

Pentra 400 ●
Clinical Chemistry system



Pentra 400

From routine to specialty testing

One bench, not a whole lab
No water system, drain,
or special electrical requirements

- Up to 420 tests per hour with the ISE module
- 55 onboard parameters with back up availability
- Innovative cassette format
- Integrated work station and validation station
- Touch screen interface
- Real-time follow-up of your workflow



Efficient Sample and Reagent Management



Sample management

- Positive identification
- Shock, level and clot detection
- Continuous loading
- STAT capability
- Automatic pre/post-dilution
- Automatic rerun



Reagent management

- Barcoded cassettes
- Optimized test packaging
- Reagent test count down with automatic backup
- Extensive onboard test menu
- 40 user-defined channels

Patented technology yields high quality results

HIGH PRECISION OPTICAL SYSTEM

HORIBA Medical has chosen HORIBA Scientific's patented holographic grating technology to generate highly accurate photometric results

The holographic grating technology reduces light diffraction and provides a high signal / noise ratio which significantly increases the quality of measurement to produce precise and stable test results.

- Spectral unit offering 15 different wavelengths (mono- or bi-chromatic)
- Optimized reading by continuous sweep
- Highly sensitive detection (validated holographic technology)



INTEGRATED ISE MODULE

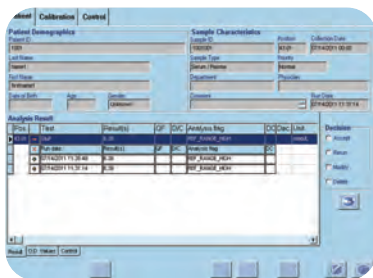
ISE module designed by HORIBA Ltd., Japan.

- 180 tests/hour
- Simultaneous analysis of Sodium, Potassium and Chloride
- Applications on Serum, Plasma and Urine

HIGH QUALITY ANALYTICAL TECHNOLOGY

- Single-use reaction cuvettes produce highly sensitive and robust results
- High performance mixer design for optimal homogenization without cross-contamination
- Test sequence optimization programming minimizes sample to result turn around time

Secure and simple patient data management



Secure data management

- Secured results validation
- Reliable traceability in compliance with accreditation standards



Patient management

- Worklist generated by a manual entry or uni-/bi-directional connectivity
- Automatic validation based on user defined rules
- Intuitive delta checking
- Monitors panic values

An extensive menu of liquid reagents

Cassette packaging

- One and two reagent cassettes
- Ready-to-use
- Broad menu
- 52 reagents
- Enzymes / Substrates / Specific Proteins



Easy management of your lab processes

- Reagent cassettes can be placed anywhere in the reagent compartment
- Automated traceability: Test name, lot number, expiration date, tests remaining, and unique cassette number
- Reagent compartment will be scanned and inventoried every time the reagent door is opened and closed
- Automated reagent cassette backup
- Just one calibrator and two controls for routine analysis



Environment protection

Compact cassette packaging that respects the environment

- No more superfluous packaging
- Saves refrigerator space



Cost control

- Optimized number of tests per cassette
- Minimal calibrations
- Rerun analysis according to laboratory defined rules
- Activity analytics with the test counter function⁽¹⁾

Specimen	Chemical	Current count	Control	Calibration	Status
1	ALP	12	12	12	
2	ALT	18	18	18	
3	ALB	15	15	15	
4	CRP	24	24	24	
5	CRP	18	18	18	
6	CRP	12	12	12	
7	CRP	18	18	18	
8	CRP	12	12	12	
9	CRP	18	18	18	
10	CRP	12	12	12	
11	CRP	18	18	18	
12	CRP	12	12	12	
13	CRP	18	18	18	
14	CRP	12	12	12	
15	CRP	18	18	18	
16	CRP	12	12	12	
17	CRP	18	18	18	
18	CRP	12	12	12	
19	CRP	18	18	18	
20	CRP	12	12	12	
21	CRP	18	18	18	
22	CRP	12	12	12	
23	CRP	18	18	18	
24	CRP	12	12	12	
25	CRP	18	18	18	
26	CRP	12	12	12	
27	CRP	18	18	18	
28	CRP	12	12	12	
29	CRP	18	18	18	
30	CRP	12	12	12	
31	CRP	18	18	18	
32	CRP	12	12	12	
33	CRP	18	18	18	
34	CRP	12	12	12	
35	CRP	18	18	18	
36	CRP	12	12	12	
37	CRP	18	18	18	
38	CRP	12	12	12	
39	CRP	18	18	18	
40	CRP	12	12	12	
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79	CRP	18	18	18	
80	CRP	12	12	12	
81	CRP	18	18	18	
82	CRP	12	12	12	
83	CRP	18	18	18	
84	CRP	12	12	12	
85	CRP	18	18	18	
86	CRP	12	12	12	
87	CRP	18	18	18	
88	CRP	12	12	12	
89	CRP	18	18	18	
90	CRP	12	12	12	
91	CRP	18	18	18	
92	CRP	12	12	12	
93	CRP	18	18	18	
94	CRP	12	12	12	
95	CRP	18	18	18	
96	CRP	12	12	12	
97	CRP	18	18	18	
98	CRP	12	12	12	
99	CRP	18	18	18	
100	CRP	12	12	12	

(1) Test counter

The Pentra C400 is the evolution of the successful Pentra 400 system. This evolution provides a platform that is reliable and extremely user friendly, while ensuring quality results that are required in the laboratory environment.

