Status: 11/2022

Label printers

for printing on both sides of a material

XDQ

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 at widths no more than 54.1 mm with print roller DR4-M60
  The 300 and 600 dpi printheads are not interchangeable in the device.
- 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 lifted by hand or automatically. Ribbons are removed or stopped by an electromechanical brake.
- An automated mechanics reducing the consumption of ribbon is provided on print head 1 when printing on the bottom of a material. While the material is fed, the print head is lifted and the ribbon stopped.
- Print images remain continuous when cutting or perforating at no backfeed.
- Multiple print jobs can be printed seamless and without loss of labels.
- CSQ cutters and PSQ perforation cutters are provided.
- Please find full documentation on the Internet. DVDs are no longer part of delivery.
- A separator is integrated to the chassis. It reliably separates a ribbon from a continuous material and improves the accuracy of feeding.
  Transport roller
  for textile materials as a steel roller,
  for shrink tubes as rubberised roller (standard),
  for labels both are possible

Textile operations
pre-punched labels
and identification strips

Cable marking
shrink tubes continuous
and ready for use

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

Models

Centered guidance of materials

1.1 **XD Q providing a tear-off plate**
All materials wound on rolls or reels 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, textile 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 long as	mm max.	100	100

1.3 **XD Q providing a PSQ 403 perforation cutter**
Continuous materials such as textiles or shrink tubes can be perforated, to separate by hand at a later stage. The materials can be cut as well.

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 long as	mm max.	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 mechanics reducing the consumption of ribbon			●	●
Materials[1]				
Paper, cardboard, synthetics PET, PE, PP, PI, PVC, PU, acrylate, Tyvec			●	
Shrink tube	ready for use		●	
	continuous, pressed		●	
Textile strip			●	
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	0.05 - 0.6	
Liner	Width	mm	14 - 114	
	Thickness	mm	0.05 - 0.16	
Continuous	Width	mm	4 - 114	
	Thickness	mm	0.05 - 0.5	
	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 layer		outside or inside	
	Roll diameter	mm max.	80	
	Core diameter	mm	25.4	
	Length	m max.	600	
	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		to plug	a service key, an USB stick, USB WLAN stick, USB Bluetooth adapter	
2 USB hosts on the back of a unit		to plug	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, to plug peripherals			■	
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		
	Data received Record datastream Pre-warning on ribbon ending SD memory card plugged USB stick plugged	Bluetooth WLAN Ethernet USB slave Time
Controls		
	Ribbon 1/2 - winding - pre-warning - ending End of material	Print head 1/2 - voltage - temperature - open Separator open Peripheral error
Test routines		
System diagnostics	upon startup, print head detection 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. - Device status request 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
To be stored	TrueType	
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 certified WHQL for	Windows Vista Windows 7 Windows 8 Windows 8.1 Windows 10 Server 2008 Server 2008 R2 Server 2012 Server 2012 R2 Server 2016 Server 2019	■
Apple printer drivers	for Mac OS X 10.6 or any later release	■
Linux printer drivers	based on CUPS 1.2 or any later release	■
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 to interact 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

Optional equipment

Parts or units to perform special functions can be assembled to a printer in addition to or instead of standards.
If order implies equipment be assembled ex factory, the part numbers of such printers and options are added by .250.
Separate deliveries are added by .001.

3.1

Slim print rollers
They allow for precise print images with slim materials and ribbons.
DR4-M30 with liner or continuous materials no more than 30 mm wide
DR4-M60 with liner or continuous materials no more than 60 mm wide
DR4-M80 with liner or continuous materials no more than 80 mm wide
Synthetic rubber coating for extra high print image accuracy

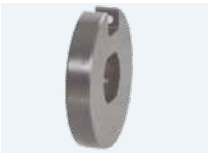
3.2

DRS4 print roller
with materials no more than 120 mm wide
Silicone coating for extra long life cycles,
accepting higher tolerances in print image accuracy

3.3

Transport roller SR4
in the case of textile materials, inside the separator a transport roller made of steel must be used

3.4



Adapter 40/100
to pick up label rolls with a core diameter of 100 mm

One adapter is sufficient if processing material
no more than 50 mm wide.

