

APC Asian Production & Components ApS Outsourcing

From idea to finished product in China

APC ApS is a Danish-Chinese outsourcing company that produces custom designed components and finished products in China:

- Electronic Manufacturing Services (EMS), Box Build (Mechatronics)
- Plastic and Aluminium injection molding and manufacturing of molds.
- Aluminium and Steel machining and Cast Iron
- Custom design electronic components:
PCB, Optoelectronics, LCD, Transformers, Power Supply,
Cable and Wireharness, Membrane Switches.
- Product development and design in hardware, software, PCB layout,
EMC testing, 3D engineering drawing and prototyping
- ISO 13485 (Medical), ISO 9001:2002, ISO 14001, QS9000, TS 16949

Awards:



APC Danmark - APC Hong Kong / Shenzhen - APC Shanghai

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Shanghai



APC Asian Production & Components ApS

Customers advantages

APC has a large portfolio of customers at selected specialist manufacturers in China, with whom APC has a close and long term cooperation. This combined with cultural insight and years of operating and networking in China gives our customers following advantages:

- Better prices, equivalent to clean factory prices.
- Suppliers accept smaller quantities than usual in China.
- Better service, attention and flexibility from supplier.
- Easy communication, as contact is maintained by APC. No misunderstandings caused by cultural and linguistic differences.
-

APC has offices in Shanghai, and Hong Kong / Shenzhen/ Dong Guan, which performs quality audits at suppliers, and ensures delivery times and prices.



APC China:

Production engineer, Jacky Shi
Shenzhen / Dongguan
Responsible for audits and delivery



Herry Wang
Shanghai

Bodil Sylvest
Shanghai

Company background: From 1984 to 1998 Electronic Manufacturing Services

From 1998 - Outsourcing - EMS, Plast & Metal production in China

10 YEARS OF EXCELLENCE



I dag APC

Entrepreneur Of The Year® (EOY) award to the most successful and innovative entrepreneurial business leaders around the globe in more than 125 cities in 40 countries worldwide. All winners become lifetime members of *The Entrepreneur Of The Year Hall of Fame*, which is part of the Entrepreneur Of The Year Academy. Each year the national country winners from around the world are invited to the World Entrepreneur Of The Year awards



Former Factory in Denmark from 1984 to 1998



Business Concept:



