

LOGSTOR ST piping

- don't go cold on poor pipe insulation

By Eg Andersen



The company

Who is Logstor?

The LOGSTOR Company

- The global leader and specialist in pre-insulated pipe systems.
 - Cost efficient system and technologies
 - Energy saving solutions
 - 50 years of experience
 - 1400 employees
 - 10 factories in EU and China
 - 360 mill USD turnover
 - See further data on logstor.com



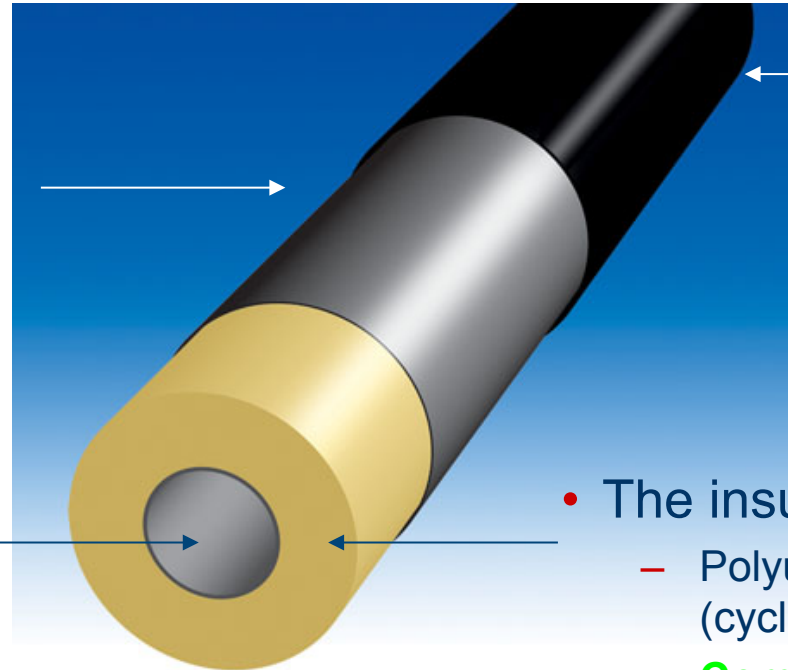
The products

What are we selling?

The ST pipe system

- Construction of the pre-insulated pipe

- The diffusion barrier to avoid heatloss
 - Aluminium foil
 - **Special plastdiff.**
- The service pipe
 - Steel
 - **Copper**
 - **Pex**
 - **Alu/Pex**



- The outer casing
 - PE-HD
 - **Steel**
- The insulation material
 - Polyurethane (cyclopentane)
 - **Combi Mineral/PUR**
 - Temp. range: - 60 to 140 deg. C > 30 years
 - 150 deg. Short term.
 - Lambdavalue: 0,020 to 0,024 W/mK.

The markets

Where is it sold (solar....)?

SolarPipe Market segmentation

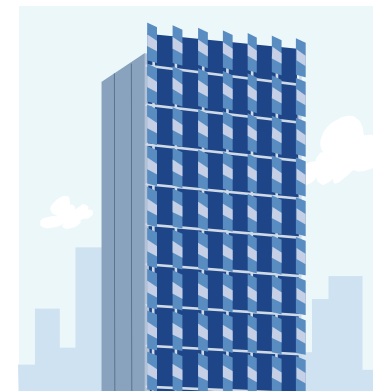
Private/Residential market?

No! Basically you are fine off with pre insulated PE foam solutions like Aeroflex since they are protected by the roof or shaft. Typically 8 to 12 mm. pipe runs and one – three collectors in private housing.



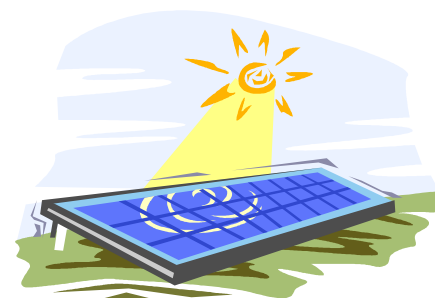
Mid size market/Project market?

