

NTO HINGES

▼ CENTER HANG A TYPE ▼





NITTO KOHKI AUTO HINGE—developed ahead of the world with free use of original closer technology, establishing great confidence in high technological power.

AUTO HINGES (CENTER HANG TYPE)

based on the accumulation of advanced technology:

Used widely for public telephone booths throughout the country

• Designed officially by Nippon Telegraph and Telephone Corp. (NTT), being used in all the public telephone booths throughout the country. The outstanding performance and durability (500,000 or more of closing operations), appreciation among users not only in the country but also in all the countries of the world.

Concealed type (door built-in type)

 Constructed door built-in closer of pivot type, thus being easy to install. In addition, it presents a slim appearance, without affecting the beauty of a door.

Wide range usability

• Designed with a receptive base meeting the requirements for the recent tendency of thinner floor slabs in buildings, thus not causing any damage to floor surfaces in installation; the AUTO HINGE is most suitable to be used in such a place where floor hinges can be hardly installed and the arm of a door closer becomes an obstacle.

Most suitable for fire protection, open smoke ventilation and normally-opened/closed doors and air supply doors.

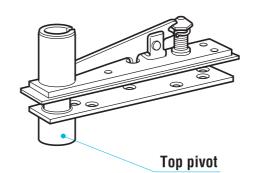
 Keeps closing-up of fire protection doors and opening of smoke ventilation doors & air supply doors reliably, by interlocking of smoke sensors in combined use with an electromagnetic release mechanism.

Decorated rubber plate

 Provided with a decorated rubber plate for screening the cutout windows for speed control and spring winding.

Sliding receptive base

- Minimized embedding depth
- Can be centered on-site because of having a sliding seat, thus assuring easy installation.



- •Can be also installed reversely.
- Options available for special applications.

Easy closing speed adjustment

 Able to adjust the closing speed in a wide range merely by turning the speed control gear to right and left, also allowing fine adjustment.

Smooth closing

 Constructed with unique hydraulic control mechanism, realizing optimum closing operation. Any door closes smoothly and quietly.

Free closing force adjustment

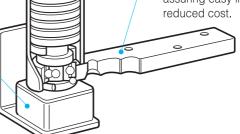
 Able to adjust the closing force freely by adjusting the spring set seat.

Powerful closing force

 Has closing force sufficient to meet the sizes of any door, assuring door closingup. It adopts special ladder type spring, having been already demonstrated for its high persistence.

Easy installation and reduced cost

 Provided with a very thin fix base plate, assuring easy installation on any door and reduced cost.



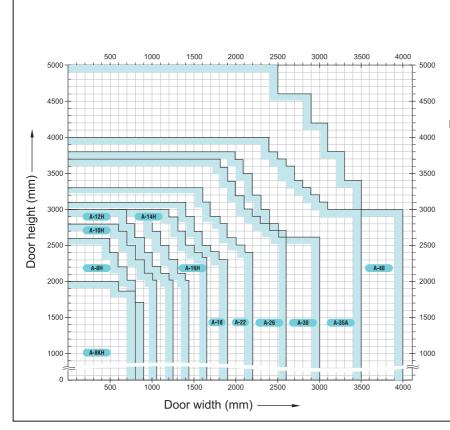
SPECIFICATIONS

Mode No.	Door	r size applicable	e(mm)	Door weight	Standard closing	Spring set	Тор	Max, opening angle	Page
wiode No.	W	Н	D	(kg)	force(N⋅m)	system	pivot	Max, opening angle	1 age
A-8KH	800	1,850 (max.)	36	40 (max.)	6.9				3
A-8H	(max.)	2,000	(min)	50	8.9				4
A-10H	1,000			85	10.8		N-21B		5
A-12H	1,200	2,100	40	100	15.7		14-210		6
A-14H	1,400			130	19.7				7
A-16H	1,600		45	160	24.6	Roll-in system		180° right or left one-side	8
A-18	1,800	2,400	50	200	41.2	System	N-22B	oponing	9
A-22	2,200		50	240	49.1		N ZZD		10
A-26	2,600	2,600		310	60.9				11
A-30	3,000	2,000	55	410	68.7		N-23B		12
A-35A	3,500	2 000		650	73.6				13
A-40	4,000	3,000	60	800	78.5		N-25A		14

Note: 1. Difference in opening directions are shown by the symbols, "R" for right-hand door and "L" for left-hand door, suffixed at the end of model No.

- 2. Pre-set type can be used as roll-in system by unwinding the spring.
- 3. Each AUTO HINGE (center hang type) consists of a main body, a receptive base, a top pivot, and a decorated rubber plate.
- 4. Stop mechanism is not built in.
- 5. For selection of a model refer to the [Chart for Applicable Doors] shown below.
- 6. Handling of the fixed type (floor type) receptive base
- The fixed type (floor type) receptive base is prepared for a place to which the sliding receptive base is not applicable.
- 7. There is a spring winding-window on both sides from A-8KH to A-16H.

CHART OF APPLICABLE DOORS



- Select an appropriate model according to the dimensions (height x width) of the door used. (See chart left)
- Then make sure that the door weight is in the range of [Table of Applicable Door Weight] (given below) and determine the model.

Note: The Chart is drawn up in the condition where wind velocity is 3m/sec as a standard. For using a forced (open smoke) ventilation door or any model under a strong wind, contact us beforehand.

Table of Applicable Door Weight

Table of Applicable Bool Weight								
Model	Weight/1m ²	Type of doors						
A-8KH	27kg/m²max.	Steel door (only for wicket door)						
A-8H	31kg/m²max.							
A-10H, A-12H	39kg/m²max.							
A-14H, A-16H	41kg/m²max.	Steel door						
A-18, A-22, A-26	45kg/m²max.	Steel door						
A-30	52kg/m²max.							
A-35A	61kg/m²max.							
A-40	65kg/m²max.							