All commercial
contact only
through APC

APC Denmark

APC Shanghai

APC Shenzhen

Follow-up:
- Quality
- Deliveries

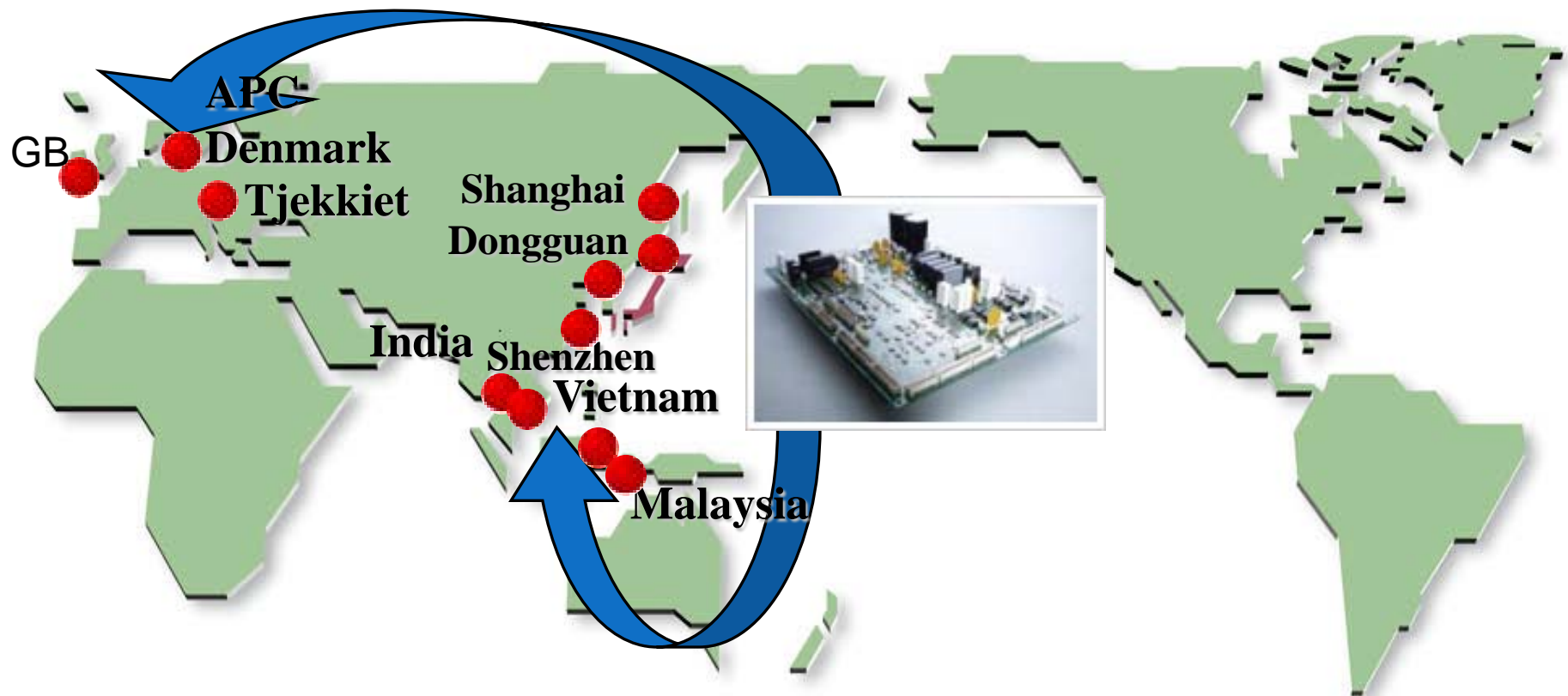
After APC Accept:
Directly contact
concerning technical
issues with cc to APC



Electronics Manufacturing Services (EMS)

APC's Partners in Asia

China, Thailand, Malaysia, India, Czech Republic



APC Asian Production & Components ApS

Electronics product development

- HW Design 25\$ / hour
- SW Design 35\$ / hour
- Embedded SW
- FPGA and ASIC implementation
- Print CAD Layout 35\$ / hour
- Print Prototyping
- EMC, EMI and EMS test approximately from 2000\$

Mechanical design, development and construction

- 2 & 3 D Mechanical Drawing 25\$ / hour
- Tool Drawings
- Mechanical Design 35\$ / hour
- Prototype Manufacturing

