TYPE-CERTIFICATE DATA SHEET

No. EASA.E.099

for
MD-TJ series engines

Type Certificate Holder
M&D Flugzeugbau GmbH & Co. KG

Streeker Straβe 5b
26446 Friedeburg
Germany

For Models:

MD-TJ42

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I. General

1. Type/ Model/ Variants

MD-TJ42

2. Type Certificate Holder

M&D Flugzeugbau Gmbh & Co. KG
Streeker Straβe 5B
26446 Friedeburg
Germany

Design Capability reference: DOA EASA.21J.603

3. Manufacturer

M&D Flugzeugbau Gmbh & Co. KG
Streeker Straβe 5B
26446 Friedeburg
Germany

4. Date of Application

21 September 2009

5. EASA Type Certification Date

18 November 2015

II. Certification Basis

1. Reference Date for determining the applicable airworthiness requirements

- 22 September 2012

2. EASA Certification Basis

2.1. Airworthiness Standards

- CS-22, subpart H; amendment 2, dated 5 March 2009, *except CS-22 paragraphs: 22.1801, 22.1825, 22.1833, 22.1835, 22.1839, 22.1843, 22.1845, 22.1849 and 22.1851*.

2.2. Special Conditions (SC)

SC01 to SC19, Airworthiness Standard for CS-22H – Turbine engine to be operated in powered sailplanes

SC01	Applicability	SC12	Cyclic Endurance Test
SC02	Functioning	SC13	Rotor Containment
SC03	Accessory Attachment	SC14	Containment
SC04	Engine Control System	SC15	Continued Rotation
SC05	Vibration	SC16	CS22.1823(c) Amendment for turbine engines to CS22.1823(c)
SC06	Fuel and Induction System		
SC07	Lubrication System	SC17	Safety Analysis
SC08	Vibration Test	SC18	CS22.1808 Selection of engine Power and/or Thrust Ratings
SC09	Calibration Test		
SC10	Endurance Test	SC19	Approved Life
SC11	Operation Test		

2.3. Equivalent Safety Findings

None

2.4. Deviations

None

2.5. Environmental Protection

- CS-34.1 Fuel Venting
- CS-34.2 Smoke Number

III. Technical Characteristics

1. Type Design Definition

Type Design Definition in accordance with parts list **MD02-DWL-71-001-R02** or later approved revisions

2. Description

Single shaft turbojet engine featuring a single stage centrifugal compressor, an annular combustion chamber, a single stage axial turbine and exhaust nozzle.
The engine is controlled by a single channel digital electronic control unit.

3. Equipment

The engine equipment is specified in the installation manual.
The engine Type Design covers an aircraft mounted Control Unit and an aircraft mounted Fuel Board consisting of electrical pump, filter and valve.

4. Dimensions

Overall Length	mm	425
Diameter (max.)		164

5. Dry Weight

Complete Engine including operating fluids	kg	3.850
Engine		3.650
Ignition Source		0.035
Engine Control Unit		0.950
Starter		0.256

6. Ratings

	Speed[1]	Thrust[2]
	RPM	N
Max Thrust (*limited to 5 minutes*)	97.000	350
Max Continuous	80.000	205

Note 1: Max Thrust 100% correspondents to 97.000 RPM
Note 2: The performance value specified above corresponds to minimum values defined under the conditions of ICAO standard atmosphere

7. Control System

The engine is equipped with a single channel digital electronic control unit.

8. Fluids (*Fuel, Oil, Coolant, Additives*)

Approved fuels and oils are listed in Operation and Maintenance Manual MD02-OMM-70-001-R03 or later approved revisions.

9. Aircraft Accessory Drives

The engine design does not provide accessory drives

10. Maximum Permissible Air Bleed Extraction

Not applicable

IV. Operating Limitations

1. Temperature Limits

Maximum and Continuous Thrust	°C	790
Maximum on Ground Start *(max 3 s.)*		1000
Fuel Temperature		-15
Intake Air Temperatures and Intake Air Temperatures – Start Up		-15 / +40

2. Rotational Speed Limits

Maximum Thrust *(limited to 5 minutes)*	RPM	97.000
Max Continuous Thrust		80.000
Minimum idle Speed		30.000

3. Pressure Limits

According Operation and Maintenance Manual MD02-OMM-70-001-R03 or later approved revisions

3.1 Fuel Pressure

Max. Fuel pressure < 4.5 bar

3.2 Oil Pressure

Not applicable

4. Oil capacity, consumption limit

According Operation and Maintenance Manual MD02-OMM-70-001-R03 or later approved revisions

V. Operating and Service Instructions

Operation and Maintenance Manual	MD02-OMM-70-001-R03
Engine Installation Manual	MD02-EIM-70-001-R0
Engine Overhaul Manual	MD02-EOM-70-001-R0
Service Bulletins	as published by MD Flugzeugbau Gmbh & Co. KG

VI. Notes

1. The engine is certified for installation on powered Sailplanes and other aircraft which can accept an engine certified according to CS-22 Subpart H.

2. The engine must not be used for:
   - performing Take Off operation,
   - flights in rain & hail conditions and
   - in icing conditions
   - aerobatic operation

3. Information on electromagnetic compatibility is contained in the Engine Installation Manual.

4. The ratings shown under III.6 are achieved at Sea Level and ISA standard day conditions

5. The EASA approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness is published in the applicable "Operation and Maintenance Manual", Chapter 5 "Airworthiness Limitations".

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

n/a

II. Type Certificate Holder Record

n/a

III. Change Record

Issue	Date	Changes	TC issue
Issue 01	18 November 2015	Initial Issue	Initial Issue, 18 November 2015
Issue 02	02 May 2019	Updated DOA reference	-

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