A-8KH (for wicket door)

Model			size applicabl	· · ·	Door weight (kg)	Closing force	Spring set system	Stop mechanism	Max. opening	Indicating label
	<u> </u>	W	Н	D	(kg)	(N•m)	System	mechanism	arigie	label
A-8KHR	Right opening Left opening	800 max.	1850 max.	36 min.	40 max.	6.9	Preset system	None	180° right or left one-side opening	R : Green L : Yellow
A-OKITE	Left opening								opening	
EXTE		Decorated Plate	Countersunk 4-M5		Reinforced 2.3 ^m /mt	N-2 The h	15.5	159 148.5 133	3	© 00 00 00 00 00 00 00 00 00 00 00 00 00
НО	023	106		eed Control Wi		Doo	o ²² o ²⁵ or Side	Octangular	4-ø5.2 Co	untersinking eter ø10
88	=	229		Counters	sunk Head Scree M6X20 &		2N Recept 3 20 2 16 20	32 32 32 148.5 tive Base 140 130 28 24 24	32 (1) 7 24 (10) Decorated P	4-M3Countersunk Head Screw
	Decorated F Recept	Plate tive Base	Reinf	Coun forced Plate 2.3	tersunk Head S 4-M6X20@ 3 ^m /mt(min.)	<u>Screw</u>	4-0	7 Countersink	ing Diameter ø	
			90° openi			Dir	nension of		eceptive ba	se notch
Sprir <u>Winc</u>	ng-Winding	28 24 2	24 24 (1	(0)			20.5	131		

- 1. This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides.
- 2. For speed control windows and spring-winding windows use the decorated rubber plate attached. (see page 15)

 * Cutout for spring-winding window is unnecessary when hanging the door by preset system.





Λ_{Q}

Model		Door s	size applicabl	e (mm)	Door weight	Closing force	Spring set	Stop	Max. opening	Indicating
iviouei		W	Н	D	(kg)	(N⋅m)	system	mechanism	angle	label
A-8HR A-8HL	Right opening Left opening	800 max.	2000 max.	36 min.	50 max.	8.9	Roll-in system	None	180° right or left one-side opening	R : Green L : Yellov
	RNAL DIN	Decorated Plate	Countersul 4-N	Countersun Head Screw 4-M5X12@	Reinforce 2.3 ^m /m Reinforce 2.3 ^m /m Window ø15	ed Plate nt(min.) 7.5 ed Plate t(min.)	21B TOP P lead shape of the 15.5 28 10 per Frame	159 148.5 133	octangular width 3 (10) 4-ø5.2 Counto	On On One of the original of t
НО	113	308	12 38 0 0 ø28.2	Spring-Win	ding Window 20	Do	or Side	Shaft Diameter 32 32 148.5	4-ø5.2 Cou Diamet	
2-M5SCRE	at N	tase Plate	Reinforcing Sto	4 Decorate	sunk Head Scre	5 2-M	54	26 34 38	decorated	X-X'direction 16m/m Single side in Y-Y'direction 7m/m x
		In the c	case of 90	° opening			M3 with	Tapping Hole	1	ing
Spring-Wi	nding 28		24 (10	38min 38min	: : Spring-Wir		28 24	24, 24,	36 din (01)	

Spring-Winding Window

Spring-Winding Window

- REMARKS

 1. This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides.

 2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot.

 The seat should be firmly welded on the base plate.

 3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)

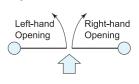
 4. When U-2N receptive base is used, the door can be hanged also by preset system.

DW

Right and Left Hand Doors

Unit: mm

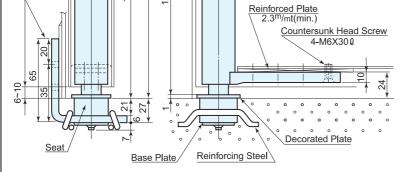
DW

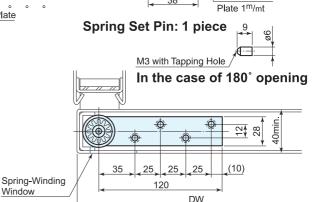


A-10H

Model		Door size applicable (mm)			Door weight	Closing force	Spring set	Stop	Max. opening	Indicating
		W	Н	D	(kg)	(N·m)	system	mechanism	angle	label
A-10HR	Right opening	1000 max.	2100 max.	40 min.	85 max.	10.8	Roll-in	None	180° right or	R : Green
A-10HL	Left opening	1000 max.	2100 IIIax.	40 111111.	65 Illax.	10.6	system	None	left one-side opening	L : Yellow

EXTERNAL DIMENSIONS AND FITTING DIAGRAMS N-21B TOP PIVOT The head shape of the adjusting screw is octangular width across flat 17. Countersunk Head Screw Reinforced Plate Decorated 2.3^m/mt(min.) 159 Plate **PI** 7.5 148.5 15.5 133 Countersunk Head Screw \oplus Reinforced Plate <u>3</u> 2.3^m/mt(min.) 28 85 (10)Speed Control Window ø15 /4-ø5.2 Countersinking Diameter ø10 **Upper Frame** Speed Control Gear Octangular width across flat17 ø23 Decorated Plate 1^m/mt 40 ФГ 22 Shaft Diameterø13 60 ø25 H Spring-Winding Window 20X50 4-ø5.2 Countersinking **Door Side** Diameter ø10 12 20 00 ④ \$ 30 A-10HR Spring Set Seat 32 32 32 (10)ø31.8 308 148.5 **U-3SN Receptive Base**





2-M3Countersunk Head Screw

Decorated

54 48

ø30 2-M5

Spring-Winding

3

Window

2-M5SCREW

186

35

25 25 25

120

8

- 1. This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides.
- 2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.

