

EM Brno Ltd.

DYNAMO – STARTER SDS 08s/F

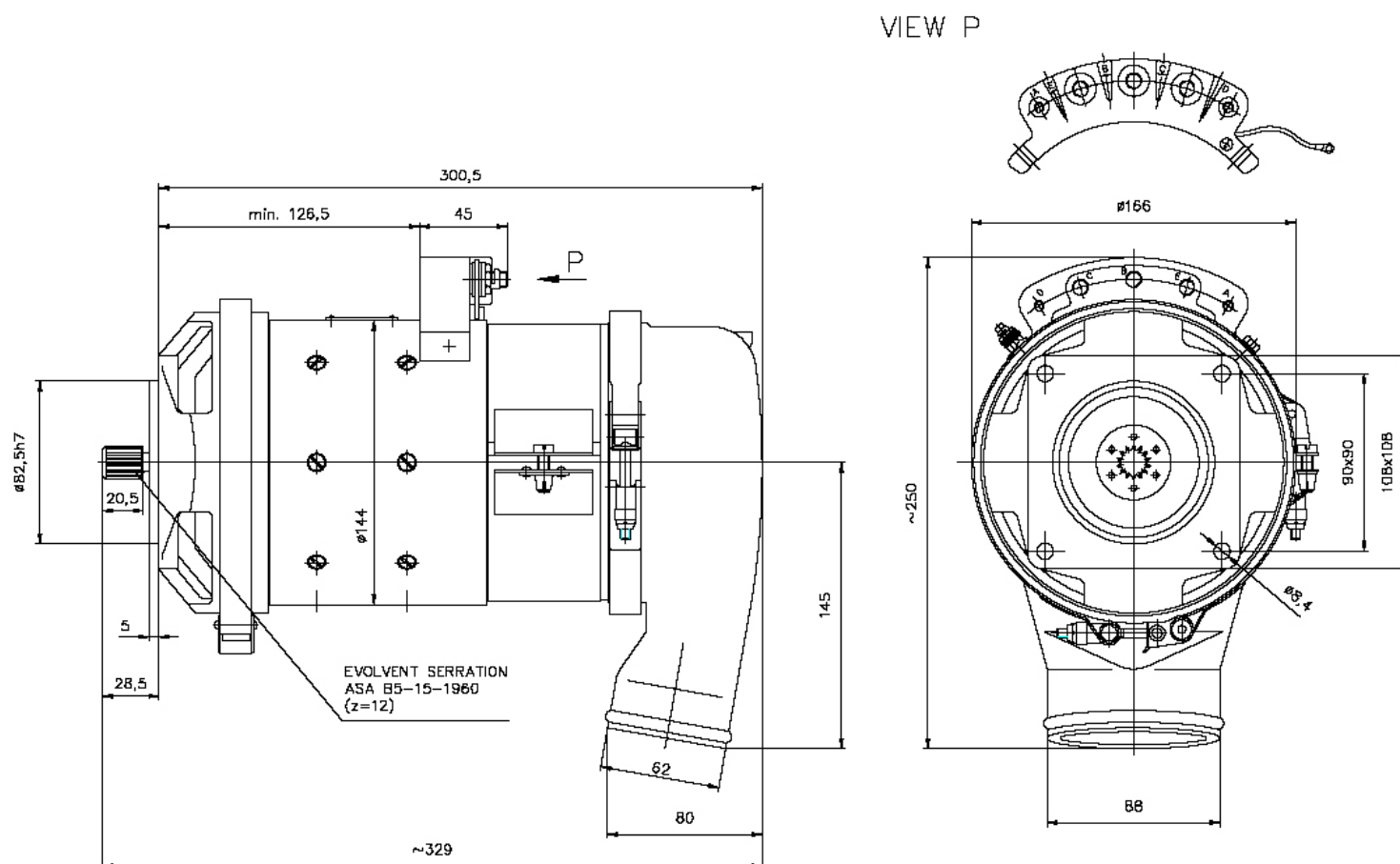
LUN 2132.02-8

and

LUN 2132.03-8



Dynamo – starter LUN 2132.02-8



Designation of the starter-generator for order:
Starter-generator LUN 2132.02-8

1. The starter-generator LUN 2132.02-8, type designation by the producer SDS 08s/F, is a four pole DC generator with parallel field winding being fed from the own terminals through the voltage control unit 3 GN 016.

