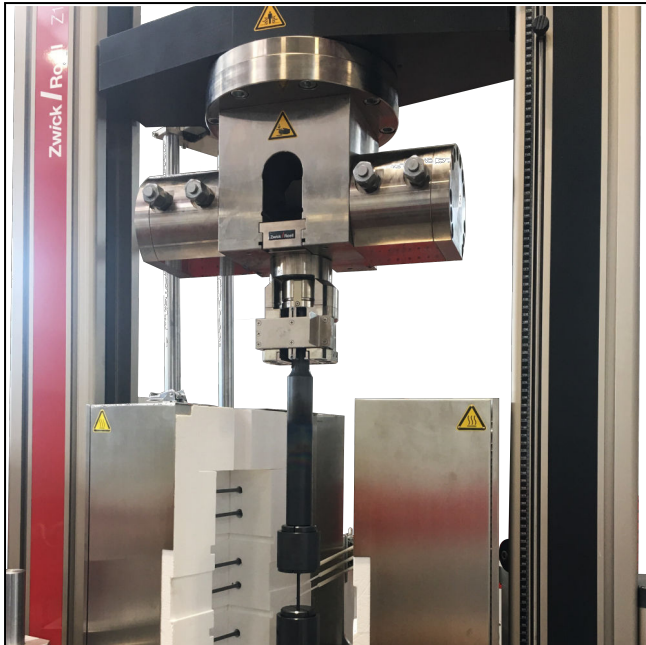


## Product Information

Ceramic load string for high-temperature and creep tensile tests up to 1,500°C

CTA: 253378 198661



Ceramic load string in universal testing machine



Ceramic load string in creep testing machine Kappa SS

### Applications

The high-temperature pull rods transfer the force from the high-temperature specimen adapters in the furnace to the high-temperature pull rod coupling outside of the furnace. This ceramic load string is used for high-temperature and creep tensile tests from 850°C up to 1,500°C.

Interchangeable high-temperature specimen adapters enable tensile tests on:

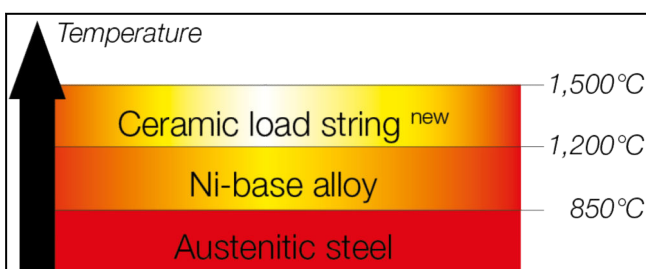
- Round specimens with button head
- Flat specimens with button head and hole

The ceramic load string consists of:

- High-temperature pull rod coupling
- High-temperature pull rod
- High-temperature specimen adapter

### Advantages and features

- Easy changeover with ambient temperature accessories via mounting studs or T-slotted mounting
- Secure alignment in accordance with ASTM E1012 due to automatic compensation of the smallest angular error with self-aligning spherical axial bearing.
- Easy changeover of specimen adapter according to specimen sizes and shapes
- Secure and quick gripping without tools
- A high-temperature pull rod made of metal can also be combined with the high-temperature pull rod coupling.
- High-temperature pull rods and specimen grips are made from a high-performance ceramic material that has a high tensile and creep strength at temperatures up to 1,500°C.
- Form-fitting force transmission inside the furnace



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## Product Information

### Ceramic load string for high-temperature and creep tensile tests up to 1,500°C

#### High-temperature pull rod coupling for universal testing machines

For universal testing machines, the high-temperature pull rod coupling is connected at the insertable mounting stud of the load cell or the opposite connection flange. There are several mounting stud sizes available depending on the testing capacity (see table on page 4). For heavy, installed accessories, you can also alternatively connect them via a T-slotted shoe connector.

The high-temperature pull rod coupling can be combined with the ceramic high-temperature pull rod described in this PI or also with the metallic pull rod. It is equipped with a self-aligning spherical axial bearing above and below, which ensures alignment in accordance with ASTM E1012.

The maximum test load of the ceramic high-temperature pull rod is 10 kN.

#### High-temperature pull rod coupling for creep testing machines (Kappa series)

The high-temperature pull rod coupling is attached to the wear-free flexible joint for creep testing machines type Kappa LA. For creep testing machines type Kappa SS / DS / SS-CF, the insertable mounting studs are used for connection, as with the universal testing machines.