In the case of 90° opening

24 \$

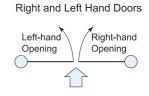
Window

(10)

3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)

DW

4. When U-2N receptive base is used, the door can be hanged also by preset system.



Unit: mm

Single side in

X-X'direction 16^m/m Single side in

Y-Y'direction 7m/m

In direction of sliding

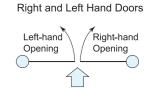
A-12H

Model	Model		Door size applicable (mm)			Closing force	Spring set	Stop	Max.	Indicating
Wodel			Н	D	(kg)	(N⋅m)	system	mechanism	angle	label
A-12HR	Right opening	1200 max.	2100 max.	40 min.	100 max.	15.7	Roll-in	None	180° right or	R : Green
A-12HL	Left opening	1200 IIIax.	Z 100 IIIax.	40 111111.	Too max.	13.7	system	None	left one-side opening	L : Yellow

EXTERNAL DIMENSIONS AND FITTING DIAGRAMS N-21B TOP PIVOT Countersunk Head Screw 4-M5X120 The head shape of the adjusting screw is octangular width across flat 17. Reinforced Plate 2.3^m/mt(min.) Decorated 159 Plate 7.5 148.5 _3 15.5 133 Countersunk Head Screw 4-M5X120 Reinforced Plate 2.3m/mt(min.) 28 85 (10) ° 4-ø5.2 Countersinking Speed Control Window ø15 Diameter ø10 **Upper Frame** Speed Control Gear ø22 ø23 Octangular width across flat17 Decorated Plate 1^m/_mt 60 10 Shaft Diameterø13 Η ø25 Spring-Winding Window 20X50 13 4-ø5.2 Countersinking **Door Side** Diameter ø10 2 20 00 ➅ 8 \$3 -(6 Spring Set Seat ø31.8 27 32 32 32 (10) 308 148.5 **U-3SN Receptive Base** 186 18 Single side in X-X'direction 16^m/_m Single side in 2-M5SCREW 2-M3Countersunk Head Screw Reinforced Plate 2.3^m/mt(min.) 54 Countersunk Head Screw 6 48 Y-Y'direction 7m/m 4-M6X300 38 4 In direction of sliding 2, 27 ø30 26 2-M5 Decorated Decorated Plate Plate 1^m/_{mt} Seat Spring Set Pin: 1 piece Reinforcing Steel Base Plate 90 M3 with Tapping Hole In the case of 90° opening In the case of 180° opening | | | | | | | | | 22 \$2 (10)(10)25 25 25 Spring-Winding Spring-Winding 120 120 Window Window DW DW Unit: mm

- 1. This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides.

 2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.
- 3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)
- 4. When U-2N receptive base is used, the door can be hanged also by preset system.



$\Lambda_{-}111$

Model		Door s	size applicable	e (mm)	Door weight	Closing force	Spring set	Stop	Max. opening	Indicatin
wiodei		W	Н	D	(kg)	(N⋅m)	system	mechanism	angle	label
A-14HR	Right opening	1400 max.	2100 max.	40 min.	130 max.	19.7	Roll-in system	None	180° right or left one-side	R : Gree L : Yello
A-14HL	Left opening						System		opening	L. Yello
EXTER	RNAL DIM	IENSIO	NS AND	FITTIN	IG DIAG	RAMS				
			Countersur	nk Head Screw	,	N-2 The h	21B TOP P	IVOT	octangular width	across flat 17
101		Decorated Plate		15X12@	Reinforce			159		
3~2		<u>r iato</u>				7.5		148.5	3	
1			T				15.5	133		₍
			_3	Countersun Head Screv	rk Reinforce	ed Plate		•	⊕ ⊕ ∞1	98
			-	4-M5X120	2.3 ^m /ml		28 10	0 85	(10)	<u></u>
				Speed Control	Window ø15		<20 → 1	0 ∢ 05	4-ø5.2 Coun	tersinking
				Speed Control	Gear	Up	per Frame	•	Diameter	ø10
	ø23	4				_	ø22	Octangular width	<u>+</u> _∟	ecorated
		→ → →	選 · · · · · · · · · · · · · · · · · · ·			04			F S	Plate 1^m/ mi
			AUTO-HINGE LOT NO			<u>↓</u>				
H H	120	119					Ø25	naft Diameter ø	ນ <u>13</u>	
			13 37	Spring-Win	ding Window 20	X50_	<		4-ø5.2 Coun	tersinkina
		50	00	_		Do	or Side	*	Diamete	
		1	A-14HR			-			- € 2	%
		368	ø31.8	Spring Set Se	at		15.5 27	32 32	32 (10)	<u></u>
								148.5		
2-M5SCRE	236	231				U-3	SN Recep		unly I I a and Caracius	Single side
			Re	einforced Plate 2.3 ^m /mt(min.)	<u>, </u>		54	94	→	X-X'direction 16m/m Single side
1					sunk Head Scre -M6X30@	<u>w</u> <u>e</u>	48		4-R5	Y-Y'direction 7m/m Y
65				1		<u>↑</u> 4			40 40	x ← x'
2		<u> </u>			7 7	1 /			↓	Y' In direction of sliding
		²⁷ ¹ 27			• • • •	. 2-1	M5 ø30	26 34	Decorated	
Sea	it T	°.°/	′. ° T °	\	ted Plate	Sp	َّا ring Set P	in: 1 piece	Plate 1M/mt	
	Ē	Base Plate	Reinforcing Ste	eei \		- P	_	-		
		In the c						h Tapping Hole	. ∕	

Spring-Winding

Window

- This diagram shows the case of right-hand opening doors. There is a spring winding-window on both sides.
 This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.
 For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)
 When U-2N receptive base is used, the door can be hanged also by preset system.

