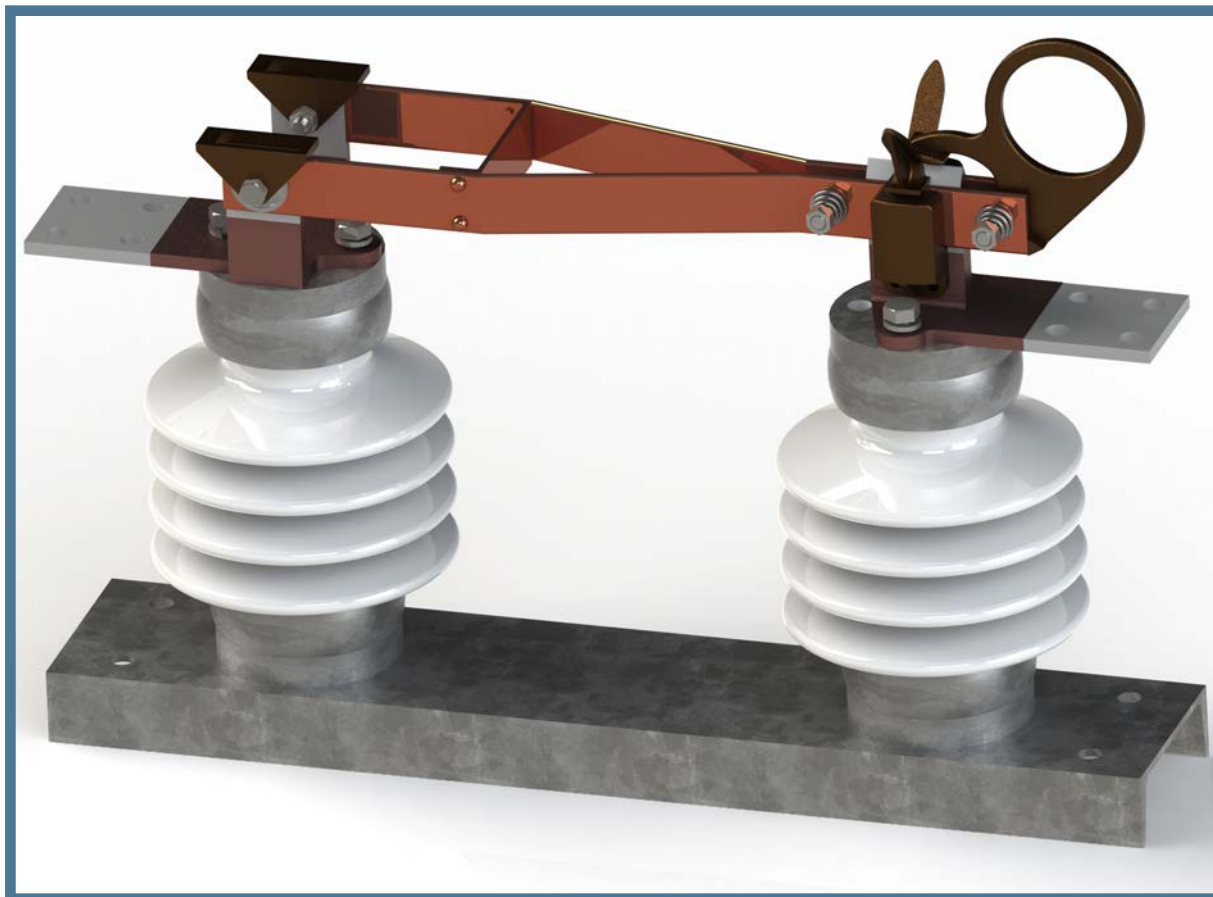


# TYPE BT DISCONNECT SWITCHES

060-170331.1  
(Rev. of 060-140307.1)

OUTDOOR HOOKSTICK OPERATED (SUBSTATION APPLICATIONS)



- Vertical or underhung mounting
- 7.5KV through 161KV
- 600A through 2000A  
(4000 Amps through 34.5KV)
- Single, tandem, and  
**low-profile styles**



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# FEATURES OF TYPE BT DISCONNECT SWITCH

