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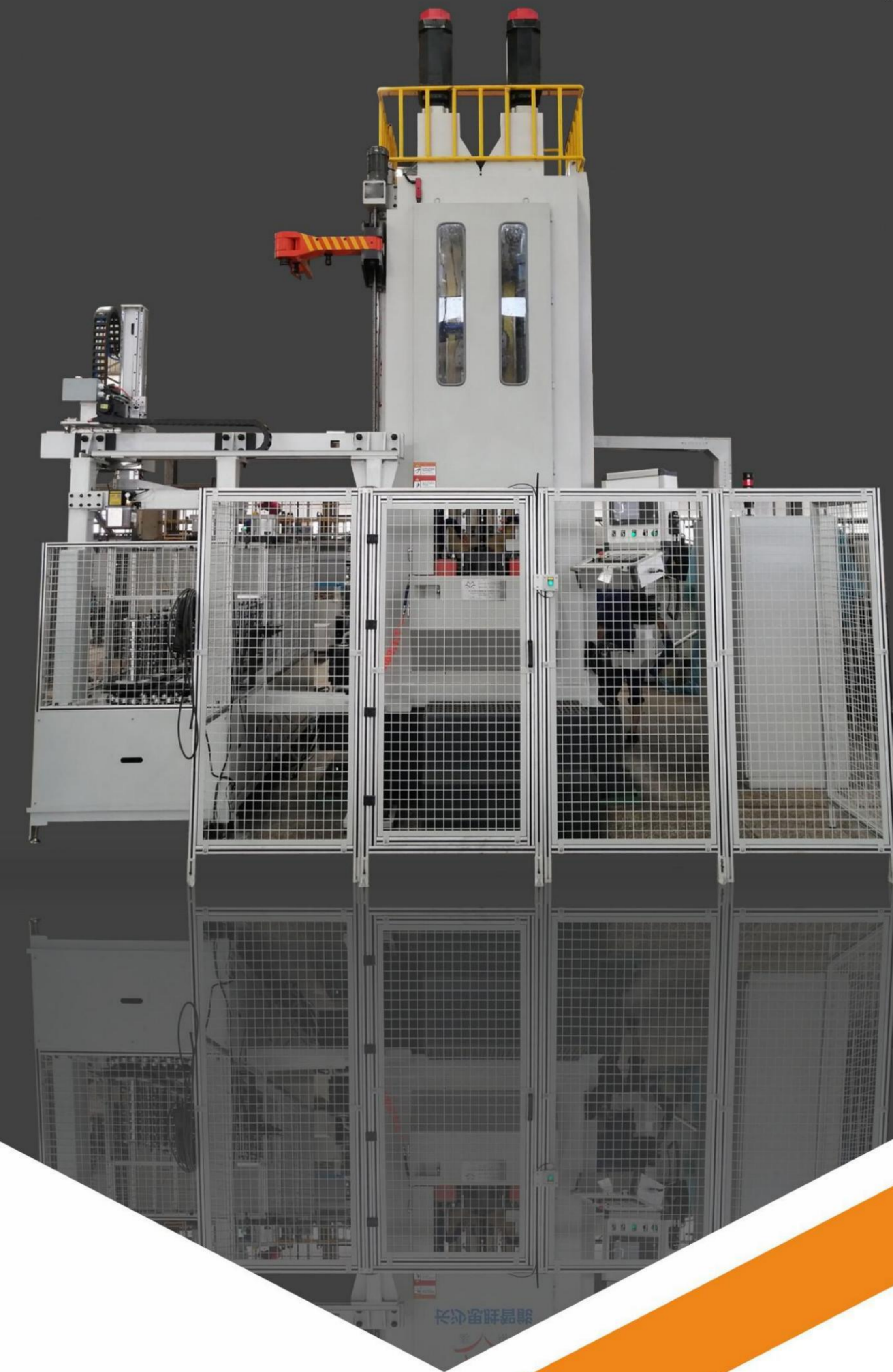
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拉床
BROACHING MACHINE



 **U·BRIGHT SOLUTIONS**
ADVANCED MANUFACTURING SOLUTIONS PROVIDER

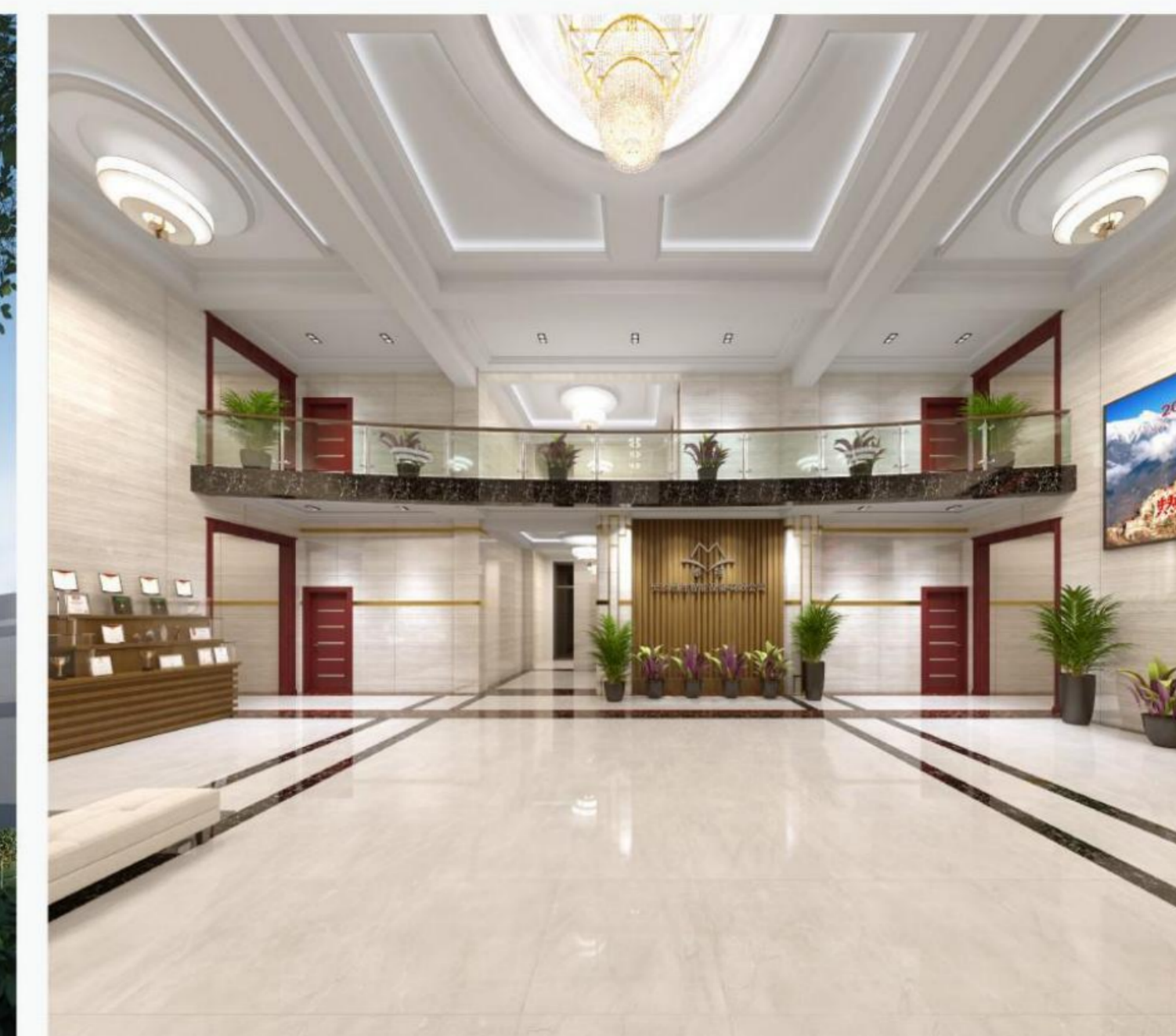
企业愿景
传承长沙拉床 振兴民族品牌



全新拉床产业化基地建设完成
将为广大客户提供更优更全面的拉削技术服务
开启拉床行业新篇章



办公大楼



办公大厅



加工车间

严谨装配



技术中心



装配车间



各类检具



三坐标检测中心



齿轮检测仪



焊接探伤



量具校准

检测室

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数控伺服内拉床

CNC servo internal broaching machine

数控机械内拉床主要应用于汽车零部件、减速机、农机、航空、军工及工程机械等行业产品的内齿、内花键以及孔类的加工。其加工尺寸和形状位置精度高、效率高，维护方便、加工成本低，设备采用FANUC伺服系统，易实现设备自动化加工和生产连线。

本机床主传动系统由伺服电机与丝杠传动，滚珠丝杠采用德国亿浮品牌，其他辅助动作均采用启动控制，工作平稳，工作速度通过无级调速，机床在拉削运动Z轴上利用编码器或光栅尺，进行终端检测，实现全闭环控制，有效保证了机床的运行加工精度。

此设备较之传统液压拉床大大节约了空间尺寸。

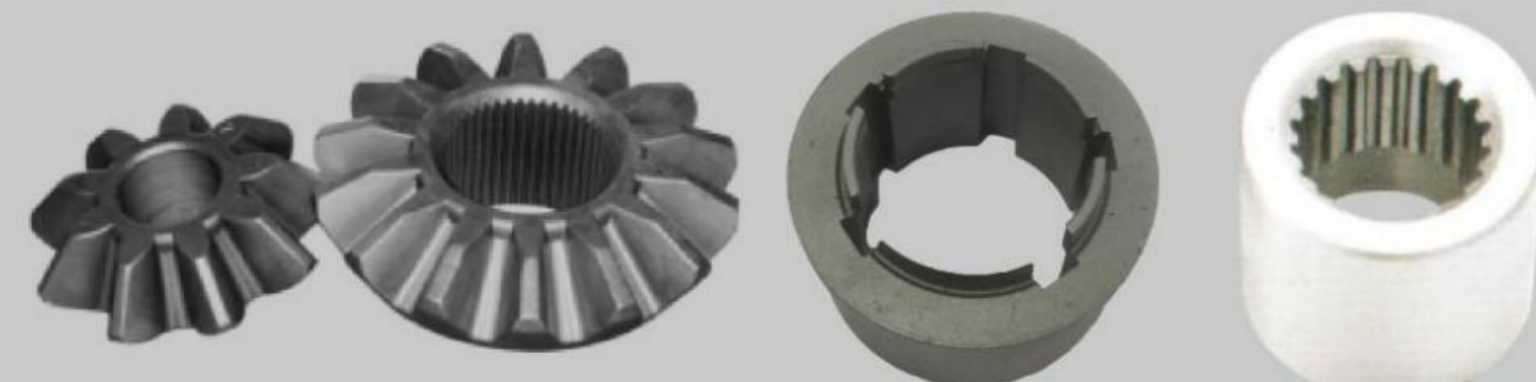
CNC machine internal broaching machine is mainly used in auto parts, gear reducer, agricultural machinery, aviation, military industry and engineering machinery industry products such as inner gear, internal spline and hole processing. Its processing position size and shape of high precision, high efficiency, convenient maintenance, low processing cost, equipment using FANUC servo system, easy to realize the automatic processing equipment and production of attachment.

The machine tool main drive system by the servo motor and ball screw drive, ball screw with German i+f brand, other auxiliary action adopt pneumatic control, working smoothly, working speed by stepless speed regulation, the broaching machine tool movement on the Z axis by using encoder or grating ruler, is used to detect the terminal, realize the full closed loop control, effectively guarantee the operation of the machine tool machining accuracy.

The equipment than the traditional hydraulic broaching machine greatly save the space size.



加工零件



数控伺服内拉床
CNC servo internal broaching machine

机床型号 Model	LJ5105F	LJ5705	LSG5710	LSG5720	(双丝杆) LSG55720	(双丝杆) LSG55740	单位 Units	
额定拉力 Rated pulling capacity	50	50	100	200	200	400	KN	
额定扭矩 Rated torque	170	170	350	750	750	1600	Nm	
额定行程 Nominal stroke	800	800	1250	1600	1650	2000	mm	
拉刀最大长度 Max.length of broach	990	990	1300	1800	1800	2200	mm	
主溜板 Main slide carriage	工作速度 Cutting speed	1-6.4	1-6.4	1-10	1-20	1-12	1-10	m/mim
	返回速度 Return speed	1-6.4	1-6.4	1-10	1-20	1-12	1-12.5	m/mim
辅溜板 Auxiliary slide carriage	送刀速度 Tool down feeding speed	1-5	1-5	1-5	1-5	1-5	1-5	m/mim
	提刀速度 Tool feeding speed	1-5	1-5	1-5	1-5	1-5	1-5	m/mim
工作台 Worktable	工作台尺寸(长×宽) Size of work table(L×W)	400×200	240×195	300×320	440×340	500×550	600×480	mm
	工作台孔径 Bore of working table	65	80	150	200	200	250	mm
	上下料高度 Height of loading and unloading	890	890	925	1050	1300	1300	mm
Z轴伺服电机功率 Power of servo motor of Z axis	7	7	15	30	14+14	30+30	KW	
Z轴伺服电机转矩 Torque of servo motor of Z axis	33.4	33.4	72	150	75×2	200×2	Nm	
Z轴伺服电机转速 Speed of servo motor of Z axis	2000	2000	2000	2000	3000	2500	rpm	
C轴伺服电机功率 Power of servo motor of C axis	0.75	0.75	1.8	1.8	2.2	2.2	KW	
C轴伺服电机转矩 Torque of servo motor of C axis	2.4	2.4	27	27	52	52	Nm	
C轴伺服电机转速 Speed of servo motor of C axis	3000	3000	2000	2000	4000	4000	rpm	
冷却泵电机功率 Power of coolant pump motor	1.1	1.1	2.2	2.2	4+2.2	4+2.2	KW	
机床占地面积及总高度(长×宽×高) Floor area and height(L×W×H)	1600×1000 ×2800	2200×1900 ×3600	2500×2600 ×4300	2800×3300 ×5000	3400×3100 ×5100	4000×3900 ×6200	mm	
机床净重 Net weight	5800	5500	10000	17000	21000	30500	kg	

立式上拉式内拉床

Vertical upward internal broaching machine

该系列机床为全防护、全护送结构形式的立式内拉床，机床辅助滑板安装在主滑板上，在机床工作时，主辅滑板上的卡刀装置同时对拉刀的前后刀柄进行有效支撑，保证拉刀在工作过程中固定不动，两端不产生位移，被加工工件在工作台上通过自定心后随主滑板向上运动，拉削完成进行送料和返回，机床全护送拉削方式有效保证了被加工零件的精度及稳定性。此设备为地面式安装。

此类机床适用于加工各类型内齿轮、内花键、几何形状的内孔，机床采用液压传动，通过人机界面无级调速，可分全自动循环、半自动分段、手动调整三种操作模式。机床配备自动调刀功能。

