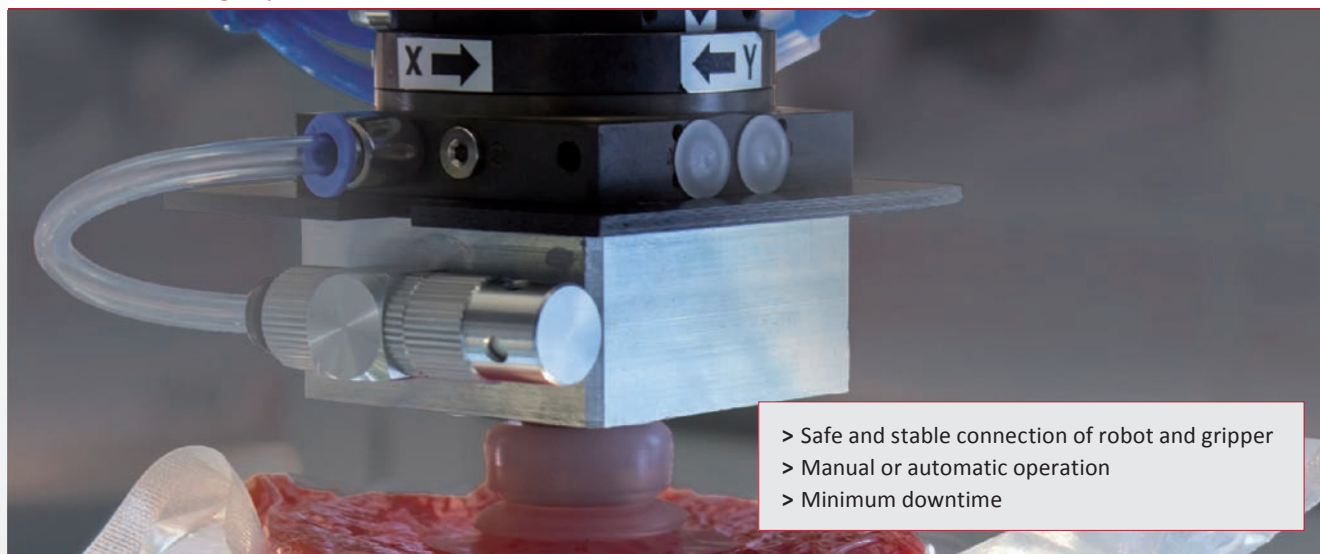




FIPA Quick-change systems



- > Safe and stable connection of robot and gripper
- > Manual or automatic operation
- > Minimum downtime



S Series – manual quick-change system

- > Four sizes with load capacity from 5 to 40 kg
- > Easy change-over of base plates and pneumatic couplings
- > Spring loaded base plates for compensating ejector stroke of injection molding machines (GR05.023, GR05.024)

> See page 13



SR Series – manual quick-change system

- > Three sizes with load capacity of 20, 40 and 100 kg
- > Secure snap-on coupling SAFE-LOCK
- > Locking position optically indicated (red/green)
- > Model MV comes with micro valves for automatic air lock off during decoupling

> See page 20



Accessories

- > Plates to adapt SLine and MLine extrusions directly to round quick-changers
- > Fits to round quick-changers from FIPA and other brands
- > Wall brackets for safe storing of gripper systems



ASR Series – automatic quick-change system

- > Two sizes with load capacity of 5 and 20 kg
- > Secure locking system with guide pins, compensates positional deviations during coupling
- > Optional electric plug connectors for transmitting up to eight sensor signals

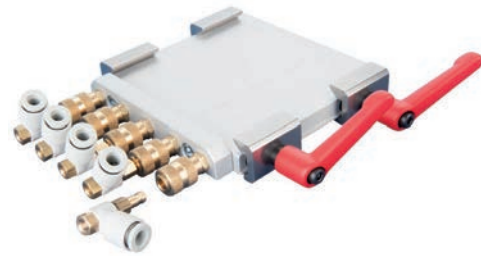
> See page 42



Quick-change systems – square, robot side, without fittings



GR05.041



GR05.041 incl. quick-connection couplers

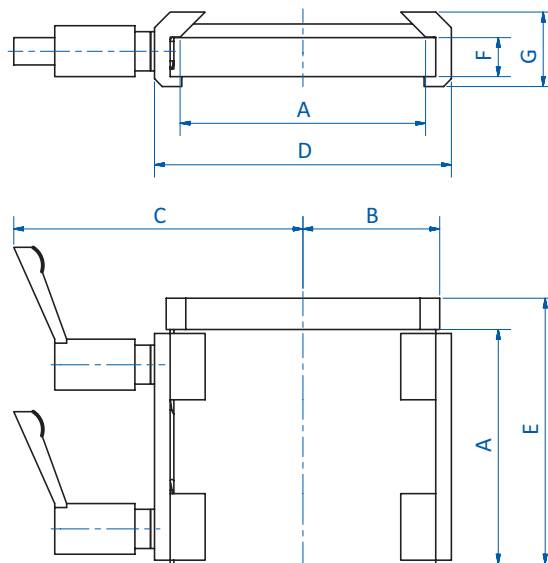
Product notes

- > Manual interface between robot and gripper system
- > Minimized down time due to fast gripper change
- > Available in four sizes
- > Clamping levers included in scope of delivery
- > Base plates and pneumatic connections not included in scope of delivery

Technical data

Item no.	Industry standard code	Number of pneumatic connections	Compatible hose \varnothing [mm]	Lifting force [N]	Weight [g]	Accessories
GR05.041	GR-0	5	6	50	315	Gripper mounting plate: GR05.042 (p.15) Quick-connection coupler: KIT1-GR05.041
GR05.021	GR-1	5	6	100	570	Gripper mounting plate: GR05.022 (p.15) Quick-connection coupler: KIT1-GR05.021
GR05.031	GR-2	5	6 / 8	200	1,970	Gripper mounting plate: GR05.032 (p.15) Gripper mounting plate: GR-XL05.032 (p.15) Quick-connection coupler: KIT1-GR05.031
GR05.051	GR-3	5	6 / 8	400	4,520	Gripper mounting plate: GR05.052 (p.15) Gripper mounting plate: GR-XL05.052 (p.15) Quick-connection coupler: KIT1-GR05.031

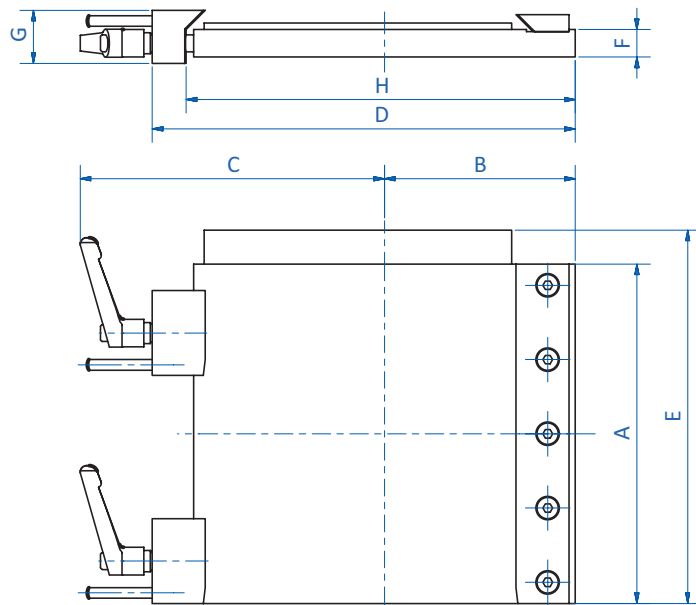
Dimensions



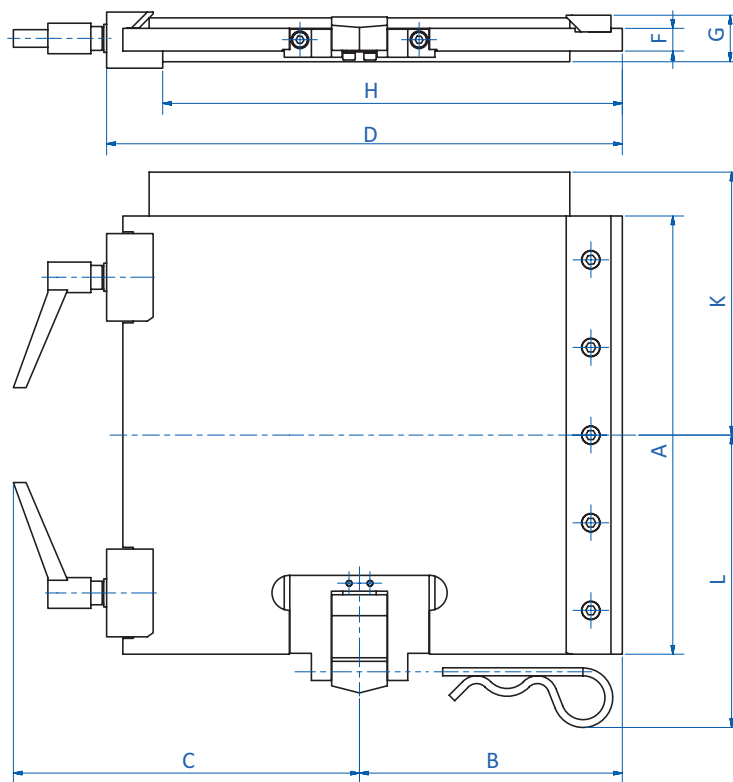
GR05.041 | GR05.021



Dimensions



GR05.031



GR05.051

Item no.	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	K [mm]	L [mm]
GR05.041	60	38	74	76	68	10	19	62	--	--
GR05.021	100	57.5	91.5	115	110	10	20	101	--	--
GR05.031	160	90	143.5	198	176	13	25	183	--	--
GR05.051	250	150	197.5	290	--	13	32	259	150	167



Gripper mounting plates



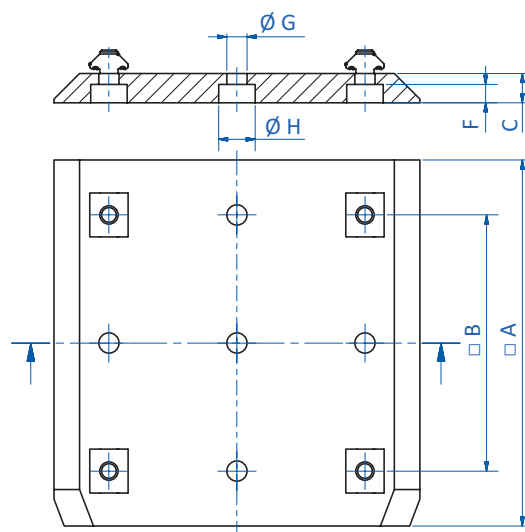
Product notes

- > Suitable for square quick-change systems GR05.021 to GR05.051
- > Base plates with pre-located, center-punched holes enable custom drilling patterns (index -X)
- > Slot nuts and mounting screws included in scope of delivery, except for base plates index -X

Technical data

Item no.	Industry standard code	Suitable for extrusion system	Weight [g]	Suitable robot adapter plates
GR05.042	GR-0	SLine / MLine	84	GR05.041 (p.13)
GR05.022	GR-1	SLine / MLine	230	GR05.021 (p.13)
GR05.032	GR-2	SLine / MLine	635	GR05.031 (p.13)
GR05.052	GR-3	SLine / MLine	1,650	GR05.051 (p.13)
GR-XL05.032	GR-2	XLine	752	GR05.031 (p.13)
GR-XL05.052	GR-3	XLine	1,784	GR05.051 (p.13)
GR05.042-X	GR-0	SLine / MLine	84	GR05.041 (p.13)
GR05.022-X	GR-1	SLine / MLine	208	GR05.021 (p.13)
GR05.032-X	GR-2	SLine / MLine	635	GR05.031 (p.13)
GR05.052-X	GR-3	SLine / MLine	1,650	GR05.051 (p.13)

Dimensions

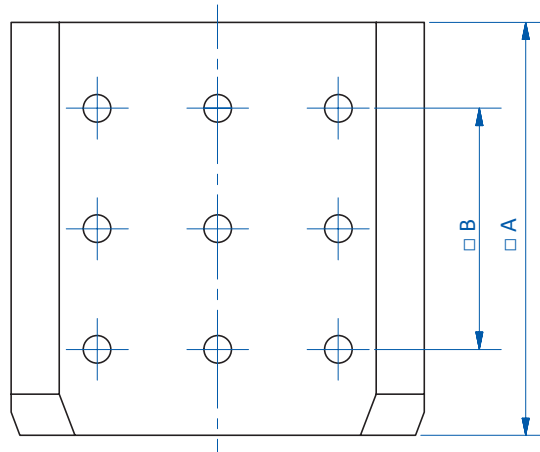
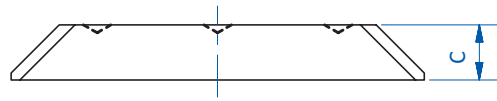


