

BHATINDA CERAMICS PRIVATE LIMITED

(Mfrs. High Tension Porcelain Insulators)
AN ISO 9001 COMPANY



Regd. (O) & Works:-

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BHATINDA CERAMICS PRIVATE LIMITED

B.C.P.L.- HIGH TENSION PORCELAIN INSULATORS :

Electricity play a vital role in the development and growth of Agriculture and Industry, As such, it is a high priority item for all the developing or developed nations. India's five year plans have therefore given much emphases on generation of Electricity along with the provisions for Agriculture and Industry for the generation and distribution of Electricity, High Tension Porcelain Insulators are an important adjust. Voltage above 1000 Volts is generally considered as high tension for long distance Electric power transmission; high voltage is essential because it reduces the cross/section and, therefore, the weight of the conductor required.

In India, most of the leading high voltage manufacturers are located in the Southern and Eastern regions. This is because the raw materials which are mainly special type of clays which are available in those regions only, So keeping in view the requirement of quality product, **Bhatinda Ceramics Pvt. Ltd.** Who were engaged in Manufacturing of S.W.Pipes, took steps to establish a High Tension Porcelain Insulators plant in the same premises under the same Name the plant is based on the practical experience of the Management but with the latest machinery/Technology available in the market and has taken up commercial production since March 1998. The plant is located at **Dabwali Road, Near Village Jodhpur Romana** and is accessible both by Road and Rail and is at a distance of about 350 K.M. from Delhi (Capital of India).

The Insulators Manufactured includes Pin. Post. Lightning Arrestor, Bushing and Disc Insulators. The plant is also geared to Manufacture Insulators as per the requirement of the customer.

The process consists of purifying and treating of requisite Raw material to attain the desired degree of purity & fineness. Quarts, Feldspar, Ball Clay and China Clay are the main raw materials utilized for the manufacture of insulators.

The plant has manual weigh batch system where the above materials from the storage Bins- after crushing & Grinding and pulverizing to the required fineness are weighed as the required composition and thereafter directly blunged in Ball Mills. The slip is then passed through Electro-Magnets before discharging in to the Agitating Tanks for further feeding to the filter press. In the filter presses, the Clay Cakes are formed and passed through the DE-Airing Pug Mill to form blanks; These Blanks are then shaped as Insulators on the manual machines a copying machines. Later the insulators are dried in the Drying-chambers and then Glazed by the manual process. After Glazing, the insulators are loaded on the kiln-cars after careful scrutiny. Finally the material is then sorted out by the quality control experts and sent for electrical testing. Insulators, which pass through the electrical tests, are sent for assembly with metal parts. After curing insulators are again tested for electro-Mechanical properties and are packed and sent to the warehouse.

PLANT & MACHINERY:

- I. **RAW MATERIAL SECTION** :Grinding and mixing equipment provided with conveyors, classified vibrating screens, Batch weighing system, storage bins settling tanks.
- II. **FILTER PRESSES** : Pneumatically controlled filter presses, equipped with wad mill and imported pug mills.
- III. **MAKING AND DRYING** ; Vertical lathes for making solid core, Disc Insulators , Pin and Posts Insulators Transformer Bushing & other special items, Pug Mills and Drying chambers with hot air circulation arrangements.
- IV. **KILN** ; Fully automatic 145 feet long tunnel kiln.
- V. **TESTING** ; Equipment for conducting all acceptance and routine testing on the insulators as per ISS, BSS and RDSO specification .
- VI. **CEMENT & CURING** ; Fixing tables and steel curing chambers etc.
- VII. **OTHER FACILITIES** ; AIR COMPRESSORS, AIR STORAGE TANKS, TWO NOS. GENERATOR, LATHES, TUBEWELL ETC.

RESEARCH AND DEVELOPMENT :-

Besides the main plant, a full fledged pilot plant and Laboratory have also been provided by the Bhatinda Ceramics private Limited, For research and development. These are fully Equipped with the latest testing equipments. For Raw material, in process material and for finished product as per ISS & BSS specification. The plant is also equipped for Railway tracking, Solid Core and Long Road Insulator.

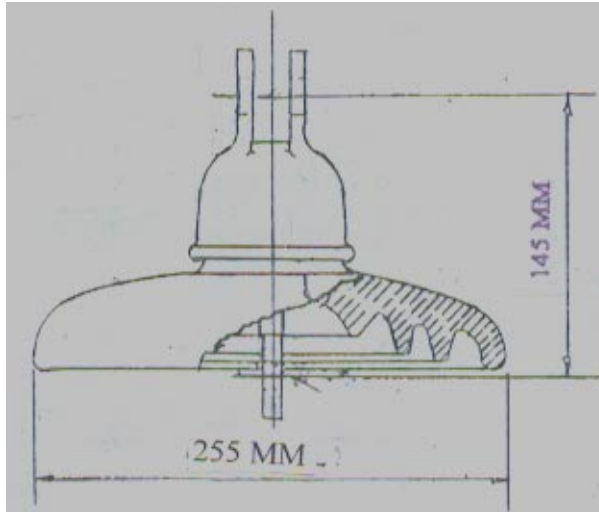
The catalogue attached herewith describes the Drawings of some of the items being produced in the plant. As stated above, The Plant has facilities for manufacturing various types of insulators as per the requirements of the customers.

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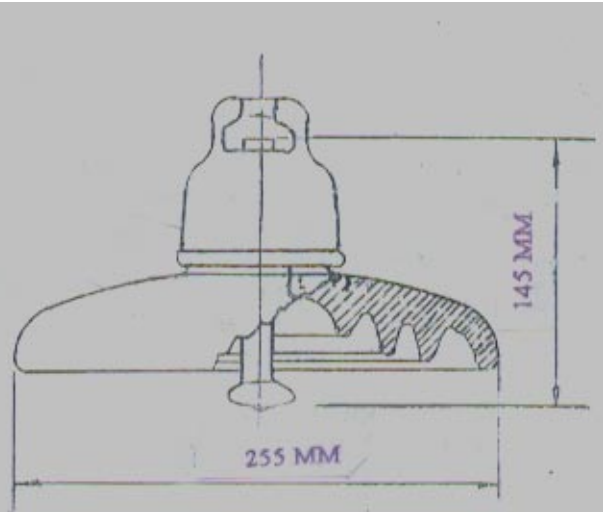
(IS : 731-1971)

