

Light-duty Conveyor Belt

# NEW LIGHT GRIP



**NITTA**

**B-N-2-E-01**



## I. Outline of NITTA's light-duty conveyor "NEW LIGHT GRIP"

With our advanced technology and all available industrial materials of this kind, NEW LIGHT GRIP is newly designed and manufactured to be suitable for use in the transportation and the assembly systems of light-weight goods.

NEW LIGHT GRIP made to be light but strong enough, when properly selected in relation to its face material and form, can be applied to the transportation and the assembly systems of any light-weight goods ranging from foodstuffs to steel pieces, whether they are soft or hard, and dry or wet.

### Main Features of NEW LIGHT GRIP (NLG)

#### 1) Dimensional stability

Since the polyester canvas is employed as a core material, the dimensions are hardly subject to the fluctuations of temperature and humidity. Consequently, NLG is free from maintenance work.

#### 2) Smaller take-up amount

When operated at the standard elongation rate, the permanent elongation of NLG is very small. Therefore, the effective take-up amount to be spared will be only 1–2% of belt length.

#### 3) Non-toxic and odorless

PU, GU, GUF and WU types satisfy Decree No. 434 made public by the Japanese Ministry of Welfare, in relation to Food Sanitation Regulations. Also, WU type meets requirements by Food and Drug Administration (F.D.A.), U.S.A. and obtains official approval from Drug Administration (U.S.D.A.), U.S.A.

#### 4) Resistant to oils and chemicals

Refer to Chemical Resistance Table.

#### 5) Resistance to wear

An amount of wear is 40mgf (0.14 oz)/1,000 revolutions for polyurethane and 100mgf (0.35oz)/1,000 revolutions for poly vinyl chloride respectively, when measured with a Taber abrasion tester; in this instance, the friction wheel H-22 is used and the working load is 500gf (1.1 lb).

#### 6) Antistatic

Regarding almost all the belts with antistatic treatment, static electricity to be produced on its face never exceeds 500v at any temperature and humidity.

#### 7) Easy to make endless

NITTA's specially prepared tools enables NLG to be made endless easily and quickly. (For details, please see a separate instructions manual.)

## II. Type and Property of New Light Grip

TYPE	OVERALL THICKNESS mm (in.)	TOP COVER		BOTTOM COVER		No. OF PLIES	COEFFICIENT OF FRICTION		TENSILE STRENGTH kgf/cm (lb/in.)	
		THICKNESS mm (in.)	COLOR	THICKNESS mm (in.)	COLOR		TOP	BOTTOM		
PU	6A	0.7 (0.028)	0.3 (0.012)	beige	0	white	1	0.3 ~ 0.4	0.1 ~ 0.2	60 (336)
	6AK	0.7 (0.028)	0.3 (0.012)	beige	0	white	1	0.3 ~ 0.4	0.1 ~ 0.2	60 (336)
	12A	1.3 (0.051)	0.3 (0.012)	beige	0	white	2	0.3 ~ 0.4	0.1 ~ 0.2	120 (672)
	12AK	1.3 (0.051)	0.3 (0.012)	beige	0	white	2	0.3 ~ 0.4	0.1 ~ 0.2	120 (672)
	12B	1.5 (0.059)	0.3 (0.012)	beige	0.3 (0.012)	beige	2	0.3 ~ 0.4	0.3 ~ 0.4	120 (672)
	12C*	1.6 (0.063)	0.3 (0.012)	beige	0.4 (0.016)	beige	2	0.3 ~ 0.4	0.2 ~ 0.3	120 (672)
	12D*	1.0 (0.039)	0	white	0	white	2	0.1 ~ 0.2	0.1 ~ 0.2	120 (672)
	12DG	1.0 (0.039)	0	white	0	white	2	0.1 ~ 0.2	0.1 ~ 0.2	120 (672)
	12DN	1.0 (0.039)	0	blue	0	white	3	0.1 ~ 0.2	0.1 ~ 0.2	120 (672)
	18A	1.8 (0.071)	0.3 (0.012)	beige	0	white	3	0.3 ~ 0.4	0.1 ~ 0.2	180 (1008)
	18D*	1.7 (0.067)	0	white	0	white	3	0.1 ~ 0.2	0.1 ~ 0.2	180 (1008)
GU	12AK	1.3 (0.059)	0.3 (0.012)	green	0	white	2	0.3 ~ 0.4	0.1 ~ 0.2	120 (672)
	20AK*	3.2 (0.134)	1.4 (0.055)	green	0	white	2	0.3 ~ 0.4	0.1 ~ 0.2	200 (1120)
	3AK	0.6 (0.024)	0.3 (0.012)	green	0	white	1	0.3 ~ 0.4	0.1 ~ 0.2	30 (168)
GUH	12A	1.1 (0.043)	0.2 (0.008)	green	0	white	2	0.2 ~ 0.25	0.1 ~ 0.2	120 (672)
	12AK	1.1 (0.043)	0.2 (0.008)	green	0	white	2	0.2 ~ 0.25	0.1 ~ 0.2	120 (672)
GUF	12AK*	1.4 (0.055)	0.3 (0.012)	gray	0	white	2	0.08 ~ 0.1	0.1 ~ 0.2	120 (672)
WU	12AK*	1.35 (0.053)	0.3 (0.012)	white	0.1 (0.004)	white	2	0.3 ~ 0.4	0.2 ~ 0.3	120 (672)
	12BK*	1.5 (0.059)	0.3 (0.012)	white	0.3 (0.012)	white	2	0.3 ~ 0.4	0.3 ~ 0.4	120 (672)
VC	6A	0.8 (0.032)	0.5 (0.02)	green	0	white	1	0.4 ~ 0.5	0.1 ~ 0.2	60 (336)
	12A	1.6 (0.063)	0.5 (0.02)	green	0	white	2	0.4 ~ 0.5	0.1 ~ 0.2	120 (672)
	12B	2.0 (0.079)	0.5 (0.02)	green	0.5 (0.02)	green	2	0.4 ~ 0.5	0.4 ~ 0.5	120 (672)
KC	1.2 (0.047)	0	blue	0	blue	3	0.1 ~ 0.2	0.1 ~ 0.2	180 (1008)	

