

EVERY NEW CHALLENGER
EVERY ACCURATE PART
S42 IS YOUR BEST PARTNER



PERFORMANCE

THE ART OF TURNING

Preface

Welcome to the "Quick-TECH world" !
Thank you very much for your trying to use our CNC Bar-Turning-Centers.

We, Quick-TECH Machinery Co., Ltd., is the unique machine-tool builder which is concentrating to contribute to all of customers and dealers in the worldwide CNC bar-turning market since 1995.

Bar-turning is well known as the most effective parts-manufacturing method in the CNC metal-cutting field. Traditionally, bar-turning has been long-time used for mass-production of many kinds of small metal parts. In this field today, many high-level customers have already established "un-manned continuous operation" because of the excellent CNC functions and the fundamental advantage of bar-loading.

Recently, CNC bar-turning is also used for the small-lot-production of various kinds of workpieces in wide range industries. In these fields today, many wise customers has already succeeded to improve their parts manufacturing to "order-base production" because of the process integration by CNC mill-turn capabilities and the big diameter bar supply for various size and shape of workpieces.

In order to complete customer's satisfaction as above, Quick-TECH has developed many non-swiss-type CNC bar-turning machines. The best three of our products are "I-42 Ultimate" with unique gantry tooling and "T8 Hybrid-Y" with conventional turret tooling and "S-42 ATM" with powerful tilting spindle. Each model of both series has the "X+Y+Z+C+B" axis control for all-purpose mill-turn applications. Furthermore, you can find "Multi-task operation", "Simultaneous cutting", "Free angle milling", "Permanent tool layout", "Standard jet coolant", "90-degree chip flow", "Built-in Robot", "Blue technology", "Smallest floor space" and "All-in-one accessories" as our feature in the "Quick-TECH world". Please access to our "Art of turning" !

We hope to expand our bar-turning business to internationally growing-up industries like as medical, aerospace, electronics, mechatronics, automobile, optical, satellite, information-technology, energy, home-electric-appliances and others. In order to contribute to your future business, we should do our best with supporting by European marketing, Japanese technology and Taiwanese cost performance.

Best Regards together to growth.
Quick-Tech Team.

About QUICK TECH

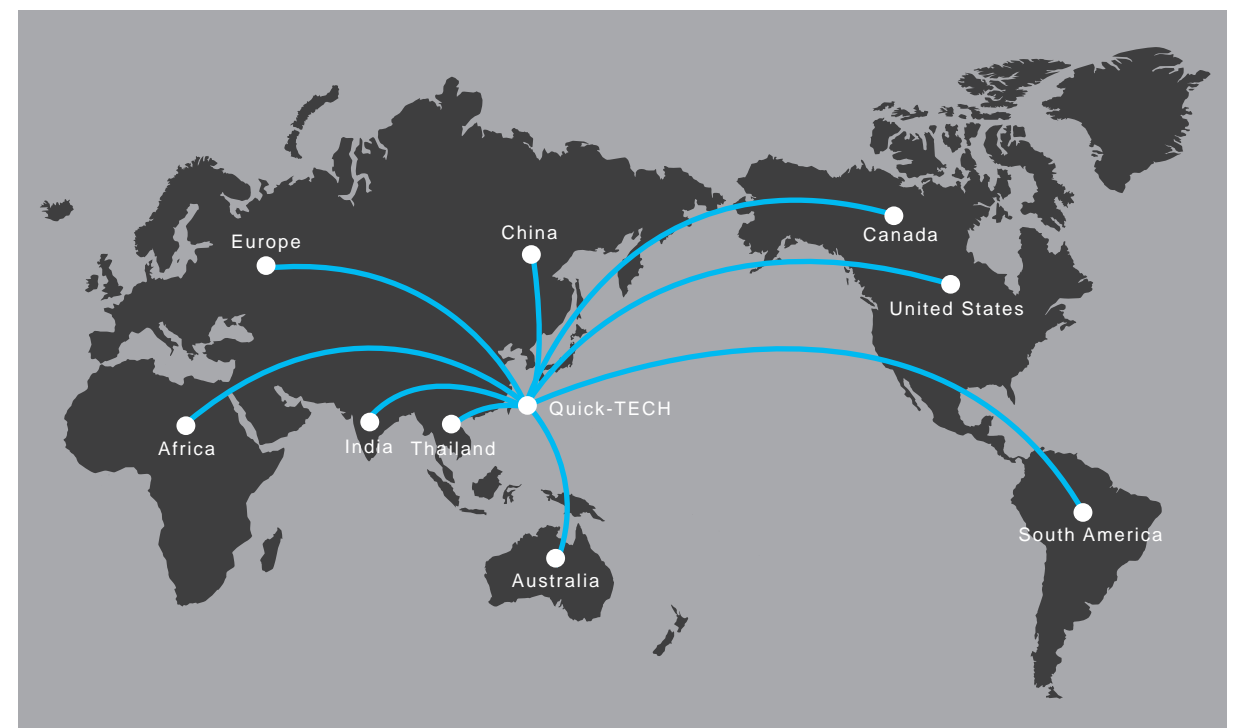
Quick-Tech has been concentrating on the development and production of the machines that are quite different from those produced by others manufactured who focused on the development of standardized machines. We produce machines for any special industry.

