CONCRETE PIPE TESTING MACHINE (PEAK LOAD)

STANDARDS: TS EN 1916

1000 kN capacity Concrete Pipe Testing Machines are designed for the Peak Load Tests on Sewer and Drain Pipes, Concrete Pipes, Fittings, Cones on from 200 mm up to 3700 mm (outer diameters) pipes. Can be used for concrete pipes with a length up to 3000 mm.

600 kN capacity Concrete Pipe Testing Machines are designed for the Peak Load Tests on Sewer and Drain Pipes, Concrete Pipes, Fittings, Cones on from 200 mm up to 2000 mm (outer diameters) pipes. Can be used for concrete pipes with a length up to 2000 mm.

Please contact with us for different dimensions and capacity of Concrete Pipe Testing Machines.

Concrete Pipe Testing Machines consist of;

- Load Frame
- Automatic Hydraulic Power Pack and
- Digital data acquisition & control system

HR-C1000

Concrete Pipe Testing Load Frame

The frames are rigid 2 column constructions with superior axial and lateral stiffness and are precision aligned. The load-controlled double acting piston is integrated to upper beam. The actuator has anti-rotation system to prevent the natural tendency of the actuator to rotate. The stroke of the double acting actuator is 300 mm. Load cell is used for precise load measurement and closed loop control.

The rectangular shaped top bearer is detachable from the actuator and the bottom bearer is V-shaped with an angle of 150°. During pipe loading the system doesn't permit top bearer to move at horizontal plane and allows it to move at vertical plane of a minimum value of ±8°. Upper crosshead height adjustment is done with electric motor drive for easy and precise test set up and manual through locking pins are used to fix the upper crosshead.

There are 2 options depending on frame fixing system, with or without chassis.

First option is not including carrying chassis for the machine. These types of frames have to be anchored to concrete base. Steel fasteners and anchorage plan are sent to the customer before installation. Steel fasteners have to be anchored to concrete base by customer according to plan. Following this anchorage process, the frame is assembled.

Second option is including metal carrying chassis for the machine.

HYDRAULIC POWER PACK AND DIGITAL DATA ACQUISITION & CONTROL SYSTEM

Hydraulic Power Pack

Automatic Hydraulic Power Pack, dual stage, controlled by digital readout unit is designed to supply the required oil to the load frames for loading.

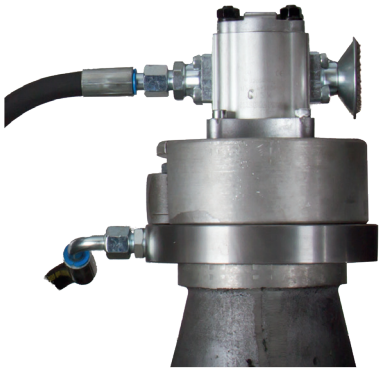
Controller unit has a simple and compact configuration.

Very silent power pack can load the specimen between 1 kN/sec. to 20 kN/sec, with an accuracy of ±5%.

A Rapid approach pump is supplied as standard. Safety valve (maximum pressure valve) is used to avoid machine overloading.

Maximum working pressure of the system is 410 bar.

HR-C8000



Dual Stage Pump

The dual stage pump is formed by two groups;

1. Low pressure gear pump
2. High pressure radial piston pump

On the dual stage pump, a high delivery, low pressure gear pump is used for rapid approach, while a low delivery, high pressure radial piston pump is used for test execution. The rapid approach facility shortens the time interval from piston start until the upper platen touches to the specimen. This excellent feature helps to save a lot of time when a large number of specimens are going to be tested.

Digital Data Acquisition & Control System

The unit is designed to control the machine and processing of data from load-cells which are fitted to the machine.

All the operations of the unit are controlled from the front panel consisting of a LCD display and function keys.

The unit has easy to use menu options.

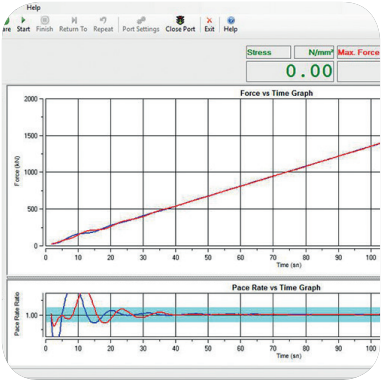
Digital graphic display unit loading rate of the time of Testing and load values can be monitored.

Digital graphic display is able to draw real-time “Load vs. Time”.

HR-C8002

HİRA TESTING EQUIPMENT

Software



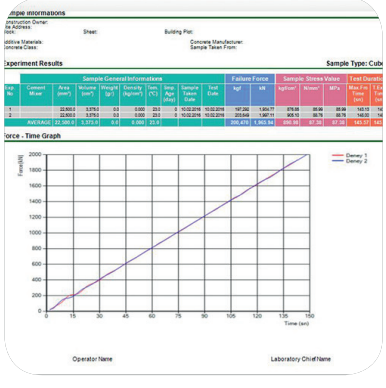
The Concrete Pipe Testing Software is supplied free of charge with the Concrete Pipe Testing Machine.

Sample, company, laboratory and test values can be entered in the programme.
Load-time graphic, test reports and sample reports can be taken.

Software provides test data, results, and the load-time graphs can be seen at LCD screen. The Concrete Pipe Testing Machine can be controlled (Start, Stop commands) by a computer with the software free of charge.

