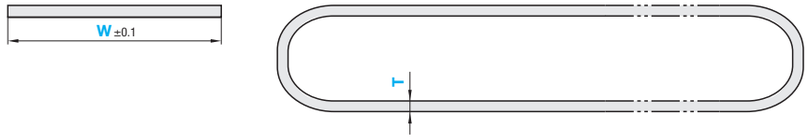
Stainless Steel Belt

Features: Stainless steel belt with superior flatness, heat resistance, and electrical conductivity.

Stainless Steel Belt

Type	Material	Thickness mm	Specific Gravity	Allowable Tension kg/cm	Min. Pulley Dia. Ømm	Continuous Use Temperature °C	Electrical Resistance of Surface Ω	Friction Coefficient (Ref. Against Polished Steel)	Surface Hardness HV	Young's Modulus kgf/mm²	Heat Expansion Coefficient x10⁻⁶/°C
STHBLT	EN 1.4301 Equiv.	0.1	0.8	4	50	-80~110	0.2	0.2	370 or over	19700	17.3
		0.15	1.2	6	75	-80~120	0.3				
		0.2	1.6	8	100	-80~130	0.5				



Belt thickness tolerance is ±10% of the thickness.

Part Number Type	Belt Thickness T (mm)	Belt Width W (mm) 1mm Increment	Belt Length L (m) 0.01mm Increment	Body Price/m	Belt Jointing Charge (Body Price +)
STHBLT	0.1 0.15 0.2	10~20	0.50~10.00		
		21~30	0.80~10.00		
		31~40			
		41~50			
		51~60			
		61~70			
		71~80			
		81~90			
		91~100			
		101~120			
		121~140			
		141~150			

For belt selections, see ☞ **P.2252** Technical Data.
For a conveyer example with this belt, see ☞ **P.1263**

Ordering Example

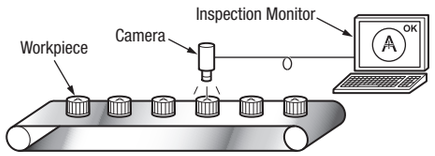
Part Number	-	Belt Width (mm)	-	Belt Length L (m)
Type / Belt Thickness				
STHBLT 0.15	-	25	-	2.24

Cautionary Points on Usages

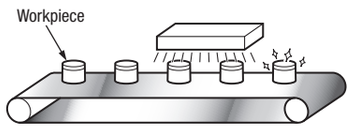
- Belts with 0.1 and 0.15 thickness are not suitable for accumulating transfer applications.
- Avoid causing impacts in through-thickness direction as it is very thin.
- The belt life will be reduced if dented.
- When loading items on the belt, use sliding chutes to avoid shock loads.
- Do not continue to use with foreign matter trapped between the belt and belt supports, workpiece guides, etc.
- The product surfaces coming in contact with the belt should be softer than the belt.
- Use dedicated pulleys and idlers.
- Belts cannot be tensioned from the back side.

Example

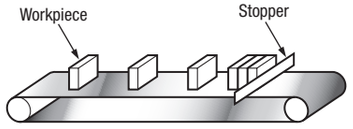
Image Inspection



Sterilization by UV and Alcohol

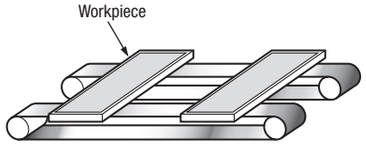


Accumulation Transfer



Belts with 0.1 and 0.15 thickness are not suitable for accumulating transfer applications.

Transfer of LED and Solar panels



Chemical Resistance

Chemical Name	Stainless Steel Belt STHBLT
Isopropyl Alcohol	○
Ethanol	○
Potassium Chloride	○
Calcium Chloride	○
Hydrochloric Acid (Gas)	×
Hydrochloric Acid (5% or less)	×
Hydrochloric Acid (5 ~ 36%)	×
Caustic Soda	○
Caustic Soda Solution (50%)	○
Volatile Oil	○
Strong Alkali	○
Strong Acid	×
Light Oil	○
Ethyl Acetate	△
Sodium Hypochlorite (Undiluted Solution)	×
Sodium Hypochlorite (600ppm)	×
Weak Alkali	○
Weak Acid	○
Soap	○
Machining Oil	○
Diesel Oil	○
Toluene	○
Naphthalene	○
Paraffin Oil	○
Phenol	○
Antirust Oil	○
Machine Oil	○
Methanol	○
Sulfuric Acid (10%)	×
Sulfuric Acid (50%)	×
Sulfuric Acid (70%)	×
Sulfuric Acid (98%)	×

Resistance Against Foods

Food	Stainless Steel Belt STHBLT
Yeast	○
Tea Leaf	○
Olive Oil	○
Fruit	○
Cashew Nuts	○
Cream	○
Spice	○
Grain	○
Coffee Beans	○
Flour	○
Rice Grain	○
Fish	○
Sugar	○
Salt	○
Salt Water	○
Fat	○
Cooking Oil	○
Syrup	○
Soy Sauce	○
Vinegar	○
Sauce	○
Molasses	○
Meat	○
Butter	○
Bread	○
Peanut Oil	○
Beer	○
Margarine	○
Mayonnaise	○
Water	○
Lard	○

○Not affected at all △: Slightly affected ×: Severely affected
The above table shows adequacy in the condition where materials including chemicals and oil are loaded on belt surface and carried at a room temperature. Actual conditions may differ in cases where belts are completely submerged in materials or used in higher temperature than room temperature.
Care must be taken for rusts resulting by chlorides and acids.

