

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

A69EU Revision 4 EADS-PZL "Warszawa-Okęcie" PZL-KOLIBER 150A PZL-KOLIBER 160A March 16, 2007
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TYPE CERTIFICATE DATA SHEET NO. A69EU

This data sheet, which is part of the Type Certificate No. A69EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder. EADS-PZL "Warszawa-Okęcie" S.A.  
 Al. Krakowska 110/114  
 00-971 Warszawa  
 Poland

Type Certificate Holder. Panstwowe Zaklady Lotnicze transferred TC A69EU to EADS-PZL "Warszawa-Okęcie" S.A. on April 9, 2004.

**I. PZL-KOLIBER 150A (Normal and Utility Category), approved February 18, 1994.**

Engine. LYCOMING O-320-E2A.

Fuel. 80/87 minimum grade aviation gasoline  
 AVGAS 100/100 LL

Oil.

over 60°F (+15°C)	SAE 50
30° to 90°F (-1° to +32°C)	SAE 40
0° to 70°F (-17° to +21°C)	SAE 30
below 10°F (-12°C)	SAE 20

Engine Limits. For all operations: 2700 r.p.m. (150 HP)

Maximum Cylinder Head Temperature:	500°F (260°C)
Minimum Oil Pressure:	25 psi
Maximum Oil Pressure:	100 psi
Maximum Oil Temperature:	245°F

Propeller and Propeller Limits. 1. SENSENICH 74DM6-0-58

R.P.M. at maximum permissible throttle setting: 2700  
 Static r.p.m. - 2280.  
 At idle - 600 r.p.m.  
 No additional tolerances permitted.  
 Blade pitch (at 27.75 in.) 18.4°.  
 Diameter: maximum - 74 in. (1880 mm),  
 min. allowed for repairs - 72 in. (1829 mm)  
 No further diameter reduction permitted.  
 Spinner: PZL IC-50.210.00-0.

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2. SENSENICH 74DM6-0-56  
 R.P.M. at maximum permissible throttle setting: 2700  
 Static r.p.m. - 2300.  
 At idle - 600 r.p.m.  
 No additional tolerances permitted.  
 Blade pitch (at 27.75 in.) 17.8°.  
 Diameter: maximum - 74 in. (1880 mm),  
 min. allowed for repairs - 72 in. (1829 mm)  
 No further diameter reduction permitted.  
 Spinner: PZL IC-50.210.00-0.

3. SENSENICH 74DM6-0-54  
 R.P.M. at maximum permissible throttle setting: 2700  
 Static r.p.m. - 2320.  
 At idle - 600 r.p.m.  
 No additional tolerances permitted.  
 Blade pitch (at 27.75 in.) 17.2°.  
 Diameter: maximum - 74 in. (1880 mm),  
 min. allowable for repairs - 72 in. (1829 mm)  
 No further diameter reduction permitted.  
 Spinner: PZL IC-50.210.00-0.

Airspeed Limits (CAS).

<u>Category</u>	<u>Normal/Utility</u>
Never exceed - $V_{NE}$	156 m.p.h. (251 km/h)
Max. structural cruising - $V_{NO}$	124 m.p.h. (200 km/h)
Maneuvering - $V_A$	102 m.p.h. (164 km/h)
Flap extended - $V_{FE}$	87 m.p.h. (140 km/h)
Maximum speed with canopy open beyond 4 inches: 100 mph.	

C.G. Range.

Normal Category  
 Forward limit at 1874 lb. (850 kg):  
 32.7 in. (0.830 m) from the ref. datum (13.3% MAC)  
 Forward limit at 1433 lb. (650 kg):  
 31.2 in. (0.792 m) from the ref. datum (10.4% MAC)  
 Rear limit:  
 40.2 in. (1.021 m) from the ref. datum (28% MAC)