APC Asian Production & Components ApS



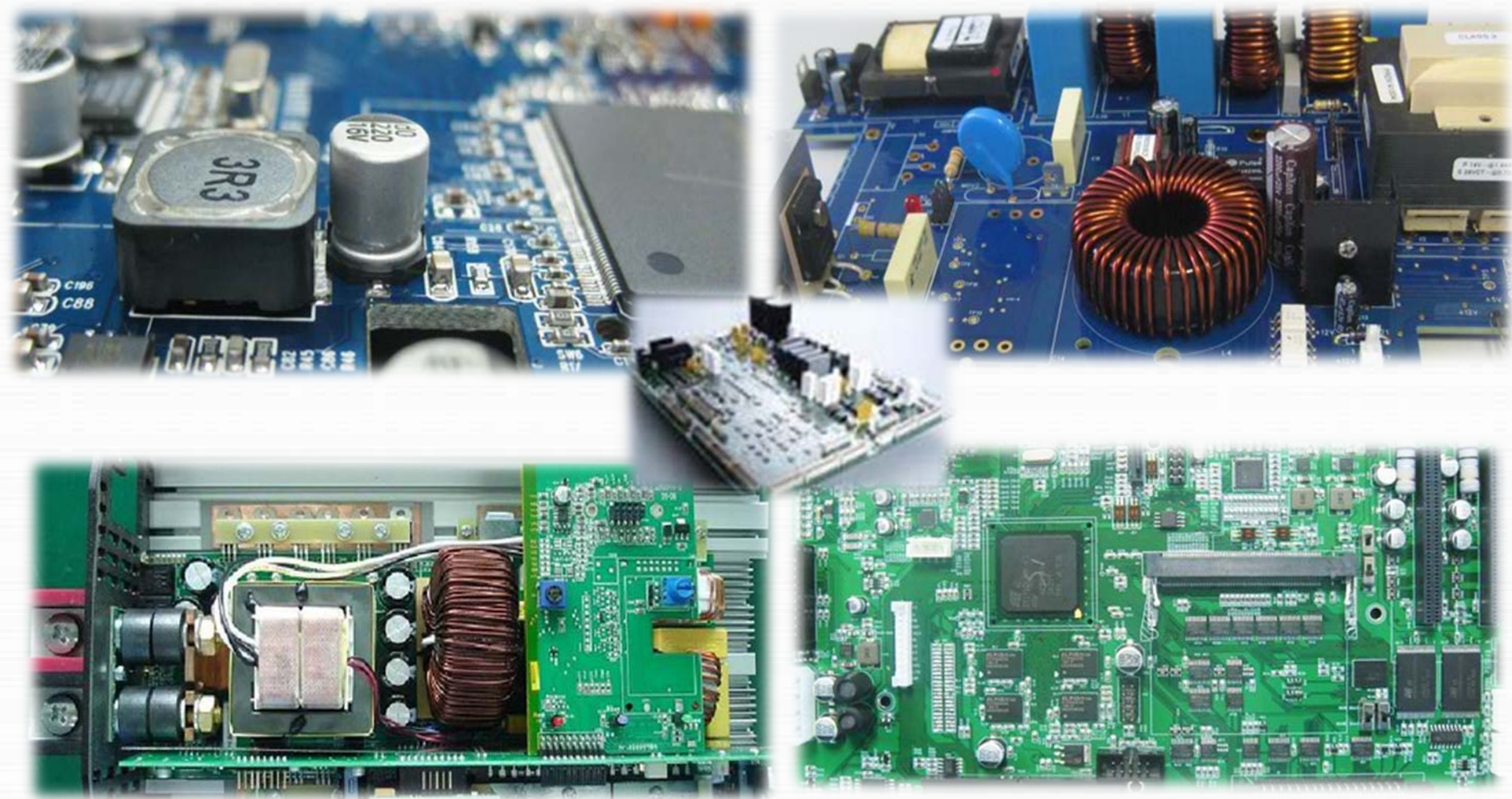
Electronic Manufacturing Services (EMS)

- ELECTRONIC ASSEMBLY PCBA (SMT & HMT). Processor according to RoHS.
- Assembly of QFP- and BGA, uBGA / CSP, 01005 components and wire bonding.
- Complete product manufacturing and assembly (Box Build)
- Material Procurement, Strategic Procurement. Production, Logistics online (ERP).
- Prototyping (NPI New Product Induction).
- QC: In-Circuit (ICT), Visual inspection (AOI) and function test (FT).
- X-ray control, Burn-in (BI) and EMC Test. Input Control (QI).
- ESD protected, temperature-controlled, Class 10K clean room.
- Quality: ISO 13485 (Medical), ISO 9001:2008, ISO 14001, TS16949, CE, ROHS cert.
- Quality Standard acc: Workman-ship/IPC-A-610 standard Class 2 and 3.
- Small series of 50 pcs (High Mix), 100 pcs (Low Mix) and upwards, without quantitative restriction on customized production lines.
- HW, SW, PCB Print Layout & Mechanical Design and Development.
- Guaranteed prices among lowest in world market prices. Typically, prices below 30% of European prices, in addition to clean factory price China

