

CASE STUDY

# Elastimold® 35 kV GAD (grounding aid device)

Offers a solution for the utilities industry



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### The customer

One of the largest leading clean energy companies in the United States, the customer provides electricity to commercial and residential consumers, as well as manages clean utility project development and construction.

The company required a permanent, reliable and direct 600 amp continuous grounding device that could accommodate up to momentary 25,000 amps-rated ground connection for a 35 kV system.

### The issue

There were no products available in the 35 kV system for grounding devices that could accommodate 600 amps continuous or a momentary fault current up to 25,000 amps-rated ground connection. The only products available were for grounding devices that accommodate 200 amps continuous and a momentary fault current up to 10,000 amps-rated ground connection. These grounding products also were available for temporary installation only; there were no products available for permanent installation.

The Elastimold 35 kV grounding aid device (GAD) provides a permanent, reliable and direct 600 A or 900 A, 25 kA-rated ground connection with a removable insulated cap with a capacitive test point for safer operation.

### The solution

The Elastimold 35 kV grounding aid device (GAD) provides a permanent, reliable and direct 600 A or 900 A, 25 kA-rated ground connection with a removable insulated cap with a capacitive test point for safer operation. The GAD can be used as a permanent installation on the system, and eliminates the need to install temporary grounding adapters and a reducing tap plug for a 200 A grounding device.

### The outcome

The 35 kV GAD connects into the back interface of 600-amp or 900-amp series elbow connectors (T-body) to provide means to ground the circuit. The GAD is installed using a torque wrench with a torque value of 50–60 foot-pounds. To ground the circuit, the circuit must be de-energized. For maximum safety, the insulated cap with capacitive test point is used to ensure that there is no voltage present. Once the circuit is completely de-energized, it is grounded through a grounding cable to the grounding system. The GAD can remain installed permanently onto the back interface of the 600-amp or 900-amp series elbow connector, but it must be installed with the protective insulated cap when not being used to ground the circuit.



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The Elastimold 35 kV GAD comes with two grounding clamp options: the C clamp (776GADDRK-SP for permanently installed stud, 776GADDRK-S for loose stud) and the ball-stud clamp (776BGADDRK-SP for permanently installed stud, 776BGADDRK-S for loose stud). The 35 kV GAD has a 21.1 kV maximum operating voltage phase to ground and a 36.6 kV maximum operating voltage phase to phase.

**Additional ratings for 35 kV voltage class**

- 50 kV AC: 1-minute withstand
- 103 kV DC: 15-minute withstand
- 26.0 kV AC: corona extinction at 3pC sensitivity
- 600 Amp: continuous
- 25 kA Sym.: 10 cycles momentary

The Elastimold GAD is also available in 15 kV, 25 kV as well as 35 kV systems and all include a removable insulated cap with test point. All GAD versions meet the latest revision of the ANSI/IEEE Standard 386-2006 and are rated 150 kV basic insulation level (BIL) (1.2 x 50 microsecond wave); a version is also available with a 200 BIL rating in 35 kV versions only.

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**Ordering information**

Cat. no.	Description	Quantity
<b>35kV GAD C-clamp — 776GADDRK kit contents</b>		
771GAD	600 series grounding device	1
776GADDR	600 series insulating cap for above	1
IS-1527	Instruction sheet	1
82-08	Silicone lubricant	2
<b>35kV BGAD ball-stud — 776BGADDRK kit contents</b>		
771BGAD	600 series grounding device	1
776BGADDR	600 series insulating cap	1
IS-1528	Instruction sheet	1
82-08	Silicone lubricant	2

When ordering for 200 kV BIL, add suffix -200 to the catalog number.

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