Auxiliary poles and compensation windings are connected in series with the armature winding. The series field winding is used in the starter regime only.

The starter-generator together with the voltage control unit serve as source of DC energy. In the starter regime it serves for primary turning of additional devices.

The machine contains a fan on the motor shaft. By the continuous rated loading there must be insured a combined cooling: fan + gust air with the overpressure of 120 mm H₂O on the air – inlet.

The starter-generator is delivered under the designation LUN 2132.02-8.

2. The starter-generator together with the voltage control unit can work in the environ WW27 in the temperature range from -60°C to +60°C with a relative humidity from 20% to 95% ± 3%.

The equipment can work to the maximal height 10 000 m over the sea level.

The ambient temperature in the not active regime is from -60°C to +100°C.

3. The mounting shape of the starter-generator is **IM 3001** acc. ČSN-EN 60034-7, the flange is on the D-side. The starter-generator can work in all positions.
The protection of the starter-generator responds to **IP 20** acc. ČSN EN 60034-5.
The cooling of the starter-generator responds to **ICA 01** acc. ČSN-EN 60034-6.
The surface painting is black, both clips are made from polished stainless steel.

4. The voltage control unit LUN 2167.03-8, type designation by the producer 3 GN 016.

5. Technical data of the starter-generator in set with the voltage control unit:

Generator-regime:

Rated voltage	28 V DC
Working voltage	27 to 28,5 V
Working voltage by overloading, by rated current and with speed under 6 500 min ⁻¹ and by limiting temperatures acc. item 2	26 to 29 V
Rated current continuously	200 A
Short-time overloading for 5s (by speed over 7 000 min ⁻¹)	400 A
Overloading by temperature +5°C (S2 30 min)	250 A
Continuous overloading by temperature +30°C (by speed over 7 000 min ⁻¹)	220 A
Speed range	5 800 to 12 000 min ⁻¹

Motor-regime (starter):

Maximal voltage	28 V DC
Pick starting current	cca 700 A
The minimal power 2,9 kW is reached with the terminal voltage 20V by speed of 2 500 min ⁻¹	

6. Installation of the device is made with conductor cross-section:

a) generative part of wiring diagram min. 35 mm ²
b) starting part of the wiring diagram min. 16 mm ²
c) connection with the voltage control unit min. 0,75 mm ²

7. Fastening of the starter-generator to the equipment by means of a mounting flange with 4 screws M8. The starter-generator itself is fastened to a mounting flange by means of a flange clip, which is a part of the delivery.