### Note

- The asterisked types are manufactured on order.
- Materials for the cover of each type are as follows:
  - PU, GU, and WU types: Polyurethane resin
  - GUF type: Fluoroplastics sheet coated with polyurethane resin
  - VC type: PVC resin
  - KC type: Polyamide fabric on both sides of polyester fabric
- WU-12AK and WU-12BK types meet requirements by Food and Drug Administration (F.D.A.), U.S.A. and both types also obtain official approval from Drug Administration (U.S.D.A.), U.S.A. for use in meat and poultry processing work.

	STABILIZED TENSION at 0.5% ELONGATION kgf/cm (lb/in.)	ALLOWABLE TENSION kgf/cm (lb/in.)	MIN. PULLEY DIA. mm (in.)	MAX. WIDTH mm (in.)	WEIGHT kgf/m <sup>2</sup> (lb/ft <sup>2</sup> )	WORKING TEMPERATURE °C (°F)	ANTI-STATIC TREATMENT
	1 (5.6)	3 (16.8)	20 (25/32)	1400 (55 1/8)	0.7 (0.143)	-20 ~ +70 (-4 ~ +158)	YES
	1 (5.6)	3 (16.8)	20 (25/32)	1000 (39 3/8)	0.7 (0.143)		NO
	2 (11.2)	6 (33.6)	40 (1 37/64)	1400 (55 1/8)	1.3 (0.266)		YES
	2 (11.2)	6 (33.6)	40 (1 37/64)	1000 (39 3/8)	1.3 (0.266)		NO
	2 (11.2)	6 (33.6)	50 (2)	1400 (55 1/8)	1.6 (0.328)		YES
	2 (11.2)	6 (33.6)	50 (2)	1000 (39 3/8)	1.6 (0.328)		YES
	2 (11.2)	6 (33.6)	40 (1 37/64)	1000 (39 3/8)	1.0 (0.205)		YES
	2 (11.2)	6 (33.6)	40 (1 37/64)	1000 (39 3/8)	1.0 (0.205)		YES
	2 (11.2)	6 (33.6)	50 (2)	1000 (39 3/8)	1.6 (0.328)		YES
	3 (16.8)	9 (50.4)	80 (3 5/32)	1400 (55 1/8)	1.8 (0.369)		YES
	3 (16.8)	9 (50.4)	70 (2 3/4)	1000 (39 3/8)	1.8 (0.328)		YES
	2 (11.2)	6 (33.6)	40 (1 37/64)	1000 (39 3/8)	1.3 (0.266)		NO
	1.75 (9.8)	7 (39.2)	100 (4)	900 (35 7/16)	3.6 (0.737)		NO
	—	—	—	1000 (39 3/8)	0.6 (0.123)		NO
	2 (11.2)	6 (33.6)	50 (2)	1000 (39 3/8)	1.2 (0.246)	YES	
	2 (11.2)	6 (33.6)	50 (2)	1000 (39 3/8)	1.2 (0.246)	NO	
	2 (11.2)	6 (33.6)	70 (2 3/4)	290 (11 3/8)	1.5 (0.307)	-20 ~ +70 (-4 ~ +158)	NO
	2 (11.2)	6 (33.6)	40 (1 37/64)	1000 (39 3/8)	1.4 (0.287)	-20 ~ +70 (-4 ~ +158)	NO
	2 (11.2)	6 (33.6)	50 (2)	1000 (39 3/8)	1.6 (0.328)		NO
	1 (5.6)	3 (16.8)	30 (1 3/16)	1300 (51 3/16)	1.0 (0.205)	-5 ~ +60 (+23 ~ +140)	YES
	2 (11.2)	6 (33.6)	50 (2)	1300 (51 3/16)	2.0 (0.41)		YES
	2 (11.2)	6 (33.6)	60 (2 23/64)	1300 (51 3/16)	2.5 (0.512)		YES
	1.5 (8.4)	5 (28.0)	50 (2)	900 (35 7/16)	1.1 (0.225)	-20 ~ +50 (-4 ~ +122)	YES

