



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

PARKER HANNIFIN  
CHOMERICS TEST SERVICES – WOBURN, MA  
84 Dragon Court  
Woburn, MA 01888  
David Inman Phone: 781 939 4375

ELECTRICAL (EMC)

Valid to: June 30, 2020

Certificate Number: 1980.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electromagnetic compatibility and product safety tests:

<b><u>Test Technology:</u></b>	<b><u>Test Method(s):</u></b>
<b><i>Emissions</i></b>	
Radiated (up to 18 GHz) and Conducted	FCC Part 15 Subpart B, (ITE devices) (using ANSI C63.4:2014); FCC Part 18 (using MP-5:1986); IEC/CISPR 11; IEC/CISPR 14-1; IEC/CISPR 22; IEC/CISPR 32; EN 55011; EN 55014-1; EN 55022 (2006+A1:2007, 2010); EN 55032; KN 11; KN 14-1; KN 22; KN 32 (341-2, excluding Broadcast Receivers); CNS 13438 (up to 6 GHz); CNS 13803; CNS 13783-1; AS/NZS CISPR 11; AS/NZS CISPR 14.1; AS/NZS CISPR 22; CAN/CSA CISPR 22; ICES 001; ICES 003; VCCI V-3 (up to 6 GHz)
Current Harmonics	EN 61000-3-2 (2006+A2:2009, 2014); IEC 61000-3-2 (2009, 2014); AS/NZS 61000.3.2; KN 61000-3-2
Voltage Fluctuations and Flicker	EN 61000-3-3 (2008, 2013); IEC 61000-3-3 (2008, 2013); AS/NZS 61000.3.3; KN 61000-3-3
<b><i>Immunity</i></b>	
Electrostatic Discharge (ESD)	EN 61000-4-2 (2009); IEC 61000-4-2 (2008); KN 61000-4-2; AS/NZS 61000.4.2
Radiated Immunity	EN 61000-4-3 (2006+A2:2010); IEC 61000-4-3 (2010); KN 61000-4-3; AS/NZS 61000.4.3

<b><u>Test Technology:</u></b>	<b><u>Test Method(s):</u></b>
<b><i>Immunity (cont.)</i></b>	
Electrical Fast Transient/Burst	EN 61000-4-4 (2004+A1:2010, 2012); IEC 61000-4-4 (2004+A1:2010, 2012); KN 61000-4-4; AS/NZS 61000.4.4
Surge Immunity	EN 61000-4-5 (2006, 2014); IEC 61000-4-5 (2005, 2014); KN 61000-4-5; AS/NZS 61000.4.5
Conducted Immunity	EN 61000-4-6 (2009, 2014); IEC 61000-4-6 (2008, 2013); KN 61000-4-6; AS/NZS 61000.4.6
Power Frequency Magnetic Field Immunity	EN 61000-4-8 (2010); IEC 61000-4-8 (2009); KN 61000-4-8; AS/NZS 61000.4.8
Voltage Dips, Short Interruptions, and Line Voltage Variations	EN 61000-4-11 (2004, A1:2018); IEC 61000-4-11 (2004); KN 61000-4-11; AS/NZS 61000.4.11
<b><i>Generic Standards</i></b>	EN/IEC 61000-6-1; EN/IEC 61000-6-2; EN/IEC 61000-6-3; EN/IEC 61000-6-4; AS/NZS 61000.6.1; AS/NZS 61000.6.2; AS/NZS 61000.6.3; AS/NZS 61000.6.4
<b><i>Product Standards</i></b>	IEC/CISPR 14-2; EN/IEC 55014-2; IEC/CISPR 24; EN/IEC 55024; ETSI EN 300 386; ETSI EN 301 489-1; ETSI EN 301 489-17; EN 55103-1; EN 55103-2; KN 14-2; KN 24; KN 35; EN55035; CISPR 35; EN/IEC 60945 (Sections 9 and 10); EN/IEC 61326-1; EN/IEC 61326-2-1; EN/IEC 61326-2-2; EN/IEC 61326-2-3; EN/IEC 61326-2-4; EN/IEC 61326-2-5; EN/IEC 61326-2-6; AAMI/EN/IEC 60601-1-2; KN 60601-1-2; AAMI/EN/IEC 60601-2-2; EN/IEC 60601-2-4; EN/IEC 60601-2-18; EN/IEC 60601-2-23; EN/IEC 60601-2-24; AAMI/EN/IEC 60601-2-25; EN/IEC 60601-2-26; AAMI/EN/IEC 60601-2-27; EN/IEC 60601-2-34; EN/IEC 60601-2-37; AAMI/EN/IEC 60601-2-47; EN/IEC 60601-2-49; EN 60730-1; EN 60730-2-9; EN 50491-1; EN 50491-3; EN 50491-5-2; EN 50491-5-1; CISPR 25; EN 60601-1-12 (Section 11 only)