Utility Category  
 Forward limit at 1698 lb. (770 kg):  
 32.2 in. (0.817 m) from the ref. datum (12.3% MAC)  
 Forward limit at 1433 lb. (650 kg):  
 31.2 in. (0.792 m) from the ref. datum (10.4% MAC)  
 Rear limit:  
 37.7 in. (0.956 m) from the ref. datum (23% MAC)  
 Straight line variation between points given.  
 M.A.C. length 51.2 in. (1.3 m)  
 Distance of M.A.C. leading edge from the reference datum 25.9 in. (0.657 m)

Empty Weight C.G. Range

None

<u>Maximum Weight.</u>	Normal Category	- 1874 lb. (850 kg)		
	Utility Category	- 1698 lb. (770 kg)		
<u>Number of Seats.</u>	4			
	2 at +36.9 in. (0.937 m);			
	2 at +70.0 in. (1.777 m) - See NOTE 4			
<u>Minimum Crew.</u>	One pilot.			
<u>Equipment and Baggage Weight.</u>	See NOTE 4.			
<u>Fuel Capacity.</u>	46.7 U.S. gal. (two 23.35 gal. tanks) at 41.6 in.			
	42.5 U.S. gal. - usable fuel (4.2 U.S. gal. unusable)			
	[two 21.25 gal. tanks at +41.6 in.]			
	(See NOTE 1).			
<u>Oil Capacity.</u>	8 qt. at -22.6 in.			
	(See NOTE 1)			
<u>Control Surface Movements.</u>	Aileron	Up 17°30' (±1°)	Down	13°30' (±1°)
	Elevator	Up 30° (±1°)	Down	25° (+0, -2°)
	Elevator	Up 20° (±1°)	Down	28° (±1°)
	Trim Tab			
	Rudder	Right 30° (+0, -2°)	Left	30° (+0, -2°)
	Wing flaps	Up 0° (±1.5°)	Down	30° (±1.5°)
<u>Reference Datum.</u>	Front face of firewall.			
<u>Leveling Means.</u>	Longitudinal fuselage longerons at canopy rails.			
<u>Serial Numbers Eligible.</u>	Each individual aircraft manufactured under this type certificate must be accompanied by a Certificate of Airworthiness for Export (or certifying statement endorsed by the Exporting Civil Airworthiness Authority (ECAA) as noted below under "Import Requirements") when an application for U.S. airworthiness is made.			
	PZL-KOLIBER 150A: 04940059 and subsequent.			
<u>Import Requirements.</u>	The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the Civil Aviation Office (CAO) of Poland on behalf of the European Community. The Export C of A should contain the following statement: 'The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. airworthiness regulations 14 CFR Federal Aviation Regulations Part 23, U.S. Type Certificate No. A69EU and to be in a condition for safe operation.'			
	Model Koliber 150A airplanes (SN: 0 393 0057 and 0 393 0058) modified by PZL Modification Kit No. 1 are eligible for a Standard Airworthiness Certificate under the U.S. Type Certificate.			

Certification Basis. FAR 23 dated February 1, 1965, as amended through Amendment 23-23 effective December 1, 1978; FAR 23.2 and 23.561(b) (2) as amended through Amendment 23-36 effective September 14, 1988; FAR 23 Subpart F amended through Amendment 23-30 effective March 29, 1984; FAR 23 Appendix G amended through Amendment 23-37 effective August 18, 1990; FAR 36 dated December 1, 1969, through Amendment 36-20 effective September 16, 1992.

The Civil Aviation Office (CAO) of Poland originally type certificated this aircraft under its type certificate Number BB-193. The FAA validated this product under U.S. Type Certificate Number A69EU. Effective July 4, 2006, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Poland. The EASA TCDS number is EASA.A.091.

Validation Basis.

Type Certificate A69EU was issued pursuant to FAR 21.29 in validation of the General Inspectorate of Civil Aviation certification of compliance with the aforementioned certification basis, and in accordance with the standard airworthiness certificate provisions of FAR 21.183(c).

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for airworthiness certification. In addition, the following items of equipment are required:

Model PZL-KOLIBER 150A - CAIB approved (for the FAA); Airplane Flight Manual, Ref. PZL Warszawa-Okecie Document No. LD-153-10/150A, dated January 1994, or later CAIB approved revision.

