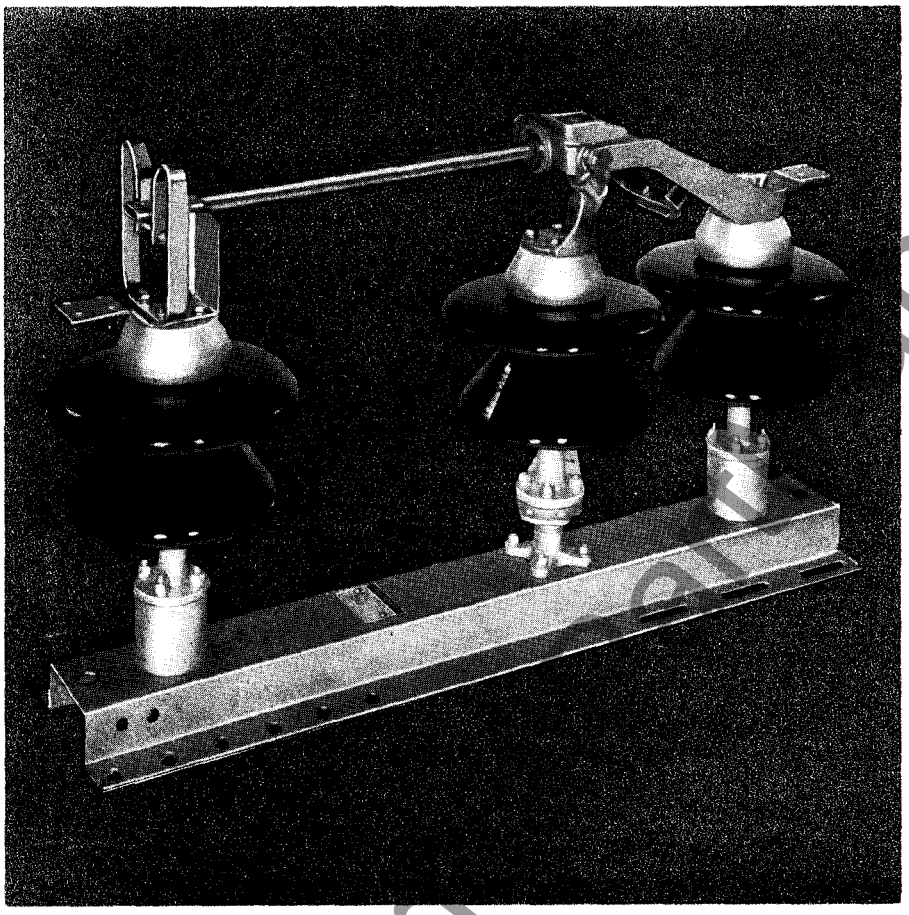
Westinghouse

Type V-3 Outdoor Disconnecting Switch

3 Pole Group-Operated
7.2 Kv to 69 Kv 600 Amps



Application

The Type V-3 vertical break outdoor disconnecting switches have a 600 ampere continuous current carrying capacity, 40,000 ampere momentary rating and are available in voltage ratings from 7.2 kv through 69 kv. Type V-3 switch pole units utilize the 3-inch bolt circle insulators and can be obtained with cap and pin or station post insulators. The V-3 is a three-pole gang-operated switch that can be furnished with either manual or motor operating mechanisms for horizontal, vertical or inverted mounting.

Advantages

TEFLON coated bushings in live side bearings.

One piece reverse loop spring copper alloy break jaw.

One piece high pressure spring copper alloy hinge-end contact.

Silver inserts on break jaw and hinge-end contacts.

High conductivity, one piece copper blade with die formed contact ends.

Built-in rotating insulator stop.

TEFLON coated rotating insulator support bearing.

NEMA 4 hole terminal pad.

3 inch bolt circle insulators (cap and pin or station post).

Galvanized formed steel base.

Suitable for horizontal, vertical or underhung mounting.

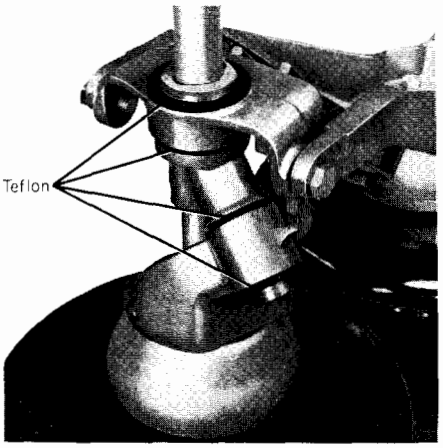
May, 1967
New Information
E, D, C/1969/DB

