



CONTINENTAL

A E R O S P A C E T E C H N O L O G I E S

PROJECT EAGLE

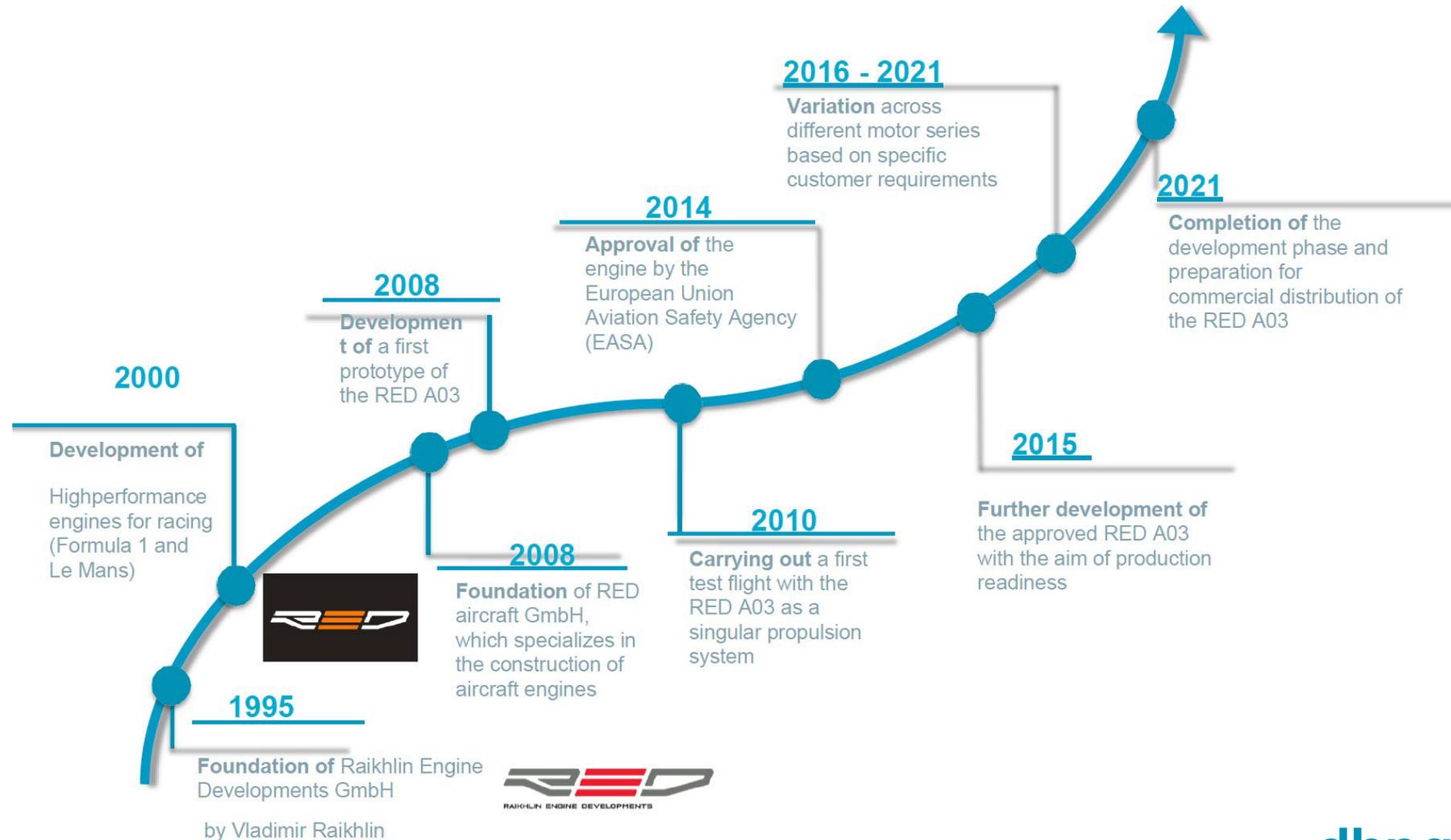


COMPANY AND PRODUCTS OF EAGLE

Based on Statements and
Marketing Material of
EAGLE

R.E.D. COMPANY DEVELOPMENT

Raikhlin aircraft Engine Developments GmbH, Adenau, (RED) operates as a developer and manufacturer of aircraft engines. The company was founded in 1995 by Vladimir Raikhlin and initially developed engines for automotive manufacturers, which were used, among other things, in racing at Le Mans and in Formula 1. In 2008, the company specialized in aircraft engines and has since developed today's main product, the RED A03 series of V12 diesel engines.

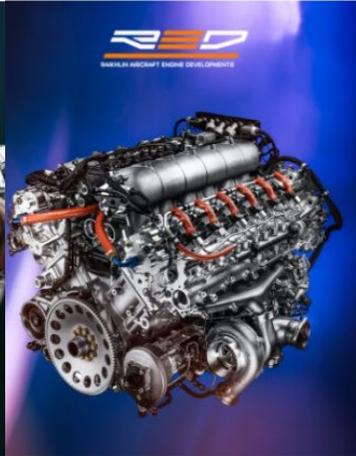
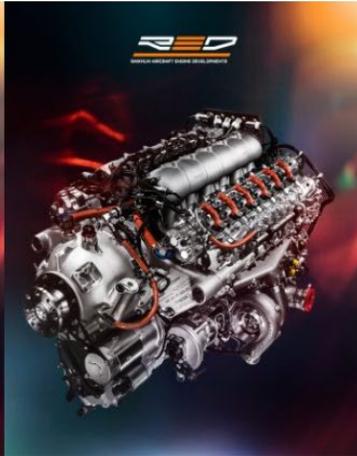


RED A03 ENGINE SERIE

Engines

Certified Aviation Engines

The RED A03 is a lightweight, all-aluminium, compression-ignition, internal combustion 12-cylinder engine in 80° V configuration with two six-cylinder banks capable of independent operation.



RED A03 – 000 Series Base Configuration (500 HP)

RED A03 – 000 Series Base (500/550 HP)

The RED A03 is RED aircraft's base configuration compression-ignition engine, producing 550 SHP and delivering the best fuel economy. Equipped with modern instrumentation that allows precise control of the engine health status.

RED A03 – 100 Series Aerobatic (500 HP)

The RED A03 100 Series is a derivative of the RED A03 -000 producing 500 HP and designed specifically for aerobatic applications. It has been approved to -7g to +9g and has inverted flight capability

RED A03 – 200 Series High Altitude (500 HP)

The RED A03 200 Series is a derivative of the RED A03 -000 and is specifically designed for very high altitude applications with an operational altitude of up to 50.000ft. It benefits from twin stage turbocharger induction system providing full take-off power up to 25.000ft

RED A03 – 300 Series Generator (500 HP)

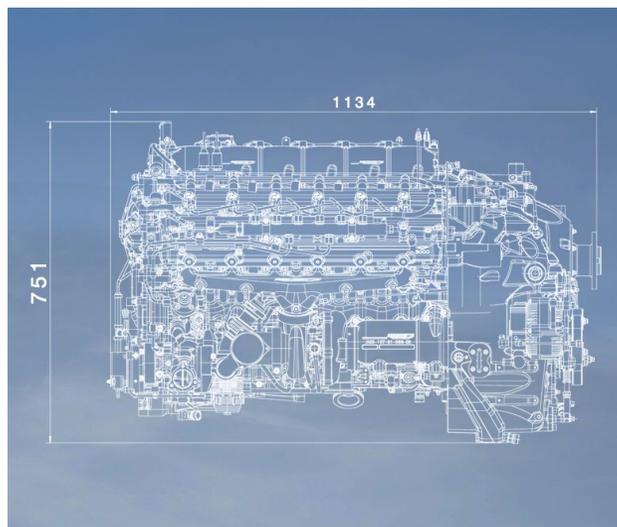
The RED A03 300 Series is a derivative of the RED A03 -000 and has a dismantled reduction gearbox, benefitting with increased take-off performance. The engine variant is suitable for a range of applications including APU, rotary wing, airships and hybrid applications.

RED A03 – 000 Series Base Configuration (500 HP)

RED A03 – 000 Series Base (500/550 HP)

These kits include the engine and digital engine control (FADEC), cooling system, oil system, fuel system (engine side), exhaust system, air system (turbocharger) and all electrical connections. Also included is the engine display adapted to the engine (picture).

