

Making FFKM affordable

While the outstanding performance characteristics of FFKM perfluoroelastomers have been widely recognised for some time, there is a lingering perception among many that the inherent difficulties of moulding and the consequent higher cost of production mitigate against their use in all but the most exceptional of cases.

However, we're demonstrating that with an innovative approach and imaginative solutions, such constraints can be overcome, and FFKM components can be designed and manufactured to meet stringent criteria at optimum cost.

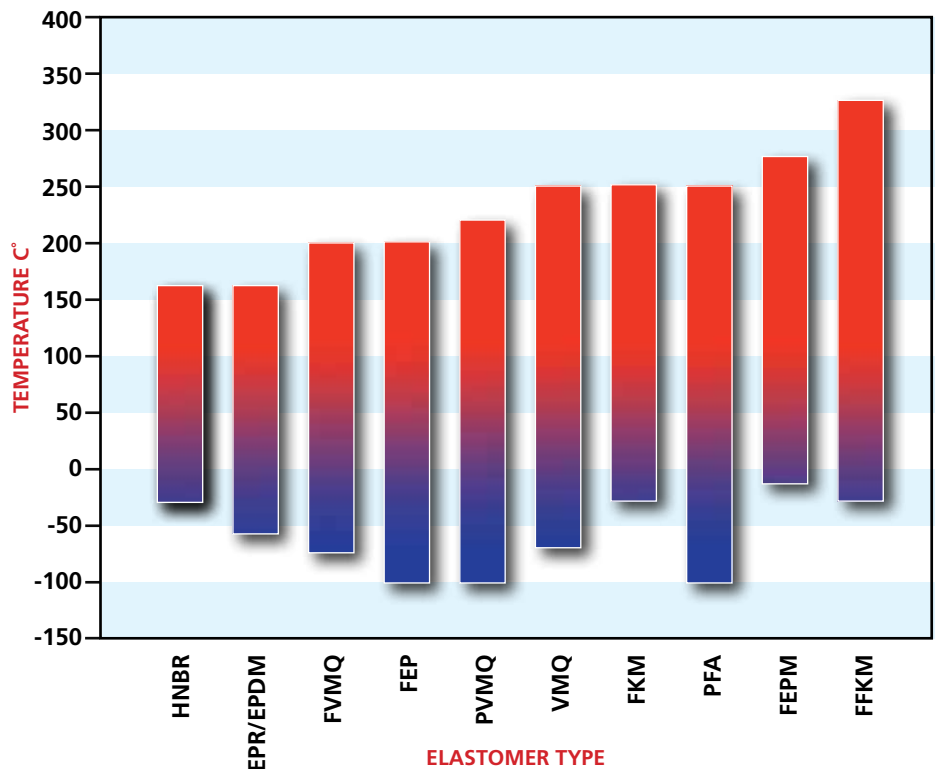
With its fully fluorinated monomers, FFKM has a chemical structure that's virtually unbreakable and impervious to attack by oxygen, ozone, UV light and harsh chemicals. The material's high level of fluorine also makes it more stable and less reactive, while its assured performance at high temperatures means it can be used in situations at least 50° above the operational limit of any other elastomer, with new grades offering similar capabilities at -40° C and below.

We've now accumulated extensive expertise in the field and have pioneered the use of innovative production techniques to address the issues of complexity and cost. Specially designed tools, produced by our own in-house engineers, have enabled us to formulate FFKM for an increasingly diverse range of applications – a prime example of this being the unique vacuum system we've developed to draw the material into tubes up to 300 mm in length for use in extreme environments. We have since expanded further on this process and 450mm lengths will be in production soon.



TYPICAL TEMPERATURE CAPABILITY OF ELASTOMERS

Graph shows the typical useful operating temperature range of each elastomer type



Our FFKM components are now used in petrochemicals, semiconductors, automotive, energy and aerospace – with the range of functions now spanning mechanical seals and pumps, process instrumentation, car engine gas sensors, fibre optical cable connectors and much more.

In essence, we're ushering in a new era where FFKM is concerned – transforming production, reducing costs and delivering major benefits for blue-chip companies across the world.