



MACH4 Label Printer

Made in Germany

Product type overview for MACH4



B with tear-off plate

A minimum label height of 30 mm is required for it to be torn off.

1.1 Printer	MACH4		
Print resolution dpi	203	300	600
Print width up to mm	104	105,6	105,6
Print speed up to mm/s	200	200	100



P with tear-off plate and dispensing function

The label height on dispensing is 20 – 200 mm.

1.2 Printer	MACH4		
Print resolution dpi	203	300	600
Print width up to mm	104	105,6	105,6
Print speed up to mm/s	200	200	100



C with tear-off plate and cutter

Labels or continuous material can be cut at a height of just 12 mm.

1.3 Printer	MACH4		
Print resolution dpi	203	300	600
Print width up to mm	104	105,6	105,6
Print speed up to mm/s	200	200	100

All information on scopes of delivery, design and technical specifications correspond to the date of the printing. Subject to change.

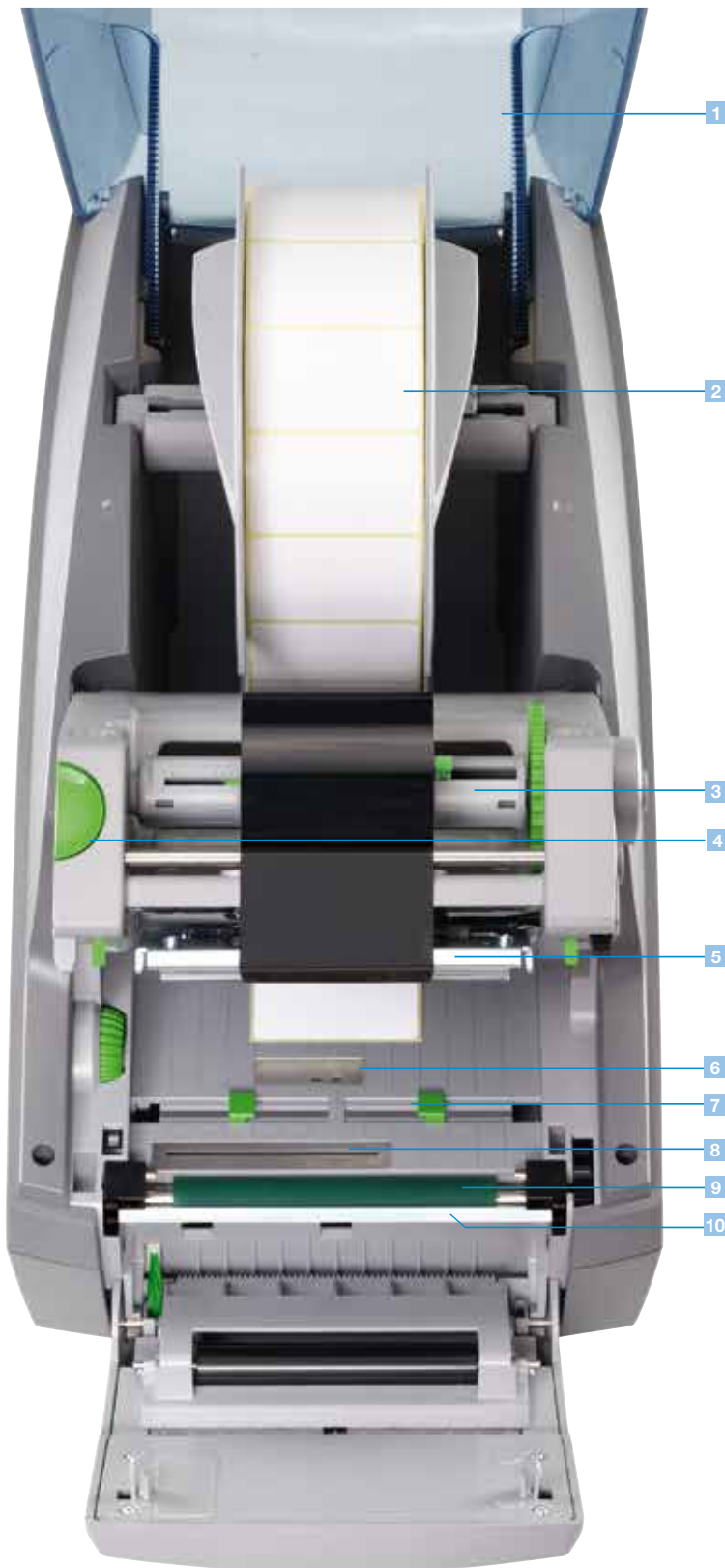
For current data refer to website www.cab.de/en/mach4.

