



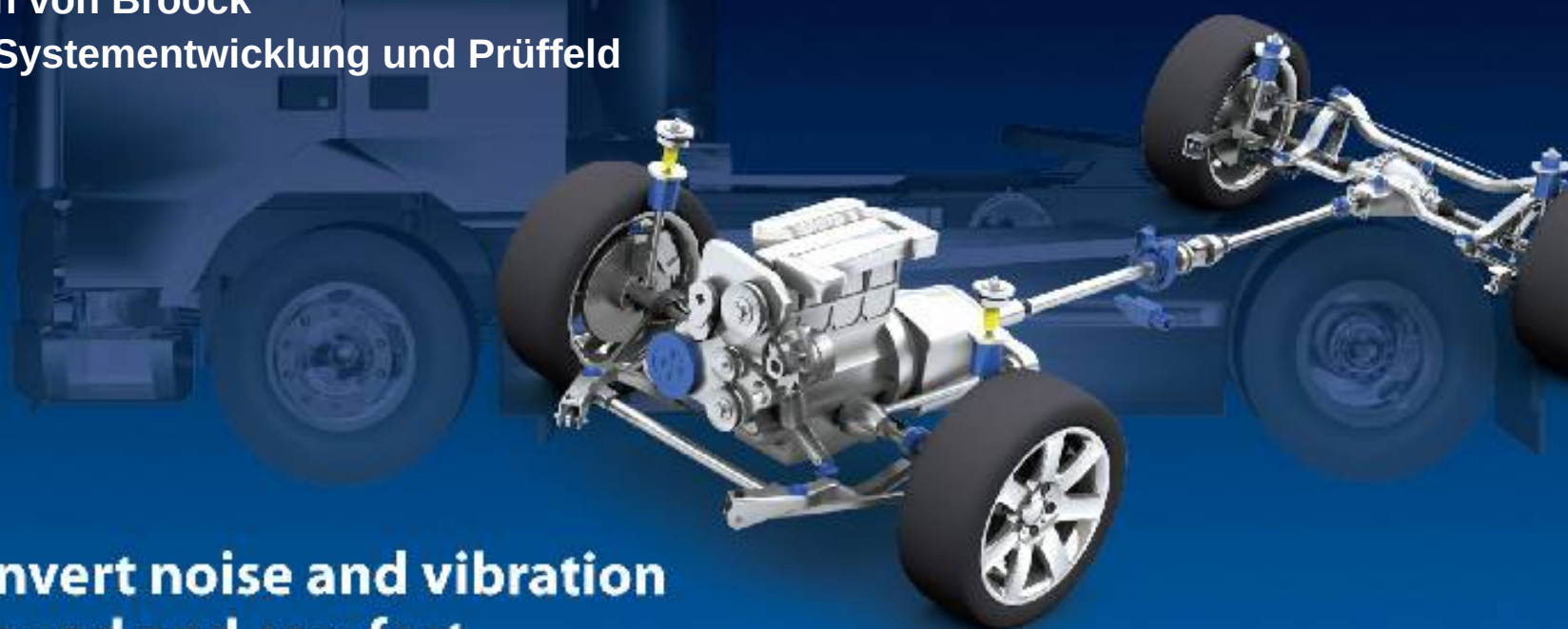
Vibracoustic GmbH & Co KG

Vehicle Dynamics 07. Mai 2008

Dr. Ulrich von Broock

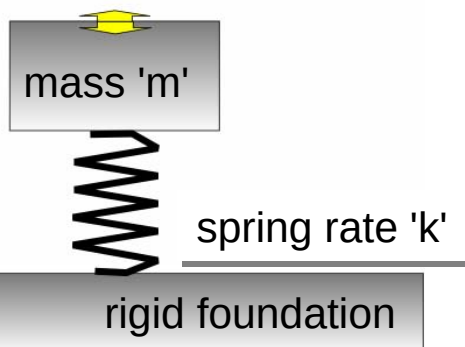
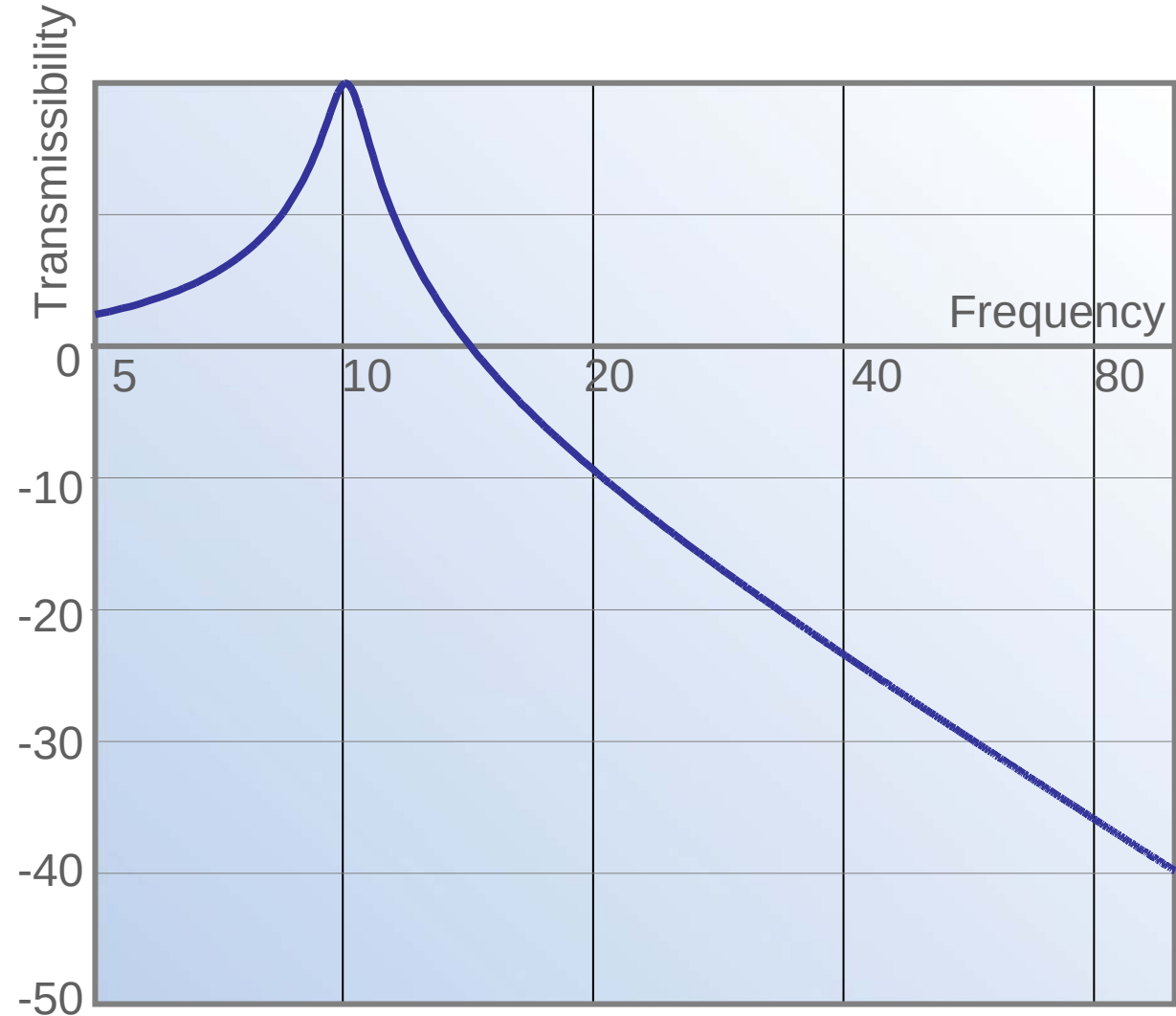
Leitung Systementwicklung und Prüffeld

