All Total Solution in WEI HONG





Flat- bed Gun Drill System FW series : 20 models



Chuck Type Gun Drill System PW series : 4 models



BTA series : 8 models



Trepanning Core Stay & Rapid Drill TPA series : 2 models



Complex Special Purpose System FEB series : 1 models





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WH Brocure_201012_ENG

WEI HONG Precision Machinery Co., Ltd. A Qualified ISO Certificated Company





Core Technology in Application

We Heng involves in related tooling application and total solution for diverse deep hole machining. We apply our customers flexible engineering proposals to exert We Heng machines to achieve satisfied cost-performance value.



WEI HONG TPA-1200 exhibited in IMTS 2010 by Mollart Brand.

International Tech Team

We cooperate with senior European gundrill manufacture and join the tech team to upgrad further application. **WEI HONG** enlarges machinery product range to integrate international leading engineering in deep hole field and moves on raising up your competition.



Continuous Development & Research

WE HONG always keeps researching leading technical craft. To advance machinery capability and to enhance high precision deep hole drilling, we invest high end scientific digital software to support optimum machine design and demonstrate mechanism rigidity.



Quality Policy

WE HONG employees high class measurement equipment. We regulate all skillful manufacturing sequences and practice inspection progress according to our internal documentary SOP (Standard Operation Procedure). We ensured each test cut in fine finishing result.

Since being a processor, then a machinery builder,

we concentrate in deep hole drilling technology.

With more than 20 years experiences, **WEI HONG** accumulated plenty technic skills in various deep hole processing. We used the machines, we build machines now, we see insight of your demand.





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1000

N	WEI HONG Model Guide							Remark: * Model with Enlarge Y axis Available Standard Feature Available Option Available by Specialized Application					Tool				
			ſ	Drilling Diameter	Ø				Drilling Depth								
	Model	1.8 - 6 mm	3 - 25 mm	4 - 40 mm	30 - 150 mm	Max 300 mm	1000 mm	1000 - 1500 mm	1500 - 2000 mm	2000 - 3000 mm	3000 mm	Off-center Drill	Angular Drill (B + W axis)	Milling & Tappina	Double Rotation (rotation for part & tool)	Part Core Remainina	Counterboring
		0.07 - 0.24"	0.12 - 1"	0.16 - 1.6"	1.2 - 6"	max 12"	40"	40 - 60"	60 - 80"	80 - 120"	120"						
	FW-1000	-			-	-		-	-	-	-		-		-	-	-
Flat-bed	FW-1300	-			-	-		-	-	-	-		-		-	-	-
	FW-2000 *	-			-	-	-			-	-		-		-	-	-
	FW-2500 *	-			-	-	-			-	-		-		-	-	-
	FW-3000 *	-			-	-	-			-	-		-		-	-	-
	FW-2000BW *	-			-	-	-			-	-				-	-	-
	FW-2500BW *	-			-	-	-			-	-				-	-	-
	FW-3000BW *	-			-	-	-			-	-				-	-	-
	PW-300-4D			-	-	-		-	-	-	-		-	-		-	-
Multiple	PW-600-4D	-			-	-		-	-	-	-		-	-		-	-
spindles	PW-800-2D	-			-	-		-	-	-	-		-	-		-	-
	PW-1500	-			-	-	-		-	-	-		-	-		-	-
	BTA-2000	-	-	-		-	-	-		-	-		-	-	-		
	BTA-2500	-	-	-		-	-	-	-		-		-	-	-		
	BTA-3000	-	-	-		-	-	-	-		-		-	-	-		
	BTA-2000S	-	-	-		-	-	-		-	-	-	-	-			
Heavy Di	BTA-3000S	-	-	-		-	-	-	-		-	-	-	-			
	BTA-4000S	-	-	-		-	-	-	-	-		-	-	-			
	BTA-5000S	-	-	-		-	-	-	-	-		-	-	-			
	BTA-6000S	-	-	-		-	-	-	-	-		-	-	-			
Coro Cha	TPA-600	-	-		-			-	-	-	-		-		-		-
- Core Sta	TPA-1200	-	-		-		-		-	-	-		-	-	-		-
Complex	FEB-5050	-	-			-	-	-	-	-					-	-	

* Contact Weihong Tech Division for availability & related proper application.

