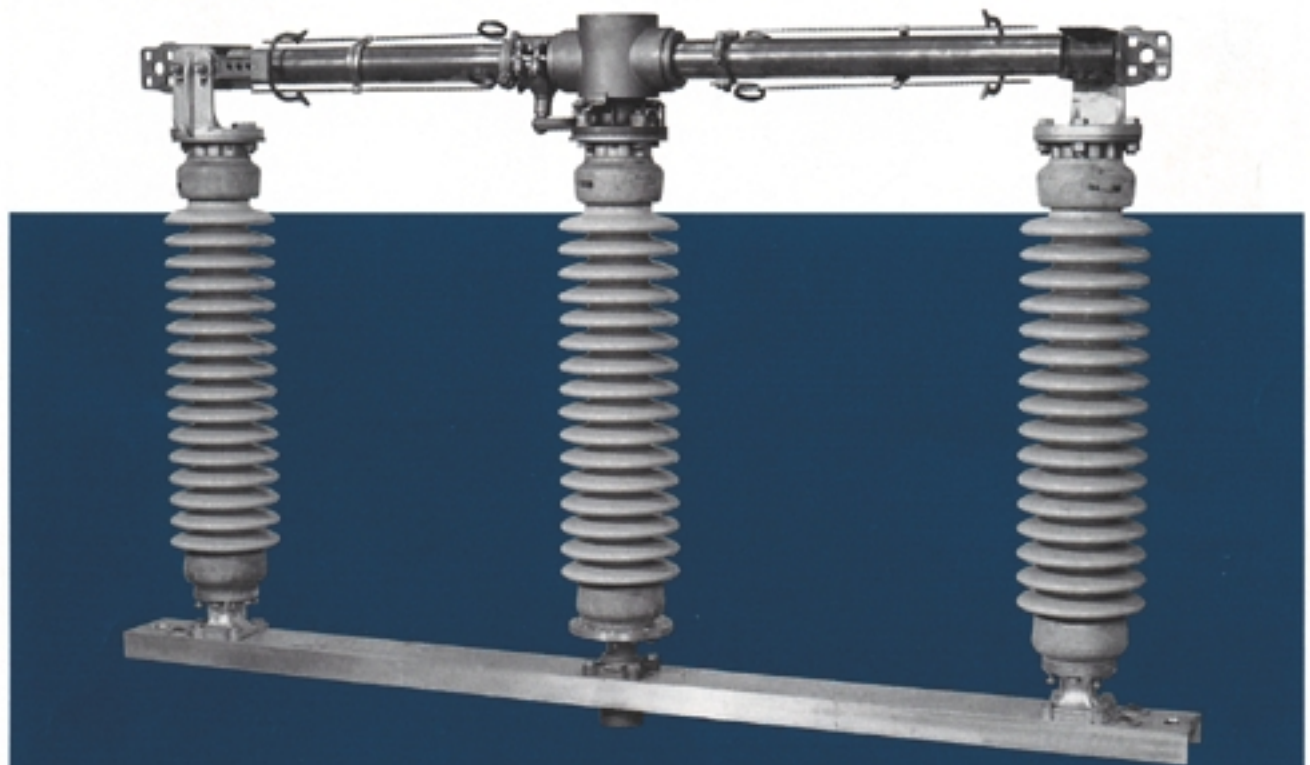


# Type "1G" and "1G2" Copper and Aluminum, Heavy-Duty, Double End Break Switches

38 kV-230 kV

600/1200/2000 Ampere



Require Greater Switching *Ability* but Lower Costs?

Specify "1G and 1G2" by Turner.

☐ Reliability   ☐ Economic Sensibility   ☐ Capability

**te** **Turner Electric Corporation**  
Providing Customer Service Since 1953

9510 St. Clair Avenue, Fairview Heights, IL 62208 • 618-397-1865

# Operating and Design Features

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### "1G" = Switch Ability

**Turner Type "1G" and "1G2" switches are heavy-duty, Double End Break Copper and Aluminum designs, respectively. They are most frequently applied when space is at a premium.**

The Copper "1G" model provides full 30° C temperature rise capability.

The Aluminum "1G2" model delivers economic sensibility as well as proven dependability.

Both provide what we call Switch-Ability!

The 1G / 1G2 switch is normally used at the same phase spacing as a vertical break switch, as blade potential floats at about 40 percent of normal line-to-ground voltage when the blades are open. Structure width is minimized, as a result. Overhead clearance is also minimized, due to the side-blade-opening characteristics.

Turner has accumulated more than 40 years of proven field experience in air break switches. That means you get an easily installed, easily operated heavy-duty switch that provides maximum mechanical and electrical performance under all operating conditions.

