

Belts for
Textile Industries

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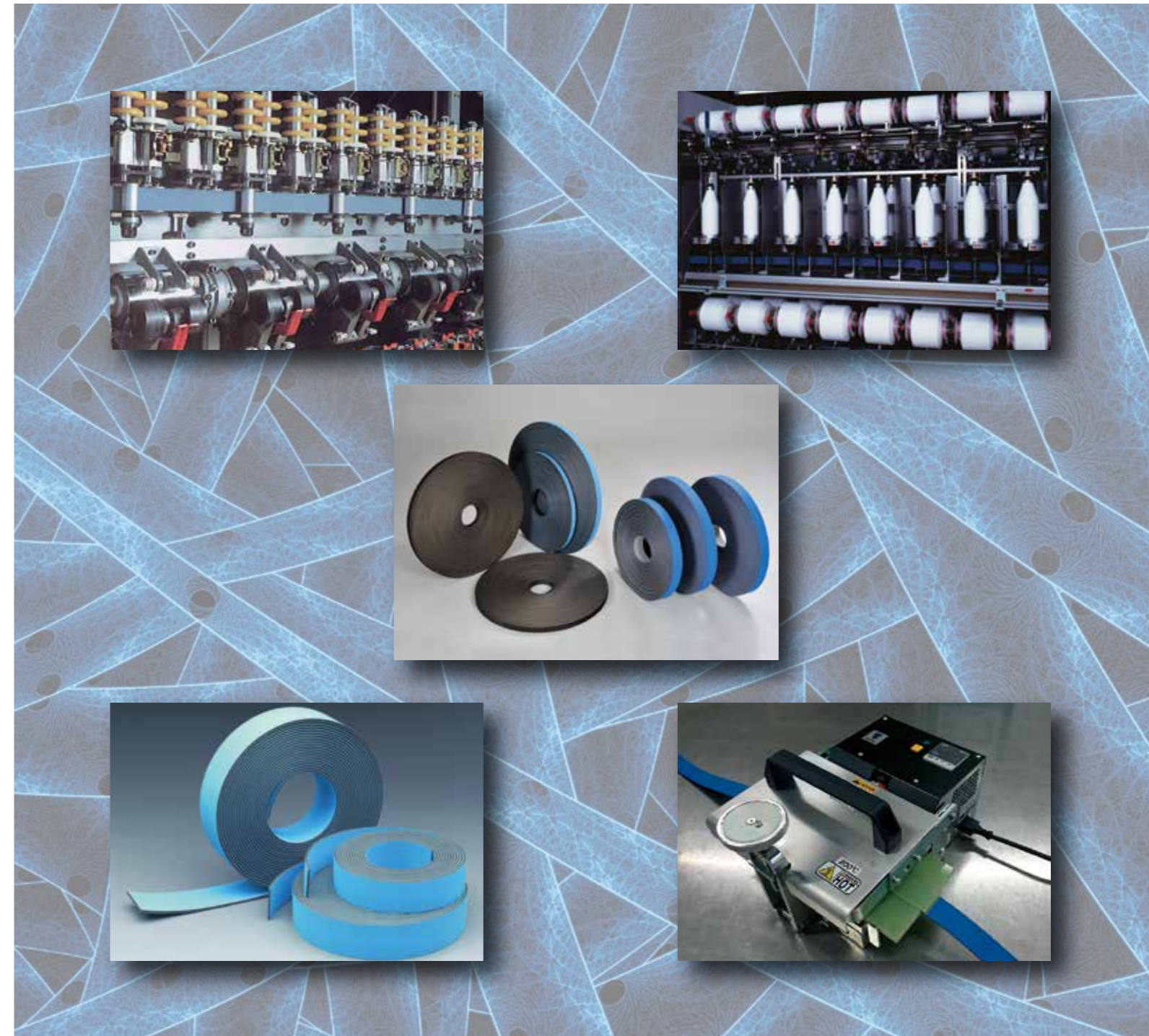
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NITTA CORPORATION

