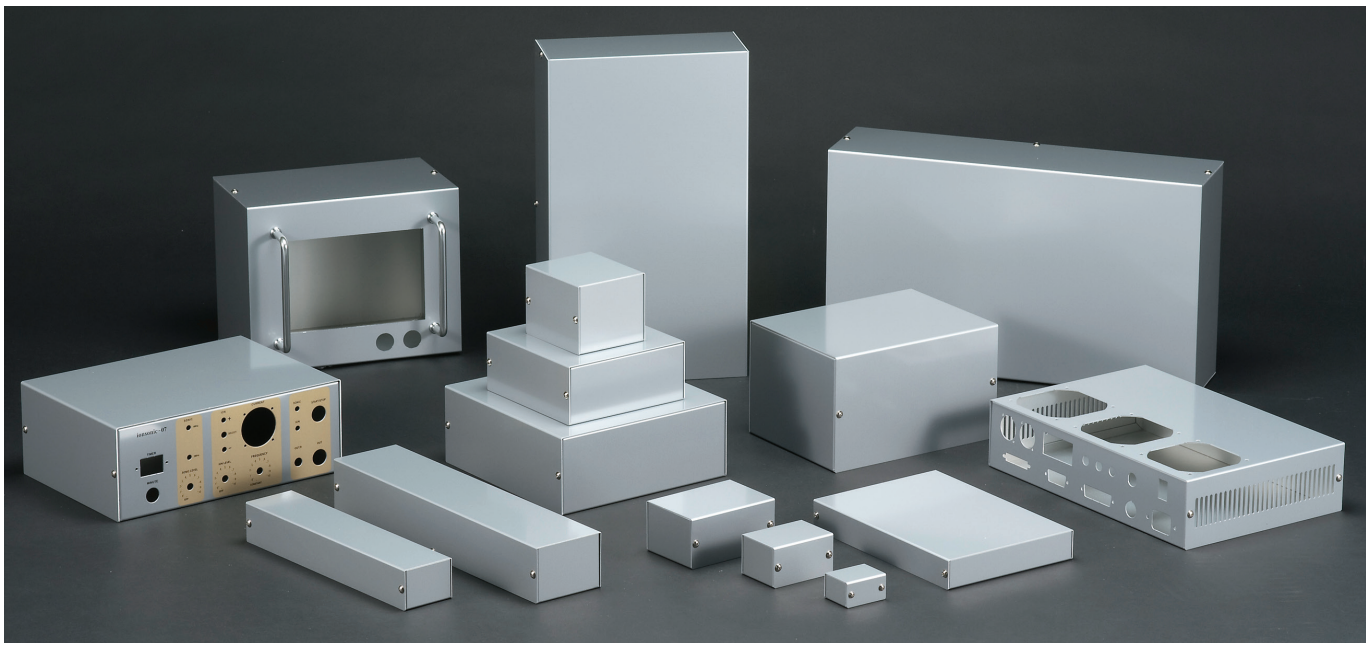
MB series ALUMINIUM CASE

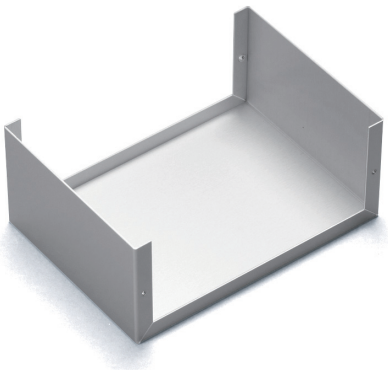


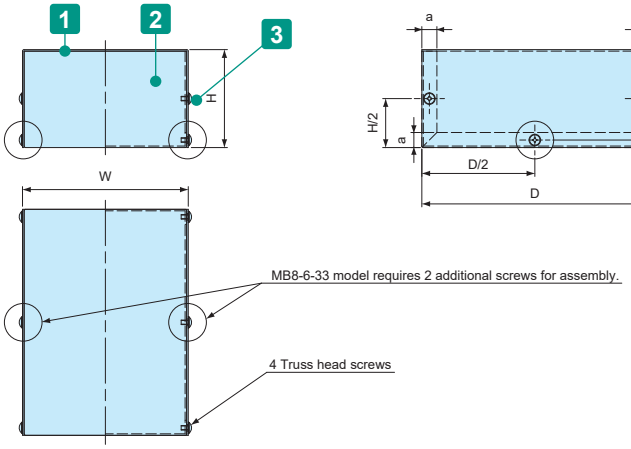
- Simple, low-cost aluminium case. Addition of 2 sizes for a total of 53 different selectable sizes.
- The inner surface is unfinished, allowing the enclosure to be conductive.
- Custom size available.

MB dimensions

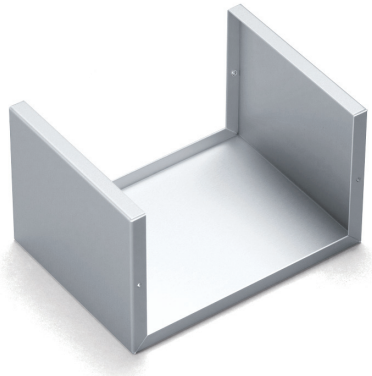
- Drawings below are reference examples only. DXF/DWG/PDF drawings available on our website.

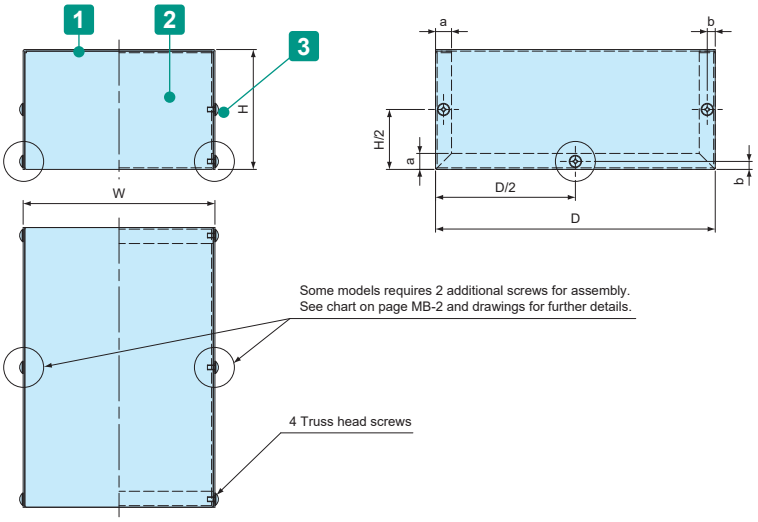
Base : A type (Standard)





Base : B type (Reinforced)





Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Aluminium A1100P	Metallic silver / Painted : Unfinished internal surface
2	Base	1	Aluminium A1100P	Metallic silver / Painted : Unfinished internal surface
3	Screw	4 / 6	Brass	Nickel plated

Product no. / Details

Product no.	W	H	D	a	b	Thickness (t)	Screw	Panel type	Weight (g)
MB 3- 2- 3	30	18	25	8	4	1.0	M2 -5 × 4	A	10.5
MB 4- 2- 3	40	22	30	8	4	1.0	M2 -5 × 4	A	16
MB 4- 3- 5	35	25	45	10	5	1.0	M2.6-5 × 4	A	23
MB 4- 3- 6	40	30	55	10	5	1.0	M3 -5 × 4	A	32
MB 5- 4- 7	50	40	70	10	5	1.0	M3 -5 × 4	A	51
MB 5- 5-16	50	45	160	10	5	1.0	M3 -5 × 4	A	103
MB 6- 4-25	55	40	250	10	5	1.0	M3 -5 × 4	A	153
MB 6- 5- 9	60	45	85	10	5	1.0	M3 -5 × 4	A	69
MB 6- 5-12	60	50	120	10	5	1.0	M3 -5 × 4	A	97
MB 7- 5-10	70	50	100	10	5	1.0	M3 -5 × 4	A	92
MB 7- 7- 7	70	70	70	10	5	1.0	M3 -5 × 4	A	87
MB 8- 6-33	75	55	325	10	5	1.0	M3 -5 × 6	A	270
MB 8- 3-11	80	25	110	10	5	1.0	M3 -5 × 4	A	89
MB 8- 6- 8	80	55	80	10	5	1.0	M3 -5 × 4	A	91
MB 8- 6-15	80	55	150	10	5	1.0	M3 -5 × 4	A	144
MB 8- 7- 9	80	70	90	10	5	1.0	M3 -5 × 4	A	111
MB 8- 7-18	80	70	180	10	5	1.0	M3 -5 × 4	A	190
MB 9- 3- 9	90	25	90	10	5	1.0	M3 -5 × 4	A	72
MB 9- 6-13	90	60	125	10	5	1.0	M3 -5 × 4	A	142
MB10- 5- 7	100	50	70	10	5	1.0	M3 -5 × 4	A	91
MB10- 7-20	100	65	200	10	5	1.0	M3 -5 × 4	A	228
MB10- 9-12	100	90	120	10	5	1.0	M3 -5 × 4	B	189
MB10-10-10	100	100	100	10	5	1.0	M3 -5 × 4	B	176
MB11- 3-14	110	30	140	10	5	1.0	M3 -5 × 4	A	129
MB11- 7-15	110	65	150	10	5	1.0	M3 -5 × 4	A	192
MB11- 7-11	110	70	110	10	5	1.0	M3 -5 × 4	A	159.5
MB11- 8-25	110	75	250	10	5	1.0	M3 -5 × 4	B	317
MB12- 3-12	120	25	120	10	5	1.0	M3 -5 × 4	A	115
MB12- 5-18	120	50	175	10	5	1.0	M3 -5 × 4	B	200
MB12- 8-18	120	75	175	10	5	1.0	M3 -5 × 4	B	252
MB12-10-16	120	100	160	10	5	1.0	M3 -5 × 4	B	277
MB13- 3-18	130	30	180	10	5	1.0	M3 -5 × 4	A	183
MB13- 6- 9	130	60	90	10	5	1.0	M3 -5 × 4	A	143.5
MB14- 5-20	140	50	200	10	5	1.0	M3 -5 × 4	B	250
MB14- 6-14	140	60	140	10	5	1.0	M3 -5 × 4	B	214
MB14- 8-20	140	75	200	10	5	1.0	M3 -5 × 4	B	312
MB15- 3-15	150	30	150	10	5	1.0	M3 -5 × 4	A	176
MB15- 3-21	150	30	210	10	5	1.0	M3 -5 × 4	A	236
MB15- 7-10	150	70	100	10	5	1.0	M3 -5 × 4	A	186
MB15-12-20	150	120	200	10	5	1.2	M3 -5 × 4	B	494
MB16- 6-25	160	60	250	10	5	1.0	M3 -5 × 4	B	358
MB16- 9-25	160	85	250	10	5	1.0	M3 -5 × 4	B	431
MB18- 8-13	180	75	130	10	5	1.0	M3 -5 × 4	B	272
MB18-14-23	180	140	230	10	5	1.2	M3 -5 × 4	B	665
MB19- 9-30	190	85	300	10	5	1.2	M3 -5 × 4	B	673
MB20- 8-15	200	80	150	10	5	1.2	M3 -5 × 4	B	400
MB20- 8-20	200	80	200	10	5	1.2	M3 -5 × 4	B	492
MB21- 9-35	210	90	350	10	5	1.2	M3 -5 × 6	B	843
MB21-16-26	210	160	260	12	6	1.5	M3 -5 × 4	B	1,091
MB23-10-40	230	100	400	10	5	1.2	M3 -5 × 6	B	1,051
MB24-18-29	240	180	290	12	6	1.5	M3 -5 × 4	B	1,381
MB25-10-18	250	100	175	10	5	1.2	M3 -5 × 4	B	588.5
MB30-12-20	300	120	200	10	5	1.2	M3 -5 × 4	B	815

Accessories (Optional parts)



Rubber feet B series
See page Feet-1



Insert nut adhesive standoff AST series
See page 394

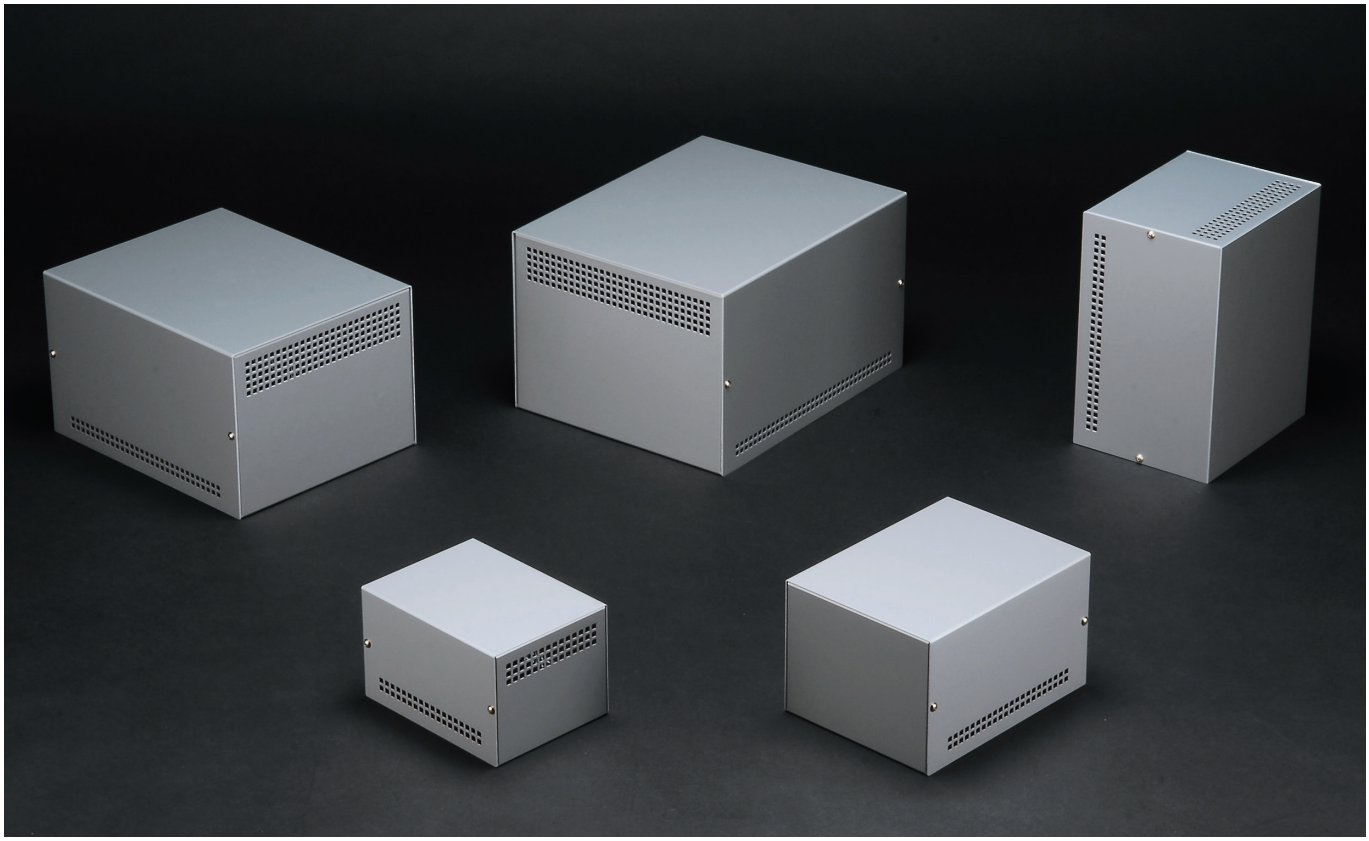


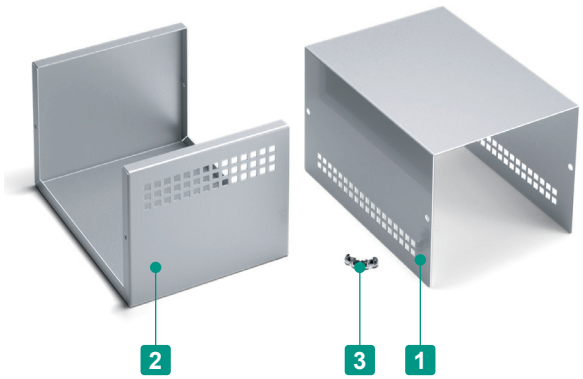
Conductive screw EV3-5S
See page EV-1



TORX screw MR3-5Z
See page MR-1

MBH series VENTILATED ALUMINIUM CASE





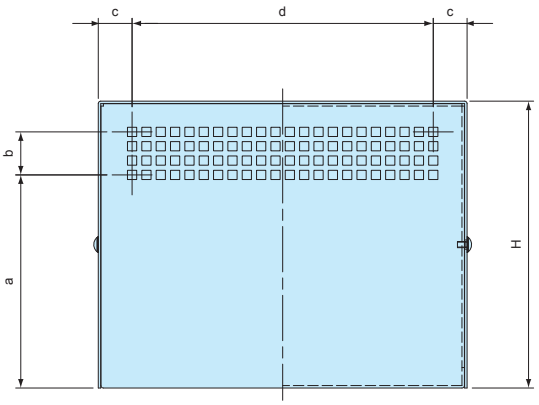
- Ventilation holes are punched on the lower side of the cover (both sides) and the upper side of the base (one side) for enhancing airflow.
- The internal surface is unfinished, making conductive and grounding possible.

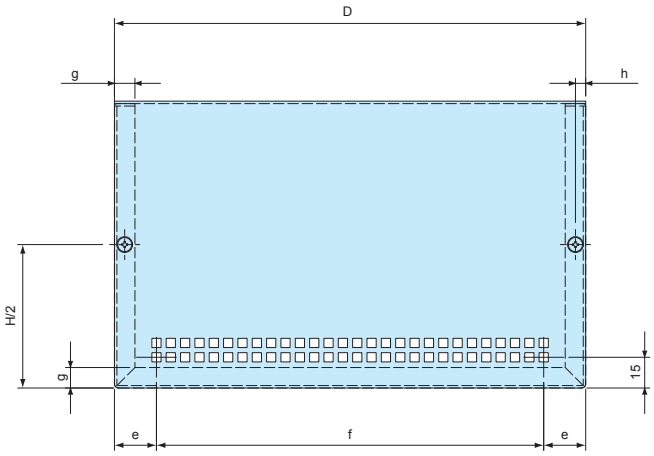
Components

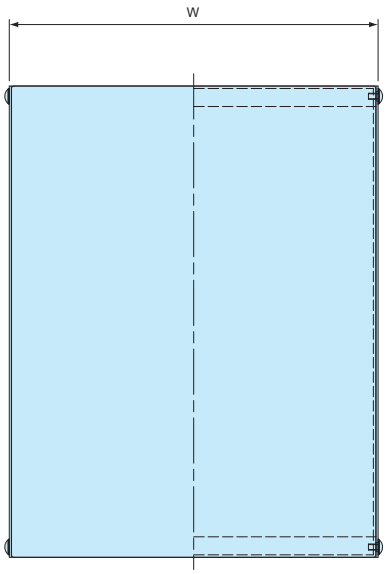
No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Aluminium A1100P	Metallic silver / Painted : Unfinished internal surface
2	Base	1	Aluminium A1100P	Metallic silver / Painted : Unfinished internal surface
3	Screw (Truss M3-5)	4	Brass	Nickel plated

MBH dimensions

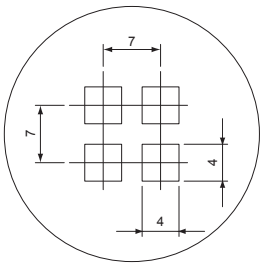
■ Detailed DXF/DWG/PDF drawings available online.