机床可选配自动上、下料装置，（桁架机械手或关节机器人）大大减轻操作者的劳动强度，零件加工提质提量。

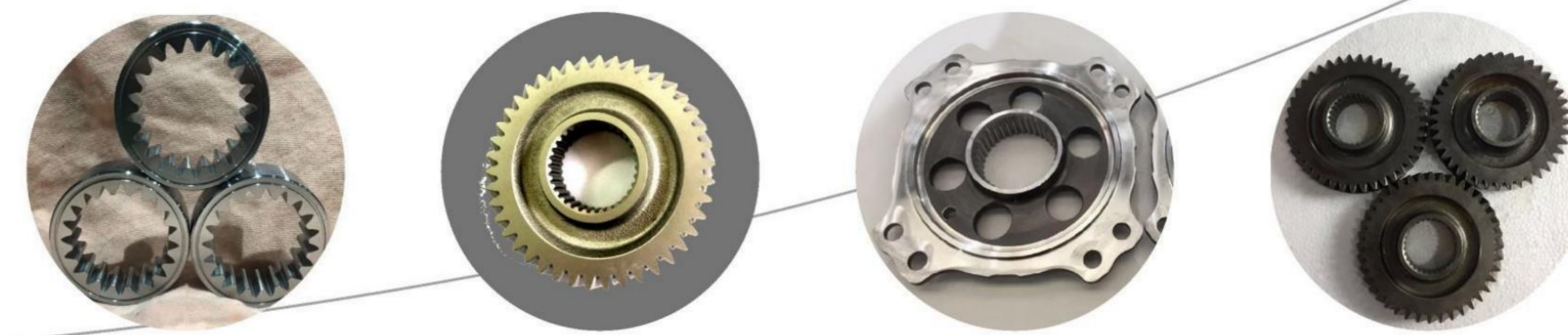
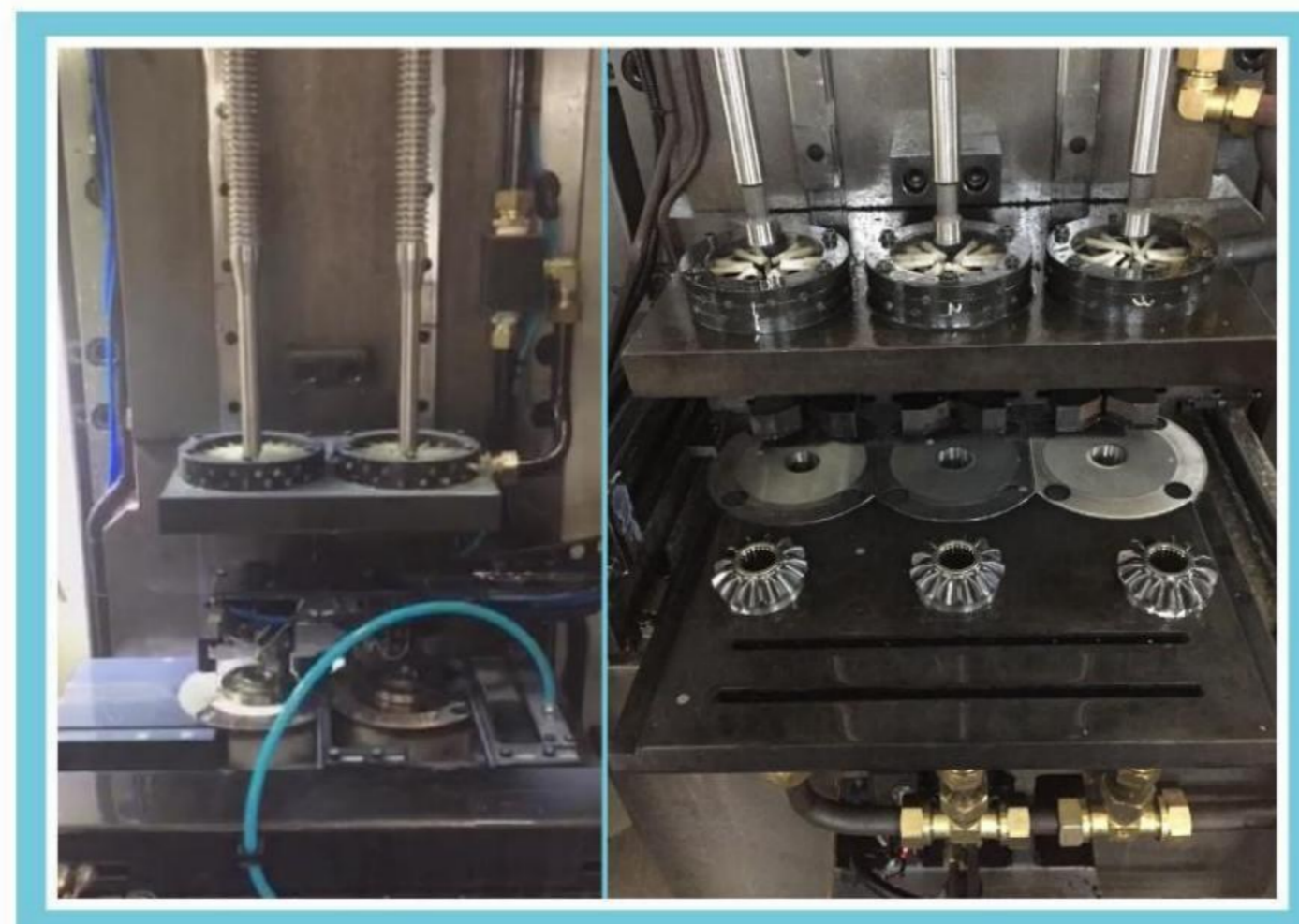
机床也可根据客户实际需求选择多工位结构，可选范围根据实际计算拉削力确定。

This series of machine tool for full protection, full escort structure forms of vertical broaching machine, auxiliary boards installed on the main board, the machine is working, advocate complementary skateboard card before and after the knife device at the same time to broach the handle effectively, guarantee the broach in the working process of the stationary, does not produce displacement on both ends, the processed workpiece on the workbench after self-centering upward movement with the main board, and the broaching completed return and return material, full escort broaching methods effectively guarantee the accuracy and stability of the processed parts. The machine for ground type installation.

This machine is suitable for processing all kinds of internal gear, internal spline, the geometry of the inner hole, the machine adopts hydraulic drive, through the man-machine interface stepless speed regulation, can be divided into automatic circulation mode, semiautomatic segmentation, manually adjust the three operating modes. Machine equipped with automatic adjustment tool function.

Optional automatic material delivery machine, (truss manipulator or robot) greatly reduce the labor intensity of operators, improve the quality of parts machining, increase production.

Machine also can select more than one processing position according to the customer actual demand structure, the optional scope according to the practical calculating broaching force is determined.



立式上拉式内拉床
Vertical upward internal broaching machine

机床型号 Model	L5705	L5710	L5720	单位 Unit	
额定拉力 Rated pulling force	50	100	200	KN	
额定行程 Rated stroke	800	1250	1600	mm	
拉刀长度范围 Range of broaching tool length	350-1000	600-1400	650-1800	mm	
主滑板 Main slide carriage	工作速度 Cutting speed	2-10	2-8	2-8	m/min
	返回速度 Return speed	2-15	2-15	2-15	m/min
辅滑板 Auxiliary slide carriage	送刀速度 Tool down feeding speed	3-8	3-8	3-8	m/min
	提刀速度 Tool feeding speed	3-14	3-14	3-14	m/min
工作台 Worktable	工作台面尺寸（长×宽） Size of worktable surface	310x350	410x340	390x485	mm
	工作台孔径 Bore diameter of worktable	Φ150	Φ150	Φ170	mm
	上下料高度 Height of loading and unloading	850	900	980	mm
主泵 Main pump	流量 Flow	50	135	210	L/min
	额定工作压力 Rated working pressure	12	12	12	Mpa
电机 Motor	主电机功率 Main motor power	7.5	15	30	KW
	主电机转速 Main motor speed	1440	1470	1480	r/min
	辅泵电机功率 Main motor speed	1.5	2.2	2.2	KW
	辅泵电机转速 Auxiliary motor speed	1400	1440	1440	r/min
	冷却泵电机功率 Cooling motor power	1.5	2.2	2.2	KW
机床占地面积及总高度（长×宽×高） Floor area and height (L×W×H)		2200x2450x3600	3324x2850x4590	3664x3010x5170	mm
机床净重 Net weight		5000	9000	16000	kg

立式下拉式内拉床

Vertical downward internal broaching machine



该系列机床为半防护、全护送结构形式的立式内拉床，辅助滑板安装在主滑板上，在机床工作时，主辅滑板上的卡刀装置同时对拉刀的前后刀柄进行有效支撑，保证拉刀在工作过程中固定不动，两端不产生位移，被加工工件在通过自定心后固定在工作台上，拉刀向下运动，拉削完成进行退料和返回，全护送拉削方式有效保证了被加工零件的精度及稳定性。此设备安装方式分为地面式安装和埋入式安装。

此类机床适用于加工各类型内齿轮、内花键、几何形状的内孔，机床采用液压传动，通过人机界面无级调速，可分全自动循环、半自动分段、手动调整三种操作模式。机床配备自动调刀功能。

机床可选配自动上、下料装置，（桁架机械手或关节机器人）大大减轻操作者的劳动强度，零件加工提质增效。

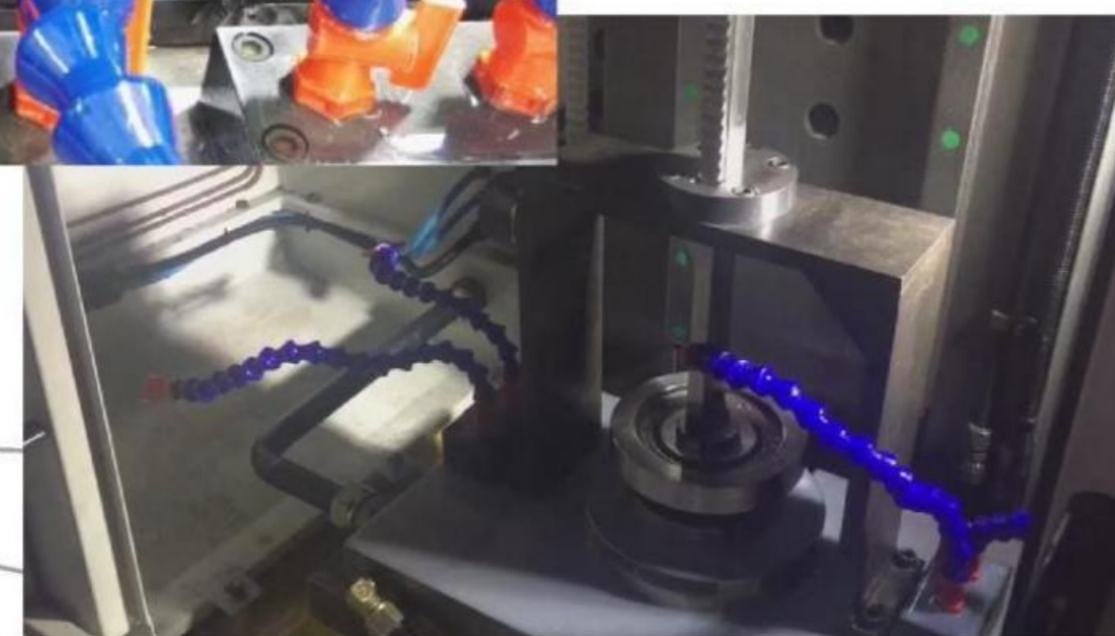
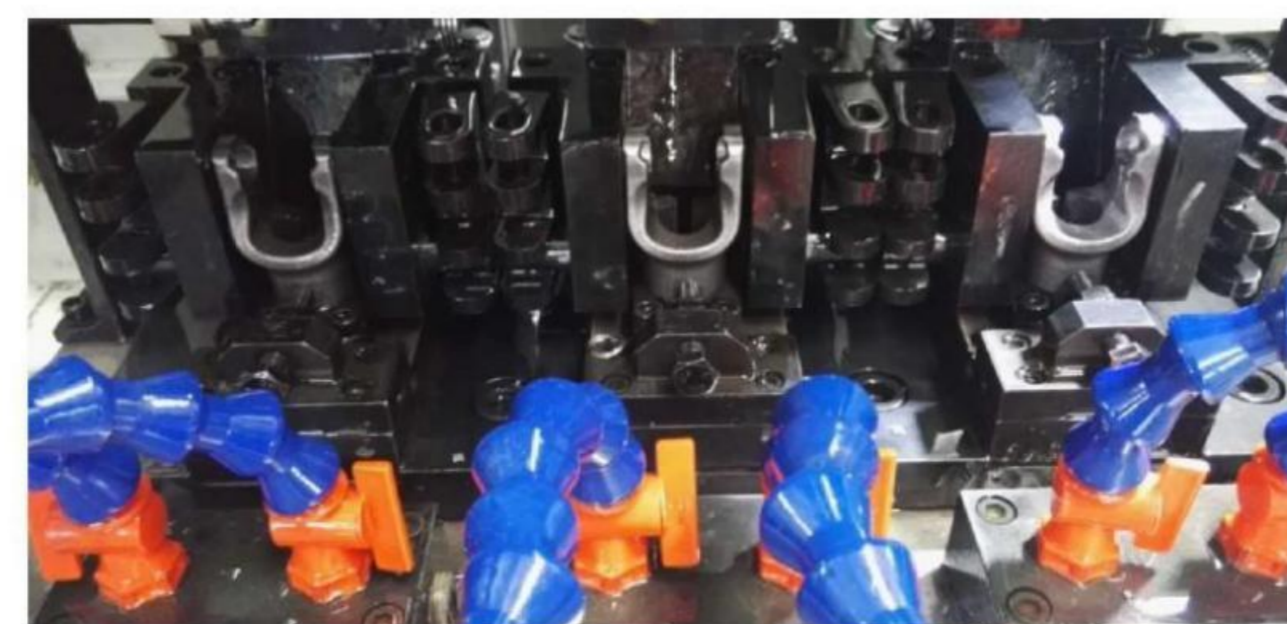
机床也可根据客户实际需求选择多工位结构，可选范围根据实际计算拉削力确定。

This series of machine is half protection, full escort structure forms of vertical broaching machine, auxiliary boards installed on the main board, the machine is working, advocate complementary skateboard card before and after the knife device at the same time to broach the handle effectively, guarantee the broach in the working process of the stationary, does not produce displacement on both ends, the processed workpiece after through self-centering fixed on the workbench, broach downward movement, broaching to return and return material complete, full escort broaching methods effectively guarantee the accuracy and stability of the processed parts. The equipment installation installed into the ground type and embedded type

This machine is suitable for processing all kinds of internal gear, internal spline, the geometry of the inner hole, the machine adopts hydraulic drive, through the man-machine interface stepless speed regulation, can be divided into automatic circulation mode, semiautomatic segmentation, manually adjust the three operating modes. Machine equipped with automatic adjustment tool function.

Optional automatic material delivery machine, (truss manipulator or robot) greatly reduce the labor intensity of operators, improve the quality of parts machining, increase production.

Machine also can select more than one processing position according to the customer actual demand structure, the optional scope according to the practical calculating broaching force is determined.



立式下拉式内拉床
Vertical downward internal broaching machine

机床型号 Model	L5105F/J	L5110F/J	L5120F	L5140F	单位 Unit	
额定拉力 Rated pulling force	50	100	200	400	KN	
额定行程 Rated stroke	800	1250	1600	2000	mm	
拉刀长度范围 Range of broaching tool length	300-918	350-1190	600-1800	800-2200	mm	
主溜板 Main slide carriage	工作速度 Cutting speed	3-8	3-8	3-10	3-10	m/min
	返回速度 Return speed	3-16	3-16	3-16	3-15	m/min
辅溜板 Auxiliary slide carriage	送刀速度 Tool down feeding speed	3-8	3-8	3-10	3-10	m/min
	提刀速度 Tool feeding speed	3-10	3-10	3-10	3-10	m/min
工作台 Worktable	工作台面尺寸（长×宽） Size of worktable surface	200×400	450×450	600×500	690×480	mm
	工作台孔径 Bore diameter of worktable	Φ120	Φ150	Φ200	Φ250	mm
	上下料高度 Height of loading and unloading	1300 (地面安装)	950 / 地下1500	950 / 地下1900	950 / 地下2300	mm
主泵 Main pump	流量 Flow	55	135	210	300	L/min
	额定工作压力 Rated working pressure	12	12	12	11	Mpa
电机 Motor	主电机功率 Main motor power	7.5	15	30	45	kw
	主电机转速 Main motor speed	1440	1470	1480	1480	r/min
	辅泵电机功率 Auxiliary motor power	2.2	2.2	2.2	2.2	kw
	辅泵电机转速 Auxiliary motor speed	1400	1440	1440	1440	r/min
	冷却泵电机功率 Cooling motor power	1.1	2.2	2.2	2.2	kw
机床占地面积及总高度（长×宽×高） Floor area and height (L×W×H)	2150×2600 ×3300	3305×2400 ×4175	3995×2520 ×5200	4000×4200 ×7800	mm	
机床净重 Net weight	5000	9500	16500	18000	kg	

双油缸立式上拉床

Double oil cylinder upward broaching machine

本机床在通用上拉式内拉床的基础上，液压系统采用双油缸驱动，更适合加工形状复杂，加工余量大，且精度要求高的各种内齿、内花键、几何形状的内孔，该拉床的双主油缸安装在床台的台面上，两油缸的中心连线与主辅卡刀体的中心线处于同一直线及垂直面，无翻转力矩，此类机床更适用于较大工件或多工位的同时加工，拉削精度高，性能稳定。

此设备为地面式安装，配有维修站架，方便机床日常维护，机床采用人机界面操作，具有全自动、半自动及手动调整加工的功能。机床配备自动调刀功能。

机床可选配自动上、下料装置，（桁架机械手或关节机器人）大大减轻操作者的劳动强度，零件加工提质增效。

机床也可根据客户实际需求选择多工位结构，可选范围根据实际计算拉削力确定。

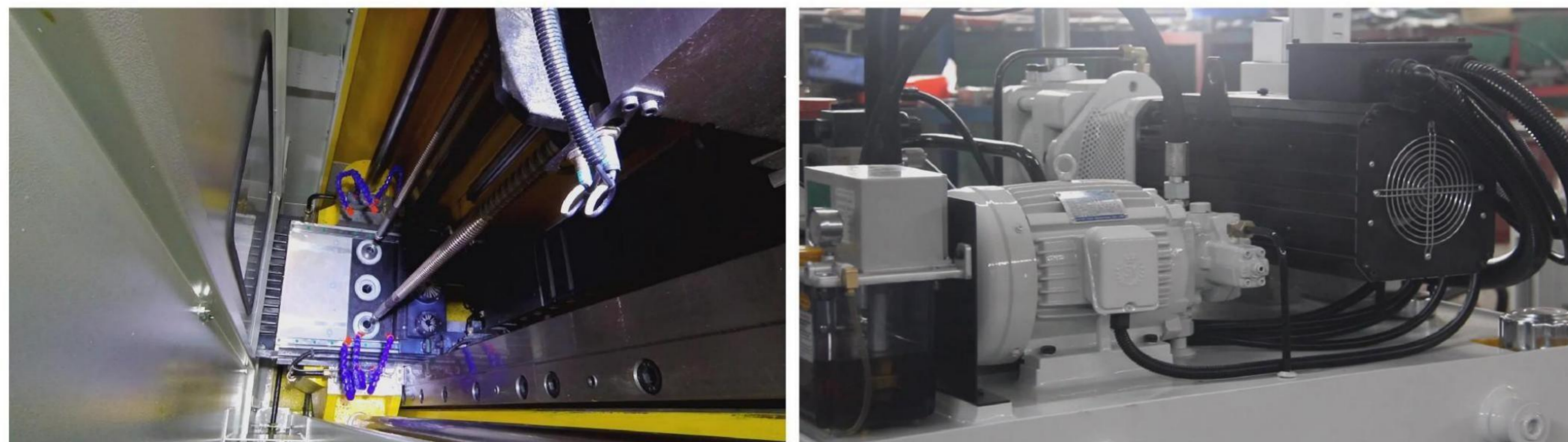


The machine adopts double oil cylinders drive hydraulic system, more suitable for processing complicated shape, large machining allowance, and of high accuracy requirement of all kinds of inner gear, internal spline, the geometry of the inner hole, the broaching machine double master cylinder installed in the machine table, the center of the two cylinders attachment and advocate complementary's blade center line on the same straight line and a vertical plane, without turning torque, this kind of machine tool more suitable for large processing or more processing position at the same time, the position of broaching precision, stable performance.

