DOOSAN

DOOSAN ROBOT SERIES

Doosan Robotics

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DOOSAN

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Doosan Robotics

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Almighty
A-SERIES

A-SERIES can go anywhere!
With its superior speed and cost-effectiveness,
A-SERIES promises a simple solution and a satisfaction to whom may be hesitant to get a cobot

A0509
Payload 5kg
Reach 900mm

A0912
Payload 9kg
Reach 1200mm

Model with Force Sensor **A0509s**
Payload 5kg
Reach 900mm

Model with Force Sensor **A0912s**
Payload 9kg
Reach 1200mm

A-SERIES
KEY FEATURES

A$^+$ Safety

The advanced safety algorithm ensures the safety
beyond the limits of current-based collision detection technology

**PL e
Cat 4**

Proven by the highest international safety level*,
trustful safe work environment is ensured

*Performance Level
Emergency Stop, Safe Torque Off (STO), and Safe Brake Control (SBC)

A$^+$ Customization

Customers have a choice of High-tech force sensor model
for more delicate tasks requiring human like dexterity

×2

Force control accuracy of FTS(Force Torque Sensor) is
twice as high as competitors, ensuring higher
performance and outcome

A$^+$ Speed

The high-end hardware, created by Doosan's world class technology,
promises quick and flawless performance on any task with the highest speed
in the industry along with the remarkable acceleration

×2

Twice faster joint speed enhances productivity,
efficiency and effectiveness on any tasks

A$^+$ ROI

Reduced cycle time and excellent cost-effectiveness promises
the shortest time for your ROI

10%

10% faster work speed on average combined with
competitive price shortens your ROI period

MAIN APPLICATIONS

Scan the QR Code
for more Doosan Robot
Applications

Machine Tending
Feed the CNC machine and load/unload the subject into the pallet

Pick & Place
Simple loading/unloading work such as moving objects between tasks

Packaging
Quick product packaging and transporting tasks in electronic, material handling and plastic industry

Inspection
Inspecting internal /external defects and assembly quality

Air Blowing
Exterior cleaning of finished products or workpieces with spiral spray motion and multi-angle composite spray motion

Gluing and Bonding
Spraying of consistent amount of adhesive for gluing and bonding

Polishing & Deburring
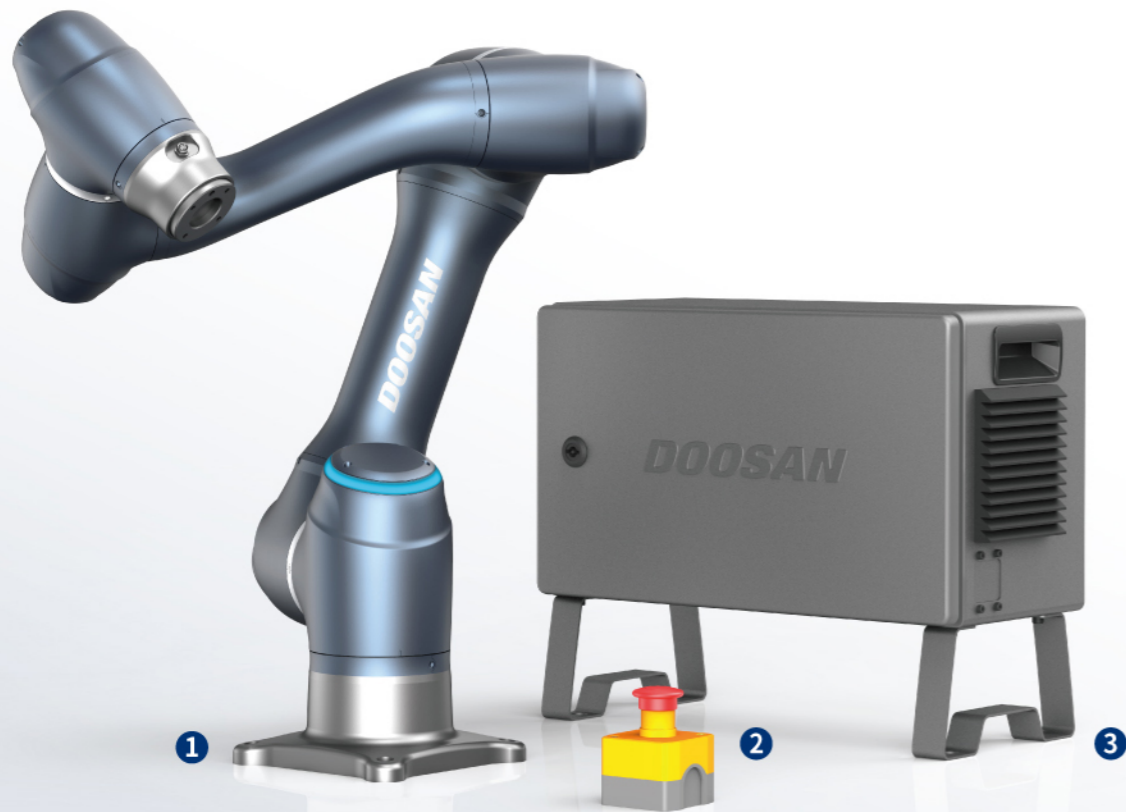Burr removal and surface polishing after processing

