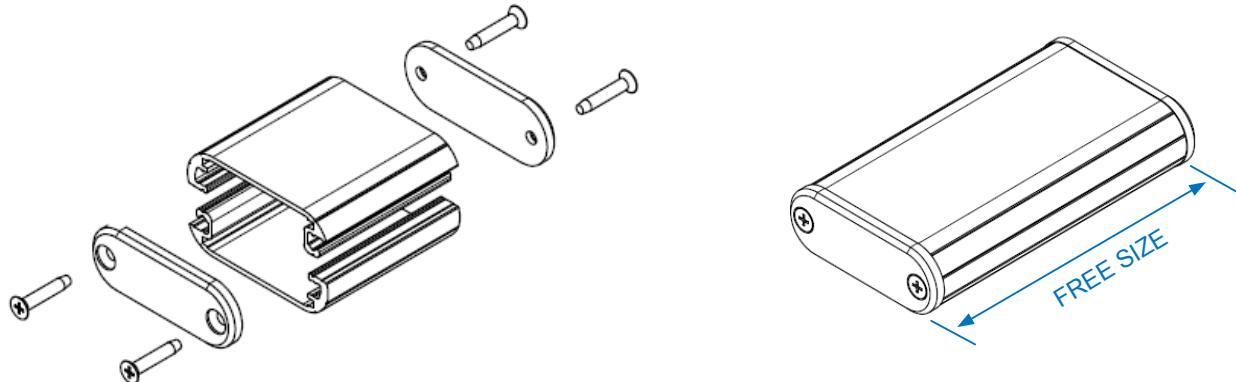


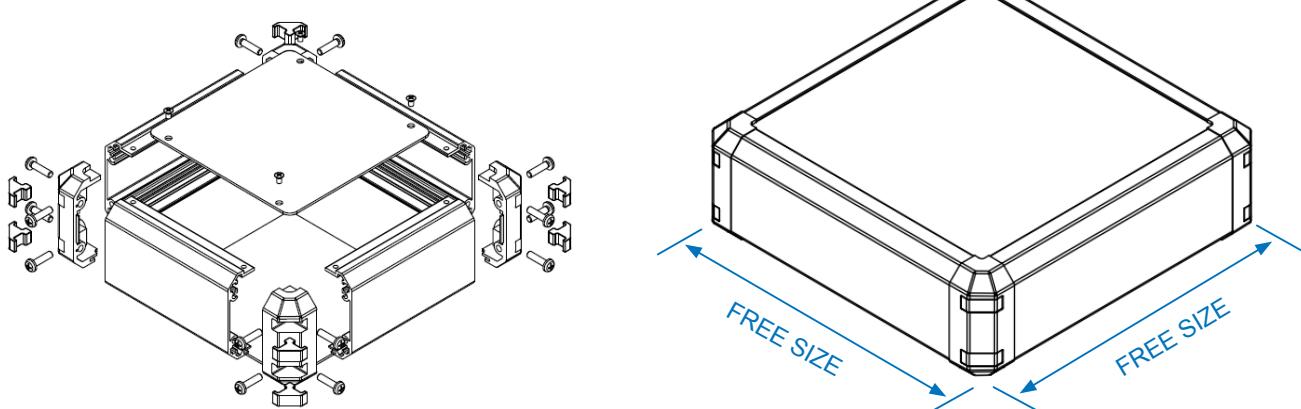
VARIETY OF CUSTOM SIZED ENCLOSURES

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.

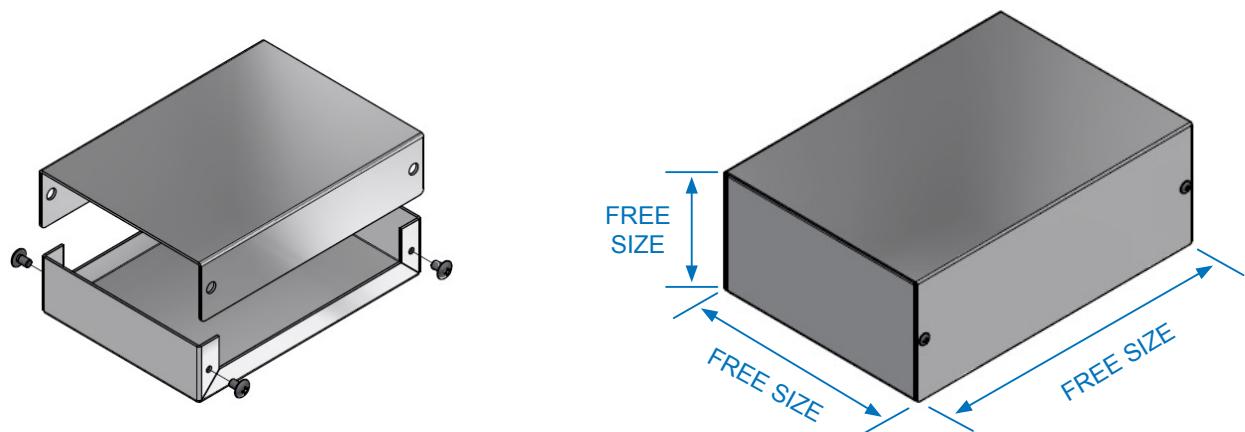
EXTRUDED ALUMINIUM MODEL



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.



