





## 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.

## 5 reasons to trust us



### Expertise

Our field experts propose you solutions adapted to your environment and specific needs.



### Innovation

By developing the products and the services of tomorrow, we offer you new perspectives or prospects.



### Performance

Our high added value solutions improve your performances and guarantee the final quality of the production.



### Commitment

Aware of your objectives, we commit ourselves to helping you to reach them.



### Reliability

Our organization which has been ISO 9001 certified since 1996, is the guarantee of your satisfaction.



ASSEMBLY 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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# SUMMARY

## WIRELESS TRANSDUCERIZED TOOLS

BMT series

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# MAIN FEATURES

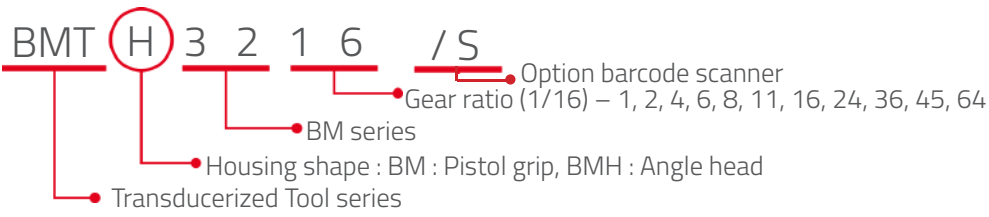


- ▶ Built in torque transducer and angle encoder
- ▶ Digital torque and angle program in 15 presets and 2 multi step sequence programs
- ▶ Models with assignable tightening strategies, batch counting and logical I/O management
- ▶ Auto speed setting by torque
- ▶ Monitoring fastening quality and count 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>Torque accuracy</b>	10% in full scale
<b>Torque repeatability</b>	+/- 3%
<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 Forward / Reverse
- 3 USB



Option  
Barcode scanner



# TECHNICAL DETAILS

## Models without barcode scanner



### Pistol wireless DC tools BMT serie

Model	Torque (min Nm)	Torque (max Nm)	Speed (rpm)	Weight (kg) without battery	Bit Socket	Code (tool alone)	Code package* (tool + 2 batteries)
BMT3204-A	0,4	4,5	100~1800	1,0	Hex 1/4"	4-1055089	4-1050721
BMT3206-A	0,6	6,5	100~1250	1,1	Hex 1/4"	4-1055090	4-1050722
BMT3211-A	1,5	11,5	50~690	1,1	Hex 1/4"	4-1055091	4-1050723
BMT3216-A	2,0	16	50~470	1,1	Hex 1/4"	4-1055092	4-1050724
BMT3224-A	4	24	50~310	1,1	Hex 1/4"	4-1055093	4-1050725
BMT3224-Q3/8	4	24	50~310	1,1	SQ 3/8"	4-1055094	4-1050726



### Angle head wireless DC tools BMT serie

Model	Torque (min Nm)	Torque (max Nm)	Speed (rpm)	Weight (kg) without battery	Bit Socket	Code (tool alone)	Code package* (tool + 2 batteries)
BMTH3204-A	0,4	4,5	100~1800	1,4	Hex 1/4"	4-1055095	4-1050727
BMTH3204-Q3/8	0,4	4,5	100~1800	1,4	SQ 3/8"	4-1055096	4-1050728
BMTH3206-A	0,8	6,5	100~1250	1,4	Hex 1/4"	4-1055097	4-1050729
BMTH3206-Q3/8	0,8	6,5	100~1250	1,4	SQ 3/8"	4-1055098	4-1050730
BMTH3211-A	1,5	11,5	50~690	1,6	Hex 1/4"	4-1055099	4-1050731
BMTH3211-Q3/8	1,5	11,5	50~690	1,6	SQ 3/8"	4-1055100	4-1050732
BMTH3216-A	2,0	16	50~470	1,6	Hex 1/4"	4-1055101	4-1050733
BMTH3216-Q3/8	2,0	16	50~470	1,6	SQ 3/8"	4-1055102	4-1050734
BMTH3224-A	4	24	50~310	1,6	Hex 1/4"	4-1055103	4-1050735
BMTH3224-Q3/8	4	24	50~310	1,6	SQ 3/8"	4-1055104	4-1050736
BMTH3236-Q3/8	5	52	50~200	1,7	SQ 3/8"	4-1055105	4-1050737
BMTH3245-Q3/8	6	40	50~160	1,7	SQ 3/8"	4-1055107	4-1050739
BMTH3245-Q1/2	6	40	50~160	1,7	SQ 1/2"	4-1055106	4-1050738
BMTH3264-Q3/8	8	50	50~115	1,9	SQ 3/8"	4-1055109	4-1050741
BMTH3264-Q1/2	8	50	50~115	1,9	SQ 1/2"	4-1055108	4-1050740

