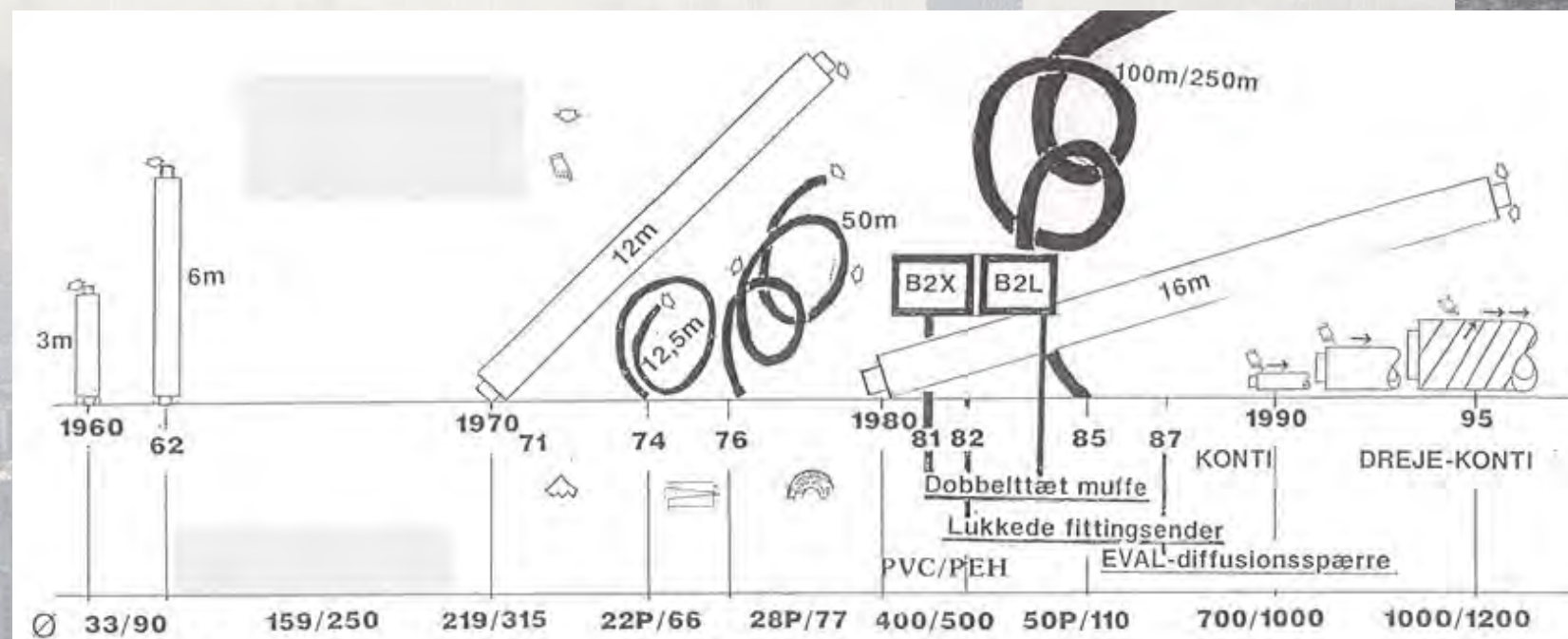


LOGSTOR VALUE PROPOSITION Sapporo 2019

Tommy Lorezen

LOGSTOR's concept for DHC

- *We invented the buried pre-insulated pipe technology*



- Headquarters in Denmark
- 1,300 employees
- Annual turnover > 220 MEUR
- Owner: Triton Fund III

- 9 plants and 2 mobile production units
- 13 Sales Units
- Joint Venture in Dubai
- Distributors in more than 30 countries
- More than 4,000 km pre-insulated pipes every year
- More than 200,000 km LOGSTOR pipes supplied to data
- Since February 2017 Powerpipe/Sweden belongs to the LOGSTOR Group



The diffusion barrier (optional)

