

# WIRELESS ADVANCED CURRENT CONTROL TOOLS

BM series

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## PRODUCTIVE SOLUTIONS

As an industrial process expert, we help you meet your challenges.

Productivity, safety, quality, industry 4.0 are themes on which we can offer you our expertise and our solutions. Whether in the field of assembly technology, machining or welding, our dedicated and specialised teams accompany your progress and recommend solutions and equipment to reach performance levels in line with your industrial strategy.



### Certified quality

From design to commissioning, DOGA guarantees the quality of this equipments and services according to ISO 9001: 2015 certification.

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### Innovation

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### Performance

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### Commitment

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### Reliability

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TECHNOLOGY

As world class assembly technology player, we manufacture and market equipments and solutions for the assembly industry which contribute to the improvement of your manufacturing quality and productivity.

Our assembly, ergonomics and traceability solutions contribute to enhancing your productivity, controlling your process quality and meet the requirements of industry 4.0.

We offer products designed to last and high value-added services by relying on our teams know-how and expertise : design, production, installation, start-up, training and maintenance. We support you locally thanks to our worldwide presence through our subsidiaries and our specialized distribution network.



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### OUR SERVICES

# MAIN FEATURES

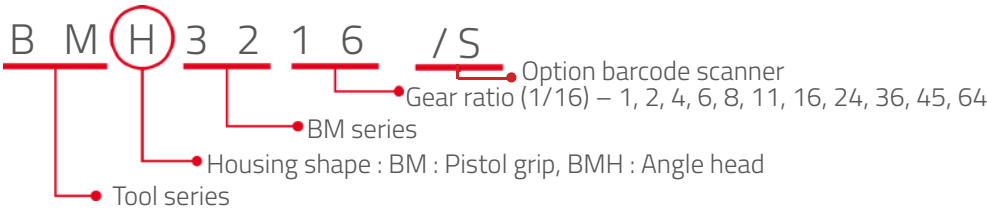


- ▶ Advanced current control with built in angle encoder
- ▶ Digital torque and angle program in 15 presets and 2 multi step sequence programs
- ▶ Models with assignable tightening strategies, batch counting and logical I/O management
- ▶ Auto speed setting by torque
- ▶ Monitoring fastening quality and count of screw numbers (with Paramon Pro X interface)
- ▶ Error information by code display
- ▶ Easy parameter setting and monitoring with ParaMon AIR (free PC software) & built-in Web server
- ▶ Real time torque data and curve display on PC software
- ▶ Real time fastening data output by USB and Wifi
- ▶ Modbus protocol
- ▶ Barcode scanner (option)

## Specifications

<b>Electric power</b>	DC25.2V, Lithium ion battery
<b>Motor</b>	Swiss DC servo motor
<b>Wifi</b>	IEEE 802.11a/b/g/n 2.4GHz & 5GHz dual band
<b>Speed</b>	Auto speed by torque setting
<b>Data memory</b>	65,000 data
<b>USB</b>	Micro USB port
<b>Display</b>	1.29" AMOLED color display
<b>No. of preset</b>	15 preset programming by USB or Wifi

# MODEL SPECIFICATIONS



Pistol type



Angle type

- 1 Trigger
- 2 Foward / Reverse
- 3 USB



Option  
Barcode scanner





# TECHNICAL DETAILS

## Models without barcode scanner



### Pistol wireless DC tools BM serie

Model	Torque (min Nm)	Torque (max Nm)	Speed (rpm)	Weight (kg) without battery	Bit Socket	Code (tool alone)	Package code* (tool + 2 batteries)
BM3201-A	0,1	1,2	100~2000	0,9	Hex 1/4"	4-1050670	4-1050693
BM3202-A	0,2	2,2	100~2000	0,9	Hex 1/4"	4-1050671	4-1050694
BM3204-A	0,4	4,4	100~1800	1,0	Hex 1/4"	4-1050672	4-1050695
BM3206-A	0,6	6,4	100~1250	1,1	Hex 1/4"	4-1050673	4-1050696
BM3211-A	1,5	11,3	50~690	1,1	Hex 1/4"	4-1050674	4-1050697
BM3216-A	2,0	15,7	50~470	1,1	Hex 1/4"	4-1050675	4-1050698
BM3224-A	3,9	23,5	50~310	1,1	Hex 1/4"	4-1050713	4-1050715
BM3224-Q3/8	3,9	23,5	50~310	1,1	SQ 3/8"	4-1050714	4-1050716



