



Label printer

MACH4 The Business Class.

Product type overview MACH4

One concept – three designs



B with tear off plate

The label should stick out of the printer for at least 30mm for tearing off.

Printing method	Thermal transfer / Thermal direct		
Print resolution dpi	203	300	600
Print speed up to mm/s	200	200	100
Print width up to mm	104	105.6	105.6



P with tear off plate and dispense function

The label height when dispensing is down to 20 - 200 mm.

Printing method	Thermal transfer / Thermal direct		
Print resolution dpi	203	300	600
Print speed up to mm/s	200	200	100
Print width up to mm	104	105.6	105.6

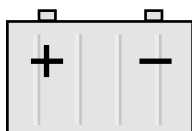


C with tear off plate and cutter

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

Printing method	Thermal transfer / Thermal direct		
Print resolution dpi	203	300	600
Print speed up to mm/s	200	200	100
Print width up to mm	104	105.6	105.6

Options



24 volt battery operation

For the battery operation there is a control PCB with 24 volt battery access built in instead of the power supply unit. Thus the printer can be used in a mobile way. The print speed is thereby limited to 100 mm/s. The battery capacity is sufficient for at least one working day.



RFID Read-Write Unit in preparation

The transfer printers can be additionally equipped with a RFID read and rewrite transponder in Smart-labels with 13.56 MHz.

Primary features

Detailed perfection

- The future “made by cab”: MACH4, the new label printer which sets new, innovative benchmarks.
- It 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 the cover are made of premium materials and are perfectly harmonized in their form and their functions.
- Easy and comfortable handling and high reliability were the requirements during development. The large display with white backlight offers best readability.
- The navigation pad with the additional “Enter” button simplifies the operation - thereby only the operated functions are indicated.
- The centred label path makes adjustments unnecessary and avoids wrinkling of the ribbon.
- On the high-tech electronic board all required interfaces are serially integrated and applicable for every adapter.



Innovative technology for a better climate protection, energy-saving, environmentally conscious.



4 Technical details

Convincing product advantages

1. Cover with large window

Can be opened widely.
The integrated absorptability mechanism provides smooth closing. The label supply is visible at all times.

2. Media hub

The label roll is placed within the media hub and centred automatically. Materials varying in width can be easily fit within the box.

3. Ribbon retainer

The ribbon is slid onto a ribbon supply hub with spring mounted brackets. It can be centred with a movable flange and a positioning indicator. Inserting the ribbon into the print mechanism is now easy and convenient.

4. Print mechanism

It is opened at the push of a button and offers best access.

5. Printing with 203, 300 or 600 dpi

The printheads can be exchanged easily from 203 to 300 dpi. The printer automatically detects the resolution.

6. Gap sensor

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

7. Label guidance

With the adjustment knob the user can adjust the width of the printing area. This is to centre the labels.

