

## heating and cooling

electrical - fluid - steam

All variopumps gear pumps can be supplied with heating jacket. Even retrofitting of a heating jacket is possible - without removing the pump!

## electrical heating cartridges

Heating cartridges are recommended if only one or two pumps have to be wormed up (and if there is no Ex area!) because providing of thermal oil, hot water or steam is very costly.

It is advantageous if there is already a heating control available (e.g. with the extruder). Normally you can use one existing port for the pump temperature control.

Of course variopumps can provide the complete equipment including temperature sensors (normally PT100), control unit and power supply - according to customers requirements



## heating and/or cooling jacket for water, oil or steam

The heating jacket can be used in all cases - even in Ex areas.

## Benefits:



- retrofitting: Heating jacket can be retrofitted all the time.It is not necessary to dismantle
- the pump from the system. in case of a spare pump the existing heating jacket can be used (reduced costs!)
- high heating intensity and homogenous temperature profile especially the area of the shaft seal is very good included.
- additional heating plate for the shaft seal as a option.
- in case of servicing the pump heating plates may remain in the system.
- every installation position is possible total draining (steam) or bleeding (thermal oil) is guaranteed if the piping is done correct
- defined flow without branches, dead ends or corresponding holes.









competitor

Comparison of different heating jackets



variopumps heating jacket

(prinziple shown)