TECHNICAL GUIDE

CONNECT.series®

TECHNICAL GUIDE
Connect.series 2.4 version

SUMMARY

01. CONNECT.SERIES MACHINES GUIDE

PORTABLE MACHINES

Easy model
Available with a marking window of 60 x 30 mm and 120 x 60 mm.

Buddy model
Available with a marking window of 60 x 30 mm.

SOON

2 IN 1 MACHINE

Combo model
Available with a marking window of 120 x 60 mm, with or without 3rd axis connector.

02. MARKING HEAD GUIDE

Handle :

The alignment of the handle with the the marking head allows for **360° use** even in hard-to-reach areas, ideal for complex areas, ideal for **mobile use**.

OLED screen:
- Real-time display of information on network coverage, battery charge, the current marking file and number of completed marks.
- **Customisable display option** : the 2 areas «file name» and «counter» can be customised as required *(see software guide page 32)*.

Head available in two sizes depending on the configuration:
- 60x30mm (Easy model only).
- 120x60mm :
  - removable support foot
  - customised foot fixings

Composition :

The use of fiberglass reinforced technical polymers* and protective bumpers make the marking head **lightweight and robust.**

Led :

Lighting of the marking area.

Impact unit :

Designed specifically for the Connect. series machines *(see impact unit guide page 12)*.

CUSTOMER BENEFITS

- ✧ Its distinctive design allows for 360° marking.
- ✧ The OLED display provides real-time information about the machine and the marking in progress.
- ✧ With the IDI, the quality of the marking is guaranteed regardless of the differences in level between the workpiece and the stylus.

*polyamide 6 and polycarbonate 15% fiberglass filled

03. WIRELESS SOLUTION GUIDE

Marking head equipment:

- **High performance lithium-ion battery** *(see battery guide page 5)*.
- **RFID chip** that allows quick pairing of the head with the controller.

Controller equipment:

- Connectable via Ethernet.
- Allows connection to the marking head network via the controller.
- 3 USB ports for external keyboard, 1D 2D readers, USB stick.
- **RFID chip**.

Secure Wifi Protocol*:

- Wireless connection of the marking head with the controller.
- Remote control, in a range of up to 10 metres.

RFID tag

CUSTOMER BENEFITS

- ✛ Suitable for marking hard-to-reach parts.
- ✛ Benefit from a network connected solution.
- ✛ Significant reduction in machine maintenance costs and breakdowns**.
- ✛ Marking in total freedom without cable constraints.

*Proprietary closed loop protocol
**Approximately 50% of after-sales interventions are linked to the head and controller cable

03. WIRELESS SOLUTION GUIDE

WIFI BAND USED BY THE CONNECT.SERIES MACHINES

The main objective of the Connect.series machines is to offer users maximum freedom of movement thanks to the wireless communication between the marking heads and their control system, despite obstacles. Technomark has therefore chosen to use the 2.4 GHz wifi frequency.

Characteristics	2.4 gHz	5 gHz
Bandwidth congestion		👍
Scope	👍	
Flow rate (speed)		👍
Obstacle tolerance	👍	

👍 Best performing technology

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04. BATTERY GUIDE

BMS by Technomark:
- Embedded intelligence «BMS» (*Battery Monitoring System*).
- Measures and displays battery charge level continuously (Soc) and battery voltage level.
- Battery health level (Soh) data.

Cells:
6 high performance cells (21700) rechargeable lithium-ion new generation type NMC (*Nickel Manganese Cobalt*).

Thermoplastic blister:
Protection and storage of the battery cells.

22V* AND 85Wh BATTERY

CUSTOMER BENEFITS

+ 22V* and 85Wh battery, new generation cells (21700)
  - **Better warm-up control** : increase lifespan battery (from 250 to 400 charge cycles up to 100% according to the environment temperature**).
  - **Significantly increase the battery performance**, number of marking multiplied by 3.5 compared to Multi4 V3.
+ Conception of the battery specifically for our machine
  - **«Form factor» control** of the battery allowing mecanic integration : 360° marking will be impossible with portable battery.
  - Recharge the battery at the same time as marking.
  - Real-time monitoring of the battery (health, life span, remaining capacity translated into number of parts to be marked).

*Portable battery are in 18V
**With less than 30% lost of initial capacity (23°C ambient)

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04. BATTERY GUIDE

CONDITIONS OF USE OF THE INTEGRATED LITHIUM ION BATTERY

Our batteries are subject to the same constraints as all lithium ion batteries. Here are the conditions to be respected for a good use and an optimized life of the battery on the Connect. series range.
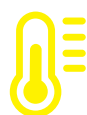
0°C/45°C
- Temperature limit of the battery for charging

-20°C/60°C
- Temperature limit of the batterie for use

The battery temperature information is in the head «maintenance» menu.

> 23°C	Reduce the life span of the battery (400 charging cycle/complete discharging, 350, 250…). Low impact on the autonomy.
23°C	*Temperature realisation of the marking tests on the battery components.*
< 23°C	No change on the life span battery. Reduce the autonomy (800 markings, 600, 400…).

Non exhaustive list of the conditions of use which could create a security alert on the software and environment to consider:
- Ambient temperature
- Parts temperature
- Environment
- Marking type

04. BATTERY GUIDE

EXAMPLES OF CONDITIONS OF USES

For high temperatures.

1st SCENARIO

- 35ºC of ambient temperature
- Marking file with 5 000 points
- Pace of 200 marking/day
- 30s break between marking

2nd SCENARIO

- Parts marking with a high temperature of 60ºC
- Ambient temperature of 30ºC
- Marking with 10 characters strength 11
- Maximum speed
- Break of 3 to 4s between each marking

OBSERVATION : SECURITY ALERT ON THE MACHINE

Beyond 45ºC, there is a very high risk.
But the machine has a security system on the battery and on the impact unit. So there is no destruction risk on the material.

RECOMMENDATIONS

For an use with ambient temperature above 35/40ºC the user risks to be limited with the machine software. We recommand to have a break between each markings to let the machine cool.

