

200 SERIES UNIFORM STRENGTH SWITCH & BUS INSULATORS

A20 STRENGTH CLASS

USE:

200 Series Uniform Strength Switch and Bus Insulators are available for outdoor and non UV exposed (enclosed) applications. 200 Series insulators are available for 5 kV through 46 kV voltage classes and are suitable for temperature applications from -50°C to 155°C. 200 Series insulators are used primarily as bus supports in switchgear applications, dry type transformers and other custom applications.

CONSTRUCTION:

200 Series Uniform Strength Switch and Bus Insulators are precision engineered to ANSI C29.1-1988 specifications using state of the art Finite Element Analysis (FEA) software. 200 Series insulators are of cast epoxy construction with metallic mounting inserts integrally cast into the unit. Through use of an integrally cast insert, the need for metallic end caps fixed with adhesives is eliminated. Adhesives tend to deteriorate over time causing future partial discharge concerns. This problem is most often associated with porcelain insulator designs. 200 Series insulators' conical design provides mechanical loading characteristics superior to most polymer insulator designs in the market today. Mounting configurations are NEMA standard and may comprise of up to 100 different variations. The deep shed design offers generous creep distances. The epoxy material is lightweight compared to porcelain, and is self extinguishing when exposed to continuous arcing or constant heating. Units at 95 kV BIL or greater, with more than two mounting inserts per end, are tied internally to prevent floating of inserts not used.



ELECTRICAL/MECHANICAL DATA

Identification No.	Dimensions		Strength Class (NEMA)	Creep Distance (in)	Electrical Ratings, kV			Mechanical Ratings		
	Dia. (in)	Height (in)			Highest System Voltage (kV)	Impulse Voltage (kV)	60 HZ Withstand 1 min (kV)	Cantilever (lbs)	Tension (lbs)	Compression (lbs)
02-000	4.00	3.50	A20	4.75	4.8	60	19	3000	3000	40000
02-001		4.50		7.75	8.3	75	26	2250		
02-002		6.00		11.50	15.0	95	36	1750		
02-003		7.50		15.50	20.0	110	50	1400		
02-004		8.75		18.00	25.0	125	60	1200		
02-005		10.50		23.25	38.0	150	80	1000		
02-006		11.00		24.00	38.0	150	80	950		
02-007		12.75		27.25	38.0	170	80	850		
02-008		14.00		29.50	48.3	200	100	750		

Uniform Strength Switch & Bus Insulators are tested in accordance with ANSI C29.1-1988.

Mechanical ratings, based on static loading applied in a practically stepless variation, are provided for design purposes and are considered safe for all insert configurations.

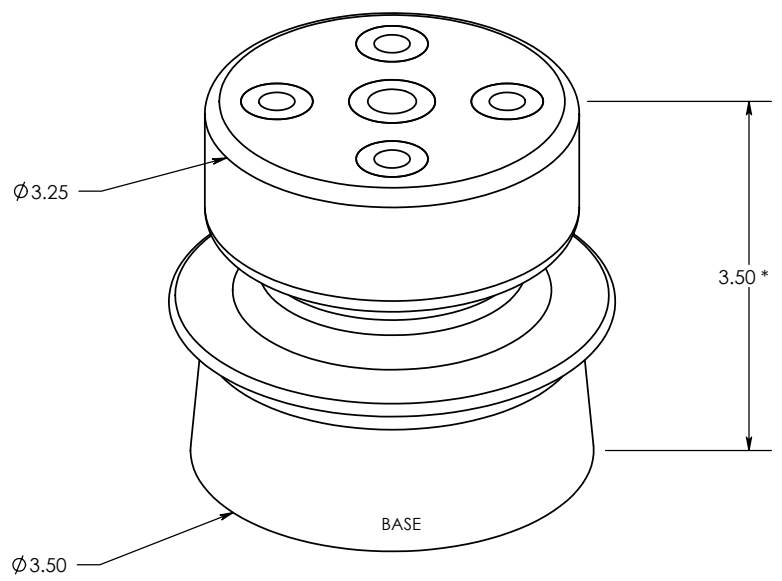
Actual values attainable will vary with each application and type of loading condition.

Impulse wave 1.2 x 50 µS.
Frequency 60 Hz.

8 7 6 5 4 3 2 1

REV. 1
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DWG. NO. 02-000-000
 CAD FILE: 200 SERIES

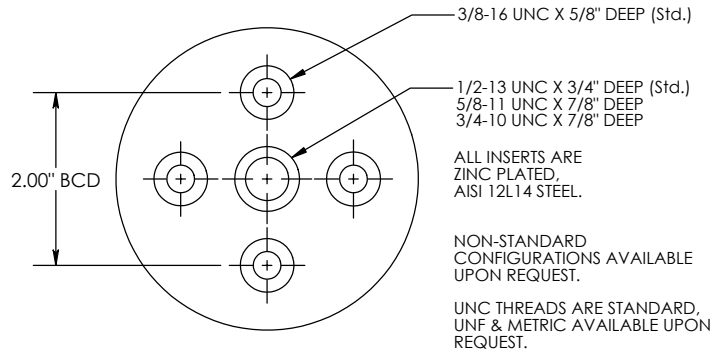


IDENTIFICATION NO. : 02-000

INSULATOR SHOWN WITH 5 INSERTS EACH END: PART NUMBER 02-000-028
 MATERIAL: E01 - BISPHENOL-A (GREY)
 E07 - CYCLOALIPHATIC (GREY)
 FOR CUSTOM INSERT CONFIGURATIONS PLEASE CONTACT OUR SALES DEPT.

TOP							
BOTTOM							
	000	001	SEE 001	002	SEE 002	003	004
	005	006	007	008	009	010	011
	012	013	014	015	016	017	018
	019	020	SEE 020	021	SEE 021	022	023
	024	025	SEE 025	026	SEE 026	027	028

MOUNTING INSERT CONFIGURATIONS (NEMA STANDARD)
 TOP OR BOTTOM

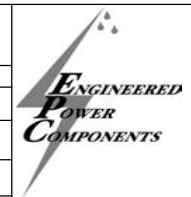


FOR B.I.L. RATINGS 95KV AND HIGHER, ALL INSERT CONFIGURATIONS WITH 3 OR MORE INSERTS EITHER END, WILL BE INTERNALLY CONNECTED (COMMON), ALLOWING FOR SELECTIVE APPLICATIONS.

REVISIONS	0	1
		ADDED E07 EPOXY RM 22/08/2002 DB 22/08/2002

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
 ONE PLACE MM ±0.50
 TWO PLACE MM ±0.25
 TWO PLACE DEC. ±0.020
 THREE PLACE DEC. ±0.010
 ANGLES 1°
 TEMPERATURE ±5°C
 VOLTAGE ±5%
 AMPERAGE ±5%
 RESISTANCE ±5%

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.
 APPROVALS: DB 28/05/1999
 DRAWN BY: DB 28/05/1999
 CHECKED BY: RM 31/05/1999
 ENGINEERING: DB 31/05/1999



5kV INDOOR/OUTDOOR INSULATOR
 A20 UNIFORM STRENGTH CLASS
 60kV BIL

REF.		* STATISTICAL DIMENSION NO. OF SAMPLES [1]
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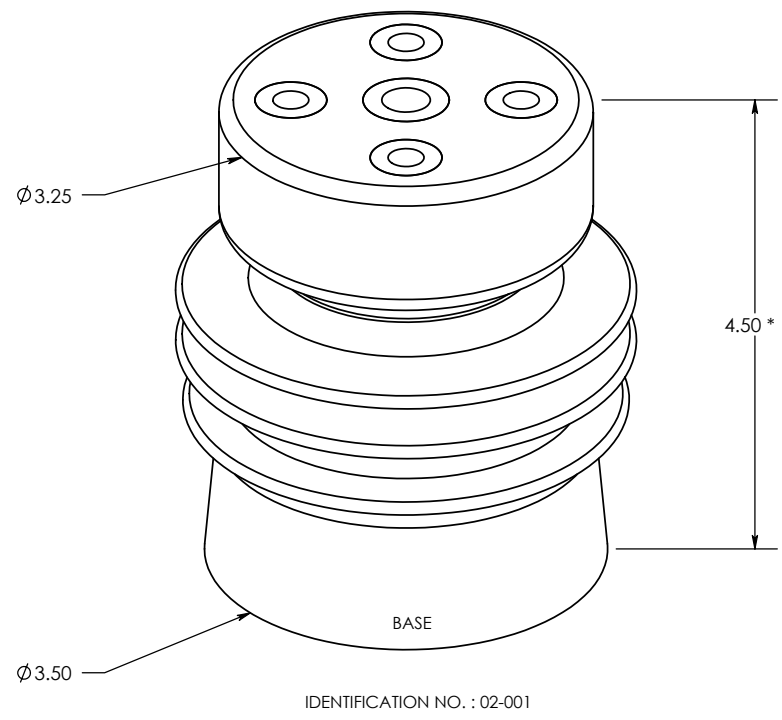
TOOLING REF. T02-000	SIZE A	DWG. NO. 02-000-000	REV. 1
PRODUCT GROUP 200 SERIES	SCALE: 1:1	CAD FILE: 200 SERIES	SHEET 1 OF 1

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

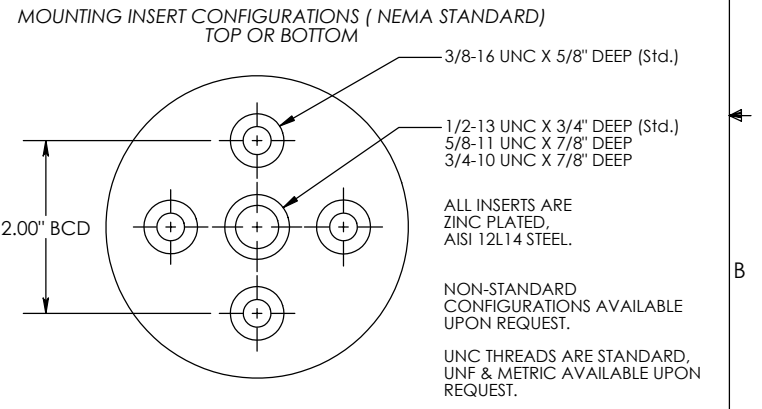
REV. 1
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DWG. NO. 02-001-000
 CAD FILE: 200 SERIES



INSULATOR SHOWN WITH 5 INSERTS EACH END; PART NUMBER 02-001-028
 MATERIAL: E01 - BISPENOL-A (GREY)
 E07 - CYCLOALIPHATIC
 FOR CUSTOM INSERT CONFIGURATIONS PLEASE CONTACT OUR SALES DEPT.

TOP							
BOTTOM							
	000	001	SEE 001	002	SEE 002	003	004
	005	006	007	008	009	010	011
	012	013	014	015	016	017	018
	019	020	SEE 020	021	SEE 021	022	023
	024	025	SEE 025	026	SEE 026	027	028



FOR B.I.L. RATINGS 95KV AND HIGHER, ALL INSERT CONFIGURATIONS WITH 3 OR MORE INSERTS EITHER END, WILL BE INTERNALLY CONNECTED (COMMON), ALLOWING FOR SELECTIVE APPLICATIONS.

