

Global Technology & Machinery



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 Hanwha Corporation

History

“To be the Global No.1 CNC Automatic Lathe Manufacturer, Hanwha will keep moving forward and never stop technology innovation.”



Machine tool division has released unique gang type models such as SAL, ML, SL, XD, XDII, XE so far and is now focusing on developing customized products through constant investment in R&D ever since starting the business in 1977 and developing the first turning machine in the nation in 1983.

Now we are striving to carry on the momentum of growth towards the top of the machine tool industry through globalization with 50 years of accumulated expertise and affiliates overseas in China, Europe & USA.

1950

1953. Founded Shinhan Bearing Industry

1970

1977. Started machine tool business

1983. Developed centerless/surface grinding machine
Developed SAL-10, the first cam type automatic lathe in Korea

1990

1992. Developed the first internal grinding machine

1993. Developed NC GANG TYPE(TG-1G)
Participated in the ministry of commerce and industry's industrial base technology process(developed schematic of CNC automatic lathe for mirror surface manufacturing)

1994. Developed KCG-200J, centerless grinding machine

1998. Developed ML series, the first automatic lathe in Korea

2000

2002. Developed SL32HPD, the first 3 paths control CNC automatic lathe

2003. Established Hanwha Machinery America Inc(U.S.A)

2004. Developed XD20H, 7 axes BEST selling model
Developed STL series, turret type & 11 axes machine

2005~2006. Developed XD32/35/38, high productivity & precision
Developed XD20N, non-guide bush type machine

2008~2009. Developed XD03 for small precision parts
Developed HCG-400(CNC TYPE), centerless grinding machine

2010

2013. Developed XD12II, XD38II

2014. Developed XD20/26II, XE20/26
Established Hanwha TechM (Suzhou) Co., Ltd(China)
Established Hanwha Corporation Stuttgart Representative office(Germany)

2016. Developed XD42/45, XD12/16III



PRODUCT GUIDE

NX series

Ultra-precision model with nano NC control

STL Series

The most powerful 3 paths turret model

XDIII Series

New version of best selling line-up, XDIII

XDII Series

Leading Hanwha CNC swiss type lathes with enhanced out put, precision and rigidity

XE Series

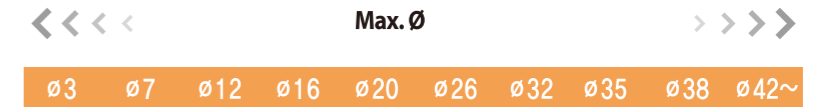
New generation of best selling economic model

XD Special Series

Specialized tool layout for complex parts of medical & electric parts

XP Series

Best solution for simple parts machining



- 1 micron tolerance control for roundness and cylindricity
- 10 nano ultra precision control



- Ultimate tooling capability with 10 station turret(VDI, BMT)
- Synchronous machining & 3 paths control system



- Optimized specification & structure
- Various tooling capacity



- Improved C/T with enhanced rigidity and stability
- Minimized vibration and thermal deformation




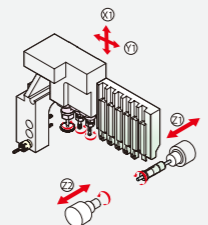
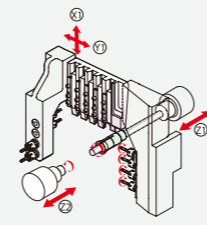
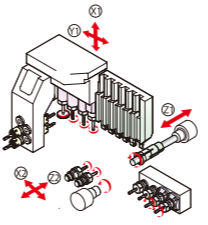
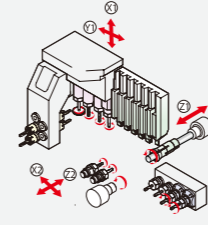

- Attractive price with stable machining & high productivity
- All-around machine with great value








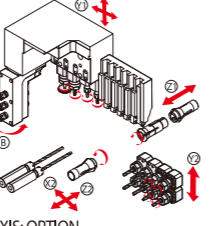
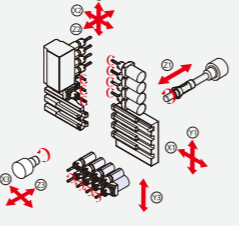
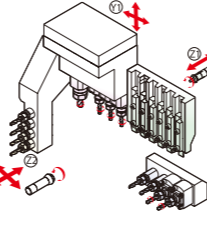
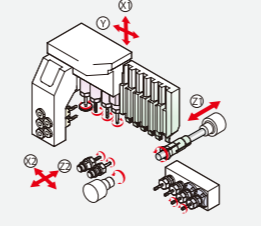
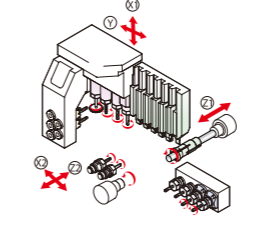
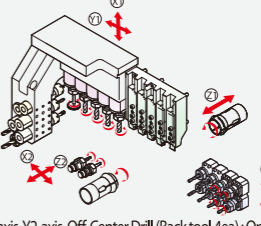
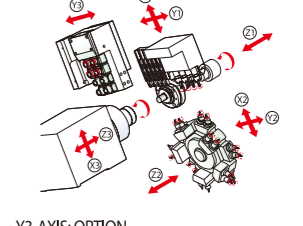


- Ultimate tooling capability with B-axis & Y2-axis(XD20V)
- Perfect solution for small precision parts(XD03/07)
- Best model of high cost-effectiveness for Ø42mm machining (XD42)



- Cost-effective machine with high productivity
- Optimized structure for better space utilization

MACHINE	NAME	XP12	XP16	XP20	XP26	XP32	XE20					XE26					XE35				XD42		
	TYPE	S		S	S		H	N	NH	J	Ne	H	N	NH	J	Ne	H	N	J	Ne	H	N	
	NC	Fanuc		Fanuc	Fanuc		Fanuc					Fanuc					Fanuc				Fanuc/Siemens		
SPECIFICATION	PHOTO																						
	TOOL LAYOUT																						
	SIZE(LxWxH)	[mm]	1,650 X 1,090 X 1,640	2,030 X 1,140 X 1,720	2,030 X 1,140 X 1,720	2,330 X 1,230 X 1,670	2,330 X 1,230 X 1,670	2,330 X 1,230 X 1,670	2,330 X 1,230 X 1,670	2,330 X 1,230 X 1,670	2,060 X 1,440 X 1,760	2,580 X 1,690 X 1,750											
	WEIGHT	[kg]	1,800	2,300	2,500	2,500	2,500	2,500	2,500	2,500	2,750	4,100											
MAIN SPINDLE	MAX. RPM	[rpm]	12,000	8,000	8,000	10,000	8,000	8,000	8,000	8,000	6,500	6,000											
	POWER	[kW]	2.2/5.5	2.2/3.7	5.5/7.5	2.2/3.7	2.2/3.7	2.2/5.5	2.2/5.5	2.2/5.5	2.2/5.5	5.5/7.5 (Fanuc), 2.3 (Siemens)											
	MAX. TURNING Ø(MAIN)	[mm]	Ø12	Ø16	Ø20	Ø26	Ø32	Ø20	Ø26	Ø35	Ø42	Ø45											
SUB SPINDLE	MAX. RPM	[rpm]	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	6,500	6,000											
	POWER	[kW]	0.55/1.1	0.55/1.1	1.5/2.2	1.5/2.2	1.5/2.2	1.5/2.2	1.5/2.2	1.5/2.2	1.5/2.2	2.2/5.5 (Fanuc), 2.3 (Siemens)											
SPECIFICATION																							
	MAX. TOOLING	[EA]	15	18	17	24	23	21	24														
MAIN	OD	NO. OF TOOLS	[EA]	6	6	5	6	5	5														
		BITE SIZE	[mm]	□ 12 x 12	□ 12 x 12	□ 16 x 16	□ 12x12	□ 16x16	□ 20x20														
	FRONT	NO. OF TOOLS	[EA]	6 (FRONT 3, BACK 3)	8 (FRONT 4, BACK 4)	8 (FRONT 4, BACK 4)	10 (FRONT 5, BACK 5)	10 (FRONT 5, BACK 5)	8 (FRONT 4, BACK 4)	10 (FRONT 5, BACK 5)													
		MAX. RPM	[rpm]	6,000	6,000	5,000	6,000	6,000	6,000	6,000													
	CROSS	POWER	[kW]	0.5	1.0	1.0	1.0	1.0	1.0	2.2 (Fanuc), 2.13 (Siemens)													
		NO. OF TOOL	[EA]	3	4	4	4	4	4	4													
OFF CENTER	NO. OF TOOL	[EA]				2 (OPTION)	2 (OPTION)	1 (OPTION)	1 (OPTION)														
BACKTOOL	MAX. RPM	[rpm]				6,000	6,000	6,000	6,000														
	POWER	[kW]				1.0	1.0	1.0	1.0														
	NO. OF TOOL (BACKTOOL)	[EA]				4 (2 FIXED, 2 DRIVEN)	4 (FIXED)	4 (2 FIXED, 2 DRIVEN)	4 (FIXED)	4 (2 FIXED, 2 DRIVEN)	4 (FIXED)	5 (3 FIXED, 2 DRIVEN)											
COOLANT TANK	TANK CAPACITY	[Liter]	120	160	160	170	170	170	230														
	PUMP POWER	[kW]	0.25	0.4	0.4	0.4	0.4	0.4	1.1														
STROKE	Z1	[mm]	140	210	205	210	60	210(H) 50(N)	210	60	210	60	210(H) 50(N)	210	60	210	60	210	60	320	100		
	X1	[mm]	50	145	145	70																	
	Y1	[mm]	272	253	250	340	340	340	340	472													
	Z2	[mm]	140	210	204	215	211	205	276														
	X2	[mm]				315	315	312	395														
ETC	POWER CONSUMPTION(CABLE SIZE)	[kVA]	10 (VCTF 10SQ x 4C)	12 (VCTF 10SQ x 4C)	15 (VCTF 16SQ x 4C)	15 (VCTF 10SQ x 4C)	15 (VCTF 16SQ x 4C)	15 (VCTF 16SQ x 4C)	25 (VCTF 16SQ x 4C)														
	AIR FLOW RATE	[Liter/min]	120~150	120~150	120~150	120~150	120~150	120~150	120~150														
PAGE			Page.8	Page.9	Page.9	Page.10	Page.10	Page.10	Page.11	Page.11	Page.11	Page.12											

