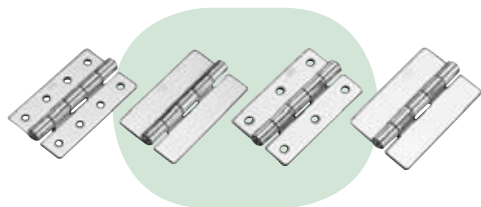


SECTION
8

Hinges
MLA



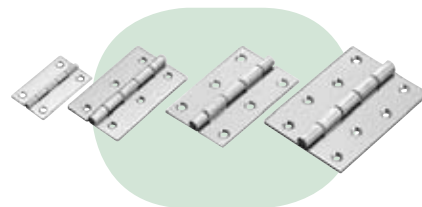
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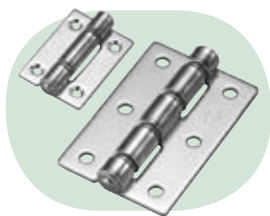
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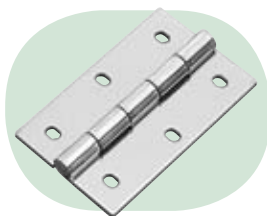
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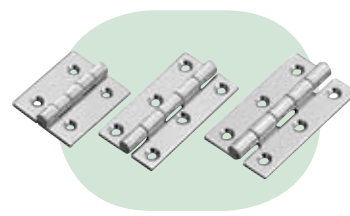
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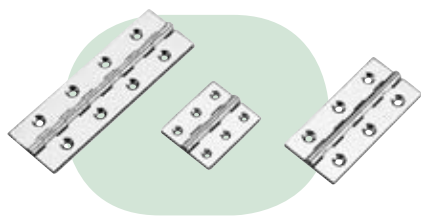
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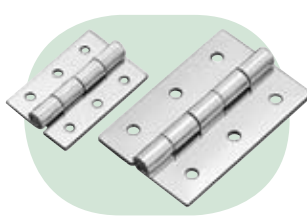
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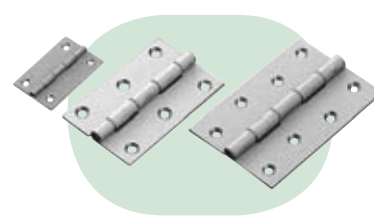
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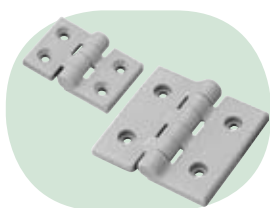
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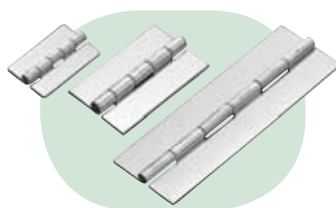
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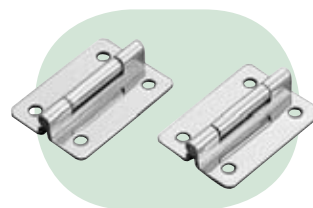
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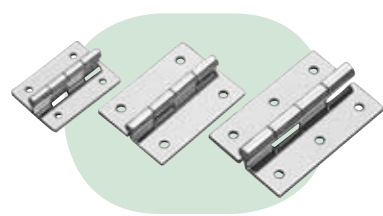
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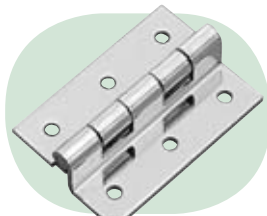
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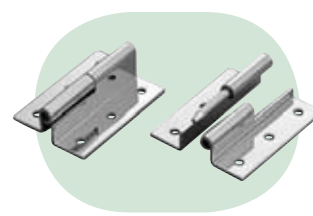
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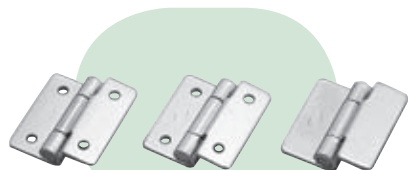
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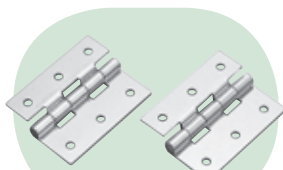
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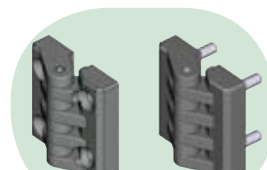
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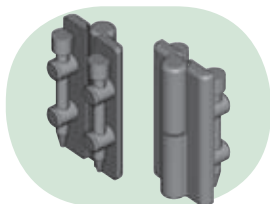
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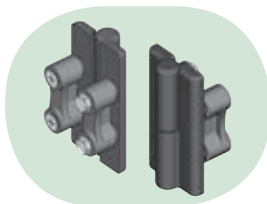
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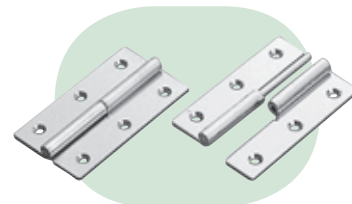
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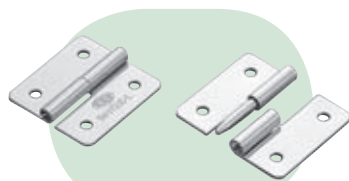
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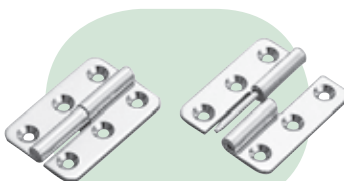
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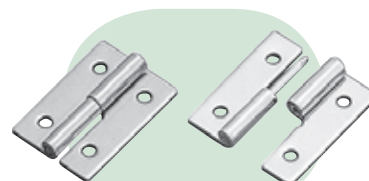
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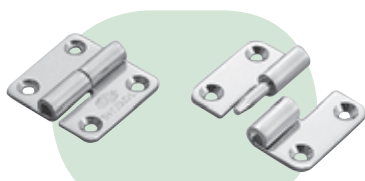
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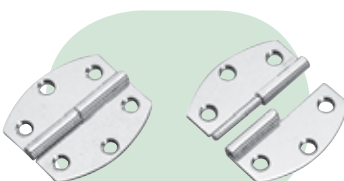
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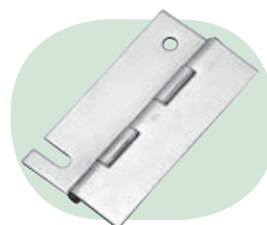
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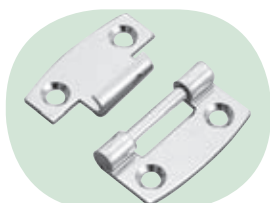
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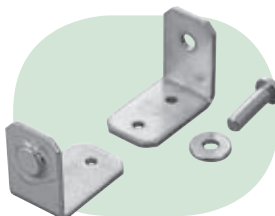
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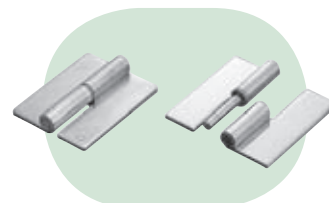
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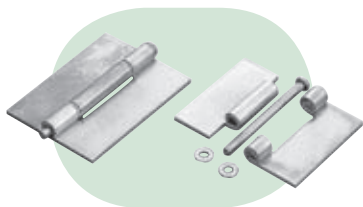
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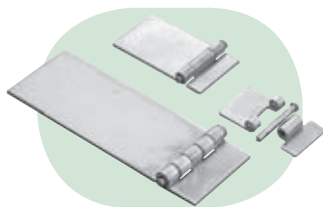
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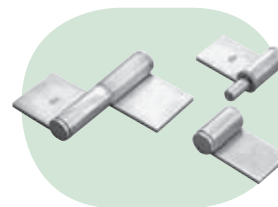
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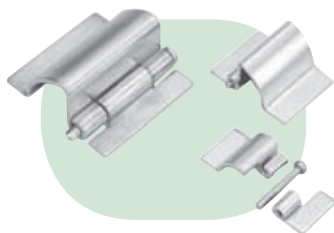
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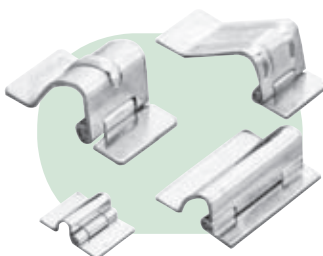
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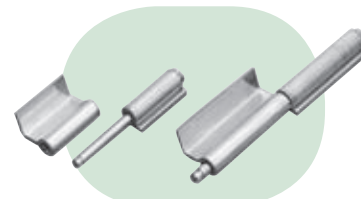
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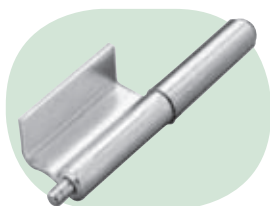
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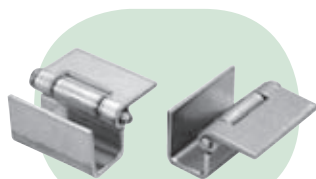
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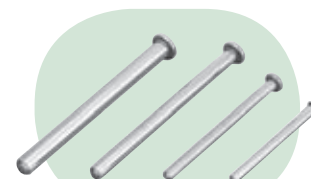
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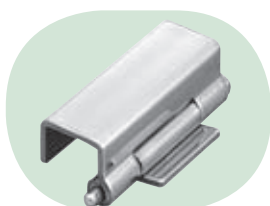
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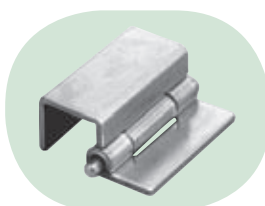
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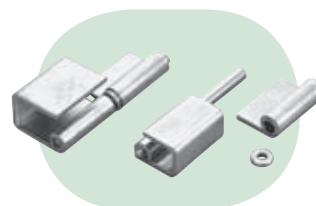
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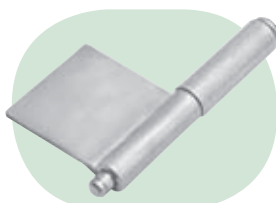
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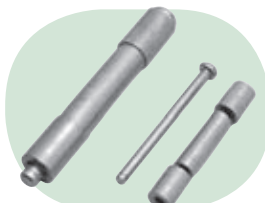
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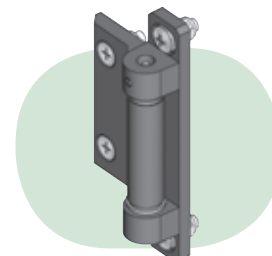
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8-40



8-41



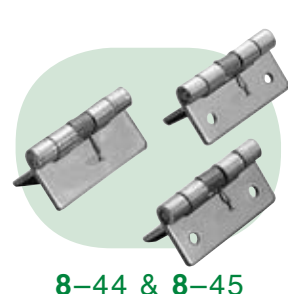
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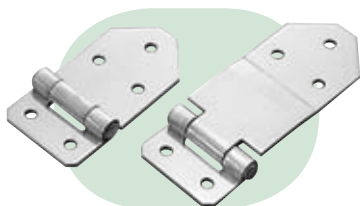
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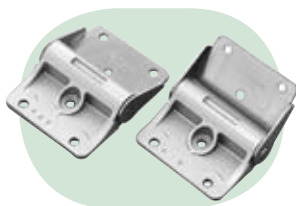
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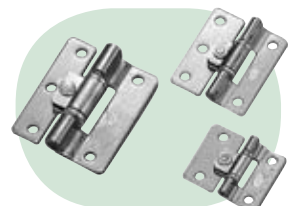
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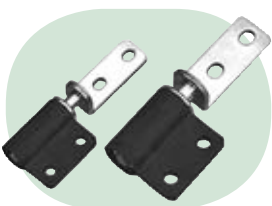
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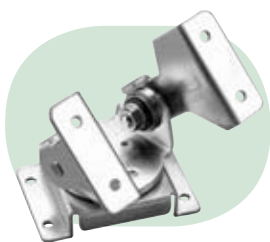
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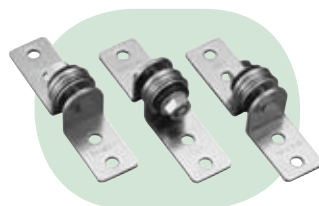
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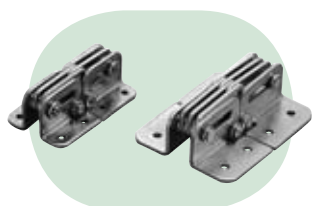
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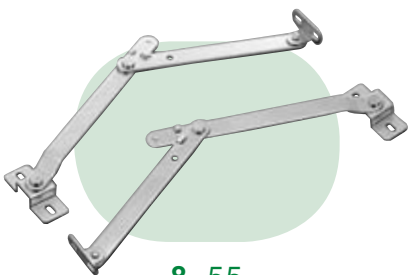
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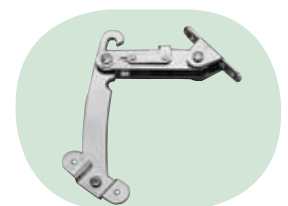
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8-54



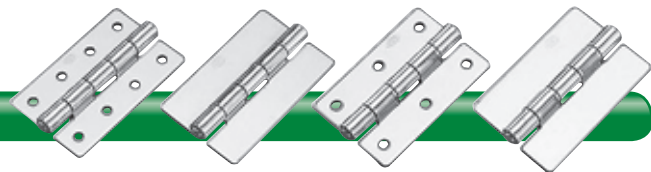
8-55



8-56 thru 8-58

HINGES, FLAT - Stainless Steel

RoHS
COMPLIANT



• APPLICATIONS

Medical instruments / Machine tools / Exterior cases

• CHARACTERISTIC

Made of stainless steel, having excellent corrosion and chemical resistance.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	Buffing	1
2	Hinge Piece		—	
3	Pin		—	

Fig. 1

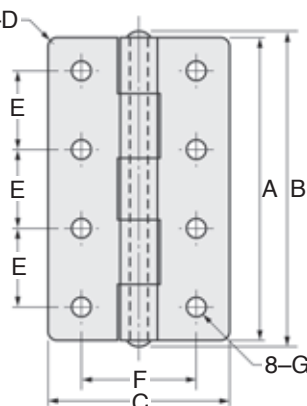
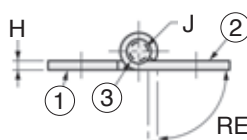
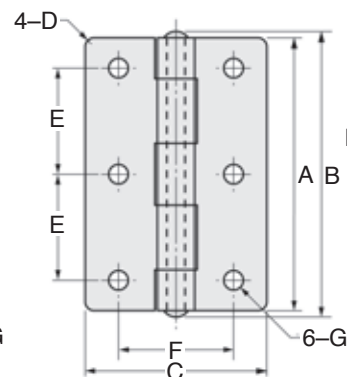
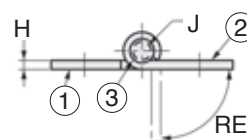


Fig. 2



RESIDUAL
ANGLE:
APPROX. 90°



RESIDUAL
ANGLE:
APPROX. 90°

Fig. 1 • HINGES

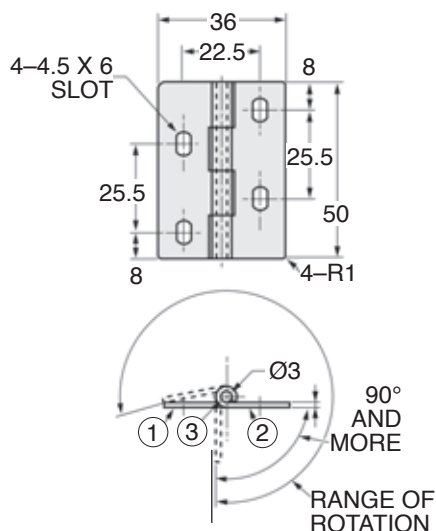
Catalog Number	Type	A	B Ref.	C	D	E	F	G	H	J	Net Weight g
MLAT17M1TH127-1	With Holes	100	104.2	60	R3	26	38	Ø6.4	3	Ø6	194
MLAT17M2TH127-2	Without Holes					—	—	—			200

8

Fig. 2 • HINGES

Catalog Number	Type	A	B Ref.	C	D	E	F	G	H	J	Net Weight g
MLAT17M1TH127-3	With Holes	90	94.2	60	R3	35	38	Ø6.4	3	Ø6	174
MLAT17M2TH127-4	Without Holes					—	—	—			180

All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts



• APPLICATIONS

Exterior devices / Kitchen equipment /
Telecommunication devices

• CHARACTERISTIC

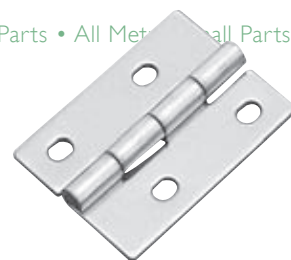
Made of stainless steel, having excellent
corrosion and chemical resistance.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	—	1
2	Hinge Piece			
3	Pin			

• HINGE

Catalog Number	Net Weight g
MLAT18M1TH-31	27.5



HINGES, FLAT - Stainless Steel

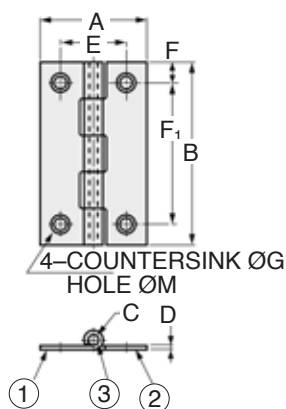
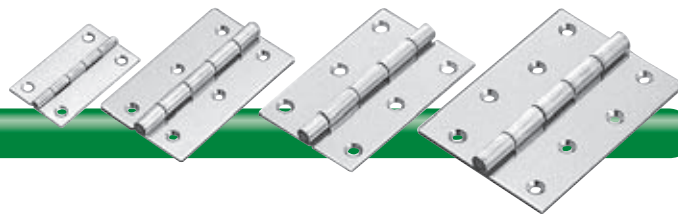


Fig. 1

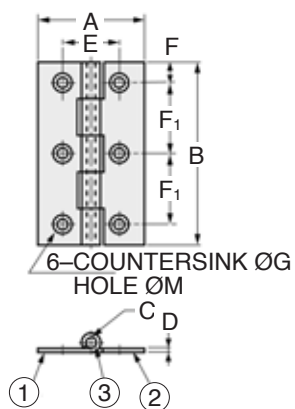


Fig. 2

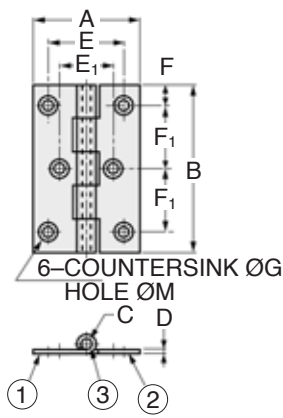


Fig. 3

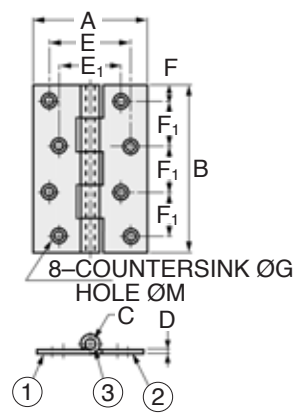


Fig. 4

• APPLICATION

Various types of industrial machines

• CHARACTERISTIC

Choose the size from a wide variety of selections.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	—	1
2	Hinge Piece			
3	Pin			

Fig. 1 • HINGES

Catalog Number	A	B	C	D	E	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT10MTHTM84SUS	18.5	25	Ø2	0.8	12	3.5	18	Ø4.4	Ø3.1	4	4.3
MLAT10MTHTM85SUS	21.5	32			14	4	24	Ø5.6	Ø4.3		6
MLAT10MTHTM86SUS	26	38			16	5	28				8
MLAT10MTHTM87SUS	30	51			19	6	39			5	12

Fig. 2 • HINGES

Catalog Number	A	B	C	D	E	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT10MTHTM88SUS	41.5	64	Ø3	1.2	20	6.5	25.5	Ø6.5	Ø4.3	5	31.8
MLAT10MTHTM89SUS	48	76	Ø4	1.5	24	8	30		Ø3.7		56.5

Fig. 3 • HINGES

Catalog Number	A	B	C	D	E	E ₁	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT10MTHTM90SUS	56	89	Ø5	1.5	41	34	10.5	34	Ø8.6	Ø5.8	5	84

Fig. 4 • HINGES

Catalog Number	A	B	C	D	E	E ₁	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT10MTHTM91SUS	71.5	102	Ø5	2	50	40	9	28	Ø8.6	Ø4.9	5	153

Fig. 1

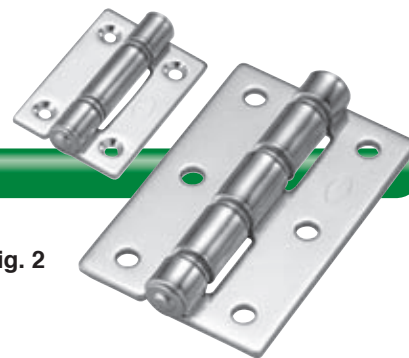


Fig. 2

• **APPLICATIONS**

Electronics / Semiconductor machines / Engineering equipment /
Experimental facility

• **CHARACTERISTICS**

The existence of the high-performance bushings between the hinge pieces and the pin reduces the generation of metal powder from rubbing. Also, the reduction of the friction leads to smoother opening and closing of the hinge. For superior rust resistance, the hinge pieces and the pin are made of stainless steel.

