MILLING AND BORING MACHINING CENTER

HBC -series

This machine adpots cross-slide moving structure. The boring spindle is made of advanced materials with careful heat treatment which improved the surface hardness, wear resistance, rigidity, and precision preservation of the W boring shaft. It's mainly applicated in small and medium-sized discs, shells, boxes parts machining, especially surface milling and hole processing. It can be widely used in locomotive, power generation, automotive and engineering machinery industries.

PRODUCT ADVANTAGES

• The rotary table adopts servo motor drive cross roller bearing (bearing outer ring is gear ring) dual motor anti-backlash control, it can help achieve higher load capacity; meanwhile it is equipped with angle grating ruler to meet the requirements of 8" high positioning accuracy for any indexing of the rotary table;
• The main drive adopts the direct connection type between the spindle motor and the two-stage gearbox to transfer the power to the spindle, which can fully utilized the efficiency of the spindle motor,ensure the low speed but large torque output to meet heavy cutting demands.

HBF -series

This machine series adopts moving column, side-mounted spindle box, moving ram layout, and is equipped with CNC rotary table (or floor-standing table).The X-axis of the machine tool adopts double-motor anti-backlash high-precision rack and pinion transmission form, and the other axes are driven by servo motors, precision reducers and high-precision ball screws. X, Y, and Z axes all use high-precision grating rulers for closed-loop control to ensure higher positioning accuracy.

PRODUCT ADVANTAGES

• The spindle box adopts a two-stage gear: at low speed level, the output torque is large, suitable for heavy cutting; at high speed level, the output speed is high, suitable for high-speed cutting.
• The square ram is made of high quality ductile iron, and Y axis is driven by double screw to compensate for the droop deformation caused by the boring bar and the square ram moving forward.

HBP -series

This machine series adopts movable and single column, horizontal bed, hanging upright spindle box, while equipped with cutting tools and workpiece cooling system. It is suitable for processing various large and medium-sized parts such as plate parts, disc parts, shell parts, molds etc. It can automatically, efficiently and accurately complete a variety of processes such as boring, milling and drilling with 1-time clamping.

PRODUCT ADVANTAGES

• The rotary table adopts imported cross roller bearings (the outer ring is a gear ring), through the dual motor and double gear anti-backlash transmission, and standard equipped with a circular grating, can realize its precise indexing positioning, with high precision and arbitrary indexing positioning function;
• The rotary table clamping device adopts disc spring clamping and hydraulic releasing, equipped with pressure detection and release position detection. The double detection ensures the rotary table running smoothly without failure.

Model	HBC1320	HBC1116	HBF16	HBF13
Boring spindle diameter(mm)	φ130	φ110	φ160	φ130
Spindle max. cutting torque(Nm)	2000/2977	2000/2977	3500/5254	3000/3721

Model	HBP16	HBP13	HBP11
Boring spindle diameter(mm)	φ160	φ130	φ110
Spindle max. cutting torque(Nm)	3500/5254	2500/3721	2000/2977

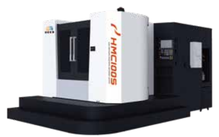
DEED — PRECISE | LARGE | CUSTOMIZED

HORIZONTAL MACHINING CENTER

This machine series is high precision horizontal machining center independently researched,designed and manufactured by DEED, with advantages of high precision, high speed, highefficiency, high efficiency. It is suitable for multi-side and hole processing of box-type parts in various industries such as aerospace, military, automotive, precision molds etc.

HMC -series

Single-pallet Horizontal Machining Center



• The machine base parts are made of mineral casting, compared to traditional high energy-consuming cast iron parts, it has excellent vibration absorption, thermal stability, higher rigidity and corrosion resistance ability, which can effectively improve the processing quality of the parts surfaces;
• The inverted T-shape overall structure, together with the gantry type double wall column structure, can help the machine get stronger structural rigidity, larger travel,and higher precision, the machine can be better suitable for all kinds of heavy cutting, high precision machining demands;
• Equipped with gear type positioning CNC rotary table, the precision can be higher, with air curtain dust proof, precision retaining ability can be improved.