RED A03 -SERIES (500 HP) BASE CONFIGURATION



PERFORMANCE & RATINGS

TAKEOFF POWER	500 SHP ⁽²⁾
TAKEOFF PROPELLER SPEED	2127 RPM
MAXIMUM CONTINUOUS POWER	460 SHP
MAXIMUM CONTINUOUS SPEED	1995 RPM
CRITICAL ALTITUDE	6562 FT
BSFC (BEST)	0.349 LBS/H/SHP
FUEL FLOW:	
AT TAKEOFF	187 LBS/H
AT MCP	169 LBS/H
AT 400 HP	143 LBS/H
AT 300 HP	103 LBS/H

ENGINE DESCRIPTION

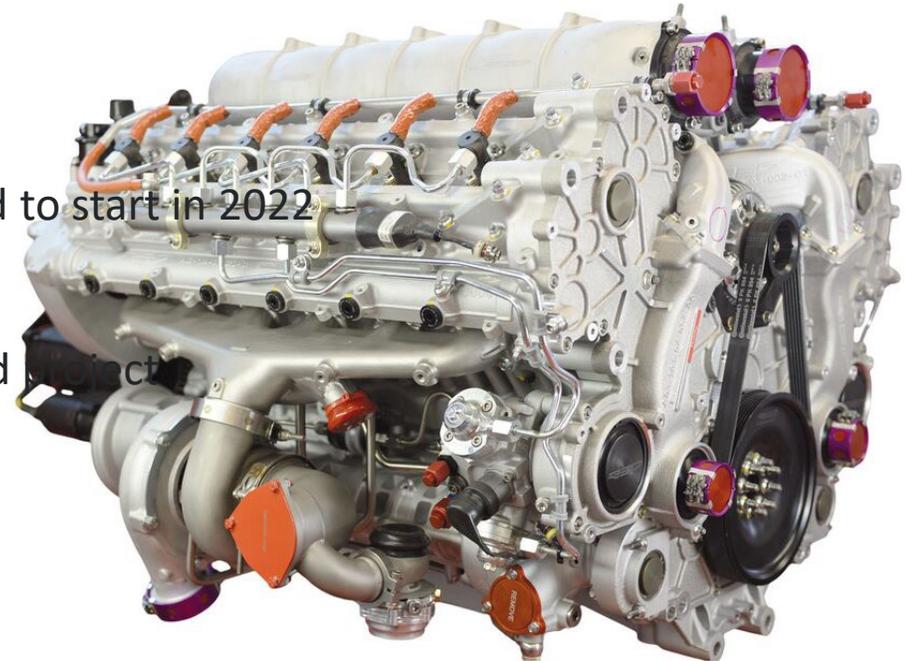
NUMBER OF CYL. + ARRANGEMENT	V-12
FUEL TYPE	JET FUEL
DISPLACEMENT	4
BORE X STROKE	3.38" X 3.46"
VALVES PER CYLINDER	4
TURBOCHARGER	SINGLE STAGE
FUEL SYSTEM	COMMON RAIL
ELECTRICAL SYSTEM	2 X 28V 3.5KW ALTERNATOR
REDUCTION GEAR	1:1.88
DRY MASS*	800 LBS
FADEC	DESIGN ASSURANCE LEVEL B CERTIFIED IN COMPLIANCE TO RTCA DO-254, DO-178B & DO-160G
DIMENSIONS	33.46 x 29.53 x 43.86 inch (Width x Height x Length)

*According to type design configuration.

- Operates with Jet Fuel
- High safety level with independent circuits for each engine bank:
 - air induction system
 - fuel system
 - cooling system
- FADEC single lever engine control
- Turbocharged
- Self-carrying structure for cantilever installation
- Dry-sump oil system
- Integrated engine oil and gearbox oil tank.
- Integrated engine oil and gearbox oil heat exchanger
- Designed for lean maintenance
- Certified in compliance to EASA CS-E / TYPE-CERTIFICATE-DATA-SHEET No.: E.150.
- FADEC & electric looms
- Engine starter
- Engine and gearbox oil subsystem, incl. oil tank and heat exchanger
- Exhaust system and turbochargers
- Optional: propeller governor, engine display, fuel supply system alternators & more

LISTING OF ALL EXISTING PRODUCTS OR SERVICES AND PRODUCTS OR SERVICES UNDER DEVELOPMENT

- ✓ 500HP Standard Engine -003
- ✓ 500HP Aerobatic Engine -102
- 550HP Standard Engine -005 in certification (Pending EASA Approval)
- 550HP High Altitude Version: Prototype Engines delivered to customer, certification not started
- 550HP Hybrid Version: Prototype at Customer (operational)
- 400HP Engine: Feasibility and volume model Study finished, Design planned to start in 2022
- Hydrogen Version: Feasibility and volume study finished. Waiting for funded project



PRODUCTS

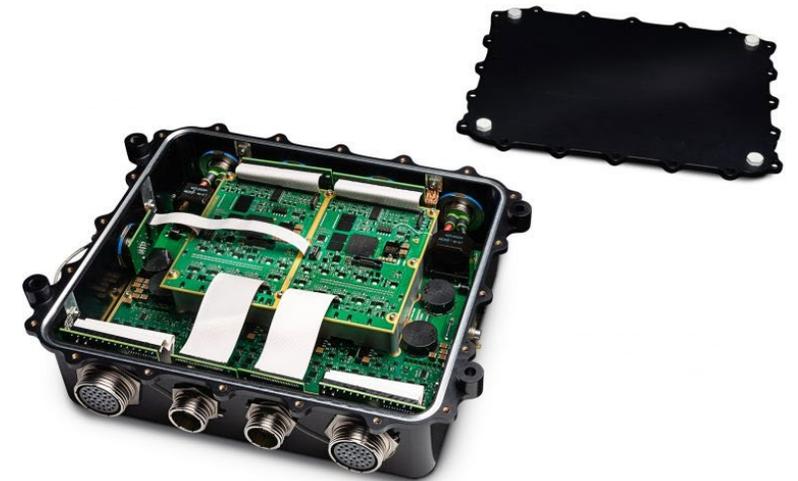
Certified to design assurance level B.

Full-Authority-Digital-Engine-Control (FADEC)

Electronic Engine Control

Full-Authority-Digital-Engine-Control (FADEC) certified to design assurance level B.

The engine is controlled via a fully redundant Electronic-Engine-Control-Unit. The single power control lever operation reduces pilot workload and increases safety. The FADEC is certified according to the civil aviation standards DO-178B for Software and DO-254 for Hardware.



PRODUCTS

Oil Lubricated High Pressure Fuel Pump

High Pressure Fuel Pump - CP4 RED

The CP4 RED Oil Lubricated High-Pressure Fuel Pump is not influenced by the fuel lubricity number because it is oil-lubricated and can sustain the challenges of Jet fuel operation. Designed for harsh environments and the highest safety requirements, it is compatible with dual and single plunger CP4 Pumps.

Application Fields

Key Design Features

Certification

Included Equipment

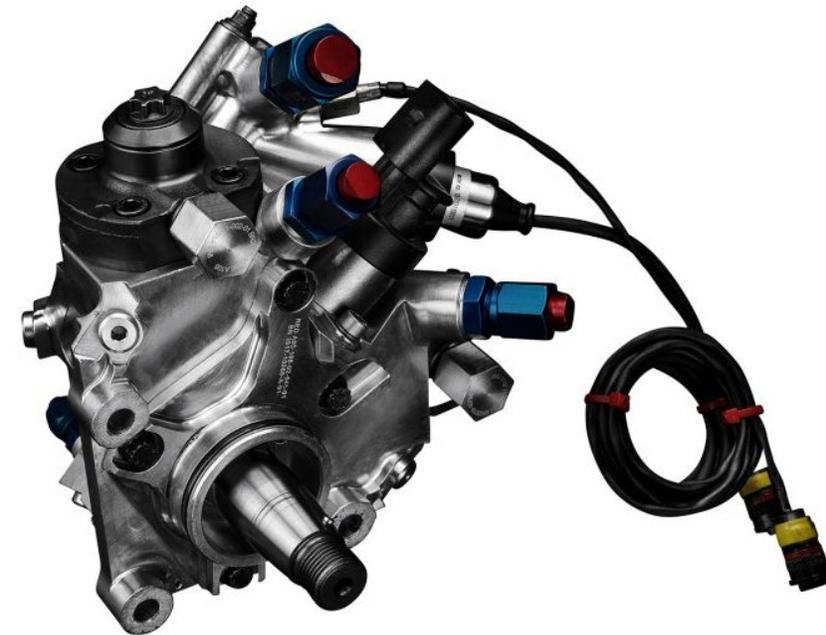
High-Pressure Fuel Pump to replace a BOSCH CP4 Pump,

- Automotive
- Utility
- Agricultural & more

- Common Rail Diesel – Constant Pressure (2000bar pressure)
- No replacement of injectors if a unit fails – Lower risk of damage due to failure

If you would like further details, please do not hesitate to contact us on the 'Make an Enquiry' button below'.