• **SPECIFICATIONS**

Operating Temperature Range: -40° to +80°C Conforms to UL
94HB flammability standards

• **PARTS LIST**

No.	Part Name	Material	Finish	Qty.	
				...1TH142-2	...1TH142-1
1	Hinge Piece	Stainless Steel	Electropolishing	1	1
2	Hinge Piece				
3	Pin				
4	Washer				
5	Washer	Acetal	-	2	4
6	Flange Bushing				
7	Flange Bushing				

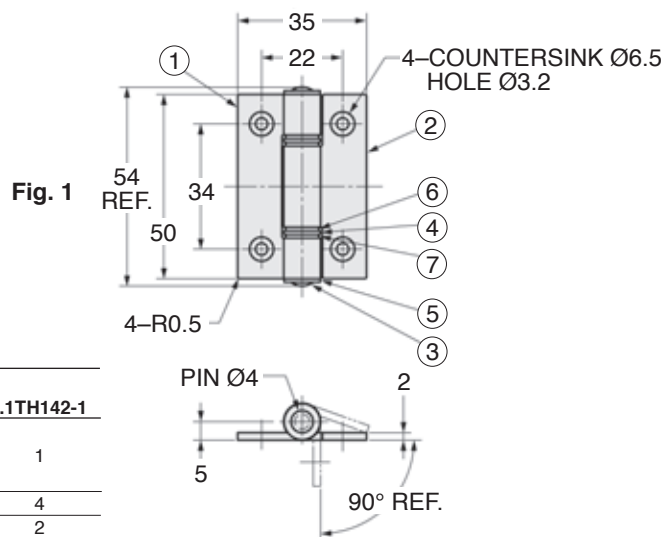
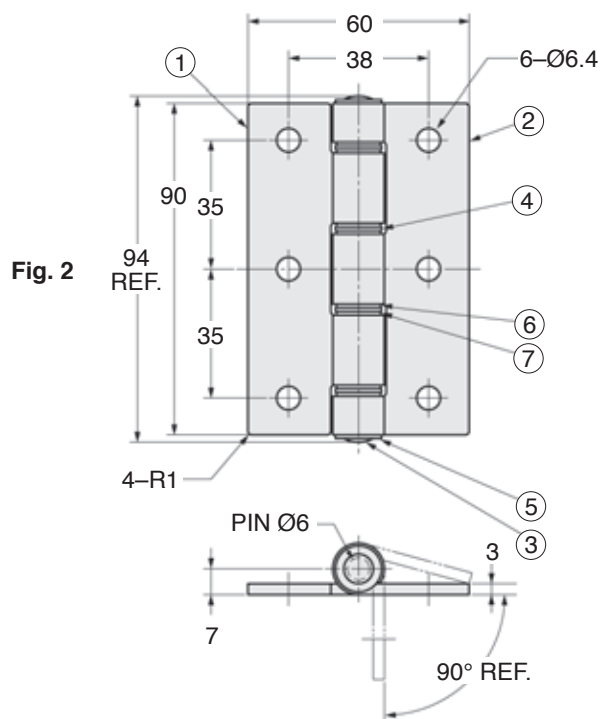


Fig. 1 • **HINGE** – Countersunk Holes

Catalog Number	Net Weight g
MLAT01M1TH142-2	42.7

Fig. 2 • **HINGE**

Catalog Number	Net Weight g
MLAT01M2TH142-1	182.6



HINGE, FLAT - Brass, Nickel Plated

RoHS
COMPLIANT

• APPLICATIONS

Distribution boards / Distribution panels /
Telecommunication devices

• CHARACTERISTICS

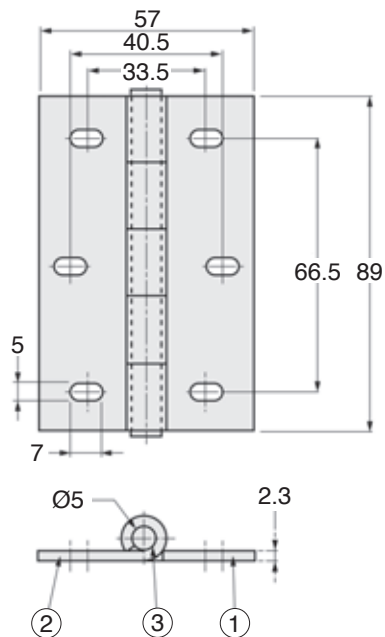
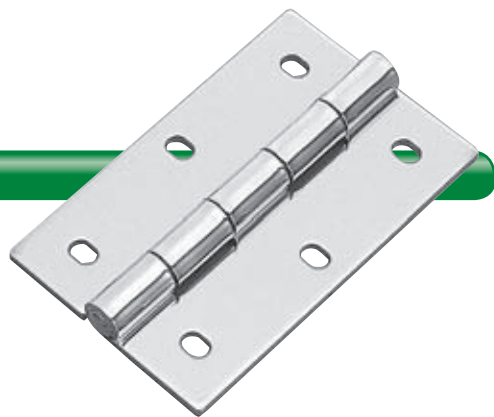
Slots are made as holes for installations.
The slots absorb positioning gaps between
movable and fixed sides.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			

• HINGE

Catalog Number	Net Weight g
MLAT18M2TH-30	137.5



HINGES, FLAT - Brass, Nickel Plated

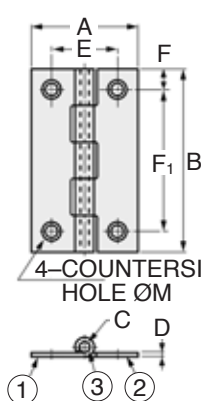
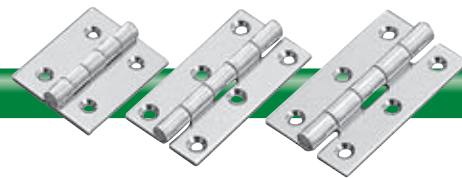


Fig. 1

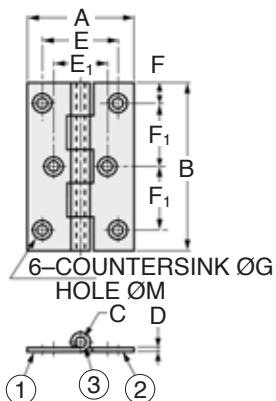


Fig. 2

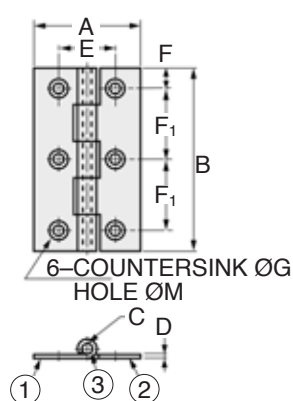


Fig. 3

• APPLICATION

Various types of industrial machines

• CHARACTERISTIC

Choose the size from a wide variety of selections.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			

Fig. 1 • HINGE – 4 Holes, Straight

Catalog Number	A	B	C	D	E	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT13M1THTM-2	20	30	Ø2	1	12	5	20	Ø4.4	Ø3.2	4	6.5
MLAT13M2THTM-6	32	40	Ø3	1.5	18	8	24	Ø5.6	Ø3.3	5	22.5

Fig. 2 • HINGE – 6 Holes, Offset

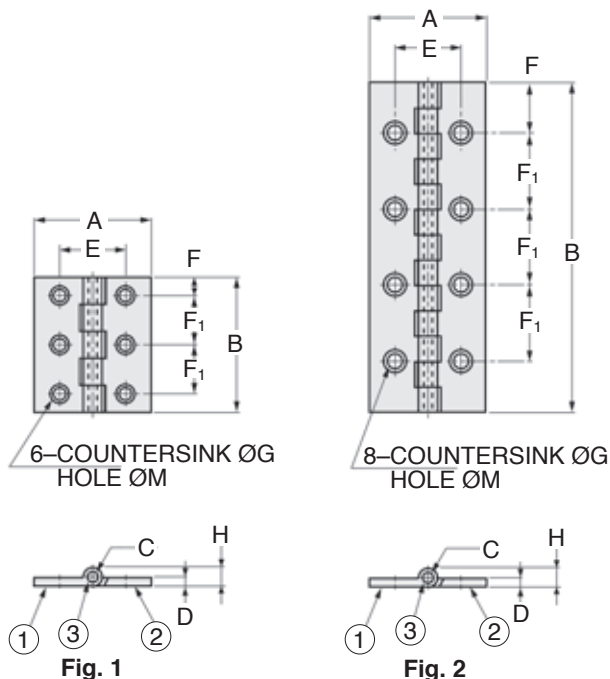
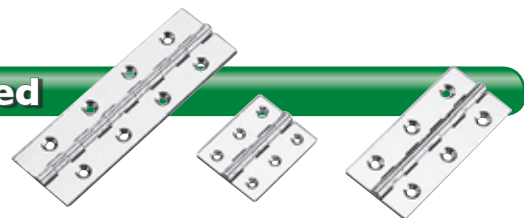
Catalog Number	A	B	C	D	E	E ₁	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT13M3THTM-8	30	58	Ø3	1.5	20	15	6	23	Ø6.5	Ø3.8	5	31.5

Fig. 3 • HINGE – 6 Holes, Straight

Catalog Number	A	B	C	D	E	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT13M4THTM-17	18	45	Ø1.5	0.5	11	4	18.5	Ø4.4	Ø3.5	6	4.5
MLAT13M5THTM-4	26	38	Ø2	1	16	5.5	13.5	Ø5	Ø3.3	4	10.5
MLAT13M6THTM-7	30	50	Ø3	1.5	19	5	20	Ø5.6		5	27
MLAT13M7THTM-9	35	60	Ø4		21	7	23	Ø6.5	Ø3.8		39.5
MLAT13M8THTM-10			Ø3	1.2	19	8	22		Ø4.3		29
MLAT13M9THTM-12	40	75		1.5	22	9	28.5	Ø8.6	Ø5.8		48

HINGES, CATCH-OFF - Brass, Nickel Plated

RoHS
COMPLIANT



• APPLICATION

Measuring instruments

• CHARACTERISTIC

By using drawn material, the diameters of the pin and spine of the hinge are minimized.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			

8

Fig. 1 • HINGES

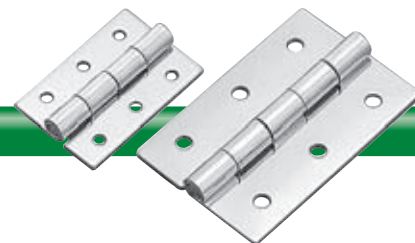
Catalog Number	A	B	C	D	E	F	F ₁	G	H	M	Number of Segments	Net Weight g
MLAT14M1THTM-92	41	50	Ø3.2	3	25	7	18	Ø6.5	6.3	Ø3.2	5	55
MLAT14M2THTM-15		76				8	30	Ø8.6		Ø4.6		83
MLAT14M3THTM-93		90				15						98

Fig. 2 • HINGES

Catalog Number	A	B	C	D	E	F	F ₁	G	H	M	Number of Segments	Net Weight g
MLAT14M4THTM-94	41	130	Ø3.2	3	25	20	30	Ø8.6	6.3	Ø4.6	13	144

HINGES, FLAT - Brass, Nickel Plated

RoHS
COMPLIANT



• APPLICATION

Various types of devices

• CHARACTERISTIC

Choose the size from a wide variety of selections.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			

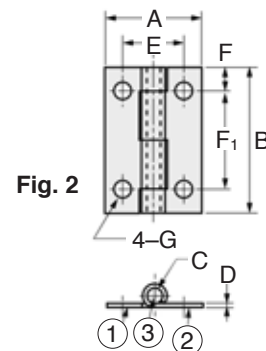
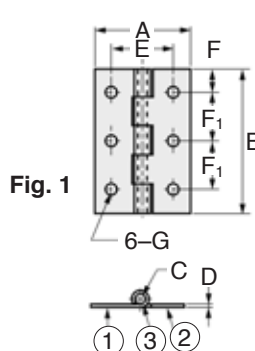


Fig. 1 • HINGE – Straight Holes

Catalog Number	A	B	C	D	E	F	F ₁	G	Number of Segments	Net Weight g
MLAT14M1THTM-5	26	40	Ø3	1.5	17	7	13	Ø3.2	4	19.5
MLAT14M2THTM-11	40	60	Ø4		26	10	20	Ø4.3	5	44

Fig. 2 • HINGE – Straight Holes

Catalog Number	A	B	C	D	E	F	F ₁	G	Number of Segments	Net Weight g
MLAT14M3THTM-19	16	30	Ø1.5	0.5	9	4.25	21.5	Ø2.7	4	3
MLAT14M4THTM-16	20	25	Ø2	1	12	5.5	14	Ø2.8		5.5
MLAT14M5THTM-1		30	Ø3		13	5	20	Ø3.2		9

HINGES, FLAT - Galvanized Steel

RoHS
COMPLIANT

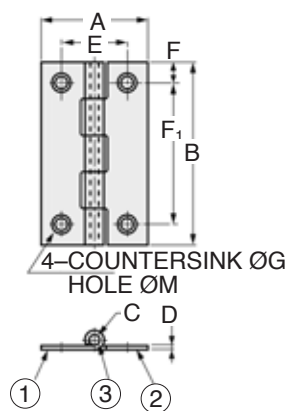
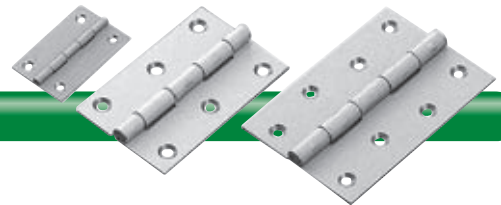


Fig. 1

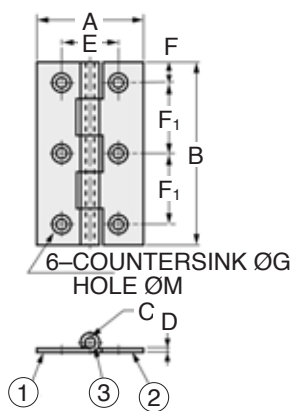


Fig. 2

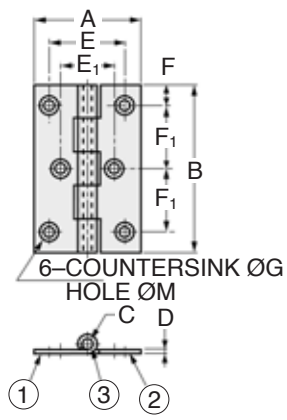


Fig. 3

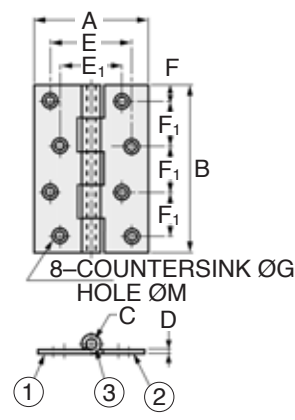


Fig. 4

• APPLICATION

Various types of industrial machines

• CHARACTERISTIC

Choose the size from a wide variety of selections.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Galvanized	—	1
2	Hinge Piece	Sheet Steel		
3	Pin	Steel		

Fig. 1 • HINGES

Catalog Number	A	B	C	D	E	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT11MTHTM-84	18.5	25	Ø2	0.8	12	3.5	18	Ø4.4	Ø3.1	4	4
MLAT11MTHTM-85	21.5	32			14	4	24	Ø5.6	Ø4.3		5.7
MLAT11MTHTM-86	26	38			16	5	28				8
MLAT11MTHTM-87	30	51			19	6	39			5	12

Fig. 2 • HINGES

Catalog Number	A	B	C	D	E	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT11MTHTM-88	41.5	64	Ø3	1.2	20	6.5	25.5	Ø6.5	Ø4.3	5	31.5
MLAT11MTHTM-89	48	76	Ø4	1.5	24	8	30		Ø3.7		60.5

Fig. 3 • HINGES

Catalog Number	A	B	C	D	E	E ₁	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT11MTHTM-90	56	89	Ø5	1.6	41	34	10.5	34	Ø8.6	Ø5.8	5	88

Fig. 4 • HINGES

Catalog Number	A	B	C	D	E	E ₁	F	F ₁	G	M	Number of Segments	Net Weight g
MLAT11MTHTM-91	71.5	102	Ø5	2	50	40	9	28	Ø8.6	Ø4.9	5	150.5

HINGES, NYLON

RoHS
COMPLIANT

• APPLICATIONS

Lightweight cases / Various types of boxes

• CHARACTERISTICS

Resin is light and useful where lightweight components are needed. The hinge pieces are resin (ivory color) and the pin is 304 stainless steel.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Nylon	Ivory	2
2	Cap			
3	Pin	Stainless Steel	—	1

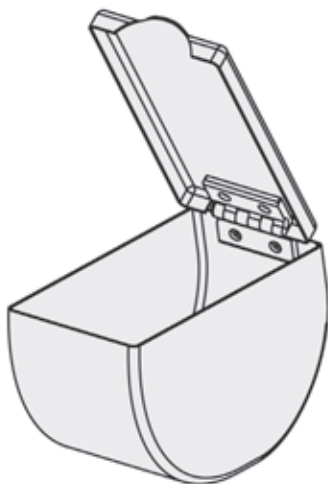
Fig. 1 • HINGE – Countersunk Holes

Catalog Number	Net Weight g
MLAT02M1TH141-2	19

Fig. 2 • HINGE – Counterbored Holes

Catalog Number	Net Weight g
MLAT02M2TH141-1	58.2

INSTALLATION EXAMPLE



CONSTRUCTION MACHINERY
CONSOLE BOX

Fig. 1

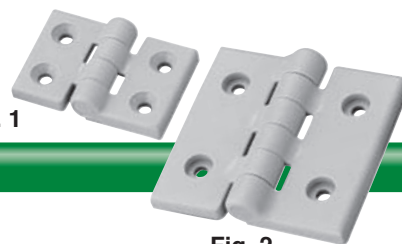


Fig. 2

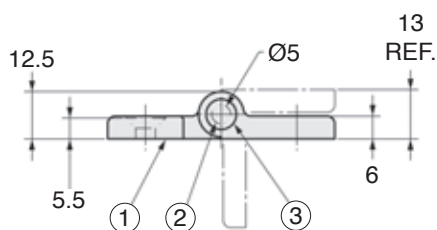
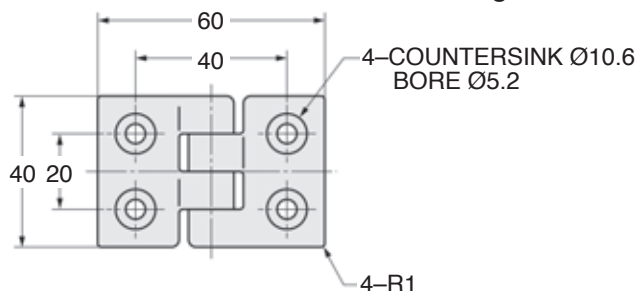


Fig. 1

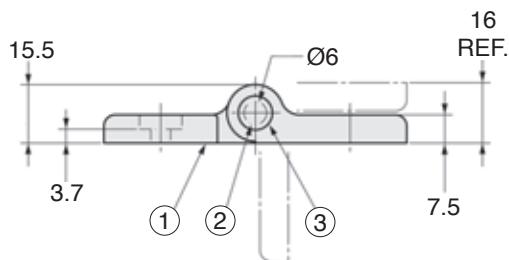
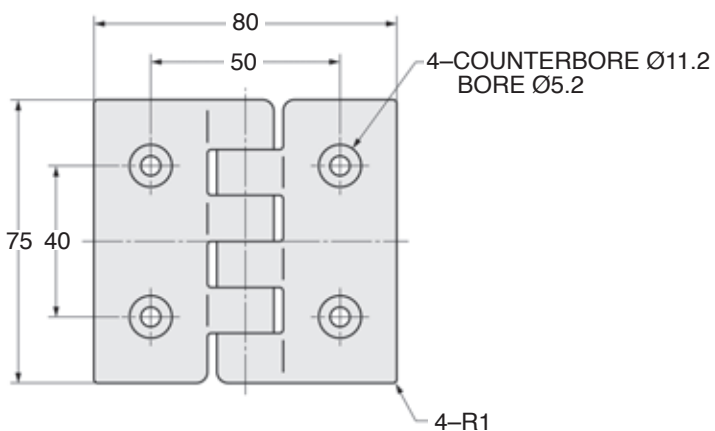


