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Experience Your **SMART FACTORY**

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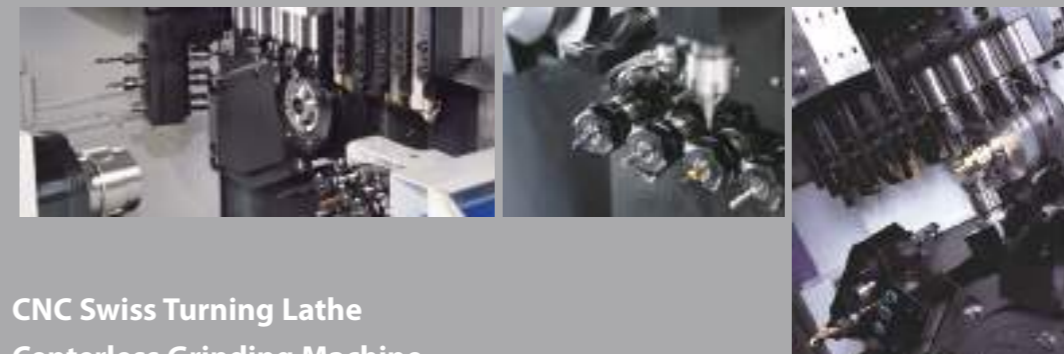
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CNC Swiss Turning Lathe
Centerless Grinding Machine



Platforms

Hanwha CNC Swiss turning machines with a full line-up ranging from 3 to 42 mm, featured with high-grade CNC unit, complex tooling and high-rigidity machine structure can achieve high complex and precision machining. The Hanwha sliding headstock machines offer various range of models with optimized design combination as per customer's requirement.

CNC Swiss Turning Lathe

XP Series

Budget-friendly 4-axis entry models

- CNC unit : Hanwha Fanuc-i
- Ø12, 16, 20, 26, 32
- High-productivity machining for simple workpiece

08 **XP12/16S**

09 **XP20/26/32S**

XE Series

Value for money 5-axis models

- CNC unit : Hanwha Fanuc-i
- Ø20, 26, 35
- Affordability with stable and high productivity

10 **XE20/26**

11 **XE35**

XD Series

Flagship multi-axis models for high precision & complex machining

- CNC unit : Hanwha Fanuc-i, 32i-B
Siemens 828D, 840D
- Ø03, 07, 12, 16, 20, 26, 32, 38, 42

12 **XD03/07**

13 **XD12/16III**

14 **XD20/26II (F, S)**

16 **XD20/26II-V (F, S)**

STL Series

3-path controlled, powerful turret type models

- CNC unit : Siemens 840D
- Ø32, 38, 42
- Synchronous machining & 3 path control system
- Ultimate tooling capability with 10 station turret (VDI30 & BMT45)

24 **STL32/38 (S)**

26 **STL42 (S)**

34 Special Functions

Hi-CPS

Hanwha Smart Factory Solution

PCR / PCRS & Oscillation

Chip breaking solution

Customer & Performance Supporting Function

Centerless Grinding Machine

KCG Series

Single grip spindle for easy replacement

30 **KCG**

KCG-150CNC, KCG-200J,
KCG-200/300 (CNC)

HCG Series

High precision & rigidity centerless grinding machine with twin grip G/W and R/W spindle
※ HCG-150CNC : Single grip G/W spindle

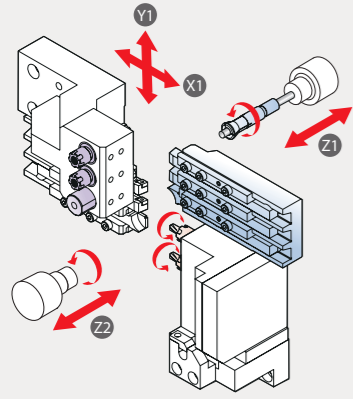
31 **HCG**

HCG-150CNC, HCG-300 (CNC),
HCG-400 (CNC)



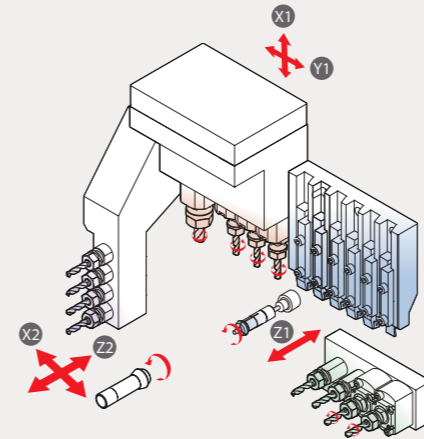
XD03/07

High-performing 4-axis for small precision parts
(Max. dia. 7mm)



XD12/16III

High-speed 5-axis solution for max. dia. 12/16mm



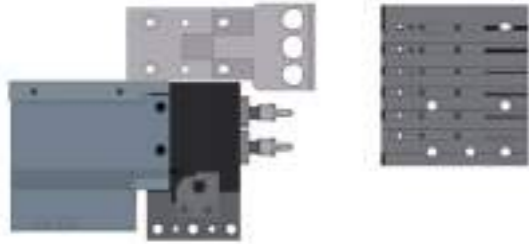
- OPTION**
- Long drill (Fixed) 1
 - Back tool 4 ~ 5
- ※ Cross(standard) : Non-modular type with single body



