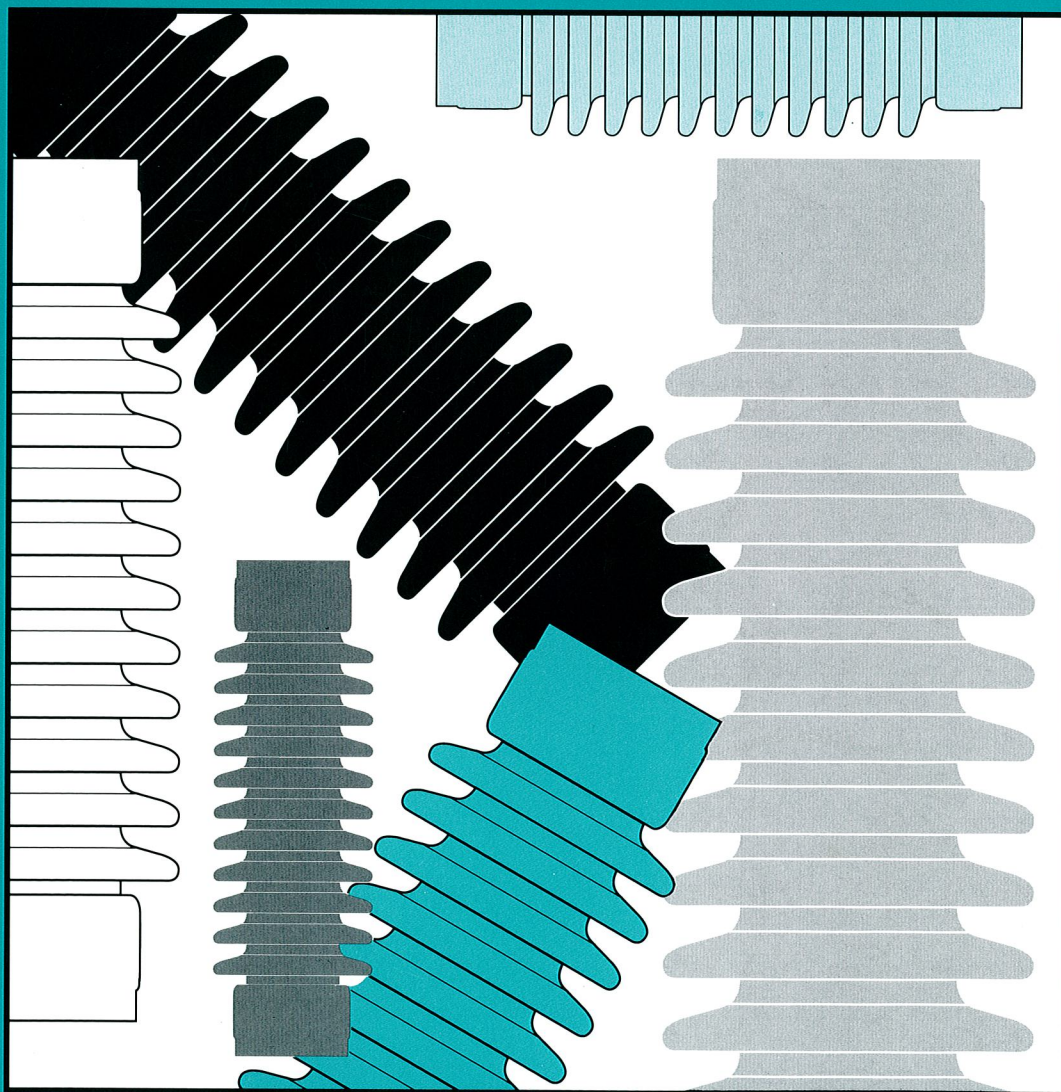


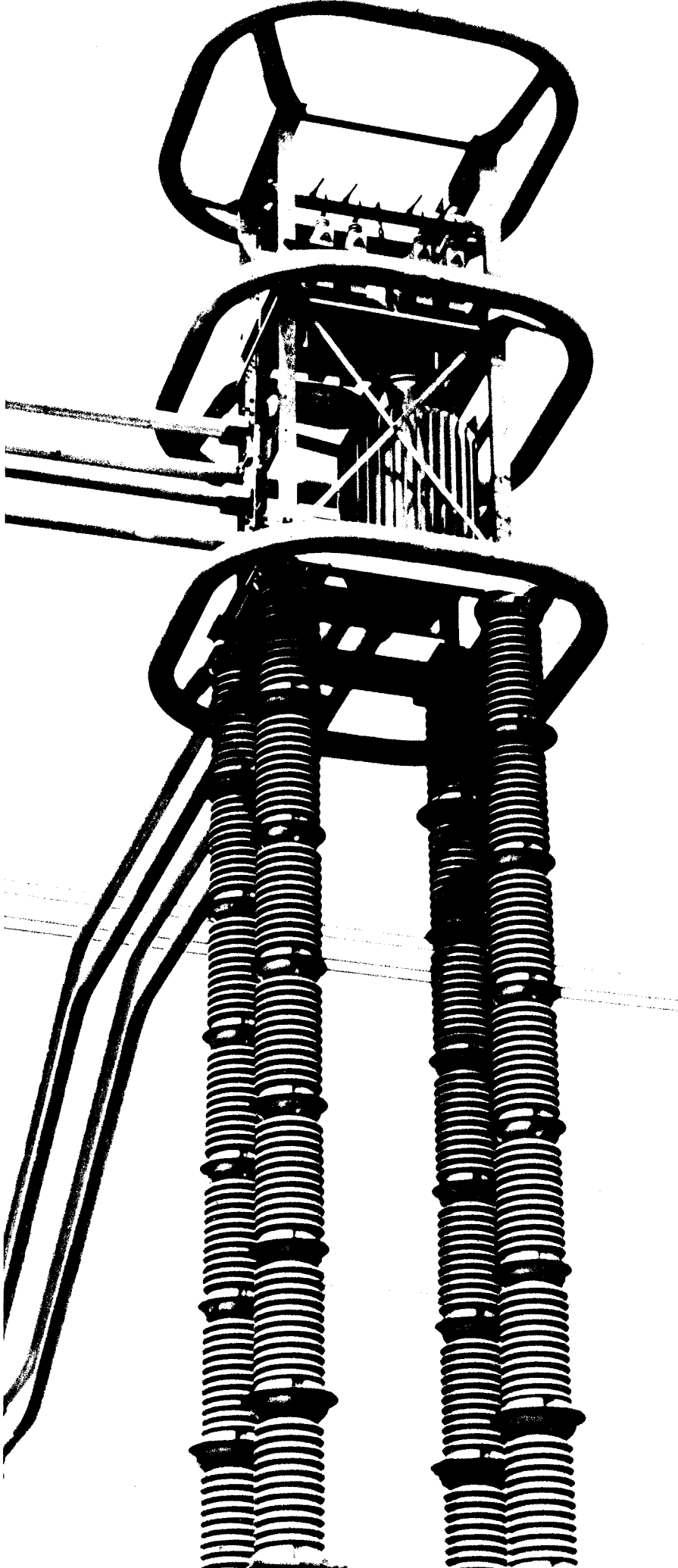
LAPP® IEC STATION POST INSULATORS

CATALOG 11C



LAPP
Insulator Company

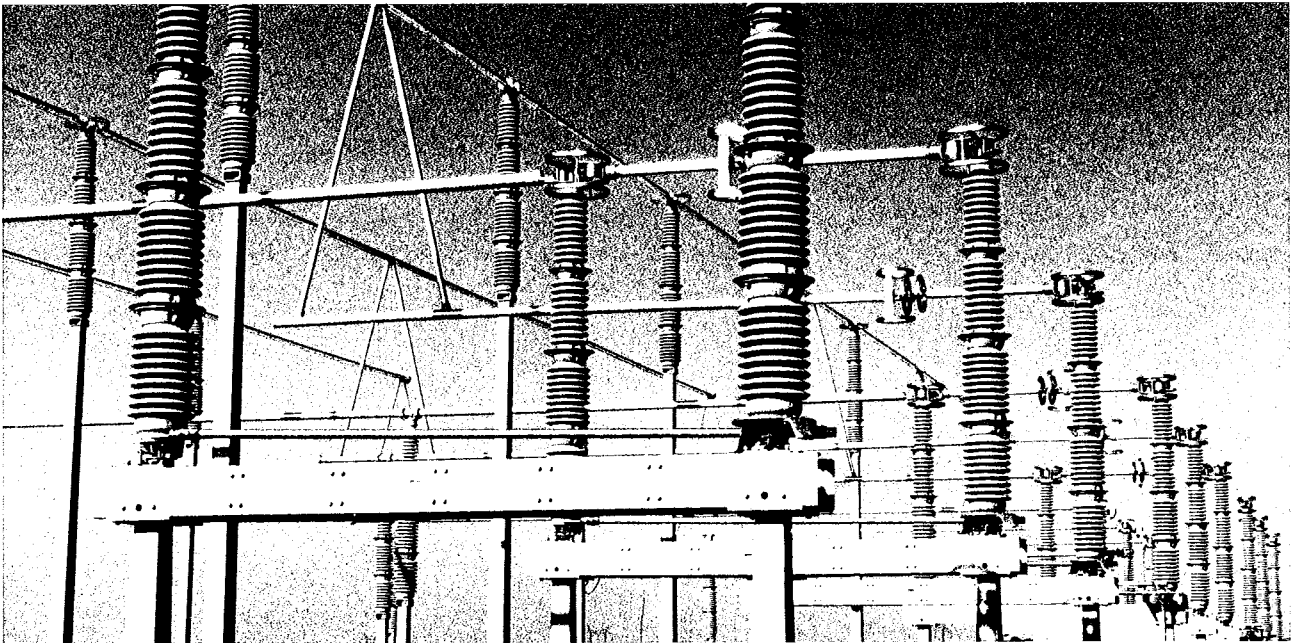
LAPP IEC
STATION
POST
INSULATORS



All statements, technical information, and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. It is the user's responsibility to determine the suitability of the product for its intended use.

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Lapp IEC Station Post Insulators

4

Design Features

1. Hardware

All Lapp station posts have externally attached caps and/or bases. A highly engineered cementing system transfers the load uniformly from the hardware into the porcelain body.

2. Porcelain body

Each insulator body is made from the highest quality clay raw materials that have been processed to be fully vitrified porcelain. The body is glazed to add strength, improve surface appearance, and enhance cleanability.

3. Electrostatic rain deflector

The wet flashover characteristics of the taller station post stacks are improved by placing metal rain deflectors (U.S. Patent No. 2884479) between each of the sections. The deflectors use the electrostatic field surrounding the insulator to disperse falling rainwater and prevent flooding of the lower sections.

4. Minimum deflection

Lapp station posts provide maximum stiffness in a switch and bus insulator design, an important feature in taller stacks for higher voltages. Station post stacks for high voltage and EHV are made up of single-piece porcelains with externally attached hardware bolted together in a strong, rigid assembly.

5. Specifications

Either chocolate brown or Munsell gray glaze is available. Caps and flanges are ferrous, hot dip galvanized. Tapped holes are in accordance with IFI-500, thread series M12x1.75 and M16x2. Holes are tapped 0.1mm oversize. Metric bolts are Class 5.8 and conform to IFI-501 and ISO R898/1. Nuts are Class 5 material per IFI-508 and ISO-R898/2.

This catalog lists BIL ratings from 60 kV to 1550 kV and bending strengths to 10 kN. Higher BIL's and greater strengths can be provided upon request.

6. Operation in contaminated areas

The profile shown in Figure 1 is our standard shed for stacking insulators and will be supplied with all catalog numbers. The assembly will have approximately 2½ mm of leakage distance for each millimeter of assembly height.

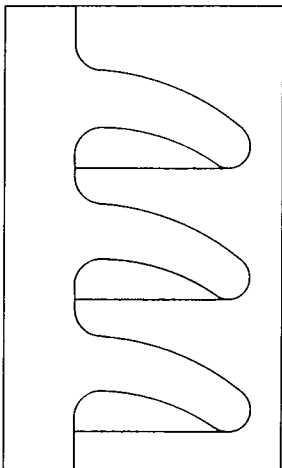


Figure 1

The profile shown in Figure 2 is our high leakage shed shape and will be supplied with catalog numbers carrying the "H" suffix. The assembly will have approximately 3 mm of leakage distance for each millimeter of assembly height.