04. BATTERY GUIDE

EXEMPLES OF CONDITIONS OF USE

For low temperatures.

SCENARIO

- Machine stored under -10ºC
- Battery with 30% power

OBSERVATION :
Battery charging impossible

1st SOLUTION:
Possible to mark, thus the machine will rise in temperature and after few markings charging battery is possible.

2nd SOLUTION:
Warm up of the machine to be over 0ºC and allow battery charging.

PRECONISATIONS

For a use with ambient temperature under 0ºC, stored the machine in a place with a temperature above 0ºC to allow battery charging.

04. BATTERY GUIDE

BATTERY PERFORMANCE AND COMPETITIVE COMPARISON
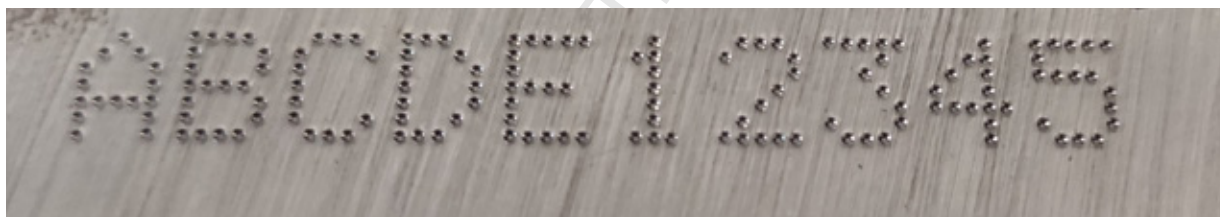
Connect Series battery charging time:

- **From 10 to 80%: about 55 min** (10% charge every 8 min).
- **From 10 to 100%: about 1:35**.

Marking test:

- ABCDE12345
- Height= 5mm
- Matrice 5*7
- 0.2mm depth on steel S235 (about 180HB hardness) equivalent to 50% maximum strength Connect Series.

Marking test executed:

Competitors machines tested:

04. BATTERY GUIDE

BATTERY PERFORMANCE AND COMPETITIVE COMPARISON

	100% battery *Maximum number of marks*	Comments about competitors machines	Battery life (under charges) compared to Easy 120
MARKATOR FLYMARKER MINI 2Ah / 18V	230 to 260	Tests equivalent to maximum strength because low power machine	From 30 to 40%
TECHNIFOR XM700 4.3Ah / 37V	350 to 470	Disparity with measures - because of bad battery management ?	From 45 to 59%
DATAMARK MP-100 MOBILE 5Ah / 18V	370 to 380	Smartphone and pad energy consumers too	About 50%
SIC E-MARK 3Ah / 18V	380 to 390	No alerts at the end of autonomy	About 50%
STAMP IT MNSB53 5.5Ah / 18V	370 to 390	Smartphone and pad energy consumers too	About 50%
TECHNOMARK MULTI4 PB50 72Ah/24V	230 to 240	NI-MH battery - shorter lifespan	About 28%
TECHNOMARK EASY 120	790 to 810	-	-

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04. BATTERY GUIDE
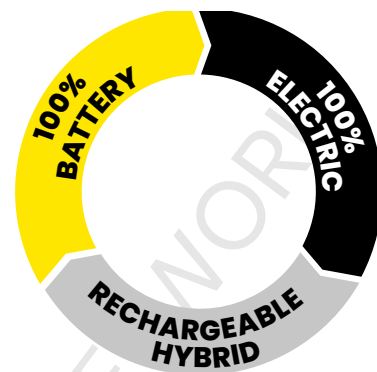
ENERGY SELECT : 3 USES

100% battery mode :
Light to deep marking with moderate use.

100% lithium-ion battery

100% electric mode :
Deep marking with intensive use (large series).

100% electric

Plug-in hybrid mode :
To ensure continuity of production in case of low battery.

Plug-in hybrid

	100/day	200/day	300/day	400/day	500/day
Low marking	Battery use				
Moderate marking					
Deep marking			Electrical + battery use		
High deep marking					

Use of the battery depending on marking frenquencies and deepth

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05. IMPACT UNIT GUIDE

A NEW IMPACT UNIT, WHAT'S NEW IN?

Why to change? It's bold, but impacting!

Today, users are waiting for very different marking machines than is the 2000's, date of appearance of our first version of the Multi4 machine. It has been 20 years we used the same impact unit, we need to change it to answer the new requirements of the traceability market. A different use, easier than before, with less and less settings, a 2D marking (thanks to the IDI function) which was sometimes difficult to set up and a need of deep marking still significant. Also, priority of the handheld machines is now focused on the weight, the maniability and the autonomy which are the first choice criteria.

How to change?

Industry needs	Proposed plan
Handheld machines lighter and lighter	Reduce the weight of several parts of the machine including the impact unit
Handheld machine more and more energy sufficient	Reduce the energy consumption to avoid charging during working hours
Performing machines, Technomark's signature	Keep a kinetic energy similar to the previous ranges (V2, V3)
Machines able to make constant quality marking, Technomark's signature thanks to IDI function	Have a constant impact energy on a range of 5,5mm distance

05. IMPACT UNIT GUIDE

Coil
Core
} **Solenoid or (Electromagnet)**

Spring

Tungsten carbide stylus
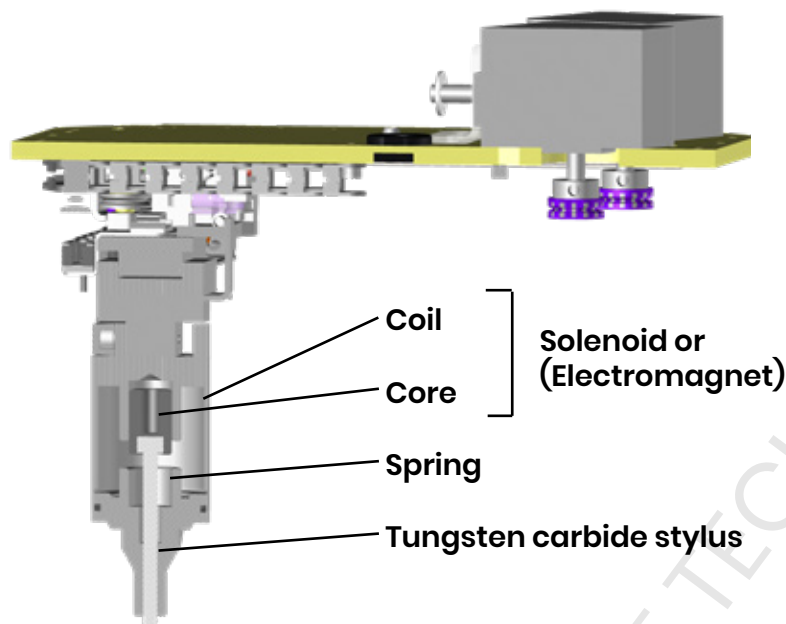
Process :