This machine tool is the ground type installation, equipped with operating floor, convenient routine maintenance of machine tools, machine tool adopts the man-machine interface, with automatic, semi-automatic and manual adjustment processing functions. Machine equipped with automatic adjustment tool function.

Optional automatic material delivery machine, (truss manipulator or robot) greatly reduce the labor intensity of operators, improve the quality of parts machining, increase production.

Machine also can select more than one processing position according to the customer actual demand structure, the optional scope according to the practical calculating broaching force is determined.



双油缸立式上拉床
Double oil cylinder upward Broaching Machine

机床型号 Model	L55710	L55720	L55740	L55760	单位 Units	
工位数量 Number of broaching stations	1-3	1-3	1-3	1-3	/	
额定拉力 Rated broaching force	100	200	400	600	KN	
最大拉削行程 Max. stroke length	1250	1600	2000	2000	mm	
拉刀长度范围 Length range of broaching tool	650-1400	650-1800	750-2200	750-2200	mm	
主溜板 Main slide carriage	工作速度 Cutting speed	2-6	2-6	2-6	m/min	
	返回速度 Return speed	4-16	4-16	4-16	m/min	
辅溜板 Auxiliary slide carriage	送刀速度 Tool down feeding speed	1-5	1-5	1-5	m/min	
	提刀速度 Tool feeding speed	1-5	1-5	1-5	m/min	
工作台 Worktable	工作台孔径 Hole diameter of worktable	单工位：Φ150 双工位：Φ100 三工位：Φ80	单工位：Φ200 双工位：Φ180 三工位：Φ150	单工位：Φ250 双工位：Φ200 三工位：Φ150	单工位：Φ300 双工位：Φ250 三工位：Φ200	mm
	最大工件外径 Max. outer diameter of workpiece	单工位：Φ200 双工位：Φ150 三工位：Φ120	单工位：Φ280 双工位：Φ200 三工位：Φ160	单工位：Φ360 双工位：Φ300 三工位：Φ200	单工位：Φ460 双工位：Φ360 三工位：Φ260	mm
	上下料高度 Height of loading and unloading	1100	1250	1350	1450	mm
主泵 Main pump	流量 Flow	135	220	270	480	L/min
	额定工作压力 Rated working pressure	10	11	13	13	Mpa
电机 Motor	主电机功率 Main motor power	15	30	50	45+30	kw
	主电机转速 Main motor speed	1470	1470	1470	1470	r/min
	辅泵电机功率 Auxiliary motor power	2.2	2.2	2.2	3	kw
	辅泵电机转速 Auxiliary motor speed	1470	1470	1470	1470	r/min
	冷却泵电机功率 Cooling motor power	2.2	2.2+1.1	2.2+4	2.2+4	kw
	机床占地面积及总高度（长×宽×高） Floor area and height (L×W×H)	4200×2000 ×4600	4700×3400 ×5150	4800×3600 ×7000	5000×3800 ×7200	mm
	机床净重 Net weight	10500	21000	30000	36000	kg

双油缸立式下拉床

Double oil cylinder downward broaching machine

本机床在通用下拉式内拉床的基础上，液压系统采用双油缸驱动，更适合加工大尺寸，加工余量大，且精度要求高的各种内齿、内花键、几何形状的内孔，多用于工程机械行业和商用汽车行业，该拉床的双主油缸安装在床台的台面上，通过电气系统控制双主油缸的同步运行，保证机床运行精度高，拉削加工精度高，性能稳定。

此设备为埋入式安装，机床可选配全按钮操作或人机界面操作，具有自动、半自动及手动调整加工的功能。

机床可选配自动上、下料装置，（桁架机械手或关节机器人）大大减轻操作者的劳动强度，零件加工提质增效。

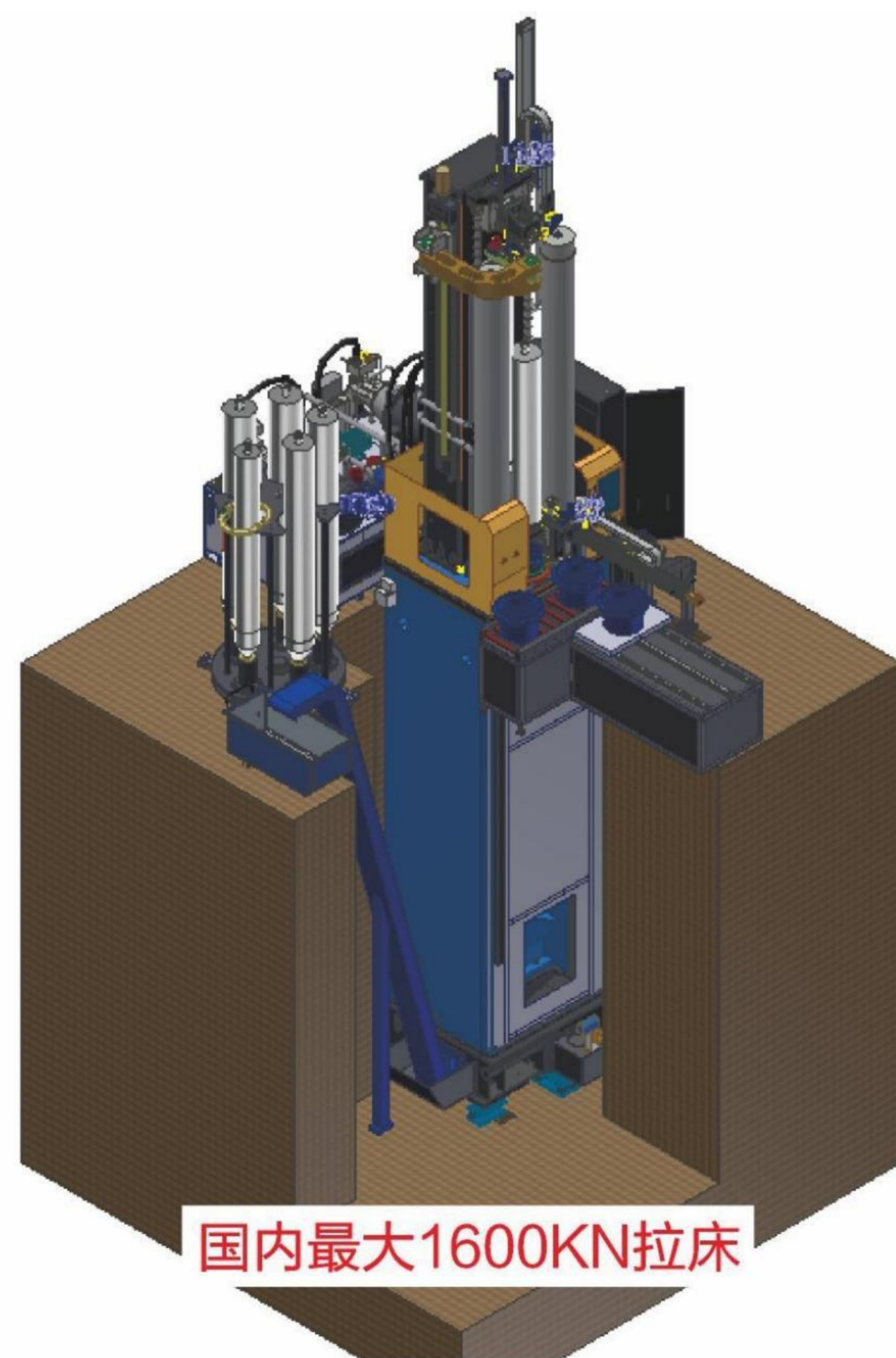
机床也可根据客户实际需求选择多工位结构，可选范围根据实际计算拉削力确定。

The machine adopts double oil cylinders drive, hydraulic system is more suitable for processing large size, machining allowance, and of high accuracy requirement of all kinds of inner gear, internal spline, the geometry of the inner hole, used in construction machinery industry and commercial vehicle industry, the broaching machine double master cylinder installed in machine table, by electric control system of main oil cylinder synchronous operation, to ensure the accuracy of machine tool operation, broaching processing of high precision, stable performance.

This machine for the embedded installation, machine optional full button action or human-machine interface operation, has the function of automatic, semi-automatic and manual adjustment process.

Optional automatic material delivery machine, (truss manipulator or robot) greatly reduce the labor intensity of operators, improve the quality of parts machining, increase production.

Machine also can select more than one processing position according to the customer actual demand structure, the optional scope according to the practical calculating broaching force is determined.

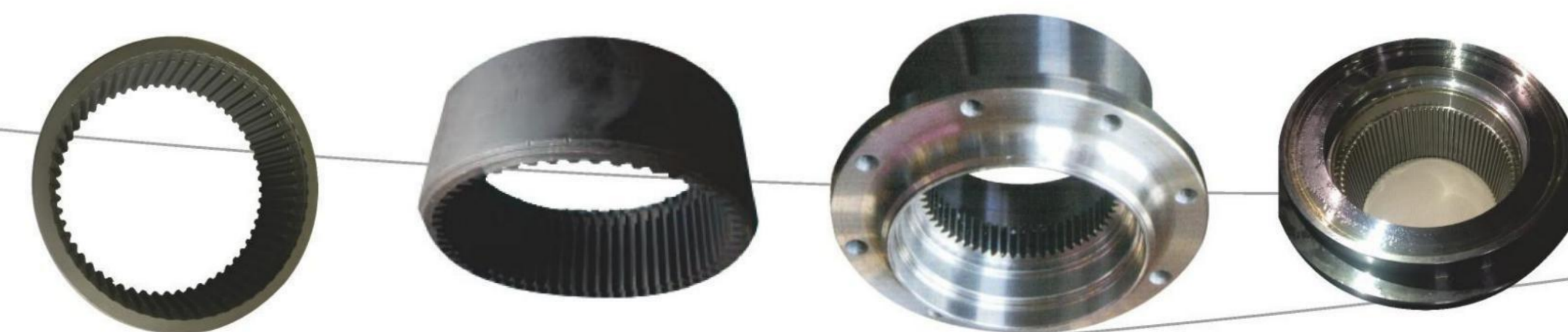


国内最大1600KN拉床



双油缸立式下拉床
Double oil cylinder downward broaching machine

机床型号 Model	L5540F	L5560F	L5580F	L55100F	L55120F	L55160F	单位	
额定拉力 Rated pulling force	400	600	800	1000	1200	1600	kN	
最大行程 Max. stroke length	2000	2000	2000	2000	3000	3000	mm	
最大拉刀长度 Range of broaching tool length	2200	2200	2200	2200	3000	3000	mm	
主溜板 Main slide carriage	工作速度（无级变速） Working speed (stepless)	2-7	2-7	2-6	2-6	1-5	1-5	m/min
	返回速度（无级变速） Return speed (stepless)	2-14	2-14	2-12	2-12	2-12	2-12	m/min
辅溜板 Auxiliary slide carriage	拉刀送进速度 Broach fee-in speed	2-6	2-6	2-6	2-6	2-6	2-6	m/min
	拉刀返回速度 Broach return speed	5-8	5-8	5-8	5-8	5-8	5-8	m/min
工作台 Worktable	工作台面尺寸（长×宽） Size of worktable surface	500 x 400	500 x 400	520 x 460	520 x 460	530 x 480	530 x 480	mm
	工作台孔径 Bore diameter of worktable	Φ225	Φ260	Φ300	Φ300	Φ340	Φ340	mm
	上下料高度 Height of loading and unloading	950 / 地下3420	950 / 地下3720	950 / 地下3720	950 / 地下3720	950 / 地下4200	950 / 地下4900	mm
主泵 Main pump	流量 Flow	280	330	330+210	330+210	330+330	330+330	L/min
	额定工作压力 Rated working pressure	10	11	11	11	13	13	Mpa
电机 Motor	主电机功率 Main motor power	45	55	45+45	45+45	75+75	75+75	kw
	主电机转速 Main motor speed	1470	1470	1470	1470	1470	1470	r/min
	辅泵电机功率 Auxiliary motor power	2.2	2.2	2.2	3.75	3.75	3.75	kw
	辅泵电机转速 Auxiliary motor speed	1470	1470	1470	1470	1470	1470	r/min
	冷却泵电机功率 Cooling motor power	2.2+2.2+1.5	3+3+1.5	3+3+1.5	3+3+1.5	3+3+1.5	3+3+1.5	kw
拉机床占地面积及总高度（长 X 宽 X 高） Floor area and height (L×W×H)	4000x3765 x7625	4000x3765 x7625	4100x4050 x7625	4100x4050 x7625	5000x4100 x9625	5000x4100 x9625	mm	
机床净重 Net weight	29000	30000	31000	32000	50000	50000	kg	



数控螺旋立式内拉床

CNC internal spiral broaching machine

数控内螺旋拉床主要应用于汽车零部件、减速机、农机、航空、军工及工程机械等行业产品的内螺旋齿、内斜齿、螺旋的加工制造。其加工尺寸和形状位置精度高、效率高、操作维修方便、加工成本低且易实现自动化。

数控内螺旋拉床的应用范围日益广泛，我们也将此机型系列化，拉削力范围可从50KN-250KN。

本机床采用FANUC伺服机械传动，工作平稳，能无级调速；机床的工作台与主滑板为整体式，由伺服电机和滚珠丝杆带动下、下移动实现拉削，机床在拉削运动Z轴上利用光栅尺，在旋转运动C轴上使用双蜗轮蜗杆和角度编码器进行终端检测，实现闭环控制，有效保证了机床的运行精度，其工效可比传统工艺提高10倍以上。

CNC internal spiral broaching machine is mainly used in auto parts, reducer, agricultural machinery, aviation, military industry and engineering machinery industries, processing in helical gears, helical gears, spiral parts inside. The machining position size and shape of high precision, high efficiency, convenient operation and maintenance, low processing cost and easy to automate.

CNC spiral broaching machine within the application scope of increasing, we will also this machine series, broaching force range from 50 KN - 250 KN.

This machine adopts FANUC servo mechanical transmission, the work is smooth, stepless speed regulation; Machine of the table with the main board for monolithic, driven by servo motor and ball screw to broaching and return, workbench in broaching machine tool movement on the Z axis by using grating ruler, using double worm gear and worm on rotation axis C and Angle encoder is used to detect the terminal, realize the full closed loop control, effectively guarantee the operation of the machine tool accuracy, its efficiency than the traditional process increased by more than 10 times.



数控螺旋立式内拉床
CNC Internal Spiral Broaching Machine

机床型号 Model	LSG8805	LSG8810	LSG8820	(双丝杆) LSG8825	单位 Units	
额定拉力 Rated pulling capacity	50	100	200	250	KN	
额定扭矩 Rated torque	45	90	180	140×2	Nm	
额定行程 Nominal stroke	800	1250	1600	2000	mm	
拉刀最大长度 Max.length of broach	990	1400	1850	2150	mm	
主滑板 Main slide carriage	工作速度 Cutting speed	1-10	1-10	1-15	1-15	m/min
	返回速度 Return speed	1-10	1-10	1-20	1-20	m/min
辅滑板 Auxiliary slide carriage	送刀速度 Tool down feeding speed	1-5	1-5	1-5	1-8	m/min
	提刀速度 Tool feeding speed	1-5	1-5	1-5	1-8	m/min
工作台 Worktable	工作台尺寸(长×宽) Size of work table(L×W)	240×195	300×320	440×340	600×384	mm
	工作台孔径 Bore of working table	80	150	200	200	mm
	上下料高度 Height of loading and unloading	890	925	1050	1100	mm
Z轴伺服电机功率 Power of servo motor of Z axis	9	20	37	52	KW	
Z轴伺服电机转矩 Torque of servo motor of Z axis	45	90	180	140×2	Nm	
Z轴伺服电机转速 Speed of servo motor of Z axis	2000	2000	2000	2000	rpm	
C轴伺服电机功率 Power of servo motor of C axis	1.5	3.5	4	5.5	KW	
C轴伺服电机转矩 Torque of servo motor of C axis	7.5	16	36	40	Nm	
C轴伺服电机转速 Speed of servo motor of C axis	2000	2000	2000	3000	rpm	
冷却泵电机功率 Power of coolant pump motor	1.1	2.2	2.2	4+2.2	KW	
拉机床占地面积及总高度(长×宽×高) Floor area and height (L×W×H)	2800×2900 ×4600	3000×3100 ×5300	3500×3200 ×5500	4000×3800 ×6000	mm	
机床净重 Net weight	8500	13500	20500	22000	kg	

筒式拉床 Pot broaching machine

筒式拉床主要针对于汽车零部件行业的外齿轮、外花键以及周边轮廓特定形状的零件而设计。拉刀安装固定在一个筒形刀座内，通过推进机构推动工件完成外齿拉削，机床结构简单，加工一次完成，高效率，高精度，替代了外齿轮、外花键等铣削、插削、刨削、剃齿、滚齿等传统加工方法。

此机床安装方式分为地面式安装和埋入式安装。机床采用液压传动，通过人机界面无级调速，可分全自动循环模式、半自动分段、手动调整三种操作模式。

机床可选配自动上、下料装置，（桁架机械手或关节机器人）

Pot broaching machine for processing gear, external spline and designed around the contour in the shape of a specific part. Broach installation fixed within a cylindrical cutter holder, simple structure, a complete processing, high efficiency, high precision, replaced the gear, external spline milling, slotting, cutting, shaving, gear hobbing and other traditional processing methods.