Yes! Apartment buildings, hotels, public buildings (hospitals, administrations), production buildings etc. **Logstor SolarPipes!** Typically 22 to 35 mm piping and up to 500 m2 collectors.



Large scale/District Heating market?

Yes! Marstall, Ulsted, Ærøskøbing, Strandby, Tørring, Almere Island (2010). Other private installations for industry purposes. Typically 500 to 40000 m2 collector surface.



The Solar Pipes for mid sizes..



What are they good for?

SolarPipes – market segmentation

Why going for it....?



SolarDingo market segmentation

Why going for it....





SolarPipes – the properties!

*The complete
product program*



SolarPipes FZ steel or copper – properties

- **Connect**
 - Easy, reliable and fast with Mapres copper or steel pres couplings



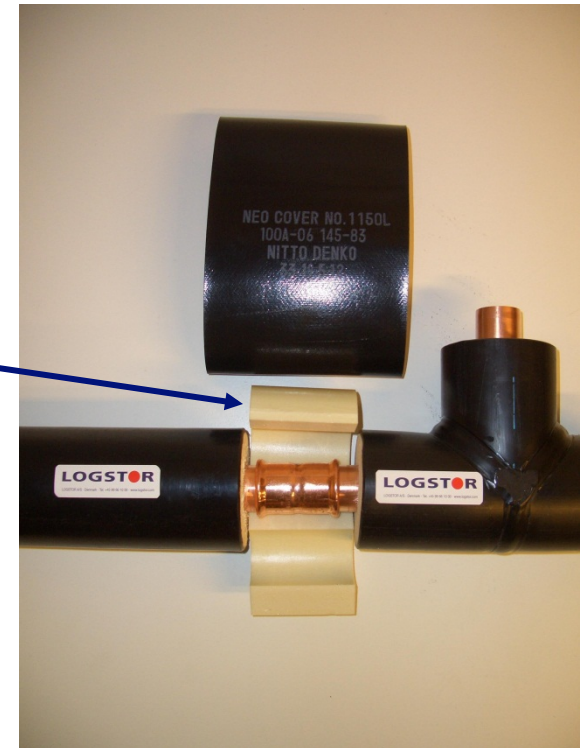
SolarPipes – properties

- **Connect**
 - Easy, reliable and fast with Mapress copper pres coublings
- **Press**
 - Using Mapress accu tool for reliable fitting



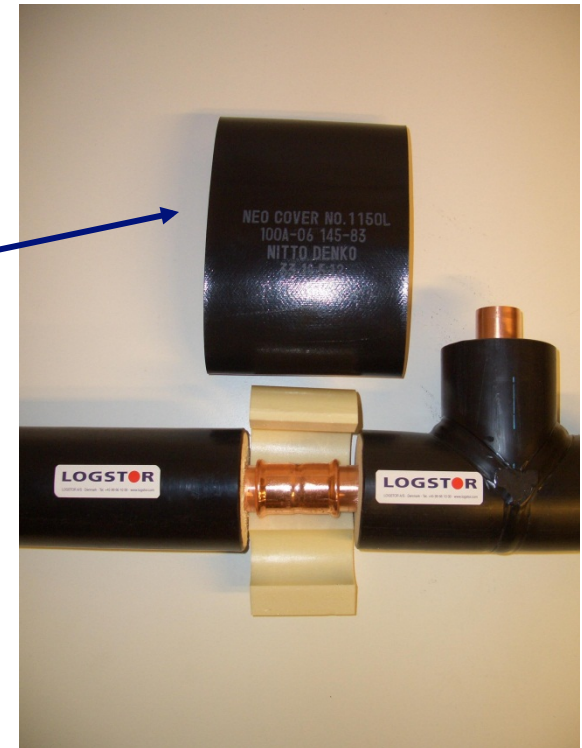
SolarPipes – properties

- **Connect**
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- **Insulate**
 - Two half shells, one shrinkable joint



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- **Shrink**
 - Use a torch or a hot air gun



SolarPipes – properties

- **Connect**
 - Easy, reliable and fast with Mapress copper press couplings
- **Press**
 - Using Mapress accu tool for reliable fitting
- **Insulate**
 - Two half shells, one shrinkable joint
- **Shrink**
 - Use a torch or a hot air gun
- **Leave behind**
 - *“Install and forget”*. 10 minutes later you can leave behind a sealed weather and waterproof installation, for the next +30 years



Jacket pipe

- HDPE in carbon black - 100% watertight!
 - Impact resistant
 - Salt and chemical resistant
 - Anti-corrosive
 - The black HDPE is UV resistant
- The HDPE is approved to fire classification 3 (class NT fire 036)



ea energy homepage
<http://www.eaenergy.net>
Installation pictures....