(10)

DW

25 25

120

(10)

35

Spring-Winding Window

25 25

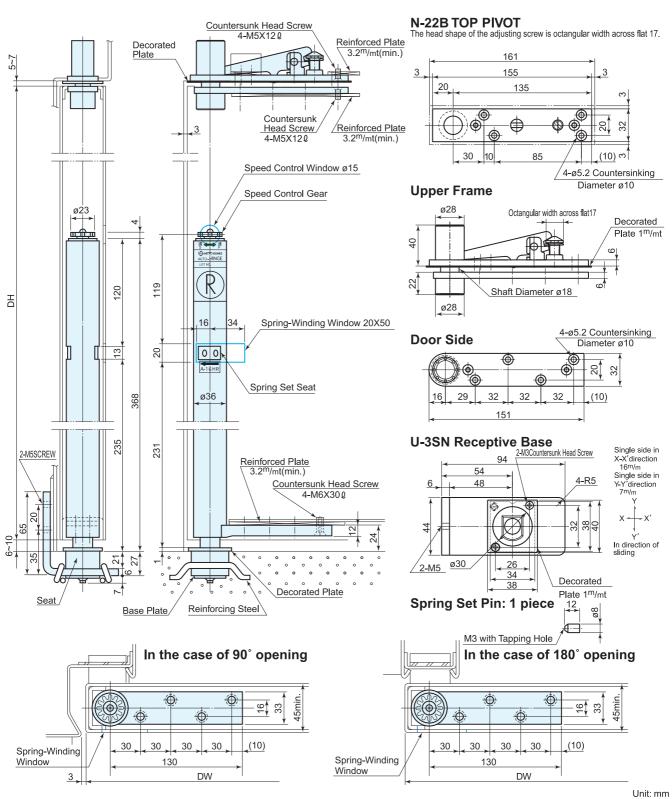
DW

120

A-16H

Model		Door size applicable (mm)		Door weight	Closing force	Spring set	Stop	Max. opening	Indicating	
Model		W	Н	D	(kg)	(N·m)	system	mechanism	angle	label
A-16HR	Right opening	1600 max.	2400 max.	45 min.	160 max.	24.6	Roll-in	None	180° right or	R : Green
A-16HL	Left opening	1000 max.	2400 IIIax.	45 11111.	100 Illax.	24.0	system	None	left one-side opening	L : Yellow

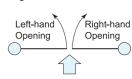
EXTERNAL DIMENSIONS AND FITTING DIAGRAMS



REMARKS

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- This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.
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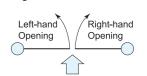
Right and Left Hand Doors



Model		Door s	ize applicabl	e (mm)	Door weight (kg)	Closing force (N·m)	Spring set system	Stop mechanism	Max. opening angle	Indicating label
A-18R A-18L	Right opening Left opening	1800 max.	2400 max.	50 min.	200 max.	41.2	Roll-in system	None	180° right or left one-side opening	R : Green L : Yellow
EXTE	RNAL DIM	IENSIO	NS AND	FITTIN	IG DIAG	RAMS				
		Decorated (K Head Screw	Reinforced	The hea Plate	B TOP PI\ d shape of the ad	justing screw is oc	stangular width acı	ross flat 17.
2~1		Plate			3.2 ^m /mt(3	20	161 155 135	3	ო
		3		Countersunk Head Screw / 4-M5X12 @	Reinforced 3.2 ^m /mt(n		30 10	85	(10)	3
				d Control Winc		Uppe	er Frame	₹ 00 ∠	4-ø5.2 Counte	ersinking
HO	923	264	Section 1	d Control Gear	_	22 40	ø28	Octangular width	PI	ecorated ate 1 ^m /mt
	47 > 400	55	A 188	Spring-Winding	g Window 55X5	16	29 32	32 32	Diameter Ø	10
2-M5SCREW 2000 00 00 00 00 00 00 00 00 00 00 00 0	187	181	ø38	/ 3.2	orced Plate 2 ^m /mt(min.) ntersunk Head 4-M6X30 0	Screw 6	58 52 52 6 937.5		ersunk Head Screw 4-R5	X direction 16 ^m /m X'direction 31 ^m /m Single side in Y-Y'direction 7 ^m /m Y X In direction of sliding
<u>Seat</u>	Bas	se Plate Re	einforcing Steel	Decorated	i Plate	Sprii	⊸ ng Set Pin	±49 n: 2 pieces	Plate 2 ^m /n	
		In the	case of 9	0° openin	g			th Tapping Hole		ing
=== Spring-Win	30	7	80 30	(10)	Spring-Win	ading	30 30	80	30 (10)	34 ×
Window	3	180	DW	<u> </u>	Window	-		180 DW	<u> </u>	

- 1. This diagram shows the case of right-hand opening doors.
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 3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)

Right and Left Hand Doors



Madal		Door s	ize applicabl	e (mm)	Door weight	Closing	Spring set	Stop	Max.	Indicating
Model		W	Н	D	(kg)	force (N⋅m)	system	mechanism	opening angle	label
A-22R A-22L	Right opening Left opening	2200 max.	2400 max.	50 min.	240 max.	49.1	Roll-in system	None	180° right or left one-side opening	R : Greer L : Yellov
	RNAL DIN	IENSIO	NS AND	FITTIN	IG DIAG		- TOP DI	10.		
		Decorated Plate	4-M!	k Head Screw 5X12 0 Countersunk Head Screw 4-M5X12 0	Reinforced 3.2 ^m /mt(Reinforced 3.2 ^m /mt(n	The hear Plate min.) 3 Plate	d shape of the adj	161 155 135	stangular width acr	oss flat 17.
	Ø23	<u>_</u>		d Control Wind	dow ø15_	, [30 10 er Frame	85 Octangular width	4-ø5.2 Coun Diameter	tersinking
	592	264	18 37			l-	ø28	naft Diameterø	PI PI	ecorated ate 1 ^m /mt
	47 \$	25	O A 22R	Spring-Winding	g Window 55X5		r Side	151	4-ø5.2 Count Diameter	ø10
2-M5SCREW 2-M5SC	274	2 - 181	ø38	3.2	orced Plate 2 ^m /mt(min.) ntersunk Head \$ 4-M6X300	Screw 6	58 52 52 55 937.5	2-M3Cour 103 2-M3Cour 17, 19 46 49	Decorated Plate 2 ^m /r	16 ^m /m X'direction 31 ^m /m Single side Y-Y'directio 7 ^m /m Y X
<u>Seat</u> ,	Bas		einforcing Steel			Spri		n Tapping Hole	15 8	

