

LIFT ASSIST STAY S-AT SERIES



- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.

[Specifications]

- Operating temperature: 0°C~40°C
- Operating humidity: 90%RH or less
- For other specification exceeding the above range, please contact local representatives.

[Remarks]

- Be sure to read the "Cautions" **1**
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be taken into consideration. Low rigidity may cause deformation or damage.
- Continuous opening and closing is not allowed.
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).

Video Link

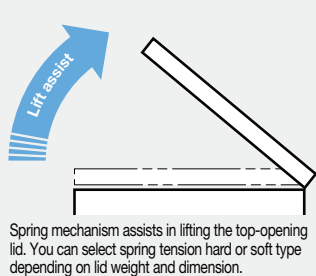


Selection Tool

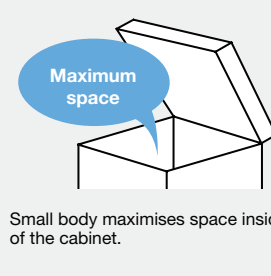


Sasuga-kun

● Easy operation with lift assist



● Compact



[S-ATH seriese]

Item name		Maximum Door Moment (N•m) (As a reference value)										Feature	Page	
Torque		S-AT	4.1 ~6.1 6.1 ~8.8 8.8 ~11.8										Side Mount Back Panel Mount	P.296
		S-ATJ	6.1 ~8.8 8.8 ~11.8			Balance Adjustable	Damper Available					Side Mount	P.298	
		S-ATJD	6.1 ~8.8 8.8 ~11.8			Balance Adjustable	Damper Available					Back Panel Mount	P.300	
		S-ATJS	6.1 ~8.8 8.8 ~11.8			Balance Adjustable						Back Panel Mount	P.302	
		S-AT02W				17.6 ~21.0							Side Mount Back Panel Mount	P.306
		S-ATH							54.0 ~60.0	63.0 ~70.0		Back Panel Mount	P.308	

Refer to **1** : P.293

A tool for easily selecting soft-close, free stop and lift assist stays now available online!

Motion Design Tech **Selection Tool** **"Sasuga-kun"**



Simply by inputting the movement, size, weight and centre of gravity of the door or lid to be used, the torque required can be automatically calculated and suitable stay can be selected.

LIFT
ASSIST
STAYS

SOFT
CLOSING
STAYS

TORQUE
STAYS

HEAVY DUTY
LOCKING
STAYS

FOOT
STAYS

LID
STAYS

OTHER
STAYS

TOP-
OPENING

DOWNWARD-
OPENING

UPWARD-
OPENING

BOTTOM-
OPENING

SWING
DOOR

LIFT-UP

LIFT-
DOWN

UP &
OVER

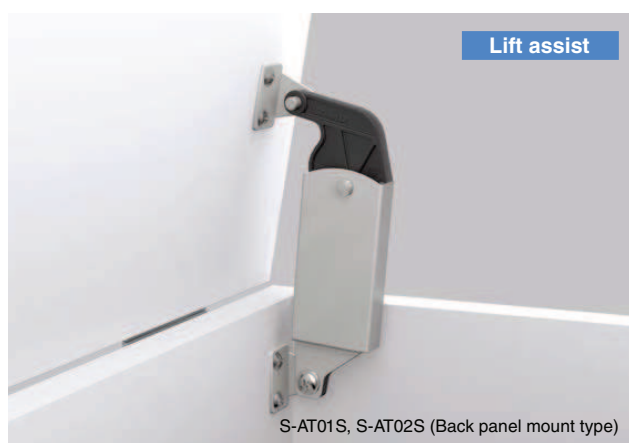
BI-
FOLDING

OVER
THE
TOP

LIFT ASSIST STAY **S-AT** Side Mount, Back Panel Mount

L=R

INSTRUCTION



Opening Direction	Item Name	Description	Non-handed	Maximum Door Moment
 Top-opening	S-AT01	Side mount	Yes	6.1~8.8 N・m/pc (62~90 kgf・cm/pc)
	S-AT02			8.8~11.8 N・m/pc (90~120 kgf・cm/pc)
	S-AT01S	Back panel mount		6.1~8.8 N・m/pc (62~90 kgf・cm/pc)
	S-AT02S			8.8~11.8 N・m/pc (90~120 kgf・cm/pc)

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle (about 10° ~80°).
- Compact design maximises the space inside.
- Side mount and back panel mount are available. Both are non-handed.
- Can select spring tension hard or soft type depending on lid weight and dimension.
- S-AT02W **1** with doubled maximum door moment also available.

[Specifications]

- Operating temperature: 0°C~40°C
- Operating humidity: 90%RH or less
- For other specification exceeding the above range, please contact local representatives.

[Remarks]

- Be sure to read the "Cautions" **2**.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be taken into consideration. Low rigidity may cause deformation or damage.
- Continuous opening and closing is not allowed.
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- We recommend to test the assembly before final use.

Video Link



Selection Tool



Sasuga-kun

● Easy operation with lift assist



Spring mechanism assists in lifting the top-opening lid. You can select spring tension hard or soft type depending on lid weight and dimension.

● Free stop



10° ~80°

Free stop

Easily holds the opening angle of top-opening lid at about 10° ~80°.