Assembly
Traditional assembly tasks like screw driving and gear assembling

A-SERIES :
ROBOT SYSTEM

Experience the best robot system with stable and immaculate controllability

① ② ③

01
Robot Arm
Our six-axis multi-joint robot arm maintains excellent stability with overwhelming speed and an advanced safety algorithm

02
Emergency Stop Button
The safety button can halt the robot in an emergency situation to prevent accidents

03
Controller
The solid control platform guarantees stable performance in any field based on real-time control and high-speed communication technology

DART Platform

DART Platform, the Doosan Robotics user software, enables robot teaching along with the wide range of programming actions on a PC environment

A separate PC is required for installation and use of the DART platform

OPTIONS

OPTION
01 Smart Pendant

A simple interface with commonly used function buttons including Home Position, Servo ON/OFF and Start/Stop for easy controlling

If Smart Pendant is installed,
a separate PC is required to run the DART Platform

OPTION
02 Teach Pendant

Offers tablet PC-like ease of use, and with the inclusion of the DART Platform, it is capable of configuring various applications, from simple programming up to advanced control algorithms
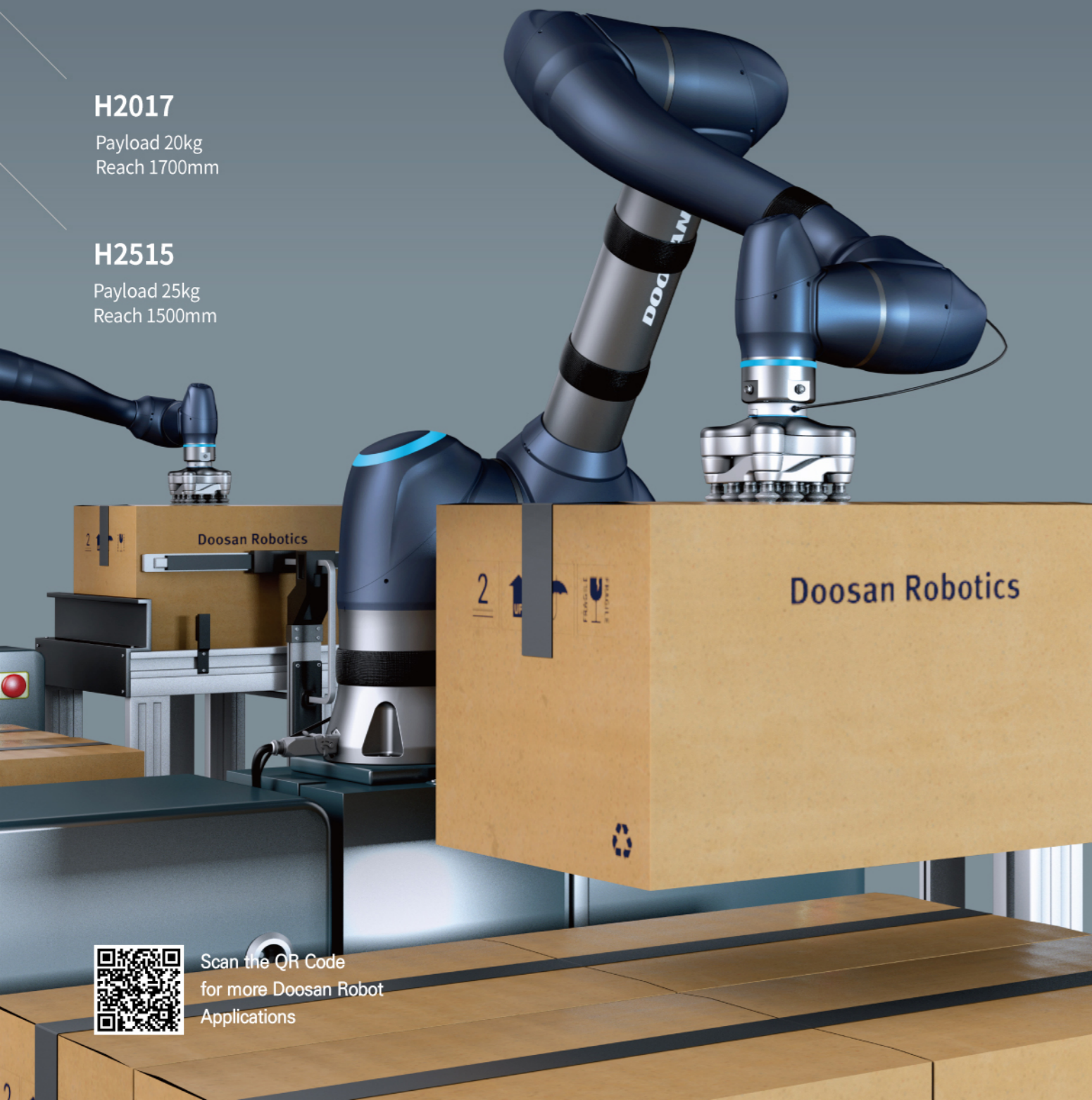
High-Power
H-SERIES

H-SERIES is the most powerful cobot in the market.
Outstanding 25kg payload and 6 torque sensors
brings safe work environment for any kind of application

H2017
Payload 20kg
Reach 1700mm

H2515
Payload 25kg
Reach 1500mm

Doosan Robotics

KEY FEATURES

High$^+$ Payload
Astonishing payload,
easily handles heavy objects
up to 25kg

25kg

High$^+$ Safety
Guarantees superb safety
with the industry's best collision
sensitivity powered by
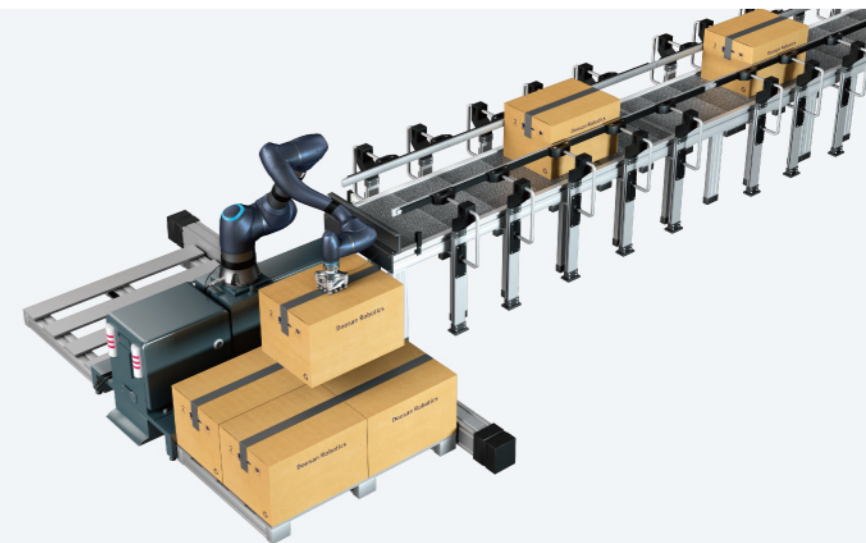6 torque sensors and
counterbalance mechanism

