Sample Coolers

Series 7
SEE SEPARATE LEAFLET FOR SERIES 8 & 9

FULL RANGE OF HIGH PERFORMANCE COST EFFECTIVE COMPACT DESIGNS

Lowe Sample Coolers: - (Originally developed in association with CEGB), have been the de facto standard for many years in nearly all UK Power Stations and with UK plant builders for both UK and overseas projects. Their performance and reliability remain unsurpassed. Ever conscious of changing markets LOWE has introduced a wider and upgraded range, retaining many of the outstanding features whilst offering more cost effective solutions.

Large heat capacity: - With very low cooling water pressure drop, allowances for coil & shell fouling at full process conditions resulting in a safely predictable performance with high sample flow rates and minimum coil vibration. Short sample residence time reduces the build up of solids and scale.

Sealing: - single non asbestos bearing gasket only

Coils designed to minimise thermal shock: Reducing stress corrosion and extending coil life. This unique feature has been retained for this new range.

Shell removable: - without disturbing the sample lines, for inspection or maintenance purposes to the most commonly fouled area.

Heat Treated Coils: - offered as an option to extend coil life even further. Alternative materials to the standard Stainless Steel coils are available i.e. INCONEL or MONEL where more aggressive conditions prevail.

Shell Relief Valves: - Available from Thermal Relief Valve to Full Flow protection, if required against the unlikely event of simultaneous guillotine coil failure

Special Designs: - for Low Pressure Steam / Water; Multi Steam samples; Multi element Isothermal Bath Type; High Sample Flow and closer approach tolerances.

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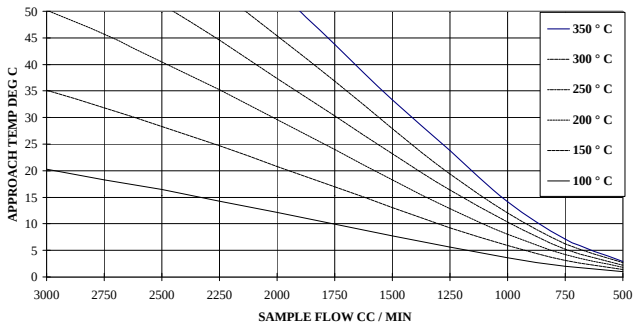
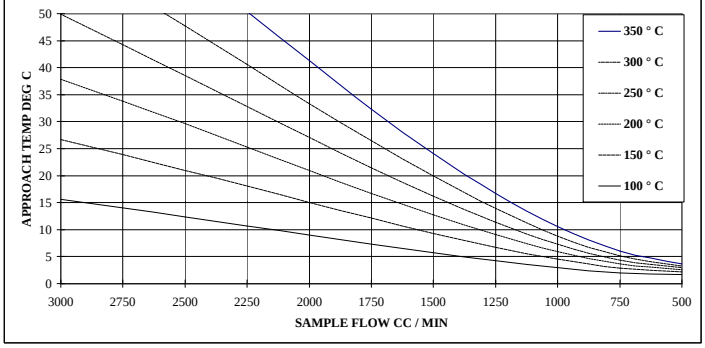
CALCULATIONS ARE BASED ON A COOLANT FLOW OF 2,400 L/HR
WITH 35 DEG C INLET TEMPERATURE
THE PERFORMANCE IS WITH A FOULING RESISTANCE OF
0.059m² °K/kW ADDED TO BOTH SIDES OF THE COOLING ELEMENT

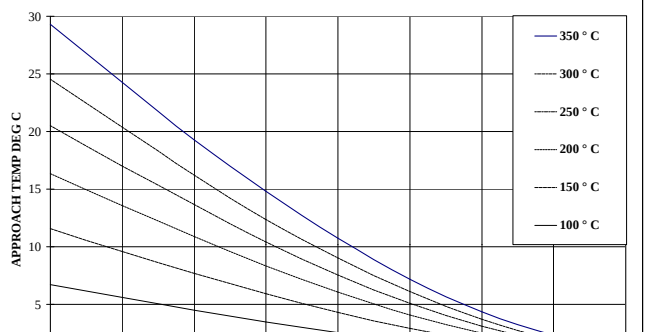
SAMPLE COOLER 6 M 1/4" OD COIL 7 SERIES
SURFACE AREA 0.11 SQ M
CW PRESSURE DROP 0.04 BAR



