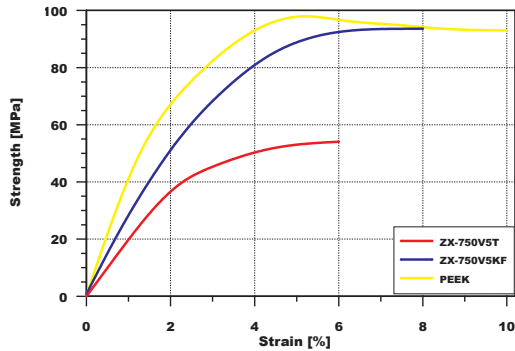
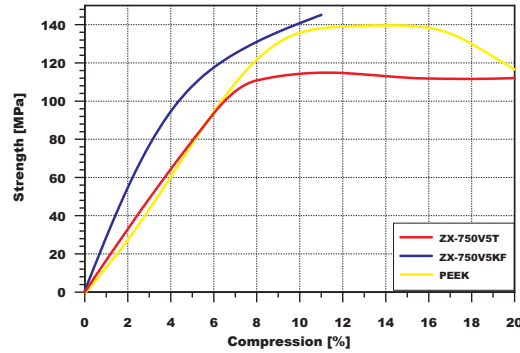


Stress/Strain (ISO 527)



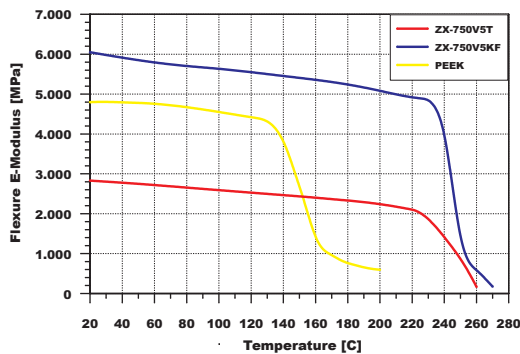
ZX-750V5KF has got the same yield stress value as PEEK (natural), however it still offers a high elongation.

Strength/Compression (ISO 604)



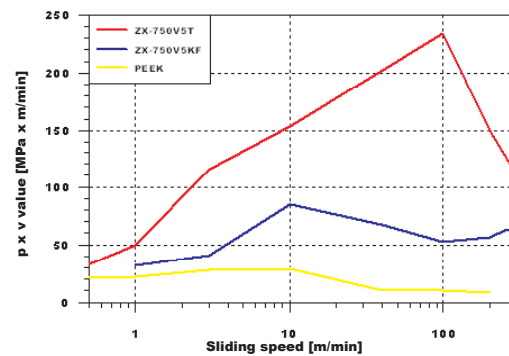
ZX-750V5T does have a similar behaviour to PEEK up to a pressure of approx. 100MPa. ZX-750V5KF is stiffer and its compression at break is approx. 11%.

Flexural E-Modulus (ISO 178)



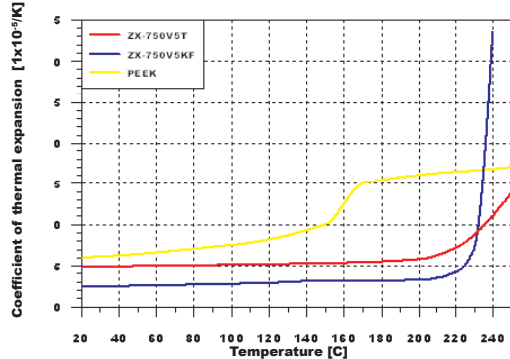
The elastic modulus of both ZX-750 types, strongly decrease over 220°C. This decay temperature is 80°C higher than the PEEK's one.

