



## Collobro Endure 1509

## CE 1509

Fast - Safe - Flexible

Matchlessly compact yet fully comprehensive  
Flexible for shifting workstations, applications  
Maximized Cobot speed – No safety jeopardy  
Unique, patented Safety System

**SICK**  
Sensor Intelligence.



15 kg

900mm

## Collobro Endure

*"Instant profitability"*



## Some Feature Highlights

# Collobro Endure 1509

# CE 1509

Fast – Safe – Flexible

*“The most compact yet comprehensive Cobot Concept ever”*

- Direct control unit,**
- Free move of arm
  - Save positions
  - Control move in X/Y plane
  - Control move in Z axis
  - \*Optional

- Automatic Tool Changer,**
- Fits all Collobro tools
  - 4x 3/2 valves
  - 3 digital inputs
  - 3 digital outputs
  - Power +24/-0 VDC

- Teach pendant touch panel**
- Simple robot teaching
  - Icon drag & drop based
  - Ready skills & templates

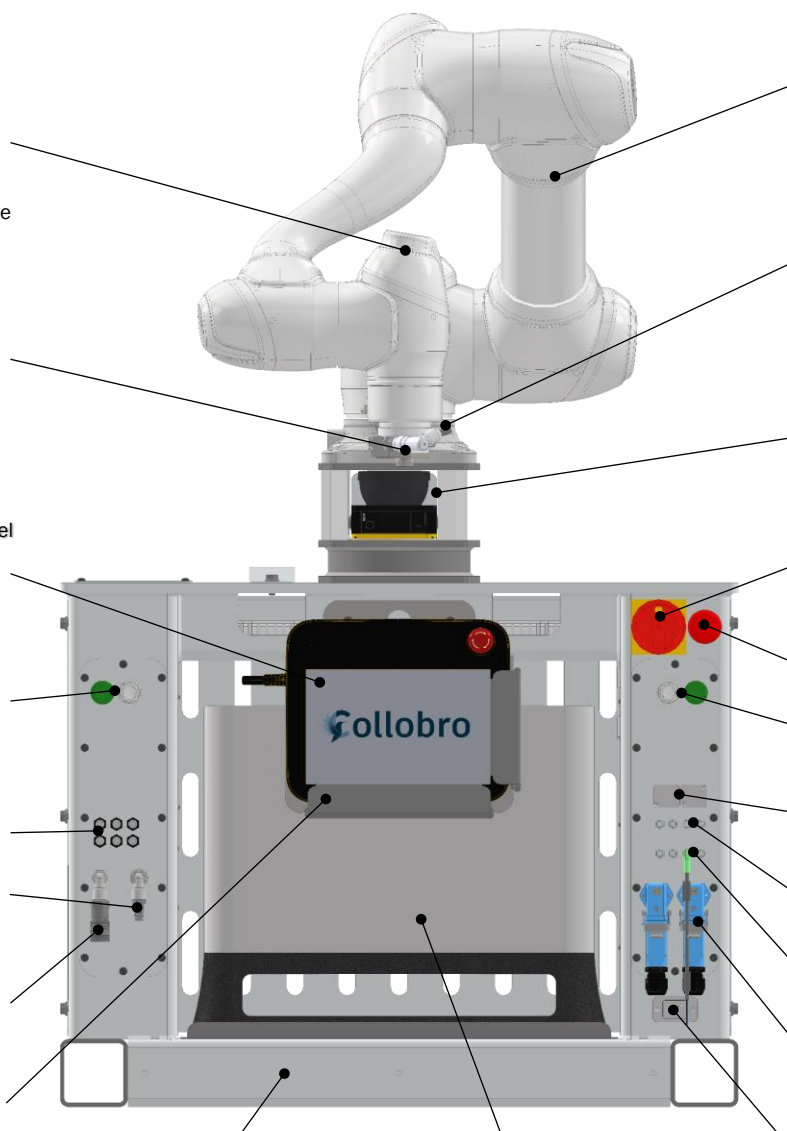
- Programmable buttons,**
- Start/stopp/control

- Pneumatic outputs,**
- Program controlled
  - 3x 5/2 valves

- Air supply connection,**
- Incoming air supply

- Air supply connection,**
- Feeding of external equipment.