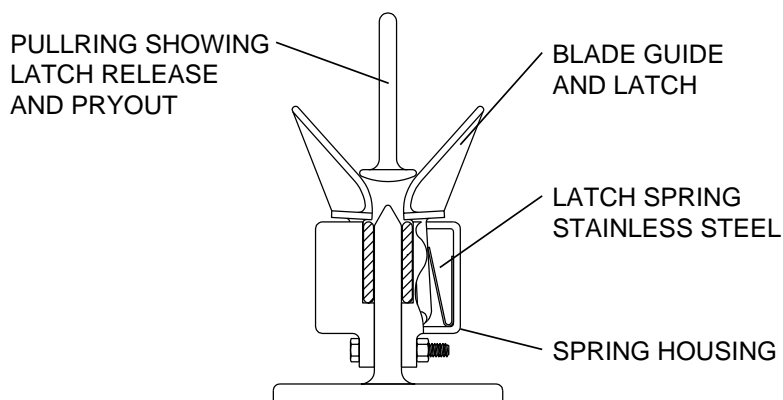
- Truss-type blade for extra strength.
- Wide, sturdy blade guide.
- Large pull ring - easy to hook.
- Sturdy blade pryout opens switch easily.
- Tongue-type contact provides double contact surfaces.
- All contact surfaces are silver plated.
- All current carrying parts are hard-drawn copper, cast copper, or high conductivity bronze.
- Available in single, tandem, and low-profile styles.
- Ratings for 7.5kV to 161kV - from 600 to 2000 amperes (4000 amps through 34.5kV).
- Switches rated 1200 and 2000 amperes are available with either 30°C or 53°C maximum temperature rise design.
- 600 ampere rated switches are available with the heavier 30°C rise design only.
- Wood crate packaging.

Design principles incorporated in Royal's type BT disconnect switch have an established field-service record of more than 30 years.

The blade is of truss-type construction providing an exceptionally sturdy blade. The latch tips are flared to form a wide guide for closing the blade. The pull ring is large for easy hook-stick operation.

Integral with the pull ring is an effective latch release and blade pry-out. This makes opening the switch easy, even when coated with ice or after years of exposure to contaminated or corrosive atmospheres.

The type BT switch is also offered with a current rating of 4000 amperes; for further information on this rating consult the factory.



## CONTACTS

Contacts of the type BT are tongue type. The latch tips are flared to provide the wide blade guide. The guide fingers overlap the blade in the closed position to insure a positive latch. In opening, the pull ring separates the latch fingers and acts as pryout for the blade. All current carrying parts are made of hard-drawn copper, cast copper, or high-conductivity bronze. All contacts are silver plated. Silver inserts are available.

## Blades

The blade of the BT switch is of a truss type construction. This gives the blade unusual lateral strength. The two blade members straddle the contact tongue to provide two contact surfaces. The blades are of hard-drawn copper. Blade stops will be furnished without charge when specified on your order.

## Bases

Switch bases through 69kV are single steel channel. Standard dimensions are listed but any base length and drilling can be furnished. On switches rated 115kV and above, built-up girder bases are furnished.

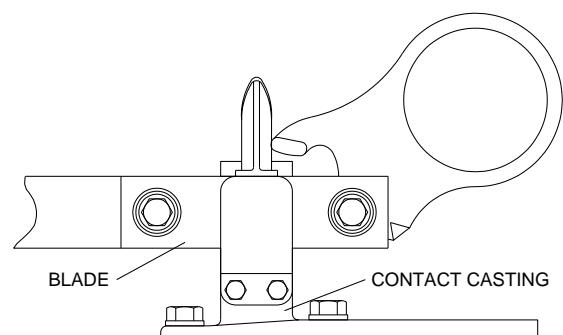
For crossarm mounting, bases can be drilled to accommodate standard pole-top diameters. Bases are hot-dipped galvanized after fabrication.

