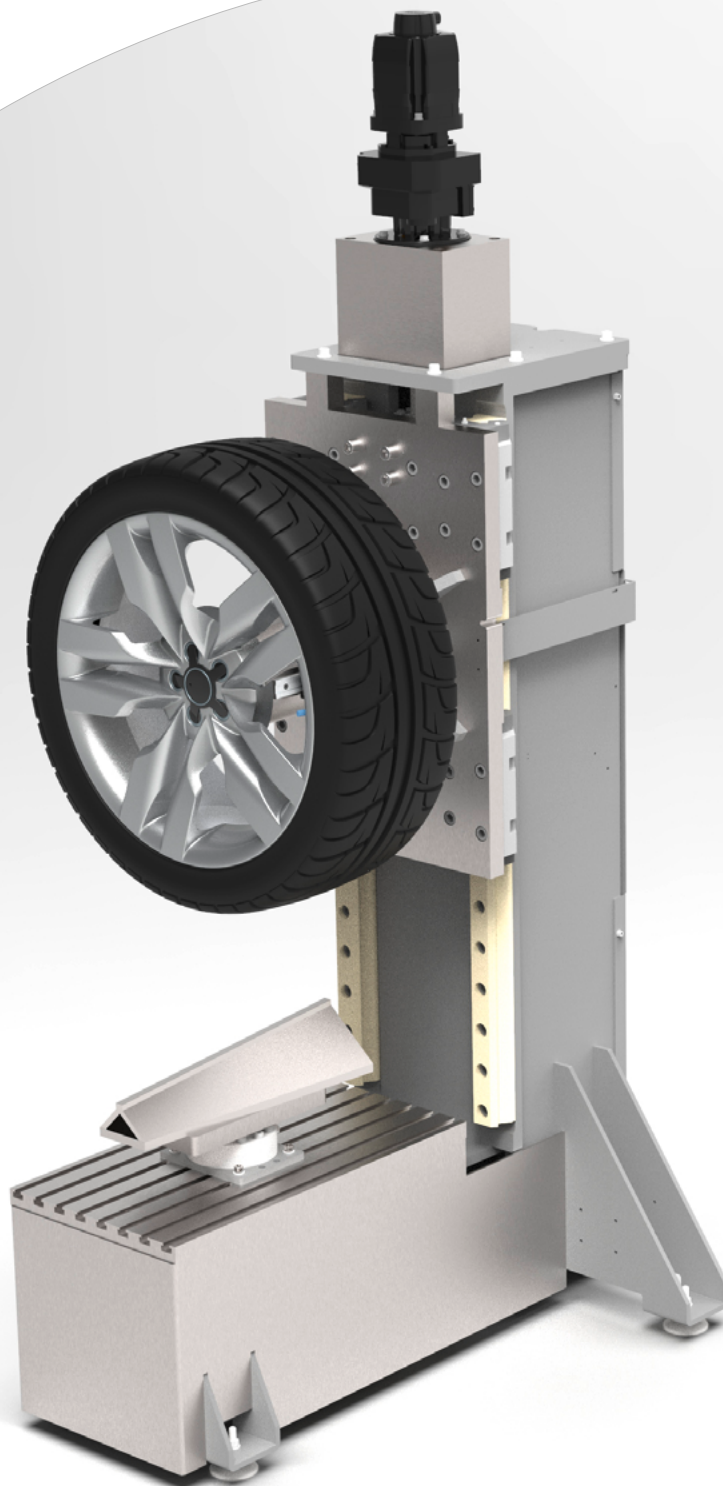


VSE200

Pre-damage & compression test



FUNCTION

Pre-damage

For various radial fatigue tests of aluminum wheels, a defined pre-damage is requested. The VSE200 can apply this kind of load scenarios according different regulations prior to the fatigue test.