Double-pallet Horizontal Machining Center

• The machine body is designed as a positive T-shaped high-rigidity one-piece bed, portal double-wall column structure, and adopts finite element (FEM) analysis and positive hanging box layout, which can realize high-rigidity heavy cutting machining;
• Equipped with servo APC (automatic pallet changer), shorter exchange time and more accurate positioning, and also equipped with positioning cone cleaning compressed air to ensure high-precision positioning;
• Adopting AC servo spindle motor can realize stepless speed regulation of spindle, and equipped with two-speed gearbox to meet the requirements of low-speed and high-torque and high-speed cutting at the same time.

Model	HMC50S	HMC50	HMC63S	HMC63		HMC80S	HMC80	HMC100S
				Belt type	Direct type		Direct type	
Travel(X×Y×Zmm)	850×600×700	850×600×700	1050×800×950	1050×700×900	1050×850×900	1500×1000×1150	1300×1100×1100	1600×1200×1200
Table Size(mm)	500×500	500×500	630×630	630×630	630×630	800×800	800×800	1000×1000
Quantity of work table	1	2	1	2	2	1	2	1

AUTOMATIC SOLUTIONS

Reduced machining complexity and shorter engineering times with intelligent, open industry solutions and concepts.

With many years of experience in automation control, mechatronics R&D technology and manufacturing, DEED offers high-efficiency, high-precision, and high-reliability products, systems and solutions for mechanical automation.
With strong research and development capabilities, professional technology and real-time global services, the mechanical automation solutions provided by DEED can not only help customers effectively improve the speed and efficiency of automated production, improve product accuracy and reliability, but also can reduce labor costs and production costs, save material consumption, reduce equipment loss and improve competitiveness.




DEED

LET CHINESE MACHINE TOOLS WIN RESPECT OF THE WORLD

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SHANDONG DEED PRECISION MACHINE TOOL CO.,LTD.

DEED — PRECISE | LARGE | CUSTOMIZED

VERTICAL MACHINING CENTER

VL -series

This machine adopts cross slide moving structure with roller linear guideway, mainly used for the processing of various small and medium-sized complex parts, can complete milling,drilling, rearming, boring, tapping, contour milling and other processing by one-time clamping,suitable for processing various parts with high precision, multi-process and complex shapes.With the installation of CNC rotary table, the machine can do 4-axis/ 5-axis machining.

PRODUCT ADVANTAGES

• The base parts adopt German mineral casting technology, which has excellent vibration absorption and thermal stability.
• The moving parts adopt German advanced steel welding technology, which can help get higher rigidity, and the lower weight can help improve the response speed of the machine.
• Z-axis is designed without counterweight, which can help reduce machine vibration when the Z-axis changes direction at high speed during machining.

VMC -series

This machine is a small and medium size high-speed high-precision vertical machining center designed in Germany. It adopts the mainstream European design structure, and It's suitable for multi-parts machining with different complexity level such as medium and small box type,plate type, disk type and shell type parts.

PRODUCT ADVANTAGES

• The base parts adopt German mineral casting technology, which has excellent vibration absorption and thermal stability.
• The centralized automatic grease lubrication system is applied for each lubrication point of guide rail and ball screws, it can help avoid leakage and completely solve the problem of oil pollution by mixing with the cutting fluid, then the machine maintenance cost can be reduced.

GV -series

This machine is a gantry type vertical machining center, the bed is fixed to the cross beam,and the slider is running left and right on X-axis direction on the cross beam, worktable and workpieces will move back and forth on Y-axis direction only. It can be mainly used for very high precision molds making.

PRODUCT ADVANTAGES

• Adopting portal structure, most of the feed motion is concentrated on the non-load parts, it can help reduce motion inertia and ensure machining quality.
• Adopting portal structure, large span support form can help guarantee the contact rigidity and mechanical rigidity of the base parts.
• Adopting portal structure, the distance from the center of gravity of the spindle box to the cross beam can be greatly reduced, and the machining rigidity of spindle can be guaranteed.
• Equipped with 15,000rpm high-speed direct type spindle with 18,000rpm, 20,000rpm and 24,000rpm electric spindles as options, it can help improve machining efficiency as well as get better surface quality.

