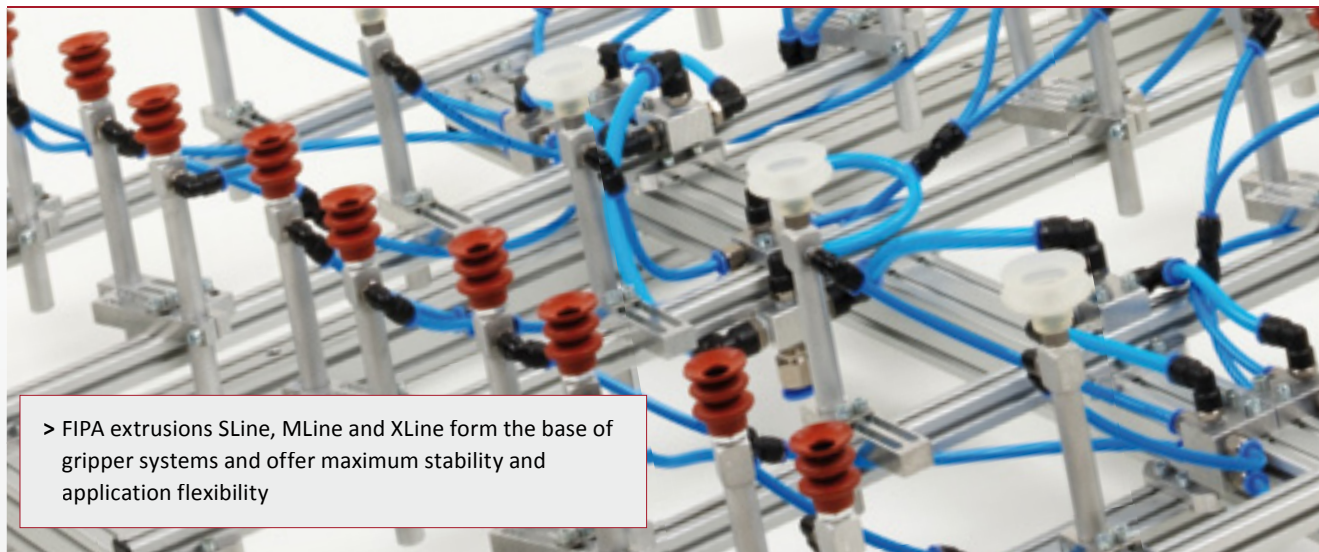


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FIPA Extrusions



> FIPA extrusions SLine, MLine and XLine form the base of gripper systems and offer maximum stability and application flexibility



SLine and MLine

- > Base for grippers with spans up to 1 meter and loads up to approx. 5 kg
- > Stable and lightweight
- > See page 46



XLine

- > Base for grippers with spans exceeding 1 meter and loading capacity exceeding 5 kg
- > Torsionally rigid for maximum stability even with high loads
- > See page 49



Angle clamps

- > Integration of gripper elements or vacuum cups
- > Clamping diameters 10, 14, 20 and 30 mm
- > Fits to extrusions from FIPA as well as third-party products



Profile connectors

- > Angle variable, rigid connection of two extrusions

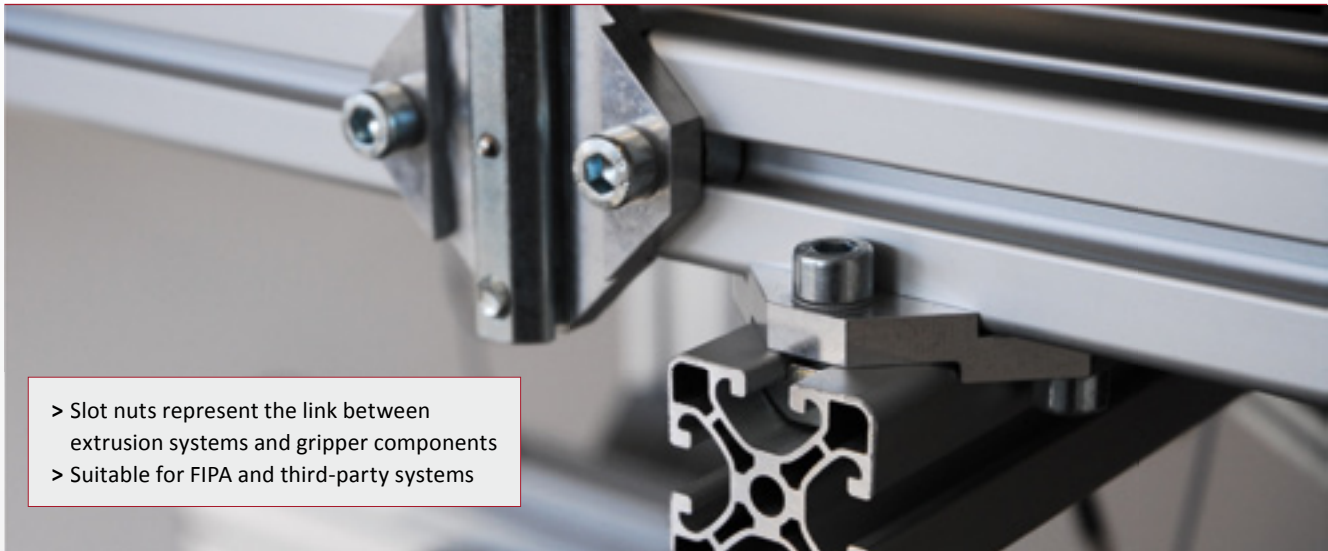


Clamping screws

- > Internal and external hex bits for easy assembly even in restricted spaces



FIPA Slot nuts



- > Slot nuts represent the link between extrusion systems and gripper components
- > Suitable for FIPA and third-party systems



Threaded slot nuts - universal

- > For inserting into the extrusion groove
- > Suitable for extrusion systems SLine, MLine and XLine as well as third-party products
- > Existing components from other suppliers can still be used

> See page 50



SLine Slot nuts - swivel-in

- > Slot nuts can be rotated in or out even after the assembly of the gripper system
- > Quick and flexible extension and adaption of gripper systems without disassembly

> See page 52



Installation examples:

- > Using the same universal slot nut in FIPA and third-party extrusions
- > Example with third-party extrusions 25 x 25 mm



- > Example with FIPA SLine 20 x 20 mm



SLine extrusions



**FOR GRIPPER SYSTEMS WITH SPANS UP TO 1 M AND
LOADS UP TO 5 KG**

Product description

- > Compatible with common extrusion systems
- > Lightweight and rigid

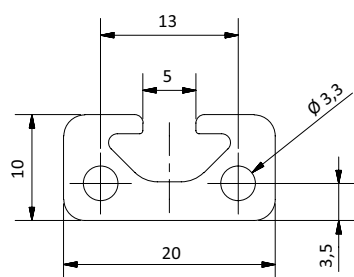
Ordering notes

- > Special lengths over 2.000 mm on request

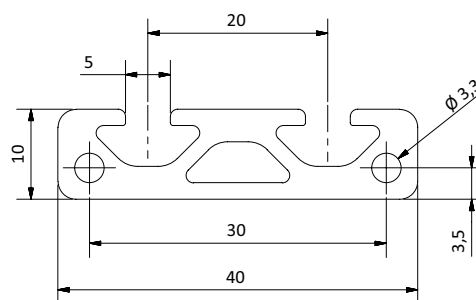
Technical data

Item no.	Length [mm]	Weight [g]	Suitable end caps
GR01.001.2000	1,960	350	GR01.010 (p.53)
GR01.002.2000	1,960	640	GR01.011 (p.53)
GR01.003.2000	1,960	490	GR01.012 (p.53)
GR01.004.2000	1,960	950	GR01.013 (p.53)
GR01.006.2000	1,960	1,670	GR01.015 (p.53)
GR01.007.2000	1,960	1,810	GR01.016 (p.53)