Key features

- MACH4 offers all the features of a high class industrial printer with a wide application range.
- Labels and ribbons can be inserted from the front. The print mechanism and housing are made of premium materials and are perfectly harmonized in their form and function.
- Easy and comfortable handling and high reliability were the requirements during development. The large display with white backlight offers optimum readability.
- The navigation pad with the additional “Enter” button simplifies operation, with only the operated functions being displayed.
- The centered label path eliminates the need for adjustments and avoids wrinkling of the ribbon.
- The high-tech electronic board incorporates all the requisite interfaces as standard and works with all kinds of adapters.



Technical details



1 Cover with large window

Can be opened wide. The integrated cushioning mechanism ensures smooth closing. The label stock is visible at all times.

2 Media hub

The roll is inserted into the media hub and centered automatically. Materials of different widths fit easily within the box.

3 Ribbon retainer

The ribbon can be slid onto a ribbon supply hub with spring mounted brackets. It can be centered with a movable flange and a positioning indicator. The ribbon can be inserted quickly and easily into the print mechanism.

4 Print mechanism

It can be opened at the push of a button and offers easy access.

5 Printing with 203, 300 or 600 dpi

The printheads can switch easily between 203 and 300 dpi. The printer detects the resolution automatically.

6 Gap sensor

To detect the beginning or end of labels, the gap sensor is mounted in the center of the label path. With multi-track labels, the user can switch to another sensor that is shifted 10 mm sideways.

7 Label guide

The adjustment knob can be used to adjust the width of the printing area in order to center the labels.

8 Reflex sensor

The adjustable reflex sensor can be used to identify the start of a label, print marks and cut-outs

9 Drive roller

The drive roller can be easily removed for cleaning or replacement.

10 Peel-off plate

The liner is guided down behind the operation panel. The label is removed from its liner at the peel-off-plate.

Interfaces



Rear of printer

- 1 RS232C interface.
- 2 USB 2.0 slave interface.
- 3 Ethernet 10/100 Base T interface with TCP/IP.
- 4 Slot for wireless LAN card.
- 5 Two USB master interfaces for connecting an external operation panel, keyboard, scanner, USB flash drive or service key.
- 6 Slot for CompactFlash Type I memory card.

Options



- Centronics bi-directional interface acc. to IEEE 1284. RS422/RS485 interface 1,200 to 230,400 Baud/8 Bit. The interfaces are plugged into the PC. Connection to the printer via mini USB connection cable.



- Label selection – I/O box. Up to 16 different labels can be loaded via PLC from a memory card. Operation of four inputs/outputs via Basic Interpreter.



- cab WLAN card 802.11 b/g.

Stand-alone operation

Printing without PC

Stand-alone operation is the ability to print labels even if the printer is not connected to the host system. The label layout is designed with the label software cablabel S3 or direct programming via PC. Label formats, fonts, font-, text- and graphics data as well as data base contents are saved on the USB stick or read on the internal data memory IFFS. Only variable data to be printed is sent to the printer via keyboard or scanner.



