



HELSINKI, FINLAND, 2018

# STARDEX® 0304

## COMMON RAIL PUMP AND INJECTORS TESTER



## **Safety rules for working with STARDEX 0304 device.**

Before using the device STARDEX 0304 (further “the device”), read this manual carefully.

The device should be plugged only in a circuit of alternative current mentioned in the passport of the device. In order to power up the device, use only supply cable from the delivery kit.

Getting the electrical charges on device body is strongly prohibited!

Ingress of moisture inside the device is strictly unacceptable!

Device body is constructed to protect its components from mechanical impact, while operating. Avoid body damage, do not drop the device and do not put any heavy objects on its cover.

At any sign of device defect, as smoke, sparking or specific smell, unplug the device immediately and contact the nearest STARDEX service center.

All cables connected to the device must be supplied with standard plugs without mechanical damage.

There are no self-repairable parts inside of the device. It is strongly prohibited to open the device.

Store and use away from children and pets.

The device is designed to work with high pressure systems. A user must understand the structure and principle of operation of injection systems.

Incorrect use of the device can lead to breakage of the equipment or user’s injury.

## Specifications and operation directions

Dimensions	470x300x190 mm
Weight	6 Kg
AC power supply	220V 50Hz (110V 60Hz on demand)
Power consumption in stand-by mode	40W
Power consumption in load mode	Up to 400W
Operating temperature	From +10 <sup>0</sup> C to +40 <sup>0</sup> C
Relative air humidity	not more than 90% at 25 <sup>0</sup> C

Embedded delay sensor module	False
Embedded flow meter module	False
Embedded RLC measurement module	False
Embedded PC	True
Front panel embedded touchscreen	False
New STARDEX SISU software compatible	True
Number of simultaneously testing injectors	Up to 4
Pressure regulator out	3
Pressure sensor in	1
RPM sensor in	1

Delay sensor in	With STARDEX 0502
Injector digital flow measurement	With STARDEX STREAM
Pump digital flow measurement	With STARDEX STREAM
Common Rail coil injectors	True
Common Rail piezo injectors (except Delphi piezo)	True
Common Rail Delphi piezo injectors	False
Double coil injectors	False
Common Rail pumps (except Denso HP 0)	True
Repair code generation for Bosch IMA, Denso QR, Delphi C2I C3I	With STARDEX STREAM
Repair code generation for Bosch piezo injectors	False
UIS/UPS PDE/PLD	False
HEUI	False

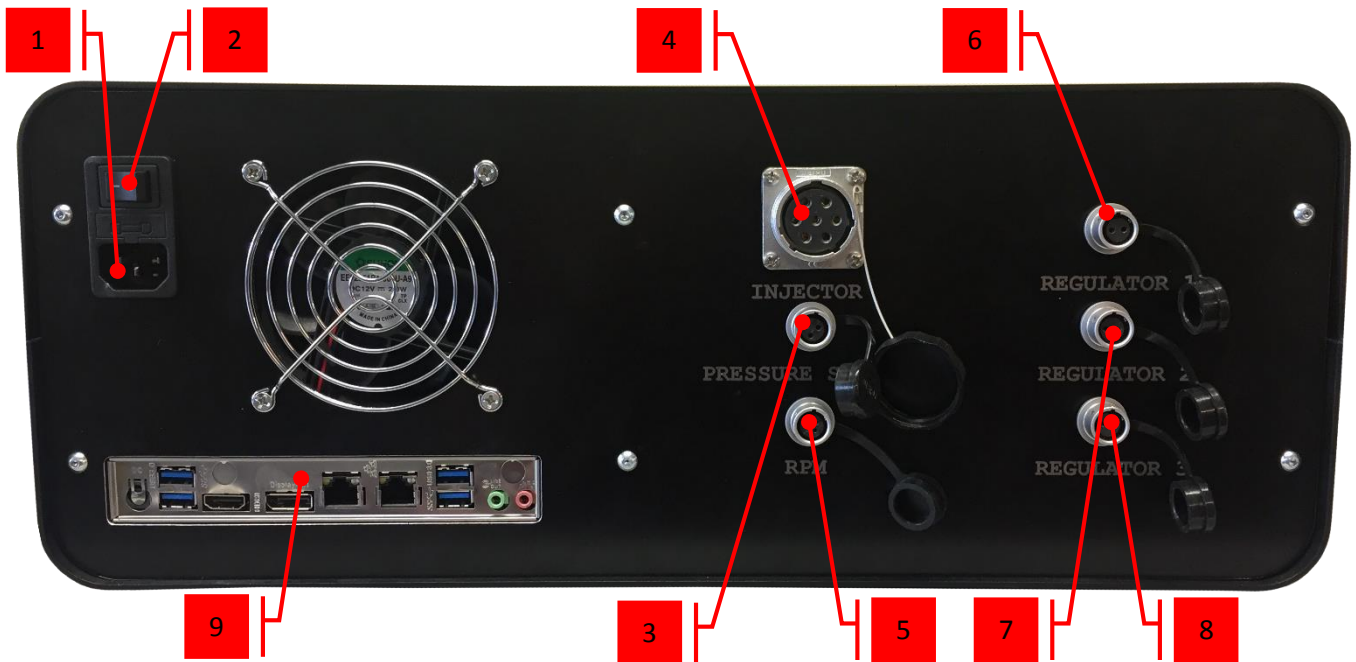
USB, LAN, VGA, HDMI, DVI and other PC interfaces could vary depending on installed motherboard.

