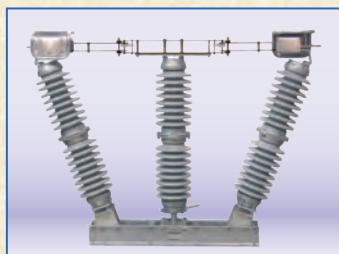


## Switch Types: DB-C and DB-CV

# Copper Double Break Switch

115 kV - 230 kV  
1200 A. - 3000 A.



**CLEAVELAND/PRICE INC.**

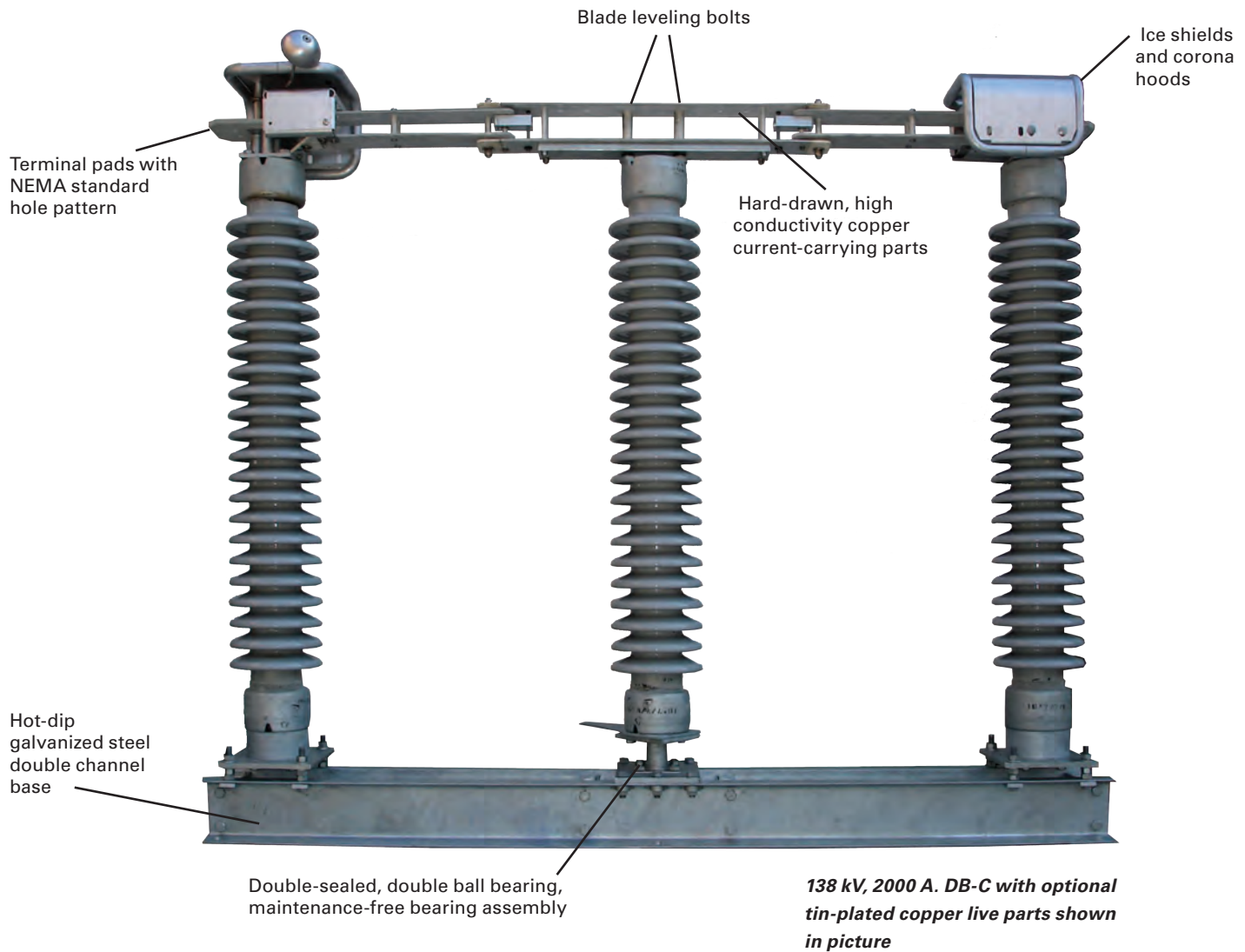
14000 Rt. 993, Trafford, PA 15085 (724) 864-4177

