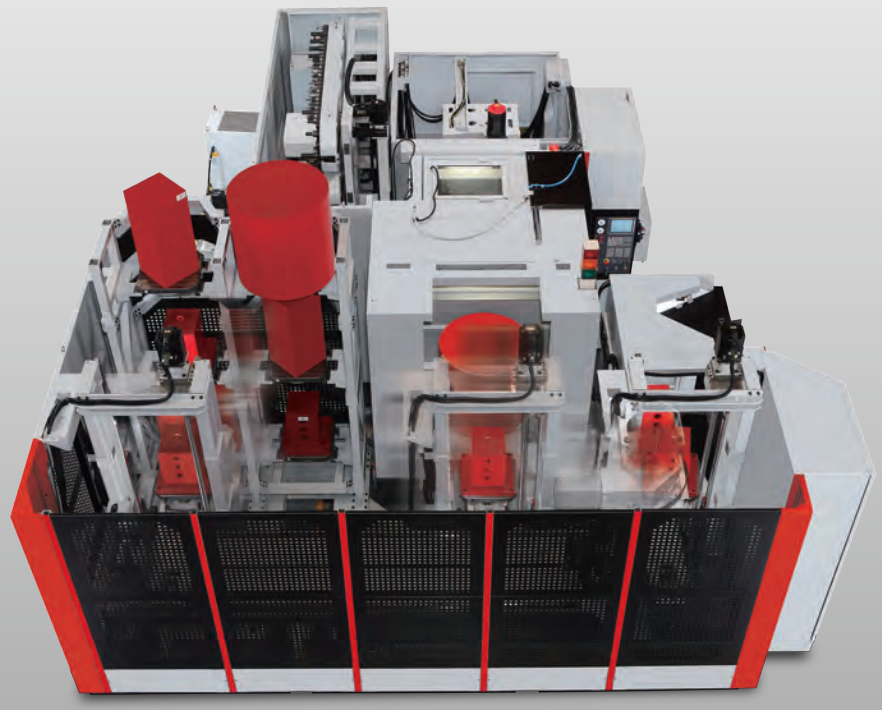
HX505 Cell :

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.

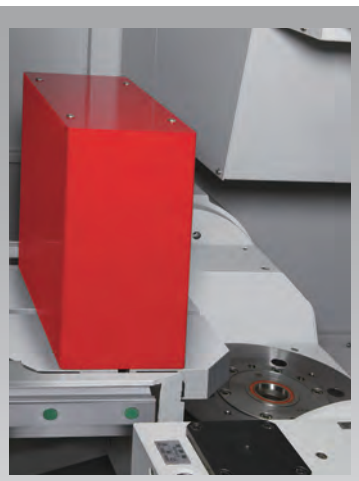
MF Cell 5 Axes M/C. this machine system is equipped with a dual magazine with max capacity 120 tools. The pallet storage tower is capable of storing 40 pallets (MF400) and 28 pallets (MF500) in a small foot print. It can be integrated to Fanuc 0iMF and Siemens 828D NC systems, for 5 Axes positioning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

