



## SPAL COOLANT PUMPS

12 & 24V - 300 | 650 | 900W

A cooling pump is an essential part of any vehicle cooling system.

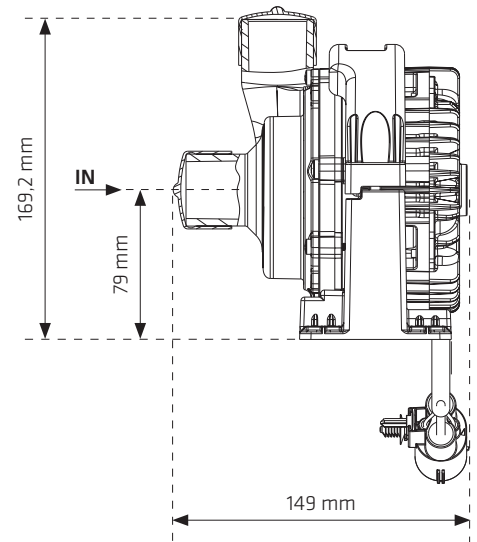
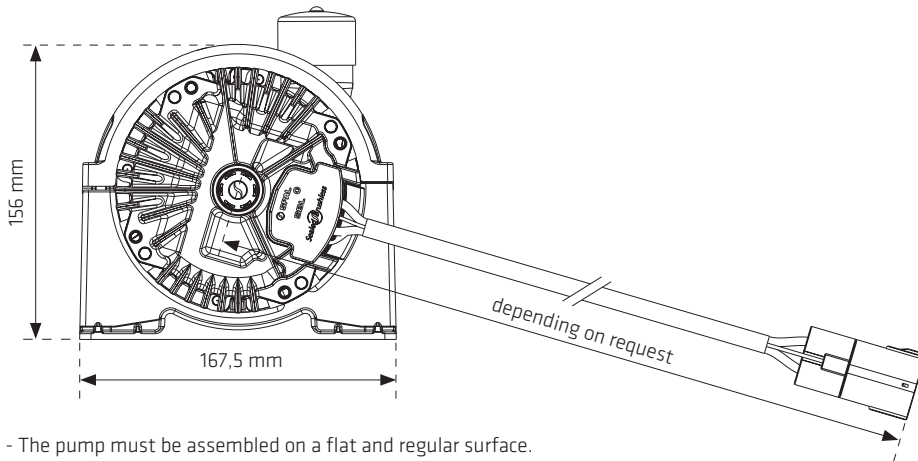
### PRODUCT FEATURES

- 650W available
- **300W & 900W coming soon**
- Sealed Brushless Motor resistant to Corrosion & Water (IP68/IP6K9K Drive)
- Extended temperature range
- PWM controlled, CAN and LIN version available
- Diagnosis functions
- Metal housing drive
- Robust & Reliable
- High Efficiency
- Silent
- Intelligent Drive
- Variable speed control
- Drive self protection features

Sealed  Brushless®

Image is purely indicative and might change without any prior notice

## MECHANICAL DATA



- The pump must be assembled on a flat and regular surface.
- Fixing recommendation: use M6 bolts with washer  $\varnothing$  12-18 mm for fixing.
- Suggested Nominal torque 5 Nm.
- Nominal torque defined for brand new, clean and lubricant-free bolts.

## FEATURES

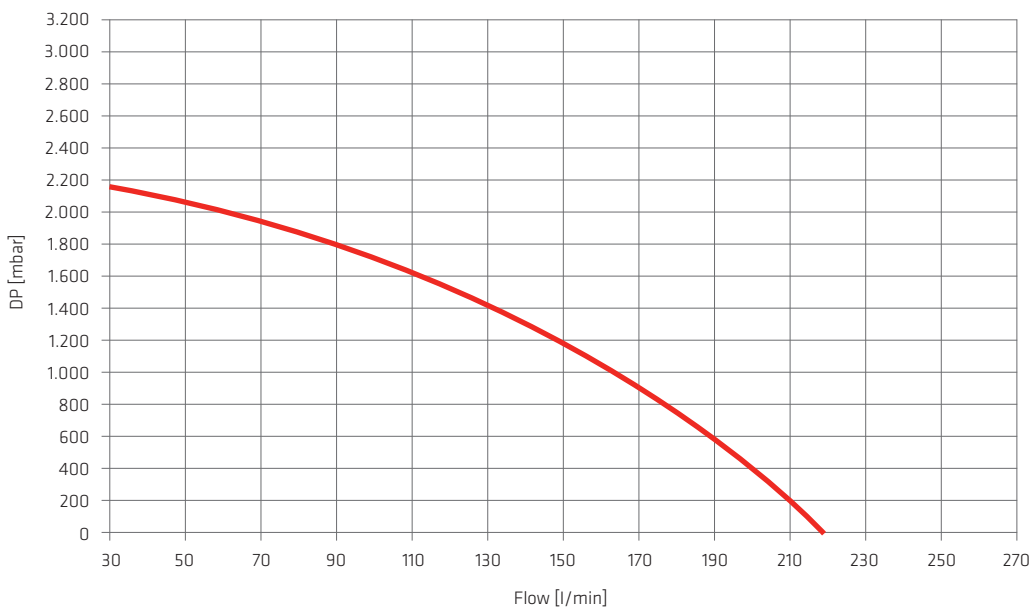
Weight	kg	2,76 with bracket
Operating supply voltage range	V	16.0 .. 32.0 at the Drive connector
Supply voltage to reach max speed	V	26.0 .. 32.0 at the Drive connector
Ambient temperature range	°C	-40 .. +120 (2)
Max operating ambient temperature @ max pump speed	°C	+105 (1)
Storage temperature range	°C	-40 .. +120
Lifetime	h	up to 40.000 hours (2)
Load dump protection (Pulse 5a)	available	ISO16750-2
Reverse polarity protection	available	ISO 16750-2

