TYPE CERTIFICATE

DATA SHEET

No. EASA.R.007

for

PZL W-3A

Type Certificate Holder

WYTWÓRNIA SPRZĘTU KOMUNIKACYJNEGO “PZL-Świdnik” Spółka Akcyjna

Al. Lotników Polskich 1

21-045 Świdnik

POLAND

For Models: PZL W-3A, PZL W-AS

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I. General

1.	Type/ Model/ Variant	
	1.1 Type	PZL W-3A
	1.2 Model	PZL W-3AS
	1.3 Variant	n/a
2.	Airworthiness Category	Large Rotorcraft, Category A and B
3.	Manufacturer	WYTWÓRNIA SPRZĘTU KOMUNIKACYJNEGO "PZL-Świdnik" Spółka Akcyjna Al. Lotników Polskich 1 21-045 Świdnik POLAND
4.	Type Certification Application Date	to CAO: 18 January 2001
5.	State of Design Authority	POLAND
6.	Type Certificate Date by NAA	24 April 2003
7.	Type Certificate n°	By CAO: No. BC-188
8.	Type Certificate Data Sheet n°	By CAO: No. BC-188, Issue 7
9.	EASA Type Certification Date	17 March 2005

II. Certification Basis

1.	Reference Date for determining the applicable requirements	Year 1989
2.	Airworthiness Requirements	
	- 14CFR Part 29 Amendments 29-1 to 29-26 (ref. CRI A-01 Issue No. 3)	
3.	Special Conditions	none
4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	
	- FAR 29.1309(g)	
7.	Requirements elected to comply	none
8.	Environmental Protection Requirements	See EASA Type Certificate Data Sheet for Noise TCDSN EASA.R.007
9.	Operational Suitability Data (OSD)	see SECTION 3 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	List of design Groups of W-3AS Document No. WW-37.00.670 Type Design Definition Doc. WW-30.06.635/1 (List of Design Differences between W-3A and W-3AS helicopter configurations)

2. Description

The PZL W-3AS is a twin turboshaft engine, single main rotor helicopter designed to carry up to 14 persons (passengers and crew members). The cockpit can be fitted out with seats, controls and instrumentation for two pilots. The airframe is a semi-monocoque construction made primarily of metal. Certain non structural elements such as cabin doors, cowlings and the horizontal stabilizer are made of glass-epoxy composite materials.
The fixed tricycle landing gear includes a swivelling nose gear and the main gear fitted out with disc brakes.
Main Rotor - fully articulated with four blades.
Tail Rotor - fully articulated with three blades

3. Equipment

Basic equipment must be installed and operational prior to registration of the helicopter.
Refer to Rotorcraft Flight Manual for the approved mandatory and optional equipment List.

4. Dimensions

4.1 Fuselage

Length: 14.210 m (46.62 ft)
Width hull: 1.750 m (5.7 ft)
Height: 3.808 m (12.5 ft)

4.2 Main Rotor

Diameter: 15.760 m (51.5 ft)

4.3 Tail Rotor

Diameter: 3.030 m (9.9 ft)

5. Engine

5.1 Model

PRATT & WHITNEY RZESZÓW S.A.
PZL-10W

5.2 Type Certificate

EASA Engine TCDS No. E.128 (JAR-E Amdt. 8) dated 15 December 2015

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

Power rating Parameter		Takeoff	Maximum continuous
Torque	Max.	109%	85%
Power turbine speed (continuous)	Max.	105%	105%
	Min.	100%	105%
Gas producer speed	Max.	97%	93%
Turbine Outlet Temp.	Max.	725°C	670°C

Maximum transient:..... 112% (up to 5 sec.)
Minimum transient ..... 85% (up to 15 sec.)

NOTE: Engine Over speed Protection will activate to shut down the engine at 120% N2.

