# Valflow

## Ink temperature controller (ITS)

On rotogravure and flexographic presses, as print run progresses, ink temperature tends to rise rapidly from that at the start. This high temperature results in:

- Reduced print quality due to changing solid-liquid ratio of the ink
- Increased solvent evaporation, resulting in higher top-up solvent consumption
- Unpleasant solvent odour on the shop floor
- Increased risk of fire

The **Valflow ink temperature controller VIC11** is designed to maintain the temperature at the optimum level suitable for the process and ambient conditions. This ensures consistency of printing and reduces fugitive solvent losses.

### Operation:

On each print station, an ink circulating pump delivers ink from the tank to the print station. As the printing progresses, temperature of the ink varies over time. This variation in ink temperature results in higher solvent evaporation, which in turn means higher top-up solvent consumption. The ink flows through the inner spiral tube of heat exchanger to the print tray. The chilled water flows in the outer side of the tube and inside the shell, thereby cooling the ink. This ensures that ink temperature is maintained constant at set value.

### Benefits:

- Reduced solvent evaporation
- Enhanced print quality, dot gain, and reflective density
- Reduced risk of fire
- Consistent print shade
- Lesser solvent vapour on shop floor
- Increased profitability
- Easy to clean
- No mixing of water and ink
- Smooth ink flow
- Leak-proof, compact heat exchanger design

**Heat duty (in kW) in cooling mode**

| Water temp. (°C) | Water flow rate (L/min) | | |
|---|---|---|---|
| | 25 | 30 | 35 |
| 10 | 4.3 | 4.4 | 4.4 |
| 15 | 3.2 | 3.3 | 3.3 |

Note: Inlet ink temperature considered at 30°C

**Heat duty (in kW) in heating mode**

| Water temp. (°C) | Water flow rate (L/min) | | |
|---|---|---|---|
| | 20 | 25 | 30 |
| 35 | 3.2 | 3.2 | 3.3 |
| 40 | 4.3 | 4.4 | 4.4 |

Note: Inlet ink temp considered at 20°C

**AxisValence** has extensive experience and expertise in various applications across industries, which we leverage to provide a suitable solution for your application.

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V4, Nov 2023