

GATES HIGH PERFORMANCE BELTS FOR AUTOMATION SYSTEMS

Get your business rolling!

Wherever moving or conveying is an issue, you can rely on Gates' rubber and polyurethane synchronous belts. Whether they are used for assembly lines in the food, the electronics or the automotive industries, in packaging lines or in luggage handling, Gates' belts guarantee a 100% reliability under the most diverse circumstances.

Gates, the world's leader in synchronous belt technology, continuously improves its products thus expanding the application range of its power transmission belts. Gates' belts meet the needs of the materials handling and conveying industries outlasting and outperforming roller chain and other high-performance rubber synchronous products.



Material handling applications

Long Length

Open-end synchronous belts

Gates' Long Length synchronous belt is a cost-effective, efficient and low-maintenance alternative to the chain. Open-end synchronous belts are especially suited for linear movements, accurate positioning and reversal drives. Gates' Long Length

belts are available in various sizes, constructions and tooth designs to cover a wide range of loads, speeds and applications. Long Length is a technically sophisticated, compact and economic option for modern linear drives.

Advantages

- High positioning accuracy and repeatability
- High power transmission thanks to sophisticated materials and tooth profiles
- Positive power transmission with low axial load
- High modulus tensile members giving length stability
- Low-noise drives
- Easy attachment using clamping fixtures
- Low maintenance
- No environmental pollution due to lubricants



LiftPower™

Open-end flat belts

Gates' LiftPower™ open-end flat belts are an ideal alternative for hydraulic cylinders in scissors lifts and for chains in the vertical transport of motor vehicles in high rise stores. LiftPower™ belts run on flat and curved pulleys.

Thanks to its flexible construction, this belt allows the use of smaller pulley diameters, resulting in space and cost savings. As this belt is maintenance-free, it does not require retensioning or lubrication, which again reduces costs considerably.

Advantages

- Resistant to temperatures from -25°C up to +100°C
- Wear resistant
- Steel cord resistant to elongation



Conveying applications

Poly Chain®

Polyurethane synchronous belts for low-speed, high-torque drives

Poly Chain®, Gates' most powerful synchronous belt, has been designed for optimum performance on high torque, low speed drives in any industrial application. It is an ideal alternative to roller chain, requiring neither retensioning nor lubrication. Space-saving, weight-saving and money-saving, Poly Chain® drives offer a long and reliable service life.

The Poly Chain® belt with aramid cord can be used for wash down applications.

An upgraded special Poly Chain® belt with the latest, state-of-the-art cord technology is available on request for people who want to design new applications. This new cord in combination with the superior Poly Chain® materials allows unseen and unsurpassed power capacity.

Advantages

- Substantially increased power ratings: 40% higher in speed range up to 500 rpm.
- The belt's teeth and body are made of a lightweight polyurethane compound, specially blended for adhesion to the cords and fabric. This uniquely formulated polyurethane makes the belt tough and virtually immune to abrasion and chemicals.
- Highly efficient positive drive.
- Maintenance-free: no lubrication or retensioning needed.
- Savings in space, weight and money.
- PowerPaint™ version available on request.



Drive package comparison between Poly Chain® belts and chains

	Poly Chain® 14MGT-2520-37	Chain DIN 8178 16B – 2
Length belt / chain - mm	2520	2540
Pitch - mm	14	25.4
Ratio	2.64	2.63
No of grooves - driveR pulley	34	19
No of grooves - driveN pulley	90	50
Outside diameter driveR pulley - mm	151.52	153.32
Outside diameter driveN pulley - mm	401.07	404.52
Weight driveR pulley - kg	3.8	8.3
Weight driveN pulley - kg	17.2	27.6
Width belt / chain - mm	37	74
Centre distance - mm	816.45	822.13
Speed - rpm	100	100
Design power - kW	9.1	7.6
Weight belt / chain - kg	0.74	13.72
Total drive weight - kg	21.74	49.62

Mini Poly Chain®

This compact polyurethane synchronous belt opens up new opportunities in the design of conveyor drives and is an alternative to roller chains. The Gates Mini Poly Chain® does not require lubrication,

nor retensioning and is characterised by low noise levels even at high transport speeds. The special construction is highly resistant to contaminants such as dust, oil and chemicals.

