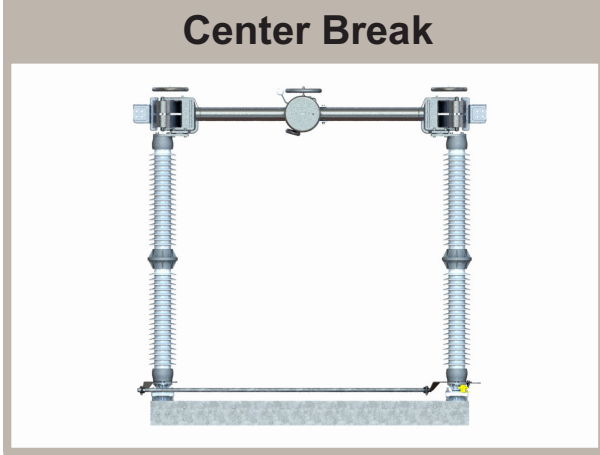


Group Operated Switch Application Guide

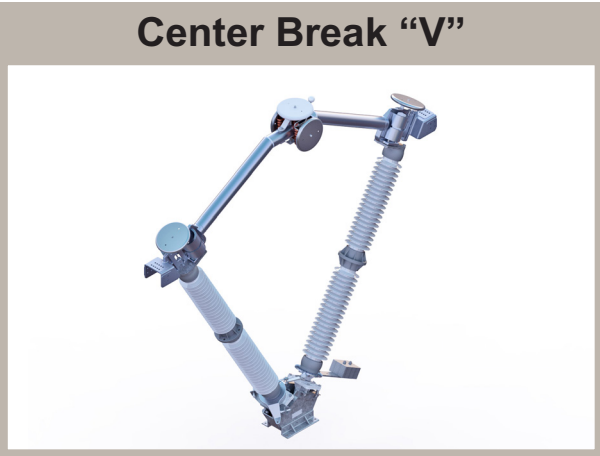
Vertical Break



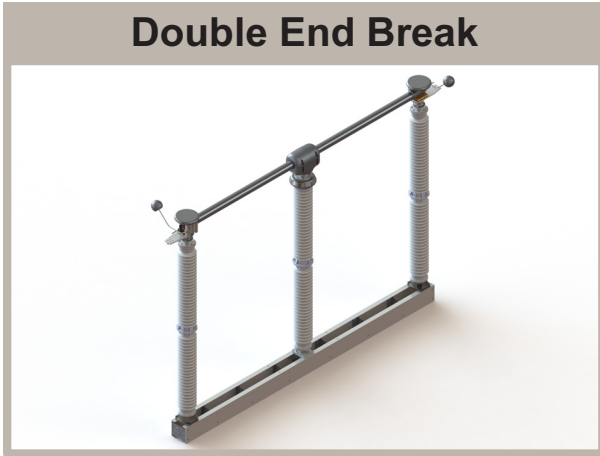
Center Break



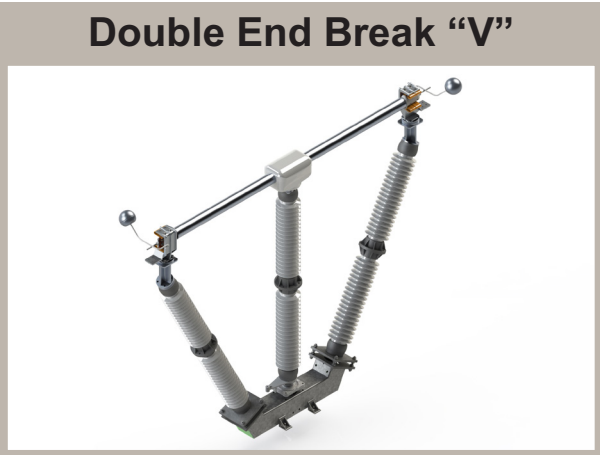
Center Break "V"