Approximately 30-40% of Danish manufacturing cost. Low volume from 100 pcs

Examples of customer-specific products

Electronic Manufacturing Services (EMS)



Examples of customer-specific products

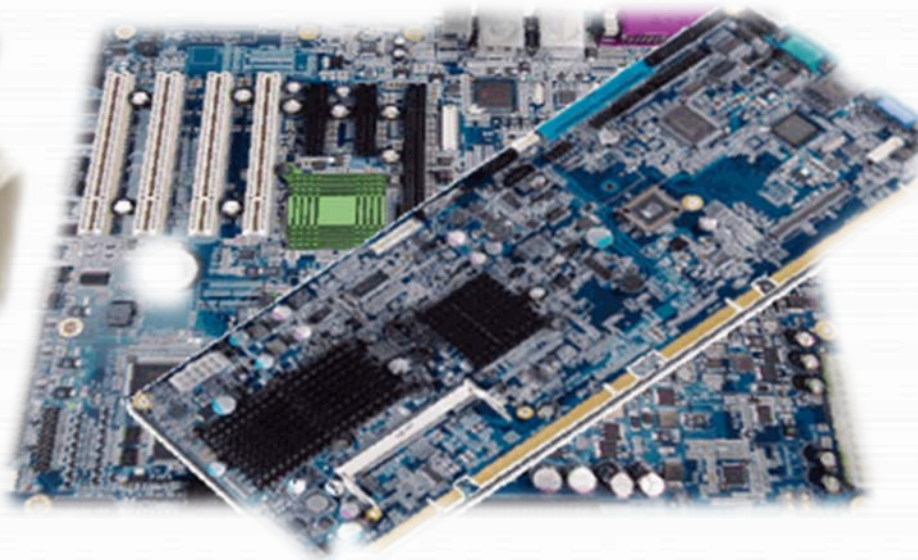
Box Build

Typically, total delivery time 6-8 weeks for first delivery



Examples of customer-specific products

Contract Manufacturing Services



APC's EMS partners:

Electronic assembly SMD, HMT, COB, Box Build (Mechatronic)



SMD Linie



SMD Pick and place machines

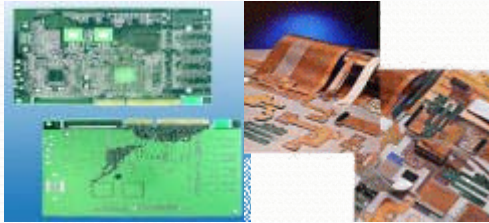


85 SMD Lines



Box Build assembly lines

Custom-designed components:



Printed Circuit Board (PCB):
Single-double-sided ,Multilayer
Flexible PCB (FCB)



Cable & Wireharness:
Cable Bundles
Flat Cables
Spiral Cables
Power cord
Connectors



Membrane Switch:
Silicone Keypad
Rubber Keypad
Touch Panel



Plastic and Aluminium injection molding/Ext.:
35T to 3600T
Up to 2500 mm
Vacuum forming



Optoelectronics:
LCD LCM Modul
TFT LED LD



Metal Machining CNC & Casting:
Laser Cutting, Press,
Bending, Punching.....
Turning, Milling, Grinding

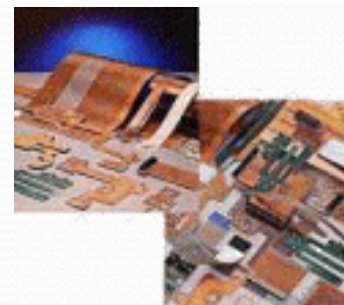
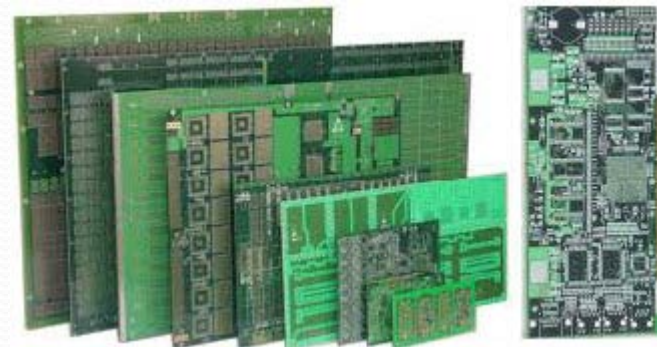


