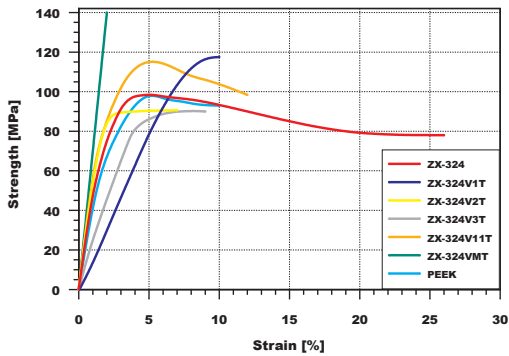
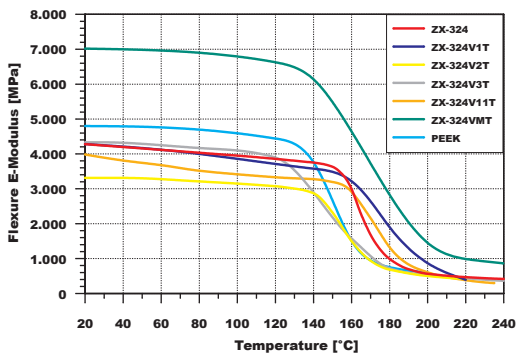


Stress/Strain (ISO 527)



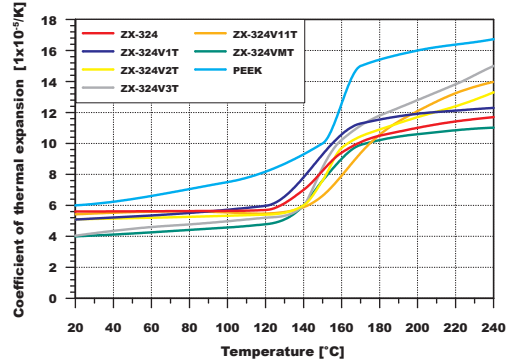
ZX-324V1T has got a high yield stress and elongation similar to the polyketone. ZX-324V11T, despite a high elongation at break, is also very stiff.

Flexural E-Modulus (ISO 178)



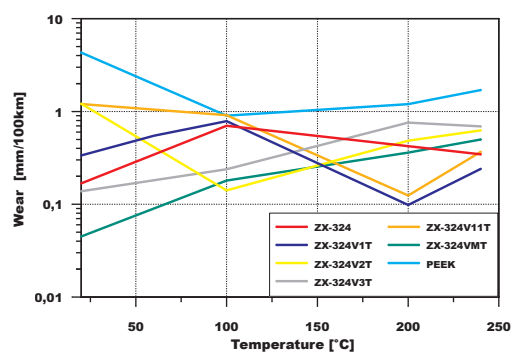
At 145 °C the ZX-324V1T is stiffer than PEEK. ZX-324VMT, thanks to the fibre reinforcement, has got the highest elastic modulus.

Thermal expansion coefficient (ISO E830)



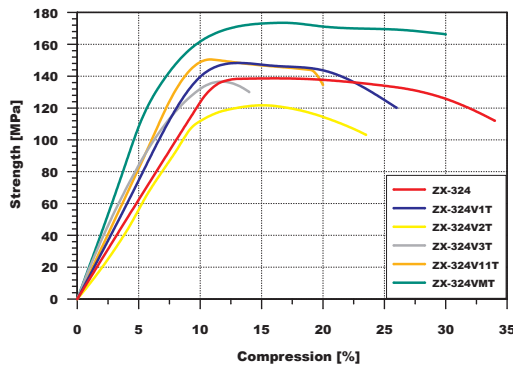
ZX-324V11T has got the highest dimensional stability from 140 °C, the ZX-324VMT, thanks to the fibre reinforcement, is dimensionally stable.

Wear (PVLAB11)*



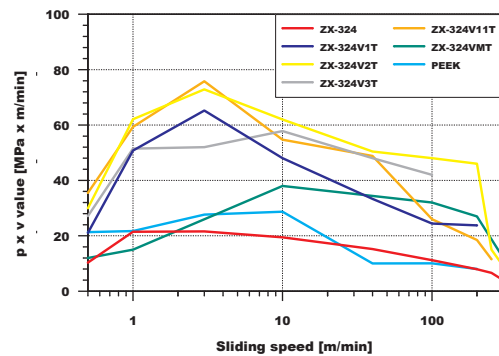
All the modified PEEK are better wear resistant than natural PEEK. Up to 160 °C, the ZX-324VMT is the best. Beyond 160 °C, the ZX-324V1T and ZX-324V11T are better.

