



**Date** 25<sup>th</sup> Oct, 2018 – 26<sup>th</sup> Oct, 2018

**Venue** — Gyeongnam Sacheon Aerospace Expo, B2B Conference Hall

Host ───── Sacheon
Organizer ──── KOTRA

**Participants** — 16 Global Companies, 50 Korean companies

**Type of Business** → Airplanes, Airplane Parts, Spaceship, Spaceship Parts, etc.

#### Schedule

Date	I Time		Title	
	09:30 – 09:45	′15	Opening Remarks & Welcoming Speech - KOTRA & Sacheon	
			Session 1 : Business Forum	
	09:45 – 10:05	′20	Introduction of Korea Aerospace Industries - Gyeongsang National University	
	10:05 – 10:25	′20	Introduction of MRO Businesses in Korea - KAEMS (Korea Aviation Engineering & Maintenance Service)	
	10:25 – 10:40	′15	Coffee Break	
	10:40 – 11:10	′30	Aviation Valley, Poland - Aviation Valley	
10.25	11:10 – 11:40 /30 Personnel Training (by the Exar	The Aircraft Industry, the Region, the University : Cooperation in Production and Personnel Training (by the Example of the Ulyanovsk Region) - Ulyanovsk State University		
(Thu)	11:40 – 11:50	′10	Coffee Break	
	11:50 – 12:10	′20	Airbus industrial cooperation in Korea	
	12:10 – 12:30	′20	How to Prepare to Enter the European Market? - Consultaero SAS, France	
	12:30 – 13:00	′30	Taking the Cost out of the Cost - MAMA(Michigan Aerospace Manufacturers Association)	
	13:00 – 14:40		Networking Luncheon	
			Session 2: B2B Meeting	
	14:40 – 17	<b>'</b> :10	1:1 Meeting (30mins per company)	
	18:00 – 20	0:00	Networking Dinner	
40.26	09:30 – 12	2:00	1:1 Meeting (30mins per company)	
10,26 (Fri)	12:00 – 13	:30	Networking Luncheon	
()	13:30 – 15:30		1:1 Meeting (30mins per company)	



## CONTENTS

01. AERO MASTER	→ 06
02. BUSUNG AEROSPACE TECHNOLOGY CORPORATION -	⊸ 08
03. C & Lee Inc.	<b>⊸</b> 10
04. COTEC Corporation	<b>⊸</b> 12
05. Dae Han Engineering Inc.	<b>⊸</b> 14
06. DAEHWA AEROSPACE INDUSTRIES CO., LTD	<b>⊸</b> 16
07. DnMA (Distribution and Manufacturing for Aerospace) —	<b>⊸</b> 18
08. Dongsung TCS	<b>⊸</b> 20
09. Dong Young M&T	<b>⊸</b> 21
10. DOOWON HEAVY INDUSTRIAL CO. LTD	<b>→ 23</b>
11. DONGHWA A.C.M. CO., LTD	→ 25
12. EMKOREA CO.,LTD.	<b>⊸ 27</b>
13. EOS Corporation	<b>⊸</b> 29
14. FINE PRECISION IND, Ltd.,	⊸ 30
15. FIRSTEC Co.,Ltd.	→ 32
16. FOREX CO.,LTD	<b>⊸</b> 34
17. Hanwha Corporation/Machinery	<b>⊸</b> 35
18. HIZE AERO	<b>⊸</b> 37
19. HYUNDAI-WIA	<b>⊸</b> 39
20. IONES (DEFENSE)	<b>⊸</b> 41
21. JANG-AN AERO IND.	<b>→ 43</b>
22. JEIL HEAT TREATMENT COMPANY	<b>⊸</b> 45

23. JINYOUNG TBX Co., Ltd.	46
24. Korea Composites Inc.	47
25. KOLON DACC Composite Co., Ltd	49
26. Kencoa Aerospace ————————————————————————————————————	51
27. KIPCO Electronics & Aerospace CO.,Ltd	53
28. KOMACO CO., LTD	55
29. KOREA JIG & FIXTURE IND CO,LTD	57
30. KP AERO INDUSTRIES CO.,LTD.	59
31. KPC Metal Co., Ltd.	61
32. LC-TEK CO., LTD.	63
33. NDT ENGINEERING & AEROSPACE	65
34. ORBITECH	67
35. SAMCO (Sacheon Aserospace Manufacturig Ind. Co. Ltd) →	68
36. Samheung Precision. Co.Ltd.	70
37. S&K Aerospace Co., Ltd.	72
38. SOOSUNG AIRFRAME IND.,LTD.	74
39. SVMTECH Co., Ltd.	76
40. WOOJOO AEROSPACE IND. CO.,LTD.	78
41. Yeonhab Precision Co., Ltd.	79
42. YoungPoong Electronics Co., Ltd.	81

## **AERO MASTER**



Aero Master Corp. is the company who takes a key role in avionic and related software development in Korea.

Our main products are Flight Data Recording Systems, Subsystem Control Units and various Ground Stations in hardware field and ASIP(aircraft structure integrity program), aircraft engine maintenance management program, onboard OFPs(operational flight programs) and etc in software field.

#### **Contact Point**



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#### **Product Information**

#### 0

#### Avionics DTS, DTRS, RIU DTE-AVR, etc.

- Avionics and embedded software
- Military and International Standards
- LRU Design and Production (DTS, DTRS, CHCU, RIU, DTE-AVR)
- SRU Design and Production (PowerPC, Intel, DSP, FPGA, 1553B, A429, Discrete/Analog



DTS (Data Transfer System)



DTRS (Data Transfer & Recording System)



RIU (Remote Interface Unit)

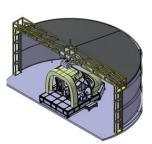


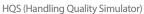
DTE-AVR (Data Transfer Equipment-Airborne Video Recoder)

#### 3D System & Ground Station HQS, GCS, PBX, etc.

#### **PRODUCT DETAILS**

- Handling Quality Simulator
- $\bullet$  Ground station to control aircraft mission and flight data
- LRU/SRU Test Equipment
- Ground Control System for the Unmanned Aircraft







GCS (Ground Control System)



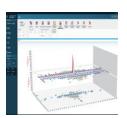
PBX (Pilot Box)

#### **Software**

SLM2000, DPS, IEMMS, ELMS MDAS, etc.

#### **PRODUCT DETAILS**

- Software for Aircraft Structure and Engine Life Management
- ASIP SW (T-50, KT-1, KT-1T)
- ENSIP SW (T-50)
- $\ \, {\bf \cdot}\, {\bf 3D}\, Application\, Software\, for\, investigating\, aircraft\, mishap\, by\, simulating\, the\, flight\, data\, downloaded\, from\, CSMU\, (T-50,F-15K,F-16,KT-1T,KT-1P)$



SLM2000 (Structural Life Management)



DPS (Data Processing System)



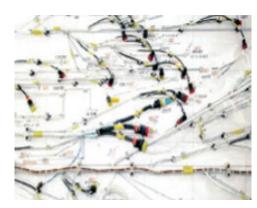
ELMS (Engine Life Management Software)



MDAS (Mishap Data Analysis Software)

#### **Wire harness**

- Wire Harness for Korea Utility Helicopter & Marine Utility Helicopter
- Wire Harness for Satellite





## **BUSUNG AEROSPACE TECHNOLOGY CORPORATION**



Early '90s, From its inception with small tasks for making simple tools, Busung Co., Ltd has grown to comprehensive aerospace company, specializing in producing parts, tools, design for aircraft through the history of aerospace industry of Korea. We will support aerospace industry continually and produce reliable products to live up to your expectation in the era of limitless competition with our accumulated technology, know-how and quality pride of our products.

The capacity which we supply as one stop service is about the processes that is based on the infrastructure such as precision equipments, talented people and partners for producing products and tools from development stage and manufacturing preparation to production, delivery service and installation to meet the needs of our clients.

#### Part production Capa -

 For years, we are managing qualities and delivery service based on experiences of aircraft sheet metal manufacturing and technology for you.

Tooling production Capa - Since '90s, we are performing the optimized design and the swift development process based on tool producing experience all around the aircraft manufacturing and technical know-how.

#### **Quality Capa**

 To live up to your expectation, we are controlling qualities of the products and operating safety and reliable quality management policy based on AS9100 and quality guideline, and maintaining perfect quality by apply newest instrumentation device.

#### **Engineering Capa**

 We are providing optimized solutions and designs for aircraft part manufacturing and tool development using CATIA platform, and performing 'Optimize Iteration' which is retestifying appropriacy and stability of the design and reviewing productivity about the shape with NC Programmers.

#### Contact Point -

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#### **Product Information**

#### **Machining** part

#### **PRODUCT DETAILS**

We are performing high speed manufacturing and Finishing process for aluminum machining product of aircraft structuring role and deliver the products in perfect quality guaranteed by CMM measurement on time.









#### Sheet metal part

#### PRODUCT DETAILS

We are performing all processes about sheet metal, extrusion, non-metal part molding and shape machining which are required in aircraft and performing turn-key engineering by a product Information of customer from simple shape to complex shape and deliver on time.









#### Tool

#### **PRODUCT DETAILS**

Master tool — Master tool, the tool for managing shape of l&R part and hole, performs controlling function for perfect coordination when you produce or repair the related tool. It is required in part manufacturing and assembling such as outer skin which is predicted to part change, maintenance door or hinge door & glass frame.

**Machining tool** Machining tool, which cannot fix by standard clamping method, is tool to minimize work preparation time such as clamping & set-up considering mass productivity. In general, Aircraft part needs at least 2 machining tools for bifacial process due to decrease the weight, Vacuum clamping will be added if prevention of vibration is necessary.

**Welding tool** • Welding tool, the fixturing for Tube ass'y welding which is required for aircraft manufacturing. We perform shape test after positioning of 3D Bending tube and welding. In general, Standard locator ass'y is applied but special locator is applied if the installation area is uncomfortably narrow.

**Bonding tool** Bonding tool, the fixturing for lay-up of aircraft composite part and assembly bonding process. We enable the verification of ply pattern and lay-up by laser project equipment. In general, aluminum mold is applied for small project but graphite & invar mold is applied for compound surface for big project.

**Assembly tool** Assembly tool, the fixturing which is required to sub assembling or final assembling aircraft parts, is separable into several steps. In general, we perform drilling and riveting & fastening after determine assembling positions for direct parts but there are various assembly tools which play indirect roles such as product handling and holding.

**Miscellaneous tool** •• Miscellaneous, the fixturing which plays indirect roles but direct functions for aircraft part and assembling process, is produced for convenience such as transportation / working support. In general, it is made as special shape/function for backing up the fixturing and the process for aircraft manufacturing.