Spring-Winding Window

3

30

30

This diagram shows the case of right-hand opening doors.
 This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.
 For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)

DW

_(10)

30 , 30

Spring-Winding Window

80

180

30

DW

, 30

80

180



(10)

Model		Door s	size applicabl	le (mm)	Door weight (kg)	Closing force (N·m)	Spring set system	Stop mechanism	Max. opening angle	Indicating label
A-26R	Right opening	2600 max.	2600 max.	55 min.	310 max.	60.9	Roll-in system	None	180° right or left one-side	R : Green L : Yellow
A-26L	Left opening								opening	2.1011011
EXTE	RNAL DIN	IENSIO	NS AND	FITTIN	IG DIAG					
		!	Countersunk H			The hea	B TOP PIN ad shape of the ad	/OT ljusting screw is or	ctangular width ac	ross flat 17.
2~5		Decorated Plate	4-MOX		Reinforced Pla 3.2 ^m /mt(min	ate n.)		62 56	3	
1							21	135	~ (n	o Į
			<u> </u>	ountersunk ead Screw -M6X16 @	Reinforced Pla 3.2 ^m /mt(min.			\rightarrow	— 7 ¹ %	
		<u> </u>	-				29 10	86	(10) ~	→
				ed Control Wind		Uppe	er Frame	4-1	ø6.5 Countersi Diameter ø12	
	ø23 ≺ →	rl	Spee	ed Control Gea	<u>r</u>	Орр	ø34	Ostonovilov vidilo o		
			P P P P P P P P P P P P P P P P P P P			46		Octangular width ac	← Dec	corated te 1 ^m /mt
HO	307	307	18 37			22 <u> </u>	ø34	Shaft Diameter	ø20 ø6.5 Countersir	nkin a
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Spring-Windin	g Window 55X5	5 Dooi	Side	. \	Diameter ø12.	
	48	55	PO /			20		32 32	(10)	
			Sp	ring Set Seat		*	15th	5	*	X direction
a Medobern					orced Plate 2 ^m /mt(min.)				tersunk Head Screw	16 ^m /m X'direction 31 ^m /m
2-M5SCREW	216	210	ø46 →	/	ntersunk Head	Screw 6	58	\rightarrow	4-R5	Single side in Y-Y'direction
							9			7m/m Y
0 0 0				,	<u></u>	45 45			20 24	X X'
98 0	7 7 8	7.00			• • • • •	7 V	ø44.5	19 21	<u> </u>	In direction of sliding
1 + + 7		¥ , , , , ,		Descritor	• • • • •	<u>/ 2 WIS</u>		50	Decorated Plate 2 ^m /mt	_
<u>Seat</u>	/	se Plate Re	°°°\ einforcing Stee	Decorated	<u>i Plate</u>	Sprii	ng Set Pin	: 2 pieces	15 8 8	
	_	_					MQ with	n Tapping Hole		
		In the	case of 9	0° openin	g			e case of	-	ing
		*	•	4 4 2 4 4	55min.			*	- 25	55min.
Spring-Wi Window	nding 45	35	55 × 35	(10)	Spring-Wir Window	nding	45 35	55	35 (10)	
	3		DW					DW		

- REMARKS

 1. This diagram shows the case of right-hand opening doors.

 2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.

 3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)



		Door s	size applicable	e (mm)	Door weight	Closing	Caring oot	Stop	Max.	Indicating			
Model		W	Н	D	Door weight (kg)	force (N⋅m)	Spring set system	mechanism	opening angle	label			
A-30R	Right opening	3000 max.	2600 max.	55 min.	410 max.	68.7	Roll-in	None	180° right or	R : Green			
A-30L	Left opening	3000 max.	2000 max.	55 111111.	410 max.	00.7	system	None	left one-side opening	L : Yellow			
FXTF	RNAL DIM	IENSIO	NS AND	FITTIN	IG DIAG	RAMS							
						N-23	B TOP PIV						
		Decorated	Countersunk He		Reinforced F	late	d shape of the adj	usting screw is oc	tangular width ac	ross flat 17.			
5~7		Plate			3.2 ^m /mt(m	iin.) 3 _	∢	162 156	3				
		T T					21	135		m↓			
			Co	ountersunk ead Screw	Deinferend D				47	 88			
		3		M6X16 Q	/Reinforced PI 3.2 ^m /mt(min	.) <u>ate</u>	20 10	- T		m			
			Spee	d Control Wind	dow ø15		29 10	86	/(10) 4-ø6.5 Counter				
	ø23		Spee	d Control Gea	<u>r</u>	Uppe	er Frame		Diameter ø				
		† <u> </u>				_	ø34	Octangular width	across flat17 De	ecorated			
		1	MITO-HINGE			46			Pla	ate 1 ^m /mt			
			\mathbb{R}			<u>\</u>				 			
晑	30	307				²²	ø34	Shaft Diamet	erø20 o↑				
			18 37	Caring Windia	a Window EEVE	D	←		4-ø6.5 Coun	tersinking			
		 		Spring-winding	g Window 55X5	<u>, nooi</u>	r Side	•	Diameter	ø12.5 ↑			
	48	55	P 4 /					—	→ 2∫ %	S ▼			
		\$ 	A SOR				20 29	32 32 3 155	(10)				
			Spi	ring Set Seat		U-7S	⊩ N Recepti		→	X direction			
2-M5SCREW	216			Reinfo	orced Plate 2 ^m /mt(min.)	۱			ersunk Head Screw	16 ^m /m X'direction 31 ^m /m			
	5,	210	ø46 →		ntersunk Head 4-M8X35 0	Screw 6	58 52	→	4-R5	Single side in Y-Y'direction 7m/m			
										¥ .			
6~10						37 45			19 50 50	X Y' In direction of			
	77 2	7		· · · ·	• • • • •	<u>√</u> / <u>↓ [</u> 2-M5	ø44.5	19, 21,		sliding			
				Decorated	d Plate			50	Decorated Plate 2 ^m /mt				
Seat	./ <u>Bas</u>	se Plate Re	einforcing Steel			Sprii	ng Set Pin	: 2 pieces	15 88				
	r			٠				h Tapping Hole	_				
	In the case of 90° opening In the case of 180° opening												
		*		27 4	55min			•	27,	55min			
Spring-Wi	nding 45	35	55 35	(10)	──* Spring-Wir	ndina	45 35	55	35 (10)				
Window	3	18	DW	<u> </u>	Window			180 DW					
	117					15				Unit: mm			

