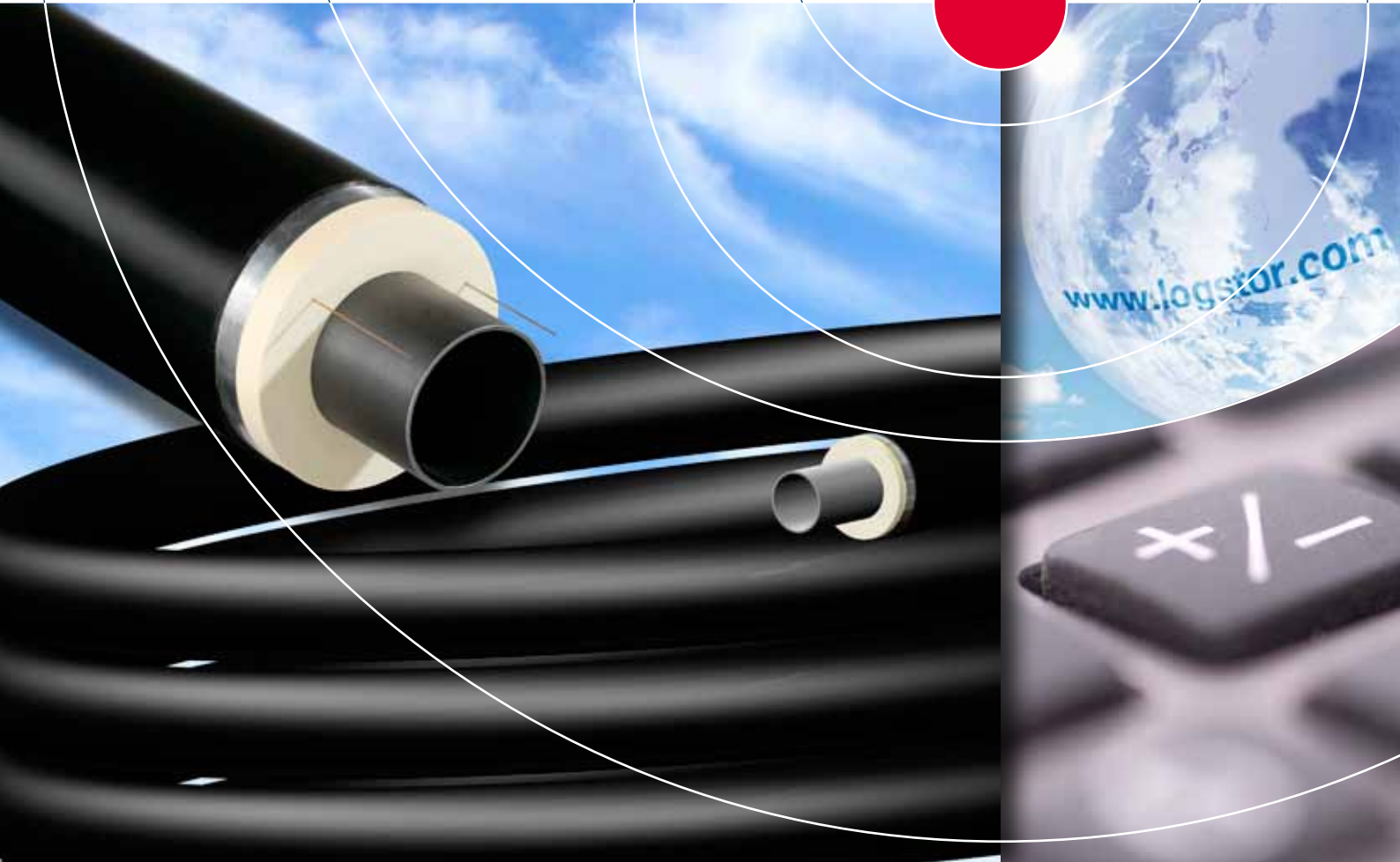


# Documented lambda values

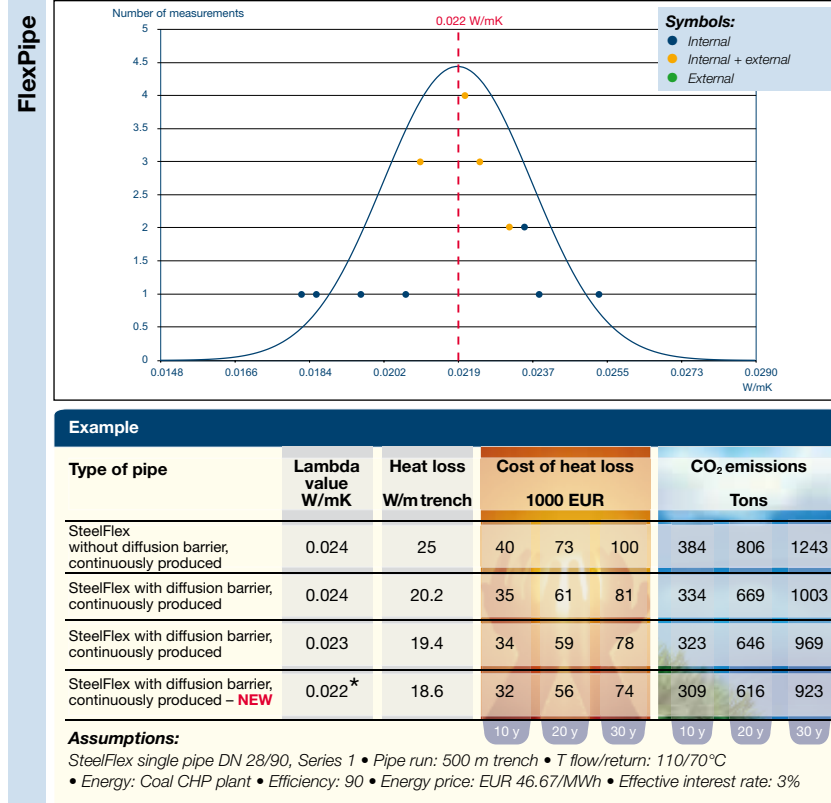


## Quality under control

- distributing energy efficiency

# We check that our values are spot on ...

## New documented lambda values



We are engaged in a comprehensive programme of ongoing testing on LOGSTOR pre-insulated pipes. Our objective is to provide customers with full documentation for the lambda values associated with the pre-insulated pipe we deliver – and to improve these values still further.

Ongoing measurements and monitoring of day-to-day production enable us to establish such average lambda values with accuracy. Previously, the lambda values we provided for our customers were based on individual spot checks on randomly selected lengths of pipe. Now, however, this key figure can be based on a calculated average of multiple measurements and multiple testing samples, carried out during the production process.