## C & Lee Inc.



#### Established in 2004

- 1) Business: Aerospace composite parts, tool and heat treat
- 2) Experience: Aircraft composite parts for Boeing B787, B777 / for ROKG KUH, KT-100
- 3) Aero composite parts fabrication strong point
  - All special process is possible at our site (Composites, NDT NADCAP Qualified)

#### **Contact Point**

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#### **Product Information**



- Glass Fiber Reinforced Plastic
- Sandwich panel with nomex honeycomb core
- Hand lay up, Autoclave cure and 5-axis cnc machining
- nstrumental NDT





### KT-100

#### PRODUCT DETAILS

- Carbon Fiber Reinforced Plastic
- Sandwich panel with nomex honeycomb core
- Hand lay-up, Autoclave cure and hand routing
- Instrumental NDT

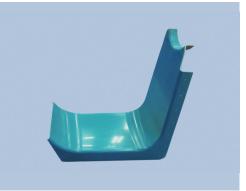




## B737 detail parts

- Glass Fiber Reinforced Plastic
- Laminate parts
- Hand lay up, Autoclave cure and Hand routing





## **COTEC Corporation**



#### Application / Use

Al, Steels & Ti materials/ Aero structure, Landing Gear & Engine Parts

#### **Strength & Key Features**

- Know-how of 30 years for NDT, Shot Peen, Thermal Spray(HVOF, Grinding, Lapping, IVD), Chemical Process(Anodizing, CCC, Zn-Ni, Cd,& Cr plating, Electroless Nickel plating) and Bushing installation.
- Qualified by Airbus, Boeing, Bombardier, Embraer, LM, MOOG, SAFRAN, etc.

#### Certification

AS9100D, NADCAP(Chemical Processing, NDT, Shot peen, Thermal spray)

#### **Contact Point**

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#### **Product Information**

#### Landing Gear Parts

#### **PRODUCT DETAILS**

#### **Product Name**

Axle Shaft, Bogie Pivot Pin, Panel, Cardan Pin, Lockstay, cuff, etc.

#### **Major Process**

- FPI
- Shot Peening, Glass Bead Peening
- CAA(Chrome Acide Anodizing)
- Cadmium Plating
- Paint, Solid Film Lubricant
- Bushing Install











#### Aero Structure **Parts**

#### **PRODUCT DETAILS**

#### **Product Name**

Side fitting, Nacelle Fitting, Panel, Frame, Stringer, Shaft, Erosion Shield, Tip, Pin, Beam, etc.

#### Various surface treament process

- NDT(FPI, MPI, Nital Etch)
- Blasting, Shot Peen, Flap Peening
- · Anodizing,
- CCC (Chemical conversion coating)
- Passivation, Phosphate coating
- Wet Plating (Cadmium, Chrome, Nickel, Zn-Ni, etc.)
- Dry Plating (IVD, HVOF)
- Painting, SFL(Solid Film Lubricant)



## Fuselage & Wing Skin Parts

#### **PRODUCT DETAILS**

#### **Product Name**

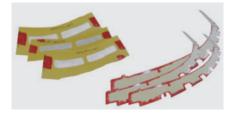
Fuse Lage Skin, Leading Edge skins

#### **Major Processes**

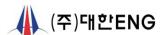
- FPI
- Chemical Milling
- Anodizing
- Paint







# Dae Han Engineering Inc.



After the company was established in 2005, we have developed about 7,000 items of aircraft parts.

At present, we have grown to become a manufacturer capable of manufacturing any machining parts of 3,5 axis MCT, lathe, and forming part. In order to secure

international competitiveness, we are introducing automated manufacturing system into 5-axis machining process and plan to gradually expand it.

We will be reborn as the best quality aircraft parts manufacturing company on the basis of our management philosophy that any difficulties will be tackled with unwavering will.



#### **Contact Point**

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#### **Product Information**

Machining Part 5 Axis

#### **PRODUCT DETAILS**

#### Airframe parts, engine parts

We are possible to manufacture various kinds of high-speed 5-axis products based on 5-axis machining technology.

#### Materials

Aluminum, titanium, Staineless steel alloy..

#### Scope

3-Axis Machining (max 4,000 mm)

5-Axis Machining (max Φ630), (Automation system)



#### Machining Part Lathe

#### **PRODUCT DETAILS**

#### Airframe parts, engine parts

We are possible to manufacture various kinds of lathe products.

#### Materials

Aluminum, titanium, Staineless steel alloy..

#### Scope

3Lathe (max Φ600)









## Forming Part Joggling, Roll forming

#### **PRODUCT DETAILS**

#### Airframe parts, engine parts

We are possible to manufacture various kinds of forning and check & straightening.

#### Materials

Aluminum

#### Scope

Hot joggling (max 1,000 mm) Roll forming (max 1600 mm) Press breaking (max 1600mm)



# DAEHWA AEROSPACE INDUSTRIES CO., LTD



- 1 DAEHWA has been working with Korea Aerospace Industries (KAI) and Korean Air Lines (KAL) as a key supplier.
- 2 Specialized in sheet metal detail parts.(provide more than 30,000 items including B747, B787, B737, B767, A10, A320, A321, A350, T50, etc.
- 3 Well-experienced experts and sophisticated equipments including Skin Stretching machine. (2,720W X 10,730L)
- 4 Turn-key based manufacturing capability (Engineering/Tooling/Fabrication/Assembly)
- **(3)** We have been developing Hot forming and super plastic forming using Titanium as a first developer in Korea. Furthermore, we would like to localize Titanium forming.

#### **Contact Point**

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#### **Product Information**

## Sheet Metal Parts

- 1) Well-experienced experts and sophisticated equipments including Skin Stretching machine (422"L)
- 2) Design & Fabrication for all types of tools
- 3) Precision Machining Aerospace parts
- 4) AS9100 and NADCAP approved
- 5) Turn-key based manufacturing capability (Engineering / Tooling / Fabrication / Assembly)



B737 Wing Rib detail part



Skin Stretch Forming part

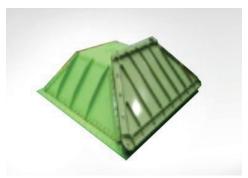
### Machining

#### **PRODUCT DETAILS**



Sukhoi Superjet 100 Door Frame

### Assembly



B767 Tanker



B777 FLE(Fixed Leading Edge)



P-8A Rear Spar

## **DnMA**

# Distribution and Manufacturing for Aerospace



- One of the strategic partners of the Korean Aerospace Industry, Ltd.
- Specialized for raw material storage, cutting, pre-machining and distribution for local aerospce induatry cluster (580 kinds of raw materials, 114 kinds of honeycomb cores)
- Assembly works of A350/330, B777-X wing rib and other sub assembly parts
- Designing and manufacturing of various types of ground support equipments for KT-1, T-50, KUH etc.

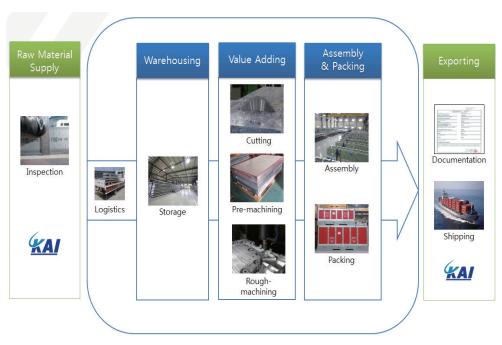
#### **Contact Point**

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#### **Product Information**

Raw material mangage -ment

#### **PRODUCT DETAILS**



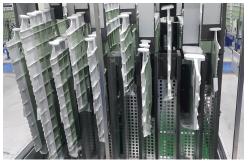
• Storage, management and distribution of raw materials at the bonded factory

## Wing rib assembly

#### **PRODUCT DETAILS**









• A350, B777-X wing rib assembly

# Ground support equipments









• Designing and manufacturing of ground support equipments for KT-1, T-50, KUH etc.

## **Dongsung TCS**



Dongsung TCS implements unique technologies and provides solutions for all industrial applications related to composite matrerials in various areas ranging from heavy equipemnt to automobile, to airplane.

#### Strength

Specialized in Aero structure Composites Parts utilizing advanced facility & equipment

- Autoclave, Clean Room, NC Ply Cutter, C-Scan, Paint Booth, CMM, 5 Axis Produce and supply advanced composite material products which are applied to various areas, such as Aero structure, civilian industry and national defense industry
- Business sector: Aerospace, Heavy construction equipment, Automobile
- Our corporate research institute develops various kinds of materials and secure engineering and Manufacturing technologies

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#### **Product Information**





B787 FSF (Flap Support Faring)

**Main Item 2** 



B737 FSF (Flap Support Faring)

#### Main Item 3



A320 Sharklet Panel

#### **Main Item 4**



A350 Cargo Door

#### **Main Item 5**



**Bonnet** 

#### Main Item 6



**Engine Hood** 

## **Dong Young M&T**



Dongyoung M&T have been going on only as air service since 1991 its establishment.

Dongyoung M&T have expanded its business to aircraft precision parts process and water jet cutting after starting with the aircraft holding fixture business, at present, Dongyoung M&T stands as an aircraft component production company. Especially, Dongyoung M&T holds the best technical skills in Korea for composite parts process that is a main material of next generation aircraft business.

Based on such a good technical skill and quality, we are supplying aircraft parts directly and indirectly to the leading airlines company such a KAI, KAL, BOEING and AIRBUS. In this time, Dongyoung M&T will make a leap as the most powerful aircraft company that takes the head in producing aircraft parts.

#### **Contact Point**

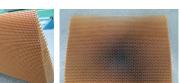
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#### **Product Information**

Aircraft components / composite parts

#### **PRODUCT DETAILS**

• Composite part 5 Axis machining



• Helicopter main rotor blade parts





Aircraft components / metal parts

#### **PRODUCT DETAILS**

• Hard metal (Ti, Cres, Al) 5 Axis, 3 Axis machinin







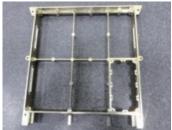


### Satellite parts

#### **PRODUCT DETAILS**

• Hard metal (Ti, Cres, Al) 5 Axis, 3 Axis machining









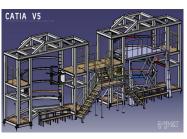




#### Design / Manuacturing of jig & fixture

#### **PRODUCT DETAILS**

- $\bullet$  Aircraft Assy jig, Sub Assy jig, and MLFX design and manufacturing
- We hold design capabilities







# Special cutting (Water-jet)

#### **PRODUCT DETAILS**

 $\bullet \ \ \text{Special metal (Ti, Inconel, Composite etc.)} \ precision \ configuration \ cutting \ (water jet)$ 









## **DOOWON HEAVY INDUSTRIAL CO. LTD**



The Korean premier aerostructures manufacturer and a key and strategic supplier of Korean Armed Forces and government agencies, DOOWON HEAVY INDUSTRIAL is a specialist in manufacturing aerostructures applicable to aircraft, missile, space launcher, satellite, and other aeronautical systems.

At DOOWON, our comprehensive capabilities include detailed design, precision machining, sheet metal, metal/composite bonding, welding, fabrication, assembly, and inspection & testing, and our production scope covers a wide range of aerostructure products and system components manufactured from Aluminum, Titanium, Stainless Steel, Inconel, and even composite.

Supported by our highly capable design & analysis group, decades-experienced technicians, state-of-the-art facilities, and rigorous quality system, DOOWON provides the customers with innovative engineering service and Build To Print / Build To Spec aero-structural products with the best quality and the competitive price.

Our mission is to help our customers maximize efficiency and reduce cost with our leading-edge solutions, and our goal for the near future is to be a global tier-1 aerostructures manufacturer.

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#### **Product Information**



#### **PRODUCT DETAILS**

- Propellant Tanks
- Paring Systems
- Payload Structures

#### **Programs**

- KSLV-1 (NARO, 2 Stages Satellite Launcher): Paring System, Payload Structure, Propellant Tanks for Pilot Test
- KSLV-2 (NURI, 3 Stages Satellite Launcher) Paring System, Propellant Tanks for 2nd and 3rd Stages.









