



Collobro Endure 1013

CE 1013

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.



10 kg

1300mm

Collobro Endure

"Instant profitability"



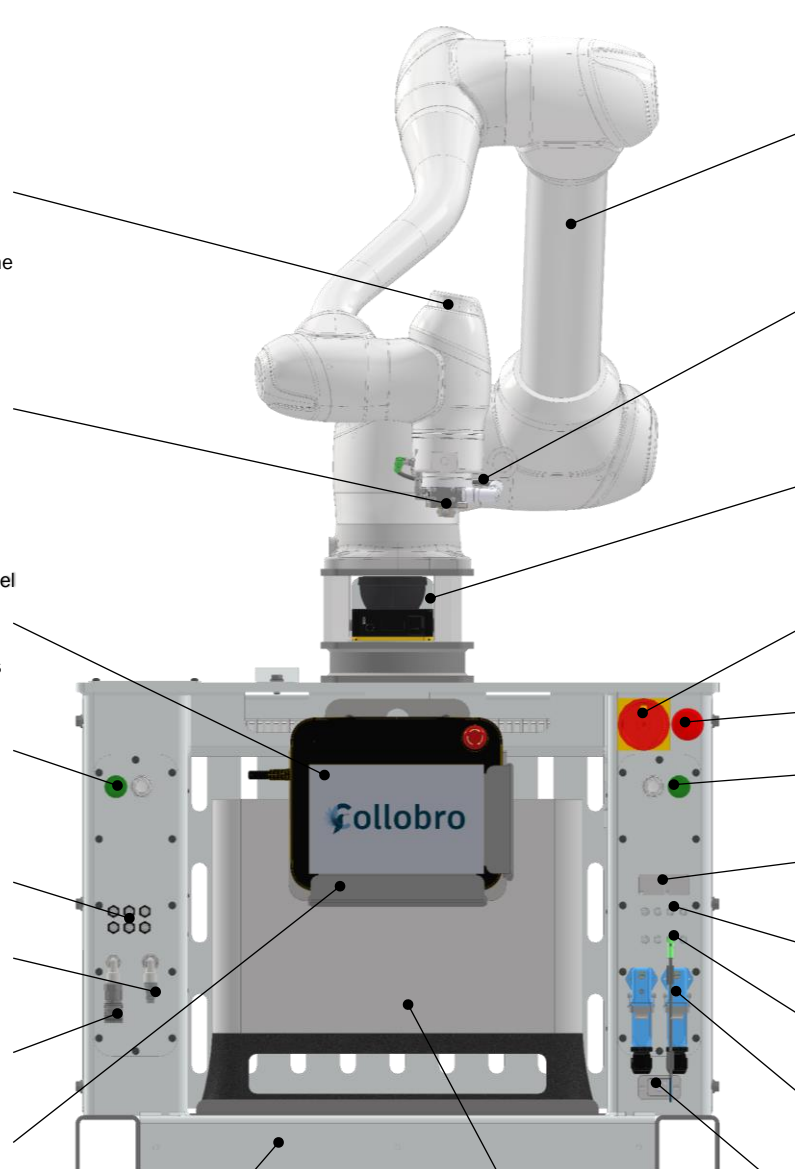
Some Feature Highlights

Collobro Endure 1013

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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/stop/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

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

Doosan's awarded 6 axis Cobot,
 - Doosan Cobot M1013
 *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/stop/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



Integrated Cobot – Doosan M1013

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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 M1013 – Performance

