

The logo features a stylized red icon of a turbine or engine component to the left of the company name. The name "Kale Arge" is in a large, bold, white sans-serif font, and "TURBINE ENGINE COMPANY" is in a smaller, red, all-caps sans-serif font below it.

**Kale Arge**  
TURBINE ENGINE COMPANY

EMPOWERING SUPREMACY

## ABOUT US

Kale Arge was established in 2013 as a subsidiary of Kale Group, Türkiye's industrial giant, to carry out research and development activities on Turbine Engines.

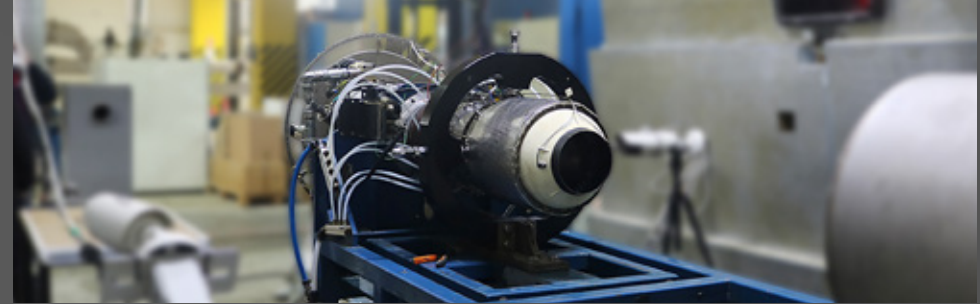
Kale Arge's main field of activity includes the design, development, testing and production of turbine engines, including but not limited to attritable turbojet engines with compact design, very high thrust-to-weight ratios.

We developed Türkiye's first Turbojet Engine KTJ-3200 and started serial production. We continue to develop and produce new turbine engines - KTJ Series Engines in different sizes and features with the experience and knowledge we gained from KTJ-3200 with over 250 employees.



Kale Arge has an in-house Altitude Test Facility for verifying key performance characteristics of its own Turbine Engines at altitude and Mach speed conditions up to 10,000 m altitude level and 0.95 Mach speed.

In addition to Türkiye's first and only Altitude Test System, we have Endurance Test Bed, Special Engine Test Systems (including; water ingestion, distortion tests), Combustion Chamber Test Rig, Test Rigs for Control and Accessories, and other test systems.



Our indigenous engines **KTJ-1750**, **KTJ-3200S**, **KTJ-3200A** and **KTJ-3700** do power the NATO-Turkish Armed Forces missile systems – **Çakır**, **SOM**, **Atmaca** and **Kara Atmaca** respectively.