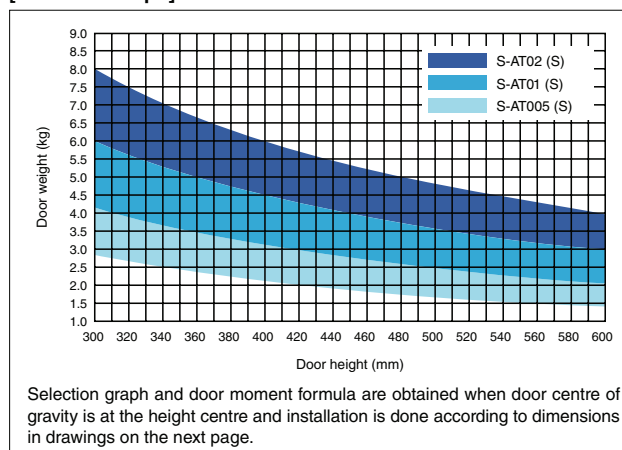
● Compact



Maximum space

Small body maximises space inside of the cabinet.

[Selection Graph]



[Applicable Range]

- Choose from 2 types according to the maximum door moment.
- Maximum Door Moment (N·m) = Door weight (kg) × 9.80665 × Distance from rotation centre to door centre of gravity (m)

Maximum Door Moment N·m	Item Name	Qty
6.1~8.8	S-AT01 (S)	1pc
8.8~11.8	S-AT02 (S)	

- With 2 stays, the maximum door moment will be doubled.

Refer to **1** : P.306~P.307, **2** : P.293

L=R **INSTRUCTION**



SOFT
CLOSING
STAYS

TORQUE STAYS

HEAVY DUTY
LOCKING
STAYS

FOOT
STAYS

LID
STAYS

OTHER STAYS

TOP-
OPENING

L=R INSTRUCTION

UPWARD-
OPENING

BOTTOM-
OPENING

SWING
DOOR

LIFT-UP

LIFT-
DOWN

UP &
OVER

BI-
FOLDING

OVER
THE
TOP

SUGATSUNE <https://global.sugatsune.com/>

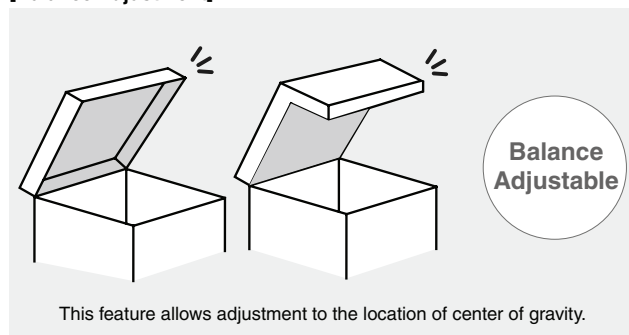
BALANCE-ADJUSTABLE LIFT-ASSIST STAY S-ATJ Side Mount, Back Panel Mount

L=R

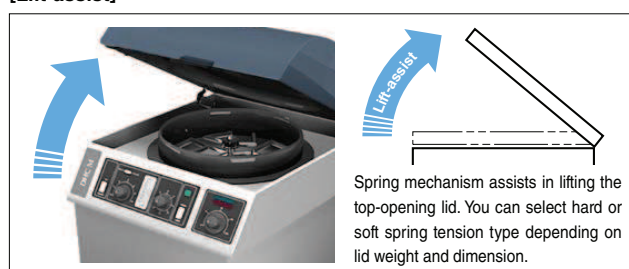
INSTRUCTION



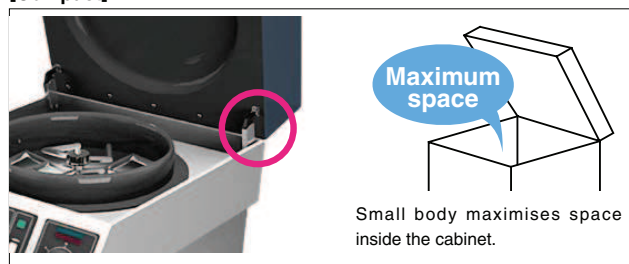
[Balance Adjustment]



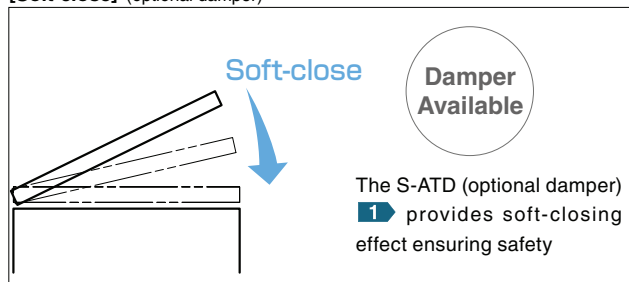
[Lift-assist]



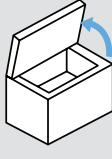
[Compact]



[Soft-close] (optional damper)



Refer to 1 : P.304, 2 : P.293

Opening Direction	Description	Non-handed	Maximum Door Moment*
 Top-opening	Side mount (damper option available)	Yes	6.1~8.8 N · m/pc (62~90 kgf · cm/pc)
			8.8~11.8 N · m/pc (90~120 kgf · cm/pc)

*The max. door moment depends on the following factors:

- Location of center of gravity
- Installation point of stays
- Balance adjustment

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.
- The balance adjustment allows for use in wider range of lids than conventional S-AT stays can be used.
- The locking hole prevents accidental close by inserting a screw driver into it.
- The optional damper S-ATD 1 provides soft closing.

[Specifications]

- Operating temperature : 0°C~40°C
- Operating humidity : 90%RH or less
- For other specifications exceeding the above range, please contact local representatives.

