

### HAC415 Series 5KW – 200KW Outdoor Rated 3 Phase AC Load Banks



#### Features

- **SIMPLE OPERATION**
- **INTELLIGENT HAND HELD CONTROLLER**
- **SAFETY ISOLATION CONTACTORS**
- **FAN FAIL PROTECTION**
- **LOW COST**
- **HIGH POWER**
- **NO AUX MAINS REQUIRED**
- **FUSE PROTECTION**
- **PARALLEL OPERATION**
- **PC DATA LOGGING AVAILABLE**



The Hillstone HAC series load banks offer a low cost solution to on-site AC testing of generators and UPS systems. Units incorporate force cooled high powered resistor elements controlled via our intelligent hand held controller. Safety features including HRC fuse protection, fan failure shut down, phase sequence protection and emergency stop push button. Twistlock cable connectors, Digital power meter and PC interface with data logging facilities are also available. Load banks can also be supplied for both three phase and optional single phase testing.

#### HAC415 Performance Table:

Load Bank Type Ref	Max. Volts	Power at 415V	Amps at 415V	Power at 400V	Amps at 400V	Power at 380V	Amps at 380V
HAC415-5	415V	5.0KW	6.9A	4.6KW	6.7A	4.2KW	6.1A
HAC415-10	415V	10.0KW	13.9A	9.2KW	13.3A	8.4KW	12.2A
HAC415-15	415V	15.0KW	20.8A	13.8KW	20.0A	12.6KW	18.3A
HAC415-20	415V	20.0KW	27.8A	18.4KW	26.6A	16.8KW	24.4A
HAC415-25	415V	25.0KW	34.7A	23.0KW	33.3A	21.0KW	30.4A
HAC415-30	415V	30.0KW	41.7A	27.6KW	39.9A	25.2KW	36.5A
HAC415-35	415V	35.0KW	48.6A	32.1KW	46.6A	29.4KW	42.6A
HAC415-40	415V	40.0KW	55.6A	36.7KW	53.2A	33.6KW	48.7A
HAC415-50	415V	50.0KW	69.4A	45.9KW	66.6A	42.0KW	60.9A
HAC415-70	415V	70.0KW	97.2A	64.3KW	93.2A	58.8KW	85.2A
HAC415-80	415V	85.0KW	118.1A	78.1KW	113.1A	71.4KW	103.5A
HAC415-100	415V	100.0KW	138.9A	91.8KW	133.1A	84.0KW	121.8A
HAC415-140	415V	140.0KW	194.4A	128.6KW	186.3A	117.6KW	170.5A
HAC415-170	415V	170.0KW	236.1A	156.1KW	226.3A	142.8KW	207.0A
HAC415-200	415V	200.0KW	277.8A	183.7KW	266.2A	168.1KW	243.6A

### Hand Held Controller – iHHC Operation

The iHHC (intelligent hand held controller) provides remote control and display of the load bank power level. Two modes of operation are provided: Load adjust mode allows the operator to pre-select the required load in KW's as displayed on the iHHC. Pressing the ACCEPT button on the iHHC will instruct the load bank to connect the requested power level and then automatically change the iHHC to Running Load Mode. During Running Load Mode, the operator can make incremental adjustments of the power level by pressing the LOADUP or LOADDOWN buttons. Any changes to the load selection will be shown on the iHHC display.

Notes: During Running Load Mode an operator can pre-select and ACCEPT an alternative load setting to simulate load profiles. A single iHHC can also control and display the total power of multiple, parallel connected load banks. When a digital panel meter and iHHC is fitted to a load bank, the iHHC will automatically display the measured KW's during Running Load mode. A ten metre interconnection control cable is provided with the iHHC. Longer control cables are available on request



#### **HAC Specification:**

<b>Description:</b>	Outdoor, adjustable, resistive AC load bank
<b>Max voltage:</b>	415 volts, three phase, 4 wire plus earth
<b>Rating:</b>	See Performance Table
<b>Frequency:</b>	50Hz (60Hz Optional)
<b>Adjustment:</b>	Manual Control Via iHHC controller Switched Steps of 1KW
<b>Controls:</b>	Fan control switch and emergency stop, iHHC controller
<b>Cable termination:</b>	Internal Busbar connection. Cables can be supplied as an optional extra. Powerlock cable connectors available as an optional extra.
<b>Cooling:</b>	415V 3 phase, 50 Hz, horizontal force air cooling fan, powered from the test source or optional separate auxiliary supply.
<b>Element type:</b>	Insulated, air cooled, sheathed resistor elements

#### **Enclosure Specification:**

<b>Environmental Protection:</b>	Designed for outdoor operation, electrical control chamber IP54, element chamber IP21.
<b>Construction:</b>	Robust Zintec steel frame and panels.
<b>Finish:</b>	Powder coated, textured finish RAL 7032
<b>Operating temperature:</b>	0-50 deg C
<b>Storage temperature:</b>	0-80 deg C
<b>Movement:</b>	Swivel Castors and Forklift Movement

