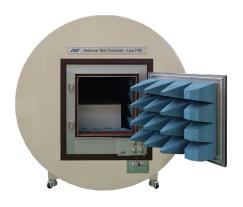
# **Datasheet**

# ATC Antenna Test Chamber - Low PIM



- Semi anechoic chamber design for high shielding and low PIM antenna measurements
- Shielding up to 90 dB
- Frequency ranges 380/700 MHz to 6000 MHz
- Residual PIM as low as -165 dBc @ 2 x 43dBm (DUT and options dependent)
- $\bullet$  Standard models from 3.5 m to 4.5 m / 11 ft. to 15 ft. length
- Connector arrays for multiband / MIMO antennas

ATC series low PIM Antenna Test Chambers are designed for testing RF devices and antennas from 380 MHz to 6000 MHz. Not only are today's antennas required to show excellent transmission characteristics, but they have to feature very low passive intermodulation distortion (PIM). This is imperative for high quality and distortion free high speed data transmission. Besides high shielding factors of up to 90 dB, our ATC chambers provide very low residual passive intermodulation distortion.



AWT Global's ATC semi anechoic chambers are delivered turnkey. That means: no installation or assembly is required locally. Our chambers are ready to go - immediately. ATCs can be moved freely with their wheeled frames. Just roll them to the desired location in your facility, connect your test systems and start measuring. This flexibility allows ATCs to integrate optimally with any production flow. Even if this changes, the chambers can be moved easily to new locations.



All ATCxxB chambers come standard with 18 inch absorber material. To suite customer specific testing requirements, ATCs are available in different lengths, with different door openings and with a variety of options and accessories.

Special requirements? Contact us for your customized ATC configurations.

#### **ATC Models**

ATC35B-2-18 (L 3.5m, D 2.0m) ATC37B-2-18 (L 3.7m, D 2.0m) ACT39B-2-18 (L 3.9m, D 2.0m) ACT45B-2-18 (L 4.5m, D 2.0m)

#### **AWT Global LLC**

Sioux Falls South Dakota 57110 USA

p: +1 (973) 321-3423 e: sales@awt-global.com w: www.awt-global.com



### Models

Model	Description
ATC35B-2-18	Antenna Test Chamber, shielding >90 dB @ 380-6000 MHz, PIM rating: <-165 dBc @ 700-6000 MHz , absorber material (body/head/door): $18/18/18$ in, door size: $0.61 \text{ m} \times 0.61 \text{ m} (24 \times 24 \text{ in})$ , length: $3.5 \text{ m} (138 \text{ in})$ , diameter: $2.0 \text{ m} (110 \text{ in})$ max mechanical DUT length: $1.8 \text{ m} (70 \text{ in})$ .
ATC37B-2-18	Antenna Test Chamber, shielding >90 dB @ 380-6000 MHz, PIM rating: <-165 dBc @ 700-6000 MHz, absorber material (body/head/door): 18/18/18 in, door size: 0.61 m x 0.61 m 24 x 24 in), length: 3.7 m (146 in), diameter: 2.0 m (79 in), max mechanical DUT length: 2.4 m (94 in).
ATC39B-2-18	Antenna Test Chamber, shielding >90 dB @ 380-6000 MHz, PIM rating: <-165 dBc @ 700-6000 MHz, absorber material (body/head/door): 18/18/18 in, door size: 0.61 m x 0.61 m (24 x 24 in), length: 3.9 m (154 in), diameter: 2.0 m (79 in), max mechanical DUT length: 2.6 m (102 in).
ATC45B-2-18	Antenna Test Chamber, shielding >90 dB @ 380-6000 MHz, PIM rating: <-165 dBc @ 700-6000 MHz, absorber material (body/head/door): 18/18/18 in, door size: 0.61 m x 0.61 m (24 x 24 in), length: 4.5 m (177 in), diameter: 2.0 m (79 in), max mechanical DUT length: 3.2 m (125 in).
ATC400	Extended PIM frequency option. PIM rating < -155 dBc @ 400 - 6000 MHz

