

MINISTÉRIO DA AERONÁUTICA
DEPARTAMENTO DE PESQUISAS E DESENVOLVIMENTO
CENTRO TÉCNICO AEROESPACIAL

TYPE CERTIFICATE DATA SHEET Nº 8903

Type Certificate Holder:

Wytwornia Sprzetu Komunikacyjnego (WSK)
 "PZL" - KALISZ
 62.800 Kalisz
POLAND

EM-8903
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ASZ-62IR-16
ASZ-62IR-M18
OCTOBER 89

Engine of models described herein conforming with this data sheet which is a part of Type Certificate nº 8903 meet the minimum standards for use in certificated aircraft in accordance with the applicable RBHA regulations. provided they are installed, operated and maintained as prescribed by the manufacturer's approved manuals and other instructions.

- MODEL	ASZ-62IR-16	ASZ-62IR-M18	.
- TYPE	Reciprocating; 9RA; Propeller reduction gearing supercharged	- -	
- RATINGS (with impeller gear ratio)			
. Maximum continuous power kw (hp)			
at sea level, 15°C (59°F)	591 (793)	- -	
at 1500m (4920ft) altitude	605 (812)	- -	
- Engine speed. rad/s (rpm)	220 (2100)	- -	
- Manifold Pressure kPa (mmHg) .	120 (900)	- -	

- MODEL	<u>ASZ-62IR-16</u>	<u>ASZ-62IR-M18</u>
. Takeoff power (5 min) kw (hp) at sea level, 15°C (59°F)	721 (967)	- -
- Engine speed rad/s (rpm)	230 (2200)	- -
- Manifold Pressure kPa (mmHg) .	140 (1050)	- -
- FUEL		
. Minimum grade aviation gas.	91/96	- -
. Carburetor (float type with automatic altitude mixture correction to 1500 m (4992 ft) .	AKM-62IRA	- -
. Fuel pump (sliding vane)	BNK-12BK	- -
- OIL		
. Type	Ashless dispersant per MIL-L- 22851 or straight mineral per MIL-L-6082 as indicated in table 3.4 of the Installation Manual.	- -
. Oil tank capacity	Dry sump	- -
. Centrifugal oil filter	-	TCM-25

	<u>ASZ-62IR-16</u>	<u>ASZ-62IR-M18</u>
- MODEL		
- COOLING	Air cooled	- -
- IGNITION		
. Type (Magneto)	BSM-9 with spark advance control. BSM-9 without spark advance control	- -
. Timing (before TDC) rad (deg)	Right magneto - 0,35 (20 °) Left magneto - 0,26 (15 °)	- -
. Spark plugs	SD-48BSM	- -
- COMPRESSION		
. Bore x Stroke mm x mm (in x in)	155,5 x 174,5 (6.12 x 6.87)	- -
. Displacement l (in ³)	29.87 (1823)	- -
. Compression ratio	6,4 ± 0.1 : 1	- -
- CRANKSHAFT DRIVEN COMPRESSOR		
. Model	Centrifugal with single speed power-drive	- -
. Compression transmission ratio	7 : 1	- -

- MODEL	<u>ASZ-62IR-16</u>	<u>ASZ-62IR-M18</u>
- MAIN DIMENSIONS mm (in) (not including starter generator)		
. Length	1328 (55,28)	1130 (44,49)
. Diameter	1380 (54,33)	- -
- WEIGHT Kgf (lbf) (dry) (Including essential accessories except starter generator, and hydraulic pump)	579 (1276)	567 (1250)
- CENTER OF GRAVITY mm (in) (Excluding engine starter and accessories and referenced to the vertical plane of the cylinder centerline)		
. above the crankshaft centerline	11.5 (0.45)	13.0 (0.51)
. behind the cylinder centerline plane	19.0 (0.75)	14.0 (0.55)

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- | | <u>ASZ-62IR-16</u> | <u>ASZ-62IR-M18</u> |
|--|--------------------|---------------------|
|--|--------------------|---------------------|
- MODEL
- PROPELLER SHAFT
- | | | |
|------------------------|---|-----|
| . Type | 16 straight splines with:
OD = 96,63 mm
ID = 86.00 mm | - - |
| . Propeller gear ratio | 0,687 : 1 | - - |
- NOTES
- " - - " Indicates "same as preceding model"
- " - " Indicates "does not apply"
- **CERTIFICATION BASIS:** Certified according to RBHA 21.29 and FAR Part 33 effective February 1st, 1965 with Amendments 33-1 through 33-6 thereto.
- **TYPE CERTIFICATION APPLICATION DATE:** April 2nd, 1987
- **CERTIFICATION DATE** Type Certificate for Import n^o 8903 issued on October 10th, 1989.
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- **IMPORT REQUIREMENTS** Each engine imported separately and/or spare parts must be accompanied by an Airworthiness Certificate for Export and/or an Airworthiness Approval Tag respectively, issued by CACA - Central Administration of Civil Aviation - attesting that the particular engine and/or parts were submitted to the governmental quality control before delivery and are in conformity with the CTA approved type design.

