

APEC 亞太菁英
ASIA PACIFIC ELITE CORP

AEROSPACE INDUSTRY SOLUTIONS

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Aiming At Aerospace Solutions

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Aiming at aerospace solutions

APEC is the total solution provider for the future aerospace industry. With our high quality 5-axis machines, we are confident to provide comprehensive strategy to our clients and bring each other to the next level.

TRENDS

- Predictable and stable growth
- Fuel consumption improving
- New engine design
- Material changes

CHALLENGES

- High efficiency production
- New machining process
- Right shoring
- Supply chain transparency
- Flexible delivery

SOLUTIONS

- Smart manufacturing
- Complete product line
- Technical support
- Turnkey solutions
- Strategic partnership



OUR MISSION

To provide high-performance 5- axis large scale aerospace machines to streamline customers' aerospace machining process.

OUR VISION

We believe our innovative proposition will help those with aspiration have a better choice and a much better future.



**CFRP
structural
and layup
tooling**



G3020



G2540



G3060



MCW30200



**Aero
engine
parts**



G800-TR



MT20RT



MDU-2000W



**Titanium
structural
parts**



G800-TR



MTH1530



MDU2842-Titan



**Aluminum
structural
parts**



MT1530



G3020



G2540



G3060



GM3080



MC30200-Dual

**Various
HAEDS & SPINDLES** available
For all **Aerospace** material applications

HSK 63A/100A

5,000 - 30,000 RPM

25 - 124 kW

60 - 1,000 Nm

Travel [mm]

1,000

3,000

5,000

10,000

20,000

Aluminum Structural Parts



Aluminum's light weight and durability offer fuel-efficient transportation with cost and it has been used in aviation since the birth of the industry.

8,000c.c/min

Material Removal Rate
Best efficient machining

**0.6G+
60m/min**

Feedrate/acceleration/Jerk value
Linear motor driving

Chip Disposal

Flushing system
Compound chip conveyor

**124kW
30,000rpm**

High power and frequency
Optimized spindle design



Titanium Structural Parts



Titanium is widely used for aircraft as a material having light weight, high strength and excellent corrosion resistance.

MTH

we offer advanced tool strategies
for wide variety of aero machining.

Efficiency

8000rpm spindle opt.
Modern tool strategy applied

Rigidity

Stable and solid machine body
Well damping ratio

• **1,000Nm**

Spindle torque





Aero Engine Parts

The design trend of aero engine is developing integrated and compound. The features of next-generation aero engine include complicated shape and difficult to-process inner structure. Besides, higher usage of nickel base alloy would also bring more challenges to machines, tool and processing technology.