OPTION TOOLING

Cross unit 2

- Front 3, Cross 2, OD 6



Cross unit 3

- Front 3, OD 4(3+1), Cross 3



※ Spec of tools are the same

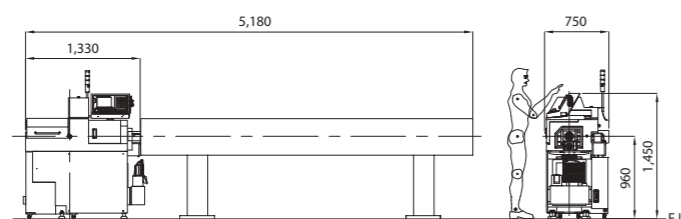
Model		XD03/07
NC		Hanwha Fanuc-i
Max. machining diameter		Ø3/7
Z1 Stroke (mm)		125
Main spindle	rpm	16,000 (Rotary G/B 10,000 rpm)
	kW	1.1/1.5
OD tool	No. of tools	6 (□8mm) (3 + 3)
	No. of tools	3 (ER8M, Ø15.875)
Cross drill	rpm	9,000
	kW	0.35
Sub spindle	rpm	16,000
	kW	1.1/1.5
Machine size (L x W x H) (mm)		1,330 x 750 x 1,450
Weight (kg)		1,000
Power Consumption (Cable size)		8kVA, 5.4kW (VCTF 6SQ x 4C)
Air Flow rate (Liter/Min)		120 ~ 150

OPTION UNIT

Special G/B units to enhance machining precision for small material under Ø7mm



Dimension



OPTION TOOLING

Cross unit 4 (modular 1)

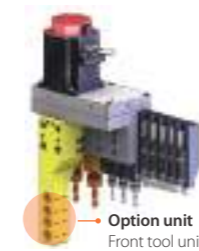
- ER11x3, Modular ER16x1

※ Standard cross : Non-modular



Cross unit 5 (modular 2)

- ER11x3, Modular ER16x2



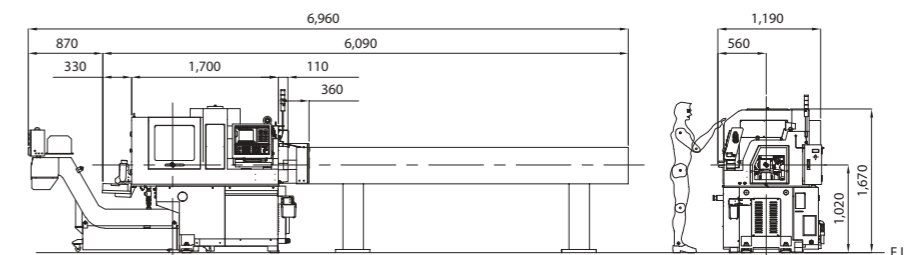
Option unit
Front tool unit attached on cross body

- Fast cycle time
- High speed of spindle (Main : 15,000rpm, Sub : 10,000rpm)
- Great machining performance with strong motor power for back tool (Capacity : 1.0kW)

Model	XD12/16III	
	H	J
NC	Hanwha Fanuc-i	
Max. machining diameter	Ø12/16	
Z1 Stroke (mm)	155	
Main spindle	rpm	15,000
	kW	2.2/3.7
OD tool	5 (□12mm)	
Front tool	4 (ER11, Ø20)	
Cross drill	No. of tools	4 (ER11 x 3 + ER16 x 1)
	rpm	6,000 (ER11), 9,000 (ER16)
	kW	1.0
Long drill (Option)	No. of tools	1 (ER11) drilling depth : 76.5mm
Sub spindle	rpm	10,000
	kW	0.55/1.1
Back tool	No. of tools	4 (ER11) (2 Fixed + 2 Driven)
	rpm	9,000
	kW	1.0
Machine size (L x W x H) (mm)		1,700 x 1,190 x 1,670
Weight (kg)		2,200
Power Consumption (Cable size)		15kVA, 10kW (VCTF 10SQ x 4C)
Air Flow rate (Liter/Min)		120 ~ 150

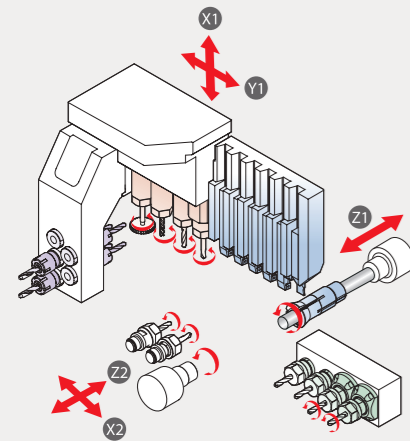
* H : G/B & Driven back tool(2), J : G/B & Fixed back tool

Dimension



XD20/26II

The best selling 5-axis for max. dia. 20/26mm



- OPTION**
- Off-center drill (Driven, Fixed) 2
 - Cross drill 5 ~ 6
 - Back tool 5 ~ 6

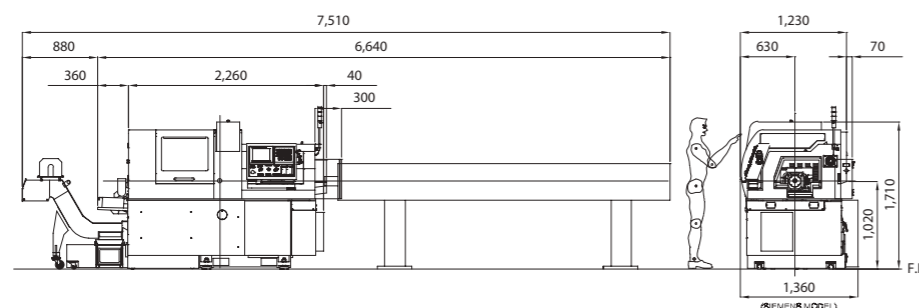


- Maximized tooling capability with a variety of customized options
- The best-suited for high precision and accuracy

