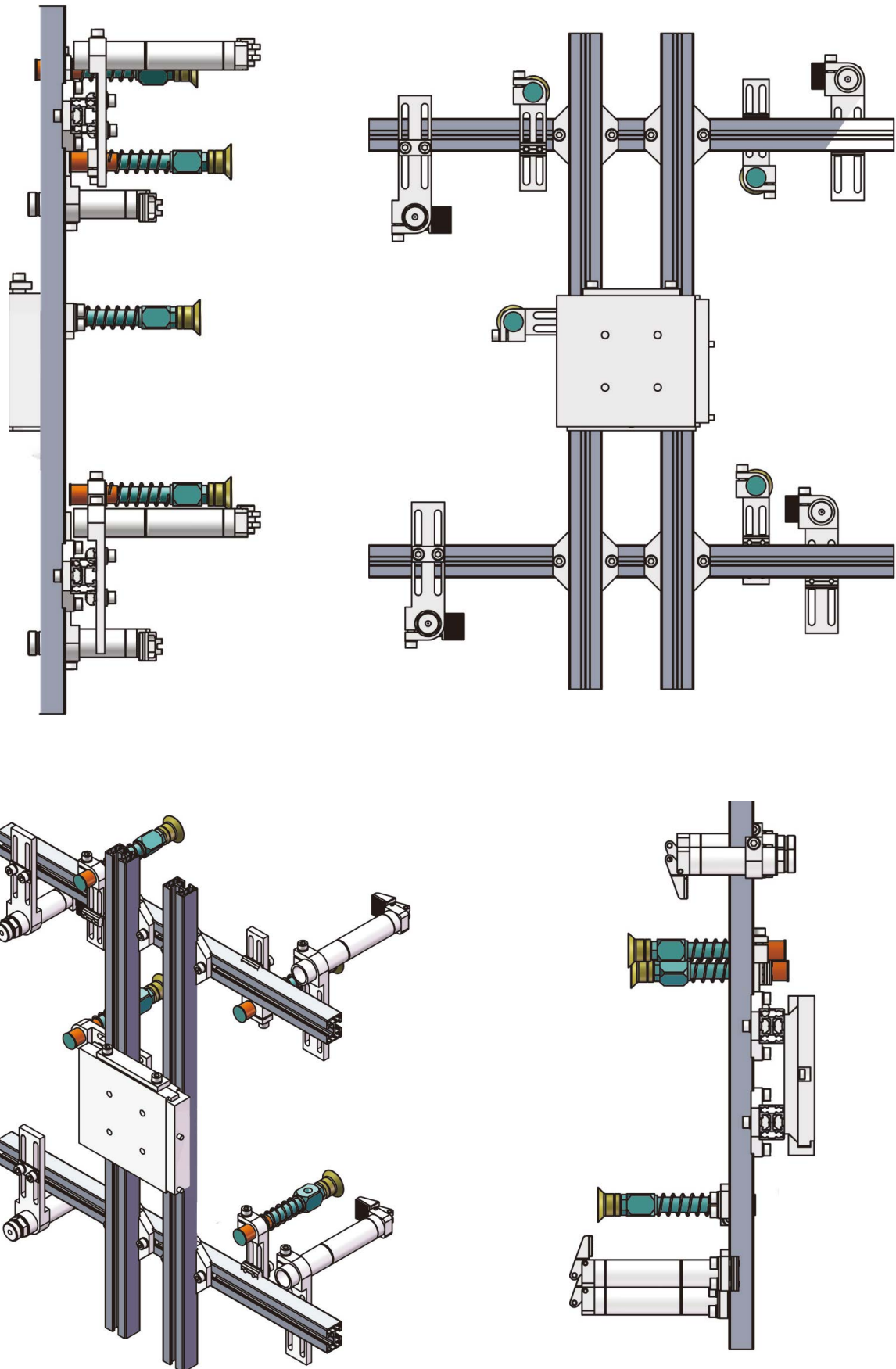


EN-2024

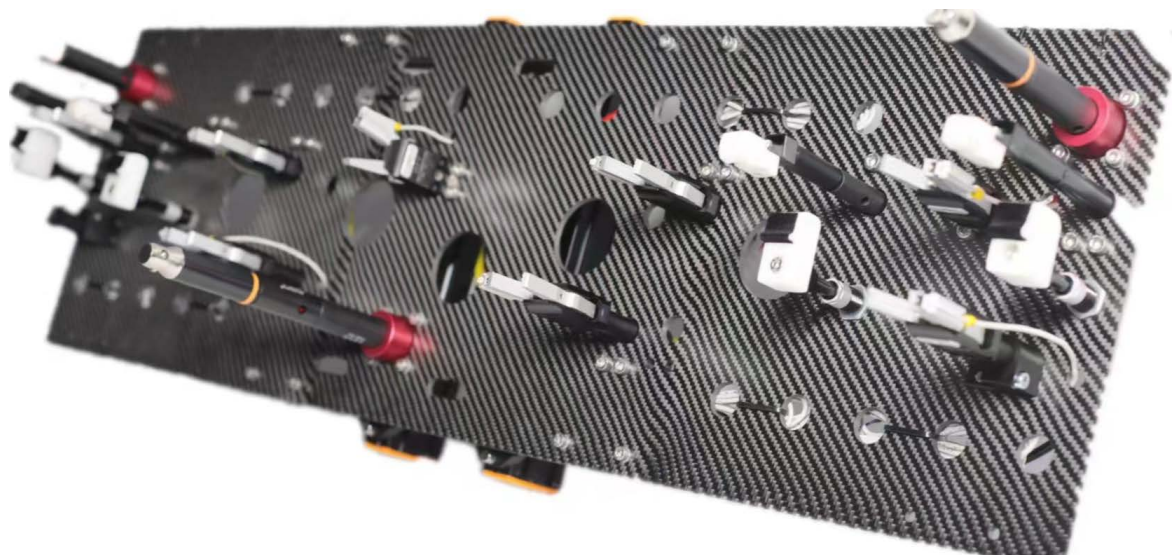
FGS

End of Arm Tooling (EOAT)

EOAT Application Example



EOAT Application Example



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NEW



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Angle bracket for profile



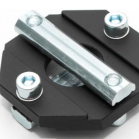
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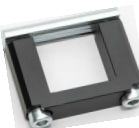
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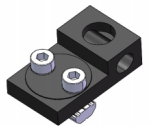
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Side manifold block



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NR Air nipper mounting bracket



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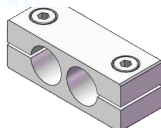
NR Air nipper mounting bracket



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NY Air nipper mounting bracket

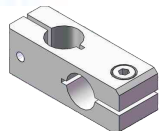
NEW



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Tube mounting connector

NEW



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Square quick changer (Manual)

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NEW



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NEW



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Vacuum cups - 2 bellows



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Vacuum cups fitting



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Air Hose



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Sponge Vacuum cups - 1 bellow



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GT-N /NR / NS /NY /NT



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Sponge Vacuum cups - 2 bellows



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Sponge Vacuum cups - 3 bellows



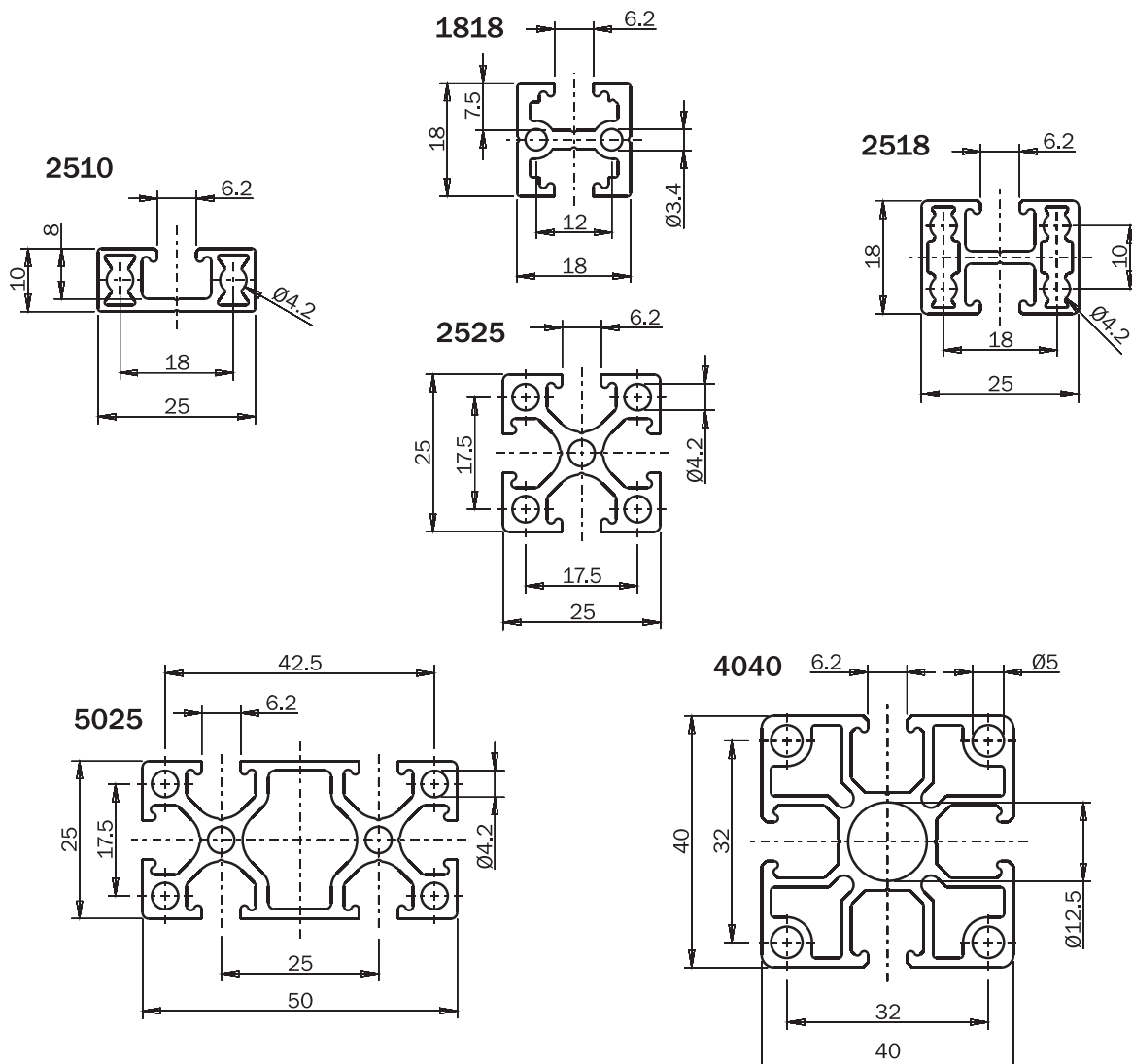
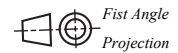
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Air Connector Fitting

Aluminium Profile

AEP - series

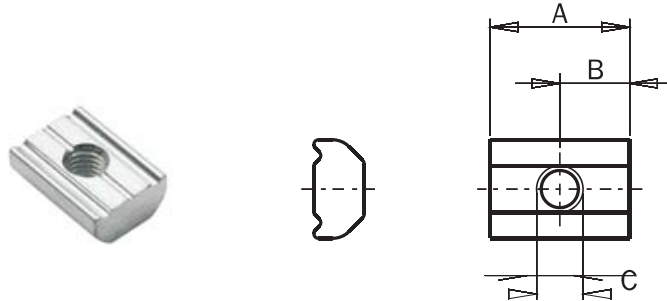
Dimensions (mm)



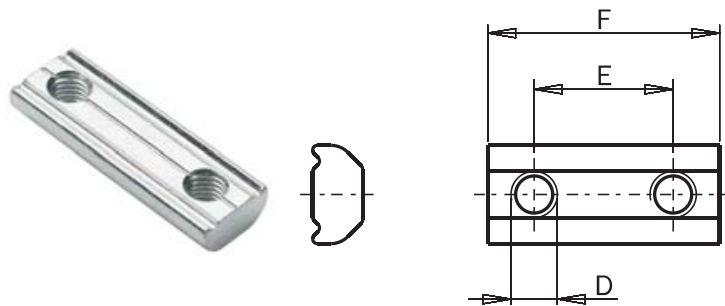
Model	Length	Weight	Plugs
AEP1818-1000	1000mm	425g	PP1818
AEP2510-1000	1000mm	310g	PP2510
AEP2518-1000	1000mm	400g	PP2518
AEP2525-1000	1000mm	610g	PP2525
AEP2525-2000	2000mm	1220g	PP2525
AEP5025-1000	1000mm	1040g	PP5025
AEP5025-2000	2000mm	2080g	PP5025
AEP4040-1000	1000mm	1300g	PP4040
AEP4040-2000	2000mm	2600g	PP4040

T-Nut
STN - series

Dimensions (mm)



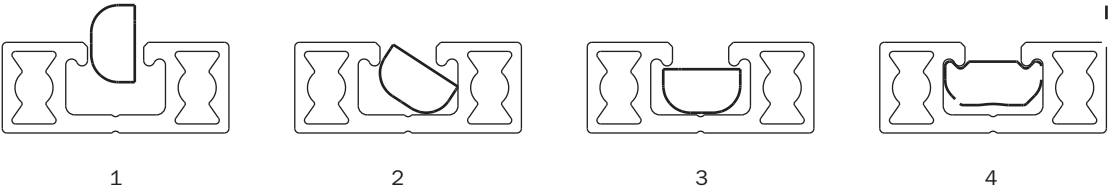
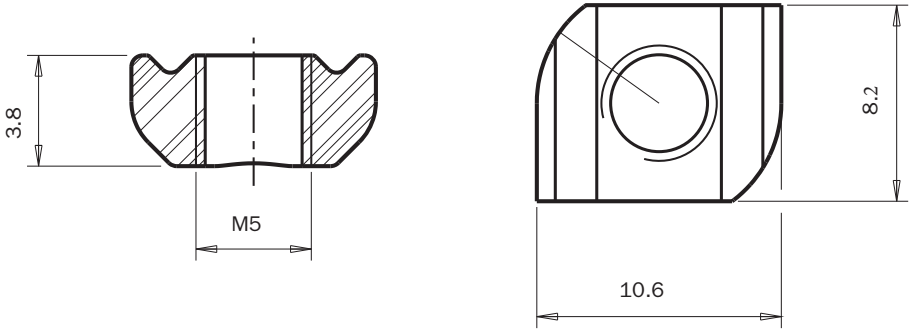
<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>Weight</i>
STN-M4	M4	15	7.5	5g
STN-M5	M5	15	7.5	5g
STN-M6	M6	15	7.5	5g



<i>Model</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>Weight</i>
STN-M4P8	M4	8	16	5g
STN-M5P10	M5	10	20	7g
STN-M5P15	M5	15	25	9g
STN-M5P17	M5	17	25	9g
STN-M5P22	M5	22	32	11g
STN-M5P25	M5	25	35	13g
STN-M5P28	M5	28	38	14g
STN-M5P30	M5	30	40	15g
STN-M5P35	M5	35	45	16g
STN-M5P40	M5	40	50	18g
STN-M5P50	M5	50	60	22g
STN-M5P60	M5	60	70	26g
STN-M5P90	M5	90	100	38g

Last-Minute Nut
STN-M5R

Dimensions (mm)

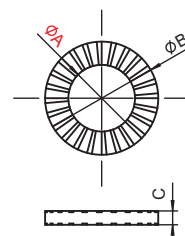


Model	Weight
STN-M5R	2g



Single Hole Shim
STS - series

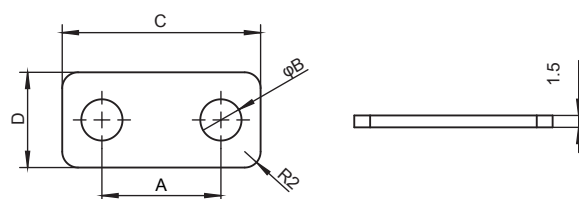
Dimensions (mm)



Model	A	B	C	Weight
STS-M4	4.5	7	0.45	0.07g
STS-M5	5.5	9	0.55	0.17g
STS-M6	6.5	10	0.65	0.20g

Double Hole Shim
STD - series

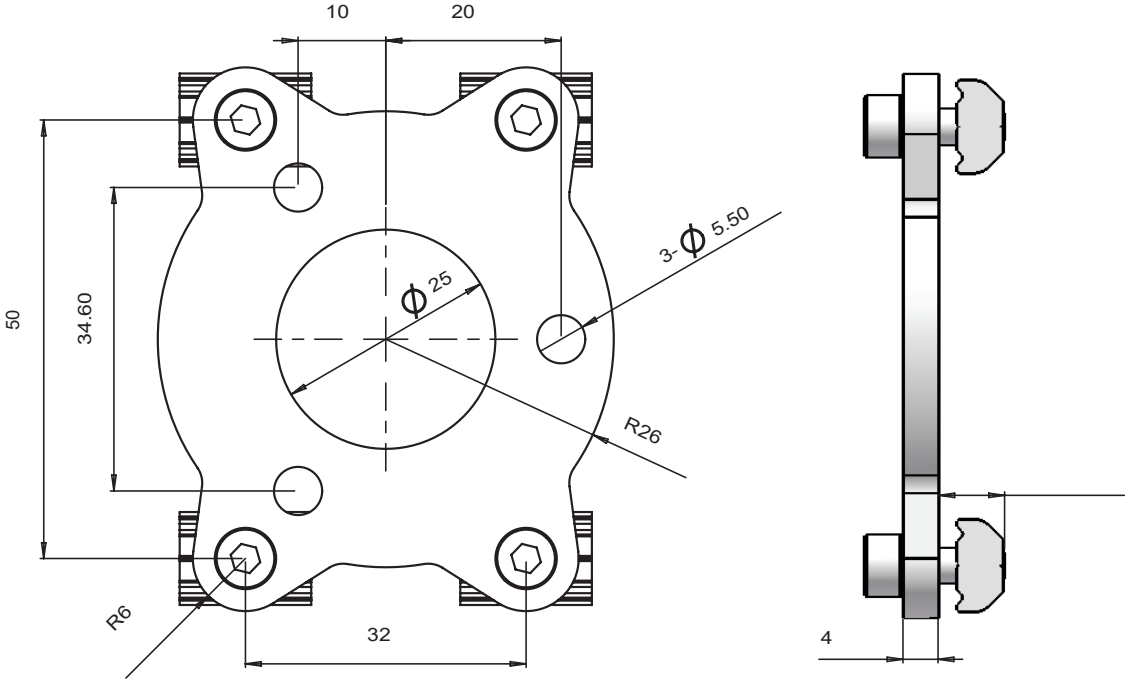
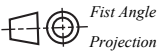
Dimensions (mm)



Model	A	B	C	D	Weight
STD-M4P8	8	4.5	16	12	0.07g
STD-M5P10	10	5.5	20	12	0.17g
STD-M5P15	15	5.5	25	12	0.20g
STD-M5P17	17	5.5	25	12	9g
STD-M5P22	22	5.5	32	12	11g
STD-M5P25	25	5.5	35	12	13g

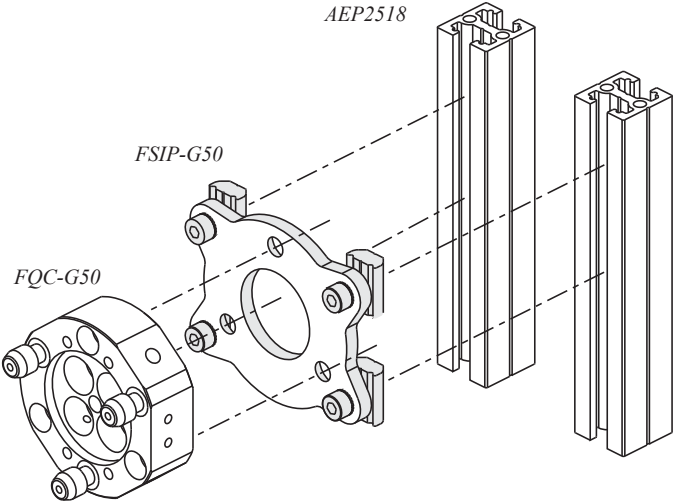
Interface Plate
FSIP-G50

Dimensions (mm)



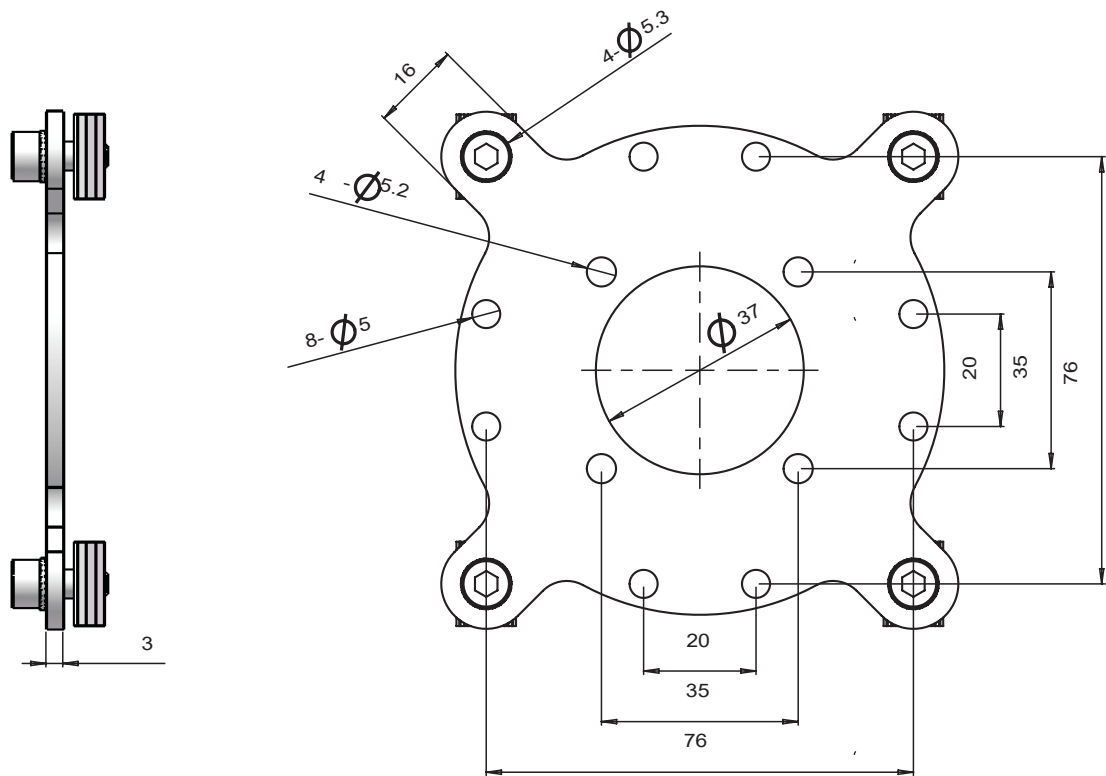
Model	Weight
FSIP-G50	90g

Application Example



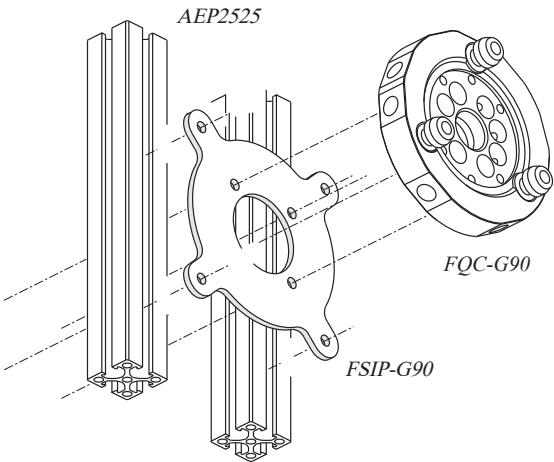
Interface Plate
FSIP-G90

Dimensions (mm)



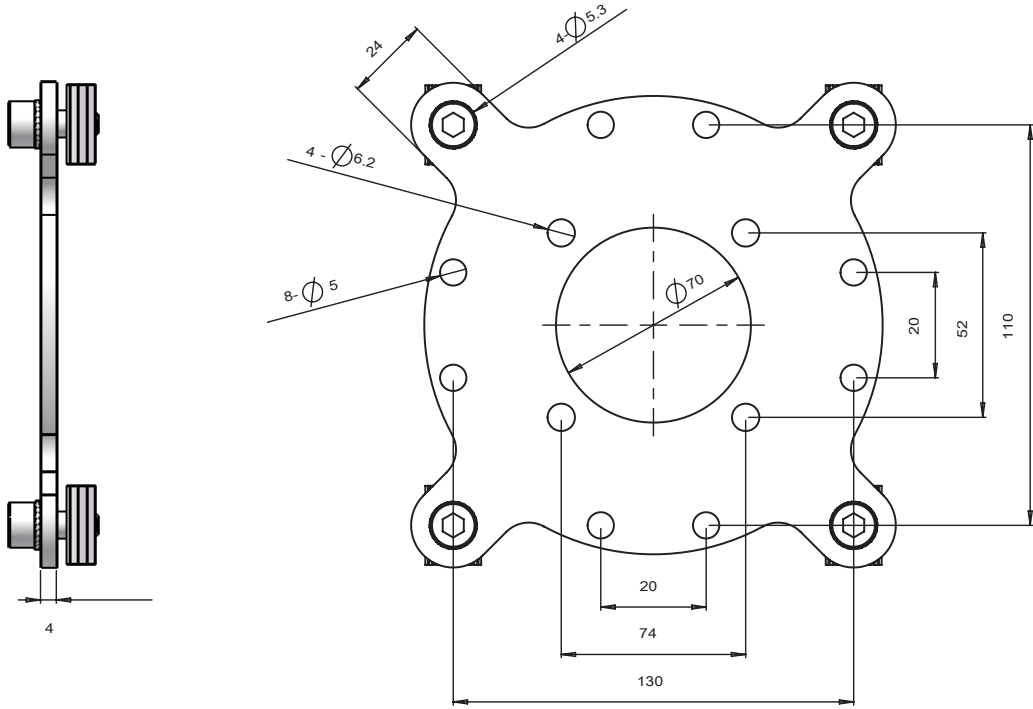
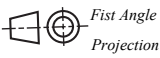
Model	Weight
FSIP-G90	190g

Application Example



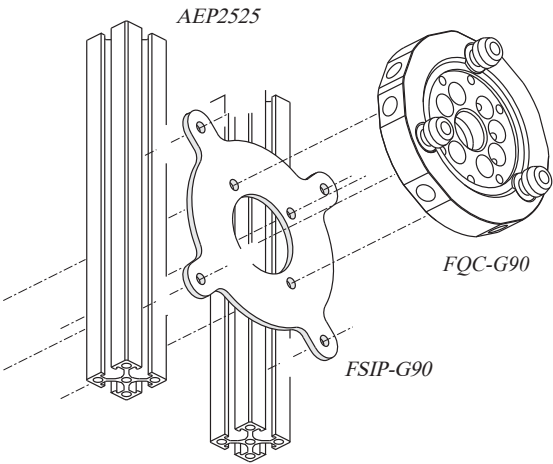
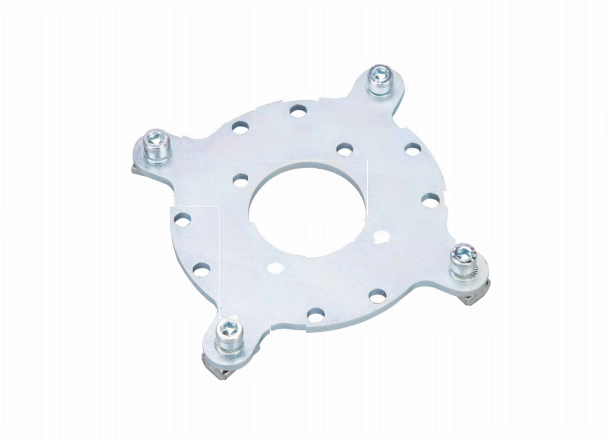
Interface Plate
FSIP-G150

Dimensions (mm)



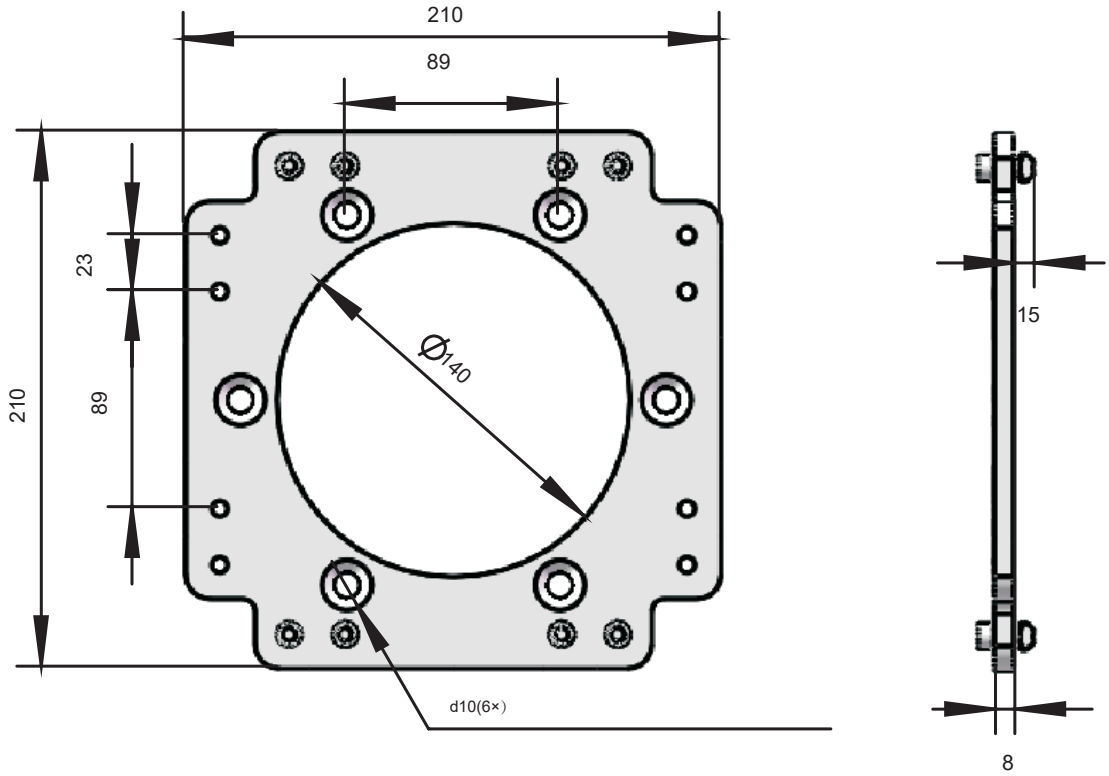
Model	Weight
FSIP-G150	540g

Application Example



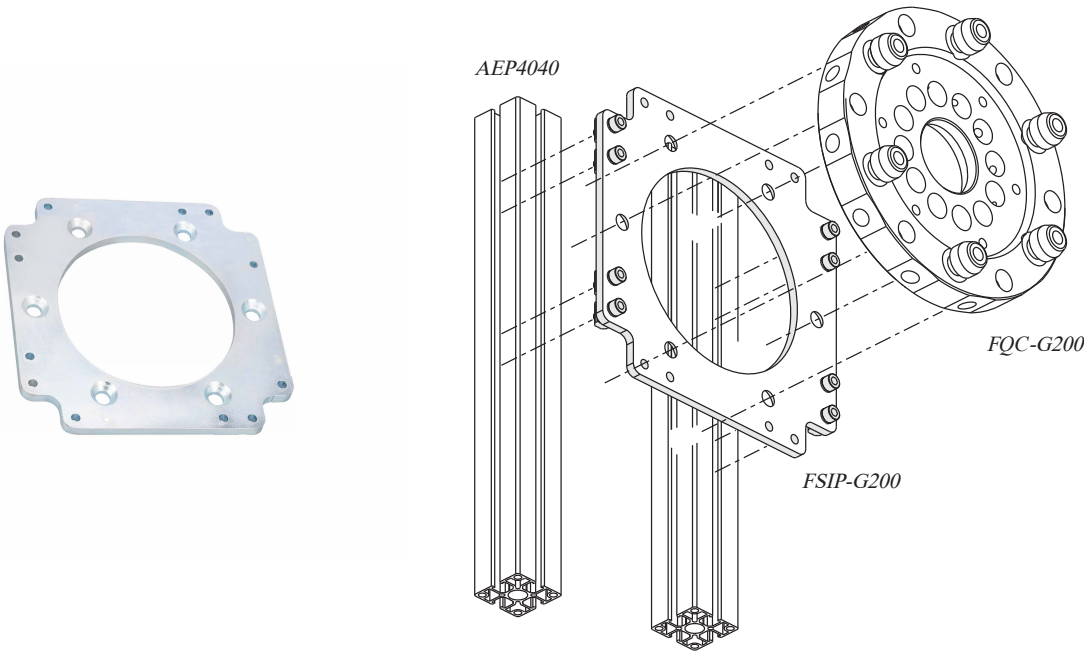
Interface Plate
FSIP-G200

Dimensions (mm)



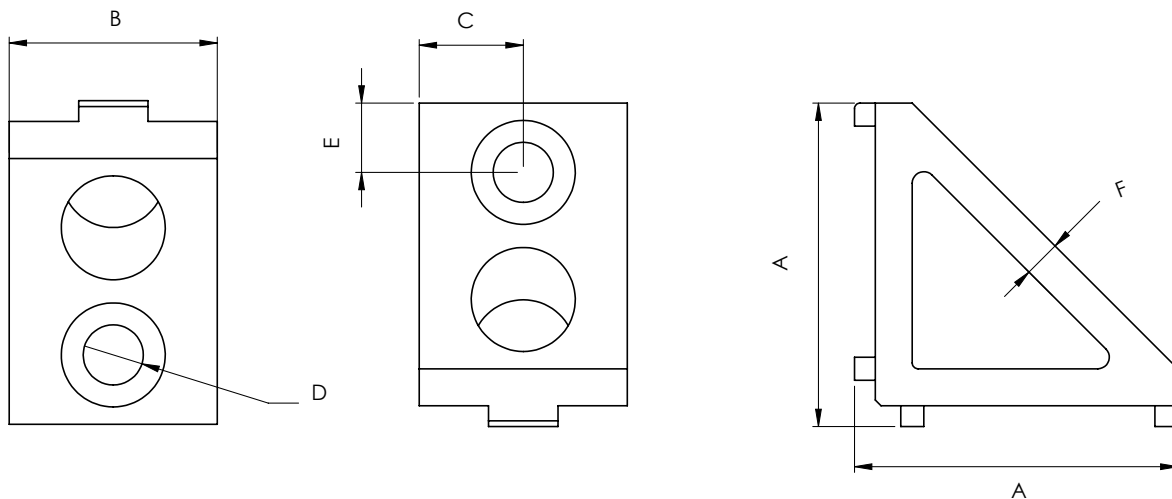
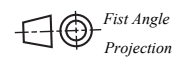
Model	Weight
FSIP-G200	1850g

Application Example



Angle Bracket for profile FFAB - series

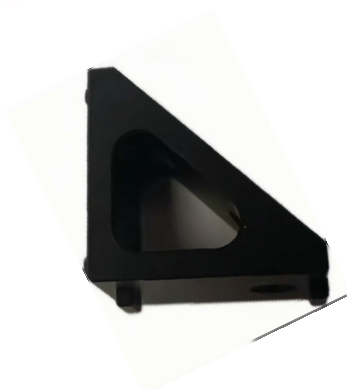
Dimensions (mm)



<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>Weight</i>
FFAB-2525T	28	18	9	ø5.2	6	3.2	27g
FFAB-2550T	28	40	25	ø5.2	6	3.2	58g
FFAB-4040T	50	22	11	ø6.2	10	5.5	63g
FFAB-4080T	50	70	40	ø6.2	10	5.5	190g

Application Example

NEW

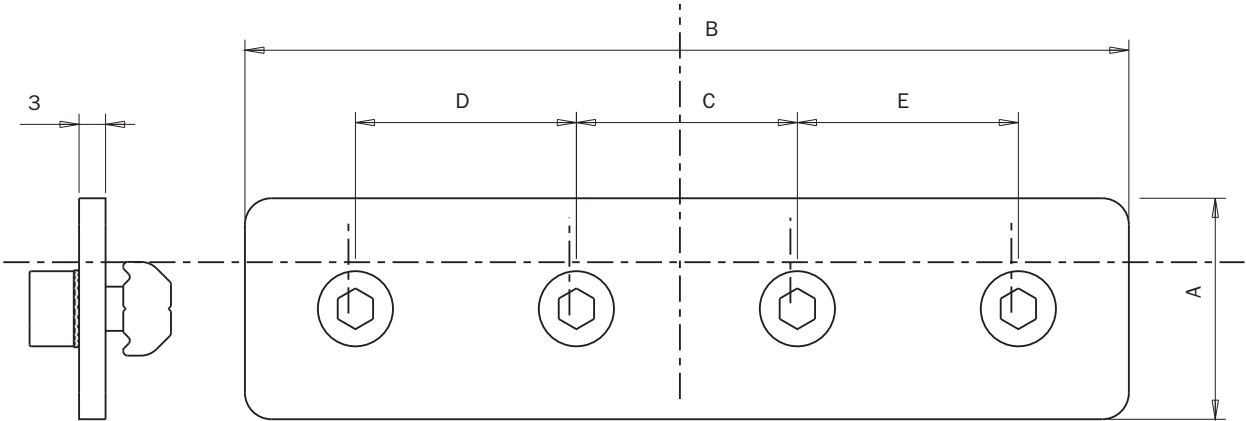
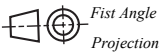


NEW



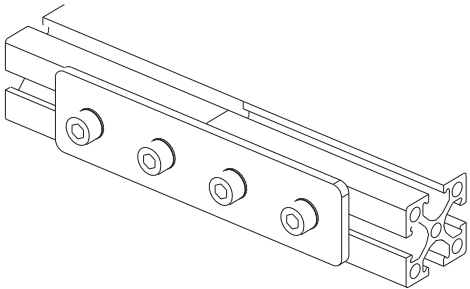
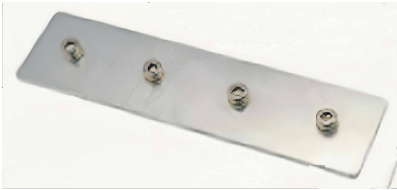
Straight Fixing Plate *FSP* - series

Dimensions (mm)



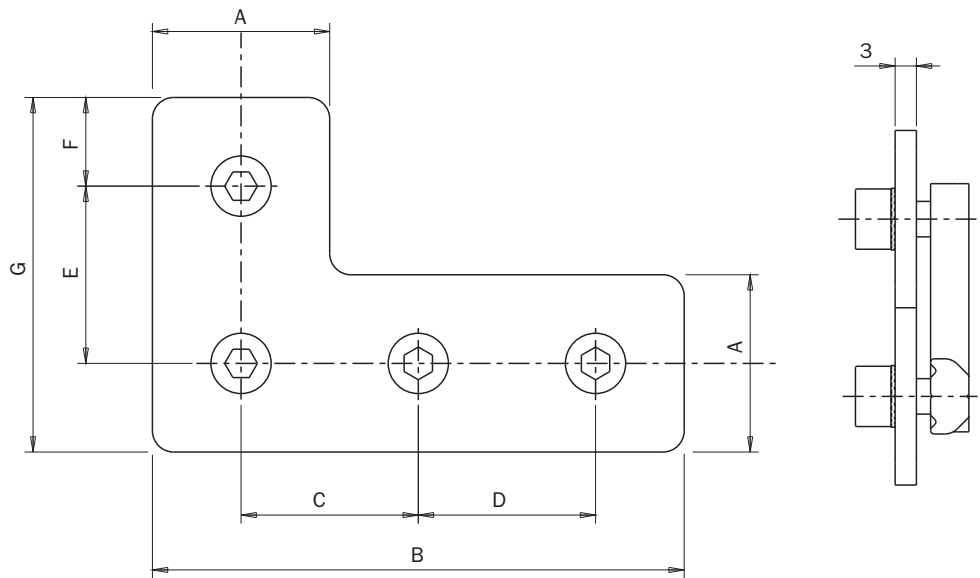
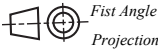
Model	A	B	C	D	E	Weight
FSP-2550T	25	50	25			45g
FSP-25100T	25	100	25	25	25	95g
FSP-40160T	40	160	40	40	40	195g

Application Example



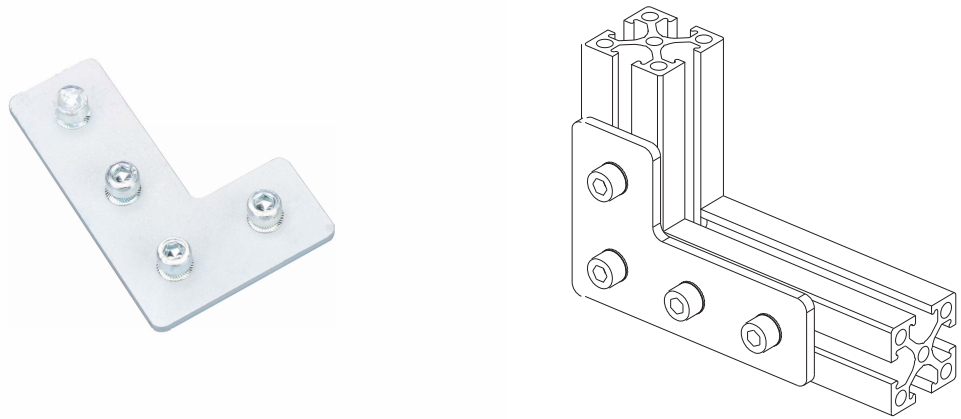
L-type Fixing Plate **FLP** - series

Dimensions (mm)



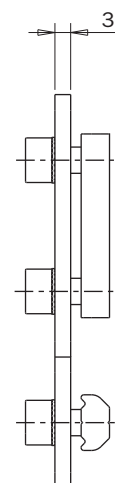
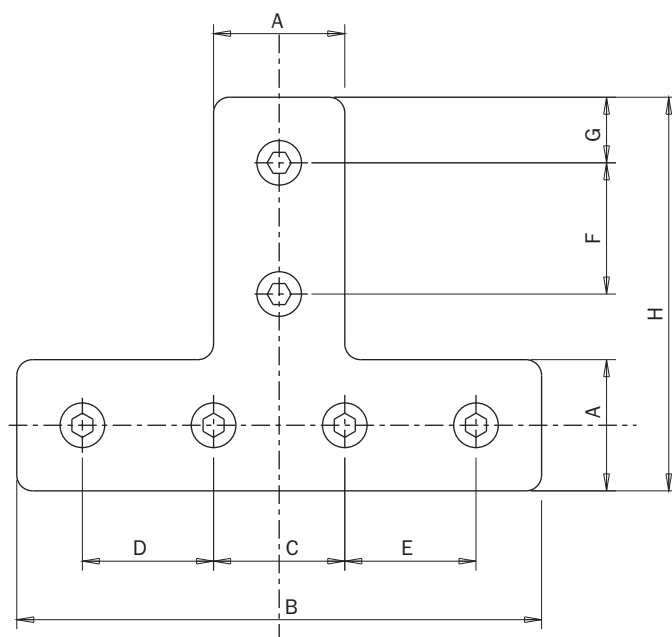
Model	A	B	C	D	E	F	G	Weight
FLP-2550T	25	50	25		25	12.5	50	70g
FLP-2575T	25	75	25	25	25	12.5	50	95g
FLP-40120T	40	120	40	40	40	20	80	200g

Application Example



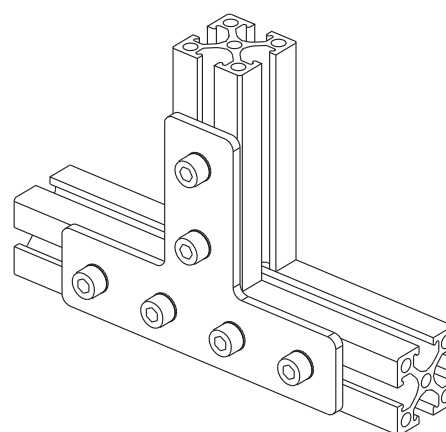
T-shaped fixing plate -FTP - series

Dimensions (mm)



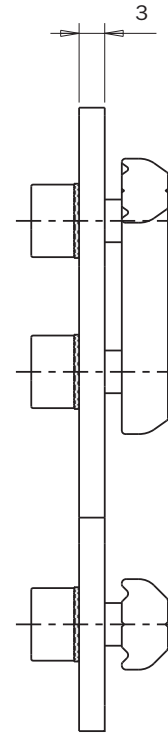
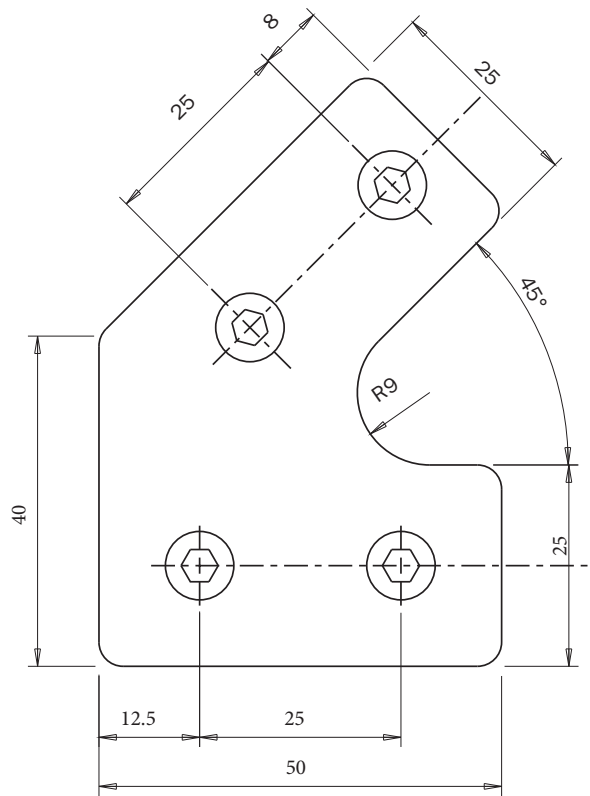
Model	A	B	C	D	E	F	G	H	Weight
FTP-2550T	25	50	25			25	12.5	75	95g
FTP-25100T	25	100	25	25	25	25	12.5	75	145g
FTP-40120T	40	120	90			40	15	110	250g

Application Example



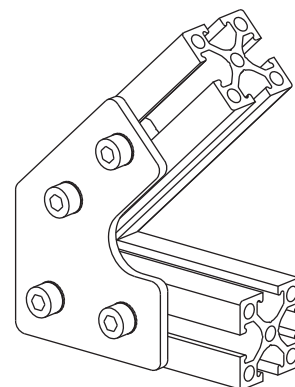
T-shaped fixing plate FTP-45T

Dimensions (mm)



Model	Weight
FTP-45T	100g

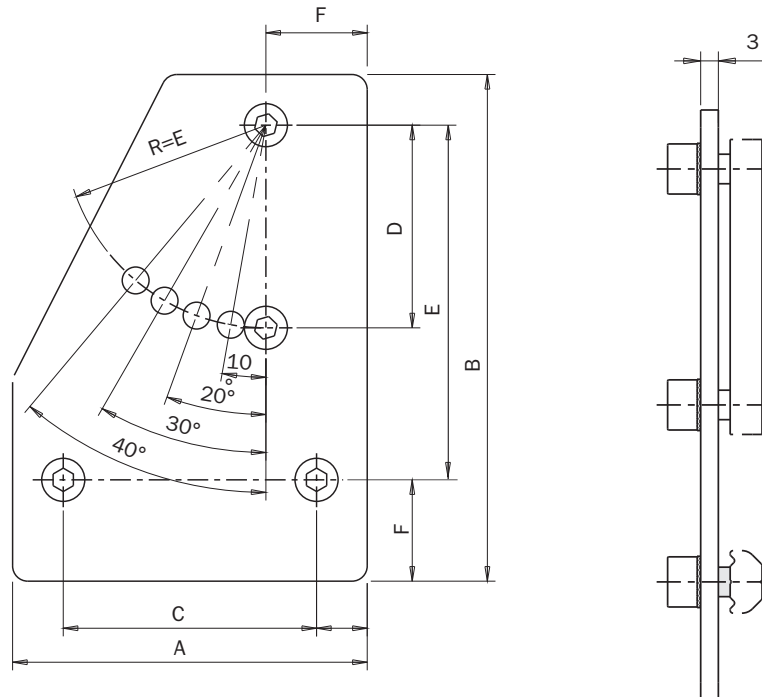
Application Example



Shaped fixing plate with adjustable angle FAP - series

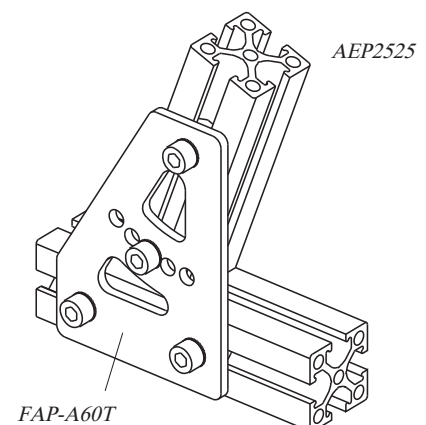
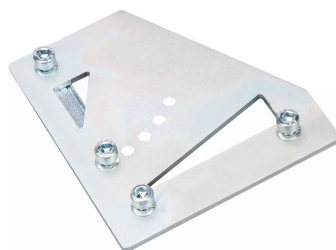
Dimensions (mm)

 First Angle
Projection



Model	A	B	C	D	E	F	G	H	L	M	Weight
FAP-A60T	60	85	40	10	40	12.5	76	12.5	25	30	130g
FAP-A90T	90	95	60	15	50	12.5	86	12.5	25	30	215g
FAP-A70T	70	100	50	10	40	20	90	20	40	27	175g

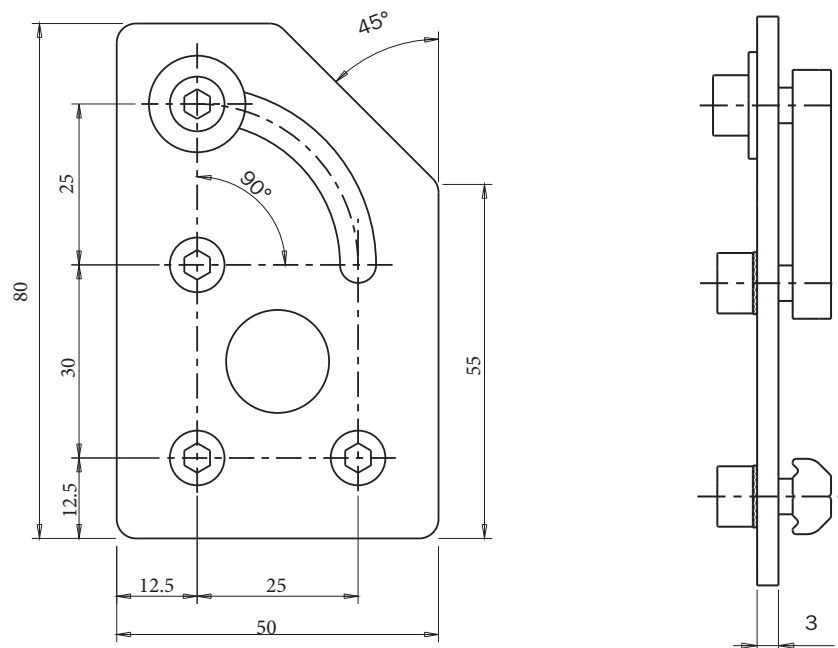
Application Example



Shaped fixing plate with adjustable angle FAP-A50T

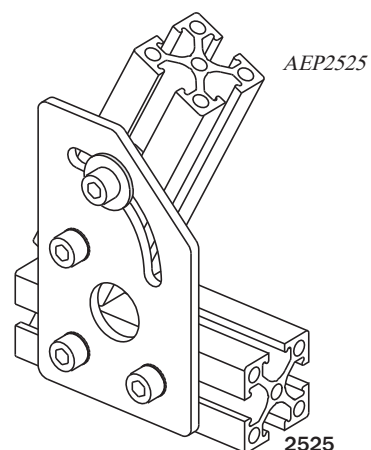
Dimensions (mm)

First Angle
Projection



Model	Weight
FAP-50T	115g

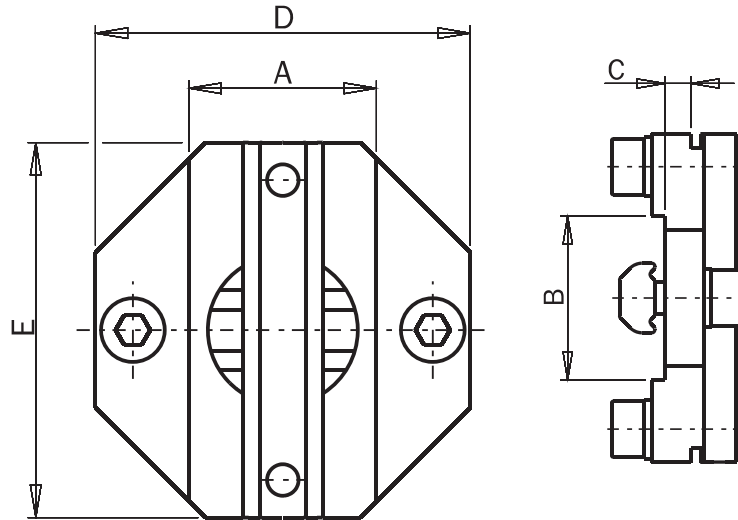
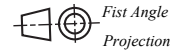
Application Example



Cross mounting bracket for profile

FCMB - series

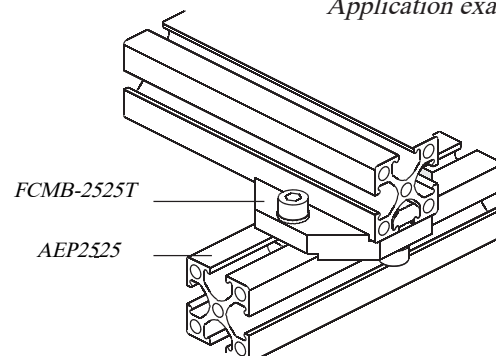
Dimensions (mm)



<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>Weight</i>
FCMB-1818T	18	18	2	38	38	40
FCMB-1825T	18	25	4	38	45	60
FCMB-2020T	20	20	4	50	50	30
FCMB-2525T	25	25	4	50	50	75
FCMB-2540T	25	40	4	45	60	75
FCMB-2550T	25	50	4	70	70	155
FCMB-2580T	25	80	4	45	100	140
FCMB-4040T	40	40	4	60	60	85
FCMB-4080T	40	80	4	60	100	175
FCMB-5050T	50	50	4	70	70	170
FCMB-8080T	80	80	4	100	100	255
FCMB-3030T	30	30	4	50	50	74



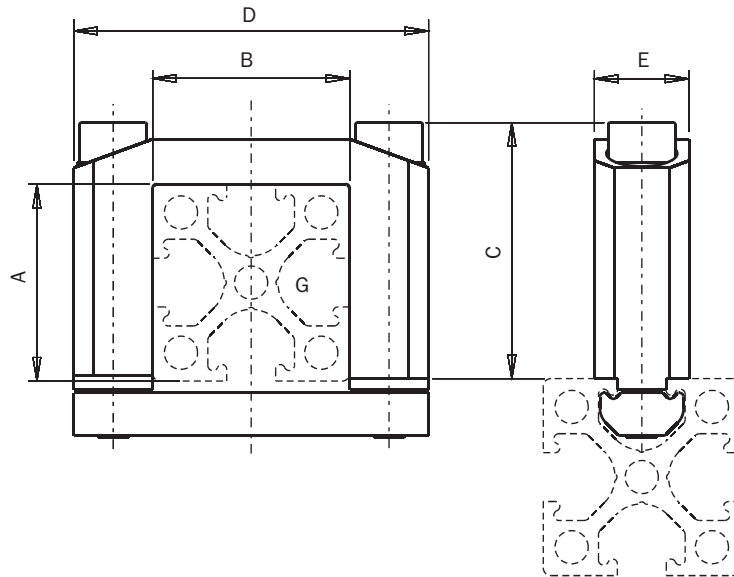
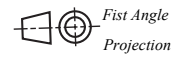
Application example



Cross (square) joint connector

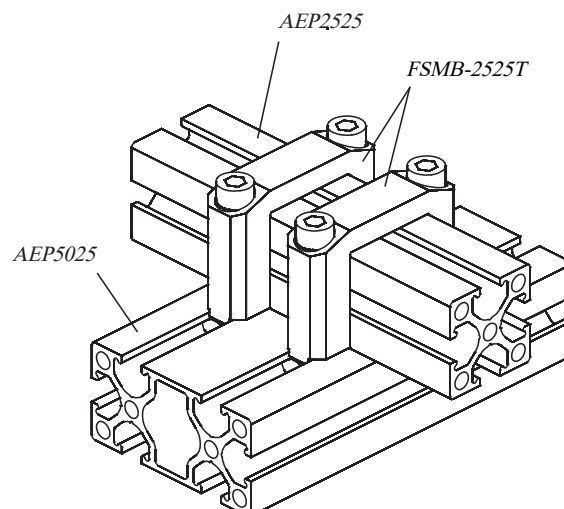
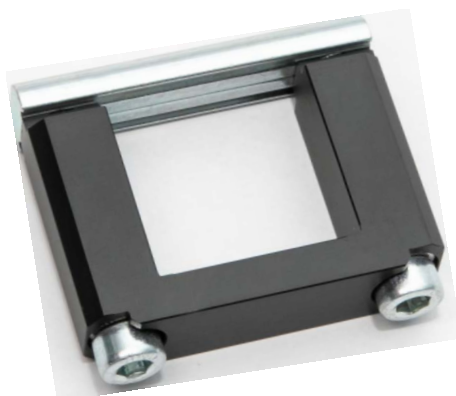
FSMB - series

Dimensions (mm)



<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>Weight</i>
FSMB-1818T	18	18	29	38	12	40g
FSMB-1825T	18	25	29	45	12	45g
FSMB-2525T	25	25	32	45	12	45g
FSMB-5025T	50	25	57	45	12	65g
FSMB-2550T	25	50	32	70	12	65g

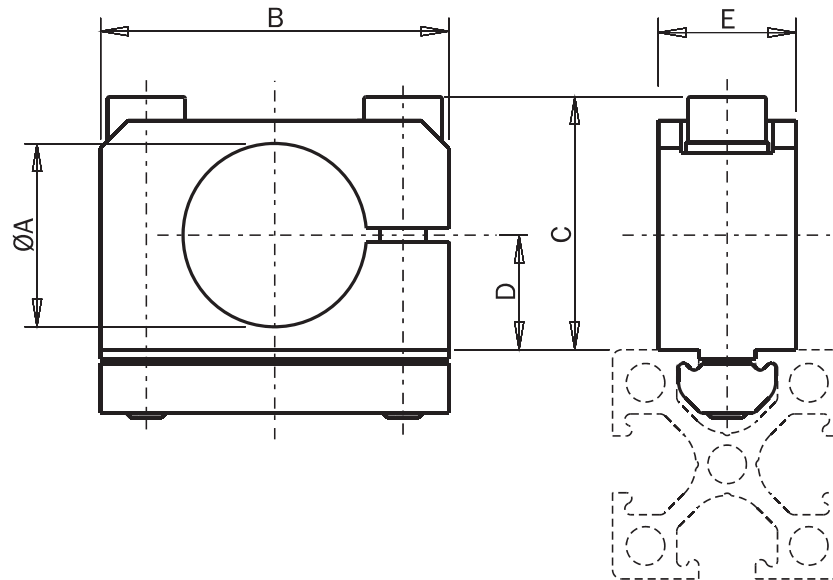
Application example



Cross (round) joint connector

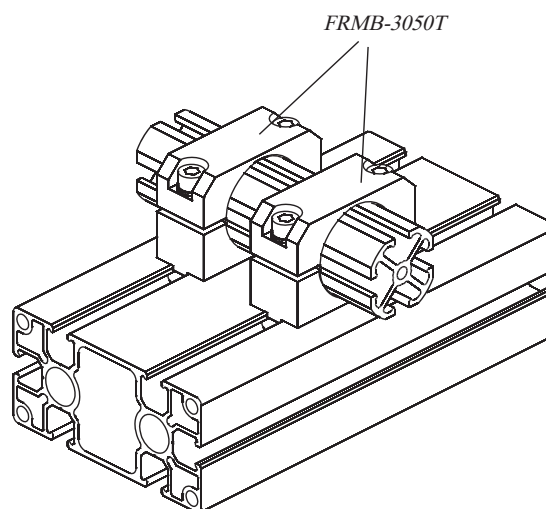
FRMB - series

Dimensions (mm)



<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>Weight</i>
FRMB-1025T	10	25	18.5	7	10	15g
FRMB-1432T	14	32	23	9	12	32g
FRMB-2038T	20	38	28	12.5	15	45g
FRMB-3050T	30	50	34	17	20	75g
FRMB-5070T	50	70	56	28	25	150g

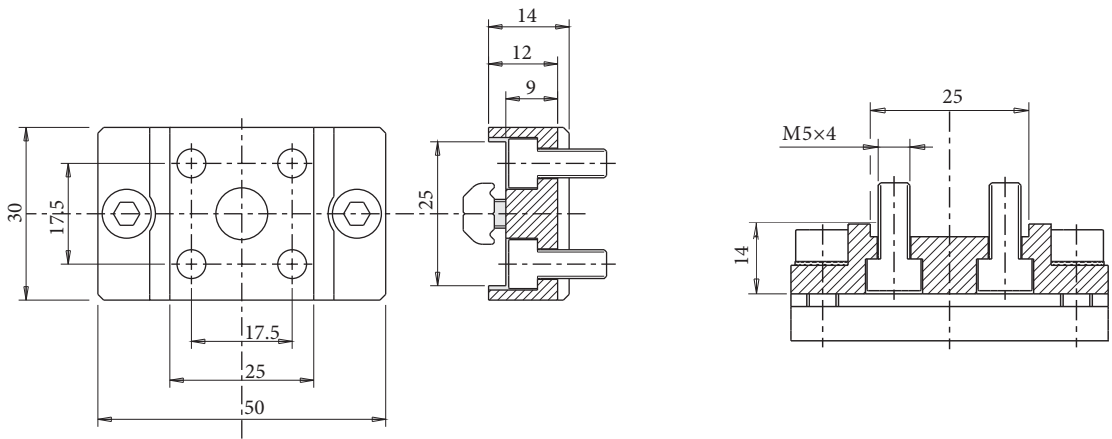
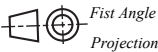
Application example



Cross joint connector

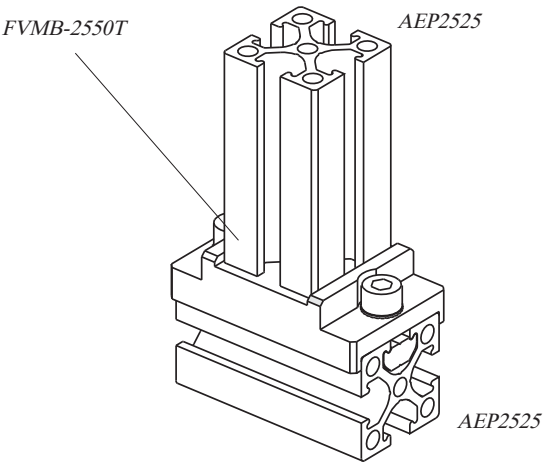
FVMB-2550T

Dimensions (mm)



Model	Weight
FVMB-2550T	65g

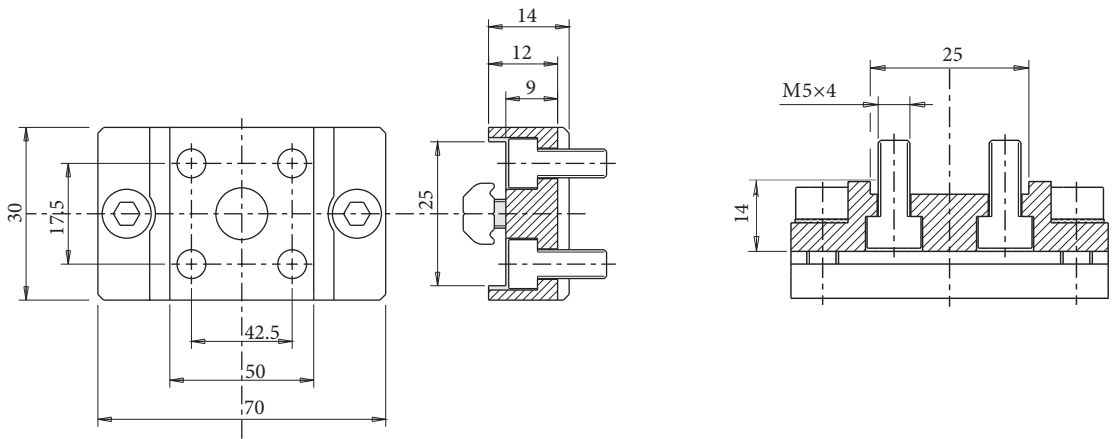
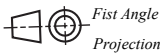
Application example



Cross joint connector

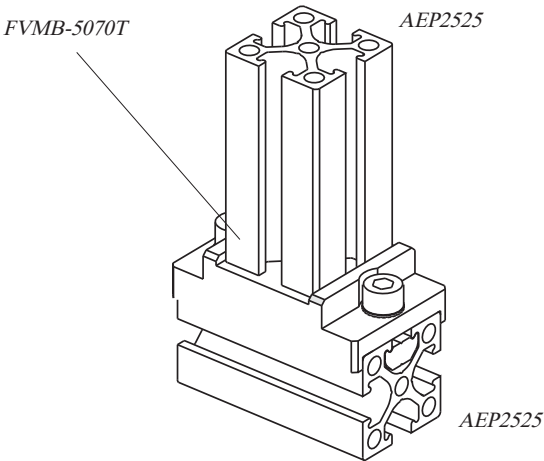
FVMB-5070T

Dimensions (mm)



Model	Weight
FVMB-5070T	85g

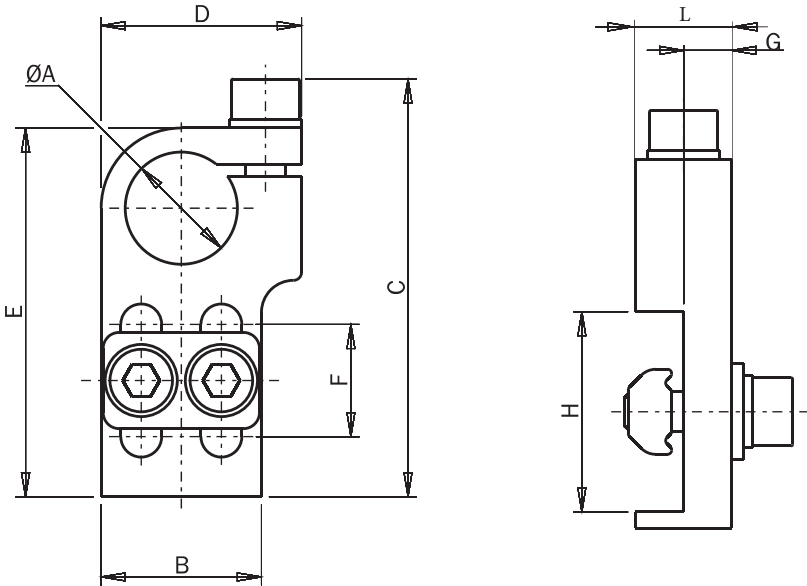
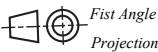
Application example



Mounting bracket

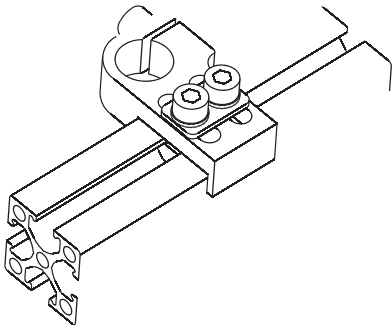
FMBE - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	H	L	Weight
FMBE-1010T	10	16	43	20	38	10	4.5	18	8	20g
FMBE-1014T	10	16	49	20	44	14	4.5	25	8	21g
FMBE-1210T	12	16	43	20.5	38	10	4.5	18	8	22g
FMBE-1214T	12	16	50	20.5	45	14	4.5	25	8	10g
FMBE-1414T	14	20	52.1	25	46	14	6	25	12	34g
FMBE-2014T	20	25	57.1	30	51.5	14	6.2	25	12	45g
FMBE-2022T	20	25	74.1	30	68	22	6	40	12	48g

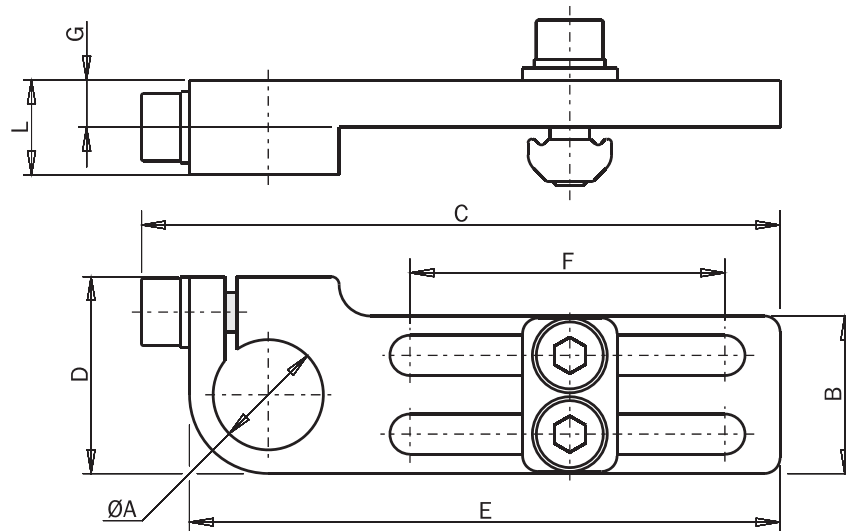
Application example



Mounting bracket

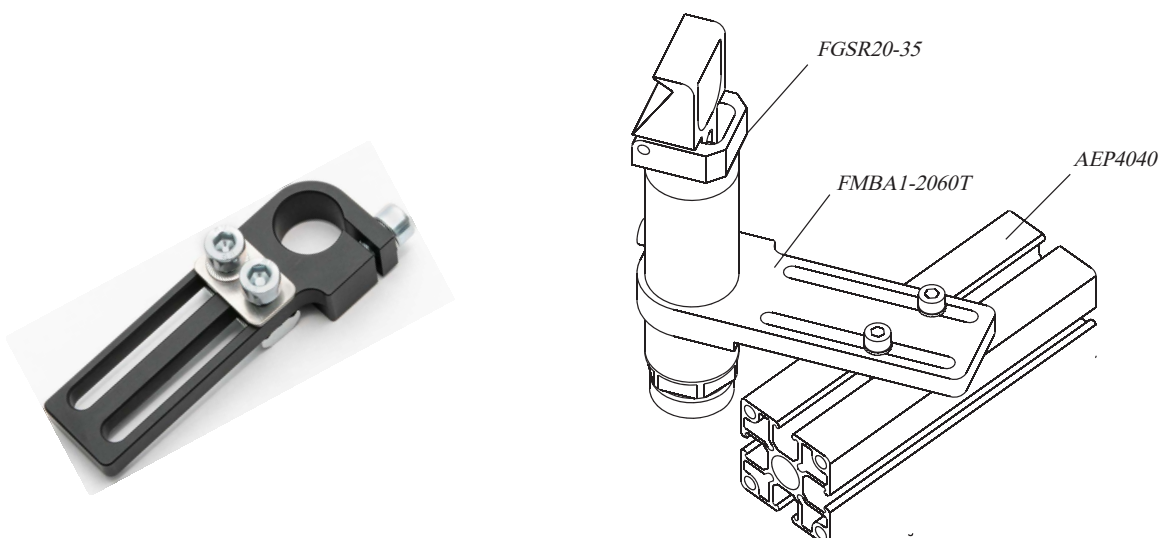
FMBA1 - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	L	Weight
FMBA1-0840T	8	16	75	20	70	40	4.5	8	13g
FMBA1-1040T	10	16	75	20	70	40	4.5	8	23g
FMBA1-1240T	12	16	75	20	70	40	4.5	8	20g
FMBA1-1440T	14	20	81.1	25	75	40	4.5	12	38g
FMBA1-1450T	14	20	91.1	25	85	50	6	12	40g
FMBA1-2060T	20	25	111.1	30	105	60	6.2	12	55g
FMBA1-3060T	30	35	121.1	40	115	60	6	12	95g

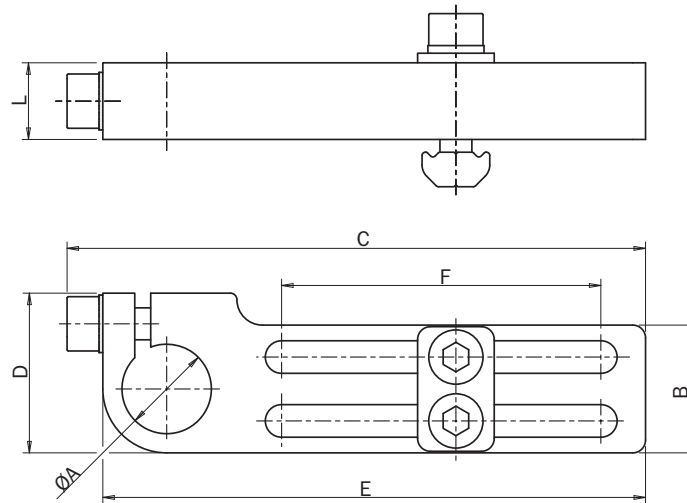
Application example



Heavy duty mounting bracket

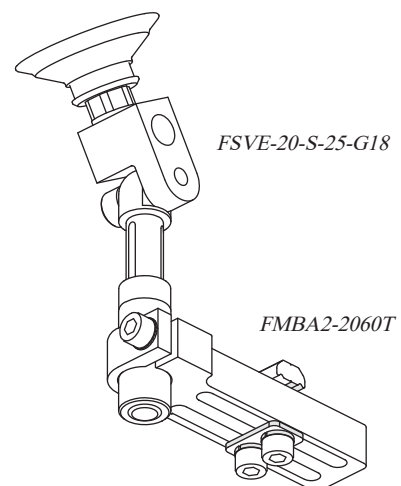
FMBA2 - series

Dimensions (mm)



Model	A	B	C	D	E	F	L	Weight
FMBA2-1040T	10	16	75	20	70	40	8.3	30g
FMBA2-1240T	12	16	75	20	70	40	8.3	40g
FMBA2-1450T	14	20	91.1	25	85	50	12	60g
FMBA2-2060T	20	25	111.1	30	105	60	15	85g
FMBA2-3060T	30	35	121.1	40	115	60	20	175g

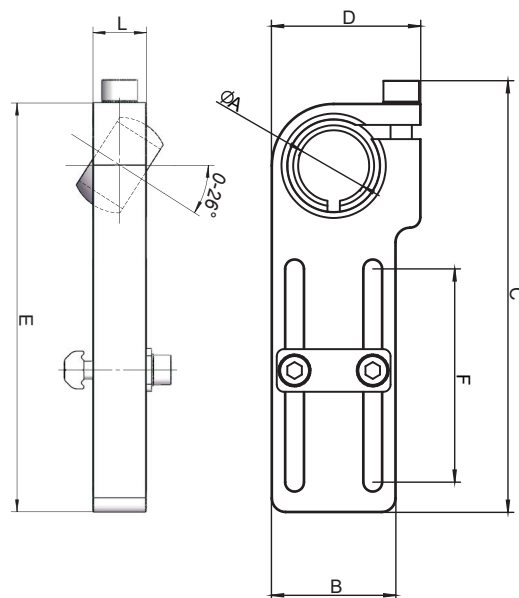
Application example



Heavy duty mounting bracket with adjustable angle ring

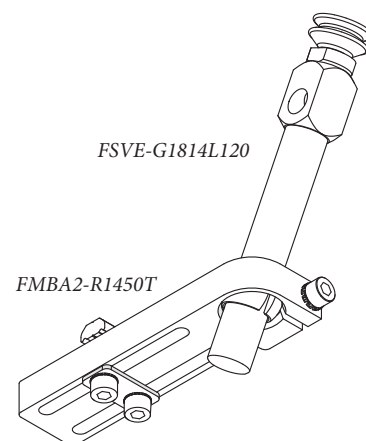
FMBA2-R - series

Dimensions (mm)



Model	A	B	C	D	E	F	L	Weight
FMBA2-R1040T	10	20	85	25	85	50	8.3	30g
FMBA2-R1450T	14	25	111.5	31	105	60	12	60g
FMBA2-R2060T	20	35	121.8	42	115	60	15	85g

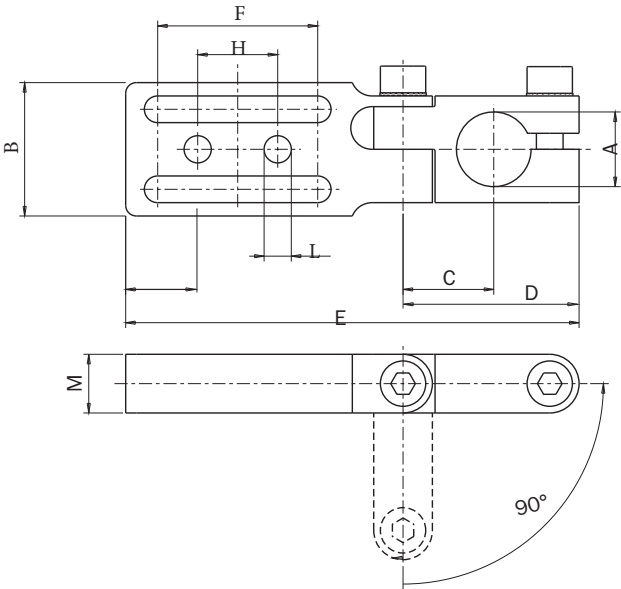
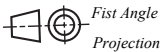
Application example



Slotted angular bracket

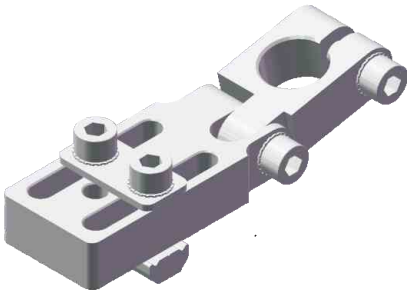
FMBA3 - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	H	L	M	Weight
FMBA3-1020T	10	16	14	26.5	70	20				9	30g
FMBA3-1220T	12	16	14	26.5	70	20				9	35g
FMBA3-1430T	14	25	17	33	85	30	13.5	15	5.1	11	50g
FMBA3-2040T	20	25	22	42	105	40	18.5	15	5.1	13	90g
FMBA3-3050T	30	36	28	54.5	115	50	21	22	5.1	16	185g

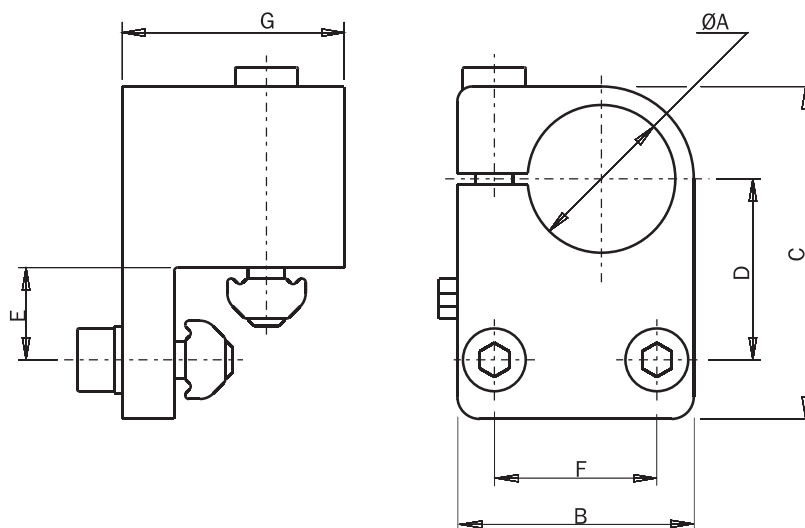
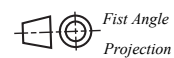
Application example



Mounting bracket

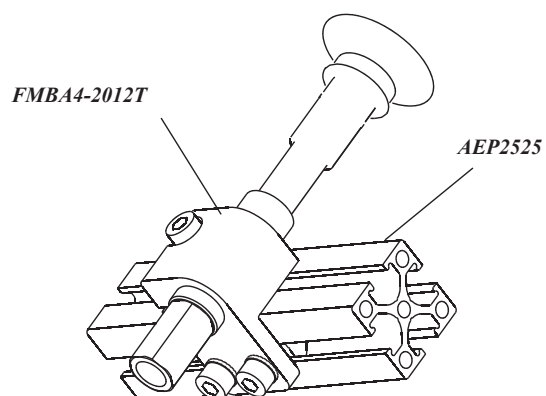
FMBA4 - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	Weight
FMBA4-1412T	14	25	40	22	12.5	15	25	50g
FMBA4-2012T	20	32	45	24.5	12.5	22	30	70g
FMBA4-2020T	20	35	54.5	33	20	25	35	95g
FMBA4-3012T	30	40	55	29.5	12.5	30	30	90g
FMBA4-3020T	30	45	65.5	39	20	35	40	150g

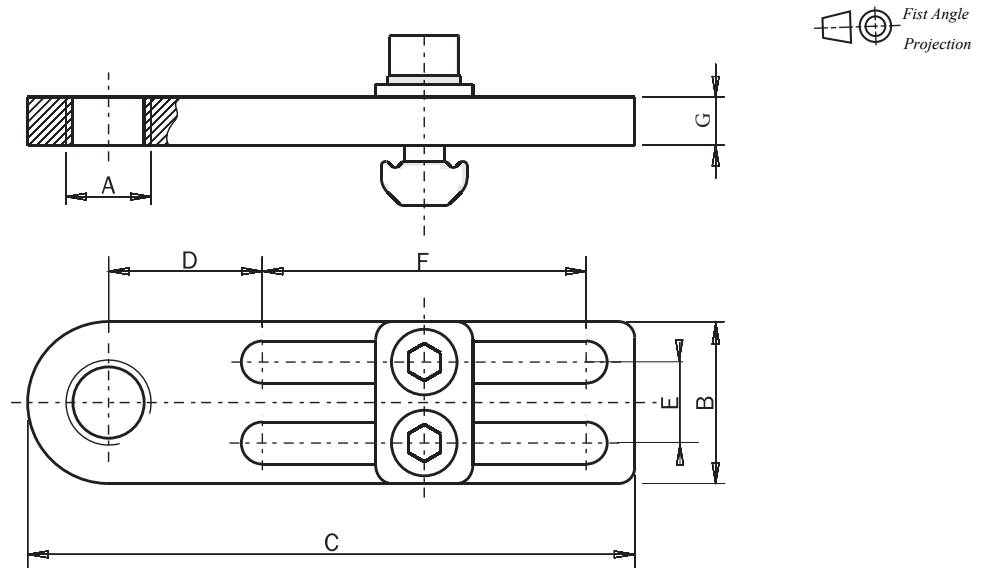
Application example



Mounting bracket

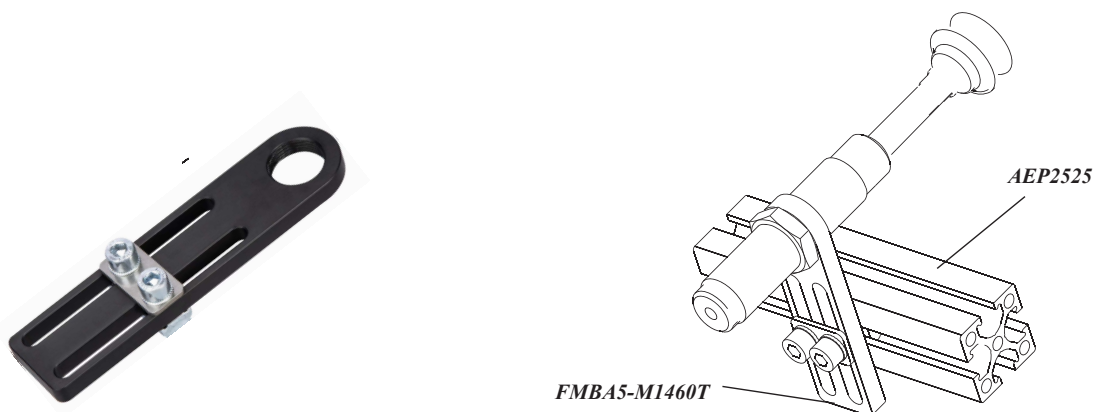
FMBA5 - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	Weight
FMBA5-G1840T	G18	20	75	19	10	40	6	25g
FMBA5-G1860T	G18	25	105	26.5	15	60	6	42g
FMBA5-M1040T	M10*1	20	75	19	10	40	6	30g
FMBA5-M1060T	M10*1	25	105	26.5	15	60	6	40g
FMBA5-M1240T	M12*1	20	75	19	10	40	6	30g
FMBA5-M1260T	M12*1	25	105	26.5	15	60	6	47g
FMBA5-M1440T	M14*1	20	75	19	10	40	6	20g
FMBA5-M1460T	M14*1	25	105	26.5	15	60	6	40g
FMBA5-M1640T	M16*1	20	75	19	10	40	6	20g
FMBA5-M1660T	M16*1	25	105	26.5	15	60	6	40g
FMBA5-M2040T	M20*1	25	75	16.5	15	40	6	30g
FMBA5-M2060T	M20*1	25	105	26.5	15	60	6	35g