8. Reflex sensor

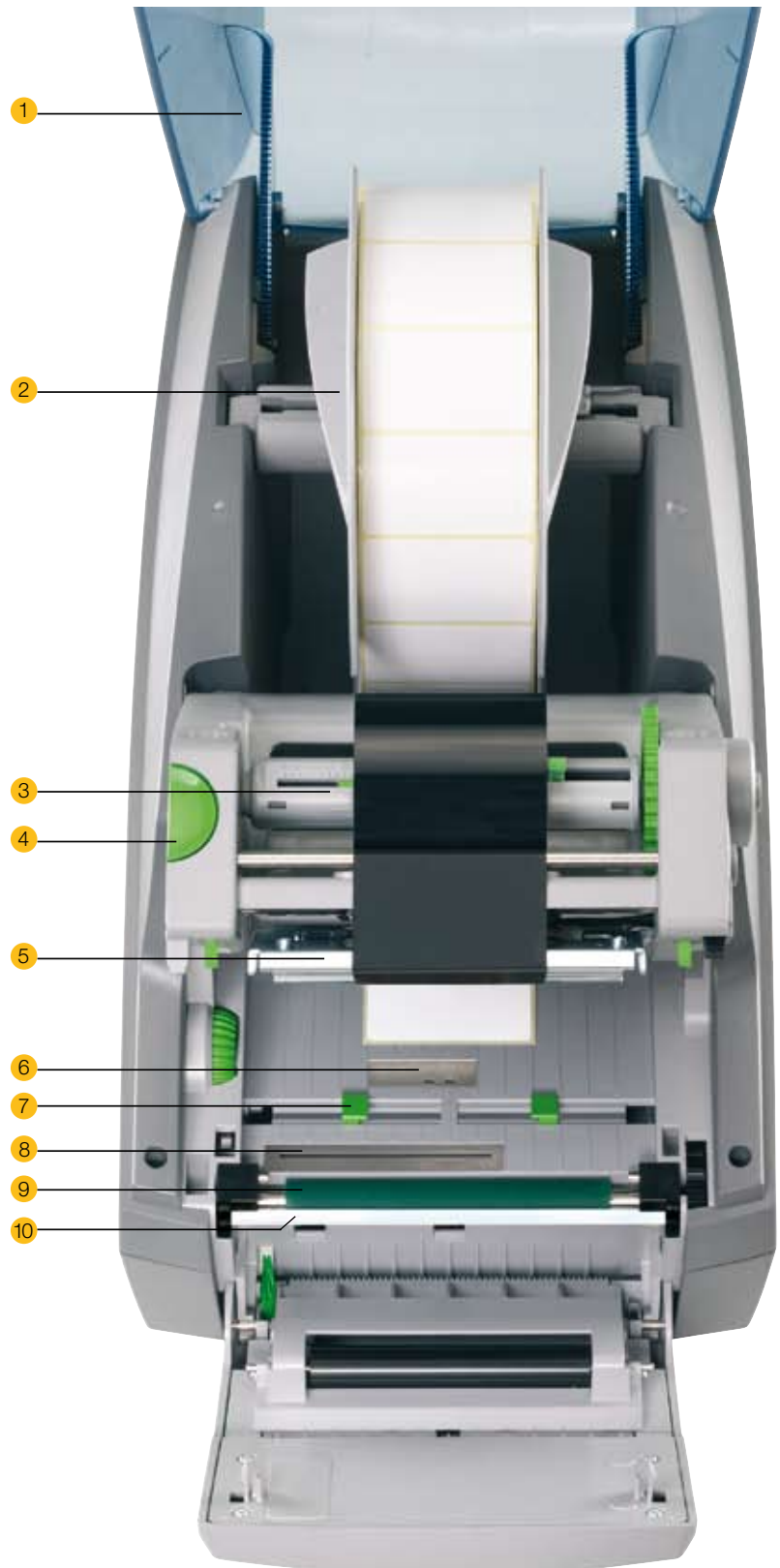
Start of label, printer's imprint and cut outs can be identified with an adjustable reflex sensor.

