



CHINA NATIONAL AERO-TECHNOLOGY  
IMPORT & EXPORT CORPORATION



# L-15 ATTACK FIGHTER TRAINER

# L-15 Attack Fighter Trainer

## INTRODUCTION

L-15 Attack Fighter Trainer is the latest variant of L-15 series aircraft. It is a multi-role platform and features high performance, reliability and cost efficiency.

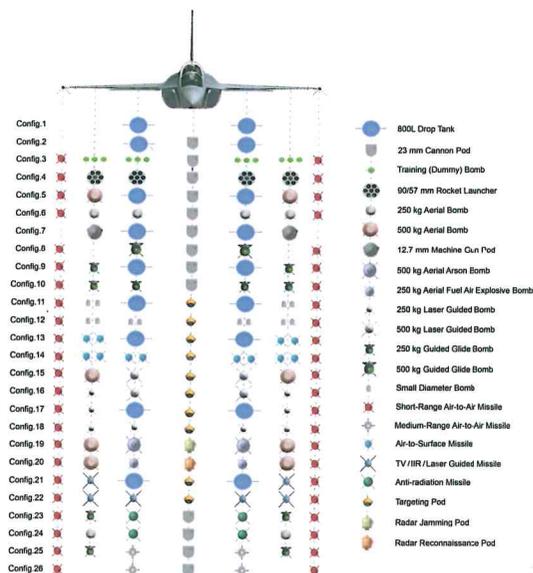
For training, it is capable of accomplishing advanced and LIFT training for the 4<sup>th</sup> and 5<sup>th</sup> generation fighters, as well as undertaking companion training in operational wings, supported by the Embedded Training System, Mission Planning & Debriefing System, and Ground Based Training System. For combat, it can execute tactical missions such as air combat, air strike, air reconnaissance, QRA, ELINT, CAS, and FAC missions.

With the advanced aerodynamic layout, 3-axis 4-redundancy digital FCS, twin FADEC turbofan engines, the aircraft provides superior fighter-like performance. The powerful radar, tactical data link, targeting pod and radar reconnaissance pod, and other on-board sensors with data-fusion in the fully-digital glass cockpits enable its outstanding situation awareness and operation capability.

The aircraft's mature FCS technology, reliable systems, and redundancy design make its safety record second-to-none in its class.

## WEIGHT

Normal take-off weight	7,745 kg
Max. take-off weight	10,700 kg

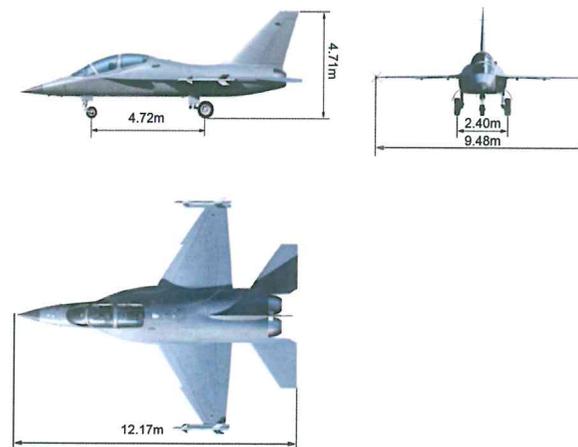


## POWER PLANT

Two AI-322 turbofan engines

## PERFORMANCE

Max. level flight speed	1,000 km/h
Service ceiling	13,500 m
Load factor	+8/-3 g
Basic range	1,700 km
Max. ferry range with drop tanks	2,800 km
Max. climb rate	82 m/s
Basic endurance	2.4 h
Max. endurance with drop tanks	3.8 h



\*\*The technical specification is for information only and is subject to change without prior notice.



CHINA NATIONAL AERO-TECHNOLOGY  
IMPORT & EXPORT CORPORATION

CATIC Plaza, No.15 Ronghua South Road, Beijing Economic and  
Technological Development Area, Beijing, China, 100176  
<http://www.catic.cn>

# FTC-2000G



CHINA NATIONAL AERO-TECHNOLOGY  
IMPORT & EXPORT CORPORATION

# FTC-2000G

## INTRODUCTION

FTC-2000G is a supersonic multi-functional aircraft which is dedicated to the missions of air-to-surface attack, air combat and pilot training. The aircraft adopts advanced aerodynamic layout, mature power plant, integrated avionics system, strong weapon system and other efficient functional systems. Benefiting from excellent flight performance, outstanding multi-purpose capability, low life cycle cost, high safety and reliability, FTC-2000G is an effective and economic choice not only to undertake advanced pilot training but also substitute legacy light attacker and fighter.