**We convert noise and vibration
into sound and comfort**

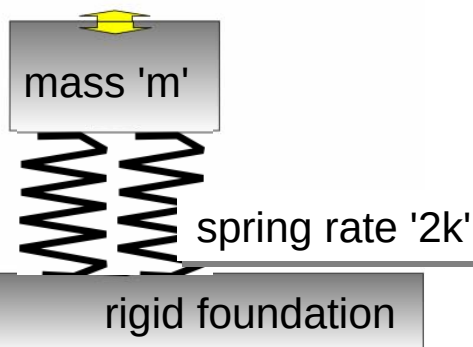
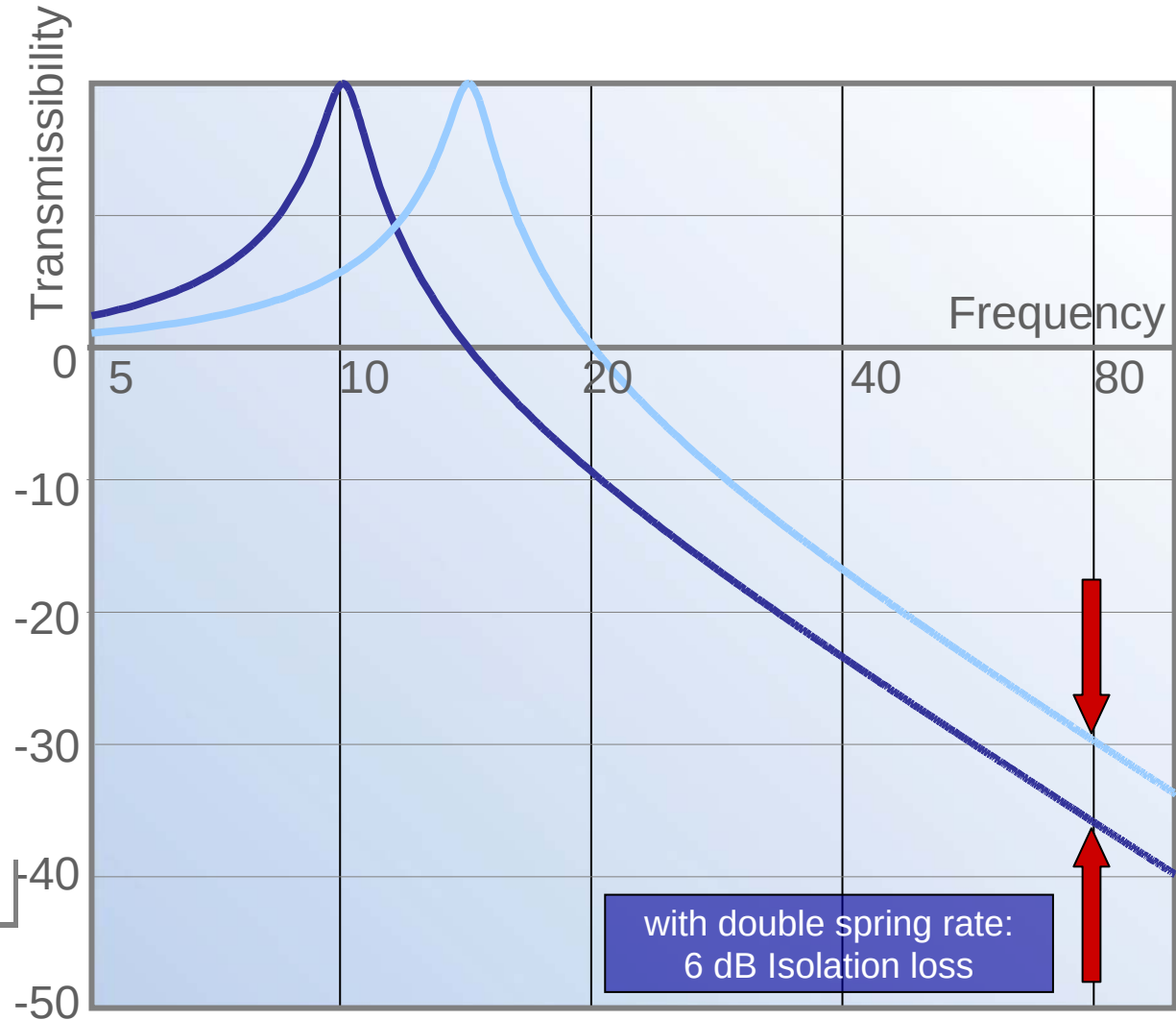


The challenge: isolation better than physics allow ?!