This software provides data acquisition and management for compression tests throughout the test execution.

The advanced functions for data base management provide an easy navigation of all saved data. The test results certificate includes all descriptive information.
Therefore, test parameters can be set and details about the test carried out such as client details, test type, specimen type, user info and other information required can be entered and printed out as well as test report and graph.



Software can be performed in Turkish and English.

Frequently used information like name and location of the laboratory, type and dimensions of mostly used specimens are held in memory and can be written automatically by right clicking on information boxes and selecting frequently used text in menu.

User can access any data of previously completed tests and use in his/ her new report since most of the tests have same structure and properties.

Main Features

- Pace rate control from 1 kN/sec to 20 kN/sec depending on piston size.
- Can control 2 frames (optional)
- Can make test with load control.
- Real time display of test graph.
- Analog channels for different frame load cells
- RS-232 serial port connecting for computer interface
- LCD display
- 2 different unit system selection; kN and kgf
- Multi-language support (English and Turkish)
- 2 different unit system selection; SI and Metric
- Real-time clock and date
- Free of charge PC software for the test control and printout the test report.

Safety Features

- Maximum pressure valves to avoid machine overloading
- Emergency stop button
- Software controlled maximum load value

Technical Specifications:

Product Code	Product Name	Capacity (kN)	Max. External Sample Dia. (mm)	Power Supply
HR-C6000	Concrete Pipe Testing Machine without Carrying Chassis	600	2000	220 V, 50-60 Hz, 1 ph
HR-C6005	Concrete Pipe Testing Machine with Carrying Chassis	600	2000	220 V, 50-60 Hz, 1 ph
HR-C1000	Concrete Pipe Testing Machine without Carrying Chassis	1000	3000	220 V, 50-60 Hz, 1 ph
HR-C1005	Concrete Pipe Testing Machine with Carrying Chassis	1000	3000	220 V, 50-60 Hz, 1 ph
HR-C1050	Concrete Pipe Testing Machine without Carrying Chassis	1000	3700	220 V, 50-60 Hz, 1 ph
HR-C1055	Concrete Pipe Testing Machine with Carrying Chassis	1000	3700	220 V, 50-60 Hz, 1 ph

Spare Parts & Accessories:

Product Code	Product Name	Capacity (kN)	Max. External Sample Dia. (mm)	Power Supply
HR-C6000/1	Concrete Pipe Testing Frame without Carrying Chassis	600	2000	---
HR-C6005/1	Concrete Pipe Testing Frame with Carrying Chassis	600	2000	---
HR-C1000/1	Concrete Pipe Testing Frame without Carrying Chassis	1000	3000	---
HR-C1005/1	Concrete Pipe Testing Frame with Carrying Chassis	1000	3000	---
HR-C1050/1	Concrete Pipe Testing Frame without Carrying Chassis	1000	3700	---
HR-C1055/1	Concrete Pipe Testing Frame with Carrying Chassis	1000	3700	---
HR-C8000	Hydraulic Power Pack and Digital Data Acquisition & Control System	---	---	220 V, 50-60 Hz, 1 ph
HR-C8001	Hydraulic Power Pack	---	---	220 V, 50-60 Hz, 1 ph
HR-C8002	Digital Data Acquisition & Control System	---	---	220 V, 50-60 Hz, 1 ph
HR-C8004	Software	---	---	---
HR-G0975	Computer & Printer	---	---	---
HR-G0975/1	Usb to com port Converter	---	---	---
HR-G0979	Thermal Printer	---	---	---

ELECTROMECHANICAL FLEXURAL & COMPRESSION TESTING MACHINE

HR-E0100 Electromechanical Flexural-Compression Testing Machine has 100 kN capacity.

The device is consist of 2 rigid columns, a cast iron base with gear box inside and a steel bridge to hold the Load cell and accessories.

The device is supplied with a special moving upper platen and 100 kN Load cell for compression tests, beam testing apparatus and 50 kN Load cell for flexure tests. The Digital Readout Unit and Software is also supplied standard with the device.

The moving of the piston is limited with 2 switches located at up and lower end of the piston.

100 kN and 50 kN Load cell calibration data can be saved independently by the Digital Readout Unit. The load vs time graph can be seen from the LCD screen during the test. The device can be connected to a computer by RS-232 serial port and different types of user and sample data can be stored.

The device can be run from the device and after failure the test data can be stored by the computer.

The pace rate can be adjusted from the panel located on the front of the device.

The pace rate can be adjusted as 0,1/0,2/0,4/1,0/2,0 mm/min.

HR-E0100

Technical Specifications:

Product Code	Product Name	Dimensions (cm)	Weight (kg)	Power Supply
HR-E0100	Electromechanical Flexural-Compression Testing Machine	64x65x90	120	220 V, 50-60 Hz, 1 ph

Spare Parts & Accessories:

Product Code	Product Name	Power Supply
HR-E0100/1	Electromechanical Flexural-Compression Testing Frame	---
HR-G0975	Computer & Printer	220 V, 50-60 Hz, 1 ph
HR-G0975/1	Usb to com port Converter	---
HR-G0981	Load Cell, 50 kN capacity	---
HR-G0982	Load Cell, 100 kN capacity	---
HR-E8500	Digital Readout Unit	220 V, 50-60 Hz, 1 ph
HR-E8500/1	Software	---