CUSTOM SIZE WEB QUOTATION

3D View - Silver/Navy

3D View - 16 color types

3D View - With tilt legs

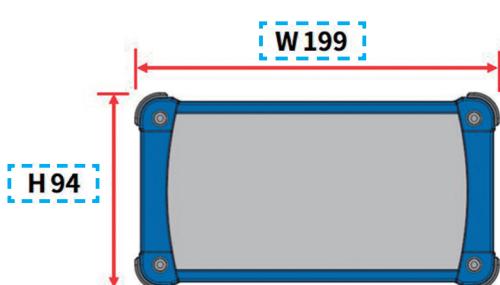
Exploded view

Color code

- 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
<input type="checkbox"/>	69	34
<input type="checkbox"/>	69	44
<input type="checkbox"/>	69	59
<input type="checkbox"/>	89	39
<input type="checkbox"/>	89	49
<input type="checkbox"/>	89	64
<input type="checkbox"/>	116	41
<input type="checkbox"/>	116	56
<input type="checkbox"/>	116	71
<input type="checkbox"/>	151	46
<input type="checkbox"/>	151	61

Select	W	H
<input type="checkbox"/>	151	81
<input type="checkbox"/>	151	101
<input type="checkbox"/>	199	56
<input type="checkbox"/>	199	74
<input checked="" type="checkbox"/>	199	94
<input type="checkbox"/>	199	119
<input type="checkbox"/>	244	64
<input type="checkbox"/>	244	89
<input type="checkbox"/>	244	114
<input type="checkbox"/>	300	90
<input type="checkbox"/>	300	140

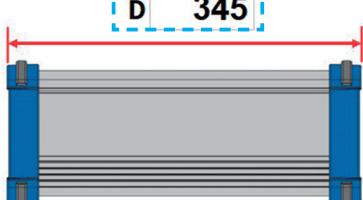
STEP2 Specify size D(depth) ... Enter dimensions in 1mm intervals.

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

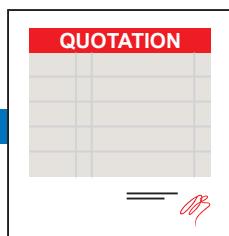
Product No.	EXPS199-94-345SN	Quantity ★	10
E-mail ★	<input type="text" value="jiro@takachi-el.co.jp"/>		
Company ★	<input type="text" value="TAKACHI ELECTRONICS ENCLOSURE CO., LTD."/>		
Your name ★	<input type="radio"/> Mr. <input checked="" type="radio"/> Ms.	First name	<input type="text" value="Jiro"/>
Country ★	<input type="text"/>		
<p>I would like a quote for 10 pieces of EXPS199-94-345SN.</p> <p>Message</p>			



 **CONFIRM**

Our privacy policy have been designed to ensure that personal information is not misused or used for purposes 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.



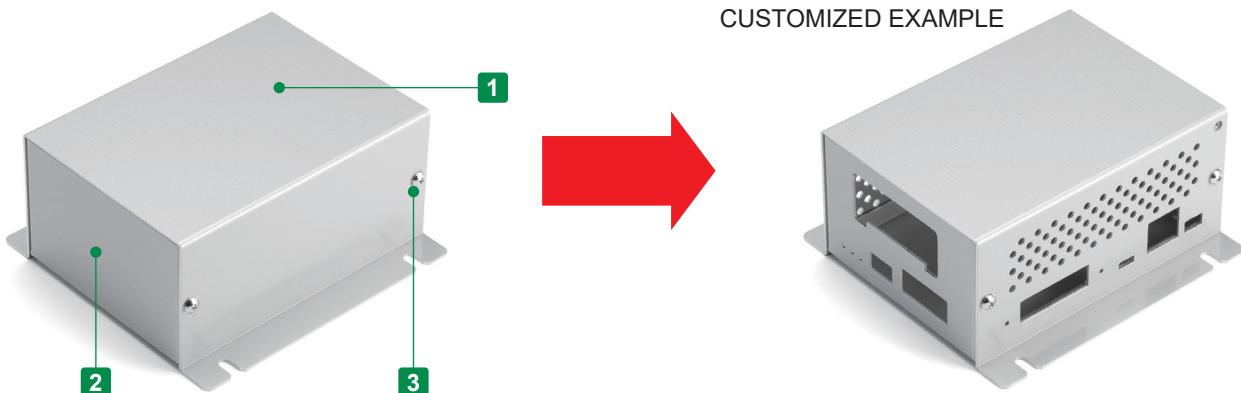
MBCF SERIES

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.

CUSTOMIZED EXAMPLE

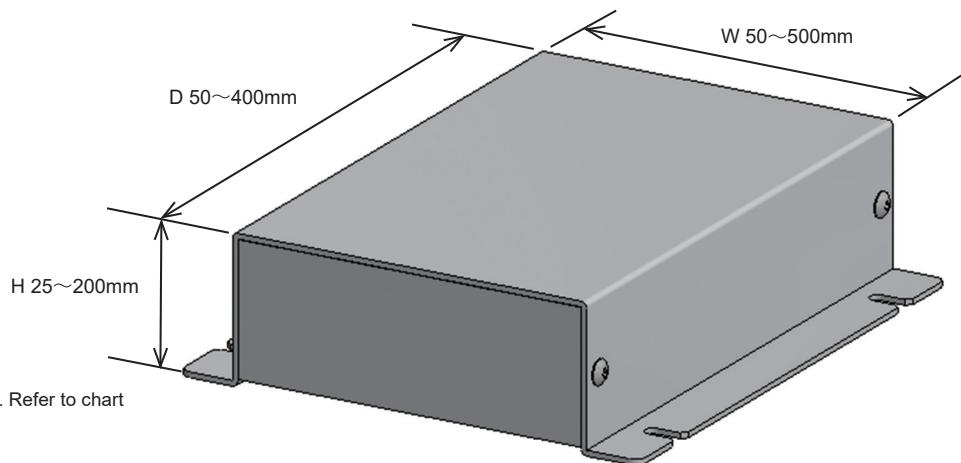


Components

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.

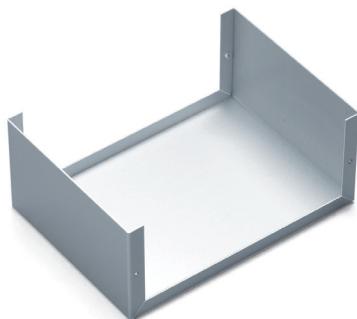
■ Panel thickness and base types vary by W / H / D dimensions.