Fig. 2

HINGES, FLAT - Stainless Steel

RoHS
COMPLIANT

• APPLICATION

Various types of industrial machines

• CHARACTERISTIC

Choose the size from a wide variety of selections.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	—	1
2	Hinge Piece			
3	Pin			

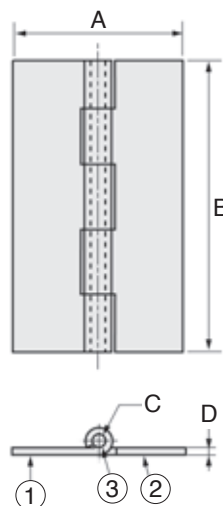


Fig. 1

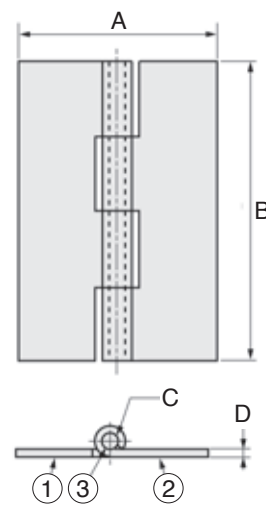


Fig. 2

Fig. 1 • HINGES

Catalog Number	A	B	C	D	Number of Segments	Net Weight g
MLAT09M01THTM-55	30	50	Ø3	1.5	5	26
MLAT09M02THTM-65		51	Ø2	0.8		12.5
MLAT09M03THTM-56	35	50	Ø3	1.5	3	27.5
MLAT09M04THTM-54	40	45		1.2		23.5
MLAT09M05THTM-57		75	Ø4	1	5	37
MLAT09M06THTM-66	41.5	64	Ø3	1.2		34
MLAT09M07THTM-58	45	75	Ø4	2		73
MLAT09M08THTM-67	48	76		1.5		58
MLAT09M09THTM-68	56	89	Ø5			85
MLAT09M10THTM-69	71.5	102		2		154

Fig. 2 • HINGES

Catalog Number	A	B	C	D	Number of Segments	Net Weight g
MLAT09M11THTM-62	18.5	25	Ø2	0.8	4	4.5
MLAT09M12THTM-63	21.5	32				6.5
MLAT09M13THTM-64	26	38				8.5
MLAT09M14THTM-61	40	500	Ø3	1.5	40	308
MLAT09M15THTM-59	50	150	Ø4		6	124
MLAT09M16THTM-60		200		1.2	16	131

HINGES, FLAT - Heavy-Duty, No Mounting Holes

RoHS
COMPLIANT

• APPLICATIONS

Distribution boards / Distribution panels / Control boards

• CHARACTERISTICS

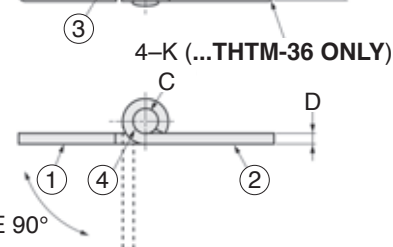
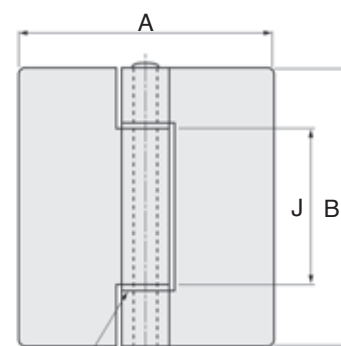
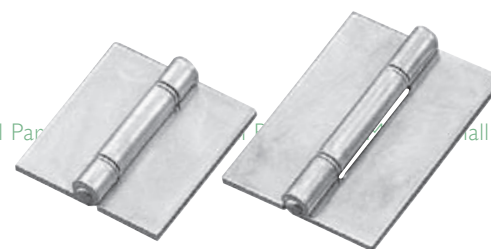
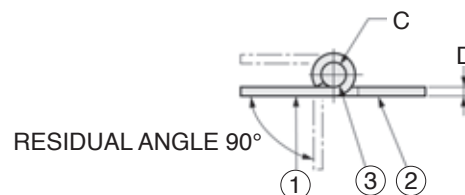
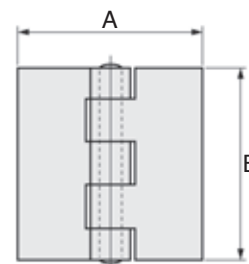
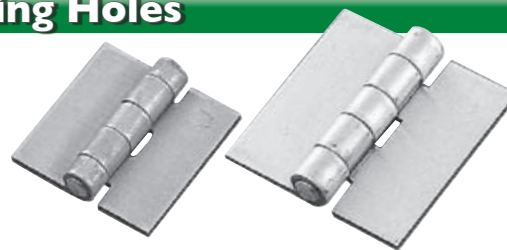
To be mounted by welding or for a heavy-weight door;
suitable for large devices such as distribution panels and
control boards.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	Brushed Finish	1
2	Hinge Piece			
3	Pin			

• HINGE – Welding Applications, Stainless Steel

Catalog Number	A Ref.	B	C	D	Net Weight g
MLAT15M1TH94SU-1	50	51	Ø6	2.5	77.2
MLAT15M1TH94SU-2	63	64	Ø7	3	142.9
MLAT15M1TH94SU-3	74	76			184
MLAT15M1TH94SU-4	87	89	Ø8	4	257.1
MLAT15M1TH94SU-5	100	101.6			421.2
MLAT15M1TH94SU-6	118	127	Ø11	4	685
MLAT15M1TH94SU-7	142	152	Ø12		961.5



All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts

• APPLICATIONS

Distribution boards / Distribution panels /
Control boards

• CHARACTERISTICS

It can be used to join a light-weight object
to a heavy-weight object.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Bright Zinc Plated	1
2	Hinge Piece			1
3	Washer	Stainless Steel	—	2
4	Pin			1

• HINGES

Catalog Number	A	B	C	D	J	K	Net Weight g
MLAT16M1THTM-36	70	75	Ø6	3.2	42	R2	184
MLAT16M2THTM-37	75	90			50	—	230
MLAT16M2THTM-38		100					254

HINGES, FLAT - Brass



• APPLICATION

Various types of devices

• CHARACTERISTIC

Choose the size from a wide variety of selections.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	—	1
2	Hinge Piece			
3	Pin			

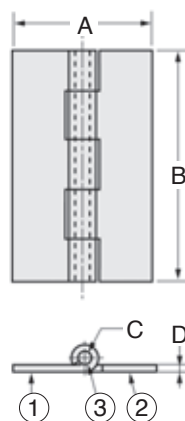
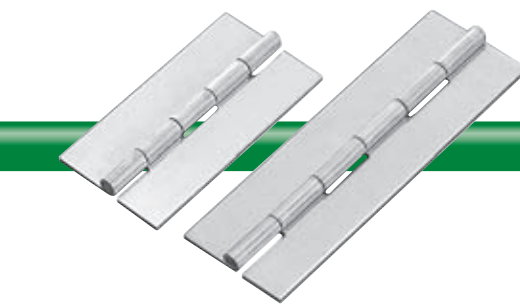


Fig. 1

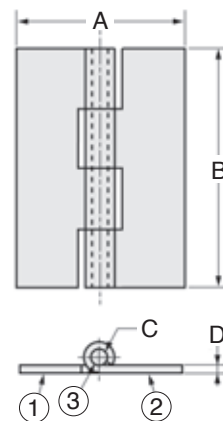


Fig. 2

Fig. 1 • HINGES

Catalog Number	A	B	C	D	Number of Segments	Net Weight g
MLAT13M01THTM-35	16	15	Ø1.8	1	3	3
MLAT13M02THTM-20	20	20	Ø1.5			4.5
MLAT13M03THTM-50	25	33	Ø3			11
MLAT13M04THTM-24	26	40	Ø2	1.5	5	18.5
MLAT13M05THTM-25	30	50	Ø3			28
MLAT13M06THTM-26		58				32
MLAT13M07THTM-52	40	80				54

Fig. 2 • HINGES

Catalog Number	A	B	C	D	Number of Segments	Net Weight g
MLAT13M08THTM-27	14	90	Ø1	0.5	12	7.5
MLAT13M09THTM-28	15	120			16	10.5
MLAT13M10THTM-31	18	400			Ø1.5	32
MLAT13M11THTM-21	20	30	Ø2	1	4	6.5
MLAT13M12THTM-23		50			40	12
MLAT13M13THTM-32		500				121.5
MLAT13M14THTM-22		26			38	4
MLAT13M15THTM-29	28	140		10	43	
MLAT13M16THTM-30	30	300		0.8	24	78
MLAT13M17THTM-33		600		1	48	197
MLAT13M18THTM-53	40	120	Ø3	1.5	6	82.5
MLAT13M19THTM-34	45	600			30	460
MLAT13M20THTM-51	50		Ø4	2	20	700

HINGES, FLAT - Galvanized Steel, No Mounting Holes

RoHS
COMPLIANT

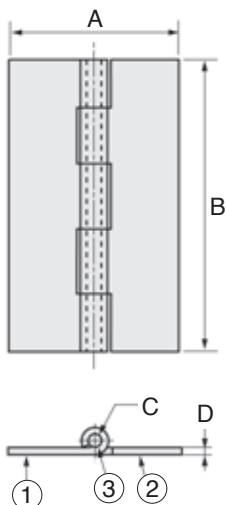


Fig. 1

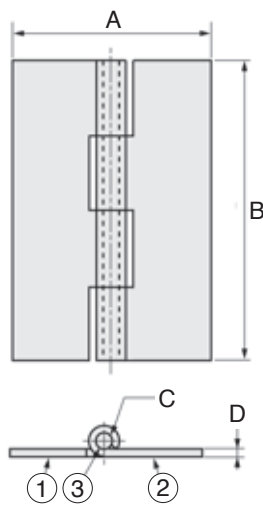


Fig. 2

• APPLICATION

Various types of devices

• CHARACTERISTIC

Choose the size from a wide variety of selections.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Galvanized sheet steel	—	1
2	Hinge Piece	Galvanized sheet steel	—	
3	Pin	Steel	—	

Fig. 1 • HINGES

Catalog Number	A	B	C	D	Number of Segments	Net Weight g
MLAT12M01THTM-72	16	15	Ø2	1	3	3
MLAT12M02THTM-73	20	20				4.5
MLAT12M03THTM-76	26	40				19
MLAT12M04THTM-77	30	50	Ø3	1.6	5	27.5
MLAT12M05THTM-78		60				32
MLAT12M06THTM-79	40	80				52.5

Fig. 2 • HINGES

Catalog Number	A	B	C	D	Number of Segments	Net Weight g
MLAT12M07THTM-74	20	30	Ø2	1	4	6.5
MLAT12M08THTM-82		400	Ø1.5	0.5	32	50
MLAT12M09THTM-83		500	Ø2	1	40	113.5
MLAT12M10THTM-75	26	35			4	9.5
MLAT12M11THTM-48	30	600		0.8	48	145
MLAT12M12THTM-81		300			24	73.5
MLAT12M13THTM-47	40	500	1	40	185	
MLAT12M14THTM-80		120	Ø3	1.6	6	79.5
MLAT12M15THTM-49	45	600			30	430
MLAT12M16THTM-70		750	Ø3.5			580
MLAT12M17THTM-71		1000			40	770

NOTE: The number of segments may not be exactly as shown in the figures. Please refer to the tables above.

HINGES, FLAT - Raised Hinge Pin



• APPLICATIONS

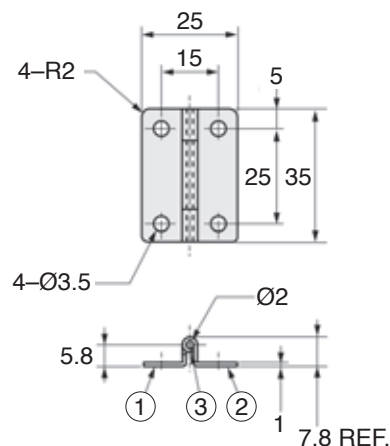
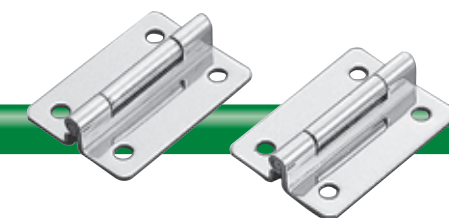
Measuring instruments /
Telecommunication devices

• CHARACTERISTIC

It is suitable for a thick door
or a place with steps.

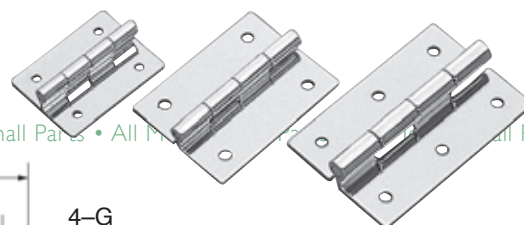
• PARTS LIST

No.	Part Name	Material		Finish		Qty.
		...TH25	...TH25SUS	...TH25	...TH25SUS	
1	Hinge Piece	Brass	Stainless Steel	Nickel Plated	Polished	1
2	Hinge Piece					
3	Pin					



• HINGES

Catalog Number	Net Weight g
MLAT23MTH25	11.5
MLAT23MTH25SUS	10



8

• APPLICATIONS

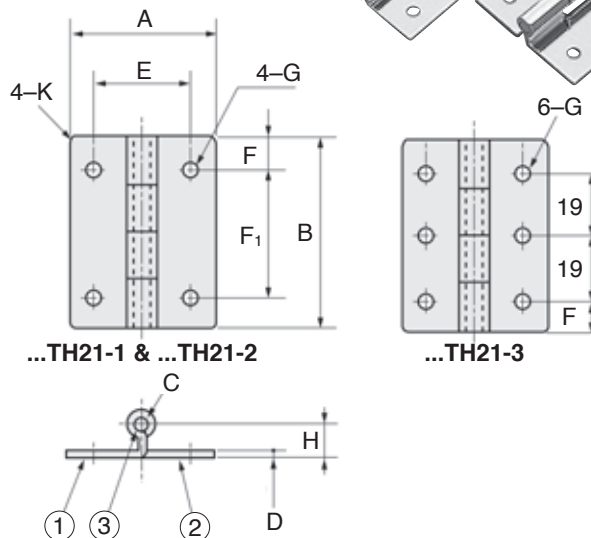
Measuring instruments /
Telecommunication devices

• CHARACTERISTIC

It is suitable for a thick door
or a place with steps.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			



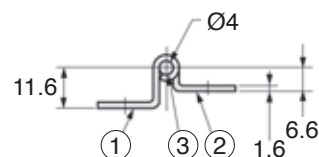
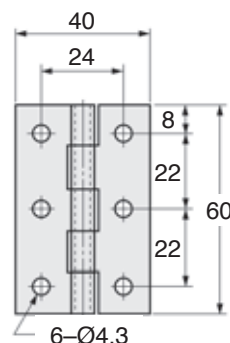
• HINGES

Catalog Number	A	B	C	D	E	F	F ₁	G	H	K	Net Weight g
MLAT23MTH21-1	23	30	Ø2	0.8	15	5	20	Ø2.2	5	R1	8
MLAT23MTH21-2	30	40		1	20	5	28		5.2	R0.5	14
MLAT23MTH21-3	33	50	Ø3	1.2	21	6	—	Ø3.2	6.3		25.5

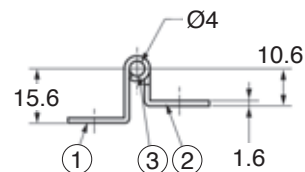
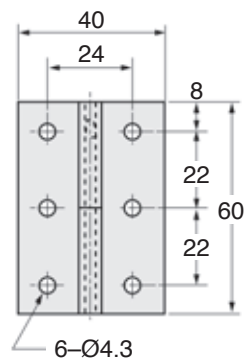
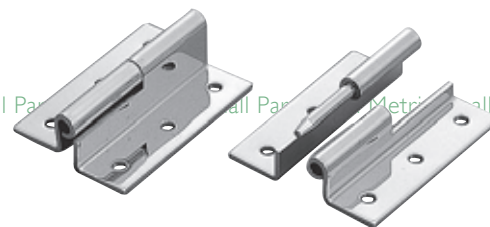
Measuring instruments / Telecommunication devices

It is suitable for a thick door or a place with a step.

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			



Catalog Number	Net Weight g
MLAT22MTH29	53



Distribution boards / Distribution panels / Measuring instruments

It is suitable for a box with a step.

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			

Catalog Number	Net Weight g
MLAT32MTH19-L	59.5
MLAT32MTH19-R	

THE FIGURE SHOWS LEFT TYPE

HINGES, FLAT - One Side Offset



• APPLICATIONS

Measuring instruments / Telecommunication devices

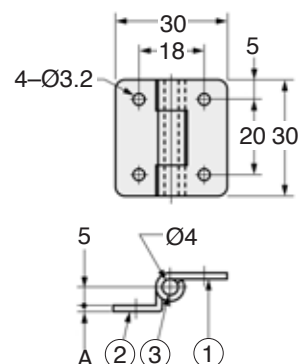
• CHARACTERISTICS

It is suitable for a thick door or place with a step.

Three types available: brass, steel and stainless steel.

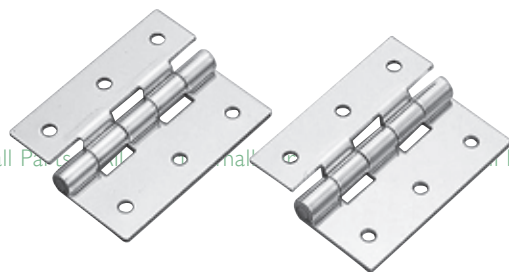
• PARTS LIST

No.	Part Name	Material			Finish		Qty.
		...TH62B	...TH62	...TH62SUS	...TH62B	...TH62SUS	
1	Hinge Piece	Brass	Steel	Stainless Steel	Nickel Plated	Zinc Plated	1
2	Hinge Piece						
3	Pin						



• HINGES

Catalog Number	Type	A	Net Weight g
MLAT21M1TH62B	With Holes	1.5	19
MLAT21M2TH62	Without Holes	1.6	18.5
MLAT21M3TH62SUS	With Holes	1.5	17.5



• APPLICATIONS

Measuring instruments / Telecommunication devices

• CHARACTERISTICS

It is suitable for a thick door or place with a step.

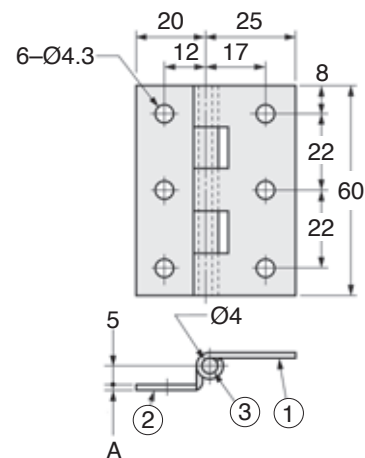
Two types available: brass and stainless steel.

