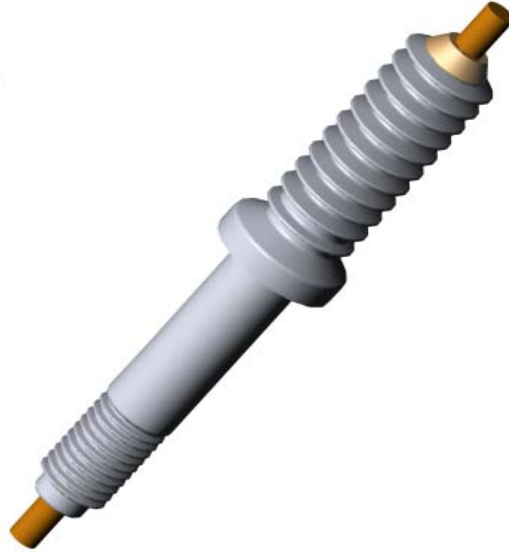




2000 - MV Series Apparatus Bushings

15 kV, 110 kV BIL to 46 kV, 250 kV BIL
Current Rating: 600 Amp to 3000 Amp



USE:

2000 Series Apparatus Bushings are designed for use in both liquid filled transformer and switchgear applications. The 2000 Series Bushing is rated for use in ambient temperatures ranging from -50°C to 105°C. Current carrying capacity is affected by mounting and termination methods.

CONSTRUCTION:

2000 Series Apparatus Bushings are constructed of C110 electrolytic grade copper with silver brazed connections for maximum conductivity. Insulation is Cycloaliphatic cast epoxy rated for enclosed or outdoor applications. 2000 Series Apparatus Bushings are capacitance graded bushings with integrally cast in ground shields for the purpose of controlling the electric field distribution.

CUSTOM OPTIONS:

2000 Series Apparatus Bushings are easily customized for any application. Spade and stud configurations can be altered to suit any termination. Conductor sizes are available for 600 Amp to 3000 Amp applications. Body shank lengths can also be customized to customer requirements.

Engineered Power Components Ltd.
Unit E - 10 Keenleyside St.
Winnipeg, Manitoba, Canada
R2L 2B9

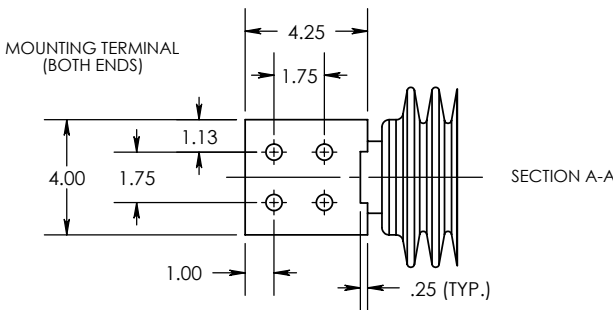
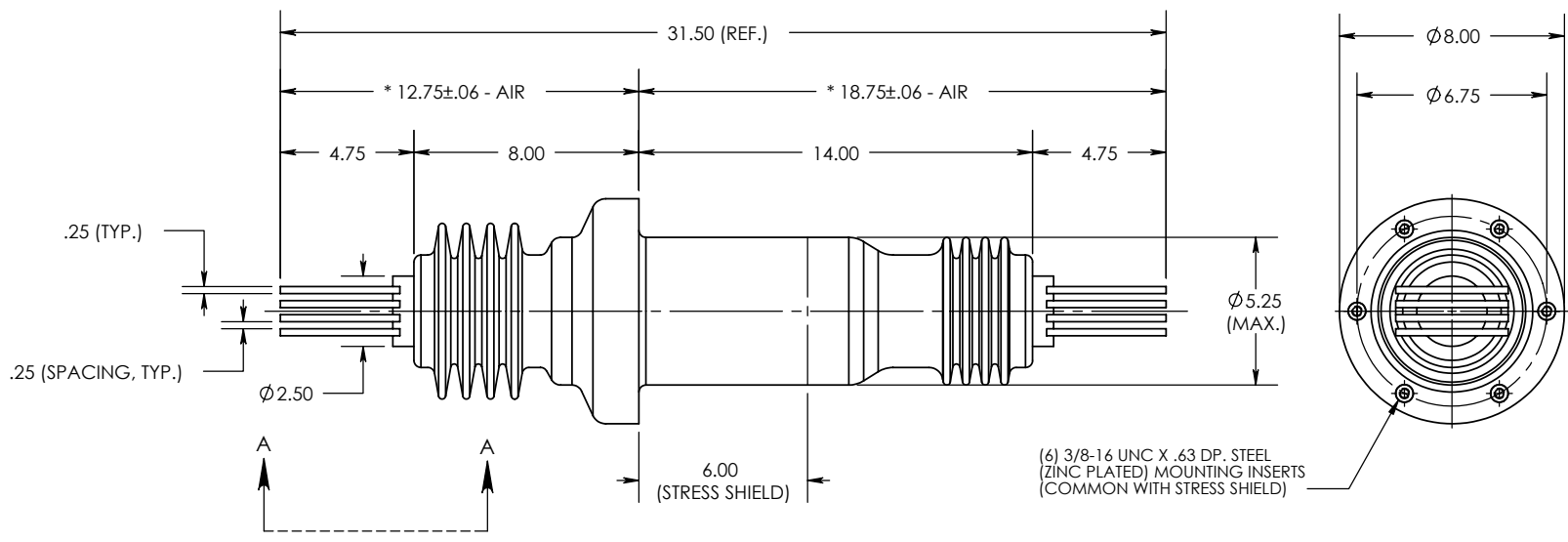
Phone: (204) 663-4195
Fax: (204) 663-5256
Toll Free: 1-888-416-8111
Email: sales@epclimited.com
Website: www.epclimited.com

8 7 6 5 4 3 2 1

REV. 0
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CAD FILE: 2000 SERIES

DWG. NO. 20-200-900



- NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
- MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. HD ETP COPPER C11000, TIN PLATED - CONDUCTOR
- SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH CUSTOMER SPECIFICATIONS
 2. RATED VOLTAGE 15kV
 3. POWER FREQUENCY WITHSTAND 50kV
 4. BASIC IMPULSE LEVEL 110kV
 5. NOMINAL CURRENT RATING 3000 AMPS
 6. TEMPERATURE CLASSIFICATION -50°C TO +105°C
 7. APPROXIMATE WEIGHT 71 LBS

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%
* STATISTICAL DIMENSION NO. OF SAMPLES [2]

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.	
APPROVALS	DATE
DRAWN BY: DB	27/11/2001
CHECKED BY: RM	28/11/2001
ENGINEERING: DB	28/11/2001
TOOLING REF.	T20-200-9
PRODUCT GROUP	2000 SERIES

15kV / 3000A
 CUSTOM
 FEED THRU BUSHING

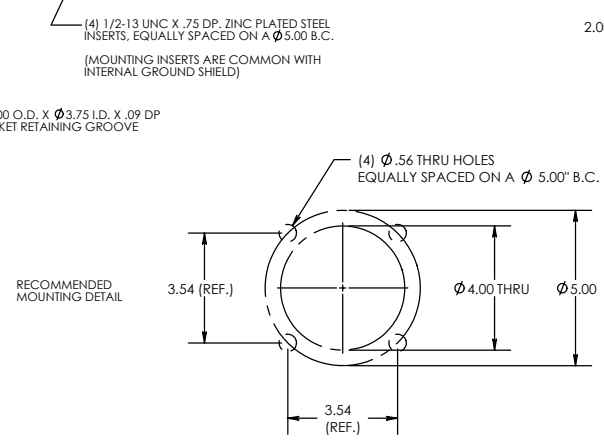
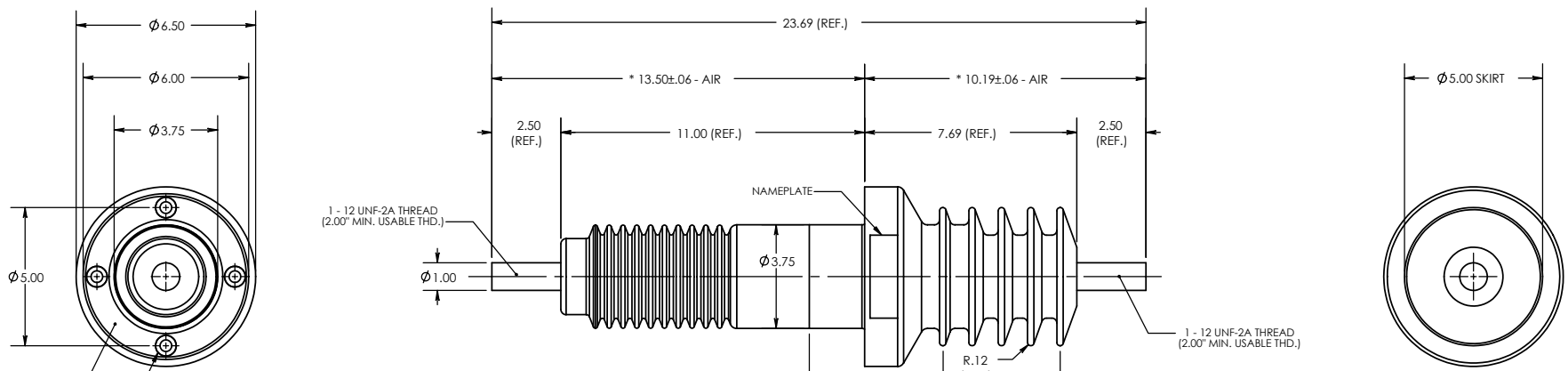
SIZE A	DWG. NO. 20-200-900	REV. 0
SCALE: 1:6	CAD FILE: 2000 SERIES	SHEET 1 OF 1

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

REV. 0
 DWG. NO. 20-300-000
 CAD FILE: 2000 SERIES

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- NOTES:
- ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
- MATERIAL:
- E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 - C110 GRADE COPPER, SILVER PLATED
- SPECIFICATIONS:
- MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 - RATED VOLTAGE 15kV
 - POWER FREQUENCY WITHSTAND 50kV
 - BASIC IMPULSE LEVEL 110kV
 - NOMINAL CURRENT RATING 600 AMPS
 - CREEP DISTANCE 15.75"/400 mm [27 mm/kV]
 - TEMPERATURE CLASSIFICATION -50°C TO +105°C