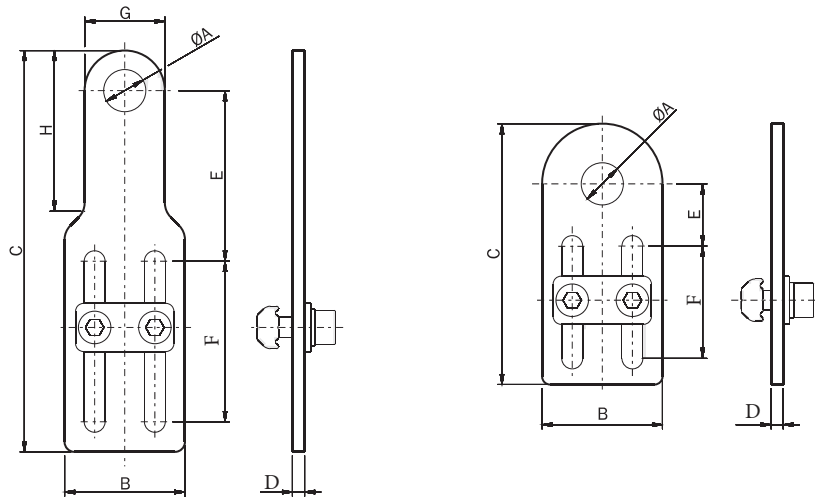
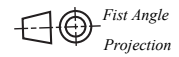
Application example



Mounting bracket

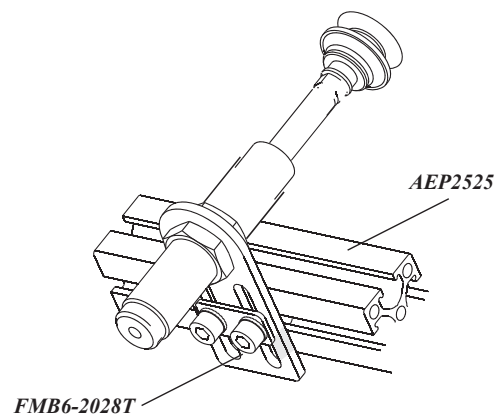
FMBA6 - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	H	Weight
FMBA6-1040T	10.5	30	100	3	42.5	40	6	38	60g
FMBA6-1240T	12.5	30	100	3	42.5	40	6	38	60g
FMBA6-1440T	14.5	30	100		42.5	40	6	38	60g
FMBA6-1640T	16.5	30	100	3	42.5	40	6		60g
FMBA6-2040T	20.5	30	100	3	42.5	40	6		60g
FMBA6-2240T	22.5	30	100	5	42.5	40	6	26	105g
FMBA6-2540T	25.5	30	100	5	42.5	40	6	26	100g
FMBA6-1028T	10.5	30	65	3	15.5	28	6		45g
FMBA6-1228T	12.5	30	65	3	15.5	28	6		45g
FMBA6-1428T	14.5	30	65	3	15.5	28	6		45g
FMBA6-1628T	16.5	30	65	3	15.5	28	6		45g
FMBA6-2028T	20.5	30	65	3	15.5	28	6		45g
FMBA6-2228T	22.5	30	70	5	17	28	6	26	75g
FMBA6-2528T	25.5	30	70	5	17	28	6	26	75g

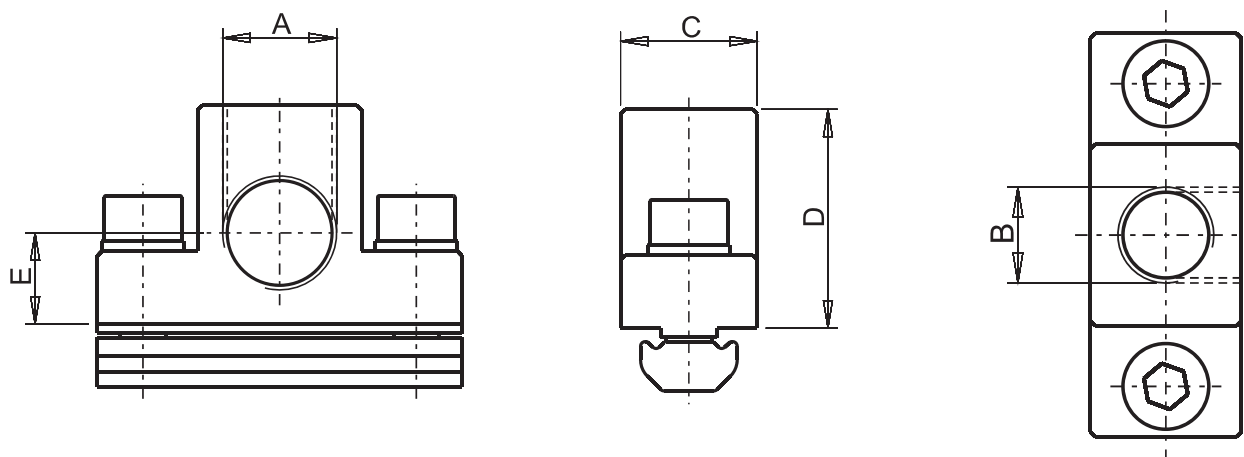
Application example



Direct connector for vacuum cup

FSVA - series

Dimensions (mm)



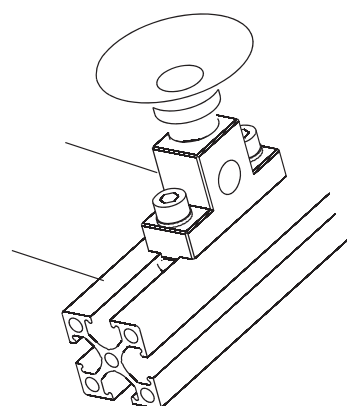
Model	A	B	C	D	E	Weight
FSVA-G18	G18	G18	15	24	12	42g
FSVA-G14	G14	G14	15	24	10	40g

Application example



FSVA-G18

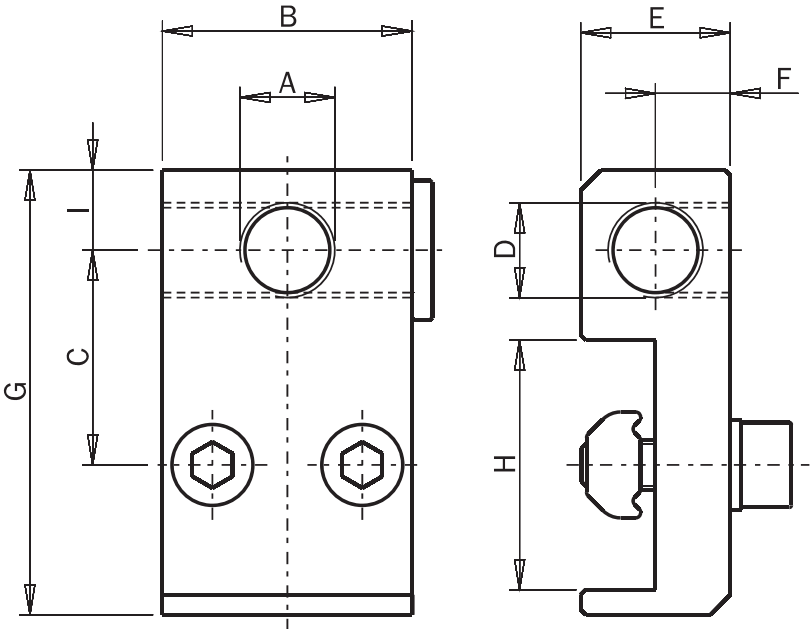
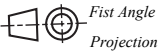
AEP2525



Mounting bracket for vacuum cup

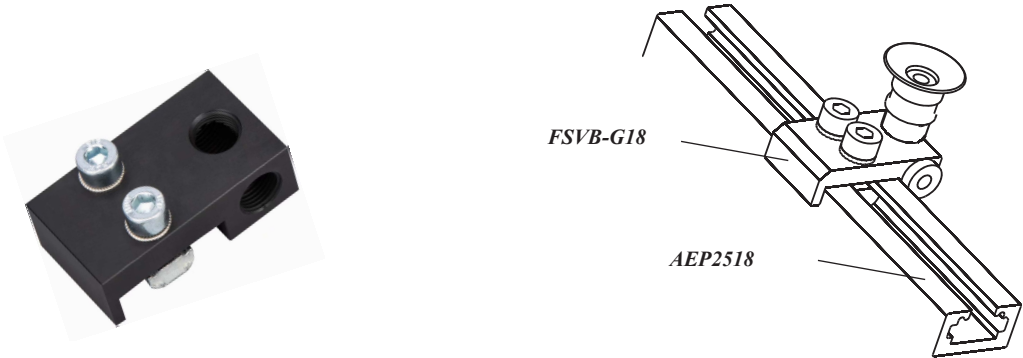
FSVB - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	H	I	Weight
FSVB-M5	M5	16	13.5	M5	8	4	29	18	4.3	15g
FSVB-G18	G18	25	21.5	G18	15	7.5	44.5	25	8	45g
FSVB-G14	G14	25	21.5	G14	15	7.5	46.5	25	10	45g

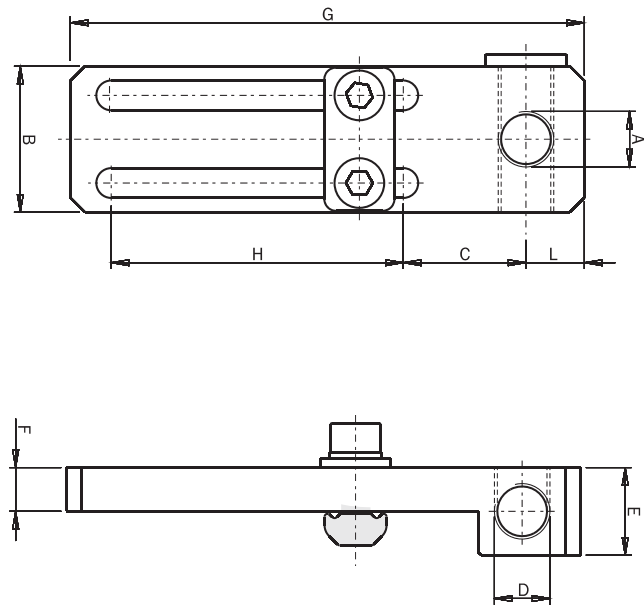
Application example



Long mounting bracket for vacuum cup

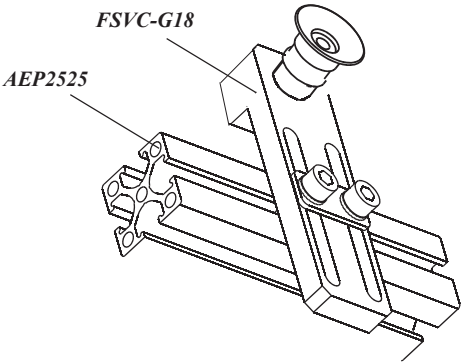
FSVC - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	H	I	Weight
FSVC-M5	M5	16	14	M5	8	4	65	40	6	20g
FSVC-G18	G18	25	21	G18	15	7.5	88	50	10	60g
FSVC-G14	G14	25	21	G14	15	7.5	88	50	10	60g

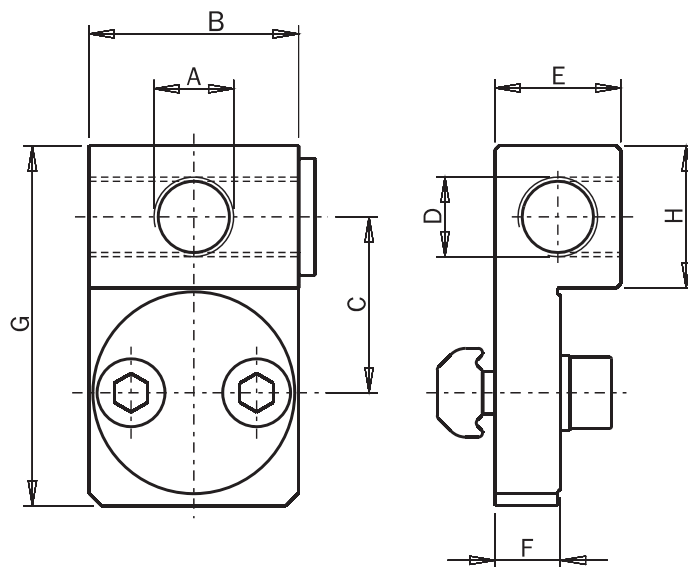
Application example



Adjustable angle mounting bracket for vacuum cup

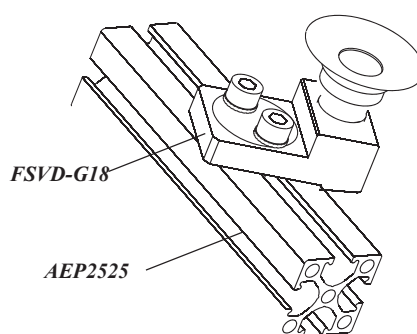
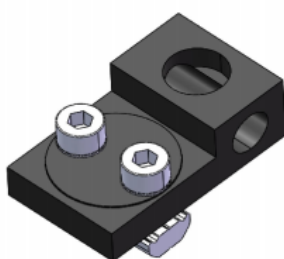
FSVD - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	H	Weight
FSVD-M5	M5	16	13	M5	10	5.3	28	10	15g
FSVD-G18	G18	25	21	G18	15	7.8	43	17	45g
FSVD-G14	G14	25	21	G14	15	7.8	43	17	42g

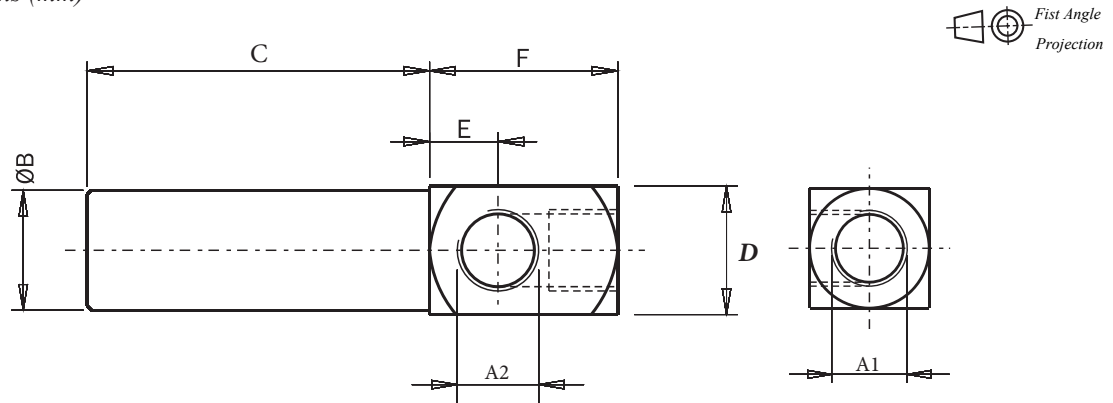
Application example



Leg for vacuum cup

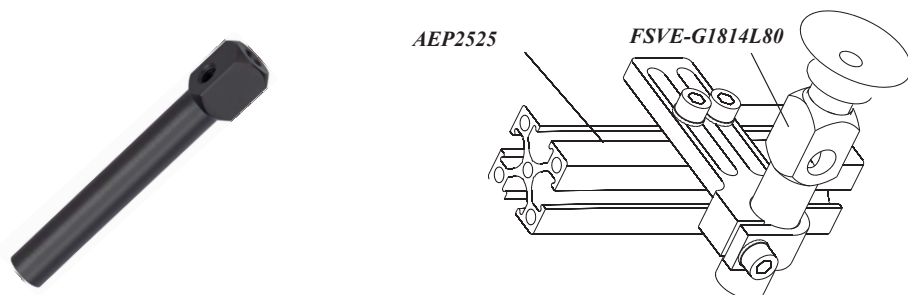
FSVE- series

Dimensions (mm)



<i>Model</i>	<i>A1</i>	<i>A2</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>Weight</i>
FSVE-M510L30	M5	M5	10	30	11	6	16	10g
FSVE-M510L60	M5	M5	10	60	11	6	16	13g
FSVE-M510L90	M5	M5	10	90	11	6	16	17g
FSVE-M512L30	M5	M5	12	30	13	7	17	12g
FSVE-M512L60	M5	M5	12	60	13	7	17	15g
FSVE-M512L90	M5	M5	12	90	13	7	17	19g
FSVE-G1814L40	G1/8	G1/8	14	40	15	8	22	17g
FSVE-G1814L80	G1/8	G1/8	14	80	15	8	22	25g
FSVE-G1814L120	G1/8	G1/8	14	120	15	8	22	32g
FSVE-G1420L50	G1/4	G1/4	20	50	20	8	23	40g
FSVE-G1420L100	G1/4	G1/4	20	100	20	8	23	60g
FSVE-G1420L150	G1/4	G1/4	20	150	20	8	23	75g

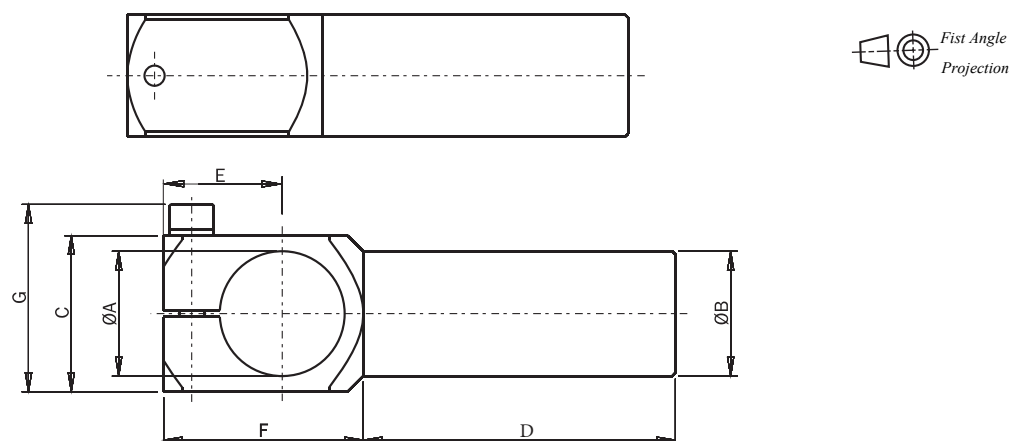
Application example



Clamp leg

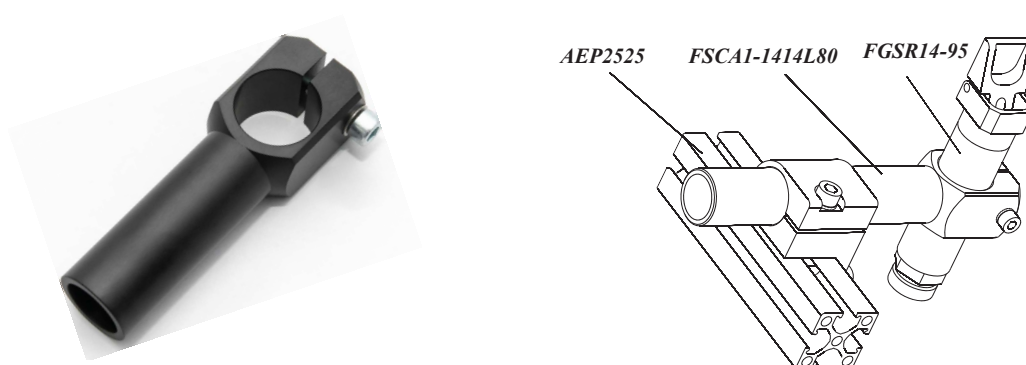
FSCAI - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	Weight
FSCA1-1010L30	10	10	14	30	12	19	19	10g
FSCA1-1010L60	10	10	14	60	12	19	19	15g
FSCA1-1010L90	10	10	14	90	12	19	19	20g
FSCA1-1212L30	12	12	19	30	14	21	21	13g
FSCA1-1212L60	12	12	19	60	14	21	21	18g
FSCA1-1212L90	12	12	19	90	14	21	21	23g
FSCA1-1414L40	14	14	18	40	16	26	24	20g
FSCA1-1414L80	14	14	18	80	16	26	24	30g
FSCA1-1414L120	14	14	18	120	16	26	24	40g
FSCA1-2020L50	20	20	25	50	19	32	32	45g
FSCA1-2020L100	20	20	25	100	19	32	32	70g
FSCA1-2020L150	20	20	25	150	19	32	32	105g
FSCA1-3030L80	30	30	40	80	25	44	46	170g
FSCA1-3030L140	30	30	40	140	25	44	46	230g
FSCA1-3030L200	30	30	40	200	25	44	46	300g

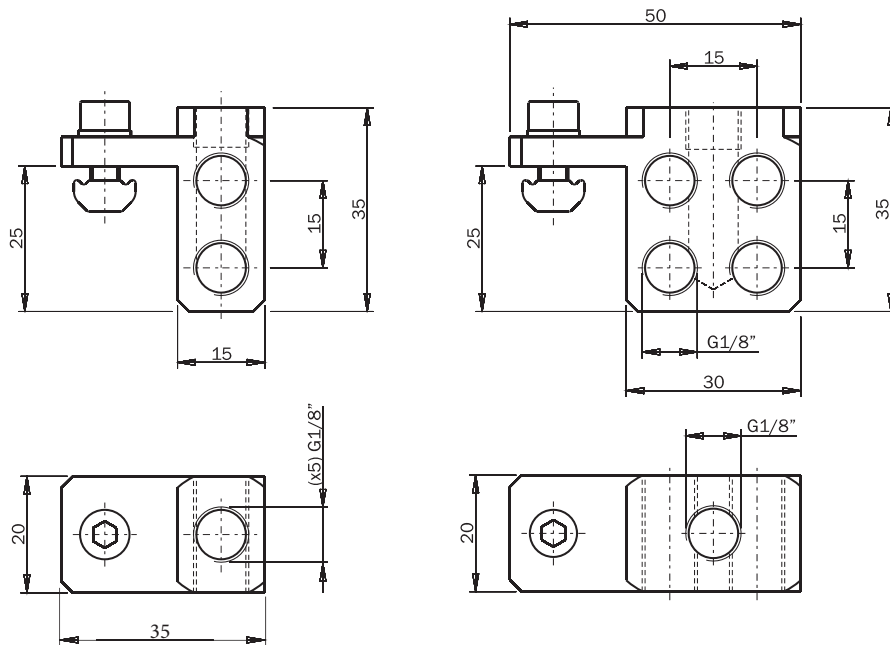
Application example



Side manifold block

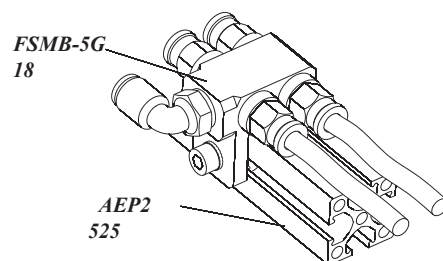
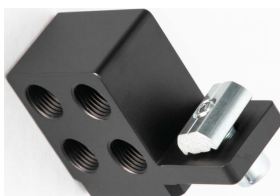
FSMB - series

Dimensions (mm)



Model	Weight
FSMB-5G18	30g
FSMB-9G18	50g

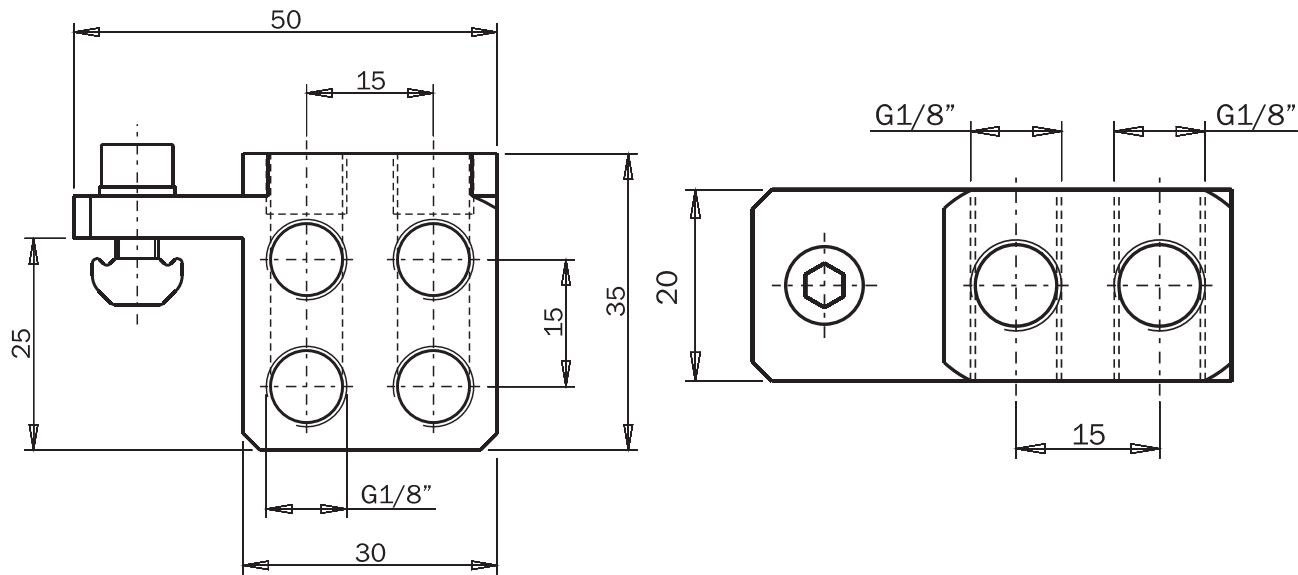
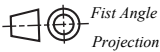
Application example



Side manifold block

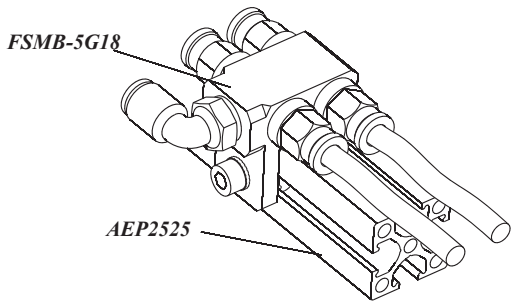
FSMB - series

Dimensions (mm)



Model	Weight
FSMB-D5G18	48g

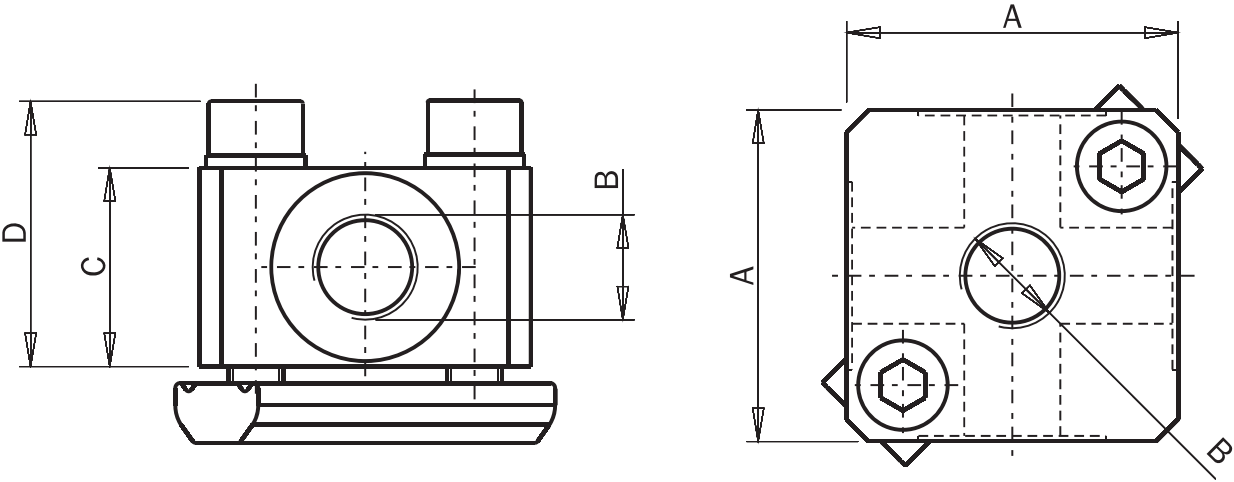
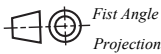
Application example



Manifold block

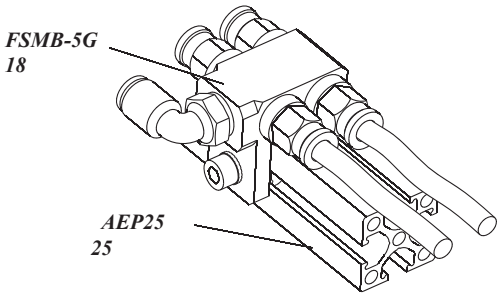
FSMB - series

Dimensions (mm)



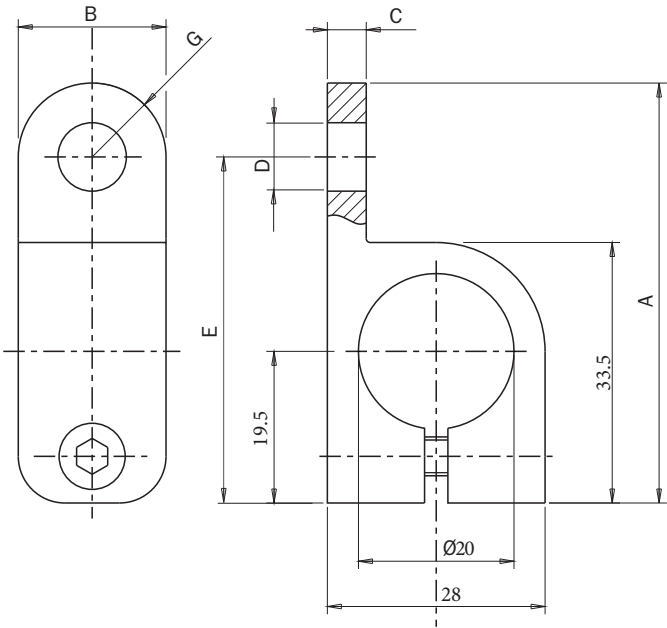
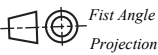
Model	A	B	C	D	Weight
FSMB-A5G18T	30	5*G1/8	18	24	50g
FSMB-A5G14T	40	5*G1/4	20	23	180g

Application example



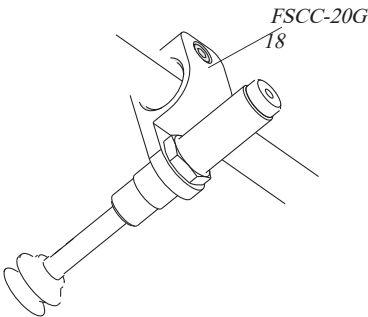
Swivelling support
 FSCC - series

Dimensions (mm)



Model	A	B	C	D	E	G	Weight
FSCC-20G18	53.5	19	5	G1/8	44	R9.5	30g
FSCC-20M16	60.5	24	6	M16*1	48.5	R12	40g

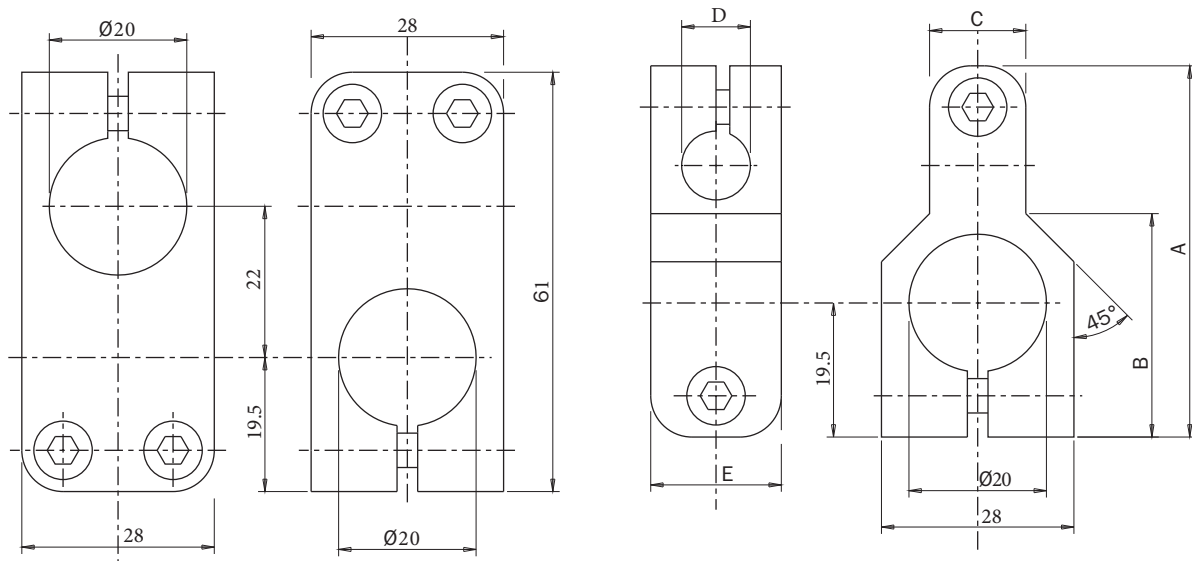
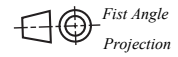
Application example



Cross connection block

FSCD - series

Dimensions (mm)



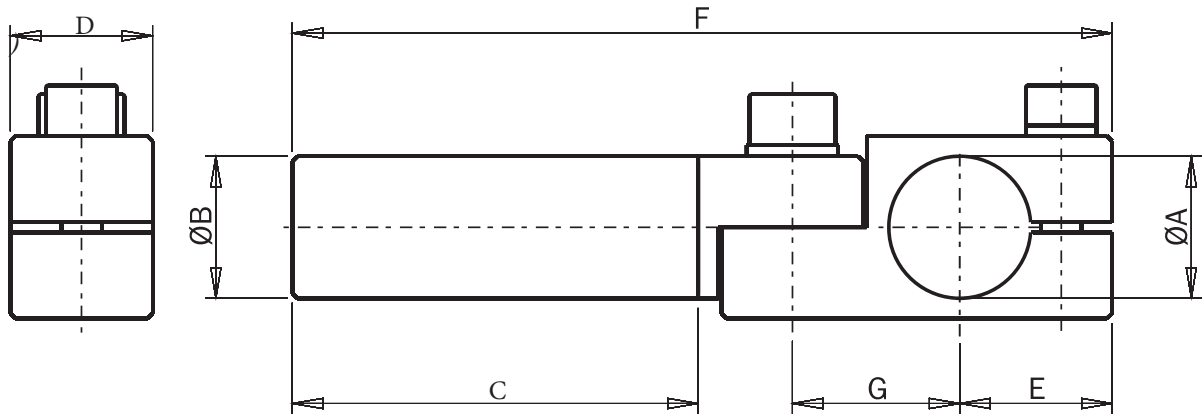
Model	A	B	C	D	E	Weight
FSCD-2010T	54	32.5	14	10	19	40g
FSCD-2014T	56	30.5	18	14	22	45g
FSCD-2020T						70g

Application example



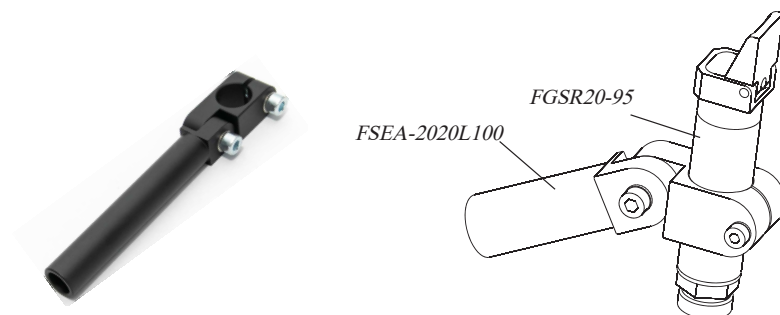
Elbow arm
FSEA - series

Dimensions (mm)



<i>Model</i>	A	B	C	D	E	F	G	Weight
FSEA-1010L60	10	10	60	10	13	93	12.5	20g
FSEA-1212L60	12	12	60	12	15	98	14.5	22g
FSEA-1414L40	14	14	40	14	16	82	16.5	32g
FSEA-1414L80	14	14	80	14	16	122	16.5	42g
FSEA-1414L120	14	14	120	14	16	162	16.5	50g
FSEA-2020L50	20	20	50	20	19	104	22.5	70g
FSEA-2020L100	20	20	100	20	19	154	22.5	90g
FSEA-2020L150	20	20	150	20	19	204	22.5	120g
FSEA-3030L80	30	30	80	30	27	160	34.8	235g
FSEA-3030L140	30	30	140	30	27	220	34.8	300g
FSEA-3030L200	30	30	200	30	27	280	34.8	360g

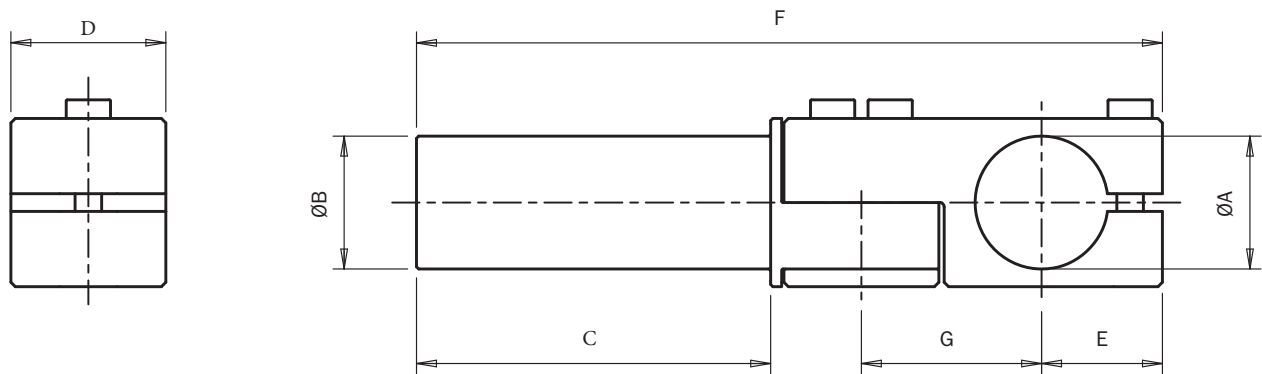
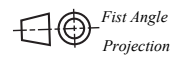
Application example



Heavy duty Elbow arm

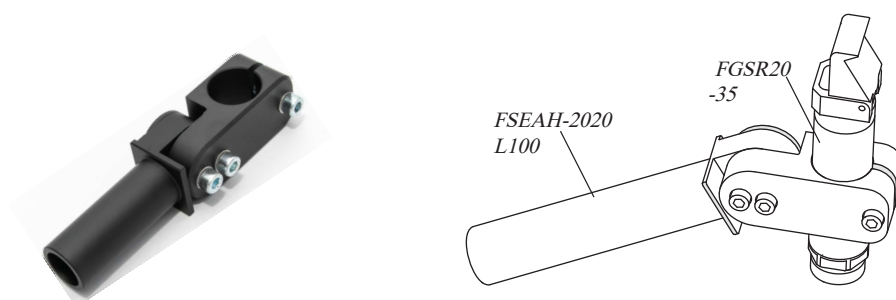
FSEAH - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	Weight
FSEAH-2020L50	20	20	50	25	19.5	113.5	28.7	95g
FSEAH-2020L100	20	20	100	25	19.5	163.5	28.7	115g
FSEAH-2020L150	20	20	150	25	19.5	213.5	28.7	130g
FSEAH-3030L80	30	30	80	35	27.3	168.5	40.7	330g
FSEAH-3030L140	30	30	140	35	27.3	228.5	40.7	380g
FSEAH-3030L200	30	30	200	35	27.3	288.5	40.7	435g

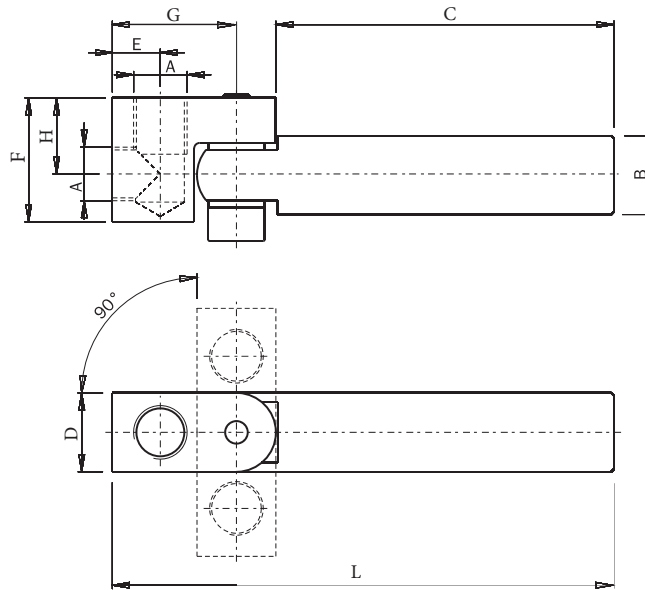
Application example



Elbow arm for vacuum cup

FSEAV - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	H	L	Weight
FSEAV-M510L45	M5	10	45	10	5.5	16.5	22	11	64	18g
FSEAV-M510L90	M5	10	90	10	5.5	16.5	22	11	109	27g
FSEAV-G1814L60	G18	14	60	14	8.5	22	22	13.5	89	33g
FSEAV-G1814L120	G18	14	120	14	8.5	22	22	13.5	149	50g
FSEAV-G1820L78	G18	20	78	14	8.5	22	22	13.5	107	60g
FSEAV-G1820L153	G18	20	153	14	8.5	22	22	13.5	182	100g
FSEAV-G1420L75	G14	20	75	20	12	27	28	15	113	75g
FSEAV-G1420L150	G14	20	150	20	12	27	28	15	188	115g

Application example

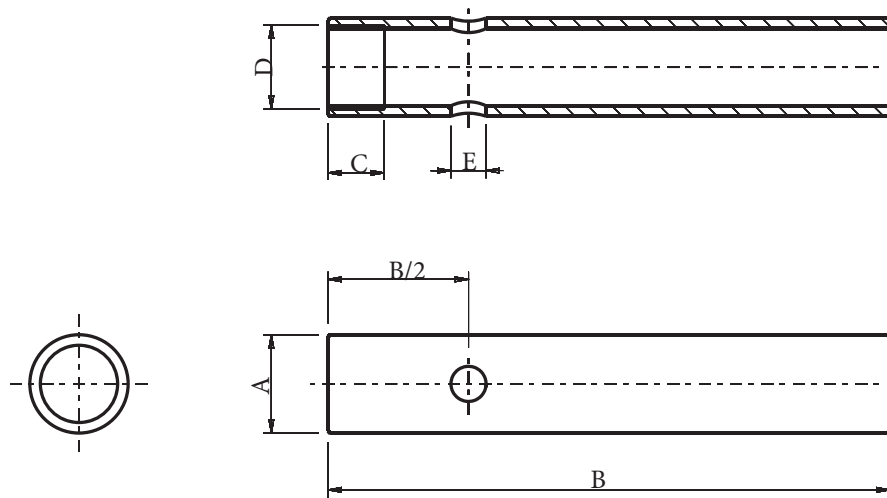


Extension tube

FETB - series

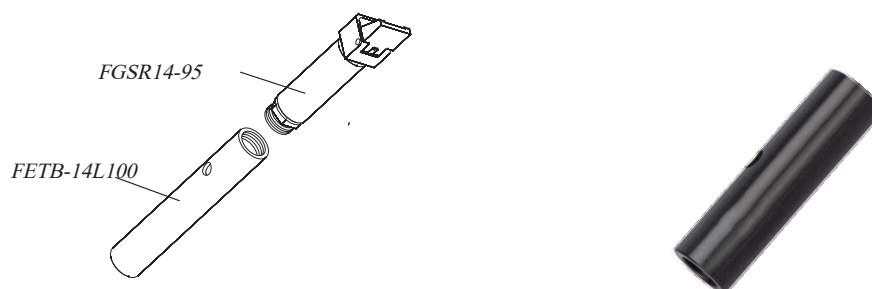
Dimensions (mm)

First Angle
Projection



Model	A	B	C	D	E	Weight
FETB-12L50	12	50	12	M10*1	5	9g
FETB-12L100	12	100	12	M10*1	5	17g
FETB-14L50	14	50	12	M12*1	5	10g
FETB-14L100	14	100	12	M12*1	5	20g
FETB-20L50	20	50	15	M17*1	8	16g
FETB-20L100	20	100	15	M17*1	8	31g
FETB-20L150	20	150	15	M17*1	8	47g
FETB-30L50	30	50	18	M27*1	9	29g
FETB-30L100	30	100	18	M27*1	9	58g
FETB-30L150	30	150	18	M27*1	9	87g

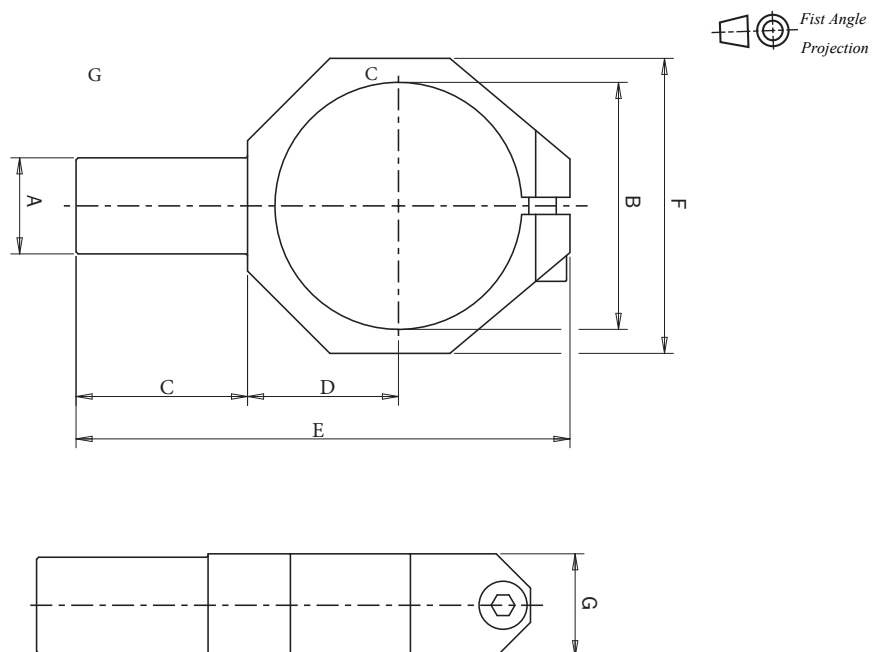
Application example



GT-NR air nipper mounting bracket

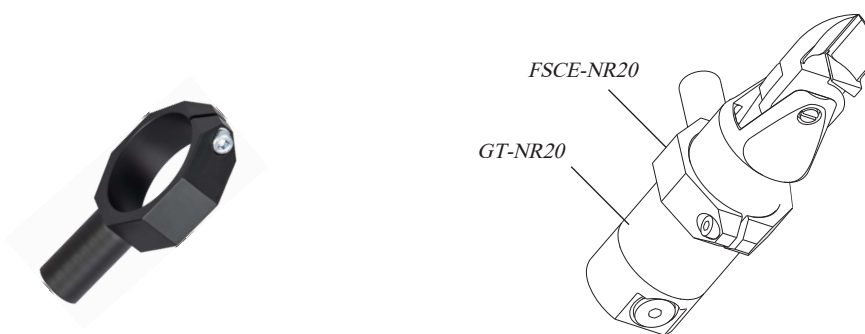
FSCE1 - series

Dimensions (mm)



Model	A	B	C	D	E	F	G	Weight
FSCE1-NR20	20	45	35	28	94.5	53	20	65g
FSCE1-NR30	20	56	40	33	111	65	25	110g
FSCE1-NR50	30	75	48	41	138	83	40	308g

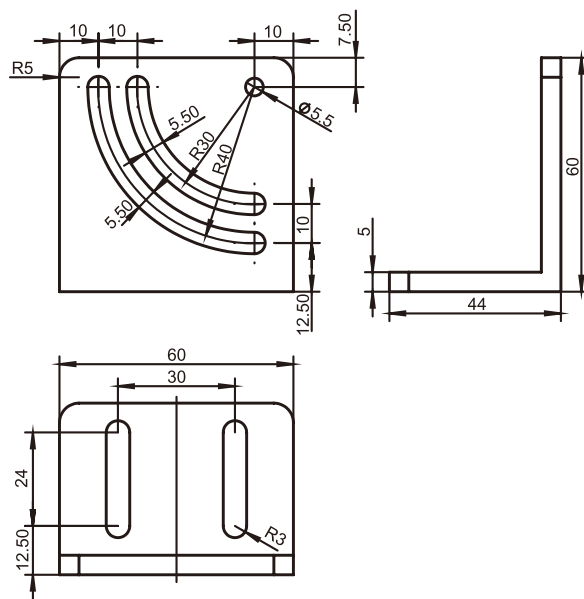
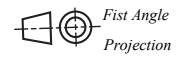
Application example



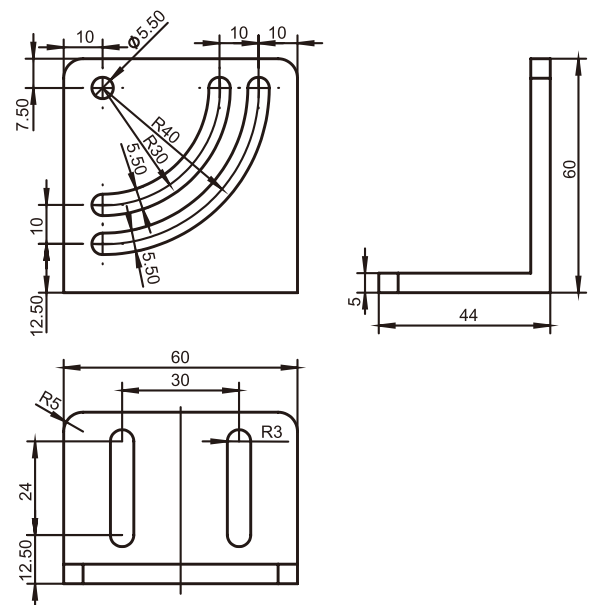
NR-Series Air Nipper - Mounting Bracket

FSCE3-NR-L & R

Dimensions (mm)

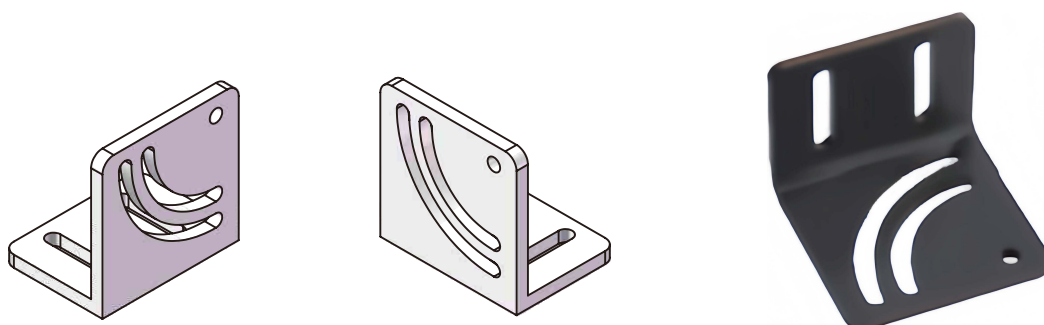


FSCE3-NR-L



FSCE3-NR-R

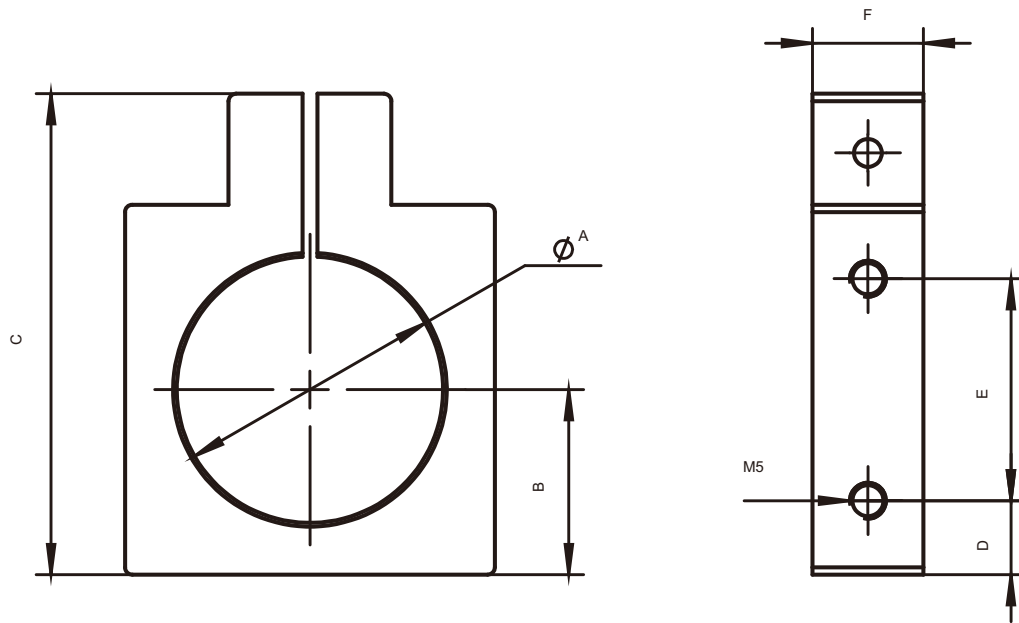
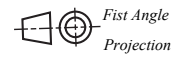
Application example



NR-Series Air Nipper - Mounting Bracket

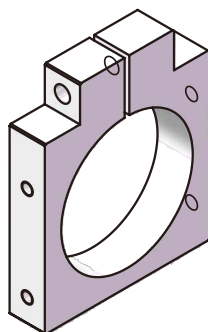
FSCE3-NR - series

Dimensions (mm)



<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>Weight / g</i>
FSCE3-NR30	56	35	85	10	40	15	111
FSCE3-NR20	45	30	75	10	40	15	93
FSCE3-NR10	36	25	65	10	30	15	72

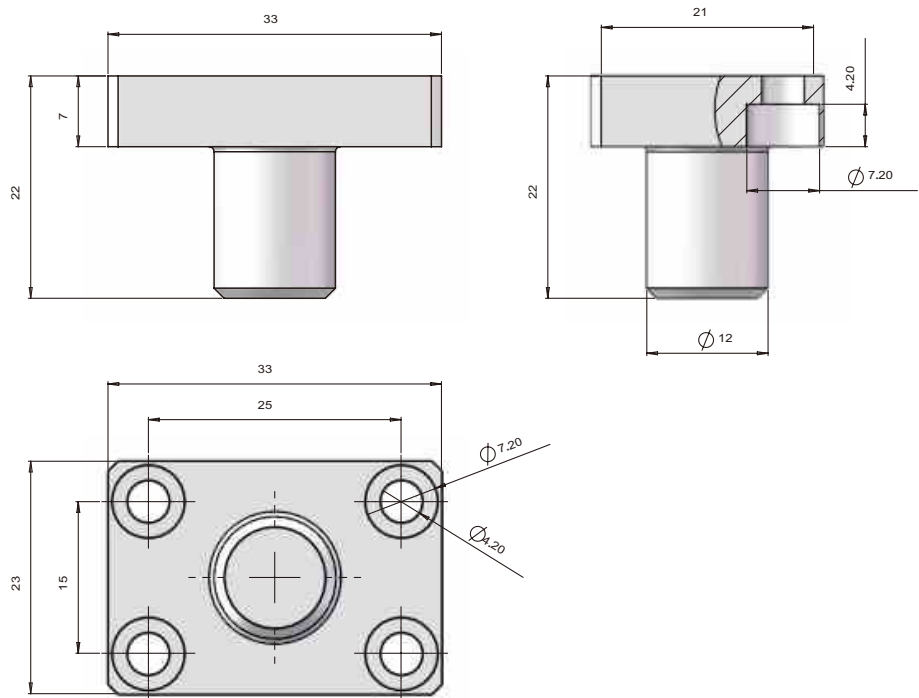
Application example



NY05 Air Nipper - Mounting Bracket

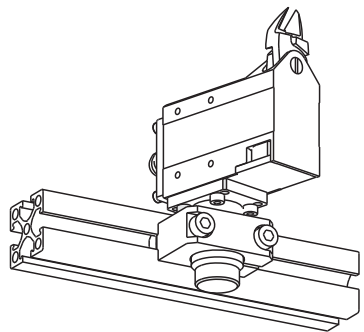
FSCE2-NY05

Dimensions (mm)



Mode	Weight
FSCE2-NY05	17g

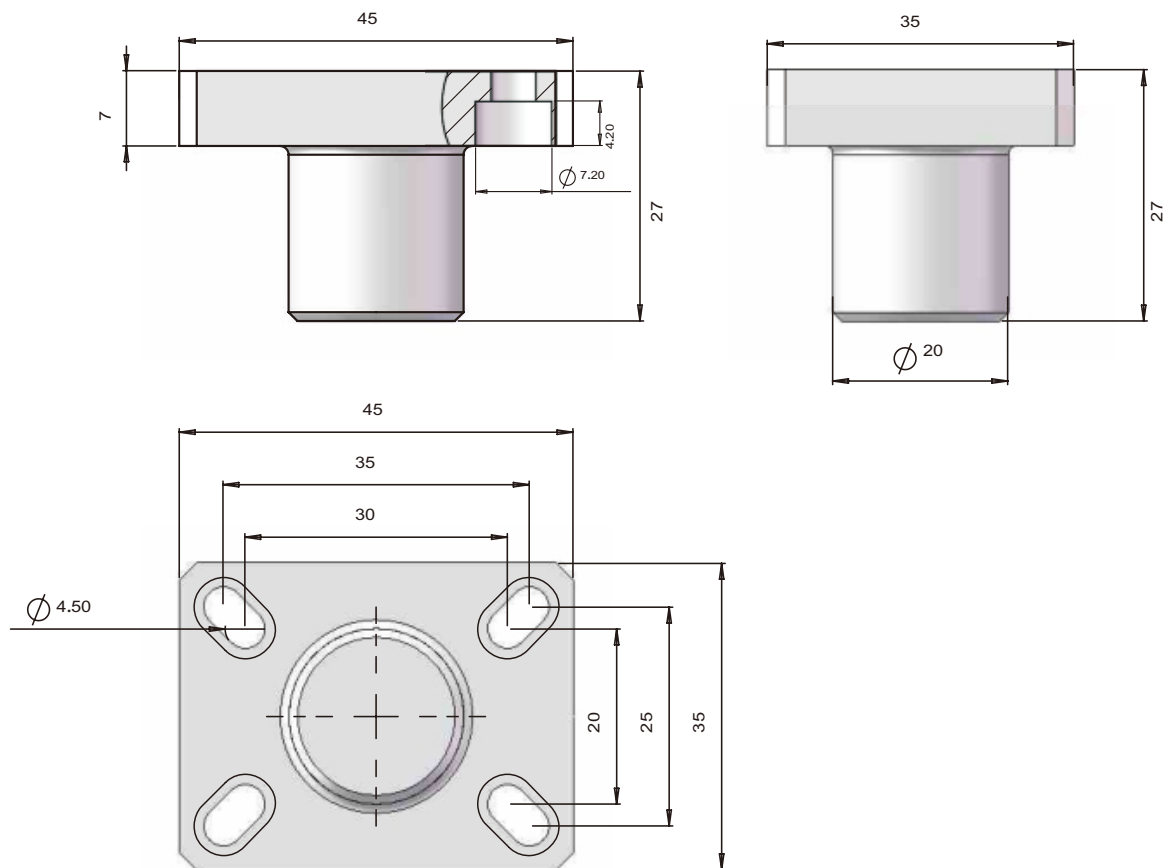
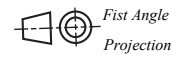
Application example



NY10 /15 Air Nipper - Mounting Bracket

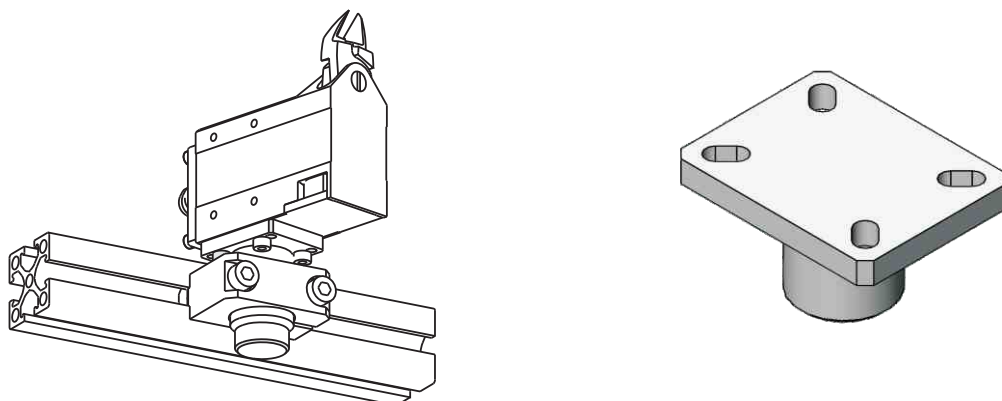
FSCE2-NY10-15

Dimensions (mm)



Mode	Weight
FSCE2-NY10-15	17g

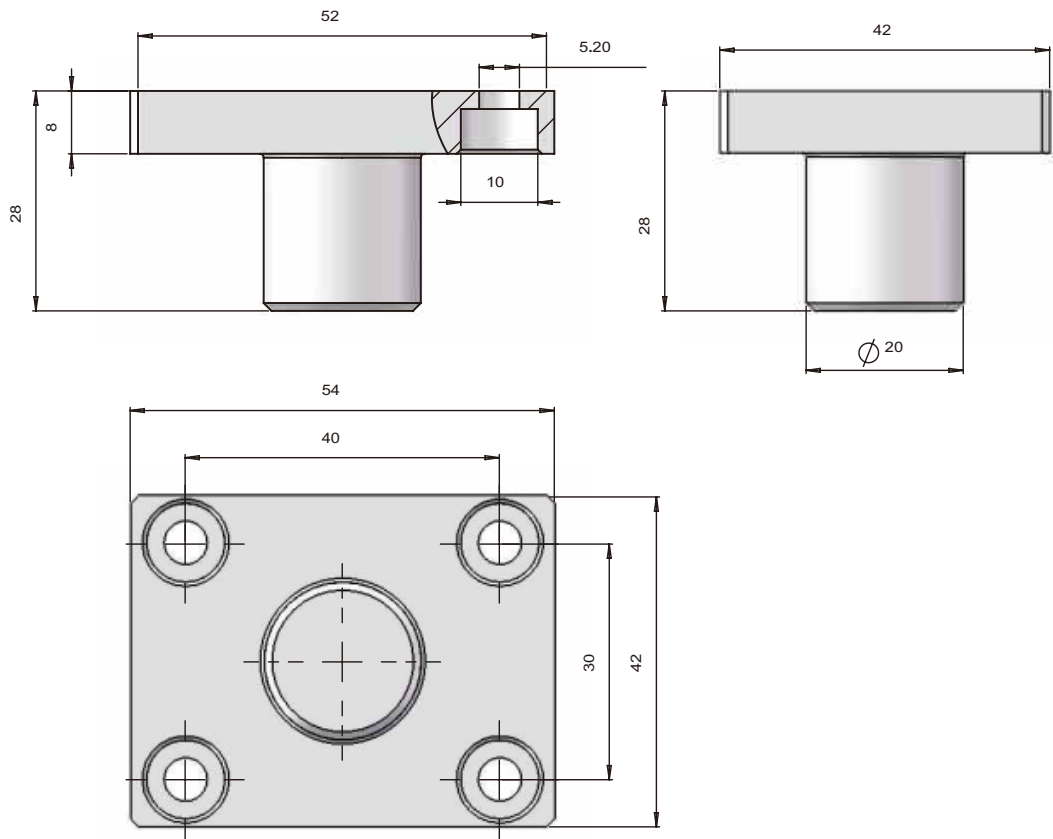
Application example



NY25 Air Nipper - Mounting Bracket

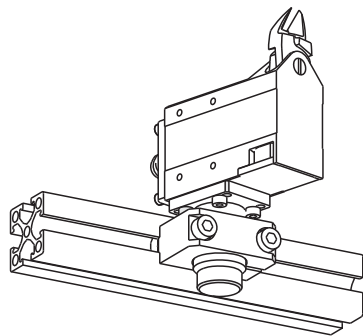
FSCE2-NY25

Dimensions (mm)



Mode	Weight
FSCE2-NY25	61g

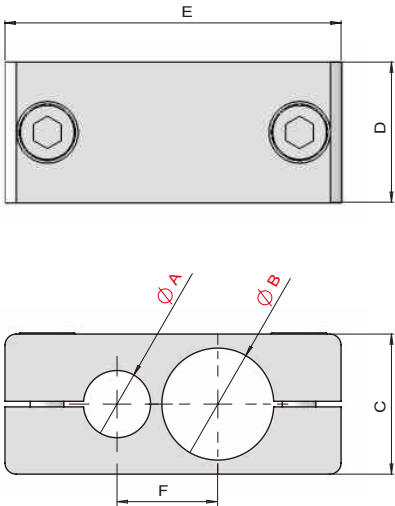
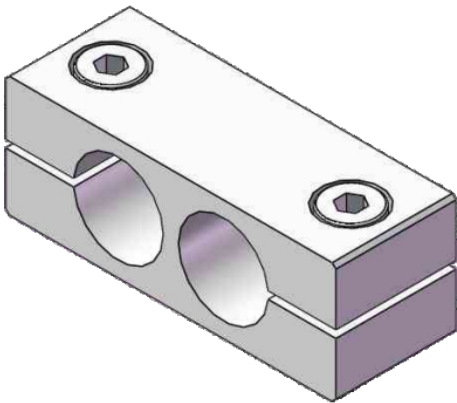
Application example



Tube Mounting Connector -- Factory OEM / ODM

FTMC1 - series

Dimensions (mm)

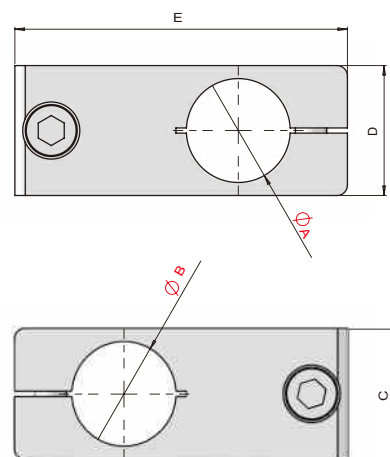
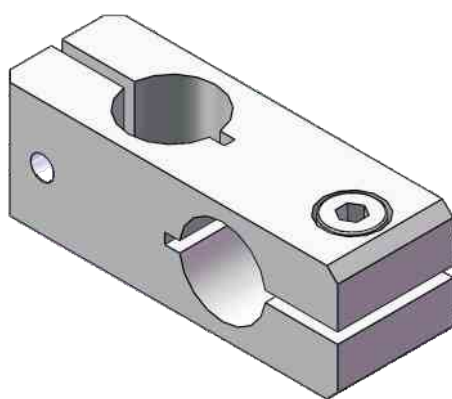
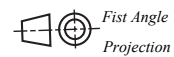


Model	A	B	C	D	E	F	Weight / g
FTMC1-0808	8	8	12	12	35	10	11
FTMC1-0812	8	12	16	16	43	12	23
FTMC1-1212	12	12	16	16	44	14	21
FTMC1-2012	20	12	25	25	60	18	75
FTMC1-2020	20	20	25	25	66	24	71

Tube Cross Connector -- Factory OEM / ODM

FTCC1 - series

Dimensions (mm)



Model	A	B	C	D	E	Weight / g
FTCC1-0808	8	8	12	12	35	10
FTCC1-1208	12	8	12	16	43	16
FTCC1-1212	12	12	16	16	47	22
FTCC1-1214	12	14	18	18	48	29
FTCC1-2012	20	12	25	25	59	72
FTCC1-2020	20	20	25	25	64	68

Sprue Gripper

FGS10 - series



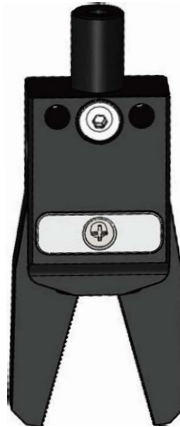
FGS10B-6S



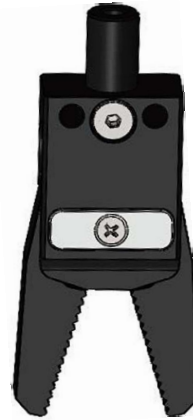
FGS10B-8M



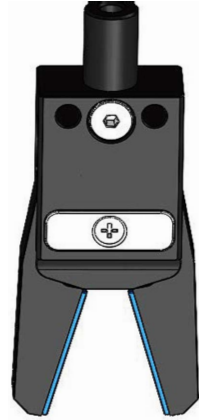
FGS10C-8M



FGS10A-12



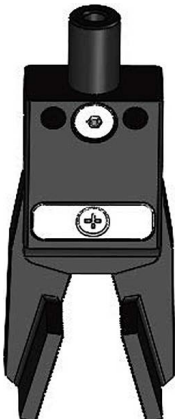
FGS10B-12



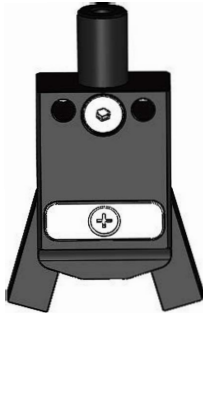
FGS10C-12



FGS10D-12



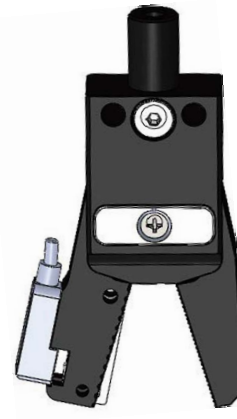
FGS10E-12



FGS10F-12



FGS10A-12-CP



FGS10B-12-CP



FGS10C-12-CP

Model	FGS10B-6S	FGS10B-8M	FGS10C-8M	FGS10A-12	FGS10A-12-CP / CN	FGS10B-12	FGS10B-12-CP / CN	FGS10C-12	FGS10C-12-CP / CN	FGS10D-12	FGS10E-12	FGS10F-12
Medium	Filtered & Compressed Air											
Pressure Range	2.5 ~ 8 bar											
Temperature Range	5 ~ 60 degree											
Stroke / degree	2*10	2*10	2*10	2*16	2*16	2*16	2*16	2*16	2*16	2*16	2*16	2*16
Max Working Frequency	3 Hz											
Cycle Air Consumption	0.3cm ³	0.3cm ³	0.3cm ³	1.2cm ³	1.2cm ³	1.2cm ³	1.2cm ³	1.2cm ³	1.2cm ³	1.2cm ³	1.2cm ³	1.2cm ³
Closing time without load	0.01s											
Closing gripping torque	10N/cm	24N/cm	24N/cm	80N/cm	80N/cm	80N/cm	80N/cm	80N/cm	80N/cm	80N/cm	80N/cm	80N/cm
Opening gripping torque	1N/cm	2N/cm	2N/cm	5N/cm	5N/cm	5N/cm	5N/cm	5N/cm	5N/cm	5N/cm	5N/cm	5N/cm
Air Inlet	M5											
Weight / g	7	15	15	52	58	50	58	46	55	75	55	46

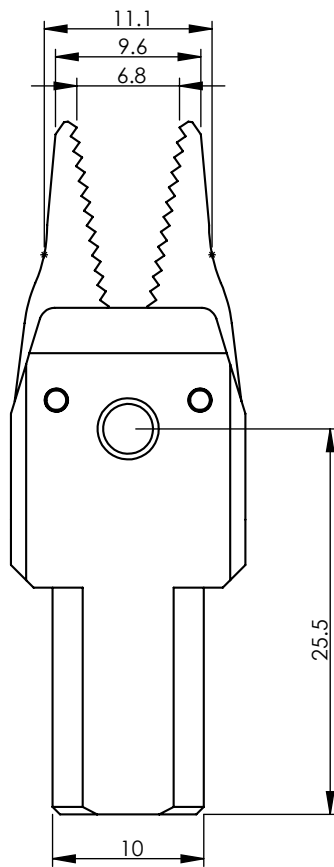
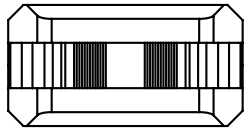
FGS10B-6S

Piston bore: 6mm.

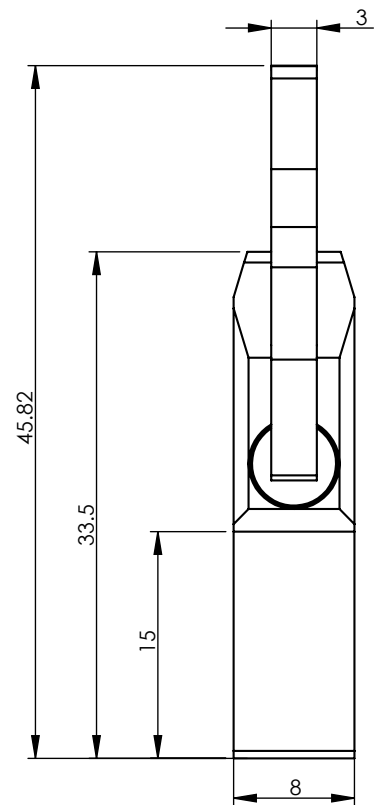
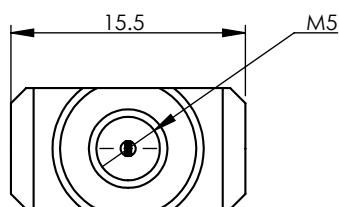
Aluminum jaws

Single-action

Dimensions (mm)



Air connection M5



Air connection M5



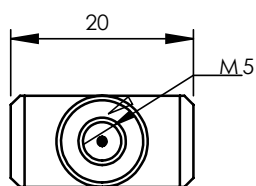
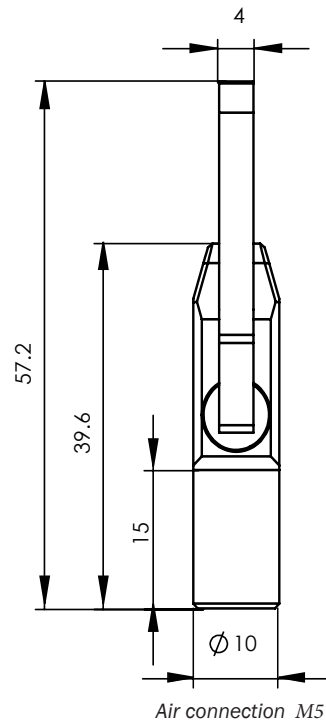
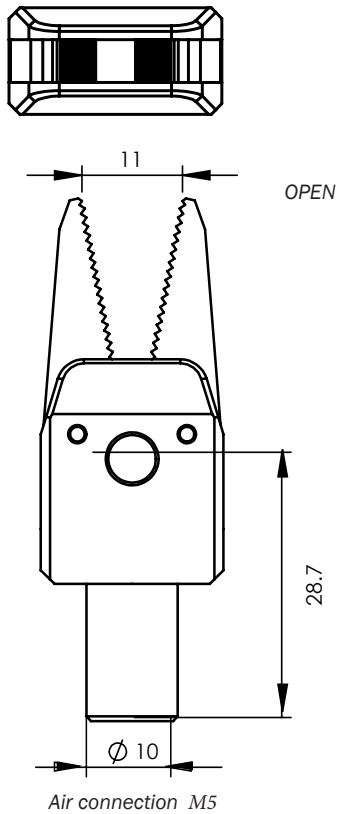
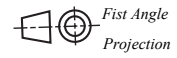
FGS10B-8M

Piston bore: 8mm.

Aluminum jaws

Single-action

Dimensions (mm)



FGS10C-8M

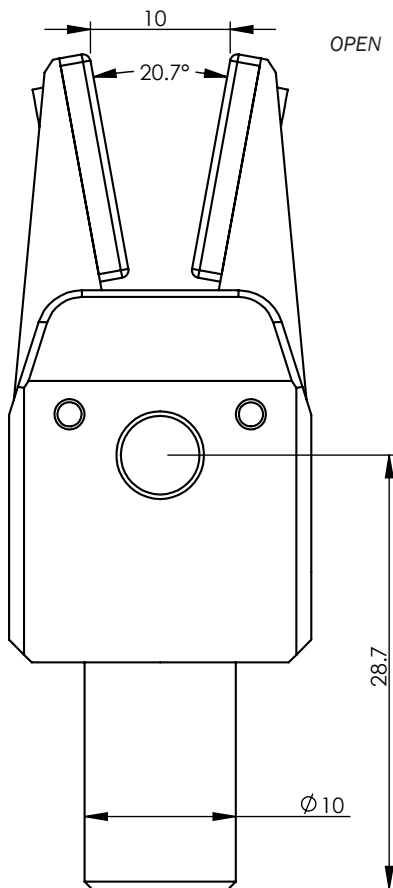
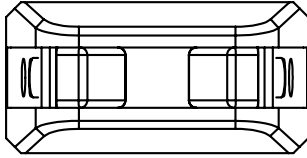
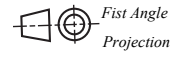
Piston bore: 8mm.

Aluminum jaws

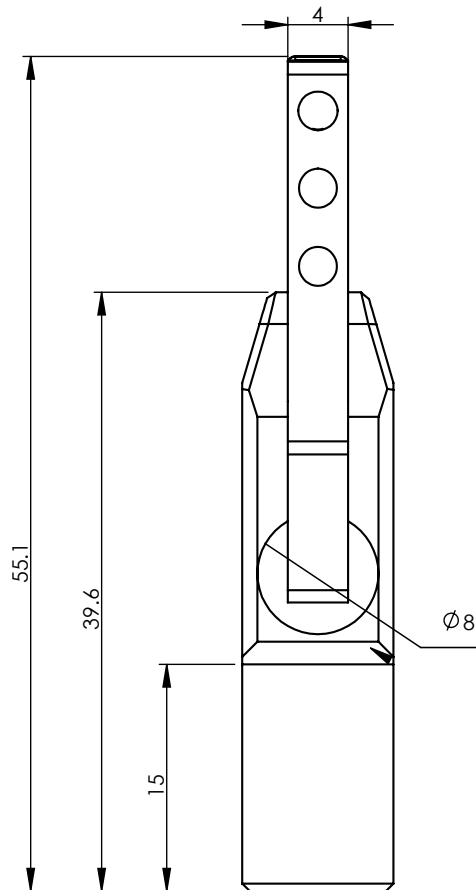
Single-action

Silicon pads

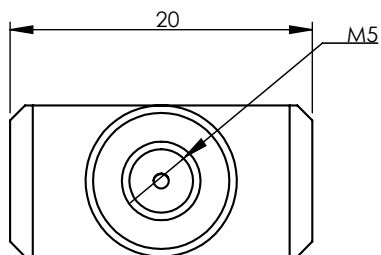
Dimensions (mm)



Air connection M5



Air connection M5



NEW



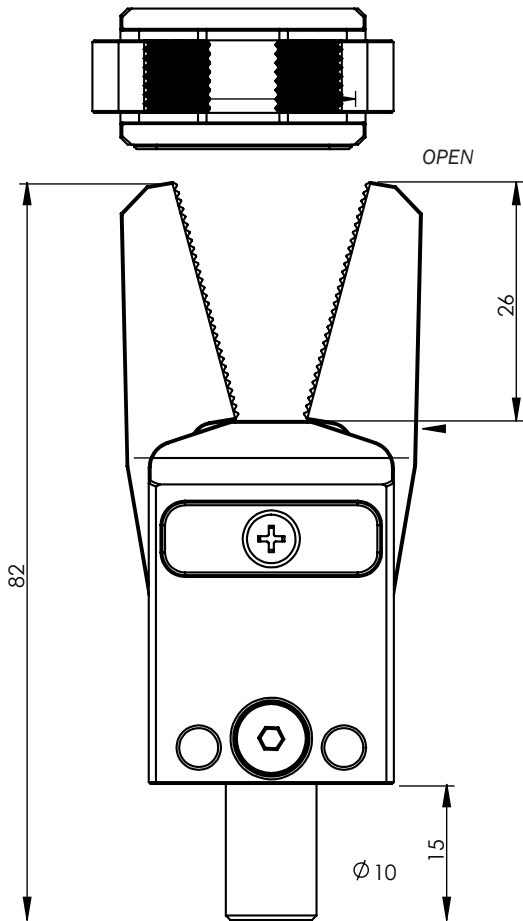
FGS10A-12

Piston bore: 12mm.

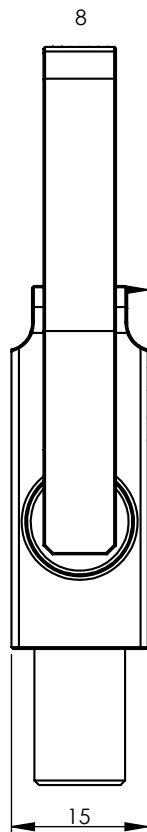
Aluminum jaws - A type

Single-action

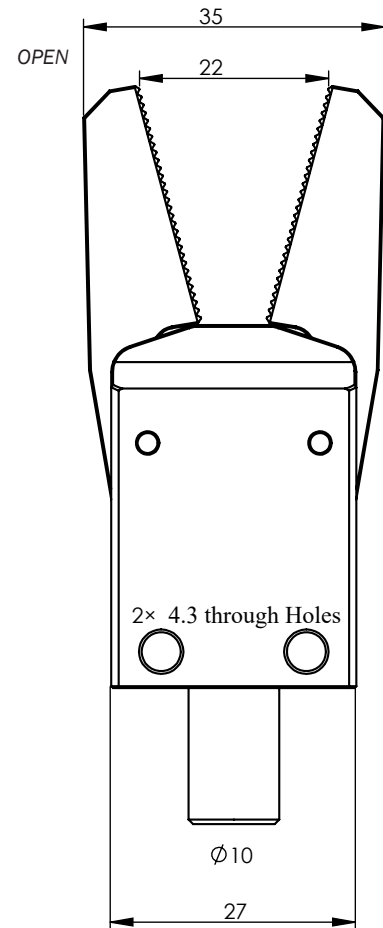
Dimensions (mm)



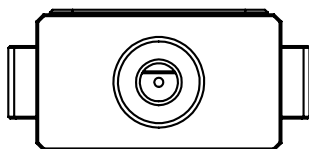
Air connection M5



Air connection M5



Air connection M5



FGS10A-12-CP / CN

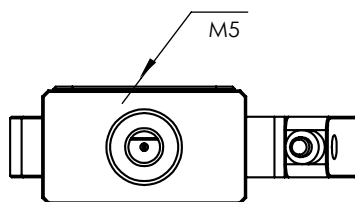
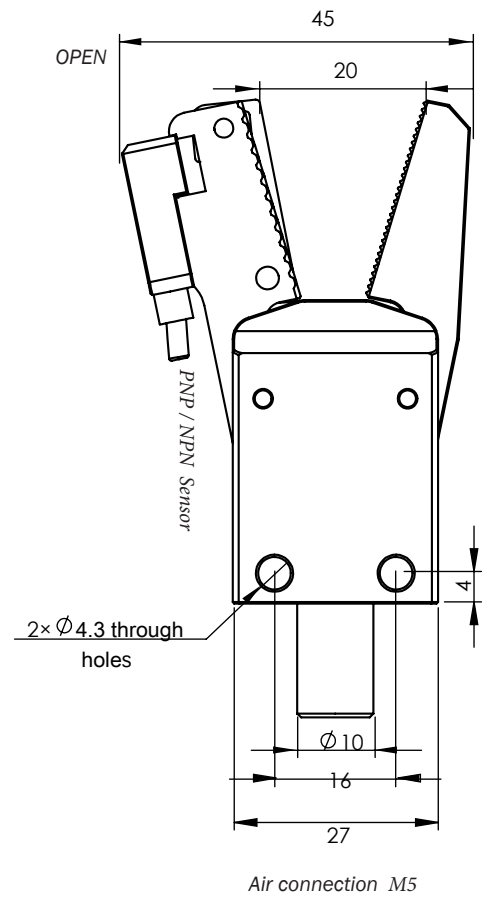
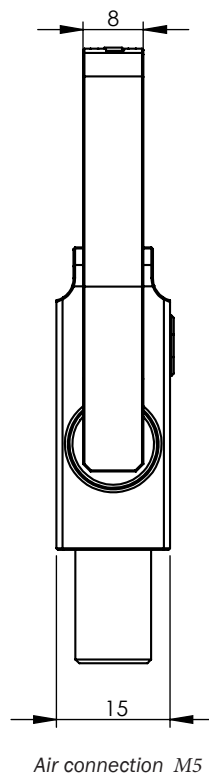
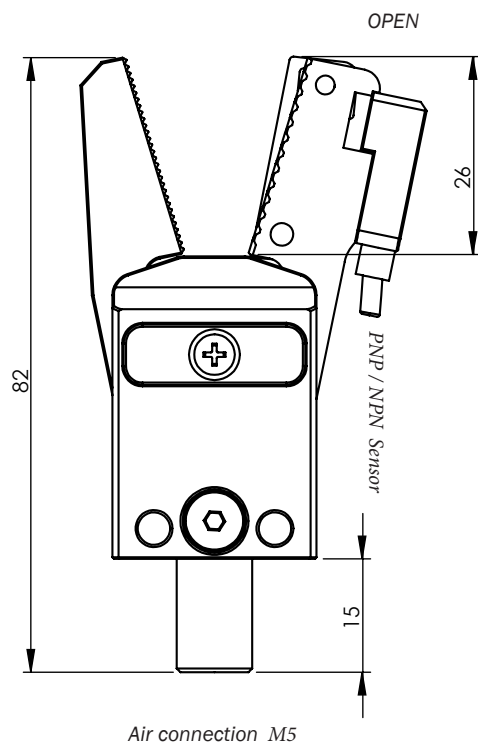
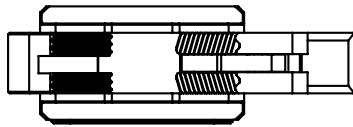
Piston bore: 12mm.