• PARTS LIST

No.	Part Name	Material		Finish		Qty.
		...TH22-1	...TH22SUS-2	...TH22-1	...TH22SUS-2	
1	Hinge Piece	Brass	Stainless Steel	Nickel Plated	—	1
2	Hinge Piece					
3	Pin					

• HINGES

Catalog Number	A	Net Weight g
MLAT21MTH22-1	1.6	49.5
MLAT21MTH22SUS-2	1.5	43



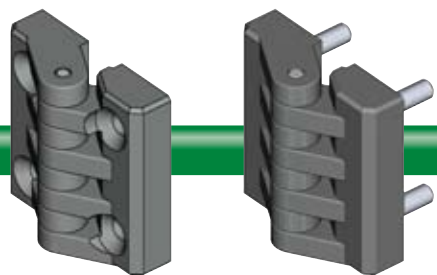
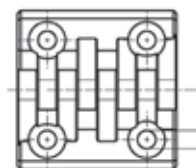
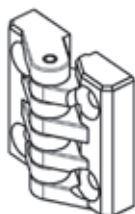
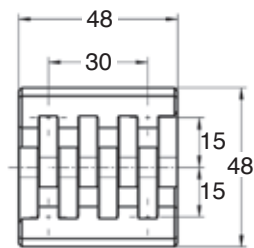
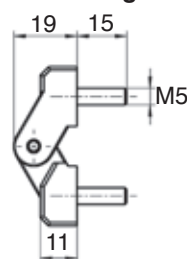
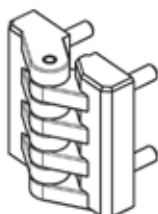


Fig. 1



Ø5.5 X 90°
COUNTERSINK

Fig. 2



- **HINGE** – Polyamide, Black
- **PIN** – Steel, Zinc Plated

Catalog Number	Fig.	Applicable Screw
MLAE02M1056U37	1	Countersunk Screw M5
MLAE02M1056U38	2	Threaded Studs M5

8

All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts

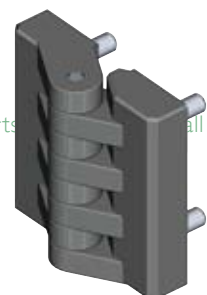
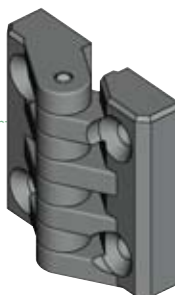
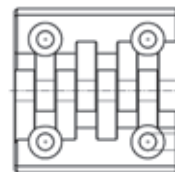
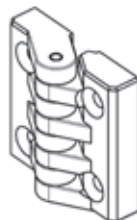
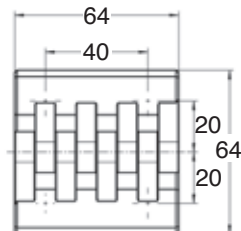
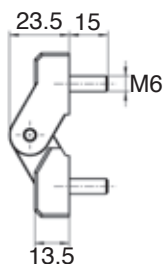
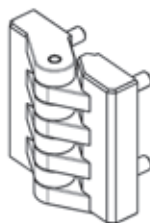


Fig. 1



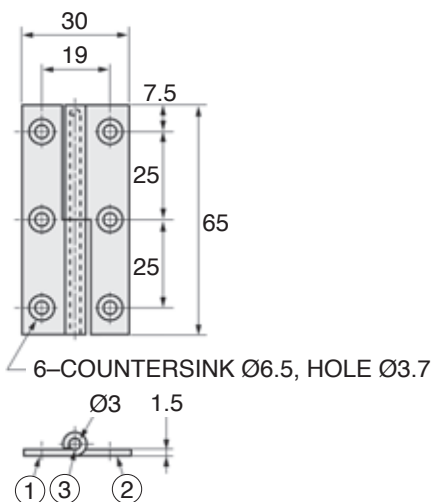
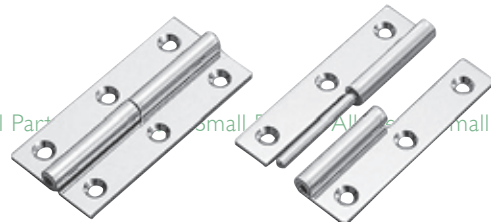
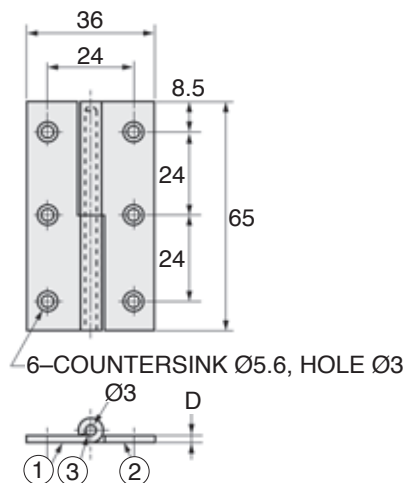
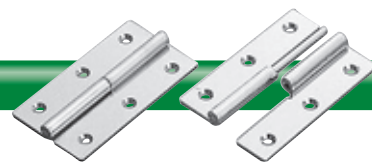
Ø6.5 X 90°
COUNTERSINK

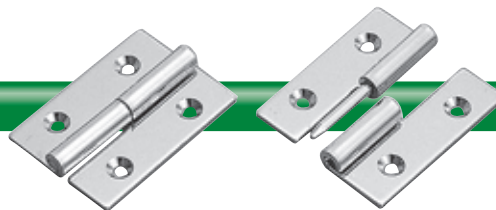
Fig. 2



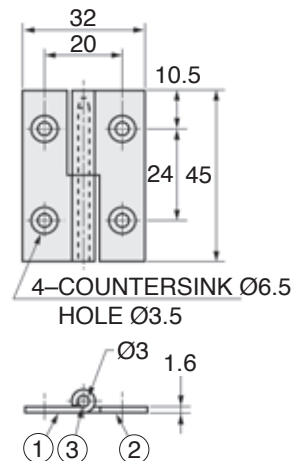
- **HINGE** – Polyamide, Black
- **PIN** – Steel, Zinc Plated

Catalog Number	Fig.	Applicable Screw
MLAE02M1056U39	1	Countersunk Screw M6
MLAE02M1056U40	2	Threaded Studs M6





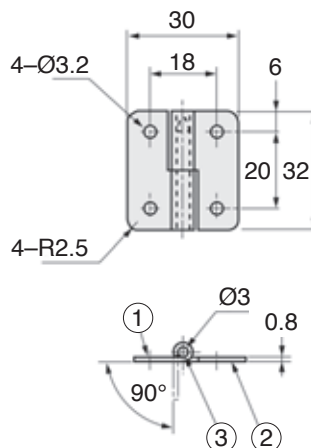
No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			



Catalog Number	Net Weight g
MLAT30MTH18-L	27.5
MLAT30MTH18-R	

8

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	Barrel Polishing	1
2	Hinge Piece			
3	Pin		—	



Catalog Number	Net Weight g
MLAT28MTH11SUS-L	8.4
MLAT28MTH11SUS-R	



HINGES, LIFT-OFF - Stainless Steel, Narrow Width



• APPLICATIONS

Measuring instruments / Telecommunication devices

• CHARACTERISTICS

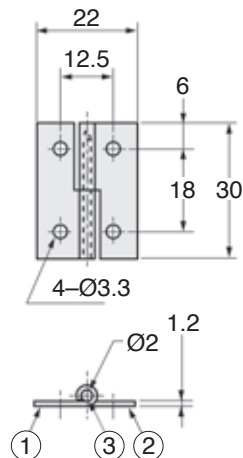
It is suitable for a small door. A door can be removed by taking the hinge off.

• PARTS LIST

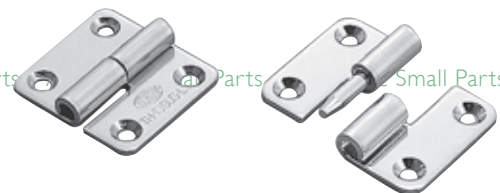
No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	Polishing	1
2	Hinge Piece		—	
3	Pin		—	

• HINGE – Narrow Width

Catalog Number	Type	Net Weight g
MLAT27MTH37SUS-L	With Holes	7.5
MLAT27MTH37SUS-R		



THE FIGURE SHOWS LEFT TYPE



All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts

8

• APPLICATIONS

Office automation appliances / Telecommunication devices /
Measuring instruments

• CHARACTERISTICS

A door can be removed by taking the hinge off.
Easy installation.

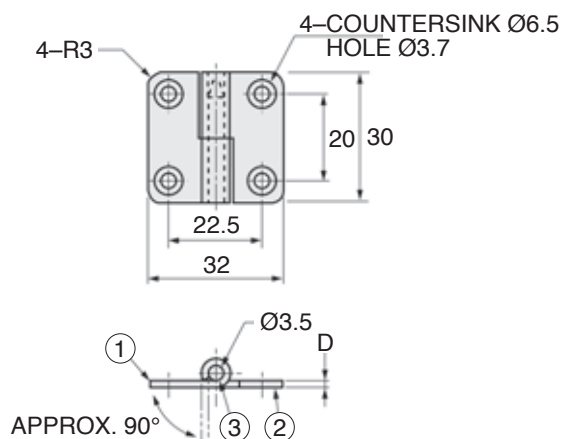
• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	Barrel Polishing	1
2	Hinge Piece		—	
3	Pin		—	

• HINGES

Catalog Number	D	Net Weight g
MLAT28MTH10SUS-L	1.5	15.2
MLAT28MTH10SUS-R		

NOTE: When using countersunk screws or rivets to attach the hinge, the mounting surface should also be countersunk.



THE FIGURE SHOWS LEFT TYPE

HINGES



• APPLICATIONS

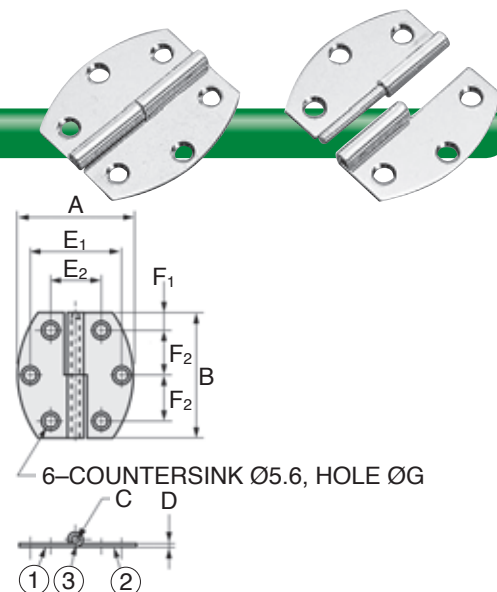
Office automation appliances / Measuring instruments /
Telecommunication devices

• CHARACTERISTICS

A door can be removed by taking the hinge off.
Easy installation.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			



THE FIGURE SHOWS LEFT TYPE

• HINGE – Lift-Off, Barrel Type

Catalog Number	Type	A	B	C	D	E ₁	E ₂	F ₁	F ₂	G Ref.	Net Weight g
MLAT29M1TH4-3L	Left	30	31	Ø2.5	1	20	14	5.5	10	4	8
MLAT29M1TH4-3R	Right		31			20	14	5.5	10		8
MLAT29M2TH4-2L	Left	37	39.3	Ø2.5	1	29	16.5	5.4	14.25	3.7	13
MLAT29M2TH4-2R	Right		39.3			29	16.5	5.4	14.25		13
MLAT29M3TH4-1L	Left		40.2			27.5	18.5	6.1	14		21
MLAT29M3TH4-1R	Right		40.2	Ø4	1.2	27.5	18.5	6.1	14	3.7	21

NOTE: When using countersunk screws or rivets to attach the hinge, the mounting surface should also be countersunk.

8

All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts

• APPLICATIONS

Measuring instruments / Telecommunication devices

• CHARACTERISTIC

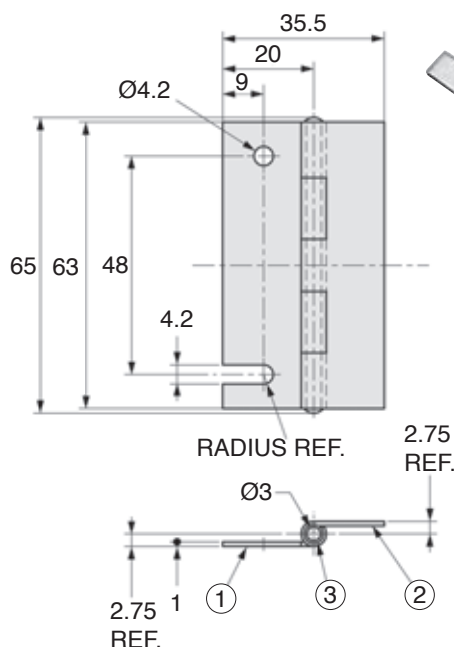
Hinge with one slotted installation hole.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	—	1
2	Hinge Piece			
3	Pin			

• HINGE – With Slotted Mounting Hole

Catalog Number	Net Weight g
MLAT22MTH128	25



HINGES



• APPLICATIONS

Measuring instruments / Telecommunication devices

• CHARACTERISTICS

The door can be removed at an approximate angle of 40°.

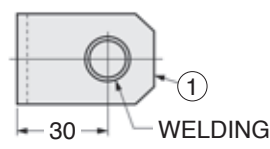
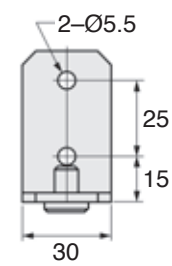
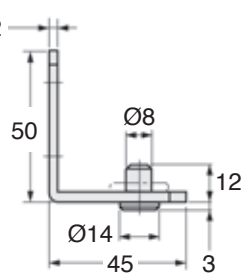
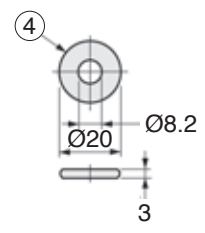
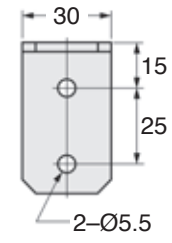
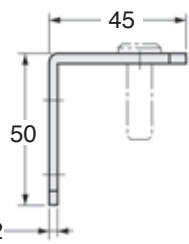
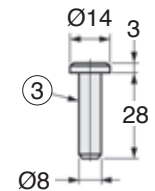
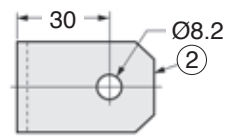
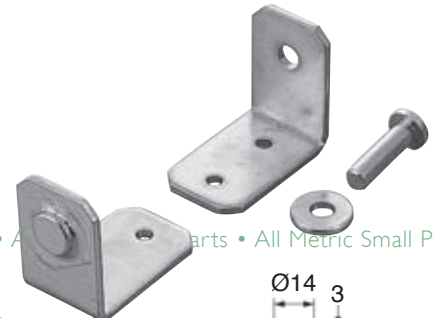
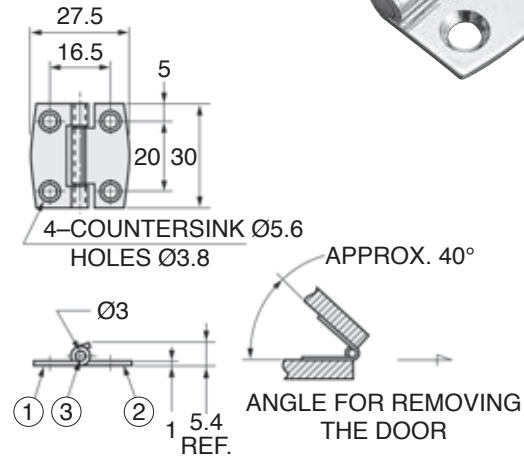
• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			

• HINGE – Hooked

Catalog Number	Net Weight g
MLAT41MTH17	9

NOTE: When using countersunk screws or rivets to attach the hinge; the mounting surface should also be countersunk.



• PARTS LIST

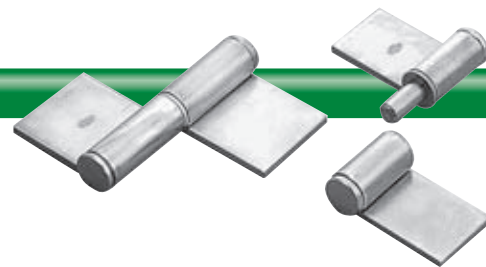
No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	1
2	Hinge Piece			
3	Pin			
4	Flat Washer			

• HINGE – Pivot

Catalog Number	Allowable Load N (kgf)	Net Weight g
MLAT43MTH50	196 (20)	155

HINGES, LIFT-OFF - Steel, Zinc Plated

RoHS
COMPLIANT



• APPLICATIONS

Distribution boards / Machine tools /
Construction machines

• CHARACTERISTIC

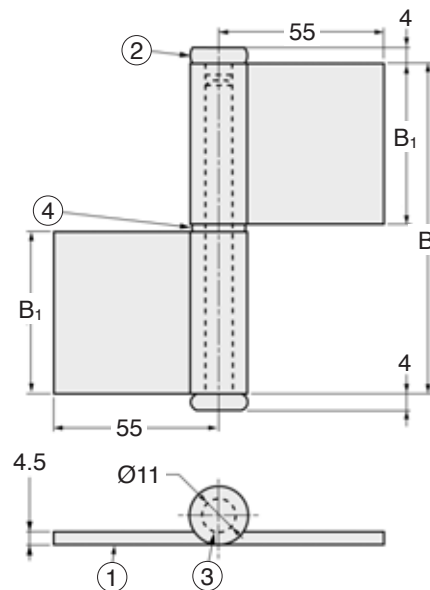
A hinge suitable for a heavy door.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	2
2	Rivet			1
3	Pin			
4	Flat Washer			

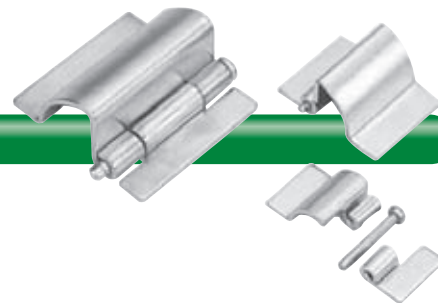
• HINGES

Catalog Number	Type	B	B ₁	Net Weight g
MLAT24MTH60-1L	Left	75	36.5	321
MLAT24MTH60-1R	Right			
MLAT24MTH60-2L	Left	100	49	420
MLAT24MTH60-2R	Right			
MLAT24MTH60-3L	Left	150	74	635
MLAT24MTH60-3R	Right			



THE FIGURE SHOWS LEFT TYPE

HINGES, LIFT-OFF - Steel, Zinc Plated



• APPLICATIONS

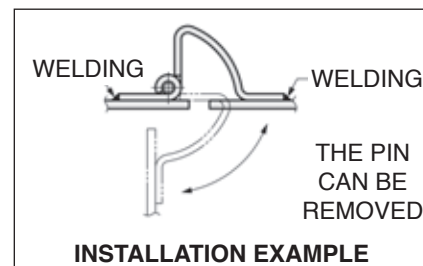
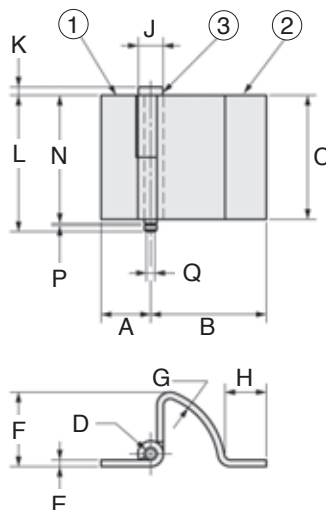
Distribution boards / Distribution panels /
Telecommunication devices

• CHARACTERISTICS

The hinge is not visible from the outside.
Select from a wide variety of sizes.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	1
2	Hinge Piece			
3	Pin	Carbon Steel		



The figure is for the left type.
...TH54-4 thru ...TH54-7 are
a slightly different shape than
...TH54-1 thru ...TH54-3.

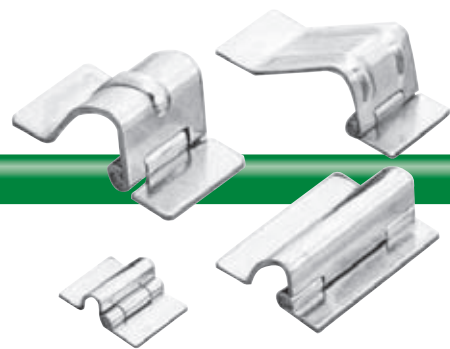
• HINGES

Catalog Number	A	B	C	D	E	F	G	H
MLAT38MTH54-1L	12	24	20	Ø3	1.6	12	R10	9
MLAT38MTH54-1R		28	25			18	R18	10
MLAT38MTH54-2L			30					
MLAT38MTH54-2R								
MLAT38MTH54-3L								
MLAT38MTH54-3R	15	40	40	Ø5	2	26	R24	12
MLAT38MTH54-4			50					
MLAT38MTH54-5	25	63	60	Ø6	3.2	35	R30	17
MLAT38MTH54-6	27	75	65	Ø8		50	R40	20

Catalog Number	J	K	L	N	P	Q	Net Weight g
MLAT38MTH54-1L	Ø6	2	23	21	0.5	Ø2	15.5
MLAT38MTH54-1R			28	26			23
MLAT38MTH54-2L							
MLAT38MTH54-2R			33	31	27.5		
MLAT38MTH54-3L							
MLAT38MTH54-3R							
MLAT38MTH54-4	Ø8		44	41	0.7	Ø4	66.5
MLAT38MTH54-5			56	52			83
MLAT38MTH54-6	Ø11	3	65	61		Ø5	224
MLAT38MTH54-7	Ø14		70	66	0.9		Ø7

HINGES, CONCEALED - Steel, Zinc Plated

RoHS
COMPLIANT

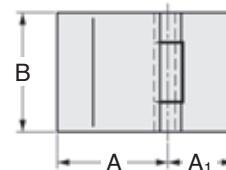
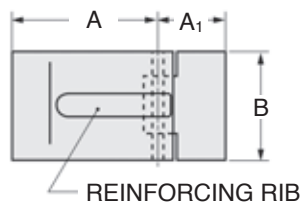


• APPLICATIONS

Distribution boards / Distribution panels /
Telecommunication devices

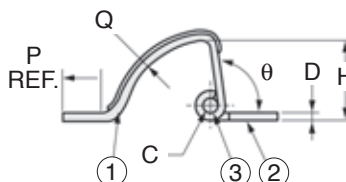
• CHARACTERISTICS

The hinge is not visible from the outside.
Select from a wide variety of sizes.