Panel and cable holder



- Doosan's awarded 6 axis Cobot,**
- Doosan's strongest Cobot M1509
  - \*See further separately specified details

- Dress Pack,**
- Robot hose organizes tubes and cables connected to tool changer as well as additional

- SICK - Safety Laser Scanner,**
- Unique, patented safety system
  - Continuous speed maximization without jeopardizing safety

- Main Power Switch**
- Empowers front sign light showing machine power status

Emergency stop button

- Programmable buttons,**
- Start/stopp/control

- Ethernet, USB connections**
- Ethernet, Fieldbus, Serial, Wifi

- Digital input connections**
- 4x for external devices

- Digital output connections**
- 4x for external devices

- Power drive connections**
- 2x 4 Amp, program controlled by relays, for external device drive

- Main power connection**
- Typ F (CEE 7/4) IEC 60320, C19
  - 230 VAC, 16 Amp

- Collobro Colla Heart,**
- Connect it to Collobro peripherals and tools and you get unlimited user possibilities
  - Delivered fully connected

- Doosan Cobot Controller,**
- Delivered fully connected to all functionality



## Integrated Cobot – Doosan M1509

# CE 1509

Fast – Safe – Flexible



### ► State-of-the-Art | Controller

- Top-notch control platform for perfect and reliable robot control
- Maximize performance of torque sensor through innovative and advanced motion control algorithm and robot language
- Providing the latest communications technology to ensure compatibility with other automation environment
- Icon-based Skills\* for easy and simple teaching of complicated robot motions



Robust platform with Real-time OS and 1msec. communication speed of EtherCAT, ensuring perfect performance even in tough environments

\* Ethernet, Fieldbus, Serial, Wifi, etc.



Easy and simple robot teaching by various types of Skills and Templates

### ► Human-Centered | Teach Pendant

- Capacitive touch and high resolution 1280x800 screen for friendly user experience
- Light-weight and ergonomic design enabling inherently-comfortable grip
- Ultra-intuitive usability by simple graphic-informative communication



Intuitive Card View to monitor all information on robot operation environment at a glance



Simple and easy robot teaching with icon drag-and-drops



## Doosan M1509 – Performance

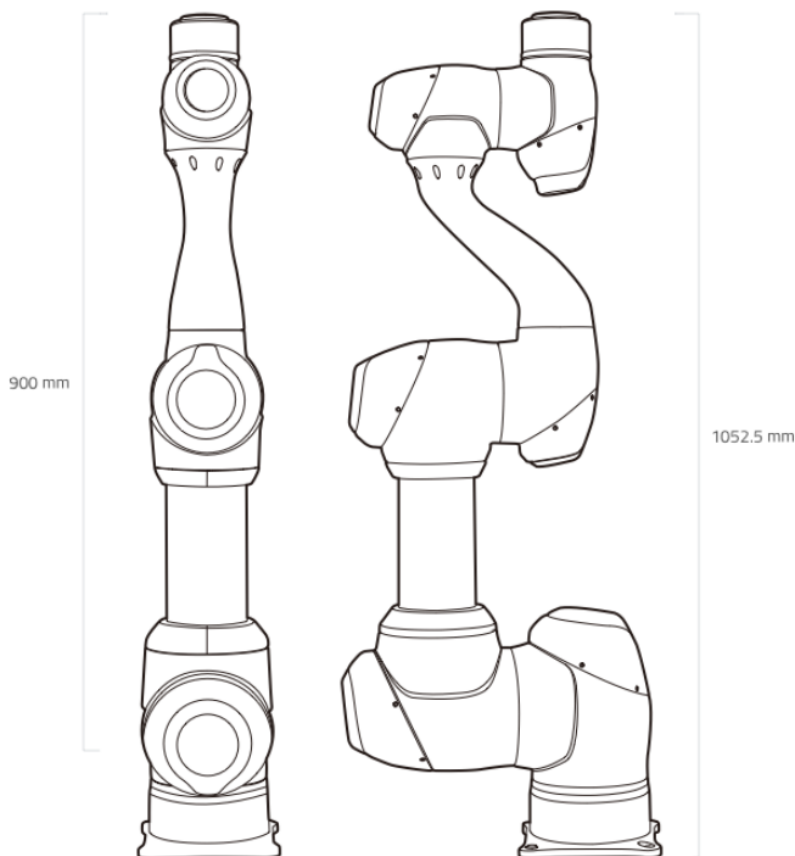
# CE 1509

*Fast – Safe – Flexible*

### Arm

### Controller

### Teach Pendant



### Performance

Degrees of freedom	6
Rated payload	15 kg
Max.reach	900 mm
Tool speed	1 m/s
Repeatability	± 0.1 mm
Temperature	0-45°C