The machine installation installed into the ground type and embedded type. Machine adopts hydraulic drive, through the man-machine interface stepless speed regulation, can be divided into automatic circulation mode, semiautomatic segmentation, manually adjust the three operating modes.

Optional automatic material delivery machine, (truss manipulator or robot)



筒式拉床
Pot broaching machine

主要技术参数 Specification	单位 Unit	数值 Number
额定拉力 Rated pulling capacity	KN	200
溜板形成长度 Rated torque	mm	1600
工程形成速度（无极调整） Cutting speed	m/min	1.5-6
返回形成速度（无极调整） Return speed	m/min	3-15
刀筒高度 Tool length	mm	1250
总功率 Power	KW	46



涡轮盘叶片榫槽拉床 Turbine disk and blade broaching machine

涡轮盘和叶片是航天工业和能源工业采用拉削技术最主要的产品。涡轮盘的直径大小不一，盘中有放射状分布的榫槽。此榫槽的加工精度、表面粗糙度都要求非常高，加工材料都是高温合金，非常难以加工。因此，采用拉削是非常适应且较为经济的一种方法。

1、机床采用液压传动，工作平稳，能无级调速。带自动让刀机构。具有自动循环、半自动循环、分段循环和手动操作四种工作状态。手动状态下对主溜板的工作与返回以及各单步动作均可进行单独操作。

2、机床采用大跨度拉削力设计，适用拉削力从250KN到1000KN可调节，拉削零件品种广，根据不同的零件，选择机床的液压运行方式。

3、机床采用PLC加控制模块组成CNC控制方式。具有手动及自动的工作方式，操作方便。采用人机界面显示、计数、报警、位移及故障诊断。

4、该机型采用全闭环数控分度方式，该分度方式既能进行连续分度且旋转精度可进行反馈调节，分度盘内有夹紧装置，能定位且可抵抗较高的倾覆力矩。船台导轨采用弧形燕尾槽导轨，船台采用全闭环位置控制使机床达到高精度。

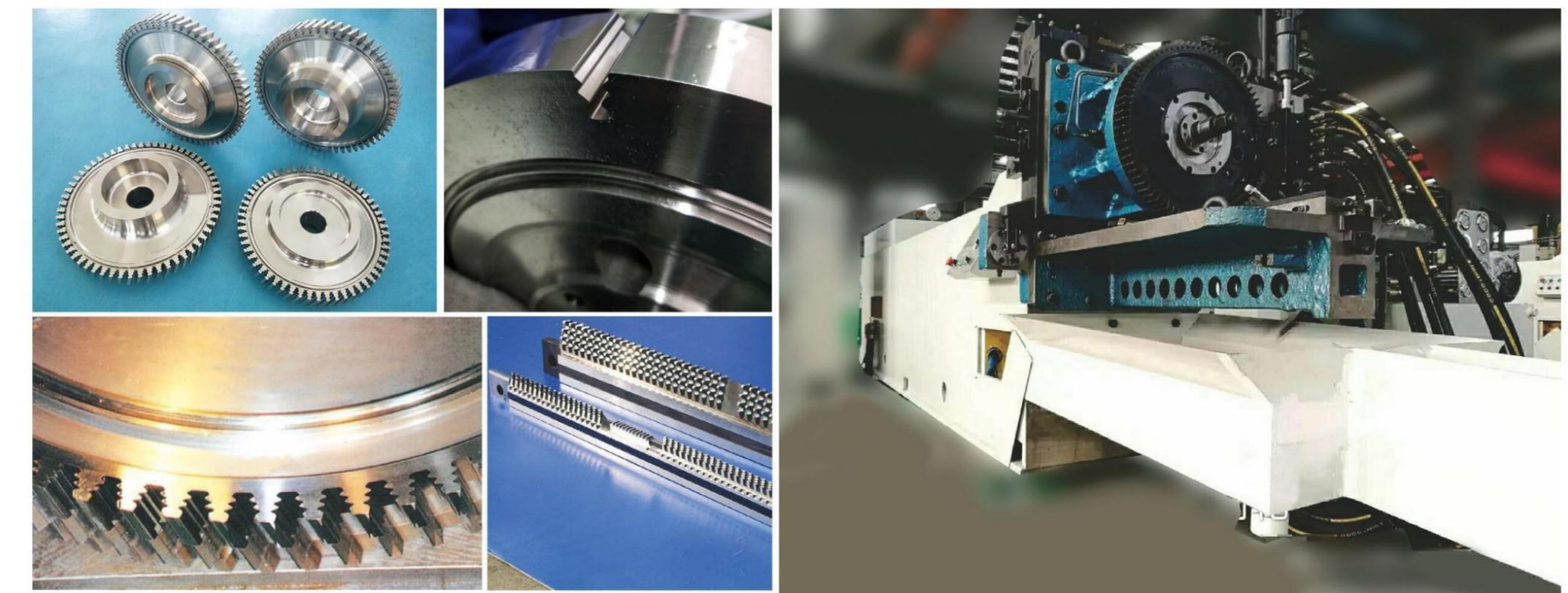
Turbine discs and blades are the main products of broaching technology used in aerospace industry and energy industry. The diameter of the turbine disk varies, and there are radial mortise grooves in the disk. The processing accuracy and surface roughness of the mortise and groove are very high, and the processing materials are superalloy, which is very difficult to process. Therefore, broaching is a very suitable and economical method.

1. The machine tool is driven by hydraulic pressure. It works smoothly and can adjust speed steplessly. With automatic knife let-off mechanism. It has four working states: automatic cycle, semi-automatic cycle, sectional cycle and manual operation. In the manual state, the work and return of the main slide and each single step can be operated separately.

2. The machine tool is designed with large-span broaching force. The broaching force can be adjusted from 250 KN to 1000 KN. There are a wide variety of broaching parts. According to different parts, the hydraulic operation mode of the machine tool is selected.

3. The CNC control mode is composed of PLC and control module. With manual and automatic working mode, easy to operate. Man-machine interface is used to display, count, alarm, displacement and fault diagnosis.

4. The whole closed-loop NC indexing method is adopted. The indexing method can carry out continuous indexing and feedback adjustment of rotation accuracy. The indexing plate has clamping device, which can locate and resist higher overturning moment. Arc dovetail groove guide rail is used for platform guide rail, and full closed-loop position control is used for platform to achieve high accuracy of machine tool.



外槽拉床 Broaching machine for external slot

传统的工艺对外槽的加工都是铣削，对于齿毂上均布的三槽，拉削工艺实现一次拉削成型。相比铣削工艺，拉削能达到更高的精度等级，具有更好的尺寸一致性。此机床为立式专用外拉机床。

其切削速度为：1.5m-10m/min

拉力为：200KN

机床行程为：2000-2500mm

其零件的夹具系我厂专为用户设计和制造。

此台机床适应加工范围是：

零件外径为：40-200mm

槽宽度：Bmax=20mm

槽深度：Hmax=15mm

当然，超过此范围，我们同样能提供给您满意的机床。



The traditional craft processing out of groove are milling machining. For uniform distribution on gear outside three slot. can once finished. Compared with the milling, broaching can reach higher precision grade, the size of the has better consistency. This machine is vertical in special purpose machine.

Cutting speed: 1.5m-10m/min

Pulling capacity: 200KN

Stroke: 2000-2500mm

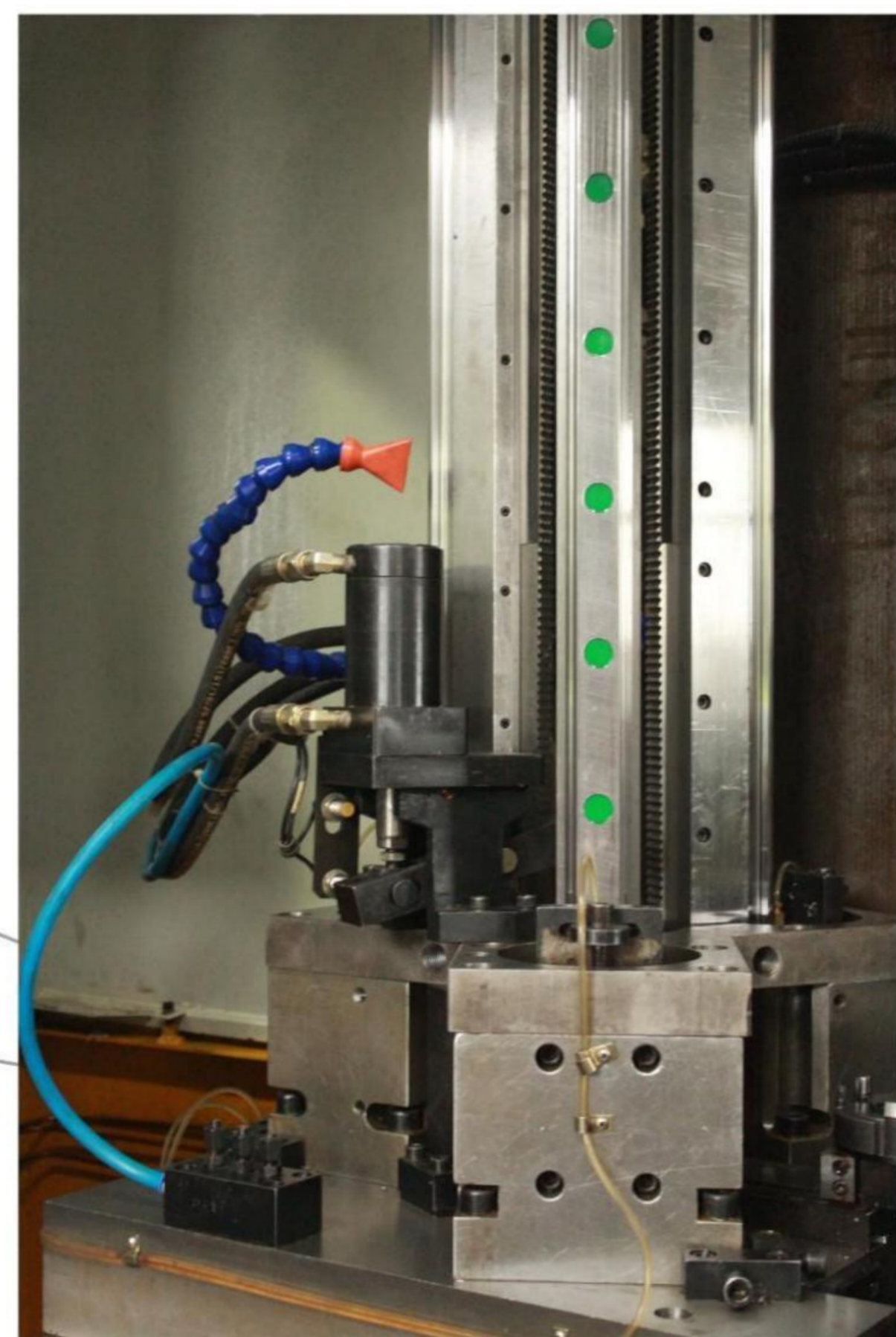
Our company designed the jigs specially.

Cutting range: O. D. of work piece: 40-200mm

Slot width: Bmax=20mm

Slot depth: Hmax=15mm

More than this range, we can also provide you with satisfactory machine tools.



汽缸体专用拉床 Special Broaching Machine for Cylinder Block

汽缸体专用拉床是主要用于加工汽缸体与轴承盖结合面的专用拉床。针对加工零件体积大，重量大的特点，此类机床均配置了自动上下料机构，有效降低了劳动强度，此类机床采用卧式结构，采用一面两销定位方式，加上拉削时浮动式辅助机构和压紧装置，保证了精度的稳定性，刀具设计方面，采用粗拉和精拉两部分，粗拉后空出工件弹性变形恢复时间再进行精拉，有利于产品的一致性，机床配备气密检测，有效保护了机床的安全运行和刀具安全。

The special broaching machine for cylinder block is a special broaching machine mainly used for processing the joint surface between cylinder block and bearing cover. Aiming at the characteristics of large volume and heavy weight of processing parts, this kind of machine tool is equipped with automatic feeding and unloading mechanism, which effectively reduces labor intensity. This kind of machine tool adopts horizontal structure, adopts one side and two pins positioning mode, plus floating auxiliary mechanism and pressing device in broaching, which ensures the stability of accuracy. In the design of cutting tools, rough drawing and fine drawing are adopted, and the empty space after rough broaching is used. Elastic deformation recovery time of the workpiece is then fine drawn, which is conducive to product consistency. The machine tool is equipped with airtight detection, which effectively protects the safe operation of the machine tool and tool safety.



高速数控上拉式硬拉床 High-speed CNC upward hard broaching machine

LSK5705高速数控上拉式硬拉床是我公司自主研发具有自主知识产权的产品,对主要部件通过三维建模、三维分析,采用先进的制造工艺手段生产出国内第一台高速数控上拉式硬拉床。此型号拉床加工效率极高,工件单件加工成本大幅降低,可带自动上下料机械手连线生产。

该拉床主要针对热后工件的内孔、内花键及各种不同形状内齿进行整形加工;工件被拉削部位的最高硬度可达HRC60以上,此机床是提高工件的内孔、内花键、内齿轮等表面粗糙度和齿形精度的关键设备。

硬质合金刀具刃磨一次可拉削工件近万件,共可刃磨15次左右,该拉床的成功研制,为我国的拉床制造业填补了一项空白。

LSK5705 high-speed CNC upward hard broaching machine is my company independent research and development has the intellectual property rights of products, the main components through 3D modeling, 3D analysis, through the use of advanced manufacturing methods to produce the first domestic high speed CNC pull hard on broaching machine. This type of broaching machine processing efficiency is high, and machining unit cost greatly reduced, Optional automatic material delivery machine, (truss manipulator or robot)

The broaching machine mainly for hot after the workpiece inner hole, inner spline internal tooth and all kinds of different shape plastic processing; Artifacts by broaching parts of the highest hardness can reach above HRC60, the machine is to improve the inner hole of the workpiece, the internal spline, surface roughness and the tooth profile accuracy of internal gear and other key equipment.

