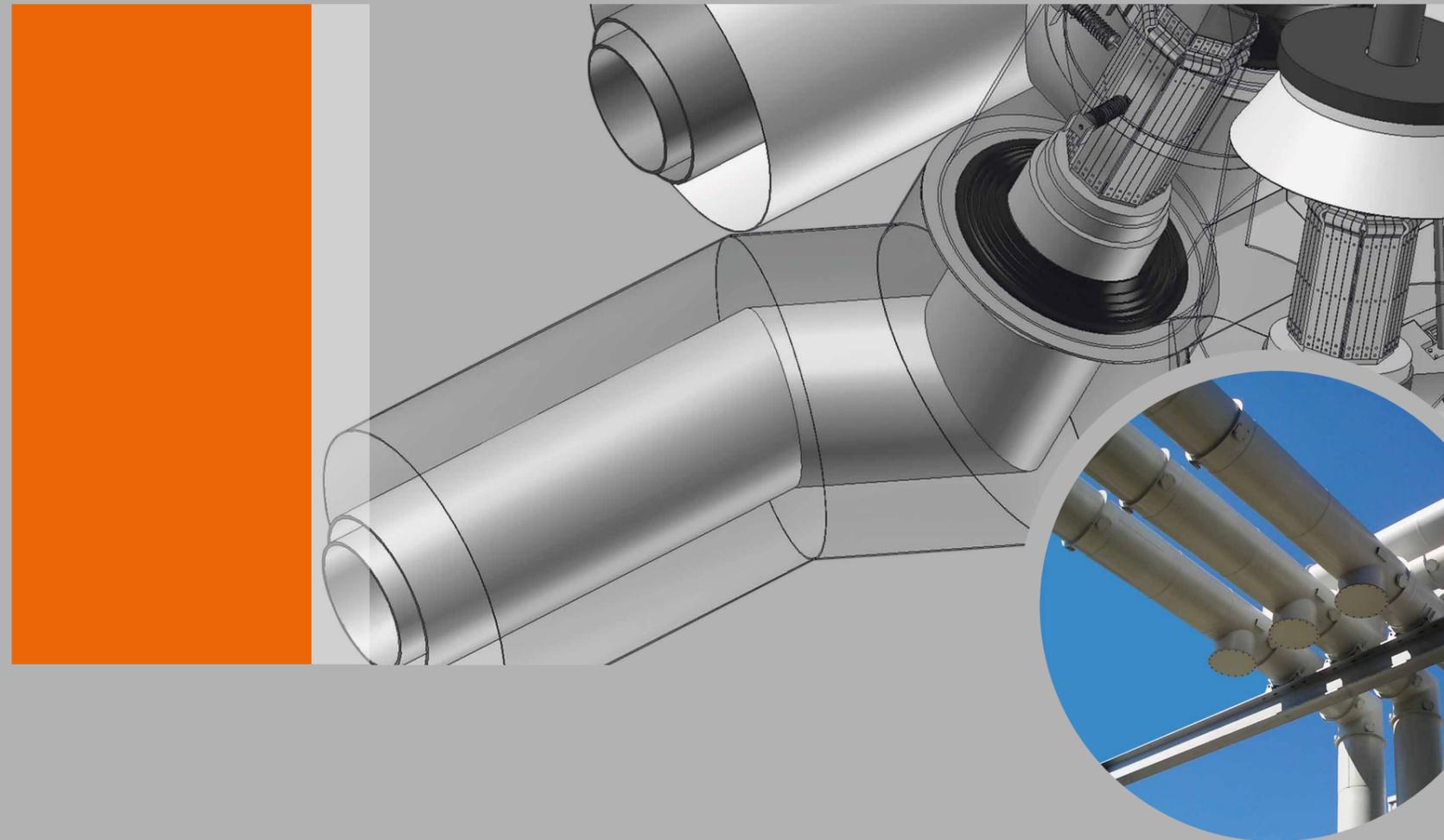


# EGE

**EFFICIENT | GLOBAL | ENGAGED**

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IN THE FIELD OF  
**ISOLATED PHASE BUS DUCTS (IPB)**



The IPB, a high current connection between generators and step up transformers, is a key component to transfer electricity to the power grid and also for unit auxiliary supply within a power plant. The IPB design has to fulfill all requirements relating to operational reliability and safety.

