

Superior Clamping and Gripping



Product Information

Plug & Work Portfolio Doosan Robotics

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Modular. Flexible. Easy.

Plug & Work Portfolio Doosan Robotics

The Plug & Work portfolio consists of electrically and pneumatically actuated grippers, as well as quick-change modules that are specifically adapted to robot arms from Doosan Robotics.

Field of application

The components can be used in clean and slightly dirty environments.



Advantages – Your benefits

Comprehensive portfolio consisting of various components and grippers for different applications for fast and easy entry into automation

Plug & Work with the interfaces suitable for all robots from Doosan Robotics

Software modules for robot control are included in the scope of delivery for fast and easy commissioning

Pre-assembled gripping unit with robot interface therefore no mounting kits or external valves required

Certified SCHUNK Co-act grippers For quick and easy entry into the world of collaborative applications

The gripping force of the electric gripper can be adjusted in four stages for flexible workpiece handling

Pneumatic grippers For a high power density and simple integration

m

Weight

0.14 .. 1.84 kg

F

Gripping force

140 .. 870 N

S

Stroke per jaw

6 .. 40 mm

m

Workpiece weight

0.7 .. 11 kg

Functional description

All Plug & Work components are ready for use for mechanical and electrical direct connection to all sizes of Doosan robots. Depending on the requirements, various grippers and end-of-arm components can be selected. The

pneumatic gripping units are additionally equipped with micro valves, meaning no external valves are required.



① **Co-act Gripper**
for implementing collaborative applications

② **Electric gripper**
for flexible handling of workpieces

③ **Pneumatic grippers**
For conventional, robust handling of workpieces

④ **Change systems**
for manual exchange of different grippers and actuators

General notes about the series

Scope of delivery: Components for direct connection to robots from Doosan Robotics, assembly and operating manual with declaration of incorporation, USB stick with work cell item

Gripping force: is the arithmetic sum of the individual force applied to each jaw at distance P (see illustration).

Finger length: The maximum permissible finger length applies until the nominal operating pressure is achieved. With higher pressures, the finger length must be reduced proportionally to the nominal operating pressure.

Repeat accuracy: is defined as a distribution of the end Position for 100 consecutive strokes.

Actuation: Control via digital I/O

Workpiece weight: is calculated for force-fit gripping with a coefficient of static friction of 0.1 and a safety factor of 2 against workpiece slippage at acceleration due to gravity g. For form-fit or capture gripping, there are significantly higher permissible workpiece weights.

Closing and opening times: are purely the times that the base jaws or fingers are in motion. Valve switching times, hose fill times, or PLC reaction times are not included, and are to be considered when cycle times are calculated.

Application example

Robots equipped with electric and pneumatic gripping units from the Plug & Work portfolio for Doosan Robotics for flexible handling of different workpieces. By combining a changing system and gripping unit, the gripper can be exchanged to suit the workpiece.

- ❶ Manual change system SHS
- ❷ Electric 2-finger parallel gripper EGP
- ❸ 3-finger centric gripper PZN-plus



SCHUNK offers more ...

The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



Universal intermediate jaw



Jaw quick-change system



Finger blank



Finger blank with jaw quick-change system



Attachment fingers

① For more information on these products can be found on the following product pages or at [schunk.com](https://www.schunk.com).

Options and special information

Further technical data and accessories: The products from the Plug & Work portfolio represent a selection of SCHUNK standard products that are adapted for direct use with the respective robots. Further technical data and usable accessories for the individual Plug & Work components are therefore included in the product information for the respective SCHUNK standard components.