0	1
REVISIONS	ADDED E07 EPOXY RM 22/08/2002 DB 22/08/2002
REF.	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

ONE PLACE MM	±0.50
TWO PLACE MM	±0.25
TWO PLACE DEC.	±0.20
THREE PLACE DEC.	±0.10
ANGLES	1°
TEMPERATURE	±5 °C
VOLTAGE	±5 %
AMPERAGE	±5 %
RESISTANCE	±5 %

* STATISTICAL DIMENSION
 NO. OF SAMPLES [1]

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.	
APPROVALS	DATE
DRAWN BY: DB	28/05/1999
CHECKED BY: RM	31/05/1999
ENGINEERING DB	31/05/1999
TOOLING REF.	T02-001
PRODUCT GROUP	200 SERIES

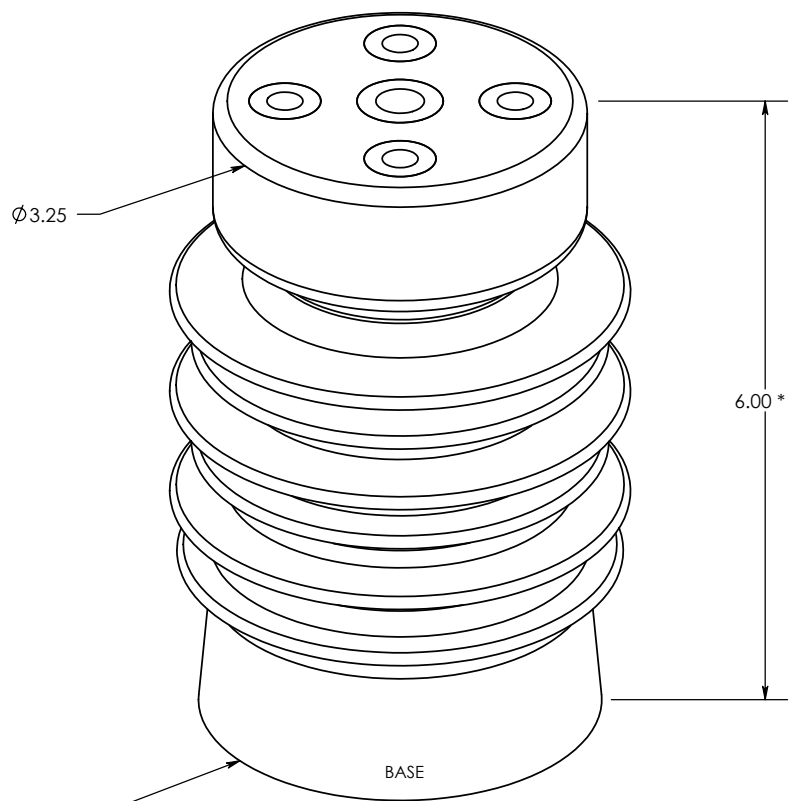
8kV INDOOR/OBUTDOOR INSULATOR
 A20 UNIFORM STRENGTH CLASS
 75KV BIL

SIZE A	DWG. NO. 02-001-000	REV. 1
SCALE: 1:1		CAD FILE: 200 SERIES SHEET 1 OF 1

8 7 6 5 4 3 2 1

REV. 1
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DWG. NO. 02-002-000
 CAD FILE: 200 SERIES



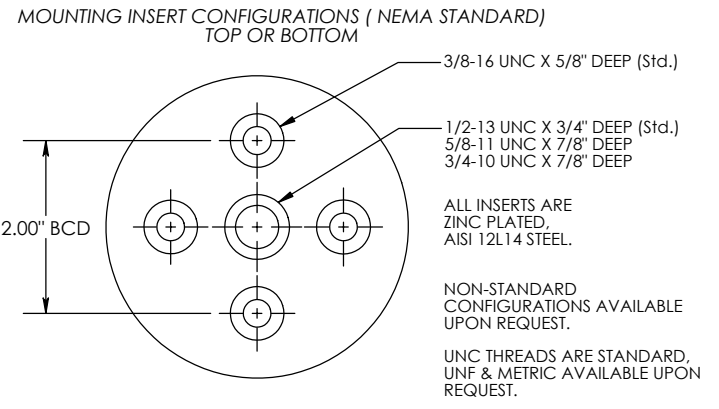
IDENTIFICATION NO. : 02-002

INSULATOR SHOWN WITH 5 INSERTS EACH END: PART NUMBER 02-002-028

MATERIAL: E01 - BISPHENOL-A (GREY)
 E07 - CYCLOALIPHATIC (GREY)

FOR CUSTOM INSERT CONFIGURATIONS PLEASE CONTACT OUR SALES DEPT.

TOP							
BOTTOM							
	000	001	SEE 001	002	SEE 002	003	004
	005	006	007	008	009	010	011
	012	013	014	015	016	017	018
	019	020	SEE 020	021	SEE 021	022	023
	024	025	SEE 025	026	SEE 026	027	028



FOR B.I.L. RATINGS 95KV AND HIGHER, ALL INSERT CONFIGURATIONS WITH 3 OR MORE INSERTS EITHER END, WILL BE INTERNALLY CONNECTED (COMMON), ALLOWING FOR SELECTIVE APPLICATIONS.

0	1
REVISIONS	ADDED E07 EPOXY RM 22/08/2002 DB 22/08/2002
REF.	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.
ONE PLACE MM ±0.50	APPROVALS
TWO PLACE MM ±0.25	DATE
TWO PLACE DEC. ±0.020	DRAWN BY: DB 28/05/1999
THREE PLACE DEC. ±0.010	CHECKED BY: RM 28/05/1999
ANGLES 1°	ENGINEERING DB 28/05/1999
TEMPERATURE ±5 °C	TOOLING REF. T02-002
VOLTAGE ±5 %	PRODUCT GROUP 200 SERIES
AMPERAGE ±5 %	
RESISTANCE ±5 %	
* STATISTICAL DIMENSION	
NO. OF SAMPLES [1]	

15KV
 INDOOR/OUTDOOR
 INSULATOR

A20 UNIFORM
 STRENGTH CLASS

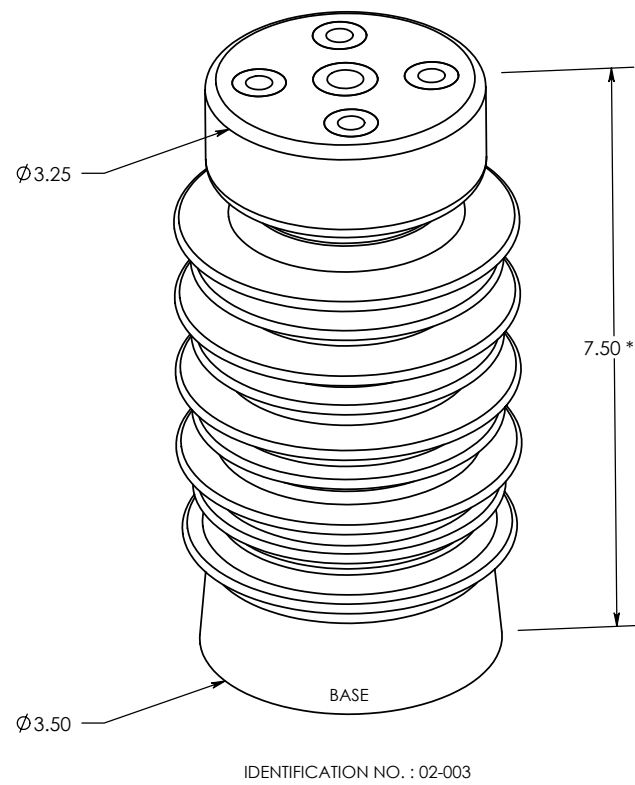
95KV BIL

SIZE A DWG. NO. 02-002-000
 SCALE: 1:1.5 CAD FILE: 200 SERIES SHEET 1 OF 1

8 7 6 5 4 3 2 1

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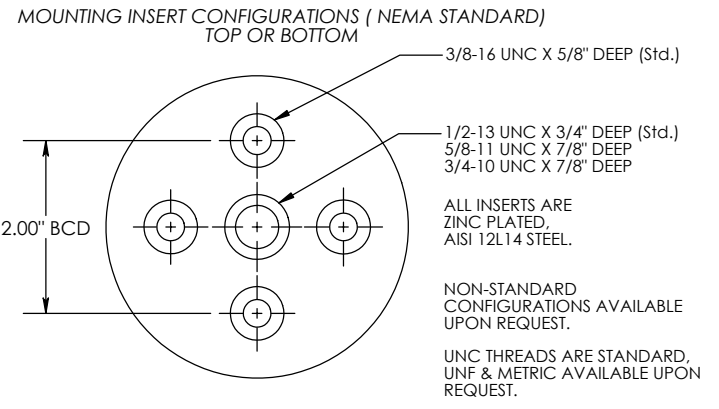
D
 CAD FILE: 200 SERIES
 C
 DWG. NO. 02-003-000



INSULATOR SHOWN WITH 5 INSERTS EACH END: PART NUMBER 02-003-028

MATERIAL: E01 - BISPHENOL-A (GREY)
 E07 - CYCLOALIPHATIC (GREY)
 FOR CUSTOM INSERT CONFIGURATIONS PLEASE CONTACT OUR SALES DEPT.

TOP							
BOTTOM							
	000	001	SEE 001	002	SEE 002	003	004
	005	006	007	008	009	010	011
	012	013	014	015	016	017	018
	019	020	SEE 020	021	SEE 021	022	023
	024	025	SEE 025	026	SEE 026	027	028



FOR B.I.L. RATINGS 95KV AND HIGHER, ALL INSERT CONFIGURATIONS WITH 3 OR MORE INSERTS EITHER END, WILL BE INTERNALLY CONNECTED (COMMON), ALLOWING FOR SELECTIVE APPLICATIONS.

0	1
REVISIONS	ADDED E07 EPOXY RM 22/08/2002 DB 22/08/2002
REF.	