6 Torque Sensors

High$^+$ Flexibility
Half the robot weight than cobots
in the same class provides more
flexible workspace settings
with its ease of repositioning,
AMR linking and installing of the robot

½ Weight

MAIN APPLICATIONS

Palletizing
Heavy objects stacking and
palletizing on logistics and
automated procedures

Machine Tending
Feed heavy subjects into the
CNC machine and load/unload
them from/to the pallet

Heavy Object Handling
Stacking, transport and handling
of multiple objects simultaneously
in fast-paced production procedures,
such as those found in the logistics
and fabric industries

Masterpiece
M-SERIES

M-SERIES is the highest quality premium cobot!
6 high-tech torque sensors provide the highest dexterity
for highly sophisticated tasks and ensure the upmost safety
with the highest collision sensitivity

M0609
Payload 6kg
Reach 900mm

M0617
Payload 6kg
Reach 1700mm

M1013
Payload 10kg
Reach 1300mm

M1509
Payload 15kg
Reach 900mm

KEY FEATURES

Master$^+$ Safety

The high-tech torque sensor is capable of detecting subtle force changes of up to 0.2 N, providing the best collision sensitivity level for safety in the industry

Master$^+$ Force Control

6 high-tech torque sensors capable of sophisticated tasks contribute to high-level force control and compliance control

Master$^+$ Setup

The Smart Setup function allows quick system installation and immediate operation, as it automatically measures inclination angles, tool position and weight

0.2 N

6 Torque Sensors

12 Minutes

MAIN APPLICATIONS

Assembly
Traditional assembly tasks like screw driving and gear assembling

Machine Tending
Feed the CNC machine and load/unload the subject into the pallet

Welding
Welding parts like skilled welder by various paths with certain quality

Polishing & Deburring
Burr removal and surface polishing after processing

Gluing & Bonding
Spraying of consistent amount of adhesive for gluing and bonding

Plastic Injection Support
Detaching item from mold of injection molding machine and loading onto/unloading from pallet

Press Forming
Picking up panel for loading onto/unloading from press machine

Service
Safely and repeatedly performs pre-defined tasks in accordance with user needs in service industries like medical and F&B

DOOSAN HERITAGE

Super SAFE

- **Five workspace settings to fully protect the operator**

  Five workspace settings protect the operator's safety and improve work efficiency.

  - Collaborate zone
  - Collision detection mute zone
  - Protected zone
  - Limited tool Orientation zone
  - Customized collision sensitivity zone

- **Outstanding product safety certified by international organizations**

  Doosan robots have received prestigious safety certifications worldwide as well as safety certifications from NRTL in the U.S., CE in Europe and KCs in Korea.

Super EASY

- **One-touch programming in just 20 seconds**

  Doosan robots automatically recognize attached peripherals and suggest ideal work process in forms of various templates from simple material handling to machine tending. It also provides pre-programed skills, commonly used in the field, which makes it very easy to teach the robot even for beginners.

- **Cockpit to quickly and easily teach robots**

  Through the cockpit (Direct teaching button) on Doosan robots, it is possible to select various teaching modes as well as to save coordinates with simple button operations, allowing easy direct teaching.

Super FLEXIBLE

- **Doosan Mate maximizing the utilization of Doosan robots**

  Doosan Mate is comprised of a variety of industry-leading partner products from grippers to electric tools machines, sensors and software, providing the best automation solutions optimized for customer needs. All registered products are highly compatible with Doosan robots, allowing easy and fast set-up and immediate operation.

- **Convenient communication connections**

  Doosan robots support the latest communication technologies, even without a gateway, allowing seamless connections with various types of industrial equipment and systems.