MACHINE	NAME	XD07		XD20V		XDI 20		XD12/16III		XD20II				XD26II				XD32/38II				STL38H		
	TYPE	-		-		-		H	J	H	N	NH	M	H	N	NH	M	H	N	NH	He	-	Y3	
	NC	Fanuc		Fanuc/Siemens		Fanuc		Fanuc		Fanuc/Siemens				Fanuc/Siemens				Fanuc/Siemens				Fanuc		Siemens
SPECIFICATION	PHOTO																							
	TOOL LAYOUT																							
	SIZE(LxWxH)	[mm]	1,230 X 910 X 1,520	2,160 X 1,160 X 1,690		2,680 X 1,250 X 1,850		1,950 x 1,130 x 1,680		2,340 X 1,230 X 1,720				2,340 X 1,230 X 1,720				2,580 X 1,390 X 1,750				2,800 X 1,850 X 1,790		
	WEIGHT	[kg]	1,000	2,500		4,000		2,200		2,700				2,700				3,600				4,600 4,700		
MAIN SPINDLE	MAX. RPM	[rpm]	16,000	10,000		10,000		15,000		10,000				8,000				6,500				6,500		
	POWER	[kW]	1.1/1.5	2.2/3.7(Fanuc),14.4(Siemens)		2.2/3.7		2.2/3.7		2.2/3.7(Fanuc),14.4(Siemens)				2.2/5.5(Fanuc),14.4(Siemens)				5.5/7.5(Fanuc),23(Siemens)				23		
	MAX. TURNING Ø(MAIN)	[mm]	Ø7	Ø20		Ø20		Ø12/16		Ø20				Ø26				Ø32/38				Ø38		
SUB SPINDLE	MAX. RPM	[rpm]	16,000	8,000		8,000		10,000		8,000				8,000				6,500				6,500		
	POWER	[kW]	1.1/1.5	1.5/2.2(Fanuc),7.4(Siemens)		2.2/3.7		0.55/1.1		1.5/2.2(Fanuc),2.59(Siemens)				1.5/2.2(Fanuc),2.59(Siemens)				2.2/5.5(Fanuc)/23(Siemens) 1.1/3.7				23		
SPECIFICATION																								
	MAX. TOOLING	[EA]	14	29		29		21		24 26				23 26				26 24				34 (Max. 43) 38 (Max. 47)		
MAIN	OD	NO. OF TOOLS	[EA]	6	6		6		5		6 5				5				5					
		BITE SIZE	[mm]	□ 8 x 8	□ 12 x 12		□ 12 x 12		□ 12 x □ 12		□ 12 x 12				□ 16 x 16 □ 12 x 12				□ 16 x 16					
	FRONT	NO. OF TOOLS	[EA]	6(FRONT 3, BACK 3)	8(FRONT 4, BACK 4)		8(FRONT 4, BACK 4)		8(FRONT 4, BACK 4)		10(FRONT 5, BACK 5)				10(FRONT 5, BACK 5)				10(FRONT 5, BACK 5)					
	CROSS	MAX. RPM	[rpm]	9,000	6,000		6,000		6,000 (ER16), 9,000 (ER11)		6,000				6,000				6,000					
		POWER	[kW]	0.35	1.0(Fanuc),1.02(Siemens)		1.0		1.0		1.0(Fanuc),1.02(Siemens)				1.0(Fanuc), 1.02(Siemens)				2.2(Fanuc),2.13(Siemens)				1.07	
OFF CENTER	NO. OF TOOL	[EA]	2	5		7		4 (ER11 x 3, ER16 x 1)		4 5				4 5				5				4		
BACKTOOL	MAX. RPM	[rpm]		6,000		6,000		9,000		6,000				6,000				6,000				6,000		
	POWER	[kW]		0.5(Fanuc),0.57(Siemens)		1.0		1.0		1.0(Fanuc),1.02(Siemens)				1.0(Fanuc),1.02(Siemens)				1.0(Fanuc),1.02(Siemens)				1.07		
		[EA]		8 (4 FIXED, 4 DRIVEN)		8 (4 FIXED, 4 DRIVEN)		4 (2 FIXED, 2 DRIVEN) 4 (FIXED)		4 (2 FIXED, 2 DRIVEN)				4 (2 FIXED, 2 DRIVEN)				6 (4 FIXED, 2 DRIVEN) 4 (2 FIXED, 2 DRIVEN)				4 (FIXED) 8 (4 FIXED, 4 DRIVEN)		
COOLANT TANK	TANK CAPACITY	[Liter]	100	170		180		140		170				170				230				300		
	PUMP POWER	[kW]	0.18	0.4		0.4		0.25		0.4				0.4				1.1				1.1		
STROKE	Z1	[mm]	125	210		210 (Stationary G/B : 227)		155		210 60 160 (H), 50 (N) 210				210 60 160 (H), 50 (N) 210				320 80 142 (H), 80 (N) 320				320		
	X1	[mm]	26	77		45		74		70				70				80				60		
	Y1	[mm]	92	354		290		290		340				340				422				296		
	Z2	[mm]	105	210		50		175		215				211				280				120		
	X2	[mm]		306		45		230		315				315				395				115(VDI), 105(BMT)		
ETC	POWER CONSUMPTION(CABLE SIZE) [kVA]		8(VCTF 65Q x 4C)	15(VCTF 105Q x 4C)		20(VCTF 165Q x 4C)		12(VCTF 105Q x 4C)		18(VCTF 105Q x 4C)				20(VCTF 165Q x 4C)				25(VCTF 165Q x 4C)				40(VCTF 165Q x 4C)		
	AIR FLOW RATE	[Liter/min]	120~150	120~150		120~150		120~150		120~150				120~150				120~150				20~30		
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INTRODUCTION
PRODUCT GUIDE

MACHINE LINE UP

MACHINE
SPECIFICATION

OPTIONS(SPECIAL)

SAMPLES

Cost-effective machine with high productivity

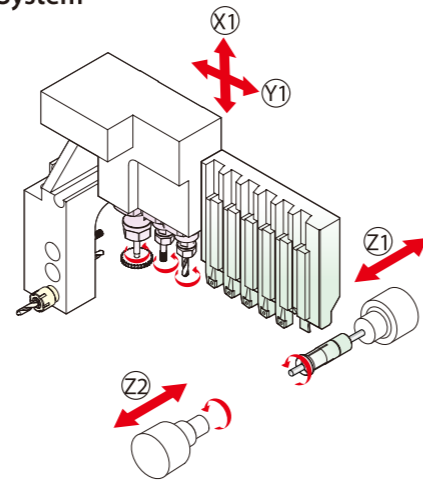
XP12/16S



Efficient structure
Optimized structure enabling better space utilization

High productivity
Excellent chip discharge and rapid traverse

Tooling System



Specification

MODEL		XP12	XP16
		S	
NC		Hanwha Fanuc-i	
Max. Turning Ø(Main)		Ø12	Ø16
Max. Stroke		140mm	
OD Tool		6EA	
No. of Tools	Front Tool	6EA(Front 3, Back 3)	
	Cross Tool	3EA	
Motor	Main spindle	rpm	12,000rpm
	Power		2.2/5.5kW
Cross Drill	rpm		6,000rpm
	Power		0.5kW
Pump	Coolant	Capacity	120L
	Pump Motor		0.25kW
SUB	Motor	Sub spindle	rpm
	Power		8,000rpm
E T C	Weight		1,800kg
	Size(L x W x H)		1,650 X 1,090 X 1,640
Power Consumption(Cable size)		10kVA(VCTF 105Q x 4C)	
Air Flow Rate		120~150Liter/Min	

High productivity



- Achieving shorten cycle time
- High productivity by rapid traverse rate in the same class

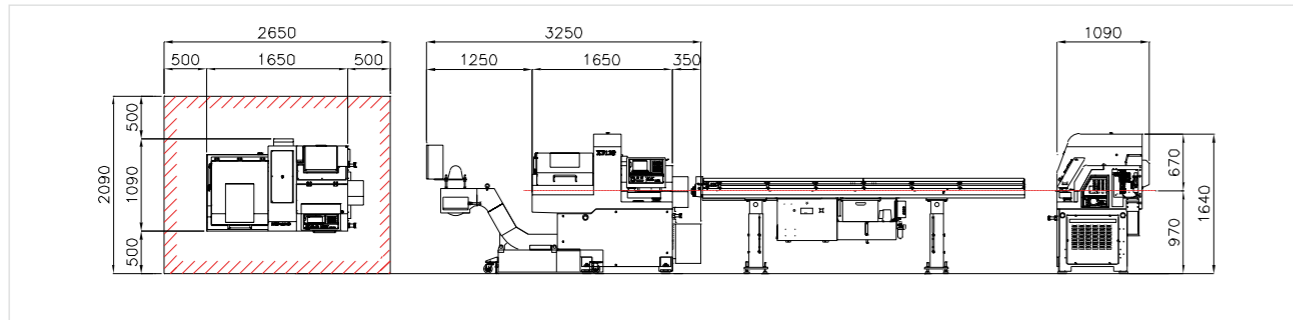
Easy maintenance



- Built-in spindle motor with low vibration
- Easy to maintenance and repair
- Movable OP for convenient work

Stroke	Z1	X1	Y1	Z2
XP12/16S	140mm	50mm	272mm	140mm

Dimension



* These products are dual-use items of strategic goods and strictly prohibited from manufacturing illegal weapons. We are not responsible for any effects resulting from the illegal use.