REV.	NO.	DESCRIPTION	DATE	BY	CHKD.	APP'D.
0						

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD.
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: ± 0.10 ANGLES: 1° TEMPERATURE: $\pm 5^\circ\text{C}$ VOLTAGE: $\pm 5\%$ AMPERAGE: $\pm 5\%$ RESISTANCE: $\pm 5\%$				
* STATISTICAL DIMENSION NO. OF SAMPLES [2]		TOOLING REF. T20-300-0	SIZE DWG. NO. B 20-300-000	REV. 0
PRODUCT GROUP 2000 SERIES		SCALE 1:4	CAD FILE: 2000 SERIES	SHEET 1 OF 1



8 7 6 5 4 3 2 1

REV. 0
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CAD FILE: 20-300-100

DWG. NO. 20-300-100

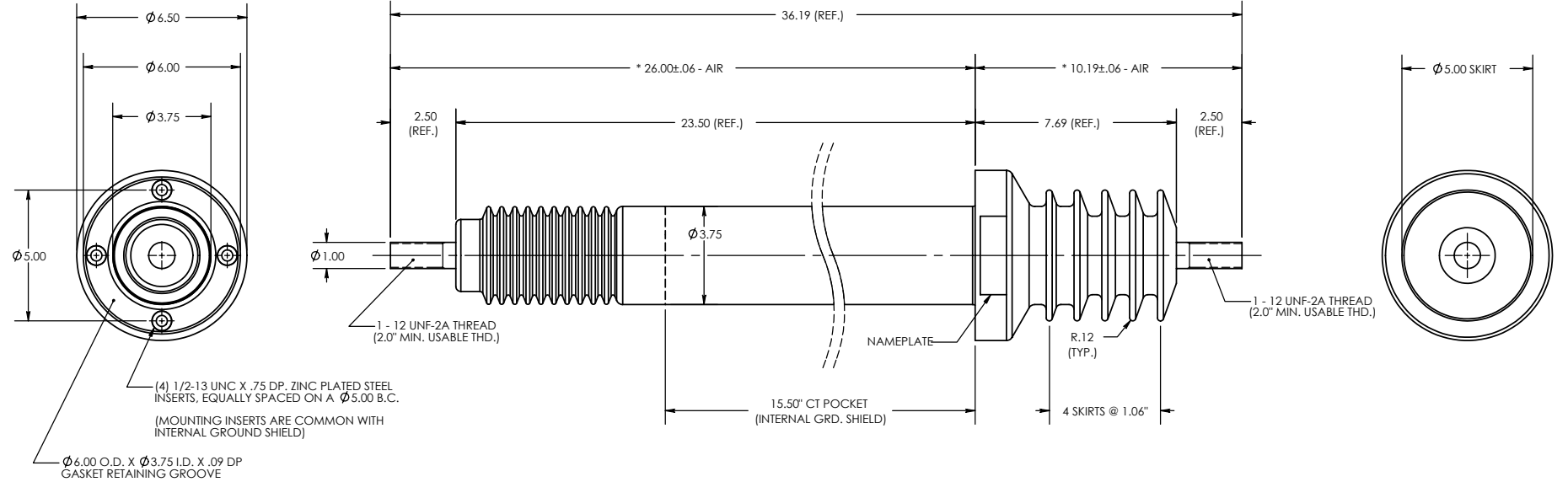
D

C

B

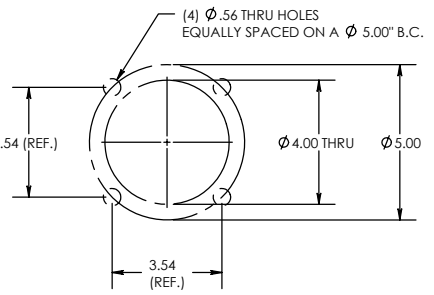
A

REF.



(4) 1/2-13 UNC X .75 DP, ZINC PLATED STEEL INSERTS, EQUALLY SPACED ON A ϕ 5.00 B.C.
 (MOUNTING INSERTS ARE COMMON WITH INTERNAL GROUND SHIELD)
 ϕ 6.00 O.D. X ϕ 3.75 I.D. X .09 DP GASKET RETAINING GROOVE

RECOMMENDED MOUNTING DETAIL



- NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
- MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. C110 GRADE COPPER, SILVER PLATED
- SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 2. RATED VOLTAGE 15kV
 3. POWER FREQUENCY WITHSTAND 50KV
 4. BASIC IMPULSE LEVEL 110KV
 5. NOMINAL CURRENT RATING 600 AMPS
 6. CREEP DISTANCE 15.75"/400 mm (27 mm/kV)
 7. TEMPERATURE CLASSIFICATION..... -50°C TO +105°C

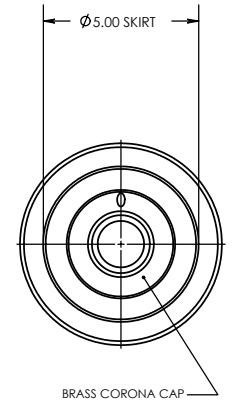
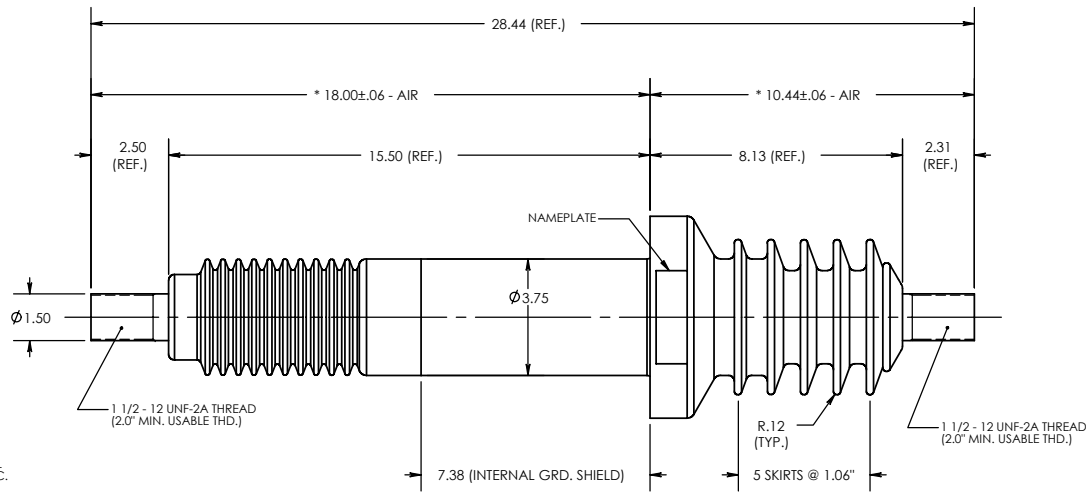
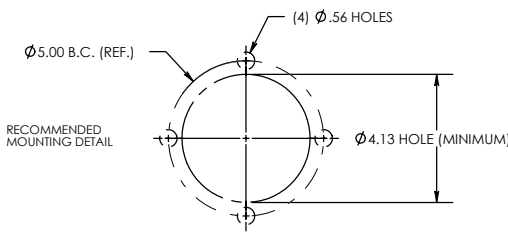
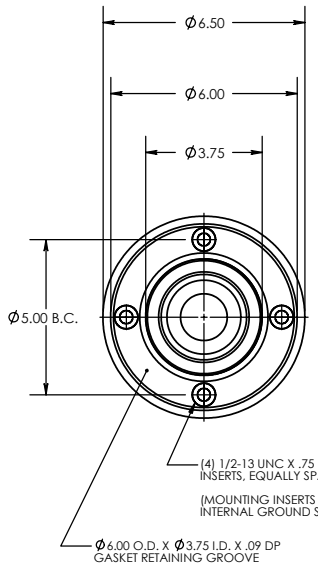
REV.	REVISIONS
0	

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: ONE PLACE MM: \pm 0.50 TWO PLACE MM: \pm 0.25 TWO PLACE DEC: \pm 0.020 THREE PLACE DEC: \pm 0.010 ANGLES: 1°				
CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE.		<p>POWER APPARATUS BUSHING 15kV / 600A</p>		
APPROVALS DATE				
DRAWN BY: DB 26/09/2002				
CHECKED BY: RM 30/09/2002				
TEMPERATURE: \pm 5°C		ENGINEERING: DB 30/09/2002		
VOLTAGE: 25%		TOOLING REF. T20-300-1		
AMPERAGE: 25%		SIZE DWG. NO. B 20-300-100		
RESISTANCE: 25%		PRODUCT GROUP 2000 SERIES		
* STATISTICAL DIMENSION NO. OF SAMPLES [2]		SCALE 1:4 CAD FILE: 2000 SERIES SHEET 1 OF 1		

8 7 6 5 4 3 2 1

REV. 0
 CAD FILE: 20-300-200
 DWG. NO. 20-300-200

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- NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
- MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. HD ETP C11000 GRADE COPPER, SILVER PLATED
- SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 2. RATED VOLTAGE 15kV
 3. POWER FREQUENCY WITHSTAND 50kV
 4. BASIC IMPULSE LEVEL 110KV
 5. NOMINAL CURRENT RATING 1200 AMPS
 6. CREEP DISTANCE 15.75"/400 mm (27 mm/kV)
 7. TEMPERATURE CLASSIFICATION -50 °C TO +105 °C
 8. WEIGHT (APPROXIMATE) 35.0 lbs (15.9 kg)