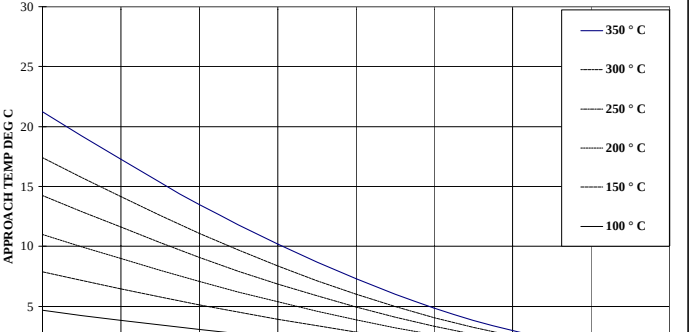
SAMPLE COOLER 6 M 3/8" OD COIL 7 SERIES
SURFACE AREA 0.17 SQ M
CW PRESSURE DROP 0.07 BAR



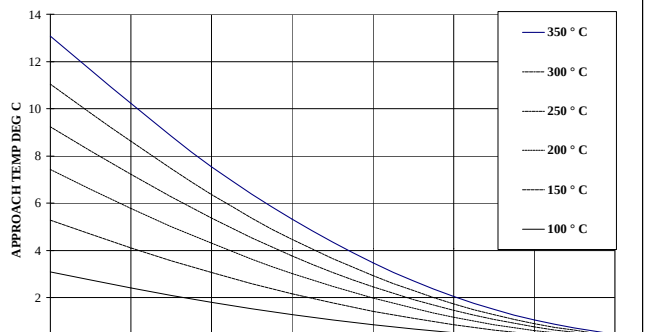
SAMPLE COOLER 11 M 1/4" OD COIL 7 SERIES
SURFACE AREA 0.22 SQ M
CW PRESSURE DROP 0.04 BAR



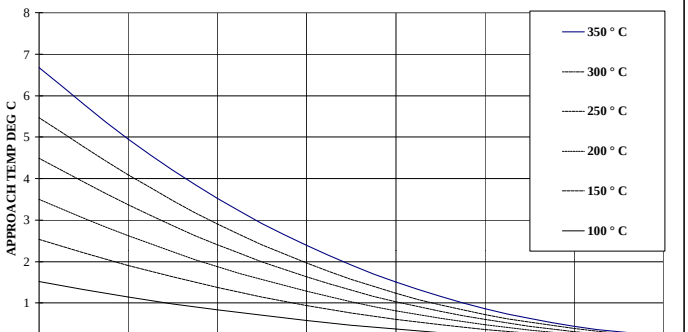
SAMPLE COOLER 11M 3/8" OD COIL 7 SERIES
SURFACE AREA 0.32 SQ M
CW PRESSURE DROP 0.09 BAR



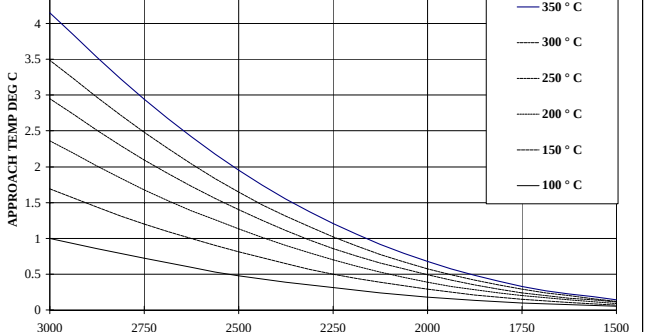
SAMPLE COOLER 15M 1/4" OD COIL 7 SERIES
SURFACE AREA 0.3 SQ M
CW PRESSURE DROP 0.05 BAR



SAMPLE COOLER 15 M 3/8" OD COIL 7 SERIES
SURFACE AREA 0.46 SQ M
CW PRESSURE DROP 0.12 BAR



SAMPLE COOLER 21 M 1/4" OD COIL 7 SERIES
SURFACE AREA 0.42 SQ M
CW PRESSURE DROP 0.05 BAR



Cooler Performance Table for Steam

The Table shows the Sample Outlet temperature

Basis of Calculation is Coolant inlet 35 °C Flow 2,400 L/hour

Fouling Factors 0.059 Both Sides Coolant and Sample

Saturated Steam Samples		300 °C 86 BARA				250 °C 40 BARA				200 °C 16 BARA	
Sample Flow mL/Min	Cooler Model	7.26			7.35	7.26			7.35	7.26	
		04.6	06.6	06.11	04.15	04.6	06.6	06.11	04.15	06.6	06.11
500		41	42	36	35	42	42	35	35	46	36
1000		64	60	37	36	60	68	38	36	99	39
1500		103	90	41	37	90	120	46	38	XXX	XXX