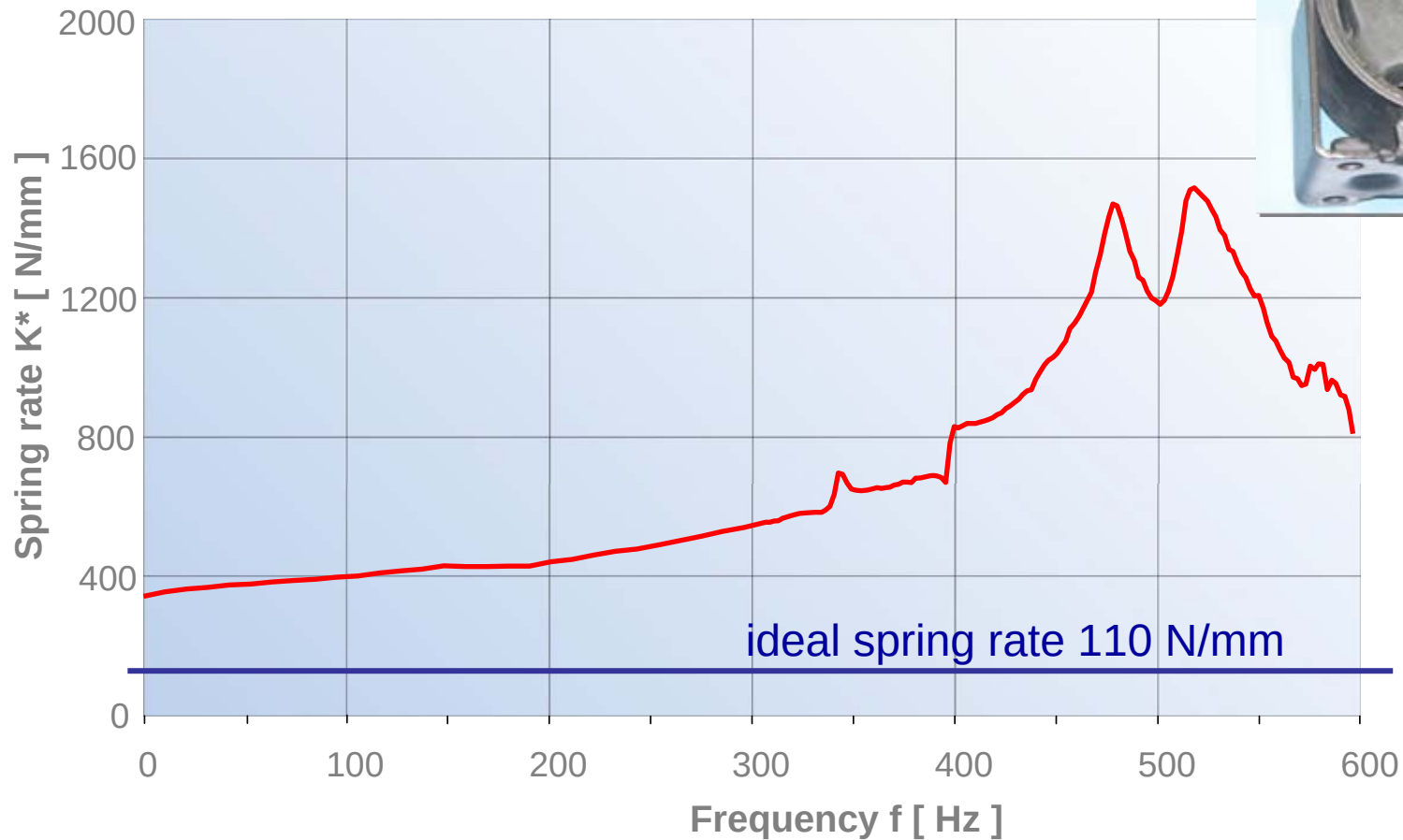


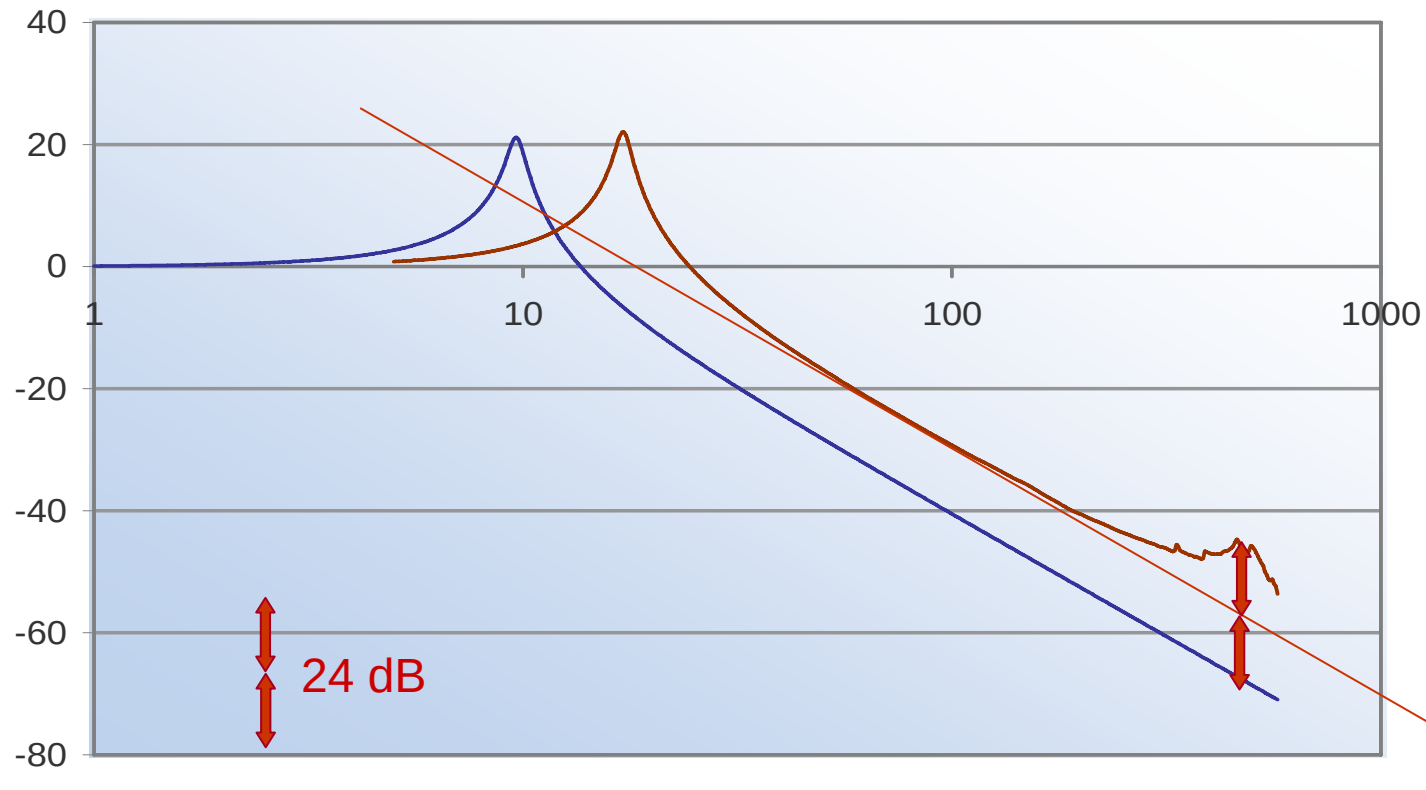


Double spring rate or half of the mass causes 6 dB isol. loss