Model	XD20/26II			
	H	N	NH	M
NC	Fanuc 32i-B / Siemens 828D			
Max. machining diameter	Ø20/Ø26			
Z1 Stroke (mm)	210 (Fanuc), 240 (Siemens)	60mm	160 (H), 50 (N)	210
Main spindle	rpm	10,000 (Ø20), 8,000 (Ø26)		
	kW	Fanuc : 2.2/3.7 (Ø20), 2.2/5.5 (Ø26) Siemens : 14.4		
OD tool	No. of tools	6 (□12mm) (Ø20), 5 (□16mm) (Ø26)		5 (□12mm)
Front tool	No. of tools	5 (ER16M, Ø25)		
Cross drill	No. of tools	4 (ER16 (Ø20), ER16M (Ø26))		5 (ER16M)
	rpm	6,000		
Off-center drill (Option)	No. of tools	2 (ER16) Driven		2 (ER16M) Fixed long drill
	rpm	8,000		
Sub spindle	kW	Fanuc : 1.5/2.2, Siemens : 2.59		
	No. of tools	4 (ER16) (2 Fixed + 2 Driven)		
Back tool	rpm	6,000		
	kW	Fanuc : 1.0, Siemens : 1.02		
Machine size (L x W x H) (mm)	2,260 x 1,230 x 1,710			
Weight (kg)	2,700			
Power Consumption (Cable size)	15kVA, 10kW (VCTF 10SQ x 4C)			
Air Flow rate (Liter/Min)	120 ~ 150			

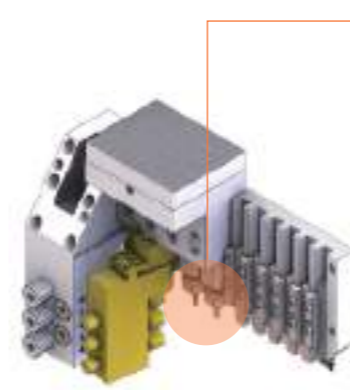
* H : G/B, N : Non-G/B, NH : Convertible G/B, M : Cross 5-axis+Long drills

Dimension



Option Tooling

Offers various and flexible toolings for enhancing productivity and covering a variety of customer's needs



Option Tool Layout

Cross unit 4 (standard)
- OD 6 (□12),
Cross 4 (ER16),
Front 5 (ER16M)

Cross unit 5
- OD 5 (□16),
Cross 5 (ER16M),
Front 3 (ER16M)

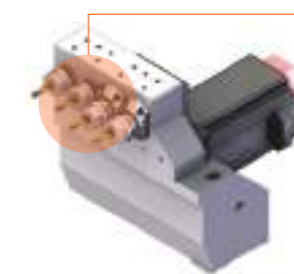
Cross unit 6
- OD 6 (□16 x 1, □11 x 5),
Cross 6 (ER11M x 2, ER16 x 4)



Off-Center Unit

- Sub spindle unit provides 2 driven drills or 2 fixed long drills for deep hole machining (option)

Option tool



Back Tool Unit

- A total of 6 tools as an option and modular type for easy tool change / maintenance

Option unit Option tool



Selectable modules of back tool

Driven max. 4



※ Unable to use Off-center for 5 ~ 6 tools

Standard

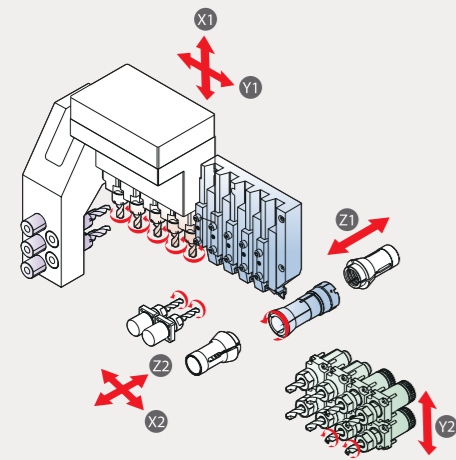
- Main-Sub Cs control (0.001°)
- Rotary Guide bush holder
- Cross drilling · milling unit (4, Gear modular type)
- MPG
- Part conveyor
- Door interlock
- Coolant flow sensor
- Work light
- Signal lamp (3color)
- LAN port
- Tool monitoring function
- Cut off tool breakage detector (S/W)
- Auto power off
- Bar feeder interface

Option

- Bar feeder
- Chip conveyor
- Transformer
- Tap breakage detector
- Pipe type ejection unit
- Off center drill unit (2)
- Middle / High pressure pump
- Oil mist collector
- Oil chiller
- Memory card
- Tooling & Programming
- Internal coolant driven tool (cross, back, off-center)
- 3 Face/counterface driven tool (cross)
- 3 Face/counterface angle driven tool (cross)
- Extended coolant tank
- NC warranty for 2 years

