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Products need labeling

Label printers for industrial applications





cab

## Key features



The MACH 4S provide all features of an industrial printer with a wide application range.

The print mechanics and the chassis are made of high-quality materials and perfectly match in terms of shape and function.

The large, colored touchdisplay with self-explanatory symbols offers best operability.

Labels and ribbons are easy to insert from the front.

The centered material guide eliminates any need of adjustments.

The hightech electronic board integrates all the needed interfaces as standard and is ready for any connection.

- reliable and fast printing
- accurate imprint
- compact, appealing design
- easy operation
- little footprint

Sample applications:

### **PCB** labels

When only little space is available – smallest label size 5 x 5 mm



### **Type plates**

Pin sharp fonts, graphics and barcodes up to 600 dpi

Cardboard box and pallet labels up to a passage width of 120 mm



## Types



Material guide centered





### 1.1 Type B with tear-off edge

for printing on all materials that are wound on rolls or reels or fanfold.

Label printer		MACH	4.35	MAC	H 4S
Printable resolution	dpi	203	300	300	600
Print speed	up to mm/s	250	250	300	150
Print width	up to mm	104	108.4	105.7	105.7

### 1.2 Type P with peel-off function

for printing on all materials that are wound on rolls or reels or fanfold. In addition, the labels can be dispensed.

Label printer		MACH	4.35	MAC	H 4S
Printable resolution	dpi	203	300	300	600
Print speed	up to mm/s	250	250	300	150
Print width	up to mm	104	108.4	105.7	105.7
Label height	from mm	12			



### 1.3 Type C with cutter

for printing on all materials that are wound on rolls or reels or fanfold. From 12 mm in height, the labels and continuous materials can be cut.

Label printer	MACH	4.35	MAC	H 4S	
Printable resolution	dpi	203	300	300	600
Print speed	up to mm/s	250	250	300	150
Print width	104	108.4	105.7	105.7	
Cutting length		1	2		
Gap height		2	.5		
Cuts/min, without ma	100				
Stop print job when		final cutter position has not been reached			

## Accessories



#### 2.15 External rewinder ER4/210

Label winding is either outside or inside. An adapter kit for exact alignment of the external rewinder is included in the delivery.

External rewinder		ER4/210
Material width	up to mm	120
Roll diameter	up to mm	210
Tightening axle for core diameter	mm	76
Winding		outside or inside

## Details

### Cover with a large panoramic window

It can be opened wide. The integrated damping mechanism provides smooth closing. Label stock is visible at any time.

### 2 Roll holder

The label roll is put onto the holder and, at this, is automatically centered. Materials of different widths can be placed within the box.

### 8 Ribbon holder

The ribbon is pushed onto the spring-mounted holder and is centered by means of a margin stop and the position indication. The insertion in the print mechanics is simple and comfortable.

### 4 Print mechanics

It opens at the push of a button and offers easy access.

## 6 Print heads

All print heads are freely interchangeable. They are automatically detected and calibrated by the CPU. Major data sucha's running performance, maximum operating temperature and heat energy are directly stored in the print head. The data can be read at the plant.

## 6 Gap sensor

It is arranged for labels or punch marks and end of material as well as for print marks in a centered position. In case of multi-track labels, you can switch to a sensor that is shifted 10 mm to the left.

## 🕖 Material guide

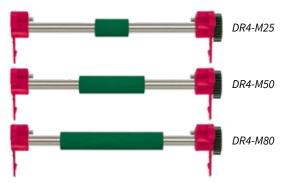
With the lateral retaining wheel the width is adjusted. At this, the labels are automatically centered.

### 8 Reflective sensor

Labels and end of material as well as print marks are identified by the slideable sensor.

## 9 Print roller DR4

It can be quickly and easily unlocked in few steps for cleaning or replacement. Coating: synthetic rubber



To achieve accurate imprint with slim materials and ribbons slim print rollers are needed. These prevent from print roller wear, print head contamination and errors during material feed.

## Deel-off function (with "P" type)

The liner tape is lead down behind the operation panel. The label separates from the liner tape on the peel-off edge. In terms of application safety, label peel-off has to be tested.