## FEATURES

- Wide flight envelop and excellent maneuverability make the aircraft suitable for air combat mission.
- Outstanding low speed characteristic, high AOA performance make the aircraft suitable for attack mission.
- Perfect take-off and landing performance make the aircraft suitable for pilot training to link with primary/basic trainer.
- Based on flexible data bus structure, the integrated avionics system possesses sufficient growth potential for future upgrading.
- Powerful radar and medium range air-to-air missile enable the aircraft to perform BVR air combat mission.
- Strong external store capability (9 stations with 3,000 kg payload) and various weapon selection provide diversified mission capability.
- Highly effective HMI supported by glass cockpit, logical override relationship, HOTAS and blue-white illumination inside cockpit.
- Radar warning system, chaff and flare dispenser, targeting pod, electronic jamming pod and FLIR pod.

## POWER PLANT

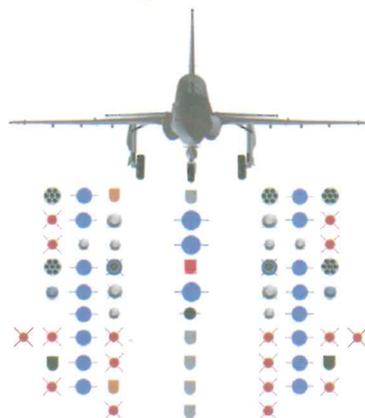
One turbojet engine	
Max. thrust	4,650 kgf
Full afterburning thrust	6,850 kgf

## WEIGHT

Normal take-off weight	7,900 kg
Max. take-off weight	11,200 kg

## PERFORMANCE

Max. flight Mach number	1.5
Max. level flight IAS	1,100 km/h
Min. level flight IAS	190 km/h
Max. climbing rate (H=1 km)	185 m/s
Load factor	-3 ~ +8 g
Max. banking turn G-load (H=5 km, M=0.9)	5.5 g
Basic range	1,630 km
Basic Endurance	2.1h
Service ceiling	16 km



- Air-surface missile
- Air-Air missile
- Guided gliding bomb
- Laser guided bomb
- 500 kg aerial bomb
- 250 kg aerial bomb
- Rocket launcher
- Gun pod
- Targeting pod
- Electronic jamming pod
- FLIR pod
- 800 L drop tank
- 500 L drop tank



\*\*The technical specification is for information only and is subject to change without prior notice.



# **K-8NG**

## **Basic/Advanced Jet Trainer**



CHINA NATIONAL AERO-TECHNOLOGY  
IMPORT & EXPORT CORPORATION

# K-8NG Basic/Advanced Jet Trainer

## INTRODUCTION

K-8NG is a multi-role jet trainer with basic/advanced training, air-to-ground precision strike, and reconnaissance capabilities. Based on the well-proven platform of K-8, K-8NG is upgraded with the up-to-date digital avionics system, LVC (Live, Virtual and Constructive) technology, and significantly improved weapon employment capability, which offer excellent training & operation effectiveness with retaining high-cost efficiency.

## FEATURES

- The K-8NG is a latest variant of K-8 family which has been extensively employed worldwide.
- Embedded Tactical Training System with training data link.
- Persistent Close Air Support (PCAS) system digitally interconnects the aircraft with the ground Joint Terminal Attack Controller (JTAC).
- Modern glass cockpit with large-area touchscreen display flexible in replicating next higher platform.
- Easy maintenance, affordable acquisition avails high-cost efficiency.
- Supply chain highly concentrated within Chinese territory, thus life cycle supply & support is guaranteed.
- Future-oriented open architecture for further upgrading.
- Rich experience in industrial cooperation including technology transfer and localized production.