XD20/26II-V

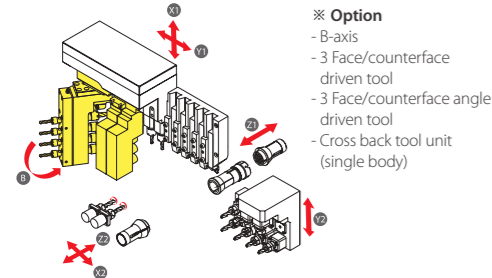
Multi-functional with B and Y2-axis



- OPTION**
- Off-center drill (Driven, Fixed) 2
 - B-axis tool post 8 (Front 4 + Back 4)
 - Y2 back tool cross unit (Max. Cross 2)



OPTION TOOLING



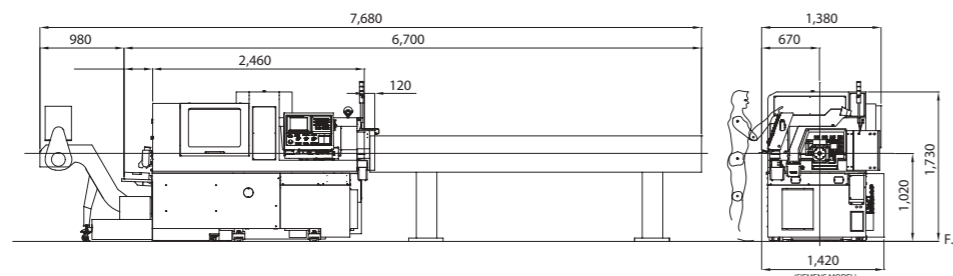
- ※ Option
- B-axis
 - 3 Face/counterface driven tool
 - 3 Face/counterface angle driven tool
 - Cross back tool unit (single body)

- Ultimate tooling capability adopting B-axis and Y2-axis
- Minimized thermal deformation with cooling system for Cross drilling/milling unit
- Adopted powerful built-in motor for main/sub spindle (2.2/3.7kW(Fanuc), 14.4kW(Siemens))

Model	XD20/26II-V		
	H	N	NH
NC	Fanuc 32i-B / Siemens 828D (B-axis 840D)		
Max. machining diameter	Ø20/26		
Z1 Stroke (mm)	210	50	210 (H), 50 (N)
Main spindle	rpm	10,000 (Ø20), 8,000 (Ø26)	
	kW	Fanuc : 2.2/3.7 (Ø20), 2.2/5.5 (Ø26) Siemens : 14.4	
OD tool	No. of tools	6 (□12mm) (Ø20), 5 (□16mm) (Ø26)	
	No. of tools	5 (ER16M, Ø25)	
Front tool	No. of tools	5 (ER16 (Ø20), ER16M (Ø26))	
	rpm	6,000	
Cross drill	kW	1.0 (Fanuc), 1.02 (Siemens)	
	No. of tools	2 (ER16) Modular	
Off-center drill (Option)	rpm	8,000	
	kW	2.2/3.7 (Fanuc), 14.4 (Siemens)	
Sub spindle	No. of tools	8 (ER16) (4 Fixed + 4 Drvien)	
	rpm	6,000	
Back tool	kW	1.0 (Fanuc), 1.02 (Siemens)	
	Machine size (L x W x H) (mm)	2,460 x 1,380 x 1,730	
Weight (kg)	2,900		
Power Consumption (Cable size)	15kVA, 10kW (VCTF 10SQ x 4C)		
Air Flow rate (Liter/Min)	120 ~ 150		

※ H : G/B, N : Non-G/B, NH : Convertible G/B

Dimension



Option Tooling

Complex & productive machining for multi shape parts with B-axis cross and Y2-axis back tooling

Cross Drilling / Milling Unit

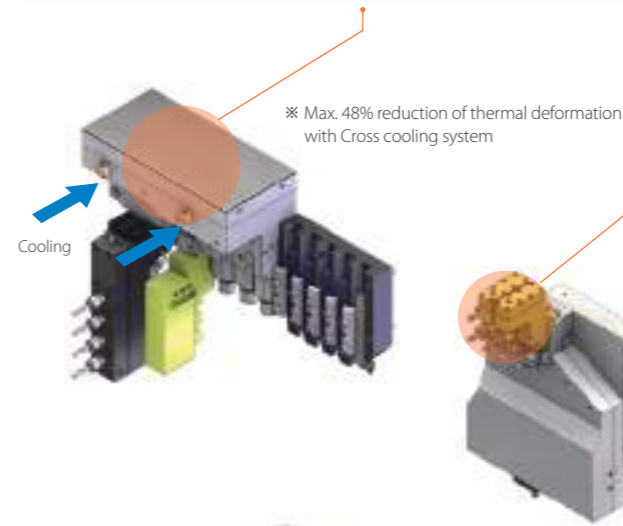
- Cross unit with gear modular type for various tooling and easy tool change / maintenance
- ※ Various option tool unit : Triple speed rotating drill, Internal coolant driven tool, 3 Face / counterface driven tool, 3 Face / counterface angle driven tool



Cross unit 5
- OD 6 (□12),
Cross 5 (ER16),
Front 5 (ER16M)
※ for XD20II-V



B-axis Cross unit
- OD 6 (□12),
Cross 4 (ER16),
B-axis 4 (ER16x4, ER11x4)
※ for XD20II-V



Back Tool Unit

- Y2-axis tool post offering flexible & various tooling on Back
- Stable machining with enhanced structure & powerful motor

Option tool



Sub Spindle & Off-Center Unit

- Adopted built-in motor to sub spindle for precision machining
- ※ Off-center drill (Driven, Fixed) 2 is available

