

WE ARE GLASS PEOPLE

HEYE

INTELLIGENT CENTRAL LUBRICATION

Type 2219



h heye
international

INTELLIGENT CENTRAL LUBRICATION

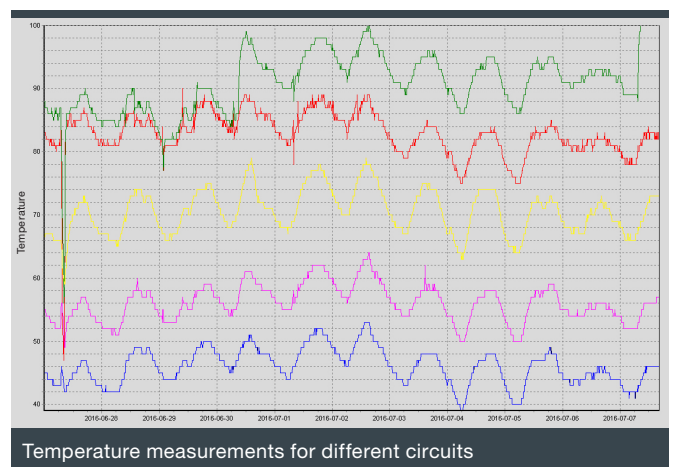
The intelligent central lubrication is a multi-circuit system and reliably supplies the lubrication points with lubricant according to needs. By the adaption of the lubricant amount to the size of the lubrication points and the allocation to temperature circuits, the lubricant is optimally used so that consumption and costs are reduced.

Allocation to temperature circuits

The intelligent central lubrication allocates injectors that operate under similar thermal conditions to six temperature circuits. For controlling the times between the lubrication cycles, sensors measure the temperature at the hottest point of a circuit. From the measured temperature and under consideration of the lubricant-specific evaporation characteristic values the control unit calculates for this lubrication circuit the perfect time for re-lubrication. Thereby, the lubrication points are supplied with lubricant precisely timed.

Adaption of the lubrication frequency to the temperature

In order to prevent that the lubricant loses quality between the lubrication cycles, re-lubrication is carried out more frequently and in considerably lower amounts. The frequency is adapted to the individual temperature of the lubrication point to optimally compensate evaporation losses of the lubricant. In that way the advantage of the high evaporation resistance of fully-synthetic oils is optimally used.



Injectors

Individually adapted injector sizes

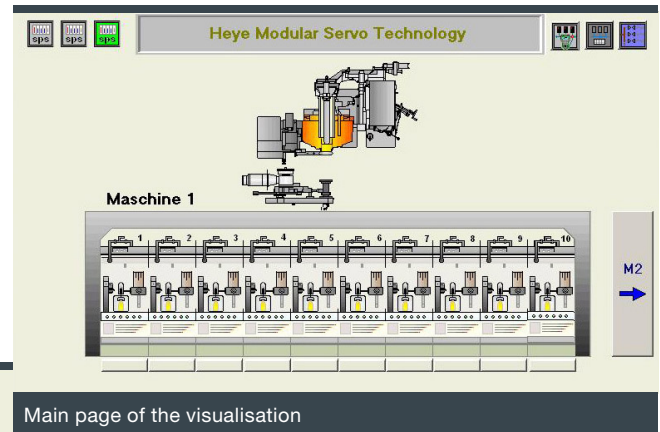
The lubricant amount injected is proportional to the size of the lubrication point, whereby every lubrication point only gets that much lubricant that is absolutely needed. This prevents overlubrication, the lubricant consumption is lowered and machine contamination by overflowing oil is reduced.

HIGH OPERATING COMFORT THROUGH VISUALISATION

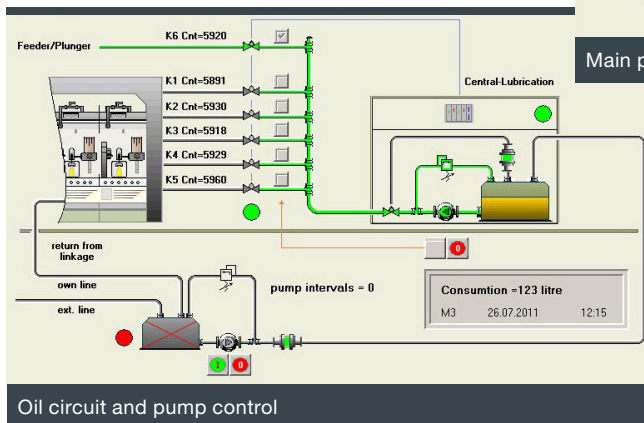
The visualisation interface increases the operating comfort, system monitoring ensures that errors can be recognized easily and quickly.

