



**Krantz**

**Air Technologies**

*Krantz*

# Markets



- **Bio-safety laboratories BSL 3 and BSL 4**
- **Isolation wards**



- **Nuclear power plants**
- **Nuclear (research) centers**
- **Waste treatment plants**
- **Decommissioning**



- **Industrial Applications**
  - **Pharmacy**
  - **Chemical**
  - **Airports**

# Krantz Air Technologies - nuclear and conventional

## Three columns for the entire life cycle of your buildings and facilities



### Plant Engineering and Construction

Customized, specification-oriented facilities for nuclear and conventional areas.

Evaluation, conception, planning, consulting, approval documents, pre approval documents (PAD), execution, modification and system customization, documentation, commissioning.

### Service and Maintenance

Customized, specification-oriented services for nuclear and conventional areas.

Maintenance, inspection, hygiene inspection, repair, periodic inspection (WKP), measurements, evaluation, and consultation. Qualification for special loads, renovation and modernisation, replacement measures, spare and wear parts, approval documents, pre approval documents (PAD), documentation.

### Measurement and control technology

Customized, specification-oriented measurement and control systems.

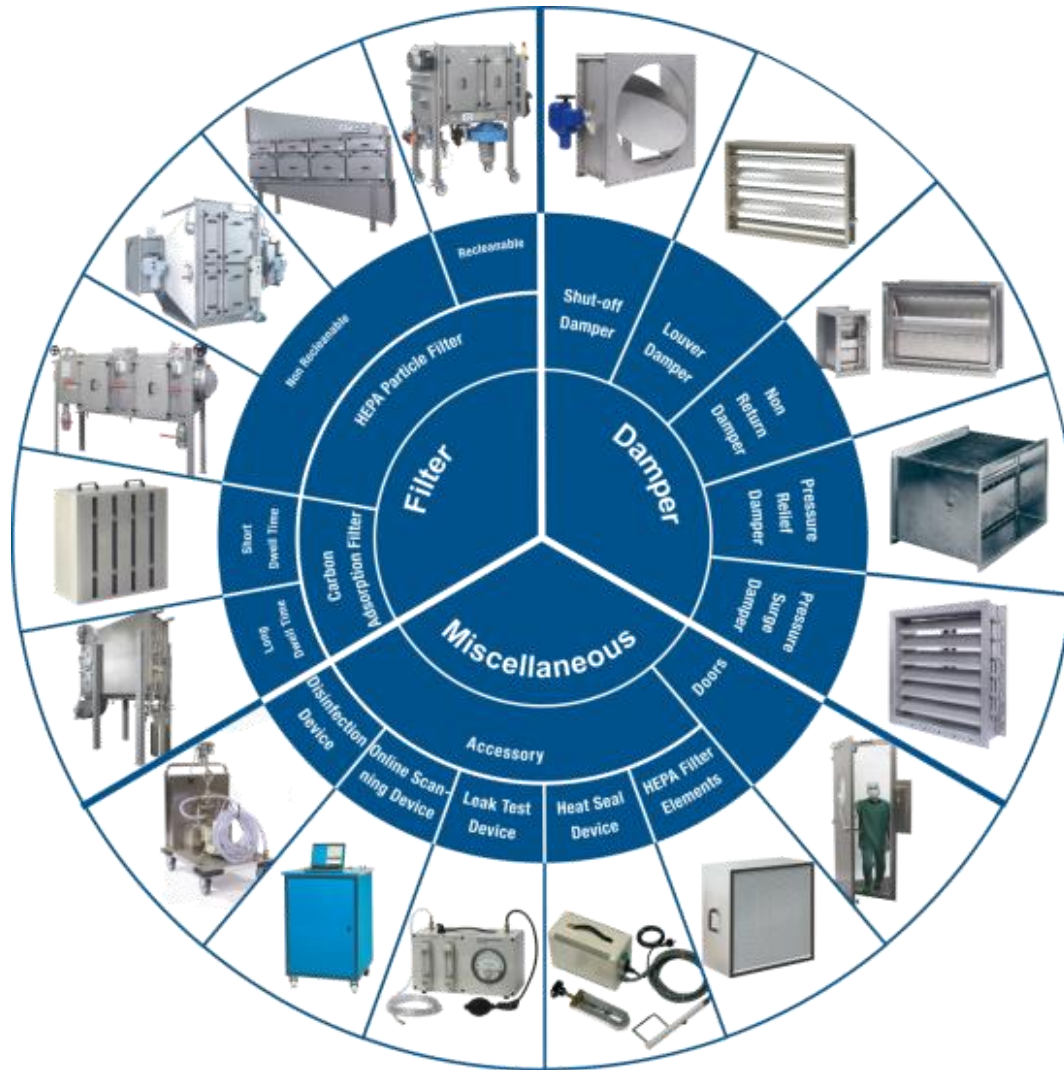
Evaluation, conception, planning, consulting, licensing documentation, pre approval documents (PAD), modernisation of switchboards, programming, circuit planning, calculations, visualisation, documentation, commissioning.