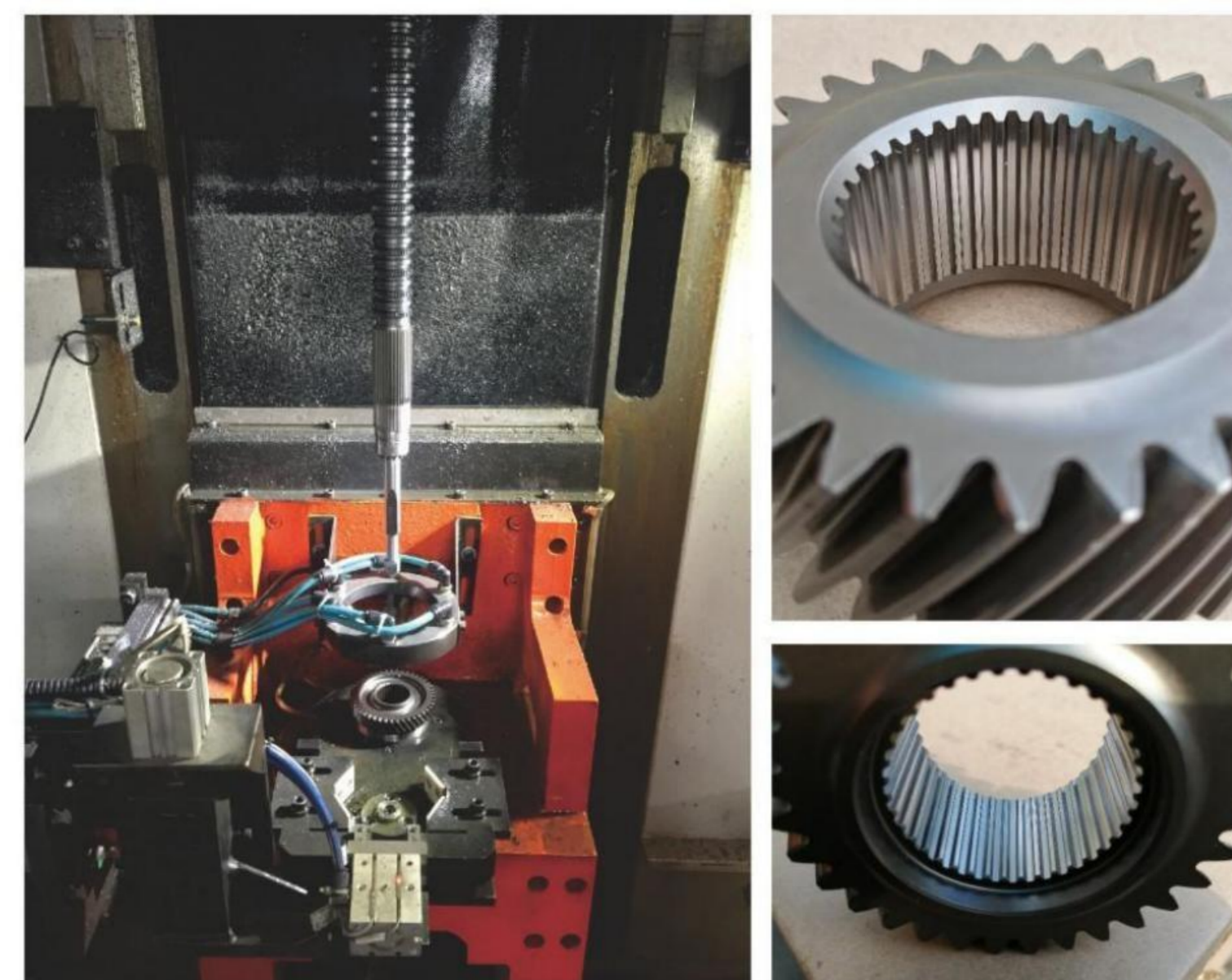
Cemented carbide cutting tool sharpening one time korah artifacts nearly 10000 PCS, total of around grinding about 15 times

主要技术参数:

- 1、额定拉力×额定行程: 50KN×800mm
- 2、拉削速度(无级调速): 0-80m/min
- 3、主滑板返回速度(无级调速): 0-80m/min
- 4、齿形精度5级
- 5、拉削表面粗糙度: Ra 1.6-0.8

Main technical parameters:

1. Rated force × Rated Trave: 50KN × 800 mm
2. Broaching speed (continuously viable): 0-80 m/min
3. Return speed (continuously viable): 0-80 m/min
4. Tooth profile precision: 5 grade
5. Surface roughness: Ra 1.6-0.8



数控键槽拉床 CNC keyway broaching machine

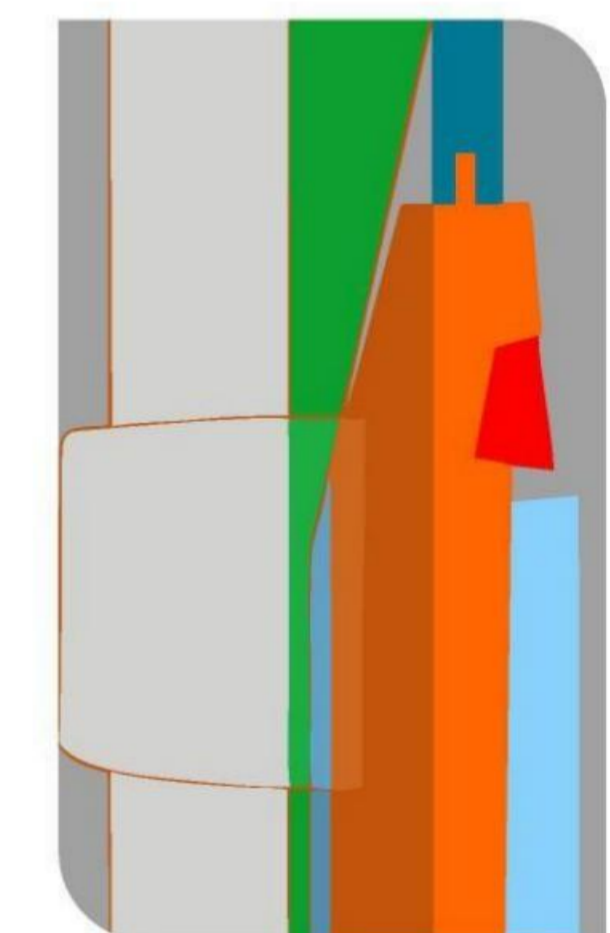
此机床属于下拉式数控键槽拉床,通过更换工装,刀具导向装置、刀具和刀显,实现内孔键槽的加工。配套三点定位工装,精度可靠。先进的操作系统,保证刀具拉削和进给精确控制。较高的拉削和回程速度产生高的生产率,在保证精同度时,减少了加工时间和成本。

This machine belongs to the CNC downward keyway broaching machine, we can change tooling, cutter guide, cutting tools and tools jigs, realize the inner hole machining keyway. Supporting three positioning jig to guarantee the accuracy requirement. Advanced operating system, ensure the accuracy of cutting tool broaching and feed control. Higher broaching and return speed to produce high productivity, while guarantee accuracy, reducing the processing time and cost.



数控键槽拉床
CNC keyway broaching machine

技术参数名称 Specification	单位 Unit	数值 Number
额定拉力 Rated pulling capacity	KN	30
额定行程 Rated stroke	mm	320
键槽最大宽度 Max.width of keyway	mm	63
键槽最大深度 Max.depth of keyway	mm	13
键槽最大长度 Max.lenth of keyway	mm	280
工作速度 Cutting speed	m/min	1-10
主滑板返回速度(无级调速) Return speed	m/min	1-25
主电动机功率 Power of machine	KW	11.3
机床尺寸(长×宽×高) Size of machine	mm	1550x2300x2000



原理示意

» 连杆体、连杆盖、轴承盖专用拉床

Connecting rod, connecting rod cap,
bearing cover special broaching machine

连杆专用拉床主要用于连杆结合面，齿面，凸、凹槽，去重面，半圆弧等位置的拉削，杆的定位主要采用两面一销的方式，盖则采用面定位和摆臂对中的装置进行定位。夹具为子母夹具结构，采用液压控制，并可实现多工位同时拉削，工作效率高。

主轴承盖专用拉床是主要用于加工汽缸体上的主轴承盖，机床为单溜板或双溜板结构，在公称拉力和溜板行程的长度范围内，可拉削轴承盖的两个大平面、结合面、圆弧面和螺栓面，实现多工位同时加工，极大提高了工作效率。

本机床采用液压系统传动，工作平稳，能进行无级调速。并有各种保险装置，经过多年的经验积累，在刀具设计方面，本机床上的拉刀是采用组合式合金拉刀，其拉削方式是前部粗切削，后部精切削，以保证工件表面粗糙度要求。在拉刀前部装有刀具保护装置，当拉削量大于刀具允许量时机床不能拉削，加工位还配备了气密检测装置，能有效控制机床加工风险。

The special broaching machine for connecting rod is mainly used for broaching connecting rod joint surface, tooth surface, convex and groove, heavy surface removal, semi-circular arc and other positions. The positioning of connecting rod mainly adopts the way of two sides and one pin, while the positioning of cover adopts the device of face positioning and swing arm alignment. The fixture is a Cluster fixture structure, which adopts hydraulic control and can realize multi-station broaching at the same time with high working efficiency.

The special broaching machine for the main bearing cover is mainly used to process the main bearing cover on the cylinder block. The machine tool is of single or double slide structure. Within the range of nominal pulling force and the length of slide stroke, two large planes, joint planes, arc planes and bolt planes of the bearing cover can be broached to realize simultaneous multi-station processing, which greatly improves the working efficiency.

The machine tool is driven by hydraulic system, which works smoothly and can speed steplessly. And there are various safety devices, after years of experience, in the design of cutting tools, the broach on this machine tool is a combination of alloy broach, its broaching method is front rough cutting, rear precision cutting, to ensure the surface roughness requirements of the workpiece. The front of broach is equipped with tool protection device. When the broaching amount is larger than the allowable amount of the tool, the machine can not broach. The processing position is equipped with air-tight detection device, which can effectively control the processing risk of the machine tool.



» 盘式制动器及制动钳专用拉床

Disc brake and brake caliper special broaching machine



盘式制动器、制动钳由于本身的结构刚性差，易变形，对拉削工艺提出更高的要求，所以我们开发此产品的专用拉床，在拉削加工过程中，采取不同的速度进行粗、精拉削，同时刀具齿升量合理设计排齿。

夹具部分可采用固定式工作台、翻转工作台、回转工作台或移动式工作台结构，并可配置自动上下料机构。夹具具备了压紧、对中以及辅支撑功能，尽可能保证零件在加工过程中减少变形。

The disc brake and brake calipers are easy to deform due to their poor structural rigidity, which puts forward higher requirements for broaching technology. Therefore, we develop a special broaching machine for this product. In broaching process, different speeds are adopted for rough and fine broaching, while the cutter tooth lift is reasonably designed for gear arrangement.

Fixture part can adopt fixed worktable, turnover worktable, rotary worktable or mobile worktable structure, and can be equipped with automatic feeding and unloading mechanism. The fixture has the functions of compaction, alignment and auxiliary support, so as to ensure that the deformation of parts can be reduced as much as possible in the process of processing.



突缘（叉）专用拉床

Flange special broaching machine



该机床是突缘（叉）端面齿专用立式/卧式外拉床，机床采用自动分度，一次加工完成，具有高精度、高效率等优点。其主要技术参数如下：

额定拉力：200KN
 额定工作行程：2000mm
 拉削速度：1.5-9m/min
 返回速度：7-20m/min
 加工节拍：≤2分钟/件
 对称度：≤0.05mm

This machine is the special flange, flange fork vertical/horizontal broaching machine, machine adopts automatic rotary indexing, Completed a one-time processing and has the advantages of high precision and high efficiency. Its main technical parameters are as follows:

Rated pulling capacity: 200KN
 Nominal working stroke: 2000mm
 Cutting speed: 1.5-9m/min
 Return speed: 7-20m/min
 Producing efficiency: ≤2min/piece
 Symmetry degree: ≤0.05mm

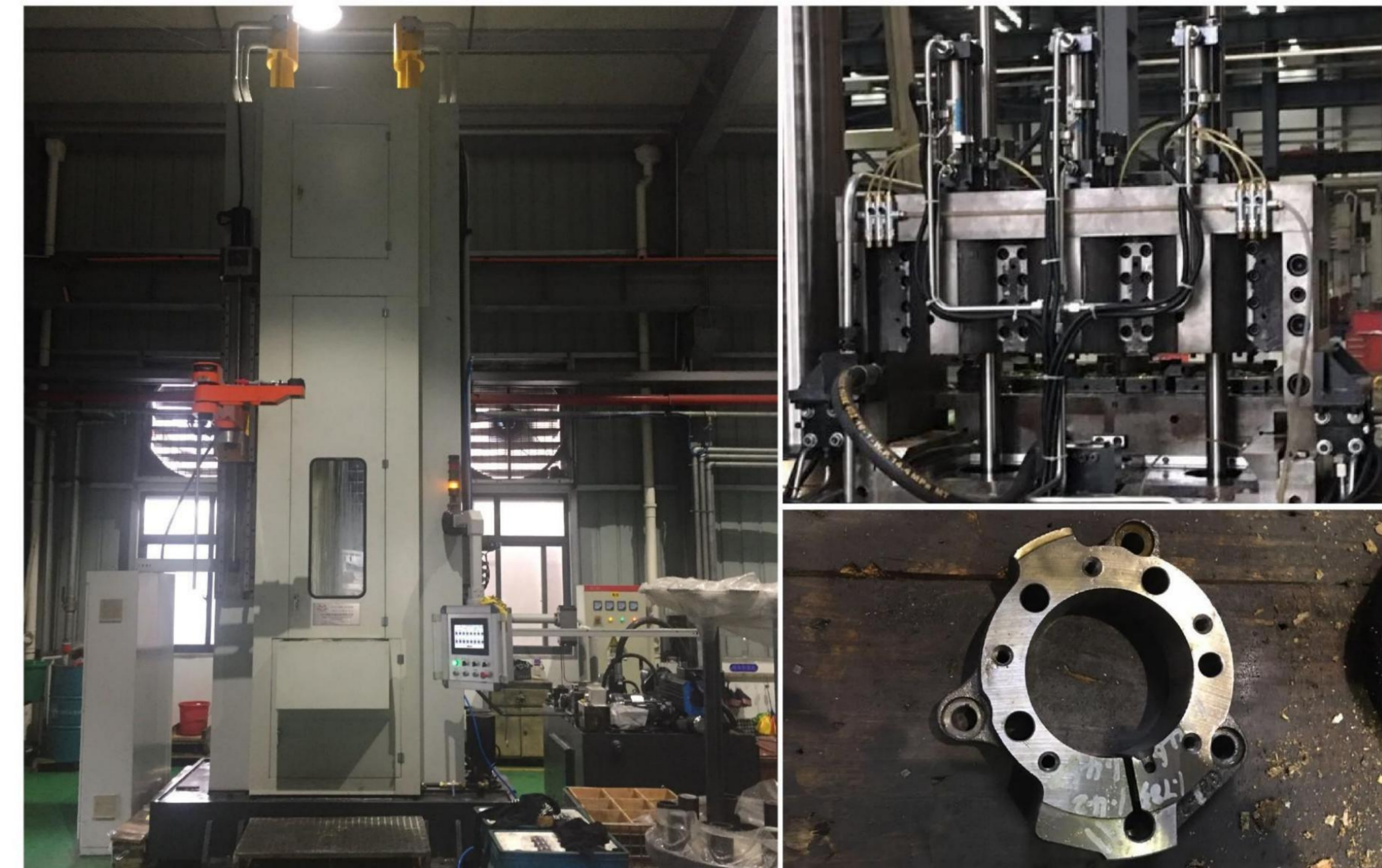


滑片槽专用拉床

Special broaching machine for slide groove

本机床是针对空气压缩机的滑片槽加工而研制的专用拉床，机床为双工位上拉式专用拉床，一次拉削工件两件，生产效率。由于滑片槽加工的槽深，精度高，采用传统的先铣后磨的加工工艺，加工成本高。本机床能一次拉削成型，大大提高工作效率。

The machine tool is a special broaching machine developed for the processing of slider groove of air compressor. The machine tool is a double-position pull-up broaching machine with 2-4 pieces of workpiece broached at one time, which has high production efficiency. Because of the deep groove and high precision of the slider groove, the traditional process of milling before grinding is adopted and the processing cost is high. The machine tool can be broached and formed at one time, which greatly improves the working efficiency.



» 方向盘专用拉床 Steering wheel broaching machine

此类拉床是用于汽车方向盘骨架拉削的专用机床，其结构形式与通用上拉式内拉床相似，但在工作台设计上我们采用了翻转下料机构，由于方向盘体积较大，所以机床内部空间进行整体优化，便于上下料，特别对于用量较大的企业，我们在传统机型上增配液压滑台，实现全智能化制造。方向盘通常使用镁铝合金，此类材料对环境有极高的要求，所以机床在防腐蚀和防火等方面都做了相应设计。

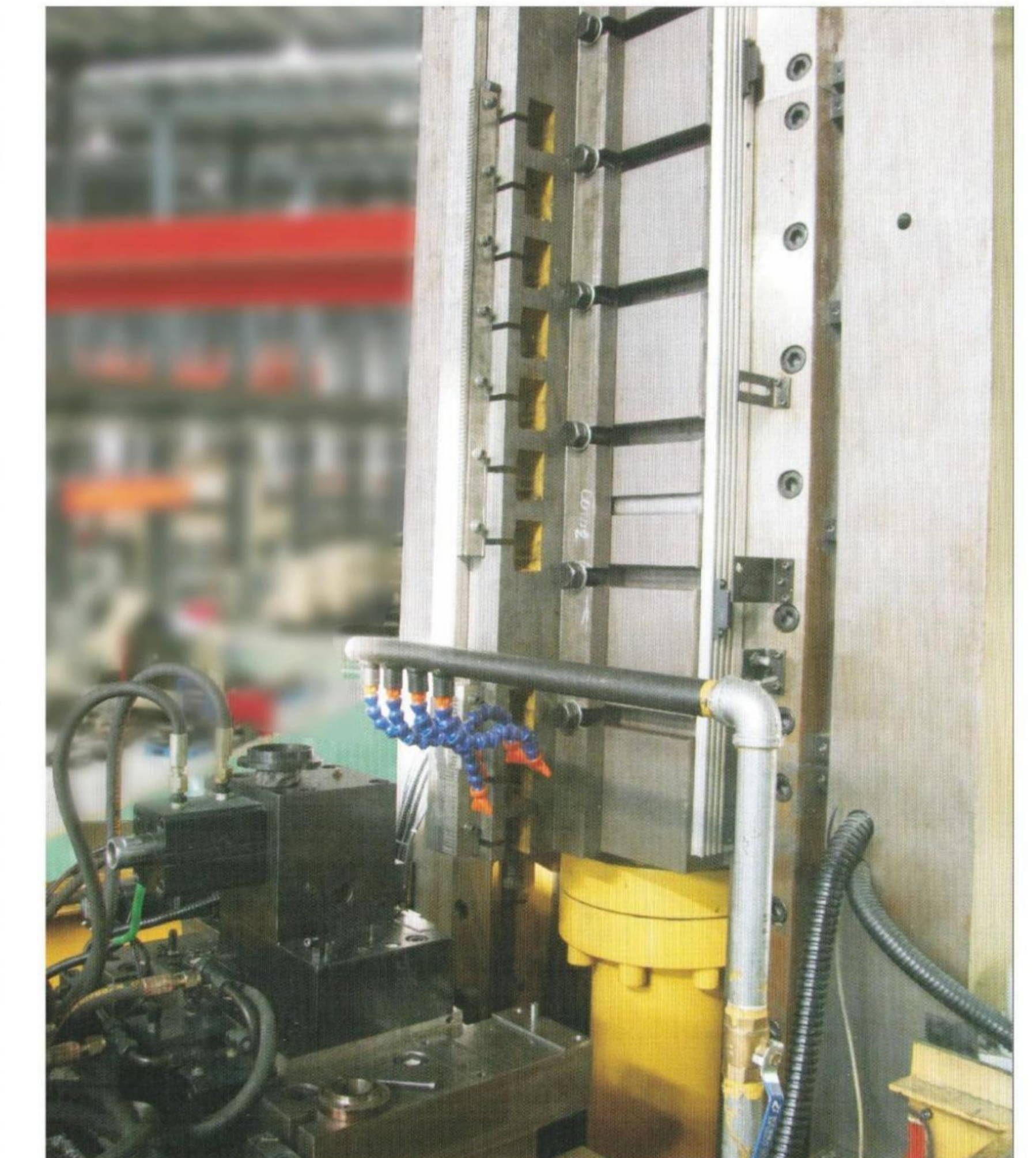
This kind of broaching machine is a special machine tool for broaching automobile steering wheel skeleton. Its structure is similar to that of general pull-up broaching machine. But in the design of worktable, we adopt the turning-down mechanism. Because of the large volume of steering wheel, the internal space of the machine tool is optimized as a whole, which is convenient for loading and unloading. Especially for enterprises with large amount of material, we add hydraulic shift to the traditional machine. Moving table to realize full intelligent manufacturing. The steering wheel is usually made of magnesium-aluminium alloy. This kind of material has very high requirements for the environment. Therefore, the machine tool has been designed in anticorrosion and fire protection.



