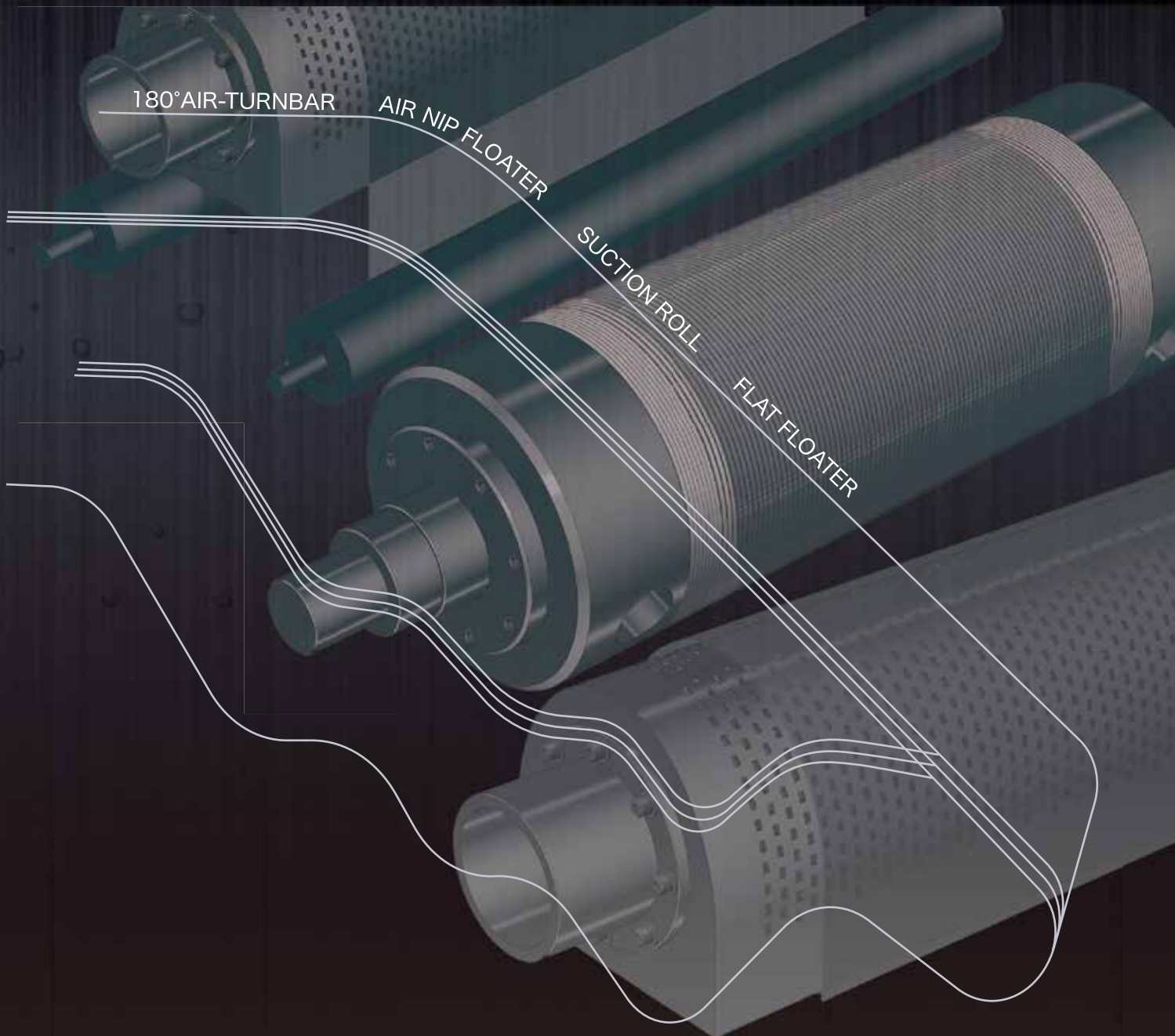


Bellmatic®

WEB HANDLING MAIN DEVICES



CONTENTS



PAT. **PAT. PEND.**

Special features

- Standard to micro suction holes
- Fixed/variable effective suction width

Suction Roll

P 4 – 5



PAT. **PAT. PEND.**

Special features

- 0 to 180-degree angles
- 420°C heat resistance
- Non-contact film transport

Air Turn Bar

P 6 – 7



PAT. **PAT. PEND.**

Special features

- Angles from 90 to 180 degrees
- Tension display
- Web tension distribution measurements
- Intrinsically safe explosion proof

Non-contact Web Tension Meter

P 8 – 9



PAT. **PAT. PEND.**

Special features

- Acid and alkaline resistance
- Non-contact transport in liquid
- SUS-304, 316, 316L, Titanium, Hastelloy

Liquid Turn Bar

P 10

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- Demonstration machine combined with other devices

List of Demonstration/ Test Machines

P 11

- Suction Roll, Non-contact Web Tension Meter, Liquid Turn Bar, Drying furnace



Special features

- Low friction for web dancers

Non Fric Cylinder

P 12



PAT.

Special features

- Low friction
- Offset load resistance
- Capable of horizontal loading

Linear Guide Air Cylinder

P 13

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Confirm Specs and Uses

P 14 – 17

- Suction Roll, Air Turn Bar, Non-contact Web Tension Meter, Liquid Turn Bar

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- History, customers, and a map to BELLMATIC

- While information herein is updated in a timely manner, the specifications and designs of the products are subject to change without notice for improvements.
- Reprinting or reproducing the contents herein without permission is prohibited.

Suction Roll

Air Turn Bar

Non-contact Web
Tension Meter

Liquid Turn Bar

List of Demonstration/
Test Machines

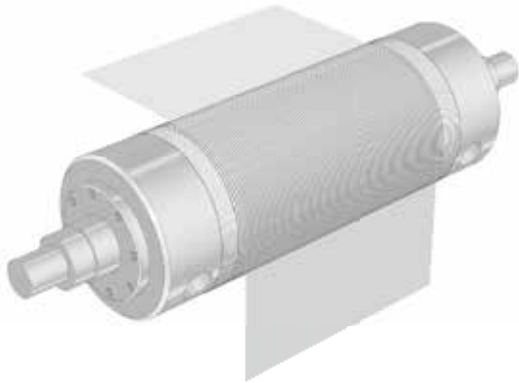
Non Fric Cylinder

Linear Guide Air
Cylinder

Quotation request
form

Company Profile

Suction Roll



PAT. **PAT. PEND.**

Special features

- Standard to micro suction holes
- Fixed/variable effective suction width

Suction Roll

Device overview

The Suction Roll takes in air through the holes on its surface and holds the base material by suction to carry it. The Suction Roll is designed for tension cutting (alternative to nip rolls) for the base material to carry or for use as a driving roll.

