Status: 03/2023

Label printers

for printing on both sides of a material

XD Q

Made in Germany

XD Q label printers for printing on both sides of a material

Particularities

- **300 dpi** if printing as wide as 105.7 mm

  600 dpi if printing no more than 54.1 mm wide, using a DR4-M60 print roller

  Print heads designed for 300 dpi and such for 600 dpi are not interchangeable on the unit.
- **Heating** can be assigned separately to each print head.
- If **printing only on the top of a material** using print head 2, print head 1 is automatically lifted and the ribbon is stopped by an electromechanical brake.
- **Guiding materials in centered position** results in precise print images in particular with slim continuous materials are in use. The width of a material is set with the help of a spindle.
- **Automated ribbon saving** is provided on print head 1 when printing on the bottom of a material. The print head is lifted and the ribbon is stopped during material feed.
- **Continuous print images** when cutting or perforating labels at no backfeed.
- **Optimized printing,** so that multiple print jobs can be printed seamless and without loss of labels.
- **CSQ cutters** and **PSQ perforation cutters**
- **A separator** is part of the chassis.
  It separates continuous material reliably from a ribbon and improves the accuracy of feeding.
  Draw roller quality:
  Steel roller standard if printing on textile materials
  Print roller an option with shrink tubes
  The pressure system can be pivoted if required.
- **Find documentation** on the Internet.
  DVDs are no longer part of delivery.

Textile tapes
Cardboard labels
Identification strips

Cable marking
Shrink tubes continuous
or ready for use

Labels
Printing only on the top of a material
using print head 2

Types of printers

1.1

XD Q providing a tear-off plate
All materials wound on a roll or a reel can be printed, so can fanfold ones.

Label printer		XD Q4/300	XD Q4.2/600
Print resolution	dpi	300	600
Print speed	mm/s max.	200	100
Print width	mm max.	105.7	54.1
Width of a material	mm max.	114	114

1.2

XD Q providing a CSQ 402 cutter
Paper labels and self-adhesive labels, cardboard and synthetic materials can be cut, so can shrink tubes.

Label printer		XD Q4/300-C2	XD Q4.2/600-C2
Print resolution	dpi	300	600
Print speed	mm/s max.	200	100
Print width	mm max.	105.7	54.1
Width of a material	mm max.	114	114
Tray	Materials as wide as mm	100	100

1.3

XD Q providing a PSQ 403 perforation cutter
Continuous materials such as shrink tubes can be perforated, to simplify separation by hand at a later stage. Cutting a material is as well possible.

Label printer		XD Q4/300-P3	XD Q4.2/600-P3
Print resolution	dpi	300	600
Print speed	mm/s max.	200	100
Print width	mm max.	105.7	54.1
Width of a material	mm max.	114	114
Tray	Materials as wide as mm	100	100