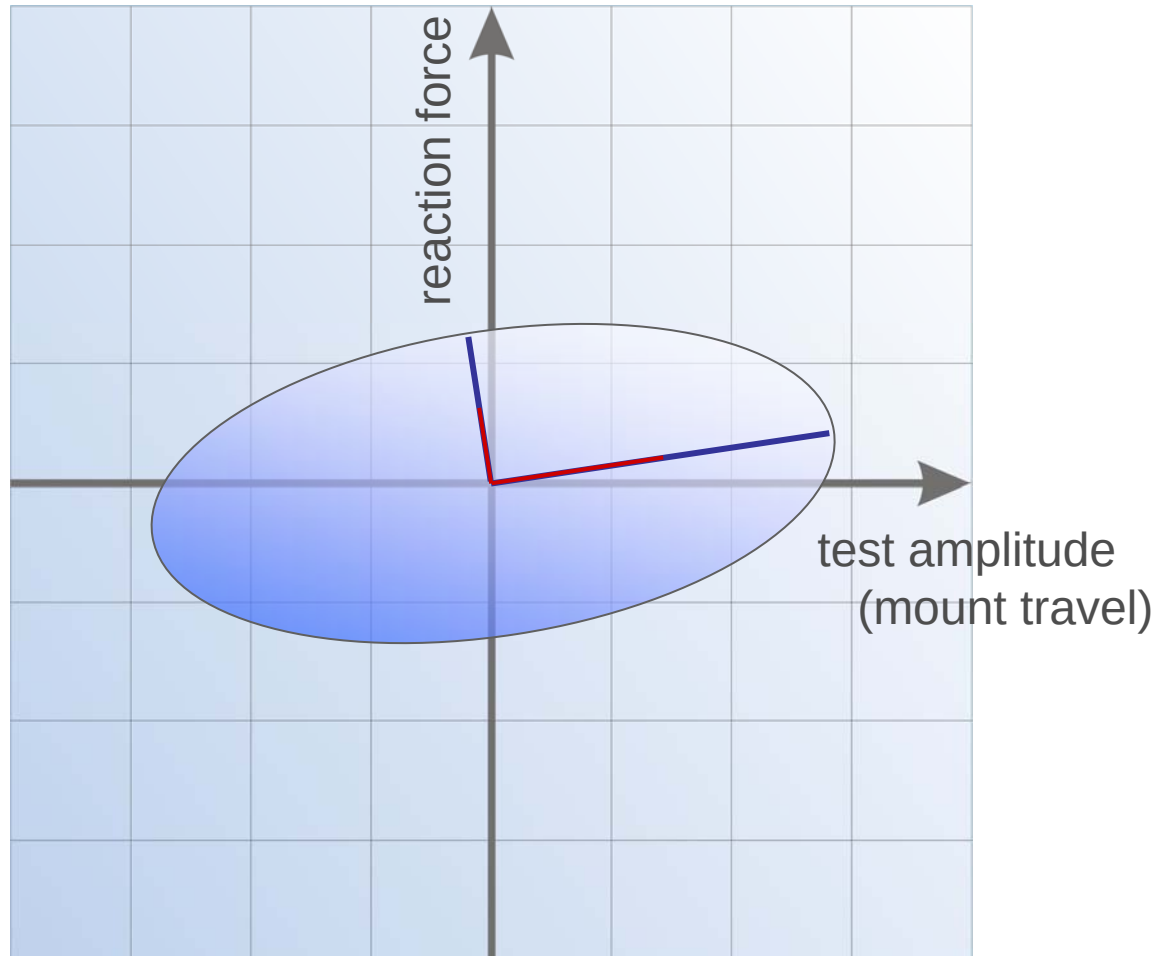


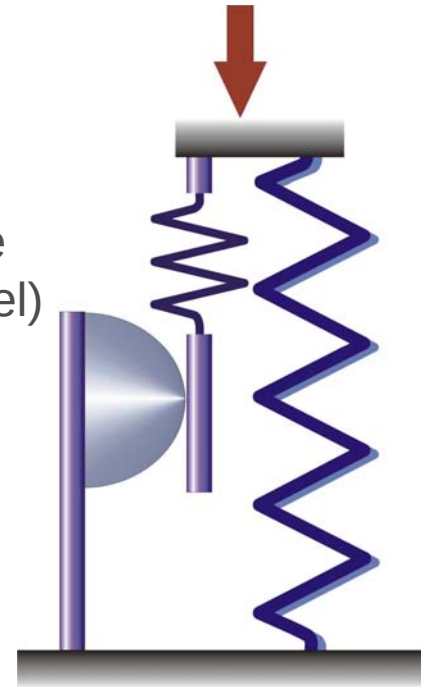
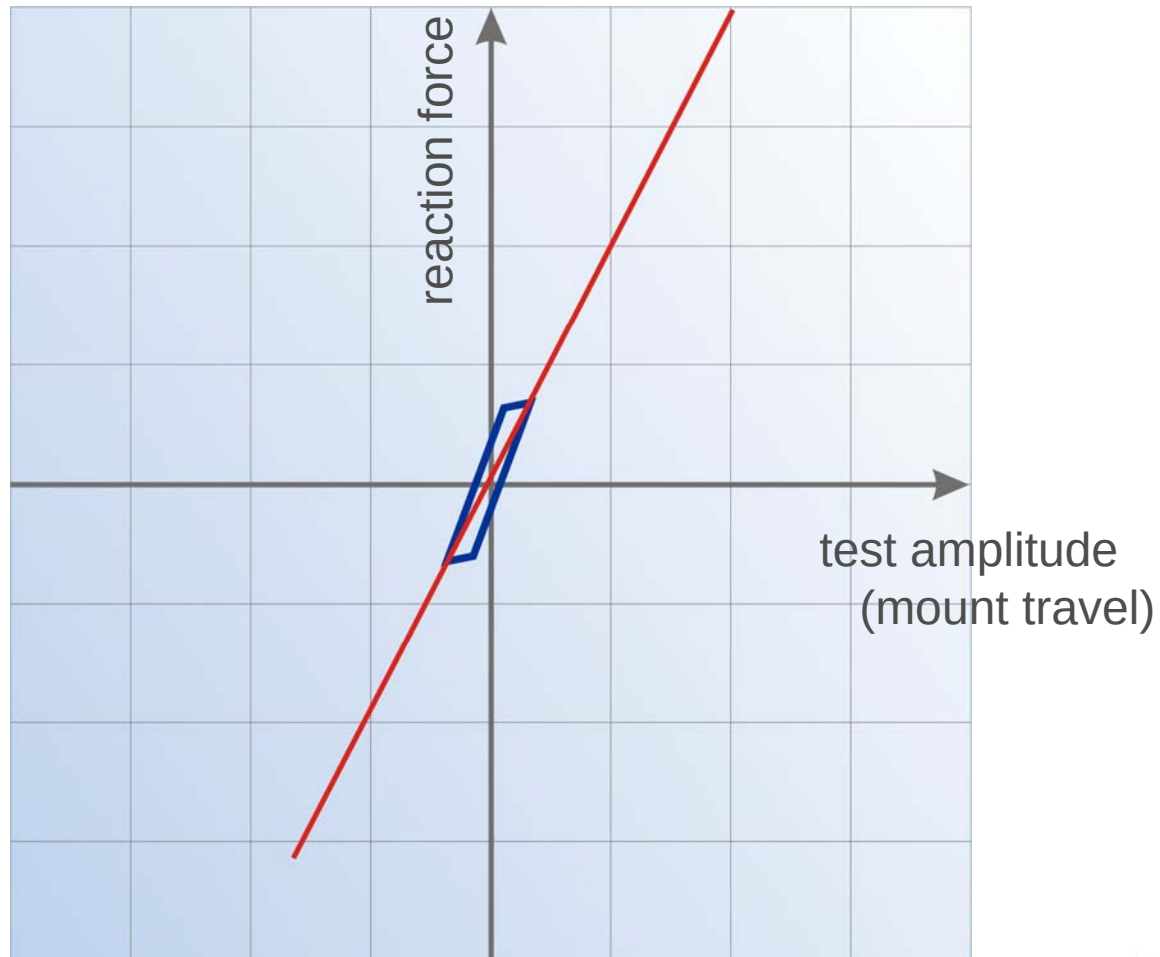
rear engine mount
specification 110 N/mm

