



**POWER TRANSMISSION
TEXTILES**



SPECIALISTS

A man with a beard and a white t-shirt is holding a large roll of dark grey fabric. He is standing in a factory or industrial setting with a white ceiling and metal beams. The background is slightly blurred, showing the structure of the building.

“So that everything
keeps on smoothly
turning.”

Norbert, 42, Foreman

IN WORLDWIDE USE

The modern textile industry offers an enormous bandwidth, not only in relation to the products it manufactures, but also with regard to the machinery used in their manufacture.

The requirements and performance conditions are therefore equally numerous and varied. Optibelt's comprehensive range of belts offers the ideal solution for every type of situation and is therefore in demand the world over.

FOR TEXTILES

OPTIBELT SUCCESS STORY

REDUCED WEAR, REDUCED COSTS



The Padma Group, based in Bangladesh, is one of the world's largest textile producers and exporters. The company had been experiencing considerable difficulties with a new production machine. The belts used in the machine often needed replacing after just two weeks. The result was high maintenance costs and stoppages in production.

After the machine had been fitted with **optibelt OMEGA HP** and **optibelt OMEGA HL** belts, however, maintenance costs and downtimes were reduced to a minimum.

Optibelt has been focussing on sustainable improvements in drive systems for many years. This is why many renowned textile manufacturers in India, such as Vardhman, Nahar, Samgam and KPR Mill, place their trust in **optibelt TEXTILE POWER** variable speed belts made by Optibelt, in order to significantly increase the efficiency of their machines. The large Indian corporation RWSM Bhilwara, for example, has commissioned Optibelt to supply all of its subsidiaries. All of these companies reap tangible benefits from the high product quality and the comprehensive services that Optibelt has to offer.

OPTIBELT SUCCESS STORY

ALWAYS THE FIRST CHOICE IN INDIA



MANUFACTURE

Precise dimensions are essential.

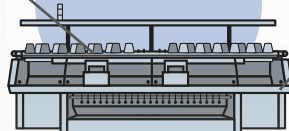


1. KNITTING MACHINES

These allow knitted products to be industrially mass-produced.

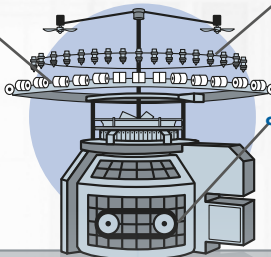


optibelt **OMEGA LINEAR**
optibelt **ALPHA LINEAR**



optibelt **OMEGA HP**

optibelt **TT5**



optibelt **ALPHA TORQUE**

optibelt **OMEGA**

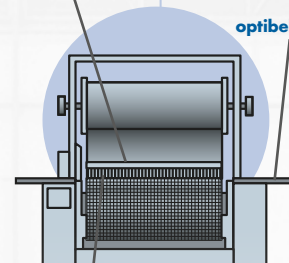


3. WEAVING MACHINES / LOOMS

These are used to manufacture woven fabrics and can produce fabrics that are up to 10 metres wide.



optibelt **ALPHA SPEZIAL**



optibelt **DELTA**

optibelt **HRR**



2. CIRCULAR KNITTING MACHINES

These machines manufacture so-called tubular fabrics, which are used to create T-shirts and pullovers.



In the textile industry, quality and quantity are of equal importance. This requires special drive machinery that is precisely tailored to the product in question, making exacting demands on all components. High rotational speeds, low noise, low heat generation and minimum wear are all essential criteria here. Optibelt's state-of-the-art belts provide efficient long-term solutions to these complex challenges.