Nose Fairing / Payload Structure

Propellant Tank Assembly

#### Airframe Assembly for Missile / Rocket

#### **PRODUCT DETAILS**

#### Product

- Fuselage Structures for Warhead, Seeker Sections, Electronic Control Sections, Propulsion Sections
- Fuel Tank Assembly,
- Wing, Canard and Fin Assemblies
- Propulsion Ducts
- Mechanical Sub-Assemblies

#### Materials

• Aluminum, Titanium, Stainless Steel Inconel., Composites

#### **Key Technologies**

- Light-Weight Structures for More Payloads
- Heat/Ware Proof Technologies for Ultra Sonic
- Missile Composite Structures to fit performance and cost goals
- Precision Water/leakage Proof Technologies for Underwater Missiles.
- From Man-Carried rocket to Ballistic Missile
- Performance, Environmental, Ultra-Sonic Testing.

#### Applicable to

- Aircraft / UAV / Missile Airframe Structure
- Fuel Tank Assembly for Aircraft / Missile
- Aircraft Gas Trubine Parts
- Sub-Assembly for Aircraft / UAV / Missile



Ship to Ship Missile



130mm Guided Rocket



Anti Submarine Torpedo



2.75 inch Guided Rocket



Anti-Tank Guided Rocket

#### Satellite Thermal Hardware

- Heat Pipe Radiator Assembly
- Optical Solar Reflector
- Multi-Layer Insulation





## DONGHWA A.C.M. CO., LTD



Donghwa ACM is Aircraft Tooling oriented Company. After our establishment in 1998, we have endeavoured to fulfill Customer's Satisfaction especially in the area of Composite Bonding Tools. As a result, we possess the capabilities to cover most of Tooling requirements in Aerospace Business.

Engineering Capability to be an important role in modern Aircraft Design. Our extensive experience and DPD management system enable us to meet sophisticated requirement of clients.

Business agility is another our strength in unpredictable Tooling Market. Simplicity of decision making and variety work-network with similar SMe's near our facility make us to cope with any unexpected workload.

#### **Contact Point**

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#### **Product Information**



#### **PRODUCT DETAILS**

#### [Main Item 1]

#### **Tools for Advanced Composite Material & Autoclave Bonding Process**

- Lay-up Mold(LM) for B787 Sec.48 Tailcone, Floor Panel, various T Chord, etc,.
- Bonding Assembly Jig(BAJ) for B787 Raked Wing Tip, Floor Beam Web
- LM for KHP Main Rotor Blade
- LM, BAJ for B350 Cargo Door
- NC Milling Fixture(NCMF) for A320 Sharklet







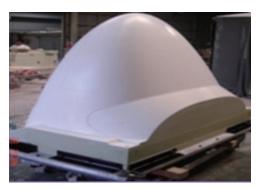
#### Aircraft Tool Manufacturing

#### **PRODUCT DETAILS**

#### [Main Item 2]

#### **Tools for Sheet Metal Forming & for Aero-Structure Assembly**

- Stretch Form(STFM) for T-50 Landing Gear Door
- Stretch Draw(STDW) for B737 Vertical Fin, T-50 Landing Gear Inner Skin
- ooling Form(TOFM) for KHP Engine Cover, Nose Skin, Windshield, etc.,
- Hand Router Fixture(HRF), Trim Shell(TRSH), Etching Template(ETTP), Check Form(CKFM) and similar sort of tools.
- Assembly Fixture(ASFX) for A321 Side Shell







## **EMKOREA CO.,LTD.**



EM Korea Co., Ltd. established in 1987, is renowned for its implementation of the most progressive manufacturing techniques, namely precision machining. Listed on the KOSDAQ in 2007, EM Korea set off to initiate new business operations acquiring both domestic and international patents and certificates. The company now enjoys a strong reputation for proven results and has become successfully accomplished in 5 business fields, including Tunnel Boring Machine, Energy/Environment, Defense/Aerospace, Machine Tools and Power Generation industry. EM Korea remains committed to quality improvement and technological development to meet customers' demands while fulfilling corporate social responsibilities. EM Korea strives to bolster public confidence and trust for a better future.

#### **Contact Point**

Sales Contact	Kang Shin-Hyun	СР	+82-10-4566-8724
E-mail	ksh12651@yesemk.com	Telephone	+82-55-211-9851
Homepage	www.yesemk.com	Fax	+82-55-211-9670

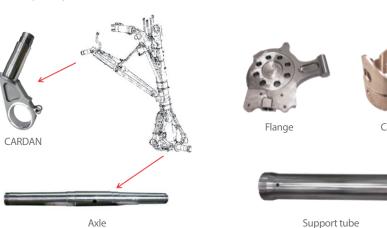
#### **Product Information**



#### **PRODUCT DETAILS**

Since 2008 our first delivery, EM Korea manufactures and delivers Trailing Arm, Pivot Axle and 28 kinds of Cam A340/A380 landing gear components. Based on precision processing technology, EM Korea manufactures and assembles 54 kinds essential components for landing gear door actuator.

- Machining main components for landing gear based on built-to-print
- Development and initial delivery: 2008
- A340 : 9 Item per ship set
- · A380: 19 Item per ship set



#### **Door actuator**

#### **PRODUCT DETAILS**

Since 2008 our first delivery, EM Korea manufactures and delivers Trailing Arm, Pivot Axle and 28 kinds of Cam A340/A380 landing gear components. Based on precision processing technology, EM Korea manufactures and assembles 54 kinds essential components for landing gear door actuator.

- Machining main components for landing gear door actuator based on built-to-print for T-50.
- Development and initial delivery: 2006
- 54 Item per ship set



## Hydraulic reservoir

#### **PRODUCT DETAILS**

EM Korea produces Hydraulic reservoir which is core part for Korean supersonic advanced trainer T-50. It secured technology that covers whole process from design, manufacturing, assembling and test. EM Korea delivered 16 sets of hydraulic reservoir for T-50 delivered to Indonesia recently

#### Work scope

- Manufacturing completed
- product by design itself
- Development and initial delivery: 2012

#### Design concept

- Bootstrap-type reservoir to offset hydraulic inside of aircraft such as components and schematics
- Displayed temperature range : -40 $^{\circ}$ F  $\sim$  +160 $^{\circ}$ F
- Displayed flow rate range: 0% to 100%
- Equipped relief valve to protect reservoir against internal high pressure



## **EOS Corporation**



Being one of leading PCB manufacturers, we have been offering our customers powerful and eco friendly products.

As an international company, we not only operate in Korea but we are represented all over countries. From CAD to Manufacturing, EOS Corporation provides one stop solution for all kinds of PCB and SMT needs for different companies

#### **Contact Point**

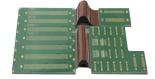
Sales Contact	Kevin Kim	СР	+82-10-9909-7956
E-mail	kevinkim@eos.co.kr	Telephone	+82-70-4244-1147
Homepage	www.eos.co.kr	Fax	+82-32-815-5466

#### **Product Information**

Rigid-flex Board

#### **PRODUCT DETAILS**

Both rigid and flexible part are to be integrated, three dimensional space in the device enables smaller and optimized which improves design free. Rigid-flex board is used a variety of industry as Aerospace, Defense and Satellite etc.



**Hybrid Board** 

#### PRODUCT DETAILS

This kind of board is used for low dielectric constant, low loss and high speed signal process in high-frequency bands. It optimizes cost reduction products.



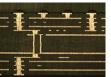
**HDI Board** 

#### **PRODUCT DETAILS**

The purpose of HDI type PCB is to make connection between layer to layer which required connection. This type of PCB s being developed at present like mobile phone application.

HDI PCB is essential new technology circuit board to support for high function, high persisten and light weight short small in 21C using high precision machine, it makes micro vias and high density traces on the board which develops small electronic devices.





## FINE PRECISION IND, Ltd.,



- 30 years old of the aircraft parts and auto parts manufacturers.
- Recognized by the government and the KAI, aircraft wiper systems analysis and design of aircraft parts and manufacturing technology.
- All aircraft components were tested and passed the environmental performance, durability tested according to MIL-STD-810F.
- Respond to any needs that you can design, analysis, manufacture, total engineering solution provider
- AS 9100 Rev D & ISO 9001:2015 Certificate, Certificate of Defense industry, Tear 1 of KAI.
- Leading technology, high-precision machining, low price, time delivery.

#### **Contact Point**

Sales Contact	KI YOUNG HONG	СР	+82-10-3593-1915
E-mail	fineind@korea.com	Telephone	+82-51-301-1213
Homepage	fineind.koreasme.com	Fax	+82-51-301-1215

#### **Product Information**

WIPER & WASHER SYSTEM FOR AIRCRAFT

#### **PRODUCT DETAILS**

#### **Application**

KUH-1/MUH-1, KAI all Helicopter

#### **Product composition**

Motor (BLDC), Converter, Arm, Link, Blade, Flexible driver(L/R), Revoir tank, Wash pump,

#### **Specifications**

- Fast/Slow: 160/120 Strokes/min
- Auto Parking / Built-in Sensor(temperature, overheat prevention, over current prevention)
- High accuracy +/- 1 degree, No lubrication for 30 years (Converter)
- three layers for windshield adhesion (Blade)
- Weight: 6.91 Kg / 1.54 Kg (Wiper / Washer) system.
- 28 VDC 11 Amp (\*\*MIL-STD-810F/461E, Performance, Durability test)

## All aircraft custom design (According to customer requirements)





#### **PRODUCT DETAILS**

For cabin of patient trasport helicopter.

**Application:** KUH-1ME KAI Helicopter

Material: AL 2024(aluminum) / PEEK(plastic)

Specifiacion

• Power: 110VAC (Heater) / 28VDC(Control)

• Heater capacity: 1400W



#### TOILET DRAINAGE FD (FLUSH DISCHARGE) VALVE

#### **PRODUCT DETAILS**

For vacuum type sewage discharge valve(Flap)

**Application:** Ship(warship), Railway train, Airplane

Material: PE, PP(Plastic), Rubber

#### Specifiacion

- Vacuum pump is vacuumed at 0.3~0.6 bar
- •Tow float valves (water/discharge)
- Water consumption : 1.2 liter
- MIL-STD-810F, Performance, Durability test



## FIRSTEC Co.,Ltd.



Since FIRSTEC's foundation in 1975, we have been professional manufacturer of state-of-the-art defense goods and have played a pivotal role as a government-designated expert defense manufacturer in Korean national defense & security industry.

FIRSTEC was the first one in Korea to successfully conduct the full-scale aircraft static & reliability test and succeed in development of rotary wing aircraft's NVIS panel and space rocket attitude control system. We are not only participated in a Korean Helicopter Development project but in various businesses and smart UAV and small-sized, mid, low altitude UAV projects - which are all the core of and are new growth engines of future environment and technology market, thereby making a contribution to national development.

FIRSTEC focuses on customer-first policy and reaching out to the world's best corporate based on high technology.

#### **Contact Point**

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Sales Contact	Sun Bak	СР	+82-10-5537-0800
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#### **Product Information**

#### **Wire Harness**

#### **PRODUCT DETAILS**

For more than 42 years, FIRSTEC has been involved in the design and manufacturer of many wiring harness, which has required higly advanced technical methods and excellent reliability as well as the ability to develop related devices and huge workshop.