Best 4-axes machine in same class

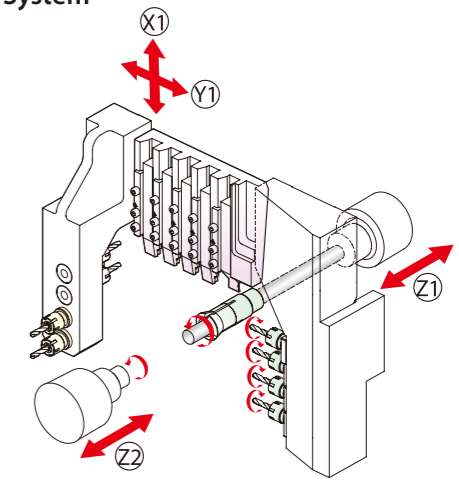
XP20/26/32S



Best tooling capacity in the same class
Max. 18ea tooling capacity

Built-in motor
Optimized for high precision and high speed

Tooling System



Specification

MODEL		XP20	XP26	XP32
		S		
NC		Hanwha Fanuc-i		
Max. Turning Ø(Main)		Ø20	Ø26	Ø32
Max. Stroke		210mm	205mm	
OD Tool		6EA	5EA	
No. of Tools	Front Tool	8EA(Front 4, Back 4)		
	Cross Tool	4EA		
Motor	Main spindle	rpm	8,000rpm	
	Power	2.2/3.7kW	5.5/7.5kW	
Cross Drill	rpm	6,000rpm	5,000rpm	
	Power		1.0kW	
Pump	Coolant	Capacity	160L	
	Pump Motor		0.4kW	
SUB	Motor	Sub spindle	rpm	8,000rpm
	Power			0.55/1.1kW 1.5/2.2kW
E T C	Weight	2,300kg	2,500kg	
	Size(L x W x H)		2,030 X 1,140 X 1,720	
Power Consumption(Cable size)		12kVA(VCTF 105Q x 4C) 15kVA(VCTF 165Q x 4C)		
Air Flow Rate		120~150Liter/Min		

Efficient tool layout



- Various tooling(Max. 18ea)
- Improved C/T and high productivity by horizontal type cross tool

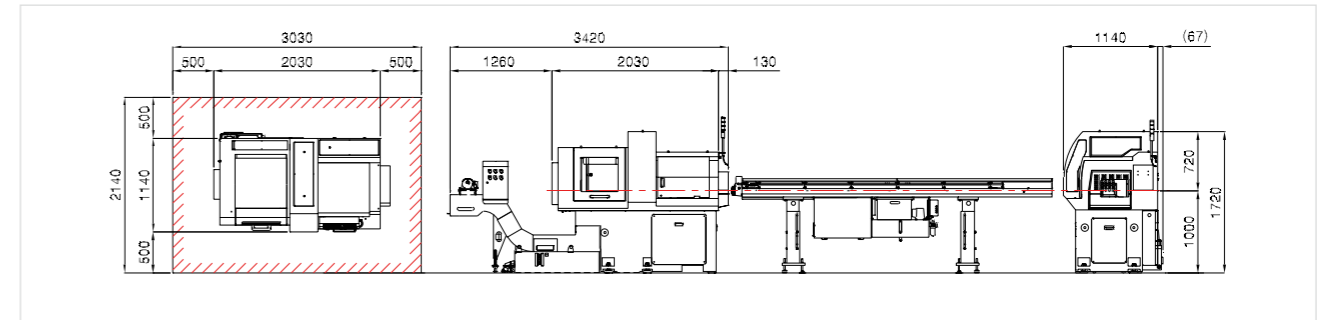
Optimized structure



- Solid and single bed structure
- High rigidity and high precision for long time operation

Stroke	Z1	X1	Y1	Z2
XP20S	210mm	145mm	253mm	210mm
XP26/32S	205mm	145mm	250mm	204mm

Dimension



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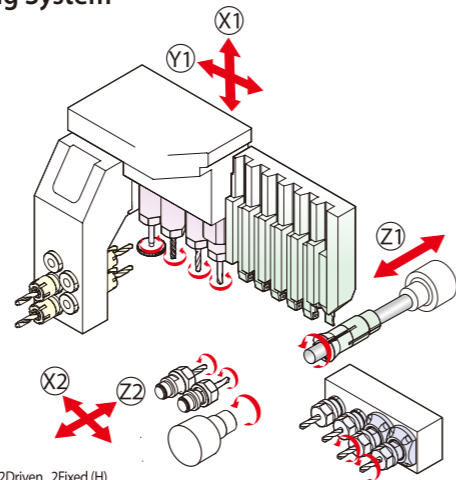
All-around machine with great value

XE20/26



- Strong and rigid tool post**
Cross live tool motor(1kW), modular type
- Great value for 5-axis machine**
Achieving cost effective 20mm machine
- Compact design to minimize the floor space**

Tooling System



* Back Tool : 2Driven, 2Fixed (H)
* Off Center Drill : Option

Specification

MODEL	XE20/26					
	H	N	NH	J	Ne	
NC	Hanwha Fanuc-i					
Max. Turning Ø(Main)	Ø20/Ø26					
Max. Stroke	210mm 60mm 160mm(H), 50mm(N) 210mm 60mm					
No. of Tools	OD Tool	6EA(Ø20)/5EA(Ø26)				
	Front Tool	10EA(FRONT 5, BACK 5)				
	Cross Tool	4EA				
	Back Tool	4EA(2Fixed, 2Driven)		4EA(Fixed)		
	Off Center Drill	2EA(Option)				
Motor	Main spindle	rpm	10,000rpm(Ø20)/8,000rpm(Ø26)			
	Power	2.2/3.7kW(Ø20), 2.2/5.5kW(Ø26)				
	Cross Drill	rpm	6,000rpm			
Pump	Capacity	170L				
	Pump Motor	0.4kW				
	Sub spindle	rpm	8,000rpm			
Motor	Power	1.5/2.2kW				
	Back Tool	rpm	6,000rpm			
	Power	1.0kW				
Weight	2,500kg					
Size(L x W x H)	2330 x 1230 x 1,670					
Power Consumption(Cable size)	Ø20:15kVA(VCTF 105Q x 4C), Ø26:15kVA(VCTF 165Q x 4C)					
Air Flow Rate	120~150Liter/Min					

MAIN

SUB

ETC

Gear type modular live tool



- Optimal for heavy drilling & milling
- Improved live motor power

Enhanced durability

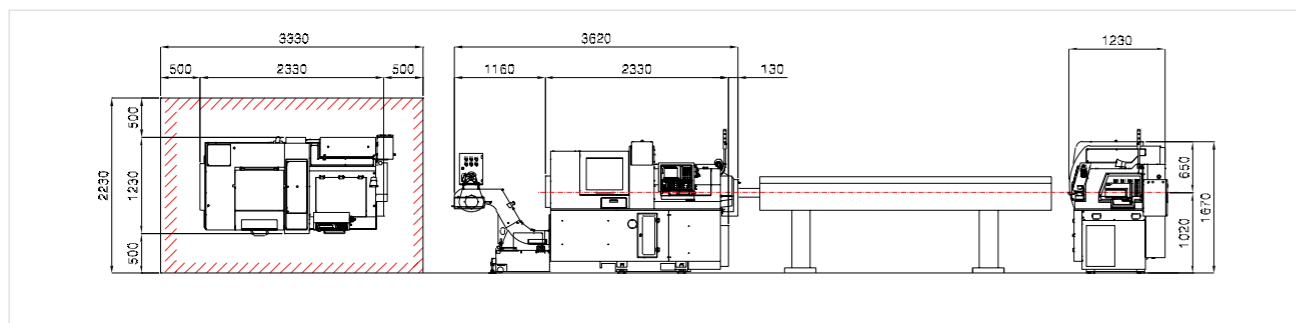


- Powerful chucking by outer toggle
- Increased belt strength and applied air purge on spindle

Stroke	Z1	X1	Y1	Z2	X2
XE20/26	210mm (N:60mm) NH:160(H),50(N)	70mm	340mm	215mm (Ø26:211mm)	315mm

* N : Non G/B type, NH : G/B convertible type

Dimension



* These products are dual-use items of strategic goods and strictly prohibited from manufacturing illegal weapons. We are not responsible for any effects resulting from the illegal use.

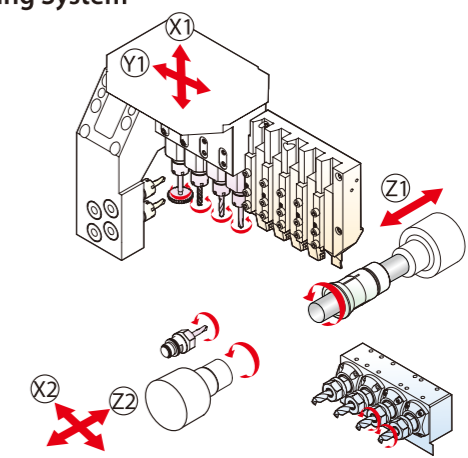
All-around machine with great value

XE35



- Strong and rigid tool post**
Cross live tool motor(1kW), modular type
- Great value for 5-axis machine**
Achieving cost effective 20mm machine
- Compact design to minimize the floor space**

Tooling System



* Back Tool : 2Driven, 2Fixed (H)
* Off Center Drill : Option

Specification

MODEL	XE35					
	H	N	J	Ne		
NC	Hanwha Fanuc-i					
Max. Turning Ø(Main)	Ø35					
Max. Stroke	210mm 60mm 210mm 60mm					
No. of Tools	OD Tool	5EA				
	Front Tool	8EA(FRONT 4, BACK 4)				
	Cross Tool	4EA				
	Back Tool	4EA(2Fixed, 2Driven)		4EA(Fixed)		
	Off Center Drill	1EA(Option)				
Motor	Main spindle	rpm	6,500rpm			
	Power	2.2/5.5kW				
	Cross Drill	rpm	6,000rpm			
Pump	Capacity	170L				
	Pump Motor	0.4kW				
	Sub spindle	rpm	6,500rpm			
Motor	Power	1.5/2.2kW				
	Back Tool	rpm	6,000rpm			
	Power	1.0kW				
Weight	2,750kg					
Size(L x W x H)	2,060 x 1,440 x 1,760					
Power Consumption(Cable size)	15kVA(VCTF 165Q x 4C)					
Air Flow Rate	120~150Liter/Min					

