

Timing Belt Guide

Material Properties and Application Examples of Long Timing Belts

Features: A guide to prevent belts from flexure and wandering during conveying.

BTG (No Hole)

BTGZ (1 Row of Counterbored Holes)

Details of Hole Dimensions

Counterbored Hole

Screw Nominal Dia.	4	5	6
d	4.5	5.5	6.5
d1	8	9.5	11
h	5	6	7

Accuracy Standards

Dimension	Tolerance
A, B, C, D, E	±0.2
L	±1.0

Thermal Expansion Coefficient: 1.7x10⁻⁴/°C
Machining Conditions: 3mm thickness from a hole to the end face is required.

Material: UHMWPE

Part Number Type	Nominal	L 10mm Increment	P (Hole Pitch) 5mm Increment	H Number of Holes	K Hole Machining Nominal Dia. Selection	Applicable Belt Type	A	B	C	D	E
							BTG (No Hole)	100 150 150A 200 200A 250 250B 300 400 500	200~1800	50~500	2~10

Applicable to belts not listed in "Applicable Belt Type". Make sure of the width and the height of teeth before use.
 Belt Nominal Width 100 is not available for BTGZ.

Ordering Example

Part Number: **BTG** - **150** - **300**
BTGZ - **200A** - **1200** - **P160** - **H8** - **K5**

ex LTBN-T10400 (P.1474)

TPPA30T10400 (P.1419)

Body Price

Part Number Type	Nominal	Body Price					
		L200~400	L410~600	L610~900	L910~1200	L1210~1500	L1510~1800
BTG	100						
	150						
	150A						
	200						
	200A						
	250						
	250B						
	300						
	400						
	500						

Hole Machining Charge

Number of Holes	BTGZ (1 Row of Counterbored Holes)
2	
3	
4	
5	
6	
7	
8	
9	
10	

Material Properties of Long Timing Belts (P.1473, P.1474)

Chemical Resistance (Long Timing Belts Iron Rubber® P.1473)

○: With Resistibility
 △: With Limited Resistibility
 ×: Non-resistant

Chemical	Resistibility	Chemical	Resistibility	Chemical	Resistibility
Acetic Acid 5%	×	Aqueous Sodium Hydroxide Solution 5%	×	n-Hexane	△
Glacial Acetic Acid (38°C)	×	Aqueous Sodium Hydroxide Solution 10%	×	Hydrazine	×
Non-Glacial Acetic Acid	×	Aqueous Potassium Hydroxide Solution 5%	×	N-Methylpyrrolidone	×
Hydrochloric Acid 5%	×	Seawater	△	Isocetane	△
Nitric Acid 10%	×	Acetone	×	Isopropyl Alcohol	△
Sulfuric Acid 20%	×	Methyl Ethyl Ketone	×	Kerosene	△
Fuming Sulfuric Acid 20%	×	Ethyl Alcohol	×	Gasoline	△
Sulfurous Acid	×	Ethyl Alcohol	×	Jet Fuel	△
Formic Acid	×	Methyl Alcohol	×	Linseed Oil	○
Hydro Cyanic Acid	×	Ethyl Acetate	×	Ricin	○
Hydrofluoric Acid 10%	×	Carbon Tetrachloride	×	Naphthalene	△
Hydrogen Sulfide	×	Benzene	×	Soybean Oil	○
Chlorine Gas	×	Carbon Bisulfide	×	Beer	○
Aqueous Trisodium Phosphate Solution	○	Diethyl Phthalate	○	Phenol	×
Aqueous Citric Acid Solution	○	Chloroethane	×	Ethylene Tetrachloride	×
Anhydrous Bromine (Solution)	×	Ethylene Glycol	△	Xylene	×
Aqueous Acetic Boric Acid Solution	○	Ethylene Oxide	△	Fuel Oil A	△
Aqueous Ammonium Chloride Solution	△	Fluosiolic Acid	△	Fuel Oil B	×
Aqueous Calcium Chloride Solution	○	Formaldehyde 40%	×	Fuel Oil C	×
Aqueous Calcium Hypochlorite Solution	○	Chlorobenzene	×	Dimethylformamide	×
Aqueous Sodium Chloride Solution	○	Cyclohexane	△	Tetrahydrofuran	×
Aqueous Ammonium Sulphate Solution	△	Dibutyl Phthalate	○	Toluene	×
Aqueous Ammonium Hydroxide Solution	×	Glycerin	○	Hydrogen Peroxide Solution	×

The effects are just for reference and tests are required before use.
 Check compatibility before using as belts.