T/C TYPE DISC INSULATOR

B/S TYPE DISC INSULATOR

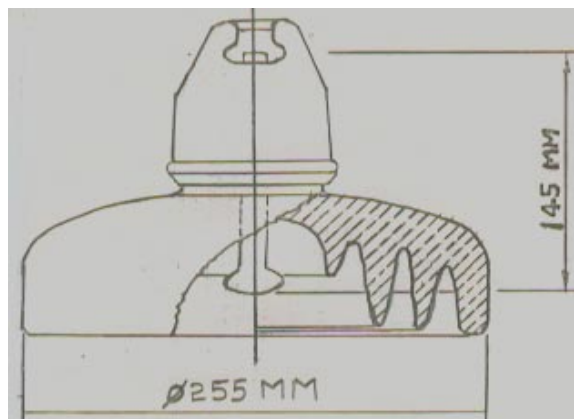


Drg. No. BCPL-0030



Drg. No. BCPL-0031

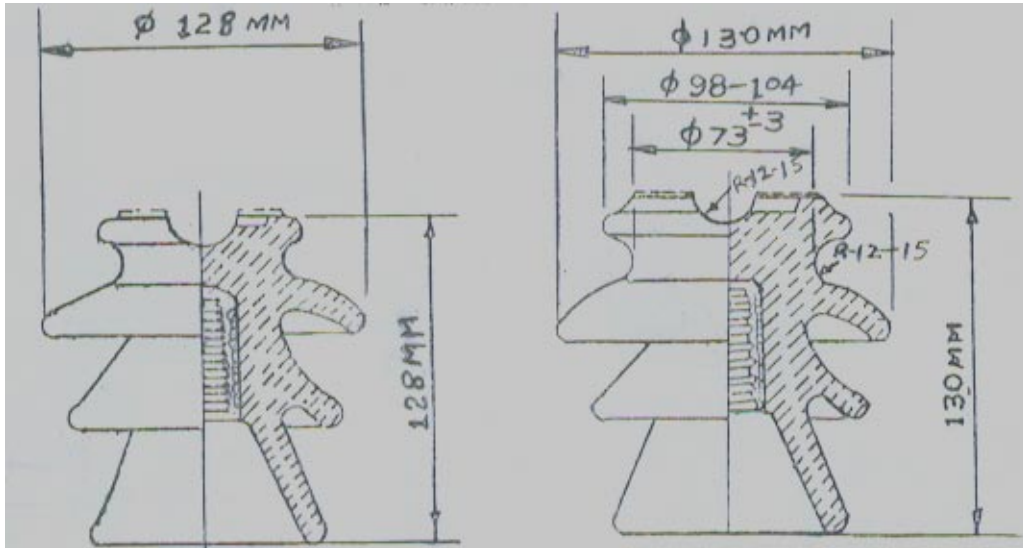
PRODUCT NUMBER		BCPL-0030	BCPL-0031	BCPL-0032
NOMINAL SYSTEM VOLTAGE		11KV	11KV	11KV
HIGHEST SYSTEM VOLTAGE		12 KV	12 KV	12 KV
MINIMUM CREEPAGE DISTANCE		280 MM	280 MM	280 MM
VISIBLE DISCHARGE VOLTAGE		9 KV	9 KV	9 KV
ONE MINUTE POWER-FREQUENCY WITHSTAND VOLTGE	DRY	75 KV	75 KV	75LV
	WET	40 KV	40 KV	40 KV
FLASHOVER WITHSTAND VOLTAGE	DRY	80 KV	80 KV	80 KV
	WET	45 KV	45 KV	45 KV
IMPULSE WITHSTAND VOLTAGE	POSITIVE	115 KV	115 KV	115 KV
	NEGATIVE	120 KV	120 KV	120 KV
POWER- FREQUENCY PUNCTURE WITHSTAND VOLTAGE		110 KV	110 KV	110 KV
MINIMUM FAILING LOAD		45 KN	45 KN	70 KN
COLOUR OF GLAZE		BROWN		



Drg. No. BCPL-0032

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11 KV PIN INSULATOR (IS : 731)

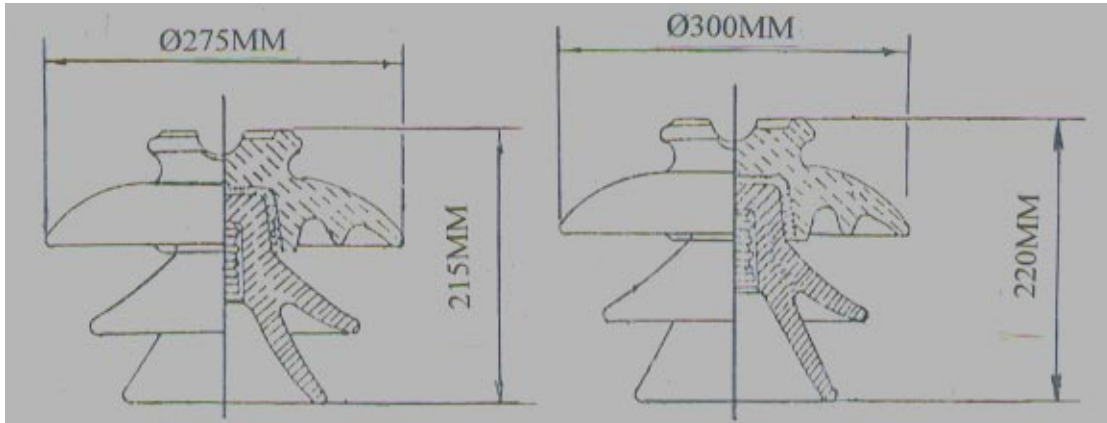


(BELL MOUTH FORMATION)

PRODUCT NUMBER		350005	350005-B
NOMINAL SYSTEM VOLTAGE		11KV	11KV
HIGHEST SYSTEM VOLTAGE		12 KV	12 KV
MINIMUM CREEPAGE DISTANCE		240 MM	230 MM
VISIBLE DISCHARGE VOLTAGE		9 KV	9 KV
ONE MINUTE POWER-FREQUENCY WITHSTAND VOLTGE	DRY	75 KV	75 KV
	WET	40 KV	40 KV
FLASHOVER WITHSTAND VOLTAGE	DRY	80 KV	80 KV
	WET	45 KV	45 KV
IMPULSE WITHSTAND VOLTAGE	POSITIVE	115 KV	115 KV
	NEGATIVE	120 KV	120 KV
POWER- FREQUENCY PUNCTURE WITHSTAND VOLTAGE		105 KV	105 KV
MINIMUM FAILING LOAD		5 KN	5 KN
COLOUR OF GLAZE		BROWN	BROWN
THIMBLE TYPE		SMALL	SMALL

