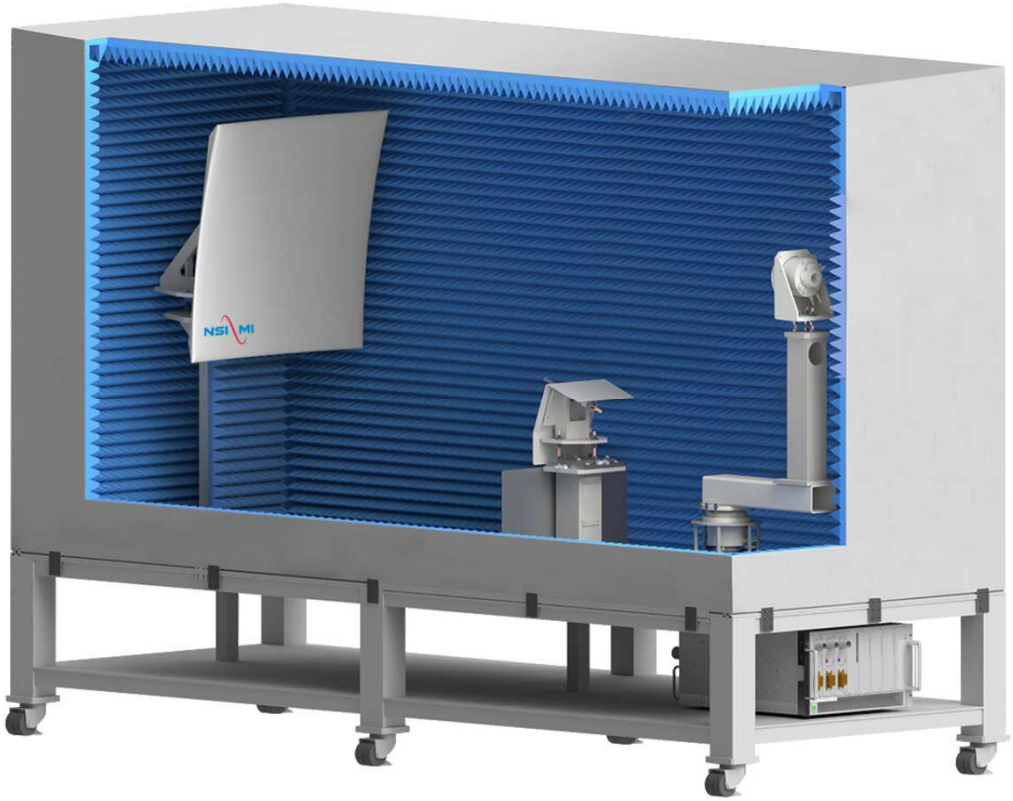
Test with Confidence™

Small Compact Range Systems

November 2017

Company Proprietary



System Specifications

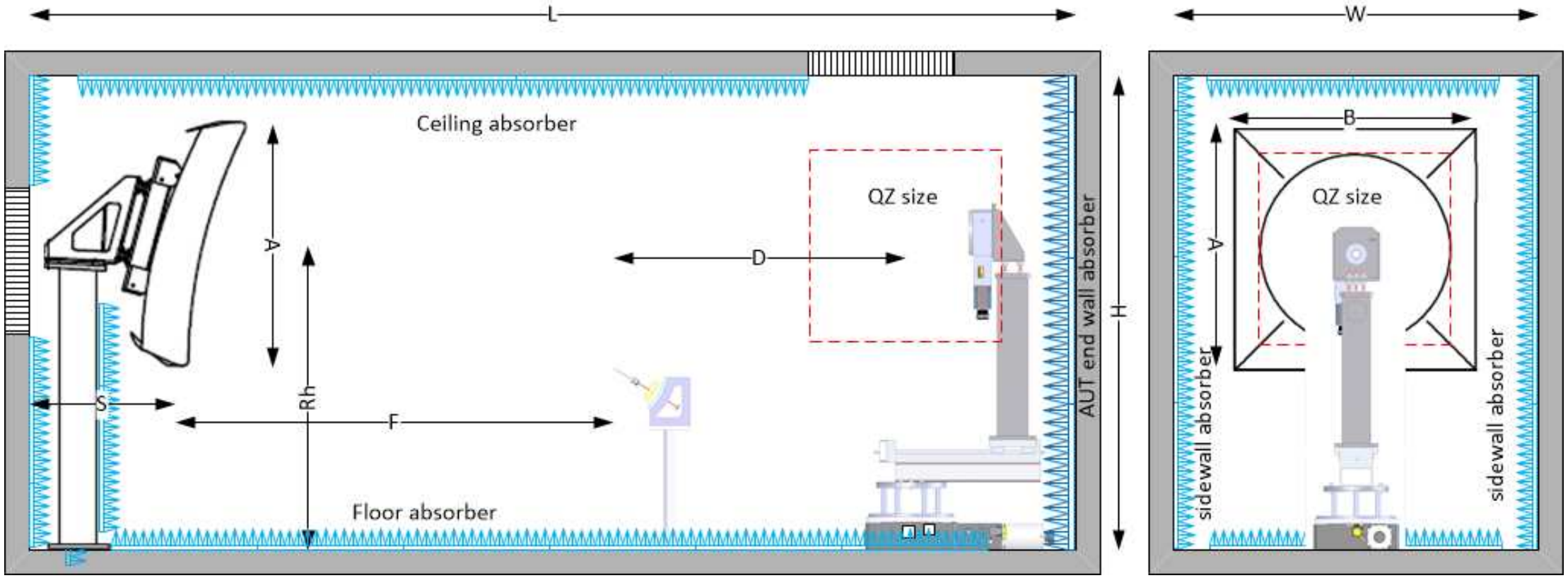
CR System	30 cm QZ	50 cm QZ	80 cm QZ
Reflector Type	Rolled-Edge	Rolled-Edge	Rolled-Edge
Quiet Zone Size (cm)	ϕ30 x 30 long	ϕ50 x 50 long	ϕ80 x 80 long
Quiet Zone Shape	Circular Cylindrical	Circular Cylindrical	Circular Cylindrical
Nominal Reflector size (cm)	50 x 50	76 x 76	110 x 110
Feed Configuration	Center Fed	Center Fed	Center Fed
Frequency Range (GHz)	24 – 110	24 – 110	24 – 110
Amplitude Taper (dB)*	≤ 1	≤ 1	≤ 1
Amplitude Ripple (dB)*	≤ ±0.5	≤ ±0.5	≤ ±0.5
Total Phase Variation (°)*	20	20	20
Cross Polarization (dB)*#	30	30	30

*Standard specifications provided are with a 95% confidence level. Phase variation increases above 40 GHz.
#Specification applies to on axis only

CR-Mini Components

- Anechoic Enclosure
  - Size dependent on quiet zone
  - Inside surface lined with RF absorber
  - Moderate shielding
  - Vents for air flow (not shown)
- CR Reflector System
  - CR Reflector with rolled-edges
  - Center fed configuration
  - Single piece reflector