3.5

Digital I/O interface
Print jobs are triggered via a PLC, a sensor or a hand switch.
Simultaneously, status and error reports are indicated.

Accessories

Equipment plugged or screwed to a printer by a customer

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** to extend the range of operation 2.4 GHz 802.11b/g/n + 5 GHz 802.11a/n/ac Hotspot mode or lifrastructure mode
2.5		**USB Bluetooth adapter**
2.6		**I/O interface plug**, SUB-D, 25 pins All control signals are connected to the I/O interface using clamping screws.

Further accessories:
- CU400 cutter
- PCU400 perforation cutter

2.7		**External control panel** If the control panel of a printer cannot be accessed, an additional external one can be plugged. Same functionality as on a printer Landscape mode or portrait mode Operability as targeted, either on an external panel or on a printer
		USB 2.0 Hi-Speed device to connect a printer cab provides specified connecting USB cables for power supply. Lengths are 1.8 m to 16 m
2.8		**Label selection - I/O box** A maximum of 16 labels per box can be selected from a memory card by a superior control unit, such as a PLC. Two boxes may be plugged. Making use of an I/O box, four inputs and four outputs suffice for implementing PLC processes via abc programming.

Accessories

Equipment plugged or screwed to a printer by a customer

2.9

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

PSQ 403 perforation cutter
Continuous materials such as textiles or shrink tubes can be perforated, to separate by hand at a later stage. The materials can be cut as well.

Tray
Label heights can be set, a maximum of 50 labels be collected.

2.10

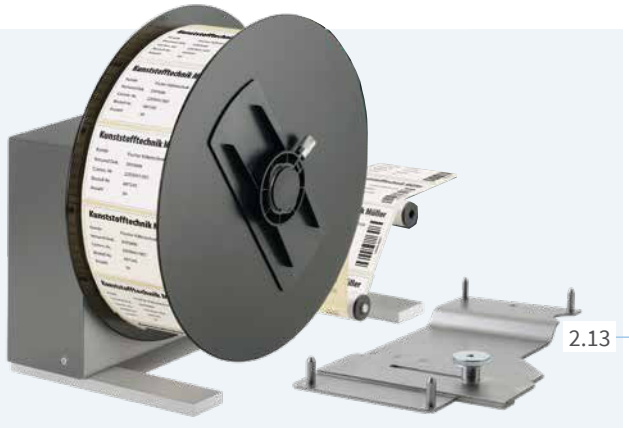
Cutter			CSQ 402	
Perforation cutter				**PSQ 403**
Material	Width	mm max.	120	
	Weight (cardboard)	gr/m² max.	300	
	Thickness	mm max.	1.1	1.5
Perforation	Distance between off-cuts	mm	-	2.5
	Width of off-cuts	mm / quantity	-	0.4 / 6
Cutting length		mm at least	10	
Length of perforation		mm at least	-	3
Tray	materials as long as	mm max.	100	
Material passage		mm max.	2.0	
Performance at use of material 1 mm high, no backfeed		cuts/min	200	
Controls			no final cutter position, cover off cutter	

2.11

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

2.12



2.13

External ER4 rewinder, power supply installed
It operates also with printers other than cab.
Label webs may be wound outside or inside.