Strength/Compression (ISO 604)



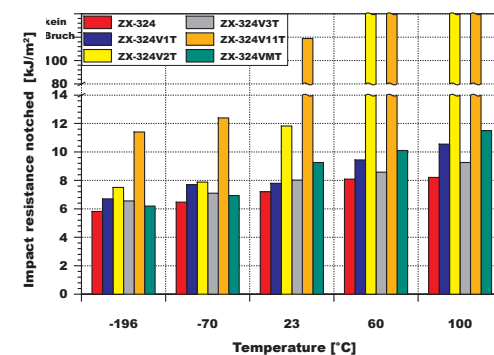
ZX-324V1T, ZX-324V11T and ZX-324VMT have got a higher compressive strength than the basic type and they do have a more stiff behaviour when subjected to pressure.

Admissible PV-value (PVLAB07)*



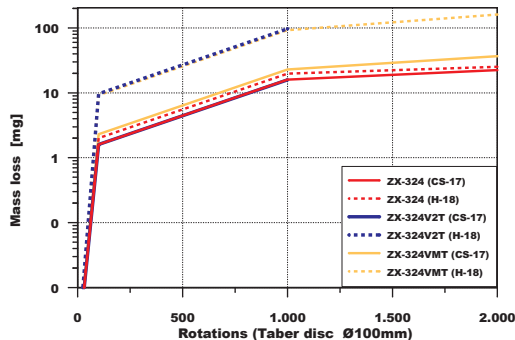
ZX-324V2T and ZX-324V11T have got a PV-value approx. 500% better than PEEK. ZX-324VMT, despite a fibre reinforcement, has got just a small PV-value.

Impact resistance notched (ISO 179/1eA)



ZX-324V11T, even at low temperatures, has got a higher impact resistance than PEEK and fibre reinforced PEEK (ZX-324VMT).

Abrasive Wear (ISO 5470-1)



The basic type is to be preferred in case of coarse abrasive particles (H-18). ZX-324 and ZX-324V2T are equivalent in case of mild abrasive particles (CS-17).

Substitution examples

Which material can replace the ZX-324?

PEEK

Targets: ZX-324 matches for 98 % the PEEK material. The properties correspond to those of natural PEEK. Due to new processing characteristics and the use of the most suitable semi-finished materials (e.g. tubes), a large cost reduction can be archived with the use of ZX-324.

The ZX-324V1T or the ZX-324V11T materials are recommended to improve the yield stress and the resilience.

To improve the PV-value, we suggest the ZX-324V2T and ZX-324V11T materials.

ZX-324V1T und ZX-324V11T have got a higher (30 °C) glass transition temperature. This permits to increase the component stiffness over 140 °C, without adding abrasive fibres. In addition can be archived a cost reduction.

All the modified ZX-324 have got a higher wear resistance and PV-value than the natural PEEK.

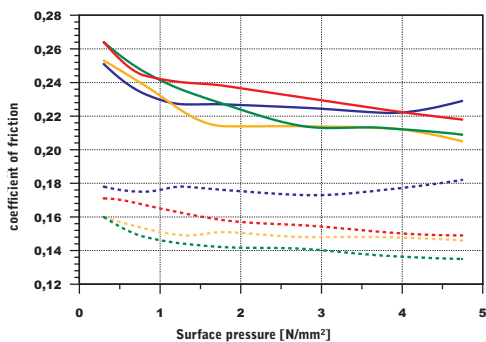
* Information about factory standards can be found on the last page