Category	Belt Type	Thickness (mm)	Surface (Top/Bottom) *1	Color (Top/Bottom)	Tension Member *2	Minimum Pulley Diameter (mm)	Tensile Force for standard Elongation (N/mm) *3	Standard Elongation (%)	Recommend Elongation Range (%)	Temperature Range (°C)	Maximum length (m)	Card	Draw Frame	Ring Spinning	OE Spinning	TFO	DTY	Covering	Cleaner	Circular Knitting	Features	Skiver Splice	Finger Splice	Belt Type	Category				
PolyBelt	TFL-7S	2.4	NBR/NBR	Dark Blue/Gray	PA	75	15.0	2	1~3	-20~+80	105		●			●		●	●		Low Noise, Excellent Durability	●		TFL-7S	PolyBelt				
	TFL-10S	2.6	NBR/NBR	Dark Blue/Gray	PA	100	19.5	2	1~3	-20~+80	105	●	●		●	●		●				●	●			TFL-10S			
	TFL-12S	2.85	NBR/NBR	Dark Blue/Gray	PA	125	24.5	2	1~3	-20~+80	105	●			●	●							●			TFL-12S			
	TFL-15S	3.1	NBR/NBR	Dark Blue/Gray	PA	150	30.0	2	1~3	-20~+80	105			●	●	●	●							●			TFL-15S		
	TFL-18S	3.35	NBR/NBR	Dark Blue/Gray	PA	175	34.0	2	1~3	-20~+80	105			●			●							●			TFL-18S		
	TFM-15S	3.7	NBR/NBR	Dark Blue/Gray	PA	150	30.0	2	1~3	-20~+80	105			●			●							●			TFM-15S		
	L-500	1.55	NBR/NBR	Blue/Black	PA	50	7.5	2	1~3	-20~+80	105	●	●									Stable Coefficient of Friction, Abrasion Resistance, Excellent Durability	●			L-500			
	LA-750S	2.25	NBR/NBR	Blue/Blue	PA	75	15.0	2	1~3	-20~+80	105										●					●		LA-750S	
	L-1000S	2.45	NBR/NBR	Blue/Black	PA	100	19.5	2	1~3	-20~+80	105	●			●	●								●			●		L-1000S
	M-1000S	3.0	NBR/NBR	Blue/Black	PA	100	19.5	2	1~3	-20~+80	105			●			●							●			●		M-1000S
	MA-1500S	3.5	NBR/NBR	Blue/Blue	PA	150	30.0	2	1~3	-20~+80	105					●	●							●			●		MA-1500S
	M-1000GS	2.6	NBR/NBR	Blue/Black	PA	100	19.5	2	1~3	-20~+80	105				●									●			●		M-1000GS
	MB-1000GSR	2.6	NBR/NBR	Black/Black	PA	100	19.5	2	1~3	-20~+80	105				●								●			●		MB-1000GSR	
	IRS-6S	2.6	NBR/NBR	Green/Black	PA	60	11.5	1	1~3	-20~+80	105										●	Specially Developed for Pneumatic Cleaner	●				IRS-6S		
IR-500	1.3	NBR/NBR	Green/Green	PA	40	3.8	2	1~3	-20~+80	105										●	For Circular Machine, High Friction	●			IR-500				
KSG-250	0.85	NBR/PA	Green/White	PA	20	1.5	1	1~3	-20~+80	105			●								Spindle Tape	●			KSG-250				
PolySprint	TFL-15E20	2.0	NBR/NBR	Dark Blue/Black	PE	40	15	1	0.5~2	0~+60	200	●	●	●							Less Power Consumption Easy to Make Endless, Low Noise, Shorter Take-up	●		TFL-15E20					
	TFL-22E26-2	2.6	NBR/NBR	Dark Blue/Black	PE	50	22	1	0.5~2	0~+60	200			●	●	●								●		TFL-22E26-2			
	TFL-22E26C-2	2.6	NBR/NBR	Dark Blue/Gray	PE	50	22	1	0.5~2	0~+60	200					●				●				●		TFL-22E26C-2			
	TLA-30E30-2	3.0	NBR/NBR	Dark Blue/Dark Blue	PE	70	30	1	0.5~2	0~+60	100							●						●		TLA-30E30-2			
	CFTG-40F	3.0	NBR/NBR	Blue/Blue	AR	100	40	0.5	0.2~0.5	-10~+60	200			●		●								●		●	CFTG-40F		
	CFTG-60F-3.9	3.9	NBR/NBR	Blue/Blue	AR	150	60	0.5	0.2~0.5	-10~+60	200			●		●								●		●	CFTG-60F-3.9		
SEB	SE-A-PSS	1.6	NBR/NBR	Blue/Blue	PE	15	7.4	1	0.5~1	-20~+80	4.531*4		●								Seamless	-	-	SE-A-PSS					
	SE-B-PB	1.6	NBR/NBR	Black/Black	PE	25	14.7	1	0.5~1	-20~+80	4.525*4		●				●						-	-	SE-B-PB				
	SE-D-PB	1.7	NBR/NBR	Black/Black	PE	35	29.4	1	0.5~1	-20~+80	4.525*4		●				●						-	-	SE-D-PB				