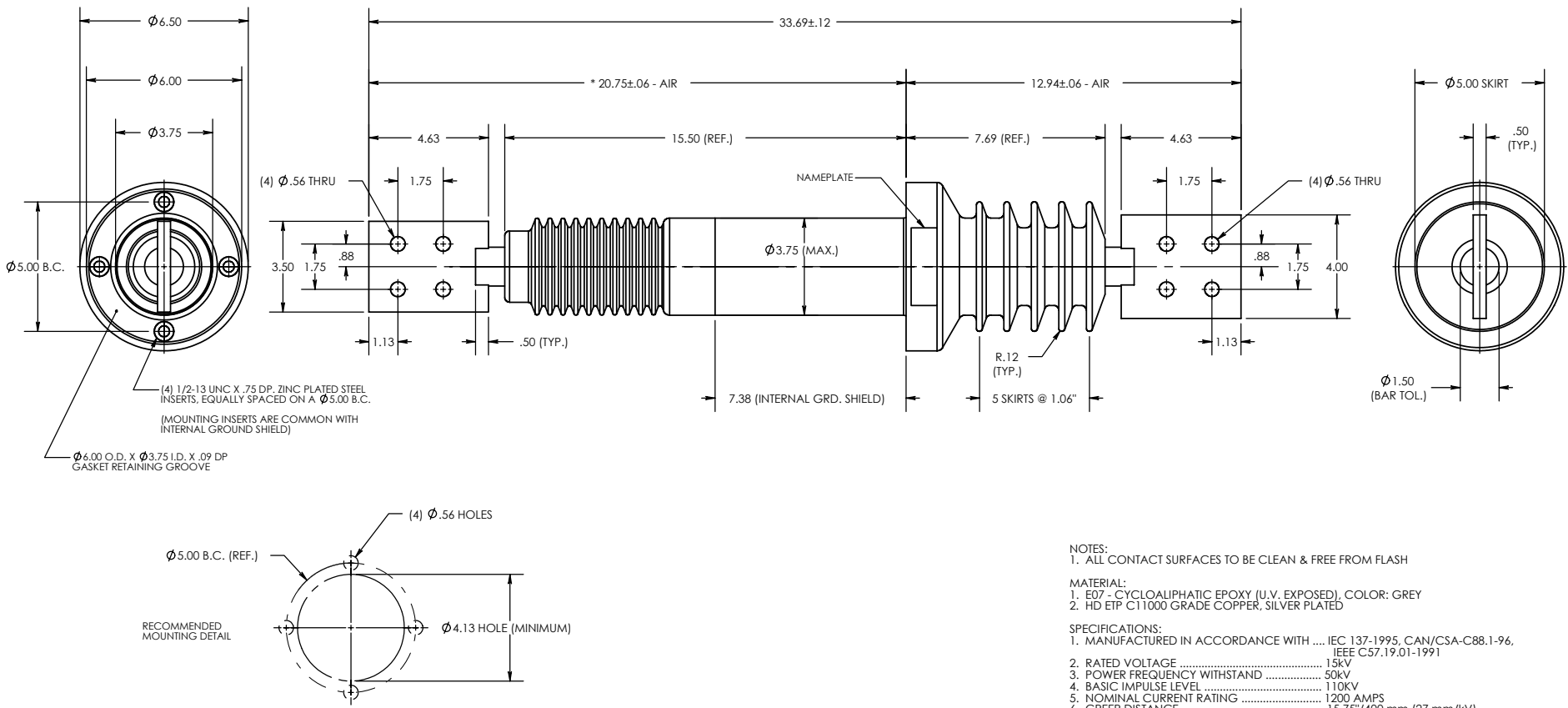
REV.	REVISIONS
0	

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:		CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.		
ONE PLACE MM ±0.50		APPROVALS DATE		
TWO PLACE MM ±0.25		DRAWN BY: DB 09/04/2003		
THREE PLACE DEC. ±0.10		CHECKED BY: RM 11/04/2003		
ANGLES 1°		ENGINEERING DB 11/04/2003		
TEMPERATURE ±5 °C		TOOLING REF. T20-300-2		
VOLTAGE ±5 %		SIZE DWG. NO. B 20-300-200		
AMPERAGE ±5 %		SCALE 1:4 CAD FILE: 2000 SERIES		
RESISTANCE ±5 %		REV. 0		
* STATISTICAL DIMENSION NO. OF SAMPLES [2]		PRODUCT GROUP 2000 SERIES SHEET 1 OF 1		



REV. 0
 CAD FILE: 2000 SERIES
 DWG. NO. 20-300-201

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NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. HD ETIP C11000 GRADE COPPER, SILVER PLATED

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 2. RATED VOLTAGE 15kV
 3. POWER FREQUENCY WITHSTAND 50kV
 4. BASIC IMPULSE LEVEL 110kV
 5. NOMINAL CURRENT RATING 1200 AMPS
 6. CREEP DISTANCE 15.75"/400 mm (27 mm/kV)
 7. TEMPERATURE CLASSIFICATION -50°C TO +105°C
 8. WEIGHT (APPROXIMATE) 37.0 lbs (16.8 kg)

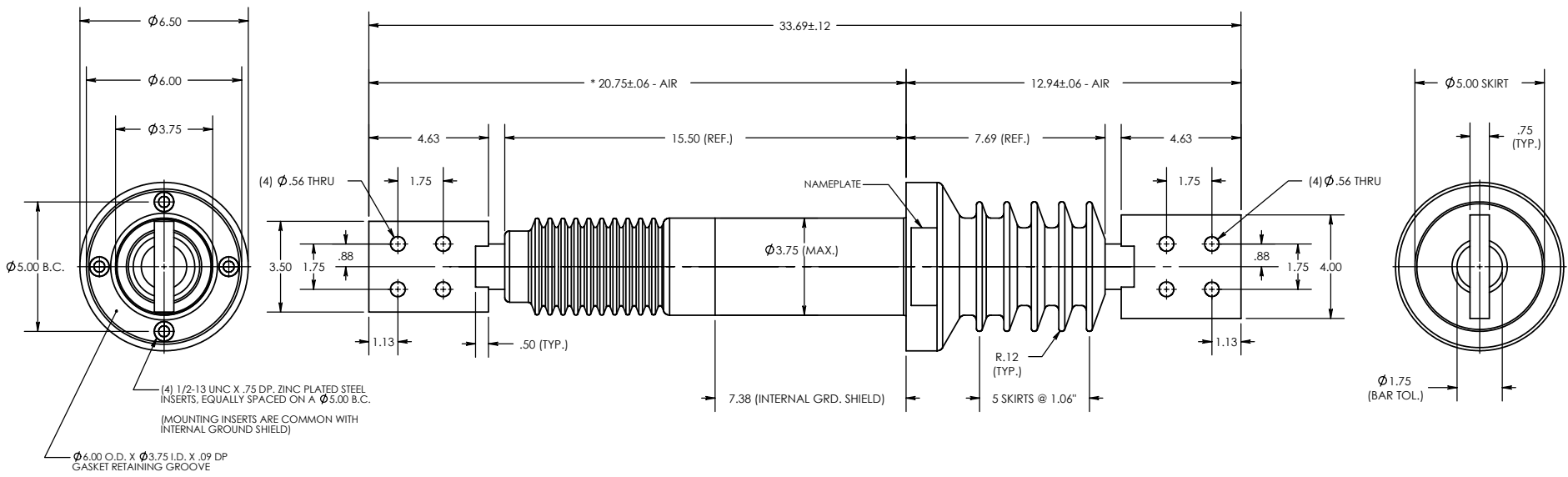
REV.	REVISIONS
0	

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
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		TOOLING REF. T20-300-2	SIZE DWG. NO. B 20-300-201	REV. 0
NO. OF SAMPLES [1]		PRODUCT GROUP 2000 SERIES	SCALE 1:4 CAD FILE: 2000 SERIES	SHEET 1 OF 1



REV. 0
 CAD FILE: 2000 SERIES
 DWG. NO. 20-300-300

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NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. HD ETP C11000 GRADE COPPER, SILVER PLATED

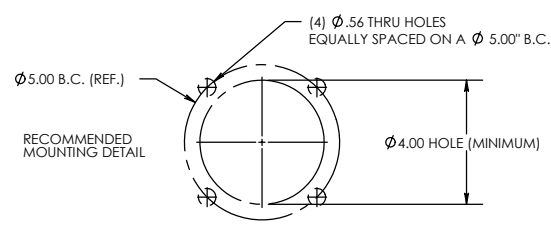
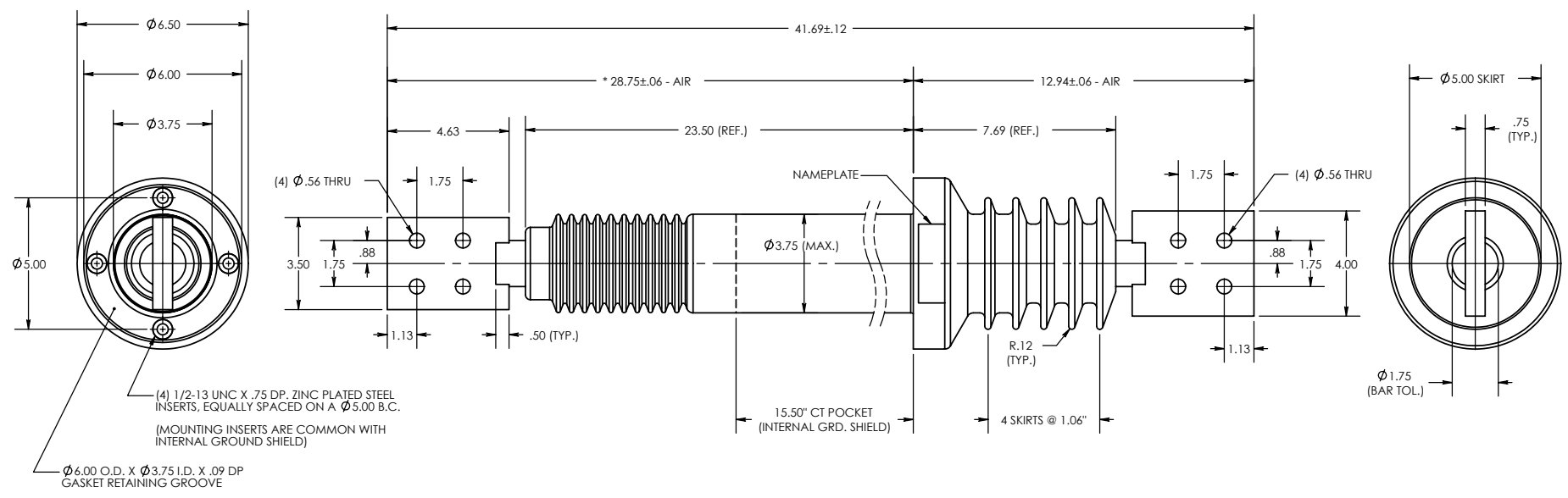
SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 2. RATED VOLTAGE 15kV
 3. POWER FREQUENCY WITHSTAND 50kV
 4. BASIC IMPULSE LEVEL 110kV
 5. NOMINAL CURRENT RATING 2000 AMPS
 6. CREEP DISTANCE 15.75"/400 mm (27 mm/kV)
 7. TEMPERATURE CLASSIFICATION -50 °C TO +105 °C
 8. WEIGHT (APPROXIMATE) 43.5 lbs (19.8 kg)

