

# Insulation Build Up

1/14/2003

## PF1, PF2, PF3, PF5, PF6 Turn to Turn

		Thickness		Dielectric Strength	
1/2 Lap Layer of Kapton	Kapton	0.002		7.8	
	Adhesive	0.0015			
	Kapton	0.002		7.8	
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	Adhesive	0.0015			
	Kapton	0.002		7.8	
	Adhesive	0.0015			
1/2 Lap Layer Dry Glass	Glass	0.007		0.63	
	Glass	0.007		0.63	
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	Glass	0.007		0.63	
<b>PF1, PF2, PF3, PF5 , PF6</b>		<b>0.042</b>	<b>Inches</b>	<b>33.7</b>	<b>KV</b>

# Insulation Build Up

## PF4, & TF Turn to Turn

1/2 Lap Layer of Kapton	Kapton	0.002		7.8	
	Adhesive	0.0015			
	Kapton	0.002		7.8	
	Adhesive	0.0015			
1/2 Lap Layer of Kapton	Kapton	0.002		7.8	
	Adhesive	0.0015			
	Kapton	0.002		7.8	
	Adhesive	0.0015			
1/2 Lap Layer of Kapton	Kapton	0.002		7.8	
	Adhesive	0.0015			
	Kapton	0.002		7.8	
	Adhesive	0.0015			
1/2 Lap Layer Dry Glass	Glass	0.007		0.63	
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	Glass	0.007		0.63	
<b>PF4, &amp; TF</b>		<b>0.049</b>	<b>Inches</b>	<b>49.3</b>	<b>KV</b>

## Insulation Build Up

### Ground Wrap

6 x (1/2 Lap Layers) Glass		0.12	Inches	1.1	KV
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# NCSX Coil Voltage Standoff Requirements

1/10/2003

		PF1	PF2	PF3	PF4	PF5	PF6	TF
<b>Operating Voltage (KV)</b>		2	2	4	6	2	2	6
<b>Maintenance Field Test Voltage (KV)</b>	(Operating Voltage x 2) + 1	5	5	9	13	5	5	13
<b>Manufacturing Test Voltage (KV)</b>	Maintenance Test Voltage x 1.5	7.5	7.5	13.5	19.5	7.5	7.5	19.5
<b>Design Voltage Standoff (KV)</b>	Manufacturing Test Voltage x 2	<b>15.0</b>	<b>15.0</b>	<b>27.0</b>	<b>39.0</b>	<b>15.0</b>	<b>15.0</b>	<b>39.0</b>

<b>New Design Specification (KV)</b>		<b>33.7</b>	<b>33.7</b>	<b>33.7</b>	<b>49.3</b>	<b>33.7</b>	<b>33.7</b>	<b>49.3</b>
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