# Quality management

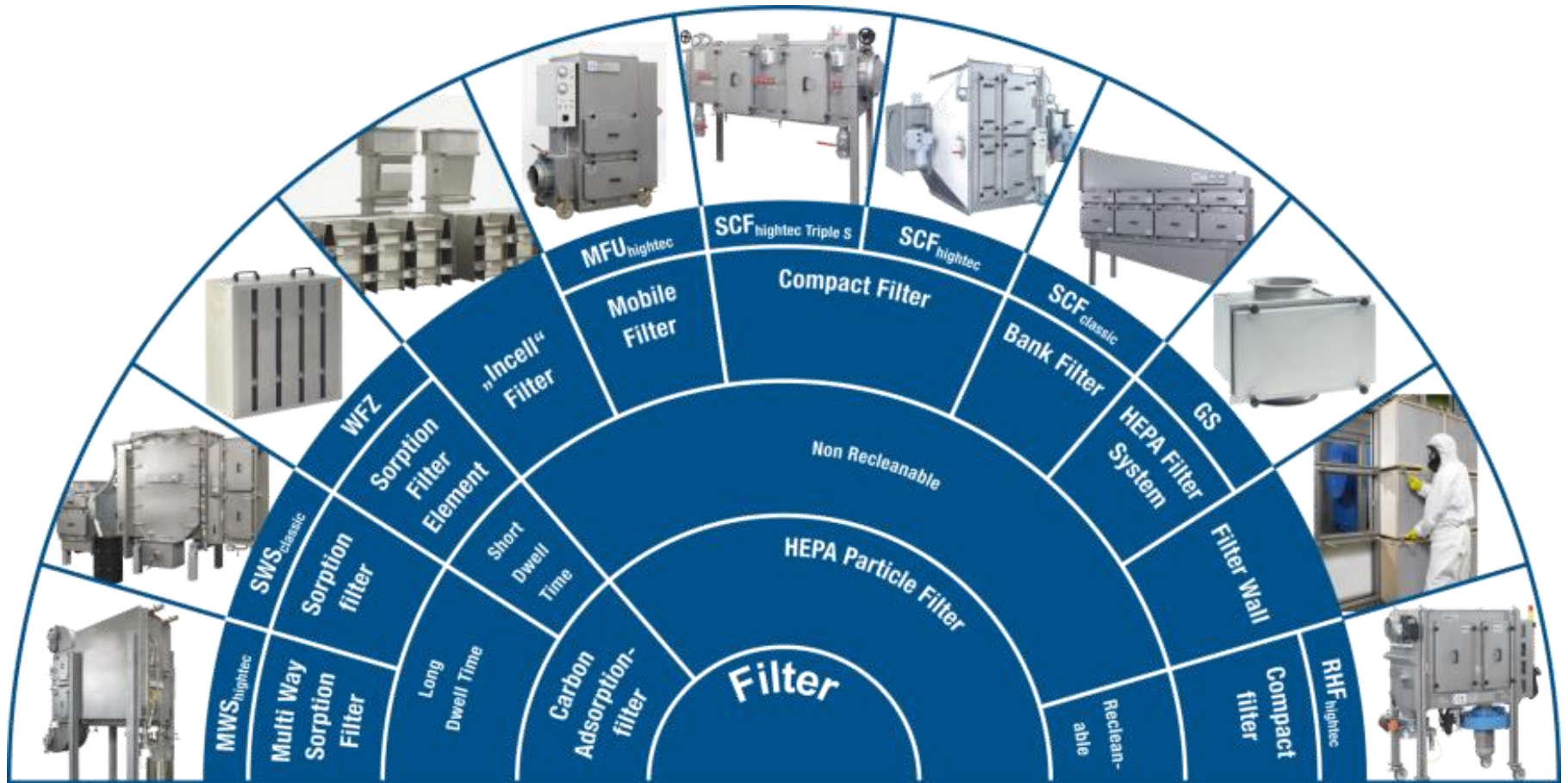
To meet the requirements of a quality management system for nuclear facilities, Krantz is certified according to the following standards:

- DIN EN ISO 9001
- KTA 1401, ASME NQ 1, FRA / N / 100/OL3
- 10CFR50 Appendix B by Tractebel
- DIN EN ISO 3834-2:2006
- Other quality management systems on request.

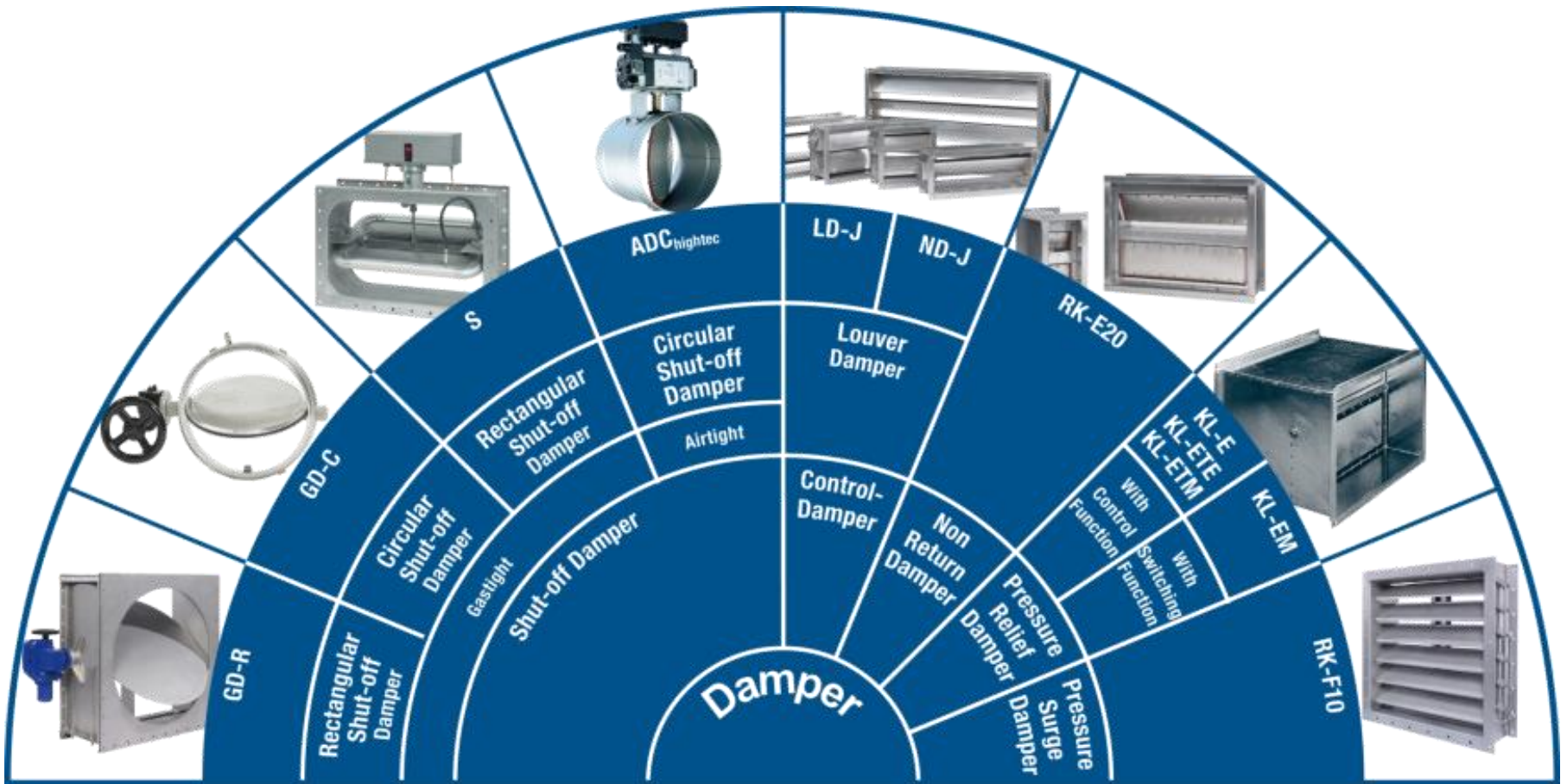
# Scope of delivery and supply



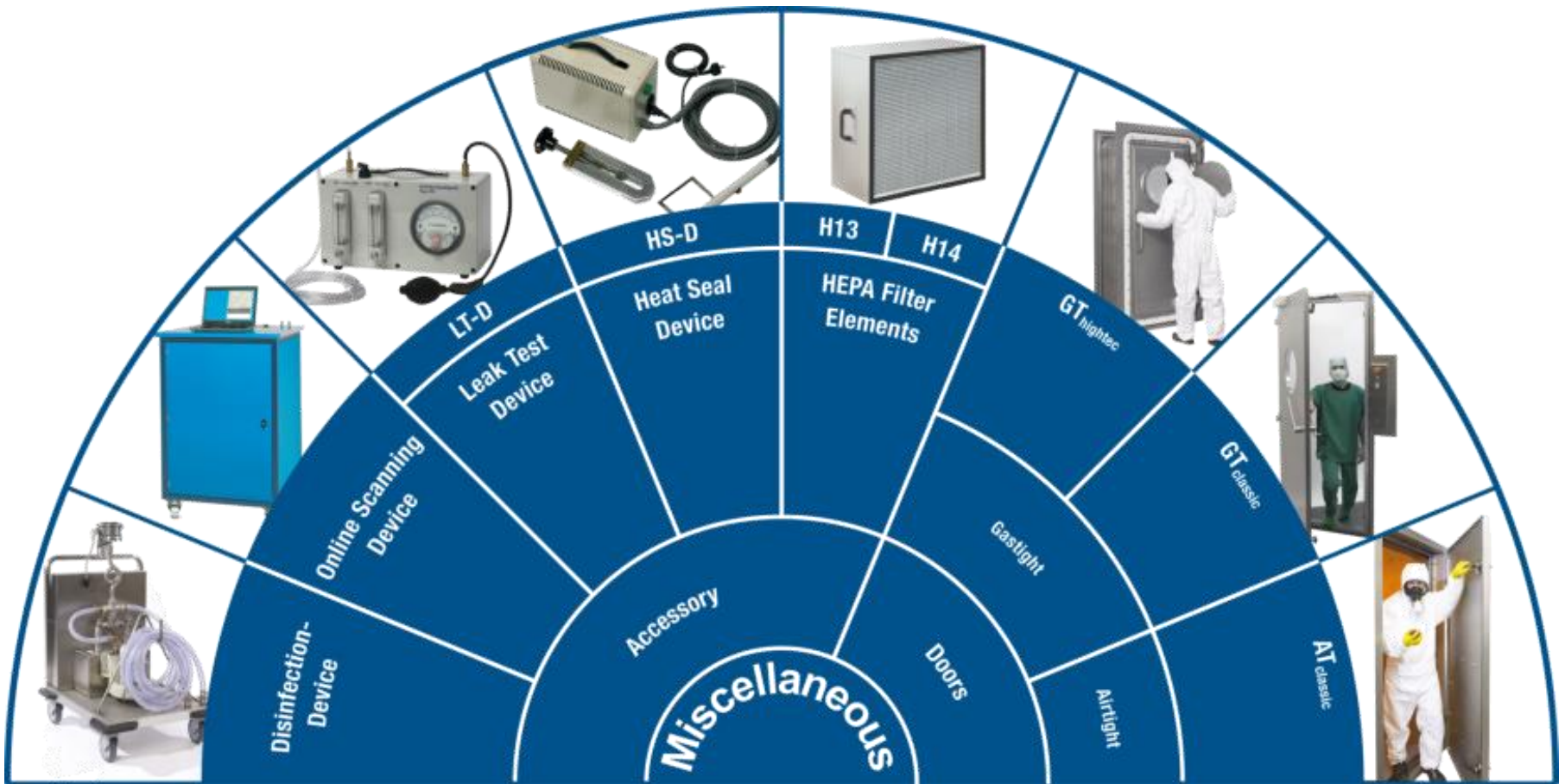
# Air Filters - Scope of delivery and supply



