

Cubus

Version 3.2 / May 2017

Configuration

Standard Configuration	Cubus
Machine type	Standalone
Stacks	Flexible stacks for reel storing, adjustable by customer
Reel detection	Automatic diameter, width and weight detection, automatic barcode detection
Control	PC, keyboard and LCD
Windows version	Windows 10
Database	Data access via Access table;
	Connection to existing SQL systems
Software	Cubus control software
	Job planning software
	MSL tracking (Moisture sensitivity level)
	Bar code label designer and print software
	Component stock management software
	Software interface to eMIS planning and optimization system
	Adjustable operator language (English, German. Other languages on request)
	User group rights
Other included items	Power connection cable

Specifications

эрсстисс	1110115						
General		Regular	Large				
Power requirements		100-240 VAC, 50-60 Hz	100-240 VAC, 50-60 Hz				
Power consumption		400W	400W				
Required	circuit breaker	10A	10A				
Environme	ent	Temperature	15 - 30°C				
		Relative humidity	10 - 60%				
		Noise level	50dB				
Storage		4-7" reels: 8-72 mm tapes	4-7" reels: 8-72 mm tapes				
		11-15" reels: 8-72 mm tapes	11-15" reels: 8-72 mm tapes				
		Max. 3.5 kg	Max. 3.5 kg				
Maximum	capacity	4-7" reels: 612	4-7" reels: 932				
		or any mix of 4-15" reels up to	or any mix of 4-15" reels up to				
		4-7" reels: 320 and 11-15" reels: 121	4-7" reels: 480 and 11-15" reels: 188				
		(8mm tape only)	(8mm tape only)				
Access tim	ne	9-11 seconds per reel	9-11 seconds per reel				
Options		Option for storing trays:	Option for storing trays:				
	Tray Box (*)	Capacity in Cubus Regular: 73 x Tray Boxes	Capacity in Cubus Large: 110 x Tray Boxes				
Tray Box (7		Each containing up to 10 x JEDEC trays (8 mm)	Each containing up to 10 x JEDEC trays (8 mm)				
		Option for a compact storing of 7" reels	Option for a compact storing of 7" reels				
	Spindle 7" ^(*)	Capacity in Cubus Regular: 146 x spindles	Capacity in Cubus Large: 220 x spindles				
		Each containing up to 7 x reels (each size 11mm)	Each containing up to 7 x reels (each size 11mm)				
		Option for a compact storing of 15" reels	Ontion for a compact storing of 15" rooks				
	Spindle 15" (*)	Capacity in Cubus Regular: 35 x spindles	Option for a compact storing of 15" reels Capacity in Cubus Large: 54 x spindles Each containing up to 7 x reels (each size 11mm)				
	spinule 15	Each containing up to 7 x reels (each size 11mm)					
		Lacificontaining up to 7 x reets teach size 1 milling	Lacif containing up to 7 x reets teach size i iiiiii)				
	Comment alata						
	Support plate 15"	Handling of reels which do not comply specifications, like extremely bended reels or reels with weak					
	13	material. Each support plate can handle only one reel, no stacking possible.					

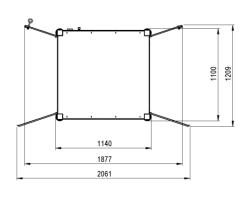
^(*) Not available with Remote Service software option

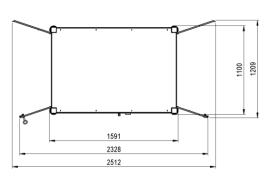


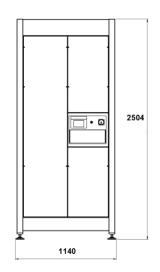
Machine Dimensions and Packaging

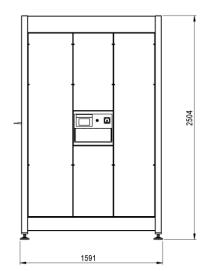
General	Regular	Large
Machine Dimensions	1140x110x2504 mm (w x d x h)	1591x1100x2504 mm (w x d x h)
Machine Weight	500 kg (without reels)	700 kg (without reels)
Packaging Dimension		
Wooden crate / cardboard	1350 x 1500 x 2700 mm (w x d x h)	1800 x 1500 x 2700 mm (w x d x h)
Entire wooden crate	1350 x 1550 x 2800 mm (w x d x h)	1800 x 1550 x 2800 mm (w x d x h)
Packaging Weight		
Wooden crate / cardboard	130 kg	180 kg
Entire wooden crate	220 kg	280 kg
Total Weight		
Wooden crate / cardboard	630 kg	880 kg
Entire wooden crate	720 kg	980 kg

Dimension Drawings











Cubus Air Dryer / Required Air Quality (Cu-Dry)*

General	
Compressed air	6 bar-10 bar
Min. Compressed air flow	18m³/h@6bar
Typical Compressed air consumption	With air flow limiter: 12m³/h@6bar Without air flow limiter: 18m³/h@6bar Nominal approx. 6m³/h**
Air connection diameter	8mm
Required Air Quality	
Class 1 Particulate	In each cubic meter of compressed air, the particulate count should not exceed 20,000 particles in the 0.1 - 0.5 micron size range, 400 particles in the 0.5 - 1 micron size range and 10 particles in the 1 - 5 micron size range.
Class 2 Water	A pressure dew point (PDP) of -40°C or better is required. No liquid water is allowed.
Class 1 Oil	In each cubic meter of compressed air, not more than 0.01mg of oil is allowed. This is a total level for liquid oil, oil aerosol and oil vapor.