MAIN

SUB

ETC

Excellent motor power



- Built-in motor
- Rigid machining with high power of motor

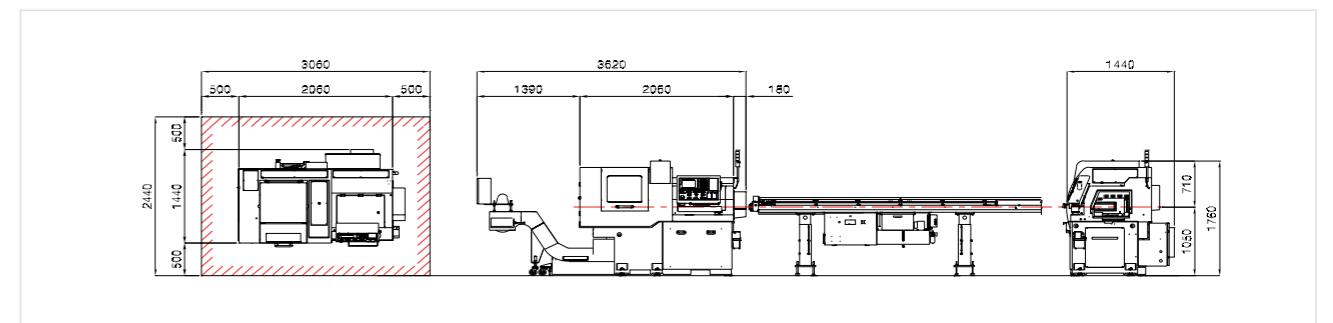
Convenient tooling system



- Easy tool change & installation
- Modular type of drills

Stroke	Z1	X1	Y1	Z2	X2
XE35	210mm N:60mm	62mm	340mm	205mm	312mm

Dimension



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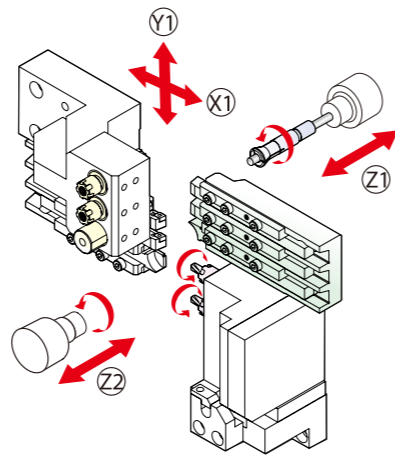
Perfect solution for small precision parts

XD07



- Various tooling**
Cutting edge compact machine for 7mm workpiece
- High precision**
Pursue high productivity with oil cooling system
- Compact design**
Minimum installation space is required and guarantee high productivity

Tooling System



Excellent performance



- High precision and ultra speed built-in motor(16,000rpm)
- Realized various tooling with cross rotary tool
- Shortened cycle time and reinforced productivity

Easy maintenance



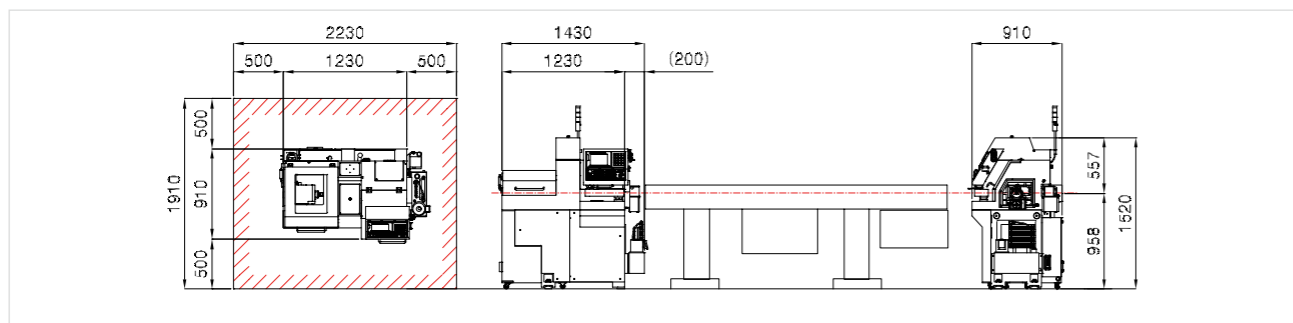
- Opposed gang type tool post
- Efficient chip discharge and smooth coolant flow enables stable continuous machining

Stroke	Z1	X1	Y1	Z2
XD07	125mm	26mm	92mm	105mm

Specification

MODEL	XD07
NC	Hanwha Fanuc-i
Max. Turning Ø(Main)	Ø7
Max. Stroke	125mm
	6EA
No. of Tools	6EA(Front 3, Back 3)
	2EA(3EA Option)
Motor	
Main spindle	rpm: 16,000rpm Power: 1.1/1.5kW
Cross Drill	rpm: 9,000rpm Power: 0.35kW
Pump	
Coolant	Capacity: 100L Pump Motor: 0.18kW
Coolant	rpm: 16,000rpm Power: 1.1/1.5kW
Back Tool	rpm: - Power: -
Weight	1,000kg
Size(L x W x H)	1,230 X 910 X 1,520
Power Consumption(Cable size)	8kVA(VCTF 65Q x 4C)
Air Flow Rate	120~150Liter/Min

Dimension



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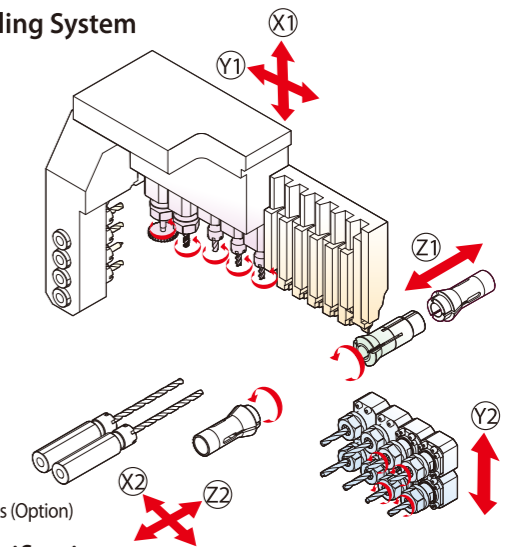
Ultimate tooling capability with B-axis & Y2-axis, 32i-B5

XD20V



- Outstanding machining capability**
Y2-axis & B-axis(Op) available for complex parts
- Enhanced C/T and productivity**
Ensure better C/T by reduction of idle time
- Strong casting structure**
Secured both stable machining and high rigidity

Tooling System



* B-axis (Option)

Specification

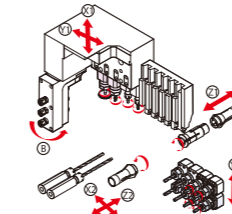
MODEL	XD20V
NC	Fanuc 32i-B/Siemens 840D
Max. Turning Ø(Main)	Ø20
Max. Stroke	210mm
	6EA
No. of Tools	8EA(Front 4, Back 4)
	5EA
	2EA(Fixed, Gun Drill Max 110mm)
	8EA(4Driven, 4Fixed)
Motor	
Main spindle	rpm: 10,000rpm Power: 2.2/3.7kW(Fanuc), 14.4kW(Siemens)
Cross Drill	rpm: 6,000rpm Power: 1.0kW(Fanuc), 1.02kW(Siemens)
Pump	
Coolant	Capacity: 170L Pump Motor: 0.4kW
Sub spindle	rpm: 8,000rpm Power: 1.5/2.2kW(Fanuc), 7.4kW(Siemens)
Back Tool	rpm: 6,000rpm Power: 0.5kW(Fanuc), 0.57kW(Siemens)
Weight	2,500kg
Size(L x W x H)	2,160 X 1,160 X 1,690(Siemens: 2,370 X 1,260 X 1,690)
Power Consumption(Cable size)	15kVA(VCTF 105Q x 4C)
Air Flow Rate	120~150Liter/Min

Various tooling capability



- Y2-axis(8ea, 4Driven/4Fixed)
- Back tool cross tool(Op)
- Rapid traverse 40m/min
- Fixed long gun drill 2ea(Max.110mm)

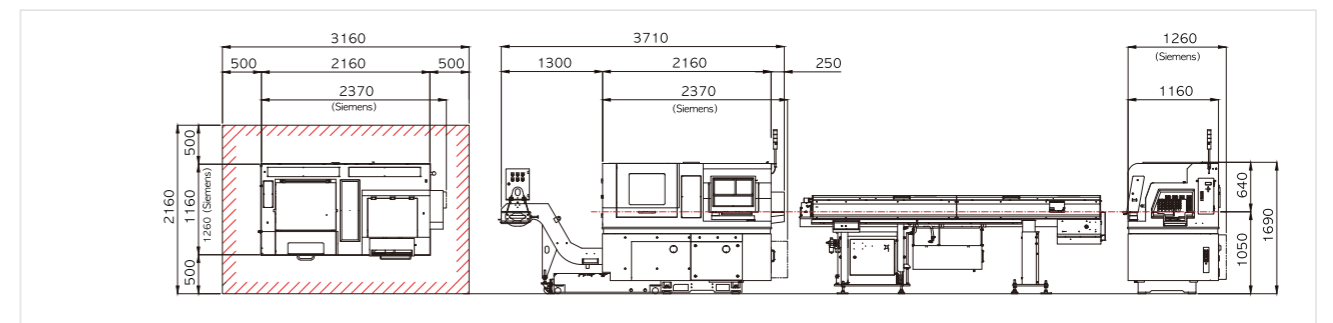
B-axis live tool



- B-axis(6ea, ER16x3ea/ER11x3ea)
- Motor power/rpm: 1kW/6,000rpm
- Gear hobbing & angle adjustment
- Simultaneous 5-axis machining with 32i-B5(Optional)