One engine inoperative

Power rating Parameter		Limited to 2 ½ minutes	Limited to 30 minutes
Torque	Max.	139%	121%
Power turbine speed (continuous)	Max.	105%	105%
	Min.	95%	95%
Gas producer speed	Max.	102%	98%
Turbine Outlet Temp.	Max.	770°C	735°C

For limitations for transients - refer to Rotorcraft Flight Manual.

NOTE: 100% of power turbine speed corresponds to 22490 rpm.
100% of gas producer speed corresponds to 31486 rpm.

Torque (TQ) Limits

OEI operation:
Maximum 2.5-minute OEI.....139% (Nr = 95% or below)
Maximum 30-minute OEI.....121% (Nr = 95% or below)

Twin engine operation:
Maximum takeoff for Nr = 95%.....109%
Maximum allowable takeoff for Nr = 100%.....103% (up to 5 minutes)
Maximum allowable takeoff for Nr = 105%.....98% (up to 5 minutes)
Maximum continuous for Nr = 105%.....85%

5.3.2 Transmission Torque Limits

Twin engine operation:
Maximum takeoff for minimum transient Nr = 95%.....2 x 109%
Maximum allowable takeoff for minimum cont. Nr = 100% .....2 x 103%
Maximum allowable takeoff for maximum cont. Nr = 105%.....2 x 98%
Maximum continuous for minimum transient Nr = 95% .....2 x 95%
Maximum allowable continuous for minimum cont. Nr = 100%.....2 x 90%
Maximum allowable continuous for maximum cont. Nr = 105% .....2 x 85%

OEI operation:

Maximum 2.5-minute OEI for minimum transient Nr = 85%
(up to 15 sec.)..... 139%

Maximum allowable 2.5-minute OEI for minimum cont. Nr = 95%..... 139%

Maximum allowable 2.5-minute OEI for maximum cont. Nr = 105%..... 127%

Maximum 30-minute OEI for minimum transient Nr = 85%
(up to 15 sec.)..... 121%

Maximum allowable 30-minute OEI for minimum cont. Nr = 95%..... 121%

Maximum allowable 30-minute OEI for maximum cont. Nr = 105%..... 110%

6. Fluids (Fuel/ Oil/ Additives)

6.1 Approved Fuel Grades

JET A-1	conforming to DERD 2494 or ASTM D 1655-83
TS-1	conforming to GOST 10227-86
RT	conforming to GOST 10227-86
PSM-2	conforming to PN-86/C-96026
T-1 and T-2	conforming to GOST 10227-86 with PMAM or TK additives

NOTE: For anti-ice additives - refer to Rotorcraft Flight Manual

6.2 Oil

Engine Oils

B-3W	conforming to TU 38.101295-85 or GOST 5566-70
CASTROL 5000, CASTROL 5050, AEROSHELL TURBINE OIL 500, ELF TURBO JET II	conforming to MIL-L-23699C
CASTROL 599	conforming to DERD 2497
AEROSHELL TURBINE OIL 555	conforming to DERD 2497

Main Gearbox Oils

B-3W	conforming to TU 38.101295-85 or GOST 5566-70
CASTROL 599	conforming to DERD 2497
AEROSHELL TURBINE OIL 555	conforming to DERD 2497

7. Fluid capacities

7.1 Fuel

Total fuel capacity: 454 US Gallons (1720 litres)

Maximum amount of fuel filled into each group of cells:

Engine 1: 214.0 US gallons (810 litres)

Engine 2: 240.4 US gallons (910 litres)

Unusable fuel: 1.8 US gallons (7 litres)

7.2 Oil

Engine oil capacities (each engine):

Max.: 2.1 US gallons (8 litres)

Min.: 1.6 US gallons (6 litres)

Main gearbox oil capacity, Max 7.9 US gallons (30 litres)

7.3 Coolant System Capacity n/a

8. Air Speed Limitations

Power-on never exceed speed V_{NE}: 140 KIAS (260 km/h)

NOTE: For V_{NE} variations versus actual weight, OAT, and altitude - refer to placards (located in the cockpit on windshield frame and shown in Limitations Section of Rotorcraft Flight Manual).