  *Supported Communications: RS232/485, TCP/IP, Modbus TCP (Master/Slave), Modbus RTU (Master), PROFINET IO Device, EtherNet/IP Adapter

DOOSAN ROBOT LINE-UP

Almighty A-SERIES

A0509 · A0509s · A0912 · A0912s

A-SERIES can go anywhere! With its superior speed and cost-effectiveness, A-SERIES promises a simple solution and a satisfaction to whom may be hesitant to get a cobot

High-Power H-SERIES

H2017 · H2515

H-SERIES is the most powerful cobot in the market. Outstanding 25kg payload and 6 torque sensors brings safe work environment for any kind of application

Masterpiece M-SERIES

M0609 · M0617 · M1013 · M1509

M-SERIES is the highest quality premium cobot! 6 high-tech torque sensors provide the highest dexterity for highly sophisticated tasks and ensure the upmost safety with the highest collision sensitivity

A-SERIES TECHNICAL SPECIFICATION

		A0509 / A0509s	A0912 / A0912s
Arm	Payload	5 kg (11 lb)	9 kg (19.8 lb)
	Reach	900 mm (35.4 inch)	1,200 mm (47.2 inch)
	Weight	21 kg (46.2 lb)	27 kg (59.5 lb)
	Performance		
	Tool Speed	1 m/s	1 m/s
	Repeatability	±0.03 mm	±0.05 mm
	Temperature	-5~45 ℃	-5~45 ℃
	Joint Movement (Range : ° / Max Speed : °/s)		
	J1	±360° / 180°/s	±360° / 180°/s
	J2	±360° / 180°/s	±360° / 180°/s
	J3	±160° / 180°/s	±160° / 180°/s
	J4	±360° / 360°/s	±360° / 360°/s
	J5	±360° / 360°/s	±360° / 360°/s
	J6	±360° / 360°/s	±360° / 360°/s
	Other Features		
	Installation Position	Any (Floor / Ceiling / Wall)	
	Protection Rating	IP 54	
	Flange Interfaces	Digital I/O 2 In / 2 Out, RS 485* *For pseudo serial communication, refer to the Programming Manual for more details	
	I/O Power Supply	DC 24 V / Continuous 2 A (Max. 3 A)	
	FTS(6-axis)	Force 110 N/ Moment 11 Nm (Option)	
Controller	Interfaces	USB 3.0 (RS422/485**), TCP/IP **Requires a USB to RS422/485 converter	
	Industrial Network***	Modbus-TCP (Master/Slave) / Modbus-RTU (Master) / EtherNet/IP (Adapter) / PROFINET IO (Device) ***Install a gateway for other communication support	
	Dimensions	450 x 210 x 265 mm + Stand 110 mm	
	Weight	12 kg	
	Protection Rating	IP 40	
	I/O Port - Digital I/O	16 / 16	
	I/O Port - Analog I/O	2 / 2	
	I/O Power Supply	DC 24 V / Max. 2 A	
	Reated Supply Voltage	100~240 VAC, 50~60Hz	
	Cable Length	6.0 m	
Teach Pendant	Protection Rating	IP 40	
	Dimensions	264 x 218 x 42 mm	
	Weight / Screen Size	0.8 kg / 10.1 inch	
	Cable Length	4.5 m	
Smart Pendant (Option)	Dimensions	180 x 90 x 26.5 mm	
	Weight	0.3 kg (Without cable)	
	Cable Length	6.0 m	

H-SERIES TECHNICAL SPECIFICATION

		H2017	H2515
Arm	Payload	20 kg (44 lb)	25 kg (55.1 lb)
	Reach	1,700 mm (66.9 inch)	1,500 mm (59 inch)
	Weight	74kg (163.1 lb)	72 kg (158.7 lb)
	Performance		
	Tool Speed	1 m/s	
	Repeatability	±0.1 mm	
	Temperature	0~45 ℃	
	Joint Movement (Range : ° / Max Speed : °/s)		
	J1	±360 ° / 100 °/s	
	J2	±130 ° / 80 °/s	
	J3	±160 ° / 100 °/s	
	J4	±360 ° / 180 °/s	
	J5	±360 ° / 180 °/s	
	J6	±360 ° / 180 °/s	
	Other Features		
	Installation Position	Only Floor	
	Protection Rating	IP 54	
	Flange Interfaces	Digital I/O 6 In / 6 Out	
	I/O Power Supply	DC 24 V / Max. 3 A	
Controller	Interfaces	Serial (RS232) / USB 3.0 (RS422/485*), TCP/IP *Requires a USB to RS422/485 converter	
	Industrial Network**	Modbus-TCP (Master/Slave) / Modbus-RTU (Master) / EtherNet/IP (Adapter) / PROFINET IO (Device) **Install a gateway for other communication support	
	Dimensions	490 x 390 x 287 mm	
	Weight	9 kg	
	Protection Rating	IP 40	
	I/O Port – Digital I/O	16 / 16	
	I/O Port – Analog I/O	2 / 2	
	I/O Power Supply	DC 24 V	
	Rated Supply Voltage	100~240 VAC, 50~60Hz	
	Cable Length (Arm)	6.0 m	
Teach Pendant	Protection Rating	IP 40	
	Dimensions	264 x 218 x 42mm	
	Weight / Screen Size	0.8 kg / 10.1 inch	
	Cable Length (TP)	4.5 m	