» 拨叉轴专用拉床 Special Broaching Machine for Fork Shaft

拨叉轴专用拉床主要用于加工汽车换挡拨叉轴槽口的加工，一次可以加工3-6件，通过更换夹头，导套、刀具和工件定位装置拉削不同规格的拨叉轴，机床夹具固定在床身端板上，有定位、夹紧、松开工件，夹具移动让刀、移动后锁紧等功能，由液压油缸执行夹具动作，夹具带7°自锁角结构，保证夹紧有效

The special broaching machine for shifting fork axle is mainly used to process the groove of shifting fork axle of automobile. It can process 3-6 pieces at a time. By changing the chuck, guide sleeve, cutter and workpiece positioning device, broaching the different specifications of shifting fork axle, the machine tool fixture is fixed on the end plate of the bed. It has the functions of positioning, clamping, loosening the workpiece, fixture moving the cutter and locking after moving. The fixture is operated by the hydraulic cylinder. Fixture with 7 degree self-locking angle structure to ensure effective clamping



链轨节专用拉床

Special broaching machine for chain link



该拉床是一种立式专用拉床，用于拉削工程机械履带链轨节螺母安装面，加工过程中，刀具多点支撑，保证拉削精度。机床兼容性高，更换品种仅需更换夹具工装、刀具导向装置、刀具，即可实现多品种加工。机床填补了国内空白，具有高精度、高效率等优点。

The broaching machine is a kind of special vertical broaching machine, are designed for broaching nut installation surface engineering machinery crawler caterpillar track section, machining process, the cutting tool more support and guarantee the broaching accuracy. Machine high compatibility, replace the varieties, only replace the clamp fixture, cutting tool, cutting tool guides, can processing many kinds .and has the advantages of high precision and high efficiency.



链轨节专用拉床
Special Broaching machine For Chain Link

技术参数名称 Specification	数值 Number	数值 Number	单位 Unit
额定拉力 Rated pulling capacity	200	400	KN
额定行程 Rated stroke	1250	1250	mm
推刀最大长度 Max length of broach	1155	1155	mm
推刀背面至主滑板的距离 Distance between broach to sliding plate	21.5	21.5	m/min
工作速度 Cutting speed	1.5-10	1.5-10	m/min
返回速度 Return speed	3-20	3-20	m/min
适用工件 Suitable for workpiece	135-228节距	228-280节距	



齿条专用拉床

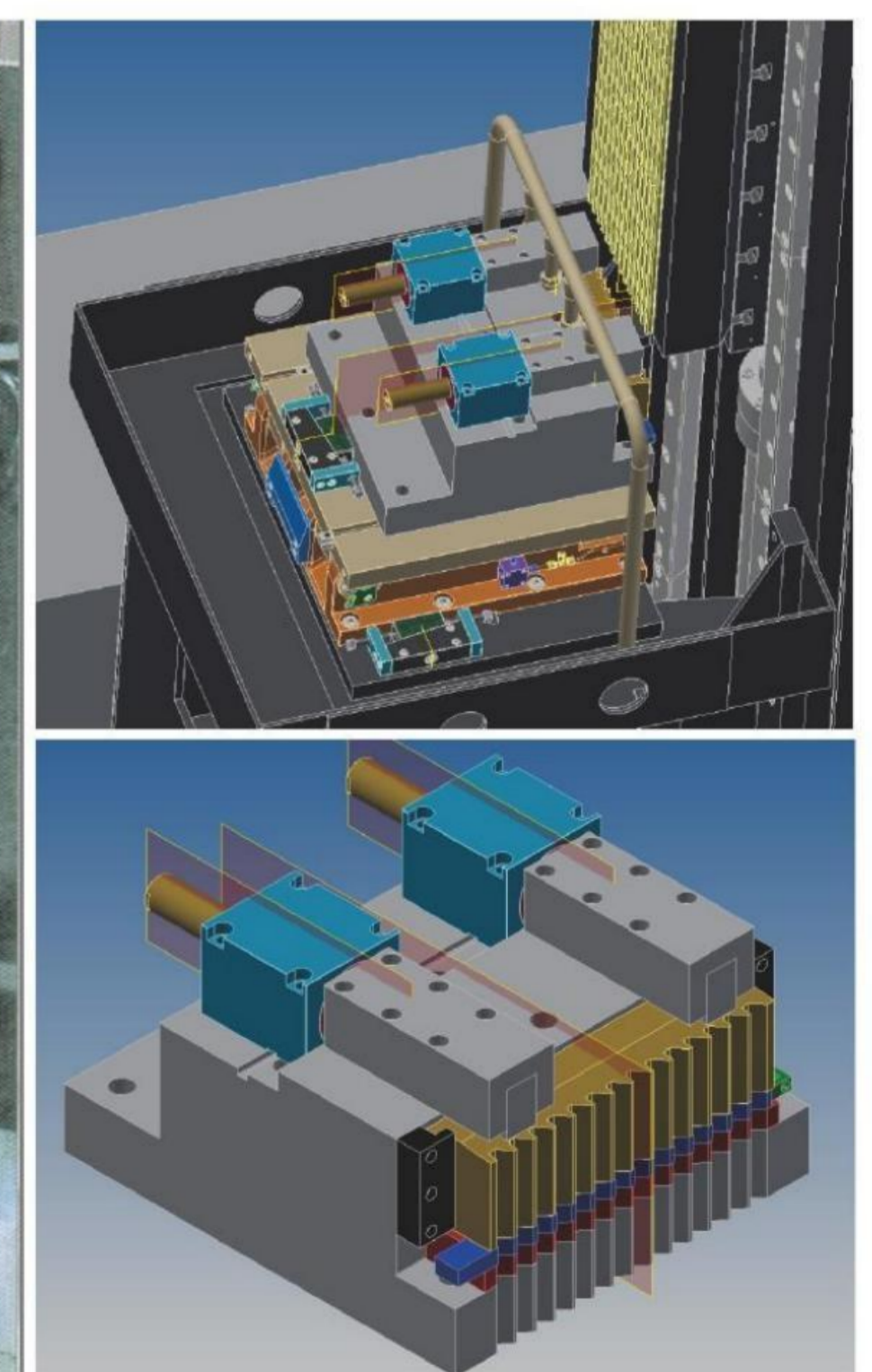
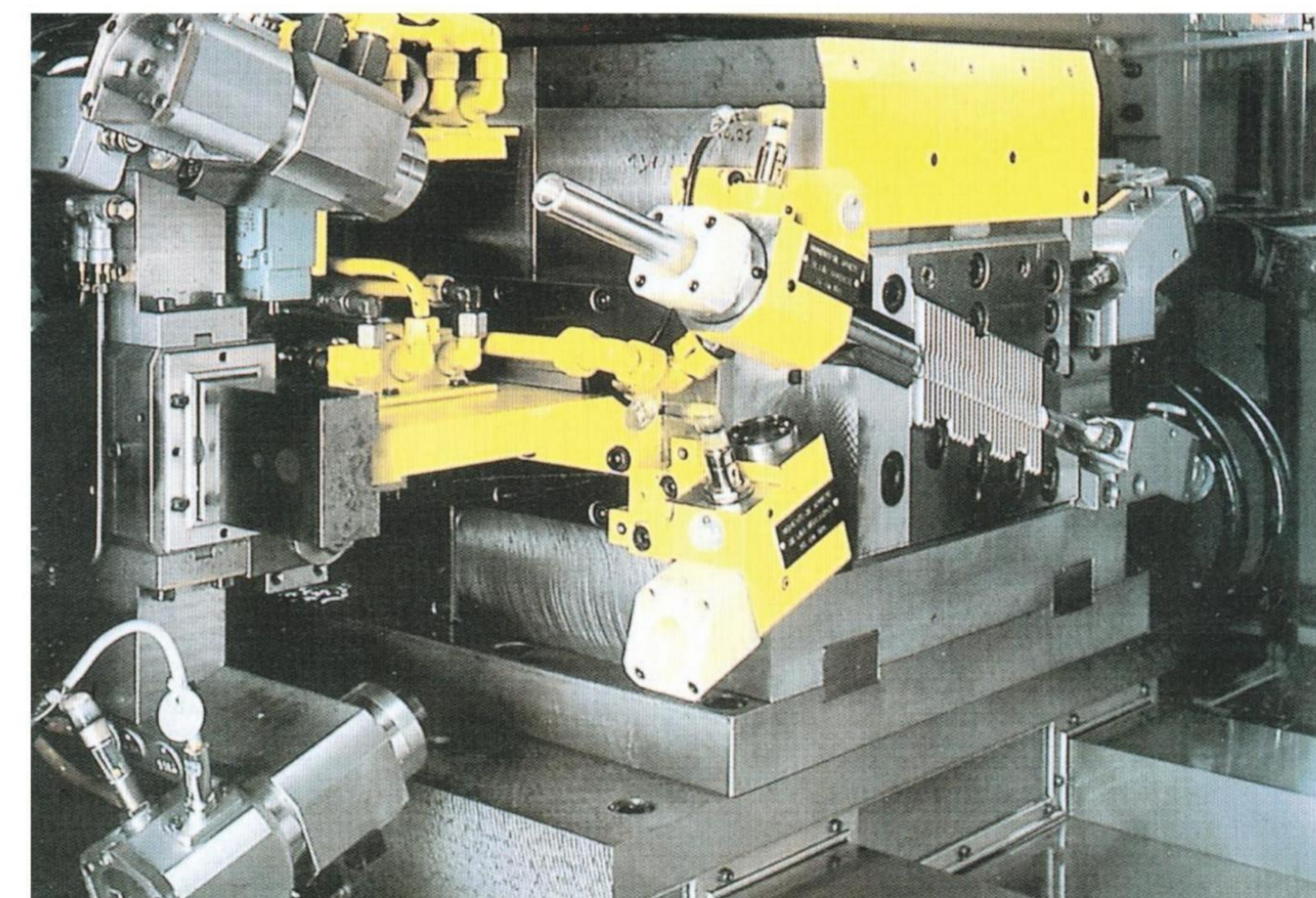
Rack special broaching machine

在对轴类零件开齿槽时，主要是控制零件夹紧状态，由于拉削面积大，切削力大，零件会产生翻转力矩，我公司开发的轴齿类专用夹具，能有效保证零件加工过程中的稳定性，此类零件采用拉削的优势是：

- 1、高效率，节拍时间短，同时拉削两件；
- 2、高精度，线轨导向保证齿槽的精度；
- 3、操作简便，人工上下料，刀具、夹具可快速更换。

In the process of rack processing, it is mainly to control the clamping state of the parts. Because of the large broaching area and cutting force, the parts will produce turning moment. The special rack fixture developed by our company can effectively guarantee the stability of the parts in the process of processing. The advantages of broaching for this kind of parts are as follows:

1. High efficiency, short rhythm time, broaching two pieces at the same time;
2. High precision, track guide ensures the accuracy of tooth profile.
3. Easy to operate, manual loading and unloading, cutting tools and fixtures can be quickly replaced.



» 冷凝管主阀平面拉削机床

Broaching machine for surface of main valve of condensing tube

此拉床专门针对于冷凝器铜阀座平面加工，在加工精度、效率的高要求下特别能显示其优越性。三工位专用设计，一次拉削3个工件，具有结构简单、操作、维修方便等优点，并可配置自动上下料，节约人工成本。

除此之外，对冷凝管主阀座的加工，其检测的标准是泄漏量，故对平面度的要求及拉刀的精度都要求非常高。特别对于小孔径的拉刀，如何保证刀具的精度等非常关键。

该机床主要技术参数为：

拉力：50KN

行程：800mm

切削速度：1.5-9m/min

表面粗糙度：Ra1.6

生产节拍：25秒 / 3件

the broaching machine designed for condenser copper seat surface processing, under the machining precision, high efficiency requirements it can show the superiority of the machine tool. Design has three working position, Three parts in one time broaching, machine has simple structure, convenient operation, maintenance. Optional automatic material delivery machine, (truss manipulator or robot) greatly reduce the labor intensity of operators, improve the quality of parts machining, increase production.

Besides, the condenser pipe seat processing, its standard is leakage detection, so the requirement very demanding of flatness and broach high precision. Especially for the small aperture broach, how to ensure the accuracy of the cutting tool is critical.

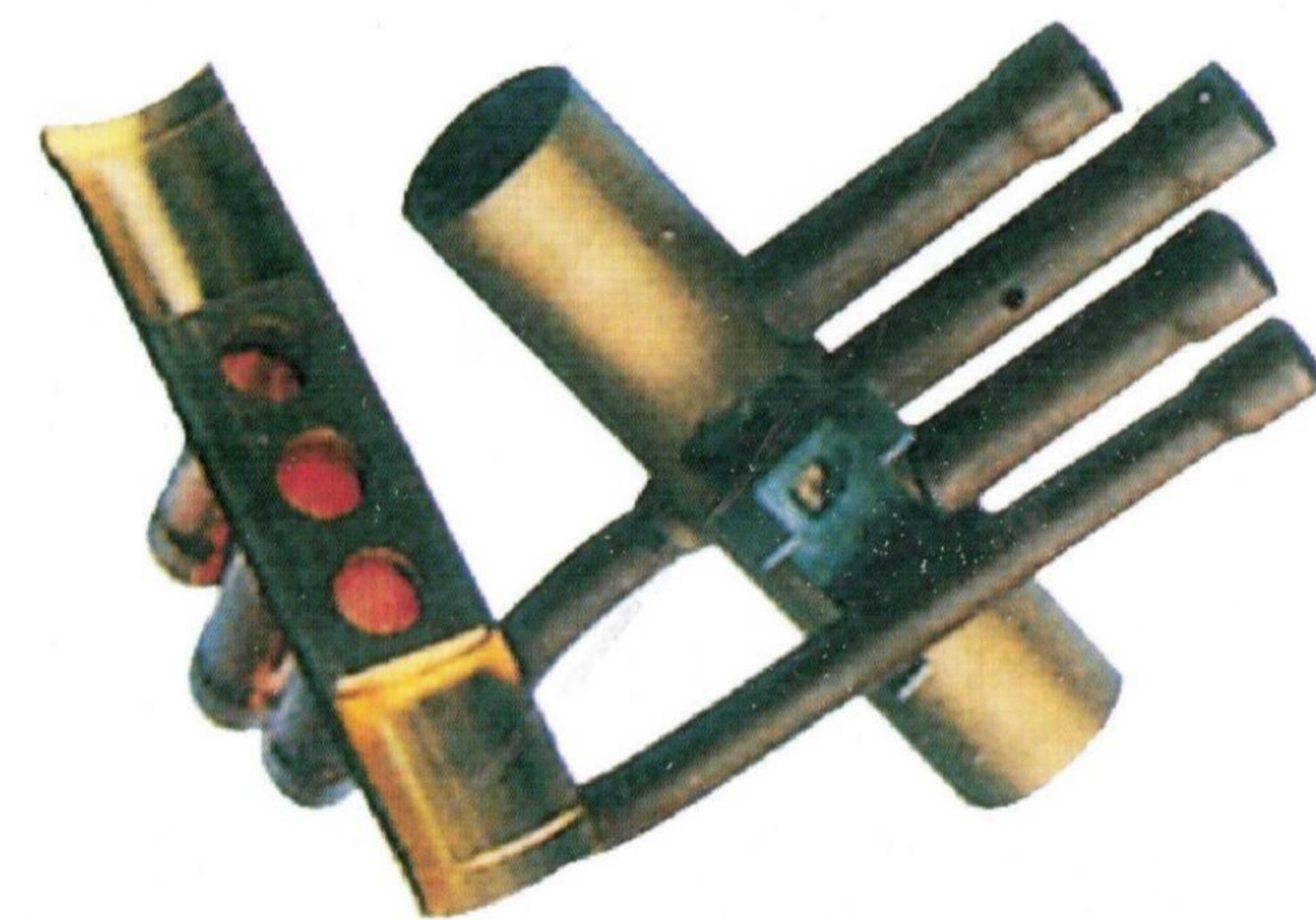
Main specification: Pulling capacity: 50KN