Power-off never exceed speed V_{NE}:

86 KIAS (160 km/h) up to 6500 ft (2000 m) press. alt.

56 KIAS (105 km/h) above 6500 ft (2000 m) press. alt.

9. Rotor Speed Limitations

Speed range	Rotor speed	
	Power off	Power on
Maximum transient (5 sec.)	112%	112%
Maximum (continuous)	108%	105%
Minimum (continuous)	90%	100% (two engines running)
		95% (one engine inoperative)
Minimum transient (15 sec.)	85%	85% (one engine inoperative)

NOTE: 100% of main rotor speed corresponds to 255.7 rpm.

10. Maximum Operating Altitude and Temperature

Maximum pressure altitude for flight	19700 feet (6000 m)
Maximum pressure altitude for takeoff and landing	16400 feet (5000 m)
Engine starting ensured up to altitude	13120 feet (4000 m)
Outside air temperature at sea level:	Maximum (+) 43°C
	Minimum (-) 40°C

NOTE: For variation of altitude limits with OAT and segment of flight (takeoff, en route, and landing) refer to Limitations Section of Rotorcraft Flight Manual

11. Operating Limitations

11.1 General — Day VFR, Operations in know icing condition are not allowed

11.2 Additional limitations for take-off and landing:

Maximum Ground Speed for Takeoff, Landing, and Taxiing		
	on prepared surface	32 knots (60 km/h)
	on unprepared surface	16 knots (30 km/h)
Maximum wind velocity for starting and stopping rotors:		
	head wind	48 knots (90 km/h, 25 m/s)
	side wind	17 knots (32 km/h, 9 m/s)
	tail wind	11 knots (22 km/h, 6 m/s)
Maximum landing slope	5° (windless conditions, the landing slope limit will decrease in the presence of wind)	

12. Certified Weights

Maximum takeoff and landing weight 6400 kg (14110 lb)
Minimum takeoff and landing weight 3850 kg (8488 lb)

13. Centre of Gravity Range

Longitudinal centre of gravity limitations:
+ 7.3 inch (185 mm) forward
- 1.97 inch (- 50 mm) aft

NOTE: For variation of longitudinal centre of gravity with gross weight refer to Limitations Section of Rotorcraft Flight Manual.

Lateral centre of gravity limitations:
± 4.7 inch (± 120 mm) for the indicated airspeed up to 48 KIAS (90 km/h),
± 3.5 inch (± 90 mm) for the indicated airspeed above 48 KIAS (90 km/h).

14. Datum

The Centre of Gravity position is determined in the XYZ coordinate system whose origin is in the intersection point of the main rotor axis and the main rotor hub rotation plane.
The X axis lays in the helicopter plane of symmetry and is directed forward.
The Y axis is aligned with the main rotor axis and is directed upward.
The Z axis is directed to the right while looking toward the direction of flight.

15. Levelling Means

Plumb line from ceiling reference point to the index plate located on passenger compartment floor.

16. Minimum Flight Crew

One pilot operating from the left hand seat

17. Maximum Passenger Seating Capacity

13 (thirteen)
Refer to RFM for the approved seat configurations

18. Passenger Emergency Exit — 2 (two) located on each side of the passengers cabin

19. Maximum Baggage / Cargo Loads

In passenger / cargo cabin 2100 kg (4620 lb)

NOTE: For maximum allowable floor load refer to Limitations Section of Rotorcraft Flight Manual.

In baggage compartment 180 kg (396 lb)

NOTE: For baggage compartment shelf load limits refer to Limitations Section of Rotorcraft Flight Manual.

