



TYPE CERTIFICATE DATA SHEET Nº EA-2023T05

Type Certificate Holder:

BLACKSHAPE S.P.A. Strada Statale 16 KM 841+900
70043 Monopoli (BA)
ITALY

State of Design Reference Document: TCDS EASA.A.607, Issue 07, dated
14 June 2022.

EA-2023T05 Sheet 01 BLACKSHAPE S.P.A. BK 160-200 BK 160TR 01 December 2023

This datasheet, which is part of Type Certificate No. 2023T05, prescribes conditions and limitations under which the product, for which the Type Certificate was issued, meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

I - Model BK 160-200 (Normal Category), approved on 01 December 2023.

ENGINE	Single-engine Lycoming IO-320-D1B. See ANAC TCDS no. EM-2023T04.
FUEL	Refer to AFM, Section 2 for engine fuels
FUEL CAPACITY	2 tanks, 64 liters (17 USG) each. Total usable capacity: 113.5 liters (30 USG)
ENGINE LIMITS	Maximum Takeoff Power: 160SHP Maximum Continuous Power: 160SHP For other limitations See BCV-00-38-06 “Aircraft Flight Manual, Section 2.
OIL	Refer to AFM, Section 2 for engine oil
OIL CAPACITY	Total: 7.57 liters (8 quart) Minimum: 3.78 liters (4 quart)
PROPELLER	Model Hartzell Raptor series Hub: 3C1-L675A1 Governor: S-1-78 Blades: 76C03-7 See ANAC TCDS no. EH-2016T09 (TCDS No. IM.P.137)
AIRSPEED LIMITS	Never exceed speed (V_{NE}): 318 km/h (172 KCAS) Max. structural cruising speed (V_{NO}): 274 km/h (148 KCAS) Operating Maneuvering speed (V_A): 226 km/h (122 KCAS) Max. speed with landing gear extended (V_{LE}): 204 km/h (110 KCAS) Max. speed for landing gear operation (V_{LO}): 204 km/h (110 KCAS) Max. speed with flaps fully deployed (V_{FE}): 185 km/h (100 KCAS)

C. G. LIMITS	23% MAC 28.5% MAC at 850 Kg 19% MAC 28.5% MAC at 765 Kg Mean Aerodynamic Chord: 1360.26 mm										
MAXIMUM WEIGHT	Max. Takeoff: 850 kg (1874 lbs) Max. Landing 850 kg (1874 lbs)										
MINIMUM CREW	1 pilot seated in the front seat										
NUMBER OF SEATS	1 passenger seat										
MAXIMUM BAGGAGE	33 kg capacity, 2.5 m aft of datum										
MAXIMUM OPERATING ALTITUDE	3 505 m (11500 ft) – Density Altitude										
CONTROL SURFACE MOVEMENT	<table border="0"> <tr> <td>Aileron (Left / Right)</td> <td>Up: 14° ±1° Down: 13° ±1°</td> </tr> <tr> <td>Elevator</td> <td>Up: 25° ±1° Down: 8° ±1°</td> </tr> <tr> <td>Rudder</td> <td>Left: 25° ±2° Right: 25° ±2°</td> </tr> <tr> <td>Elevator trim</td> <td>DWN: 30° ±2° UP: 4° ±1°</td> </tr> <tr> <td>Flap</td> <td>Takeoff: 15° ±1° Landing: 30° ±2°</td> </tr> </table>	Aileron (Left / Right)	Up: 14° ±1° Down: 13° ±1°	Elevator	Up: 25° ±1° Down: 8° ±1°	Rudder	Left: 25° ±2° Right: 25° ±2°	Elevator trim	DWN: 30° ±2° UP: 4° ±1°	Flap	Takeoff: 15° ±1° Landing: 30° ±2°
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Flap	Takeoff: 15° ±1° Landing: 30° ±2°										
SERIAL NUMBERS ELIGIBLE	S/N BCV.21009 and subsequent										
DATUM	800 mm aft of composite bulkhead. 165 mm up from airplane fuselage centerline										
LEVELING MEANS	Baggage compartment surface										
CERTIFICATION BASIS	<p>The certification basis for the aircraft type design corresponds to the EASA certification basis (TCDS No. EASA.A.607) as follow: CS-VLA Amdt. 1, dated on 05 May 2009, amended with CS 23.2605(b) Amdt. 5 and CS-ACNS (Airborne Communications, Navigation and Surveillance) Issue 1, dated 17 December 2013.</p> <p>Special Conditions: SC-CVLA-div01-02 (CS-VLA Airplanes with MTOM of more than 750 Kg). SC-OVLA.div03-02 (Night VFR Operation with VLA). SC-ELA.2015-01 (Lithium Battery Installation).</p> <p>Equivalent Safety Level Findings: SC-OVLA-div-03-02 Night VFR: CS-VLA SC 1143, CS-VLA SC 1147 (Engine and Mixture Controls); CS VLA.161 (b)(2)(ii) Amdt 1(Longitudinal trim, approach).</p>										
ENVIRONMENTAL STANDARDS	ANAC adopts the EASA requirements as provide on TCDSN EASA.A.607.										
EQUIPMENTS	Equipment list as reported in BCV-00-38-06 Airplane Flight Manual Section 6										
APPROVED OPERATIONS CAPABILITY	Day/Night VFR Flights in known icing conditions is prohibited										

II - Model BK 160TR (Normal Category), approved on 01 December 2023.

