



**Office  
Building  
ABENA**

**The Building Layout**

**The Design**

**System Layout**

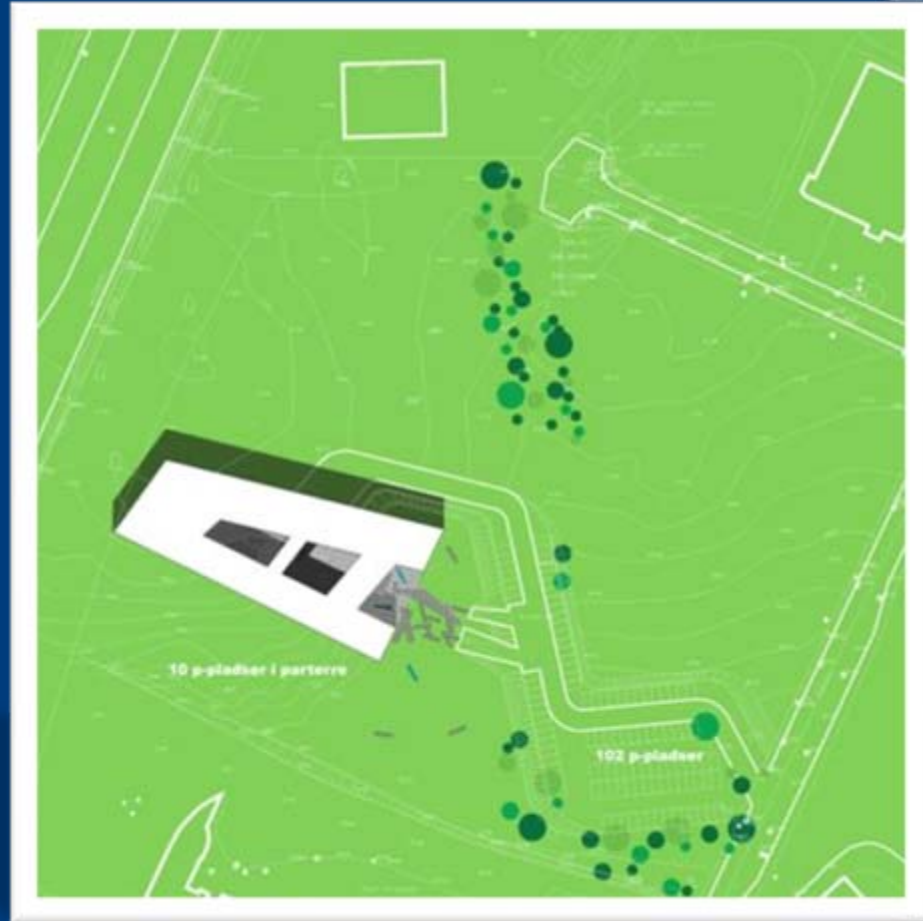
**Water and Power Supply**

**The Quality Process**

## ABENA

### Building Layout

- Office building
- Two stories and parterre level
- Car park in parterre



## ABENA

### Building Layout

- Total of 6,850 m<sup>2</sup>
- Office 6,300 m<sup>2</sup>
- Car park 550 m<sup>2</sup>



## Office Building ABENA

### hazard classification

- Hazard classification against DBI CEA 4001 “Sprinkler systems – Design, installation and maintenance”:
  - Office levels - Ordinary Hazard group 1 (OH1)
  - Car park – Ordinary Hazard group 2 (OH2)



**Office Building ABENA** fire test

- CEN/TS 14972 for Office fire test
- Office levels - Ordinary Hazard group 1 (OH1)



## Office Building ABENA

fire test

- Sprinkler test
- Spacing 3.5m × 3.5m

- Water mist test
- Spacing 5.5m × 5.5 m





## Office Building ABENA installation

- Nozzle head with 6 micro nozzles
- Press fitting for easy assembly of the pipes in the installation