Stroke: 800mm

Cuning speed: 1.5-9m/min

Surface roughness: Ra1.6

Producing efficiency: 25sec/3 pieces



» 卧式内拉床

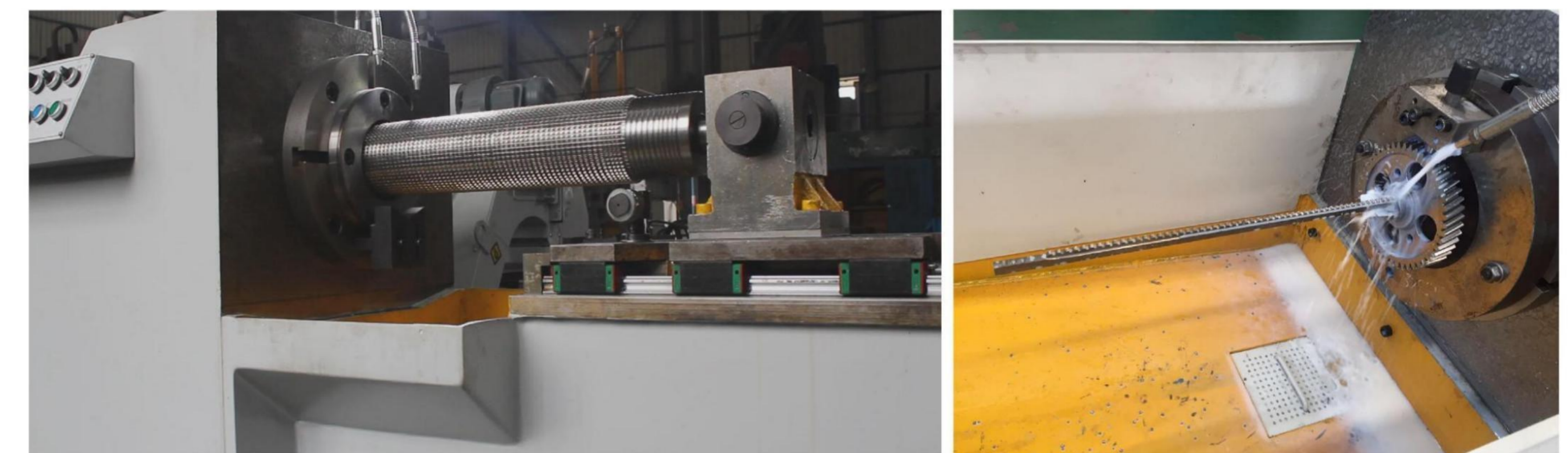
Horizontal internal broaching machine

本系列机床用于拉削各种内齿、内花键及几何形状的孔，生产效率高，适于大量生产和成批生产。本系列机床采用液压式传动，工作平稳，能无级调速，并有超负荷保护装置。机床具有全自动循环、半自动分段、手动调整三种操作模式。机床由一个总按钮站操作，操作方便。

本厂随机配置的自动夹头；适用于拉刀前柄为圆柱型且符合国家标准的拉刀（无周向定位），对拉刀前柄为非标或加工键槽等部位的矩形柄拉刀，刀夹头须另行制作。

This series machines are designed for broaching internal tooth, internal spline and the geometry of the hole, high production efficiency, suitable for mass production. This series machine adopts hydraulic transmission, the work is smooth, can stepless speed regulation, and has the overload safety device. Machine has automatic circulation mode, semi-automatic segmentation, manual adjustment of three operating modes. Machine tool operation by a total button control panel, easy to operate.

The automatic toolholder with the machine is suitable for state standard broach that front shank is cylindrical (without periphery positioning). Toolholder should be specially designed and produced for nonstandard shank or rectangular shank broach which for key slot processing.



经济型 / 卧式内拉床系列

Simplify / Horizontal internal broaching machine series

型号 Model	技术规格 Specification
L6105J	50KN*800MM
L6110J/F	100KN*1250MM
L6120J/F	200KN*1600MM
L6140J/F	400KN*2000MM
L6160F	600KN*2000MM
L6180F	800KN*2000MM
L61100F	1000KN*2000MM

拉刀切削负荷的计算

Calculation of pulling force

预想负荷(kgf)=切削宽度(mm)×1刃的切深(mm)×单位面积切削阻力(kgf/mm²)×同时切削刃数

安全负荷(kgf)=1.8×预想负荷(kgf)

预想负荷是拉刀在普通状态下加工时所需的切削力。随着拉刀刀刃的不断磨损，就需要逐渐加大切削力，但加大到一定程度后拉刀会破损，或者因拉床的维护状态不良而在切削中停机。安全负荷就是为了防止出现上述情况的允许切削力。

Calculation of pulling force Expected force(Kgf) =Cutting width × Cutting depth/1 tooth(mm) ×specific cutting resistance(kgf/mm²) × number of simultaneous

Safety load(kgf)=1.8 × Expected force.

Expected force means that necessary cutting force for broaching under normal condition. Safety load is permitted cutting force.

拉刀全长和拉床行程的关系

Broach length and machines stroke

拉刀的长度要受到拉床的行程及夹具的限制。

拉刀刃长+后部柄长 (MAX) = (最大行程) - (工件切削长度)

所需行程=刃长 + 工件切削长度 + 后柄长度 < 拉床最大行程

由于产品在不断的改进中，样本技术参数如有改动，恕不另行通知。

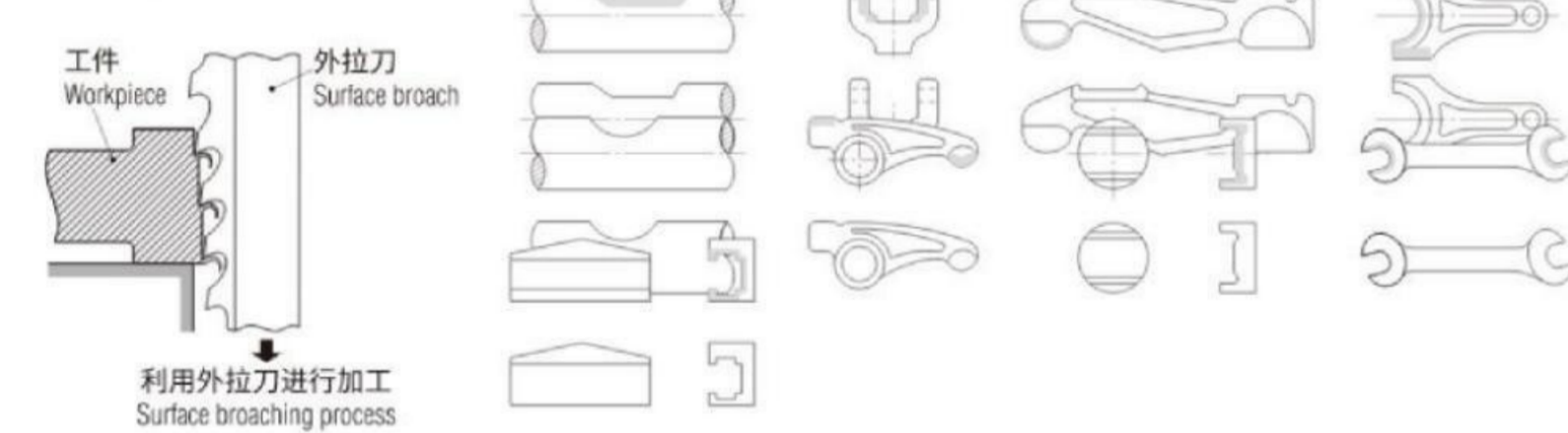
Broach cutter length and machines stroke Broach length is limited by machine stroke and jig/fixture.

Broach cutter teeth length+length of rear shank=(Max stroke)-(cutting length) .

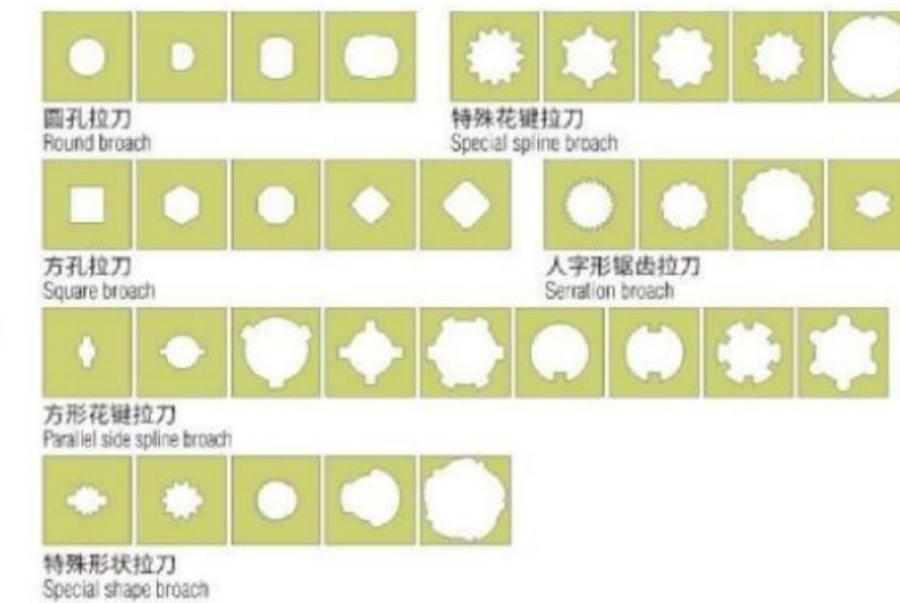
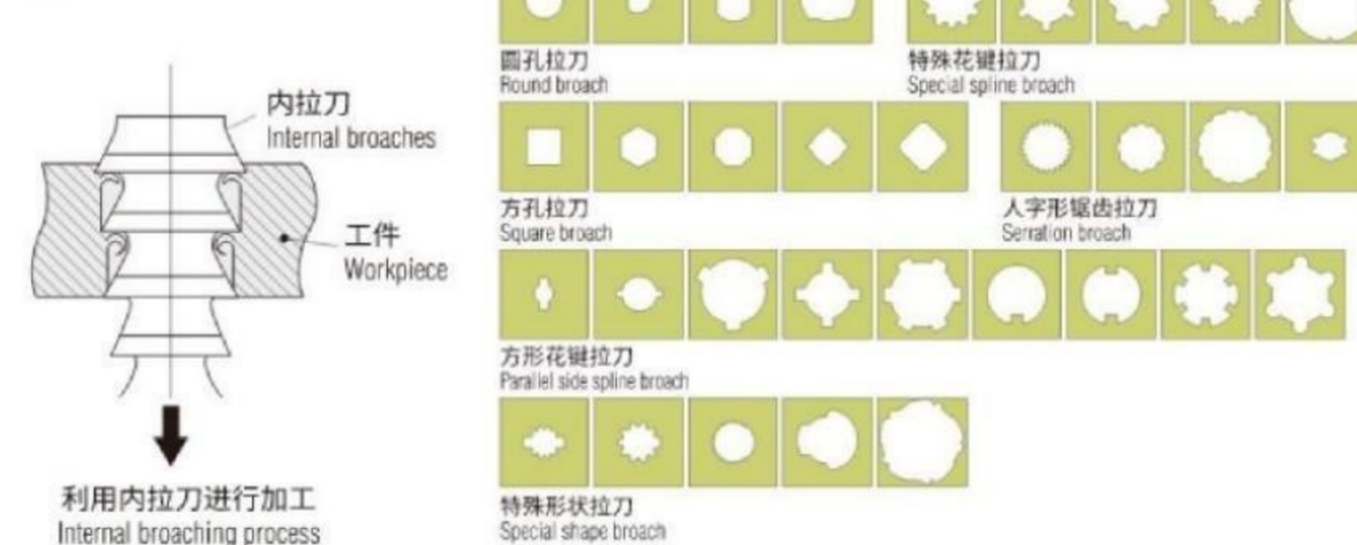
Necessary stroke=Teeth length +length of rear shank+Broaching length<machine max stroke.

Description and specifications given in this catalogue are subject to modification without notice.

[平面拉削加工例]



[内拉削加工例]

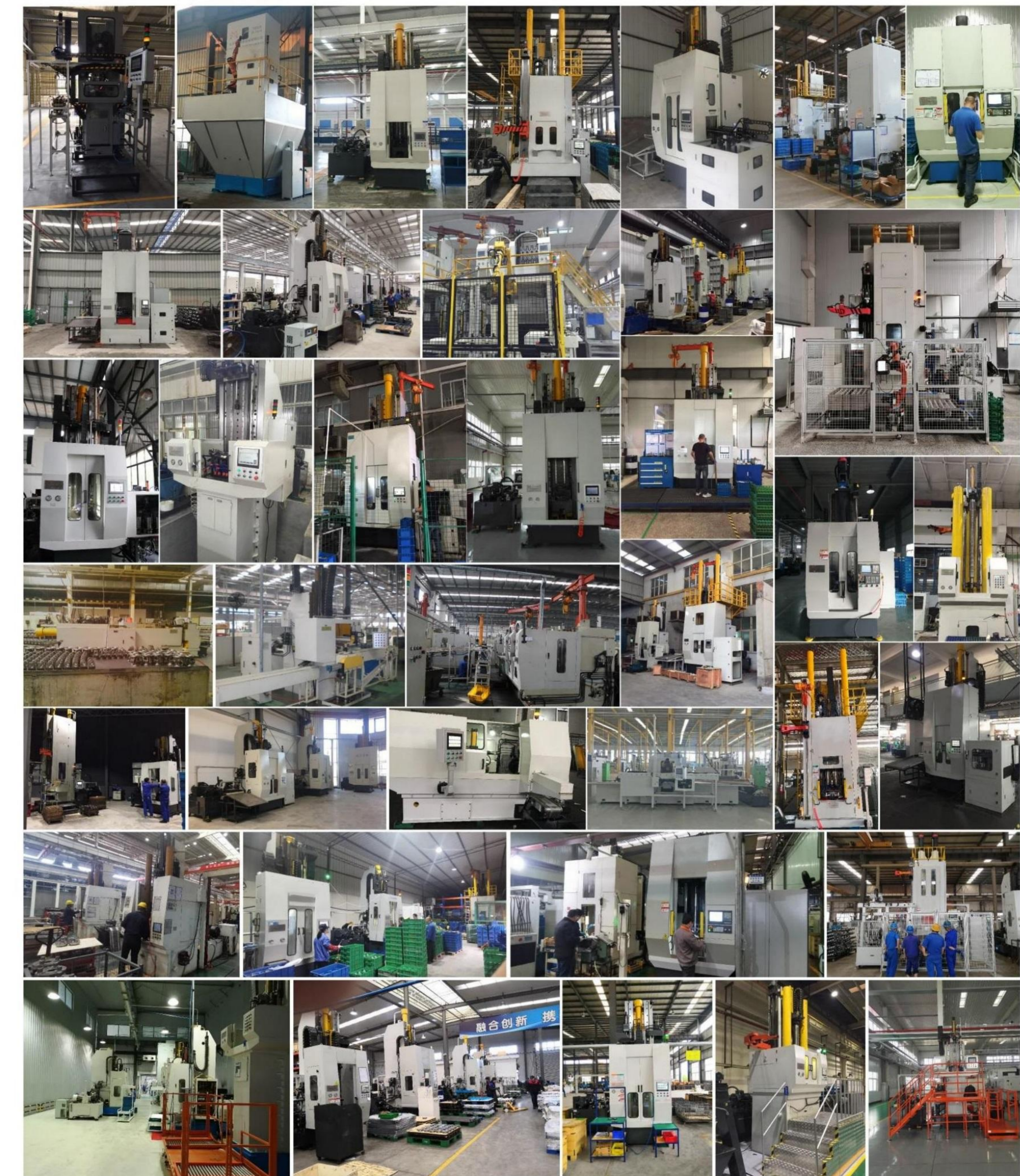


拉刀全长和拉床行程的关系
Broach length and machines stroke

加工件的材料 Material	每1刃的切深(单边)(um) Cutting depth/1tooth(one side) (um)			单位面积切削阻力(N) Specific cutting resistance
	圆 Round	花键 Spline	平面 Surface	
合金钢 Alloy Steel	10-20	25-30	30-70	300-400
软铁 Steel	10-20	25-30	30-70	300
铸铁 Cast iron	25-40	25-40	50-75	200
可锻铸铁 Malleable cast iron	25-35	25-35	50-75	150-200
轻合金 Light alloy	35-50	30-40	60-100	100-200