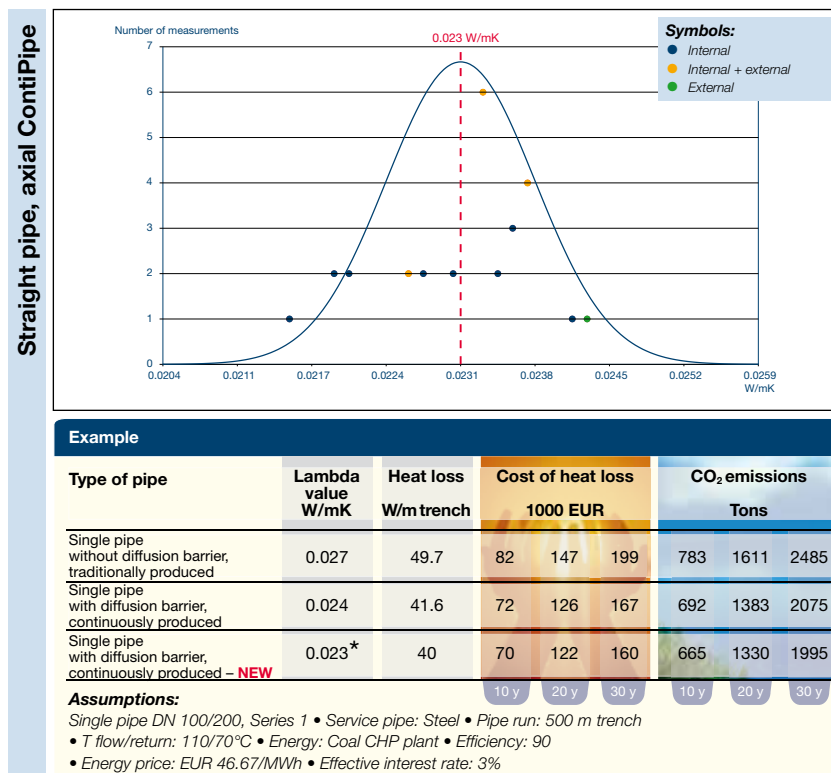
In the course of 2010, we have laid out plans for 70 sets of measurements to be carried out in LOGSTOR's own laboratories, using the same testing procedures as Danish Technological Institute. In addition to our own measurements, we will continue to have tests carried out by approved external testing bodies.

### Full transparency and documentation

The many test results are used to calculate a Gauss curve that provides the average lambda values and the distribution of the results. This Gauss curve and the many results are already available on the LOGSTOR web site, where visitors can monitor any changes and improvements in the average lambda values of our different types of pre-insulated pipe.

### Less heat loss, lower operating costs and reduced environmental impact

Improving and fine-tuning LOGSTOR manufacturing processes result in better insulation properties. This plays an important role in reducing the heat loss from LOGSTOR pre-insulated pipes still further and cuts down on operating costs as well as CO<sub>2</sub> emissions. The calculations shown on the left are examples of the improvements you can achieve with pipes of different specifications and with different types of insulation.

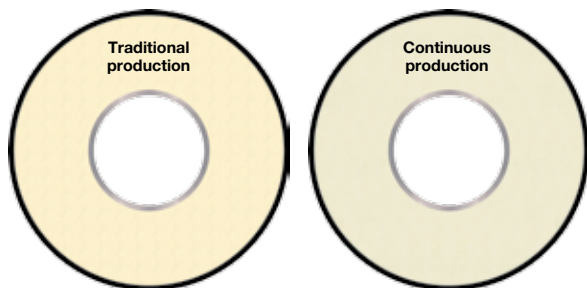


\* The average of the lambda value measurements carried out in-house by LOGSTOR and by external testing bodies has resulted in new, even better lambda values of 0.023 W/mK for axial ContiPipe and 0.022 W/mK for FlexPipe.



### There are differences in insulating foam

The insulation used in LOGSTOR pre-insulated pipe systems is always polyurethane foam (PUR) of the best quality. Used in conjunction with high-efficiency continuous manufacturing processes, this makes it possible to achieve a PUR-foam with exceptionally small cells, thus improving heat retention performance.



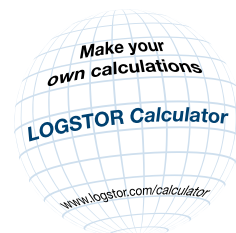
### LOGSTOR Calculator

The lambda value is a recognised expression for any specific material's ability to limit energy loss. The average lambda value is the parameter used for that material when calculating heat loss for pre-insulated pipelines.

Using the LOGSTOR Calculator, you can easily calculate the heat loss, energy savings and CO<sub>2</sub> emissions for your particular pipe network, based on the most recent and most accurate lambda values available.

*LOGSTOR provides full transparency and documentation of both the actual test results and the basis for LOGSTOR's calculations of the lambda values used for each type of pre-insulated pipe and for our heat loss calculations.*

[www.logstor.com/documentation](http://www.logstor.com/documentation)



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