

DESCRIPTION

The CL-7121 test benches include power supplies, load banks and measuring instruments that can be custom built using the electric components and specifications of your choice. Each bench is equipped with four (4) swivel casters, two of which are lockable. The test bench rear panel has vents for cooling the internal parts in operation, and is equipped with flexible safe-rating cables.

SUGGESTED MODELS**Model CL-7121-01****Bench for 0-120/208 V AC; 0-250 V AC/DC****Model CL-7121-02****Bench for 0-120/208/240/347/600 V AC; 0-250 V DC****Consulab Éducattech Inc.****5100 Des Tournelles Street, Suite 500
Quebec City, PQ CANADA G2J 1E4****Phone: 418-688-9067 / 800-567-0791 Fax: 418-688-9526****Email: info@consulab.com Internet : <http://www.consulab.com>**

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DESCRIPTION

The CL-7121-01 is a mobile test bench which offers three (3) internal, isolated variable power supplies, one (1) built-in multiple power bar with eight (8) isolated outlets, 120 V AC, and two (2) sockets, 120 V AC. The bench also includes variable resistive loads, voltmeters and ammeters. It can be used to verify AC/DC motors with voltage requirements from 0 to 250 V DC or 0 to 250 V AC. Characteristics of the test bench include:

CONSTRUCTION

The bench consists of a wood-laminated working table fixed on a metal base with swivel casters. The control panel measures 150 x 148 x 75 cm.

SUPPLY VOLTAGE

The CL-7121-01 is supplied with one (1) three-phase input, 120/208 V AC, 4 wires, 20 A, with twist-and-lock plugs.

INTERNAL POWER SUPPLIES

Source A

Variable voltage, 0-120/208 V AC; three phase, thermal protection; built-in digital ammeter and voltmeter.

Source B

Variable voltage, 0-250 V AC, 2.5 kVA; single phase, thermal protection; built-in digital ammeter and voltmeter.

Source C

Variable voltage, 0-250V DC, regulated, filter providing minimum ripple to 10 A; adjustable current limiter; built-in digital ammeter and voltmeter.

RESISTIVE LOAD BANK

The CL-7121-01 built-in resistive load bank is designed to test various voltage sources (16, 24, 48, 60 and 120 V). Using selectors, the user can test each voltage source at different power levels ($\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and nominal). The load bank consists of four (4) identical groups mounted in parallel with switches so as to verify each voltage source at a given power level with 200-W power threshold. The resistive load groups are the following:

- Four (4) resistive load groups, 10 Ω , 50 W (for testing 16 V sources, at 1.6 A),
- Four (4) resistive load groups, 25 Ω , 50 W (for testing 24 V sources, at 1.0 A),
- Four (4) resistive load groups, 100 Ω , 50 W (for testing 48 V sources, at 0.5 A),
- Four (4) resistive load groups, 150 Ω , 50 W (for testing 60 V sources, at 0.4 A), and
- Four (4) resistive load groups, 300 Ω , 50 W (for testing 120 V sources, at 0.4 A).

The resistive load bank also includes a rotary rheostat, 0 – 500 Ω , 500 W.

ACCESSORIES

The following accessories are included with the CL-7121-01 test bench:

- One (1) built-in multiple power bar with eight (8) isolated outlets, 120 V AC,
- Two (2) grounded and isolated sockets, 120 V AC, 15 A,
- One (1) storage compartment,
- Four (4) glide-out drawers,
- Twenty (20) 16AWG patchcords, 1 m, with banana plugs including five (5) black, five (5) blue, five (5) red and five (5) white,
- Twenty (20) 16AWG patchcords, 1 m, with alligator/banana plugs including five (5) black, five (5) blue, five (5) red and five (5) white,
- Twenty (20) 16AWG patchcords, 1 m, with alligator/banana plugs including five (5) black, five (5) blue, five (5) red and five (5) white,
- One (1) 45-cm fluorescent tube under the control panel.