## Insulators

Type BT switches are mounted on ANSI standard station-post insulators

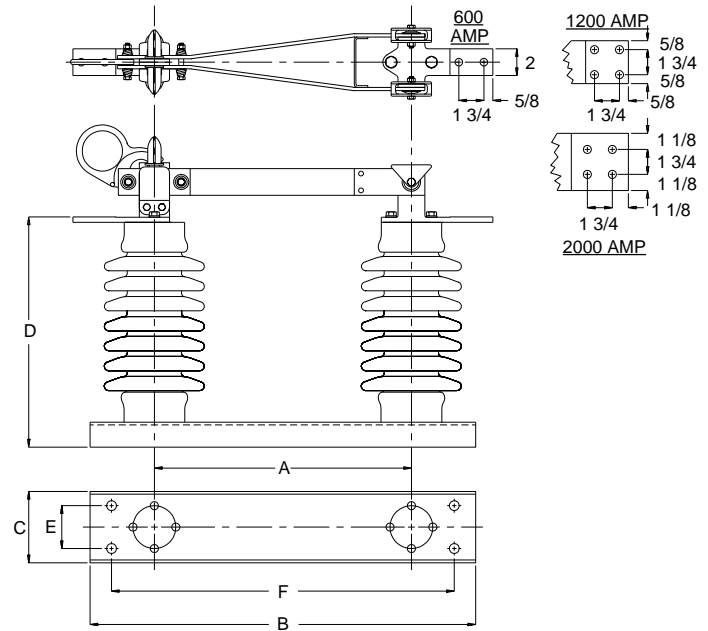
## Rating Standards

Type BT switches will carry full rated load continuously in accordance with latest ANSI standards. These switches have also been tested in accordance with and will meet short-time current ratings for outdoor switches, per ANSI standards.



# TYPE BT DISCONNECT SWITCH OUTDOOR HOOK-OPERATED SINGLE POLE, SINGLE THROW

- Terminal pads are drilled 9/16" on standard 1 3/4" centers unless otherwise requested.
- Terminal connectors can be supplied at an additional cost.
- Channel bases are furnished thru 69kV and girder bases above 69kV. Holes sizes and locations are provided as required.
- Certified construction drawings are furnished.
- Blade stops are available.



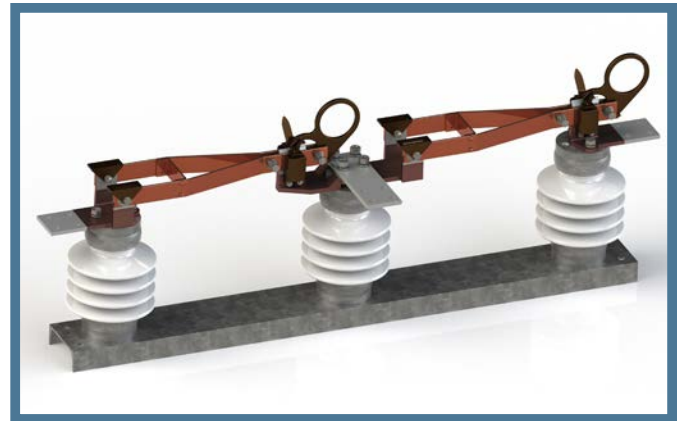
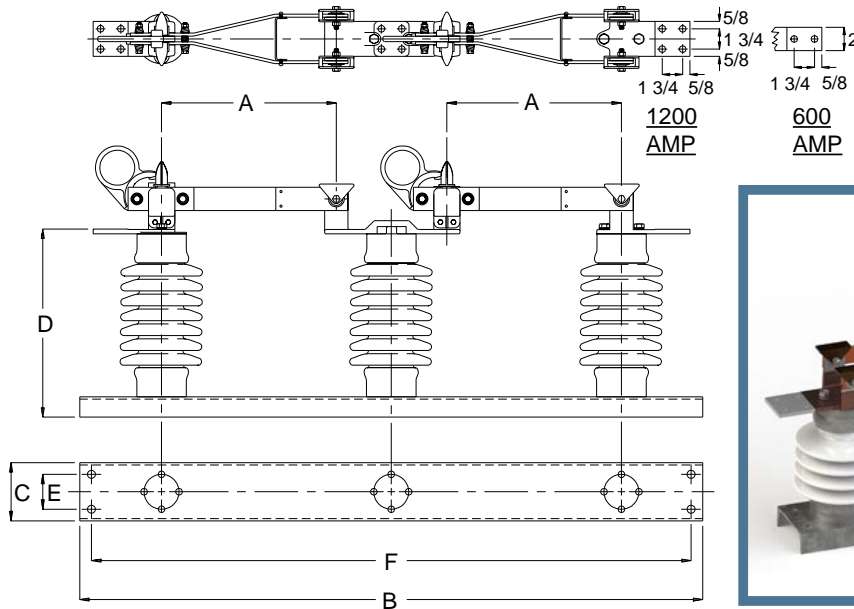
KV NOM. (MAX.)	RATINGS		INSULATOR		CATALOG NO.		DIMENSIONS (IN)						Single Pole Weight (Lbs.)	
	CURRENT CONT. (A)	kA MOM.	T.R.	B.I.L.	VERTICAL	UNDERHUNG	A	B	C	D	E	F		
7.5 (8.3)	600	40	202	95	13001	13021	12	23	5	9 5/8	3	20	52	
	1200	61			13002	13022				9 1/2				57