Transformers:
transformers
Toroidal
Coils
Power Supply

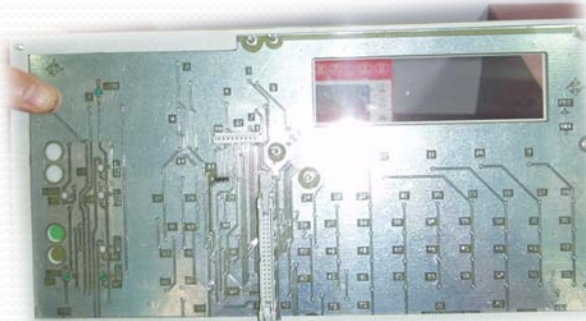


Aluminum Processing:
Sheet metal boxes
Cabinets and front
panel
Extrusion - Profiles

Examples of Printed Circuit Board (PCB)



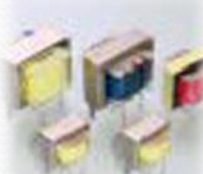
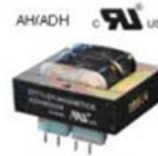
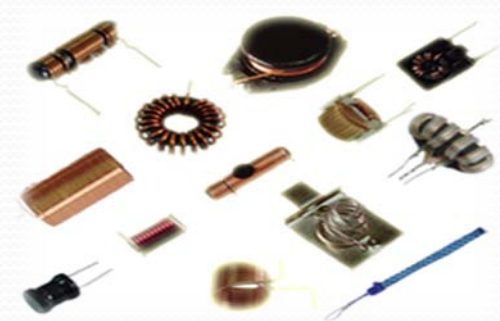
Examples of Membrane Switch



Examples of Optoelectronics LCD(M), TFT, Touch



Examples of Transformers, Power Supply



Examples of Wireharness



APC Asian Production & Components ApS

Standard Components

Is not directly included in the APC's product program,
but can be supplied by order > 1-2000 USD

Direct from the factory via our Hong Kong / Shenzhen branch

- Connectors
- Relays
- Mounting Boxes
- Switches / Switches
- Motors
- Semiconductors
- Power (Contactors, PLC)
- Panel PC



HMI



Integrated
PLC+HMI



Inverter

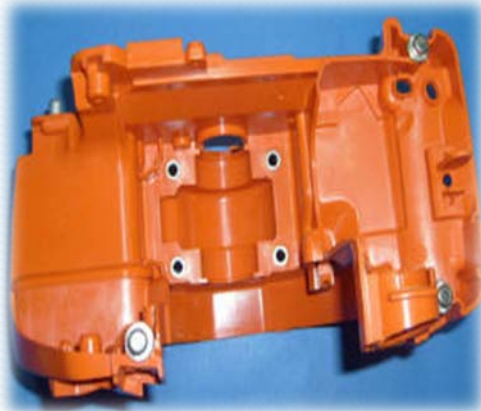
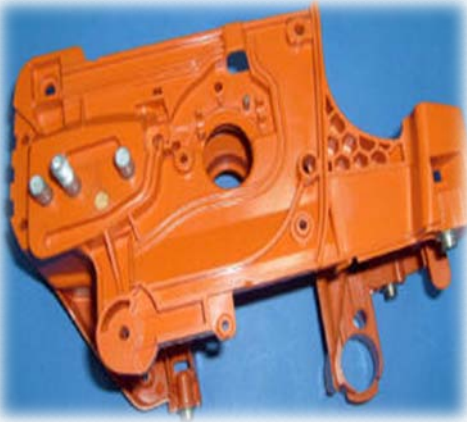
Plastic and Aluminium Injection / Extrusion & Tooling