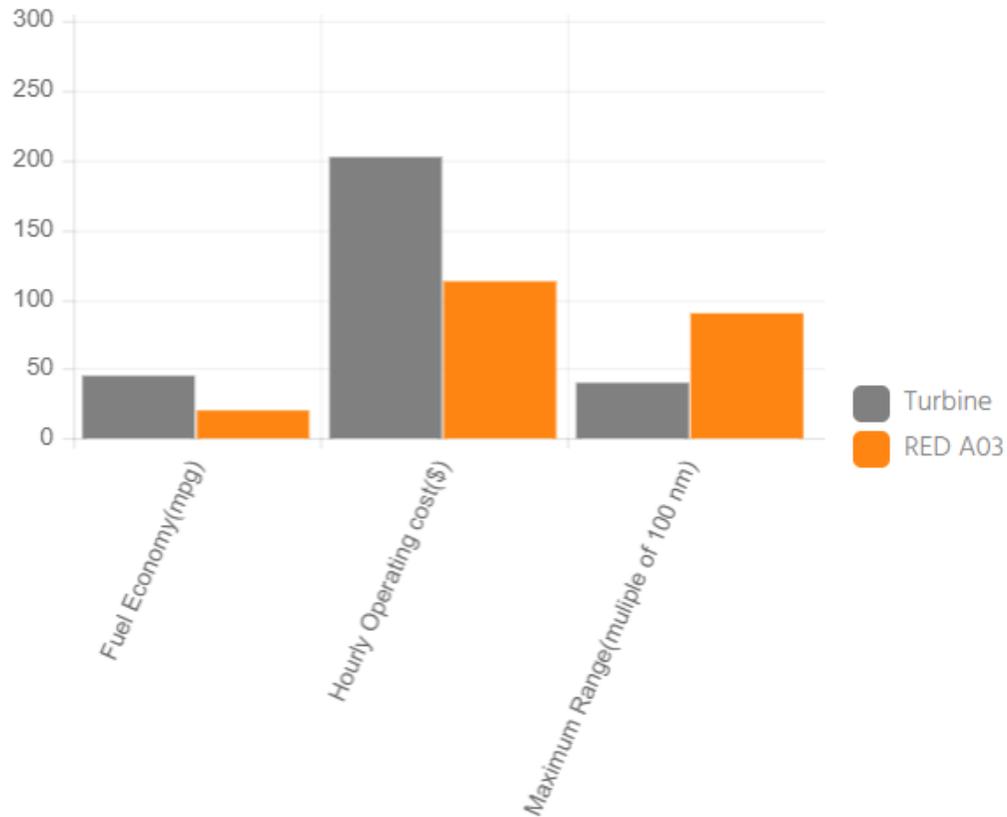
Certified in compliance to EASA CS-E / TYPE-CERTIFICATE-DATA-SHEET No.: E.150.



PROJECT EVALUATION EAGLE

Proven Performance Real world data

Air Tractor 301



Ref. Amc(2020)11750 - 30/09/2020

APPROVAL CERTIFICATE EASA.21J.433

Pursuant to Regulations (EU) 2018/1139 and (EU) 748/2012 and subject to the conditions specified below, the Agency hereby certifies

Raikhlin aircraft Engine Development GmbH
Am alten Wehr 23
53518 Adenau
Germany

as a DESIGN ORGANISATION

approved according to Part 21, Section A, Subpart J.

CONDITIONS :

1. The approval is limited to that specified in the enclosed Terms of Approval, and
2. This approval requires compliance with the procedures specified in the Design Organisation Handbook, reference RED-B-RB-DOE-0001, in the latest revision, and
3. This approval is valid whilst the approved Design Organisation remains in compliance with Part 21, Section A, Subpart J.
4. Subject to compliance with the foregoing conditions, this approval shall remain valid until surrendered or revoked.

For the European Union Aviation Safety Agency,
Date of issue: 28/09/2020

Francesco-Maria Caridei
Francesco-Maria CARIDEI
Design Organisations Section Manager

TCDS No.: E.150
Issue: 02
Raikhlin aircraft Engine Developments GmbH
RED A03 Series Engines
Date: 27 August 2018



TYPE-CERTIFICATE DATA SHEET

E.150

for
RED A03 series engines

Type Certificate Holder

Raikhlin aircraft Engine Developments GmbH

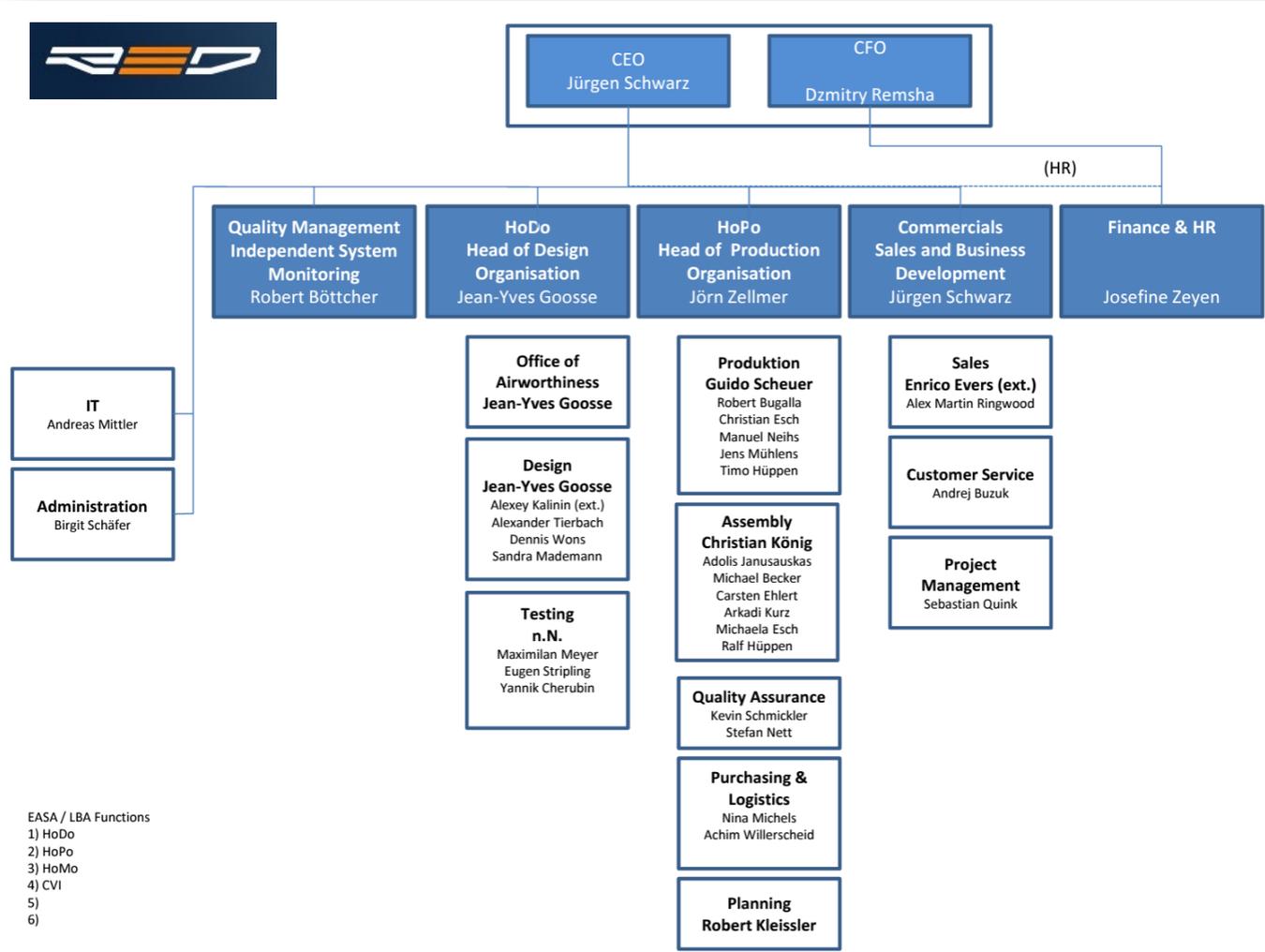
Am alten Wehr 23
D-53518 Adenau
Germany

For Models: RED A03-003
RED A03-102

All technical knowhow is designed in CATIA, full 3D and 2D. The engine is not based on any existing engine model.

RED has deep knowledge in Diesel Type Aircraft engines, gasoline engines especially for Motorsport applications. As well in FADEC development.

RED GMBH ORGANIZATION CHART



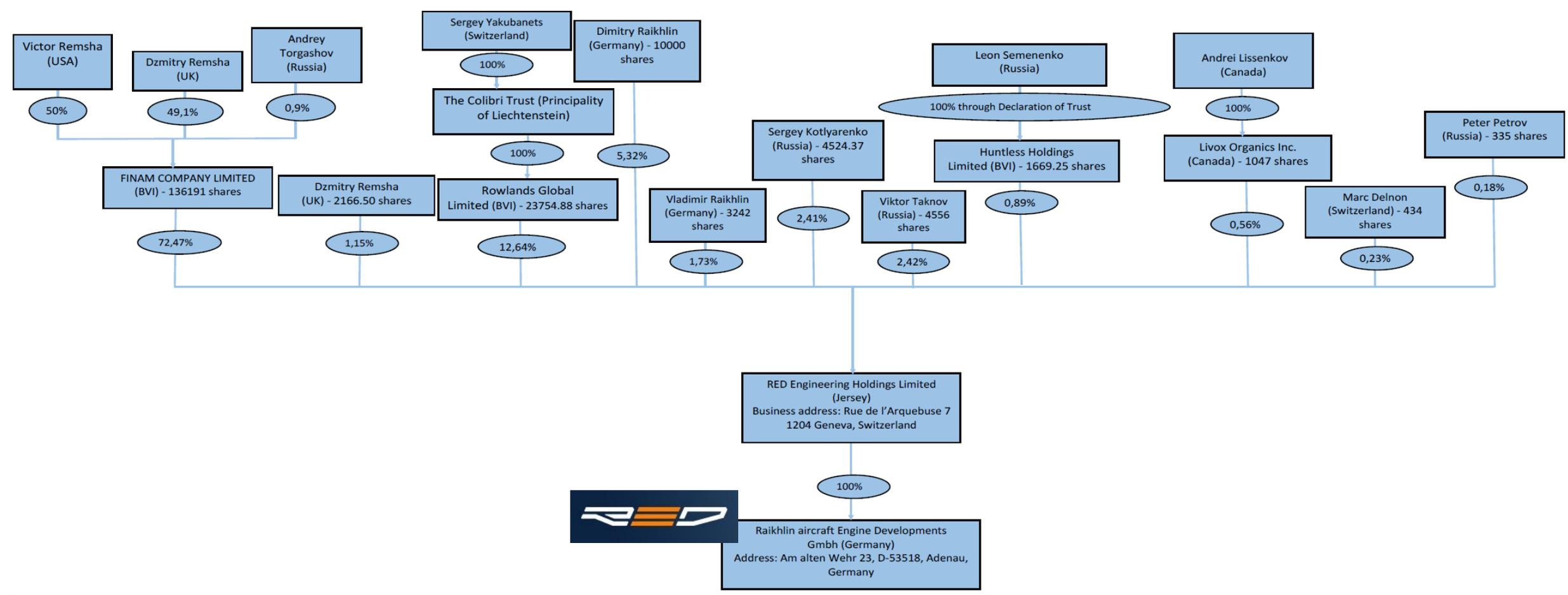
- Raiklin Engine Developments GmbH has a registered office in Germany only.