Dimensions



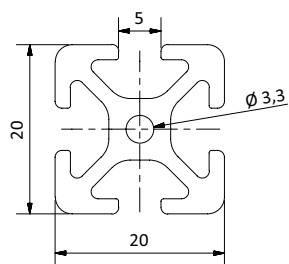
GR01.001.2000



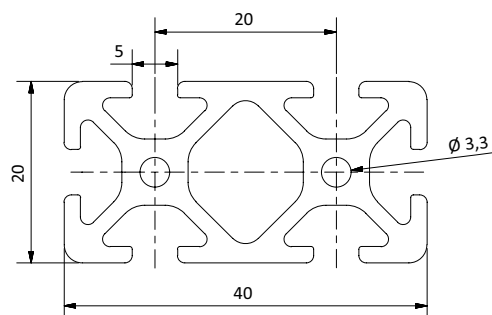
GR01.002.2000



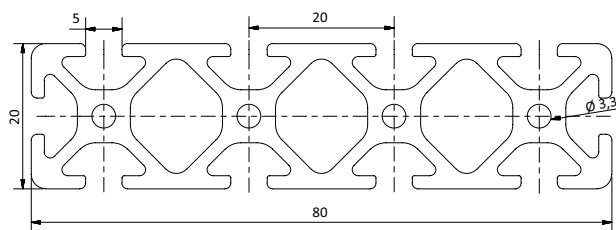
Dimensions



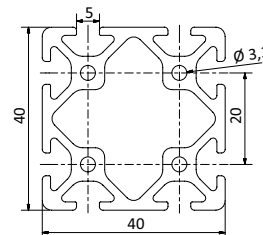
GR01.003.2000



GR01.004.2000



GR01.006.2000



GR01.007.2000



MLine extrusions



**FOR GRIPPER SYSTEMS WITH SPANS UP TO 1 M AND
LOADS UP TO 5 KG**

Product description

- > Compatible with common extrusion systems
- > Lightweight and rigid

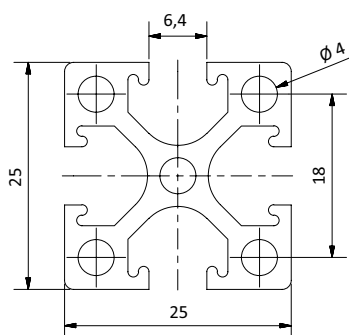
Ordering notes

- > Special lengths over 2,000 mm on request

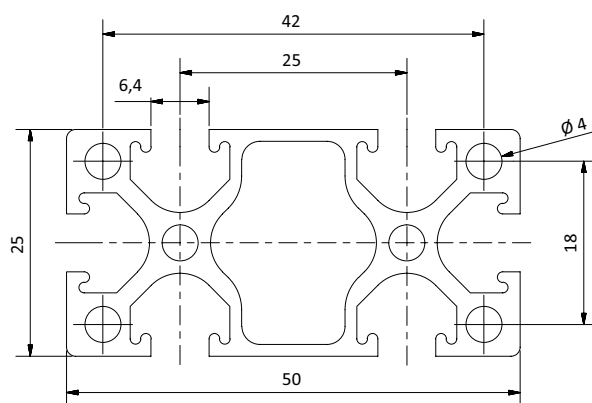
Technical data

Item no.	Length [mm]	Weight [g]	Suitable end caps
GR01.008.2000	1,960	1,500	GR01.017 (p.53)
GR01.009.2000	1,960	2,700	GR01.018 (p.53)

Dimensions



GR01.008.2000



GR01.009.2000



XLine extrusions



**FOR GRIPPER SYSTEMS WITH SPANS LARGER 1 M
AND LOADS EXCEEDING 5 KG**

Product description

- > Compatible with common extrusion systems
- > Very high stability

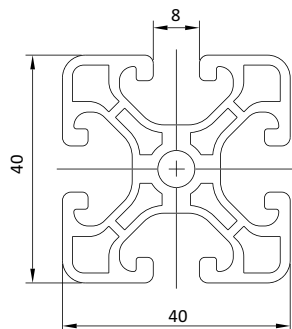
Ordering notes

- > Special lengths over 2,000 mm on request

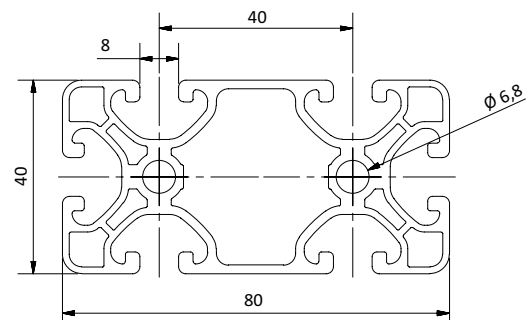
Technical data

Item no.	Length [mm]	Weight [g]	Suitable end caps
GR-XL01.003.2000	1,960	2,650	GR-XL01.012 (p.53)
GR-XL01.004.2000	1,960	4,400	GR-XL01.013 (p.53)
GR-XL01.005.2000	1,960	10,380	--

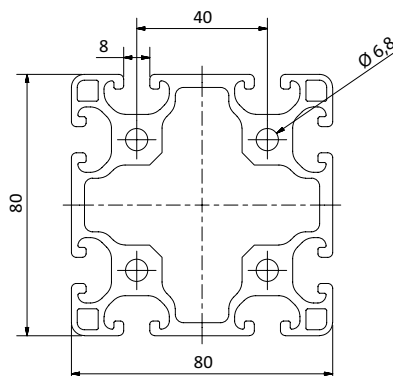
Dimensions



GR-XL01.003.2000



GR-XL01.004.2000



GR-XL01.005.2000



Extrusion systems | Channel nuts

Threaded slot nuts - universal

Threaded slot nuts - universal



FITS WITH MANY THIRD-PARTY EXTRUSIONS

Product description

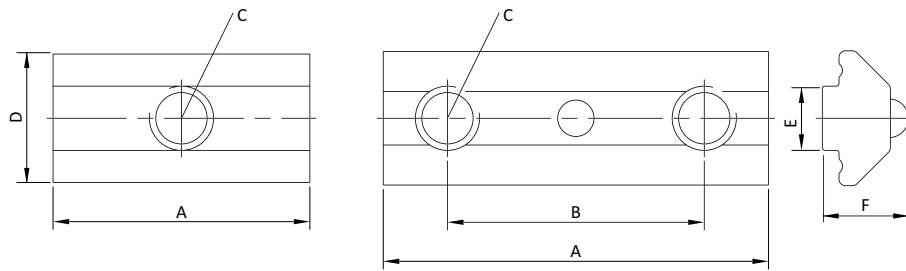
- > Slot nuts made of galvanised steel
- > Ball catch prevents slipping of slot nut during installation
- > Compatible with many third-party extrusions

Technical data

Item no.	Suitable for extrusion system	With ball catch	Weight [g]
GR01.088A	SLine / MLine	--	2
GR01.089A	SLine / MLine	--	3
GR01.090A	SLine / MLine	--	6
GR01.091A	SLine / MLine	Yes	6
GR01.092A	SLine / MLine	Yes	8
GR01.093A	SLine / MLine	Yes	9
GR01.094A	SLine / MLine	Yes	12
GR01.095A	SLine / MLine	Yes	13
GR01.096A	SLine / MLine	Yes	20
GR01.097A	SLine / MLine	--	2
GR01.098A	SLine / MLine	--	5
GR01.101A	SLine / MLine	Yes	12
GR01.102A	SLine / MLine	Yes	20
GR01.103	MLine	Yes	4
GR01.104	MLine	--	7
GR01.105	MLine	--	16
GR-XL01.100	XLine	Yes	17
GR-XL01.101	XLine	Yes	21
GR-XL01.102	XLine	Yes	35
GR-XL01.103	XLine	Yes	57
GR-XL01.104	XLine	Yes	94
GR-XL01.106	XLine	Yes	18



Dimensions



Item no.	C	A [mm]	B [mm]	D [mm]	E [mm]	F [mm]
GR01.088A	M3	12	--	10.5	5	6.8
GR01.089A	M4	12	--	10.5	5	6.8
GR01.090A	M4	20	8	10.5	5	6.8
GR01.091A	M5	20	10	10.5	5	6.8
GR01.092A	M5	25	12	10.5	5	6.8
GR01.093A	M5	30	20	10.5	5	6.8
GR01.094A	M5	35	25	10.5	5	6.8
GR01.095A	M5	40	30	10.5	5	6.8
GR01.096A	M5	60	50	10.5	5	6.8
GR01.097A	M5	12	--	10.5	5	6.8
GR01.098A	M5	20	--	10.5	5	6.8
GR01.101A	M5	45	35	10.5	5	6.8
GR01.102A	M5	70	60	10.5	5	6.8
GR01.103	M6	17	--	10.5	5	6.8
GR01.104	M6	28	19	10.5	5	6.8
GR01.105	M6	58	47	10.5	5	6.8
GR-XL01.100	M8	22	--	17	8	12.1
GR-XL01.101	M8	30	15	17	8	12.1
GR-XL01.102	M8	45	30	17	8	12.1
GR-XL01.103	M8	70	55	17	8	12.1
GR-XL01.104	M8	110	95	17	8	12.1
GR-XL01.106	M6	22	--	17	8	12.1



Threaded slot nuts - swivel-in



**SUBSEQUENT INTEGRATION OF COMPONENTS
WITHOUT DISASSEMBLY**

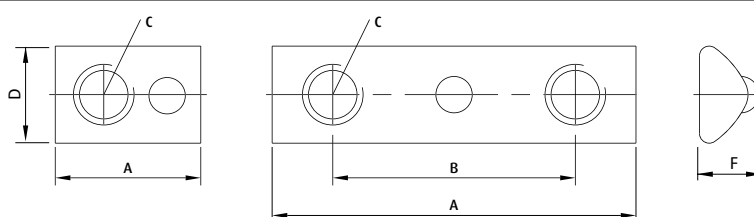
Product description

- > Slot nuts made of galvanised steel
- > Enables subsequent extension of gripper systems without disassembly
- > Ball catch prevents slipping of slot nut during installation

Technical data

Item no.	Suitable for extrusion system	With ball catch	Weight [g]
GR01.069	SLine	Yes	2
GR01.070	SLine	Yes	2
GR01.071	SLine	Yes	2
GR01.080	SLine	--	2
GR01.081	SLine	Yes	3
GR01.082	SLine	Yes	4
GR01.083	SLine	Yes	5
GR01.084	SLine	Yes	6
GR01.085	SLine	Yes	7
GR01.086	SLine	Yes	11
GR-XL01.105	XLine	Yes	8

Dimensions



Item no.	C	A [mm]	B [mm]	D [mm]	F [mm]
GR01.069	M3	12	--	8	5.6
GR01.070	M4	12	--	8	5.6
GR01.071	M5	12	--	8	5.6
GR01.080	M4	20	8	8	5.6
GR01.081	M5	20	10	8	5.6
GR01.082	M5	25	12	8	5.6
GR01.083	M5	30	20	8	5.6
GR01.084	M5	35	25	8	5.6
GR01.085	M5	40	30	8	5.6
GR01.086	M5	60	50	8	5.6
GR-XL01.105	M5	22	--	9.1	9.1