Stroke	Z1	X1	Y1	Z2	X2	Y2
XD20V	210mm	77mm	354mm	210mm	306mm	60mm

Dimension



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3 channels, 11 axes gang type machine

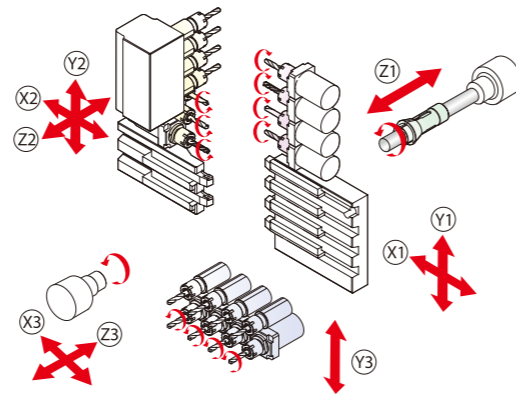
XDI20

Innovative tooling system
Y2-axis, various machining capability
(Balance cutting)

Enhanced C/T and productivity
Powerful built-in motors on main & sub spindle



Tooling System



Innovative tool layout



- Opposed gang type tool post
- Synchronized control between main spindle and rotary guide bush unit by spindle motor
- Various special tools are available

Various machining capabilities



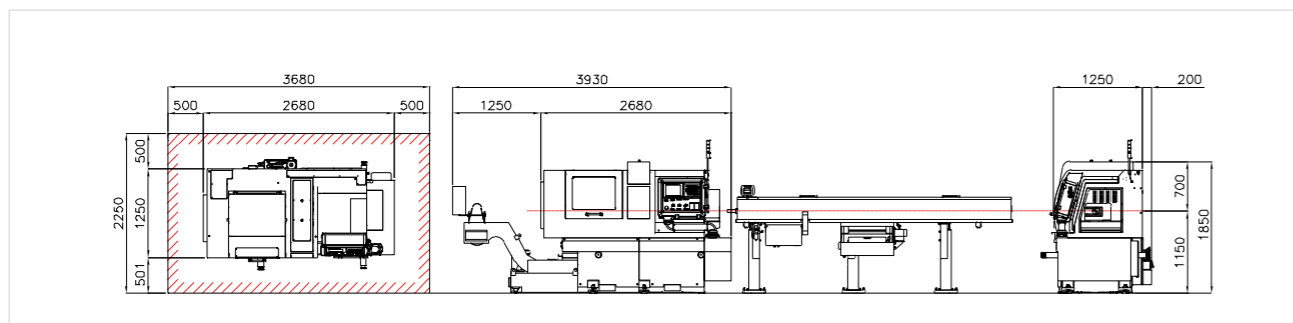
- Y2-axis(8ea, 4Driven/4Fixed)
- Ideal machine for manufacturing various parts utilizing simultaneous machining with 3 path controller

Stroke	Z1	X1	Y1	Z2	X2	Y2	Z3	X3	Y3
XDI20	210mm	45mm	290mm	50mm	45mm	290mm	300mm	295mm	60mm

Specification

MODEL	XDI20	
NC	FANUC 31i-A	
Max. Turning Ø(Main)	Ø20	
Max. Stroke	210mm	
No. of Tools	OD Tool	6EA
	Front Tool	8EA(Front 4, Back 4)
	Cross Tool	7EA
	Back Tool	8EA(4Driven, 4Fixed)
Motor	Main spindle	rpm: 10,000rpm Power: 2.2/3.7kW
	Cross Drill	rpm: 6,000rpm Power: 1.0kW
Pump	Coolant	Capacity: 180L
	Pump Motor	0.4kW
SUB Motor	Sub spindle	rpm: 8,000rpm Power: 2.2/3.7kW
	Back Tool	rpm: 6,000rpm Power: 1.0kW
Weight	4,000kg	
Size(L x W x H)	2,680 X 1,250 X 1,850	
Power Consumption(Cable size)	20kVA(VCTF 16SQ x 4C)	
Air Flow Rate	120~150Liter/Min	

Dimension



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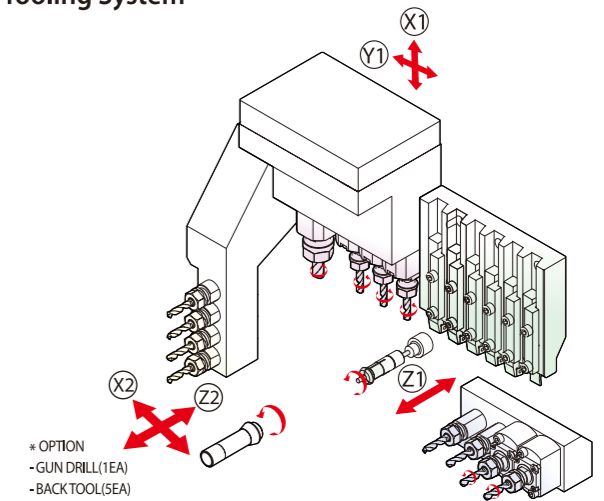
Great cost-effective model with high-productivity & high-precision

XD12/16 III

- Precision**
Optimized machining with stable structure and high-speed for short machining cycle
- Productivity**
Best productivity with great performance & reasonable price
- Efficiency**
High efficiency of performance with wide space and various options for machining



Tooling System



* OPTION
- GUN DRILL(1EA)
- BACK TOOL(5EA)

High speed & stable structure



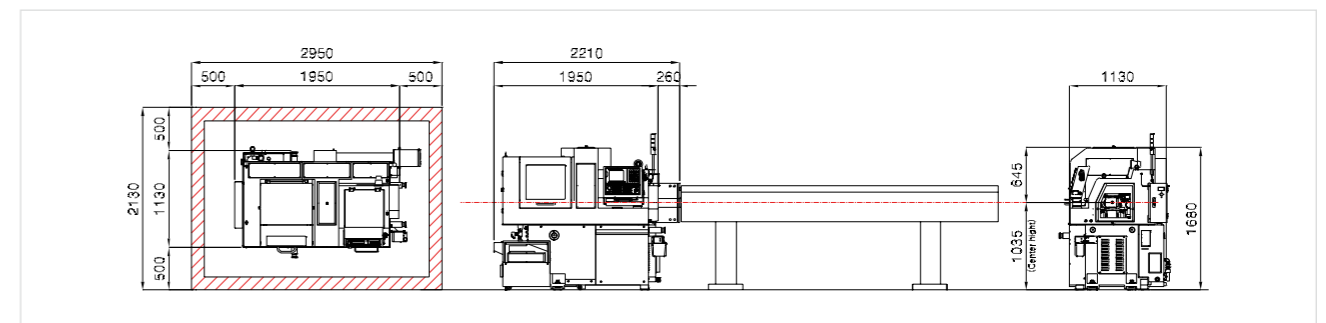
- Various tooling options for complex machining (Modular cross drill, Back drill 5EA, Gun drill 1EA option)
- Wide tooling and machining space for high-efficiency
- Great machining performance with strong motor power for back
- High speed and precise drive of spindle for high productivity
- Minimized vibration of stable guide structure and enhanced balancing
- Reduction of thermal-deformation and vibration by optimization of structure

Stroke	Z1	X1	Y1	Z2	X2
XD12/16III	155mm	74mm	290mm	175mm	230mm

Specification

MODEL	XD12/XD16 III	
	H	J
NC	Hanwha Fanuc i	
Max. Turning Ø(Main)	Ø12	Ø16
Max. Stroke	155mm	
No. of Tools	OD Tool	5EA
	Front Tool	8EA(FRONT 4, BACK 4)
	Cross Tool	4EA
	Gun Drill	1EA(Option)
Motor	Main spindle	rpm: 15,000rpm Power: 2.2/3.7kW
	Cross Drill	rpm: 6,000rpm(ER16), 9,000rpm(ER11) Power: 1.0kW
Pump	Coolant	Capacity: 140L
	Pump Motor	0.25kW
No. of Tools	Back Tool	4EA(Fixed 2, Driven 2) 4EA(Fixed)
	Sub spindle	rpm: 10,000rpm Power: 0.55/1.1kW
SUB Motor	Back Tool	rpm: 9,000rpm Power: 1.0kW
	Weight	2,200kg
Size(L x W x H)	1,950 x 1,130 x 1,680	
Power Consumption(Cable size)	12kVA(VCTF 10SQ x 4C)	
Air Flow Rate	120~150Liter/Min	

Dimension



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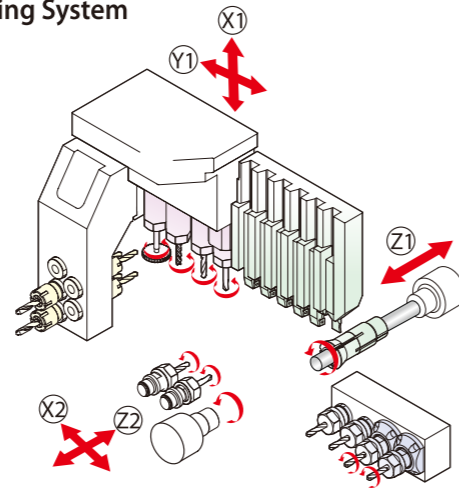
The evolutionary best selling machines ever

XD20/26 II



- High precision & rigidity**
Improved machining accuracy by minimizing vibration and thermal deformation
- Best structure for hard material machining**
Applied strong tool post and modular live tool with gear
- Convertible guide bush type available**
Shorten remnant length

Tooling System



* Off Center Drill: Option

<p>Efficient tool layout</p> <ul style="list-style-type: none"> Extended spindle stroke Max. 26ea tool(Max. 20ea live tool) 	<p>Improved durability</p> <ul style="list-style-type: none"> External toggle type, Stronger belt Air purge in G/B & spindle 	<p>Various special tool holders</p> <ul style="list-style-type: none"> Easy set up & various tool holder available Coolant through live tool(Optional) 	<p>Convertible guide bush type available</p> <ul style="list-style-type: none"> Easy to switch from G/B to non G/B G/B to shorten remnant length
--	---	---	---