Plug & Work Portfolio Doosan Robotics – Collaborative Gripping

Plug & Work Portfolio Doosan Robotics

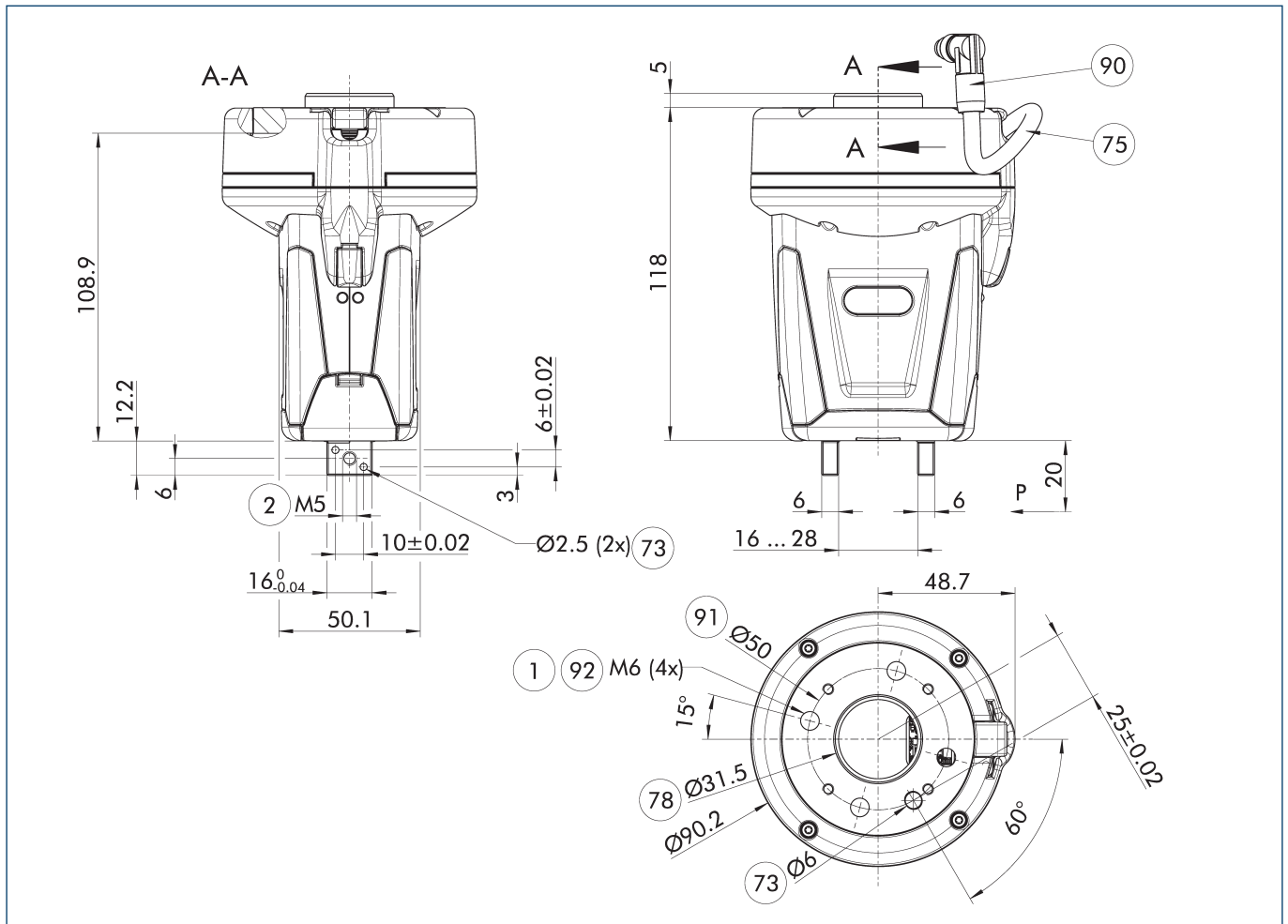


Technical data

Description		Co-act EGP-C 40-N-N-M1013	Co-act EGP-C 64-N-N-M1013
ID		1359018	1416679
Function		Gripping	Gripping
Robot compatibility		Doosan Robotics M-Series/A-Series/H-Series	Doosan Robotics M-Series/A-Series/H-Series
Standard components		Co-act EGP-C 40-N-N-M1013	Co-act EGP-C 64-N-N-M1013
Stroke per jaw	[mm]	6	10
Max. gripping force	[N]	140	230
Weight	[kg]	0.6	1.11
Recommended workpiece weight	[kg]	0.7	1.15
Cable length	[mm]	100	100

① You can find more technical values in the catalog chapter for the respective standard component.

Main view Co-act EGP-C 40-N-N-M1013



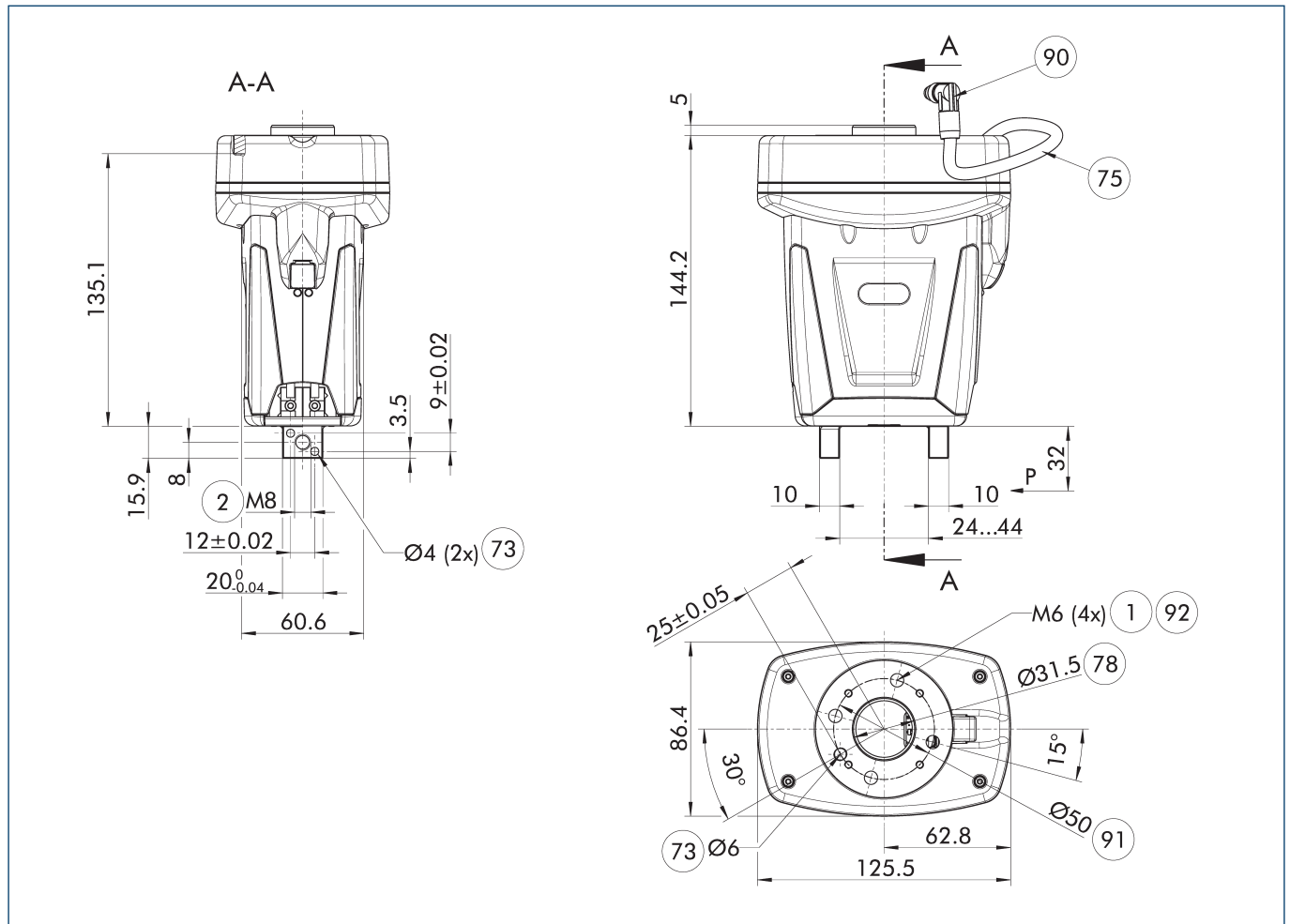
The drawing shows the basic version of the gripper with open jaws.