- Aluminium foil
- EVOH
- PVCD

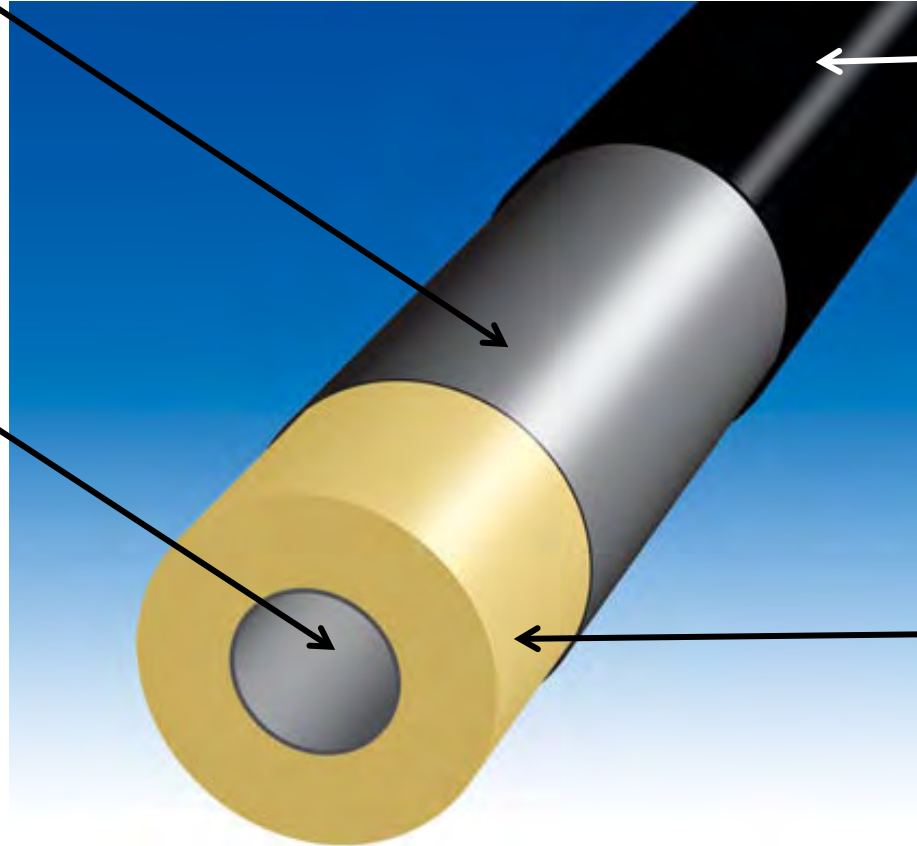
The service pipe:

EN 253 pipe (rigid pipe):

- Steel P235 GH
- Other qualities upon order
- 6, 12 or 16 m lengths

FlexPipes:

- Copper
- Pex
- Alu/Pex
- Steel
- 100 – 200 m coils



The outer casing:

- PE-HD rigid pipes
Flextra pipes
- LD-PE flex pipes, (smooth casing)

The insulation material:

- Polyurethane (PUR) < 140°C
 - Rigid pipes
 - Flextra pipes
 - Flex pipes (smooth casing)
- PIR < 170°C
 - rigid

