



# S&C Vista Switchgear Gets Drafted Into Service

**S&C Featured Solution:** Vista® Underground Distribution Switchgear

**Location:** U.S. Air Force and Army

## Customer Challenge

The U.S. Air Force and Army are jointly developing a lightweight electrical power system that can be transported by air to serve provisional bases.

The engineering contractor for the new Deployable Power Generation and Distribution System chose S&C Vista Underground Distribution Switchgear for primary switching and secondary distribution. Vista switchgear is easy to operate and requires minimal training of ever-changing military personnel. SF<sub>6</sub>-insulated Vista switchgear is small and light weight, so it's ideally suited for airlifting.

Other factors in the decision to use Vista switchgear were its proven quality and functionality, and S&C's ability to go beyond the ordinary to satisfy customer requirements.

The Air Force and Army wanted switchgear that could be stacked two-high to save space aboard airplanes and in storage. They also specified a special steel skid for permanently mounting the gear. The skid would be integral with the enclosure, serving as both a pad and lifting support.

The gear would need to pass the MIL Spec E-810 20-hour shaker-table vibration test, verifying that stacked units could withstand 10,000 miles of travel aboard military aircraft. It would also need to pass tests verifying that switchgear performance is not affected after the gear has been subjected to low pressure at an altitude of 40,000 feet.

Numerous enclosure design changes would be needed to meet these requirements. But all the unique features of Vista switchgear had to be retained.

## S&C Solution

Multiple units of manually operated 15.5-kV Vista switchgear Model 624 were furnished to switch and protect loads fed by 920-kW generators. A typical unit is shown in the photo to the right.

All of the units have a 600-ampere continuous current rating and 16-kA short-circuit and fault-interrupting capabilities. Each unit includes two load-interrupter switch ways and four fault-interrupter ways. Optional voltage indicators are also included.

The Vista switchgear enclosure was completely redesigned and outfitted with the requisite integral steel skid. The skid and enclosure frame utilize heavy-duty steel I-beams and channels. Four alignment pins at the top corners of the enclosure facilitate stacking of the units.

Stacked units are lifted by eyebolts on the skid frame as shown in the photo above. Channels at the bottom allow forklift handling; reinforced tabs at the lower corners of the skid allow the gear to be dragged along the ground. Turnbuckles, attached to eyebolts on front and rear sides of the skid, hold stacked units together during transport.

Plates, attached to the floor of the enclosure, protect the switchgear during transport and storage and can be removed for cable entry while the gear is in use.

*This S&C Vista switchgear unit includes a specially designed steel skid for transport by military aircraft to provisional bases.*





## Results

The switchgear passed the rigorous shaker table tests imposed by the specifications. See the photo below. And the special design retained all the unique features of standard-production Vista switchgear.

To date, several Vista switchgear units have been sent to bases overseas. Others are scheduled for shipment in the near future. Both the Army and the Air Force are very satisfied with the performance of this gear. In fact, the Army awarded S&C a plaque for a job well done!

*Two units of the airworthy Vista switchgear can be stacked to save space. Turnbuckles attach to heavy-duty eye bolts to hold the units together during transport.*



*Stacked Vista switchgear units undergo the military's arduous shaker table vibration test.*