9. Drive roller

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

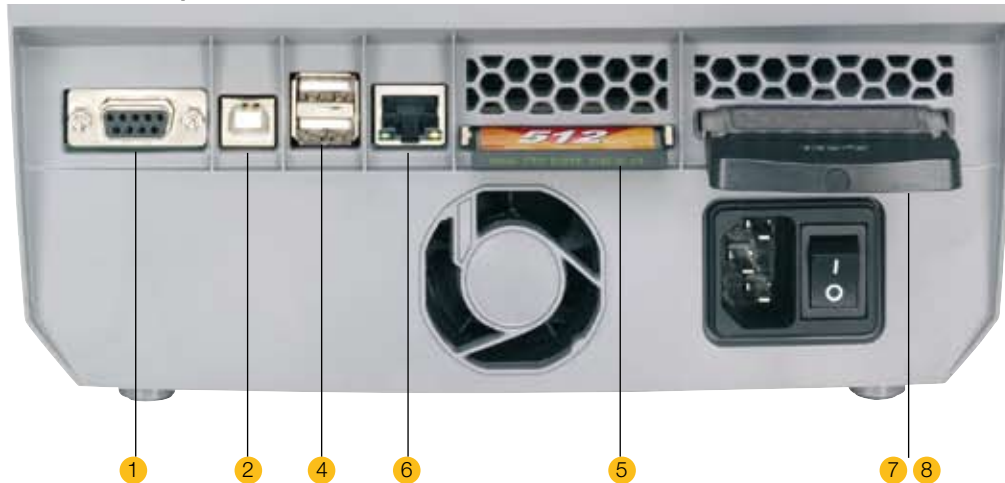
10. Peel-off-plate

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



All interfaces built in

Back side of printer



■ Standard □ Option

PC/SPS interfaces

- 1. **Serial RS232 C** interface up to 230.400 Baud.
- 2. **USB 2.0 High Speed Slave** interface.
- 3. **Parallel Centronics** acc. IEEE 1284
The data from the Centronics interface are converted onto the USB Full Speed interface.



Peripheral connection

- 4. Two **USB-Master** interfaces to connect external operation panel, keyboard and scanner.
- 5. Slot for **CompactFlash-card Type I**

Network connection

- 6. **Ethernet 10/100 Base T**-interface with TCP/IP Protocol. Printing with LPR/LPD, Raw IP or FTP. IP adress can be set manually or obtained via DHCP. Status information and set up via internet browser. FTP for firmware updates and PC-card Type II/Compact-Flash administration. Messages can be sent via e-mail or SNMP. Time and date synchronization through time server.
- 7. Slot for **Wireless LAN-Card** or **PC-Card Type II** (PCMCIA)
- 8. **WLAN-card IEEE 802.11 b/g** for wireless network connection, depend on chip set.
IEEE 802.11 b: 11 MBit/s, 2.4 GHz Band
IEEE 802.11 g: 54 MBit/s, 2.4 GHz Band



Stand-alone operation without PC

The layout of the labels is created either with the label software or directly on the PC.

Label formats, fonts and graphic data, serial data and data base contents are saved on the CF memory card or on the internal IFFS printer memory.

Only the variable data is sent to the printer via keyboard or host computer before being printed out.

Data of a barcode scanner or a scale can be fed additionally.

6 Technical Data

1. Printhead		MACH4		
Printing method	Thermal transfer / Thermal direct			
Print resolution dpi	203	300	600	
Print speed up to mm/s	200	200	100	
Print width mm	104	105.6	105.6	
2. Material				
Labels, continous rolls or fan-folded	thermal and standard paper, cardboard, textile, plastic foils PE, PP, PVC, PA, PI			
Material thickness mm / weight g/m ²	0.055 - 0.8 / 60 - 200			
Label width ¹⁾ mm	6 - 116			
Width of carrier or of continuous material mm	25 - 120 / from 0.4 mm Material thickness 5 - 120			
Label height ¹⁾ mm	5 - 1000			
Label height when dispensing ¹⁾ mm	20 - 200			
Material height when cutting ¹⁾ mm	12 - 1000			
Media roll: Total diameter up to mm	210			
Core diameter mm	38 - 100			
Winding direction	outside our inside			
3. Ribbon				
Ink	outside our inside			
Roll diameter up to mm	72			
Core diameter mm	25			
Ribbon length variable up to m	360			
Width up to mm	114			
5. Dimensions printer				
Height x Depth x Width mm	312 x 435 x 240			
Weight kg	6			
6. Label sensor				
See-trough sensor Position	for label edge or punching mark and end of material centered or shifted 10 mm to the left			
Reflective sensor Position	for label edge, punching or centered printing mark adjustable 56 mm to the left / 10 mm to the right			
7. Electronics				
Processor high speed 32 Bit ColdFire/clock frequency MHz	266			
(RAM) MB	64			
Memory IFFS MB Flash	8			
Slot for memory CompactFlash-card Type I	■			
Slot for memory card Cardbus / PC-Card Type II	■			
Real time clock, print-ad out of time and date	■			
8. Operation panel				
Buttons illuminated, depending on mode of operation	Pause, Feed, Cancel, Menue, Enter, 4 x Cursor			
LCD graphic display Width x Height in mm	60 x 40			
lines/characters	4 / about 20			
9. Interfaces				
Parallel Centronics bi-directional acc. IEEE 1284	□			
Serial RS 232 C 1.200 up to 230.400 Baud/8 Bit	■			
USB 2.0 High Speed Slave for PC-connection	■			
Ethernet 10/100 Base T, LPD, RawIP-Printing, ftp-Printing, DHCP, HTTP, FTP, SMTP, SNMP, TIME, Zeroconf, mDNS, SOAP	■			
WLAN card 802.11b/g WEP/WPA PSK (TKIP)	□			
USB Master for external operation panel, keyboard and scanner	2x ■			

