

EDP-A2-520

MAGNET CONTROLLER

EDP CONCEPTION

EDPCONCEPTION.COM

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Introduction

- **EDP-A2-520** is electromechanical design controlled by a microprocessor which allows a high working speed and thus allows to increase production.

INSTALLATION

Important Note: Installation must be performed by a competent person and must be of industrial grade. Follow the plug-in instructions carefully.

- 1- Follow the connection plan to the letter and double-check carefully. The generator arrives with 16 feet of control wire and a lamp. Important note for the power wire leading to the magnet, the power contacts should be crimped using the appropriate tool so as not to warp the contacts, which can cause the sockets and housing to heat up. You can also solder them with tin.
- 2- Hydraulic Systems - Adjust the relief cartridge to 3000 psi and the hydraulic flow to the minimum. And start the generator.
- 3- You must cancel the automatic idle of the machine and run the machine at full speed, when the magnet generator is running.
Adjust the generator speed so that the voltage of the nameplate is 170 – 175 volts AC while respecting the maximum RPM written on this plate. ***Important note for hydraulic system with priority block.*** Force the pumps to work by slightly maneuvering a (joystick) during hydraulic adjustment this increases the flow rate of the pumps and may influence the adjustment.
- 4- Activate the magnet and return to section 4 to finalize the fit with the charge. The voltage can rise up to about 5 volts with the load.

Controller properties

. If the adjustment is not complete, the cabin light and LED (lamp) will flash once every 2.5 sec
On the front you will find two push buttons UP and DOWN and two lamps X 1 and X 10.

The X 10 lamp flashes to indicate the dozens and X 1 units.

At rest and without alarm, the display is for the manufacturer's technician only. The normal display when the magnet is activated is the amperage of the magnet. So at 52 amps the X10 lamp flashes 5 times and the X1 lamp twice then a pause and starts flashing again.

Never take the first reading because at each change of function first reading lamp may be false.

UP button is used to load the magnet or to increase the displayed parameter.

DOWN button is used drop the magnet or to decrease the displayed parameter.

Note. The Up and Down buttons are slow, you need to press about 1 second.

Parameter

To change the doping power setting press 5 sec. on the DOWN button, then the lamps will flash quickly to indicate that you have entered setting mode.

Then use the two button to change the setting. (minimum 1 and maximum 95)

Use the button of the cabin to load and drop magnet to see if the setting is good. In setting mode, the TEST button can also be used to load and drop the magnet.

For testing , use small mixed pieces material.

If the material seems to drop off and stick again under the magnet, lower the parameter.

If it doesn't seem to want to drop then turn up the parameter.

When the magnet is in load mode the lamps indicate the magnet current .

To accept the parameter press 3 sec. the UP button or press ½ sec. the two button simultaneously.

The lamp will go off.

To exit Setup without saving the change, press the button DOWN 3 sec.

Read alarm

If an alarm occurs, the X10 lamp will light up and the X1 lamp as well as the cabin lamp connected to the COM and LAMP terminals will flash.

The number of flashes indicates the number of the alarm.

1. Magnet not detected or unplugged magnet wire. Or no voltage coming from the generator. (NO LOAD)
2. Overload. Turn off the power for 90 seconds. And the alarm will disappear. Check the wire that leads to the magnet and check the magnet.
3. Faulty current transformer (CT) or wrong connections or send the controller for repair.
4. Relay in trouble
5. IGBT test failed. Change the IGBT module. And call a technician to activate it.
6. Failure or drop in 12-24VDC supply voltage
10. Overheating.
11. 11 And more , magnet not detected . Or no voltage coming from the generator.

The last alarm is saved in memory and can be reviewed by following these steps.

At the same time, the excitation of the generator will be activated.

1. Stop the machine for 2 minutes
 2. Press and hold the control button and turn it on (ignition key).
 3. Wait for the lamp to flash rapidly and release the button.
 4. After a few seconds, the lamp will display the alarm in memory.
 5. Short press the button to clear the alarm or turn off the power if you want to keep the current memory. Or do the sequence for the playback of the last alarm in memory on the previous page.
- .