Detail: Ventilation hole



Number of Ventilation Hole

Product no.	Cover	Base
MBH10- 9-12	24×2 faces	36
MBH12-10-16	36×2 faces	42
MBH15-12-20	44×2 faces	72
MBH18-14-23	56×2 faces	88
MBH21-16-26	60×2 faces	130
MBH24-18-29	72×2 faces	150

Product no. / Details

Product no.	W	H	D	a	b	c	d	e	f	g	h	Thickness	Weight (g)
MBH10- 9-12	100	90	120	64.5	14	11.5	77	21.5	77	10	5	1.0	190
MBH12-10-16	120	100	160	71	14	14.5	91	20.5	119	10	5	1.0	265
MBH15-12-20	150	120	200	84	21	15.5	119	26.5	147	10	5	1.2	476
MBH18-14-23	180	140	230	104	21	16.5	147	20.5	189	10	5	1.2	655
MBH21-16-26	210	160	260	117	28	17.5	175	28.5	203	12	6	1.5	1,068
MBH24-18-29	240	180	290	137	28	18.5	203	22.5	245	12	6	1.5	1,354

Accessories (Optional parts)



Rubber feet B series
See page Feet-1



Insert nut adhesive standoff AST series
See page 394



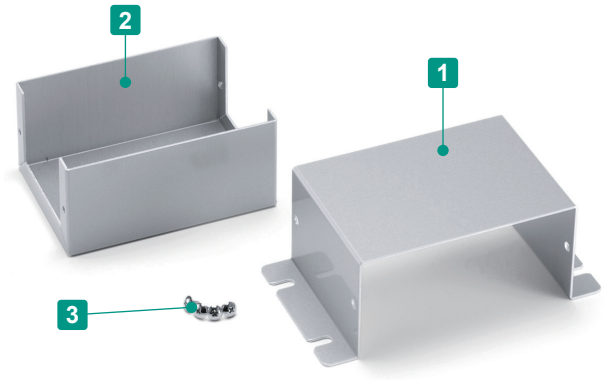
Conductive screw EV3-5S
See page EV-1



TORX screw MR3-5Z
See page MR-1

MBC series FLANGED ALUMINIUM BOX





- Flanged aluminium case for wall mounting application.
- Suitable for use as a switch box or controller.
- The internal surface is unfinished, making conductive and grounding possible.
- Custom size available.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Aluminium A1100P	Metallic silver / Painted : Unfinished internal surface
2	Base	1	Aluminium A1100P	Metallic silver / Painted : Unfinished internal surface
3	Screw (Truss M3-5)	4	Brass	Nickel plated

Accessories (Optional parts)



Insert nut adhesive standoff AST series
See page 394



Conductive screw EV3-5S
See page EV-1



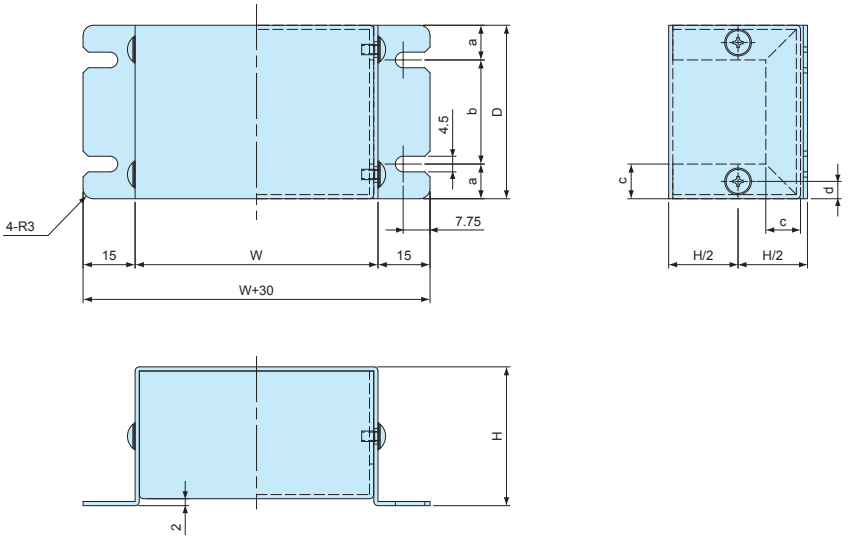
TORX screw MR3-5Z
See page MR-1

MBC dimensions

■ Detailed DXF/DWG drawings available online.

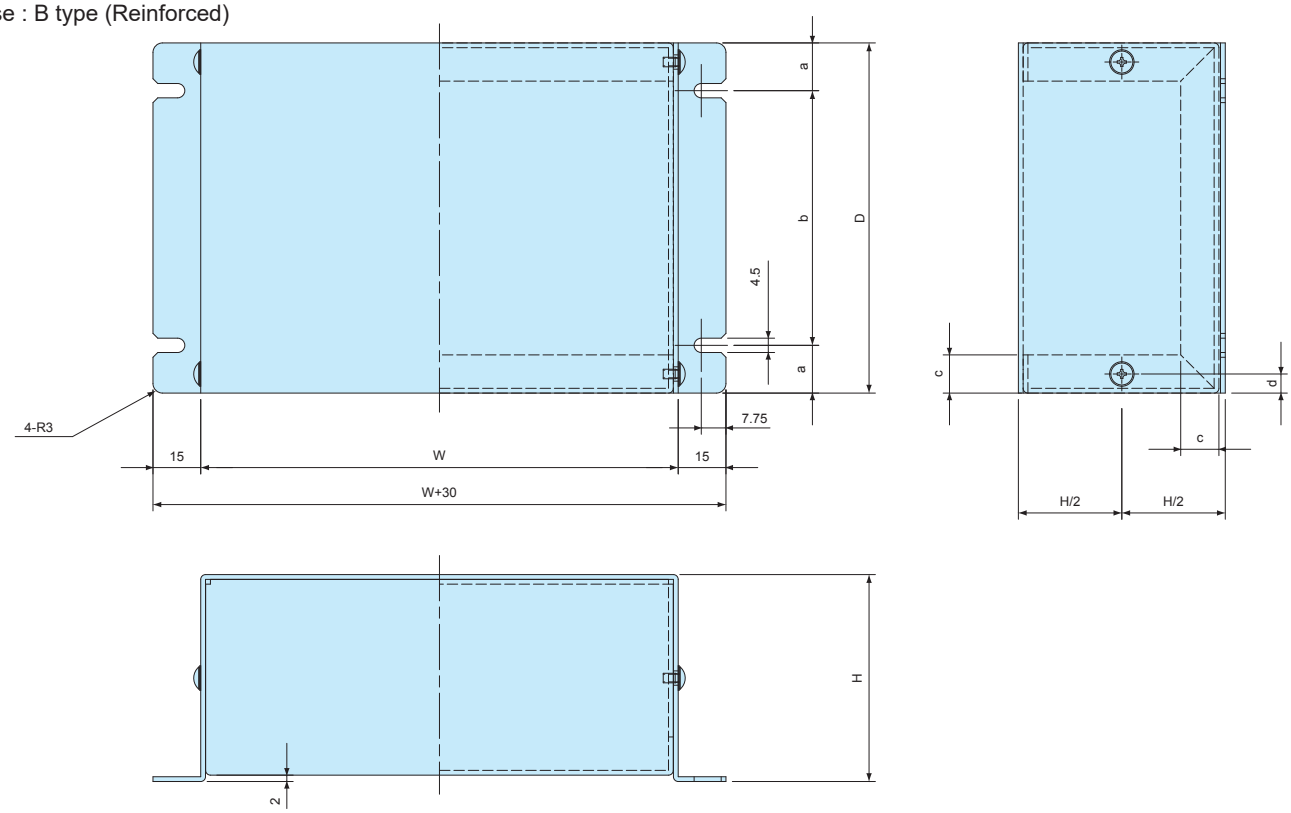
MBC5-4-7～MBC13-6-9

Base : A type (Standard)



MBC14-4-20～MBC20-8-15

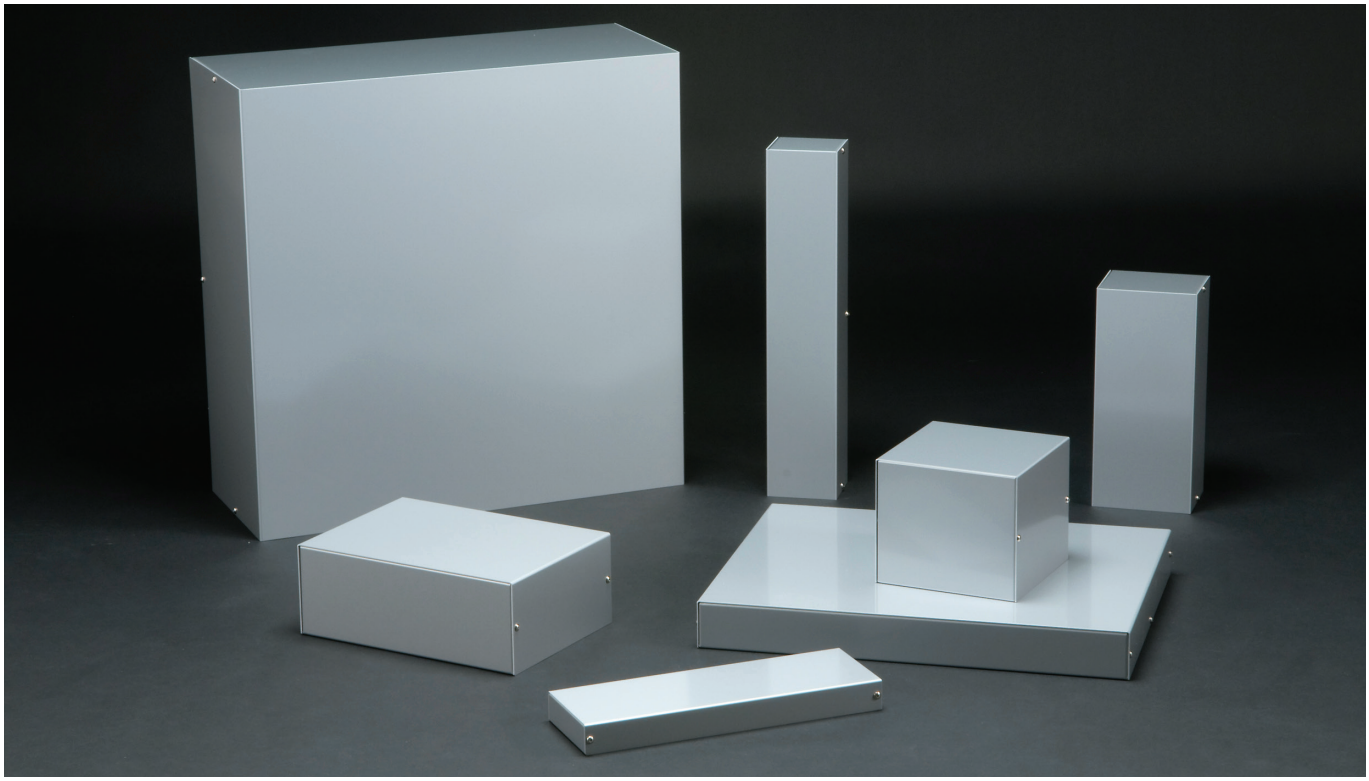
Base : B type (Reinforced)

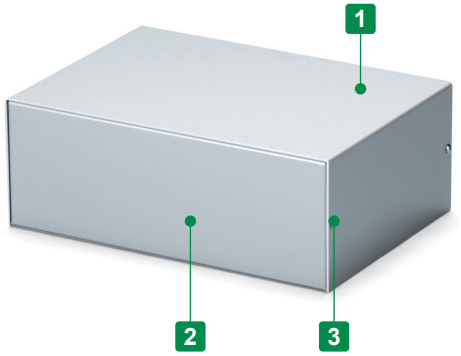


Product no. / Details

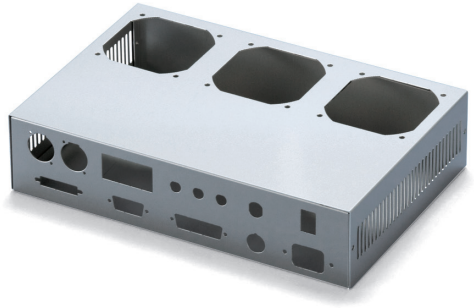
Product no.	W	H	D	a	b	c	d	Thickness	Base type	Weight (g)
MBC 5-4- 7	50	40	70	15	40	10	5	1.2	A	64
MBC 7-4- 5	70	40	50	10	30	10	5	1.2	A	62
MBC 7-4-10	70	40	100	15	70	10	5	1.2	A	102
MBC 8-5-12	80	50	120	15	90	12	6	1.5	A	180
MBC10-4-15	100	40	150	20	110	12	6	1.5	A	224
MBC10-5- 7	100	50	70	15	40	10	5	1.2	A	112
MBC10-7-15	100	65	150	20	110	12	6	1.5	A	280
MBC13-6- 9	125	60	90	15	60	12	6	1.5	A	210
MBC14-4-20	135	40	200	25	150	12	6	1.5	B	367
MBC15-7-11	150	65	110	15	80	12	6	1.5	B	298
MBC17-4-25	170	40	250	30	190	12	6	1.5	B	527
MBC18-7-13	175	70	130	15	100	12	6	1.5	B	389
MBC20-8-15	200	75	150	20	110	12	6	1.5	B	490

MBF series CUSTOM SIZED ALUMINIUM CASE





CUSTOMIZED EXAMPLE



- Adjustable sizes available in 1mm intervals, with W and D dimensions from 50 ~ 500mm, and H dimension from 20 ~ 250mm.
- A conductive coating is applied onto the internal surface, allowing for easy earthing.
- Customization services are available (relevant drawings and data will be required).
- Standard size MB series is also available. See MB series product pages for more information.

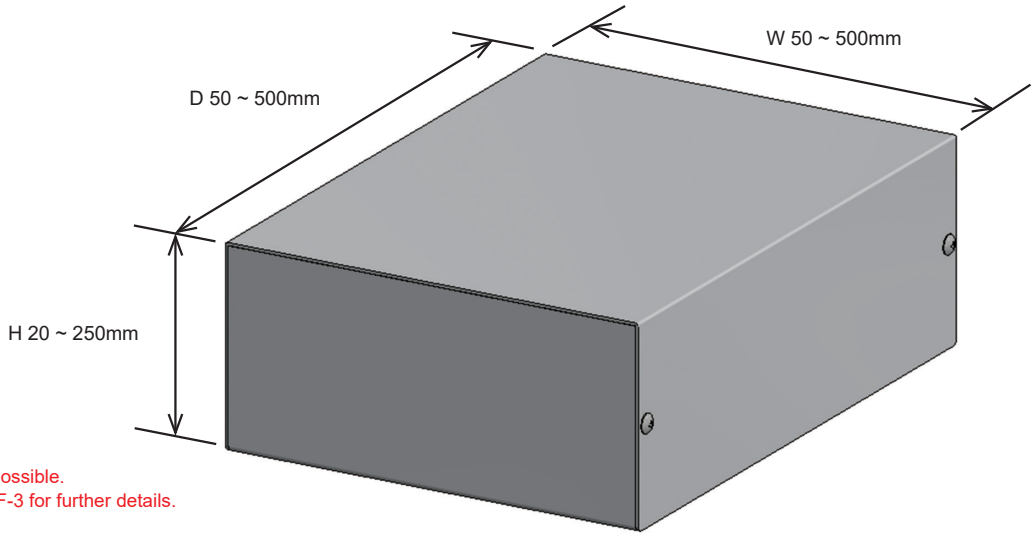
Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Aluminium A1100P	Metallic silver / Painted : Conductive coated internal surface
2	Base	1	Aluminium A1100P	Metallic silver / Painted : Conductive coated internal surface
3	Screw (Truss head M3-5)	4 or 6	Steel	Nickel plated

- Cover • Base are covered with a protective film on one side.

1 Dimensions

To select D, W and H dimensions in 1mm intervals.



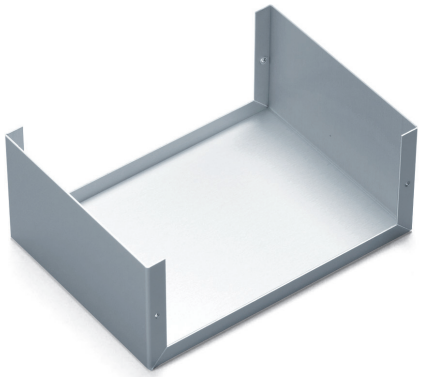
Caution : Not all size combinations are possible.
Refer to the table on page MBF-3 for further details.

■ To select base type (thickness and structure) from the table below based on W / H / D dimensions specified.
Refer to the table on page MBF-3 for A10, B12 or B15 type selection based on W, H & D dimensions.

Base Type A (Standard)

【A10】Type

W : 200 • H • 100 • D : 500 or smaller
Type A : Standard • Panel thickness : 1.0mm



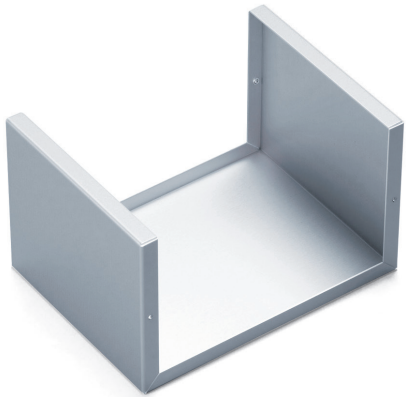
Base Type B (Reinforced)

【B12】Type

W : 400 • H • 225 • D : 400 or smaller
Type B : Reinforced • Panel thickness : 1.2mm

【B15】Type

W : 500 • H • 250 • D : 500 or smaller
Type B : Reinforced • Panel thickness : 1.5mm



Product No. To determine a product number, fill W, H, D and select Base type in the following blank boxes.

Product no. MBF [ ] - [ ] - [ ] [ ] [ ]

W H D Base type Panel thickness

Numbering example: W:122 x H:70 x D:130 and A base type in panel thickness of 1.0mm

➡ **MBF122-70-130A10**

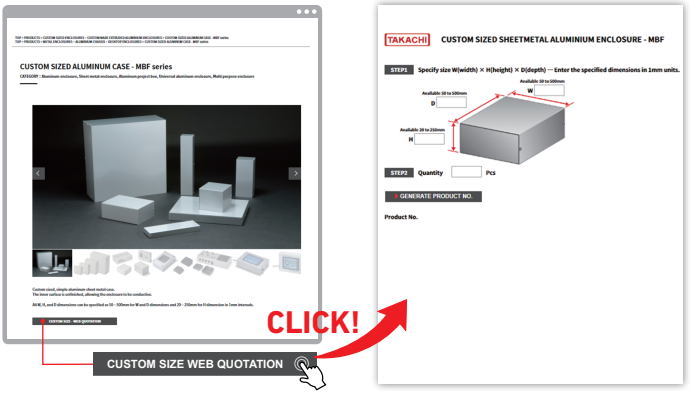
Lead Time	Custom Size Only	5 business days (1 ~ 10 pcs)
	Custom Size + Hole Milling	8 business days (1 ~ 10 pcs)

Order Inquiry For more information, contact us here at sales@takachi-el.co.jp

CUSTOM SIZE WEB QUOTATION

Send your inquiry via our online form now!

Visit the MBF product page on our website, click on the "CUSTOM SIZE WEB QUOTATION" button, and fill in the required details. The product number will be generated, and once your information have been filled in, simply click on SUBMIT and await for our sales team's contact!



MBF Type Chart

Refer to the below chart for A10, B12 or B15 type selection by W, H & D dimensions.