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



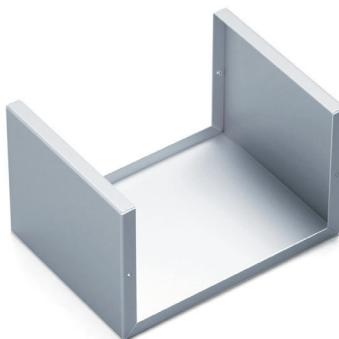
Base Type B

[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.

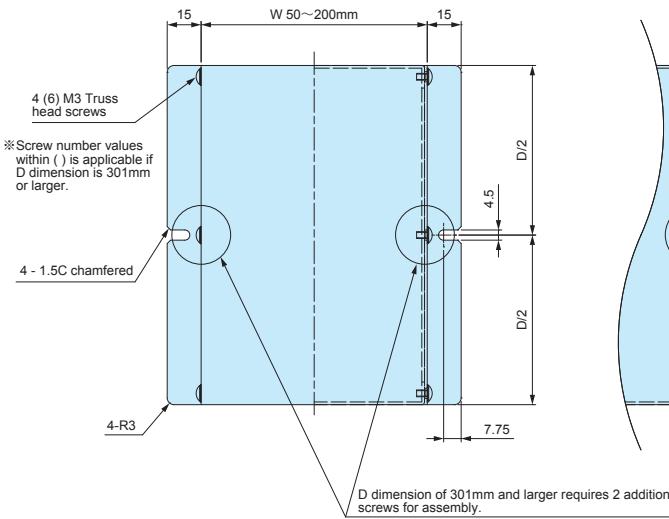
W	H	D	4x fixing screw points										6x fixing screw points				
			50~74	75~99	100~125	126~150	151~175	176~200	201~225	226~250	251~275	276~300	301~325	326~350	351~375	376~400	
50~99	25~35	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	
	36~50	—	A12	A12	A12	A12	A12	A12	A12	A12	A12	A12	B12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

MBCF dimensions

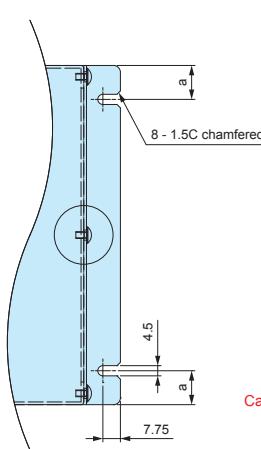
[A12] Type

Standard • Panel thickness : 1.2mm

2-hole flange type

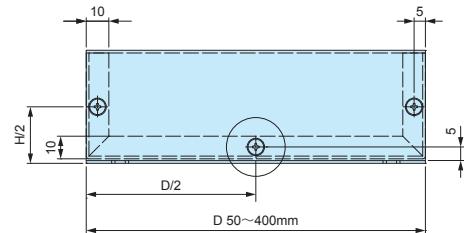
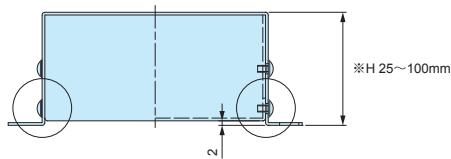


4-hole flange type



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

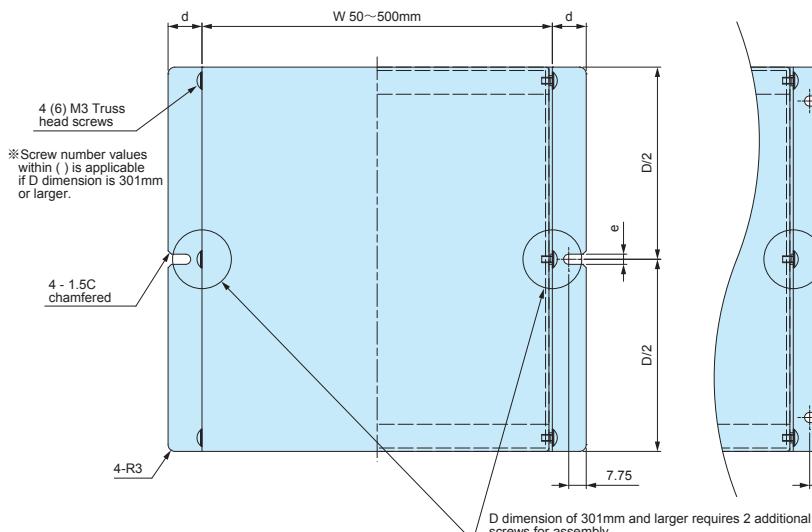
Caution : Refer to the available dimensions on the chart.



[B12] Type

Reinforced • Panel thickness : 1.2mm

2-hole flange type



[B15] Type

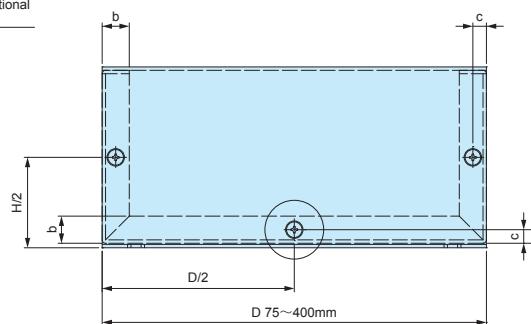
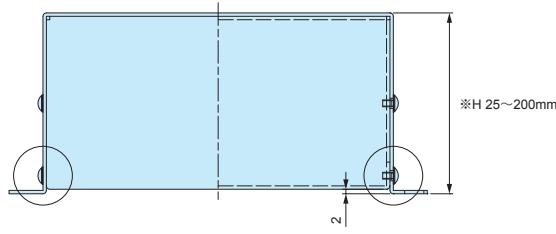
Reinforced • Panel thickness : 1.5mm

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.