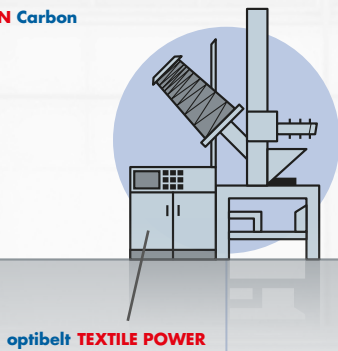


6. WINDING MACHINES

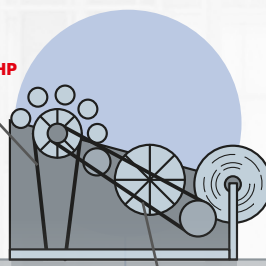
These are used for winding and unwinding. The run and tension of the fabric must therefore remain absolutely constant.



CHAIN Carbon

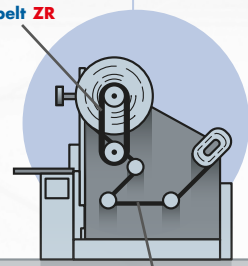


optibelt OMEGA HP



optibelt OMEGA HP double sided

optibelt ZR



optibelt ALPHA FLEX



4. SPINNING MACHINES

Using various different methods, these machines take loose fibres and spin them into yarn for use in textile production.



5. CARDING MACHINE

Carding is used as an initial process in spinning or manufacturing nonwovens to align the loose textile fibres into a pile or nonwoven material.



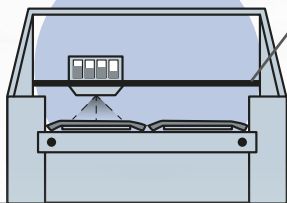
FINISHING

It's all about the details.

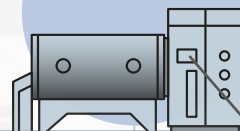


7. DIGITAL PRINTING MACHINES

Textiles can be printed directly or in transfer, even in small runs, with an almost unlimited choice of colours.

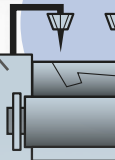


optibelt **OMEGA LINEAR**
optibelt **ALPHA LINEAR**



optibelt **RB**
optibelt **RED POWER 3**

optibelt **ALPHA LINEAR**



8. DYEING MACHINES

These machines give synthetic or natural fibres the desired hue. A highly sensitive process with special requirements.

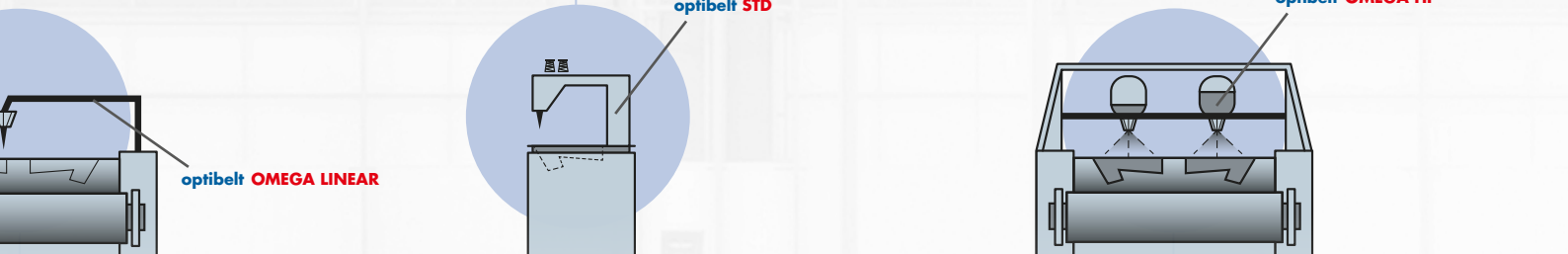


The various production techniques and stages in designing, finishing and producing textiles place extraordinary demands on the machines that are used. Precision and efficiency, combined with a high degree of cost-effectiveness, are called for here, while also taking individual customer requirements into account. Tailor-made drive solutions from Optibelt make this possible, guaranteeing flexibility, quality, reliability and outage-free top performance.



10. SEWING MACHINES

Sewing machines fasten textiles together with precision and at very high speed: a particularly challenging task.



9. CUTTING MACHINES

These machines cut textile products to the right shape. The highest level of precision is required of the machinery and sensors.