TransMotion™

Rubber synchronous belts with conveyor cord

Gates' TransMotion™ is the most powerful rubber belt in the market. This belt, which is only available on request, has a conveyor cord which is characterised by its superior tooth jump resistance and shock load resistance. When aramid cord is used this belt can also be used for wash down applications.

This 8 mm pitch belt is supplied in an antistatic version for applications in the electronic industry where applications with electronic discharge are frequently used.



PowerGrip® GT3

Rubber synchronous belts for a wide variety of compact and high-speed drives

PowerGrip® GT3 is Gates' latest development in synchronous rubber belts. This new, technically advanced belt covers the widest range of industrial applications.

PowerGrip® GT3 transmits up to 30% more power than previous generation belts. The entire belt range is designed to run on existing drives and does not require any adaptation of the system.

Advantages

- Technically advanced compound with fibreglass tensile cord, elastomeric teeth and backing and nylon facing.
- Elastomeric backing protects the cords from contaminants and frictional wear.
- Helically wound tensile member gives enormous strength, flex life and elongation resistance.
- High capacity belt with reduced noise levels.
- Compact, light-weight and cost-effective drives.
- TransMotion™ and PowerGrip® GT3 will run in HTD® and RPP pulleys used on conveyor systems.



PowerGrip® GT3 is supplied in a silicone-free construction. For paint processes, Gates can supply, on demand, the PowerGrip® GT3 8MGT and 14MGT in a paint and varnish compatible construction. As contamination risks are excluded, it is the ideal belt for paint processes in the automotive industry.



PowerGrip® HTD®

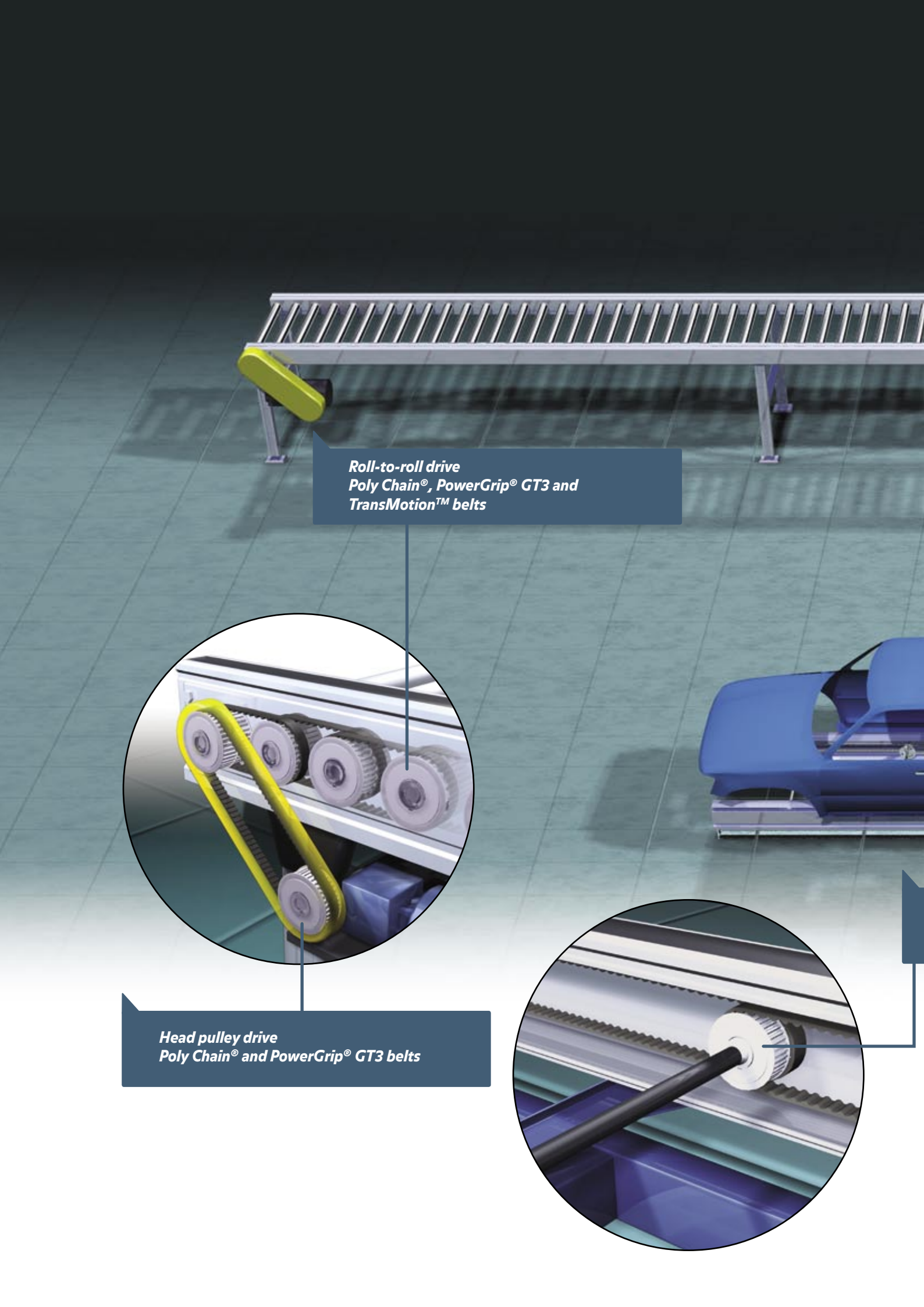
Rubber synchronous belts for high torque drives