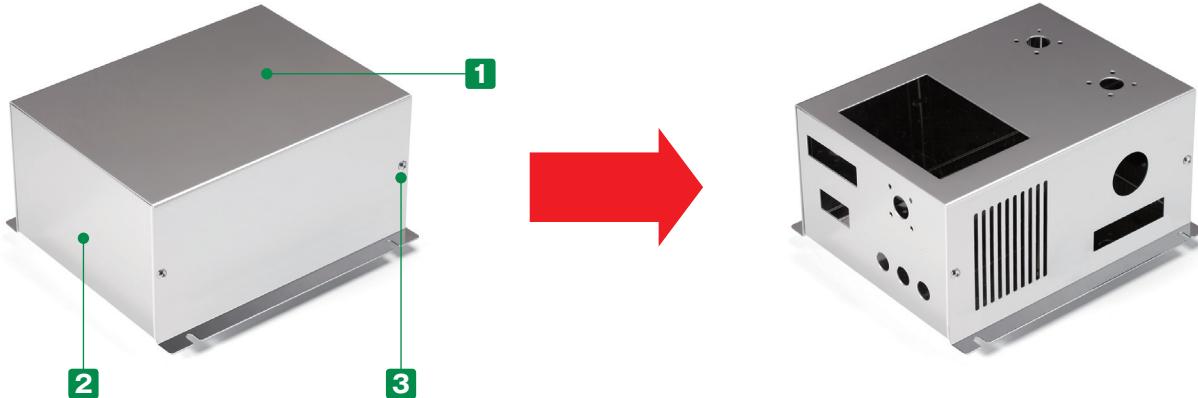
MBSF SERIES

CUSTOM SIZED FLANGED STAINLESS STEEL ENCLOSURE



- Adjustable sizes available in 1mm intervals, with W dimensions from 50 ~ 500mm, D dimensions from 50 ~ 400mm, and H dimensions from 20 ~ 250mm.
- Wall mount flange holes available in 2 models: 2-hole, and 4-hole types.
- SUS304 stainless steel allows the enclosure to be conductive.

CUSTOMIZED EXAMPLE

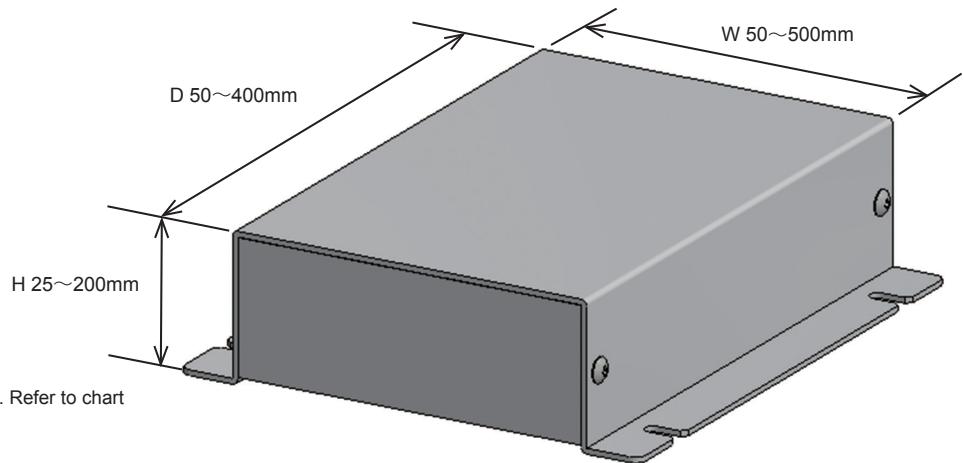


Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Stainless steel SUS304	Bright annealed (BA)
2	Base	1	Stainless steel SUS304	Bright annealed (BA)
3	Screw (Truss M3-5)	4 or 6	Stainless steel	Unfinished

1 Specify Dimensions

Specify dimensions in 1mm intervals.



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

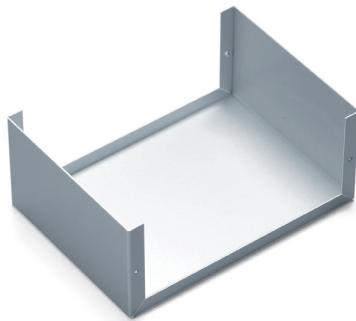
■ Panel thickness and base types vary by W / H / D dimensions.

Refer to the chart on page MBS-3 for A08, B10 or B12 type selection by W, H & D dimensions.

Base Type A

[A10] Type

W : 200 • H : 100 • D : 400 or smaller
Type A : Standard • Panel thickness : 1.0mm



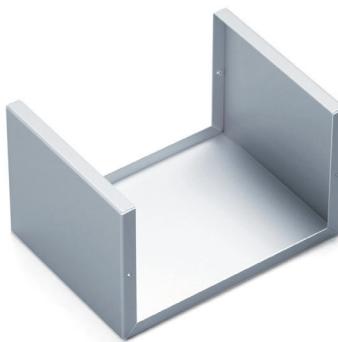
Base Type B

[B10] Type

W : 300 • H : 200 • D : 400 or smaller
Type B : Reinforced • Panel thickness : 1.0mm

[B12] Type

W : 500 • H : 200 • D : 400 or smaller
Type B : Reinforced • Panel thickness : 1.2mm



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. MBSF

155	-	80	-	200	A	10	-	4
W		H		D	Base type	Panel thickness		Flange hole

Example : W = 155 mm, H = 80 mm, D = 200 mm, A base type in panel thickness of 1.0mm, 4 flange holes

Lead time

Custom Size Only
Custom Size + Hole Milling

9 business days (1 ~ 3 pcs)
10 business days (1 ~ 3 pcs)

Order Inquiry

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

MBSF Type Chart

Refer to the below chart for A10, B10 or B12 type selection by W, H & D dimensions.