\* Battery charger is not included

## Models with barcode scanner



### Pistol wireless DC tools BMT serie

Model	Torque (min Nm)	Torque (max Nm)	Speed (rpm)	Weight (kg) without battery	Bit Socket	Code (tool alone)
BMT3204-A/S	0,4	4,4	100~1800	1,0	Hex 1/4"	4-1055110
BMT3206-A/S	0,6	6,4	100~1250	1,1	Hex 1/4"	4-1055111
BMT3211-A/S	1,5	11,3	50~690	1,1	Hex 1/4"	4-1055112
BMT3216-A/S	2,0	15,7	50~470	1,1	Hex 1/4"	4-1055113
BMT3224-A/S	4	24	50~310	1,1	Hex 1/4"	4-1055114
BMT3224-Q/S 3/8	4	24	50~310	1,1	SQ 3/8"	4-1055115



### Angle head wireless DC tools BMT serie

Model	Torque (min Nm)	Torque (max Nm)	Speed (rpm)	Weight (kg) without battery	Bit Socket	Code (tool alone)
BMTH3204-A/S	0,4	4,5	100~1800	1,4	Hex 1/4"	4-1055116
BMTH3204-Q/S 3/8	0,4	4,5	100~1800	1,4	SQ 3/8"	4-1055117
BMTH3206-A/S	0,8	6,5	100~1250	1,4	Hex 1/4"	4-1055118
BMTH3206-Q/S 3/8	0,8	6,5	100~1250	1,4	SQ 3/8"	4-1055119
BMTH3211-A/S	1,5	11,5	50~690	1,6	Hex 1/4"	4-1055120
BMTH3211-Q/S 3/8	1,5	11,5	50~690	1,6	SQ 3/8"	4-1055121
BMTH3216-A/S	2,0	16	50~470	1,6	Hex 1/4"	4-1055122
BMTH3216-Q/S 3/8	2,0	16	50~470	1,6	SQ 3/8"	4-1055123
BMTH3224-A/S	4	24	50~310	1,6	Hex 1/4"	4-1055124
BMTH3224-Q/S 3/8	4	24	50~310	1,6	SQ 3/8"	4-1055125
BMTH3236-Q/S 3/8	5	52	50~200	1,7	SQ 3/8"	4-1055126
BMTH3245-Q/S 3/8	6	40	50~160	1,7	SQ 3/8"	4-1055128
BMTH3245-Q/S 1/2	6	40	50~160	1,7	SQ 1/2"	4-1055127
BMTH3264-Q/S 3/8	8	50	50~115	1,9	SQ 3/8"	4-1055130
BMTH3264-Q/S 1/2	8	50	50~115	1,9	SQ 1/2"	4-1055129



# TOOL DIMENSION

▶ BMT & BMTH Unit: mm



# PACKAGE

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





# FLEXIBLE FUNCTION

## Built-in digital display



## Battery



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

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

## Battery charger



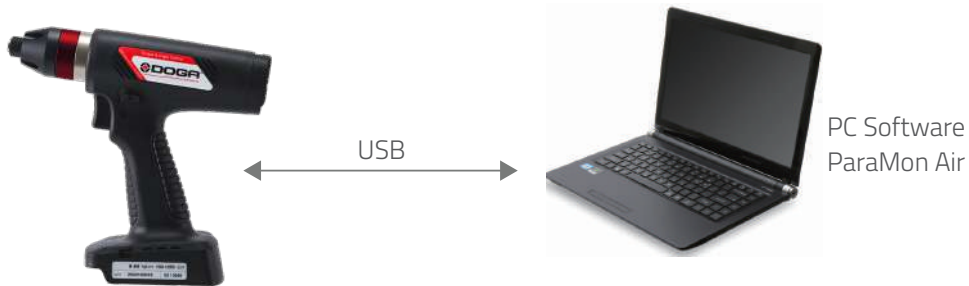
<b>Model</b>	D25247A
<b>Input</b>	AC220 - 240V, 50/60Hz, 1.1A
<b>Output</b>	DC18-25.2V, 4.0A
<b>Fuse</b>	250VAC T3.15A
<b>Operating environment</b>	0 ~ 40 / 15 ~ 80% RH (without dew)
<b>Full charging time</b>	50 minutes
<b>Safety class</b>	Class II
<b>Weight</b>	620 gr
<b>Code</b>	4-1050684

LED Display Information

- Blink Ready
- Charging
- Complete
- Blink Battery Overheat
- Blink Charging Not Possible