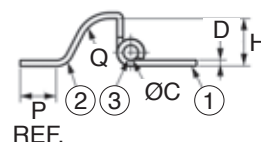


• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	1
2	Hinge Piece			
3	Pin			



THE PIN IS SET OUTSIDE



MLAT37M1TH27-2 ONLY

• HINGES

Catalog Number	A	A ₁	B	C	D	H	P Ref.	Q	θ	Rib	Net Weight g
MLAT37M1TH27-2	18.5	11	20	Ø2.5	1	8	6	R5	90°	no	7.5
MLAT37M2TH27-1	55	14.5	26	Ø3.5		22	13	—	100°	two lines	22.5
MLAT37M3TH27-10	35	13.5	40	Ø3	1.6	21	8	R18	95°	no	44
MLAT37M4TH27-12	26	12	50			15	8.5	R16			
MLAT37M5TH27-13	44	20	32	Ø4	2.3	25	11	R21	90°	one line at the center	63.5
MLAT37M6TH27-16	24	10	30	Ø3	1.6	15	6.5	R12		no	25.5
MLAT37M7TH27-17		13	25		1.2	10.5	9	R13			14.5

HINGES, ANGLED - Concealed Hinge

• APPLICATIONS

Distribution boards / Distribution panels /
Control boards / Telecommunication devices

• CHARACTERISTICS

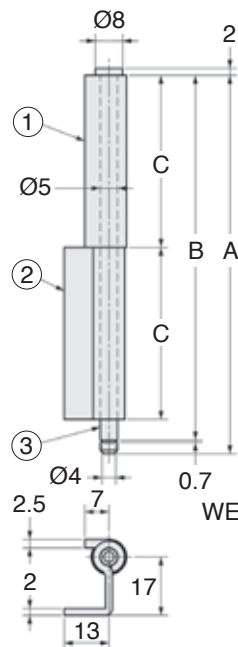
Made of stainless steel, having excellent corrosion
and chemical resistance.

• PARTS LIST

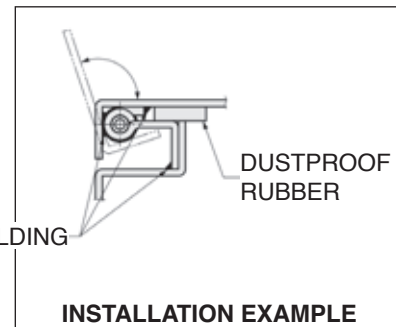
No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	—	1
2	Hinge Piece			
3	Pin			

• HINGES

Catalog Number	A	B	C	Net Weight g
MLAT36M1TH93-2	65	61	30	47
MLAT36M2TH93-1	110	106	50	78



THE PIN CAN BE
REMOVED



All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts

8

• APPLICATIONS

Distribution boards / Distribution panels /
Control boards / Telecommunication devices

• CHARACTERISTICS

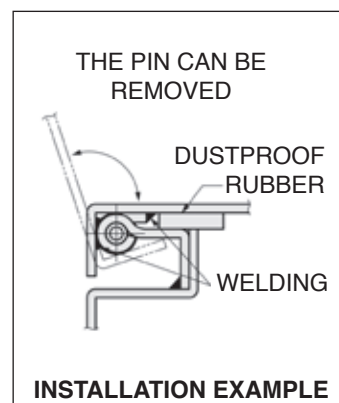
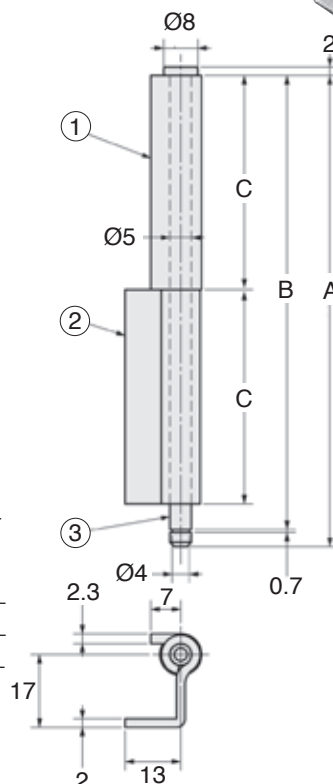
The pin can be removed. Easy installation.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	1
2	Hinge Piece			
3	Pin			

• HINGES

Catalog Number	A	B	C	Net Weight g
MLAT36M1TH73-3	44	41	20	31.5
MLAT36M2TH73-2	65	61	30	46.5
MLAT36M3TH73-1	110	106	50	77

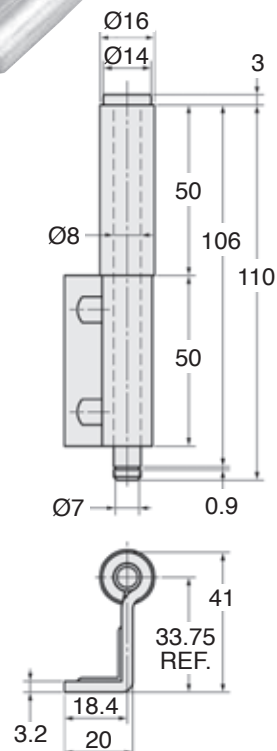
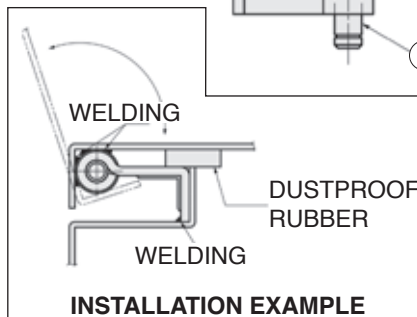
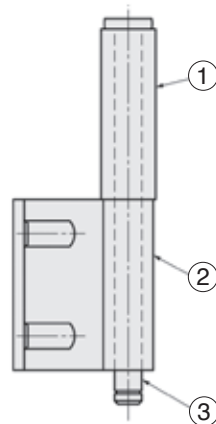
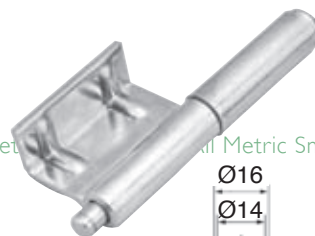
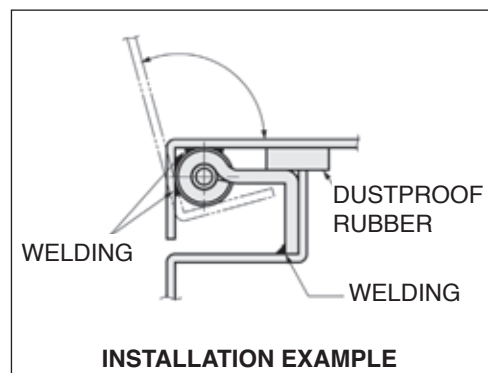
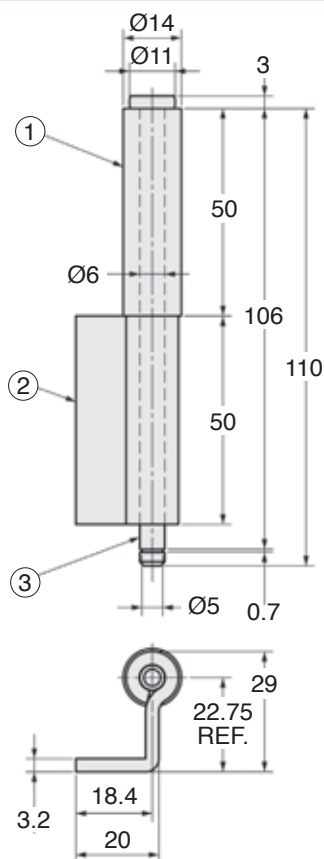


Distribution boards / Distribution panels /
Control boards / Telecommunication devices

The pin can be removed. Easy installation.

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	1
2	Hinge Piece			
3	Pin	Carbon Steel		

Catalog Number	Net Weight g
MLAT36MTH71	150.5

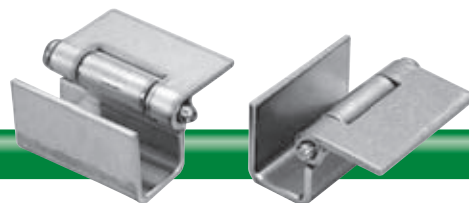


Distribution boards / Distribution
panels / Control boards /
Telecommunication devices

The pin can be removed. Easy installation.

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	1
2	Hinge Piece			
3	Pin	Carbon Steel		

Catalog Number	Net Weight g
MLAT36MTH72	200.5



• APPLICATIONS

Distribution boards / Distribution panels /
Control boards / Telecommunication devices

• CHARACTERISTICS

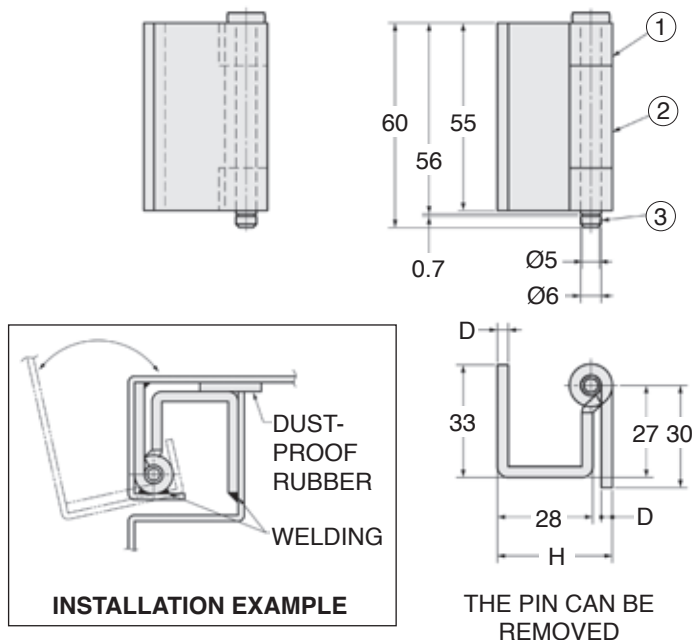
The pin can be removed. Easy installation.

• PARTS LIST

No.	Part Name	Material		Finish		Qty.
		...TH81	...TH81SUS	...TH81	...TH81SUS	
1	Hinge Piece	Steel	Stainless Steel	Zinc Plated	—	1
2	Hinge Piece	Steel	Stainless Steel	Zinc Plated	—	
3	Pin	Carbon Steel	Stainless Steel	Zinc Plated	—	

• HINGE – Channeled, Concealed

Catalog Number	D	H	Net Weight g
MLAT33MTH81	3.2	33.7	184
MLAT33MTH81SUS	3	33.5	169.5



• APPLICATIONS

Replacement of steel made hinge pins as an
anticorrosive countermeasure / Rotational
axes for any part in mechanisms / General applications

• CHARACTERISTICS

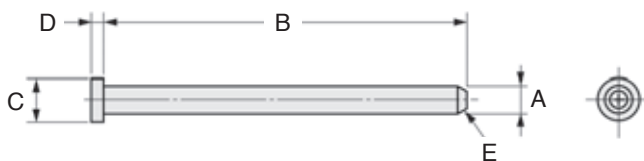
Made of stainless steel, having excellent
corrosion resistance.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Pin	Stainless Steel	—	1

• PINS

Catalog Number	A	B	C	D	E	Net Weight g
MLAT39MTH100-1	Ø5	65	Ø8	2	1 X 45°	10.4
MLAT39MTH100-2	Ø6	85	Ø11	3		20.8
MLAT39MTH100-3	Ø8	110	Ø14			46
MLAT39MTH100-4	Ø10		Ø16		1.5 X 45°	71.7



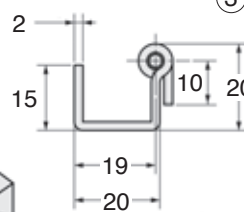
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Distribution boards / Distribution panels /
Control boards / Telecommunication devices

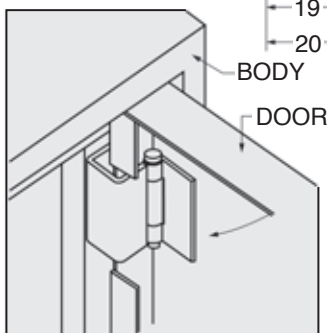
The pin can be removed. Easy installation.

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	—	1
2	Hinge Piece			
3	Pin			

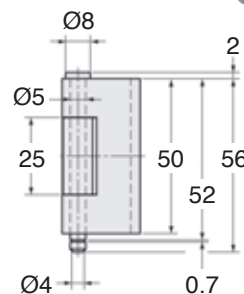
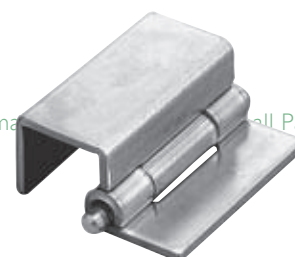
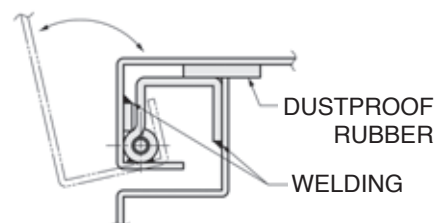
Catalog Number	Net Weight g
MLAT33M1TH83	57.5



THE PIN CAN
BE REMOVED



INSTALLATION EXAMPLE

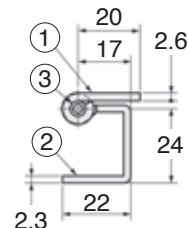
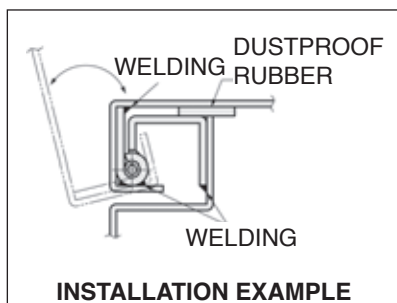


Distribution boards / Distribution panels /
Control boards / Telecommunication devices

The pin can be removed. Easy installation.

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	1
2	Hinge Piece			
3	Pin	Carbon Steel		

Catalog Number	Net Weight g
MLAT33M2TH75	91.5



THE PIN CAN
BE REMOVED

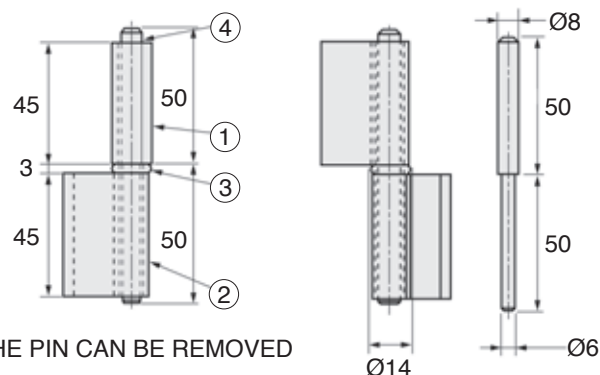
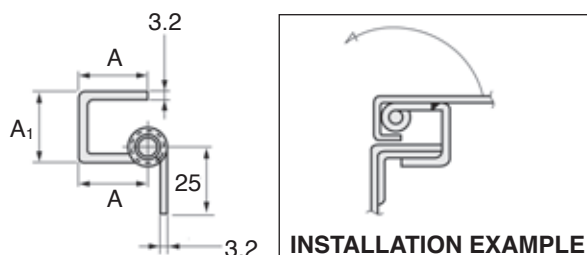
This image shows three different types of metal cable clamps and a small washer. The clamps are made of polished metal and are designed to secure cables. One clamp is shown with a cable inserted, while the other two are shown without. A small washer is also visible next to the clamps.

Distribution boards / Distribution panels /
Telecommunication devices

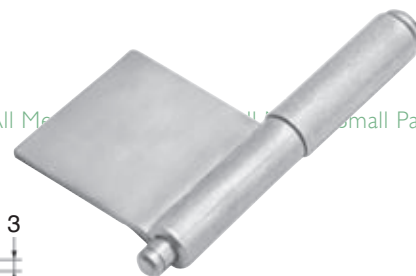
A dowel pin is not needed to hold the hinge pieces in place. The pin is made with two diameters. The lower portion is smaller while the plate thickness of the hinge pieces is the same. Either side of the door can be used. The flat washer enables the door to rotate with a light touch.

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	1
2	Hinge Piece			
3	Flat Washer			
4	Pin	Stainless Steel	—	

Catalog Number	A	A ₁	Net Weight g
MLAT34M1TH52-3	25	23	195
MLAT34M2TH52-2	35	28	225
MLAT34M3TH52-1	45	33	252



THE PIN CAN BE REMOVED



8

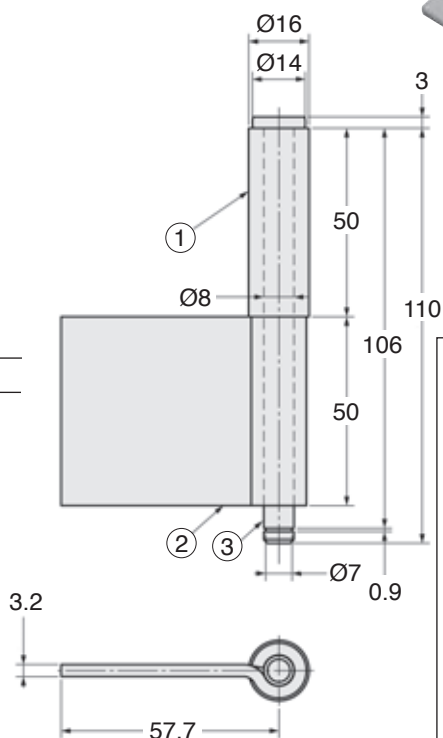
All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts

Distribution boards / Distribution panels /
Control boards / Telecommunication devices

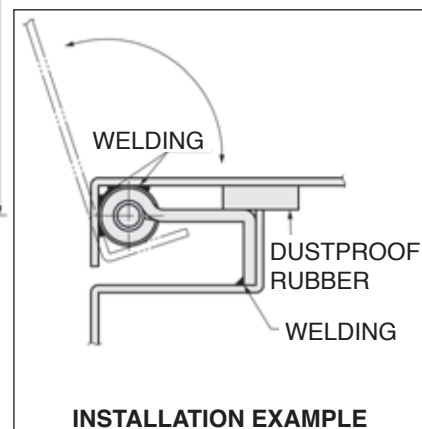
The plate may be bent to fit the space available for installation.

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Zinc Plated	1
2	Hinge Piece			
3	Pin	Carbon Steel		

Catalog Number	Net Weight g
MLAT35MTH74	211



THE PIN CAN BE REMOVED



HINGES, PIPE



• APPLICATIONS

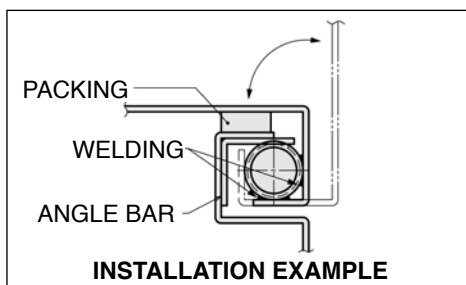
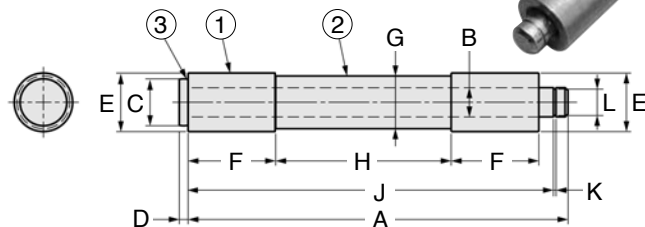
Distribution boards / Distribution panels /
Control boards

• CHARACTERISTICS

A concealed hinge installed only by means of
welding. A pipe-shaped hinge piece saves the
space to install.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Collar Piece	Steel	—	2
2	Collar Piece			1
3	Pin	Carbon Steel	Zinc Plated	1



• HINGE – I-Type

Catalog Number	A	B	C	D	E	F	G	H	J	K	L	Net Weight g
MLAT42M1TH56-4	65	Ø5	Ø8	2	Ø12	15	Ø10	30	61	0.7	Ø4	45.5
MLAT42M2TH56-3	85	Ø6	Ø11	3	Ø14	20	Ø12	40	81		Ø5	85
MLAT42M3TH56-2	110	Ø10	Ø16		Ø18	25	Ø16	50	105	0.9	Ø9	184
MLAT42M4TH56-1	130				Ø20	30	Ø18	60	125			272.5

All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts • All Metric Small Parts

• APPLICATIONS

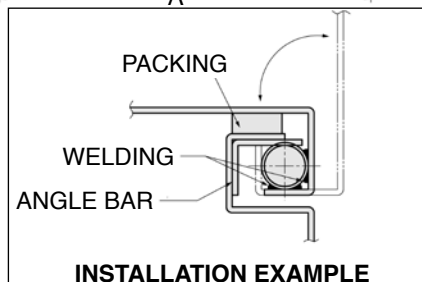
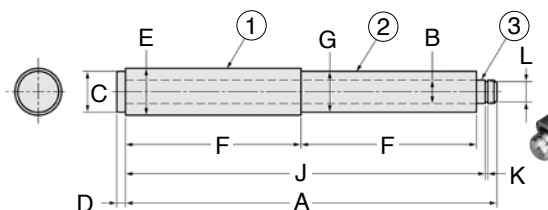
Distribution boards / Distribution panels /
Control boards

• CHARACTERISTICS

A concealed hinge installed only by means of
welding. A pipe-shaped hinge piece saves the
space to install.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Collar Piece	Steel	—	1
2	Collar Piece			
3	Pin	Carbon Steel	Zinc Plated	



• HINGE – II-Type

Catalog Number	A	B	C	D	E	F	G	J	K	L	Net Weight g
MLAT42M1TH57-4	65	Ø5	Ø8	2	Ø12	30	Ø10	61	0.7	Ø4	46
MLAT42M2TH57-3	85	Ø6	Ø11	3	Ø14	40	Ø12	81		Ø5	85
MLAT42M3TH57-2	107					50		103			106
MLAT42M4TH57-1	127	Ø8	Ø14			Ø16	60	Ø14	123	0.9	Ø7

HINGES, 180° 2D-SCREW-ON

RoHS
COMPLIANT

• CHARACTERISTICS

Hinge can be right-handed or left-handed by flipping the section that mounts to the door.
Hinge pin is self-gripping.