	2000	100			18221	18241				9 5/8				77
15 (15.5)	600	40	205	110	13004	13024	15	26	5	12 1/8	3	23	55	
	1200	61			13005	13025				12			58	
	2000	100			18223	18243				12 1/8			81	
23 (27)	600	40	208	150	13007	13027	18	27	5	16 1/8	3	24	79	
	1200	61			13008	13028				16			81	
	2000	100			18225	18245				16 1/8			106	
34.5 (38)	600	40	210	200	13010	13030	24	33	5	20 1/8	3	30	99	
	1200	61			13011	13031				20			102	
	2000	100			18227	18247				20 1/8			129	
46 (48.3)	600	40	214	250	13012	13032	30	41	5	24 1/8	3	38	118	
	1200	61			13013	13033				24			121	
	2000	100			18229	18249				24 1/8			150	
69 (72.5)	600	40	216	350	13014	13034	42	53	6	32 1/4	4	50	196	
	1200	61			13015	13035				32 1/8			200	
	2000	100			18231	18251				32 1/4			233	
115 (123)	600	40	286	550	13016	13036	60	66	9 3/4	51 3/8	8 1/4	63	431	
	1200	61			13017	13037				51 5/8			451	
	2000	100			18233	18253				51 5/8			474	
138 (145)	600	40	288	650	18234	18254	72	78	9 3/4	60 3/8	8 1/4	75	476	
	1200	61			18235	18256				60 5/8			497	
	2000	100			18237	18257				60 5/8			524	
161 (170)	600	40	291	750	13018	13038	84	90	9 3/4	68 3/8	8 1/4	87	642	
	1200	61			13019	13039				68 5/8			664	
	2000	100			18239	18259				68 5/8			694	



