Vega Series

15 kW to 480 kW

CE

Customizable Power Racks

INTEPRO SYSTEMS

THE POWER TEST EXPERTS

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Vega Series

15 kW to 480 kW

Sample Vega Series

Product Overview

The Vega Series is Intepro's new line of customizable high power racks. Comprised of 15kW 3U Regenerative loads or DC power supplies, you can mix and match depending on your testing needs. Up to 480kW of power can be loaded or supplied at efficiencies of well over 90%. When incorporating our regenerative DC loads, energy savings are doubled via reduced generated heat and recouped energy. These racks are ideal for battery testing (charge & discharge), burn-in, research & development and EOL/Production tests across a wide array of industries including: Aerospace, Automotive, Medical Device, Energy Storage and Military/Defense.

We can also mate any Vega Series rack to a Power Distribution Unit (PDU), allowing you to easily connect DUT's without having to second-guess your wiring. Use one of Intepro's standard PDUs or have us build one to your exact requirements. Complete the customization with a variety of standard or custom connections and interfaces to make your life easier. There is no need to compromise, Intepro will adapt to what you require!

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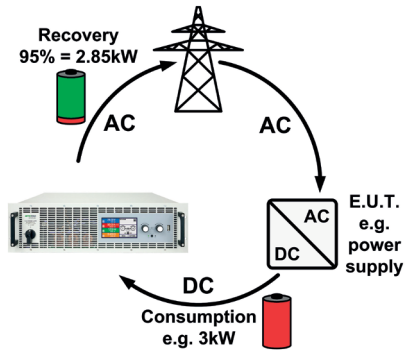
Featured Benefits

- *Configurable; can be adapted to your unique requirements*
- *21U, 30U, 35U, and 42U chassis sizes*
- *Up to 180kW in a single rack using 15kW power modules; 480 kW total in three bays*
- *Voltages up to 1500 VDC*
- *Currents up to 6100 amps*
- *Chose from auto-ranging power supplies, recycling loads, bi-directional charge-discharge sources, or a combination*
- *Multilingual TFT touch panel*
- *>90% efficient in both the supply and energy recovery*

Power

All models feature a flexible Auto-Ranging output stage which provides higher output current at reduced voltages, so the source maintains maximum output power across a wide range of voltage operation. Intepro racks with Auto-Ranging deliver the full power down to 1/3 of the voltage range. Our 500V, 150 kW rack will deliver 900amps down to 170VDC. which means a single source will cover many more applications than the competitors. Auto-Range is especially useful when testing products that require varied input voltages while maintaining regulated output power. This feature often results in a single rack solution versus buying multiple sources to address low and high voltage / current requirements.



Energy Recovery

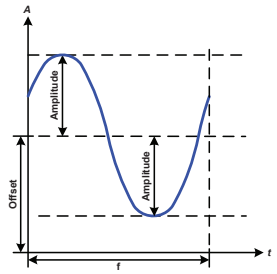
The ELR and PSB series have technology that allows energy recovery back to the AC grid, both series are highly efficient recovering nearly 95% of the loaded energy. Recovering this energy reduces your costs as well as eliminating the need for additional cooling necessary for air-cooled and water-cooled loads that dissipate energy in the form of heat.

Integrated Function Generator

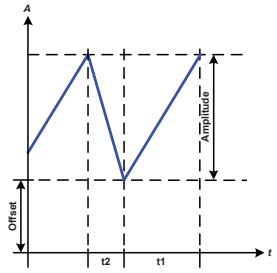
All models have an integrated function generator that is capable of creating various non-linear load conditions based on 4096 data points and apply these to the set value of voltage or current.

Available functions:

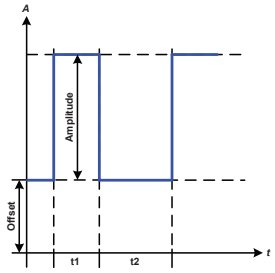
Function	Short Description
Sine	Sine wave generation with adjustable amplitude, offset and frequency
Triangle	Triangular wave signal generation with adjustable amplitude, offset, gain and decay times
Rectangular	Rectangular wave signal generation with adjustable amplitude, offset and duty cycle
Trapezoid	Trapezoidal wave signal generation with adjustable amplitude, offset, rise time, pulse time, fall time, idle time
DIN 40839	Simulated automobile engine start curve according to DIN 40839 / EN ISO 7637, split into 5 curve sequences, each with a start voltage, final voltage and time
Arbitrary	Generation of a process with up to 100 freely configurable steps, each with a start and end value (AC/DC), start and end frequency, phase angle and total duration
Ramp	Generation of a linear rise or fall ramp with start and end values and time before and after the ramp
UI-IU	Table (.csv) with values for U or I, uploaded from a USB flash drive