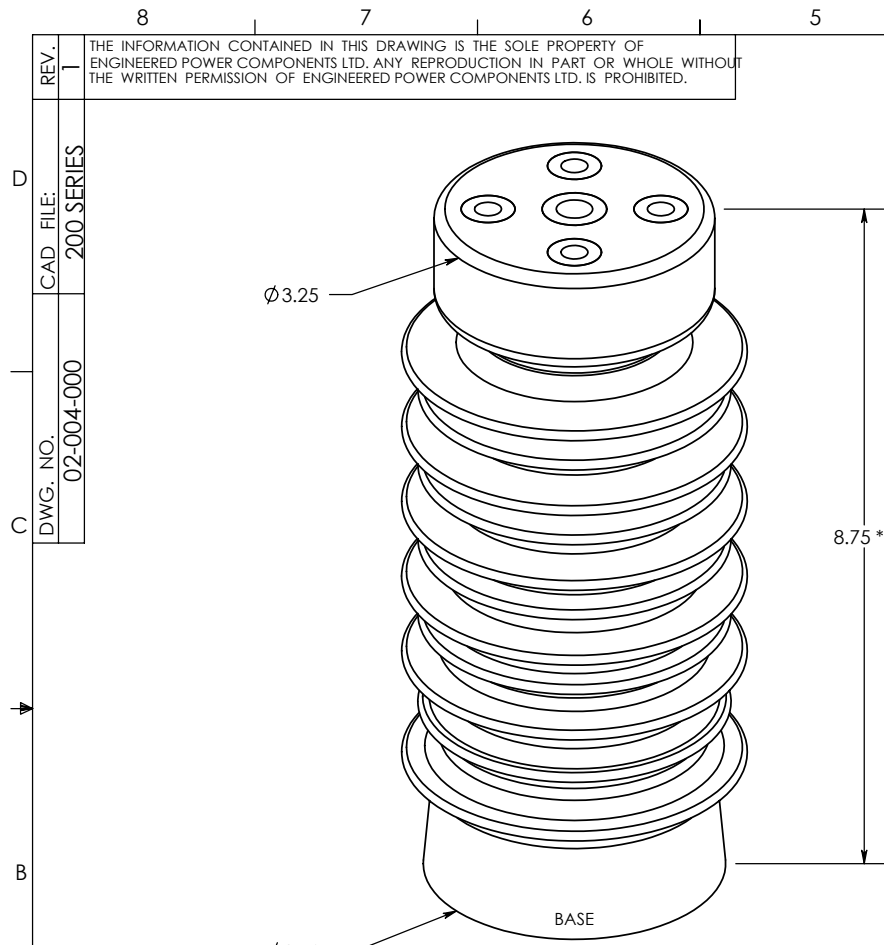
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.
ONE PLACE MM ±0.50	APPROVALS
TWO PLACE MM ±0.25	DATE
TWO PLACE DEC. ±0.020	DRAWN BY: DB 28/05/1999
THREE PLACE DEC. ±0.010	CHECKED BY: RM 28/05/1999
ANGLES 1°	ENGINEERING DB 31/05/1999
TEMPERATURE ±5 °C	TOOLING REF. T02-003
VOLTAGE ±5 %	PRODUCT GROUP 200 SERIES
AMPERAGE ±5 %	
RESISTANCE ±5 %	
* STATISTICAL DIMENSION	
NO. OF SAMPLES [1]	

20kV
 INDOOR/OUTDOOR
 INSULATOR

A20 UNIFORM
 STRENGTH CLASS

110kV BIL

SIZE A DWG. NO. 02-003-000
 SCALE: 2 CAD FILE: 200 SERIES SHEET 1 OF 1



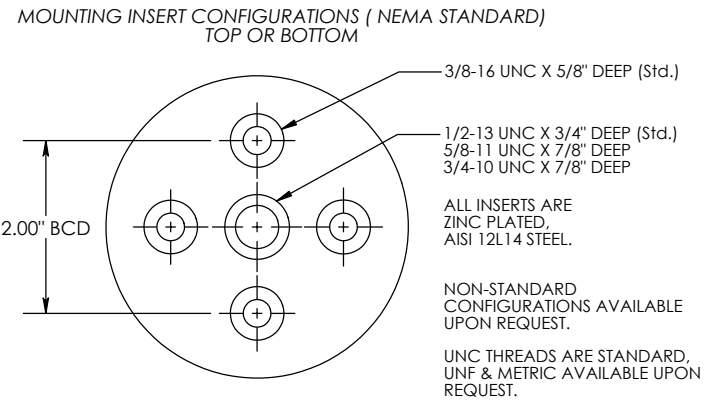
IDENTIFICATION NO. : 02-004

INSULATOR SHOWN WITH 5 INSERTS EACH END: PART NUMBER 02-004-028

MATERIAL: E01 - BISPHENOL-A (GREY)
E07 - CYCLOALIPHATIC (GREY)

FOR CUSTOM INSERT CONFIGURATIONS PLEASE CONTACT OUR SALES DEPT.

	8	7	6	5	4	3	2	1
TOP								
BOTTOM								
	000	001	SEE 001	002	SEE 002	003	004	
	005	006	007	008	009	010	011	
	012	013	014	015	016	017	018	
	019	020	SEE 020	021	SEE 021	022	023	
	024	025	SEE 025	026	SEE 026	027	028	



FOR B.I.L. RATINGS 95KV AND HIGHER, ALL INSERT CONFIGURATIONS WITH 3 OR MORE INSERTS EITHER END, WILL BE INTERNALLY CONNECTED (COMMON), ALLOWING FOR SELECTIVE APPLICATIONS.

REV.	1
CAD FILE:	200 SERIES
DWG. NO.	02-004-000

0	1
REVISIONS	ADDED E07 EPOXY RM 22/08/2002 DB 22/08/2002

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.
ONE PLACE MM ±0.50	APPROVALS
TWO PLACE MM ±0.25	DATE
TWO PLACE DEC. ±0.020	DRAWN BY: DB 28/05/1999
THREE PLACE DEC. ±0.010	CHECKED BY: RM 28/05/1999
ANGLES 1°	ENGINEERING DB 31/05/1999
TEMPERATURE ±5 °C	TOOLING REF. T02-004
VOLTAGE ±5 %	PRODUCT GROUP 200 SERIES
AMPERAGE ±5 %	
RESISTANCE ±5 %	

25kV INDOOR/OUTDOOR INSULATOR

A20 UNIFORM STRENGTH CLASS

125kV BIL

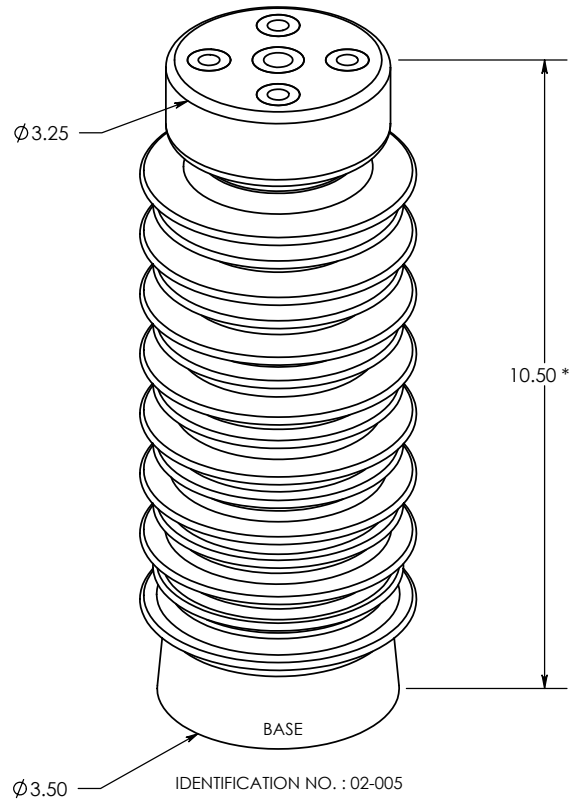
SIZE A DWG. NO. 02-004-000

SCALE: 2 CAD FILE: 200 SERIES SHEET 1 OF 1

8 7 6 5 4 3 2 1

REV. 0
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CAD FILE: 200 SERIES
 DWG. NO. 02-005-000

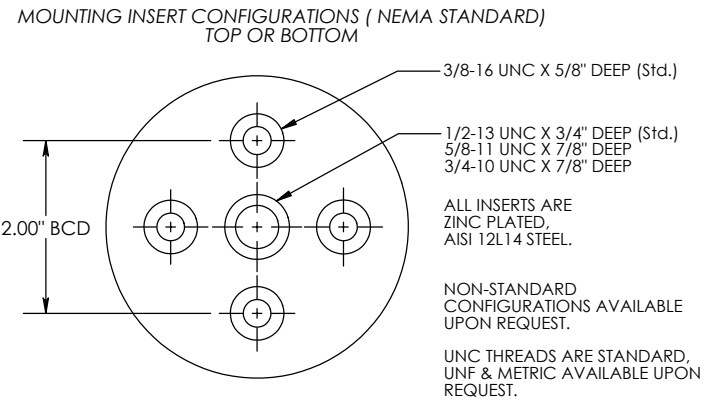


INSULATOR SHOWN WITH 5 INSERTS EACH END: PART NUMBER 02-005-028

MATERIAL: E01 - BISPHENOL-A (GREY)
 E07 - CYCLOALIPHATIC (GREY)

FOR CUSTOM INSERT CONFIGURATIONS PLEASE CONTACT OUR SALES DEPT.

TOP							
BOTTOM							
	000	001	SEE 001	002	SEE 002	003	004
	005	006	007	008	009	010	011
	012	013	014	015	016	017	018
	019	020	SEE 020	021	SEE 021	022	023
	024	025	SEE 025	026	SEE 026	027	028



FOR B.I.L. RATINGS 95KV AND HIGHER, ALL INSERT CONFIGURATIONS WITH 3 OR MORE INSERTS EITHER END, WILL BE INTERNALLY CONNECTED (COMMON), ALLOWING FOR SELECTIVE APPLICATIONS.

0	1
REVISIONS	ADDED E07 EPOXY RM 22/08/2002 DB 22/08/2002
REF.	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

ONE PLACE MM ±0.50
 TWO PLACE MM ±0.25
 TWO PLACE DEC. ±0.020
 THREE PLACE DEC. ±0.010
 ANGLES 1°

TEMPERATURE ±5°C
 VOLTAGE ±5%
 AMPERAGE ±5%
 RESISTANCE ±5%

* STATISTICAL DIMENSION
 NO. OF SAMPLES [1]

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.

APPROVALS	DATE
DRAWN BY: DB	28/05/1999
CHECKED BY: RM	28/05/1999
ENGINEERING DB	31/05/1999

TOOLING REF. T02-005
 PRODUCT GROUP 200 SERIES

38kV
 INDOOR/OUTDOOR
 INSULATOR

A20 UNIFORM
 STRENGTH CLASS

150kV BIL

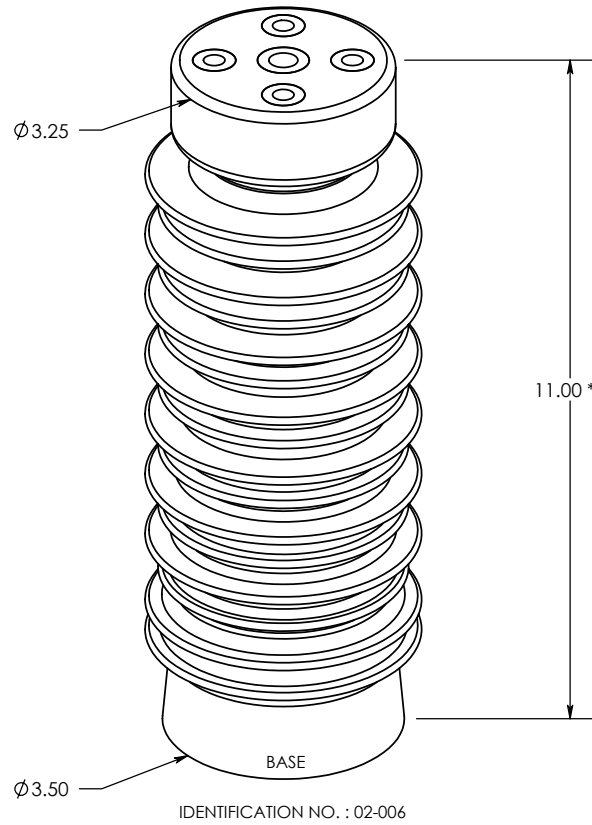
SIZE A DWG. NO. 02-005-000
 SCALE: 1:2.5 CAD FILE: 200 SERIES SHEET 1 OF 1

8 7 6 5 4 3 2 1

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CAD FILE: 200 SERIES
 DWG. NO. 02-006-000

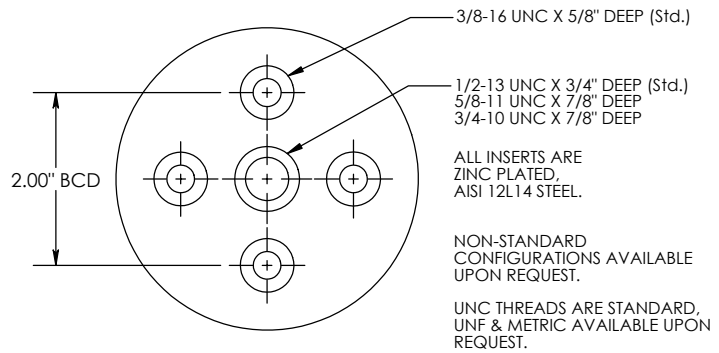
D
 C
 B
 A



INSULATOR SHOWN WITH 5 INSERTS EACH END: PART NUMBER 02-006-028
 MATERIAL: E01 - BISPENOL-A (GREY)
 E07 - CYCLOALIPHATIC (GREY)
 FOR CUSTOM INSERT CONFIGURATIONS PLEASE CONTACT OUR SALES DEPT.