An electromagnetic solenoid drives the stylus down onto the marking surface to create a precise indent.

Application :

- Different marking types: alphanumeric text (straight, radial, angular), sequential data, timestamp, logos, 2D barcodes (Datamatrix ECC200, QR).
- On all types of materials with less than 63HRC hardness that accept plastic deformation: metals, plastics, etc.

IDI function:

The IDI** (Intelligent Driving Impact) function: the machine adapts to the shape of the part and offers **consistent quality marking** over a range of 3mm to 8mm.

CUSTOMER BENEFITS

✛ New impact unit that is the result of three years of research.
✛ Constant marking and management of height differences.
✛ Moving mass divided by 2.5 and stylus speed multiplied by 3 (compared to Multi4 V3):
   - Marking performance similar to Multi4 V3 (in terms of depth)
   - Improved battery consumption (battery autonomy multiplied by 3.5)

**Patent No. EP2035238 (EP - 06764715.6) - Patent No. US-9,421,598 - Patent No. JP-2009-512631

05. IMPACT UNIT GUIDE

TABLE OF NOMINAL DISTANCES MARKING DEPTH

Measures realised in our Applab with a 3D microscope. Tests with new stylus and clean and lubricated impact unit.

Strength / metal	AU4G aluminium 75 HB (in mm)	S235 steel 180 HB (in mm)	C35 steel 260 HB (in mm)	40CMD8 steel 350 HB eq. 36 HRC (in mm)
Strength 1	0.05	0.02	0.02	0.02
Strength 2	0.1	0.09	0.08	0.07
Strength 3	0.15	0.12	0.1	0.09
Strength 4	0.2	0.16	0.12	0.11
Strength 5	0.25	0.19	0.17	0.16
Strength 6	0.3	0.22	0.19	0.18
Strength 7	0.35	0.25	0.21	0.21
Strength 8	0.4	0.27	0.25	0.23
Strength 9	0.45	0.3	0.26	0.25
Strength 10	0.5	0.39	0.31	0.29
Strength 11	0.55	0.4	0.36	0.32

From strength 4, depth variation lower than ±10% (for a stylus - parts distance between 3 and 8 mm).

05. IMPACT UNIT GUIDE

INDICATION TABLE OF THE NUMBER OF POINTS RELATED TO THE FONT SIZE

| Height	Marking of 36 characters (alphabet + numbers)	5x7	9x13	Arial	Vector 0.2	Vector 0.3	Vector 0.4	Vector 0.5
1 mm	Total nb_points	536	1 051	1 903	460	348	291	280
	Nb_points/ characters	15	29	53	13	10	8	8
	Distance between points (mm)	0.17	0.08	0.04	0.20	0.30	0.40	0.50
3 mm	Total nb_points	536	1 051	1 903	1 329	877	630	570
	Nb_points/ characters	15	29	53	37	24	18	16
	Distance between points (mm)	0.50	0.25	0.12	0.20	0.30	0.40	0.50
5 mm	Total nb_points	536	1 051	1 903	2 279	1 483	1 118	885
	Nb_points/ characters	15	29	53	63	41	31	25
	Distance between points (mm)	0.83	0.42	0.20	0.20	0.30	0.40	0.50
8 mm	Total nb_points	536	1 051	1 903	3 738	2 464	1 836	1 458
	Nb_points/ characters	15	29	53	108	68	51	41
	Distance between points (mm)	1.33	0.67	0.32	0.20	0.30	0.40	0.50
10 mm	Total nb_points	536	1 051	1 903	4 653	3 096	2 279	1 818
	Nb_points/ characters	15	29	53	129	86	63	51
	Distance between points (mm)	1.67	0.83	0.40	0.20	0.30	0.40	0.50

Exemple for a 5mm height
- From 0.2 vector to a 0.4 vector : a 40% battery autonomy gain.
- From a 0.2 vector to a 9x13 : a 30 to 40% battery autonomy gain.
- From a 0.2 vector to a 5x7 : a 70 to 100% battery autonomy gain.

05. IMPACT UNIT GUIDE

INDICATION TABLE OF THE POINT DIAMETER AS A RESULT OF THE STYLUS ANGLE AND THE DEPTH

Depth (mm)	60° stylus	90° stylus	120° stylus
0.1	Ø0.12	Ø0.2	Ø0.35
0.15	Ø0.17	Ø0.30	Ø0.52
0.20	Ø0.23	Ø0.40	Ø0.69
0.25	Ø0.29	Ø0.50	Ø0.87
0.30	Ø0.35	Ø0.60	Ø1.04
0.35	Ø0.40	Ø0.70	Ø1.21
0.40	Ø0.46	Ø0.80	Ø1.39
0.45	Ø0.52	Ø0.90	Ø1.56
0.50	Ø0.58	Ø1.00	Ø1.73
0.55	Ø0.64	Ø1.10	Ø1.91
0.60	Ø0.69	Ø1.20	Ø2.08

Ø0.4 mm · 0.4 mm ✅

Ø0.4 mm · 0.3 mm ⛔
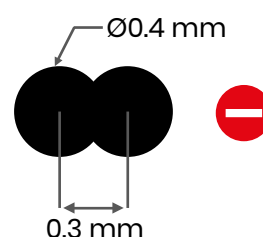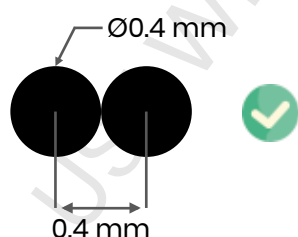
PRECONISATIONS

We recommand not to overlay the dots. IIncreasing the dot spacing will increase the battery life and also limit the stylus wear and tear. As a general recommendation, for a text height under 5 mm, a 5x7 matrix has a better quality - speed / autonomy ratio.