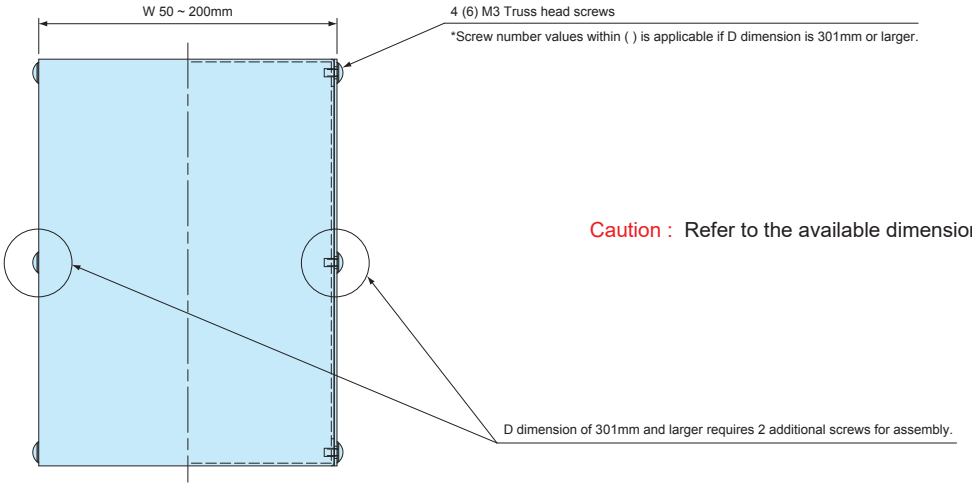
【A10】Type	Standard • Panel thickness : 1.0mm
【B12】Type	Reinforced • Panel thickness : 1.2mm
【B15】Type	Reinforced • Panel thickness : 1.5mm

■ [—] sizes are not available.

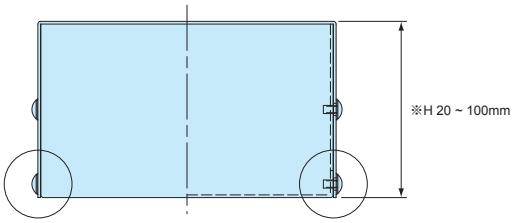
		4x fixing screw points										6x fixing screw points							
W	D / H	50 ~ 79	80 ~ 99	100 ~ 125	126 ~ 150	151 ~ 175	176 ~ 200	201 ~ 225	226 ~ 250	251 ~ 275	276 ~ 300	301 ~ 325	326 ~ 350	351 ~ 375	376 ~ 400	401 ~ 425	426 ~ 450	451 ~ 475	476 ~ 500
50 ~ 99	20 ~ 35	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10
	36 ~ 50	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15
	51 ~ 75	—	A10	A10	A10	A10	A10	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
100 ~ 150	20 ~ 50	A10	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
151 ~ 200	20 ~ 50	A10	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	—	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	—	—	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
201 ~ 250	20 ~ 50	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
251 ~ 300	20 ~ 50	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
301 ~ 350	20 ~ 50	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	226 ~ 250	—	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15
351 ~ 400	20 ~ 50	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	226 ~ 250	—	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15
401 ~ 450	20 ~ 50	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	226 ~ 250	—	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15
451 ~ 500	20 ~ 50	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	226 ~ 250	—	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15

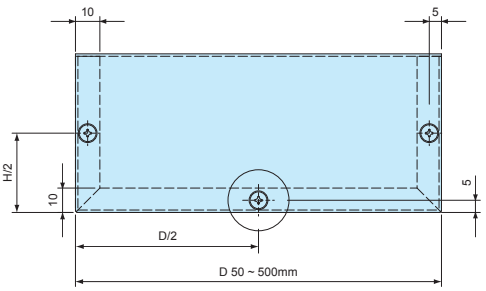
■ DXF/DWG/PDF drawings available on our website.

【A10】Type　Standard • Panel thickness : 1.0mm



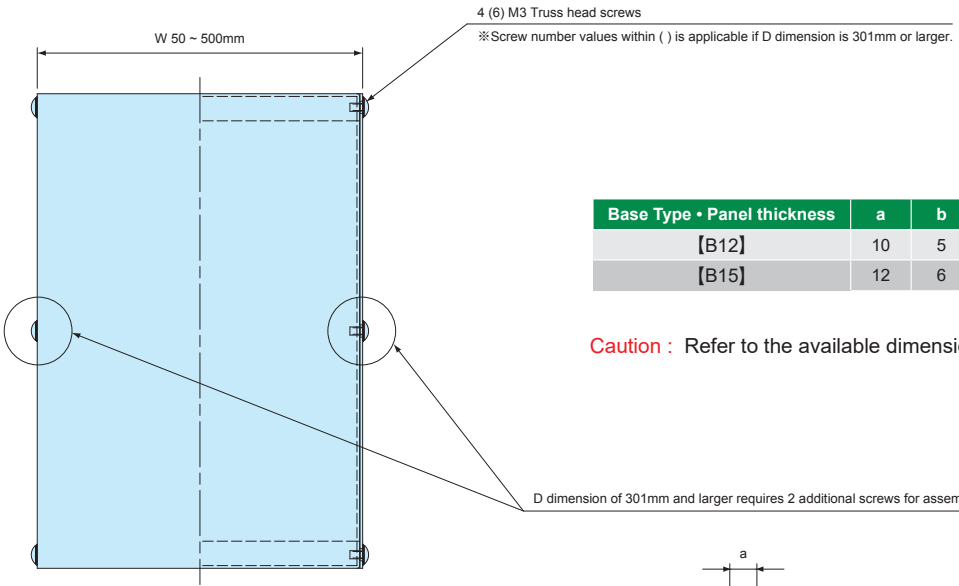
Caution : Refer to the available dimensions on the table.





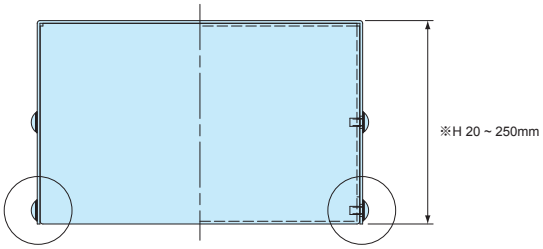
【B12】Type　Reinforced • Panel thickness : 1.2mm

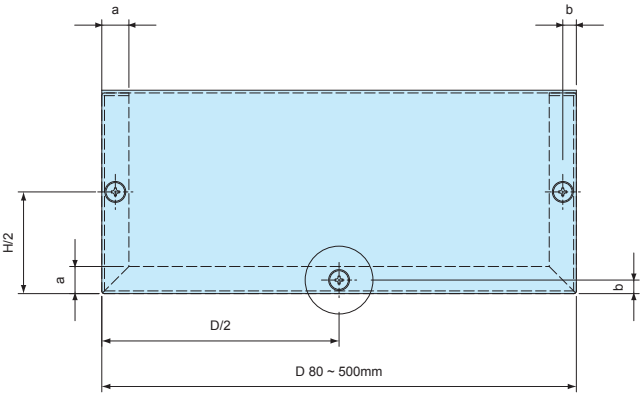
【B15】Type　Reinforced • Panel thickness : 1.5mm



Base Type • Panel thickness	a	b
【B12】	10	5
【B15】	12	6

Caution : Refer to the available dimensions on the table.

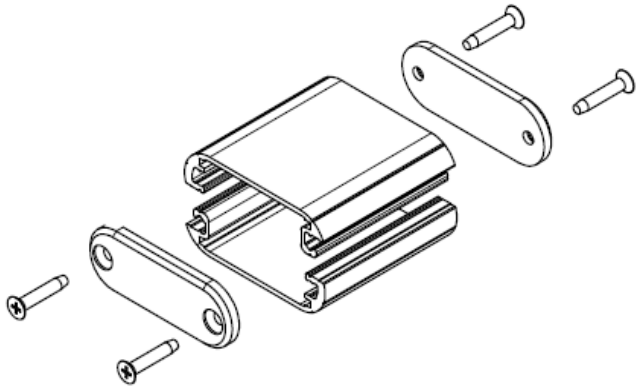


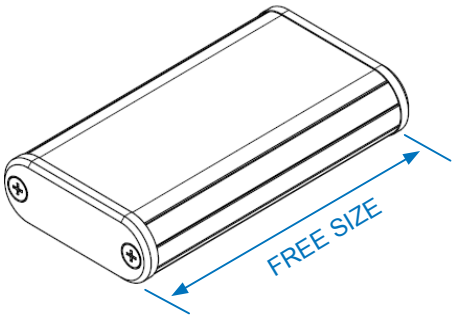


VARIETY OF CUSTOM SIZED ENCLOSURES

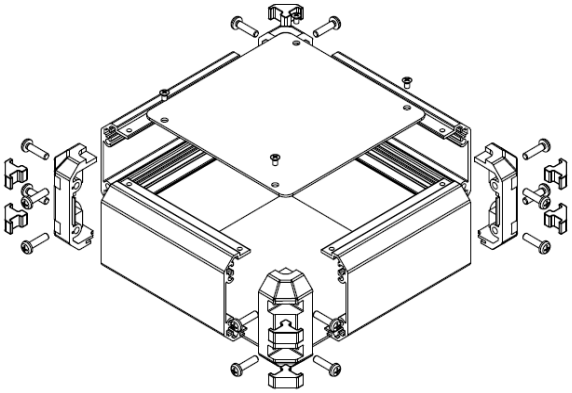
Extruded models are adjustable in extrusion length (depth) in 0.1mm or 1.0mm intervals.
Sheet-metal models are adjustable in W/D/H dimensions in 1.0mm intervals.

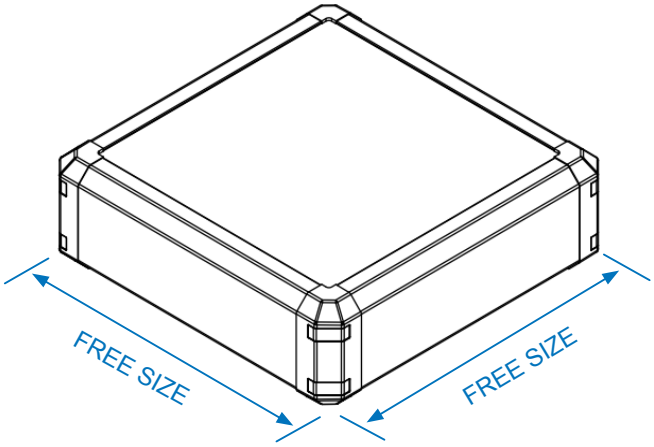
EXTRUDED ALUMINIUM MODEL



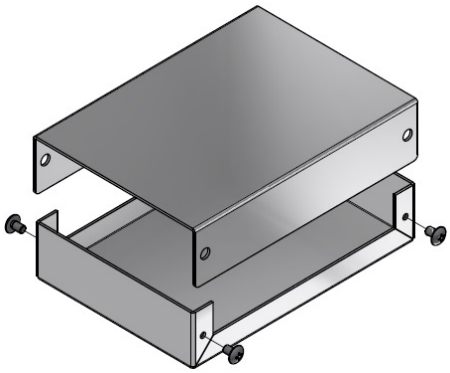


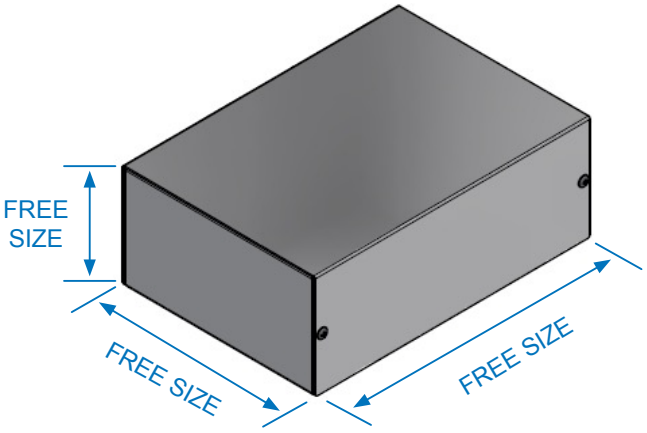
4 SIDE-EXTRUDED ALUMINIUM MODEL





SHEET METAL MODEL





More custom sized models are available.

https://www.takachi-enclosure.com/cat/flexible_size

INQUIRING CUSTOM SIZED ENCLOSURES

1 **Navigate to the free-size product page you wish to inquire on our website and click on the button indicated by the ➡ arrow.**



Custom sized shock-proof design instrument enclosure.
Corner guards are designed to be both aesthetically pleasing, and impact resistant.

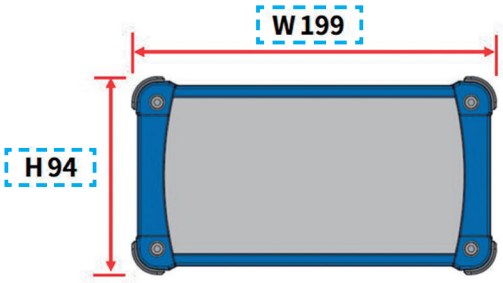
Selectable 22 different Width/Height profiles and specified length (depth) from 40 to 500mm in 1mm intervals.
16 different color combinations can be specified.



■ If there is no "WEB QUOTATION" click button, please send us your inquiry from the "INQUIRY FORM" on the CONTACT tab on our website.

2 **Go to the CUSTOM SIZE WEB QUOTATION page and enter your preferred dimensions.**

STEP1 **Select required width / height.**

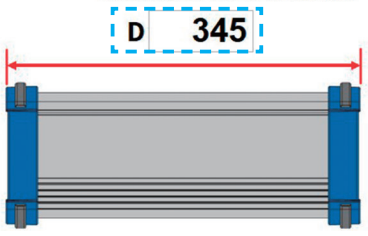


Select	W	H
☐	69	34
☐	69	44
☐	69	59
☐	89	39
☐	89	49
☐	89	64
☐	116	41
☐	116	56
☐	116	71
☐	151	46
☐	151	61

Select	W	H
☐	151	81
☐	151	101
☐	199	56
☐	199	74
☑	199	94
☐	199	119
☐	244	64
☐	244	89
☐	244	114
☐	300	90
☐	300	140

STEP2 **Specify size D(depth) ··· Enter dimensions in 1mm intervals.**

Available from 40 to 500mm



*NOTE: Specified size D(depth) =/= available internal dimension
Available internal dimension = D dimension - 20mm
Please take caution when calculating required D dimension.

3 After entering the quantity, click on the button indicated by the arrow to generate a Product No.

STEP4 **Quantity** ※Quantity can be specified up to 5 slots.

10 pcs

▸Add quantity

▸ GENERATE PRODUCT NO.

Product No. **EXPS199－94－345SN** ※Please use this model number when ordering.

4 After entering your details and the message in our INQUIRY FORM, click on the CONFIRM button.

STEP5 **INQUIRY FORM**

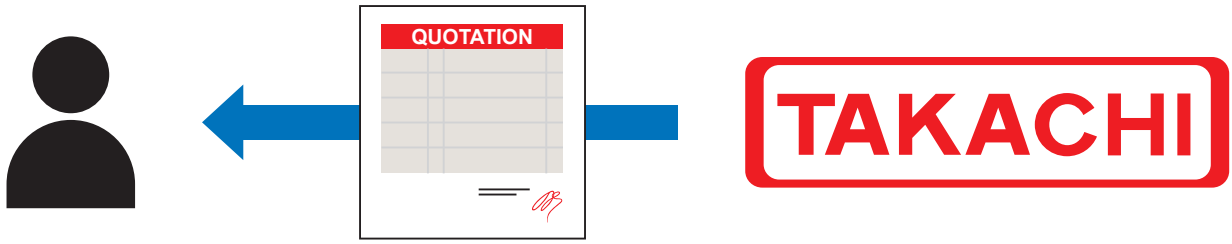
Fill out the inquiry form and send it. We will give you quotation by Email.
Inquiry from the country where the distributor is located will be answered by the distributor.

Fields marked with ★ are required

Product No.	EXPS199-94-345SN	Quantity ★	10
E-mail ★	jiro@takachi-el.co.jp		
Company ★	TAKACHI ELECTRONICS ENCLOSURE CO., LTD.		
Your name ★	○Mr. ●Ms. First name Jiro	Last name	Takachi
Country ★			
Message	I would like a quote for 10 pieces of EXPS199-94-345SN.		

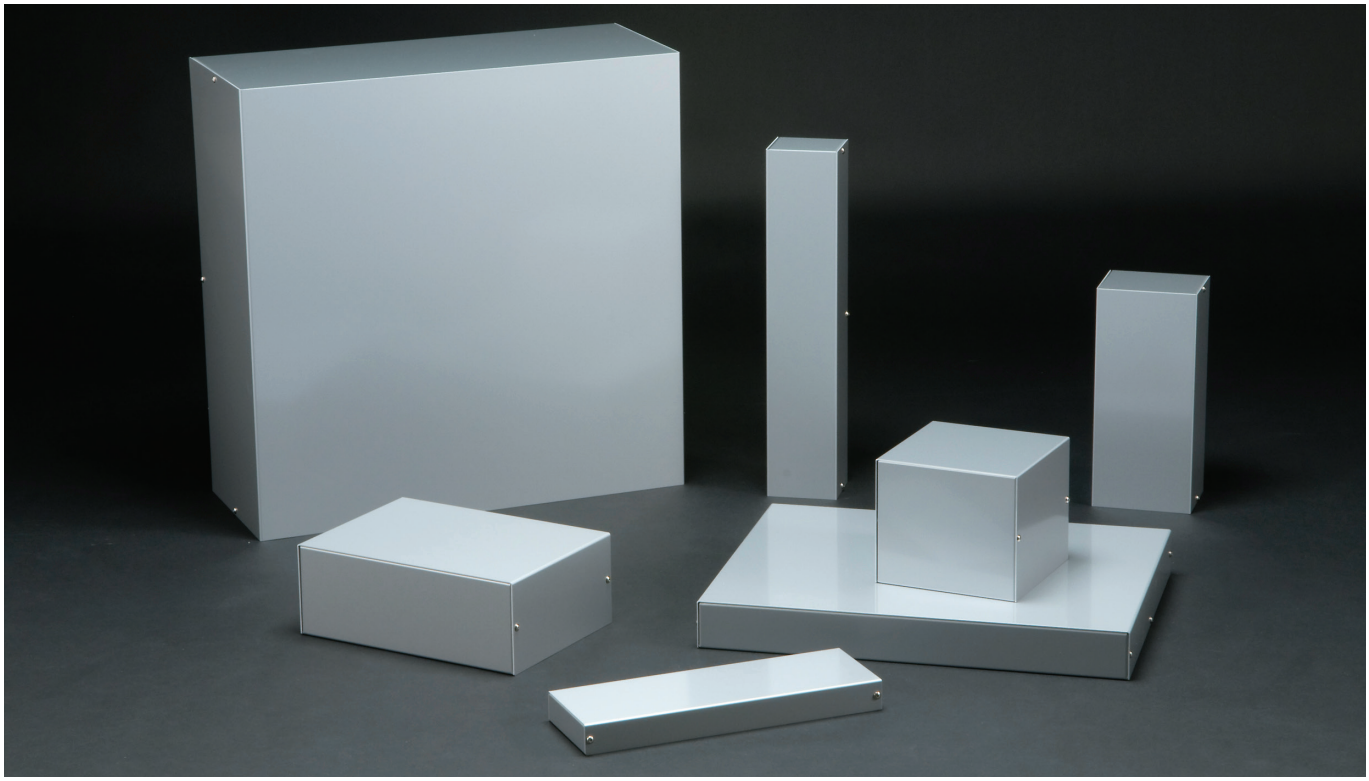
▸ CONFIRM Our privacy policy have been designed to ensure that personal infomation is not misused or used forpurposes other than it is intended for.
PRIVACY POLICY

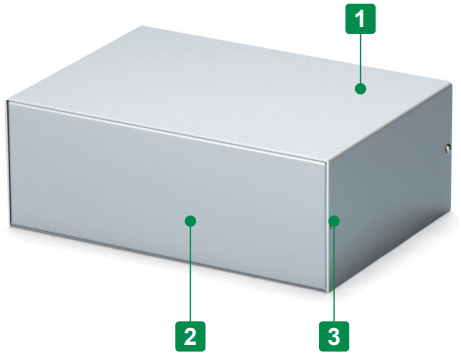
5 A TAKACHI sales representative will get in touch with you with a quote via e-mail.