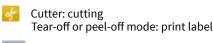
## Operation panel

## Intuitive and easy operation with self-explanatory symbols to configure the device setups

### 1 LED signal: Power ON

- 2 Status bar: Data reception, Record data stream, Ribbon pre-warning, SD memory card / USB memory stick plugged in, Bluetooth, WLAN, Ethernet, USB Slave, Time
- Orinter status: Ready, Pause, Number of printed labels per print job, Label in peel-off position, Awaiting external start signal

#### Operation



- Jump to menu
- 🛗 Reprint last label
- Interrupt and continue print job
- Stop and delete all print jobs
- 🚺 Label feed

Setup options





**Printing parameters** 





**Print position Y** 

2

3

A

Print speeds



providing the same functionality as on the printer

Landscape or portrait mode display

Users are free to choose whether to operate the printer on the external panel or on the one integrated in the device.

Printer connection: USB 2.0 Hi-speed device

- 1 LED: Power ON
- 2 USB slot to connect the Service Key or a memory stick, to load data in the IFFS storage
- **3 Connecting cable USB**, lengths 1.8 to 16 m Use only specified cables if length succeeds 3 m; for dimensions see assembly instructions



MACH 4S

## Interfaces on the back of the device



#### 1 for a SD memory card

- 2 x USB host to connect a Service Key, USB memory stick, keyboard, barcode scanner, USB Bluetooth adapter, USB WLAN stick
  - WLAN hotspot or infrastructure mode: In hotspot mode it is possible to directly connect a mobile device with the printer via WLAN.
- **3 USB 2.0 Hi-speed device** to connect a PC
- 4 Ethernet 10/100 Mbit/s
- **5 RS232C** 1,200 to 230,400 baud/8 bit



# Technical data

● typical ○ possible ■ standard □ option

Label printer			Туре	MACI	14.3S	MAG	MACH 4S		
Material feed			centered						
Printing	Thermal tra	ansfer		•					
method	Thermal di	rect		•	•	0	-		
Printable resolution			dpi	203	300	300	600		
Print speed			up to mm/s	250	250	300	150		
Print width			up to mm				105.7		
Start of printing	Distance to	o locating edge	mm		cent	ered			
Material <sup>1)</sup>									
Paper, cardboard,		· · · · · · · · · · · ·		•	•	•	•		
plastics PET, PE, PP, F									
Shrink tubes	ready-for-ι	JSe							
Textile tapes	on rolls ro	ala fanfald							
Packing	Roll diamet	els, fanfold	up to mm		20	•			
	Core diame		mm		38.1				
	Winding				outside				
Labels	Width		mm	5-116					
Lubels		l. label backfeed	from mm		5				
		l. label backfeed	from mm		1				
	Peel-off, si		from mm	12					
	Thickness	<b>U</b> .	mm	0.03 - 0.6 9 - 120					
Liner material		ore diameter 38 mm							
		76 mm	mm		25 - 1	120			
Thickness mm			0.03 -	0.13					
Continuous material Width at core diameter 38 mm mm		5 - 120							
76 mm mm			25 - 1						
	Thickness		mm	0.05 - 0.5					
	Weight (ca		up to g/m <sup>2</sup>		18				
Shrink tubes	Width read	ly-for-use	up to mm		12				
	Thickness		up to mm		1.				
Ribbon <sup>2)</sup>	Ink side				outside				
	Roll diame		up to mm		7				
	Core diame		mm		25	•			
	Variable ler	ngth	up to m		36				
Duinten einen and we	Width		mm		25 -	114			
Printer sizes and we	•				24021	7 425			
Width x Height x Dept	tn		mm		240 x 31				
Weight Label sensor indicat	ting the new	sition	kg		C	)			
Gap sensor	ing the pos	sicion	for	labels or punch marks	and end of material, print m	arks on transparant mate	rials		
Reflective sensor		reflex from below	for	· · · · · · · · · · · · · · · · · · ·	rial, print marks on non-tra	· · · · · · · · · · · · · · · · · · ·	11015		
Distance of sensor gap mm		centered or shifted by 1		isparent materials					
from centre to locating edge reflex from below mm			by 56 mm to the left or by 1	0 mm to the right					
Material passage	0 0		up to mm	, ,	2	•			
Electronics									
Processor 32 bit clock	k rate		MHz		80	00			
Main memory (RAM)			MB		25	56			
Data memory (IFFS)			MB		5	0			
Slot to connect a SD memory card (SDHC, SDXC) up to GB				51	.2				
Battery for time and date, real-time clock									
Data memory when p	oower is swi	tched off (e.g. serial	numbering)						
Interfaces						-			
RS232C 1,200 to 230,									
USB 2.0 Hi-speed device to connect a PC									
Ethernet 10/100 BASE	E-T			LPD, IPv4, RawIP printing, DHCP, HTTP/HTTPS, FTP/FTPS, SMTP, SNMP, TIME, NTP, Zeroconf, SOAP web service, VNC					
2 x USB host on the b			for	Service Key, USB memory stick, keyboard, barcode scanner, USB Bluetooth adapter, USB WLAN stick, external operation panel					
USB WLAN stick 2.4 G									
USB WLAN stick 2.4 G Hotspot or Infrastruc	ture Mode	g/n + 5 GHz 802.11a/	/n/ac,		[				
USB Bluetooth adapt									
Peripheral connectio	in for cutter	or peel-off function	1						
Operating data				100 040146 50/06 **	DEC				
Power supply				100 - 240 VAC, 50/60 Hz					
Power consumption	dity	Operation		Standby < 10 W / typica					
		Operation Stock		+5 - 40°C / 10 - 85 %, n 0 - 60°C / 20 - 85 %, n	J				
remperature / numid		Stock Transport		-25 - 60°C / 20 - 85 %, n					
remperature / numid		1141150011		-20-00 C/20-85 %, N	occondensing				
· · ·				CE ECC Class A ICES 3		C FAC BIS BSMI KC Mart	RCM		
Temperature / humid Approvals Operation panel				CE, FCC Class A, ICES-3	, cULus, CB, CoC Mexico, CC	C, EAC, BIS, BSMI, KC-Mark	k, RCM		
· ·		Screen diagonal	п	CE, FCC Class A, ICES-3			, RCM		

