

# AutoQA Plus - Release build 1.5.1.0

## ACR-MR



<b>FACILITY NAME</b>	<b>Study Date</b>	<b>Vendor</b>	<b>Model</b>	<b>Study Name</b>
	4/23/2017	SIEMENS	Avanto	ACR LARGE PHANTOM

### Site Information

Scanner Name: **AVANTO**  
 Operator Initials: **DD**  
 Phantom Serial #: **J12049**  
 Device Serial Number: **26492**

Magnetic Field: **1.5**  
 Recv Coil: **HeadMatrix**  
 Center Frequency: **63.63 MHz**



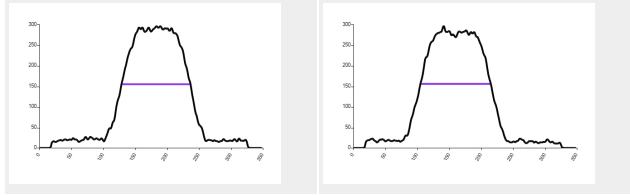




### Series Information

Description: **ACR T1**  
 Pulse Sequence: **SE**  
 Series Number: **4**  
 TR: **500**  
 TE: **20**  
 FOV: **250**  
 Number of Slices: **11**  
 Thickness: **5 mm**

Spacing: **10mm**  
 NSA: **1**  
 Percent Sampling: **100**  
 Frequency Matrix: **256**  
 Phase Matrix: **256**  
 Display Matrix: **512**  
 Bandwidth : **122 Hz**  
 Scan Time: **2:08**

### Test Results

Processed Date: 1/25/2019


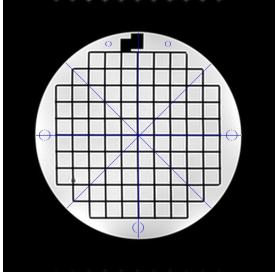
<b>Test</b>	<b>Details</b>	<b>Results</b>	<b>Pass/Fail</b>														
<b>Slice: 1</b> Location (mm): -41.86 File : ...0001.2017.04.23.11.05.52.281250.22335038																	
High Contrast Spatial Resolution		<table border="1"> <thead> <tr> <th>Expected</th> <th>Upper Left</th> <th>Lower Right</th> </tr> </thead> <tbody> <tr> <td>≤ 1.0mm</td> <td>1.0</td> <td>1.0</td> </tr> </tbody> </table>	Expected	Upper Left	Lower Right	≤ 1.0mm	1.0	1.0									
Expected	Upper Left	Lower Right															
≤ 1.0mm	1.0	1.0															
Slice Thickness Accuracy	<table border="1"> <thead> <tr> <th>Top Ramp</th> <th>Bottom Ramp</th> </tr> </thead> <tbody> <tr> <td>52.8</td> <td>53.8</td> </tr> <tr> <th>Slice Offset</th> <th>Threshold</th> </tr> <tr> <td>0.6mm</td> <td>155</td> </tr> </tbody> </table>  	Top Ramp	Bottom Ramp	52.8	53.8	Slice Offset	Threshold	0.6mm	155	<table border="1"> <thead> <tr> <th colspan="2">Slice Thickness</th> </tr> <tr> <th>Expected</th> <th>Measured</th> </tr> </thead> <tbody> <tr> <td>5 ± 0.7mm</td> <td>5.3</td> </tr> </tbody> </table>	Slice Thickness		Expected	Measured	5 ± 0.7mm	5.3	
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729																	
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Geometric Accuracy	<b>Horizontal</b>	<b>Vertical</b>	<b>Threshold</b>	<b>Diameter</b>		
	189.7mm	190.7mm	765	<b>Expected</b>	<b>Measured</b>	
				<b>190 ± 2mm</b>	<b>189.7</b>	
					<b>190.7</b>	

**Slice: 5**

Location (mm): -1.86


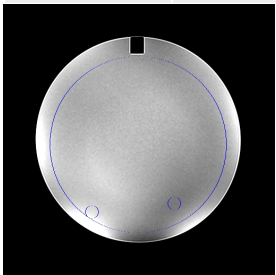
File : ...0005.2017.04.23.11.05.52.281250.22335072