ENGINE	Single-engine Lycoming IO-320-D1B. See TCDS no. 2023T04	
FUEL CAPACITY	2 tanks, 64 liters (17 USG) each. Total usable capacity: 113.5 liters (30 USG)	
ENGINE LIMITS	Max Take-off Power:	160 SHP
	Max Continuous Power:	160 SHP
	For other limitations. See the BCV-00-38-05 "Aircraft Flight Manual" Section 2	
OIL	Refer to AFM, Section 2 for engine oil	
OIL CAPACITY	Total:	7.57 liters (8 quart)
	Minimum:	3.78 liters (4 quart)
PROPELLER	Model Hartzell Raptor series Hub: 3C1-L675A1 Governor: S-1-78 Blades: 76C03-7 TCDS No. IM.P.137	
AIRSPEED LIMITS	Never exceed speed (V_{NE}):	318 km/h (172 KCAS)
	Max. structural cruising speed (V_{NO}):	274 km/h (148 KCAS)
	Operating Maneuvering speed (V_A):	226 km/h (122 KCAS)
	Max. speed with landing gear extended (V_{LE}):	204 km/h (110 KCAS)
	Max. speed for landing gear operation (V_{LO}):	204 km/h (110 KCAS)
	Max. speed with flaps fully deployed (V_{FE}):	185 km/h (100 KCAS)
C. G. LIMITS	23% MAC 28.5% MAC at 850 Kg 19% MAC 28.5% MAC at 765 Kg Mean Aerodynamic Chord: 1360.26 mm	
MAXIMUM WEIGHT	Max. Take-off: 850 kg (1874 lbs) Max. Landing 850 kg (1874 lbs)	
MINIMUM CREW	1 pilot seated in the front seat	
NUMBER OF SEATS	1 passenger seat	
MAXIMUM BAGGAGE	33 kg capacity, 2.5 m aft of datum	
MAXIMUM OPERATING ALTITUDE	3 505 m (11500 ft) – Density Altitude	
CONTROL SURFACE MOVEMENT	Aileron (Left / Right)	Up: $14^\circ \pm 1^\circ$ Down: $13^\circ \pm 1^\circ$
	Elevator	Up: $25^\circ \pm 1^\circ$ Down: $8^\circ \pm 1^\circ$
	Rudder	Left: $25^\circ \pm 2^\circ$ Right: $25^\circ \pm 2^\circ$
	Elevator trim	DWN: $30^\circ \pm 2^\circ$ UP: $4^\circ \pm 1^\circ$
	Flap	Takeoff: $15^\circ \pm 1^\circ$ Landing: $30^\circ \pm 2^\circ$
SERIAL NUMBERS ELIGIBLE	S/N BCV.21007 and subsequent	

DATUM	800 mm aft of composite bulkhead. 165 mm up from airplane fuselage centerline.
LEVELING MEANS	Baggage compartment surface
CERTIFICATION BASIS	The certification basis for the aircraft type design corresponds to the EASA certification basis (TCDS No. EASA.A.607) as follow: CS-VLA Amdt. 1, dated on 05 May 2009, amended with CS 23.2605(b) Amdt. 5 and CS-ACNS Issue 2, 30 April 2019. Special Conditions: SC-CVLA-div01-02 (CS-VLA Airplanes with MTOM of more than 750 Kg). SC-OVLA.div03-02 (Night VFR Operation with VLA). SC-ELA.2015-01 (Lithium Battery Installation). Equivalent Safety Level Findings: SC-OVLA-div-03-02 Night VFR: CS-VLA SC 1143, CS-VLA SC 1147 (Engine and Mixture Controls); CS VLA.161 (b)(2)(ii) Amdt 1(Longitudinal trim, approach). CS VLA 1145(A) (Engine ignition switches). CS-VLA 1147 (Mixture control). CS-VLA 777 (a) ;(b); (e)(1)(2); (f) (Cockpit controls – flaps).
ENVIRONMENTAL STANDARDS	ANAC adopts the EASA requirements as provide on TCDSN EASA.A.607.
EQUIPMENTS	Equipment list as reported in BCV-00-38-05 Airplane Flight Manual Section 6
APPROVED OPERATIONS CAPABILITY	Day/Night VFR. Flights in known icing conditions is prohibited.

NOTES (applicable to both models):

NOTE 1 Markings and placards: All markings and placards for passenger information under normal or emergency conditions must be in Portuguese (or English and Portuguese). External markings for emergency operation of doors, normal ground operation of cargo doors, and servicing operations must be in Portuguese (or bilingual). Marking and placards indicating maximum loads in cargo and baggage compartments must be also presented in Portuguese (or bilingual).
For the approved markings and placards translations contact the TC holder and/or ANAC at the following address: progcert@anac.gov.br.

NOTE 2 The designation “Gabriel” is a commercial name (market name) only.

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This TCDS is available at ANAC website:

<https://sistemas.anac.gov.br/certificacao/Produtos/EspecificacaoOrgE.asp>

SEI (9148517)