### III. Selection of New Light Grip

In order to apply NLG to an intended purpose, an appropriate type of belt should be selected from the table below.


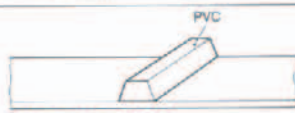

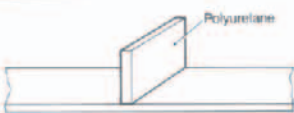
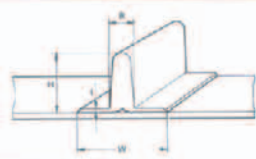
Type	Characteristics								Applications	
	Nontoxic	Wear-resistant	Oil-resistant	Plate supporting method	Roller supporting method	Knife edge	Antistatic treatment	Troughed		Maximum applicable optimum width mm (in.)
PU	6A	○	○	○	○	○	○	○	600 (23 5/8)	Chocolate and confectionery (Knife edge: 2mm (0.08") radius or more)
	6AK	○	○	○	○	○	○	○	600 (23 5/8)	Chocolate, confectionery and metal detectors (0.08")
	12A	○	○	○	○	○	○	○	1200 (47 1/4)	Confectionery, ice cream, bread and noodle (Knife edge: 5mm (0.2") radius or more)
	12AK	○	○	○	○	○	○	○	1000 (39 3/8)	Confectionery, ice cream, bread and metal detectors (0.2")
	12B	○	○	○	○	○	○	○	800 (31 1/2)	Vegetables, fruits and general foodstuffs
	12C	○	○	○	○	○	○	○	800 (31 1/2)	Canned goods and sugar
	12DG	○	○	○	○	○	○	○	1000 (39 3/8)	Paper and (Knife edge: 5mm (0.2") radius or more)
	12DN	○	○	○	○	○	○	○	1000 (39 3/8)	paper, corrugated cardboard
	12D	○	○	○	○	○	○	○	1000 (39 3/8)	Paper and food (Knife edge: 5mm (0.2") radius or more)
	18A	○	○	○	○	○	○	○	1200 (47 1/4)	Steel pieces, corrugated cardboard and foodstuffs
18D	○	○	○	○	○	○	○	1000 (39 3/8)	Plaster powder, corrugated cardboard and foodstuffs	
GU	12AK	○	○	○	○	○	○	○	1000 (39 3/8)	Confectionery, ice cream, bread and metal detectors (Knife edge: 5mm (0.2") radius or more)
	20AK	○	○	○	○	○	○	○	900 (35 7/16)	Steel pieces, corrugated cardboard and foodstuffs
	3AK	○	○	○	○	○	○	○	300 (11 13/16)	Skirt Belt exclusive use
GUH	12A	○	○	○	○	○	○	○	1000 (39 3/8)	Tobacco, Chocolate, and Paper
	12AK	○	○	○	○	○	○	○	1000 (39 3/8)	Tobacco, Chocolate and Paper
GUF	12AK	○	○	○	○	○	○	○	900 (35 7/16)	Sticky materials, foodstuffs and slip belts
WU	12EK	○	○	○	○	○	○	○	1000 (39 3/8)	Meat and foodstuffs
	12BK	○	○	○	○	○	○	○	1000 (39 3/8)	Meat and foodstuffs
VC	6A	○	○	○	○	○	○	○	600 (23 5/8)	Paper, cloth and fabric
	12A	○	○	○	○	○	○	○	1300 (51 3/16)	Plastics and cotton
	12B	○	○	○	○	○	○	○	800 (31 1/2)	Molded and packaged articles
KC	○	○	○	○	○	○	○	900 (35 7/16)	Paper, luggage and parcels	