05. IMPACT UNIT GUIDE

CLEANING AND LUBRICATION INSTRUCTIONS

The new impact unit has better performance so thus it has to be cleaned and lubricated more often than before. We recommend the following frequencies thanks to the cleaning kit provided with the machine.

	Nb of marking / day	Font used	Cleaning/lubrication frequencies
Low use	20	5x7	Once a month
		9x13	Once a month
		Vect 0.2	Once a month
		Vect 0.4	Once a month
Moderate use	100	5x7	Once a month
		9x13	Once a month
		Vect 0.2	Once a week
		Vect 0.4	Once a month
Intensive use	200	5x7	Once a month
		9x13	Twice a month
		Vect 0.2	Once a week
		Vect 0.4	Twice a month
Very intensive use	300	5x7	Once a month
		9x13	Once a week
		Vect 0.2	Once a week
		Vect 0.4	Twice a month

Datas given a marking of 10 characters, heigth 5mm, made on a machined and flat surface in a normal environment with a temperature between 20 et 25ºC. An oily environment, presence of dust, very high temperatures are likely to change these frequencies to once a day. The cleaning rate have to be checked with your sales contact during the installation of the machine.

Cleaning and lubrication instructions of the impact unit are available in the Connect. series maintenance guide. You also have video tuto and quick start guide provided with the machines. Maintenance alerts are also available on the controller when the impact unit need to be cleaned and lubricated.

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06. FOOT SUPPORT GUIDE

5-in-1 support foot:

1 Marking of flat parts

2 Magnetic support with 4 magnets: clamping aid for metal parts

3 Anti-slip : 4 polymer inserts (V-profile)

4 Cylinder marking (2 sizes of V, one for diameters below 15mm and above 15mm)

5 Support guide : positioning aid (mechanical stop)


+ Customizable foot support for 120x60mm head

CUSTOMER BENEFITS

+ The most complete machine on the market with the standard 5 functions in 1 foot support.
+ No need to buy additional tools.
+ Allows the marking of a wide variety of parts.
+ Optional customised solutions can be provided for specific needs.

07. STORAGE DOCK GUIDE

Preventive maintenance function :
- Check the sharpness of the stylus angle.
- Check the spring condition (length).
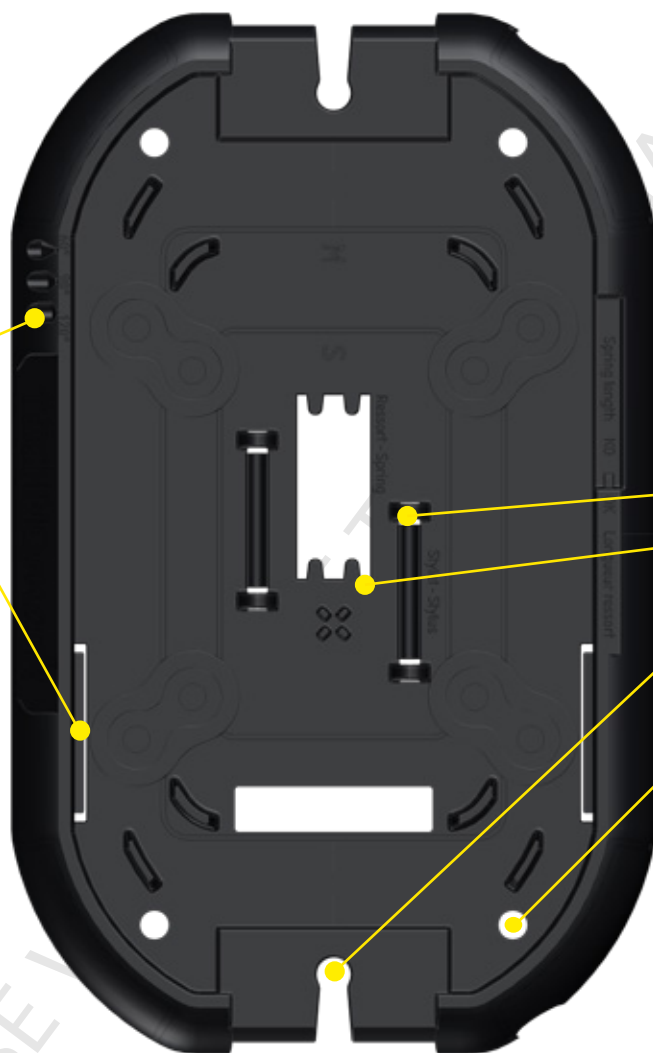
Storage / fixing function :
- Support function for the marking head (suitable for 120 and 60 heads).
- Storage for :
  - styluses,
  - springs,
  - positioning aids (bar-end support guide).
- 4 fixing holes to put on a bench top or other.

CUSTOMER BENEFITS

+ Ergonomic storage tool delivered with the machine.
+ Optimised and clean work space.
+ It can be integrated into any work area thanks to its compatibility with different supports *(see support guide page 23).*
+ Reduces the risk of breakage or loss of equipment.

08. COMBO BENCH KIT GUIDE

BENCH KIT : ONE MACHINE, SEVERAL CONFIGURATIONS

Only available with a window size of 120 x 60 mm.

BENCH CONFIGURATION

Column:
- Marking of small to medium-sized parts: up to 290 mm high as standard, with an optional 150 mm column extension.
- Crank handle on the top of the column to adjust finely.
- Quick Shift function to easily and quickly set the height.
- Quick and easy fastening of the head on the support thanks to the levers.