Working with controller

- **ED P-A2** is active with less than 15 volts to the (manual) command instead of 230 volts so much safer for the operator.
- If the magnet lead disconnects, the controller automatically cuts the *voltage to less than 20 volts DC a few milliamperes to the wire leading to the magnet in an effort to protect the operator and equipment.*
- The controller offers two dropping modes and a one of loading.

Working with the controller

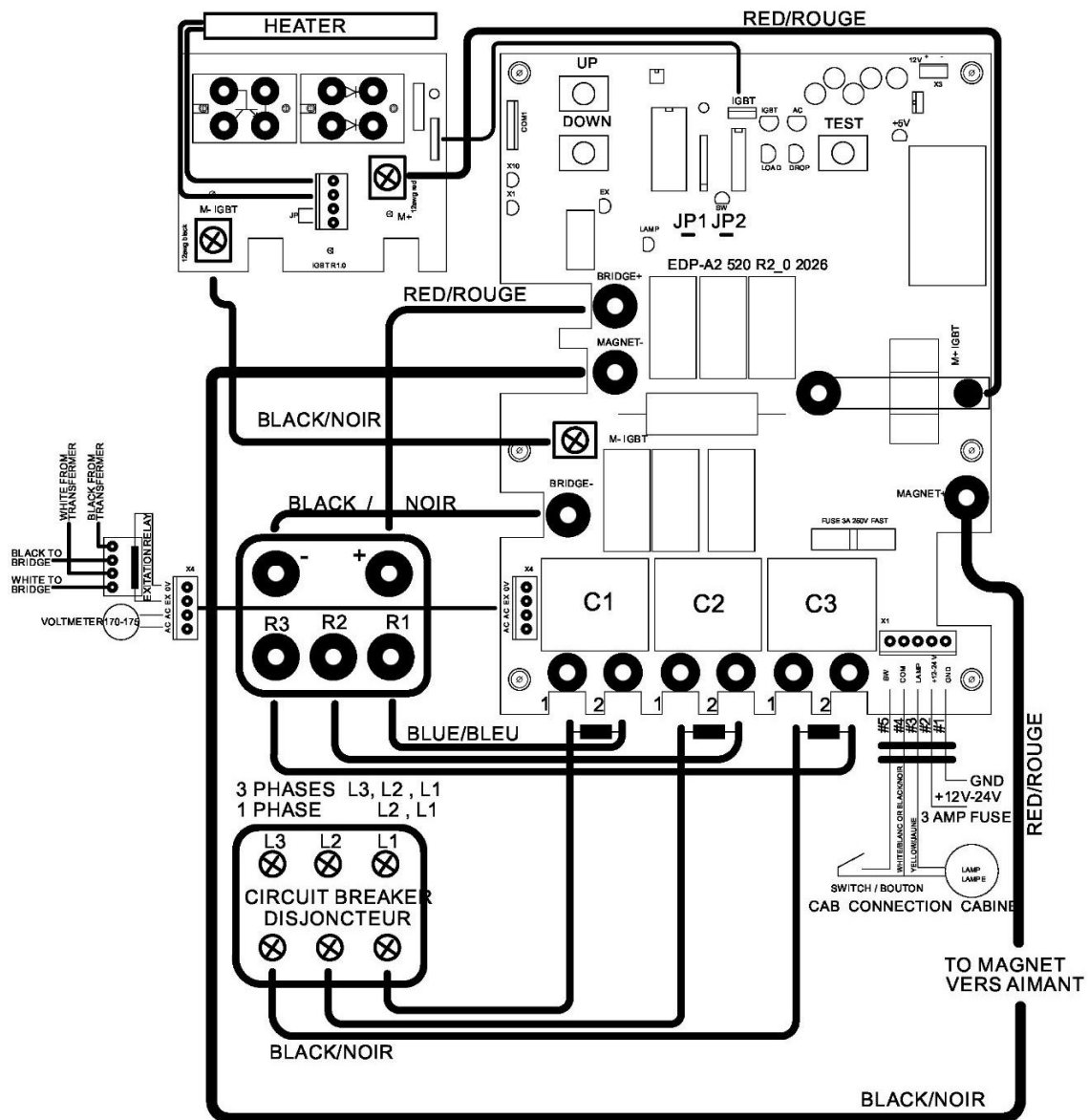
- 1- To activate the controller, you need to activate the generator.
- 2- Press load/drop switch for a period of less than 1 second and the controller will activate the electromagnet.
- 3- Press again for more than 0.5 second and release. The controller will release the steel.
- 4- If you press the switch to release the metal while keeping the switch pressed, release of metal will slow down. (sorting)