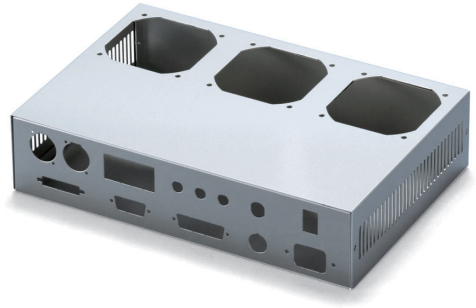
MBF series CUSTOM SIZED ALUMINIUM CASE

NEW SIZE





CUSTOMIZED EXAMPLE



- Adjustable sizes available in 1mm intervals, with W and D dimensions from 50 ~ 500mm, and H dimension from 20 ~ 250mm.
- A conductive coating is applied onto the internal surface, allowing for easy earthing.
- Customization services are available (relevant drawings and data will be required).
- Standard size MB series is also available. See MB series product pages for more information.

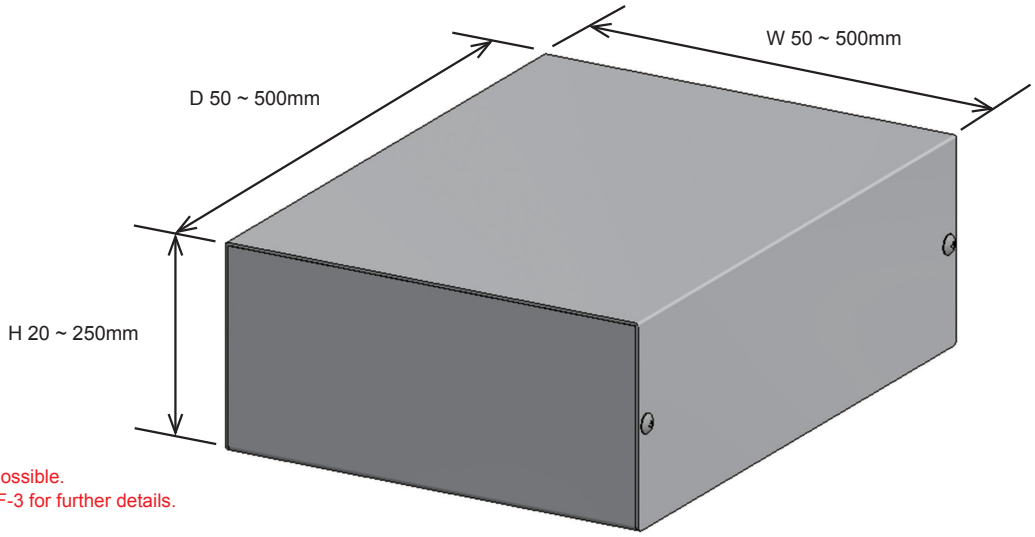
Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Aluminium A1100P	Metallic silver / Painted : Conductive coated internal surface
2	Base	1	Aluminium A1100P	Metallic silver / Painted : Conductive coated internal surface
3	Screw (Truss head M3-5)	4 or 6	Steel	Nickel plated

- Cover • Base are covered with a protective film on one side.

1 Dimensions

To select D, W and H dimensions in 1mm intervals.



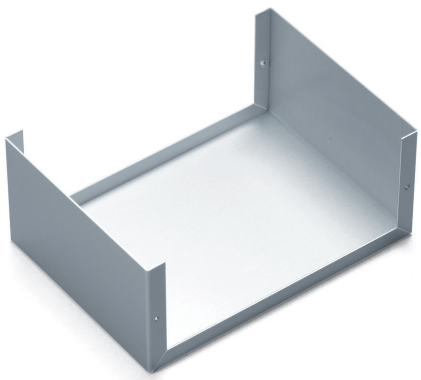
Caution : Not all size combinations are possible.
Refer to the table on page MBF-3 for further details.

■ To select base type (thickness and structure) from the table below based on W / H / D dimensions specified.
Refer to the table on page MBF-3 for A10, B12 or B15 type selection based on W, H & D dimensions.

Base Type A (Standard)

【A10】Type

W : 200 • H • 100 • D : 500 or smaller
Type A : Standard • Panel thickness : 1.0mm



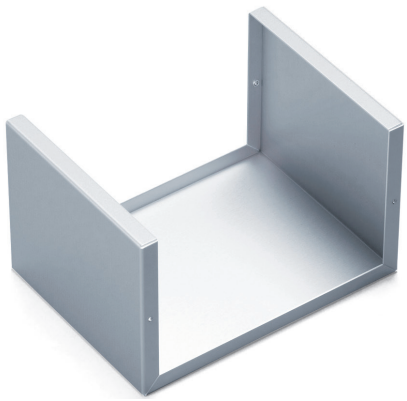
Base Type B (Reinforced)

【B12】Type

W : 400 • H • 225 • D : 400 or smaller
Type B : Reinforced • Panel thickness : 1.2mm

【B15】Type

W : 500 • H • 250 • D : 500 or smaller
Type B : Reinforced • Panel thickness : 1.5mm



Product No. To determine a product number, fill W, H, D and select Base type in the following blank boxes.

Product no. MBF [ ] - [ ] - [ ] [ ] [ ]

W H D Base type Panel thickness

Numbering example: W:122 x H:70 x D:130 and A base type in panel thickness of 1.0mm

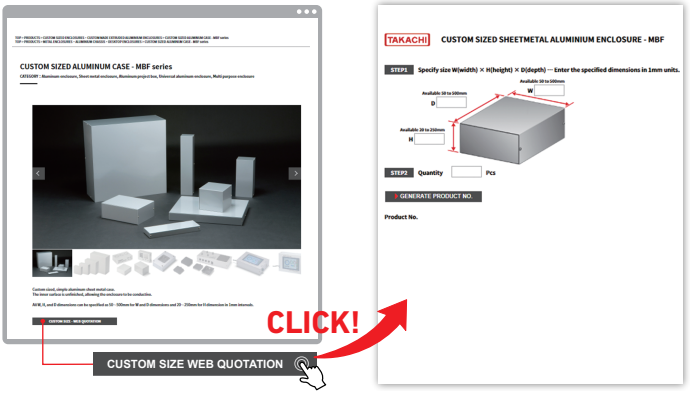
➡ **MBF122-70-130A10**

Lead Time	Custom Size Only	5 business days (1 ~ 10 pcs)
	Custom Size + Hole Milling	8 business days (1 ~ 10 pcs)
Order Inquiry	For more information, contact us here at sales@takachi-el.co.jp	

CUSTOM SIZE WEB QUOTATION

Send your inquiry via our online form now!

Visit the MBF product page on our website, click on the "CUSTOM SIZE WEB QUOTATION" button, and fill in the required details. The product number will be generated, and once your information have been filled in, simply click on SUBMIT and await for our sales team's contact!



MBF Type Chart

Refer to the below chart for A10, B12 or B15 type selection by W, H & D dimensions.

【A10】Type	Standard • Panel thickness : 1.0mm
【B12】Type	Reinforced • Panel thickness : 1.2mm
【B15】Type	Reinforced • Panel thickness : 1.5mm

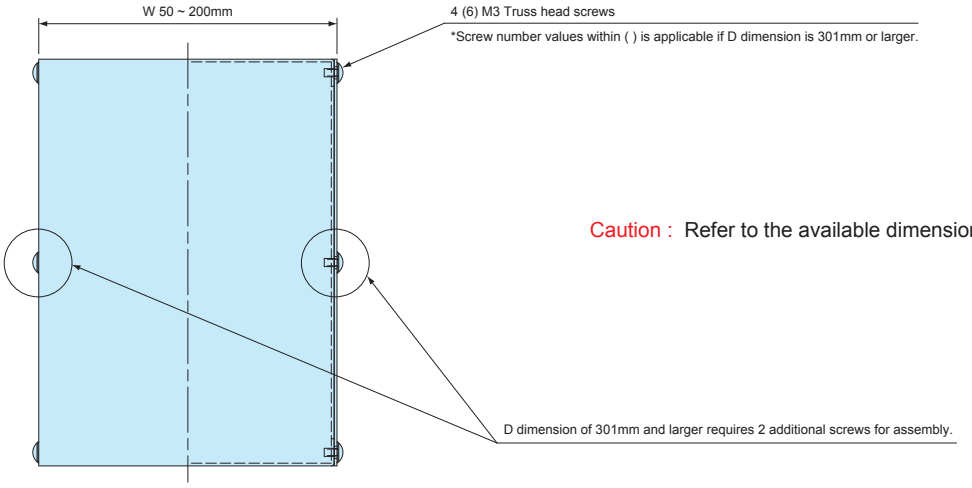
■ [—] sizes are not available.

		4x fixing screw points										6x fixing screw points							
W	D / H	50 ~ 79	80 ~ 99	100 ~ 125	126 ~ 150	151 ~ 175	176 ~ 200	201 ~ 225	226 ~ 250	251 ~ 275	276 ~ 300	301 ~ 325	326 ~ 350	351 ~ 375	376 ~ 400	401 ~ 425	426 ~ 450	451 ~ 475	476 ~ 500
50 ~ 99	20 ~ 35	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10
	36 ~ 50	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15
	51 ~ 75	—	A10	A10	A10	A10	A10	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
100 ~ 150	20 ~ 50	A10	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
151 ~ 200	20 ~ 50	A10	A10	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	—	A10	A10	A10	A10	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	—	—	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
201 ~ 250	20 ~ 50	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
251 ~ 300	20 ~ 50	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B12	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B12	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B12	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15
301 ~ 350	20 ~ 50	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	226 ~ 250	—	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15
351 ~ 400	20 ~ 50	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B12	B12	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	226 ~ 250	—	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15
401 ~ 450	20 ~ 50	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	226 ~ 250	—	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15
451 ~ 500	20 ~ 50	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51 ~ 75	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76 ~ 100	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101 ~ 125	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126 ~ 150	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151 ~ 175	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	176 ~ 200	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	201 ~ 225	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	226 ~ 250	—	—	—	—	—	—	—	—	—	B15	B15	B15	B15	B15	B15	B15	B15	B15

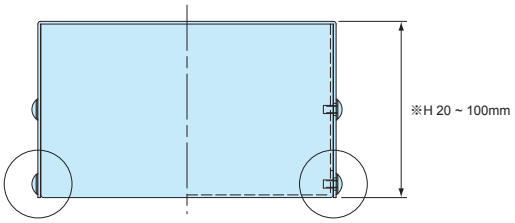
MBF dimensions

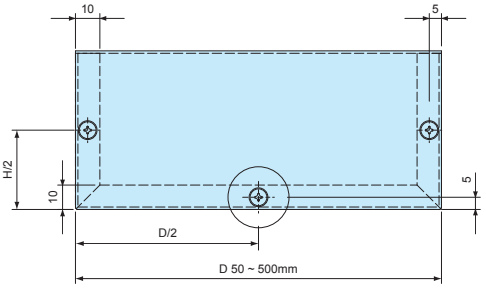
■ DXF/DWG/PDF drawings available on our website.

【A10】Type　Standard • Panel thickness : 1.0mm



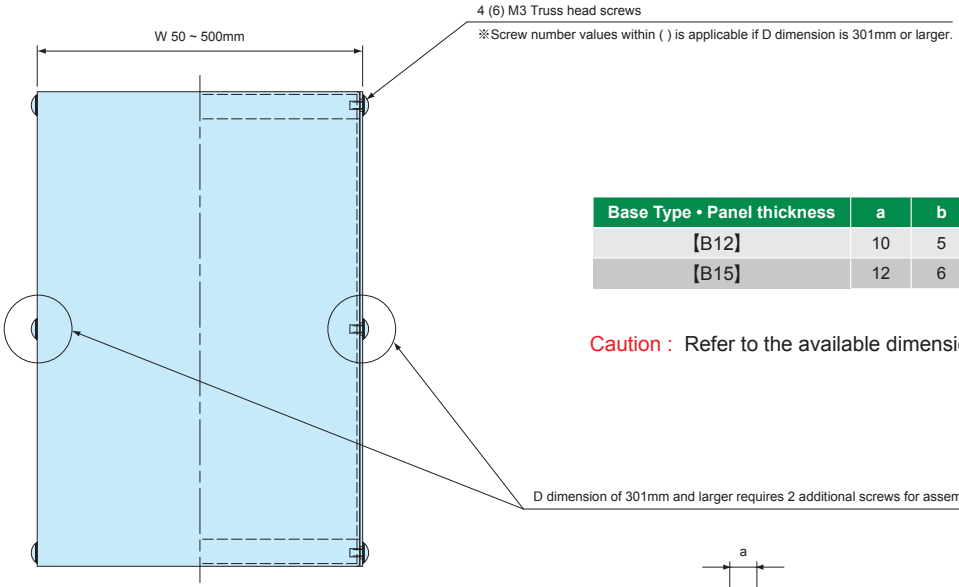
Caution : Refer to the available dimensions on the table.





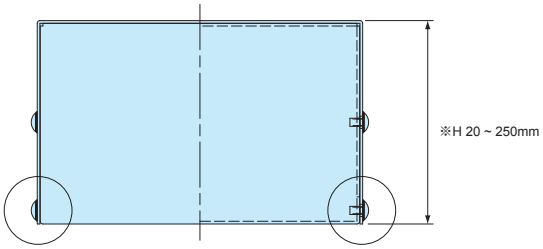
【B12】Type　Reinforced • Panel thickness : 1.2mm

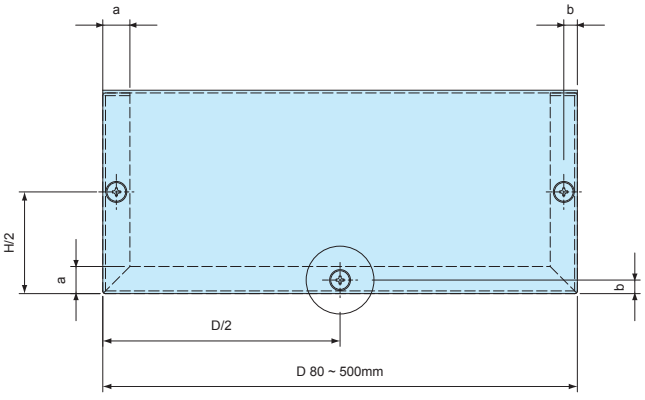
【B15】Type　Reinforced • Panel thickness : 1.5mm



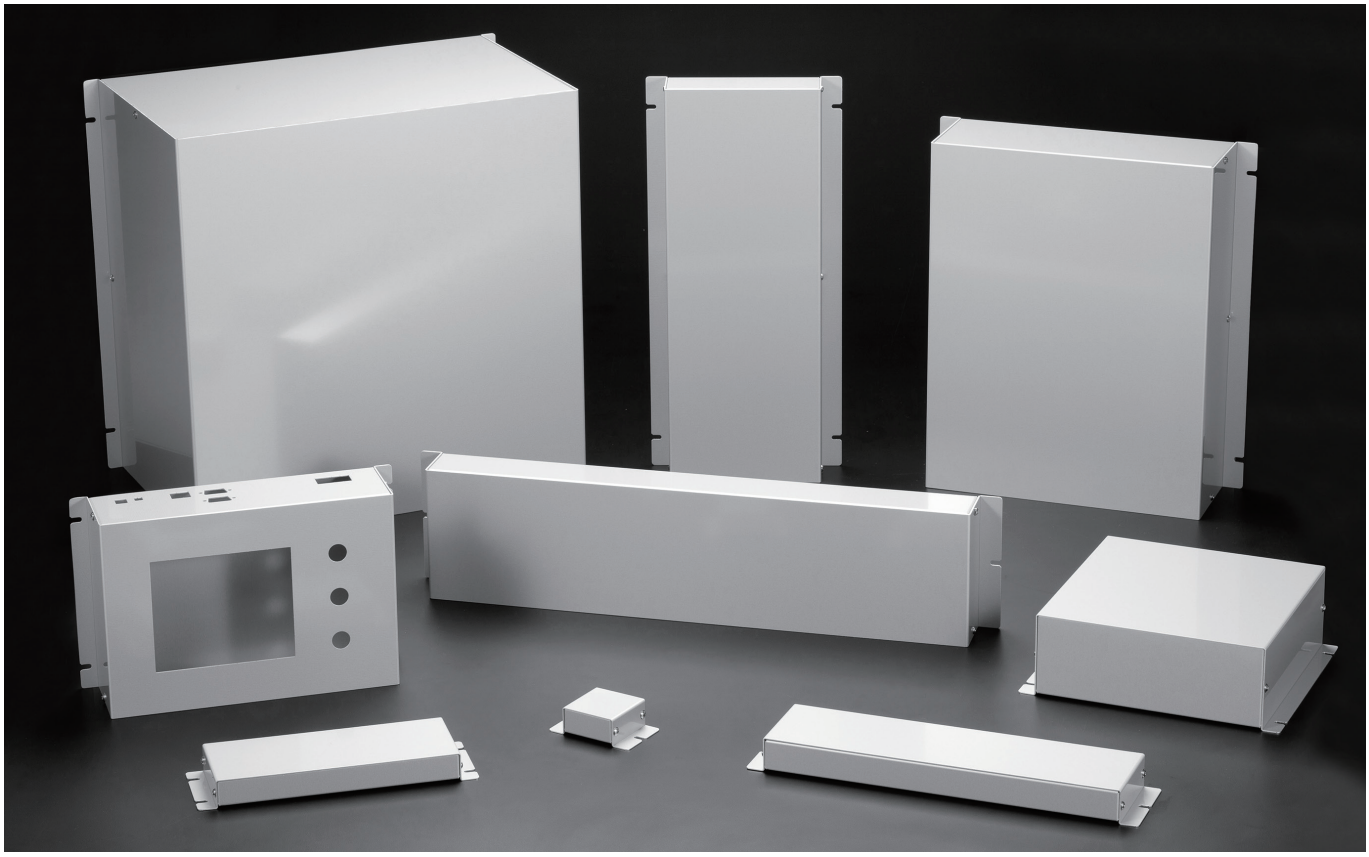
Base Type • Panel thickness	a	b
【B12】	10	5
【B15】	12	6

Caution : Refer to the available dimensions on the table.

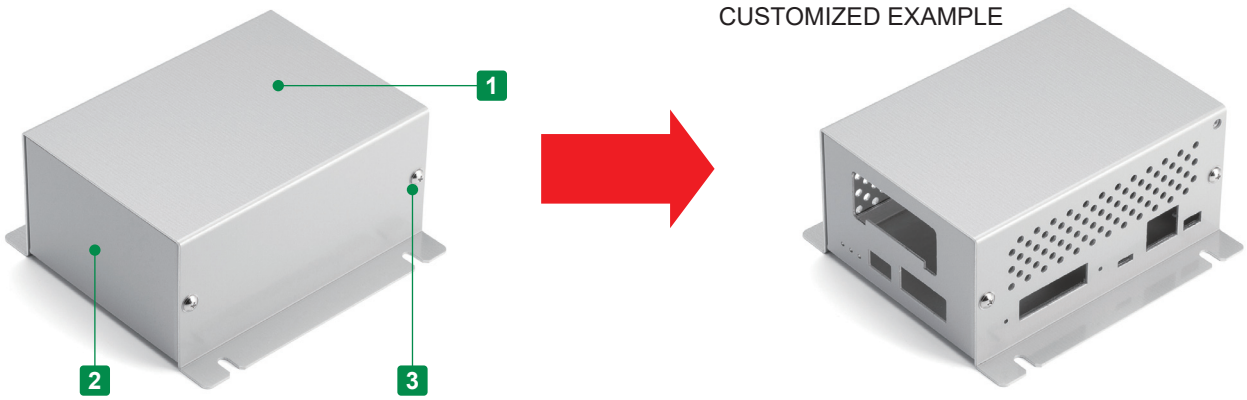




MBCF SERIES CUSTOM SIZED EXTRUDED ALUMINIUM ENCLOSURE



- Adjustable sizes available in 1mm intervals, with W dimensions from 50 ~ 500mm, D dimensions from 50 ~ 400mm, and H dimensions from 25 ~ 200mm.
- Wall mount flange holes available in 2 models: 2-hole, and 4-hole types.
- A conductive coating is applied onto the internal surface, making earthing possible.