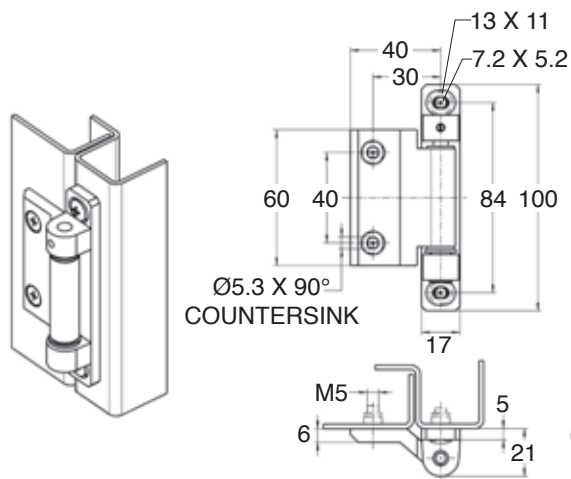


Fig. 1

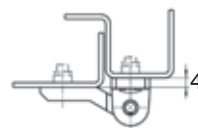


Fig. 2

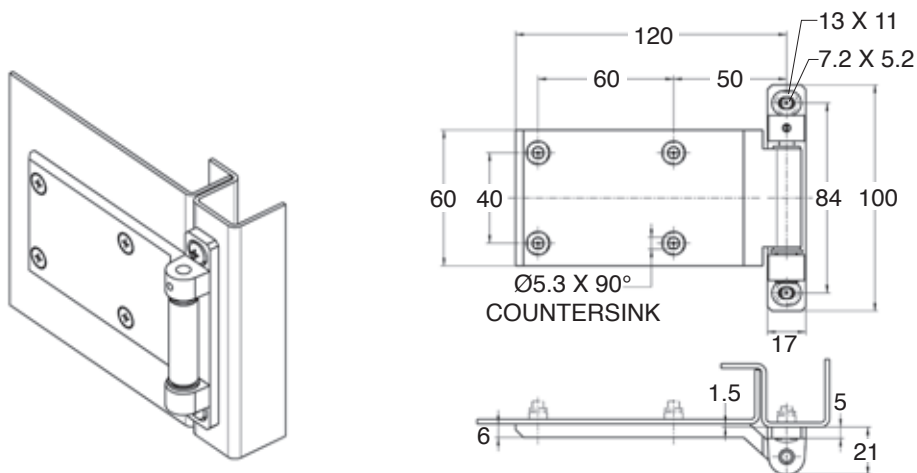


Fig. 3

- **HINGE** – Zinc Die Cast, Black Powder Coated • **AXLE** – Brass, Nickel Plated
- **WASHER** – Mild Steel, Zinc Plated • **BUSHING** – Polyamide

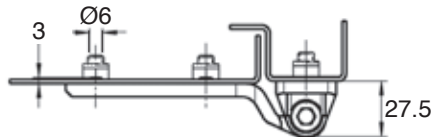
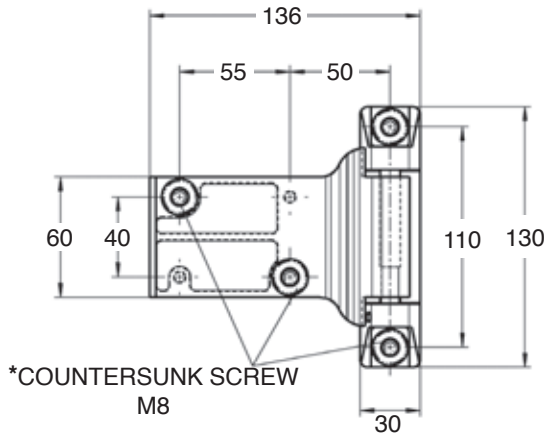
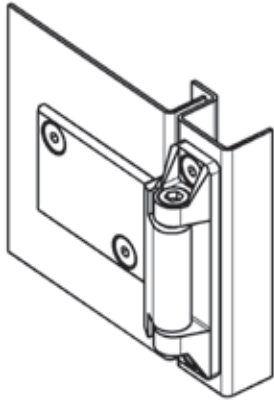
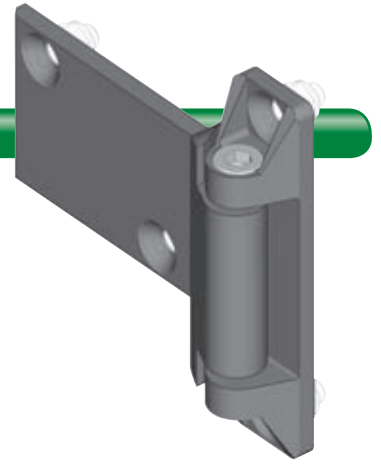
Catalog Number

Fig. 1	Fig. 2	Fig. 3
MLAE03M1054U3301	MLAE03M1054U3401	MLAE03M1054U3501

Tolerances: All vertical dimensions ± 1.6
All horizontal dimensions ± 1

HINGES, 180° 3D - Screw-On

RoHS
COMPLIANT



*Not Included.

8

- **HINGE** – Zinc Die Cast, Black Powder Coated
- **SHAFT & SCREW** – Stainless Steel

Catalog Number	Type
MLAE04M1054U31	Right
MLAE04M1054U32	Left

Tolerances: All vertical dimensions ± 2.5
All horizontal dimensions ± 1
All depth dimensions ± 1

HINGES, POSITIONING SPRING



• APPLICATIONS

Office automation appliances /
Telecommunication devices /
Measuring instruments

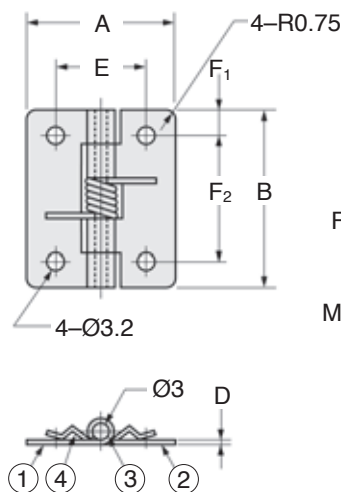
• CHARACTERISTICS

Spring is set with the pin. The spring load is measured at a hole for installation.

• PARTS LIST – Fig. 1

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Steel	Bright Zinc Plated	1
2	Hinge Piece			
3	Pin			
4	Spring	Stainless Steel	—	

Fig. 1 • HINGE – Without Holes



MEASURING POSITIONS OF SPRING LOAD



Fig. 2

Fig. 1

Fig. 3

• PARTS LIST – Fig. 2

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Brass	Nickel Plated	1
2	Hinge Piece			
3	Pin			
4	Spring	Stainless Steel	—	

Fig. 2 • HINGE – With Holes

Catalog Number	A	B	D	E	F ₁	F ₂	d	Reference Spring Load N (kgf)			Net Weight g
								a	b	c	
MLAT44MTH61B-1	32	25	1.2	20	5.5	14	10	3.92 (.4)	6.38 (.65)	8.83 (.9)	11
MLAT44MTH61B-2		38	1.5		6	26					20.5
MLAT44MTH61B-3	38	51		25	9.5	32	12.5	4.91 (.5)	6.87 (.7)	8.83 (.9)	32.5

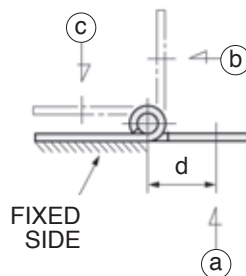
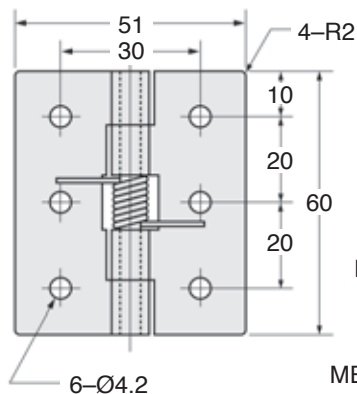
• PARTS LIST – Fig. 3

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	—	1
2	Hinge Piece			
3	Spring			
4	Pin			

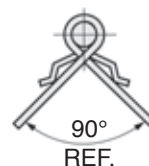
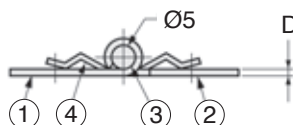
Fig. 3 • HINGE – With Holes

Catalog Number	A	B	D	E	F ₁	F ₂	d	Reference Spring Load N (kgf)			Net Weight g
								a	b	c	
MLAT44MTH61SUS-1	32	25	1.2	20	5.5	14	10	3.92 (.4)	6.38 (.65)	8.83 (.9)	10
MLAT44MTH61SUS-2		38	1.5		6	26					19
MLAT44MTH61SUS-3	38	51		25	9.5	32	12.5	4.91 (.5)	6.87 (.7)	8.83 (.9)	29.5

HINGES, POSITIONING SPRING - With Holes



MEASURING POSITIONS OF SPRING LOAD



FREE STATE

• APPLICATIONS

Office automation appliances /
Telecommunication devices /
Measuring instruments

• CHARACTERISTICS

Spring is set with the pin. The spring load is measured at a hole for installation.

• PARTS LIST

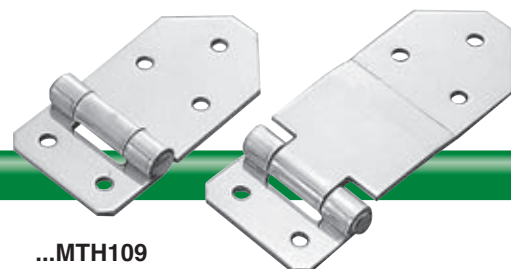
No.	Part Name	Material		Finish		Qty.
		...TH63B	...TH63SUS	...TH63B	...TH63SUS	
1	Hinge Piece	Brass	Stainless Steel	Nickel Plated	Barrel Polishing	1
2	Hinge Piece					
3	Pin					
4	Spring	Stainless Steel	—			

8

• HINGES

Catalog Number	D	d	Reference Spring Load N (kgf)			Net Weight g
			a	b	c	
MLAT44MTH63B	1.5	15	4.91 (.5)	6.87 (.7)	9.81 (1)	57.5
MLAT44MTH63SUS						53

HINGES, STRAP - Stainless Steel



• APPLICATIONS

Trucks / Fire engines / Container trucks /
Freezers / Food related boxes

• CHARACTERISTICS

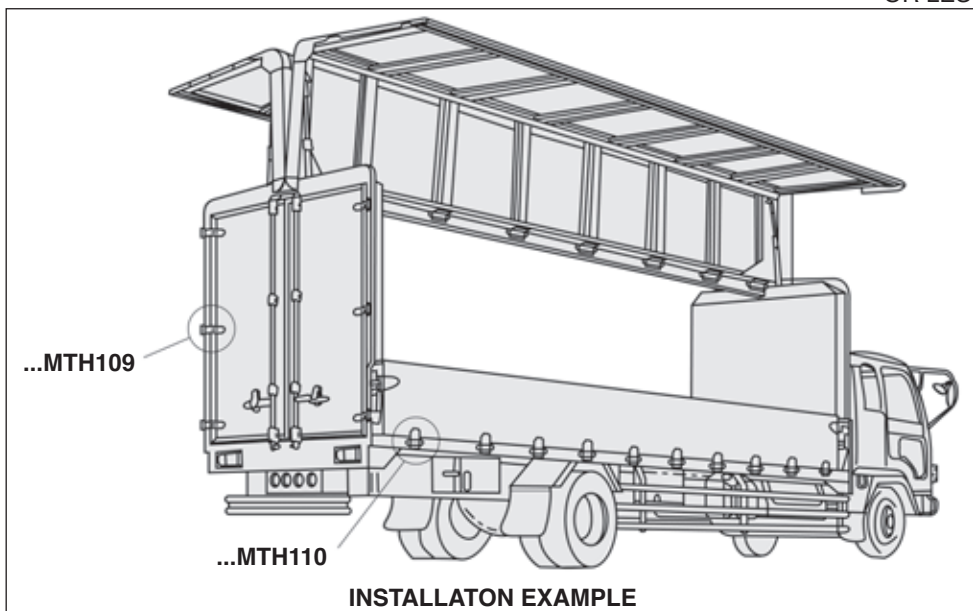
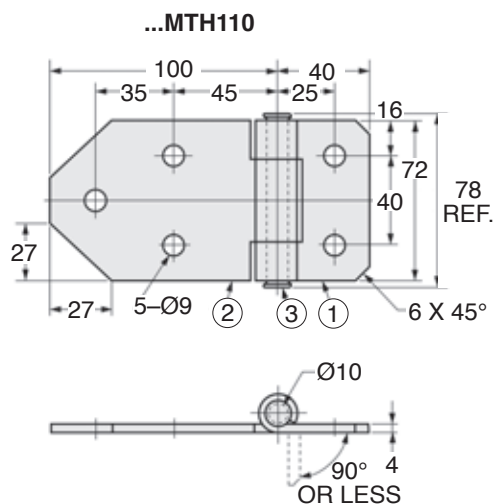
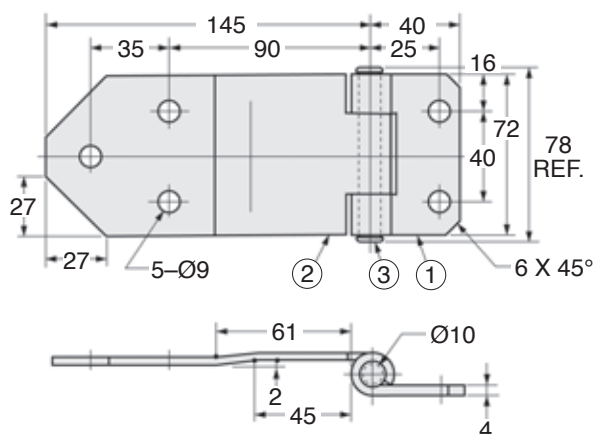
The large hinge is designed for outfitting special equipment vehicles. It is suitable for use on the rear fence of a truck bed, or a door to a (truck) container (see installation example below). Corrosion-resistant stainless steel is used for the hinge. The smaller hinge is suitable for use on the side fence of a truck bed.

• PARTS LIST

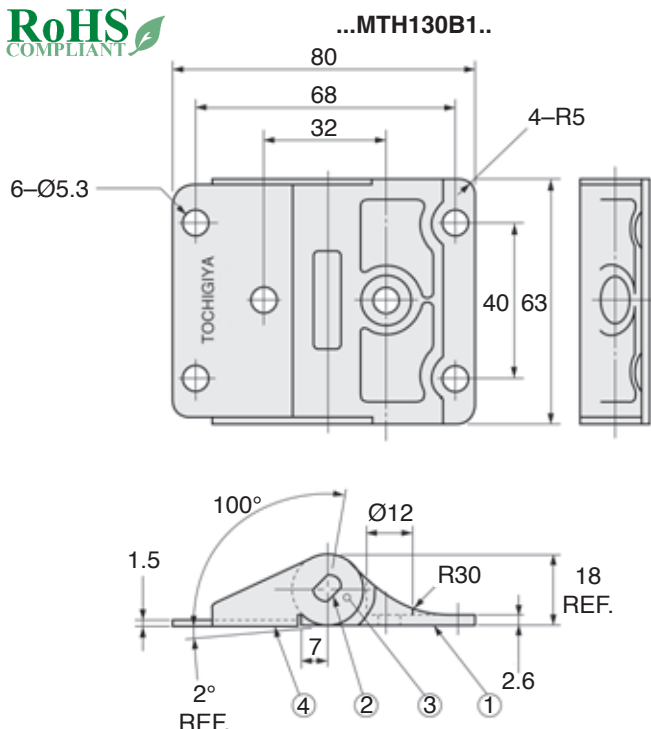
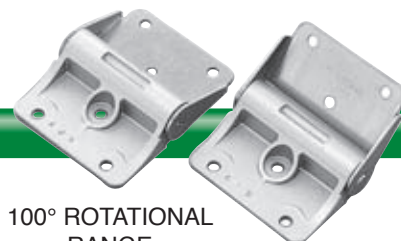
No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	Buffing	1
2	Hinge Piece		—	
3	Pin		—	

• HINGES

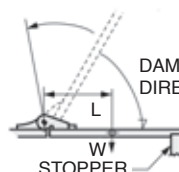
Catalog Number	Net Weight g
MLAT40MTH109	475.7
MLAT40MTH110	376.5



HINGES, VISCOUS DAMPENED

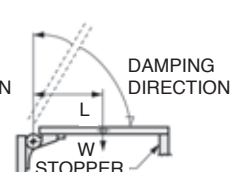


100° ROTATIONAL
RANGE

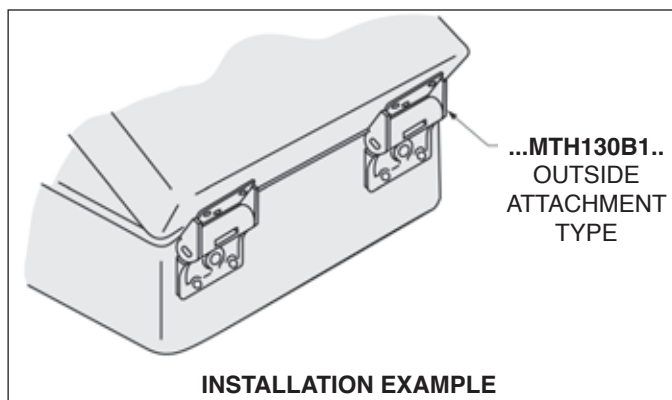


...MTH130B1..
OUTSIDE
ATTACHMENT

100° ROTATIONAL
RANGE



...MTH130B2..
INSIDE
ATTACHMENT



• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Body	Aluminum Die Cast	Silver Paint	1
2	Pin	Steel	Nickel Plated	1
3	Silicon Oil	—	—	—
4	Hinge Piece	Stainless Steel	Barrel Polishing	1

1. Permissible Temperature Range: -20°C to +40°C.

2. Durability: At least 20,000 cycles (1 cycle: Open and Close, Room Temp.: 23°C).

3. Damping in one direction only.

• HINGES

Catalog Number	Attachment	Max. Moment Load N · m (kgf · cm)	Net Weight g
MLAT08MTH130B112	Outside	1.18 (12)	98
MLAT08MTH130B124		2.35 (24)	
MLAT08MTH130B212	Inside	1.18 (12)	
MLAT08MTH130B224		2.35 (24)	

- NOTES:**
1. Do not apply excess force in the damping direction.
 2. A stopper / stoppers should be placed to prevent the lid from rotating beyond the rotational range.
 3. Use no more than 2 hinges per one lid.

• Maximum Moment Load

MLAT08MTH130B112	1 piece	W X L = 1.18 N · m (12 kgf · cm)
	2 pieces	W X L = 2.35 N · m (24 kgf · cm)
MLAT08MTH130B124	1 piece	W X L = 2.35 N · m (24 kgf · cm)
	2 pieces	W X L = 4.71 N · m (48 kgf · cm)

• APPLICATIONS

Office automation appliances / Medical instruments
Telecommunication devices / Various types of storage cases such as transporter cases / Aircrafts / Hand baggage racks on vehicles / Audio-visual devices

• CHARACTERISTICS

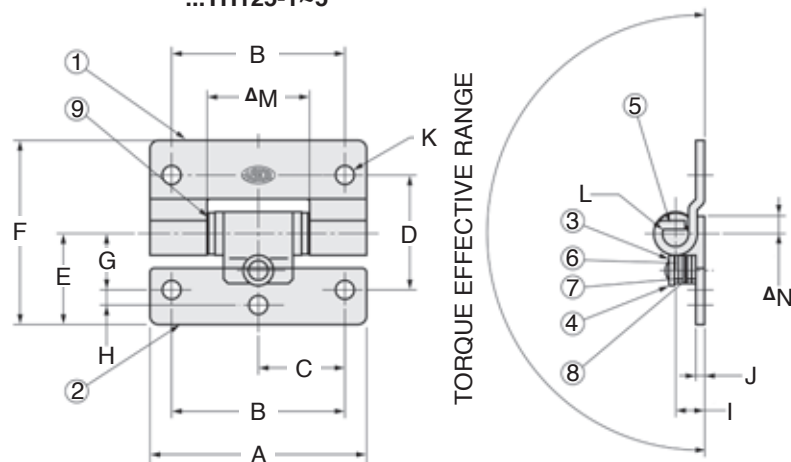
Soft and Silent: It is a light weight and compact dampened hinge designed to have higher torque, by using a newly developed rotary mechanism. Since damping force to the rotational movement of hinge is applied by viscous resistance of the oil, the rotation becomes slow and soft.