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# TYPE BT TANDEM OUTDOOR HOOK-OPERATED SINGLE POLE, DOUBLE BLADE

- Terminal pads are drilled 9/16" on standard 1 3/4" centers unless otherwise requested.
- Terminal connectors can be supplied at an additional cost.
- Certified construction drawings are furnished.
- 90 degree blade stops furnished on top switch. Specify if required on bottom switch.
- Center pad for right hand or left hand take-off.



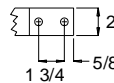
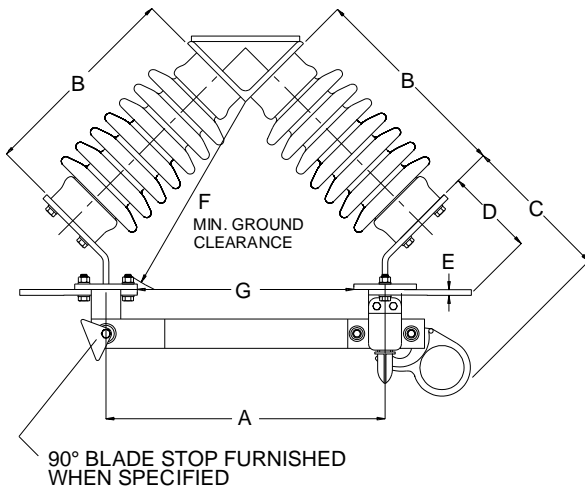
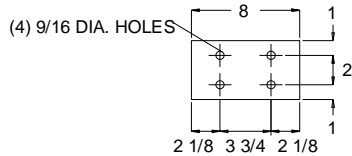
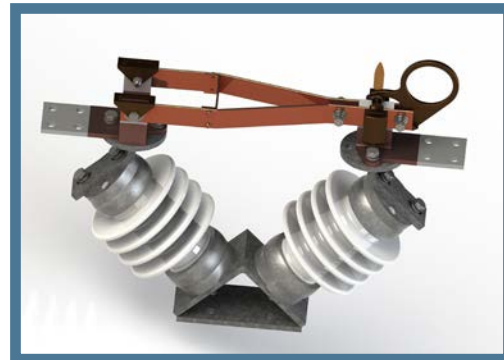
KV NOM. (MAX.)	RATINGS		INSULATOR		CATALOG NO.		DIMENSIONS (IN)						Single Pole Weight (Lbs.)
	CURRENT CONT. (A)	kA MOM.	T.R.	B.I.L.	VERTICAL	UNDERHUNG	A	B	C	D	E	F	
7.5 (8.3)	600	40	202	95	13209	13226	12	40	5	9 5/8	3	37	91
	1200	61			13210	13227		41 1/2		9 1/2		39 1/2	98
15 (15.5)	600	40	205	110	13212	13229	15	46	5	12 1/8	3	43	97
	1200	61			13213	13230		47 1/2		12		45 1/2	104
23 (27)	600	40	208	150	13215	13232	18	52	5	16 1/8	3	49	136
	1200	61			13216	13233		53 1/2		16		51 1/2	143
34.5 (38)	600	40	210	200	13218	13235	24	64	5	20 1/8	3	61	168
	1200	61			13219	13236		65 1/2		20		63 1/2	176
46 (48.3)	600	40	214	250	13220	13237	30	76	5	24 1/8	3	73	197
	1200	61			13221	13238		77 1/2		24		75 1/2	206
69 (72.5)	600	40	216	350	13222	13239	42	100	6	32 1/4	4	97	319
	1200	61			13223	13240		101 1/2		32 1/8		99 1/2	329