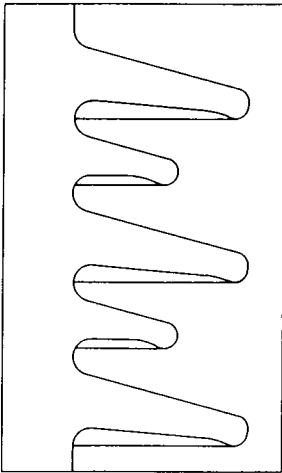


Figure 2

The profile shown in Figure 3 is our extra high leakage shed shape and will be supplied with catalog numbers carrying the "E" suffix. The assembly will have about 3½ mm of leakage distance for each millimeter of assembly height.

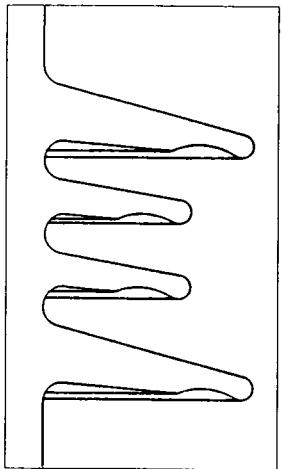


Figure 3

RG Insulators

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RG Insulators Employ a Unique Semi-Conductive Glaze Which Inhibits Arcing and Flashover.

Since they were first installed in the 1970's, Lapp RG insulators have built an enviable operating record in contaminated areas where no standard insulator can perform. That's because RG insulators make use of a unique semi-conducting glaze which effectively inhibits arcing and flashover.

Whether the contamination problem is the result of coastal salt fog or mist, industrial pollution, agricultural dust or chemicals, the tens of thousands of RG insulators already in service have provided excellent performance for utilities around the world.

RG Insulators Gain Their Superior Performance From Three Factors:

1. Linear Voltage Distribution

Voltage drop across the entire length of the RG insulator surface is uniform so that all parts of the insulator are evenly stressed.

2. Heating Effect

The small current flow over the resistor created on the surface of an RG insulator warms the surface to a few degrees above the ambient temperature. This discourages moisture accumulation, and moisture is usually necessary to make contaminants conductive.

3. Reduction of Dry Band Arcing

Dry bands form on RG insulators with uneven wetting and drying, just as they do on regular insulators. However, RG insulators provide a conductive shunt path across the dry bands, preventing any visible scintillations or arcing. The result? There are no local arcs that can grow into full length flashover.

They're Backed By Years of Field Experience

Commercially available since 1970, RG insulators have been used in a broad range of applications, from moderate to extremely severe contamination. This experience puts Lapp in a position which no other manufacturer can match when it comes to helping you meet the contamination demands of your application.

It has also shown us ways in which to improve our product designs. All Lapp's latest RG insulators demonstrate our commitment to providing the most comprehensive and up-to-date product designs available.

Want to Know More?

For RG® Resistance Graded Station Posts and equivalent Regular Glaze Station Posts, refer to the table below.