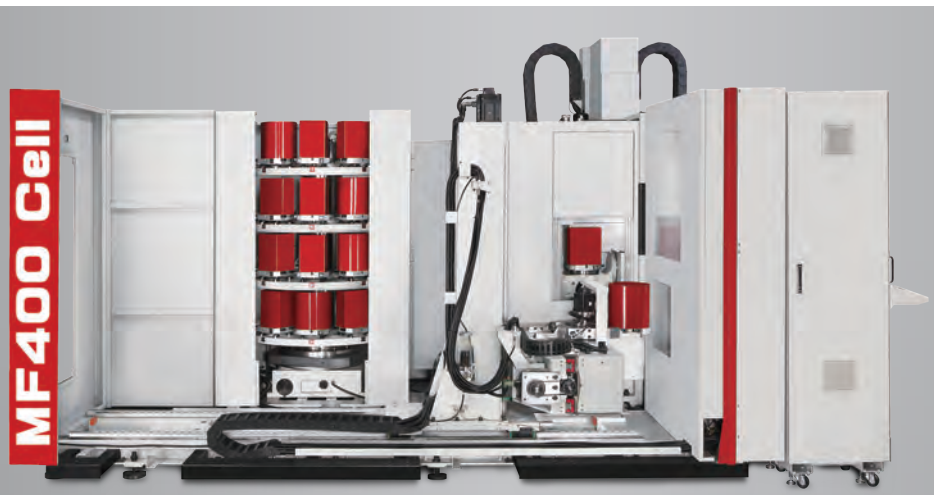


Pallet clamping system

Pallet loader

System controller

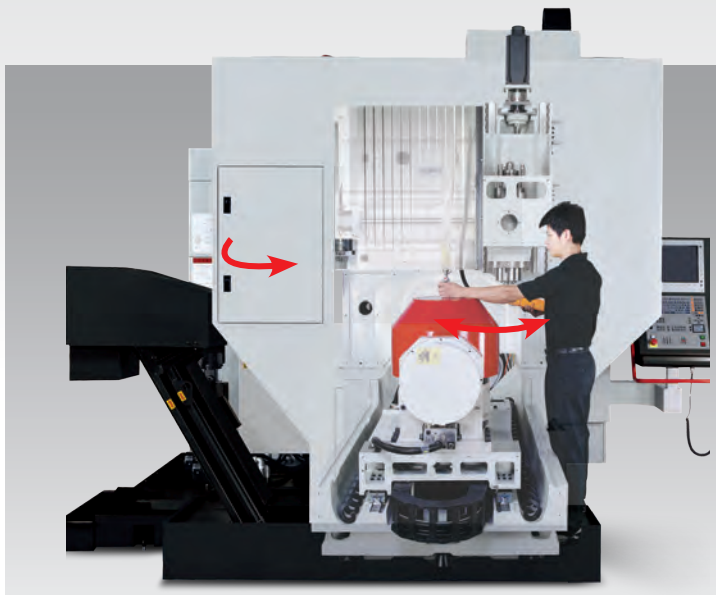
Manual operation position & Loading station



Pallet storage tower

Ease of Use

::: Ergonomic operation panel with adjustable angle :::



::: Excellent accessibility to the table & spindle :::

::: Wide-opening door for loading :::

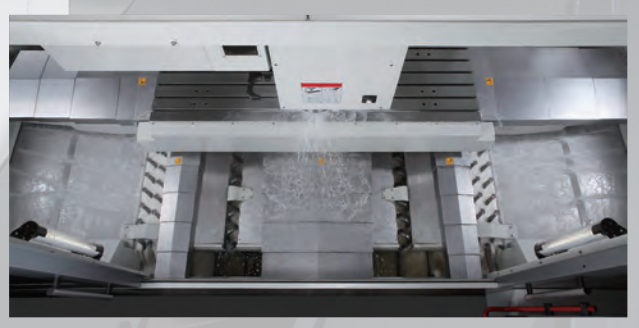
Coolant & Chip Management

::: Nozzle coolant :::

::: Coolant through spindle :::

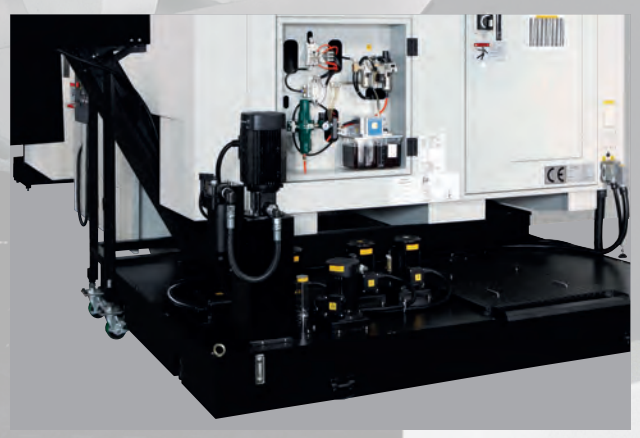
::: Ceiling coolant HX series :::

::: Wash down coolant :::



::: Wash gun :::

::: Large capacity coolant tank :::

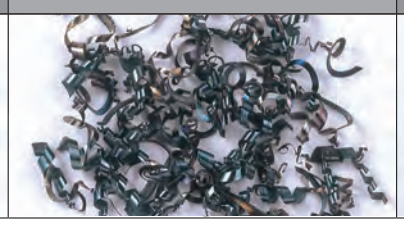


::: Paper filtering system (opt.) :::

::: Drum type chip conveyor (opt.) :::

::: Chip conveyor :::

::: Chip auger :::

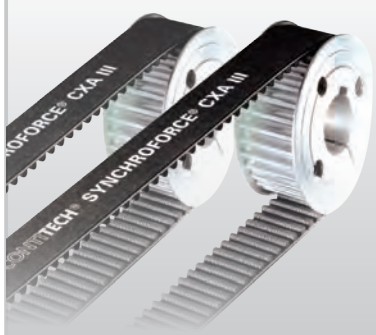
Curly iron	Metallic	Foundry	Curly Aluminum	Aluminum
				

High Quality Components

FANUC

MITSUBISHI ELECTRIC

LUBE	MOTION & CONTROL™ NSK	MAXIA Innovation by Matsuura	ate antriebstechnik und entwicklungs gmbh
			

DEUBLIN Engineered for Performance	Made for Motion KTR	CONTITECH	mmk MATSUMOTO
			

HEIDENHAIN

SIEMENS

ROEMHELD HILMA ▪ STARK

HEIDENHAIN

THK

BLUM

RENISHAW apply innovation™

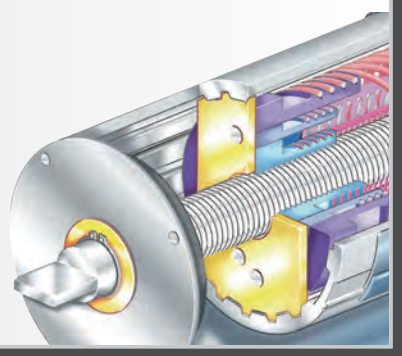
pilz

EATON Powering Business Worldwide

GRUNDFOS

SMC

Protezioni Elaborazioni Industriali



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