- | | |
|---------------------------|--|
| ① Gripper connection | ⑦⑧ Fit for centering |
| ② Finger connection | ⑨⑩ Angled plug |
| ⑦③ Fit for centering pins | ⑨① DIN ISO-9409 bolt circle |
| ⑦⑤ Cable length | ⑨② Through holes for screw connections |

Plug & Work Portfolio Doosan Robotics – Collaborative Gripping

Plug & Work Portfolio Doosan Robotics

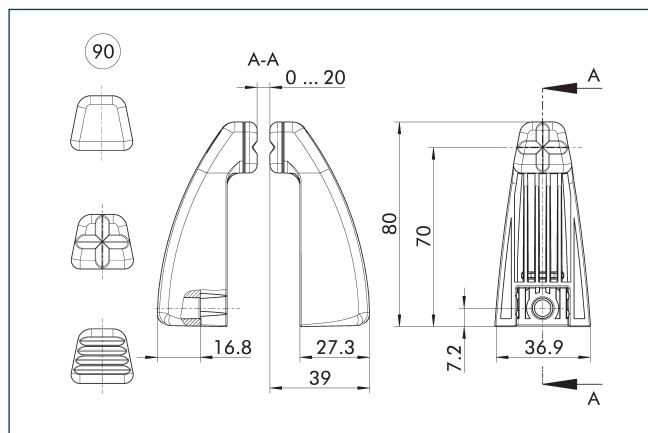
Main view Co-act EGP-C 64-N-N-M1013



The drawing shows the basic version of the gripper with open jaws.

- | | |
|---------------------------|--|
| ① Gripper connection | ⑦⑧ Fit for centering |
| ② Finger connection | ⑨⑩ Angled plug |
| ⑦③ Fit for centering pins | ⑨① DIN ISO-9409 bolt circle |
| ⑦⑤ Cable length | ⑨② Through holes for screw connections |

Top jaw AUB Co-act EGP



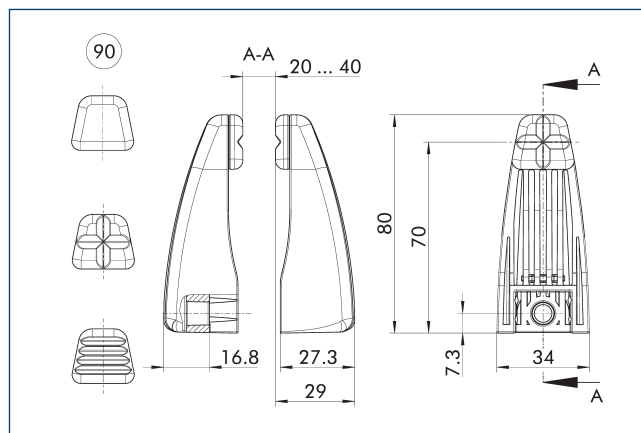
90 Finger inserts

The top jaws are specifically designed for the Co-act EGP gripper. Depending on the size, they are available with varying clamping ranges. Depending on the application and workpiece, one of the supplied finger inserts can be used. The finger inserts are manufactured from rigid or elastic material.

Description	ID	Material
Finger blank		
AUB Co-act EGP 64/20	1401294	PA/TPU

- ① The scope of delivery includes two top jaws including fastening material. Observe the notes in the Assembly and Operating Manual of the Co-act EGP gripper.

Top jaw AUB Co-act EGP



90 Finger inserts

The top jaws are specifically designed for the Co-act EGP gripper. Depending on the size, they are available with varying clamping ranges. Depending on the application and workpiece, one of the supplied finger inserts can be used. The finger inserts are manufactured from rigid or elastic material.

Description	ID	Material
Finger blank		
AUB Co-act EGP 64/40	1401297	PA/TPU

- ① The scope of delivery includes two top jaws including fastening material. Observe the notes in the Assembly and Operating Manual of the Co-act EGP gripper.