We recommend that you consult Lapp directly when considering the installation of Lapp Resistance Graded Insulators. For more details and technical assistance, write to Lapp or contact your Lapp representative.

RG® Resistance Graded Station Posts

IEC Designation	Regular Glaze Part Number	RG Glaze Part Number	IEC Designation	Regular Glaze Part Number	RG Glaze Part Number
C10-60	400624	500001M	C6-650	400322	500155M
C10-95	400174	500002M	C10-650	400249	500156M
C10-125	400210	500144M	C6-750	400611	500157M
C10-150	400176	500145M	C10-750	400613	500158M
C10-170	400177	500146M	C6-950	400171	500159M
C10-200	400178	500147M	C10-950	400374	500160M
C6-250	400272	500005M	C6-1050	400283	500161M
C10-250	400179	500148M	C10-1050	400327	500162M
C6-325	400195	500149M	C6-1175	400067	500163M
C10-325	400181	500150M	C10-1175	400549	500164M
C6-450	400192	500151M	C6-1300	400521	500165M
C10-450	400193	500152M	C10-1300	400412	500166M
C6-550	400093	500153M	C6-1425	400501	500167M
C10-550	400609	500154M	C10-1425	400615	500168M
			C6-1550	400020	500169M
			C10-1550	400023	500170M

Lapp IEC Station Post Insulators

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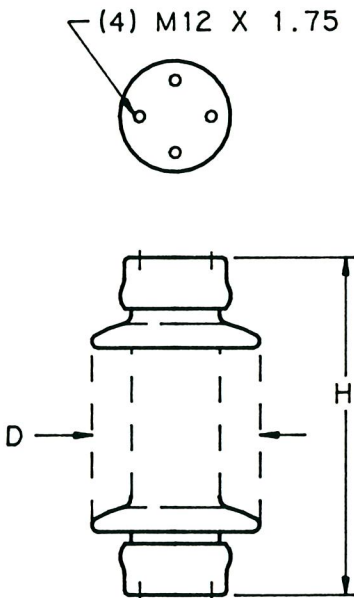
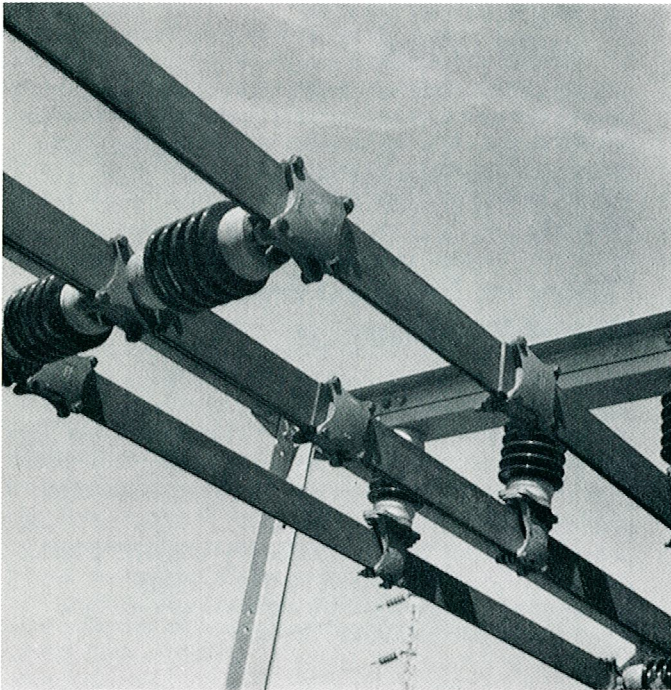


Figure 1

Catalog Number	400200	400624	400073	400174	400237	400210	400256	400176
IEC Designation	C6-60	C10-60	C6-95	C10-95	C6-125	C10-125	C6-150	C10-150
Figure	1	1	1	1	1	1	1	1
Dimensions								
Overall Height (H), mm	190 ± 1	190 ± 1	255 ± 1	255 ± 1	305 ± 1	305 ± 1	355 ± 1	355 ± 1
Shed Diameter (D), mm	171	171	178	178	178	203	171	178
Creepage Distance, mm	267	267	380	380	500	520	600	600
Fixing Arrangements								
Pitch Circle Diameter, mm	76.2	76.2	76.2	76.2	76.2	76.2	76.2	76.2
Cap Diameter, mm	108	108	108	108	108	108	108	108
Mechanical Ratings								
Cantilever Strength, kN	6	10	6	10	6	10	6	10
Tension Strength, kN	31	31	40	40	25	40	40	50
Torsion Strength, N-m	680	1000	2000	2000	1000	2000	2000	2500
Electrical Ratings								
Power Frequency Dry Withstand, kV	35	35	50	50	60	60	75	75
Power Frequency Wet Withstand, kV	20	20	38	38	50	50	50	50
Lightning Impulse Withstand, kV	60	60	95	95	125	125	150	150

Notes: Hardware is malleable or ductile iron, hot dip galvanized.
Catalog Number shown has chocolate glaze. For light gray glaze, add -70 to the number shown; i.e. 400567-70.
Bolts for attaching the insulator can be provided on special order – specify length.
For RG equivalents to these units, see table on page 5.
Specification: IEC Publication 273 and Publication 168.

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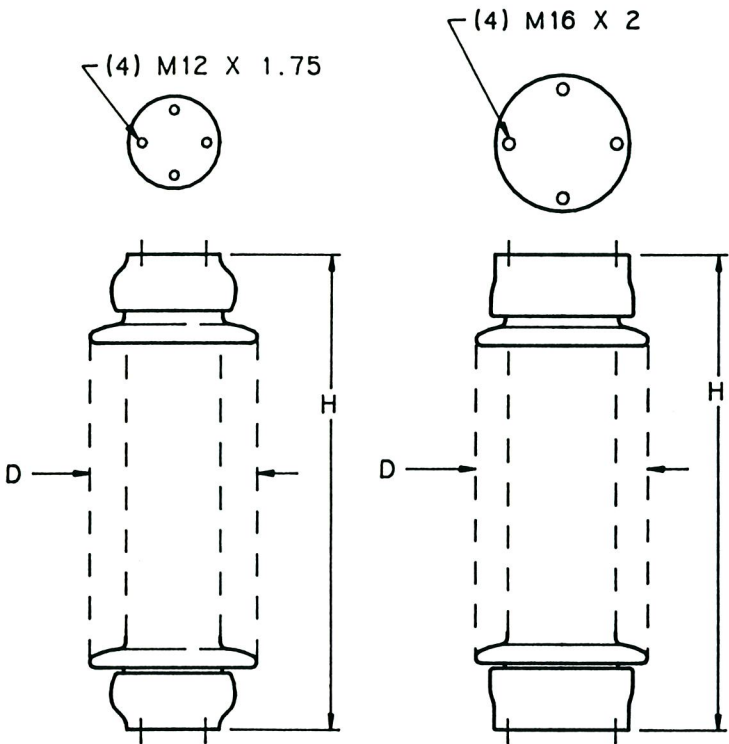
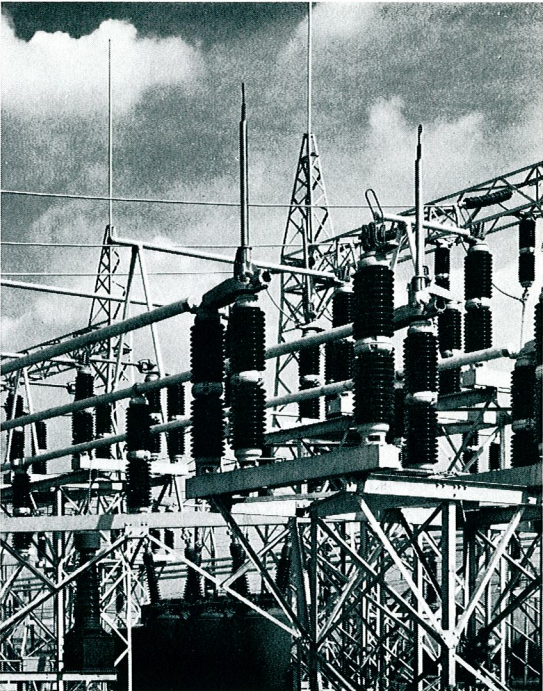


