



**DRIVEN BY POSSIBILITY™**



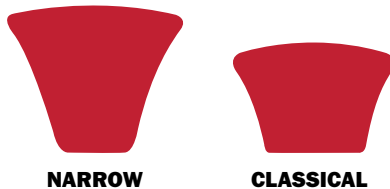
# **HIGH PERFORMANCE BELT DRIVES**

**INDUSTRIAL POWER TRANSMISSION PRODUCTS AND SERVICES**

# PREDATOR® V-BELTS DESIGNED FOR THE MOST AGGRESSIVE APPLICATIONS

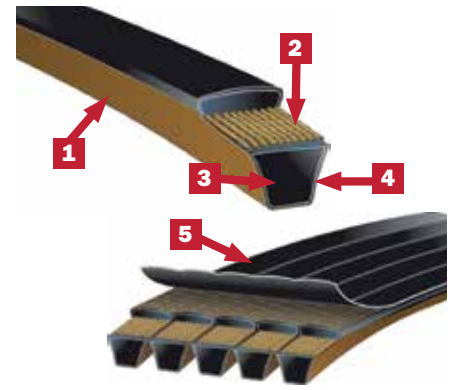
High powered motors. Shock loads from sudden starts and stops. Dirty operating environments. High heat. Contamination from oil or solvents. **Predator® V-belts handle them all.**

- Maintenance free
- 35% less drive cost
- 60% less drive width
- 50% less weight
- Shaft load remains unchanged



PREDATOR® CROSS SECTIONS			
Belt Type	Classical	Narrow (ISO)	Narrow (RMA)
Singles	AP, BP, CP	SPBP, SPCP	5VP, 8VP
Powerbands®	BP*, CP*	SPBP, SPCP, 9JP*, 15JP*	3VP, 5VP, 8VP

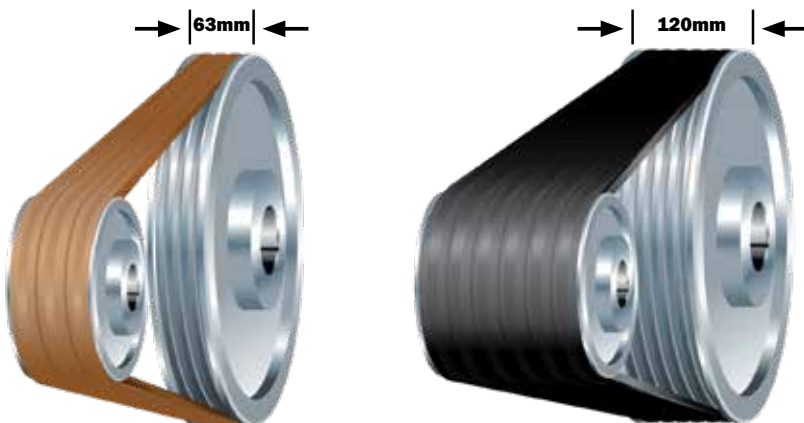
**NOTE:** Predator® V-belts must be ordered in matched sets.  
\*Available on request



1. Reduce friction and heat build-up under shock loads with abrasion and puncture-resistant bareback (non-rubber) **double-layer fabric cover**.
2. Minimal need for re-tensioning due to stronger-than-steel **Aramid fibre (Kevlar)** tensile cords that reduce belt stretch by 50%.
3. Oil and heat resistant **Chloroprene compound body**, rated for 80°C, outperforms other rubbers in harsh operating conditions.
4. Extend drive life with the **patented curved sidewall** that allows belt to enter the pulley groove cleanly and smoothly, reducing sidewall wear on belt and pulley.
5. **Multiple-layer tie band** joins belts together into a Predator® Powerband® that provides lateral rigidity for reduced vibration and belt roll-over on multi-groove pulleys.