EGE is a certified company according to CSN EN ISO 9001 / 14001 and CSN OHSAS 18001. The electrical and thermal design of IPB components conforms to various international codes including IEC & IEEE standards.

EGE's IPBs are naturally cooled for rated values up to 36 kV / 30 kA.

EGE has the competence and more than 40 years of experience in engineering and manufacturing of IPB components.

The high quality of EGE IPB is achieved by consistent application of the highest quality standards for engineering, materials, and in the manufacturing & assembly procedures.

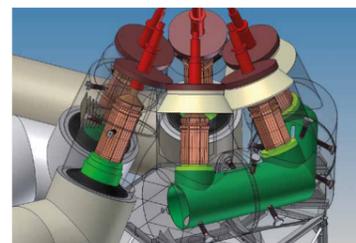
EGE's expertise allows them to deliver an optimized IPB design to meet all electrical, thermal and mechanical requirements. EGE utilizes a series of IPB module designs to cover the range of various ratings for all types of power plants.

A confirmation of EGE's design cap success in that there have been no design-related outages reported on any installed EGE IPB worldwide. The fact that there are no design-related outages reported throughout all the years of operation is a further confirmation of the high quality of IPB components designed and produced in EGE.

EGE's IPB design allows easy handling of component connections of the IPB resulting in minimized power plant maintenance outages. Long service intervals (typically > 5) years and very short maintenance times is a result of an optimized design of all IPB parts and modules.

EGE is able to customize and implement any IPB solution within a short time. Standardized designs and modules are the necessary prerequisite to reach this target. EGE's solutions offer maximum flexibility taking into consideration project specific design requirements.

Customer feedback has always been welcomed and has helped to improve our performance over the years resulting sales of more than 1000 IPB units to date.



**GOOD REASONS TO USE EGE IPB SYSTEMS:**

- High current connection with proven design
- Protection against 3- phase short circuit
- High reduction of short-circuit forces between phases of IPB
- The IPB design solution meets thermal and mechanical requirements under short- circuit conditions – calculations verified by tests up to 450 kA
- Low temperature rise in steel supporting structure or concrete / rebar due to low magnetic field around IPBs (this is achieved by short-circuiting of IPB enclosures on both the generator and GSU transformer ends of the IPB)
- Tested and certified modules
- Personnel protection against electric shock
- High protection of electrical equipment inside of IPB from dust and humidity - IP65
- Optional features include custom design allowing for easy replacement of generator, GCB and transformers

**GENERAL SCOPE OF SUPPLY:**

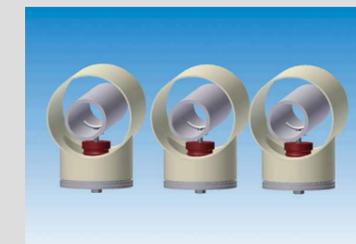
- IPB for both main and branch lines
- Generator neutral and line side connection (in case of hydrogen cooled generator, H2- ventilation system is included)
- Circuit breaker connection
- Transformer connection

**OPTIONAL FEATURES:**

- Short-circuit device
- Current transformers at generator bushings or inside the IPB
- Generator protection cubicles for neutral and line side incl. electrical equipment
- IPB overpressure system
- Infra-red temperature monitoring system

**ADVANTAGES OF IPB COMPONENTS FROM EGE:**

- Customized solutions to meet project specific requirements
- Good relation between price and quality
- Excellent performance and operational reliability through the lifetime of the power plant
- Short delivery time and low cost for on-site assembly and maintenance thanks to optimized modular design



IPBs DESIGNED AND MANUFACTURED BY EGE ARE RELIABLE COMPONENTS FOR ALL TYPES OF POWER PLANTS

GENERATED ENERGY WILL BE TRANSFERRED SAFELY AND RELIABLY WITH IPBs FROM EGE