

PEGASUS[®] BT

System Performance Sheet



Ionization Source	Electron Ionization (open style)
Electron Energy	40eV to 200eV (default setting is 70eV)
Emission Current	0.5 to 5 mA (default setting is 1mA)
Filament	<ul style="list-style-type: none">• Dual ribbon-style EI filaments (switchable between runs)• Fast and easy filament replacement design
Ion Source Temperature	100°C to 300°C
Transfer Line Temperature	50°C to 350°C
Mass Analyzer	Time-of-Flight with industry-leading single mirror, dual stage reflectron
Mass Accuracy	< 0.30 Da for entire mass range
Mass Drift	< 0.30 Da for 24 hours without calibration
Mass Range	10 to 1500 m/z
Mass Resolution	<ul style="list-style-type: none">• Resolution ≥ 1500 for m/z 1500• Resolution ≥ 1100 for m/z 219• Mass peak width ≤ 0.2 Da FWHH for m/z 219
Spectral Acquisition Rate	<ul style="list-style-type: none">• 1 to 50 spectra/second• 35,000 native spectra/second (maximum)
Detection Limit	<ul style="list-style-type: none">• Signal to Noise (S/N) ≥ 10 for injections of 50 fg of OFN on column• 10 replicate injections of 50 fg of OFN on column with Instrument Detection Limit (IDL) ≤ 20 fg
Precision	$\leq 5\%$ RSD for 15 replicate injections of 1pg OFN on column
Library Match (Deconvolution)	OFN (NIST 2014) similarity score of > 800 on 1pg on column
Linear Dynamic Range	10^5
Supported GC Options	Agilent 7890
Supported Auto Injector Options	<ul style="list-style-type: none">• Agilent 7683B/7693A/7650 Auto injectors and 100-/150-Sample Trays• LECO L-PAL3 Liquid/HS/SPME Automatic Tool Exchange Autosampler• Other autosamplers can be used via contact closure and 3rd party software control
Instrument Control Software	ChromaTOF [®] brand software version 5.0 for Pegasus BT Mass Spectrometry Data System with integrated instrument control, acquisition, processing, and reporting software operating under 64-bit Windows [®] 7 or Windows 10

Serviceability Features	Designed for serviceability; easy access to filaments, detector, and electronics
Carrier Gas and Flow Rates (ml/minute)	Helium—recommended optimal flow rate: 1 mL/minute Min. – 5 mL/minute Max
Operating Temperature	60° to 80°F (16° to 26°C)
Storage Temperature	32° to 122°F (0° to 50°C)
Mass Spectrometer Dimensions	20 in H x 21 in W x 32 in D (50.8 cm H x 53.3 cm W x 81.3 cm D)
Weight (approximate)	<ul style="list-style-type: none"> • Pegasus BT: 200 lb. (91 kg) • Total Shipping: TBD lb. (TBD kg)
Safety & Regulatory Certifications	<ul style="list-style-type: none"> • CE Certification • ISO 9001

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Patents pending: US PAT. NO. 9,123,521; US PAT. NO. 7,501,621

Specifications and part numbers may change.
Consult LECO for latest information.

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