Special features

- Increased tension cutting force thanks to the wide suction area
- Small suction holes preventing marks (available in 3 types of surface profiles)
- Heat resistant (200°C)
- Stable tension cutting force even during high-speed rotation

Use

- Processing of Plastic films/Papers/Metal foils, and for the carrier line.
- Variety of Printers/Rolling mills/Coating machines/Calendaring machines/Slitter machines/Laminating machines/Textile machinery/Packaging machines, Feed rolls/Pull rolls, also for Tension cutting

Examples of applicable base materials

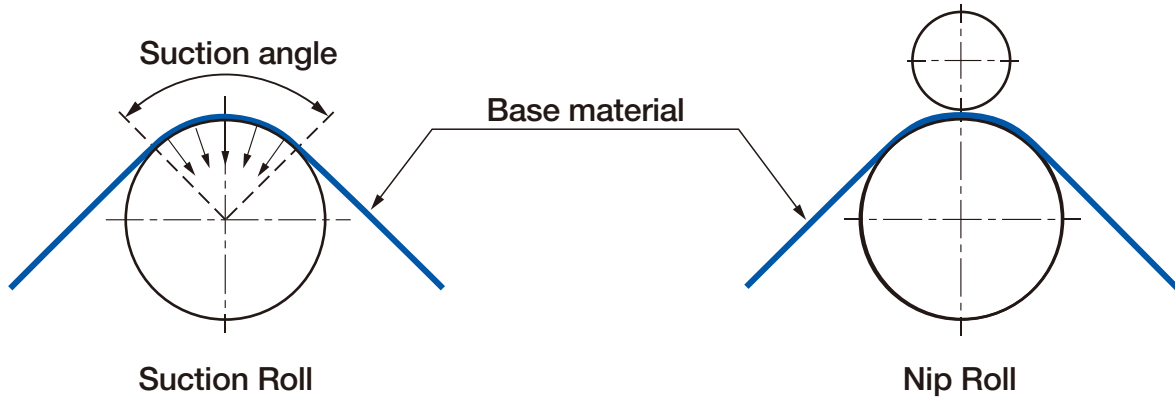
- Resin films (e.g., PET, PP, TAC), optical foils, metal foils, rubber sheets, fabrics, and other non-porous base materials
- Water removal from unwoven fabric

Production specs

Diameter	: ϕ 100~450 mm
Length	: 100~5800 mm
Materials	: Aluminum (Alumite process), S45C (plating), SUS-304
Roll surface	: SUS-304, SUS-316
Surface profile	: Standard/Middle hole/Micro hole
Structure	: Fixed suction width/Variable suction width

Suction Roll

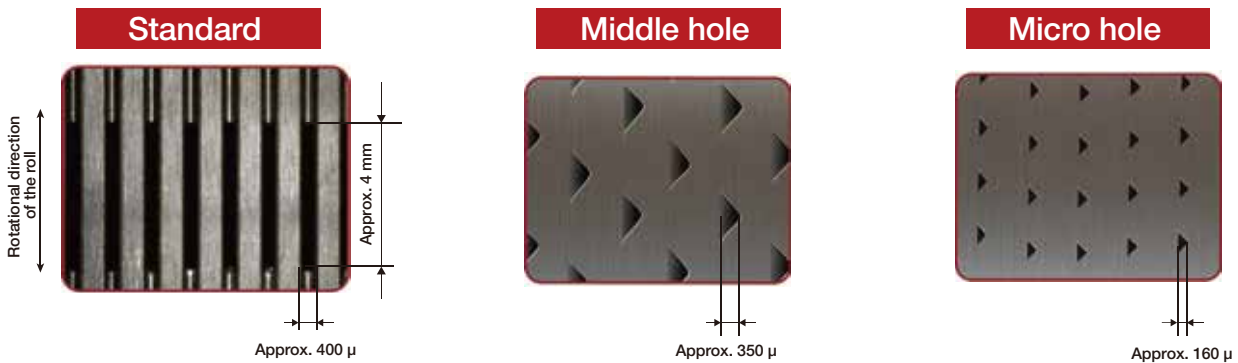
Comparison with nip roll



- Can carry the material by adhering to one side of the material
- Causes no creases due to the material sticking to the entire roll surface
- Can hold the entire base material by suction to prevent it from slipping
- Requires caution because of the rotating body
- Does not need replacing unless the holes are clogged (it is recommended to replace the bearings regularly)

- Carries the material by adhering to both sides of the material
- Causes the rolls to bend due to the nip, leading to creases or scratches
- Foreign objects caught causes dents or scratches
- Poses a risk of becoming trapped in the rolls
- Causes dust or necessitates the replacement or adjustment of the rolls, due to the degradation of the rubber

Images of the surfaces of Suction Rolls



- Standard
Use: Dry film (standard spec)

- Middle hole, Micro hole
Use: Post-application wet film, metal foil

Product lineup



Fixed-width Suction Roll



Variable-width Suction Roll

Air Turn Bar



PAT. **PAT. PEND.**

Special features

- 0 to 180-degree angles
- 420°C heat resistance
- Non-contact film transport

Air Turn Bar

Device overview

The Air Turn Bar discharges air from the holes on its surface and raises the base material using the discharge pressure to carry it in a contactless manner.

Special features

- Non-contact, preventing scratches, creases and static electricity
- Capable of stably raising and carrying the material thanks to it being lifted only 1 to 2 mm on average
- Extremely low discharge airspeed of 1 to 5 m/sec, preventing twisting and fluttering
- Capable of continuous transport with extremely low tension
- Unaffected by the transport speed
- No need for bearings thanks to the non-rotating body, causing no mechanical loss
- Capable of working as a drying furnace by discharging hot air (420°C heat resistance)
- Capable of preventing scratches due to a difference in rotational direction between the base material and guide rolls during a directional change

Use

- Non-contact transport of non-porous base materials
- Heating/cooling
- Alternative to guide rolls

Examples of applicable base materials

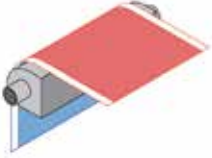




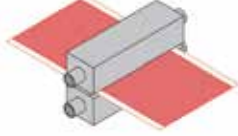
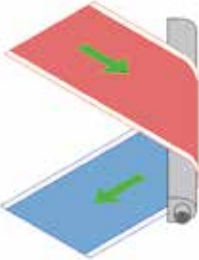
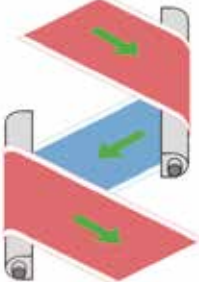
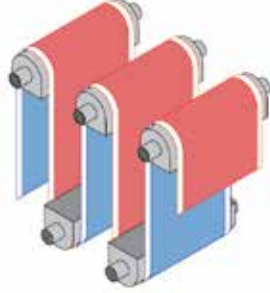
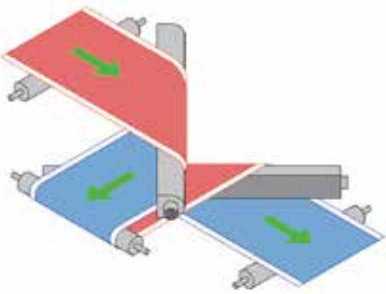

- Resin films (e.g., PET, PP, TAC), optical films, metal foils, rubber sheets, fabrics, substrates, etc.