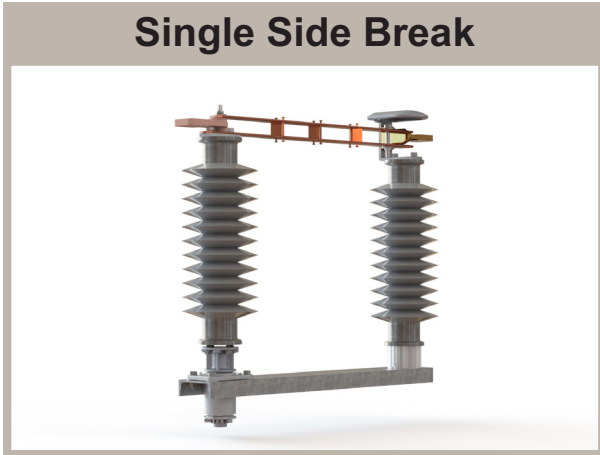
Double End Break



Double End Break "V"



Single Side Break



APPLICATION GUIDE

> Disconnect Switches > GROUP OPERATED SWITCHES

APPLICATION GUIDE

> Disconnect Switches > GROUP OPERATED SWITCHES

Max Voltage / BIL	Phase Spacing (in.)	Recommended Insulator(s)	Switch Configuration	1200A	2000A	3000A	4000A	5000A
15.5 / 110	30 30 24 30	TR 205 / TR 225	Single Side Break Center Break "V" Vertical Break Center Break	SSB-T, SSB-A, or L EC-1V, EC-2V, or CBL-T EV, EV-2, EV-2H, EVB, or TA-OC EC-1 or ECB-T	SSB-T or L EC-1V or EC-2V EV-2, EV-2H, or CVB-2 EC-1 or ECB-T	— EC-1V or EC-2V EV-2 or EV-2H EC-1 or P	— EC-1V or EC-2V EV-2, EV-2H, or WAG-A EC-1 or P	— EC-1V WAG-A EC-1 or P
27 / 150	36 36 30 36	TR 208 / TR 227	Single Side Break Center Break "V" Vertical Break Center Break	SSB-T, SSB-A, or L EC-1V, EC-2V, or CBL-T EV, EV-2, EV-2H, EVB, or TA-OC EC-1 or ECB-T	SSB-T or L EC-1V or EC-2V EV-2, EV-2H, or CVB-2 EC-1, ECB-T, or P	— EC-1V or EC-2V EV-2 or EV-2H EC-1 or P	— EC-1V or EC-2V EV-2, EV-2H, or WAG-A EC-1 or P	— EC-1V WAG-A EC-1 or P
38 / 200	48 48 36 48 36	TR 210 / TR 231	Single Side Break Center Break "V" Vertical Break Center Break Double End Break	SSB-T, SSB-A, or L EC-1V, EC-2V, or CBL-T EV, EV-2, EV-2H, EVB, or TA-OC EC-1 or ECB-T RDA-1	SSB-T or L EC-1V or EC-2V EV-2, EV-2H, or CVB-2 EC-1, EC-2, ECB-T, or P RDA-1	— EC-1V or EC-2V EV-2 or EV-2H EC-1, EC-2, or P RDA-1	— EC-1V or EC-2V EV-2, EV-2H, or WAG-A EC-1, EC-2, or P RDA-1	— EC-1V WAG-A EC-1 or P —
48.3 / 250	60 60 48 60 48	TR 214 / TR 267	Single Side Break Center Break "V" Vertical Break Center Break Double End Break	SSB-T, SSB-A, ES-1, or L EC-1V, EC-2V, or CBL-T EV, EV-2, EV-2H, EVB, or TA-OC EC-1 or ECB-T RDA-1	SSB-T, L, or ES-1 EC-1V or EC-2V EV-2, EV-2H, or CVB-2 EC-1, EC-2, ECB-T, or P RDA-1	— EC-1V or EC-2V EV-2 or EV-2H EC-1, EC-2, or P RDA-1	— EC-1V or EC-2V EV-2, EV-2H, or WAG-A EC-1, EC-2, or P RDA-1	— EC-1V WAG-A EC-1 or P —
72.5 / 350	72 72 60 72 60	TR 216 / TR 278	Single Side Break Center Break "V" Vertical Break Center Break Double End Break	SSB-T, SSB-A, ES-1, or L EC-1V, EC-2V, or CBL-T EV, EV-2, EV-2H, EVB, or TA-OC EC-1 or ECB-T RDA-1	SSB-T, L, or ES-1 EC-1V or EC-2V EV-2, EV-2H, or CVB-2 EC-1, EC-2, ECB-T, or P RDA-1	— EC-1V or EC-2V EV-2 or EV-2H EC-1, EC-2, or P RDA-1	— EC-1V or EC-2V EV-2, EV-2H, or WAG-A EC-1, EC-2, or P RDA-1	— EC-1V WAG-A EC-1 or P RDA-1