- **NOTE 1 : MAX. PERMISSIBLE TEMPERATURE °C (°F)**

	<u>ASZ-62IR-16</u>	<u>ASZ-62IR-M18</u>
. Cylinder Head	245 (473) max. 15 min 215 (419) no time limit	- -
. Oil inlet temperature.	95 (203) max. 3 min 75 (167) no time limit 98.9 (210) for oils with 120 SUS vis- cosity	- -

- **NOTE 2: PRESSURE LIMITS kPa (psi)**

	<u>ASZ-62IR-16</u>	<u>ASZ-62IR-M18</u>
. Carburetor inlet pressure at rated range	24.5 to 34.3 (3.55 to 4.97)	- -
. Oil pressure		
- at rated range	392.3 to 490.2 (56.9 to 71.1)	- -
- at idle	146.9 (21.3)	- -

- NOTE 3: ACCESSORY DRIVE PROVISIONS

ACCESSORY	ENGINE M O D E L S		ROTATION	SPEED RATIO TO CRANKSHAFT	CONTINUOUS		OVERHANG MOMENT
	ASZ-62IR-16	ASZ-62IR-M18			MAXIMUM TORQUE Kgf x m (lb x ft)	kgf x m (lb x ft)	
Starter RIM-U-24R	*	*	CC	1 : 1	110 (795)	2.35 (17.00)	
Magneto BSM-9 or BSM-9F	*	*	CC	1,252 : 1	0.31 (2.21)	0.41 (2.93)	
Centrifugal filter TCM-25	*	-	C	3,345 : 1	0.18 (1.30)	0.25 (1.81)	
Propeler governor R-9SM2	*	*	CC	1,114 : 1	0.36 (2.60)	-	
Generator GSN-3000M	**	**	C	2,52 : 1	1.46 (10.56)	1.23 (8.90)	
Piston Air Com- pressor AK-50P-12	**	-	C	0,835 : 1	0.65 (4.70)	0.18 (1.30)	
Hydraulic Pump PLT-2-3	-	**	C	2,17 : 1	0.83 (6.00)	0.13 (0.94)	
"Agro" hydraulic Pump PLTZ-15	-	**	CC	1,28 : 1	6.01 (43.4)	0.57 (4.12)	

* - Standard

** - Optional

- - Not applicable

C - Clockwise rotation when facing pad.

CC - Counterclockwise when facing pad.

- **NOTE 4: CONDITIONS FOR ENGINE RATING EVALUATION**

- Engine ratings are based on static sea level standard conditions of International Standard Atmosphere /ISA/ without taking into account dynamic pressure and with no aircraft accessory loads.

- **NOTE 5: ENGINE MODEL DESCRIPTION**

ASZ-62IR-16 - Basic model. Tractor type 9 cylinders radially assembled to the crankshaft casing supercharged with dry sump. Oil sump equipped with ship detector. Oil system equipped with a centrifugal filter. Engine equipped with AK 50P-12 piston air compressor.

ASZ-62IR-M18 - Same as above but without centrifugal oil filter, metal-ship detector and equipped with hydraulic pumps PLT-2-3 AND pltz-15.

- **NOTE 6: ENGINE ACCESSORY CERTIFIED WITH AIRCRAFT**

Not applicable.

- **NOTE 7: MODEL CANCELLATIONS**

Not applicable.

- **NOTE 8: DIRECTION OF THRUST APPLICATION**

Tractor type propulsion arrangement.

- NOTE 9: HELICOPTER INSTALLATION INFORMATION

Not applicable.

- NOTE 10: VIBRATION DAMPER PROVISIONS LIMITATIONS

Not applicable.

- NOTE 11: SERVICE BULLETINS OF GENERAL INTEREST

70 - 51/E/85 - Introduction of fuel and oil specifications.

- NOTE 12: COMPLIANCE WITH 33.5 REQUIREMENT

Installation instructions WT-62.01.01K

Operation Instructions WT-62.02.01

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