Production specs

Width of Turn bar	: 80~1000 mm
Length	: 100mm~6800 mm
Material	: SUS-304, SUS-316, Titanium
Surface	: Special perforated panel (patented)
Included angle	: 0~180 degrees (standard: 0, 90, 180 degrees)

Air Turn Bar

Typical uses of Air Turn Bars

90°	180°	Horizontal transport
		
Special angle	90-degree wide-pitch U-turn	Air nip floater
		
Directional change	In-plane crank turn	Accumulator
		
Cross inverter	Drying furnace (hot air supply) PAT. PEND.	
		
<ul style="list-style-type: none"> Capable of double-side processing with one path line Capable of preventing scratches due to a difference in rotational direction between the base material and guide rolls during a directional change 	<ul style="list-style-type: none"> Capable of improving drying efficiency due to the material being raised slightly (1 to 2 mm) and thus exposed directly to hot air Capable of reducing the furnace length by vertical turns in the furnace 	

Suction Roll

Air Turn Bar

Non-contact Web Tension Meter

Liquid Turn Bar

List of Demonstration/ Test Machines

Non Fric Cylinder

Linear Guide Air Cylinder

Quotation request form

Company Profile

Non-contact Web Tension Meter



PAT. **PAT. PEND.**

Special features

- Angles from 90 to 180 degrees
- Tension display
- Web tension distribution measurements
- Intrinsically safe explosion proof

Non-contact Web Tension Meter

Device overview

The Non-contact Web Tension Meter is a device equipped with the Air Turn Bar that measures the air pressure in the gap with the raised base material and converts the air pressure into the tension to carry out tension measurement and tension distribution measurement in a contactless manner. It can also carry out the detailed measurement of slack in the base material.

Special features

- Non-contact measurement
- Fast response rate
- Ultra-low tension measurement
- Hot spot measurement
- Intrinsically explosion-proof construction
- Non-contact measurement in liquid

Use

- Non-contact tension measurement for films, paper, metal foils, rubber sheets, fabrics, and other non-porous base materials
- Tension distribution measurement (substrate width direction)

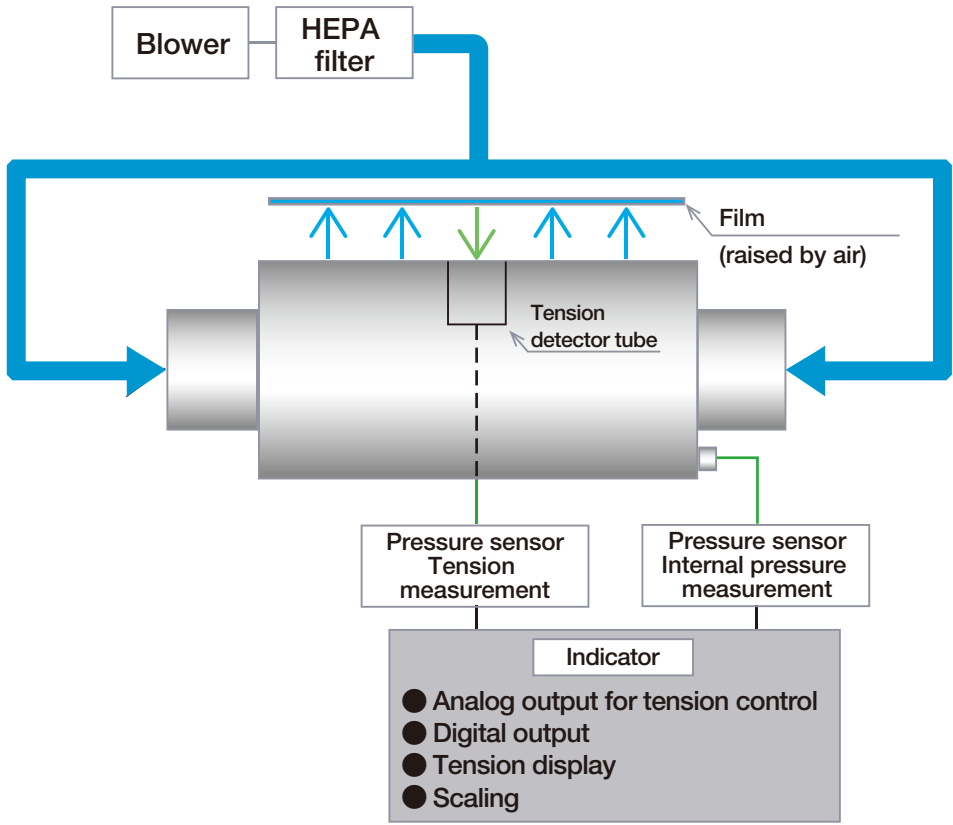
Main Unit

- | | |
|----------------------------|---|
| ● Tension output | Touch panel (graphs/numbers) or panel meter (numbers) |
| ● Analog output | 4~20 mA/1~5 V |
| ● Measurement precision | ±1%, full scale (pressure sensor accuracy) |
| ● Responsivity | Within 20 ms |
| ● Measurement availability | 1~1000 N/m |
| ● Measuring points | Any points (minimum pitch: 40.5 mm) |
| ● Included angle | 90~180 degrees (standard: 90, 180 degrees) |

Non-contact Web Tension Meter

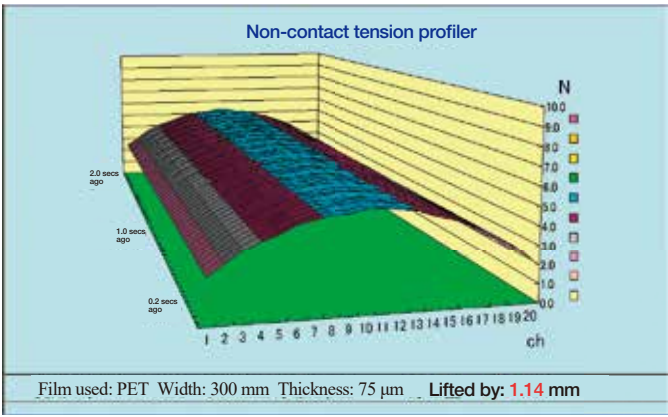
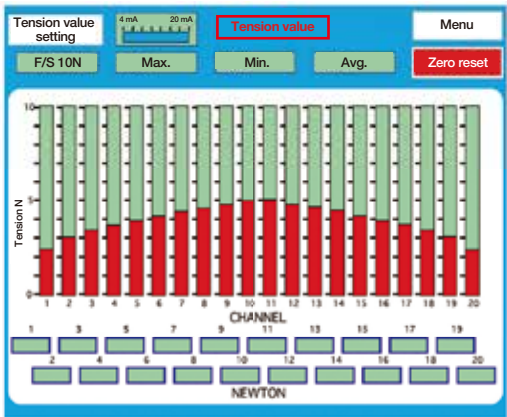
Diagram of the measurement principle

Pressure changes in the gap between the film raised by air and the surface of the turn bar are detected to display the tension.