End caps



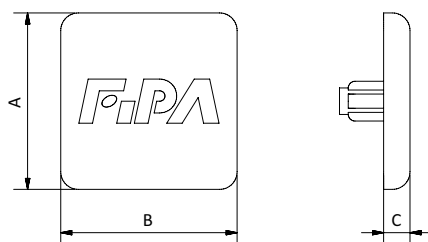
Product description

> For installation at end of extrusion

Technical data

Item no.	Suitable for extrusion system
GR01.010	SLine
GR01.011	SLine
GR01.012	SLine
GR01.013	SLine
GR01.015	SLine
GR01.016	SLine
GR01.017	MLine
GR01.018	MLine
GR-XL01.012	XLine
GR-XL01.013	XLine

Dimensions



Item no.	A [mm]	B [mm]	C [mm]
GR01.010	10	20	3
GR01.011	10	40	3
GR01.012	20	20	3
GR01.013	20	40	3
GR01.015	20	80	3
GR01.016	40	40	3
GR01.017	25	25	3
GR01.018	25	50	3
GR-XL01.012	40	40	4
GR-XL01.013	40	80	4



Cross joint connectors



Product description

- > Elements for 90° connection of two extrusions
- > Extrusions can be moved in four directions after screws are loosened

Ordering notes

- > Slot nuts and screws included in delivery

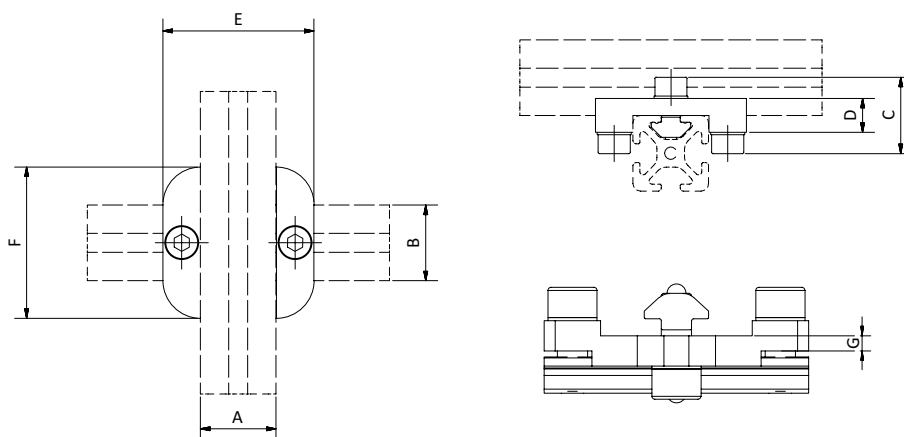
Technical data

	Suitable for extrusion system	Weight [g]
Item no.		
GR01.020A	SLine	48
GR01.021	SLine	73
GR01.022	SLine	107
GR01.026	MLine	55
GR01.027	MLine	90
GR-XL01.020	XLine	218
GR-XL01.021	XLine	380
GR-XL01.022	XLine	630

Dimensions

A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]
20	20	20	9	40	40	--
20	40	20	9	40	60	--
40	40	20	9	60	60	--
25	25	23	12	45	45	--
25	50	23	12	45	70	--
40	40	30	12	70	70	4
40	80	30	12	70	110	4
80	80	30	12	110	110	4

Dimensions





Adapter profile connectors



Product description

- > Elements for 90° connection of SLine with MLine or XLine extrusions
- > Extrusions can be moved in four directions after screws are loosened

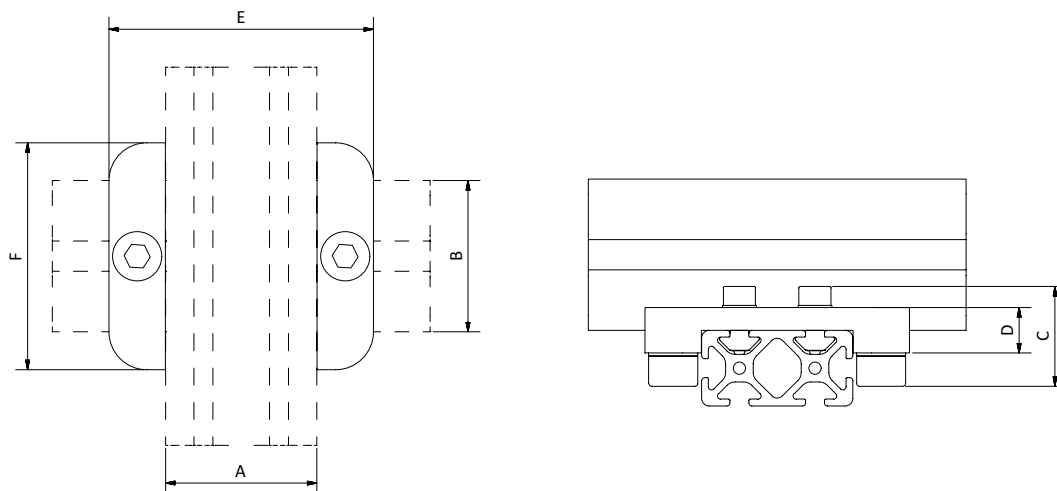
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.023	SLine / MLine	61
GR01.024	SLine / XLine	119
GR01.025	SLine / XLine	173

Dimensions



Item no.	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
GR01.023	20	25	23	12	40	45
GR01.024	20	40	27	12	50	60
GR01.025	40	40	27	12	70	60



SLine profile connectors



Product description

- > Elements for 90° connection of two SLine extrusions
- > Extrusions can be moved in four directions after screws are loosened

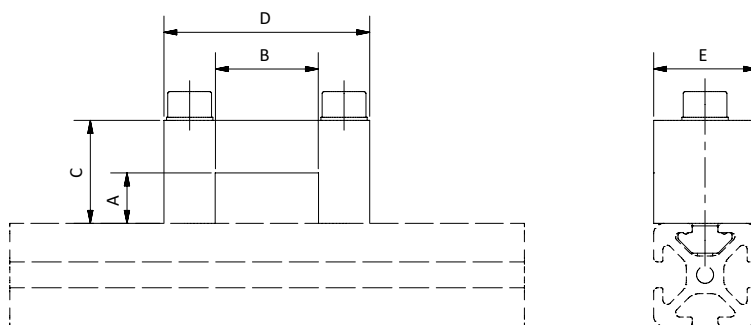
Ordering notes

- > Slot nuts included in delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.030	SLine	43
GR01.031	SLine	58
GR01.032	SLine	72
GR01.040	SLine	50
GR01.041	SLine	55
GR01.042	SLine	83