20. Rotor Blade and Controls Movement

Main	Maximum 25° 20’ up, minimum 4° 30’ ± 10’ down
Cyclic stick longitudinal travel from neutral position	minimum ±138 mm (±5.43 inch)
Cyclic stick lateral travel from neutral position	minimum ±111 mm (±4.37 inch)
Swash plate angles for:	
Cyclic stick in neutral position	(-)1° ±12’ (pitch forward) 0° ±12’ (bank)
Cyclic stick in extreme fwd position	(-)8° ±18’(pitch forward)
Cyclic stick in extreme back position	(+)6° ±18’(pitch backward)
Cyclic stick in extreme left position	(+)5° ±18’(bank left)
Cyclic stick in extreme right position	(-)5° ±18’(bank right)
Collective lever travel from neutral position	minimum ±144 mm (±5.67 inch)
Swash plate slider travels for:	
Collective lever in neutral position	0 mm (0 inch)
Collective lever at lower extreme	23.5 ±0.3 mm (0.93 ±0.012 inch) downward
Collective lever at upper extreme	23.5 ±0.3 mm (0.93 ±0.012 inch) upward
Tail rotor pedals travel from neutral position	minimum ±75 mm (±2.95 inch)
Tail rotor pitch angles for:	
tail rotor pedals in neutral position	(+)2° 30’ ±1°
RH pedal moved forward home	(+)23° ±1°
RH pedal moved backward home	(-)9° ±1°

21. Auxiliary Power Unit (APU) — n/a

22. Life-limited Parts — Refer to Document AE 31.03.05.0 MM / AE 31.03.05.0 IOT Volume 1 Chapter 4 Subchapter 4.00.00 Airworthiness Limitations

23.	Wheels and Tyres	Main wheels 700 x 250 tire, model 6A and 750 x 250 tube Nose wheel 400 x 140 size tubeless

IV. Operating and Service Instructions

1.	Flight Manual	PZL W-3AS Rotorcraft Flight Manual AE-31.03.05.0 PRFM (in English) or AE-31.03.05.0 IUL (in Polish) approved by EASA on 17 March 2005 or later EASA-approved revisions
2.	Maintenance Manual	- Aircraft Maintenance Manual: AE-31.03.05.0 MM (in English) or AE-31.03.05.0 IOT (in Polish) - Engine documents as per Engine TCDS – refer Section 1, Chapter III., para. 5.2
3.	Structural Repair Manual	n/a
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	n/a
6.	Service Letters and Service Bulletins	As published by PZL
7.	Required Equipment	

Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer's eligible serial numbers: 3X.02.01 and subsequent (not consecutive)

SECTION 2: Model PZL W-3A

I. General

1.	Type/ Model/ Variant	
	1.1 Type	PZL W-3A
	1.2 Model	PZL W-3A (basic model)
	1.3 Variant	n/a
2.	Airworthiness Category	Large Rotorcraft, Category A and B
3.	Manufacturer	WYTWÓRNIA SPRZĘTU KOMUNIKACYJNEGO “PZL-Świdnik” Spółka Akcyjna Al. Lotników Polskich 1 21-045 Świdnik POLAND
4.	Type Certification Application Date	to CAO: year 1989
5.	State of Design Authority	POLAND
6.	Type Certificate Date by NAA	01 July 1993
7.	Type Certificate n°	By CAO: No. BC-188
8.	Type Certificate Data Sheet n°	By CAO: No. BC-188, Issue 1 and subsequent
9.	EASA Type Certification Date	16 June 2006

II. Certification Basis

1.	Reference Date for determining the applicable requirements	Year 1989
2.	Airworthiness Requirements	
	- 14CFR Part 29 Amendments 29-1 to 29-26	
3.	Special Conditions	none
4.	Exemptions	none
5.	Deviations	none
6.	Equivalent Safety Findings	none
7.	Requirements elected to comply	none
8.	Environmental Protection Requirements	See EASA Type Certificate Data Sheet for Noise TCDSN EASA.R.007
9.	Operational Suitability Data (OSD)	see SECTION 3 below

III. Technical Characteristics and Operational Limitations

1.	Type Design Definition	List of design groups determining typical design of W-3A helicopter Document No. WW-37.00.263

2. Description

The PZL W-3A is a twin turboshaft engine, single main rotor helicopter designed to carry up to 14 persons (passengers and crew members). The cockpit can be fitted out with seats, controls and instrumentation for two pilots. The airframe is a semi-monocoque construction made primarily of metal. Certain non structural elements such as cabin doors, cowlings and the horizontal stabilizer are made of glass-epoxy composite materials.
The fixed tricycle landing gear includes a swivelling nose gear and the main gear fitted out with disc brakes.
Main Rotor - fully articulated with four blades.
Tail Rotor - fully articulated with three blades

3. Equipment

Basic equipment must be installed and operational prior to registration of the helicopter.
Refer to Rotorcraft Flight Manual for the approved mandatory and optional equipment List.

