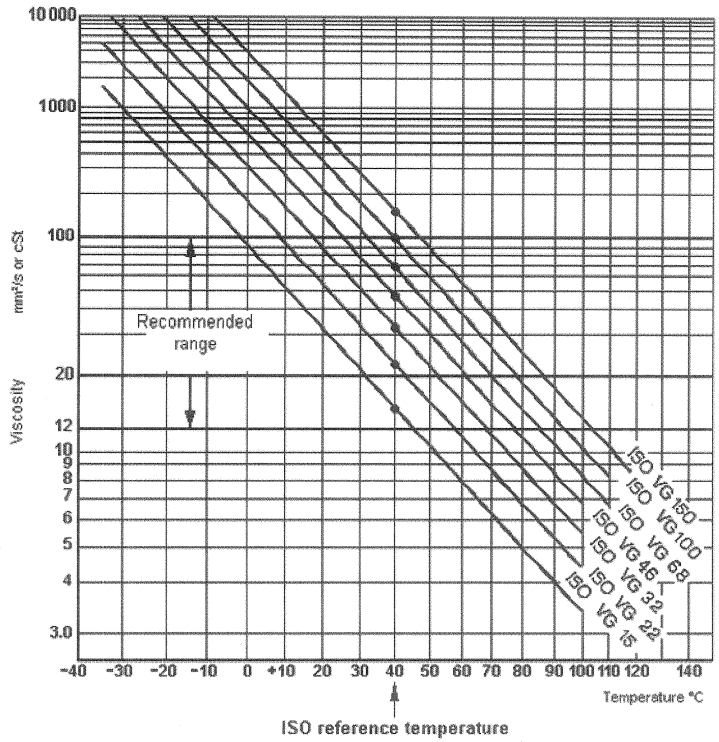
Graph showing effect of Temperature on Kinematic Viscosity



Effect of pressure on viscosity

Contrary to popular belief, varying pressure can lead to significant variations in viscosity. In a closed flow circuit at a fixed temperature, a change in pressure of 40 MPa (400 bar) can lead to a change of up to 8% in viscosity. However there are problems in calculating this variation.

Density and specific volume

The density of mineral oils is typically around 870 kg m^{-3} (in comparison synthetic oils usually have a density of around 1200 kg m^{-3}). The specific gravity, the ratio of the density of the fluid to the density of water, is a dimensionless quantity typically 0.87 for mineral oils.