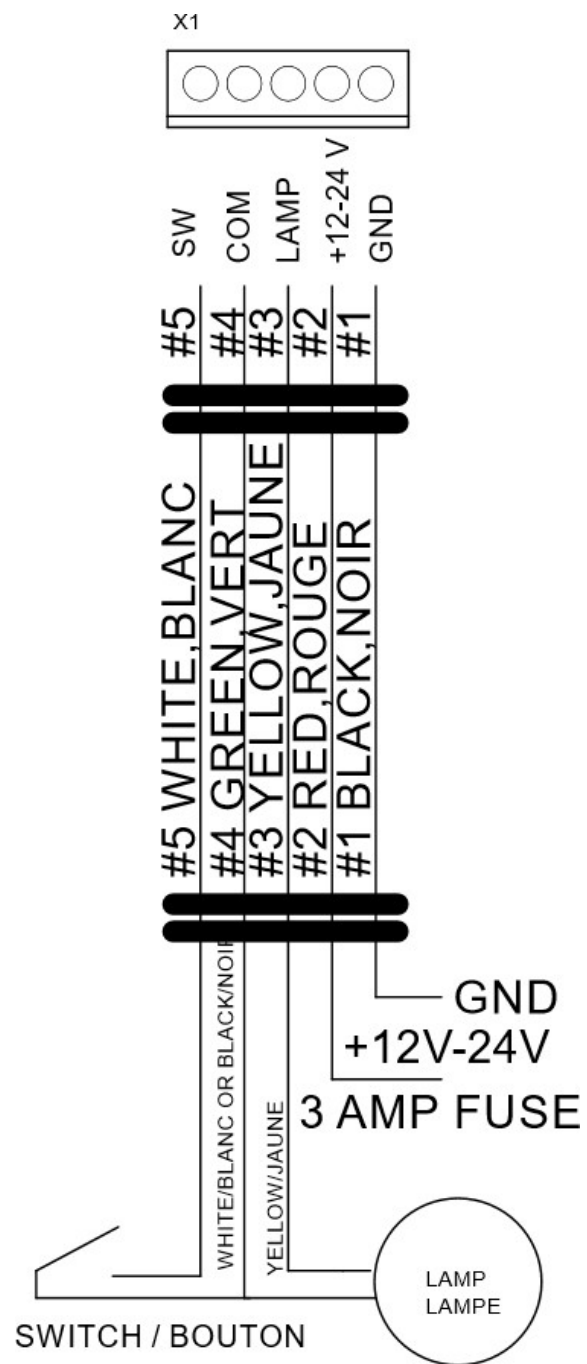
Each time the controller is turned on, the first magnetization is slower and after a pause in use of 3 minutes or more.

The voltage or frequency display, as the case may be, turns off and on again according to the magnetization and demagnetization sequence.

It is always possible to force the excitation of the generator which turns on the display, by pressing (very briefly) the button in the cab or the TEST button in the controller.

The controller has a power reserve for almost a minute, so if its power is off, it will display alarm 6 (power failure). And this every time you stop the machine.





Trouble shooting:

The main breaker is shutoff !! Stop the engine before put breaker to on !!

-There is probably a short-circuit on the magnet lead wire.

Cut the supply for 30 seconds minimum.

Very important to repair before working again with the magnet to protect the contactor of the controller.

Unplug the two magnet wires from the controller and check the resistor between the Magnet+ and Magnet- and between the two terminals at the top of the IGBT card (2 white wires) If there is resistor (less than 10 ohms) the controller is bad then send it for repair. If not, try to activate the magnet (without magnet plugged) and check if the breaker still on. If yes the magnet lead or the magnet has a problem. If not, the controller has a problem.

TROUBLE

Voltage to low

The tension is good but lack of current,
or does not lift enough materials

The magnet current is too high

The output voltage is unstable

Dropping is not constant or bad

CAUSES

- RPM /frequency to low
- Bad junction.
- Bad size of generator
- Check brushes
- Check fuse

- Bad junction.
- Check magnet ohms
- Check magnet ohms
- Check magnet isolation.
- Check if the speed (RPM) of the generator is stable.
- Bad wire between controller and magnet,
Rpm unstable. Low voltage.