Plug & Work Portfolio Doosan Robotics – Electric Gripping

Plug & Work Portfolio Doosan Robotics

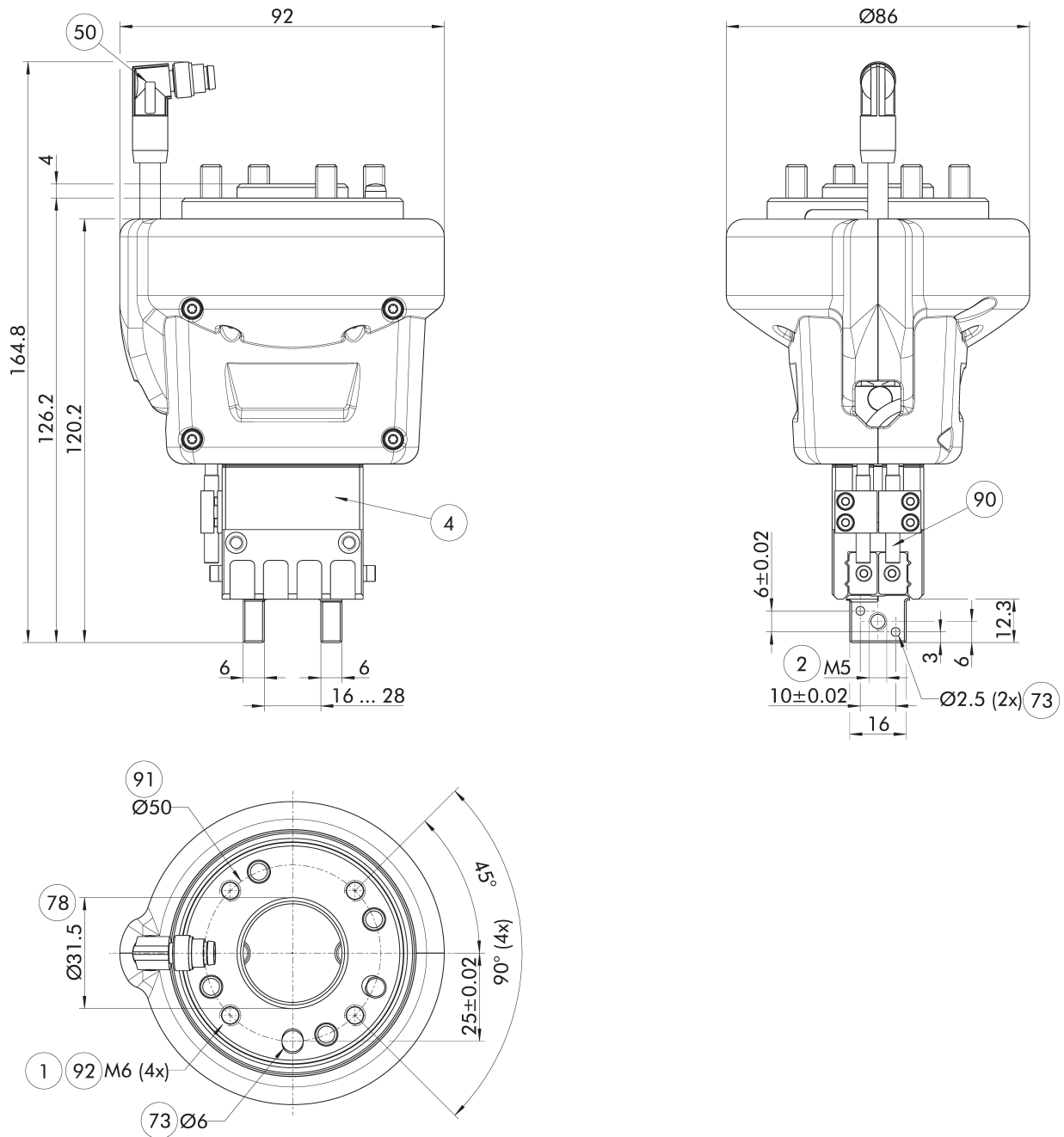


Technical data

Description		EOA-DRM-EGP 40
ID		1399631
Function		Gripping
Robot compatibility		Doosan Robotics M-Series/A-Series/H-Series
Standard components		EGP 40
Stroke per jaw	[mm]	6
Max. gripping force	[N]	140
Weight	[kg]	0.8
Recommended workpiece weight	[kg]	0.7

① You can find more technical values in the catalog chapter for the respective standard component.

Main view E0A-DRM-EGP 40

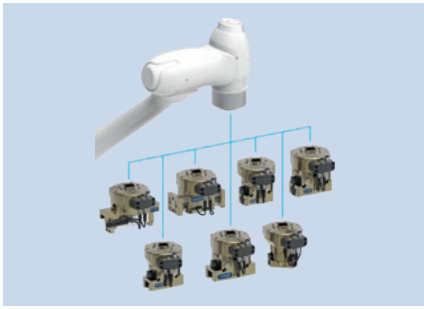


The drawing shows the basic version of the gripper without dimensional consideration of the options described below.

- | | |
|---------------------------|--|
| ① Gripper connection | ⑦⑧ Fit for centering |
| ② Finger connection | ⑨⑩ Sensor IN ... |
| ④ Grippers | ⑨① DIN ISO-9409 bolt circle |
| ⑤⑥ Electrical connection | ⑨② Through holes for screw connections |
| ⑦③ Fit for centering pins | |

Plug & Work Portfolio Doosan Robotics – Pneumatic Gripping

Plug & Work Portfolio Doosan Robotics



Technical data

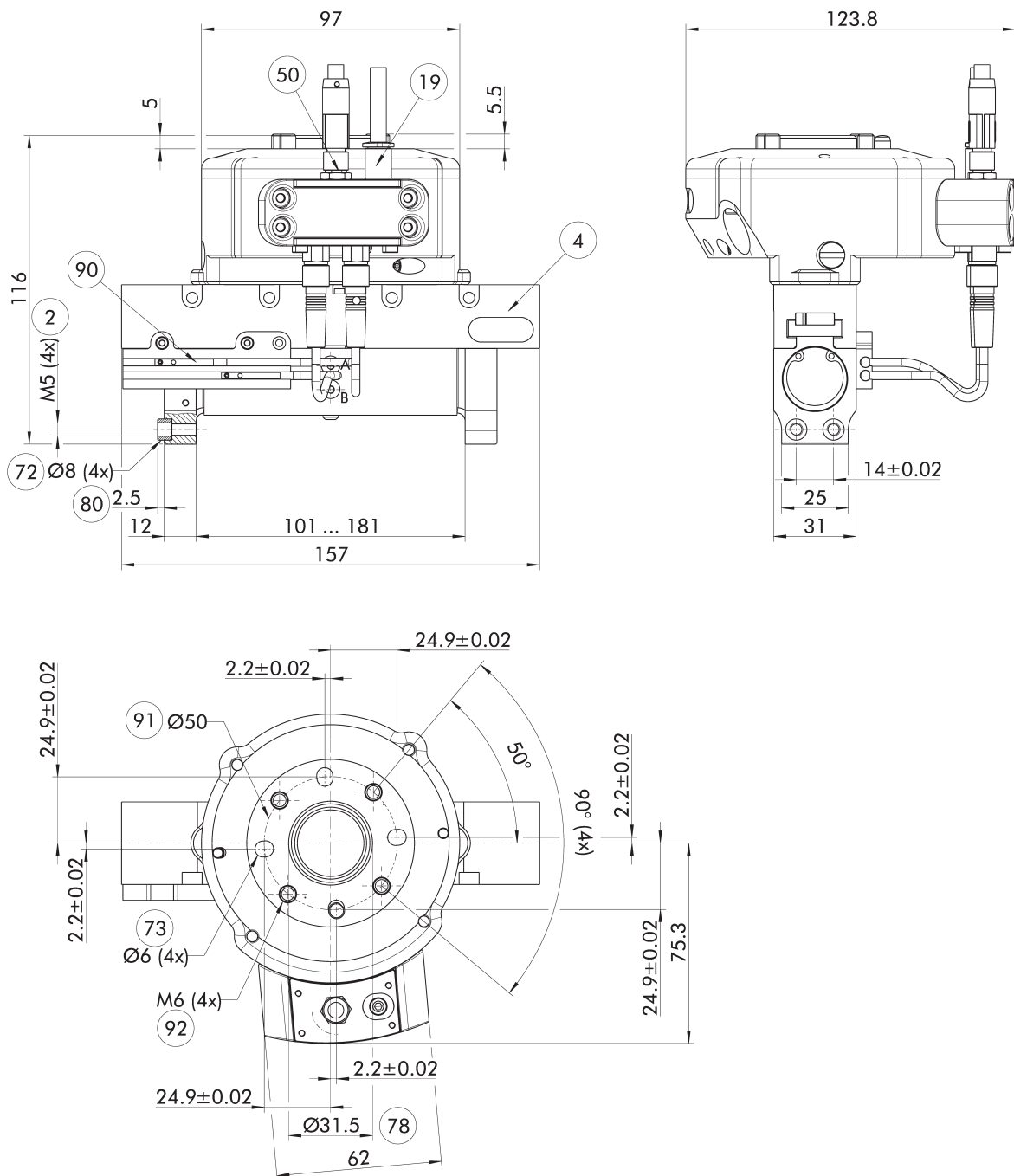
Description		EOA-DRM-KGG 100-80	EOA-DRM-PSH 22-1	EOA-DRM-JGP 80-1	EOA-DRM-JGP 100-1	EOA-DRM-PGN- plus-P 80-1	EOA-DRM-PGN- plus-P 100-1
ID		1399592	1399591	1399614	1399613	1399612	1399611
Function		Gripping	Gripping	Gripping	Gripping	Gripping	Gripping
Robot compatibility		Doosan Robotics M-Series/A-Series/ H-Series	Doosan Robotics M-Series/A-Series/ H-Series	Doosan Robotics M-Series/A-Series/ H-Series	Doosan Robotics M-Series/A-Series/ H-Series	Doosan Robotics M-Series/A-Series/ H-Series	Doosan Robotics M-Series/A-Series/ H-Series
Standard components		KGG 100-80	PSH 22-1	JGP 80-1	JGP 100-1	PGN-plus-P 80-1	PGN-plus-P 100-1
Stroke per jaw	[mm]	40	28	8	10	8	10
Max. gripping force	[N]	175	320	415	660	550	870
Weight	[kg]	1.28	1.73	1.33	1.72	1.38	1.84
Recommended workpiece weight	[kg]	0.9	1.6	2.1	3.3	2.75	4.35