## KTJ1750

KTJ-1750 Turbojet Engine



Çakır Missile



## KTJ3200

KTJ-3200 Turbojet Engine



SOM Missile

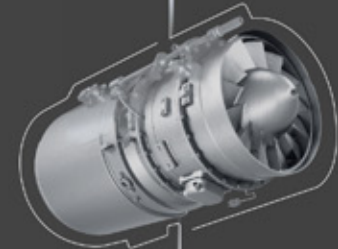


Atmaca Missile



## KTJ3700

KTJ-3700 Turbojet Engine



Kara Atmaca Missile







# KIT1750



THRUST  
**1750 N (SLS, max rpm)**



SPECIFIC FUEL CONSUMPTION  
**1.17 kg / h / daN (SLS, max rpm)**

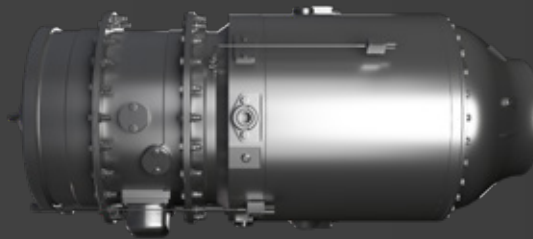


ENGINE WEIGHT  
**22.5 kg**

*In Serial Production*



**Length**  
464 mm



**Diameter**  
202 mm

## KTJ-1750



Alternator



Fuel Metering  
Pump



Electronic  
Control Unit



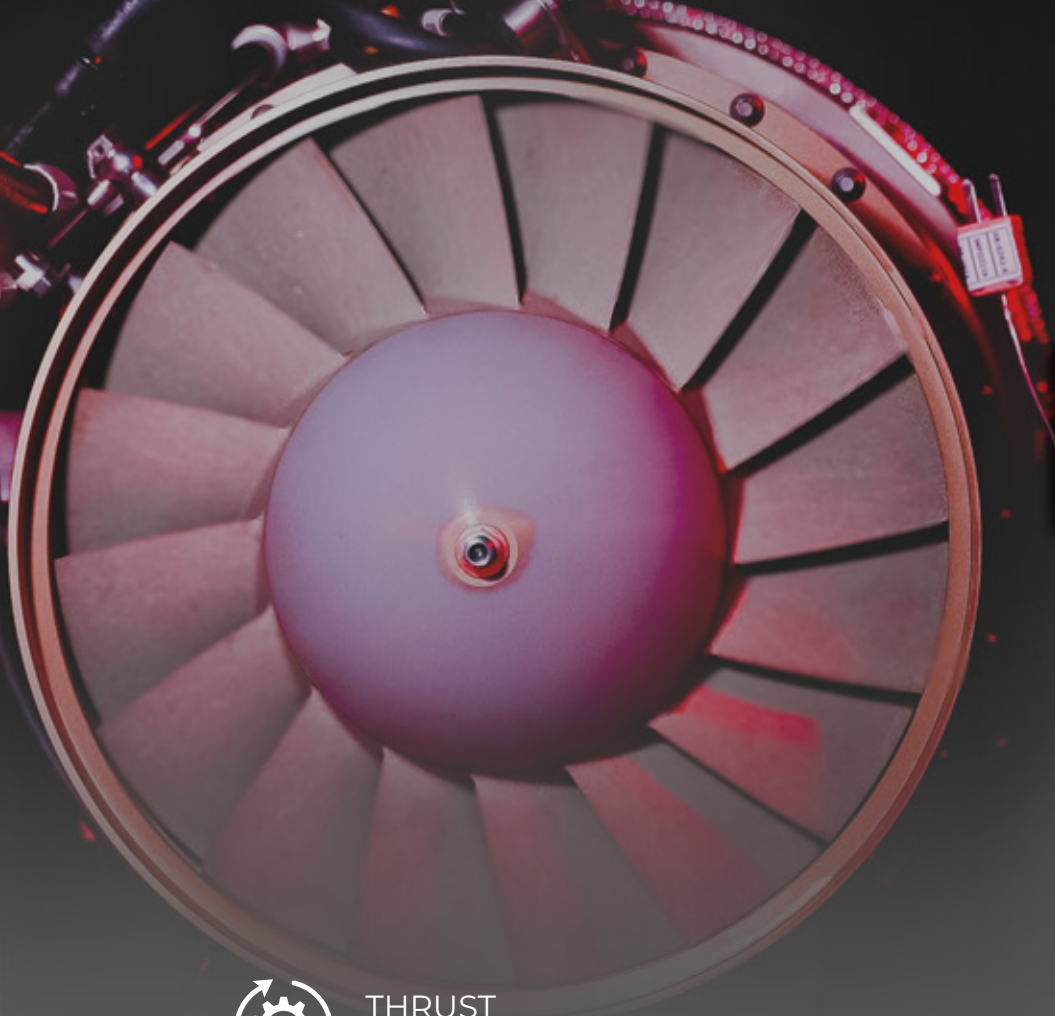
Pyrotechnic  
Igniter

TECHNICAL PARAMETERS	METRIC	IMPERIAL
<b>Max. thrust</b> (SLS, max RPM)	1750 N	393.4 lbf
<b>Specific fuel consumption</b> (SLS, max RPM, lubrication included)	1.17 kg/h/daN	1.15 lb/lbf/h

STARTING RANGE	METRIC	IMPERIAL
<b>Altitude</b> (qualified at in-house ATF)	0 m to 6000 m	0 ft to 19680 ft
<b>Speed</b> (qualified at in-house ATF)	0 to 0.9 Mach	

OPERATING RANGE	METRIC	IMPERIAL
<b>Altitude</b> (qualified at in-house ATF)	0 m to 6000 m	0 ft to 19680 ft
<b>Speed</b> (qualified at in-house ATF)	0 to 0.95 Mach	

PHYSICAL CHARACTERISTICS	METRIC	IMPERIAL
<b>Diameter</b> (excluding igniter, piping, flanges)	202 mm	7.95 in
<b>Total Length</b>	464 mm	18.27 in
<b>Weight</b> (including controls and accessories)	22.5 kg	49.60 lb
<b>Electrical power output</b>	2.3 kVA	
<b>Max. engine speed</b> (RPM)	52,500	
<b>Fuel Type</b>	Jet A-1, JP-8, JP-10	
<b>Lubrication System</b>	Fuel	