GR05.042 | GR05.022 | GR05.032 | GR05.052 | GR-XL05.032 | GR-XL05.052

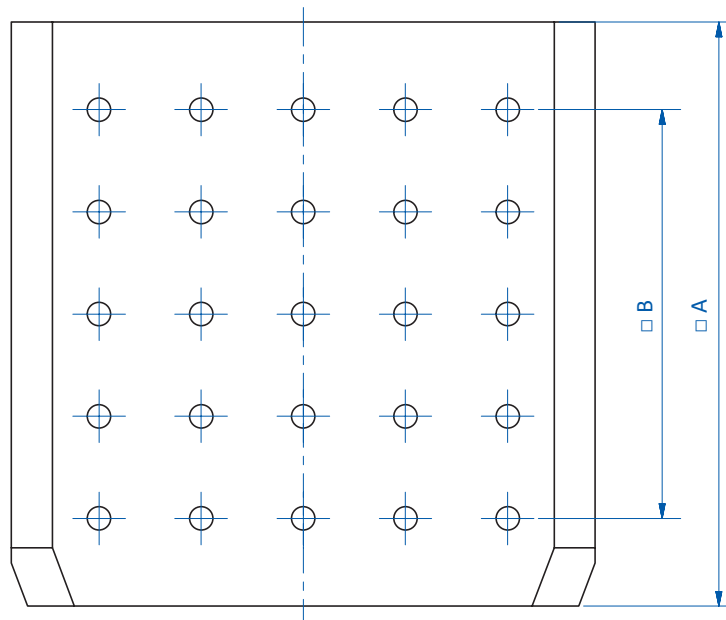
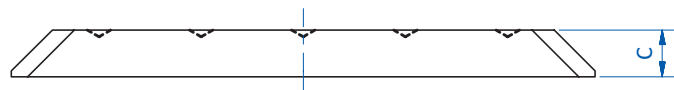
Continued on the next page



Dimensions



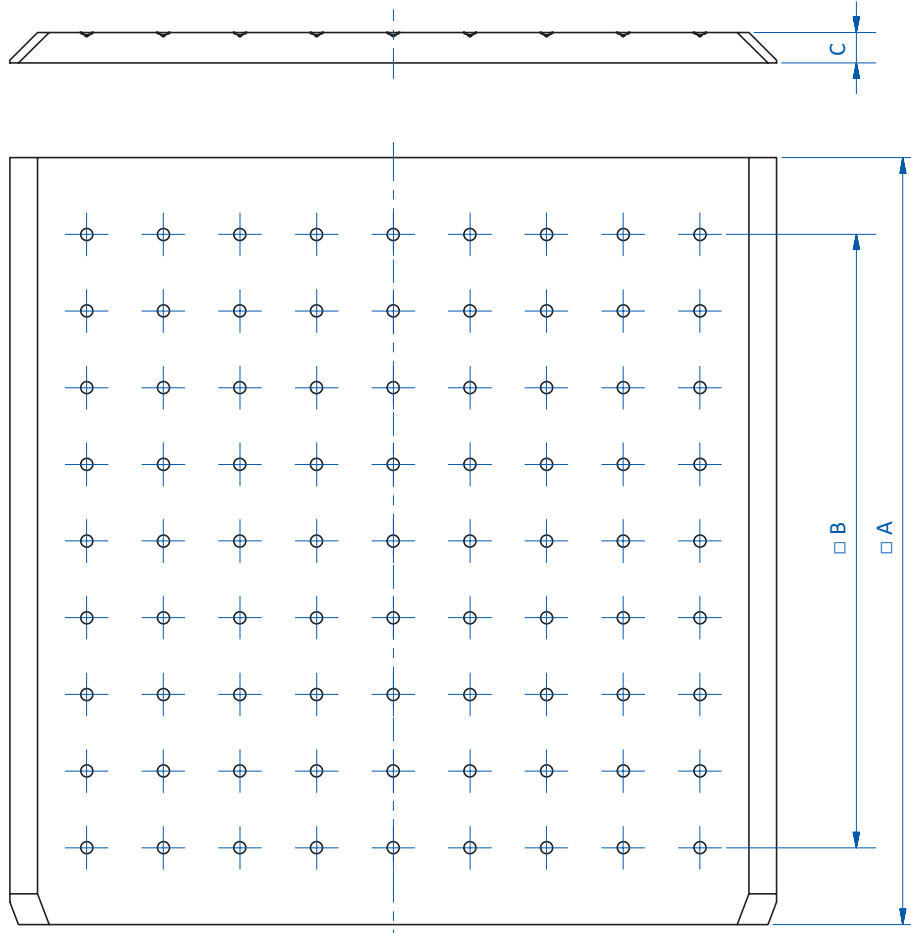
GR05.042-X



GR05.022-X | GR05.032-X



Dimensions

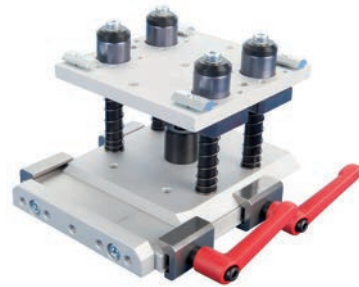


GR05.052-X

Item no.	□ A [mm]	□ B [mm]	C [mm]	F [mm]	∅ G [mm]	∅ H [mm]
GR05.042	60	35	8	5	5.5	10
GR05.022	100	70	8	5	5.5	10
GR05.032	160	120	10	4.5	5.5	10
GR05.052	250	200	10	7	5.5	10
GR-XL05.032	160	120	10	6.5	8.5	14
GR-XL05.052	250	200	10	6.5	8.5	14
GR05.042-X	60	35	8	--	--	--
GR05.022-X	100	70	8	--	--	--
GR05.032-X	160	120	10	--	--	--
GR05.052-X	250	200	10	--	--	--



Gripper mounting plates – spring loaded



Gripper mounting plate with quick-change system GR05.021

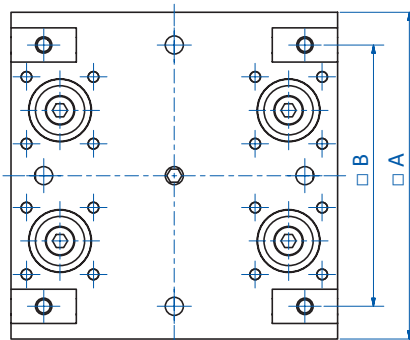
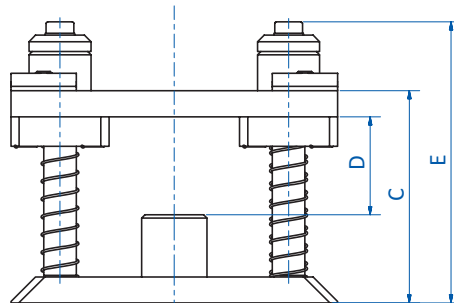
Product notes

- > Base plate for compensating ejection stroke of molding machine
- > High-quality slide bearings ensure accurate guidance
- > A second set of springs with higher spring rate included in scope of delivery
- > Slot nuts and mounting screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Industry standard code	Stroke [mm]	Spring stiffness (already built in) [N/mm]	Spring stiffness (alternatively) [N/mm]	Weight [g]	Suitable robot adapter plates
GR05.023	SLine	GR-1	30	0.143	0.349	690	GR05.021 (p.13)
GR05.024	SLine / MLine	GR-1	30	0.143	0.349	690	GR05.021 (p.13)

Dimensions



Item no.	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
GR05.023	100	80	65	30	86
GR05.024	110	85	65	30	86



Wall brackets for square quick-change plates



Wall bracket with quick-change plate

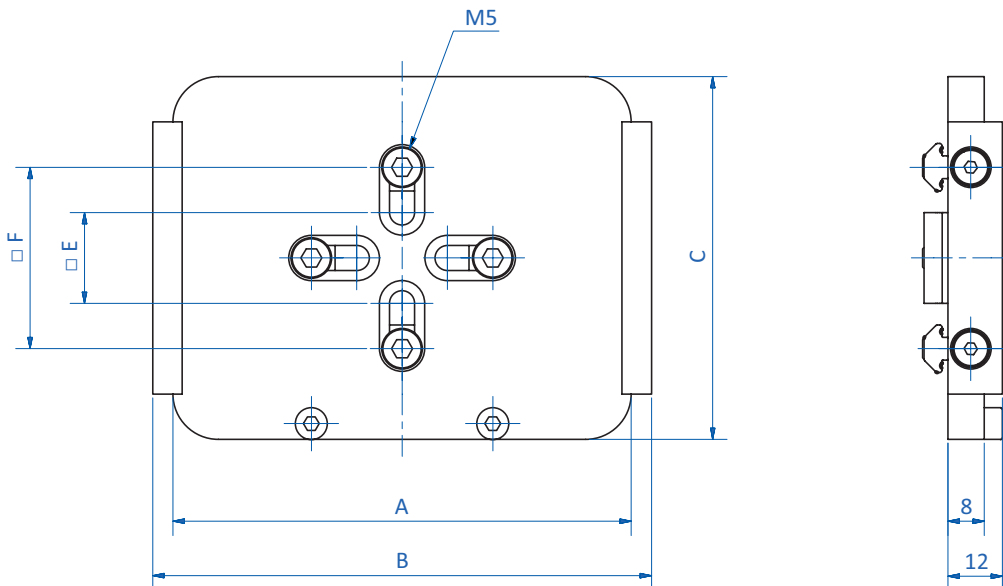
Product notes

- > Efficient storage of gripping systems
- > Fixing kit included in delivery

Technical data

Item no.	Weight [g]	Compatible gripper mounting plate
GR05.042-W	145	GR05.042 (p.15)
GR05.022-W	212	GR05.022 (p.15)
GR05.032-W	385	GR05.032 (p.15)
GR05.052-W	1,218	GR05.052 (p.15)

Dimensions



Item no.	A [mm]	B [mm]	C [mm]	□ E [mm]	□ F [mm]
GR05.042-W	60	70	80	20	40
GR05.022-W	101	110	80	20	40
GR05.032-W	161	170	100	20	40
GR05.052-W	251	260	200	60	120



Quick-change systems | SR Series

Round quick-changers Ø 50 mm, 6 air inlets – robot side

Round quick-changers Ø 50 mm, 6 air inlets – robot side



SR50-A-SL-MV with optical locking indication SAFE-LOCK

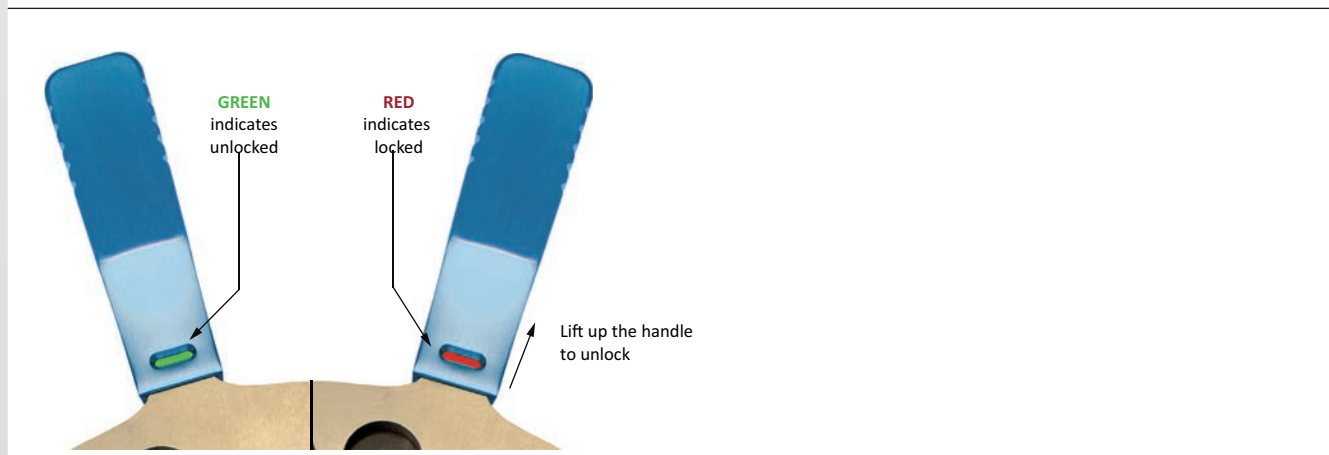
Product notes

- > Manual interface between robot and gripper system
- > Air connections always correctly aligned
- > Body made of anodized aluminum alloy
- > Model MV comes with micro valves for automatic air or vacuum lock off during decoupling
- > Model SL with secure SAFE-LOCK ensures maximum functional reliability and optical locking indication (red/green)
- > Stainless steel design on request