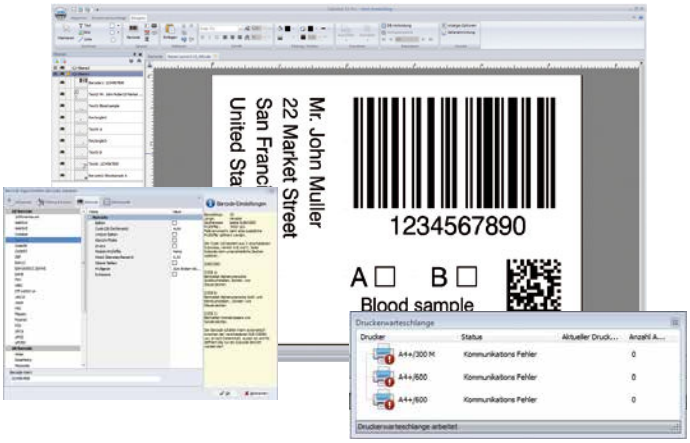
External rewinder		ER4/210	ER4/300
Width of a material	mm max.	120	
Roll diameter	mm max.	205	300
Tightening axle	core diameter mm	76	
Winding		outside or inside	
Voltage		100 - 240 V, 50/60 Hz	

X series kit to adapt
ER4 to XD Q

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 32 / 64 bit drivers for controlling printers with software other than cablabel S3. Running the drivers requires operating systems Windows[1] Vista, Mac OS X[2][3] 10.6 and Linux[3] CUPS 1.2 or any later releases.

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 PLCs.

Integration

Printer Vendor program

cab as a member of this program developed a replace method for controlling cab printers from SAP[4] 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 and 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 diagrams. 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] Windows is a registered trademark of Microsoft Corporation
[2] MAC OS X is a registered trademark of Apple Computer, Inc.
[3] SQUIX, MACH 4S, EOS, HERMES Q, AXON, PX Q units
[4] SAP and associated logos are trademarks or registered trademarks of SAP SE.

Delivery program

Label printers

Pos.		Part no.	Designation
1.1		6011500	XD Q4/300 label printer
		6011505	XD Q4.2/600 label printer
1.2		6011502	XD Q4/300-C2 label printer with a CSQ 402 cutter
		6011507	XD Q4.2/600-C2 label printer with a CSQ 402 cutter
1.3		6011501	XD Q4/300-P3 label printer with a PSQ 403 perforation cutter
		6011506	XD Q4.2/600-P3 label printer with a PSQ 403 perforation cutter

	Scope of delivery
	Label printer Power cable type E+F, 1.8 m Connecting USB cable, 1.8 m Instructions DE / EN

	Provided online
https://setup.cab.de/en	Instructions Configuration manuals DE / EN / FR Service manuals DE / EN Spare parts lists DE / EN Programming manual EN Windows printer drivers certified WHQL for Windows Vista — Server 2008 Windows 7 — Server 2008 R2 Windows 8 — Server 2012 Windows 8.1 — Server 2012 R2 Windows 10 — Server 2016 Server 2019 cablabel S3 Lite software cablabel S3 Viewer Database Connector

Optional equipment

Pos.		Part no.	Designation
3.1		5953700.xxx	DR4-M30 print roller
		5953701.xxx	DR4-M60 print roller
		5953702.xxx	DR4-M80 print roller
3.2		5954985.xxx	DRS4 print roller
3.3		5978588.xxx	Transport roller SR4
3.4		5959622.xxx	Adapter 40/100
3.5		5977767.xxx	Digital I/O interface

xxx - .250 assembled to a printer
.001 separate delivery
resp. spare part

Optional equipment are parts or units to perform special functions.
They can be assembled to a printer in addition to or instead of standards.
If order implies equipment be assembled ex factory, the part numbers
of such printers and options are added by .250. Separate deliveries are added by .001.