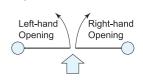
- REMARKS

 1. This diagram shows the case of right-hand opening doors.

 2. This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.

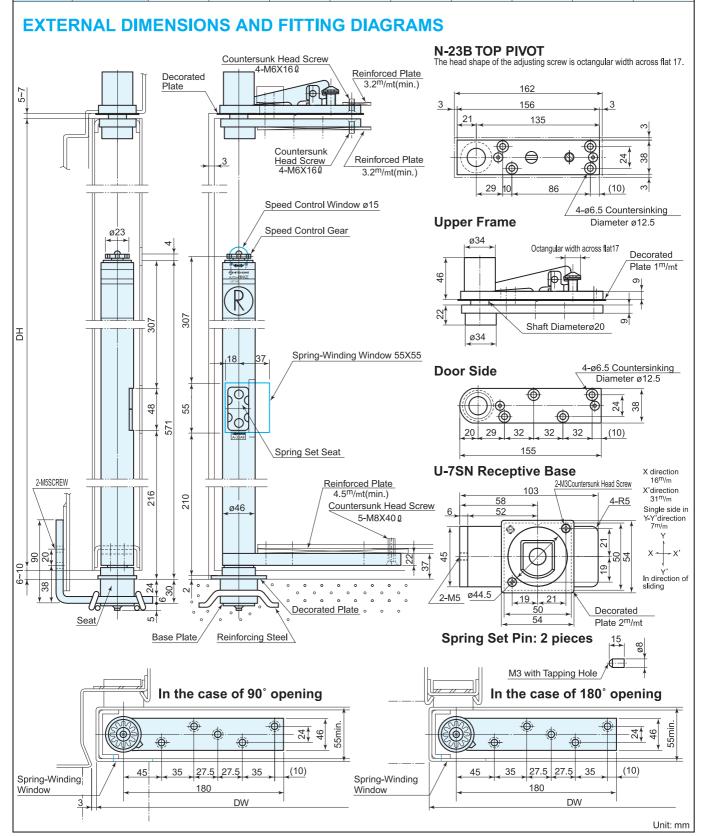
 3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)

Right and Left Hand Doors



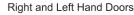
A-35A

Model		3500 max 3000 max 55 min 650 max 73.6 Roll-In None left one side R. Green									
Wodel		W	Н	D	(kg)		system	mechanism	, ,	label	
A-35AR	Right opening	2500 may	2000 may	55 min	650 may	72.6	Roll-in	None		R : Green	
A-35AL	Left opening	3300 max.	Sooo max.	oo min.	oso max.	73.0	system	None	opening	L : Yellow	



REMARKS

- 1. This diagram shows the case of right-hand opening doors.
- This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.
- 3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15)





A-40

Model		Door size applicable (mm) W H D		Door weight (kg)	Closing force (N·m)	Spring set system	Stop mechanism	Max. opening angle	Indicating label		
	A-40R	Right opening	4000 max.	3000 max.	65 min.	800 max.	78.5	Roll-in system	None	180°right or left one-side opening	R : Green
	A-40L	Left opening									L : Yellow

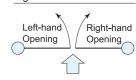
EXTERNAL DIMENSIONS AND FITTING DIAGRAMS N-25A TOP PIVOT 6-M8X30@ Reinforced Plate exagon socket head cap screw 255 9^m/mt(min.) 45 180 Decorated Plate Ф 30 Shaft Fixing Screw Reinforced Plate 8-ø9 Countersinking 2-M8x10@ (Both sides) 75 75 Diameter ø14 9m/mt(min.) Shaft Fixing Window **Upper Frame** ø15 Decorated Plate 2m/mt Hexagon socket head cap screw 90 9 Shaft Adjusting Window 100x100 \$2 ø23 _30_ 70 Speed Control Window ø15 8 100 ø45 Speed Control Gear 6-M8X30@ H Hexagon socket head cap screw 299 Spring-Winding Window Hexagon socket head cap screw M16 55X55 **Door Side** 6-ø9 Countersinking <u>\</u> Diameter ø14 48 571 ଛ୍ଚୀ 65 65 40 10 Shaft Diameter ø25 207.5 **U-7N Receptive Base** 54 Reinforced Plate 9^m/mt(min.) 4-M8X40@ 50 Decorated 19 21 Plate 2^m/mt ø55 Spring lock washer T=2.5 20 2-M3Countersunk Head Screw 172 6~10 200 Spring Set Pin: 2 pieces M3 with Tapping Hole Base ø Decorated Plate Wire rod Plate In the case of 180° opening In the case of 90° opening 55 **₹** 35 20 45 35 65 35 20 Spring-Winding Spring-Winding 200 200 Window Window DW Unit: mm

REMARKS

- This diagram shows the case of right-hand opening doors.
- This receptive base should be adjusted and centered according to the plumb bob from the top pivot. The seat should be firmly welded on the base plate.
- 3. For speed control windows and spring-winding windows use the decorated rubber plate. (see page 15) Prepare the shaft fixing window.
- 4. A big force is applied to the installation unit.