## WEIGHT

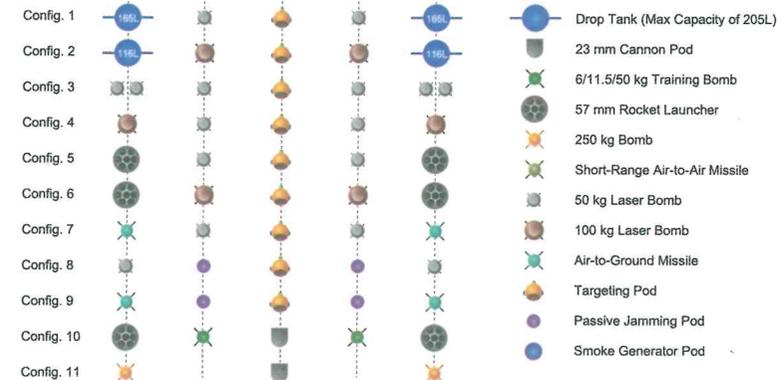
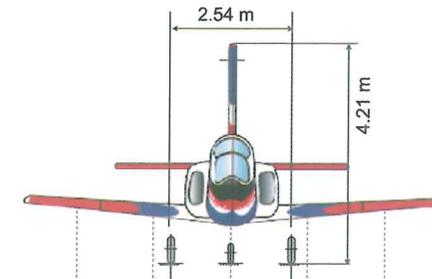
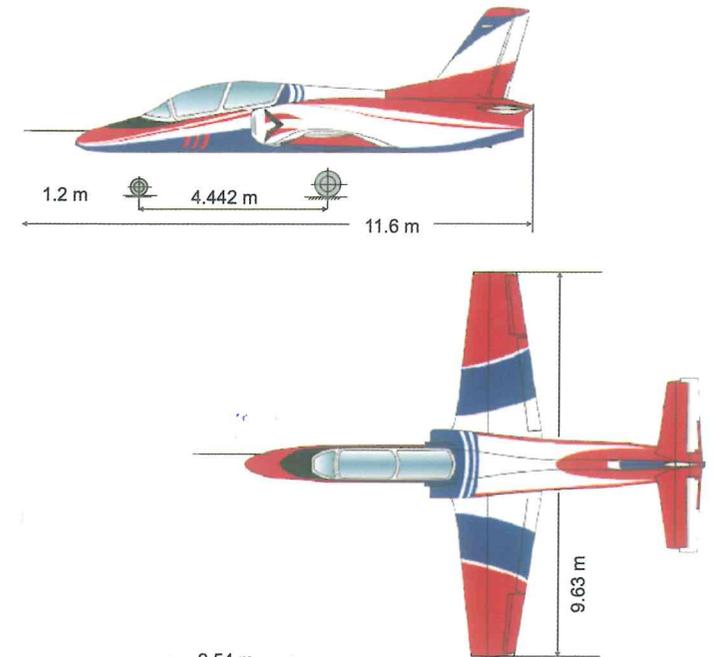
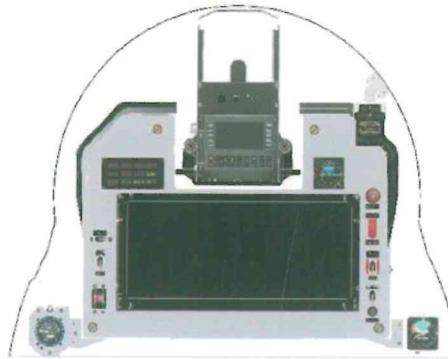
Normal take-off weight 4,032 kg  
Max. take-off weight 4,686 kg

## PERFORMANCE

Max. level flight speed 800 km/h  
Service ceiling 12,000 m  
Max. rate of climb (at sea level) 30 m/s  
Max. range (with drop tank) 1,900 km  
Range (without drop tank) 1,450 km

## POWER PLANT

One AI-25TLK turbofan engine  
Max. thrust 1,720 kgf



CHINA NATIONAL AERO-TECHNOLOGY  
IMPORT & EXPORT CORPORATION

CATIC Plaza, No.15 Ronghua South Road, Beijing Economic and Technological Development Area, Beijing, China, 100176  
<http://www.catic.cn>

# GB-1

LASER-GUIDED  
BOMB



CHINA NATIONAL AERO-TECHNOLOGY  
IMPORT & EXPORT CORPORATION



# GB-1

LASER-GUIDED  
BOMB

## General Introduction

GB-1 500kg laser guided bomb adopts the guidance system of semi-active laser with 8 set laser codes which enable numerous bomb to engage targets simultaneously in the same air space. GB-1 can deliver precision strike to stationary and low-speed moving targets on ground and water surface.