# KIJ 3200



THRUST  
**3200 N (SLS, max rpm)**



SPECIFIC FUEL CONSUMPTION  
**1.18 kg / h / daN (SLS, max rpm)**



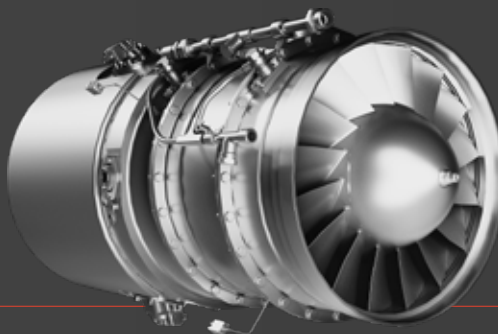
ENGINE WEIGHT  
**50 kg**



*In Serial Production*



**Length**  
630 mm



**Diameter**  
330 mm

## KTJ-3200



Alternator



Fuel Metering  
Pump



Electronic  
Control Unit



Pyrotechnic  
Igniter

TECHNICAL PARAMETERS	METRIC	IMPERIAL
<b>Max. thrust</b> (SLS, max RPM)	3200 N	719.4 lbf
<b>Specific fuel consumption</b> (SLS, max RPM, lubrication included)	1.18 kg/h/daN	1.16 lb/lbf/h

STARTING RANGE	METRIC	IMPERIAL
<b>Altitude</b> (qualified at in-house ATF)	0 m to 6000 m	0 ft to 19680 ft
<b>Speed</b> (qualified at in-house ATF)	0 to 0.9 Mach	

OPERATING RANGE	METRIC	IMPERIAL
<b>Altitude</b> (qualified at in-house ATF)	0 m to 6000 m	0 ft to 19680 ft
<b>Speed</b> (qualified at in-house ATF)	0 to 0.95 Mach	

PHYSICAL CHARACTERISTICS	METRIC	IMPERIAL
<b>Diameter</b> (excluding igniter, piping, flanges)	330 mm	13 in
<b>Total Length</b>	630 mm	24.8 in
<b>Weight</b> (including controls and accessories)	50 kg	110.2 lb
<b>Electrical power output</b>	3 kVA	
<b>Max. engine speed</b> (RPM)	38,300	
<b>Fuel Type</b>	Jet A-1, JP-8, JP-10	
<b>Lubrication System</b>	Fuel	



A detailed view of the KTJ3700 engine, showing its large, multi-bladed compressor or turbine section. The engine is illuminated with a strong red light, creating a dramatic effect. The background is dark, making the engine stand out.

# KTJ3700



THRUST  
**3700 N (SLS, max rpm)**



SPECIFIC FUEL CONSUMPTION  
**1.12 kg / h / daN (SLS, max rpm)**



ENGINE WEIGHT  
**50 kg**





**Length**  
630 mm



**Diameter**  
330 mm

## KTJ-3700



Alternator



Fuel Metering  
Pump



Electronic  
Control Unit



Pyrotechnic  
Igniter

TECHNICAL PARAMETERS	METRIC	IMPERIAL
<b>Max. thrust</b> (SLS, max RPM)	3700 N	831.8 lbf
<b>Specific fuel consumption</b> (SLS, max RPM, lubrication included)	1.12 kg/h/daN	1.10 lb/lbf/h

STARTING RANGE	METRIC	IMPERIAL
<b>Altitude</b> (qualified at in-house ATF)	0 m to 6000 m	0 ft to 19680 ft
<b>Speed</b> (qualified at in-house ATF)	0 to 0.9 Mach	

OPERATING RANGE	METRIC	IMPERIAL
<b>Altitude</b> (qualified at in-house ATF)	0 m to 6000 m	0 ft to 19680 ft
<b>Speed</b> (qualified at in-house ATF)	0 to 0.95 Mach	

PHYSICAL CHARACTERISTICS	METRIC	IMPERIAL
<b>Diameter</b> (excluding igniter, piping, flanges)	330 mm	13 in
<b>Total Length</b>	630 mm	24.8 in
<b>Weight</b> (including controls and accessories)	50 kg	110.2 lb
<b>Electrical power output</b>	3 kVA	
<b>Max. engine speed</b> (RPM)	38,300	
<b>Fuel Type</b>	Jet A-1, JP-8, JP-10	
<b>Lubrication System</b>	Fuel	

With the legacy of  
**Dr.(h.c) İbrahim Bodur,**  
from the roots to the skies!

Kale Group is one of the larger industrial conglomerates in Turkey. Established in **1957** by one of the pioneering industrialist of Turkey, **Dr. İbrahim Bodur**, Kale has its main business in the field of building materials (one of the largest ceramic tile factories under one roof, in the world) and mining, logistics, along with its technology driven businesses.

Having a vision for growth in technology oriented sectors, Kale Group management established ventures in defense and aerospace sector: creating successful companies including Kale Arge in indigenous turbine engines design, development and production.



# OUR VALUES



We Build  
Trust



We Act With  
Determination



We Take  
Responsibility



We Cooperate



We Lead  
The Way



We Pave The Way For  
Entrepreneurship







#### ENGINEERING OFFICE

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#### LIAISON OFFICE

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