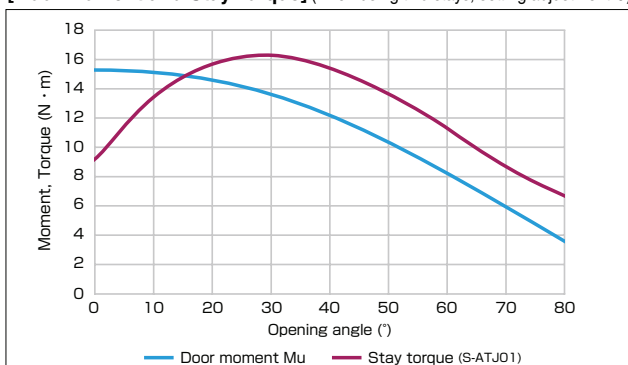
[Remarks]

- Be sure to read the "Cautions" 2.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be take into consideration. Low rigidity may cause deformation or damage.
- Was not designed for continuous opening and closing.
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- Installation points must be parallel when using more than one stay.

[Recommended Screw]

- Truss head screw M5)

[Door Moment and Stay Torque] (when using two stays, setting adjustment C)



The graph above shows a ideal example of curves.

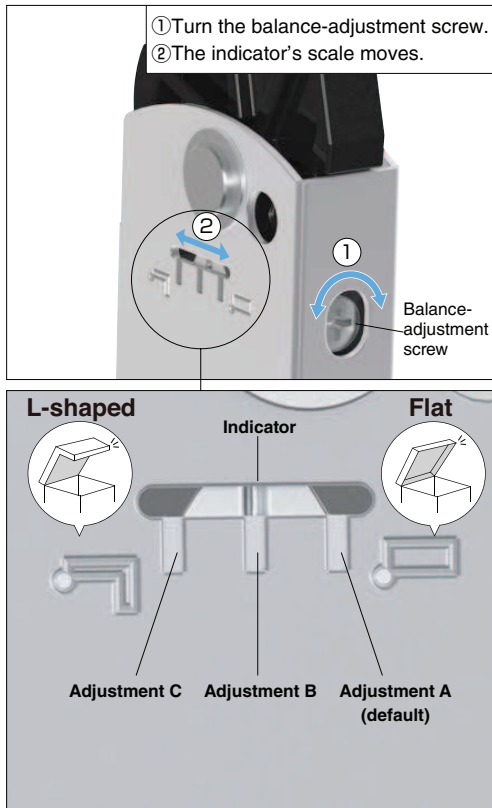
The stay torque should be above the door moment from the middle of the opening.

- Door moment $\mu >$ Stay torque : Force is applied in the closing direction of door.
- Door moment $\mu <$ Stay torque : Force is applied in the opening direction of door.
- Door specs (example) : X=500mm Y=20mm L=500.4mm m=3kg

*The installation point is the same as the drawings on the page of the HG-PA300-15.

[Calculating Door Moment]

Calculation formula: $\mu = m \times L \times \cos \theta$		X	Horizontal distance from rotation centre to lid centre of gravity
		Y	Vertical distance from rotation centre to lid centre of gravity
		L	Distance from rotation centre to lid centre of gravity
		θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
		m	Lid weight
		G	Lid centre of gravity

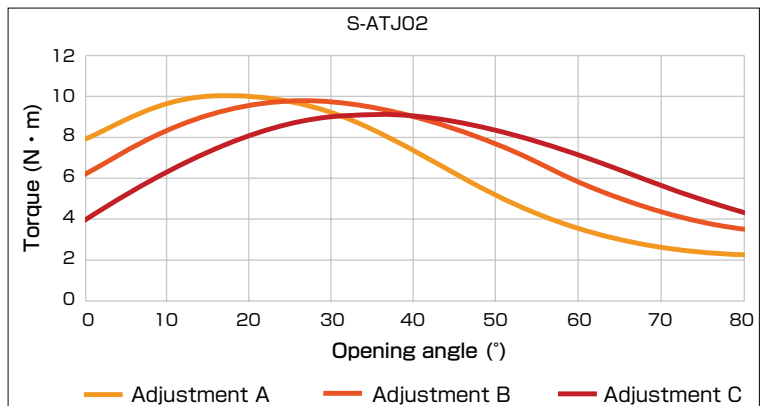
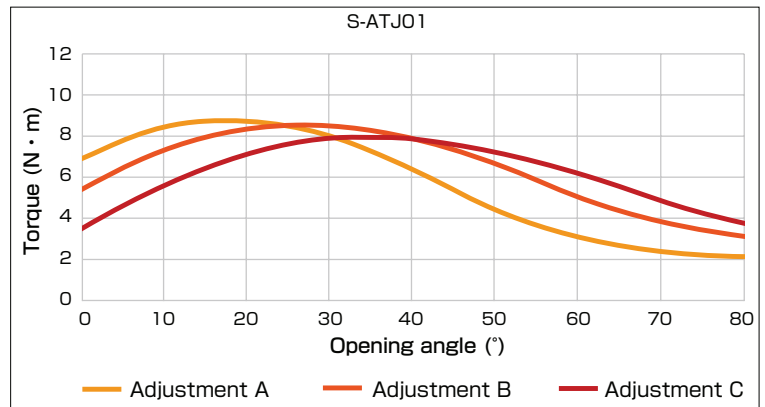
[Balance Adjustment]

The indicator shows how much balance-adjustment is applied. Balance-adjustment should depend on the location of the center of gravity. When used in:

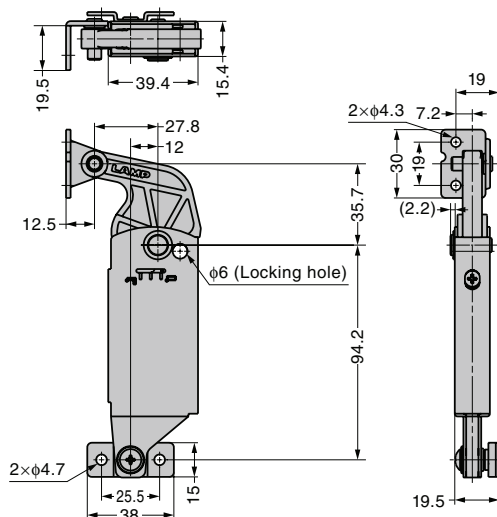
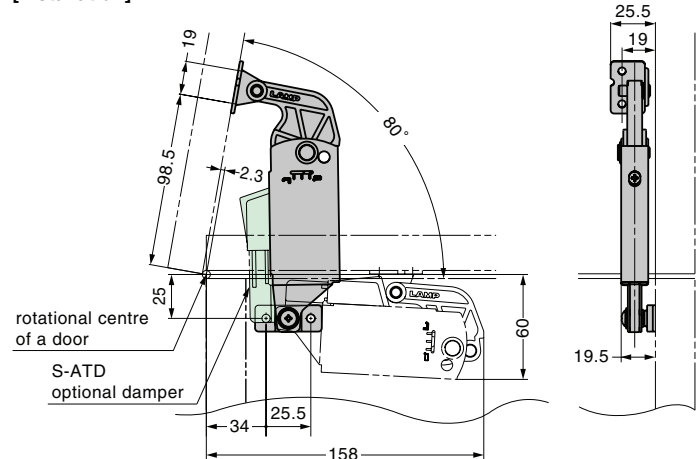
- a flat lid, "Adjustment A" becomes better setting.*
- a L-shaped lid, "Adjustment C" becomes better setting.*

*A flat lid's center of gravity is higher than its rotational center.

*A L-shaped lid's center of gravity is lower than its rotational center.

[Torque-Angle Graph] showing the variation of peak torque when balance-adjusted**Video Link****Selection Tool**

Sasuga-kun

**[Installation]****[Body]**

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-515	S-ATJ01	Stainless Steel (SUS430) / POM	Plain	6.1~8.8	62~90	200	10	50
		180-043-518	S-ATJ02			8.8~11.8	90~120		10	50

*The Max. door moment depends on location of center of gravity, installation point of stays, and balance adjustment.

[Damper Unit] option

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-521	S-ATD-30	15	50	-

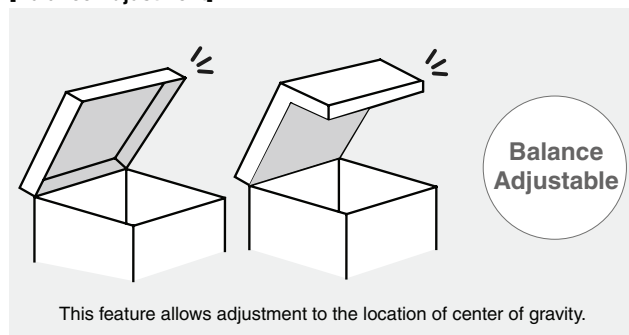
BALANCE-ADJUSTABLE LIFT-ASSIST STAY S-ATJD Back Panel Mount

L=R

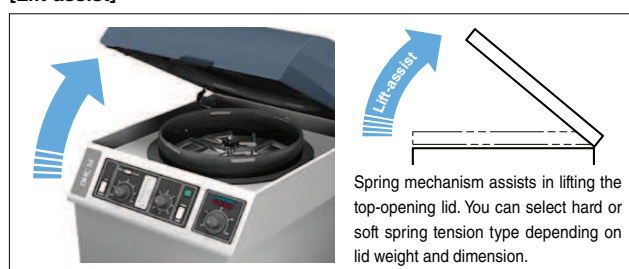
INSTRUCTION



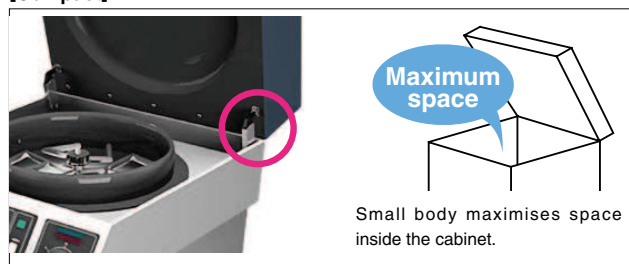
[Balance Adjustment]



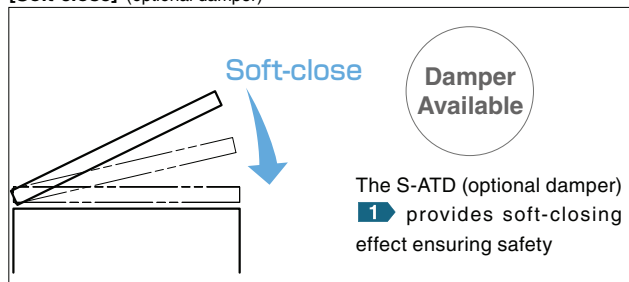
[Lift-assist]



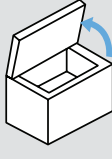
[Compact]



[Soft-close] (optional damper)



Refer to 1 : P.304, 2 : P.293

Opening Direction	Description	Non-handed	Maximum Door Moment*
 Top-opening	Back panel mount (damper option available)	Yes	6.1~8.8 N · m/pc (62~90 kgf · cm/pc)
			8.8~11.8 N · m/pc (90~120 kgf · cm/pc)

*The max. door moment depends on the following factors:

- Location of center of gravity
- Installation point of stays
- Balance adjustment

- Spring mechanism assists in lifting the top-opening lid.
- Easily holds the door at any angle.
- The balance adjustment allows for use in wider range of lids than conventional S-AT stays can be used.
- The locking hole prevents accidental close by inserting a screw driver into it.
- The optional damper S-ATD 1 provides soft closing.