Aero Engine Parts

5-axis Heavy Duty Machining Center

Internal and external
machining can be done
in single machine

MDU



MDU

Efficiency+

No time wasting of attachment
changing and calibration

Accuracy+

Vertical compact head for both Internal
& outside patterns machining

No attachment change

Automation+

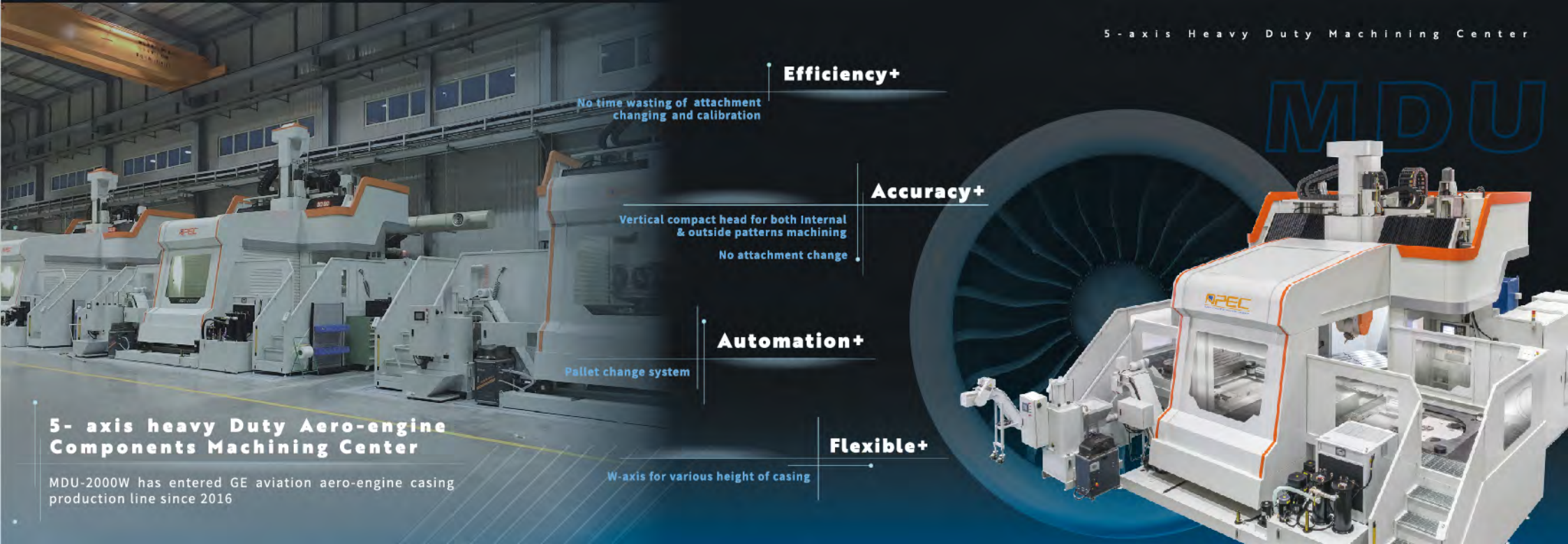
Pallet change system

Flexible+

W-axis for various height of casing

5-axis heavy Duty Aero-engine Components Machining Center

MDU-2000W has entered GE aviation aero-engine casing
production line since 2016





Composite Structural Parts and Layup Tooling

The application ratio of composite material to aircraft has been growing to improve aircraft fuel consumption due to its features of light-weight and high-temperature resistance.

Dust Collection

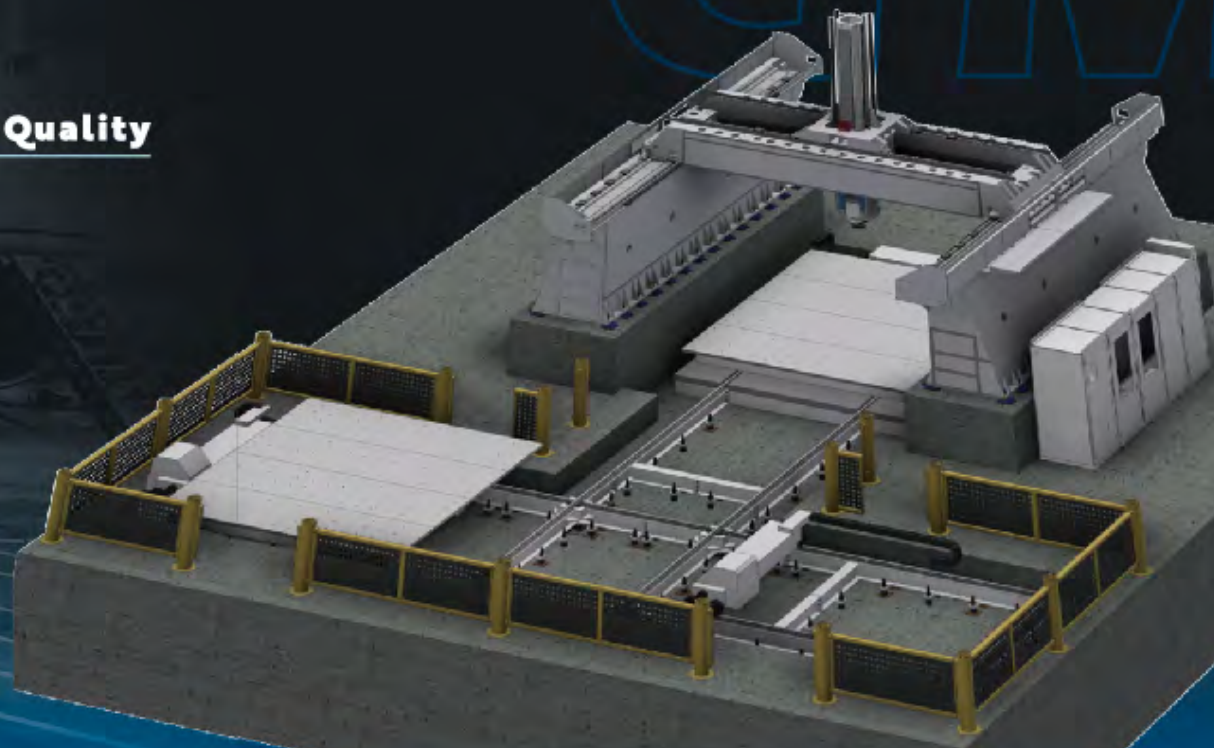
Working zone dust collecting & filtering
Suction hood on spindle
Top roof sliding cover