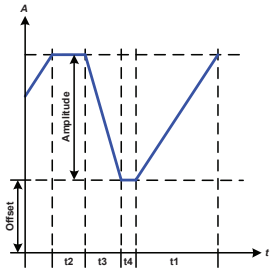
Sine



Triangle

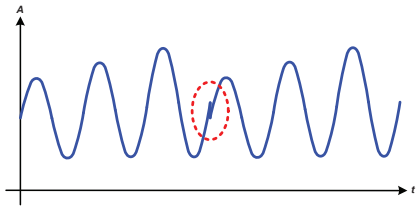


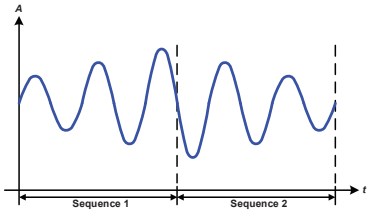
Rectangle

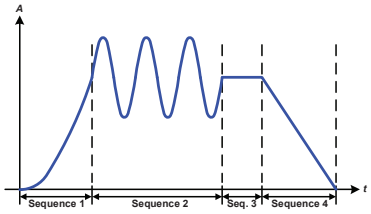


Trapezoid

By linking several different configured sequences, complex progressions can be created. Smart configuration of the arbitrary generator can be used to match triangular, sine, rectangular or trapezoidal wave functions and thus, e.g. a sequence of rectangular waves with differing amplitudes or duty cycles could be produced.







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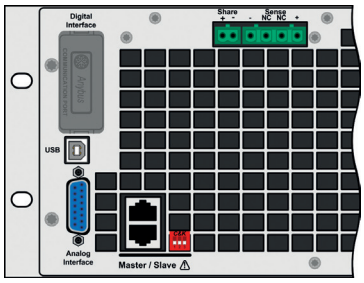
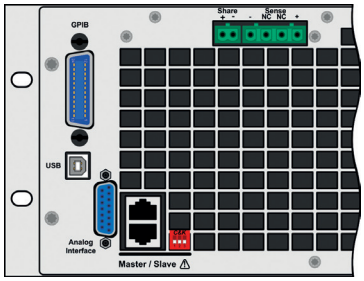


Rear connectors of the standard models



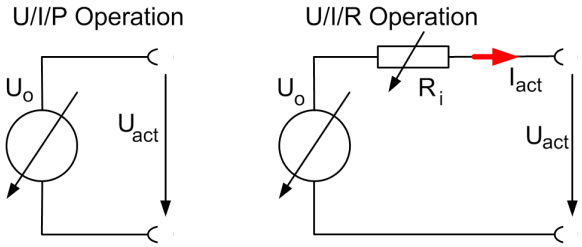
Rear connectors of models with option 3W

Remote Control & Connectivity

By default, there are two interface ports (1x analog, 1x USB) available on the rear of the devices for remote control, which can also be extended with optional retrofittable digital interface modules (dedicated slot). Alternatively, all models can be equipped with a three-way interface (option 3W, see below), which then offers 1x GPIB/IEEE, 1x USB and 1x Analog on the rear side of the device. A front side USB port is intended for portable drives to load save functions and user profiles. For the implementation into the LabView IDE we offer ready-to-use components (VIs) to be used with USB, RS232, GPIB, and Ethernet interfaces.

Programmable Impedance

The PSI 9000 Series DC Supplies allows users to define a variety of output connections and wiring via internal resistance control. The user simply programs the supply via the Ri setting for the lumped series impedance of the wiring and connectors the UUT has in its installation. This allows users to simulate the various connections and cable lengths that the UUT will see in the real world without having to purchase the hardware itself.

