

RT8B THERMOMETER



ACCURATE TEMPERATURE MEASUREMENT IN THE
ROADSTONE INDUSTRY

0 to 500 °C / 32 to 1000°F



LAND
AMETEK®



QUALITY CUSTOMER SOLUTIONS

RT8B THERMOMETER

ACCURATE TEMPERATURE MEASUREMENT IN THE ROADSTONE INDUSTRY

AMETEK LAND HAS BEEN MANUFACTURING PRECISION MEASURING EQUIPMENT SINCE 1947.

WE ARE SPECIALISTS IN NON-CONTACT TEMPERATURE MEASUREMENT AND COMBUSTION MONITORING WITH APPLICATIONS ACROSS DIVERSE INDUSTRIES SUCH AS STEEL AND GLASS MAKING, POWER GENERATION AND CEMENT MANUFACTURE.

As part of AMETEK Process & Analytical Instruments Division since 2006, our customers benefit from the worldwide AMETEK sales and service team.

RT8B is a non-contact infrared thermometer for use in many low temperature applications. It helps asphalt paving or roadstone producers meet state, national and environmental quality compliance requirements and glass manufacturers meet quality compliance requirements in multiple standalone applications.

Required to help manufacturers meet the increasing demands for tighter quality control and comply with quality assurance schemes to ensure that material leaving the site is within specification, RT8B measures the temperature of materials throughout the production process.

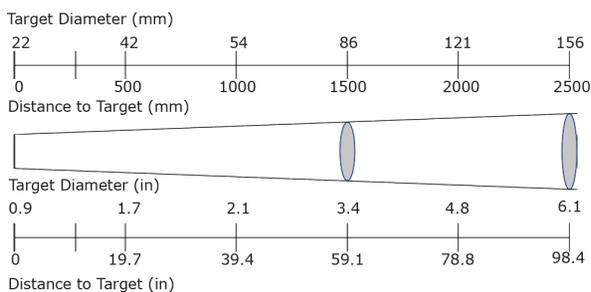
AMETEK Land's non-contact infrared technology provides a faster, superior measurement to unreliable thermocouple

technologies, ensuring product quality, while the RT8B integrates easily into a wide-range of low-cost recorders and controllers.

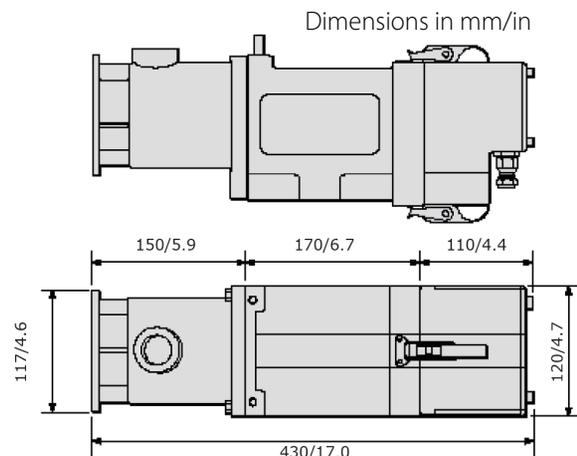
The RT8B is the ideal choice for helping maintain process and quality control within all rugged low temperature applications like Asphalt paving /roadstone plants, able to provide measurements on applications including drier exit chute, mixed material, coated mixer exit, drum mix asphalt plants, and hot storage bins. For glass plants, on applications including lehr exit, cooling and laminar cooling.

The RT8B is an ideal non-contact temperature measurement solution for the roadstone and glass industry.

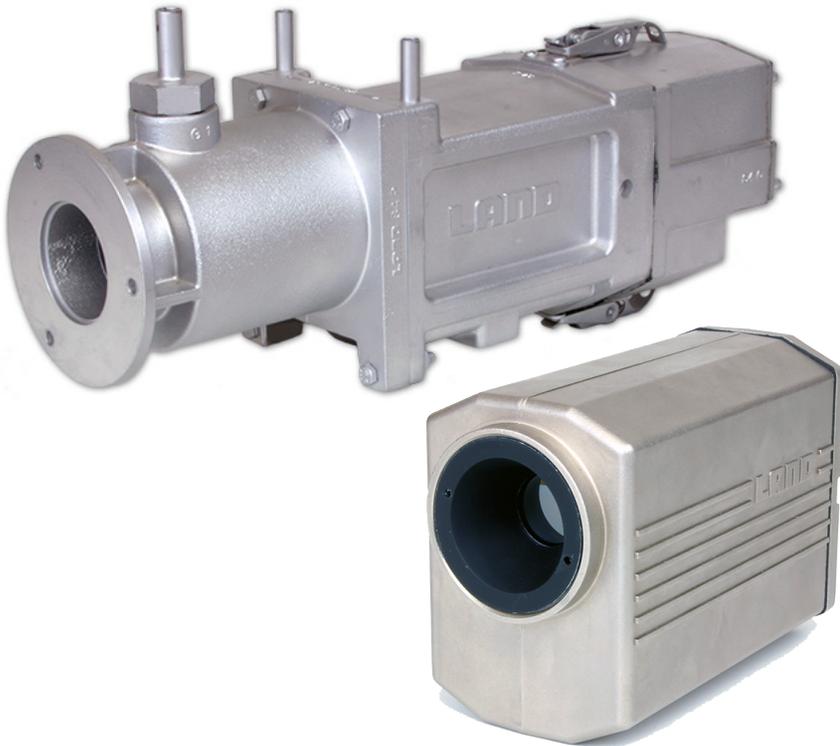
TARGET SIZE DIAGRAM ▼



MOUNTINGS & ACCESSORIES ▼



RT8B APPLICATIONS



Drier Exit Chute

The RT8B thermometer sights onto a stream of aggregate at the exit chute. The thermometer output can either be used to indicate aggregate temperature, or utilised in a closed loop control system to control the burner, thus minimising fuel wastage and maximising efficiency whilst controlling aggregate temperature.