**II. PZL-KOLIBER 160A (Normal and Utility Category), approved February 13, 2001.**

Engine.

LYCOMING 0-320-D2A

Fuel.

91/96 minimum grade aviation gasoline  
AVGAS 100/100 LL

Oil.

over 80°F (+26°C)	SAE 60
over 60°F (+15°C)	SAE 50
30° to 90°F (-1° to +32°C)	SAE 40
0° to 70°F (-17° to +21°C)	SAE 30
below 10°F (-12°C)	SAE 20

Engine Limits.

For all operations:	2700 r.p.m. (160 HP)
Maximum Cylinder Head Temperature:	500°F (260°C)
Minimum Oil Pressure:	25 psi
Maximum Oil Pressure:	100 psi
Maximum Oil Temperature:	245°F

Propeller and Propeller Limits.

1. SENSENICH 74DM6-0-58	
R.P.M. at maximum permissible throttle setting:	2700
Static r.p.m.	2280
Idle r.p.m.	600
(No additional tolerances permitted.)	

Blade pitch (at 27.75 in.) 18.4°  
 Diameter: maximum 74 in. (1880 mm)  
                   minimum (allowed for repairs) 72 in. (1829 mm)  
 (No further diameter reduction permitted.)  
 Spinner: PZL IC-50.210.00-0.

Airspeed Limits (CAS).

<u>Category</u>	<u>Normal (850 kg.)</u>	<u>Utility (770 kg)</u>
Never exceed - $V_{NE}$	156 mph (251 km/h)	168 mph (270 km/h)
Max. structural cruising – $V_{NO}$	124 mph (200 km/h)	124 mph (200 km/h)
Maneuvering - $V_A$	102 mph (164 km/h)	104 mph (168 km/h)
Flap extended - $V_{FE}$	87 mph (140 km/h)	87 mph (140 km/h)
Maximum speed with canopy open beyond 4 inches: 100 mph.		
See NOTE 5		

<u>Category</u>	<u>Normal (950 kg.)</u>	<u>Utility (770 kg)</u>
Never exceed - $V_{NE}$	143 mph (230 km/h)	143 mph (230 km/h)
Max. structural cruising – $V_{NO}$	114 mph (183 km/h)	114 mph (183 km/h)
Maneuvering - $V_A$	103 mph (165 km/h)	100 mph (161 km/h)
Flap extended - $V_{FE}$	89 mph (143 km/h)	89 mph (143 km/h)
Maximum speed with canopy open beyond 4 inches: 100 mph.		
See NOTES 5, 6		

C.G. Range.Normal Category (See NOTE 6)

Forward limit at 2094 lb. (950 kg):  
 33.4 in. (0.849 m) from the ref. datum (14.8% MAC)

Forward limit at 1874 lb. (850 kg):  
 32.7 in. (0.830 m) from the ref. datum (13.3% MAC)

Forward limit at 1433 lb. (650 kg):  
 31.2 in. (0.792 m) from the ref. datum (10.4% MAC)

Rear limit: 2094 lb. (950 kg)  
 40.2 in. (1.021 m) from the ref. datum (28% MAC)

Rear limit: 1874 lb. (850 kg)  
 40.2 in. (1.021 m) from the ref. datum (28% MAC)

Utility Category

Forward limit at 1698 lb. (770 kg):  
 32.2 in. (0.817 m) from the ref. datum (12.3% MAC)

Forward limit at 1433 lb. (650 kg):  
 31.2 in. (0.792 m) from the ref. datum (10.4% MAC)

Rear limit: 1698 lb. (770 kg)  
 37.7 in. (0.956 m) from the ref. datum (23% MAC)

Straight line variation between points given.

M.A.C. length 51.2 in. (1.3 m)  
 Distance of M.A.C. leading edge from the reference datum 25.9 in. (0.657 m).