Feature		Value
Sub spindle unit	Max. machining diameter	Ø20/26 mm
	Rotation speed	8,000 rpm
	Motor	2.2/3.7 kW (Fanuc) 14/4 kW (Siemens)
Off-center drill unit (Option)	Drill	2 (ER16)
	Type	Gear modular

Standard

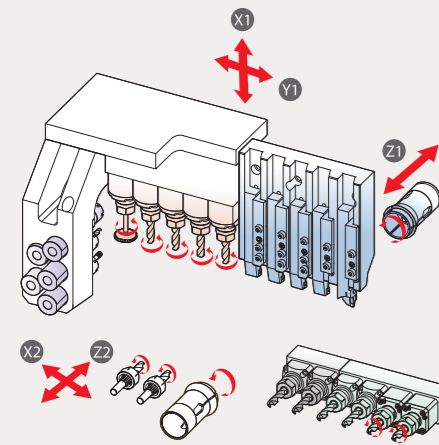
- Main - Sub Cs control (0.001°)
- Rotary Guide bush holder
- Cross drilling · milling unit (5, Gear modular type)
- MPG
- Part conveyor
- Door interlock
- Coolant flow sensor
- Work light
- Signal lamp (3color)
- LAN port
- Tool monitoring function
- Cut off tool breakage detector (S/W)
- Auto power off
- Bar feeder interface

Option

- Bar feeder
- Chip conveyor
- Transformer
- Tap breakage detector
- Pipe type ejection unit
- Off center drill unit (2)
- Middle / High pressure pump
- Oil mist collector
- Oil chiller
- Memory card
- Tooling & Programming
- Internal coolant driven tool (cross, back, off-center)
- 3 Face/counterface driven tool (cross)
- 3 Face/counterface angle driven tool (cross)
- Extended coolant tank
- NC warranty for 2 years

XD32/38II

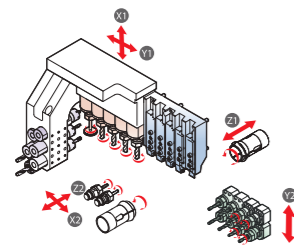
Specialized 5/6/7-axis model for heavy duty cutting / milling



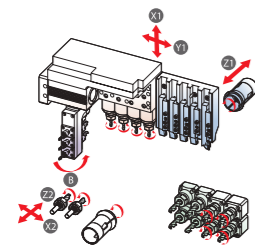
- OPTION**
- Off-center drill (Driven, Fixed) 2
 - Cross 6
 - B-axis tool post 6 (Front 3 + Back 3)
 - Back tool 4 ~ 6
 - Y2 back tool cross unit (Max. Cross 2)

TOOLING VARIATION

- Y2 Back tool 8 (Driven max. 8)
- Off-center drill (Driven) 2



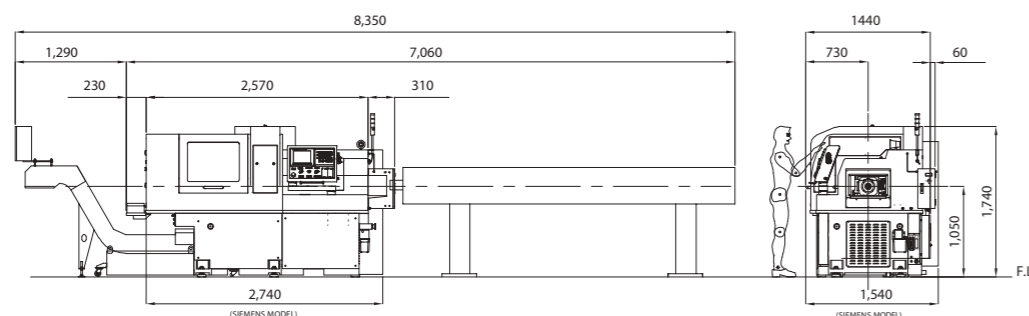
- B-axis tool post 6 (Front 3 + Back 3)



Model	XD32/38II			
	H	N	NH	He
NC	Fanuc 32i-B			Hanwha Fanuc-i
Max. machining diameter	Ø32/38			
Z1 Stroke (mm)	320	80	142 (H), 80 (N)	320
Main spindle	rpm	6,500		
	kW	5.5/7.5		
OD tool	No. of tools	5 (□16mm)		
Front tool	No. of tools	5 (ER20M, Ø32)		
	No. of tools	5 (ER16)		
Cross drill	rpm	6,000		
	kW	2.2		
Off-center drill (Option)	No. of tools	2 (ER16) Modular	2 (ER16) Non-modular	
	type	Motor drive (6,000rpm, 1.0kW)	Gear drive	
Sub spindle	rpm	6,500 (Built-in motor)	6,500 (Spindle motor)	
	kW	2.2/5.5	1.1/3.7	
Back tool	No. of tools	6 (ER16) (4 Fixed + 2 Driven)	4 (ER16) (2 Fixed + 2 Driven)	
	rpm	6,000		
	kW	1.0		
Machine size (L x W x H) (mm)	2,570 x 1,440 x 1,740			
Weight (kg)	3,600			
Power Consumption (Cable size)	25kVA, 16.7kW (VCTF 16SQ x 4C)			
Air Flow rate (Liter/Min)	120 ~ 150			