1 Enhance precision and minimize dimensional change with Integrated X2 base on bed structure



2 Easy to convert G/B to Non G/B



< Z1 Stroke:160mm >

< Z1 Stroke:50mm >

Various special options are available

Special Tool

SIDE CUTTER UNIT (Back tool)	THREAD WHIRLING UNIT (Cross tool)	3-AXIS FACE UNIT (Cross tool)	3-AXIS ADJUSTABLE FACE UNIT(0~90°) (Cross tool)	3-AXIS COUNTER FACE UNIT (Cross tool)	GEAR HOBBING UNIT (Cross tool)
• Slotting for back tool	• Screw for cross tool	• Drilling/Milling/Tapping for cross tool	• Drilling/Milling/Tapping for cross tool (angle)	• Drilling/Milling/Tapping for cross tool	• Hobbing for cross tool

Specification

MODEL	XD20/26 II			
	H	N	NH	M
NC	Fanuc 32i-B/Siemens 828D			
Max. Turning Ø(Main)	Ø20/Ø26			
Max. Stroke	210mm 240mm(Siemens)	60mm	160mm(H) 50mm(N)	210mm
No. of Tools	OD Tool	6EA(Ø20), 5EA(Ø26)		5EA
	Front Tool	10EA(Front 5, Back 5)		
	Cross Tool	4EA		
	Back Tool	4EA(2Driven, 2Fixed)		
Off Center Drill	2EA, Gun Drill 2EA(M Type)			
	Off Center Drill	2EA, Gun Drill 2EA(M Type)		
Motor	Main spindle	rpm	10,000rpm(Ø20), 8,000(Ø26)	
		Power	Fanuc:2.2/3.7kW(Ø20), 2.2/5.5kW(Ø26), Siemens:14.4kW	
	Cross Drill	rpm	6,000rpm	
		Power	1.0kW(Fanuc), 1.02kW(Siemens)	
Pump	Coolant	Capacity	170L	
		Pump Motor	0.4kW	
SUB Motor	Sub spindle	rpm	8,000rpm	
		Power	1.5/2.2kW(Fanuc), 2.59kW(Siemens)	
	Back Tool	rpm	6,000rpm	
		Power	1.0kW(Fanuc), 1.02kW(Siemens)	
Weight	2,700kg			
Size(L x W x H)	2,340 X 1,230 X 1,720			
Power Consumption(Cable size)	Ø20:18kVA(VCTF 105Q x 4C), Ø26:20kVA(VCTF 165Q x 4C)			
Air Flow Rate	120~150Liter/Min			

Standard

- Full c axis control on main & sub spindle
- V-pulley type indexing unit on main spindle
- Rotary guide bush holder unit(h, nh, m type)
- Cross drill/milling unit(4ea, modular type)
- Mpg
- Door interlock
- Coolant flow sensor
- Coolant unit
- Lubrication unit
- Work light
- Signal lamp(3color)
- Lan port
- Tool monitoring function
- Tool box
- Drill holders
- Bar feeder interface
- Part conveyor
- Cut off tool breakage detector(s/w)
- Auto power off

Option

- Transformer
- Chip conveyor
- Off center drill unit (2ea, driven)
- Tap breakage detector
- Pipe type ejection unit
- Additional 1 pipe set
- Middle / high pressure pump
- Spare m code kit
- Oil mist collector
- Oil chiller
- Chiller united h/p unit
- Nc warranty for 2 years
- Cross / back internal coolant driven tool
- 4 driven back tool
- Bar feeder
- Memory cards
- Tooling & programming
- Gripper unit
- Power guide bush unit
- Rs232c i/o interface

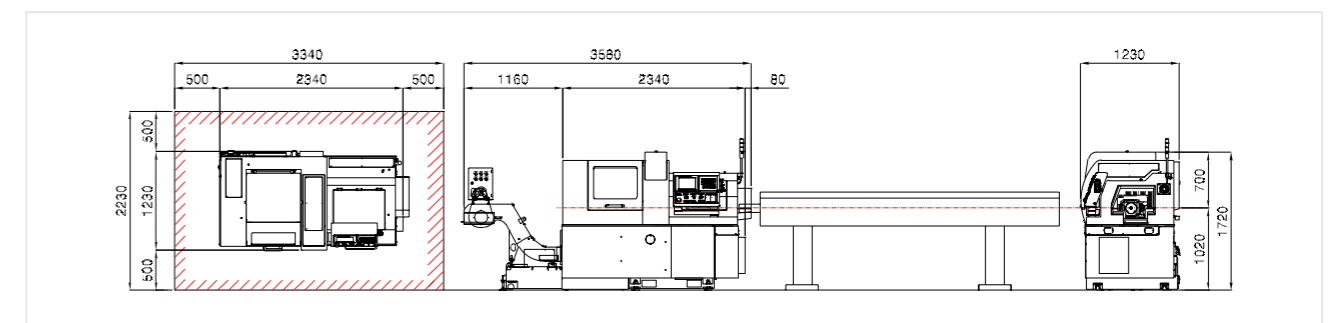
* N: Non G/B type

* NH: G/B convertible type

Stroke	Z1	X1	Y1	Z2	X2
XD20II	210mm (N: 60mm)	70mm	340mm	215mm	315mm
XD26II	NH: 160(H), 50(N)	70mm	340mm	211mm	315mm

* Siemens H type : 240mm

Dimension



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The ultimate machine in high rigidity

XD32/38II

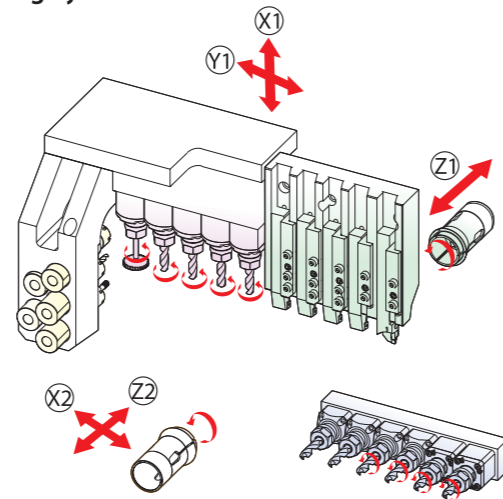


Strong casting structure allows for high rigidity

Complex machining by various tooling
Modular cross live drill(5ea), Y2-axis & B-axis(Option)

Improved C/T and productivity
Reduced idle time by the latest NC
Powerful cross motor output(2.2kW)

Tooling System



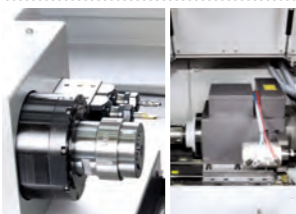
* B-axis, Y2-axis, Off-Center Drill : Option
* Off-center Drills can be attached with only back tool 4ea

Optimized tool layout



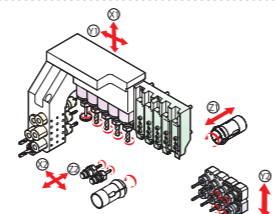
- Secure accuracy and minimized heat displacement
- Easy chip discharge and efficient coolant circulation system

Excellent motor power



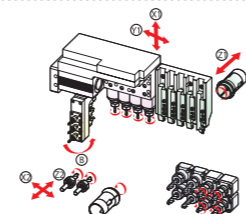
- Stability of hard cutting by high output motor and built-in motor
- Increase rigidity by direct connecting motor

Y2-axis



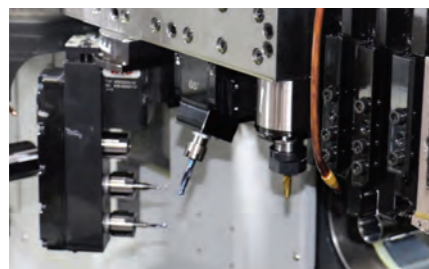
- Y2 & B-axis allow for complex machining parts

B-axis

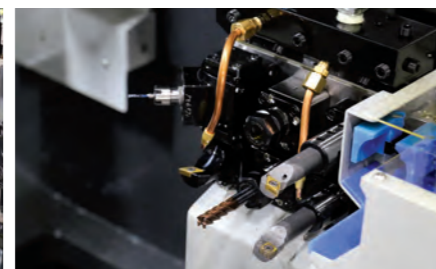


- Easy to use various special tool holders

Various special option tools are available



<Cross tool>



<Back tool>

1-axis angle modular unit



B-axis unit

Various special options are available

Special Tool

BACK TOOL CROSS UNIT (Back tool)	SIDE CUTTER UNIT (Back tool)	THREAD WHIRLING UNIT (Cross tool)	3-AXIS FACE UNIT (Cross tool)	3-AXIS ADJUSTABLE FACE UNIT(0~90°) (Cross tool)	3-AXIS COUNTER FACE UNIT (Cross tool)
• Drilling for back tool	• Slotting for back tool	• Screw for cross tool	• Drilling/Milling/Tapping for cross tool	• Drilling/Milling/Tapping for cross tool (angle)	• Drilling/Milling/Tapping for cross tool

