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FACSIMILE/EMAIL TRANSMITTAL

TO:		FAX:	
FROM:	Estimating Department	DATE:	
RE:	Pre-Insulated Pipes	PAGES:	13
<input type="checkbox"/> URGENT	<input type="checkbox"/> FOR REVIEW	<input type="checkbox"/> PLEASE COMMENT	<input type="checkbox"/> PLEASE REPLY

Further to your enquiry, please find attached data sheets and Guide Specification for Logstor Ror pre-insulated pipe system.

Data sheets attached:

- Page 4.2.1: Pipe Series 1
- Page 4.2.7: Elbow 90 degree
- Page 4.2.8: Elbow 45 degree
- Page 4.2.9: T-Fitting
- Page 4.2.15: Anchor
- Page 4.2.18: Ball Valve
- Page 4.2.22: Joint BX
- Page 4.2.37: End Cap
- Page 4.2.38: Seal Ring

Logstor Ror Guide Specification

Regards

Estimating Department

Pipe

Series 1

Bonded system - Components **4.2.1**

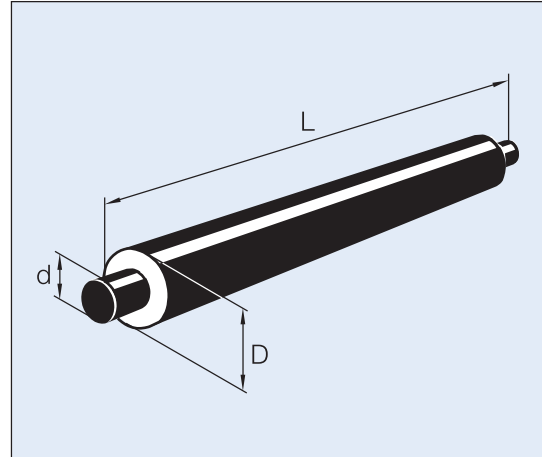
All straight Logstor pipes are produced according to EN 253.

The carrier pipe is made of the P235GH steel quality according to EN 10217-2 or St. 37.0 BW steel quality according to DIN 1626. Steel pipes are purchased with 3.1B certificate according to EN 10204.

All pipes and components are supplied with 150 mm free ends.

Continually manufactured pipes with a casing dimension of 90-315 mm are supplied as standard with an aluminium diffusion barrier, which keeps its unique insulation properties, unchanged throughout the service life of the pipe.

Continually produced pipes with ø355 mm casings and upward are manufactured with wall thicknesses that are lower than those given in EN 253 Pr A1.



Component no. 2000

Nominal diameter ND	20	25	32	40	50	65	80	100	125	150	200	250	300
Steel pipe diameter d, mm	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273,0	323,9
Steel pipe wall thic kn., mm	2,6	2,6	2,6	2,6	2,9	2,9	3,2	3,6	3,6	4,0	4,5	5,0	5,6
Casing pipe diameter D, mm	90	90	110	110	125	140	160	200	225	250	315	400	450
Weight, kg/m	2.5	2.9	3.9	4.3	5.7	7.2	9.1	13.2	16.1	20.9	31.1	45.0	58.3
Water content, l/m	0.4	0.6	1.1	1.5	2.3	3.9	5.4	9.0	13.8	20.2	34.7	54.3	76.8
Length 6 m	X	X	X	X	X	X	X	X	X	X	X	X	X
Length 12 m		X	X	X	X	X	X	X	X	X	X	X	X
Length 16 m								X	X	X	X	X	X

Nominal diameter ND	350	400	450	500	600	700	800	
Steel pipe diameter d, mm	355.6	406.4	457.0	508.0	610.0	711.0	813.0	
Steel pipe wall thic kn., mm	5.6	6.3	6.3	6.3	7.1	8.0	8.8	
Casing pipe diameter D, mm	500	560	630	710	800	900	1000	
Weight, kg/m	66.3	84.4	96.3	114.0	148.7	188.5	231.0	
Water content, l/m	93.2	121.8	155.1	192.8	278.8	381.3	498.9	
Length 6 m	X	X	X	X	X	X	X	
Length 12 m	X	X	X	X	X	X	X	
Length 16 m	X	X	X	X	X	X	X	

Steel pipes and fittings in dimensions 914.0 mm and 1016.0 mm can be supplied to order.



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GUIDE SPECIFICATION FOR LØGSTØR RØR POLYETHYLENE CASED PRE-INSULATED PIPEWORK

For the distribution of:

- **Low/Medium Temperature Hot Water**
- **Heating**
- **Chilled Water**
- **Oil**

The **Løgstør Rør** pre-insulated distribution system shall consist of a composite bonded, insulated, jacketed pipework system, composed of steel or copper service pipe, polyurethane rigid foam thermal insulation, encased in a high density polyethylene jacket.

As supplied by:

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General

All **Løgstør Rør** products and corresponding materials are to meet with the requirements, where relevant, as stated in the EN 253 and associated standards, published by the CEN (European Committee for Standardisation). The features are to include the following:



Steel Pipes and Fittings

Pre-Insulated pipes and pipe fittings are to be identification marked when delivered. Copies of quality control certificates, X-ray reports and test certificates are to be made available to order.

DN 25 - DN 600 steel pipes are to consist of longitudinally or resistance welded tubes according to DIN 1626:1984 or seamless tubes according to DIN 1629:1984 of material St. 37.0, SS 1312 or similar according to DIN 17100.

Cold-pulled bends of steel SIS 141330-05, -06 or corresponding material are to be used for pipe fittings where possible. Welded bends are to be of steel SIS 141330 or corresponding material. Tee-pieces are to be manufactured of a steel quality at least equivalent to St. 37,0, SIS 141330 or corresponding material. Material wall thickness is to be selected in such a way that the Tee-pieces are as strong as the straight pipes.

CFC-Free Polyurethane Insulation

CFC-free polyurethane insulation is to be used in all tubes and fittings. The insulation shall have good thermal insulating qualities, excellent mechanical properties and excellent ageing resistance, including the following features:

Number of closed cells:	Minimum:	88%
Water absorption when boiled:	Maximum:	10%
Compression strength:	Minimum:	300 kPa
Thermal conductivity @ 50°C:		0.030 W/mK
Maximum continuous operating temperature:	140°C	

Jacket Pipe

The jacket pipe is to be made of high-density polyethylene (HDPE) and is to be manufactured to DIN 8075 or be directly extruded.

The material has to be stabilised against thermal, chemical, oxidising and other kinds of decomposition, ie. must fulfil the technical/functional requirements stated in EN 253.

The impact and wear strengths are to be very high, even at low temperatures.

The material is to be suitable for welding and is very resistant to stress corrosion cracking. The thickness of material is to be in accordance with international standards.

Alarm System

All **Logstør Rør** straight lengths and fittings are to be delivered with an alarm system with two alarm wires. The monitoring equipment is to use the well tried and tested water conductivity method to sense the presence of water within the foam filled annular space around the steel pipe using two bare wires for sensing and locating. The system is to use a low frequency, very low power, AC signal to sense both loop continuity and conductivity,

When an Alarm or Fault condition has been detected the relevant LED is to be illuminated - in addition an output relay is to be provided that can either de-activate or activate associated equipment. (**Note:** the relay shall have voltage free contacts rated at 1A at 30 volts DC or 0.3A at 150 volts AC - the relay is supplied so that the alarm may be connected into a Building Management System or any other associated plant).

Installation

Welded joints in prefabricated pipe sections (bends, Tee-pieces, valves) are to be ultrasonically inspected on a 10% random sample basis.