- Tooling cost
 - Small Item 2500-4000\$
 - Big Item 4000-6500\$
- Delivery time
 - ca. 5 weeks
- Item delivery time Plastic and Alu. ca. 1-2 weeks
- Extrusion
- SLA models
- If you don't have 3D Mechanical drawing,
we can do a 3D drawing after your model.
Normally 1 day of 25\$ / hour

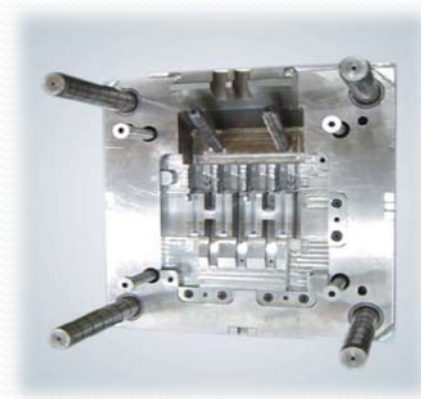
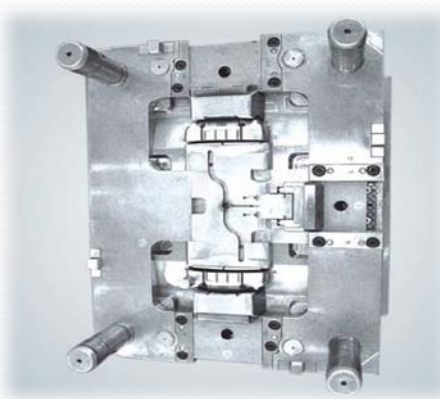
Examples of customer-specific plastic products



Examples of customer-specific plastic products

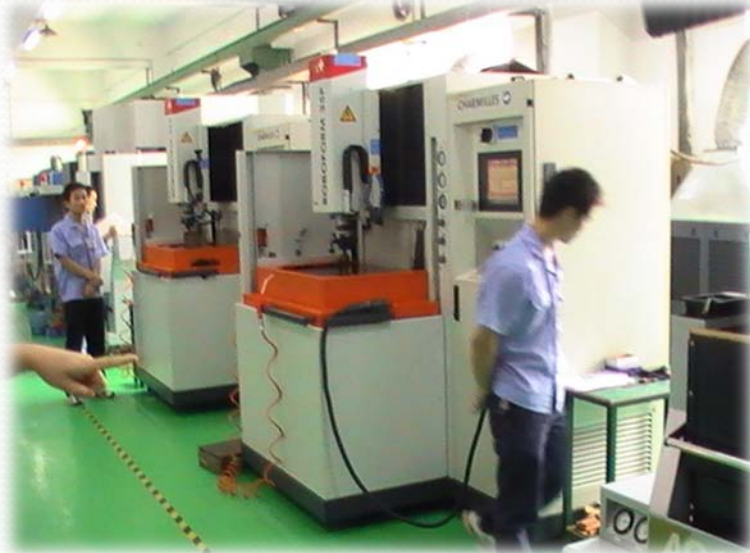


APC's Plastic and Aluminium partners:





Tooling for Plastic and Aluminium injection:



Metal Machining

Non-cutting machining

- CNC Laser Cutting
- Press
- Bending
- Pulling
- Punching

Machining

- CNC Turning
- CNC Milling
- Grinding

Castings

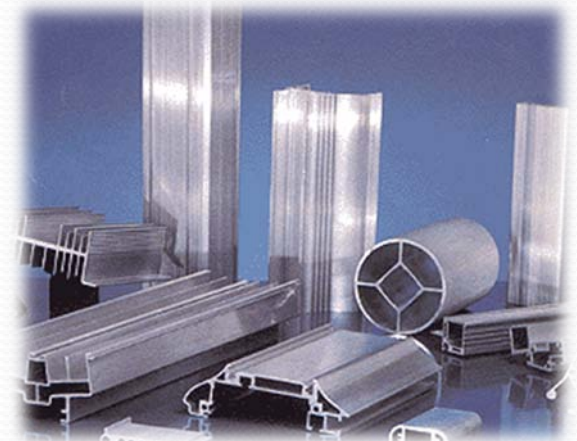
- Sand Castings
- Wax/Investment Casting
- Steel/Aluminum Casting