TOP							
BOTTOM							
	000	001	SEE 001	002	SEE 002	003	004
	005	006	007	008	009	010	011
	012	013	014	015	016	017	018
	019	020	SEE 020	021	SEE 021	022	023
	024	025	SEE 025	026	SEE 026	027	028

MOUNTING INSERT CONFIGURATIONS (NEMA STANDARD)
 TOP OR BOTTOM



FOR B.I.L. RATINGS 95KV AND HIGHER, ALL INSERT CONFIGURATIONS WITH 3 OR MORE INSERTS EITHER END, WILL BE INTERNALLY CONNECTED (COMMON), ALLOWING FOR SELECTIVE APPLICATIONS.

REVISIONS
 0 1

ADDED E07 EPOXY RM 22/08/2002 DB 22/08/2002

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1°	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.
TEMPERATURE ±5 °C VOLTAGE ±5 % AMPERAGE ±5 % RESISTANCE ±5 %	APPROVALS DATE DRAWN BY: DB 28/05/1999 CHECKED BY: RM 28/05/1999 ENGINEERING DB 31/05/1999
* STATISTICAL DIMENSION NO. OF SAMPLES [1]	TOOLING REF. T02-006 PRODUCT GROUP 200 SERIES

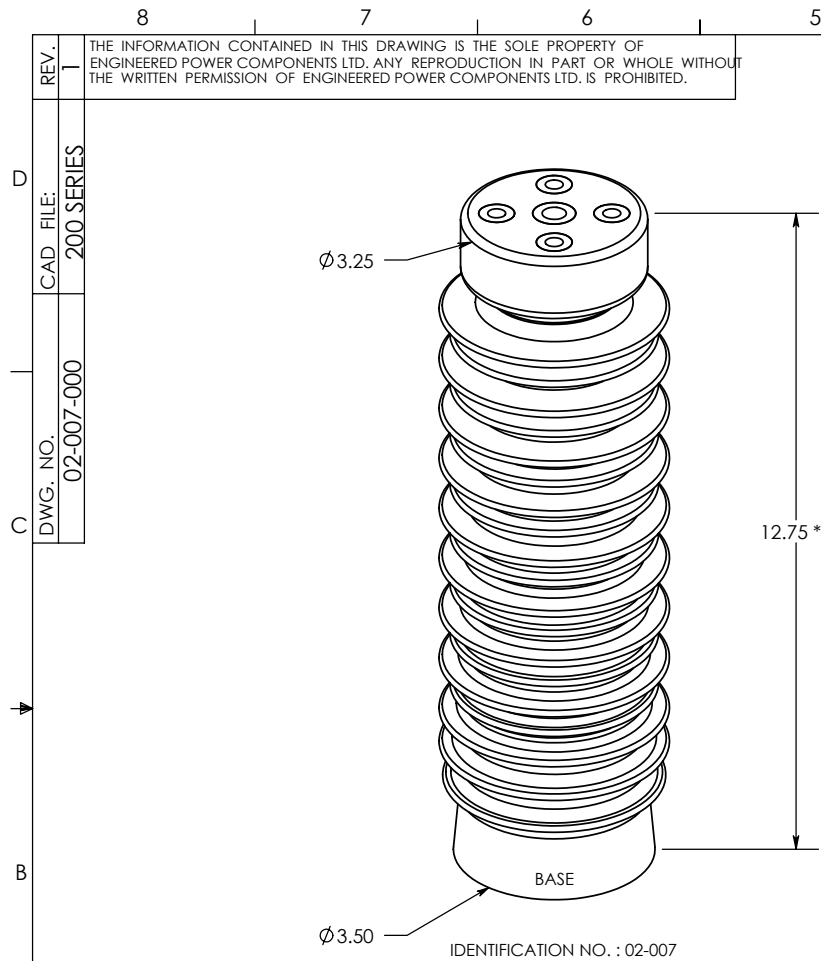
38KV
 INDOOR/OUTDOOR
 INSULATOR

A20 UNIFORM
 STRENGTH CLASS

150KV BIL

SIZE A DWG. NO. 02-006-000
 SCALE: 1:2.5 CAD FILE: 200 SERIES SHEET 1 OF 1

8 7 6 5 4 3 2 1

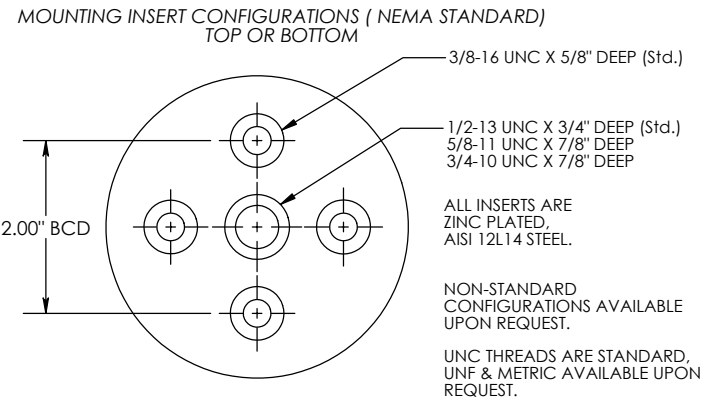


INSULATOR SHOWN WITH 5 INSERTS EACH END: PART NUMBER 02-007-028

MATERIAL: E01 - BISPHENOL-A (GREY)
E07 - CYCLOALIPHATIC (GREY)

FOR CUSTOM INSERT CONFIGURATIONS PLEASE CONTACT OUR SALES DEPT.

	8	7	6	5	4	3	2	1
TOP								
BOTTOM								
	000	001	SEE 001	002	SEE 002	003	004	
	005	006	007	008	009	010	011	
	012	013	014	015	016	017	018	
	019	020	SEE 020	021	SEE 021	022	023	
	024	025	SEE 025	026	SEE 026	027	028	



FOR B.I.L. RATINGS 95KV AND HIGHER, ALL INSERT CONFIGURATIONS WITH 3 OR MORE INSERTS EITHER END, WILL BE INTERNALLY CONNECTED (COMMON), ALLOWING FOR SELECTIVE APPLICATIONS.

A	0	1	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1° TEMPERATURE ±5 °C VOLTAGE ±5 % AMPERAGE ±5 % RESISTANCE ±5 %	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS DATE DRAWN BY: DB 28/05/1999 CHECKED BY: RM 28/05/1999 ENGINEERING DB 31/05/1999 TOOLING REF. T02-007 PRODUCT GROUP 200 SERIES	<p>38kV INDOOR/OUTDOOR INSULATOR</p> <p>A20 UNIFORM STRENGTH CLASS</p> <p>170kV BIL</p>	SIZE A DWG. NO. 02-007-000 REV. 1
	REVISIONS	ADDED E07 EPOXY RM 22/08/2002 DB 22/08/2002				
	REF.		* STATISTICAL DIMENSION NO. OF SAMPLES [1]			

REV. 1

CAD FILE: 200 SERIES

DWG. NO. 02-007-000

D

C

B

A

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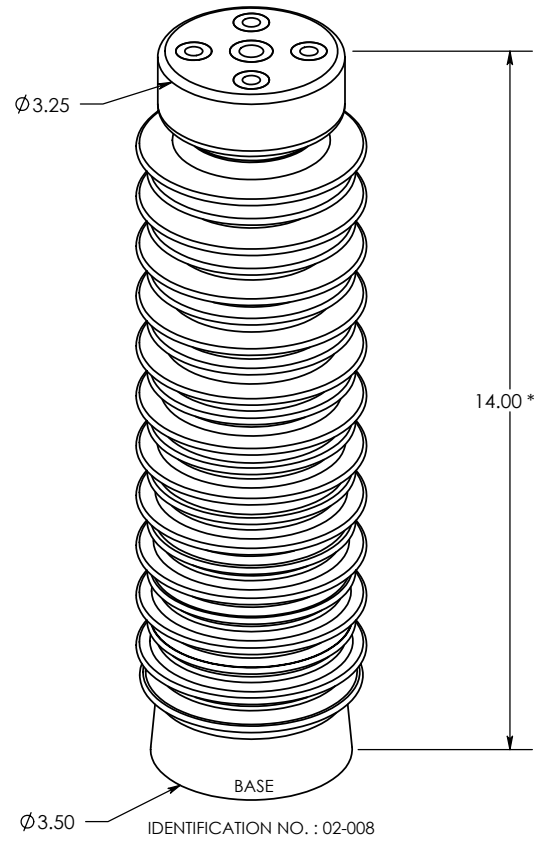
8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

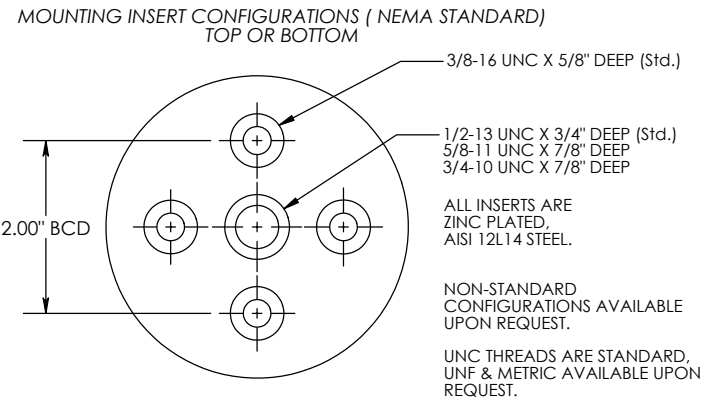
REV. 1
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CAD FILE: 200 SERIES
 DWG. NO. 02-008-000



INSULATOR SHOWN WITH 5 INSERTS EACH END: PART NUMBER 02-008-028
 MATERIAL: E01 - BISPHENOL-A (GREY)
 E07 - CYCLOALIPHATIC (GREY)
 FOR CUSTOM INSERT CONFIGURATIONS PLEASE CONTACT OUR SALES DEPT.

TOP							
BOTTOM							
	000	001	SEE 001	002	SEE 002	003	004
	005	006	007	008	009	010	011
	012	013	014	015	016	017	018
	019	020	SEE 020	021	SEE 021	022	023
	024	025	SEE 025	026	SEE 026	027	028



FOR B.I.L. RATINGS 95KV AND HIGHER, ALL INSERT CONFIGURATIONS WITH 3 OR MORE INSERTS EITHER END, WILL BE INTERNALLY CONNECTED (COMMON), ALLOWING FOR SELECTIVE APPLICATIONS.