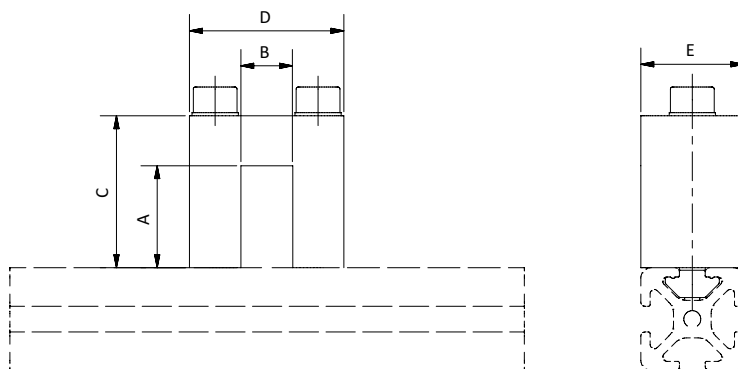
Dimensions



GR01.030 | GR01.031 | GR01.032



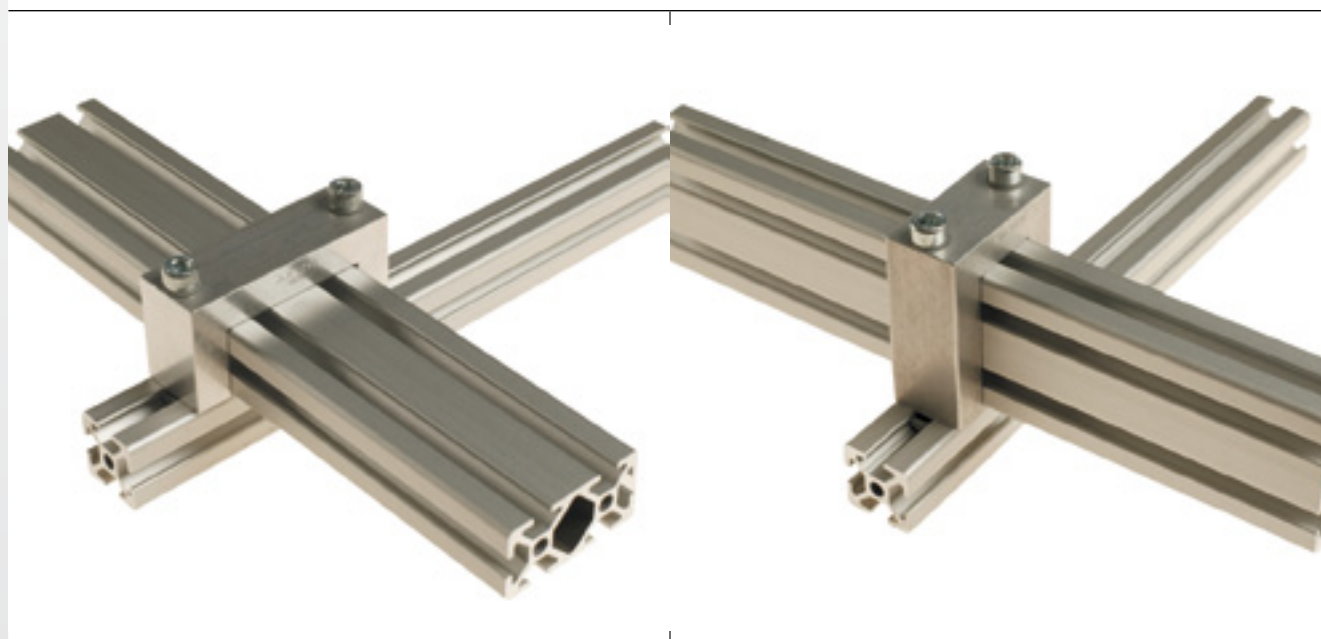
Dimensions



GR01.040 | GR01.041 | GR01.042

Item no.	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
GR01.030	10	20	18.5	40	20
GR01.031	10	40	18.5	60	20
GR01.032	20	40	28.5	60	20
GR01.040	20	10	28.5	30	20
GR01.041	20	20	28.5	40	20
GR01.042	40	20	48.5	40	20

Examples of application





Angle connectors 90° with cover



Product description

- > Elements for connection of two extrusions
- > No overlapping of the extrusion necessary

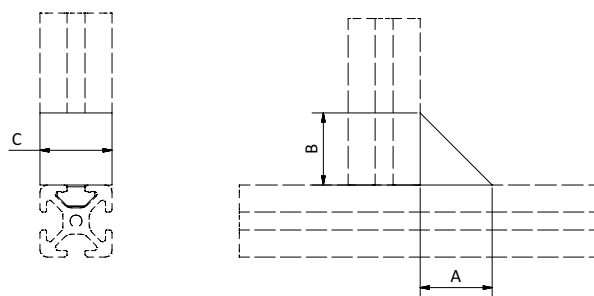
Ordering notes

- > Slot nuts, screws and covers included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.050	SLine / MLine	20
GR01.051	SLine / MLine	60
GR01.052	XLine	150
GR01.053	XLine	270

Dimensions



Item no.	A [mm]	B [mm]	C [mm]
GR01.050	20	20	20
GR01.051	40	40	20
GR01.052	40	40	40
GR01.053	80	80	40



Angle connectors 90°



GR04.060



GR04.061

Product description

> Stable connection between two extrusions

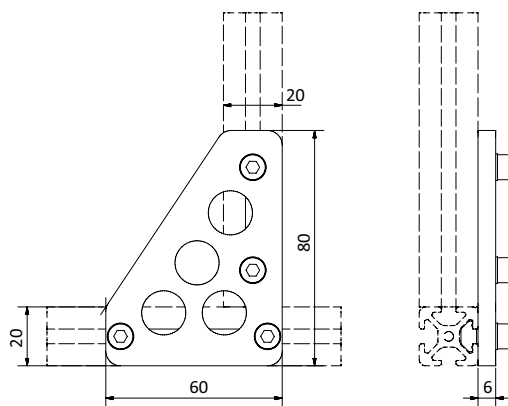
Ordering notes

> Slot nuts and screws included in scope of delivery

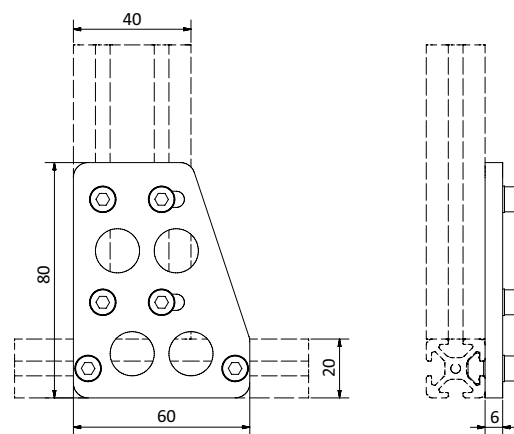
Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.060	SLine / MLine	93
GR01.061	SLine / MLine	108

Dimensions



GR01.060



GR01.061



Corner joint plates 90° to 130°

NEW



Product description

- > Elements for stable connection of two extrusions via defined angles

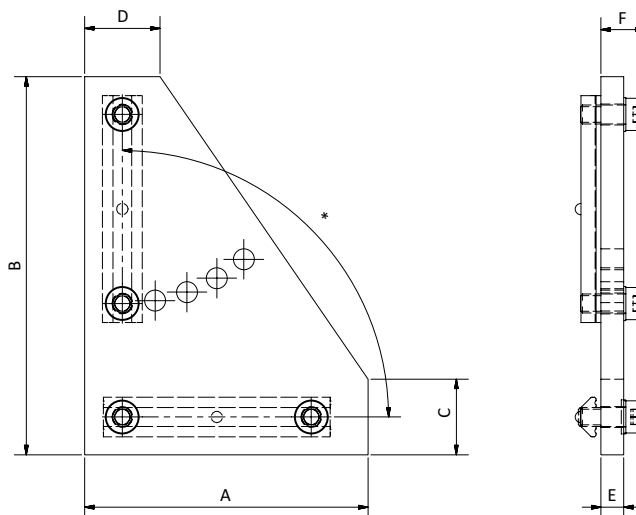
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Angle [°]	Weight [g]
GR01.063	SLine	90°, 100°, 110°, 120°, 130°	127
GR01.064	MLine	90°, 100°, 110°, 120°, 130°	131
GR-XL01.063	XLine	90°, 110°, 130°	284

Dimensions



* = Angle

Item no.	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
GR01.063	75	100	20	20	6	12
GR01.064	75	100	25	25	6	12
GR-XL01.063	80	120	40	40	6	15



Adjustable profile connectors 0° to 90°



GR01.062



GR01-XL01.062

Product description

- > Stable connection with variable adjustment options

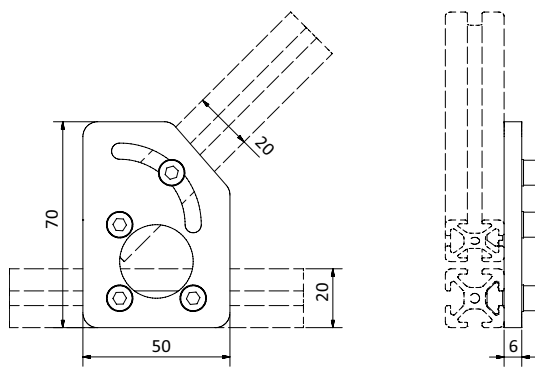
Ordering notes

- > Slot nuts and screws included in scope of delivery

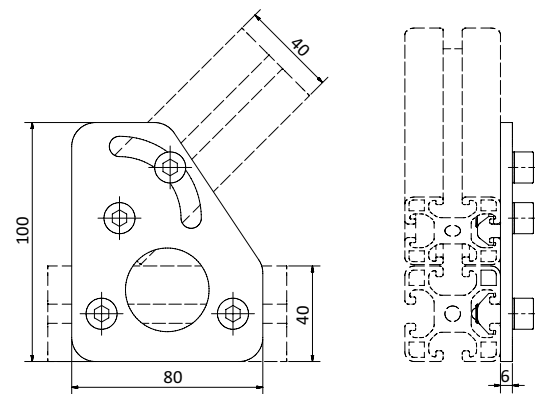
Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.062	SLine / MLine	77
GR-XL01.062	XLine	225

Dimensions



GR01.062



GR-XL01.062



Profile connectors - rotatable



Product description

- > Variable axial angle adjustment of two parallel extrusions
- > Rigid clamping through two opposing screws

Notes

- > 2 x slot nut GR01.093A, with M5 thread for length-ways mounting
- > 4 x slot nut GR01.097A, with 2x M5 thread for horizontal mounting

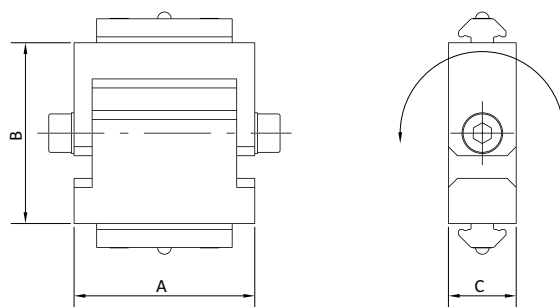
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.100	SLine / MLine	78

Dimensions



Item no.	A [mm]	B [mm]	C [mm]
GR01.100	40	40	15



NEW



REQUIRES NO THREAD CUTTING COMPARED TO THIRD-PARTY PRODUCTS

Product description

- > Stable flush connection between two extrusions
- > No thread cutting required, thus adjustable at any time