① You can find more technical values in the catalog chapter for the respective standard component.

Description		EOA-DRM-PZN-plus 64-1
ID		1399593
Function		Gripping
Robot compatibility		Doosan Robotics M-Series/A-Series/H-Series
Standard components		PZN-plus 64-1
Stroke per jaw	[mm]	6
Max. gripping force	[N]	580
Weight	[kg]	1.22
Recommended workpiece weight	[kg]	2.9

① You can find more technical values in the catalog chapter for the respective standard component.

Main view EOA-DRM-KGG 100-80



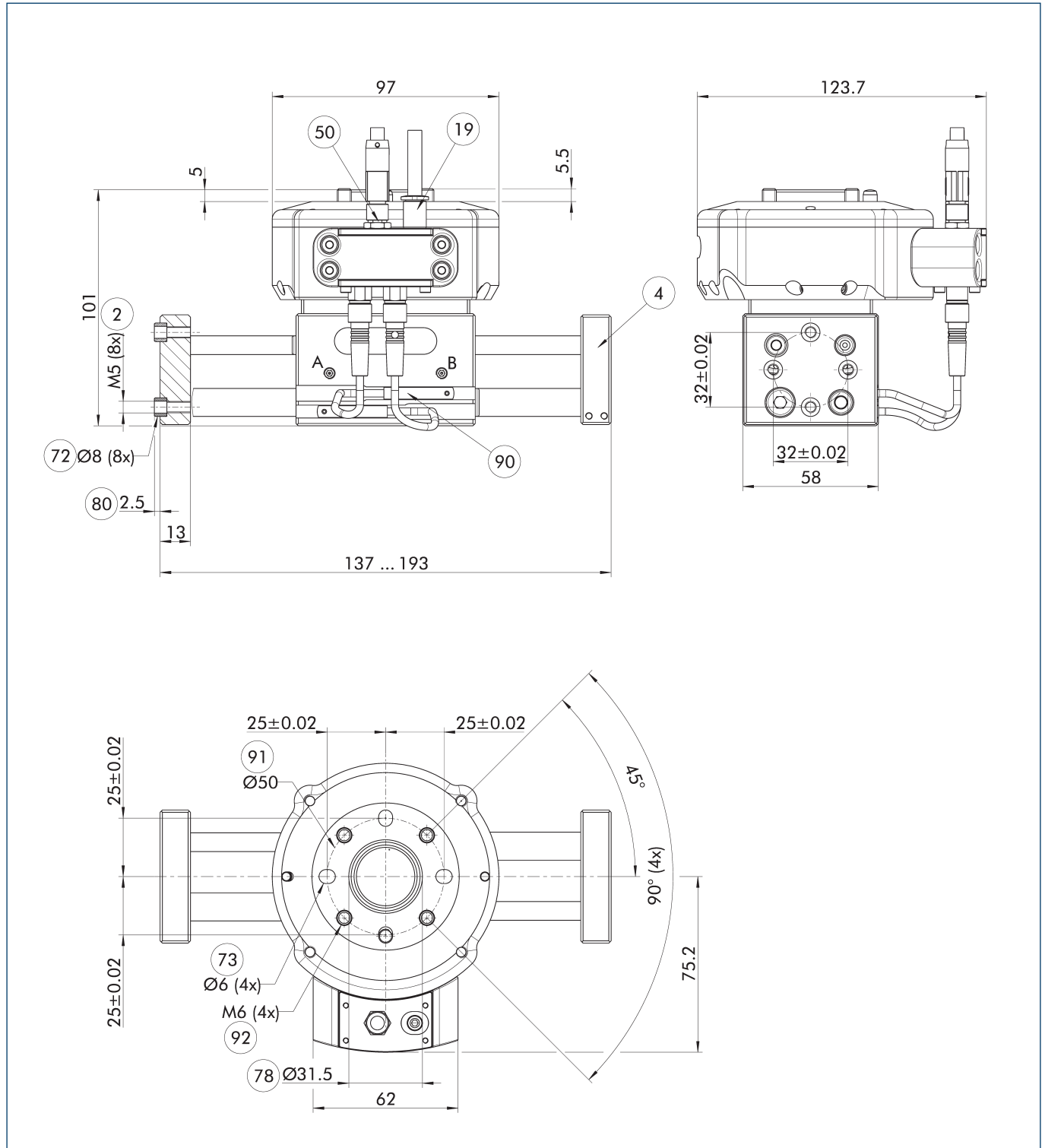
The drawing shows the basic version of the gripper without dimensional consideration of the options described below.

