

# LATENTO®

## Vacuum Tube Collector CPC 12/18



- **vacuum tube collector for high performance even at low ambient temperatures**
- **no heat losses in collector**
- **CPC reflector for high yields**
- **highly responsive**
- **long service life (no metal-to-glass joint)**
- **replacement of tubes without having to shut down or drain the solar energy system**
- **easy installation, as ready assembled**

**Tested according to DIN 4757 Part 4  
TÜV-certified and type-approved**

## Advantages

### High performance even in case of adverse weather conditions

The vacuum of the glass tubing ensures low emission of heat and thus high efficiency even in case of low ambient temperatures.

The absorber is selectively coated with a special long-lasting aluminium nitride layer. That means it almost completely absorbs incoming radiation (>92%). However, it does only emit a very small amount of energy in the spectral range of heat radiation (<6%).

In order even to increase the performance of the CPC tubes, a weather-proof, highly reflective CPC reflector is arranged behind the tubes. The reflector serves to focus radiation from all directions on the tube. On account of the reflector's geometry both direct and diffuse sun light is directed onto the absorber. Even in case of unfavourable angle of incidence, the reflector focuses the sunlight on the absorber in an optimum manner. Special heat deflectors ensure low-loss transfer of heat to the U-tubes.

### Long Life, Low Maintenance

The vacuum tubes are completely closed and not connected to the collector by means of a glass-to-metal joint. This ensures trouble-free operation, a long service life and enables replacement of a tube without having to shut down or drain the system.

### Easy Installation

The collector is ready assembled and easy to install at low cost thanks to its small dimensions and low weight.

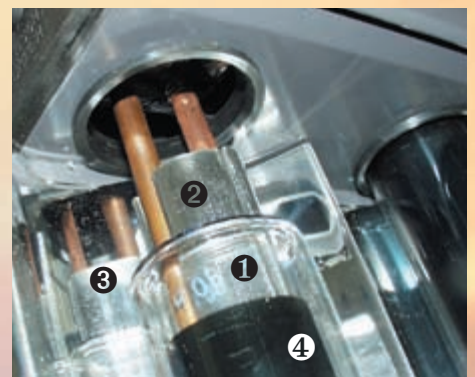
### DIN-Certified and Type-Approved

The collector has been tested according to DIN 4757 Part 4. The collector is TÜV-certified and type-approved.



## Technical Specifications

Type:	CPC 12	CPC18
Number of vacuum tubes:	12	18
Outer dimensions (WxH):	1.64 m x 0.12 m	
Length:	1.39 m	2.08 m
Gross area:	2.30 m <sup>2</sup>	3.43 m <sup>2</sup>
Aperture area:	2.00 m <sup>2</sup>	3.00 m <sup>2</sup>
Absorber area:	2.00 m <sup>2</sup>	3.00 m <sup>2</sup>
Collector volume:	1.5 l	2.4 l
Weight approx.:	37 kg	54 kg
Positive operating pressure, max. perm.:	10 bar	
Colour:	grey RAL 7015	
Glass material:	borosilicate	
Glass tube diameter:	47 mm	
Wall thickness:	1.6 mm	
Vacuum:	long-term stable, 10 <sup>-6</sup> mbar	
Absorber material:	aluminium	
Coating:	aluminium nitrite	
Optical efficiency: C0:	0.63	
Loss factor C1:	1.00	
Loss factor C2:	0.002	
Angle of incidence:	15 °-90 °	
Permitted operating pressure:	10 bar	
Connection:	threaded clamping ring	



- ① Vacuum glass tubes
- ② Heat deflectors
- ③ CPC reflector
- ④ Aluminium nitride coating