

Mini-Line® HPD100 Leeboy Converter Kit

Installation Guide



Copyright

All information, text and pictures are the intellectual property of, and copyrighted material of TF-Technologies A/S. All rights are reserved. The installation guide may not be copied, displayed, quoted, published, sold, modified, or distributed without the written consent of TF-Technologies A/S.

Disclaimer

TF-Technologies A/S and its distributors may not be held liable for potential editorial errors, omissions or failure effects. Suggestions regarding updates or correction of potential errors are appreciated.

User manual information

Document name: Mini-Line® HPD100 Leeboy Converter Kit Installation Guide

Document number: G700601

Publication date: 13. March 2014

The Mini-Line® HPD100 Leeboy Converter Kit

The Mini-Line® HPD100 Leeboy Converter Kit is specially made to connect the Mini-Line® Grade and Slope Control System to pavers with electric powered screed actuators.

Controllers in the Mini-Line® Grade and Slope Control System are developed for pavers with hydraulic actuators and therefore require this converter kit to convert the control-signals to fit electrically driven actuators.

The HPD100 Leeboy Converter Kit is designed to be used only on 12-volt systems with ON/OFF driven electrical actuators, and can operate on one side of the paver, so it can be mounted conveniently and with access to the actuator. One HPD100 Leeboy Converter Kit is thus required for each side of the asphalt paver.

When the HPD100 Leeboy Converter Kit is mounted, the Mini-Line® Grade and Slope Control System is easily connected via the I-cables of the Mini-Line® system. Please note that the HPD100 Leeboy Converter Kit only enables the connection of one sensor.

Mini-Line® HPD100 Leeboy Converter Kit

S-50577



Consists of

- 1 adaptor box with 2x6-pin bayonet chassis plugs and a switch (for connection to the Mini-Line® Grade and Slope Control System)
- 2x4m cable connected to the adaptor box (1 cable for the power supply and 1 cable to drive the electrical actuator)

Additional Information

The HPD100 Leeboy Converter Kit is designed for use with the Mini-Line® Grade and Slope Control System. General recommendations of the manual for the Mini-Line® Grade and Slope Control System should be observed for all additional subjects not covered in this installation guide, including:

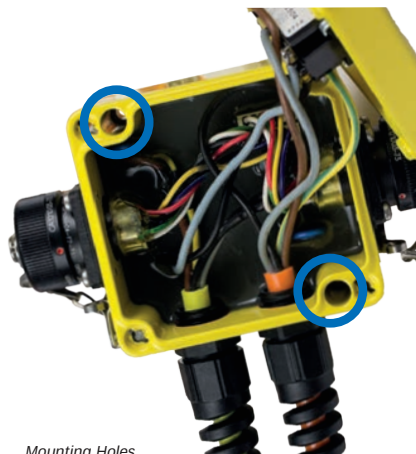
- Safety instruction
- Safe mounting and connection with the Mini-Line® Grade and Slope Control System
- Information about overcurrent protection
- Maintenance

Mounting

The HPD100 Leeboy Converter Kit is made for permanent mounting, and is resistant to corrosive substances and the tough environmental conditions on a paver.

The HPD100 Leeboy Converter Kit should be placed where it is practical to reach while connecting the Mini-Line® Grade and Slope Control System. The cables should be properly secured, so they are protected from clamping.

If mounted on the screed, protection against overextension and dragging is also needed.



Mounting Holes

Step-by-step instruction for permanent mounting

1.
2.
3.

1

Open the adaptor box

Open the adaptor box by loosening the four screws on the front

2

Map the position

Map the position of the two mounting holes shown on the picture above on the paver

3

Mount the adaptor box

Mount the adaptor box on the paver with 4mm or 5/32 inch screws. Either 6-pin bayonet chassis plug can be used for connecting controller or sensor

Installation

In order to access the control system on the paver, the two cables on the HPD100 Leeboy Converter Kit must be connected to the DC motor in the actuator and the power supply of the asphalt paver. The yellow cable of the the HPD100 Leeboy Converter Kit should be connected to the power supply, and the orange cable should be connected to the DC motor in the actuator.

The Leeboy paver has an existing “Up/Down” switch for manual control, which is connected to the DC motor. The easiest way to install the HPD100 Leeboy Converter Kit is to open the switch box/connector box on the asphalt paver to access the connections for both the DC motor and the “Up/Down” switch. In the connector box, the two wires for the existing “Up/Down” switch on the paver and the two wires for the DC motor are connected. The two sets of wires in the box must be disconnected from each other, and instead be connected to the four wires in the orange cable of the HPD100 Leeboy Converter Kit, as shown in figure 1.

The Leeboy paver should have a suitable fuse box, where the yellow cable for the power supply can be connected, as shown in figure 1. No safety features, such as the emergency stop on the asphalt paver must be by-passed when connecting the HPD100 Leeboy Converter Kit to the power supply. The connection of the HPD100 Leeboy Converter Kit must also ensure that power can be easily cut off, e.g. during maintenance.

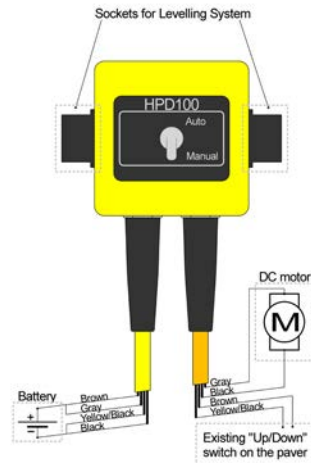


Figure 1 - HPD100 construction

Power connections

The power cable is yellow and has four wires.

	Connection	Function
Brown	Vbat+ (11-16 volts)	Driver supply
Yellow/Black	Ground (0 volts)	Driver supply
Gray	Vbat+ (11-16 volts)	Levelling supply
Black	Ground (0 volts)	Levelling supply

Actuator connections

The actuator cable is orange and has four wires.

	Connection	Function
Brown	Wire 1	“Up/Down” switch
Yellow/Black	Wire 2	“Up/Down” switch
Gray	Wire 1	DC motor
Black	Wire 2	DC motor

Manual and Auto Mode



The switch

Auto mode

When the switch on the HPD100 Leeboy Converter Kit is set to auto, only the Mini-Line® controller can activate the actuator and regulate the tow point. The manual “Up/Down” switch of the paver is by-passed in auto mode and will not change the height of the screed.

The Mini-Line® controllers can both be used for automatic regulation and manual adjustments, so there is no need for the “Up/Down” switch on the paver.

The HPD100 Leeboy Converter Kit has two settings: Auto and manual.

The switch changes between auto mode where the Mini-Line® controller regulates the screed, and manual mode, where the “Up/Down” switch on the paver can change the height of the screed.

Manual mode

When the switch on HPD100 Leeboy Converter Kit is set to manual, only the manual “Up/Down” switch can activate the actuator and change the height of the tow point. The Mini-Line® controller is by-passed in manual mode and will not regulate the screed.