Empty Weight C.G. Range

None

<u>Maximum Weight.</u>	Normal Category	2094 lb. (950 kg)	See NOTE 6
	Normal Category	1874 lb. (850 kg)	
	Utility Category	1698 lb. (770 kg)	
<u>Number of Seats.</u>	4		
	2 at +36.9 in. (0.937 m);		
	2 at +70.0 in. (1.777 m)	See NOTE 4	
<u>Minimum Crew.</u>	One pilot.		
<u>Equipment and Baggage Weight.</u>	See NOTE 4.		
<u>Fuel Capacity.</u>	46.7 U.S. gal. (two 23.35 gal. tanks) at 41.6 in.		
	42.5 U.S. gal. usable fuel (4.2 U.S. gal. unusable)		
	[two 21.25 gal. tanks at +41.6 in.]		
	(See NOTE 1).		
<u>Oil Capacity.</u>	8 qt. at -22.6 in.		
	(See NOTE 1)		
<u>Control Surface Movements.</u>	(Maximum Weight)	<u>1874 lb.(850 kg)</u>	<u>2094 lb. (950 kg)</u>
(See NOTE 6)			
	Aileron	Up 17°30' (±1°)	14°30' (±1°)
		Down 13°30' (±1°)	11°30' (±1°)
	Elevator	Up 30° (±1°)	30° (±1°)
		Down 25° (+0, -2°)	25° (+0, -2°)
	Elevator Trim Tab	Up 20° (±1°)	20° (±1°)
		Down 28° (±1°)	28° (±1°)
	Rudder	Right 30° (+0, -2°)	30° (+0, -2°)
		Left 30° (+0, -2°)	30° (+0, -2°)
	Wing flaps	Up 0° (±1.5°)	6° (-1°)
		Down 30° (±1.5°)	30° (±1.5°)
<u>Reference Datum.</u>	Front face of firewall.		
<u>Leveling Means.</u>	Longitudinal fuselage longerons at canopy rails.		
<u>Serial Numbers Eligible.</u>	Each individual aircraft manufactured under this type certificate must be accompanied by a Certificate of Airworthiness for Export (or certifying statement endorsed by the Exporting Civil Airworthiness Authority (ECAA) as noted below under "Import Requirements") when an application for U.S. airworthiness is made.		
	PZL-KOLIBER 160A: 04980077 and subsequent.		
<u>Import Requirements.</u>	The FAA can issue a U.S. airworthiness certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the Civil Aviation Office (CAO) of Poland on behalf of the European Community. The Export C of A should contain the following statement: 'The aircraft covered by this certificate has been examined, tested, and found to comply with U.S. airworthiness regulations 14 CFR Federal Aviation Regulations Part 23, U.S. Type Certificate No. A69EU and to be in a condition for safe operation.'		
<u>Certification Basis.</u>	FAR 23 dated February 1, 1965, as amended through Amendment 23-23 effective December 1, 1978; FAR 23.2 and 23.561(b) (2) as amended through Amendment		

23-36 effective September 14, 1988; FAR 23 Subpart F amended through Amendment 23-30 effective March 29, 1984; FAR 23 Appendix G amended through Amendment 23-37 effective August 18, 1990; FAR 36 dated December 1, 1969, through Amendment 36-22 effective October 13, 1999.

The Civil Aviation Office (CAO) of Poland originally type certificated this aircraft under its type certificate Number BB-193. The FAA validated this product under U.S. Type Certificate Number A69EU. Effective July 4, 2006, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Poland. The EASA TCDS number is EASA.A.091.

Validation Basis.

Type Certificate A69EU was amended pursuant to FAR 21.29 in validation of the General Inspectorate of Civil Aviation certification of compliance with the aforementioned certification basis, and in accordance with the standard airworthiness certificate provisions of FAR 21.183(c).

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for airworthiness certification. In addition, the following items of equipment are required:

Model PZL-KOLIBER 160A - CAIB approved (for the FAA); Airplane Flight Manual, Ref. PZL Warszawa-Okecie Document No. LD-153-10(USA)/160A, dated April, 1998, or later CAIB approved revision.