#### **Technologies**

- Engineering complies with standards & procedures
- Performance characteristics tests
- Wiring Test System design and manufacturing
- Wire marking, potting, crimping, tubing, soldering and assembly technology
- Small and lightweight product design

#### **Specification**

- Design in general: UMIL-W-5088
- Environmental Engineering: UMIL-STD-810, 781D
- EMI/EMC: UMIL-STD-461, 462, MIL-E-6051







#### Cockpit Control Panel (NVIS)

#### **PRODUCT DETAILS**

FIRSTEC offers comprehensive service for the design and manufacture of non-illuminated and illuminated panels for new projects and modification/upgrade programs.

NVG compatibility for secure lighting or to meet MIL-STD-3009 includes test verifcation for NVIS Green A, NVIS Green B, NVIS Yellow and NVIS Red.

- NVG 103 Spot Radiance Image Converter
- DTS320-201 Display Test System
- NVIS/NVG (night vision) compatibility conforming to MIL-STD-3009



#### Air Data Computer

#### **PRODUCT DETAILS**

The air data computer (ADC) is connected to the pitot-static probe and temperature probe. The ADC transmits primary parameters (Ps, Dp, OAT) to the navigation / flight control system and computes and transmits air data (air speed, altitude rate, altitude, air temperature). The equipment works as an ADU (air data unit) or a PTMU (pressure and temperature measurement unit)

- $\bullet$  Operating voltage: 12.0  $\sim$  32.0Vdc in accordance with MIL-STD-704F
- Power consumption: 5Wmax (28VDC @ 25°C)
- Power hold-up: >100ms (1cut/5s, U=28VDC)
- Communication: ARINC-429 (3Ch)
- Discrete output: 0 ~ 32Vdc (State)
- Differential pressure: -10 hPa ~ 100 hPa
- Total Air Temperature: -56.0°C ~ 73.0°C
- Built in Tests: ST/BIT (MIL-STD-2165)
- Environmental conditions: MIL-STD-810F (humidity, vibration, shock, altitude, rain, sand/dust, salt, fungus, acceleration, etc.)







## FOREX CO.,LTD.



FOREX specializes in the machining complex machined parts used in both the domestic and international defence & aerospace industry. We excel in 5 axis machining work utilizing the latest in computer aided design and manufacturing (CAD/CAM). All customer products are thoroughly inspected using a coordinate measurement machine (CMM). FOREX produces parts for such names as Korea Aerospace Industries, the Boeing Company, Airbus Industries and Embraer.

#### **Contact Point** -



Sales Contact	Jena_Kim	СР	+82-10-8589-3813
E-mail	jena83_kim@naver.com	Telephone	+82-55-274-4804
Homepage	www.forexaero.com	Fax	+82-55-274-4805

#### **Product Information**

#### **—**0

#### Machining Parts

#### **PRODUCT DETAILS**

We are performing high speed manufacturing and Finishing process for aluminum & hard metal (Titanium, Cres) machining product of aircraft structuring role and deliver the products in perfect quality guaranteed by CMM measurement on time.





## Hanwha Corporation/ Machinery



Hanwha Corporation/Machinery is a billion dollar company specialized in manufacturing businesss with aerospace division at annual turnover of 200 million dollar.

Since its estalishment of aerospace division in 1989, the company has developed a reputation throughout Korean market place as a company whose products are at the forefront of industry. As a result, we are positioned today on virtually every military aircraft in Korea as a core supplier of flight control actuation, hydraulics components and fuel system.

We are also exploring to expand our presense in the global market. We are already a long term partner with industry leaders including, but not limited to, companies such as UTC Aerospace, Parker, Moog, APPH, GE Aviation and Boeing, supplying machined components and sub assemblies to critical system of well known platforms.

#### **Contact Point**

Sales Contact	Sean Yim	СР	+82-10-2438-8210
E-mail	hsyin 1982@hanwha.com	Telephone	+82-31-8092-5564
Homepage	www.hanwhacorp.co.kr/eng/machinery/	Fax	+82-31-8092-5573

#### **Product Information**



- 1. Main Rotor Actuator and sub components
- 2. Tail Rotoer Actuator and sub components
- 3. FCISA and sub components
- 4. LEFAS and sub components





### **Fuel System**

#### **PRODUCT DETAILS**

- 1. Fuel Pump
- 2. Fule Valve
- 3. FQMS(Fuel Quantity Measurement System)
- 4. Fuel Tank





#### Hydraulic System

- 1. Accumulator
- 2. Manifold
- 3. Reservoir
- 4. Cylinder



## **HIZE AERO**



HIZEAERO was established in 1999 to make world best products in the world's aerospace industry with our own technology. We are making variety of parts, assemblies in aerospace industry to meet customer's requirements with cost-competitive, high-quality products and services in the following area.

- Assembly, Machining, Sheet Metal, Tooling, Chemical process, Shot-peen, MRO

#### **Contact Point**

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E-mail	hcmoon@hizeaero.com	Telephone	+82-51-761-8730
Homepage	www.hizeaero.com	Fax	+82-51-831-8702

#### **Product Information**

#### One-Stop Service

#### **PRODUCT DETAILS**

 $\label{thm:eq:hizeaen} \mbox{HIZEAERO organized the most efficient production facilities for machining, sheet metal, surface treatment and assembly.}$ 



#### **Assembly**

#### **PRODUCT DETAILS**

787 Sec. 15 Fixed Trailing Edge / Delivery Rate: 12ss/month
 787 Sec. 11 Center Wing Box / Delivery Rate: 12ss/month
 787 Sec. 48 Pivot Bulkhead / Delivery Rate: 6ss/month
 767 Sec. 48 AFT Body Tail Cone / Delivery Rate: 3ss/month
 737 Vertical Fin Dorsal / Delivery Rate: 52ss/month



#### **Maching part**

#### **PRODUCT DETAILS**

[737 HS Spar Chord]
Delivery Rate: 36ss/month,
Remark: Hot Forming, Shot peen



[737 HS Spar Chor]
Delivery Rate: 32ss/month,
Remark: Ti Etching, Shot peen



#### **Sheet Metal**

#### **PRODUCT DETAILS**

[ 787 Wing Section CAC HOOD ]
Delivery Rate: 3ss/month



#### Shot peen

#### PRODUCT DETAILS

Size(M): 0.5(W) x 1.5(H) x 10(L) Process: Shot Peening

Intensity Capability: .003"~.017"A



#### Chemical

#### **PRODUCT DETAILS**

**Size(M):** 1(W) x 3(H) x 8(L) / 28ea

**Process :** Chromic Acid Anodizing, Boric Sulfuric Anodizing, Penetrant Inspection, Chemical Conversion Coat



## 19

## **HYUNDAI-WIA**



#### Established in 1976Y

- 1 Business sectors: Automobile parts, Machinig Tool, Defense (Army, Navy, Aerospace)
- 2 Mother company: HYUNDAI & KIA Motor
- 3 2017Y Sales record: 7B\$
- 4 Aero parts Manufacturong Strong point: All special process is possible at our site (NADCAP Qualified)
  - Main customers: Safran Landing Systems, LEONARDO, KAI, KAL etc.

#### **Contact Point**

Sales Contact	CHOI, YONG-SIC	СР	+82-10-4872-6543
E-mail	yschoi@hyundai-wia.com	Telephone	+82-55-280-9962
Homepage	www.hyundai-wia.com	Fax	-

#### **Product Information**



#### **PRODUCT DETAILS**

- 1 Unique LG manufacturer in Korea
- 2 Military LG: T-50, KT-1, KUH for KAI
- **3 Commercial LG components :** A320, A340, A380, B787, A350 etc

\*We want to receive new business with LG as OEM supplier or Co-developer with new air carft







Helicopter Pilot & Co-pilot Seat

#### **PRODUCT DETAILS**

- 1 Unique Seat manufacturer in Korea
- Military: KUH for KAI

★We want to receive new business as OEM supplier or Co-developer with new air carft



Helicopter Rotor control system

#### **PRODUCT DETAILS**

- 1 Unique Rotor manufacturer in Korea
- Military: KUH for KAI

 $\ensuremath{\mbox{\ensuremath{\mbox{\sc We}}}}$  We want to receive new business with LG as OEM supplier





## **IONES (DEFENSE)**



IONES Vision is to be the Best Global Partner for our customers through the capability of Aircraft Component Development & Production based on our own Precision Machining Technology

#### **Business Area**

- Development & Manufacturing Aircraft Sub System: PTO Shaft, Pylon, BRU, Rocket Launcher
- Maintenance Support Equipment: Cannon Bore Cleaning System
- Manufacturing (Aircraft Parts): Precision Machining, Electron Beam Welding
- Maintenance(Electronic Components): F-16 IFF(identification, friend or foe)

#### **Core Capabilities**

- Professional man-power for aircraft design
- Facilities and equipment to produce aircraft component with Certification(AS9100)
- Electron Beam Welding

**Mother Company: IONES** 

2017 Sales Record: 100 million dollar(IONES DEFENSE: 3.5 million dollar)

#### **Contact Point**

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E-mail	colyslee@iones.co.kr	Telephone	+82-2-914-9830
Homepage	www.iones.co.kr	Fax	+82-2-914-9836

#### **Product Information**



#### **PRODUCT DETAILS**

- Power transmission to engine and AMAD(Airframe mounted Accessory Drive)
- Functional for Power transmission under the status of misalignment axis up to 2 degree
- Anti-Flailing function to protect structures when the shaft is damaged



T/FA-50



PTO Shaft 16,810 rpm, Misalignment 2.0 degree Weight : 1.6kg

#### **PRODUCT DETAILS**

- Power transmission to engine and AMAD(Airframe mounted Accessory Drive)
- Functional for Power transmission under the status of misalignment axis up to 3 degree
- Shear Section function for power cut-off when over torque occurs







PTO Shaft 17,210 rpm, Misalignment 3.0 degree Weigh t: 1.7kg

#### **Aircraft Sub System Development &** Manufacturing

#### **PRODUCT DETAILS**

#### • LAH Pylon Unit

- Special Structure to precisely mount Rocket Launchers on aircraft
- Manual Function for bore sighting
- Weight: 4.5 kg / Size: 480 x 145mm

#### • LAH Bomb Rack Unit

- Lightweight through Titanium Material Structure with Electronic Airdrop System(Solenoid)
- Weight: 5.8 kg / Size: 500 X 200 X 185 mm

#### Rocket Launcher

- Technology secured for Development of Multiple Rocket Launcher
- Applicable to Fighter Airplane & Helicopter
- Weight: 5.8 kg / Size: 260 X 1,700mm





LAH Pylon Unit

LAH Bomb Rack Unit Mounting Load 657.70 kg



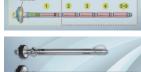
**Rocket Launcher** Diameter: 2.75in(7 tube)

#### **Cannon Bore** Cleaning **System**

#### **PRODUCT DETAILS**

- Impact Force Cleaning
- Minimizing Time & Man-power for Cleaning
- Maintenance time 0~30 min.
- Man-Power: 3~4 or less







Cannon Size: 105 mm/155 mm

## **JANG-AN AERO IND.**



1991.10.02	Established Jang-An Aero	2008.03.02	Produced KT-1 Body Parts
1991.10.12	Started to produce B747 Detailed Parts	2008.05.22	Certification to AS 9100 (The Quality
2003.06.04	Registered as a cooperative		Management System of The Aero Industry
	firm(subcontractor) of KAI	2010.02.01	Started to produce B787 Parts
2004.07.10	Manufactured B737 Fixtures & Detail Parts	2011.01.05	Started to produce A350 NLG BAY
2006.12.09	Started to produce T-50 Parts	2013.05.02	Started to produce A321 16A SKIN
2007.09.18	Registered as a Korean Venture Entrepreneurship	2015.03	Purchased a Second Plant

#### **Contact Point** -

E-mail	soungylee@gmail.com	СР	+82-10-3876-7069
Telephone	+82-55-853-5888	Fax	+82-55-855-4088

#### **Product Information**



#### **PRODUCT DETAILS**

3-Axis Machining, sheet metal roll forming, chip forming, griding for the skins of aircrafts.