BHATINDA CERAMICS PRIVATE LIMITED

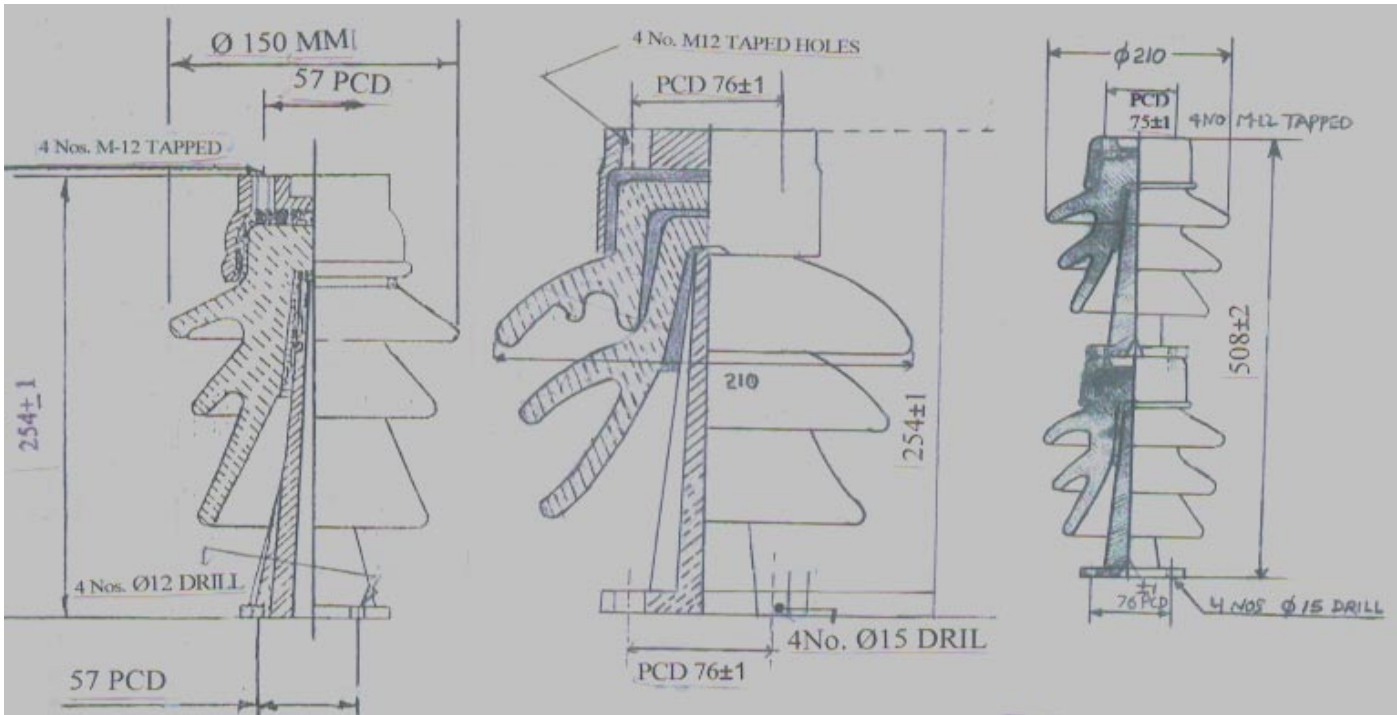
33 KV PIN INSULATOR (IS: 731)



PRODUCT NUMBER		350006	350012
NOMINAL SYSTEM VOLTAGE		33 KV	33 KV
HIGHEST SYSTEM VOLTAGE		36 KV	36 KV
MINIMUM CREEPAGE DISTANCE		580 MM	620 MM
VISIBLE DISCHARGE VOLTAGE		27 KV	27 KV
ONE MINUTE POWER-FREQUENCY WITHSTAND VOLTGE	DRY	100 KV	100 KV
	WET	75 KV	75 KV
FLASHOVER WITHSTAND VOLTAGE	DRY	125 KV	125 KV
	WET	85 KV	85 KV
IMPULSE WITHSTAND VOLTAGE	POSITIVE	190 KV	190 KV
	NEGATIVE	235 KV	235 KV
POWER- FREQUENCY PUNCTURE WITHSTAND VOLTAGE		180 KV	185 KV
MINIMUM FAILING LOAD		10 KN	10 KN
COLOUR OF GLAZE		BROWN	BROWN

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POST INSULATOR (IS : 5350)

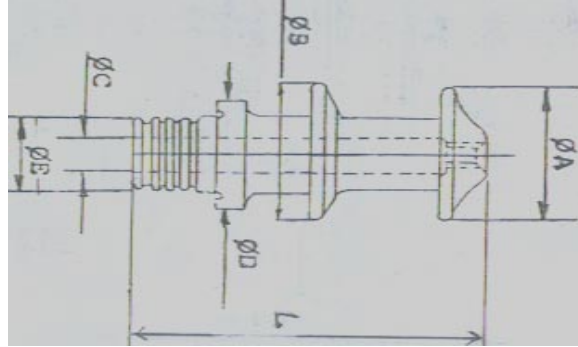


PRODUCT NUMBER		450005A	450015	4500016
NOMINAL SYSTEM VOLTAGE		11KV	22KV	33 KV
HIGHEST SYSTEM VOLTAGE		12 KV	24 KV	36 KV
MINIMUM CREEPAGE DISTANCE		320 MM	440 MM	880 MM
VISIBLE DISCHARGE VOLTAGE		9 KV	18 KV	27 KV
ONE MINUTE POWER-FREQUENCY WITHSTAND VOLTGE	DRY	75 KV	85 KV	150 KV
	WET	45 KV	55 KV	85 KV
FLASHOVER WITHSTAND VOLTAGE	DRY	80 KV	90 KV	170 KV
	WET	50 KV	60 KV	110 KV
IMPULSE WITHSTAND VOLTAGE	POSITIVE	120 KV	120 KV	190 KV
	NEGATIVE	125 KV	130 KV	190 KV
POWER- FREQUENCY PUNCTURE WITHSTAND VOLTAGE		120 KV	125 KV	190 KV
MINIMUM FAILING LOAD (BENDING UPRIGHT)		5 KN*	9 KN	4.5 KN
COLOUR OF GLAZE		BROWN	BROWN	BROWN

* ALSO AVAILABLE WITH MECHANICAL FAILING LOAD (BENDING UPRIGHT) OF 9 KN.