Tension/distribution measurement

You can carry out tension distribution measurements at any specified point in the width direction.



Waveform with 20-ch measuring points placed

Suction Roll
Air Turn Bar
Non-contact Web Tension Meter
Liquid Turn Bar
List of Demonstration/ Test Machines
Non Fric Cylinder
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Liquid Turn Bar



PAT. **PAT. PEND.**

Special features

- Acid and alkaline resistance
- Non-contact transport in liquid
- SUS-304, 316, 316L, Titanium, Hastelloy

Liquid Turn Bar

Device overview

The basic structure is the same as that of the Air Turn Bar. The liquid in the tank is pressurized by a pump to raise the base material by the liquid pressure, and it is discharged into the tank for use in circulation.

Special features

- Non-contact, preventing scratches and creases
- Capable of stably raising and carrying the material thanks to it being lifted only 1 to 2 mm on average
- Capable of continuous transport with extremely low tension
- Unaffected by the transport speed
- Capable of reducing maintenance cost due to no need for bearings
- Heat resistant
- Enables non-contact tension measurement in the liquid (optional)
- Available as a washable type (optional)
- Compatible with strong acid/alkaline

Use

- Non-contact transport of non-porous base material in liquid
- Cleaning with pure water
- Chemical treatment

Examples of applicable base materials

- Resin films, metal foils, substrates, etc.

Production specs

Turn bar width	: 150~1000 mm
Length	: 100~6800 mm
Material	: SUS-304, 316, 316L, Titanium, Hastelloy
Surface	: Special perforated panel (patented)
Included angle	: 0~180 degrees (standard: 90, 180 degrees)

List of Demonstration/Test Machines

List of Demonstration/Test Machines

Demonstration machine combined with other devices



Device configuration

- Cross inverter
- Variable-width Suction Roll
- Non-contact Web Tension Meter (number of measuring points: 18 ch)
- Accumulator

Basic material width	: 300~1000 mm
Tension	: 10~40 N/1000 mm
Speed	: 5~30 m/min
Core size	: 3" or 6"
Core length	: 300~1050 mm
Winding diameter	: Max. ϕ 250

Suction Roll



Surface profile	: Standard/Middle/Micro
Length	: 1100 mm
Diameter	: ϕ 200
Basic material width	: 1000 mm
Included angle	: 15~90°

Non-contact Web Tension Meter



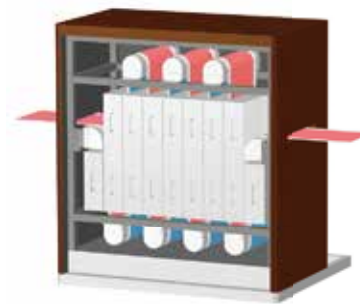
Length	: 400 mm
Width	: 120 mm
Basic material width	: 300 mm
Included angle	: 180°
Tension	: 30 N/300 mm
Number of measuring points:	9 ch

Liquid Turn Bar



Length	: 700 mm
Width	: 200 mm
Basic material width	: 600 mm
Tension	: 100 N/500 mm
Included angle	: 180°

Drying furnace



Length	: 650 mm
Basic material width	: 600 mm
Tension	: 50 N/600 mm
Temperature	: 120°C

Suction Roll

Air Turn Bar

Non-contact Web Tension Meter

Liquid Turn Bar

List of Demonstration/Test Machines

Non Fric Cylinder

Linear Guide Air Cylinder

Quotation request form

Company Profile

Non Fric Cylinder



Special features

- Low friction for web dancers

Non Fric Cylinder

Device overview

The Non Fric Cylinder controls the looseness and tension of the dancer roll while lowering mechanical loss by using air.

Special features

- Capable of operating by micro-pressure thanks to the reduced friction and mechanical loss by the air gap in the sliding part
- Operating cylinder is very light, made from CFRP (Carbon Fiber Reinforced Plastic).
- Long stroke production
- Low maintenance
- Simplified structure compared with conventional products prevents failure due to rubber getting caught.

Use

- Dancer control device for web transport line
- Reeling machine touch roll

Specification

- Operating pressure range 0.01~0.3 MPa
- Gas used Cleaned air
- Temperature/Humidity 20°C~25°C/Under 50% RH
- Lubricant/Moisture Unavailable
- Initial pressure 0.16 kPa for NFAC-40-100
- Working pressure 1 kPa for NFAC-40-100

Production specs

- Cylinder diameter : φ20~100 mm (standard) Other sizes are also available (custom-made).
- Stroke : 25,50 mm pitch (see our website for details)
- Inner cylinder material : Aluminum (Hard-alumite-treated)
- Outer cylinder material : CFRP (Carbon Fiber Reinforced Plastic)

Precautions for use

- The device must be installed vertically when in use.
- It must not be used in parallel except for special purposes.
- For use in configurations other than vertical, use the Linear Guide Air Cylinder.

Thrust calculation

Figure 1

Intake/outlet

F: Thrust (N)
 A: Piston pressure receiving area (mm²)
 D: Cylinder inside diameter (Bore diameter) (mm)
 P: Working pressure (Mpa)

Formula for the thrust (F)

$$F = Ap$$

Formula for the piston pressure receiving area (A)

$$A = \frac{\pi}{4} D^2$$

Example Thrust at an inner cylinder diameter of φ40 mm and a working pressure of 0.3 MPa

$$A = \frac{\pi}{4} D^2 = \frac{\pi}{4} \times 40^2 = 1256$$

$$F = Ap = 1256 \times 0.3 = 376.8$$

$$F = 376.8 \text{ (N)}$$

*For the Non Fric Cylinder and the Linear Guide Air Cylinder, thrust is calculated in the same manner.

Linear Guide Air Cylinder



PAT.

Special features

- Low friction
- Offset load resistance
- Capable of horizontal loading

Linear Guide Air Cylinder

Device overview

Like the Non Fric Cylinder, this device controls the dancer roll by using air, but it can be used in configurations other than vertical.

Special features

- Long stroke production with low friction, low mechanical loss and lightweight in the same manner as the Non Fric Cylinder
- High accuracy, high rigidity
- Extremely robust to unbalanced loads
- High loads can be added to the cylinder lot (Linear guide).
- The piston part is integrated with the linear guide using ball bush.