[A10] Type	Standard • Panel thickness : 1.0mm
[B10] Type	Reinforced • Panel thickness : 1.0mm
[B12] Type	Reinforced • Panel thickness : 1.2mm

■ [—] sizes are not available.

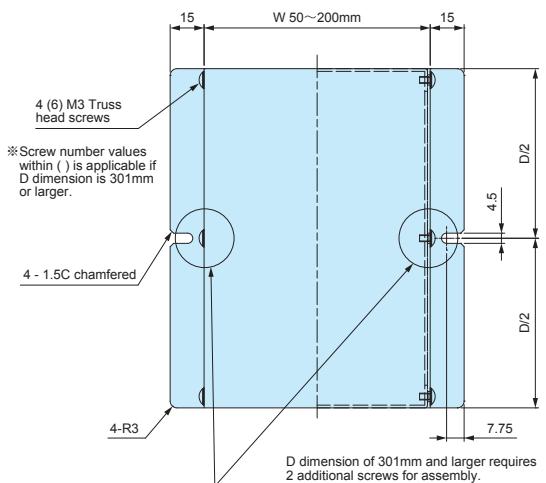
W	H	D	4x fixing screw points										6x fixing screw points			
			50~74	75~99	100~125	126~150	151~175	176~200	201~225	226~250	251~275	276~300	301~325	326~350	351~375	376~400
50~99	25~35	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10
	36~50	—	A10	A10	A10	A10	A10	A10	A10	A10	A10	A10	B10	B10	B10	B10
100~150	25~29	—	A10	A10	A10	A10	A10	A10	B10	B10	B10	B10	—	—	—	—
	30~50	—	A10	A10	A10	A10	A10	A10	B10	B10	B10	B10	B12	B12	B12	B12
	51~75	—	—	A10	A10	A10	A10	A10	B10	B10	B10	B10	B12	B12	B12	B12
	76~100	—	—	—	A10	A10	A10	A10	B10	B10	B10	B10	B12	B12	B12	B12
151~200	25~29	—	A10	A10	A10	A10	A10	A10	B10	B10	B10	B10	—	—	—	—
	30~50	—	A10	A10	A10	A10	A10	A10	B10	B10	B10	B10	B12	B12	B12	B12
	51~75	—	—	B10	B10	B10	B10	B10	B10	B10	B10	B10	B12	B12	B12	B12
	76~100	—	—	—	B10	B12	B12	B12	B12							
	101~125	—	—	—	—	B10	B12	B12	B12	B12						
	126~150	—	—	—	—	—	B10	B10	B10	B10	B10	B10	B12	B12	B12	B12
201~250	25~29	—	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	—	—	—	—
	30~50	—	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	B12	B12	B12	B12
	51~75	—	—	B10	B10	B10	B10	B10	B10	B10	B10	B10	B12	B12	B12	B12
	76~100	—	—	—	B10	B12	B12	B12	B12							
	101~125	—	—	—	—	B10	B12	B12	B12	B12						
	126~150	—	—	—	—	—	B10	B10	B10	B10	B10	B10	B12	B12	B12	B12
	151~175	—	—	—	—	—	—	B10	B10	B10	B10	B10	B12	B12	B12	B12
	176~200	—	—	—	—	—	—	—	B10	B10	B10	B10	B12	B12	B12	B12
251~300	25~29	—	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	—	—	—	—
	30~50	—	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	B12	B12	B12	B12
	51~75	—	—	B10	B10	B10	B10	B10	B10	B10	B10	B10	B12	B12	B12	B12
	76~100	—	—	—	B10	B12	B12	B12	B12							
	101~125	—	—	—	—	B10	B12	B12	B12	B12						
	126~150	—	—	—	—	—	B10	B10	B10	B10	B10	B10	B12	B12	B12	B12
	151~175	—	—	—	—	—	—	B10	B10	B10	B10	B10	B12	B12	B12	B12
	176~200	—	—	—	—	—	—	—	B10	B10	B10	B10	B12	B12	B12	B12
301~350	30~50	—	—	—	B12	B12	B12	B12								
	51~75	—	—	—	B12	B12	B12	B12								
	76~100	—	—	—	—	B12	B12	B12	B12							
	101~125	—	—	—	—	B12	B12	B12	B12							
	126~150	—	—	—	—	—	B12	B12	B12	B12						
	151~175	—	—	—	—	—	—	B12	B12	B12	B12	B12	B12	B12	B12	B12
	176~200	—	—	—	—	—	—	—	B12	B12	B12	B12	B12	B12	B12	B12
	30~50	—	—	—	B12	B12	B12	B12								
351~400	51~75	—	—	—	B12	B12	B12	B12								
	76~100	—	—	—	—	B12	B12	B12	B12							
	101~125	—	—	—	—	B12	B12	B12	B12							
	126~150	—	—	—	—	—	B12	B12	B12	B12						
	151~175	—	—	—	—	—	—	B12	B12	B12	B12	B12	B12	B12	B12	B12
	176~200	—	—	—	—	—	—	—	B12	B12	B12	B12	B12	B12	B12	B12
	30~50	—	—	—	B12	B12	B12	B12								
	51~75	—	—	—	B12	B12	B12	B12								
401~450	76~100	—	—	—	—	B12	B12	B12	B12							
	101~125	—	—	—	—	B12	B12	B12	B12							
	126~150	—	—	—	—	—	B12	B12	B12	B12						
	151~175	—	—	—	—	—	—	B12	B12	B12	B12	B12	B12	B12	B12	B12
	176~200	—	—	—	—	—	—	—	B12	B12	B12	B12	B12	B12	B12	B12
	30~50	—	—	—	B12	B12	B12	B12								
	51~75	—	—	—	B12	B12	B12	B12								
	76~100	—	—	—	—	B12	B12	B12	B12							
451~500	101~125	—	—	—	—	B12	B12	B12	B12							
	126~150	—	—	—	—	—	B12	B12	B12	B12						
	151~175	—	—	—	—	—	—	B12	B12	B12	B12	B12	B12	B12	B12	B12
	176~200	—	—	—	—	—	—	—	B12	B12	B12	B12	B12	B12	B12	B12