<sup>1)</sup> The material specifications are standard values.
 Applications with small labels, thin, slim, thick and stiff materials as well as strongly adherent labels have to be tested, so is the peel-off function.
 <sup>2)</sup> The ribbon should at least correspond with the width of the liner material.

# Technical data

■ standard □ option

Setup optionsPrintRegion: - Language Ribbon- Country - Country Tear-offPeel-off- Time zone - CutTime InterfacesDisplay: Error- Brighness - Power saving mode - Orientation InterpreterStatus barData reception Record data stream SD memory card plugged USB memory card plugged USB slaveBluetooth WLAN USB slaveMonitoringRibbon pre-warning SD memory card plugged USB memory stick plugged Direction of ribbon Direction of ribbon mode End of ribbon prime head detectionTest routinesOn start-up, including print head detection Information display, test printout, analysisPerint prime Perint head detectionStatus reports- Print of devices settings, e.g. print lengths and service hours - Device status request by software command - Display of, e.g., network errors, no links, barcode errors, periphery errors, etc.FontsS bitmap fonts: 12 x 12 dots A R Heiti Medium GB-Mono 16 x 16 dots CG Triumwirate Condensed B 16 x 32 dots OCR-A Wans stal CCR-B Wonospace 821 Swiss 721 Bold
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e.g. print lengths and service hours         - Device status request by software command         - Display of, e.g., network errors, no links, barcode errors, periphery errors, etc.         Fonts         Font types       5 bitmap fonts:       7 vector fonts:         internally provided       12 x 12 dots       AR Heiti Medium GB-Mono         16 x 16 dots       CG Triumvirate Condensed B         16 x 32 dots       Garuda         OCR-A       HanWangHeiLight         OCR-B       Monospace 821         Swiss 721
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<ul> <li>Display of, e.g., network errors, no links, barcode errors, periphery errors, etc.</li> <li>Fonts</li> <li>Font types         <ul> <li>5 bitmap fonts:</li> <li>7 vector fonts:</li> <li>12 x 12 dots</li> <li>AR Heiti Medium GB-Mono</li> <li>16 x 16 dots</li> <li>CG Triumvirate Condensed B</li> <li>16 x 32 dots</li> <li>Garuda</li> <li>OCR-A</li> <li>HanWangHeiLight</li> <li>OCR-B</li> <li>Monospace 821</li> <li>Swiss 721</li> </ul> </li> </ul>
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OCR-A HanWangHeiLight OCR-B Monospace 821 Swiss 721
OCR-B Monospace 821 Swiss 721
Swiss 721
to be stored TrueType fonts
Character sets 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 Cyrillic
Eastern European Greek
Chinese simplified Latin
Chinese traditional Hebrew
Thai Arabic
Bitmap fonts Widths and heights 1 - 3 mm
Zoom factors 2 to 10
Orientations 0°, 90°, 180°, 270°
Orientations 0°, 90°, 180°, 270°           Vector / TrueType fonts         Size in width and height 0,9 - 128 mm
Vector / TrueType fonts Size in width and height 0,9 - 128 mm
Vector / TrueType fonts Size in width and height 0,9 - 128 mm Variable zoom Orientation 360° in steps of 1°
Vector / TrueType fontsSize in width and height 0,9 - 128 mm Variable zoom Orientation 360° in steps of 1°Font stylesbold, italic, underlined, outline, inverse
Vector / TrueType fonts Size in width and height 0,9 - 128 mm Variable zoom Orientation 360° in steps of 1°