Technical data

● typical ■ standard □ option

Label printer			XD Q4/300	XD Q4.2/600
Guidance of materials			centered	centered
Print method	Thermal transfer		●	●
Print resolution		dpi	300	600
Print speed		mm/s max.	200	100
Print width		mm max.	105.7	54.1
Automated ribbon saving			●	●
Materials[1]				
Paper, cardboard, synthetics PET, PE, PP, PI, PVC, PU, acrylate, Tyvec			●	
Shrink tube	ready for use		●	
	continuous, pressed		●	
Textile tape			●	
Finishing	Roll, fanfold		●	
	Roll diameter	mm max.	300	
	Core diameter	mm	38.1 - 76	
	Winding		outside or inside	
Label	Width	mm	10 - 110	
	Height	mm at least	20	
	Thickness	mm max.	0.1	
Liner	Width	mm	14 - 114	
	Thickness	mm max.	0.1	
Continuous	Width	mm	4 - 114	
	Thickness	mm max.	0.3	
	Weight (cardboard)	g/m² max.	300	
Shrink tube	Width	ready for use mm max.	114	
		continuous, pressed mm	4 - 85	
	Thickness	mm max.	1.1	
Ribbon[2]	Color side		outside or inside	
	Roll diameter	mm max.	80	
	Core diameter	mm	25.4	
	Length	m max.	450	
	Width	mm max.	114	
Printer dimensions, weight				
Width x Height x Depth / Weight		mm/kg	248 x 395 x 594 / 21	
Label sensors, position indicators				
Transmissive sensor		detecting	labels, punch marks, materials ending, print marks on translucent materials	
Reflective sensor	from below or top	detecting	labels, materials ending, print marks on non-translucent materials	
Sensor distance	centre to locating edge	centered mm	0 - 55	
Material passage		mm max.	2	
Interfaces				
RS232-C 1,200 to 230,400 baud / 8 bit			■	
USB 2.0 Hi-Speed device to plug a PC			■	
Ethernet 10/100 Mbit/s			LPD, RawIP printing, SOAP web service, OPC UA, WebDAV DHCP, HTTP/HTTPS, FTP/FTPS, TIME, NTP, Zeroconf, SNMP, SMTP, VNC	
1 USB host on the control panel		for plugging	a service key, an USB stick, USB WLAN stick, USB Bluetooth adapter	
2 USB hosts on the back of a unit		for plugging	a keyboard, barcode scanner, an USB stick, USB WLAN stick, USB WLAN stick with a rod antenna, USB Bluetooth adapter, external operation panel	
USB host, 24 VDC, for peripheral plugging			■	
Digital I/O interface providing 8 inputs and 8 outputs			□	
Operating data				
Voltage			100 - 240 VAC, 50/60 Hz, PFC	
Consumption of power			<10 W in standby / 100 W in typical operation	
Temperature / humidity		Operation	+5 - 40°C / 10 - 85 %, not condensing	
		Stock	0 - 60°C / 20 - 85 %, not condensing	
		Transport	–25 - 60°C / 20 - 85 %, not condensing	
Approvals			CE, FCC Class A, ICES-3, cULus, CB, CCC	
		under examination	CoC Mexico, EAC, BIS, BSMI, KC-Mark	
Control panel				
Color LCD	Diagonal	"	4.3	
touchscreen	Resolution Width x Height	px	272 x 480	

[1] Specifications are standards. Operations including small, slim, thick or stiff materials need testing, so do strongly adhesive labels.
[2] A ribbon should be at least as wide as the liner material.

Technical data

■ standard ☐ option

Setup options		
	Print Labels Ribbon Tear off Cut Interfaces Error	Region: - Language - Country - Keyboard - Time zone Time Display: - Brightness - Power saving mode - Orientation Interpreter
Status bar		
	Receive data Record datastream Warning to a ribbon ending SD memory card plugged USB stick plugged	Bluetooth WLAN Ethernet USB slave Time
Controls		
	Ribbon 1/2 - Winding - Prior warning - End of ribbon Running out of material	Print head 1/2 - Voltage - Temperature - open Peripheral error
Test routines		
System diagnostics	upon startup, detection of print head included	
Information display, test printout, analysis	Status printout Fonts list List of units WLAN status	Test grid Label profile List of events Monitor mode
Status reports	- Printout of print durations, running hours, etc. - Status of a unit requested by software command - Display of errors related to a network, barcode or peripheral device, as well as links missing	
Fonts		
Integral	5 bitmap fonts: 12 x 12 dots 16 x 16 dots 16 x 32 dots OCR-A OCR-B	7 vector fonts: AR Heiti Medium GB-Mono CG Triumvirate Condensed Bold Garuda HanWangHeiLight Monospace 821 Swiss 721 Swiss 721 Bold
For storing	TrueType fonts	
Sets of characters	Windows-1250 to -1257 DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869 EBCDIC 500 ISO 8859-1 to -10 and -13 to -16 WinOEM 720 UTF-8 MacRoman DEC MCS KOI8-R Western European Eastern European Chinese, simplified Chinese, traditional Thai	 Cyrillic Greek Latin Hebrew Arabian
Bitmap	1 mm to 3 mm wide and high Zoom factors 2 to 10 0°, 90°, 180°, 270° orientations	
Vector / TrueType	0.9 mm to 128 mm wide and high Continuous zoom 360° orientation in steps of 1°	
Styles	bold, italic, underlined, outline, inverse - depending on the font type	
Character spacing	proportional or monospace	
Graphics		
Elements	lines, arrows, rectangles, circles, ellipses - filled or gradient	
Formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG	

Codes		
1D barcodes (linear)	Code 39, Code 93 Code 39 Full ASCII Code 128 A, B, C EAN 8, 13 EAN/UCC 128/GS1-128 EAN/UPC Appendix 2 EAN/UPC Appendix 5 FIM HIBC	Interleaved 2/5 Ident and routing code of Deutsche Post Codabar JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0
2D codes, stacked codes	DataMatrix DataMatrix Rectangle Extension QR code Micro QR code GS1 QR code GS1 DataMatrix PDF 417 Micro PDF 417 UPS Maxicode GS1 DataBar Aztec Codablock F Dotcode RSS 14 truncated, limited, stacked, omni-directional	
	All codes may vary in height, modular width and ratio. 0°, 90°, 180°, 270° orientations Feasibility of check digits, plain text printouts and start/stop coding depends on the type of code.	