Accessories

Pos.		Part no.	Designation
2.1		5977370	SD memory card
2.2		5977730	USB stick
2.3		5978912	USB WLAN stick 2.4 GHz 802.11b/g/n
2.4		5977731	USB WLAN stick with a rod antenna 2.4 GHz 802.11b/g/n + 5 GHz a/n/ac
2.5		5977732	USB Bluetooth adapter
2.6		5917651	I/O interface plug, SUB-D, 25 pins
2.7		6010186	External control panel
		5907718	Connecting USB cable, 1.8 m
		5907730	Connecting USB cable, 3 m
		5907750	Connecting USB cable, 5 m
		5907760	Connecting USB cable, 11 m
		5907765	Connecting USB cable, 16 m
2.8		5948205	Label selection - I/O box
2.9		5984565	CSQ 402 cutter
2.10		5984130	PSQ 403 perforation cutter
2.11		5541599	ST400 M stacker including a cutter
		55xxxxx	Support table, width x height of a label
2.12		5948100 5946090	External ER4/210 rewinder External ER4/300 rewinder
2.13		6011757	X series adapter kit

x - user-specific part no.
according to order

Wear parts

Pos.		Part no.	Designation
		5987330.001	Print head 2/600 X
		5987089.001	Print head 4/300 X
		5954180.001	DR4 print roller

Delivery program

Label software

Pos.		Part no.	Designation
11.7		Bundle 5588001 5588100 5588101 5588150 5588151 5588152 5588002 5588105 5588106 5588155 5588156 5588157 in preparation	cablabel S3 Lite (download on cab.de/en) cablabel S3 Pro 1 WS cablabel S3 Pro 5 WS cablabel S3 Pro 10 WS cablabel S3 Pro 1 additional licence cablabel S3 Pro 4 additional licences cablabel S3 Pro 9 additional licences cablabel S3 Print 1 WS cablabel S3 Print 5 WS cablabel S3 Print 10 WS cablabel S3 Print 1 additional licence cablabel S3 Print 4 additional licences cablabel S3 Print 9 additional licences cablabel S3 Print Server
11.10		9008486	Programming manual EN, printed copy

Scopes of delivery, designs and technical data correspond to the date of this publication. They are subject to change. Catalog data do not represent any warranty or guarantee.

User languages

Language	*Instructions	Control panel	Windows driver	Service manual
European Union				
Bulgarian		X		
Danish		X	X	
German	X	X	X	X
Estonian		X		
Finnish		X	X	
French	X	X	X	
Greek		X		
English	X	X	X	X
Italian		X	X	
Croatian		X	X	
Latvian		X		
Lithuanian		X	X	
Dutch		X	X	
Polish		X	X	
Portuguese		X	X	
Romanian		X		
Swedish		X	X	
Slovak		X	X	
Slowenian		X	X	
Spanish	X	X	X	
Czech		X	X	
Hungarian		X	X	
Europa (Non-EU)				
Norwegian		X	X	
Russian		X	X	
Serbian		X		
Turkish		X	X	
Asia				
Chinese, simplified		X	X	
Chinese, traditional		X	X	
Japanese			X	
Korean			X	
Thai		X	X	
Middle East				
Persian		X		
Hebrew			X	

*permanently complemented

Range of cab products

Label printers
MACH1, MACH2

Label printers
EOS 2

Label printers
EOS 5

Label printers
MACH 4S

Label printers
SQUIX 2

Label printers
SQUIX 4

Label printers
SQUIX 6.3

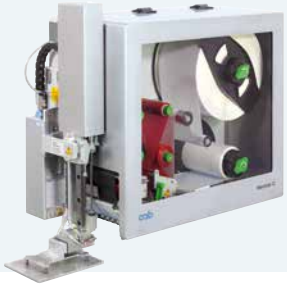
Label printers
SQUIX 8.3

Label printers
XD Q - double-sided printing

Label printers
XC - two-color printing

Print and apply systems
HERMES Q

Print and apply systems
Hermes C - two-color labeling



Tube labeling systems
AXON

Print modules
PX Q

Labels, ribbons

Label software
cablabel S3

Label dispensers
HS, VS

Labeling heads
IXOR

Marking lasers
XENO 4

Laser marking systems

See product information on **www.cab.de/en**

Germany
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www.cab.de

France
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Niedermodern
Phone +33 388 722501
www.cab.de/fr

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Chelmsford, MA
Phone +1 978 250 8321
www.cab.de/us

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Taiwan
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China
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