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Our project



Our marketing



Turret series

Contents

01

S-42 ATM..... p.6

02

Machine Character..... p.8

03

Main spindle..... p.10

04

Sub spindle..... p.12

05

Tool spindle..... p.14

06

Tool system..... p.16

07

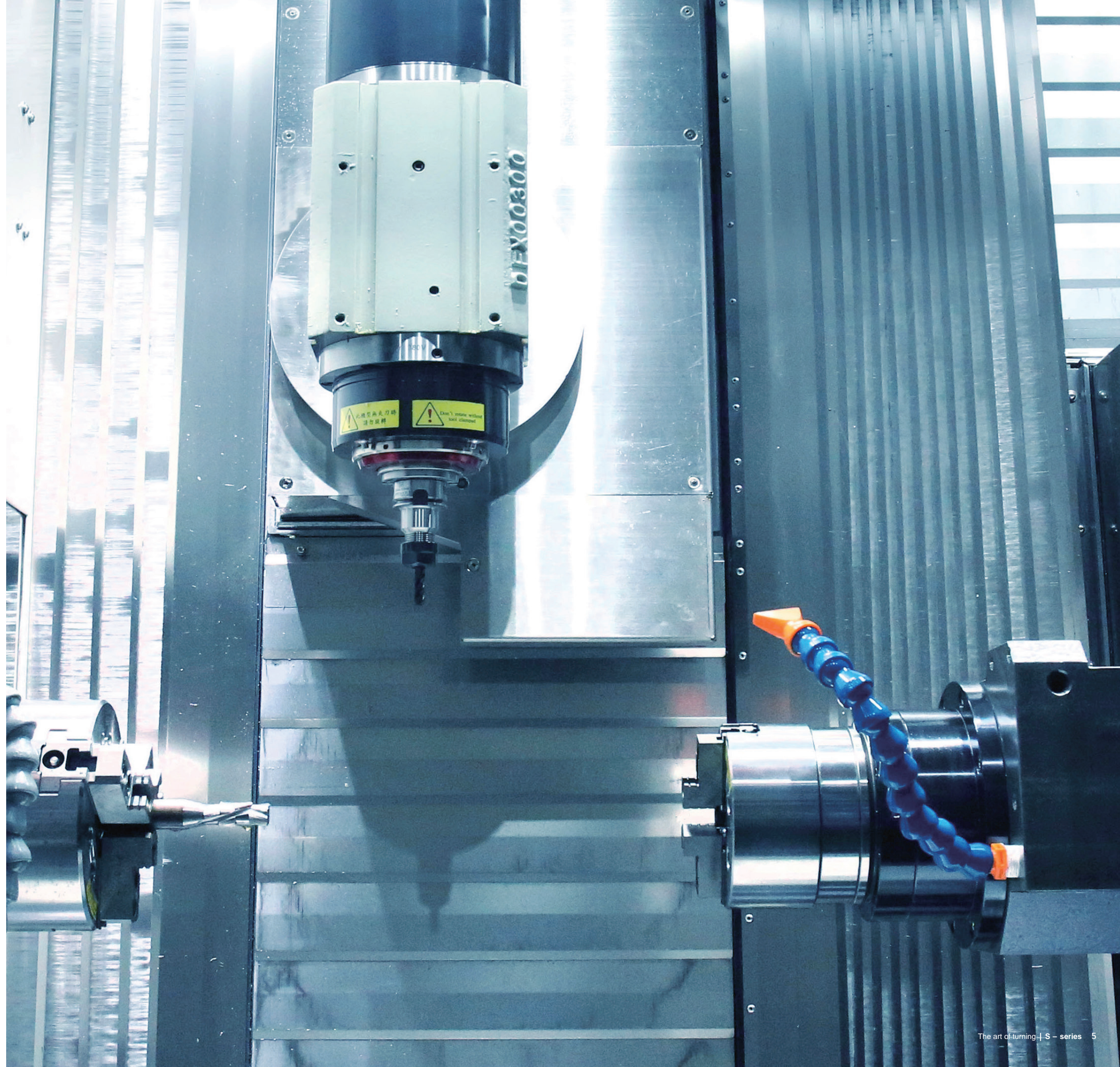
Application..... p.18

08

Working area & options..... p.20

09

Specifications..... p.22



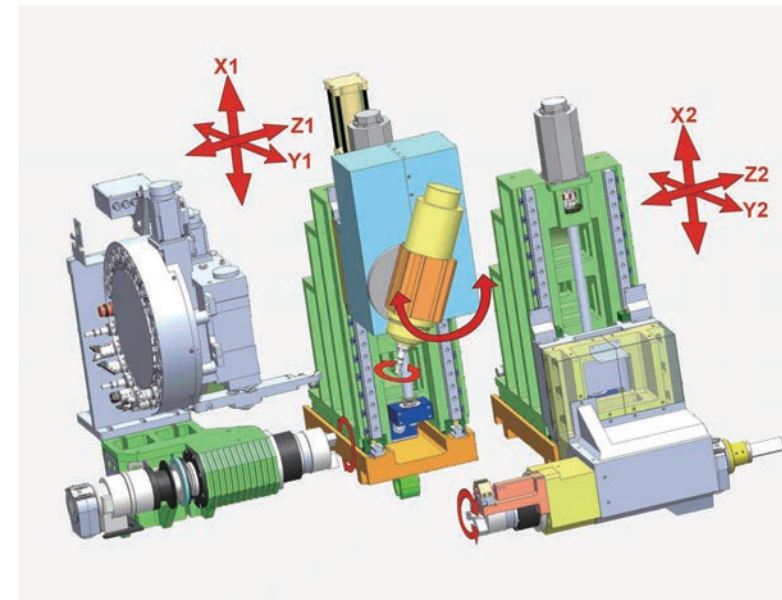
01 S-42

The most advanced technology revolution



► High-speed / High-torque milling spindle

The medical market is highly regulated, require high precision, performance and reliability; lives depend on accurate machining performed by experienced professionals. The new S-42 provides an option for a cost-effective machine for those seeking highly accurate turning and angular milling capability.



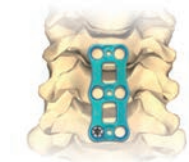
They are ideal for producing complicated and single parts in high production demand.

View videos



► Accurate parts done in 1 machine

There is no room for error in this field; high-demand request for new medical devices and technologies. These are critical factors in medical manufacturing and the S-42 is the machine to achieve this request.



Spinal implants-bone plate



Anterior Cervical Cage



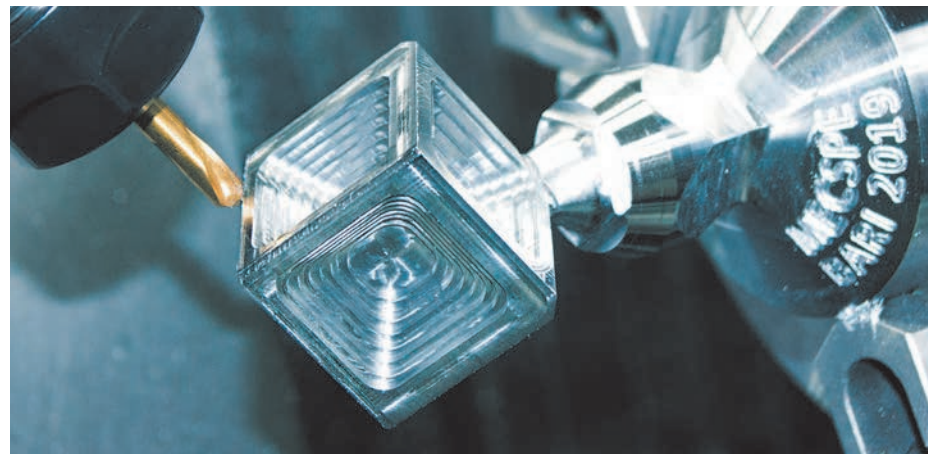
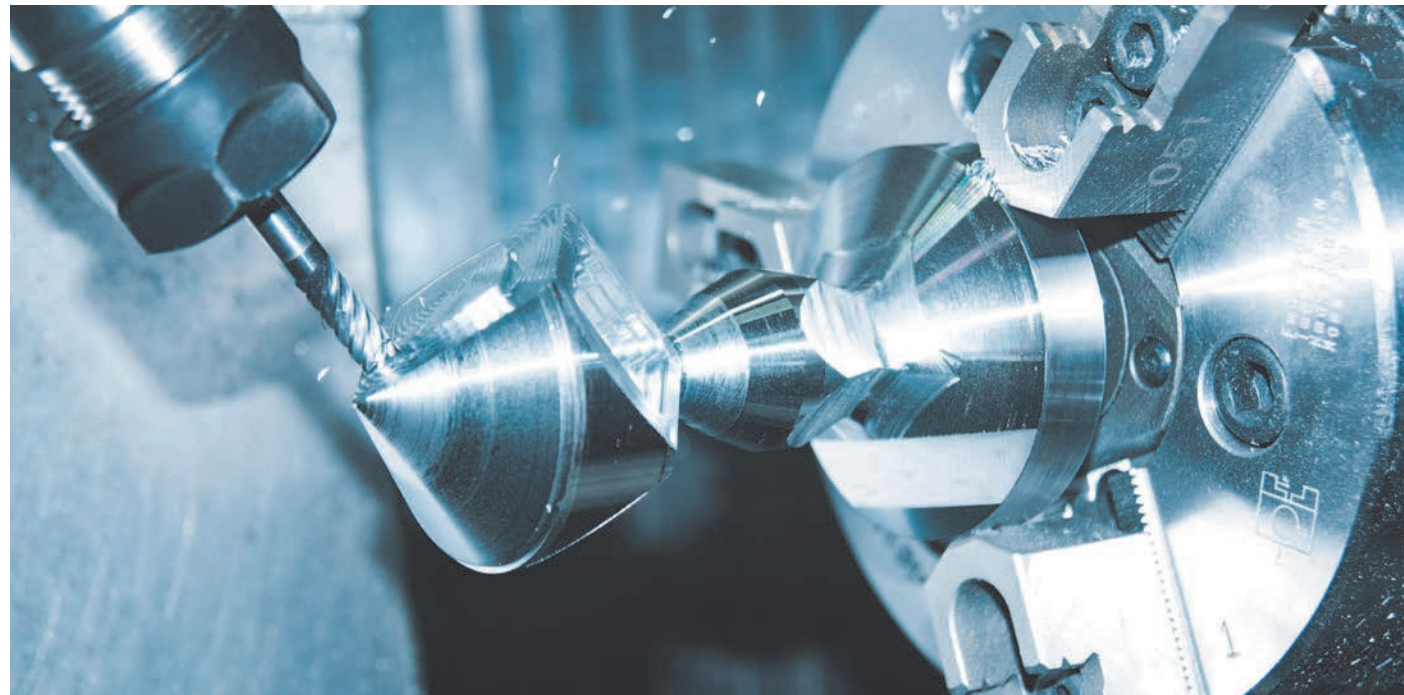
Hip joint implant (Femoral Stem)