 Perform reinforcement with enough strength.
- 5. Screw in the top pivot securely as turning the shaft upward and then tighten the shaft fixing screw.

Right and Left Hand Doors



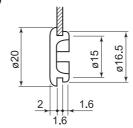
DECORATED RUBBER PLATE

DIMENSIONAL DRAWING

(For Speed Control Window)

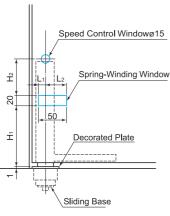
• ROUND TYPE (A-8KH~A-40)





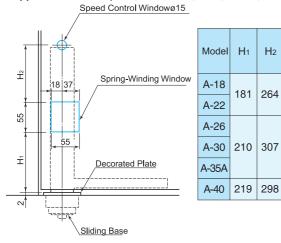
DIMENSIONAL DRAWING OF DOOR CUTOUT

• Applicable Models (A-8KH, A-8H, A-10H, A-12H, A-14H, A-16H)



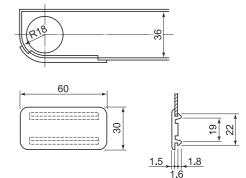
Model	H1	H ₂	L ₁	L2	
A-8KH	105	106	12	38	
A-8H			12		
A-10H	181	109			
A-12H			13	37	
A-14H	004	440			
A-16H	231	119	16	34	

• Applicable Models (A-18, A-22, A-26, A-30, A-35A, A-40)

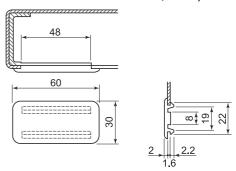


(For Spring-Winding Window)

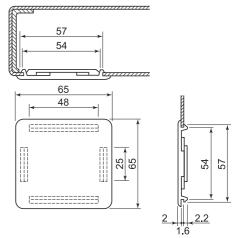
• SQUARE TYPE (With Round) (A-8KH)



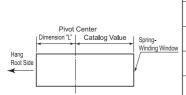
• SQUARE TYPE (Small) (A-8H, A-10H,A-12H, A-14H, A-16H)



• SQUARE TYPE (Large) (A-18, A-22, A-26, A-30, A-35A)



Notch dimension of the spring-winding window for the expected door thickness



thi	ckness odel (mm)	40	45 5	50 5	55 6	0 6	5 7	0 7	5 8	0 8	5 9	0 9	5 1	00
	A-8KH A-8H	C	L=13		L=	_=14 L		15						
<u>.</u>	A-10H A-12H	Catalog Value (L=13)								:16				
	A-14H	Catalog Value (L=13)			L=14	L=15	L=16	L=	17	L=18	L=19	L=	:20	
	A-16H	Catalog Value (L=16)	L=17	L=18	L=19	L=21	L=22	L=23	L=24	L=25	L=26	L=27	L=29	
	A-18 A-22	Catalog Value (L=18)												
	-26, A-30 -35A, A-40	Catalog Value (L=18)												

^{*1.} This table shows the notch dimension of the spring-winding window from the pivot center to the hang root side in the center hang

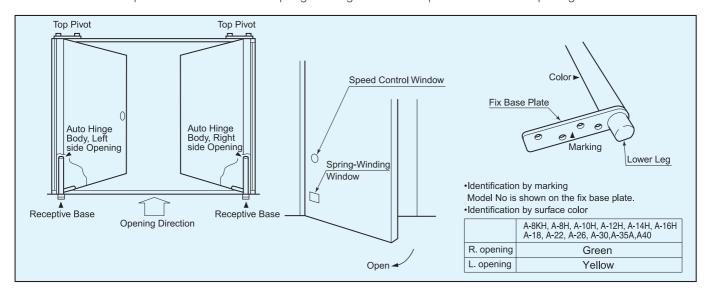
type auto hinge.

2. When the expected door thickness exceeds the catalog value range, the decorated plate provided as standard equipment cannot be used.

Precautions for Installation

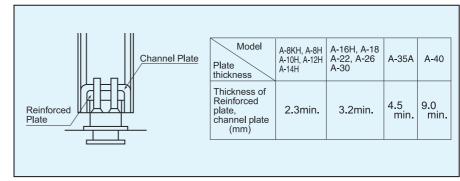
Opening directions of doors

- Opening directions of doors are identified by the seal and marking on the fix base plate (the symbol mark, R or L, suffixed to the end of model No).
- Make sure that the speed control window and spring-winding window are opened on the door opening side.



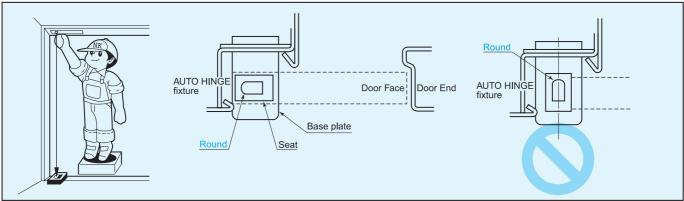
Reinforcing the doors to be used

• Reinforce the doors with reinforced plates and channel plates according to Table given right.



