

eMpulse Test Systems – seaPLUS Load Frame Specifications

SPECIFICATIONS	UNITS	sea ⁺ 13	sea ⁺ 27	sea ⁺ 40	sea ⁺ 54	sea ⁺ 108
Peak Dynamic Force Motor Peak Force (not including Air Support)	N (lbF)	13468 (3028)	26910 (6050)	40326 (9066)	53820 (12100)	107640 (242000)
Continuous Dynamic Force** Moto Continuous Force (not including Air Support)	N (lbF)	5018 (1128)	10530 (2367)	21060 (4735)	21060 (4735)	42120 (9469)
Maximum Static Air Support Air support maximum force @100 psi (6.9 bar)	N (lbF)	8900 (2000)	17800 (4000)	17800 (4000)	17800 (4000)	35600 (8000)
Continuous Force Motor Continuous Force + Maximum Air support	N (lbF)	13918 (3129)	28330 (6369)	38860 (8737)	38660 (8737)	77720 (143240)
Combined Peak Force Motor Peak Force + Maximum Air Support	N (lbF)	22368 (5029)	44710 (10052)	58126 (13068)	71620 (16102)	143240 (32203)
Peak Velocity at Continuous Dynamic Force	m/sec in/sec	4.6 181	4.2 165	4.2 165	4.2 165	4.2 165
Peak Velocity at Peak Dynamic Force	m/sec in/sec	2.0 79	1.9 75	1.9 75	1.9 75	1.9 75
Frequency Response -3dB Velocity Roll-Off	Hz	149	149	149	149	149
Temperature Monitoring	Specimen	Monitored Non-contacting IR				
	Motor	Embedded PTC thermocouple with redundant safety KTY sensor				
Digital Encoder Accuracy	nm	10.0				
Noise Level – Typical	dbA	<55				
Waveforms Supported	Type	Sine, Triangle, Square, Frequency Sweep & Custom				
Facility Requirements	V	380-480Vac, 3φ, 50-60 Hz				
	A	Current Rating based on motor sizing and system performance requirements.				
Air Supply, Rated	psi (bar)	100 (6.9), higher Static Load Support possible at higher supply pressures.				
	CFM	<5				
Recommend Liquid Cooling Flow, approximately 20deg delta C	Lpm	5	5.5	6.5	6.5	13
	gpm	1.3	1.5	1.7	1.7	3.4
Max Heat Removal @100% duty cycle, full durability rating	kW	3.9	7.3	13.5	13.5	26.9
	Btu/hr ton	13208 1.1	2505 2.1	45928 3.8	45928 3.8	91856 7.7

Notes:

1. All performance parameters are estimates based on design considerations and are subject to change at any time. As such, eMpulse cannot be held liable for any incidental or consequential damages or losses arising from the use of this information.
2. Interpretation and use of the data are the sole responsibility of the user.

