

KELLER

*infrared
temperature
solutions*

ITS



Measuring system CellaAsphalt

Reliable and maintenance-free temperature measurement
at asphalt mixing plants and asphalt pavers



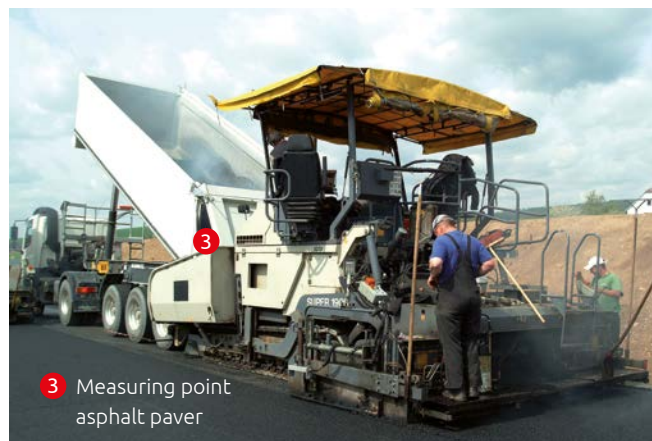
Asphalt mixing plants and asphalt pavers

In asphalt production, process temperature is a crucial factor in plant performance and the properties of the hot mix. To ensure long-term quality of the road surface, temperatures must be precisely monitored during the production process and as the hot mix is loaded onto trucks.

Common to all asphalt plants are the severe environmental conditions. A temperature detection device will be exposed to hot and aggressive vapours and dust.

Dryer drum exit 1

In asphalt production, a crucial process parameter is the temperature of the mineral aggregate and the reclaimed asphalt pavement (RAP). As these materials enter the dryer drum, their temperatures can vary depending on weather conditions. To ensure that temperatures remain within specified limits as the material is fed to the mixer, temperatures are monitored at the point where the material exits the drum. Burners are controlled based on this data.



Mixer discharge and truck loading operations 2

The hot asphalt mix is discharged directly from the mixer or from the hot mix storage silo onto trucks that deliver the asphalt to the road construction site. In order to achieve uniform quality and long-term performance of the road surface, it is essential that the hot mix exhibits a specific temperature as it arrives at the job site and when road paving operations begin. Asphalt temperatures are thus monitored and documented as the hot mix is loaded onto delivery vehicles.

Asphalt paver 3

It is essential to strictly observe the temperature limits when placing the mix to obtain a quality-oriented compaction and a satisfactory interface bonding. Whether the requirements can be met with the existing mix must be weighed up and decided at the construction site. In any case, all essential parameters, such as the temperature, have to be recorded to have a means of proof on hand if required at a later date. Therefore, the temperature of the mix is determined at the moment when the mix is dumped into the paver.



Solution

Pyrometers are ideal for monitoring temperatures of a hot liquid material. A pyrometer detects the infrared radiation emitted from an object at a safe distance, without surface contact, and produces an accurate temperature reading.

Most commercially available pyrometers will not hold up to the aggressive furnaces and dust present at asphalt mixing plants. Lenses are especially sensitive to such harsh industrial environments. The **CellaTemp PK 18** infrared thermometer was especially designed for use at asphalt and concrete plants and features a stainless steel housing as well as a special lens whose surface is highly resistant to impurities. When combined with certain fittings and accessories such as an air purge and sighting tube, the PK 18 provides many years of reliability and precision. At proper operation the measuring system works maintenance and wear-free.



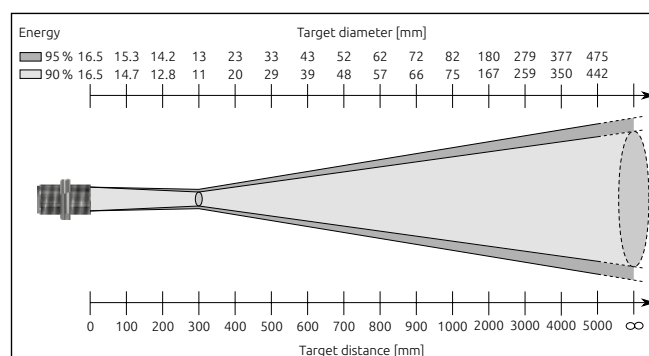
The integrated digital display is very convenient during commissioning and plant maintenance procedures.

During overhead load out onto trucks, a temperature reading is recorded for each load and saved in the plant's data acquisition system as a matter of quality control and verification.

Measuring system

Model	PK 18 AF 1
Range	0 - 500 °C / 32 - 932 °C
Output	0/4 - 20 mA / switching output
Adjustable parameter	emissivity, smoothing filter, peak picker, key lock, temperature °C/°F, temperature simulation, test function
Dimensions	Ø 30 x 183 mm
Mounting	M30 x 1.5 mm x 35 mm thread
Power requirement	24 V DC
Display	4-digit LED display (digit height 8 mm) 1 x LED switching status 2 x LED temperature unit
Protection	IP 65 (splash-proof)
Housing material	V2A (1.4305)

Field of view diagram

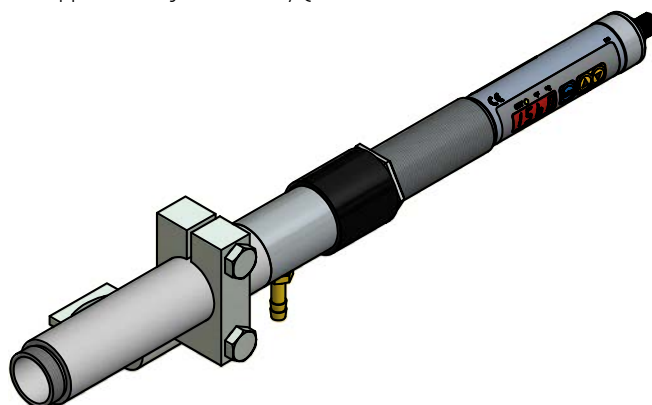


Accessories

Mounting assembly PK 01-014

consisting of:

- Thermal insulating tube PS 01/K
- Air purge PS 01/A
- Clamping collar with angle PS 11/K-35 AF2
- Supplementary tube ZA 01/Q-35





- Headquarters
- Sales and Service Center
- Sales abroad



Keller HCW GmbH
Infrared Temperature Solutions (ITS)
Carl-Keller-Straße 2-10
49479 Ibbenbüren-Laggenbeck
Germany

www.keller.de/its
Tel. +49 (0) 5451 850
Fax +49 (0) 5451 85412
its@keller.de

Distributor



INOR Transmitter Oy
Unikkotie 13
FI-01300 Vantaa
Puhelin +358 10 4217900
Faksi +358 10 4217901
myynti@inor.fi