Gundrill



Productivity Flat- bed

FW series : 20 models

3

Massive Shaft Drill

Productivity Chuck Type







Boring & Trepanning Association

Complex Multi Purpose Master



Gun Drill + BTA + Milling + Tapping

PW series : 4 models

BTA series : 8 models

TPA series : 2 models

Core Stay & Rapid Solid Drill







While Hole Length / Diameter Ratio Is Higher Than 20 times...





👍 About Deep Hole Processing...

More and more high-tech components require aero-space, energy equipment, mechanism part & die mould, or precision medical, automotive and e quality in whole processing. For deep hole in L/d 20, WE HENC provide trustable application and machinery products to



WEI HONG Gundrill



All in Once Pass by WEI HENG Gundrill

Material SSA

- ⁹ Hole Diameter Tolerance 0.02mm

Mechanism Part





Workpiece:

Machine Model: Drilling Dimension: Ø24mm * L 2400mm Drill L/d ratio:

Demo Highlight:

High rigidity of FW series allows heavy workpeice loading and whole X axis travels full within full bed scope support. Referring to this giant roller weighted 17 tons, its critical deep drill in L/d 100 times and accurate PDC connected holes can be satisfyingly handled only by Wei Hong gundrill machines.





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Machining Section



rkpiece:	Turbine Blade
chine Model:	
ling Dimension:	
ll Thickness:	1.26mm between Holes

Demo Highlight:

Intensive structure components with lightweight are decisive tech for aero industrial. The precise deep drills with L/d 70 (L 350 / ø 5.02 mm) and the tiny pitch affect the qualification for this turbine part. WEI HENC FW coordinates mechanism dynamic accuracy and the senior application engineering to support customer free from parts damage (hole breakage) and raise up his production.









Heavy Industrial Foundry





Workpiece: Machine Model: Drilling Dimension:

Productivity Improved: 500 % (compared to turning)

Demo Highlight:

The high malleability and soft physic feature of OFC (Oxygen Free Copper) create machining risks, such as chips melting and frequent tooling breakage. WE HENC exerts professional application to optimize customer's cutting condition and increase productivity. The standard extra high pressure w maintains satisfied cut quality.

Precision Instrument





Workpiece:

Machine Model: Drilling Dimension: Straightness Accuracy: 0.07mm (for full hole depth 700mm)

Demo Highlight:

This deep hole is precise tunnel for thermograph float to move up and down straightness, roundness and delicate surface. We Hence PW with dual rotation system (rotating at part and tool) performs excellent accuracy in continuous production.

Sporting Part







Workpiece:

Machine Model: Drilling Dimension: Wall Thickness:

Material Auminum

Material SUSS04

Demo Highlight:

Such deep small holes with 1.2mm tiny thickness between holes were normally handled by EDM discharging, it results in long cycle time and poor surface roughness. WET HING PW process all 3 off-center holes with special- made fixture, the drill in p advantage to get his continuous orders.





/ One-piece base in to perform ever lasting

Parts carrier stability sturdy ribs constructed is guarantee! Whole X the key casting element axial loading area are fully supported upon

All 3 axis are solid box **Ultra large capacity** way design to ensure the steady feeding.

1400L coolant tank along with paper features for all FW and PW series.





Productivity multiplication is guarantee for regular bars (according processing by multi-spindles are available in Wei Hong PW series.



Double rotation machining quality in hole straightness, concentricity and



WE HONG Full splash guards system provides superior Application Engineering are available as Division provides ideal option. turn-key solution, such as specialized fixture for job with off- center drill.