Aluminum jaws - A type

Single-action

Sensor on the jaw

Dimensions (mm)



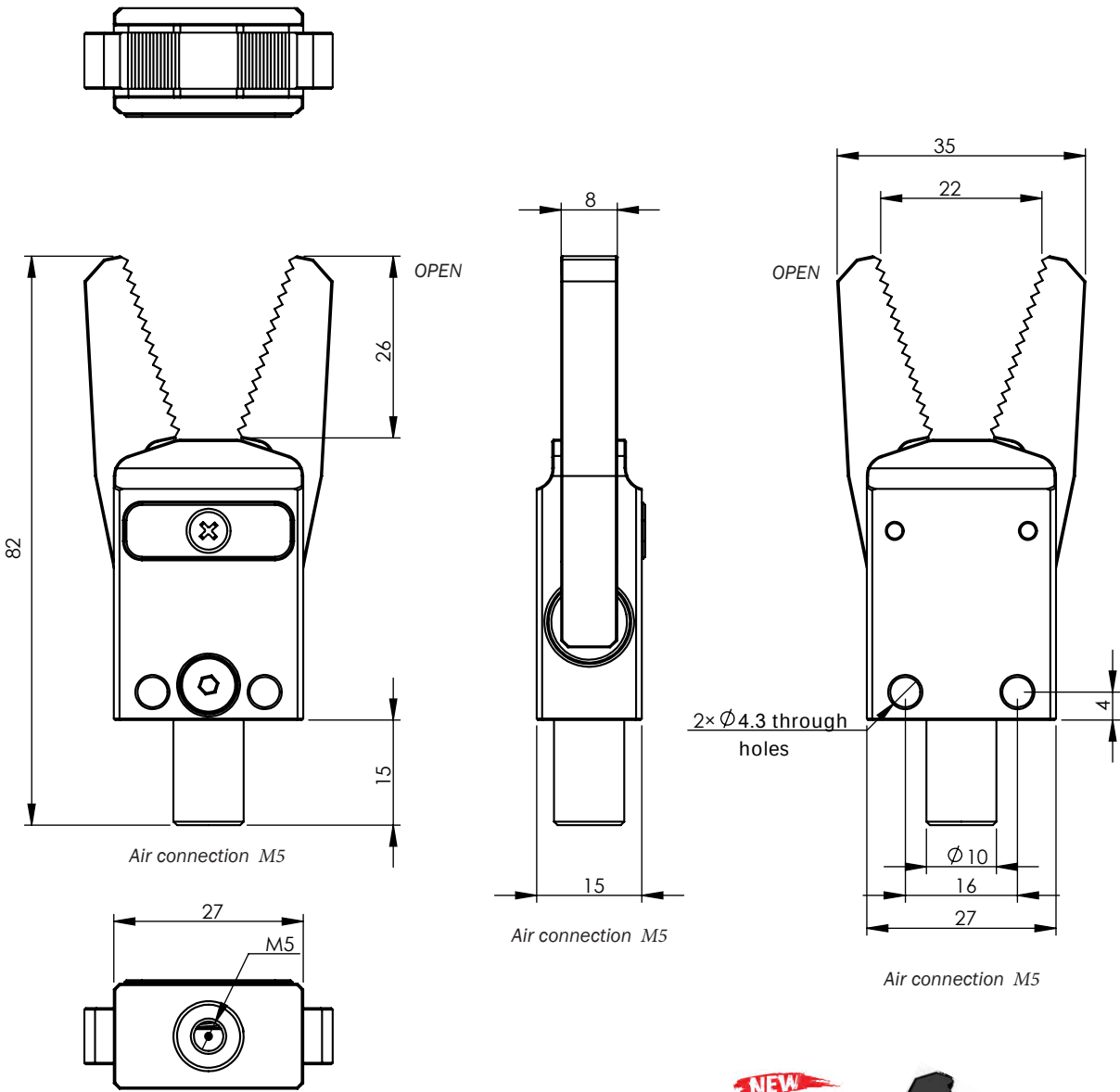
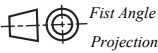
NEW



FGS10B-12

Piston bore: 12mm.
Aluminum jaws - B type
Single-action

Dimensions (mm)



FGS10B-12-CP / CN

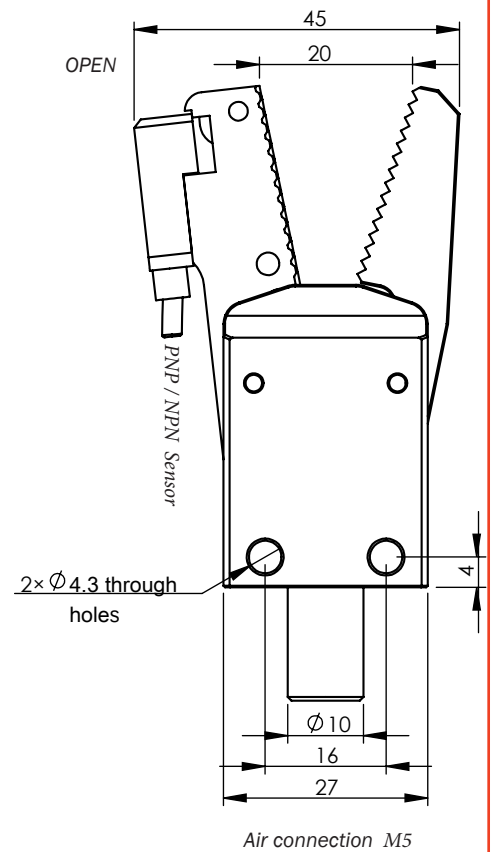
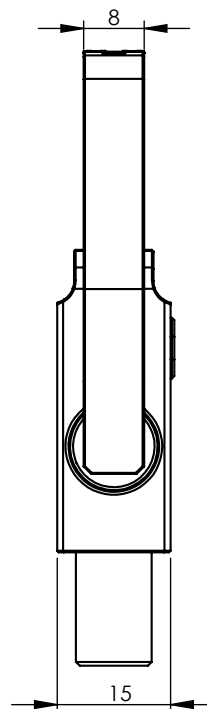
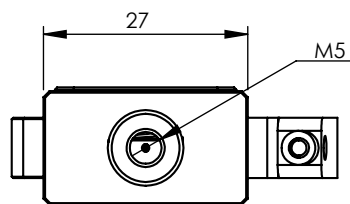
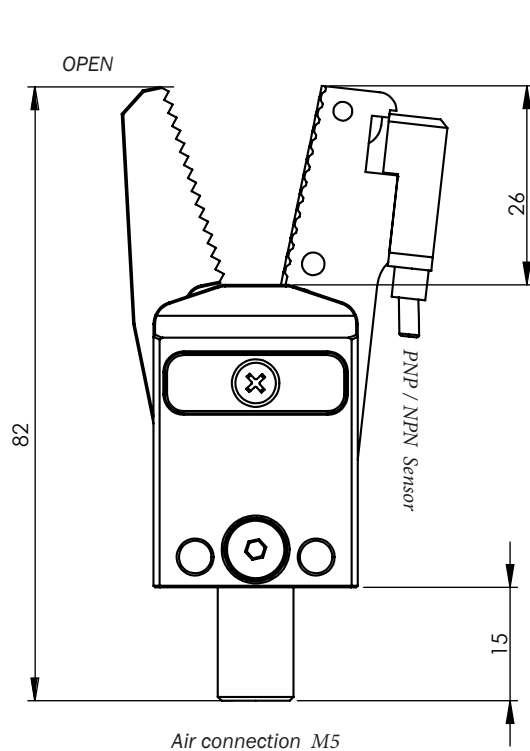
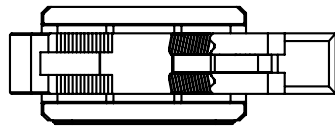
Piston bore: 12mm.

Aluminum jaws - B type

Single-action

Sensor on the jaw

Dimensions (mm)



FGS10C-12

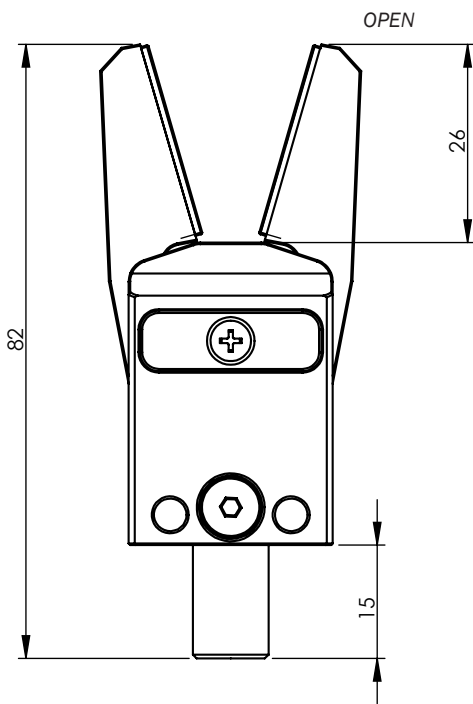
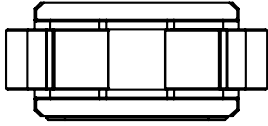
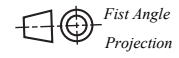
Piston bore: 12mm.

Aluminum jaws - C type

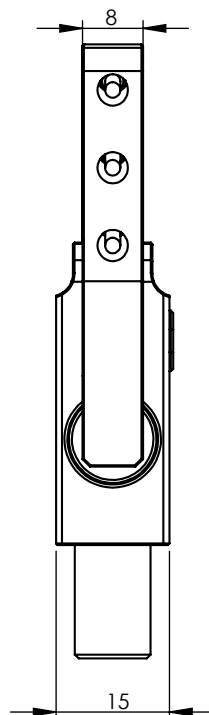
Single-action

Silicon pads

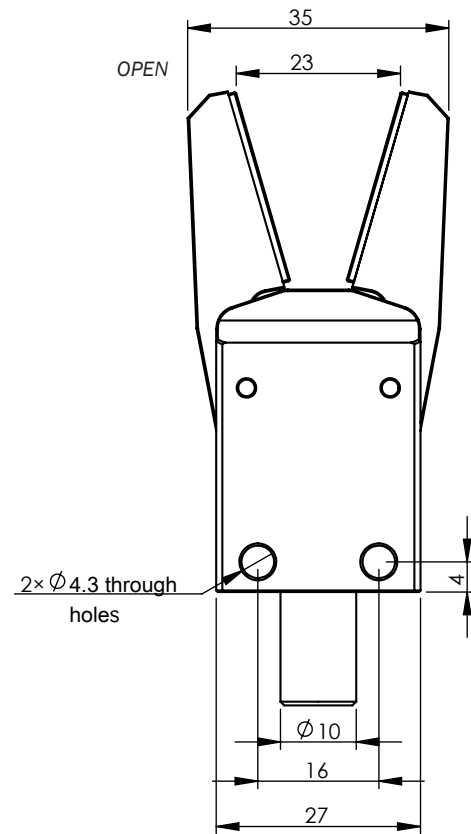
Dimensions (mm)



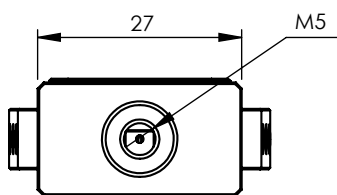
Air connection M5



Air connection M5



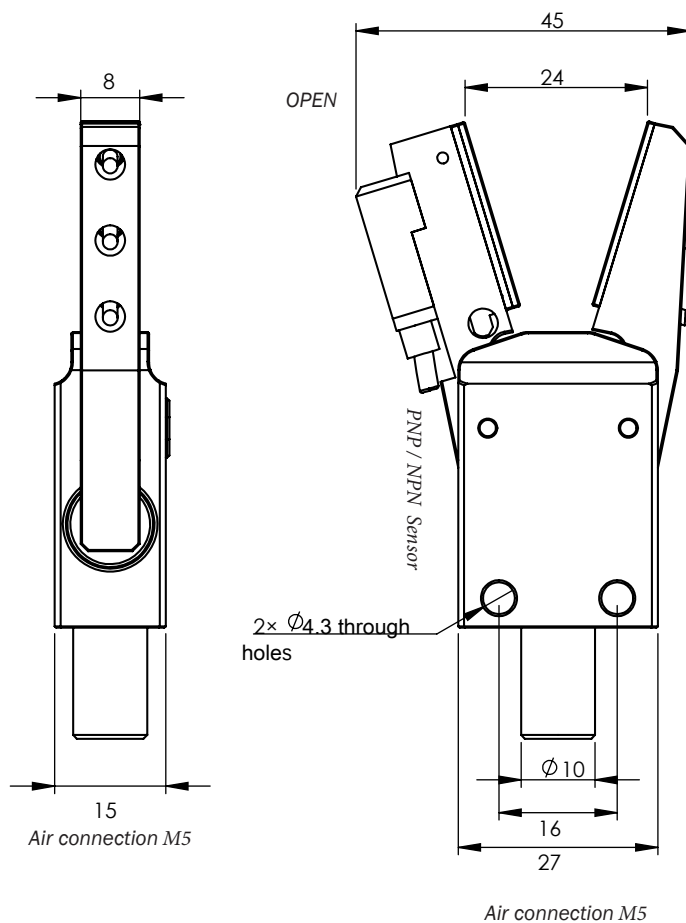
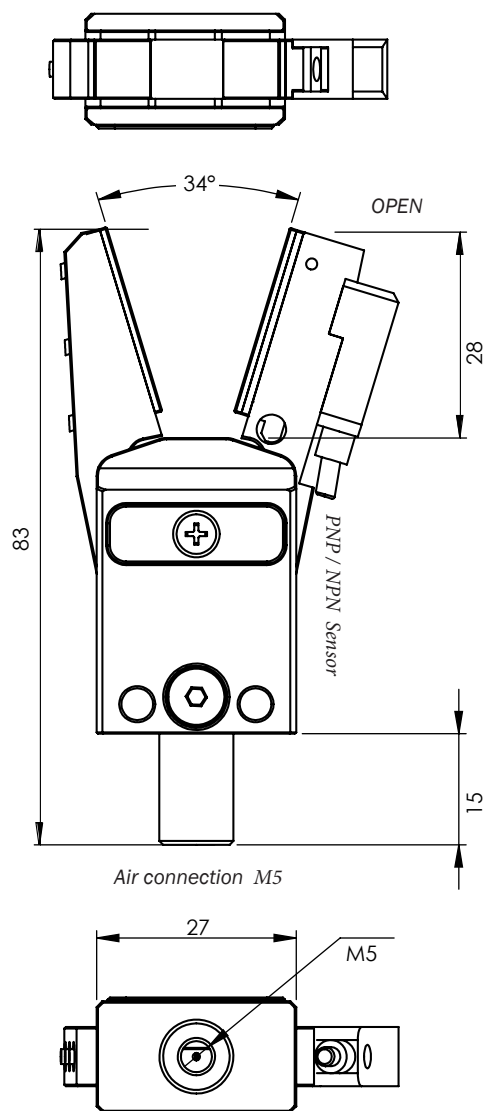
Air connection M5



FGS10C-12-CP/CN

Piston bore: 12mm.
 Aluminum jaws - C type
 Single-action
 Sensor on the jaw
 Silicon pads

Dimensions (mm)



NEW



FGS10D-12

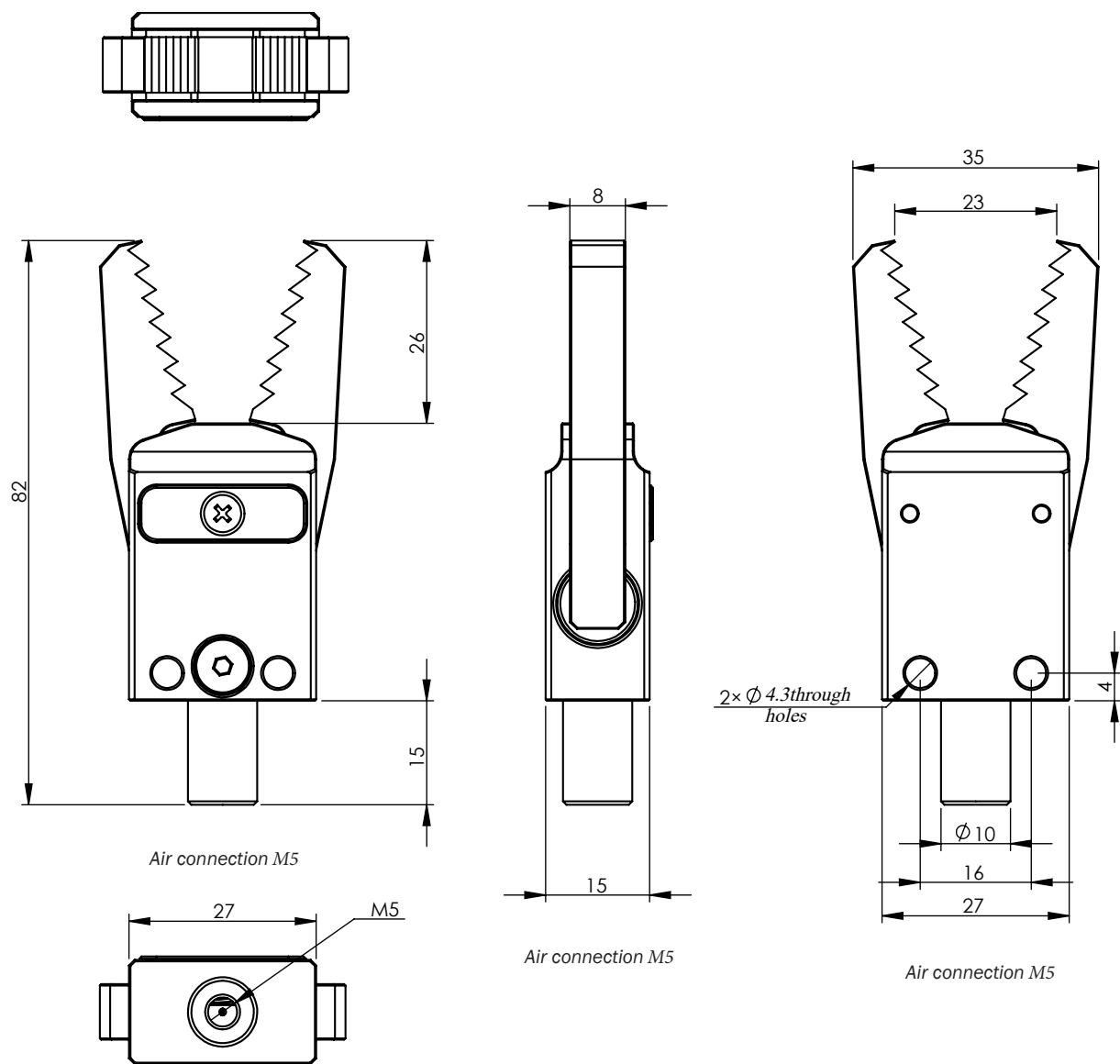
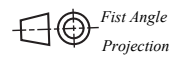
Piston bore: 12mm.

D-type Jaws

Single-action

Steel jaws

Dimensions (mm)



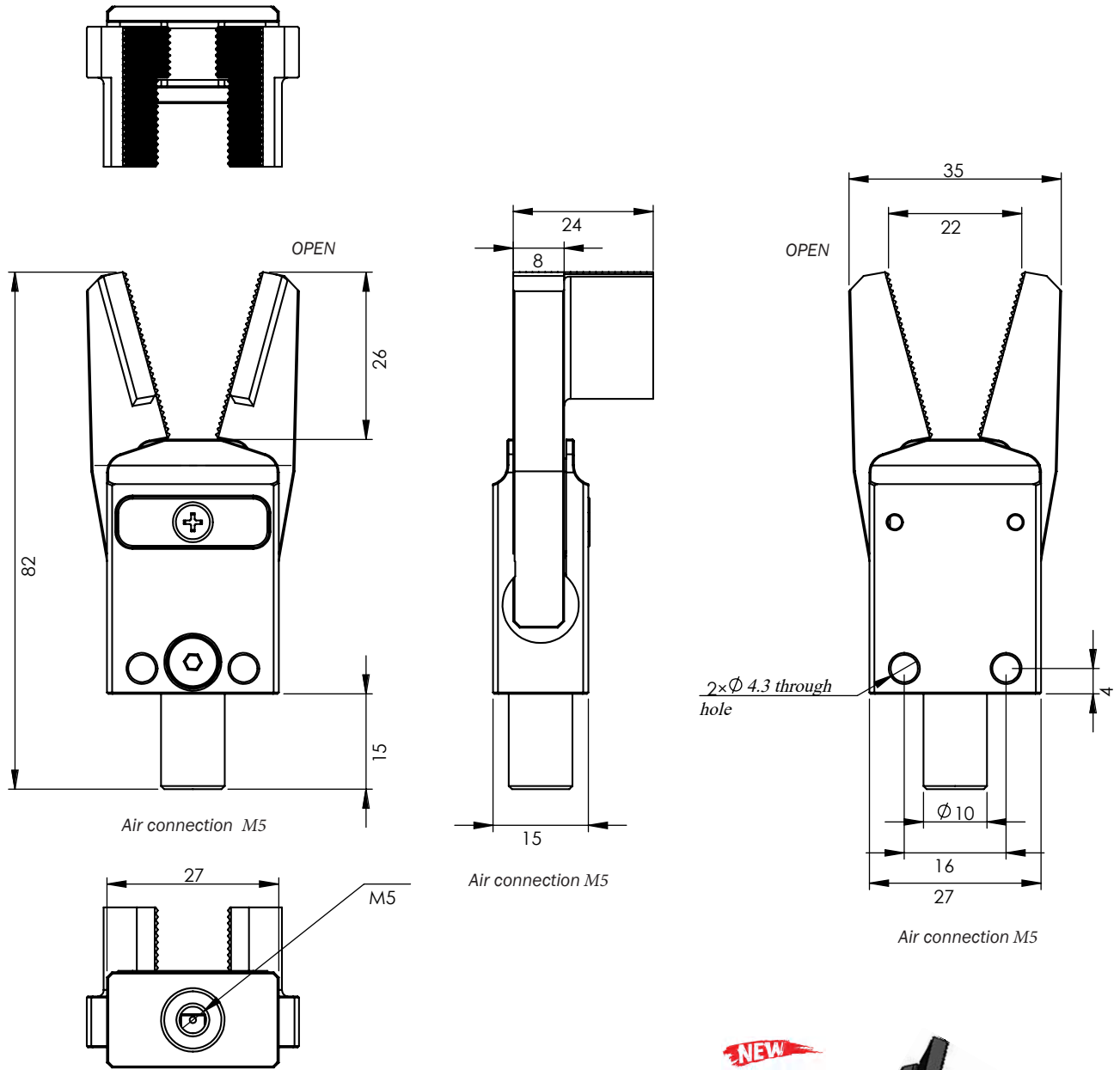
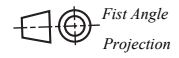
FGS10E-12

Piston bore: 12mm.

Aluminum jaws - E type

Single-action

Dimensions (mm)



FGS10F-12

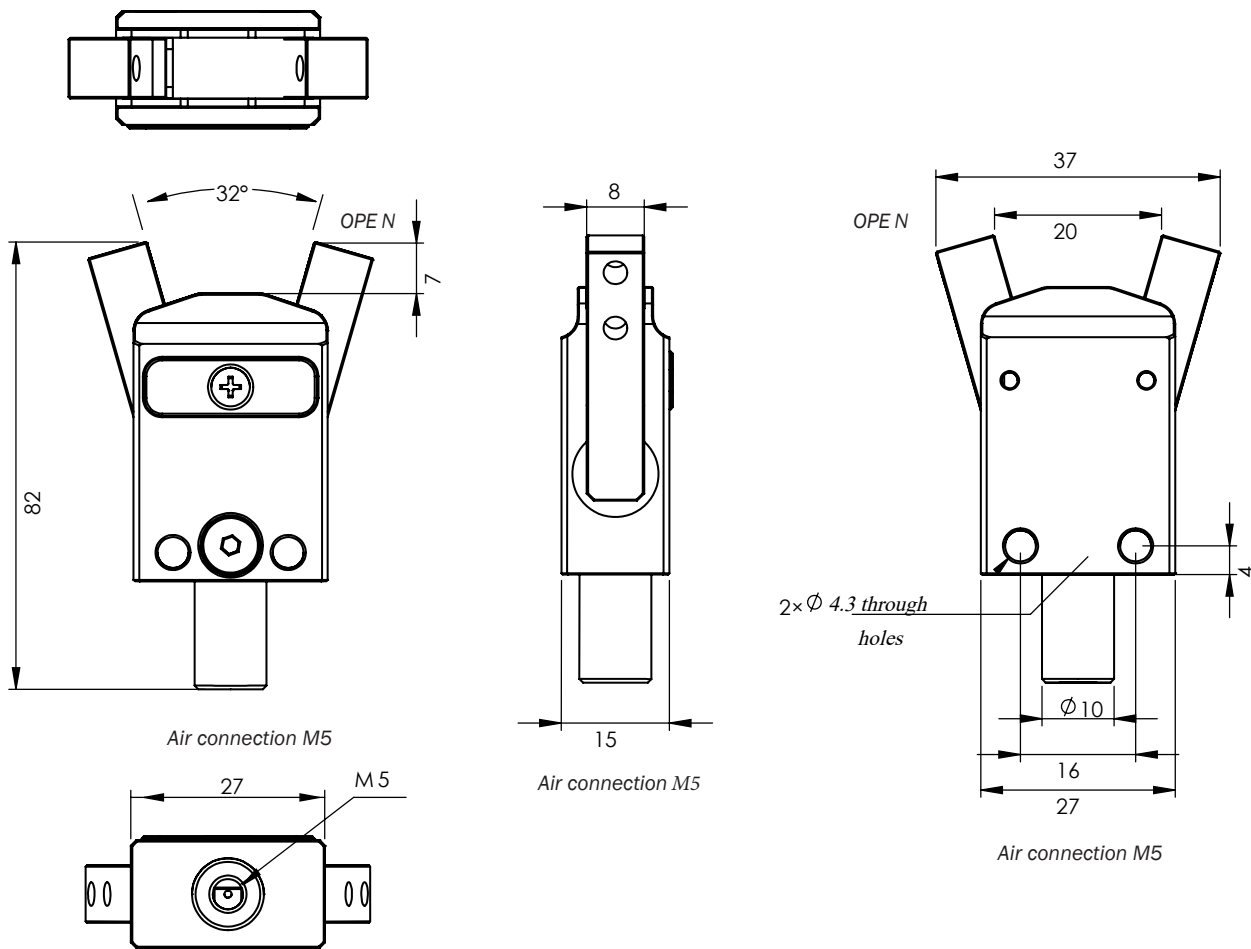
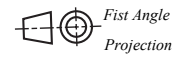
Piston bore: 12mm.

F-type Jaws

Single-action

Steel jaws

Dimensions (mm)

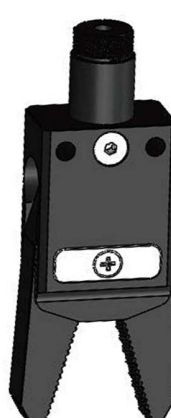


NEW

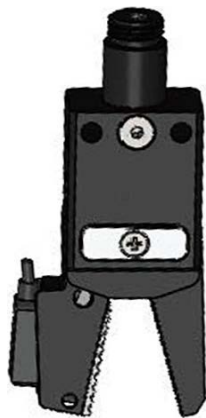


2-Jaws Non-Selfcentering Angular Pneumatic - Sprue Gripper

FGS14 Series



FGS14A-14



FGS14A-14-CP



FGS14B-14



FGS14B-14-CP



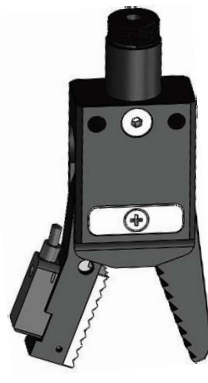
FGS14C-14



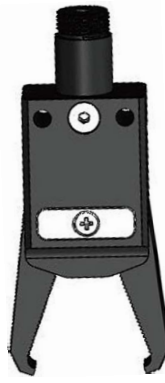
FGS14C-14-CP



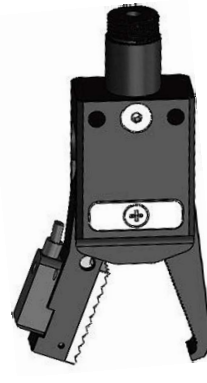
FGS14D-14



FGS14D-14-CP



FGS14E-14



FGS14E-14-CP



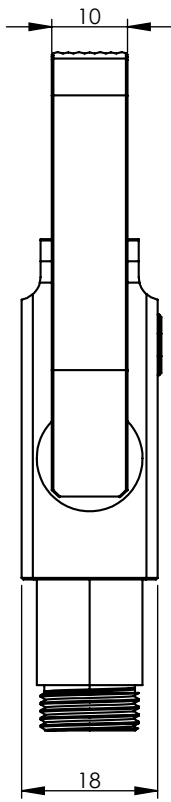
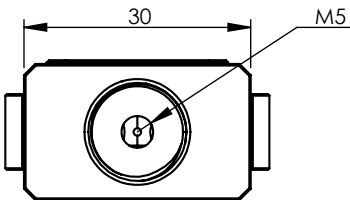
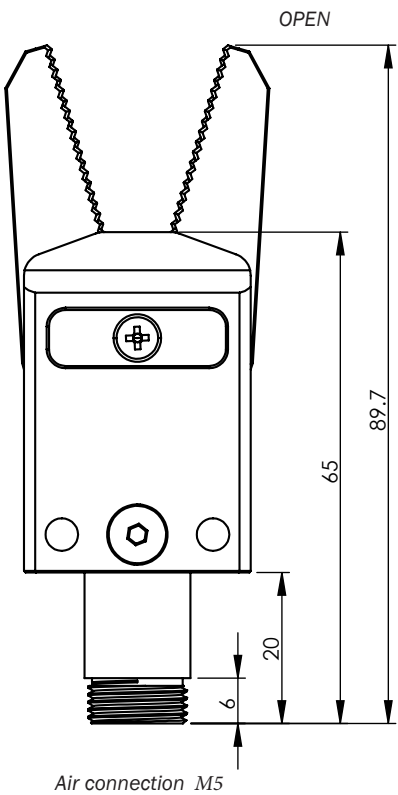
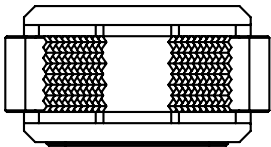
FGS14F-14

Model	FGS14A-14	FGS14A-14-CP / CN	FGS14B-14	FGS14B-14-CP / CN	FGS14C-14	FGS14C-14-CP / CN	FGS14D-14	FGS14D-14-CP / CN	FGS14E-14	FGS14E-14-CP / CN	FGS14F-14
Medium	Filtered & Compressed Air										
Pressure Range	2.5 ~ 8 bar										
Temperature Range	5 ~ 60 degree										
Stroke / degree	2*16										
Max Working Frequency	3 Hz										
Cycle Air Consumption	1.4cm ³										
Closing time without load	0.01s										
Closing gripping torque	130N/cm										
Opening gripping torque	7N/cm										
Air Inlet	M5										
Weight / g	65	76	65	76	65	76	65	76	65	76	65

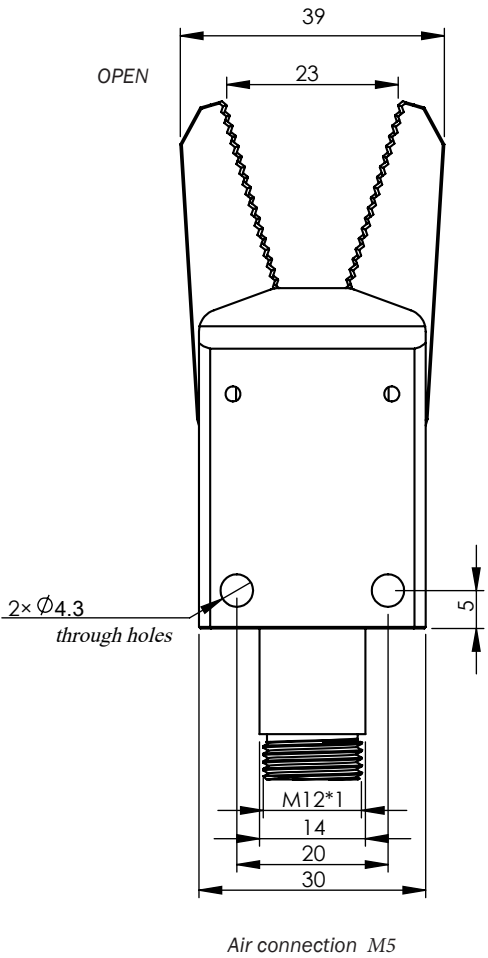
FGS14A-14

Piston bore: 14mm.
A-type aluminum Jaws
Single-action

Dimensions (mm)



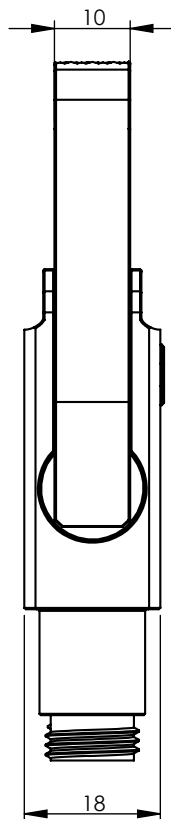
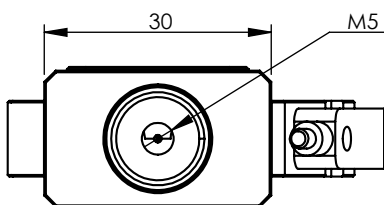
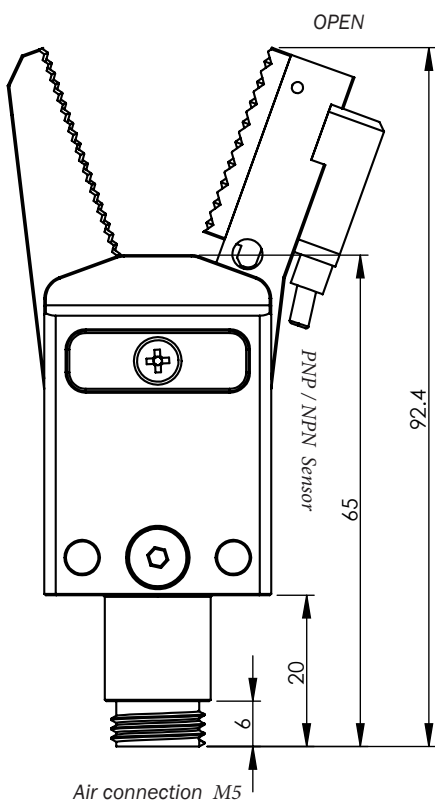
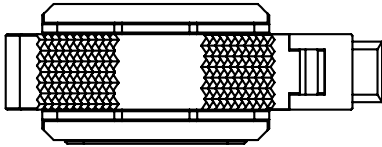
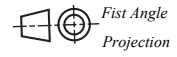
Air connection M5



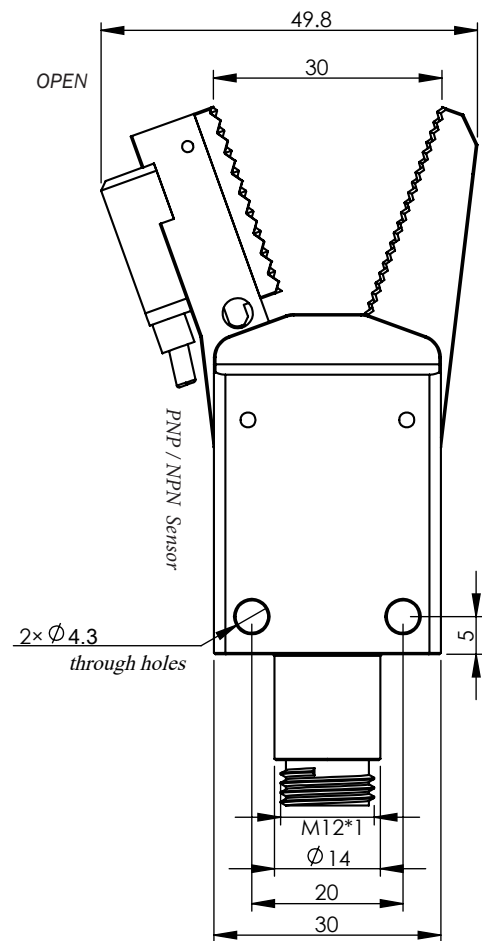
FGS14A-14-CP/CN

Piston bore: 14mm.
Aluminum jaws - A type
Single-action
Sensor on the jaw

Dimensions (mm)



Air connection M5



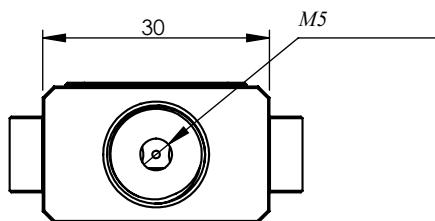
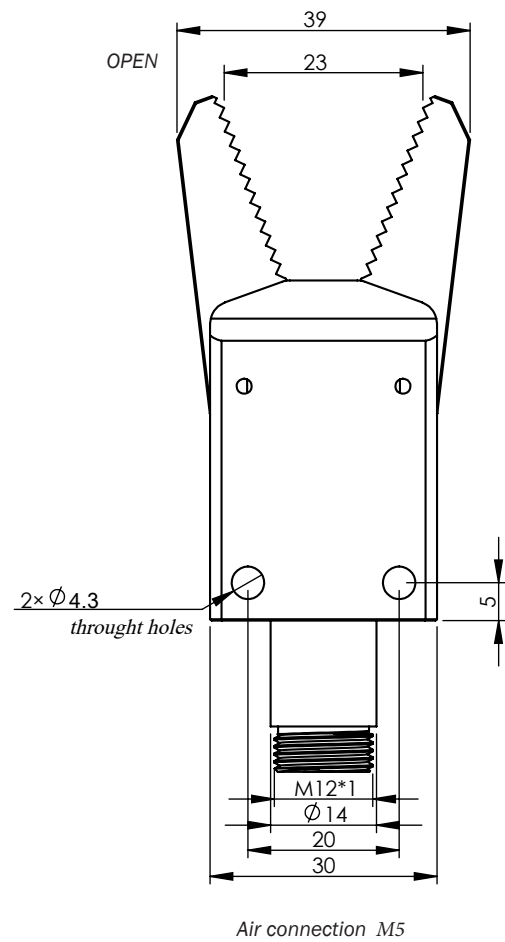
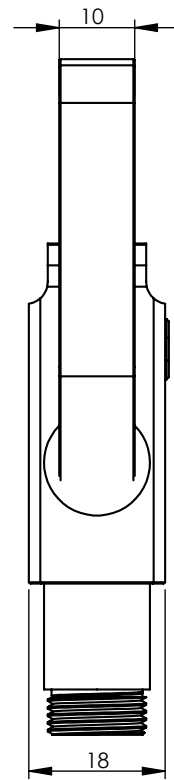
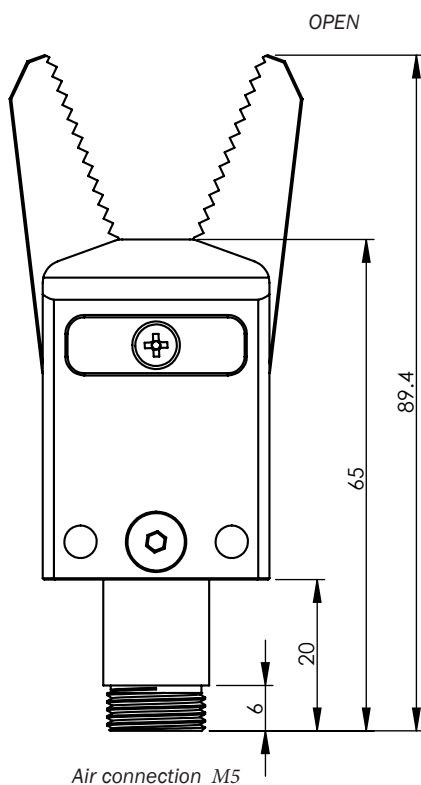
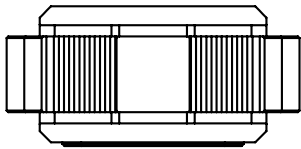
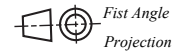
Air connection M5



FGS14B-14

Piston bore: 14mm.
Aluminum jaws - B type
Single-action

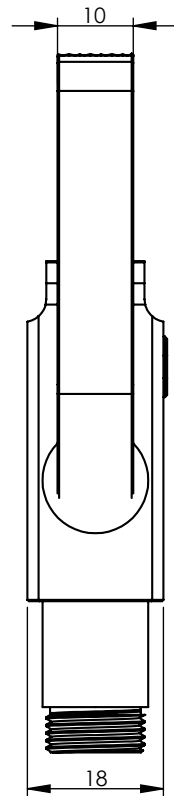
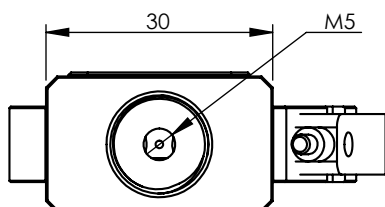
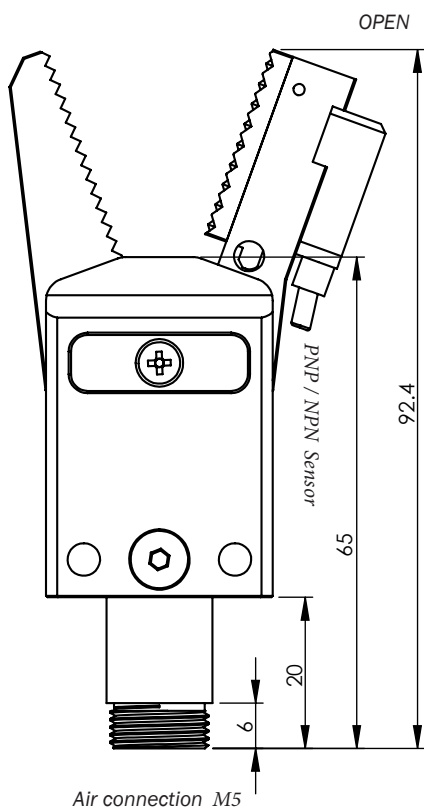
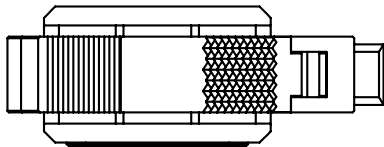
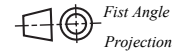
Dimensions (mm)



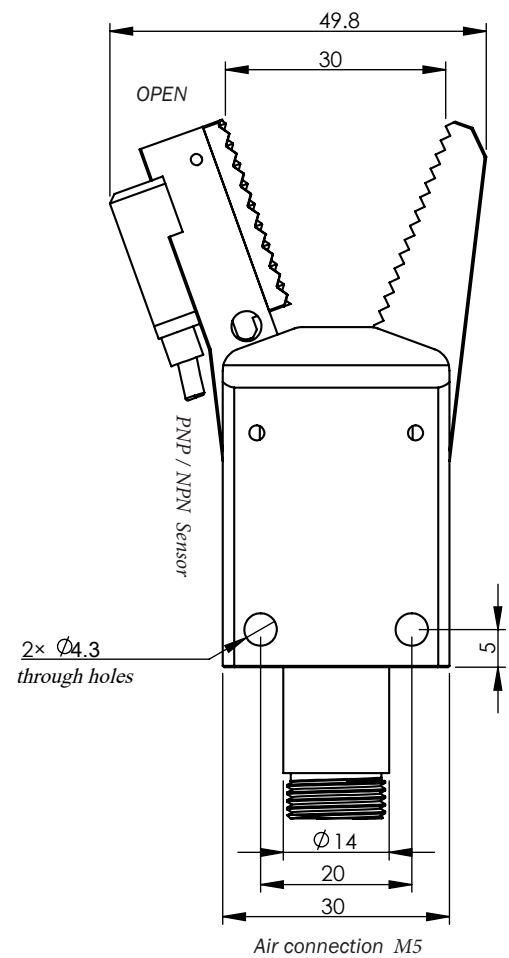
FGS14B-14-CP/CN

Piston bore: 14mm.
 Aluminum jaws - B type
 Single-action
 Sensor on the jaw

Dimensions (mm)



Air connection M5



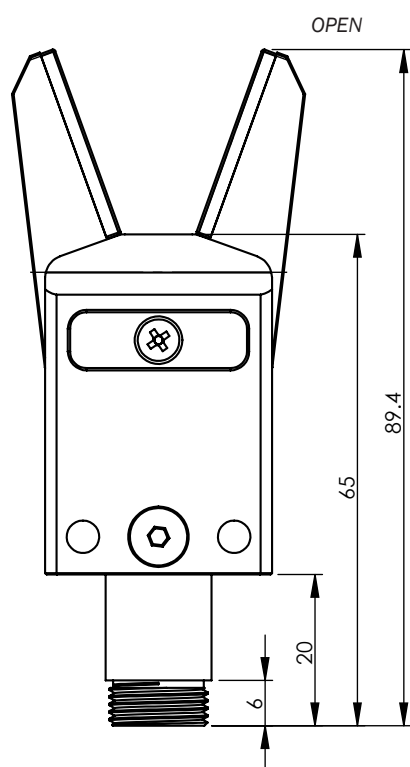
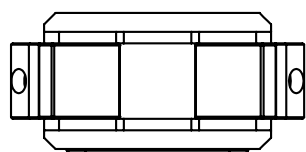
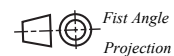
NEW



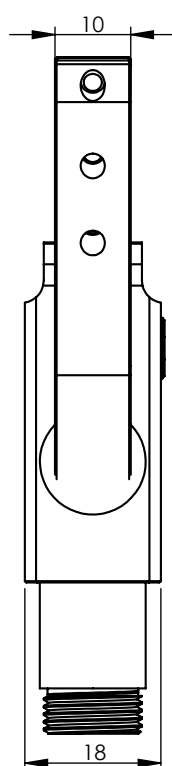
FGS14C-14

Piston bore: 14mm.
Aluminum jaws - C type
Single-action
Silicon pads

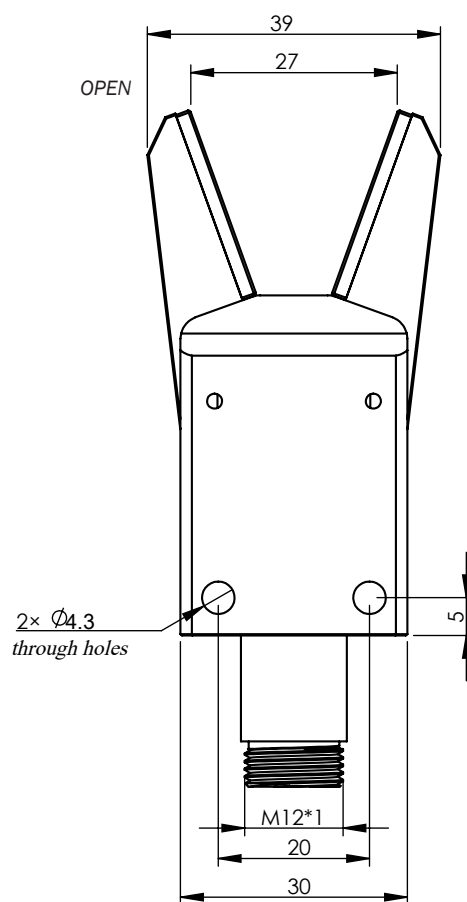
Dimensions (mm)



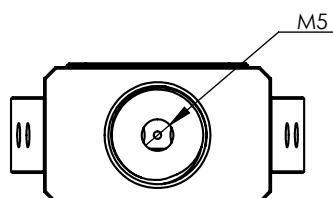
Air connection M5



Air connection M5



Air connection M5



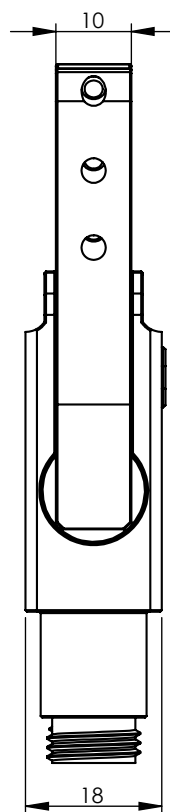
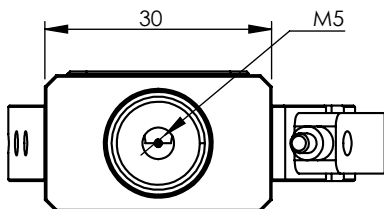
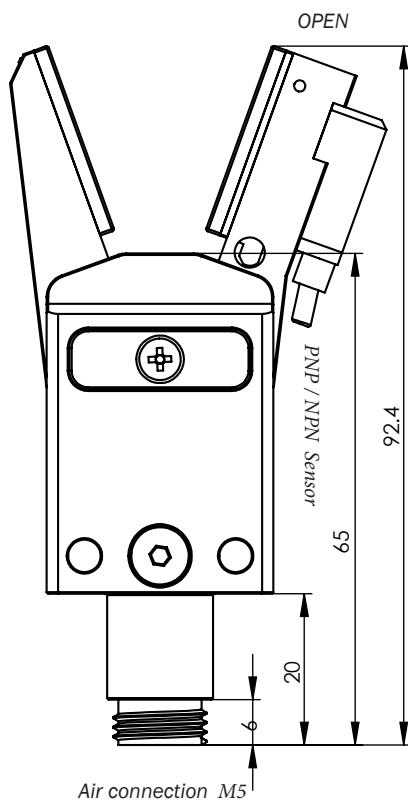
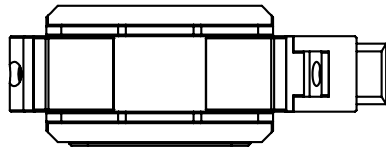
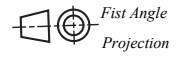
NEW



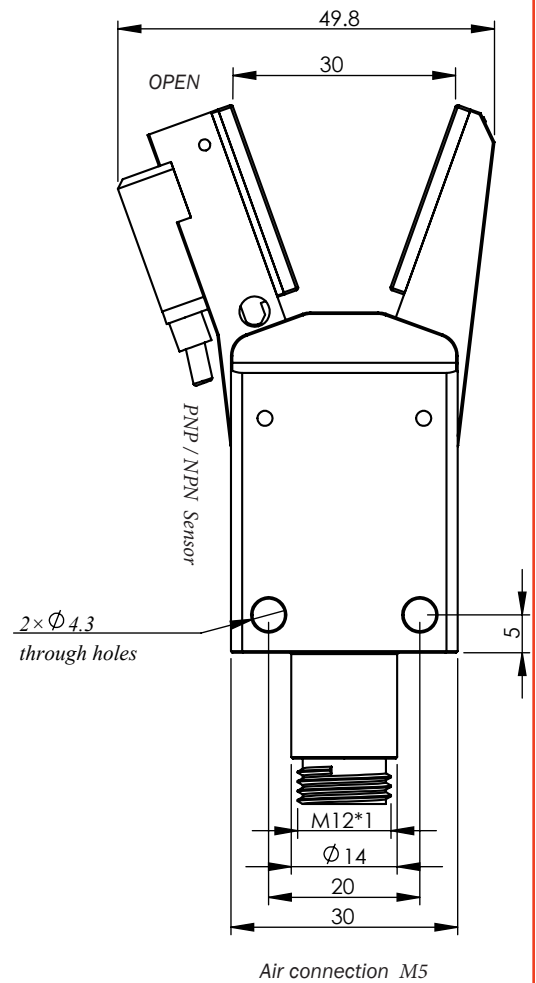
FGS14C-14-CP/CN

Piston bore: 14mm.
 Aluminum jaws - C type
 Single-action
 Sensor on the jaw
 Silicon pads

Dimensions (mm)



Air connection M5

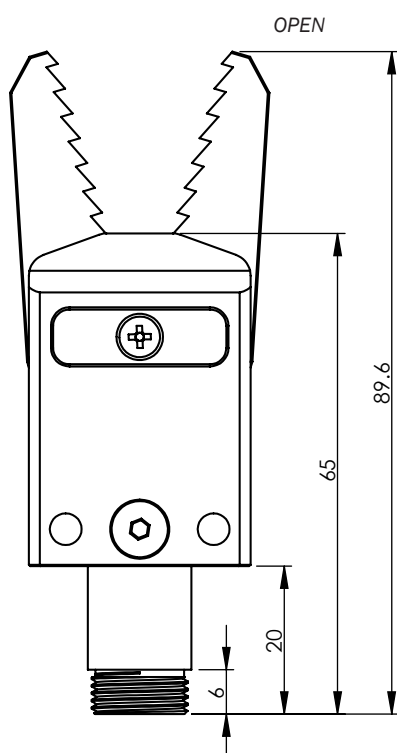
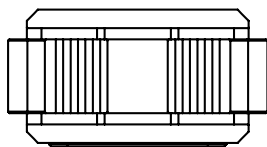


FGS14D-14

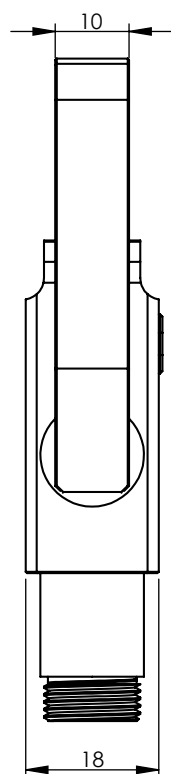
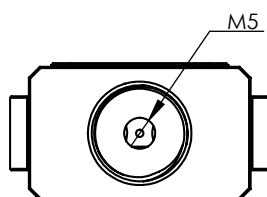
Piston bore: 14mm.
Aluminum jaws - D type
Single-action

Dimensions (mm)

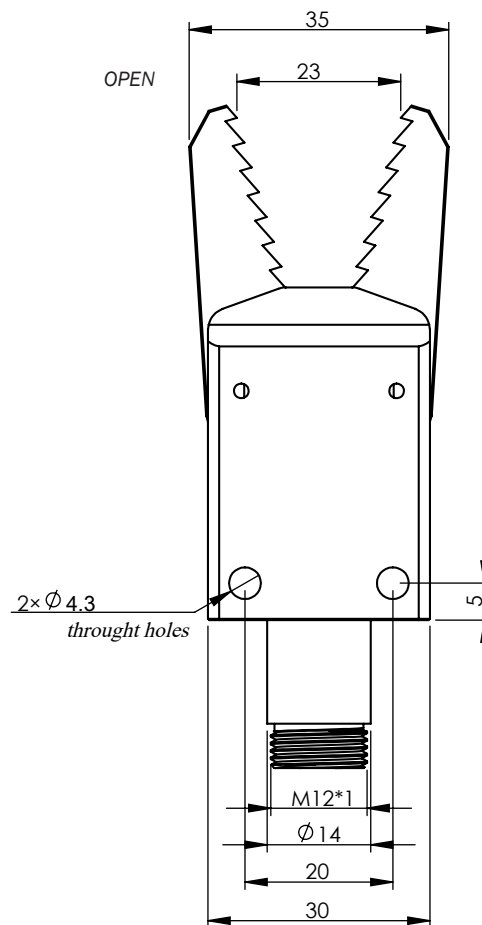
First Angle
Projection



Air connection M5



Air connection M5



Air connection M5

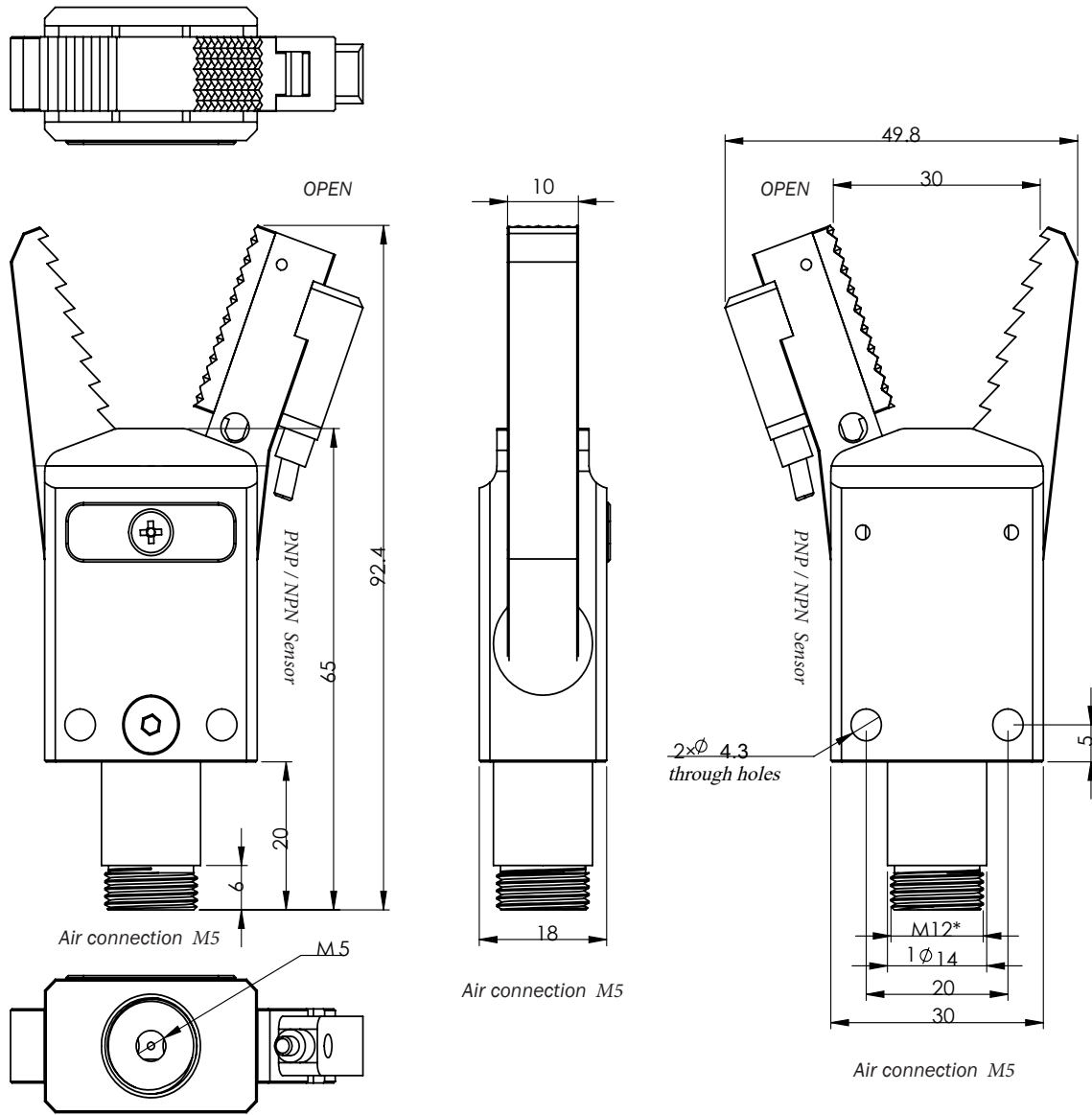
NEW



FGS14D-14-CP/CN

Piston bore: 14mm.
Aluminum jaws - D type
Single-action
Sensor on the jaw

Dimensions (mm)



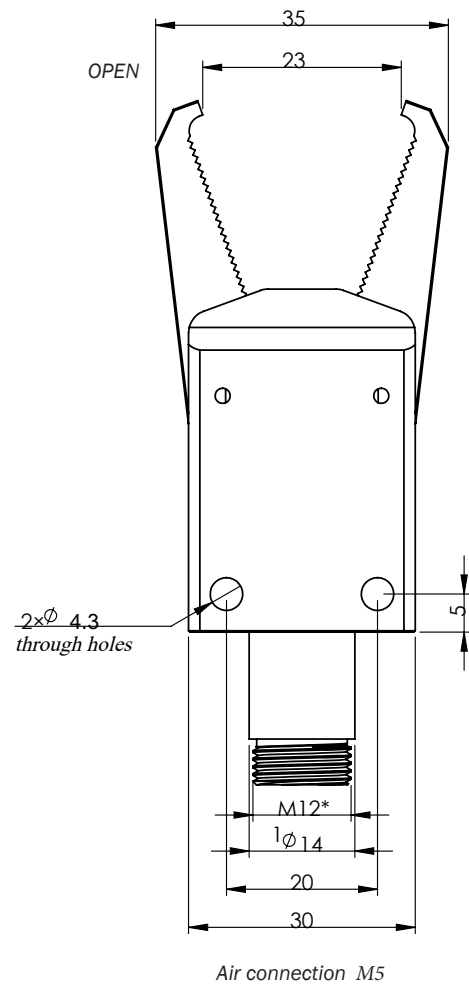
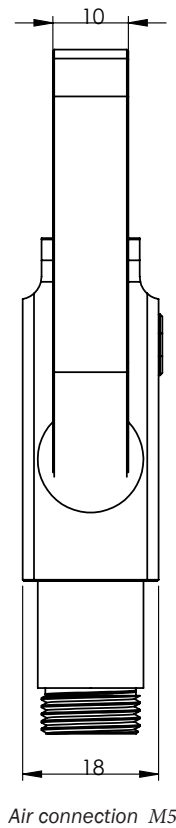
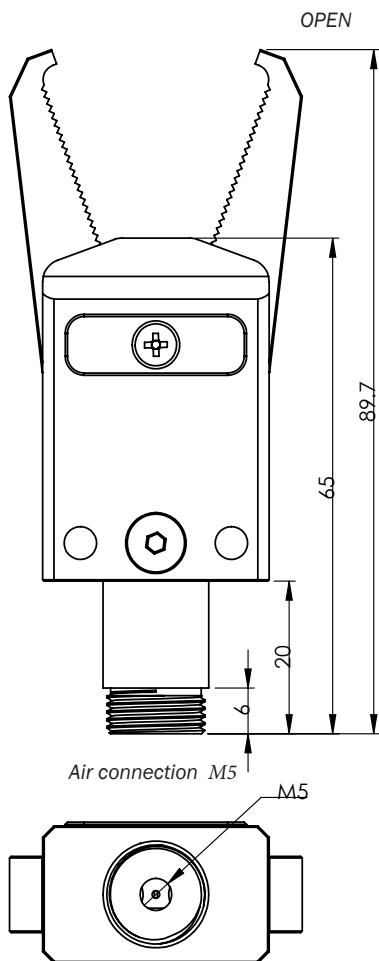
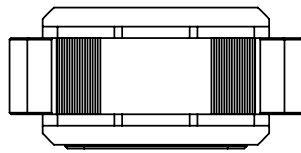
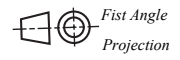
FGS14E-14

Piston bore: 14mm.

Aluminum jaws - E type

Single-action

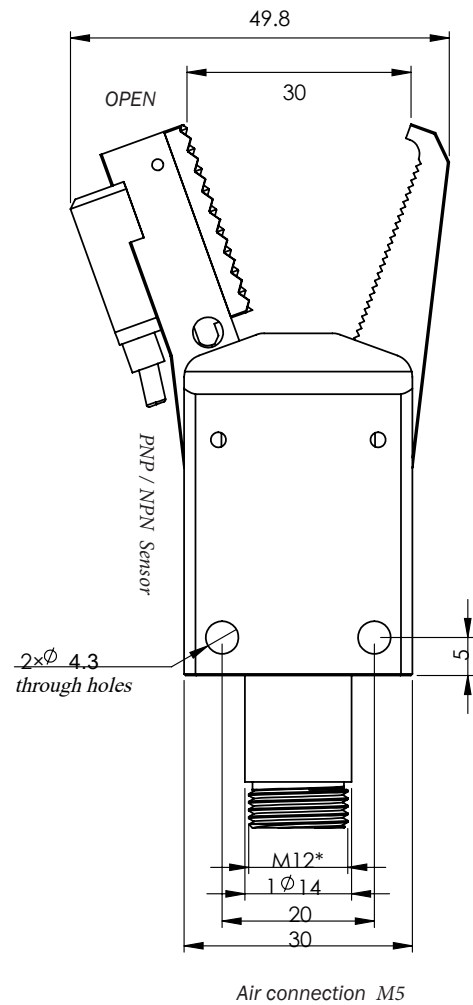
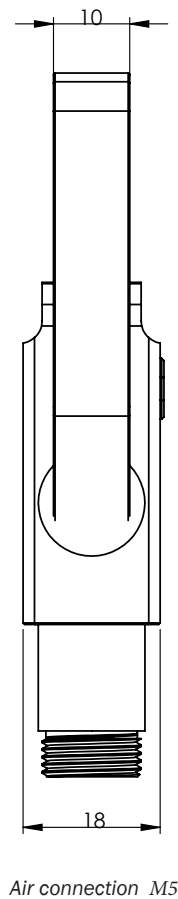
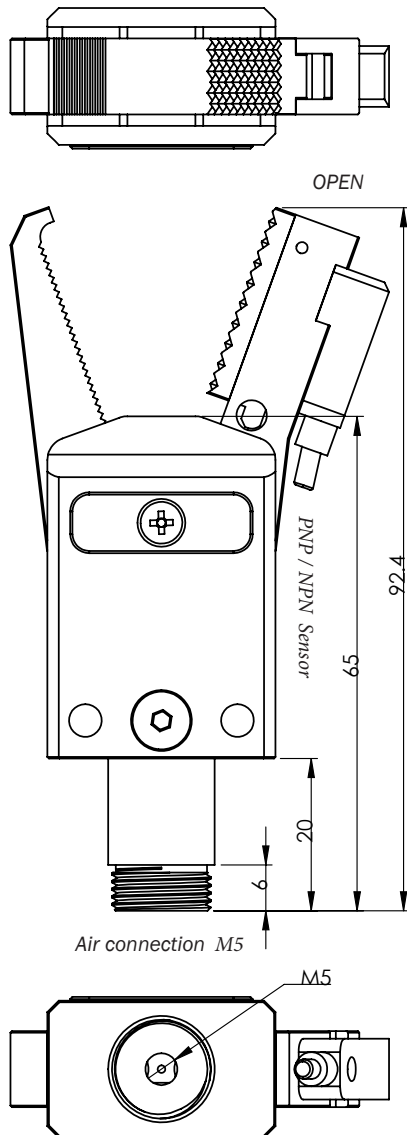
Dimensions (mm)



FGS14E-14-CP/CN

Piston bore: 14mm.
 Aluminum jaws - E type
 Single-action
 Sensor on the jaw

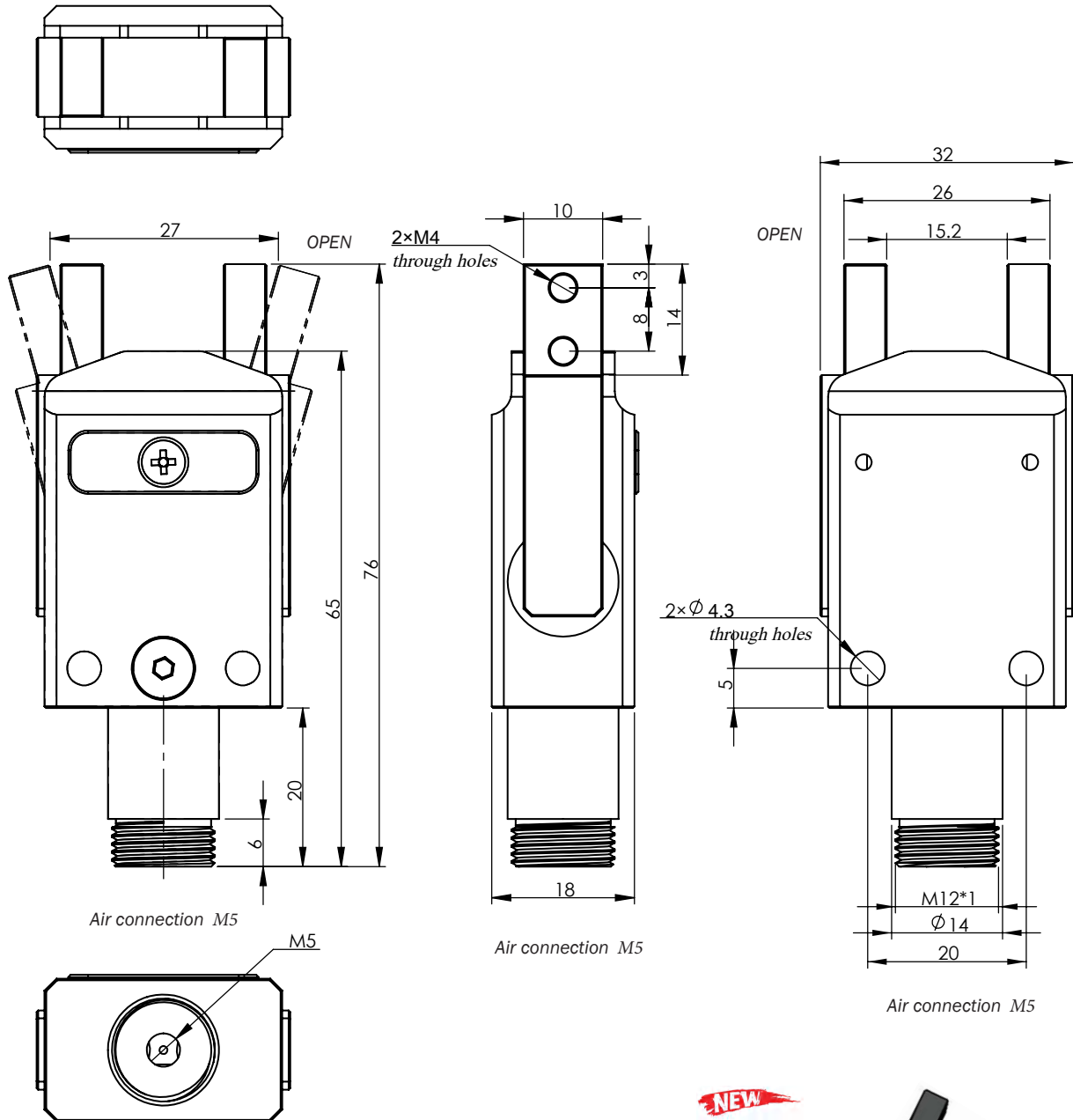
Dimensions (mm)



FGS14F-14

Piston bore: 14mm.
 Aluminum jaws - F type
 Single-action
 Stessl jaws & jaws customized

Dimensions (mm)



NEW

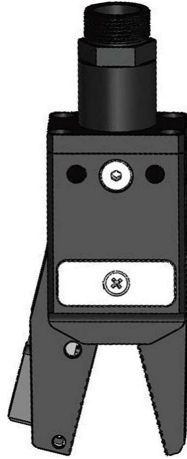


2-Jaws Non-Selfcentering Angular Pneumatic - Sprue Gripper

FGS20 - series



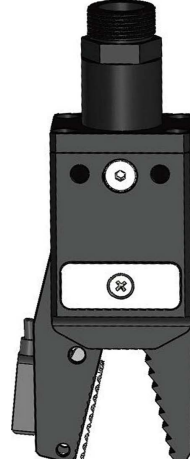
FGS20A-20



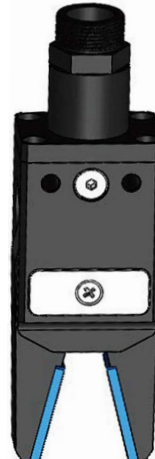
FGS20A-20-CP



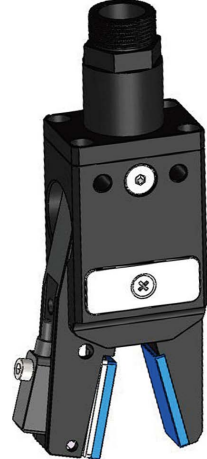
FGS20B-20



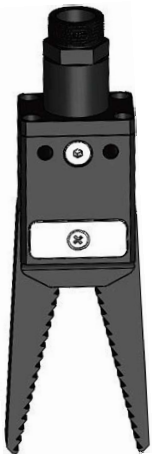
FGS20B20-CP



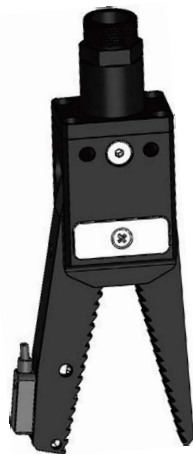
FGS20C-20



FGS20C-20-CP



FGS20D-20



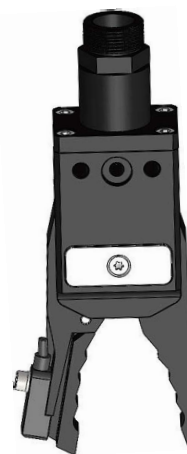
FGS20D-20-CP



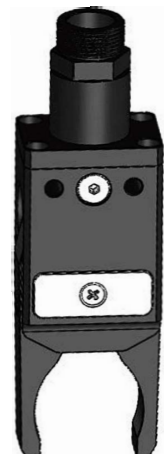
FGS20E-20



FGS20F-20



FGS20G-20-CP



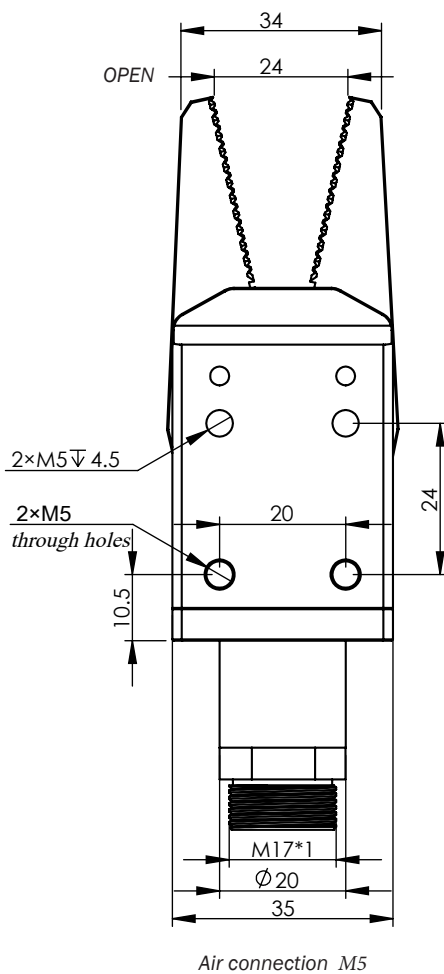
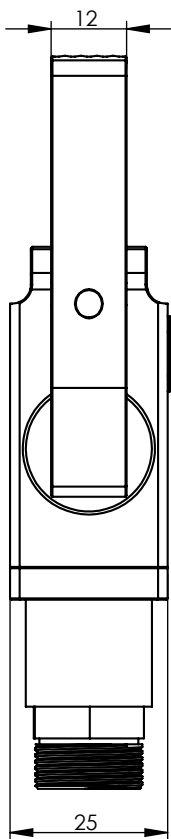
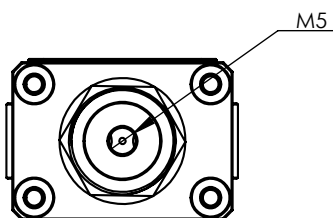
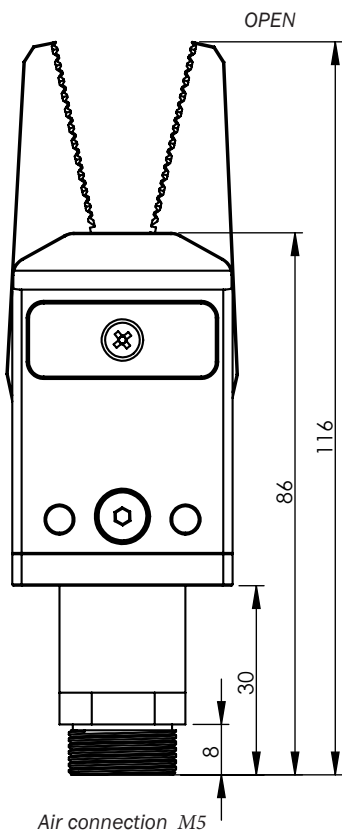
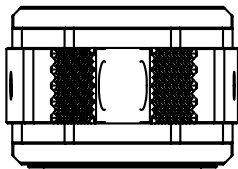
FGS20H-20

Model	FGS20A-20	FGS20A-20-CP / CN	FGS20B-20	FGS20B-20-CP / CN	FGS20C-20	FGS20C-20-CP / CN	FGS20D-20	FGS20D-20-CP / CN	FGS20E-20	FGS20F-20	FGS20G-20-CP / CN	FGS20H-20
Medium	Filtered & Compressed Air											
Pressure Range	2.5 ~ 8 bar											
Temperature Range	5 ~ 60 degree											
Stroke / degree	2*14											
Max Working Frequency	2 Hz											
Cycle Air Consumption	2.7cm ³											
Closing time without load	0.01s											
Closing gripping torque	210N/cm											
Opening gripping torque	10N/cm											
Air Inlet	M5											
Weight / g	112	135	112	136	112	135	140	155	125	130	140	122

FGS20A-20

Piston bore: 20mm.
Aluminum jaws - A-type
Single-action

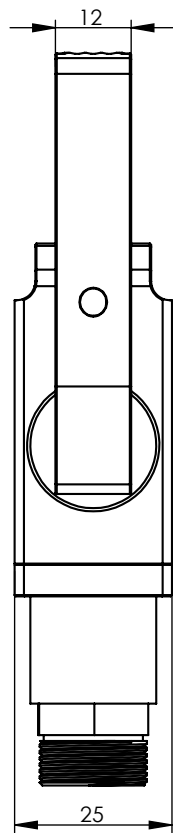
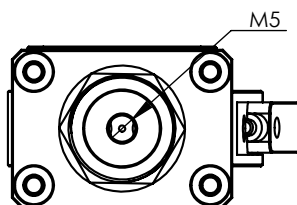
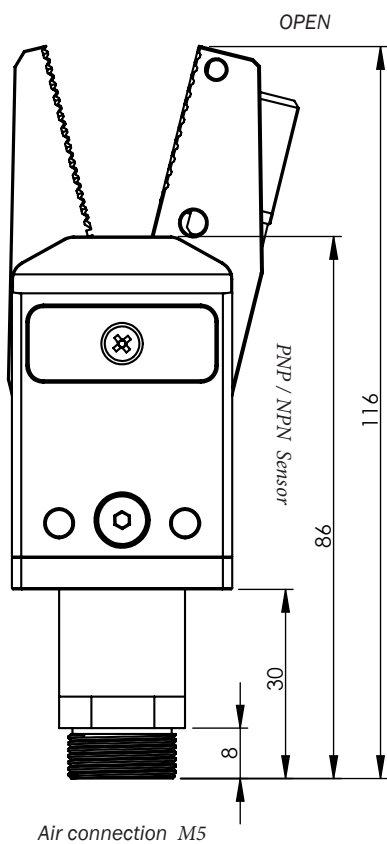
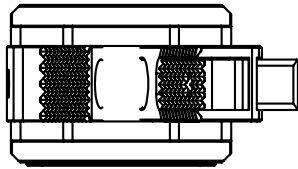
Dimensions (mm)



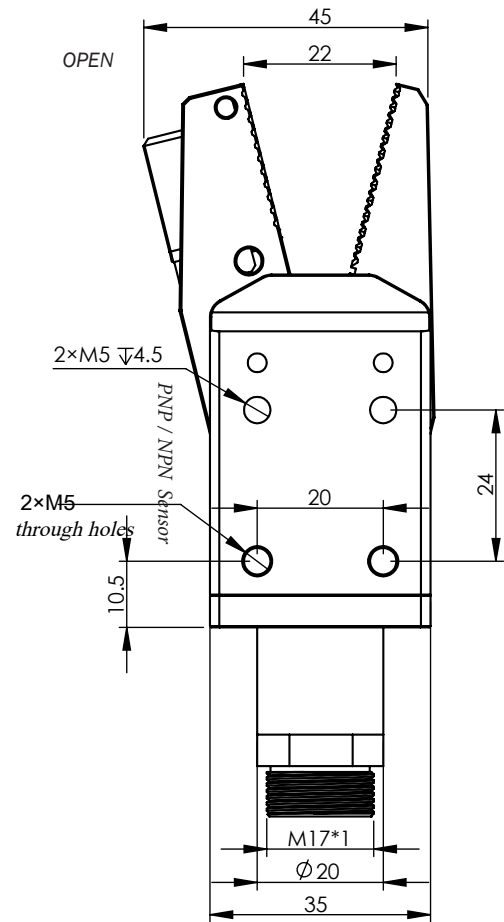
FGS20A-20-CP/CN

Piston bore: 20mm.
 Aluminum jaws - A-type
 Single-action
 Sensor on the jaw

Dimensions (mm)



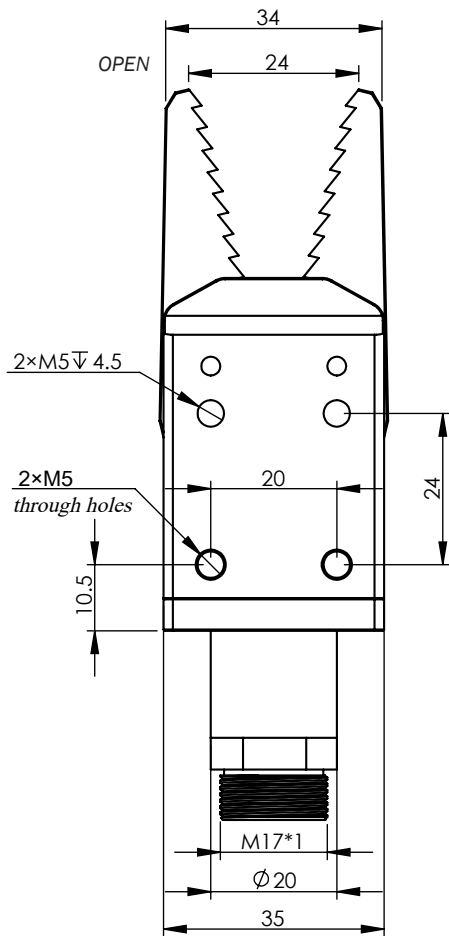
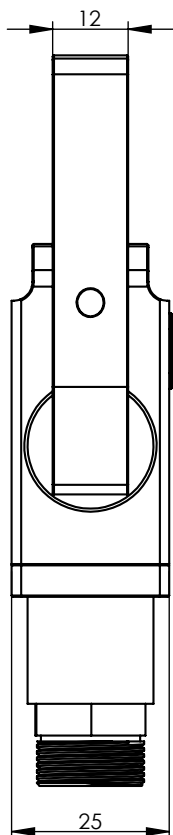
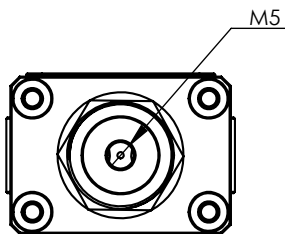
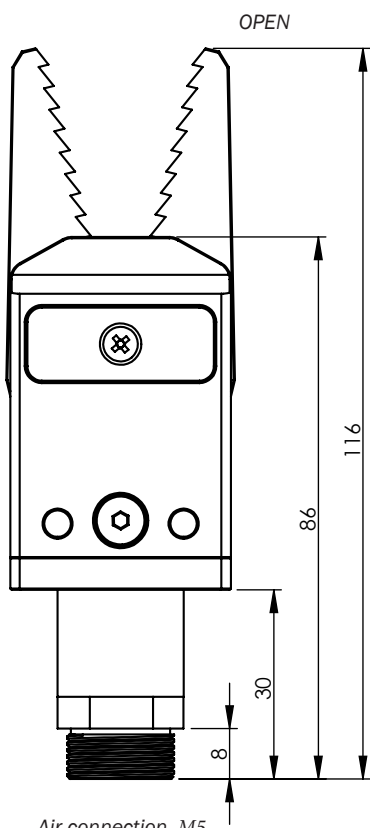
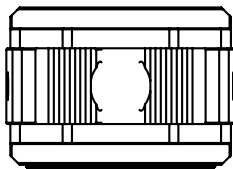
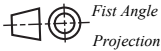
Air connection M5



FGS20B-20

Piston bore: 20mm.
Aluminum jaws - B-type
Single-action

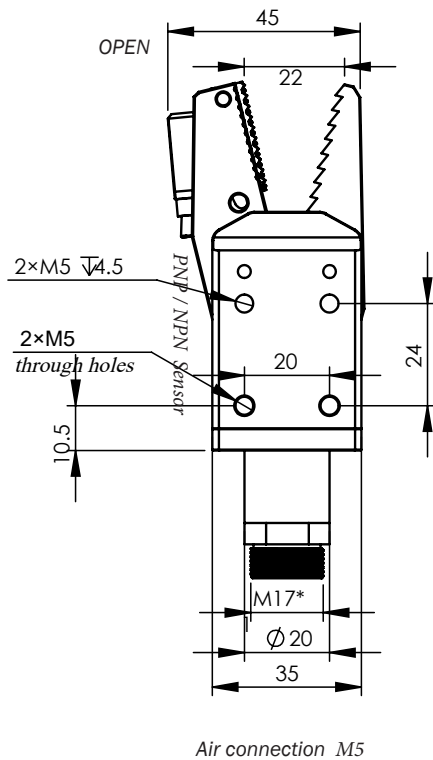
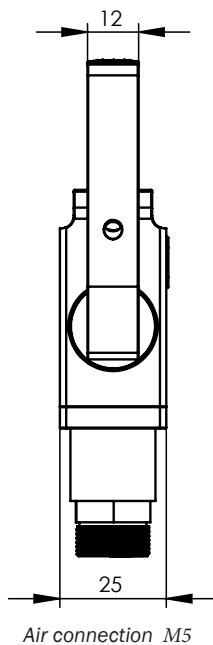
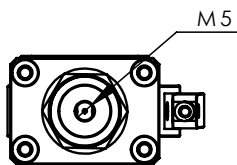
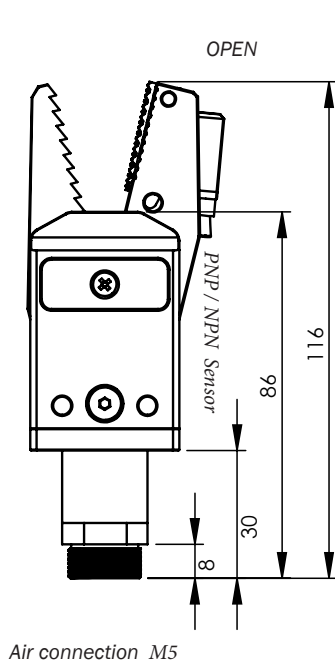
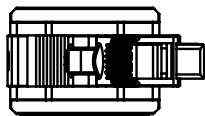
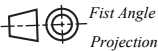
Dimensions (mm)