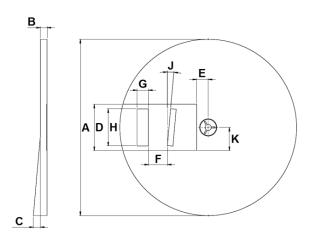
^{*} Cu-Dry is designed to maintain humidity inside the Cubus and must not be used as a Dry Cabinet ** Depending on the work load and environment

eStorage PC Requirement

Hardware Item	Minimum Requirement
Processor	Dual Core i3 Processor, 64 bit compatible
	INTEL or AMD
Memory	2 Gigabyte
-	Strongly recommended: 4 Gigabyte
Graphic Card	DirectX 9.0 support
	No high end graphic speed needed
	Recommendation: do not use Nvidia, GUI artefacts might occur
	Tip: graphic-card can be substituted with in-processor integrated GPU
Network Card	Two network cards required (GB-Link at least):
	1x Connection to Cubus
	1x Network connection
Hard Disk	200 Gigabyte hard disk, SSD preferred
Extensions	One USB Slot for Software Protection Dongle
Software Item:	Minimum Requirement:
Operating System	Microsoft Windows 7, 64 Bit version
1 3 3 3 3 3 3 3	Strongly recommended: Microsoft Windows 10, 64 Bit version
Database	A real server installation is recommended



Reel Specifications



- Nominal diameter [mm]
- Reel width [mm]
- Reel bending downwards [mm] Barcode label area [mm]
- D
- Barcode label area [mm]

- Distance between two codes [mm]
- G Barcode height [mm]
- Barcode label width [mm]
- Barcode label twist [°]
- Reel bending upwards [mm]

Reel Dimensions / Shelf Pitch for 180 mm (7 inches) Reels

Tape width [mm]	A min [mm]	A max [mm]	B min [mm]	B max [mm]	Recomm. Shelf Pitch <1000 g	Recomm. Shelf Pitch >1000 g	Recomm. Shelf Pitch >2000 g
8	100	178	10.5	14.4	25	30	35
12				18.4	30	35	40
16				22.4	35	40	45
24				30.4	45	45	55
32				38.4	50	50	65
44				50.4	65	65	75
56				62.4	75	75	85
C max [mm] <1000 g		C max [mm] >1000 g		C max [mm] >2000 g		Max Reel weight [g]	
2		3		4		3500	
K max [mm] <1000 g		K max [mm] >1000 g		K max [mm] >2000 g		Max Reel weight [g]	
1		1		1		3500	

K* The bending upwards is usually included in the height measurement of the reel. But the bending might be different between the front or back side of the reel, in this case K must not be higher than the mentioned value.



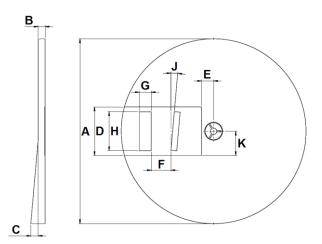
Reel Dimensions / Shelf Pitch for 330/380 mm (13/15 inches) Reels

Tape width [mm]	A min [mm]	A max [mm]	B min [mm]	B max [mm]	Recomm. Shelf Pitch <1000 g	Recomm. Shelf Pitch >1000 g	Recomm. Shelf Pitch >2000 g
8	-	381	10.5	14.4	30	35	35
12				18.4	35	40	40
16				29	45	50	50
24				37	55	55	55
32				45	65	65	65
44				57	75	75	75
56				69	85	90	90
72				89	105	110	110
C max [mm] <1000 g		C max [mm] >1000 g		C max [mm] >2000 g		Max Reel weight [g]	
6		7		8		3500	
K max [mm] <1000 g		K max [mm] >1000 g		K max [mm] >2000 g		Max Reel weight [g]	
3		3		3		3500	

K* The bending upwards is usually included in the height measurement of the reel. But the bending might be different between the front or back side of the reel, in this case K must not be higher than the mentioned value.



Barcode Label Dimensions



- A Nominal diameter [mm]
- B Reel width [mm]
- C Reel bending [mm]
- D Barcode label area [mm]
- E Barcode label area [mm]

- F Distance between two codes [mm]
- G Barcode height [mm]
- H Barcode label width [mm]
- J Barcode label twist [°]

Barcode Label Dimensions

Туре	D max	E min	Fmin	G min	G max	H max	H min	J max	Max. number of labels	Min. size of square / line
1D	110	30	8	8	100	100	8	35° depends on G	4	0.3 mm
2D	110	30	8	6	22	22	6	Must be placed 0° / 90° 180° / 270°	4	0.5 mm

Note: The system can recognize a maximum of 4 barcode labels.

Barcode Label Recommendation

White and matt labels are recommended.

Other colors or gloss surfaces can impact negatively to the function of the barcode reader or can cause malfunction.

For a proper recognition of the barcode, stick it only on a plane surface. Embossed surfaces, recesses, bumps and indentations are not suitable.

Within the readable field (D) barcodes side by side (same height) can cause malfunction.

Please ask for the System Description or Product Note for further details of available options

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