4. Dimensions

4.1 Fuselage	Length:	14.210 m (46.62 ft)
	Width hull:	1.750 m (5.7 ft)
	Height:	3.808 m (12.5 ft)
4.2 Main Rotor	Diameter:	15.760 m (51.5 ft)
4.3 Tail Rotor	Diameter:	3.030 m (9.9 ft)

5. Engine

5.1 Model

PRATT & WHITNEY RZESZÓW S.A.
PZL-10W

5.2 Type Certificate

EASA Engine TCDS No. E.128 (JAR-E Amdt. 8) dated 15 December 2015

5.3 Limitations

5.3.1 Installed Engine Limitations and Transmission Torque Limits

NOTE: 100% of gas producer speed N1 corresponds to 31486 rpm.
100% of power turbine speed N2 corresponds to 22490 rpm.

Gas Producer Speed (N1) Limits

Maximum 2.5-minute OEI 102%
Maximum 30-minute OEI 98%
Maximum takeoff (5 minute) 97%
Maximum continuous..... 93%

Turbine Outlet Temperature (TOT) Limits

Maximum 2.5-minute OEI .....770°C

Maximum 30-minute OEI .....735°C

Maximum takeoff (5 minute) .....725°C

Maximum continuous.....670°C

Power Turbine Speed (N2) Limits

Maximum transient..... 112% (up to 5 s)

Maximum continuous..... 105% (normal setting)

Minimum continuous 95%

Minimum transient..... 85% (up to 15 s)

NOTE: Engine Overspeed Protection will activate to shut down the engine at 120% N2

Torque (TQ) Limits

Twin engine operation:

Maximum takeoff for Nr = 95%..... 109%

Maximum allowable takeoff for Nr = 100% ..... 103% (up to 5 minutes)

Maximum allowable takeoff for Nr = 105% ..... 98% (up to 5 minutes)

Maximum continuous for Nr = 105% 85%

OEI operation:

Maximum 2.5-minute OEI .....139% (Nr = 95% or below)

Maximum 30-minute OEI .....121% (Nr = 95% or below)

5.3.2 Transmission Torque Limits

Twin engine operation:

Maximum takeoff for minimum transient Nr = 95%.....2 x 109%

Maximum allowable takeoff for minimum cont. Nr = 100% .....2 x 103%

Maximum allowable takeoff for maximum cont. Nr = 105%.....2 x 98%

Maximum continuous for minimum transient Nr = 95% .....2 x 95%

Maximum allowable continuous for minimum cont. Nr = 100%.....2 x 90%

Maximum allowable continuous for maximum cont. Nr = 105% .....2 x 85%

OEI operation:

Maximum 2.5-minute OEI for minimum transient Nr = 85% (up to 15 sec.)..... 139%

Maximum allowable 2.5-minute OEI for minimum cont. Nr = 95%..... 139%

Maximum allowable 2.5-minute OEI for maximum cont. Nr = 105%..... 127%

Maximum 30-minute OEI for minimum transient Nr = 85% (up to 15 sec.)..... 121%

Maximum allowable 30-minute OEI for minimum cont. Nr = 95%..... 121%

Maximum allowable 30-minute OEI for maximum cont. Nr = 105%..... 110%

6. Fluids (Fuel/ Oil/ Additives)

6.1 Approved Fuel Grades

JET A-1	conforming to DERD 2494 or ASTM D 1655-83
TS-1	conforming to GOST 10227-86
RT	conforming to GOST 10227-86
PSM-2	conforming to PN-86/C-96026
T-1 and T-2	conforming to GOST 10227-86 with PMAM or TK additives