FGS20B-20-CP/CN

Piston bore: 20mm.
Aluminum jaws B-type
Single-action
Sensor on the jaw

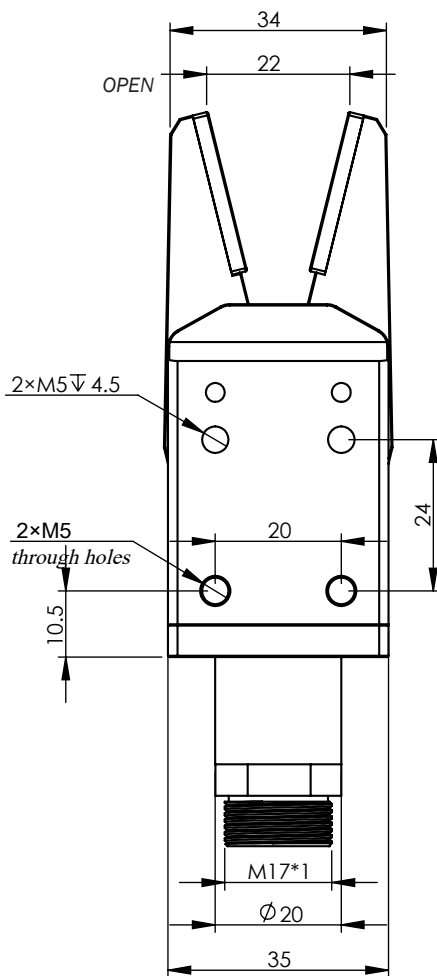
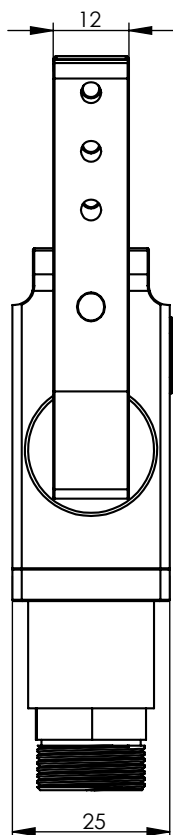
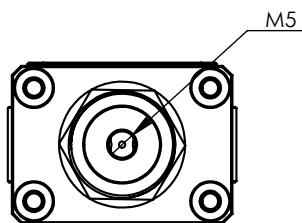
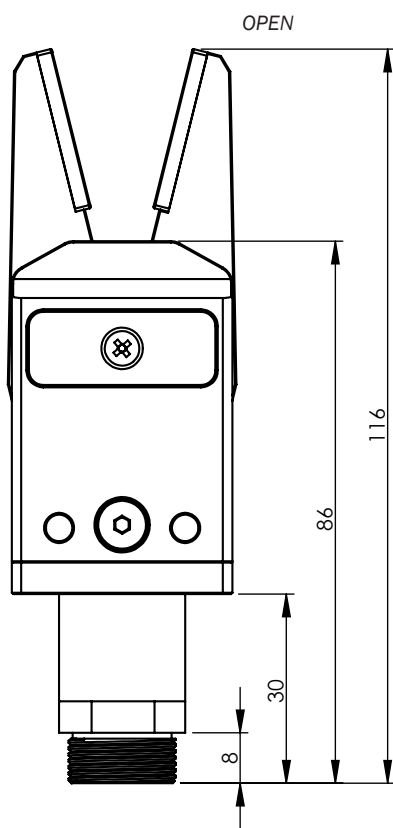
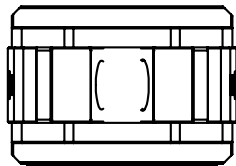
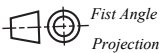
Dimensions (mm)



FGS20C-20

Piston bore: 20mm.
Aluminum jaws C-type
Single-action
Silicon pads

Dimensions (mm)



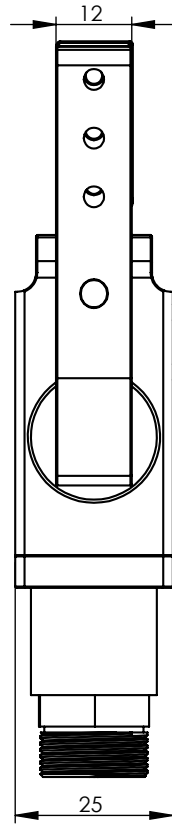
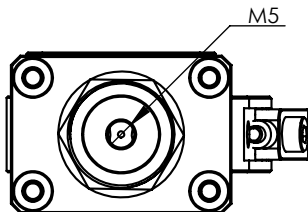
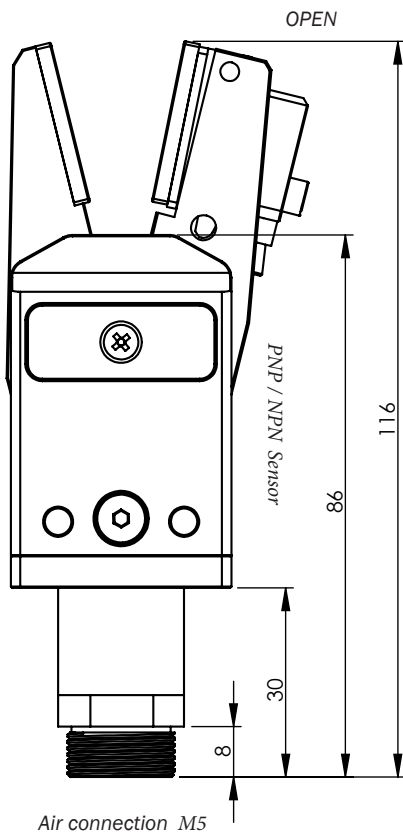
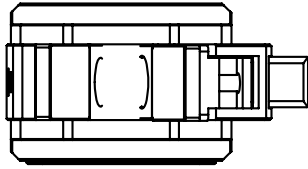
Air connection M5



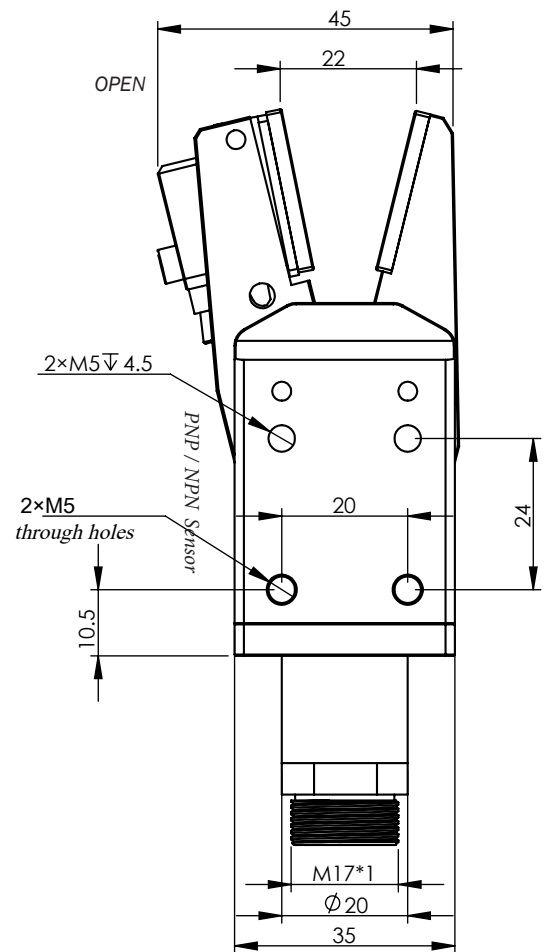
FGS20C-20-CP/CN

Piston bore: 20mm.
Aluminum jaws C-type
Single-action
Sensor on the jaw
Silicon pads

Dimensions (mm)



Air connection M5



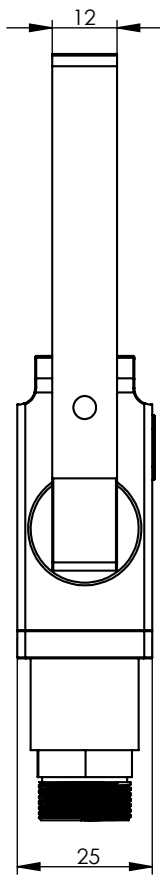
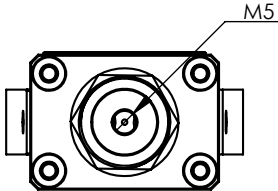
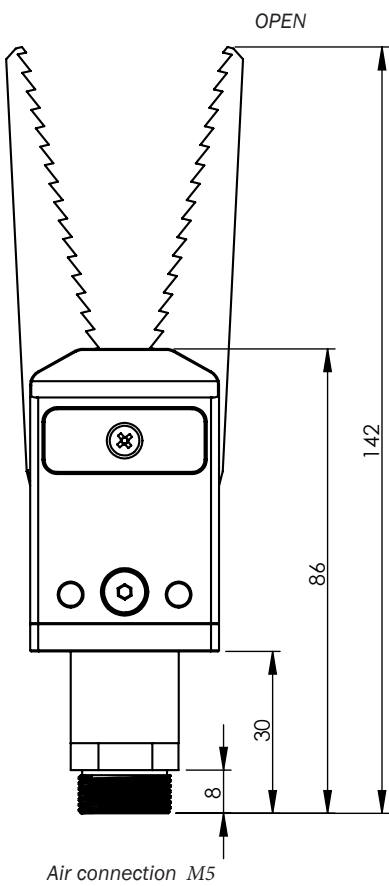
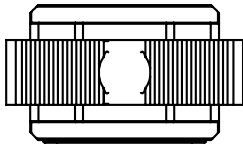
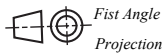
Air connection M5



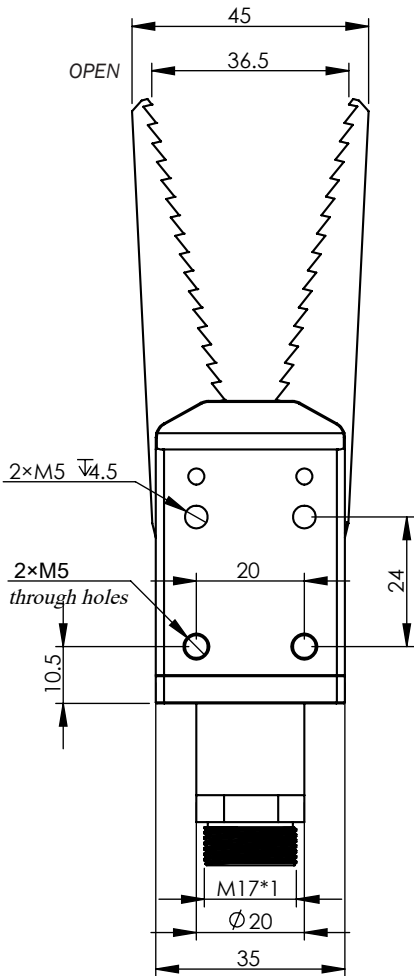
FGS20D-20

Piston bore: 20mm.
Aluminum jaws D-type
Single-action

Dimensions (mm)



Air connection M5



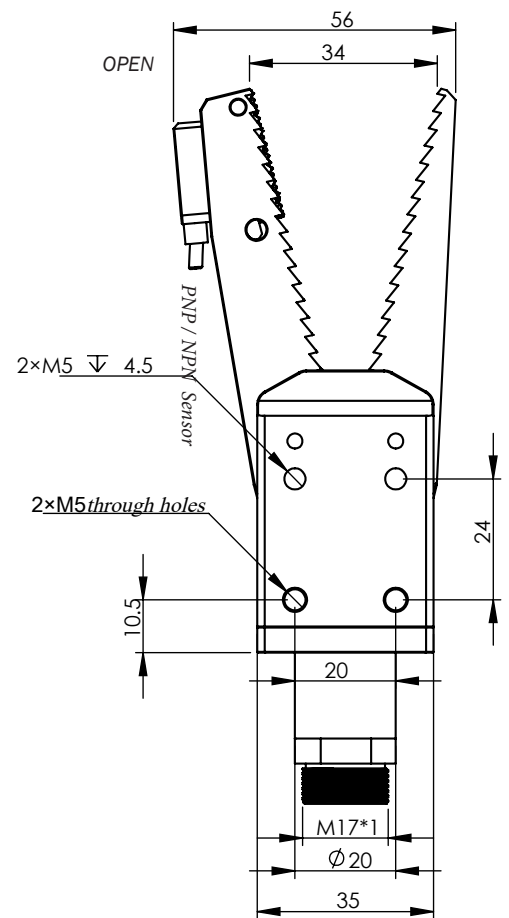
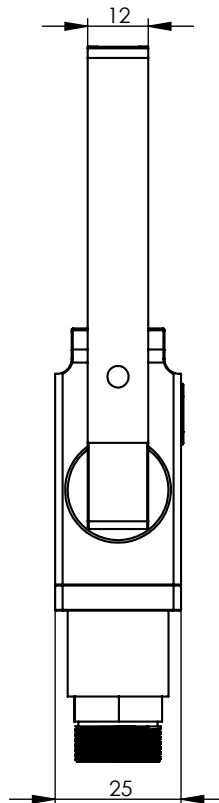
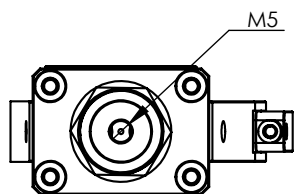
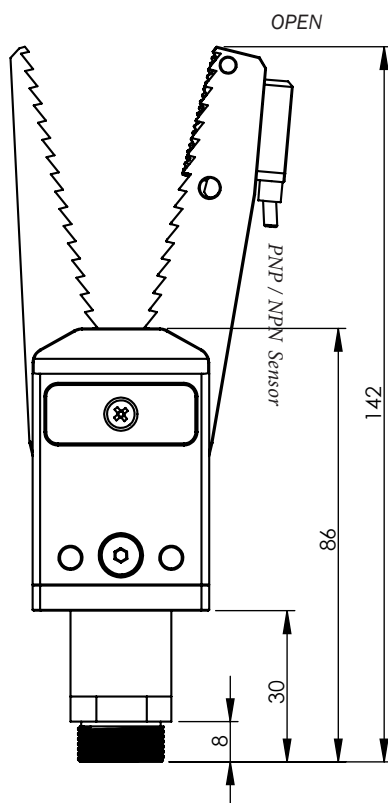
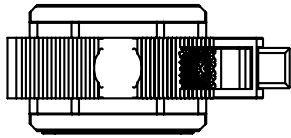
Air connection M5



FGS20D-20-CP/CN

Piston bore: 20mm.
Aluminum jaws D-type
Single-action
Sensor on the jaw

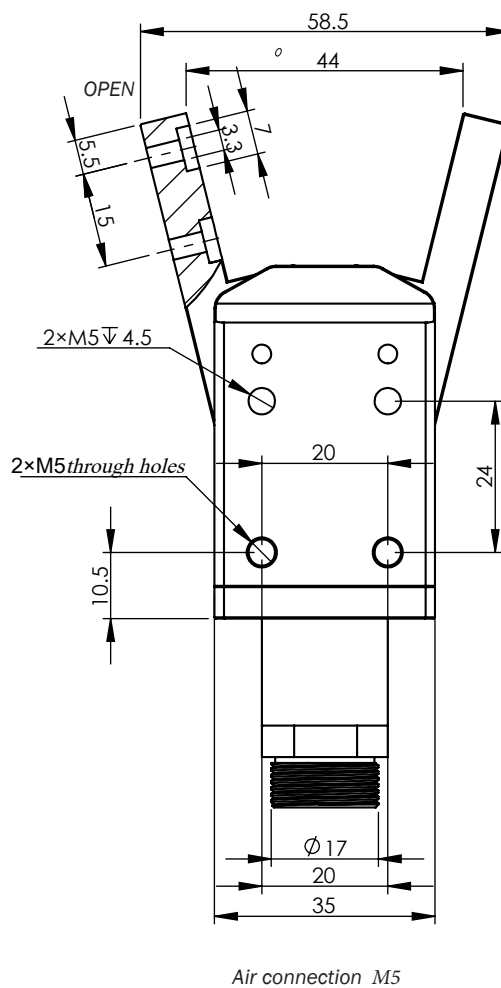
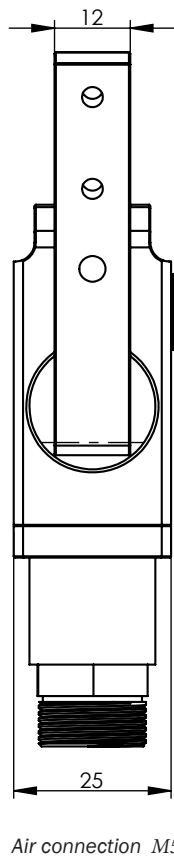
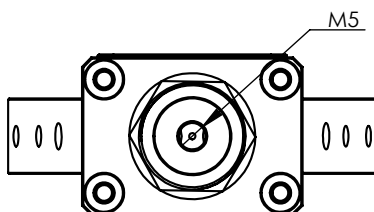
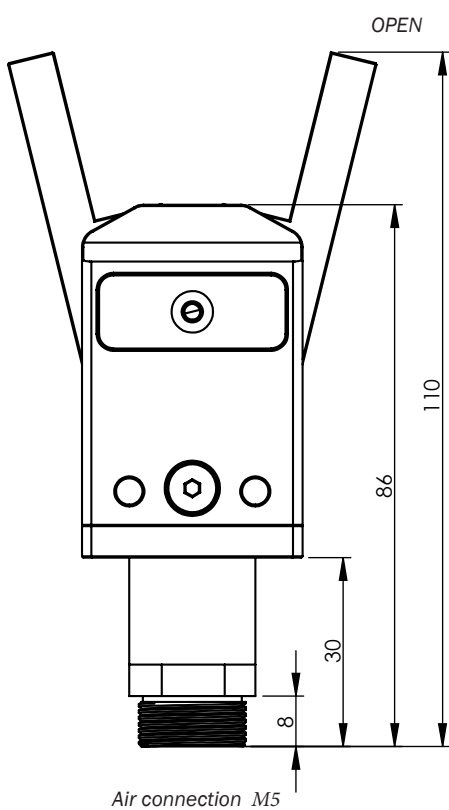
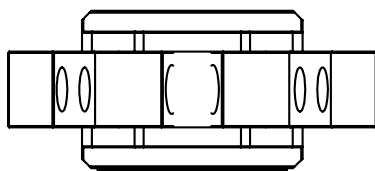
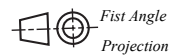
Dimensions (mm)



FGS20E-20

Piston bore: 20mm.
Aluminum jaws E-type
Single-action
Jaws customized

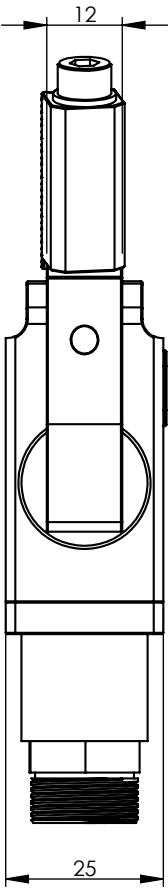
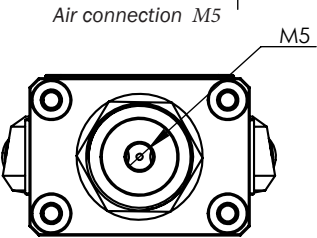
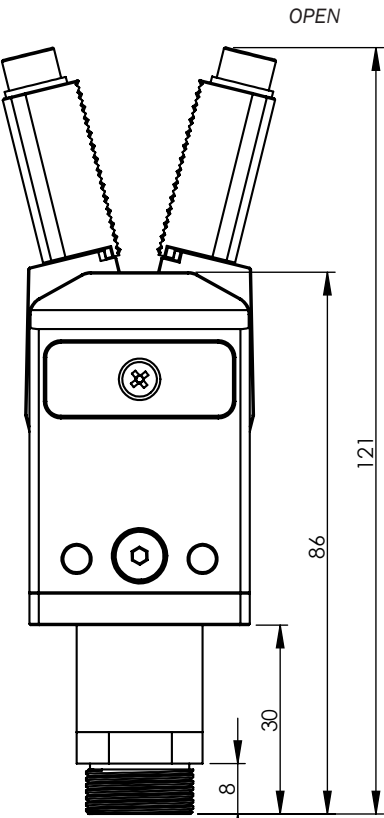
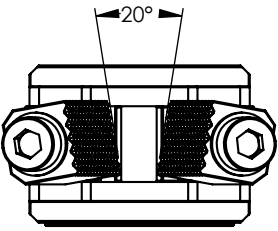
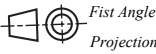
Dimensions (mm)



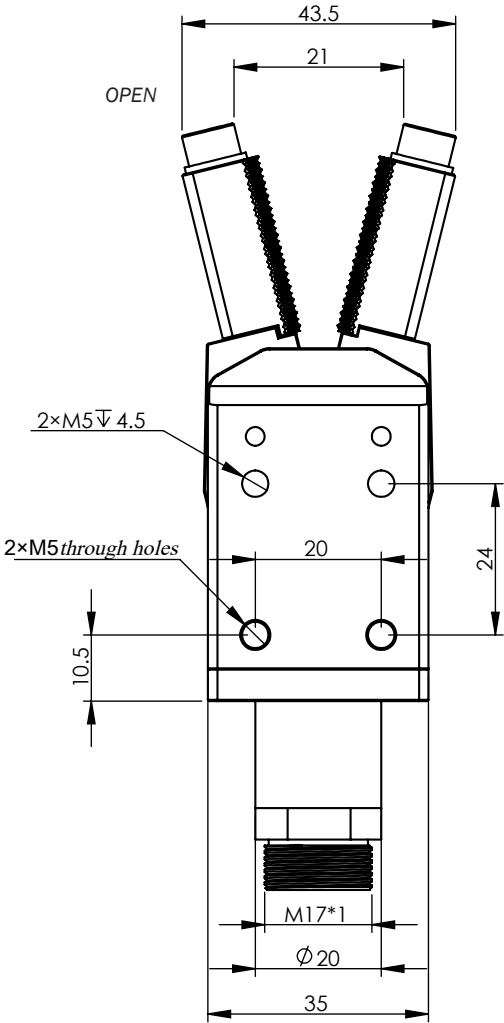
FGS20F-20

Piston bore: 20mm.
Aluminum jaws F-type
Single-action

Dimensions (mm)



Air connection M5



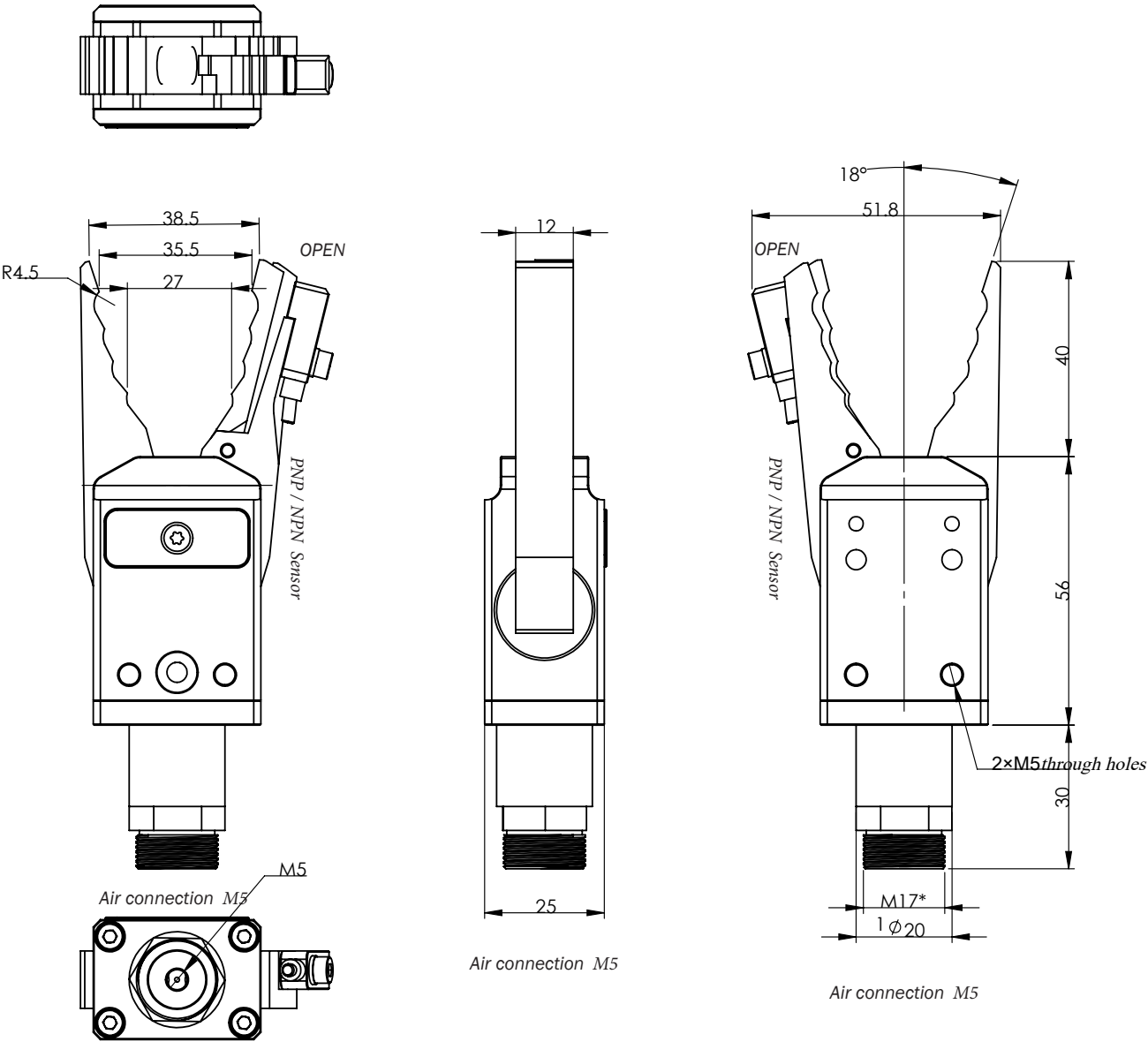
Air connection M5



FGS20G-20-CP/CN

Piston bore: 20mm.
Aluminum jaws G-type
Single-action
Sensor on the jaw

Dimensions (mm)



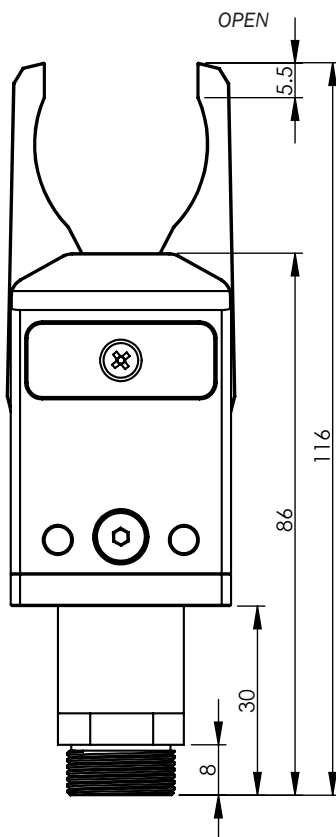
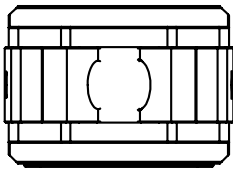
NEW



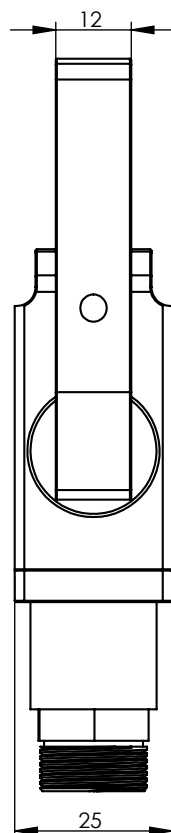
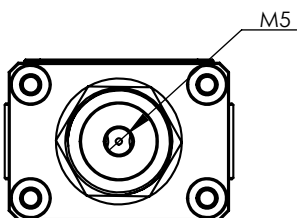
FGS20H-20

Piston bore: 20mm.
Aluminum jaws H-type
Single-action

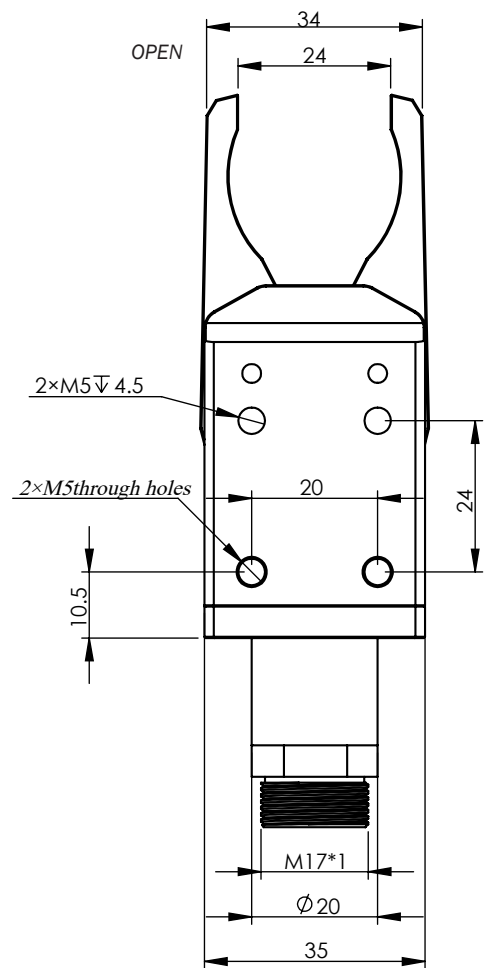
Dimensions (mm)



Air connection M5



Air connection M5



Air connection M5



2-Jaws Non-Selfcentering Angular Pneumatic - Sprue Gripper

FGST20 - series



FGST20A-16



FGST20A-16-CP



FGST20B-16



FGST20B-16-CP



FGST20C-16



FGST20C-16-CP



FGST20D-16



FGST20D-16-CP



FGST20E-16



FGST20F-16



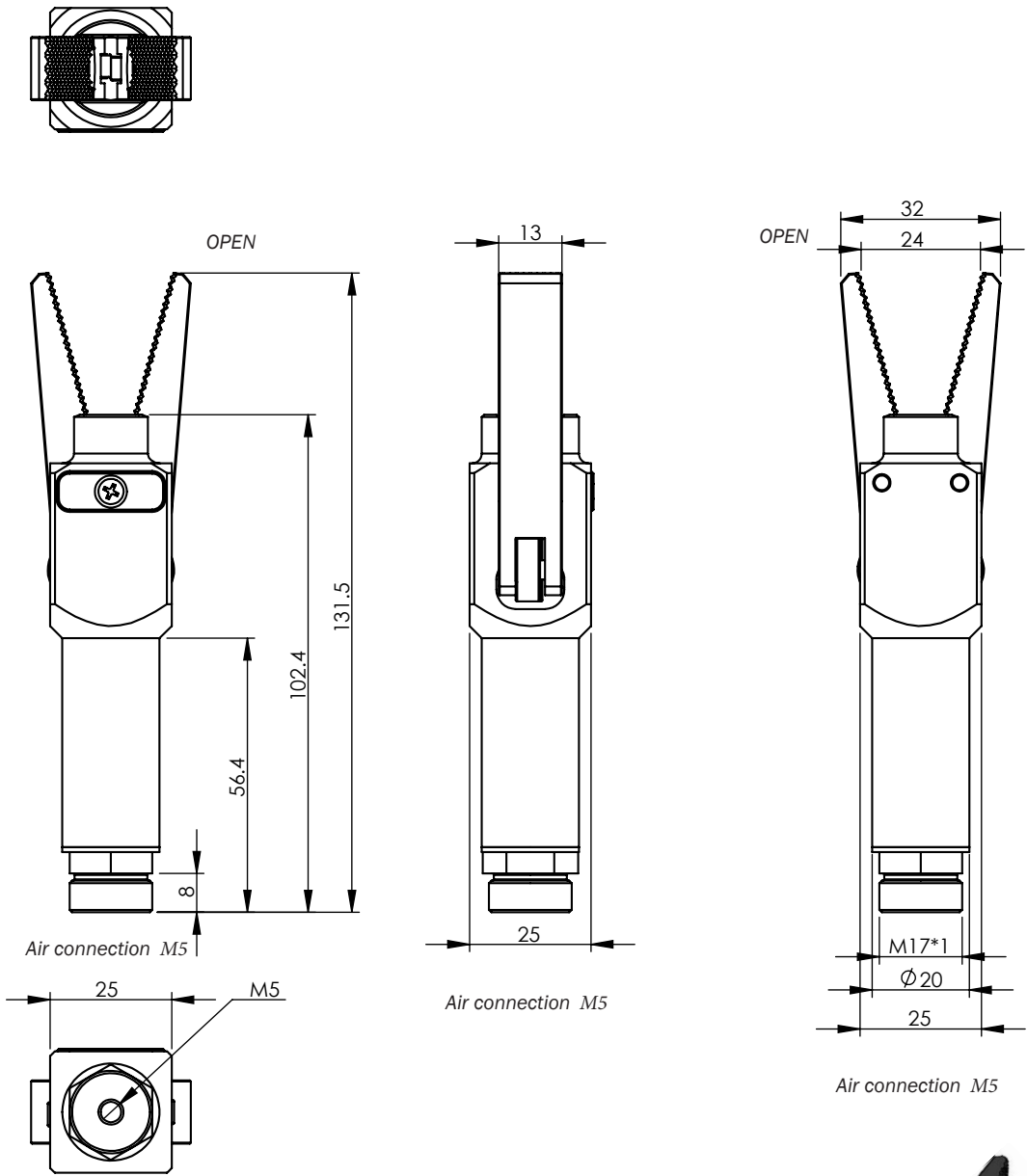
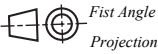
FGST20F-16-CP

Model	FGST20A-16	FGST20A-16 -CP / CN	FGST20B-16	FGST20B-16 -CP / CN	FGST20C-16	FGST20C-16 -CP / CN	FGST20D-16	FGST20D-16 -CP / CN	FGST20E-16	FGS20F-16	FGST20F-16 -CP / CN
Medium	Filtered & Compressed Air										
Pressure Range	2.5 ~ 8 bar										
Temperature Range	5 ~ 60 degree										
Stroke / degree	2*15										
Max Working Frequency	2 Hz										
Cycle Air Consumption	3.6cm ³										
Closing time without load	0.01s										
Closing gripping torque	300N/cm										
Opening gripping torque	20N/cm										
Air Inlet	M5										
Weight / g	112	130	115	135	112	135	161	165	145	165	155

FGST20A-16

Piston bore: 16mm.
Aluminum jaws A-type
Single-action

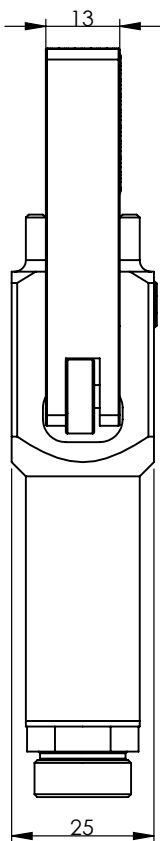
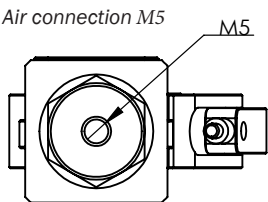
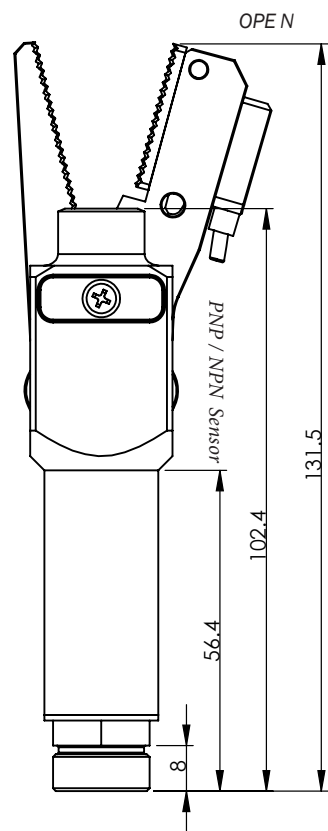
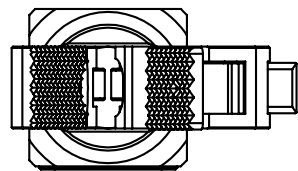
Dimensions (mm)



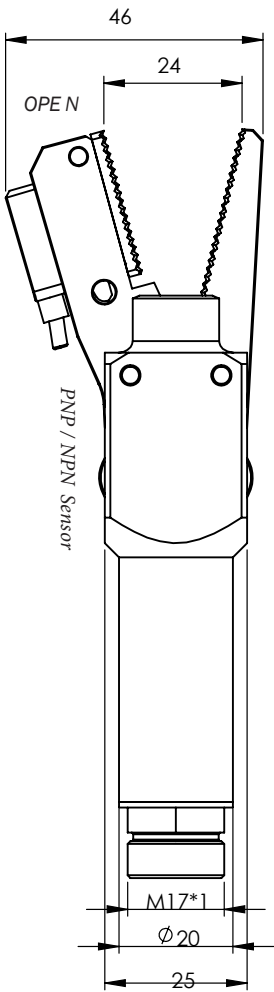
FGST20A-16-CP/CN

Piston bore: 16mm.
Aluminum jaws A-type
Single action
Sensor on the jaw

Dimensions (mm)



Air connection M5



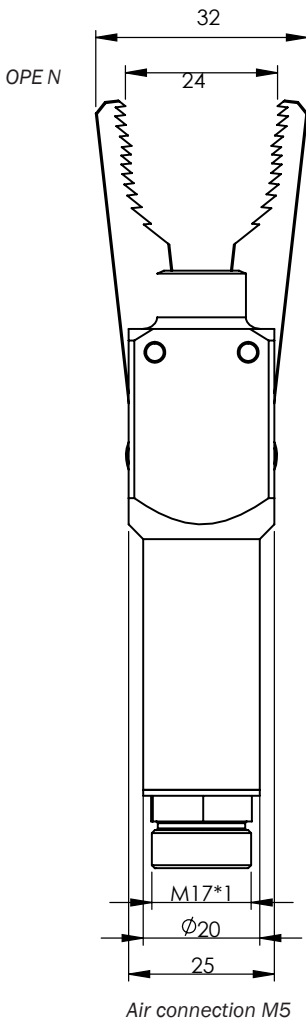
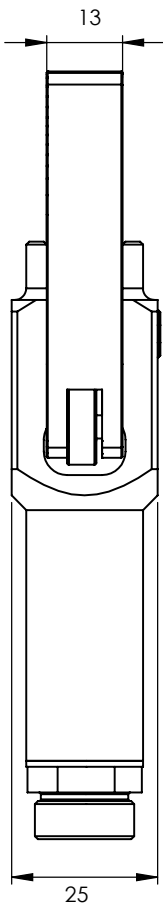
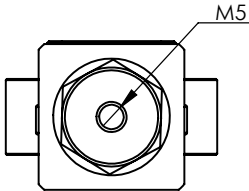
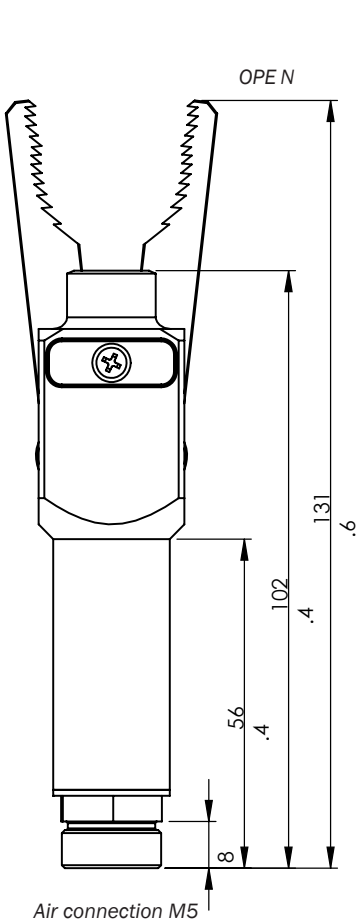
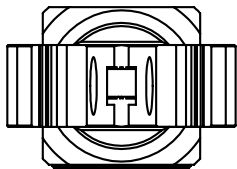
Air connection M5



FGST20B-16

Piston bore: 16mm.
Aluminum jaws B-type
Single-action

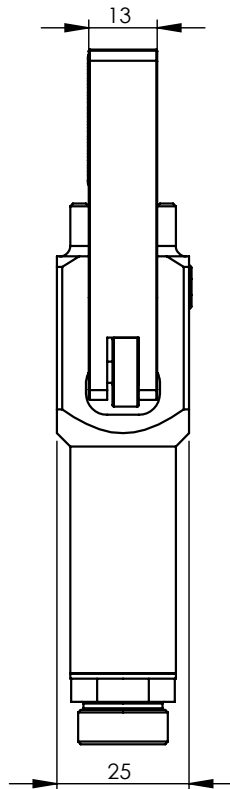
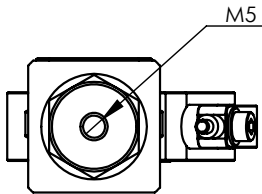
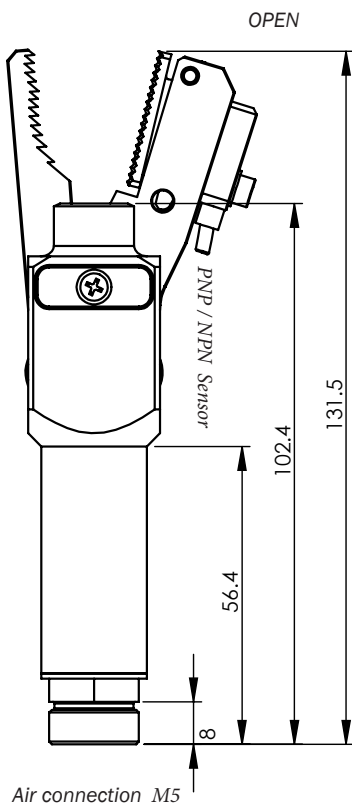
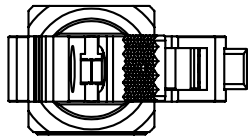
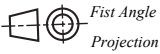
Dimensions (mm)



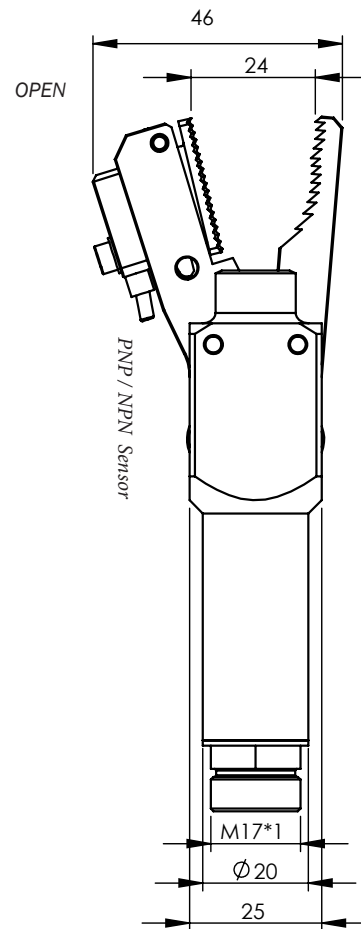
FGST20B-16-CP/CN

Piston bore: 16mm.
Aluminum jaws B-type
Single-action
Sensor on the jaw

Dimensions (mm)



Air connection M5



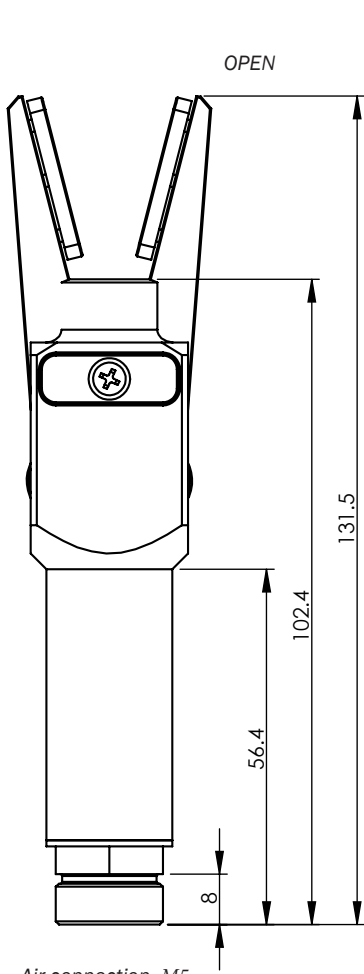
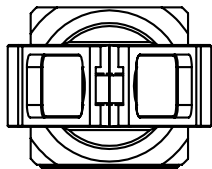
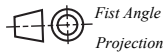
Air connection M5



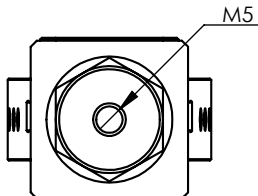
FGST20C-16

Piston bore: 16mm.
Aluminum jaws C-type
Single-action
Silicon pads

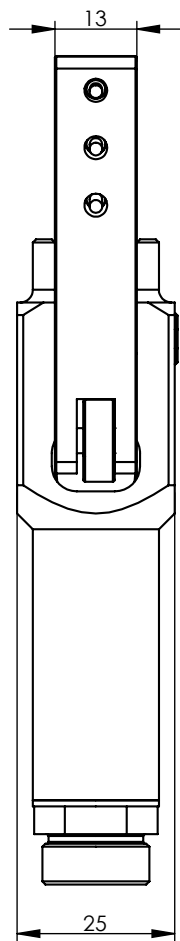
Dimensions (mm)



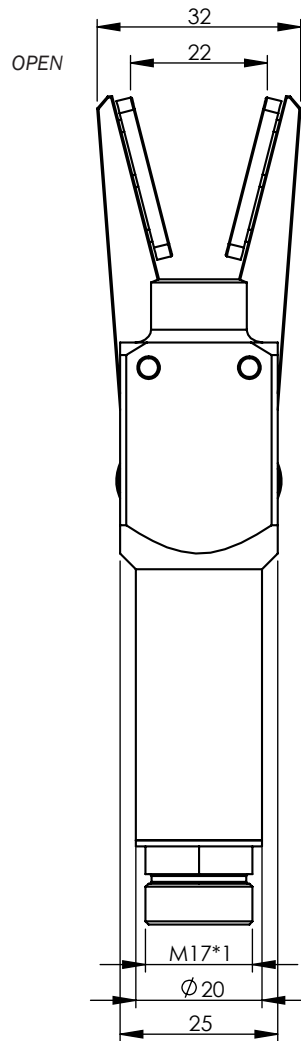
Air connection M5



M5



Air connection M5



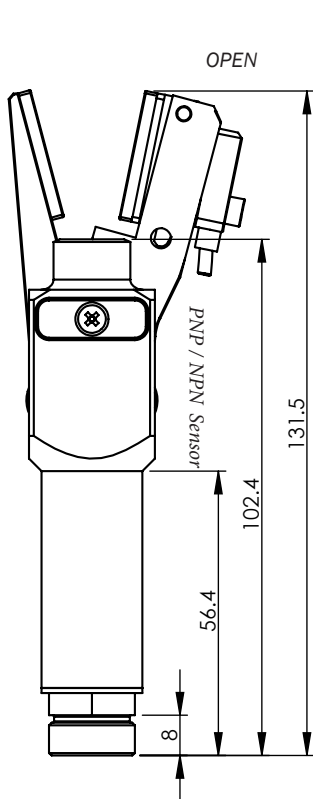
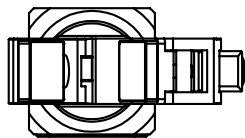
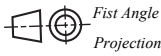
Air connection M5



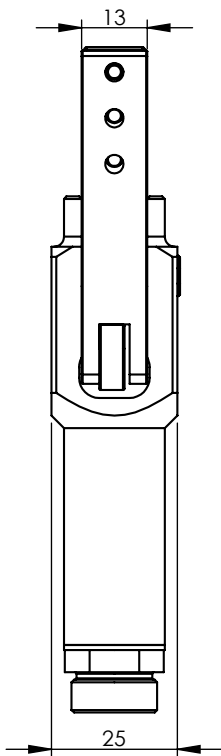
FGST20C-16-CP/CN

Piston bore: 16mm.
Aluminum jaws C-type
Single-action
Silicon pads
Sensor on the jaw

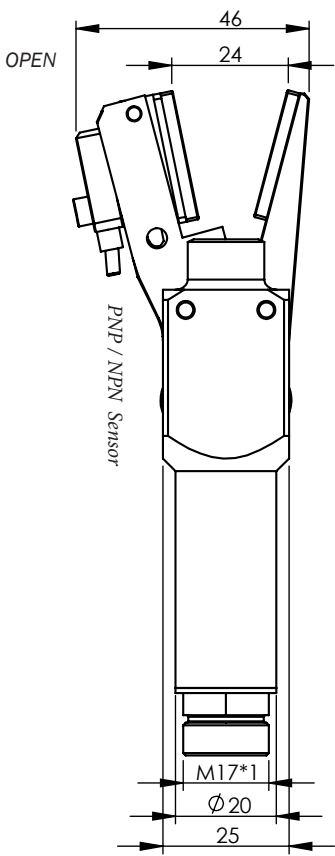
Dimensions (mm)



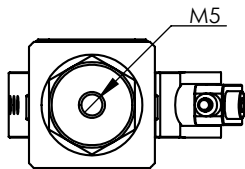
Air connection M5



Air connection M5



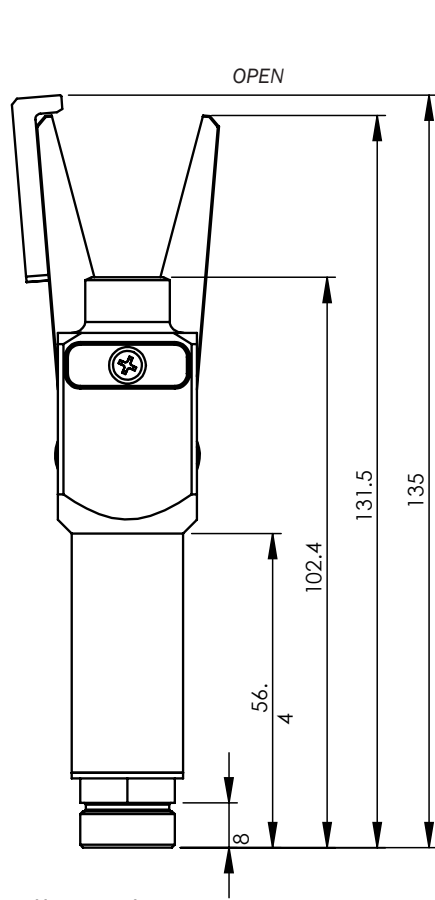
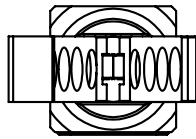
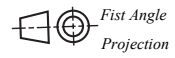
Air connection M5



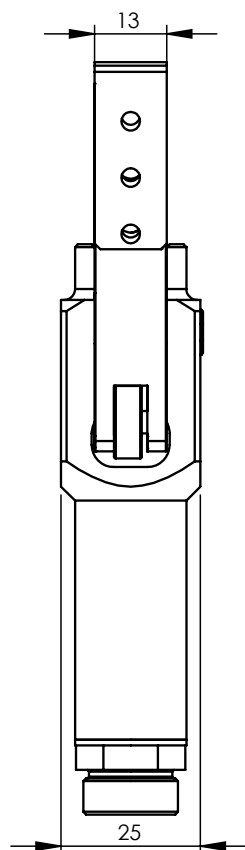
FGST20D-16

Piston bore: 16mm.
Aluminum jaws D-type
Single-action

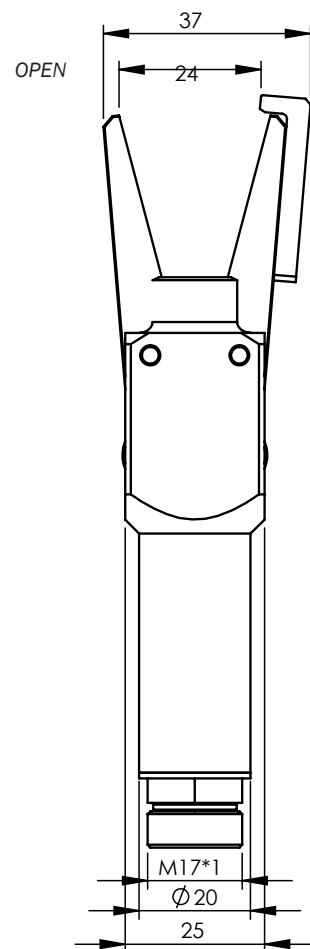
Dimensions (mm)



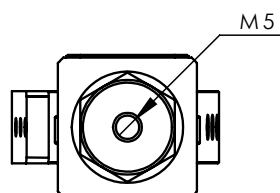
Air connection M5



Air connection M5



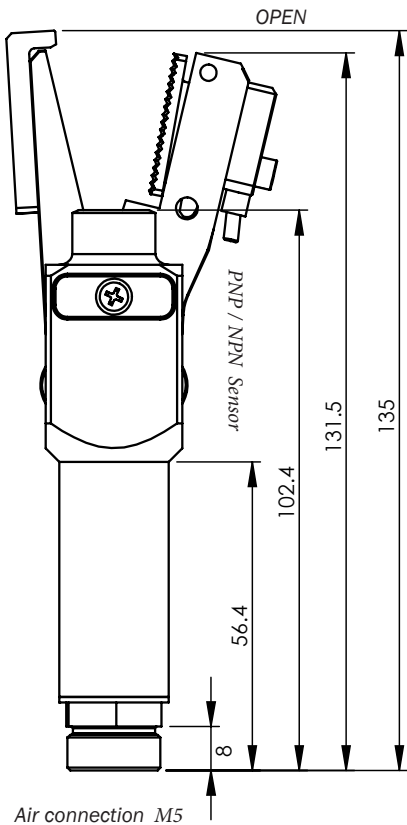
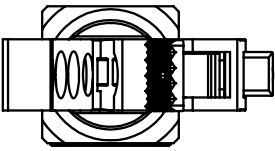
Air connection M5



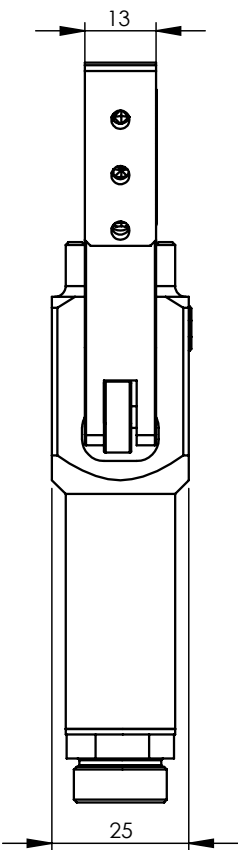
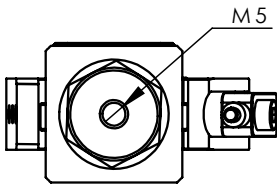
FGST20D-16-CP/CN

Piston bore: 16mm.
Aluminum jaws D-type
Single-action
Sensor on the jaw

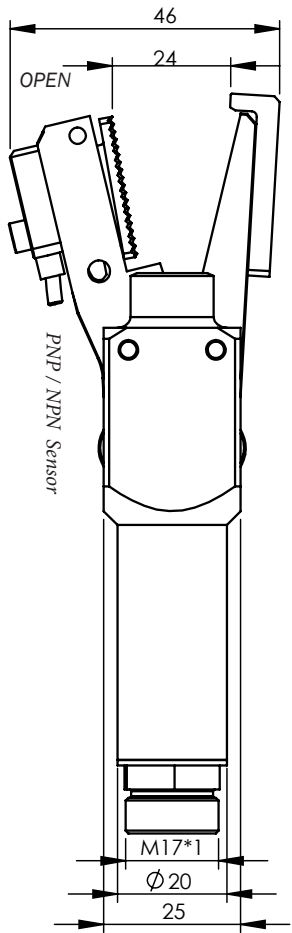
Dimensions (mm)



Air connection M5



Air connection M5



Air connection M5

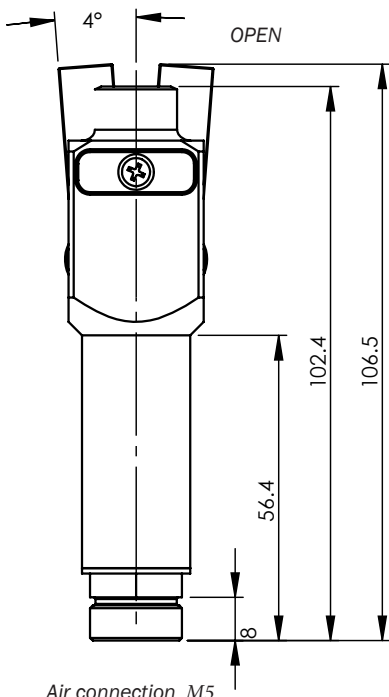
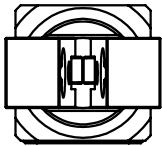
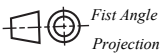
NEW



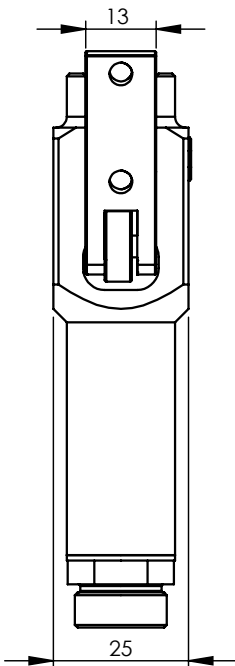
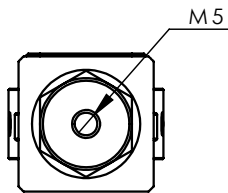
FGST20E-16

Piston bore: 16mm.
Aluminum jaws E-type
Single-action
Steel jaws

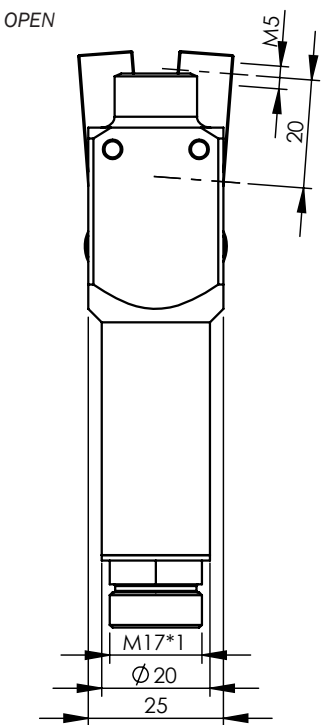
Dimensions (mm)



Air connection M5



Air connection M5



Air connection M5

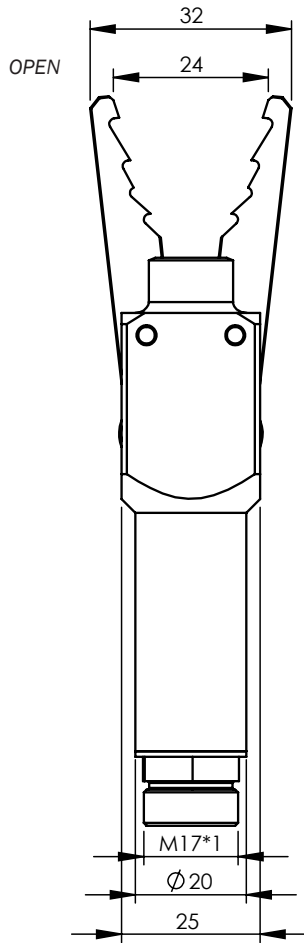
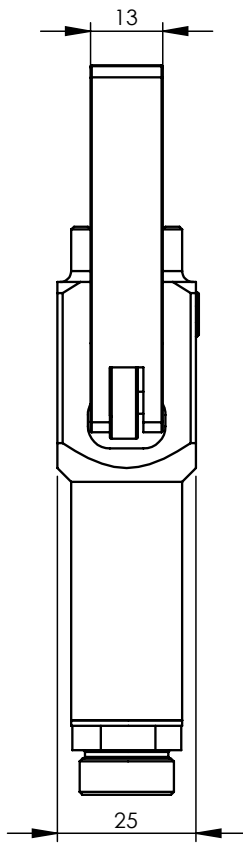
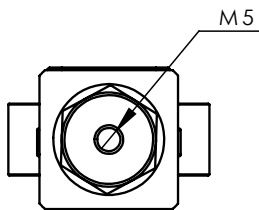
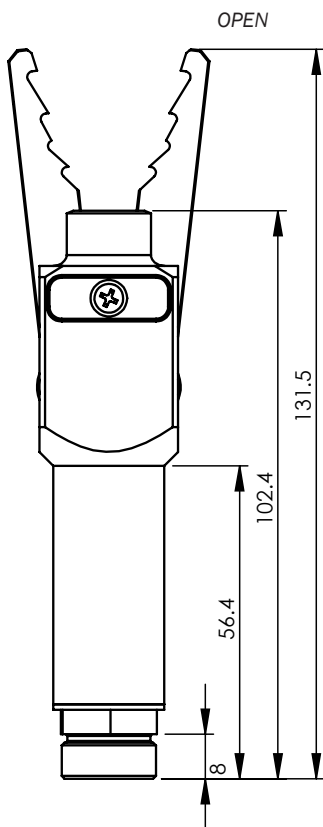
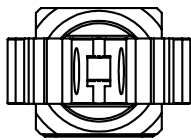
NEW



FGST20F-16

Piston bore: 16mm.
Aluminum jaws F-type
Single-action

Dimensions (mm)



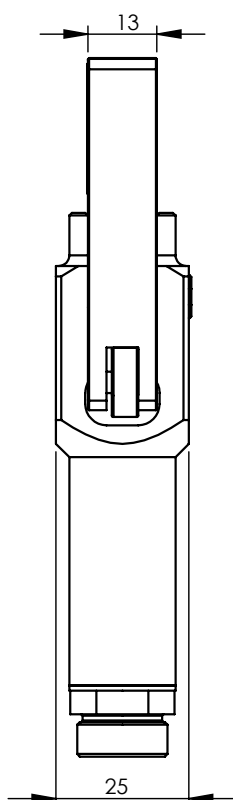
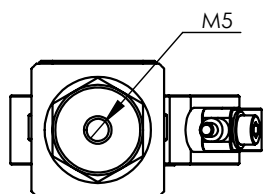
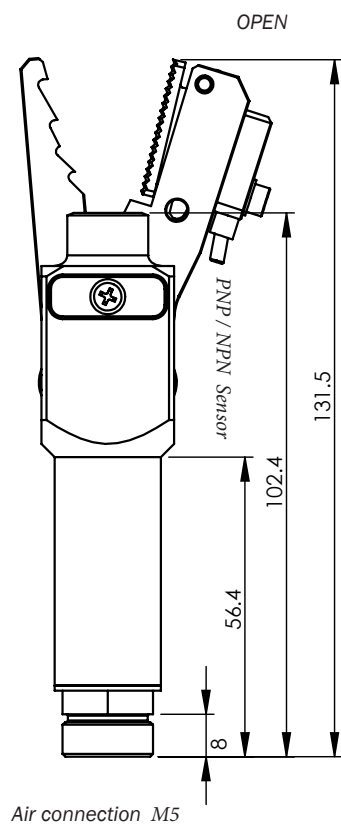
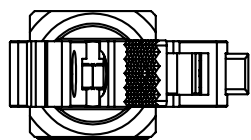
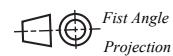
NEW



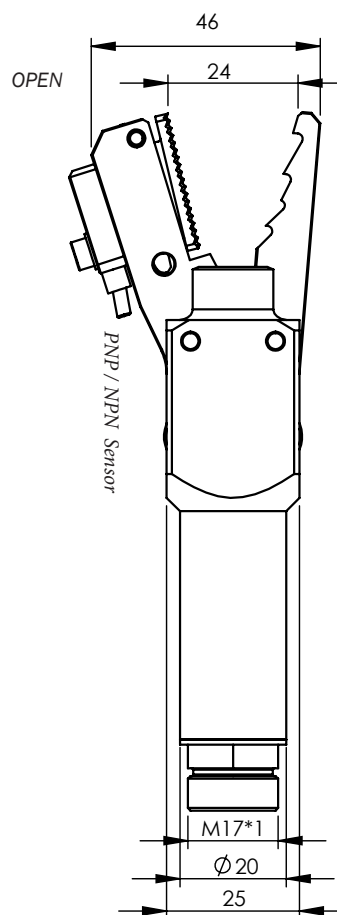
FGST20F-16-CP/CN

Piston bore: 16mm.
Aluminum jaws F-type
Single-action
Sensor on the jaw

Dimensions (mm)



Air connection M5



Air connection M5

NEW

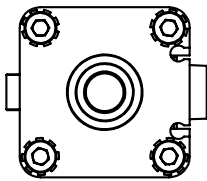
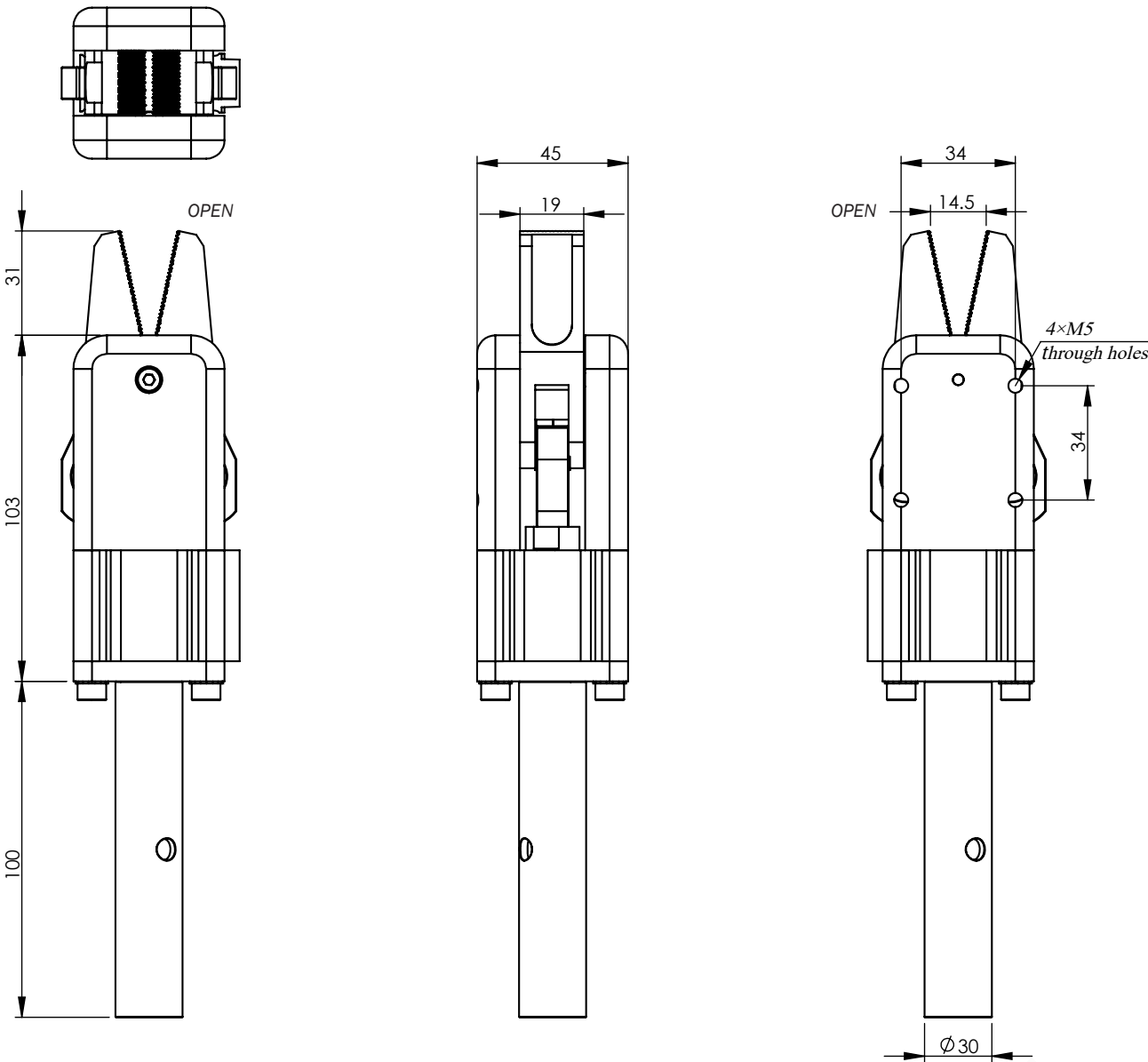


FGSRP-32A

Cylinder pushing
Steel jaws A-type
Double action

Dimensions (mm)

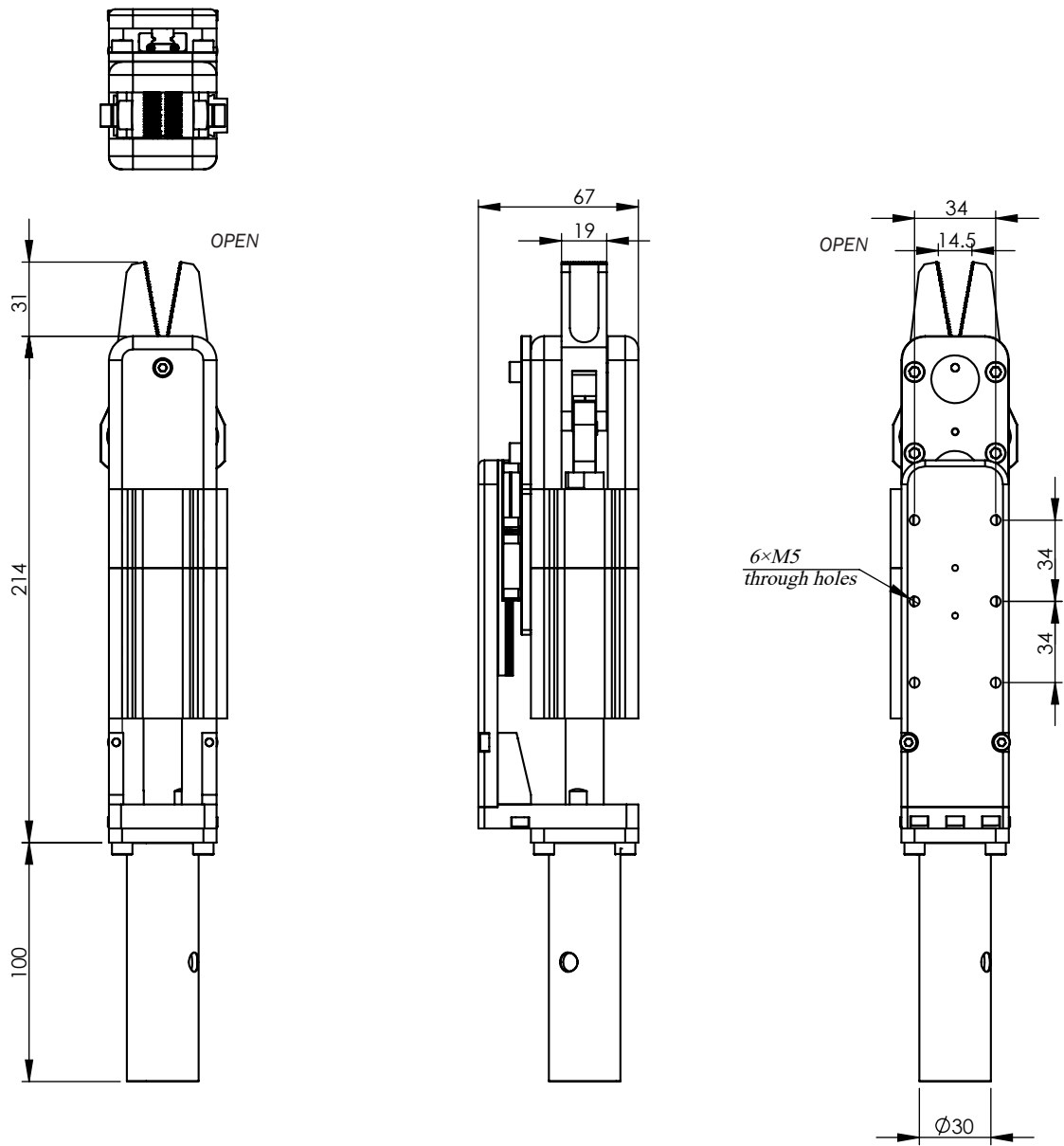
First Angle
Projection



FGSRP-32A-30

Cylinder pushing
Steel jaws A-type
Double action
Stroke: 30mm

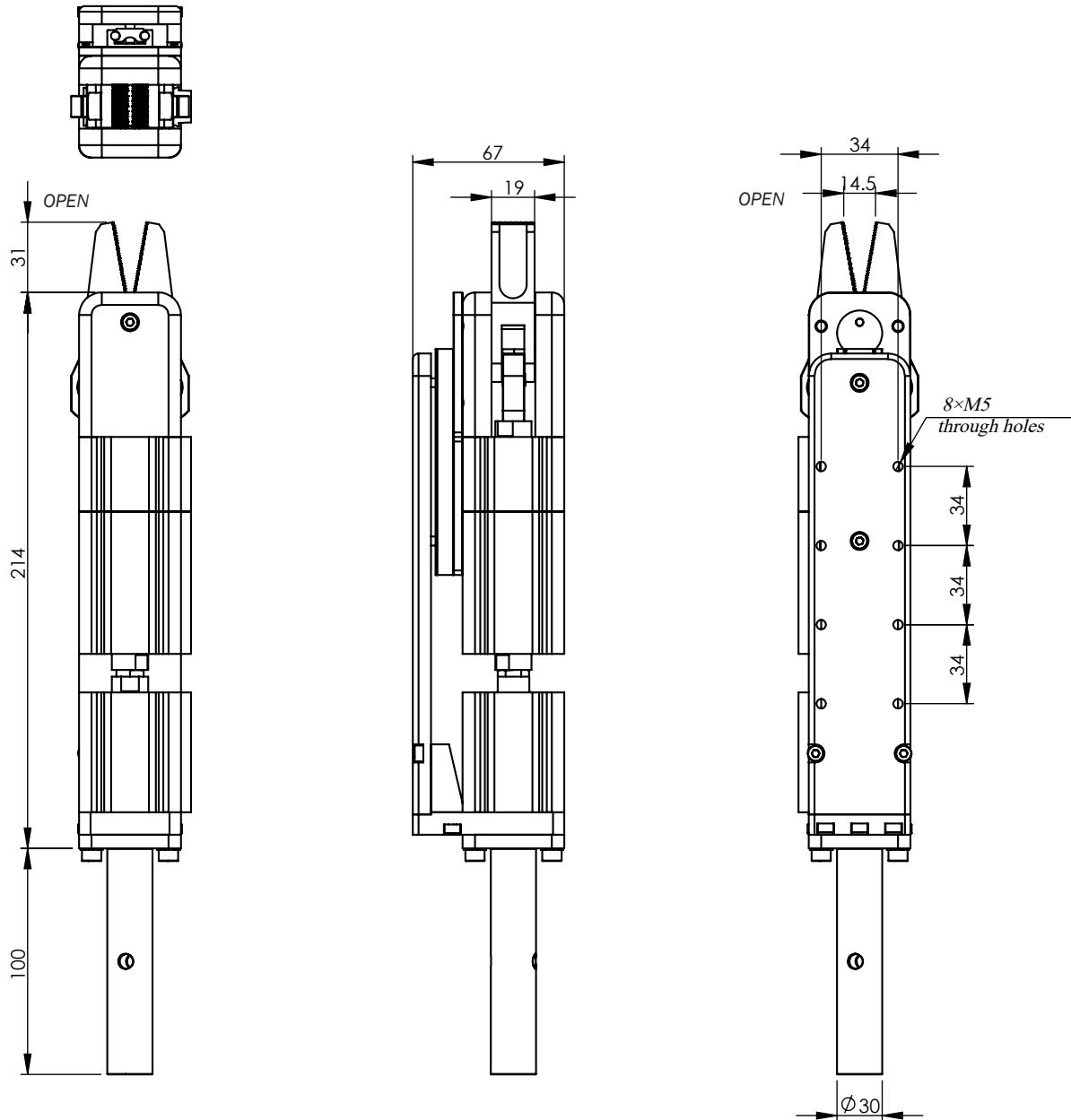
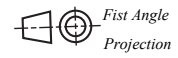
Dimensions (mm)



FGSRP-32A-3020

Cylinder pushing
Steel jaws A-type
Double action
Stroke: 30mm & 20mm

Dimensions (mm)



Finger Gripper

FGSR - series



FGSR14-35

FGSR14-90

FGSR14-95

FGSR14-95G

FGSR14-95L

FGSR14-95LG

FGSR20-35

FGSR20-90

FGSR20-95

FGSR20-95G

FGSR20-95L

FGSR20-95LG

Model	FGSR14-35	FGSR20-35	FGSR14-90	FGSR20-90	FGSR14-95	FGSR20-95	FGSR14-95G	FGSR20-95G	FGSR14-95L	FGSR20-95L	FGSR14-95LG	FGSR20-95LG
Medium	Filtered & Compressed Air											
Pressure Range	2.5 ~ 8 bar											
Temperature Range	5 ~ 60 degree											
Stroke / degree	35	35	90	90	95	95	95	95	95	95	95	95
Max Working Frequency	3Hz											
Cycle Air Consumption	0.4cm ³	3.52cm ³	1cm ³	3.52cm ³	1cm ³	3.52cm ³	1cm ³	3.52cm ³	1cm ³	3.52cm ³	1cm ³	3.52cm ³
Closing time without load	0.01s											
Closing gripping torque	26N/cm	100N/cm	19N/cm	70N/cm	19N/cm	70N/cm	19N/cm	70N/cm	19N/cm	70N/cm	19N/cm	70N/cm
Air Inlet	M5											
Weight / g	25	65	23	60	25	60	32	70	28	65	36	75



Model	FGSR20-95S	FGSR20-95SG	FGSR30-35	FGSR30-90	FGSR30-95	FGSR30-95G
Medium	Filtered & Compressed Air					
Pressure Range	2.5 ~ 8 bar					
Temperature Range	5 ~ 60 degree					
Stroke / degree	95	95	35	90	95	95
Max Working Frequency	3Hz					
Cycle Air Consumption	3.52cm ³	3.52cm ³	4.56cm ³	4.56cm ³	4.56cm ³	4.56cm ³
Closing time without load	0.01s					
Closing gripping torque	70N/cm	70N/cm	430N/cm	300N/cm	300N/cm	300N/cm
Air Inlet	M5	M5	G1/8	G1/8	G1/8	G1/8
Weight / g	92	100	206	185	185	200

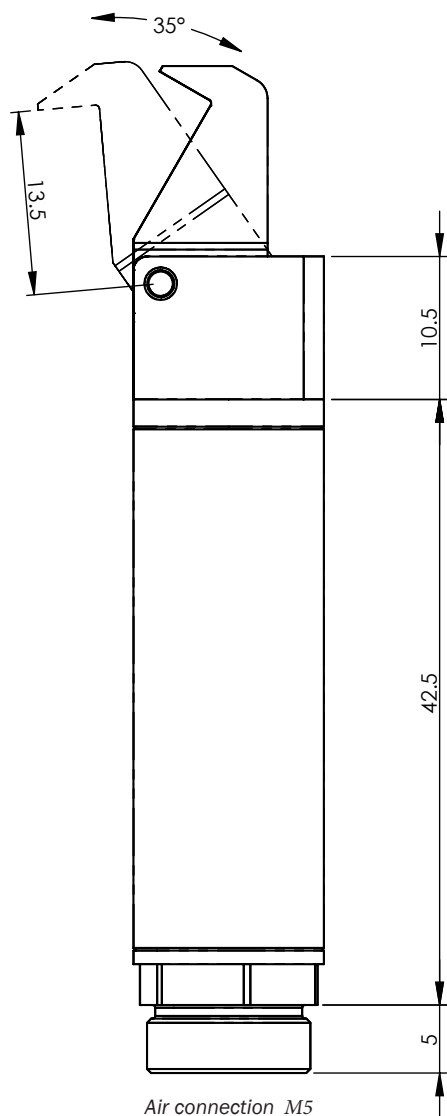
FGSR14-35

Piston bore: 10mm

Single action

Angle degree: 35°

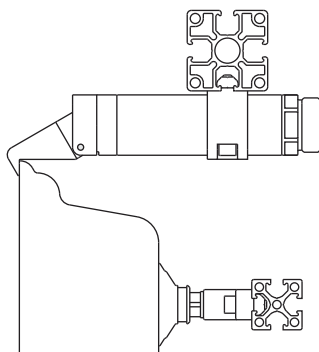
Dimensions (mm)



First Angle
Projection



Application example

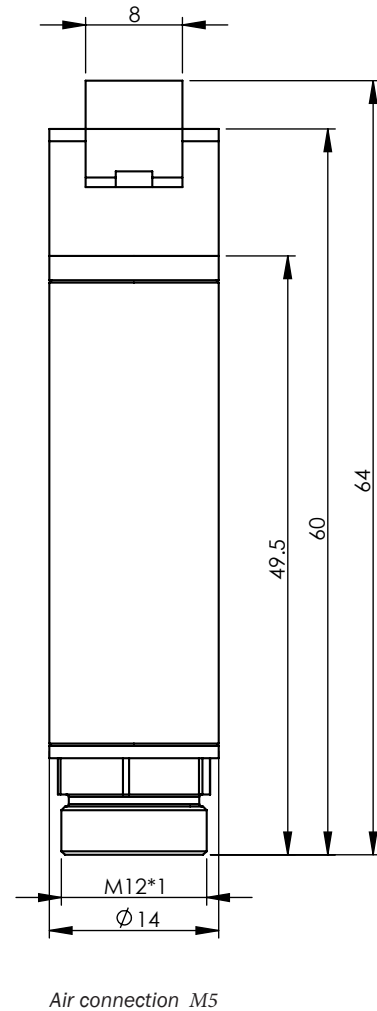
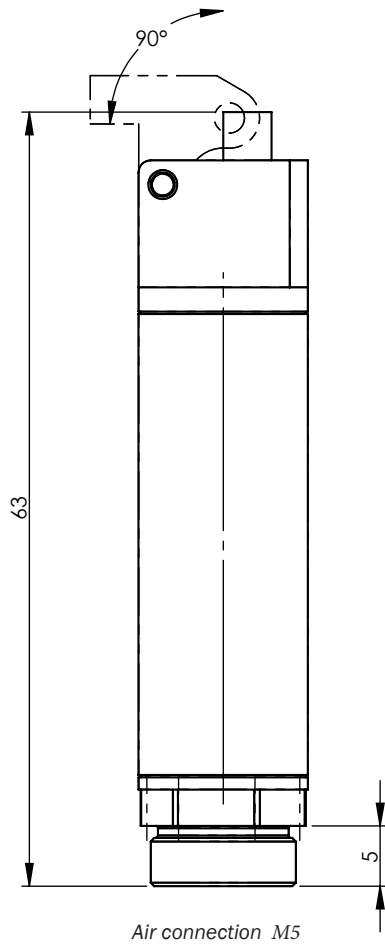


FGSR14-90

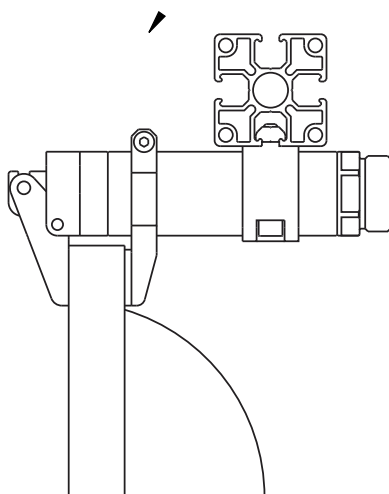
Piston bore: 10mm
Single action
Angle degree: 90°

Dimensions (mm)

 First Angle
Projection



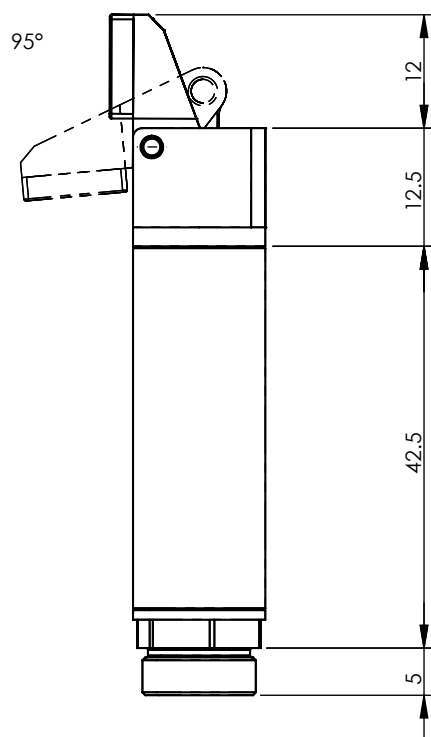
Application example



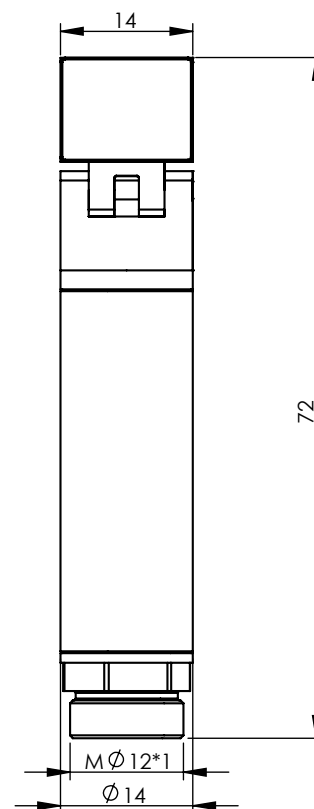
FGSR14-95

Piston bore: 10mm
Single action
Angle degree: 95°

Dimensions (mm)