Notes: (1) Few minutes ambient temperature transients do not engage the derating owing to the thermal inertia of the system. Overloads may anticipate derating.

Notes: (2) Depending on mission profile

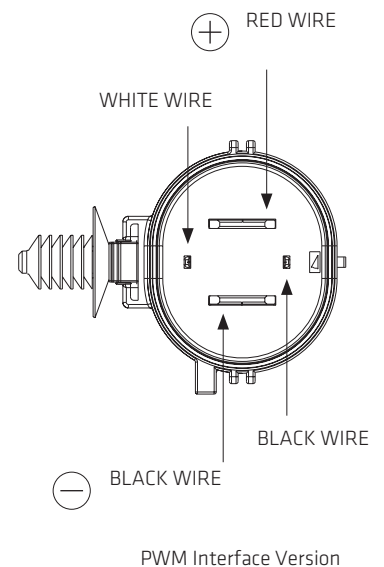
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## PERFORMANCE AT MAXIMUM SPEED

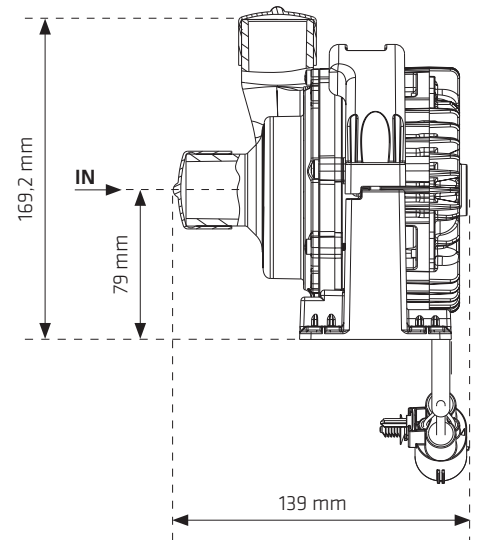
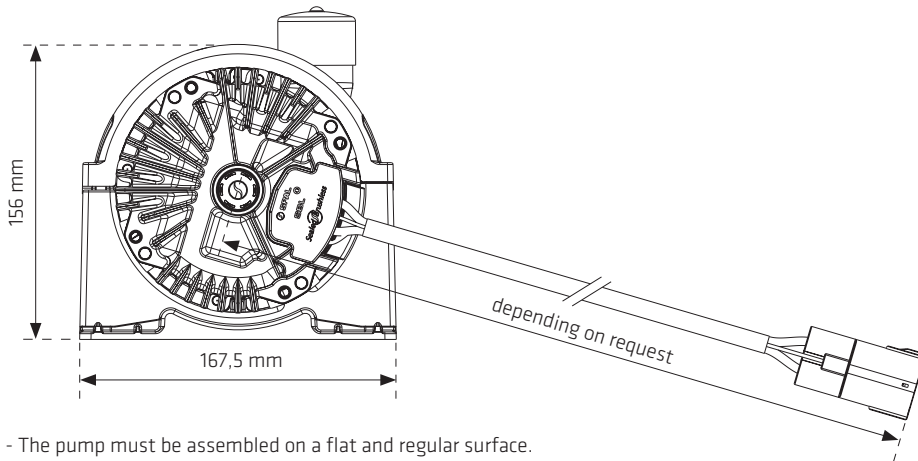