Base:
- General dimensions (L x l x H) : 412 x 310 x 656 mm.
- Ergonomic base.
- Compatible with accessories : plates support, parts support, rotary axis and other clamping systems.

Marking head:
- *See informations of the marking head p.2.*
- *See informations about the wireless connectivity p.3.*
- 3rd axis connection available on the 120D model.

Marking window :
- 120 x 60 mm.
- Easy Shift function which allows a simultaneous movement of both the items being edited and the stylus.

08. COMBO BENCH KIT GUIDE

VERSATILITY OF THE COMBO MODEL

2 in 1 machine: from a bench mode to a handheld mode in less than 10 seconds without any tools.

Vigilance from handheld mode to bench mode
In bench mode, the levers of the marking head must not interfere with the percussion assembly.

Vigilance from bench mode to handheld mode
To set the foot support in a handheld mode, you must push on the levers of the foot support before you turn it.

CUSTOMERS BENEFITS

✦ The Combo model, expand marking possibilities.
✦ Allows marking on all parts size types (from very small to very large dimensions).
✦ Important freedom of movement in handheld mode thanks to the wireless connectivity.
✦ Increased accuracy for small size parts marking thanks to the ergonomic column base.

09. CONTROLLER GUIDE

Focus on controller:
- Large 10" touch screen with tempered glass.
- Robust casing in ABS/PC.
- Protective bumpers in the corners.

Focus on fixing:

The controller is equipped with a VESA 100 mount: a **universal mount** found on the back of televisions, computer monitors and other types of displays. This mount makes the controller compatible with the mounts developed by Technomark and with other types of mounts (articulated arms, wall mounts, etc.).

Focus on connectivity:
- 3 USB ports for drives, external keyboard and USB keys.
- 1 RJ45 port Ethernet (*see communication protocol guide p.33 and network licenses p.35*)
- 220V alimentation.

CUSTOMER BENEFITS

+ Robust and easy to use controller.
+ All information available on one screen.
+ Interface can be configured according to users needs.
+ Industry 4.0 compatible controller.
+ Integration of previously developed functions as standard.

10. CONTROLLER HOLDERS GUIDE

A FULL OFFER OF CONTROLLER SUPPORTS FOR TURN-KEY WORK STATION

In order to propose all-in-one traceability solutions, Technomark has developped various controller supports which answers all needs. Some are compatible with all of the Connect.series range machines, others are dedicated to a specific model.

CUSTOMER BENEFITS

+ Create a dedicated work area, allowing production to be organised around it.
+ Reduce the risk of breakage or loss of equipment.
+ Complete ready-to-use solutions.
+ 3 workstations adapted to each need.

10. CONTROLLER HOLDERS GUIDE

LIGHT HOLDER

Controller holder with bench fixing compatible with Easy and Combo model.

Support functions:
- Compact, space saving.
- Storage for controller power supply.
- Possible to add an external keyboard.

ADVANCED HOLDER

Benchtop storage and charging station compatible with Easy and Combo model.

Support functions:
- Controller stand.
- Parking base for dock and marking head.
- Possible to add an external keyboard.

Power supply for the marking head and controller:
Storage for power supplies.

10. CONTROLLER HOLDERS GUIDE

PREMIUM CONTROLLER HOLDER

Workstation with floor fixing compatible with Easy model.

Support functions:
- Slot for a 1D or 2D code reader
- Controller support
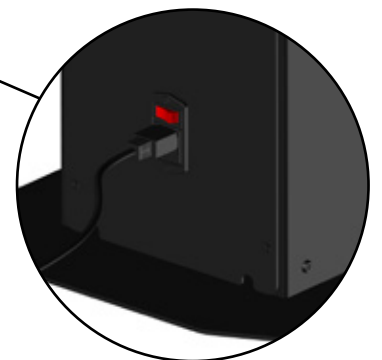- Marking head support positioned on the storage dock (compatible with 60 and 120 heads)
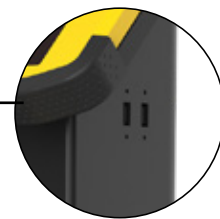
Connectivity:
2 lateral USB ports: connection of 1D and 2D readers and USB stick.

Charging station :
Integrated controller and marking head power supplies.

Power supply:
- Single power cable supplying the controller, the marking head and the reader.
- ON/OFF button.

10. CONTROLLER HOLDERS GUIDE

UPGRADED HOLDER*

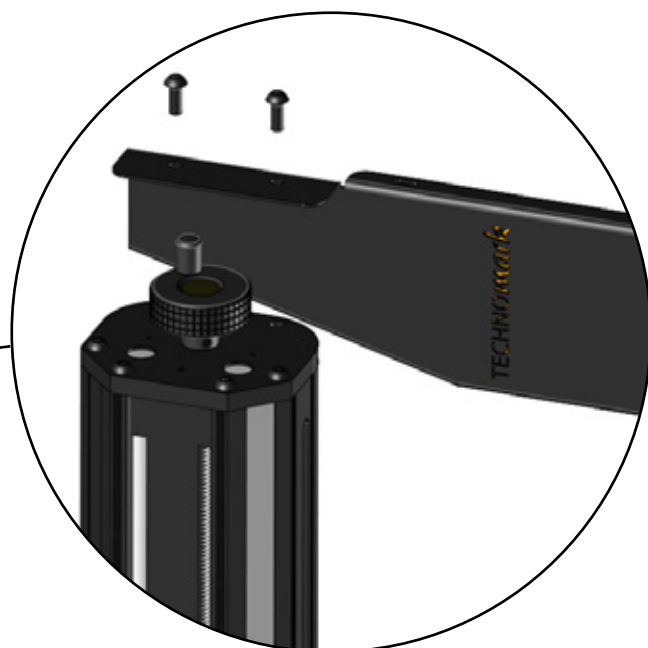Supplement to set up on the column compatible with Combo model

Support functions:
- Small space requirement on the floor
- Ergonomic, controller at eye level
- All-in-one solution

Quick set-up:
- 2 screws are sufficient to set up the support on the column.
- Could be added later

« Upgraded support» is the commercial name. The name on the tarif file is « Column controller support ».