11. YARN FINISHING TEXTURING MACHINES

Here, the fibres of the material are chemically, mechanically or thermally treated by texturing, for example, to suit the intended type of use.



optibelt DELTA CHAIN Carbon

HIGH PERFORMANCE TIMING BELT



DIMENSIONS

8MDC 640–1792 mm

Runs on **optibelt ZRS DC** timing belt pulleys and comparable competitive pulleys with CTD and PC profiles.

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- One of the strongest timing belts on the market
- Carbon cord
- Alternative for chains and gear transmissions
- Excellent resistance to oil and chemicals

optibelt OMEGA HL

HIGH PERFORMANCE TIMING BELTS



DIMENSIONS

8M HL 288–3600 mm

14M HL 966–4578 mm

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- Reinforced glass cord
- Optimised absorption of shock loading
- Highly resistant to dynamic loading
- Very low elongation
- Up to 15% more power than **optibelt OMEGA HP**

optibelt OMEGA HP

HIGH PERFORMANCE TIMING BELTS



DIMENSIONS

2M HP 74–1224 mm

3M HP 111–1569 mm

5M HP 180–2525 mm

8M HP 288–3600 mm

14M HP 966–4578 mm

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- Glass cord
- Suitable for low and high speed drives with high dynamic loading
- Shear-resistant fabric with minimised wear and friction
- Up to twice the power transmission capability of the **optibelt OMEGA** Standard version

optibelt STD

TIMING BELTS



DIMENSIONS

S3M 120–633 mm

S5M 255–2000 mm

S8M 440–3200 mm

S14M 1400–5012 mm

optibelt STD also available in HP or HL quality, profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- For existing drives with STD profile
- Noise level comparable to **optibelt OMEGA** profile

optibelt OMEGA

TIMING BELT



DIMENSIONS

2M	74–1224 mm
3M	111–1863 mm
5M	120–2525 mm
8M	288–4400 mm
14M	966–4578 mm

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- Glass cord
- Low noise
- Up to 98% efficiency
- Suitable for power transmission with slow and fast running drive systems with no high impact loading

optibelt ZR

TIMING BELT



DIMENSIONS

MXL	91.44–1026.16 mm
XL	152.40–1600.20 mm
L	276.23–1676.40 mm
H	584.20–4318.00 mm
XH	1289.05–4445.00 mm

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- Trapezoidal design
- Used worldwide for many different applications
- Also available as double sided timing belts, depending on the profile

optibelt OMEGA double sided

TIMING BELT



DIMENSIONS

D8M	1120–3600 mm
-----	--------------

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- Timing belt with **optibelt OMEGA** profile
- Glass cord
- Low noise
- Up to 98% efficiency
- Suitable for power transmission with slow and fast running drive systems with no high impact loading

optibelt OMEGA LINEAR

OPEN-ENDED TIMING BELTS



DIMENSIONS

3M	9 mm
5M	10–25 mm
8M	10–30 mm

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- Glass cord
- High tensile strength
- Low stretch
- High positioning accuracy
- Standard roll length 30 m

optibelt ALPHA TORQUE

TIMING BELTS AND SPECIAL BELTS



DIMENSIONS

T2,5; T5; T10/AT5; AT10/DT5;
DT10 120–2250 mm
MXL; XL; L 2.4–67 inches

Special belts on request

ADVANTAGES AND CHARACTERISTICS

- Endless casting
- Extremely resistant to oil and abrasion
- Tension cords made of steel, highly flexible steel, stainless steel, aramid or polyester are available

optibelt ALPHA FLEX

TIMING BELT – MANUFACTURED AS AN ENDLESS BELT



DIMENSIONS

T5, T10, T20
AT5, AT10, AT20
5M, 8M, 14M
H

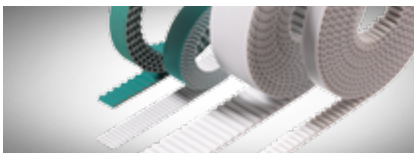
Lengths from 1100-22000 mm,
depending on profile