PANEL COMPONENTS

Qty	Description
1	Main circuit breaker, 20 A, 3 poles
1	One (1) ON/OFF switch for source A, 15 A
1	Thermal breaker for source A, 5 A
1	Safety socket block for source A, 0-120/208 V AC, 15 A
1	Autotransformer control for varying voltage for source A
1	Resistive load rheostat, 0-500 Ω , 500 W
1	Safety socket block for source B, 0-250 V AC, 10 A
1	Autotransformer control for varying voltage for source B
1	Potentiometer for setting the current limiter in source C
1	Reset button for the current limiter circuit
1	Safety socket block for source C, 0-250 V DC, 10 A
1	Autotransformer control for varying voltage for source C
1	Thermal breaker for source C, 2 poles, 15 A
1	Thermal breaker for source B, 2 poles, 10 A
1	Digital DC ammeter for source C, 10 A
1	Digital DC voltmeter for source C, 300 V
1	Digital AC ammeter for source B, 10 A
1	Digital AC voltmeter for source B, 250 V
1	Digital AC ammeter for reading current, phase C, source A, 15 A max.
1	Digital AC ammeter for reading current, phase B, source A, 15 A max.
1	Digital AC ammeter for reading current, phase A, source A, 15 A max.
1	Digital AC voltmeter for reading voltage between phases C and A, source A, 250 V
1	Digital AC voltmeter for reading voltage between phases B and C, source A, 250 V
1	Digital AC voltmeter for reading voltage between phases A and B, source A, 250 V
1	Indicating lamp set for ON/OFF main supply circuit
1	Indicating lamp set for ON/OFF supply circuit, source A
1	Safety socket and switching block for the resistive load bank
1	Grounded socket
1	ON/OFF switching block for grounded sockets
1	ON/OFF switching block for the 8-outlet power bar, 120 V AC, isolated
1	Thermal breaker for the 8-outlet power bar, 120 V AC, isolated
1	8-outlet power bar, 120 V AC, isolated
1	Grounded socket



DESCRIPTION

The CL-7121-02 is a mobile test bench which offers four (4) internal, isolated variable power supplies and two (2) different types of socket, 120 V AC. The bench also includes variable resistive loads, voltmeters and ammeters. It can be used to verify AC/DC motors with voltage requirements from 0 to 250 V DC or 0 to 600 V AC. Characteristics of the test bench include:

CONSTRUCTION

The bench consists of a wood-laminated working table fixed on a metal base with swivel casters. The control panel measures 150 x 148 x 75 cm.

SUPPLY VOLTAGE

The CL-7121-02 is supplied with two (2) three-phase inputs, 120/208 V AC, 4 wires, 20 A and 347/600 V AC, 4 wires, 20 A, with twist-and-lock plugs.

INTERNAL POWER SUPPLIES

Source A

Variable voltage, 0-347/600 V AC, 15 A AC; three phase, thermal protection; built-in digital ammeter and voltmeter.

Source B

Variable voltage, 0-120/208 V AC, 15 A AC; three phase, thermal protection; built-in digital ammeter and voltmeter.

Source C

Variable voltage, 0-250V AC, 10 A AC; single phase, 2.5 kVA, thermal protection; built-in digital ammeter and voltmeter.

Source D

Variable voltage, 0-250V DC, regulated, filter providing minimum ripple to 10 A; adjustable current limiter; built-in digital ammeter and voltmeter.

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RESISTIVE LOAD BANK

The CL-7121-02 built-in resistive load bank is designed to test various voltage sources (16, 24, 48, 60 and 120 V). Using selectors, the user can test each voltage source at different power levels ($\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and nominal). The load bank consists of four (4) identical groups mounted in parallel with switches so as to verify each voltage source at a given power level with 200-W power threshold. The resistive load groups are the following:

- Four (4) resistive load groups, 10 Ω , 50 W (for testing 16 V sources, at 1.6 A),
- Four (4) resistive load groups, 25 Ω , 50 W (for testing 24 V sources, at 1.0 A),
- Four (4) resistive load groups, 100 Ω , 50 W (for testing 48 V sources, at 0.5 A),
- Four (4) resistive load groups, 150 Ω , 50 W (for testing 60 V sources, at 0.4 A), and
- Four (4) resistive load groups, 300 Ω , 50 W (for testing 120 V sources, at 0.4 A).

The resistive load bank also includes a rotary rheostat, 0 – 500 Ω , 500 W.