PowerGrip® HTD® belts are ideal for high power transmission in low speed and high torque applications. PowerGrip® HTD® belts are used in high performance drives where durability and low maintenance are required.

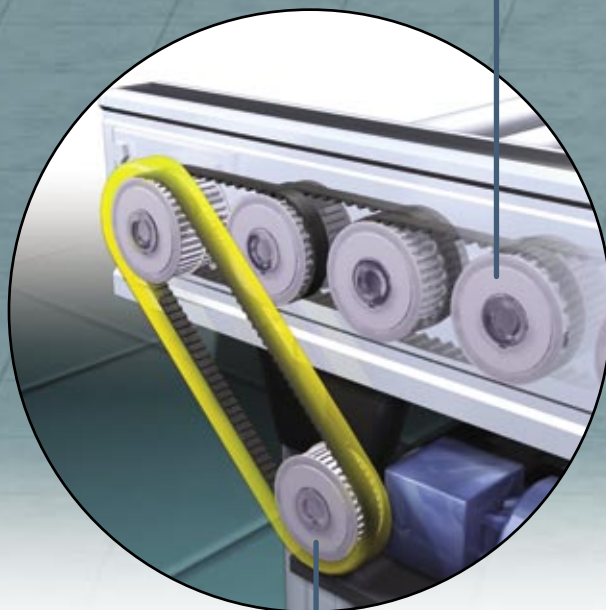


Advantages

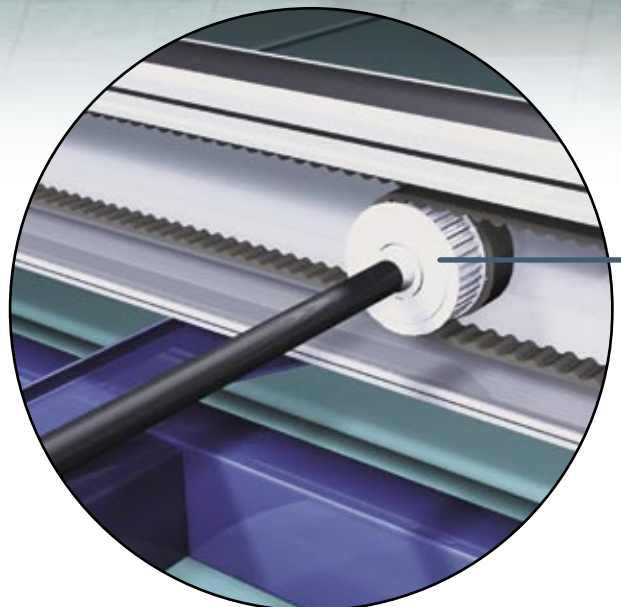
- Special curvilinear tooth form improves stress distribution and allows higher overall loading.
- No slippage. PowerGrip® HTD® belt teeth mesh smoothly with pulley grooves, reducing speed variations.
- Economical operation. No lubrication needed, no need for adjustment due to stretch and wear.
- Long trouble-free service life (because of excellent abrasion resistance) in many applications where metal components like chains and gears wear out in a matter of months.
- PowerPaint™ version available on request.