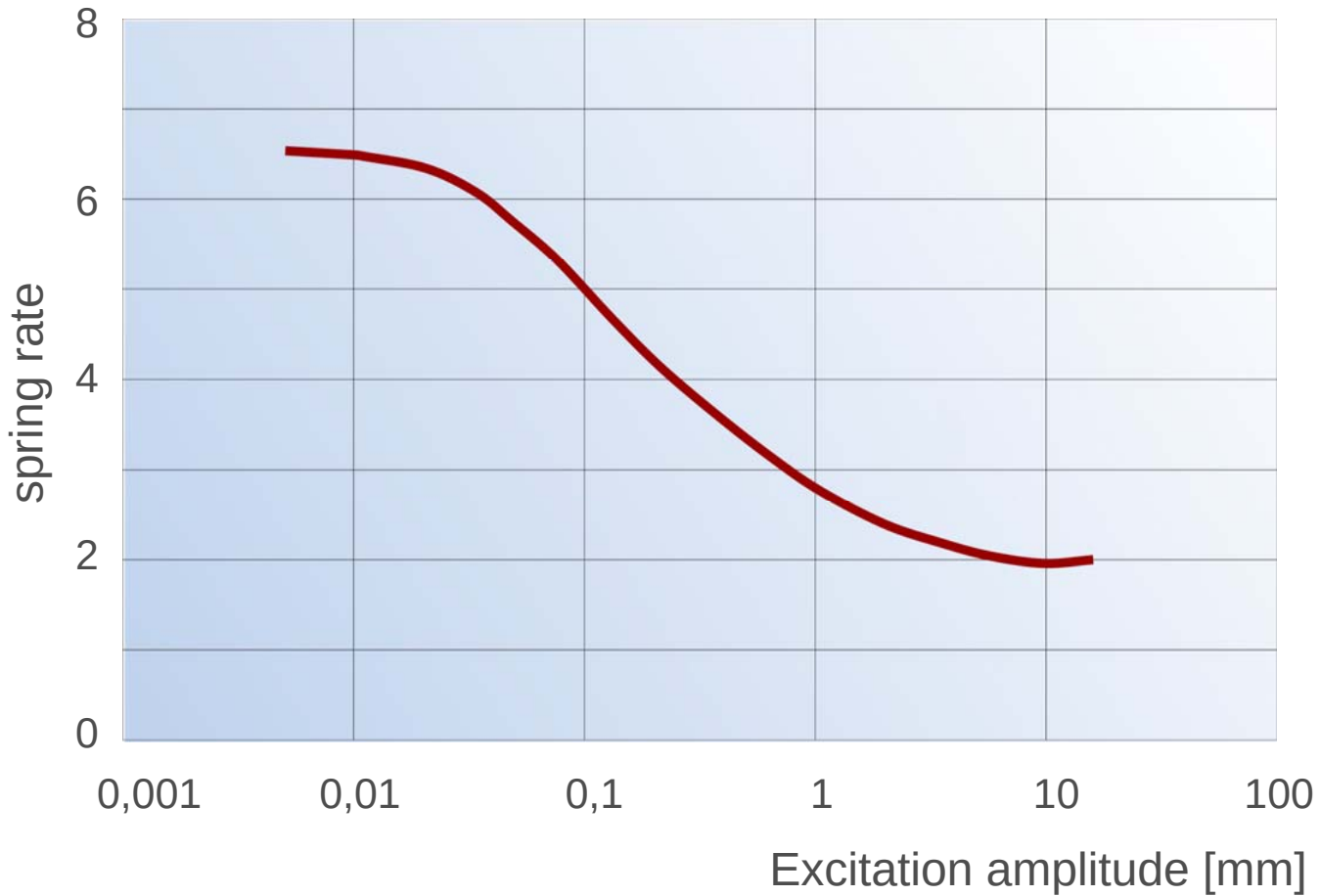


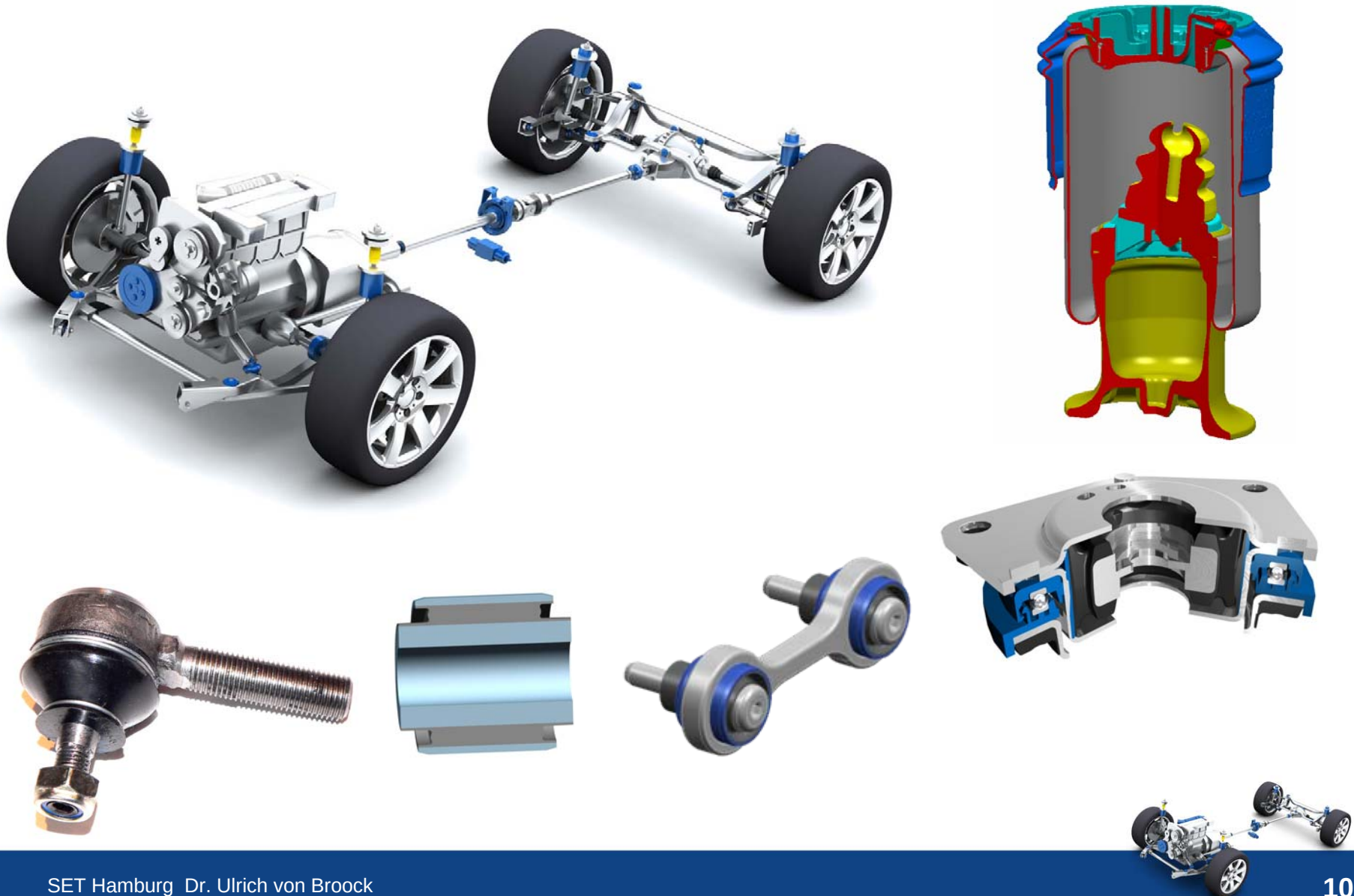


Damping or friction? A significant difference !