FAX (724) 864-9040

E-mail: [sales@cleavelandprice.com](mailto:sales@cleavelandprice.com)



# Designed for Simplicity



## DB-C / DB-CV APPLICATION

The Cleaveland/Price DB-C and DB-CV are three pole, group operated, copper double break switches for substation installations. The DB-C has parallel insulators while the DB-CV's stationary insulators are in a "V" configuration. The switches are suitable for use in a variety of applications including line disconnecting, circuit breaker bypass and isolation, and transformer isolation. The switch may be manually operated by use of a wormgear mechanism or electrically operated with a type TP-C2 motor operator. The DB-C and DB-CV can be mounted in the horizontal upright, vertical, or horizontal underhung position.

Accessories and options needed to adapt the switch to a customer's particular requirements are available. Arc horns or quick break whips can be supplied when small amounts of magnetizing or line charging current must be interrupted.

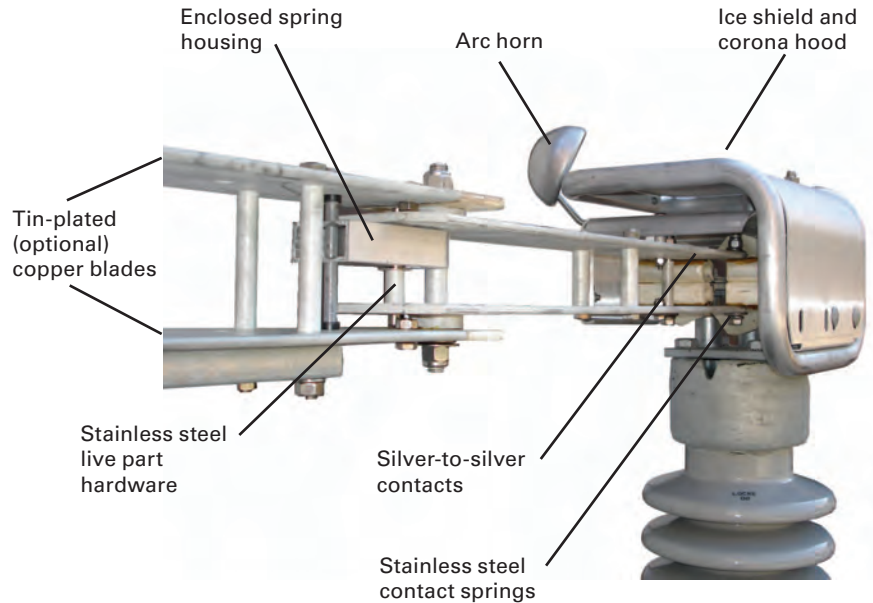
The switches meet applicable NEMA and IEEE Standards and the rating requirements of applicable IEC Standards.

The DB-C and DB-CV follow the Cleaveland/Price tradition of designing simple, dependable switches without the use of castings. Knowledge gained from maintaining switches in the field for over 60 years has played a major part in designing the DB-C.