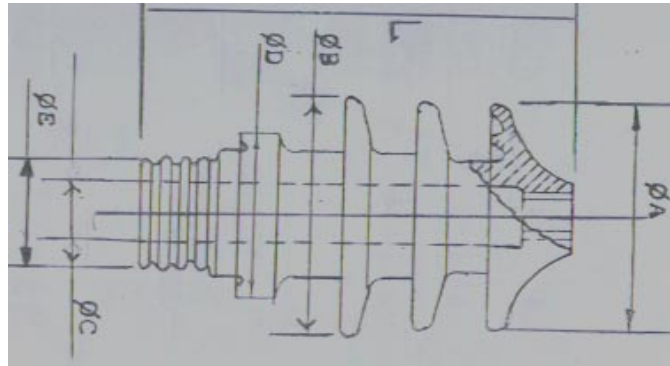
BHATINDA CERAMICS PRIVATE LIMITED

12/17.5 KV TRANSFORMER BUSHING (IS : 3347 & 2099)



NAME OF PRODUCT	12KV/250 A 250006	12KV/630A 250007	12KV/1000A 250008	12KV/2000A 250009
DIMENSION- A	135 MM	145 MM	165 MM	190 MM
DIMENSION- B	140 MM	150 MM	170 MM	190 MM
DIMENSION- C ± 3, 0	33 MM	39 MM	58 MM	74 MM
DIMENSION- D ± 0, 7	111 MM	128 MM	163 MM	183 MM
DIMENSION- E	70 MM	85 MM	100 MM	125 MM
LENGTH - L	295MM	295MM	325MM	325MM
VISIBLE DISCHARGE VOLTAGE	9 KV	9 KV	9 KV	9 KV
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	48 KV	48 KV	48 KV
	WET	45 KV	45 KV	45 KV
LIGHTNING IMPULSE WITHSTAND VOLTAGE	75 KV	75 KV	75 KV	75 KV
COLOUR OF GLAZE	BROWN	BROWN	BROWN	BROWN

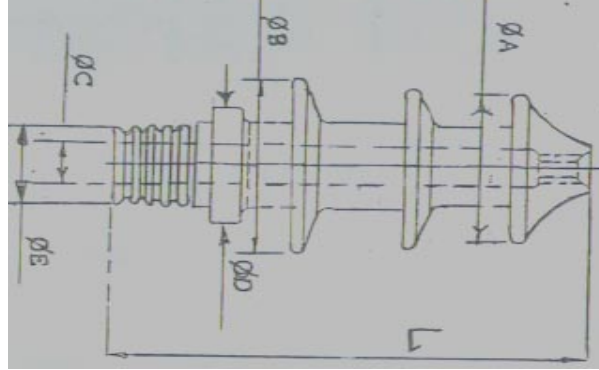
12/17.5 KV TRANSFORMER BUSHING (IS : 8603)



NAME OF PRODUCT	12KV/250 A 250056	12KV/630A 250057	12KV/1000A 250058	12KV/2000A 250059
DIMENSION- A	165 MM	175 MM	195 MM	210 MM
DIMENSION- B	170 MM	178 MM	200 MM	220 MM
DIMENSION- C ±3,0	33 MM	39 MM	58 MM	74 MM
DIMENSION- D ±0,7	111 MM	128 MM	163 MM	183 MM
DIMENSION- E	70 MM	85 MM	100 MM	125 MM
LENGTH - L	295MM	295MM	325MM	325MM
VISIBLE DISCHARGE VOLTAGE	9 KV	9 KV	9 KV	9 KV
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	58 KV	58 KV	58 KV
	WET	55 KV	55 KV	55 KV
LIGHTNING IMPULSE WITHSTAND VOLTAGE	110KV	110KV	110KV	110KV
MINIMUM CREEPAGE DISTANCE	450MM	450MM	455MM	455MM

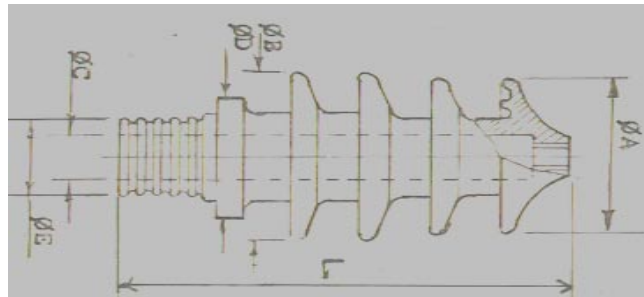
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24 KV TRANSFORMER BUSHING (IS: 3347 & 2099)



NAME OF PRODUCT		24KV/250A 260001	24KV/630A 260002	24KV/1000A 260003	24KV/2000A 260004
DIMENSION- A		145 MM	155 MM	175 MM	190 MM
DIMENSION- B		155 MM	165 MM	185 MM	210 MM
DIMENSION- C ± 3, 0		33 MM	39 MM	58 MM	74 MM
DIMENSION- D ± 0, 7		111 MM	128 MM	163 MM	183 MM
DIMENSION- E		70 MM	85 MM	100 MM	125 MM
LENGTH - L		385MM	385MM	410MM	410MM
VISIBLE DISCHARGE VOLTAGE		18 KV	18 KV	18 KV	18 KV
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	58 KV	58 KV	58 KV	58 KV
	WET	55 KV	55 KV	55 KV	55 KV
LIGHTNING IMPULSE WITHSTAND VOLTAGE		125 KV	125 KV	125 KV	125 KV
COLOUR OF GLAZE		BROWN	BROWN	BROWN	BROWN

