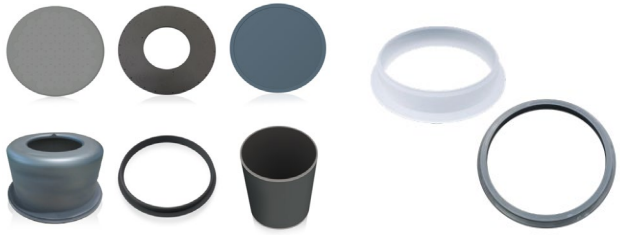
SMEC Smart One, Global One

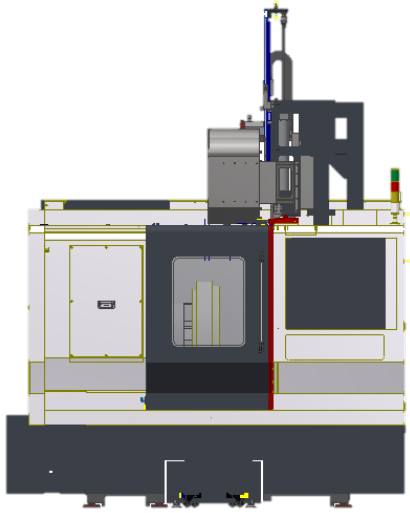
Solutions for Semi-conductor manufacturing market

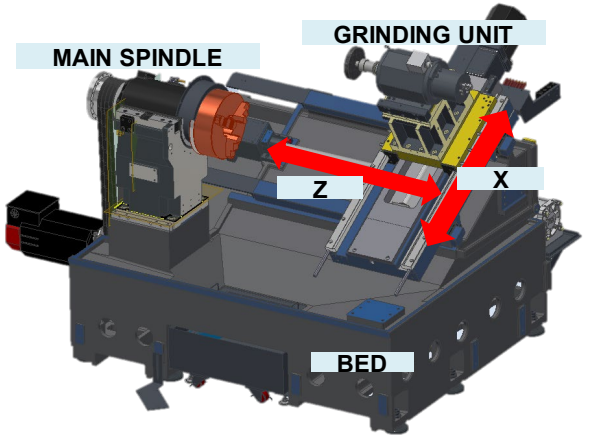
2024-04-24

Equipment Selection Guide : PL 800GB / SL 1000GB with ATC

SiC, Quartz Ring





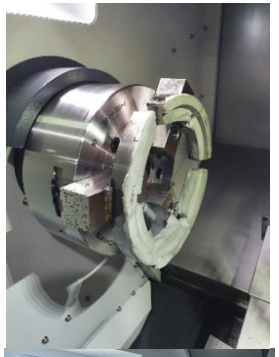


1. High Precision grinding process
2. Easy to handle dust and sludge after processing
3. Suitable for round ring products

-SiC, Quartz grinding

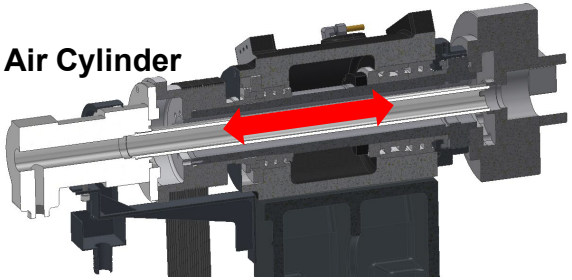
Air cylinder and pneumatic chuck to reduce material breakage

Minimal chucking force applied to the material

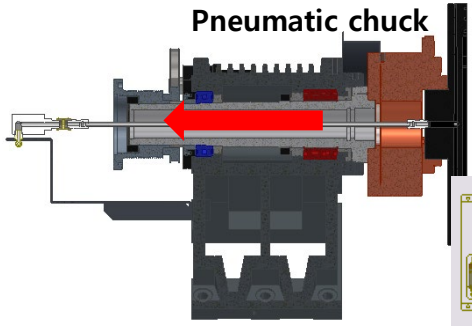


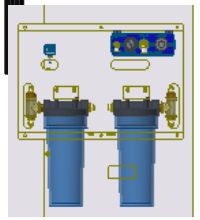
Pneumatic chuck

Air Cylinder



Pneumatic chuck





VACUUM UNIT

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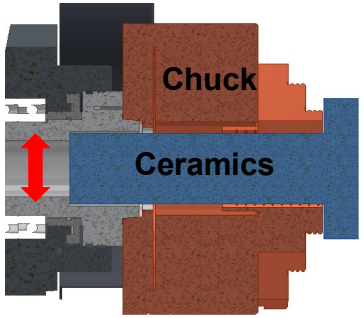
Equipment Selection Guide : PL 800GB / SL 1000GB with ATC

Ceramics, CVD SiC

Ceramics

CVD SiC

-.Ceramics grinding (heater etc.)