NOTE: For anti-ice additives - refer to Rotorcraft Flight Manual

6.2 Oil

Engine Oils

B-3W	conforming to TU 38.101295-85 or GOST 5566-70
CASTROL 5000, CASTROL 5050, AEROSHELL TURBINE OIL 500, ELF TURBO JET II	conforming to MIL-L-23699C
CASTROL 599	conforming to DERD 2497
AEROSHELL TURBINE OIL 555	conforming to DERD 2497

Main Gearbox Oils

B-3W	conforming to TU 38.101295-85 or GOST 5566-70
CASTROL 599	conforming to DERD 2497
AEROSHELL TURBINE OIL 555	conforming to DERD 2497

7. Fluid capacities

7.1 Fuel

Total fuel capacity: 454 US Gallons (1720 litres)

Maximum amount of fuel filled into each group of cells:

Engine 1: 214.0 US gallons (810 litres)

Engine 2: 240.4 US gallons (910 litres)

Unusable fuel: 1.85 US gallons (7 litres)

7.2 Oil

Engine oil capacities (each engine):

Max.: 2.1 US gallons (8 litres)

Min.: 1.6 US gallons (6 litres)

Main gearbox oil capacity, Max 7.9 US gallons (30 litres)

7.3 Coolant System Capacity

n/a

8. Air Speed Limitations

Power-on never exceed speed V_{NE}: 140 KIAS (260 km/h)

NOTE: For V_{NE} variations versus actual weight, OAT, and altitude - refer to placards (located in the cockpit on windshield frame and shown in Limitations Section of Rotorcraft Flight Manual).

Power-off never exceed speed V_{NE}:

86 KIAS (160 km/h) up to 6500 ft (2000 m) press. alt.

56 KIAS (105 km/h) above 6500 ft (2000 m) press. alt.

9. Rotor Speed Limitations

Power-off:

Maximum transient 112%

Maximum continuous..... 108%

Minimum continuous 90%

Minimum transient..... 85%

Power-on:

Maximum transient ..... 112% (up to 5 s)

Maximum continuous..... 105%

Minimum continuous

- twin engine operation 100%
- OEI..... 95%

Minimum transient

- twin engine operation 95%
- OEI..... 85% (up to 15 sec.)

NOTE: 100% of main rotor speed corresponds to 255.7 rpm.

10. Maximum Operating Altitude and Temperature

Maximum operating pressure altitude	19700 feet (6000 m)
Maximum pressure altitude for takeoff and landing	16400 feet (5000 m)
Engine starting ensured up to altitude	13120 feet (4000 m)

Sea level OAT limits:

Max.	(+) 43°C
Min.	(-) 40°C

NOTE: For variation of altitude limits with OAT and segment of flight (takeoff, en route, and landing) refer to Limitations Section of Rotorcraft Flight Manual

11. Operating Limitations

11.1 General

Day and Night VFR, and if fitted out with the additional equipment specified in RFM, under IFR.
Operations in know icing condition are not allowed.

11.2 Additional limitations for take-off and landing:

Maximum Ground Speed for Takeoff, Landing, and Taxiing

on prepared surface	32 knots (60 km/h)
on unprepared surface	16 knots (30 km/h)

Maximum wind velocity for starting and stopping rotors:

head wind	48 knots (90 km/h, 25 m/s)
side wind	17 knots (32 km/h, 9 m/s)
tail wind	11 knots (22 km/h, 6 m/s)

Maximum landing slope 5° (windless conditions, the landing slope limit will decrease in the presence of wind)

12. Certified Weights

Maximum takeoff and landing weight	6400 kg (14110 lb)
Minimum takeoff and landing weight	3850 kg (8488 lb)

13. Centre of Gravity Range

Longitudinal centre of gravity limitations:
+ 7.3 inch (185 mm) forward
- 1.97 inch (- 50 mm) aft

NOTE: For variation of longitudinal centre of gravity with gross weight refer to Limitations Section of Rotorcraft Flight Manual.