**HAC415 Case Size:**

Load Bank Type Ref	Case Size	Length (mm)	Width (mm)	Height (mm)	Approx. Weight (Kgs)
HAC415-5	A	1050mm	590mm	950mm	65Kgs
HAC415-10	A	1050mm	590mm	950mm	70Kgs
HAC415-15	A	1050mm	590mm	950mm	75Kgs
HAC415-20	A	1050mm	590mm	950mm	80Kgs
HAC415-25	A	1050mm	590mm	950mm	85Kgs
HAC415-30	A	1050mm	590mm	950mm	90Kgs
HAC415-35	A	1050mm	590mm	950mm	95Kgs
HAC415-40	A	1050mm	590mm	950mm	100Kgs
HAC415-50	B	1140mm	580mm	1130mm	120Kgs
HAC415-70	B	1140mm	580mm	1130mm	130Kgs
HAC415-85	B	1140mm	580mm	1130mm	140Kgs
HAC415-100	B	1140mm	580mm	1130mm	150Kgs
HAC415-140	C	1140mm	705mm	1125mm	200Kgs
HAC415-170	C	1140mm	705mm	1125mm	200Kgs
HAC415-200	C	1140mm	705mm	1125mm	220Kgs

**Available Optional Extras**

**DIGITAL POWER METER**

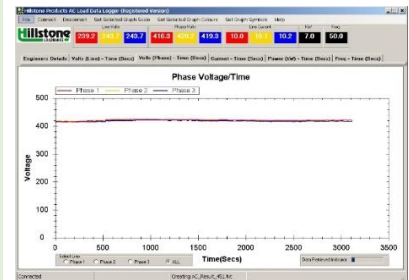
A panel mounted power meter is provided to display, line volts, phase volts, line current, power and frequency



**PC INTERFACE & DATA LOGGING SOFTWARE**

The PC interface and data logging software allows transfer and storage of test data to a laptop or PC using Hillstone/Windows software.

The computer display includes line volts, phase volts, line current, power and frequency plus a real time graphical display.



**POWERLOCK CONNECTORS**

Industry standard compatible power single pole connectors are designed to provide safe, reliable and quick connection of Cable to Cable or Cable to Equipment in Electrical power distribution systems. Our connectors feature a unique clip contact removal system, improved finger proofing, easier mating and thicker wall sections on the mouldings



**OPTIONAL SINGLE PHASE OPERATION:**

Special units can be ordered to allow both three phase and single phase testing.  
The optional single phase performance is detailed below:

**HAC415 Single Phase Performance Table:**

Load Bank Type Ref	Max. Volts	Power at 240V	Amps at 240V	Power at 230V	Amps at 230V	Power at 220V	Amps at 220V
HAC415-5	240V	1.7KW	2.3A	1.5KW	2.2A	1.4KW	2.0A
HAC415-10	240V	3.3KW	4.6A	3.1KW	4.4A	2.8KW	4.1A
HAC415-15	240V	5.0KW	6.9A	4.6KW	6.7A	4.2KW	6.1A
HAC415-20	240V	6.7KW	9.3A	6.1KW	8.9A	5.6KW	8.1A
HAC415-25	240V	8.3KW	11.6A	7.7KW	11.1A	7.0KW	10.1A
HAC415-30	240V	10.0KW	13.9A	9.2KW	13.3A	8.4KW	12.2A
HAC415-35	240V	11.7KW	16.2A	10.7KW	15.5A	9.8KW	14.2A
HAC415-40	240V	13.3KW	18.5A	12.2KW	17.7A	11.2KW	16.2A
HAC415-50	240V	16.7KW	23.1A	15.3KW	22.2A	14.0KW	20.3A
HAC415-70	240V	23.3KW	32.4A	21.4KW	31.1A	19.6KW	28.4A
HAC415-85	240V	28.3KW	39.4A	26.0KW	37.7A	23.8KW	34.5A
HAC415-100	240V	33.3KW	46.3A	30.6KW	44.4A	28.0KW	40.6A
HAC415-140	240V	46.7KW	64.8A	42.9KW	62.1A	39.2KW	56.8A
HAC415-170	240V	56.7KW	78.7A	52.0KW	75.4A	47.6KW	69.0A
HAC415-200	240V	66.7KW	92.6A	61.2KW	88.7A	56.0KW	81.2A

**Notes:**

- Units are rated for continuous operation at max volts
- Panel mounted load switches are available as an alternative to the hand held controller (see HACM Range)
- Optional Matching twist lock cable connectors can be provided for you to fit to your external cables
- Use L1, neutral and earth connectors only for optional single phase testing
- Where single phase testing option is supplied the fan operates on 240V 50Hz supply from L1 and neutral.
- Standard resistance element tolerance +/- 7.5%
- Data logging software OS compatibility: Microsoft Windows
- Changes to specification, components, dimensions or weights may vary without prior notice.
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