## COMPACT DRIVE SAVES SPACE, WEIGHT AND MONEY

Predator® V-belts can handle up to 2.2 times more power than the equivalent size standard V-belt. A more compact drive that weighs less, puts less strain on costlier components, and uses fewer belts. All of which saves you money. See the difference in the following example:



### PREDATOR® - SPBP BELTS

- 3 belts required
- Rated kW/Strand: 53.5kW
- Total weight: 72.2 kg

**VS**

### STANDARD - SPB BELTS

- 6 belts required
- Rated kW/Strand: 26.8kW
- Total Weight: 114.6 kg

**COMPARED WITH STANDARD V-BELT DRIVES, THE COMPACT PREDATOR® DRIVE PROVIDES GREATER POWER CAPACITY IN HALF THE WIDTH AND WEIGHT, AT A THIRD OF THE COST, WITH NO CHANGE IN SHAFT LOADS. PREDATOR® V-BELTS PROVIDE THE IDEAL SOLUTION TO REPLACE COSTLY, MADE TO ORDER, 8V BELT DRIVE PULLEYS WITH STANDARD SPB OR SPC.**

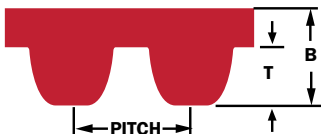
# POLY CHAIN® GT® CARBON™ POLYURETHANE SYNCHRONOUS BELT WITH CARBON FIBRE CORDS

Trying to reduce your energy bill? Experiencing downtime to re-tension & lubricate your roller chain? High moisture, oil or chemicals causing you problems? **Poly Chain® GT® Carbon™ synchronous belts are the solution.**

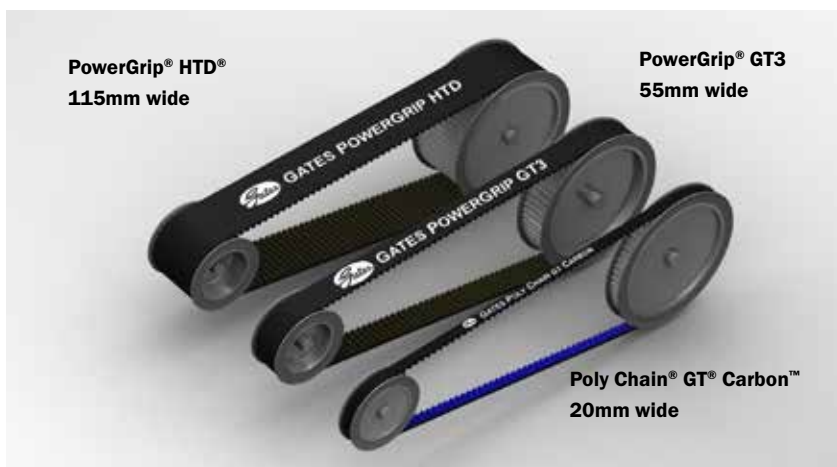
- Maintenance free
- 400% greater capacity than HTD timing belts
- 5% energy savings over V-belts
- 99% efficiency for life of the drive
- Reduce downtime
- Reduce weight and overhung loads
- Over 120,000 possible drive combinations
- Inert to most acids, chemicals and water
- Stainless steel sprockets & taper locks available in certain sizes



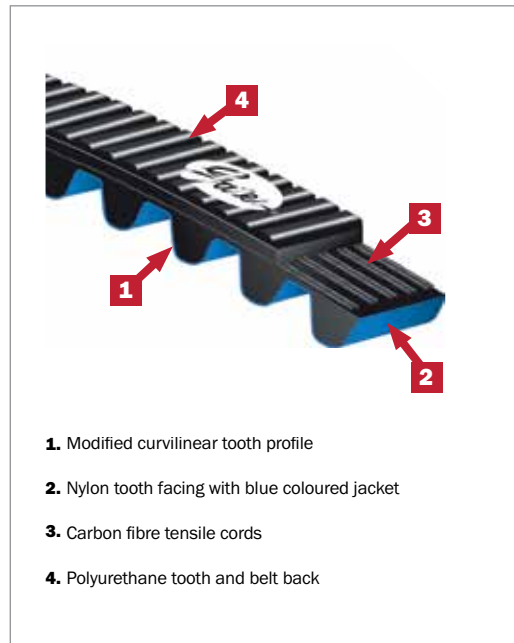
POLY CHAIN® GT® CARBON™ PITCH SIZES			
	Pitch mm	T (mm)	B (mm)
8MGT	8.0	3.4	5.9
14MGT	14.0	6.0	10.2



**NOTE:** 19MGT Poly Chain GT Carbon available as a made-to-order.



- Width-for-width roller chain conversions
- No stretch, no lubrication, no re-tensioning
- Outlasts roller chain up to 4 to 1
- Outlasts roller chain sprockets up to 10 to 1
- Inside & backside idlers can be used