FW Series Specification

*Black line	Black lines for metric *Blue lines for inch												
	Model	FW-1000	FW-1300	FW-2010	FW-2013	FW-2016	FW-2510	FW-2513	FW-2516	FW-3010	FW-3013	FW-3016	
	Diameter (STD)				Ø	3 - 25mm ,	/ Ø 0.08 - 1						
Drilling capacity	Diameter (OPT)		Ø4 - 40mm / Ø 0.16 - 1.6"										
	Depth	1000mm / 40"		1500mm / 60" (STD)									
			2000mm / 80" (OPT)										
Spindlo	Spindle Motor	3.75kW / 5HP	.75kW / 5HP 7.5kW / 10HP										
Spiridie	Spindle Speed			100 - 8000rpm									
Parts	Media e Telele	800 * 1200mm	800 * 1500mm	300 * 1500mm 1200mm * 2260mm			1200mm * 2710mm			1200	mm * 3270	Imm	
	working lable	32" * 47"	32" * 60"	47" * 89"			47" * 107"				471" * 129"		
Holding	Telele Le edie e	3000kgs	4000kgs	15000kgs			18000kgs			21000kgs			
	Idble Lodding	d10066	d10088		33000lb		39600lb			46200lb			
	X axis	1000mm / 40"	1300mm / 51.2"	20	000mm / <mark>8</mark>	0"	2500mm / 100"			30	00mm / 12	0"	
	V auda	800mm	800mm	1000mm	1300mm	1600mm	1000mm	1300mm	1600mm	1000mm	1300mm	1600mm	
Tavel	Y CIXIS	/ 32"	/ 32"	/ 40"	/ 51.2"	/ 63"	/ 40"	/ 51.2"	/ 63"	/ 40"	/ 51.2"	/ 63"	
	Z axis	1650mm / 65"	1650mm / 65"				2200mm / 87* (STD) 2800mm / 110* (OPT)						
Controller						Mitusbhish	i / Fanuc						

* All specification subject to change without notice.



unit: mm ABCDE FW-1000 5000 4000 2600 1050 3200 2000 3800 FW-1300 5300 4700 2600 1200 3700 2000 4500 EW-2010 6500 6000 3500 1200 5000 2200 4800 EW-2013 6500 6000 3800 1200 5000 2200 4800 EW-2016 6500 6000 4100 1200 5000 2200 4800 EW-2510 7000 6000 3500 1200 5000 2200 4800 EW-2513 7000 6000 3800 1200 5000 2200 4800 FW-2516 7000 6000 4100 1200 5000 2200 4800 FW-3010 7500 6000 3500 1200 5000 2200 4800 FW-3013 7500 6000 3800 1200 5000 2200 4800 FW-3016 7500 6000 4100 1200 5000 2200 4800

PW Series Specification

*Black lines for me	tric *Blue lines for inch							
	Model	PW-300-4D	PW-600-4D	PW-800-2D	PW-1500			
	Diameter (STD)		Ø 3 - 25mm /	Ø 0.08 - 1"				
Drilling capacity	Diameter (OPT)	Ø1.8 - 6mm / Ø 0.07 - 0.23"	Ø4 - 40mm / Ø 0.16 - 1.6"					
	Depth	300mm / 12"	600mm / 24"	800mm / 31.5"	1500mm / 60"			
	Spindle Motor	3.75kW / 5HP	7.5kW / 10HP	7.5kW / 10HP	7.5kW / 10HP			
Spindle	Spindle Speed	100 - 12000rpm	100 - 8000rpm	100 - 8000rpm	100 - 8000rpm			
	Number of Spindles	4	4	2	1			
Parts Holding	3- jaw Chuck	7", manual	7", manual (STD) 10" manual (OPT)	10" manual (STD) 12" manual (OPT)	10" manual (STD) 12" manual (OPT)			
Tavel	Z axis	700mm / 28"	1000mm / 40"	1200mm / 47 "	2200mm / 87"			
Controller		Mitushhishi / Eanuc						

* All specification subject to change without notice.

* Customized drilling depth (Z axis) and spindle numbers are available according to appointed application.













Material SASC

Material SCM220

High Speed Train Parts









w the fine finishing cut

Workpiece: Machine Model: Drilling Dimension: 95 mm / min Drill feed rate:

Demo Highlight:

Workpiece:

Compared to most of conventional turning and other BTA machines with slow parts rotation, **WE HENG** BTA series provides very safe aperation mode for deep and medium diameter hole processing in long bar. Tool rotation allows faster velocity and cut feed to reach fine finishing and straightness.

Automotive Parts







Machine Model: Drilling Dimension: Ø33mm*L245mm Drill feed rate:

Demo Highlight:

Massive volume auto part manufacturing never stops enhancing productivity. The customer required 90 secs to complete 2 parts, WEI HENG specially built BTA with twin spindles to advantage customer's application methods, its cutting results satisfication by 65 secs for both 2 pieces, particularly in fine surface finishing. Specialized 2 spindles ease loading and

We Insist Highest Efficiency and Qualified Deep Hole Straightness.