Mixing Material (Batch Heaters)

Due to the batch nature of the mixing process, automatic burner control is not possible, but knowledge of the hot stone temperature and its subsequent effect on the binder and filler temperature is a useful aid to process control. Once the material is in the mixer it is not possible to make adjustments to its temperature. Measurement here does however permit rejection of a single batch if it falls outside the temperature specification limits - avoiding contamination of acceptable material.

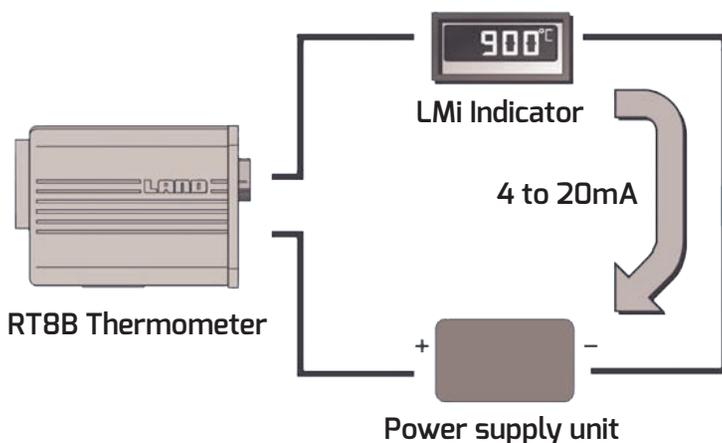
Coated Roadstone Mixer Exit

Installing an RT8B thermometer at the exit of the mixer gives an accurate temperature reading of the coated roadstone prior to leaving the plant. If however, the finished product does not meet specification, there is still time to reject it. The temperature of each batch can then be recorded on a chart or stored to a computer system. The RT8B Thermometer is positioned to sight onto the stream of coated roadstone, as it falls from the mixer/storage bin into the delivery vehicle.

Drum Mix Asphalt Plants

Modern drum-mix asphalt plants are capable of a high level of continuous production, any slight fluctuation in final mix temperature can result in batch rejection. The RT8B is mounted to sight on the stream of coated material as it leaves the discharge chute, prior to the elevator system. The thermometer output can also be fed into a chart recorder or linked to an automatic burner control system using a suitable controller.

SCHEMATIC DIAGRAM ▼



FEATURES & BENEFITS

SIGNIFICANT SAVINGS -

By accurately and reliably measuring the temperature of the material during production, process control can be improved, providing substantial energy savings. These precision measurements also assure quality, increasing production rates.

EASILY INTERFACES WITH ROADSTONE SYSTEMS -

Specifically designed for all applications in the Asphalt paving and roadstone industry, the RT8B has a linear, industry standard

4-20mA output signal, so it interfaces easily with all types of low-cost indicators, controllers and recorders. It also offers a 12-month warranty.

FAST-RESPONSE, NON-CONTACT MEASUREMENT -

Unlike traditional thermocouples, the RT8B offers a fast-response temperature measurement which gives better control. By not being in contact with the product, it avoids the damage and wear that leads to constant replacement or repair.

RT8B THERMOMETER

ACCURATE TEMPERATURE MEASUREMENT IN THE ROADSTONE INDUSTRY

SPECIFICATIONS

Measurement Range	Operating	Specified
RT80B	0 - 250 °C	0 - 250 °C
RT81B	0 - 500 °F	30 - 500 °F
RT82B	0 - 500 °C	0 - 500 °C
RT83B	0 - 1000 °F	30 - 1000 °F
RT84B	100 - 600 °C	100 - 600 °C
RT85B	200 - 1100 °F	200 - 1100 °F
Spectral Response:	8 to 14µm (nominal)	
Output:	4 to 20 mA, 2-wire loop connection	
Emissivity Adjustment:	0.10 to 1.09. Steps of 0.01	
Response Time:	1 to 10s adjustable (0 to 95 %)	
Resolution:	<0.1 °C/0.2 °F	
Accuracy:	2 °C / 0.5 % of span (whichever is higher)	
Ambient Temp. Limits:	-5 to 50 °C/23 to 122 °F (specified), -5 to 70 °C/23 to 159 °F (operating)	
Drift with Ambient Temp.:	<1.5 °C per 10 °C/<1.5 °F per 10 °F	
Drift with Time:	<1 °C/2 °F per year	
Power Supply:	11 to 45 V d.c., 2-wire loop connection	
Load Resistance:	1 Kohm max.	
Vibration:	3G any axis, 10 to 300 Hz	
EMC:	EN 50081-1 (emissions), EN 50082-2 (immunity), EN 61010-1 (electrical safety)	
Sealing:	To requirements of IP65/NEMA4X	
Weight:	1.4 kg/3.0 lb	

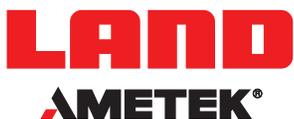


AMETEK Land's AMECare Performance Services ensure peak performance and maximum return on investment over the life of your equipment.

We will deliver this by:

- Proactively maintaining your equipment to maximise availability.
- Optimising solutions to meet your unique applications.
- Enhancing user skills by providing access to product and application experts.

AMETEK Land's global service network provides unparalleled after-sales services to ensure you get the best performance and value from your AMETEK Land products. Our dedicated service centre teams and on-site engineers are trained to deliver the highest standard of commissioning, maintenance and after-sales support.



CONTACT US



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We are fully committed to Quality Assurance. See all our accreditations at AMETEK-LAND.COM/QUALITY