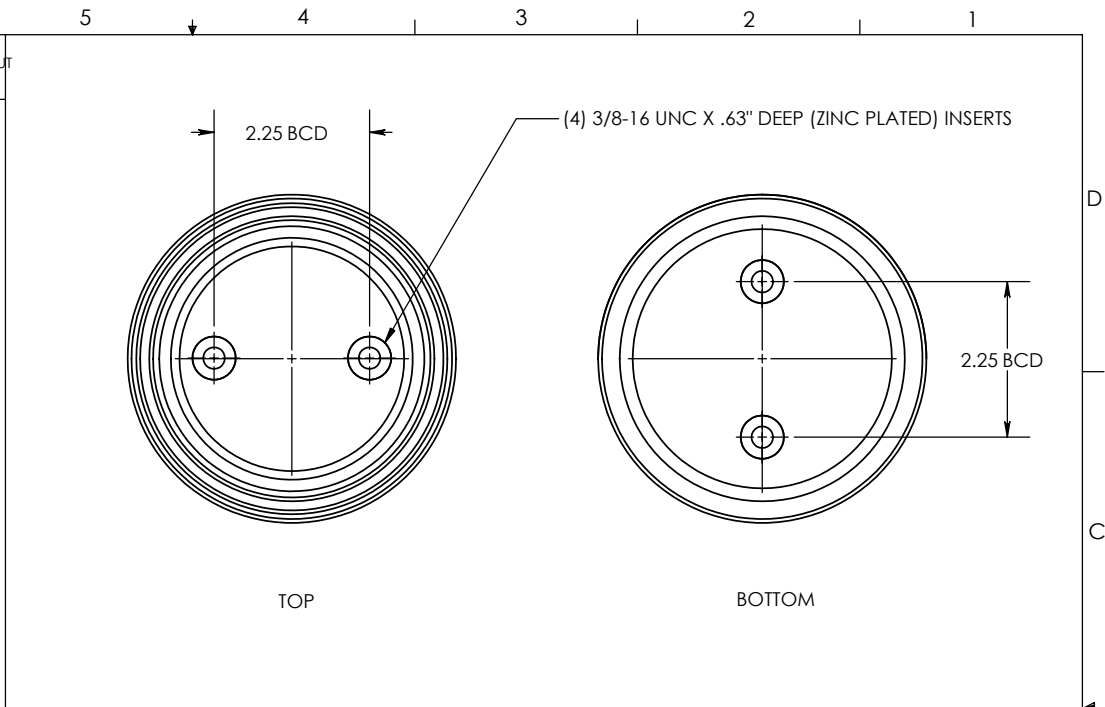
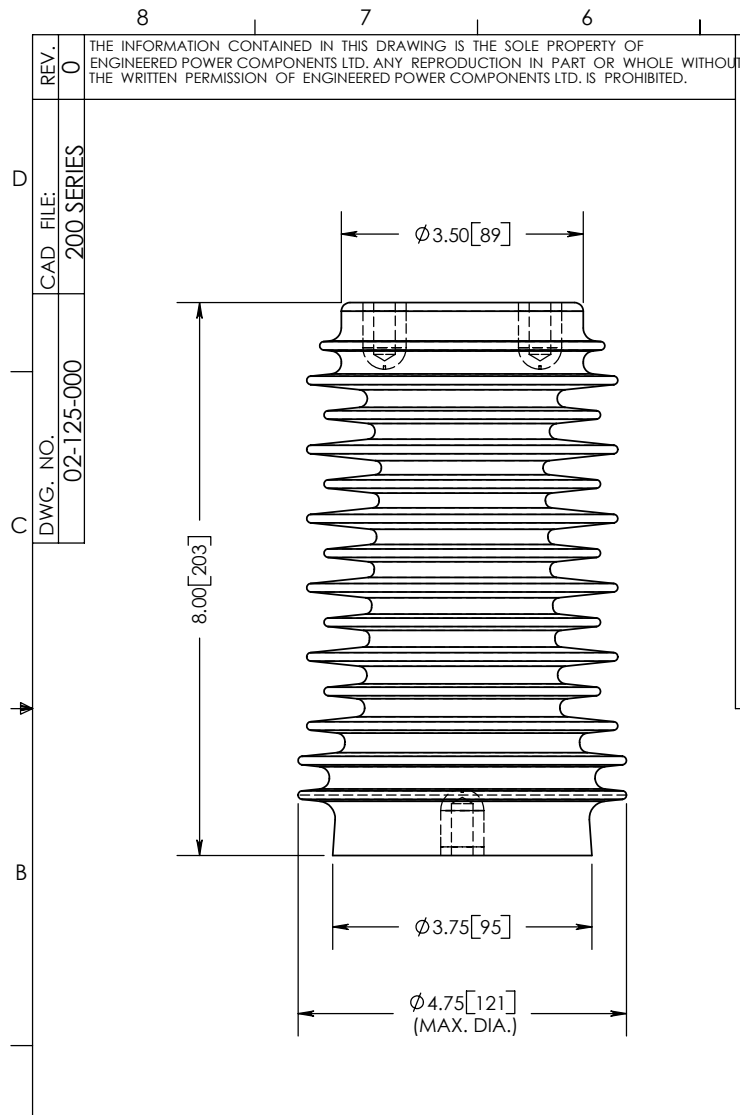
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REVISIONS	ADDED E07 EPOXY RM, 22/08/2002 DB 22/08/2002
REF.	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
 ONE PLACE MM ±0.50
 TWO PLACE MM ±0.25
 TWO PLACE DEC. ±0.020
 THREE PLACE DEC. ±0.010
 ANGLES 1°
 TEMPERATURE ±5 °C
 VOLTAGE ±5 %
 AMPERAGE ±5 %
 RESISTANCE ±5 %

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.
 APPROVALS DATE
 DRAWN BY: DB 28/05/1999
 CHECKED BY: RM 28/05/1999
 ENGINEERING DB 31/05/1999
 TOOLING REF. T02-008
 PRODUCT GROUP 200 SERIES

48kV INDOOR/OUTDOOR INSULATOR
 A20 UNIFORM STRENGTH CLASS
 200kV BIL
 SIZE A DWG. NO. 02-008-000
 SCALE: 3 SHEET 1 OF 1


8 7 6 5 4 3 2 1

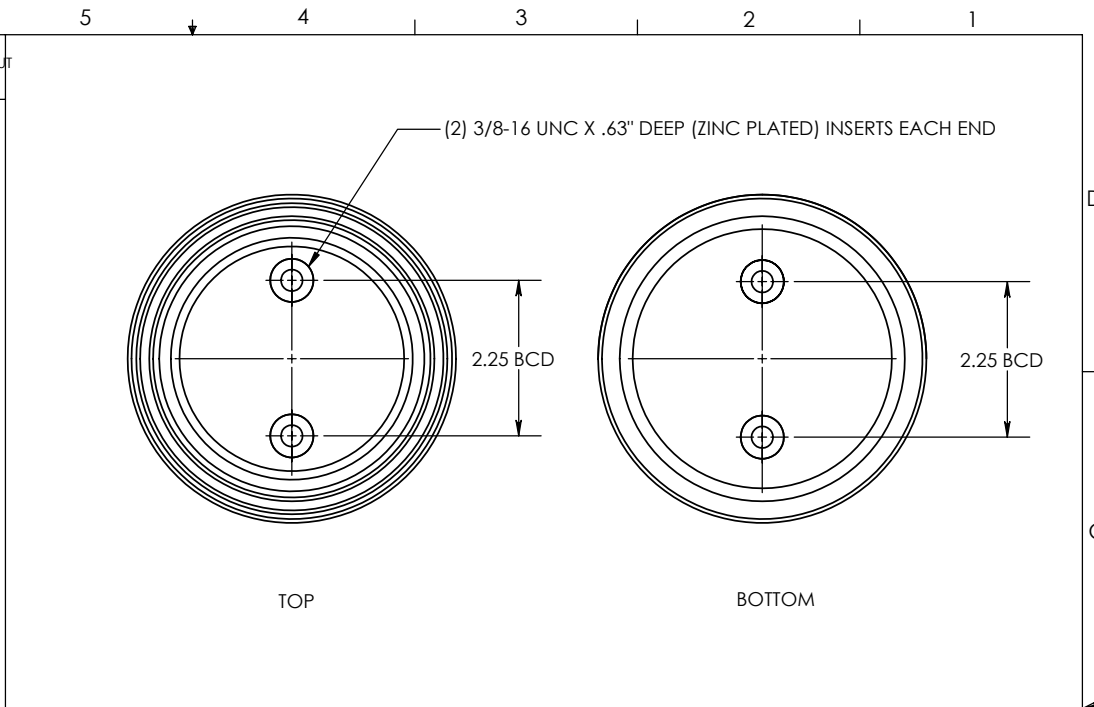
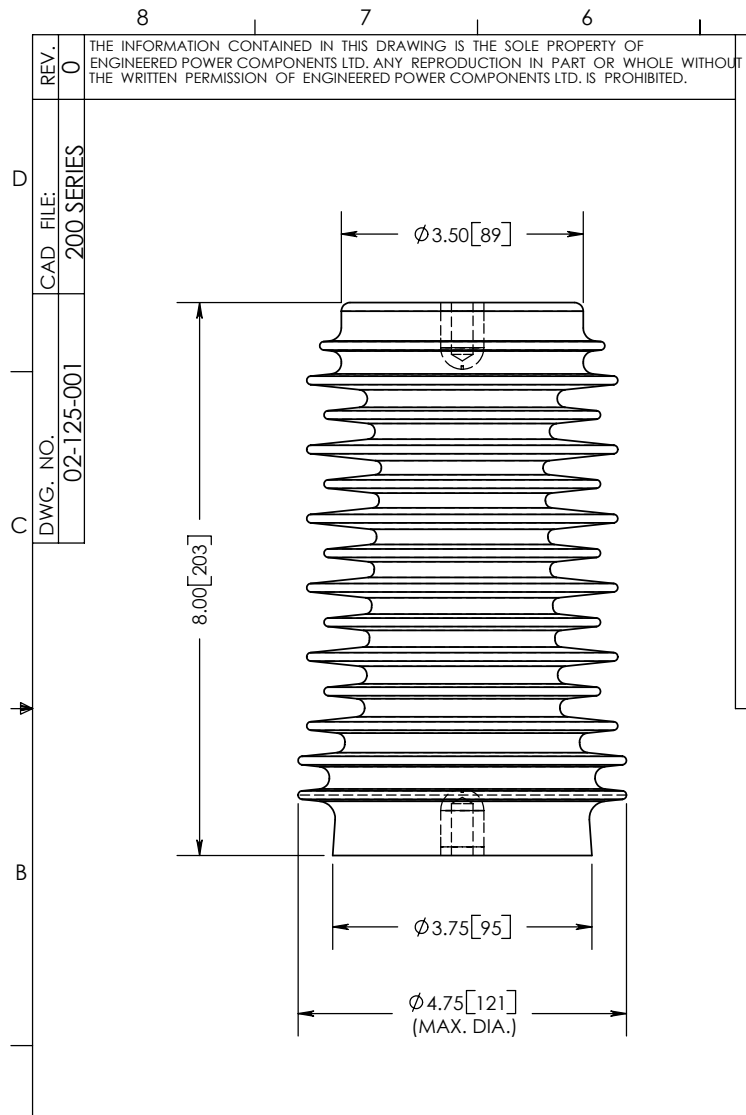


NOTES:
 1. ENDS TO BE FLAT & PARALLEL
 2. REMOVE ALL FLASHING

MATERIALS:
 1. E07 CYCLOALIPHATIC EPOXY
 2. AISI 12L14 STEEL INSERTS (ZINC PLATED)

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH ANSI C29.1-1988
 2. RATED VOLTAGE 14.4kV
 3. BASIC IMPULSE LEVEL 125kV
 4. LOW FREQUENCY WITHSTAND VOLTAGE 60kV
 5. CREEP DISTANCE 24" (610mm)
 6. CANTILEVER LOAD 1000 lbf (4400N)
 7. WEIGHT 5.0 lbs (2.3Kg)


A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ± 0.50 TWO PLACE MM ± 0.25 TWO PLACE DEC. ± 0.020 THREE PLACE DEC. ± 0.010 ANGLES 1° TEMPERATURE $\pm 5^\circ\text{C}$ VOLTAGE $\pm 5\%$ AMPERAGE $\pm 5\%$ RESISTANCE $\pm 5\%$	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS: DATE DRAWN BY: DB 18/10/2001 CHECKED BY: ENGINEERING	 OUTDOOR APPARATUS INSULATOR 14.4kV/125kV BIL
	REF.				