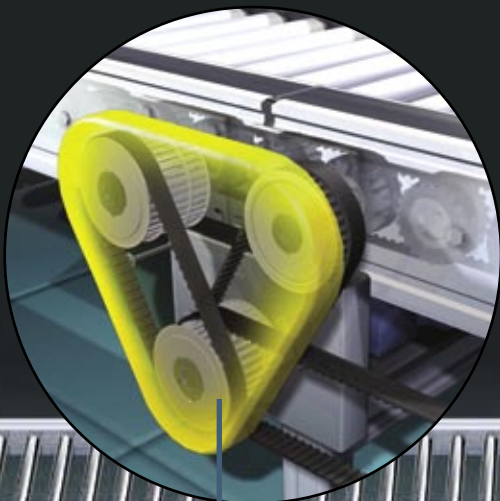


*Roll-to-roll drive
Poly Chain®, PowerGrip® GT3 and
TransMotion™ belts*



*Head pulley drive
Poly Chain® and PowerGrip® GT3 belts*



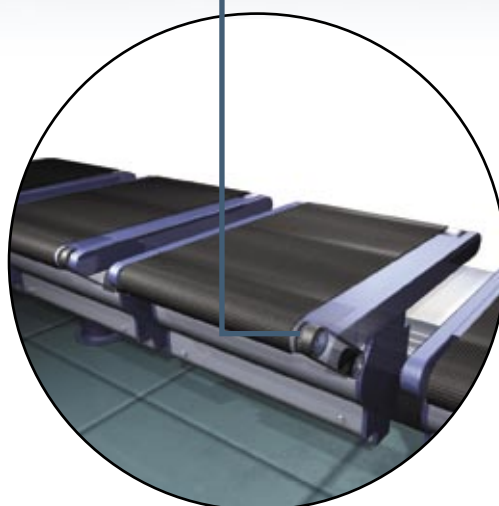


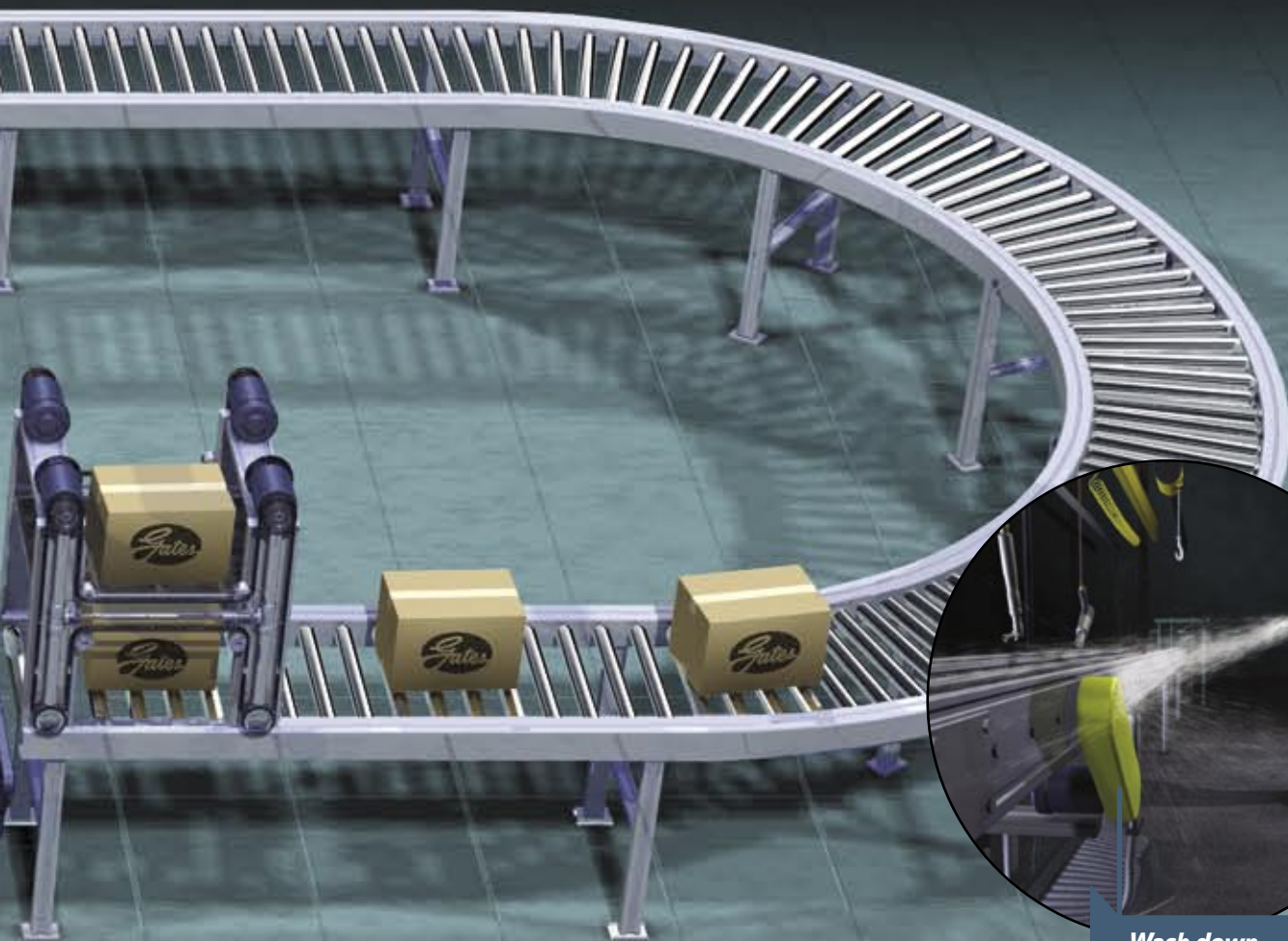
Slave drive
Poly Chain®, **PowerGrip® GT3** and
TransMotion™ belts