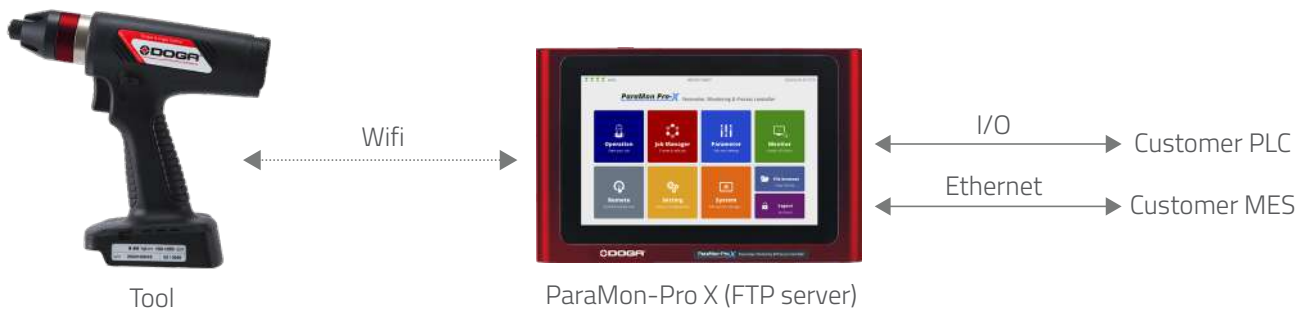
# CONNECTION

## USB connection



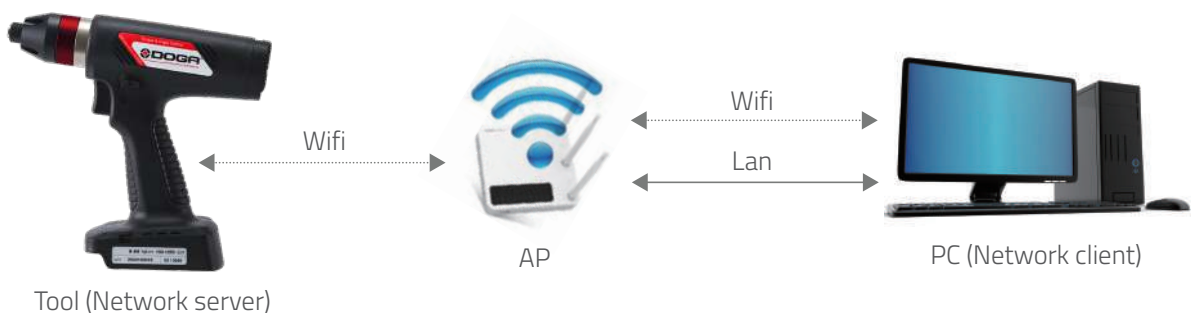
- ▶ Initial network and parameter setting, data monitoring
- ▶ Data download from the internal memory (max 65 000)
- ▶ Tool firmware update

## 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)
<b>Feature</b>	<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>
<b>Tools</b>	<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>
<b>Barcode Scanner</b>	<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.



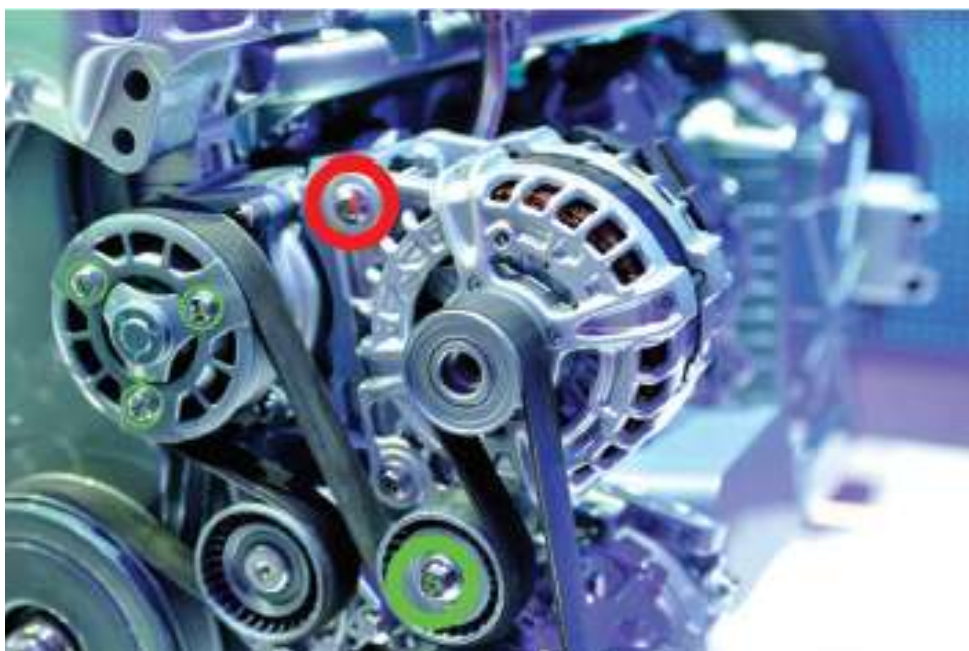
## Assembly process visualization



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