Graphics Graphic elements	Lines, arrows, rectangles,	circles ellinses			
	- filled or filled with fading				
Graphic formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG				
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 coo of Deutsche Post Codabar JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0	le		
2D and stacked	DataMatrix DataMatrix Rectangle Exter 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, All codes are variable in te modular width and ratio; check digit, plain text prin are options depending fro	, stacked, stacked omni-d erms of height, orientations 0°, 90°, 180°, itout and start / stop code	270°		
Software					
Label software			_		
Labersonware	cablabel S3 Lite cablabel S3 Viewer cablabel S3 Pro cablabel S3 Print				
Also running with	n CODESOFT NiceLabel BarTender				
Stand-alone operation	1				
Windows printer drivers WHQL certified fo	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 Mac OS X printer drivers	from version 10.6				
Linux printer drivers	from CUPS 1.2				
Programming	JScript printer language abc Basic Compiler				
Integration	SAP Database Connector				
Emulation	ZPL (Datastream to be te	sted in advance)			
Administration	Printer control Configuration in Intranet a Network Manager (in prep				

cab uses free and Open Source Software in its products. For information see **www.cab.de/opensource** 

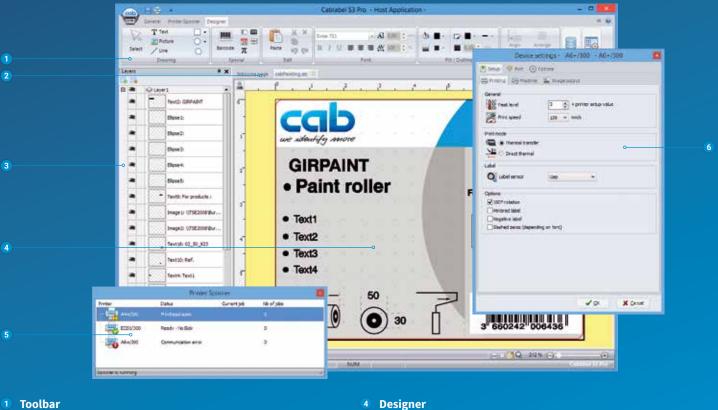
## Designing, printing, administrating with cablabel S3

cablabel S3 opens up the full potential of cab devices.

First of all, the label must be designed. Only when it comes to printing

it has to be decided whether the label shall be processed on a label printer, a print and apply or marking laser system.

cablabel S3 is of a modular design which makes it adaptable to requirements step by step. To support functions like native JScript programming, elements such as the JScript Viewer are embedded as plug-ins. The designer user interface and the JScript code are synchronized in real time. Special functions like the Database Connector or barcode testers can be integrated.



to create different label objects

2 Tabs

Lavers

to quickly switch from one running label design to another \_\_\_\_\_

to administrate different label objects

simplifies the design and displays the label WYSIWYG

Printer spooler
 to monitor all print jobs and the state of the printer

• **Drivers** for setting and the communication with devices

# Printing in stand-alone operation

This operating mode is the printer's ability to select and print labels even when it is not connected to a host system.