Admissible PV-value (PVLAB07)*



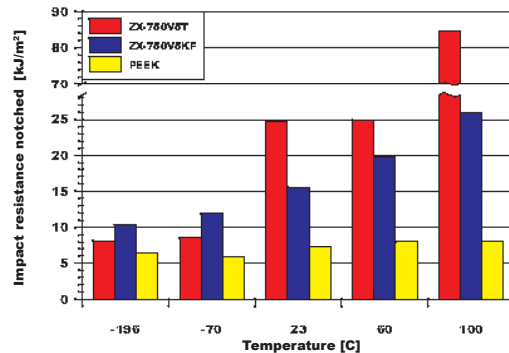
The PV-value of the ZX-750V5T is 1000% higher than the PEEK's one. PEEK in combination with a oil lubrication has got lower resistance.

Thermal expansion coefficient (ISO E830)



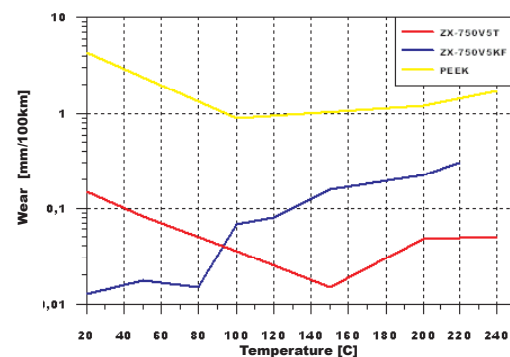
The thermal expansion coefficient of the ZX-750V5KF is up to 220°C at the same level of aluminium.

Impact resistance notched (ISO179/1eA)



ZX-750V5T has got a 500% better Charpy v-notch test value than PEEK (at 23°C). The fibre reinforced ZX-750V5KF is more impact resistant than natural PEEK.

Wear (PVLAB11)*



So far, from 100°C, the ZX-750V5T offers the best measured wear resistance. ZX-750V5T is from 2000% to 8000% more wear resistant than PEEK (natural).

* Information about factory standards can be found on the last page

Substitution examples

Which material can replace the ZX-750V5T?

PI

taking into account the long-term service temperature required, replaceable
Targets: cost reduction, friction and wear reduction.

PEEK

taking into account of chemical resistance required, replaceable.

Targets: wear reduction, increment of the PV-value, increment of the mechanical strength and of the dimensional stability. Increment of the long-time service temperature and precision.

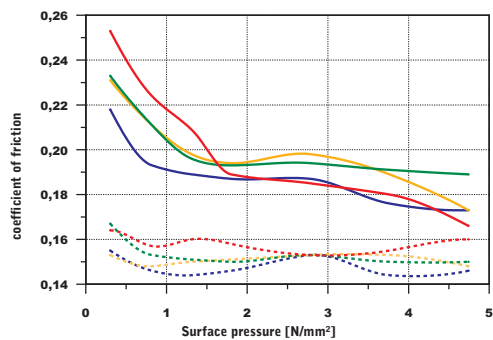
The ZX-750V5T material should always be used, in those applications in which an operational temperature increment of 100°C, applied load, lifetime and dimensional stability have to be improve.

