

HumaClot Pro

- > System Specifications
- > Scope of Supply
- > Obligatory Items
- > Optional Items



System Overview

Cat.No.	15800
Analyzer type	Fully automated coagulation analyzer
Class	Bench top / Desktop
Throughput	Up to 100 PT / h Up to 58 tests /h with mixed parameters (PT, aPTT, FIB)
Reagent system	Closed ¹ (validated HUMAN application settings) ²
# of parameters	50 freely definable applications ³
Consumable system	Closed for cuvette rings
Operation mode	Batch mode (sample oriented, test selective) Random-access (STAT)
Languages software	Multilingual ⁴
Languages manual	English
Operation software	HumaClot Pro GUI

¹ Open at launch, but system will be closed mandatorily in the future.

² Hemostat Prothrombin-SI, Prothrombin ^{liquid}, aPTT, TT & FIB preinstalled. D-Dimer will follow after launch

³ After closing the system for non-Hemostat reagents, the number of freely definable channels will be reduced

⁴ At launch: English and German, additional languages (RU, FR, SP, PO) will follow in due course

HumaClot Pro

Fully Automated Coagulation Instrument

Tests

Measure type	Photo-optical
Analysis modes	Coagulation, Chromogenic, Immunologic
Parameters	Prothrombin Time (PT) Activated Partial Thromboplastin Time (aPTT) Thrombin Time (TT) Fibrinogen (FIB) D-Dimer (DD) Protein C (PC)* Antithrombin (AT3)* Factors (FII – FXII)* Venom Time (VT)* or Batroxobin Time (BT)* Heparin (HEP)* Activated PC Resistance (APCR)* Lupus Anticoagulant (Screen, Confirm)* Protein S (PS)* von Willebrand Factor (VWF)* Ecarin Chromogenic Assay Thrombin (ECAT)* Hirudin (ECAH) * Plasminogen (PLG) * 2-Antiplasmin (A2AP) * PT/FIB* Prothrombinase induced Clotting Time (PiCT)* Thrombin Dynamics Test (TDT)* Thrombin Activatable Fibrinolysis Inhibitor (TAFI)*
Calibration	Up to 7 Point, ISI, normal PT
Self check	On start-up
Result display	Clotting - Sec, % of Normal, INR Kinetic – Sec, mE, Unit

Samples / Controls / Calibrators

Sample type	Plasma
Supported sample vessels	Primary tubes: D11-13 x 65-100 mm Secondary tubes: Human 4 ml, Hitachi cup,
Sample positions	25 (22 + 3 STAT)
STAT capability	3 positions
Supp. calibration/control vessels	Human 4 ml, Hitachi cup
Calibration/control positions	8
Sample identification	Manual internal barcode reader
Auto-repeat	Yes (double measure time)
Auto-calibration / -dilution	Yes
Calibration points	Up to 7

* Reagent currently not available from HUMAN



Reagent

Reagent positions	15
Mixing	Yes, 3 positions
Supp. reagent vessels	3 x 15 ml ø 31.2 mm 12 x 5 ml stirred ø 22.5 mm
Wash & cleaner positions	2
Supp. wash / cleaner vessels	2 x 15 ml ø 31.2 mm

Barcode Reader

Internal barcode reader	Sample ID
Types	Code 39, codabar min. 6 characters, 2 of 5 interleave min 6 characters UPCA -> EAN13 UPAC -> UPAC

Reaction unit / Incubation

Reaction system	Cuvette ring
Capacity	32 cuvettes / ring
Mixing during measurement	Yes
Incubation temperature	37.4°C
Accuracy	± 0,4°C
Uniformity	± 0,1°C
Min. reaction volume (test vol.)	150 µl
Max. reaction volume (test vol.)	300 µl

Liquid Pipetting

Liquid transportation	X, Y, Z- pipetting arm
Liquid level detection/ level sense	Yes for reagents & samples (capacity)
Needle crash detection	Yes, XYZ Arm
Needle type	Steel needle
Needle heating	Yes
Min. pipetting volume	2 µl
Max. pipetting volume	250 µl
Pipetting resolution	1 µl

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Washing

Capacity	2.5 l DI water tank / 2.5 l waste tank
Level sensor	DI water empty / Waste full
DI water filter	Yes
Probe wash station	Yes
Water consumption min.	< 6 ml
Wash profiles	5

Reading

Optical system	Photometric
Number of wavelengths	3
Wavelengths	405 nm, 570 nm, 740 nm
Light source	LED
Optical range	0 - 2 abs.
Optical sensitivity	0.001 abs.
Number of channels	2
Reference channels	2