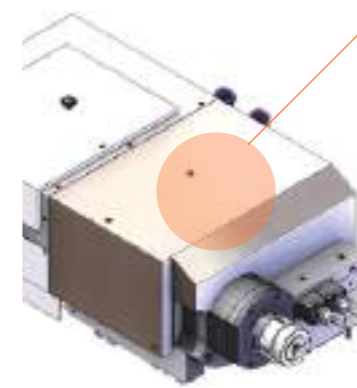
* H : G/B, N : Non-G/B, NH : Convertible G/B, He : Hanwha Fanuc-i NC (with G/B)

Dimension



Option Tooling

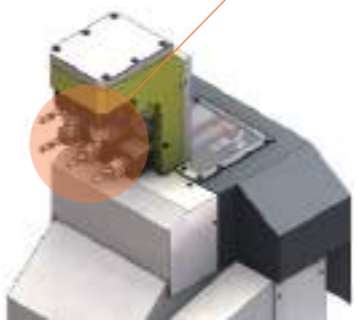
Various tooling options & sub-spindle type are offered for high-quality performance depending on product & machining condition



Sub Spindle Unit

- Built-in motor for powerful cutting and spindle motor for high productivity are both available
- ※ Choose a right type of motor to generate the best performance depending on processing material and condition

Sub spindle		Spec	
Max. machining diameter		Ø38 mm	
Rotating speed		6,500 rpm	
Motor spec	Built-in motor	Fanuc 32i-B	2.2/5.5kW, 20/49Nm
	Spindle motor	Hanwha Fanuc-i	1.1/3.7kW, 7/28Nm

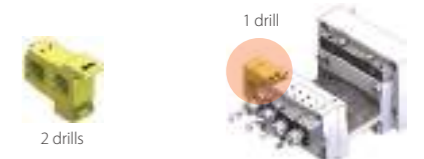


Back Tool Unit

- A total of 8 tools with Y2-axis and modular type for easy tool change / maintenance

Option unit

Attachable fixed drill unit
Off-center can be available with 1 drill unit



Option tool



Selectable modules of back tool

Driven max. 4



※ Option : Back tool cross unit (Single body, Modular)

Standard

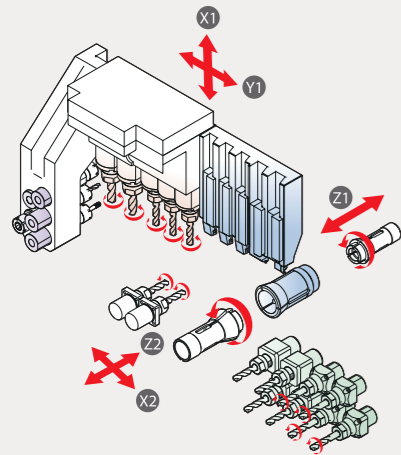
- Main-Sub Cs control (0.001°)
- Rotary Guide bush holder
- Cross drilling · milling unit (5, Gear modular type)
- MPG
- Part conveyor
- Door interlock
- Coolant flow sensor
- Work light
- Signal lamp (3color)
- LAN port
- Tool monitoring function
- Cut off tool breakage detector (S/W)
- Auto power off
- Bar feeder interface

Option

- Bar feeder
- Chip conveyor
- Transformer
- Tap breakage detector
- Pipe type ejection unit
- Off center drill unit (2)
- Middle / High pressure pump
- Oil mist collector
- Oil chiller
- Memory card
- Tooling & Programming
- Internal coolant driven tool (cross, back, off-center)
- 3 Face/counterface driven tool (cross)
- 3 Face/counterface angle driven tool (cross)
- Extended coolant tank
- NC warranty for 2 years

XD38II-R

The latest 5/6-axis, specialized in heavy duty cutting/ milling of max. dia. 38mm



- OPTION**
- Off-center drill (Driven, Fixed) 2
 - Cross 6
 - Y2 back tool cross unit (Max. Cross 2)



Specification of G/B & Chuck

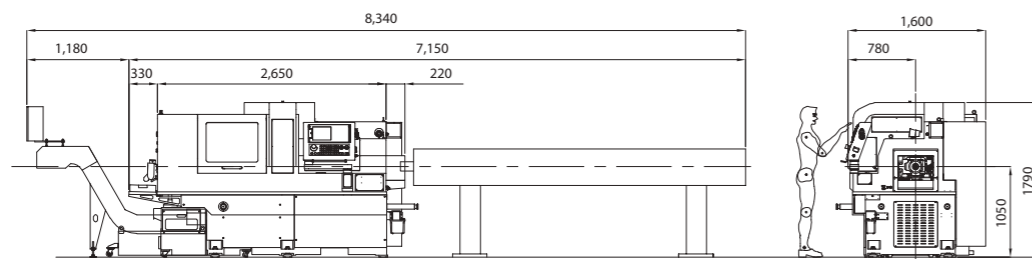
Model	XD38II-R		XD38II	
	Fanuc / Siemens	Fanuc	Siemens (※ Production stop)	
NC	Fanuc / Siemens	Fanuc	Siemens (※ Production stop)	
Type	NH	H/N/NH/He	H	N/NH
Guide bush	BRA-42	TD38	BRA-42	
Main chuck	TF48	TF44	TF48	TF44
Sub chuck	TF48	TF44	TF48	

- Enhanced machining performance with optimized structure/ layout & widened distance between tools
- Easy switching between G/B & Non G/B and enhanced stroke, rigidity and chip disposal
- Flexible material feeding solution (bar feeder, automation unit and robot)