Figure 2

Figure 3

Catalog Number	400567	400177	400207	400178	400272	400262	400179
IEC Designation	C6-170	C10-170	C6-200	C10-200	C6-250	C6-250	C10-250
Figure	2	2	2	2	2	3	3
Dimensions							
Overall Height (H), mm	445 ± 1	445 ± 1	475 ± 1	475 ± 1	560 ± 1	560 ± 1	560 ± 1
Shed Diameter (D), mm	165	190	178	191	181	181	203
Creepage Distance, mm	850	850	1000	950	1200	1200	1200
Fixing Arrangements							
Pitch Circle Diameter, mm	76.2	76.2	76.2	76.2	76.2	127	127
Cap Diameter, mm	108	108	108	108	108	159	159
Mechanical Ratings							
Cantilever Strength, kN	6	10	6	10	6	6	10
Tension Strength, kN	44.5	80	40	80	50	50	80
Torsion Strength, N-m	2000	4500	2000	4500	2500	2500	5000
Electrical Ratings							
Power Frequency Dry Withstand, kV	100	100	110	110	135	135	135
Power Frequency Wet Withstand, kV	70	70	70	70	95	95	95
Lightning Impulse Withstand, kV	170	170	200	200	250	250	250

Notes: Hardware is malleable or ductile iron, hot dip galvanized.
Catalog Number shown has chocolate glaze. For light gray glaze, add -70 to the number shown; i.e. 400567-70.
Bolts for attaching the insulator can be provided on special order – specify length.
For RG equivalents to these units, see table on page 5.
Specification: IEC Publication 273 and Publication 168.

Lapp IEC Station Post Insulators

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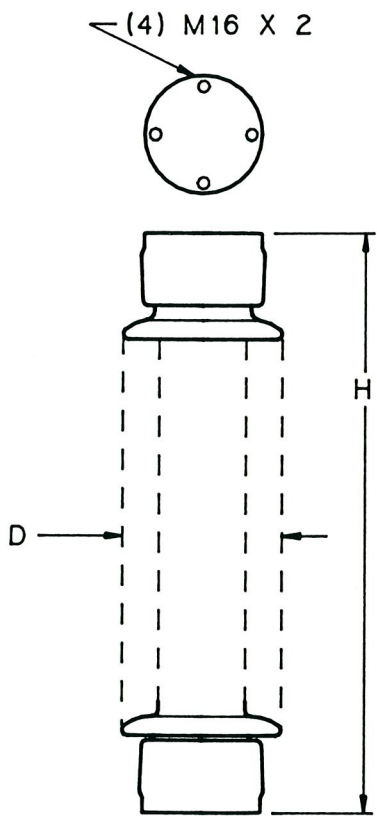
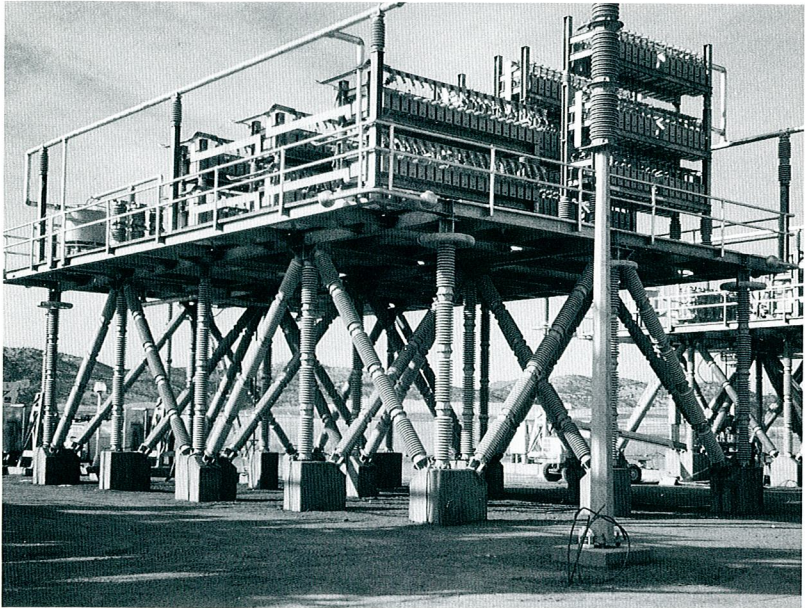


Figure 4

Catalog Number	400138	400195	400566	400181	400135	400192	400193	400058	400093	400639	400609
IEC Designation	C4-325	C6-325	C8-325	C10-325	C4-450	C6-450	C10-450	C4-550	C6-550	C8-550	C10-550
Figure	4	4	4	4	4	4	4	4	4	4	4
Dimensions											
Overall Height (H), mm	770 ± 1	770 ± 1	770 ± 1	770 ± 1	1020 ± 1	1020 ± 1	1020 ± 1	1220 ± 1	1220 ± 1	1220 ± 1	1220 ± 1
Shed Diameter (D), mm	194	194	225	225	197	197	260	200	210	222	235
Creepage Distance, mm	1860	1860	1800	1800	2350	2350	2400	2540	2900	2900	2900
Fixing Arrangements											
Top PCD, mm	127	127	127	127	127	127	127	127	127	127	127
Cap Diameter, mm	159	159	159	159	159	159	159	159	159	159	159
Base PCD, mm	127	127	127	127	127	127	127	127	127	127	127
Base or Flange Diameter, mm	159	159	159	159	159	159	159	159	159	159	159
Flange Thickness, mm	—	—	—	—	—	—	—	—	—	—	—
Mechanical Ratings											
Cantilever Strength, kN	4.5	6.5	8	10	4.5	6.5	12	4	6	8	10
Tension Strength, kN	50	80	80	80	80	80	90	80	90	90	90
Torsion Strength, N-m	2500	4500	5000	5000	4500	4500	7000	4500	7000	7000	7000
Electrical Ratings											
Power Frequency Dry Withstand, kV	175	175	175	175	245	245	245	300	300	300	300
Power Frequency Wet Withstand, kV	140	140	140	140	185	185	185	230	230	230	230
Lightning Impulse Withstand, kV	325	325	325	325	450	450	450	550	550	550	550

Notes: Hardware is malleable or ductile iron, hot dip galvanized.
Catalog Number shown has chocolate glaze. For light gray glaze, add -70 to the number shown; i.e. 400567-70.
Bolts for attaching the insulator can be provided on special order – specify length.
For RG equivalents to these units, see table on page 5.
Specification: IEC Publication 273 and Publication 168.