## Upper Panel (A350 NLG Bay)

#### **PRODUCT DETAILS**

#### [3-Axis MCT]

• Part Size : about 4000 x 2000 x 25(mm)





### 5-Axis Machining Parts

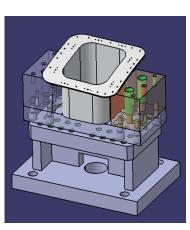
#### **PRODUCT DETAILS**

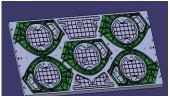
#### [5-Axis MCT]

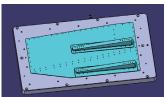
• KUH : Fitting, External Fuel, Aircraft

• LAH : Bracket, Seat

• B747 Max : Fitting, Closeout







# JEIL HEAT TREATMENT COMPANY



We have been established in 1997 and are leading the domestic heat treatment market based on differentiated technology in vacuum heat treatment, nitriding and carburizing, and special heat treatment fields such as AeroSpace & Defense and Auto parts. Heat treatment is a process of lifetime improvement of metals that requires various technologies based on the knowledge of special engineering. PerNit® (high chromium steel can be completely processed from a vacuum to a complicated shape inside of vacuum-nitriding stainless steel) DemSta® (Heat treatment for mold dimension stabilization and prevention of dimensional deformation of mold), SurMoNit® (Surface modification gas nitriding, SurMoNit removes the harmful white layer. M stainless steel can also be nitrided.), IsoPSC® (Deformation reduction and crack prevention heat treatment method), and NfeSR® (non-ferrous deformation reduction heat treatment method). The quality certification includes NADCAP (Steel, CRES, Ni, Ti Alloys), AS 9100 (Provision of heat treatment for aircraft and defense parts), IATF 16949 and ISO 9001.

#### **Contact Point**

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E-mail	gyulman@jeilheat.co.kr	Telephone	+82-31-8077-2281
Homepage	blog.naver.com/jeilhtc	Fax	+82-31-8077-2236

#### **Product Information**

**Vacuum HT** 

#### **PRODUCT DETAILS**

- Steel, CRES, Ti, Ni Alloys
- Furnace Class 2, Type B



### Nitriding

#### **PRODUCT DETAILS**

• Furnace Class 2, Type C



# Aluminium Solution

#### **PRODUCT DETAILS**

• We are scheduled to purchase equipment next year.



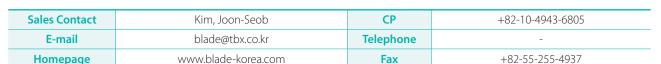


## JINYOUNG TBX Co., Ltd.



Since 1982, JINYOUNG TBX Co. has been producing Turbine Blade that are the part of Turbine Power plant. We also have been striving continuously to obtain the advanced technology which would help the company develop local industry as well. Certified with ISO9001, our company provides our customers needs by investing in the latest technology and quality at the beginning of the 21st century. We make every effort to satisfy the customers need through highest quality products and best possible services.

#### **Contact Point**



#### **Product Information**

#### Turbine Blade

#### **PRODUCT DETAILS**

#### **1** Gas Turbine

• Compressor Blade / Vane / IGV/ OGV/ VSV

#### Steam Turbine

- Rotating / Moving / Rotor / Fan Blade
- Stationary / Fixed / Stator Blade / Profile / Partition
- Bucket / Airfoil
- Nozzle for diaphragm / Spacer

#### **3** Turbo Machinery

• Impeller / Blisk / Diffuser / Blade







Rotor

# **Korea Composites Inc.**

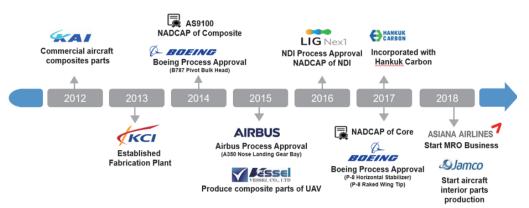


#### **1** Introduction

Korea Composite Inc.( KCI) is the aerospace division of Hankuk Carbon (HK) Group, its mother company, and is specialized at manufacturing composite structural & cabin interior parts and sub-assemblies, and repairing composites parts for aircraft. Since establishment in 2012, KCI receives lots of process appovals from AIRBUS, BOEING, JAMCO, KAI and other customers. KCI also enjoys a reputation as a committed, reliable, autonomous, performant and attractive supplier. Our customers benefit from HK & KCI experiences, receive attractive proposals and commitments to meet customers' strategical goals, with the lowest prices, the highest quality, shortest deliveries and the best service.

Comibining HK raw-material supply and KCI high molding technology experiences, KCI is now engaging to expand its Export businesses and be involved in various projects with special interest to Europe/Russia Markets.

#### Company History



#### **3** On-Going Projects

Customers	Projects	Processes
KAI/AIRBUS	A350 Nose Landing Gear Bay	AIPI-03-02-019
	B787 Pivot Bulkhead	BAC5578
KAL/DOFING	B787 Fixed Trailing Edge	BAC5317-2
KAI/BOEING	P-8A Raked Wing Tips	DACE217 4.0 F
	P-8A Horizontal Stabilizer	- BAC5317, -4 & -5
JAMCO	A350 XWB Business Class Back Shell	MOS-F-M0263
ASIANA	MRO	Prepare AMO

#### **Contact Point**

Sales Contact	KIM SEOL-HUI	СР	+82-10-3022-6853
E-mail	seolhui@kci.so	Telephone	+82-55-850-2719
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#### **AIRBUS Products** Manufacturing **Family**

Aero-structure & Cabin Interior

#### **PRODUCT DETAILS**

#### **A350 Nose Landing Gear Bay**

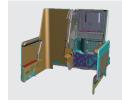
- Project consists of 5 T-Stiffeners and 1Bulkhead composites Parts.
- The process of Al-Pl-03-02-019 and quality system are qualifed by Airbus team.
- Over 420 ship/sets are delivered since 2012.

#### A350 XWB Business Class Seat

- All parts are sandwich panels and Nomex Honeycomb are used. Especially, Glass / Phenolic Prepreg is developed by HK.
- Over 300 ship/sets are delivered since 2012.



Bulkhead (CFRP 40 Plies + GFRP 2 Plies)



Nomex Honeycomb SandwichGlass / Phenolic prepreg + Nomex Honeycomb

#### **BOEING Products** Manufacturing **Family** Aero-structure

#### **PRODUCT DETAILS**

#### P-8 Horizontal Stabilizer & Raked Wing Tip

- Sandwich panels and laminate panel are existed. GFRP, CFRQ and Honeycomb Core are applied.
- Processes are approved by Boeing.
- Over 150 ship/sets are delivered since 2012.

#### **B787 Pivot Bulk Head**

- Components Web: 1 Part , T-Stiffener: 18 Parts / I-Beam: 4 Part, Intercostal: 8 Parts
- Over 300 ship/sets are delivered since 2012.



Skin (CFRP 6~33 Plies + GFRP 2~8 Plies + NOMEX Honeycomb)



Web (CFRP 38 Plies + GFRP 2 Plies)

#### **MRO Activities** Cabin & Thrust Reverser

#### **PRODUCT DETAILS**

#### **Cain Interior Parts**

• Main works are repairing cabin interior parts such as IFE system cover, seat-toilet, arm escutcheon etc..

#### **Thust Reversers**

- AMO (Approved Maintenance Organization) will be achieved in the early 2019.
- MRO Business for Thrust Reverer in 2019.







In-Flight Entertainment System Cover

Thrust Reverser



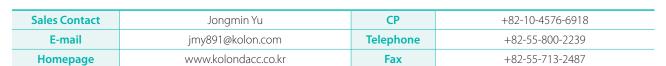
# **KOLON DACC Composite Co., Ltd**



2018	Established the Ballistic Laboratory	2007	Certified AS9100, BSI
2015	Incorporated into KOLON Group.	2006	Certified Defense Quality System (DTaQ)
2013	Contracted Composite Structure for Submarine	2002	Designated as a Member in Korea Defense
2012	Contracted Korea GPS Guide Bomb KIT		Industry
2012	Export T-50 External Fuel Tank (Indonesia, etc.)	2001	Established(Spin off from KAI Ltd.)
2009	Contracted Korea VLS		
2008	Contracted Infantry Fighting Vehicle Armor		

KOLON DACC Composite Co., Ltd. was originally created as a spin-off from Korea Aerospace Industries Ltd. and has applied high-tech composite to develop core technologies to contribute to maximizing system performance of Aerospace, Defense sector since 1980's. We have grown into a total solution provider to provide products and services that fully satisfy global customers' requirements by selecting excellent materials and application of optimal design and analysis, and applying economical manufacturing technologies.

#### **Contact Point**



#### **Product Information**



#### **PRODUCT DETAILS**

- Filament Winding Process
- We develop the External Fuel Tank for T/FA-50.
- Fuel capacity: 150 Gallon
- Fuel supply : Air pressurization
- Separation : Forced drop (Jettison)



# Composite Structure(1)

#### **PRODUCT DETAILS**

- Resin Transfer Mould(RTM) Process
- We have the references for Submarine composite structure using the RTM Process
- We have an experience to suggest the compoiste product such as Landing gear door structure, bulk head for aircraft



# Composite Structure(2)

#### **PRODUCT DETAILS**

- AutoClave Process
- We have an experience to manufacture the composite structure and asseble for UAV and KGGB (Korea GPS Guided Bomb) kit.



Smart UAV



KGGB Composite Kit

## **Kencoa Aerospace**



#### **1** KENCOA ARROSPACE Corp.

KENCOA KOREA: Machinig, Assembly, MRO
 KENCOA USA: Machining and Forging
 CALIFORNIA METAL: Raw Material Supply

#### Total Solution Provider

1) Performing as Total Solution provider, offering raw materials supply, parts machining, final assembly and MRO through cooperation system of KENCOA AEROSPACE Corp.