※All belt types listed above have antistatic properties.
 *1 Depending on the application, top and bottom covers can be reversed. *2 PE : Polyester PA : Polyamide AR : Aramid
 *3 Tensile Force is measured after running 200 hours in internal test. *4 SEB length depends on the mold.

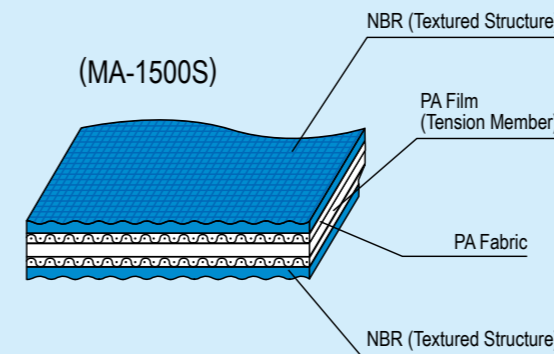
The NITTA Advantage - Innovative Products and Solutions



PolyBelt™

Super-strong polyamide core, extended-life skived joining, high operating duty cycles

- High Strength, Long Life**
 High flexibility and rugged design for heavy-duty applications. Polyamide core accommodates shock loads, and wide choice of covers provide abrasion resistance, giving long, dependable service.
- Electrically Conductive**
 Materials with anti-static properties are used in specific layers to provide permanent conductivity, eliminating build-up of electro-static charges. Selected materials are not susceptible to oil contamination.
- Environmental Resistance**
 Selected materials are not susceptible to oil contamination.



Nomenclature **MA-1500 S**

[Surface]
 L : Light
 M : Medium
 H : Heavy

A : Blue NBR on Both Surfaces
 B : Black NBR on Both Surfaces

S : Super Strength
 G : Ground Surface
 PA Film Thickness in mm×1000
 (1.5×1000=1500)

TFL-10 S

[Surface]
 T : Tangential
 F : Taffeta
 L : Light
 M : Medium

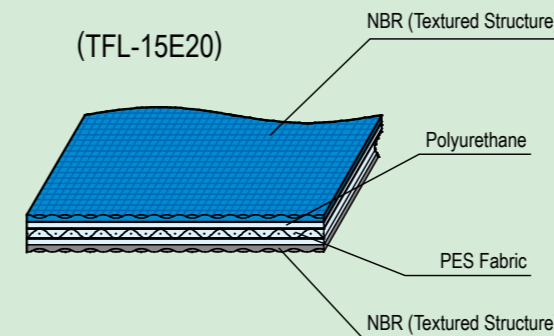
PA Film Thickness in mm×10
 (1.0×10=10)

S : Super Strength

PolySprint™

Finger-spliceable, easy installation, high-strength polyester core

- Ease of Joining**
 A single action Nitta cutter eliminates the tedious task of multiple cuts that can lead to mismatched and non-aligned joints. Finger-splice joints are completed without adhesive.
- Dimensional Stability**
 Polyester fabric used as tension member provides high dimensional stability. Selected materials are temperature and humidity tolerant.
- Abrasion Resistance**
 Friction resistant covers and fabric are exclusively designed for textile machinery.
- Less Power Consumption**
 PolySprint's flexibility enables machines to run more efficiently, reducing power consumption.