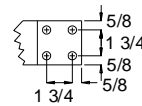
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# TYPE BT LOW-PROFILE SWITCH OUTDOOR HOOK-OPERATED SINGLE POLE, SINGLE THROW

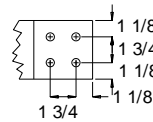
- Terminal pads are drilled 9/16" on standard 1 3/4" centers unless otherwise requested.
- Terminal connectors can be supplied at an additional cost.
- Certified construction drawings are furnished.
- Blade stops are available.
- Insulators at 90 or 60 degrees.



**600 AMP**



**1200 AMP**



**2000 AMP**

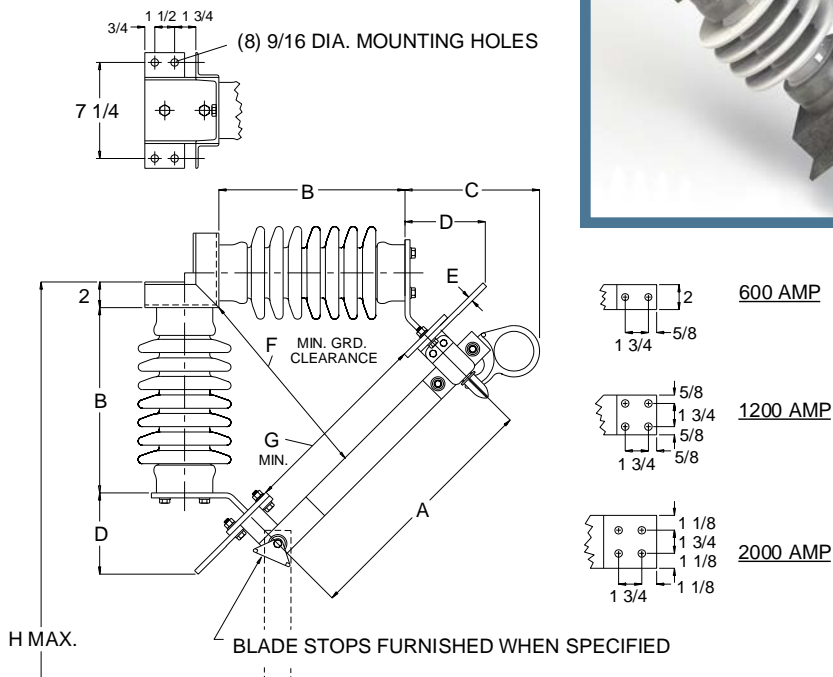
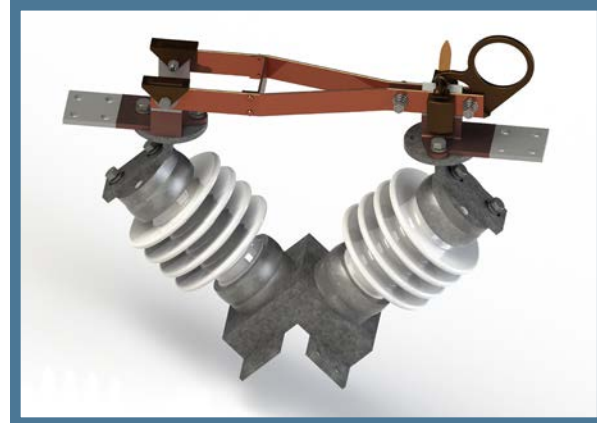
KV NOM. (MAX.)	RATINGS		INSULATOR		CATALOG NO.	DIMENSIONS (IN)						Single Pole Weight (Lbs.)	
	CURRENT CONT. (A)	kA MOM.	T.R.	B.I.L.		A	B	C	D	E	F		G
7.5 (8.3)	600	40	202	95	19806	12	7 1/2	10	6	3/8	8	7 3/4	54
	1200	61			19810			10 1/8	6 1/4	1/4			56
	2000	100			19814			11 1/4	6 7/8	3/8			79
15 (15.5)	600	40	205	110	19807	15	10	10	6	3/8	10 1/2	10 3/4	55
	1200	61			19811			10 1/8	6 1/4	1/4			57
	2000	100			19815			11 1/4	6 7/8	3/8			82
23 (27)	600	40	208	150	19808	18	14	9 1/4	5 1/4	3/8	14	13 3/4	79
	1200	61			19812			9 3/8	5 5/8	1/4			81
	2000	100			19816			10 1/2	6 1/4	3/8			106
34.5 (38)	600	40	210	200	19809	24	18	9 1/4	5 1/4	3/8	17 7/8	19 3/4	95
	1200	61			19813			9 3/8	5 5/8	1/4			98
	2000	100			19817			10 1/2	6 1/4	3/8			125
46 (48.3)	600	40	214	250	20297	30	22	9 1/4	5 1/4	3/8	22	25 3/4	110
	1200	61			20298			9 3/8	5 5/8	1/4			113
	2000	100			20299			10 1/2	6 1/4	3/8			142
69 (72.5)	600	40	216	350	20300	42	30	12	8	3/8	29	37 1/2	181
	1200	61			20175			12 1/4	8 1/4	1/4			185
	2000	100			20302			12 7/8	8 7/8	3/8			218



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# TYPE BT VERTICAL 90° LOW-PROFILE DISCONNECT SWITCH OUTDOOR HOOK-OPERATED -- SINGLE POLE, SINGLE THROW

- Terminal pads are drilled 9/16" on standard 1 3/4" centers unless otherwise requested.
- Terminal connectors can be supplied at an additional cost.
- Certified construction drawings are furnished.
- Blade stops are available.



KV NOM. (MAX.)	RATINGS		INSULATOR		CATALOG NO.	DIMENSIONS (IN)								Single Pole Weight (Lbs.)
	CURRENT CONT. (A)	kA MOM.	T.R.	B.I.L.		A	B	C	D	E	F	G	H	
7.5 (8.3)	600	40	202	95	19823	12	7 1/2	10	6	3/8	8	7 3/4	30 1/2	54
	1200	61			19827			10 1/8	6 1/4	1/4			30 7/8	56
	2000	100			19831			11 1/4	6 7/8	3/8			32	79
15 (15.5)	600	40	205	110	19824	15	10	10	6	3/8	10 1/2	10 3/4	36	55
	1200	61			19828			10 1/8	6 1/4	1/4			36 3/8	57
	2000	100			19832			11 1/4	6 7/8	3/8			37 1/2	82
23 (27)	600	40	208	150	19825	18	14	9 1/4	5 1/4	3/8	14	13 3/4	42 1/2	79
	1200	61			19829			9 3/8	5 5/8	1/4			42 5/8	81
	2000	100			19833			10 1/2	6 1/4	3/8			43 1/2	106
34.5 (38)	600	40	210	200	19826	24	18	9 1/4	5 1/4	3/8	17 7/8	19 3/4	52 1/4	95
	1200	61			19830			9 3/8	5 5/8	1/4			52 5/8	98
	2000	100			19834			10 1/2	6 1/4	3/8			53 1/2	125