ZX-324 family - Coefficient of friction*

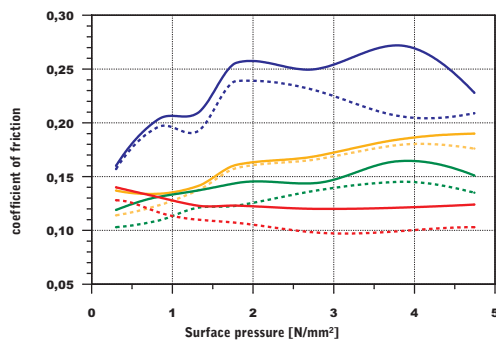
ZX-324

ZX-324 V1T

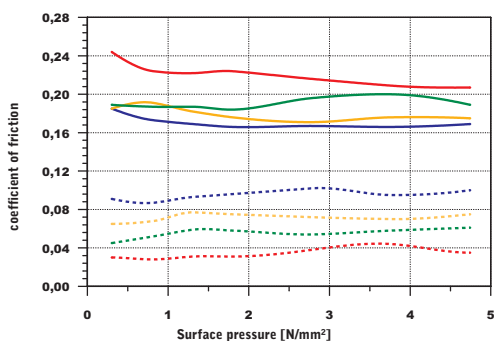
Dry running



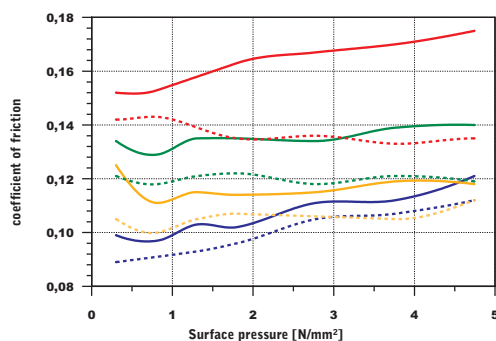
Dry running



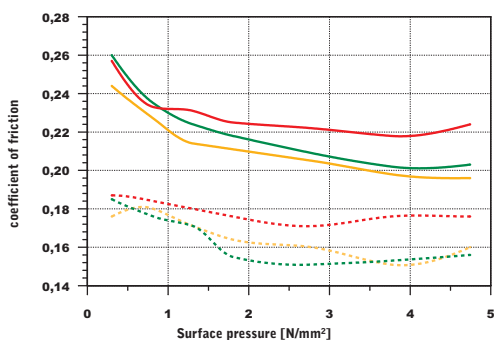
Oil lubrication



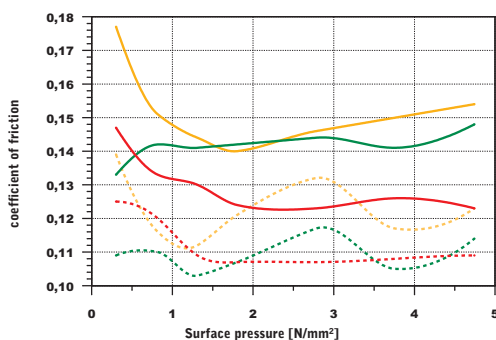
Oil lubrication



Water lubrication



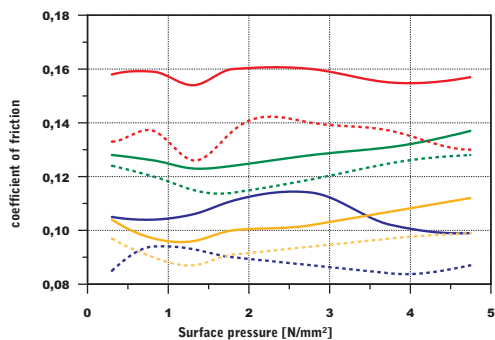
Water lubrication



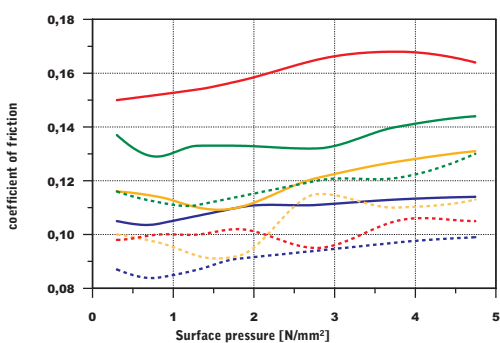
* Determined to factory standard. Information about the test parameters can be found on the last page