## Features

- 1 Precision strike
- 2 Modularized design, multi-purpose warhead
- 3 Low-cost operation

## Specifications

Typical target	Large communication command center, aircraft shelter, transportation ship, oil tanks, all kinds of warehouses, bridges, vehicles
Max.Range	10km
Weight	572kg
Dimension	Φ377mm × 3342mm, Wingspan: 950mm
System accuracy	CEP ≤ 3m
Guidance system	Semi-active laser
Warhead	218kg (25kPa overpressure at 45m from explosive center)
Between lugs	355.6mm



# GB-3

LASER-GUIDED  
BOMB



CHINA NATIONAL AERO-TECHNOLOGY  
IMPORT & EXPORT CORPORATION

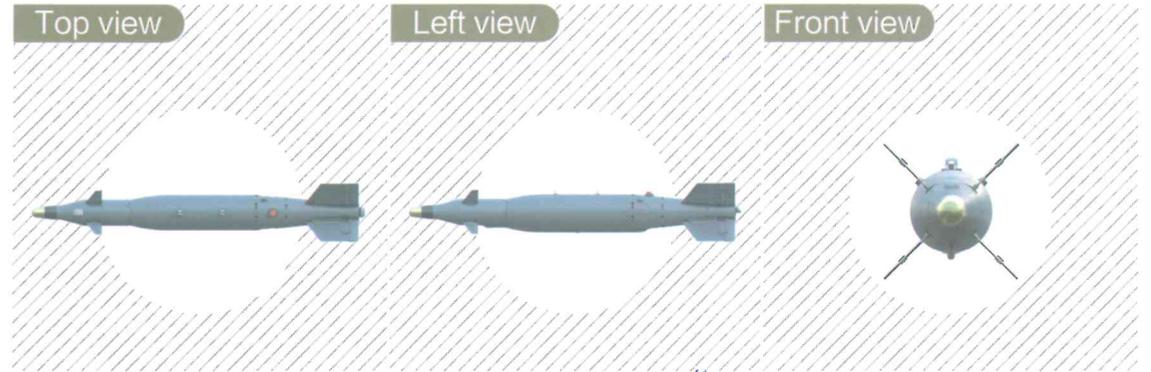


# GB-3

LASER-GUIDED  
BOMB

## General Introduction

GB-3 250kg laser guided bomb adopts dual guidance mode of strap-down INS/GPS correction and semi-active laser proportional guidance. It can deliver precision strike to stationary and low-speed moving targets on ground and water surface.



## Features

- 1 Mounted for advanced trainers or UAVS
- 2 Dual-guidance mode integrated
- 3 Systematized and modularized design, laser coding type is consistent with GB-1

## Specifications

Typical target	Ground/surface stationary or moving targets, including buildings, airstrips, air defense artillery positions, missile launching positions, early warning radar positions, military depots, transportation junctions, bridges, bunkers, vehicles and ship, etc
Max.Range	20km
Weight	260kg
Dimensions	Φ299mm × 2800mm, Span: 890mm
System accuracy	CEP ≤ 3m
Guidance system	Strap-down INS/GPS+Semi-active laser
Warhead	90kg (26kPa overpressure at 22m from explosive center)
Between lugs	355.6mm

# CM-704KG

AIR-TO-SURFACE  
MISSILE



CHINA NATIONAL AERO-TECHNOLOGY  
IMPORT & EXPORT CORPORATION

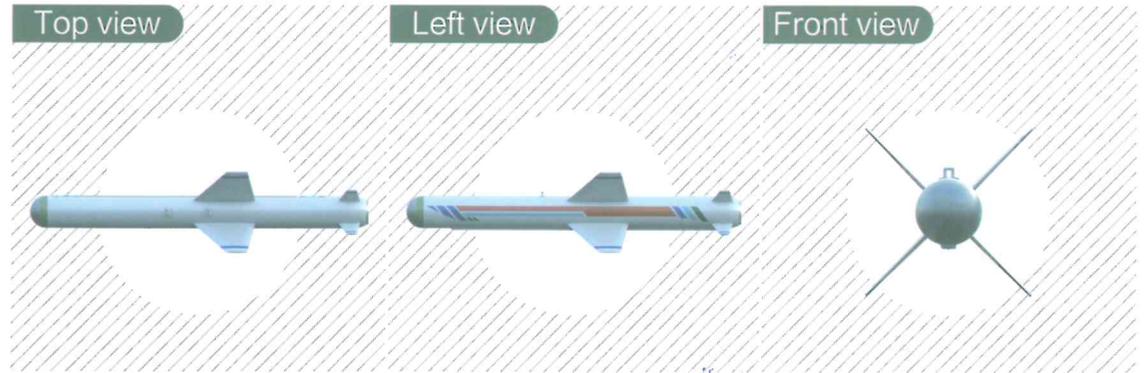


# CM-704KG

AIR-TO-SURFACE  
MISSILE

## General Introduction

The CM-704KG is a short-range air-to-surface missile that can be used for defense suppression, close air support and interdiction missions. It is effective against a wide target spectrum, including enemy field command centers, ship, shelters and fortifications.



