



ITER for Swiss Industry

Matching Capacitors for Fusion Projects

September 28, 2009





Company Profile



The COMET Group is one of the world's leading manufacturers of systems and components for the growth markets of non-destructive testing, security and semiconductors. Based on the **core competencies of vacuum technology, high voltage engineering and materials science, as well as the core products of X-Ray tubes and vacuum capacitors**, the COMET Group supplies a complete and highly flexible range of components, modules, systems and services from a single source.

Sales 2008	223 Mio. CHF
Employees	670
Foundation	1948
Headquarter	Flamatt, Switzerland
SWX	2002 (COTN)
Export	99%
Acquisitions	Phillips Industrial X-Ray (2002) Feinfocus (2004) YXLON (2007)

X-Ray Systems for Endusers



X-Ray Source for OEM's



Vacuum Capacitors for Semicon Industry





COMET Cooperation in Fusion Projects

A fusion project is like the Olympic games

- **Ambitious, for best of class**
- **Not on a regular basis – every few years**
- **Long preparation/design phase – short production and delivery phase**
- **Finally you are proud if you are part of it**



COMET Cooperation in Fusion Projects

A fusion project is like the Olympic games

- Ambitious, for best of class
- Not on a regular basis – every few years
- Long preparation/design phase – short production and delivery phase
- Finally you are proud if you are part of it

COMET has a long relation to fusion projects

- **First project ~ 30 years ago**
- **World wide community – Europe, USA, Japan, China**
- **Several special, customized designs based on standard products**



COMET Cooperation in Fusion Projects

A fusion project is like the Olympic games

- Ambitious, for best of class
- Not on a regular basis – every few years
- Long preparation/design phase – short production and delivery phase
- Finally you are proud if you are part of it

COMET has a long relation to fusion projects

- First project ~ 30 years ago
- World wide community – Europe, USA, Japan, China
- Several special, customized designs based on standard products

