

Product Information

Wedge grips type 8504, Fmax 100 kN body over wedge

CTA: 184039 184039



Wedge grips type 8504, Fmax 100 kN up to 250 °C



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Applications

- Specimen material:
Metal, wood, fiber-reinforced composite
- Specimen shape:
Round and flat specimens
- Type of loading:
Tensile

Function description

The body over wedge grip is a symmetrically closing specimen grip. Opening and closing occurs via a cross handle.

The gripping force is generated via wedge action and is proportional to the tensile force. The ratio is determined by the wedge angle.

With specimen grips from the body over wedge series, the position of the jaws remains constant in the test direction as the specimen is gripped. This means that the grip-to-grip separation does not depend on the specimen thickness.

Advantages and features

- The grips always close symmetrically to the tensile axis regardless of specimen thickness.

- Markings on the jaws and centering stops allow for accurate and fast specimen centering.
- Fast and easy insertion of the specimen is achieved through the ergonomic and open design.
- For determination of exact nominal strain the grip-to-grip separation is independent of the specimen diameter. This minimizes set-up time.
- Low weight plus compact design simplify handling, ensure short heating and cooling times in the temperature chamber and enable long travel.
- Absolutely secure gripping right from the start of the test for specimens prone to light slippage.
- The specimen grip is suitable for alignment-critical applications, such as specimens sensitive to transverse tensile forces.
- Due to the same direction of rotation above and below as well as precise guidance, the specimen is gripped with minimal torsion.
- Jaws can be changed quickly without the use of a tool to accommodate different specimens.
- Whether you are testing sensitive specimens or specimens with short clamping-lengths, these grips guarantee optimum clamping.

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Technical data

Type	8504	8504	
Item No.	080384 ¹⁾²⁾	1091813 ¹⁾²⁾	
Test load F _{max}	100	100	kN
Operating principle/identification	Wedge action (symmetrically closing)	Wedge action (symmetrically closing)	
Dimensions			
Height	260	260	mm
Width	200	200	mm
Width with actuation lever	236	334	mm
Depth	94	94	mm
Depth with actuation lever	236	334	mm
Gripping area			
Height	60	60	mm
Width	35/60	35/60	mm
Opening width, max. with jaws	22	22	mm
Gripping of the specimen, min.	30	30	mm
Weight per specimen grip, approx.	18	18	kg
Connection, stud	Ø 60	Ø 60	mm
Ambient temperature	-70 ... +250	-80 ... +360	°C
Scope of delivery	2	2	pieces

1) Recommended and approved for strain rate control to standards DIN EN ISO 6892-1:2009 and ASTM E8-09

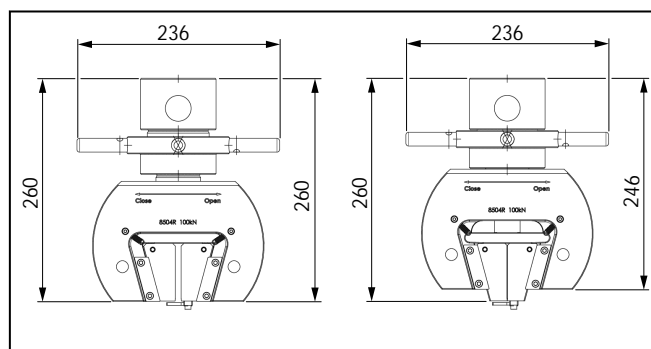
2) A load cell with a limit torque of min. 200 Nm is required (e.g. type K or type P).



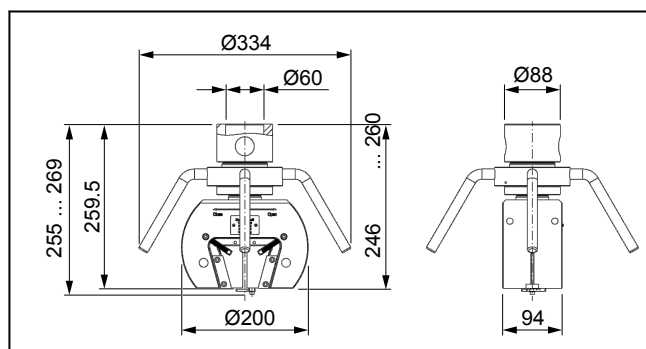
NOTE

For use with the door with additional opening of the temperature chamber, the specimen insertion aid is required.

CTA: 39908 255119



Wedge grips type 8504, F_{max} 100 kN up to 250 °C, overview



Wedge grips type 8504, F_{max} 100 kN up to 360 °C, overview

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Accessories required

Jaws

To use the sample holder, **1 set of jaws is required.**

Flat jaws

Scope of delivery: 1 set (= 4 pieces)