■ Standard □ Option

¹⁾ Depending on label size, material and adhesive limitations are possible. Critical material or applications have to be testet and cleared.

10. Monitoring	
Stop printing if	End of ribbon End of labels Printhead open
On the Display	Data reception Clock WLAN field intensity Date sheet Ethernet state abc Debug Used memory Input buffer Temperature printhead Access to memory card Remaining quantity of ribbon
11. Settings	
	Time, data, digital or analog clock. Country and language settings BE, BG, CH, CN, CZ, DE, DK, ES, FI, FR, GR, HR, HU, IR, IT, LT, MK, MX, NL, NO, PL, PT, RU, RS, SE, SI, TH, TR, UK, US, ZA system settings, print parameters, interfaces, security
12. Test routines	
	System diagnosis of memory and print head when switched on, Short Status, Status Print, font list, device list, WLAN state, profile of label, test grid, monitor mode, PPP state
Status reports	Extensive status print with information about instrument setting, for example print length counter, runtime counter etc. Request of the machine status via software command. Detailed status messages on the display, for example network error-no link, barcode error etc.
13. Fonts	
Font types	5 Bitmap fonts incl. OCR-A, OCR-B and 3 Vector fonts Swiss 721, Swiss 721 Bold and Monospace 821, loadable TrueType fonts. Optional chinese (simplified chinese) Optional Thai
Character sets	Windows 1250 up to 1257, DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869, EBCDIC 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. Optional Thai and Chinese
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, negative, grey, vertical, depending on character fonts
Font width	Variable

14. Graphics	
Graphic elements	Line, arrow, box, circle, ellipse, filled and filled with fading
Graphic formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG
15. Codes	
Linear Barcodes	Code 39, Code 93 Interleaved 2/5 Code 39 Full ASCII Ident- and lead Code 128 A, B, C code of german Codabar Post AG EAN 8, 13 JAN 8, 13 EAN/UCC 128 MSI EAN/UPC Appendix 2 Plessey EAN/UPC Appendix 5 Postnet FIM RSS 14 HIBC 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 variable in height, module width and ratio. Orientation 0°, 90°, 180°, 270°. Optionally with check digit, printed characters and Start/Stop code, depending on code type.
16. Software	
Programming	J-Script direct programming ■ abc-Basic Compiler ■ Database Connector □
System diagnosis/ Administration	Printer monitoring ■ Network Manager □
cab Label software	cablabel R2 Lite ■ cablabel R2 Pro □
Additional Label software	Easylabel, Codesoft, Nicelabel, □ Bartender, Label Matrix, Labelview
Windows driver	2000, XP32/64 bit, ■ 2003 32/64 bit, Vista 32/64 bit
Mac driver	OS X printer driver from version 10.3 ■
Linux driver	Testet with Suse 9.0, ■ CUPS based
17. Operation data by	
Power supply	100 - 240 V ~ 50/60 Hz, PFC
Energy consumption	max. 300 W
Operation temperat.	10 - 35°C
Humidity	30 - 85% not condensing
Approvals	CE, FCC class A, CB, CCC, UL
Power supply	24 VDC ~ 50/60 Hz, PFC
Energy consumption	max. 250 W
Operation temperat.	10 - 35°C
Humidity	30 - 85% not condensing
Approvals	CE, others on request

■ Standard □ Option

The specifications are according to our current technical knowledge. They are subject to change.