Technical data

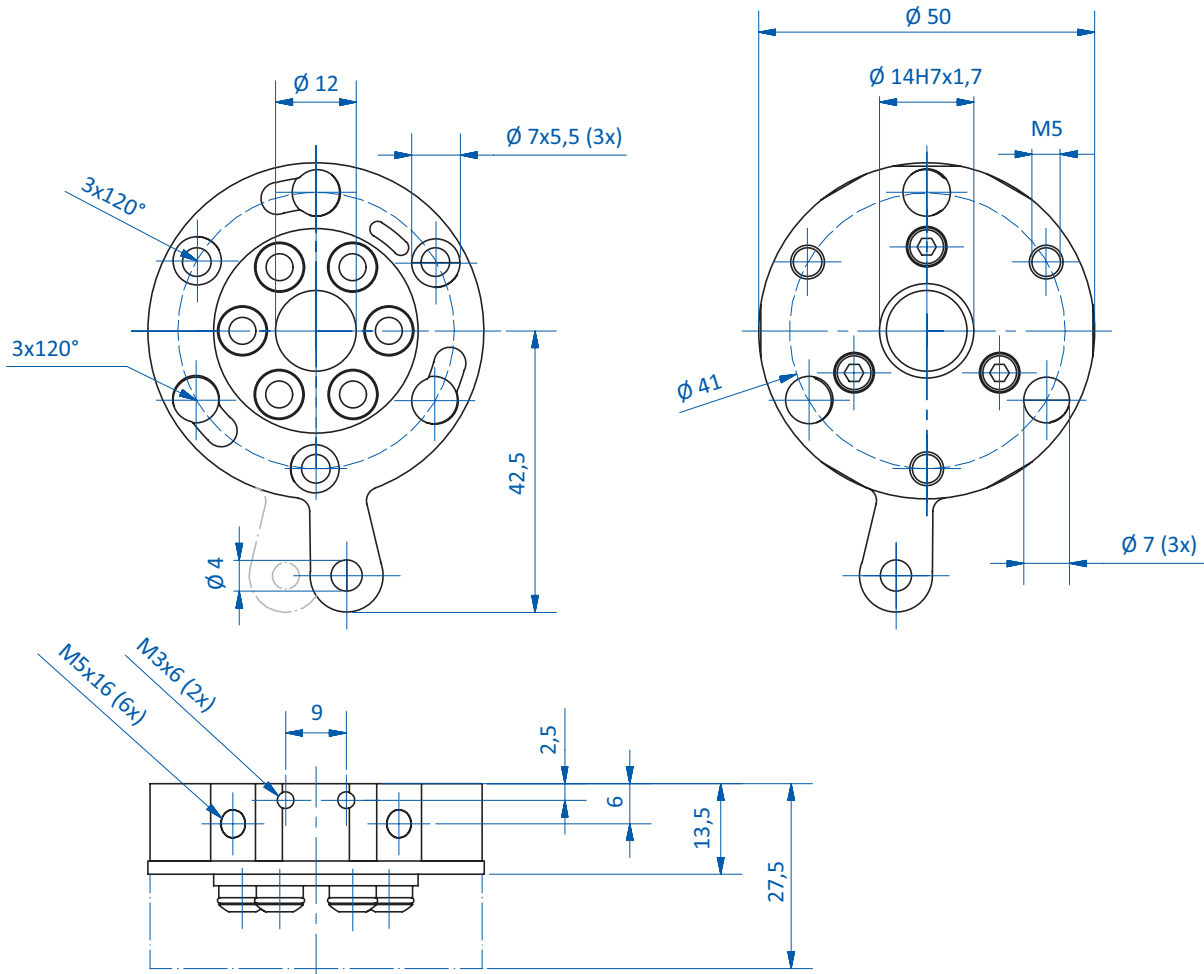
Item no.	SR50-A	SR50-A-MV	SR50-A-SL	SR50-A-SL-MV
Lifting force [N]	200	200	200	200
Number of pneumatic connections	6xM5	6xM5	6xM5	6xM5
Working pressure [bar (psi)]	0 - 6 (0 - 87)	0 - 6 (0 - 87)	0 - 6 (0 - 87)	0 - 6 (0 - 87)
Max. torque [Nm]	50	50	50	50
Max. bending moment [Nm]	30	30	30	30
Repeat accuracy [mm]	+/- 0.025	+/- 0.025	+/- 0.025	+/- 0.025
Micro valves	--	integrated	--	integrated
Snap-on	--	--	SAFE-LOCK for secure locking	SAFE-LOCK for secure locking
Weight [g]	65	65	65	65
Accessories	Electrical connectors: 20.537 (p.38) Spare part kit: KIT-SR50	Electrical connectors: 20.537 (p.38) Spare part kit: KIT-SR50	Electrical connectors: 20.537 (p.38) Spare part kit: KIT-SR50	Electrical connectors: 20.537 (p.38) Spare part kit: KIT-SR50

Display of optical locking indication SAFE-LOCK





Dimensions



SR50-A | SR50-A-MV

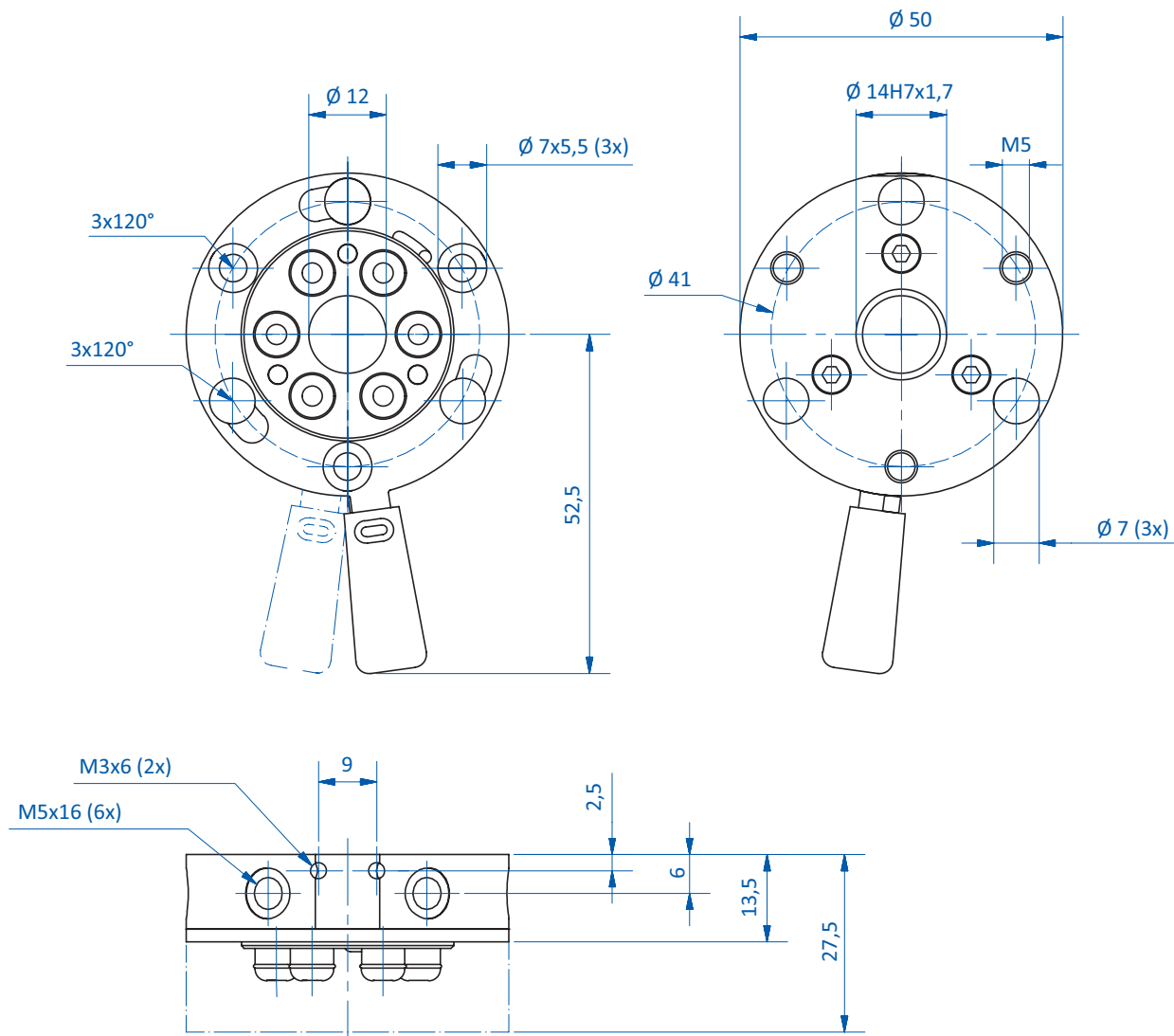
Continued on the next page →



Quick-change systems | SR Series

Round quick-changers \varnothing 50 mm, 6 air inlets – robot side

Dimensions



SR50-A-SL | SR50-A-SL-MV



Quick-change systems | SR Series

Round quick-changers Ø 90 mm, 8 air inlets – robot side

Round quick-changers Ø 90 mm, 8 air inlets – robot side



SR90-A-SL with optical locking indication SAFE-LOCK

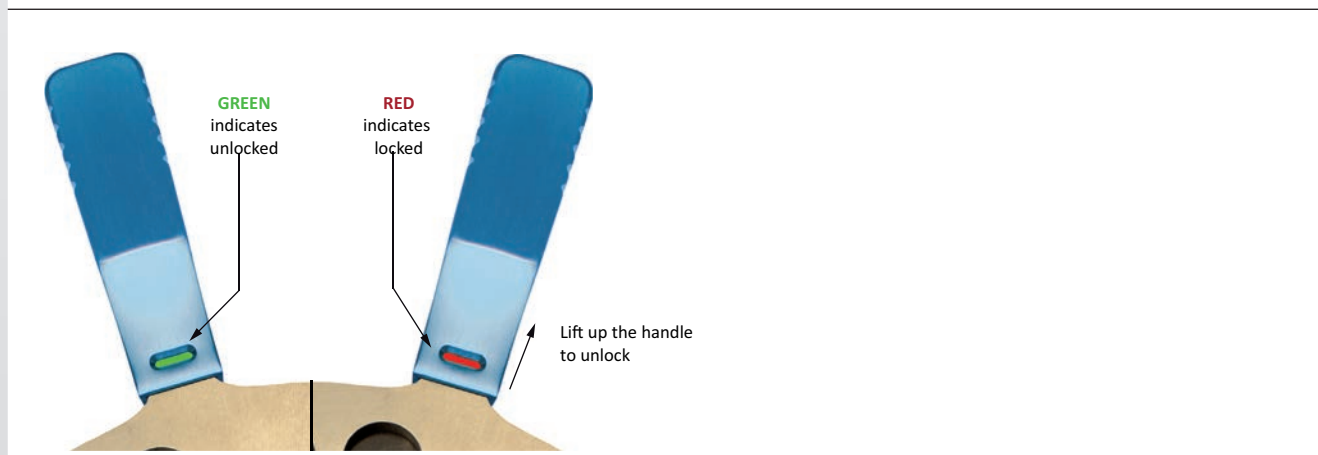
Product notes

- > Manual interface between robot and gripper system
- > Air connections always correctly aligned
- > Body made of anodized aluminum alloy
- > Model MV comes with micro valves for automatic air or vacuum lock off during decoupling
- > Model SL with secure SAFE-LOCK ensures maximum functional reliability and optical locking indication (red/green)
- > Stainless steel design on request

Technical data

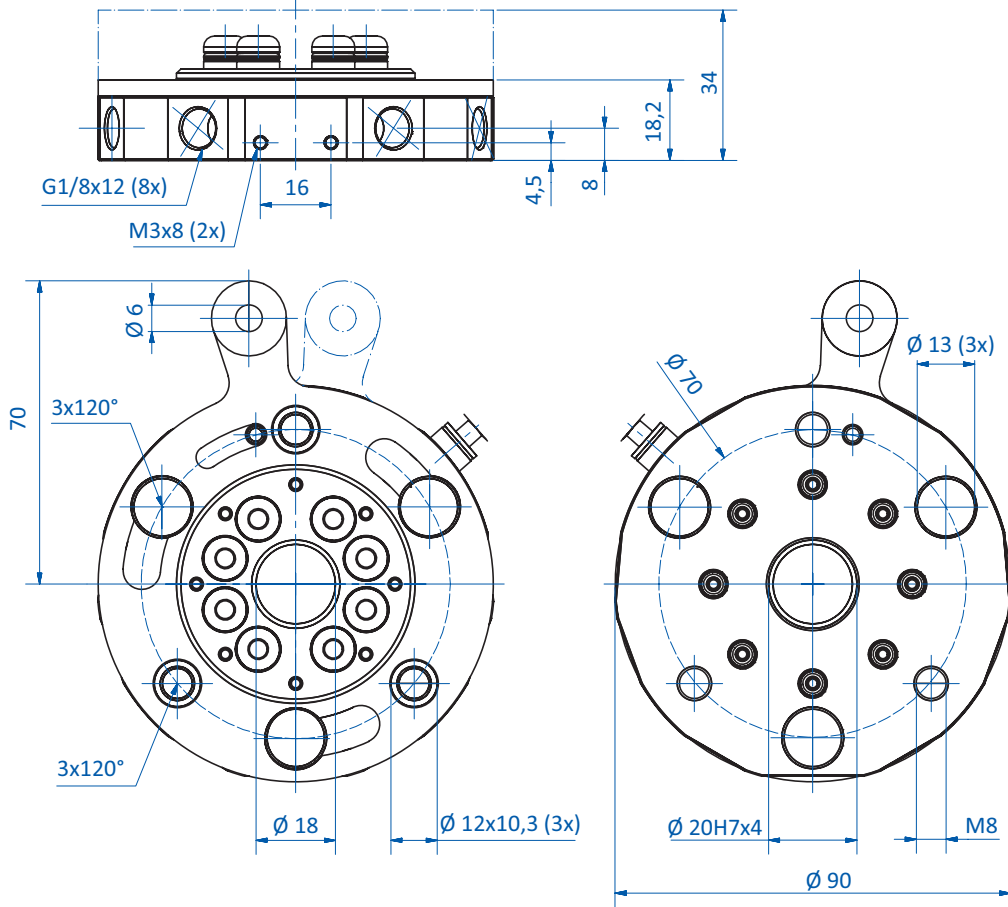
Item no.	SR90-A	SR90-A-MV	SR90-A-SL	SR90-A-SL-MV
Lifting force [N]	400	400	400	400
Number of pneumatic connections	8xG1/8	8xG1/8	8xG1/8	8xG1/8
Working pressure [bar (psi)]	0 - 6 (0 - 87)	0 - 6 (0 - 87)	0 - 6 (0 - 87)	0 - 6 (0 - 87)
Max. torque [Nm]	100	100	100	100
Max. bending moment [Nm]	60	60	60	60
Repeat accuracy [mm]	+/- 0.025	+/- 0.025	+/- 0.025	+/- 0.025
Micro valves	--	integrated	--	integrated
Snap-on	--	--	SAFE-LOCK for secure locking	SAFE-LOCK for secure locking
Weight [g]	320	320	320	320
Accessories	Electrical connectors: 20.536 (p.38) Spare part kit: KIT-SR90	Electrical connectors: 20.536 (p.38) Spare part kit: KIT-SR90	Electrical connectors: 20.535 (p.38) Spare part kit: KIT-SR90	Electrical connectors: 20.535 (p.38) Spare part kit: KIT-SR90