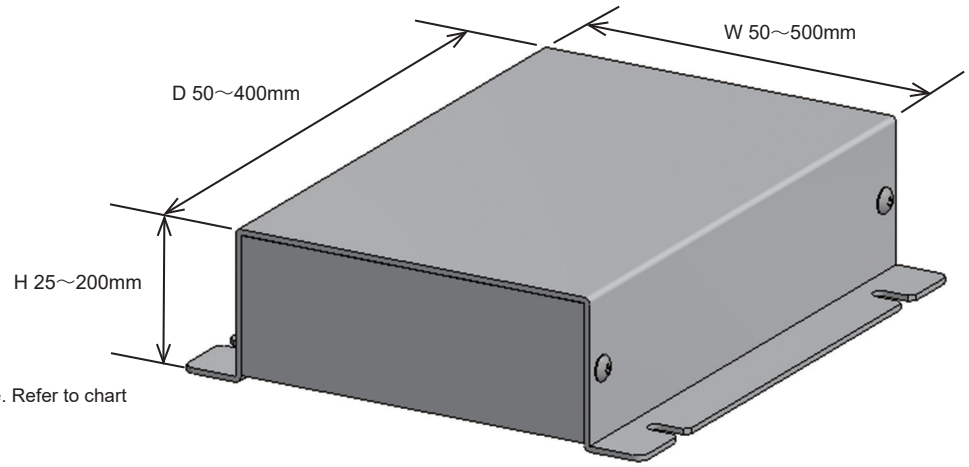


Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Aluminium A1100P	Metallic silver / Painted : Conductive coated internal surface
2	Base	1	Aluminium A1100P	Metallic silver / Painted : Conductive coated internal surface
3	Screw (Truss M3-5)	4 or 6	Brass	Nickel plated

1 Specify Dimensions

Specify dimensions in 1mm intervals.



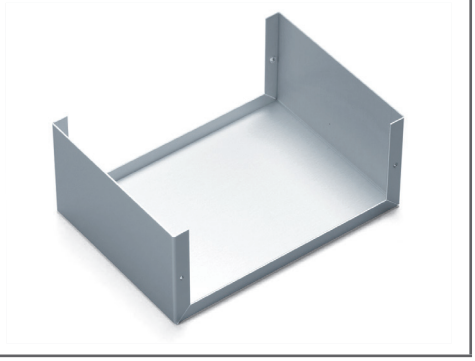
Caution : Not all size combinations are possible. Refer to chart for more information.

■ Panel thickness and base types vary by W / H / D dimensions.
Refer to the chart on page MBCF-3 for A12, B12 or B15 type selection by W, H & D dimensions.

Base Type A

【A12】Type

W : 200 • H : 100 • D : 400 or smaller
Type A : Standard • Panel thickness : 1.2mm



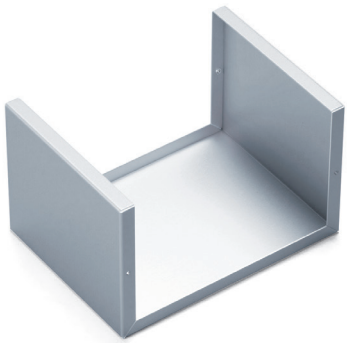
Base Type B

【B12】Type

W : 300 • H • 200 • D : 400 or smaller
Type B : Reinforced • Panel thickness : 1.2mm

【B15】Type

W : 500 • H : 200 • D : 400 or smaller
Type B : Reinforced • Panel thickness : 1.5mm



2 Select Flange-hole Type



2 (1 on each side)



4 (2 on each side)

Confirm Product No.

Confirm an assigned product number in the following order format as below.

Product no. MBCF	155	-	80	-	200	Base type	12	-	4
	W		**H**		**D**	**Base type**	**Panel thickness**		**Flange hole**

Example : W = 155 mm, H = 80 mm, D = 200 mm, B base type in panel thickness of 1.2mm, 4 flange holes

Lead time

Custom Size Only	5 business days (1 ~ 3 pcs)
Custom Size + Hole Milling	8 business days (1 ~ 3 pcs)

Order Inquiry

For more information, contact us here at sales@takachi-el.co.jp

MBCF Type Chart

Refer to the below chart for A12, B12 or B15 type selection by W, H & D dimensions.

【A12】Type	Standard • Panel thickness : 1.2mm
【B12】Type	Reinforced • Panel thickness : 1.2mm
【B15】Type	Reinforced • Panel thickness : 1.5mm

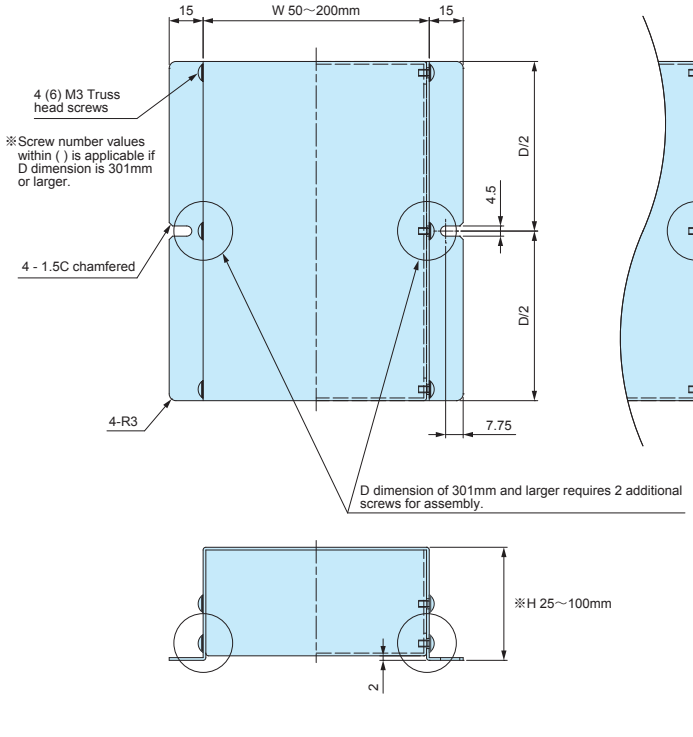
■ [–] sizes are not available.

		4x fixing screw points										6x fixing screw points			
W	D / H	50～74	75～99	100～125	126～150	151～175	176～200	201～225	226～250	251～275	276～300	301～325	326～350	351～375	376～400
50～99	25～ 35	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12
	36～ 50	–	A12	A12	A12	A12	A12	A12	A12	A12	A12	B12	B12	B12	B12
100～150	25～ 29	–	A12	A12	A12	A12	A12	B12	B12	B12	B12	–	–	–	–
	30～ 50	–	A12	A12	A12	A12	A12	B12	B12	B12	B12	B15	B15	B15	B15
	51～ 75	–	–	A12	A12	A12	A12	B12	B12	B12	B12	B15	B15	B15	B15
	76～100	–	–	–	A12	A12	A12	B12	B12	B12	B12	B15	B15	B15	B15
151～200	25～ 29	–	A12	A12	A12	A12	A12	B12	B12	B12	B12	–	–	–	–
	30～ 50	–	A12	A12	A12	A12	A12	B12	B12	B12	B12	B15	B15	B15	B15
	51～ 75	–	–	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	76～100	–	–	–	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	101～125	–	–	–	–	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	126～150	–	–	–	–	–	B12	B12	B12	B12	B12	B15	B15	B15	B15
201～250	25～ 29	–	B12	B12	B12	B12	B12	B12	B12	B12	B12	–	–	–	–
	30～ 50	–	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	51～ 75	–	–	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	76～100	–	–	–	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	101～125	–	–	–	–	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	126～150	–	–	–	–	–	B12	B12	B12	B12	B12	B15	B15	B15	B15
	151～175	–	–	–	–	–	–	B12	B12	B12	B12	B15	B15	B15	B15
	176～200	–	–	–	–	–	–	–	B12	B12	B12	B15	B15	B15	B15
251～300	25～ 29	–	B12	B12	B12	B12	B12	B12	B12	B12	B12	–	–	–	–
	30～ 50	–	B12	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	51～ 75	–	–	B12	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	76～100	–	–	–	B12	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	101～125	–	–	–	–	B12	B12	B12	B12	B12	B12	B15	B15	B15	B15
	126～150	–	–	–	–	–	B12	B12	B12	B12	B12	B15	B15	B15	B15
	151～175	–	–	–	–	–	–	B12	B12	B12	B12	B15	B15	B15	B15
	176～200	–	–	–	–	–	–	–	B12	B12	B12	B15	B15	B15	B15
301～350	30～ 50	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51～ 75	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76～100	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101～125	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126～150	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151～175	–	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15
	176～200	–	–	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15
351～400	30～ 50	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51～ 75	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76～100	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101～125	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126～150	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151～175	–	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15
	176～200	–	–	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15
401～450	30～ 50	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51～ 75	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76～100	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101～125	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126～150	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151～175	–	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15
	176～200	–	–	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15
451～500	30～ 50	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	51～ 75	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	76～100	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	101～125	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15	B15
	126～150	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15	B15
	151～175	–	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15	B15
	176～200	–	–	–	–	–	–	–	B15	B15	B15	B15	B15	B15	B15

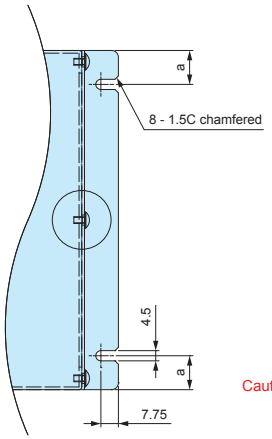
MBCF dimensions

【A12】Type Standard • Panel thickness : 1.2mm

2-hole flange type

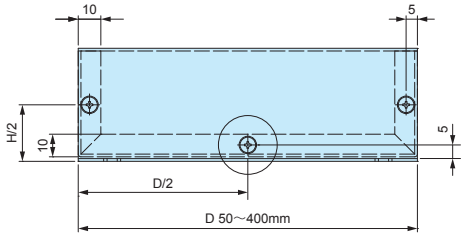


4-hole flange type



D dimension	a
50 ～ 60	10
61 ～ 140	15
141 ～ 240	20
241 ～ 400	30

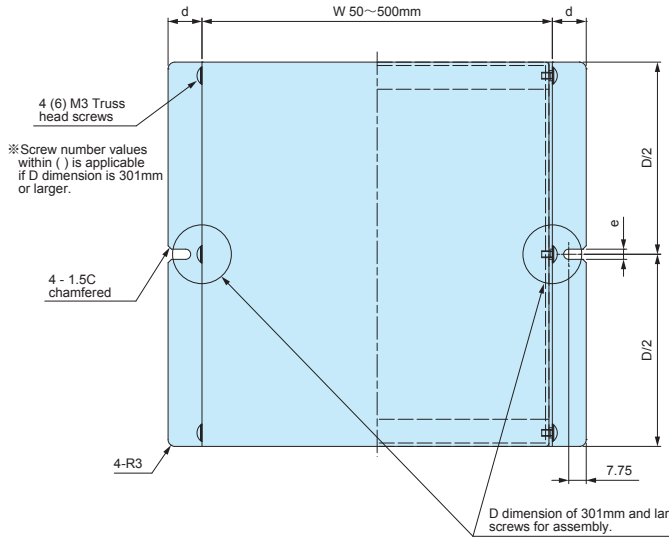
Caution : Refer to the available dimensions on the chart.



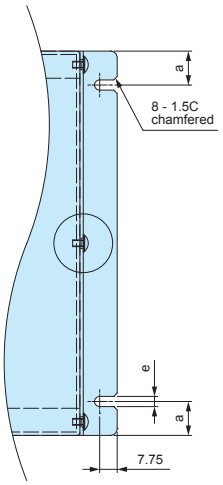
【B12】Type Reinforced • Panel thickness : 1.2mm

【B15】Type Reinforced • Panel thickness : 1.5mm

2-hole flange type



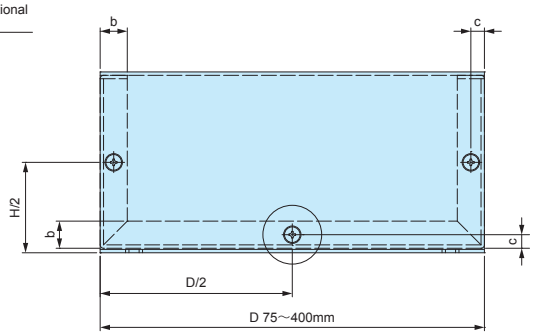
4-hole flange type



D dimension	a
50 ～ 60	10
61 ～ 140	15
141 ～ 240	20
241 ～ 400	30

Base Type	b	c	d	e
【B12】	10	5	15	4.5
【B15】	12	6	20	5.5

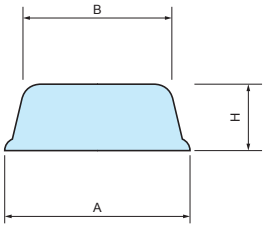
Caution : Refer to the available dimensions on the chart.



B series ADHESIVE RUBBER FEET

■ DXF/DWG/PDF drawings available on our website.





■ Injection molded type.

■ Please note color may be transferred from the synthetic rubber material after an extended period of time.

Product no. / Details

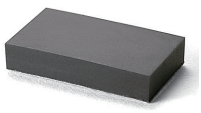
■ Material / Color : Synthetic rubber / Black

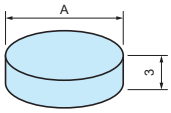
Product no.	A	B	H	Weight(g)	Pack of
B 6-2	6	5	1.8	0.1 (1pc)	10
B 8-4	8	7.7	3.5	0.2 (1pc)	10
B10-4	10	9.2	4.2	0.3 (1pc)	10
B11-3	10.8	10.2	3	0.4 (1pc)	10
B11-5	11	9.6	5	0.6 (1pc)	10
B12-4	12.7	10	3.8	0.6 (1pc)	10
B15-5	15.4	14.8	5.1	1.3 (1pc)	10
B16-7	16	13	7	1.5 (1pc)	10
B19-4	19	15.8	4.2	1.5 (1pc)	10
B21-7	21	17	7	2.6 (1pc)	10
B23-5	22.8	22.4	5	2.5 (1pc)	10
B26-11	26	20	11	5.9 (1pc)	10

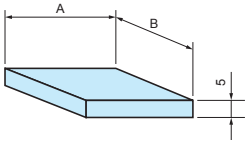
B-P series ADHESIVE RUBBER FEET

■ DXF/DWG/PDF drawings available on our website.









Product no. / Details

■ Material / Color : Synthetic rubber / Black

Product no.	A	B	Weight(g)	Pack of
B-P21	10	–	0.4 (1pc)	10
B-P22	20	–	1.6 (1pc)	10
B-P23	15	–	0.9 (1pc)	10
B-P31	28	16	3.4 (1pc)	10
B-P32	46	26	9.4 (1pc)	10

■ Press-punched type.

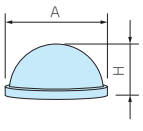
■ Please note color may be transferred from the synthetic rubber material after an extended period of time.

TB series ROUNDED ADHESIVE RUBBER FEET

■ DXF/DWG/PDF drawings available on our website.







Product no. / Details

■ Material : Synthetic rubber

Product no.		A	H	Weight(g)	Pack of
● Black	● White (W)				
TB- 7	–	6.7	4.2	0.2 (1pc)	10
TB- 8	TB- 8W	8	2.6	0.3 (1pc)	10
TB-10	–	10	2.8	0.3 (1pc)	10
TB-12	TB-12W	11.3	5.6	1 (1pc)	10
TB-14	–	14	8	1.2 (1pc)	10
TB-16	TB-16W	15.9	8	1.9 (1pc)	10
TB-21	–	21.6	8.5	2.6 (1pc)	10
TB-27	–	27.8	7.4	4.9 (1pc)	10

■ Hemispherical rubber feet with adhesive tape.

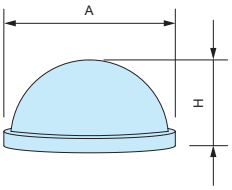
■ Please note color may be transferred from the synthetic rubber material after an extended period of time.

SCR series SELF-ADHESIVE CLEAR RUBBER FEET

NEW

■ DXF/DWG/PDF drawings available on our website.





■ Hemispherical semi-transparent type rubber feet with adhesive tape.

■ Please note synthetic rubber may leave stains on the touching surface after an extended period of time.

Product No. / Details

■ Material / Color: Synthetic rubber / Semi-clear

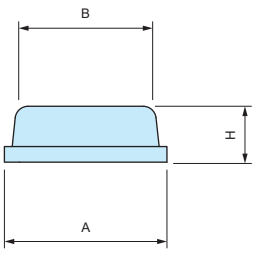
Product No.	A	H	Weight (g)	Pack of
SCR 8- 3	8	3	0.1 (1 pc)	10 pcs
SCR11- 5	11	5	0.4 (1 pc)	10 pcs
SCR12- 8	12	8	0.8 (1 pc)	10 pcs
SCR16- 8	16	8	1.2 (1 pc)	10 pcs
SRC19-10	19	10	2.3 (1 pc)	10 pcs

SCRC series SELF-ADHESIVE CLEAR RUBBER FEET, CYLINDRICAL SHAPE

NEW

■ DXF/DWG/PDF drawings available on our website.





■ Cylindrical semi-transparent type rubber feet with adhesive tape.

■ Please note synthetic rubber may leave stains on the touching surface after an extended period of time.

Product No. / Details

■ Material / Color: Synthetic rubber / Semi-clear

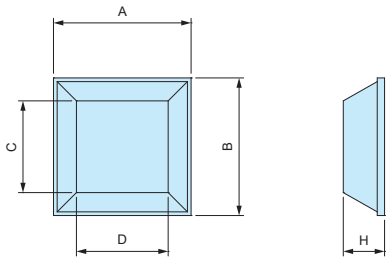
Product No.	A	B	H	Weight (g)	Pack of
SCRC 8-2	8.2	7.9	2.2	0.1 (1 pc)	10 pcs
SCRC10-4	10.3	8	4	0.3 (1 pc)	10 pcs
SCRC11-3	11.1	10.3	3.4	0.3 (1 pc)	10 pcs
SCRC13-4	12.5	10.3	4.4	0.4 (1 pc)	10 pcs
SCRC15-4	15	14	4.2	0.7 (1 pc)	10 pcs
SCRC18-6	17.6	16.6	5.6	1.3 (1 pc)	10 pcs

SCRS series SELF-ADHESIVE CLEAR RUBBER FEET, SQUARE SHAPE

NEW

■ DXF/DWG/PDF drawings available on our website.





■ Square shape semi-transparent type rubber feet with adhesive tape.

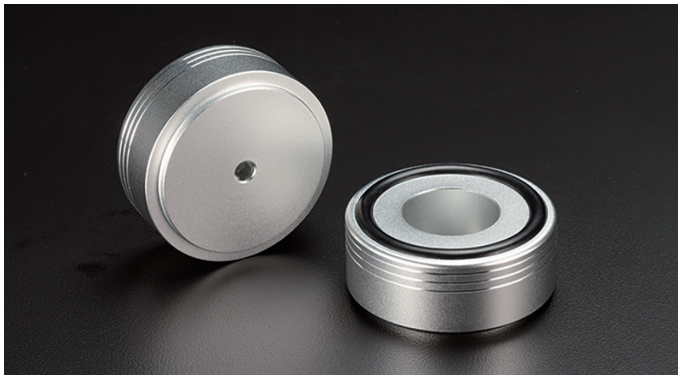
■ Please note synthetic rubber may leave stains on the touching surface after an extended period of time.