#### Remarks

- Each "circle" mark in the above table indicates that the corresponding type bears characteristics mentioned at the top of the column.
- PU, GU, GUF, and WU types meet Decree No. 434 made public by the Japanese Ministry of Welfare, in relation to Food Sanitation Regulations. WU type meets requirements by F.D.A. in the U.S.A. and obtains official approval from U.S.D.A. in U.S.A.
- As to oil-resistant and chemical-resistant quality, refer to Chemical Resistance Table.
- In case of the plate supporting method, the canvas face should be in contact with the plate.

- In places where articles are liable to stagnate, a stopper is set, and there is any guide bar for feeding articles to the conveyor from side, the canvas face should be used for the conveyance surface (non-pulley side) for better conveyance work.
- Where the metal detector is used, employ PU- 6AK, 12AK and GU-12AK types.
- If you need any belt broader than the maximum applicable optimum width specified in the table, you are kindly requested to refer to NITTA for details.

## IV. List of Specially Manufactured New Light Grip

No.	Name	Descriptions	Remarks (in.)																																				
1.	Center seam treatment	In order to make a belt of larger width, each piece is connected side by side.	Maximum width available: 4,000mm (160) Maximum length available: 15m (590)																																				
2.	V-guide	<p>A V-guide is provided on the pulley side of the belt to fit the matching V-groove on the pulley; this fitting structure prevents some possible tracking of belt running.</p> <p>One or two rows of guide are available depending upon belt width and thickness.</p> <p>Applicable to types 12 &amp; 18.</p>	 <p><b>Standard type</b></p> <table border="1"> <thead> <tr> <th></th> <th>A type</th> <th>M type</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>12.5<sup>+1</sup><sub>-0</sub> mm (0.49<sup>+0.04</sup><sub>-0</sub>)</td> <td>10.0<sup>+1</sup><sub>-0</sub> mm (0.39<sup>+0.04</sup><sub>-0</sub>)</td> </tr> <tr> <td>H</td> <td>8.0<sup>+1.5</sup><sub>-0</sub> mm (0.315<sup>+0.06</sup><sub>-0</sub>)</td> <td>5.5<sup>+1.5</sup><sub>-0</sub> mm (0.216<sup>+0.06</sup><sub>-0</sub>)</td> </tr> <tr> <td>θ</td> <td>40°</td> <td>40°</td> </tr> </tbody> </table> <p><b>Manufacturing size range (belt)</b></p> <table border="1"> <thead> <tr> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Width</td> <td>~700mm (27)</td> <td>701 ~ 1300mm (27.04 ~ 51)</td> </tr> <tr> <td>Length</td> <td>1.5 ~ 15m (59 ~ 590)</td> <td>3 ~ 15m (118 ~ 590)</td> </tr> </tbody> </table> <p><b>Pulley groove size</b></p> <table border="1"> <thead> <tr> <th></th> <th>A type</th> <th>M type</th> </tr> </thead> <tbody> <tr> <td>B<sub>1</sub></td> <td>16.5 ± 0.3mm (0.65 ± 0.012)</td> <td>14.0 ± 0.3mm (0.55 ± 0.012)</td> </tr> <tr> <td>H<sub>1</sub></td> <td>10.0 ± 0.3mm (0.39 ± 0.012)</td> <td>7.0 ± 0.3mm (0.295 ± 0.012)</td> </tr> <tr> <td>θ<sub>1</sub></td> <td>40°</td> <td>40°</td> </tr> <tr> <td>Min. pulley dia.</td> <td>150φ (6)</td> <td>100φ (4)</td> </tr> </tbody> </table>		A type	M type	B	12.5 <sup>+1</sup> <sub>-0</sub> mm (0.49 <sup>+0.04</sup> <sub>-0</sub> )	10.0 <sup>+1</sup> <sub>-0</sub> mm (0.39 <sup>+0.04</sup> <sub>-0</sub> )	H	8.0 <sup>+1.5</sup> <sub>-0</sub> mm (0.315 <sup>+0.06</sup> <sub>-0</sub> )	5.5 <sup>+1.5</sup> <sub>-0</sub> mm (0.216 <sup>+0.06</sup> <sub>-0</sub> )	θ	40°	40°				Width	~700mm (27)	701 ~ 1300mm (27.04 ~ 51)	Length	1.5 ~ 15m (59 ~ 590)	3 ~ 15m (118 ~ 590)		A type	M type	B <sub>1</sub>	16.5 ± 0.3mm (0.65 ± 0.012)	14.0 ± 0.3mm (0.55 ± 0.012)	H <sub>1</sub>	10.0 ± 0.3mm (0.39 ± 0.012)	7.0 ± 0.3mm (0.295 ± 0.012)	θ <sub>1</sub>	40°	40°	Min. pulley dia.	150φ (6)	100φ (4)