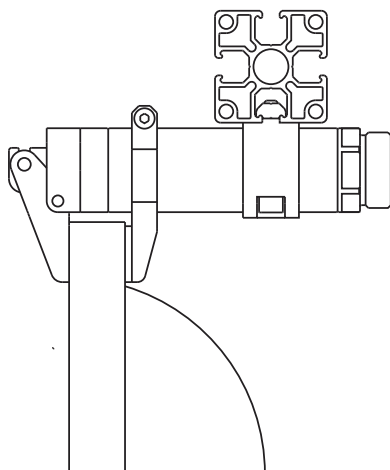


Air connection M5



Air connection M5

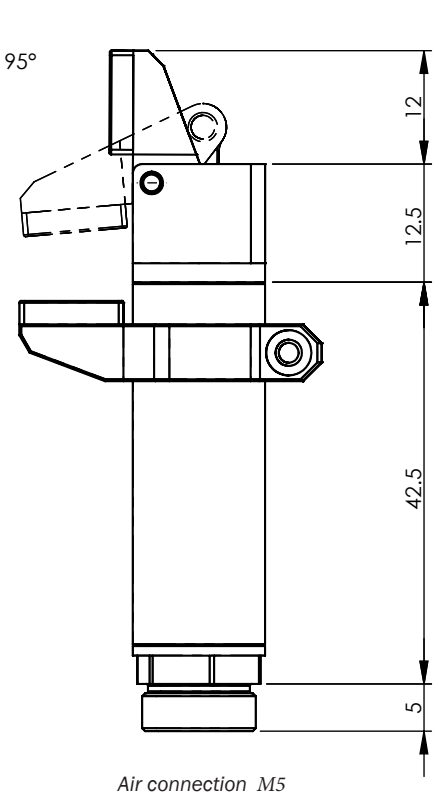
Application example



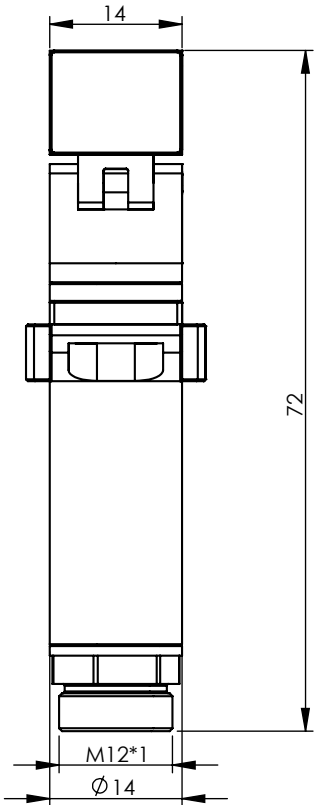
FGSR14-95G

Piston bore: 10mm
Single action
Angle degree: 95°

Dimensions (mm)

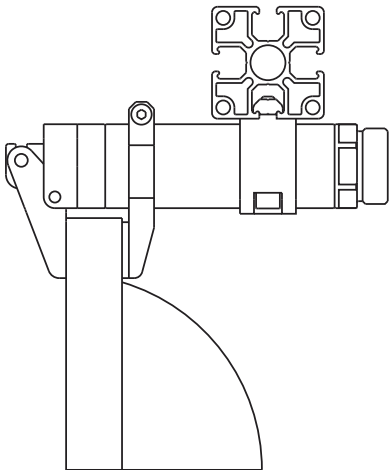


Air connection M5



Air connection M5

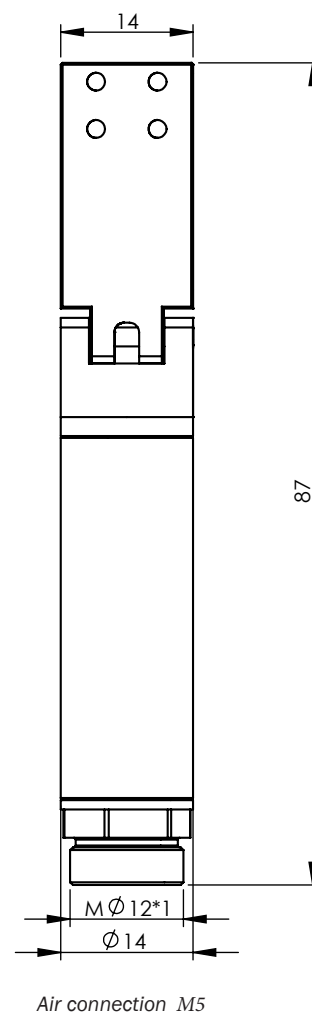
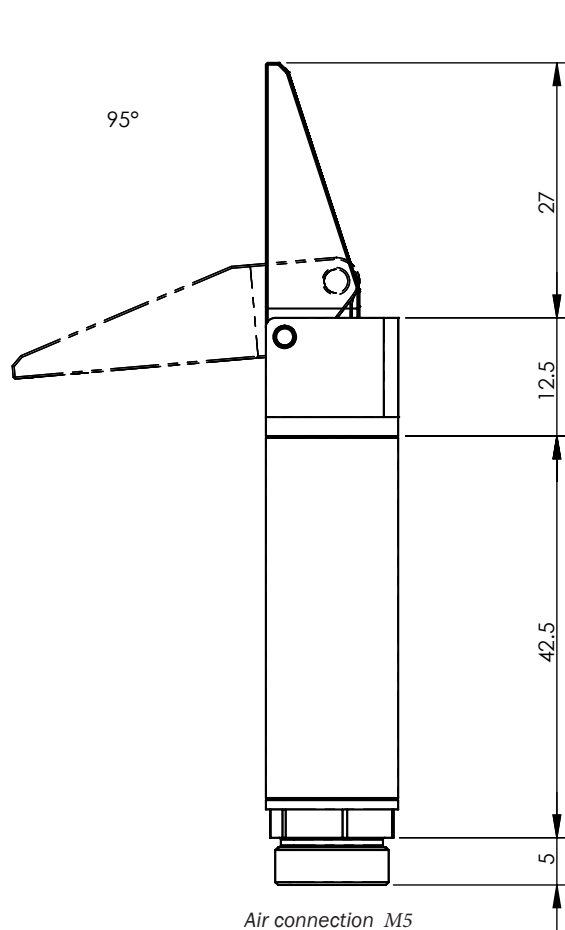
Application example



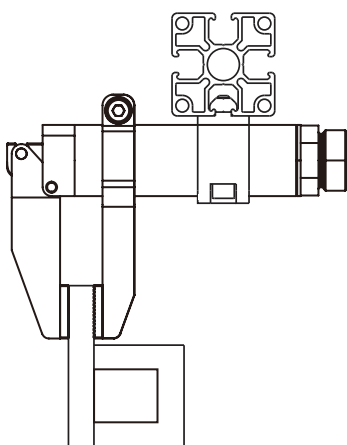
FGSR14-95L

Piston bore: 10mm
Single action
Angle degree: 95°

Dimensions (mm)



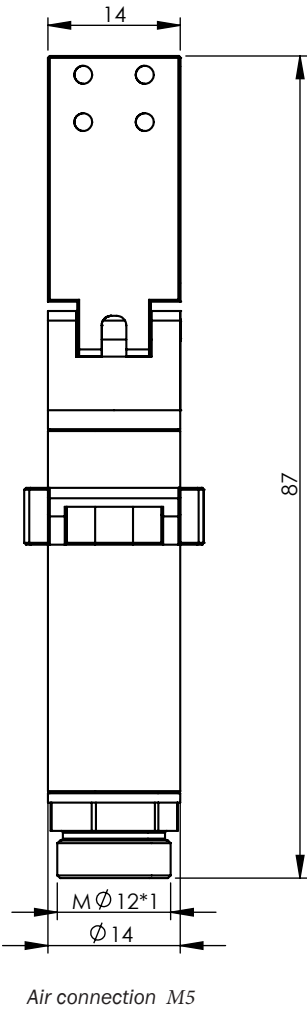
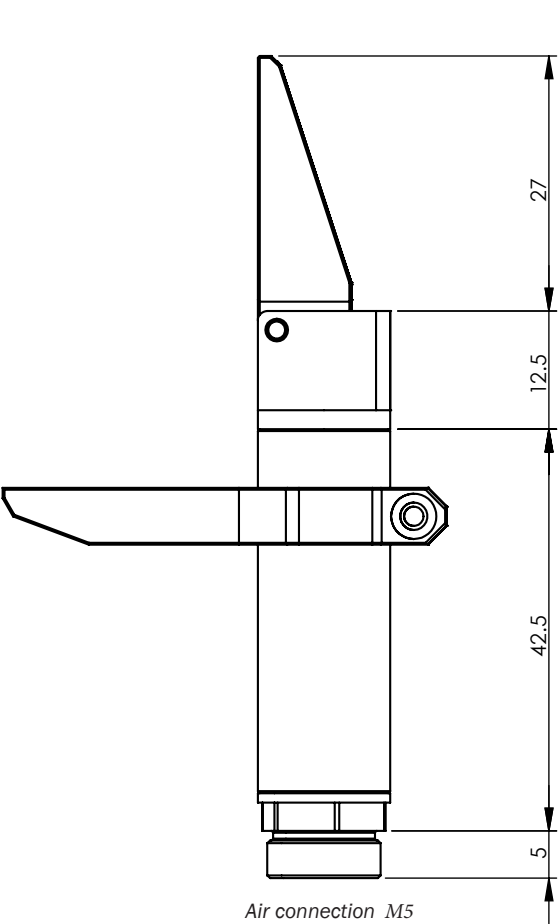
Application example



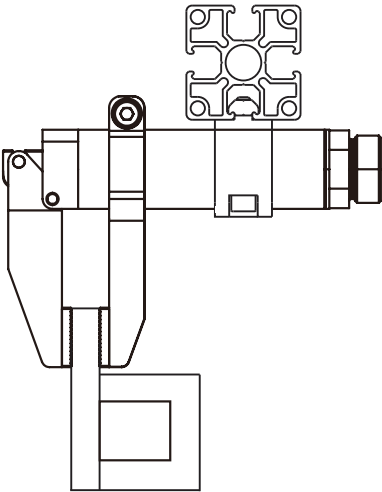
FGSR14-95LG

Piston bore: 10mm
Single action
Angle degree: 95°

Dimensions (mm)



Application example



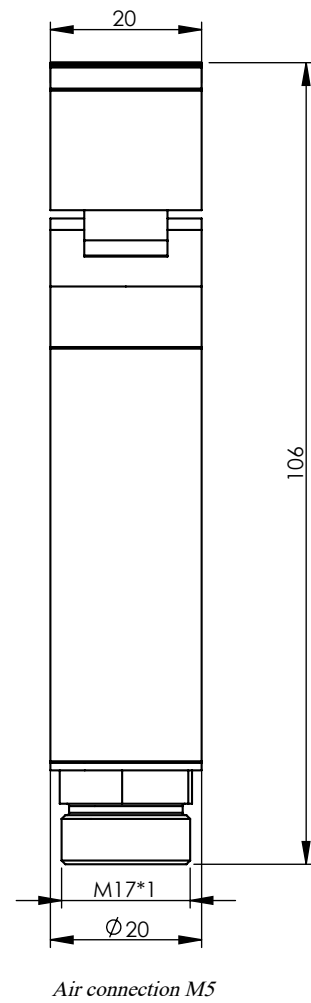
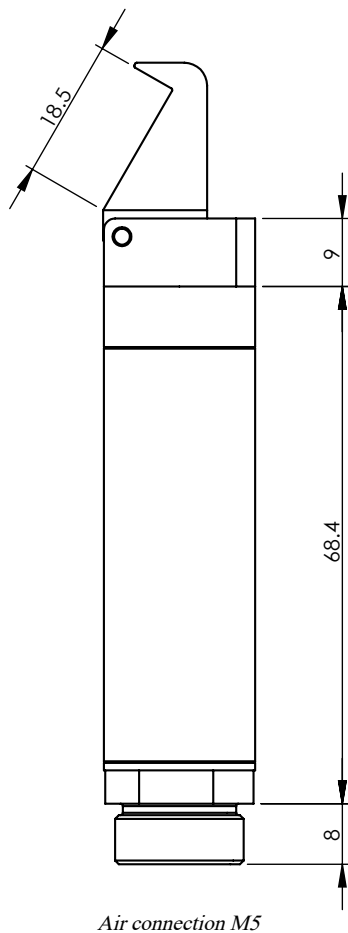
NEW



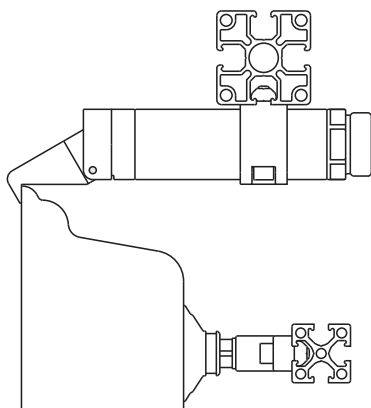
FGSR20-35

Piston bore: 16mm
Single action
Angle degree: 35°

Dimensions (mm)



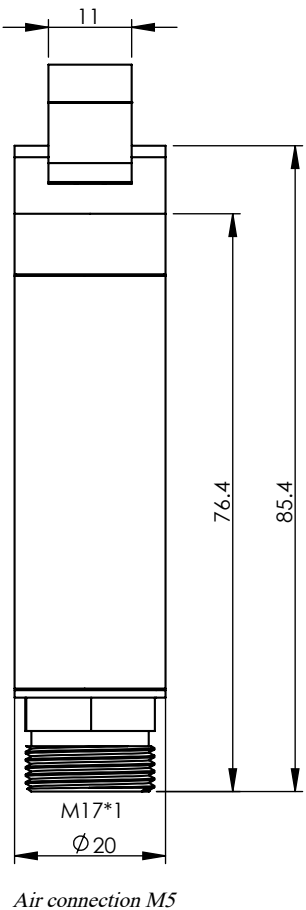
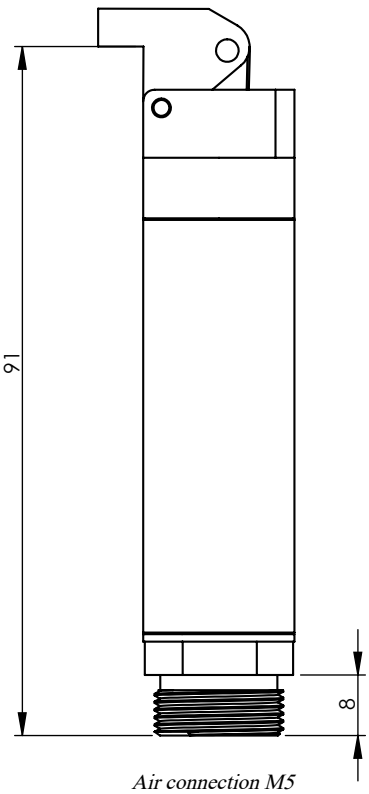
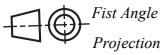
Application example



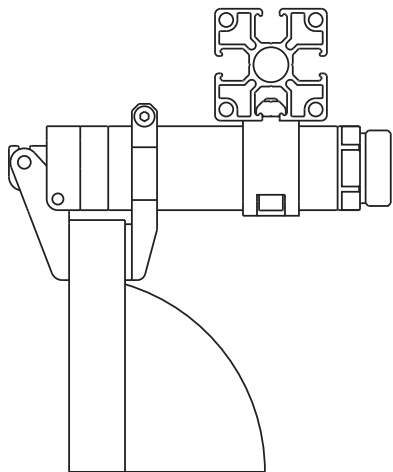
FGSR20-90

Piston bore: 16mm
Single action
Angle degree: 90°

Dimensions (mm)



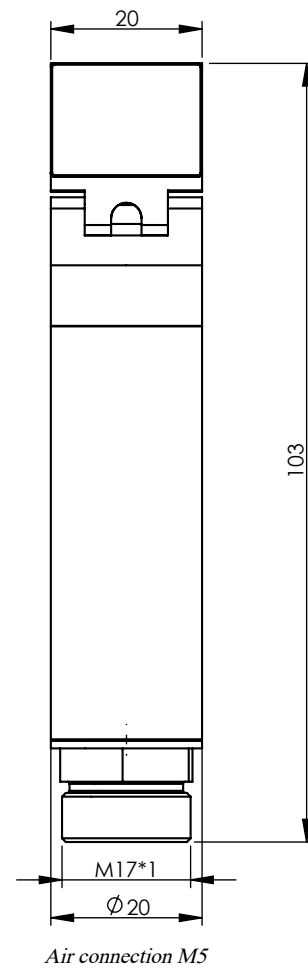
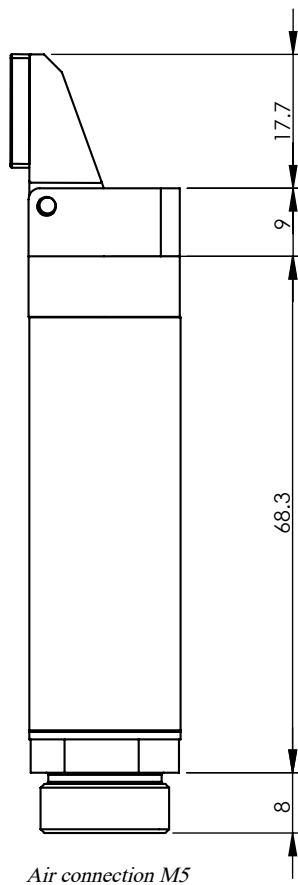
Application example



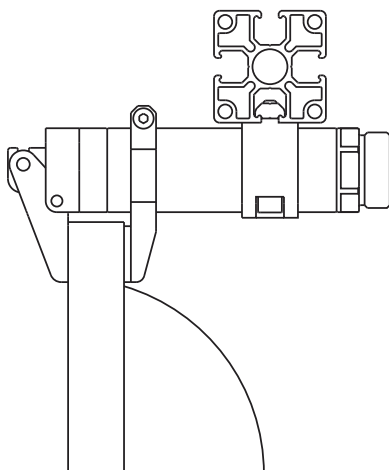
FGSR20-95

Piston bore: 16mm
Single action
Angle degree: 95°

Dimensions (mm)



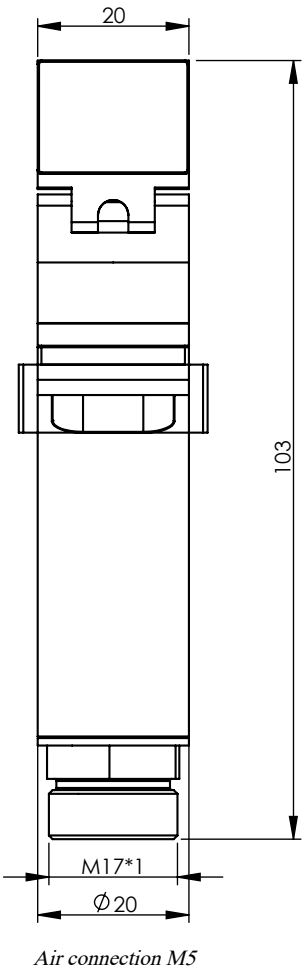
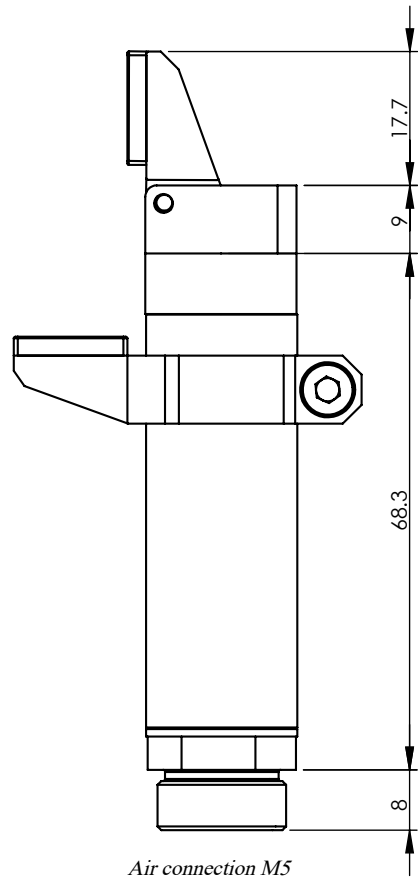
Application example



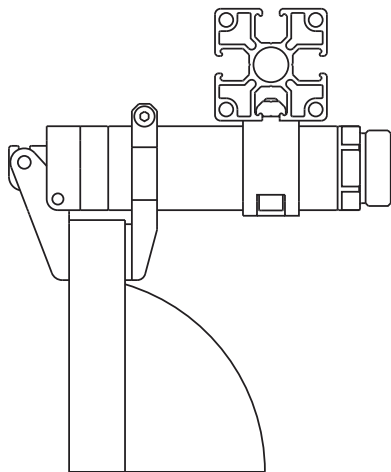
FGSR20-95G

Piston bore: 16mm
Single action
Angle degree: 95°

Dimensions (mm)



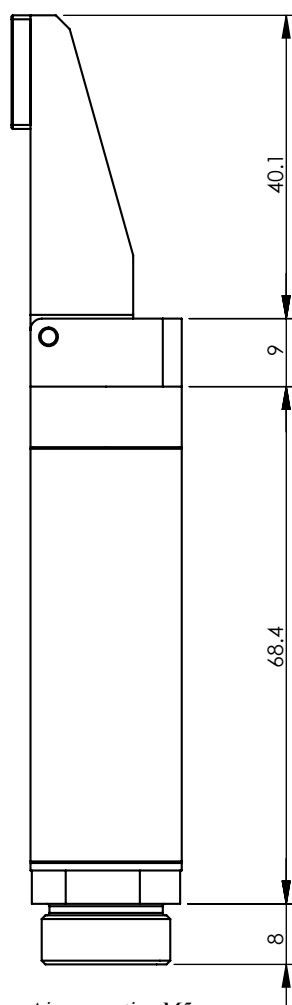
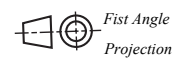
Application example



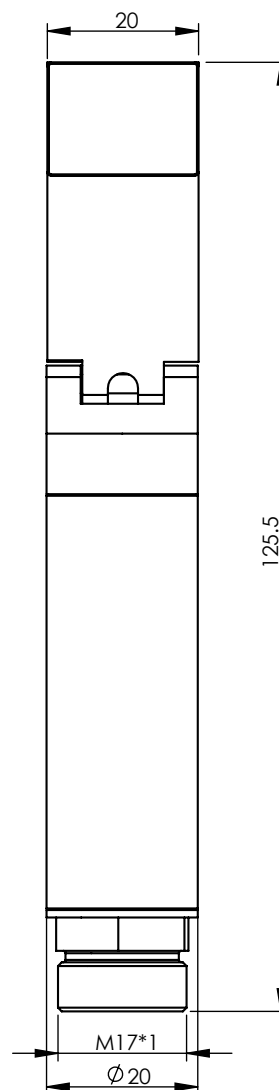
FGSR20-95L

Piston bore: 16mm
Single action
Angle degree: 95°

Dimensions (mm)

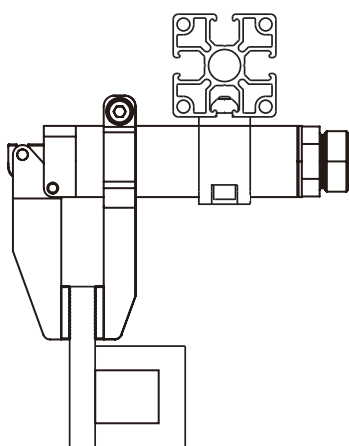


Air connection M5



Air connection M5

Application example



NEW

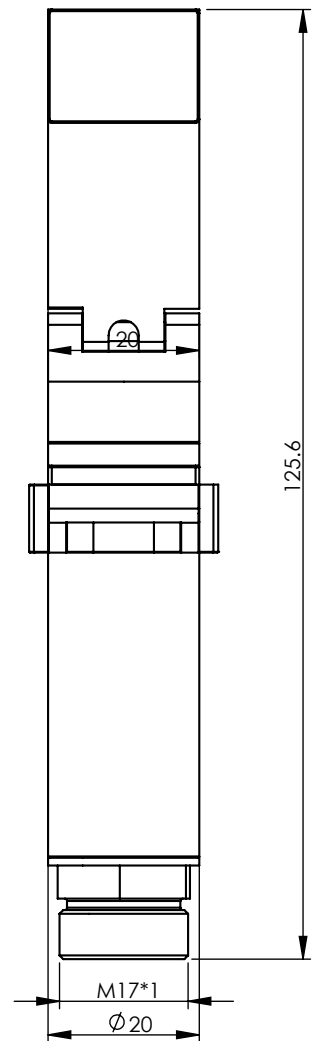
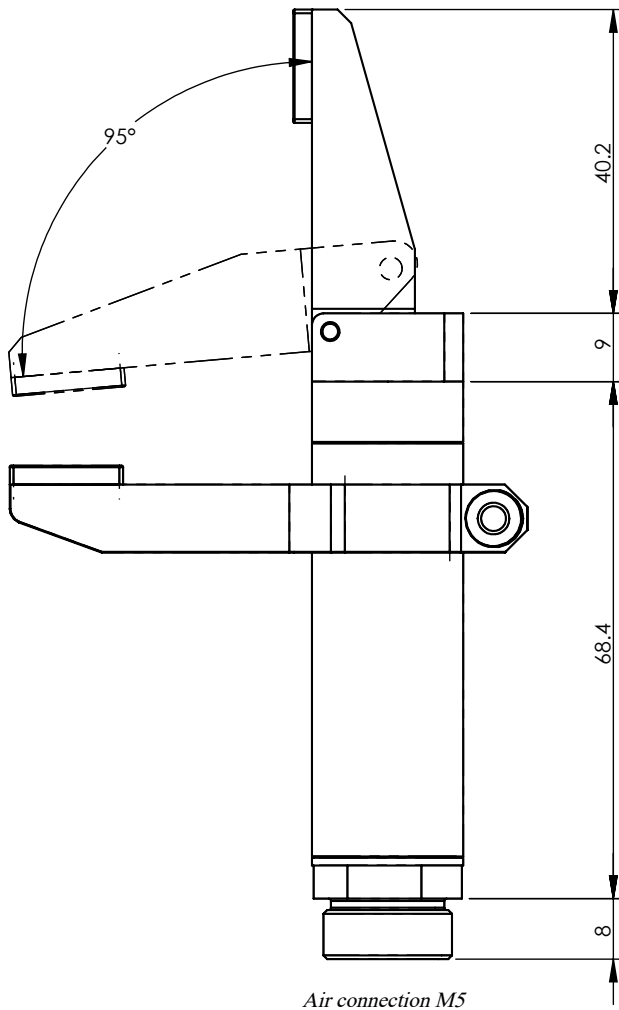


FGSR20-95LG

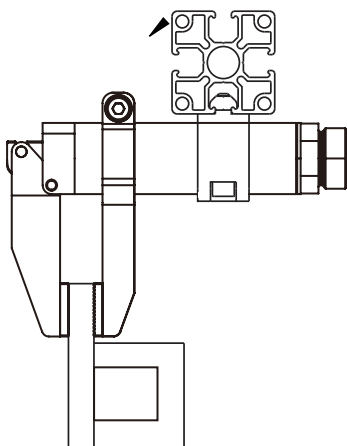
Piston bore: 16mm
Single action
Angle degree: 95°

Dimensions (mm)

 First Angle
Projection



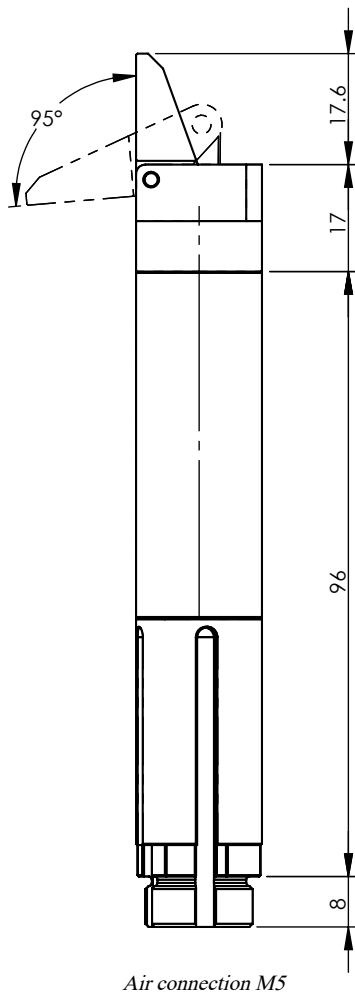
Application example



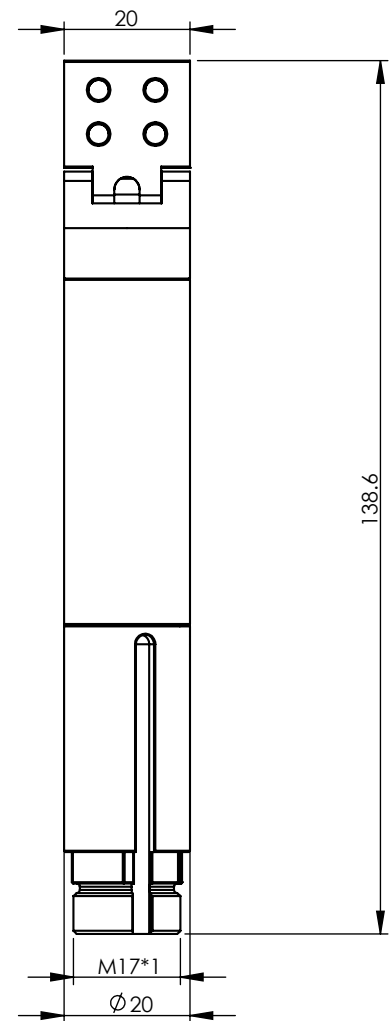
FGSR20-95S

Piston bore: 16mm
Single action
Angle degree: 95°

Dimensions (mm)

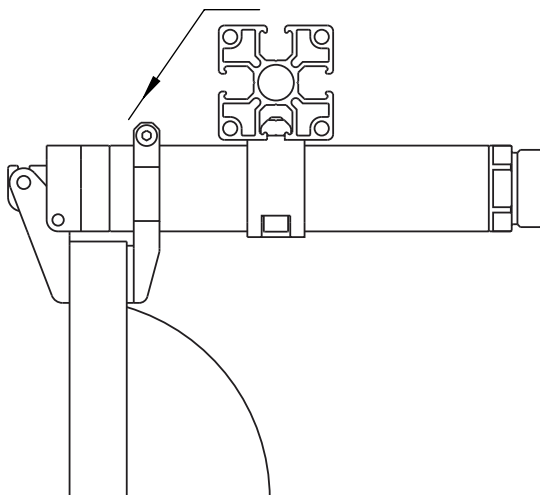


Air connection M5



Air connection M5

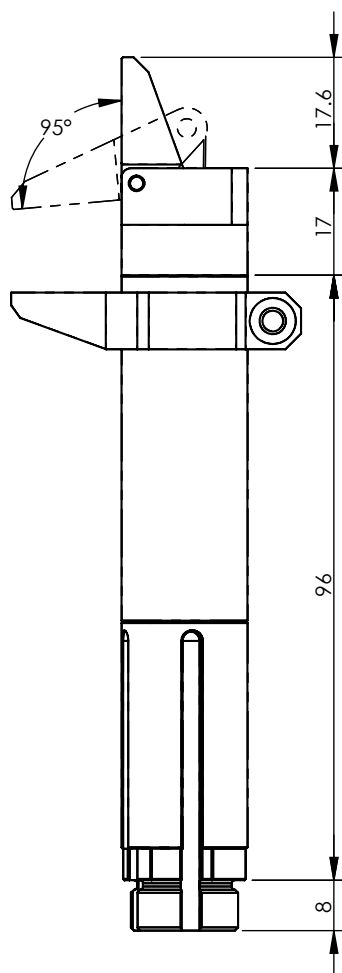
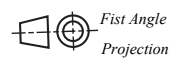
Application example



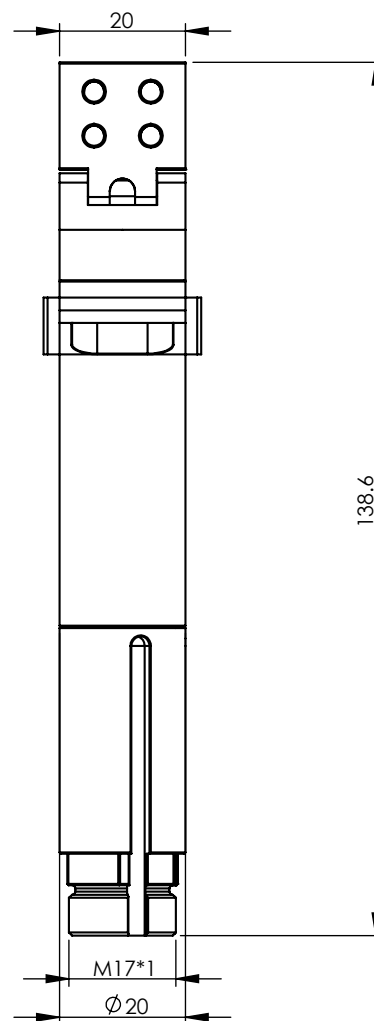
FGSR20-95SG

Piston bore: 16mm
Single action
Angle degree: 95°

Dimensions (mm)

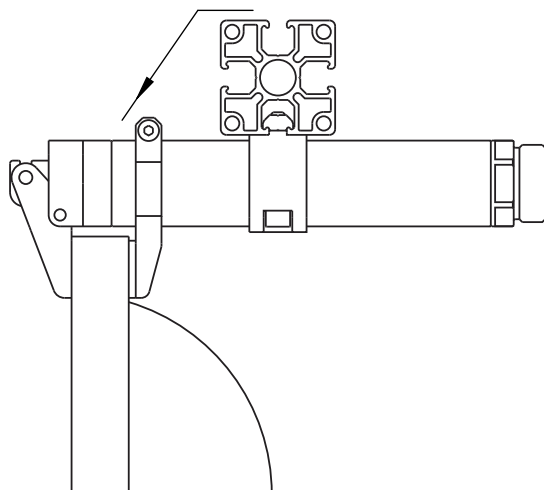


Air connection M5



Air connection M5

Application example



FGSR30-35

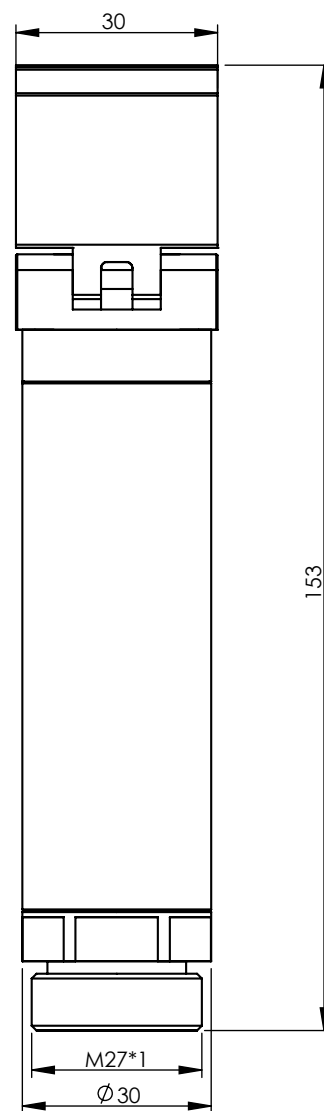
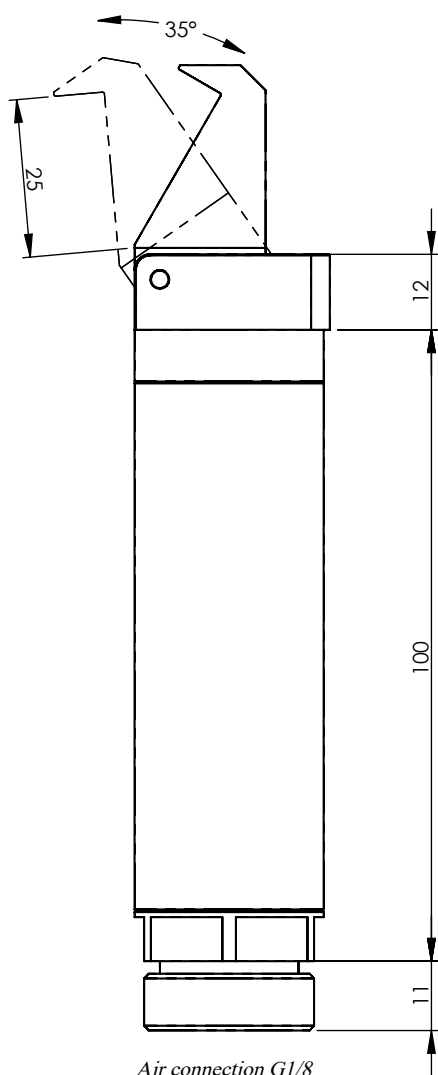
Piston bore: 25mm

Single action

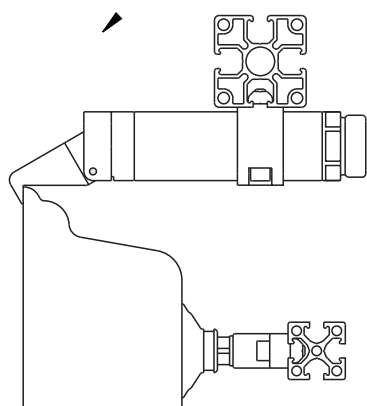
Angle degree: 35°

Dimensions (mm)

Fist Angle
Projection



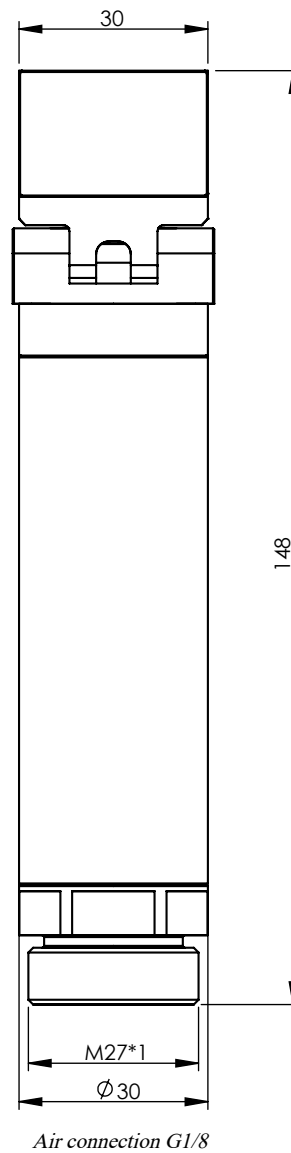
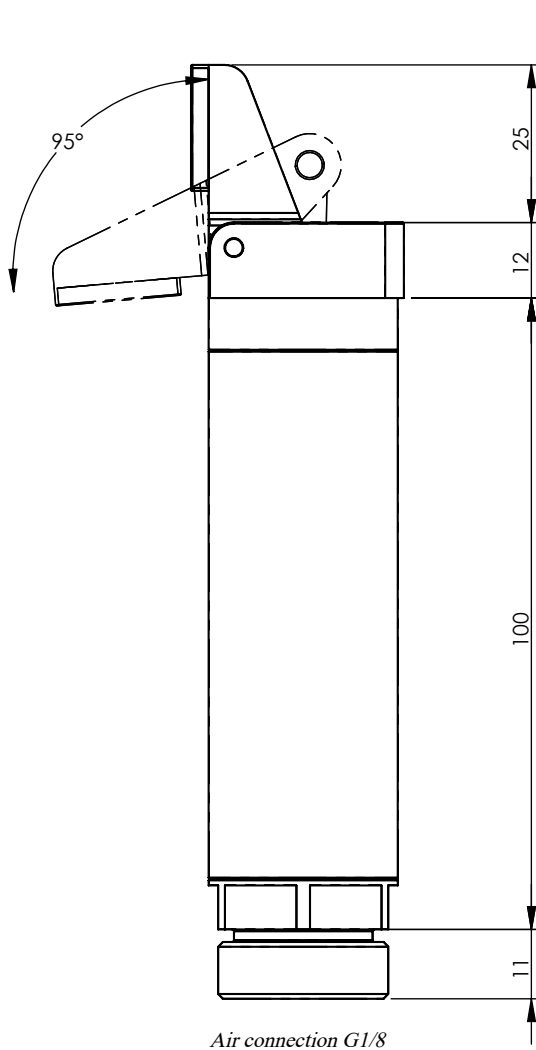
Application example



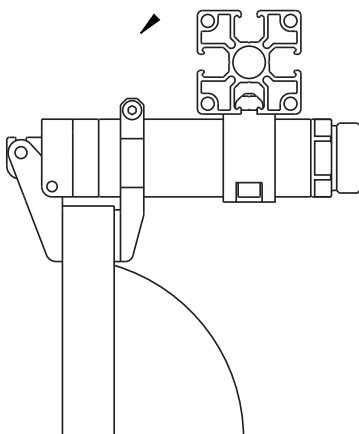
FGSR30-95

Piston bore: 25mm
Single action
Angle degree: 95°

Dimensions (mm)



Application example



NEW

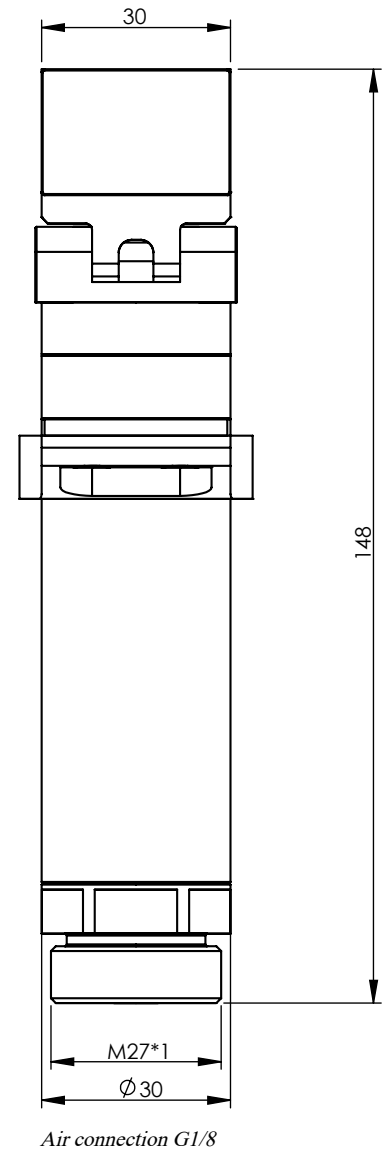
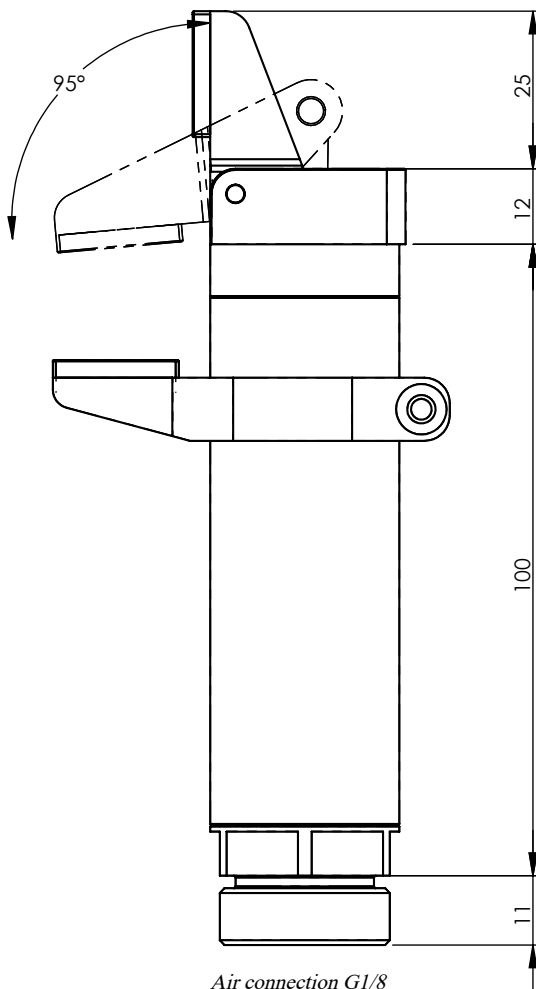


FGSR30-95G

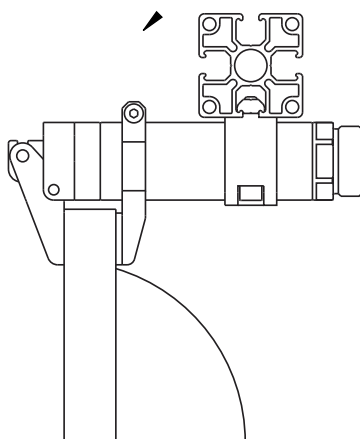
Piston bore: 25mm
Single action
Angle degree: 95°

Dimensions (mm)

First Angle
Projection



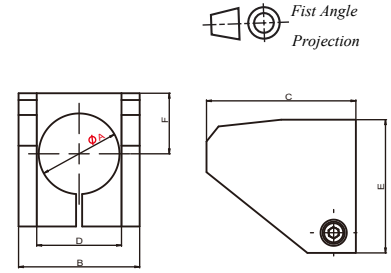
Application example



Finger Gripper Fitting

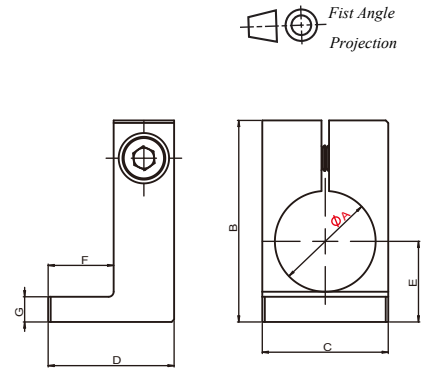
Dimensions (mm)

Model	A	B	C	D	E	F	Weight
FGS1-20	∅20	30	37	21	33	15	20g
FGS1-30	∅30	45	65	32	44	20	60g



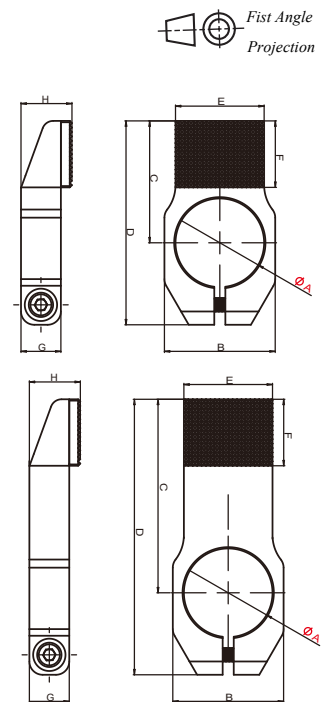
Dimensions (mm)

Model	A	B	C	D	E	F	G	Weight
FGS2-14	∅14	24	19	12	11	6	3.5	5g
FGS2-20	∅20	35	25	25	16	13	5	14g
FGS2-30	∅30	45	35	25	21	13	5.5	23g



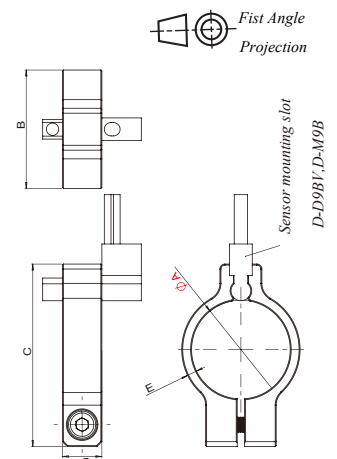
Dimensions (mm)

Model	A	B	C	D	E	F	G	H	Weight
FGS3-14	∅14	19	14	32	19	10	6	11	6g
FGS3-20	∅20	25	20	43.5	27.5	9.5	7	15	12g
FGS3-30	∅30	37	30	63	40	12	9	20	30g
FGS3-14L	∅14	19	35	47	14			8.5	15g
FGS3-20L	∅20	25	50	68.5	20			9.5	25g



Dimensions (mm)

Model	A	B	C	D	E	Weight
FGS4-14	∅14	18	30	8	2	14g
FGS4-20	∅20	24	37	8	2	17g
FGS4-30	∅30	34	47	8	2	25g



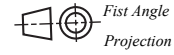
Parallel Gripper FMHZ2 - series

Single / Double acting

Long cycle life & stable & reliability

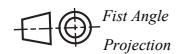
Magnetic Sensor option with flexible mounting ways

Dimensions (mm)

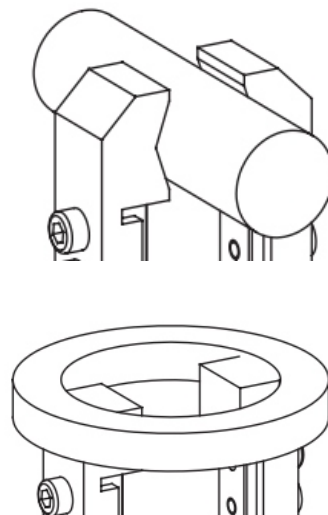
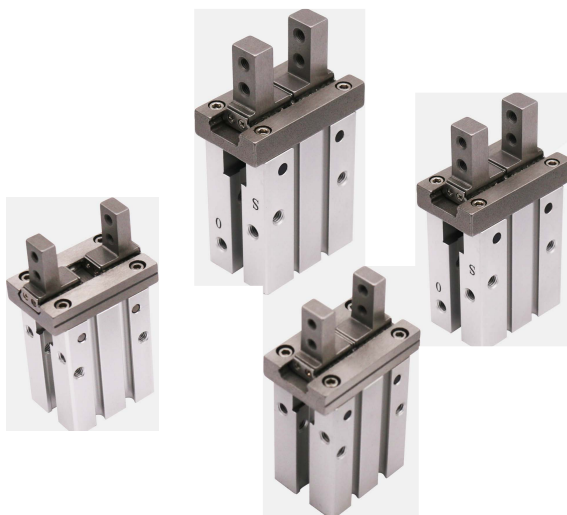


Model	Action direction		Bore / mm	Pressure range / MPa	Temperature range / °C	Repetition accuracy / mm	Frequency Max. / minute	Clamping force / N		Stroke / mm	Air inlet mm	Weight / g
	Single	Double						External	Internal			
FMHZ2-10S	S		10	0.35 ~ 7	(-10 ~ 60°C) (-0.01 ~ 0.01)		180	11	17	4	M3*0.5	53
FMHZ2-10D		D	10	0.2 ~ 0.7	(-10 ~ 60°C) (-0.01 ~ 0.01)		180	11	17	4	M3*0.5	52.5
FMHZ2-16S	S		16	0.25 ~ 7	(-10 ~ 60°C) (-0.01 ~ 0.01)		180	34	45	6	M5*0.8	123
FMHZ2-16D		D	16	0.1 ~ 0.7	(-10 ~ 60°C) (-0.01 ~ 0.01)		180	34	45	6	M5*0.8	120
FMHZ2-20S	S		20	0.25 ~ 7	(-10 ~ 60°C) (-0.01 ~ 0.01)		180	42	66	10	M5*0.8	227
FMHZ2-20D		D	20	0.1 ~ 0.7	(-10 ~ 60°C) (-0.01 ~ 0.01)		180	42	66	10	M5*0.8	225
FMHZ2-25S	S		25	0.25 ~ 7	(-10 ~ 60°C) (-0.01 ~ 0.01)		180	65	104	14	M5*0.8	309
FMHZ2-25D		D	25	0.1 ~ 0.7	(-10 ~ 60°C) (-0.01 ~ 0.01)		180	65	104	14	M5*0.8	314
FMHZ2-32S	S		32	0.25 ~ 7	(-10 ~ 60°C) (-0.02 ~ 0.02)		60	158	193	22	M5*0.8	415
FMHZ2-32D		D	32	0.1 ~ 0.7	(-10 ~ 60°C) (-0.02 ~ 0.02)		60	158	193	22	M5*0.8	410
FMHZ2-40S	S		40	0.25 ~ 7	(-10 ~ 60°C) (-0.02 ~ 0.02)		60	254	318	30	M5*0.8	543
FMHZ2-40D		D	40	0.1 ~ 0.7	(-10 ~ 60°C) (-0.02 ~ 0.02)		60	254	318	30	M5*0.8	537
Medium	Filtered & Compressed Air											

Dimensions (mm)



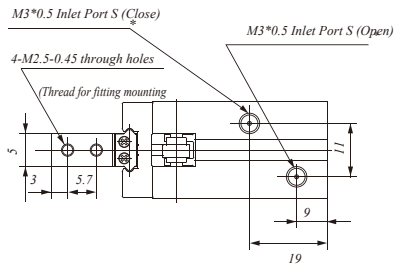
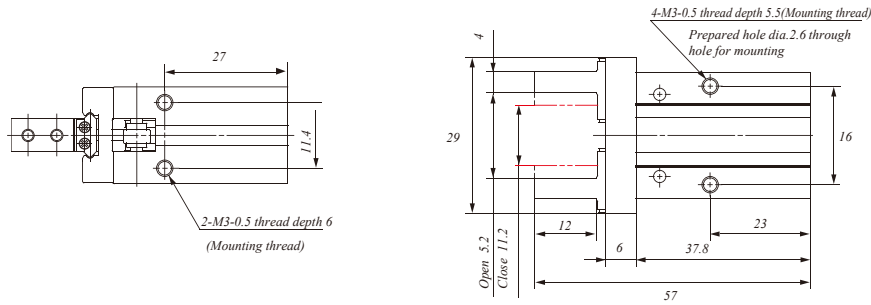
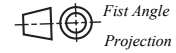
Application example



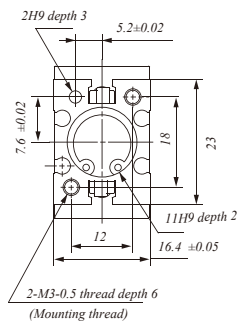
Parallel Gripper

FMHZ2 - 10 S / D

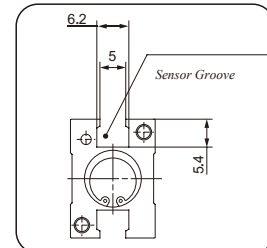
Dimensions (mm)



* For single acting, the port on one side is a breathing hole



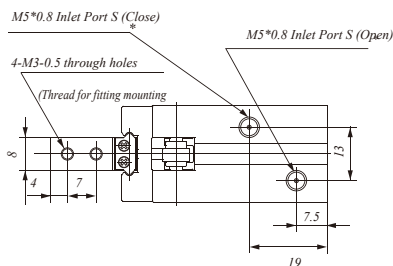
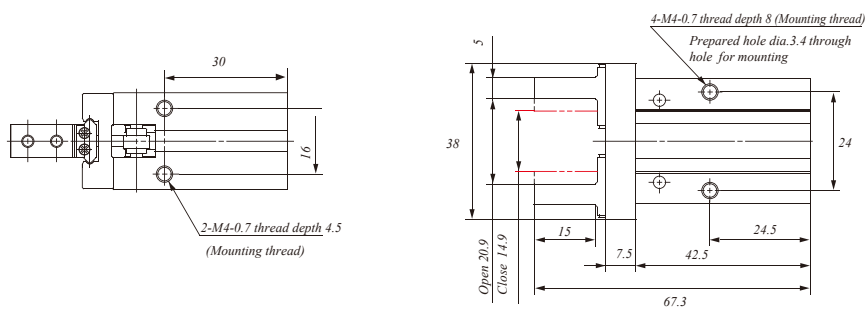
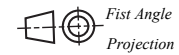
GMHZ2-10 S / D Sensor Groove Data



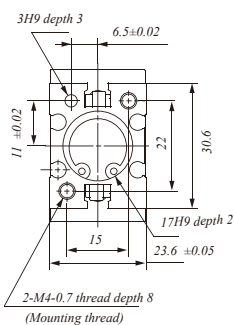
* When using Magnetic switches, through hole mounting is not possible.

FMHZ2 - 16 S / D

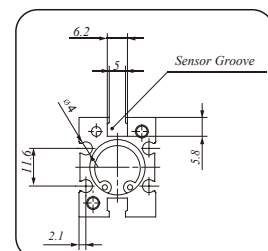
Dimensions (mm)



* For single acting, the port on one side is a breathing hole



GMHZ2-16 S / D Sensor Groove Data

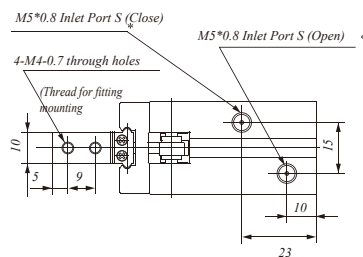
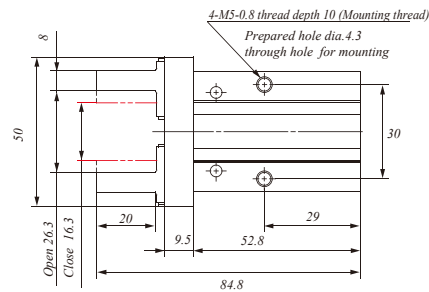
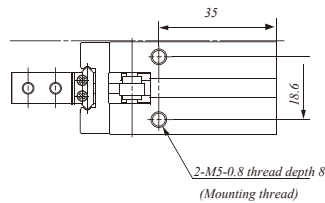
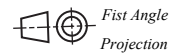


* When using Magnetic switches, through hole mounting is not possible.

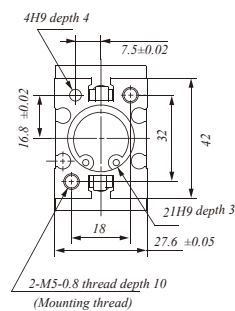
Parallel Gripper

FMHZ2 - 20 S / D

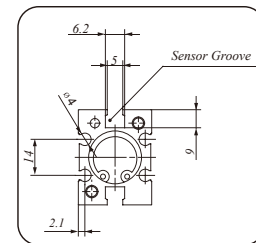
Dimensions (mm)



* For single acting, the port on one side is a breathing hole



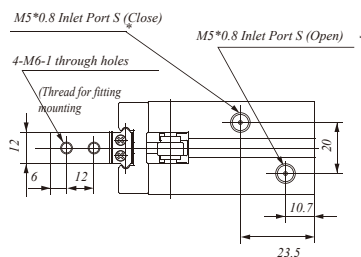
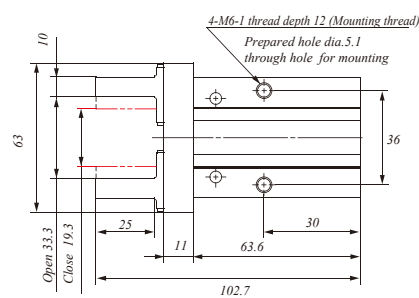
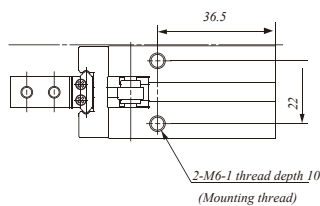
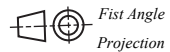
GMHZ2-20 S / D Sensor Groove Data



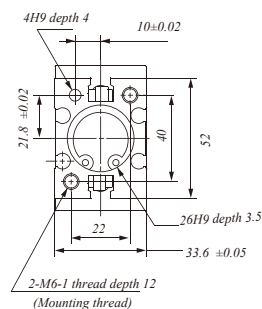
* When using Magnetic switches, through hole mounting is not possible.

FMHZ2 - 25 S / D

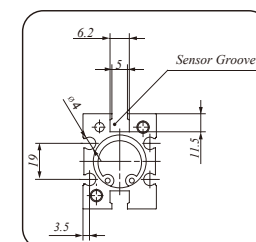
Dimensions (mm)



* For single acting, the port on one side is a breathing hole



GMHZ2-25 S / D Sensor Groove Data

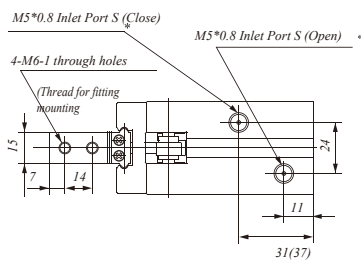
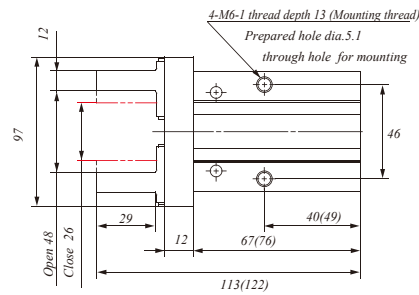
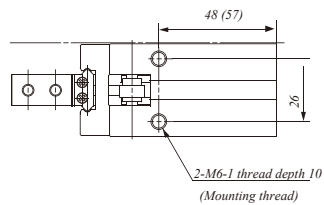
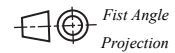


* When using Magnetic switches, through hole mounting is not possible.

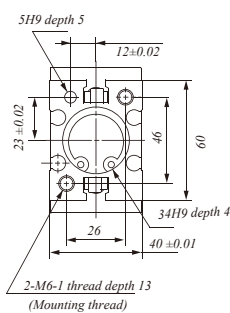
Parallel Gripper

FMHZ2 - 32 S / D

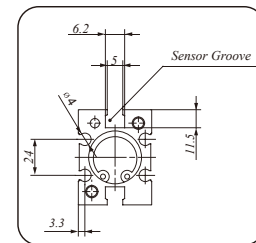
Dimensions (mm)



* For single acting, the port on one side is a breathing hole



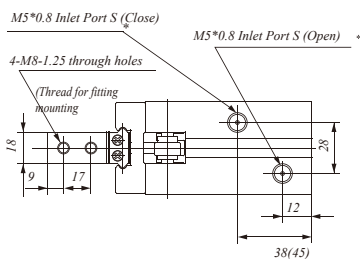
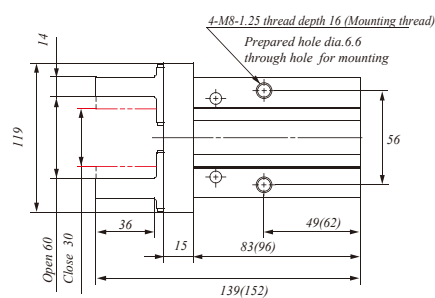
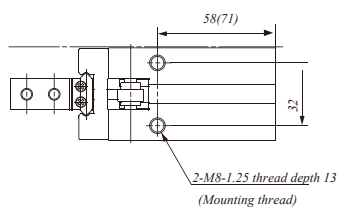
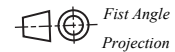
GMHZ2-32 S / D Sensor Groove Data



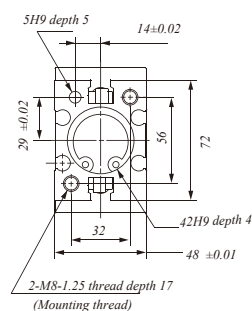
* When using Magnetic switches, through hole mounting is not possible.

FMHZ2 - 40 S / D

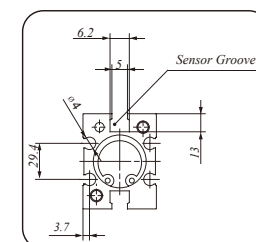
Dimensions (mm)



* For single acting, the port on one side is a breathing hole



GMHZ2-40 S / D Sensor Groove Data



* When using Magnetic switches, through hole mounting is not possible.

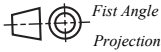
Square Quick Changer (Manual)

FGSS- series

Easy replace of the EOAT on the robot

Two parts (robot side & gripper side) are supplied separately

Loading capability option: 4, 10, 20, 40 KGS



Model	FGSS-R60	FGSS-G60	FGSS-R100	FGSS-G100	FGSS-R160	FGSS-G160	FGSS-R250	FGSS-G250
Robot Side quick changer	FGSS-R60		FGSS-R100		FGSS-R160		FGSS-R250	
Gripper side quick changer		FGSS-G60		FGSS-G100		FGSS-G160		FGSS-G250
Loading capability /KGS	4	4	10	10	20	20	40	40
Weight / g	146	78	620	270	1650	670	3720	1600

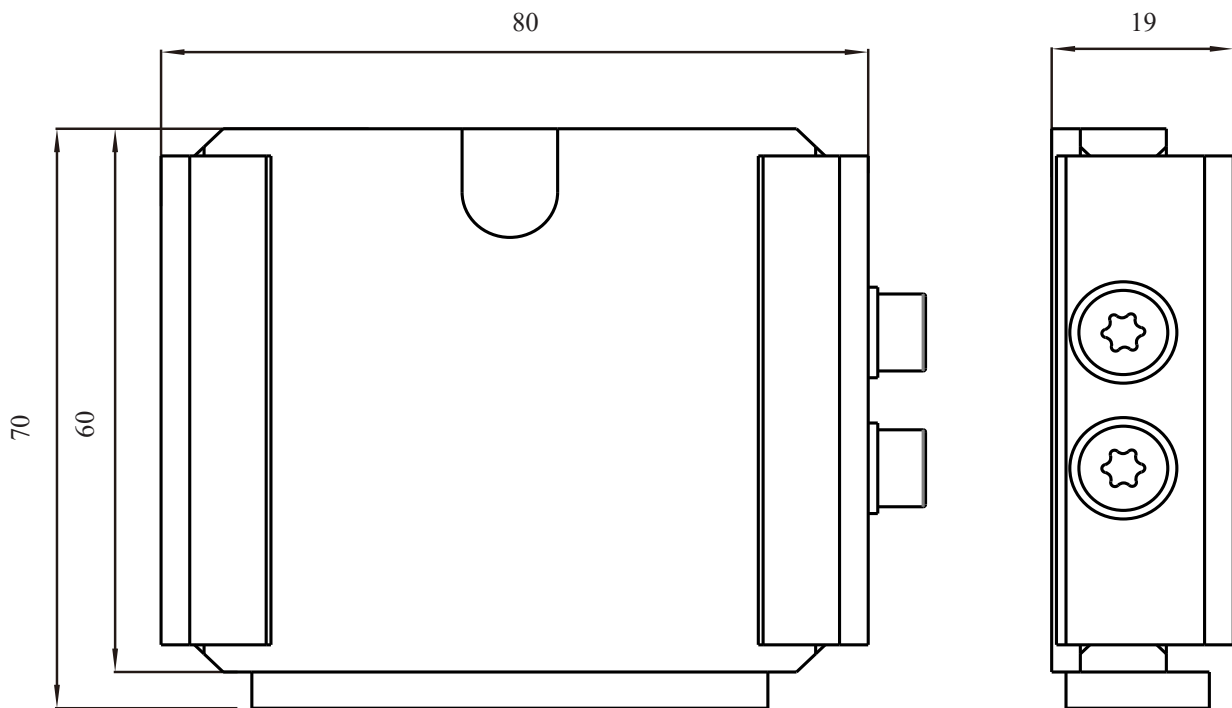
Dimensions (mm)



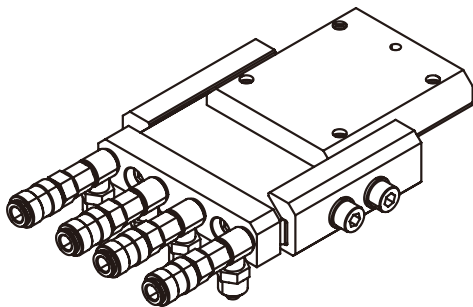
Square Quick Changer (Manual)

FGSS-R60 Robot side

Dimensions (mm)



Application example

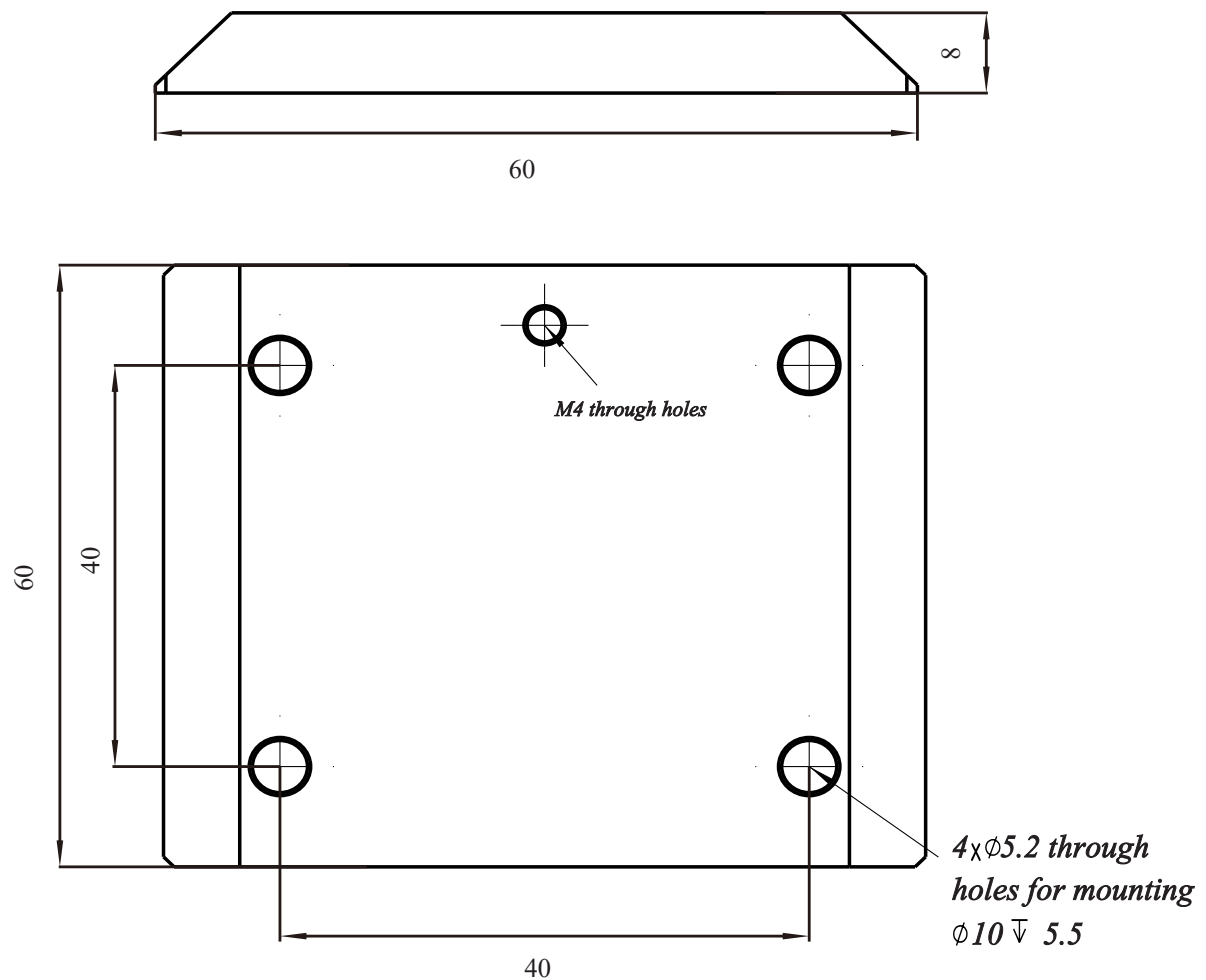


Square Quick Changer (Manual)

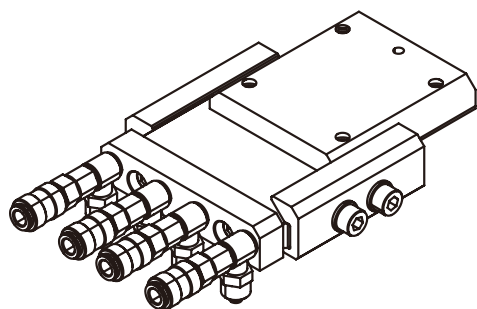
FGSS-G60 Gripper side

Dimensions (mm)

First Angle
Projection



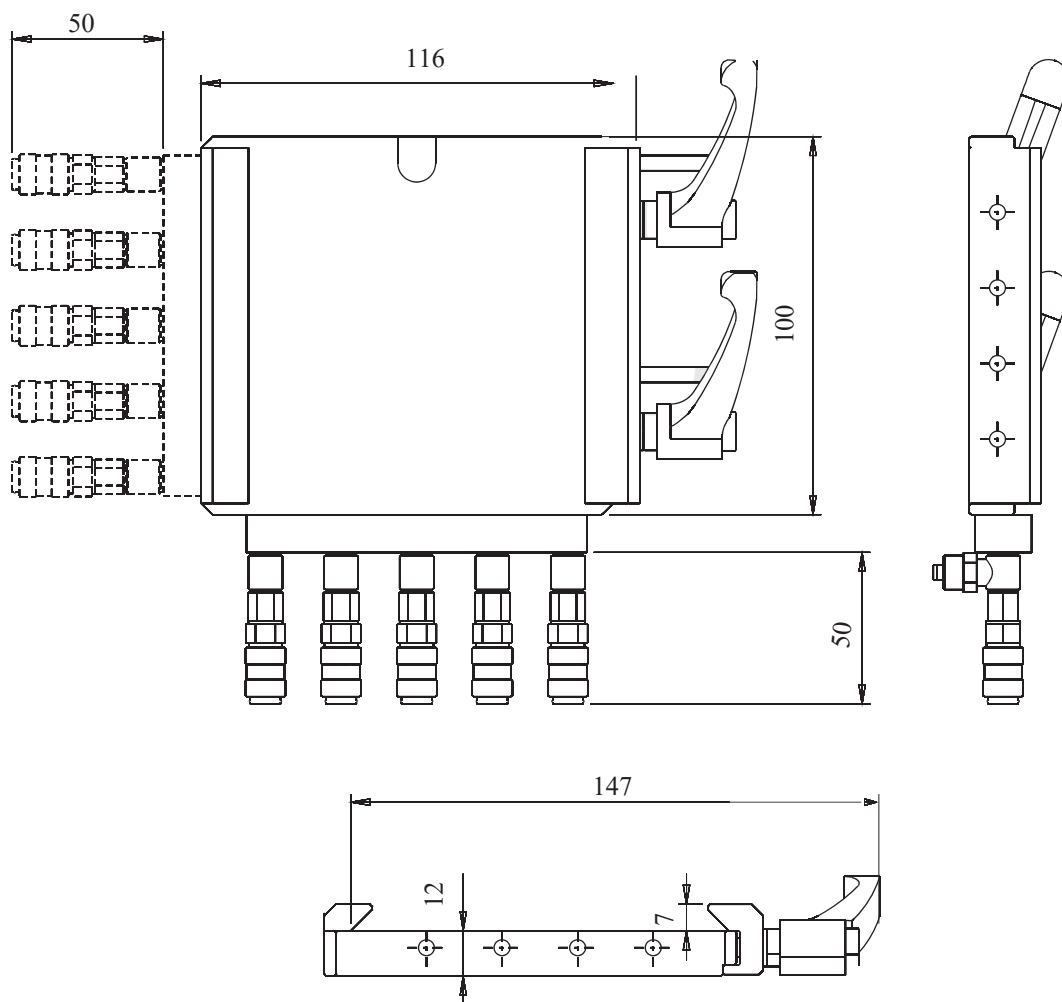
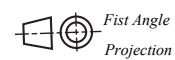
Application example



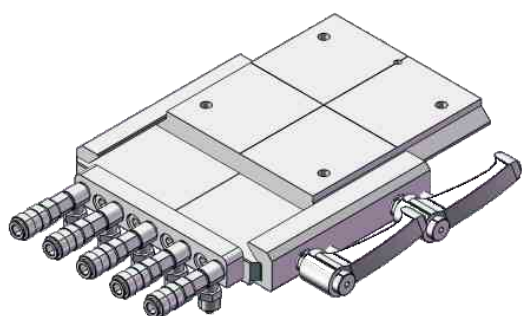
Square Quick Changer (Manual)

FGSS-R100 Robot side

Dimensions (mm)



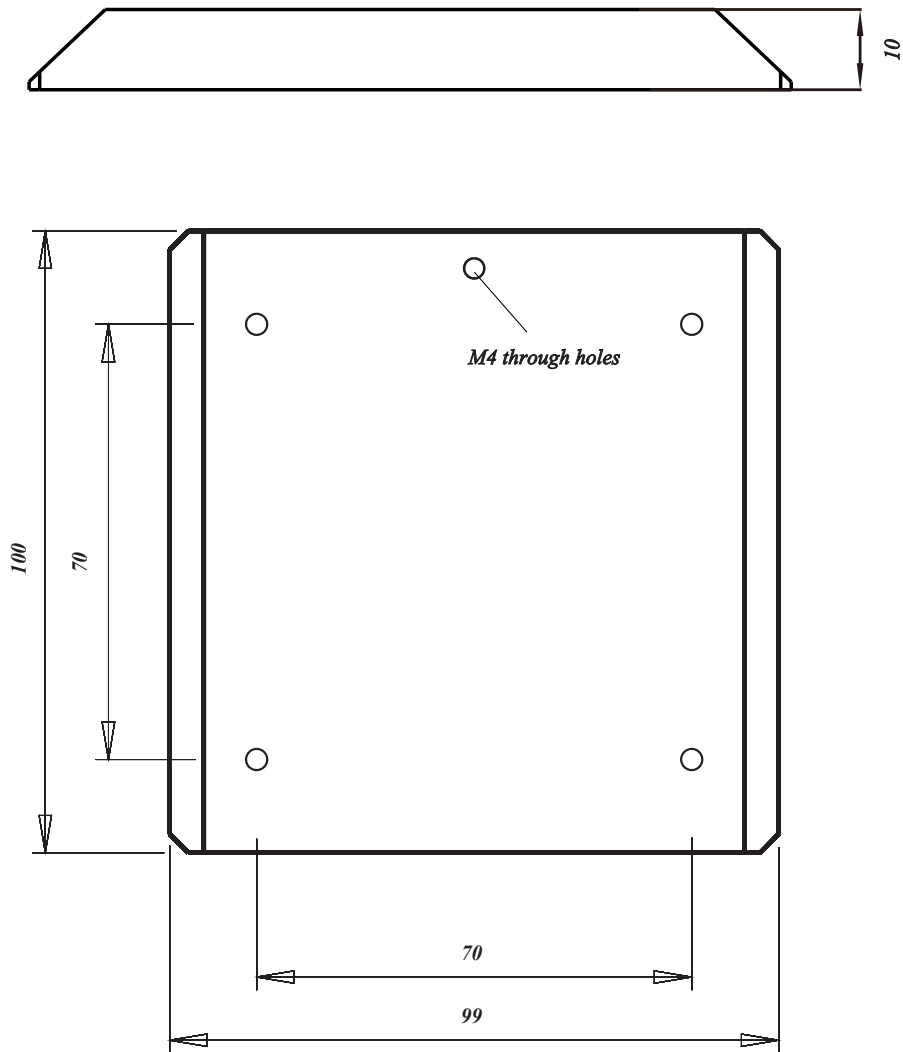
Application example



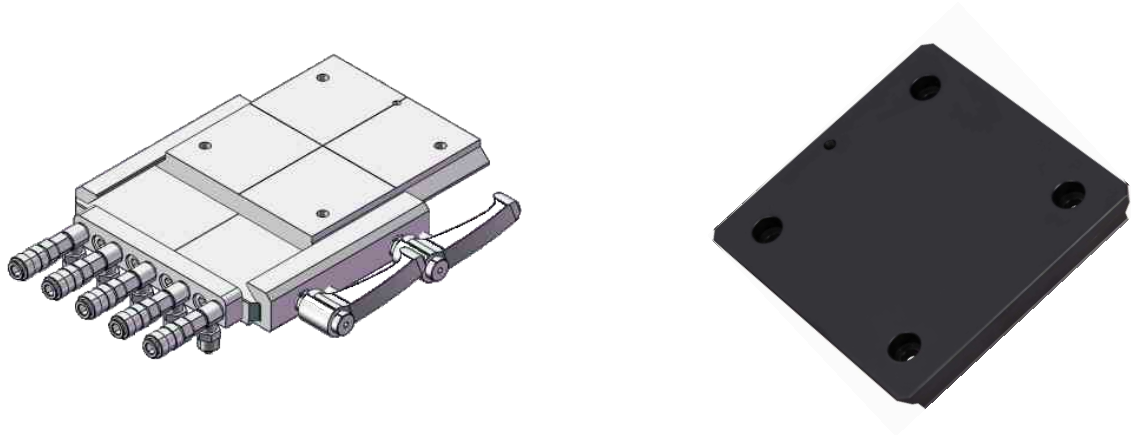
Square Quick Changer (Manual)

FGSS-G100 Gripper side

Dimensions (mm)



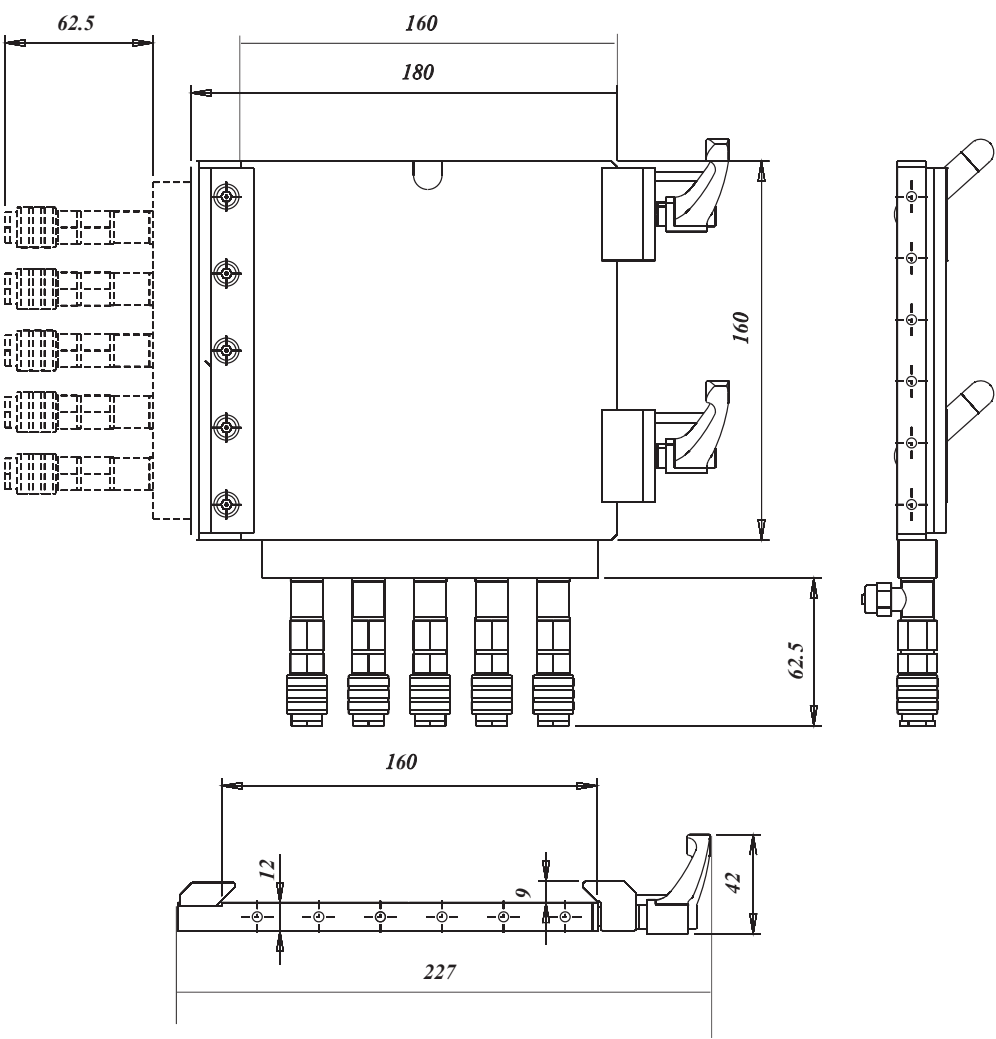
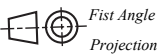
Application example



Square Quick Changer (Manual)

FGSS-R160 Robot side

Dimensions (mm)



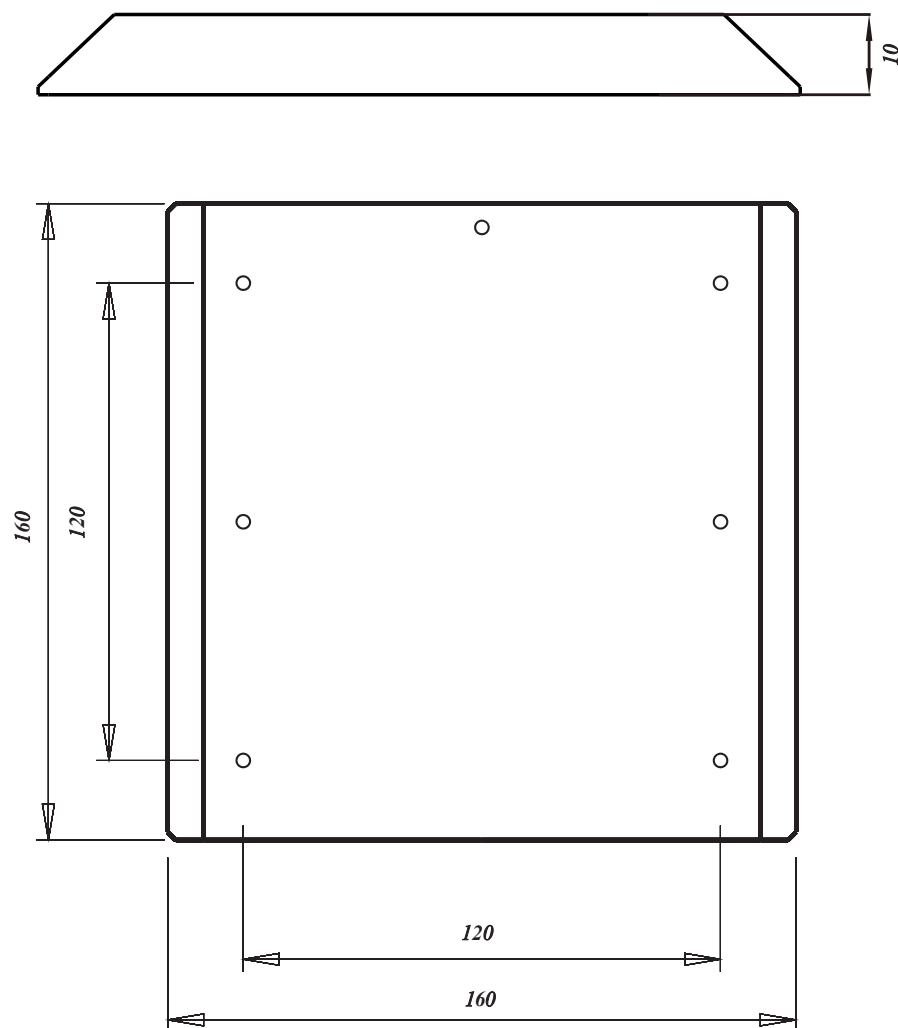
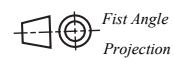
Application example