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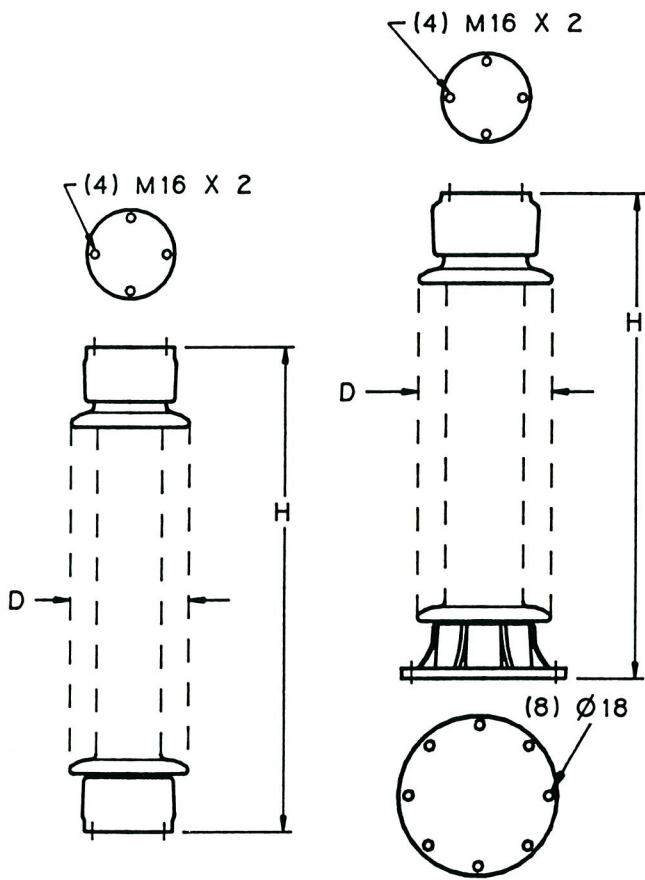
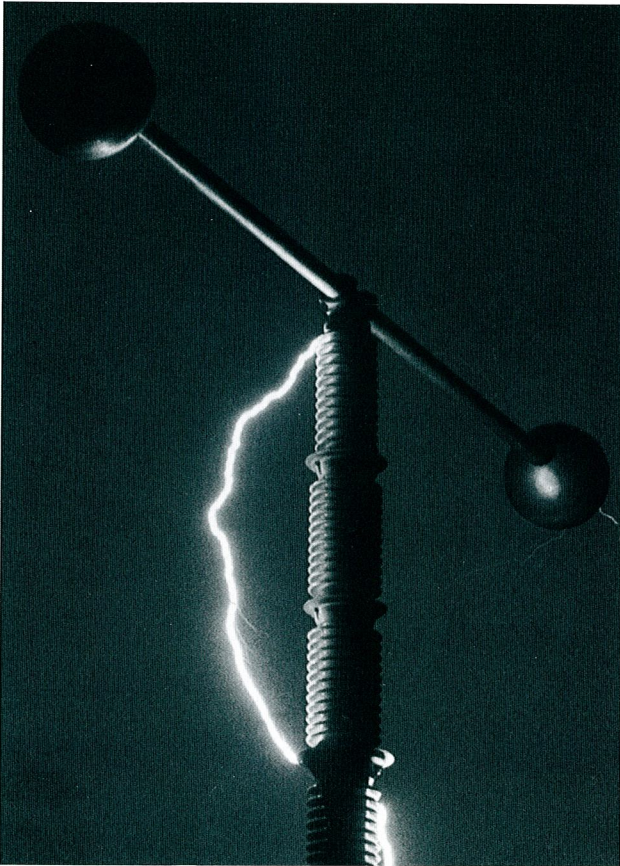


Figure 5

Figure 6



Catalog Number	400324	400322	400153	400249	400610	400611	400612	400613
IEC Designation	C4-650	C6-650	C8-650	C10-650	C4-750	C6-750	C8-750	C10-750
Figure	5	5	5	6	5	5	5	6
Dimensions								
Overall Height (H), mm	1500 ± 2.5	1500 ± 2.5	1500 ± 2.5	1500 ± 2.5	1700 ± 2.5	1700 ± 2.5	1700 ± 2.5	1700 ± 2.5
Shed Diameter (D), mm	203	203	267	267	267	267	267	273
Creepage Distance, mm	3350	3350	3350	3350	4300	4300	4300	4000
Fixing Arrangements								
Top PCD, mm	127	127	127	127	127	127	127	127
Cap Diameter, mm	159	159	159	159	159	159	159	159
Base PCD, mm	127	127	127	254	127	127	127	254
Base or Flange Diameter, mm	159	159	159	289	159	159	159	289
Flange Thickness, mm	—	—	—	19	—	—	—	19
Mechanical Ratings								
Cantilever Strength, kN	4	6	8	10	4	6.5	8	10
Tension Strength, kN	80	90	90	110	80	90	120	120
Torsion Strength, N-m	5000	7000	7000	7000	5000	7000	10000	10000
Electrical Ratings								
Power Frequency Dry Withstand, kV	375	375	375	375	410	410	410	410
Power Frequency Wet Withstand, kV	275	275	275	275	325	325	325	325
Lightning Impulse Withstand, kV	650	650	650	650	750	750	750	750

Notes: Hardware is malleable or ductile iron, hot dip galvanized.
Catalog Number shown has chocolate glaze. For light gray glaze, add -70 to the number shown; i.e. 400567-70.
Bolts for attaching the insulator can be provided on special order – specify length.
For RG equivalents to these units, see table on page 5.
Specification: IEC Publication 273 and Publication 168.

Lapp IEC Station Post Insulators

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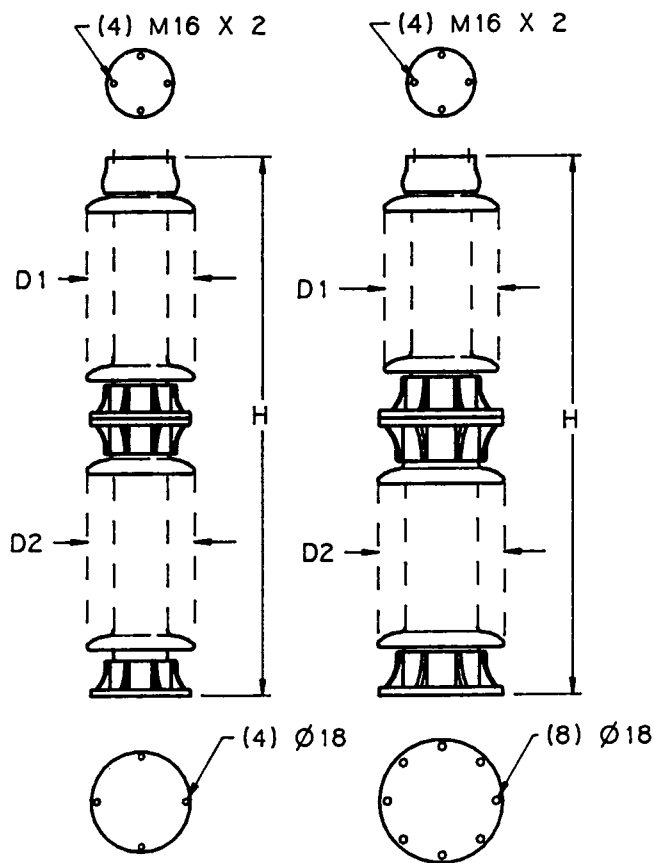
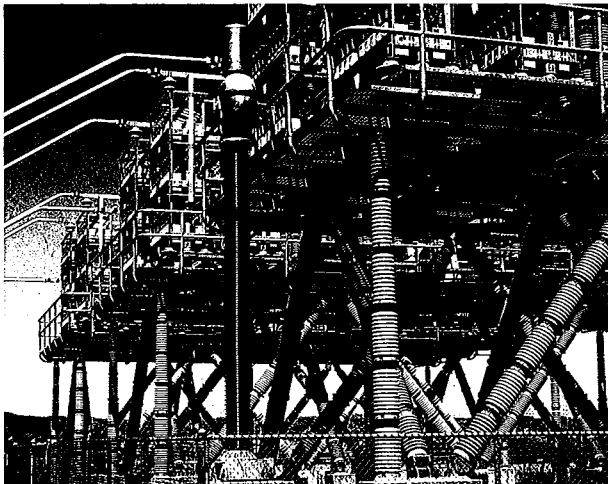


