# **Valflow**<sup>®</sup> Ink temperature conditioner (ITS)

As a print run progresses in rotogravure and flexographic printing processes, the ink temperature tends to rapidly rise above the ambient temperature. The higher temperature leads to:

- Increased solvent evaporation
- Unpleasant solvent odour
- Reduced print quality
- Higher top up solvent consumption
- Increased risk of fire

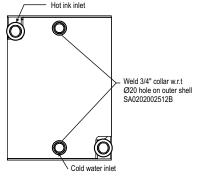
The Valflow<sup>®</sup> ink temperature conditioner VIC11 is designed to maintain the temperature at the optimum level suitable for the processes and ambient conditions. This ensures consistency of printing and reduces the fugitive solvent losses.

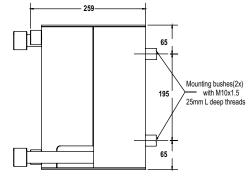
#### Operation

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.

### **Dimensional drawing**

Measurements in mm





Increased profitability

No mixing of water and ink

Ink I/L (1" BSP(F))

#### **Benefits**

- Reduced solvent evaporations
- Enhanced print quality, dot gain, and reflective density
- Reduced risk of fire
- Consistent print shade
- Lesser solvent vapour on shop floor; ensures better safety and health of workers

#### Leak-proof, compact heat exchanger design

Easy to clean

Smooth ink flow

## **Operational data**

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  $^\circ\text{C}$  and flow at 35 L/min

#### 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 and flow at 35 L/min



(Business Unit: AxisValence) Survey no. 251, Sarkhej Bavla Highway (N.H. no. 8A), Village: Sari Taluka: Sanand, Ahmedabad 382 220, Gujarat, India T: +91-2717-699061 E: contact@axisvalence.com W: www.ategroup.com/valence CIN: U51503MH2001PTC132921 \* Product specifications are subject to change

A.T.E. ENTERPRISES PRIVATE LIMITED



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lame proof

sensor

Ink O/L

(1" BSP(F))