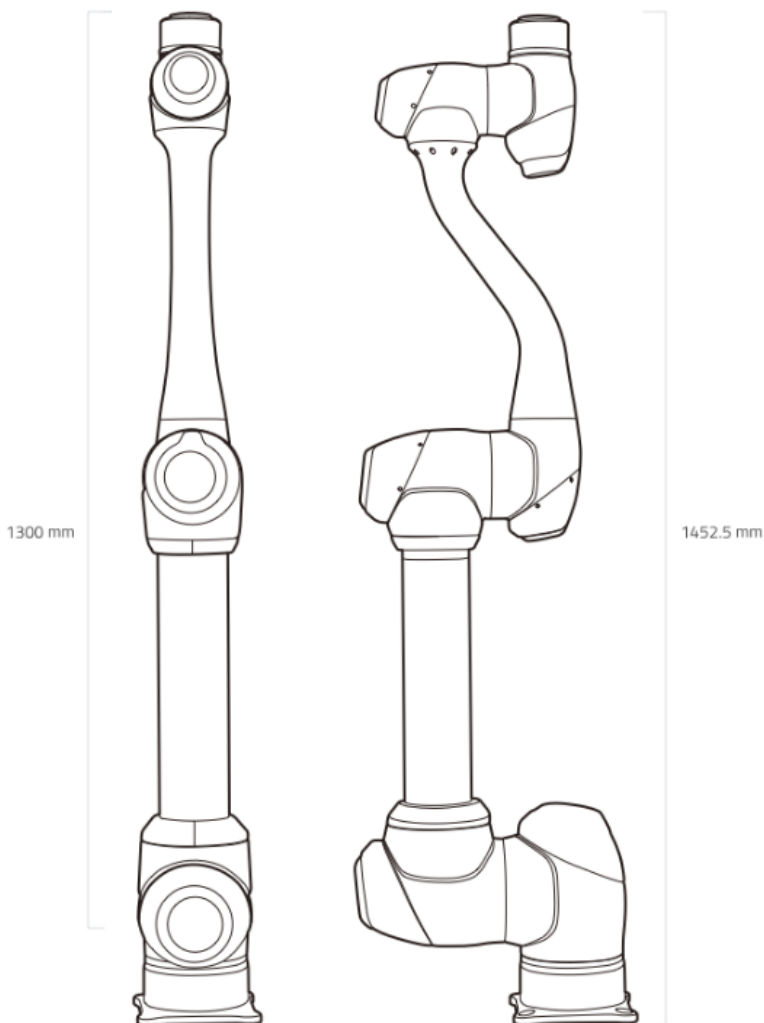
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Fast – Safe – Flexible

Arm

Controller

Teach Pendant



Performance

Degrees of freedom	6
Rated payload	10 kg
Max.reach	1,300 mm
Tool speed	1 m/s
Repeatability	± 0.1 mm
Temperature	0-45°C

Joint Movement

J1 Range / Speed	±360° / 120°/s
J2 Range / Speed	±360° / 120°/s
J3 Range / Speed	±160° / 180°/s
J4 Range / Speed	±360° / 225°/s
J5 Range / Speed	±360° / 225°/s
J6 Range / Speed	±360° / 225°/s

Other Features

Weight	33 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 M1013 – Performance

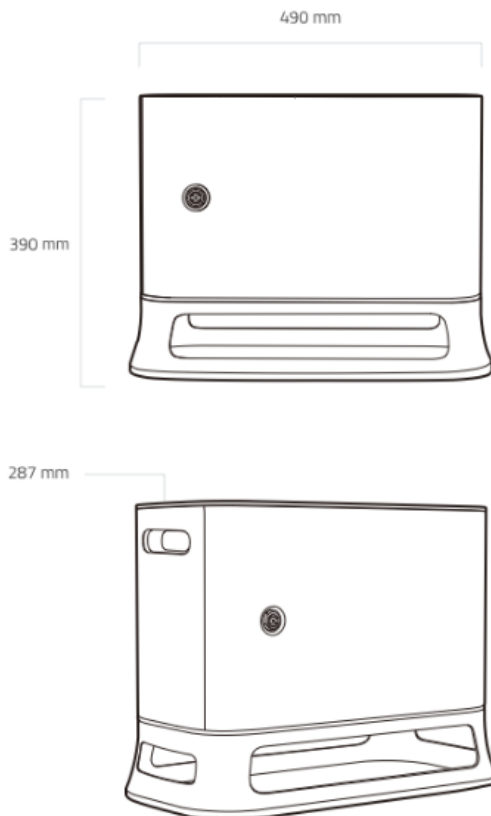
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Arm

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

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Doosan M1013 – Performance

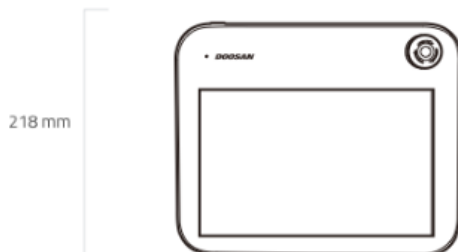
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Arm

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.



Doosan M1013 VALUE ADDING *of the COBOT*

CE 1013

Fast – Safe – Flexible

DM1013-01

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.



DM1013-03

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 M1013 VALUE ADDING *of the* COBOT

CE 1013

Fast - Safe - Flexible

DM1013-04

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.