Ethylene Glycol / Water mixture 60:40 ratio by volume - Density 1,08kg / l  
 Test bench compliant to ISO9906 TAMB = 20 °C ± 5 °C - UB = 26.0 V at the Drive connector

## CONNECTOR AND WIRES



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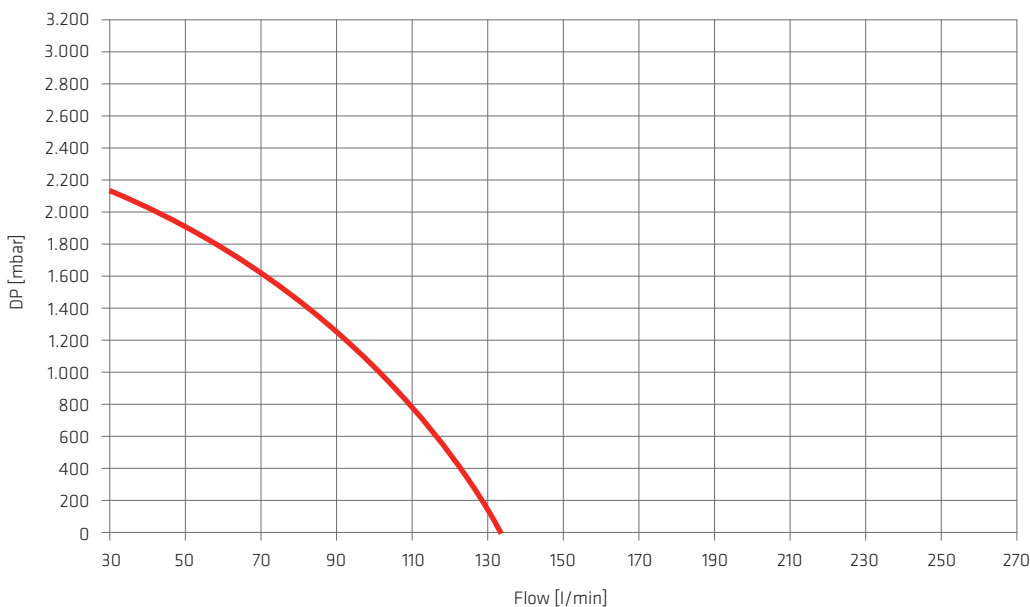
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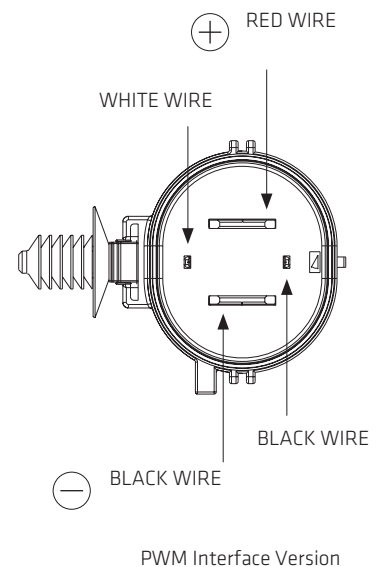
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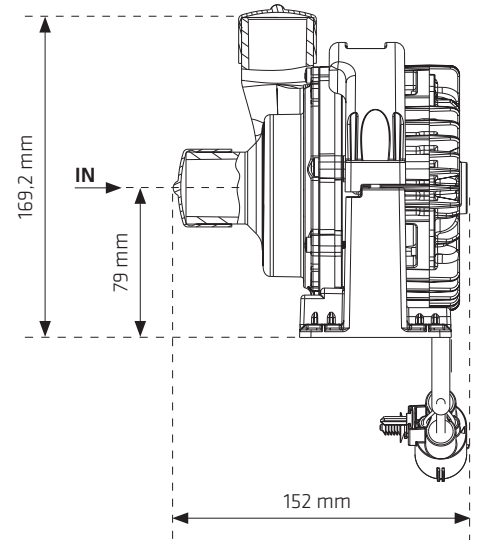
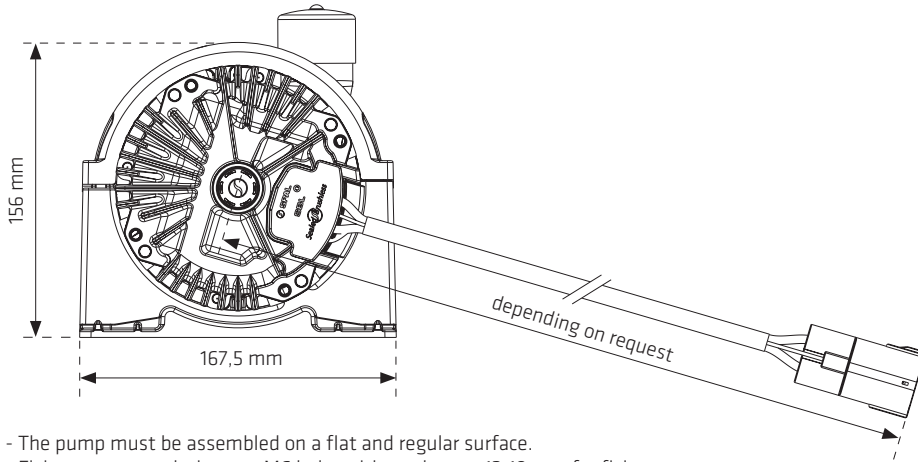