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3.	V-top	<p>A V-mould for the V-guide is fitted to the belt in a cross direction.</p> <p>Applicable to types 12, 18 and 20.</p>	 <p><b>Manufacturing size range (belt)</b></p> <table border="1"> <tbody> <tr> <td>Width</td> <td>700mm (27)</td> </tr> <tr> <td>Length</td> <td>20m (787) or less</td> </tr> <tr> <td>Mould pitch</td> <td>150mm (6) or more</td> </tr> </tbody> </table>	Width	700mm (27)	Length	20m (787) or less	Mould pitch	150mm (6) or more																														
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4.	Flat mould	<p>A flat plate of polyurethane is fitted to the belt in a cross direction.</p> <p>Applicable to types 12, 18 and 20.</p>	<p><b>Standard mould size</b></p> <table border="1"> <tbody> <tr> <td>Width</td> <td>20mm (25/32)</td> </tr> <tr> <td>Thickness</td> <td>1mm (0.039) or 2mm (0.079)</td> </tr> </tbody> </table> <p><b>Manufacturing size range (belt)</b></p> <table border="1"> <tbody> <tr> <td>Width</td> <td>1300mm (51) or less</td> </tr> <tr> <td>Length</td> <td>20m (787) or less</td> </tr> <tr> <td>Mould pitch</td> <td>120mm (4-3/4) or more</td> </tr> </tbody> </table> 	Width	20mm (25/32)	Thickness	1mm (0.039) or 2mm (0.079)	Width	1300mm (51) or less	Length	20m (787) or less	Mould pitch	120mm (4-3/4) or more																										
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5.	Upright mould	<p>A plate of polyurethane is fitted upright to the belt.</p> <p>Applicable to types 12, 18 and 20.</p>	 <p><b>Standard mould size</b></p> <table border="1"> <tbody> <tr> <td>Thickness</td> <td>1.5mm (0.06)</td> </tr> <tr> <td>Height</td> <td>10mm (25/64) or 20mm (25/32)</td> </tr> </tbody> </table> <p><b>Manufacturing size range (belt)</b></p> <table border="1"> <tbody> <tr> <td>Width</td> <td>100mm (3.9) or less</td> </tr> <tr> <td>Length</td> <td>20m (787) or less</td> </tr> <tr> <td>Mould pitch</td> <td>100mm (3.9) or more</td> </tr> </tbody> </table>	Thickness	1.5mm (0.06)	Height	10mm (25/64) or 20mm (25/32)	Width	100mm (3.9) or less	Length	20m (787) or less	Mould pitch	100mm (3.9) or more																										
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6.	Bored type	The belt has ring-shaped pieces of polyurethane attached onto it.	No standard type in particular																																				
7.	Canvas-bonded type	<p>A special canvas is bonded to the belt face.</p> <p>Applicable to PU-12A type only.</p>	<table border="1"> <tbody> <tr> <td>Thickness</td> <td>1.6mm (0.06)</td> </tr> <tr> <td>Width</td> <td>1,300mm (51) or less</td> </tr> <tr> <td>Length</td> <td>20m (787) or less</td> </tr> </tbody> </table>	Thickness	1.6mm (0.06)	Width	1,300mm (51) or less	Length	20m (787) or less																														
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8.	Cleat mould	<p>This type is used for steep inclination.</p> <p>A cleat of polyurethane is fitted to the belt in a cross direction.</p> <p>Applicable to all types.</p>	<p><b>Standard cleat size</b></p> <table border="1"> <tbody> <tr> <td>B</td> <td>8mm (5/16)</td> </tr> <tr> <td>H</td> <td>20mm (25/32)</td> </tr> <tr> <td>W</td> <td>30mm (1-3/16)</td> </tr> <tr> <td>t</td> <td>1mm (0.039)</td> </tr> </tbody> </table>  <p><b>Manufacturing size range</b></p> <table border="1"> <tbody> <tr> <td>Width</td> <td>500mm (19-11/16) or less</td> </tr> <tr> <td>Length</td> <td>20m (787) or less</td> </tr> <tr> <td>Mould pitch</td> <td>150mm (5-29/32) or more</td> </tr> </tbody> </table>	B	8mm (5/16)	H	20mm (25/32)	W	30mm (1-3/16)	t	1mm (0.039)	Width	500mm (19-11/16) or less	Length	20m (787) or less	Mould pitch	150mm (5-29/32) or more																						
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### Note