[Specifications]

- Operating temperature : 0°C~40°C
- Operating humidity : 90%RH or less
- For other specifications exceeding the above range, please contact local representatives.

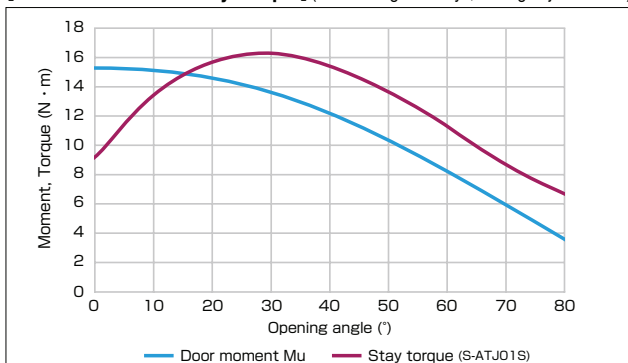
[Remarks]

- Be sure to read the "Cautions" 2.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be take into consideration. Low rigidity may cause deformation or damage.
- Was not designed for continuous opening and closing.
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- Installation points must be parallel when using more than one stay.

[Recommended Screw]

- Truss head screw M4

[Door Moment and Stay Torque] (when using two stays, setting adjustment C)



The graph above shows a ideal example of curves.

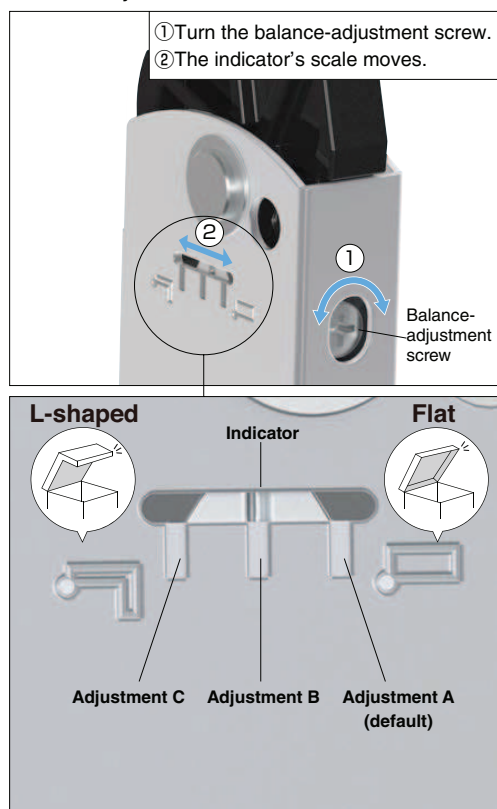
The stay torque should be above the door moment from the middle of the opening.

- Door moment $\mu >$ Stay torque : Force is applied in the closing direction of door.
- Door moment $\mu <$ Stay torque : Force is applied in the opening direction of door.
- Door specs (example) : X=500mm Y=20mm L=500.4mm m=3kg

*The installation point is the same as the drawings on the page of the HG-PA300-15.

[Calculating Door Moment]

Calculation formula: $\mu = m \times L \times \cos\theta$	
X	Horizontal distance from rotation centre to lid centre of gravity
Y	Vertical distance from rotation centre to lid centre of gravity
L	Distance from rotation centre to lid centre of gravity
θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
m	Lid weight
G	Lid centre of gravity

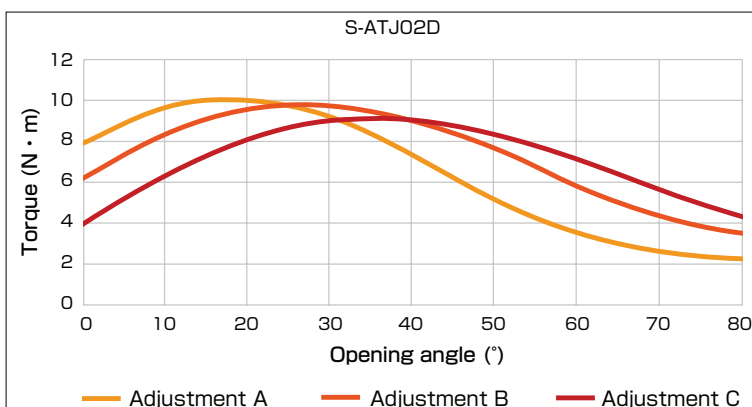
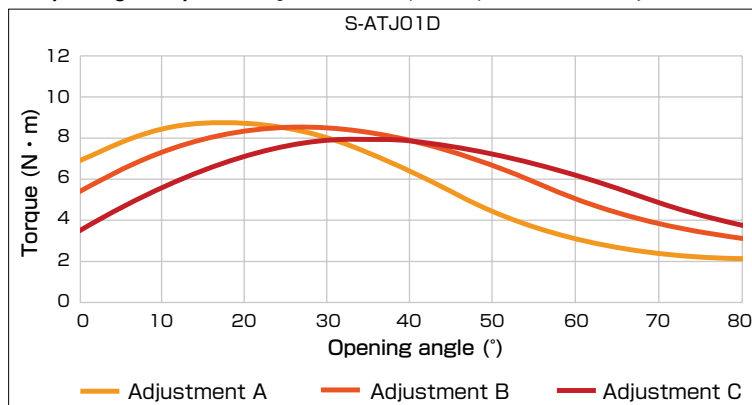
[Balance Adjustment]