Version	Specimen dimensions	Gripping area		Ambient temperature [°C]	Hardness	Item No.
	Flat specimen, thickness [mm]	Height [mm]	Width [mm]			
Steel, fsc ¹⁾ 0.75 mm	0 ... 6.5	60	35	-70 ... +250	61 HRC	086971
Steel, fsc ¹⁾ 0.75 mm	0 ... 6.5	60	60	-70 ... +250	61 HRC	088568
Steel, fsc ¹⁾ 0.75 mm	0 ... 6.5	60	60	-80 ... +360	61 HRC	1091817
Steel, fsc ¹⁾ 0.75 mm	6.5 ... 12	60	35	-70 ... +250	61 HRC	086975
Steel, fsc ¹⁾ 0.75 mm	6.5 ... 12	60	60	-70 ... +250	61 HRC	088570
Steel, fsc ¹⁾ 0.75 mm	6.5 ... 12	60	60	-80 ... +360	61 HRC	1091818
Steel, fsc ¹⁾ 0.75 mm	12 ... 17.5	60	35	-70 ... +250	61 HRC	086976
Steel, fsc ¹⁾ 0.75 mm	12 ... 17.5	60	60	-70 ... +250	61 HRC	088571
Steel, fsc ¹⁾ 0.75 mm	12 ... 17.5	60	60	-80 ... +360	61 HRC	1091819
Steel, fsc ¹⁾ 0.75 mm	17.5 ... 22	60	35	-70 ... +250	61 HRC	086977
Steel, fsc ¹⁾ 0.75 mm	17.5 ... 22	60	60	-70 ... +250	61 HRC	088573
Steel, fsc ¹⁾ 0.75 mm	17.5 ... 22	60	60	-80 ... +360	61 HRC	1091820

¹⁾ Fsc = fish scale

Prism jaws

Scope of delivery. 1 set (= 4 pieces)

Version	Specimen dimensions	Gripping area		Ambient temperature [°C]	Hardness	Item No.
	Round specimen, Ø [mm]	Height [mm]				
Steel, St ¹⁾ 1.5 mm	4 ... 7.5	60		-70 ... +250	61 HRC	086980
Steel, St ¹⁾ 1.5 mm	4 ... 7.5	60		-80 ... +360	61 HRC	1091821

All data at ambient temperature.

Subject to change in the course of further development.

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Version	Specimen dimensions Round specimen, Ø [mm]	Gripping area Height [mm]	Ambient temperature [°C]	Hardness	Item No.
Steel, St ¹⁾ 1.5 mm	7.5 ... 11.5	60	-70 ... +250	61 HRC	086981
Steel, St ¹⁾ 1.5 mm	7.5 ... 11.5	60	-80 ... +360	61 HRC	1091822
Steel, St ¹⁾ 1.5 mm	11.5 ... 14	60	-70 ... +250	61 HRC	086982
Steel, St ¹⁾ 1.5 mm	11.5 ... 14	60	-80 ... +360	61 HRC	1091823
Steel, St ¹⁾ 1.5 mm	14 ... 16.5	60	-70 ... +250	61 HRC	086983
Steel, St ¹⁾ 1.5 mm	14 ... 16.5	60	-80 ... +360	61 HRC	1091824
Steel, St ¹⁾ 1.5 mm	16.5 ... 19	60	-70 ... +250	61 HRC	086984
Steel, St ¹⁾ 1.5 mm	16.5 ... 19	60	-80 ... +360	61 HRC	1091825

1) St= saw tooth

Optional accessories

Description	ArticleNumber
Centering stops for centered clamping of specimen with variable height adjustment Scope of delivery: 2 pieces, sufficient for 2 grip units	086985
Adapter plate For attaching fixtures up to 100 kN (e.g. compression and flexure test kits).	086986

Specimen insertion aid

Consisting of:

Holder for specimen insertion aid: **1x required**

Specimen insertion aid: **1x required**

The specimen insertion aid is used to accurately position the specimen in the specimen grip and secure the specimen in the insertion position. After the specimens have been inserted, the specimen grips can be conveniently closed manually. This allows for operation of the specimen grips with just one hand, which may be necessary for example, if the specimens are loaded via the door with additional opening when operating with a temperature chamber. The specimen insertion aid is mounted on both the upper and the lower specimen grip and remains there during the test. The specimen insertion aid also includes an adjustable depth stop for adjustment of the shoulder width of the respective specimen.

Description	ArticleNumber
Holder for specimen insertion aid (1x required)	
For attachment of the specimen insertion aid onto the mechanical body over wedge grip 100 kN Scope of delivery: 2 pieces	1103503
Specimen insertion aid (1x required)	
For holding and centering specimens with specimen thicknesses of 0 ... 3 mm With adjustable depth stop for shoulder widths of 0 ... 50 mm Scope of delivery: 2 pieces	1103504
For holding and centering specimens with specimen thicknesses of 3...6 mm With adjustable depth stop for shoulder widths of 0...50 mm Scope of delivery: 2 pieces	1103505

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Description	ArticleNumber
For holding and centering specimens with specimen thicknesses of 6...9 mm With adjustable depth stop for shoulder widths of 0...50 mm Scope of delivery: 2 pieces	1103506
For holding and centering specimens with specimen thicknesses of 9...12 mm With adjustable depth stop for shoulder widths of 0...50 mm Scope of delivery: 2 pieces	1103507
For holding and centering specimens with specimen thicknesses of 12...15 mm With adjustable depth stop for shoulder widths of 0...50 mm Scope of delivery: 2 pieces	1103508



NOTE

For use with the door with additional opening of the temperature chamber, the specimen insertion aid is required.