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10. CONTROLLER HOLDERS GUIDE

FULL HOLDER

Working trolley with an extra size column base integrated compatible with Combo model

Upgraded controller holder:

Support integrated with the Full solution *(See Upgraded controller support description p.26)*

Standard column:

See bench kit description p.21

Extra size base:
- Larger base which allows to host larger parts
- General dimensions : (L*l) 660*440 mm

Trolley on wheels:
- General dimensions : (L*l*H) 684*470*820 mm
- Easier moving thanks to the wheels (2 guidance wheels) and the handle
- Double storage level (50kg max for each tray)

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SOFTWARE & LICENSES GUIDE
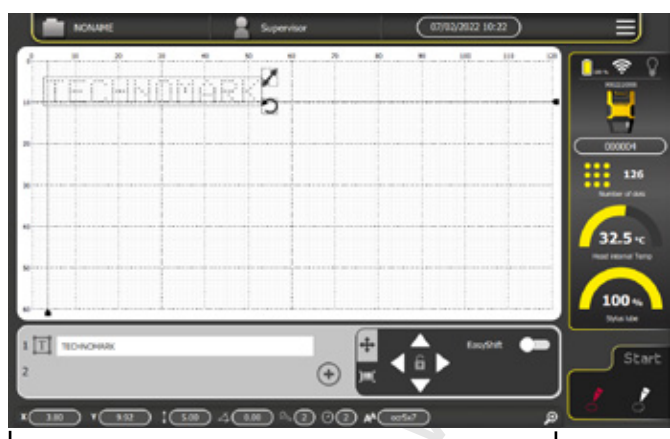
CONNECT.SERIES CONTROLLER SOFTWARE

Compatible with Easy and Combo models

2 modes of use :

Creation mode:
- Create marking files
- Machine administration
- Mark
- Dashboard settings (configurable in option. *See description of «custom display» license p.35*).

Production mode:
- Entering variables with prior authorization
- Create marks

— Dashboard configurable

Marking informations: settings can be defined for the whole marking file or can be adapted to each marking line.

- Content of each line in the file
- Position of the X and Y line
- Height of the characters
- Angle of the marking

- Marking force: from 1 to 11
- Marking speed: from 1 to 3
- Font used (matrix)

⊕ Select several lines of the file at the same time to move them or to modify the marking parameters thanks to the multi-selection.

⊕ Align the different lines of the marking file with the horizontal, vertical and central alignment tools.

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SOFTWARE & LICENSES GUIDE

CONNECT.SERIES CONTROLLER SOFTWARE
Compatible with Easy and Combo models

Types of marking:
- Text: alphanumeric and special characters
- Circular, angular and mirror text
- Variable
- Serial number
- Timestamp
- 2D code*: Datamatrix and QR code
- Logo* (with LogPro software)
- Shape: round, square/rectangle, line
- Path point
- Pause

*Function associated with a license *(see licenses p.32)*

3 users mode:
- **Operator**: access to the production mode with existing files.
- **Supervisor**: production mode access and file creation.
- **Administrator**: production mode and file creation access with machine administration.

Preventive maintenance module:
- Software version of the head and controller
- Maintenance of the impact unit: level of lubrication and sharpening, temperature and number of impacts realised.
- Battery health status thanks to the Battery Monitoring System *(see battery guide p.5)*.
- Information on the cross table: origin, distance travelled and revision.

Regular and proper maintenance ensures better smooth and lifespan of the machine. This is why, maintenance alerts depending on the use of the machine are available on the controller. They indicate when maintenance is required.
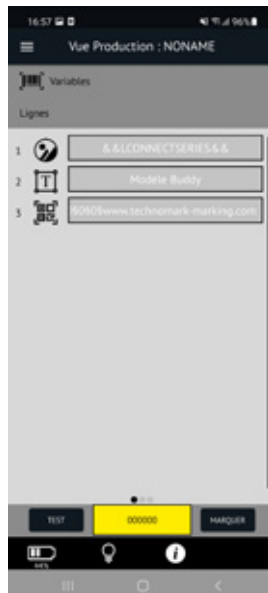
SOFTWARE & LICENSES GUIDE

APPLICATION CONNECT.APP

Compatible with Buddy model

The Connect.App is available on the Google Play Store. It works with smartphones with Android 10 and above.

2 user profiles:

Admin mode:
- Create marking files
- Manage the machine
- Make markings*

Possibility of access with a password.

Production mode:
- Entering/scanning variables with prior authorisation
- Make markings*

Types of marking:
- Text: alphanumeric and special characters
- Circular, angular and mirror text
- Variable
- Serial number
- Timestamp
- 2D code**: Datamatrix, QR code
- Logo** (with LogPro software)
- Pause

**Licence required (*See license guide p.31*)

Differences from the Connect.series controller:
- Marking parameters (force, speed and matrix…) identical to those of the controller but defined for the whole file and not per line
- No shape marking
- No multi-selection of file lines
- No VIN serial number
- No network connection

*The realization of the markings requires to have a Buddy license *(See license description p.32)* and to be connected to a head.

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GUIDE
## LOGICIELS & LICENCES

APPLICATION CONNECT.APP

Compatible with Buddy model

Maintenance menu:
- Impact unit: lubrication, sharpening and temperature
- Battery: level, temperature and number of cycles
- Cross table revision
- Software: head version and application

Maintenance alerts are available on the application when a maintenance operation is required.

LICENCES FOR THE APPLICATION
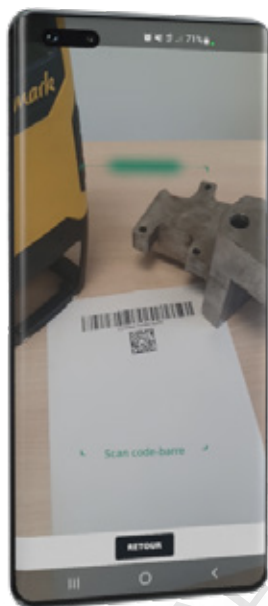
NEW **Buddy license:**
- Making markings with the Connect. App
- Access the maintenance menu of a marking head

NEW **Barcode scanning license:**
Scan 2D codes (barcode and Datamatrix) via the camera integrated in the smartphone.

