

# Set of Preloading Elements

Type 9451...

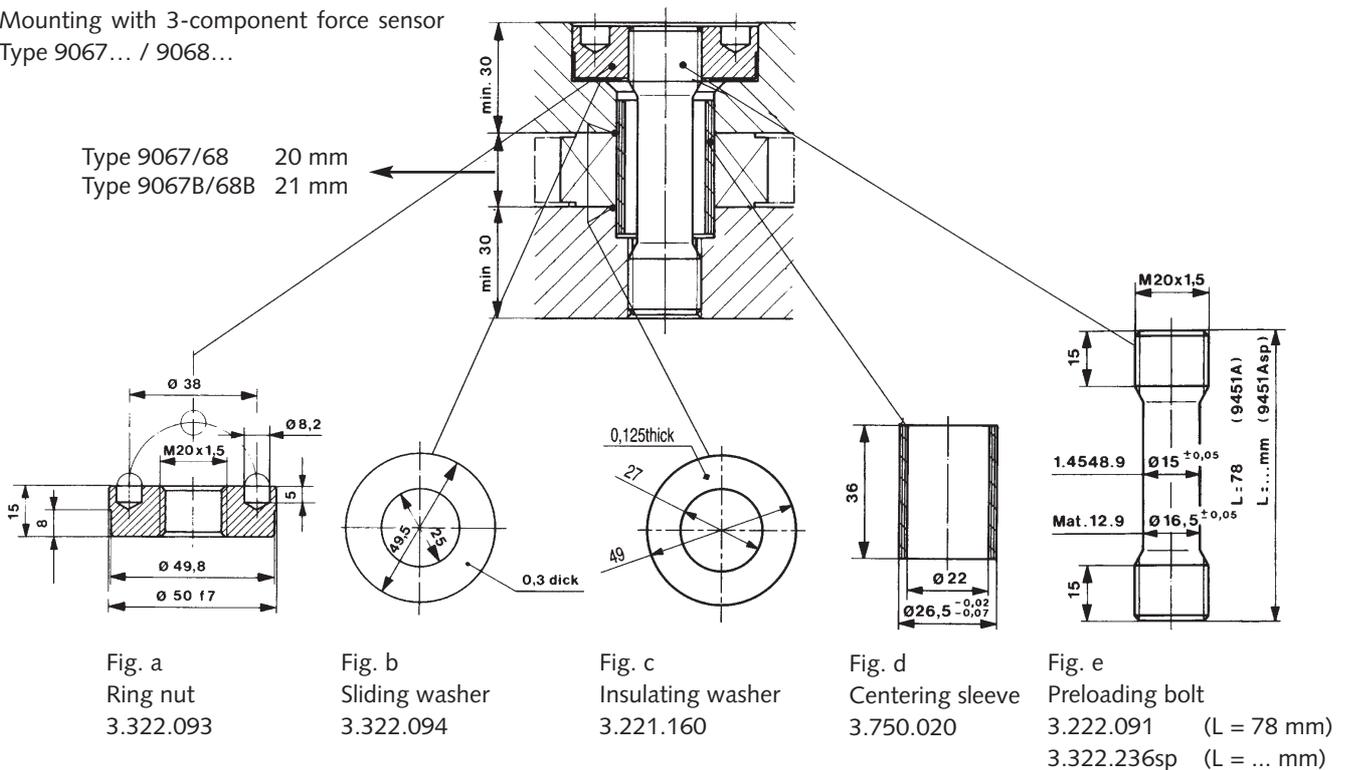
## M20 x 1,5 – for Force Sensors

The standardized preloading elements are used for mounting the multicomponent force sensors Types 906X with internal diameter of 26,5 mm.

A set of preloading elements consists of a preloading bolt, a screw nut, a centering sleeve a sliding washer and two insulating washers.

The preloading set Type 9451A allows for a very compact mounting of dynamometers. A minimum overall height is obtained by recessed mounting of the ring nut.

Mounting with 3-component force sensor  
Type 9067... / 9068...