### Angle head wireless DC tools BM serie

Model	Torque (min Nm)	Torque (max Nm)	Speed (rpm)	Weight (kg) without battery	Bit Socket	Code (tool alone)	Package code* (tool + 2 batteries)
BMH3204-A	0,4	4,4	100~1800	1,4	Hex 1/4"	4-1050676	4-1050699
BMH3204-Q3/8	0,4	4,4	100~1800	1,4	SQ 3/8"	4-1050686	4-1050700
BMH3206-A	0,8	6,4	100~1250	1,4	Hex 1/4"	4-1050677	4-1050701
BMH3206-Q3/8	0,8	6,4	100~1250	1,4	SQ 3/8"	4-1050687	4-1050702
BMH3211-A	1,5	11,3	50~690	1,6	Hex 1/4"	4-1050678	4-1050703
BMH3211-Q3/8	1,5	11,3	50~690	1,6	SQ 3/8"	4-1050688	4-1050704
BMH3216-A	2,0	15,7	50~470	1,6	Hex 1/4"	4-1050679	4-1050705
BMH3216-Q3/8	2,0	15,7	50~470	1,6	SQ 3/8"	4-1050689	4-1050706
BMH3224-A	3,9	23,5	50~310	1,6	Hex 1/4"	4-1050680	4-1050707
BMH3224-Q3/8	3,9	23,5	50~310	1,6	SQ 3/8"	4-1050690	4-1050708
BMH3236-Q3/8	4,9	31,4	50~200	1,7	SQ 3/8"	4-1050717	4-1050718
BMH3245-Q3/8	5,9	39,2	50~160	1,7	SQ 3/8"	4-1050681	4-1050709
BMH3245-Q1/2	5,9	39,2	50~160	1,7	SQ 1/2"	4-1050691	4-1050710
BMH3264-Q3/8	7,8	49,1	50~115	1,9	SQ 3/8"	4-1050682	4-1050711
BMH3264-Q1/2	7,8	49,1	50~115	1,9	SQ 1/2"	4-1050692	4-1050712

\* battery charger is not included

## Models with barcode scanner



### Pistol wireless DC tools BM serie

Model	Torque (min Nm)	Torque (max Nm)	Speed (rpm)	Weight (kg) without battery	Bit Socket	Code (tool alone)
BM3201-A/S	0,1	1,2	100~2000	0,9	Hex 1/4"	4-1055066
BM3202-A/S	0,2	2,2	100~2000	0,9	Hex 1/4"	4-1055067
BM3204-A/S	0,4	4,4	100~1800	1,0	Hex 1/4"	4-1055068
BM3206-A/S	0,6	6,4	100~1250	1,1	Hex 1/4"	4-1055069
BM3211-A/S	1,5	11,3	50~690	1,1	Hex 1/4"	4-1055070
BM3216-A/S	2,0	15,7	50~470	1,1	Hex 1/4"	4-1055071
BM3224-A/S	3,9	23,5	50~310	1,1	Hex 1/4"	4-1055072
BM3224-Q/S 3/8	3,9	23,5	50~310	1,1	SQ 3/8"	4-1055073



### Angle head wireless DC tools BM serie

Model	Torque (min Nm)	Torque (max Nm)	Speed (rpm)	Weight (kg) without battery	Bit Socket	Code (tool alone)
BMH3204-A/S	0,4	4,4	100~1800	1,4	Hex 1/4"	4-1055074
BMH3204-Q/S 3/8	0,4	4,4	100~1800	1,4	SQ 3/8"	4-1055075
BMH3206-A/S	0,8	6,4	100~1250	1,4	Hex 1/4"	4-1055076
BMH3206-Q/S 3/8	0,8	6,4	100~1250	1,4	SQ 3/8"	4-1055077
BMH3211-A/S	1,5	11,3	50~690	1,6	Hex 1/4"	4-1055078
BMH3211-Q/S 3/8	1,5	11,3	50~690	1,6	SQ 3/8"	4-1055079
BMH3216-A/S	2,0	15,7	50~470	1,6	Hex 1/4"	4-1055080
BMH3216-Q/S 3/8	2,0	15,7	50~470	1,6	SQ 3/8"	4-1055081
BMH3224-A/S	3,9	23,5	50~310	1,6	Hex 1/4"	4-1055082
BMH3224-Q/S 3/8	3,9	23,5	50~310	1,6	SQ 3/8"	4-1055083
BMH3236-Q/S 3/8	4,9	31,4	50~200	1,7	SQ 3/8"	4-1055084
BMH3245-Q/S 3/8	5,9	39,2	50~160	1,7	SQ 3/8"	4-1055086
BMH3245-Q/S 1/2	5,9	39,2	50~160	1,7	SQ 1/2"	4-1055085
BMH3264-Q/S 3/8	7,8	49,1	50~115	1,9	SQ 3/8"	4-1055088
BMH3264-Q/S 1/2	7,8	49,1	50~115	1,9	SQ 1/2"	4-1055087