## Features

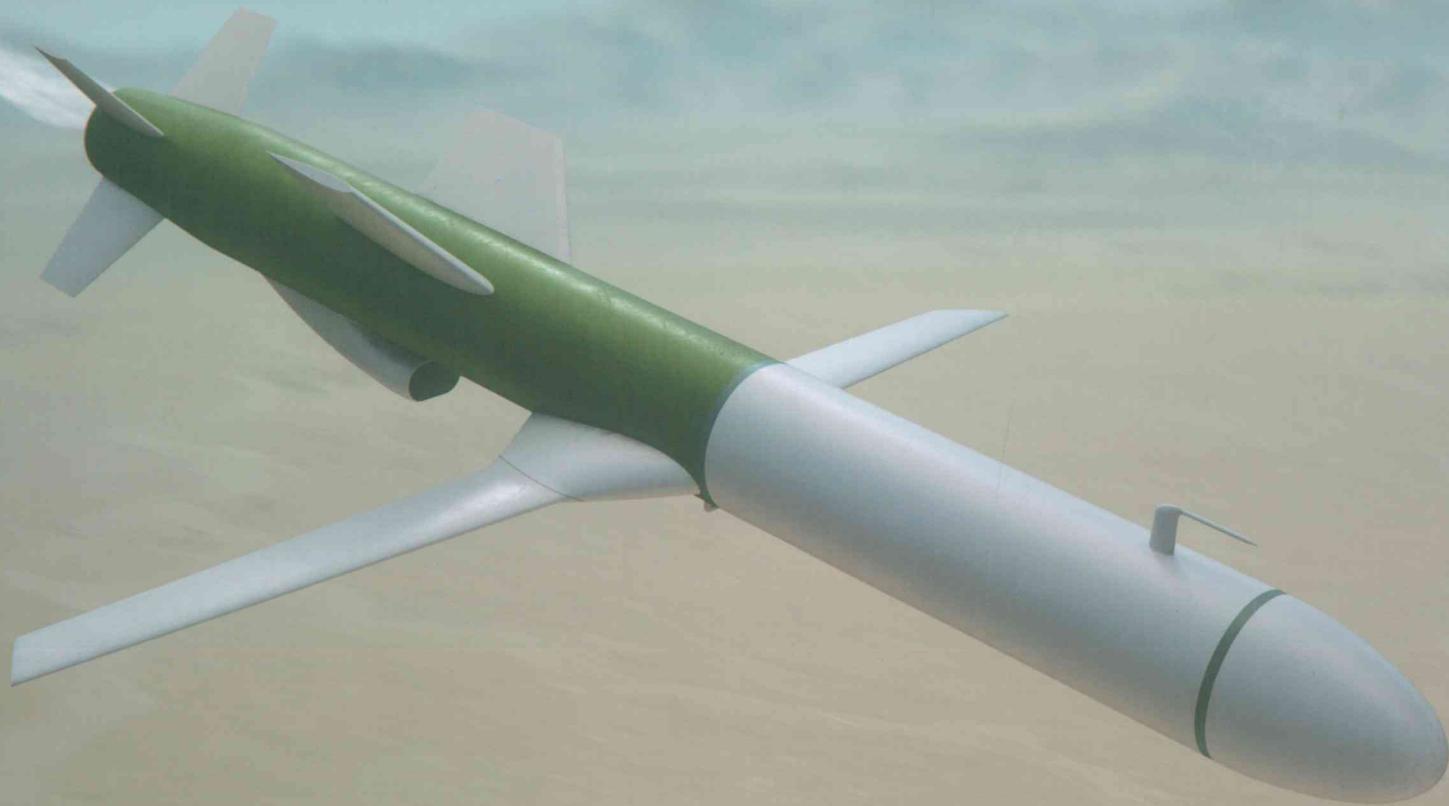
- 1 Compatible with multiple platforms
- 2 Modularized design for seeker and warhead
- 3 High accuracy and damage effectiveness
- 4 Automatic target recognition (IR/TV)

## Specifications

Typical target	All kinds of stationary and moving tactical target, including ship
Speed	Ma 0.6 ~ 0.9
Range	25km (release altitude $\geq$ 5000m)
Weight	295kg (blast)/310kg (penetration)
Dimension	$\Phi$ 280mm $\times$ 2950mm
System accuracy	CEP $\leq$ 1m (Semi-active laser) CEP $\leq$ 15m (GNSS + INS) CEP $\leq$ 3m (IR imaging)
Guidance system	Strap-down INS (GNSS module inside)+semi-active/IR/TV seeker
Power plant	Solid propulsor
Warhead	165kg (blast) 180kg (penetration)

