

## Service Trolley: Test run

PlantWare and LH-Rørbyg has designed and manufactured a service trolley for the tunnel under the harbour in Copenhagen. The tunnel is built for distributing steam and water piping for the Copenhagen area district heating.

The trolley is designed for a speed of 4.5 km/h when carrying a load of 3.6 tonnes; and the test run confirmed this.



## Pressure Vessel Design

PlantWare design pressure vessels according to several standards - European EN-standards, German AD Märkblätter und US ASME standards. We perform both design and stress analysis and detail engineering with fabrication drawings.

Amongst other items, we do also design blow down tanks, tube/shell heat exchangers, de-aerators, feed water vessels etc. process wise.



## PIPE-FLO®

PlantWare is Scandinavian distributor of PIPE-FLO from Engineered Software Inc. (USA).

PIPE-FLO is the leading software package for calculation of piping system: sizing and pressure loss calculations. PIPE-FLO contains a database of pump characteristics from major pump manufactures enabling the user to easily select the correct pump for the pipe system.

Contact us for further information via [pipe-flow@plantware.dk](mailto:pipe-flow@plantware.dk).

## PDMS HVAC: Lindab Product Line

PlantWare has produced a Lindab catalogue - approximately 80,000 components in total - as AVEVA PDMS Cats&Spec using the piping modules for both circular and rectangular ducting.

In Scandinavia, HVAC systems are built by standard components rather than custom made ducting. Our Cats&Spec is fully in line with using standard components.

If you want to purchase AVEVA Cats&Spec or other customizations from PlantWare – please contact us at [pdms@plantware.dk](mailto:pdms@plantware.dk). More information is also available on [www.pdms.dk](http://www.pdms.dk).



## Flow induced pulsations in Flue Gas Ducts

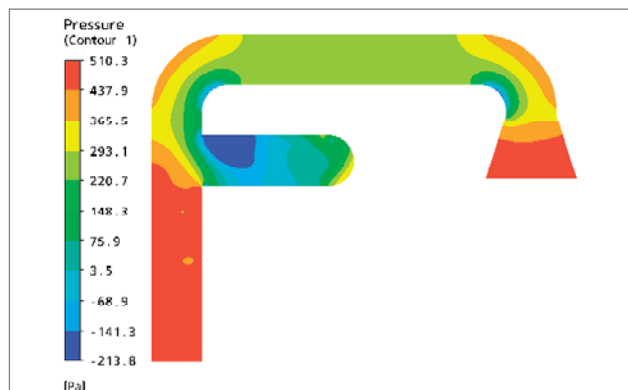
### Bioener ApS, Denmark - [www.bioener.dk](http://www.bioener.dk)

Bioener is installing a biomass fired boiler at FYV8 - Fynsværket in Denmark. PlantWare had made flow investigation via CFD-modelling into removal of pulsations in the flow.

PlantWare are experts in duct design for e.g. air and flue gas on power plants:

- Sizing with respect process data - media, temperature, flow, dust contains etc.
- Mechanical dimensioning
- Insulation and sound issues
- Sound attenuators (absorption, Helm-Holz resonators or quarter of wave length type)
- Sound propagation from an external sound
- Hangers and support structures
- Flexible joints design
- Dampers

Contact us for further information.



## CONVAL 7.0

Calculation and selection of control valves, orifice plates etc.  
Design of blow-off systems and calculate de-pressurization.  
For more information mail to [conval@plantware.dk](mailto:conval@plantware.dk).