Hip joint implant (Acetabular Component)

02 Machine Character

The most advanced technology revolution



► Features

- Strong milling operation
- High-speed (12,000 rpm) and high-torque milling spindles.
- Two spindles, OP1 and OP2 finish in one machine.
- Extra lower toding system for Turning and Boring operation.
- Simultaneous synchronization reduces working time and increase accuracy.



03 Main spindle

Complex / Fast / Accurate parts done in 1 machine

Features

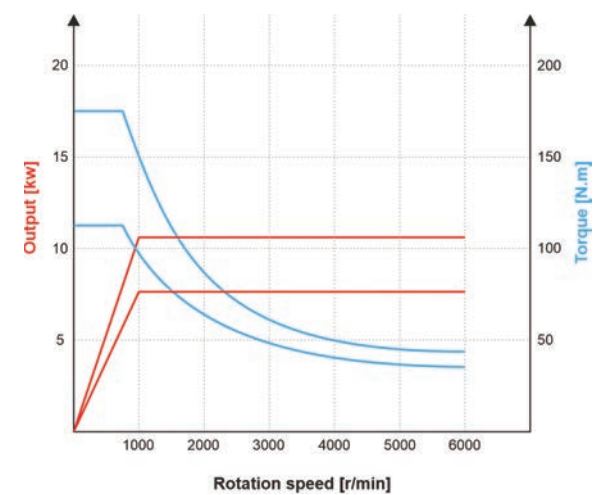
The main spindle bore is 43 mm packed with Din-173E-42B collet chuck or 6" jaw chuck.

The max. spindle rpm can reach 6000 rpm. Accurate C axis can have the spectacular performance in high and very low speed turning.

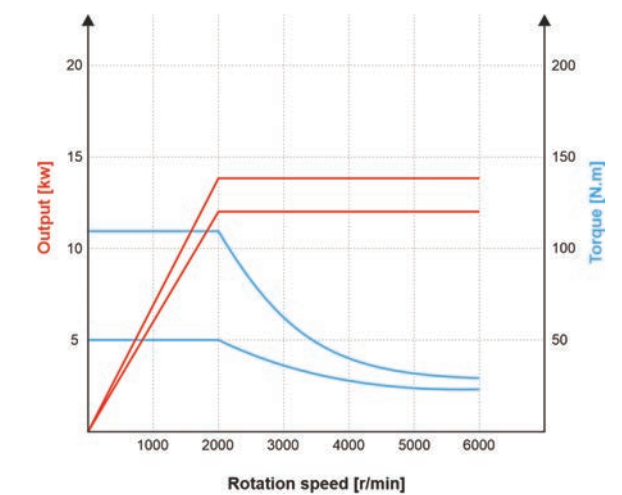


| | Machine Model | S-42 Mitsubishi | S-42 Siemens |
|--------------|------------------------|--------------------------------|--------------------------------|
| Main spindle | Swing over bed | 400 mm | 400 mm |
| | Swing over cross slide | 250mm | 250mm |
| | Max. working dia | 169 mm | 169 mm |
| | Max. Bar working dia | 42 mm | 42 mm |
| | Max. turning length | 340mm(OD Turn) / 130mm (Drill) | 340mm(OD Turn) / 130mm (Drill) |
| | Collet chuck type | KK5-173E42B / N206A5 (6-inch) | KK-17342B / N206A5 (6-inch) |
| | Nose | ISO(DIN) A2-5 | ISO(DIN) A2-5 |
| | Spindle bore | 43mm | 43 mm |
| | Speed | 6000 rpm | 6000 rpm |
| | Spindle motor | AC spindle 11,5kw | AC spindle 14,3kw |
| | Type | Belt drive | Belt drive |