123 / 550	108 108 84 108 84 84	TR 286	Single Side Break Center Break "V" Vertical Break Center Break Double End Break Double End Break "V"	ES-1 EC-1V or EC-2V EV, EV-2, EV-2H, or EVB EC-1 or P RDA-1 RDA-1V	ES-1 EC-1V or EC-2V EV-2, EV-2H, or CVB-2 EC-1, EC-2, or P RDA-1 RDA-1V	— EC-1V or EC-2V EV-2 or EV-2H EC-1, EC-2, or P RDA-1 RDA-1V	— EC-1V or EC-2V EV-2, EV-2H, or WAG-A EC-1, EC-2, or P RDA-1 RDA-1V	— EC-1V WAG-A EC-1 or P RDA-1 RDA-1V
145 / 650	132 132 96 132 96 96	TR 288	Single Side Break Center Break "V" Vertical Break Center Break Double End Break Double End Break "V"	ES-1 EC-1V or EC-2V EV, EV-2, EV-2H, or EVB EC-1 or P RDA-1 RDA-1V	ES-1 EC-1V or EC-2V EV-2, EV-2H, or CVB-2 EC-1, EC-2, or P RDA-1 RDA-1V	— EC-1V or EC-2V EV-2 or EV-2H EC-1, EC-2, or P RDA-1 RDA-1V	— EC-1V or EC-2V EV-2, EV-2H, or WAG-A EC-1, EC-2, or P RDA-1 RDA-1V	— EC-1V WAG-A EC-1 or P RDA-1 RDA-1V
170 / 750	156 108 156 108 108	TR 291	Center Break "V" Vertical Break Center Break Double End Break Double End Break "V"	EC-1V or EC-2V EV, EV-2, EV-2H, or EVB EC-1 or P RDA-1 RDA-1V	EC-1V or EC-2V EV-2, EV-2H, or CVB-2 EC-1, EC-2, or P RDA-1 RDA-1V	EC-1V or EC-2V EV-2 or EV-2H EC-1, EC-2, or P RDA-1 RDA-1V	EC-1V or EC-2V EV-2, EV-2H, or WAG-A EC-1, EC-2, or P RDA-1 RDA-1V	EC-1V WAG-A EC-1 or P RDA-1 RDA-1V
245 / 900	156 216 156 156	TR 304 / TR 308	Center Break "V" Vertical Break Center Break Double End Break Double End Break "V"	EC-1V or EC-2V EV-2 or EV-2H EC-1 or P RDA-1 RDA-1V	EC-1V or EC-2V EV-1, EV-2, EV-2H, or CVB-2 EC-1, EC-2, or P RDA-1 RDA-1V	EC-1V or EC-2V EV-1, EV-2, or EV-2H EC-1, EC-2, or P RDA-1 RDA-1V	EC-1V or EC-2V EV-1, EV-2, or EV-2H EC-1, EC-2, or P RDA-1 RDA-1V	EC-1V EC-1 or P RDA RDA-V
362 / 1050	156 216 156 156	TR 312 / TR 316	Center Break "V" Vertical Break Center Break Double End Break Double End Break "V"	EC-1V or EC-2V EV-2 or EV-2H — RDA-1 RDA-1V	EC-1V or EC-2V EV-1, EV-2, or EV-2H EC-1 RDA-1 RDA-1V	EC-1V or EC-2V EV-1, EV-2, or EV-2H EC-1 or EC-2 RDA-1 RDA-1V	EC-1V or EC-2V EV-1, EV-2, or EV-2H EC-1 or EC-2 RDA-1 RDA-1V	EC-1V — EC-1 RDA RDA-V
362 / 1300	174 174 174	TR 324 / TR 367 (Radio free)	Center Break "V" Vertical Break Center Break Double End Break Double End Break "V"	EC-1V or EC-2V EV-2 or EV-2H — RDA-1 RDA-1V	EC-1V or EC-2V EV-1, EV-2, or EV-2H EC-1 RDA-1 RDA-1V	EC-1V or EC-2V EV-1, EV-2, or EV-2H EC-1 or EC-2 RDA-1 RDA-1V	EC-1V or EC-2V EV-1, EV-2, or EV-2H EC-1 or EC-2 RDA-1 RDA-1V	EC-1V — EC-1 RDA RDA-V
550 / 1550		Consult factory	Vertical Break Double End Break	EV-2H —	EV-1 or EV-2H RDA	EV-1 or EV-2H RDA	EV-1 or EV-2H RDA	—
550 / 1800	Vertical Break Double End Break		EV-2H —	EV-1 or EV-2H RDA	EV-1 or EV-2H RDA	EV-1 or EV-2H RDA	—	
800 / 2050	Vertical Break Double End Break		EV-2H —	EV-1 or EV-2H RDA	—	—	—	