Standardized and complete pipesystem with all elements included

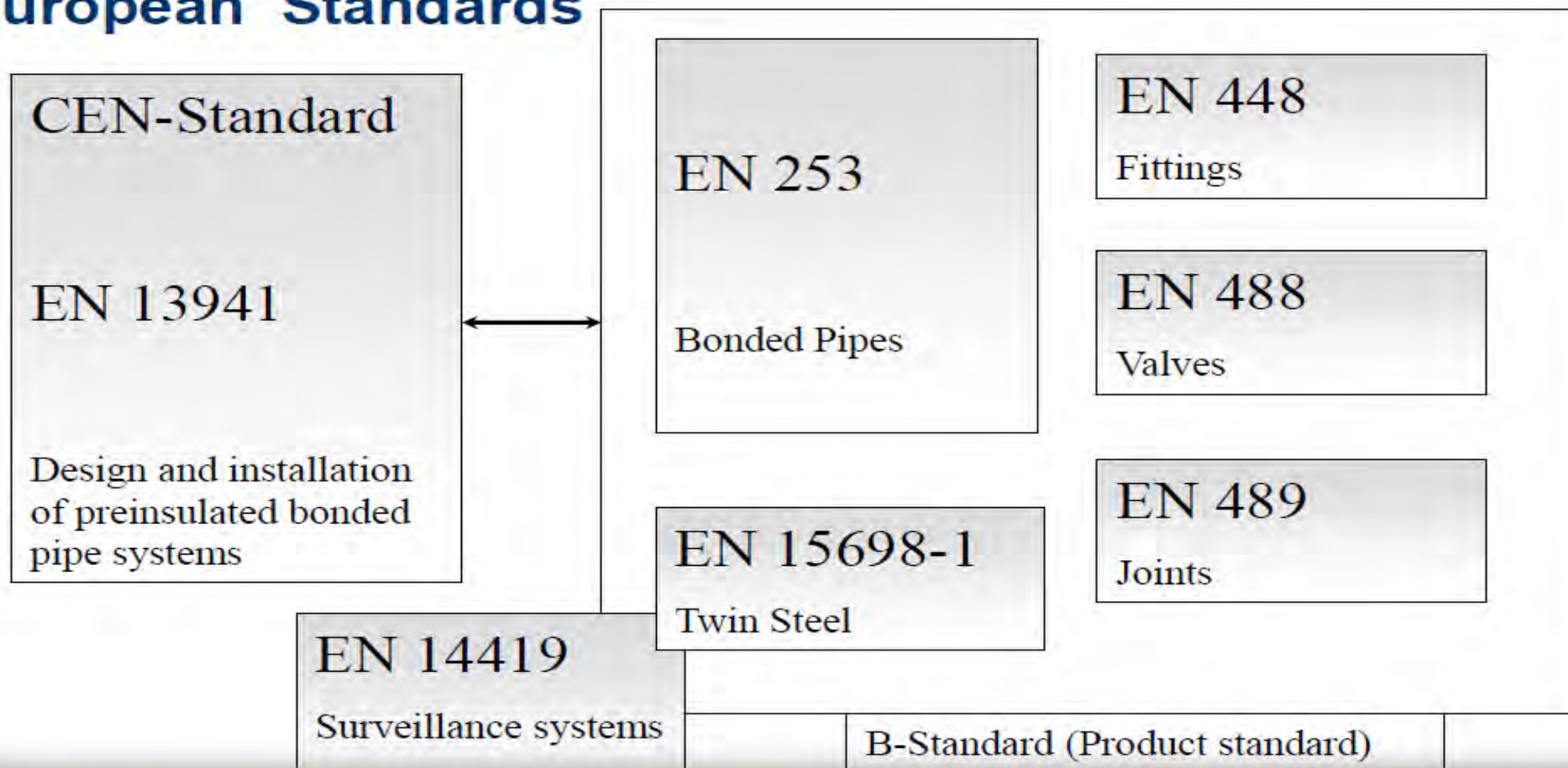


With: Preinsulated straight pipe
Preinsulated bends
Preinsulated branches
Preinsulated valves
Connected with joins