For any information as to special belts of other types than shown in the above table, please refer to NITTA.

## V. Making New Light Grip Endless

### 1) Outline of Endless Methods

Endless method	Joint processing	Steps
Heating method	Skiver finish	Exclusive adhesive of 2-solution type is applied to both ends of the belt to be joined and the joint is pressed with an electric heater and press machine. For details, please see the instructions manual.
	Step finish	
Metal fitting method	Lacing metal fitting	"Clipper" (made by Clipper, Inc.) or "Alligator" is used.

### 2) Specifications for Joint

The shapes of skiver and step finish are as follows, and the applicable lacing metal fittings are shown in the table.

Type	Skiver finish approx. $l$ mm (in.)		Step finish approx. $l$ mm (in.)	Metal fittings		
	PU, GU GUF, WU	VC		Clipper		Alligator
				PU, GU, GUF, WU	VC	
6A (K)	30 (1.181)	32 (1.26)	46 (1.81)	#25	#25	00
12A (K)	50 (1.969)	64 (2.52)	66 (2.6)	#25	#25LP	00
12B (K)	60 (2.363)	80 (3.15)	66 (2.6)	#25LP	#25LP	00
12C	64 (2.52)	—	66 (2.6)	#25LP	—	00
12D	40 (1.575)	—	66 (2.6)	#25	—	00
18A	72 (2.835)	—	80 (3.15)	#1-D	—	1
18D	65 (2.559)	—	80 (3.15)	#1-D	—	1
20AK	—	—	80 (3.15)	#1	—	1
KC	40 (1.575)		—	#25	—	00

Fig. 1 Skiver finish

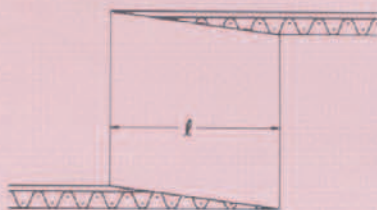


Fig. 3  $S = 0.4W$   $W$ : belt width

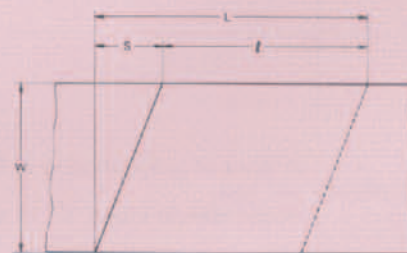


Fig. 2 Step finish  
mm (in.)

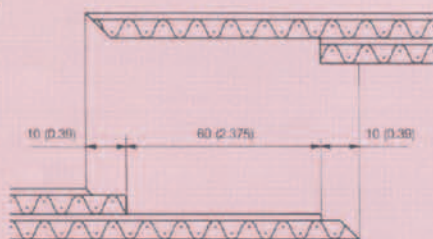
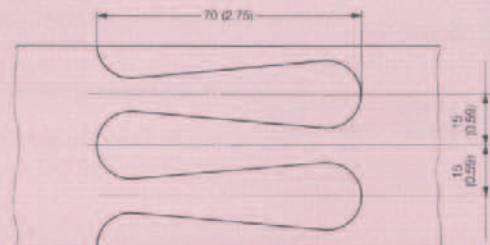


Fig. 4  
mm (in.)



#### ● Special joint (Fig. 4)

Where smooth belt running is required, small pulley diameter or knife edge is applied, and the belt is used for many bending operations, the finger joint as shown in Fig. 4 can be applied to PU-6A (6AK) type. (This joint processing work, however, can be done at NITTA's factory only.)