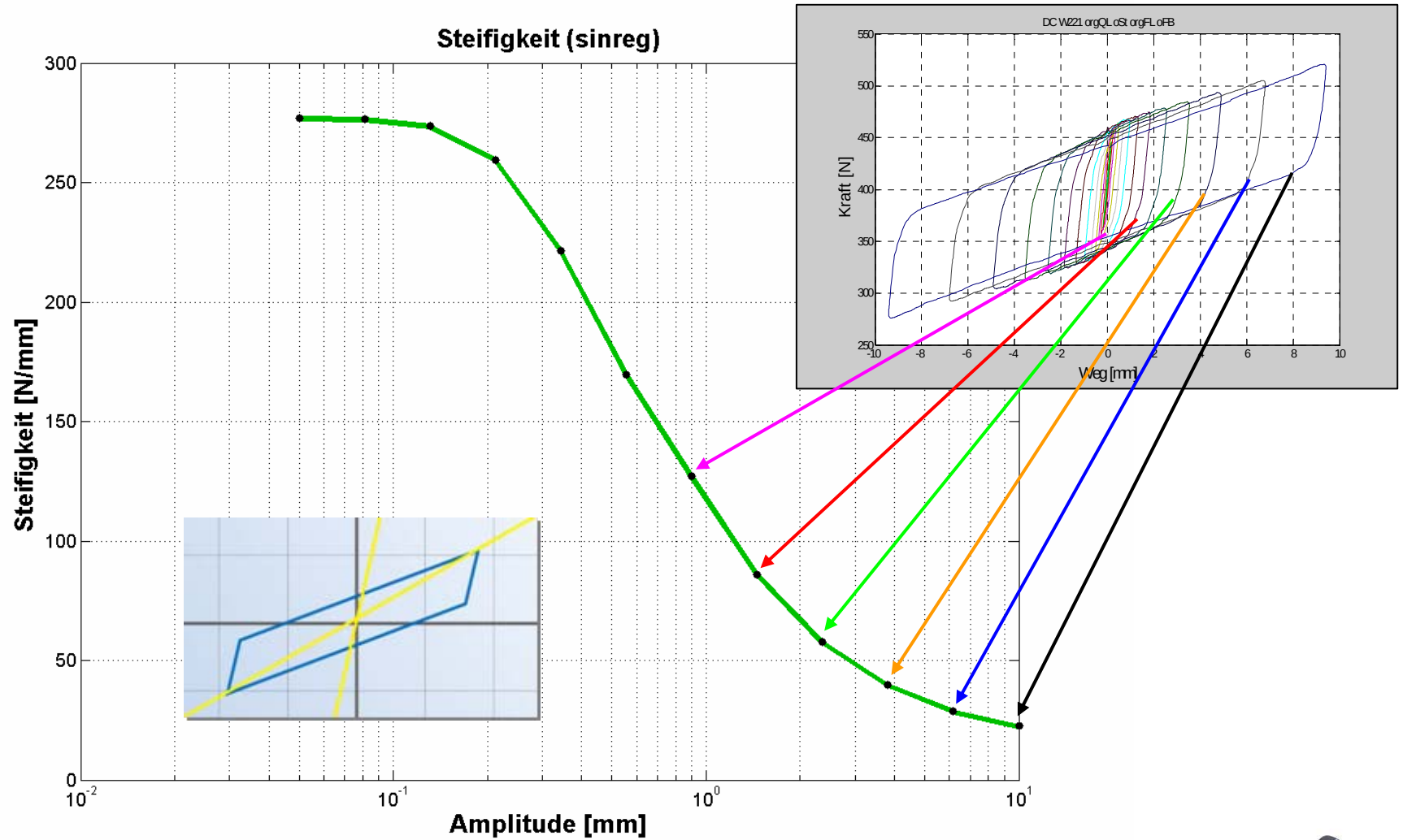


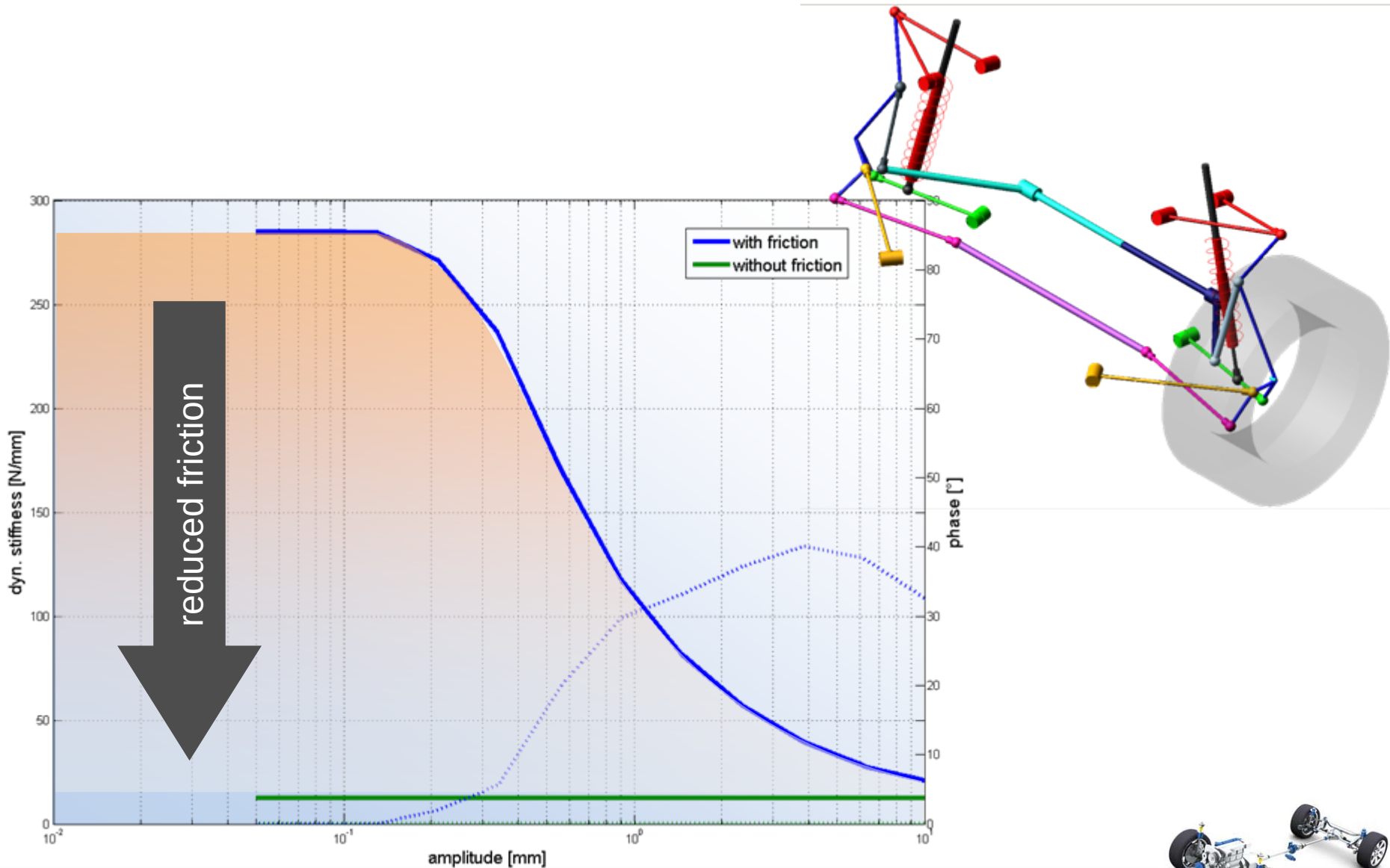




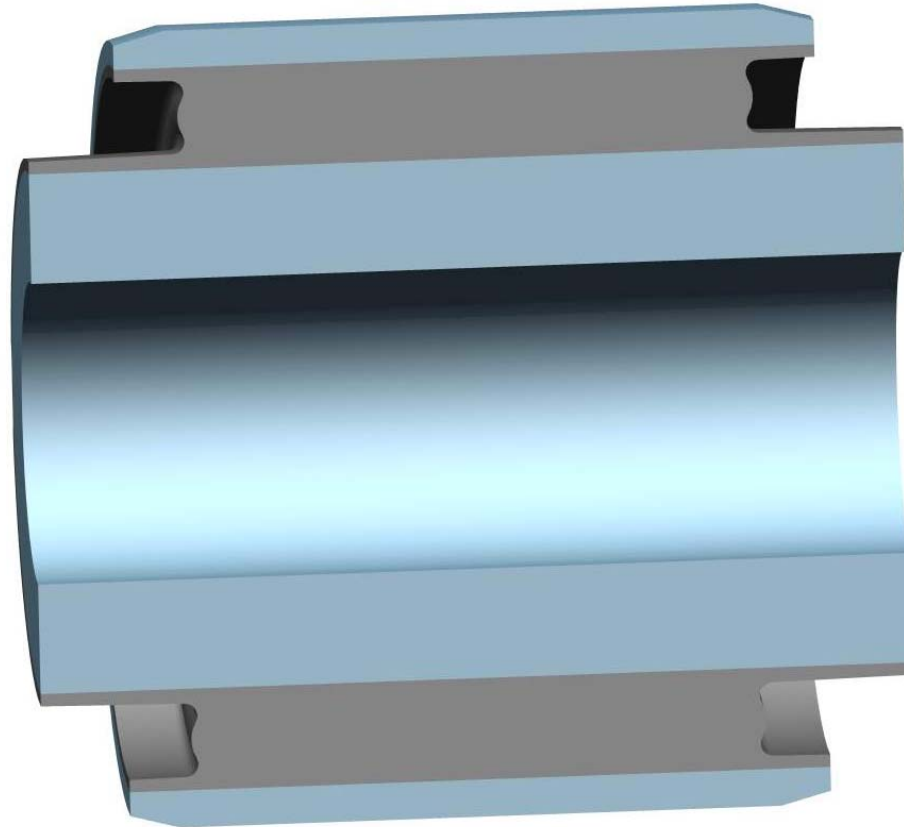


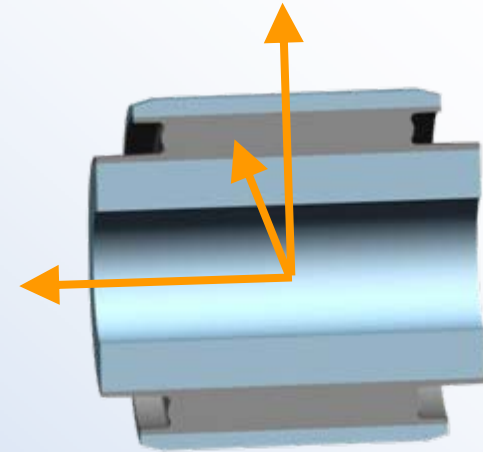