#### **3** Global Project Management Capabilities

1) KENCOA USA: LOCKHEED, BOEING, GULFSTREAM Tier 1 Supplier over 20 year

- Lockheed Martin Supplier Excellence Award('17)

2) KENCOA KOREA: OverSeas Business Status

- SPIRIT B7373 Max Maintrack Parts Machining Frame Assembly('17)

3) CALIFORNIA METAL

- Boeing Excellence Award ('13, '14, '15, '16 '17)

#### **Contact Point**

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E-mail	info@kencoa.com	Telephone	+82-70-4864-2603
Homepage	www.kencoa.com	Fax	+82-55-855-4130

#### **Product Information**



#### **PRODUCT DETAILS**

1. Customer: Spirit

2. Work Scope: Machining, Special Process, Assembly and Inspection

3. Item: Main Track(16 Item) / Track Assy(7 Item)

4.Material: Steel Forging





### Korean Utility Helicopter AFT Fuselage

#### **PRODUCT DETAILS**

1. Customer: Korean Air2. Work Scope: Assembly

3. Item: Side Skin, Tail Boom, STBL

4.Material: Aluminum



MRO (HH-60, P3-C)

#### PRODUCT DETAILS

1. Customer: Korean Air

#### 2. Work Scope

- Skin / Structure Repair and Repalce
- Avionics Upgrade
- 3. Model: HH-60, P3-C







# KIPCO Electronics & Aerospace CO.,Ltd



KIPCO Electronics & Aerospace is expanding over to aircraft parts business with its top quality and service

1989.03	BUILT
1989.04	START PRODUCTION OF MILITARY PARTS FOR ARMY
2004.02	MOVE CURRENT CHANGWON FACTORY.
2005.05	START PRODUCTION OF AIRCRAFT ENGINE PARTS (GE, RR, P&W)
2010.01	BUILT SEOUL FACTORY AND R&D CENTER
2012.07	START PRODUCTION OF APU ENGINE TITANUM IMPELLER
2012.09	PRODUCED SUS IMPELLER FOR SHIP PARTS
2013. 10	PARTNERSHIP KOREAN AIR AND KOREA AEROSPACE INDUSTRY
2013. 12	START PRODUCTION OF IMPELLER FOR TURBO COMPRESSOR
2013. 12	START BOEING 787 FRAME PARTS
2015.02	START DONGTAN FACTORY FOR R&D CENTER
2018.06	Developed and production of GE PP20 Engine Part
2018. 07	START ARROWHEAD Pneumatic Ducting System Part  ACCLIMITED PRODUCTION OF IMPELLER FOR AIR COMPRESSORS 3 000 pcs

#### **Contact Point**

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E-mail	kyeong@kipcokorea.com	Telephone	+82-55-251-9171
Homepage	www.kipcokorea.com	Fax	+82-55-251-9060

#### **Product Information**



#### **PRODUCT DETAILS**

Matirial: 17-4PH, Titanium
 Product Size: Ø100~Ø1000

3. Manufacturing Capacity: 150ea / Month4. Lead Time: 10 Days After Receiving Raw Material

5. Application Fied

- Gas turbine Engine(aircraft , helicoper)
- Industrial air compressor
- turbo charger for marine



Aircraft Pneumatic Ducting System Part1

#### **PRODUCT DETAILS**

1. Part Name : FLANGE2. Matirial : INCONEL 718

**3. Product Size**: ID(Ø3.186) OD(Ø3.666),H(Ø1.5)

4. Customer: Bombardier



Aircraft Pneumatic Ducting System Part2

#### **PRODUCT DETAILS**

Part Name: BRACKET
 Matirial: INCONEL 718

**3. Product Size**: L(Ø4.33)XW(Ø1.3)XH(Ø3.06)

4. Customer: Bombardier



## **KOMACO CO., LTD**



Komaco, we manufacture the illuminated panels with NVIS(Night Vision Imaging System) on Military Standards Since 2006, we started with R&D for the cockpits of KUH(Korea Utility Helicopter).

The panels for T-50 and KUH are our mass production and we have started to develop new panels on the LAH/LCH business. We have also started to introduce our products on the global market to make the opportunity for the global business to expend business area with good relationship with them. We made the business for the panels and simulator prject.

#### AS9100 & AS9120 / ISO14001

#### **Contact Point**

Sales Contact	Kino	СР	+82-10-2472-1817
E-mail	kino@komaconvis.com	Telephone	+82-70-7835-4167
Homepage	www.komaconvis.com	Fax	+82-31-932-0345

#### **Product Information**

The illuminated panels on the cockpit

#### **PRODUCT DETAILS**

General infomation of the panels

Panel Material: Thermoplastic of acrylic per MIL-P-5425

Finish Color: Conforms to FED-STD-595

Panel Marking: Per MIL-M-18102 or SAE-AS-18012

**Light Sources :** Light-Emitting Diode (LED), Incandescent (MS)

**NVG/NVIS Compatibility:** MIL-STD-3009/MIL-L-85762 **Environmental:** Per MIL-DTL-7788H or SAE-AS7788





### C-130 Simulator

#### **PRODUCT DETAILS**

Simulator project



# Portable DC strobe light

#### **PRODUCT DETAILS**

- Strobe light realization
- Waterproof function / IP 65
- Pattern generation of LED / IR LED\* and stability Automatic strobe light realization when power is out/off
- Realization about the Second battery that can be used for mobile phone in emergency
- $\bullet$  IR LED -(secret) location Information function after emergency escape from ship or aircraft -the light during the night duty



# KOREA JIG & FIXTURE IND CO,LTD



#### "Create production"

KOREA JIG & FIXTURE(KJF) has increased its reputation in aerospace and defense industry with its cuttingedge technologies since KJF was established in 1984. As a leading manufacturer in aerospace tooling as well as aerostructures, KJF has been developing state-of-theart products and makes a great effort to jump into a leading position in the world. In addition, KJF plays key role in Korean defense industry by supplying mechanical components and structures.

We also have supplied products to our overseas customer; Northrop Grumman, Triumph Aerostructures, Elbit systems, IAI, FACC, L-3 communications, Dedienne Aerospace and Spirit Aerosystems since 2012.

#### **Contact Point**

Sales Contact	Jason Park	СР	+82-10-2123-6229
E-mail	jason@kjfaero.com	Telephone	+82-51-913-9236
Homepage	www.kjfaero.com	Fax	+82-51-831-1729

#### **Product Information**

Engine installation trailer

#### **PRODUCT DETAILS**

GSE to install the engine to fighters

- Compatible to: A-10, F-14, F-15, F-16, Eurofighter, T/FA-50 etc.
- Has 6 DOF(degree of freedom): Roll, Yaw, Tilt, X/Y/Z linear motion







#### **PRODUCT DETAILS**

 $\ensuremath{\mathsf{GES}}$  to support the installation of FLIR to the aircraft

- Built-to-spec according to Elbit systems and ROKAF's requirements
- $\bullet \ \, \text{Coarse/fine linear adjust in 3 axis, tilt \& rotate adjust available to mount FLIR at various condition } \\$





Fuselage assembly tooling

#### **PRODUCT DETAILS**

EMBRAER E2 Fuselage Floor Assembly Jigs

- after fuselage upper assembly jig
- after fuselage pressure bulkhead assembly Jig







# KP AERO INDUSTRIES CO.,LTD.



KP Aero Industries Co.,Ltd., have manufactured different type of tooling for a serial operation and other assembly job or more, and also the support equipment since its established in 1990.

More than 5,000 kinds of detail part since 1996 – and successfully on-time delivered with a less than 0.05% NCR rate, also the sub-assembly facilities are equipped in our brand new factory site with the diverse experience filled with high skilled workers, also paint booth and ovens are included for the fast process for customers & operation in KPC as well.

These various type of business can make us able to have more enthusiastic future based on our successful experience with 100% on-time delivery and of course the high-quality of product, with the competitive price as well. Also, certified AS 9100 Rev. D by DNV-GL in 2017.

#### **Contact Point**

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E-mail	dichoi@airkpc.com	Telephone	+82-70-5148-7507
Homepage	www.airkpc.com	Fax	+82-55-342-5743

#### **Product Information**



#### **PRODUCT DETAILS**

Since 1990, we have produced various types of tooling to advance/assist on assembly, and bonding tool, other JIG & FIXTURE for the manufacturing. The Jig & fixture used in the area of assembly or a series of manufacturing.

The first picture is refer to the assembly jig for B767 Lobe frame. Second one is Wing Bottom panel's manual assembly jig of A320 Project.





### **Detail Part**

#### **PRODUCT DETAILS**

Detail part fabrication - machined by high-speed 5axis machine and applied in certain area of airplane, have manufactured various projects and more than 1,500 kinds of items are successfully procured with on-time delivery.

We put top priority on building optimized working environment. Establishing a high-speed precision facility for aircraft part assembly and process, to increasing our productivity. The company is equipped with the high speed machine (30,000 rpm) and processing technology to reduce the idle time. KPC has developed an environment control systems/ safety facility and effective working atmosphere for our staff.



#### Part Assembly

#### **PRODUCT DETAILS**

We have accumulate in assembling experience last several years on various assembling projects in aircraft components since 2001 with our highly skill staffs with has over 20 years experience.

Also established B737 Flap Support Fairing assembly line in our new factory; headquarter - as you might see in first picture of FAJ in-line. And the second picture refer to the A320 Sharklet AML assembly.

And we have invested in painting and oven facility to enhance efficiency.





## **KPC Metal Co., Ltd.**



With more than 40 years of experience, KPCM is Korea's leading company in producing and supplying Titanium, Nicklealloy and other super alloys for critical engineering. Since 1977, KPCM has been a global partner for industries that are required to perform in challenging environments. We offer integrated solution through producing such materials with our in-house facilities including VIM, ESR, VAR, Extrusion press, rolling mill, forging press and radial forging machines. Currently, KPCM supplies components for space launch vehicle, missiles, submarine and tooling/press die material for commercial aircrafts. With our tenacious quality control, we are able to meet the specific requirements of our customers in the aerospace and defense industries. We cerified up-to-date with AS 9100D

#### **Contact Point**

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E-mail	sjahn@kpccorp.co.kr	Telephone	+82-2-2637-9188
Homepage	www.kpcmetal.co.kr	Fax	+82-2-2637-9118

#### **Product Information**

### **Forged Ring**

#### **PRODUCT DETAILS**

- Al7175 & Al7050 Forged Ring
- Forging SR H.T. Machining
- Usage : Skirty & Cylinder
- Diameter max. 4,000 mm / Height max. 1,000 mm





## Shape Forging

#### **PRODUCT DETAILS**

- •Ti-6Al-4V
- $\bullet \ \mathsf{Double} \ \mathsf{Melting} \ (\mathsf{VAR} + \mathsf{VAR}) \mathsf{Forging} \mathsf{H.T.} \mathsf{Machining} \mathsf{Shape} \ \mathsf{Forging}$
- Usage : Missile body, Cover & Warhead



### Shape Forging

#### **PRODUCT DETAILS**

- Maraging Steel C-250
- $\bullet \ \mathsf{Melting} \ (\mathsf{VIM} + \mathsf{VAR}) \mathsf{Forging} \mathsf{H.T.} \ \mathsf{Machining} (\mathsf{Back} \ \mathsf{Extrusion} \mathsf{Pre} \ \mathsf{Forming} \ )$
- Usage: Missile Warhead and Case



## 32

## LC-TEK CO., LTD.



#### Overview

Providing clients customized solution and specification which are suitable to suppersystem. These enabled the armed forces' platform to realize performance improvement, integration, and maximization currently in Korea.

#### 2 Comparative Advantages, comparing to competitors

#### A. Electric Motor

As a small-sized, and large output motor applied to driving device in missile, and tachometer, the core of high sensitivity, and low noise design technology can be fulfilled. (Electro-magnetics, Structure design/analysis, fixture design, production technology)

#### **B.** Actuator

Achieved structure simplicity, and stability in regard to aiming unit, landing gear, freight gate at wing sides of missiles. (Composed as either BLDC Motor + Oil Reducer or Ball screw + spur gear)

#### C. Servo Control

Provides clients the most reasonable specification in running Gimbal and servo control, covering hardware and software platforms maximized to supersystem

- a. Gimbal Actuator: Acquired miniaturization, weight lightening, high-precision positioning, stability revision
- **b.** Seeker: Achieved high-precision, swift response, miniaturization.