Nomenclature **TFL-15E 20**

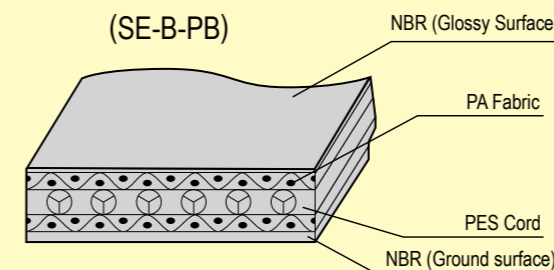
[Surface]
 T : Tangential
 F : Taffeta
 L : Light
 M : Medium

Belt Tension in N/mm
 (1% Elongation at 200 hrs. running)

Belt Thickness in mm×10

SEB™ (Super Endless Belt)

- Seamless**
 Splice free belts made by molded forming with excellent dimensional stability.
- Excellent flexibility, bending resistance and abrasion resistance**
 Excellent flexibility, long flex life and abrasion resistance can be expected even with power transmission and carrying equipment using very small pulleys.
- High rotation accuracy**
 High rotation accuracy is available as pitch line is stable.



Nomenclature **SE - B - PB**

Series Name

Cord type A : Tension at 1% elongation 14.7(N/mm)

Surface shape : Plane Surface

Surface material : Black NBR

Splicing Tools (PolySprint™ • PolyBelt™)

Splicing Tools for PolySprint™

PolySprint™

**Quick and Easy Endless
(No Experience Required)**

**Finger Joint
(No Adhesive Needed)**

PolySprint tools make replacing broken belts quick and easy, with minimal disassembly of the machine.



● Finger Puncher

Type	Appearance	Features	Max. Width (mm)	Max. Thick. (mm)	Size (mm)			Wt. (kg)	Finger Length × Pitch
					Width	Length	Height		
FP120-10-50		Precise indexing system	50	6.0	180	600	250	9.0	120×10
FP120-10-100		Precise indexing system	100	6.0	230	610	250	10.5	120×10

● Heating Press

Type	Appearance	Features	Marking	Max. Width (mm)	Max. Thick. (mm)	Size (mm)			Wt. (kg)	Finger Length × Pitch	Power	Temp. (°C)
						Width	Length	Height				
NSP-1210-1		Automated heating and cooling press	PS E	100	6.0	230	320	180	9.5	120×10	100V	~200
NSP-1210-2											CE	

● Other Tools

Type	Appearance	Features
Presetter		Guide rails to hold joint straight when pressing
Clamp (2 Pieces)		Clamps for holding presetter together when pressing

Splicing Tools for PolyBelt™

PolyBelt™

Nitta provides well-made, reliable tools for effective and efficient fabrication of our belts.

● Poly Skiver

Type	Appearance	Features	Max. Width (mm)	Max. Thick. (mm)	Size (mm)			Wt. (kg)	Power
					Width	Length	Height		
PS153		PolyBelt skiver for making skived ends. Highly reliable and widely accepted.	150	3.0	400	380	435	33.0	100V or 200V