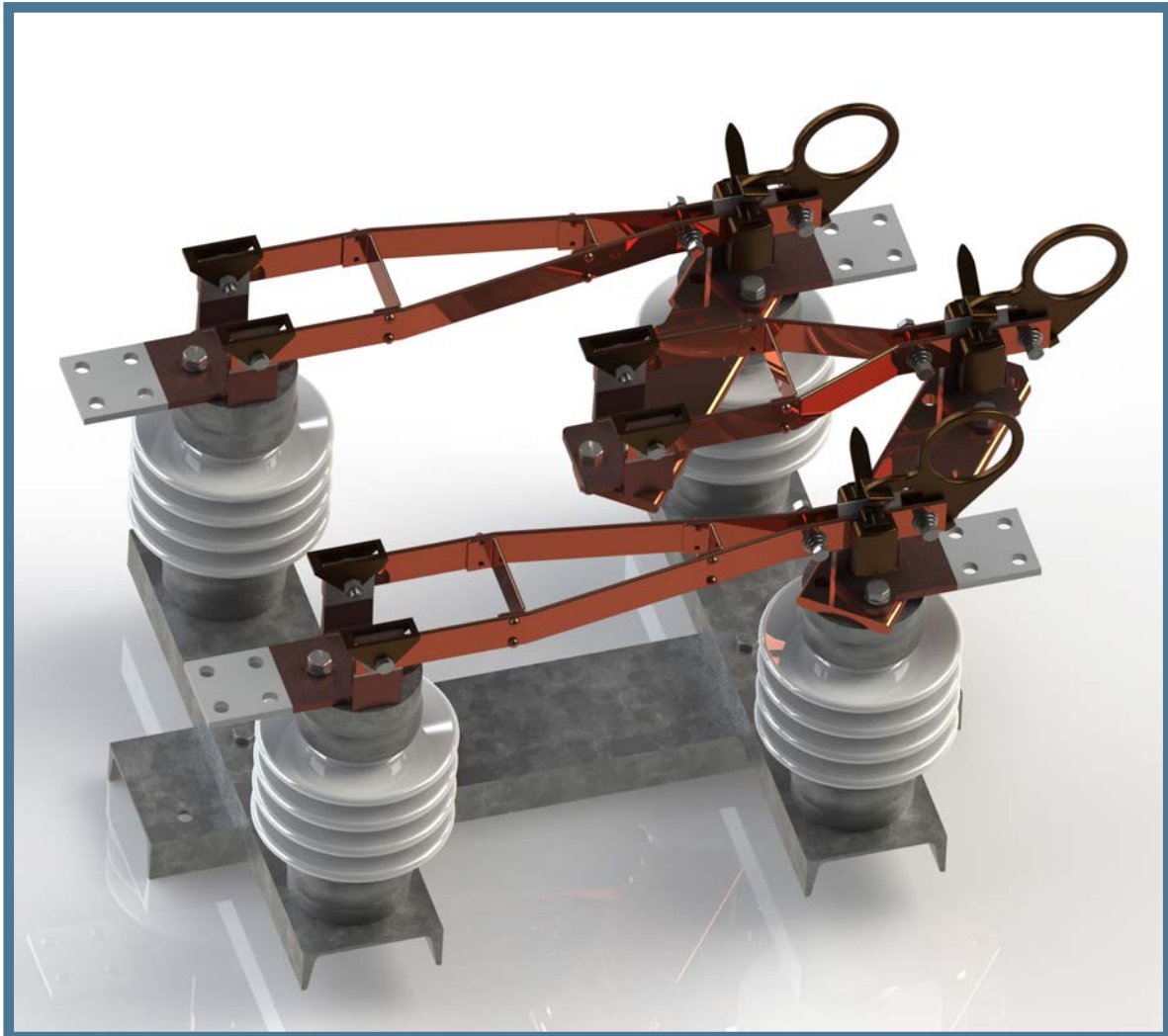
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# TYPE BTBP SUBSTATION CLASS REGULATOR BY-PASS DISCONNECT SWITCH

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The type **BTBP** is a cleanly designed three-blade substation disconnect switch appropriate for by-passing substation regulators. The live parts are the same as the type BT switch. The simple design and operation features make it dependable over many years of service. Reference dimensions and ratings on the next page.