Mitsubishi



Siemens

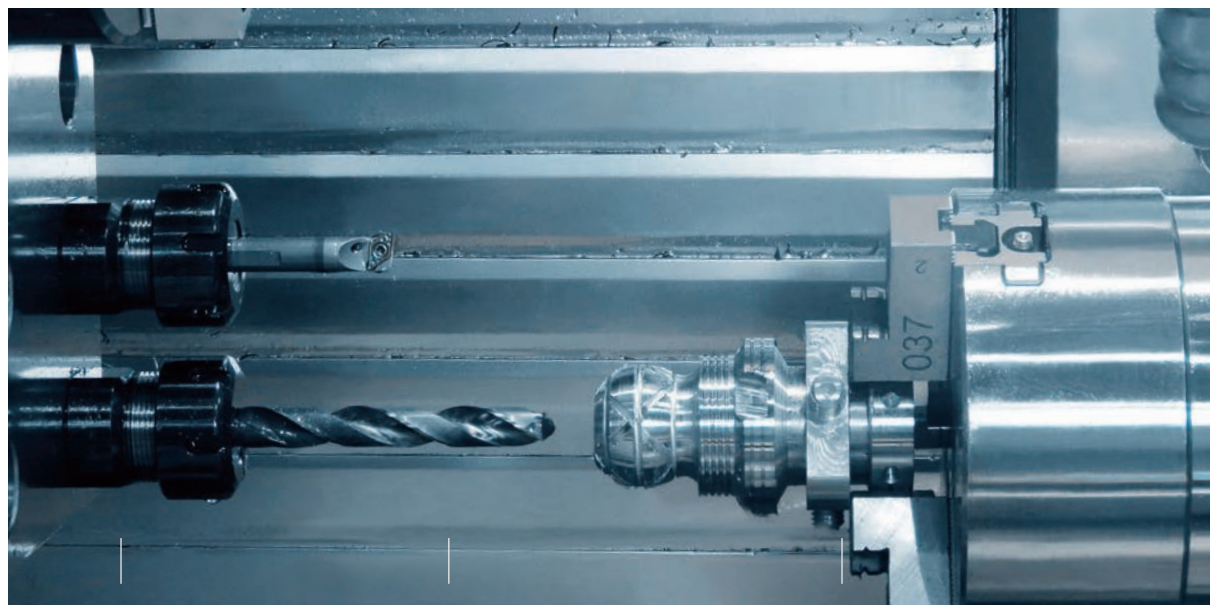
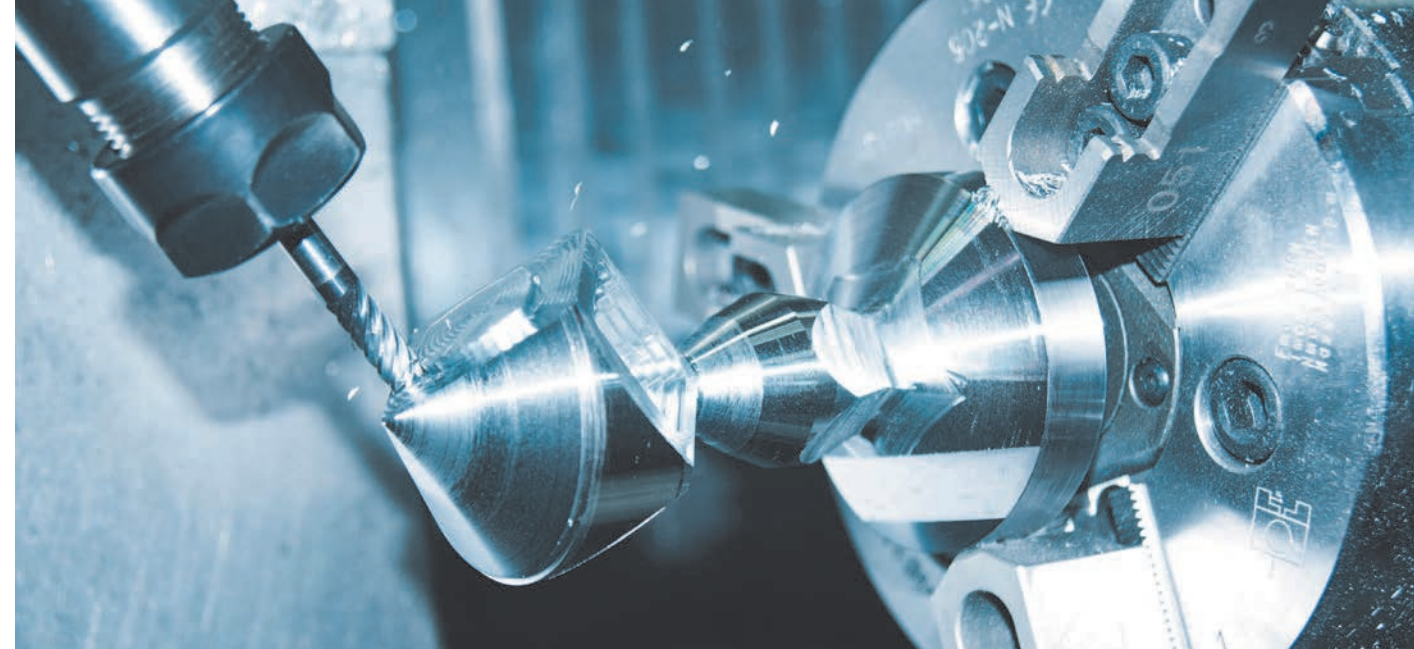


04 Sub spindle

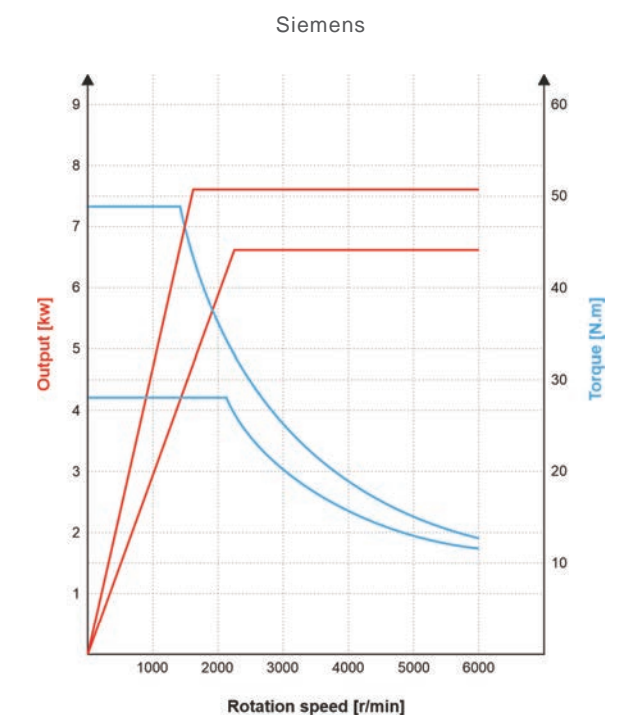
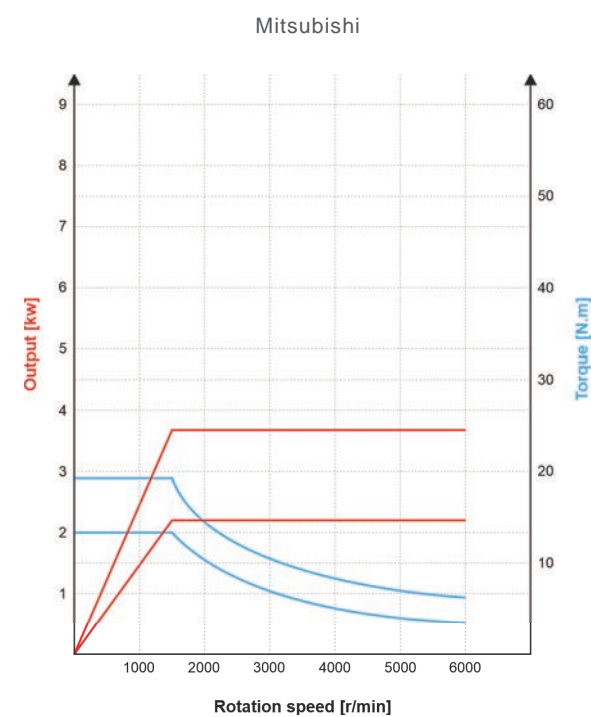
Remarkable pieces require a special machine

- ▶ The cartridge type spindle with built-in motor runs on P4 high precision bearings, giving high radial and axial stability, allowing for heavy-duty cutting.