REV.	NO.	DESCRIPTION
0		

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
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 11/06/2003 CHECKED BY: RM 17/06/2003 ENGINEERING: DB 17/06/2003		POWER APPARATUS BUSHING 15kV / 2000A		
* STATISTICAL DIMENSION NO. OF SAMPLES [1]		TOOLING REF. T20-300-3 PRODUCT GROUP 2000 SERIES SIZE DWG. NO. 20-300-300 SCALE 1:4 CAD FILE: 2000 SERIES SHEET 1 OF 1		

REV. 0
 DWG. NO. 20-300-400
 CAD FILE: 2000 SERIES

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NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. C110 GRADE COPPER, SILVER PLATED

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 2. RATED VOLTAGE 15kV
 3. POWER FREQUENCY WITHSTAND 50kV
 4. BASIC IMPULSE LEVEL 110kV
 5. NOMINAL CURRENT RATING 2000 AMPS
 6. CREEP DISTANCE 15.75"/400 mm (27 mm/kV)
 7. TEMPERATURE CLASSIFICATION -50 °C TO +105 °C
 8. WEIGHT (APPROXIMATE) 53.5 lbs (24.3 kg)

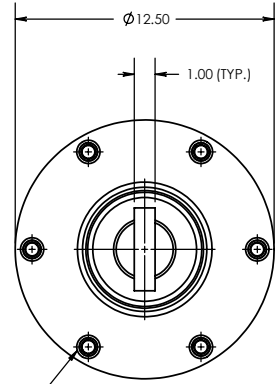
REV.	NO.	DESCRIPTION
0		

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
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 11/06/2003 CHECKED BY: RM 17/06/2003 ENGINEERING: DB 17/06/2003		POWER APPARATUS BUSHING 15kV / 2000A		
* STATISTICAL DIMENSION NO. OF SAMPLES [1]		TOOLING REF. T20-300-1 PRODUCT GROUP 2000 SERIES SIZE DWG. NO. B 20-300-400 SCALE 1:4 CAD FILE: 2000 SERIES SHEET 1 OF 1		

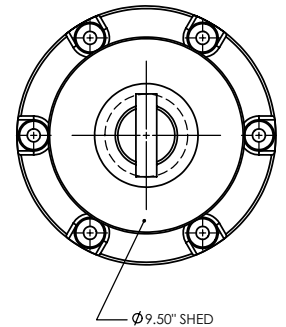
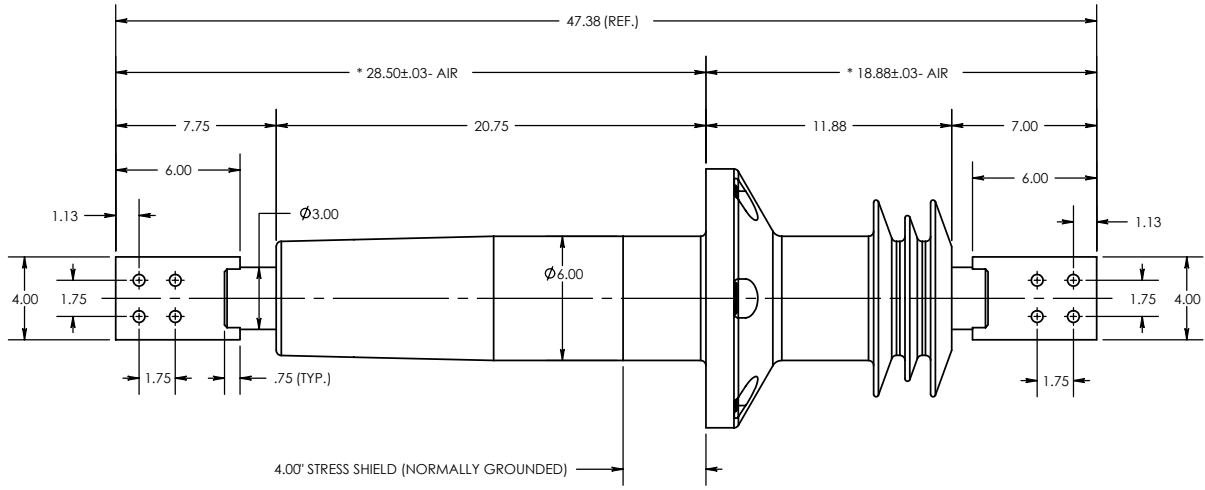
8 7 6 5 4 3 2 1

REV. 0
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DWG. NO. 20-401-000
 CAD FILE: 2000 SERIES



(6) ϕ .63" I.D. BRASS MOUNTING SLEEVES
 C/W ϕ 1.13" X .19" DP. COUNTERBORE
 EQUALLY SPACED ON A 10.88" BCD, COMMON
 WITH INTERNAL STRESS SHIELD.




NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
 2. CANTILEVER LOAD SPECIFICATIONS, BASED ON LOAD APPLIED HORIZONTALLY AT CENTER POINT OF TERMINAL.

MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY, GRAY
 2. HD ETP C11000 COPPER, TIN PLATED

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH SEE CLIENT SPECIFICATIONS
 2. APPLICATION ENCLOSED SERVICE
 3. RATED VOLTAGE 27.6kV
 4. BASIC IMPULSE LEVEL 150KV
 5. NOMINAL CURRENT RATING 3000 AMPS
 6. CREEP DISTANCE 20' (508mm)
 7. TEMPERATURE CLASSIFICATION -50°C TO +105°C
 8. CANTILEVER LOAD (SAFE) 150lbf (660N)
 9. CANTILEVER LOAD (ULTIMATE) 300lbf (1320N)
 10. APPROXIMATE SHIPPING WEIGHT 155 lbs (70.5kg)

REV.	NO.	DESCRIPTION
0		

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: ONE PLACE MM: \pm 0.50 TWO PLACE MM: \pm 0.25 TWO PLACE DEC: \pm 0.020 THREE PLACE DEC: \pm 0.010 ANGLES: 1° TEMPERATURE: \pm 5°C VOLTAGE: \pm 5% AMPERAGE: \pm 5% RESISTANCE: \pm 5%				
CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE. APPROVALS: _____ DATE: _____ DRAWN BY: DB 09/27/2001 CHECKED BY: _____ ENGINEERING: _____		 <p>27.6kV / 3000A M.V. APPARATUS BUSHING 2000 SERIES</p>		
* STATISTICAL DIMENSION NO. OF SAMPLES [2]		TOOLING REF. T20-401-0 PRODUCT GROUP 2000 SERIES	SIZE DWG. NO. B 20-401-000 SCALE 1:6 CAD FILE: 2000 SERIES	REV. 0 SHEET 1 OF 1

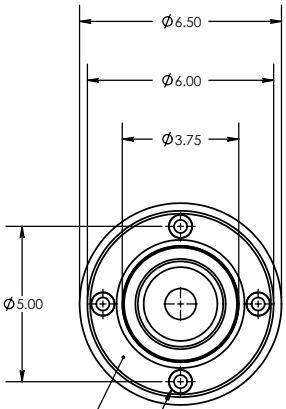
8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

REV. 0
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 ENGINEERED POWER COMPONENTS LTD. ANY REPRODUCTION IN PART OR WHOLE WITHOUT
 THE WRITTEN PERMISSION OF ENGINEERED POWER COMPONENTS LTD. IS PROHIBITED.

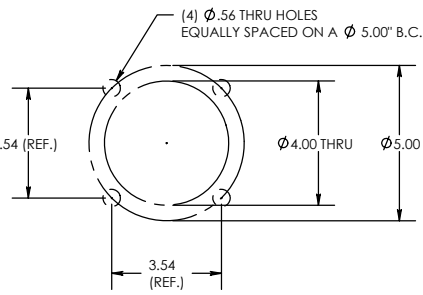
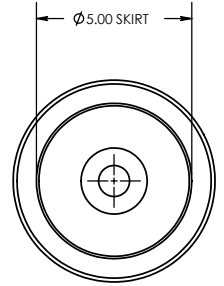
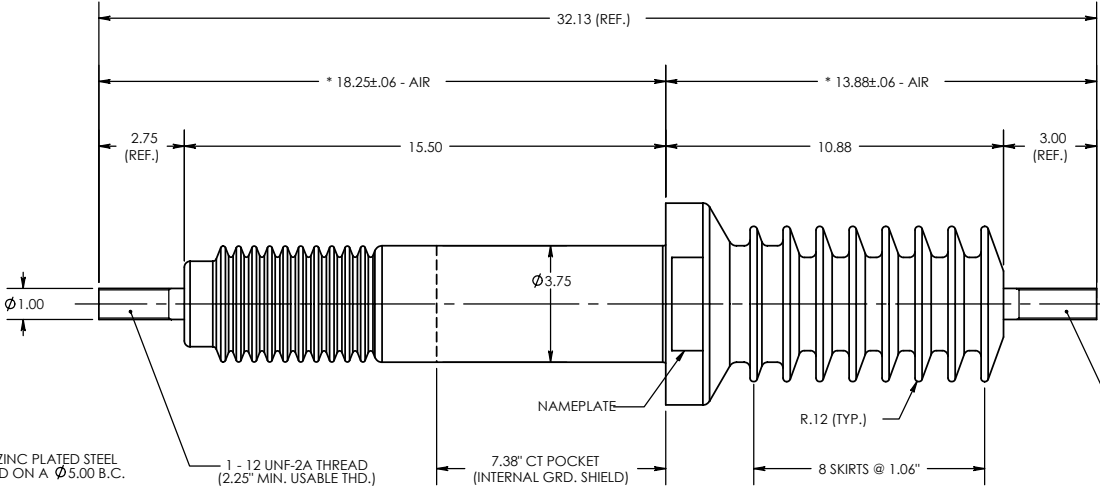
CAD FILE:
 2000 SERIES

DWG. NO.
 20-425-000



(4) 1/2-13 UNC X .75 DP, ZINC PLATED STEEL
 INSERTS, EQUALLY SPACED ON A Ø 5.00 B.C.
 (MOUNTING INSERTS ARE COMMON WITH
 INTERNAL GROUND SHIELD)