Safety: Since lids can be opened or closed slowly and quietly, it is possible to take countermeasures to prevent injuries or damages from closing shocks and noises.

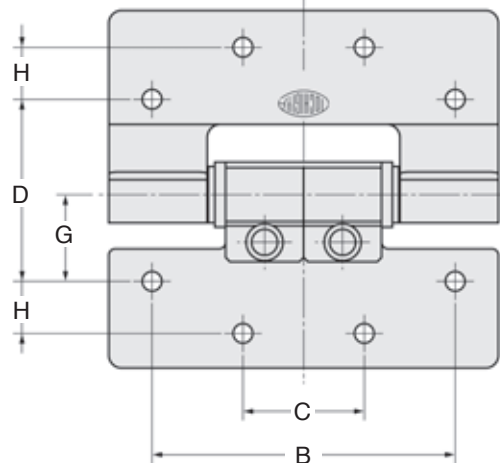
HINGES, FRICTION - Stainless Steel

RoHS
COMPLIANT

...TH125-1~5



...TH125-H



• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Hinge Piece	Stainless Steel	Barrel Polishing	1
2	Hinge Piece			
3	Countersunk Rivet		—	1**
4	Washer for Caulking			
5	Pin			
6	Body	Acetal	Black Primary Color	1**
7	*Spacer			
8	Plug			
9	Thrust Washer			

*The spacer is not used in MLAT05M6TH125-5.

**For MLAT05M6TH125-H, quantity is 2.

• APPLICATIONS

Medical instruments / Audio devices

• CHARACTERISTIC

Rotation can be stopped at any angle.

• SPECIFICATIONS

Effective torque range is 180° from mounting surface.

Permissible Temperature Range: -10°C to +50°C

Durability: 20,000 cycles (At Room Temp., 12 sec/cycle).

For the ...TH125-H model only:

Permissible Temperature Range: 0°C to +40°C.

Durability: 20,000 cycles (At Room Temp., 16 sec/cycle).

• HINGES

Catalog Number	A	B	C	D	E	F	G	H	I
MLAT05M1TH125-5	28	20	—	22.5	19.5	34	13	—	4.3
MLAT05M2TH125-4	40	30	15	25	20	35	15		5
MLAT05M3TH125-3	50	40	20	26.5	21	42.5	13	3	7
MLAT05M4TH125-2									
MLAT05M5TH125-1									
MLAT05M6TH125-H	90	70	28	42	40	82.5	20	12	9.5

Catalog Number	J	K	L	ΔM	ΔN Ref.	Torque (At Room Temp.) N · m (kgf · cm)	Net Weight g
MLAT05M1TH125-5	1.2	4-Ø4.3	Ø3	14.2	2.1	0.34 ^{+0.10} ₀ (3.5 ⁺¹ ₀)	12
MLAT05M2TH125-4		5-Ø4.3	Ø4	17.2	2	0.69 ^{+0.20} ₀ (7 ⁺² ₀)	21
MLAT05M3TH125-3	2	5-Ø4.3	Ø6	23.7	4	1.08 ^{+0.39} ₀ (11 ⁺⁴ ₀)	51
MLAT05M4TH125-2						1.37 ^{+0.39} ₀ (14 ⁺⁴ ₀)	
MLAT05M5TH125-1						1.96 ^{+0.39} ₀ (20 ⁺⁴ ₀)	
MLAT05M6TH125-H	2.5	8-Ø4.5	Ø8	44.5	7.5	4.9 ^{±0.98} (50 ^{±10})	196

NOTES: 1. Use no more than 2 hinges per one lid.

2. The pin should be placed horizontally.

3. The hinge should be set on a panel avoiding Δ-marked lengths on the figure.

4. Avoid applications where the operation is continuous.

HINGES, FRICTION

RoHS
COMPLIANT

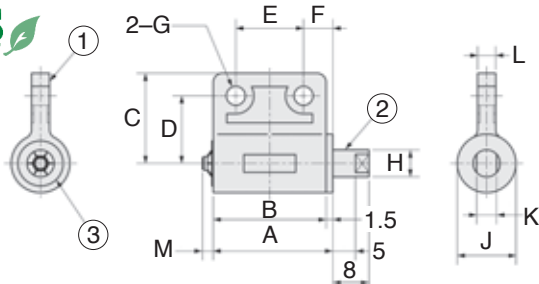


Fig. 1 HINGE

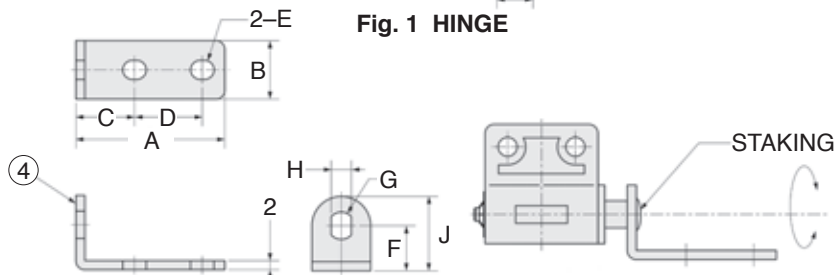
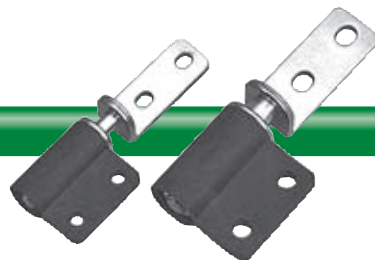


Fig. 2 BRACKET

ASSEMBLED PRODUCT

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Case	Nylon	Black	1
2	Pin	Stainless Steel	—	
3	Push Nut		—	
4	Bracket		Barrel Polishing	

• APPLICATIONS

Medical instruments /
Office automation appliances / Audio devices

• CHARACTERISTICS

Using low frictional resistance of nylon material, the hinge has structures that minimize metal powder and noise generation while reducing friction. Attached part can be stopped at any inclination.

• Specifications for Bracket Assembled to Hinge

Catalog Number	Item No.	Torque N·m (kgf·cm)	Net Weight g
MLAT07M1TH134-4A	1	0.34 ±0.05 (3.5 ±0.5)	6.5
MLAT07M2TH134-3A	2	0.69 ±0.10 (7 ±1)	11.5
MLAT07M3TH134-2A	3	1.08 ±0.15 (11 ±1.5)	16
MLAT07M4TH134-1A	4	1.37 ±0.2 (14 ±2)	22

Fig. 2 • BRACKET

Item No.	A	B	C	D	E	F	G	H	J Ref.
1	22.5	8	8.5	10	4.2 X 3.2	8	Ø3.05	2.25	12
2	27	10	10	13			Ø4.05	2.95	13
3	30.5	11	11.5	14	5.2 X 4.2	10	Ø5.05	3.65	15.5
4	33	13	13	15			Ø6.05	4.45	16.5

Fig. 1 • HINGE

Item No.	A Ref.	B	C	D	E	F	G	H	J	K	L	M
1	19.5	18	11	7.5	10	5.5	Ø3.2	Ø3	Ø8	2.2	3	1.8
2	22.5	21	15	11	13			Ø4	Ø10	2.9		
3	25.5	24	18	13	14	6.5	Ø4.2	Ø5	Ø11	3.6	4	2.1
4	26.5	25	20	15	15			Ø6	Ø13	4.4		2.4

NOTES: 1. Do not stake the hinge and the bracket afterward.
2. Do not use more than 2 hinges per one lid.

3. The pin should be placed horizontally.
4. Avoid applications where the operation is continuous.

HINGES, FRICTION

RoHS
COMPLIANT

ASSEMBLED PRODUCT

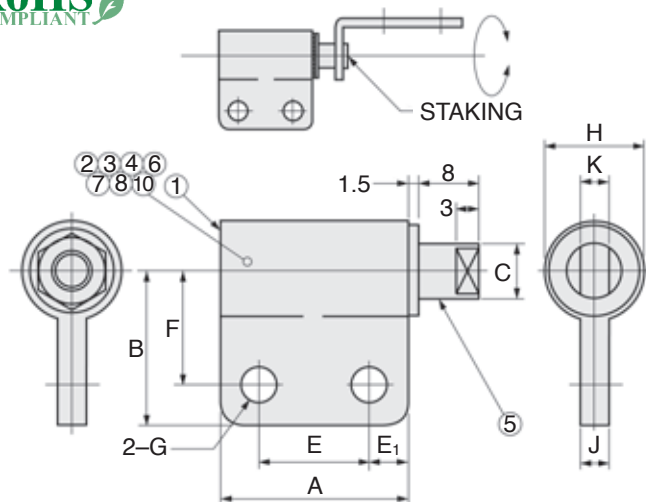


Fig. 1 HINGE

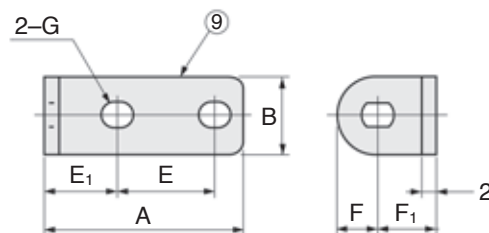
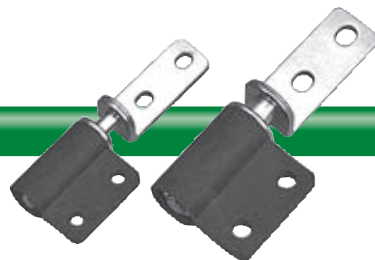


Fig. 2 BRACKET

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Case	Nylon	Black	1
2	Plug	Acetal		
3	Molded Washer		—	
4	Socket	Carbon Steel	Nickel Plated	
5	Pin	Stainless Steel	—	
6	Washer			
7	Countersunk Washer			
8	Nut			
9	Bracket	Steel	Barrel Polishing	
10	Countersunk Spring		—	2

• APPLICATIONS

Personal computers / Word processors / Office automation appliances / Medical instruments / Audio devices / Measuring instruments / Precision instruments

• CHARACTERISTICS

Using low frictional resistance of nylon material, the hinge has structures that minimize metal powder and noise generation while reducing friction. Attached part can be stopped at any inclination.

• Specifications for Bracket Assembled to Hinge

Catalog Number	Item No.	Torque N·m (kgf·cm)	Net Weight g
MLAT06M1TH122-4A	1	0.34 ±0.05 (3.5 ±0.5)	7.5
MLAT06M2TH122-3A	2	0.69 ±0.10 (7 ±1)	12
MLAT06M3TH122-2A	3	1.08 ±0.15 (11 ±1.5)	17.5
MLAT06M4TH122-1A	4	1.37 ±0.2 (14 ±2)	24.4

Fig. 2 • BRACKET

Item No.	A	B	E	E ₁	F	F ₁	G
1	22.5	8	10	8.5	4	8	4.2 X 3.2
2	27	10	13	10	5	8	4.2 X 3.2
3	30.5	11	14	11.5	5.5	10	5.2 X 4.2
4	33	13	15	13	6.5	10	5.2 X 4.2

Fig. 1 • HINGE

Item No.	A	B	C	E	E ₁	F	G	H	J	K
1	18	11	Ø3	10	4	7.5	Ø3.2	Ø8	3	2.2
2	21	15	Ø4	13	4	11	Ø3.2	Ø10	3	2.9
3	24	18	Ø5	14	5	13	Ø4.2	Ø11	4	3.6
4	25	20	Ø6	15	5	15	Ø4.2	Ø13	4	4.4

NOTES: 1. Do not stake the hinge and the bracket afterward. 2. Do not use more than 2 hinges per one lid. 3. The pin should be placed horizontally. 4. Avoid applications where the operation is continuous.

HINGES, FRICTION



• APPLICATIONS

Medical instruments / Office automation appliances /
Audio devices

• CHARACTERISTICS

Using low frictional resistance of nylon material, the hinge has structures that minimize metal powder and noise generation while reducing friction. Attached part can be stopped at any inclination.

• NOTE

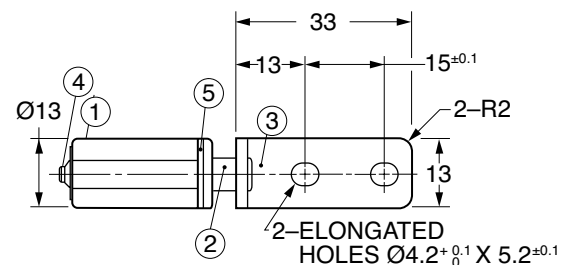
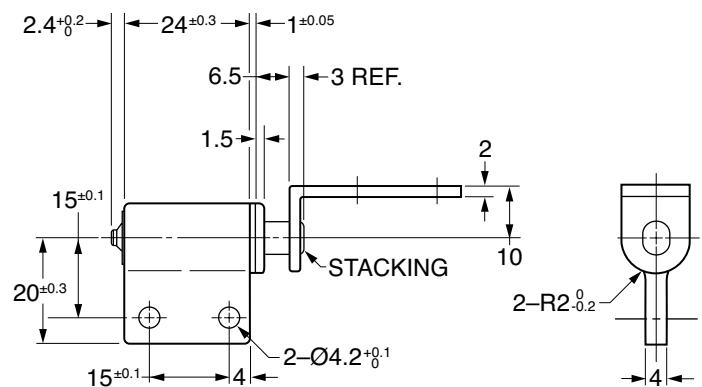
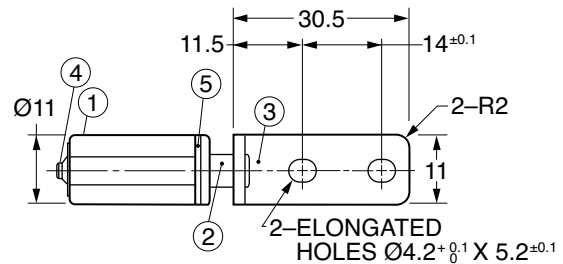
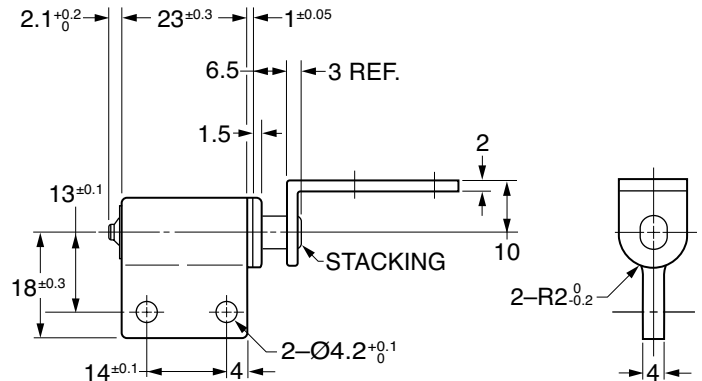
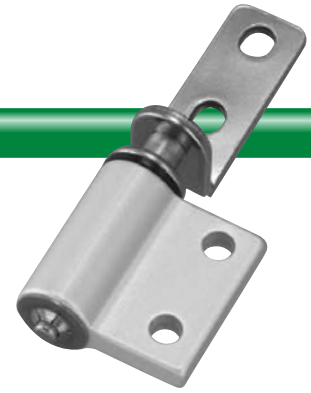
1. Do not use more than two hinges per cover
2. Do not use in continuous operation.

• PARTS LIST

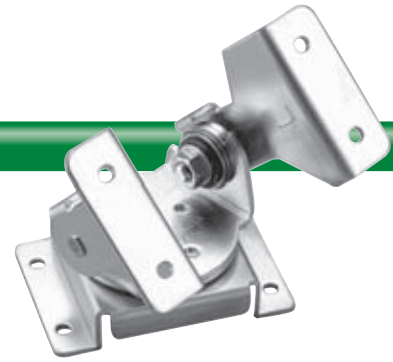
No.	Part Name	Material	Finish	Qty.
1	Case	Aluminum	Anodized	1
2	Pin	Stainless Steel	—	
3	Bracket		Barrel Polishing	
4	Push Nut	Nylon	—	
5	Plug		Black	

• HINGES

Catalog Number	Fig.	Torque	Net Weight g
MLAT46M1TH1441A	2	1.08 $\pm$ 0.15 N·m (11 $\pm$ 1.5 kgf·cm)	28
MLAT46M2TH1442A	1	1.37 $\pm$ 0.2 N·m (14 $\pm$ 2 kgf·cm)	20



HINGE, DOUBLE PIVOT - Free Stopping



• APPLICATIONS

Displays / Office automation equipment / Various display screens

• CHARACTERISTICS

The hinge can be positioned to any desired angle. With two pivots, it can be situated in any position; front-to-back (tilt) and right-to-left (swivel).

• HINGE

Catalog Number	Torque N·m (kgf·cm)		Net Weight g
	Tilt Direction	Swivel Direction	
MLAT03MTH145	5.88 ±0.98 (60 ±10)	2.45 ±0.49 (25 ±5)	289

NOTE: Use hinge within its torque limits. Do not adjust torque (i.e., loosening the nut).

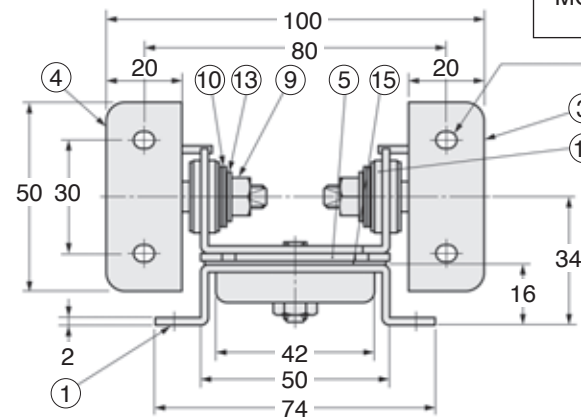
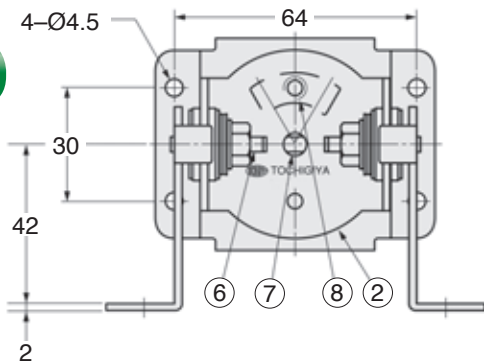
The unit is to be mounted with the fixed bracket down.
For upside-down or sidewall mounting, please consult aMSP.

Use the left- and right-tilting brackets as a pair, and mount only one object. Do not use for continuous motion applications.

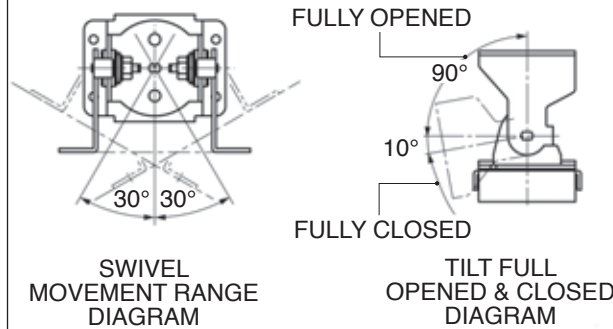
• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Fixed Bracket	Steel	Bright Zinc Plated	1
2	Rotating Bracket			
3	Tilting Bracket (L)			
4	Tilting Bracket (R)			
5	Secondary Bracket			
6	Tilting Pin			2
7	Swiveling Pin			1
8	Stopper Pin			3
9	Hex Nut			6
10	Belleville Spring Washer	Stainless Steel	Black Oxide	5
11	Disc		—	3
12	Plug Holder		—	5
13	Washer	Acetal	Black	1
14	Thrust Plug			
15	Thrust Washer			

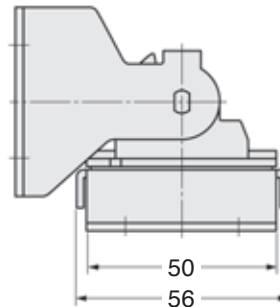
8



INSTALLATION EXAMPLE

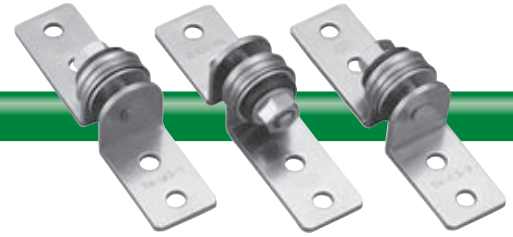


4-ELONGATED HOLES
5.5 X 4.5



HINGES, FREE STOPPING

RoHS
COMPLIANT



• APPLICATIONS

Medical equipment / Sound system equipment

• CHARACTERISTIC

The mounted object can be held at any angle.