Sub-spindle & tooling system are able to save cycle time by doing deep boring/drilling operations in 2-nd channel, while the 1-st channel is processing.



| Sub spindle | Machine Model | S-42 Mitsubishi | S-42 Siemens |
|---------------------|--------------------------------|--------------------------------|--------------|
| | Max. Bar working dia | 42 mm | 42 mm |
| Max. turning length | 230mm (OD Turn) / 55mm (Drill) | 230mm (OD Turn) / 55mm (Drill) | |
| Collet chuck type | KK5-173E42B / N205A5 (5-inch) | KK5-173E42B / N205A5 (5-inch) | |
| Nose | ISO (DIN) A2-5 | ISO (DIN) A2-5 | |
| Spindle bore | 28 (30 opt.) | 28 (30 opt.) | |
| Speed | 6000 rpm | 6000rpm | |
| Spindle motor | Built-in spindle 3,7kw | Built-in spindle 7,3kw | |



05 Tool spindle

B axis 0°-190°

► **Tool spindle with large X-axis travel and B-axis rotation (0-190 degree)**

Leading edge tilting spindle technology allows free angle rotating of a tool during machining due to reach required geometry, roughness, accuracy and efficient usage working area space. Any kind of machining - turning, milling, drilling and tapping is winning from free angle tool tip control. High speed tooling spindle is equipped with internal cooling system which gives stable protection of overheat. Working area transformation allows front-end drilling and tapping on main and sub-spindle side.

► **±95° Swivel B axis function**

Free Angle rotating and positioning Reach 4 axis simultaneous (max. 5 axis / Option). Collet chuck or Jaws give you the flexibility need.



**B axis
0°-190°**

Built-in motor provides the precision and accurate for every parts need.

► **Tilted finish turning**



| | Machine Model | S-42 ATM Mitsubishi | S-42 ATM Siemens |
|--------------|--------------------|-----------------------|-----------------------|
| Tool Spindle | Max. RPM. | 12000rpm | 12000rpm |
| | Spindle Type | HSK-T40 | HSK-T40 |
| | Motor | Built-in spindle 10kw | Built-in spindle 10kw |
| | Tool Holding Force | 290kg | 290kg |
| | Tool Release Force | 450-500kg | 450-500kg |
| | Machining Cooling | Coolant Ring | Coolant Ring |

06 Tool system

Easy setup for complex parts

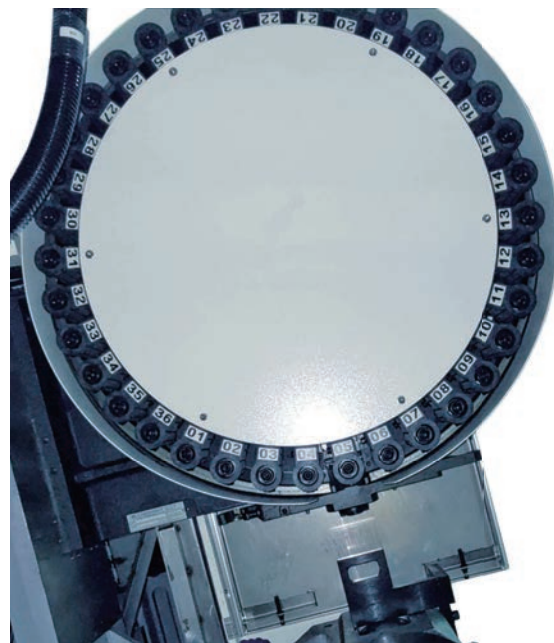
▶ ATC System

In the medical area, you combine several cutting processes, including turning, milling, drilling, and tapping ; in one machine you need quick and precision; The new S-42 offer you 24 tools (option: 36 tools) for achieving high accurate application for complex parts.

The ATC is driven by NC servo motor with the fast tooling change. The tool arm is packed with high speed acc/dec function so the tool change can be in a safe and efficient way



HSK-T40 24 tools ATC

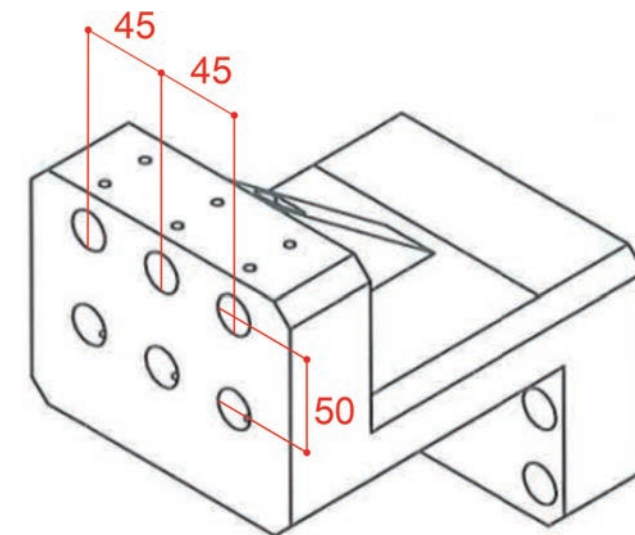
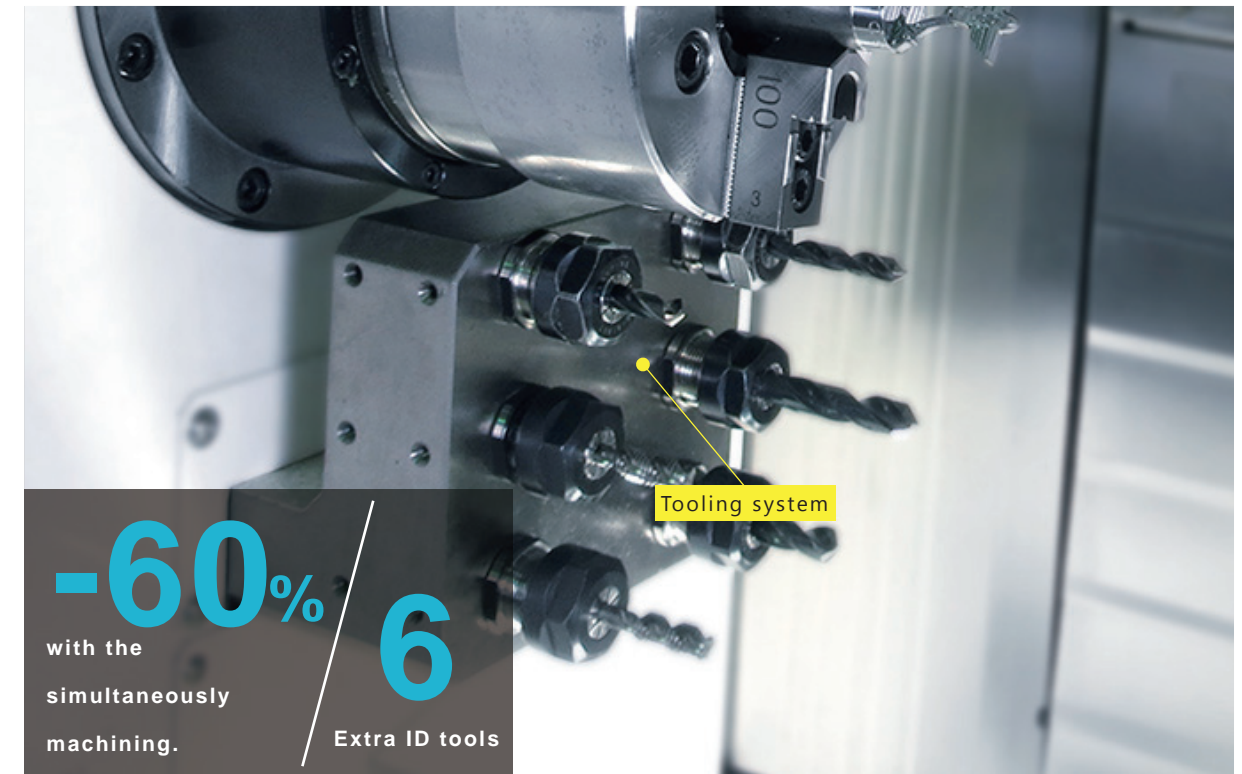