● Poly Press

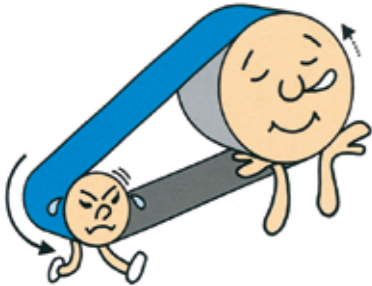
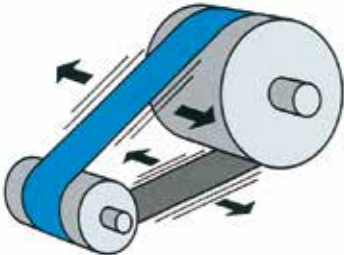
Type	Appearance	Features	Marking	Max. Width (mm)	Max. Thick. (mm)	Size (mm)			Wt. (kg)	Power	Temp. (°C)
						Width	Length	Height			
PP051		PolyBelt press for skived joining. Lightweight, easy to use and well-regarded in the industry.	PS E	50	2.5	112	160	90	1.3	100V or 200V	110
PP103		PolyBelt press for skived joining. Reliable, easy to use and well-regarded in the industry.	PS E	100	5.0	140	295	150	3.1	100V or 200V	

Sonic Tension Meter U-508



Measurement of tension has depended greatly on the measurer's instinct, sometimes with very subjective results. Now, the sonic belt tension meter allows anyone to measure tension easily and correctly. Acoustic waves (natural frequency) generated by a belt are captured by the meter's sensor, and a digital processor uses the reading to calculate tension to a high degree of accuracy. The precise results are displayed on-screen.

TROUBLESHOOTING & SOLUTIONS

Issue	Cause	Solution
On all spindles, the required revolution is not obtained. 	Belt slippage occurring on the motor drive pulley.	The belt tension should be increased.
	Oil adhering to the belt.	Wipe away the oil which has adhered to the belt surface. Replace the belt with a new one if it is not possible to clean it.
	The diameter of some pulleys is not correct.	Replace the pulley with one suitable for the spindle revolution required.
	Belt slippage occurring on motor-drive belt or the belt driving the tangential-drive pulley.	Increase belt tension. Wipe away the oil which has adhered to the belt surface.
	Yarn's "Balloon-load" exceeds the transmitted power of the belt.(In this situation, the belt slips on the drive pulley or spindle wharves.)	Check the belt tension and or the intruding depth of the contact pulley.
On the slack side, the required revolution is not obtained.	The pressure load of the belt against the spindle wharves on the slack side is insufficient.	Increase the belt tension. Adjust the intruding depth of the contact pulley (thus increasing the spring force).
	Yarn particles are wound up in the spindle wharves and as a result, the spindle load is increased.	Remove the yarn particles.
	Something is wrong with the bearing rotation.	Replace the bearing or the spindle with a new one.
Incessant noise.	Some foreign materials have adhered to the belt surface.	Wipe away the foreign materials. Grind the belt surface lightly with fine sand paper.
	Some foreign materials have adhered to the spindle wharves.	Wipe away the foreign materials.
Intermittent noise.	The spliced section of the belt is beginning to tear.	Rejoin the spliced section. Immediately replace the belt with a new one if too much damage has occurred.
	A section of the belt surface is deformed.	Check the cause. Take appropriate corrective action if such deformation is caused by abnormal abrasion of the belt. Replace the spindle or the belt if the belt is unusually heated due to an issue with spindle revolution and is burned at the time of belt stoppage.
Noise at certain places(such as at spindles).	Something is wrong with the bearing rotation.	Replace the bearing.
	Belts are bumping or rubbing somewhere.	Adjust the belt tracking.
Belt tends to deviate in either upper or lower direction from the proper tracking position.	Something is wrong with the belt tracking.	Adjust the belt tracking by adjusting contact pulleys or guide pulleys.
Belt tends to run zigzag against the pulley axis. 	Something is wrong with the belt tracking.	Adjust the belt tracking by adjusting contact pulleys or guide pulleys.
	Spindles are not securely fixed.	Check the bearings.
	Pulley has a small crown.	Make pulley crown larger.
	Spindle wharves, contact pulleys or other pulleys are not horizontally aligned.	Align pulleys properly.