The indicator shows how much balance-adjustment is applied. Balance-adjustment should depend on the location of the center of gravity. When used in:

- a flat lid, "Adjustment A" becomes better setting.*
- a L-shaped lid, "Adjustment C" becomes better setting.*

*A flat lid's center of gravity is higher than its rotational center.

*A L-shaped lid's center of gravity is lower than its rotational center.

[Torque-Angle Graph] showing the variation of peak torque when balance-adjusted

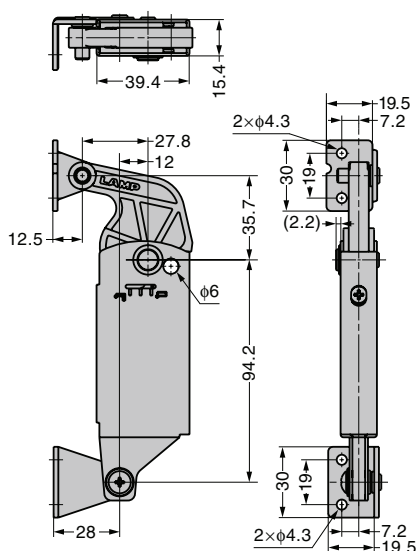
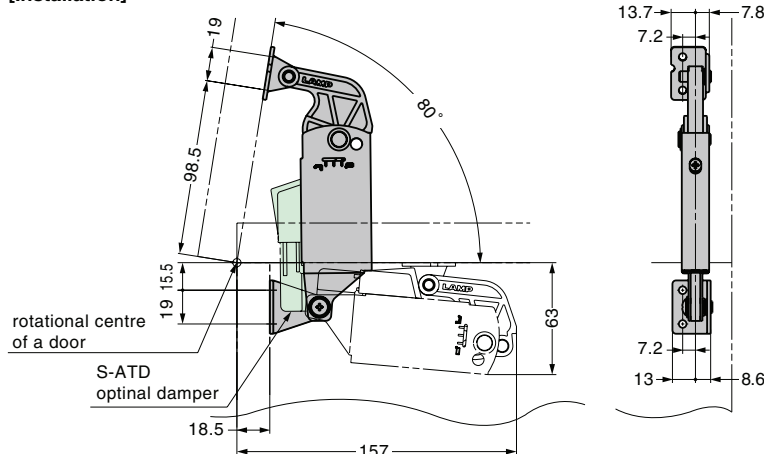
Video Link



Selection Tool



Sasuga-kun

**[Installation]****[Body]**

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-516	S-ATJ01D	Stainless Steel (SUS430) /	Plain	6.1~8.8	62~90	210	10	50
		180-043-519	S-ATJ02D	POM		8.8~11.8	90~120		10	50

*The Max. door moment depends on location of center of gravity, installation point of stays, and balance adjustment.

[Damper Unit] option

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-521	S-ATD-30	15	50	-

BALANCE-ADJUSTABLE LIFT-ASSIST STAY **S-ATJS** Back Panel Mount

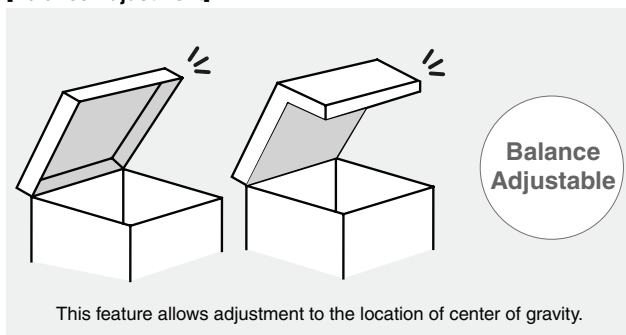
L=R

INSTRUCTION



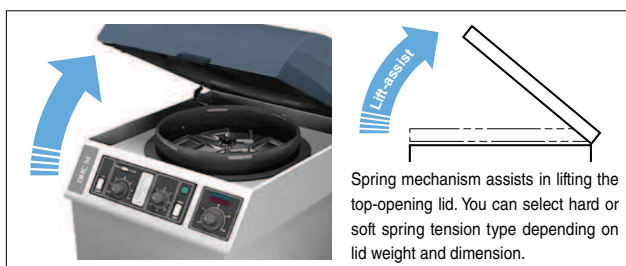
Lift assist

[Balance Adjustment]

Balance
Adjustable

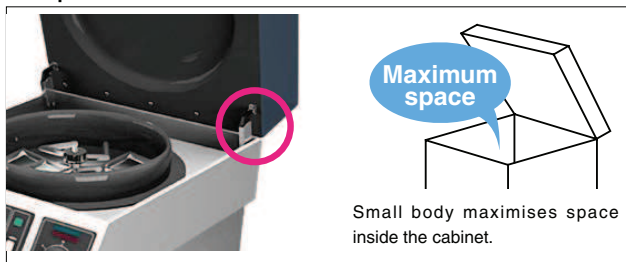
This feature allows adjustment to the location of center of gravity.