Software		
Label software	cablabel S3 Lite cablabel S3 Viewer cablabel S3 Pro cablabel S3 Print	■ ■ ☐ ☐
Running also with	CODESOFT NiceLabel BarTender	
Stand-alone operation		■
Windows printer drivers for	Windows 10 Windows 11 Server 2016 Server 2019 Server 2022 Certification WHQL in preparation	■
Apple printer drivers	Mac OS X 10.6 or any later release minimum driver version 1.46	■
Linux printer drivers	CUPS 1.2 or any later release minimum driver version 1.46	■
Programming	JScript printer language abc Basic Compiler ZPL II (datastream be tested in advance)	■ ■ ☐
Integration	SAP Database Connector	■ ■
Administration	Printer control Configuration on the Intranet and Internet	■ ■

Free and Open Source software in cab products:
www.cab.de/opensource

OPC UA

All the latest cab printers have been designed ready for interacting with machines and components of different manufacturers in industrial plants. An OPC UA server is part of the firmware.

See further information on
www.cab.de/en/opcua

Accessories / optional equipment

Accessorial products are plugged or screwed to a printer by a customer.

Options are parts or units to perform special functions. They are assembled to a printer in addition to or instead of standards.
If order implies options be assembled ex factory, corresponding item numbers are added by .250.
Options delivered separately are added by .001.

2.1		**SD memory card**
2.2		**USB stick**
2.3		**USB WLAN stick** 2.4 GHz 802.11b/g/n Hotspot mode or infrastructure mode
2.4		**USB WLAN stick with a rod antenna** for extended range of operation 2.4 GHz 802.11b/g/n + 5 GHz 802.11a/n/ac Hotspot mode or infrastructure mode
2.5		**USB Bluetooth adapter**
2.6		**Adapter 40/100** for picking up label rolls with a core diameter of 100 mm One adapter is sufficient if processing materials no more than 50 mm wide.
3.3		**Digital I/O interface** Labeling is triggered via a PLC, a sensor or a hand switch. Status reports and errors are displayed simultaneously.
3.4		**I/O interface plug** SUB-D, 25 pins, for connecting all control signals to the I/O interface

3.1	DR4  DRS4 	**Print roller coating** DR4 Synthetic rubber is standard for highly accurate print results. DRS4 Silicon is an option in particular when printing on textile materials. Extra long life cycles **Slim print rollers** They allow for accurate print results with small materials and ribbons. **Type** — **materials as wide as** DR4-M30 — 30 mm DR4-M60 — 60 mm DR4-M80 — 80 mm DRS4-M35 — 35 mm DRS4-M50 — 50 mm
3.2		**Standard print rollers** serving also for a draw roller on the separator **Type** — **materials as wide as** DR4 — 120 mm DRS4 — 120 mm

Rewinding

2.13

2.14

External ER4 rewinder, power supply built in
Label webs may be wound outside or inside. They are wound consistently and tight by electronic control, with a pendulum arm.

External rewinder		**ER4/210**	**ER4/300**
Width of a metarial	mm max.	120	
Roll diameter	mm max.	205	300
Tightening axle	core diameter in mm	76	
Winding		outside or inside	
Voltage		100 - 240 V, 50/60 Hz	
Adapter kit		☐	☐

Cutting, perforating, stacking

2.8
CSQ 402

2.9
PSQ 403

2.10
CU400

2.11
PCU400

2.12
ST400 M

Cutters and perforation cutters
Paper, cardboard, textile and synthetic materials can be cut resp. perforated, so can shrink tubes, continuous or ready for use.

Differences between CSQ and CU resp. PSQ and PCU cutters:

- CSQ / PSQ can be pivoted to simplify material changeover.
- CSQ / PSQ are cutting twice as fast as CU /PCU cutters.
- CU / PCU cutters are still recommended with textile operations.

If perforating with a PSQ, six off-cuts remain at the center, each at a distance of 2.5 mm. At the left and right of a perforation, the material is entirely cut. If perforating with a PCU, there is off-cutting along the entire width.