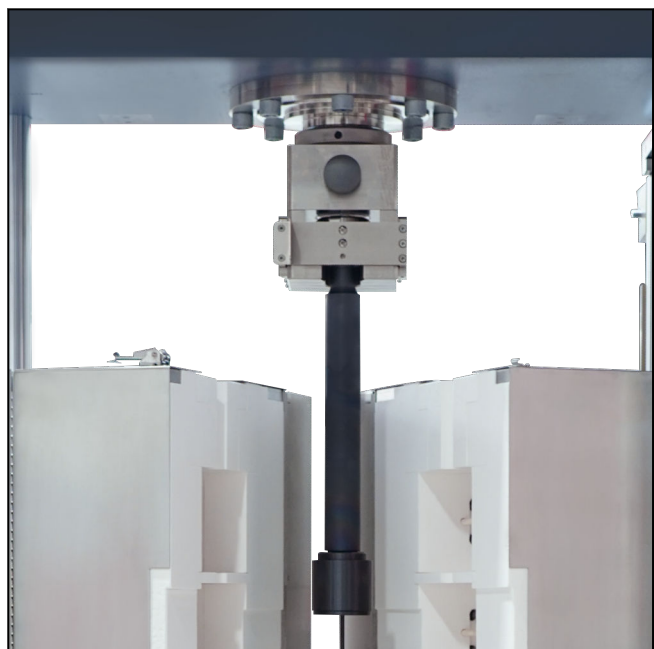
The high-temperature pull rod coupling can be combined with the ceramic high-temperature pull rod described in this PI or also with the metallic pull rod. It is equipped with a self-aligning spherical axial bearing above and below, which ensures alignment in accordance with ASTM E1012.

The maximum test load of the ceramic high-temperature pull rod is 10 kN.

CTA: 274533.198661



High-temperature pull rod coupling for universal testing machines



High-temperature pull rod coupling for creep testing machines type Kappa SS / DS / SS-CF

## Product Information

Ceramic load string for high-temperature and creep tensile tests up to 1,500°C

### High-temperature specimen adapter

The specimen adapters are suitable for tensile tests and creep tensile tests at high-temperature up to 1,500°C and can be easily changed out for different specimen sizes and types. The maximum test loads depend on the specimen sizes (see table on page 4).

The divided specimen holder is mounted directly to the self-aligning pull rod. After the specimen is placed in one of the half shells, the second half shell is placed over the specimen and the outer support sleeve is brought over the specimen holder.

### I) High-temperature specimen adapter for round specimens with button head

The specimen grips are designed for round specimens with button heads according to DIN 50125 Form C. The force is transmitted through form fit connection via a button head.

### II) High-temperature specimen adapter for flat specimens with button head and hole

These specimen adapters are designed for flat specimens with a hole in the button head to EN ISO 6892 type A2 and A3. The force is transmitted through form fit connection via a lock-pin.

CTA: 253433 253429 253434 233067



Specimen adapter for round specimens with button head

Round specimen with button head

Specimen adapter for flat specimens with button head and hole

Flat specimen with button head and hole

## Product Information

Ceramic load string for high-temperature and creep tensile tests up to 1,500°C

### High-temperature pull rod coupling for universal testing machines

Scope of delivery: 1 pair	752128	016988	016987	043025	
Scope of delivery: 1 piece	085494	085493	085492	085495	
Fmax	10	50	250	250	kN
Connector	Ø 20	Ø 36	Ø 60	Via T-slotted mounting	mm
Installation height per piece	157	165	195	155	mm

### High-temperature pull rod coupling on creep testing machines (Kappa series)

Item number	MP01149	MP01149	MP01241	MP01241	
Machine type Kappa	SS / DS / SS-CF	SS / DS / SS-CF	LA	LA	
Fmax	50 kN	100 kN	50 kN	100 kN	
Connector	Ø 36 mm	Ø 60 mm	fix	fix	

### High-temperature pull rod (scope of delivery: 1 pair)

Item number	MP01133	016618	1094906	
Material	Ceramic	Nickel-based alloy <sup>1)</sup>	Austenitic steel <sup>1)</sup>	
Maximum force	10 kN	100 kN	50 kN	
Temperature range	1,500°C	1,200°C	850°C	

1) Additional possible load strings for the above-mentioned high-temperature pull rod couplings. The appropriate high-temperature specimen adapters are listed in PI 88\_731.

### High-temperature specimen adapter for ceramic pull rod: Round specimens with button head (scope of delivery: 1 pair)

Item number	MP01312	MP01134	MP01313	MP01314	MP01315	
Specimen diameter	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	mm
Head diameter	10	12	15	18	22	mm
Maximum force	8	10	10	10	10	kN

### High-temperature specimen adapter for ceramic pull rod: Flat specimens with button head and hole (scope of delivery: 1 pair)

Item number	MP01316	MP01317	MP01318	
Specimen width	3	4	5	mm
Specimen thickness	4	5	6	mm
Hole	Ø 6	Ø 8	Ø 10	mm
Maximum force	5	10	10	kN