

# PEGASEM Wheel

## 5<sup>th</sup>-Wheel for Vehicle Testing



### Features

- Enables reversing and skid testing
- Compact Size
- Low Weight
- Robust and corrosion resistant
- P-Lock Quick Fastener
- Easy to disassemble and transport
- Available in a special carrying case

### Applications

- High Prec. Speed Measurement
- Acceleration Testing
- Brake Performance Testing
- Speed Reference during Tire Slip-Testing
- High Precision Distance Measurement
- Vehicle Development
- Registration



5<sup>th</sup>-wheel 5W-20 in action attached with elements from the FMS Mounting System.

The newly designed 5<sup>th</sup>-wheels of PEGASEM stand out because of their precision, compactness and carefree reversing ability. This unique design avoids lateral forces to the rim when the vehicle is skidding or reversing. This enables the vehicle to be turned



Reversing over kerbstones - no problem

without lifting the 5<sup>th</sup>-wheel. The integrated sensor delivers stable measurement data even on critical surfaces e.g. on flooded test tracks where non-contact speed sensors often fail.

Very smooth running characteristics on the road are achieved by using a high-grade damper with extra long spring travel. This, together with the newly designed pulse transducer, results in a low noise speed signal.

When selecting the materials, emphasis was put on robustness and corrosion resistance. All components, e.g. joints, fork, axle, ball bearings, hub, spokes, rim and tyres, have been constructed for heavy-duty application. Nevertheless the unit is compact and easy to transport.

The 20"-version is also excellently suited for mounting under trucks. The test driver can at last manoeuvre without having to consider lifting the 5<sup>th</sup>-wheel. Even reversing over kerbstones is no problem.

For extremely high precision measurements, the PEGASEM 5<sup>th</sup>-wheel is available with an airless PUR-tyre. Therefore re-calibration of the wheel

diameter due to loss of pressure, is no longer necessary. Depending on usage, the initial calibration remains valid for several years.



Mounting on ball shaped trailer hitch

Furthermore, during design a high level of modularity was incorporated. In the case of damage the user can simply change any part within minutes, no special training or any non-standard tools being necessary. Returning the wheel to the factory for repair is therefore usually not required. This in-

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increases the availability and minimises cost.

For attachment to the vehicle we offer various mounting devices e.g.

- Suction Cup Holders
- Clamps for the Trailer Hitch
- Clamps for the Towing Lug
- Brackets and Plates for under floor rails on trucks
- Customised Plates and Flanges



Truck under floor attachment of 20"-sized wheel

Our attachment devices are modular and extremely versatile. They are also very well suited for mounting other



5W-26 with spikes: Ideal for winter and ice condition

test equipment on the car.

Please ask for our separate data sheet: **FMS**, the PEGASEM 5<sup>th</sup>-wheel Mounting System.



The 5th wheel with accessories perfectly fits into the custom-made transportation case. 550x550x270 (WxDxH)

### Technical Data:

Mechanical Data	5W-20				5W-20-AL				5W-26			
	Metric		Standard		Metric		Standard		Metric		Standard	
Wheel Diameter	509	mm	20	inch	476	mm	18,7	inch	560	mm	22	inch
Max. Air Pressure	8,5	bar	120	psi	---	bar	---	psi	4,5	bar	65	psi
Max. Speed	250	km/h	155	mph	100	km/h	62	mph	250	km/h	155	mph
Vertical Force on Road	100	N	100	N	100	N	100	N	200	N	200	N
Length (appr.)	800	mm	32	inch	800	mm	32	inch	1000	mm	40	inch
Arcing Angle	±90	deg	±90	deg	±90	deg	±90	deg	±90	deg	±90	deg
Weight	5,3	kg	11,7	lbs	5,3	kg	11,7	lbs	6,8	kg	15	lbs
Number of Spokes	48		48		48				3		3	
Fork Material	Stainless Steel				Stainless Steel				Stainless Steel			
Tyre	Pneumatic				Polyurethane (PUR)				Pneumatic			
Wheel Mounting Technique	Quick Release Skewer				Quick Release Skewer				Quick Release Skewer			
<b>Sensor Data</b>												
Power Supply	5...24 VDC, 20mA				5...24 VDC, 20mA				5...24 VDC, 20mA			
Pulse Rate per Revolution	128				128				128			

Intelligent Test Solutions



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