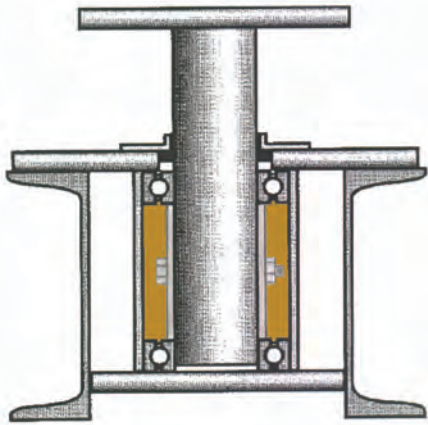
# Engineered for Performance

## Contact and blade details

- Live parts constructed from hard-drawn, high conductivity copper producing stronger, more conductive components than parts made of cast material
- High-pressure line contacts at the break-jaws
- Proven high-pressure ring contacts backed by stainless steel contact springs at the folding blade joint
- Blade guide on the break-jaw as well as the leading edge of the blade for reliable contact entry, eliminating the need for fine blade entry adjustment
- Folding blade spring assembly with fully enclosed stainless steel springs
- Stainless steel live parts hardware
- Stainless steel, type 316 corrosion-resistant contact springs



## Rotating insulator bearing details



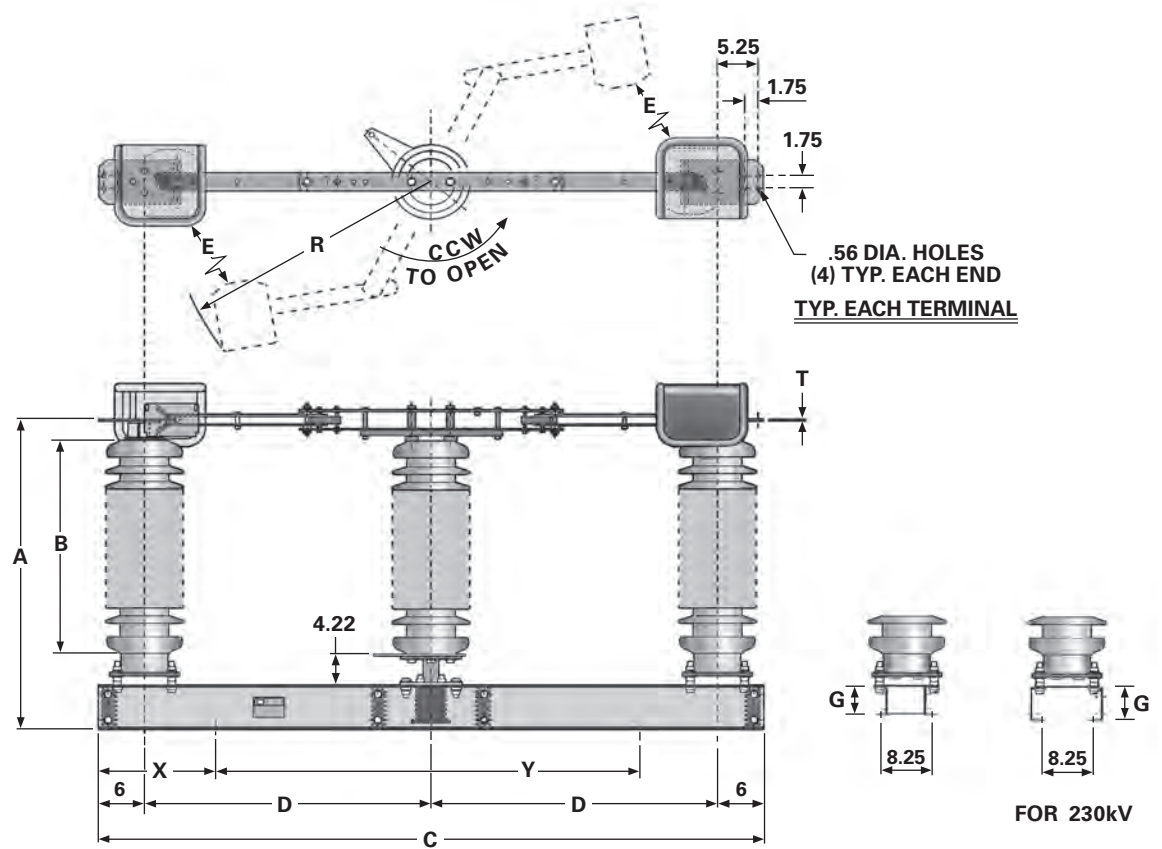
- High strength, non-cast, hot-dip galvanized steel shaft
- Non-ferrous seal retainer
- Special ozone and UV resistant seals outlast conventional seal and contain no metal parts that typically corrode
- Maintenance-free, permanently lubricated construction
- Individually sealed ball bearing assemblies in sealed grease-packed housing
- Permanently adjusted bearing

