

# Steam and Condensate Technology



**Packaged Solutions**  
ready for connection



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## Vacuumizer – Vacuum Steam Heating System

### Vacuumizer – Vacuum Steam Heating System

- Low Temperature Heating System using vacuum steam for process heating at temperatures below 100°C
- Precise temperature control, no overshooting of set value
- Short warm-up times for an increased number of batches (about 50% warm-up time reduction compared to hot water heating)
- Quick response to changes in temperature settings
- Improved energy efficiency by using the latent energy present
- Space saving – the compact system design is easy to adapt to existing equipment
- Packages mounted on casters simplify piping installation and provide easy mobility
- Lower maintenance as condensate is removed as it forms, virtually eliminating corrosion

#### Basic Specifications

Positive steam pressure supply	1 to 2 barg
Vacuum steam temperature range	30 to 110°C
Vacuum steam temperature stability	± 1°C
Vacuum steam capacity range	
Packaged systems:	VM1HP: 70 kg/h (42 kW)
	VM3HP-25: 100 kg/h (60 kW)
	VM3HP-40: 350 kg/h (210 kW)
	VM3HP-50: 520 kg/h (310 kW)
Engineered System:	VM-H: on customer request



## HeatPack Heat Exchanger Systems

### HeatPack Heat Exchanger Systems Packaged systems

- Simple selection and installation
- Available in Domestic Hot Water (DHW), Low Temperature Heating Water (LTHW) and Clean-in-Place (CIP) configurations
- Available with either stainless steel tubular or plate heat exchangers
- Frame and pipework constructed from stainless steel to ensure long life
- Available with either pneumatically or electrically actuated control equipment
- Precise temperature control of outlet water temperatures under varying load conditions
- Small footprints give reduced floor space requirements compared to traditional shell-and-tube units
- Available with pumping trap units to give positive condensate removal under vacuum conditions or where the system back pressure is excessive

### Thermo-cel In-line Water Heating Systems In-line systems

- Simple direct heating of water in pipe
- Systems designed individually to meet your exact requirements
- Temperature control by either electric, pneumatic or direct acting controls depending on load fluctuations
- Installed in existing water supply line
- Suitable for water pressures up to 15 barg
- Available with high limit cut out option



## Condensate Return Systems

### Condensate Return Systems Packaged pump systems

- Return of condensate from process area to hotwell
- Simple selection and installation
- Compact design ensures efficient use of available floor space
- Improved energy efficiency by using the residual heat energy of the condensate to maintain the hotwell temperature
- Available with electrical or mechanical pumps (air or steam powered)
- Available with receiver constructed from either copper, steel or stainless steel (dependent on model selected)

### Engineering a Better Solution

**TLV (Trouble Less Valve)**—the name of our company could not have been better chosen even now, after more than 50 years of company history.

Through development of new products and improving existing designs and systems TLV are continuously improving the quality of their service to their customers. By optimizing the design and accuracy of steam systems, we assist in the reduction of production costs and increase automation, which result in an improvement in the quality of the goods being produced. Through direct customer communication we develop new products and technologies to meet user needs more effectively.

### Overview TLV-Products

- Pressure/Temperature Controls
- Steam Flow Meters
- Vacuum Steam Heating System
- Reducing Valves  
Reducing Stations
- Separators/Filters
- Steam Traps – All Types
- Steam Manifolds  
Trap Stations  
Condensate Manifolds
- Pump Traps/Condensate Pumps
- Compact Heat Exchangers
- Packaged Units
- Flash Vessels
- Steam/Water Mixing Valves
- Diagnostic Equipment  
for Steam Traps and Valves
- Safety Valves, Stop Valves,  
Ball Valves
- Strainers, Sight Glasses