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Subject: **Homogenizing grease and lubricating oil**

### The homogenisation process

High pressure homogenisation has been used in the processing of lubricating oils for many years. The result achieved have been so good that now this technology can be considered a standard practice in the process line of a lot of grease producers.

In general grease consist of a thickening agent dispersed throughout a lubricating oil. The thickening agent include alkali metal soaps, bentonite, colloidal silica etc. In the case of soap based greases made by saponification, the fatty ingredient and a portion of the oil are mixed in the reactor at hot temperature.



Milling of the grease: The mill is the last step of the manufacturing process where the grease finds its final texture (through shearing) prior to going into the drum filler for packaging.

After the saponification step , the remaining oil is added and the mix is ready to be homogenised. The high pressure homogenisation will produce a uniform and smooth structure that remains stable when the grease is used. The advantages of using an high pressure homogeniser are generally the micronisation of the thickening agent, the perfect dispersion of the various components, the increased stability over time and the inhibition of oil separation. Consequently the action of the additive is more efficient and an improvement in quality is obtained.

For grease production a Single Stage Homo is recommended. On the other hands, some grease specialists here apply a back pressure in the range of 10 kg/cm<sup>2</sup> to attain some luster on the grease putting on needle valve etc. in the down stream of homogenizer.