The label has to be designed with a software such as cablabel S3 or by direct programming with a text editor on a PC. Label formats, texts, graphics as well as database contents are stored on a memory card, a USB memory stick or in the internal IFFS memory.

Only variable data are sent to the printer via a keyboard, a barcode scanner, scales or other host systems and/or recalled by the Database Connector from the host and printed.



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For further information see www.cab.de/en/cablabel

# Printer control and administration

## Printer drivers

To control the printer with a software other than cablabel S3, cab provides drivers in 32 / 64 bit for operating systems starting from Windows Vista, Mac OS 10.6 and Linux with CUPS 1.2.



### Windows<sup>1)</sup> drivers

cab printer drivers are certified according to WHQL. They ensure optimum stability on the Windows operating system.



### Mac OS X<sup>2)3)</sup> drivers

cab provides CUPS-based printer drivers for Mac OS X applications.



### Linux drivers<sup>3)</sup> Linux drivers are CUPS-based.

Drivers are offered on the DVD delivered with the printer and for free download at www.cab.de/en/support

## Printer programming



### JScript

To control the printer, cab has developed the embedded programming language JScript. See manual for free download at www.cab.de/en/programming

## ABC abc Basic Compiler

In addition to JScript and as an integral part of the firmware, it allows advanced printer programming before data are sent to printout. For example, external printer languages can be replaced without interfering in the current print job. Also data from other systems such as a scale, a barcode scanner or PLC can be integrated.

### Printer integration

## SAP P

## Printer Vendor Program

As a partner in SAP's<sup>4)</sup> Printer Vendor Program, cab has developed a replace method to enable easy control of a cab printer via SAPScript from SAP R/3. Only variable data are sent to the printer by the host. Pictures and fonts that had priorly been stored in the local memory (IFFS, memory card, etc.) are merged.



- <sup>1)</sup> Windows is a registered trademark of Microsoft Corporation
- <sup>2)</sup> MAC OS X is a registered trademark of Apple Computer, Inc.
- <sup>3)</sup> Only for device series SQUIX (except of SQUIX MT), MACH 4S, EOS, Hermes+ and PX
- <sup>4)</sup> SAP and all corresponding logos are trademarks or registered trademarks of SAP SE

### Printer administration



### **Configuration in Intranet and Internet**

The HTTP and FTP server integrated in the printer via standard programs like a web browser or FTP clients allows printer control and configuration, firmware updates and memory card administration. Via email or SNMP, the SNMP and SMTP client datagram sends status, warning and error messages to administrators and users. Time and date are synchronized by a time server.





Network Manager in preparation

It is possible to simultaneously manage several printers within the network. Control, configuration, firmware updates, memory card administration, data synchronization and PIN administration are supported from one single location.

gptions	Help						
1.6							
		Aa	19 10	2 ?	1		
	15	Name	Group	Type	Address	Status	Pin
		5 and 7	Case 11	cab A4+/300	192.168.100.48	Ready	6-1
	8 100 48	8.100.40	8.100.48	8 100.40 Flame Group	8 100 48 + Hame Group Type	8.100.48 Fiame Group Type Address	8.100.48 - cab A4+/300 192.168.100.48 Ready



#### **Database Connector**

Printers connected to a network may directly access data from a central ODBC or OLEDB-ready database and print it on a label. While printing, data can be rewritten to the database.