Display of optical locking indication SAFE-LOCK





Dimensions

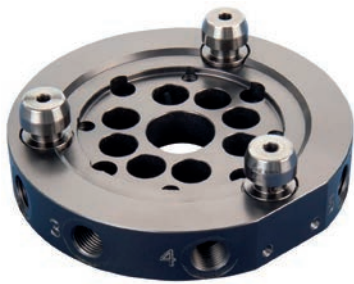


SR90-A | SR90-A-MV

Continued on the next page



Round quick-changers \varnothing 90 mm, 8 air inlets – gripper side



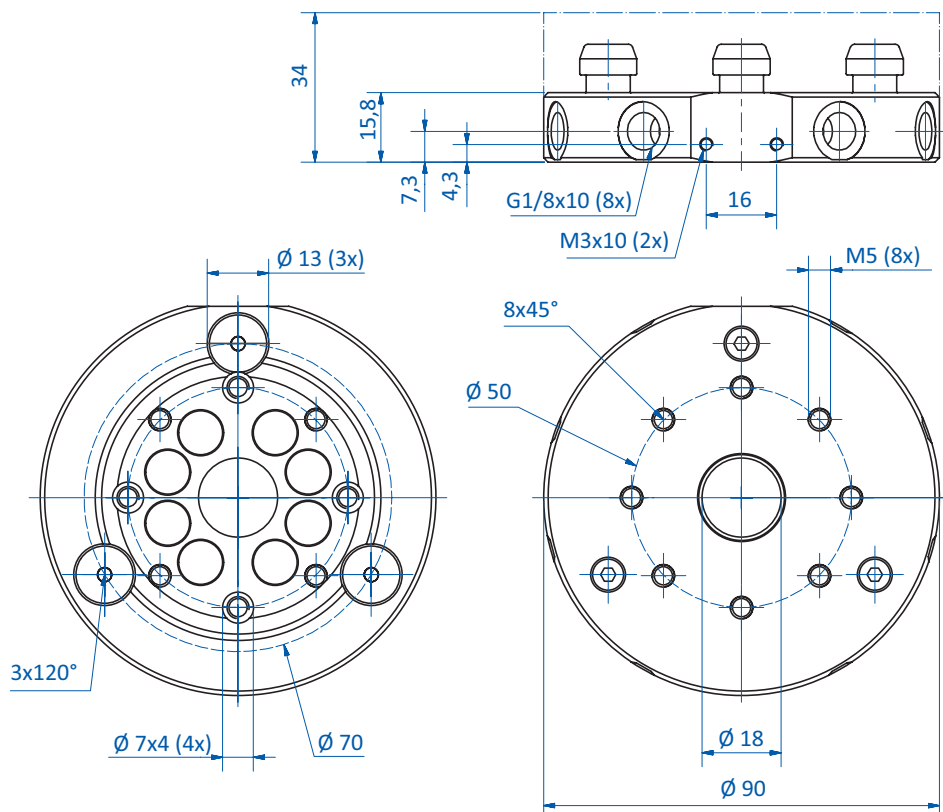
Product notes

- > Manual interface between robot and gripper system
- > Air connections always correctly aligned
- > Body made of anodized aluminum alloy
- > Stainless steel design on request

Technical data

Item no.	SR90-B
Lifting force [N]	400
Number of pneumatic connections	8xG1/8
Working pressure [bar (psi)]	0 - 6 (0 - 87)
Max. torque [Nm]	100
Max. bending moment [Nm]	60
Repeat accuracy [mm]	+/- 0.025
Weight [g]	220
Suitable electrical connectors	20.536 (p.38)

Dimensions





Quick-change systems | SR Series

Round quick-changers Ø 150 mm, 10 air inlets – robot side

Round quick-changers Ø 150 mm, 10 air inlets – robot side



SR150-A

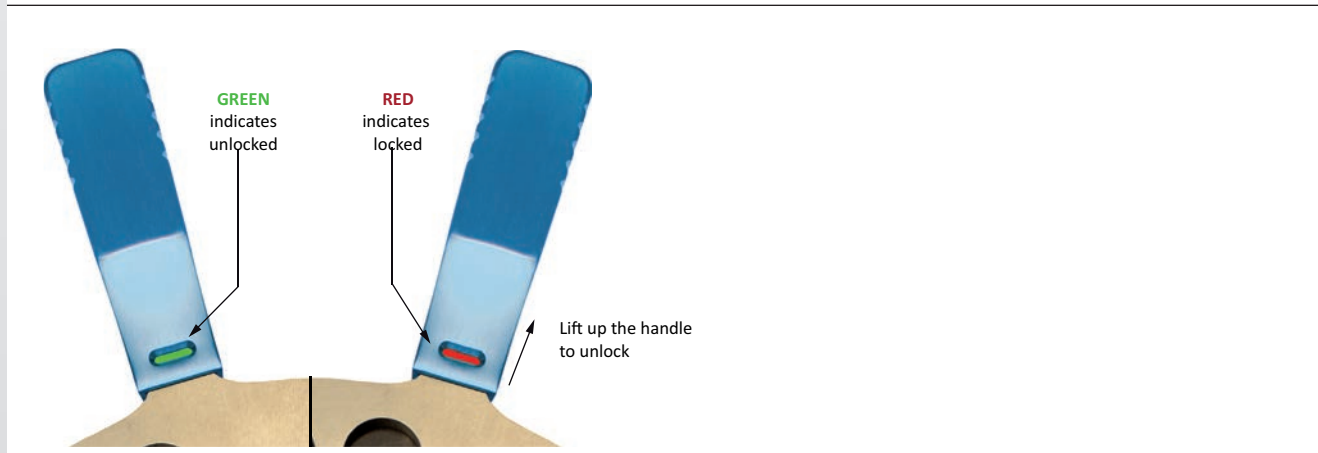
Product notes

- > Manual interface between robot and gripper system
- > Air connections always correctly aligned
- > Body made of anodized aluminum alloy
- > Model SL with secure SAFE-LOCK ensures maximum functional reliability and optical locking indication (red/green)
- > Stainless steel design on request

Technical data

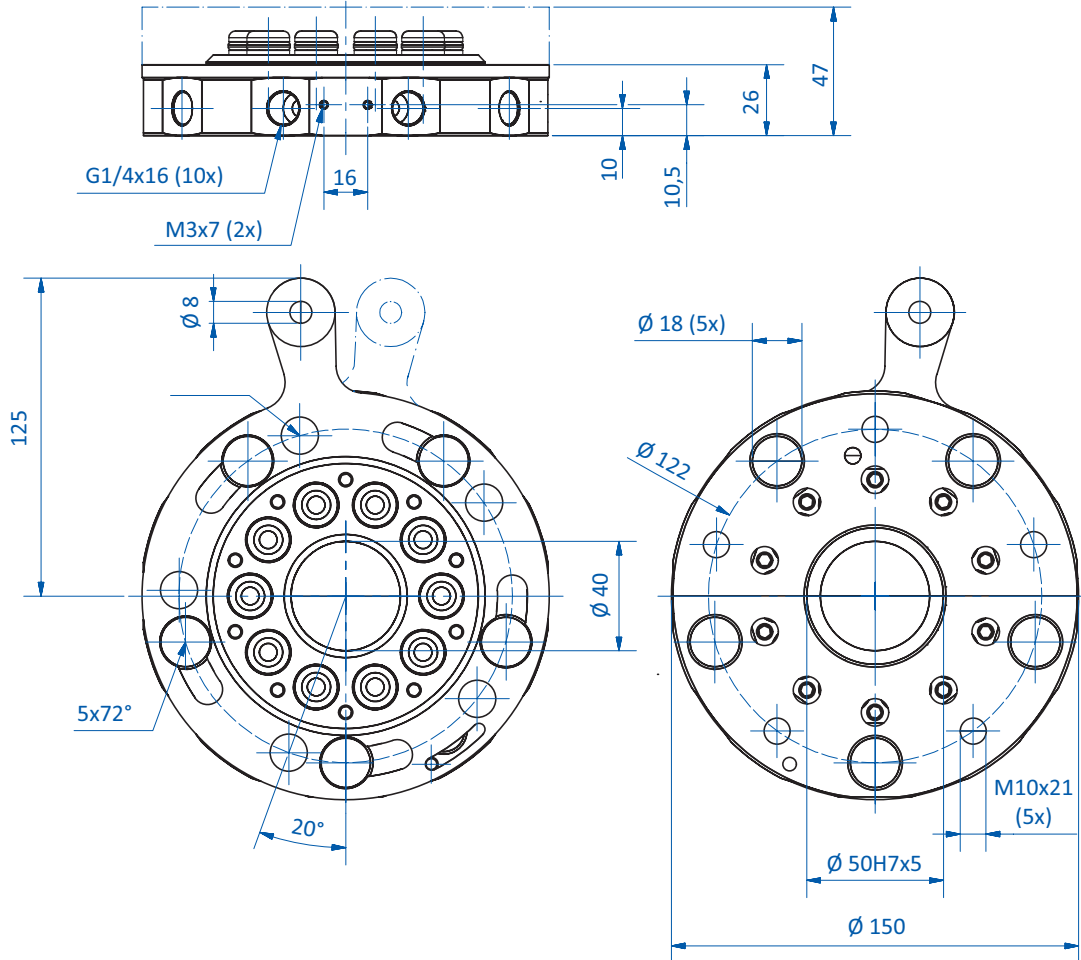
Item no.	SR150-A	SR150-A-SL
Lifting force [N]	1,000	1,000
Number of pneumatic connections	10xG1/4	10xG1/4
Working pressure [bar (psi)]	0 - 6 (0 - 87)	0 - 6 (0 - 87)
Max. torque [Nm]	250	250
Max. bending moment [Nm]	100	100
Repeat accuracy [mm]	+/- 0.025	+/- 0.025
Micro valves	--	--
Snap-on	--	SAFE-LOCK for secure locking
Weight [g]	1,190	1,190
Accessories	Electrical connectors: 20.535 (p.38) Spare part kit: KIT-SR150	Electrical connectors: 20.535 (p.38) Spare part kit: KIT-SR150

Display of optical locking indication SAFE-LOCK





Dimensions



SR150-A

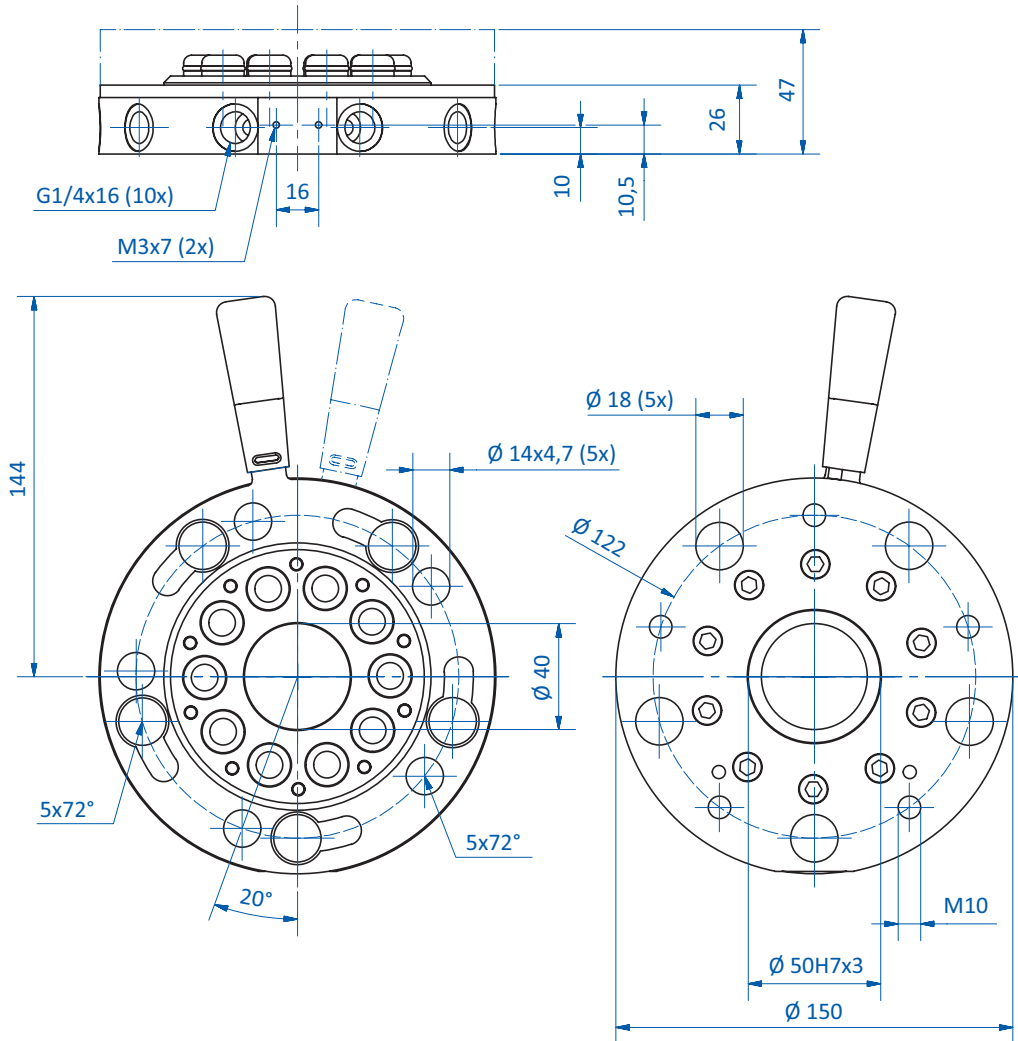
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Quick-change systems | SR Series