  - Feed stand, with manual adjustments
  - Dual-Polarized Feed
- DUT Positioning System
  - Roll over Azimuth configuration
  - Mast and Manually Adjustable Offset
  - 2 Axis Position Controller

Enclosure Specifications:



Enclosure Specifications

CR System	30 cm QZ	50 cm QZ	80 cm QZ
Internal size L x H x W (m)	2.13 x 0.91 x 0.91	3.13 x 1.65 x 1.1	4.37 x 1.98 x 1.52
Reflector A x B (m)	0.5 x 0.5	0.76 x 0.76	1.10 x 1.10
Focal Length F (m)	0.76	1.22	1.83
Quiet Zone Size (m)	Ø 0.3 x 0.3 long	Ø 0.5 x 0.5 long	Ø 0.8 x 0.8 long
Additional test distance D (m)	0.51	0.81	1.22
Support space S (m)	0.45	0.5	0.61
Range height Rh (m)	0.46	1.02	1.27
Ceiling absorber[1]	3 inch pyramidal	3 inch pyramidal	3 inch pyramidal
Side walls absorber[1]	3 inch pyramidal	3 inch pyramidal	3 inch pyramidal
Floor absorber[1]	3 inch pyramidal	3 inch pyramidal	3 inch pyramidal
AUT end wall absorber[1]	4 inch pyramidal	4 inch pyramidal	4 inch pyramidal
Frequency Range (GHz)[2]	24-110	24-110	24-110
Estimated shielding effectiveness of enclosure (dB)	>40	>40	>40

[1]Typical power handling capability of 1 kW/m^2
[2] Actual capability depends on feeds purchased