<b><u>Test Technology:</u></b>	<b><u>Test Method(s):</u></b>
<b><i>Military EMI/EMC</i></b>	
MIL-STD-461C/462 Radiated Emissions Conducted Emissions Radiated Susceptibility Conducted Susceptibility	RE01, RE02, RE03; CE01, CE03, CE06, CE07; RS01, RS02, RS03 (200 v/m); CS01, CS02, CS03, CS04, CS05, CS06, CS09, CS10, CS11
MIL-STD-461D/E/F/G Radiated Emissions Conducted Emissions Radiated Susceptibility Conducted Susceptibility	RE101, RE102, RE103; CE101, CE102, CE106; RS101, RS103 (200 v/m); CS101, CS103, CS104, CS105, CS106 ( <i>461F only</i> ), CS109, CS114, CS115, CS116, CS118
RTCA DO-160 D/E/F/G	RADIATED EMISSIONS SECTION 21; CONDUCTED EMISSIONS SECTION 21; RADIATED SUSCEPTIBILITY SECTION 20; CONDUCTED SUSCEPTIBILITY SECTION 20
<b><i>Product Safety</i></b>	
Measuring and Test Equipment ( <i>except Sections 2.2 to 12.4, 12.5.2, &amp; 12.6</i> )	EN/IEC 61010-1; EN/IEC 61010-2-101; CSA22.2 No. 61010-1; UL 61010-1; EN/IEC 61010-2-10; EN/IEC 61010-2-030; EN/IEC 61010-2-51; EN/IEC 61010-2-81; EN/IEC 61010-2-201
Medical Devices <sup>1</sup>	AAMI ES 60601-1; EN/IEC 60601-1; UL 60601-1; EN 60601-1-12; CSA 60601-1; EN/IEC 60601-1-6; AAMI/EN/IEC 60601-1-8; HA/EN/IEC 60601-1-11; EN/IEC 60601-2-2; EN/IEC 60601-2-18; AAMI/EN/IEC 60601-2-25; EN/IEC 60601-2-26; EN/IEC 60601-2-27; EN/IEC 60601-2-37; AAMI/EN/IEC 60601-2-47; EN/IEC 60601-2-49; EN/IEC 62304
Controls	EN 60730-1; EN 60730-2-9; EN 60730-2-11; EN 60730-2-13; EN 50491-1; EN 50491-3; EN 63044-1; EN 63044-3
Information Technology	EN/UL 60950-1 ( <i>excluding clauses 6 and 7.4.2</i> ); CSA 60950-1 ( <i>excluding clauses 6 and 7.4.2</i> ); AS/NZS 3250; EN/IEC 62368-1

On the following products or types of products:

Information Technology Equipment (ITE) and Medical, Industrial, Scientific and Laboratory Equipment (ISM), Household Appliances and Portable Tools.

<sup>1</sup>The laboratory is only accredited for testing activities outlined within the test methods listed above. Reference to any other activity within these standards, such as risk management or risk assessment, does not fall within the laboratory's accredited capabilities.

Testing Activities Performed in Support of FCC Declaration of Conformity and Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1 <sup>2</sup>:

<b>Rule Subpart/Technology</b>	<b>Test Method</b>	<b>Maximum Frequency (MHz)</b>
<u>Unintentional Radiators</u> Part 15B	ANSI C63.4:2014	18000 MHz
<u>Industrial, Scientific, and Medical Equipment</u> Part 18	FCC MP-5 (February 1986)	18000 MHz

<sup>2</sup> Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (<https://apps.fcc.gov/oetcf/eas/>) for a listing of FCC approved laboratories.





## Accredited Laboratory

A2LA has accredited

# PARKER HANNIFIN CHOMERICS TEST SERVICES - WOBURN, MA

Woburn, MA

for technical competence in the field of

## Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 20<sup>th</sup> day of June 2018.

A handwritten signature in black ink, written over a horizontal line.

President and CEO  
For the Accreditation Council  
Certificate Number 1980.01  
Valid to June 30, 2020

*For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.*