Ø 6.00 O.D. X Ø 3.75 I.D. X .09 DP
 GASKET RETAINING GROOVE



- NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
- MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. C110 GRADE COPPER, SILVER PLATED
- SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96,
 IEEE C57.19.01-1991
 2. RATED VOLTAGE 25kV
 3. POWER FREQUENCY WITHSTAND 60kV
 4. BASIC IMPULSE LEVEL 125kV
 5. NOMINAL CURRENT RATING 600 AMPS
 6. CREEP DISTANCE 22.5"/572 mm (23 mm/kV)
 7. TEMPERATURE CLASSIFICATION -50°C TO +105°C

REV.	DESCRIPTION
0	

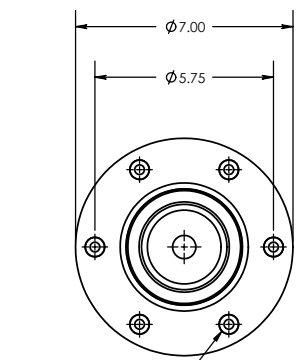
ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1° TEMPERATURE ±5°C VOLTAGE ±5% AMPERAGE ±5% RESISTANCE ±5%				
CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE. APPROVALS _____ DATE _____ DRAWN BY: DB 23/10/2001 CHECKED BY: _____ ENGINEERING _____		POWER APPARATUS BUSHING 25kV / 600A		

* STATISTICAL DIMENSION NO. OF SAMPLES [2]	TOOLING REF. T20-425-0 PRODUCT GROUP 2000 SERIES	SIZE DWG. NO. B 20-425-000 SCALE 1:4 CAD FILE: 2000 SERIES SHEET 1 OF 1
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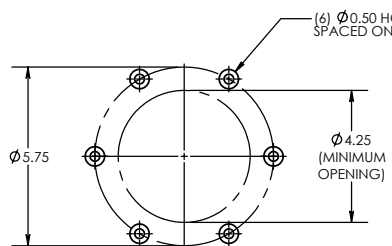
8 7 6 5 4 3 2 1

REV. 0
 CAD FILE: 2000 SERIES
 DWG. NO. 20-426-000

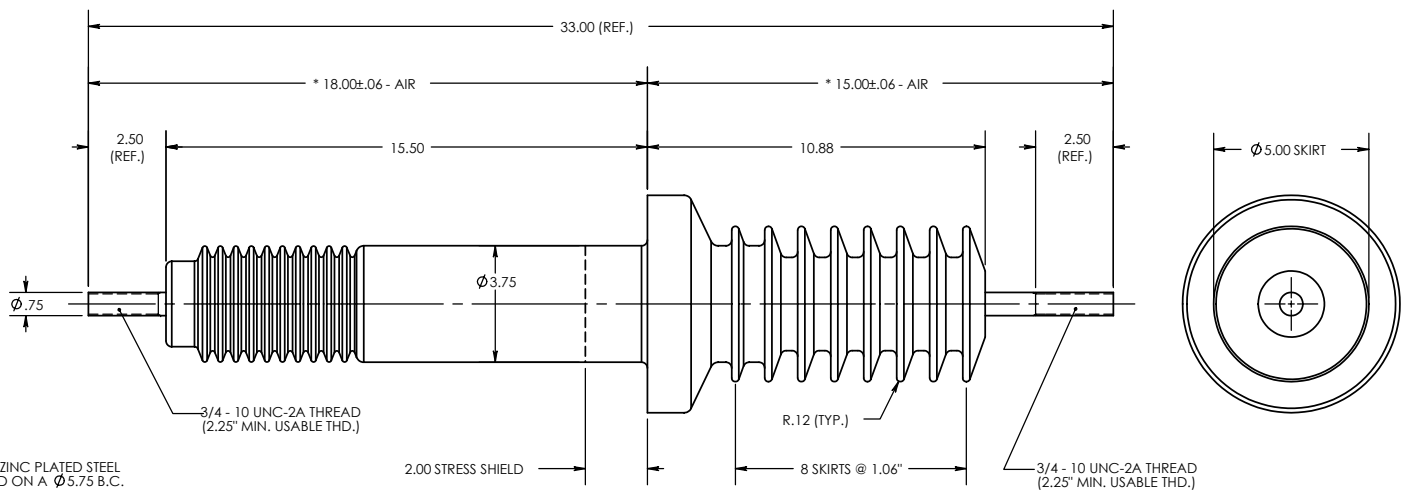
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ENGINEERED POWER COMPONENTS LTD. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF ENGINEERED POWER COMPONENTS LTD. IS PROHIBITED.



(6) 3/8 - 16 UNC X .63 DP. ZINC PLATED STEEL INSERTS, EQUALLY SPACED ON A ϕ 5.75 B.C.
 (MOUNTING INSERTS ARE COMMON WITH INTERNAL GROUND SHIELD)



RECOMMENDED MOUNTING DETAIL



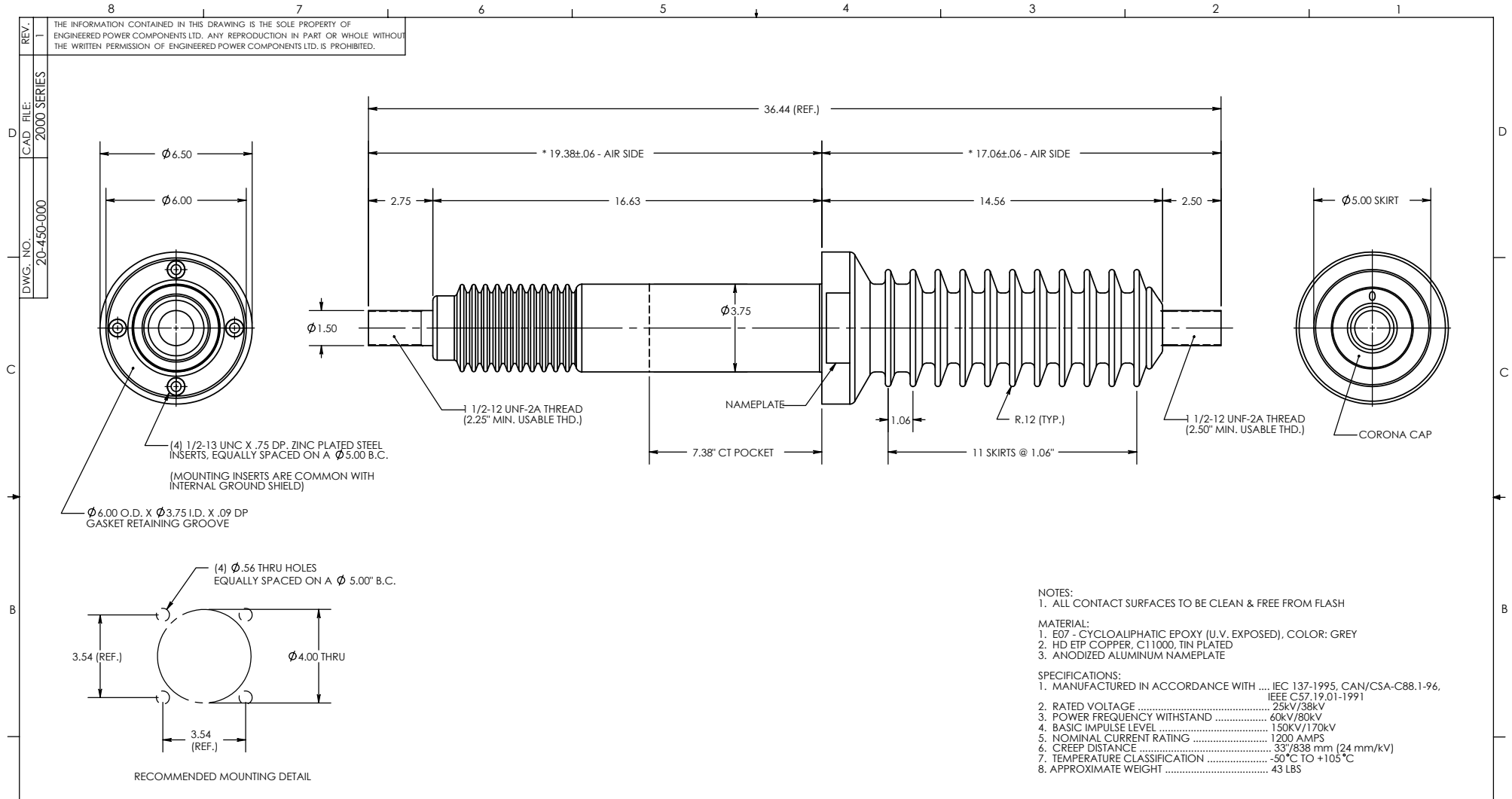
NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. HD ETP COPPER, C11000 SILVER PLATED

SPECIFICATIONS:
 1. RATED VOLTAGE 28kV
 2. POWER FREQUENCY WITHSTAND 60kV
 3. BASIC IMPULSE LEVEL 150kV
 4. NOMINAL CURRENT RATING 600 AMPS
 5. TEMPERATURE CLASSIFICATION -50°C TO +105°C
 6. APPROXIMATE WEIGHT 26 LBS

REV.	DESCRIPTION
0	

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD.
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. APPROVALS: _____ DATE: _____ DRAWN BY: DB 05/12/2001 CHECKED BY: RM 07/01/2002 ENGINEERING: DB 07/01/2002				
* STATISTICAL DIMENSION NO. OF SAMPLES [2]		FEED THRU APPARATUS BUSHING 28kV / 600A		
TOOLING REF. T20-426-0 PRODUCT GROUP 2000 SERIES		SIZE DWG. NO. 20-426-000 SCALE 1:4 CAD FILE: 2000 SERIES SHEET 1 OF 1		



NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

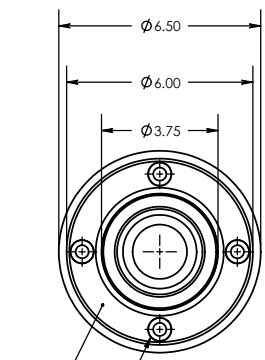
MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. HD ETP COPPER, C11000, TIN PLATED
 3. ANODIZED ALUMINUM NAMEPLATE