# TOOL DIMENSION

► BM & BMH Unit: mm



# PACKAGE

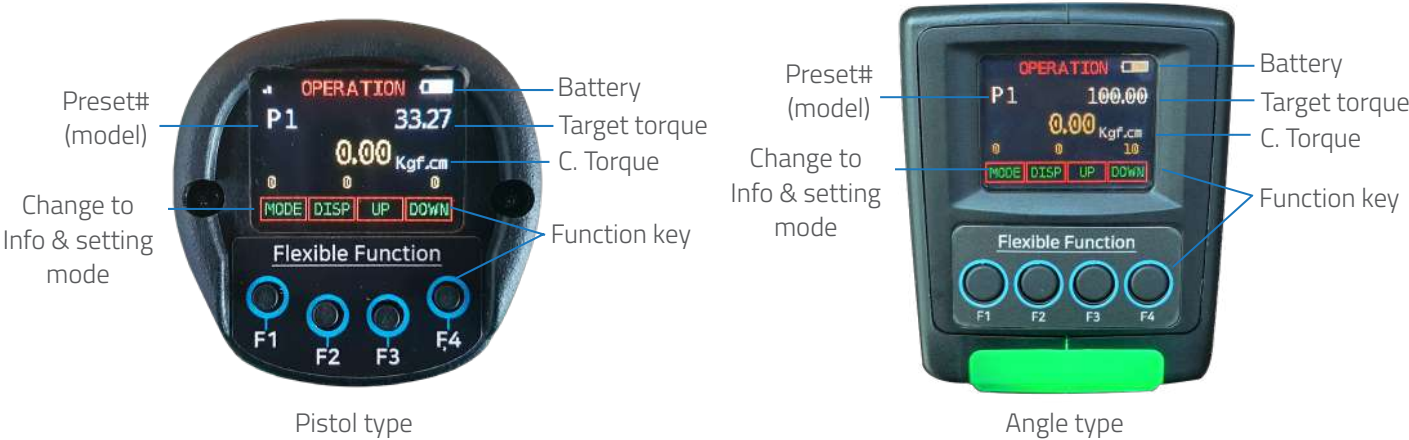
► Standard packing items: BM Tool, Battery pack 2EA  
(battery charger is not included).





# FLEXIBLE FUNCTION

## Built-in digital display



## Battery



Model	BL25201
Voltage	25.2V
No of cell	3.6V x 7
Weight	505 gr
Code	4-1050683

▶ Don't use the battery for any other tools or purpose

## Battery charger



Model	D25247A
Input	AC220 - 240V, 50/60Hz, 1.1A
Output	DC18-25.2V, 4.0A
Fuse	250VAC T3.15A
Operating environment	0 ~ 40 / 15 ~ 80% RH (without dew)
Full charging time	50 minutes
Safety class	Class II
Weight	620 gr
Code	4-1050684