Figure 7

Figure 8

Catalog Number	400375	400171	400066	400374	400140	400283	400348	400327
IEC Designation	C4-950	C6-950	C8-950	C10-950	C4-1050	C6-1050	C8-1050	C10-1050
Figure	7	7	8	8	7	7	8	8
Dimensions								
Overall Height (H), mm	2100 ± 3.5	2100 ± 3.5	2100 ± 3.5	2100 ± 3.5	2300 ± 3.5	2300 ± 3.5	2300 ± 3.5	2300 ± 3.5
Shed Diameter (D1), mm	254	254	273	273	254	254	273	302
Shed Diameter (D2), mm	254	273	302	302	254	273	302	318
Creepage Distance, mm	5400	5400	5400	5400	5900	5900	5900	5900
Fixing Arrangements								
Top PCD, mm	127	127	127	127	127	127	127	127
Cap Diameter, mm	159	159	159	159	159	159	159	159
Base PCD, mm	200	225	254	254	200	225	254	275
Base or Flange Diameter, mm	235	260	289	289	235	260	289	310
Flange Thickness, mm	14	17	19	19	14	17	19	19
Mechanical Ratings								
Cantilever Strength, kN	4.5	6	10	10	5	6	8	10
Tension Strength, kN	80	80	90	90	80	80	90	90
Torsion Strength, N-m	5000	5000	7000	7000	5000	5000	5000	7000
Electrical Ratings								
Power Frequency Dry Withstand, kV	490	490	490	490	525	525	525	525
Power Frequency Wet Withstand, kV	395	395	395	395	460	460	460	460
Lightning Impulse Withstand, kV	950	950	950	950	1050	1050	1050	1050
Switching Impulse Withstand, kV	750	750	750	750	750	750	750	750

Notes: Hardware is malleable or ductile iron, hot dip galvanized.
Catalog Number shown has chocolate glaze. For light gray glaze, add -70 to the number shown; i.e. 400567-70.
Bolts for attaching the insulator can be provided on special order – specify length.
For RG equivalents to these units, see table on page 5.
These units are also available as underhung posts. Contact the factory for further information.
Specification: IEC Publication 273 and Publication 168.

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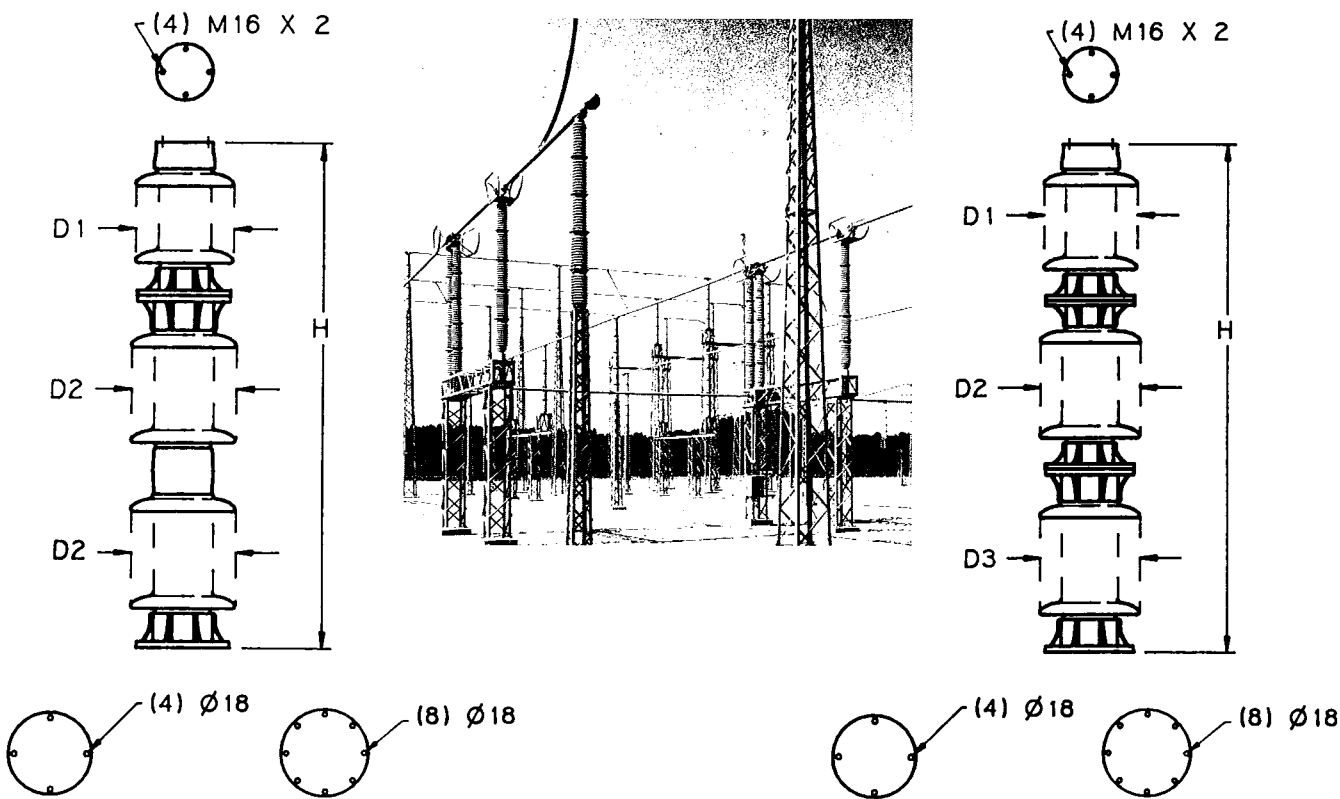


Figure 9

Figure 10

Figure 11

Figure 12

Catalog Number	400285	400067	400520	400549	400157	400521	400384	400412
IEC Designation	C4-1175	C6-1175	C8-1175	C10-1175	C4-1300	C6-1300	C8-1300	C10-1300
Figure	9	10	10	10	11	12	12	12
Dimensions								
Overall Height (H), mm	2650 ± 4.5	2650 ± 4.5	2650 ± 4.5	2650 ± 4.5	2900 ± 4.5	2900 ± 4.5	2900 ± 4.5	2900 ± 4.5
Shed Diameter (D1), mm	259	273	273	273	254	254	273	273
Shed Diameter (D2), mm	273	302	302	302	273	273	302	302
Shed Diameter (D3), mm	—	—	—	—	273	302	318	318
Creepage Distance, mm	6500	6500	6500	6500	7000	7000	7000	7000
Fixing Arrangements								
Top PCD, mm	127	127	127	127	127	127	127	127
Cap Diameter, mm	159	159	159	159	159	159	159	159
Base PCD, mm	225	254	254	275	225	254	275	275
Base Flange Diameter, mm	260	289	289	310	260	289	310	310
Base Flange Thickness, mm	17	19	19	19	17	19	19	19
Mechanical Ratings								
Cantilever Strength, kN	4	6	8	10	4.5	7	8	11
Tension Strength, kN	80	90	90	120	80	90	90	90
Torsion Strength, N-m	5000	7000	7000	10000	5000	7000	7000	7000
Electrical Ratings								
Power Frequency Dry Withstand, kV	585	585	585	585	640	640	640	640
Power Frequency Wet Withstand, kV	510	510	510	510	570	570	570	570
Lightning Impulse Withstand, kV	1175	1175	1175	1175	1300	1300	1300	1300
Switching Impulse Withstand, kV	850	850	850	850	950	950	950	950

Notes: Hardware is malleable or ductile iron, hot dip galvanized.
Catalog Number shown has chocolate glaze. For light gray glaze, add -70 to the number shown; i.e. 400567-70.
Bolts for attaching the insulator can be provided on special order – specify length.
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Specification: IEC Publication 273 and Publication 168.