Round quick-changers \varnothing 150 mm, 10 air inlets – robot side

Dimensions



SR150-A-SL



Round quick-changers \varnothing 150 mm, 10 air inlets – gripper side



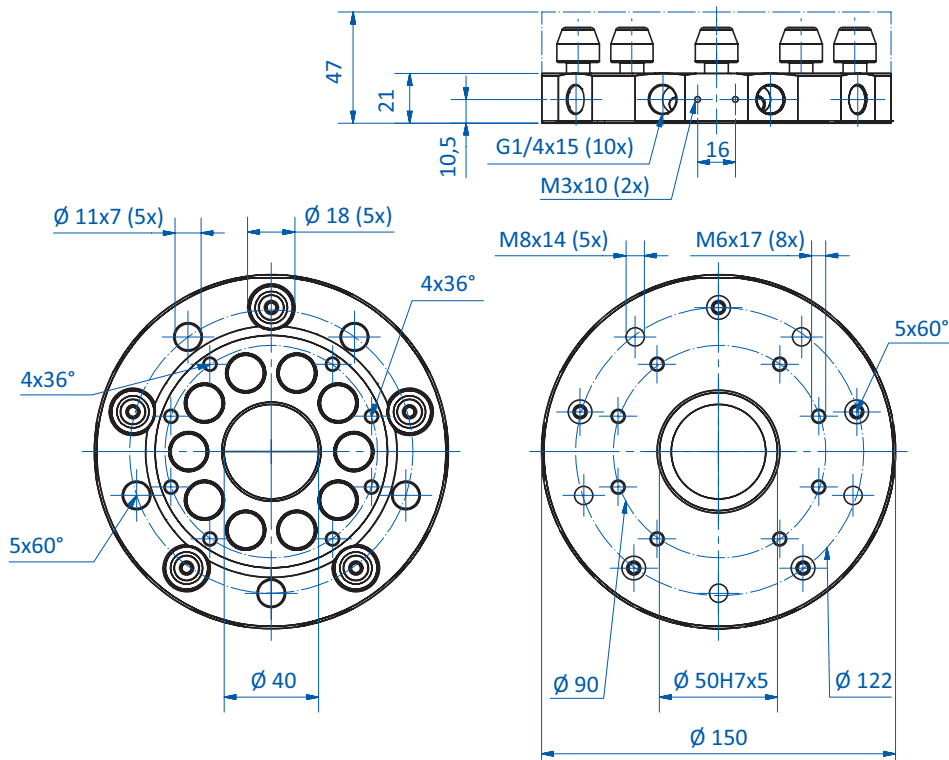
Product notes

- > Manual interface between robot and gripper system
- > Air connections always correctly aligned
- > Body made of anodized aluminum alloy
- > Stainless steel design on request

Technical data

Item no.	SR150-B
Lifting force [N]	1,000
Number of pneumatic connections	10xG1/8
Working pressure [bar (psi)]	0 - 6 (0 - 87)
Max. torque [Nm]	250
Max. bending moment [Nm]	100
Repeat accuracy [mm]	+/- 0.025
Weight [g]	850
Suitable electrical connectors	20.536 (p.38)

Dimensions





Adapter plates for round quick-changers – gripper side



SR150-C



GR05.102

Product notes

- > Adapter plates for mounting SLine or MLine extrusions to SR Series round quick-changers
- > GR05.100, GR05.101, GR05.102: for SEPRO quick-changers
- > Slot nuts and mounting screws included in scope of delivery
- > Suitable for third-party systems

Technical data

Item no.	Weight [g]	Suitable quick-change systems
SR50-C	107	SR50-A (p.20), SR50-B (p.23)
SR90-C	117	SR90-A (p.24), SR90-B (p.27)
SR150-C	227	SR150-A (p.28), SR150-B (p.31)
GR05.100	236	SEPRO AM02S0716605
GR05.101	272	SEPRO BP 90
GR05.102	400	SEPRO BP 120

Robot adapter plates SR Series



SR50-C



SR90-C



SR150-C

Robot adapter plates SEPRO



GR05.100



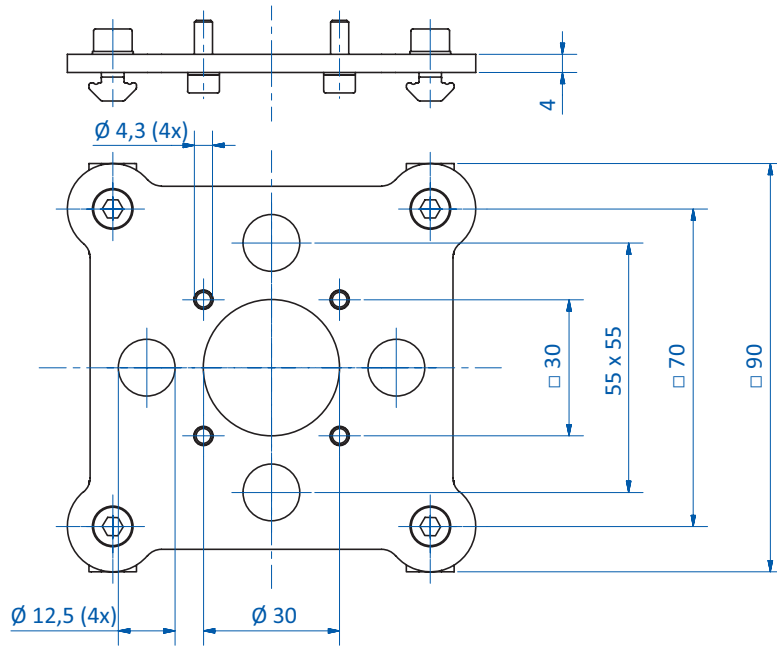
GR05.101



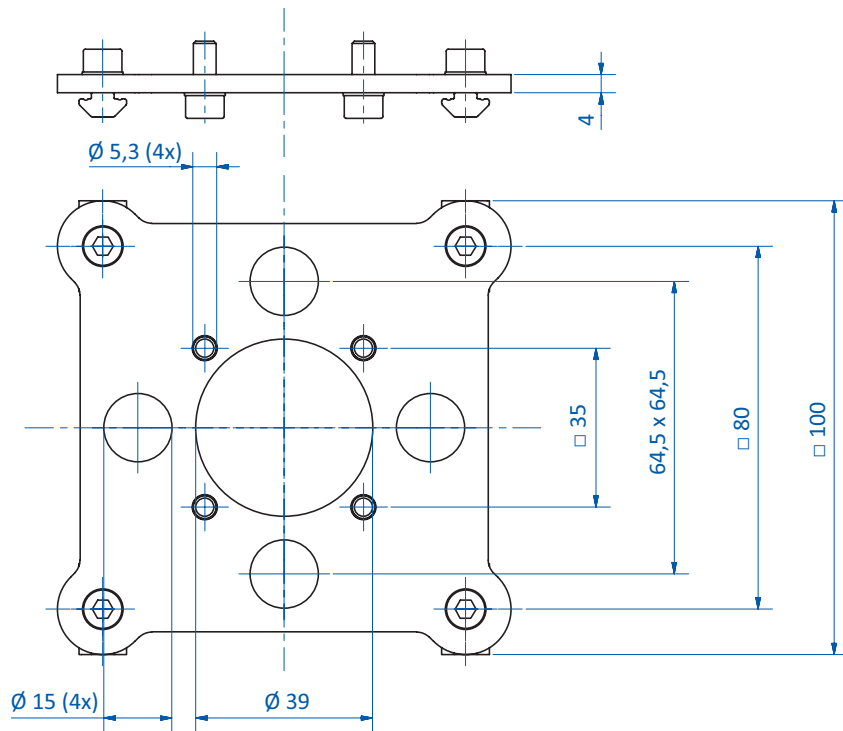
GR05.102



Dimensions



SR50-C

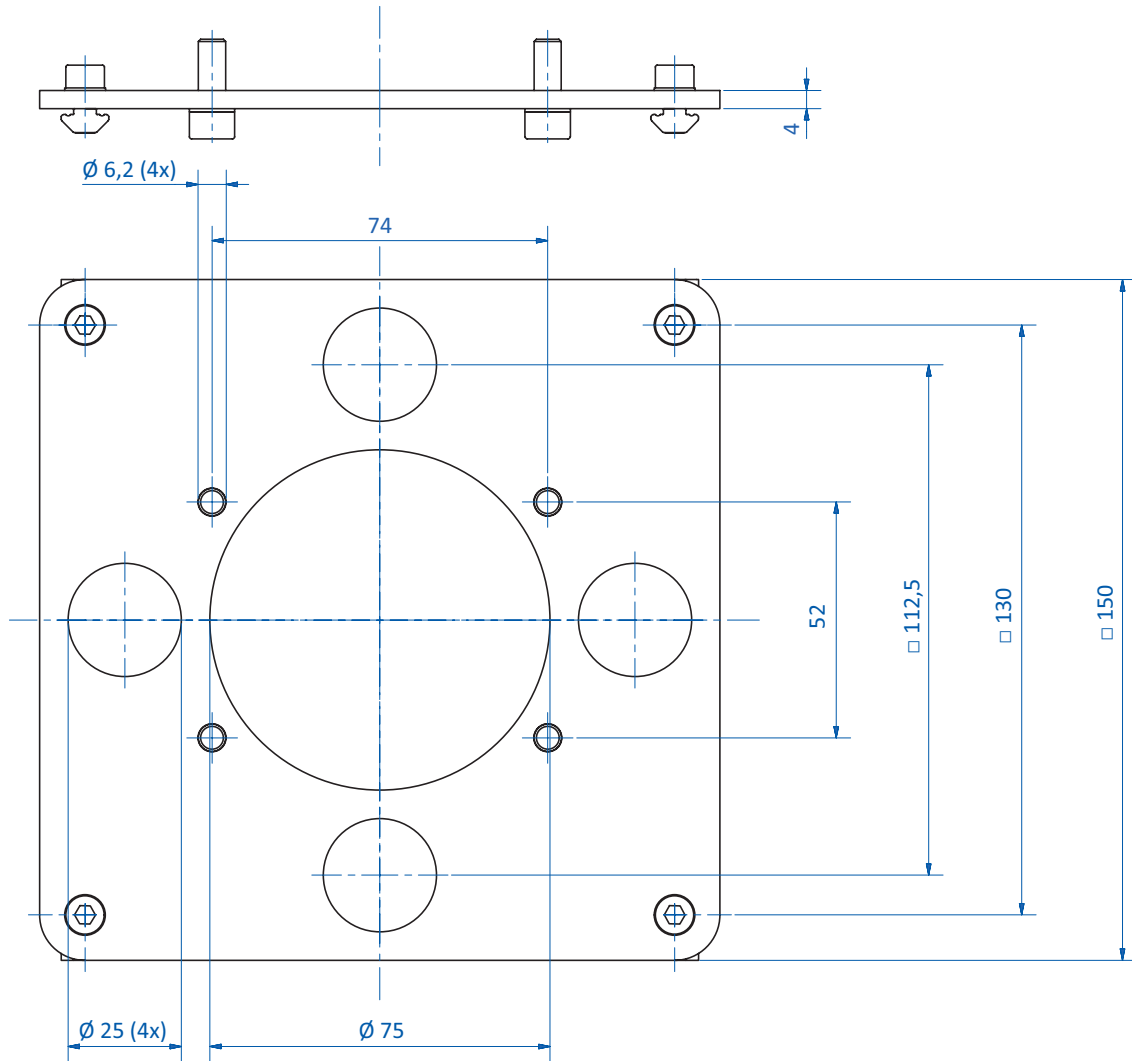


SR90-C

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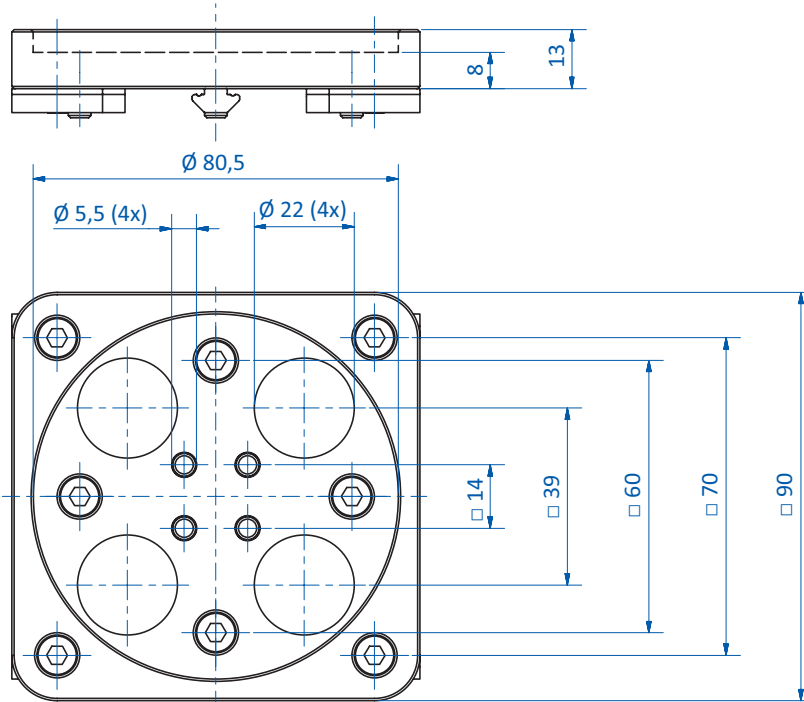
Dimensions