8 Accessories

External rewriter ER4



- 1 Roll diameter: max. 210 mm
- 2 Operating voltage: 100 - 240 V ~
- 3 Core diameter mm: 40 / 76

Media hub



For a quick replacement labels and ribbons can be provided in additional holders.

Ribbon holder



Removable battery 4VDC/7.2A



Operating voltage:
24 VDC / 7.2 Ah
L x W x H mm: 380 x 185 x 90
Weight: 5.5 kg

Recharger 24 V



Operating voltage:
100-240 V ~
Charging rate: max. 2 A
Charging time: 6 - 8 h
when completely recharged

Connecting cable



Length: 1.5 m
Additional lengths
on request

Connecting plug



For self cable fabrication
Powercon NAC3FCA

Memory card



CompactFlash Typ I
Label formats, fonts, texts
and graphics can be saved.
It can be accessed from the
printer or from the PC.

Numerical keyboard



Connection: USB
No. of key: 19
L x W mm: 120 x 76

Compact keyboard



Connection: USB
No. of key: 86
L x W mm: 282 x 132
Cherry Classic Line
G84-4100 LCM

Standard keyboard



Connection: USB
No. of key: 115
L x W mm: 460 x 192
Cherry G83-6504 LAD

On this account the operation and the compliance with CE-standards is only warranted by using cab-made materials or materials recommended by cab.

Printer Control

Direct programming with J-Script

J	Job Start
H 100	Speed (100 mm/s)
O R	Orientation rotated by 180°
S 11;0,0,68,70,100	Size of label (100x68 mm, gap 2 mm)
T 10,10,0,5,pt20;sample	Text object/font: Swiss bold, 20 pt
B 10,20,0,EAN-13,SC2;401234512345	Barcode EAN 13, size SC 2
G 8,3.5,0;R:30,9,0,3,0.3	Graphic, box 30 x 9 mm,
A 1	Line strength 0.3 mm
	Number of labels (in this example 1)

The printer language is easy to understand and integrate into your host system. Linkage of variable data with host application. Label design, graphics and fonts are recorded on the compact flash card. The host computer sends only the variable data to the printer.

abc - Basic Compiler

```

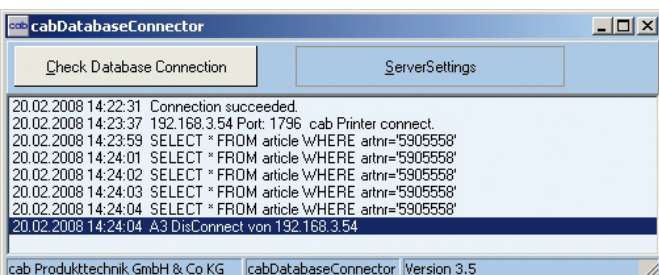
default.lbl - Editor
Datei Bearbeiten Format Ansicht ?

<ABC>
DO
  LINE INPUT a$
  IF LEFT$(a$,15)=""194300301480070" THEN
    PRINT "R t2;";MID$(a$,16)
  ENDIF
  IF LEFT$(a$,15)=""194300300580172" THEN
    PRINT "R t3;";MID$(a$,16)
  ENDIF
</ABC>
    
```

As an integrated element of the firmware it enables the printer to process data via BASIC programming before being transmitted to print editing. Thereby external printer languages can be replaced or data from other systems, e.g. SPS, can be transferred to be printed on different label sizes.

Database Connector

The database connector enables stand-alone printers to link up data from a SQL-compatible database and to print. Data can be rewritten and modified simultaneously to the printing process.