Use

- Dancer control device for web transport line
- Reeling machine touch roll
- Shock absorber

Specification

- Operating pressure range 0.01~0.3 MPa
- Gas used Cleaned air
- Temperature/Humidity 20°C~25°C/Under 50% RH
- Lubricant/Moisture Unavailable
- Initial pressure 0.2 kPa for LGAC-40-100
- Working pressure 1 kPa for LGAC-40-100

Production specs

- Cylinder diameter : $\phi 21\sim 60$ mm (standard) Other sizes larger than $\phi 60$ mm are also available (custom-made).
- Stroke : 50 mm pitch (see our website for details)
- Shaft material : SUJ-2 (Hard chrome)
- Outer cylinder material : CFRP (Carbon Fiber Reinforced Plastic)

Precautions for use

- The device can be installed either vertically or horizontally when in use.
- It must not be used in parallel except for special purposes.

Suction Roll

Air Turn Bar

Non-contact Web Tension Meter

Liquid Turn Bar

List of Demonstration/ Test Machines

Non Fric Cylinder

Linear Guide Air Cylinder

Quotation request form

Company Profile

Quotation request form

Suction Roll

To Sales Division, BELLMATIC LTD.

FAX: +81-42-556-0011

E-mail: contact@bellma.com

Dear Sir or Madam

Thank you very much for your continued patronage. We would like to ask you to fill out the form below and reply.
Thank you again for your time.

Date _____

Company	TEL
Department	FAX
Name	E-mail

Specifications	• Base material type: _____	• Tension cutting amount: N/ mm
	• Base material thickness: _____ μm	• Temperature: _____ °C
	• Base material width: _____ mm	• Number of rolls: _____
	• Transport speed: _____ m/min	• Cleanliness level: _____ class
	• Base material included angle: _____ °	

Roll specifications	• Roll diameter: φ _____ mm	• Roll surface length: _____ mm
	• Suction method: <input type="checkbox"/> Fixed suction width <input type="checkbox"/> Variable suction width	Varying method: <input type="checkbox"/> Manual <input type="checkbox"/> Auto (non-explosion proof) <input type="checkbox"/> Auto (explosion proof)
	• Roll surface profile: <input type="checkbox"/> Standard	<input type="checkbox"/> Middle hole <input type="checkbox"/> Micro hole
	• Roll material: <input type="checkbox"/> Aluminum (standard)	<input type="checkbox"/> S45C <input type="checkbox"/> Other ()
• Shaft material: <input type="checkbox"/> S45C (standard)	<input type="checkbox"/> Other ()	Control panel: <input type="checkbox"/> Required <input type="checkbox"/> Not required

Blower specifications	<input type="checkbox"/> Required <input type="checkbox"/> Not required	• Piping length: _____ m <small>(Piping material is outside the scope of quotation.)</small>	Options
	• Operating environment: <input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	• Vacuum meter: <input type="checkbox"/> Required <input type="checkbox"/> Not required	
	• Frequency: <input type="checkbox"/> 50 Hz <input type="checkbox"/> 60 Hz <input type="checkbox"/> (Hz)	• Blower control panel: <input type="checkbox"/> Required <input type="checkbox"/> Not required	
	• Voltage: <input type="checkbox"/> 200 V <input type="checkbox"/> 220 V <input type="checkbox"/> (V)	• Inverter: <input type="checkbox"/> Required <input type="checkbox"/> Not required	
• Motor: <input type="checkbox"/> Non-explosion proof <input type="checkbox"/> Pressure-resistant explosion proof <input type="checkbox"/> Increased-safety explosion proof	• HEPA filter for exhaust <input type="checkbox"/> Required <input type="checkbox"/> Not required		

Desired delivery date	Place of delivery	Place of use
-----------------------	-------------------	--------------



Thank you. We will get back to you shortly.

387-1 Nihongi, Mizuho-machi, Nishitama-gun, Tokyo, 190-1201 Japan

TEL: +81-42-556-1111 <https://bellma.com>

Quotation request form

Air Turn Bar

To Sales Division, BELLMATIC LTD.

FAX: +81-42-556-0011

E-mail: contact@bellma.com

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Company _____

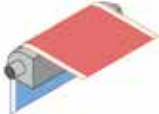




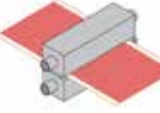
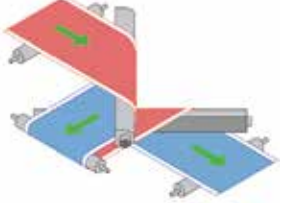
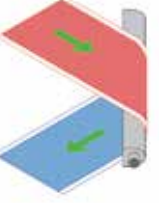
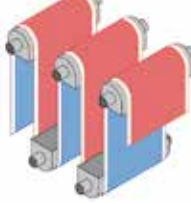
TEL _____

Department _____

FAX _____

Name _____

E-mail _____

Specifications	• Base material type: _____	• Tension: N/ _____ mm
	• Base material thickness: _____ μm	• Temperature: _____ °C
	• Base material width: _____ mm	• Number of rolls: _____
	• Transport speed: _____ m/min	• Cleanliness level: _____ class
• Turn bar material: <input type="checkbox"/> SUS-304 (standard) <input type="checkbox"/> SUS-316 <input type="checkbox"/> Titanium <input type="checkbox"/> Other (_____)		
Use	① 90° 	
	② 180° 	
	③ Horizontal 	
	④ Special angle _____° (0°~180°) 	
	⑤ U-turn 	
	⑥ Air nip 	
	⑦ Cross inverter (to flip the product) 	
	⑧ Directional change 	
	⑨ Accumulator 	
Blower specifications	<input type="checkbox"/> Required <input type="checkbox"/> Not required	• Piping length: _____ m (Piping material is outside the scope of quotation.)
		• Operating environment: <input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor
	• Frequency: <input type="checkbox"/> 50 Hz <input type="checkbox"/> 60 Hz <input type="checkbox"/> (_____ Hz)	
	• Voltage: <input type="checkbox"/> 200 V <input type="checkbox"/> 220 V <input type="checkbox"/> (_____ V)	
	• Motor: <input type="checkbox"/> Non-explosion proof <input type="checkbox"/> Pressure-resistant explosion proof <input type="checkbox"/> Increased-safety explosion proof	
Options		
• Piping junction box: <input type="checkbox"/> Required <input type="checkbox"/> Not required		
• Pressure gauge: <input type="checkbox"/> Required <input type="checkbox"/> Not required		
• Blower control panel: <input type="checkbox"/> Required <input type="checkbox"/> Not required		
• HEPA filter: <input type="checkbox"/> Required <input type="checkbox"/> Not required		
• Inverter: <input type="checkbox"/> Required <input type="checkbox"/> Not required		
• Heater: <input type="checkbox"/> Required <input type="checkbox"/> Not required <input type="checkbox"/> Circulation <input type="checkbox"/> One path		
Desired delivery date _____		Place of delivery _____
		Place of use _____



Thank you. We will get back to you shortly.