LED Display Information

Blink Ready

Charging

Complete

Blink Battery Overheat

Blink Charging Not Possible

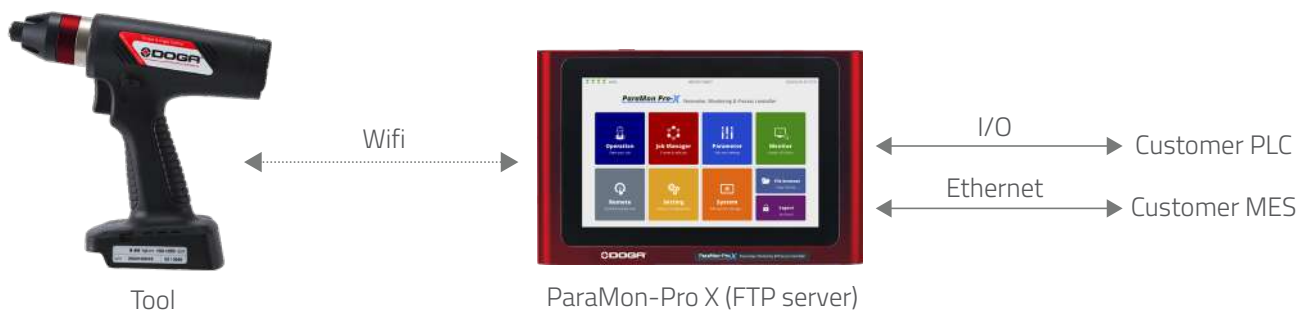
# CONNECTION

## USB connection



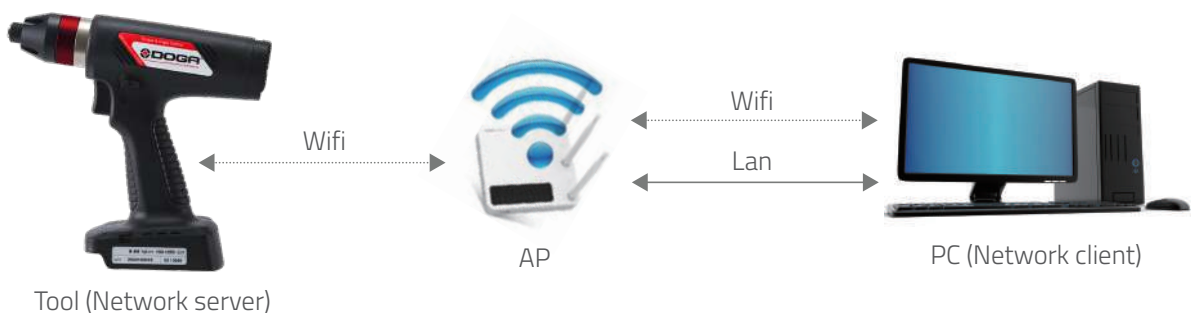
- ▶ Initial network and parameter setting, data monitoring
- ▶ Data download from the internal memory (max 65 000)
- ▶ Tool firmware update

## Wifi connection to Paramon-Pro X



- ▶ Connect up to 8 BM tools
- ▶ Error-proofing through assembly sequencing and process monitoring
- ▶ Simple and user friendly sequence programming interface
- ▶ 2 x USB 2.0 ports - Bar code scanning (optional)
- ▶ HDMI port for display extension

## Wifi connection to PC via AP



- ▶ Parameter setting, data monitoring on PC with ParMon Air or custom software
- ▶ Protocols are open for programming the custom software

# PARAMON-PRO X INTERFACE (OPTIONAL)



- ▶ Total 8 tools can be connected
- ▶ Parameter setting, Data monitoring
- ▶ Error-proofing through assembly sequencing and process monitoring
- ▶ Fastening data auto saving with file system
- ▶ Tool remote control
- ▶ Barcode scanner can be connected

## Features

<b>Input power</b>	AC220 - 240V, 50/60Hz, 0.35A
<b>Dimensions</b>	300 (W) x 196 (H) x 80 (D) - Wall mount bracket included
<b>Display</b>	10.1" TFT LCD Touch
<b>Com port</b>	Ethernet, 2 x USB, I/O (input 16, output 16), RS 232 (Barcode reading)
<b>Memory</b>	Internal : 8GB + extra memory slot with file system External : Micro SD card up to 32GB
<b>Wifi</b>	Wireless USB adapter 2.4 & 5GHz Plug-in dual channel module kit
<b>Display extension</b>	HDMI
<b>Weight</b>	3,54 kg
<b>Code</b>	4-1050685