Product No. / Details

■ Material / Color: Synthetic rubber / Semi-clear

Product No.	A	B	H	C	D	Weight (g)	Pack of
SCRS11-3	10.5	10.5	2.7	8	8	0.2 (1 pc)	10 pcs
SCRS11-4	10.5	10.5	4.2	8	8	0.4 (1 pc)	10 pcs
SCRS13-3	12.7	12.7	3.4	9	9	0.4 (1 pc)	10 pcs
SCRS13-6	12.7	12.7	6.3	7	7	0.7 (1 pc)	10 pcs

AFS•AFM series ALUMINIUM ISOLATION FEET



External type / Shot blast finish AFS series



Internal type / Reflective finish AFM series

- The surface treatment and finish allows the feet to exhibit a polished and luxurious feel.
- Non-slip NBR O-ring is located on the underside of the feet.

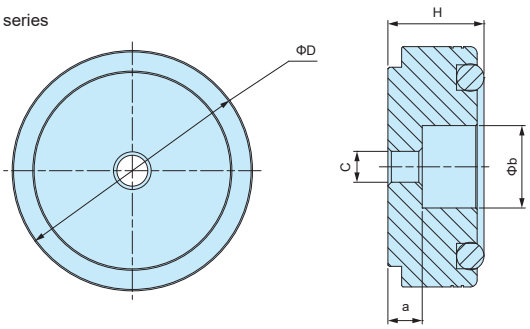
Product no. / Details

Product no.		D	H	Installation type	C	a	b	Pack of
● Silver	● Black							
AFS20- 8S	AFS20- 8B	20	8	External	Φ3.4	3	9	4
AFS25-10S	AFS25-10B	25	10	External	Φ4.5	4	12	4
AFS30-12S	AFS30-12B	30	12	External	Φ4.5	5	12	4
AFS35-14S	AFS35-14B	35	14	External	Φ4.5	5	12	4
AFS39-16S	AFS39-16B	39	16	External	Φ4.5	5	15	4
AFS44-18S	AFS44-18B	44	18	External	Φ4.5	5	20	4
AFS55-20S	AFS55-20B	55	20	External	Φ5.5	5	20	4
AFM15- 7S	–	15	7	Internal	M3	4	–	4
AFM20- 9S	–	20	9	Internal	M3	5	–	4
AFM25-12S	–	25	12	Internal	M4	7	–	4
AFM30-14S	–	30	14	Internal	M4	8	–	4
AFM35-16S	–	35	16	Internal	M4	10	–	4
AFM39-18S	–	39	18	Internal	M4	10	–	4
AFM44-20S	–	44	20	Internal	M4	10	–	4
AFM55-22S	–	55	22	Internal	M5	15	–	4

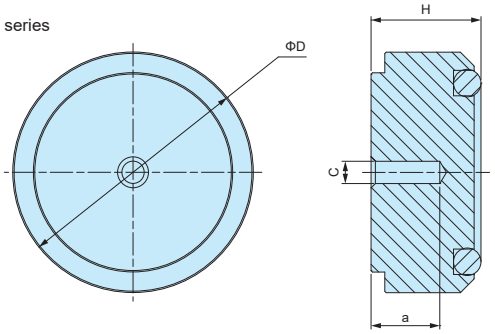
AFS • AFM dimensions

- DXF/DWG/PDF/STP drawings available on our website.

AFS series



AFM series



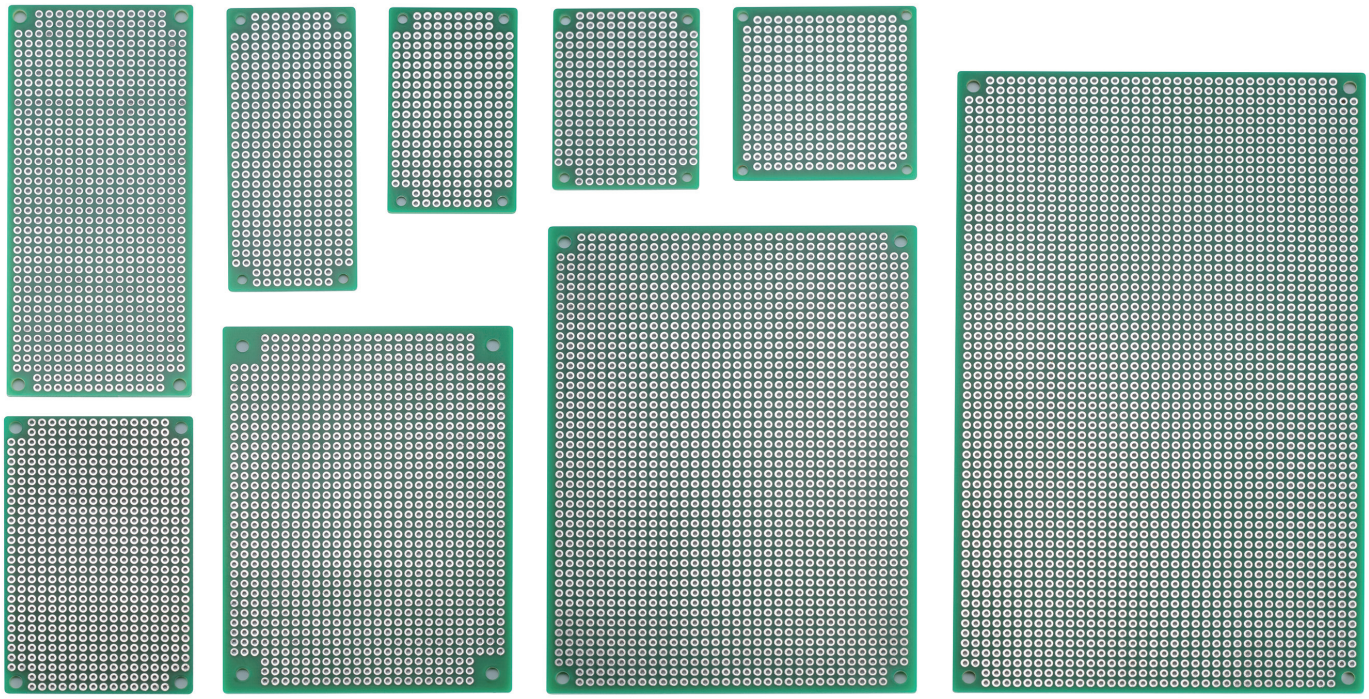
APPLICATION EXAMPLE





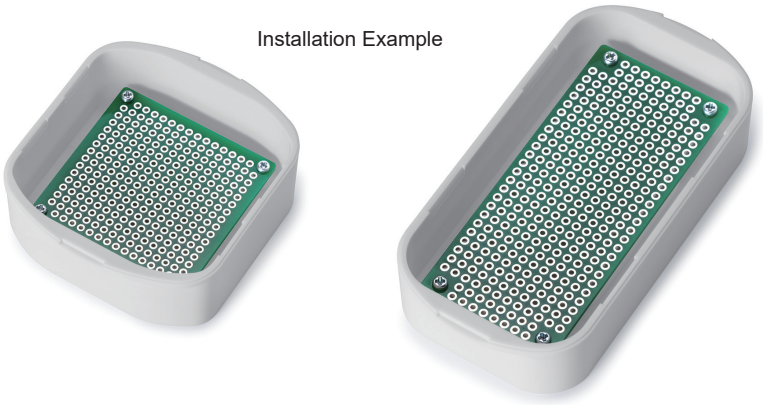
PCB series LOW-COST UNIVERSAL PCB

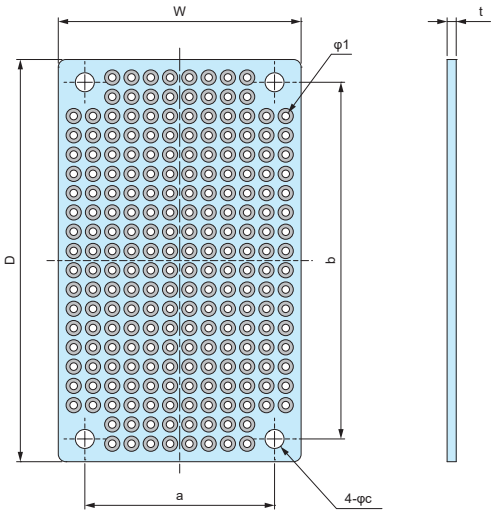
NEW SIZE



- Plated Through Hole (PTH) type PCB with a 2.54mm hole-to-hole pitch.
  Inexpensive and economical PCB made with robust, heat-resistant and non-conductive glass epoxy material.
- Easily mounted onto bosses or standoffs with the mounting holes at each corner.
- Made with environmentally friendly lead-free solder. RoHS3 compliant.
- 4 new sizes added to extend the lineup to a total of 9 sizes. PCB100-160 is Eurocard (3U) format size.
- 3 new SIC and SIM plastic case series compatible sizes have been released, now with 4 compatible sizes available.
- DXF/DWG/PDF drawings available on our website.

Installation Example





Material / Finish : Glass epoxy (FR-4) / Through-hole - Lead-free solder resist

*When installing PCB46-101 with M2 mounting screws, use EM-B2 (see page 398).

Product no. / Details

Product no.	W	D	a	b	c	t	Mounting screw	Weight (g)	Compatible SIC & SIM size
PCB 32- 53	32	53	25	47	2.5	1.2	M2 / M2.5	3.9	SIC • SIM5- 7-□
NEW PCB 32- 73	32	73	25	67	2.5	1.2	M2 / M2.5	5.2	SIC • SIM5- 9-□
NEW PCB 36- 47	36	47	30	41	2.5	1.2	M2 / M2.5	3.7	–
NEW PCB 45- 45	45	45	40	40	2.5	1.2	M2 / M2.5	4.6	SIC • SIM6- 7-□
NEW PCB 46-101	46	101	40	95	3.2	1.6	M2 / M2.5 / M3	13.2	SIC • SIM6-12-□
PCB 47- 72	47	72	41	66	3.2	1.2	M3	7.4	–
PCB 72- 95	72	95	62	85	3.2	1.2	M3	15.7	–
PCB 90-120	90	120	82	112	3.2	1.6	M3	32.5	–
PCB100-160	100	160	92	152	3.2	1.6	M3	49.2	–

AST series INSERT NUT ADHESIVE STANDOFF

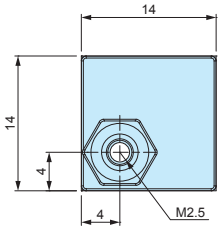


- Double-sided adhesive tape allows the standoff to be mounted quickly and easily; allows PCB mounting in non-boss enclosures.
- Convenient for installing PCBs into enclosures without the need for customization.
- Please ensure that surface is cleaned and grease-free before adhering.
- Once removed, it cannot be adhered on again.

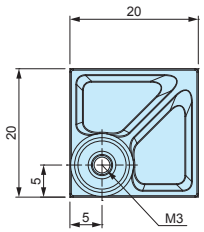
AST dimensions

- DXF/DWG/PDF/STP drawings available on our website.

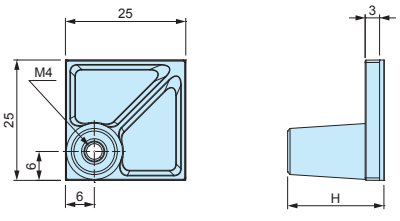
AST2.5-□



AST3-□



AST4-□



Product no. / Details

Product no	H dimension	Included screw	Recommended PCB thickness (mm)	Recommended torque (N • m)	Weight (g)	Pack of
AST2.5-5B	5	M2.5-5 pan head	1.0 ~ 2.0	0.3	0.6 (1 piece)	4
AST2.5-10B	10	M2.5-5 pan head	1.0 ~ 2.0	0.3	0.8 (1 piece)	4
AST3-6B	6	M3-6 pan head	1.0 ~ 3.0	0.4	1.5 (1 piece)	4
AST3-10B	10	M3-6 pan head	1.0 ~ 3.0	0.4	1.6 (1 piece)	4
AST3-15B	15	M3-6 pan head	1.0 ~ 3.0	0.4	1.8 (1 piece)	4
AST3-20B	20	M3-6 pan head	1.0 ~ 3.0	0.4	2.1 (1 piece)	4
AST4-10.5B	10.5	M4-8 pan head	1.0 ~ 3.5	0.8	2.6 (1 piece)	4
AST4-20B	20	M4-8 pan head	1.0 ~ 3.5	0.8	3.2 (1 piece)	4

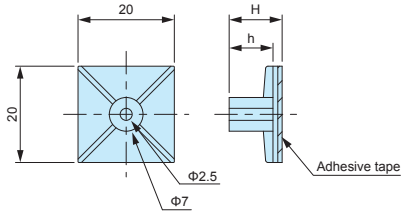
Bulk package

Product no	Pack of
AST2.5-5B-P	100
AST2.5-10B-P	100
AST3-6B-P	100
AST3-10B-P	100
AST3-15B-P	100
AST3-20B-P	100
AST4-10.5B-P	50
AST4-20B-P	50

- Base material / color : Nylon 66 (UL94V-2) / Black
- Nut • screw material / finish : Steel / Trivalent chromate
- Bulk packaging is available. See "Bulk package" column above.
- Screws are not included for bulk packages.

ASR series ADHESIVE PCB STANDOFF

ASR dimensions





- DXF/DWG/PDF drawings available on our website.

Technical Data
Recommended torque : 0.4N • m

- M3 tapping screw use adhesive standoff.
  Recommended to be used with EM-3 or EM-3-6
  self-tapping screws (See page 398).
- Please ensure that surface is cleaned and grease-free before adhering.
- Once removed, it cannot be adhered on again.

Product no. / Details

- Material / Color: Nylon 66 (UL94V-2) / Natural

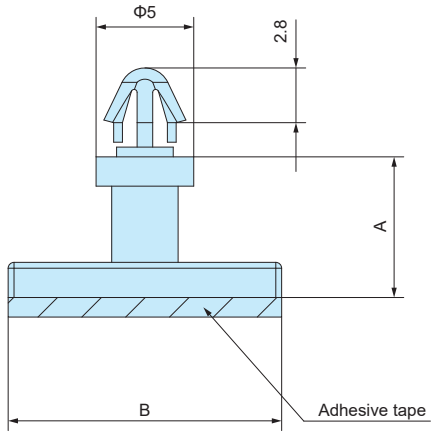
Product no	H	h	Weight (g)	Pack of
ASR- 5	5.1	3.1	0.9 (1 piece)	10
ASR- 6	6.4	4.4	1.0 (1 piece)	10
ASR- 7	7.2	5.1	0.9 (1 piece)	10
ASR- 8	8.1	6.3	0.9 (1 piece)	10
ASR- 9	9	7	1.0 (1 piece)	10
ASR-11	11	9	1.0 (1 piece)	10
ASR-13	12.7	10.7	1.2 (1 piece)	10
ASR-14.5	14.7	12.8	1.1 (1 piece)	10
ASR-16	15.9	13.9	1.3 (1 piece)	10
ASR-19	19.1	17.1	1.4 (1 piece)	10

ASL series LOCKING PCB ADHESIVE STANDOFF NEW

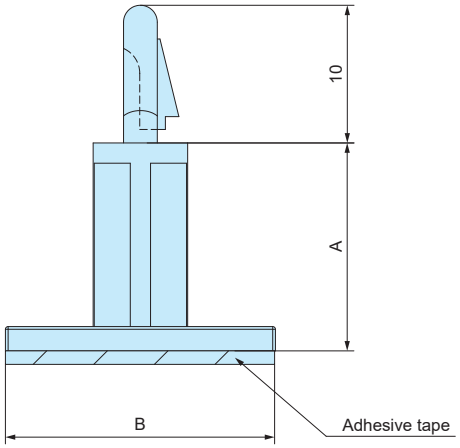


- Standoff for securing PCB by simply snapping it in.
- Adhesive standoff can be freely and easily affixed on.
- Once removed, it cannot be adhered on again.

ASL-3 ~ 12



ASL-15 & 19

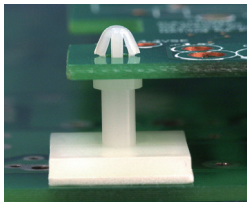


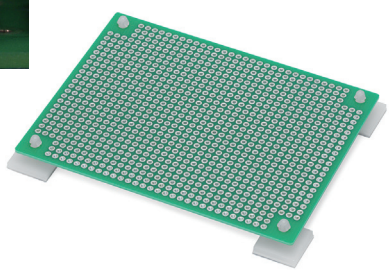
Product no. / Details

■ Material / Color : PA66 / Natural

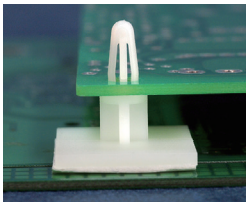
Product no.	A	B	Mounting hole	Mounting thickness	Weight (g)	Pack of
ASL- 3	2.7	□14	Φ3	1.2 ~ 1.6	0.5 (1 piece)	10
ASL- 4	4	□14	Φ3	1.2 ~ 1.6	0.5 (1 piece)	10
ASL- 6	5.6	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL- 7	7.2	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL- 9	9.2	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL-10	9.7	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL-12	11.9	□14	Φ3	1.2 ~ 1.6	0.6 (1 piece)	10
ASL-15	15.4	□20	Φ4	1.2 ~ 1.7	1.3 (1 piece)	10
ASL-19	18.5	□18	Φ4	1.2 ~ 2.0	1.4 (1 piece)	10

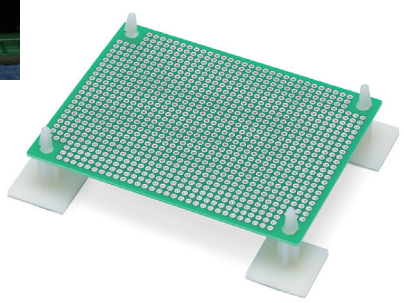
APPLICATION EXAMPLE : ASL-3 ~ 12





APPLICATION EXAMPLE : ASL-15 & 19





PMB-1 POLE MOUNTING BRACKET

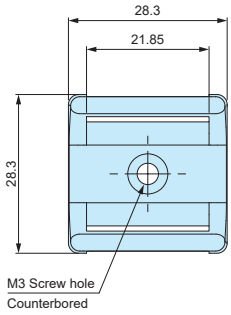


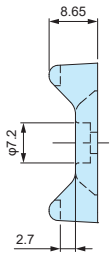


Installation example



■ DXF/DWG/PDF drawings available on our website.





- Small size pole mounting bracket suitable for indoor use.
- Installation screws (M3 size) are separately sold.
  See page HES • HOS • MT for compatible MT3-4 screws.
- Minimum applicable pole diameter is Φ35.
- Use SNB • PKB • SCT mounting belt to install onto a pole.

Product no. / Details

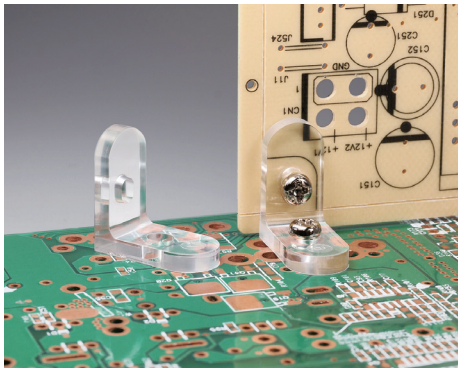
■ Material / Color : PA66+GF(UL94HB) / Black

Product no.	Maximum load (kg)	Weight (g)	Pack of
PMB-1	1	3 (1 piece)	2

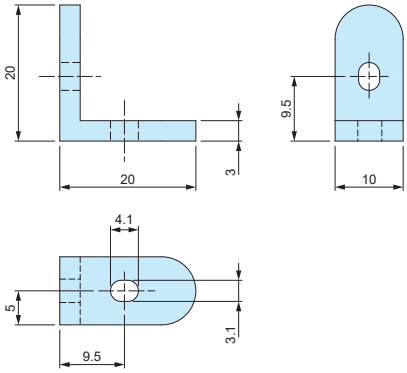
LPZA-1 RIGHT ANGLE PCB STANDOFF



Installation example



■ DXF/DWG/PDF drawings available on our website.