MBSF dimensions

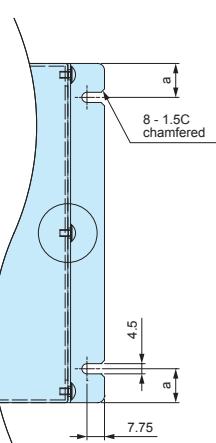
[A10] Type

Standard • Panel thickness : 1.0mm

2-hole flange type

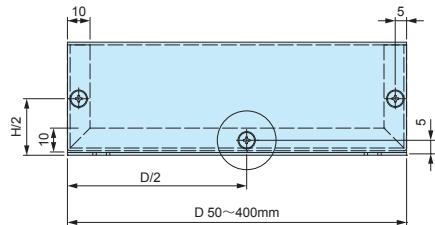
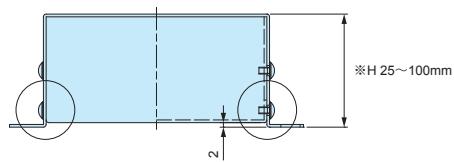


4-hole flange type



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

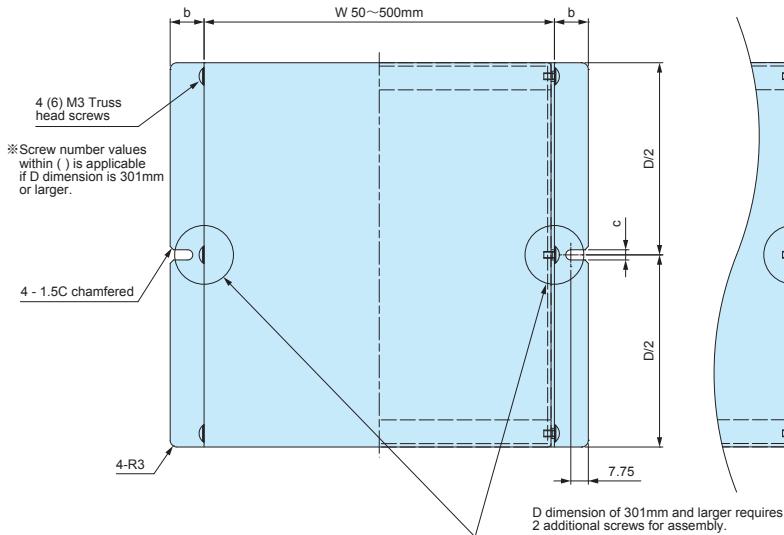
Caution : Refer to the available dimensions on the chart.



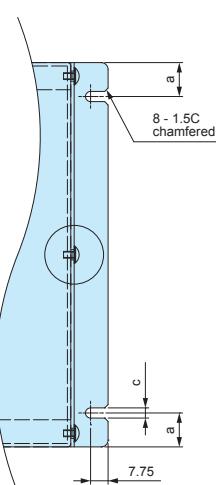
[B10] Type

Reinforced • Panel thickness : 1.0mm

2-hole flange type

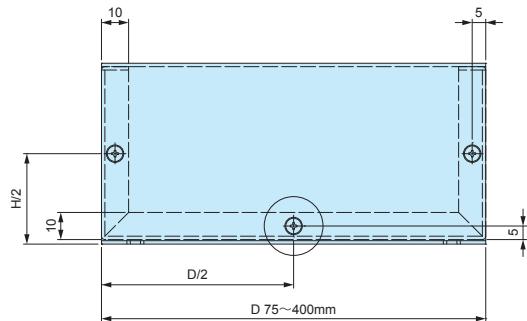
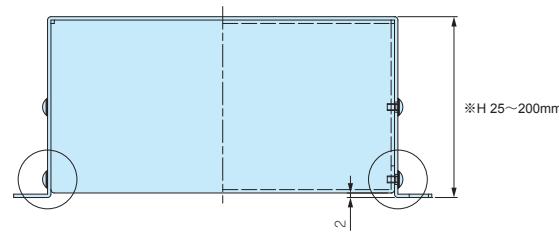


4-hole flange type



D dimension	a	b	c
50 ~ 60	10	15	4.5
61 ~ 140	15	15	4.5
141 ~ 240	20	15	4.5
241 ~ 400	30	20	5.5

Caution : Refer to the available dimensions on the chart.



AST series

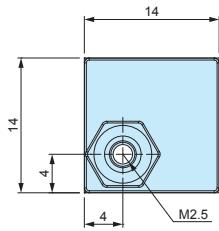
INSERT NUT ADHESIVE STANOFF



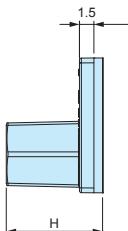
- Double-sided adhesive tape allows the standoff to be mounted quickly and easily; allows PCB mounting in non-boss enclosures.
- Convenient for installing PCBs into enclosures without the need for customization.
- Please ensure that surface is cleaned and grease-free before adhering.
- Once removed,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