Lapp IEC Station Post Insulators

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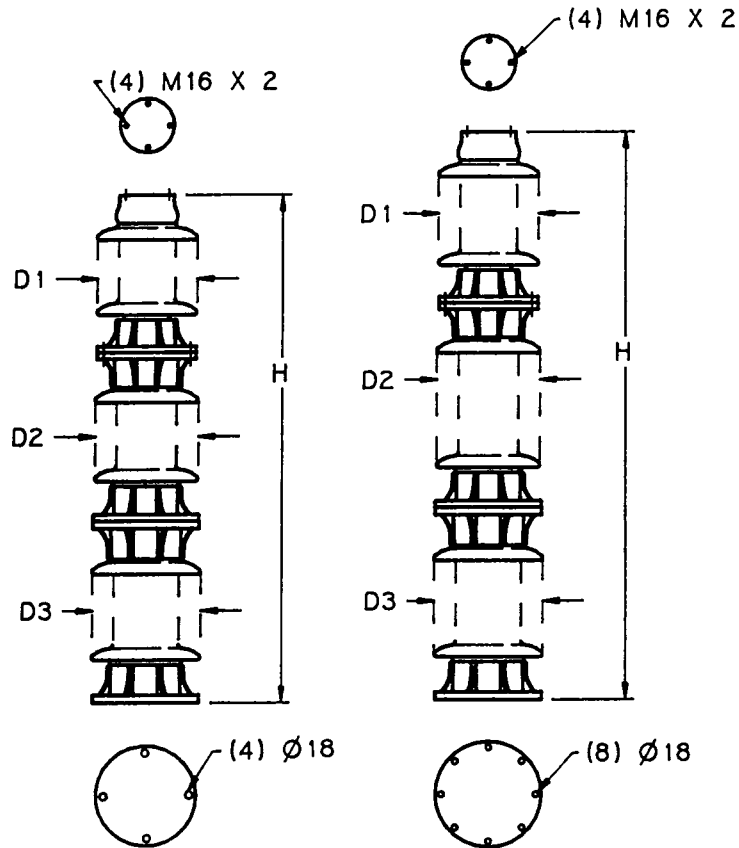
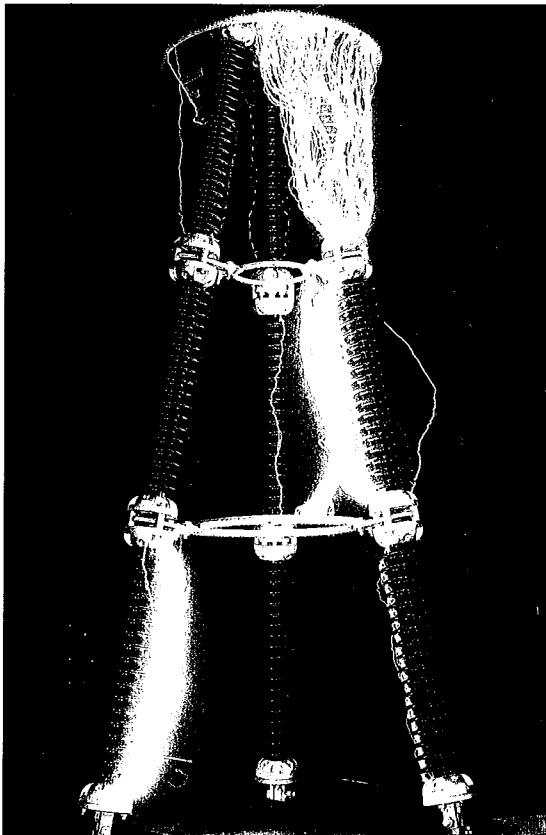


Figure 13

Figure 14

Catalog Number	400310	400501	400614	400615	400052	400020	400541	400023
IEC Designation	C4-1425	C6-1425	C8-1425	C10-1425	C4-1550	C6-1550	C8-1550	C10-1550
Figure	13	14	14	14	13	14	14	14
Dimensions								
Overall Height (H), mm	3150 ± 4.5	3150 ± 4.5	3150 ± 4.5	3150 ± 4.5	3350 ± 4.5	3350 ± 4.5	3350 ± 4.5	3350 ± 4.5
Shed Diameter (D1), mm	254	254	273	302	254	254	302	302
Shed Diameter (D2), mm	254	273	302	318	273	273	302	318
Shed Diameter (D3), mm	273	302	318	343	273	302	318	343
Creepage Distance, mm	7800	7800	7800	7800	8500	8500	8500	8500
Fixing Arrangements								
Top PCD, mm	127	127	127	127	127	127	127	127
Cap Diameter, mm	159	159	159	159	159	159	159	159
Base PCD, mm	225	254	275	300	225	254	275	300
Base Flange Diameter, mm	260	289	310	335	260	289	310	335
Base Flange Thickness, mm	17	19	19	22	17	19	19	22
Mechanical Ratings								
Cantilever Strength, kN	4	6.5	8	11	4	6.5	8	10
Tension Strength, kN	80	90	120	90	80	90	120	90
Torsion Strength, N-m	5000	7000	10000	7000	5000	7000	10000	7000
Electrical Ratings								
Power Frequency Dry Withstand, kV	695	695	695	695	740	740	740	740
Power Frequency Wet Withstand, kV	630	630	630	630	680	680	680	680
Lightning Impulse Withstand, kV	1425	1425	1425	1425	1550	1550	1550	1550
Switching Impulse Withstand, kV	950	950	950	950	1050	1050	1050	1050

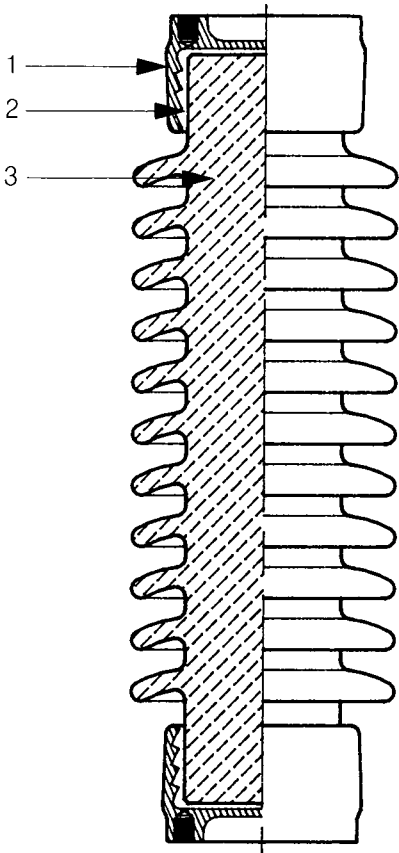
Notes: Hardware is malleable or ductile iron, hot dip galvanized.
Catalog Number shown has chocolate glaze. For light gray glaze, add -70 to the number shown; i.e. 400567-70.
Bolts for attaching the insulator can be provided on special order – specify length.
For RG equivalents to these units, see table on page 5.
These units are also available as underhung posts. Contact the factory for further information.
Specification: IEC Publication 273 and Publication 168.