Lateral centre of gravity limitations:
± 4.7 inch (± 120 mm) for the indicated airspeed up to 48 KIAS (90 km/h),
± 3.54 inch (± 90 mm) for the indicated airspeed above 48 KIAS (90 km/h).

14.	Datum	The Centre of Gravity position is determined in the XYZ coordinate system whose origin is in the intersection point of the main rotor axis and the main rotor hub rotation plane. The X axis is sensed forward and is defined as an intersection of the rotor plane of rotation on the helicopter plane of symmetry. The Y axis is sensed upward and aligns with rotor axis. The Z axis is sensed to the right as viewed from rear.
15.	Levelling Means	Plumb line from ceiling reference point to the index plate located on passenger compartment floor.
16.	Minimum Flight Crew	VFR one pilot operating from the left hand seat IFR two pilots
17.	Maximum Passenger Seating Capacity	13 (thirteen) Refer to RFM for the approved seat configurations
18.	Passenger Emergency Exit	2 (two) located on each side of the passengers cabin
19.	Maximum Baggage / Cargo Loads	In passenger / cargo cabin 2100 kg (4620 lb) NOTE: For maximum allowable floor load refer to Limitations Section of Rotorcraft Flight Manual. In baggage compartment 180 kg (396 lb) NOTE: For baggage compartment shelf load limits refer to Limitations Section of Rotorcraft Flight Manual.

20. Rotor Blade and Controls Movement

Cyclic stick longitudinal travel from neutral position	minimum ±138 mm (±5.43 inch)
Cyclic stick lateral travel from neutral position	minimum ±111 mm (±4.37 inch)
Swash plate angles for:	
Cyclic stick in neutral position	(-)1° ±12' (pitch forward) 0° ±12' (bank)
Cyclic stick in extreme fwd position	(-)8° ±18'(pitch forward)
Cyclic stick in extreme back position	(+)6° ±18'(pitch backward)
Cyclic stick in extreme left position	(+)5° ±18'(bank left)
Cyclic stick in extreme right position	(-)5° ±18'(bank right)
Collective lever travel from neutral position	minimum ±144 mm (±5.67 inch)
Swash plate slider travels for:	
Collective lever in neutral position	0 mm (0 inch)
Collective lever at lower extreme	23.5 ±0.3 mm (0.93 ±0.012 inch) downward
Collective lever at upper extreme	23.5 ±0.3 mm (0.93 ±0.012 inch) upward
Tail rotor pedals travel from neutral position	minimum ±75 mm (±2.95 inch)
Tail rotor pitch angles for:	
tail rotor pedals in neutral position	(+)2° 30' ±1°
RH pedal moved forward home	(+)23° ±1°
RH pedal moved backward home	(-)9° ±1°

21. Auxiliary Power Unit (APU) n/a

22. Life-limited Parts Refer to Document AE 30.04.20.1 MM / AE 30.04.20.1 IOT Volume 1, Chapter 4, Subchapter 4.00.00 Airworthiness Limitations

23. Wheels and Tyres

Main wheels	700 x 250 size model 6A tube type tire and 700 x 250 tube
Nose wheel	400 x 140 size tubeless

IV. Operating and Service Instructions

1.	Flight Manual	PZL W-3A Rotorcraft Flight Manual AE-30.04.20.0 ERFM approved by EASA on 19 June 2005 or later EASA-approved revisions
2.	Maintenance Manual	- Aircraft Maintenance Manual: AE 30.04.20.1 MM (in English) or AE 30.04.20.1 IOT (in Polish) - Engine documents as per Engine TCDS – refer Section 2, Chapter III., para. 5.2
3.	Structural Repair Manual	n/a
4.	Weight and Balance Manual	Refer to approved RFM
5.	Illustrated Parts Catalogue	Illustrated Parts Catalogue AE 30.04.20.1 IPC (in English) or AE 30.04.20.1 IKCR (in Polish)
6.	Service Letters and Service Bulletins	As published by PZL

7. Required Equipment

Refer to EASA-approved Rotorcraft Flight Manual and related supplements for other approved mandatory and optional equipment and Master Minimum Equipment List.