387-1 Nihongi, Mizuho-machi, Nishitama-gun, Tokyo,
190-1201 Japan

TEL: +81-42-556-1111 <https://bellma.com>

Suction Roll

Air Turn Bar

Non-contact Web Tension Meter

Liquid Turn Bar

List of Demonstration/ Test Machines

Non Eric Cylinder

Linear Guide Air Cylinder

Quotation request form

Company Profile

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Non-contact Web Tension Meter

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Company _____

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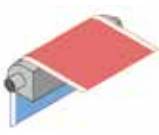


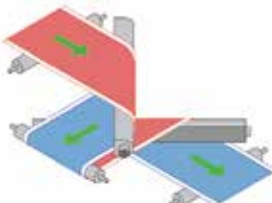
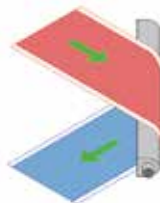
Department _____

FAX _____

Name _____

E-mail _____

Specifications	• Base material type: _____	• Temperature: _____ °C
	• Base material thickness: _____ μm	• Number of rolls: _____
	• Base material width: _____ mm	• Cleanliness level: _____ class
	• Transport speed: _____ m/min	• Number of measuring points: _____ ch
	• Tension: N/ _____ mm	• Measuring pitch: _____ mm (minimum pitch: 40.5 mm)
	• Turn bar material: <input type="checkbox"/> SUS-304 (standard) <input type="checkbox"/> SUS-316 <input type="checkbox"/> Titanium <input type="checkbox"/> Other (_____)	

Use	① 90° 	② 180° 	③ Special angle _____° (90°~180°) 
	④ Cross inverter (to flip the product) 		⑤ Directional change 

Blower specifications	<input type="checkbox"/> Required <input type="checkbox"/> Not required	• Piping length: _____ m (Piping material is outside the scope of quotation.) • Operating environment: <input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor • Frequency: <input type="checkbox"/> 50 Hz <input type="checkbox"/> 60 Hz <input type="checkbox"/> (_____ Hz) • Voltage: <input type="checkbox"/> 200 V <input type="checkbox"/> 220 V <input type="checkbox"/> (_____ V) • Motor: <input type="checkbox"/> Non-explosion proof <input type="checkbox"/> Pressure-resistant explosion proof <input type="checkbox"/> Increased-safety explosion proof	Options
	<input type="checkbox"/> Required <input type="checkbox"/> Not required		• Piping junction box: <input type="checkbox"/> Required <input type="checkbox"/> Not required • Pressure gauge: <input type="checkbox"/> Required <input type="checkbox"/> Not required • Blower control panel: <input type="checkbox"/> Required <input type="checkbox"/> Not required • Inverter: <input type="checkbox"/> Required <input type="checkbox"/> Not required • HEPA filter: <input type="checkbox"/> Required <input type="checkbox"/> Not required

Others	Tension detection pressure sensor : <input type="checkbox"/> Required <input type="checkbox"/> Not required	Tension indicator : <input type="checkbox"/> Required <input type="checkbox"/> Not required	<input type="checkbox"/> Touch panel <input type="checkbox"/> Indicator (digital display)
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Desired delivery date _____	Place of delivery _____	Place of use _____
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Thank you. We will get back to you shortly.

387-1 Nihongi, Mizuho-machi, Nishitama-gun, Tokyo, 190-1201 Japan

TEL: +81-42-556-1111 <https://bellma.com>

Quotation request form

Liquid Turn Bar

To Sales Division, BELLMATIC LTD.

FAX: +81-42-556-0011

E-mail: contact@bellma.com

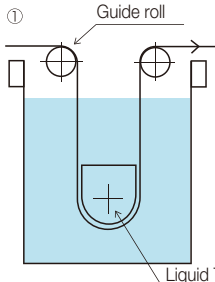
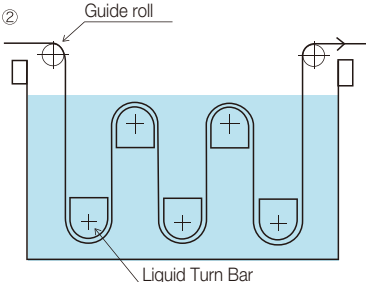
Dear Sir or Madam

Thank you very much for your continued patronage. We would like to ask you to fill out the form below and reply. Thank you again for your time.

Date _____

Company	TEL
Department	FAX
Name	E-mail

Specifications	• Base material type:	• Tension: N/ mm
	• Base material thickness: μm	• Temperature: $^{\circ}\text{C}$
	• Base material width: mm	• Number of rolls:
	• Transport speed: m/min	• Liquid type:
	• Base material included angle: $^{\circ}$	• Liquid pH:
	• Turn bar material: <input type="checkbox"/> SUS-304 (standard) <input type="checkbox"/> SUS-316 <input type="checkbox"/> SUS-316L <input type="checkbox"/> Titanium <input type="checkbox"/> Other ()	

Uses	 <p>① Guide roll Liquid Turn Bar</p>	 <p>② Guide roll Liquid Turn Bar</p>	③ Other (Please fill out.)
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Others	• Tension measurement : <input type="checkbox"/> Required <input type="checkbox"/> Not required	Number of measuring points: ch
		Measuring pitch: mm (minimum pitch: 40.5 mm)
	Tension detection pressure sensor : <input type="checkbox"/> Required <input type="checkbox"/> Not required	Tension indicator : <input type="checkbox"/> Required <input type="checkbox"/> Not required
		<input type="checkbox"/> Touch panel <input type="checkbox"/> Indicator (Digital display)

Pump specifications	<input type="checkbox"/> Required <input type="checkbox"/> Not required	• Operating environment: <input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor • Frequency: <input type="checkbox"/> 50 Hz <input type="checkbox"/> 60 Hz <input type="checkbox"/> (Hz) • Voltage: <input type="checkbox"/> 200 V <input type="checkbox"/> 220 V <input type="checkbox"/> (V) • Motor: <input type="checkbox"/> Non-explosion proof <input type="checkbox"/> Pressure-resistant explosion proof <input type="checkbox"/> Increased-safety explosion proof	Options
			• Filter: <input type="checkbox"/> Required <input type="checkbox"/> Not required • Flowmeter: <input type="checkbox"/> Required <input type="checkbox"/> Not required • Pressure gauge: <input type="checkbox"/> Required <input type="checkbox"/> Not required • Blower control panel: <input type="checkbox"/> Required <input type="checkbox"/> Not required • Inverter: <input type="checkbox"/> Required <input type="checkbox"/> Not required

Desired delivery date	Place of delivery	Place of use
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Thank you. We will get back to you shortly.