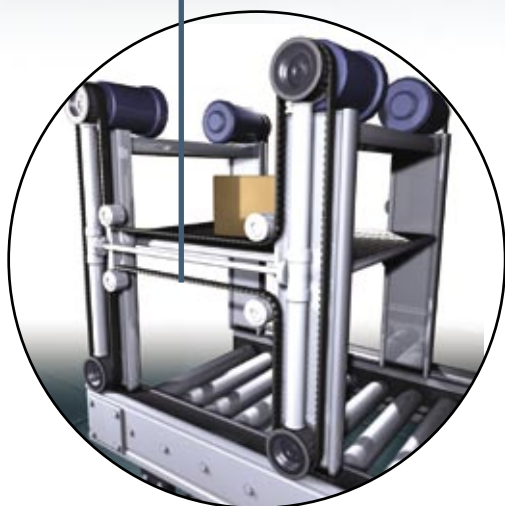
Skid conveyor drive
Poly Chain®, **PowerGrip® GT3** and
TransMotion™ belts

Diverter and sorter drive
PowerGrip® GT3 and
TransMotion™ belts





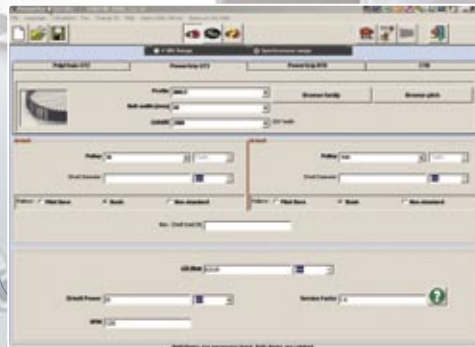
Lifter drive
Poly Chain® and PowerGrip® GT3 belts
LiftPower™ belts