HSK-T40 36 tools ATC

| | Machine Model | 24 tools ATC (standard) | 36 tools ATC (option) |
|------------|-----------------------|-----------------------------------|-----------------------------------|
| ATC system | Tool Spec | HSK-T40 | HSK-T40 |
| | Tool Magazine Station | 24 | 36 |
| | Tool retract Travel | 40 mm | 40 mm |
| | Max. Tool Dia | φ55 (φ80 without adjacent tool) | φ55 (φ80 without adjacent tool) |
| | Max. Tool Weight | 3 kg | 3 kg |
| | Max. Tool Length | 100 (From the surface of spindle) | 190 (From the surface of spindle) |
| | Tool Change Time | 2.5 sec | 2.5 sec |
| | Tool arm swing | 505mm | 505mm |
| | Motor | AC Servo 0.75kw | AC Servo 0.75kw |
| | Tool selection | Two way (random) | Two way (random) |

▶ 2 nd- Channel Tooling System

Extra 6 I.D Tools help you to achieve special parts and reduce upto 60% with the simultaneously machining. Z2 = 510 mm long stroke makes deepdrilling available.



| | Machine Model | S-42 |
|----------------|-------------------|--------------|
| Gantry Tooling | Drill holder spec | ER20 / φ20mm |
| | Tool Quantity | 6 |
| | Z2 | 510 mm |

07 Application

Tooling Specification & Machining Applications



PIAX00950

PIAX01130



PIAX01210



PIAX01140



PIAX01110



PIAX00960

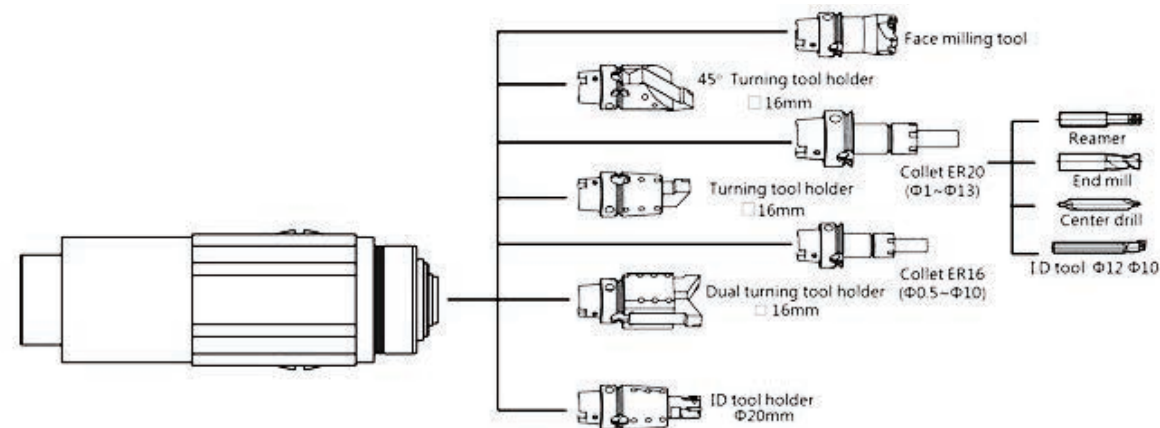


PIAX00920

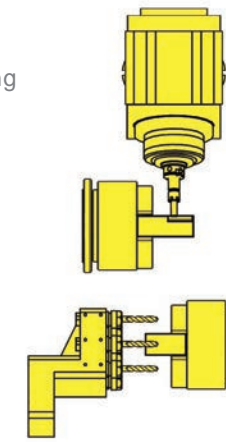


PIAX00910

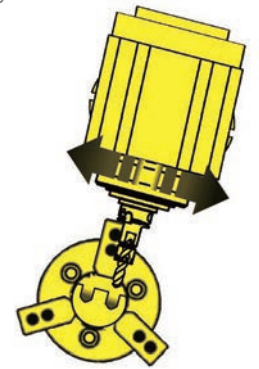
▶ Wide choice of HSK-T40 tool holders allows to do various machining applications



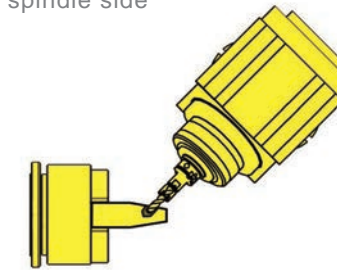
▶ Twin Spindles synchronize machining



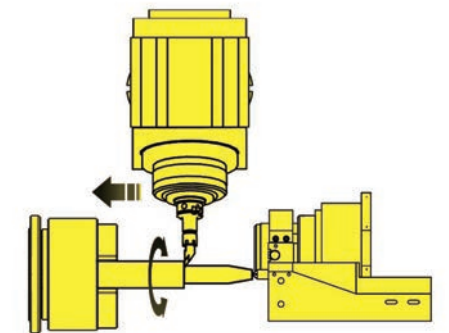
▶ Off-center machining by Y1-axis



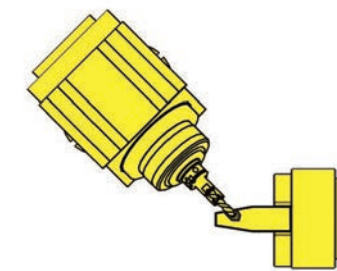
▶ Free angle tapping/drilling by B-axis on Main spindle side



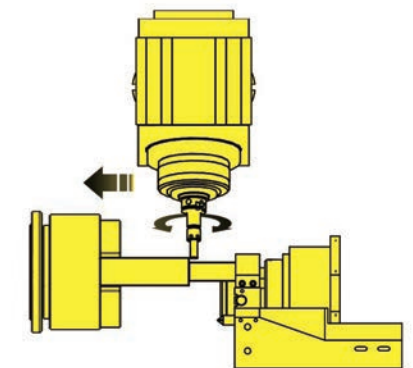
▶ Long work-piece turning/grooving



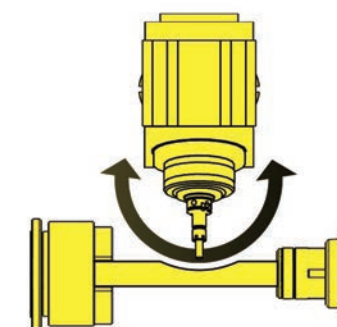
▶ Free angle tapping/drilling by B-axis on Sub-spindle side