Setting the fix base plate

- Be sure to arrange the receptive base so that the Round side of the channel in the seat will come to the AUTO HINGE fixture side when the door is closed.
- Since the seat of the receptive base can slide on the base plate, align it with the top pivot using a plumb bob.
- After the alignment is completed, weld the seat and the base properly.



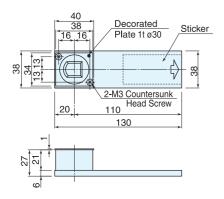
Precautions for Handling

Do not strike or drop it.
Do not turn the lower leg.
Do not joint by welding.
Do not file the tapered part of the lower leg.

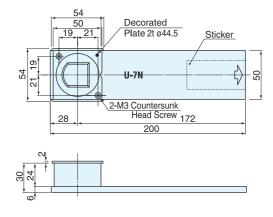


FIXED RECEPTIVE BASE

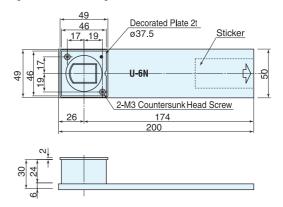
U-3N (A-8KH~A-16H)



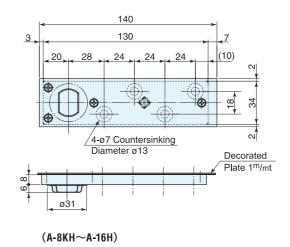
U-7N (A-26~A-35A)



U-6N (A-18•A-22)

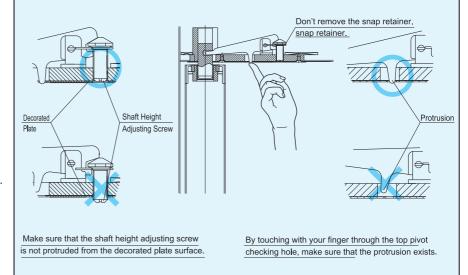


U-2NH (A-8KH~A-16H)



CAUTION FOR OPERATING THE TOP PIVOT

• After operating the top pivot, perform checking as shown in the right diagram.



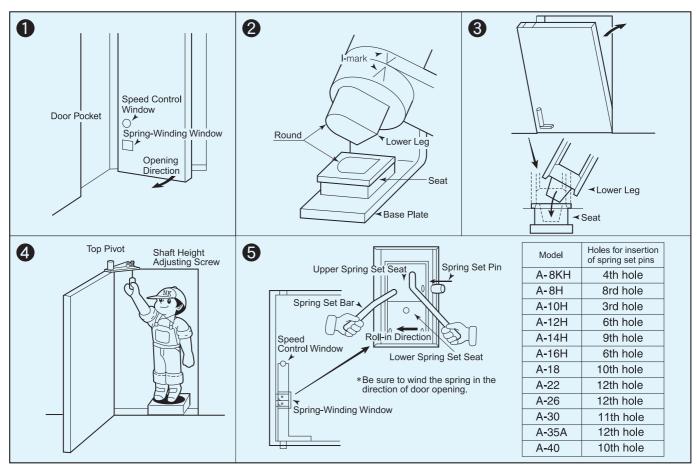
※ Operation for top pivot (A-35)

Be sure to screw a shaft into the body and fasten the shaft setscrew(hexagonal screw).

ROLL-IN SYSTEM (A-8KH~35A) HANGING AND SPRING WINDING METHODS

- Make sure that the speed control window and the springwinding window are opened on the door opening side (door pocket side)
- Make sure that both the round positions of the lower leg and receptive base match properly. Only proper positioning makes it to hang the door in place. In case the rounds are out of position, roll in the spring to set the I-mark in position.
- 3 In hanging, insert the lower leg in the receptive base with the door inclined, and then stand the door.
- 4 Make sure that the whole lower leg is in the receptive base,

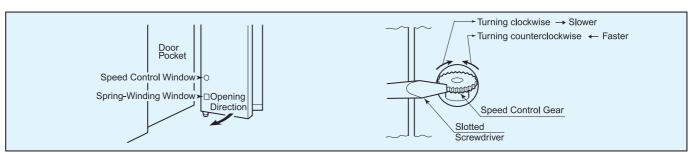
- and then with the door opened 90°, center the top pivot. Use a screwdriver and screw in the shaft height adjusting screw of the top pivot clockwise reliably.
- ⑤ After hanging, roll in the spring with the spring set bar. To wind the spring, roll in the upper spring set seat in the direction of door opening and insert the set pin into the spring set pin hole given in Table ⑤ below. After then, roll in and set also the lower spring set seat in such manner as above. (only the upper spring set seat for A-8H~A-16H).



This figures show the case of right-side opening door.

CLOSING SPEED ADJUSTMENT

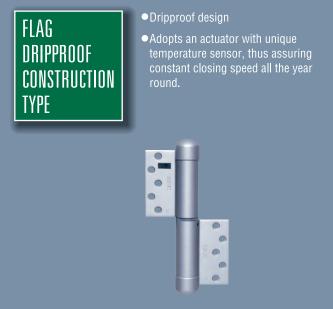
- After hanging the door and setting the spring, insert a screwdriver through the speed control window and turn the speed control gear.
 Turning clockwise → Slower
 Turning counterclockwise ← Faster
- Turning the speed control gear will not allow vertical movement.
- The turning limit of the speed control gear are 18 turns.
- The point where the gear suddenly comes to heavy turn for both right and left turning is the limit of turning.

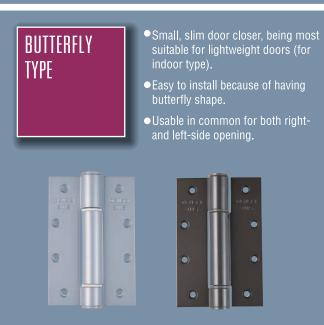


REMARKS: Further turning beyond such limit may cause damage.

OTHER RELATED PRODUCTS (AUTO HINGE)











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