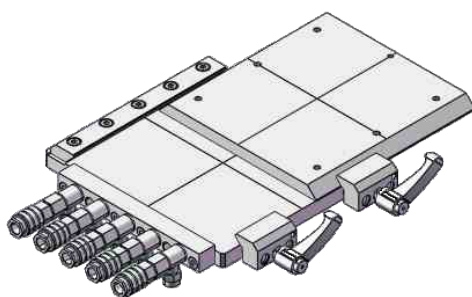
Square Quick Changer (Manual)

FGSS-G160 Gripper side

Dimensions (mm)



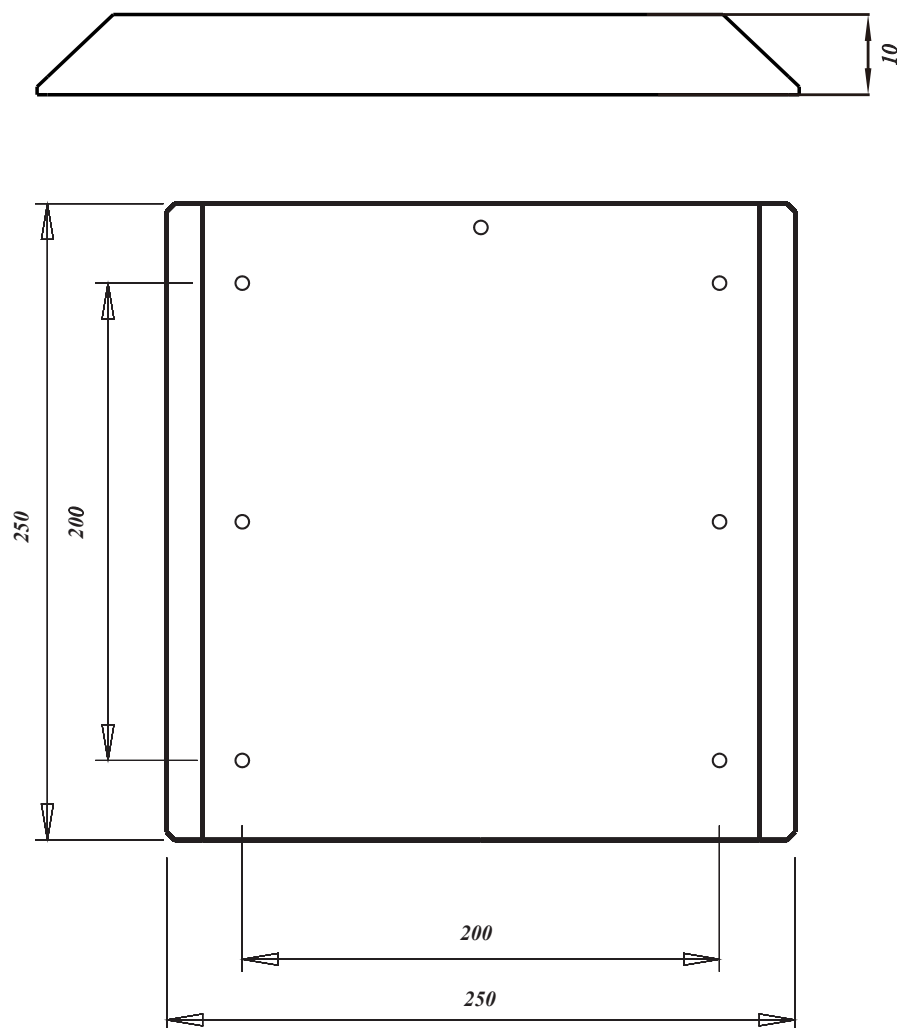
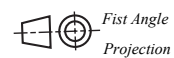
Application example



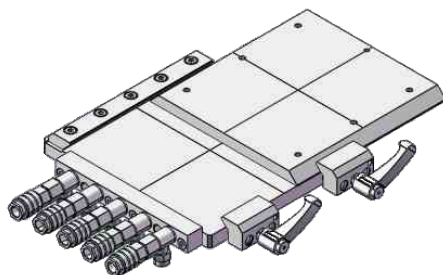
Square Quick Changer (Manual)

FGSS-G250 Gripperside

Dimensions (mm)



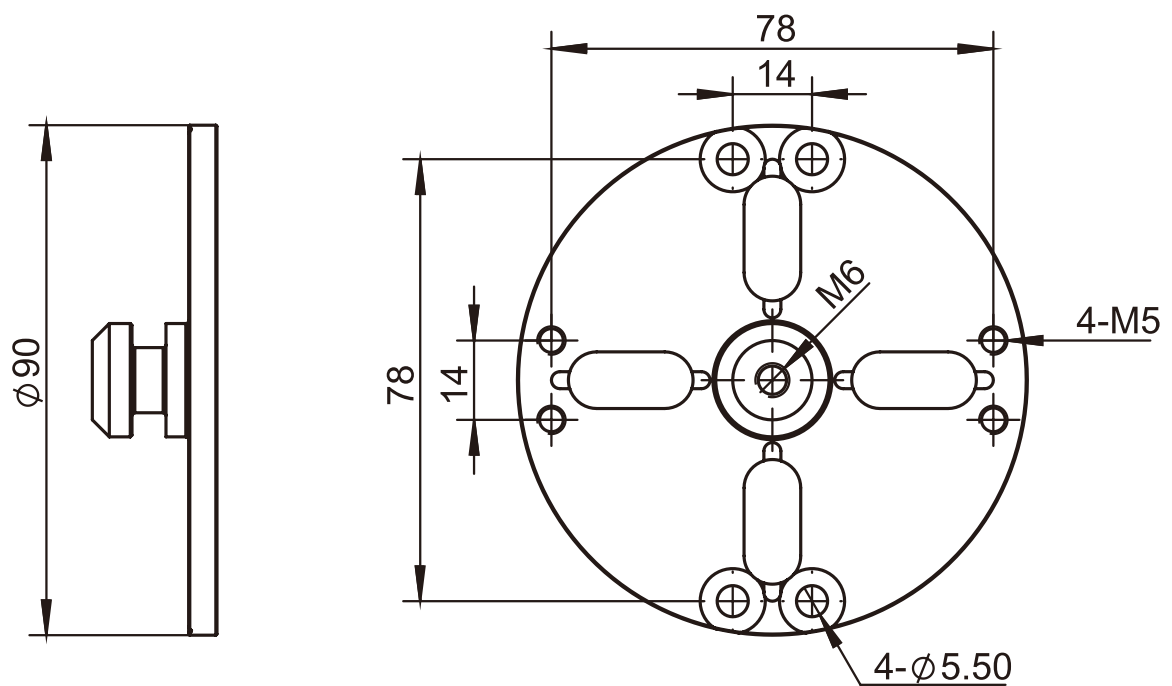
Application example



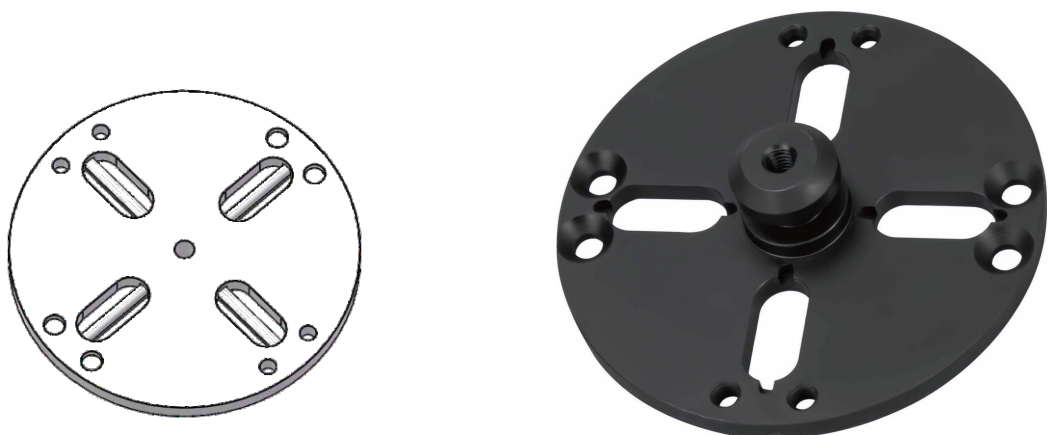
Round Quick Changer (Manual) -- Factory OEM / ODM

FBP-90 Gripper side

Dimensions (mm)



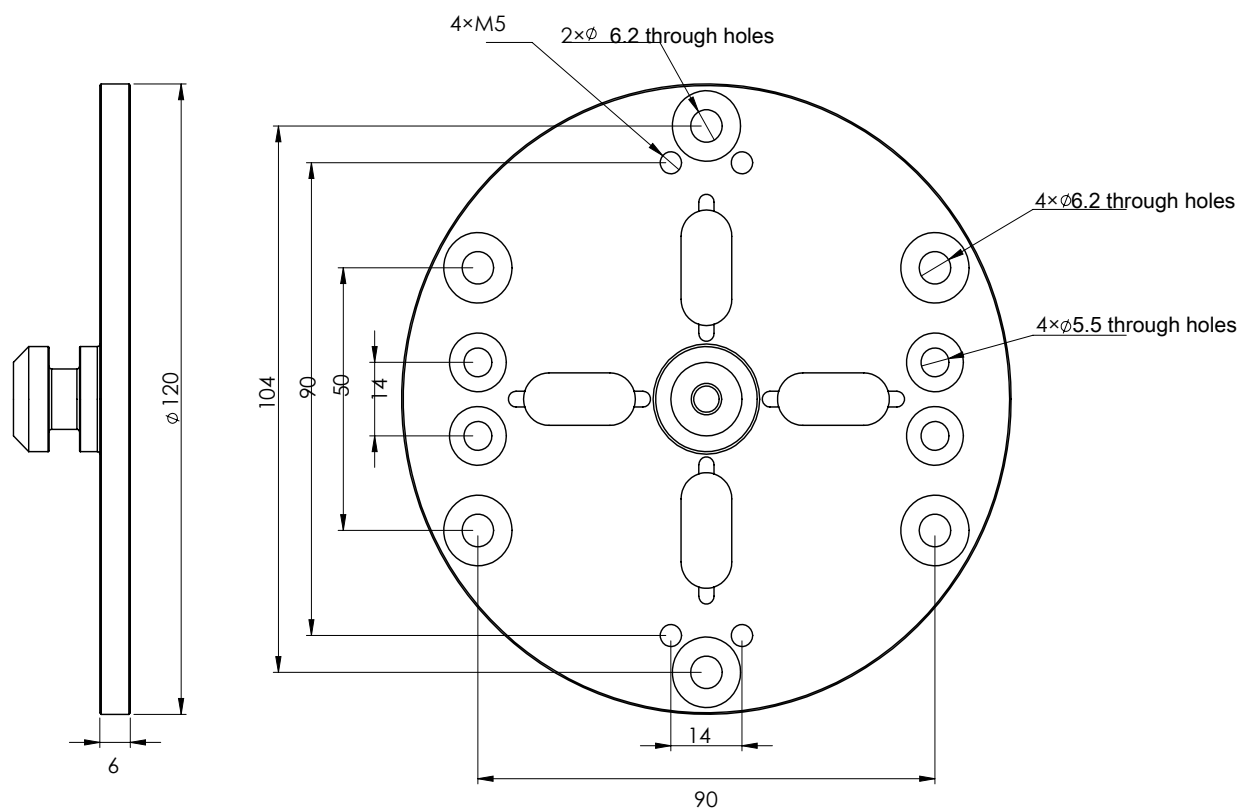
Application example



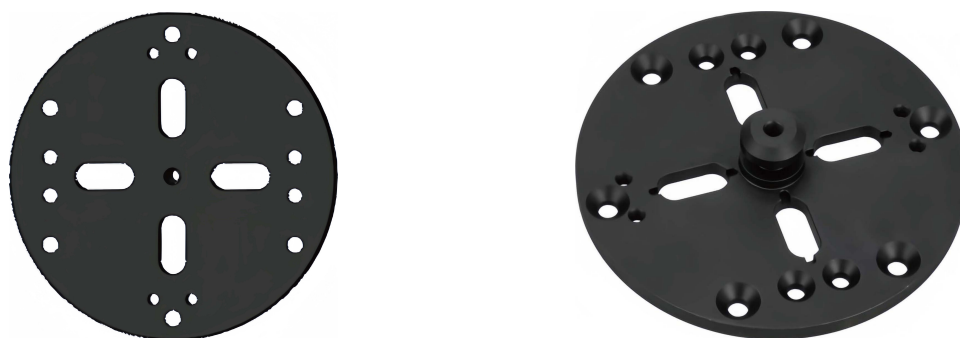
Round Quick Changer (Manual) -- Factory OEM / ODM

FBP-120 Gripper side

Dimensions (mm)



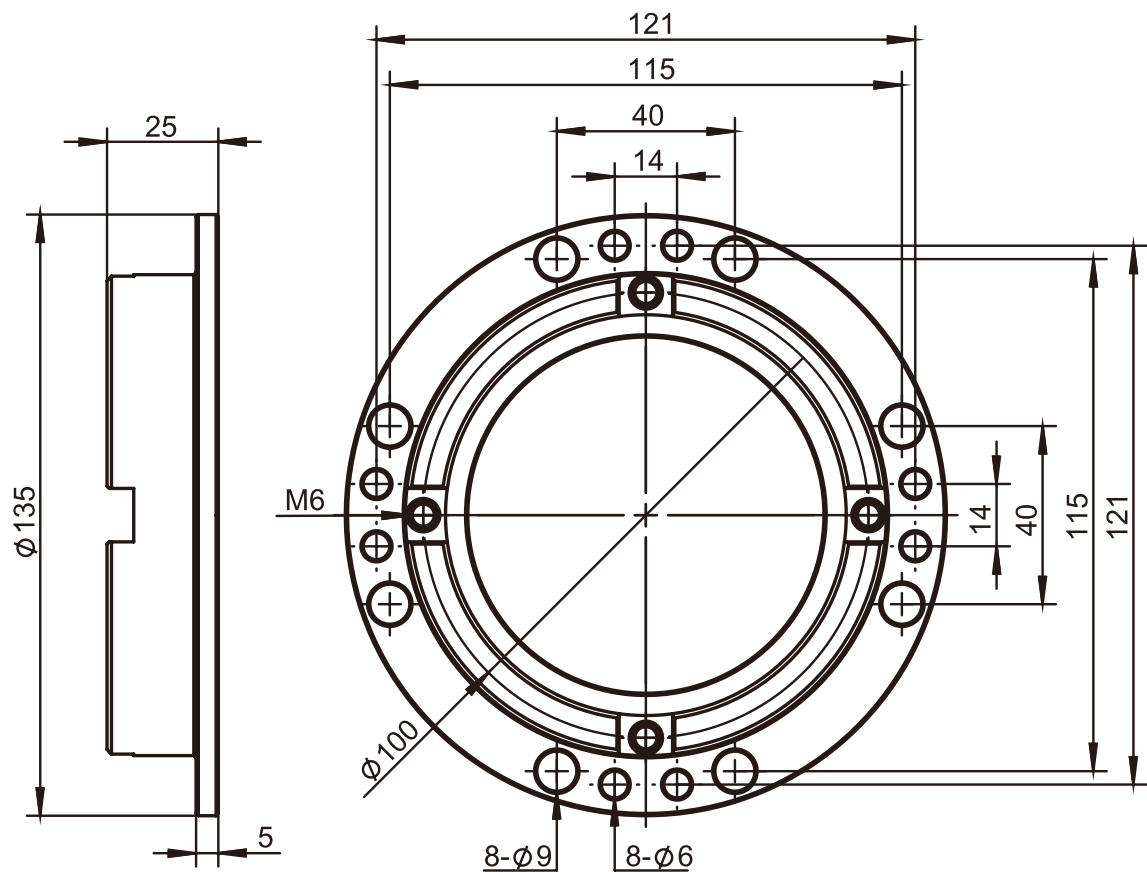
Application example



Round Quick Changer (Manual) -- Factory OEM / ODM

FBP-135 Gripper side

Dimensions (mm)



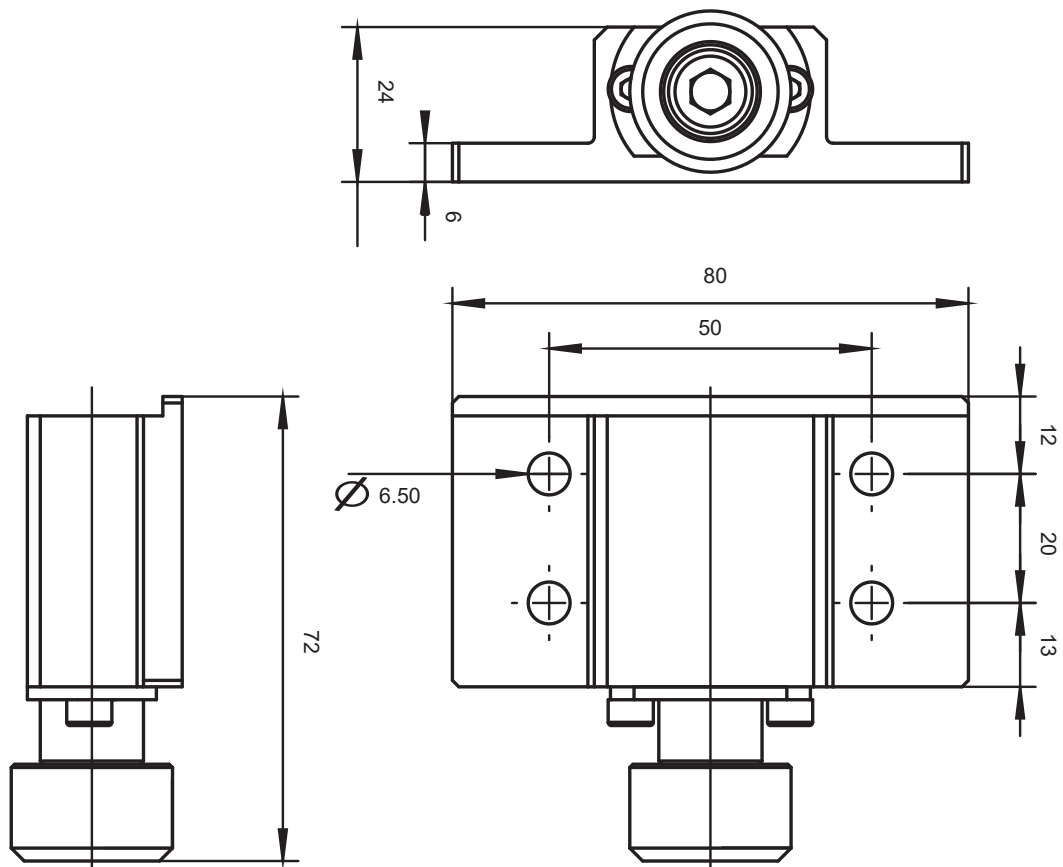
Application example



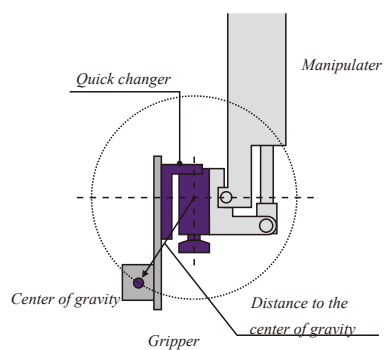
Square Quick Changer (Manual) -- Factory OEM / ODM

FSL-R15 Robot side

Dimensions (mm)



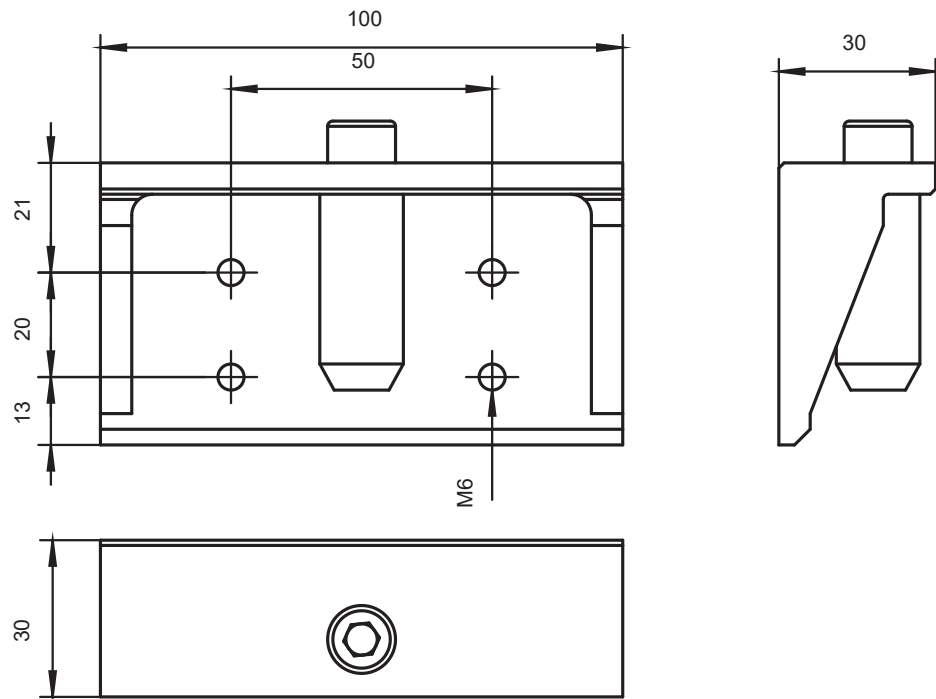
Application example



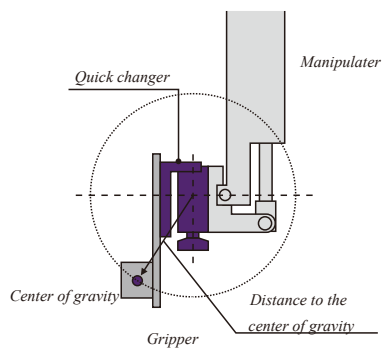
Square Quick Changer (Manual) -- Factory OEM / ODM

FSL-G15 Gripper side

Dimensions (mm)



Application example

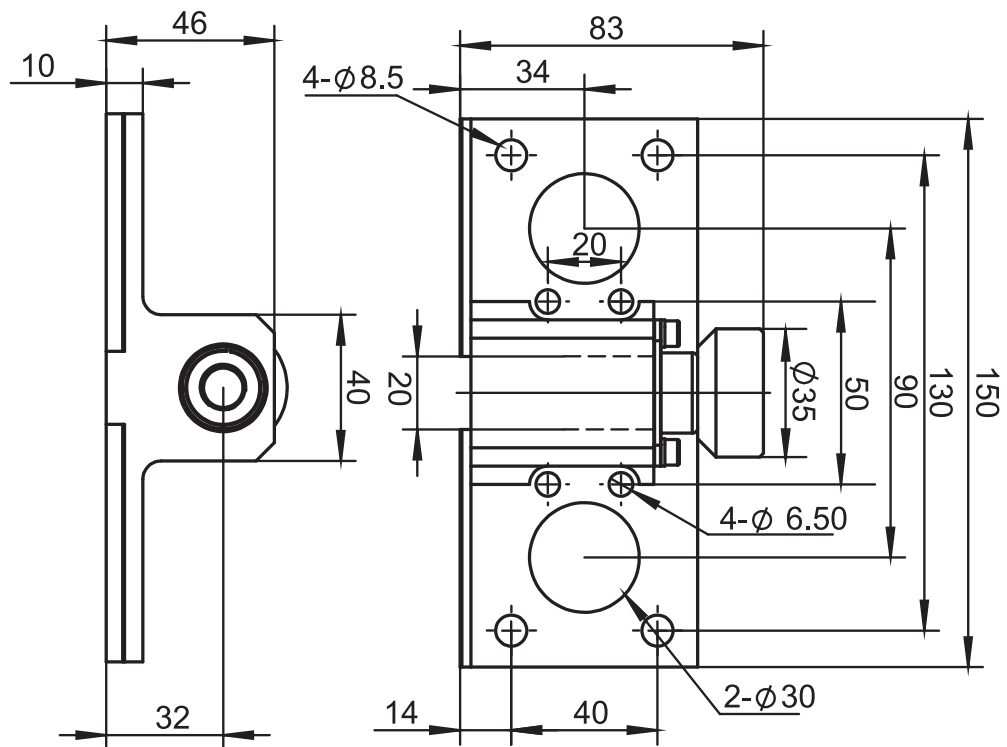


Square Quick Changer (Manual) -- Factory OEM / ODM

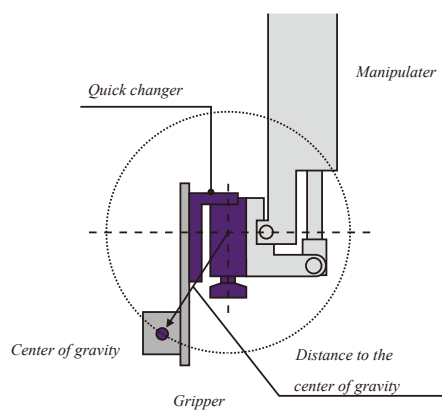
FSL-R35 Robot side

Dimensions (mm)

 *First Angle
Projection*



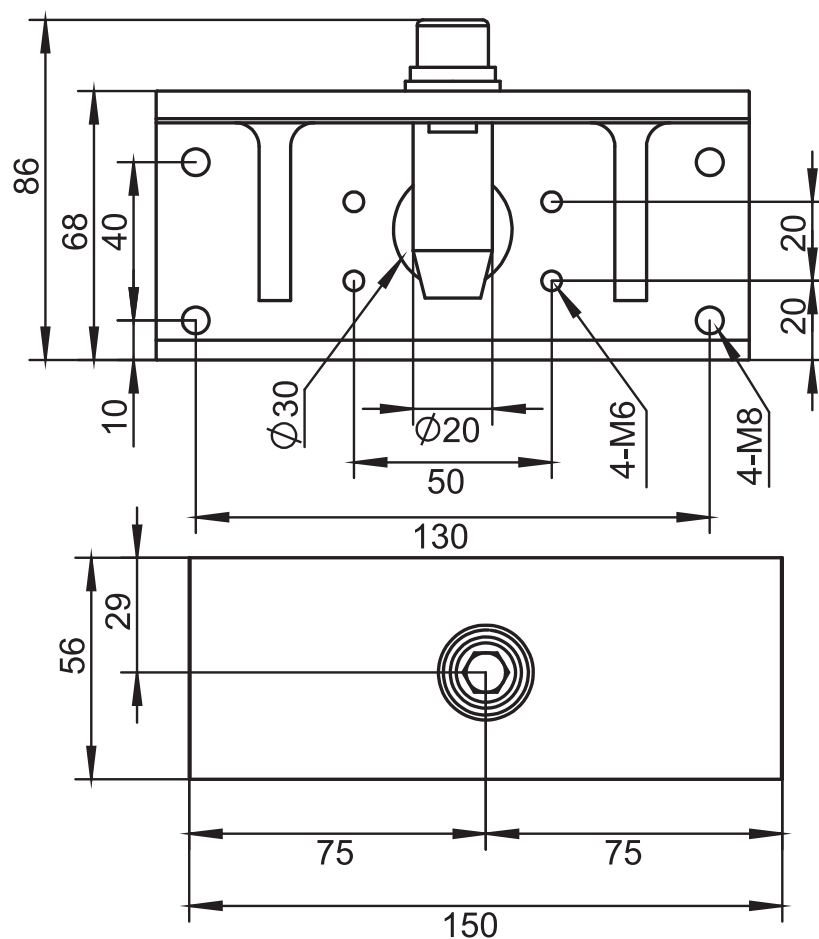
Application example



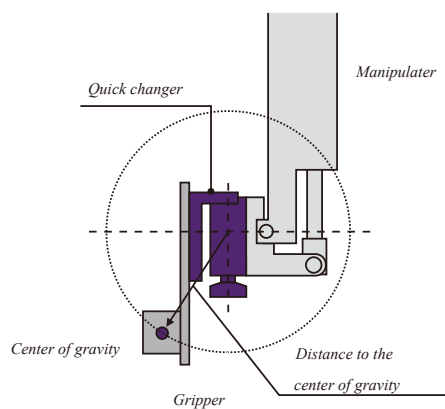
Square Quick Changer (Manual) -- Factory OEM / ODM

FSL-G35 Gripper side

Dimensions (mm)



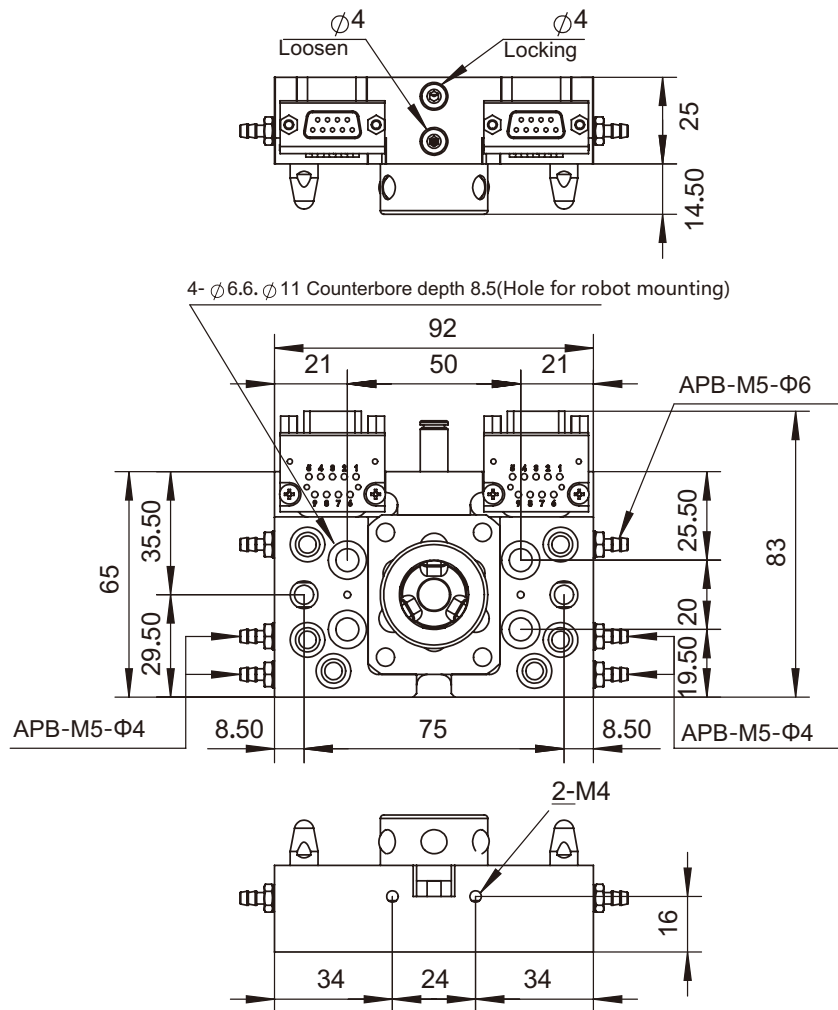
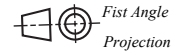
Application example



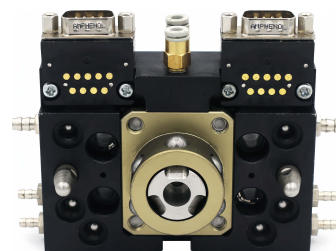
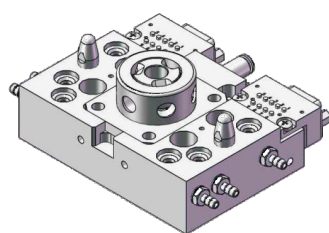
Square Quick Changer (Automatic) -- Factroy OEM / ODM

FSLA-R10 Robot side

Dimensions (mm)



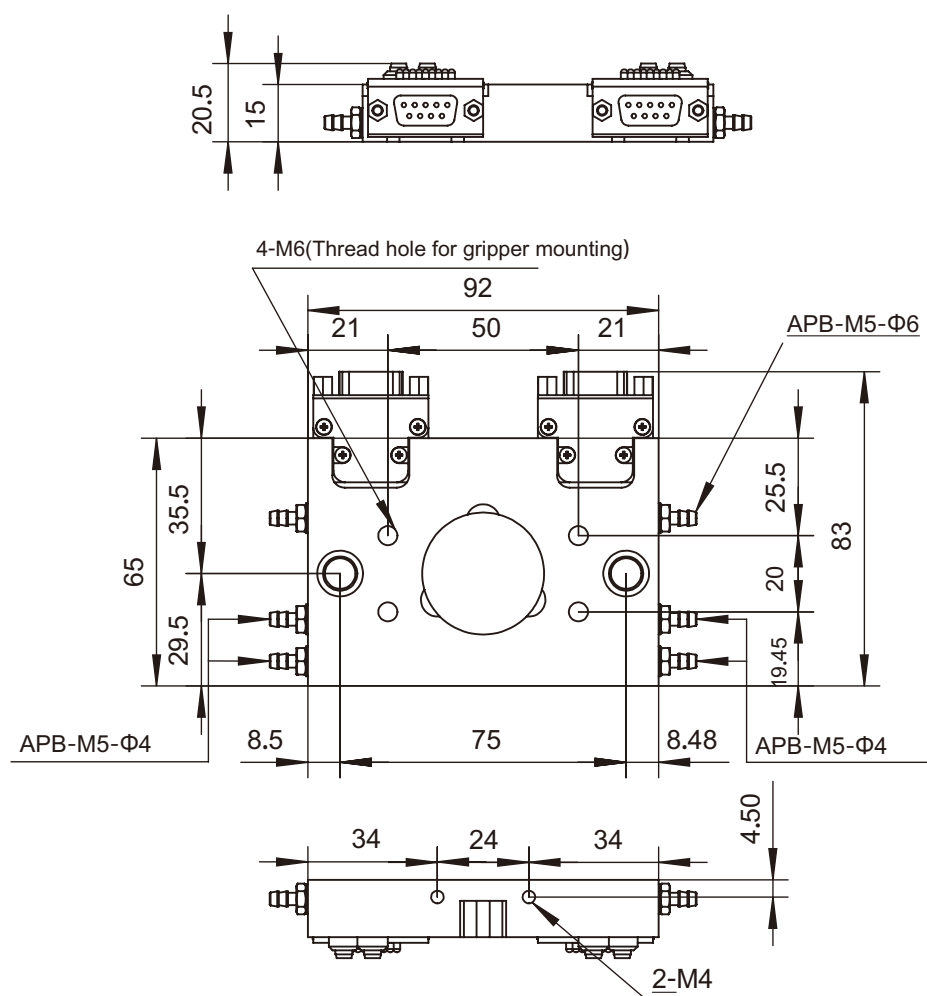
Application example



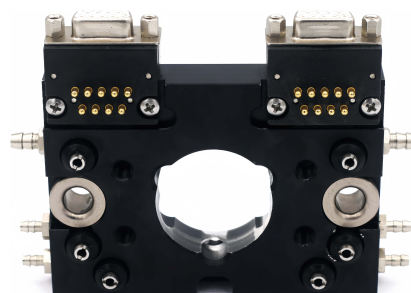
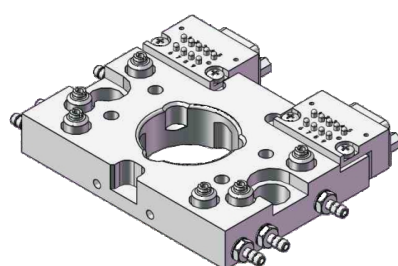
Square Quick Changer (Automatic) -- Factroy OEM / ODM

FSLA-G10 Gripper side

Dimensions (mm)



Application example



Round Quick Changer (Manual)

FQC - series

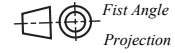
Easy replace of the EOAT on the robot

Two parts (robot side & gripper side) are supplied separately

Pneumatic connection ports: 4, 8, 10, 12 air inlet ports

Suitable with vacuum ports

Avoid mistakes in pneumatic & electrical connections



Model	FQC-R50	FQC-G50	FQC-R90	FQC-G90	FQC-R150	FQC-G150	FQC-R200	FQC-G200
Medium	Filtered & Compressed Air							
Pressure Range	2.5 ~ 8 bar							
Temperature Range	5 ~ 60 degree							
Robot Side quick changer	FQC-R50		FQC-R90		FQC-R150		FQC-R200	
Robot Side quick changer with Lock	FQC-R50S		FQC-R90S		FQC-R150S		FQC-R200S	
Gripper side quick changer		FQC-G50		FQC-G90		FQC-G150		FQC-G200
Pneumatic Connection port / pcs	4	4	8	8	10	10	12	12
Air Inlet Size	M5	M5	G1/8	G1/8	G1/4	G1/4	G1/4	G1/4
Mb (N/m)	15	15	100	100	350	350	1350	1350
Mt (N/m)	30	30	180	180	600	600	2500	2500
F (N)	150	150	400	400	3000	3000	9000	9000
Weight / g	102	65	318	226	1124	826	2640	1890



FQC-R200 / G200



FQC-R150 / G150



FQC-R90 / G90



FQC-R50 / G50



FQC-G200



FQC-G150



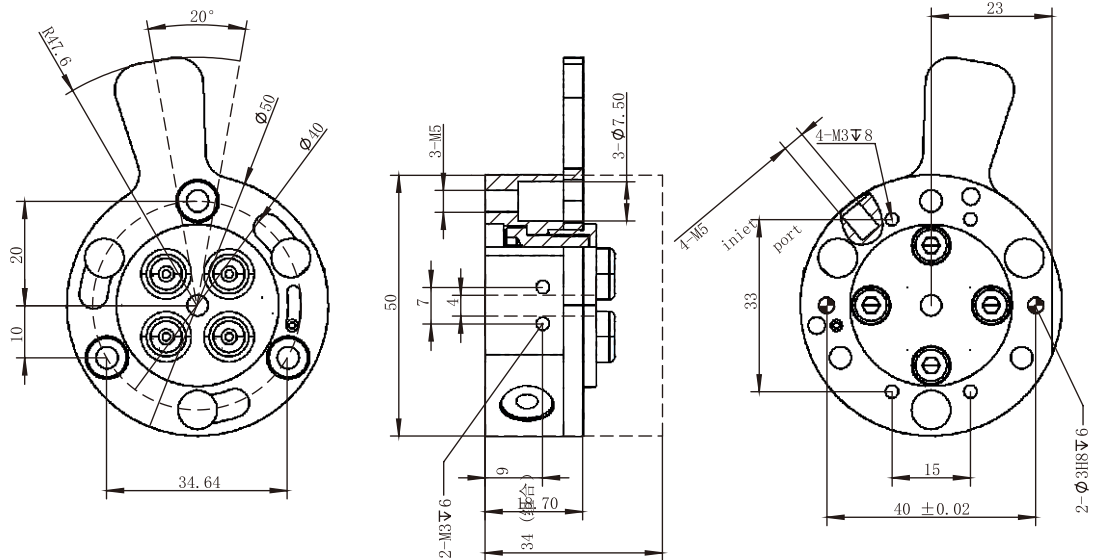
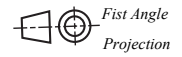
FQC-G90



FQC-G50

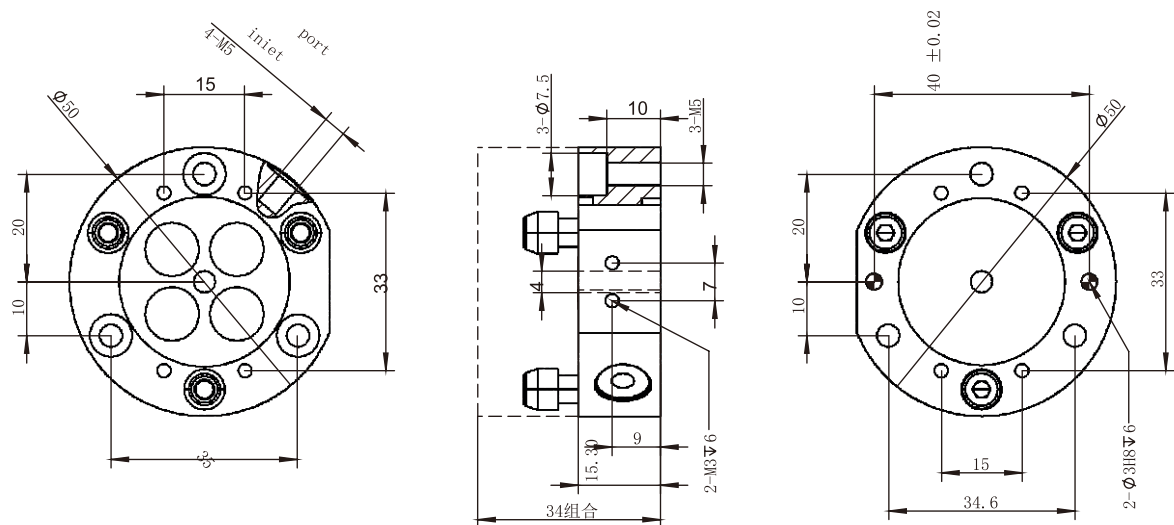
FQC-R50 Robot side

Dimensions (mm)



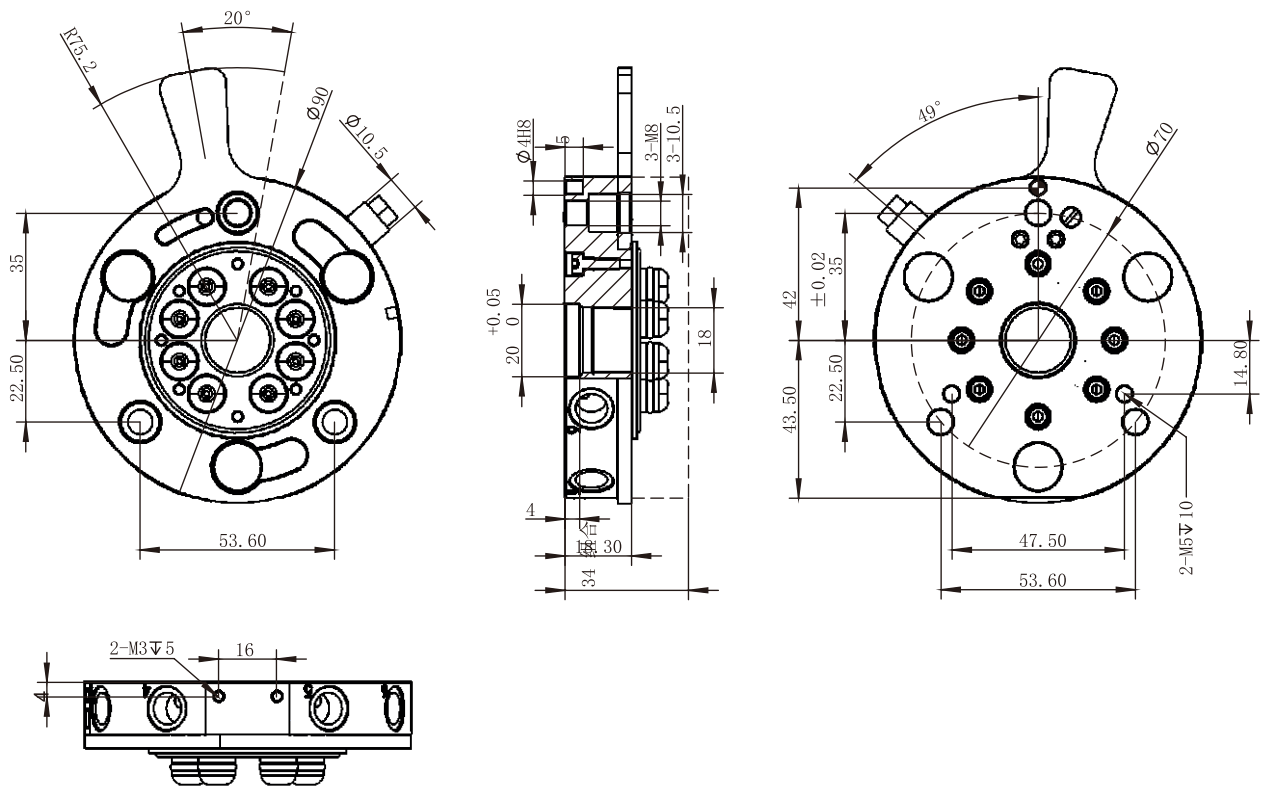
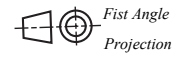
FQC-G50 Gripper side

Dimensions (mm)



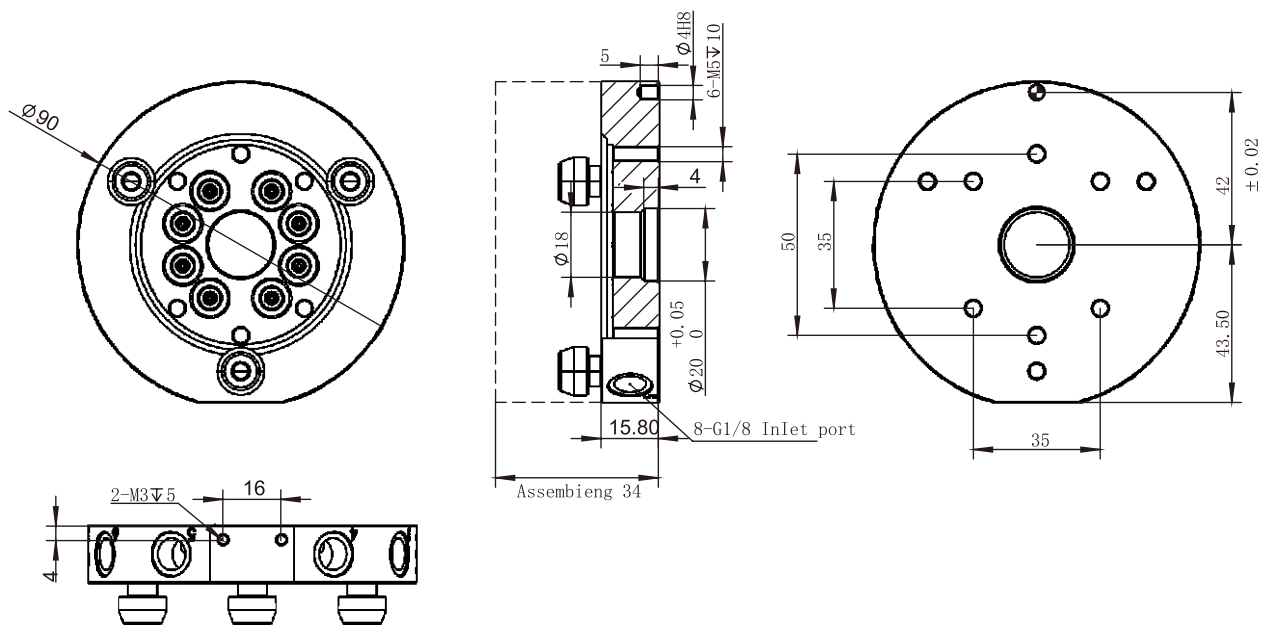
FQC-R90 Robot side

Dimensions (mm)



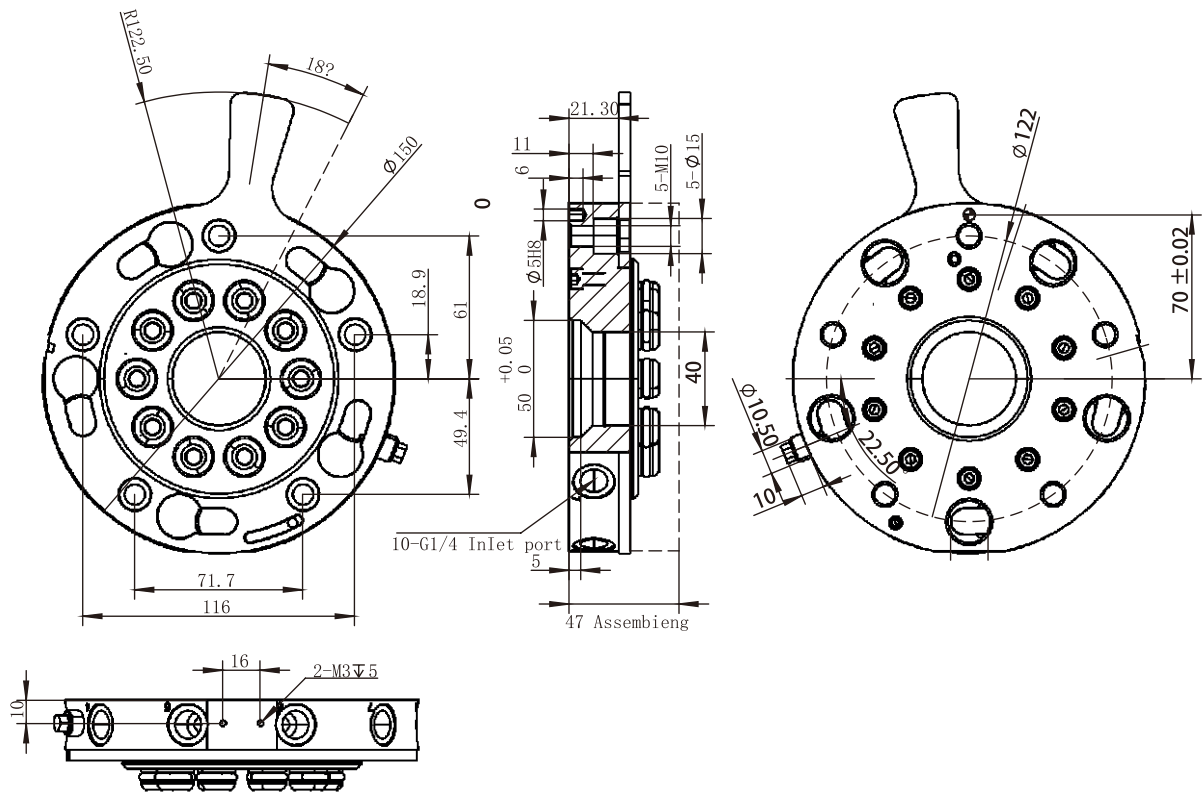
FQC-G90 Gripper side

Dimensions (mm)



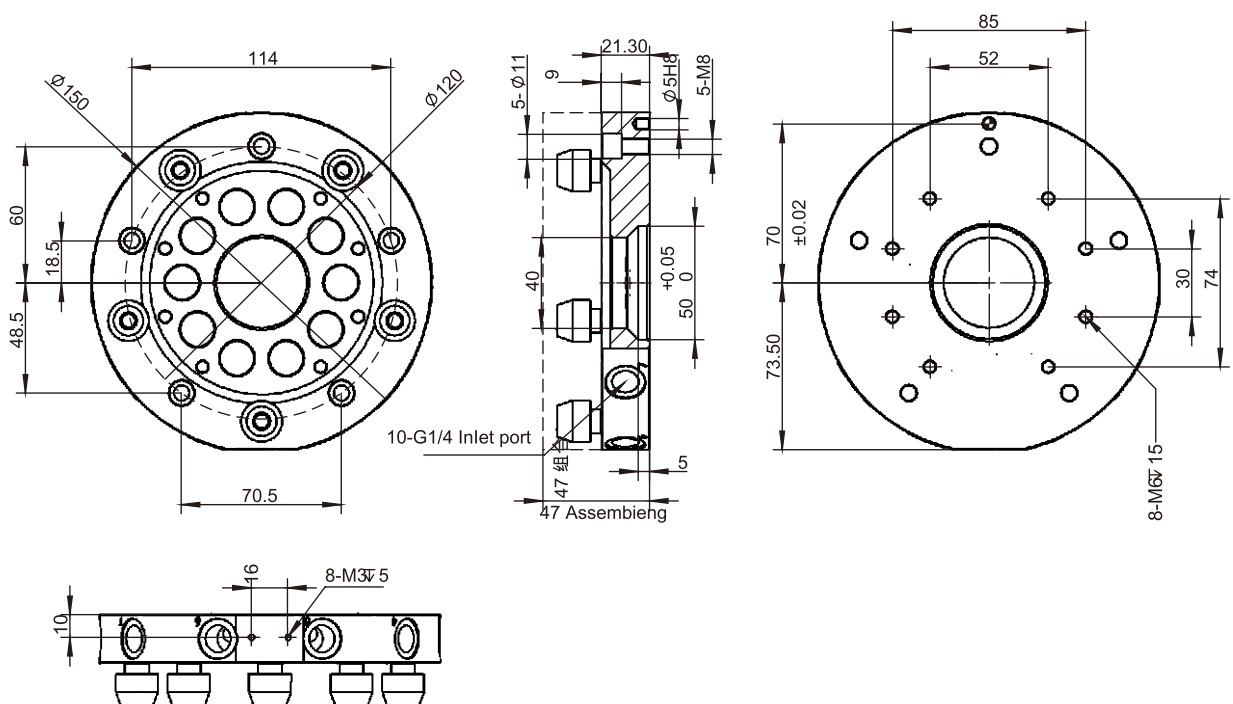
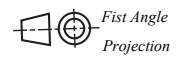
FQC-R150 Robot side

Dimensions (mm)



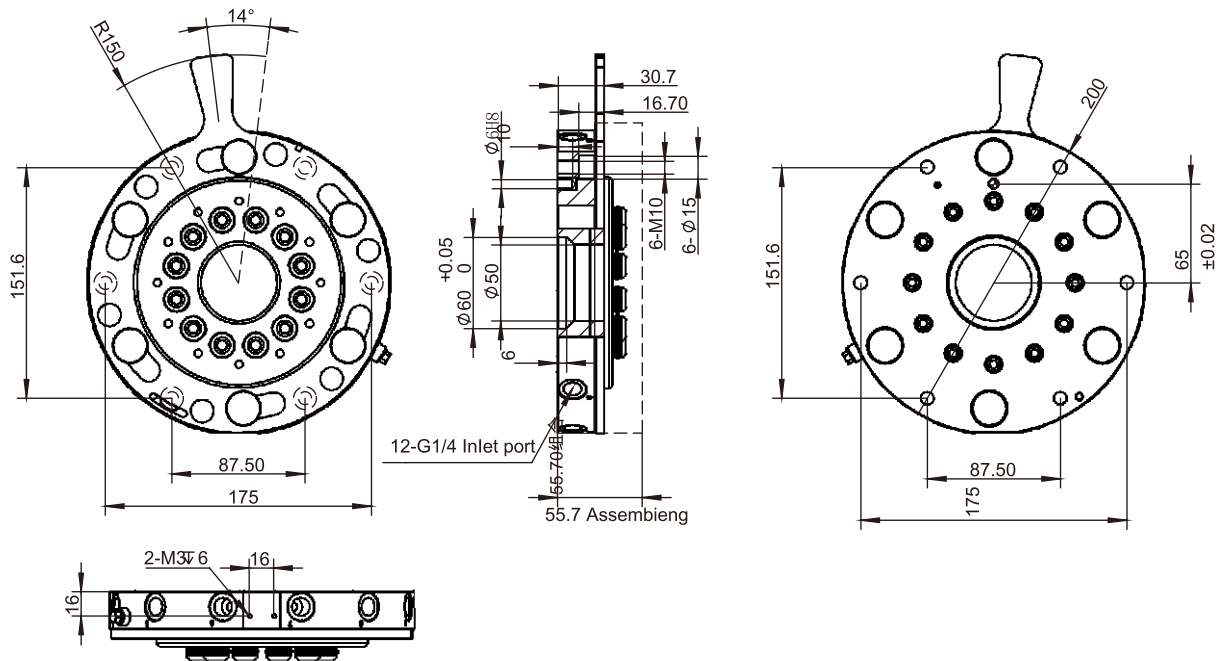
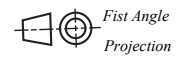
FQC-G150 Gripper side

Dimensions (mm)



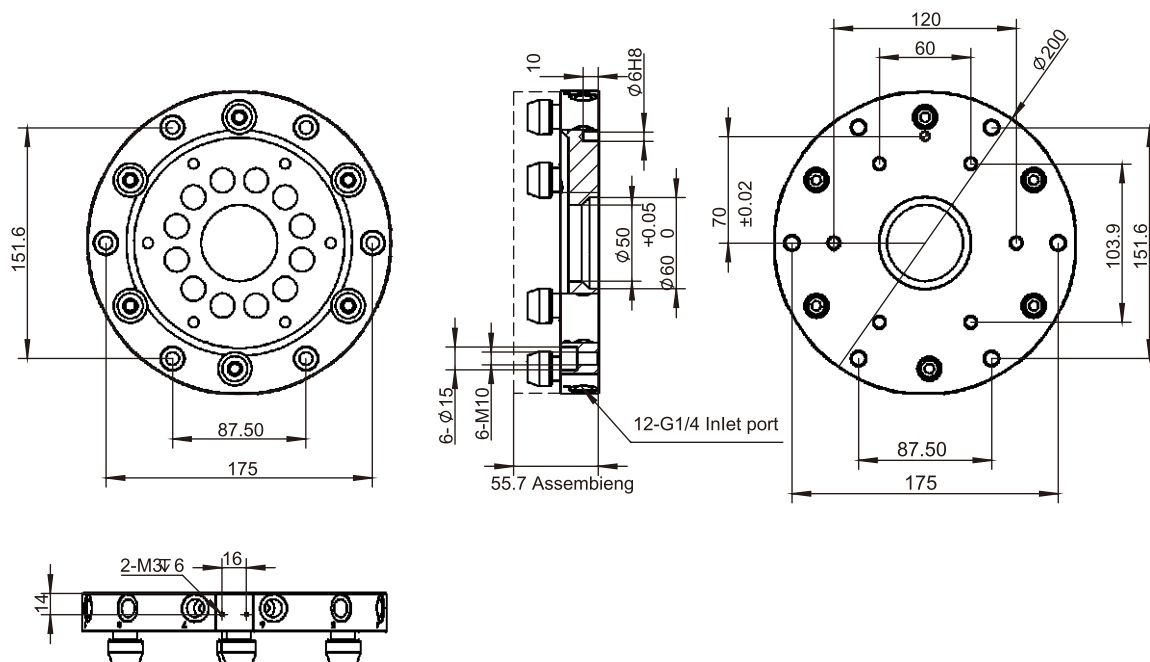
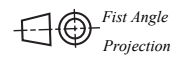
FQC-R200 Robot side

Dimensions (mm)



FQC-G200 Gripper side

Dimensions (mm)



Round Quick Changer (Manual)

Electrical connection module - Fitting

I/O quick changer by D-SUB 9 pins connectors

The two parts (robot side / gripper side) are supplied separately

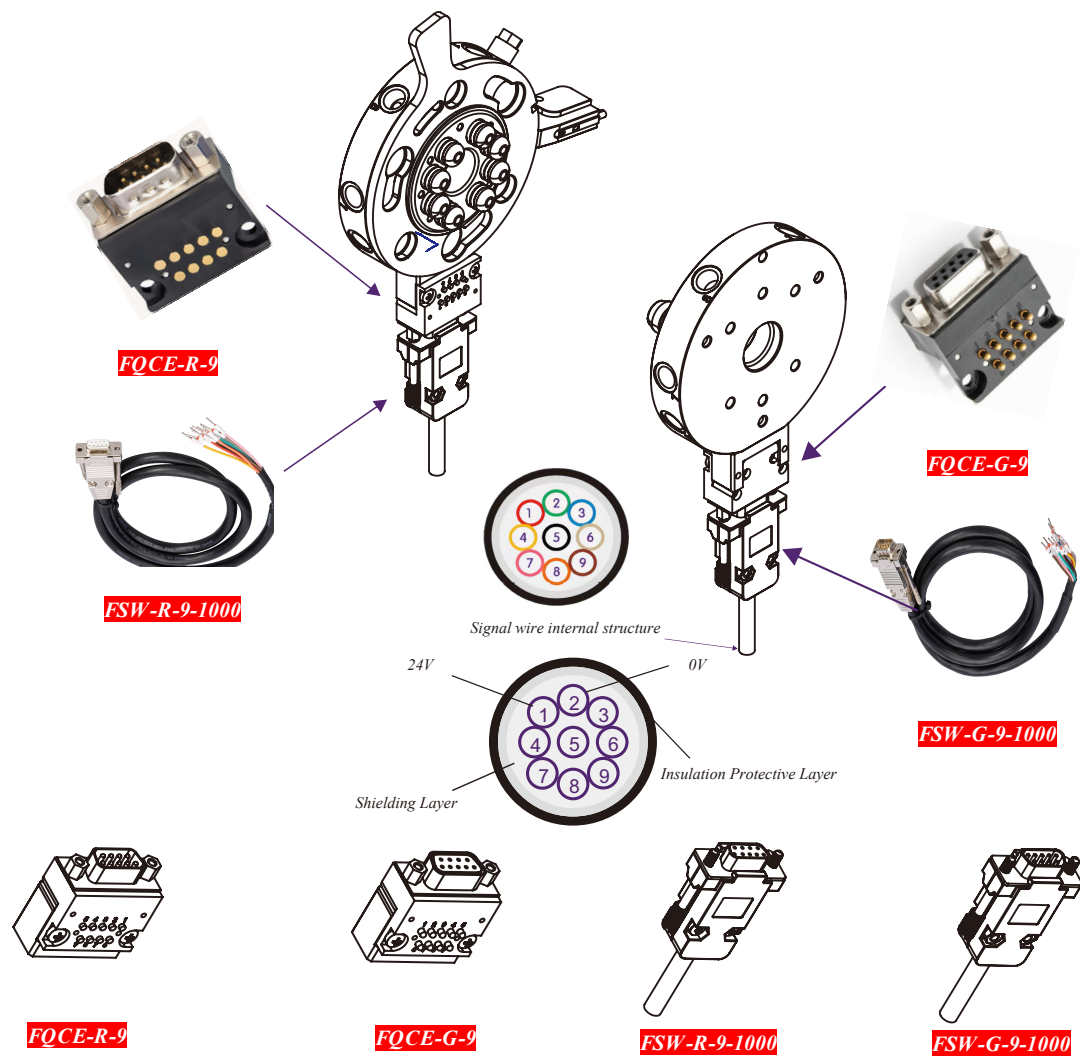
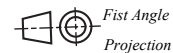
Robot side: **FQCE-R** & **FSW-R**

Gripper side: **FQCE-G** & **FSW-G**

OEM: the length of signal wire of electrical connection module can be customized

Dimensions (mm)

Application example



Model	FQCE-R-9	FQCE-G-9	FSW-R-9-1000	FSW-G-9-1000
I/O Connection Type	9 pin D-SUB	9 pin D-SUB	9 pin D-SUB	9 pin D-SUB
Working current / Max	3A	3A	3A	3A
Weight / g	24	24	24	24

Round Quick Changer (Automatic)

FQCA - series

To provide high repeatedly precision to improve production efficiency

To achieve high-intensive & multiple-stations production task automatically

To achieve automation industry heavy & dangerous work to protect safety

Base on unique internal steel ball design structure to provide high-strength locking force

To enhance the practicability to provide various function module: electrical module, pneumatic module, security checking module, fluid module and etc.

Pneumatic connection ports: 6, 7, 8 air inlet ports

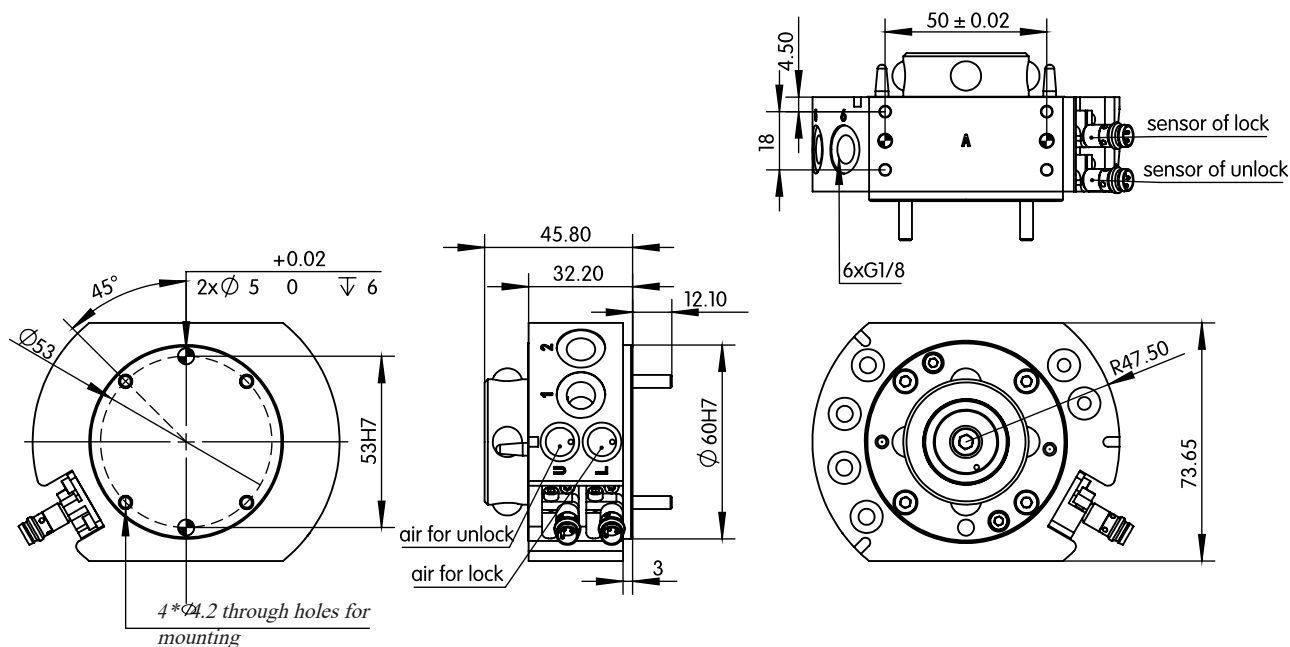
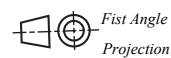


Model	FQCA-R25	FQCA-G25	FQCA-R35	FQCA-G35	FQCA-R50	FQCA-G50	FQCA-R100	FQCA-G100
Material	Aluminium Alloy & Steel Alloy							
Air Pressure Range	0.5 ~ 0.8 Mpa							
Temperature Range (Min./ Max.)	5 ~ 60 Degree							
Humidity	0 ~ 90%							
Robot Side	FQCA-R25		FQCA-R35		FQCA-R50		FQCA-R100	
Gripper Side		FQCA-G25		FQCA-G35		FQCA-G50		FQCA-G100
Loading capability (safety)	25KGS		35KGS		50KGS		100KGS	
Air Connection Channel Port / pcs	6	6	7	7	8	8	8	8
Air Connection Channel port Size	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8	G3/8	G3/8
Open & Lock Channel port size	G1/8							
Repeatability Accuracy	0.015mm ~ -0.015mm							
Max. Angle deviation	1 degree ~ -1 degree							
Max. distance for locking	2 mm							
Locking Force / N	2300N		2850N		4600N		12000N	
Static Load Torque (X&Y)	169.5 Nm		169.5 Nm		471Nm		538Nm	
Static Load Torque (Z)	230Nm		230Nm		648Nm		720Nm	
Weight / KGS	0.87	0.55	0.95	0.6	1.1	0.7	3.6	1.7



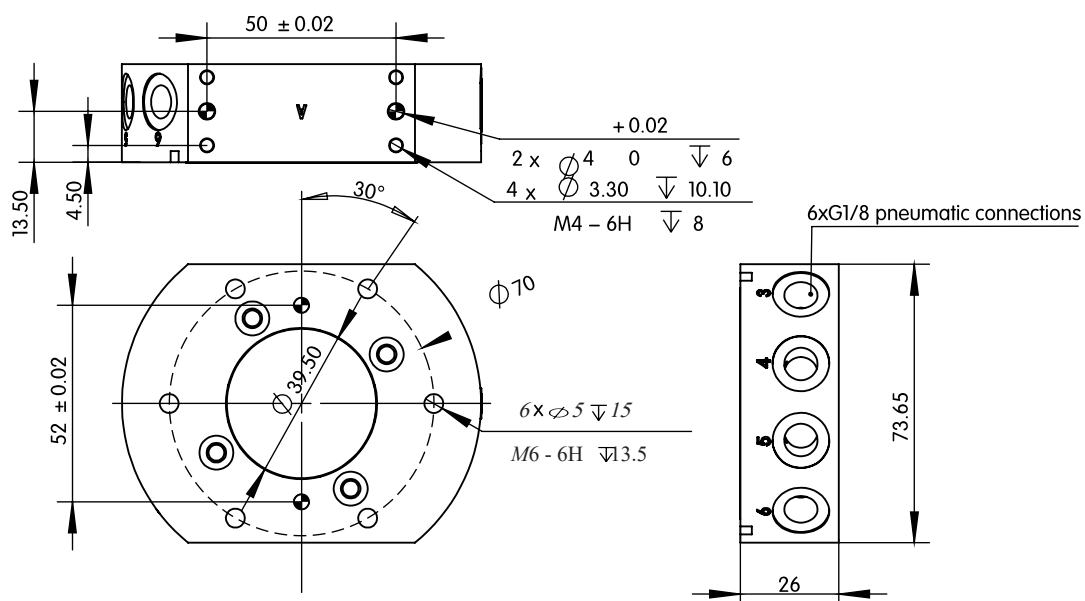
FQCA-R25 Robot side

Dimensions (mm)



FQCA-G25 Gripper side

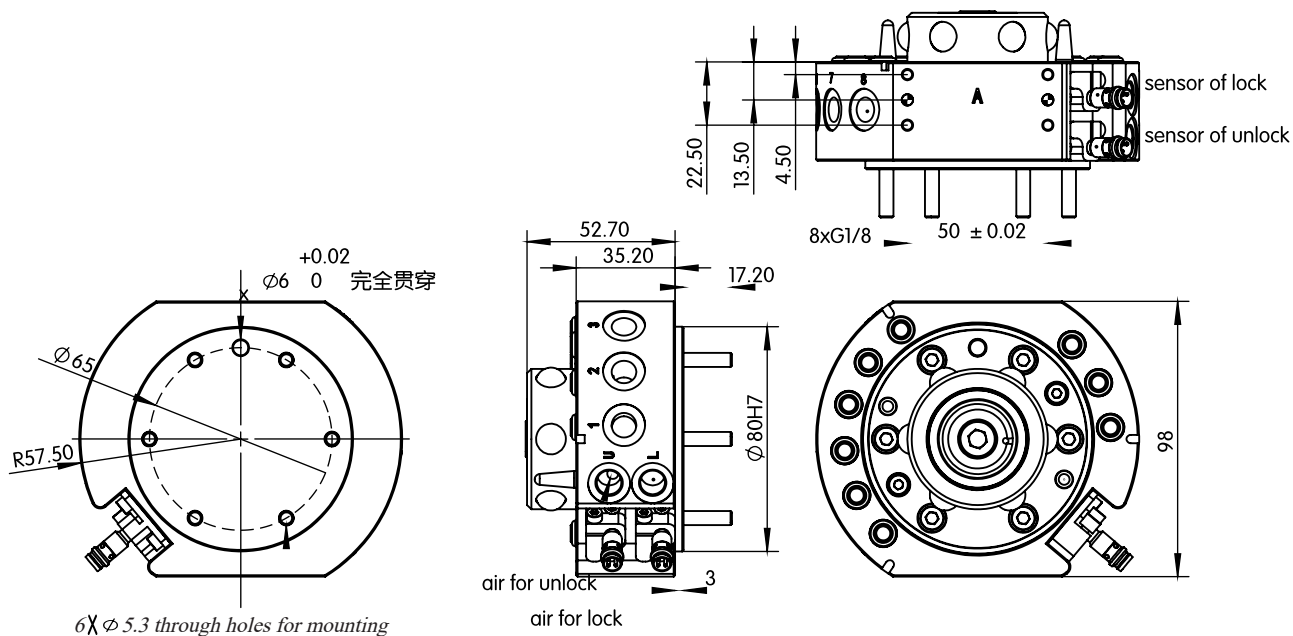
Dimensions (mm)



FQCA-R35 Robot side

Dimensions (mm)

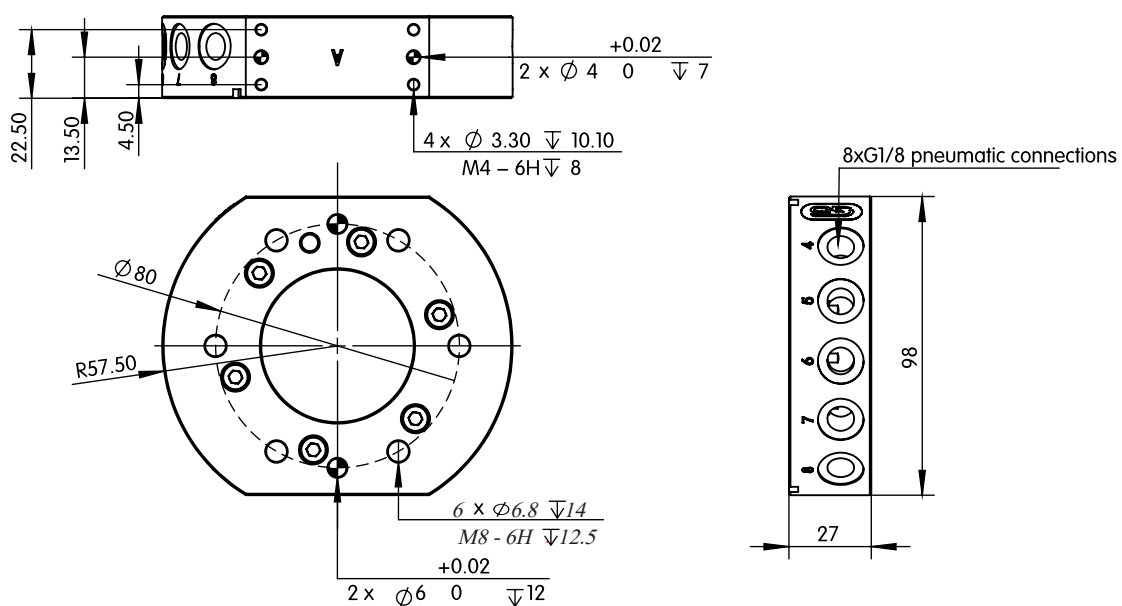
First Angle
Projection



FQCA-G35 Gripper side

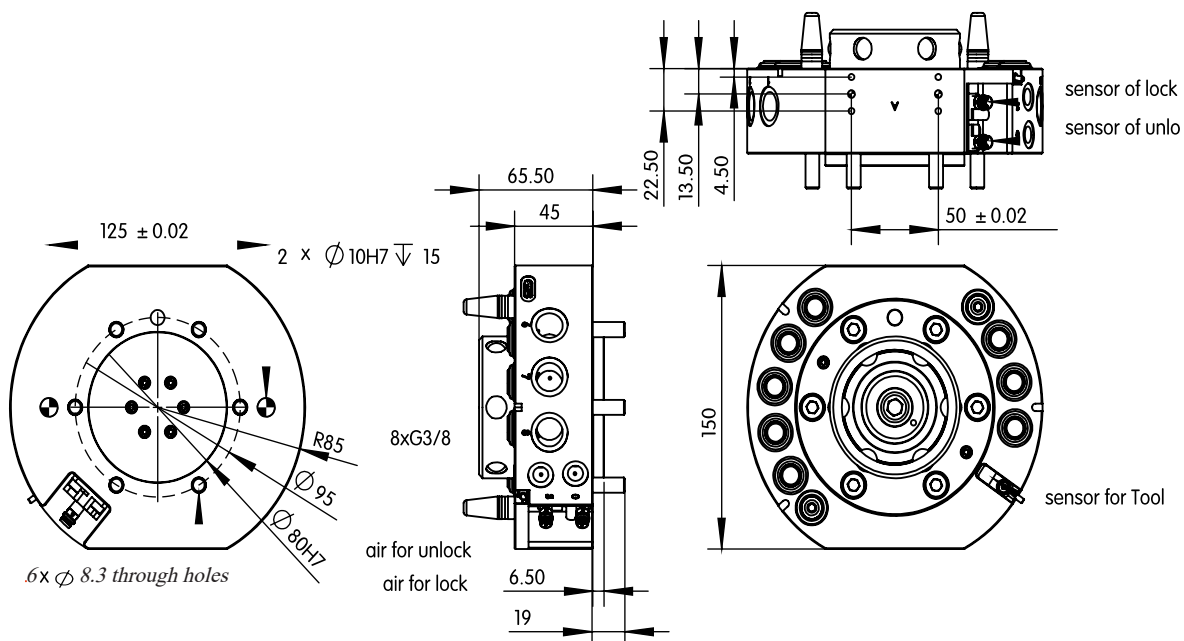
Dimensions (mm)

First Angle
Projection



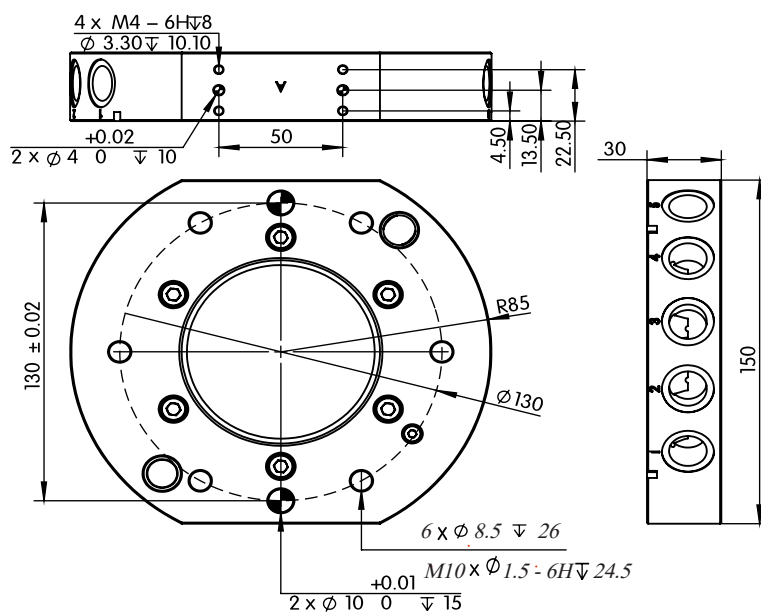
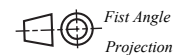
FQCA-R50 Robot side

Dimensions (mm)



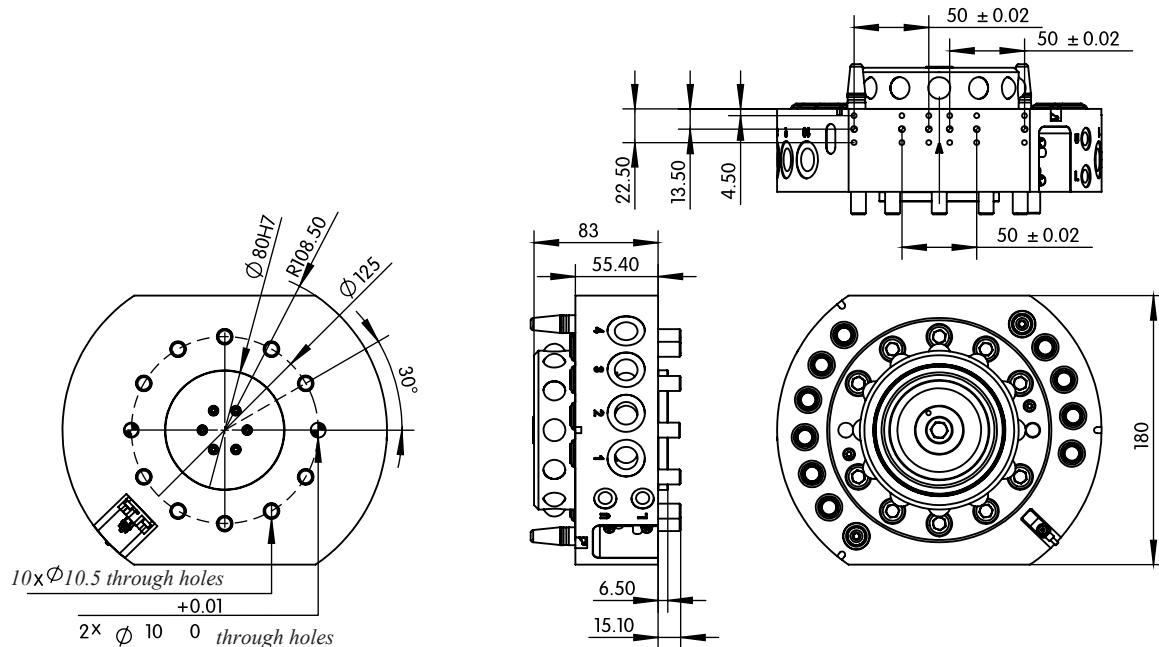
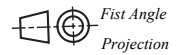
FQCA-G50 Gripper side

Dimensions (mm)



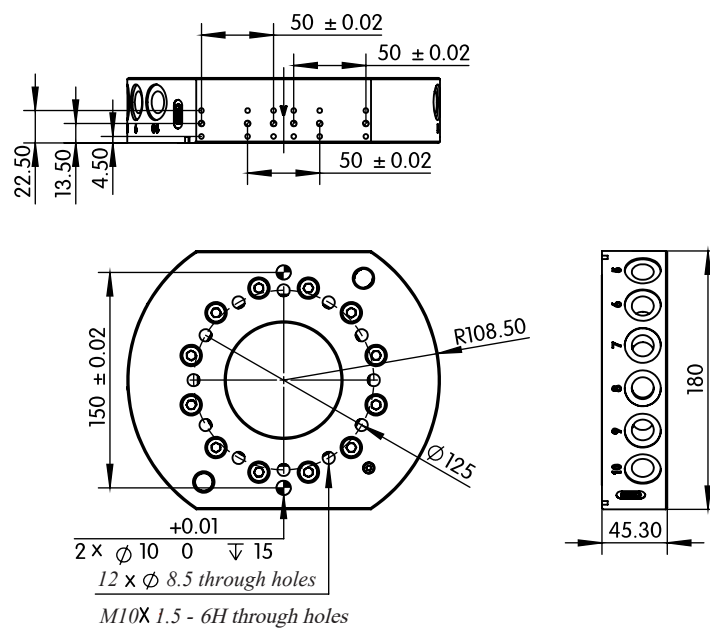
FQCA-R100 Robot side

Dimensions (mm)



FQCA-G100 Gripper side

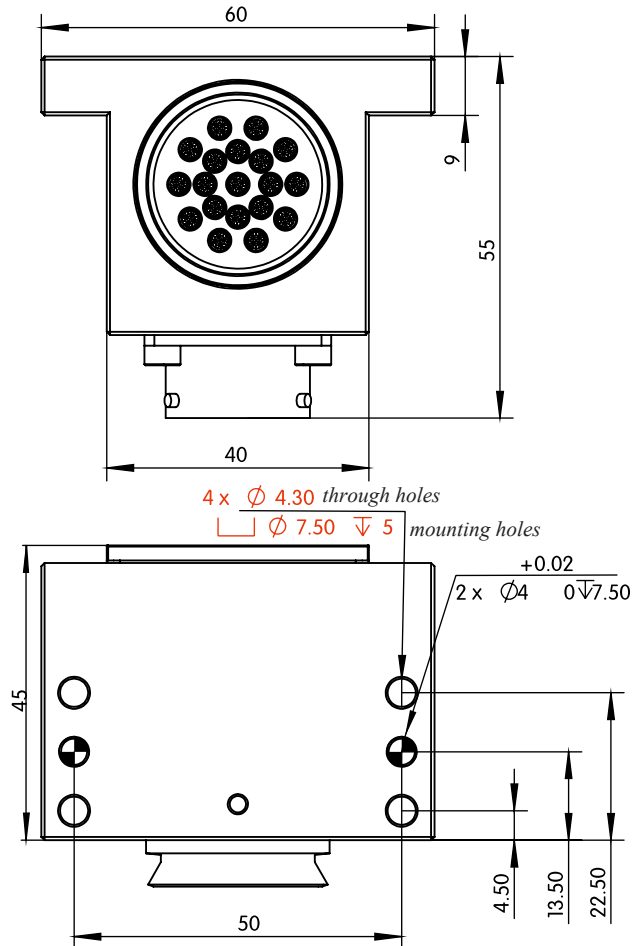
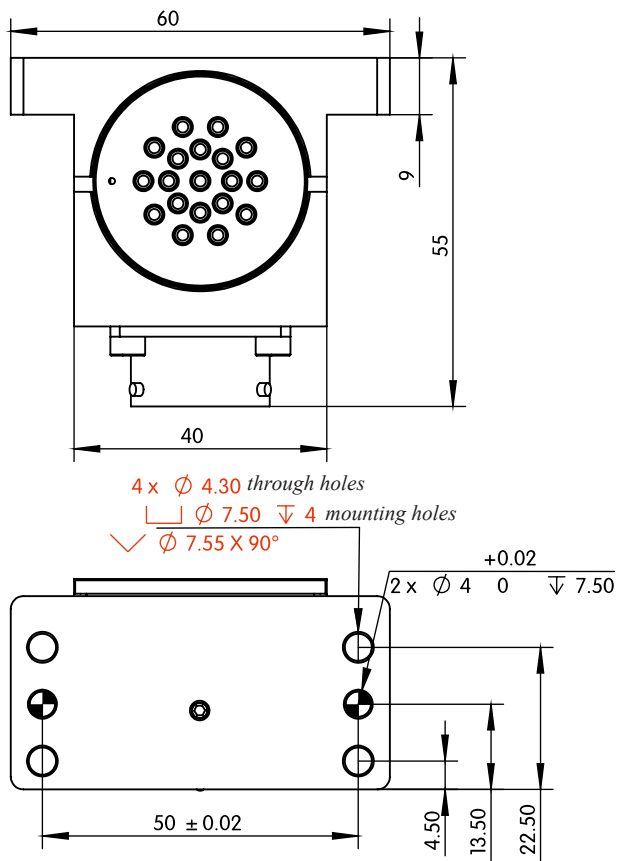
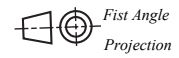
Dimensions (mm)