▶ Long work-piece milling



▶ Angular milling by B-axis



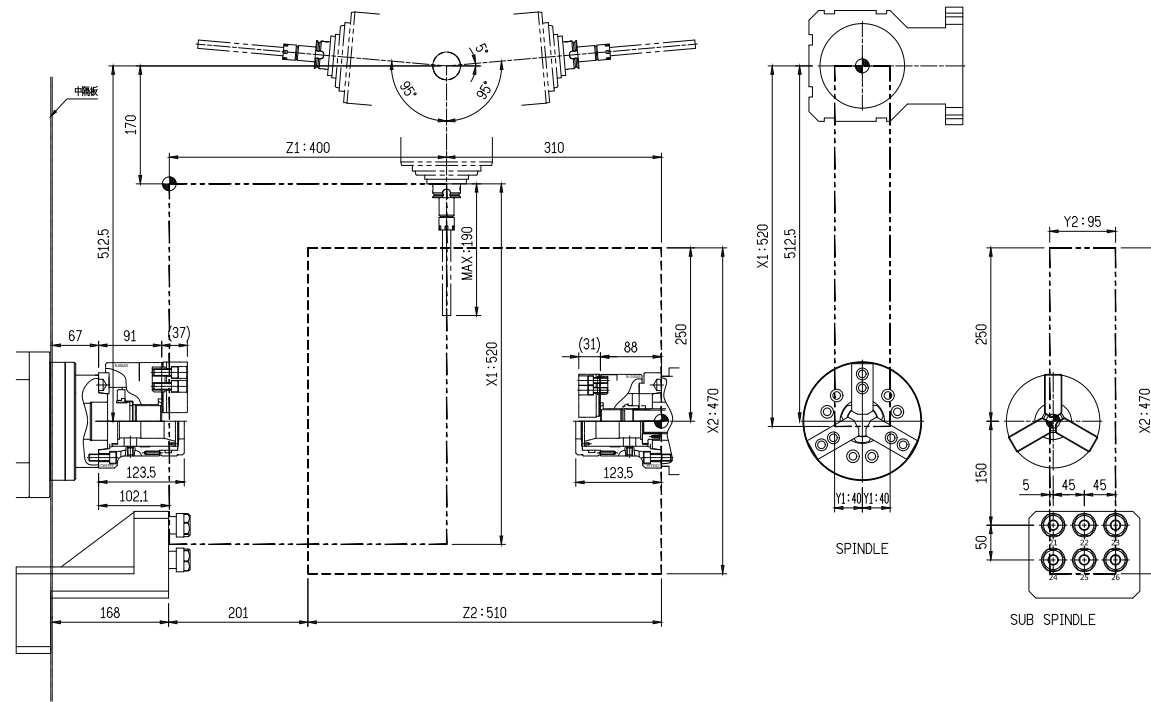
▶ Polygon generating cutting



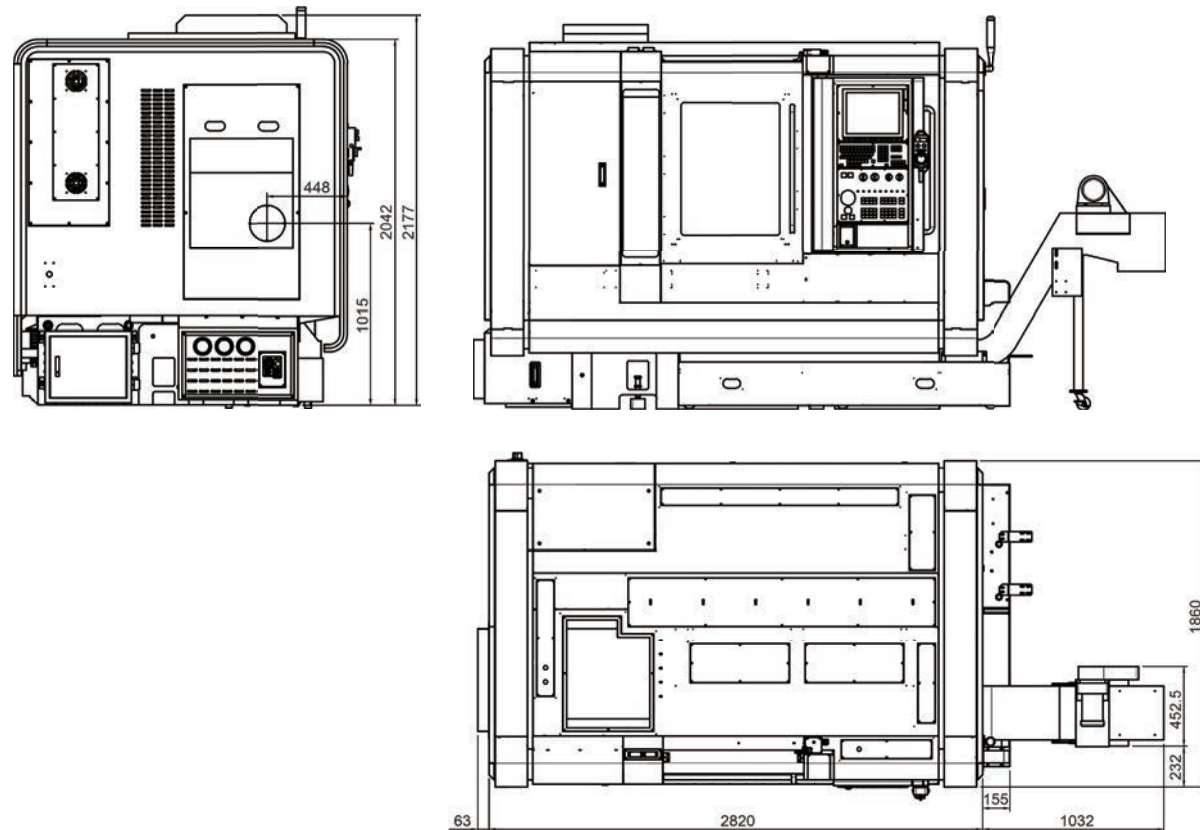
08 Working area & options

Smart layout & intelegant options

▶ Working area 36 ATC version

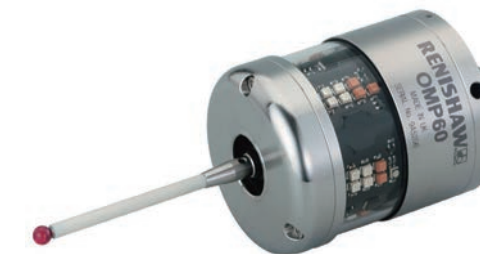
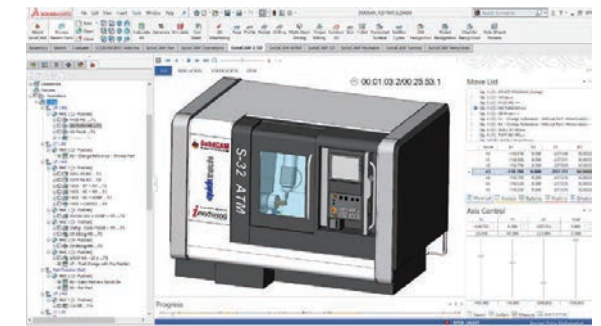
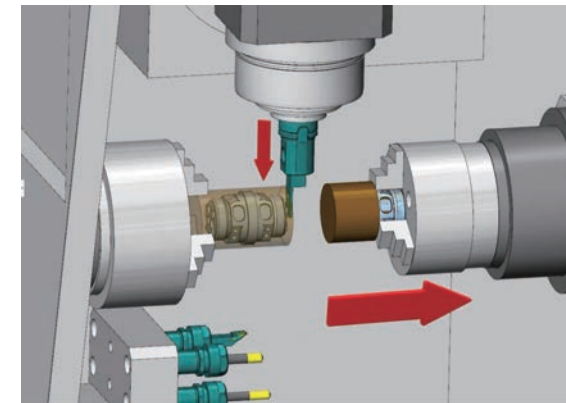


▶ Installation plan 36 ATC version



▶ Intelligent options on demands:

SolidCAM software helps to verify collisions and save time to generate programs! It makes operator work more safety and faster!



▶ Work-piece probe – is used for workpiece set-up inspection – It offers users an up to 90% reduction in set-up time, as well as a reduction in scrap and fixture costs



▶ Tool presetter – allows you to increase productivity and quality, avoid breakage incase tool damage, reduce set up time and scrap rate



▶ Tool breakage detection system – let to check the integrity of tiny, easy to brake tools and guarantee high quality products for mass-production process

09 Specification

Help you to achieve special parts

| Machine Model | | S-42 ATM Mitsubishi | S-42 ATM Siemens |
|-----------------------|--------------------------|-------------------------------|-------------------------------|
| Main Spindle Capacity | CNC Controller | M830S | 828D/840D sl |
| | Swing over Bed | 400mm | 400mm |
| | Swing over cross slide | 250mm | 250mm |
| | Max. Turning Dia. | 169mm | 169mm |
| | Max. Bar Working Dia. | 42mm | 42mm |
| | Max. Turning Length | 340mm(OD Turn) / 130mm(Drill) | 340mm(OD Turn) / 130mm(Drill) |
| | Collet/Jaws Chuck Type | KK5-173E42B / N206A5 (6-inch) | KK5-173E42B / N206A5 (6-inch) |
| | Spindle Nose | ISO(DIN) A2-5 | ISO(DIN) A2-5 |
| | Spindle Bore | 43mm | 43mm |
| | Max. RPM. | 6000 rpm | 6000 rpm |
| | Motor | AC spindle 11kw | AC spindle 14,3kw |
| Sub-Spindle Capacity | Max. Work Piece Dia. | 42mm | 42mm |
| | Max. Turning Length | 230mm(OD Turn) / 55mm(Drill) | 230mm(OD Turn) / 55mm(Drill) |
| | Chuck Type Collet/Jaws | KK5-173E42B / N205A5 (5-inch) | KK5-173E42B / N205A5 (5-inch) |
| | Spindle Nose | ISO(DIN) A2-5 | ISO(DIN) A2-5 |
| | Spindle Bore | 28mm (30 mm option) | 28mm (30 mm option) |
| | Max. RPM. | 6000rpm | 6000rpm |
| | Motor | Built-in spindle 3.7kw | Built-in spindle 7.3kw |
| | Optional Accessory 1 | φ16 Running center (Quill) | φ16 Running center (Quill) |