Model	V650L	V850L	V1160L	V1370L	V1580L	V1690L	V1890L
Travel(X×Y×Zmm)	600×460×510	850×510×510	1100×610×610	1300×710×710	1500×810×810	1600×910×810	1800×910×810
Table Size(mm)	600×400	950×500	1200×600	1400×700	1700×800	1800×900	2000×900

Model	VMC -series			GV -series		
	VMC50B	VMC60B	VMC70B	GV50B	GV60B	GV70B
Travel(X×Y×Zmm)	850×500×600	1100×600×600	1400×700×700	850×500×500	1100×600×600	1300×700×600
Table Size(mm)	950×500	1200×600	1500×700	950×500	1200×600	1400×700

5-AXIS MACHINING CENTER

VB - Series vertical five axis machining center

This equipment is designed by a well-known European machine tool design company, manufactured in China, a small and medium-sized vertical five-axis machining center, the use of bridge structure, and combined with the company's many years of machine tool design and manufacturing experience, a large number of usage characteristics, to develop a new generation of high-speed, high-precision products. It can be widely used in blade, impeller, mold industry and other types of mechanical processing industry in the complex surface parts processing, to meet the needs of medium and small box parts and space curved surface parts processing. It is widely used in aerospace, mold, high precision instruments, civil industry, military enterprises and other fields.

PRODUCT ADVANTAGES

• The overall gantry type compact structure has good rigidity, and the Y-axis adopts a dual drive structure design to ensure the balance of high-speed movement. The box type spindle box structure brings higher stability in large torque output.
• X /Y/ Z axes are equipped with linear scales, the A and C axes are equipped with a time linear scale, ensuring that the machine tool improves the accuracy level of the workpiece and high positioning accuracy under high-speed and fast movement.

GB - Series bridge type five axis linkage machining center

This series of products is a high-speed bridge type five axis linkage gantry machining center jointly developed and manufactured by German ROTTLER company and DEED. This product has the structural characteristics of high speed, high precision, high rigidity, and high reliability. It can work continuously and normally under specified environmental conditions, with stable accuracy. It is mainly used for precision machining in industries such as automobiles, aviation, aerospace, power, and large molds. It is particularly suitable for high-precision and high-speed milling of various spatial continuous surfaces with heavy parts and long workpiece lengths.

PRODUCT ADVANTAGES

• The C-axis is hidden inside the slider and driven by a torque motor, which expands the effective machining space of the Z-axis and ensures the consistency of C-axis positioning accuracy.

Model	VB50F5	VB63F5	VB80F5	GB5550BF5	GB6550BF5	GB8550BF5
Travel(X×Y×Zmm)	510×(600+400)×500	800×(800+400)×600	900×(1000+400)×700	5500×4000×1500	6500×4000×1500	8500×4000×1500
Table Size(mm)	Ø500	Ø630	Ø800	5500×4000	6500×4000	9000x3500

RY - Vertical Five-axis Machining Center

The RY series products are vertical machining centers jointly developed and manufactured in Germany by German company ROTTLER and DEED. This product has the structural characteristics of high speed, high precision, high rigidity, and high reliability. It can work continuously and normally under specified environmental conditions with stable accuracy. It is mainly used for precision machining in industries such as automobiles, aviation, aerospace, power, and small and medium-sized molds. It is particularly suitable for high-precision and high-speed milling of parts with large weight and uneven weight.

PRODUCT ADVANTAGES

• The fixed components of the machine tool base and column are made of new mineral casting materials. Compared with traditional cast iron materials, they have excellent vibration absorption, low thermal expansion coefficient, low thermal conductivity coefficient, excellent corrosion resistance, and low internal stress during room temperature casting and solidification.

Model	V650-3	V850-3	V900-3	V1100-3	V1300-3	V1500-3	V650-5	V900-5	V1300-5
Travel(X×Y×Zmm)	650×450×520	850×450×520	900×550×600	1100×550×600	1300×750×700	1500×750×700	650×450×520	900×550×600	1300×750×700
Spindle nose to worktable surface (mm)	150-670	150-670	150-750	150-750	150-850	150-850	150-670	150-750	150-850

GANTRY MACHINING CENTER

This machine adopts a movable workbtable and a closed gantry frame structure composed of the bed, columns and beam, which has the characteristics of high rigidity and high stability. The machine can complete surface milling, boring, drilling, rigid tapping and three-axis linkage curved surface processing. It can also add milling head to achieve five surface processing in one clamping according to customer requirements.

GL-series

PRODUCT ADVANTAGES

• Inorganic mineral casting material, with strong vibration absorption and thermal stability, ensures the stability of physical and mechanical properties;
• The three axis moving parts are supported by heavy loading roller linear way, and roller retainers are used to prevent deviation, achieve balanced and stable movement, and ensure the accuracy and stability of the machine tool for long-term running.