- Raiklin Engine Developments GmbH has 36 employees in Germany and no employees outside of Germany.

- All personnel outside of Germany are under contract.

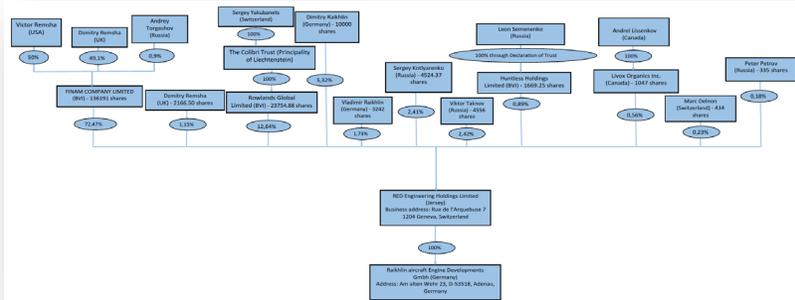
- Adenau, am alten Wehr 23 is the only location of RED. Not owned by RED – leased.

RED GMBH SHAREHOLDER CHART



- Raikhlin Engine Developments GmbH is 100% owned by the RED Engineering Holdings Limited

GERMAN SANCTION LIST SCREENING W/O POSITIV RESULT



Green tick - everything ok
 Yellow tick - there were hits, checked all of them and they were false positive hits.
 None of the listed gentlemen and companies are on the sanction's lists

NAME	REFERENZ	HINZUGEFÜGT	LETZTE PRÜFUNG	AKTION
✔ Raikhlín aircraft Engine Developments	PTW	21.06.2022 - 11:44	21.06.2022 - 11:45	🔍 🔄 🚫
✔ RED Engineering Holdings	PTW	21.06.2022 - 11:43	21.06.2022 - 11:44	🔍 🔄 🚫
✔ Rowlands Global	PTW	21.06.2022 - 11:35	21.06.2022 - 11:36	🔍 🔄 🚫
🟡 Sergey Kotlyarenko	PTW	21.06.2022 - 11:39	21.06.2022 - 11:39	🔍 🔄 🚫
✔ The Colibri Trust	PTW	21.06.2022 - 11:35	21.06.2022 - 11:36	🔍 🔄 🚫
✔ Victor Remsha	PTW	21.06.2022 - 11:29	21.06.2022 - 11:30	🔍 🔄 🚫
🟡 Vladimir Raikhlín	PTW	21.06.2022 - 11:37	21.06.2022 - 11:38	🔍 🔄 🚫

NAME	REFERENZ	HINZUGEFÜGT	LETZTE PRÜFUNG	AKTION
🟡 Andrei Lissenkov	PTW	21.06.2022 - 11:42	21.06.2022 - 11:43	🔍 🔄 🚫
🟡 Andrey Torgashov	PTW	21.06.2022 - 11:31	21.06.2022 - 11:32	🔍 🔄 🚫
✔ Dimitry Raikhlín	PTW	21.06.2022 - 11:34	21.06.2022 - 11:35	🔍 🔄 🚫
✔ Dzmityry Remsha	PTW	21.06.2022 - 11:30	21.06.2022 - 11:31	🔍 🔄 🚫
🟡 Finam Company	PTW	21.06.2022 - 11:32	21.06.2022 - 11:33	🔍 🔄 🚫
✔ Huntless Holdings	PTW	21.06.2022 - 11:41	21.06.2022 - 11:42	🔍 🔄 🚫
✔ Leon Semenenko	PTW	21.06.2022 - 11:41	21.06.2022 - 11:42	🔍 🔄 🚫
✔ Livox Organics	PTW	21.06.2022 - 11:42	21.06.2022 - 11:43	🔍 🔄 🚫
✔ Marc Delnon	PTW	21.06.2022 - 11:43	21.06.2022 - 11:44	🔍 🔄 🚫
✔ Peter Petrov	PTW	21.06.2022 - 11:43	21.06.2022 - 11:44	🔍 🔄 🚫

LEGAL EVALUATION M&A VS. US SANCTIONS

Legal Evaluation by Stephen Ginger: w/o concerns for further negotiations

IP TECHNOLOGY EVALUATION BY DHPG IN ORDER OF RED



1. Executive Summary

dhpG

Evaluation object	Technology of Raikhlin aircraft Engine Developments GmbH, Adenau		
Evaluation date	December 31, 2021		
Evaluation occasion	Transfer of intangible assets		
Evaluation method	Residual Value		
Economic life	30 years		
Cost of capital	8,7%		
Contributory assets	Working capital	Fixed assets	Staff
Contributory Asset Charge (in % of sales)	3,3%	2,1%	0,9%
Asset-specific cost of capital	7,8%	8,7%	8,4%
Technology value	TEUR 41,539		

A member of
Nexia
International

6www.dhpg.de



DUE DILIGENCE

Informations received from
R.E.D CEO Jürgen Schwarz

DUE DILIGENCE – CUSTOMER / MARKET INFORMATION'S

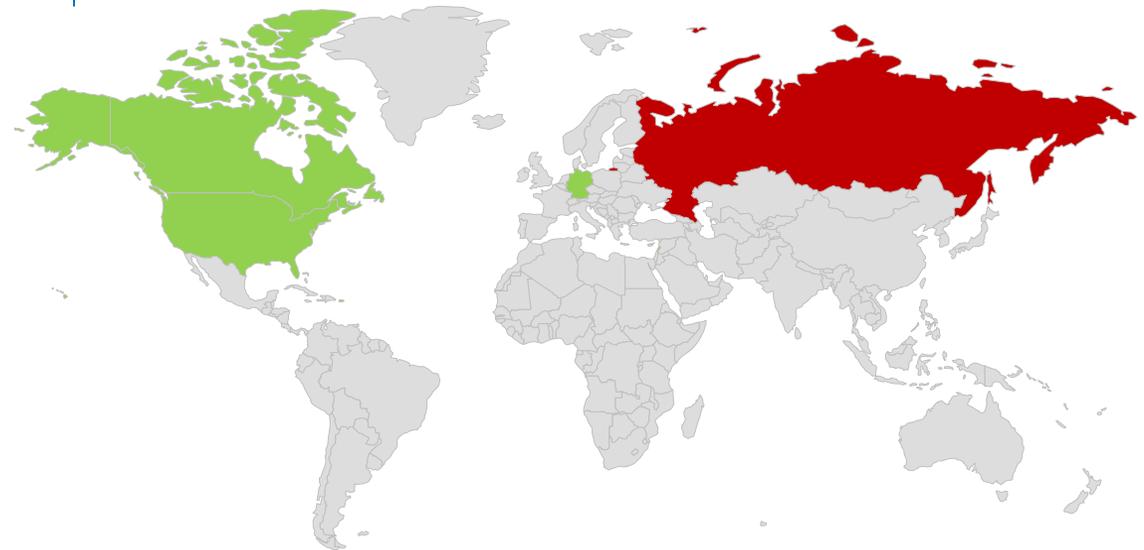
Listing of the company's **twenty largest customers** in terms of sales over the previous three-year period:

- Customer 1 US
- Customer 2 Israel
- Customer 3 US
- AirTractor (STC)
- Sealand Aviation (STC)
- Otto Aviation
- Customer 4 EU
- Stemme
- ADS (YAK 18T STC)

"...Customers we cannot disclose at this time, RED is nominated or has an LOI in hand. "

Listing and explanation for any major **customers lost** over the last two years:

- Irkut Corporation stopped due to aviation embargo against Russia. All BAFA Application have been stopped.
- Russo Balt stopped due to aviation embargo against Russia. All BAFA Application have been stopped.



COMPETITIVE LANDSCAPE

TURBINE:

Low End turbines start at 450HP. By design they are extremely inefficient, very expensive and hard to operate. They are very light and burn Jet Fuel. Turbines are becoming efficient at about 1000-1200HP and higher where the aircraft can utilise all the advantages of the turbine.