Data Processing

Interfaces	1 x RS232C (Mini DIN), 1 x RS232C (9 pin), 1x Chipcard , 1xLAN, 2x USB, 1x USB Device, 1x SD Card HC (Internal)
Supp. printer	External USB PCL3 e.g HP Deskjet D5560 / HP Officejet 6000 / HP Deskjet 6940 HP Deskjet 6930 / HP Officejet Pro 8500 / HP Officejet Pro 8100
Compatible USB storage	FAT, up to 32GB
LIS/LIMS	Yes, by LAN bidirectional (FTP auto-send, auto-request)
User levels	3 (anyone, expert, service)
Real-time reaction curve display	Yes
Calibration curve display	Yes
User interface	Integrated colour touch screen 17 x 12.5 cm, resolution 800 x 600
Result memory	Up to 10.000 results
Result flags	OK, none clotting, deviation error, temperature, mixer sample, mixer reagent photometer, liquid, QC
Number of applications	50
Quality control module	Yes, with Levey Jennings
QC rules	Westgard rules (1_3S, 2_2S, R_4S, 4_1S, 8x, 1_2S)
Max. # of QC	8
# of QC's / parameter	3
Update parameter by USB	Yes export
Export integrated service software	Yes



General

Dimension(WxDxH)	Instrument without any components: 83 x 46 x 61 cm
	Space requirements routine use: 100 x 60 x 80 cm
	Packaging: 93 x 71 x 60 cm
	Weight: Gross: 45 kg, Net: 38 kg
Electrical requirements	100-240 VAC ± 10 %, 50/60 hz, IEC-60320C13 connector
	Power consumption: 150 W
	Fuse: 5A250V time lag (T5A L250V) IEC 60127-2II
Protection class	IP20 according IEC60529
	2 = < 12.5 mm, finger or similar object
	0 = Not protected against harmful ingress of water
Environmental conditions	Operation : Temperature 15...30°C
	Humidity max. 10-85 % non condensing
	Altitude max. 4000 m
	Transport: Temperature 2...50°C
	Humidity max. 10-85 % non condensing
	Noise level: ≤ 56 db

Scope of Supply

	Unit/Size	Cat.No.
HumaClot Pro	1	15800
Packlist		
User Manual	1	15800/1
Power Cable Length (1.8 m)	1	.....
Distilled Water Container (incl. screw lid)	1	.....
Waste Water Container (incl. screw lid)	1	.....
Distilled Water Sensor	1	.....
Waste Water Sensor	1	.....
Filter for Distilled Water Sensor	12	.....
Syringe 250 µl (Built- in)	1	.....
Cuvette Rings	10	.....
Sample Cups 4 ml	11	.....
Reagent Vial 5 ml Plastic	5	.....
Bottle Washing Solution	1	.....
Bottle Cleaner	1	.....
Reducing Rings for Reagent Vials 5 ml	3	.....
USB Stick	1
Teflon Coated Reagent Stirrer (3 * 13 mm)	3
Primary Fuses (250 V/5 A)	2

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Obligatory Items

Service Kits

Cat.No.

Need to be ordered with each instrument:

Maintenance Kit (Sufficient for twelve months)

15800/500

Need to be ordered with the first instrument:

Alignment Tool Kit

15800/501

Starter Spare Part Kit

15800/502

Optional

Consumables

Unit/Size

Cat.No.

Cuvette Rings for 1920 Tests

1

15800/10

6 Boxes with 10 cuvette rings 32 cuvettes incl. mixers and chip card

HumaClot Pro Washing Solution 5 x 15m

1

15800/20

To prevent carry-over. Instrument consumption approx. 10 Kits/Year depending on assay combination

Sample Cups 4 ml 2 x 250 pcs.

1

15800/25

For sample, calibrator and controls

Cleaner 5 x 15 ml

1

15800/30

For end of week cleaning of the instrument. Instrument consumption approx. 1 Kits/Year.

Reagent Vials 5 ml with Caps 50 pcs.

1

15800/40

Necessary for Hemostat FIB Buffer and Hemostat aPTT CaCl

Teflon Stirrer Bar 10 pcs.

1

15800/50

For reagent mixing e.g PT-SI

Reagents

Unit/Size

Cat.No.

HEMOSTAT aPTT-EL 6 x 4 ml / 240 Tests

1

33002

HEMOSTAT D-Dimer 40 Tests

1

36002

HEMOSTAT FIBRINOGEN 100 Tests

1

32002

HEMOSTAT THROMBIN TIME 60 Tests

1

34002

HEMOSTAT THROMBOPLASTIN-SI 6 x 2 ml / 60 Tests

1

31002

HEMOSTAT THROMBOPLASTIN-SI 6 x 10 ml / 300 Tests

1

31003

HEMOSTAT CONTROL PLASMA NORMAL 6 x 1 ml

1

35001

HEMOSTAT CONTROL PLASMA ABNORMAL 6 x 1 ml

1

35002

HEMOSTAT Calibrator – 4x1ml (lyophilized)

1

35500

To generate a calibration curve for the determination of prothrombin time

Accessories

Unit/Size

Cat.No.

USB Printer

1

15800/80

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