APPLICATION AREA

High-end manufacturing industries such as automobiles, molds, aerospace, rail transit, household appliances, and medical treatment use it for high-speed and heavy-cutting of metal parts.

GMC-series

PRODUCT ADVANTAGES

• Inorganic mineral casting materiol, with strong vibration absorption and thermal stability, ensures the stability of physical and mechanical properties;
• High-rigidity square ram structure with a large cross section of 400x400mm and 450x500mm, can achieve powerful cutting in the full stroke of the Z-axis.

APPLICATION AREA

Suitable for high-end manufacturing industries such as automobiles, molds, aerospace, rail transit, household appliances, wind power, and military applications.

Model	G1614L	G2016L	G2018L	G2518L	G3018L	G3518L	G4018L	G4518L	G5018L	G5518L	G6018L	G3024L	G3524L	G4024L	G4524L	G5024L	G5524L	G6024L	G3028L	G3528L
Travel(X×Y×Zmm)	1600×1300×800	2100×1600×850	2100×1800×850	2600×1800×850	3100×1800×850	3500×1800×850	4000×1800×850	4500×1800×850	5000×1800×850	5500×1800×850	6000×1800×850	3000×2400×850	3500×2400×850	4000×2400×850	4500×2400×850	5000×2400×850	5500×2400×850	6000×2400×850	3000×3400×1250	3500×3400×1250
Table Size(mm)	1600×1300	2000×1400	2000×1600	2500×1600	3000×1600	3500×1600	4000×1600	4500×1600	5000×1600	5500×1600	6000×1600	3000×1800	3500×1800	4000×1800	4500×1800	5000×1800	5500×1800	6000×1800	3000×2200	3500×2200

Model	G4028L	G4528L	G5528L	G6528L	G4532L	G5532L	G6532L	G8532L	G10532L	G5537L	G6537L	G8537L	G10537L	G12537L	G10542L	G12542L	G14542L
Travel(X×Y×Zmm)	4000×3400×1250	4500×3400×1250	5500×3400×1250	6500×3400×1250	4500×3800×1250	5500×3800×1250	6500×3800×1250	8500×3800×1250	10500×3800×1250	5500×4300×1250	6500×4300×1250	8500×4300×1250	10500×4300×1250	12500×4300×1250	10500×4300×1250	12500×4300×1250	14500×4300×1250
Table Size(mm)	4000×2200	4500×2200	5500×2200	6500×2200	4500×2800	5500×2800	6500×2800	8500×2800	10500×2800	5500×3200	6500×3200	8500×3200	10500×3200	12500×3200	10500×3500	12500×3500	14500×3500

Model	GMC2016L	GMC2516L	GMC3016L	GMC3516L	GMC4016L	GMC2020L	GMC2520L	GMC3020L	GMC3520L	GMC4020L	GMC3024L	GMC3524L	GMC4024L	GMC4524L	GMC3028L	GMC3528L	GMC4028L
Travel(X×Y×Zmm)	2000×1600×850	2500×1600×850	3000×1600×850	3500×1600×850	4000×1600×850	2000×2000×850	2500×2000×850	3000×2000×850	3500×2000×850	4000×2000×850	3000×2400×850	3500×2400×850	4000×2400×850	4500×2400×850	3000×3600×1250	3500×3600×1250	4000×3600×1250
Table Size(mm)	2000×1250	2500×1250	3000×1250	3500×1250	4000×1250	2000×1600	2500×1600	3000×1600	3500×1600	4000×1600	3000×1800	3500×1800	4000×1800	4500×1800	3000×2600	3500×2600	4000×2600

Model	GMC4528L	GMC5028L	GMC5528L	GMC6528L	GMC5532L	GMC6532L	GMC8532L	GMC10532L	GMC5537L	GMC6537L	GMC8537L	GMC10537L
Travel(X×Y×Zmm)	4500×3600×1250	5000×3600×1250	5500×3600×1250	6500×3600×1250	5500×4000×1250	6500×4000×1250	8500×4000×1250	10500×4000×1250	5500×4500×1250	6500×4500×1250	8500×4500×1250	10500×4500×1250
Table Size(mm)	4500×2600	5000×2600	5500×2600	6500×2600	5500×2800	6500×2800	8500×2800	10500×2800	5500×3500	6500×3500	8500×3500	10500×3500

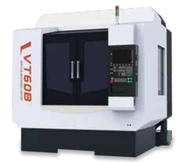
VT VERTICAL TAPPING MACHINING CENTER

This product is a vertical tapping machining center independently designed and developed by our company. The product has the structural characteristics of high speed, high precision, high rigidity and high reliability, and can continuously work with stable accuracy under specified environmental conditions.