Notes:

- For continuous current ratings above 5000A, contact factory
- For other switch configurations, consult factory
- Blue indicates aluminum live part construction
- Red indicates copper live part construction

Available Operators

Manual	HOGO (High Output Gear Operator)
Motor	VM-1
	VM-1 SE (Stored Energy)
	CM-4AE (For Circuit Switchers Operation)

Available Ground Switches

Model	Available kV Ratings	Momentary Current Rating
LH-6	15.5 - 145 kV	61 kA
EVG-1	15.5 - 550 kV	61 kA
		70 kA
		80 kA
		100 kA
EVG-2	15.5 - 345 kV	120 kA
		61 kA
		70 kA
		80 kA
ESD-63	72.5 - 245 kV	100 kA
TV-70	123 - 800 kV	120 kA

Application Chart




SWITCH INTERRUPTER ATTACHMENTS

Switch Interrupter Selection Chart

PRODUCT	LOAD BREAKING	LOOP SPLITTING	LINE / CABLE DROPPING	TRANSFORMER MAGNETIZING
Standard Arcing Horn			X	X
Quick Break Whip			X	X
High Speed Whip (HSW)			X	X
LLS[®]	X	X	X	X

*Consult factory for vacuum interrupter attachments



LLS[®] LOAD AND LINE SWITCHER FAMILY OVERVIEW						
	LLS[®]-I		LLS[®]-II 2000		LLS[®]-II 3000	
MAXIMUM VOLTAGE RATING	38 kV - 72.5 kV	123 - 245 kV	72.5 - 170 kV	245 kV	72.5 - 170 kV	245 kV
LOAD BREAKING CAPABILITY	2000 A	N/A	2000 A		3000 A	2000 A
LINE DROPPING CAPABILITY	300 A	N/A	300 A	200 A	300 A	200 A
LOOP SPLITTING CAPABILITY	2000 A	2000 A*	2000 A		3000 A	

* The LLS[®]-I can be utilized for loop splitting applications to 245 kV as long as the transient recovery voltage does not exceed 30 kV