NOTES:
 1. ENDS TO BE FLAT & PARALLEL
 2. REMOVE ALL FLASHING

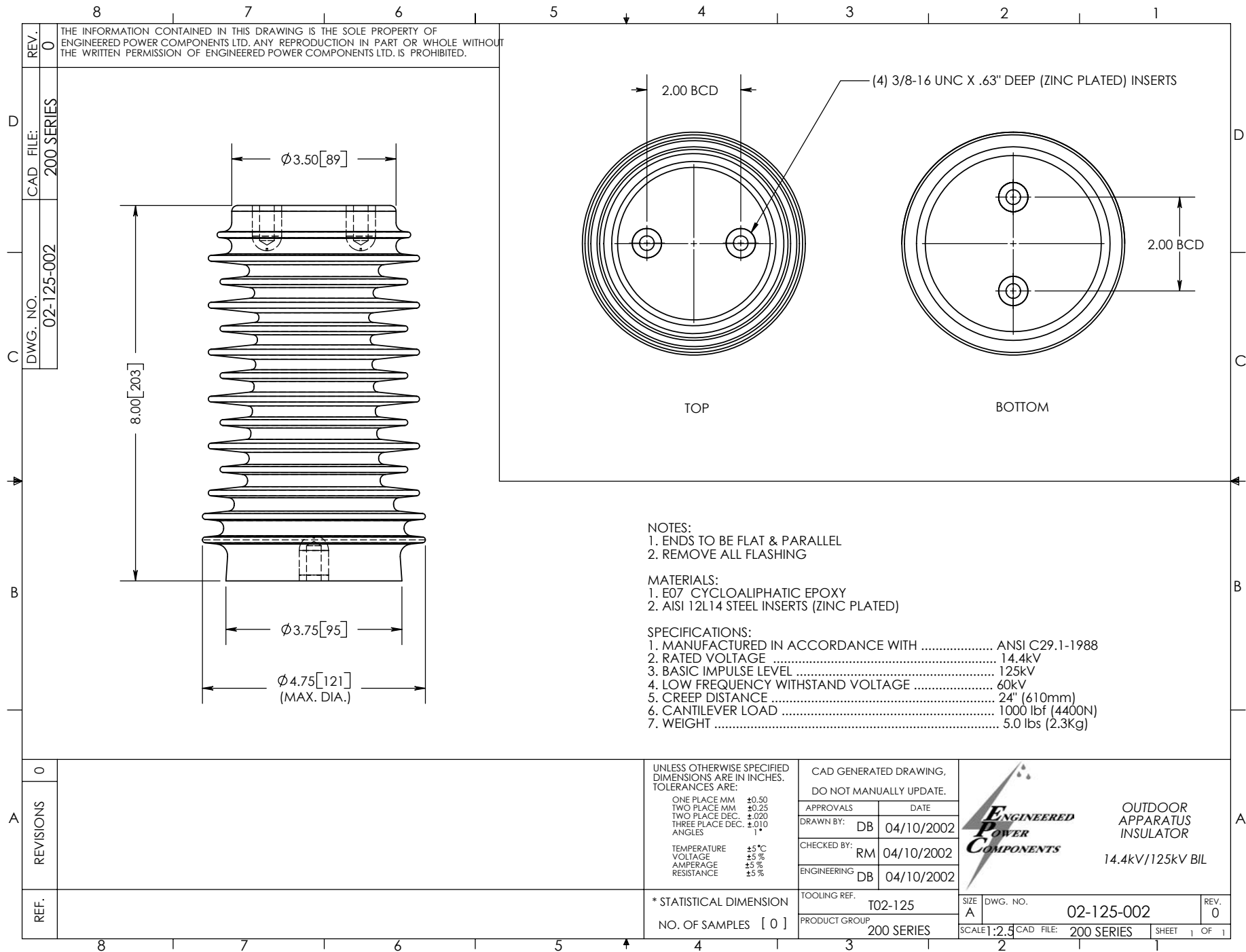
MATERIALS:
 1. E07 CYCLOALIPHATIC EPOXY
 2. AISI 12L14 STEEL INSERTS (ZINC PLATED)

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH ANSI C29.1-1988
 2. RATED VOLTAGE 14.4kV
 3. BASIC IMPULSE LEVEL 125kV
 4. LOW FREQUENCY WITHSTAND VOLTAGE 60kV
 5. CREEP DISTANCE 24" (610mm)
 6. CANTILEVER LOAD 1000 lbf (4400N)
 7. WEIGHT 5.0 lbs (2.3Kg)

A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1° TEMPERATURE ±5°C VOLTAGE ±5% AMPERAGE ±5% RESISTANCE ±5%	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS: DB 13/03/2002 CHECKED BY: RM 14/05/2002 ENGINEERING: DB 14/05/2002	 OUTDOOR APPARATUS INSULATOR 14.4kV/125kV BIL
	REF.				

REV. 0
 CAD FILE: 200 SERIES
 DWG. NO. 02-125-001

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REV. 0
 CAD FILE: 200 SERIES
 DWG. NO. 02-125-002

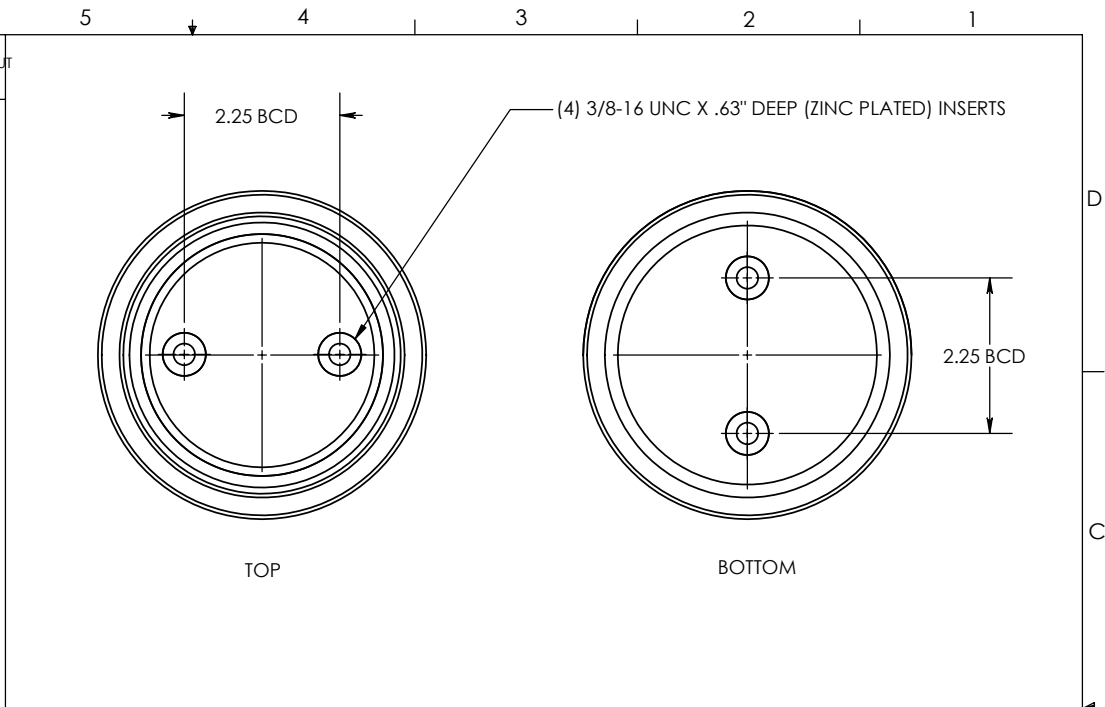
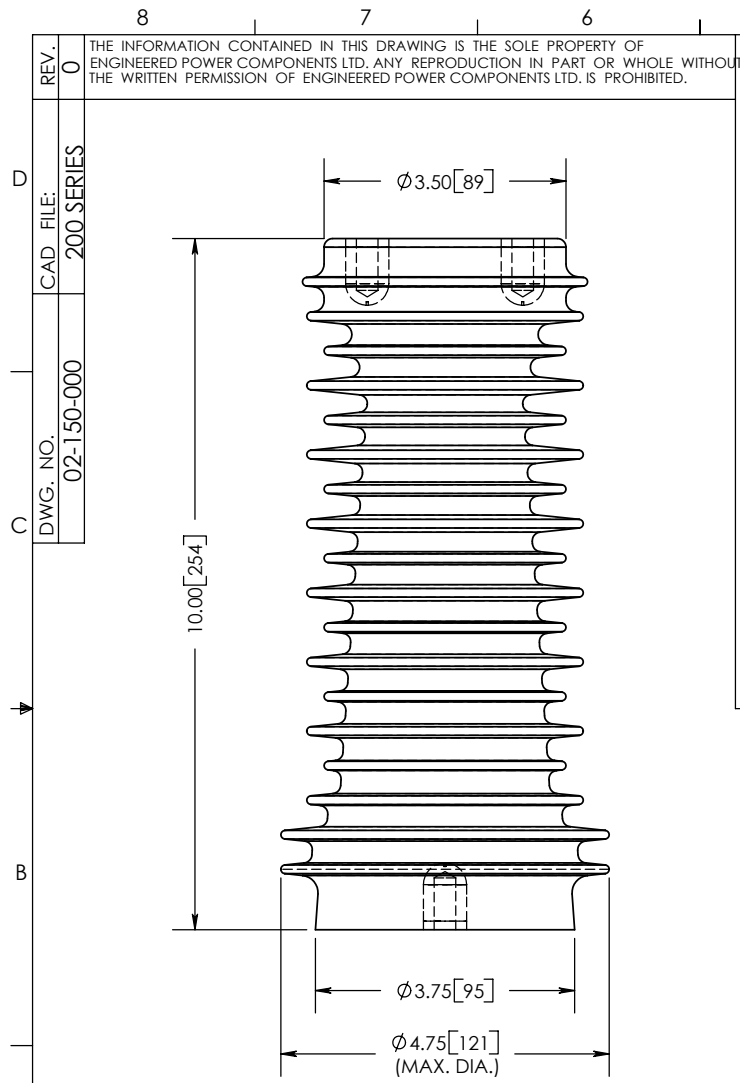
- NOTES:
 1. ENDS TO BE FLAT & PARALLEL
 2. REMOVE ALL FLASHING