Wash down
Poly Chain® and
TransMotion™ belts

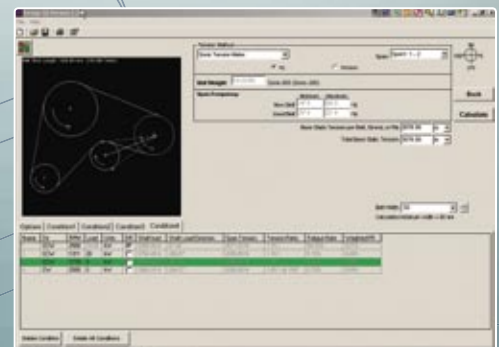
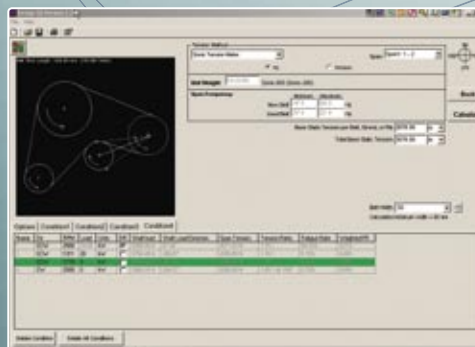
DesignFlex®

You may calculate your own application by using DesignFlex®, Gates' Windows-based multilingual software program. The program is available on CD-ROM (E/20098), but can also be downloaded from Gates' website at www.gates.com/europe. The program offers a step-by-step drive calculation procedure for both V-belts and synchronous belts based on the criteria and/or limitations specified by the user.



Design IQ

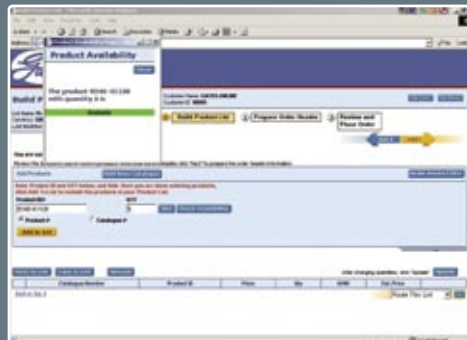
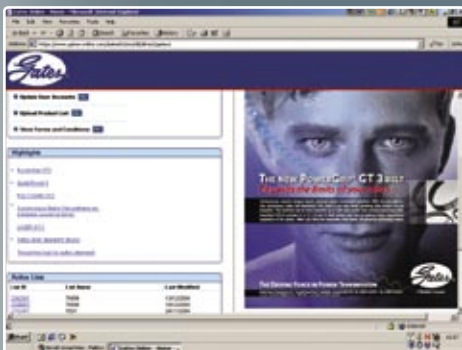
Gates' application engineers now use Design IQ, a very powerful software program enabling them to calculate multiple pulley drives for the most diverse complex duty cycles. For more information on this brandnew software possibility please contact your Gates representative.



Gates literature

Please consult our web site at www.gates.com/europe/pti for specific and updated information on other Gates industrial belt products and our list of available literature. Industrial Power Transmission brochures

and leaflets can be downloaded from the site. Distributors may link up with the Gates European site to provide customers with up-to-date information on the European Gates organisation.



Gates addresses

Operations

Gates S.A.S.
111, rue Francis Garnier
B.P. 37
F - 58027 Nevers - Cedex
TI : (33) 3 / 86 71 75 00
Fx : (33) 3 / 86 36 62 47

Gates GmbH
Eisenbahnweg 50
D - 52068 Aachen
TI : (49) 241 / 5108-0
Fx : (49) 241 / 5108-297

Gates Polska Sp. z o.o.
Ul. Jaworzyńska 301
P - 59-220 Legnica
TI : (48) 76 / 855 10 00
Fx : (48) 76 / 855 10 01

Gates Power Transmission Ltd
Tinwald Downs Road
Heathhall - Dumfries
DG1 1TS - UK
TI : (44) 1387 / 24 20 00
Fx : (44) 1387 / 24 20 10

Sales offices

Gates Europe nv
Dr. Carlierlaan 30
B - 9320 Erembodegem
TI : (32) 53 / 76 27 11
Fx : (32) 53 / 76 27 13

Gates GmbH
Haus Gravener Straße 191-193
D - 40764 Langenfeld
TI : (49) 2173 / 795-0
Fx : (49) 2173 / 795-150

Gates France S.A.R.L.
B.P. 37
Zone Industrielle
F - 95380 Louvres
TI : (33) 1 / 34 47 41 41
Fx : (33) 1 / 34 72 60 54

Gates S.R.L.
Via Senigallia 18
I - 20161 Milano MI
TI : (39) 02 / 662 16 2
Fx : (39) 02 / 645 86 36

Your distributor:



www.gates.com/europe/pti
ptiindustrial@gates.com