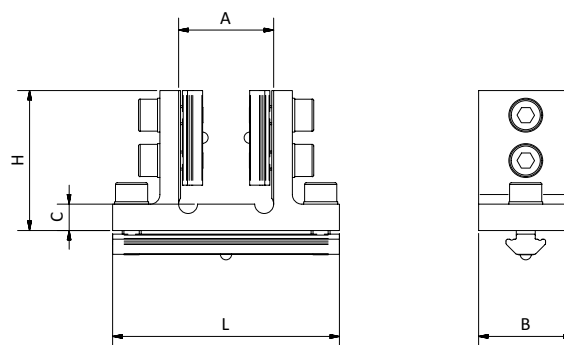
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.120	SLine / MLine	92
GR01.121	SLine / MLine	90
GR01.122	SLine / MLine	96
GR01.123	SLine / MLine	100
GR-XL01.025	XLine	406
GR-XL01.026	XLine	396

Dimensions



Item no.	A [mm]	B [mm]	C [mm]	H [mm]	L [mm]
GR01.120	20	20	8	38	60
GR01.121	40	20	8	38	80
GR01.122	25	25	7	37	60
GR01.123	50	25	7	37	90
GR-XL01.025	40	40	12	47	110
GR-XL01.026	80	40	12	47	150



Flat connectors - straight

NEW



Product description

> Elements for straight connection of two extrusions

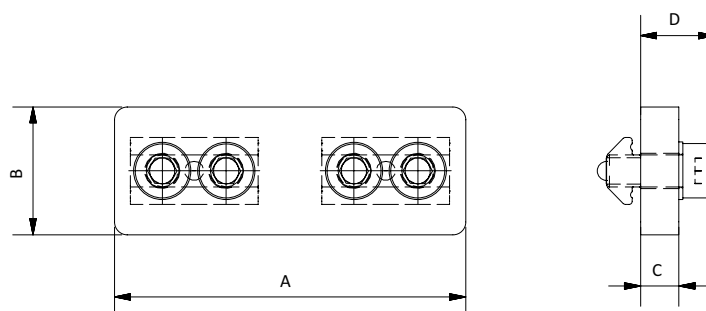
Ordering notes

> Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.054	SLine / MLine	16
GR01.055	SLine / MLine	50
GR01.056	SLine / MLine	64
GR-XL01.028	XLine	260

Dimensions



Item no.	A [mm]	B [mm]	C [mm]	D [mm]
GR01.054	55	20	6	12
GR01.055	75	20	6	12
GR01.056	100	20	6	12
GR-XL01.028	160	40	6	15



Flat connectors - L Form

NEW



Product description

> Elements for 90° connection of two extrusions

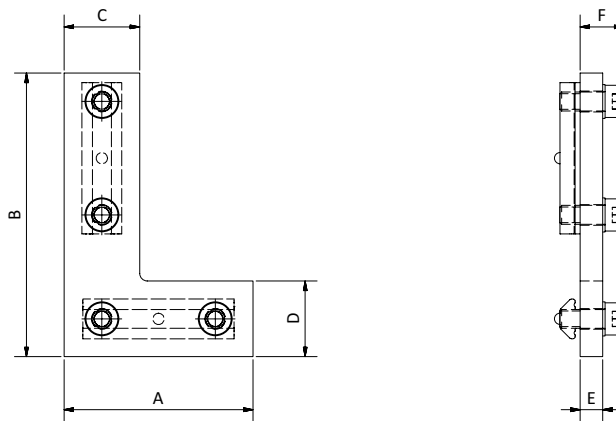
Ordering notes

> Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.046	SLine / MLine	66
GR01.047	SLine / MLine	53
GR01.048	MLine	213
GR-XL01.029	XLine	260

Dimensions



Item no.	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
GR01.046	50	75	20	20	6	12
GR01.047	50	50	20	20	6	12
GR01.048	80	120	50	50	6	12
GR-XL01.029	80	120	40	40	6	15



Flat connectors - T Form

NEW



GR01.034 | GR01.035 | GR-XL01.035



GR01.036 | GR01.037

Product description

> Elements for T connection of two extrusions

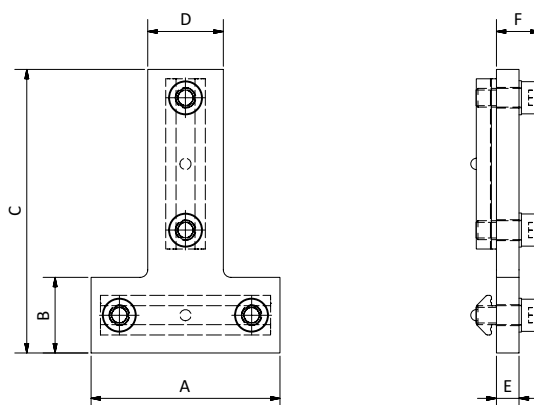
Ordering notes

> Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.034	SLine	68
GR01.035	SLine	95
GR01.036	SLine	123
GR01.037	MLine	268
GR-XL01.035	XLine	318

Dimensions



Item no.	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
GR01.034	50	20	75	20	6	12
GR01.035	100	20	75	20	6	12
GR01.036	120	40	120	40	6	12
GR01.037	120	50	130	50	6	12
GR-XL01.035	120	40	120	40	6	15



Flat connectors 45°

NEW



Product description

> Elements for 45° connection of two extrusions

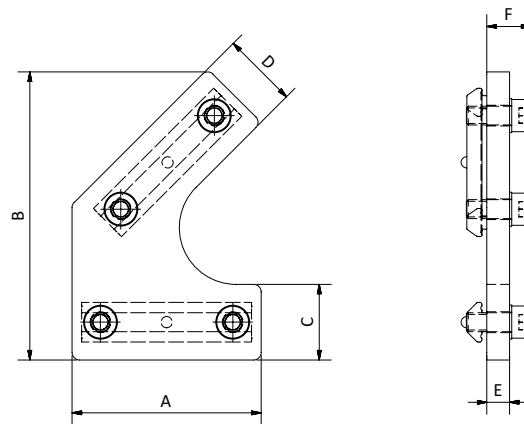
Ordering notes

> Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Angle [°]	Weight [g]
GR01.065	SLine	45	74
GR01.066	MLine	45	79

Dimensions



Item no.	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
GR01.065	50	76	20	20	6	12
GR01.066	50	76	25	25	6	12



Profile - shaft - adapter



Product description

> Connection between extrusions and clamping shafts

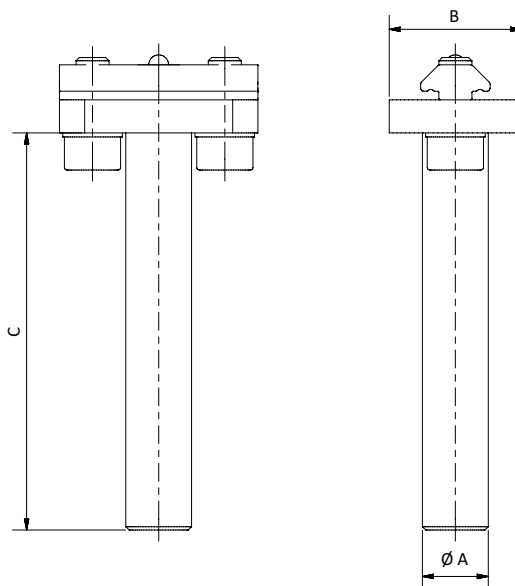
Ordering notes

> Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR01.110	SLine / MLine	28
GR01.111	SLine / MLine	41
GR01.112	SLine / MLine	48

Dimensions



Item no.	Ø A [mm]	B [mm]	C [mm]
GR01.110	10	20	60
GR01.111	14	20	80
GR01.112	20	20	100



Angle clamps - short type



Product description

- > Elements for mounting components with clamping shafts
- > Slot holes allow for assembly with profiles of 20 to 30 mm spacing

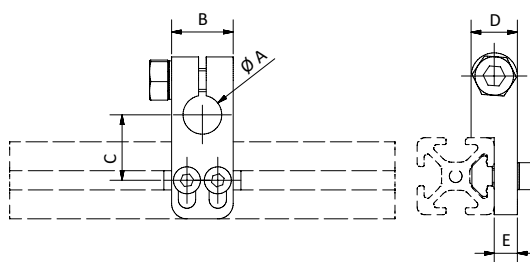
Ordering notes

Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.001A	SLine / MLine	26
GR02.003A	SLine / MLine	52
GR02.004	SLine / MLine	41
GR02.005	SLine / MLine	73
GR-XL02.003	XLine	114
GR-XL02.005	XLine	122

Dimensions



Item no.	Ø A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
GR02.001A	10	16	17 - 22	12	6
GR02.003A	20	25	22 - 27	12	6.5
GR02.004	14	20	19 - 24	12	6.5
GR02.005	30	35	27 - 32	20	10
GR-XL02.003	20	30	32 - 42	15	6
GR-XL02.005	30	35	37 - 47	20	10



Extrusion systems | Clamps for shafts

Angle clamps - long type

Angle clamps - long type



Product description

- > Elements for mounting components with clamping shafts
- > Slot holes allow for variable positioning of components

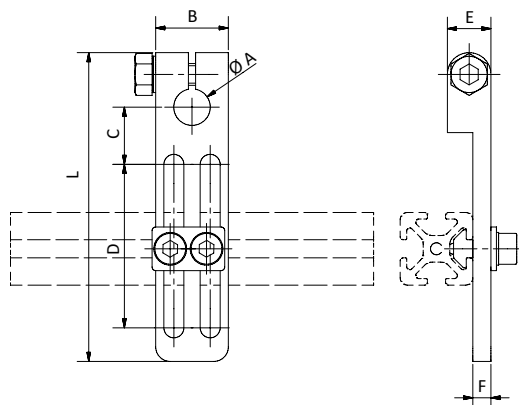
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.010A	SLine / MLine	52
GR02.011A	SLine / MLine	58
GR02.013A	SLine / MLine	85
GR02.016	SLine / MLine	150
GR-XL02.013	XLine	140
GR-XL02.016	XLine	213