Heavy-duty construction, proven reliability and ease of operation makes the family of "1G" switches perfect for demanding substation and line operations such as breaker isolating and bypassing; transmission line and bus sectionalizing; and isolating arrestors, metering equipment and other apparatus.

Internal construction is simple, and virtually maintenance-free. The greaseless ball bearing assembly on the rotating center stack provides smooth, easy operation, in either the horizontal or vertical mounting positions. Blades are designed to lock into the closed position.

Group operation for substation and transmission application is accomplished with an inter-phase pipe, group operated control pipe, outboard bearing, vertical operating pipe and swing handle operator.

**Quality may cost more to buy, but it always costs less to own.**

### "1G"/"1G2" Operating Features

The high pressure contact shoes are of cast, heat-treated, high-conductivity Beryllium - copper. Although contact pressure is factory adjusted, should field adjustment ever be necessary, it can easily be made. In addition, contact changeout is fast and easy.

The 1G tubular blade is designed of hard-drawn copper. The 1G2 blade is aluminum tube. Each provides the proper combination of current-carrying capacity and rigidity. The blade tip is Beryllium-copper, heat treated and strato-

milled to provide a machined current transfer surface. The coin silver overlays provides high pressure, silver-to-copper contact with the Beryllium-copper jaw surfaces when the tip is in the jaw.

The blade tip engages the jaw contacts in an upright condition to form a high-pressure contact. The blade and jaw contacts are wiped clean during the closing action to assure a low resistance current transfer. A patented blade locking device keeps the blade closed despite temporary faults, surge currents, twisting structures or galloping conductors. Double spring

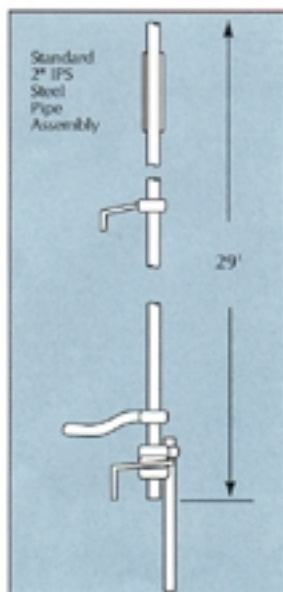
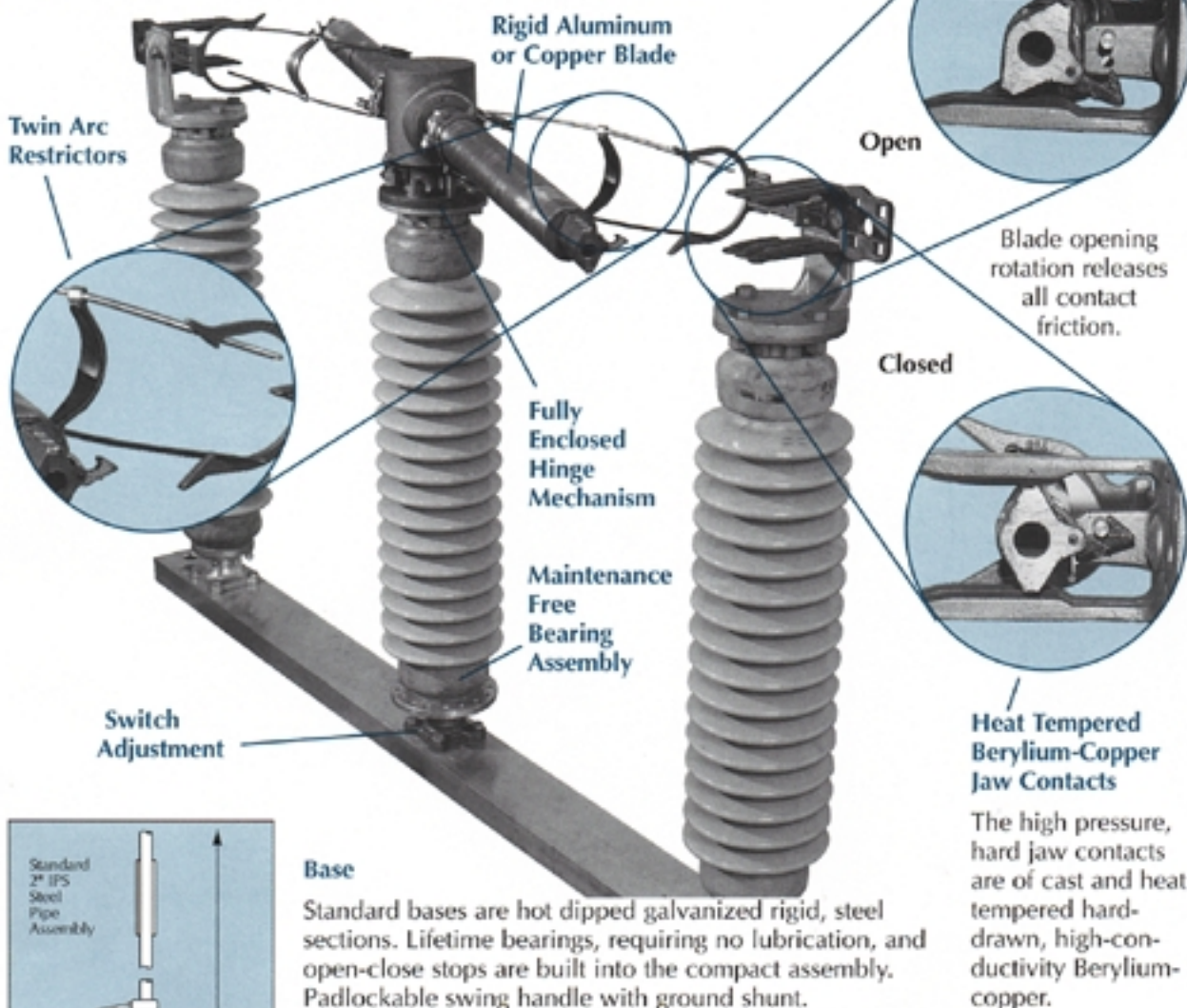
type quick whips provide time-proven interruption of limited amounts of charging and load currents.