Monitoring

Printer monitoring with Intra- and Internet

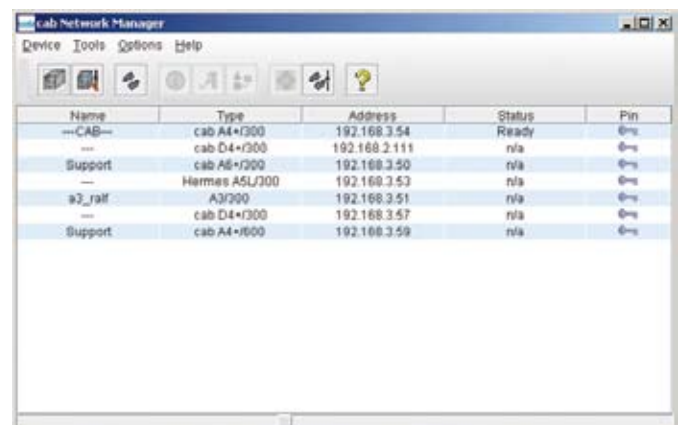


The integrated HTTP- and FTP-Server enables, with standard programs like web browser or FTP-clients, the print monitoring, configuration, the firmware-update and the administration of the memory card. Status signals, warning or error signals are sent to users or administrators either as email or SNMP-datagram via SNMP- and SMTP-clients.

Administration

Network Manager

The cab network manager enables the user to govern several printers within the network at the same time. It supports monitoring, configuration, firmware updates, memory card, datasynchronization and PIN-administration centrally.



10 Label software

Windows driver



Create and print your label with a Windows program for ex. MS Word, Excel, Access, Works, Corel Draw etc.

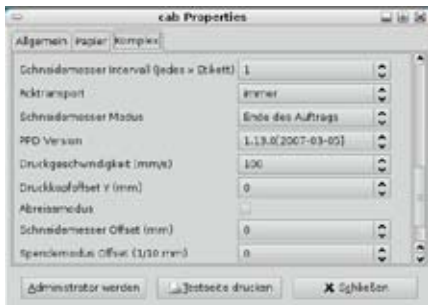
Windows printer driver are provided for 2000, XP 32/64 bit, 2003 32/64 bit, Vista 32/64 bit.

Mac OS X-Treiber



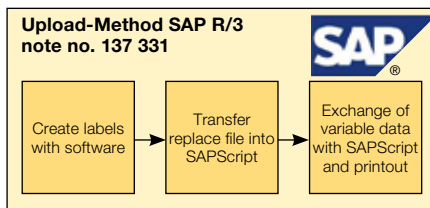
For MAC OS X cab offers a CUPS based printer driver.

Linux-Treiber



For LINUX cab offers also a CUPS based printer driver.

Integration into SAP R/3



cab developed together with SAP the "replacefile" application. This is a simple way to run cab printers with SAPScript out of SAP R/3.

The software to create labels



Perfect labels need optimized text fonts. cab offers a large number of bit-map and vector fonts. Height and width of the font can be scaled and the object can be positioned and arranged. Additional true type fonts can be downloaded to the memory card. Most of the country specific code-pages are supported.

● cablabel R2 Lite

Extensive standard label software. You get it - free of charge - with every cab printer.

● cablabel R2 Pro

Allows the embedding of data from different data bases into the label. An assistant supports the creation of UCC/EAN 128 barcodes.

Whether simple texts, barcodes, graphics and the connection of databases, cablabel R2 is the most flexible - offering 24 languages.

MDI (Multiple Document Interface) helps to open and handle several labels at the same time. Objects can be copied, moved and inserted into another label.














cablabel R2 provides its own drivers with greater response to all different functions of cab printers.
















Take advantage of using the multiple possibilities of cablabel R2.

Additional label Software

The transfer printers and print and apply systems can be easily controlled with Codesoft, Bartender or NiceLabel.