# Scope of delivery and supply



# Scope of delivery and supply





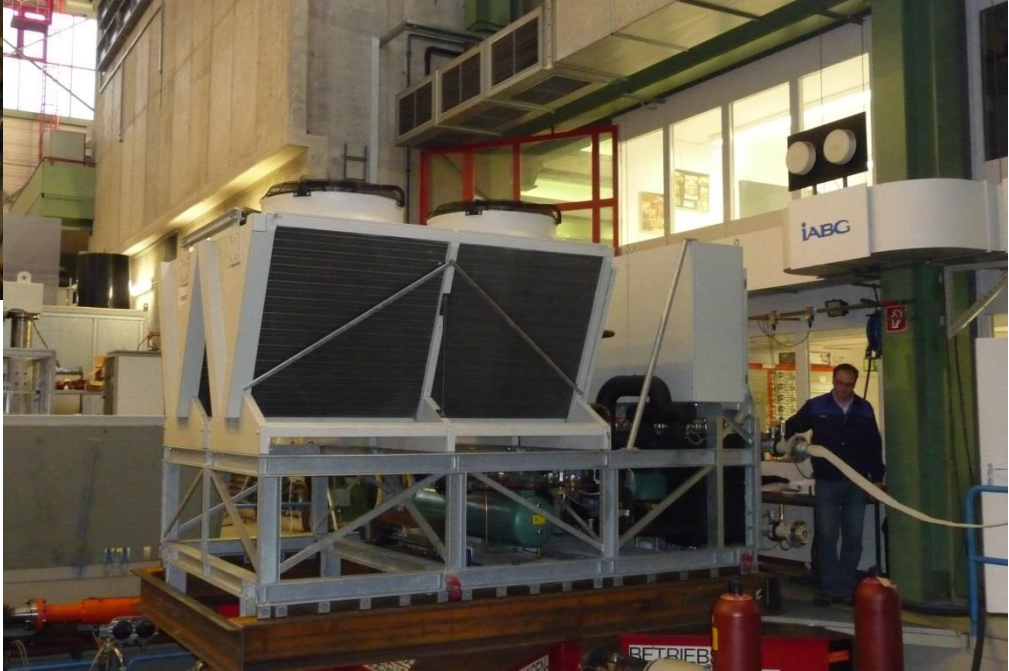
# NPP Oskarshamn – Sweden: Emergency Cooling System, Engineering, Production and Earthquake Simulation for 15 safety-classified for recirculating air cooling units for seawater operation.



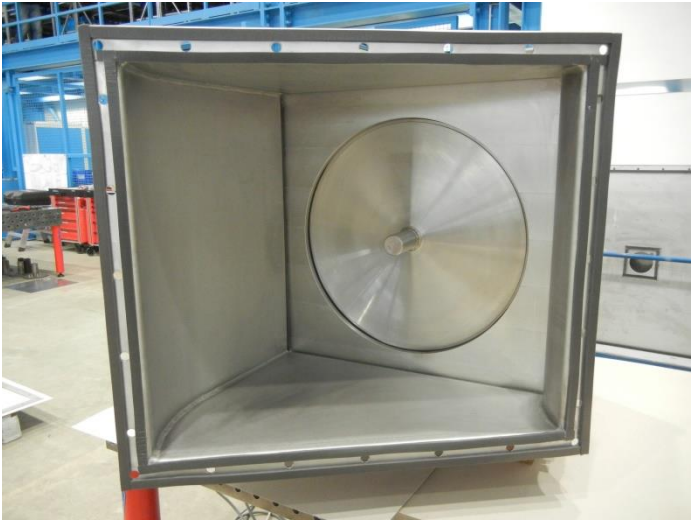
# NPP Oskarshamn – Sweden: Earthquake Simulation for cooling unit for the two emergency buildings in project FLEX. Acceleration force: 6g