[Lift-assist]

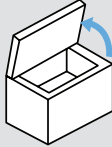


Spring mechanism assists in lifting the top-opening lid. You can select hard or soft spring tension type depending on lid weight and dimension.

[Compact]

Maximum
space

Small body maximises space inside the cabinet.

Opening Direction	Description	Non-handed	Maximum Door Moment*
 Top-opening	Back panel mount (damper option available)	Yes	6.1~8.8 N · m/pc (62~90 kgf · cm/pc)
			8.8~11.8 N · m/pc (90~120 kgf · cm/pc)

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[Specifications]

- Operating temperature : 0°C~40°C
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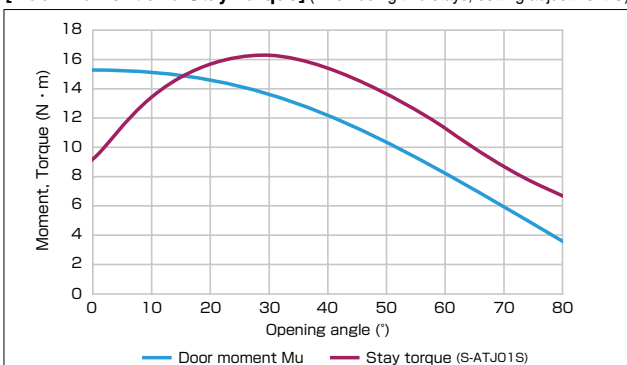
[Remarks]

- Be sure to read the "Cautions" 1.
- When used for the top-opening lid, install a stopper (not included) to prevent from exceeding the opening angle.
- Material of the mounting surface should be take into consideration. Low rigidity may cause deformation or damage.
- Was not designed for continuous opening and closing .
- Do not use outdoors.
- Spring tension may vary over time.
- Do not use concealed hinges (multiaxial hinges).
- Installation points must be parallel when using more than one stay.

[Recommended Screw]

- Truss head screw M4

[Door Moment and Stay Torque] (when using two stays, setting adjustment C)



The graph above shows a ideal example of curves.

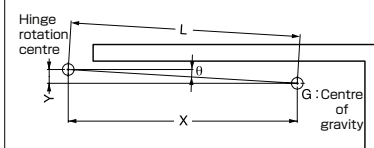
The stay torque should be above the door moment from the middle of the opening.

- Door moment Mu > Stay torque : Force is applied in the closing direction of door.
- Door moment Mu < Stay torque : Force is applied in the opening direction of door.
- Door specs (example) : X=500mm Y=20mm L=500.4mm m=3kg

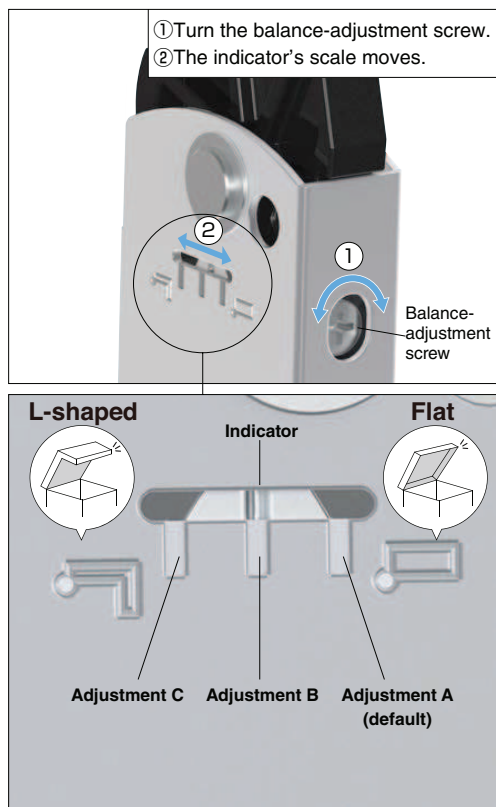
*The installation point is the same as the drawings on the page of the HG-PA300-15.

[Calculating Door Moment]

Calculation formula: $Mu = m \times L \times \cos\theta$	
X	Horizontal distance from rotation centre to lid centre of gravity
Y	Vertical distance from rotation centre to lid centre of gravity
L	Distance from rotation centre to lid centre of gravity
θ	Angle from the horizontal line at the rotation centre to lid centre of gravity
m	Lid weight
G	Lid centre of gravity