Technical data

■ Standard □ Optional

Label printer			MACH4		
Print head					
Printing method		Thermal transfer	■	■	■
		Thermal direct	■	■	–
Print resolution		dpi	203	300	600
Print width		mm	104	105,6	105,6
Print speed up to		mm/s	200	200	100
Material ¹⁾					
Labels, continuous rolls or fan-folded			Paper, cardboard, textile, plastics such as PET, PE, PP, PVC, PU, acrylate, PI		
Thickness mm / Weight g/m²			0,055–0,8/60–200		
Width	Labels	mm	6 - 116		
	Liner or continuous rolls	mm	25 - 120 / from 0,4 mm material thickness 5 - 120		
Label height		mm	5 - 4500		
	when dispensing from	mm	20		
Material height	when cutting from	mm	12		
		mm	205		
Media roll	total diameter	mm	205		
	core diameter	mm	38–100		
	winding direction		outside or inside		
Ribbon					
Ink			outside or inside		
Roll diameter up to		mm	72		
Core diameter		mm	25		
Ribbon length up to		m	360		
Width ²⁾ up to		mm	114		
Dimensions					
Height x Depth x Width		mm	312 x 435 x 240		
Weight		kg	6		
Label sensor					
Gap sensor Position			For label edge or punching mark and end of material centered or shifted 10 mm to the left		
Reflective sensor from below Position			For label edge, punching or centered printing mark adjustable 56 mm to the left /10 mm to the right		
Electronics					
Prozessor High Speed 32 Bit Coldfire / clock rate MHz			266		
RAM MB			64		
Memory IFFS MB Flash			8		
Slot for CompactFlash Type I memory card			■		
Slot für wireless LAN card			■		
Battery buffer for real-time clock, printout of time and date, data storage on shut-down			■		
Warning signal acoustic signal in case of error			■		
Interfaces					
Centronics bidirectional acc. IEEE 1284			□		
RS232 C 1.200 up to 230.400 Baud / 8 Bit			■		
USB 2.0 full speed Device for PC connection			■		
Ethernet 10/100 Base T, LPD, RawIP-Printing, ftp-Printing, DHCP, HTTP, FTP, SMTP, SNMP, TIME, Zeroconf, mDNS, SOAP			■		
RS422, RS485 1.200 up to 230.400 Baud / 8 Bit			□		
WLAN card 802.11b/g WEP / WPA PSK (TKIP)			□		
2 x USB Host for external operation panel, keyboard, scanner, service key, USB flash drive			■		
Operating data					
Power supply			100 - 240 VAC 50/60 Hz, PFC		
Energy consumption			max. 300 W		
Temperature/Humidity	Operation:		5 - 40°C / 10 - 85% not condensing		
	Stock:		0 - 60°C / 20 - 80% not condensing		
	Transport:		– 25 - 60°C / 20 - 80% not condensing		
Approvals			CE, FCC class A, CB, CCC, UL		

¹⁾ Limitations may apply to small labels, thin materials or strong adhesives. Critical materials or applications must be tested and approved.












²⁾ The ribbon should be roughly the same width as the label in order to avoid folding.

Operation panel		
Buttons/LED display	Pause, Feed, Cancel, Menu, Enter, 4 x Cursor	
LCD graphic display	Width 60, Height 40 mm, Text 4 lines, approx. 20 characters per line	
Settings		
	Digital or analog clock System settings Print parameters 25 language settings	Time Date Interfaces Security
On the Display		
	Data reception WLAN field intensity Ethernet status Used memory Temperature printhead Access to memory card	Clock Date sheet abc Debug Input buffer Remaining ribbon
Monitoring		
Stop printing if	End of ribbon End of labels Printhead open Final position not reached	
Test routines		
System diagnosis	When switched on, including printhead testing	
Short status, status print	Font list, device list, WLAN Status, label profile, test grid, monitor mode, PPP status	
Status reports	Status printout with information about settings, e.g. print length counter, runtime counter, etc. Request of status via software command. Status messages on the display, e.g. network error - no link, barcode error, etc.	
Fonts		
Font types	5 Bitmap fonts, incl. OCR-A, OCR-B and 3 Vector Fonts Swiss 721, Swiss 721 Bold and Monospace 821 internally available, loadable TrueType fonts. Thai and Chinese (simplified Chinese) available as option.	
Character sets	Windows 1250 up to 1257, DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869, EBC DIC 500, ISO 8859-1 up to -10 and -13 up to -16, WinOEM 720, UTF-8, Macintosh Roman, DEC MCS, KOI8-R. All West and East European Latin, Cyrillic, Greek, Hebrew and Arabic characters are supported. Thai and Chinese available as option.	
Bitmap fonts	Size of width and height 1 – 3 mm Zoom 2 – 10 Orientation 0°, 90°, 180°, 270°	
Vector- / TrueType fonts	Size of width and height 0,9 – 128 mm Variable zoom, Orientation 360° in steps of 1°	
Font formats	Bold, Italic, underlined, outline, inverse, depending on character fonts	
Font width	Variable	