- Right angle standoff for mounting PCB vertically.
- Installation screws (M3 size) are separately sold.
  See page HES • HOS • MT for compatible MT3-8 screws.

Product no. / Details

Product no.	Material	Color	Weight (g)	Pack of
LPZA-1	PC (UL94V-2)	Transparent	1 (1 piece)	10

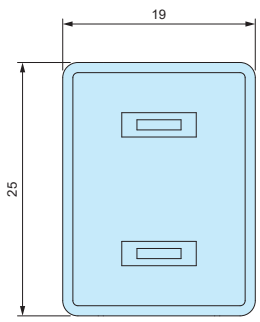
PLCC-3 POWER OUTLET PLUG COVER

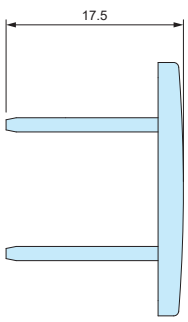
■ DXF/DWG/PDF drawings available on our website.



Installation example







- Plug cover for 100V outlet.

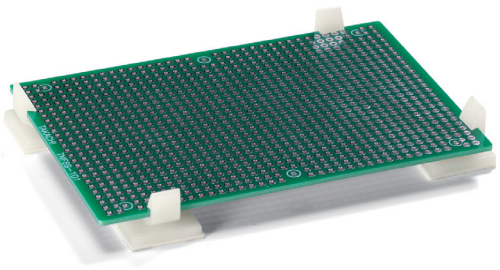
Product no. / Details

Product no.	Material	Color	Weight (g)	Pack of
PLCC-3	ABS (UL94HB)	Black	1 (1 piece)	5

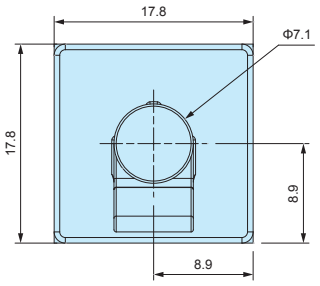
ULCK series SCREWLESS PCB ADHESIVE STANDOFF

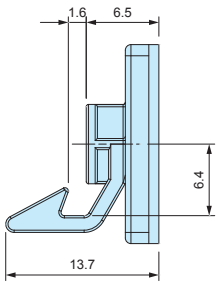


Application example



ULCK dimensions





■ DXF/DWG/PDF drawings available on our website.

- Securing of a 1.6mm thick PCB made easy by simply snapping it in.
- Adhesive standoff can be freely and easily affixed on.
- Once removed, it cannot be adhered on again.

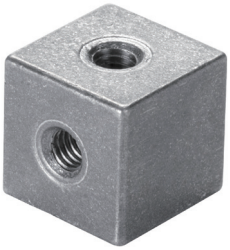
Product no. / Details ■ Material / Color : PA66 UL94V-2 / Natural

Product no.	Weight (g)	Pack of
ULCK-6.4	1.3 (1 pc)	4

CUBE series CUBE STANDOFF

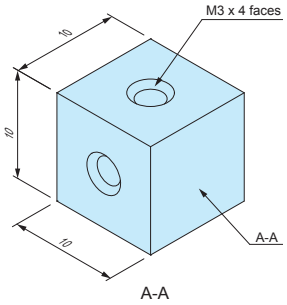
■ DXF/DWG/PDF/STP drawings available on our website.

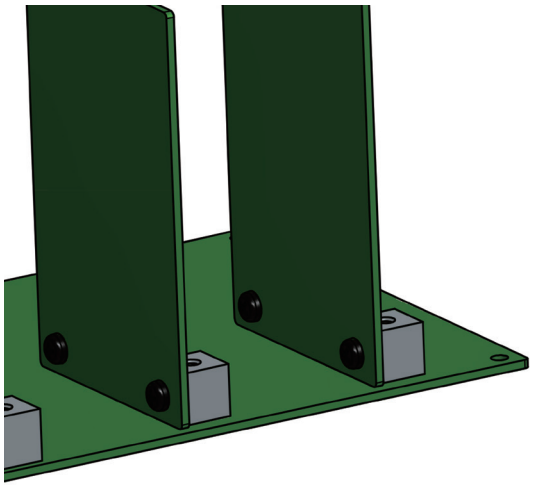
CUBE10-M3



CUBE10-M4







- 10mm threaded cube shape standoff with a thread on 4 faces.
- M3 and M4 thread models available.
- Coveniently usable when installing PCB or metal plate upright.
- CUBE can also be used to make a simple housing by vertically aligning the plates.

Product no. / Details ■ Zinc diecast : Glossy barrel finish

Product no.	Pack of
CUBE10-M3	2
CUBE10-M4	2
CUBE10-M3-P	20
CUBE10-M4-P	20

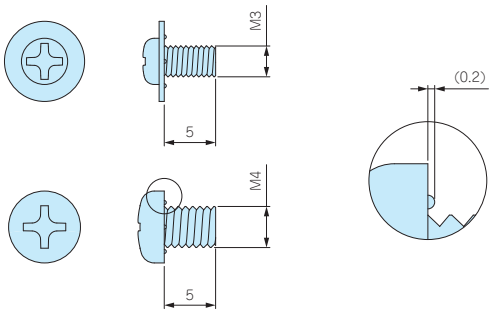
EV series CONDUCTIVE SCREW

NEW SIZE

Conductive



EV dimensions



Base material exposed after being shaved.



Example: Internal grounding use.



■ When tightened, protrusions on the underside of the screw head will shave away at the painted or anodized surface to expose the base material for achieving conductivity.

Product no. / Dimensions

Product no.	M	L	Material	Finish	Suitable series	Pack of
EV3-5S	3	5	Steel	Nickel plated	YM • MB • others	20
NEW EV-4S	4	5	Steel	Nickel plated	BDN • others	20

PLS • MTS • PM series CAPTIVE FASTENER • CAPTIVE SCREW

NEW SIZE

PLS-1G
Plastic fastener



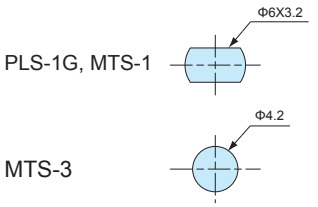
MTS-1
Metal fastener



MTS-3
Metal fastener



Hole layout for mounting



Product no. / Dimensions Fastener

Product no.	M	Material	Color / Finish	Pack of
PLS-1G	2.5	POM	White gray	50
MTS-1	2.5	Steel	Zinc plated	8
NEW MTS-3	2.5	Steel	Nickel plated	10

Conductive

PM-1□



PM-2□

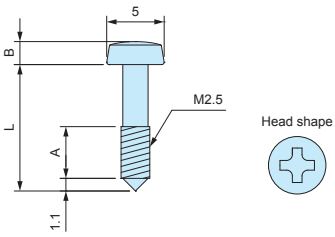


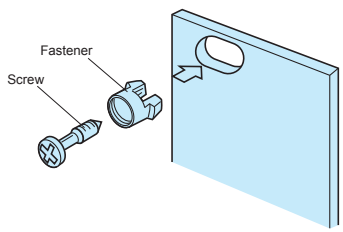
PM-3



PM dimensions

PM-1□ • PM-2□





Product no. / Dimensions Screw

Product no.	Material	Finish	L	A	B	Suitable screw driver	Pack of
PM-1B	Steel	Black trivalent chromate	10	4	1.5	#1	50
PM-1S	Steel	Chrome plated	10	4	1.5	#1	50
PM-2B	Steel	Black trivalent chromate	11	5	2	#2	50
PM-2S	Steel	Nickel plated	11	5	2	#2	50
NEW PM-3	Steel	Nickel plated	7	2.5	2	#2	50

BC series EMBEDDED BATTERY BOX

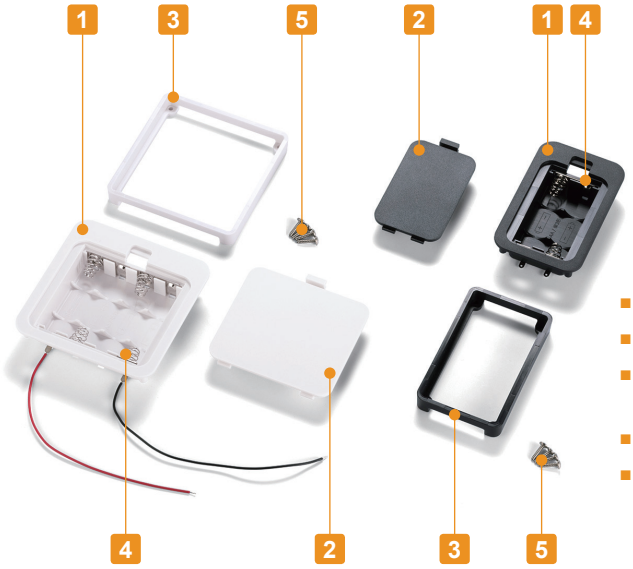
NEW



Technical Data
Operating temperature: -10°C ~ +60°C

Mount Example





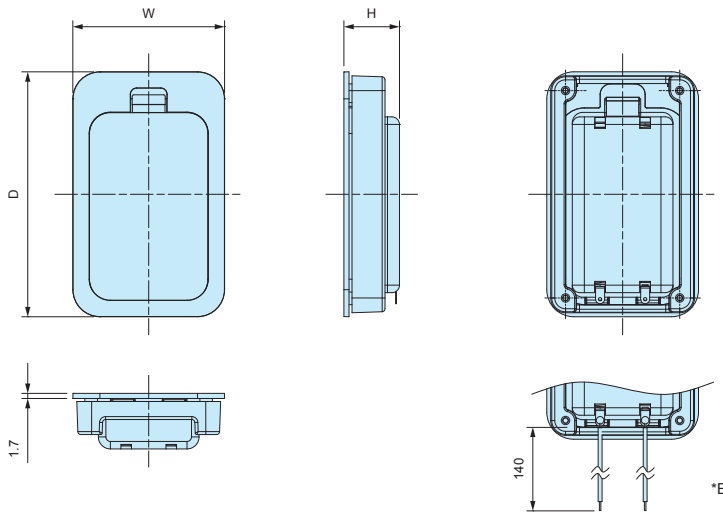
- Suitable to be installed into enclosures with material thickness of 1.0mm to 3.5mm.
- Cover can be opened/closed without any tool for easy battery replacement.
- 5 different battery layouts are available as AA x 2, AA x 3, AA x 4, AAA x 2 and AAA x4. Each layout comes in 2 models: with lead-wire, and without lead-wire.
- ⊕⊖markings prevents incorrect placement of battery.
- The dimensions of alkaline or manganese batteries may vary depending on country and brand. Use optional battery cushion sponge to preventing rattling.

Components

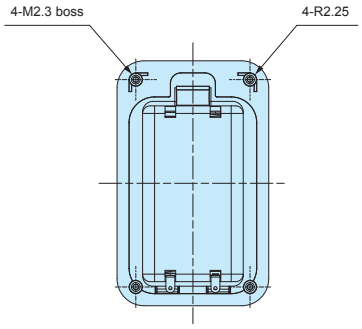
No.	Part name	Pcs	Material	Color / Finish
1	Box	1	ABS UL94V-0	Black • Off-white
2	Cover	1	ABS UL94V-0	Black • Off-white
3	Frame	1	ABS UL94V-0	Black • Off-white
4	Battery contact Lead wire (BC-L models)	1 set	Battery contact : Brass & steel wire Lead wire : PVC + Copper wire (UL1007 AWG26)	Nickel plated Black • Red
5	Self-tapping screw	4	Steel	Nickel plated

BC dimensions

- DXF/DWG/PDF/STP drawings available on our website.
- The shape and position of battery contacts vary by models.

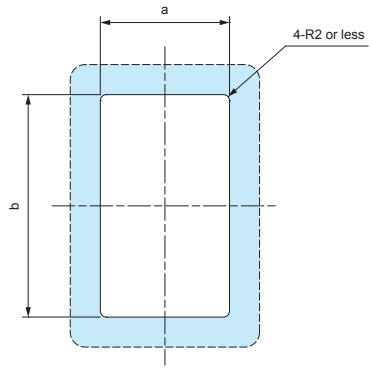


Back side of box



*Battery contact with lead wire for BC4-☐L and BC3-☐L models.

Hole layout for mounting



Suitable to be installed into enclosures with material thickness of 1.0mm to 3.5mm.

Type: Without Lead Wire

Product no. / Dimensions

Product no.		Dimensions					Battery layout	Weight (g)
● Black	● Off-white	W	H	D	a	b		
BC4-2-B	BC4-2-W	40	14.8	78.5	32.5	71	*AAA x 2	24.5
BC4-4-B	BC4-4-W	62	14.8	78.5	54.5	71	*AAA x 4	34.5
BC3-2-B	BC3-2-W	50.5	18.5	81.5	43	74	*AA x 2	31.5
BC3-3-B	BC3-3-W	65.5	18.5	81.5	58	74	*AA x 3	39
BC3-4-B	BC3-4-W	80.5	18.5	81.5	73	74	*AA x 4	46

*Alkaline or manganese batteries

Type: With Lead Wire

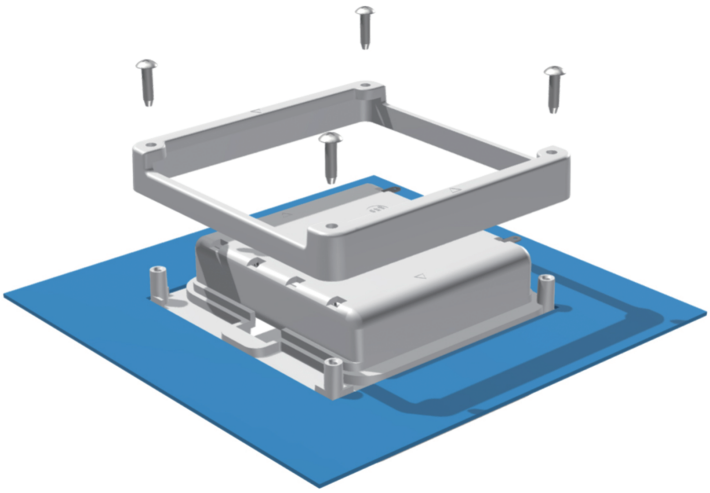
Product no. / Dimensions

Product no.		Dimensions					Battery layout	Weight (g)
● Black	● Off-white	W	H	D	a	b		
BC4-2L-B	BC4-2L-W	40	14.8	78.5	32.5	71	*AAA x 2	25.5
BC4-4L-B	BC4-4L-W	62	14.8	78.5	54.5	71	*AAA x 4	35.5
BC3-2L-B	BC3-2L-W	50.5	18.5	81.5	43	74	*AA x 2	32.5
BC3-3L-B	BC3-3L-W	65.5	18.5	81.5	58	74	*AA x 3	40
BC3-4L-B	BC3-4L-W	80.5	18.5	81.5	73	74	*AA x 4	47

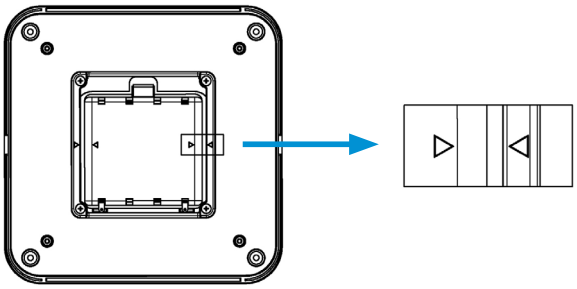
*Alkaline or manganese batteries

How to mount on the enclosures

■ Insert battery box into the milled hole first, and fit the frame on the back side. Once mounted, secure the frame with screws.



■ For BC3-4□ models, ▷ markings are shown on the frame. Install by matching the markings.



Parallel circuit conversion on BC series battery box

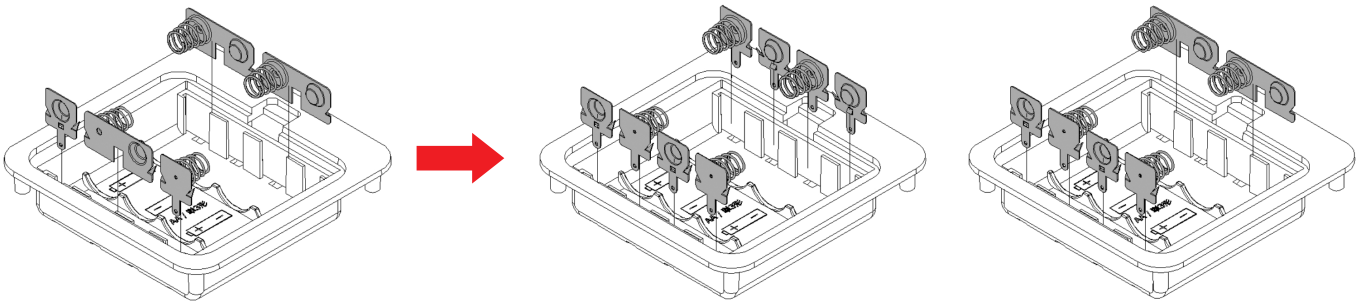
■ BC-3□ models can be converted from a series to a parallel circuit. See below illustration for further details.

■ IT series (IT-3 models) optional battery contacts can be used for parallel circuit conversion. (See website for more information)

■ Use caution when installing or replacing the terminals to avoid the damage to the material.

■ Parallel series conversion is available via our customization services.

Conversion Example

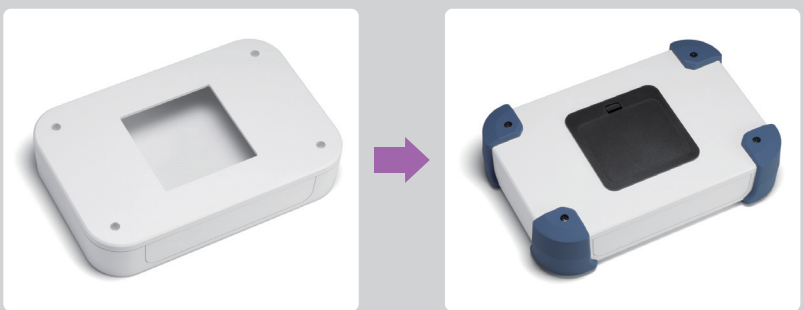


Series Circuit (Standard)

Parallel Circuit (4 batteries)

Parallel Circuit (2 batteries x 2)

Customization Available



For more information, contact us here:

Online form: https://www.takachi-enclosure.com/custom/form_custom
E-mail : sales@takachi-el.co.jp

Mount Example



■ BC series battery boxes can also be mounted on aluminium enclosures.

TAKACHI

Clinching Fastener

Self-clinching Standoff / Stud / Nut

Easy attaching of self-clinching fasteners into simple through-holes.

Need standoffs for mounting PCB/ Components in metallic enclosures.



Using threaded standoffs.



Self-clinching standoffs reduces assembly processes.

Need studs in/on aluminium enclosures.



A screw fastened with a nut and used as a stud.



Self-clinching stud makes for a flat and beautiful finish.

Need tough thread hole(s) on 1.0mm thick aluminium.



Using burred holes.



Self-clinching nuts provide tougher thread holes.

●A wide variety of self-clinching fasteners are available for selection.