- MATERIALS:
 1. E07 CYCLOALIPHATIC EPOXY
 2. AISI 12L14 STEEL INSERTS (ZINC PLATED)

- SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH ANSI C29.1-1988
 2. RATED VOLTAGE 14.4kV
 3. BASIC IMPULSE LEVEL 125kV
 4. LOW FREQUENCY WITHSTAND VOLTAGE 60kV
 5. CREEP DISTANCE 24" (610mm)
 6. CANTILEVER LOAD 1000 lbf (4400N)
 7. WEIGHT 5.0 lbs (2.3Kg)

REVISIONS
 0


UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE.		OUTDOOR APPARATUS INSULATOR 14.4kV/125kV BIL
ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1°	APPROVALS _____ DATE _____ DRAWN BY: DB 04/10/2002 CHECKED BY: RM 04/10/2002 ENGINEERING DB 04/10/2002		
TEMPERATURE ±5 °C VOLTAGE ±5 % AMPERAGE ±5 % RESISTANCE ±5 %	TOOLING REF. T02-125 PRODUCT GROUP 200 SERIES		

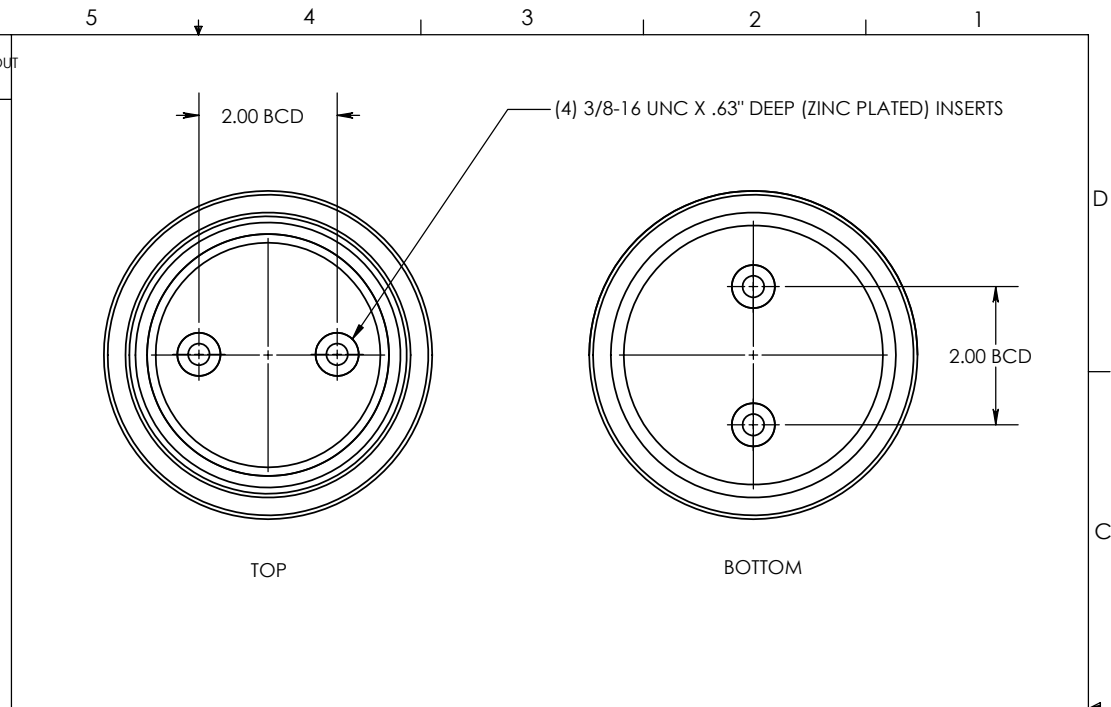
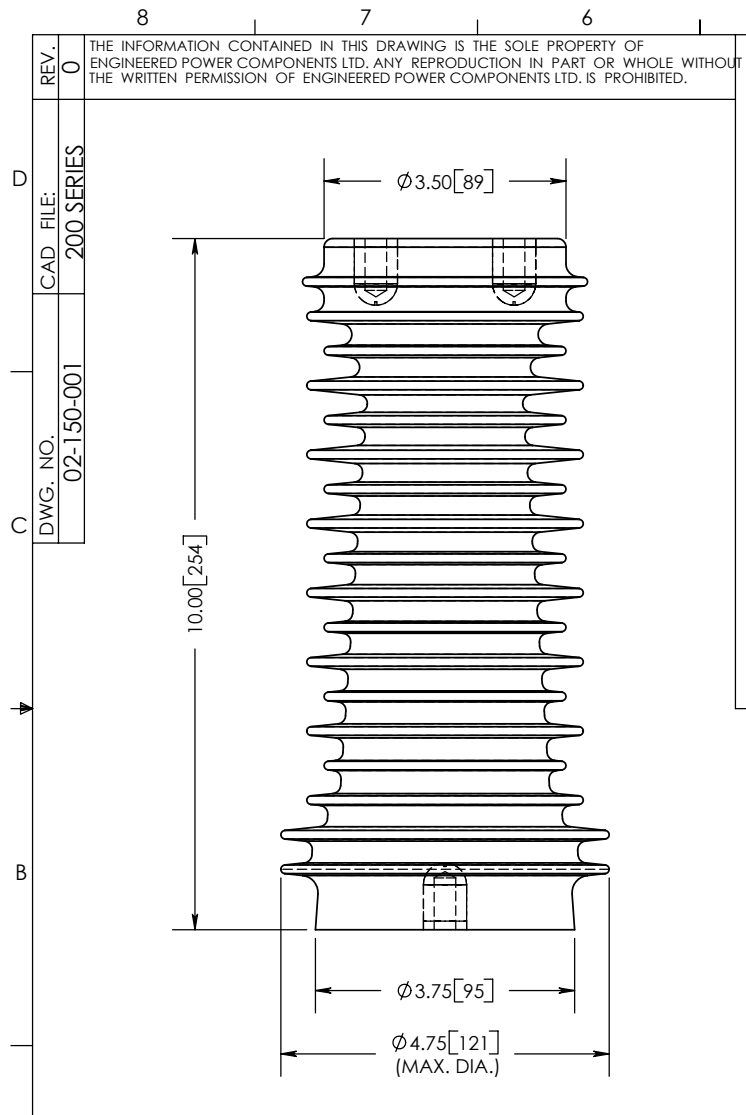


- NOTES:
 1. ENDS TO BE FLAT & PARALLEL
 2. REMOVE ALL FLASHING

- MATERIALS:
 1. E07 CYCLOALIPHATIC EPOXY
 2. AISI 12L14 STEEL INSERTS (ZINC PLATED)

- SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH ANSI C29.1-1988
 2. RATED VOLTAGE 38kV
 3. BASIC IMPULSE LEVEL 150kV
 4. LOW FREQUENCY WITHSTAND VOLTAGE 80kV
 5. CREEP DISTANCE 24" (610mm)
 6. CANTILEVER LOAD 1000 lbf (4400N)
 7. WEIGHT 5.5 lbs (2.5kg)


A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ± 0.50 TWO PLACE MM ± 0.25 TWO PLACE DEC. ± 0.020 THREE PLACE DEC. ± 0.010 ANGLES 1° TEMPERATURE $\pm 5^\circ\text{C}$ VOLTAGE $\pm 5\%$ AMPERAGE $\pm 5\%$ RESISTANCE $\pm 5\%$	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS _____ DATE _____ DRAWN BY: DB 17/10/2001 CHECKED BY: _____ ENGINEERING _____	 OUTDOOR APPARATUS INSULATOR 38kV/150kV BIL
	REF.	* STATISTICAL DIMENSION NO. OF SAMPLES [0]			

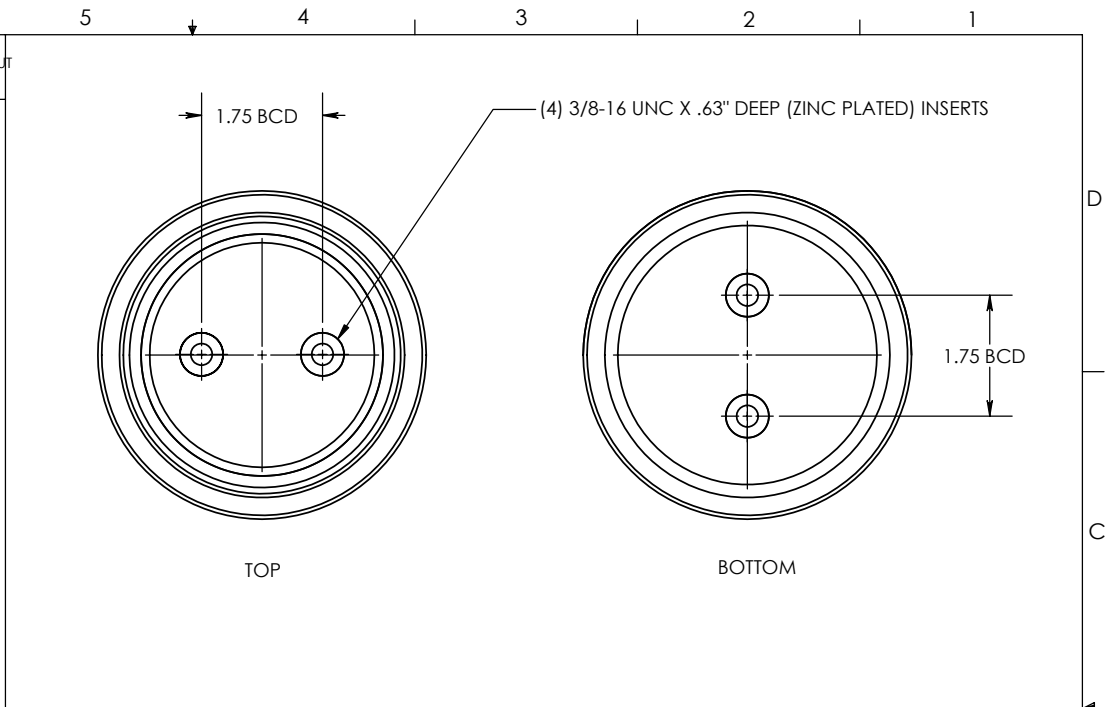
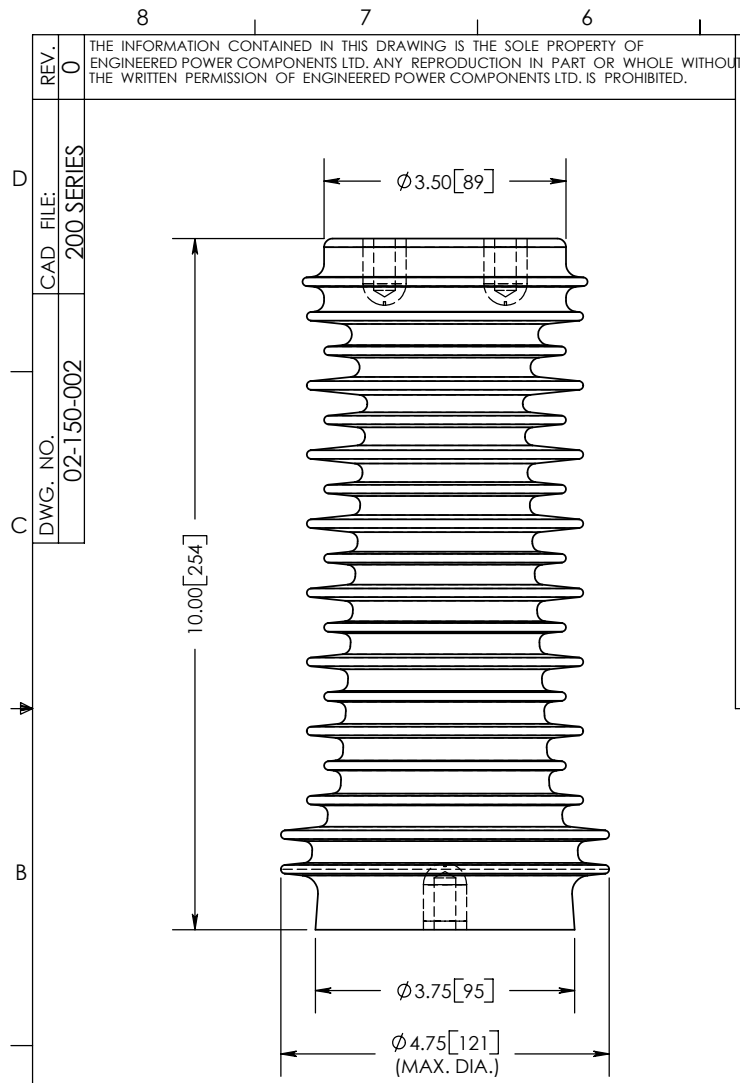