VT-series

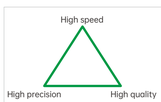
PRODUCT ADVANTAGES

• The gantry frame structure effectively avoids the problem of overshooting when the load weight is small and delay when the load weight is heavy;
• Inorganic mineral casting material, with strong vibration absorption and thermal stability, ensures the stability of physical and mechanical properties;
• The moving parts of the machine adopts Germany's advanced new steel plate welding technology, which has higher rigidity;
Reduces the weight and improves the response speed of the machine.



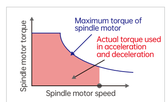
APPLICATION AREA

It can be widely used in precision processing like 3C industry, 5G, auto parts, small mold processing, medical equipment and other industries. It is especially suitable for high-efficiency processing of large-volume parts and non-ferrous metals.



HIGH SPEED

A better acceleration and deceleration of the servo axis and spindle;
Rapid traverse: 60m/min;
1G acceleration; High-speed drilling and tapping.



HIGH-EFFICIENCY INTELLIGENT RIGID TAPPING

No need to adjust the tapping time constant, the spindle uses the maximum output power to accelerate and decelerate, achieving fast and optimal rigid tapping and improving processing efficiency.

Model	VT60B
Travel(X×Y×Zmm)	1100×600×550
Table Size (mm)	1200×600

CNC LATHE

HTC-series

This series of machine tools is a CNC turning center for machining parts such as discs, sleeves, and shafts. It is suitable for machining inner and outer cylindrical surfaces, conical surfaces, stepped surfaces, grooves, spherical surfaces, and various other rotating surfaces, as well as various metric and inch internal and external threads. With the addition of special functional components, it can be clamped in one go to achieve functions such as turning, grinding, milling, drilling, tapping, hobbing, slotting, etc. It is widely used in industries such as bearings, automobiles, and gears.

VTC-series

This machine series is developed for rough and fine turning of automotive disk and box parts. The main processing material can be gray cast iron, ductile iron,steel, copper, aluminum etc. and it's suitable for the machining of base, rotors,mechanical accessories, transition sleeves, connecting sleeves, front wheel hubs etc.

Model	HTC-series				VTC-series						
	HTC420	HTC560	HTC600	HTC700	VTC450	VTC550	VTC650	VTC850	VTC1000	VTC1250	VTC1600
Max. swing diameter(mm)	φ420	φ560	φ600	φ700	φ600	φ700	φ800	φ980	φ1350	φ1600	φ2000
Max. turning diameter(mm)	φ380	φ480	φ540	φ630	φ450	φ550	φ650	φ850	φ1100	φ1400	φ1800
Max. processing length(height)(mm)	500	500-1000	1000-1500	500-3000	500	600	700	900	1000	1200	1600

CNC LATHE SPECIALLY FOR WHEEL HUB

VTC/DVTC-W-series

This machine series is designed for the rough and fine turning of automobile wheel hubs, mainly for the processing of passenger vehicle wheel hubs and commercial vehicle wheel hubs below 24 inches, as well as disc parts of similar size and structure.

HTC-W-series

This machine series is developed for rough and fine turning of automobile wheel hubs,mainly for 12-22 inch passenger vehicle wheel hubs and commercial vehicle wheel hubs, as well as disc parts of similar size and structure.

Model	VTC-W-series			DVTC-W-series			HTC-W-series	
	VTC-W8035	VTC-W9035	VTC-W9041	DVTC-W8035	DVTC-W9035	DVTC-W9041	HTC-W800	HTC-W900
Max. swing diameter(mm)	φ800	φ900	φ900	φ800	φ900	φ900	φ800	φ900
Max. hub turning diameter(inch)	22"	26"	26"	22"	26"	26"	22"	26"
Max. Hub turning length(inch)	12"	12"	14"	12"	12"	14"	12"	14"