Specification

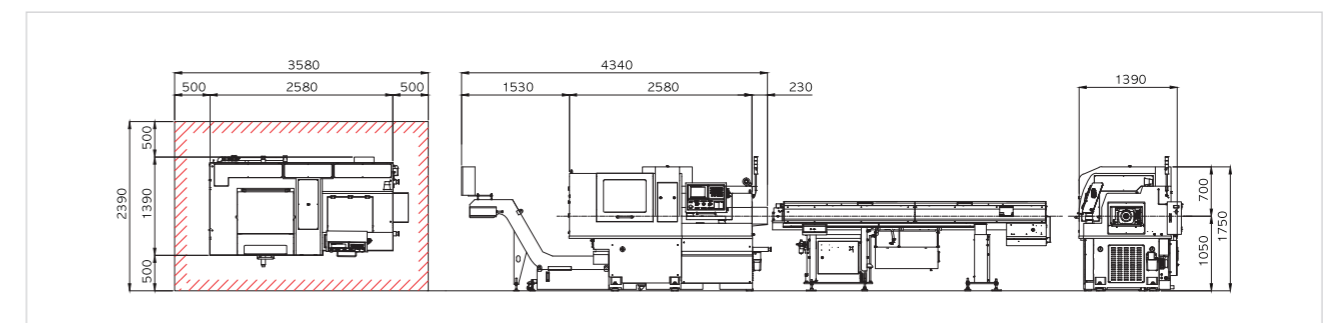
MODEL	XD32/38II			
	H	N	NH	He
NC	Fanuc 32i-B/Siemens 828D		Hanwha Fanuc-i	
Max. Turning Ø(Main)	Ø32/Ø38			
Max. Stroke	320mm	80mm	142mm 80mm	320mm
No. of Tools	OD Tool	5EA		
	Front Tool	10EA(Front 5, Back 5)		
	Cross Tool	5EA		
	Back Tool	6EA(2Driven, 4Fixed) 8EA(4Driven, 4Fixed)-Option	4EA(2Driven, 2Fixed)	
Off Center Drill	2EA(Option)			
Motor	Main spindle	rpm	6,500rpm	
	Power	5.5/7.5kW(Fanuc), 23kW(Siemens)		
Cross Drill	rpm	6,000rpm		
	Power	2.2kW(Fanuc), 2.13kW(Siemens)		
Pump	Coolant	Capacity	230L	
	Pump Motor	1.1kW		
Sub spindle	rpm	6,500rpm		
	Power	2.2/5.5kW(Fanuc), 23kW(Siemens)		1.1/3.7kW
Motor	rpm	6,000rpm		
	Power	1.0kW(Fanuc), 1.02kW(Siemens)		
Weight	3,600kg			
Size(L x W x H)	2,580 X 1,390 X 1,750			
Power Consumption(Cable size)	25kVA(VCTF 165Q x 4C)			
Air Flow Rate	120~150Liter/Min			

* N: Non G/B type
* NH: G/B convertible type

Stroke	Z1	X1	Y1	Z2	X2	Y2
XD32/38II	320mm(N:80mm), NH:142(H),80(N)	80mm	422mm	280mm	395mm	72mm

* Y2, B is not available for He Type

Dimension



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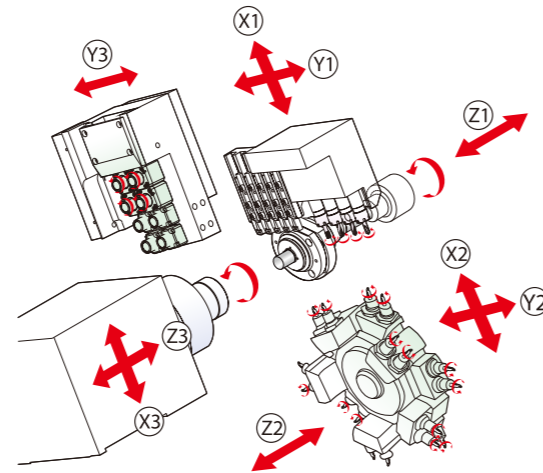
The most powerful 3 paths turret machine

STL38H



- Various tooling for complex parts**
M8 rigid tapping & Y3-axis (Option)
Max 47ea tooling capacity
- Innovative performance**
High-performance built-in motor (23kW) for main & sub spindle
- Enhanced durability**
Enhance durability & stability with improved structure & function of slide cover

Tooling System



* Y3-axis (Option)

High power & rigidity



- The most powerful built-in motor (23.0kW) in same class for main & sub spindle
- Synchronous rotary guide bush unit by spindle motor
- Strong indexing & Cs contouring by hydraulic disk brake

Maximized tooling capabilities



- Turret indexing by servo motor enables to save tool changing time
- Rigid tapping on all spindles enables to expand the range of working
- Various special tools: polygon, thread whirling and angle adjustable driven tool BMT45 turret available

Conspicuous conveniences



- Free position typed operation panel
- Ethernet outlet & pendant MPG as standard
- Turret spindle locates on main spindle side for easy tooling and tool change (center height: 1,050mm) height

SIEMENS SINUMERIK 840D



- WINDOWS 7 and 15" color LCD display
- Contribute to save tooling time and improved productivity by advanced dialogic programming
- Programming guidance function (G/M code) & alarm help function

Complex Machining



Balance cutting
OD + Turret



Synchronous
OD + Turret



Endmill
Turret + Cross



Drilling
Turret + Cross

Stroke	Z1	Y1	X1	Z2	Y2	X2	Z3	Y3	X3
STL38H	320mm	296mm	60mm	120mm	100mm	115mm(VDI) 105mm(BMT)	330mm	40mm (Option)	300mm

Specification

MODEL	STL32/38H	
	-	Y3
NC	SIEMENS 840D	
Max. Turning Ø(Main)	Ø32/Ø38	
No. of Tools	OD Tool	5EA
	Cross Tool	4EA
	Turret Tool	10Station (ST: VDI30, OP: BMT45)
	Back Tool	4EA(Fixed) 8EA(4Driven, 4Fixed)
Motor	Main spindle	rpm: 6,500rpm
	Power	23kW
	Cross Drill	rpm: 6,000rpm
	Power	1.07kW
Pump	Coolant	Capacity: 300L
	Pump Motor	1.1kW
	Sub spindle	rpm: 6,500rpm
Motor	Power	23kW
	Back Tool	rpm: - 6,000rpm
	Power	- 1.07kW
	Weight	4,600kg 4,700kg
Size(L x W x H)	2,800 X 1,850 X 1,790	
Power Consumption(Cable size)	40kVA(VCTF 16SQ x 4C)	
Air Flow Rate	20~30Liter/Min	

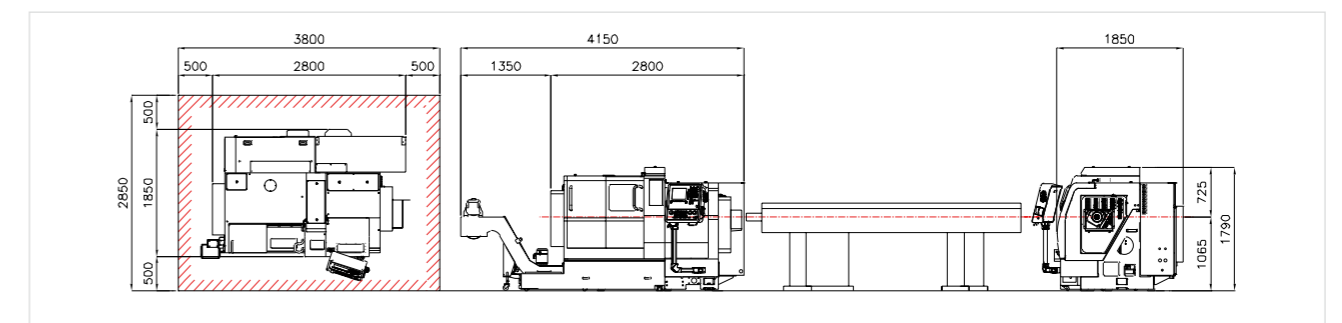
Standard

- Full c axis control on main & sub spindle
- Rotary guide bush holder unit
- Cross drill/milling unit(4ea, modular type)
- Mpg
- Door interlock
- Coolant flow sensor
- Coolant unit
- Lubrication unit
- Work light
- Signal lamp(3color)
- Lan port
- Tool monitoring function
- Tool box
- Drill holders
- Bar feeder interface
- Part conveyor
- Cut off tool breakage detector(s/w)
- Auto power off
- Chip conveyor

Option

- Tap breakage detector
- Pipe type ejection unit
- Additional 1 pipe set
- Middle / high pressure pump
- Spare m code kit
- Oil mist collector
- Oil chiller
- Nc warranty for 2 years
- Y3-axis(4driven/4fixed)
- Turret tool holders
- Bar feeder / 2nd anti vibration unit
- Transformer(for 220v)
- Memory cards

Dimension



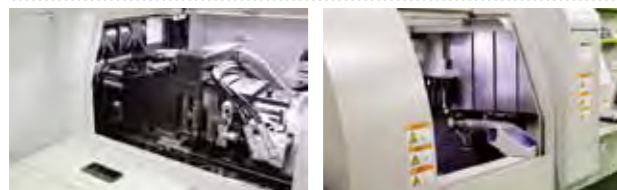
* These products are dual-use items of strategic goods and strictly prohibited from manufacturing illegal weapons. We are not responsible for any effects resulting from the illegal use.

Best model of high cost-effectiveness with strong machining performance & high-productivity for large bore of material

XD42



High rigidity & User friendly mechanism



- Improved bearing system & rotary accuracy
- Strong chucking force with hydraulic cylinder

- High-rigidity of feed unit (Applied Linear Roller guide)
- Enhanced durability & great production quality

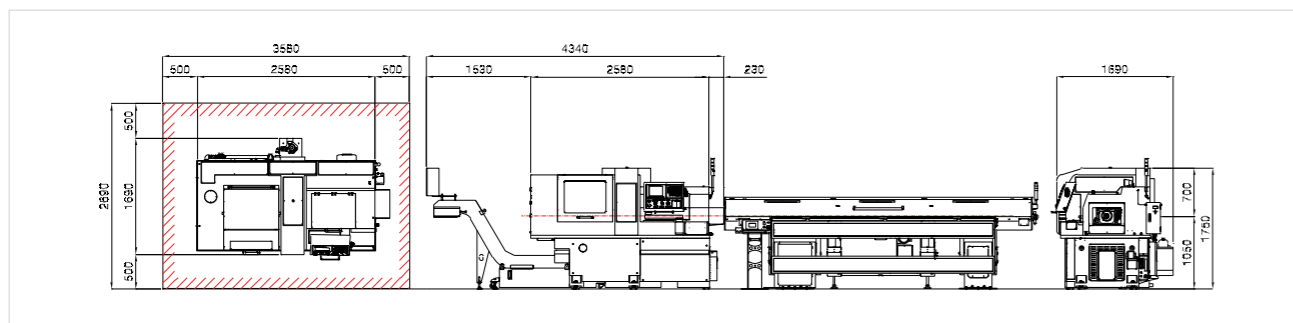


- Optimized tool layout
- Horizontal gang type tool post
- High-power of motor for cross & back drills