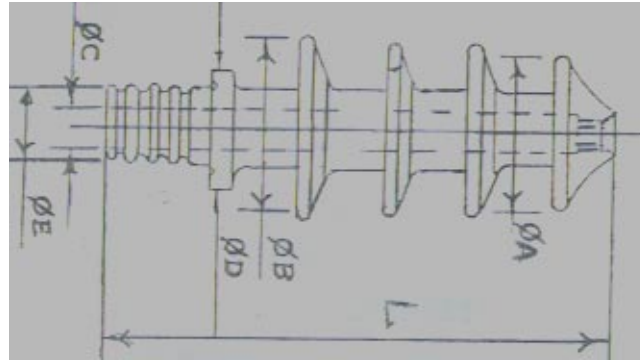
24 KV TRANSFORMER BUSHING (IS: 8603)



NAME OF PRODUCT		24KV/250 A 250060	24KV/630A 250061	24KV/1000A 250062	24KV/2000A 250063
DIMENSION- A		165 MM	175 MM	195 MM	220 MM
DIMENSION- B		170 MM	180 MM	200 MM	230 MM
DIMENSION- C ± 3, 0		33 MM	39 MM	58 MM	74 MM
DIMENSION- D ± 0, 7		111 MM	128 MM	163 MM	183 MM
DIMENSION- E		70 MM	85 MM	100 MM	125 MM
LENGTH - L		385MM	385MM	410MM	410MM
VISIBLE DISCHARGE VOLTAGE		18 KV	18 KV	18 KV	18 KV
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	78 KV	78 KV	78 KV	78 KV
	WET	75 KV	75 KV	75 KV	75 KV
LIGHTNING IMPULSE WITHSTAND VOLTAGE		150 KV	150 KV	150 KV	150 KV
MINIMUM CREEPAGE DISTANCE		900 MM	900 MM	905 MM	905 MM
COLOUR OF GLAZE		BROWN	BROWN	BROWN	BROWN

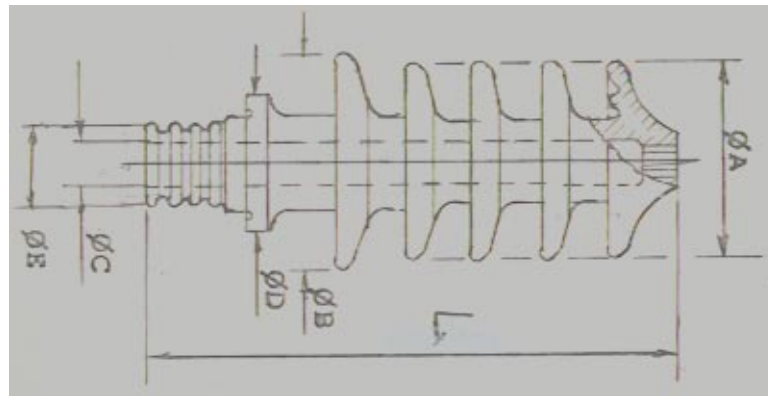
BHATINDA CERAMICS PRIVATE LIMITED

36 KV TRANSFORMER BUSHING (IS: 3347 & 2099)



NAME OF PRODUCT	36KV/250 A 251001	36KV/630A 251002	36KV/1000A 251003	36KV/2000A 251004
DIMENSION- A	145 MM	165 MM	185 MM	215 MM
DIMENSION- B	155 MM	180 MM	195 MM	225 MM
DIMENSION- C $\pm 3,0$	33 MM	39 MM	58 MM	74 MM
DIMENSION- D $\pm 0,7$	111 MM	128 MM	163 MM	183 MM
DIMENSION- E	70 MM	85 MM	100 MM	125 MM
LENGTH - L	485MM	510MM	540MM	540MM
VISIBLE DISCHARGE VOLTAGE	27 KV	27 KV	27 KV	27 KV
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	75 KV	78 KV	80 KV
	WET	75 KV	75 KV	75 KV
LIGHTNING IMPULSE WITHSTAND VOLTAGE	170 KV	170 KV	170 KV	170 KV
COLOUR OF GLAZE	BROWN	BROWN	BROWN	BROWN

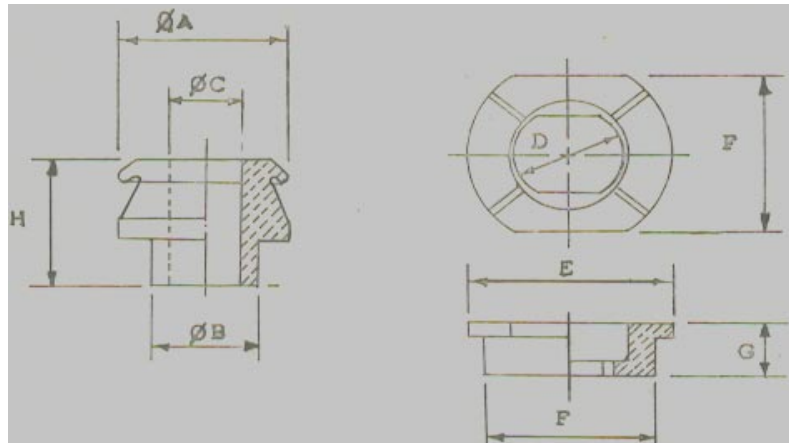
36 KV TRANSFORMER BUSHING (IS: 8603)



NAME OF PRODUCT	36KV/250 A 250064	36KV/630A 250065	36KV/1000A 250066
DIMENSION- A	195 MM	205 MM	225 MM
DIMENSION- B	200 MM	208 MM	230 MM
DIMENSION- C $\pm 3, 0$	33 MM	39 MM	58 MM
DIMENSION- D $\pm 0, 7$	111 MM	128 MM	163 MM
DIMENSION- E	70 MM	85 MM	100 MM
LENGTH - L	485MM	510MM	540MM
VISIBLE DISCHARGE VOLTAGE	27 KV	27 KV	27 KV
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	85 KV	85 KV
	WET	80 KV	80 KV
LIGHTNING IMPULSE WITHSTAND VOLTAGE	190 KV	190 KV	190 KV
MINIMUM CREEPAGE DISTANCE	1000 MM	1005 MM	1005 MM
COLOUR OF GLAZE	BROWN	BROWN	BROWN

BHATINDA CERAMICS PRIVATE LIMITED

LV BUSHING (IS: 3347)