Visualisation interface

The visualisation is a graphic user interface of the Heye Modular Servo Technology (HMST). It displays all servo components of a production line including intelligent central lubrication on a screen. This gives the operator a comprehensive and visual overview on the various system conditions. The visualisation interface moreover serves as central input and control option.



Main page of the visualisation



Oil circuit and pump control

System monitoring

All system and error messages are collected in a central message server and are displayed via the visualisation interface. Apart from precise error messages there are hints and warnings that facilitate troubleshooting. Maintenance and servicing can thus be planned and performed forward-looking. If problems occur the system condition can be examined, evaluated and remedied quickly by Heye International through remote access worldwide. Software updates can be carried out simply and safely.

| | Section | Drive | ErrNo. | Messages (82) | Reset Meldungen |
|----------|---------|----------|--------|---|-----------------|
| | SPS-3 | S7-Res-M | 123 | K3 -sensor result again valid | |
| 09:48:14 | SPS-3 | S7-Res-M | 124 | K3 -sensor result again valid | |
| 09:48:14 | SPS-3 | S7-Res-M | 133 | K4 -sensor result again valid | |
| 09:48:14 | SPS-3 | S7-Res-M | 134 | K4 -sensor result again valid | |
| 09:48:14 | SPS-3 | S7-Res-M | 143 | K5 -sensor result again valid | |
| 09:48:16 | SPS-3 | S7-OI | 123 | K3 -one or several sensors provide invalid values (short circuit, wire break o | |
| 09:48:16 | SPS-3 | S7-OI | 124 | K3 -no sensor connected or all sensors provide an invalid result | |
| 09:48:16 | SPS-3 | S7-OI | 133 | K4 -one or several sensors provide invalid values (short circuit, wire break o | |
| 09:48:16 | SPS-3 | S7-OI | 134 | K4 -no sensor connected or all sensors provide an invalid result | |
| 09:48:17 | SPS-3 | S7-OI | 143 | K5 -one or several sensors provide invalid values (short circuit, wire break o | |

Message server

OVERVIEW

Advantages

- Lubrication points are lubricated according to needs
- The lubricant is optimally used
- Consumption and costs are reduced
- Temperature guided lubrication intervals
- High operating comfort through visualisation interface
- Error detection through system monitoring
- Improved cleanliness
- Lower evaporation, less oil emission in the air

Scope of Delivery

The central lubrication system consists of three main assemblies

- Main tank
 - Return flow tank
 - Valve switching means
-
- Control cabinet (PLC)

Technical Data

- Number of circuits 6
- Protection class IP 44
(of the control cabinet)
- Ambient temperature max. 50°C
(in the control cabinet)
- Relative humidity max. 85%
(in the control cabinet)

System Requirements

The machine must be equipped with 6 lubrication circuits to take maximum advantage

Recommended Lubricant

Fully synthetic high-performance lubricant specified by Heye International, e.g. Klübersynth HM 2-220 or Castrol Viscogen-G

Emissions

The A-weighted equivalent permanent sound level of the central lubrication system is below 70 dB (A)

Main Tank

- Delivery rate (pump) 0.36 l/min
- Pressure (pump) max. 80 bar
- Dimension incl. oil pan (separate tank) approx. 1700 x 1000 x 1750 mm
- Filling amount (separate tank) 200 / 400 liters
(depending on the type)
- Filling amount (tank integrated in the bed) 110 / 130 liters
(depending on the number of sections)

Return Flow Tank

- Delivery rate (pump) 5.8 l/min
- Pressure (pump) max. 25 bar
- Dimension incl. oil pan approx. 700 x 600 x 1115 mm
- Filling capacity approx. 70 liters

Control Cabinet (PLC)

- Dimension approx. 210 x 600 x 800 mm