- Improved convenience with option for heavy bar lifting
- Realization of stable machining by lower vibration

Stroke	Z1	X1	Y1	X2	Y2
XD42	320(H)mm 100(N)mm	80mm	472mm	276mm	395mm

Dimension



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High rigidity

Enhance bed rigidity and adopt profitable structure for stable chucking of large bore material



High efficiency

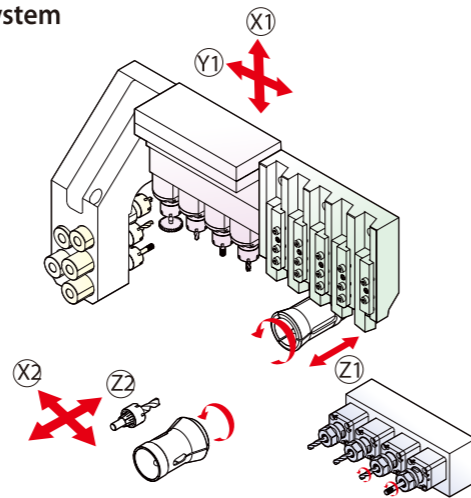
Best productivity with great performance & reasonable price



Optimization

High power of motor & optimized structure for stable machining of die casting, forging materials

Tooling System



* OPTION : OFF-CENTER DRILL(1EA)

Specification

MODEL	XD42		
	H Type	N Type	
NC	Hanwha Fanuc i/Siemens 828D		
Max. Turning Ø(Main)	Ø42	Ø45	
Max. Stroke	320mm	100mm	
No. of Tools	OD Tool	5EA(φ20)	
	Front Tool	10EA(FRONT5, BACK5)	
	Cross Tool	4EA	
	Back Tool	5EA(3Fixed, 2Driver)	
Off Center Drill	1EA(Option)		
Motor	Main spindle	rpm: 6,000rpm 4,000rpm Power: 5.5/7.5 kW(Fanuc), 23kW(Siemens)	
	Cross Drill	rpm: 6,000rpm Power: 2.2kW(Fanuc), 2.13kW(Siemens)	
Pump	Coolant Capacity	230L	
	Pump Motor	1.1kW	
SUB	Sub spindle	rpm: 6,000rpm 4,000rpm Power: 2.2/5.5 kW(Fanuc), 23kW(Siemens)	
	Back Tool	rpm: 6,000rpm Power: 1.0kW(Fanuc), 1.02kW(Siemens)	
	Weight	4,100kg	
ETC	Size(L x W x H)	2,580 X 1,690 X 1,750	
	Power Consumption(Cable size)	25kVA/VCTF 16SQx4C	
	Air Flow Rate	120~150Liter/Min	

If Off-center drill is selected, back drill is only available for 4EA N: Non G/B type

Customized tools are available



HMS (Hanwha Monitoring System)

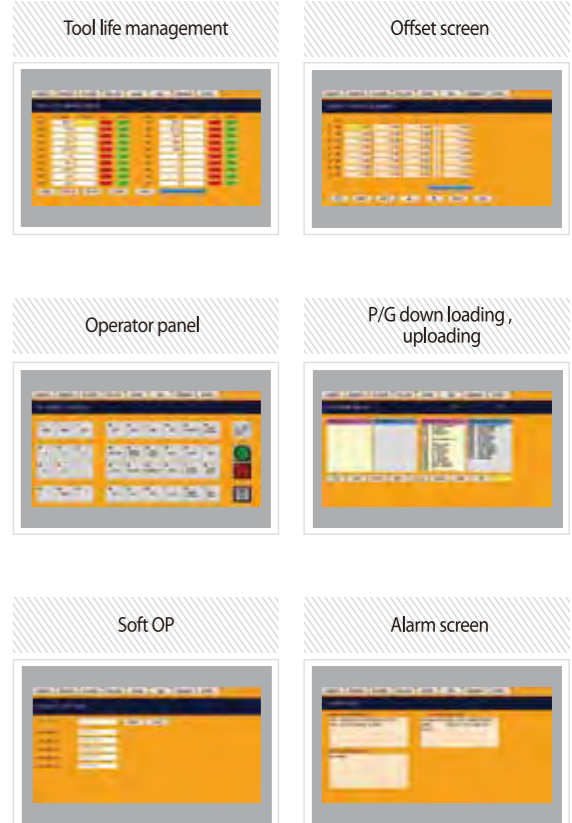
PC Version

Possible to check conditions of machines & plants even in your office through PC by Ethernet communication.

- Whole machine in the factory can be monitored by one PC
- Cycle Time / Work Count / Parts PG No/ Alarm
- Program Down loading, Uploading and Modification



See the whole machine status from the office

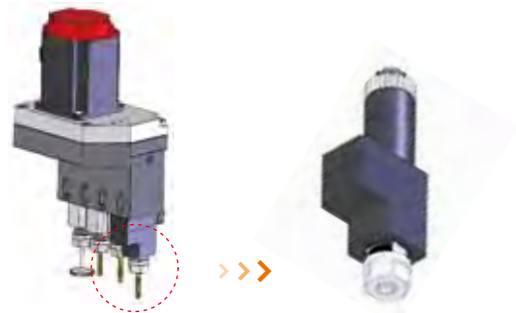


Special option

“Machines with only Hanwha's special options could be utilized more than 100%”

Triple speed cross drill

- Enhance cross drilling performance with triple speed of cross drill rotation
- Achieving high-precision surface roughness with high rpm



Internal coolant driven tool

- Improve machining performance and extend tool life by supplying coolant through the inner drill and spraying the coolant to the machining point



Cut off tool breakage detector

- Wave pin with air pressure and then when the pin touches tool, it detects reflux of air then figures out whether drill is broken or not



Power G/B

- Manage chucking force of guide bush for bar in various diameters with pneumatic device (adjustment range : MAX -0.2mm of bore of material)



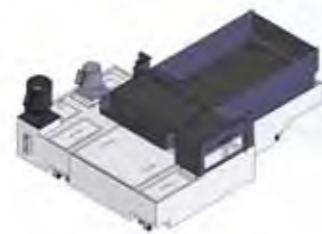
Air/motor spindle

- MOTOR SPINDLE : Fine HOLE machining with high rpm of 60,000~80,000rpm by electric motors
- AIR SPINDLE : Air spindle rotating in range of 2,000~30,000rpm for burr removing, fine drilling



Extended coolant tank

- Model : XD38II, XD20II, XE20
- Tank Capacity
 - XD38II : 230Liter -> 470Liter
 - XD20II, XE20 : 170Liter -> 300Liter



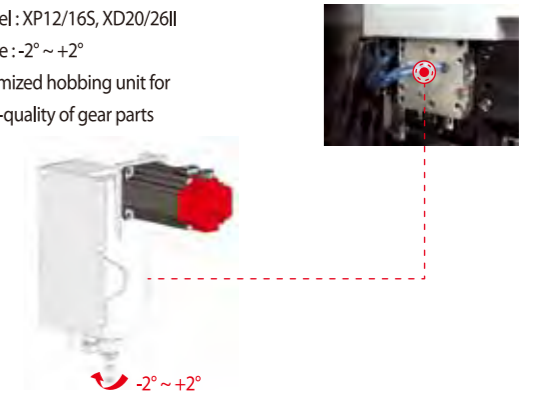
Chiller united H/P unit (Stauff)

- Maker : STAUFF
- Double filtering system with Mesh & Bag filter within 30µm
- Tank capacity : 200 Liter (Chiller united)
- Chiller control : Inverter control
- Spec : 70bar (15ℓ/min) , 120bar (20ℓ/min)



Gear hobbing unit

- Model : XP12/16S, XD20/26II
- Angle : -2° ~ +2°
- Optimized hobbing unit for high-quality of gear parts



Back tool cross unit

Modular type

- Model : XD38II, XD42/45
- Part protrusion length (Back tool 30mm)
 - Modular type : 80mm
 - Single body type : 106mm

Single body type


- Model : XD20V, XD38II
- Compact & Modular design adaptable to complex machining with cross for back
- Provide excellent productivity with simultaneous machining for main and sub cross drilling


Smart chip conveyor

- Model : XE20/26, XD20/26II, XD38II, XD20V, XD42
- Significant chip disposal system with Hinge chain and Solid & durable Filter Drum conveyor



Automobile samples

No	A001	A002	A003	A004
Photo				
Material	ADC12	SUS304	SCM440H	SUS304

No	A005	A006	A007	A008
Photo				
Material	SUS316	SUS304	SUM22	SUS630





No	A009	A010	A011	A012
Photo				
Material	SUM24	AL6062-T8	AL6062-T8	AL6062-T9

No	A013	A014	A015	A016
Photo				
Material	Brass	AL-Die Casting	SUM22	SUS316

No	A017	A018	A019	A020
Photo				
Material	SUS304	SUS303	SCM315	AL6062


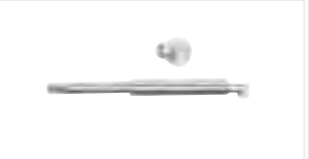


No	A021	A022	A023	A024
Photo				
Material	Brass	AL6061	SUS304	SUM202





Electronic samples

No	E001	E002	E003	E004
Photo				
Material	SUS316	AL6061	AL6062	AL6061

No	E005	E006	E007	E008
Photo				
Material	Brass	AL6061	Brass	AL6062

Medical samples

No	M001	M002	M003	M004
Photo				
Material	Titanium	SUS316L	Titanium	Titanium

No	M005	M006	M007	M008
Photo				
Material	Titanium, Brass	Titanium, Brass	SUS316	Titanium

Industrial samples

No	I001	I002	I003	I004
Photo				
Material	AL6062	SUS316	AL2024	AL2024

No	I005	I006	I007	I008
Photo				
Material	AL6062	AL6062	SUS316	Brass