Expanded spindle bore
(Φ82max)
to secure workpiece

1. High Precision grinding process
2. Easy to handle dust and sludge after processing
3. Suitable for round ring products

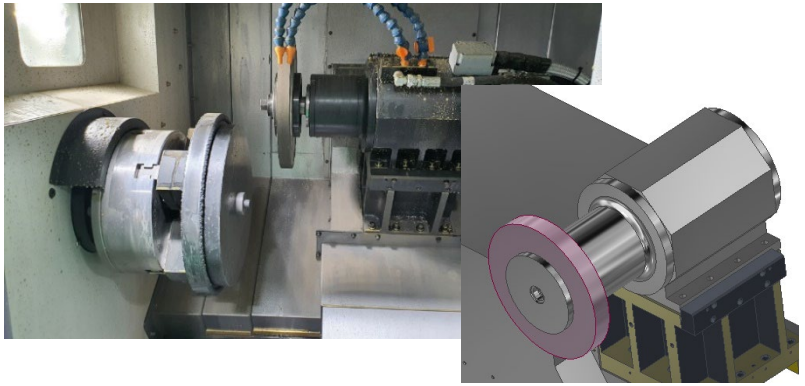
-Ceramics grinding

Φ82 spindle bore to secure the workpiece

-CVD SiC grinding

Flange type Built-in-spindle for CV SiC grinding

-.CVD SiC Grinding



FLANGE TYPE
Built-in Spindle (High power)
for CVD SiC grinding

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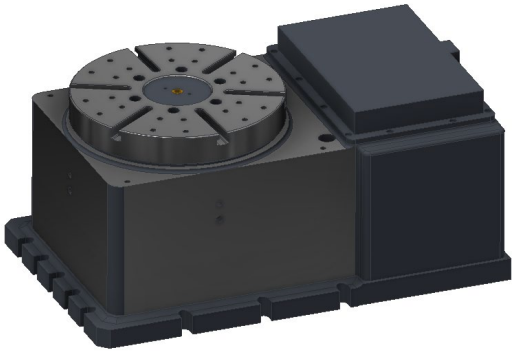
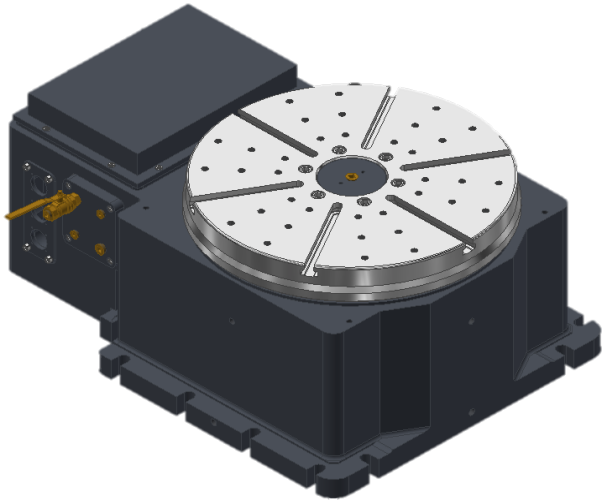
SMEC's internally designed Rotary Table : SBRT 350 & SBRT 450

SBRT 350



- Ø350 Belt Driven Rotary Table
- Ø100x223L Center Bore Hole

SBRT 450



- Ø450 Belt Driven Rotary Table
- Ø100x213L Center Bore Hole

[Note]

- Belt driven rotary table for precise turning applications (300 rpm)
- Minimized backlash against worm-gear type rotary tables.
- Highly dustproof design to protect internal parts from abrasive sludges
- High column machining center design to offset Z axis travel (column riser block)

Equipment Selection Guide : MCV Series with Rotary Table x 1

AIN
(Aluminum Nitride, Ceramic)

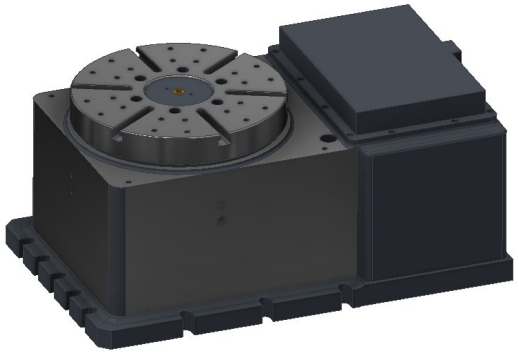
SiO_2 (Quartz)

MCV 4600 + SBRT 350

C-frame MCT | Belt-driven Rotary table

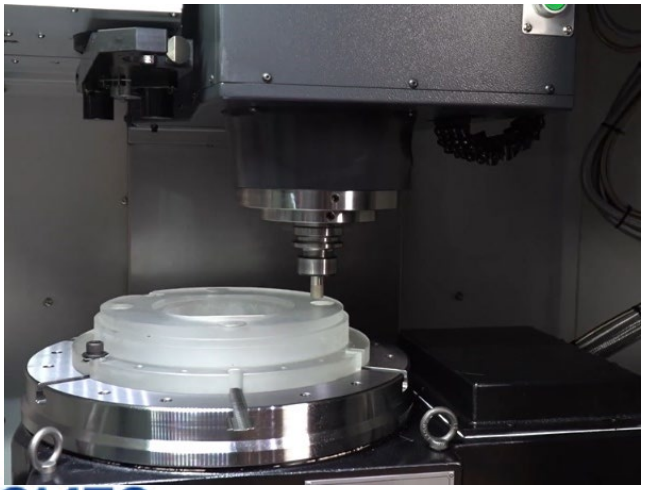
[Requirements]