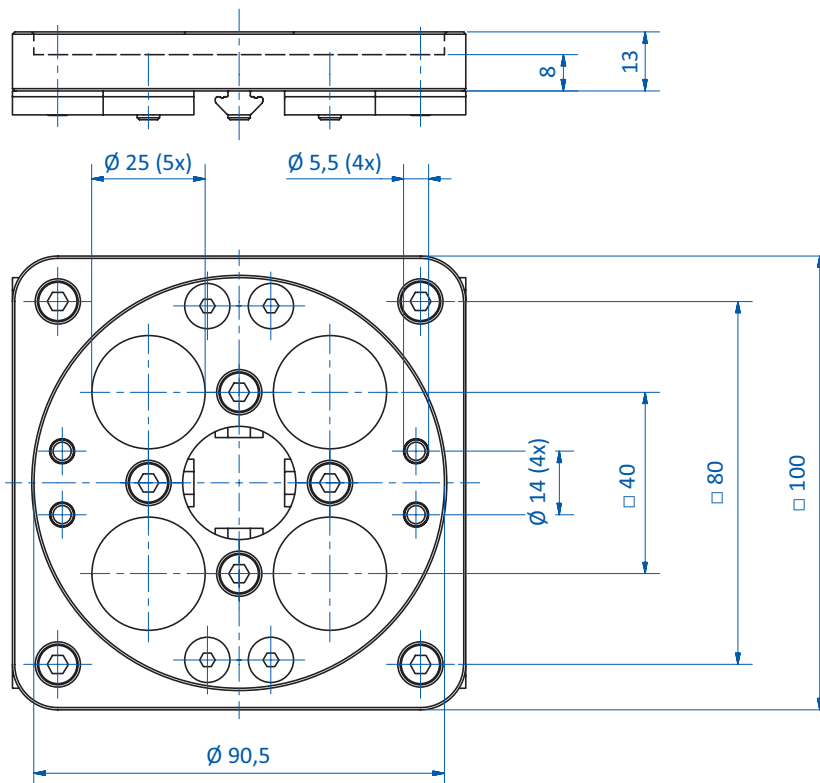
SR150-C



Dimensions



GR05.100

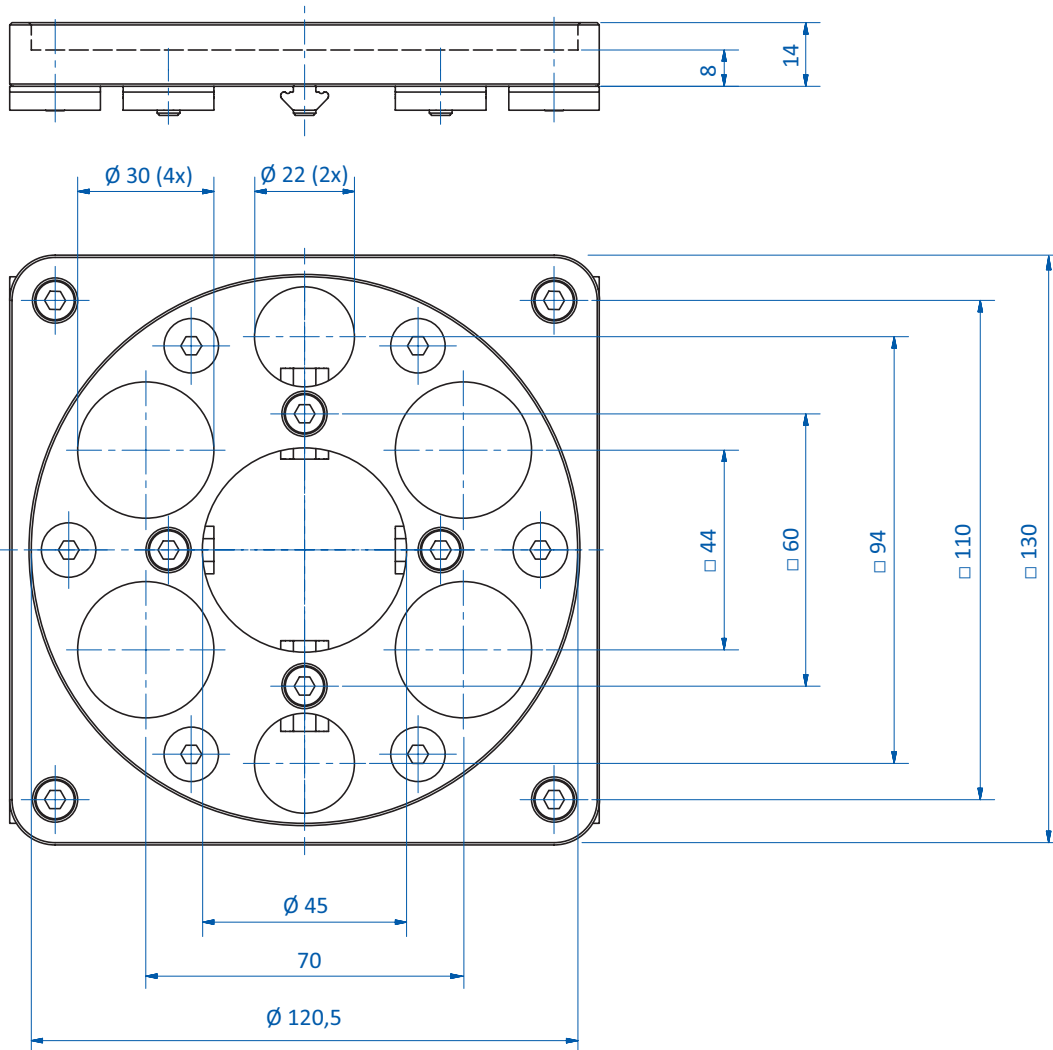


GR05.101

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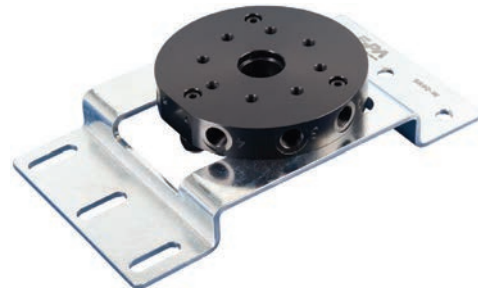
Dimensions



GR05.102



Wall bracket for gripper systems with round base plate



Application example with quick-changer

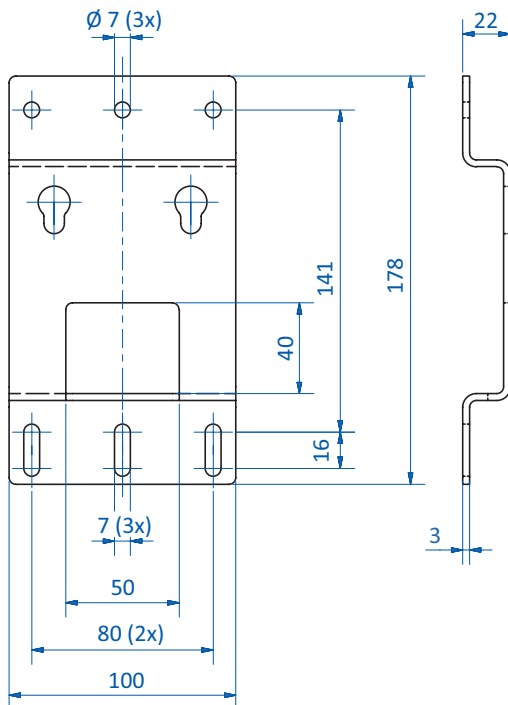
Product notes

- > Efficient and safe storage of EOAT with SR Series round quick-changers
- > Suitable for third-party round gripper systems

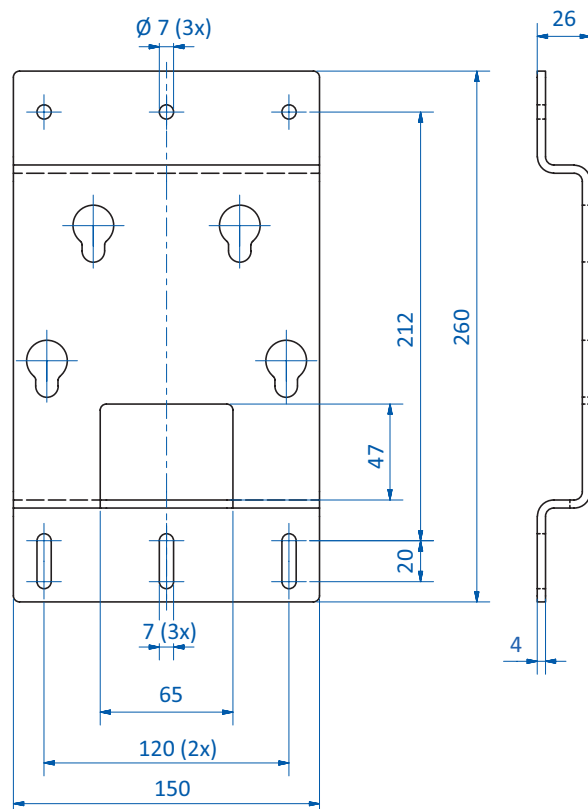
Technical data

Item no.	Weight [g]	Suitable quick-change systems
SR90-W	600	SR90-B (p.27)
SR150-W	1,200	SR150-B (p.31)

Dimensions



SR90-W



SR150-W



Electric plug connectors for SR50, SR90 and SR150



Robot side 20.537 | Gripper side 20.538



Robot side 20.535 | Gripper side 20.536

Product notes

- > Electrical interface between robot and gripper
- > 15 pin SUB-D plug
- > Max. cable cross section 0.14 mm² based on 16 - 18-wire cable

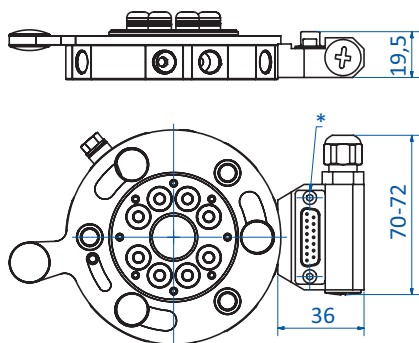
Technical data

Item no.	Suitable quick-change systems	Plug Design	Number of Pins	Operating voltage [VDC]	Power consumption [W]	Weight [g]	Suitable plug
20.535	SR90-A, SR150-A, SR90-A-SL, SR150-A-SL	male	15	24	0.5	42	20.505
20.536	SR90-B, SR150-B	female	15	24	0.5	41	20.505
20.537	SR50-A, SR50-A-SL, SR50-A-MV, SR50-A-SL-MV	male	9	24	0.5	42	20.505
20.538	SR50-B	female	9	24	0.5	41	20.505

