

Specification CNC turning and milling - Upper Precision Tech

Processable metals

Including aluminum, stainless steel, aluminum-steel, bronze, brass, steel, titanium, and carbon steel.

Processable Plastics

ABS, PC, PMMA, POM, PA, PP, PET, PVC, CPVC, PS, LDPE, HDPE, PSU, PPSU, Nylon, PEEK, PEI and Polycarbonates.

Tolerances

Our working methods are geared towards compliance with the ISO 2768 CNC machine standard. As a rule, the tolerances according to ISO 2768 (medium) and ISO 2768 (fine) are used. If tighter tolerances are required, a corresponding declaration in the drawings is necessary. Please contact us to discuss further options.

Component finishing

Anodising	Painting
Grinding and polishing	Chrome plating
Bead blasting + anodising	Electrophoresis
Water plating	Electropolishing
Steam polishing	Sandblasting
Passivation	Heat treatment
Hard oxidation	Brushing
Powder coating	Electroplating

Standards	Metal Part	Plastic Part
Max. Part Size	1430×1130×450 mm	1970×1470×250 mm
Min. Part Size	1x1 mm	2x2 mm
Min. Hole Size	ø 0,30 mm	ø 0,30 mm
Hole / Shaft Tolerance	H6/h6	H7/h7
Standard Tolerance	ISO 2768-f	ISO 2768-m
Min. Text CNC Engraving	Line Width 0,02 mm x Depth 0,3 mm	Line Width 0,02 mm x Depth 0,3 mm
Text Laser Engraving	Depth 0,05-0,1 mm	Depth 0,05-0,1 mm
Min. Milling Radius	Standard R 0,15 mm; Optional R 0,1 mm	Standard R 0,15 mm; Optional R 0,1 mm
Surface roughness Ra	-	PMMA Ra 0,04 - Ra 0,08; PC Ra 0,06 - Ra 1,0
Edge properties	The corners of the component will be removed in the form of a chamfer or radius, as shown in the drawing provided for the job. Specify the size of the resulting chamfer or radius.	



Please do not hesitate to contact us
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 for further details or individual

requirements.

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Overall Mold Category

5-axis high-speed machines can guarantee that the mold parts are qualified when they are completed, achieving the goal of "only assembly without repair" for mold assembly.

Car Seat Belt

Number of parts 249 pcs (non-standard parts and standard parts)

CNC processing

Mold dimension 83 pcs

Machine 608.5×600.0×794.0 mm

Highlights GRU200T+GRU300+GRU400T+HGU600+HGU800

+ The entire mold assembly time only 7.5 hours, achieving the goal of "only assembly without repair" for the mold parts.

A-Pillar And B-Pillar Of The Car

Number of parts 231 pcs (non-standard parts and standard parts)

CNC processing

Mold dimension 87 pcs

Weight

Machine 500×600×305 mm

Highlights 392 kg

GRU400T+HGU600+HGU800

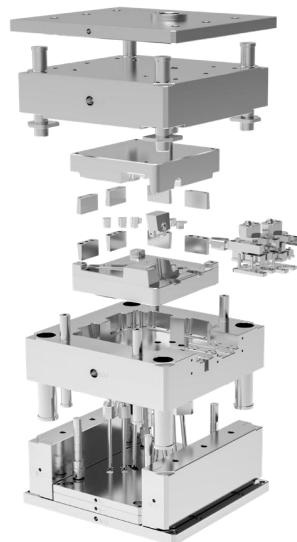
+ 3-axis and 5-axis sequential processing reduces the 325 processes required in 3-axis processing to 252 processes;

+ The machining allowance of key fitting parts controlled within -0.01 to 0 mm;

+ The precision < 15 μm after all non-standard parts machining;

+ 0.5 days to complete the assembly of all parts.

Explosion view of the mold for the protective cover of vehicle seat belts

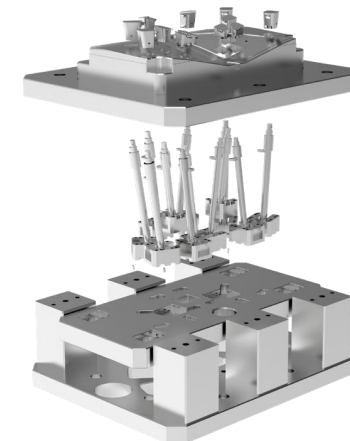


The protective cover of vehicle seat belts



Explosion view of the mold of decorative surface of vehicle AB pillars

Decorative surface of vehicle AB pillars



Automotive Parts

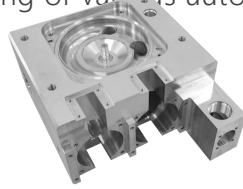
5-axis high-speed machine can use a variety of composite tools to accurately perform composite machining process, achieving efficient and high-quality processing of various automotive parts



New Energy Vehicle Motor Shell

Size
Material 165×128×106 mm
Machine 6061 aluminium alloy
Highlights MRMT300

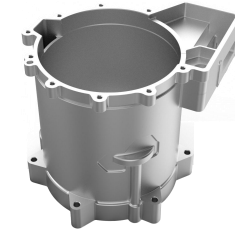
- + Single piece processing time < 11 min;
- + Coaxiality between each cylindrical surface in the inner cavity is < 5 μm;
- + Concentricity of inner step hole is < 20 μm, roundness of inner hole is < 10 μm.



New Energy Shell Parts

Size
Material 219×190×95 mm
Machine Aluminum alloy (6082)
Highlights GRET400

- + The amount of material removed from raw material to finished product is up to 33%;
- + A total of 63 tools are required in the processing, including milling tools, boring tools, step drills, step reamers, etc.;
- + All feature processing is completed in one clamping, and the single piece processing time is 88 min.



Vehicle Motor Shell

Size 340×311×320mm
Material ADC12 aluminum alloy
Machine MRMT600
Highlights

- + The processing time of a single piece is 30 min;
- + The concentricity of the step holes < 10 μm.

Hydraulic Valve Body Parts

Size
Material 50×127×50 mm
Machine 6061-T6
Highlights MRET400DZ

- + The amount of material removed is greater than 40%, and the number of holes to be processed can be up to 200 kinds;
- + The cylindricity of the hole < 5 μm;
- + The concentricity of the step holes < 10 μm;
- + The perpendicularity between the holes and the surface < 10 μm.