Manufacturing range:

Width 30mm (1-3/16") to 300mm (11-13/16")

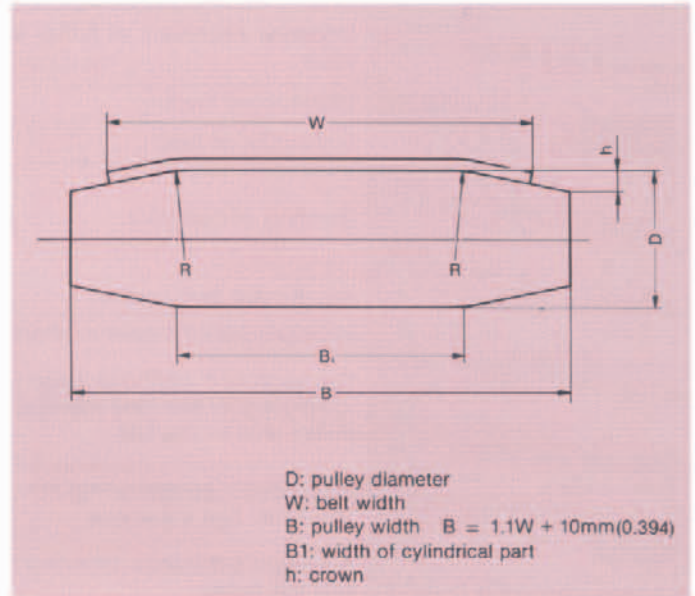
Allowable temperature range:

-10°C ~ +40°C (+14 ~ +104°F.)

## TECHNICAL DATA

### 1) Shape and Size of Pulley

As illustrated below, the pulley must be flat at centre and tapered at both ends. In order to prevent the wear of the belt, each adjoining part of cylindrical and taper areas is rounded.



#### • Width of cylindrical part B1

W	mm (in.)	B1
50 ~ 200	( 2 ~ 8 )	0.3 ~ 0.4W
200 ~ 300	( 8 ~ 12 )	0.4 ~ 0.5W
300 ~ 500	( 12 ~ 20 )	0.5 ~ 0.6W
500 ~ 700	( 20 ~ 28 )	0.6 ~ 0.65W
700 ~ 1400	( 28 ~ 56 )	0.65 ~ 0.7W

#### • Crown "h"

Pulley diameter	mm (in.)				
	~50 (~2)	~75 (~3)	~100 (~4)	~150 (~6)	~200 (~8)
Belt type					
6A, 6AK & KC	0.5 (0.02)	0.6 (0.024)	0.8 (0.032)	1.0 (0.039)	1.0 (0.039)
12A, AK, B, C & D	0.8 (0.032)	0.8 (0.032)	1.0 (0.039)	1.2 (0.047)	1.2 (0.047)
18A & D	—	0.8 (0.032)	1.0 (0.039)	1.2 (0.047)	1.2 (0.047)
20AK	—	—	1.0 (0.039)	1.2 (0.047)	1.2 (0.047)

### 2) Proper Use of New Light Grip

For the proper and effective use of "New Light Grip", enough care must be taken as to the following points.

- Standard elongation rate:  
0.3% for 6 types  
0.5% for 12, 18 and KC types  
1.0% for 20 types
- Maximum elongation rate:  
0.5% for 6 types  
1.0% for 12, 18 and KC types  
1.5% for 20 types
- Take-up amount  
When the belt is used at the standard elongation rate or less, 1-2% of belt length should be spared for the effective take-up amount.
- Pulley diameter:  
When the belt width is 300mm (11—13/16") or more, it is recommended that the pulley diameter should be two times or more as large as the minimum pulley diameter in the list of products.

- Running direction:  
In the case of the knife edge application, the running direction should be set as shown in Fig. A. In any other application, it should be set as shown in Fig. B so that the edge of the joint section may not be against articles to be carried.

Fig. A endless joint

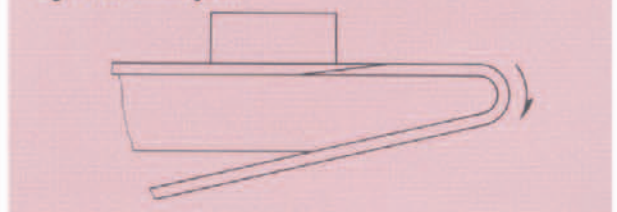
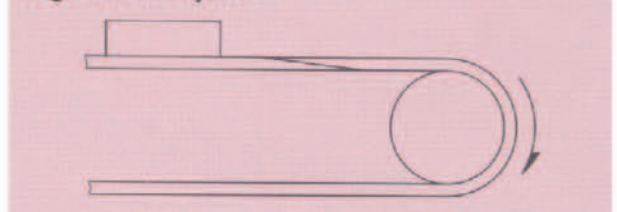


Fig. B endless joint



- Adjustment of running:  
New Light Grip gives a very small elongation and the pulley must be so well constructed as to permit its parallel adjustment.