# TL-30

LOITERING  
MUNITION



CHINA NATIONAL AERO-TECHNOLOGY  
IMPORT & EXPORT CORPORATION

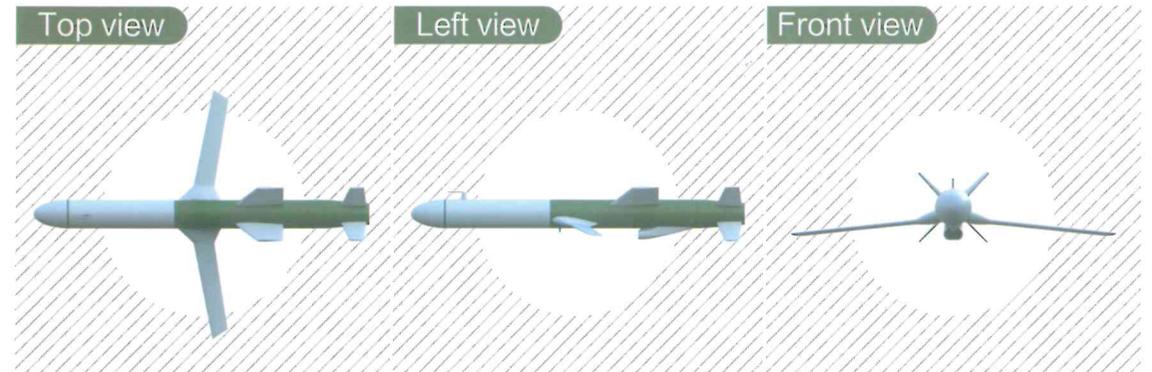


# TL-30

LOITERING  
MUNITION

## General Introduction

TL-30 missile system is mainly used to perform rapid suppression of enemy air defense (SEAD) with electronic countermeasure and reconnaissance information. By loitering above, the TL-30 is able to strike the air defense system once the system is powered on, so as to cover defense penetration operation and facilitate to take the air superiority.



## Features

- 1 Stand-off launch, fire-and-forget
- 2 Quick arrival, long durations suppression and high maneuver attack
- 3 High guidance accuracy and damage effectiveness, anti-shutdown and second pull-up attack capability
- 4 Excellent anti-radiation seeker with wide bandwidth range
- 5 Pre-mission planning with group launch, mission coordination and cluster attack capabilities

## Specifications

Typical targets	Ground radars or ship borne radars (director radar, target search and indication radar, missile guidance radar, artillery control radar etc.)
Missile type	TL-30A (airborne type), TL-30B (vehicle borne), TL-30C (ship borne type)
Speed	0.65Ma
Range	280km+Loitering duration 50min
Weight	270kg
Dimension	Length: 3700mm, diameter: 320mm, wingspan: 650mm (folded )
Frequency coverage	1.2-18GHz
System accuracy	CEP≤8m
Guidance system	Strap-down INS/satellite combined navigation+passive radar seeker
Power plant	Small turbojet engine
Warhead	26kg (prefabricated fragmented blast warhead)

## F-16 Combustion and Controls



### Woodward F-16 Combustion and Controls

Woodward is the leading manufacturer of F-16 Engine Fuel Flow components, Combustion Systems and Servovalves. Simtech has been a Woodward distributor for this product line since 2008.

Woodward supplies Fuel Flow and Combustion System components for both engines that power the F-16 fighter: the Pratt & Whitney F100 engine and the General Electric F110 engine.

In addition, Woodward repairs and overhauls all its product lines.

As the leading worldwide distributor for these products, Simtech has supplied hundreds of Afterburner Spray Rings and Fuel Nozzles to FMS customers. Simtech also manages all FMS repair contracts for Main Engine Controls, Servovalves and Afterburner Spray Rings.

### About Simtech

Founded in 1988, Simtech supplies military spare parts to allied governments, the United States Government and maintenance centers. Simtech handles customer support, logistics, and ensures all ITAR controls are met. Woodward's advanced manufacturing technologies and Simtech's superior distribution service provide end users with OEM parts, repairs and unparalleled support.