UPPER PART		1.1 KV/250A 270001	1.1KV/630A 270003	1.1KV/1000A 270005	1.1KV/2000A 270007
DIMENSION- A		50 MM	70 MM	90 MM	104 MM
DIMENSION- B $\pm 0, 2$		27 MM	43 MM	53 MM	66 MM
DIMENSION- C $\pm 1, 0$		14 MM	22 MM	32 MM	42 MM
DIMENSION - H $\pm 0, -5$		70 MM	80 MM	85 MM	85 MM
LOWER PART		270002	270004	270006	270008
DIMENSION- D MON		26 MM	41 MM	64 MM	64 MM
DIMENSION- E		60 MM	85 MM	125 MM	125 MM
DIMENSION- F		50 MM	70 MM	104 MM	104 MM
DIMENSION- G MIN		30 MM	30 MM	35 MM	35 MM
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	11 KV	11 KV	11 KV	11 KV
	WET	11 KV	11 KV	11 KV	11 KV
IMPULSE WITHSTAND VOLTAGE		15 KV	15 KV	15 KV	15 KV

UPPER PART		3.6KV/250 280001	3.6KV/630A 280003	3.6KV/1000A 280005	3.6KV/2000 280007
DIMENSION- A		75 MM	90 MM	110 MM	125 MM
DIMENSION- B MAX		37 MM	43 MM	53 MM	66 MM
DIMENSION- C MIN		14 MM	22 MM	36 MM	44 MM
LOWER PART		270002	270004	270006	270008
DIMENSION- D MIN		26 MM	41 MM	64 MM	64 MM
DIMENSION- E		70 MM	85 MM	110 MM	125 MM
DIMENSION- F		60 MM	70 MM	90 MM	105 MM
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	21 KV	21 KV	21 KV	21 KV
	WET	21 KV	21 KV	21 KV	21 KV
IMPULSE WITHSTAND VOLTAGE		40 KV	40 KV	40 KV	40 KV
COLOUR OF FLAZE		BROWN	BROWN	BROWN	BROWN

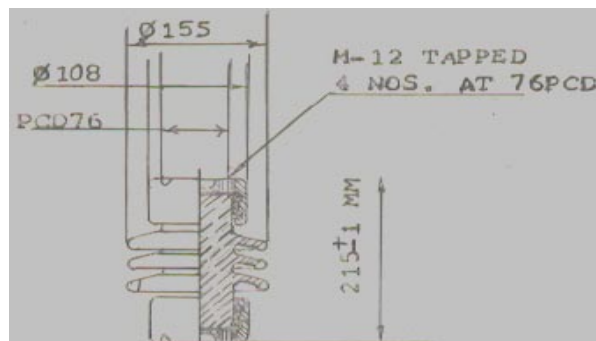
BHATINDA CERAMICS PRIVATE LIMITED

CABLE BOX BUSHING (IS : 9147)



NAME OF PRODUCT	12KV/250A 456001	12KV/630A 456002	12KV/1000A 456003	24KV/630A 456004	36KV/630A 456005
DIMENSION- A± 0,2	80 MM	80 MM	108 MM	108 MM	160 MM
DIMENSION- B	45 MM	56 MM	70 MM	70 MM	70 MM
DIMENSION- C	14 MM	22 MM	38 MM	41 MM	40 MM
DIMENSION- D	35 MM	50 MM	70 MM	70 MM	70 MM
LENGTH – L	220MM	220MM	220MM	290MM	380MM
NOMINAL SYSTEM VOLTAGE	12 KV	12 KV	12 KV	24 KV	36 KV
VISIBLE DISCHARGE VOILTAGE	9 KV	9 KV	9 KV	18 KV	27 KV
POWER FREQUENCY WITHSTAND VOLTAGE	35 KV	35 KV	35 KV	55 KV	75 KV
IMPULSE WITHSTAND VOLTAGE	75 KV	75 KV	75 KV	125 KV	170 KV

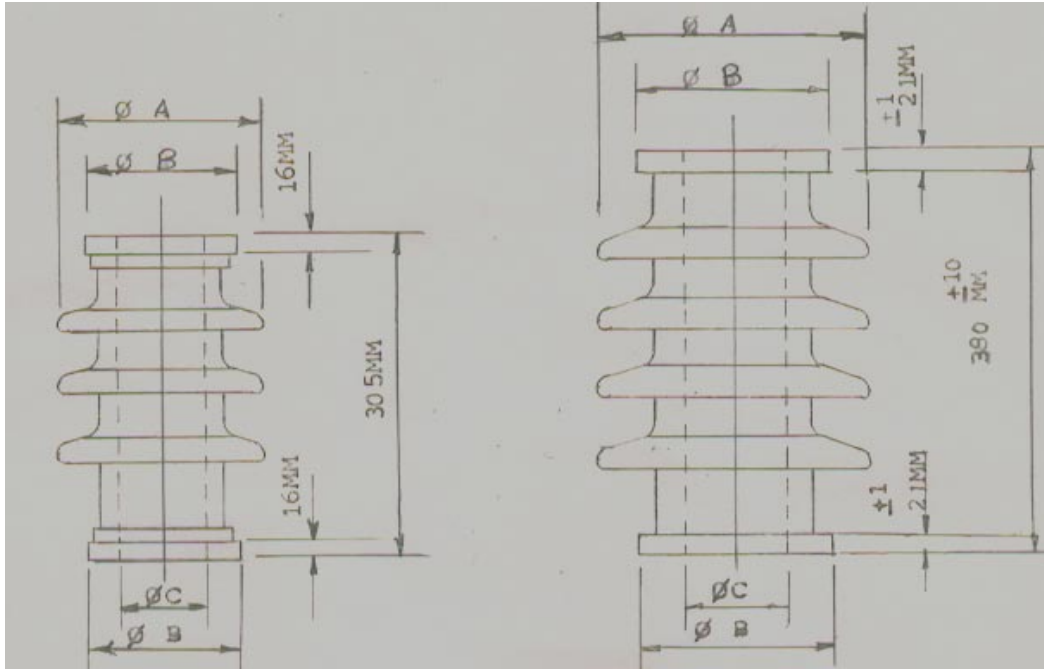
SOLID CORE INSULATOR (IS : 5350)