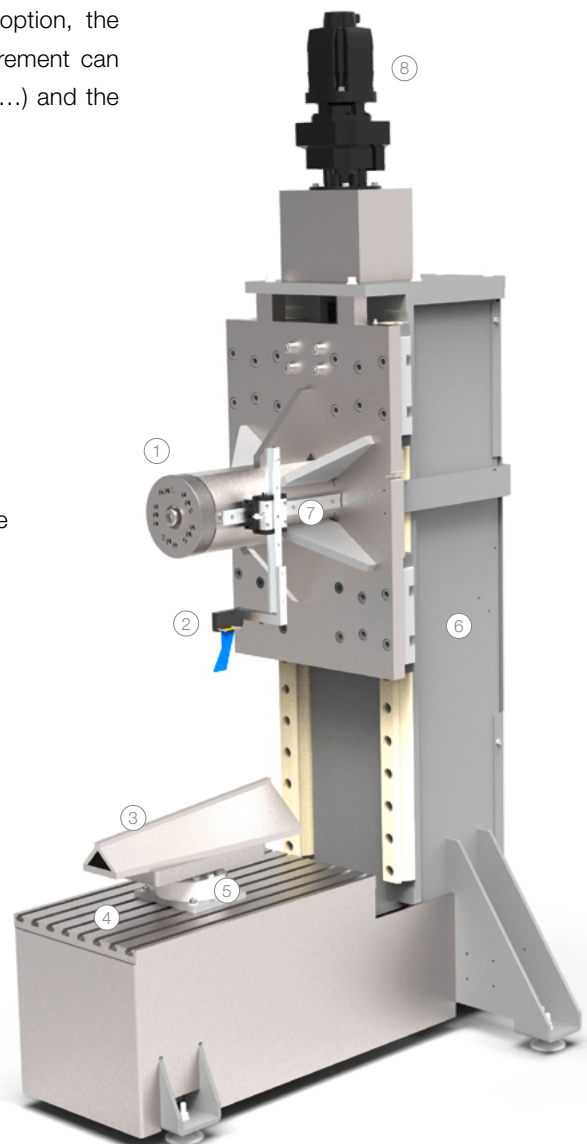
Compression test

Several car manufactures are requesting compression tests according to their own company standard. The individual tests are quite different in the test setup and test procedure. Alpine Metal Tech delivers with the VSE200 pre-programmed test routines including necessary test hardware for the different car manufacturer specifications.

Plastic/carbon wheels

In the upcoming extension of the § 30 StVZO guideline for testing of plastic/carbon wheels, new requirements for test procedures and test machines are defined. With the VSE200 and its carbon option, the requested pre-damage and the necessary stiffness measurement can be done. The additional equipment (e.g. mounting adaptor,...) and the measurement software will be included in the package.

- ① Universal wheel flange
Manually turn- and lockable
- ② Bracket for laser sensor or measuring sensor
Manually adjustable
- ③ Peen
According corresponding specification, easy changeable
- ④ Base plate
With standard T-slots for easy and fast machine change to the different test specifications
- ⑤ Load cell
For the precise measurement of the test load
- ⑥ Machine frame
Strong machine frame for high stiffness
- ⑦ Test slide
Electrically driven, for movement of the wheel
- ⑧ Electrical servo motor
Drive mode distance or load regulated



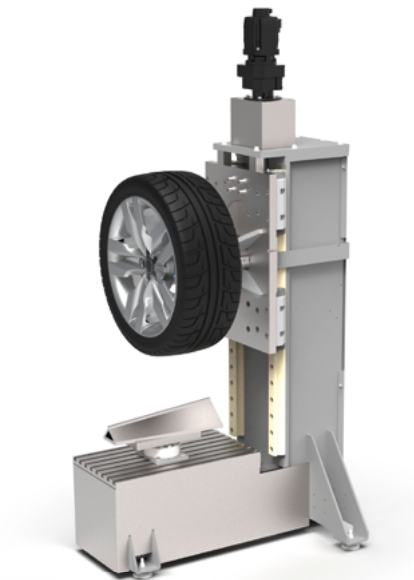
TECHNICAL DATA

Machine type		VSE200
Wheel parameter	wheel diameter	max. 1100 mm (incl. tyre)
	wheel width	up to 14"
	PCD	changeable with adaptor plates, manually turnable
Machine performance	test load	max. 90 kN
	test speed	0.05 – 10.00 mm/s, adjustable
	test parameters	deformation wheel/tyre, test load, stiffness
Technical components	PLC type	Siemens S7-1500 PLC with PC-visualization WinCC
	measurement equipment	by mechanical or laser sensor
Media	electrical connection	3 x 400 VAC, 5 kVA
Dimensions	L x B x H	1200 x 1000 x 2300 mm

TEST MODES

Pre-damage and compression test

In the operation modes pre-damage and compression test, the wheel will be pressed against a defined peen according the specified regulation type. This test can be either pre-damage for a following fatigue test or compression test up to a complete breakage of the wheel structure. Different standards and car manufacturers specifications like AK-LH 08, Toyota TSD56xx, Hyundai/Kia ES52910-03 and others are covered. Additionally, new specifications and requirements can be programmed individually on the HMI screen to fulfill future demands.



Stiffness-measurement

In this operation mode, the upcoming request for stiffness measurement for plastic/carbon wheels according the new extension of § 30 StVZO guideline will be covered. The wheel will be measured prior and after the actual wheel test (e.g. ZWARP test, radial impact test,...) to detect any loss in stiffness due to change in the internal material structure of the wheel. The needed additional mounting and measurement equipment is included in the corresponding option package.



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