AST dimensions

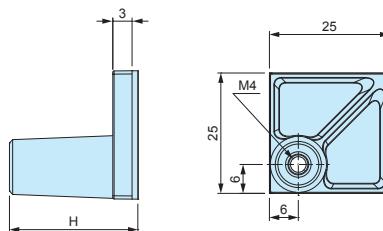
AST2.5-□



AST3-□



AST4-□



Product no. / Details

Product no	H dimension	Included screw	Recommended PCB thickness (mm)	Recommended torque (N · m)	Weight (g)	Pack of	Product no	Pack of
AST2.5-5B	5	M2.5-5 pan head	1.0 ~ 2.0	0.3	0.6 (1 piece)	4	AST2.5-5B-P	100
AST2.5-10B	10	M2.5-5 pan head	1.0 ~ 2.0	0.3	0.8 (1 piece)	4	AST2.5-10B-P	100
AST3-6B	6	M3-6 pan head	1.0 ~ 3.0	0.4	1.5 (1 piece)	4	AST3-6B-P	100
AST3-10B	10	M3-6 pan head	1.0 ~ 3.0	0.4	1.6 (1 piece)	4	AST3-10B-P	100
AST3-15B	15	M3-6 pan head	1.0 ~ 3.0	0.4	1.8 (1 piece)	4	AST3-15B-P	100
AST3-20B	20	M3-6 pan head	1.0 ~ 3.0	0.4	2.1 (1 piece)	4	AST3-20B-P	100
AST4-10.5B	10.5	M4-8 pan head	1.0 ~ 3.5	0.8	2.6 (1 piece)	4	AST4-10.5B-P	50
AST4-20B	20	M4-8 pan head	1.0 ~ 3.5	0.8	3.2 (1 piece)	4	AST4-20B-P	50

■ Base material / color : Nylon 66 (UL94V-2) / Black

■ Nut • screw material / finish : Steel / Trivalent chromate

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

AST package

Bulk package

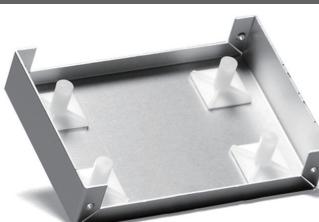
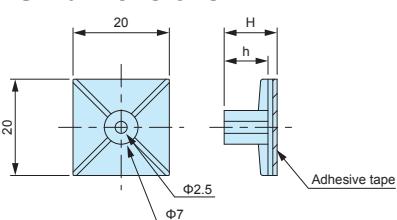
■ Bulk packaging is available. See "Bulk package" column above.

■ Screws are not included for bulk packages.

ASR series

ADHESIVE PCB STANOFF

ASR dimensions



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

■ 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.

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 burried 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

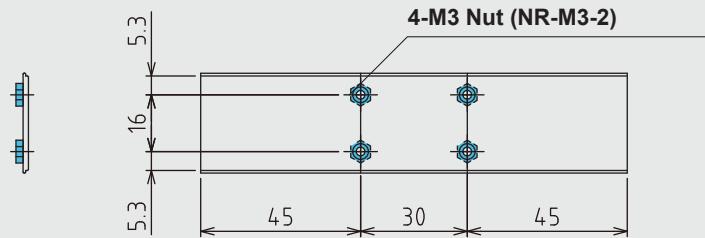


BN series

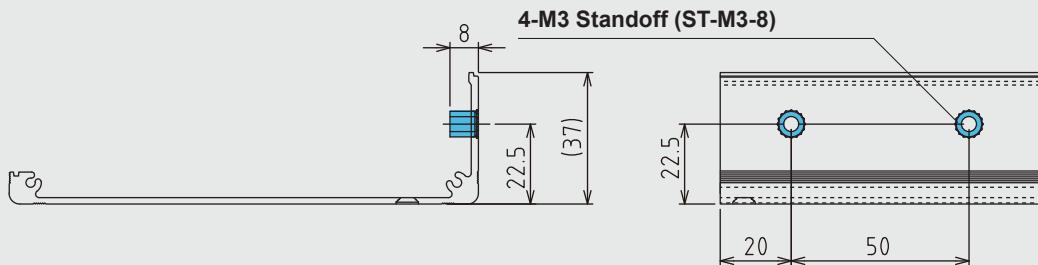
Self-clinching nuts
(Blind type)

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

Example



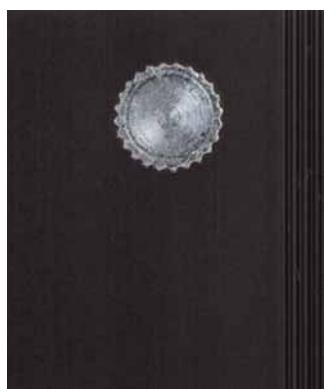
Example



EXAMPLE



ST · STS Through-hole type



SB · SBS Blind type



Thread and length size chart

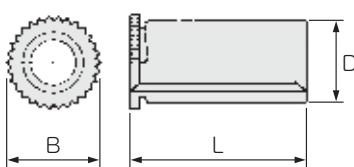
← NEW SIZE →

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) .

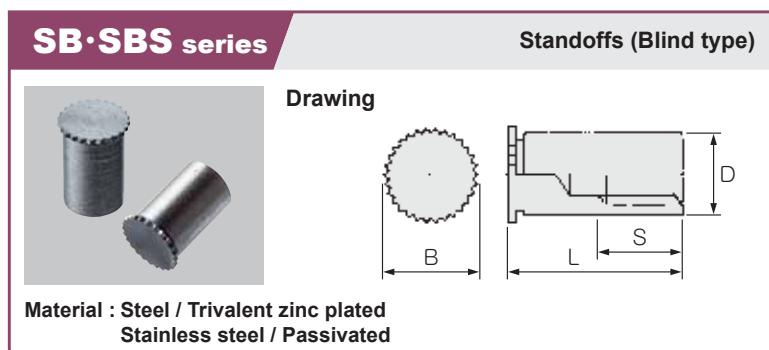
New sizes.

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



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

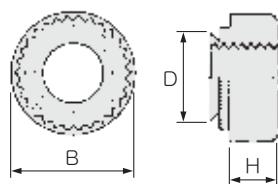
NM·NS series

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.