Graphics			
Graphic elements	Line, arrow, box, circle, ellipse, filled and filled with fading		
Graphic formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG		
Barcodes			
Linear barcodes	Code 39, Code 93 Code 39 Full ASCII Code 128 A, B, C EAN 8, 13 EAN / UCC 128 EAN / UPC Appendix 2 EAN / UPC Appendix 5 FIM HIBC	Interleaved 2 / 5 Ident- and lead code of Deutsche Post AG Codabar JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0	
2D codes	Aztec, Codablock F, Data Matrix, PDF 417, Micro PDF 417, UPS Maxicode, QR-Code, RSS 14 truncated, limited, stacked and stacked omnidirectional, EAN-Datamatrix, GS1 Data Bar All codes are variable in height, module width and ratio. Orientation 0°, 90°, 180°, 270°. Optionally with check digit, printed characters and start/stop code depending on type of code.		
Software			
Programming	J-Script direct programming abc-Basic Compiler Database Connector SAP Replace method	■ ■ ■ ■	
System diagnosis/ administration	Printer monitoring with Intra- and Internet with web interface Network Manager	■ ■	
Label software	cablabel® S3 Lite cablabel® S3 Viewer cablabel® S3 Pro	■ ■ □	
Windows driver certified	32 / 64 bit for Windows XP Windows Vista Windows 7 Windows 8 Windows 8.1	Server 2003 Server 2008 Server 2008 R2 Server 2012 Server 2012 R2 ■	
Mac- driver	OS X printer driver from version 10.6		■
Linux driver	32/64 Bit from CUPS 1.2		■
Stand-alone- operation			■

Accessories

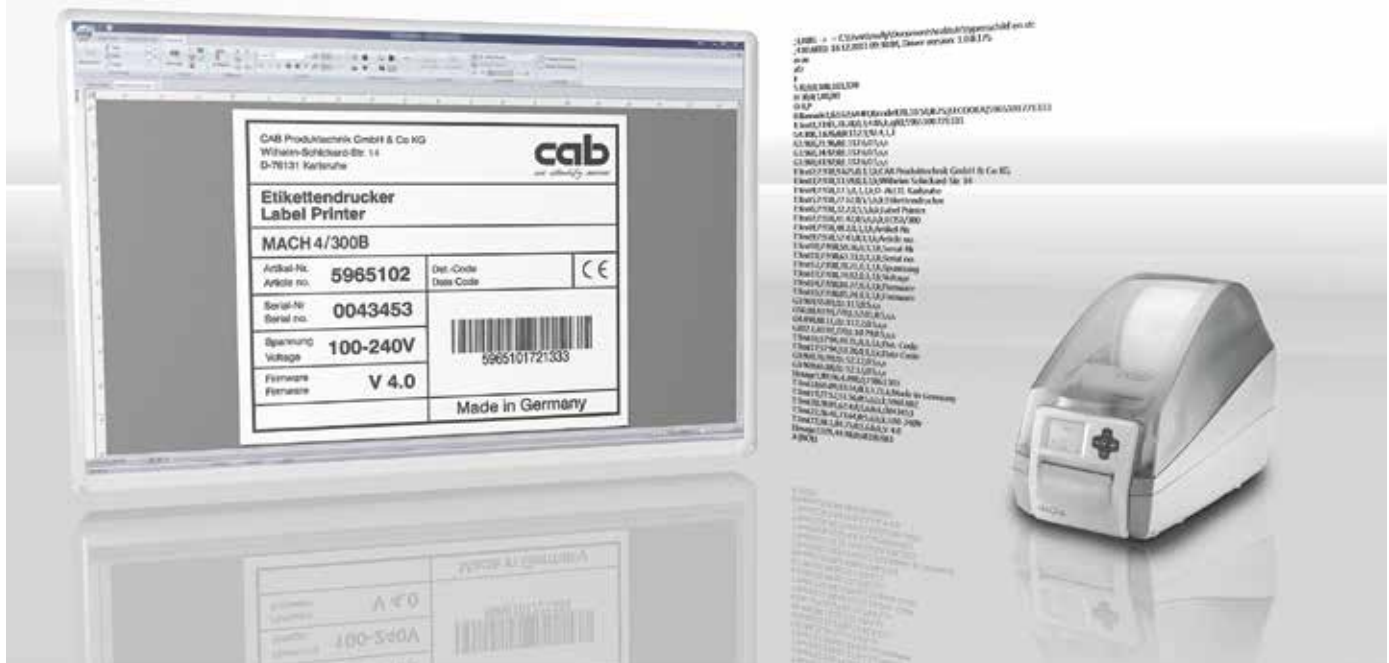
Accessories		MACH4
2.1	External rewinder ER4	<input type="checkbox"/>
2.2	Media hub	<input type="checkbox"/>
2.3	Ribbon holder	<input type="checkbox"/>
2.4	Memory card	<input type="checkbox"/>
2.5	Standard keyboard	<input type="checkbox"/>
Interfaces		
3.1	Interface Centronics	<input type="checkbox"/>
3.2	Interface RS422/RS485	<input type="checkbox"/>
3.3	Label selection box	<input type="checkbox"/>
3.4	WLAN card 802.11 b/g	<input type="checkbox"/>
Connecting cables		
4.1	Connecting cable RS232 C 9/9 pin, length 3 m	<input type="checkbox"/>
4.2	Patch cable CAT 5e, length 3 m grey	<input type="checkbox"/>
Software		
11.4	Database Connector	■
11.6	Network Manager	■
11.9	cablabel® S3 Lite	■
	Pro	<input type="checkbox"/>
11.10	Programming manual	<input type="checkbox"/>