Pratt & Whitney Model PT6A-60A

KEY PLAYER:

PRATT&WHITNEY; GENERAL ELECTRIC; ROLLS ROYCE; MOTOR SICH;

PISTON ENGINES GASOLINE:

Max Power today is about 380HP (Lycoming and Continental). The design of these engines is from the 60's without or only with limited electronic control (FADEC). Fuel consumption is high, weight is relatively low, AvGas (Gasoline) contend lead, proven technology.



Lycoming 540

KEY PLAYER:

LYCOMING; CONTINENTAL AEROSPACE TECHNOLOGY

PISTON ENGINES JET FUEL (DIESEL):

Continental and Austro offering 130 to 170 HP automotive based Jet A Engines. Continental is offering a 300HP Jet A Engine, EPS was developing a 350HP but went insolvent two years ago. RED is the only major producer in the high horsepower class. 500-600HP existing; 400HP in our road map.



Continental CD-170

KEY PLAYER:

CONTINENTAL AEROSPACE TECHNOLOGY; AUSTRO ENGINE; DIESEL JET

ELECTRIC ENGINES:

Electric is not a threat at the moment as battery technology will need another 15-20 Years to reach the power density for our class of airplanes. 500HP Electric Motors with a 450kg battery pack can fly for 8-10 Minutes at max power. Electric Engines require a whole different power plant architecture



Magnix 650 EPU

KEY PLAYER:

ROLLS ROYCE; MAGNIX; H3X; MGM

DUE DILIGENCE – CUSTOMER / MARKET INFORMATION'S

Fleet of RED A03 powered aircraft



Celera 500L

The Celera 500L is powered by RED Aircraft RED A03 engine. The bullet plane is designed for transcontinental range with [...]

[Learn more](#)



Airlander Hybrid Air Vehicle

The Hybrid Air Vehicles HAV 304/Airlander 10 is a hybrid airship designed and built by British manufacturer Hybrid Air Vehicles (HAV). Comprising a helium airship with auxiliary wing and [...]

[Learn more](#)



Yakovlev Yak-18T

The Yakovlev Yak-18T was developed as an Aeroflot training aircraft and also as a light passenger transport aircraft, with a cabin for one pilot [...]

[Learn more](#)



eVTOL aircraft – Electric Vertical Take-off and Landing

RED aircraft works with the eVTOL sector providing an effective solution for propulsion systems With the transition away from fossil [...]

[Learn more](#)



Yakovlev Yak-52

First flown in 1976, The Yak-52 is a two-seat, single-engine monoplane, designed by Aleksandir Sergeievich Yakovlev. It was first developed [...]

[Learn more](#)



Air Tractor AT 301

The Air Tractor AT-300 is a family of agricultural aircraft that first flew in the United States on September 1973. Type certification was awarded to Air Tractor in November the same [...]

[Learn more](#)



Pro Avia Twin Engine Passenger Aircraft

The PRO-Avia company has begun a preliminary design of a light multi-purpose twin-engine aircraft for 9-14 passengers Country of origin: Russia Cockpit: 2 [...]

[Learn more](#)



Fletcher FU-24

The Fletcher FU-24 is an agricultural aircraft made in New Zealand. One of the first aircraft designed for aerial topdressing, the Fletcher has also been used [...]

[Learn more](#)



de Havilland Canada DHC-2 Beaver

The de Havilland Canada DHC-2 Beaver is a single-engined high-wing propeller-driven short takeoff and landing (STOL) aircraft developed and manufactured by de Havilland Canada. It has [...]

[Learn more](#)



Yakovlev Yak-152

The Yakovlev Yak-152 is a Russian primary trainer aircraft from the Yakovlev Design Bureau, part of the Irkut Corporation. The prototype Yak-152 first flew on 29 September 2016, [...]

[Learn more](#)



Long endurance UAVs

The certified RED A03 engine has many applications including UAVs. In recent years the world has seen prolific use of [...]

[Learn more](#)

Source:

<https://red-aircraft.com/our-fleet/>

DUE DILIGENCE – FINANCIALS & INVENTORY

- 2019 Income Statement available → Revenue: 2.432.374,84€ → Net loss for the year: **1.8320.33,17€**
- 2020 Income Statement Draft only → Revenue: 869.490,47€ → Net loss for the year: **4.690.627,30€**
- 2021 not available

Cash Flow will provide after Continental decided to go on and signed a MOU

Asset List Net Book Value < 1Mill€ with ~300k€ useful for CC.

(not all Machines are listed: "... The machines were brought into the company by Vladimir Raikhlin and signed over for a low value. They were therefore booked by our tax advisor as low-value goods and are also not listed as "memorable value". However, they are the property of RED, the purchase contract is available..." See Statement RED on the next pages.



Need total
R&D CAPEX
amount
since 1995

DUE DILIGENCE – FINANCIALS & INVENTORY – NOT LISTED ASSETS

Anlageverzeichnis RED KG

Bezeichnung	Anschaffungs- jahr	kosten	Zugänge	Abgänge	Umbuchungen /Zuschreibungen	Abschreibungen kumuliert	Buchwert	Buchwert	Abschreibungen im	
							am 31.12.2018	am 31.12.2017	%	Betrag
Maschinen										
Deckel Maho Universal Fräsmaschine	2001	205,083.26				205,082.26	1.00	1.00		
CNC, CTX 420 Linear Drehmaschine	28.05.2004	145,366.00				142,803.00	2,563.00	12,245.00	6.66	9,682.00
CNC Fahrständermaschine DMF 250 linear	08.07.2008	347,350.00				347,349.00	1.00	1.00		
Software zu DMF 250	18.09.2008	29,000.00				28,999.00	1.00	1.00		
HSC-Präzisionszentrum HSC 75 linear	30.11.2009	380,000.00				379,999.00	1.00	1.00		
		1,106,799.26				1,104,232.26	2,567.00	12,249.00		9,682.00
Andere Anlagen, Betriebs- und Geschäftsausstattung										
PC komplett	1996	1,357.48								
Testgetriebe	1997	9,788.10								
Testgetriebe	1997	9,788.10								
Laptop	1998	1,329.36								
ARAI Autosporthelm	2000	528.92								
Schreibtisch	2000	435.11								
Testmotor	2000	7,158.09								
Kompressor Golf 600/90	2000	1,099.28								
Ventilsitz-Bearbeitungsgerät	2001	3,295.23								
Härteprüfgerät, gebr.	2001	7,059.66								
Computer	2001	726.83								
Flüssigstickstoff-Behälter	2001	830.85								
Presse, gebr.	2002	5,743.30								
Fräsmaschine, gebr.	2002	2,505.10								
Drehbank, gebr.	2002	1,289.39								
Zubehör zu Drehbank	2003	2,971.00								
Hebebühne MTF 3000	2002	2,350.00								
Voreinstellgerät SK 40	2002	4,171.96								
PC incl. Bildschirm	2002	1,042.93								
Schweissanlage	2002	760.00								
NC-Kompakt-Spanner	2002	3,714.00								
Presswerkzeug f. Kolben	2002	8,137.92				8,136.92	1.00	1.00		
Schwenkbiegemaschine	2002	2,001.00				2,000.00	1.00	1.00		
Schmiedevorrichtung	2002	3,178.85				3,177.85	1.00	1.00		
Übertrag:		81,262.46				81,238.46	24.00	24.00		

Hallo Frau Zeyen,

Ihre Rückfragen beantworten wir wie folgt:

RED GmbH

Sie haben recht, das erworbene Anlagevermögen von der RED KG ist finden Sie zum 31.12.2020 nicht im Anlagevermögen der RED GmbH.

Der Kaufpreis von 10.000 EUR netto wurde den angeschafften Anlagengütern zugeordnet, da diese einzeln zu aktivieren sind. Nach Zuordnung des Kaufpreises liegen alle angeschafften Anlagengüter unter der GWG-Grenze von 800 EUR netto. Sie wurden somit sofort abgeschrieben (Konto #4855 0).

1100003 CNC Fräsmaschine DMF 260

Anbei erhalten Sie die Inventarkarte. Der Anschaffungspreis war 112.444,67 EUR. Weiter Unterlagen liegen uns hierzu leider nicht vor.

Mit freundlichen Grüßen

Steffi Schwiete

DUE DILIGENCE – RM / WIP / FG

RED has engine components on stock for

15 Engine Sets: representing 15x 147.270 €	= 2.209.050 Euro
10 Incomplete Engine Sets 10X ~75.000 €	= 750.000 Euro
Raw Materials (Blank)	= 150.000 Euro
 Total:	 = 3.109.050 Euro

Did the customer in R already pay \$1.6M for these 15 engines?
If so, these will be consignment inventory and not for sales

More Details to the Inventory will provide after Continental decided to go on and signed a MoU

DUE DILIGENCE – FINANZIAL MONITORING BY CRIF

Full Report (MONITORING)



Raikhlin aircraft Engine Developments GmbH
Am alten Wehr 23, 53518 Adenau

CRIF Number: **47439996** Customer reference:
Company status: **active** Cost center:
Monitoring until: **07.06.2023** Customer ID: **34692**
Inquiry ID: **4076001739645248** Contract ID: **56204226**
Inquiry ID initial report: **4292001736918047**
Delivery date: **10.06.2022 03:40**

We refer to your enquiry of 07.06.2022
In the meantime there have been changes in particular in the following areas subject to monitoring:
- Financial information

FINANCIAL INFORMATION



The CRIF Solvency Rating predicts the probability of default within the next 12 months. CRIF considers this company's solvency to be good to satisfactory.