Cutter	**CSQ 402**		**CU400**	
Perforation cutter		**PSQ 403**		**PCU400**
Material:				
Passage width mm max.	120		120	
Passage height mm max.	2.0		2.0	
Weight (cardboard) gr/m² max.	300		300	
Thickness mm max.	1.1		1.1	
Perforation:				
Distance between off-cuts mm	-	2.5	-	2.5
Off-cut width mm	-	0.4	-	0.5
Number of off-cuts	-	6	-	48
Cutting length mm at least	10	10	5	5
Perforation length mm at least	-	3	-	5
Tray Materials as wide as mm	100	100	100	100
Performance cuts/min at use of material 1 mm high, no backfeed	200		100	
Controls	no final cutter position			
	cutter cover removed		-	

ST400 M stacker providing a cutter
Printed materials can be cut and then collected.
Print jobs stop if the maximum number of labels have been collected. Limitations may occur with stiff or curved materials. cab recommends to have such operations tested.

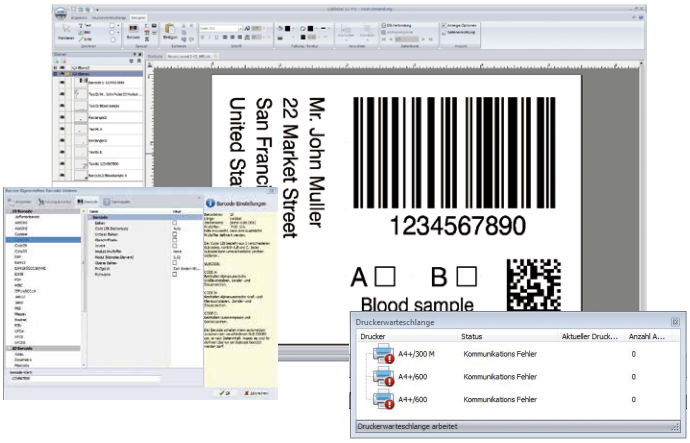
Stacker providing a cutter		**ST400 M**
Material	Passage width mm	20 - 100
	Passage height mm max.	1.2
	Weight (cardboard) gr/m²	60 - 300
	Thickness mm	0.05 - 0.8
Cutting length mm		20 - 150
Performance cuts/min at use of material 1 mm high, no backfeed		100
Limit of collecting mm max.		100
Controls:	no final cutter position, paper jam, stacker cover open, limit of collecting	

Support table - label W x H
The table and the protective cover are adapted to the size of a label. Please request individually.

cablabel S3 software

Design, print, administrate

cablabel S3 opens up the full potential of cab devices. Defining a label is first. Modular design adapts cablabel S3 to requirements step by step. Plug-ins are embedded. Native JScript programming, for example, is supported by the JScript Viewer. The designer user interface and JScript codes synchronize in real time. Optional features can be integrated, such as the Database Connector or barcode verifiers.



See further information on
www.cab.de/en/cablabel

Printer control

Drivers

cab provides drivers to control a printer with software other than cablabel S3.

Free download on **www.cab.de/en/support**

Programming

JScript
cab printers embed JScript language.
Download free manual on **www.cab.de/en/programming**

abc Basic Compiler
Integral to the firmware, abc in addition to JScript enables advanced programming before data are edited for printout.
For example, external printer languages can be replaced without intervening in a print job in progress. Data may be imported as well from other systems such as scales, barcode scanners or PLC.

Integration

Printer Vendor program
cab as a member of this program developed a replace method for controlling cab printers from SAP[1] R/3 using SAPScript. Only variable data are sent by a host system to a printer. They add on the printer to local images and fonts (IFFS, memory card, etc.).

Stand-alone operation

This operating mode enables a printer select and print labels while not connected to a host system. Labels can be designed using software such as cablabel S3 or a text editor on a PC. Label formats, texts, graphics and data of a database can be stored on a memory card, a USB stick or a printer's IFFS memory. Only variable data are sent by a keyboard, a barcode scanner, a scale or any other host system to a printer, or be recalled by the Database Connector from a host and printed.

Printer administration

Configuration on the Intranet / Internet

Integral HTTP / FTP servers enable a printer be controlled or configured, firmware be updated and memory cards be administrated using standard applications such as a web browser or a FTP client.
Administrators and operators on behalf of SNMP / SMTP are notified of states, alerts and errors by email or SNMP datagrams. Time and date are synchronized by a time server.

Database Connector

Printers in a network may access data from a ODBC / OLEDB database and print it on labels. Data can be rewritten to a database while print jobs are in progress.

[1] SAP and associated logos are trademarks or registered trademarks of SAP SE.