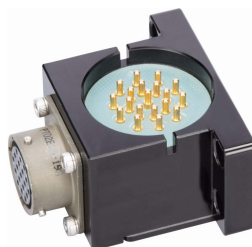
Automatic Quick Changer - Electrical module

FQCA-EM - series

Dimensions (mm)



FQCA-EM-G19



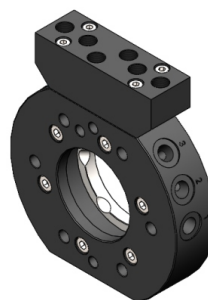
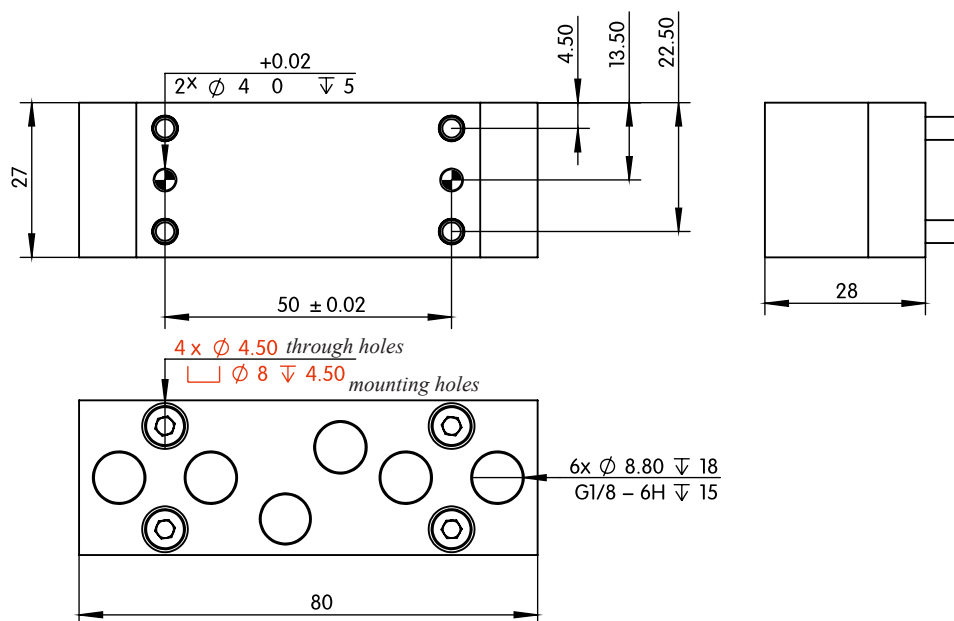
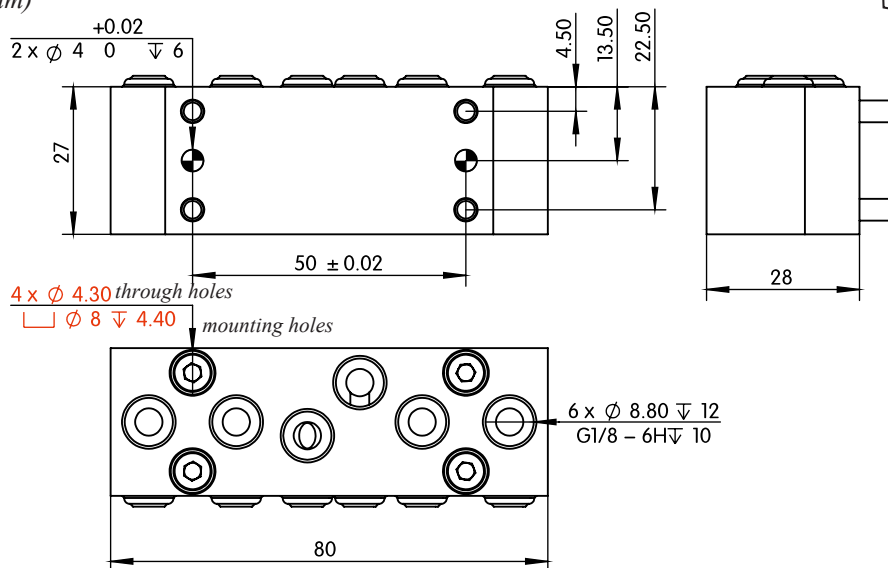
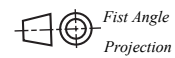
FQCA-EM-R19



Automatic Quick Changer - Pneumatic module

FQCA-PM - series

Dimensions (mm)



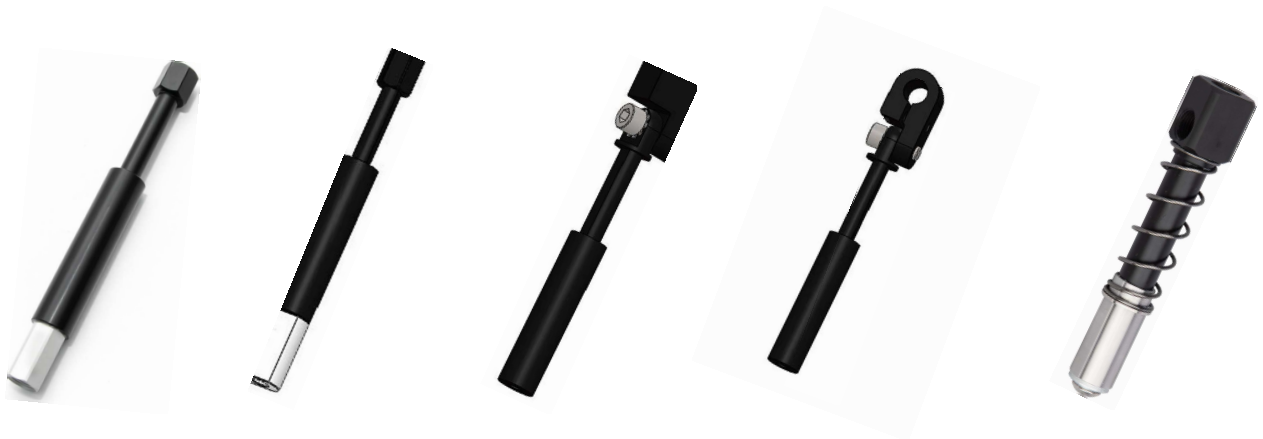
FQCA-PM-R6-G18

FQCA-PM-G6-G18

Suspension for vacuum cup

Suspension normally used with vacuum cups to pick up parts & take out parts & move parts in plastic industry
New design internal structure offers more smoothly movement affection & more heavy duty load
spring structure to provide buffering function to protect parts Body & rod in hard anodized aluminum
Suspension normally be used with bracket to be mounted on aluminum profile or plate Base on special internal
Factory advantage: to provide OEM & ODM to meet customers' special request

Dimensions (mm)



FSVR Series FSVN Series FSVE Series FSK Series FVFM Series



FFSVRT Series FSVNT Series FSVET Series FSKT Series FVSG Series

Non-rotative Suspension with smoothly body

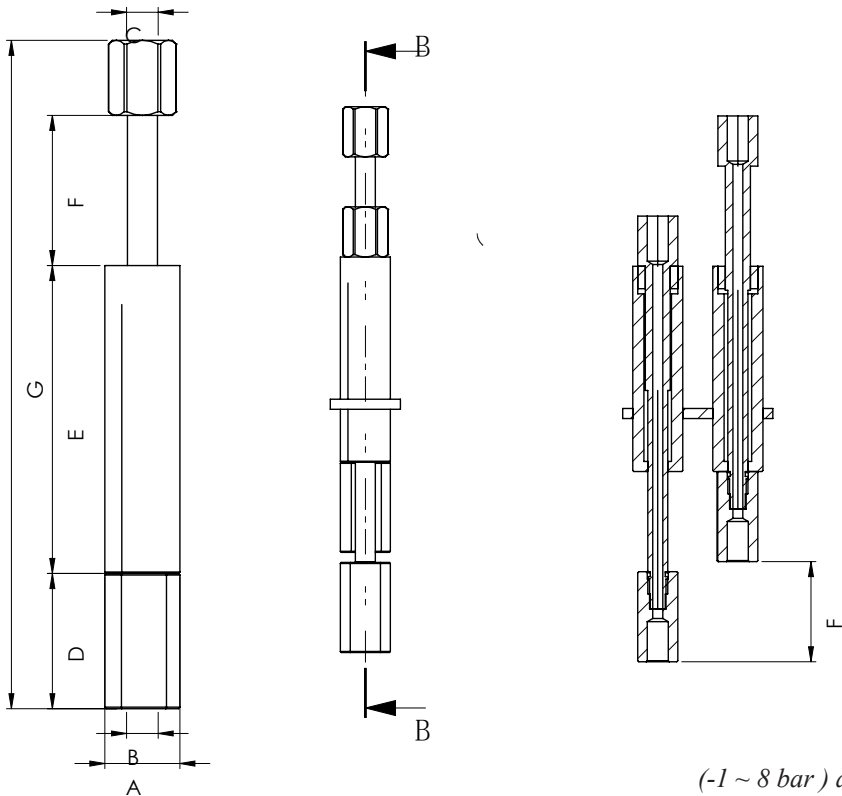
FSVN - series

Body & rod in hard anodized aluminum

Internal non-rotative structure to offers more smoothly movement affection & high load capability

Different strokes for option: 10mm; 20mm; 25mm; 35mm; 50mm

Dimensions (mm)



(-1 ~ 8 bar) air pressure range

Model	A	B	C	D	E	F	G	Weight
FSVN10-S-10-M5	∅10	M5	M5	18	22	10	60	15g
FSVN10-S-20-M5	∅10	M5	M5	18	41	20	89	20g
FSVN14-S-20-G18	∅14	G1/8	G1/8	20	40	20	92	30g
FSVN14-S-35-G18	∅14	G1/8	G1/8	20	60	35	127	50g
FSVN20-S-25-G18	∅20	G1/8	G1/8	22	50	25	112	54g
FSVN20-S-50-G18	∅20	G1/8	G1/8	22	84	50	171	80g

Application example



NEW



Non-rotative Suspension with thread body

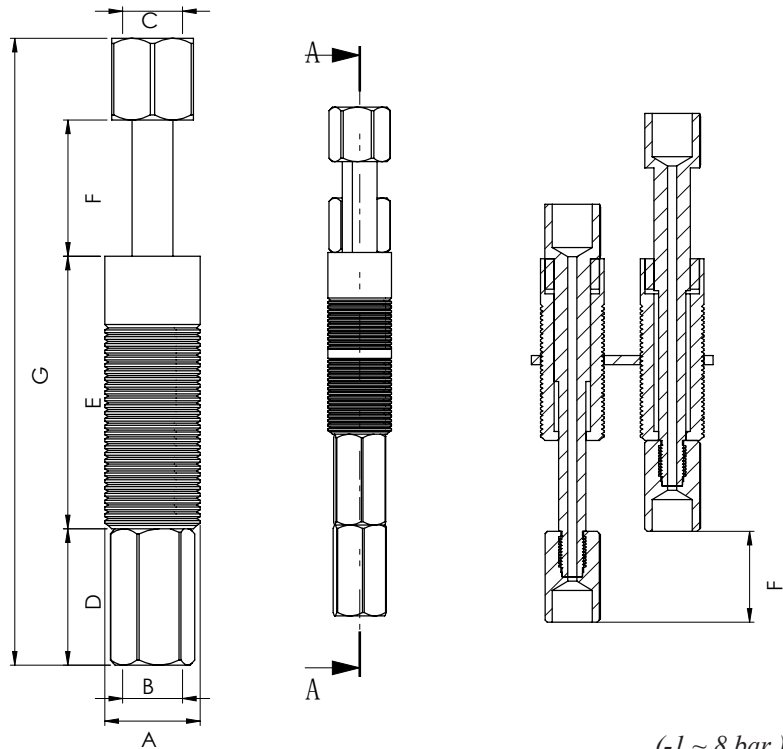
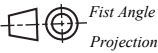
FSVNT - series

Body & rod in hard anodized aluminum

Internal non-rotative structure to offers more smoothly movement affection & high load capability

Different strokes for option: 10mm; 20mm; 25mm; 35mm; 50mm

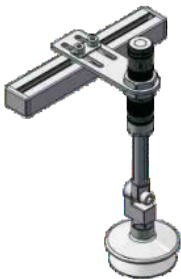
Dimensions (mm)



(-1 ~ 8 bar) air pressure range

Model	A	B	C	D	E	F	G	Weight
FSVNT10-M-10-M5	M10*1	M5	M5	18	22	10	60	18g
FSVNT10-M-20-M5	M10*1	M5	M5	18	41	20	84	23g
FSVNT14-M-20-G18	M14*1	G1/8	G1/8	20	40	20	92	51g
FSVNT14-M-35-G18	M14*1	G1/8	G1/8	20	60	35	127	72g
FSVNT20-M-25-G18	M20*1	G1/8	G1/8	22	50	25	112	82g
FSVNT20-M-50-G18	M20*1	G1/8	G1/8	22	84	50	171	120g

Application example



NEW



Rotative Suspension with smoothly body

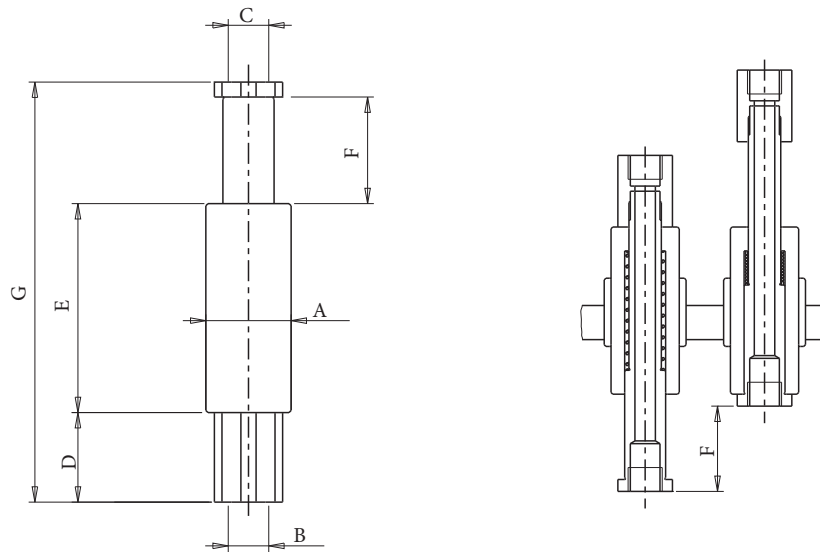
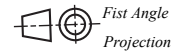
FSVR - series

Body & rod in hard anodized aluminum

Internal rotative structure to provide high load capability

To provide different strokes for option: 10mm; 20mm; 25mm; 35mm; 50mm

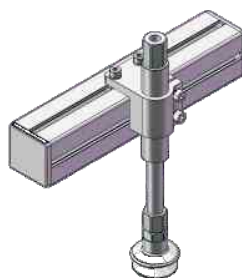
Dimensions (mm)



(-1 ~ 8 bar) air pressure range

<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>Weight</i>
FSVR10-S-10-M5	∅10	M5	M5	18	22	10	55.5	11g
FSVR10-S-20-M5	∅10	M5	M5	18	41	20	84	17g
FSVR14-S-20-G18	∅14	G1/8	G1/8	20	40	20	92	23g
FSVR14-S-35-G18	∅14	G1/8	G1/8	20	60	35	127	40g
FSVR20-S-25-G18	∅20	G1/8	G1/8	22	50	25	112	50g
FSVR20-S-50-G18	∅20	G1/8	G1/8	22	84	50	171	77g

Application example



Rotative Suspension with thread body

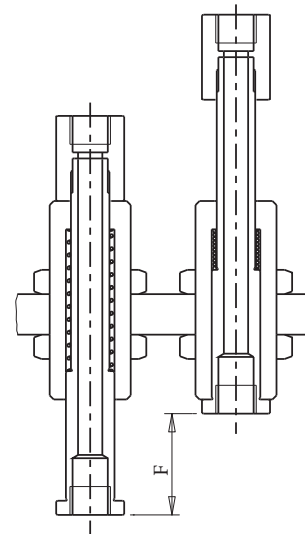
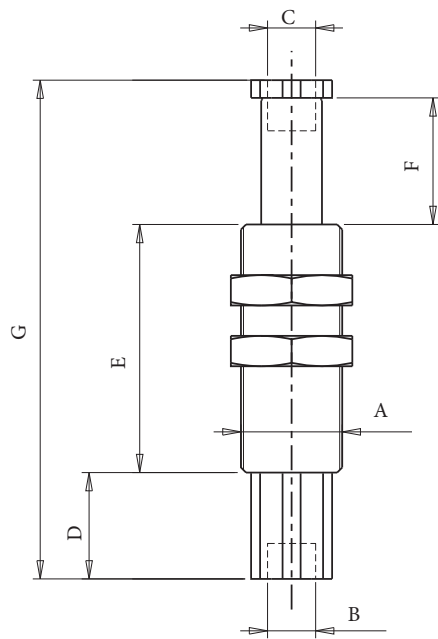
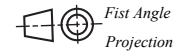
FSVRT - series

Body & rod in hard anodized aluminum

Internal rotative structure to provide high load capability

To provide different strokes for option: 10mm; 20mm; 25mm; 35mm; 50mm

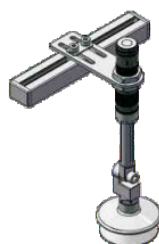
Dimensions (mm)



(-1 ~ 8 bar) air pressure range

<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>Weight</i>
FSVRT10-M-10-M5	M10*1	M5	M5	18	22	10	55.5	14g
FSVRT10-M-20-M5	M10*1	M5	M5	18	41	20	84	26g
FSVRT14-M-20-G18	M14*1	G1/8	G1/8	20	40	20	92	32g
FSVRT14-M-35-G18	M14*1	G1/8	G1/8	20	60	35	127	36g
FSVRT20-M-25-G18	M20*1	G1/8	G1/8	22	50	25	112	70g
FSVRT20-M-50-G18	M20*1	G1/8	G1/8	22	84	50	171	104g

Application example



Non-rotative Suspension with integrated elbow arm & Smoothly body

FSVE- series

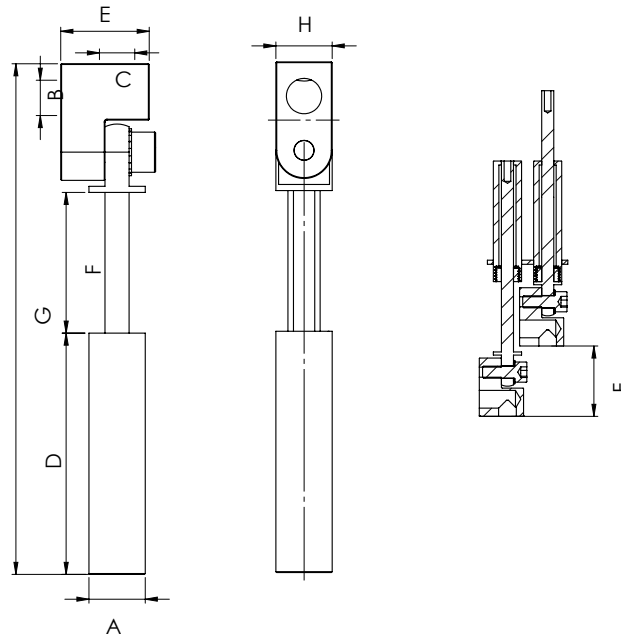
Body & rod in hard anodized aluminum

Internal non-rotative structure to offers more smoothly movement affection & high load capability

Different strokes for option: 10mm; 20mm; 25mm; 35mm; 50mm

Easy to set 0° ~ +/-90° to provide more flexible option to meet special angle request

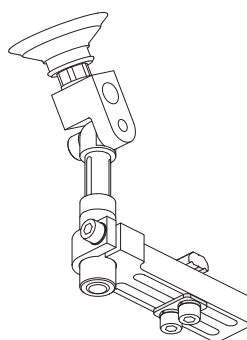
Dimensions (mm)



(-1 ~ 8 bar) air pressure range

<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>Weight</i>
FSVE10-S-10-M5	∅10	M5	M5	22	11	10	53	10	18g
FSVE10-S-20-M5	∅10	M5	M5	41	11	20	81	10	23g
FSVE14-S-20-G18	∅14	G1/8	G1/8	40	22	20	93	14	51g
FSVE14-S-35-G18	∅14	G1/8	G1/8	60	22	35	128	14	72g
FSVE20-S-25-G18	∅20	G1/8	G1/8	50	22	25	111	14	82g
FSVE20-S-50-G18	∅20	G1/8	G1/8	84	22	50	169.5	14	120g

Application example



NEW



Non-rotative Suspension with integrated elbow arm & Thread body

FSVET- series

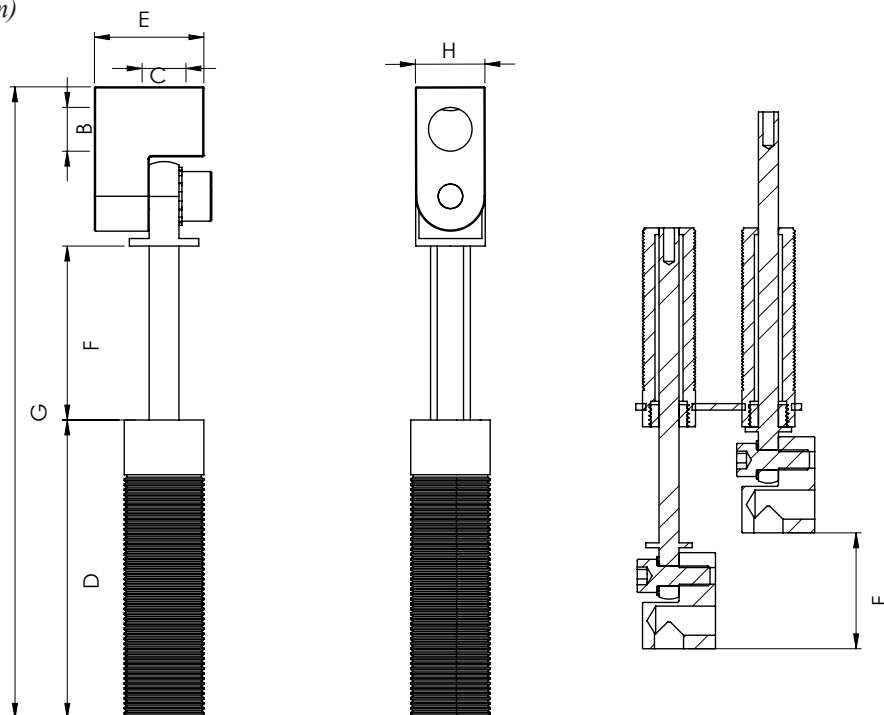
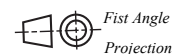
Body & rod in hard anodized aluminum

Internal non-rotative structure to offers more smoothly movement affection & high load capability

Different strokes for option: 10mm; 20mm; 25mm; 35mm; 50mm

Easy to set 0° ~ +/-90° to provide more flexible option to meet special angle request

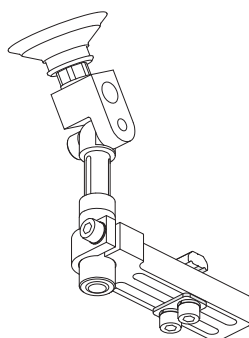
Dimensions (mm)



(-1 ~ 8 bar) air pressure range

Model	A	B	C	D	E	F	G	H	Weight
FSVET10-M-10-M5	M10*1	M5	M5	22	11	10	53	10	21g
FSVET10-M-20-M5	M10*1	M5	M5	41	11	20	81	10	26g
FSVET14-M-20-G18	M14*1	G1/8	G1/8	40	22	20	93	14	57g
FSVET14-M-35-G18	M14*1	G1/8	G1/8	60	22	35	128	14	80g
FSVET20-M-25-G18	M20*1	G1/8	G1/8	50	22	25	111	14	88g
FSVET20-M-50-G18	M20*1	G1/8	G1/8	84	22	50	169.5	14	125g

Application example



NEW



Non-rotative Suspension with adjustable clamp & Smoothly body

FSK- series

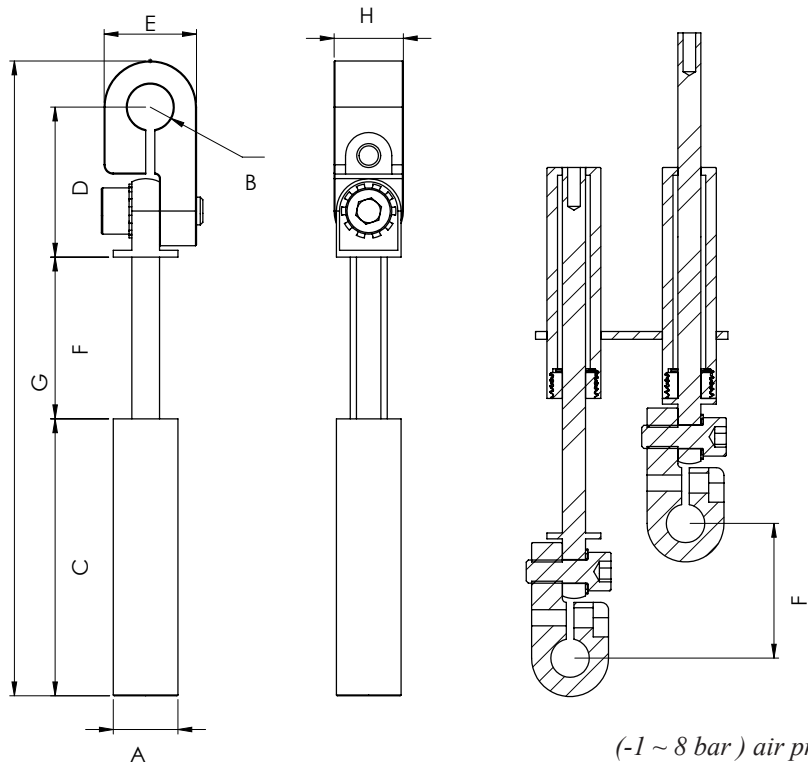
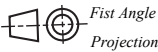
Body & rod in hard anodized aluminum

Internal non-rotative structure to offers more smoothly movement affection & high load capability

Different strokes for option: 20mm; 25mm; 35mm; 50mm

Easy to set 0° ~ +/-90° to provide more flexible option to meet special angle request

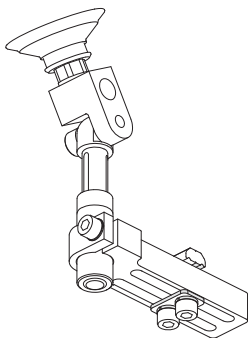
Dimensions (mm)



(-1 ~ 8 bar) air pressure range

Model	A	B	C	D	E	F	G	H	Weight
FSK14-S-20-D10	ø14	ø10	40	22.5	20	20	97	23.6	36g
FSK14-S-20-D14	ø14	ø14	40	22.5	20	20	97	23.6	35g
FSK14-S-35-D14	ø14	ø14	40	22.5	20	35	128	23.6	80g
FSK20-S-25-D14	ø20	ø14	50	22.5	20	25	120	23.6	72g
FSK20-S-25-D20	ø20	ø20	50	25	27	25	125	27	90g
FSK20-S-50-D20	ø20	ø20	84	25	27	50	180	27	125g

Application example



Non-rotative Suspension with adjustable clamp & Thread body

FSKT- series

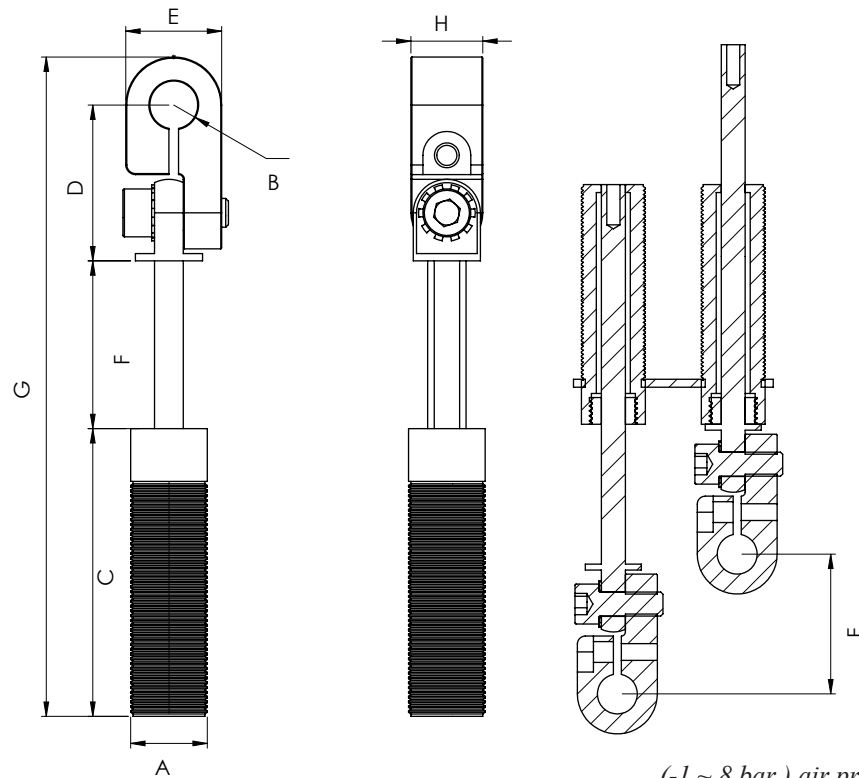
Body & rod in hard anodized aluminum

Internal non-rotative structure to offers more smoothly movement affection & high load capability

Different strokes for option: 20mm; 25mm; 35mm; 50mm

Easy to set $0^{\circ} \sim \pm 90^{\circ}$ to provide more flexible option to meet special angle request

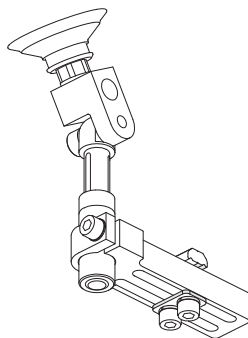
Dimensions (mm)



(-1 ~ 8 bar) air pressure range

Model	A	B	C	D	E	F	G	H	Weight
FSKT14-M-20-D10	M14*1	∅10	40	22.5	20	20	97	23.6	36g
FSKT14-M-20-D14	M14*1	∅14	40	22.5	20	20	97	23.6	35g
FSKT14-M-35-D14	M14*1	∅14	40	22.5	20	35	128	23.6	80g
FSKT20-M-25-D14	M20*1	∅14	50	22.5	20	25	120	23.6	72g
FSKT20-M-25-D20	M20*1	∅20	50	25	27	25	125	27	90g
FSKT20-M-50-D20	M20*1	∅20	84	25	27	50	180	27	125g

Application example



NEW



Rotative Suspension with Smoothly body

FVFM - series

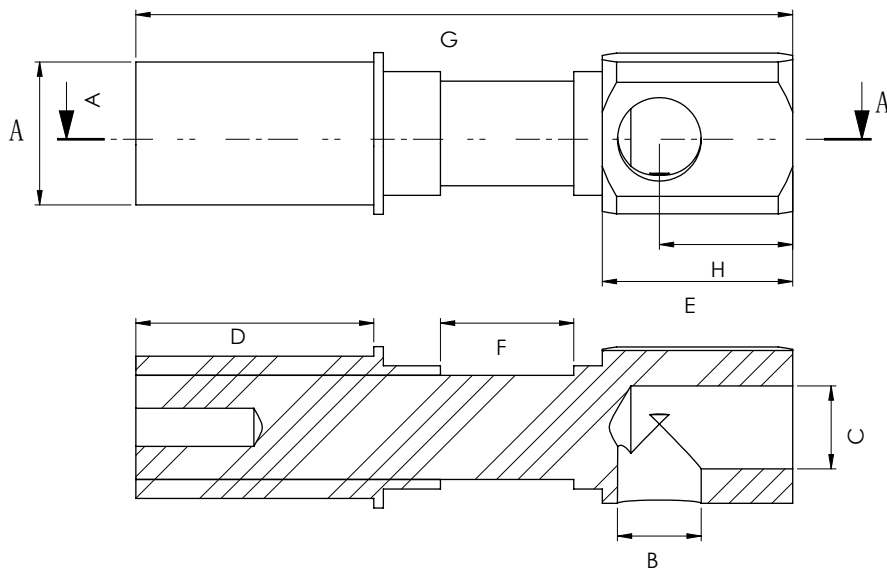
Rod in hard anodized aluminum & Body in steel material

External spring structure to offer high load capability

Different strokes for option: 10mm; 15mm; 20mm; 40mm

Dimensions (mm)

 First Angle
Projection



Model	A	B	C	D	E	F	G	H	Weight
FVFM10-10-M5	∅10	M5	M5	18	16	10	64	12	18g
FVFM10-20-M5	∅10	M5	M5	18	16	20	72	12	28g
FVFM14-15-G18	∅14	G1/8	G1/8	25	20	15	75	14	34g
FVFM14-40-G18	∅14	G1/8	G1/8	25	20	40	100	14	48g
FVFM20-20-G14	∅20	G1/8	G1/4	48	26	20	113	15	136g
FVFM20-40-G14	∅20	G1/8	G1/4	48	26	40	132	15	148g

Application example

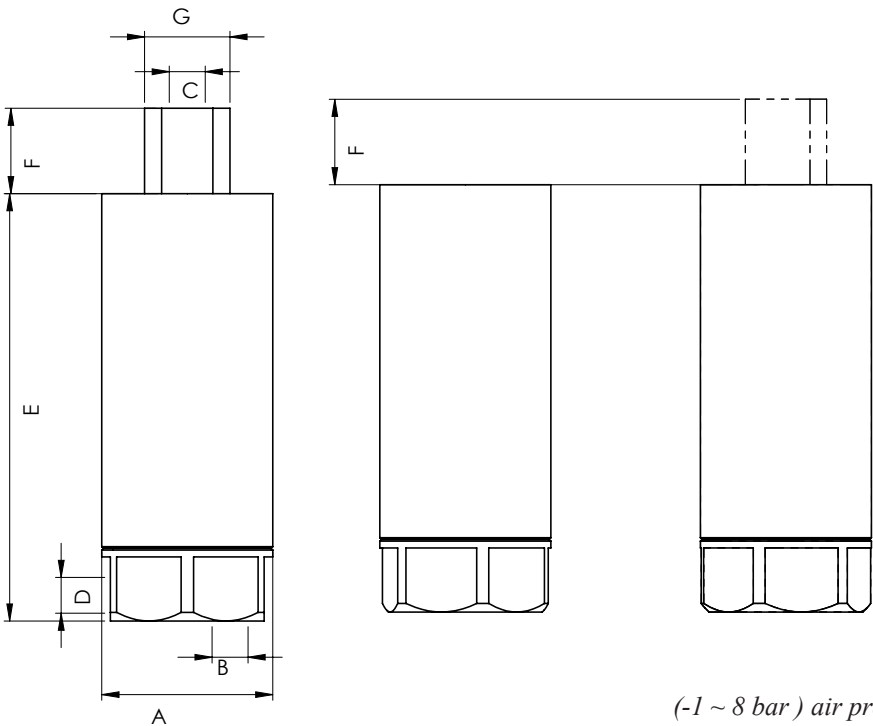
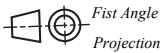


Non-rotative Suspension with Smoothly body

FVSG - series

Rod & body in hard anodized aluminum
Unique internal telescopic structure to provide more space to assemble flexible
Different strokes for option: 10mm; 20mm;

Dimensions (mm)



(-1 ~ 8 bar) air pressure range

Model	A	B	C	D	E	F	G	Weight
FVSG20-S-10-M5	ø20	M5	M5	M5	50	10	50.5	35g
FVSG20-S-20-M5	ø20	M5	M5	M5	65	20	84	45g
FVSG20-S-20-G18	ø20	G1/8	G1/8	G1/8	72	20	92	70g

Application example



Vacuum cup - 1 bellow

Vacuum cups with 1 bellow are used for Flat surface only

Vacuum cups with 1 bellow could provide high accuracy in loading gripping & speeds up throughput rates.

Base on different request, provide 3 materials for option: Silicon Rubber. NBR. HT1(Traceless Function)

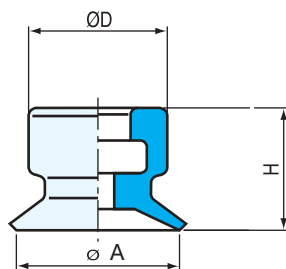
Factory advantage: to provide OEM & ODM to meet customers' special request

FVS1 - series

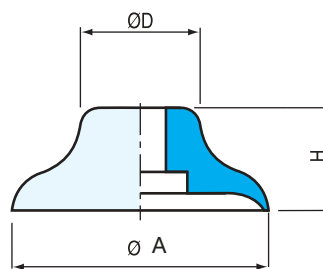
Dimensions (mm)



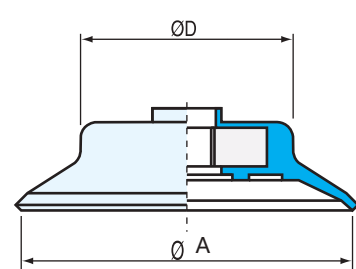
Model	F / (N)	A	H	D	SI / Transparent	NBR / Black	Weight
FVS1-2-HT1	0.5	2	4	4	FVS1-2-SI	FVS1-2-NBR	1g
FVS1-3.5-HT1	0.7	3.5	4	4	FVS1-3.5-SI	FVS1-3.5-NBR	1g
FVS1-5-HT1	0.9	5	6.5	7.5	FVS1-5-SI	FVS1-5-NBR	1g
FVS1-6-HT1	1	6	6.5	7.5	FVS1-6-SI	FVS1-6-NBR	1g
FVS1-8-HT1	1.1	8	7	8	FVS1-8-SI	FVS1-8-NBR	1g
FVS1-10-HT1	1.6	10	7.5	8.7	FVS1-10-SI	FVS1-10-NBR	4g
FVS1-15-HT1	3.7	15	8	12	FVS1-15-SI	FVS1-15-NBR	5g
FVS1-20-HT1	6.1	20	10	15	FVS1-20-SI	FVS1-20-NBR	6g
FVS1-25-HT1	9.4	25	14	16	FVS1-25-SI	FVS1-25-NBR	7g
FVS1-30-HT1	15.9	30	12	15	FVS1-30-SI	FVS1-30-NBR	8g
FVS1-35-HT1	23.1	35	14	20.5	FVS1-35-SI	FVS1-35-NBR	11g
FVS1-40-HT1	26.7	40	14	23.5	FVS1-40-SI	FVS1-40-NBR	12g
FVS1-50-HT1	38.3	50	15	29	FVS1-50-SI	FVS1-50-NBR	15g
FVS1-60-HT1	57.8	60	16	38	FVS1-60-SI	FVS1-60-NBR	34g
FVS1-80-HT1	101.1	80	18	53	FVS1-80-SI	FVS1-80-NBR	63g



FVS1-2~10



FVS1-15~50



FVS1-60~80

Vacuum cup - 2 bellows

Vacuum cups with 2 bellows provide better precision and positioning comparing with vacuum cup with 1 bellow

Vacuum cups with 2 bellows provide better angle & flexibility precision & low internal volume suitable for high-speed applications.

Base on different request, provide 3 materials for option: Silicon Rubber. NBR. HT1(Traceless Function)

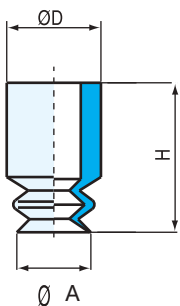
Factory advantage: to provide OEM & ODM to meet customers' special request

FVS2 - series

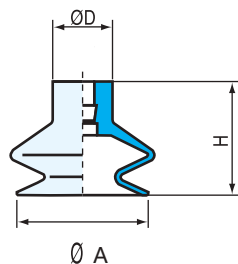
Dimensions (mm)



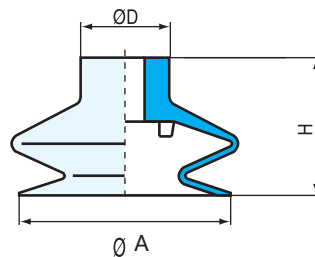
Model	F / (N)	A	H	D	SI / Transparant	NBR / Black	Weight
FVS2-6-HT1	0.4	5.7	11	7	FVS2-6-SI	FVS2-6-NBR	2g
FVS2-11-HT1	0.95	10.1	16	10	FVS2-11-SI	FVS2-11-NBR	2g
FVS2-14-HT1	1.2	12.5	16	10	FVS2-14-SI	FVS2-14-NBR	2g
FVS2-16-HT1	2.3	15.6	19	10	FVS2-16-SI	FVS2-16-NBR	5g
FVS2-20-HT1	4.7	18.1	16	10	FVS2-20-SI	FVS2-20-NBR	5g
FVS2-22-HT1	5.7	21.5	19	10	FVS2-22-SI	FVS2-22-NBR	6g
FVS2-25-HT1	5.3	22.5	23	10	FVS2-25-SI	FVS2-25-NBR	6g
FVS2-33-HT1	13.6	30	27.5	18	FVS2-33-SI	FVS2-33-NBR	16g
FVS2-43-HT1	22.8	38	28	18	FVS2-43-SI	FVS2-43-NBR	19g
FVS2-53-HT1	51.3	50	34	18	FVS2-53-SI	FVS2-53-NBR	27g
FVS2-63-HT1	85	60	34	18	FVS2-63-SI	FVS2-63-NBR	34g



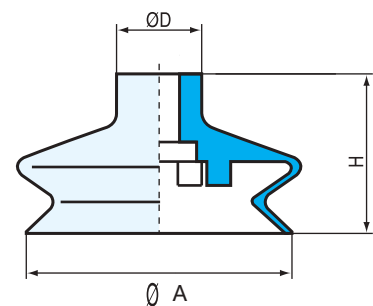
FVS2-6



FVS2-11 ~ 25



FVS2-33 ~ 43



FVS2-53 ~ 63

Vacuum cup - 3 bellows

Vacuum cups with 3 bellows provide better precision and positioning comparing with vacuum cup with 2 bellows

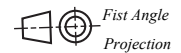
Vacuum cups with 3 bellows are recommended for gripping products on different planes (large deflection) in stead of spring systems. Meanwhile to gripe spherical or cylindrical objects at an angle (ball-joint effect).

Base on different request, provide 3 materials for option: Silicon Rubber. NBR. HT1(Traceless Function)

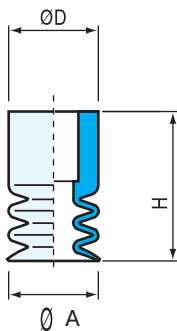
Factory advantage: to provide OEM & ODM to meet customers' special request

FVS3 - series

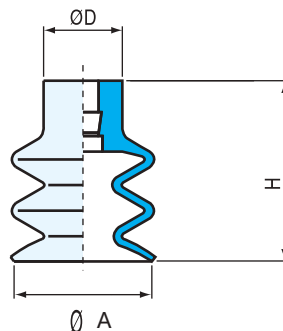
Dimensions (mm)



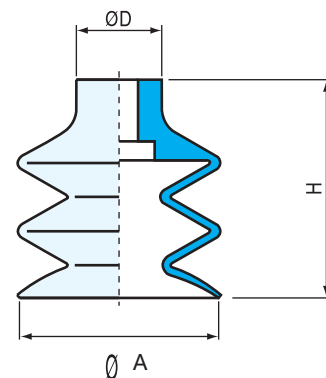
Model	F / (N)	A	H	D	SI / Transparant	NBR / Black	Weight
FVS3-5-HT1	0.5	5	13.5	7	FVS3-5-SI	FVS3-5-NBR	1g
FVS3-7-HT1	0.9	7	13.5	9	FVS3-7-SI	FVS3-7-NBR	2g
FVS3-9-HT1	1.1	9	15	9	FVS3-9-SI	FVS3-9-NBR	2g
FVS3-12-HT1	2.8	12	21	10	FVS3-12-SI	FVS3-12-NBR	2g
FVS3-14-HT1	3	14	23	10	FVS3-14-SI	FVS3-14-NBR	3g
FVS3-18-HT1	4.4	18	23	10	FVS3-18-SI	FVS3-18-NBR	6g
FVS3-20-HT1	4.6	20	23	10	FVS3-20-SI	FVS3-20-NBR	6g
FVS3-25-HT1	6.5	25	34	10	FVS3-25-SI	FVS3-25-NBR	8g
FVS3-32-HT1	12.1	32	37.5	18	FVS3-32-SI	FVS3-32-NBR	17g
FVS3-42-HT1	20.9	42	46	18	FVS3-42-SI	FVS3-42-NBR	27g
FVS3-52-HT1	28.9	52	49	18	FVS3-52-SI	FVS3-52-NBR	32g
FVS3-62-HT1	41.2	62	55	21	FVS3-62-SI	FVS3-62-NBR	60g



FVS3-5 ~ 9



FVS3-12 ~ 25



FVS3-32 ~ 62

Sponge Vacuum cup - 1 bellow

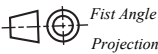
Vacuum cups with sponge are used for gripping products on different planes.

Base on different request, provide different sponge as option.

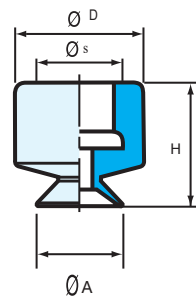
Factory advantage: to provide OEM & ODM to meet customers' special request

FVS1-M - series

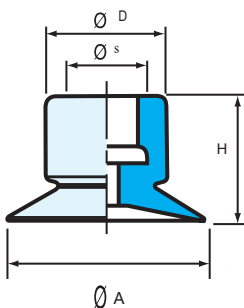
Dimensions (mm)



Model	A	H	D	S	Material
FVS1-M-10	10	13	11	7	Silicon rubber&Sponge
FVS1-M-12	12	15	11	7	Silicon rubber&Sponge
FVS1-M-15	15	11	11	7	Silicon rubber&Sponge
FVS1-M-20	20	11	11	7	Silicon rubber&Sponge
FVS1-M-25	25	11	11	7	Silicon rubber&Sponge
FVS1-M-30	30	11	11	7	Silicon rubber&Sponge
FVS1-M-40	40	13	11	7	Silicon rubber&Sponge
FVS1-M-50	50	15	12	7	Silicon rubber&Sponge



FVS1-M-10



FVS1-M-12 ~ 50

Sponge Vacuum cup - 2 bellows

Vacuum cups with sponge are used for gripping products on different planes.

Vacuum cups with sponge provide better angle & flexibility precision

Base on different request, provide different sponge material as option.

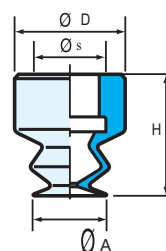
Factory advantage: to provide OEM & ODM to meet customers' special request

FVS2-M - series

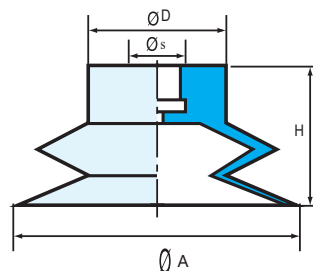
Dimensions (mm)



Model	A	H	D	S	Material
FVS2-M-10	10	13	11	7	Silicon rubber & Sponge
FVS2-M-12	12	15	11	7	Silicon rubber & Sponge
FVS2-M-15	15	11	11	7	Silicon rubber & Sponge
FVS2-M-20	20	11	11	7	Silicon rubber & Sponge
FVS2-M-25	25	11	11	7	Silicon rubber & Sponge
FVS2-M-30	30	11	11	7	Silicon rubber & Sponge
FVS2-M-40	40	13	11	7	Silicon rubber & Sponge
FVS2-M-50	50	15	12	7	Silicon rubber & Sponge



FVS2-M-10 ~ 25



FVS2-M-30 ~ 50

Sponge Vacuum cup - 3 bellows

Vacuum cups with sponge are used for gripping products on different planes.

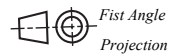
Vacuum cups with sponge provide better angle & flexibility precision

Base on different request, provide different sponge material as option.

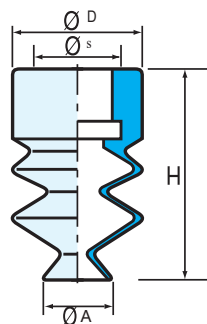
Factory advantage: to provide OEM & ODM to meet customers' special request

FVS3-M - series

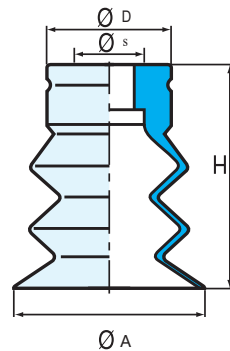
Dimensions (mm)



Model	A	H	D	S	Material
FVS3-M-10	10	13	11	7	Silicon rubber & Sponge
FVS3-M-12	12	15	11	7	Silicon rubber & Sponge
FVS3-M-15	15	11	11	7	Silicon rubber & Sponge
FVS3-M-20	20	11	11	7	Silicon rubber & Sponge
FVS3-M-25	25	11	11	7	Silicon rubber & Sponge
FVS3-M-30	30	11	11	7	Silicon rubber & Sponge
FVS3-M-40	40	13	11	7	Silicon rubber & Sponge
FVS3-M-50	50	15	12	7	Silicon rubber & Sponge



FVS3-M-10 ~ 30

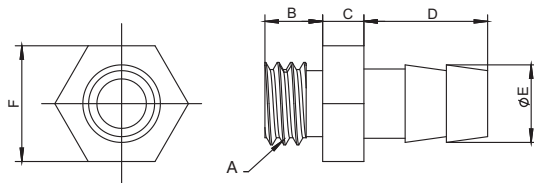


FVS3-M-40 ~ 50

Air Connector Fitting

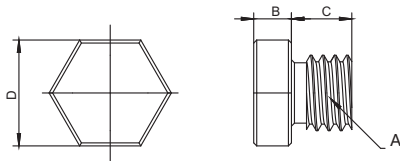
FACB - series

Dimensions (mm)



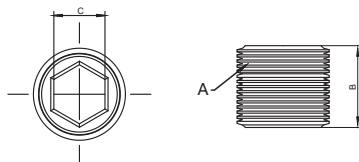
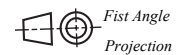
Model	A	B	C	D	E	F	Weight / g
FACB1-M3-4	M3	4	2	5.5	3.5	4.5	0.6
FACB1-M5-4	M5	5	2	6.5	3.5	7	1.4
FACB1-M5-6	M5	4.5	2.5	7	4.8	7	1.7

Dimensions (mm)



Model	A	B	C	D	Weight / g
FACB2-M3	M3	2	3	4.9	0.5
FACB2-M5	M5	2.5	4.5	7	1

Dimensions (mm)

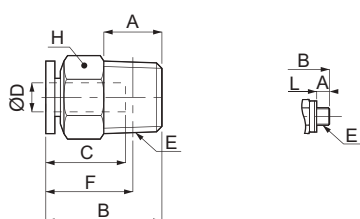
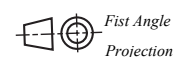


Model	A	B	C	Weight / g
FACB3-G18	G1/8	8	5	3
FACB3-G14	G1/4	9	6	6.2

Air Hose Connector Fitting

Straight Type Connectors FACS - series

Dimensions (mm)

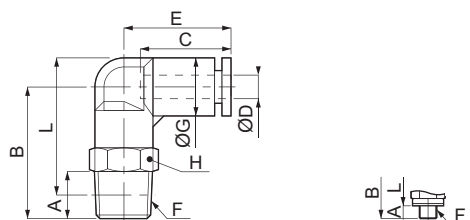
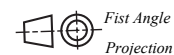


Model	A	B	C	D	E	F	H	Weight / g
FACS4-M5	3	20	14.9	4	M5	17	10	6.3
FACS4-G1/8	8	21	14.9	4	G1/8	17	10	8.3
FACS4-G1/4	11	21	14.9	4	G1/4	15	14	16
FACS6-M5	3	22.1	17	6	M5	19.1	12	9.2
FACS6-G1/8	8	22.6	17	6	G1/8	18.6	12	9.3
FACS6-G1/4	11	24.6	17	6	G1/4	18.5	14	18
FACS6-G3/8	12	23.6	17	6	G3/8	17.2	17	28
FACS8-G1/8	8	27.9	18.2	8	G1/8	23.9	14	16
FACS8-G1/4	11	26.6	18.2	8	G1/4	20.6	14	16
FACS8-G3/8	12	23.9	18.2	8	G3/8	17.6	17	24
FACS10-G1/8	8	30.3	20.7	10	G1/8	26.3	17	24
FACS10-G1/4	11	29.5	20.7	10	G1/4	23.8	17	21
FACS10-G3/8	12	29.3	20.7	10	G3/8	23	17	27

Air Hose Connector Fitting

L-Type Connectors *FACL* - series

Dimensions (mm)

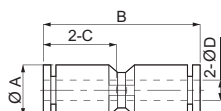
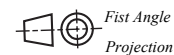


Model	A	B	C	D	E	F	G	H	Weight / g
FACL4-M5	3	20.3	14.9	4	18	M5	10	10	8
FACL4-G1/8	8	23.2	14.9	4	18	G1/8	10	10	11
FACL4-G1/4	11	26.3	14.9	4	18	G1/4	10	14	21
FACL6-M5	3	22	16.8	6	19.8	M5	12.5	12	13
FACL6-G1/8	8	25	16.8	6	19.8	G1/8	12.5	12	14
FACL6-G1/4	11	28	16.8	6	19.8	G1/4	12.5	14	22
FACL6-G3/8	12	29.8	16.8	6	19.8	G3/8	12.5	17	35
FACL8-G1/8	8	28	18.1	8	22.7	G1/8	14.5	14	19
FACL8-G1/4	11	31	18.1	8	22.7	G1/4	14.5	14	24
FACL8-G3/8	12	32.8	18.1	8	22.7	G3/8	14.5	17	37
FACL10-G1/8	8	33	20.2	10	26.2	G1/8	17.5	17	31
FACL10-G1/4	11	36	20.2	10	26.2	G1/4	17.5	17	34
FACL10-G3/8	12	37	20.2	10	26.2	G3/8	17.5	21	43

Air Hose Connector Fitting

Straight-Type Connectors FACS2 - series

Dimensions (mm)

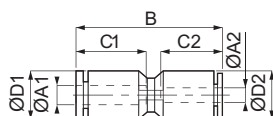


Model	A	B	C	D	Weight / g
FACS2-4	10	30.8	14.9	4	4.7
FACS2-6	12.5	34.9	17	6	6.5
FACS2-8	14.5	37.8	18.1	8	9.4
FACS2-10	17.5	43.4	20.2	10	16

Straight-Type Converting Connectors

FACS3 - series

Dimensions (mm)

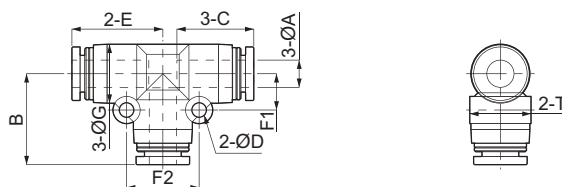


Model	A1	A2	B	C1	C2	D1	D2	Weight / g
FACS3-6-4	6	4	34.4	17	14.9	12.5	12.5	6.4
FACS3-8-4	8	4	36.6	18.1	14.9	14.5	10.7	7.2
FACS3-8-6	8	6	37.9	18.1	17	14.5	14.5	8.8
FACS3-10-6	10	6	39.8	20.2	17	17.5	13	12
FACS3-10-8	10	8	43.1	20.2	18.4	17.5	17.5	14

Air Hose Connector Fitting

T-Type Connectors FACT 2- series

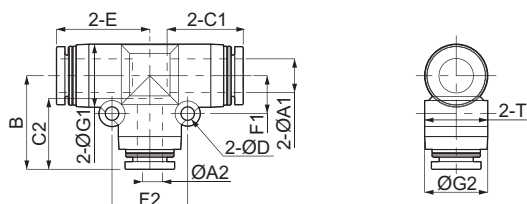
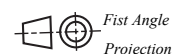
Dimensions (mm)



Model	A	B	C	D	E	F1	F2	G	T	Weight / g
FACT2-4	4	16.9	14.9	3.2	16.9	6.5	13	10	10	7.5
FACT2-6	6	20.1	17	3.2	20.05	8	16	13	13.5	11
FACT2-8	8	22.2	18.1	3.2	22.2	9	18	15	15	16
FACT2-10	10	25.2	19.6	4.2	25.2	12	24	17.5	17.5	25

T-Type Converting Connectors FACT3- series

Dimensions (mm)

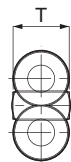
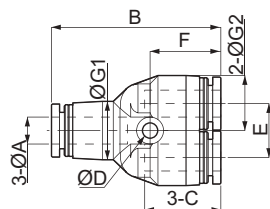
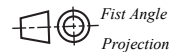


Model	A1	A2	B	C1	C2	D	E	F1	F2	G1	G2	T	Weight / g
FACT3-4-6	4	6	20.1	14.9	17	3.2	19.5	8	16	13	13	13.5	11
FACT3-6-4	6	4	19.5	17	14.9	3.2	20.1	8	16	13	13	13.5	11
FACT3-6-8	6	8	22.2	17	18.1	3.2	22.3	9	18	15	15	15.6	14
FACT3-8-4	8	4	21.7	18.1	14.9	3.2	22.2	9	18	14.5	12.5	15.1	14
FACT3-8-6	8	6	22.3	18.1	17	3.2	22.2	9	18	14.5	12.5	15.1	14
FACT3-8-10	8	10	25.2	18.1	20.2	4.2	24.9	12	24	17.5	17.5	17.5	22
FACT3-10-6	10	6	25	20.2	17	4.2	25.2	12	24	14.5	14.5	18.2	22
FACT3-10-8	10	8	24.9	20.2	18.1	4.2	25.2	12	24	14.5	14.5	18.2	23
FACT3-10-12	10	12	28.2	20.2	22.9	4.2	28.2	14	28	21	21	21.7	34

Air Hose Connector Fitting

Y-Type Connectors *FACY* - series

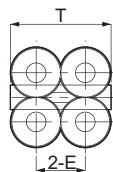
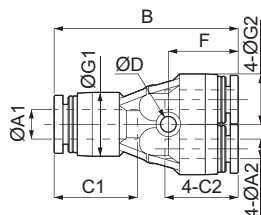
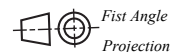
Dimensions (mm)



Model	A	B	C	D	E	F	G1	G2	T	Weight / g
FACY-4	4	32.8	14.9	3.4	11	14.1	10	10	10	7.6
FACY-6	6	37.7	17	3.4	12	15.8	13	13	13.5	11
FACY-8	8	42.4	18.1	3.4	14	17.2	15	15	14.5	16
FACY-10	10	48.4	20.7	4.5	18	19.5	18	18	18	26

Y-Type Connectors *FACY 2-* series

Dimensions (mm)

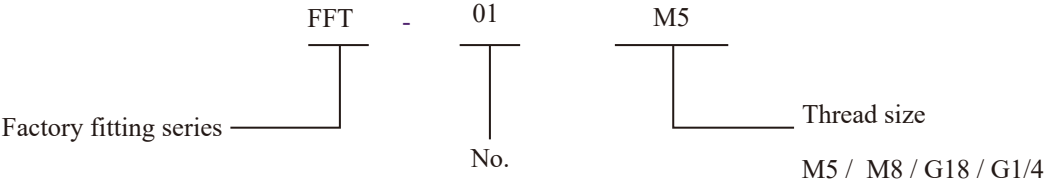


Model	A1	A2	B	C1	C2	D	E	F	G1	G2	T	Weight / g
FACY2-6-4	6	4	37.5	17	14.9	3.2	10	14.2	13	10.5	20.5	14
FACY2-8-6	8	6	42	18.2	17	3.5	13	15.8	14	13	26	21

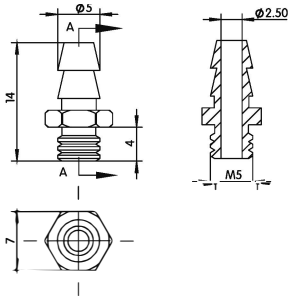
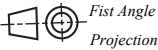
Vacuum Cups Fitting

FFT - series

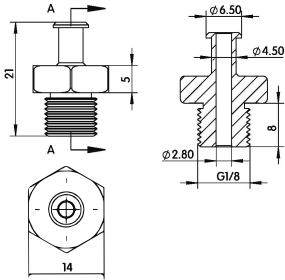
Model representation methods



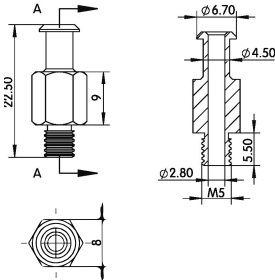
Dimensions (mm)



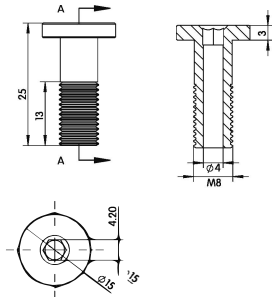
FFT-01M5



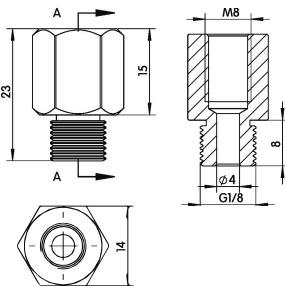
FFT-02G1/8



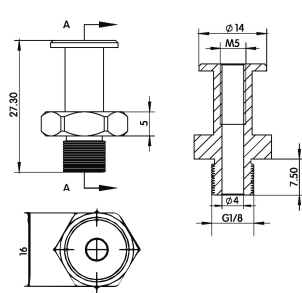
FFT-03M5



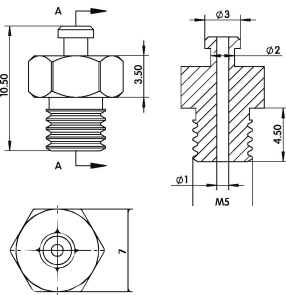
FFT-04M8



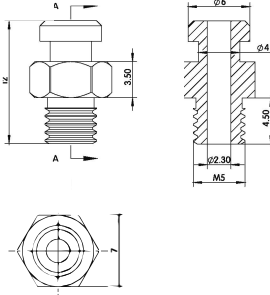
FFT-05G1/8



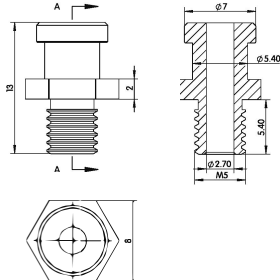
FFT-06G1/8



FFT-07M5



FFT-08M5

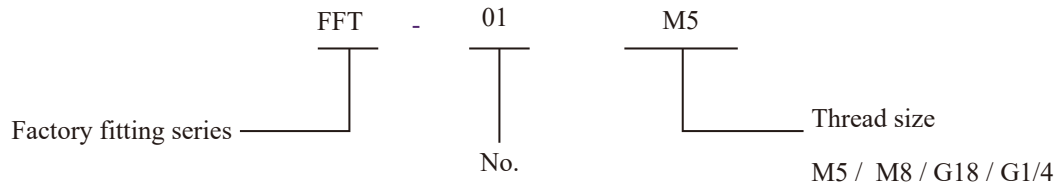


FFT-09M5

Vacuum Cups Fitting

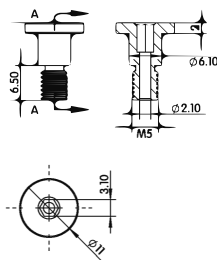
FFT - series

Model representation methods

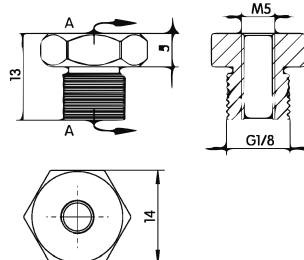


Dimensions (mm)

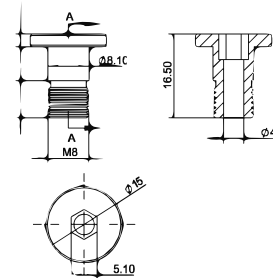
First Angle Projection



FFT-10M5



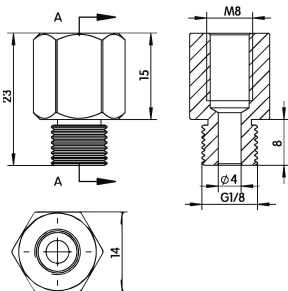
FFT-11G1/8



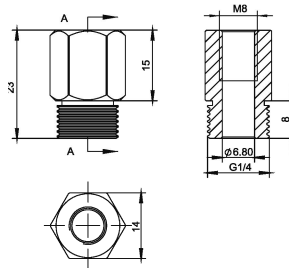
FFT-12M8

Dimensions (mm)

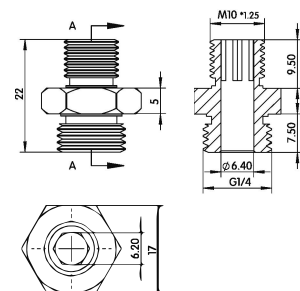
First Angle Projection



FFT-13G1/8



FFT-14G1/4

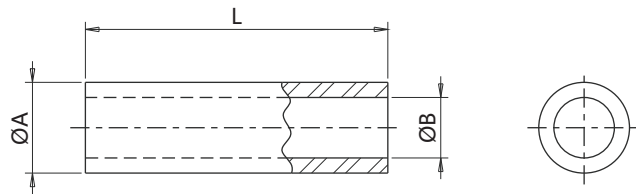
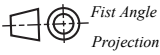


FFT-15-M10-G1/4

Air Hoses

FAH - series

Dimensions (mm)



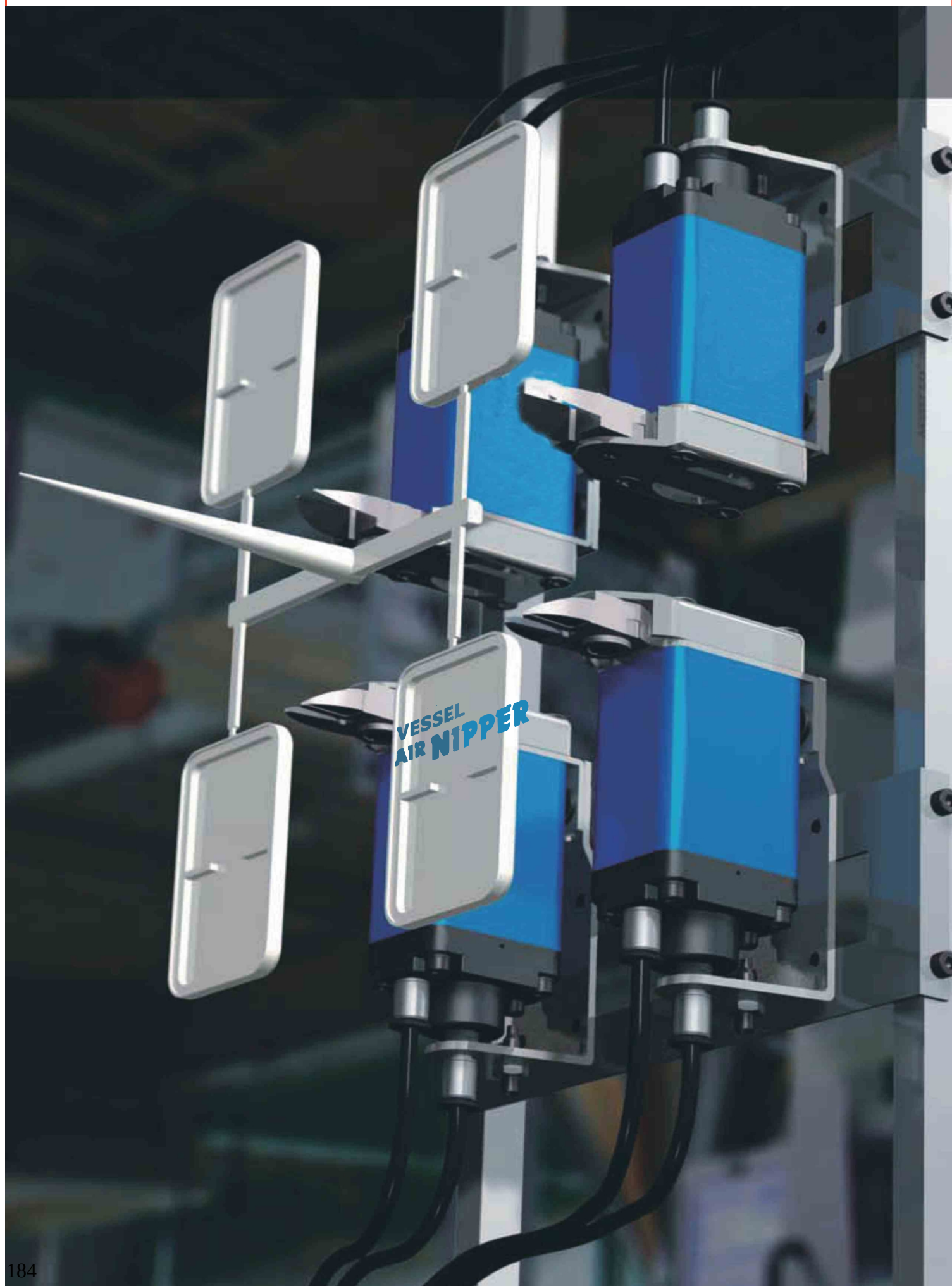
Technical characteristics

T= -40° ÷ +60°C
P= -0.99 ÷ + 10bar

Model	Colour	A [mm]	B [mm]	L [m]	Lm [g/m]
FAH4B	Black	4	2.5	100	10g
FAH4BU	Blue	4	2.5	100	10g
FAH4G	Green	4	2.5	100	10g
FAH4T	Transparent	4	2.5	100	10g
FAH4Y	Yellow	4	2.5	100	10g
FAH4R	Red	4	2.5	100	10g
FAH4O	Orange	4	2.5	100	10g
FAH6B	Black	6	4	100	19g
FAH6BU	Blue	6	4	100	19g
FAH6G	Green	6	4	100	19g
FAH6T	Transparent	6	4	100	19g
FAH6Y	Yellow	6	4	100	19g
FAH6R	Red	6	4	100	19g
FAH6O	Orange	6	4	100	19g
FAH8B	Black	8	6	100	38g
FAH8BU	Blue	8	6	100	38g
FAH10B	Black	10	8	100	58g
FAH10BU	Blue	10	8	100	58g

- A Outer diameter]
- B Inner diameter]
- L Length
- Lm Linear mass]
- P Operating pressure range]
- T Operating temperature range]

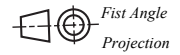




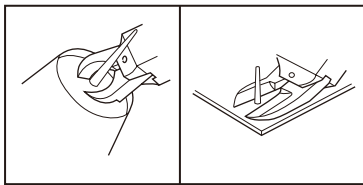
Solution

Cut, grab, crimp and punch.

Dimensions (mm)

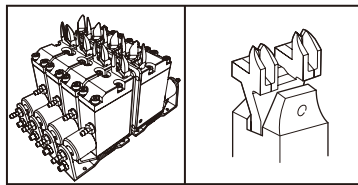


Cutting direct gate
molded components



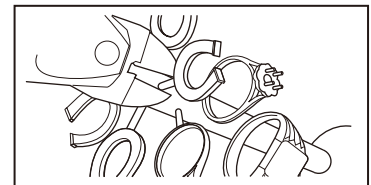
Cuts large diameter sprues such as garment casses, helmets, pipe joint parts, trash cans, planters.
Superb durability in long term use.

Gate cut for multiple
impression molded
components



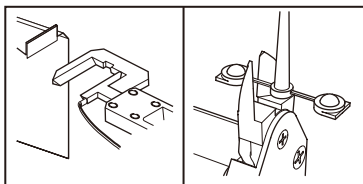
Compact, lightweight body and with a larges selection of blade items, easy mounting on chuck board and standby jig. Achieves efficient cuts matching cycle time.

Taking products from a
jewelry tree



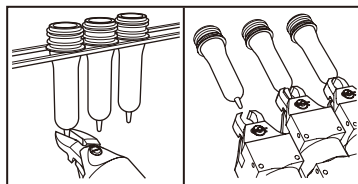
Cutting of precious metals for rings, necklaces etc. Superb durability and increased efficiency with powerful nipper blades.

Gate cutting for lenses,
LGP, and transparent
products



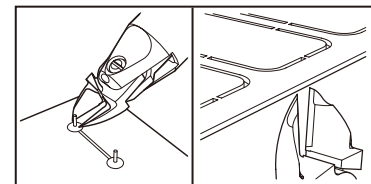
Various heated nippers prevent cracks and whitening, the decisive factor is the heating temperature of the blades and cutting speed. Supports demands for improved flexibility and high precision cutting.

Pre-form cutting for
food and drug cases



Improved efficiency in pre-forming, nippers attached to flat finish pre-form molding machine. Cut precision is linked to product quality.

Cutting electronic
components and
around boards

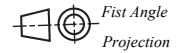


Optimal handy nippers fro cutting lead lines after soldering to significantly reduce wrist strain. Substrate is attached to the desktop robot...

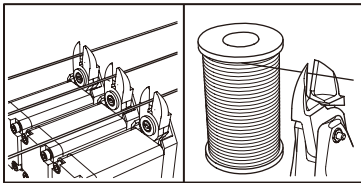
Solution

Cut, grab, crimp and punch.

Dimensions (mm)

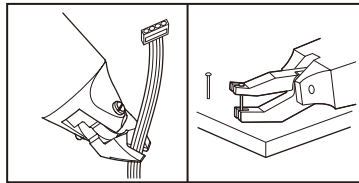


Wire cutting with coil winding machine



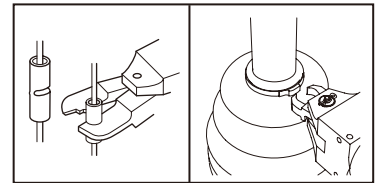
Attach to the nipper unit of automatic coil winding machine for power transformers, fan motors and ignition. Cutting thick diameter wires that can not be torn off.

Hand tools for dismantling in recycling plants



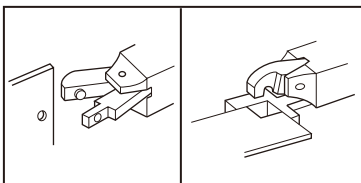
Cuts a variety of wires, copper tubing and steel bands in recycling plants such as PCS and OA equipment, pachinko machines, TVs, and refrigerators. Washing machines, etc. Nippers for the purpose of pulling out the pachinko machine pins.

Crimping task for solder less terminals



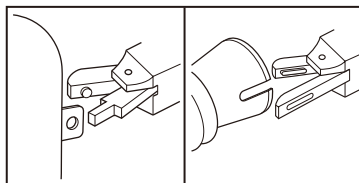
For crimping terminals with various wiring harnesses such as for switchboards, electrical products and lighting equipment . Less strain on fingers and wrists. Increased work efficiency for stop rings for auto parts.

Die cutter for aluminum products and plastic components



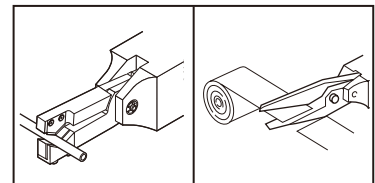
By support for separate blades, allows punching and form cutting of aluminum sash and thin plates.

Punching of blow molded products, punching slotted holes



Punching blow molded products, punching slotted holes, for containers that can not be punched and automobiles ducts, etc.

Other applications



Micro-edge air scissors that can cut various hard-to-cut fibers, carbon, aramid fibers, and soft plastic sheets. Nippers for cutting belt loops of jeans, peeling recycled golf balls, cutting edges with textile machinery, etc.

Selection method for air nipper

Check Materials

What is the cutting target (workpiece)

- Metal wire
 - Steel wire
 - Copper wire
 - Piano wire (not heat processed /HV32 or below), precious metals etc.
- Molded plastic
 - Soft plastic (PP. PE. PS. PVC. PMMA. ASets.)
 - Hard plastic (PPS. PA. PBT. LCP. ABS . POM. PC. GF. etc.)
- Other applications
 - Check materials, applications and work
(Bending, caulking, punching, robotic hand, and scissors)

Check dimensions

- Metal
 - Angle (mm*mm) (select model by cross-section area)
 - Round (Dia. mm)
- Plastic
 - Angle (mm*mm) (select model by cross-section area)
- Other applications
 - Check materials, applications and work

Usage

- What is the State / Environment of the work
- Used mounted on automated machinery and robots
- Used for manual work
- Used mounted on a jig and so forth

Select model

Chose a model suitable for the purpose

Choose based on Usage and cutting dimensions for the main unit and material and dimensions/ Shape for the blades.
Refer to product specifications for the main unit /blade characteristics/usage, respectively. Also when selecting the machine, refer to capability selection chart.
The shape/material of the workpiece may not be compatible with standard products

Capability selection chart

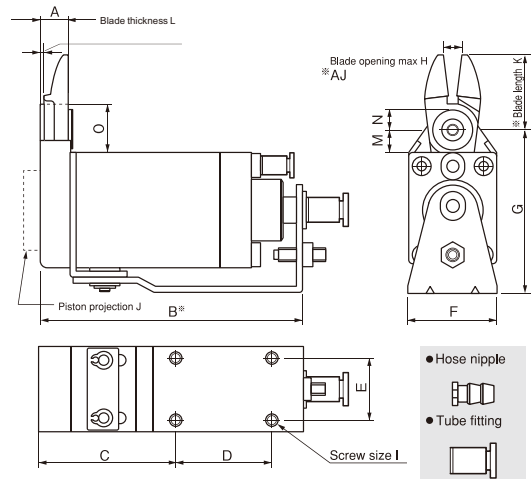
Types	Cutting materiala							Application model	Air pressure (MPa)
	Copper wire	Steel wire Non-heat treated	Piano Wire HV 320 or below	Soft Plastic		Hard Plastic	Solerless terminals		
				Dia. mm	Cross select				
N • NS • NR	1.0mm	0.5mm	0.2mm	2.0mm	3.1 mm			NS2,N3,NS3,NR3	0.4~0.5
	1.0	0.5	0.3	2.0	3.1			N5,NS5,NR5	0.4~0.5
	1.6	1.0	0.5	3.0	7.0	2.0mm		N7,NS7,NR7	0.4~0.5
	1.8	1.2	0.5	4.0	12.5	2.6		N10,NS10L,NR10L	0.4~0.5
	2.3	1.7	0.6	4.5	15.8	4.0		N12	0.4~0.5
	2.6	2.0	1.0	7.0	38.4	5.0		N20,NS20,NR2 0	0.5~0.6
	3.3	2.8	1.2	10.0	78.5	6.5	1.25/2. 0	N30,NS30,NR3 0	0.5~0.6
	5.5	4.5	2.0	12.0	113.0	6.5		N50,NR50	0.5~0.6
	With Pressure booster	2.6	1.6		5.0	19.6	4.0	12.5/2. 0	P-10L
3.0		2.2		8.0	50.2	6.0	2.0/5.5	P-20	
4.8		4.0		13.0	132.6	7.0	~0.8	P-30	
6.5		5.5						P-50	
NY				2.0	3.1	1.3		NY03	0.4~0.5
	1.6	1.0		3.0	7.0	2.0		NF05,NY0 5	0.4~0.5
				3.5	9.6	2.3		NF10,NY1 0	0.4~0.5
				4.0	12.5	2.6		NF15,NY1 5	0.4~0.5
				5.0	19.6	3.4		NY25	0.5~0.6
NT				1.5	1.7	1.0		NT03	0.4~0.5
				2.5	4.9	1.5		NT05	0.4~0.5
				3.5	9.6	2.3		NT10	0.4~0.5
				5.0	19.6	3.4		NT20	0.4~0.5
	AS, HS, BJ type		BBB	AP,PF, AJ type			ACD type		

GT-NY05/10/15/25 Slide-Off Air Nippers Horizontal-Type

NY



The horizontal slide enables space to be used effectively.
The low profile of the main unit allows work to be removed without obstructing the operations of the chuck plate.



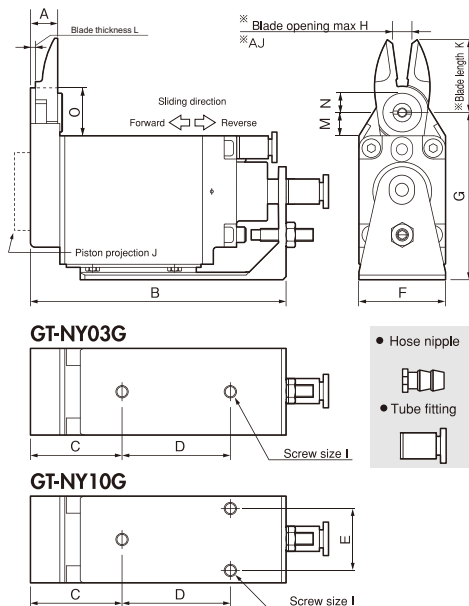
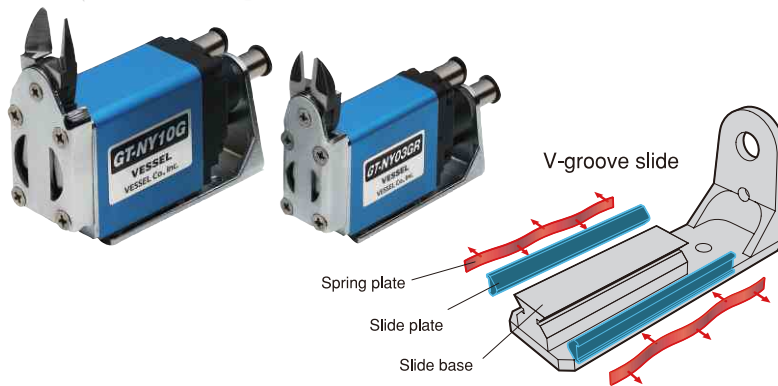
Capacity ϕ (mm)				Model No.	Size (mm)															Air Consumption (cm ³ /str.)	Weight (g)	Slide Direction/ Distance (mm)	Spec. & Size of the Hose Port
Soft Plastic	Hard Plastic	Copper	Steel		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O				
3.0	2.0	1.6	1.0	GT-NY05	8.6	75.9	40.9	25	15	23	47.6	4	M4	3	22	1.6	8.5	6.25	16.5	48	155	Pull 0~3	W/hose nipple
3.0	2.0	1.6	1.0	GT-NY05R																48	155	Push 0~3	Hose I.D. ϕ 2.5mm
3.0	2.0	1.6	1.0	GT-NY05-4																48	155	Pull 0~3	W/tube fitting
3.0	2.0	1.6	1.0	GT-NY05R-4																48	155	Push 0~3	Hose I.D. ϕ 2.5XO.D. ϕ 4mm
3.5	2.3			GT-NY10	8.8	82.1	42.1	30	20	28	51.6	6	M4	5	24	1.6	7.5	6.25	15.5	68	210	Pull 0~3	W/hose nipple
3.5	2.3			GT-NY10R																68	210	Push 0~3	Hose I.D. ϕ 2.5mm
3.5	2.3			GT-NY10-4																68	210	Pull 0~3	W/tube fitting
3.5	2.3			GT-NY10R-4																68	210	Push 0~3	Hose I.D. ϕ 2.5XO.D. ϕ 4mm
4.0	2.6			GT-NY15	10.2	93	48	35	25	33	58	8	M4	5	27	2	7.5	6.25	16.5	136	319	Pull 0~3	W/hose nipple
4.0	2.6			GT-NY15R																136	319	Push 0~3	Hose I.D. ϕ 2.5mm
4.0	2.6			GT-NY15-4																136	319	Pull 0~3	W/tube fitting
4.0	2.6			GT-NY15R-4																136	319	Push 0~3	Hose I.D. ϕ 2.5XO.D. ϕ 4mm
5.0	3.4			GT-NY25	12.5	108.5	54.5	40	30	42	69	9	M5	2	31	2.5	10.5	7	20.5	184	580	Pull 0~5	W/hose nipple
5.0	3.4			GT-NY25R																184	580	Push 0~5	Hose I.D. ϕ 4mm
5.0	3.4			GT-NY25-6																184	580	Pull 0~5	W/tube fitting
5.0	3.4			GT-NY25R-6																184	580	Push 0~5	Hose I.D. ϕ 4XO.D. ϕ 6mm

※Blade length (K) and opening max. (H) is the dimension adjusted for standard blade (AJ type). ※Air Pressure...0.4~0.5 MPa (NY25 type: 0.5~0.6)
※B refers to the distance from the cut position for PUSH style models, and the distance from the start position for PULL style models.

GT-NY03G/10G Slide-Off Air Nippers Horizontal-Type

Patented

NY-G



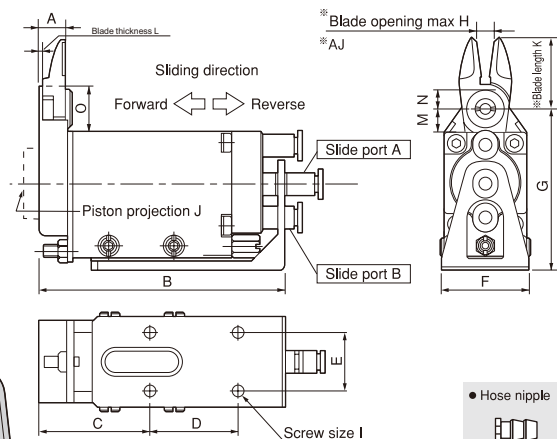
VESSEL's patented, V-groove slide base ensures constant, stable positioning. The unit is not subject to inclined loads, and has achieved high precision gate cutting performance.