Accessories	Product
2.1 	External rewinder ER4 1 Roll diameter mm: max. 210 2 Operating voltage: 100 - 240 V~ 3 Core diameter mm: 40 / 76
2.2 	Media hub Labels can be provided in additional holders for quick replacement.
2.3 	Ribbon holder Ribbons can be provided in additional holders for quick replacement.
2.4 	Memory card CompactFlash Type I Label formats, fonts, texts and graphics can be saved. Accessible from the printer or from the PC.
2.5 	Standard keyboard Connection: USB No. of keys: 115
Interfaces	Product
3.1 	Interface Centronics bi-directional acc. to IEEE 1284
3.2 	Interface RS422/RS485 1.200 up to 230.00 Baud/8 Bit
3.3 	Label selection box - I/O-Box From a higher-level control, like a PLC, up to 16 different labels can be selected from the memory card.
3.4 	WLAN card 802.11 b/g
Connecting cables	Product
4.1 	Connecting cable RS232 C 9 / 9 pin, length 3 m
4.2 	Patch cable CAT 5e 3 m grey

Operation and compliance with CE standards is only warranted by using materials provided or recommended by cab.

Label software cablabel S3

11.9



cablabel S3 concentrates label design, print control and monitoring of all cab marking systems. The development of devices and software is synchronized.

Highlights

Like no other software available cablabel S3 develops the full potential of cab devices. The software utilizes the JScript code to the full extent. The Pro product imports existing JScript files, so you can switch over easily to new software. With the new layer technology the user designs a label which works for all established devices and resolutions. Intelligent print control evaluates both device and resolution for printout and provides the proper data. Thus, possible sources of error are reduced.

cablabel S3 also maximizes the integration of database connections via Database Connector. After designing the label, the software provides all files to be stored within the printer for database connections. Stand-alone operation independent from a host system is supported. In addition the software creates interfaces which are easy to handle for SAP connection or other devices like PLC, scales and barcode testers.

Functional range

Every company designs and formats their label printing differently. For example, label creation and production are executed by different employees. To adopt the software package to specific needs, cab offers different software packages.

- *cablabel S3 Lite* is offered free of costs with every cab printer and allows to create and print labels.
- With cost-saving *cablabel S3 Pro* label designs for professional technical solutions can be created.
- *cablabel S3 Viewer* shows the preview of a label in the Windows Explorer and - like the Lite product - is delivered free of costs with every cab printer. The Viewer may support showing examples during the approval processes or supplier requirements.
- *cablabel S3 Print* is provided for users in production or warehouse. The user interface is simplified and provides only those functions which are required for label printing.

Other products like cablabel S3 Pro Laser, Print Laser and Print Server are in preparation.

Integration



No printer is isolated – in a productive environment it is connected to other equipment or networks for control and monitoring. cab offers various possibilities to integrate the printer into your environment.

Control

Every cab printer can be directly coded with the simple programming language *JScript* and an extensive instruction set. The label software *cablabel® S3* supports optimally *JScript*, but a *JScript* program may also be created with any text editor.

As an integrated element of the firmware, the *abc Basic compiler* enables the printer to process data via BASIC programming before it is sent for print editing. That way, you replace external printer languages or integrate data from other systems, e.g. balance or a PLC.

11.4 In the stand-alone mode with additional network connection, the *Database Connector* enables printers to access data directly from a central ODBC-, OLEDB compatible database and to print it as a label.

In cooperation with SAP* cab developed the so-called *replace method* to control cab printers quickly and easily from SAPScript using SAP R/3. Using the replace method the host computer only sends the *JScript* variable, respectively changed data to the printer. As a Silver Level partner in SAP's Printer Vendor Program, cab has access to the SAP development area for optimum printer support in SAP environments.

* SAP and all SAP logos are trademarks or registered trademarks of SAP SE in Germany and in several other countries.

11.10 The *Programmer's guide* explains and describes commands for different printer models via direct programming with *JScript* and *abc* and additionally the connection of the printer to databases via *Database Connector*.








For the printer control via PC accredited drivers are available for established Windows operating systems and additionally CUPS-based drivers for Mac OS X and Linux. The drivers ensure optimal stability on your operating system.