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 2. RATED VOLTAGE 25kV/38kV
 3. POWER FREQUENCY WITHSTAND 60kV/80kV
 4. BASIC IMPULSE LEVEL 150kV/170kV
 5. NOMINAL CURRENT RATING 1200 AMPS
 6. CREEP DISTANCE 33"/838 mm (24 mm/kV)
 7. TEMPERATURE CLASSIFICATION -50°C TO +105°C
 8. APPROXIMATE WEIGHT 43 LBS

REF.	REVISIONS	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
0	1					
	CHANGED SPECIFICATIONS SECTION ADVISED VOLTAGE RATING DBR 17.07.2002					
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:		CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE.	<p>POWER APPARATUS BUSHING 25kV/38kV 1200A</p>	
		TOLERANCES ARE:		APPROVALS DATE		
		ONE PLACE MM ±0.50		DRAWN BY: DB 04/12/2001		
		TWO PLACE MM ±0.25		CHECKED BY: RM 04/12/2001		
		TWO PLACE DEC. ±0.02		ENGINEERING DB 04/12/2001		
		THREE PLACE DEC. ±0.10				
		ANGLES 1°				
		TEMPERATURE ±5°C				
		VOLTAGE ±5%				
		AMPERAGE ±5%				
		RESISTANCE ±5%				
		* STATISTICAL DIMENSION	TOOLING REF. T20-450-0	SIZE DWG. NO. B 20-450-000		REV. 1
		NO. OF SAMPLES [0]	PRODUCT GROUP 2000 SERIES	SCALE 1:4 CAD FILE 2000 SERIES		SHEET 1 OF 1

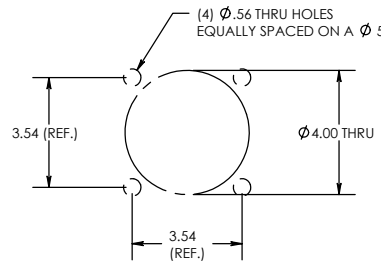
REV. 0
 DWG. NO. 20-450-100
 CAD FILE: 2000 SERIES

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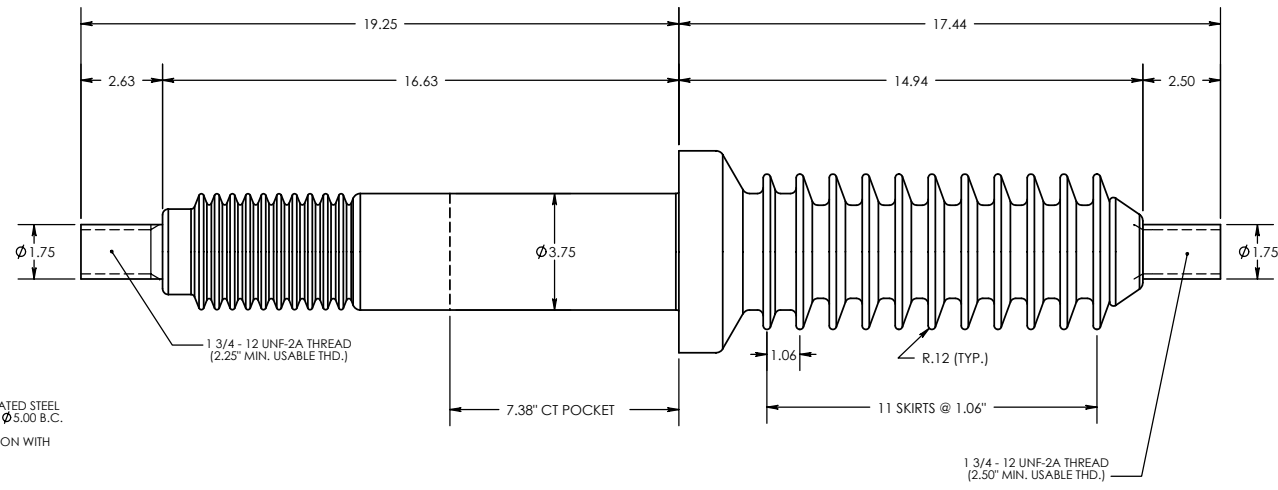


(4) 1/2-13 UNC X .75 DP, ZINC PLATED STEEL INSERTS, EQUALLY SPACED ON A ϕ 5.00 B.C.
 (MOUNTING INSERTS ARE COMMON WITH INTERNAL GROUND SHIELD)

ϕ 6.00 O.D. X ϕ 3.75 I.D. GASKET RETAINING GROOVE



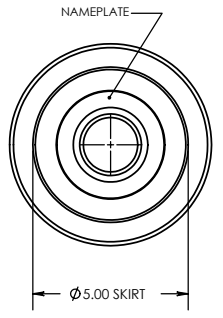
RECOMMENDED MOUNTING DETAIL



1 3/4 - 12 UNF-2A THREAD (2.25" MIN. USABLE THD.)

7.38" CT POCKET

1 3/4 - 12 UNF-2A THREAD (2.50" MIN. USABLE THD.)



- NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
 2. NAMEPLATE (ANODIZED ALUMINUM) FIXED TO CORONA CAP

- MATERIAL:
 1. E05 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. C110 GRADE COPPER

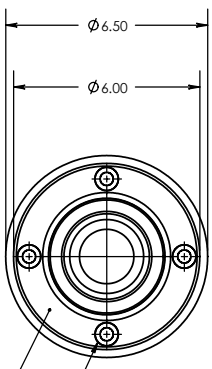
- SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 2. RATED VOLTAGE 25kV
 3. POWER FREQUENCY WITHSTAND 60kV
 4. BASIC IMPULSE LEVEL 150kV
 5. NOMINAL CURRENT RATING 2000 AMPS
 6. CREEP DISTANCE 33"/838 mm (24 mm/kV)
 7. TEMPERATURE CLASSIFICATION -50°C TO +105°C

REV.	NO.	DESCRIPTION
0		

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: ONE PLACE MM .050 TWO PLACE MM .025 TWO PLACE DEC. .002 THREE PLACE DEC. .010 ANGLES 1° TEMPERATURE 25°C VOLTAGE 25% AMPERAGE 25% RESISTANCE 25%</p>				
<p>CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS DATE DRAWN BY: DB 17/05/2001 CHECKED BY: ENGINEERING</p>		<p>POWER APPARATUS BUSHING 25kV / 2000A</p>		
* STATISTICAL DIMENSION NO. OF SAMPLES [0]	TOOLING REF. T20-450-1	SIZE DWG. NO. B 20-450-100	SCALE 1:4	REV. 0
PRODUCT GROUP 2000 SERIES		CAD FILE: 2000 SERIES SHEET 1 OF 1		

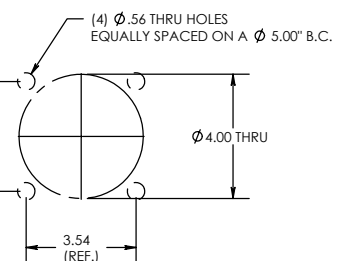
REV. 0
 CAD FILE: 2000 SERIES
 DWG. NO. 20-450-101

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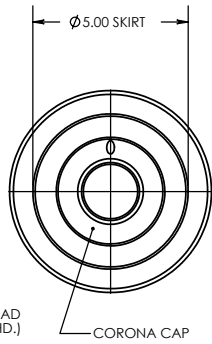
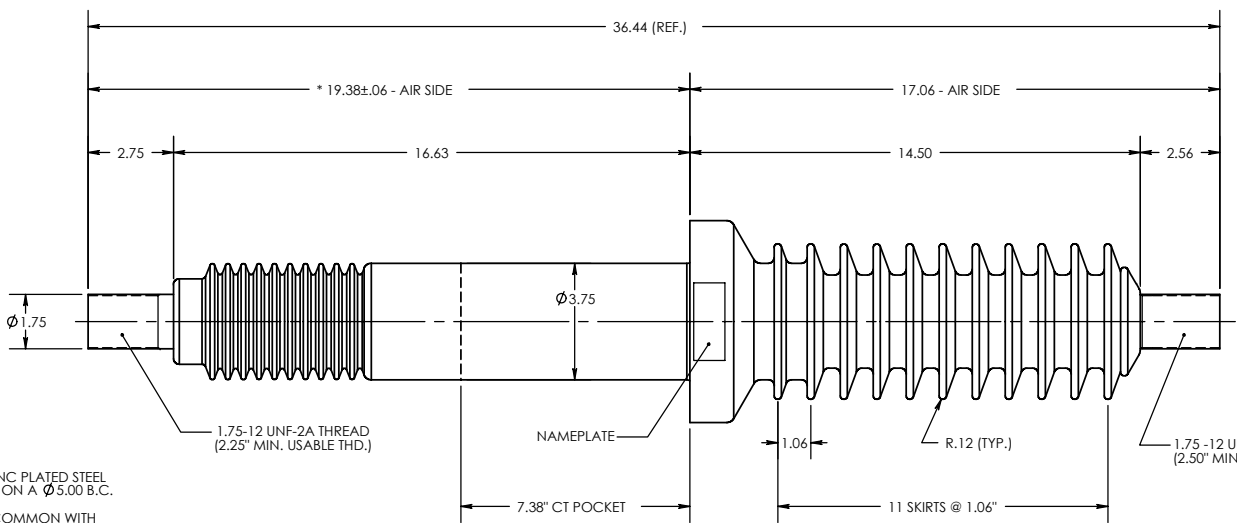


(4) 1/2-13 UNC X .75 DP. ZINC PLATED STEEL INSERTS, EQUALLY SPACED ON A $\phi 5.00$ B.C.
 (MOUNTING INSERTS ARE COMMON WITH INTERNAL GROUND SHIELD)

$\phi 6.00$ O.D. X $\phi 3.75$ I.D. X .09 DP GASKET RETAINING GROOVE



RECOMMENDED MOUNTING DETAIL



CORONA CAP

- NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
- MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. HD ETP COPPER, C11000, SILVER OR TIN PLATED
 3. ANODIZED ALUMINUM NAMEPLATE
- SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 2. RATED VOLTAGE 38kV
 3. POWER FREQUENCY WITHSTAND 80kV
 4. BASIC IMPULSE LEVEL 150kV
 5. NOMINAL CURRENT RATING 2000 AMPS
 6. CREEP DISTANCE 33"/838 mm (24 mm/kV)
 7. TEMPERATURE CLASSIFICATION -50°C TO +105°C
 8. APPROXIMATE WEIGHT 49 LBS