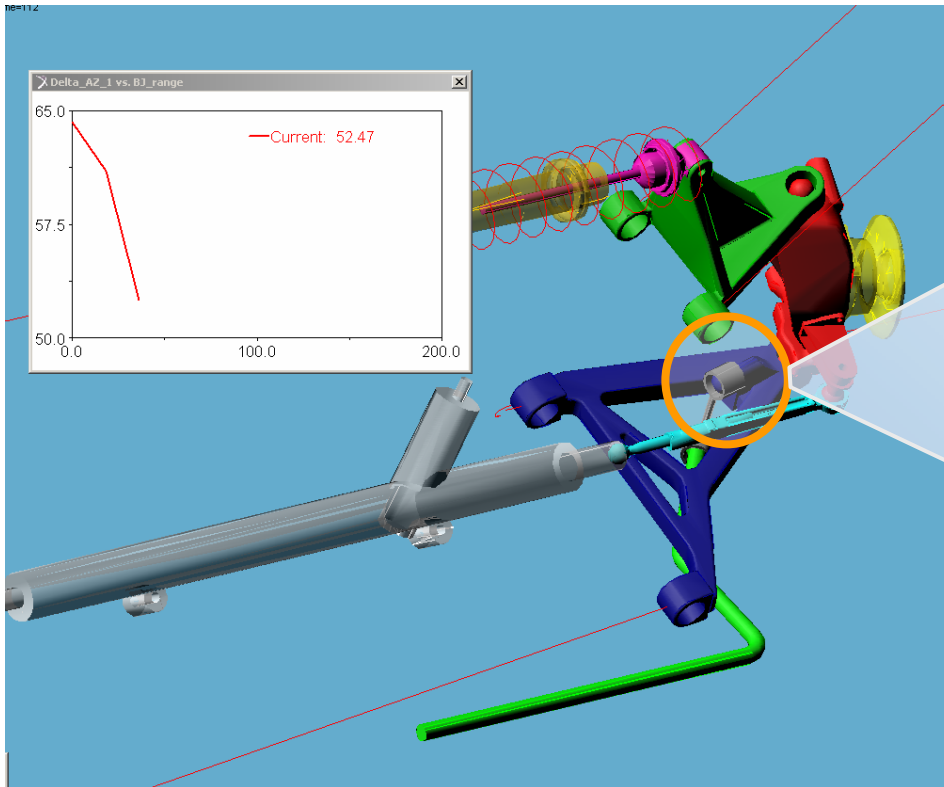






New bush design: as small as possible!





Orientation of ball joint replacement is calculated in order to minimize cardanic movements.