### Technical Data

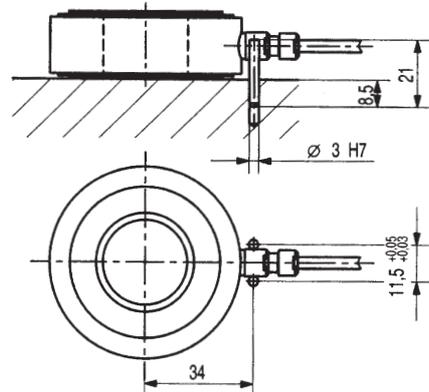
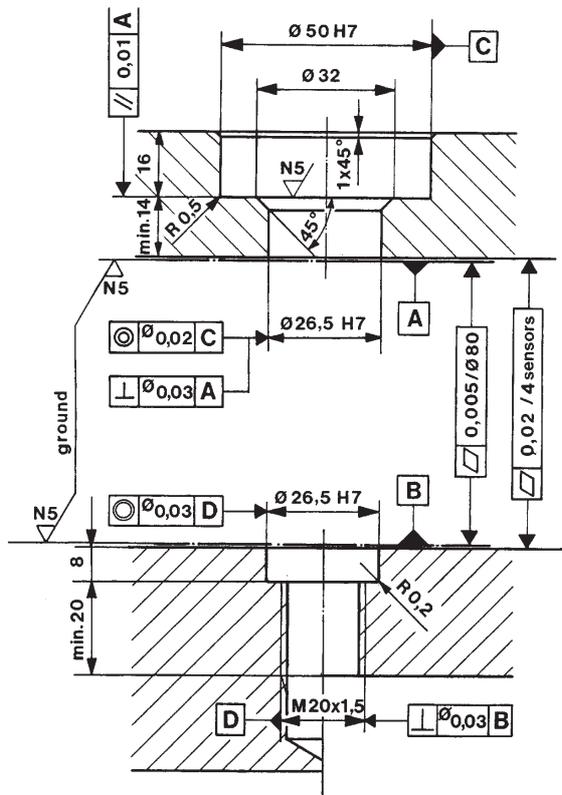
Mounting possibilities for force sensor		Types 9067.../9068...	
Preloading force (nom.)	Fv	kN	160
Preloading bolt			
Limit of elasticity	R <sub>p0,2</sub>	N/mm <sup>2</sup>	1250
Tension with Fv = 160 kN	$\sigma_v$	N/mm <sup>2</sup>	900

### Proposed materials for the cover and the base plate

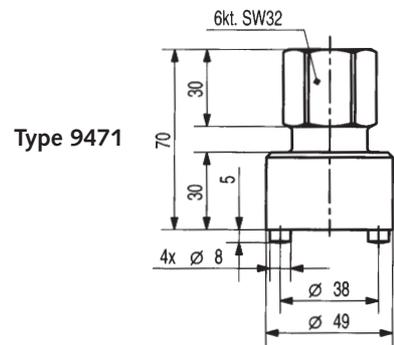
Quenched and drawn			
W.-Nr.	1.4045*	1.4021*	1.1191
DIN	x22CrNi17	x20Cr13	Ck45
AFNOR	Z15CN16-02	Z20C13	xC45
B.S.	431S29	420S37	M46
JIS	SUS431	SUS420J1	S45C
AISI/SAE	431	420	1045

\* stainless

000-194e-01.03 (DB07.9451e)



Types  
9067B  
9068B



Type 9471

### Mounting

The force sensors must be mounted under preload because the shear forces  $F_x$  and  $F_y$  must be transmitted through static friction from the base and cover plate to the surfaces of the force sensor. The necessary preload depends on the shear forces to be transmitted. The measuring ranges specified in the technical data are valid for a standard preload of 160 kN.

The preloading bolt is screwed into the base plate and the thread is secured with Loctite Type 121. The centering of the sensor is done with the centering sleeve.

The connector allows to adjust the sensor (Type 9067B/9068B).

Prior to mounting the bearing surfaces of the base and cover plates must be cleaned with fat solvent.

The insulating washers are used for groundisolated mounting of the sensor.

The sliding washer is mounted between the cover plate and the ring nut. It reduces the friction and consequently the tightening torque. Moreover, it protects the cover plate surface and the ring nut from corrosion. Before mounting the sliding surface should slightly be greased with special grease Type 1063.

Before screwing-in the preloading nut, its outer diameter and the thread of the preloading bolt should be greased.

The tightening of the nut is done with the key Type 9471. If the Z-component of the sensor is connected to the charge amplifier, then the preload can directly be measured.

### Optional Accessories

Wrench adapter Type 9471

### Ordering Key

Set of Preloading Elements

9451

Length L = 78 mm	A
Length L = please specify in mm	Asp