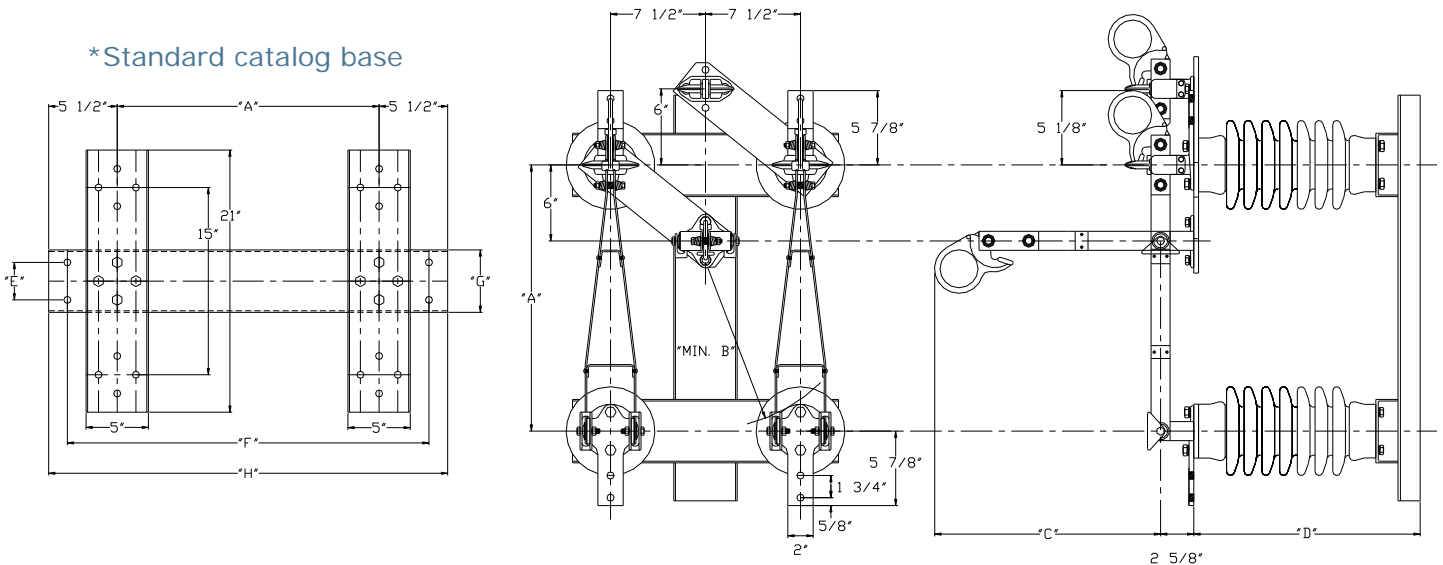


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# TYPE BTBP SUBSTATION CLASS REGULATOR BY-PASS DISCONNECT SWITCH

- Available 7.5 kV – 34.5 kV, 600A – 2000A continuous.
- Only appropriate for bypassing regulators.
- All contacts silver-plated.
- All live parts of hard-drawn copper, cast copper, or high conductivity bronze.
- Terminals are NEMA Standard drilling.
- Blade stops are available.
- Base is hot dipped galvanized.
- Standard dimensions are listed, but any base length and drilling can be furnished.

KV NOM. (MAX.)	RATINGS		INSULATOR		CATALOG NO.	DIMENSIONS (IN)								Single Pole Weight (Lbs.)
	CURRENT CONT. (A)	kA MOM.	T.R.	B.I.L.		A	B	C	D	E	F	G	H	
7.5 (8.3)	600	40	202	95	20601	15	7	17 3/8	11 3/8	3	23	5	26	132
	1200	61			20602			17 1/2	11 1/2					141
	2000	100			20603			17 1/2	11 1/2					193
15 (15.5)	600	40	205	110	20604	18	10	17 3/8	13 7/8	3	26	5	29	136
	1200	61			20605			17 1/2	14					146
	2000	100			20606			17 1/2	14					200
23 (27)	600	40	208	150	20607	21	12	17 3/8	17 7/8	3	29	5	32	185
	1200	61			20608			17 1/2	18					195
	2000	100			20609			17 1/2	18					250
34.5 (38)	600	40	210	200	20610	27	18	17 3/8	21 7/8	3	35	5	38	222
	1200	61			20611			17 1/2	22					232
	2000	100			20612			17 1/2	22					292



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