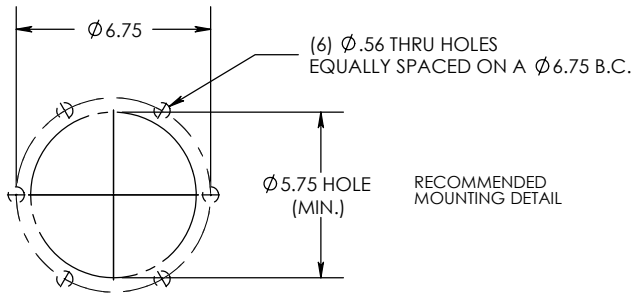
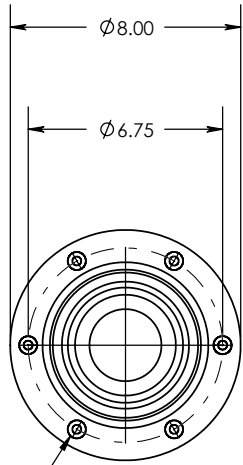
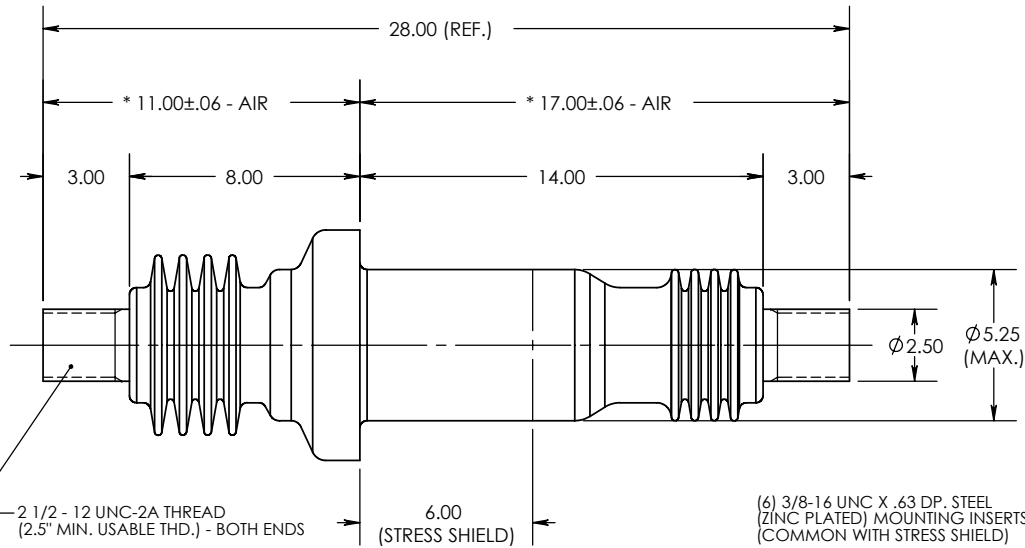
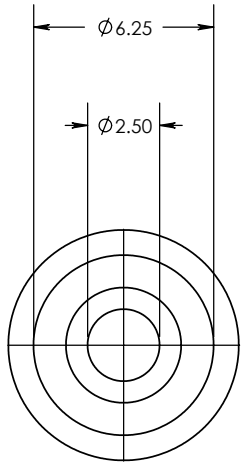
REV.	NO.	DESCRIPTION
0		

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
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 30/08/2003 CHECKED BY: RM 30/08/2003 ENGINEERING DB 30/08/2003		<p>POWER APPARATUS BUSHING 38kV / 2000A</p>		
* STATISTICAL DIMENSION NO. OF SAMPLES [0]		TOOLING REF. T20-450-1 PRODUCT GROUP 2000 SERIES	SIZE DWG. NO. B 20-450-101 SCALE 1:4 CAD FILE: 2000 SERIES	REV. 0 SHEET 1 OF 1

8 7 6 5 4 3 2 1

REV. 0
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DWG. NO. 20-200-901
 CAD FILE: 2000 SERIES



NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. HD ETP COPPER C11000, TIN PLATED - CONDUCTOR

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH IEC 137-1995, CAN/CSA-C88.1-96, IEEE C57.19.01-1991
 2. RATED VOLTAGE 15kV
 3. POWER FREQUENCY WITHSTAND 50kV
 4. BASIC IMPULSE LEVEL 110KV
 5. NOMINAL CURRENT RATING 3000 AMPS
 6. TEMPERATURE CLASSIFICATION..... -50°C TO +105°C
 7. APPROXIMATE WEIGHT 69 LBS

REVISIONS 0
 REF.

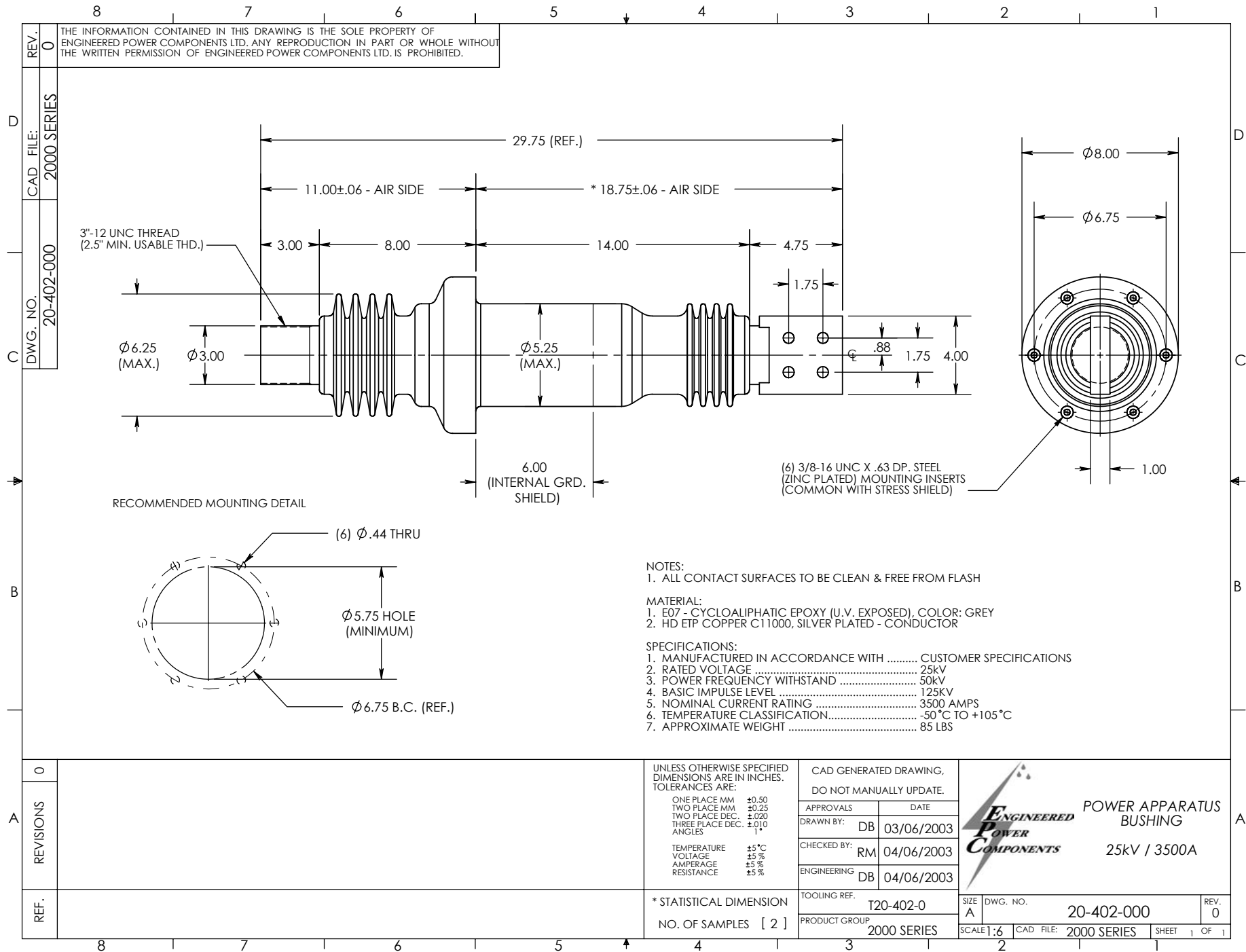
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
ONE PLACE MM ±0.50
TWO PLACE MM ±0.25
TWO PLACE DEC. ±0.020
THREE PLACE DEC. ±0.010
ANGLES 1°
TEMPERATURE ±5 °C
VOLTAGE ±5 %
AMPERAGE ±5 %
RESISTANCE ±5 %
* STATISTICAL DIMENSION
NO. OF SAMPLES [2]

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.	
APPROVALS	DATE
DRAWN BY: DB	11/08/2003
CHECKED BY: RM	12/08/2003
ENGINEERING	DB 12/08/2003
TOOLING REF.	T20-200-9
PRODUCT GROUP	2000 SERIES

15kV / 3000A
 POWER APPARATUS
 BUSHING

SIZE A	DWG. NO. 20-200-901	REV. 0
SCALE: 1:6	CAD FILE: 2000 SERIES	SHEET 1 OF 1

8 7 6 5 4 3 2 1



REV. 0 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ENGINEERED POWER COMPONENTS LTD. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF ENGINEERED POWER COMPONENTS LTD. IS PROHIBITED.

DWG. NO. 20-402-000
 CAD FILE: 2000 SERIES

3"-12 UNC THREAD (2.5" MIN. USABLE THD.)

RECOMMENDED MOUNTING DETAIL

(6) 3/8-16 UNC X .63 DP. STEEL (ZINC PLATED) MOUNTING INSERTS (COMMON WITH STRESS SHIELD)

NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY (U.V. EXPOSED), COLOR: GREY
 2. HD ETP COPPER C11000, SILVER PLATED - CONDUCTOR

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH CUSTOMER SPECIFICATIONS
 2. RATED VOLTAGE 25kV
 3. POWER FREQUENCY WITHSTAND 50kV
 4. BASIC IMPULSE LEVEL 125kV
 5. NOMINAL CURRENT RATING 3500 AMPS
 6. TEMPERATURE CLASSIFICATION -50 °C TO +105 °C
 7. APPROXIMATE WEIGHT 85 LBS

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	03/06/2003
CHECKED BY: RM	04/06/2003
ENGINEERING: DB	04/06/2003

ENGINEERED POWER COMPONENTS

POWER APPARATUS BUSHING
 25kV / 3500A

REVISIONS	0
REF.	