# Woodward F-16 Combustion and Controls

F100 Engine		
Description	Part Number	NSN
Zone I Spray Ring	4085197	2915-01-471-1311
Zone II Spray Ring	4085198	2915-01-471-3479
Zone II Spray Ring	4081806	2915-01-550-3637
Zone III Spray Ring	4071273	2915-01-333-9601
Zone III Spray Ring	4081814	2915-01-550-3636
Zone IV Spray Ring	4073225	2915-01-334-7068
Zone IV Spray Ring	4089329	2915-01-659-5074
Zone V Spray Ring	4071274	2915-01-333-9600
Unstaged Fuel Nozzle	4084843	2915-01-454-3392
Unstaged Fuel Nozzle	519P194-04	2915-01-454-3392
Staged Fuel Nozzle	4084844	2915-01-454-3393
Staged Fuel Nozzle	519P195-02	2915-01-454-3393
Servo Valve Module Kit	20105030-101	2915-01-224-0747
Servo Valve Module Kit	20105040-101	2915-01-224-0746
Servo Valve Module Kit	20105070-101	2915-01-224-0753
Servo Valve Module Kit	20105080-101	2915-01-222-6311
Servo Valve Module Kit	20105090-101	2915-01-226-1047
Servo Valve Module Kit	20105100-101	2915-01-244-5400
Autothrottle Servo	2R6216B	
Frameless BLDC Stator	CBF226A	
Frameless BLDC Rotor	CBF227A	
Pump Motor Controller	E6A237D	
Throttle Position Sensor	W39A	5990-01-264-6512
Signal Data Converter	626200A	5895-01-388-6300
Signal Data Converter	626202B	5895-01-388-6300
Signal Data Converter	626202C	5895-01-458-7537



Spray Ring



Fuel Nozzle



Main Engine Control

F110 Engine			
Description	Part Number	NSN	Woodward P/N
Main Engine Control	1534M52P16	2915-01-448-3117	8062-928
Main Engine Control	1534M52P17	2915-01-513-8400	8062-929
Main Engine Control	1534M52P18	2915-01-528-2323	8062-931
Main Engine Control	1534M52P21	2915-01-582-2567	8062-934
T 2.5 Sensor	1534M60P03	2915-01-310-2888	8901-336
T 2.5 Sensor	1534M60P05	2915-01-310-2888	8901-342
T 2.5 Sensor	1534M60P04	2915-01-343-2931	8901-337
T 2.5 Sensor	1269M86P02	2915-01-485-7506	8901-277

Simtech, Inc.  
 66A Floydville Road, East Granby, CT 06026  
 Tel: 860 653 2408 info@simtech-inc.com  
 www.simtech-inc.com





### Curtiss-Wright F-16 LEF Rotary Actuators and Torque Shafts

Curtiss-Wright manufactures the preferred configuration of F-16 LEF Rotary Actuators and Torque Shafts. Simtech has been Curtiss-Wright's distributor for this product line since 2009.

The F-16 uses two Curtiss-Wright LEF Rotary Actuator configurations: pre-block 40 and post-block 40. Most of the Torque Shafts are interchangeable between the configurations, but the Actuators are specific to the configuration.

In addition, Curtiss-Wright repairs and overhauls both pre-block 40 and post-block 40 actuator configurations. The Torque Shafts are not repairable. As the leading worldwide distributor of this product, Simtech has supplied hundreds of Actuators and Torque Shafts to FMS customers. Simtech also manages all FMS repair and overhaul contracts.

### About Simtech

Founded in 1988, Simtech supplies military spare parts to allied governments, the United States Government and maintenance centers. Simtech handles customer support, logistics, warranty claims and ensures all ITAR controls are met. Curtiss-Wright's advanced manufacturing technologies and Simtech's customer service provide end users with parts, repairs and unparalleled support.

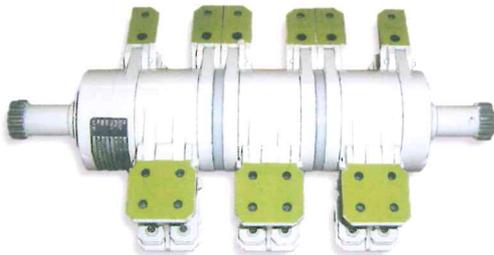
# Curtiss-Wright F-16 LEF Rotary Actuators and Torque Shafts

