

## 11-1 Specifications

This Unit assigns a new destination address to the rack which is pulled in from the upstream unit and to transfer the rack to the downstream unit. It also informs the Middleware of rack ID and sample ID. With the built-in Power Supply Unit, this Unit controls the start-up and shut-down processes. This Unit can only transport Roche 5-position racks.

Items	Specifications		
Protection barrier	The mechanical part is covered and protected by a protection barrier with a key lock.		
Applicable racks	Roche Diagnostics 5-position racks		
Applicable sample tubes <sup>Note 1</sup>	Closed tube	Open tube	
	Outer tube diameter	11.0- 16.2 mm	11.0- 16.2 mm
	Height	64.9– 101.0 mm (plus maximum 10 mm closure)	64.9- 105.5mm
Conveyor height	791 mm ± 10 mm from the floor surface.		
Dimensions, Weight	500 mm × 240 mm × 940 mm (W×D×H) 37 kg (not include Power Supply Unit) 41 kg (include Power Supply Unit) The height including the adjustable status light is 1500 - 2000 mm.		
Process speed	Up to 500 racks/hour		
Operating conditions	Device lifetime: 7 years with periodical maintenance and parts replacement Expected operating conditions (Energizing time): 8 hours/day, 26 days/month, 4,000 racks/day		

Note 1: Use only Roche Diagnostics 5-position racks with spring for 11 mm open tubes.

Items	Specifications
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Specification for the barcode labels

The barcode and labels used in the system must conform with the following specifications:

Barcode symbology	Number of digits (without check digit) <sup>Note 4</sup>	Number of digits (with check digit) <sup>Note 4, Note 5</sup>	Check character format
CODABAR	3 - 23	3 - 23	Modulus 16 Modulus 11 Weight Modulus 11 Modulus 10 / 2 weight Modulus 10 / 3 weight 7 check DR
Code 39	3 - 23	3 - 23	Modulus 43
Code 128	N/A	2 - 23	Modulus 103
Interleaved 2 of 5	3 - 22	3 - 22	Modulus 10 / 3 weight

- Label placement on the sample tubes

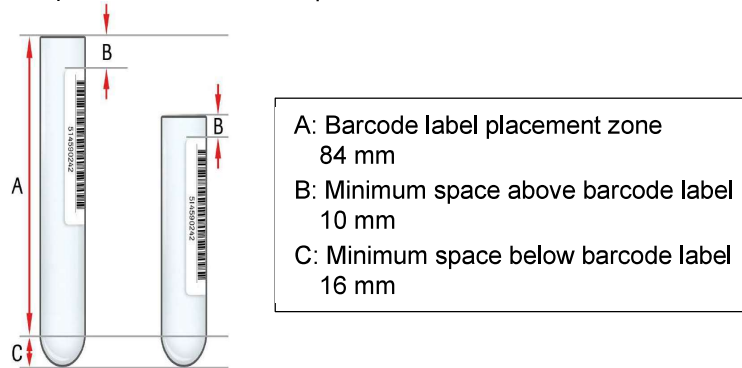


Figure 1. Barcode label placement

- Barcode label specification

- 1) Narrow bar : 0.125 mm.  
Ratio of wide : 1:2 to 1:3
- 2) Ink for the barcode : Black ink. Gray ink must not be used.
- 3) Barcode label color : White
- 4) Barcode label size<sup>Note6</sup>

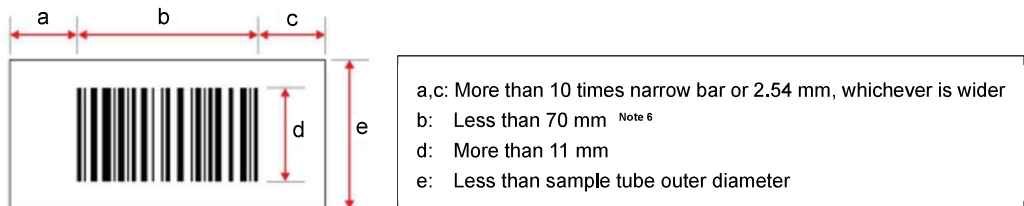


Figure 2. Barcode label specification

Note 4: The maximum barcode length depends on the size of the label which the customer is using. The length is also limited by the secondary sample barcode label and by the printing density of the barcode printer.  
 Note 5: The use of check digits can reduce the frequency of errors when reading barcodes.  
 Note 6: Barcode label size must be less than sample tube length minus 26 mm.

Items	Specifications
Specification for the barcode labels	<p>The following requirements must be met when placing a printed barcode label on a sample tube.</p> <ul style="list-style-type: none"> <li>- The label should run the length of the tube. It should be placed as parallel as possible to the tube edge.</li> <li>- The barcode must be fully readable from one side.</li> <li>- The label must be applied smoothly (wrinkle-free). The label should contain no “dogeared” corner, wrinkles, or edges which stick out.</li> <li>- There may only be one barcode on each tube. A used tube with an old label should not be re-used, since the old barcode can cause read errors.</li> <li>- If there is a manufacturer marking on the tube, this should be covered with the label when possible.</li> </ul> <ul style="list-style-type: none"> <li>● Barcode label quality Poor quality barcode labels can cause misidentification of samples. The barcode quality can be influenced by: <ul style="list-style-type: none"> <li>- Sunlight</li> <li>- Scratches</li> <li>- Peeling off</li> <li>- Marks</li> <li>- Poor contrast</li> <li>- Dirt Folding or creasing</li> </ul> </li> </ul>



## CAUTION

### Pinching hazard

Contact with moving parts may cause serious injuries

- The protection barrier must be handled by trained operators.
- The unit stops its motion when the protection barrier is opened, same as in an error situation.



## CAUTION

### Risk of rack transfer interruption

To avoid a rack transfer error, follow the instructions.

- Do not use damaged or cracked racks.
- Make sure no particle is adhered to racks.
- Affix a rack barcode label tightly to a rack body for preventing rack transfer interruption.
- The maximum height from the conveyor belt to the top of a tube inside a rack must not exceed 128 mm.



## CAUTION

### Risk of rack transfer interruption

To avoid a rack transfer error, follow the instructions.

- Do not use damaged or cracked sample tubes.
- Make sure barcode labels are tightly affixed to sample tubes.
- Make sure sample tubes are inserted firmly into a rack so the bottom of a tube reaches the bottom of a rack.
- The sample tubes shall be placed in racks which properly fix the sample tube. E.g. 11 mm tubes shall not be transported on sysmex 10-position racks, MPA13 or t711 racks.
- Enabling check digits for barcodes is recommended to reduce the risk of wrong barcode readings.



## WARNING

### Risk of sample spillage

Sample content may spill when using open sample tubes.

- Fluids filled in open sample tubes must be 15mm below the tube's upper rim.