ZX-324V2T

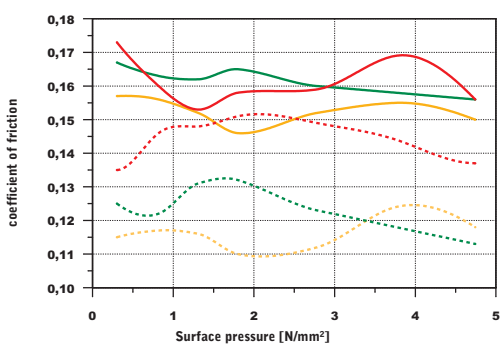
Dry running



Oil lubrication

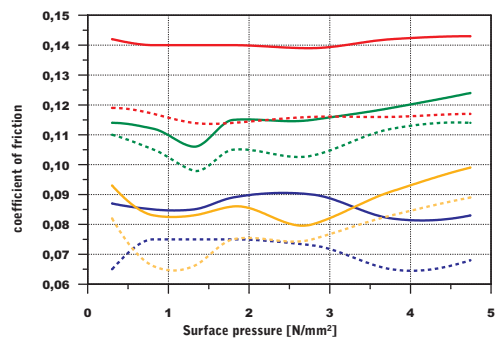


Water lubrication

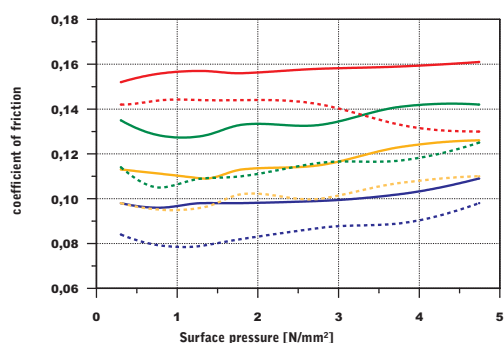


ZX-324V3T

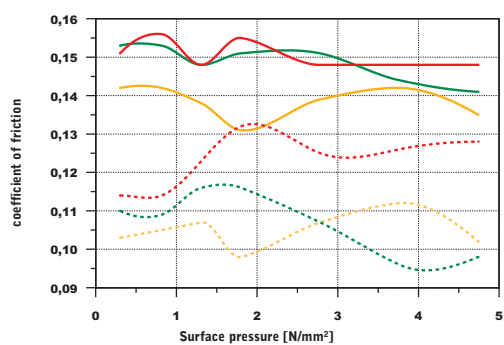
Dry running



Oil lubrication



Water lubrication



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

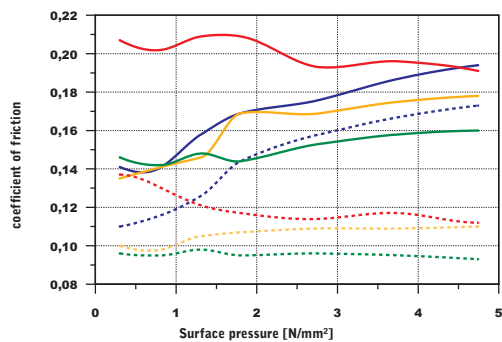


ZX-324 family - Coefficient of friction*

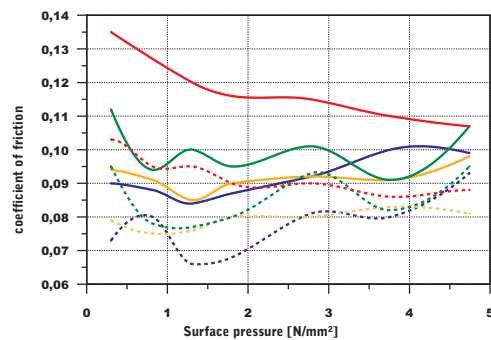
ZX-324V11T

ZX-324VMT

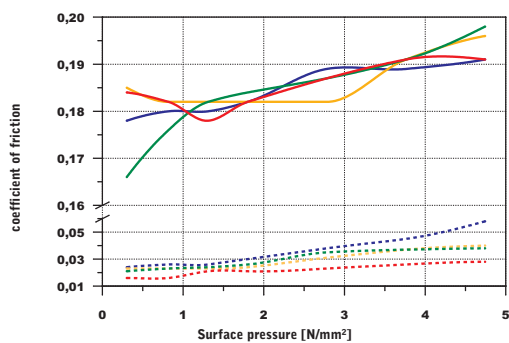
Dry running



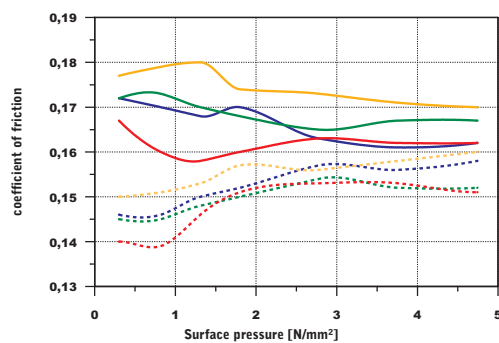
Dry running



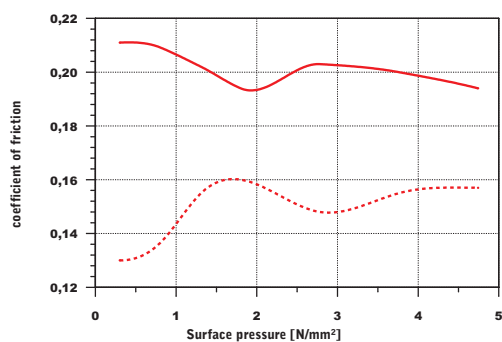
Oil lubrication



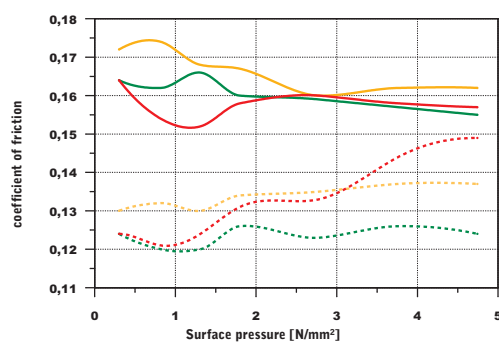
Oil lubrication



Water lubrication



Water lubrication

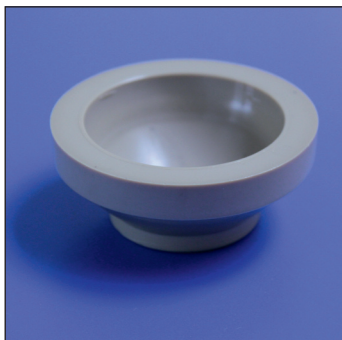


* Determined to factory standard. Information about the test parameters can be found on the last page