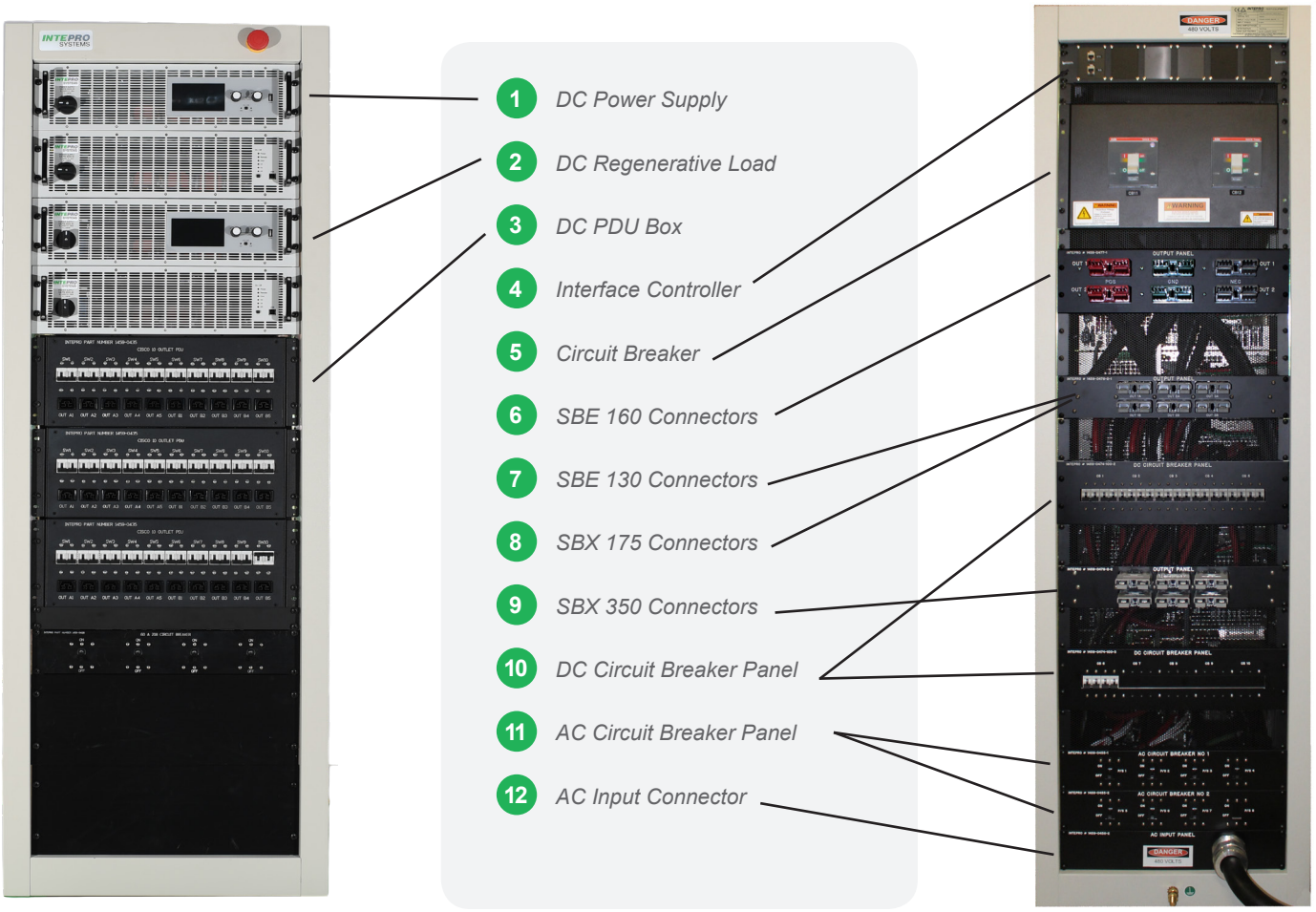


$$U_{Set} = U_0 - I_{Act} * R_{Set} \Big|^{P_{Set},\, I_{Set}}$$

Types of Cabinets

- *21U - Maximum 75 kW using 15 kW modules / 120kW using 30 kW modules*
- *30U - Maximum 120 kW using 15 kW modules / 180 kW using 30 kW modules*
- *35U - Maximum 150 kW using 15 kW modules / 210 kW using 30 kW modules*
- *42U - Maximum 180 kW using 15 kW modules / 270 kW using 30 kW modules*