## DB-C and DB-CV Design Advantages

- Total non-cast copper and steel construction resulting in superior dependability of parts
- Simple
  - No blade rotation mechanism head on the rotating insulator
  - Switch does not depend upon precise blade turnover in a break-jaw to attain full contact pressure
- Quick and easy installation with adjustment-free “fold and lock” contact system
- Parallel blade design
  - Better performance at all contact points under short circuit due to magnetic attraction of the truss blades
  - Airflow through the blade cools the blade efficiently
- Wiping contacts at all moving contact points
- Blade leveling adjustment as well as leveling screws at the stationary insulators
- Folding blade design has superior ice breaking ability
- Direct entry of the blade into the break-jaw
  - Eliminates the effect of contact drag when closing, assuring complete closing of the switch for maximum contact pressure

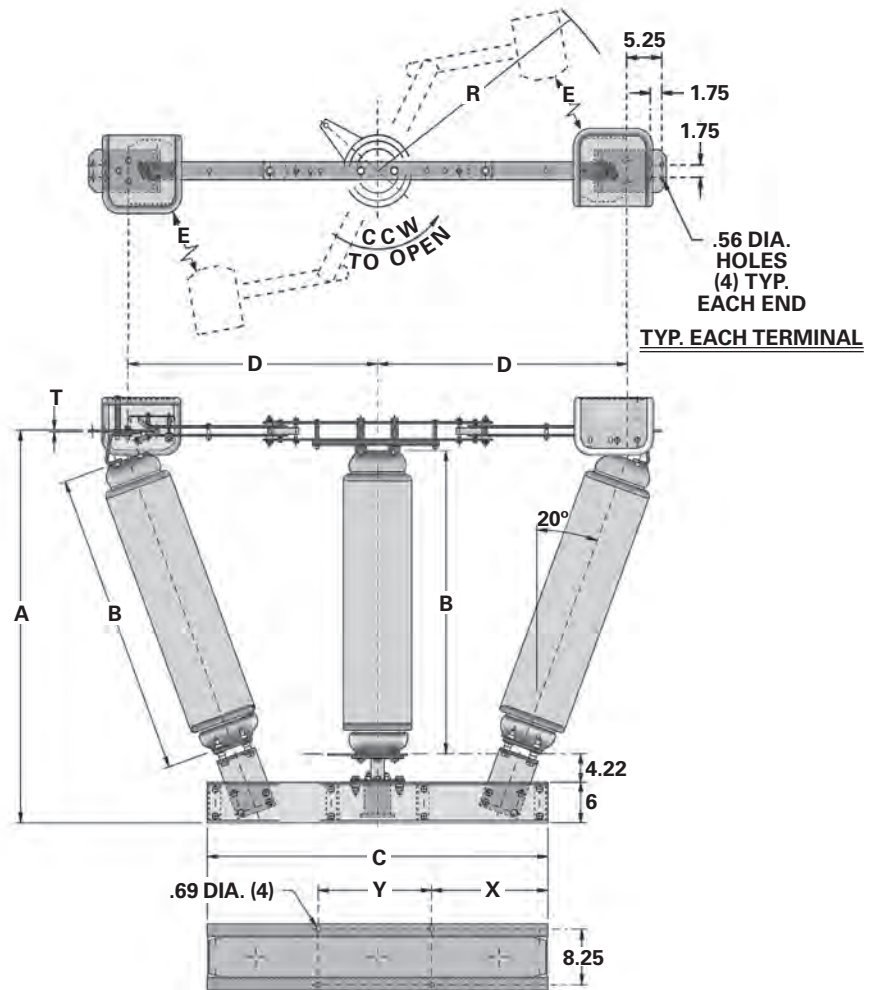


# DB-C Technical Data



Ratings					Insul. TR No.	Switch Style Number	Dimensions								Wt./Pole	
kV Nom.	kV Max.	kV BIL	Amp	Mom kA			A	B	C	D	E	G	R	T	Lbs.	
115	123	550	1200	61	286	C04B003G01	58.22	45	86	37	19.25	6	36.35	.25	792	
			1600	70		C04B003G02								.50	797	
			2000	100		C04B003G03								1.0	838	
			3000	120		C04B013G01								33.12	884	
138	145	650	1200	61	288	C04B003G04	67.22	54	86	37	24.5	6	36.35	.25	909	
			1600	70		C04B003G05								.50	914	
			2000	100		C04B003G06								1.0	955	
			3000	120		C04B013G02								33.12	1001	
161	170	750	1200	61	291	C04B003G07	75.22	62	94	41	29	6	40.21	.25	1065	
			1600	70		C04B003G08								.50	1075	
			2000	100		C04B003G09								1.0	1116	
			3000	120		C04B013G03								36.62	1165	
230	245	900	1200	61	304	C04B004G01	95.22	80	106	47	35	8	46	.25	1404	
			1600	70		C04B004G02								.50	1416	
			2000	100		C04B004G03								1.0	1463	
			3000	120		C04B018G01								42.30	1495	
230	245	1050	1200	61	312	C04B004G04	107.22	92	114	51	39	8	50	.25	1605	
			1600	70		C04B004G05								.50	1619	
			2000	100		C04B004G06								1.0	1669	
			3000	120		C04B018G02								46.13	1703	

The DB-CV uses the same current carrying parts as the DB-C, however, the jaw end insulators are inclined. By having the jaw end insulators inclined, the cable conductors establish electrical clearance from the base without the need for wire guides or outriggers. The inclined insulator design makes the switch suitable for low profile substations.