8. Accessories:

a) spare double brushes (3 sets)	12 pcs
b) flange clip	1 pc

9. Mass of the starter-generator incl. the clip is max. 16,4 kg.

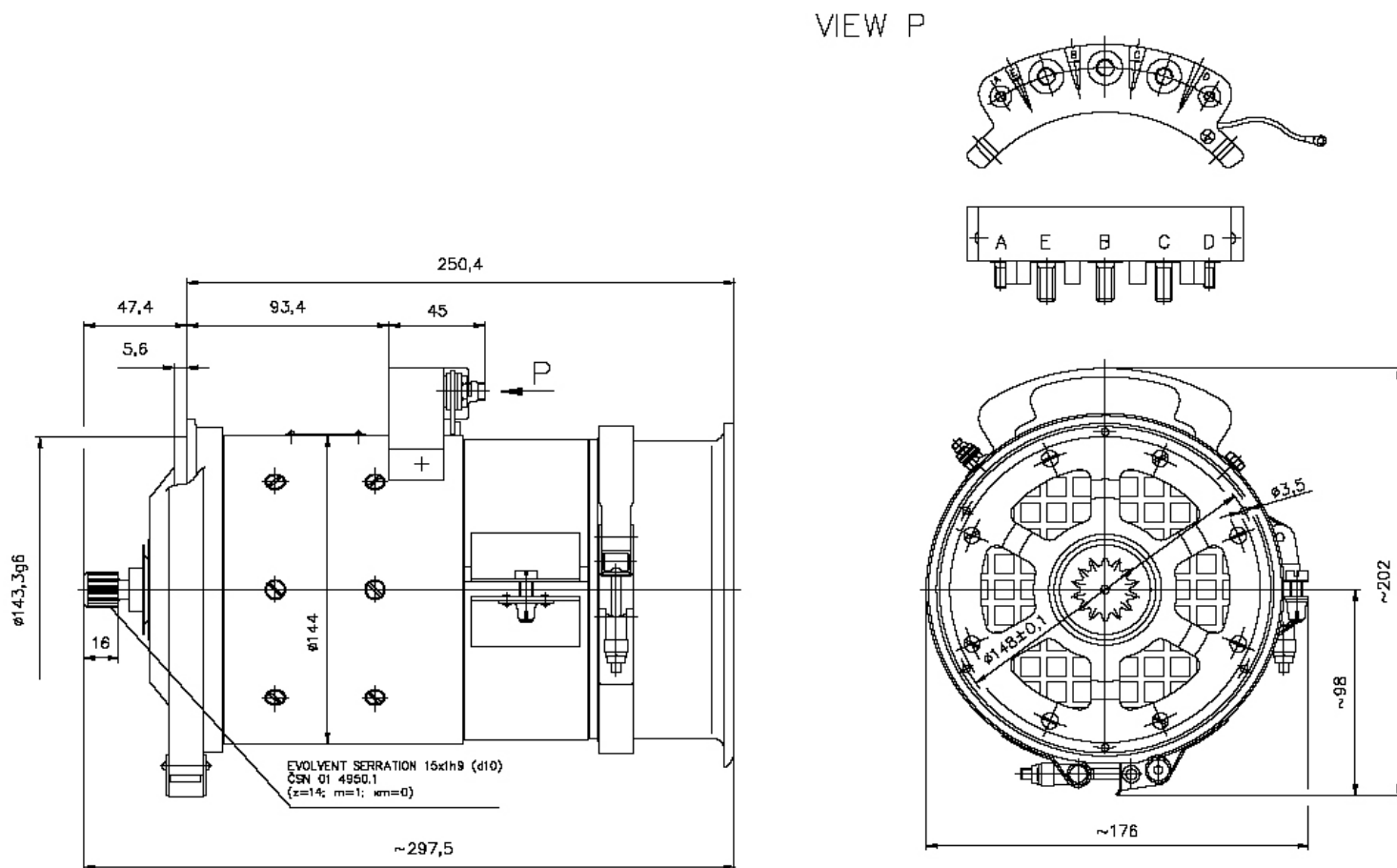
10. The authorized testing facility for avionic products VZLÚ Praha – Letňany has approved the climatic resistance WW 27 acc. ČNL 0600 on the base of the test report No: 1834/2147/97-KTR/2277/98/2304/98/98 P 835/31E-75/76

11. The prescribed time for overhauls is **3 000 working hours or 3 000 starts, or 10 years**.
Two overhauls are permissible.

12. The starter-generator was designed, tested and it complies with following standards:

ČSN EN 60034-1	ČSN EN 60034-5	ČSN EN 60034-6	ČSN EN 60068-2-1
ČSN EN 60068-2-2	ČSN EN 60034-7	ČSN 33 4200	ČSN 34 2860
ČSN 34 5791-2-30	ČSN 35 0000-1-1	ČSN 35 0010	ČSN 35 0101
ČSN ISO 9227	ČSN ISO 6988	ČSN ISO 9223	ČSN EN 60721-1
ČNL 0600			

Dynamo – starter LUN 2132.03-8



Designation of starter-generator for order:
Starter-generator LUN 2132.03-8

1. The starter-generator LUN 2132.03-8, type designation by the producer SDS 08s/F, is a four pole DC generator with parallel field winding being fed from the own terminals through the voltage control unit 4 GN 016.