- | | |
|------------------------------|---|
| ② Finger connection | ⑦⑧ Fit for centering |
| ④ Grippers | ⑧⑩ Depth of the centering sleeve hole in the counter part |
| ①⑨ Air connection | ⑨⑩ Sensor MMS 22.. |
| ⑤⑩ Electrical connection | ⑨① DIN ISO-9409 bolt circle |
| ⑦② Fit for centering sleeves | ⑨② Through holes for screw connections |
| ⑦③ Fit for centering pins | |

Plug & Work Portfolio Doosan Robotics – Pneumatic Gripping

Plug & Work Portfolio Doosan Robotics

Main view E0A-DRM-PSH 22-1



The drawing shows the basic version of the gripper without dimensional consideration of the options described below.

- | | |
|------------------------------|---|
| ② Finger connection | ⑦⑧ Fit for centering |
| ④ Grippers | ⑧⑩ Depth of the centering sleeve hole in the counter part |
| ①⑨ Air connection | ⑨⑩ Sensor MMS 22.. |
| ⑤⑩ Electrical connection | ⑨① DIN ISO-9409 bolt circle |
| ⑦② Fit for centering sleeves | ⑨② Through holes for screw connections |
| ⑦③ Fit for centering pins | |

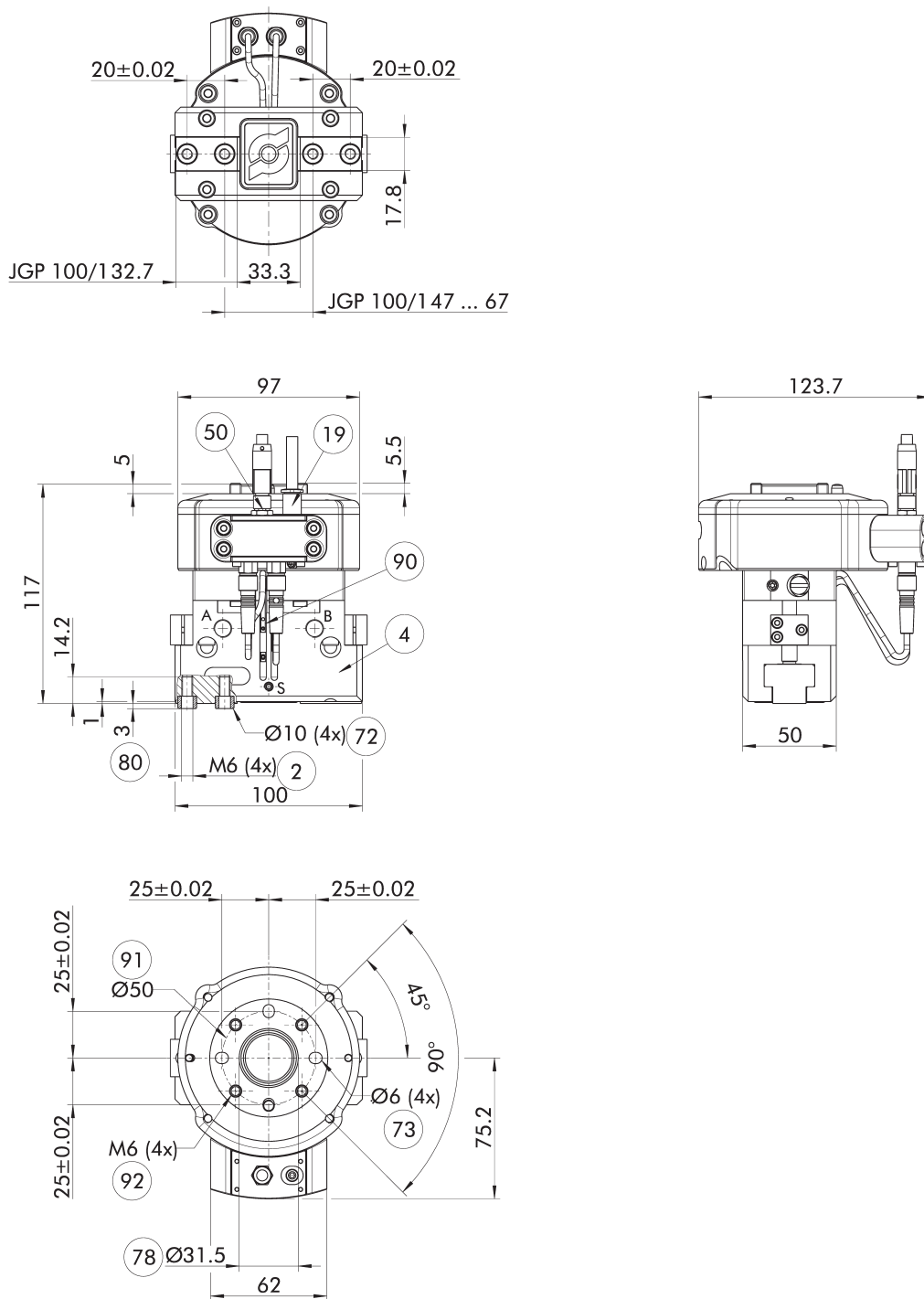
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② Finger connection	⑦⑧ Fit for centering
④ Grippers	⑧⑩ Depth of the centering sleeve hole in the counter part
⑬ Air connection	⑨⑩ Sensor MMS 22..
⑤⑩ Electrical connection	⑨① DIN ISO-9409 bolt circle
⑦② Fit for centering sleeves	⑨② Through holes for screw connections
⑦③ Fit for centering pins	