Rubber

Enclosures, Chassis, Rack, Front plates

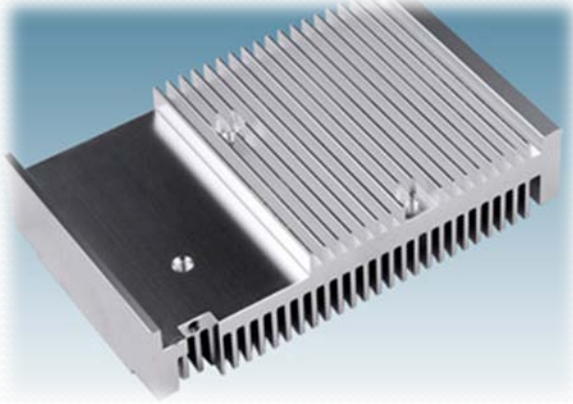
Examples of customer-specific metal products

Machining - Casting



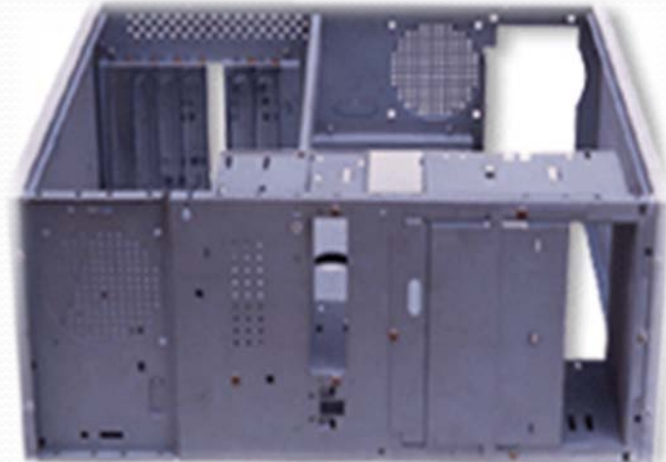
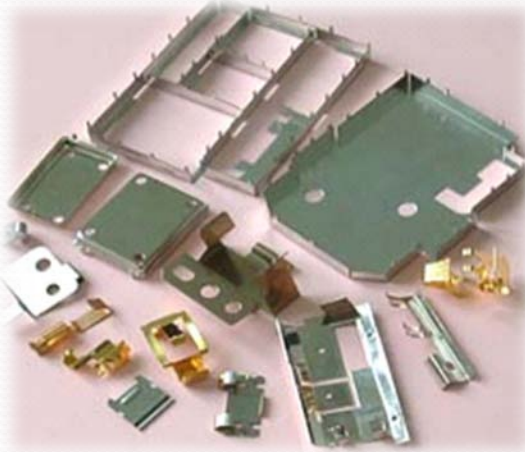
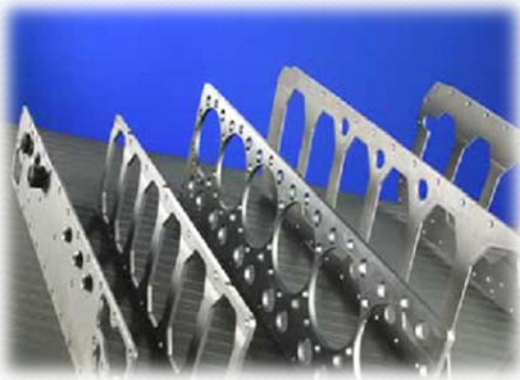
Examples of customer-specific metal products