Capacity ϕ (mm)				Model No.	Size (mm)															Air Consumption (cm ³ /str.)	Weight (g)	Slide Direction/ Distance (mm)	Spec. & Size of the Hose Port
Soft Plastic	Hard Plastic				A	B	C	D	E	F	G	H	I	J	K	L	M	N	O				
2.0	1.3			GT-NY03G	8.6	74.5	29.5	30	-	19	46.5	3	M4	0	21	1.6	7.5	5.25	14.5	37	160	Pull 0~3	W/hose nipple
2.0	1.3			GT-NY03GR																37	160	Push 0~3	Hose I.D. ϕ 2.5mm
2.0	1.3			GT-NY03G-4																37	160	Pull 0~3	W/tube fitting
2.0	1.3			GT-NY03GR-4																37	160	Push 0~3	Hose I.D. ϕ 2.5XO.D. ϕ 4mm
3.5	2.3			GT-NY10G	8.8	82.6	29.6	35	20	28	54	6	M4	5	24	1.6	7.5	6.25	15.5	68	275	Pull 0~3	W/hose nipple
3.5	2.3			GT-NY10GR																68	275	Push 0~3	Hose I.D. ϕ 2.5mm
3.5	2.3			GT-NY10G-4																68	275	Pull 0~3	W/tube fitting
3.5	2.3			GT-NY10GR-4																68	275	Push 0~3	Hose I.D. ϕ 2.5XO.D. ϕ 4mm

※Blade length (K) and opening max. (H) is the dimension adjusted for standard blade (AJ type). ※Air Pressure...0.4~0.5 MPa
※ Blade is optional. Note that forward and backward -facing blades are available

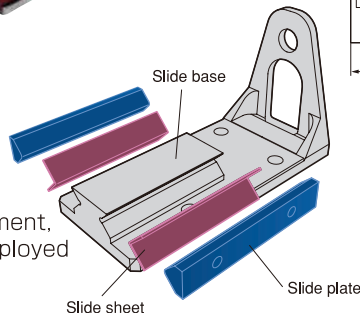
GT-NY10S/25S Double Action Sliding Air Nippers

NY-S



WARNING
Injecting air into slide port A slides the nippers in reverse.
Injecting air into slide port B slides the nippers forward.

The springless slide construction of the main unit ensures smooth movement, and a V-groove slide base has been employed for high precision positioning.

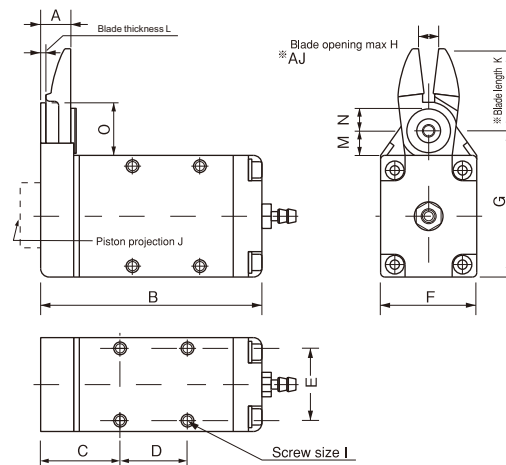


Capacity ϕ (mm) Soft Plastic Hard Plastic	Model No.	Size (mm)															Air Consumption (cm ³ /str.)	Weight (g)	Slide Direction/ Distance (mm)	Spec. & Size of the Hose Port
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O				
3.5 2.3	GT-NY10S	8.8	84.5	38	30	20	32	55	6	M4	5	24	1.6	7.5	6.25	15.5	68	300	0~3.5	W/tube fitting Hose I.D. ϕ 2.5×O.D. ϕ 4mm
5.0 3.4	GT-NY25S	12.5	106.5	47	40	30	47	72	9	M5	2	31	2.5	10.5	7	20.5	184	695	0~5.0	W/tube fitting Hose I.D. ϕ 4×O.D. ϕ 6mm

※Blade length (K) and opening max. (H) is the dimension adjusted for standard blade (AJ type). ※Air Pressure···NY10S : 0.4~0.5 MPa / NY25S : 0.5~0.6 MPa

GT-NF05/10/15 Type-F Air Nippers

NF



These compact, lightweight nippers have been designed or easy mounting inside equipment and to enable secure mounting under high-density mounting conditions.

Capacity ϕ (mm) Soft Plastic Hard Plastic Copper Steel	Model No.	Size (mm)															Air Consumption (cm ³ /str.)	Weight (g)	Spec. & Size of the Hose Port
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O			
3.0 2.0 1.6 1.0	GT-NF05	8.6	59.9	21.9	17	18	23	39.5	4	M3	3	22	1.6	8.4	6.25	16.4	43	101	W/hose nipple
3.5 2.3 1.7 1.1	GT-NF10	8.8	65.1	23.1	20	22	28	43.5	6	M3.5	5	24	1.6	7.4	6.25	15.4	63	143	Hose I.D. ϕ 2.5mm× ϕ 4mm
4.0 2.6 1.8 1.2	GT-NF15	10.2	73	25	25	26	33	48.5	8	M4	5	27	2	7.4	6.25	16.4	128	219	

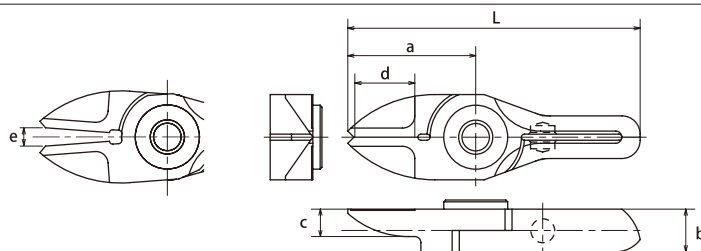
※Blade opening max. (K) is the dimension adjusted for standard blade (AJ type). Mounting screw for NF10 (M3.5) is regarded as spare part. ※Air Pressure···0.4~0.5 MPa

Slide-off air nipper horizontal-type blades

AJ Straight blades for plastic

Plastic

RAJ AJ/ This is a vertical set of blades with an unbeveled cutting edge. You can apply it at a right angle to the gate. **RAJ/** This is a reverse bevel of AJ type. **AJB/** This has a brazed carbide tip, suitable for cutting hard plastic or plastic containing glass fiber.

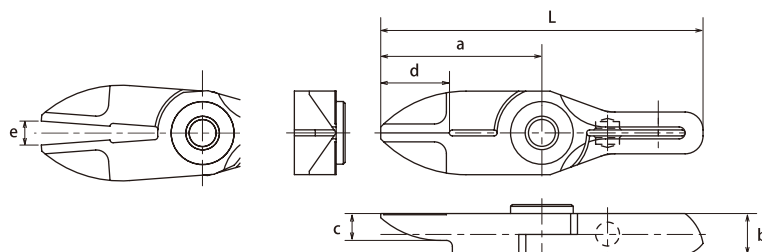


Model No.	Size (mm)						Weight (g)	Material	Application model
NY03AJ	21	7	4.5	10.5	3	48	17	Special alloy steel	GT-NY03G(-4)
NY03RAJ	21	7	4.5	10.5	3	48	17	Special alloy steel	GT-NY03GR(-4)
NY05AJ	22	7	5	10.5	4	53	22	Special alloy steel	GT-NY05(-4) / NF05
NY05RAJ	22	7	5	10.5	4	53	22	Special alloy steel	GT-NY05R(-4) / NF05
NY05AJB	22	7	5	10.5	4	53	22	Sintered Alloy	GT-NY05(-4) / NF05
NY10AJ	24	7.2	5	12	6	57	28	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S
NY10RAJ	24	7.2	5	12	6	57	28	Special alloy steel	GT-NY10R(-4) / NY10GR(-4) / NF10 / NY10S
NY10AJB	24	7.2	5	12	6	57	28	Sintered Alloy	GT-NY10(-4) / NY10GR(-4) / NF10 / NY10S
NY15AJ	27	8.2	5.5	13	8	65	41	Special alloy steel	GT-NY15(-4) / NF15
NY15RAJ	27	8.2	5.5	13	8	65	41	Special alloy steel	GT-NY15R(-4) / NF15
NY15AJB	27	8.2	5.5	13	8	65	41	Sintered Alloy	GT-NY15(-4) / NF15
NY25AJ	31	10	6	16	9	77	65	Special alloy steel	GT-NY25(-6) / NY 25S
NY25RAJ	31	10	6	16	9	77	65	Special alloy steel	GT-NY25R(-6) / NY 25S
NY25AJB	31	10	6	16	9	77	65	Sintered Alloy	GT-NY25(-6) / NY 25S

Straight long blades for plastic

Plastic

AJL AJL/ This is a long type set of straight blades. This is useful when there is distance between the nippers and the gate cut portion of the workpiece.

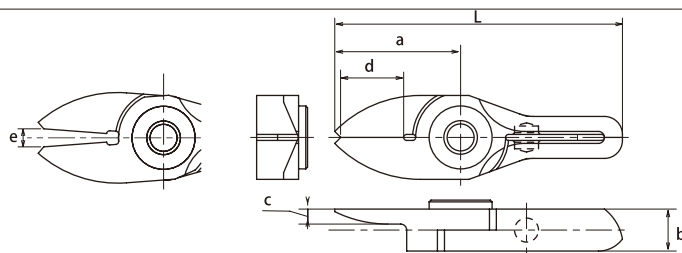


Model No.	Size (mm)						Weight (g)	Material	Application model
NY03AJL	27	7	4.5	10.5	4	54	21	Special alloy steel	GT-NY03G(-4)
NY05AJL	31	7	5	10.5	5.5	62	29	Special alloy steel	GT-NY05(-4) / NF05
NY10AJL	33	7.2	5	12	8	66	37	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S
NY15AJL	38	8.2	5.5	13	11	76	50	Special alloy steel	GT-NY15(-4) / NF15
NY25AJL	46	10	6	16	13	92	88	Special alloy steel	GT-NY25(-6) / NY 25S

Thin, straight blades for plastic

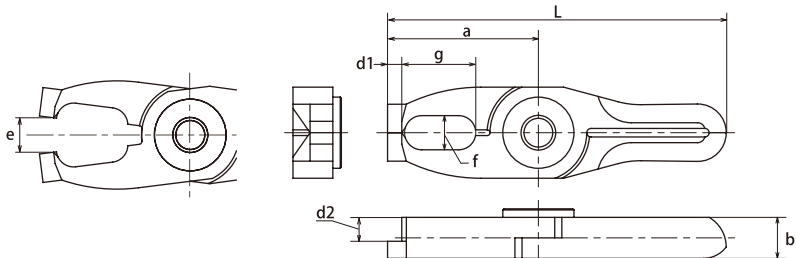
Plastic

AJT AJT/ This is a set of straight blades with a thin cutting edge. It can cleanly trim cross sections without remnants.

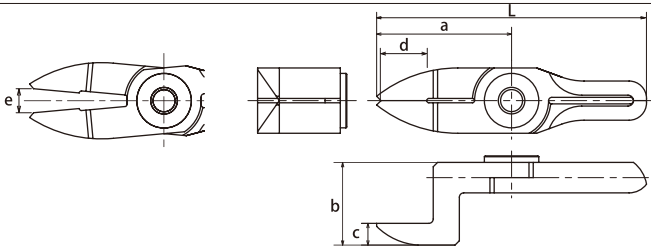


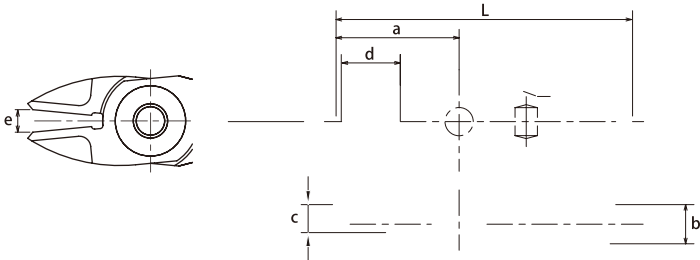
Model No.	Size (mm)						Weight (g)	Material	Application model
NY03AJT	21	7	2.5	10.5	3	48	17	Special alloy steel	GT-NY03G(-4)
NY05AJT	22	7	3	10.5	4	53	21	Special alloy steel	GT-NY05(-4) / NF05
NY10AJT	24	7.2	3	12	6	57	26	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S
NY15AJT	27	8.2	3.5	13	8	65	38	Special alloy steel	GT-NY15(-4) / NF15

Slide-off air nipper horizontal-type blades

AD	Lift blades for plastic							Plastic
	AD/ This is used for batch processing of the three-dimensional gate such as ride gate.							
								
								

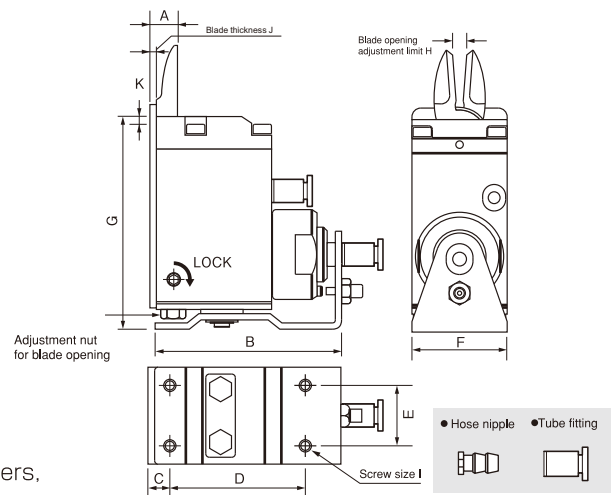
Model No.	Size (mm)			d1	d2	e	L	Weight	Material	Application model
	a	b	f×g	(mm)	(mm)	(mm)	(mm)	(g)		
NY10AD	26.5	7.2	6×13	2.5	4.2	6	59.5	31	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S
NY15AD	30	8.2	7×14	3	4.7	8	68	45	Special alloy steel	GT-NY15(-4) / NF15
NY25AD	35	10	8×17	4	6	9	81	75	Special alloy steel	GT-NY25(-6) / NY 25S

Crank blades for plastic							Plastic		
AH	AH/ This is a set of blades with a clamped cutting edge for plastic. It is effective when there are obstructions or the gate is narrow.								
RAH	RAH/ This is a reverse bevel of AH type used when installing the main units face-to-face.								
									
Model No.	Size (mm)						Weight (g)	Material	Application model
NY05AH	a	b	c	d	e	L			
NY05AH	31	19	5	10.5	5.5	62	37	Special alloy steel	GT-NY05(-4) / NF05
NY05RAH	30	12	5	10.5	5	61	31	Special alloy steel	GT-NY05R(-4) / NF05
NY10AH	33	20	5	12	8	66	43	Special alloy steel	GT-NY10(-4) / NY10G(-4) / NF10 / NY10S
NY15AH	38	21.5	5.5	13	11	76	63	Special alloy steel	GT-NY15(-4) / NF15
NY15RAH	35	13.2	5.5	13	9	73	52	Special alloy steel	GT-NY15R(-4) / NF15
NY25AH	46	24	6	17	13	92	110	Special alloy steel	GT-NY25(-6) / NY 25S
NY25RAH	42	16	6	16	12	88	89	Special alloy steel	GT-NY25R(-6) / NY 25S

BJ		Straight thin blades for metal					Metal		
RBJ		BJ/ This is a set of vertical blades with an unbeveled cutting edge for metal. RBJ/ This is a reverse bevel of BJ type.							
									
Model No.	Size (mm)						Weight (g)	Material	Application model
NY05BJ	a	b	c	d	e	L	22	Special alloy steel	GT-NY05(-4) / NF05
NY05RBJ	22	7	5	10.5	4	53	22	Special alloy steel	GT-NY05R(-4) / NF05

GT-NT03/05/10/20 Slide-Off Air Nippers Vertical-type

NT



Blade gape is adjustable,
and fine adjustments are easy to make after mounting the nippers,
ensuring clean, unblemished cut surfaces.

Capacity ϕ (mm) Soft Plastic Hard Plastic	Model No.	Size (mm)											Air Consumption (cm ³ /str)	Weight (g)	Slide Direction/ Distance (mm)	Spec. & Size of the Hose Port
		A	B	C	D	E	F	G	H	I	J	K				
1.5 1.0	GT-NT03	9	62	7	43	14	19	68.1	1.5~3	M3	2	5	27	178	Pull 0~3	W/hose nipple Hose I.D. ϕ 2.5mm
1.5 1.0	GT-NT03R												27	178	Push 0~3	
1.5 1.0	GT-NT03-4												27	178	Pull 0~3	W/tube fitting Hose I.D. ϕ 2.5XO.D. ϕ 4mm
1.5 1.0	GT-NT03R-4												27	178	Push 0~3	
2.5 1.5	GT-NT05	9	64	7	45	20	32	71.1	3~6	M4	2	5	47	325	Pull 0~3	W/hose nipple Hose I.D. ϕ 2.5mm
2.5 1.5	GT-NT05R												47	325	Push 0~3	
2.5 1.5	GT-NT05-4												47	325	Pull 0~3	W/tube fitting Hose I.D. ϕ 2.5XO.D. ϕ 4mm
2.5 1.5	GT-NT05R-4												47	325	Push 0~3	
3.5 2.3	GT-NT10	11	73	8	53	24	38	88.1	4~7	M4	2	5	82	515	Pull 0~3	W/hose nipple Hose I.D. ϕ 2.5mm
3.5 2.3	GT-NT10R												82	515	Push 0~3	
3.5 2.3	GT-NT10-6												82	515	Pull 0~3	W/tube fitting Hose I.D. ϕ 4XO.D. ϕ 6mm
3.5 2.3	GT-NT10R-6												82	515	Push 0~3	
5.0 3.4	GT-NT20	14	103	10	80	28	44	102.1	4.5~9	M5	2	6	203	930	Pull 0~8	W/hose nipple Hose I.D. ϕ 4mm
5.0 3.4	GT-NT20R												203	930	Push 0~8	
5.0 3.4	GT-NT20-6												203	930	Pull 0~8	W/tube fitting Hose I.D. ϕ 4XO.D. ϕ 6mm
5.0 3.4	GT-NT20R-6												203	930	Push 0~8	

※Blade opening adjustment limit (H) is the dimension adjusted for standard blade (AJ type). ※Air Pressure...0.4~0.5 MPa

Slide-off air nipper vertical-type blades

AJ

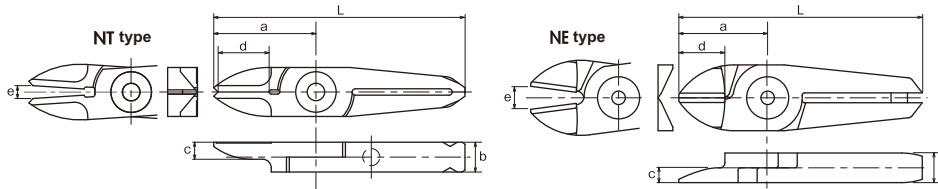
Straight blades for plastic

Plastic

AJH

AJ/ This is a set of vertical blades with an unbeveled cutting edge.
You can apply it at a right angle to the gate. AJH/ This has a brazed
high-speed steel tip suitable for cutting hard plastic. AJB/ This has
a brazed carbide tip used for cutting hard plastic or plastic containing
glass fiber. Improved durability.

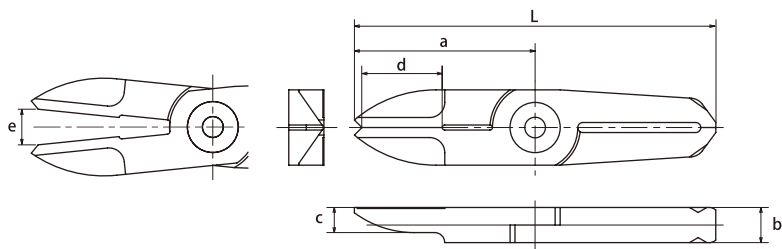
AJB



Model No.	Size (mm)						Weight (g)	Material	Application model
NT03AJ	24	7	4	11	3	59	20	Special alloy steel	GT-NT03 type
NT05AJ	29	7	5	15	6	65	30	Special alloy steel	
NT05AJH	29	7	5	15	6	65	30	High Speed Steel	GT-NT05 type
NT05AJB	29	7	5	15	6	65	30	Sintered Alloy	
NE5AJ	24	7	3.5	12	6	60	35	Special alloy steel	
NT10AJ	35	9	6	17	7	82	62	Special alloy steel	GT-NT10 type
NT10AJH	35	9	6	17	7	82	76	High Speed Steel	
NT10AJB	35	9	6	17	7	82	76	Sintered Alloy	
NE10AJ	27	9	4.5	12	7	74	70	Special alloy steel	
NT20AJ	40	12	6	20	9	97	120	Special alloy steel	GT-NT20 type
NT20AJH	40	12	6	20	9	97	120	High Speed Steel	
NT20AJB	40	12	6	20	9	97	120	Sintered Alloy	

Slide-off air nipper vertical-type blades

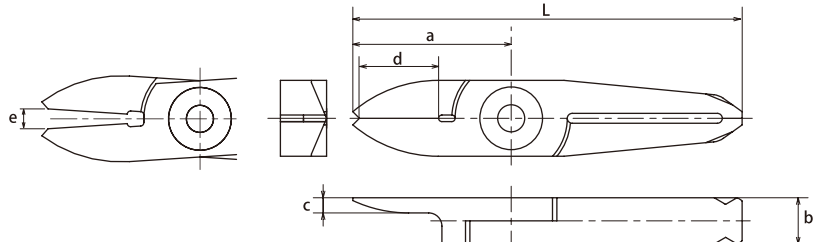
AJL	Straight long blades for plastic	Plastic
	AJL/ This is a long type set of straight blades. This is useful when there is distance between the nippers and the gate cut portion of the workpiece.	
		



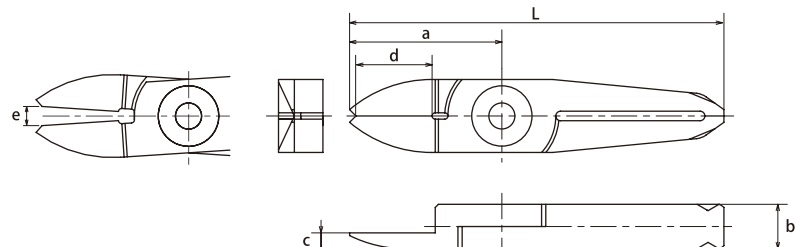


Model No.	a	b	Size (mm)				Weight (g)	Material	Application model
NT05AJL	36	7	5	15	7	72	39	Special alloy steel	GT-NT05 type
NT10AJL	47	9	6	17	9	94	62	Special alloy steel	GT-NT10 type
NT20AJL	57	12	6	20	12	114	156	Special alloy steel	GT-NT20 type

AJT	Thin, straight blades for plastic	Plastic
	AJT/ This is a set of straight blades with a thin cutting edge. It can cleanly finish cross sections without remnants.	

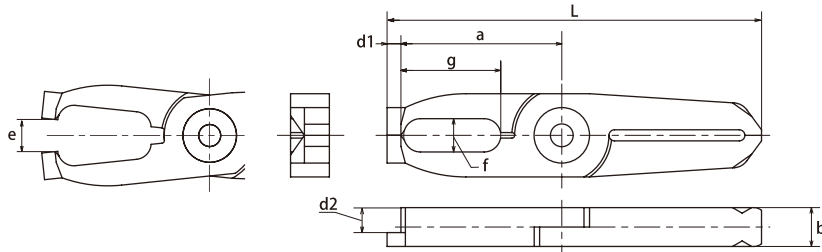
	
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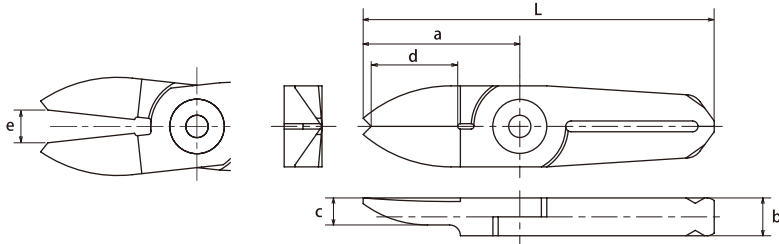
Model No.	a	b	Size (mm)				Weight (g)	Material	Application model
NT03AJT	24	7	2.3	11	3	59	19	Special alloy steel	GT-NT03 type
NT05AJT	29	7	3	15	6	65	29	Special alloy steel	GT-NT05 type
NT10AJT	35	9	4	17	7	82	65	Special alloy steel	GT-NT10 type

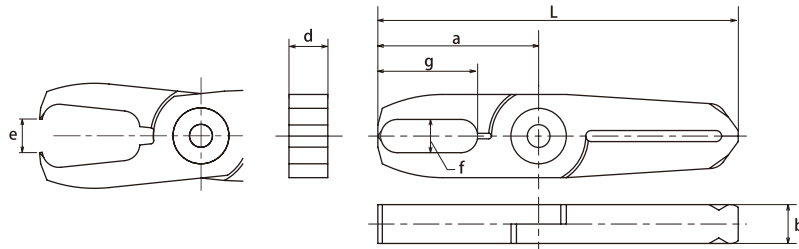
Thin, straight blades for plastic		Plastic
AJY	AJY/ This is effective when the width between the opposing gates is too short and the thickness of the blades will not go in.	
		

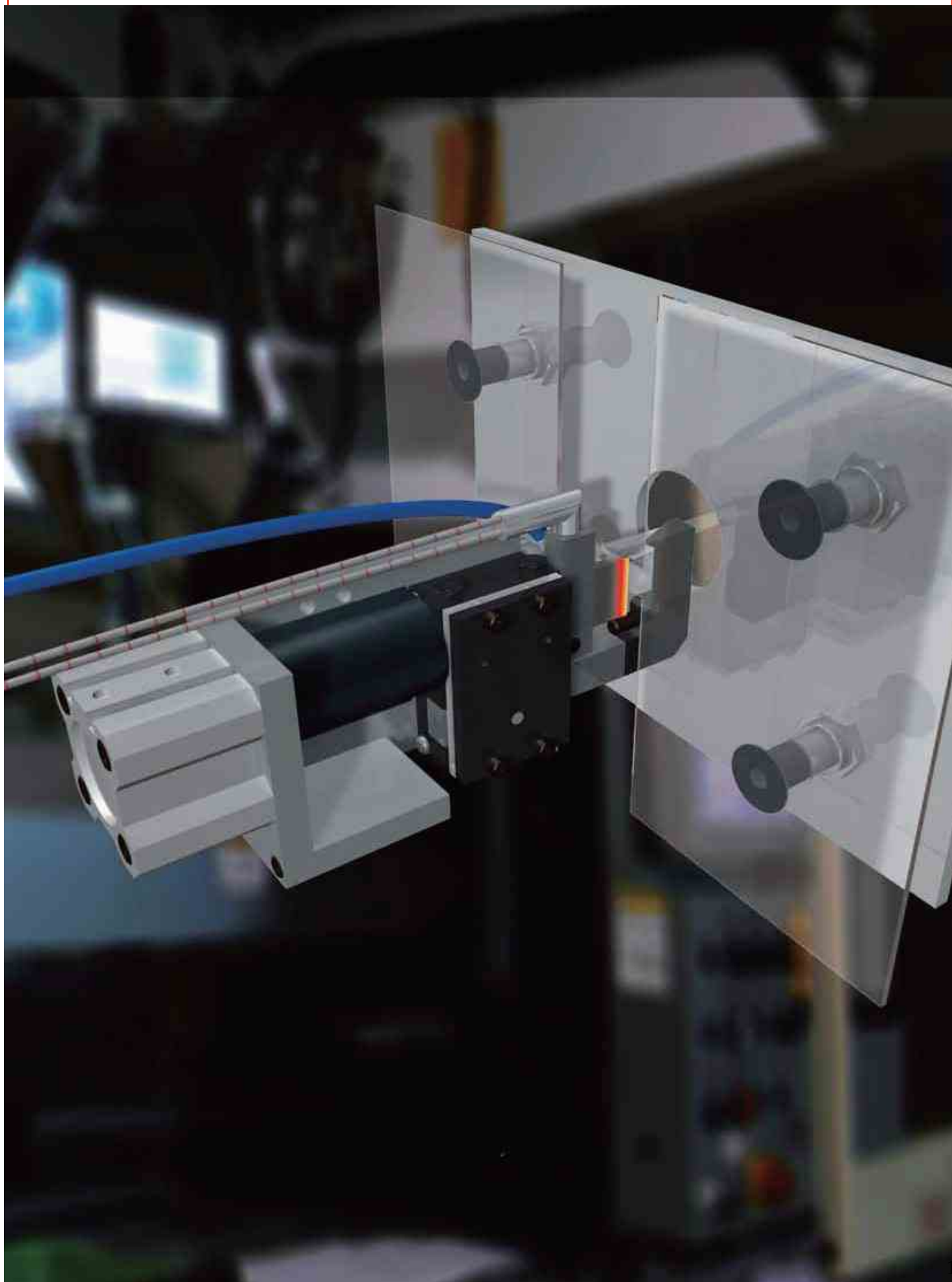
Model No.	a	b	Size (mm)				Weight (g)	Material	Application model
NT03AJY	24	7	2.5	11	3	59	19	Special alloy steel	GT-NT03 type
NT05AJY	29	7	5	15	6	65	29	Special alloy steel	GT-NT05 type
NT10AJY	35	9	4	17	7	72	82	Special alloy steel	GT-NT10 type

Slide-off air nipper vertical-type blades

AD	Lift blades for plastic	Plastic								
	AD/ This is used for batch processing of the three-dimensional gate such as ride gate.									
										
										
										
Model No.	a	Size (mm) b	f×g	d1 (mm)	d2 (mm)	e (mm)	L (mm)	Weight (g)	Material	Application model
NT05AD	31.5	7	6×18	2.5	4.5	6	67.5	37	Special alloy steel	GT-NT05 type
NT10AD	39	9	8×21.5	4	5	7	86	65	Special alloy steel	GT-NT10 type
NT20AD	46	12	9×24.5	6	7	9	103	141	Special alloy steel	GT-NT20 type

AJV	V shaped straight blades for plastic						Plastic		
	AJV/ This is suitable for gate processing when the cross section is curved or the cut end must not be left.								
									
									
Model No.	a	b	Size (mm)			Weight (g)	Material	Application model	
NT05AJV	29	7	5	15	6	65	29	Special alloy steel	GT-NT05 type
NT10AJV	35	9	6	17	7	82	63	Special alloy steel	GT-NT10 type

AE	Nipping blades for p		Plastic						
	AE/ Used for processing plastic gates such as ride gates and discard gates.								
									
									
Model No.	a	b	Size (mm)			Weight (g)	Material	Application model	
NT05AE	29	7	f×g 6×18	d 7	e 6	L 65	36	Special alloy steel	GT-NT05 type
NT10AE	35	9	8×21.5	9	7	82	75	Special alloy steel	GT-NT10 type



GT-NKH20XL-25/NKH20XR-25 Heat Air Nippers (Air Hydro Type)

NKH

Highly durable PTFE Plating blades; melted resin does not adhere to them.
Improved durability of blades with High-Speed chip brazed.
Easier blade replacement than conventional models; take out the blade unit and exchange with the new one.



Requires separately sold Hydro Controller

Customized blade lengths and cylinder capacities available

Model No.	Cutting Capacity φ (mm) Acrl	Blade Edge Temp. (MAX °C)	Air Consumption (cm³/str.)	Piston Stroke (mm)	Weight (g)
GT-NKH20XL-25/NKH20XR-25	10x1.5	180	60	10	690

• Air Pressure: 0.6MPa • Working air hose inner diameter: 4mm
※ The above weight is only a product, excluding the weight of heater and sensor.
※ 200V AC/220V AC/240V AC heaters are also available to order.
• Included heater: HTL-28.5-6.25-300L 80W/100V Cord length 300mm Recommended temp. 140°C Weight: 13g
• Included temperature sensor: SNO-300L-H Thermal couple type K Recommended temp. 140°C Cord length 300mm Weight: 7g

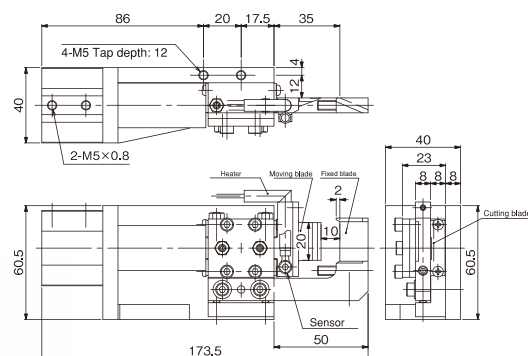
Blades Specifications

Material	Blade Shape	Blade Opening (mm)	Cutting blade effective (mm)	Weight (g)
Special Alloy Steel	Knife type (resin)	10	20	125

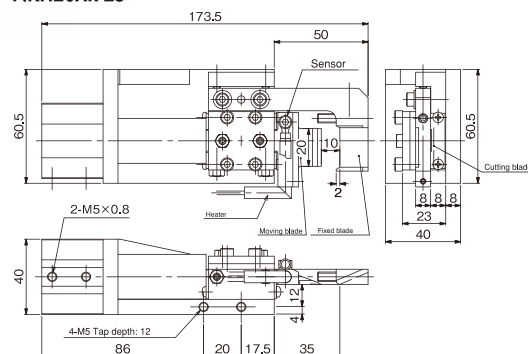
Option Parts

• Hydro-converter (Recommended: KOGANEI AHC 32×50)
Working fluid: Petroleum hydraulic fluid or turbine oil with antifoaming agent additive (VG22~100)
• Temperature controller (DTC-001)

NKH20XL-25



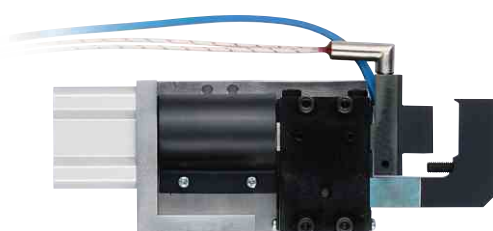
NKH20XR-25



GT-NKH20A/20AR Heat Air Nippers (Air Hydro Type)

NKH

Air-hydro cylinders produce high power from air and oil.
These units are ideal for high precision cuts required for products such as optical resin lenses.



Requires separately sold Hydro Controller

Customized blade lengths and cylinder capacities available

Model No.	Cutting Capacity φ (mm) Acrl	Blade Edge Temp. (MAX °C)	Air Consumption (cm³/str.)	Piston Stroke (mm)	Weight (g)
GT-NKH20A-25/20AR-25	10x1.5	180	60	10	720

• Included heater • Included temperature sensor
• Air Pressure: 0.6MPa • Working air hose inner diameter: 4mm
※ 200V/240V heaters are also available to order.

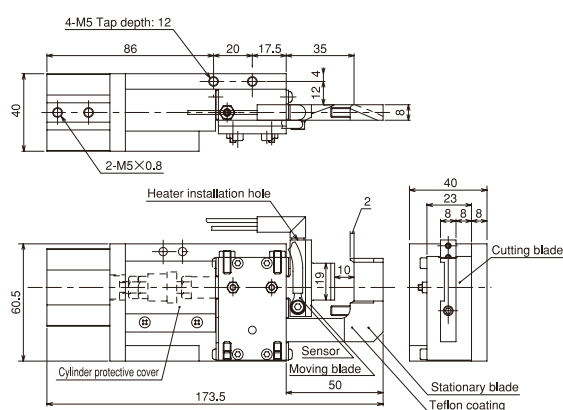
Blades Specifications

Material	Blade Shape	Blade Opening (mm)	Cutting blade effective (mm)	Weight (g)
Special Alloy Steel	Knife type (resin)	10	19	125

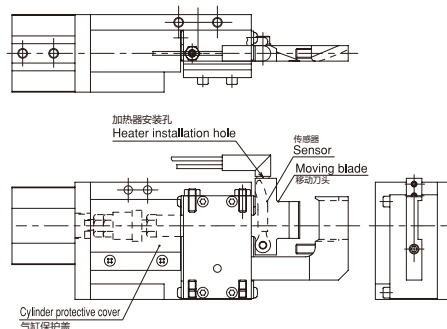
Option Parts

• Hydro-converter (Recommended: KOGANEI AHC 32×50)
Working fluid: Petroleum hydraulic fluid or turbine oil with antifoaming agent additive (VG22~100)
• Temperature controller (DTC-001)

GT-NKH20A-25 (Forward-facing blades)



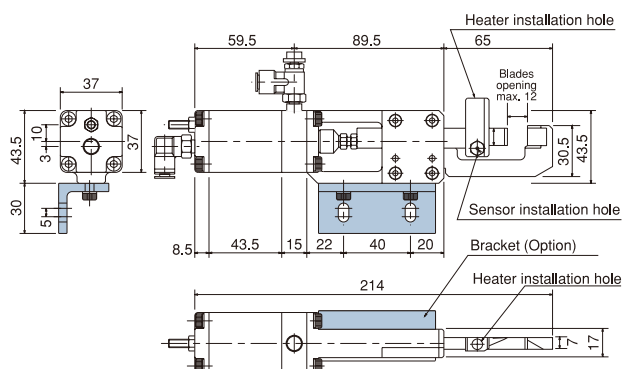
GT-NKH20AR-25 (Backward-facing blades)



GT-NKH10 Heat Air Nippers

NKH

Speed control of cut speed and heater temperature allows for variable cutting surface solutions for extremely high precision cutting demands.



Model No.	Cutting Capacity φ (mm) Acrl	Blade Edge Temp. (MAX °C)	Cutting Cycle (sec/cut)	Air Consumption (cm³/str.)	Piston Stroke (mm)	Weight (g)
GT-NKH10	7x1.5	200	4~5	73	12	715

•Included heater: 80W/120V Cord length: 300mm
•Included temperature sensor: Thermal couple type K (Nickel-Chromium/Nickel-Aluminum)
Cord length: 1,000mm
•Air Pressure: 0.5~0.6 MPa

Option Parts •Temperature controller (DTC-001)

Blades Specifications

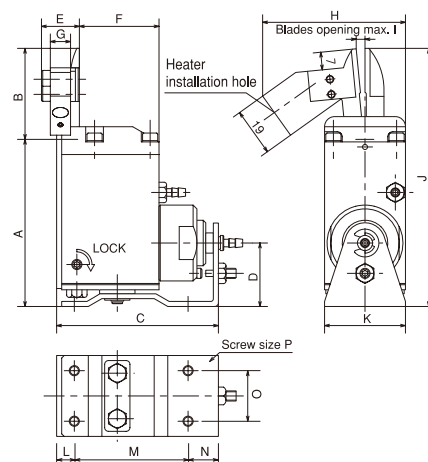
Model No.	Material	Blade Shape	Blade Opening (mm)	Cutting blade effective (mm)	Weight (g)
NKH10AJ/NKH10RAJ	Special Alloy Steel	Knife type (resin)	12	10	137

Heat Air Nippers

GT-NTH05/10 Heat Air Nippers (Vertical sliding type)

NTH

One blade is fixed in position, facilitating easy gate alignment. In addition, a slide function presses the product into position.



Model No.	Cutting Capacity φ (mm) Acrl	Blade Edge Temp. (MAX °C)	Cutting Cycle (sec/cut)	Air Consumption (cm³/str.)	Slide Distance (mm)	Weight (g)	Dimensions (mm)															
							A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
GT-NTH05	2.5	200	4~5	47	0~3	325	66.1	36	64	25.1	15	31.5	8	56.5	3.5	102.1	32	7	45	12	20	M4
GT-NTH10	3.5	200	4~5	82	0~3	515	83	47	73	29	16.2	37.5	8	63	4.5	130	38	8	53	12	24	M4

•Included heater: 80W/120V Cord length: 300mm
•Included temperature sensor : Thermal couple type K (Nickel-Chromium/Nickel-Aluminum) Cord length: 1,000mm
•Air Pressure: 0.4~0.5MPa

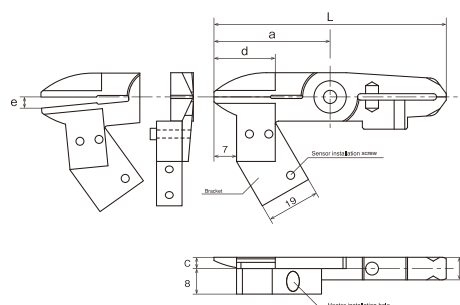
Blades Specifications

Model No.	Material	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)
NTH05AJ	Special Alloy Steel	36	7	3.5	15	3.5
NTH10AJ	Special Alloy Steel	47	9	4.7	17	4.5

Model No.	L (mm)	Weight (g)	Cutting Capacity φ (mm) Acrl	Setting temp. (MAX °C)	Application model
NTH05AJ	72	40	2.5	200	GT-NT05(-4)/GT-NT05R(-4)
NTH10AJ	94	88	3.5	300	GT-NT10(-6)/GT-NT10R(-6)

HTH type blade weight does not include heater and sensor.

Option Parts •Temperature controller (DTC-001)

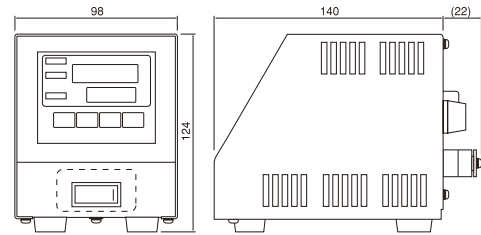


Temperature Controller

DTC-001 Benchtop Temperature Controller

DTC

The heating element can be connected directly to the main unit, a useful feature that saves labor during wiring installation. Compact construction enables the unit to be easily carried, allowing for changing the work site at any time.



Please inform us of the product number of the heat nipper when placing an order.

Model No.	Temperature range Thermocouple K (°C)	Power supply (V)	Power consumption (with 100 VAC input)	Ambient temperature and humidity (°C)	Protection fuse	Weight (g)
DTC-001	0~200	AC100~240	Approx. 3W (Approx. 5VA) (With no load)	0~40 RH35~85% (No condensing)	One 1.5A fuse is incorporated.	900

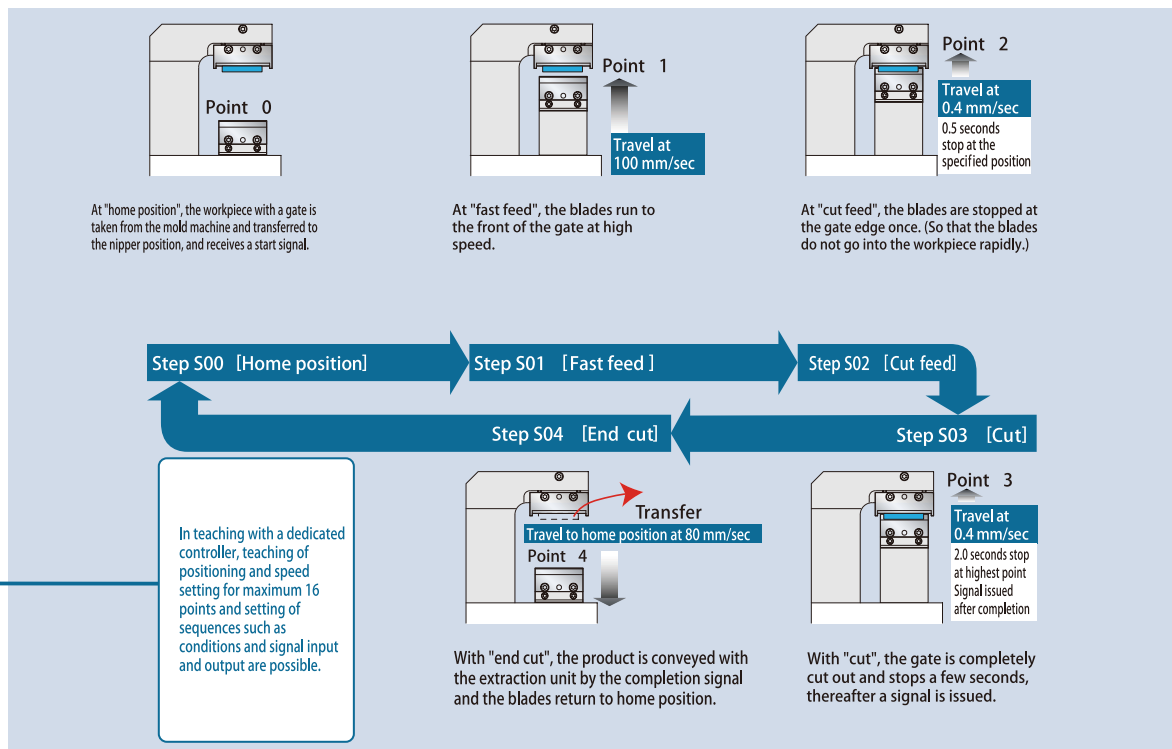
※Please ensure the input voltage in prior to operation as it is directly connected to the heater.

Option Parts • Power supply cable : Model No. DTC-001-□□

- : Cable for connection to the terminal block is necessary to be included.
 □ : (N/ A) Cable not necessary.
- A : 2m power cable w/ Japanese type plug (A-type)
 □C : 2m power cable w/ European type plug (C-type)
 □ : (N/ A) Cable not necessary.

Special Controller (optionally available)

Practical example of gate-cut



Practical example of input data

	Teaching content	Home position	Fast feed	Cut feed	Cut	End cut
Point data	Point No.	0	1	2	3	4
	Positioning (*)	Home position	Leaving 7 mm	Leaving 0.5 mm	Maximum	value
	Speed setting	-	100 mm/sec	0.4 mm/sec	0.4 mm/sec	80 mm/sec
	Pushing force setting	-	-	-	-	-
	Acceleration setting	-	-	-	-	-
Sequencer data	Step No.	S00	S01	S02	S03	S04
	Waiting for positioning to complete	-	-	-	-	-
	Waiting for external input conditions	-	-	-	-	-
	Delay timer	-	-	0.5sec	2.0sec	-
	Specified external output	-	-	-	ON	-

(*) Input of positioning is actually done with a numerical value.



Air Nippers

GT-NS3/5/7/10L/20/30 Square Air Nippers

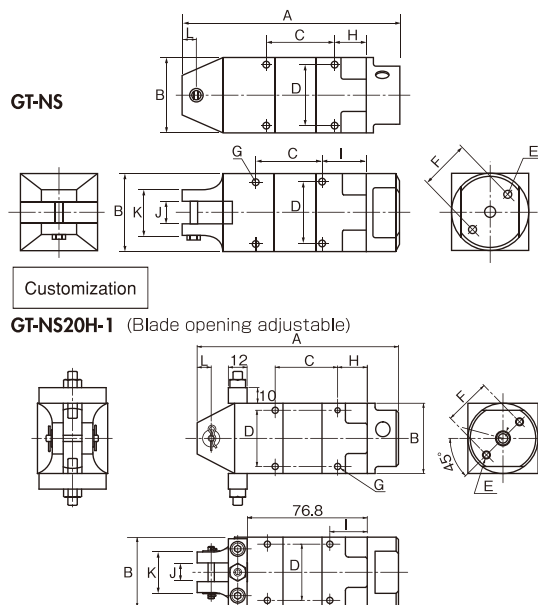
NS

VESSEL provides a generous selection of blades for all wire cutting needs, including resin product gate cuts and automatic welding equipment.



The main body end is 180 degree rotative.

Two suction (intake) ports are provided and so the suction position can be optionally changed depending on the mounting place.



Capacity ϕ (mm)				Model No.	Size (mm)												Air Consumption (cm ³ /str.)	Air Pressure (MPa)	Weight (g)	Hose coupling
Soft Plastic	Hard Plastic	Copper	Steel		A	B	C	D	E	F	G	H	I	J	K	L				
2.0		1.0	0.5	GT-NS3	110	23	40	19	M3 Depth8	17	M3 Depth3.5	19	24	7	23	7	45	0.4~0.5	95	Rc1/8
2.0		1.0	0.5	GT-NS5	94	30	30	24	M4 Depth10	20	M3 Depth5	14	19	7	23	7	64	0.4~0.5	135	
3.0	2.0	1.6	1.0	GT-NS7	113	36	30	28	M4 Depth10	24	M4 Depth5.5	18	23	9	23	7	116	0.4~0.5	215	
4.0	2.6	1.8	1.2	GT-NS10L	113	36	30	28	M4 Depth10	24	M4 Depth5.5	18	23	12	26	7	116	0.4~0.6	215	
7.0	5.0	2.6	2.0	GT-NS20	129	45	40	36	M5 Depth12	30	M4 Depth7	19	24	12	26	9	230	0.5~0.6	370	
10.0	6.5	3.3	2.8	GT-NS30	170	56	60	46	M6 Depth12	40	M5 Depth10	20	30	17	36	15	584	0.5~0.6	685	
7.0	5.0	2.6	2.0	GT-NS20H-1	129	45	40	36	M5 Depth12	30	M4 Depth7	19	24	12	26	9	230	0.5~0.6	455	

*Air hose inner dia. : 5mm *Overall length/Weight: Accessories not included.

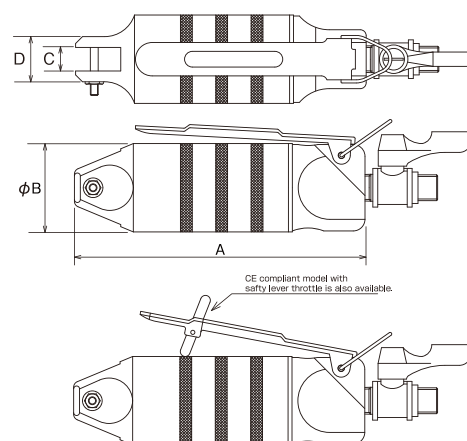
※Before mounting of exclusive/automatic machines, check the following product dimensions.
(Frame O.D., screw dia. (screw to screw) dimensions, etc.)

※Model GT-NS50 is a special order item. Please contact VESSEL for details.

GT-N3/5/7/10/12/20/30/50 Hand Held Air Nippers

N

VESSEL's special order blades provide solutions for a virtually unlimited range of needs, leading to safer, and more efficient work with less fatigue.



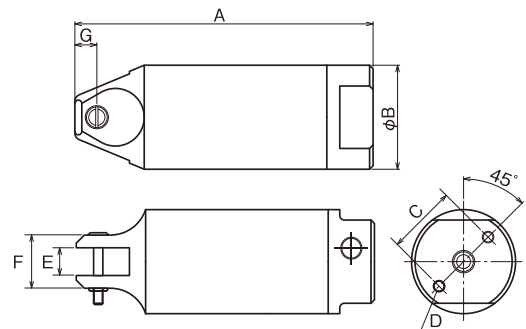
• N20, N30 and N50 have the air cock.

Capacity ϕ (mm)				Model No.	Size (mm)				Air Consumption (cm ³ /str.)	Air Pressure (MPa)	Weight (g)	Body	Hose coupling
Soft Plastic	Hard Plastic	Copper	Steel		A	B	C	D					
2.0		1.0	0.5	GT-N3	112	23	7	14	45	0.4~0.5	95	Rc1/8	R1/4
2.0		1.0	0.5	GT-N5	103	30	7	17	64	0.4~0.5	135	Rc1/8	
3.0	2.0	1.6	1.0	GT-N7	123	34	9	17	116	0.4~0.5	180	Rc1/4	
4.0	2.6	1.8	1.2	GT-N10	132	34	9	17	116	0.4~0.5	185	Rc1/4	
4.5	4.0	2.3	1.7	GT-N12	142	36	12	20	116	0.5~0.6	210	Rc1/4	
7.0	5.0	2.6	2.0	GT-N20	156	45	12	23	230	0.5~0.6	375	Rc1/4	
10.0	6.5	3.3	2.8	GT-N30	193	56	17	30	584	0.5~0.6	625	Rc1/4	
		5.5	4.5	GT-N50	237	75	25.2	43	1,170	0.5~0.6	1,220	Rc1/4	

*Hose coupling: R 1/4 *Air hose inner dia. : 5mm *Overall length: Accessories, Hunger not included. *Weight: Accessories not included.

GT-NR3/5/7/10L/20/30/50 Air Nipper Round-Type without Lever

The NR20 body contains the installation scale of two sides.

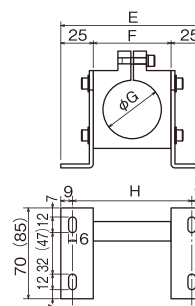


Two suction (intake) ports are provided and so the suction position can be optionally changed depending on the mounting place.

*Before mounting of exclusive/automatic machines, check the following product dimensions.
(Frame O.D., screw dia. (screw to screw) dimensions, etc.)

GT-NR Type

45°



Figures in () are for the NR50ST

• Above figures of overall length and the weight are defined for the extra booster specs only. And these figures in the installation.

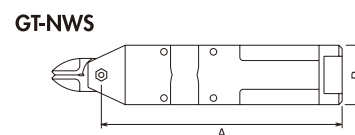
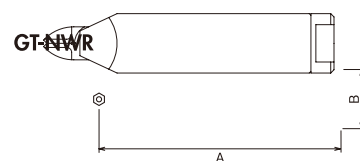
Air nippers

GT-NWR10/20/30 GT-NWS1/10/20/30 Double Action Air Nippers

Patented

NWR・NWS

Blade opening and closing is air piston driven.
Having no spring mechanism in the main unit facilitates maintenance operations.



Model No.	Capacity ϕ (mm)			Air Consumption (cm ³ /str.)	Applied Pressure (N)	Air Pressure (MPa)	Size (mm)		Weight (g)
	Copper	Steel	ABS Plastic				A	B	
Double Action Air Scissors (Round Type without Lever)									
GT-NWR10	1.8	1.2	4.0	116	588	0.4~0.5	146	ϕ 36	280
GT-NWR20	2.6	2.0	6.5	230	1,372	0.5~0.6	165	ϕ 45	523
GT-NWR30	3.3	2.8	9.5	584	2,744	0.5~0.6	230.5	ϕ 56	980
Double Action Air Scissors (Square Type)									
GT-NWS1	1.0	0.5	2.0	45	294	0.4~0.5	95	23×20	116
GT-NWS10	1.8	1.2	4.0	116	588	0.4~0.5	146	36×36	356
GT-NWS20	2.6	2.0	6.5	230	1,372	0.5~0.6	165	45×45	610
GT-NWS30	3.3	2.8	9.5	584	2,744	0.5~0.6	230.5	56×56	1115

GT-NB20/30/20LW/30LW Slide-Off Air Nipper Bracket-Type

NB

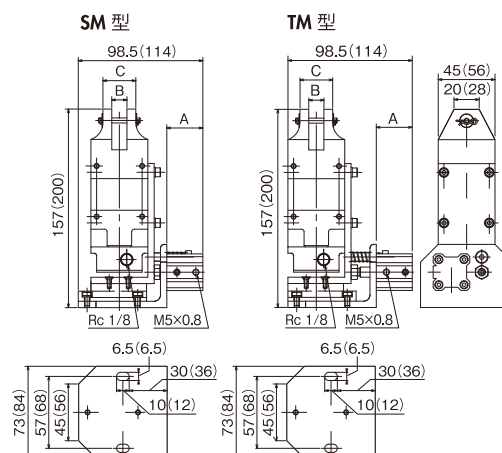
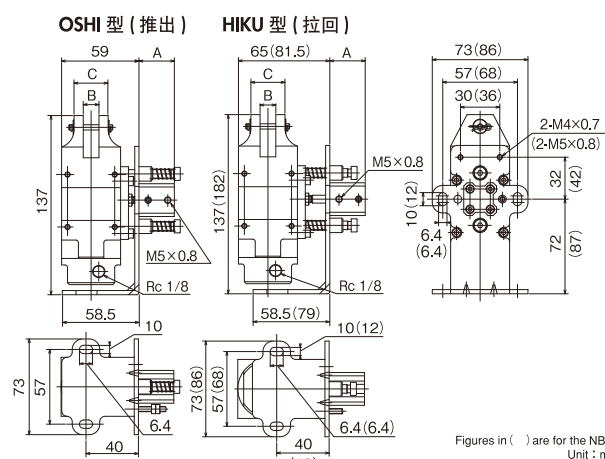
VESSEL has achieved smooth, continuous slide movement even for large diameter gate cuts, which produce a large shock at each cut.



GT-NB20LW-10TM
Accurate slide function
with slide stroke

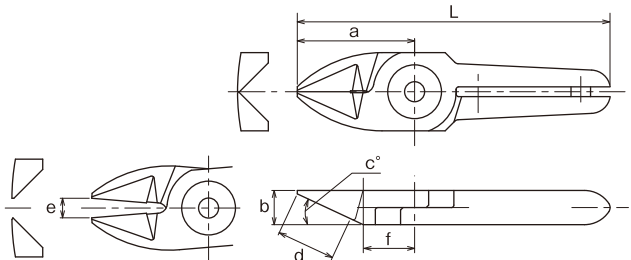


GT-NB20



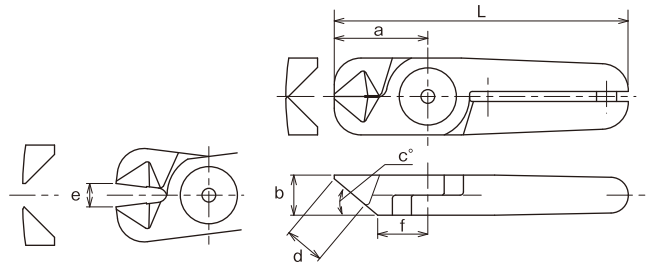
Model No.	Size (mm)			Slide Direction/ Distance (mm)	Weight (g)
	A	B	C		
GT-NB20 (5-OSHI)	22	12	26	Push 0~5	755
GT-NB20 (5-HIKU)	22	12	26	Pull 0~5	755
GT-NB20 (10-OSHI)	27	12	26	Push 0~10	755
GT-NB20 (10-HIKU)	27	12	26	Pull 0~10	755
GT-NB30 (10-HIKU)	28.5	17	36	Pull 0~10	1,420
GT-NB20LW-10TM	28.5	12	26	Pull 0~10	795
GT-NB30LW-10TM	29.5	17	36	Pull 0~10	1,315
GT-NB20LW-10SM	28.5	12	26	Push 0~10	795
GT-NB30LW-10SM	29.5	17	36	Push 0~10	1,325

Air nipper standard blades for metal

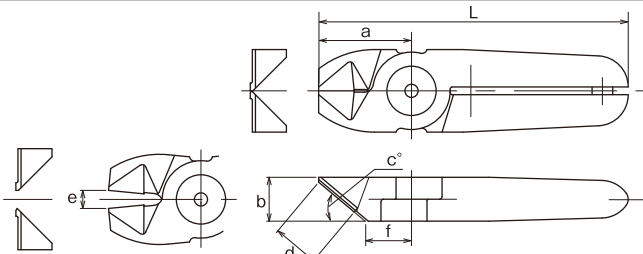
		Standard							Metal		
		AS/ Standard type. This is a general set of blades used for cutting copper wire and steel wire. HS/ Improved durability with brazed high-speed steel.									
											
Model No.	a	b	c (°)	Size (mm)		e	f	L	Weight (g)	Material	Application model
N3AS	24	7	25	12	4	10.5	64	35	35	Special alloy steel	GT-N3 / NS3 / NR3
N3HS	24	7	25	12	4	10.5	64	35	35	High Speed Steel	GT-N3 / NS3 / NR3
N5AS	24	7	25	12	4	10.5	64	40	40	Special alloy steel	GT-N5 / NS5 / NR5
N5HS	24	7	25	12	4	10.5	64	40	40	High Speed Steel	GT-N5 / NS5 / NR5
N7AS	27	9	30	13.5	4	12.5	81	80	80	Special alloy steel	GT-N7 / NS7 / NR7
N7HS	27	9	30	13.5	4	12.5	81	80	80	High Speed Steel	GT-N7 / NS7 / NR7
N10AS	27	9	30	13.5	5	12.5	91	85	85	Special alloy steel	GT-N10
N10HS	27	9	30	13.5	5	12.5	91	85	85	High Speed Steel	GT-N10
N10LAS	35	12	30	20	5	15	89	120	120	Special alloy steel	GT-NS10L / NR10L
N12AS	35	12	30	20	5	15	105	135	135	Special alloy steel	GT-N12
N12HS	35	12	30	20	5	15	105	135	135	High Speed Steel	GT-N12
N20AS	35	12	30	20	9	15	95	140	140	Special alloy steel	GT-NS20 / NR20 / N20
N30AS	43	17	30	25	9	18	127	370	370	Special alloy steel	GT-NS30 / NR30 / N30

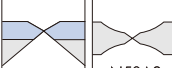
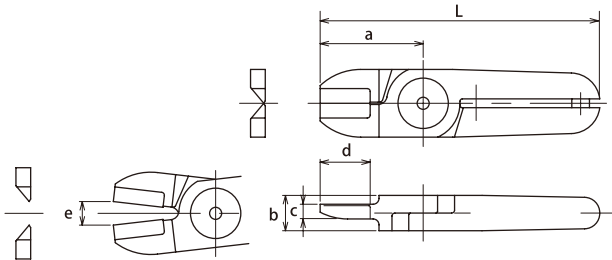
Straight blades for metals							Metal
BJ BJ/ This is a set of vertical blades with an unbeveled cutting edge for metal.							

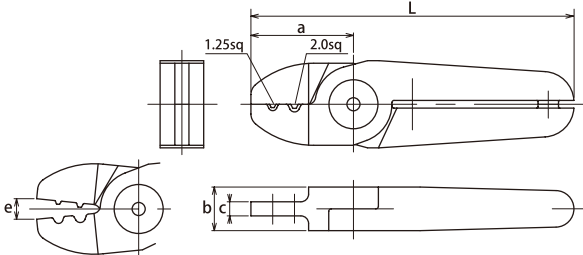
Model No.	Size (mm)						Weight (g)	Material	Application model
	a	b	c	d	e	L			
NW1BJ	20	5	3	10.5	3.5	50	16	Special alloy steel	GT-NWR1 / NWS1
N3BJ	24	7	5.8	13	5	64	35	Special alloy steel	GT-N3 / NS3 / NR3
N5BJ	24	7	5.8	13	4	64	40	Special alloy steel	GT-N5 / NS5 / NR5
N7BJ	27	9	7.5	13	5	81	75	Special alloy steel	GT-N7 / NS7 / NR7
NW10BJ	30	9	6	14	5	85	76	Special alloy steel	GT-NWR10 / NWS10
NW20BJ	40	12	6	21.5	8	100	142	Special alloy steel	GT-NWR20 / NWS20
NW30BJ	55	17	8	29.5	11	140	367	Special alloy steel	GT-NWR30 / NWS30

Powerful cutting blades									Metal		
AG	AG/ This is a set of blades with increased strength with a shorter cutting edge than the standard type. Increases the pressure because it cuts at the base of the blades.										
											
Model No.	a	b	c (°)	Size (mm)		e	f	L	Weight (g)	Material	Application model
N20AG	28	12	40	12	7	15	88	135	Special alloy steel	GT-NS20 / NR20 / N20 / NB20	
N20HS	26	12	40	10	7	13.5	86	135	High Speed Steel	GT-NS20 / NR20 / N20 / NB20	

Air nipper standard blades for metal

Powerful cutting blades with carbide tips								Metal		
BBB	BBB/ With carbide tips suitable for cutting hard wire such as high steel wire and piano wire.									
								N30BBB	N50BBB	
										
Model No.	a	b	c(°)	Size (mm)			L	Weight (g)	Material	Application model
N30BBB	36	17	40	18	7	18	120	365	Sintered Alloy	GT-NS30 / NR30 / N30 / NB30
N50BBB	46	25	35	19	9	24	166	955	Sintered Alloy	GT-NR50 / N50

Clipper blades with carbide tips							Metal		
BFB/ The shape is clipper type. With carbide tips, suitable for cutting metal wire and thin pipe. AS/ Standard clipper type blades.									
							N50AS		
									
Model No.	Size (mm)						Weight (g)	Material	Application model
N20BFB	35	12	5	17	8	95	150	Sintered Alloy	GT-NS20 / NR20 / N20 / NB20
N50AS	60	25	10	30	11	180	950	Special alloy steel	GT-NR50 / N50

ACD	Crimp edge for solderless terminals						Metal	
	ACD/ This is a set of blades for crimping solderless terminals. (Bare terminal 1.25 sq/2.0 sq)							
								
Model No.	a	b	Size (mm)			Weight (g)	Material	Application model
N30ACD	40	17	c	e	L	335	Special alloy steel	GT-NS30 / NR30 / N30 / NB30

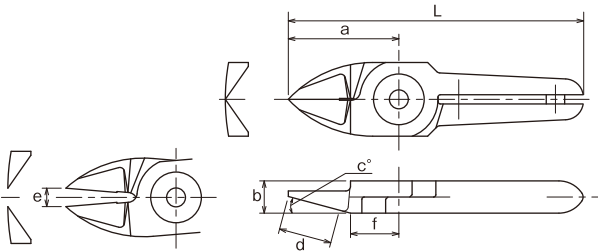
Air nipper standard blades for plastic

AP

For plastic

AP/ This is a standard set of blades used to cut plastic. A broad, gentle curve is provided in the cross section for gate processing where the cut end must not be left. (The cutting edge is curved.)

Plastic



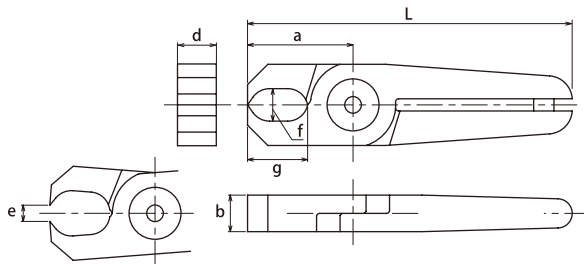
Model No.	a	b	c(°)	Size (mm)			L	Weight (g)	Material	Application model
N3AP	24	7	15	11.5	4	10.5	64	35	Special alloy steel	GT-N3 / NS3 / NR3
N5AP	24	7	15	11.5	4	10.5	64	40	Special alloy steel	GT-N5 / NS5 / NR5
N7AP	27	9	30	11.5	4	14.5	81	80	Special alloy steel	GT-N7 / NS7 / NR7
N10AP	27	9	30	11.5	5	14.5	91	85	Special alloy steel	GT-N10
N10LAP	35	12	15	16	5	15	89	120	Special alloy steel	GT-NS10L / NR10L
N12AP	35	12	15	16	5	15	105	135	Special alloy steel	GT-N12
N20AP	35	12	15	16	11	15	95	125	Special alloy steel	GT-NS20 / NR20 / N20 / NB20
N30AP	66	17	15	38	16	24	150	380	Special alloy steel	GT-NS30 / NR30 / N30 / NB30

AE

Nipping blades for plastic

AE/ Used for processing plastic gates such as ride gates and discard gates.

Plastic



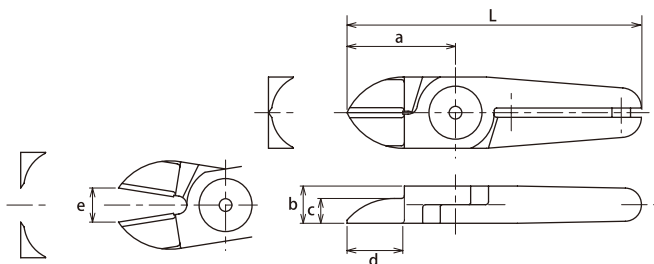
Model No.	a	b	f x g	Size (mm)			L	Weight (g)	Material	Application model
N3AE	20	7	6×11	7	3.5	60	35	35	Special alloy steel	GT-N3 / NS3 / NR3
N5AE	20	7	6×6.6	7	3.5	60	40	40	Special alloy steel	GT-N5 / NS5 / NR5
N7AE	26	9	8×14.8	9	4	80	85	85	Special alloy steel	GT-N7 / NS7 / NR7
N20AE	28	12	10×15.5	12	8	88	135	135	Special alloy steel	GT-NS20 / NR20 / N20 / NB20
N30AE	45	17	13×28	17	12	129	395	395	Special alloy steel	GT-NS30 / NR30 / N30 / NB30

AJ

Thin. straight blades for plastic

AJ/ This is a set of vertical blades with an unbeveled cutting edge for plastic. You can apply it at a right angle to the gate.

Plastic



Model No.	a	b	c	Size (mm)			L	Weight (g)	Material	Application model
NW10AJ	30	9	6	14	5	85	76	76	Special alloy steel	GT-NWR10 / NWS10
N20AJ	35	12	8	18	11	95	125	125	Special alloy steel	GT-NS20 / NR20 / N20 / NB20
N20AJB	35	12	8	18	11	95	125	125	Sintered Alloy	GT-NS20 / NR20 / N20 / NB20
NW20AJ	40	12	6	21.5	8	100	142	142	Special alloy steel	GT-NWR20 / NWS20
N30AJ	52	17	8	28	11	136	370	370	Special alloy steel	GT-NS30 / NR30 / N30 / NB30
NW30AJ	55	17	8	29.5	11	140	368	368	Special alloy steel	GT-NWR30 / NWS30

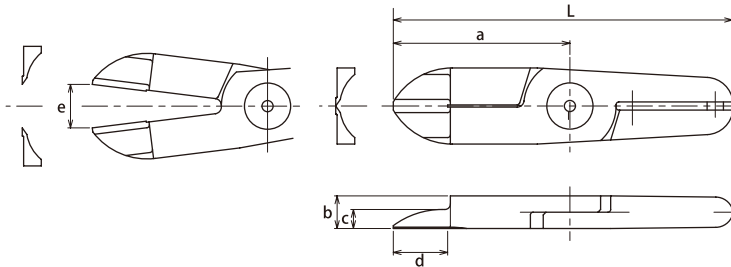
Air nipper standard/quasi-standard blades for plastic

AJL Straight long blades for plastic

Quasi-standard products

AJL/ This is a long type set of straight blades. This is suitable when there is distance between the nippers and the gate cut portion of the workpiece. N30AJL163 is useful for wide gate processing

Plastic



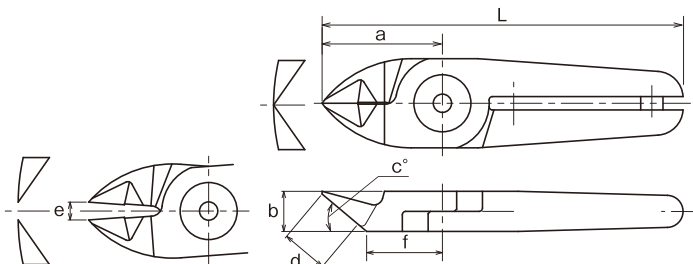
Model No.	Size (mm)						Weight (g)	Material	Application model
N10LAJ141	a	b	c	d	e	L			
N20AJL	61	12	7	34	10	115	165	Special alloy steel	GT-NS10L / NR10L
N20AB39	65	12	7	20	16	125	230	Special alloy steel	GT-NS20 / NR20 / N20 / NB20
N30AJL	61	12	7	36	14	121	185	Special alloy steel	GT-NS20 / NR20 / N20 / NB20
N30AJ163	65	17	7	41	17.5	149	355	Special alloy steel	GT-NS30 / NR30 / N30 / NB30
N30AJL	75	17	8	25	19	159	470	Special alloy steel	GT-NS30 / NR30 / N30 / NB30

PF Flat blades for plastic

PF

PF/ This is a set of blades for cutting the cut end flat for plastic. A large R is provided in the cross section for gate processing where the cut end must not be left.

Plastic



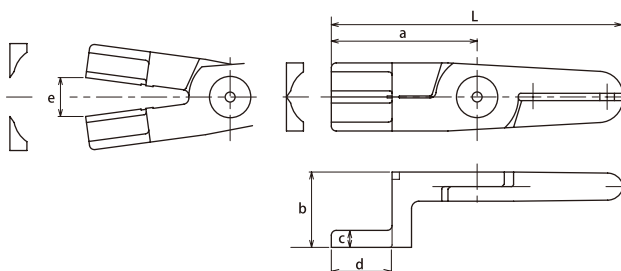
Model No.	Size (mm)						Weight (g)	Material	Application model
N7PF	a	b	c(°)	d	e	f	L		
N10LPF	27	9	40	10.5	4	17	81	80	Special alloy steel
N20PF	35	12	40	13.5	5	21	89	120	Special alloy steel
N30PF	35	12	40	13.5	11	21	95	130	Special alloy steel
N30PF	58	17	30	25	15	33	142	390	Special alloy steel

AH Crank blades for plastic

AH

AH/ This is a set of blades with a crank cutting edge for plastic. It is effective when there are obstructions or the gate is narrow.

Plastic



Model No.	Size (mm)						Weight (g)	Material	Application model
N20AH	a	b	c	d	e	L			
N20AH	60	31	7	23	16	120	240	Special alloy steel	GT-NS20 / NR20 / N20 / NB20

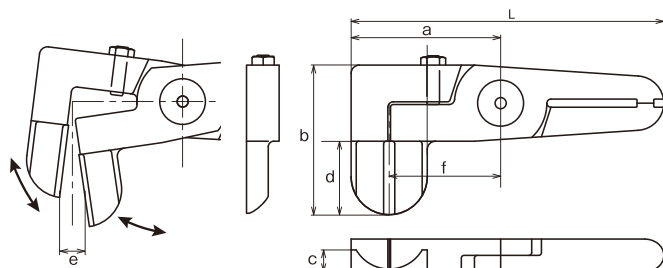
Air nipper standard/quasi-standard blades for plastic

AMR Laterally facing blades for plastics

AML

AMR/AML This is a set of blades for plastic where the ML cutting edge is bent 90 degrees. It is useful when restricted to confined spaces hard for the nipper to get into.

Plastic



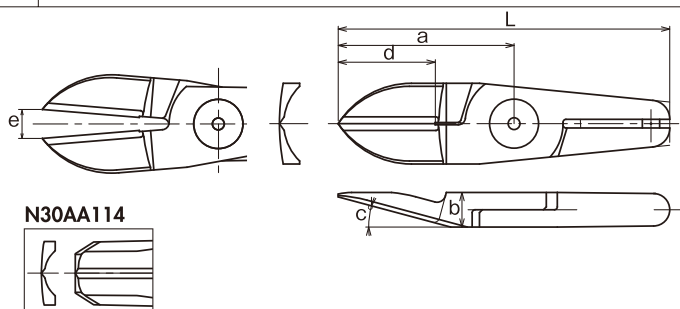
Model No.	Size (mm)							Weight (g)	Material	Application model
	a	b	c	d	e	f	L			
N20AML1498	55	55	8	26	9.5	41	115	270	Special alloy steel	GT-NS20 / NR20 / N20 / NB20
N20AMR1499	55	55	8	26	9.5	41	115	270	Special alloy steel	GT-NS20 / NR20 / N20 / NB20
N30AML1435	55	68	10	35	13	39	139	520	Special alloy steel	GT-NS30 / NR30 / N30 / NB30
N30AMR1395	55	68	10	35	13	39	139	520	Special alloy steel	GT-NS30 / NR30 / N30 / NB30

Quasi-standard products

R blades for plastics

A large R is provided in the cross section for gate processing where the cut end must not be left. An angled blades can be selected in accordance with the installation angle of the main unit.

Plastic



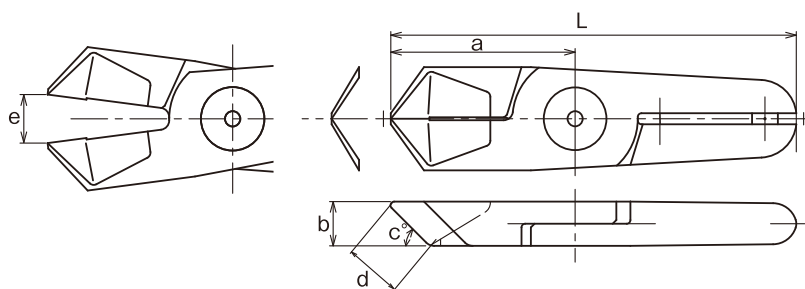
Model No.	Size (mm)						Weight (g)	Material	Application model
	a	b	c (°)	d	e	L			
N10LAB152	61	12	15	35	10	115	165	Special alloy steel	GT-NS10 /NR10L
N20AA27	45	12	23	25	12	105	145	Special alloy steel	GT-NS20 / NR20 /N20 /NB20
N20AA239	52.3	12	40	27	14	112.3	195	Special alloy steel	GT-NS20 / NR20 /N20 /NB20
N20AB360	61	12	15	35	16	121	185	Special alloy steel	GT-NS20 / NR20 /N20/ NB20
N30AA114	76.3	17	30	50	20	160.3	385	Special alloy steel	GT-NS30 /NR30 /N30 / NB30

Quasi-standard products

Angle nipping blades for plastics

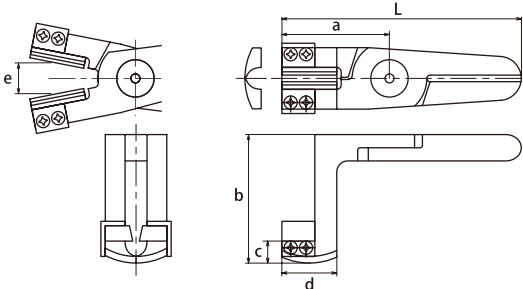
AE/ Used for processing plastic gates such as ride gates, discard gates. The cutting edge is angled so that the main unit can set up diagonally.

Plastic

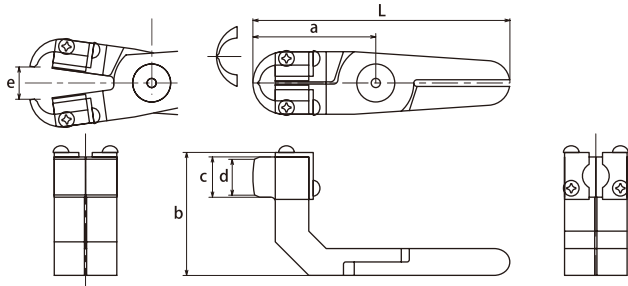


Model No.	Size (mm)						Weight (g)	Material	Application model
	a	b	c (°)	d	e	L			
N20AE19	50	12	45	13	13	110	200	Special alloy steel	GT-NS20 / NR20 / N20 / NB20
N30AE53	65	17	65	18.5	16	149	440	Special alloy steel	GT-NS30 / NR30 / N30 / NB30

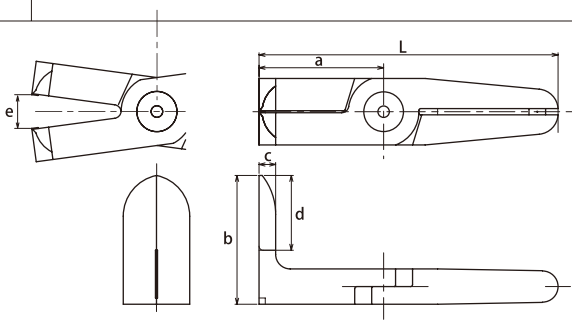
Air nipper quasi-standard blades for plastic

Quasi-standrad products	Comes with chuck function-1						Plastic		
	Mainly in gate processing for direct gates, the sprue is caught with urethane rubber. A large R is provided in the cross section for gate processing where the cut end must not be left.								
									
Model No.	Size (mm)						Weight (g)	Material	Application model
N20AH533	a	b	c	d	e	L	280	Special alloy steel	GT-N20 / NS20 / NR20



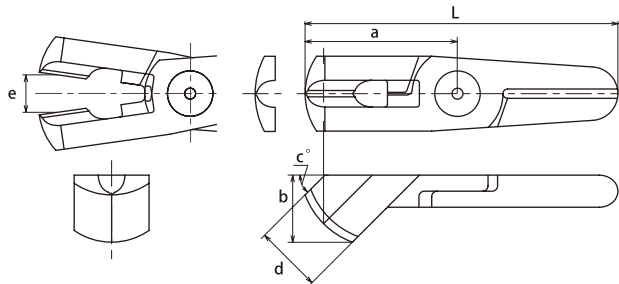
Quasi-standard products	Comes with chuck function-2						Plastic		
	Mainly in gate processing for direct gates, the sprue is caught with urethane rubber. A large R is provided in the cross section for gate processing where the cut end must not be left.								
									
Model No.	Size (mm)						Weight (g)	Material	Application model
N20AH152	a	b	c	d	e	L	330	Special alloy steel	GT-N20 / NS20 / NR20

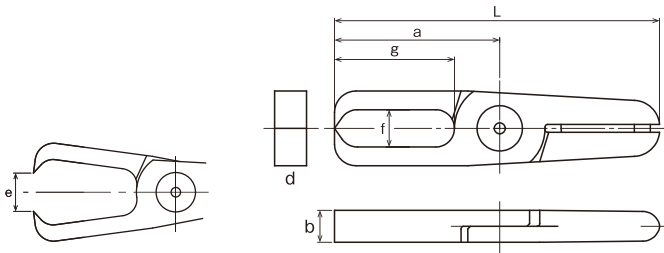


Quasi-standrad products	L-shape blades for plastics						Plastic		
	This is an angled long type straight set of blades with a 90-degree angle. Ideal for direct gate cut.								
									
Model No.	Size (mm)						Weight (g)	Material	Application model
N30AL525	a 60	b 62	c 8	d 36	e 16	L 144	520	Special alloy steel	GT-N30 / NS30 / NR30 / NB30



Air nipper quasi-standard blades for plastic

Nipping blades for plastics							Plastic					
Quasi-standard products This is the perfect spherical set of cutting blades for sprue cut. The blades can be inserted precisely in narrow areas that have ribs around them and the finish is very clean.												
												
Model No.	a	b	Size (mm)			c (°)	d	e	L	Weight (g)	Material	Application model
N20AK249	57	25	45	25	14	117	240	Special alloy steel	GT-N20 / NS20 / NR20 / NB20			

Quasi-standard products		Nipping blades for plastics					Plastic		
		AE/ Used for processing plastic gates such as ride gates, discard gates.							
									
Model No.	a	b	Size (mm)			Weight (g)	Material	Application model	
N20AE1205	62	12	f×g 14×45	d 12	e 16.5	L 122	202	Special alloy steel	GT-NS20 / NR20 / N20 / NB20

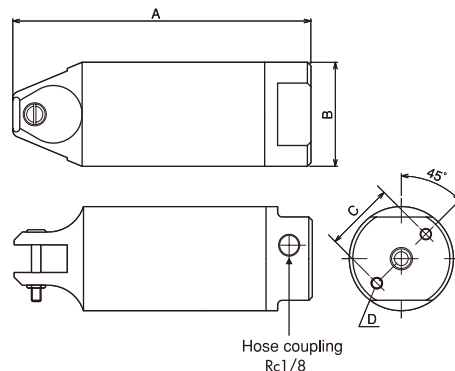
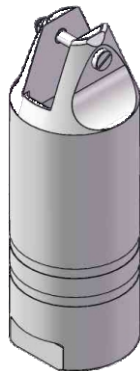
Air Nipper Troubleshooting

Inspection items when a malfunction occurs during use

Symptoms	Causes	Treatment
1. Blades or slide not working properly.	Air is not being supplied	Supply air
	The hose is twisted	Extend the hose
	Low air pressure	Air pressure adjustment
	Corrosion, wear, or contamination of sliding part of the blades	Lubrication/disassembly and adjustment
	Sliding parts burned by heat (heat nipper)	Component replacement
	Broken blade spring	Component replacement
	Broken return spring	Component replacement
	Broken blades	Replace blades
2. Air leakage	Wear of the cutting unit/rivet	Replace blades
	Valve malfunction/wear, damage (O-rings, ball valves, etc.)	Component replacement
	Packing is broken	Component replacement

Air nippers NR20-M NR30-M Air Nipper Round-Type without Lever

NR



The main body end is 180 degree rotative.

Two suction (intake) ports are provided and so the suction position can be optionally changed depending on the mounting place.

Soft Plastic	Hard Plastic	Copper	Steel	Model No.	A	B	Size (mm) C	D	Air Consumption (cm ³ /str.)	Air Pressure (MPa)	Weight (g)	Hose coupling
7.0	5.0	2.6	2.0	NR20-M	129	45	30	M5 Depth12	230	0.5~0.6	280	Rc1/8
10.0	6.5	3.3	2.8	NR30-M	165	56	40	M6 De th12	584	0.5~0.6	505	

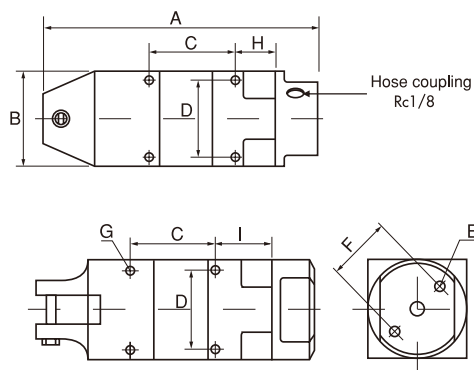
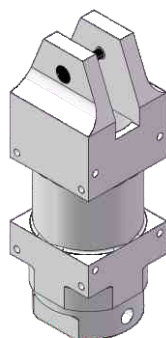
•Air hose inner dia. : 5mm •Overall length/Weight: Accessories not included.

※Before mounting of exclusive/automatic machines, check the following product dimensions.
(Frame O.D., screw dia. (screw to screw) dimensions, etc.)

Air Nippers NS20-M NS30-M Square Air Nippers

NS

VESSEL provides a generous selection of blades for all wire cutting needs, including resin product gate cuts and automatic welding equipment.



The main body end is 180 degree rotative.

Two suction (intake) ports are provided and so the suction position can be optionally changed depending on the mounting place.

Capacity φ (mm)	Model No.	A	B	C	D	Size (mm) E	F	G	H	I	Air Consumption (cm ³ /str.)	Air Pressure (MPa)	Weight (g)	Hose coupling
Soft Plastic 7.0	NS20-M	129	45	40	36	M5Depth12	30	M4Depth7	19	24	230	0.5~0.6	370	Rc1/8
Hard Plastic 5.0														
Copper 2.6	NS30-M	170	56	60	46	M6Depth12	40	M5Depth10	20	30	584	0.5~0.6	685	Rc1/8
Steel 2.0														

•Air hose inner dia. : 5mm •Overall length/Weight: Accessories not included.

※Before mounting of exclusive/automatic machines, check the following product dimensions.
(Frame O.D., screw dia. (screw to screw) dimensions, etc.)

※Model GT-NS50 is a special order item. Please contact VESSEL for details.

VESSEL

STAT·CLEAN





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