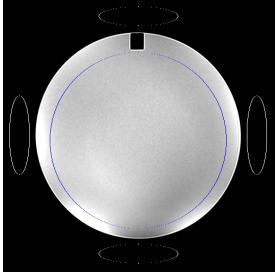
Geometric Accuracy	<b>↗ Rising Diagonal</b>	<b>↘ Falling Diagonal</b>	<b>Horizontal</b>	<b>Vertical</b>	<b>Diameter</b>		
	189.1mm	190.7mm	189.4mm	190.6mm	<b>Expected</b>	<b>Measured</b>	
	<b>Threshold</b>				<b>190 ± 2mm</b>	<b>189.1</b>	
	786					<b>190.7</b>	
					<b>189.4</b>		
					<b>190.6</b>		
					<b>190.6</b>		


**Slice: 7**

Location (mm): 18.14

File : ...0007.2017.04.23.11.05.52.281250.22335089

Image Intensity Uniformity	<b>Large Mean</b>	<b>Small High Mean</b>	<b>Small Low Mean</b>	<b>Uniformity</b>		
	1,597	1,704	1,493	<b>Expected</b>	<b>Measured</b>	
					<b>≥ 87.5%</b>	

Ghosting	<b>Top Mean ± SD</b>	<b>Bottom Mean ± SD</b>	<b>Large Mean</b>	<b>Ghosting Ratio</b>		
	12.4 ± 4.42	9.0 ± 3.44	1,597	<b>Expected</b>	<b>Measured</b>	
				<b>Left Mean ± SD</b>	<b>Right Mean ± SD</b>	
				9.3 ± 3.56	9.9 ± 3.56	
				<b>≤ 0.025</b>	<b>0.001</b>	

Signal to noise (SNR)	<b>Large Mean</b>	<b>Background</b>	<b>Noise (SD)</b>	<b>SNR</b>		
	1,597	10	3.56	<b>Expected</b>	<b>Measured</b>	
				≥ 250	<b>449</b>	

**Slice: 8**  
 Location (mm): 28.14  
 File : ...0008.2017.04.23.11.05.52.281250.22335191

Low Contrast Detectability	<b>Number of Spokes Detected</b>	<b>CNR: Spoke 1 (7mm Diameter Disk)</b>		
	9	Inner: 7.7		
		Middle: 7.4		
		Outer: 9.6		

**Slice: 9**  
 Location (mm): 38.14  
 File : ...0009.2017.04.23.11.05.52.281250.22335106

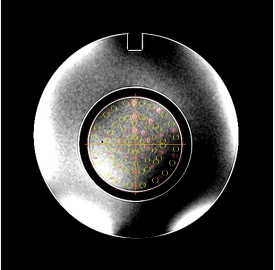
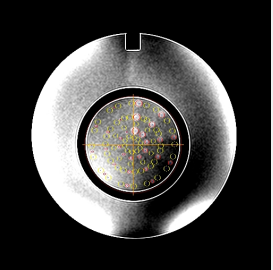
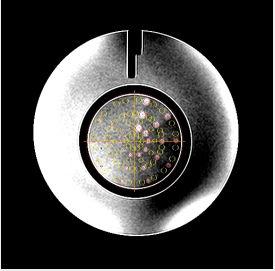
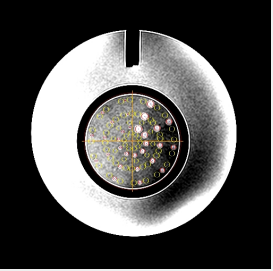
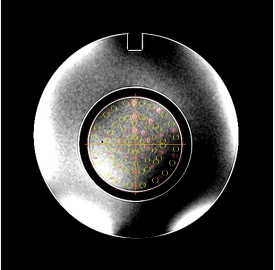
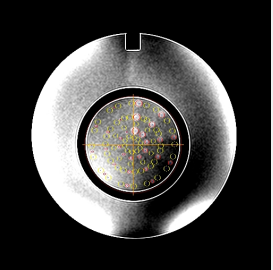
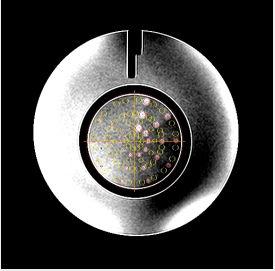
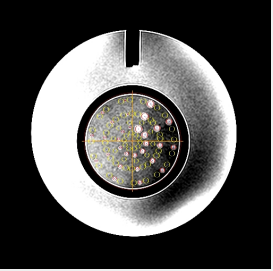