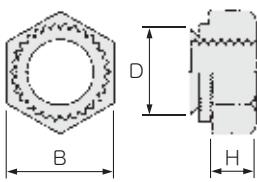
NR series

Nuts (Hex through-hole type)

Drawing



Material : Steel / Trivalent zinc plated

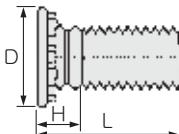


All dimensions are in mm

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		

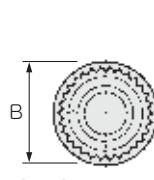
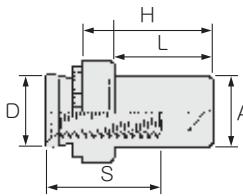
*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary.
Only available together with installation services. Not available separately.

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.

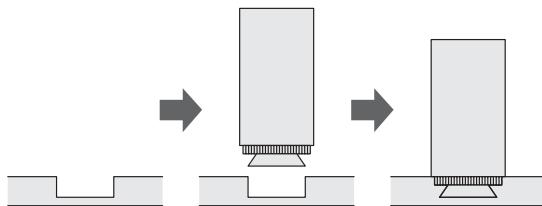
All dimensions are in mm										
Part #	Thread code	Thread pitch	Maximum D	Maximum A	B +/-0.25	Minimum S	H +/-0.25	Min. sheet thickness	Hole size +0.08 / -0	*Minimum distance
BN-M3-1	M3	0.5	4.22	3.8	6.35	5.3	9.6	1.0	4.25	4.8
BN-M3-2								1.4		
BN-M4-1	M4	0.7	5.38	5.2	7.95	6.8	11.2	1.0	5.4	6.9
BN-M4-2								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
1.5mm	△	×
2.0mm	○	○
2.5mm	○	○
3.0mm~	○	○

Example : Clinching M4 standoff on 1.5mm thick material.



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			

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	M 3	0.5	4.45	6.0	0.95	3 4 5 6 7 8 9 10 11 12	1.5	4.5	4.5
MK-M3-4									
MK-M3-5									
MK-M3-6									
MK-M3-7									
MK-M3-8									
MK-M3-9									
MK-M3-10									
MK-M3-11									
MK-M3-12									
MK-M4-3	M 4	0.7	5.45	8.0	0.95	3 4 5 6 7 8 10 12 14	1.5	5.5	5.5
MK-M4-4									
MK-M4-5									
MK-M4-6									
MK-M4-7									
MK-M4-8									
MK-M4-10									
MK-M4-12									
MK-M4-14									

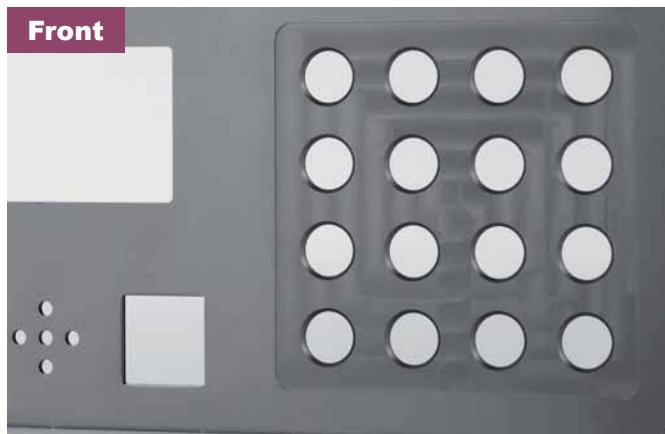
*Minimum distance = Minimum distance from hole center to edge. Installation requirements vary. Only available together with installation services. Not available separately.

Aluminium stud welding

Welded Fasteners

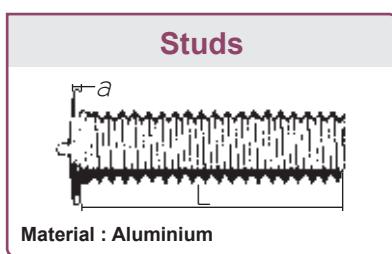
Welded fasteners on aluminium objects.

Standoffs and studs with little surface weld marks can be achieved.



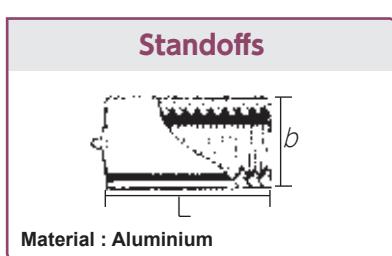
Weld marks may be more visible on plates thinner than 2.0mm.

All dimensions are in mm



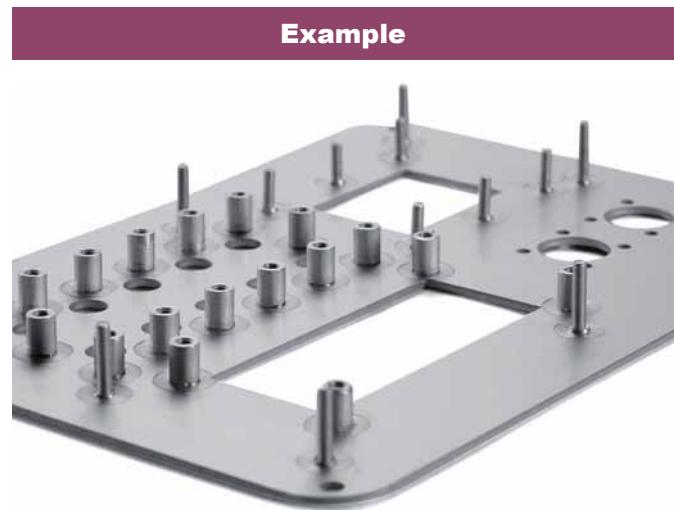
Part #	Thread code	Thread pitch	a	L +/-0.2	*Minimum distance
AMS-M3-8	M3	0.5	0.8 ± 0.1	8	7.0
AMS-M3-10				10	
AMS-M3-12				12	
AMS-M3-15				15	
AMS-M4-8	M4	0.7	0.8 ± 0.1	8	7.0
AMS-M4-10				10	
AMS-M4-12				12	
AMS-M4-15				15	

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



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.



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

