Installation Guide IG/LLT100-EN Rev. A

LLT100
Cooling Tube

LLT100 Cooling Tube Installation Guide

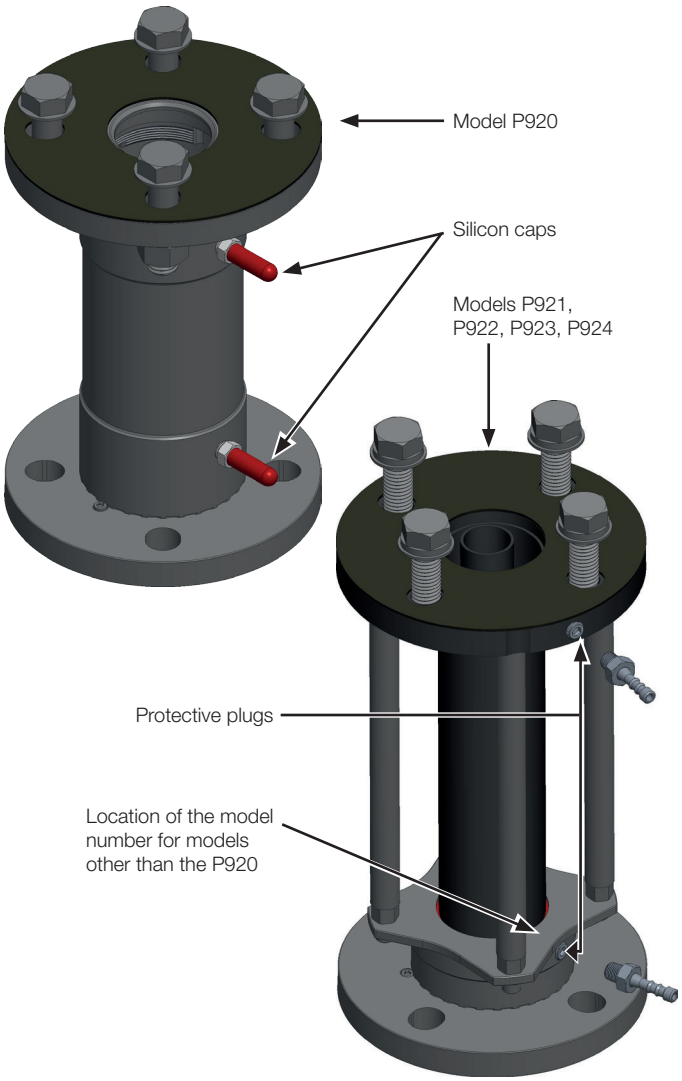
The following information is critical with regards to the installation of a cooling tube with your LLT100 Laser level transmitter.

CAUTION **HOT SURFACE**

The cooling tube can become hot while in use.

The first step that you need to perform before installing the cooling tube is to determine the cooling tube model that you have, and whether you need to add air flow or not.

The following will help you identify the cooling tube model:



Tables on the other side of this document indicate the need for air flow based on the cooling tube model, the temperature generated by the process under measurement, and the ambient temperature.

NOTICE

The cooling tube is not a pressurized vessel. As such, it should not be exposed to air pressures exceeding 10 psi (0.7 bar).

Also, to prevent air pressure build-up, the bottom air outlet should NEVER be blocked in any way. (If a tube extension is used to redirect air flow, the tube itself should neither be blocked nor connected to anything.)

To install the cooling tube when air flow is NOT NEEDED:

1. Screw the cooling tube in place on the process flange.
2. Depending on your cooling tube model:

   If you have a model P920 cooling tube, remove the silicon caps from both top and bottom fittings.

   For any other model, the cooling tube is ready for use.
3. Screw the LLT100 on top of the cooling tube.

To install the cooling tube when air flow is NEEDED:

1. Screw the cooling tube in place on the process flange.
2. Depending on your cooling tube model:

   If you have model P920 cooling tube, remove the silicon caps and connect an air supply tube to the TOP air intake. The cooling tube is ready for use.
3. For any other model, unscrew the protective plugs located at the top and bottom of the cooling tube.
4. Screw the cooling tube on the process flange.
5. Screw the two barbed fittings into the top and bottom threaded holes freed by the removal of the protective plugs.
6. Connect an air supply tube to the TOP air intake.
7. Screw the LLT100 on top of the cooling tube.

LLT100
Laser level transmitter

Tube model P920		Ambient temperature (°C) 20	30	40	50	Air flow needed? (minimum recommended flow, if needed)	Air pressure at cooling tube air inlet*
	Max. process temperature (°C)	205	155	110	65	No	–
		300	225	150	75	Yes (1 scfm)	0.50 psi (0.05 bar)
			280	185	85	Yes (2 scfm)	1 psi (0.075 bar)
				230	105	Yes (3 scfm)	2.5 psi (0.2 bar)
		350		305	130	Yes (4 scfm)	5 psi (0.35 bar)
					165	Yes (5 scfm)	8.5 psi (0.6 bar)

Tube model P921		Ambient temperature (°C) 20	30	40	50	Air flow needed? (minimum recommended flow, if needed)	Air pressure at cooling tube air inlet*
	Max. process temperature (°C)			175	85	No	–
					150	Yes (1 scfm)	0.50 psi (0.05 bar)
		180				Yes (2 scfm)	1.25 psi (0.1 bar)
						Yes (3 scfm)	2.75 psi (0.2 bar)
						Yes (4 scfm)	6.25 psi (0.45 bar)

Tube model P922, P923, P924		Ambient temperature (°C) 20	30	40	50	Air flow needed? (minimum recommended flow, if needed)	Air pressure at cooling tube air inlet*
	Max. process temperature. (°C)			200	90	No	–
					155	Yes (1 scfm)	0.50 psi (0.05 bar)
		280			200	Yes (2 scfm)	1.25 psi (0.1 bar)
					270	Yes (3 scfm)	2.75 psi (0.2 bar)
						Yes (4 scfm)	6.25 psi (0.45 bar)

*These values are given for guidance only.

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