Dimensions



Item no.	Ø A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	L [mm]
GR02.010A	10	18	16	45	12	5	85
GR02.011A	14	20	17	55	12	8.5	98
GR02.013A	20	25	20	65	12	8.5	114
GR02.016	30	35	27	65	20	10	122
GR-XL02.013	20	30	21	100	15	7.5	130
GR-XL02.016	30	35	25.5	100	20	10	159



Angle clamps - customisable



Product description

- > Elements with customisable mounting option for gripper components
- > Slot holes allow for variable positioning of components

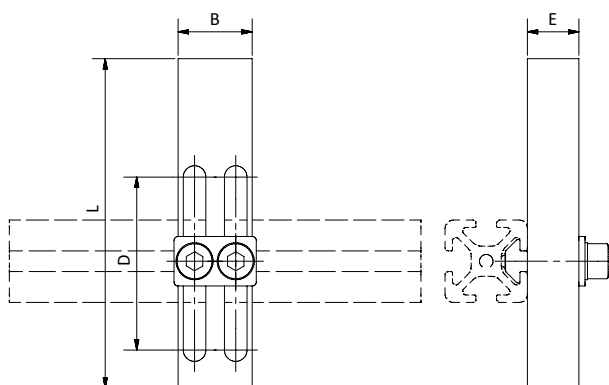
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.014	SLine / MLine	47
GR02.015	SLine / MLine	84

Dimensions



Item no.	B [mm]	D [mm]	E [mm]	L [mm]
GR02.014	18	42	12.5	80
GR02.015	25	52	12.5	100



Angle clamps - rotatable

NEW



Product description

- > Elements for angle variable installation of gripper components with a shaft
- > Slot holes allow for flexible positioning on profiles

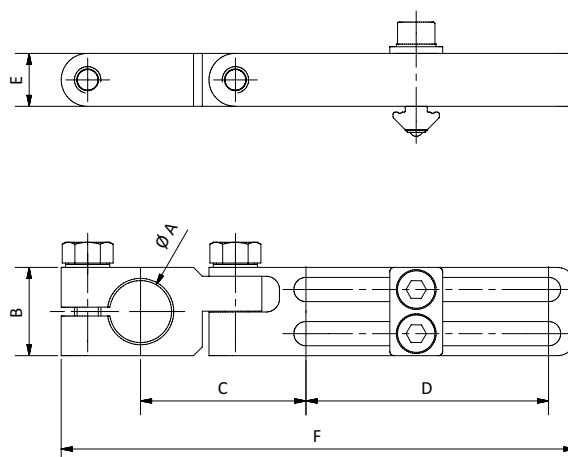
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.026	SLine / MLine	56
GR02.027	SLine / MLine	62
GR02.028	SLine / MLine	90
GR02.029	SLine / MLine	152
GR-XL02.029	XLine	223

Dimensions



Item no.	Ø A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]
GR02.026	10	20	34.5	45	10	100.5
GR02.027	14	20	37.5	55	12	116.5
GR02.028	20	25	44	65	15	136
GR02.029	30	35	59	85	20	184
GR-XL02.029	30	45	60	85	20	185



Angle clamps - with ball joint

NEW



ANGLE CAN BE FREELY ADJUSTED

Product description

- > Elements for angle variable installation of gripper components with a shaft
- > Ball joint enables free angle adjustment
- > Slot holes allow for flexible positioning on profiles

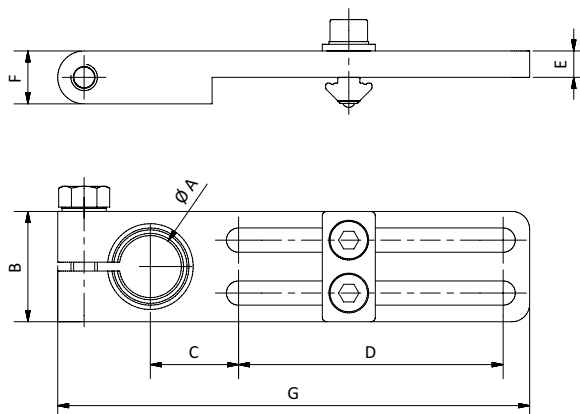
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.035	SLine / MLine	48
GR02.036	SLine / MLine	60
GR02.037	SLine / MLine	145
GR02.038	SLine / MLine	238
GR-XL02.038	XLine	260

Dimensions



Item no.	Ø A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]
GR02.035	10	20	18	50	6	12	93
GR02.036	14	25	20	60	6	12	107
GR02.037	20	35	24	60	10	20	115
GR02.038	30	45	30	70	17	20	136
GR-XL02.038	30	45	30	70	20	20	136



Cross clamps



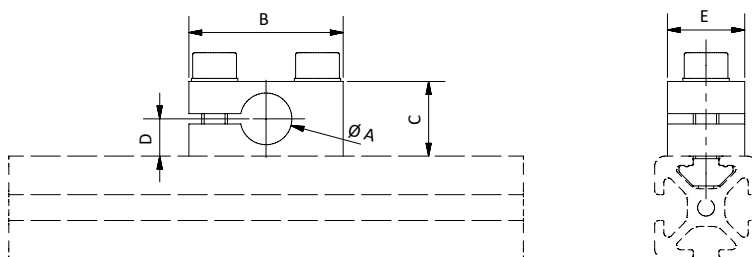
Product description

> Elements for 90° clamping of gripper components

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.020	SLine / MLine	27
GR02.022	SLine / MLine	43
GR02.023	SLine / MLine	35
GR02.024	SLine / MLine	97
GR-XL02.022	XLine	103
GR-XL02.024	XLine	172

Dimensions



Item no.	Ø A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
GR02.020	10	30	14	6.5	15
GR02.022	20	40	24	12.5	15
GR02.023	14	35	19.5	9.5	12
GR02.024	30	60	34	17	20
GR-XL02.022	20	45	24.5	12	20
GR-XL02.024	30	68	34	17	20



Parallel clamps



Product description

- > Multifunctional parallel connection of two clamping shafts
- > Both clamping shafts adjusted independently
- > Easy mounting through screws with internal and external hex bits

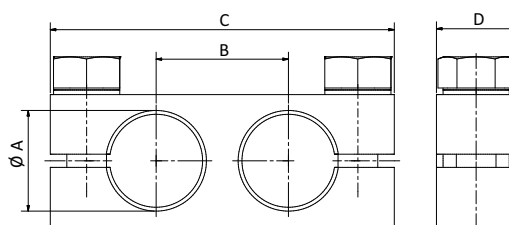
Ordering notes

- > Screws included in scope of delivery

Technical data

Item no.	Weight [g]
GR02.220	30
GR02.221	35
GR02.222	60

Dimensions



Item no.	Ø A [mm]	B [mm]	C [mm]	D [mm]
GR02.220	10	15	43	12
GR02.221	14	20	52	12
GR02.222	20	26	64	14



Heavy-duty cross clamps

NEW



Product description

> Heavy duty elements for mounting gripper components to extrusions

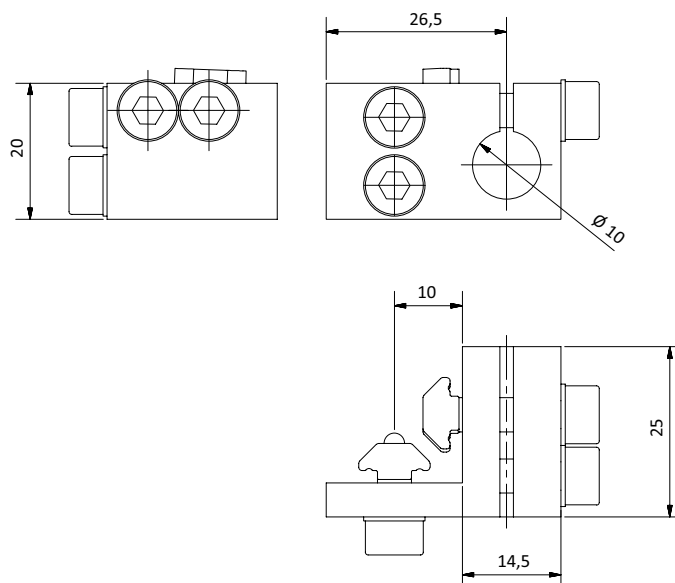
Ordering notes

> Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.006	SLine	37

Dimensions





Angle connectors - short type



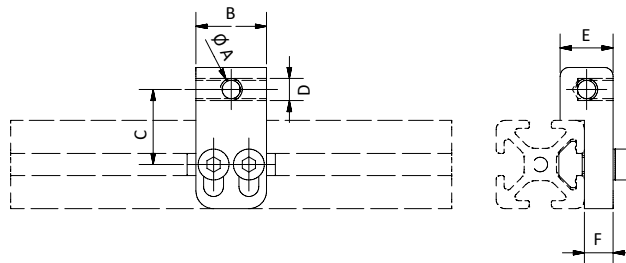
Product description

- > Versatile connection of vacuum cups in gripping system
- > Slot holes provide compatibility with extrusions with dimensions from 20 to 30 mm and 40 to 60 mm

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.030A	SLine / MLine	18
GR02.031A	SLine / MLine	37
GR-XL02.033	XLine	94