| Optional Accessory 2 | Part Support (pneumatic) | Part Support (pneumatic) | |
| Tool Spindle | Max. RPM. | 12000rpm | 12000rpm |
| | Spindle Type | HSK-T40 | HSK-T40 |
| | Motor | Built-in spindle 10kw | Built-in spindle 10kw |
| | Tool Holding Force | 290kg | 290kg |
| | Tool Release Force | 450~500kg | 450~500kg |
| | Machining Cooling | Coolant Ring | Coolant Ring |
| Travel&Feed | X1 | 420mm (520 option) | 420mm (520 option) |
| | Y1 | 80 = ±40mm | 80 = ±40mm |
| | Z1 | 400mm | 400mm |
| | X2 | 420mm (470 option) | 420mm (470 option) |
| | Y2 | 95mm | 95mm |
| | Z2 | 510mm | 510mm |
| | X1/Y1/Z1Motor | 2.2 / 1.5 / 2.2 kw | 2.85 / 1.45 / 1.71 kw |
| | X2/Y2/Z2Motor | 2.2 / 1.5 / 2.2 kw | 2.85 / 1.45 / 1.71 kw |

| Machine Model | | S-42 ATM Mitsubishi | S-42 ATM Siemens |
|------------------|-----------------------------------|---|---|
| B axis | B axis Rotary | 190° = ±95° | 190° = ±95° |
| | Motor | AC Servo 1.0kw | AC Servo 1.0kw |
| ATC System | Tool Spec | HSK-T40 | HSK-T40 |
| | Tool Magazine Station | 24 (36 option) | 24 (36 option) |
| | Tool Retract Travel | 40mm | 40mm |
| | Max. Tool Dia. | φ55 (φ80 without adjacent tool) | φ55 (φ80 without adjacent tool) |
| | Max Tool Weight | 3kg | 3kg |
| | Max Tool Length | 100 (190 opt.) (From the surface of spindle) | 100 (190 opt.) (From the surface of spindle) |
| | Tool Change Time | 2.5 sec | 2.5 sec |
| | Tool Arm Swing | 505mm | 505mm |
| | Motor | AC Servo 0.75kw | AC Servo 0.75kw |
| | 2-nd ch. Tooling | Drill Holder Spec | ER20 / φ20mm |
| Tools Quantity | | 6 | 6 |
| Lubrication | Max. Pressure | 10MPa (100 kg/cm ²) | 10MPa (100 kg/cm ²) |
| | Flow | 20cc/min | 20cc/min |
| | Capacity | 1L | 1L |
| Hydraulic System | Hydraulic Motor | 1HP | 1HP |
| | Hydraulic Pressure | 50kg/cm ² | 50kg/cm ² |
| | Tank Capacity | 35L + 30L | 35L + 30L |
| Coolant System | Coolant Tank Capacity | 240L | 240L |
| | HF pump preassure/ flow/ power | 5 Bar/ 75 L/min / 1HP | 5 Bar/ 75 L/min / 1HP |
| | HP pump preassure/ flow/ power | 25 Bar/ 30 L/min / 2HP | 25 Bar/ 30 L/min / 2HP |
| Machine Size | Length | 3920mm (Chip CVY.) / 3040mm | 3920mm (Chip CVY.) / 3040mm |
| | Width | 1860mm | 1860mm |
| | Height | 2050mm (2180 option) | 2050mm (2180 option) |
| | Weight | 6100 kg | 6100 kg |

Specifications May Be Changed Without Prior Notice

S-42 ATM

**B axis
0°-190°**

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