- High Rigidity
- High Precision
- High Dustproof



- **Compact layout**
- **Highly dustproof guideways**

- **Ø350 Belt Driven Rotary Table**
- **Ø100x223L Center Bore Hole**



Item		Unit	Standard
Travel	Stroke (X/Y/Z)	mm	**900 / 460 / 520**
	Spindle – Table-top Distance	mm	**150 ~ 670**
	Rapid Traverse (X/Y/Z)	m/min	**36 / 36 / 30**
Spindle	Taper	-	**CAT 40 (BBT 40)**
	Max spindle speed	rpm	**12,000**
	Motor Output (Cont./Max)	kW	**11 / 18.5 (S3 25%)**

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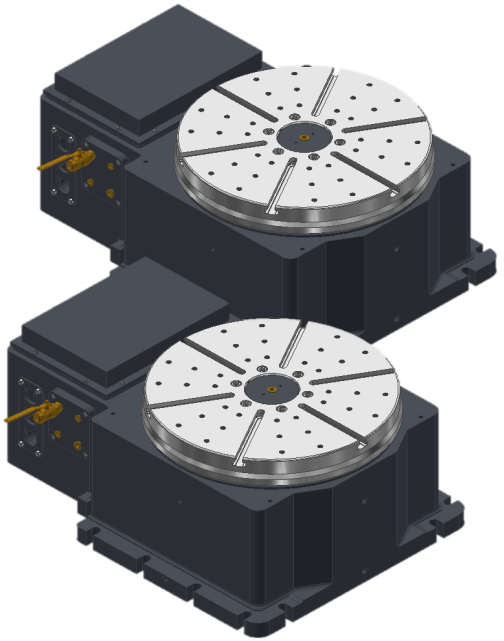
Equipment Selection Guide : MCV Series with Rotary Table x 2

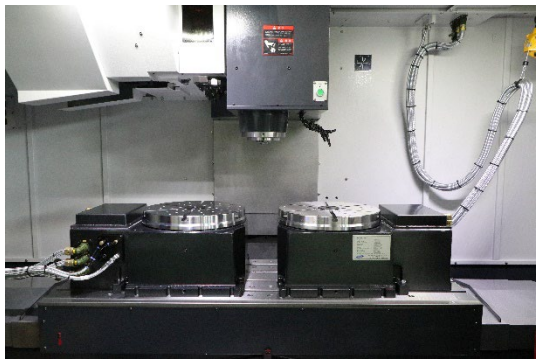
SiO_2 (Quartz) → MCV 5700L + SBRT 450 (x2)

C-frame MCT | Belt-driven Rotary table

[Requirements]

- High Rigidity
- High Precision
- High Dustproof
- High Productivity





- **LONG STROKES X AXIS**
- **2 x Rotary Tables Installed**

- **Ø450 Belt Driven Rotary Table**
- **Ø100x213L Center Bore Hole**

Item		Unit	Standard
Travel	Stroke (X/Y/Z)	mm	**1,600 / 570 / 520**
	Spindle – Table-top Distance	mm	**150 ~ 670**
	Rapid Traverse (X/Y/Z)	m/min	**30 / 36 / 30**
Spindle	Taper	-	**CAT 40 (BBT 40)**
	Max spindle speed	rpm	**12,000**
	Motor Output (Cont./Max)	kW	**11 / 18.5 (S3 25%)**

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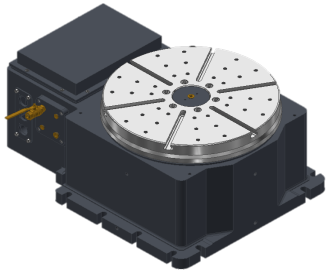
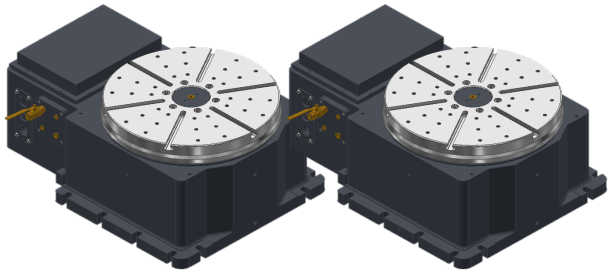
Why 2 rotary tables in 1 machine?

MCV 5700L + SBRT 450 (x1)



MCV 5700L + SBRT 450 (x2)



- 1 Operator can handle maximum of 3 machines per shift due to setup requirements
- However, by installing 2 rotary tables for each machine, a single operator can now handle five to six machines per shift due to increased cycle time.
- This adjustment will lead to decreased labor costs and significantly improved cost-to-profit margins.