## Purpose and range of application

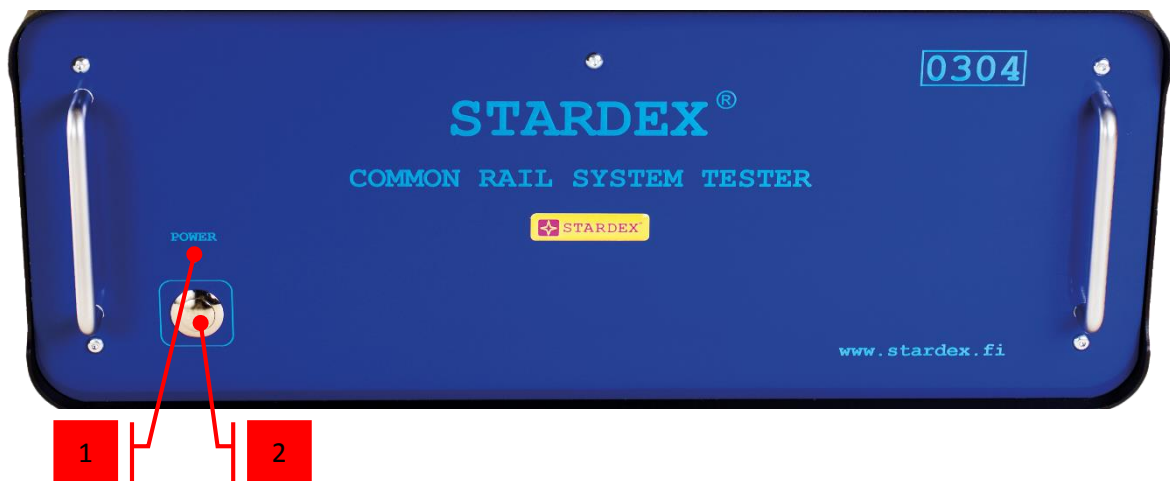
- STARDEX 0304 is a highly professional universal device for testing pumps and injectors of Common Rail system.
- The device is designed to work with Common Rail systems by **Bosch, Delphi, Denso, Siemens, Caterpillar, Cummins, AZPI** and is also able to test all mechanical injectors as well as nozzles of the unit-injectors.
- The device is specified to test from one (combined with a hand pump) to four (while using a test bench) injectors simultaneously.
- It works both with electromagnetic and piezoelectric Common Rail injectors (except Delphi piezo).
- Allows you to examine the current graph, as well as the delay time of the injection (in link with STARDEX 0502)
- Using the STARDEX 0304 with STARDEX STREAM allows you to measure the flow and return flow of injectors and pumps using digital flowmeters. The use of this set also allows you to assign new repair codes for injectors.
- The device is equipped with an industrial PC system powered by Ubuntu Linux, allowing you to connect a keyboard, mouse, printer, monitor and other peripheral devices.
- The memory of the device contains approximately 3000 test-plans for checking Common Rail pumps and injectors and over 10000 test-plans for checking mechanical injectors of different manufactures.
- The device is suitable for fitting out any high pressure pump test bench including test benches without measuring unit (in case of using with STARDEX STREAM).
- STARDEX 0304 combined with a hand pump enables to make an express test of Common Rail injectors as well as mechanical injectors and nozzles of the unit injectors on the following parameters: efficiency, leakage, quality of injection, pressure at the beginning of the injection, state of electromagnetic coil (solenoid) or piezo element.

