



DOC022.53.00619MAI04

Digital Reactor Block 200 (DRB 200) Instrument Manual

Table of Contents

Safety Precautions.....	5
Specifications.....	7
Section 1 Introduction	9
1.1 Front Display.....	9
Operation	13
Section 2 Instrument Use.....	15
2.1 Starting-up.....	15
2.2 Routine Operation	16
2.3 Using the Reducing Adapters.....	17
2.4 Selecting the Program	17
2.5 Setting User Programs.....	19
2.6 Error Messages.....	19
Section 3 Maintenance	21
3.1 Cleaning the Instrument	21
3.2 Instrument Test.....	21
3.3 Changing the Protective Covers.....	22
General Information	23
Parts and Accessories.....	25
How To Order	26
Repair Service.....	27
Warranty.....	28
Certification	29

Safety Precautions

Please read this entire manual before unpacking, setting up, or operating this instrument. Pay particular attention to all danger and caution statements. Failure to do so could result in serious injury to the operator or damage to the equipment.

To ensure the protection provided by this equipment is not impaired, do not use or install this equipment in any manner other than that which is specified in this manual.

Use of Hazard Information

If multiple hazards exist, this manual will use the signal word (Danger, Caution, Note) corresponding to the greatest hazard.

DANGER

Indicates a potentially or imminently hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation that may result in minor or moderate injury.

NOTE

Information that requires special emphasis.

Precautionary Labels

Read all labels and tags attached to the instrument. Personal injury or damage to the instrument could occur if not observed.



This symbol, if noted on the instrument, references the instruction manual for operational and/or safety information.



Hot Surfaces. Touching the reactor block surfaces and vials while hot can cause serious burns.



Protective Earth Ground. This product requires a protective earth connection. If not provided with a plug on a cord, connect positive earth to this terminal (U.S. cord set provides ground).

Safety Precautions

Safety Equipment

Use protective clothing when operating the reactor, including goggles or face mask, and gloves.

Reagent Spills

Clean up spilled reagents immediately. If reagent contacts skin, rinse the affected area thoroughly with water. Avoid breathing released vapors. Read the Material Safety Data Sheets (MSDS) supplied with each reagent for complete chemical information.

Fire Hazard

Avoid the presence of flammable liquids near the operating reactor. A fire hazard could be created.

Power Cord

A power cord suitable for 115 V ac line voltage is supplied with the DRB 200.

DANGER:

Do not allow the power cord to pass under the instrument.

Specifications

Specifications are subject to change without notice.

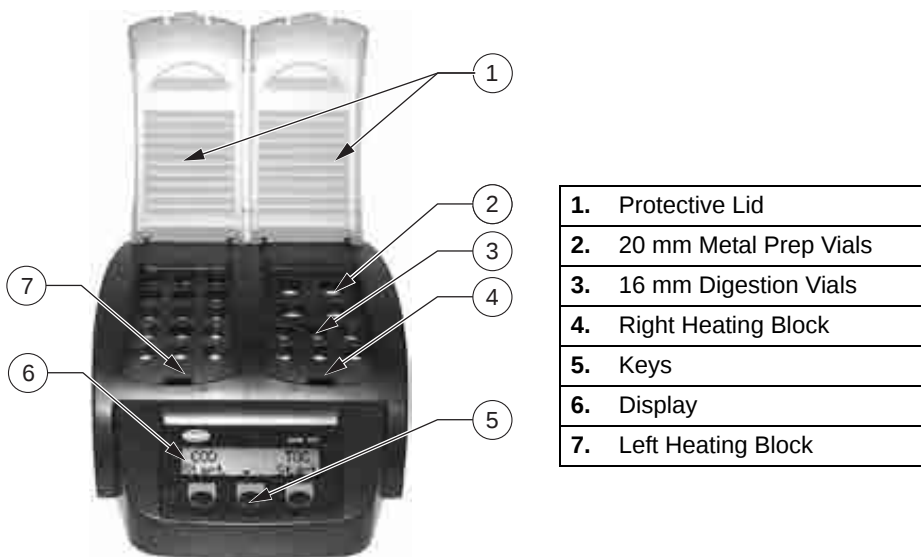
Dimensions	250 x 145 x 310 mm (W x H x D)
Weight	LTV082.53.30001: 2 kg instrument, 3.5 kg with packaging LTV082.53.40001: 2 kg instrument, 3.5 kg with packaging LTV082.53.42001: 2.8 kg instrument, 4.3 kg with packaging
Ambient Operating Temperature	10–45 °C
Storage Temperature	– 40–60 °C
Relative Humidity	maximum 90% non-condensing
Stored Programs	COD program (150 °C, 120 minutes)
	TOC program (105 °C, 120 minutes)
	100 °C program (100 °C, 30, 60, 120 minutes)
	105 °C program (105 °C, 30, 60, 120 minutes)
	150 °C program (150 °C, 30, 60, 120 minutes)
	165 °C program (165 °C, 30, 60, 120 minutes)
	Easily selected 37–165 °C (no cooling)
Programmable Temperature Range	37–165 °C
Programmable Timer Range	Easily selected 0–480 min; acoustic signal when the set time expires, heating stops when time expires.
Heating Rate	From 20 to 150 °C in 10 minutes
Temperature Stability	± 2 °C
Number of Vials	LTV082.53.30001: 9 holes for 16 vials, 2 holes for 20 mm vials LTV082.53.40001: 15 holes for 16 mm vials LTV082.53.42001: 21 holes for 16 mm vials, 4 holes for 20 mm vials
Power Requirements	100–240 V, +5%/–15%, 50/60 Hz, Protection Class I
Power Input	600 VA
Safety Checks	CE, GS, and cTUVus

Section 1 Introduction

The DRB 200 is supplied as two models, with either one or two heating blocks (*Figure 1*). The heating blocks can heat solutions in round vials of various sizes at 37–165 °C for a period of 0–480 minutes. The small, 16 mm diameter openings on the heating block are suitable for Hach COD, Unicell, TOC, and Test N’ Tube tests. The larger, 20 mm diameter openings are intended for sample preparation reaction vessels, using the Metals Prep Set.

The DRB 200 has 6 stored and 3 programmable temperature programs.

Figure 1 Front View of the DRB 200 Digital Reactor Block (2 Block Version)



1.1 Front Display

The instrument is operated using three touch-sensitive keys located below the display (*Figure 1*). The function of the key depends on the display. If no function is shown for a specific key, that key is not currently active.

The actual temperatures of the heating blocks and the remaining time are visible in the display while temperature programs are active.

Introduction

Figure 2 DRB 200 Display and Keys



1. Display	2. Touch-sensitive Keys
---------------	----------------------------