

## Heating Jackets and Trolleys



Picture Courtesy of the Petroleum Engineering Department  
at the Colorado School of Mines, Golden, CO USA



### Sampling

The Leutert electronically controlled heating jackets provide even heating of liquid and gas samplers and cylinders. The sample cylinders can easily be transported anywhere in the laboratory by means of the heating jacket trolleys.

## Description

When a downhole sampler travels back to the surface the temperature inside the tool and consequently the pressure inside the sample chamber drops. The decrease in temperature and the reduction of pressure may bring the fluid to conditions of temperature and pressure corresponding. The sample will separate to a multiphase condition. In general, this process may be reversed by re-heating the sample. Thus, the sample will resume its initial monophasic state.

The Leutert electronically controlled heating jackets provide even heating of liquid and gas samplers and cylinders. The sample chamber is heated to the maximum temperature in less than an hour and the temperature is controlled at  $\pm 1$  °C (1.8 °F).

The Leutert heating jacket trolleys can be used in the laboratory if a sample in multiphase condition needs to be heated to its initial single phasic state. The trolleys allow easy and safe transportation of the sample cylinders anywhere in the laboratory. Heating also reduces the viscosity of crude oil and the sample can be transferred easily.

The main features are:

- Controlled and even heating of the sample chamber or cylinder
- Easy and safe transportation of the sample cylinders in the laboratory
- Fast heating temperature ramp
- Allows inversion of the chambers to transfer at pressure and temperature
- Homogeneous temperature in the fluid sample
- Explosion proof according to ATEX available on request

## Technical Specifications

| Heating Jackets |                                     |   |   |
|-----------------|-------------------------------------|---|---|
| Type            | MDT Sampler                         | PDS / OPS Sampler                               | Oil Sample Cylinder                     |
| Suitable for    | Schlumberger MDT Sampler 4.75" & 5" | MK I / MK II / SPS / PDS <sup>short</sup> / OPS | Leutert PDC Cylinders / Type 5, 6 (10K) |
| Dimensions      | (91 x 20 x 20) cm   (36 x 8 x 8) in | (134 x 21 x 10) cm   (50 x 8 x 4) in            | (26 x 47 x 15) cm   (10 x 19 x 6) in    |
| Weight          | 19 kg   41.9 lbs                    | 13 kg   28.7 lbs                                | 12 kg   26.5 lbs                        |
| Max. OD         | 127 mm   5"                         | 46 mm   1.8"                                    | 89 mm   3.5"                            |
| Power           | 440 W, 230V 50Hz                    | 440 W, 230V 50Hz                                | 440 W, 230V 50Hz                        |
| Temp. range     | 0 – 180 °C   32 – 356 °F            | 0 – 180 °C   32 – 356 °F                        | 0 – 150 °C   32 – 302 °F                |

| Heating Jacket Trolleys |   |  |  |
|-------------------------|---|--|--|
| Type                    | Oil Sample Cylinder Trolley             | Gas Sample Cylinder Trolley            | Gas Sample Cylinder Trolley            |
| Suitable for            | Leutert PDC Cylinders / Type 5, 6 (10K) | Leutert GSC Cylinders                  | Double ended GSC Cylinders             |
| Dimensions              | (130 x 58 x 61) cm   (50 x 23 x 24) in  | (130 x 58 x 66) cm   (50 x 23 x 26) in | (130 x 63 x 71) cm   (50 x 25 x 28) in |
| Weight                  | 36 kg   79.4 lbs                        | 54 kg   119.0 lbs                      | 56 kg   123.5 lbs                      |
| Max. OD                 | 89 mm   3.5"                            | 210 mm   8.27"                         | 229 mm   9"                            |
| Power                   | 440 W, 230V 50Hz                        | 400 W, 230V 50Hz                       | 400 W, 230V 50Hz                       |
| Temp. range             | 0 – 150 °C   32 – 302 °F                | 0 – 65 °C   32 – 149 °F                | 0 – 65 °C   32 – 149 °F                |