ST・STS series

Self-clinching Standoffs
(Through-hole type)



SB・SBS series

Self-clinching Standoffs
(Blind type)



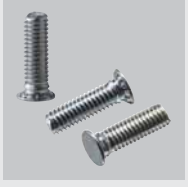
NM・NS series

Self-clinching nuts
(Round type)



NR series

Self-clinching nuts
(Hex type)



CS series

Self-clinching studs

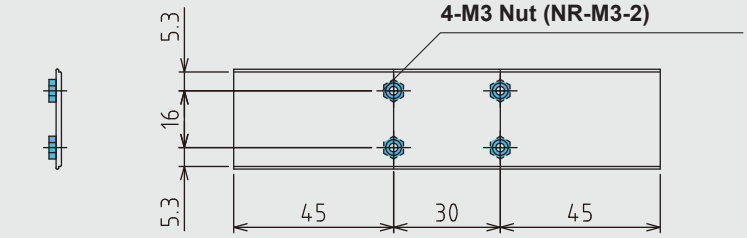


BN series

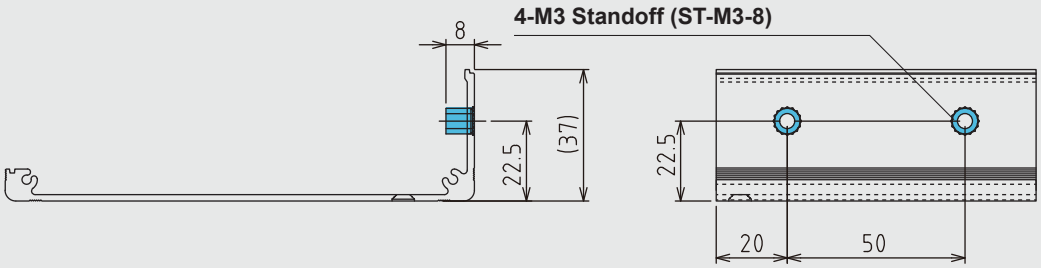
Self-clinching nuts
(Blind type)

●See "Thread and length size chart" on page clinching-3 to clinching-6. Kindly specify and put the relevant "Part #" in your drawings.

Example



Example



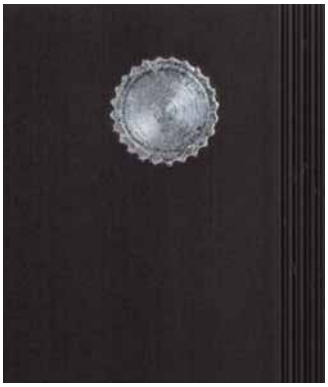
EXAMPLE







ST・STS Through-hole type



SB・SBS Blind type



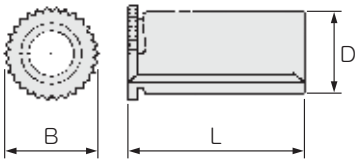
Thread and length size chart

NEW SIZE

ST·STS series — Standoffs (Through-hole type)



Drawing



Material : Steel / Trivalent zinc plated
Stainless steel / Passivated

For length (L) up to 12mm, it will be fully threaded.
For length (L) 13mm or longer, threading is only up to 10mm.

Stainless steel models are BTO (built-to-order) . New sizes.

All dimensions are in mm

Part # (Steel)	Part # (Stainless steel) for use with panel thickness t=1.0mm+	Part # (Stainless steel) for use with panel thickness t=0.8mm	Thread code	Thread pitch	D -0.08	B +/-0.2	L +/-0.1	Minimum sheet thickness	Hole size +0.08 / -0	*Minimum distance
ST-M2-6			M2	0.4	4.18	5.2	6	1.0	4.2	6.0
ST-M2-8							8			
ST-M2-10							10			
ST-M2-12							12			
ST-M2.5-6			M2.5	0.45	4.18	5.2	6	1.0	4.2	6.0
ST-M2.5-8							8			
ST-M2.5-10							10			
ST-M2.5-12							12			
ST-M3-3	STS-M3-3		M3	0.5	6.18	7.2	3	0.8-1.0	6.2	7.0
ST-M3-4	STS-M3-4						4			
ST-M3-5	STS-M3-5						5			
ST-M3-6	STS-M3-6	STS-M3-6-0.8					6			
ST-M3-7	STS-M3-7						7			
ST-M3-8	STS-M3-8	STS-M3-8-0.8					8			
ST-M3-9	STS-M3-9						9			
ST-M3-10	STS-M3-10	STS-M3-10-0.8					10			
ST-M3-11	STS-M3-11						11			
ST-M3-12	STS-M3-12	STS-M3-12-0.8					12			
ST-M3-13							13			
ST-M3-14							14			
ST-M3-15							15			
ST-M3-16							16			
ST-M3-17							17			
ST-M3-18							18			
ST-M3-20							20			
ST-M4-6	STS-M4-6		M4	0.7	7.18	8.2	6	1.0	7.2	8.0
ST-M4-7							7			
ST-M4-8	STS-M4-8						8			
ST-M4-9	STS-M4-9						9			
ST-M4-10	STS-M4-10						10			
ST-M4-12							12			
ST-M4-14							14			
ST-M4-16							16			
ST-M5-6			M5	0.8	7.18	8.2	6	1.0	7.2	8.0
ST-M5-8							8			
ST-M5-10							10			
ST-M5-12							12			

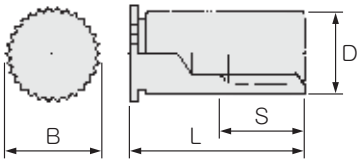
*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary.
Only available together with installation services. Not available separately.

Thread and length size chart

SB·SBS series — Standoffs (Blind type)



Drawing



Material : Steel / Trivalent zinc plated
Stainless steel / Passivated

All dimensions are in mm

Part # (Steel)	Part # (Stainless steel)	Thread code	Thread pitch	D -0.08	B +/-0.2	L +/-0.1	Minimum S	Min. sheet thickness	Hole size +0.08 / -0	*Minimum distance
SB-M2-6		M2	0.4	4.18	5.2	6	3	1.0	4.2	6.0
SB-M2-8						8	4			
SB-M2-10						10	4			
SB-M2-12						12	5			
SB-M2.5-6		M2.5	0.45	4.18	5.2	6	3	1.0	4.2	6.0
SB-M2.5-8						8	4			
SB-M2.5-10						10	4			
SB-M2.5-12						12	5			
SB-M3-6	SBS-M3-6	M3	0.5	6.18	7.2	6	3	1.0	6.2	7.0
SB-M3-7	SBS-M3-7					7	3			
SB-M3-8	SBS-M3-8					8	4			
SB-M3-9	SBS-M3-9					9	4			
SB-M3-10	SBS-M3-10					10	4			
SB-M3-11						11	4			
SB-M3-12	SBS-M3-12					12	5			
SB-M3-13						13	5			
SB-M3-14	SBS-M3-14					14	6.5			
SB-M3-15						15	6.5			
SB-M3-16	SBS-M3-16					16	6.5			
SB-M3-17						17	6.5			
SB-M3-18						18	9.5			
SB-M3-20						20	9.5			
SB-M4-6	SBS-M4-6	M4	0.7	7.18	8.2	6	3	1.0	7.2	8.0
SB-M4-7						7	3			
SB-M4-8	SBS-M4-8					8	4			
SB-M4-9						9	4			
SB-M4-10	SBS-M4-10					10	4			
SB-M4-12						12	5			
SB-M4-14						14	6.5			
SB-M4-16						16	6.5			
SB-M5-8		M5	0.8	7.18	8.2	8	4	1.0	7.2	8.0
SB-M5-10						10	4			
SB-M5-12						12	5			

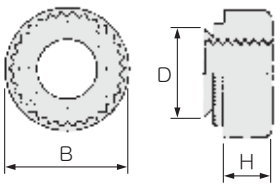
*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary.
Only available together with installation services. Not available separately.

Thread and length size chart

NM·NS series — Nuts (Round through-hole type)



Drawing



Material : Steel / Trivalent zinc plated
Stainless steel / Passivated

All dimensions are in mm

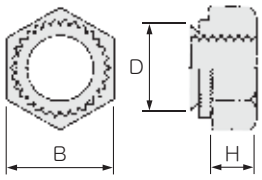
Part # (Steel)	Part # (Stainless steel)	Thread code	Thread pitch	Maximum D	B +/-0.2	H +/-0.1	Min. sheet thickness	Hole size +0.08 / -0	*Minimum distance
NM-M2-1		M2	0.4	4.22	6.3	1.5	1.0	4.25	4.8
NM-M2.5-1		M 2.5	0.45	4.22	6.3	1.5	1.0	4.25	4.8
NM-M2.5-2							1.4		
NM-M3-1	NS-M3-1	M3	0.5	4.22	6.3	1.5	1.0	4.25	4.8
NM-M3-2							1.4		
NM-M4-1	NS-M4-1	M4	0.7	5.38	7.9	2.0	1.0	5.4	6.9
NM-M4-2							1.4		
NM-M5-1	NS-M5-1	M5	0.8	6.38	8.7	2.0	1.0	6.4	7.1
NM-M5-2							1.4		

*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary.
Only available together with installation services. Not available separately.

NR series — Nuts (Hex through-hole type)



Drawing



Material : Steel / Trivalent zinc plated

All dimensions are in mm

Part #	Thread code	Thread pitch	Maximum D	B -0.2	H +/-0.1	Min. sheet thickness	Hole size +0.08 / -0	*Minimum distance
NR-M2-1	M2	0.4	4.45	5.5	2.0	1.0	4.5	4.5
NR-M2.5-1	M 2.5	0.45	4.45	5.5	2.0	1.0	4.5	4.5
NR-M3-1	M3	0.5	4.45	5.5	2.0	1.0	4.5	4.5
NR-M3-2						1.4		
NR-M4-1	M4	0.7	5.45	7.0	2.2	1.0	5.5	5.5
NR-M4-2						1.4		
NR-M5-1	M5	0.8	6.45	8.0	3.0	1.0	6.5	6.5
NR-M5-2						1.4		

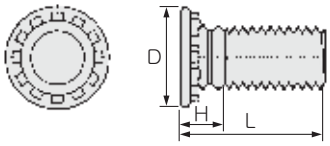
*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary.
Only available together with installation services. Not available separately.

Thread and length size chart

CS series — Studs (Flush-head type)



Drawing



Material : Steel / Trivalent zinc plated

All dimensions are in mm

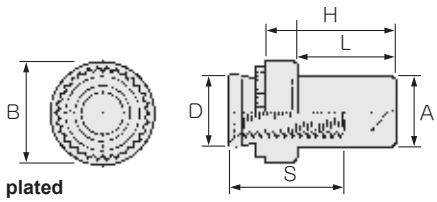
Part #	Thread code	Thread pitch	D +/-0.4	Maximum H	L +/-0.4	Min. sheet thickness	Hole size +0.08 / -0	*Minimum distance
CS-M3-8	M3	0.5	4.6	2.1	8	t1.0	3.0	5.6
CS-M3-10					10			
CS-M3-12					12			
CS-M3-15					15			
CS-M4-8	M4	0.7	5.9	2.4	8	t1.0	4.0	7.2
CS-M4-10					10			
CS-M4-12					12			
CS-M4-15					15			

*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary. Only available together with installation services. Not available separately.

BN series — Nuts (Blind type)



Drawing



Material : Steel / Trivalent zinc plated



A specialized press machine for clinching is utilized to ensure that the standoffs / studs / nuts are securely attached.

All dimensions are in mm

Part #	Thread code	Thread pitch	Maximum D	Maximum A	B +/-0.25	Minimum S	H +/-0.25	Min. sheet thickness	Hole size +0.08 / -0	*Minimum distance
BN-M3-1	M3	0.5	4.22	3.8	6.35	5.3	9.6	1.0	4.25	4.8
BN-M3-2								1.4		
BN-M4-1	M4	0.7	5.38	5.2	7.95	6.8	11.2	1.0	5.4	6.9
BN-M4-2								1.4		

*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary. Only available together with installation services. Not available separately.

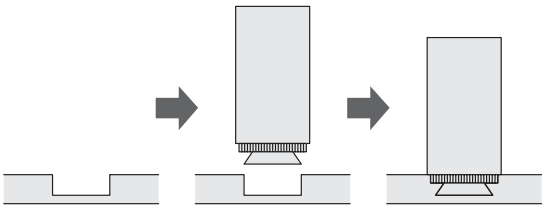
Clinching fastener

Concealed-head Self-clinching Standoffs (Non-through-hole type)

**Installed into recessed pockets so that one side of the panel remains unmarred.
Standoffs can be mounted onto 1.5mm or thicker material without requiring a through-hole to be milled.
Concealed-head standoffs/studs ensure that the IP rating (if the enclosure is a waterproof series) is maintained.**



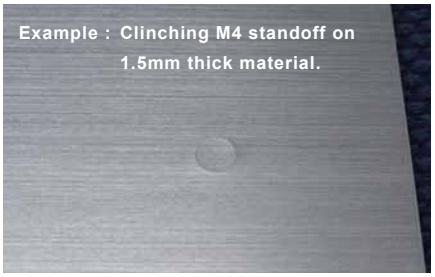




Concealed-head standoffs/studs give an aesthetically better finish on the enclosure.
A recess cut is made on the internal side, and the standoffs are press-inserted in.

Mounting Mark Visibility

板厚	取付跡	
	M3	M4
1.5㎜	△	×
2.0㎜	◎	○
2.5㎜	◎	◎
3.0㎜～	◎	◎



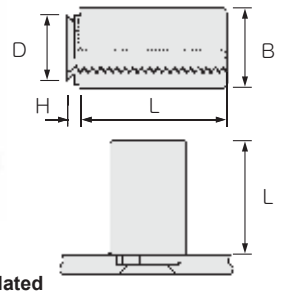
Mounting is possible on 1.5mm thick material.
Mounting mark would be almost invisible on 2.5mm or thicker material.

◎ Almost invisible
○ Barely visible
△ Somewhat visible
× Very visible

MK series Concealed-head Clinching Standoffs

Drawing





Material : Steel / Nickel plated

All dimensions are in mm

Part #	Thread code	Thread pitch	Maximum D	B +/-0.1	H +0 -0.1	L +/-0.1	Min. sheet thickness	Hole size +0.08 / -0	*Minimum distance
MK-M3-3	M3	0.5	4.45	6.0	0.95	3	1.5	4.5	4.5
MK-M3-4						4			
MK-M3-5						5			
MK-M3-6						6			
MK-M3-7						7			
MK-M3-8						8			
MK-M3-9						9			
MK-M3-10						10			
MK-M3-11						11			
MK-M3-12						12			
MK-M4-3	M4	0.7	5.45	8.0	0.95	3	1.5	5.5	5.5
MK-M4-4						4			
MK-M4-5						5			
MK-M4-6						6			
MK-M4-7						7			
MK-M4-8						8			
MK-M4-10						10			
MK-M4-12						12			
MK-M4-14						14			

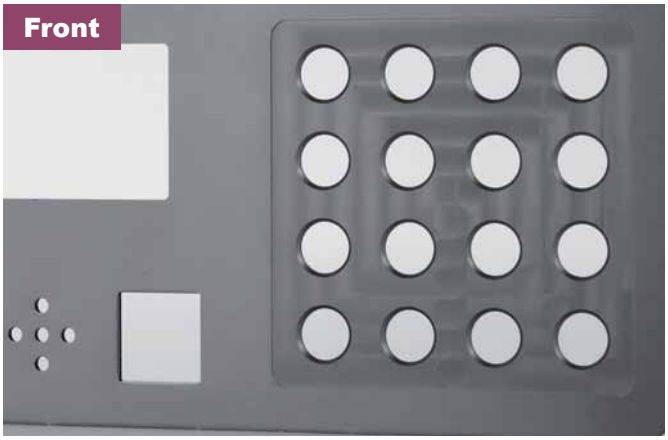
*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary.
Only available together with installation services. Not available separately.

Aluminium stud welding

Welded Fasteners

Welded fasteners on aluminium objects.
Standoffs and studs with little surface weld marks can be achieved.

Front

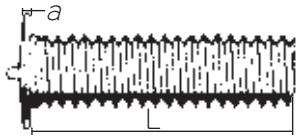


Back



Weld marks may be more visible on plates thinner than 2.0mm.

Studs



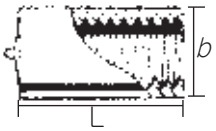
Material : Aluminium

All dimensions are in mm

Part #	Thread code	Thread pitch	a	L +/-0.2	*Minimum distance
AMS-M3-8	M3	0.5	0.8 ± 0.1	8	7.0
AMS-M3-10				10	
AMS-M3-12				12	
AMS-M3-15				15	
AMS-M4-8	M4	0.7	0.8 ± 0.1	8	7.0
AMS-M4-10				10	
AMS-M4-12				12	
AMS-M4-15				15	

*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary.

Standoffs



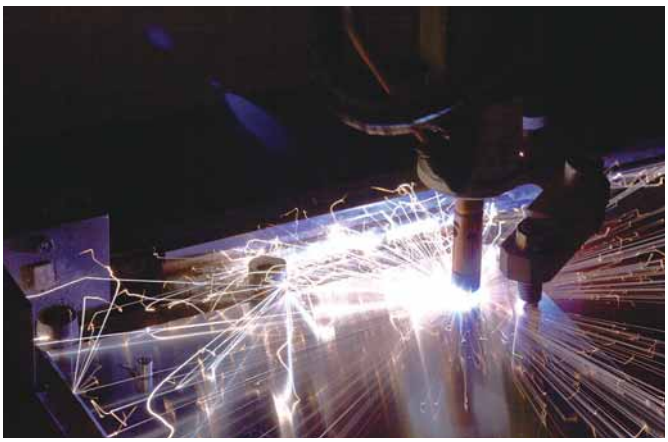
Material : Aluminium

All dimensions are in mm

Part #	Thread code	Thread pitch	b	L +/-0.2	Available screw length	*Minimum distance
AFS-M3-5	M3	0.5	6	5	2.0	7.0
AFS-M3-6				6	2.5	
AFS-M3-7				7	3.5	
AFS-M3-8				8	4.5	
AFS-M3-9				9	5.5	
AFS-M4-8	M4	0.7	8	8	3.5	7.0
AFS-M4-10				10	5.5	
AFS-M4-12				12	7.5	

*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary.

Welding



Example



Stainless steel and steel weld fasteners are also available. Please inquire for more details.

Only available together with installation services. Not available separately.

Insert Nuts and Heliserts (for plastic)

Inserts for plastic

Simple and easy way for stable fastening.
Simply insert the nuts into the bosses, and it will be refastenable.

LINE-UP

Press-in inserts



Material : Brass / Unfinished

Part #	Size	Hole size in bosses	Length (mm)
SP-M3	M3×0.5P	8 ~ 10	5.3
SP-M4	M4×0.7P	9.5 ~ 12	7.4
SP-M5	M5×0.8P	12 ~ 14	8.3

Threaded inserts



Material : Brass / Nickel plated

Part #	Size	Hole size in bosses	Length (mm)
IRB-2603S	M2.6×0.45P	5.5 ~ 6	3.0
IRB-304S	M3×0.5P	5.5 ~ 6	4.0
IRB-404S	M4×0.7P	6 ~ 10	4.0

Heliserts



Material : Stainless steel / Unfinished

Part #	Size	Hole size in bosses	Length (mm)
2TNM-M2	M2×0.4P	4 ~ 5	2.0
2TMN-M2.6	M2.6×0.45P	4.8 ~ 6	2.6
2TMN-M3	M3×0.5P	4.8 ~ 6	3.0

●Comparison chart

Point \ Method	Press-in inserts	Threaded inserts	Heliserts
Strength	○	◎	◎
Cost	◎	▲	▲
Boss size	▲	○	◎

◎ : Excellent ○ : Good ▲ : Average

EXAMPLE

Press-in inserts



Threaded inserts



Heliserts