CUSTOMER BENEFITS

+ 1 licence per marking head: unlimited number of users and smartphones for one head.
+ File creation in offline mode (without connection to the head).
+ Infinite freedom of marking and movement thanks to a battery-operated control unit and a wireless marking head.

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SOFTWARE & LICENSES GUIDE

«Datamatrix» license:

Marking Datamatrix and QR codes.

Compatible with Easy, Combo and Buddy models.

«Logo marking» license:

Mark logos created with Logpro (PC software).

Compatible with Easy, Combo and Buddy models.

Logpro makes your logo design and marking easier, more intuitive and faster

Communication protocol

The Ethernet port on the controllers allows the machine to be controlled via a TCP/IP communication protocol. This is not subject to a licence.

Compatible with Easy and Combo models.

SOFTWARE & LICENSES GUIDE

«USB-CSV manager» license:
- Mark data from a CSV file
- file stored on a USB stick.
- 2 steps :
  - Import and configure the CSV
  - Marking

Compatible with Easy and Combo models.

«USB Production tracker» license:

Export to a USB stick the data related to the marks made (date, content, user...).

Compatible with Easy and Combo models.

NEW **«RFID – Log on head or CB» license:**

«Logging» a user with an RFID tag. 2 RFID tag are supplied with each licence.

Compatible with Easy and Combo models.

NEW **«RFID – Data input» license*:**

Fill in the content of a variable with an RFID badge scan.

Compatible with Easy and Combo models.

*Available current 2023

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SOFTWARE & LICENSES GUIDE

NEW **Marking authorization control license:**

- Enable the VVIN and SVIN variables which prevent the same value being marked more than once.
- Check for duplicates on CB variables.
- Select the allowed head positions for the markings.
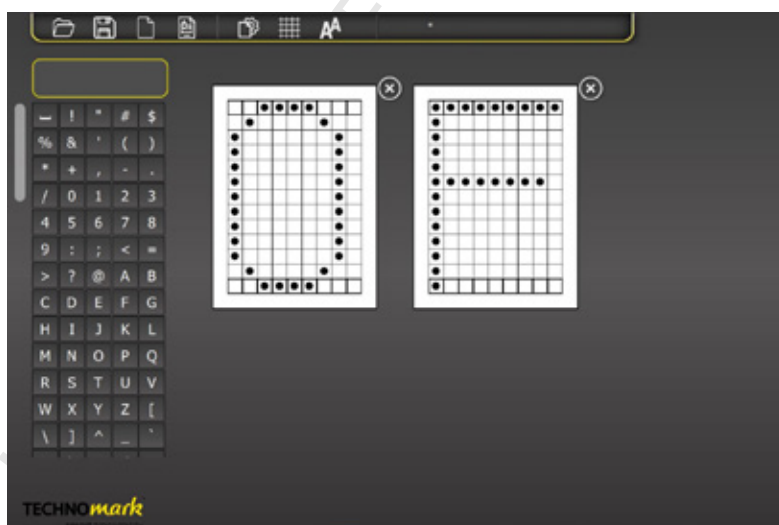
Compatible with Easy and Combo models.

NEW **«Network Access» License:**

- Connect the controller to the network.
- Store the marking files and logos on a remote PC in the network.
- Access CSV Manager on the network, no need for a USB stick
- Export marked data to a network folder.

Compatible with Easy and Combo models.

NEW **«Font Creator» license:**

Allows you to import and use fonts created with the FontCreator software (free PC software).

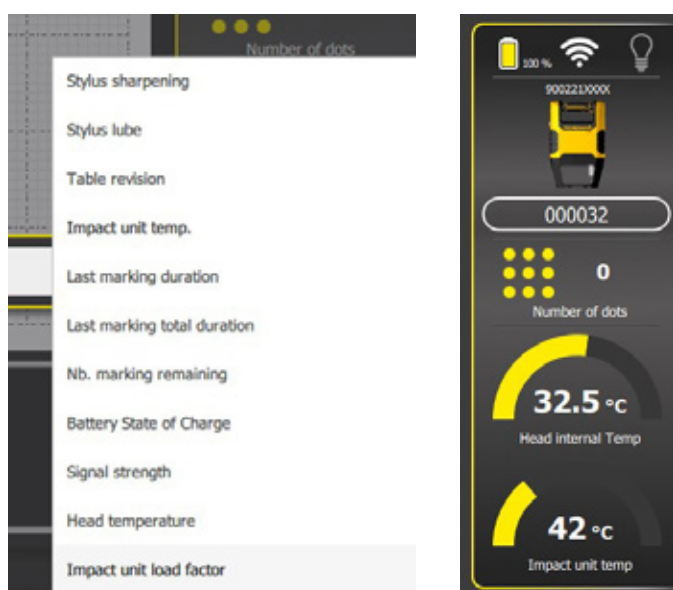Compatible with Easy, Combo and Buddy models.

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SOFTWARE & LICENSES GUIDE

«Custom Display» license:

This option allows you to set the display of the dashboard and the OLED screen located on the marking head.
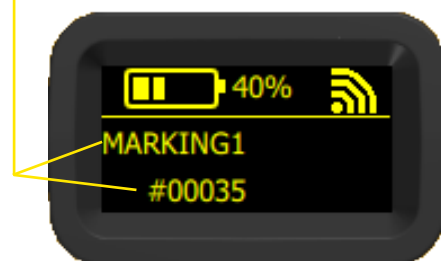
Compatible with Easy and Combo models.

Dashboard customisation:
- Drop-down menu with display choices:
  - Preventive and predictive information,
  - Information on marks,
  - Information on the controller.
- 2 customisable areas, by default :
  - lubrication stylus indicator,
  - Total duration of the last marking.