Monitoring

Using standard programs such as the web browser or FTP clients, the integrated HTTP and FTP server enables print monitoring, configuration, firmware updates and memory card administration. Status, warning and error messages are sent to administrators or users as e-mails or SNMP datagrams via SNMP and SMTP clients. A time server is used to synchronize time and date.

11.6 The cab Network Manager enables the user to control a number of printers across a network simultaneously. It supports monitoring, configuration, firmware updates, memory card administration, file synchronization and PIN administration centrally.

Delivery program

	Part no.	Hardware	dpi
1.1		5541082 5541083 5541086	With tear-off plate Label printer MACH4 / 200B Label printer MACH4 / 300B Label printer MACH4 / 600B
1.2		5541092 5541093 5541096	With tear-off plate and dispensing function Label printer MACH4 / 200P Label printer MACH4 / 300P Label printer MACH4 / 600P
1.3		5541102 5541103 5541106	With cutter Label printer MACH4 / 200C Label printer MACH4 / 300C Label printer MACH4 / 600C
Scope of delivery			
Label printer, Power cable type E+F, length 1.8 m, Connecting cable USB, length 1.8 m, Operating manual de/en DVD: Quick Start guide in 17 languages, Operating manual de/en/fr, Configuration manual de/en/fr, Service manual de/en, Spare parts list de/en, Programming manual en, Windows printer driver 32/64 bit in 19 languages for Windows XP Server 2003 Windows Vista Server 2008 Windows 7 Server 2008 R2 Windows 8 Server 2012 Windows 8.1 Server 2012 R2 Label software cablabel® S3 Lite and Viewer Mac OS X driver de/en/fr, Linux driver de/en/fr			
	Part no.	Spare parts	
		5541074.001 5541073.001 5541077.001	Print head 4 / 203 Print head 4 / 300 Print head 4 / 600
		5540896.001	Print roller DR4
	Part no.	Accessories	
2.1		5540750	External rewinder ER4 / 210
2.2		5540867.001	Media hub

	Part no.	Accessories	
2.3		5540866.001	Ribbon holder
2.4		5561043	Memory card CompactFlash Type I
2.5		on request	Standard PC keyboard USB German version
	Part no.	Interfaces	
3.1		5954200	Centronics interface
3.2		5954201	RS422/RS485 interface
3.3		5954191	Label selection – I/O box
3.4		5561041	WLAN card 802.11 b/g
	Part no.	Connecting cable	
4.1		5550818	Cable RS232 C 9/9 pin, length 3 m
4.2		5918008	Patch cable KAT 5e, 3 m gray
	Part no.	Software	
11.9		5588000	Label software cablabel S3 Lite
		5588001	cablabel S3 Pro 1 WS
		5588100	cablabel S3 Pro 5 WS
		5588101	cablabel S3 Pro 10 WS
		5588150	cablabel S3 Pro 1 additional licence
		5588151	cablabel S3 Pro 4 additional licences
		5588152	cablabel S3 Pro 9 additional licences
		5588002	cablabel S3 Print 1 WS
		5588105	cablabel S3 Print 5 WS
		5588106	cablabel S3 Print 10 WS
11.10		5588155	cablabel S3 Print 1 additional licence
		5588156	cablabel S3 Print 4 additional licences
		5588157	cablabel S3 Print 9 additional licences
		from the 4th quarter 2015	cablabel S3 Print Server
		9008486	Programming manual english, printed copy

cab delivery program

Label printer EOS1

The compact one for label rolls up to 155 mm diameter



Label printer EOS4

The cost-effective one for label rolls up to 210 mm diameter



Label printer EOS mobile

Both EOS sizes with battery pack for mobile print



Label printers A+ series

The universal ones



Label printer A4+M

With centered material positioning



Label printer A4+T

With centered material positioning also for textile materials



Label printer XD4T

Double-sided printing



Label printers XC series

Two-color printing



Label dispensers HS/VS

Precise horizontal or vertical dispensing up to 180 mm width



Print & apply system Hermes+

For automation



Print & apply system Hermes C

For two-color printing and applying



Print modules PX series

For integration into automatic labeling systems



Consumables

Precise printing with cab labels and ribbons



Label software cablabel S3

Standard and optional



Laser marking system FL+ series


Precise and fast



Laser safety housing

The industrial solution



 Headquarter and fabrication
in Germany

 to  International
subsidiaries

There are furthermore 820
distribution partners in more
than 80 countries.



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