The balance sheet grade ranges from 1.0 to 5.0. It is based on the following ratios: equity ratio, liquidity ratio and return on total capital from the balance sheets published in the Federal Gazette. The balance sheet grade forms part of the Solvency Rating.

Probability of default for the company **2.25%**
Average risk of default within the sector(s) **2.7%**
Payment experience **within periods customary in this trade**
Negative information **We have no negative information at hand.**
Balance sheet year **2019**

The risk of default is the probability with which a company in Germany will show payment defaults within a period of 12 months. The non-payment risk is assessed as below average to average.
Percentage share of companies which on average show payment defaults within this business sector.

CONCLUSION

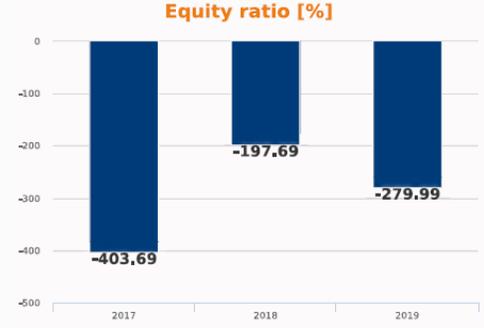
Business relations are permissible.

BALANCE SHEETS

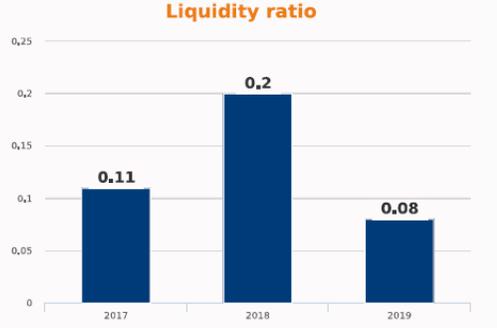
Balance type: Company balance sheet

Balance sheet ratios / balance sheet grade

Description	01.01.2017 - 31.12.2017	01.01.2018 - 31.12.2018	01.01.2019 - 31.12.2019
Equity ratio [%]	-403.69	-197.69	-279.99
Liquidity ratio	0.11	0.20	0.08
Return on total capital [%]	-93.31	-147.58	-47.14
Balance sheet grade	5.0	5.0	5.0



The equity ratio indicates the portion of the equity as compared to the total capital. The higher the equity ratio, the better the economic stability (solvency) and thus the financial autonomy of a company.



The liquidity ratio shows the proportion between adjusted receivables and net liabilities. The higher the ratio, the lower the company's financial dependency from external creditors.



The return on total capital shows the efficiency and return on the total capital employed in the company. The higher the return on total capital, the more economically does the company work with the invested capital.



The balance sheet grade is based on the following ratios: equity ratio, liquidity ratio and return on total capital from the balance sheets published in the Federal Gazette. It is calculated in accordance with the methodology of Euler Hermes. It ranges from 1.0 (positive) to 5.0 (negative).

DUE DILIGENCE – FINANZIAL MONITORING BY CRIF

1) What are deficit not covered by shareholders?
We need to know the ownership of those access

Origin of the present balance sheet	electronic German Federal Gazette	electronic German Federal Gazette	
Financial year	01.01.2019 - 31.12.2019	01.01.2018 - 31.12.2018	Var. in %
	EUR	EUR	
ASSETS	32,030,883.16	28,448,406.67	12.60
Fixed assets	968,303.39	979,891.01	-1.20
Intangible assets	139,488.66	79,968.28	74.40
Tangible assets	828,814.73	899,922.73	-7.90
Current assets	3,394,565.13	1,636,754.13	107.40
Stocks	1,805,478.86		
Accounts receivable	1,547,744.47	1,407,200.49	10.00
Liquid means	41,341.80	229,553.64	-82.00
Remaining other assets	27,668,014.64	25,831,761.53	7.10
Accruals (assets)	8,132.94	3,912.00	107.90
Deficit not covered by shareholders' equity	27,659,881.70	25,827,849.53	7.10
LIABILITIES	32,030,883.16	28,448,406.67	12.60
Shareholders' equity	0.00	0.00	
Capital	100,837.50	100,837.50	0.00
Subscribed capital (share capital)	100,837.50	111,150.00	-9.30
thereof not yet paid-up capital		10,312.50	
thereof uncalled outstanding contributions		10,312.50	
Reserves	26,313,893.57	26,313,893.57	0.00
Capital reserves	26,313,893.57	26,313,893.57	0.00
Balance sheet profit/loss (+/-)	-54,074,612.77	-52,242,580.60	-3.50
Profit / loss brought forward	-52,242,579.60		
Annual surplus / annual deficit	-1,832,033.17		
Balance sheet profit / loss		-52,242,580.60	
Other shareholders' equity (+/-)	27,659,881.70	25,827,849.53	7.10
Deficit not covered by shareholders' equity	27,659,881.70	25,827,849.53	7.10
Provisions	26,894.01	386,500.00	-93.00
Liabilities	32,003,989.15	28,061,906.67	14.00





M&A SWOT

M&A SWAT

S

- Finalized Blank Paper Design – no licenses
- Self carrying Design with dry-sump oil system
- Most Supplier used also at CG's
- Service Network of CG with 400 global Service Partner usable
- Existing RED Machines and Test Equipment usable for CD100/300 production = CAPEX Savings at CG and time for renewing of the existing old machines
- Future Modular Design with down gradable to V8 / V6 / V4 possible

- Time to Market vs. Invest
- Currently high IP Costs requested by RED
- Expanding at CG = Invest needed
- Quality not proven due to missing volume

W

O

- Full Jet-A Portfolio from 135 HP till 500HP
- with 400HP V8 new possibilities for OEM's and STC's
- RED A05 is a 2017 preliminary design of a V6 engine with 3,550 cc and 300 HP
- new V6 / V4 design future proof w/o licensing bindings of Mercedes
- a derived V4 design could attack ROTAX in the UAV segment
- Merge of Mechanical Design and FADEC Technologies
- RED no EASA PO-Approval

- M&A by one of Continental Competitors to enter the JET-A Market esp. Lycoming. Add to the Development and Certification Costs Lycoming would save est. 5 years of Development time.
- M&A by one of Continentals Aircraft OEM's (Cirrus?) – Lost of the business for Continental

T

Continental current and future OEM acceptance?

M&A SWAT → OPPORTUNITY'S → MODULAR DESIGN



Oppo for which
OEM/Market

Oppo for which
OEM/Market

CD300



CD135, 155, 170



V12



V8



V6



R4



V4



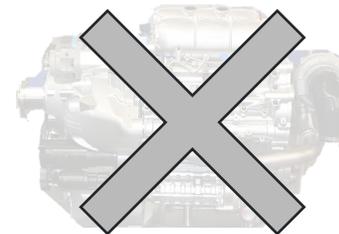
RED A03



Design Study ready



RED A05





MARKET AND ROADMAP

LISTED CUSTOMER EVALUATION

Fleet of RED A03 powered aircraft



Celera 500L

The Celera 500L is powered by RED Aircraft RED A03 engine. The bullet plane is designed for transcontinental range with [...]

[Learn more](#)



Airlander Hybrid Air Vehicle

The Hybrid Air Vehicles HAV 304/Airlander 10 is a hybrid airship designed and built by British manufacturer Hybrid Air Vehicles (HAV). Comprising a helium airship with auxiliary wing and [...]

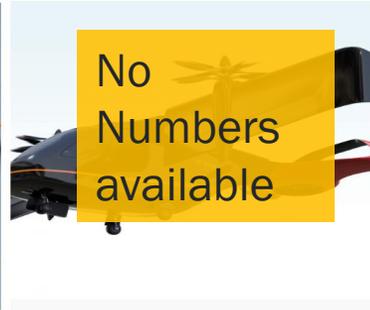
[Learn more](#)



Yakovlev Yak-18T

The Yakovlev Yak-18T was developed as an Aeroflot training aircraft and also as a light passenger transport aircraft, with a cabin for one pilot [...]

[Learn more](#)



eVTOL aircraft – Electric Vertical Take-off and Landing

RED aircraft works with the eVTOL sector providing an effective solution for propulsion systems With the transition away from fossil [...]

[Learn more](#)



Yakovlev Yak-52

First flown in 1976, The Yak-52 is a two-seat, single-engine monoplane, designed by Aleksandr Sergeevich Yakovlev. It was first developed [...]

[Learn more](#)



Air Tractor AT 301

The Air Tractor AT-300 is a family of agricultural aircraft that first flew in the United States on September 1973. Type certification was awarded to Air Tractor in November the same [...]

[Learn more](#)



Pro Avia Twin Engine Passenger Aircraft

The PRO-Avia company has begun a preliminary design of a light multi-purpose twin-engine aircraft for 9-14 passengers Country of origin: Russia Cockpit: 2 [...]