Model	XD38II-R	
	NH	
NC	Fanuc 32i-B / Siemens 828D	
Max. machining diameter	Ø38 (Option : Ø40)	
Z1 Stroke (mm)	320 (H), 120 (N)	
Main spindle	rpm	6,500
	kW	5.5/7.5 (Fanuc), 23 (Siemens)
OD tool	No. of tools	5 (□20mm x 2, □16mm x 3)
	No. of tools	5 (ER20M, Ø32)
Front tool	No. of tools	5 (ER20 x 2, ER16 x 3)
	rpm	6,000
	kW	2.2 (Fanuc), 2.13 (Siemens)
Off-center drill (Option)	No. of tools	2 (ER16) Modular
	No. of tools	2 (ER16) Modular
Sub spindle	rpm	6,500
	kW	2.2/5.5 (Fanuc), 23 (Siemens)
Back tool	No. of tools	8 (ER16) (4 Fixed + 4 Driven)
	rpm	6,000
	kW	1.0 (Fanuc), 1.02 (Siemens)
Machine size (L x W x H) (mm)	2,650 x 1,600 x 1,790	
Weight (kg)	4,600	
Power Consumption (Cable size)	25kVA (Siemens : 40kVA), 16.7kW (VCTF 16SQ x 4C)	
Air Flow rate (Liter/Min)	120 ~ 150	

* NH : Convertible G/B

Dimension



Optimized Structure & Spec for Ø38mm

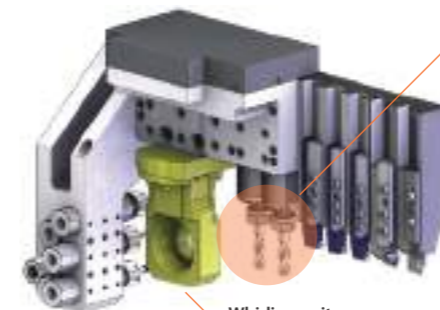
Possible to machine max. Ø40mm (Option)

Stroke

- Extended stroke to cover various & flexible processing
- Widened distance between tools
- Upper size of tools
- Extended stroke of Z1 for convertible type of G/B (G/B : 205mm → 320mm, Non-G/B : 80mm → 120mm)

Z1	X1	Y1	Z2	X2	Y2
320 (G/B) 120 (Non-G/B)	80	467 (+55*)	350 (+70*)	450 (+55*)	67.7

* : increased stroke compared to XD38II



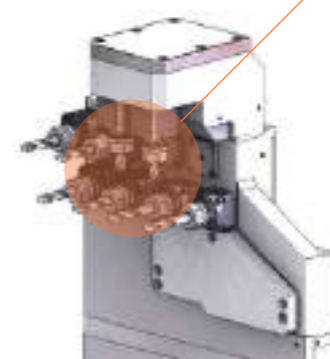
Whirling unit
※ Other various option units are available

Cross Drilling / Milling Unit

- Powerful cross machining
- Adopted the best-in-class motor (Capacity : Fanuc 2.2kW, Siemens 2.13kW)
- Gear driven modular
- Gear modular type as standard for various tooling and easy tool change / maintenance

Specification

6,000rpm, 2.2kW(Fanuc), 2.13kW(Siemens)
5 tools (ER20 x 2, ER16 x 3)



Back Tool Unit

- Optimized structure for machining large bore material
- Extended tooling layout (Distance between tools : 52mm)
- Various option toolings are available
- Less chip trouble structure

Specification

6,000rpm, 1.0kW(Fanuc), 1.02kW(Siemens)
8 tools (4 Driven + 4 Fixed)

Option tool



Standard

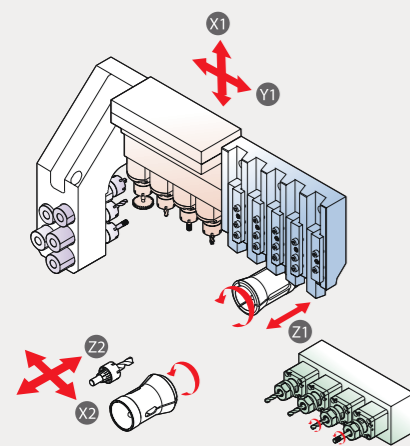
- Main - Sub Cs control (0.001°)
- Rotary Guide bush holder
- Cross drilling · milling unit (5, Gear modular type)
- MPG
- Part conveyor
- Door interlock
- Coolant flow sensor
- Work light
- Signal lamp (3color)
- LAN port
- Tool monitoring function
- Cut off tool breakage detector (S/W)
- Auto power off
- Bar feeder interface

Option

- Bar feeder
- Chip conveyor
- Right-way part conveyor
- Transformer
- Tap breakage detector
- Pipe type ejection unit
- Off center drill unit (2)
- Middle / High pressure pump
- Oil mist collector
- Oil chiller
- Memory card
- Tooling & Programming
- Internal coolant driven tool (cross, back, off-center)
- 3 Face/counterface driven tool (cross)
- 3 Face/counterface angle driven tool (cross)
- Extended coolant tank
- NC warranty for 2 years

XD42

Specialized 5/6-axis for larger dia. machining (42mm)



- OPTION**
- Off-center drill (Driven) 1
 - Back tool 4 ~ 6, Y2 back tool post 6 ~ 8