## ● Causes and Remedies of Abnormal Running

Phenomena	Causes	Remedies
The belt suffers bias distortion in operation.	Improper pulley shape	Checking of pulley shape
	Improper alignment of pulley and carrier roller	Adjusting of alignment
	Unbalanced loading	A load to be relocated to belt centre
	Deflection of belt	Adjusting of pulley and carrier roller
	Bending of belt joint	Checking of belt type and material The belt ends to be properly connected to each other
	Insufficient belt tension	The belt to be re-stretched
The belt suffers a crease/fold.	Improper pulley crown in shape and height	Checking of pulley shape and crown
	Too large belt width/too large friction coefficient of the face material of the pulley-side of the belt	B and C type belts not to be used A rubber lining not to be used for the pulley
	Insufficient transverse rigidity of belt Too small belt thickness	Checking of belt
	A foreign substance adhering to the belt and the pulley	Cleaning up
	Too much tension of belt	Adjusting of belt tension
The running speed of the belt varies.	Slipping	The belt to be re-stretched An oil stain, if any, to be removed.
	Too large friction resistance between the supporting plate and the belt	Friction coefficient to be made smaller between the belt and the supporting plate.

## ● Storage of Belt

1) The belt should be stored at normal temperature and humidity. Naturally, the belt must not be left exposed to direct sunshine and dusts. Under direct-sunshined/dusty conditions, the belt should

be stored with an appropriate cover laid on it, such as cloth and sheet.

2) Care must be taken about high temperature and humidity, which possibly deteriorate the belt.

### 3) Chemical Resistant Quality

- 1 Each "circle" mark indicates that the corresponding belt material is completely resistant to chemicals.
- 2 Each "triangle" mark indicates that the corresponding belt material possibly suffers slight deterioration when exposed to chemicals.
- 3 Each "cross" mark indicates that the corresponding belt material suffers much deterioration when exposed to chemicals.

The table is applied to the case where articles containing chemicals/oils are carried at a normal temperature. When temperature is higher or there is some possibility of the belt being impregnated with chemicals/oils, please notify NITTA as to the application conditions.

VC type, when exposed to the triangled items, sometimes suffers some deterioration in its face flatness, and special care must be taken. KC type should not be used for carriage of articles containing chemicals and oils in the table.

CLASSIFICATION	NAME	PU GU	VC
Acid	Strong acid	×	×
	Weak acid	○	○
Alkaline	Strong alkali	×	×
	Weak alkali	○	○
Salts	Sulfate	○	○
	Nitrate	○	○
	Phosphate	○	○
	Acetate	○	○
	Carbonate	○	○
Solvents	Alcohols	○	△
	Ethers	×	×
	Esters	×	×
	Ketones	×	×
	Benzene	×	×
	Toluene	△	△
	Trichloroethylene	×	×
	Cresol	△	×
	Chloroform	×	×
	Formalin	△	×
	Thinner	△	△
	Petroleum benzene	○	○
	Oils	Butter	○
Margarine		○	△
Vegetable oil		○	△
Animal oil		○	△
Turpetine oil		○	△
Tar oil		○	○
Machine oil		○	△
Heavy oil		○	△
Light oil		△	×
Kerosene		△	×
Gasoline		○	×
Paraffin oil		○	△
Fat		○	△
Vaseline		○	○
Others		Sugar (aq. Soln)	○
	Fruit sugar (aq. Soln)	○	○
	Theriac	○	○
	Fruit juice	○	○
	Milk	○	○
	Gelatin	○	○
	Vinegar	△	○
	Water	○	○
	Table salt (water)	○	○
	Starch (solution)	○	○
	Yeast	○	○
	Alcoholic drinks	○	○
	Soap (aq. Soln)	○	○
	Ink	○	○
	Dye	×	○
	Hydrogen Peroxide 2% aqueous	△	△
	Bleaching agent	△	△
	Perfumes	○	○
Varnish	×	×	
Ozone	○	△	

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