DUT Positioner

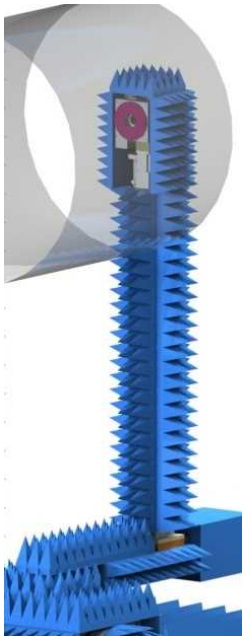
Parameters		Units	Small	Medium	Large
Maximum Load (on Roll axis)		kg	9	18	75
Maximum Moment (on Roll axis)		Nm	188	188	370
Delivered Torque	Roll	Nm	24	24	85
	Azimuth	Nm	24	85	85
Withstand Torque	Roll	Nm	64	64	260
	Azimuth	Nm	64	260	260
Max Speed	Roll	rpm	6	6	7
	Azimuth	rpm	6	7	7
Position Readout Accuracy	Roll	deg	±0.02°	±0.02°	±0.02°
	Azimuth	deg	±0.02°	±0.02°	±0.02°
Limit-to-Limit Travel[1]	Roll	deg	±157.5°	±157.5°	±160°
	Azimuth	deg	±157.5°	±160°	±160°

[1] Range shown when hardware limits are used. Travel range can be extended by removing hardware limits and using only software limits. However, note that travel may further be limited by DUT cable management solution.

DUT cable management is customer responsibility.

El over Azimuth Configuration

Roll over Azimuth Configuration

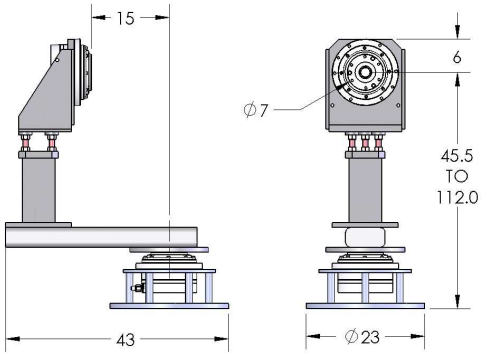


Typical Absorber Treatment

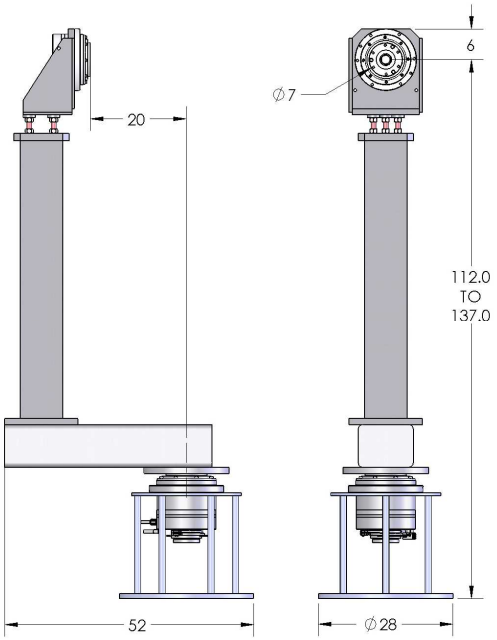
DUT Positioner – Dims and Compatibility

Parameters	Units	Small	Medium	Large
Maximum Load (on Roll axis)	Kg	9	18	75
Maximum Moment (on Roll axis)	Nm	188	188	370
Nominal Maximum Offset	cm	15	20	25
CR Compatibility		30 cm QZ 50 cm QZ	50 cm QZ 80 cm QZ	50 cm QZ 80 cm QZ

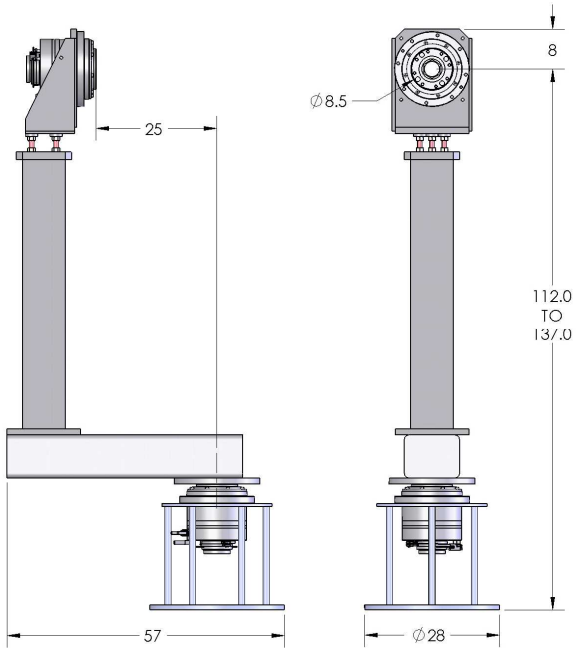
All dimensions are in cm
Maximum offset depends on QZ size specified



Small AUT Positioner



Medium AUT Positioner



Large AUT Positioner