The opening action of the Turner Side Break Switch is unique. Prior to the blade disengaging from the jaw contact, the blade contact rotates 22 degrees in the jaw. This exclusive Turner Twist action releases all contact friction and breaks any ice or contamination in the jaw area which may impede an easy opening procedure. The Turner switch provides effortless switch opening regardless of environmental or time effects.



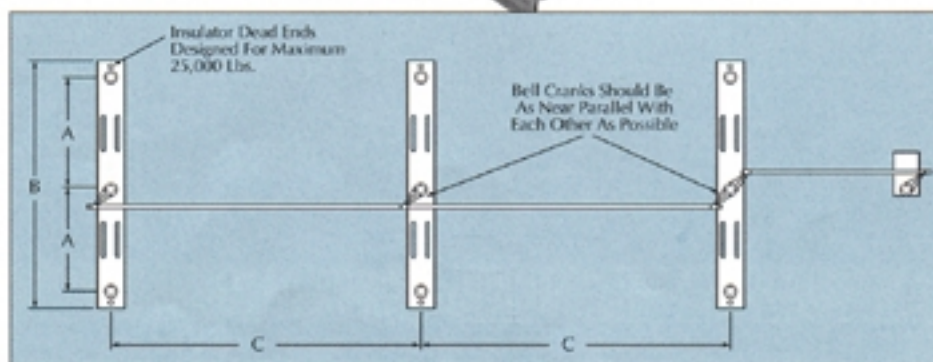
## Insulators

NEMA standard strength grey porcelain insulators of the same voltage rating as the switch will be furnished unless otherwise specified.