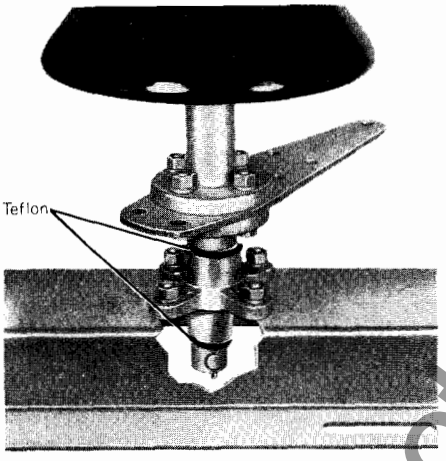
Type V-3 Outdoor Disconnecting Switch

3 Pole Group-Operated
7.2 Kv to 69 Kv 600 Amps

Design Features

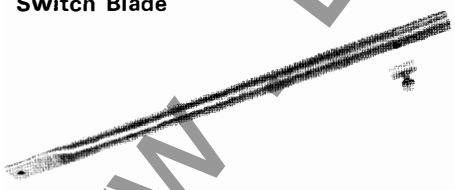
Teflon Coated Bearing Sufaces





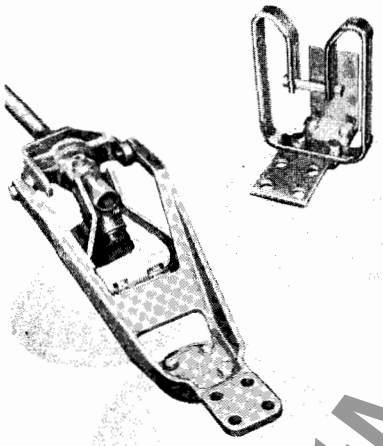
Extensive use of Teflon on the bearings, surfaces of the blade, actuating mechanism and rotating insulator stack bearings provide long life, low friction operation, completely eliminating the use of ball bearings, special seals and lubricants.

Switch Blade



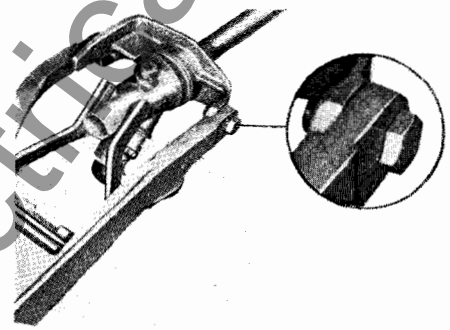
The switch blade is a single piece, hard drawn, round, high conductivity, copper tube with die formed contact tips on the break jaw and hinge end of the blade.

Contact Points



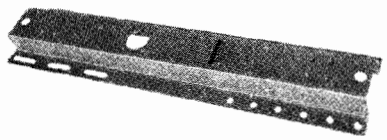
The Type V-3 switch utilizes separate high pressure contacts for the current carrying path at both the break jaw and hinge end of the switch blade. The high pressure, high conductivity contact jaws with silver inserts are formed from cadmium, chromium copper which is a highly conductive, extremely strong, heat treated spring copper alloy.

Blade Pivot Points



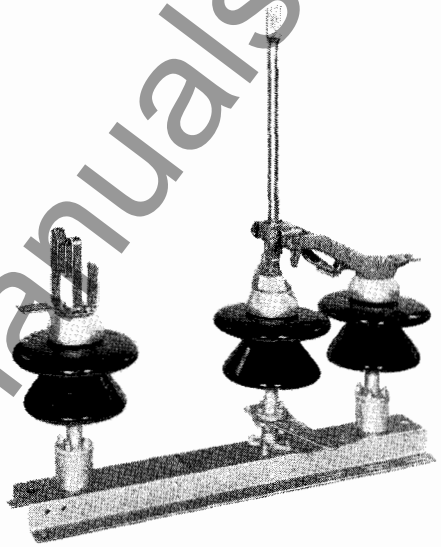
The blade pivots are designed to use dissimilar metals (bronze casting and stainless steel stud) with small rotational diameter to provide long life, low friction operation.

Base

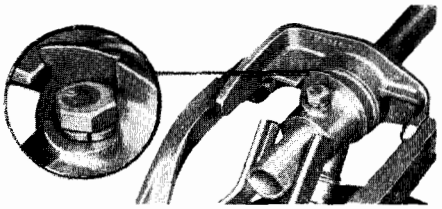


The switch base is made of formed galvanized steel that is drilled and slotted to meet the mounting requirements for the majority of substation structures and poles.

Operation



The opening cycle of the switch is initiated by the rotation of the center insulator stack. The initial rotation of the insulator stack rotates the blade about its own axis through the angular bearing assembly. Continued rotation of the insulator stack results in a small rise in the blade height for the degree of insulator rotation attaining the necessary mechanical advantage for lifting the blade. When the need for the mechanical advantage is reduced, the blade will rise rapidly for each degree of insulator rotation.



Positive control of the blade is maintained by solid mechanical connection throughout the complete open or close cycle, and is held in the open or close position by the movement of the blade actuating mechanism over toggle position, plus a positive blade stop in the closed position.

Westinghouse Electric Corporation
Switchgear Division, Power Switching Equipment, East Pittsburgh, Pa.
Printed in USA