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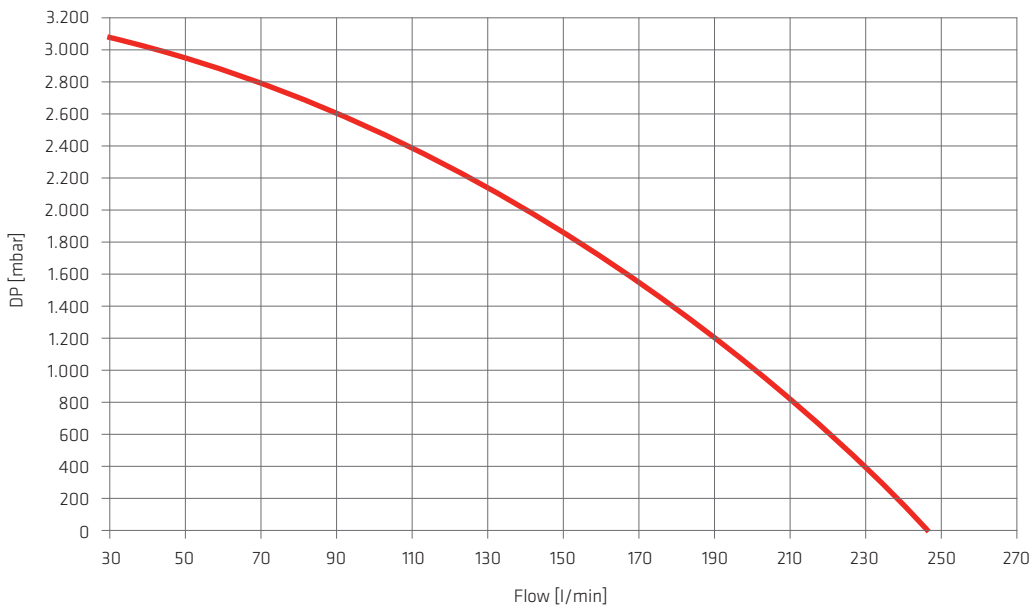
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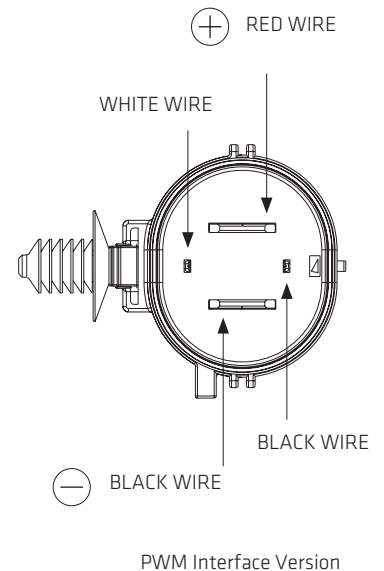
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## CONNECTOR AND WIRES



# GLOBAL footprint subsidiaries

The **SPAL** team has an international presence with subsidiaries and offices worldwide.

The location of subsidiaries are carefully co-ordinated to optimize the distribution and marketing of **SPAL** products with customer service and distribution centers based close to key customers.



• SPAL USA INC.  
Sales office and warehouse

• SPAL AUTOMOTIVE (UK) LIMITED  
Sales office and warehouse

• SPAL AUTOMOTIVE TECHNOLOGY INDIA PRIVATE LIMITED  
Production, sales office and warehouse

• SPAL JAPAN K.K.  
Sales office and warehouse

• SPAL RUS LLC.  
Sales office and warehouse

• SPAL KOREA  
Sales office

• SPAL DO BRASIL LTDA  
Sales office and warehouse

• SPAL AUTOMOTIVE TECHNOLOGY  
(Changzhou) CO., LTD.  
Manufacturing site

• SPAL AUTOMOTIVE COMPONENTS  
(Shanghai) CO., LTD.  
Sales office and warehouse