NAME OF PRODUCT	220001	
NOMINAL SYSTEM VOLTAGE	11 KV	
HIGH SYSTEM VOLTAGE	12 KV	
MINIMUM CREEPAGE DISTANCE	230 MM	
VISIBLE DISCHARGE VOLTAGE	9 KV	
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	40 KV
	WET	35 KV
IMPULSE WITHSTAND VOLTAGE	POSITIVE	80 KV
	NEGATIVE	85 KV
MECHANICAL STRENGTH BENDING TEST (WITHSTAND)	700 KG	
COLOUR OF GLAZE	BROWN	

BHATINDA CERAMICS PRIVATE LIMITED

C.T. BUSHINGS (IS : 5621)

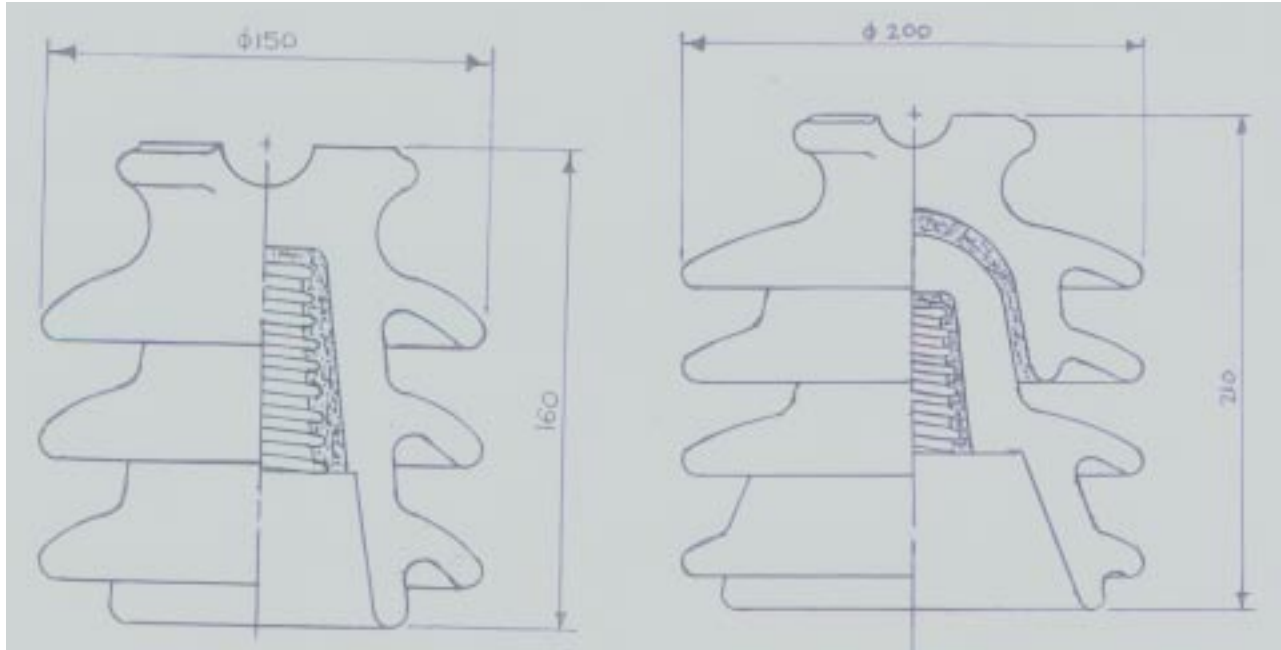


NAME OF PRODUCT	270001	270002
DIMENSION- A	180 MM	235 MM
DIMENSION- B	130 MM	165 MM
DIMENSION- C	80 MM	90 MM
NOMINAL SYSTEM VOLTAGE	12 KV	24 KV
VISIBLE DISCHARGE VOILTAGE	9 KV	18 KV
POWER FREQUENCY WITHSTAND VOLTAGE	35 KV	55 KV
LIGHTNING IMPULSE WITHSTAND VOLTAGE	75 KV	125 KV
CREEPAGE DISTANCE	420 MM	620 MM
COLOUR OF GLAZE	BROWN	

AUSTRALIAN SPECIFICATION

BHATINDA CERAMICS PRIVATE LIMITED

PIN INSULATORS (AS : 2947.2-1989)