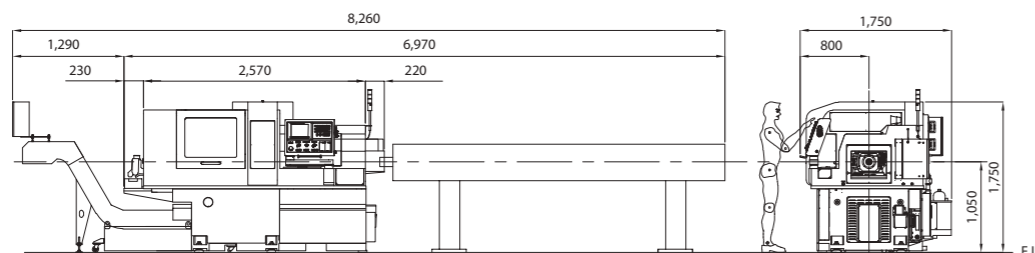


- Strong machining performance & high-productivity for large bore material
- Strong chucking force with hydraulic cylinder
- Improved bearing system for accuracy
- High rigidity of feed unit (Adopted linear roller guide)

Model	XD42		
	H	NH	N
NC	Hanwha Fanuc-i		
Max. machining diameter	Ø42		Ø45
Z1 Stroke (mm)	320	207 (H), 100 (N)	100
Main spindle	rpm	6,000	
	kW	5.5/7.5	
OD tool	No. of tools	5 (□20mm)	
Front tool	No. of tools	5 (ER20M, Ø32)	
Cross drill	No. of tools	4 (ER20M)	
	rpm	6,000	
	kW	2.2	
Off-center drill (Option)	No. of tools	1 (ER20M)	
	type	Gear drive (Modular type drill)	
Sub spindle	rpm	6,000	
	kW	2.2/5.5	
Back tool	No. of tools	5 (ER20M) (3 Fixed + 2 Driven)	
	rpm	6,000	
	kW	1.0	
Machine size (L x W x H) (mm)	2,570 x 1,750 x 1,750		
Weight (kg)	4,100		
Power Consumption (Cable size)	25kVA, 16.7kW (VCTF 16SQ x 4C)		
Air Flow rate (Liter/Min)	120 ~ 150		

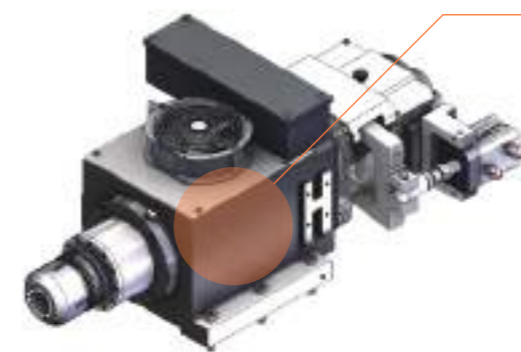
* H : G/B, N : Non-G/B, NH : Convertible G/B

Dimension



Option Tooling

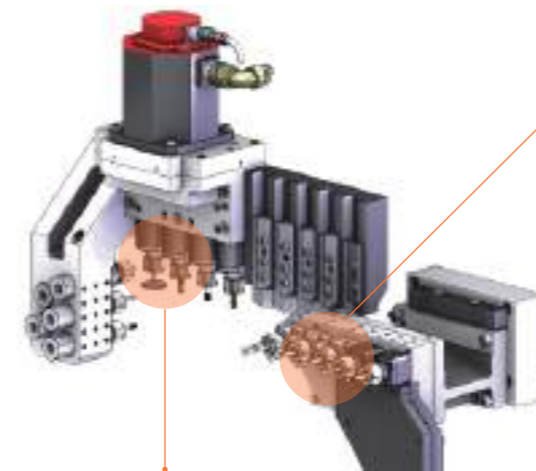
Offers various and flexible toolings for enhancing productivity and covering a variety of customer's needs



Spindle Unit

- Adopted built-in motor, hydraulic chucking cylinder & 3 toggle system for strong chucking power for Ø42mm material

Specification
6,000rpm
5.5/7.5kW (20 ~ 49Nm)



Back Tool Unit

- A total of 8 tools with Y2-axis and modular type for easy tool change / maintenance

Specification
6,000rpm, 1.0kW (3 ~ 7.5Nm)
5 tools (ER20M)

Option tool



Cross Drilling / Milling Unit

- Powerful cross machining with upper size of tools and the best-in-class motor
- Cross unit with gear modular type as standard for various tooling and easy tool change / maintenance

Specification
6,000rpm, 2.2kW (8 ~ 22Nm)
4 tools (ER20M)

Selectable modules of back tool

Driven max.4



4 tools (2 + 2) 5 tools (2 + 3) (Unable to use Off-center)
6 tools (Driven max. 5) ※ Tool distance : 50mm
8 tools (Driven max. 5) ※ With attachable fixed back tool unit (2 drills) ※ Unable to use Off-center

Standard

- Main - Sub Cs control (0.001°)
- Rotary Guide bush holder
- Cross drilling · milling unit (4, Gear modular type)
- MPG
- Part conveyor
- Door interlock
- Coolant flow sensor
- Work light
- Signal lamp (3color)
- LAN port
- Tool monitoring function
- Cut off tool breakage detector (S/W)
- Auto power off
- Bar feeder interface

Option

- Bar feeder
- Chip conveyor
- Transformer
- Tap breakage detector
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- Tooling & Programming
- Internal coolant driven tool (cross, back, off-center)
- 3 Face/counterface driven tool (cross)
- 3 Face/counterface angle driven tool (cross)
- Extended coolant tank
- NC warranty for 2 years