Design of Bonded Pipe Systems

LOGSTOR

- European Standards



CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

What can Logstor do for you

The LOGSTOR Group



Total Cost of Ownership / Lifetime costs

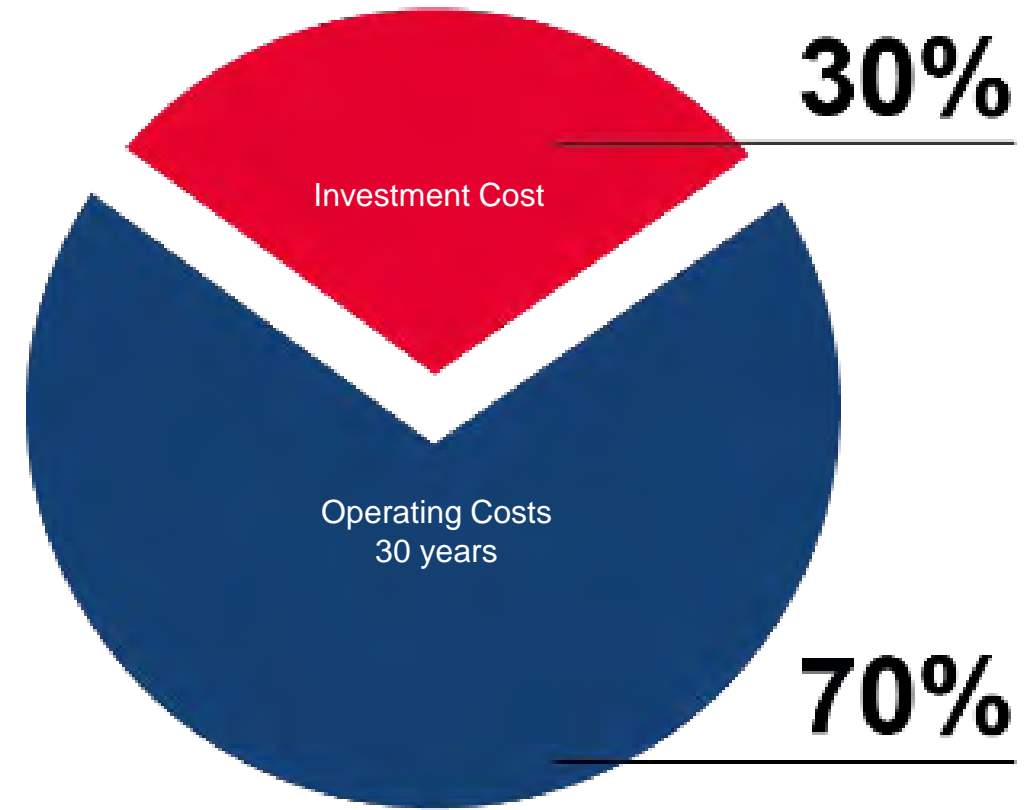
1. Investment costs (Non-recurrent costs)

- Purchase costs, components
- Installation costs
- Costs of planning and commissioning

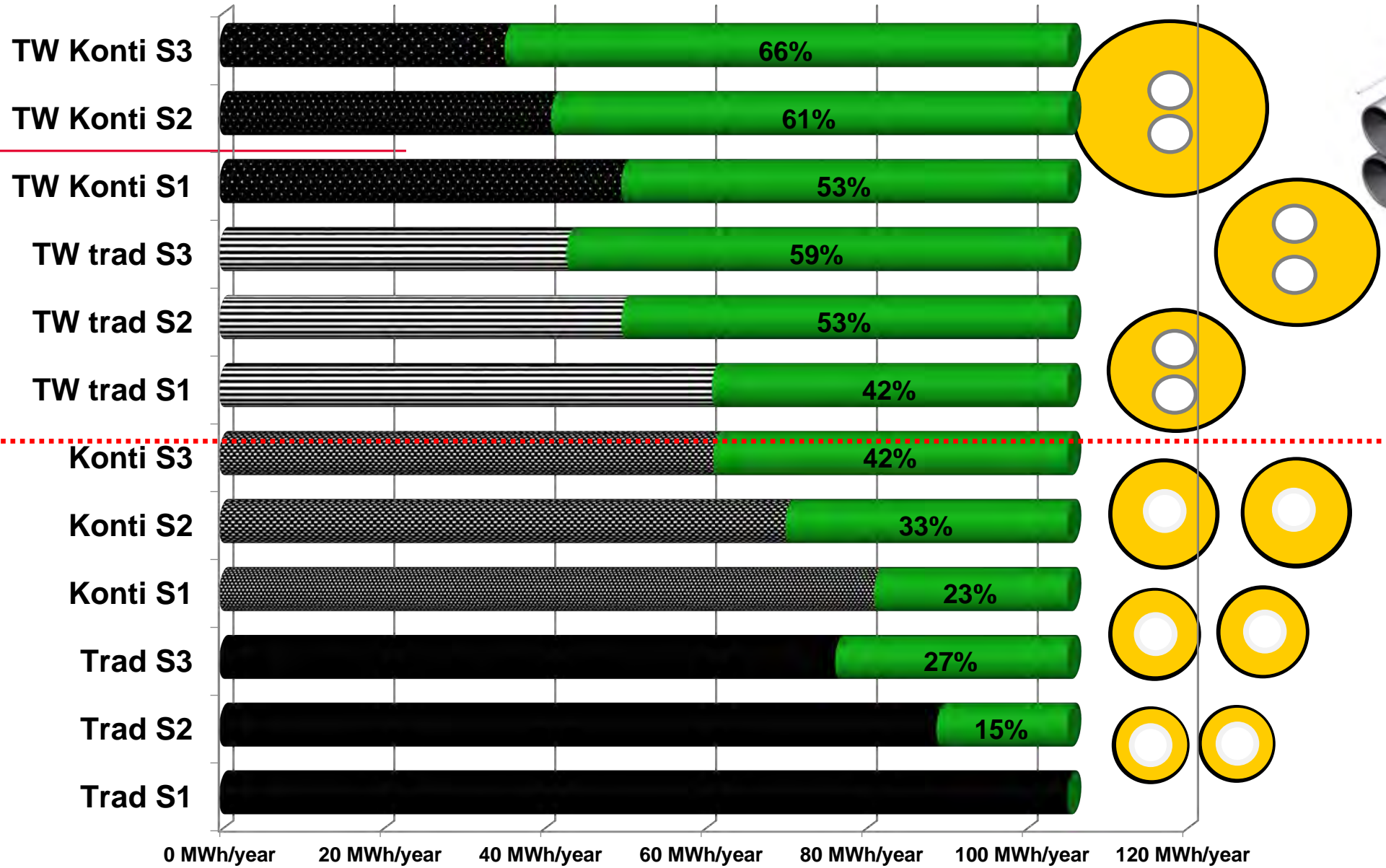
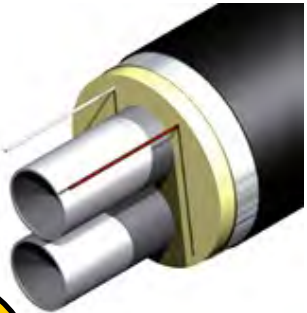
2. Operating costs (annual costs)