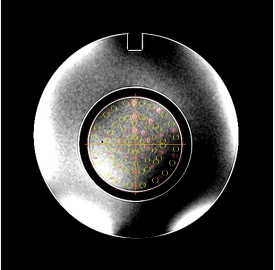
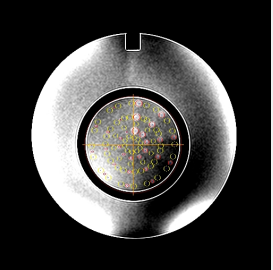
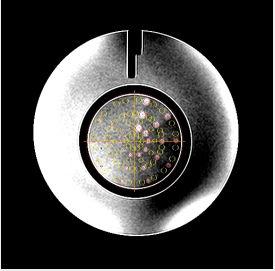
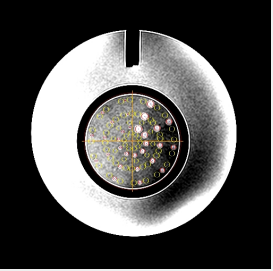


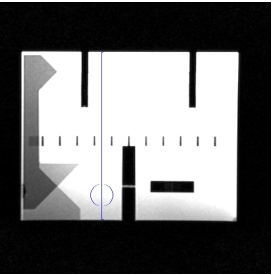

Low Contrast Detectability	<b>Number of Spokes Detected</b>	<b>CNR: Spoke 1 (7mm Diameter Disk)</b>		
	10	Inner: 14.9		
		Middle: 14.2		
		Outer: 10.5		

**Slice: 10**  
 Location (mm): 48.14  
 File : ...0010.2017.04.23.11.05.52.281250.22335208

Low Contrast Detectability	<b>Number of Spokes Detected</b>	<b>CNR: Spoke 1 (7mm Diameter Disk)</b>		
	10	Inner: 17.9		
		Middle: 19.3		
		Outer: 18.9		

**Slice: 11**  
 Location (mm): 58.14  
 File : ...0011.2017.04.23.11.05.52.281250.22335123

Low Contrast Detectability	<b>Number of Spokes Detected</b>	<b>CNR: Spoke 1 (7mm Diameter Disk)</b>		
	10	Inner: 24.4		
		Middle: 25.7		
		Outer: 25.1		

<p>Total Spokes Detected <b>Manual Method</b></p>	<table border="1"> <tr> <td data-bbox="397 0 722 336"> <p><b>Slice 8</b></p>  </td> <td data-bbox="722 0 1055 336"> <p><b>Slice 9</b></p>  </td> </tr> <tr> <td data-bbox="397 336 722 688"> <p><b>Slice 10</b></p>  </td> <td data-bbox="722 336 1055 688"> <p><b>Slice 11</b></p>  </td> </tr> </table>	<p><b>Slice 8</b></p> 	<p><b>Slice 9</b></p> 	<p><b>Slice 10</b></p> 	<p><b>Slice 11</b></p> 	<table border="1"> <tr> <th colspan="2">Total Spokes Detected</th> </tr> <tr> <th>Expected</th> <th>Measured</th> </tr> <tr> <td>≥ 9 Spokes</td> <td><b>39</b></td> </tr> </table>	Total Spokes Detected		Expected	Measured	≥ 9 Spokes	<b>39</b>	
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761													
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<p><b>Slice: Sagittal Localizer</b> File : AVANTO_2017ACRPHANTON.MR.QA_ACR.0001.0001.2017.04.23.11.05.52.281250.22331958.IMA</p>													
<p>Sagittal Localizer</p>	<table border="1"> <tr> <th>Threshold</th> </tr> <tr> <td>84</td> </tr> </table> 	Threshold	84	<table border="1"> <tr> <th colspan="2">Length</th> </tr> <tr> <th>Expected</th> <th>Measured</th> </tr> <tr> <td>148 ± 2mm</td> <td><b>148.3</b></td> </tr> </table>	Length		Expected	Measured	148 ± 2mm	<b>148.3</b>			
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