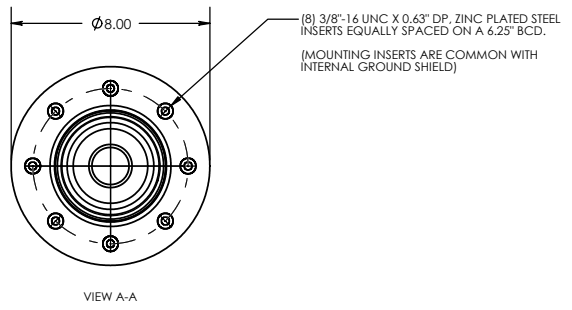
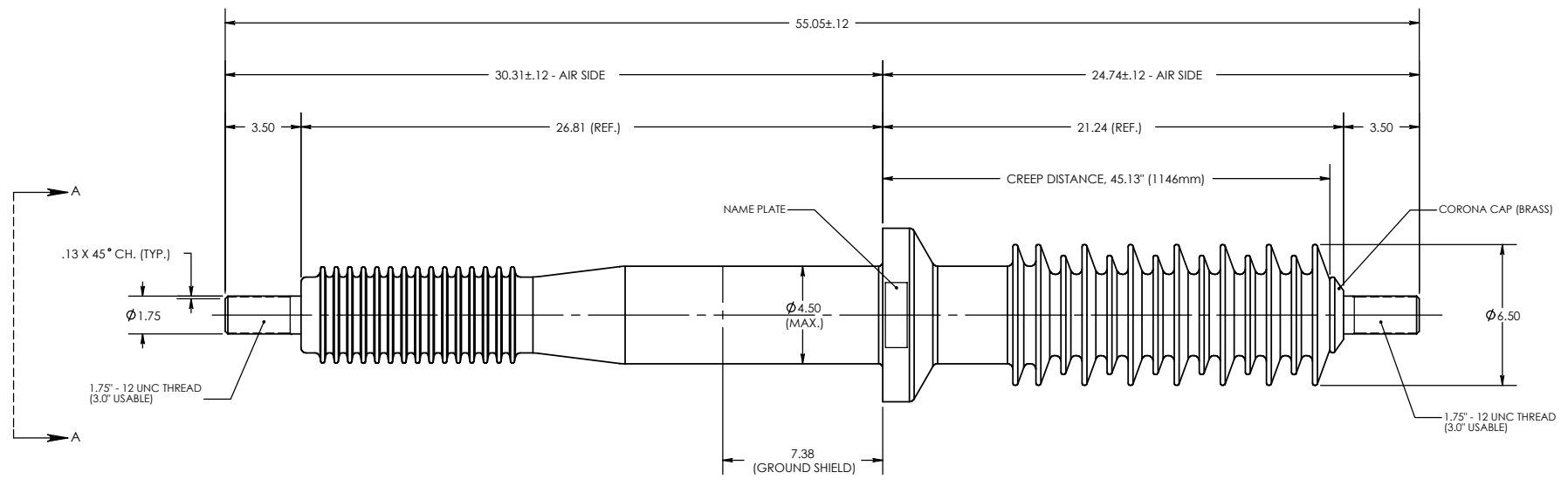
* STATISTICAL DIMENSION
 NO. OF SAMPLES [2]

TOOLING REF.	T20-402-0	SIZE A	DWG. NO. 20-402-000	REV. 0
PRODUCT GROUP	2000 SERIES	SCALE: 1:6	CAD FILE: 2000 SERIES	SHEET 1 OF 1

8 7 6 5 4 3 2 1

REV. 0
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DWG. NO. 20-600-000
 CAD FILE: 2000 SERIES



NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
 2. CANTILEVER LOAD SPECIFICATION, BASED ON (STATIC) LOAD APPLIED HORIZONTALLY AT CENTER POINT OF TOP STUD.

MATERIAL:
 1. CYCLOALIPHATIC EPOXY, GRAY (U.V. EXPOSED)
 2. HD ETP C11000 COPPER, TIN PLATED

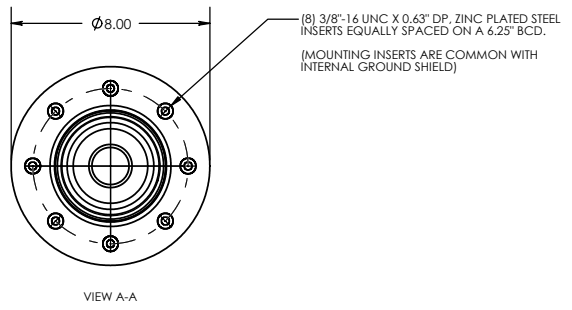
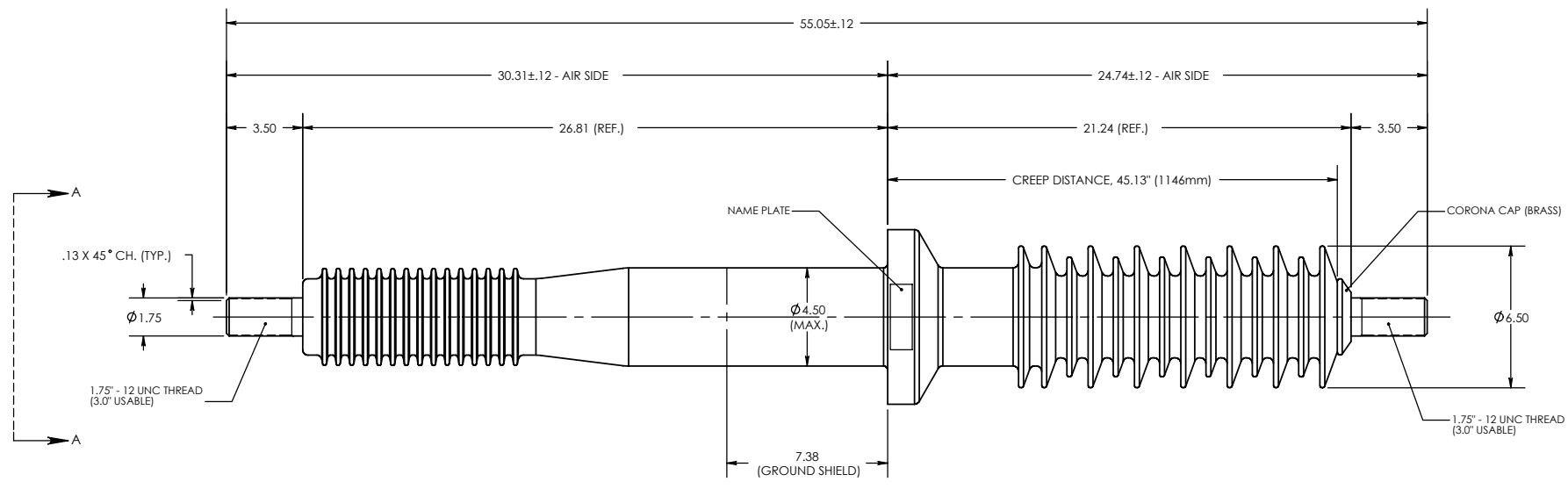
SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH CAN/CSA-C88.1-96 / ANSI C57.19.01-1991
 2. RATED VOLTAGE 38kV
 3. BASIC IMPULSE LEVEL 250KV
 4. NOMINAL CURRENT RATING 2000 AMPS
 5. CREEP DISTANCE 45.13\" (1146mm)
 6. TEMPERATURE CLASSIFICATION -50°C TO +105°C
 7. CANTILEVER LOAD (ULTIMATE) 400 lbf (1760N)
 8. APPROXIMATE SHIPPING WEIGHT 88 lbs (40kg)

REV.	NO.	DESCRIPTION	DATE	BY	CHKD.	APP'D.
0						

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
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°				
* STATISTICAL DIMENSION NO. OF SAMPLES [1]		CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE. APPROVALS DRAWN BY: DB 13/07/2003 CHECKED BY: RM 14/08/2003 ENGINEERING DB 14/08/2003	 38kV / 2000A POWER APPARATUS BUSHING	
TOOLING REF. T20-600-0 PRODUCT GROUP 2000 SERIES		SIZE B DWG. NO. 20-600-000 SCALE 1:5 CAD FILE: 2000 SERIES	REV. 0 SHEET 1 OF 1	

REV. 0
 CAD FILE: 2000 SERIES
 DWG. NO. 20-600-001

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NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
 2. CANTILEVER LOAD SPECIFICATION, BASED ON (STATIC) LOAD APPLIED HORIZONTALLY AT CENTER POINT OF TOP STUD.

MATERIAL:
 1. CYCLOALIPHATIC EPOXY, GRAY (U.V. EXPOSED)
 2. HD ETP C11000 COPPER, TIN PLATED

SPECIFICATIONS:
 1. MANUFACTURED IN ACCORDANCE WITH CAN/CSA-C88.1-96 / ANSI C57.19.01-1991
 2. POWER FREQUENCY WITHSTAND 80kV
 3. RATED VOLTAGE 46kV
 4. BASIC IMPULSE LEVEL 250KV
 5. NOMINAL CURRENT RATING 2000 AMPS
 6. CREEP DISTANCE 45.13" (1146mm)
 7. TEMPERATURE CLASSIFICATION..... -50°C TO +105°C
 8. CANTILEVER LOAD (ULTIMATE) 400 lbf (1760N)
 9. APPROXIMATE SHIPPING WEIGHT 88 lbs (40kg)

REV.	NO.	DESCRIPTION
0		

ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	QTY REQD
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.02 THREE PLACE DEC. ±0.10 ANGLES 1° TEMPERATURE ±5°C VOLTAGE ±5% AMPERAGE ±5% RESISTANCE ±5%				
CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS _____ DATE _____ DRAWN BY: DB 24/07/2003 CHECKED BY: RM 14/08/2003 ENGINEERING DB 14/08/2003		 46kV / 2000A POWER APPARATUS BUSHING		
* STATISTICAL DIMENSION NO. OF SAMPLES [1]		TOOLING REF. T20-600-0 PRODUCT GROUP 2000 SERIES	SIZE DWG. NO. B 20-600-001 SCALE 1:5 CAD FILE: 2000 SERIES	REV. 0 SHEET 1 OF 1