cablabel R2	Lite	Pro
32-Bit Platform-compatibility		
Windows 2000 SP4, XP Professionnel SP2	■	■
Server 2003 SP2 and Vista 32 bit		
Country and language settings		
BE, BG, CH, CN, CZ, DE, DK, ES, EE, FR, FI, GB, GR, HU, HR, IT, IL, JP, KR, LT, LV, MK, MX, NO, NL, PT, PL, RU, SE, SI, RS, TR, US, ZA	■	■
Label samples	■	■
Online document. with tutorials	■	■
Multi-level Undo	■	■
number of levels	1	40
Graphic format import	■	■
Color support	■	■
Color graphic reduction		■
Text art		■
TrueType font	■	■
Graphic barcodes numbers	■	■
	9	37
Native printer barcodes	■	■
Hidden (not printable) objects		■
Label preview	■	■
Graphics preview	■	■
Grid view/print		■
OLE-Client		■
Windows driver support		■
Control of printers	1	99
Support of net printer (TCP/IP)	■	■
Bi-directional communication to the printer		■
Stand-alone		
Printing to file	■	■
Font Downloader	■	■
Database		
Database Manager		
Access, DBF		■
ASCII, ODBC, OLEDB		■
Variables		
Flexible date and time stamping	■	■
Host of date and time with Date offset		■
Printing counter	■	■
Host counter		■
Variable graphic images		■
Free variables		■
Global files		■
Decimal value forming		■
Basic formula		■
User input field		
Text alignment		■
Definition input format		■
Minimum input length		■
Selection of default values		■
Automatic input prompt		■
Extras		
UCC/EAN 128 and Maxicode Assistant		■

Part. No.	Hardware	dpi
	with tear off plate	
5541082	Transfer printer MACH4/200B	
5541083	Transfer printer MACH4/300B	
5541086	Transfer printer MACH4/600B	
	with tear off plate and dispense function	
5541092	Transfer printer MACH4/200P	
5541093	Transfer printer MACH4/300P	
5541096	Transfer printer MACH4/600P	
	with tear off plate and cutter	
5541102	Transfer printer MACH4/200C	
5541103	Transfer printer MACH4/300C	
5541106	Transfer printer MACH4/600C	
	554xxxx.600 Transfer printer MACH4/xxxx-24V	
	5541xxx.102 Transfer printer MACH4/xxxx with RFID read-write unit 13.56 MHz	
Content of delivery:	Transfer printer, Power cable Type E+F, length 1,8 m Operating manual German/English	
CD-ROM:	Brief instruction Quick Start in 17 languages, Operating manual German/English, Set-up German/English, Service manual German/English, Spare part list German/English, Programming manual English, Windows printer driver 32/64 bit in 19 languages for Windows 2000 / XP / 2003 and Vista, MAC OS X driver Germ./Engl. and French, Database Connector English, cablabel R2 Lite in 24 languages, operating manual German, English, French, Spanish and Italian	
Part No.	Spare parts	
	5541074.001 Printhead 4/203	
	5541073.001 Printhead 4/300	
	5541077.001 Printhead 4/600	
	5540896.001 Print roll DR4	
Part No.	Interfaces	
	5561041 WLAN-Card 802.11 b/g	
	5954200 Parallel Centronics Interface	
	5550818 Connecting cable RS232 C 9/9-pole, length 3 m	
	5901616 Connecting cable USB, length 3 m	

Part No.	Accessories
	5540750 External rewinder ER4/210
	5540867.001 Media hub
	5540866.001 Ribbon holder
	5541219 Removable battery 24 VDC / 7.2 A
	5541221 Recharger 24 V
	5541222 Connecting cable 24 V length 1.5 m
	5917904 Connecting plug
	5561043 Memory card CompactFlash Type 1
	5917909 Numerical PC keyboard USB
	on request Compact PC keyboard USB Cherry Classic Line G84-4100LCM
	on request Standard PC keyboard USB Cherry G83-6504 LAD
Part No.	Software
	5580212 Database Connector
	5580215 Network Manager
	5580221 Label software cablabel R2 Pro
	9008486 Programming manual english, printed copy

The specifications are according to our current technical knowledge. They are subject to change.

Product marking



The cab delivery programme

Transfer printer
MACH4



Transfer printer
A+ Series



Print and Apply
Hermes A



Print engine PX-Series



Transfer printer e4



Labels



Ribbons



Label software



Label dispenser
HS150



Scanner and MDE



Laser Marking System
FL-Series



Safety housing
with Accessories



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