Ratings					Insul. TR No.	Switch Style Number	Dimensions								Wt./Pole
kV Nom.	kV Max.	kV BIL	Amp	Mom kA			A	B	C	D	E	R	T	Lbs.	
115	123	550	1200	61	286	C04B007G01	58.22	45	50.5	37	19.25	36.35	.25	759	
			C04B007G02	.50		805									
			2000	100		C04B019G01	59.25						33.12	1.0	916
			3000	120											
138	145	650	1200	61	288	C04B007G04	67.22	54	52	41	24.5	40.21	.25	879	
			C04B007G05	.50		925									
			2000	100		C04B019G02	68.25						36.62	1.0	1037
			3000	120											
161	170	750	1200	61	291	C04B007G07	75.22	62	46	41	29	40.21	.25	1011	
			C04B007G08	.50		1019									
			2000	100		C04B019G03	76.25								
			3000	120											



# Operators / Accessories



*Geared handcrank operator with unbreakable, non-cast stops.*



*Motor operator type TP-C2 with torque relief decoupler (shown uncoupled).*

## Standard Operator Features

- Wormgear operator
- Padlock provision in both the open and closed positions
- Tin-plated ground strap for vertical operating pipe
- Adjustable stops
- Clamp-on open/closed indicators
- Self-lubricating, maintenance-free outboard bearing
- 2" IPS galvanized steel vertical operating pipe
- Adjustable radius outboard bearing lever
- Threaded interphase and drive lever adjustment

## Ordering Information

### Furnish:

- Switch type
- Voltage
- Amperage
- Momentary rating
- BIL level
- Mounting position
- Operator type
- Accessories required

## Available Accessories

- Arc horns
- Quick break whips
- Auxiliary switch assembly
- Braidless ground
- Electrical interlock
- Extended operator
- Ground blades (consult the factory for ground blades on the DB-CV)
- Insulated interphase pipe
- Insulated vertical pipe
- Key interlock
- Mounting hardware
- Operator grounding platform
- Outriggers
- Spill gaps
- Terminal connectors

*This brochure describes our standard product and does not show variations in design that may be available. Contact the factory for additional details.*

*Cleveland/Price reserves the right to make changes or improvements to the product shown in this brochure without notice or obligation.*



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