Plug & Work Portfolio Doosan Robotics – Pneumatic Gripping

Plug & Work Portfolio Doosan Robotics

Main view EOA-DRM-JGP 100-1

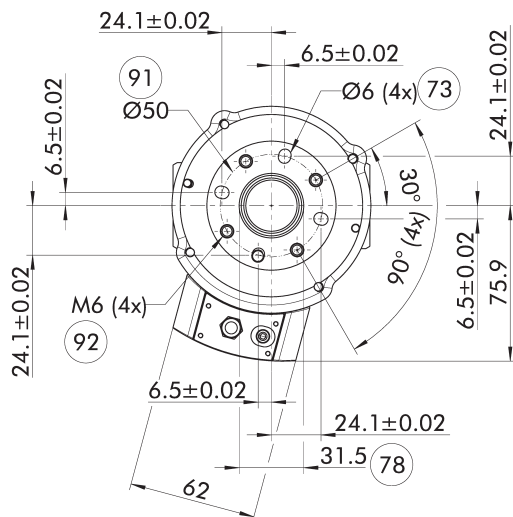
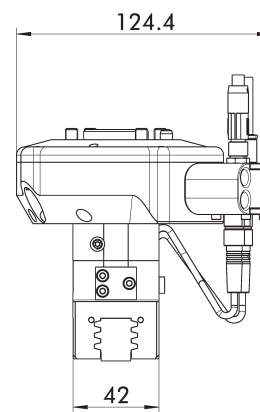
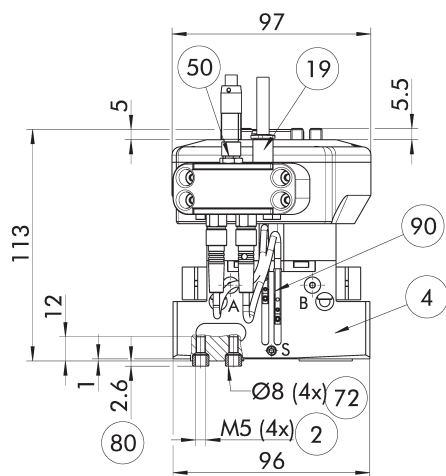


The drawing shows the basic version of the gripper without dimensional consideration of the options described below.

- | | |
|------------------------------|---|
| ② Finger connection | ⑦⑧ Fit for centering |
| ④ Grippers | ⑧⑩ Depth of the centering sleeve hole in the counter part |
| ①⑨ Air connection | ⑨⑩ Sensor MMS 22.. |
| ⑤⑩ Electrical connection | ⑨① DIN ISO-9409 bolt circle |
| ⑦② Fit for centering sleeves | ⑨② Through holes for screw connections |
| ⑦③ Fit for centering pins | |

Technical drawing of a 3/2-way solenoid valve. The drawing shows a cross-section of the valve body with a solenoid coil on top. Dimensions are indicated as follows:

- Top horizontal dimensions: 16 ± 0.02 (twice)
- Right vertical dimension: 15
- Bottom horizontal dimensions: PGN+P 80/126 (left), 27 (middle), PGN+P 80/137 ... 53 (right)



② Finger connection	⑦⑧ Fit for centering
④ Grippers	⑧⑩ Depth of the centering sleeve hole in the counter part
①⑨ Air connection	⑨⑩ Sensor MMS 22..
⑤⑩ Electrical connection	⑨① DIN ISO-9409 bolt circle
⑦② Fit for centering sleeves	⑨② Through holes for screw connections
⑦③ Fit for centering pins	

Plug & Work Portfolio Doosan Robotics

② Finger connection	⑦⑧ Fit for centering
④ Grippers	⑧⑩ Depth of the centering sleeve
⑬ Air connection	hole in the counter part
⑤⑩ Electrical connection	⑨⑩ Sensor MMS 22..
⑦⑩ Fit for centering sleeves	⑨① DIN ISO-9409 bolt circle
⑦③ Fit for centering pins	⑨② Through holes for screw connections

[illegible]

② Finger connection	⑦⑧ Fit for centering
④ Grippers	⑧⑩ Depth of the centering sleeve hole in the counter part
①⑨ Air connection	⑨⑩ Sensor MMS 22..
⑤⑩ Electrical connection	⑨① DIN ISO-9409 bolt circle
⑦② Fit for centering sleeves	⑨② Through holes for screw connections
⑦③ Fit for centering pins	