[Learn more](#)



Fletcher FU-24

The Fletcher FU-24 is an agricultural aircraft made in New Zealand. One of the first aircraft designed for aerial topdressing, the Fletcher has also been used [...]

[Learn more](#)



de Havilland Canada DHC-2 Beaver

The de Havilland Canada DHC-2 Beaver is a single-engined high-wing propeller-driven short takeoff and landing (STOL) aircraft developed and manufactured by de Havilland Canada. It has [...]

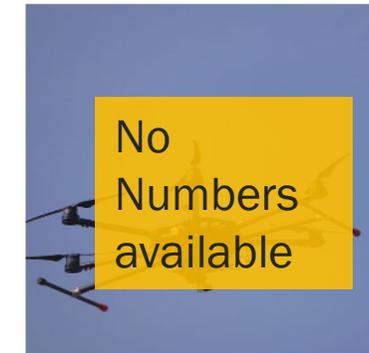
[Learn more](#)



Yakovlev Yak-152

The Yakovlev Yak-152 is a Russian primary trainer aircraft from the Yakovlev Design Bureau, part of the Irkut Corporation. The prototype Yak-152 first flew on 29 September 2016, [...]

[Learn more](#)



Long endurance UAVs

The certified RED A03 engine has many applications including UAVs. In recent years the world has seen prolific use of [...]

[Learn more](#)

Source:

<https://red-aircraft.com/our-fleet/>

PROJECT EAGLE PROPOSALS (ASSET ACQUIREMENT ONLY)

1 Profit/Risk Sharing

Cash Offer for Asset Sales ¹⁾:
€5M-€8M (Lump sum or installment depends on negotiation)

Risks/Profit Sharing Model:

- 1) Continental will solely operate with acquired assets (pricing, costing, marketing etc.)
- 2) Asset can be gradually moved to St. Egidien
- 3) P&L will be shared among RED and Continental for 10 years only
Continental: 75%
RED: 25%
(A03 Engine Profit only)
- 4) Est Profit sharing within 10 yrs:
Continental: €86M
RED: €32.2M
- 5) Continental Payback: 5Yrs
75% based on RED forecasted business model

2 Sole Profit/Risk

Cash Offer for Asset Sales:
€10M - €18M (Lump sum or installment depends on negotiation)

Operation Model:

- 1) Continental will solely operate with acquired assets (pricing, costing, marketing etc.)
- 2) All Assets purchased will be immediately moved to St. Egidien for continued development and production
- 4) Estimated Profit within 10 years:
Continental: €XXM
- 5) Continental Payback: XXYrs
50% based on RED forecasted business model

Proposal Category	#1 Profit/Risk Sharing	#2 Sold Profit /Risk by CC	#3 JV or others ³⁾
Asset Acquisition Only	√	√	X
Additional CAPEX (CG expansion/R&D)	€6M	€6M	√
Additional Expense	€3M	€1M	√
Employee, Liabilities, Customer Acquisition ²⁾	X	X	√
Cash-out	€5M-€8M	€10M-€18M	Not consider
Risk/Profit to CC	75%	100%	50%
Payback Years	5.8Yrs	10 yrs	<XX yrs
Estimated ROI/NPV	XXX/XXX	XXX/XXX	
Assets move to CG site	√ Within 1 Yr	√ Immediately	X
NPV			

Memo:

- 1) Asset Sales Only: IP, Design, Equipment, Inventory (A/R can be purchased at a discount if needed)
- 2) Current RED Employees can apply for jobs at Continental
- 3) Other modules (JV, non-cash purchase) won't be considered

CUSTOMER A03 PROJECTS FROM RED INCL. RED BUSINESS CASE

Act. Financials A03 RED (based on 91€/hour)	
Sales Projection BP	265.000 €
COGS RED act.	183.500 €
COGS RED target	165.150 €
Margin RED act	31%
Margin RED target	38%

Provided Data

The provided customer figures included only 1 contracted project, 3 LOI and 5 nominated and 2 pot. Customer STC 's.

Customer A03		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Remarks
Cessna Grand Caravan	LOI	1	13	41	62	111	186	280	424	591	676	Hybrid Solution. 150A/C global. Announcement at Oshkosh, Customer Numbers seems to optimistic
Air Tractor 301 STC	Internal	2	4	6	6	6	7	9	11	11	9	STC must be finalized first - 700k€ costs for CG
MTD - Meyers 400	LOI	2	4	6	8	10	11	13	15	15	15	
DeHeavialnd Beaver	Internal	2	6	8	10	10	11	15	17	17	17	Maiden Fligth Middle of August
Customer 12	LOI	6	6	0	4	10	16	20	20	20	20	2 Mot Project. Order expectet End of August.
HAV	nominated	4	8	12	16	16	20	20	24	24	28	Hybrid Airvehicle - very optimistic numbers
Airship	nominated	0	0	0	0	4	16	28	40	52	64	Airship w/o investor
ADS	Contract	3	10	20	30	30	32	39	48	57	57	ADS STC in Spain for YAK18 as Trainer for Baltic countries. RED sees big potential (w/o China and India)
Otto Aviation	nominated	1	0	2	2	3	3	5	8	11	17	
Junkers	nominated	3	0	3	3	6	8	6	8	8	8	
Fletcher	nominated	1	3	5	5	5	3	3	5	5	4	Maiden fligt done, Press Release comming soon.
customer 19	evaluattion	1	1	3	5	5	5	5	7	9	9	Project in Czech Republic - Highdecker for comercial customers. (Africa...)
Total committed		26	55	106	151	216	318	443	627	820	924	
RED Sales Forecast		15	48	98	137	188	270	379	544	720	806	
RED business plan		11	20	51	81	143	204	265	332	381	402	

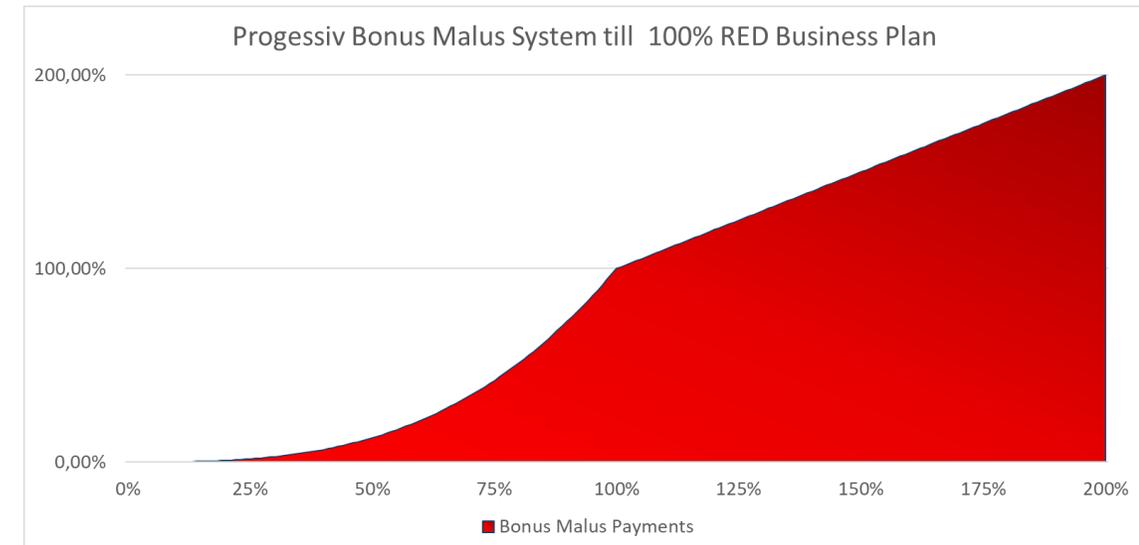
M&A Value ? Risk Sharing of the BP

Due to CC 's lack of in sign to the market, an Asset Deal should be based on the Business Plan figures of the Seller with Risk Sharing. A Bonus / Malus System based on the achieve engine sells.

A progressive Bonus Malus system could be for numbers below the promised Business Plan:

Achieved Engine No Sells / (1 / % of achieved Business Plan).

And for engines above Business Plan = 1:1 % of the achieved BP.



ASSET DEAL PROPOSAL FOR NEGOTIATIONS

M&A Value ? Risk Sharing of the BP

Negotiations Start with €5Mill as One Timer and in Total 43.5Mill€ over 10 years. As result of a Bonus Malus system with + 25% of Margin based on the Business Plan provided by RED. With valued increasing Business Plan numbers 1:1. In case of not hitting the Business Plan Numbers the Bonus reduced by the % Gap³.

The Calculation shows 100% Business Plan achieved. → RED will get 43.5 Mill€ → ROI CC within 4 years.