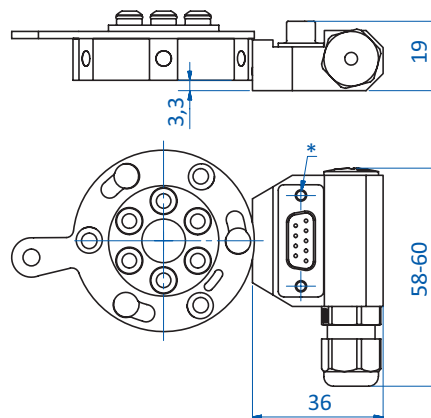
SR Series with electric connectors



Dimensions



20.535 | 20.536



20.537 | 20.538

* = Remove plug connection for cable installation



Quick-change systems rectangle, robot side

COMPATIBLE WITH STAR SYSTEMS



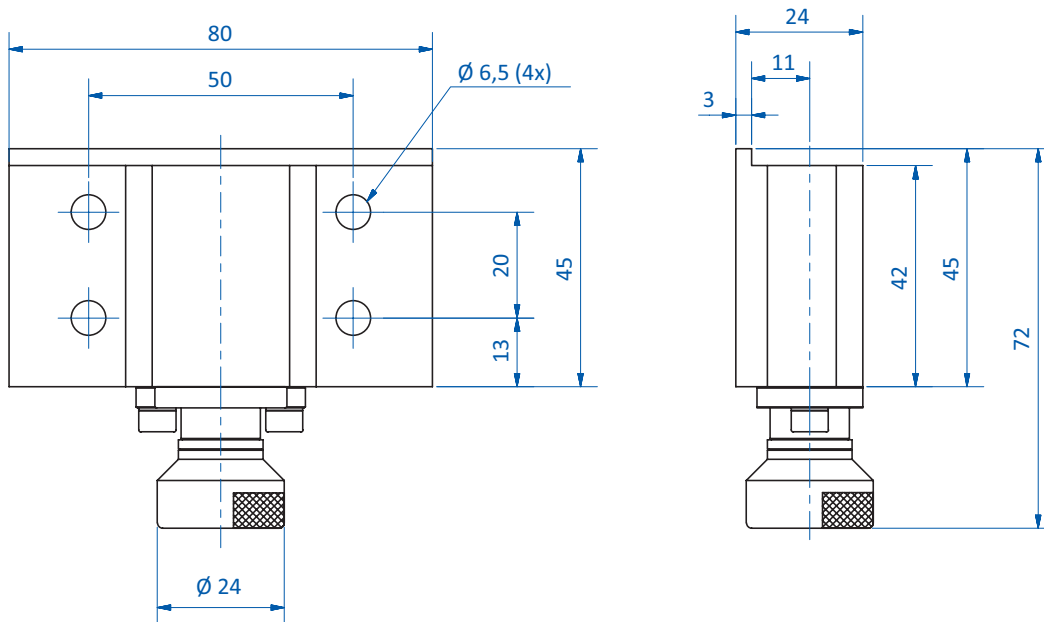
Product notes

- > Manual interface between robot and gripper system
- > Minimized downtime due to fast gripper change
- > Gripper side not included in scope of delivery

Technical data

Item no.	Lifting force [N]	Weight [g]	Suitable gripper side
GR05.121	150	168	GR05.122 (p.40)

Dimensions





Quick-change systems | R Series

Quick-change systems rectangle, gripper side

Quick-change systems rectangle, gripper side

COMPATIBLE WITH STAR SYSTEMS



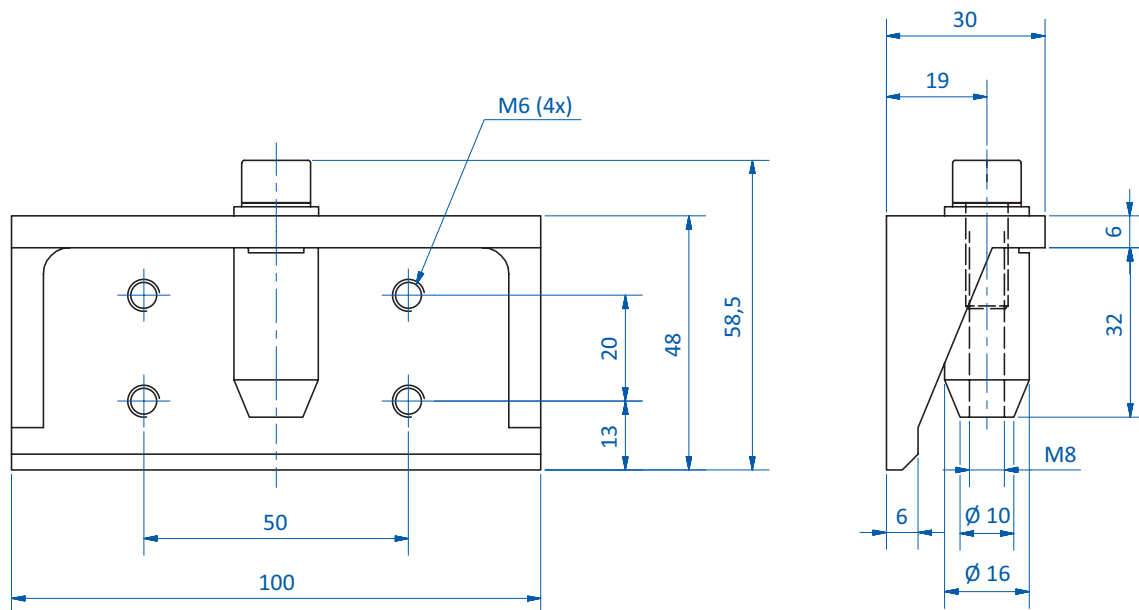
Product notes

- > Manual interface between robot and gripper system
- > Minimized downtime due to fast gripper change
- > Robot side not included in scope of delivery

Technical data

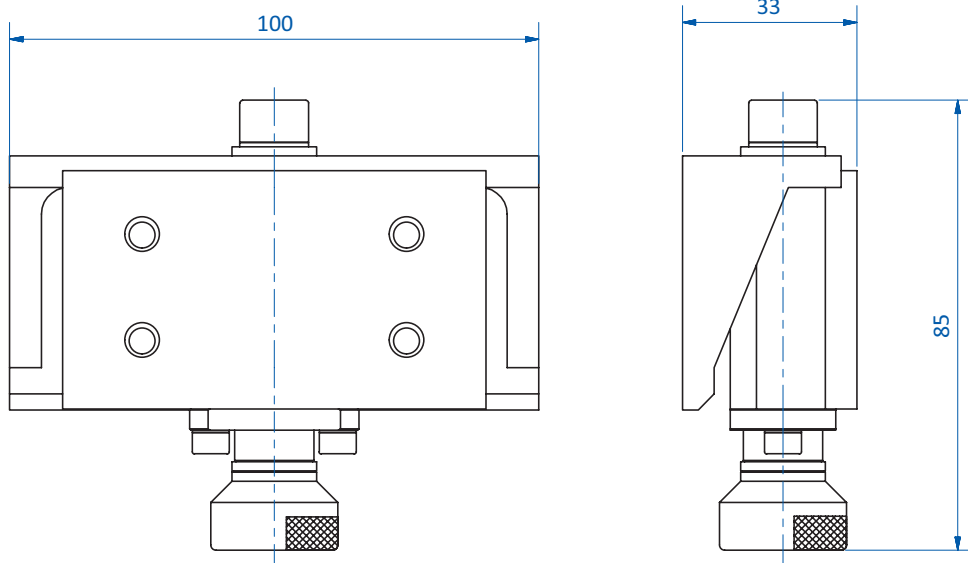
Item no.	Lifting force [N]	Weight [g]	Suitable robot side
GR05.122	150	171	GR05.121 (p.39)

Dimensions





Dimensions for quick-change system robot side incl. gripper side





Automatic quick-change systems



Robot side: ASR60-A



Gripper side: ASR48-B

Product notes

- > Fast exchange of EOAT on robots via automatic compressed air disconnection, minimizes set-up time
- > Secure locking system with guide pins compensates positional deviations during coupling
- > Electronic connector for signal transmitting see accessories

Technical data

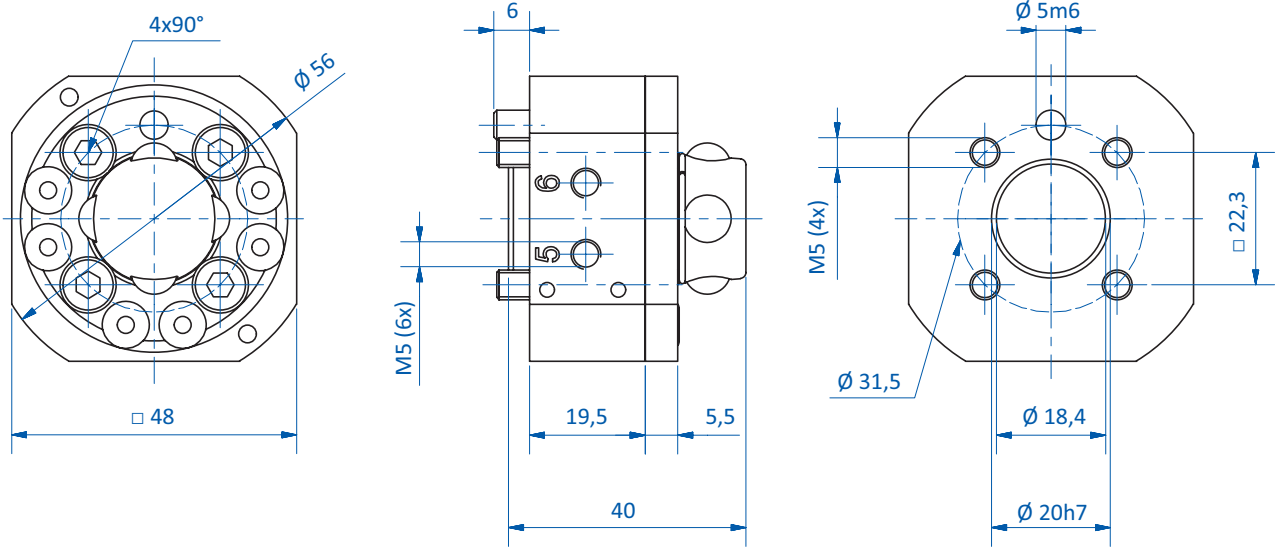
Item no.	ASR48-A	ASR48-B	ASR60-A	ASR60-B
Lifting force [N]	50	50	200	200
Number of pneumatic connections	8xM5	6xM5	4xM5	4xM5
Working pressure [bar (psi)]	0 - 10 (0 - 145)	0 - 10 (0 - 145)	0 - 10 (0 - 145)	0 - 10 (0 - 145)
Max. torque [Nm]	40	40	150	150
Max. bending moment [Nm]	40	40	158	158
Repeat accuracy [mm]	< 0.01	< 0.01	< 0.01	< 0.01
Operating pressure [bar (psi)]	6 - 10 (87 - 145)	6 - 10 (87 - 145)	6 - 10 (87 - 145)	6 - 10 (87 - 145)
Operating temperature [°C (°F)]	10 - 60 (50 - 140)	10 - 60 (50 - 140)	10 - 60 (50 - 140)	10 - 60 (50 - 140)
Weight [g]	200	50	400	110
Suitable plug connectors	ASR48-A-ME (p.45)	ASR48-B-ME (p.45)	ASR60-A-ME (p.45)	ASR60-B-ME (p.45)