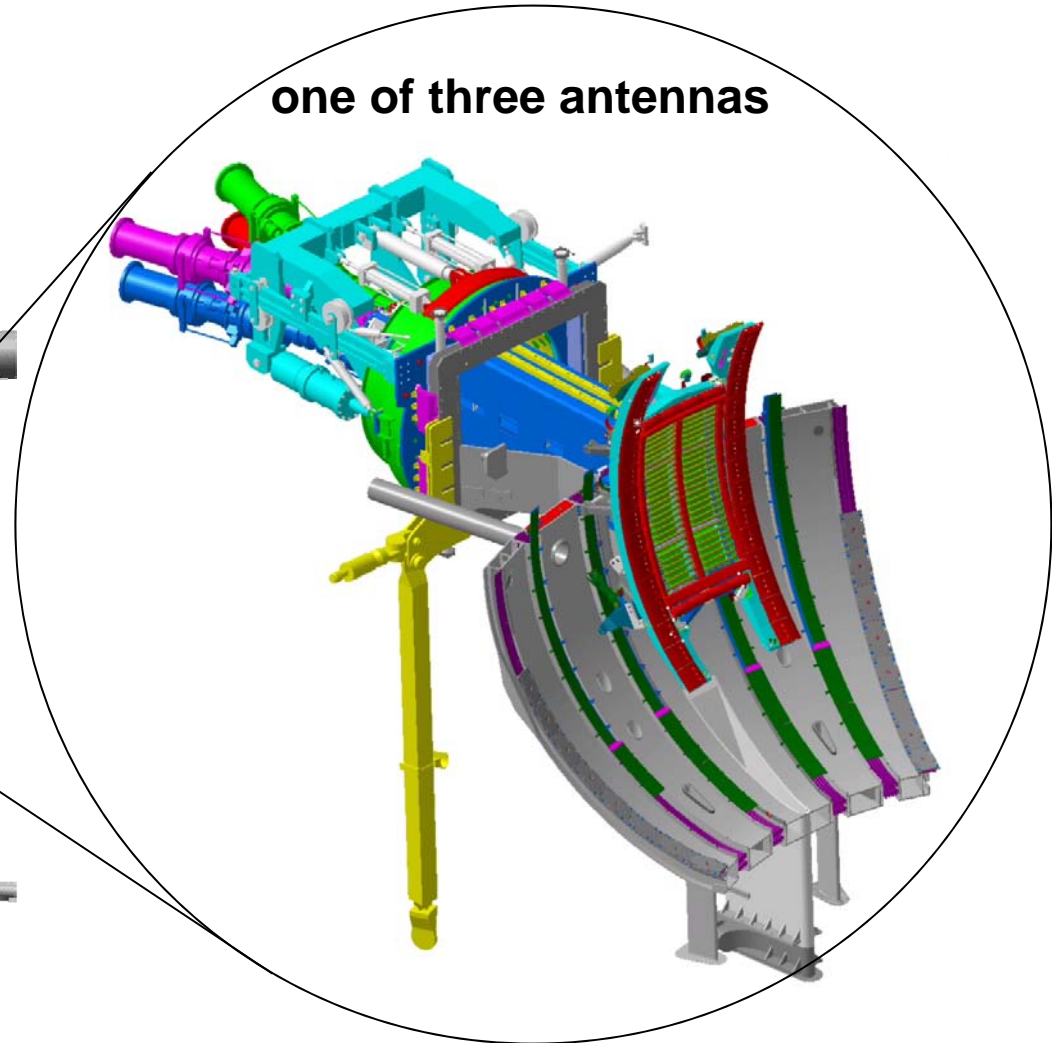
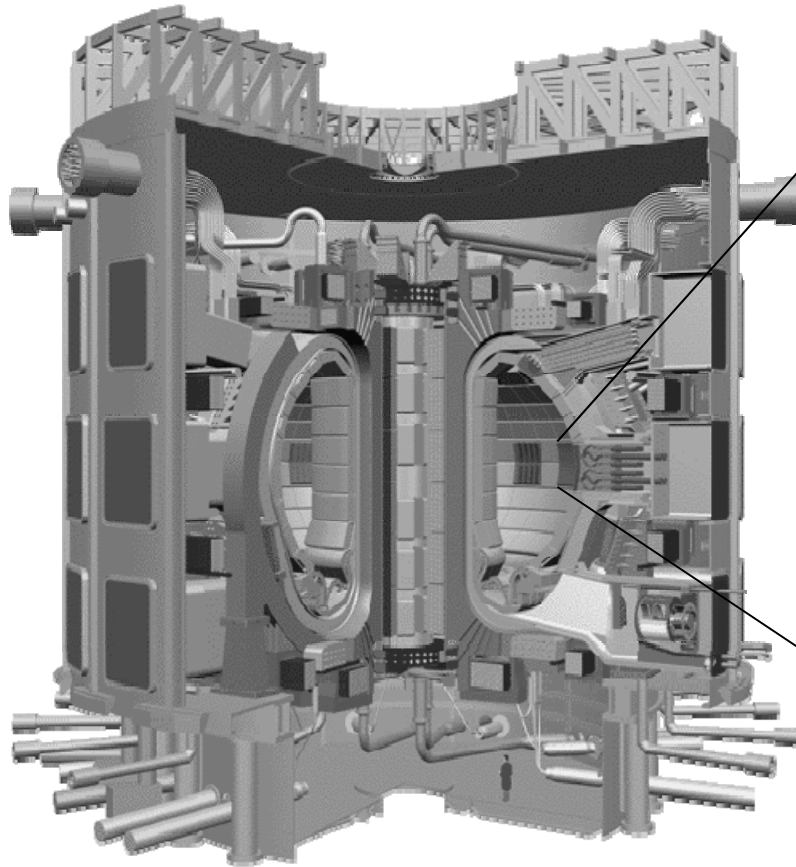
Experience made in such projects

- **Most effort in R&D team – but contract work for ITER was quite complex**
- **Each projects brought us to a higher technological level**
- **Many exciting discussions with interesting persons -> always happy when we get in contact also after the project is finished**



ITER – Fusion reactor

RF heating of plasma with 6MW



one of three antennas



ITER – Fusion reactor

Four matching capacitors per antenna



Variable Vacuum Capacitor

60 – 300pF

40kV peak test voltage

1000A_{RMS} at 60MHz

**Special, rugged design to
withstand the torque caused
by magnetic field**