Dimensions



Item no.	A	D	B [mm]	C [mm]	E [mm]	F [mm]
GR02.030A	M5	M5	16	17 - 22	12	6.5
GR02.031A	G1/8	G1/8	25	19 - 24	12	6.5
GR-XL02.033	G1/4	G1/4	30	29 - 39	20	10



Angle connectors - long type



Product description

- > Versatile connection of vacuum cups in gripping system
- > Slot holes allow for variable positioning

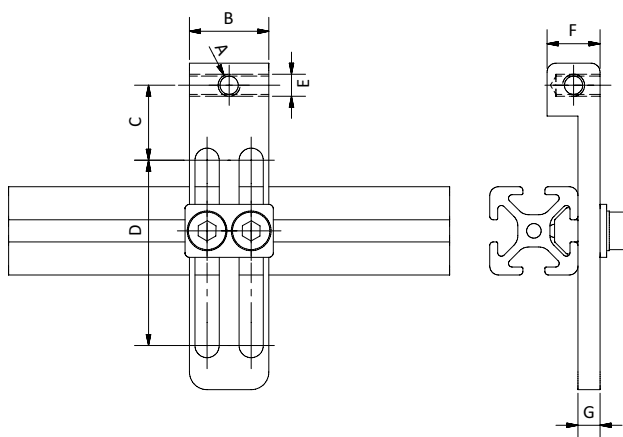
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.040	SLine / MLine	44
GR02.041	SLine / MLine	58
GR02.043	SLine / MLine	86

Dimensions



Item no.	A	E	B [mm]	C [mm]	D [mm]	F [mm]	G [mm]
GR02.040	M5	M5	20	17	42	12	5
GR02.041	G1/8	G1/8	25	19	52	15	8.5
GR02.043	G1/4	G1/4	30	20	52	15	8.5



Threaded mounting brackets



Mounting example

Product description

- > Integration of vacuum cups in gripper systems via spring levelers as alternative to spring-loaded gripper arms
- > Compatible with commercially available spring levelers
- > Particularly suited for FIPA spring levelers series SZ-NIV-S, SZ-NIV-HD

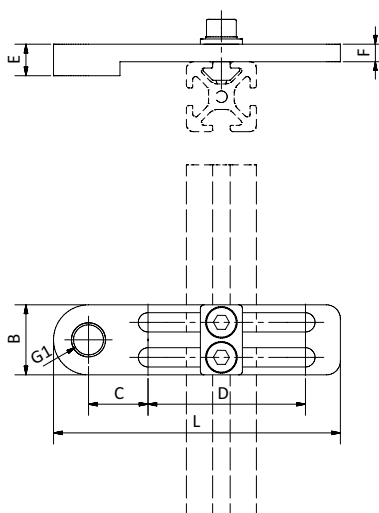
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Weight [g]
GR02.230	29
GR02.231	55
GR02.232	63

Dimensions



Item no.	G1	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	L [mm]
GR02.230	G1/8	20	17	45	9	5	82
GR02.231	M16x1	26	21	55	12	8.5	99
GR02.232	M20x1.5	28	21	65	12	8.5	110



Vacuum cup connectors - perpendicular



Product description

- > Compact connection between extrusions and vacuum cups
- > Cups are positioned in 90° angle to the profile

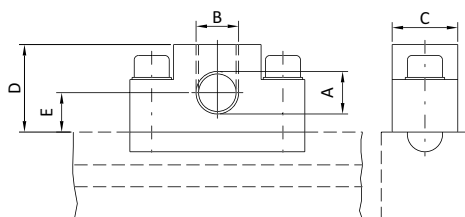
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.050	SLine / MLine	24
GR02.051	SLine / MLine	36
GR02.052	SLine / MLine	41
GR02.053	SLine / MLine	49

Dimensions



Item no.	A	B	C [mm]	D [mm]	E [mm]
GR02.050	M5	M5	15	15	7
GR02.051	G1/8	G1/8	15	20	9
GR02.052	G1/4	G1/8	15	25	10
GR02.053	G1/4	G1/4	20	25	10



Vacuum cup connectors - 360° rotatable



Product description

> Elements for mounting vacuum cups to profiles with highest angle variability

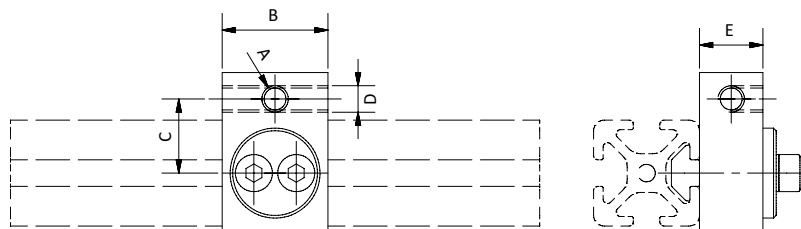
Ordering notes

> Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR02.060	SLine / MLine	24
GR02.061	SLine / MLine	48
GR02.063	SLine / MLine	69

Dimensions



Item no.	A	D	B [mm]	C [mm]	E [mm]
GR02.060	M5	M5	20	14	12
GR02.061	G1/8	G1/8	25	20	15
GR02.063	G1/4	G1/4	30	21	20



Vacuum cup connectors - rotatable



Product description

- > Elements for mounting vacuum cups to profiles or compact cylinders
- > Suitable for all standard compact cylinders (anti-twist) in acc. with ISO 21287 standard

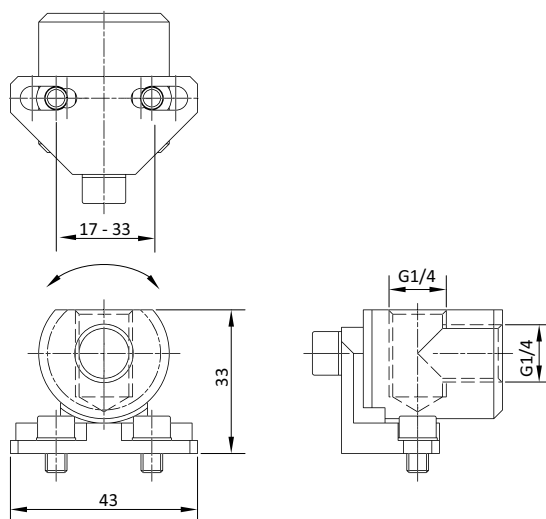
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]
GR07.020	SLine / MLine	79

Dimensions





Air and vacuum manifolds - stackable



Product description

- > Space-saving distribution of air or vacuum in gripper systems
- > Manifold can be mounted directly on extrusion
- > 1 inlet, 4 outlets per manifold
- > Can be freely extended or combined

Notes

- > When stacking the air manifold, a bore hole with max. $\varnothing 7$ mm is to be provided in the center of the underside

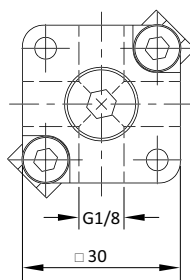
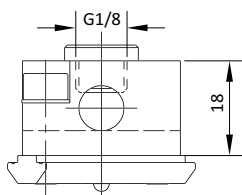
Ordering notes

- > Slot nut, O-ring for sealing and seal plug included in scope of delivery

Technical data

Item no.	Weight [g]	Suitable sealing plugs
GR05.001A	50	77.009 (p.443)

Dimensions





Extrusion systems | Air manifolds

Air and vacuum manifolds - 1 circuit - 1:4

Air and vacuum manifolds - 1 circuit - 1:4

NEW



Product description

- > Distribution of air or vacuum in gripper systems
- > Manifold can be mounted directly on extrusion
- > 1 inlet, 4 outlets

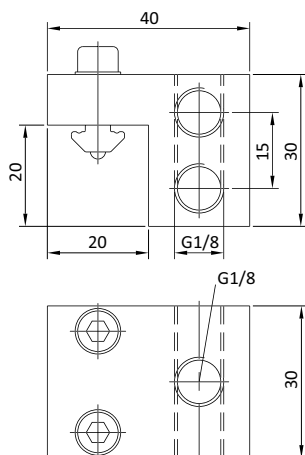
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]	Suitable sealing plugs
GR05.001	SLine	69	77.009 (p.443)

Dimensions





Air and vacuum manifolds - 2 circuits - 1:4

NEW



Product description

- > Distribution of air or vacuum in gripper systems
- > Manifold can be mounted directly on extrusion
- > Two separate circuits, each with 1 inlet, 4 outlets

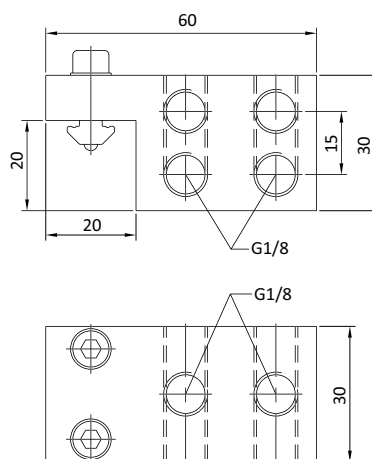
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]	Suitable sealing plugs
GR05.002	SLine	106	77.009 (p.443)

Dimensions





Extrusion systems | Air manifolds

Air and vacuum manifolds - 2 circuits - 1:6

Air and vacuum manifolds - 2 circuits - 1:6

NEW



Product description

- > Distribution of air or vacuum in gripper systems
- > Manifold can be mounted directly on extrusion
- > Two separate circuits, each with 1 inlet, 6 outlets