IEC Station Post Insulators

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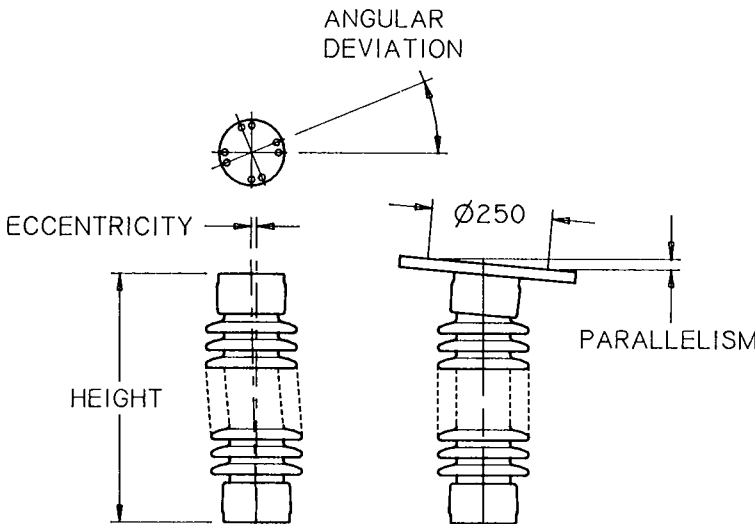
Item No.	Name	Material
1	Cap	Malleable or Ductile Iron Hot-Dip Galvanized After Machining Caps Tapped After Galvanizing
2	Mortar	Portland Cement/Quartz Sand
3	Porcelain Body	Porcelain IEC Publication 672-3, Group C-100 Sub-Group 110 and 120

Lapp's standard color is chocolate. To specify gray glaze, add -70 to the catalog number.



Standard Pitch Circle Diameter – Number of Holes

PCD	Tapped Holes	Plain Holes
76.2	M12-16 Deep - 4 Holes	–
127	M16-19 Deep - 4 Holes	–
178	–	4 - 18 Ø Holes
200	–	4 - 18 Ø Holes
225	–	4 - 18 Ø Holes
254	–	8 - 18 Ø Holes
275	–	8 - 18 Ø Holes
300	–	8 - 18 Ø Holes
325	–	8 - 18 Ø Holes
356	–	8 - 18 Ø Holes



Unit Tolerances

Height	+ 1 mm
Parallelism	H ≤ 1 m: 0.5 mm H ≥ 1 m: 0.5 H mm
Eccentricity	2 (1 + H) mm
Camber	1.5 mm + 0.008 h mm
Angular Deviation	1° either clockwise or counter-clockwise

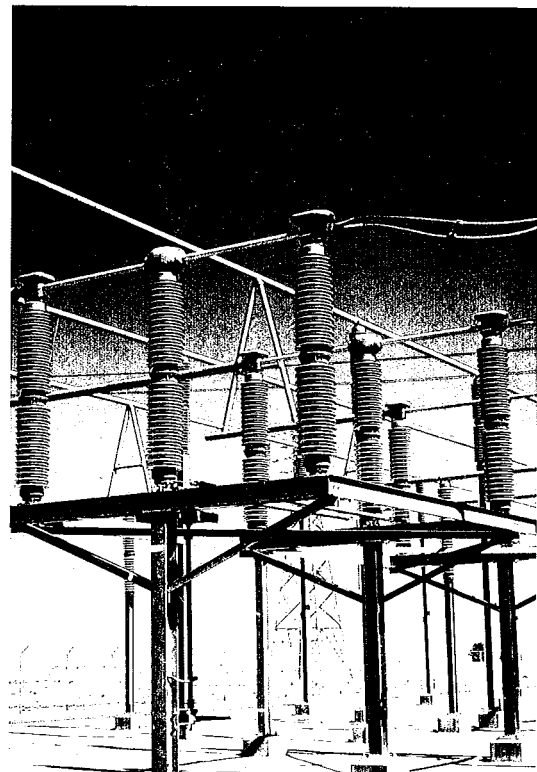
Notes: (1) Parallelism measured for diameter D = 250 mm
(2) H: Height in meters
(3) h: Height in millimeters

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IEC Designation	Catalog Number	Page	IEC Designation	Catalog Number	Page
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C6-125	400237	6	C4-1050	400140	10
C10-125	400210	6	C6-1050	400283	10
C6-150	400256	6	C8-1050	400348	10
C10-150	400176	6	C10-1050	400327	10
C6-170	400567	7	C4-1175	400285	11
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Terms and Warranties

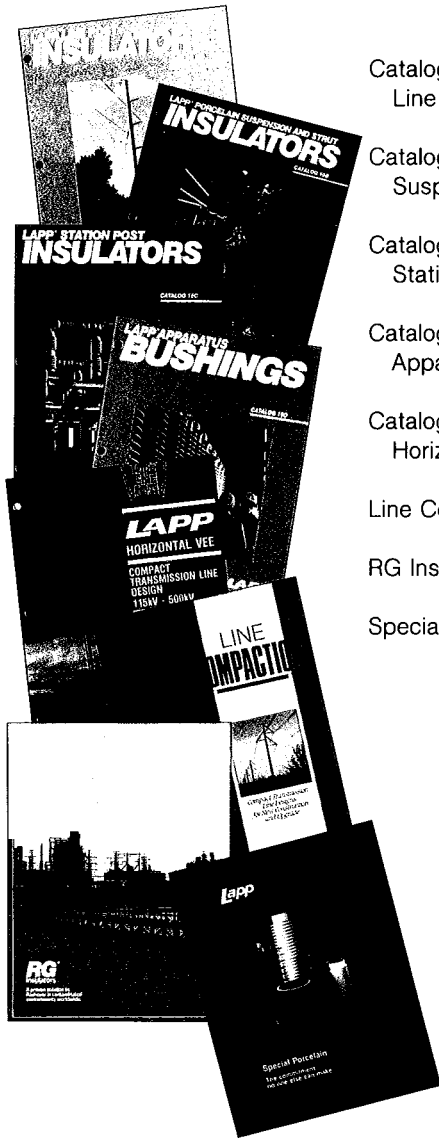
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Complete Catalog Information From Lapp

**Current product catalogs available on request from Lapp
or from your Lapp representative are listed below.
Other publications including engineering papers, technical information,
test data, and application brochures
are available for specific products.**

Porcelain Catalogs...



Catalog 10A
Line Post Insulators

Catalog 10B
Suspension Insulators

Catalog 10C
Station Post Insulators

Catalog 10D
Apparatus Bushings

Catalog 606
Horizontal Vees

Line Compaction Catalog

RG Insulators Catalog

Special Porcelain Catalog

Polypace® Catalogs...

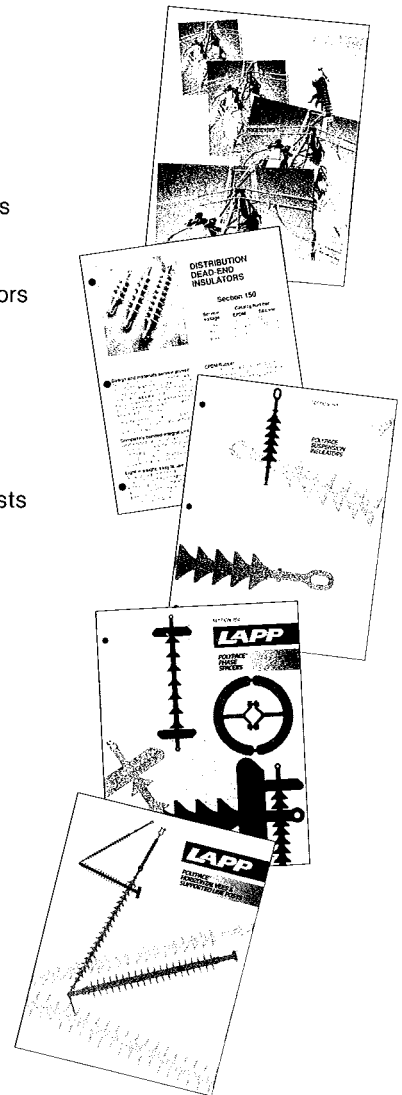
Polypace Insulators
Overview Brochure

Section 150
Distribution
Dead-End Insulators

Section 151
Suspension Insulators

Section 154
Phase Spacers

Section 155
Horizontal Vees/
Supported Line Posts



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