OLED screen customisation:
- Drop-down menu with display choices :
  - Information on markings,
  - General.
- 2 customisable areas, by default:
  - «counter»,
  - «file name».

This option allows you to have a solution 100% adapted to the use of the machine.
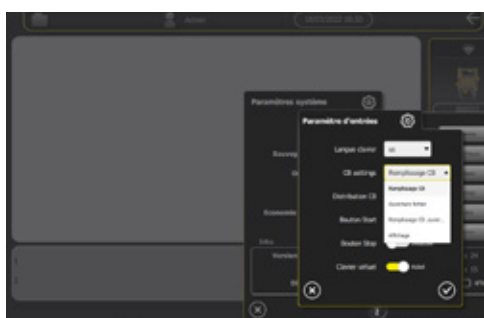
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ACCESSORIES GUIDE

CODE READER
Compatible with Easy and Combo models

Flexible management of 1D, 2D readers. With a single setting the scanner can perform 4 functions:

- Open a file.
- Fill a variable from the scan.
- Sequencing: opening the file then filling in the variables
- Display of code content.

HIGH CAPABILITY D AXIS
Compatible with Combo 120D model

The high-capacity D-axis is used for marking the circumference of a cylindrical part. It is equipped with a fixing foot to ensure that it is held. It must be mounted on the left side of the workbench in order to respect the direction of rotation set and must be aligned with the axis of the marking window. To function properly the D-axis must be connected to the head and declared in the controller software. The marking head must be **connected to the mains.**
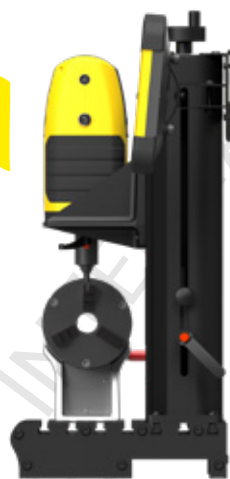
Capacity :
- Ø130 mm chuck
- • Chuck for bar passage up to Ø30 mm
- • Loading capacity up to 10 kg for Ø80 mm

Bridage :
- From inside from Ø40 to Ø130 mm
- • From outside from Ø3 to Ø40 mm
- • OR from Ø40 to Ø120 mm depending on the chuck jaws

⊕ Magnetic storage is provided at the back of the D-axis for the chuck key.

TECHNO*mark*

13. FREQUENTLY ASKED QUESTIONS

Controller questions :

- **Can the controller be used with gloves?**

The controller can be used with gloves that are compatible with capacitive touch screens. We recommend the MAXFEEL range from ROSTAING. However, we do not guarantee compatibility with all gloves on the market.

- **Does the controller come with accessories?**

A protective film is available as an option, also available as spare parts. A USB pen drive is also available.

- **How do I clean the controller screen?**

To clean the screen, use a soft cloth with isopropyl alcohol or ethyl alcohol.
CAUTION: Do not clean with water or acetone

- **What are the special features of the keyboard?**

Overall, there is no need for an additional keyboard as the screen is touch-sensitive and has a virtual keyboard with all the necessary characters (including Cyrillic).
However, it should be noted that standard USB keyboards can be used to facilitate input. These will only be used for entering characters but will not exempt the user from entering the menus.

Programming questions :

- **The file formats are different from the previous generation, can they be modified manually?**

Manual modification of the files is not possible. We offer a paid service for converting V3 files to Connect.series files (item NLC-611). Please note that there may be losses, the conversion is not 100% guaranteed.

- **Is the machine compatible for a left and right-handed use ?**

The controller has a left-handed option which allows you to keep the start button under the index finger.

- **What format should I use for the logos?**

It is the same format as on the Multi4 V3, Logpro is 100% compatible with the Connect.series machines.

13. FREQUENTLY ASKED QUESTIONS

- **How to modify/delete a file or a variable?**

A bin icon appears when editing the variable. As same as a bin icone is in the file menu.

- **Can we load a marking sequence to avoid returning to the controller?**

Yes, by using the CSV manager licence which allows you to generate an upstream marking file. Automatic increments of serial numbers also allows successive markings with data changes.

- **What is VIN and how does it work?**

The so-called VIN variables have a check on the markings already made over a given time period (typically 30 days). If a value has already been marked, an error message appears. This message could be blocking or not.

- **What are the differences between the three user modes?**

The same as Multi4, supervisor mode allows creation and editing of marking files. The production mode is limited to file opening, information of variable and marking. And the supervisor mode allows the machine administration (controller setting, license, etc.). The administrator mode allows you to configure the machine (setting of controller parameters, licenses, etc.).

- **How do you make a user code appear on a variable/marking?**

By using the «USER» variable which mark the iD of the user logged in.

Questions about the marking head and the foot support:

- **What is the life span of the LED?**

The estimated lifespan is 20,000 hours.

- **Why isn't the impact unit blocked when not marking?**

If the impact unit is not moving, the batteries must be powered. For energy saving reasons. we chose not to immobilize it.

- **Is it necessary to lubricate the stylus?**

A light lubrication and a cleaning are necessary. Please refer to the dedicated page of the technical guide. Lubrication need is also indicated in the controller dashboard. NB: Too much lubrication can lead to a «suction» effect and not enough can lead to a «friction» effect which could degrade marking quality.

13. FREQUENTLY ASKED QUESTIONS

Questions about the connexion between marking head and controller:

- **What is the frequency band of the WIFI used?**

The frequency band used is 2.4GHz, the least sensitive to interference.

- **Are there any elements that could interfere with the connection?**

The presence of numerous WIFI equipment or various interference.

- **Is the connection distance 10 metres with or without obstacles?**

Without obstacles.

- **What happens when the connection is lost? Can the marking be stopped even without a connection?**

If the connexion between the head and controller is lost during marking, the marking can be terminated easily. If you want to stop it you can with the button on the head.

Evolutionary questions :

- **Does the marking head have a third axis?**

The Combo version 120D has a rotary axis connector. The rotary axis is available under the reference NAC-600. *(See accessories guide p.36 for more information on the D axis).*