Surface Quality

Layup tooling finishing
Vacuum clamping jig & fixture

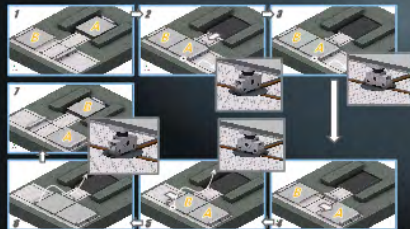
Efficiency

High spindle torque for stack material
Adapted machining with real time measuring



Auto Pallet Change System

Automatic Pallet Change system can be applied to reduce non-productive time. Machine can be carried out on one pallet, while the others can be used for preparation (seating and clamping of work-pieces etc.)



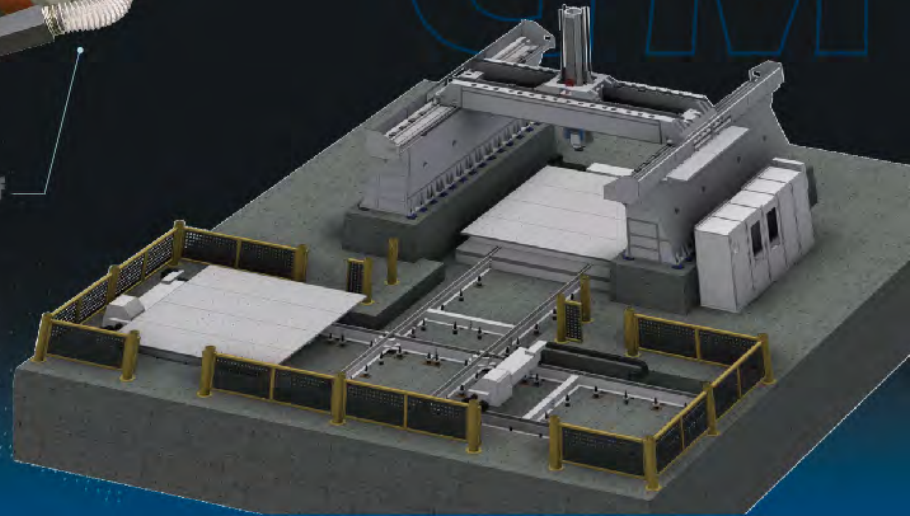
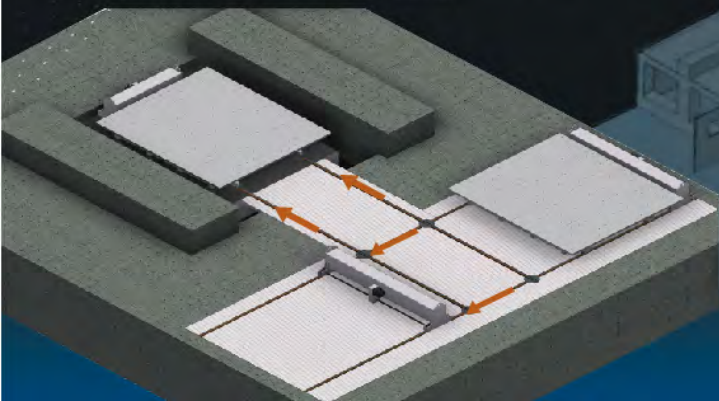
Dust Collection System

The dust collector system provides many manufacturing advantages including improvement of workpieces quality and efficiency.

- + Vacuuming
- + Filtering
- + Explosion proof



GM



Smart Factory Solutions

Factories have been driving forward to deliver a more responsive, adaptive and connected manufacturing line. The goals of smart factory are optimizing the manufacturing process and improving manufacturing efficiency.



TLM

TIMS

Smart Factory

- Instant machine Status tracking
- Utilization analysis
- Alarm history
- Operation history

- Smart
Manufacturing
- Production management
- Intelligent monitoring
- Tool management
- Workpiece management