ADVANTAGES AND CHARACTERISTICS

- Length range can be manufactured according to gradations in pitch
- Option of polyamide fabric on the tooth side for belts at least 1500 mm long
- Available with S or Z cord twist
- Also available as double sided profiles

optibelt ALPHA LINEAR

TIMING BELT – OPEN-ENDED



DIMENSIONS

XL, L, H, XH
5M, 8M, 14M
T5, T10, T20
AT5, AT10, AT20

Other profiles + dimensions
see product range

ADVANTAGES AND CHARACTERISTICS

- High tensile strength with low elongation
- High positioning accuracy
- ATL version timing belts for linear drives

optibelt TT5

HIGH PERFORMANCE TIMING BELTS



DIMENSIONS

3600 - 14 000 mm

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- Interruption-free, smooth-running properties
- Extremely long lifetime
- Outstanding tensile strength guaranteed over the entire belt length
- TT5 products offered in blocks of 5 = batch size 5

optibelt RR/RR Plus/HRR

PLASTIC ROUND BELTS



DIMENSIONS

Optibelt round belts are available with various degrees of hardness and different surface structures and can be manufactured with diameters ranging from 2 to 20 mm.

Minimum lengths, welded 200–400 mm, depending on the diameter

ADVANTAGES AND CHARACTERISTICS

- Welding takes place on site. This also applies to the **optibelt RR Plus** version
- No disassembly of the drive / shafts
- Quick rectification of breakdowns
- Short downtimes
- Immediate availability
- Even faster installation thanks to the **optibelt HRR** connector system

optibelt ALPHA SPECIAL

TIMING BELTS, COATED, WITH MECHANICAL MACHINING OR WITH CLEATS



PRODUCT SPECIFICATIONS

optibelt ALPHA SPECIAL combines the properties of a timing belt with individual coatings, cleats and mechanical machining that can be precisely adapted to the product.

This makes it very versatile in use in the textile industry.

optibelt RB

RIBBED BELTS



DIMENSIONS

PK	630–2845 mm
PL	954–6096 mm

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- Polyester cord
- High belt speeds are possible
- Suitable for back-bend idlers
- PK, PL profiles also available with aramid cord
- DPK profile available

optibelt TEXTILE POWER

VARIABLE SPEED BELT



DIMENSIONS

13 x 5–70 x 18	468–2500 mm
1422 V–4436 V	235–750 inch
HI–HQ	1200–3550 mm
	> 3550 mm on request

Other profiles + dimensions on request

ADVANTAGES AND CHARACTERISTICS

- Also available as double sided belts
- Polyester or aramid cord
- High transverse rigidity
- Allows transmission ratios of up to 1:12
- Also available as EPDM version

THE OPTIBELT TEAM FOR DEVELOPMENT, APPLICATIONS AND SERVICE



SOFTWARE TOOLS AND SPECIALIST CONSULTING

Optibelt's free CAP software allows users to quickly and easily calculate their specific drives. For more complex drive systems, CAP Professional gives users the ability to perform detailed variable calculations. CAP's efficiency calculator will also compare available drives with those already optimised.

Optibelt application engineers are always available to provide advice to customer's operations around the world. They can assist in optimising the drives for entire plant operations.



SERVICE SUPPORT

To make sure that all machines run reliably, Optibelt also offers personal support in drive assembly, maintenance and service on site around the world. Optibelt's broad range of tools, measuring devices and service tools allow for easy drive optimisation, maintenance and repair.



OPTIBELT CUSTOM PRODUCTS

Optibelt offers custom high performance products for all applications: Customised products are designed to precisely meet customer's drive application requirements. Optibelt engineers develop tailored drive solutions for superior efficiency and safety.

Optibelt GmbH

Corveyer Allee 15

37671 Hörter

GERMANY

T +49 5271 621

F +49 5271 976200

E info@optibelt.com