ZX-750 family - Coefficient of friction*

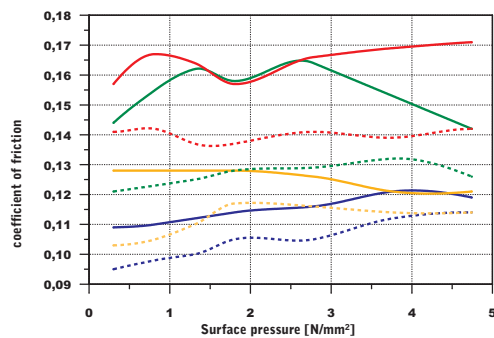
ZX-750V5T

ZX-750V5KF

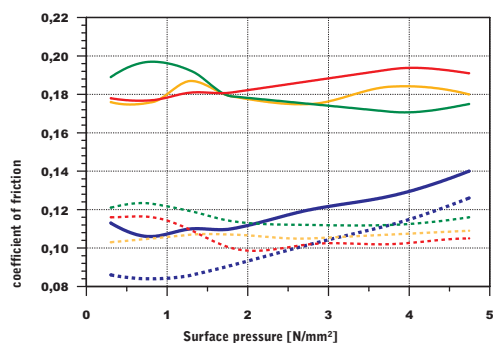
Dry running



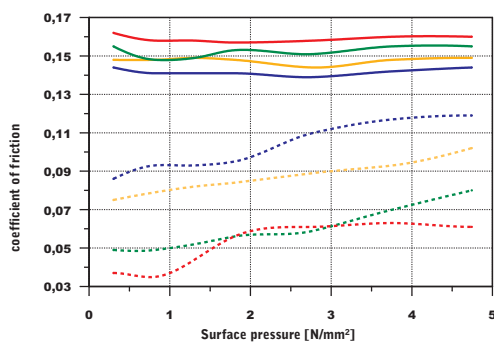
Dry running



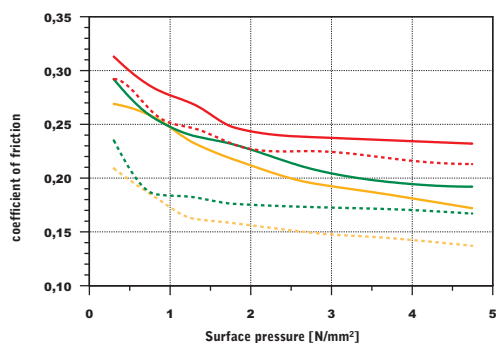
Oil lubrication



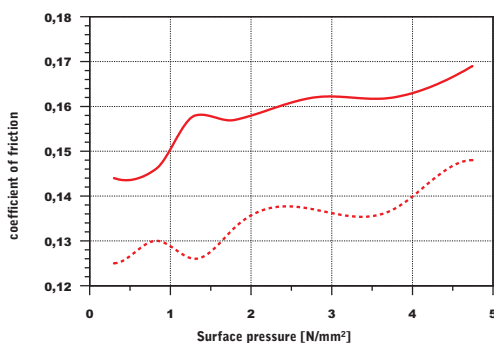
Oil lubrication



Water lubrication



Water lubrication

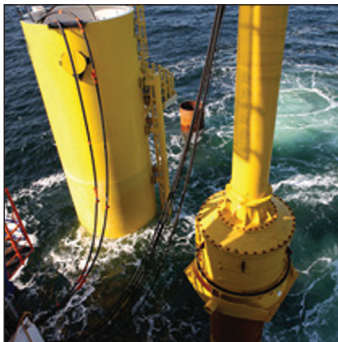
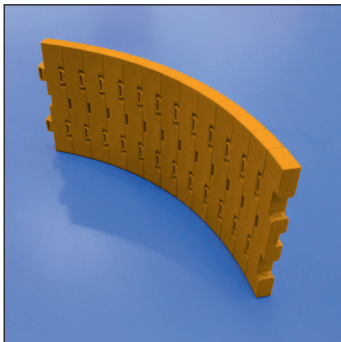


* Determined to factory standard. Information about the test parameters can be found on the last page

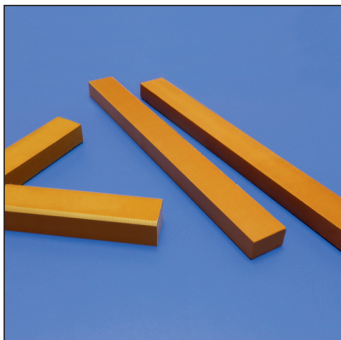
Examples of usage



Friction bearings, made of ZX-750V5T, meet the extreme requirements of the artificial knee joints. Thanks to a high surface pressure and high wear resistance, a max. backlash of 0,05 mm will not be exceeded.



This segmental bushing, made of ZX-750V5T (Ø 700 mm), guides and leads into water the floating weight of 28 t in a deep-sea hammer. This extreme stress subjected part operates in unlubricated conditions, with a 50 Hz impact frequency and a drop height of 1 m.



The existing sliding guide of a chipboard press, is converted from a grease lubrication condition to a dry running condition. Thanks to the extreme high PV-value and the high wear resistance of the ZX-750V5T, the chipboard press now works just in dry running conditions.