Chemical Resistance (Long Timing Belts Polyurethane P.1474)

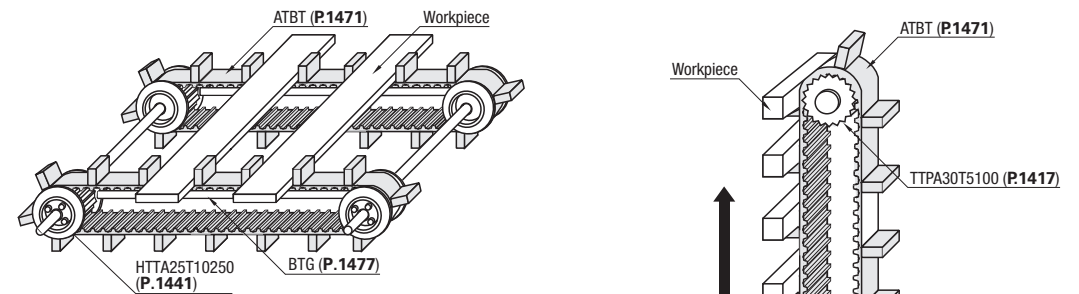
○: With Resistibility
 △: With Limited Resistibility
 ×: Non-resistant

Chemical	Resistibility	Chemical	Resistibility
Acetic Acid	△	Kerosene	○
Acetone	△	Grease	○
Aluminum Chloride (5% Moisture)	○	Methanol	△
Ammonia Water (10%)	○	Methanol / Gasoline (15 / 85)	△
Aniline	×	Methyl Ethyl Ketone	△
ASTM No.1 Oil	○	Chloromethane	△
ASTM No.2 Oil	○	Nitric Acid 20%	×
ASTM No.3 Oil	△	Regular Gasoline	△
Benzene	△	Super Gasoline	△
Butyl Alcohol	△	Saline Solution	○
Butyl Acetate	×	Seawater	○
Carbon Tetrachloride	×	Aqueous Sodium Chloride Solution	○
Cyclohexanol	△	Sodium Hydroxide	△
Diesel Oil	○	Tetrahydrofuran	×
Dimethylformamide	×	Toluene	×
Ethanol	△	Trichloroethylene	×
Ethyl Acetate	×	Water	○
Ethylether	○		
n-Heptane	○		
20% Hydrochloric Acid	△		
Iron Chloride (Moisture 5%)	△		
Isopropanol	△		

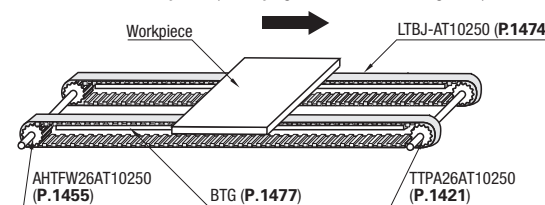
Not applicable when temperature is above 40°C or belts are immersed in solution or liquid.

App. Example of Long Timing Belt / Open End Belt (P.1473~1476)

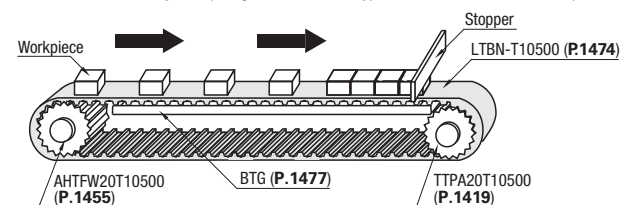
- Simultaneous Conveyance (Conveying workpieces at regular intervals using attachments)
- Vertical Conveyance (Conveying light workpieces using attachments)



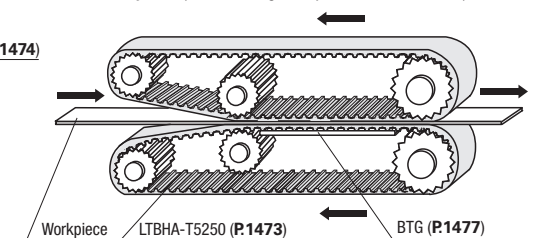
- Circuit Board Conveyance (Conveying boards on two timing belts)



- Accumulation Conveyance (Using the Cloth Lined Type to reduce friction coefficient)



- Tractor Conveyance (Sandwiching workpieces between belts)



- Linear Drive (Reciprocating motion with open end belts)

