

Chapter 15 Technical Information

This chapter explains technical information such as specifications and principles.

15.1 Performance/specifications



Note:

Channels and analysis parameters are specified depending on the connected analyzer.
For details, see Chapter 1. (►P.1-4 "Chapter 1: 1.3 Analysis parameters")

Operating Environment (Ambient temperature)	15 to 30°C (same with the temperature of the supplied reagent)
Operating Environment (Relative humidity)	30 to 85%
Storage Condition (Transportation)	Ambient temperature: -10 to 60°C Relative humidity: 30 to 95% (no condensation) Atmospheric pressure: 70 to 106 kPa
Dimensions (including the sampler)	Width: 645 mm (SA-10), 520 mm (SA-01) Height: 855 mm (SA-10), 840 mm (SA-01) Depth: 755 mm (SA-10), 680 mm (SA-01)
Total weight (including the sampler)	Approx. 78 kg (SA-10), Approx. 70 kg (SA-01)
Pneumatic unit dimensions	Width: 280 mm Height: 400 mm Depth: 355 mm
Pneumatic unit weight	Approx. 17 kg
Power supply	Analyzer (XN-10, XN-20) AC100 to 240V (50 / 60 Hz) Sampler (SA-10) AC100 to 240V (50 / 60 Hz) Pneumatic unit AC100 to 117V (50 / 60 Hz) AC220 to 240V (50 / 60 Hz)
Power consumption	Analyzer (XN-10, XN-20) 270 VA or less Sampler (SA-10) 110 VA or less Pneumatic unit 50 Hz: 230 VA or less (100 - 117V), 220 VA or less (220 - 240V) 60 Hz: 280 VA or less (100 - 117V), 250 VA or less (220 - 240V)
Laser class	Class I (IEC60825-1:2007)
Protection type	Class I
Safety standard	IEC61010-1:2001, IEC61010-2-081:2001+A1, IEC61010-2-101:2002

Throughput [Whole blood] mode ^{*1} [Low WBC] mode	Values of the analyzer as a standalone unit are indicated below. CBC 100 samples/hour CBC+DIFF 100 samples/hour (88 samples/hour^{*1}) CBC+DIFF+WPC^{*2} 88 samples/hour (68 samples/hour^{*1}) CBC+DIFF+RET^{*2} 83 samples/hour (65 samples/hour^{*1}) CBC+RET^{*2} 83 samples/hour CBC+DIFF+WPC+RET^{*2} 71 samples/hour (57 samples/hour^{*1}) CBC+PLT-F^{*2} 68 samples/hour CBC+DIFF+PLT-F^{*2} 68 samples/hour (55 samples/hour^{*1}) CBC+DIFF+WPC+PLT-F^{*2} 53 samples/hour (45 samples/hour^{*1}) CBC+DIFF+RET+PLT-F^{*2} 47 samples/hour (41 samples/hour^{*1}) CBC+RET+PLT-F^{*2} 47 samples/hour CBC+DIFF+WPC+RET+PLT-F^{*2} 47 samples/hour (41 samples/hour^{*1}) ^{*1} [Low WBC] mode. ^{*2} These items do not appear with all analyzer types.
Throughput [Pre-Dilution] mode	Values of the analyzer as a standalone unit are indicated below. CBC 90 samples/hour CBC+DIFF 90 samples/hour CBC+DIFF+RET[*] 53 samples/hour CBC+DIFF+PLT-F[*] 52 samples/hour CBC+DIFF+RET+PLT-F[*] 39 samples/hour [*] These items do not appear with all analyzer types.
Throughput [Body Fluid] mode ^{*2}	Values of the analyzer as a standalone unit are indicated below. 40 samples/hour
Throughput [HPC] mode ^{*3}	Values of the analyzer as a standalone unit are indicated below. CBC+DIFF+RET+PLT-F+WPC[*] 16 samples/hour CBC+DIFF+RET+WPC[*] 18 samples/hour [*] These items do not appear with all analyzer types.
Sample Volume Required [Whole blood] mode [Low WBC] mode	Sampler analysis: 88 μL Manual analysis: 88 μL Micro analysis: 88 μL Micro analysis[*]: 88 μL RBT analysis: 88 μL [*] Analysis using a micro collection tube.
Sample Volume Required [Pre-Dilution] mode	Micro analysis: 70 μL (The blood volume required for dilution is 20 μL.) Micro analysis[*]: 70 μL (The blood volume required for dilution is 20 μL.) [*] Analysis using a micro collection tube.
Sample Volume Required [Body Fluid] mode ^{*2}	Manual analysis: 88 μL Micro analysis: 88 μL Micro analysis[*]: 88 μL [*] Analysis using a micro collection tube.
Sample Volume Required [HPC] mode ^{*3}	Manual analysis: 190 μL Micro analysis: 190 μL Micro analysis[*]: 190 μL [*] Analysis using a micro collection tube.

^{*1} When a Raised Bottom Tube is used, processing throughput decreases.

^{*2} The body fluid analysis can only be performed if the instrument offers the body fluid analysis mode.

^{*3} The HPC analysis can only be performed if the instrument offers the HPC analysis mode.

Analysis parameters	For details on analysis parameters, see Chapter 1. (►P.1-4 "Chapter 1: 1.3 Analysis parameters")
Display range	WBC: 0.00 to 999.99 $\times 10^3/\mu\text{L}$ RBC: 0.00 to 99.99 $\times 10^6/\mu\text{L}$ HGB: 0.0 to 30.0 g/dL HCT: 0.0 to 100.0% PLT: 0 to 9999 $\times 10^3/\mu\text{L}$ NRBC#: 0.00 to 999.99 $\times 10^3/\mu\text{L}$ NRBC%: 0.0 to 9999.9 / 100WBC RET%*1: 0.00 to 99.99% RET#*1: 0.0000 to 0.9999 $\times 10^6/\mu\text{L}$ IRF*1: 0.0 to 100.0% LFR*1: 0.0 to 100.0% MFR*1: 0.0 to 100.0% HFR*1: 0.0 to 100.0% RBC-He*1: 0.0 to 999.9 pg Delta-He*1: -999.9 to 999 pg NEUT-RI*2: 0.0 to 999.9 FI NEUT-GI*2: 0.0 to 999.9 SI WBC-BF: 0.000 to 999.999 $\times 10^3/\mu\text{L}$ RBC-BF: 0.000 to 99.999 $\times 10^6/\mu\text{L}$ MN#: 0.000 to 999.999 $\times 10^3/\mu\text{L}$ PMN#: 0.000 to 999.999 $\times 10^3/\mu\text{L}$ MN%: 0.0 to 100.0% PMN%: 0.0 to 100.0% *1 These items do not appear with all analyzer types. *2 The availability of these functions depends on your system configuration.
Background limits	WBC: 0.10 $\times 10^3/\mu\text{L}$ or less RBC: 0.02 $\times 10^6/\mu\text{L}$ or less HGB: 0.1 g/dL or less PLT*1: 10 $\times 10^3/\mu\text{L}$ or less PLT*2,4: 10 $\times 10^3/\mu\text{L}$ or less PLT*3,4: 3 $\times 10^3/\mu\text{L}$ or less WBC-BF: 0.001 $\times 10^3/\mu\text{L}$ or less RBC-BF: 0.003 $\times 10^6/\mu\text{L}$ or less *1 PLT counted in the RBC/PLT channels (PLT particle size distribution). *2 PLT counted in the RET channels. *3 PLT counted in the PLT-F channels. *4 These items do not appear with all analyzer types.