Service Information for Both Models

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before July 4, 2006 – by the Civil Aviation Office (CAO) of Poland. (See Note 7)

- Service bulletins,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

The FAA accepts such documents and considers them FAA-approved for type design data only unless one of the following conditions exists:

- The documents change the limitations, performance, or procedures of the FAA approved manuals; or
- The documents make an acoustical or emissions changes to this product's U.S. type certificate as defined in 14 CFR § 21.93.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to EASA to approve on behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

NOTES.

Applicable to both models unless otherwise stated

NOTE 1.

A current weight and balance report including list of equipment, certificated empty weight, and loading instructions, must be provided with each aircraft at the

time of original airworthiness certification, and carried in the airplane at all times thereafter.

The certificated empty weight and the corresponding center of gravity location must include full oil (15.4 lbs. at -22.6 inches), and unusable fuel (25.4 lbs. at +41.6 inches).

NOTE 2.

Placards (Refer to Manufacturer's Specifications for a complete listing): All required placards as listed in the approved Airplane Flight Manual must be installed in the appropriate locations.

(1) The following placard must be displayed for PZL-KOLIBER 150A airplane in clear view of the pilot:

KOLIBER 150A			
THIS AIRPLANE IN THE UTILITY CATEGORY MUST BE OPERATED IN COMPLIANCE WITH PLACARDS, MARKINGS AND FLIGHT MANUAL.			
<u>LIMITATIONS IN CATEGORY "U"</u>			
GROSS WEIGHT	_____	1698 LBS	
REAR C.G. POSITION LIMIT	_____	37.7 in. (23.0% MAC)	
NEVER EXCEED SPEED V <sub>ne</sub>	_____	160 MPH (139 KTS)	
LOAD FACTOR (FLAPS RETRACTED)	_____	+4.4 : -1.8	
ABRUPT USE OF CONTROLS PROHIBITED			
ABOVE V <sub>A</sub>	_____	106 MPH (92 KTS)	
MAX AIRSPEED IN ROUGH AIR V <sub>NO</sub>	_____	128 MPH (111 KTS)	
MAX SPEED WITH FLAPS EXTENDED V <sub>FE</sub>	_____	91 MPH (79 KTS)	
<u>ACROBATIC MANOEUVERS ARE LIMITED TO THE FOLLOWING:</u>			
<u>MANOEUVER</u>	<u>ENTRY SPEED</u>	<u>MANOEUVER</u>	<u>ENTRY SPEED</u>
CHANDELLES	___ 130MPH (113 KTS)	STEEP TURNS	___ 103MPH (89 KTS)
LAZY EIGHTS	___ 130MPH (113 KTS)		
INVERTED ACROBATIC AND SPINS PROHIBITED			
REFER TO AFM FOR THE OPERATION IN NORMAL CATEGORY			

(2) Refer to the Airplane Flight Manual of PZL-KOLIBER 150A airplane, Section 2, Limitations for a listing of other required placards.

(3) The appropriate following placard must be displayed for PZL-KOLIBER 160A (1874 lb gross weight) airplane in clear view of the pilot:

<b>KOLIBER 160A</b>			
THIS AIRPLANE IN THE UTILITY CATEGORY MUST BE OPERATED IN COMPLIANCE WITH PLACARDS, MARKINGS AND FLIGHT MANUAL.			
<u>LIMITATIONS IN CATEGORY "U"</u>			
GROSS WEIGHT	_____	1698 LBS	
REAR C.G. POSITION LIMIT	_____	37.7 in. (23.0% MAC)	
NEVER EXCEED SPEED V <sub>ne</sub>	_____	160 MPH (139 KTS)	
LOAD FACTOR (FLAPS RETRACTED)	_____	+4.4 : -1.8	
ABRUPT USE OF CONTROLS PROHIBITED			
ABOVE V <sub>A</sub>	_____	106 MPH (92 KTS)	
MAX AIRSPEED IN ROUGH AIR V <sub>NO</sub>	_____	128 MPH (111 KTS)	
MAX SPEED WITH FLAPS EXTENDED V <sub>FE</sub>	_____	91 MPH (79 KTS)	
<u>ACROBATIC MANOEUVERS ARE LIMITED TO THE FOLLOWING:</u>			
<u>MANOEUVER</u>	<u>ENTRY SPEED</u>	<u>MANOEUVER</u>	<u>ENTRY SPEED</u>
CHANDELLES	__ 130MPH (113 KTS)	STEEP TURNS	__ 103MPH (89 KTS)
LAZY EIGHTS	__ 130MPH (113 KTS)		
INVERTED ACROBATIC AND SPINS PROHIBITED			
REFER TO AFM FOR THE OPERATION IN NORMAL CATEGORY			