Auxiliary poles and compensation windings are connected in series with the armature winding. The series field winding is used in the starter regime only.

The starter-generator together with the voltage control unit serve as source of DC energy. In the starter regime it serves for primary turning of additional devices.

The machine contains a fan on the motor shaft ensuring the self cooling.

The starter-generator is delivered under the designation LUN 2132.03-8.

2. The starter-generator together with the voltage control unit can work in the environ WW27 in the temperature range from -55°C to $+60^{\circ}\text{C}$ with a relative humidity from 20% to $95\% \pm 3\%$.

The equipment can work to the maximal height 11 500 m over the sea level.

The ambient temperature in the not active regime is from -60°C to $+85^{\circ}\text{C}$.

3. The mounting shape of the starter-generator is **IM 3001** acc. ČSN-EN 60034-7, the flange is on the D-side. The starter-generator can work in all positions.

The protection of the starter-generator responds to **IP 20** acc. ČSN EN 60034-5.

The cooling of the starter-generator responds to **ICA 01** acc. ČSN-EN 60034-6.
The surface painting is black, both clips are made from polished stainless steel.

4. The voltage control unit LUN 2167.04-8, type designation by producer 4 GN 016.

5. Technical data of the starter-generator in set with the voltage control unit:

Generator-regime:

Rated voltage	28 V DC
Working voltage	27 to 29 V
Working voltage by overloading, by rated current and with speed under $9\,400\text{ min}^{-1}$ and by limiting temperatures acc. item 2	26 to 29 V
Rated current continuously	200 A
Short-time overloading for 5s (by speed over $9\,600\text{ min}^{-1}$)	400 A
Overloading by temperature $+30^{\circ}\text{C}$ (S2 60 min) (by speed over $9\,400\text{ min}^{-1}$)	250 A
Continuous overloading by temperature $+30^{\circ}\text{C}$ (by speed over $9\,400\text{ min}^{-1}$)	220 A
Speed range	$8\,000$ to $11\,720\text{ min}^{-1}$

Motor-regime (starter):

Maximal voltage	28 V DC
Pick starting current	cca 700 A
The minimal power 1,7 kW and torque 7,8,Nm are reached with the terminal voltage 20V by speed of $2\,070\text{ min}^{-1}$.	

6. Installation of the device is made with conductor cross-section:

- a) generative part of wiring diagrammin. 35 mm^2
- b) starting part of the wiring diagrammin. 16 mm^2
- c) connection with the voltage control unitmin. $0,75\text{ mm}^2$

7. Fastening of the starter-generator to the equipment is made by means of a flange clip, which is part of the delivery.

8. Accessories:

- a) spare double brushes (1 set) 4 pcs
- b) flange clip 1 pc

9. Mass of the starter-generator incl. the clip is max. 16 kg.

10. The authorized testing facility for aviatric products VZLÚ Praha – Letňany has approved the climatic resistance WW 27 acc. ČNL 0600 on the base of the test report No.: 1835/2307/98-KTR/98 P 1834/2147/97-KTR/2277/98/2304/98/98.

11. The prescribed time for overhauls is: **1 500 working hours or 4 000 starts, or 12,5 years.**
One overhaul is permissible only.

12. The starter-generator was designed, tested and it complies with following standards:

ČSN EN 60034-1	ČSN EN 60034-5	ČSN EN 60034-6	ČSN EN 60068-2-1
ČSN EN 60068-2-2	ČSN EN 60034-7	ČSN 33 4200	ČSN 34 2860
ČSN 34 5791-2-30	ČSN 35 0000-1-1	ČSN 35 0010	ČSN 35 0101
ČSN IEC 721-2-1	ČSN ISO 9227	ČSN ISO 6988	RTCA/DO-160C
ČNL 0600			

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