- Costs of energy & heat loss
- Costs of maintenance
- Costs of repairs
- Costs of poor quality

3. Total costs of the solution



OPEX optimization, type of pipe system



Example:
Heat loss -
1000 m DN
80 –
average 30
years

What can we do today?

LOGSTOR Design Services

- The shortest way from energy plant to consumer
- Optimal design is beneficial in all aspects
- Optimal design means less excavation and reduction of the total investment
- LOGSTOR provides documentation, tools and support to optimize your project

Optimal design

Design manual to find the best solution for the specific project • Tools to calculate all details • Curved pipes to ensure shortest pipe run • TwinPipe to reduce excavation and number of joints



LOGSTOR Calculator

- The tool for correct decision on optimal type of pipe – single, TwinPipe and insulation series
- Optimization in relation to minimizing the heat loss and operational costs, energy efficiency and environmental impact in form of CO2
- Choice of pipe system with lowest total costs of ownership
- Based on the actual parameters for each project
- Comparable calculations for different type of pipes
- Based on the very latest know how about aging of the PUR-insulation foam
- LOGSTOR Design Tool – a new online calculation tool for design of pre-insulated pipe systems

LOGSTOR Calculator

Web based and easy to use tool • Results shown in numerical form and easy-to-read graphs
• Aging processes in PUR insulation foam shown in graph form • Any calculation result can be downloaded for your personal use



Monitoring and surveillance



Tablet and
smartphone

- IOS
- Android



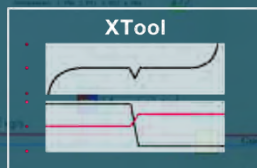
External hosting

- Gives access to XTool



Firewall

- Precautionary measures



User access

- SRO (SCADA)

Communication

- Mails
- SMS
- Documentation
- Support



XTool
control centre

- System surveillance
- Analyses

X4



Energy company

- District Heating
- District Cooling

X1L



On time project execution

- Customer dialogue creates the basis for an on time project execution
- Delivery plan according to installation progress
- Flexibility when on-site conditions change
- Broad product range ensures solutions to any change

Physically closer to the customer

Presence via LOGSTOR company or distributor • Regional centers supporting technical and logistic issues • Regional factories and distribution centers



Logstor Academy



Thank you for your attention

Questions?

Documentation on logstor.com

Follow us on LinkedIn

Contact: tol@logstor.com

*Make sure nothing goes to waste –
use nature's resources thoughtfully*



LOGSTOR