Save valuable time

Automatic reagent management

- Intelligent monitoring of reagent supply: the “work balance” function assesses the stock on board relative to the workload requirements⁽¹⁾
- Use limit date and calibration validity checks

Substance	Capacity required	Present reagent bag	Lot #	Position	Unit
ALP	0.8400 mL	027	0000000	11	64 B
ALPMP	0.8000 mL				64 A
AspH	0.4000 mL		0000001		63 B
CEA	0.8000 mL		0000024		62 B
CRP	1.2000 mL				61
CRP	0.4000 mL				60 B
CRP	0.4000 mL				59 B
CRP	0.4000 mL				58 B
CRP	0.4000 mL				57 B
CRP	0.4000 mL				56 B
CRP	0.4000 mL				55 B
CRP	0.4000 mL				54 B
CRP	0.4000 mL				53 B
CRP	0.4000 mL				52 B
CRP	0.4000 mL				51 B
CRP	0.4000 mL				50 B
CRP	0.4000 mL				49 B
CRP	0.4000 mL				48 B
CRP	0.4000 mL				47 B
CRP	0.4000 mL				46 B
CRP	0.4000 mL				45 B
CRP	0.4000 mL				44 B
CRP	0.4000 mL				43 B
CRP	0.4000 mL				42 B
CRP	0.4000 mL				41 B
CRP	0.4000 mL				40 B
CRP	0.4000 mL				39 B
CRP	0.4000 mL				38 B
CRP	0.4000 mL				37 B
CRP	0.4000 mL				36 B
CRP	0.4000 mL				35 B
CRP	0.4000 mL				34 B
CRP	0.4000 mL				33 B
CRP	0.4000 mL				32 B
CRP	0.4000 mL				31 B
CRP	0.4000 mL				30 B
CRP	0.4000 mL				29 B
CRP	0.4000 mL				28 B
CRP	0.4000 mL				27 B
CRP	0.4000 mL				26 B
CRP	0.4000 mL				25 B
CRP	0.4000 mL				24 B
CRP	0.4000 mL				23 B
CRP	0.4000 mL				22 B
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CRP	0.4000 mL				20 B
CRP	0.4000 mL				19 B
CRP	0.4000 mL				18 B
CRP	0.4000 mL				17 B
CRP	0.4000 mL				16 B
CRP	0.4000 mL				15 B
CRP	0.4000 mL				14 B
CRP	0.4000 mL				13 B
CRP	0.4000 mL				12 B
CRP	0.4000 mL				11 B
CRP	0.4000 mL				10 B
CRP	0.4000 mL				9 B
CRP	0.4000 mL				8 B
CRP	0.4000 mL				7 B
CRP	0.4000 mL				6 B
CRP	0.4000 mL				5 B
CRP	0.4000 mL				4 B
CRP	0.4000 mL				3 B
CRP	0.4000 mL				2 B
CRP	0.4000 mL				1 B

(1) Workbalance

Real-time workflow follow-up

- Control all operations from the main screen (system, reagent and sample status)
- Dynamic display of the test results and sampling exceptions with the test review function⁽²⁾

Sample	Sample ID	Position	Test	Result	QC	Analysis flag
Sample 1	Sample 1	71.00	Ab			
Sample 2	Sample 2	71.00	Ab			
Sample 3	Sample 3	71.00	Ab			

(2) Test review

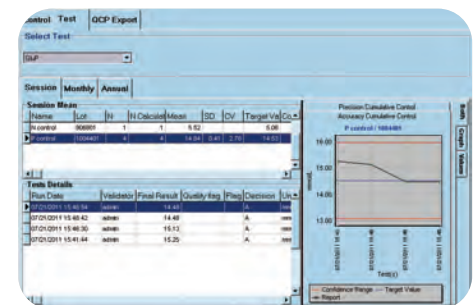
Reduced maintenance procedures

- Automated daily procedures
- Maintenance alerts
- Easy uploading of target values for calibrators and controls

Secure data management

Secured results validation

- Westgard multi-rule quality control procedures
- Automatic calibration factor check
- Selective flagging



(3) Quality Control

Reliable traceability in compliance with Accreditation Standards

- Operator login history, Reagents, Calibration and Maintenance logs
- Full patient results traceability: Multi-format option for archives review, end of day patient reports
- Full QC program: Up to 12-month control history, Levey-Jennings and Statistics⁽³⁾

Pentra 400

Clinical Chemistry system by HORIBA Medical



PHYSICAL SPECIFICATIONS

• Analyzer dimensions and weight

Height	Width	Depth	Weight
25 in	40 in	28 in	265 lbs
634 cm	102 cm	72 cm	121 kg

• Recommended lab bench dimensions (analyzer/printer + servicing area)

Height	Width	Depth
48 in	60 in	36 in
122 cm	153 cm	92 cm

• External cooling unit dimensions and weight

Height	Width	Depth	Weight
18 in	12 in	17 in	77 lbs
46 cm	31 cm	44 cm	35 kg

• Recommended dimensions beneath bench (for cooling unit + water/waste containers)

Height	Width	Depth
28 in	32 in	24 in
172 cm	82 cm	62 cm

• Power requirements

Power supply 120 VAC (\pm 10%)
60Hz
15 Amp

Outlets 3-5 outlets (1 – PC400 / 1 – Cooling Unit / 1 – Printer)
(Optional: 1 – Water System / 1 – waste pump)

• Temperature and humidity requirements

Operating temperature 61° F to 90° F
15° C to 32° C

• Optional remote diagnostic and LIS connectivity requirements

1 – Cat 5 Ethernet Port for Remote Diagnostics capability to Pentra C400
RS232 port from Pentra C400 is a standard DB-9 male connector
ASTM specification E-1381 and E-1394 compliant
Pentra C400 accepts most Barcode formats

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