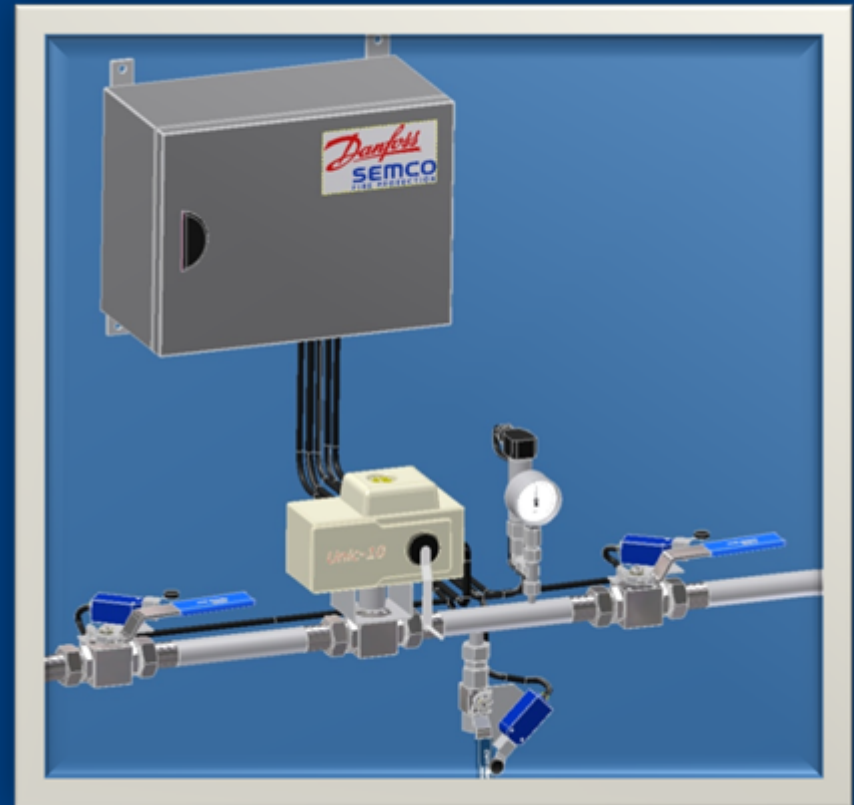




Office Building ABENA

installation

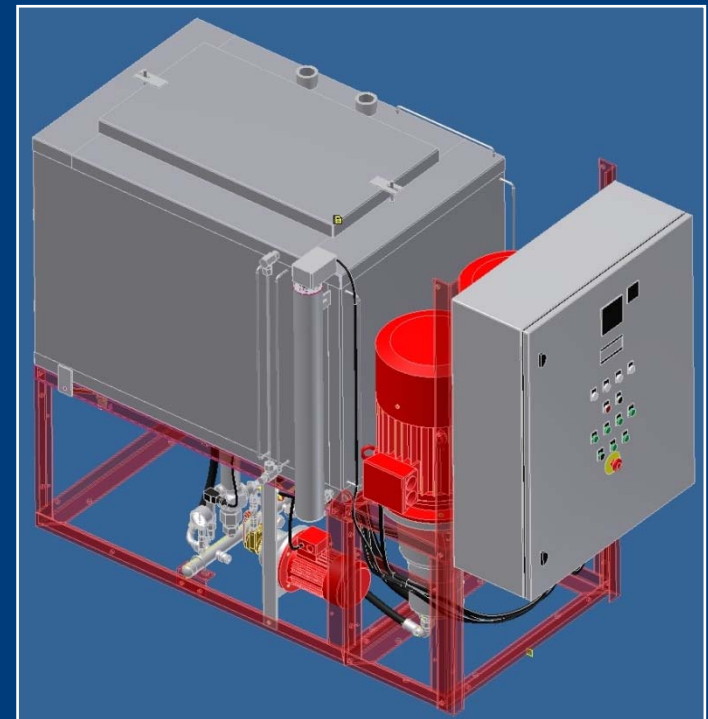
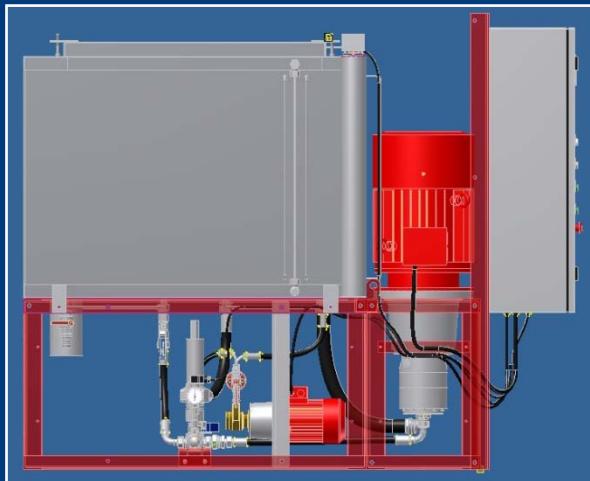
- Motor valve as section valve