# Delivery program

	Part no	Printers			
	r ur crio.	Triffers			
Type B with tear-off edge	5984630 5984631 5984632 5984633	Label printer MAG Label printer MAG Label printer MAG Label printer MAG	CH 4.3S/300B CH 4S/300B		
Type P with peel-off function	5984634 5984635 5984636 5984637	Label printer MAG Label printer MAG Label printer MAG Label printer MAG	CH 4.3S/300P CH 4S/300P		
Type C with cutter	5984638 5984639 5984640 5984641	Label printer MAG Label printer MAG Label printer MAG Label printer MAG	CH 4.35/300C CH 4S/300C		
	Scope of de	livery:			
Label printer Power cable Type E+F, length 1.8 m Connecting cable USB, length 1.8 m Operator's manual DE/EN					
:	Operator's manual in 30 languages Configuration manual DE/EN/FR Service manual DE/EN Spare parts list DE/EN Programming manual EN WHQL certified Windows printer drivers for Windows Vista Server 2008 R2 Windows 7 Server 2008 R2 Windows 8 Server 2012 R2 Windows 8.1 Server 2012 R2 Windows 10 Server 2016 Server 2019 Apple Mac OS X printer drivers DE/EN/FR				
	Linux printer drivers DE/EN/FR Label software cablabel S3 Lite cablabel S3 Viewer Database Connector				
	tear-off edge	SystemSystemType B with tear-off edgeSystem 	SourceSourceSourceSourceType B with tear-off edgeSourceSourceSourceSourceType B with tear-off edgeSourceSourceSourceSourceType P with peel-off functionSourceSourceSourceSourceType C with cutterSourceSourceSourceSourceType C with cutterSourceSourceSourceSourceType C with cutterSourceSourceSourceSourceType C with cutterSourceSourceSourceSourceSourceSourceSourceSourceSourceType C with cutterSourceSo		

Pos.		Part no.	Wear parts
		5977382.001	Print head 4.3/200
2.1		5977383.001	Print head 4.3/300
2.1	and the second s	5977444.001	Print head 4/300
		5977380.001	Print head 4/600
2.2	F	5984649.001	Print roller DR4
Pos.		Part no.	Extra equipment
2.3	<b>*</b>	5984223.001	Print roller DR4-M25
2.4		5984224.001	Print roller DR4-M50
2.5	<b></b>	5984228.001	Print roller DR4-M80

Scopes of delivery, design and technical specifications correspond to the date of the printing. Subject to change. The data provided in the catalog do not represent any warranty or guarantee.

Pos.		Part no.	Extra equipment
		6010186	External operation panel
	1000	5907718	Connecting cable USB / 1.8 m
2.6		5907730	Connecting cable USB / 3 m
	$\frown$	5907750	Connecting cable USB / 5 m
		5907760	Connecting cable USB / 11 m
	N 94	5907765	Connecting cable USB / 16 m
2.7		5977370	SD memory card 8 GB
2.8	4	5977730	USB memory stick 8 GB
2.9		5978912.001	USB WLAN stick 2.4 GHz 802.11b/g/n
2.10		5977731	USB WLAN stick with rod antenna 2.4 GHz 802.11b/g/n+5 GHz a/n/ac
2.11	E.	5977732	USB Bluetooth adapter
2.12	R	5948205	Label selection - I/O box
2.13		5550818	Connecting cable RS232 C 9/9 pin, length 3 m
2.14	*	5984648.001	Roll holder
2.15		5984647.001	Ribbon holder
2.16		5540750	External rewinder ER4/210
Pos.		Part no.	Label software
11.7		Bundle 5588001 5588100 5588101 5588150 5588152 5588105 5588106 5588156 5588156 5588157 in preparation	cablabel S3 Lite (Download at cab.de/en) cablabel S3 Pro 1 WS cablabel S3 Pro 5 WS cablabel S3 Pro 10 WS cablabel S3 Pro 1 add. licence cablabel S3 Pro 4 add. licences cablabel S3 Pro 9 add. licence cablabel S3 Print 1 WS cablabel S3 Print 5 WS cablabel S3 Print 10 WS cablabel S3 Print 1 add. licence cablabel S3 Print 4 add. licences cablabel S3 Print 9 add. licences cablabel S3 Print 9 add. licences
11 10		9009950	Programming manual EN,
11.10			printed copy



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Information is also available on the Internet www.cab.de/en/mach4s

# cab product overview

Label printers MACH1, MACH2





Label printer XD4T



Tube labeling systems AXON



Label dispensers HS, VS



Label printers ХС

Label printers

Label printers

**SQUIX 4** 

EOS 2



Print modules PX Q



Labeling heads



Label printers EOS 5



Label printers SQUIX 6.3



Print and apply systems HERMES Q



Labels and ribbons



Marking lasers XENO 4

Label printers MACH 4S

Label printer A8+



Print and apply systems **Hermes** C



Label software cablabel S3



Laser marking systems





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