PRODUCT GUARANTEE

Products manufactured by EDP Conception (hereinafter the "**Manufacturer**") are guaranteed against defects in design, manufacturing, labour and materials for a period of two years from the date of purchase (hereinafter the "**Guarantee Period**"), but only in cases of normal and proper use of the product by the purchaser and if the conditions contained herein are met (hereinafter the "**Guarantee**"). Only products sold by an authorized distributor of the Manufacturer (hereinafter the "**Distributor**"), will be covered by this Guarantee.

The Guarantee is applicable only to the original purchaser of the product and is transferable to a subsequent purchaser only with the written consent of the Manufacturer.

All defective products giving rise to the application of the Guarantee will be replaced or repaired at the expense and at the sole discretion of the Manufacturer at a service center authorized by the Manufacturer (hereinafter the "**EDP Service Center**"). Replacement or repair parts provided by the Manufacturer will be equivalent, in terms of performance and reliability, to the original parts and will remain covered by the Guarantee for the Guarantee Period remaining on the day of pieces replacement.

The Manufacturer provides no guarantee with respect to losses or damages to the product which are attributable to misuse, improper installation of the product, accident, abuse, negligence, misconduct on the part of the purchaser, force majeure, excessive use, unauthorized modification, stress or unusual electrical interference, use in inappropriate environmental conditions, an accessory to the product or any other fault, damage or defect not covered under the terms of the Guarantee.

The Manufacturer is not liable for and provides no guarantee regarding any fault and/or damage arising directly or indirectly from delivery, transportation, removal, relocation, installation, maintenance or repair of the products or accessories thereto made by a Distributor or a service provider other than a EDP Service Center authorized by the Manufacturer. Moreover, all products' accessories are not covered by the Guarantee. The Manufacturer will not assume any responsibility for any damage caused by its products.

To qualify for the Guarantee, the purchaser must return the defective product to the Distributor where the purchase was made, or if it is not an EDP Services Center, in an EDP Service Center authorized by the Manufacturer.

The Manufacturer will not cover costs incurred for transportation or labour (other than the repair itself) during the execution of the Guarantee.

During the period of repair or replacement of the defective product covered by the Guarantee, the Manufacturer will not assume any liability arising directly or indirectly from any damages which may be suffered by the purchaser in connection with the product's unavailability, including any loss of income or enjoyment of the product.

Other than the Guarantee provided for herein, the Manufacturer shall not be liable for any guarantee offered by a third party, with the exception of, and without limiting the generality of the foregoing, any guarantee provided by the legislation in force in the province of Quebec.

The Guarantee offered covers only the repair, replacement or refund of the purchase price to the purchaser, the whole at the sole discretion of the Manufacturer.

The Guarantee will enter into force upon receipt by the Manufacturer a copy of this document duly completed, which must be returned within thirty (30) days from the date of purchase, accompanied by a copy of the purchase invoice, by mail, fax or email at:

Address : 2883, boul. Trudel-Est, C.P. 2035
St-Boniface (Québec) G0X 2L0
Canada

Facsimile : 819.535.6247

Email : info@edpconception.com

Beneficiary : _____

Product's name : _____

Product's serial number : _____

Date of purchase (DD/MM/YYYY): ____/ ____/ _____

Signature : _____

If the purchaser fails to return the completed form along with a copy of the original purchase invoice, the Manufacturer will offer a Guarantee limited to two years from the date the product was sold by the Manufacturer to the Distributor.

Service instruction:

Call your EDP authorised dealer to receive a request for service (RS) number before shipping. Be sure to check your entire system before shipping your unit. Units received that are in good working condition will be returned with a service fee to cover inspection and return shipment.

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Important notice:

Security warning

The controller is only a portion of the electro mechanic lifting system and electromagnet therefore precautions must be taken around the system by the user to insure the safety of all users and workers. In this type of system, if the controller fails, as a bad wire, a bad fuse, generator malfunction, etc., these circumstance may cause the load to suddenly drop and cause serious injuries and even death.

EDP CONCEPTION can not be responsible for these kinds of accidents.