387-1 Nihongi, Mizuho-machi, Nishitama-gun, Tokyo,
190-1201 Japan
TEL: +81-42-556-1111 <https://bellma.com>

Suction Roll

Air Turn Bar

Non-contact Web Tension Meter

Liquid Turn Bar

List of Demonstration/ Test Machines

Non Fric Cylinder

Linear Guide Air Cylinder

Quotation request form

Company Profile

Company Profile

Company Name	BELLMATIC LTD.
Founded	February 16, 1989
Established	September 1, 2002 President: Shinobu Furuki
Sales Office/ Factory	387-1 Nihongi, Mizuho-machi, Nishitama-gun, Tokyo, 190-1201 Japan
Capital	10,000,000 yen
Main bank(s)	Higashi-Ome Branch, Resona Bank Sales Department, Head office, Hanno-Shinkin Bank

History	1981	Feb.	Established the company
	1982	Feb.	Developed a powerful demagnetizer for rare-earth magnets, and patented it in Japan and four other countries
	1983	Mar.	Developed a belt-conveyor-type precision magnetic eraser for magnetic tape
	1985	Oct.	Developed a 7-roll super calender for new-structure magnetic tape
	1987	Oct.	Developed a magnetic gravure roll for magnetic tape, and patented it in and outside Japan
		Dec.	Developed a continuous orientation device for magnetic tape (the world's first to be certified under the Health, Labor and Welfare Ministry's explosion proof certification system)
	1989	May.	Developed and sold an air floating guide roller (product name: BELLFROLLER)
		Jul.	Developed and sold a low-friction cylinder (product name: NONFRIC CYLINDER)
	1990	Jan.	Developed a magnetic roll pressurizer (product name: MAGNAPOWER CALENDER), and patented it in five foreign countries
	1991	Mar.	Successfully developed and patented arc bearings
	1994	Dec.	Launched and patented the Suction Roll
	1995	Mar.	Launched and patented the Air Turn Bar
	1998	Dec.	Developed a tube die coater head, and patented it internationally (in five countries)
	1999	Jan.	Successfully developed a non-contact tension meter, which is patent-pending
	2002	Sep.	Changed the company name to BELLMATIC LTD. (company split-off)
	2004	Jan.	Developed a triangle web inverter, which is patent-pending
	2008	Feb.	Developed a clean blaster, which is patent-pending
	2009	Feb.	Developed a crownless calender, which is patent-pending
	2013	Dec.	Developed a non-contact accumulator, which is patent-pending
2015	Dec.	Developed a non-contact web controller, which is patent-pending	
2022	Dec.	Completed a non-contact hot-air drying furnace tester	

Distributor	Sole distributor of the Non Fric Cylinder SHINKO CO., LTD. (+81-6-6552-3171)
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Main Product Lineup	Suction Roll	... Patented, Patent pending
	Air Turn Bar	... Patented, Patent pending
	Non-contact Web Tension Meter	... Patent pending
	Liquid Turn Bar	... Patented, Patent pending
	Non Fric Cylinder (low-friction cylinder)	... Utility model
	Linear Guide Air Cylinder	... Patent pending

Company Profile

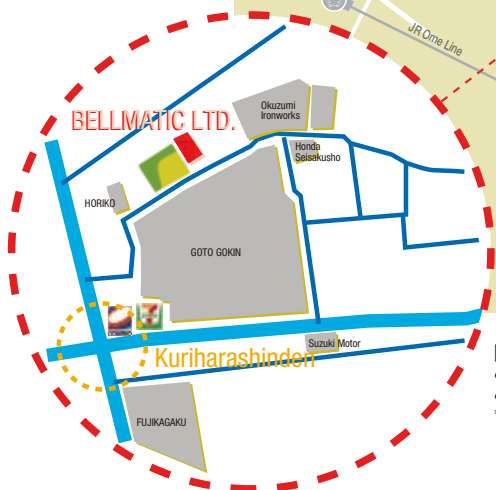
Customers

- IHI Corporation
- Akatsuki Machina Co., Ltd
- Asahi Kasei Corp.
- Ajinomoto Co., Inc.
- Arisawa Manufacturing Co., Ltd.
- THE ICHIKIN, LTD.
- IMURA & Co., Ltd.
- Ushio Inc.
- EIKO SOKKI Co., Ltd.
- AGC Inc.
- SKC
- SB PAX CORPORATION
- ENEOS LC COMPANY, LIMITED
- LG Electronics
- ORC MANUFACTURING CO., LTD.
- Okura Industrial Co.,Ltd.
- Oji Tac Co., Ltd.
- OKAMOTO INDUSTRIES, INC.
- ORIENT SOGYO CO., LTD.
- Kao Corporation
- KAWAKAMI Co.
- KYOCERA Corporation
- KUMAMOTO IDM CO.,LTD.
- Kuraray Engineering Co.,Ltd.
- Clean Technology Inc.
- GUNZE LIMITED
- National Printing Bureau
- KONICA MINOLTA, INC.
- Komori Corporation
- SUN · TECTRO
- SANDO TECH, Inc.
- Sanwa Machinery Co., Ltd.
- JSR Corporation
- JTEKT CORPORATION
- Shikoku Tohcello
- Shinohara Manufacturing Co., Ltd.
- SHIBAURA MACHINE CO., LTD.
- Shin-Etsu Engineering Co., Ltd.
- Sumitomo Metal Mining Co., Ltd.
- Sumitomo Bakelite Co., Ltd.
- Sumitomo Riko Company Limited
- 3M Japan Limited
- SEKISUI CHEMICAL CO., LTD.
- Cellolabel Ltd.
- Sony Corporation
- SOMAR CORPORATION
- Taisei Laminator Co.,LTD.
- Daicel Corporation
- Dai Nippon Printing Co., Ltd.
- TAIFLEX Scientific Co., Ltd.
- CHIBA MACHINE INDUSTRY CORPORATION
- Chukoh Chemical Industries, Ltd.
- CHUGAI RO CO., LTD.
- DNP Engineering Co., Ltd.
- TDK Corporation
- TEIJIN LIMITED
- DIC Corporation
- Techno Smart Corp.
- Dexerials Corporation
- TERAOKA SEISAKUSHO CO., LTD.
- Toa Electronics Co., Ltd.
- TOKYO OHKA KOGYO CO., LTD.
- Toshin Co., Ltd.
- Tonen Chemical Corporation
- Toyo Technical Co., Ltd.
- Toray Industries, Inc.
- Toray Engineering Co.,Ltd.
- DU PONT-TORAY CO., LTD.
- TORAY ADVANCED FILM Co., Ltd.
- Toppan Inc.
- TOYOTA MOTOR CORPORATION
- Nabtesco Corporation
- Nichiban Co., Ltd.
- NIPPON STEEL Chemical & Material Co., Ltd.
- Nitto Denko Corporation
- NITTOKU CO., LTD.
- NGK Insulators, Ltd.
- NIPPON CHEMI-CON CORPORATION
- The Japan Steel Works, Ltd.
- Nippon Paper Industries Co., Ltd.
- NIPPON STEEL CORPORATION
- Zeon Corporation
- Nippon Denkai, Ltd.
- NIPPON MEKTRON, LTD.
- NEWLONG INDUSTRIAL CO., LTD.
- NORITAKE CO., LIMITED
- High-Tech Corporation
- Panasonic Corporation
- PANAC INDUSTRIES, INC.
- Via Mechanics, Ltd.
- Hitachi Zosen Corporation
- Hitachi Power Solutions Co., Ltd.
- HIRANO TECSEED Co., Ltd.
- FUJI KIKAI KOGYO Co.,Ltd.
- FUJICOPIAN CO., LTD.
- Fujishouko-Machinery Co.,Ltd
- FUJI TEKKO CO.,LTD.
- FUJIFILM Corporation
- FUJIMORI KOGYO CO., LTD.
- Maxell, Ltd.
- Maxell Siontec Ltd.
- Mazda Motor Corporation
- MARUTO SANGYO CO., LTD.
- Mitsui Chemicals, Inc.
- Mitsui Chemicals Tohcello, Inc.
- Mitsubishi Chemical Corporation
- MITSUBISHI CHEMICAL ENGINEERING CORPORATION
- Mitsubishi Paper Mills Limited
- MusashinoKikai Co. Ltd.
- Muraoka Co., Ltd.
- Murata Manufacturing Co., Ltd.
- MEIKO Co., Ltd.
- MAYSUN Co.Ltd
- Yazaki Parts Co., Ltd.
- Yasui Seiki Company, Ltd.
- UBE Corporation
- Unicharm Corporation
- YURI ROLL Co., Ltd.
- YURI ROLL MACHINE Co.,Ltd.
- RIKEN TECHNOS CORPORATION
- Ricoh Co., Ltd.
- RAIZNEXT Corporation
- Resonac Corporation
- ROCK GIKEN KOGYO Co.,Ltd.