Plug & Work Portfolio Doosan Robotics – Changing

Plug & Work Portfolio Doosan Robotics

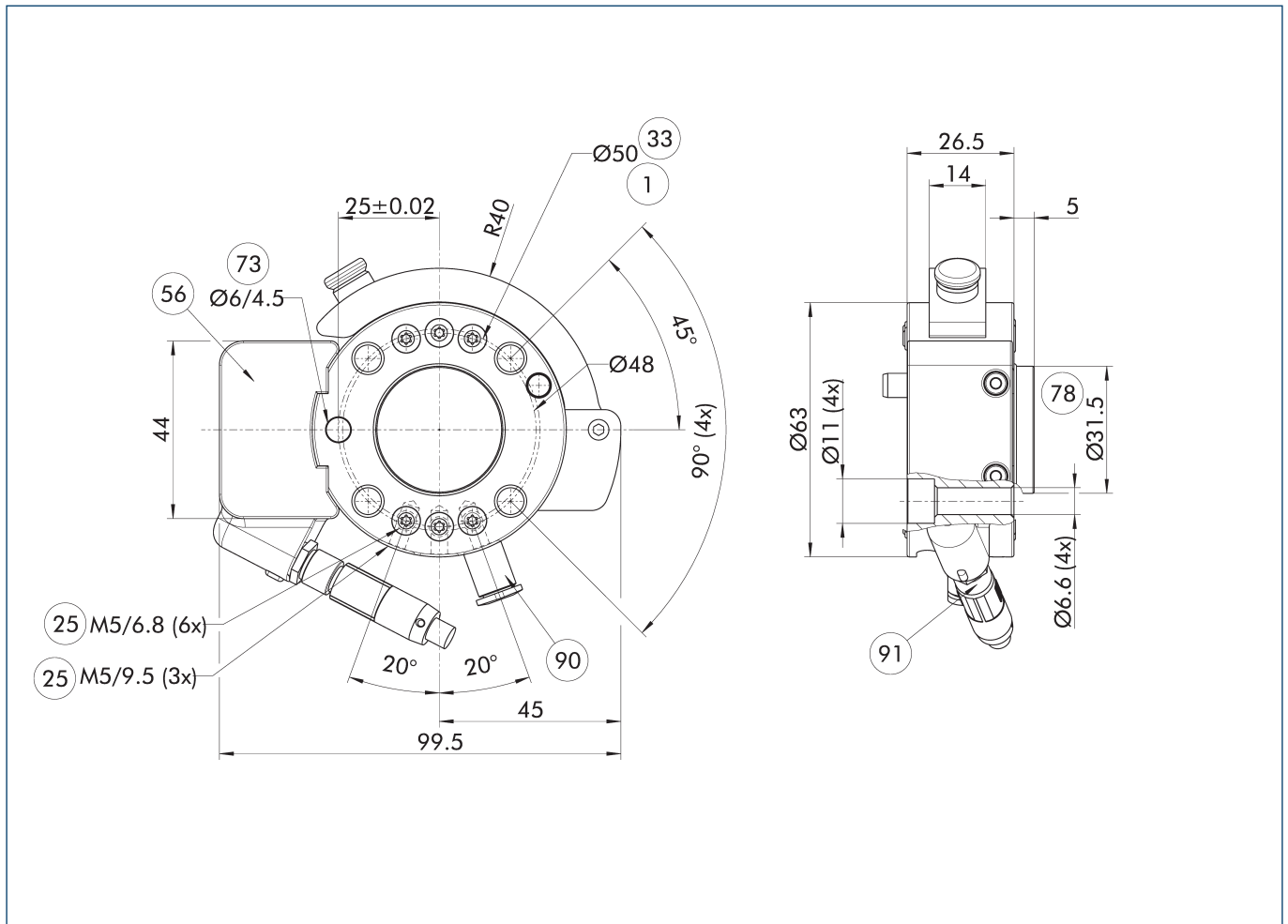


Technical data

Description		EOA-DRM-SHK-050-E08-000	EOA-DRM-SHA-050-E08-000
ID		1399576	1399581
Function		Changing	Changing
Robot compatibility		Doosan Robotics M-Series/A-Series/H-Series	Doosan Robotics M-Series/A-Series/H-Series
Standard components		SHS 50	SHS 50
Weight	[kg]	0.35	0.14
Recommended workpiece weight	[kg]	11	11
Max. dynamic bending moment Mx/My	[Nm]	75	75
Max. dynamic bending moment Mz	[Nm]	135	135

① You can find more technical values in the catalog chapter for the respective standard component.

Main view E0A-DRM-SHK-050

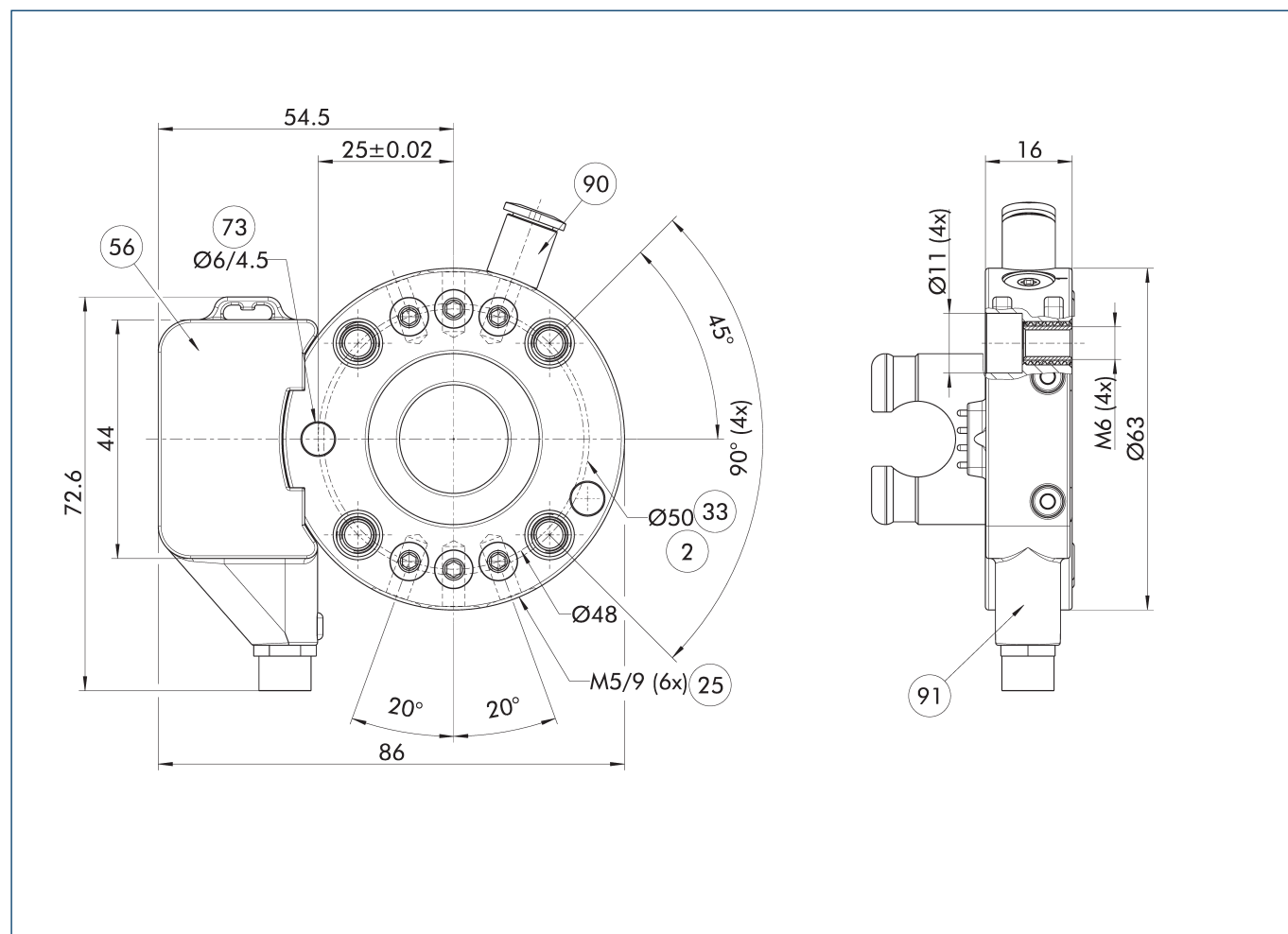


- | | |
|--------------------------------------|---------------------------|
| ① Robot-side connection | ⑦③ Fit for centering pins |
| ②⑤ Pneumatic feed-throughs | ⑦⑧ Fit for centering |
| ③③ DIN ISO-9409 bolt circle | ⑨⑩ Air connection |
| ⑤⑥ Included in the scope of delivery | ⑨① Electrical connection |

Plug & Work Portfolio Doosan Robotics – Changing

Plug & Work Portfolio Doosan Robotics

Main view EOA-DRM-SHA-050



- | | |
|--------------------------------------|---------------------------|
| ② Tool-side connection | ⑦③ Fit for centering pins |
| ②⑤ Pneumatic feed-throughs | ⑨⑩ Air connection |
| ③③ DIN ISO-9409 bolt circle | ⑨① Electrical connection |
| ⑤⑥ Included in the scope of delivery | |



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