ACCESSORIES

The following accessories are included with the CL-7121-02 test bench:

- One (1) built-in multiple power bar with eight (8) isolated outlets, 120 V AC,
- One (1) isolated socket, 120 V AC, 15 A,
- One (1) DDFT socket with ground connection, 120 V AC, 15 A,
- One (1) storage compartment,
- Four (4) glide-out drawers,
- Twenty (20) 16AWG patchcords, 1 m, with banana plugs including five (5) black, five (5) blue, five (5) red and five (5) white,
- Twenty (20) 16AWG patchcords, 1 m, with alligator/banana plugs including five (5) black, five (5) blue, five (5) red and five (5) white,
- Twenty (20) 16AWG patchcords, 1 m, with alligator/banana plugs including five (5) black, five (5) blue, five (5) red and five (5) white,
- One (1) green 16AWG patchcord, 1 m, with alligator/banana plugs,
- One (1) 45-cm fluorescent tube under the control panel.



SECTION COMPONENTS

SECTION	CONTROL AND INSTRUMENTATION	PROTECTION
- 1 - 347/600 V AC 15 A	<ul style="list-style-type: none"> - One (1) ON/OFF push-button switch - One (1) panic push-button (lockable) - One (1) three-phase autotransformer for manual output voltage control - Voltage indicating lamps for breaker input and output - One (1) digital voltmeter with line voltage selector - One (1) digital ammeter with line voltage selector - Five (5) safety sockets (4 mm / 32 A) for equipment power supply (L1, L2, L3 phases, neutral and ground) 	<ul style="list-style-type: none"> - Breaker, 15 A, for autotransformer input - Breaker, 1 A, for control circuit - Fuses, 15 A, for autotransformer output
- 2 - 120/208 V AC 15 A	<ul style="list-style-type: none"> - One (1) ON/OFF push-button switch - One (1) three-phase autotransformer for manual output voltage control - Voltage indicating lamps for breaker input and output - One (1) digital voltmeter with line voltage selector - One (1) digital ammeter with line voltage selector - Five (5) safety sockets (4 mm / 32 A) for equipment power supply (L1, L2, L3 phases, neutral and ground) 	<ul style="list-style-type: none"> - Breakers, 15 A, for autotransformer input and output
- 3 - 240 V AC 10 A	<ul style="list-style-type: none"> - One (1) ON/OFF push-button switch (breaker) - One (1) single-phase autotransformer for manual output voltage control - Voltage indicating lamps - One (1) digital voltmeter and one (1) digital ammeter - Two (2) safety sockets (4 mm / 32 A) for equipment power supply 	<ul style="list-style-type: none"> - Breaker, 10 A
- 4 - 250 V DC 10 A	<ul style="list-style-type: none"> - One (1) ON/OFF switch (breaker) - One (1) single-phase autotransformer for manual output voltage control - Voltage indicating lamps - One (1) digital voltmeter and one (1) digital ammeter - Two (2) safety sockets (4 mm / 32 A) for equipment power supply 	<ul style="list-style-type: none"> - Breaker, 15 A, for primary - Current limiter, 10 A max. for output
- 5A - / - 5B - RÉSISTIVE LOADS	<ul style="list-style-type: none"> - One rheostat, 500 Ω/500 W - Manual control and three (3) safety sockets (4 mm / 32 A) - Four (4) loads, 16 V - 1,6 A - Four (4) switches and two (2) safety sockets (4 mm / 32 A) - Four (4) loads, 24 V - 1 A - Four (4) switches and two (2) safety sockets (4 mm / 32 A) - Four (4) loads, 48 V - 0,5 A - Four (4) switches and two (2) safety sockets (4 mm / 32 A) - Four (4) loads, 60 V - 0,4 A - Four (4) switches and two (2) safety sockets (4 mm / 32 A) - Four (4) loads, 120 V - 0,4 A - Four (4) switches and two (2) safety sockets (4 mm / 32 A) 	<ul style="list-style-type: none"> - External by user
6A - / - 6B - 120 V AC OUTLETS ISOLATED AND DDFT	<ul style="list-style-type: none"> - One (1) ON/OFF switch with indicating lamp for each type of outlet. 	<ul style="list-style-type: none"> - Breaker, 10 A, for each type