The SolarPipes for LG scale

Above ground systems in steel for welding (26 to 139 mm)

Why insulate afterwards, when you can do it much better up front?

- The pipe design is also a bonded system
- It is supported outside the coating
 - no thermal bridges!
- It is robust and may be used as walkways
- It has the same properties as the mid size SolarPipes



Underground systems (steel)

- Any minor movement caused by temperature change is absorbed within the system itself!
- The larger stress movements are absorbed by expansion-absorbing elements
 - i.e. L, Z or U bends and axial compensators (axial not recommended for large ΔT !)



Installation and preparation (you get a certification)

*A short installation time and reliable jointing
will guarantee a fast ROI*

- Follow normal procedure for welding/pressing - and pressure test of the pipes
- Now you are ready to insulate the connections...
- Logstor Joint certification



The quality

European Standard

EN 253

- *but.....*

CEN-Standard
EU Standard
EN 13941
Laying
methods and
statistics –
bonded sys.

EN 253

Bonded
piping
systems

EN 448
Fittings

EN 488
Valves

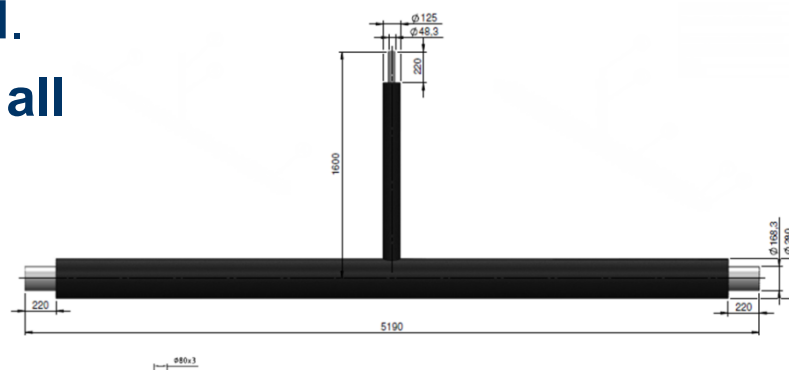
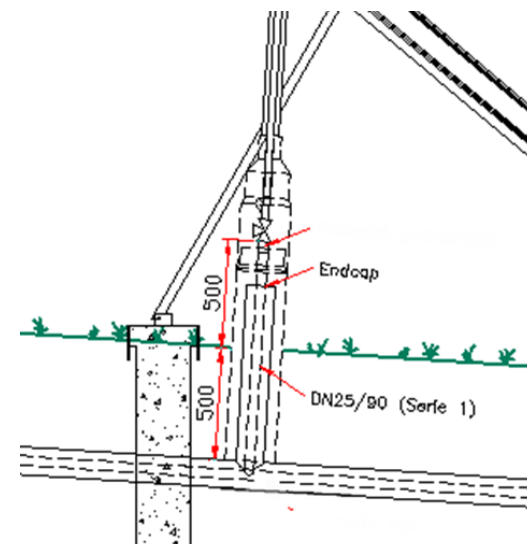
EN 489
Joints

A-Standard
(Design)

B-Standard
(Product standard)

LOGSTOR recommends

- **Reinforced Tees**
- **All branch off to ST collector must be done in a stancion pipe.**
- Installation on stancion must be carried out acc. to expansion.
- **All T-connections must be fully pre insulated.**
- **All bends must be fully pre insulated.**
- **It is strongly recommended to make all change of directions with 90° bends.**
- Use an active surveliance system.





- **Thank you for listening...**

- **Solar Thermal - everybody deserves energy from the sun**