



# LSC / Coil – Laboratory Sample Condenser

## LSC-COIL - Laboratory Sample Condenser

The better and cheapest solution vs. standard DTS double tube sheet heat exchanger

LSC-COIL heat exchangers have been designed to allow Clean Steam (CS) and Water For Injection (WFI) samples to be taken quickly and easily whilst maintaining a sterile testing environment.

LSC-COIL are ideal to be mounted at the sampling point and can be operated with either mains or chilled water as the cooling medium. Availability of aseptic sample valve allow fine control of sample flow during testing

The LSC-COIL can be sterilised in situ-on-line, thus ensuring continuity of samples regardless of testing frequency, ideal for fluids in pharmaceutical and purity systems applications.

### Areas of applications:

- Pure Steam sampling
- In-line conductivity monitoring
- Cooling/heating of PW-WFI for processing equipment in pharmaceutical industry



### Feature offered by the unit include:

- No internal welds
- No gaskets to renew
- Low maintenance costs
- Self drainable on product side
- Compact, easy to install
- Easy to steam in place

### Sample Condenser operation

The medium to be condensed/cooled passes through the tube side coil. Typically a regulating valve will be used to throttle the sample medium flow. Cooling water is channelled countercurrent inside the shell in order to ensure maximum efficiency. The heat energy of the sample medium is absorbed by the flowing cooling water, resulting in a drop in the sample temperature. Where steam is the sample medium, the cooling water will firstly absorb the steam's latent heat content, condensing it back to water. Further heat transfer as the condensate passes through the coil will reduce its temperature prior to discharge.

### No risk of contamination

The design without internal welds, completely exclude the possibility of cross contamination between the product and the cooling/heating media.

### Operating conditions :

Maximum working pressure 8 barg at 175°C both sides (shell and tube)

@ Note – pressure rating may exceed that of clamps connections

### Capacities (approximate) :

- Steam : 6/8 kg/h of condensate at 100°C

- Water : 30 lt/h of water from 85°C to 30°C

based on a cooling water temperature of 18°C and flow rate of 10 lt/min.

### Connections :

Tube side : 1/2" clamp BS 4825

Shell side : 3/8" BSP

### Standards :

All LSC models according to PED directive 97/23/CE are CE compliant under the SEP

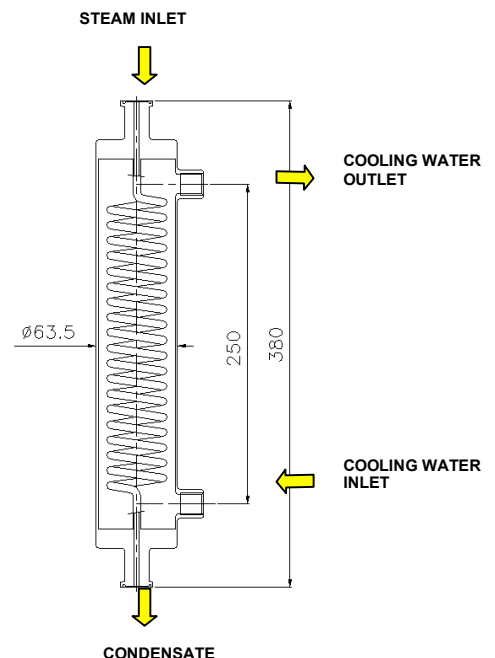
"Sound Engineering Practice" (Article 3 – Paragraph 3)

Non-standard size can be made on request, depending

On application and flow rates.

### Surface finish :

product contact surface are finish with Ra<0,5 micron or better



In the interests of development and improvement of the product, we reserve the right to change the specifications without prior notice.