Machining - Casting



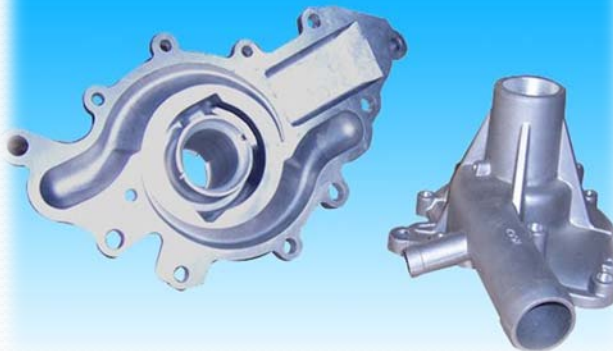
Examples of customer-specific sheet metal working

Sheet metal working



Examples of customer-specific Aluminium Injection

Aluminium Pressure Injection

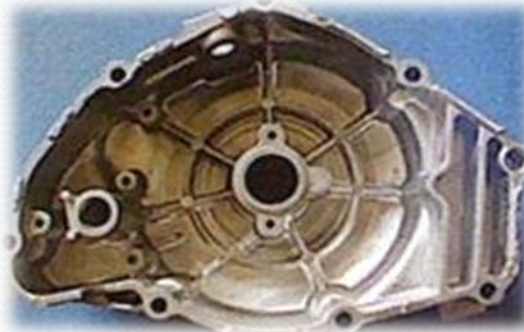


Examples of customer-specific Steel Casting

Investment Casting



Die Casting



Sand Casting



Examples of customer-specific Sand Casting

Sand Casting



APC's Machining partners:



Quality Certification and Standards - Electronics:

Electronic Manufacturing Services (EMS):

- Quality security. **ISO 13485 (Medical)**, ISO 9001: 2008, ISO 14001 (Environmental), QS 9000, TS 16949 (Automobile), IPC-A-610 kl.3 (Highest requirements) CE og ROHS certified..
- Quality Standard acc: IPC-A-610 Standard Class 1, 2 and 3 (Highest requirement)
- ESD protected, temperature regulated, Class 10K clean room.
- QC: In-circuit (ICT), Visual inspection (AOI) and function test (FT).

Printed Circuit Board (PCB):

- Quality Standard acc: PERFAG DIN/IEC326
- IPC-A-600 (Acceptance of Printed Boards)
- IPC-6012 (Qualification and Performance Specification for PCB)
- RoHS Directive

Quality Certification and Standards – Plastic & Metal:

Quality Standard Plastic & Metal production:

- Kvalitets sikring. ISO 9001: 2008, ISO 14001 (Miljø), QS 9000, TS 16949 (Automobil), ROHS certificeret.

Quality Standard & Norm for Plastic Injection:

- DIN 16901 Plastic Moulding
- ISO 1302 surface condition

Quality Standard & Norm for Metal work :

- ISO 2768-1

APC's Audit skema iht ISO 9001:2008:



Audit Spørsmål:

	Supplier: xxxxxxxxxx xxxxxxxxxx	
	Audit performed by: xxxxxxxxxx, APC, Shenzhen	
	Date: 08-04-2010	
4.1.2	Organization	
	Does supplier have a Quality Manager?	Name:
	Is the Quality Manager independent of the production?	
4.2	Quality Management System	
	Does supplier have a quality policy?	
	Does supplier have a manual for quality?	
	Is the manual available for the staff?	
	Which quality approvals has the supplier	last approval:
	Which norm approval has supplier	last: approval:
	Which environment approval	last: approval:

Organization:



Jørgen Sylvest Jensen COE



Bodil Sylvest Jensen Director



Jacky Shi Project Engineer, APC Shenzhen

Project Engineer, QA Engineer



The background of the slide is a photograph of the Shanghai skyline, featuring the Oriental Pearl Tower and other skyscrapers. The text is overlaid on this image.

Thanks for your attention

APC Danmark, APC Hong Kong / Shenzhen, APC Shanghai

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