## Office Building ABENA

pump unit

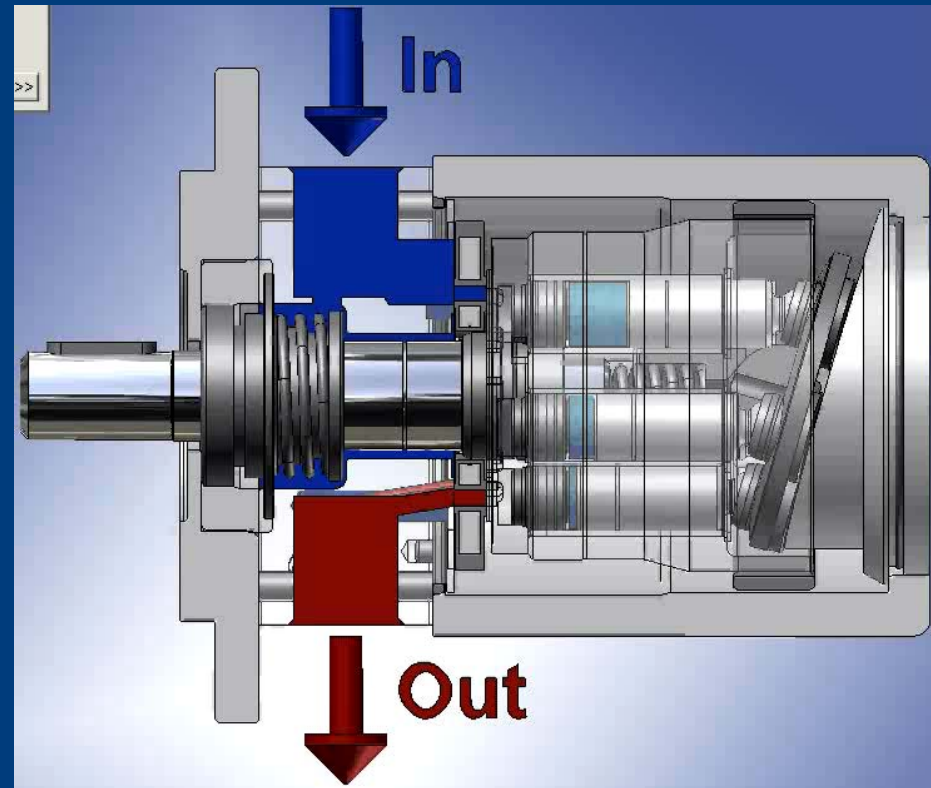
- Two high pressure pumps operating together to generate the required pressure
- One jockey pump for containing system pressure



## Office Building ABENA

water and power supply

- One electric generator
- One diesel generator
- Water supply directly from two stainless steel tanks
  - Ensures that the system can operate independent of public water supply
  - Water capacity for 30 minutes (Dispensation)



## Office Building ABENA

control system

- Two individually switch boards
  - One for electric
  - One for diesel

## Office Building ABENA

service and maintenance

- Regularly test
  - Start-up of pump unit once per week
  - Flow test

## Acknowledgements

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- Carsten Windt, Danfoss Semco A/S Fire Protection
- See more about Danfoss Semco A/S Fire Protection's SEM-SAFE<sup>®</sup> system on

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