WEI HONG **BTA-S Models**



Rotation at Part & Drill

- V Double rotation to guide best drill
- hortest cycle time for single
- Recommended for medium weighted parts for massive & precise production.

WEI HONG **BTA Models**



Fine control for straightness

Rotation at Drill

Tool rotation acts rapid cut feed



Recommended for heavier weighted parts for massive & precise production.

Other



taper drill & trumbling concer

Conventional BTA



A Heavy part rotation allowed only

Rotation at Part

🛕 Long time operation, Accuracy Lost,

A Holding unbalance concern always bothers deep hole drilling. OD



BTA Series



*Black lines for metric	Black lines for metric *Blue lines for inch								
	Model	BTA-2000	BTA-3000						
	Diameter (STD)		Ø 30 - 120mm / Ø 1.2 - 48"						
Drilling capacity	Diameter (OPT)		Ø 30 - 150mm / Ø 1.2 - 60"						
	Depth	2000mm / 80"	2500mm / 100"	3000mm / 120"					
	Spindle Motor		37.5 kW / 50HP						
Spindle	Spindle Speed		10 - 1200rpm, 2 steps (STD) 10 - 950rpm, 4 steps (OPT)						
Parts Holding	3- jaw Chuck	16" manual (STD) 20" manual (OPT)							
Tavel	Z axis	2650mm / 104"	3700mm / 146"	4750mm / 187"					
Controller		Mitusbhishi / Fanuc							

* All specification subject to change without notice.

BTA-S Series Specification

*Black lines for	"Black lines for metric "Blue lines for inch									
	Model	BTA-2000S	BTA-3000S	BTA-4000S	BTA-5000S	BTA-6000S				
Drilling capacity	Diameter (STD)	Ø	30 - 120mm / Ø 1.2 - 4	48"	Ø 30 - 150mm / Ø 1.2 - 6"					
	Diameter (OPT)	Ø	30 - 150mm / Ø 1.2" -	N	N/A					
	Depth	2000mm / 80"	3000mm / 120"	4000mm / 160"	5000mm / 200"	6000mm / 240"				
	Main Spindle Motor (for tool)	37.5kW / 50HP								
Spindle	Main Spindle Speed (for tool)	10 10	- 1200rpm, 2 steps (S1 - 950rpm, 4 steps (Of	10 - 950rpm, 4 steps						
	Sub Spindle Motor (for part)									
	Sub Spindle Speed (for part)	indle Speed (for part) 10 - 200rpm, stepless								
Parts Holding	3- jaw Chuck	16" manual (STD) 20" manual (OPT)			20" manual					
Tavel	Z axis	3700mm / 146"	4750mm / 187"	5800mm / 228"	7000mm / 280"	8000mm / 320"				
Controller		Mitusbhishi / Fanuc								
* All specification	All specification subject to change without notice.									

* Customized spindle numbers are available according to appointed application.

unit: mm	unit: mm										
	А	В	С	D	E	F	G	н			
BTA-2000	8300	3200	2200	6700	1200	1800	3000	4400			
BTA-2500	10300	3200	2200	8700	1200	1800	3000	5100			
BTA-3000	11300	3200	2200	9700	1200	1800	3000	6400			
BTA-2000S	11300	3200	2200	9700	1200	1800	3000	5400			
BTA-3000S	12300	3200	2200	10700	1200	1800	3000	6400			
BTA-4000S	14300	3200	2200	12700	1200	1800	3000	7400			
BTA-5000S	16300	3200	2200	14700	1200	1800	3000	8400			
BTA-6000S	18300	3200	2200	16700	1200	1800	3000	9400			





/ Spindle transmission made by world class in all BTA models to output powerful torque. deep drill.



/ Tool shank is fully WE HONG supported by spindle Application Division is type steady rest (option) capable to organize grinding technology are as vibration damper, the special boring and equipped as standard tool firmly move forward trepanning for bigger in rapid feed for precise and strict finishing

BTA-2500

/ Fixed- type tool holding block ensure the cutting tool support rigidity and allows high coolant pressure supply to activate strong chip





TPA Series

TPA Sories Specification								
Model	TPA-600	TPA-1200						
Diameter (Blind hole)	Ø 120mm / Ø 4.7"	Ø 150mm / Ø 6"						
Diameter (Core-stay)	Ø 250mm / Ø 10"	Ø 300mm / Ø 12"						