# **Options and Accessories**

Model	Description
ATCPORT4	Four bulkhead connectors instead of one, type DIN 7/16 (f).
ATCPORT6	Six bulkhead connectors instead of one, type DIN 7/16 (f).
ATCPORT8	Eight bulkhead connectors instead of one, type DIN 7/16 (f).
ATCWG	Waveguide port with removable RF-tight lid, well suited as cable lead-through.
ATCPORT1N	Additional N type connector port.
ATCSMA	Additional SMA type bulkhead connectors SMA(f)-SMA(f).
ATCPL	Second connector panel (removable).
ATCDCP25	DC Port (48V / 25A) with EMI filters.
ATCACP10	AC port (100-240V) / 10A with EMI filters.
ATCDRWDL	Extra wide door $1.0 \text{m} \times 0.61 \text{m}$ (39 x 24 inch) with ATCDRL. Replaces standard door. Reduces PIM and shielding performance.
ATCDRL	Door lever - more ergonomic, faster loading / unloading, more even contact compression. For standard door, included already in wide door option.
ATCFAN	Fan for air exchange, covered with honeycomb screen.
ATCSLTBLxx	Sliding table for ATC. Dimensions vary and depend on ATC length and door width. Requires ATCTBLSTD. Contact local representative.
ATCJIGxx	Test jig for exact positioning of DUTs within the chamber (repeatable measurements). Dimensions vary and depend on ATC length and door width. Contact local representative.
ATCTBLSTD	External stand to support fully extended ATC sliding table.
LIC308-DMDM-3M	Low PIM cable 3m (10ft), PIM < -165dBc @ 2x43dBm, connectors DIN 7/16(m)-DIN 7/16(m). Other lengths or connector combinations available.
ADA-DMDF	Adapter DIN 7/16 (m) - DIN 7/16 (f). Utilization as connector saver for RF ports.
ADA-D716M-D4310F	Adapter DIN7/16(m) to DIN 4.3-10(f)

Options and accessories may affect PIM and shielding ratings of Antenna Test Chambers



# RF & Microwave Technology

AWT-Global provides advanced telecommunication technology products and analyzers for a variety of RF and Microwave applications.

### **AWT Global LLC**

5116 E 18th Street Sioux Falls South Dakota 57110 USA

p: +1 (973) 321-3423 e: sales@awt-global.com w: www.awt-global.com

# **Technical Specifications**

### **Shielding Effectiveness**

ATCxxB	>90 dB (380-6000 MHz)
with ATCDRWDL option	>70 dB (380-6000 MHz)

Residual PIM	
ATCxxB-2-18	< -165 dBc (700-6000 MHz)
with ATC400 option	< -155 dBc (400-700 MHz)
with ATCDRWDL option	<-155 dBc

Residual PIM specifications of ATCs are measured with 2x43 dBm signals using omni- and dipole antennas.

PIM behavior of ATCs may change with customer antennas because of their architecture and resulting radiation patterns. Measurements may vary depending on DUT position within the chamber, caused by different near field dynamics and varying reflected RF energy .

RF Port (s)	
ATCxx	Bulkhead
	DIN 7/16 (f) - DIN 7/16 (f)
Other connector ty	pes available

### Electrical (LED light)

Wide door (opt)

Main Power for 12 V AC/DC Converter 100-240 V,	
50/60 Hz	
Power consumption	10 Watts

Door Sizes		
Dimensions in mete	rs ( inches)	
Standard door	0.61 x 0.61	$(24 \times 24)$