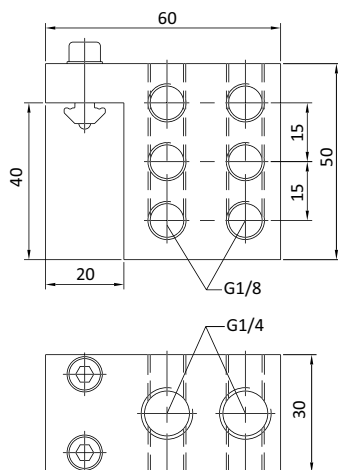
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Suitable for extrusion system	Weight [g]	Suitable sealing plugs
GR05.003	SLine	155	77.009 (p.443) 77.008 (p.443)

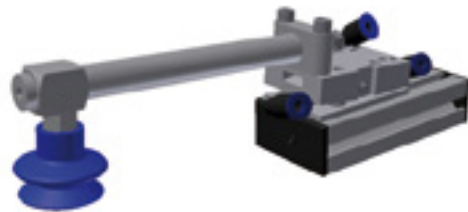
Dimensions





NEW

SPACE-SAVING APPLICATION OF GRIPPER COMPONENTS TO THE WORKPIECE



Product description

- > Lateral application of vacuum cups to the workpiece
- > Double-acting, controlled swivel movement and short duty cycles
- > Various M5 bore holes on top for mounting gripper components

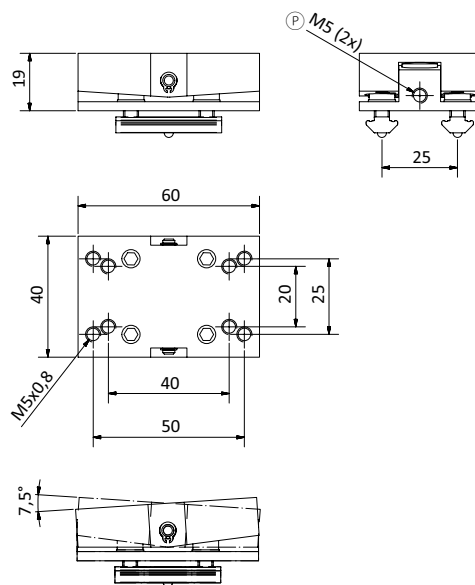
Ordering notes

- > Slot nuts and screws included in scope of delivery

Technical data

Item no.	Principle of operation	Pressure range [bar]	Angle lift [°]	Weight [g]
GR02.300	Double-acting	2 - 8	7.5	120

Dimensions



Ⓟ = Compressed air connection



NEW



HIGH-PRECISION PART EXTRACTION VIA COUPLING GRIPPER AND TOOL



Display with condition monitoring (locked / unlocked)

Product description

- > Single-acting centering element with strong holding force
- > Guiding sleeve embedded in the mold
- > Optional position monitoring (locked / unlocked) via PNP / NPN sensors

Notes

- > Sensor is fixed to centering unit via mounting bracket GR07.520S clamping diameter 20 mm

Ordering notes

PNP and NPN sensors:
- C-Nut, straight: GR04.198, GR04.198/NPN

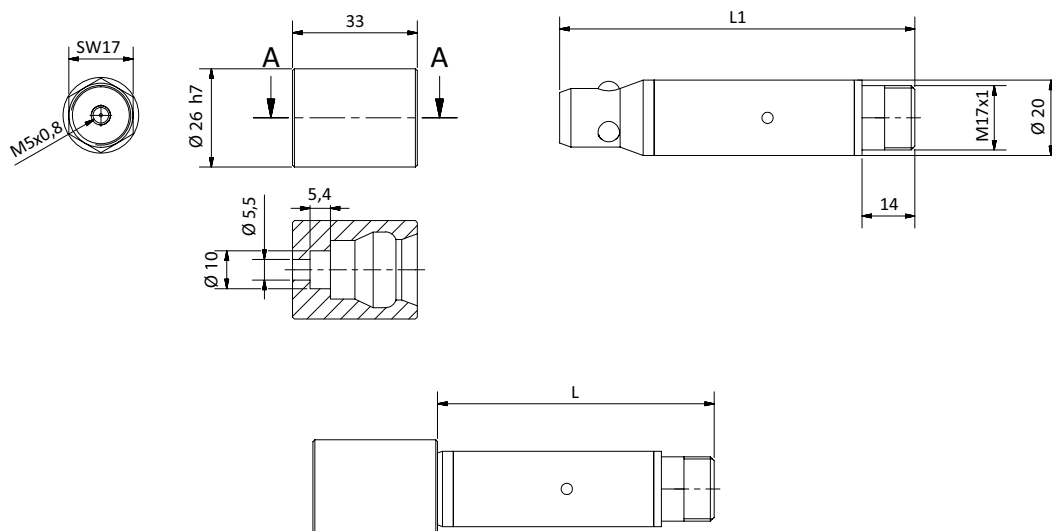
Technical data

Item no.	Description	Holding force at 6 bar [N]	Accessories
GR07.520	Centering unit	750	Sensor GR04.198 (p.374) Sensor GR04.198/NPN (p.374) Sensor mounting bracket GR07.520S (p.89)
GR07.521	Guiding sleeve	--	--

Dimensions

L [mm]	L1 [mm]
73	94
75	96

Dimensions





NEW



Display with centering unit

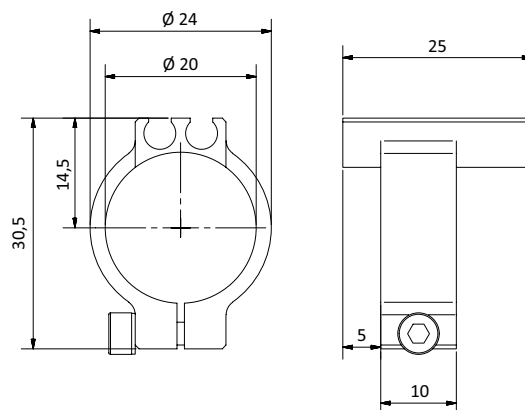
Product description

> Mounting bracket for monitoring locking stage (locked / unlocked)

Technical data

Item no.	Suitable for sensor	Suitable for centering unit	Weight [g]
GR07.520S	GR04.198, GR04.198/NPN	GR07.520	7

Dimensions





Locator pins



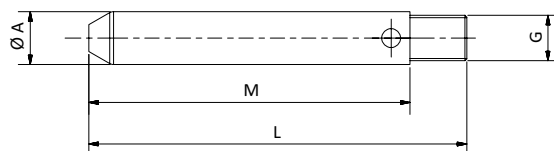
Product description

- > Element supports positioning of gripper to handling item
- > Locator pins made of POM - can be adapted if required
- > Suitable for extension tubes

Technical data

Item no.	Weight [g]	Suitable extension tube
GR06.001	4	GR06.020 (p.91)
GR06.002A	22	GR06.021A (p.91)
GR06.003	63	GR06.022 (p.91)

Dimensions



Item no.	G	Ø A [mm]	L [mm]	M [mm]
GR06.001	M8x1	10	50	40
GR06.002A	M12x1	14	100	85
GR06.003	M17x1	20	150	135



Extension tubes



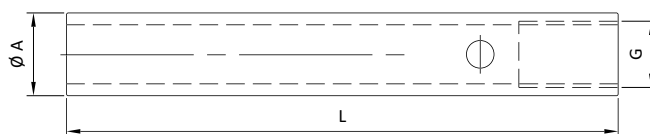
Product description

> Extension of clamping shafts and locator pins

Technical data

Item no.	Weight [g]	Suitable locator pins
GR06.020	10	GR06.001 (p.90)
GR06.021A	22	GR06.002A (p.90)
GR06.022	28	GR06.003 (p.90)

Dimensions

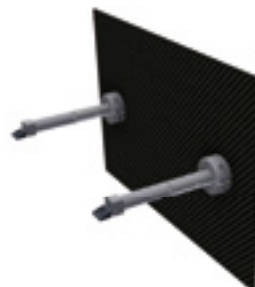


Item no.	G	Ø A [mm]	L [mm]
GR06.020	M8x1	10	100
GR06.021A	M12x1	14	100
GR06.022	M17x1	20	100



Clamping rings for clamping elements

NEW



SUITABLE FOR PLATE BASED EOAT

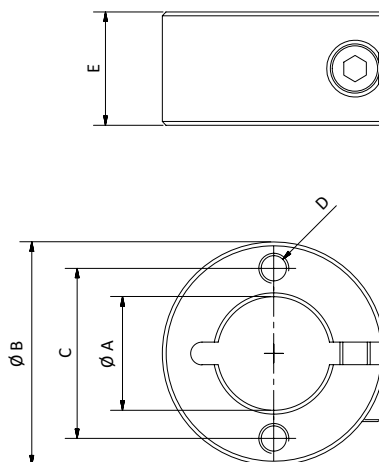
Product description

> Elements for mounting gripper components having a clamping shaft to plate based EOAT

Technical data

Item no.	Weight [g]
GR06.060	16
GR06.061	24
GR06.062	82
GR06.063	138

Dimensions



Item no.	Ø A [mm]	Ø B [mm]	C [mm]	D	E [mm]
GR06.060	10	29	20	M4	12
GR06.061	14	34	25	M5	15
GR06.062	20	49	32	M6	22.5
GR06.063	30	59	45	M8	30