Introducing the HiDry\textsuperscript{72} transformer, ABB’s first ever dry-type transformer available for a subtransmission application. ABB’s HiDry\textsuperscript{72} is the best transformer to serve direct subtransmission voltage with a higher power rating while maintaining superior safety and environmental friendliness.

**Increasing the limits**
Dry-type transformers have traditionally been used for power distribution up to 15 MVA and 36 kV. Over the years industries have increased their power to keep up with today’s electrical needs. In the 1990s a dry-type transformer capable of 52 kV was created to keep up with increasing demand. Then in the 2000s an increase in the power to 40 MVA was produced. Now at the beginning of this decade, again with increasing demand, dry-type transformers have become able to sustain 72.5 kV and 63 MVA. These kind of higher limits allow for more power close to urban populations since dry transformers can be installed close to or inside of buildings.

**Safe**
ABB’s dry-type transformers do not contain any flammable or explosive liquids. In the event of a fire, the insulation materials in the unit are self-extinguishing. This greatly reduces the risk of smoke or fire damage to persons or property. This also allows for installing the transformers inside or very close to buildings.

**Environmental benefits**
No risk of soil or water contamination due to transformer liquid spills. This makes the unit especially suited for installations in environmentally sensitive or seismic areas. Also no liquids for insulation or cooling eliminate the need for oil-pits, civic work, fire protection walls, and other protective equipment.

**Applications**
- inner-city substations
- indoor and underground substations
- chemical, oil, and gas industry
- environmentally sensitive areas
- renewable generation
- fire-risk areas
- sub-transmission

**Main advantages**
- non-flammable and self-extinguishing
- zero risk of leakage of flammable or contaminating substances
- environmentally friendly
- can be located in areas where national code does not allow oil-filled installations
- no oil containment needed for protection
- shorter cable runs
- reduced maintenance
- can be used indoors or outdoors with an enclosure
- highest level of short circuit strength
- easy to install
- reduced insurance fees
- energy losses are reduced because the unit allows higher voltages to be safely installed closer to the load center
Testing
The use of computer simulation modeling and experimental testing on prototype units has allowed for developments of new concepts for ABB dry-type transformers. This has led to advances in our compact insulation configuration. The insulation materials have a high temperature difference to the ambient air, allowing efficient transformer cooling. ABB dry-type transformers have been tested well beyond their limits to guarantee a large safety margin and customer peace of mind.

Current product range offerings
Power: up to 63 MVA
Primary voltages: up to 72.5 kV class

ABB leadership and experience
ABB continues to be the world leader in dry-type transformer production and technologies. The HiDry™ dry-type transformer is the latest addition to ABB’s line of safe technologies utilized in all of their dry-type transformers.

ABB offers a fully integrated, US located manufacturing facility that includes enclosure assemblies and bus working. These manufacturing abilities allow for complete tailored solutions for new and retrofit installations, particularly where space is limited. ABB’s scale, experience, in house testing and research and development capabilities make us the ideal provider for long term partnerships.

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