M-SERIES TECHNICAL SPECIFICATION

		M0609	M0617	M1013	M1509
Arm	Payload	6 kg (13.2 lb)	6 kg (13.2 lb)	10 kg (22 lb)	15 kg (33 lb)
	Reach	900 mm (35.4 inch)	1,700 mm (66.9 inch)	1,300 mm (51.1 inch)	900 mm (35.4 inch)
	Weight	27 kg (59.5 lb)	34 kg (74.9 lb)	33 kg (72.7 lb)	32 kg (70.5 lb)
	Performance				
	Tool Speed	1 m/s	1 m/s	1 m/s	1 m/s
	Repeatability	±0.05 mm	±0.1 mm	±0.05 mm	±0.05 mm
	Temperature	0~45 ℃	0~45 ℃	0~45 ℃	0~45 ℃
	Joint Movement (Range : ° / Max Speed : °/s)				
	J1	±360 ° / 150 ° /s	±360 ° / 100 ° /s	±360 ° / 120 ° /s	±360 ° / 150 ° /s
	J2	±360 ° / 150 ° /s	±360 ° / 100 ° /s	±360 ° / 120 ° /s	±360 ° / 150 ° /s
	J3	±150 ° / 180 ° /s	±165 ° / 150 ° /s	±160 ° / 180 ° /s	±150 ° / 180 ° /s
	J4	±360 ° / 225 ° /s	±360 ° / 225 ° /s	±360 ° / 225 ° /s	±360 ° / 225 ° /s
	J5	±360 ° / 225 ° /s	±360 ° / 225 ° /s	±360 ° / 225 ° /s	±360 ° / 225 ° /s
	J6	±360 ° / 225 ° /s	±360 ° / 225 ° /s	±360 ° / 225 ° /s	±360 ° / 225 ° /s
	Other Features				
	Installation Position	Any (Floor / Ceiling / Wall)			
	Protection Rating	IP 54			
	Flange Interfaces	Digital I/O 6 In / 6 Out			
	I/O Power Supply	DC 24 V / Max. 3 A			
Controller	Interfaces	Serial (RS232) / USB 3.0 (RS422/485*), TCP/IP *Requires a USB to RS422/485 converter			
	Industrial Network**	Modbus-TCP (Master/Slave) / Modbus-RTU (Master) / EtherNet/IP (Adapter) / PROFINET IO (Device) **Install a gateway for other communication support			
	Dimensions	490 x 390 x 287 mm			
	Weight	9 kg			
	Protection Rating	IP 40			
	I/O Port – Digital I/O	16 / 16			
	I/O Port – Analog I/O	2 / 2			
	I/O Power Supply	DC 24 V			
	Rated Supply Voltage	100~240 VAC, 50~60Hz			
	Cable Length (Arm)	6.0 m			
Teach Pendant	Protection Rating	IP 40			
	Dimensions	264 x 218 x 42 mm			
	Weight / Screen Size	0.8 kg / 10.1 inch			
	Cable Length (TP)	4.5 m			

GLOBAL NETWORK

Doosan Robotics continues to expand its global network around the world!
Prompt service is available around the globe through dealer networks established in different countries

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COUNTRIES

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Applications