(4) Refer to the Airplane Flight Manual of PZL-KOLIBER 160A airplane, Section 2, Limitations for a listing of other required placards.

NOTE 3.

Instructions for Continued Airworthiness and Service Life Limits of components are contained in the Koliber 150A or 160A Maintenance Manual. Revisions to Airworthiness Limitations must be FAA approved.

All service bulletins classified as mandatory by the General Inspectorate of Civil Aviation are identified to that effect and are mandatory for U.S. registered aircraft only if made the subject of an Airworthiness Directive issued by the FAA.

NOTE 4.

Total weight on the rear seats at station +70 inches aft of datum must not exceed 340 lbs. (154.2 kg).

NOTE 5

To achieve uniformity, the Airplane Flight Manual assumes the same airspeed limits for the Utility Category as those determined for the Normal Category for the PZL-Koliber 150A and PZL-Koliber 160A (1874 lb. Gross weight) airplanes.

NOTE 6

Operation of the Koliber 160A airplane at 2094 lbs. in the Normal Category is approved, providing Service Bulletin No. 11099048 and Mandatory Bulletin No. 11099050 or Service Bulletin No. 11000053 have been implemented. Operation will be in accordance with Supplement 3 of Model PZL-KOLIBER 160A - CAIB

approved (for the FAA); Airplane Flight Manual, Ref. PZL Warszawa-Okecie Document No. LD-153-10(USA)/160A, dated April, 1998, or later CAIB approved revision.

The following placard must be displayed for the PZL-Kolibier 160A (2094 lb. gross weight) airplane in clear view of the pilot:

<b>KOLIBER 160A</b>			
THIS AIRPLANE IN THE UTILITY CATEGORY MUST BE OPERATED IN COMPLIANCE WITH PLACARDS, MARKINGS AND FLIGHT MANUAL.			
<u>LIMITATIONS IN CATEGORY "U"</u>			
GROSS WEIGHT	_____	1698 LBS	
REAR C.G. POSITION LIMIT	_____	37.7 in. (23.0% MAC)	
NEVER EXCEED SPEED V <sub>ne</sub>	_____	147 MPH (127 KTS)	
LOAD FACTOR (FLAPS RETRACTED)	_____	+4.4 : -1.8	
ABRUPT USE OF CONTROLS PROHIBITED			
ABOVE V <sub>A</sub>	_____	106 MPH (92 KTS)	
MAX AIRSPEED IN ROUGH AIR V <sub>NO</sub>	_____	119 MPH (103 KTS)	
MAX SPEED WITH FLAPS EXTENDED V <sub>FE</sub>	_____	91 MPH (79 KTS)	
<u>ACROBATIC MANOEUVERS ARE LIMITED TO THE FOLLOWING:</u>			
<u>MANOEUVER</u>	<u>ENTRY SPEED</u>	<u>MANOEUVER</u>	<u>ENTRY SPEED</u>
CHANDELLES	__ 119 MPH (103 KTS)	STEEP TURNS	__ 106 MPH (92 KTS)
LAZY EIGHTS	__ 119 MPH (103 KTS)		
INVERTED ACROBATIC AND SPINS PROHIBITED			
REFER TO AFM FOR THE OPERATION IN NORMAL CATEGORY			

NOTE 7

The national airworthiness authority (NAA) for this airplane is the Civil Aviation Office (CAO) of Poland. The CAO was previously known as CAIB, CACA and General Inspectorate of Civil Aviation (GICA).

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