 ROI Calculation RED Asset Deal based on Business Plan RED with Risk Sharing for the Business Plan Numbers	V12 Sales Price	265.000 €	<	>	V8 Sales Price	- €	<	>	Sharing Sales	0,00%	Sharing Margin	25,00%	RED BP Probability	100%	€ Asset Deal	- 5.000.000 €
	COGS	183.500 €	<	>	COGS	108.800 €	<	>								
	Margin	81.500 €			Margin	- 108.800 €			▲	▲	▲	▲	▲	▲		
	Margin %	30,8%			Margin %	0,0%			▼	▼	▼	▼	▼	▼		

Price €	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
One Timer						SOP V8	Start of TBR/TBO V12				
Business Plan RED V12	11	20	51	81	143	204	265	332	381	402	
# V12 + V8 engines:	11	20	51	81	143	204	265	332	381	402	
V12 + V8 Net Sales:	2.915.000 €	5.300.000 €	13.515.000 €	21.465.000 €	37.895.000 €	54.060.000 €	70.225.000 €	87.980.000 €	100.965.000 €	106.530.000 €	
V12 + V8 Margin	896.500 €	1.630.000 €	4.156.500 €	6.601.500 €	11.654.500 €	16.626.000 €	21.597.500 €	27.058.000 €	31.051.500 €	32.763.000 €	
Return of Invest w/o Risk Sharing	30,8%	30,8%	30,8%	30,8%	30,8%	30,8%	30,8%	30,8%	30,8%	30,8%	

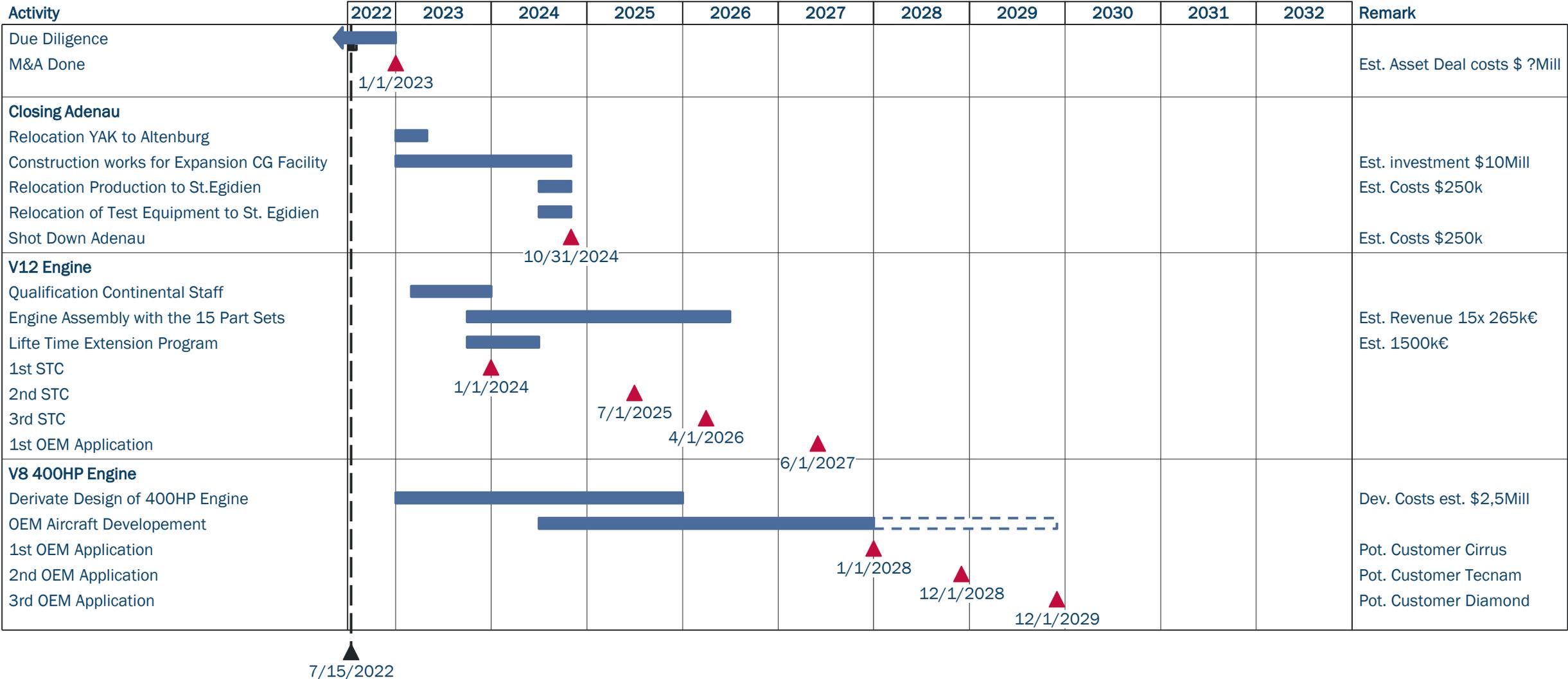
Risk Sharing % of Business Plan Sales V12:													
Risk Sharing % of Business Plan Margin V12:	-38.508.750 €	25,00%	Payments to RED:	-5.224.125 €	-407.500 €	-1.039.125 €	-1.650.375 €	-2.913.625 €	-4.156.500 €	-5.399.375 €	-6.764.500 €	-7.762.875 €	-8.190.750 €
			Payments to RED per engine:	-474.920 €	-20.375 €	-20.375 €	-20.375 €	-20.375 €	-20.375 €	-20.375 €	-20.375 €	-20.375 €	-20.375 €
RED Profit w/Risk Sharing Margin and Business Plan numbers	43.508.750 €												

Cash and adj. Margin	Adjusted Margin €	-4.327.625 €	1.222.500 €	3.117.375 €	4.951.125 €	8.740.875 €	12.469.500 €	16.198.125 €	20.293.500 €	23.288.625 €	24.572.250 €
	Adjusted Margin %	-148%	23%	23%	23%	23%	23%	23%	23%	23%	23%
Return of Invest (Running Total)		-8.353.500 €	-9.780.760 €	-7.063.385 €	-2.512.260 €	5.828.615 €	17.898.115 €	33.696.240 €	53.589.740 €	76.478.365 €	100.650.615 €

Risk Sharing is a Bonus Malus System with valued increasing Business Plan numbers 1:1. In case of not hitting the Business Plan Numbers the Bonus reduced by the % Gap³.

	10Mill Cash Out Building										
Cash Out:	-9.250.000 €	-13.057.260 €	-1.039.125 €	-1.650.375 €	-2.913.625 €	-4.156.500 €	-5.399.375 €	-6.764.500 €	-7.762.875 €	-8.190.750 €	
Cash In:	896.500 €	1.630.000 €	4.156.500 €	6.601.500 €	11.654.500 €	16.626.000 €	21.597.500 €	27.058.000 €	31.051.500 €	32.763.000 €	
RT Cash Flow	-8.353.500 €	-19.780.760 €	-16.663.385 €	-11.712.260 €	-2.971.385 €	9.498.115 €	25.696.240 €	45.989.740 €	69.278.365 €	93.850.615 €	

POSSIBLE 10 YEARS ROADMAP



▲ 7/15/2022

DUE DILIGENCE – SUMMARY PHASE ONE 13.06.2022

Provided Data

- the financial situation of RED GmbH is with the actual knowledge of the provided date not clear enough. The IS 2020 is a draft only, IS 2021 is not available.

Company Value

- the calculated, but from our side not considered realistic, **IP Value of 41,5Mill€** by DHPG based on figures from RED Management only. (economic useful life of the engine of 30 years, 2026 max of 100 engines/year, w/o Russian sanctions in place) is not the value what CC see. But there are no better figures available.
- **Inventory Value 3,1Mill€** (among other things the 15 engine sets could be sold for \$3.75Mill if customers were found)
- **Asset List Net Book Value** useful for CC **0,3Mill€**
- **Property 1413 + 2435 = 3848m²** could be sold – Value estimation must be done. (500k€ ?)
- Development costs estimated by CG to develop and certify a similar V12 engine are \$6Mill and Time to SOP 6 Years.
- The existing 20 years old machines at CG urgently need to be renewed over the next few years. The Replacement Invest for is est. ~\$3Mill annually beginning 2023. The renewal process could be significantly shortened with RED's machines and save CAPEX in the coming years. And the existing Machines could be used for the CD100 and CD300 series w/o additional costs.

Next Steps

- Due Diligence Phase 2 with Financial deep dive, contract evaluations, inventory check, property value check must be done.

FURTHER POTENTIAL A03

Rumors at YAK152/CJ-7 (China)

CJ-7 was a joint venture project between Nanchang Hongdu aircraft manufacturing (a subsidiary of AVIC) and Yakovlev. Actually, YAK-152 and CJ-7 are twins. Rumour said Yakovlev use the project data from this JV to make the YAK-152.

The reason why CJ-7 failed is because of the change in the pilot training system.

In the past, flight schools adopt a three-stage training system, they use CJ-6 for entry-level training and then change to JL-8, and then JL-10 (JL=teaching in Chinese). (CJ=basic trainer) That system then was optimized into a two-stage training system, trainees will fly CJ-6 and then spend most of their time flying the JL-10.

The new pilot training system can shorten the time to train a pilot and make them more experienced with jet fighters. (JL-10 is very similar to gen 3 or gen 4 jet fighters)

Hence, the CJ series is not that important, CJ-6 is still doable for basic training. So they gave up the new development and invest more into the development of more advanced trainers and the manufacturing of the CJ-6. In this regard, it's possible that they will be interested in updating CJ-6.