• SPECIFICATIONS

Allowable Temperature Range: -10°C to +50°C

Durability: 20,000 cycles (At Room Temp., 12 sec/cycle).

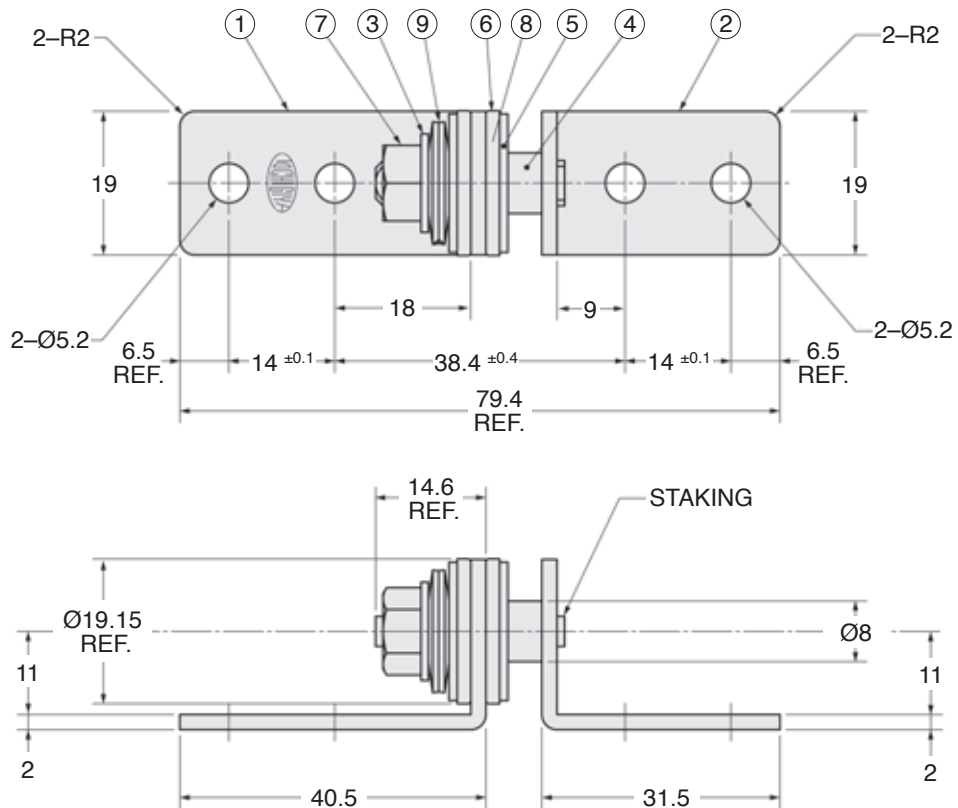
• HINGES

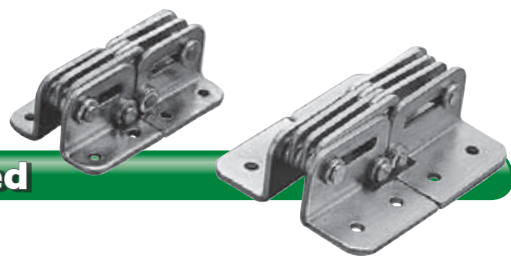
Catalog Number	Torque (At Room Temp.) N·m (kgf·cm)	Net Weight g
MLAT04MTH143-1	3.92 ±0.49 (40 ±5)	47.8
MLAT04MTH143-2	2.94 ±0.49 (30 ±5)	
MLAT04MTH143-3	1.96 ±0.49 (20 ±5)	

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Movable Bracket	Stainless Steel	Barrel Polishing	1
2	Fixed Bracket			
3	Washer			2
4	Pin		—	
5	Disc			1
6	Plug Tray			
7	Hex Nut			2
8	Thrust Plug	Acetal	Black	
9	Belleville Spring Washer	Steel	Black Oxide	

NOTE: Use no more than two hinges per lid. The pin must be in the horizontal position. Do not use in a continuous motion application. Do not adjust torque setting.





HINGES, LINKED - Steel, Bright Zinc Plated



• APPLICATIONS

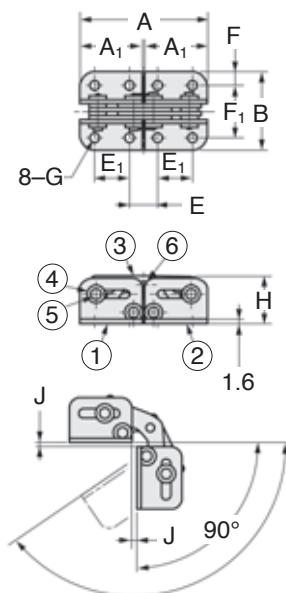
Distribution boards / Distribution panels /
Telecommunication devices

• CHARACTERISTIC

Lid can be opened approximately 145°.

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Base Piece	Steel	Bright Zinc Plated	2
2	Base Piece			
3	Arm			6 (...TH28-1)
4	Washer			4 (...TH28-2)
5	Shaft			20 (...TH28-1)
6	Shaft			16 (...TH28-2)



MAXIMUM APPROX. 145°

LAYOUT OF ROTATIONAL MOVEMENT

• HINGES

Catalog Number	A Ref.	A ₁	B	E Ref.	E ₁	F	F ₁	G	H	J Ref.	Net Weight g
MLAT45MTH28-1	57	28	*45.6	15	14	7.25	*31.1	Ø3.3	21	3.3	70.5
MLAT45MTH28-2	47	23	29	11	13	4.5	20	Ø3	17.5	1.5	43

*Reference

SUPPORT BRACE, LIFTING LID

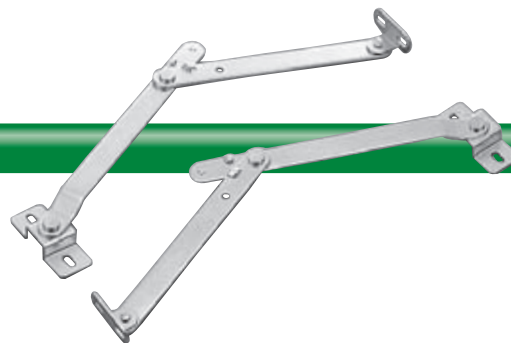
RoHS
COMPLIANT

• APPLICATIONS

Cabinets / Furniture

• CHARACTERISTIC

A limit stop is built in at the center part of the brace.

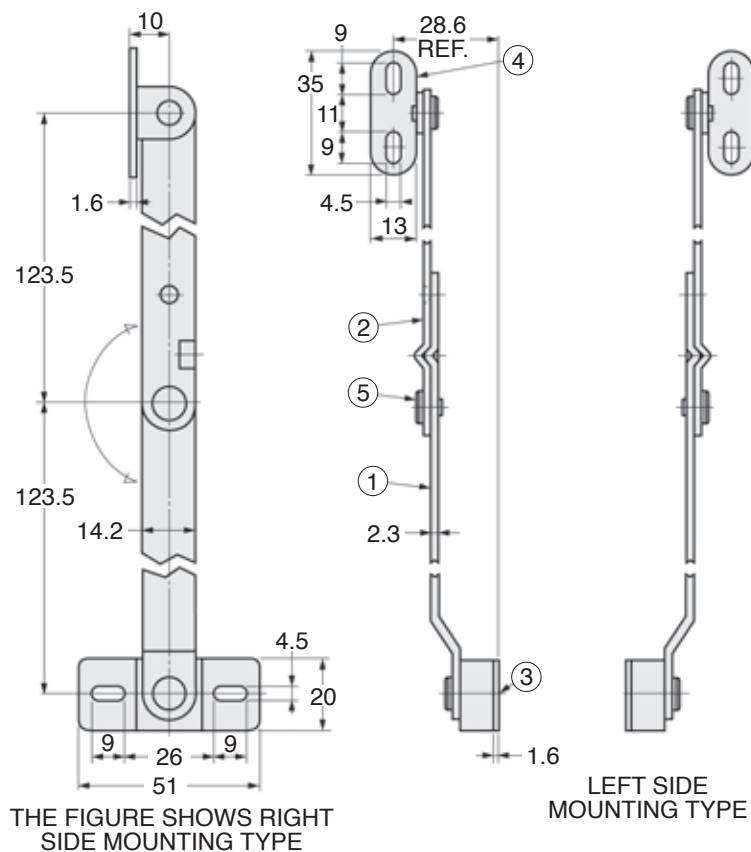


• PARTS LIST

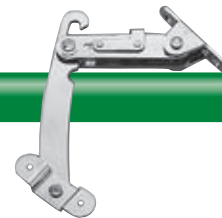
No.	Part Name	Material	Finish	Qty.
1	Arm	Steel	Zinc Plated	1
2	Arm			
3	Bracket			
4	Bracket			
5	Rivet			3

• BRACES

Catalog Number	Type	Allowable Load N (kgf)	Net Weight g
MLAT00MTM92-L	Left	83.4 (8.5)	99.4
MLAT00MTM92-R	Right		



OPEN DOOR KEEPER



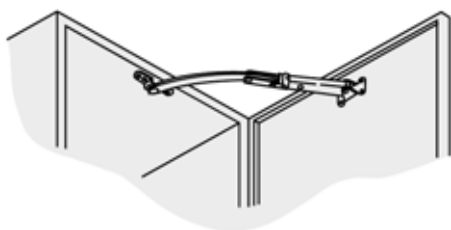
• APPLICATIONS

Distribution panels / Distribution boards /
Large and heavy doors such as cubicles

• CHARACTERISTICS

A door can be kept securely in the open position. The lock can be released with a single touch by sliding the stopper on the front of the keeper. Smart looking appearance with its built-in spring.

INSTALLATION EXAMPLE



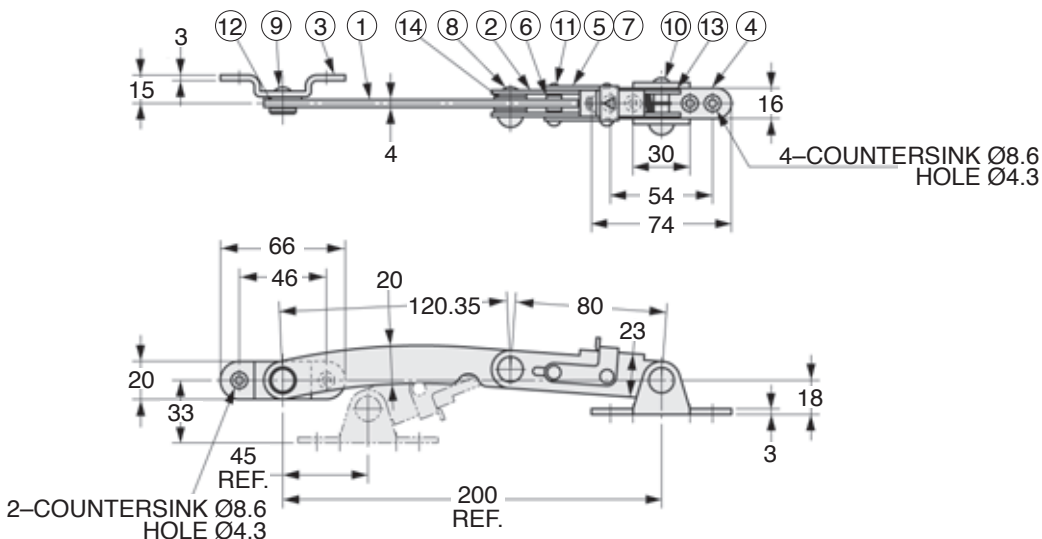
...TM223.. RIGHT SIDE MOUNTING TYPE

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Arm	Stainless Steel	Barrel Polishing	1
2	Arm			
3	Bracket			
4	Bracket			
5	Stopper			
6	Roller		—	2
7	Spring			
8	Pivot Pin			
9	Pivot Pin			
10	Pivot Pin			
11	Pin			
12	Spacer			
13	Spacer			
14	Flat Washer			4

• KEEPER

Catalog Number	Type	Allowable Tensile Load N (kgf)	Allowable Compressive Load N (kgf)	Net Weight g
MLAT00MTM223-2L	Left	1000 (102)	800 (81.5)	288
MLAT00MTM223-2R	Right			



THE FIGURE SHOWS THE RIGHT SIDE MOUNTING TYPE.
THE LEFT SIDE MOUNTING TYPE IS THE MIRROR IMAGE OF
THE RIGHT SIDE MOUNTING TYPE.

OPEN DOOR KEEPER



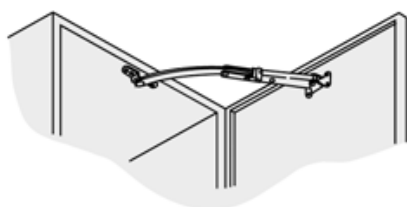
• APPLICATIONS

Distribution panels / Distribution boards /
Large and heavy doors such as cubicles

• CHARACTERISTICS

A door can be kept securely in the open position. The lock can be released with a single touch by sliding the stopper on the front of the keeper. This feature makes it useful for exterior applications. Smart looking appearance with its built-in spring.

INSTALLATION EXAMPLE



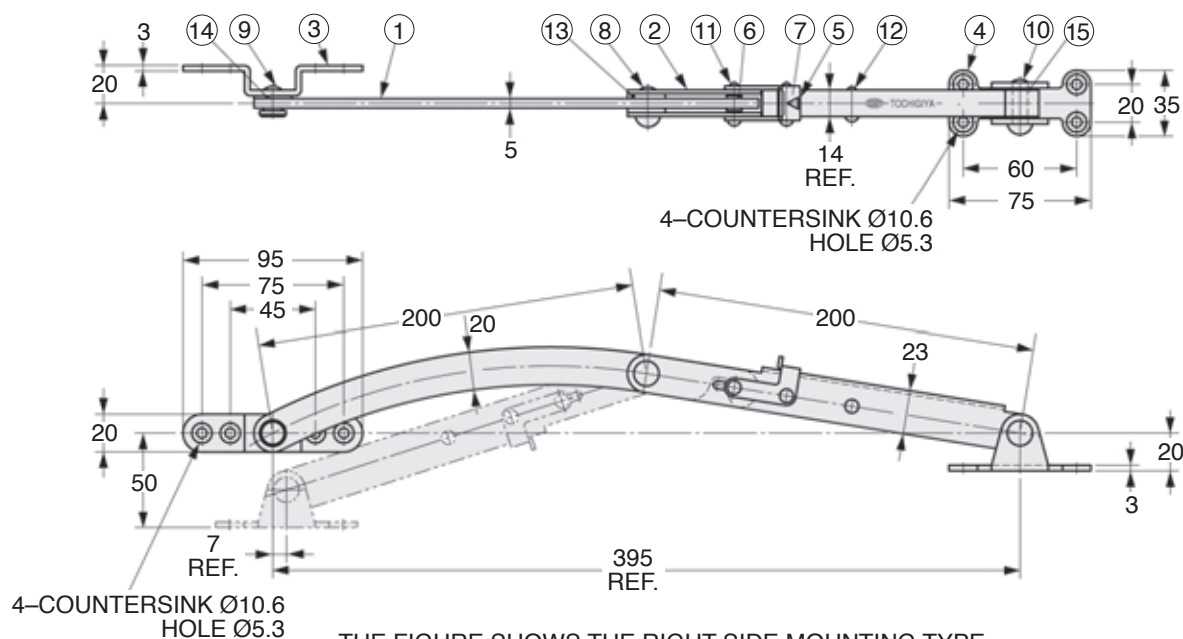
...TM223.. RIGHT SIDE MOUNTING TYPE

• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Arm	Stainless Steel	Barrel Polishing	1
2	Arm			
3	Bracket			
4	Bracket			
5	Stopper			
6	Roller			
7	Spring		—	2
8	Pivot Pin			
9	Pivot Pin			
10	Pivot Pin			
11	Pin			
12	Pin			
13	Spacer			
14	Spacer			
15	Spacer			

• KEEPERS

Catalog Number	Type	Allowable Tensile Load N (kgf)	Allowable Compressive Load N (kgf)	Net Weight g
MLAT00MTM223-1L	Left	1500 (153)	500 (51)	514
MLAT00MTM223-1R	Right			



THE FIGURE SHOWS THE RIGHT SIDE MOUNTING TYPE.
THE LEFT SIDE MOUNTING TYPE IS THE MIRROR IMAGE OF
THE RIGHT SIDE MOUNTING TYPE.

OPEN DOOR KEEPER

• APPLICATIONS

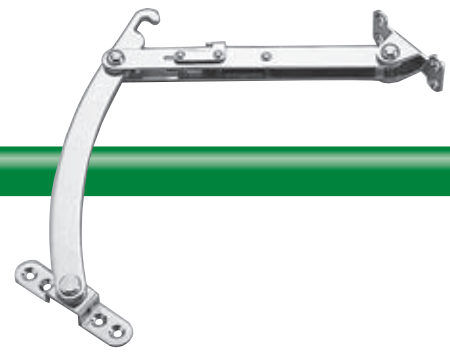
Distribution panels / Distribution boards / Large and heavy doors such as cubicles / Cabinets which need frequent access

• CHARACTERISTICS

A sister product of ...TM223... With its locking mechanism, a door can be held securely in its open position. The door can be closed by simply pushing on the door. Smart looking appearance with its built-in spring. Suitable for short duration opening and closing on interior doors.

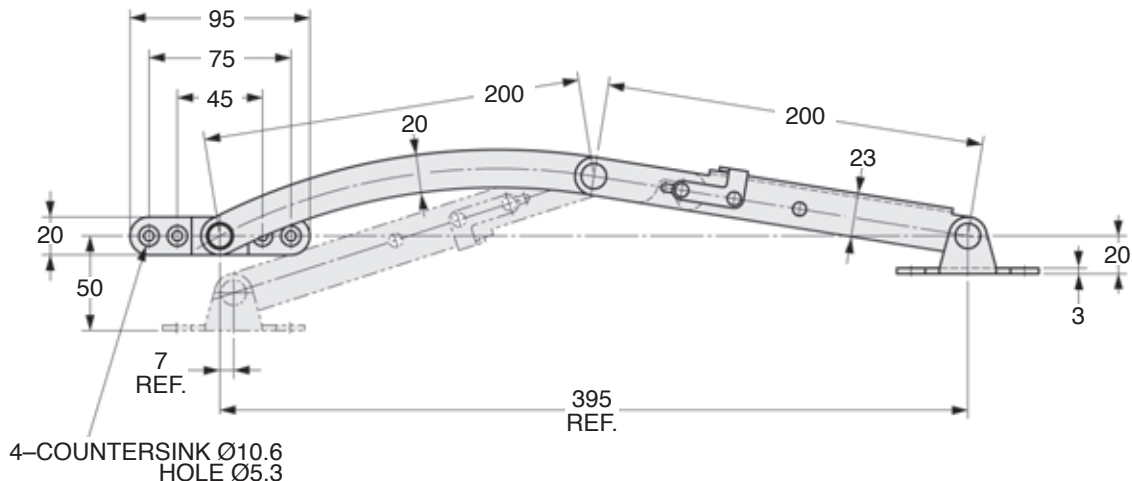
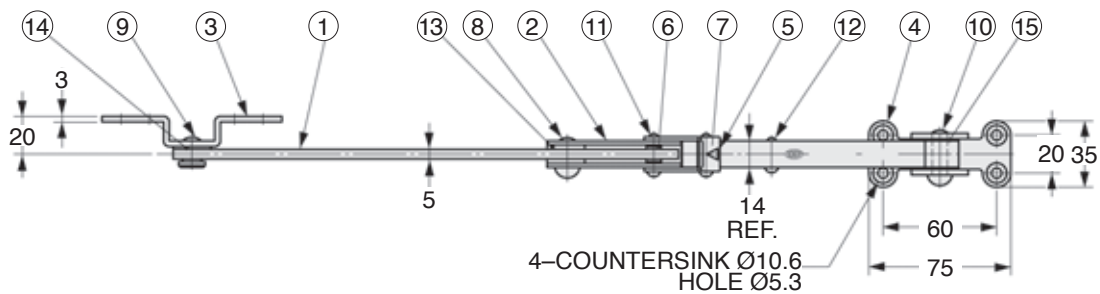
• KEEPERS

Catalog Number	Type	Allowable Tensile Load N (kgf)	Net Weight g
MLAT00MTM224-L	Left	1500 (153)	513.5
MLAT00MTM224-R	Right		



• PARTS LIST

No.	Part Name	Material	Finish	Qty.
1	Arm	Stainless Steel	Barrel Polishing	1
2	Arm			
3	Bracket			
4	Bracket			
5	Stopper			
6	Roller			
7	Spring		—	2
8	Pivot Pin			
9	Pivot Pin			
10	Pivot Pin			
11	Pin			
12	Pin			
13	Spacer			
14	Spacer			
15	Spacer			



THE FIGURE SHOWS THE RIGHT SIDE MOUNTING TYPE.
THE LEFT SIDE MOUNTING TYPE IS THE MIRROR IMAGE OF
THE RIGHT SIDE MOUNTING TYPE.