- The device STARDEX 0304 combined with the high pressure pump test bench is a full-fledged highly professional solution which enables completed test and setting of Common Rail injection systems.

## Connectors and control buttons



- ① Power cable connector.
- ② Power switch.
- ③ Pressure sensor connector.
- ④ Injector cable connector.
- ⑤ RPM sensor connector.
- ⑥ Regulator connector 1.
- ⑦ Regulator connector 2.
- ⑧ Regulator connector 3.
- ⑨ PC back panel.



### ① Front panel light diode

- No light – the device is off power.
- Light on– the device is on.

### ② On/off button.



## Switching on/off the device

Plug in the device using the power cable from the supply kit.

Connect mouse, keyboard, printer and monitor to appropriate connectors on the PC back panel of the device.

Connect the pressure sensor to the pressure sensor connector by the appropriate cable.

Connect the fuel rail pressure regulator to regulator 1 connector by appropriate cable.

Connect pump pressure regulators to regulator connectors 2 and 3 by appropriate cables.

Connect injectors to the injector cable connector by the appropriate cable.

Turn on the power switch on back panel of the device.

Run the operating system using on/off button on the front panel.

Once the operating system is loaded the device is ready to be used.

To switch off the device press the on/off button on the front panel of the device.

## Supply kit

Basic	
Device STARDEX 0304	1 piece
Power cable	1 piece
Main cable for connecting 4 injectors	1 piece
Adapter for main cable to test Bosch injectors	4 piece
Adapter for main cable to test Delphi (type 1) injectors	4 piece
Adapter for main cable to test Delphi (type 2) injectors	4 piece
Adapter for main cable to test Denso (type 1) injectors	4 piece
Adapter for main cable to test Denso (type 2) injectors	4 piece
Adapter for main cable to test piezoelectric Siemens injectors	4 piece
Adapter for main cable to test piezoelectric Bosch injectors	4 piece
Adapter for main cable multisystem 1	4 piece
Adapter for main cable multisystem 2	4 piece
Cable for connecting Bosch pressure sensor (old style)	1 piece
Cable for connecting Bosch pressure sensor (new style)	1 piece
Main cable for connecting regulators	2 pieces
Adapter for main cable for connecting Bosch pressure regulator	2 pieces
Adapter for main cable for connecting Bosch Mercedes pressure regulator	2 pieces
Adapter for main cable for connecting Delphi/Siemens pressure regulator	2 pieces
Adapter for main cable for connecting Denso pressure regulator	2 pieces

LCD Monitor	1 piece
Computer mouse	1 piece
Computer keyboard	1 piece

### Additional (supplied separately)

Adapter for main cable to test 4 injectors multisystem 1

Adapter for main cable to test 4 injectors multisystem 2

RPM sensor



## Warranty and technical support

The equipment has 1 year of warranty. The manufacturer is not responsible for the damage due to violation of the operation terms, misuse including unskillful or mistaken personnel actions and if there are traces of mechanical impact. Post-warranty service of device is performed at cost components and the work. The manufacturer reserves the right to design modifications, equipment and the warranty period without advance notice.

## Shipping details

The device is packed into a bubble wrap and a carton box.

Weight 15 kg.

Length 600 mm.

Width 400 mm.

Height 400 mm.

## Manufacturer information

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