For Safe Use of Nitta Belt

1. Function and Performance

DANGER

- Do not use Nitta Belt as hoisting or towing equipment.

WARNING

- Do not use Nitta Belt beyond the acceptable range specified in the Catalog.
- When static electricity generated in the belting section of a machine would create a fire and malfunction hazard, use an antistatic belt and put antistatic measures in place on the equipment.
- Do not use Nitta Belt for conveying prepackaged food.

2. Storage and Shipping

WARNING

- Nitta Belt is combustible; do not store or use it near fire or a high-temperature heat source.
- When storing heavy belts, secure them with appropriate jigs or stoppers to prevent falling and rolling.

CAUTION

- When storing and shipping the belts, do not distort them excessively.
- Store the belts in a low-temperature place free from direct sunlight. The recommended storage temperature is - 10 to + 30 °C.

3. Installing the Belt and Daily Use

DANGER

- Be sure to put a cover over the rotating part including the belt.
- Before maintenance and inspection, be sure to turn off the switch and confirm that the machine has stopped.

WARNING

- When cleaning the belt, do not use chemicals harmful to humans.

CAUTION

- After replacing the a belt with a new one, perform a test operation to adjust tension, elongation rate and operation.
- Do not attach the belt forcibly; use a motor slide, a tension pulley or a special pulling device.
- When abnormal noise, snaking, deviation, skidding, etc. occur, stop the belt immediately for inspection.

4. Installation, Endless Joining, etc.

WARNING

- When using solvents or adhesives, fully ventilate the work area. Keep fire away from the work area.

CAUTION

- Perform endless joining of belts by using the materials, the methods and the procedures specified by Nitta.
- Handle solvents and adhesives as directed.

5. Handling Used Belts

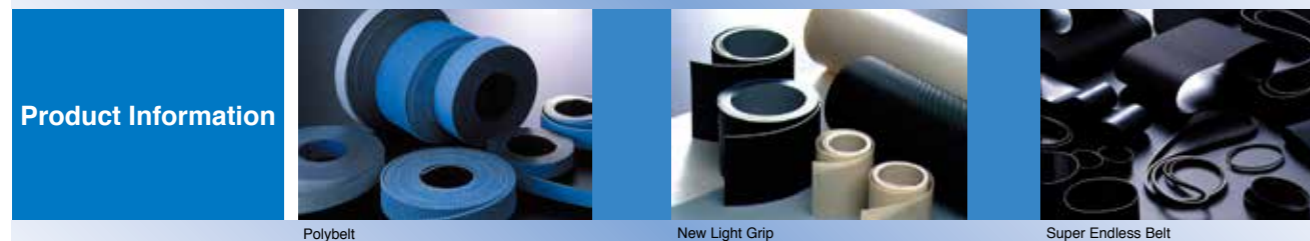
CAUTION

- Do not burn used belts; harmful gasses may be produced.
- Lawfully dispose of the used belts as industrial waste.

THE EXCELLENCE OF NITTA TECHNOLOGY

Nitta Corporation turns dreams into reality. Our combination of dynamic imagination and creativity with an organic corporate structure enables us to cover a wide-range of products from the most advanced semiconductors and space development to everyday commodities. We are continuously seeking new products and new frontiers. This new technology, not immediately obvious to the naked eye, is vital to the continued growth of every industry. Our objective is to develop the extraordinary. Then to translate the extraordinary into the everyday.