## Operation mode (with job vs without job)



VS



Operation mode	With Job (Sequencing mode with logical steps)	Without Job (Multi tool tightening mode )
Feature	<ul style="list-style-type: none"> <li>Five types of steps (fastening / Input / output / delay / message) are provided for sequence programming.</li> <li>The combination of steps is called a job.</li> <li>Up to 1,000 jobs are supported.</li> <li>Fastening data is auto saved in the file system.</li> </ul>	<ul style="list-style-type: none"> <li>Not support process control.</li> <li>Display fastening data receiving from tools in real-time.</li> <li>Fastening data is auto saved in the file system.</li> </ul>
Tools	<ul style="list-style-type: none"> <li>The tool works only in the fastening step.</li> <li>In the fastening step, only one tool can be assigned.</li> <li>Two or more tools cannot work simultaneously.</li> <li>Suitable for single operator environments.</li> </ul>	<ul style="list-style-type: none"> <li>No restrictions on the use of the tool.</li> <li>All tools can be work simultaneously.</li> <li>Suitable for multiple operator environments.</li> </ul>
Barcode Scanner	<ul style="list-style-type: none"> <li>To load the desired job by scanning barcode.</li> </ul>	<ul style="list-style-type: none"> <li>To select the preset torque on the tools.</li> </ul>

## Sample job



Displays information of the product to be assembled in text or image.

Displayed message remains at the preset time.

Press the start button to start assembly.

Select the tool to be used for fastening. Set the preset torque of the tool and the number of screws.

OK and NG are output to the tower lamp according to the assembly result.

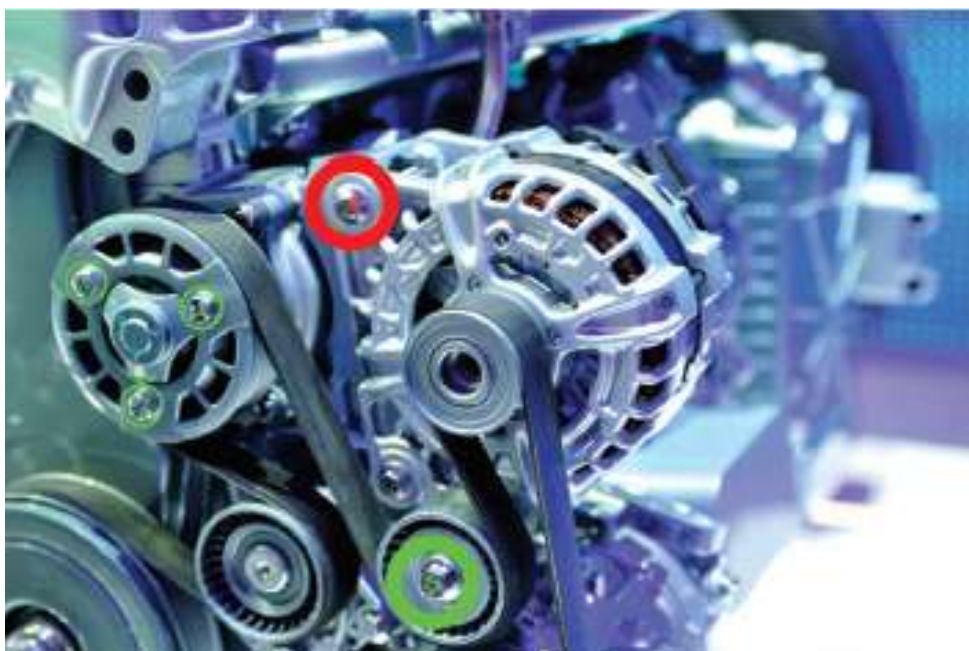




Visualize the assembly procedure with just a few touches.

- ▶ Take a picture of the work-piece
- ▶ Set position of screw according to the fastening order
- ▶ Up to 99 screws can be set per fastening step
- ▶ Radius / Width of the circle can be adjusted to fit the size of the screw
- ▶ Color of the product and color of the circle overlap, you can change the color of the circle

Below is the screen that is actually performing the job.





# OUR SERVICES

At DOGA we put at your disposal our reliable, accurate and user friendly tightening solutions. It is our duty to advise you of the right solution for your application.

Our Product Manager and Support engineering teams are here to analyse your manufacturing process and share with you our innovative solutions to improve your assembly process. Thanks to our technical integration service CELPRO, we provide you with turnkey solutions from design to commissioning.



## TURNKEY SOLUTIONS

Using all the options of our complete product range, we offer you solutions adapted to your needs.

- Custom Design
- Adaptation of existing models
- Integration of automation system



## TECHNICAL ASSISTANCE

To ensure the optimal performance and durability of our tools, we put our technical assistance at your disposal.

- Installation and start-up
- Maintenance agreement
- On-site maintenance
- Maintenance in our workshop



## TRAINING

DOGA offers specialized training courses around its trades:

- Theoretical
- Technical & practical
- Audit & Consulting



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