案例图片

Case pictures



加工零件展示
Machining parts



拉床智能化 Intelligent technology

充分发挥公司技术研发人员既具备多年拉床设计经验又具备拉床制造经验丰富的优势，把公司的成熟技术和设计理念始终贯彻到产品制造过程中的每一个细节。

Give full play to the company's technology research and development personnel have many years of experience in broaching machine design and has the advantages of broaching machine manufacturing experience, the company of mature technology and design philosophy has always been central to the every detail in the process of product manufacturing

利用Inventor在机床整机设计中三维建模。

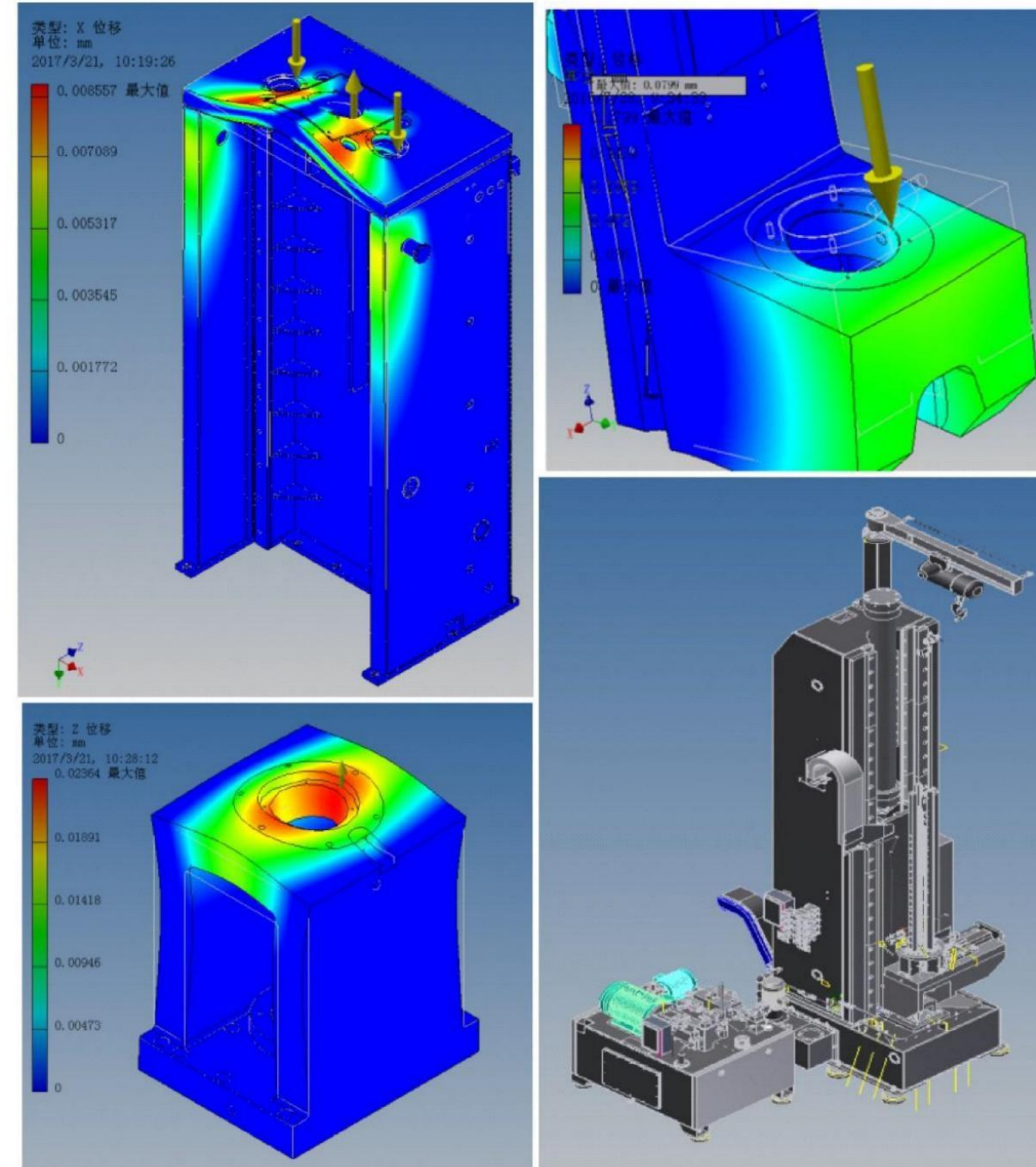
对设计中的关键零部件进行受力分析。

优化机床结构，提高机床刚性，确保拉削精度。

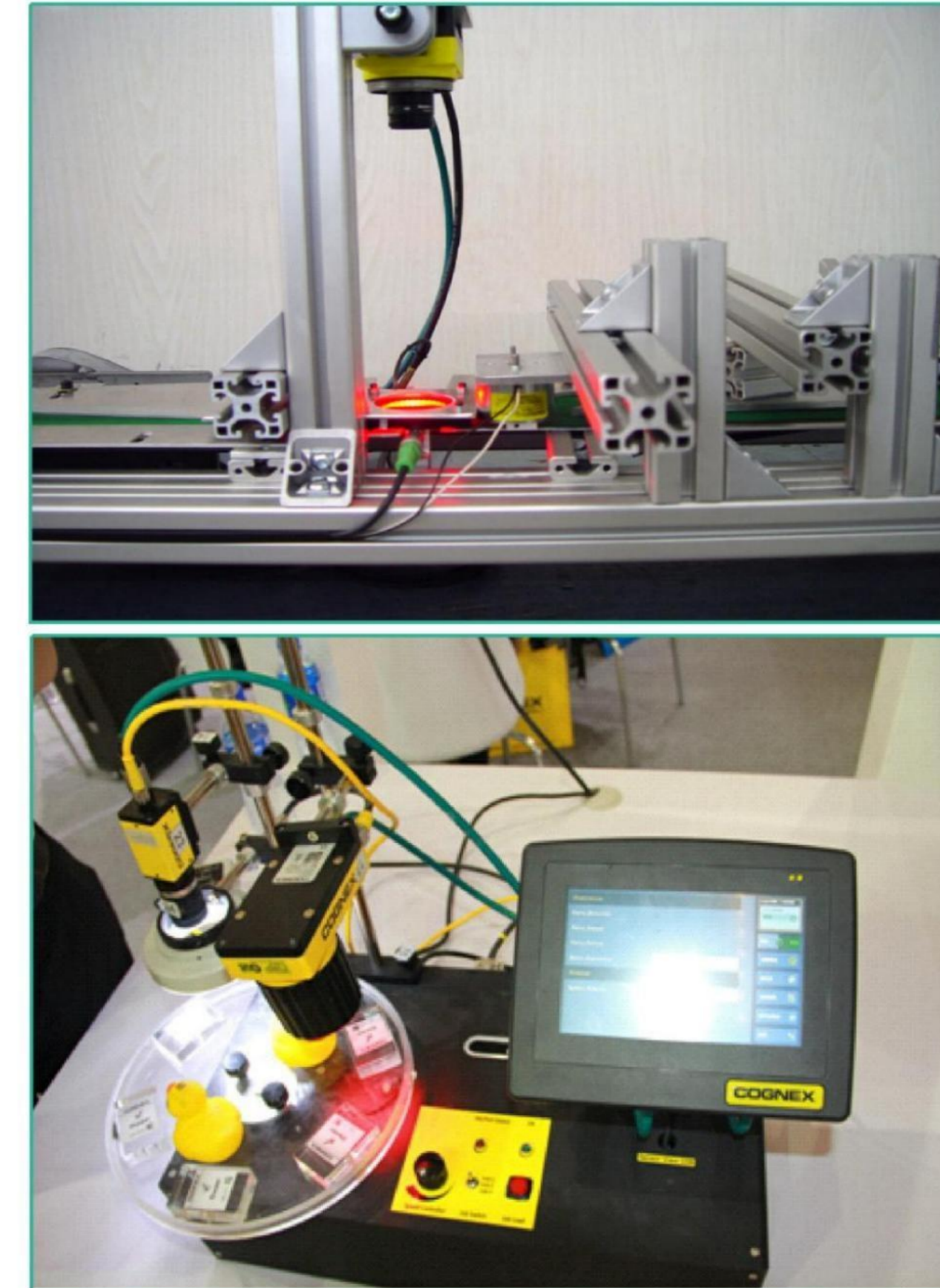
Using the Inventor in 3D modeling in the design of machine tool machine.

Stress analysis was carried out on the design of key parts.

Optimize the structure of machine tool, improving machine tool rigidity to ensure the broaching accuracy.



可选配siemens PLC,通过PROFIBUS-DP等通讯协议实现拉床和机器人、MES系统集成连线。
Optional Siemens PLC, through the profibus-dp communication protocol implementation such as broaching machine, robot and MES system integration

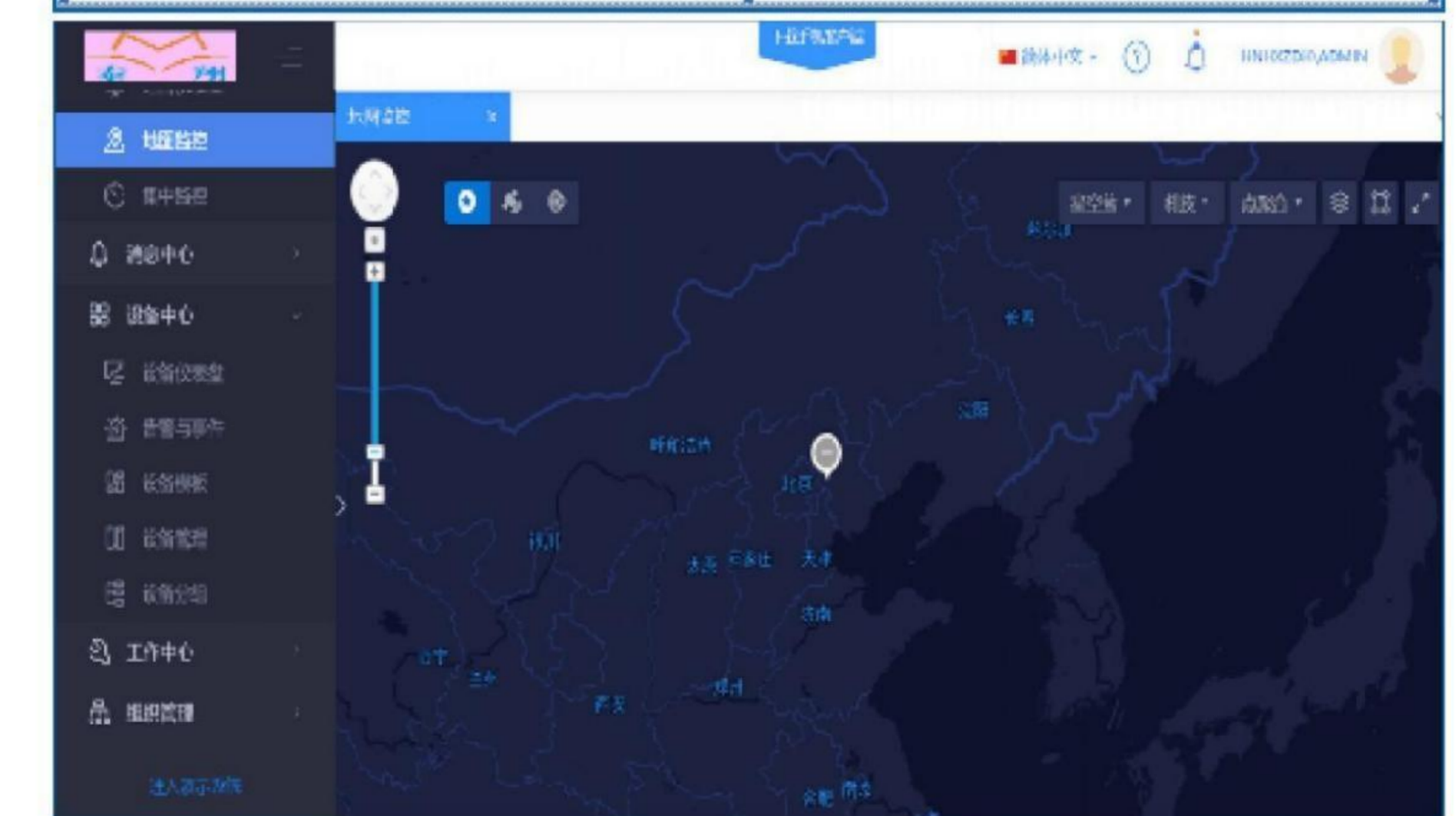
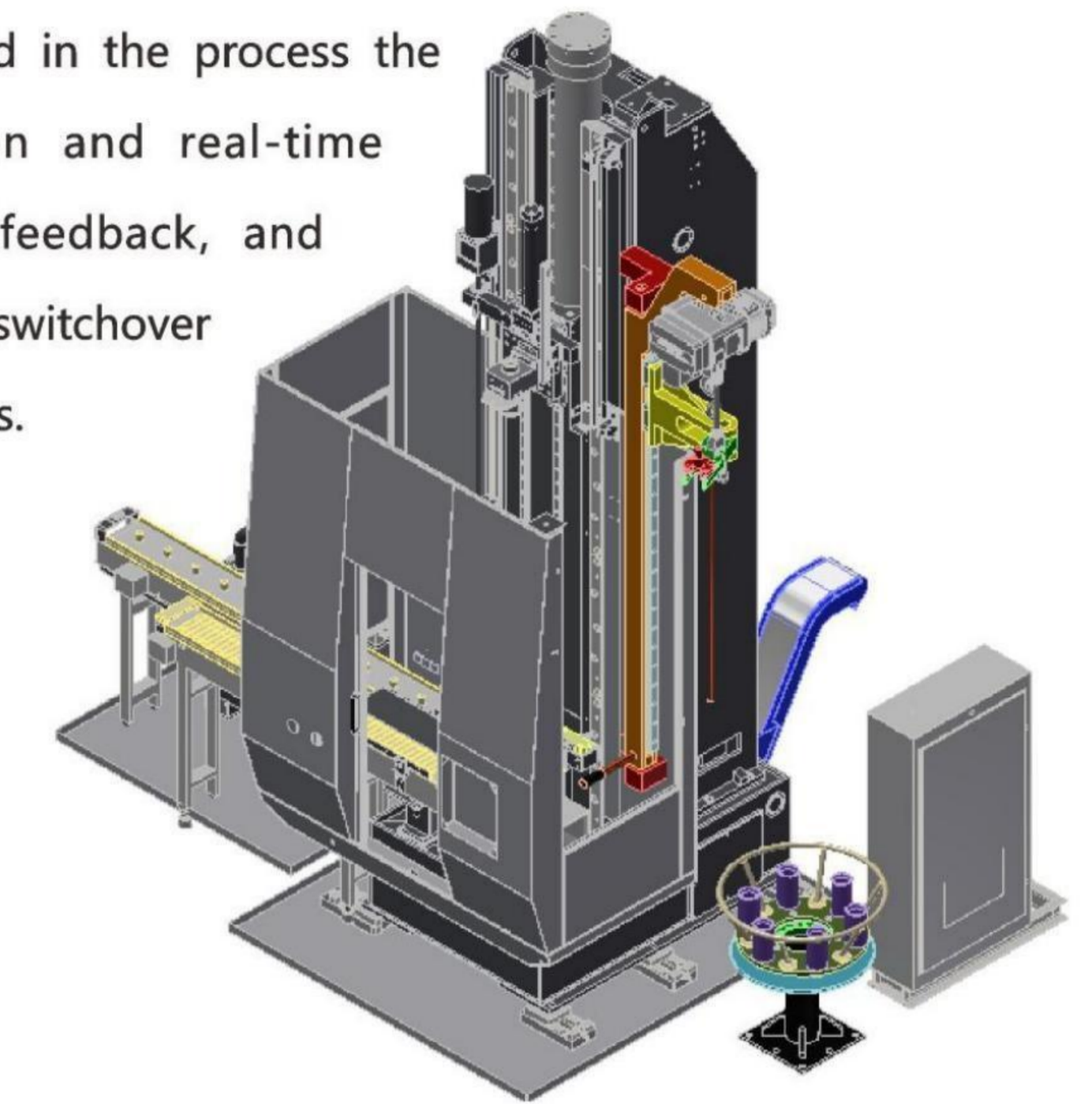


设备并预留MES系统接口实现与上层管理系统信息交互，实时反馈产品身份信息，加工质量信息，加工数量信息，刀具磨损信息，机床状态信息至工控机，加上通过以机器人完成自动上下料，完全实现智能化连线，也可实现物联网远程控制。

The equipment preparation the MES system interface implementation and upper management system information interaction, real-time feedback product identity information and information processing quality, processing quantity information, information tool wear and machine tool state information to the industrial computer, coupled with robot to complete the automatic up-down material, fully realized intelligent connection, it can also realize remote control of Internet of things.

设备集成了在线检测系统、RFID、对于产品在生产加工过程当中的数据可以数字化采集并实时监控并反馈，并能实现多品种零件自动切换。

Equipment integrated with online testing system, RFID, for the product in the production and processing data can be found in the process the digital acquisition and real-time monitoring and feedback, and realize automatic switchover many kinds of parts.



企业荣誉

Enterprise honors



合作伙伴
Cooperative Partner