Application example

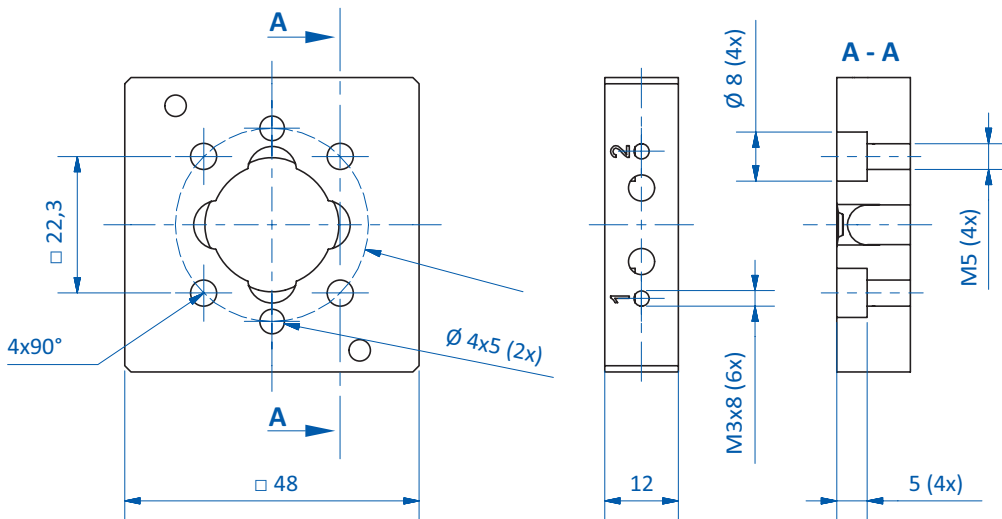




Dimensions



ASR48-A

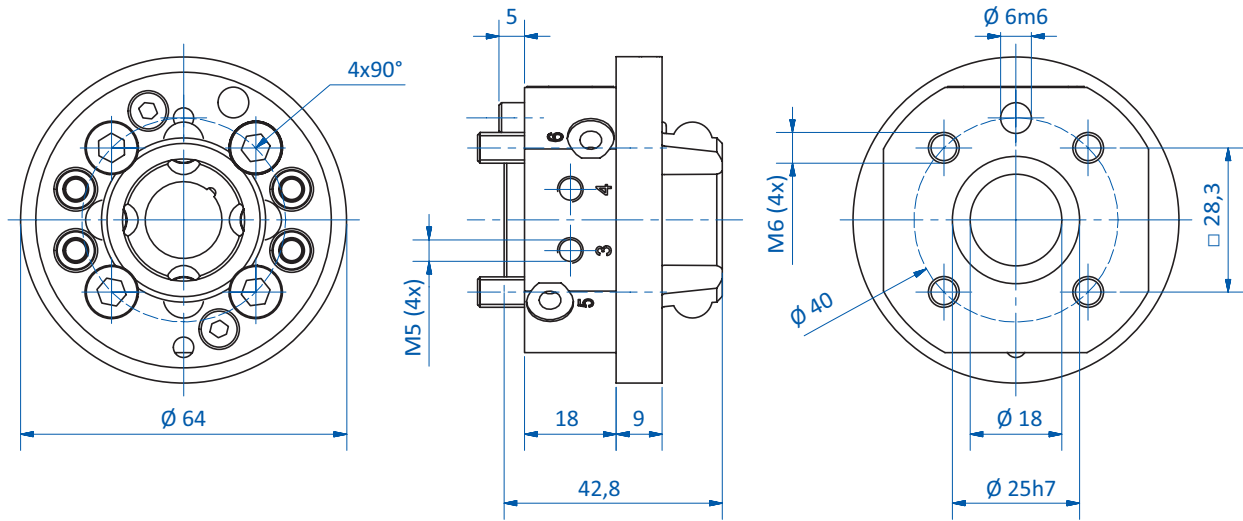


ASR48-B

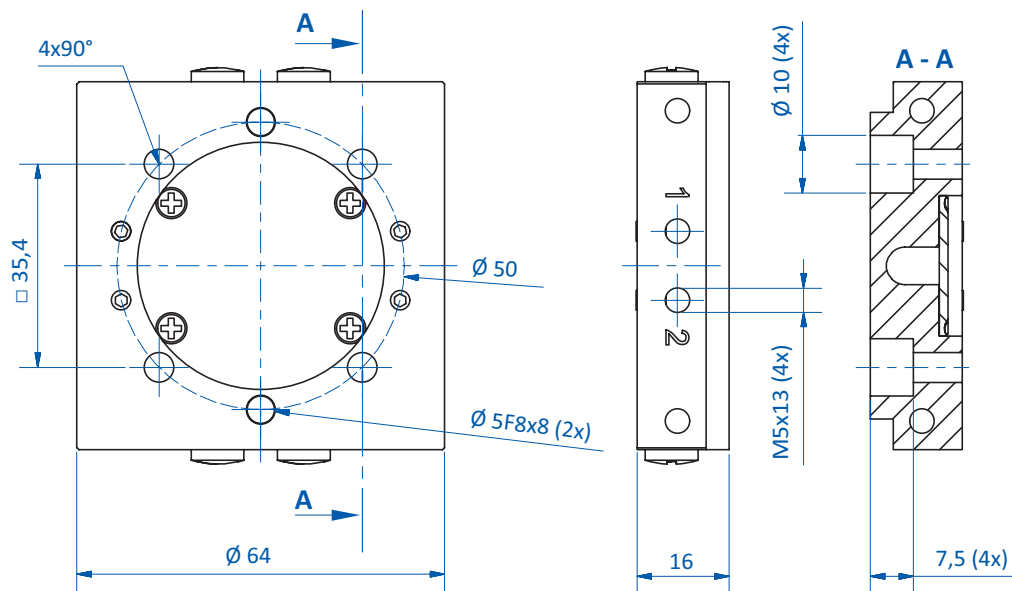
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Dimensions



ASR60-A



ASR60-B



Electronic connectors for automatic quick-changers



Display with quick-change system – robot side



Display with quick-change system – gripper side

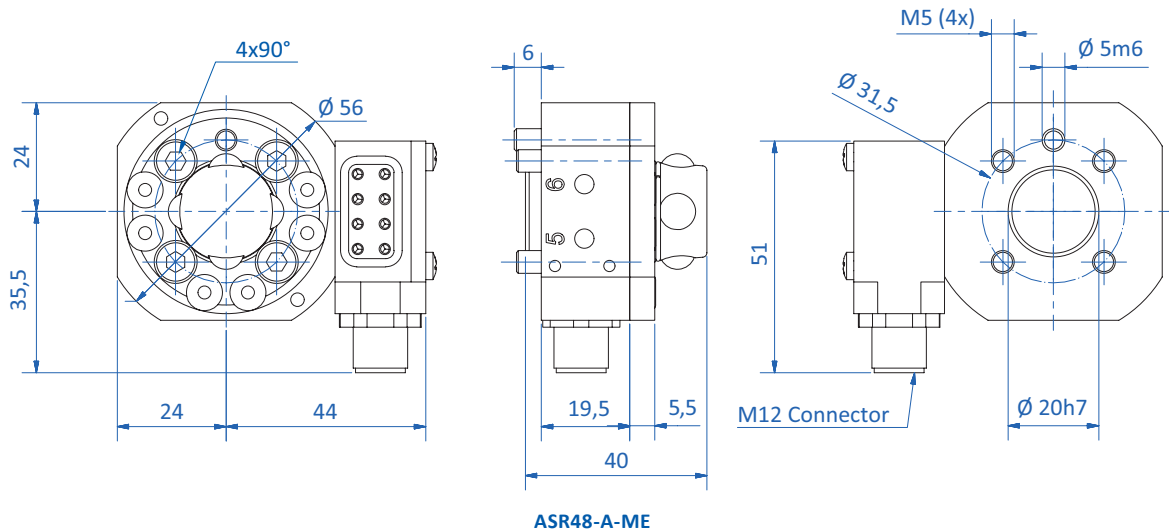
Product notes

- > Electronic modules for transmitting up to eight signals
- > Automatic electrical connection via spring loaded pins

Technical data

Item no.	Max. operating voltage [V]	Number of electrical channels	Max. current consumption [A]	Connection	Operating temperature [°C (°F)]	Weight [g]
ASR48-A-ME	60	8	2	M12	10 - 60 (50 - 140)	50
ASR48-B-ME	60	8	2	M12	10 - 60 (50 - 140)	20
ASR60-A-ME	60	8	2	M12	10 - 60 (50 - 140)	50
ASR60-B-ME	60	8	2	M12	10 - 60 (50 - 140)	20

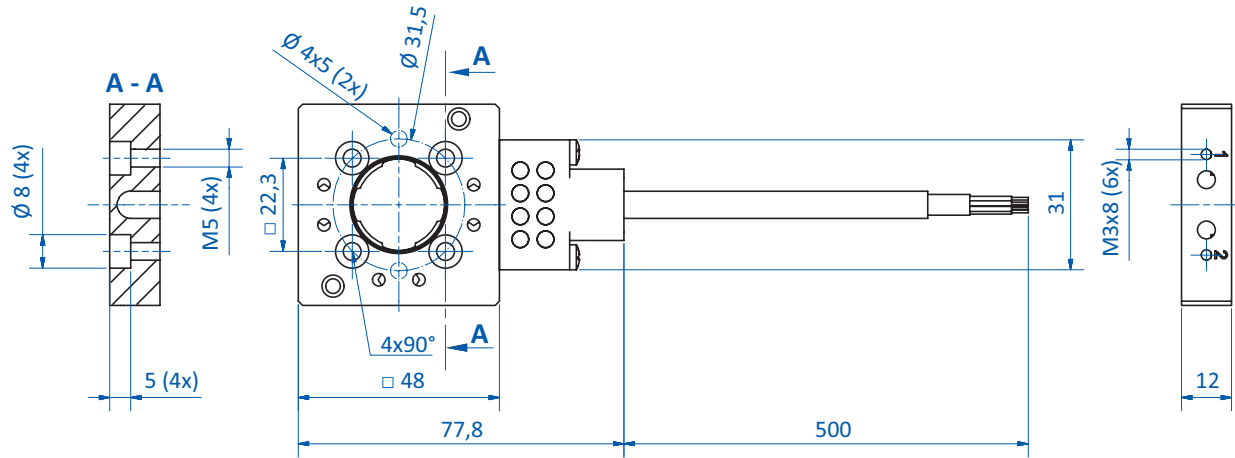
Dimensions



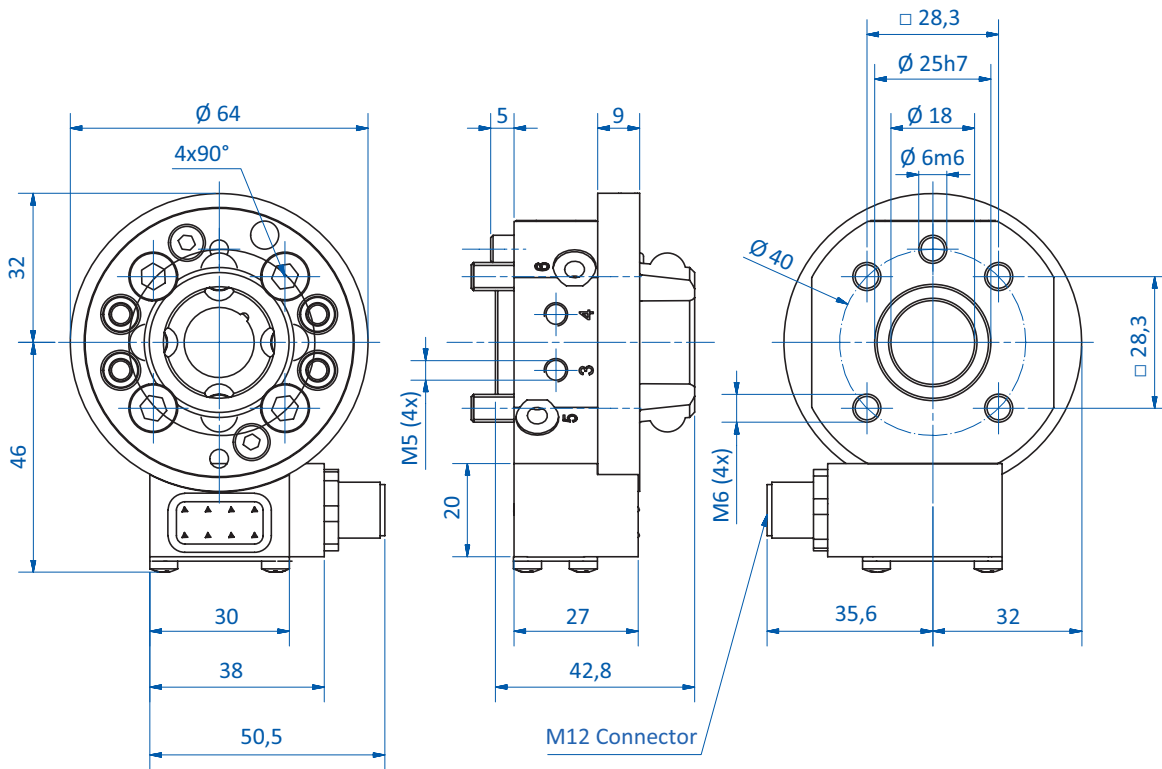
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Dimensions



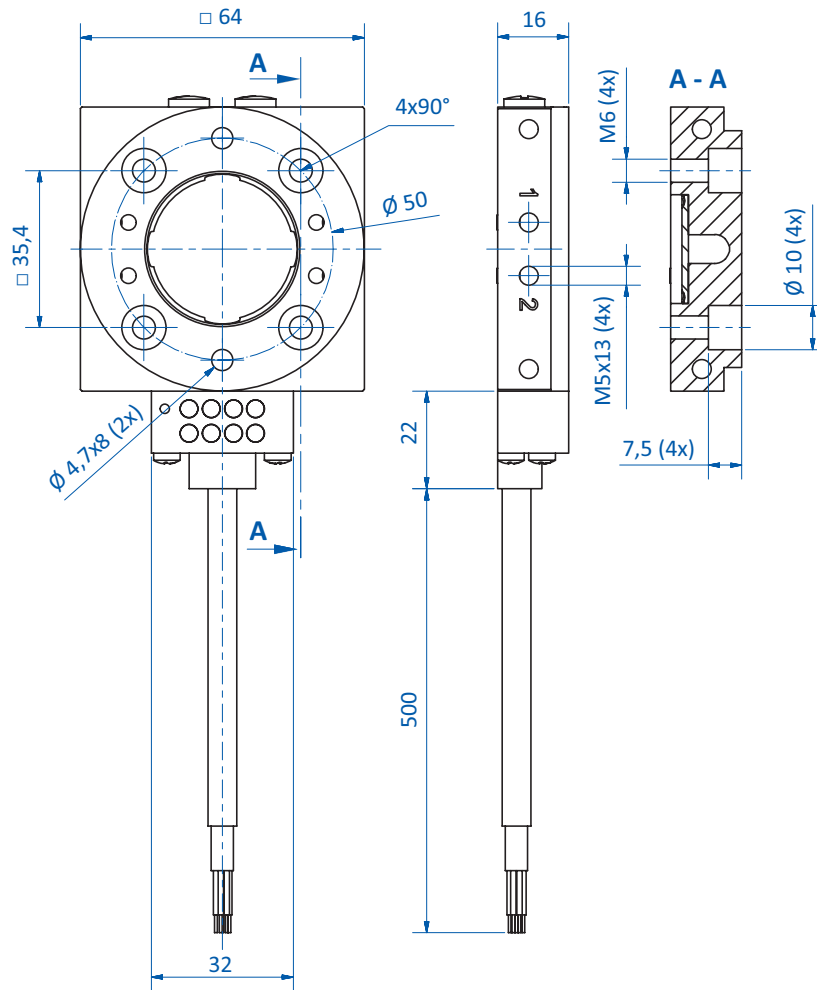
ASR48-B-ME



ASR60-A-ME



Dimensions



ASR60-B-ME