 $1.0 \times 0.61$ 

 $(39 \times 24)$ 

Dimensions	
Dimensions in met	ers ( inches) Length, Dia, Height
ATC35B-2-18	$3.5 \times 2.0 \times 2.3 $ (138 x 78 x 91)
ATC37B-2-18	$3.7 \times 2.0 \times 2.3 (146 \times 78 \times 91)$
ATC39B-2-18	3.9 x 2.0 x 2.3 (154 x 78 x 91)
ATC45B-2-18	4.5 x 2.0 x 2.3 (177 x 78 x 91)

Weight	
ATC35B-2-18	790 kg / 1736 lbs
ATC37B-2-18	850 kg / 1868 lbs
ATC39B-2-18	910 kg / 2000 lbs
ATC45B-2-18	1060kg / 2330 lbs



Image shows ATC39B-2-18 with ATCPORT4, ATCFAN and ATCTBL, ATCJIG and (2) ATCTBLSTAND options.



### **Product Quality**

AWT is committed to providing our customers products that meet highest quality standards. AWT products undergo thorough quality checks and are ISO 9001 and ISO 14001 certified.

For more information on any of our products or services please visit our Web site:

www.awt-global.com

#### **Customized Solutions**

Measurement requirements need often tailored solutions. We offer customized antenna chambers and turnkey ATE solutions for a variety of applications. Contact us for more details.

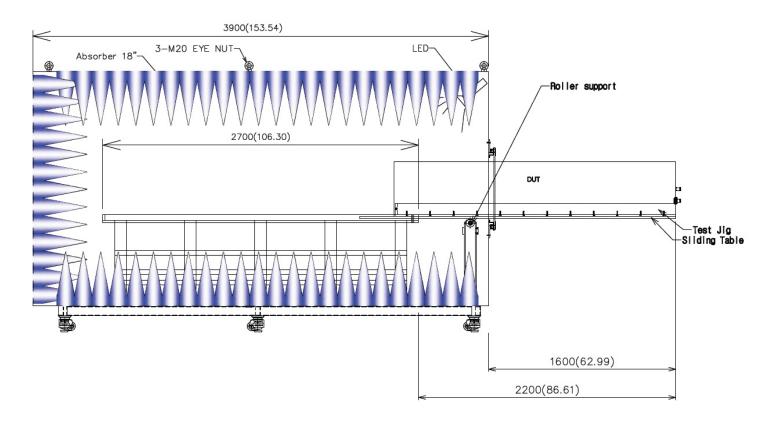
#### **AWT Global LLC**

5116 E 18th Street Sioux Falls South Dakota 57110 USA

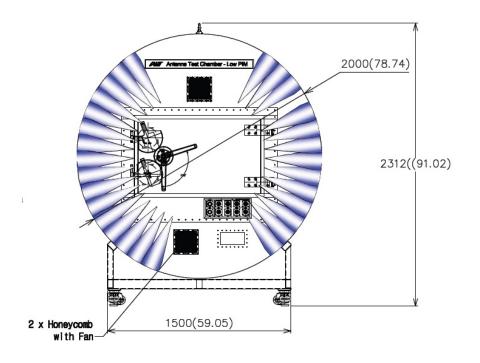
p: +1 (973) 321-3423 e: sales@awt-global.com

w: www.awt-global.com

## Dimensions: example ATC39B-2-18



Drawing shows an ATC39B-2-18 with sliding table. The number "xx" of ATCxxB-2-18 represents the outer length in meters. The "2" stands for the diameter in meters, and "18" for 18 inch absorber material. All ATCs are also equipped with absorber material at the door side (right side of this drawing). This is however not shown here to allow for a better view at sliding table mechanics. Contact your local AWT Global representative for complete drawings and dimensions of your desired ATC model.



Drawing shows front view of ATCxxB-2-18 with extra wide door option ATCDRWDL, ATCPORT8 option, 2x ATCWG option and 2x ATCFAN option.

### **AWT Global LLC**

5116 E 18th Street Sioux Falls South Dakota 57110

p: +1 (973) 321-3423

e: sales@awt-global.com

w: www.awt-global.com