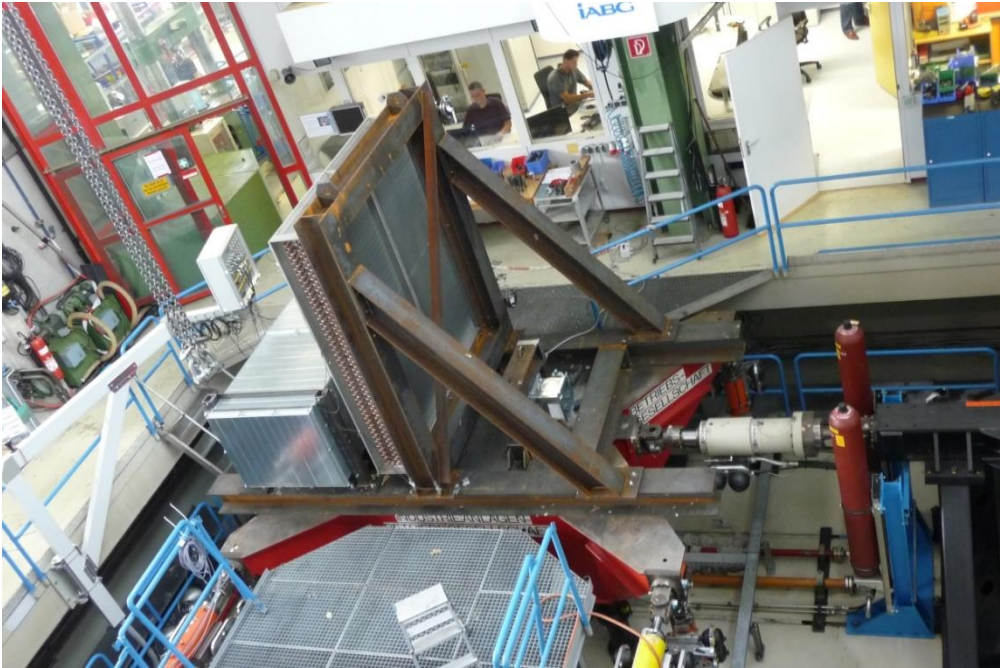
3-axes test facility at IABG



# Production of a gas tight shut-off valve according to client specification for the Areva Project Angra 2



# NPP Beznau – CH: Delivery and assembly of safety-classified ventilation system for 4 pce 4-MW emergency diesel generator



# NPP Beznau – CH: Delivery and assembly of safety-classified ventilation system for 4 pce 4-MW emergency diesel generator



# NPP Beznau – CH: Delivery and assembly of safety-classified ventilation system for 4 pce 4-MW emergency diesel generator



# References - Tractebel / Electrabel, NPP Tihange

## Replacement of ducts and pipes, Additional Facts

- Note:  
Own conception, design & construction, realization, dismantling & installation, commissioning
- Specifics:  
Tooling until 20 m over ground, mobile crane 250 t,  
connection within 48 hours, no complicated and costly containment of  
channels by setting of partition plates, dismantling and installation  
during operation
- Risks: Contamination, outdated seals (asbestos risk), aging and  
corrosion at old ducts
- Own, especially qualified assembly personnel



**Strong Partner:  
ALS, Ditec, Jordan**

**Key-Components from Krantz  
(Access lock, mobile filter  
unit)**



# References – Tractebel / Electrabel, NPP Tihange

## Replacement of ducts and pipes

### Tractebel Engineering A.S. NPP Tihange (PW-reactor) Belgium

Replacement of air ducts and pipes for the Nuclear Power Plant Tihange, Block 1

Exchange of the connections pipes and ducts between BAN und reactor building

- Execution: Welded
- Material: Steel with dekontaminable coating
- Tightness: According DIN 25496
- Design pressure: 5.000 Pa
- Measurements: Feed size to 4.0 m, Diameter to 1.6 m
- Order value: ca. 2.0 mio. euros
- Period: 2008 till 2009





# FAIR – Planning of Building Services for the ring accelerator complex FAIR GmbH



◦ Thank you a lot for your attention!

Krantz GmbH  
Uersfeld 24  
52072 Aachen  
Germany  
Tel:+49 241 441-1  
www.krantz.de



STEAG Energy Services GmbH  
Rüttenscheider Str. 1–3  
45128 Essen  
Germany  
Tel:+49 201 801-00  
www.steag-energyservices.com