BCPL/ALP/11/275

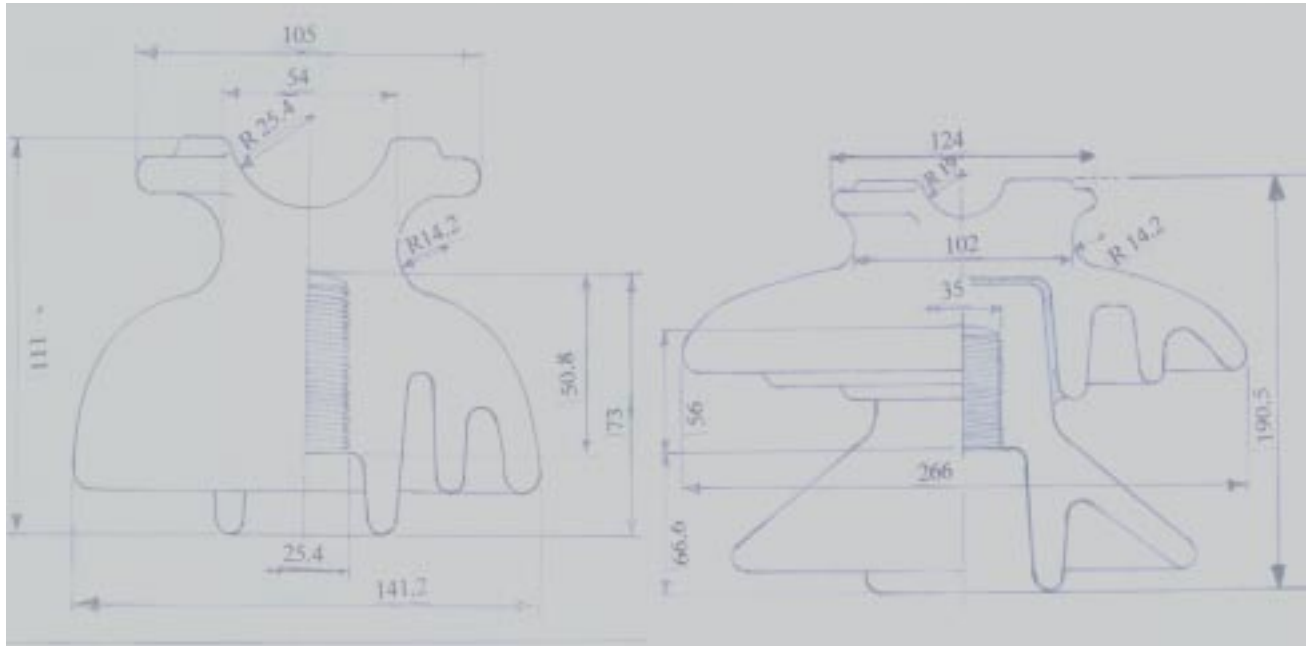
BCPL/ALP/2/520

PRODUCT NUMBER		BCPL/ALP/11/275	BCPL/ALP/2/520
NOMINAL SYSTEM VOLTAGE		11KV	22KV
HIGHEST SYSTEM VOLTAGE		12 KV	24 KV
CREEPAGE DISTANCE		275 MM	520 MM
LOW-FREQUENCY WITHSTAND VOLTGE	DRY	70 KV	80 KV
	WET	30 KV	50 KV
IMPULSE WITHSTAND VOLTAGE	POSITIVE	105 KV	150 KV
	NEGATIVE	120 KV	120 KV
LOW- FREQUENCY PUNCTURE VOLTAGE		135 KV	160 KV
VISIBLE DISCHARGE VOLTAGE		9 KV	18 KV
CANTILEVER STRENGTH		7 KN	11 KN
COLOUR OF GLAZE		BROWN	BROWN

ANSI SPECIFICATION

BHATINDA CERAMICS PRIVATE LIMITED

PIN INSULATORS (ANSI : C29.6-1984, C29.5-1984)



BCPL/P0270

ANSI: CLASS-55-4

BCPL/P0271

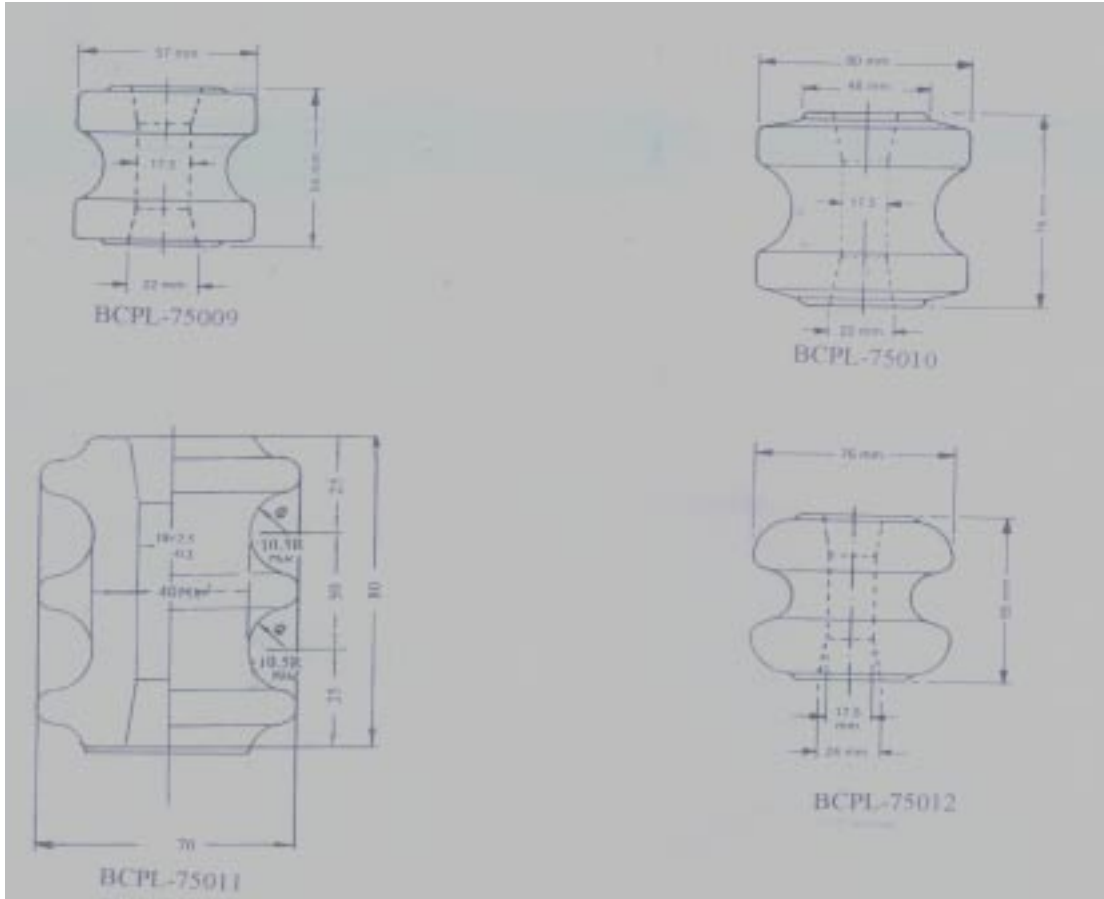
ANSI: CLASS-56-3

PRODUCT NUMBER		BCPL/P0270	BCPL/P0271
RECOMMENDED VOLTAGE RATING		13.2KV	34.5KV
LOW FREQUENCY FLASHOVER VOLTAGE	DRY	65 KV	125 KV
	WET	35 KV	80 KV
CRITICAL IMPULSE FLASHOVER VOLTAGE	POSITIVE	105 KV	200 KV
	NEGATIVE	130 KV	265 KV
LOW- FREQUENCY PUNCTURE VOLTAGE		95 KV	165 KV
CANTILEVER STRENGTH		13 KN	13 KN

BHATINDA CERAMICS PRIVATE LIMITED

Australian & B. S. Specification

Shackle Insulator



PRODUCT NUMBER		BCPL-75009	BCPL-75010	BCPL-75011	BCPL-75012
POWER FREQUENCY WITHSTAND VOLTAGE	DRY	20 KV	25 KV	20 KV	25 KV
	WET	8 KV	12 KV	10 KV	12 KV
MECHANICAL STRENGTH		9 KN	20 KN	13.5 KN	15 KN
Colour of Glaze		Dark Brown			