Refer to 1 : P.293

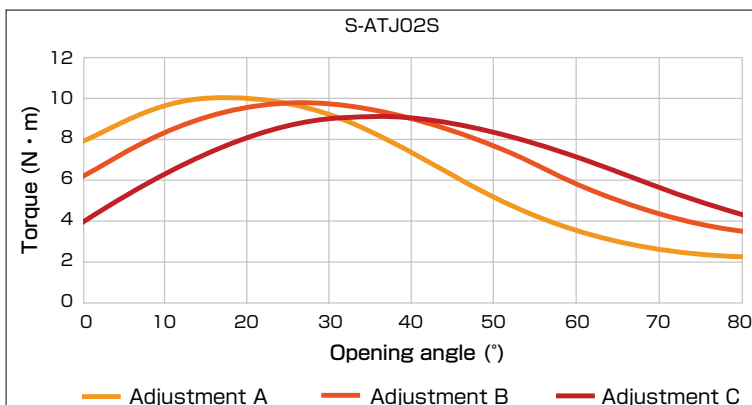
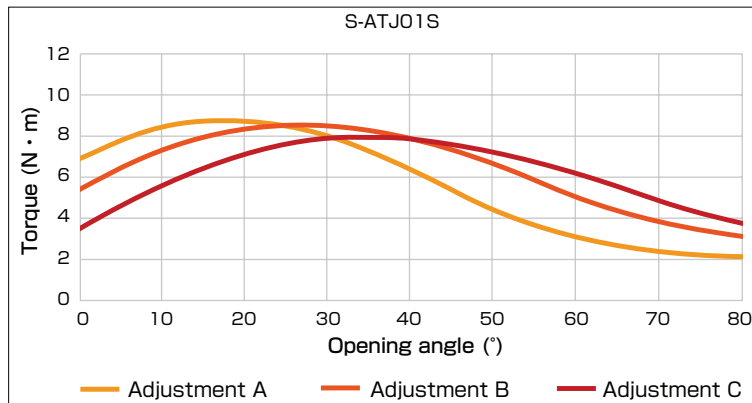
[Balance Adjustment]

The indicator shows how much balance-adjustment is applied. Balance-adjustment should depend on the location of the center of gravity. When used in:

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- a L-shaped lid, "Adjustment C" becomes better setting.*

*A flat lid's center of gravity is higher than its rotational center.

*A L-shaped lid's center of gravity is lower than its rotational center.

[Torque-Angle Graph] showing the variation of peak torque when balance-adjusted

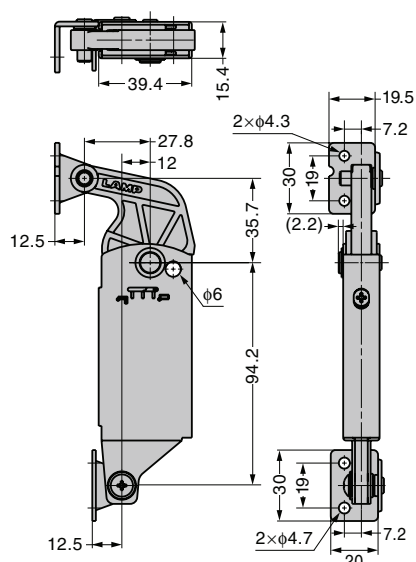
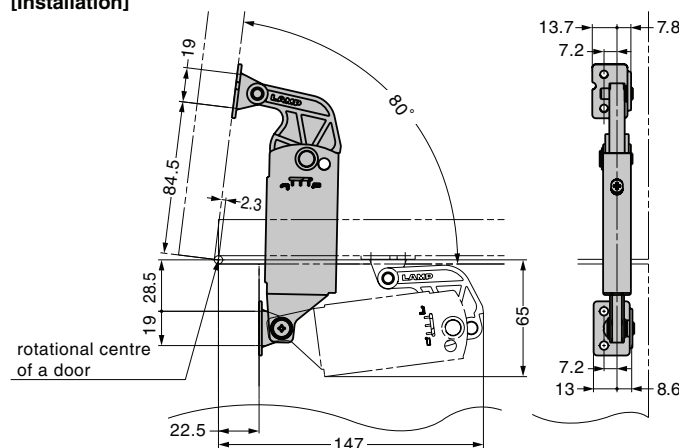
Video Link



Selection Tool



Sasuga-kun

**[Installation]****[Body]**

RoHS	CAD	Item Code	Item Name	Material	Finish	Maximum Door Moment N·m/pc	Maximum Door Moment kgf·cm/pc	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-517	S-ATJ01S	Stainless Steel (SUS430) / POM	Plain	6.1~8.8	62~90	200	10	50
		180-043-520	S-ATJ02S			8.8~11.8	90~120		10	50

*The Max. door moment depends on location of center of gravity, installation point of stays, and balance adjustment.

DAMPER UNIT **S-ATD** For S-ATJ and S-ATJD

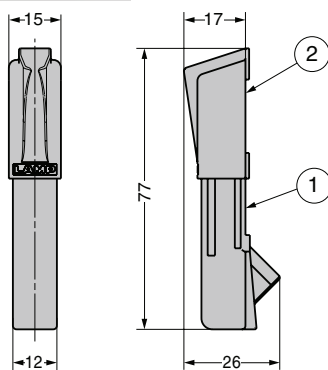


- Specially designed for use with the S-ATJ **1** and S-ATJD **2**.
Adds soft-closing feature to the stays.
- Easy to attach to the S-ATJ and S-ATJD stays by simply inserting it.
The thickness is designed to fit the stays allowing for maximum space inside cabinets.

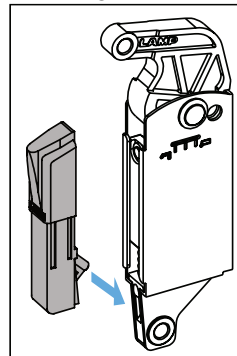
[Remarks]

- Only for use with the S-ATJ and S-ATJD. Can not be used with other items in the S-AT series.
- Other installation points than those in this catalogue may not be available.
For details, please check with the product search engine called "Sasuga-kun".

[When attached to the S-ATJD]



[Attaching]



Selection Tool



Sasuga-kun

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)	Carton (pcs)
		180-043-521	S-ATD-30	15	50	—

Refer to **1** : P.298, **2** : P.300

No.	Part Name	Material
①	Damper Case	POM
②	Slider	PBT