### Joint Movement

J1 Range / Speed	±360° / 150°/s
J2 Range / Speed	±360° / 150°/s
J3 Range / Speed	±150° / 180°/s
J4 Range / Speed	±360° / 225°/s
J5 Range / Speed	±360° / 225°/s
J6 Range / Speed	±360° / 225°/s

### Other Features

Weight	32 kg
Installation position	Any (Floor, ceiling, wall)
Protection Rating	IP54
Digital I/O – flange	6 In / 6 Out
I/O power supply	DC 24 V / Max. 3 A

\* The above specification is subject to change without prior notice.



## Doosan M1509 – Performance

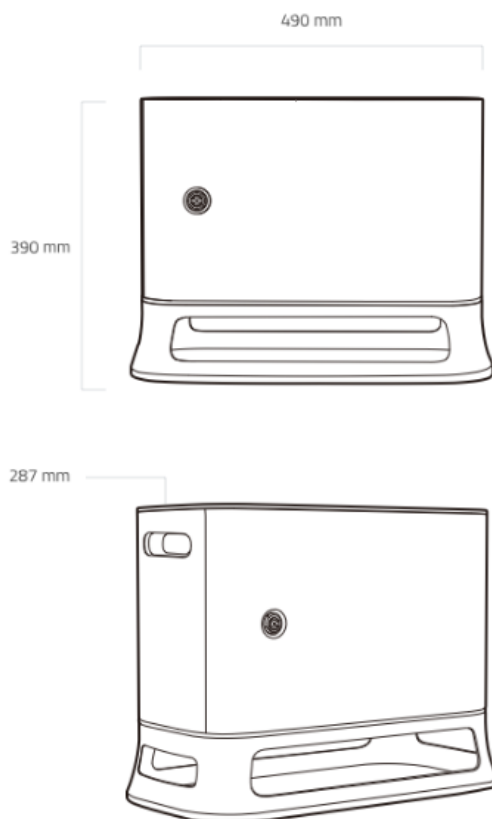
# CE 1509

*Fast – Safe – Flexible*

Arm

Controller

Teach Pendant



### Basic

Interfaces	Ethernet / Wifi / RS232 / Modbus / Ethernet TCP/IP
Dimensions	490 x 390 x 287 mm
Weight	9 kg
Protection Rating	IP20

### Other Features

I/O Port – Digital I/O	16 / 16
I/O Port – Analog I/O	2 / 2
I/O power supply	DC 24 V
Fieldbus	Modbus
Rated supply voltage	100~240(50~60Hz) VAC

\* The above specification is subject to change without prior notice.



## Doosan M1509 – Performance

# CE 1509

*Fast – Safe – Flexible*

Arm

Controller

Teach Pendant



### Basic

Protection Rating	IP20
Dimensions	264 x 218 x 42 mm
Weight / Screen Size	0.8 kg / 10.1 inch
Cable Length	4.5 m

\* The above specification is subject to change without prior notice.

218 mm



264 mm





## Doosan M1509 VALUE ADDING *of the COBOT*

# CE 1509

Fast – Safe – Flexible

### DM1509-01

Value-Adding | Enhancer

## Direct Control Unit : Cockpit

The optimal option to maximize user experience enables you to select a wide range of teaching modes and save coordinates with a simple five-button operation.



### DM1509-03

Value-Adding | Enhancer

## Robot Jacket

Protects robot from contamination by liquids used during cutter support work, etc. PU coating forms a 2-stage water barrier which ensures Doosan robot to maintain optimum operation conditions.





## Doosan M1509 VALUE ADDING *of the COBOT*

# CE 1509

*Fast - Safe - Flexible*

### DM1509-04

Value-Adding | Enhancer 03

### Stain-Resistant Model

The enhanced anti-stain function makes it easy to manage the appearance even in a work environment that is exposed to contamination.