BELTING PRODUCTS



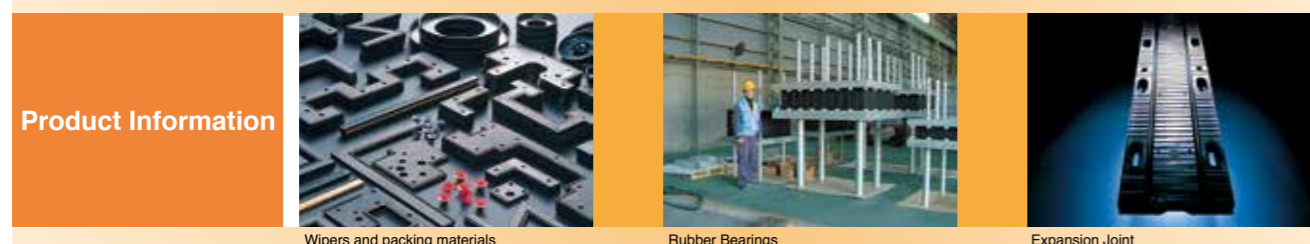
The Nitta tradition of manufacturing belting products began in 1888, with the power transmission leather belts that were the first of their kind to be produced in Japan. Today, our power transmission and conveyor belts continue to be utilized in a wide variety of machines. By meeting society's needs with products including high-function and high added-value belts that convey power and objects more rapidly and reliably than ever, Nitta uses its technical capabilities to make a contribution to our society.

CONVEYOR PRODUCTS



Conveyors, which transport a variety of products from one station to another, must be efficient, capable of making the most of a limited amount of space to convey objects smoothly without any human aid. At Nitta, where we carry out the design-to-construction process for production-line conveyor systems, we use our technical know-how to promote conveyance speed and safety, and also offer advice on issues including the placing of conveyors to accommodate machines or installation environment. In a world where manufacturing and product logistics are becoming more important than ever, let us at Nitta provide the ideal solutions to your conveyor product needs.

ENGINEERED RUBBER PRODUCTS



Skyscrapers, intelligent buildings and a lattice-like pattern of highly ordered expressways make city life more comfortable. It is essential for these utilities to be safe and durable as well as aesthetically pleasing. Nitta is providing various kinds of reliable and easily maintained engineered rubber products such as construction materials and precision molding. They are made from high quality rubber with our own unique and special technology. Cities are full of amenities, and we are supporting the safety and comfort of city life by supplying high quality products.

AIR FILTRATION PRODUCTS



New technology innovation is required everyday in high-technology industries. Nitta has been contributing significantly to the fields of semiconductor production and nuclear application by using unique air filter systems to create totally dust-free environments. These fields are at the forefront of our era. Nowadays, our filter systems are broadly used not only these fields but also FPD (Flat panel display), pharmaceuticals, foods, office buildings, and so on. Furthermore, we are developing ecological products which aim to reduce industrial waste and save resources, energy and costs. We are creating comfortable and dust-free environments, as well as protecting the earth and the natural environment, giving consideration to all environments and the realization of a perfect ecosystem.

MECHATRONIC PRODUCTS



These are the newest products for automated production lines by our connecting technologies. Industrial robots have a key role in the automation line. In response to a variety of applications required by the end of the industrial robot's arm we will meet the demands of our customers.

TACTILE SENSOR PRODUCTS



0.1mm thin film sensor supports the quality improvement and product development needs of our customers. In various fields, such as industry and medical, our thin film sensor shows the pressure distribution on the contact area in real time, and contributes to advanced quality control, prompt development and high customer satisfaction.

THERMOSENSITIVE ADHESIVE TAPE



Intelimer® Tape is an adhesive tape utilizing a special polymer which responds to temperature to become adhesive or non-adhesive. As an industrial-use tape, Intelimer® Tape brings labor-saving efficiency to work operations, and its ability to be reusable under the right conditions helps promote resource conservation and cost savings.

WIRELESS COMMUNICATION DEVICES



By integrating our original rubber and resin technologies, we have developed high-performance magnetic sheets for wireless communication of mobile equipment as well as RFID tags (non-contact IC cards).

NITTA GROUP

GATES UNITTA ASIA COMPANY

Integrated Systems Enhance Quality

Conveyance and transmission systems harness the power in products. For the automobile and beyond, Gates Unitta Asia (GUA) is the leader in power transmission.



NITTA GROUP

NITTA HAAS INCORPORATED

A Well Sharpened Future is Just Around the Corner

Polishing Systems, which are progressing toward "Nano-Structures." The world of human technology that keeps seeking "Beauty and Difference."