- NOTES:
1. ENDS TO BE FLAT & PARALLEL
 2. REMOVE ALL FLASHING

- MATERIALS:
1. E07 CYCLOALIPHATIC EPOXY
 2. AISI 12L14 STEEL INSERTS (ZINC PLATED)

- SPECIFICATIONS:
1. MANUFACTURED IN ACCORDANCE WITH ANSI C29.1-1988
 2. RATED VOLTAGE 38kV
 3. BASIC IMPULSE LEVEL 150kV
 4. LOW FREQUENCY WITHSTAND VOLTAGE 80kV
 5. CREEP DISTANCE 24" (610mm)
 6. CANTILEVER LOAD 1000 lbf (4400N)
 7. WEIGHT 5.5 lbs (2.5kg)


A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ± 0.50 TWO PLACE MM ± 0.25 TWO PLACE DEC. ± 0.020 THREE PLACE DEC. ± 0.010 ANGLES 1° TEMPERATURE $\pm 5^\circ\text{C}$ VOLTAGE $\pm 5\%$ AMPERAGE $\pm 5\%$ RESISTANCE $\pm 5\%$	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS _____ DATE _____ DRAWN BY: DB 21/02/2002 CHECKED BY: RM 26/02/2002 ENGINEERING DB 26/02/2002		OUTDOOR APPARATUS INSULATOR 38kV/150kV BIL
	REF.	* STATISTICAL DIMENSION NO. OF SAMPLES [0]				



- NOTES:
1. ENDS TO BE FLAT & PARALLEL
 2. REMOVE ALL FLASHING

- MATERIALS:
1. E07 CYCLOALIPHATIC EPOXY
 2. AISI 12L14 STEEL INSERTS (ZINC PLATED)

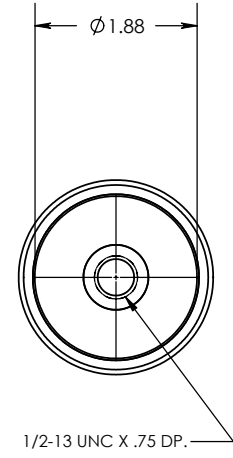
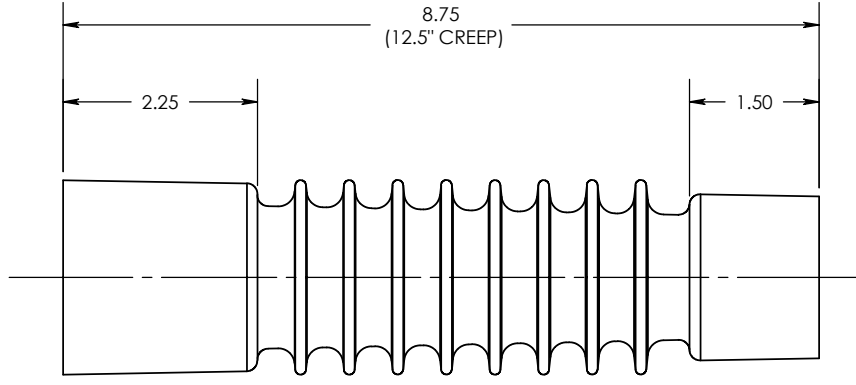
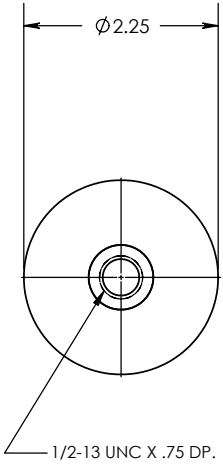
- SPECIFICATIONS:
1. MANUFACTURED IN ACCORDANCE WITH ANSI C29.1-1988
 2. RATED VOLTAGE 38kV
 3. BASIC IMPULSE LEVEL 150kV
 4. LOW FREQUENCY WITHSTAND VOLTAGE 80kV
 5. CREEP DISTANCE 24" (610mm)
 6. CANTILEVER LOAD 1000 lbf (4400N)
 7. WEIGHT 5.5 lbs (2.5kg)

A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1° TEMPERATURE ±5 °C VOLTAGE ±5 % AMPERAGE ±5 % RESISTANCE ±5 %	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS DATE DRAWN BY: DB 19/11/2002 CHECKED BY: RM 19/11/2002 ENGINEERING DB 19/11/2002	 <p>OUTDOOR APPARATUS INSULATOR 38kV/150kV BIL</p>
	REF.				

8 7 6 5 4 3 2 1

REV. 0
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DWG. NO. 02-011-000
 CAD FILE: 200 SERIES



NOTES:
 1. ENDS TO BE FLAT AND PARALLEL
 2. REMOVE ALL FLASHING

MATERIALS:
 1. E01 - BISPHENOL-A EPOXY
 2. INSERTS - AISI 12L14 STEEL, ZINC PLATED

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH ANSI C29.1-1988
 2. RATED VOLTAGE 25kV
 3. BASIC IMPULSE LEVEL 125kV
 4. CREEP DISTANCE 12.5" (318mm)
 5. WEIGHT 1.8 lbs (.82Kg)

REVISIONS 0
 REF.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
 ONE PLACE MM ±0.50
 TWO PLACE MM ±0.25
 TWO PLACE DEC. ±0.020
 THREE PLACE DEC. ±0.010
 ANGLES 1°
 TEMPERATURE ±5 °C
 VOLTAGE ±5 %
 AMPERAGE ±5 %
 RESISTANCE ±5 %

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.
 APPROVALS DATE
 DRAWN BY: DB 14/03/2003
 CHECKED BY: RM 18/03/2003
 ENGINEERING DB 18/03/2003

ENGINEERED POWER COMPONENTS
 INDOOR INSULATOR
 25kV / 125kV BIL

* STATISTICAL DIMENSION
 NO. OF SAMPLES [0]
 TOOLING REF. T02-011
 PRODUCT GROUP 200 SERIES

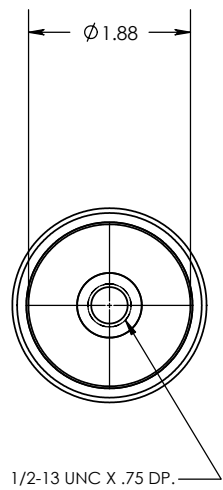
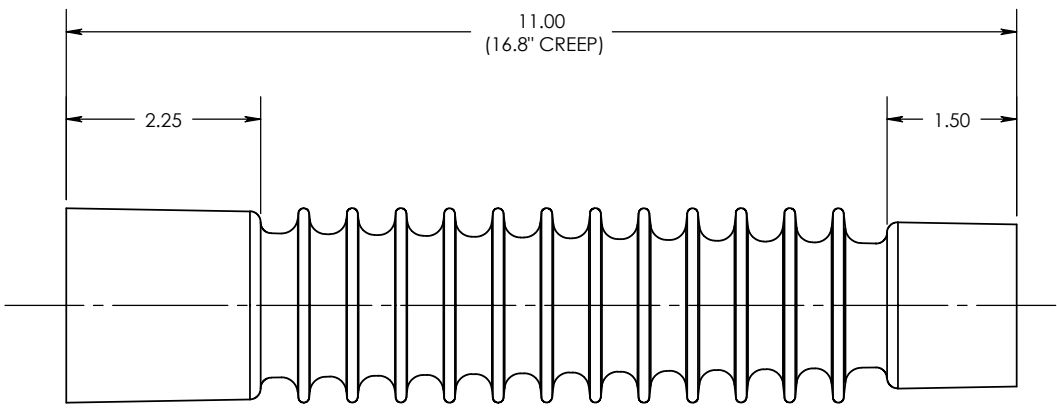
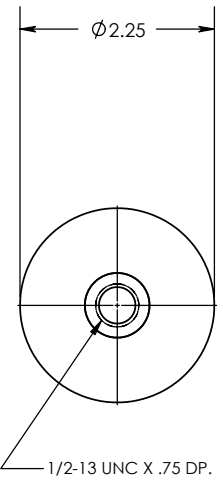
SIZE A DWG. NO. 02-011-000 REV. 0
 SCALE 1:2 CAD FILE: 200 SERIES SHEET 1 OF 1

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

REV. 0
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DWG. NO. 02-012-000
 CAD FILE: 200 SERIES



NOTES:
 1. ENDS TO BE FLAT AND PARALLEL
 2. REMOVE ALL FLASHING

MATERIALS:
 1. E01 - BISPHENOL-A EPOXY
 2. INSERTS - AISI 12L14 STEEL, ZINC PLATED

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH ANSI C29.1-1988
 2. RATED VOLTAGE 27.6kV
 3. BASIC IMPULSE LEVEL 150kV
 4. CREEP DISTANCE 16.8" (427mm)
 5. WEIGHT 2.1 lbs (.95Kg)

REVISIONS 0
 REF.

0	
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
 ONE PLACE MM ±0.50
 TWO PLACE MM ±0.25
 TWO PLACE DEC. ±0.020
 THREE PLACE DEC. ±0.010
 ANGLES 1°
 TEMPERATURE ±5 °C
 VOLTAGE ±5 %
 AMPERAGE ±5 %
 RESISTANCE ±5 %

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.
 APPROVALS DATE
 DRAWN BY: DB 14/03/2003
 CHECKED BY: RM 18/03/2003
 ENGINEERING DB 18/03/2003

ENGINEERED POWER COMPONENTS
 INDOOR INSULATOR
 27.6kV / 150kV BIL

* STATISTICAL DIMENSION
 NO. OF SAMPLES [0]
 TOOLING REF. T02-012
 PRODUCT GROUP 200 SERIES

SIZE A DWG. NO. 02-012-000 REV. 0
 SCALE 1:2 CAD FILE: 200 SERIES SHEET 1 OF 1

8 7 6 5 4 3 2 1