V. Notes

1. Manufacturer's eligible serial numbers: 3X.04.20 and subsequent (not consecutive)

SECTION 3: OPERATIONAL SUITABILITY DATA (OSD)

The OSD elements listed below are approved by the European Aviation Safety Agency as per Commission Regulation (EU) 748/2012, as amended by Commission Regulation (EU) No. 69/2014.

I. OSD Certification Basis

I.1 Reference Date for determining the applicable OSD requirements

For Model PZL W-3AS: n/a
For Model PZL W-3A: 10 July 2015 (as determined in PZL W-3A CRI A-01 OSD)

I.2 MMEL - Certification Basis

For Model PZL W-3AS:
- n/a

For Model PZL W-3A:
- CS-MMEL, initial Issue dated 31 January 2014 (as defined in PZL W-3A CRI A-01 OSD)

I.3 Flight Crew Data - Certification Basis

For Model PZL W-3AS:
- n/a

For Model PZL W-3A:
- CS-FCD – Initial Issue 31 dated January 2014 (as defined in PZL W-3A CRI A-01 OSD)

I.4 SIM Data - Certification Basis

Reserved

I.5 Maintenance Certifying Staff Data - Certification Basis

Reserved

II. OSD Elements

II.1 MMEL

For Model PZL W-3AS:
n/a
For Model PZL W-3A:
PZL W-3A - Operational Suitability Data (OSD) - Master Minimum Equipment List (MMEL), Doc. No. AE 30.04.20.0 MMEL, Issue 0 dated 11.12.2015, or later approved revisions

II.2 Flight Crew Data

For Model PZL W-3AS:
n/a
For Model PZL W-3A:
PZL W-3A - Operational Suitability Data - Flight Crew Data, Doc. No. AE 30.04.20.0 FCD, Issue 0 dated 16.12.2015, or later approved revisions

II.3 SIM Data

reserved

II.4 Maintenance Certifying Staff Data

reserved

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

Amdt.	Amendment
CAO	Civil Aviation Office (Polish Civil Aviation Authorities)
CRI	Certification Review Item
EASA	European Aviation Safety Agency
IFR	Instrument Flight Rules
JAR	Joint Aviation Requirements
KIAS	Knots Indicated Air Speed
LBA	Luftfahrt-Bundesamt (German Federal Aviation Office)
Max.	maximum
Min.	minimum
MMEL	Master Minimum Equipment List
n/a	not applicable
No.	number
Nr	Rotor speed
OAT	Outside Air Temperature
OEI	One Engine Inoperative
OSD	Operational Suitability Data
RFM	Rotorcraft Flight Manual
rpm	Revolutions per minute
sec.	seconds
TCDS	Type Certificate Data Sheet
TCDSN	Type Certificate Data Sheet for Noise
VFR	Visual Flight Rules
V_{NE}	Never Exceed Speed

II. Type Certificate Holder Record

Type Certificate Holder	**Period**
WYTWÓRNIA SPRZĘTU KOMUNIKACYJNEGO “PZL-Świdnik” Spółka Akcyjna Al. Lotników Polskich 1 21-045 Świdnik POLAND	From 17 March 2005

III. Change Record

Issue	**Date**	**Changes**	**TC issue**
Issue 01	17 March 2005	Initial issue of EASA TCDS (Model PZL W-3AS)	Initial Issue 17 March 2005
Issue 02	8 August 2006	Incorporation of Model PZL W-3A	TC reissued on 8 August 2006
Issue 03	18 December 2015	Incorporation of Section 3 - OPERATIONAL SUITABILITY DATA (OSD), engine TC Holder name and engine TCDS No. update, and editorial changes (new TCDS template)	No TC change

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