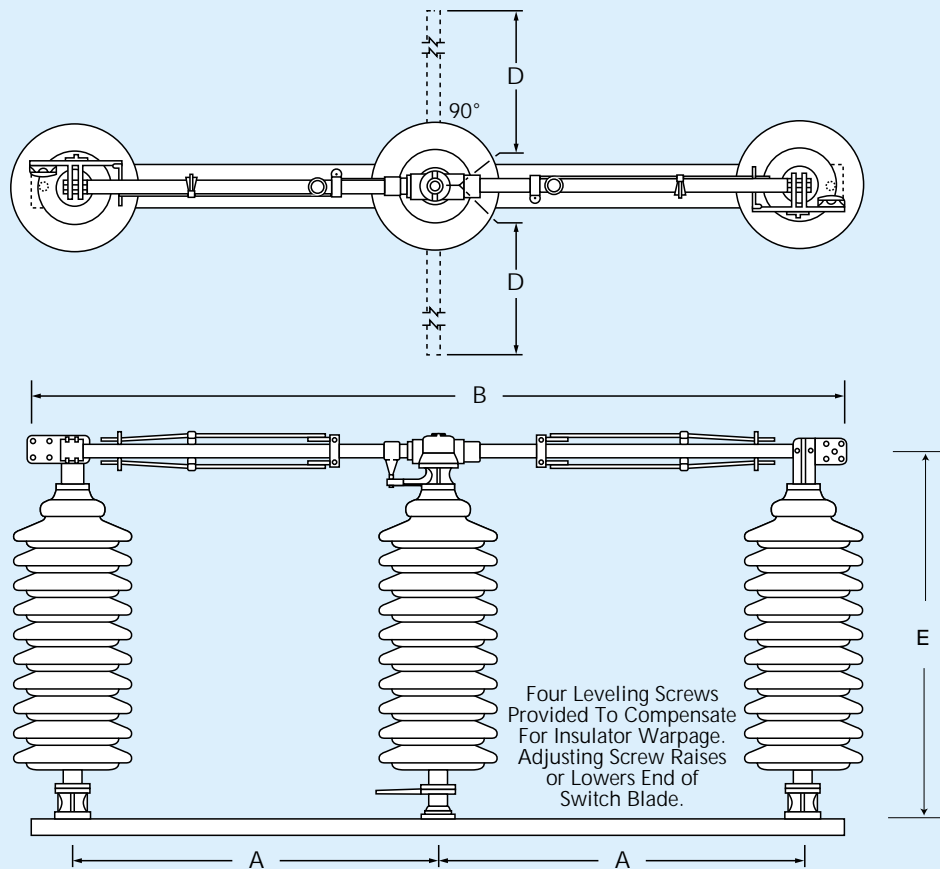


## Base

Standard bases are hot dipped galvanized rigid, steel sections. Lifetime bearings, requiring no lubrication, and open-close stops are built into the compact assembly. Padlockable swing handle with ground shunt.



# Dimensions and Ordering



Switch Rating Voltage kV	Amperes		Station Post Tech No.	Catalog Number		Dimensions					Approximate Weight in Lbs	
											per pole	Net Ship Wt 3-Ø
	Cont	Mom		Copper	Aluminum	A	B	C*	D	E		
46	600	40,000	214	1G04606	1G204606	2'-3"	62-7/8"	7'-0"	28-1/2"	29-3/8"	321	1473
46	1200	61,000	214	1G04612	1G204612	2'-3"	62-7/8"	7'-0"	28-1/2"	29-3/8"	346	1488
46	2000	100,000	214	1G04620	1G204620	2'-3"	69-1/2"	7'-0"	29-1/2"	31-3/8"	476	1878
69	600	40,000	216	1G06906	1G206906	2'-6"	68-7/8"	8'-0"	31-1/2"	37-3/8"	426	2187
69	1200	61,000	216	1G06912	1G206912	2'-6"	68-7/8"	8'-0"	31-1/2"	37-3/8"	451	2217
69	2000	100,000	216	1G06920	1G206920	2'-6"	75-1/2"	8'-0"	32-1/2"	39-5/8"	581	2604
115	600	40,000	286	1G11506	1G211506	3'-6"	92-7/8"	9'-0"	43-1/2"	55-1/4"	699	5160
115	1200	61,000	286	1G11512	1G211512	3'-6"	92-7/8"	9'-0"	43-1/2"	55-1/4"	724	5205
115	2000	100,000	286	1G11520	1G211520	3'-6"	99-1/2"	9'-0"	44-1/2"	55-1/4"	854	5445
138	600	40,000	288	1G13806	1G213806	4'-0"	104-7/8"	10'-0"	49-1/2"	64-1/4"	80	5772
138	1200	61,000	288	1G13812	1G213812	4'-0"	104-7/8"	10'-0"	49-1/2"	64-1/4"	805	5837
138	2000	100,000	288	1G13820	1G213820	4'-0"	111-1/2"	10'-0"	50-1/2"	64-1/4"	935	6077
161	600	40,000	291	1G16606	1G216106	4'-6"	116-7/8"	11'-0"	55-1/2"	72-1/4"	870	6390
161	1200	61,000	291	1G16112	1G216112	4'-6"	116-7/8"	11'-0"	55-1/2"	72-1/4"	895	6455
161	2000	100,000	291	1G16120	1G216120	4'-6"	123-1/2"	11'-0"	56-1/2"	72-1/4"	1025	6695
230	600	40,000	304	1G23006	1G223006	5'-8"	144-7/8"	12'-6"	69-1/2"	90-1/4"	1086	7462
230	1200	61,000	304	1G23012	1G223012	5'-8"	144-7/8"	12'-6"	69-1/2"	90-1/4"	1111	7537
230	2000	100,000	304	1G23020	1G223020	5'-8"	151-1/2"	12'-6"	70-1/2"	90-1/4"	1241	7787

\*See page 3.