Pre Block 40			
Description	Part Number	NSN	Lockheed P/N
Inboard Actuator	182900-3	1680-01-254-0471	16VM005-1
Outboard Actuator	183050-5	1680-01-254-0470	16VM005-2
Torque Shaft	184080-1	3040-01-411-3344	16VM003003-9
Torque Shaft	184080-2	3040-01-411-3342	16VM003003-10
Torque Shaft	184080-3	3040-01-148-7912	16VM003003-12
Torque Shaft	184080-4	3040-01-399-5947	16VM003003-13
Torque Shaft	184080-5	3040-01-411-3341	16VM003003-11

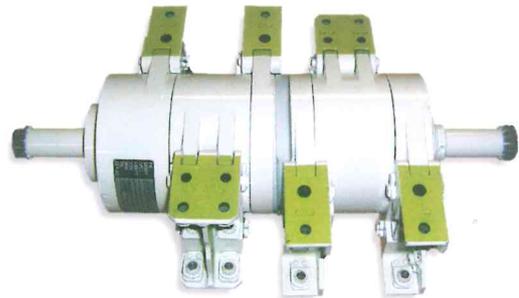
Post Block 40			
Description	Part Number	NSN	Lockheed P/N
Inboard Actuator	183210-1	1680-01-450-6899	16VM005001-1
Inboard Actuator	183200-1	1680-01-450-6900	16VM005001-2
Outboard Actuator	183315-1	1680-01-450-6898	16VM005001-4
Torque Shaft	184080-2	3040-01-411-3342	16VM003003-10
Torque Shaft	184080-4	3040-01-399-5947	16VM003003-13
Torque Shaft	184080-5	3040-01-411-3341	16VM003003-11
Torque Shaft	184080-6	3040-01-413-3767	16VM003003-15



Torque Shaft



Rotary Actuator



Rotary Actuator

Simtech, Inc.  
 66A Floydville Road, East Granby, CT 06026  
 Tel: 860 653 2408 info@simtech-inc.com  
 www.simtech-inc.com





# MULTI-ROLE AIRCRAFT

# FA-50

**KAI** KOREA AEROSPACE  
INDUSTRIES, LTD.

[www.koreaaero.com](http://www.koreaaero.com)

# T-50 & FA-50 MULTI-ROLE AIRCRAFT



## T-50

Advanced Jet Trainer



## FA-50

Multi-Role Fighter

- Multi-Mode RADAR
- Modern Glass Cockpit
- RWR / CMDS
- JDAM / LGB
  - JDAM : Joint Direct Attack Munitions
  - LGB : Laser Guided Bomb
- Tactical Data Link
- Advanced Targeting Pod

The FA-50 aircraft is a multi-role fighter and is derivate version of the T-50 aircraft platform. FA-50 can operate various conventional munitions and various air-to-air and air-to-ground precision guided munitions, thus FA-50 can suppress threats fast and precisely as a agile fighter.

### Weapon Capability



#### A to A



AIM-9L/M/S Sidewinder



AIM-9N/P Sidewinder

#### A to G



GBU-38/B JDAM



BDU-33D/B (Under SUU-20)



GBU-12 Paveway II



MK-82 500-LB LDGP



Advanced Targeting Pod



AGM-65 A/B/D/G Maverick Missile



Internal Gun (200 rounds)



CBU-105 WCMD

### Dimensions

43.1ft (13.14m)



31.0ft (9.45m)



15.8ft  
(4.81m)



### Specification

Max. Design Weight

**27,300 lbs**

(12,383kg)

Engine Thrust

**17,700 lbs**

(78.7kn)

Thrust-to-Weight

**0.95**

Max. Speed

**M 1.5**

Design Load Factor

**-3/+8 g**

Design Service Ceiling

**55,000 ft**

(16.7km)

Max. Rate of Climb

**37,000 ft/min**

(11.3km/min)

# KF-21

BORAMA E



## Korean Fighter Aircraft

The KF-21 has excellent capabilities to meet future operational needs. It embodies features that offer lethality, survivability, interoperability and supportability within an affordable air system.

### Features

- AESA Radar & Advanced Avionics
- Advanced Precision Weapons
- 10 Weapon Hard Points
- High Maneuverability
- Enhanced Survivability
- Advanced Support Features
- Design for Future Growth
- Single & Tandem Seat Aircraft
- Affordable Mid-Class Fighter Aircraft



### Specification

Max. Thrust	<b>44,000lb</b>	Ferry Range	<b>1,550nm</b>	Max. Speed	<b>1,400mph</b>	Max. Payload	<b>17,000lb</b>	MTOW	<b>56,400lb</b>
-------------	-----------------	-------------	----------------	------------	-----------------	--------------	-----------------	------	-----------------