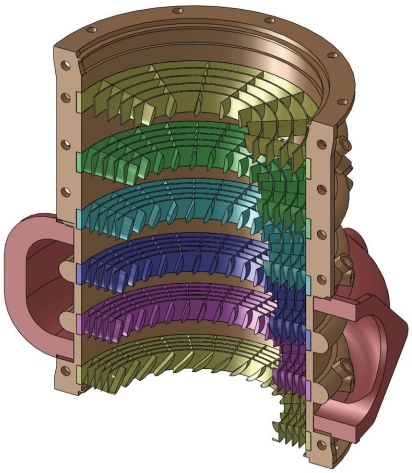
FRONTLINE AEROSPACE

ADVANCE INFORMATION

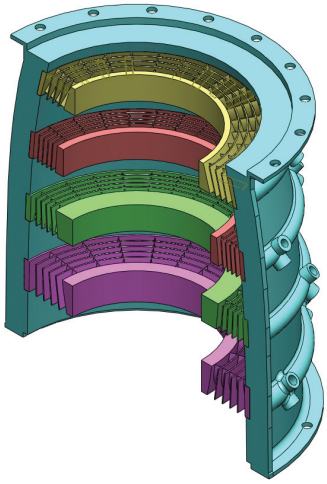
ISOCOOL™ Isothermal Gas Turbine Compression

ISOCOOL™ IMPROVES PERFORMANCE AND FUEL ECONOMY

Rotorcraft using the Rolls-Royce Model 250 C20 series can improve power by as much as 15% and reduce fuel consumption by 5% when installing IsoCool™. This patent-pending simple retrofit replaces the existing compressor housing with a new Q-Blade™ stator blades and a water cooled housing. This allows the heat that is extracted during the air compression cycle (reducing the amount of work the turbine does) to be rejected via a radiator to the atmosphere. This retrofit improves the thermal efficiency of the gas turbine by reducing the amount of work required to compress the air before combustion.



ROLLS-ROYCE MODEL 250 C20B COMPRESSOR HALF



ROLLS-ROYCE MODEL 250 C20R COMPRESSOR HALF

MICROFIRE™ & ISOCOOL™ - SYNERGISTIC PERFORMANCE

By installing Frontline's MicroFire™ and IsoCool™ products they work in a complementary way to increase the fuel savings capability of MicroFire™ and increase the power output of the gas turbine.

PERFORMANCE ESTIMATES AND SPECIFICATIONS FOR MODEL 250

	C20B AND	C20R
Weight: Pounds/Kg	16 / 7.3	13 / 5.9
Specific Fuel consumption (SFC) improvement	5%	3%
Power Increase Estimate	15%	7%

Materials: cooper, aluminum and stainless steel
Operation Range: -40C to 300C
Foreign Object Damage (FOD): The heat fins of the first stator ring act like a grate/filter to reduce FOD
Regulatory Approvals: FAA Supplemental Type Certificate in process
TBO: Normal compressor maintenance seclude
Maintenance Required: Periodic inspection, TBD
Installation: 2-4 hours

ORDER INFORMATION

Orders are being taken for experimental helicopter installations. When full FAA Supplemental Type Certificate is issued, MicroFire™ will be available for commercial operations. Contact Frontline Aerospace, Inc. for specific quote on your engine and helicopter. Typical delivery is 16 weeks after receipt of order (ARO).

INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR)

This document does not contain technical data within the definition contained within ITAR and the Export Administration Regulations (EAR), and as such is releasable by any means to any person whether in the U.S. or abroad.

FRONTLINE AEROSPACE, INC.

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Notice: This document contains information on products that are in prototype and initial production phases of development. The specifications are subject to change without notice. Verify with Frontline Aerospace Inc. directly that you have the latest product information before installing in an experimental aircraft.