Borgward
P100



MB
W100
W110

MB
W108
W109



1964

1967

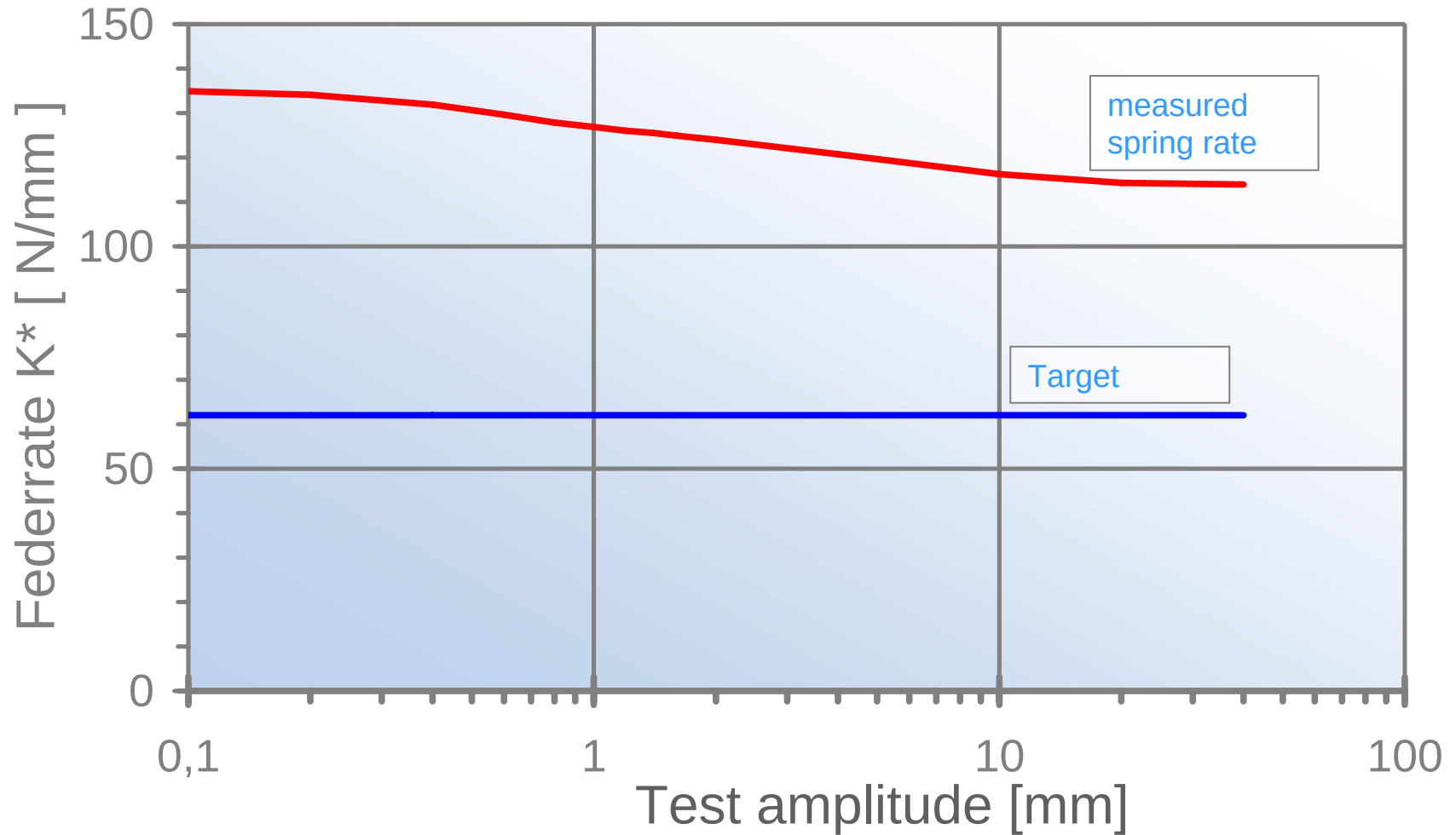


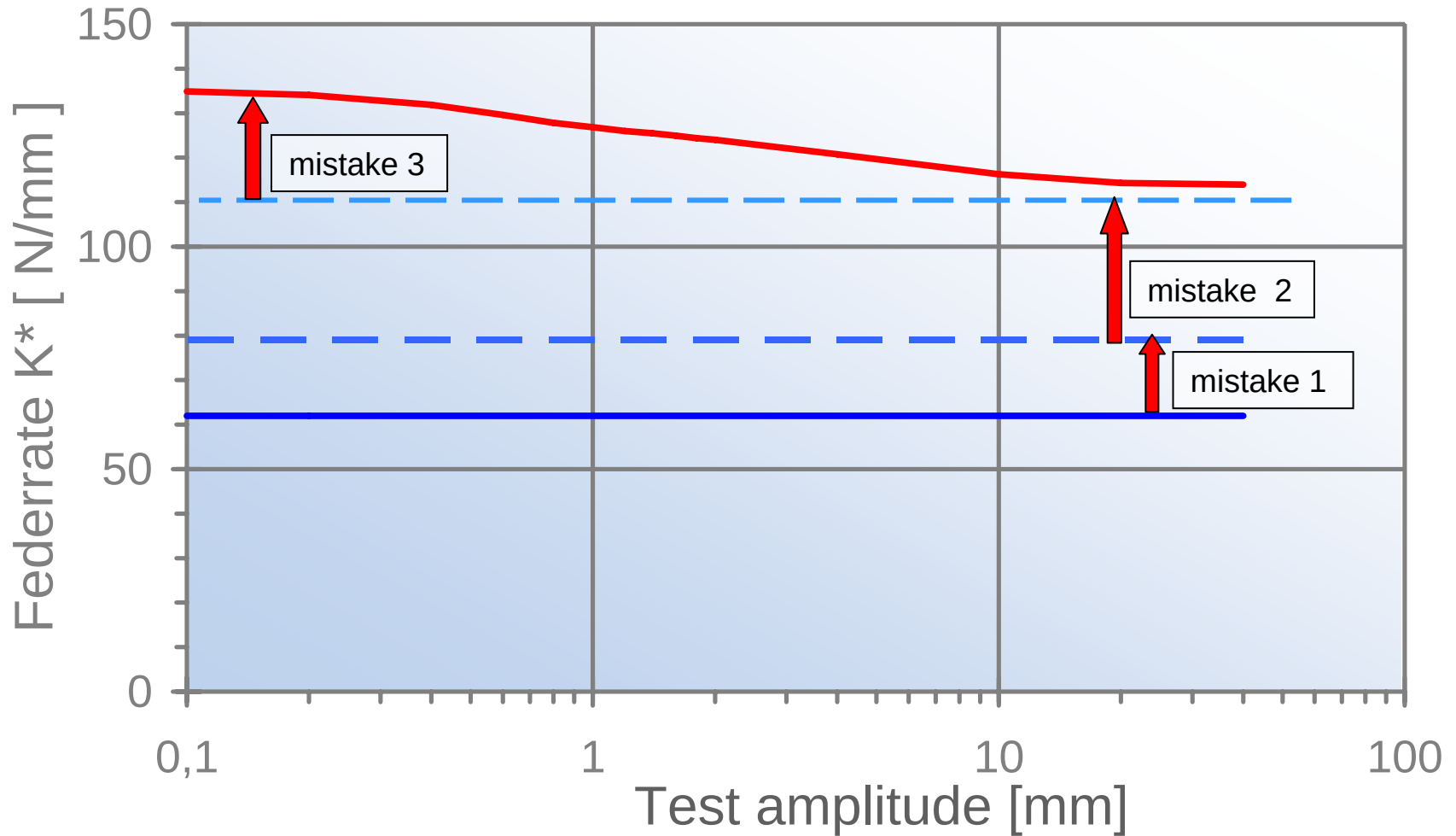
**No air springs
in passenger cars
for more than
30 years**

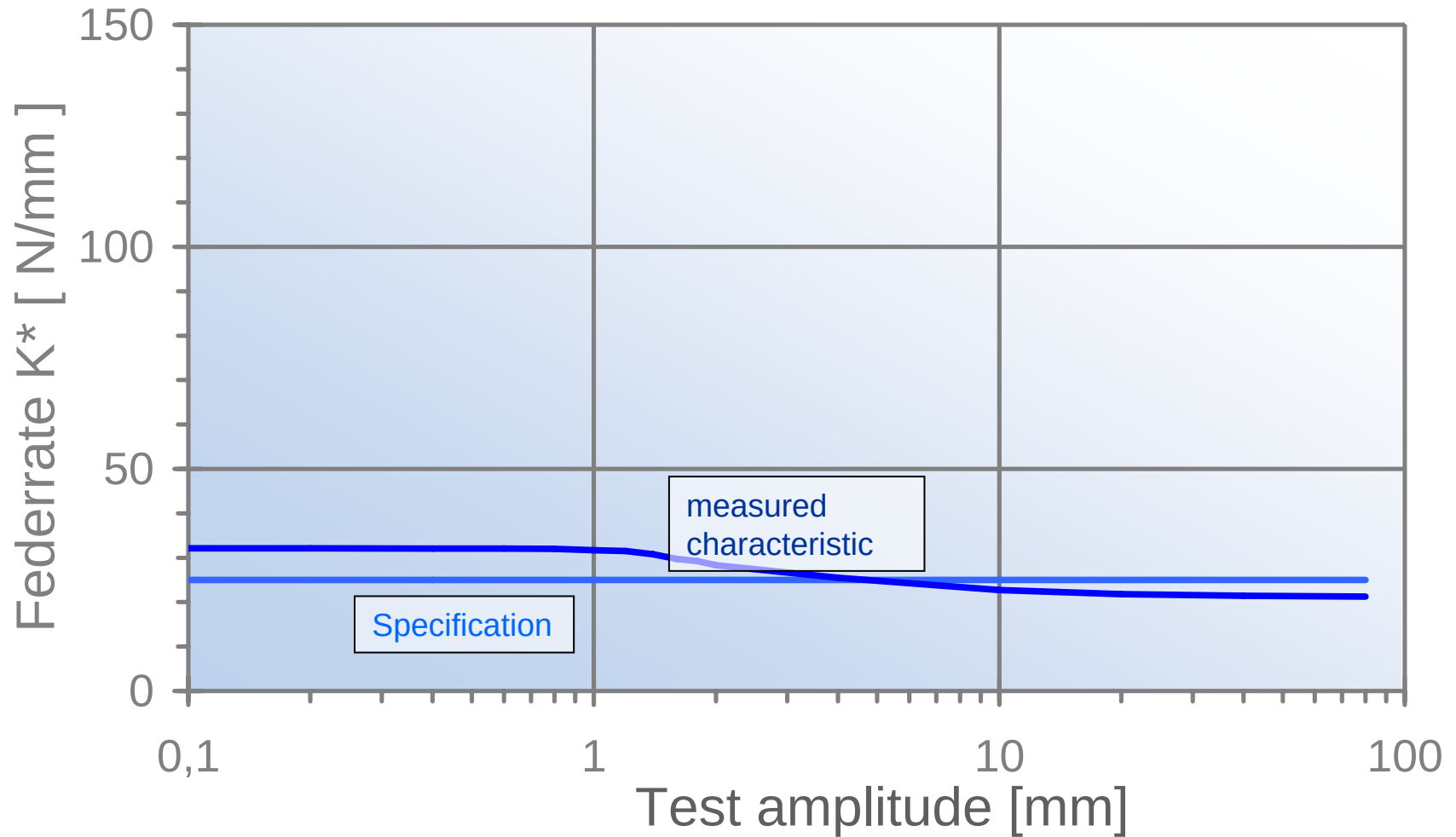


1960



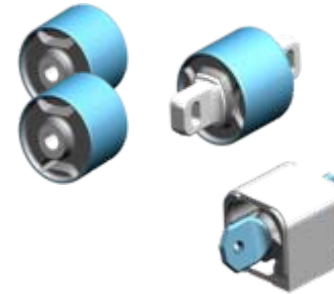




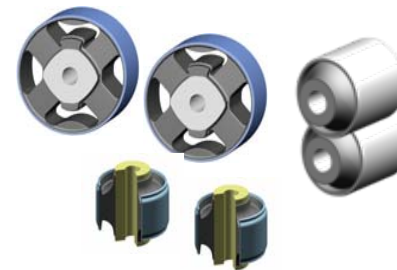




Bugatti Veyron



Audi R8



?????
(still confidential)



.... supports in second step future high volume projects and

TATA Nano the vehicle for a new market



VW Golf5



Ford Focus



production volume Nr. 1 in Europe

production volume Nr. 1 in the world



..... supports the successful introduction of the thin wall air sleeve

RR 01



BMW X5



Jaguar X350



DC W221



BMW E65



PSA Picasso



DC W211



Audi A6



DC W220



1998

Accuracy
of manufact.



2001

switchable
spring rate



2005

addition
compliance mount