#### 3 History

- 1998.09. Established Corporation
- 2001.01. Signed M.O.U\_Kumoh National Institute of Technology, Yeungnam Univ, Keimyung Univ, Hanyang Univ, Konkuk Univ.
- 2002.06. Acquired ISO 9001 Quality Certification
- 2013. 10. Obtained Quality Certification
- 2016.09. Signed National Defense Venture Support Project (Developped next generational actuator in guided weapon)
- **2016.12.** Won a grand prize of management at small & medium sized business division (Seoul Economy, electric motor manufacturing section)
- 2017. 10. Won Prime Minister Citation at competition of National Production
- 2018. 10. Qualified AS9100 Quality Certification

#### **Contact Point**

Sales Contact	Kim, Jeong-Soo(Mr.)	СР	+82-10-2307-2382
E-mail	jskim@lc-tek.co.kr	Telephone	+82-54-462-6991
Homepage	lc-tek.co.kr	Fax	+82-54-462-6992

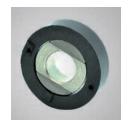
### **Torque Motor**

#### **PRODUCT DETAILS**

#### **Specifications**

Operation angle range: ±35°
Applied voltage: 20.2Vdc
Maximum current: 2.0A
Maximum torque: 34.92 mNm

• Size : Ф34.9×9.7(L)



# BLDC Motor (ray bolt)

#### **PRODUCT DETAILS**

#### **Specifications**

• Voltage: 30Vdc

• No-load RPM(Revolutions per minute): 15,000rpm

• Rated output: 56W Rated

• RPM: 12,000rpm • Size: \$\Phi 24.9 \times 32.6(L)

• Ball Screw Integrated Type



#### **DC Motor**

#### **PRODUCT DETAILS**

#### **Specifications**

• Power: 22Vdc No-load

• RPM: 11,700rpm (Revolutions per minute)
• Maximum output: 80 W @ 3,000rpm

• Maximum torque: 0.25Nm

• Size: Ф60.0×136.0(L) Reducer Integrated Type



#### Seeker Servo Control Device

#### **PRODUCT DETAILS**

#### Specifications

• AD: 16Bit 6Ch • DA: 14Bit 4Ch

• DSP: 32Bit, 150MHz

• AMP : Analog Power AMP

• Control cycle: 2KHz±0.1%

• Current linearity: within 1%

• Current offset: within 20mA

• Imaging (IR, CCD) transmission

Built-in SOC



#### Gimbal Driving Device

#### **PRODUCT DETAILS**

#### **Features**

- Rotates at azimuth/high angle
- Resolver mounted
- Rotary Joint mounted Sol-Braker mounted (Gimbal protection/avoid function)
- BLDC motor mounted, Electrical isolation Mechanical drive restriction function
- Software limit settings
- Built-in drive system BIT function Position accuracy
- $\bullet \ \text{Mechanical angle vs. electrical angle error correction}$
- Solenoid brake check function



# NDT ENGINEERING & AEROSPACE



We are committed to leading the pack and providing customers with the best product. Proud of our deep knowledge and long experience in assembly and machining. Our goal is to assist and support our coustomers in their selection of the product that better meets their needs and provide responsive and excellent customer service.

#### **Contact Point**

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E-mail	limhj2@ndteng.co.kr	Telephone	+82-55-290-3922
Homepage	ndteng.co.kr	Fax	-

#### **Product Information**

#### A330 NEO Shacklet

#### **PRODUCT DETAILS**

Contract: KAL

**2** Rate: 3shipset per month

3 Type: Assembly

4 Material: CFRP and Alumium

**5** Qualification : Approved from Airbus



## 777 WBE

#### **PRODUCT DETAILS**

- 1 Contract: KAL
- **2** Rate: 4shipset per month
- **3** Type: Assembly
- 4 Material: CFRP and Alumium



## 737 FSF

#### **PRODUCT DETAILS**

- Contract: KAL
- 2 Rate: 40shipset per month
- **3** Type: Assembly and paint
- 4 Material: CFRP and Alumium



## **ORBITECH**



Orbitech co., Itd has a long and stable contract to supply machined precision apparatus and bulkhead assemblies which are main parts of B737 aircraft fuselage for domestic aircraft company in a strategic relationship. We are going to become a specialized company as aircraft part fabricator and bulkhead assembler. In the future, we have a goal to be a global aircraft manufacturer by strengthening the independent sales.

- 2013 Established Aerospace Division
- 2014 Awarded contract: Aircraft precision products supply for B787 components (Spirit Aerosystems, US)
- 2017 Awarded contract: SST Package

#### **Contact Point**

Sales Contact	Seung Wan, Ko	СР	+82-10-3816-2648
E-mail	swko@orbitech.co.kr	Telephone	+82-55-958-3930
Homepage	www.orbitech.co.kr	Fax	+82-55-958-3992

#### **Product Information**

Frame, Bracket, Fitting etc.

#### **PRODUCT DETAILS**

Component and assembly of aircraft structure (Aluminium, Steel, Titanium etc.)















## **SAMCO**



# (Sacheon Aserospace Manufacturig Ind. Co. Ltd)

SAMCO was established 2002.

SAMCO specialized in Aircraft Door assembly and system integration. Also, we have experienced in Aircraft Wing Assembly. Additionally, SAMCO has capability of Machining and Sheet Metal. So, SAMCO can provide one stop shopping. Currently, we have various customer such as SUKHOI, Airbus Helicopters, Aernnova, Spirit Aerosystems, L-3DS, JAMCO, KAI, KAL and Hanwha.

15% (Domestic program): 85% (Overseas program)

Employees: 330 / Sales(2017): 32M (USD)

#### **Contact Point**

Sales Contact	Jenny Lee	СР	+82-10-6396-0145
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Homepage	www.samcokorea.com	Fax	+82-55-852-9961

#### **Product Information**

# Airframe strucure Assembly

#### PRODUCT DETAILS

#### Aircraft Door Assembly

- SSJ 100 Passenger Door and Cargo Door
- B737 Access Door
- B777 Access Door
- A350 Bulk Cargo Door
- MRJ Door Sub-Assembly
- A350 Passenger Door Sub-Assembly
- B737 Door Torque Tubes







Aircraft Wing Assembly

• B737 Horizontal Stabilizer

• B737 Vertical Fin

# Airframe strucure Machining

#### **PRODUCT DETAILS**

#### **Machining Parts**

- MRJ Door Kinematics Parts
- B737 Various Parts
- B787 Various Parts
- A350 Passenger Door Parts
- KT-1 Parts
- T-50 Parts
- A350 Passenger Door Parts



Airframe strucure Sheet Metal

#### **PRODUCT DETAILS**

#### **Sheet Metal Parts**

- SSJ 100 Passenger Door Skin
- SSJ 100 Cargo Door Skin
- A330 Passenger Door Skin
- A320 Sharklet Skins
- A320 Housing Skins
- B787 APU Door Skins
- A330 Neo Skin
- B737 Wing Skin
- B737 Door Seal Retainers
- B737 Outer Skins









# Samheung Precision. Co.Ltd.



- 1987. 05. Established to produce precision machinery and automotive parts
- 1992. 02. Participated in the manufacture of tooling and detail parts for aircraft business(KT-1, F16, Boeing)
- 2000.06. Participated in the aircraft frame assembly business (Boeing 747)
- 2002.07. Certified to AS9100 quality management system
- 2004. 10. Delivered first shipset of B737 FTE Assy for Horizontal Stabilizer & Vertical Fin
- 2008. 10. Started Sacheon plant operation
- 2010.09. Participated in the assembly of KC-100 small aircraft program(KAI)
- 2010. 10. Started Yentai plant operation(Machinery Tool & Parts) in China
- 2010. 11. Participated in the assembly of A350 NLG Bay program( AIRBUS)
- 2013.07. Contracted for B777 FLE Assembly with KAI (Boeing)
- 2014.09. Delivered #1 article s/s for B777 FLE assembly
- 2015. 10. Contracted for B737 MAX Assembly with KAI (Boeing)

#### **Contact Point** -

Sales Contact	Yang, Jae-Pyoung	СР	+82-10-8535-7019
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Homepage	airframe-shp.co.kr/wp/	Fax	+82-55-853-8325

#### **Product Information** -



#### **PRODUCT DETAILS**

#### Assembly product

Horizontal Stabilizer FTE

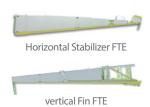
Vertcial Fin FTE

• SUB Assembly





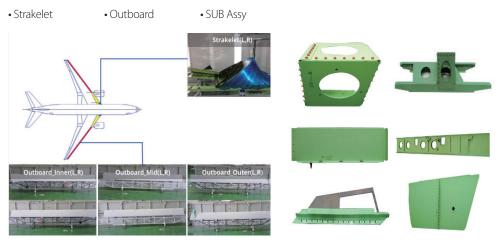




## **B777 FLE**

#### **PRODUCT DETAILS**

#### Assembly product



## A350 NLGBay

#### PRODUCT DETAILS

#### Assembly product

• A350NLGBay • SUB Assy











# S&K Aerospace Co., Ltd.



S&K Aerospace is an aero and space structure specialist in wing and fuselage parts and assemblies of commercial aircraft. Especially, as one of flagship products, more than 3,000 cumulative shipsets of A319/320 Wing Top Panel assemblies have been successfully delivered to customer over the last 11 years. We have Collective Production System all certified by customer for processes and technologies to carry out the required works inside its own plants: Machining, Surface Enhancement, Chemical Processing and Assembly for large parts. This system will make supply chain management much simpler and significantly contribute to customer in terms of quality, cost and risk management.