Pulleys and Idlers for Stainless Steel Belts

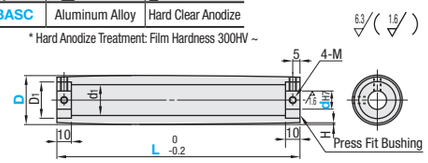
Crowned

Features: Crowned pulleys and idlers dedicated for stainless steel belts.

Pulleys for Stainless Steel Belts Crowned

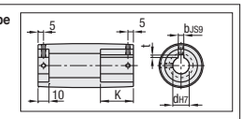
Type	Material	Surface Treatment
ROBASC	Aluminum Alloy	Hard Clear Anodize

* Hard Anodize Treatment: Film Hardness 300HV ~



The crown height (H dim) for meandering suppression is adjusted based on D dims. and L dims.

Keyway Shape



New JIS (B1301) Keyway Dimensions

Nominal	dH7		bJS9		t Tolerance	
N15	15	+0.018 0	5	±0.0150	2.3	+0.1 0
N20	20	+0.021 0	6	±0.0180	2.8	+0.2 0
N25	25		8		3.3	
N30	30					
N35	35	+0.025 0	10	±0.0215		
N40	40		12			

Part Number Type	D	dH7 Round Hole + Tap	dH7 Keyway + Tap	10mm Increment L	K Keyway Length	d1	D1	M Round Hole + Tap	M Keyway + Tap
ROBASC	50	15	N15	40~160	30*	27	40	M5	M4
		20	N20						M5
		25	N25						M6
	60	20	N20			32	45	M6	M5
		25	N25						M6
		30	N30						
	70	20	N20			35	50	M6	M5
		25	N25						M6
		30	N30						
	75	25	N25			40	55	M8	M6
		30	N30						M8
		35	N35						
	80	25	N25			41	55	M8	M6
		30	N30						M8
		35	N35						
	100	30	N30			45	60	M8	M6
		35	N35						M8
		40	N40						

Ordering Example: Part Number - d - L → ROBASC50 - 20 - L100

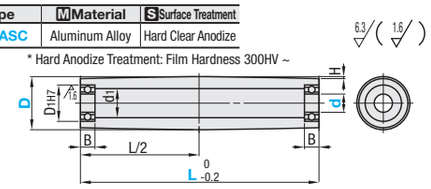
* When Keyway machining is specified as L<50, K will be K=20.

D	Body Price ROBASC L40	L50	L60	L70	L80	L90	L100	L110	L120	L130	L140	L150	L160	Keyway Machining Charge (Body Price +)
50														
60														
70														
75														
80														
100														

Idlers for Stainless Steel Belts Crowned

Type	Material	Surface Treatment
ROFASC	Aluminum Alloy	Hard Clear Anodize

* Hard Anodize Treatment: Film Hardness 300HV ~



The crown height (H dim) for meandering suppression is adjusted based on D dims. and L dims.

Part Number Type	D	d	10mm Increment L	d1	Bearing Dimension No.	D1	B
ROFASC	50	10	40~160	22	B6200ZZ	30	9
		12			B6001ZZ	28	8
		15			B6902ZZ	28	7
		20			B6804ZZ	32	7
		25		27	B6905ZZ	42	9
	60	12		22	B6201ZZ	32	10
		15			B6002ZZ	32	9
		20			B6904ZZ	37	9
		25		32	B6905ZZ	42	9
		30			B6906ZZ	47	9
	70	15		22	B6002ZZ	32	9
		20			B6904ZZ	37	9
		25		32	B6905ZZ	42	9
		30			B6906ZZ	47	9
	75	20		32	B6904ZZ	37	9
		25			B6905ZZ	42	9
		30			B6906ZZ	47	9
		35		40	B6907ZZ	55	10
	80	25		41	B6205ZZ	52	15
		30			B6006ZZ	55	13
		35			B6907ZZ	55	10
	100	30		48	B6006ZZ	55	13
		35			B6907ZZ	55	10
		40			B6008ZZ	68	15

Ordering Example: Part Number - d - L → ROFASC50 - 20 - L100

D	Body Price ROFASC L40	L50	L60	L70	L80	L90	L100	L110	L120	L130	L140	L150	L160
50													
60													
70													
75													
80													
100													