Drilling capacity	Depth (Unilateral)	300mm / 12"	600mm / 24"				
	Depth (Bilateral)	600mm / 24"	1200mm / 48"				
	Spindle Motor	37.5kW / 50HP					
Spindle	Spindle Speed	10 ~ 950rpm	10 ~ 850rpm				
	Spindle Taper	BT	B150				
Davita U a Jalia a	3- jaw Chuck	Stanadard: 18" Optional: 21"	Stanadard: 21" Optional: 24"				
Paris Holding	Steady Rest	Ø 100 - 400mm / Ø 4" - 16"	Ø 100 - 400mm / Ø 4" - 16" (STD) Ø 400 - 600mm / Ø 16 - 24" (OPT)				
Tavel	Z axis	1200mm / 48"	2300mm / 90"				
Controller		Mitsubish	ii / Fanuc				

* All specification subject to change without notice.

*Black lines for metric

unit mm									
	А	В	с	D	E	F	G	н	
TPA-600	3400	2800	2400	1700	1300	2000	1300	500	
TPA-1200	5200	5000	2300	2500	2200	1400	2200	850	







/ Tool rotation operation and acheives seizes the technology feedrate. Flexible to adapt various irregular shape parts and offcenter hole processing, free from balance gravity bother.



WEI HONG

trepanning tools.

TPA-1200

Enlarged chip disposal space built Application Division to design and produce conveyor lay in casting large capacity coolant

/ High pressure coolant system ease inside of machine. Chip chips removable. Ultra base and remove chips tank along with paper smoothly. (2 chip conveyors filtration is standard feature.

+ WE H NG





EBSERIES Cutting Show Room







Workpiece:Grant Roller
for mechanism partMachine Model:FEB-5050Drilling Dimension:Ø16mm * L1750m
connected drill from 2 sidesDrill L/d ratio:110 times (for unilateral drill)

Demo Highlight:

WE HENC FEB-5050 presents excellent loading and damper capability for deep drill recoil force. The total hole depth 3500mm for 2-sided drill in wide gap L/d ratio 110 times and thin pitch only 18mm from hole to hole become very tough engineering. Spending for more then 10 months in many other methods, customer fulfilled the successful cut presentation by WE HENC FEB-5050.

Mechanism Part







Demo Highlight:

This is a high precision huge ram to hold power tooling spindle for vertical turning lathe. The raw part comed with bumpy surface which caused the risky tooling vibration while drilling. **WE HONG** FEB exerted milling attachment to machine contact datum for tool bush and cutting surface, then accomplished all 9 deep holes drilling at once. **Once loading** and all process passed.







		FEB5050 Specification	
*Black lines for metric	*Blue lines for inch		

	Model	Gundrill System	BTA System	Milling System			
	Diameter	Ø 4 - 40mm / Ø 0.16 - 1.6"	Ø 30 - 100mm / Ø 1.2 - 4"	-			
Drilling capacity	Depth	5000mm / 197° 4000mm / 157°		-			
	Spindle Motor	11kW / 15HP	37.5kW / 50HP	11kW / 15HP			
Spindle	Spindle Speed	10 - 6000rpm	10 - 1200rpm	50 - 4000rpm			
	Spindle Taper	-					
	Working Table		6000mm * 4800mm / 236" * 189"				
Parts Holaing	Table Loading	50000kgs / 110000lb					
	X axis	5000mm / 197*					
Taul	Y axis	2000mm / 80"					
lavei	Z axis	5300mi	-				
	W axis		-	400mm / 16"			
	X axis		4m/min / 157ipm				
Devidend	Y axis		4m/min / 157ipm				
kapia Feed	Z axis	8m/min	-				
	Waxis		10m/min / 390ipm				
Controller		Mitusbhishi / Fanuc					

* All specification subject to change without notice.



▲ All the casting are constructed in strong ribs interlaced to perform superior cutting rigidity for heavy duty jobs.



Combine gundrilling, BTA configuration and milling / tapping system multiple functions provide total solution, especially for deep connected coolant channel for giant mould or huge mechanism components.



A Enlarge working table design provides solid support as a rock, heavy large parts stay on FEB fixed loading table (foundation required).



are fully foundry in tight

heavy loading.

ribs constructed. The whole

casting bracket will be built-in

concrete foundation to bear



Specialized coolant system provides powerful support for long time machining.