Examples of Back Panels



Specifications

AC Input Voltage (3-phase; 4 Wire)			
Output Power	**208 L-L**	**400 L-L**	**480 L-L**
15kW	49 Amps per phase	26 Amps per phase	21 Amps per phase
30kW	98 Amps per phase	51 Amps per phase	43 Amps per phase
45kW	148 Amps per phase	77 Amps per phase	64 Amps per phase
60kW	197 Amps per phase	102 Amps per phase	85 Amps per phase
75kW		128 Amps per phase	107 Amps per phase
90kW		153 Amps per phase	128 Amps per phase
105kW		179 Amps per phase	149 Amps per phase
120kW		205 Amps per phase	171 Amps per phase
135kW		230 Amps per phase	192 Amps per phase
150kW		256 Amps per phase	213 Amps per phase
165kW		281 Amps per phase	234 Amps per phase
180kW		307 Amps per phase	256 Amps per phase
195kW		333 Amps per phase	277 Amps per phase
210kW		358 Amps per phase	298 Amps per phase
225kW		384 Amps per phase	320 Amps per phase
240kW		409 Amps per phase	341 Amps per phase
270kW		460 Amps per phase	384 Amps per phase

Specifications Cont.

PSI 9000 DC Source Rack							
Power	Voltage						
	80V	200V	360V	500V	750V	1000V	1500V
15kW	510A	210A	120A	90A	60A	40A	30A
30kW	1020A	420A	240A	180A	120A	80A	60A
45kW	1530A	630A	360A	270A	180A	120A	90A
60kW	2040A	840A	480A	360A	240A	160A	120A
75kW	2550A	1050A	600A	450A	300A	200A	150A
90kW	3060A	1260A	720A	540A	360A	240A	180A
105kW	3570A	1470A	840A	630A	420A	280A	210A
120kW	4080A	1680A	960A	720A	480A	320A	240A
135kW	4590A	1890A	1080A	810A	540A	360A	270A
150kW	5100A	2100A	1200A	900A	600A	400A	300A
165kW	5610A	2310A	1320A	990A	660A	440A	330A
180kW	6120A	2520A	1440A	1080A	720A	480A	360A
195kW	6630A	2730A	1560A	1170A	780A	520A	390A
210kW	7140A	2940A	1680A	1260A	840A	560A	420A
225kW	7650A	3150A	1800A	1350A	900A	600A	450A
240kW	8160A	3360A	1920A	1440A	960A	640A	480A
270kW	8670A	3570A	2040A	1530A	1020A	680A	510A

Specifications Cont.

PSB 9000 Bi-Directional DC Source Rack					
Power	Voltage				
	60V	80V	200V	360V	500V
15kW	360A	360A	210A	120A	90A
30kW	720A	720A	420A	240A	180A
45kW	1080A	1080A	630A	360A	270A
60kW	1440A	1440A	840A	480A	360A
75kW	1800A	1800A	1050A	600A	450A
90kW	2160A	2160A	1260A	720A	540A
105kW	2520A	2520A	1470A	840A	630A
120kW	2880A	2880A	1680A	960A	720A
135kW	3240A	3240A	1890A	1080A	810A
150kW	3600A	3600A	2100A	1200A	900A
165kW	3960A	3960A	2310A	1320A	990A
180kW	4320A	4320A	2520A	1440A	1080A
195kW	4680A	4680A	2730A	1560A	1170A
210kW	5040A	5040A	2940A	1680A	1260A
225kW	5400A	5400A	3150A	1800A	1350A
240kW	5760A	5760A	3360A	1920A	1440A
270kW	6120A	6120A	3570A	2040A	1530A

Specifications Cont.

ELR 9000 HP Regenerative DC Load Rack							
Power	Voltage						
	80V	200V	360V	500V	750V	1080V	1500V
15kW	510A	210A	120A	90A	60A	40A	30A
30kW	1020A	420A	240A	180A	120A	80A	60A
45kW	1530A	630A	360A	270A	180A	120A	90A
60kW	2040A	840A	480A	360A	240A	160A	120A
75kW	2550A	1050A	600A	450A	300A	200A	150A
90kW	3060A	1260A	720A	540A	360A	240A	180A
105kW	3570A	1470A	840A	630A	420A	280A	210A
120kW	4080A	1680A	960A	720A	480A	320A	240A
135kW	4590A	1890A	1080A	810A	540A	360A	270A
150kW	5100A	2100A	1200A	900A	600A	400A	300A
165kW	5610A	2310A	1320A	990A	660A	440A	330A
180kW	6120A	2520A	1440A	1080A	720A	480A	360A
195kW	6630A	2730A	1560A	1170A	780A	520A	390A
210kW	7140A	2940A	1680A	1260A	840A	560A	420A
225kW	7650A	3150A	1800A	1350A	900A	600A	450A
240kW	8160A	3360A	1920A	1440A	960A	640A	480A
270kW	8670A	3570A	2040A	1530A	1020A	680A	510A

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