*Names are in Japanese alphabetical order (honorifics omitted).



Map of the area surrounding
BELLMATIC



- [By car]
- About 3 km or 10 minutes from Ome Interchange
 - About 5 km or 15 minutes from Iruma Interchange
- *Parking is available on the premises.

- [By train]
- JR Ome Line About 15 minutes by a taxi from Ozaku Station East Exit
 - JR Hachiko Line About 10 minutes by a taxi from Hakonegasaki Station East Exit

Suction Roll

Air Turn Bar

Non-contact Web Tension Meter

Liquid Turn Bar

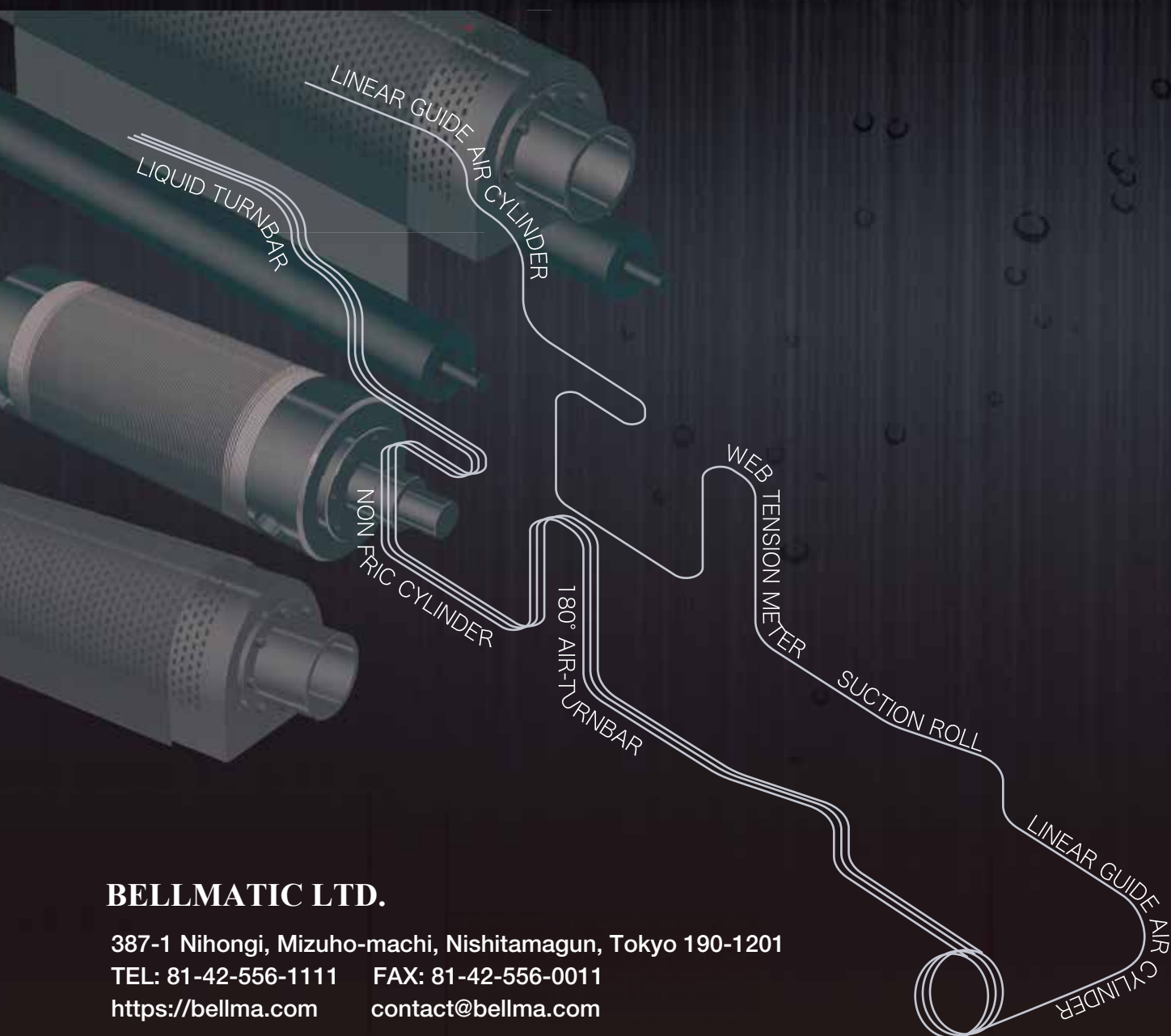
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Non Eric Cylinder

Linear Guide Air Cylinder

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Company Profile



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TEL: 81-42-556-1111 FAX: 81-42-556-0011

<https://bellma.com> contact@bellma.com