Examples of usage



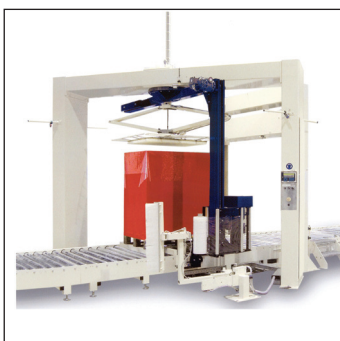
ZX-324 supports the main chassis of the world's largest excavator. Spherical diameter 1000 mm.



ZX-324, with a spherical diameter of 60 mm, supports a weight of 30t subject to a strong impact stress in a dirty work condition. Here as thickwalled injection moulded part.

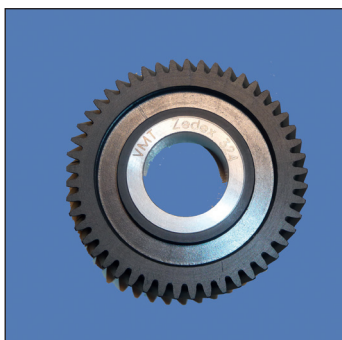


ZX-324V2T takes the toes, through a high load-bearing capacity, elasticity and a low-friction, again in the right position.



ZX-324V11T is used in packaging machines with high dynamic stress as gears and linear guides because of the low wear of the material.

ZX-324V11T is also used as main bearings in hydraulic pumps, thanks to the high dimensional stability and wear resistance.



ZX-324VMT is used in injection moulding. In this application, the material, injected onto a steel hub, transmits high power up to a temperature of 150 °C.