#### **Contact Point**

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E-mail	snkaero 069@ankaero.co.kr	Telephone	+82-70-8892-1406
Homepage	www.snkaero.co.kr	Fax	+82-55-855-2778

#### **Product Information**

Aircraft Structures Wing & Fuselage

#### **PRODUCT DETAILS**

#### A319/320 Wing Top Panel Assembly

- Consisting of 2 machined skins, 17 stringers and others
- 27 Shipsets per month
- Machining, Routing, Shot Peening, Chemical Process, Paint & Dry Oven, Assembly Jig, Tack Fastening, CNC Automatic Riveting, Provisioning Item Installation, Sealing & Curing, Packing & Shiping

#### A321 Fuselage Skins

- 18 Shipsets per month
- Roll Forming, Machining, Routing, Chek & Straightening, Chemical Process, Paint & Dry Oven

#### A320 Wing Bottom Panel Reinforcing Plates

• Roll Forming, Maching, Routing, Chemical Process, Paint & Dry Oven







2018 AEROSPACE GLOBAL BUSINESS PLAZA • 72

### Collective Production System

#### **PRODUCT DETAILS**

#### Milling Machine

- VH-MCT: 3Axis, 1Spindle, 2,000RPM/50kw, 2.5m x 10.7m(Table Size)
- CMI#1: 3Axis, 3Spindle, 7,200RPM/56.3kw, 4.06m x 18.0m(Table Size)
- CMI#2: 3Axis, 3Spindle, 3,600RPM/56.3kw, 4.06m x 16.5m(Table Size)
- CMI#3: 3Axis, 3Spindle, 3,600RPM/56.3kw, 4.06m x 16.5m(Table Size)
- CMI#4: 3Axis, 3Spindle, 3,600RPM/56.3kw, 4.06m x 16.5m(Table Size)
- VORTEX-1400/160: 5Axis, 1Spindle, 18,000RPM/37kw, 1.25m x 4.0m(Table Size)
- MAG3: 5Axis, 1Spindle, 30,000RPM/60kw, 1.5m x 3.0m(Table Size)

Roll Former: T16mm x L7500mm, 500Tons

Chip Former: T8mm x L2500mm

Press Brake: -#1 T23mm x L2580mm, 150Tons / -#2 T35mm x L5400mm, 750Tons

Shot Peening Machine: T600mm x W2800mm x L16700mm,

Chemical Process: (CAA) H3500mm x W1300mm x L17600mm (Each Tank)

NDT(FPI): H3500mm x W1300mm x L17600mm

Paint&DryOven(2Sets): H4000mm x W4000mm x L20000mm (Each Set)

Auto NC Riveter(4Sets)













# SOOSUNG AIRFRAME IND.,LTD.



• Business Type : Manuafcturer • Established Year : 1985

• Employee No.: 208 • Annual Sales: US\$ 32M(2017)

• Export Amount: US\$ 15M(2017) • Certification: AS 9100 Rev.D, ISO-9001, NADCAP

 $\bullet \, Major\, Customers: Korea(KAI, KAL), North\, America(Triumph, Spirit\, Aero, Primus), Asia(Nippi, Kawasaki, ST-Aero), Asia(N$ 

Europe(Sogerma)

- Strength
- Extension experience in airframe manufacturing
- Proven partnership competence
- Concurrent product development
- A work ethic continuous improvement
- Short lead and on-time delivery
- Competitive Cost

#### **Contact Point** -

Sales Contact	JOON WOO, CHO	E-mail	jcho@soosungair.com
Homepage	www.soosungair.com	Fax	+82-55-719-9806

#### **Product Information**



#### PRODUCT DETAILS

• Part Name : Flap Rib

Process

CNC Stack Routing ··· Hydro Rubber Press Forming ··· Heat Treatment ··· Straightening ··· Inspection ··· Chemical Coating ··· Painting ··· Marking



# Sec-15 Upper Shell A318, 319 320, 321

#### **PRODUCT DETAILS**

- A330/340 Wing Panel Sec-15
- A350 Cargo Door
- A380 Wing Button Panel Sec-15
- B737 V-Fin & H·stabilizer. Sec-43
- 767 Wing Structure
- 777 Fuselage Sec-44 /787 AFT Body
- L3c~P3c. Outer Wing
- ERJ. 170, 190 Fuselage



A321 Sec-14A Lower Shell Ass'y

#### **PRODUCT DETAILS**

• Process

Mfg All Details → Stringer Auto Riveting → Clip & Butt Strap Riveting → Frame Riveting ··· Top Coat & Primer ··· Marking





# **SVMTECH Co., Ltd.**



2006	SVMTFCH	established
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2007 Hanwha Corp. - Registered in Welded Metal Bellows

2008 Korea Aerospace Research Institute - Registed in

2011 SVMTECH - Registered as Corporation

2013 KAIST - Registered in

2015 KARI & Hanwha - Join into KSLV-II Project

2016 SDC - Registered in2018 AS9100 Rev.D (certified)

#### **Contact Point**

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#### **Product Information**

#### **Accumulator**

#### **PRODUCT DETAILS**

High-pressure maintenance-free accumulators are ideal for energy storage or pulsation damping applications for hydraulic, fuel, cooling or other fluid system applications. These metal bellows units are suitable for use on commercial and military aircraft, weapons systems, combat vehicles as well as many other platforms



### Reservoir

#### **PRODUCT DETAILS**

Reservoirs store fluid for delivery, either in a single surge or dispensed over time. The primary function is fillthen-dispense, as opposed to cycles of partial fill and drain.



# Flexible Metal Hose

#### **PRODUCT DETAILS**

This flexible metal hose is made of welded metal bellows assembly and outside of bellows is protected by stainless steel braided wire to withstand very high pressure.



# WOOJOO AEROSPACE IND. CO.,LTD.

Woojoo Aerospace Ind.

We are a aircraft parts manufacturer & MRO company for aircraft components. With 40 years of technical know-how and experiences including Koreanair service, we have been supplying high quality aircraft parts to major tier-1 aircraft companies around the world.

#### **Contact Point**

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#### **Product Information**

#### Insulation Blanket

#### **PRODUCT DETAILS**

Insulation Blanket for aircraft interier



### Machinning

#### **PRODUCT DETAILS**

Insulation Blanket for aircraft interier



## Jig & Fixtures





# Yeonhab Precision Co., Ltd.



Established in 1980 under the business philosophy of "a creative and innovative spirit" and with the goal of localizing the production of key parts, Yeonhab Precision has grown over the next thirty years to become Korea's leader in the production of core electric and electronic parts, making significant contribution to the country's economic development. To this day, it drives itself forward with the belief that "strong manufacturing depends on producing strong parts and materials."

Yeonhab is currently operating five production lines: national-defense equipment, cable assembly parts, connectors, wires and cables, and parts for ships. The specialized core parts for the national-defense and other industries Yeonhab produces are widely recognized around the world, making the company a big exporter. The company ceaselessly strives to realize innovation in research and development and ensuring the best-quality products and services for all its customers as a representative global company of Korea."

Yeonhab Precision was the first in Korea to apply its YH-connector manufacturing technology to the production of electric and electronic equipment for national defense and other industries, and its products are now exported to the United States, Japan and Europe. It has been supplying intercom devices, control devices, PCB assemblies and other latest-technology defense equipment as well as cable assemblies to the Land Army, the Navy and the Air Force of South Korea for thirty years. It is also the leader of the military cable harness market, producing world-class harness parts based on its ability to design core parts."

Moreover, Yeonhab produces various electric, communication, and optical devices as well as wires for its clients both at home and overseas, leading South Korea's industrial growth."

At Yeonhab, we fully recognize the rapid change and diversification of consumers' demands in the international market. Prompted by the recent developments, Yeonhab seeks to harness its already strong technological prowess and to continue to provide top-quality products and services in realizing its core values.

Thank you.

#### **Contact Point**



Sales Contact	James	СР	+82-10-3464-5543
E-mail	Johm@yeonhab.co.kr	Telephone	+82-41-620-1313

#### Cable Assemblies/ **Harness**

#### **PRODUCT DETAILS**

- Overview: Yenhab has manufactured military cables for over thirty six years and supplied to ROK Army, Navy, and Air Force. Also, we are working with global defense companies and delivering cable assemblies to overseas.
- Name of Manufacturing Item(s): Cable Assemblies
- Details of Technology: RF and Fiber Optic Cable
- Assembly Design: Not Required (TRL 9)
- Requirements
- 1) Technical Document: BOM, drawings, standard procedure for assembly, quality inspection manual
- 2) Overseas Training: Not required
- 3) Technical Assistance: Not required
- 4) Equipment and Tools: Tools, equipment, and etc.
- Estimated Year of Completion : To Be Determined
- Name of Manufacturing Items: Power/Signal/Antenna/Missiles Cable Assemblies for the Military Use





Teflon Wire







Ka Band



K Band



Ku, X Band and General Fiber Optic Cable



#### **Data Link Systems**

#### **PRODUCT DETAILS**

- Overview: Yenhab has developed data link systems for aircraft, UAVs, and ground units/vehicles and delivered them to Hanwha Systems.
- Name of Manufacturing Item(s): Data Link Systems
- Details of Technology: Data Link Systems RF Design: Not Required (TRL 9)
- Requirements
- 1) Technical Document: BOM, drawings, standard procedure for assembly, quality inspection manual
- 2) Overseas Training: Not required
- 3) Technical Assistance: Not required
- 4) Equipment and Tools: Tools, equipment, and etc.
- Estimated Year of Completion: To Be Determined
- Name of Manufacturing Items: Data Link Systems for aircraft, UAVs, and ground units/vehicles





# YoungPoong Electronics Co., Ltd.



Since founded in 1986, YPE is specialized in developing and manufacturing defense products, the electrical and electronic control/calibration/calculation devices for ground, aviation(fixed-wing, rotary-wing, simulator, UAV, KF-X), naval, and guided weapon systems compliance with MIL-SPEC & ISO for over 30 years.

- · High efficiency military hybrid power control technology
- Navigation & ground control technology for unmanned vehicles
- Core technology application for avionics
- Actuator system development for guidance & control
- Land / Marine / Airborne fire control system development
- Multi-sensor navigation system development

We won a presidential prize for Defense Quality Management, earned DAPA award for ISI localization development, and R&D in aircraft mounted controller and/or UAV navigation & control system is on the way.

#### **Contact Point**

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Homepage	www.ypelec.co.kr	Fax	+82-55-295-6776

#### **Product Information**

Integrated Standby Instrument (ISI)

#### **PRODUCT DETAILS**

ISI consists of AHRS calculation algorithm, OFP suitable for aircraft operation and protection from electromagnetic waves (including HIRF), lightning, and electrostatics. It provides the best solution for standby flight information - attitude, air data, Slip and Internal Fault Data information, replacing two or three electromechanical cockpit standby instrument with a single 3ATI display unit. In addition, it integrates highly reliable MEMS sensors(gyros and accelerometer), pressure sensors all in a compact and rugged environmentally sealed enclosure.

#### Data (key tested performance metrics)

• Size(mm): Housing; 80.64(L) X 229.33(W) X 80.64(H) / LCD; 2.4" X 2.4" (3ATI)

Weight: 1.611kg (3.55lbs)
Input Voltage: 22VDC ~ 29VDC
Consumption Current: 26A(Max)

Interface: Serial RS-232, ARINC429, Discrete
Durability: MIL-STD-810F, MIL-STD-461E



#### Integrated Signal Process Unit (ISPU)

ISPU consists of Torque signal processing algorithm and software built in. It processes digital torque sensor signal of aircraft engine with high speed transmitting to FADEC/DAU. Built in Test is available (Self-diagnosis Function) and it has detection of chip(in main shaft gear box of helicopter) and removal function.

#### Data (key tested performance metrics):

• Size(mm): 102(L) X 227(W) X 138(H) (4(L) X 8.9(W) X 5.4(H) in) / Weight: 2.5 Kg(5.5 lbs)

• Operating Voltage: +28VDC

Consumption Current: 500mA(Max, DC)
 Interface: Discrete Input/Output, RS-232
 Durability: MIL-STD-810, MIL-STD-461 certified



AC/DC Electrical Master Box (EMB) EMB controls AC&DC power distribution and monitors the status of internal power of an aircraft. It has a dual system structure for redundancy and emergency preparedness. Built-in Test is available(Self-diagnosis Function) and it has Generator Fail Mode(Electrical Network Auto-reconfiguration), Automatic Protection Function for under/over voltage, current, AC/DC power frequency and electrical short.

#### Data (key tested performance metrics):

• Size(mm): 1AC-440(L) X 270(W) X 125(H), DC-345(L) X 230(W) X 125(H) / Weight: 7.5Kg(16.5lbs)

• Input Voltage: 28VDC

• Control Voltage : AC-115VAC, 3Phase 400Hz, DC-28VDC • Interface : MIL-STD-1553B BUS / ARINC429 / CAN

• Environment: MIL-STD-810F, MIL-STD-461E