**“THIS IS HOW WE’VE ALWAYS DONE IT ”  
WON’T CUT IT ANYMORE.  
SOMEONE TO LUBRICATE  
THAT OLD ROLLER CHAIN,  
SOMEONE ELSE TO CLEAN  
UP THE GREASE ON THE  
FLOOR, ANOTHER PERSON  
SHUTTING DOWN DRIVES  
TO RE-TENSION.**





# POLY CHAIN® CARBON® VOLT® STATIC CONDUCTIVE POLYURETHANE SYNCHRONOUS BELT WITH CARBON FIBRE CORDS

Application in an explosive environment, e.g. oil and gas, flour or sugar processing? Does the belt get wet? Roller chain wearing too quickly? Need a more efficient drive? **Poly Chain Carbon Volt belts are the ideal solution.**

- Static Conductive to ISO 9563 throughout the lifetime of the belt
- Patented Static Conductive construction
- All the advantages and performance benefits of Poly Chain® GT® Carbon
- Available in all 8MGT & 14MGT sizes
- Ideal for fin fan drives



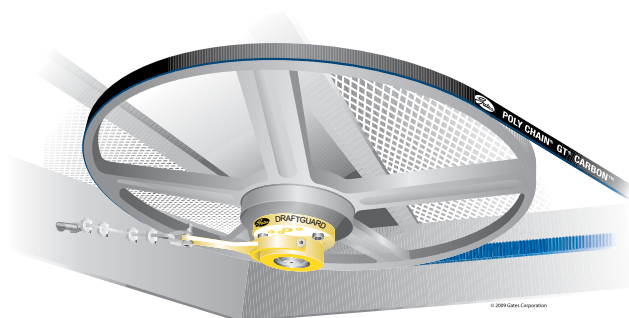
[www.GatesAustralia.com.au/VOLT](http://www.GatesAustralia.com.au/VOLT)



1. Modified curvilinear tooth profile
2. Patent pending antistatic black jacket
3. Carbon fibre tensile cords
4. Polyurethane tooth and belt back.

# DRAFTGUARD® ANTI-ROTATION DEVICE FOR ACHE BELT DRIVES

- Prevents back-drafting of fans
- Eliminates hard starts during wind-milling
- Avoids damage to belt drive system and structure during start up
- Protects technicians from serious injury during maintenance operations
- Maintenance-free bearings greased-for-life assemblies
- Multiple mounting options, Locking Ring, Taper-bush or QD Bush
- Adapts to clockwise or counter clockwise rotation
- Unlike motor clutches, Draftguard® prevents wind-milling after belt failure

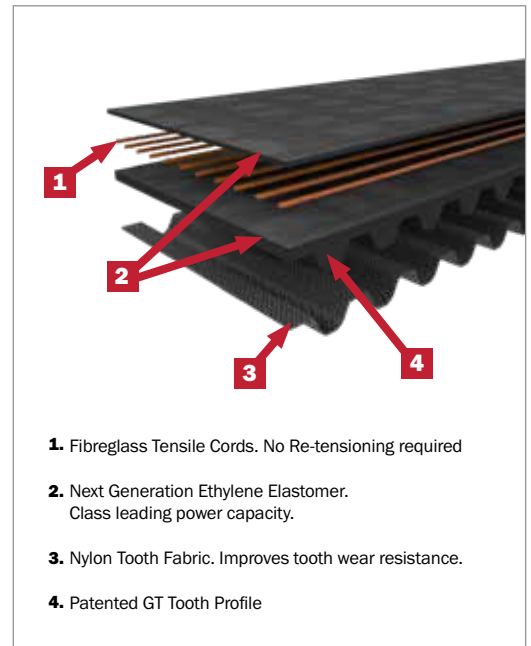


[www.GatesAustralia.com.au/Draftguard](http://www.GatesAustralia.com.au/Draftguard)

# POWERGRIP® GT4 RUBBER SYNCHRONOUS BELT WITH FIBREGLASS CORDS

HTD belts not strong enough? After a more efficient drive than V-belts? Need a compact, high precision drive? Hazardous explosive areas requiring a static conductive rated belt? **Think PowerGrip® GT4 synchronous belts.**

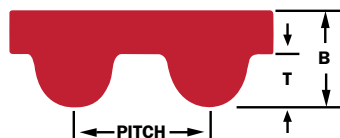
- Maintenance free
- Low noise and vibration
- Greater capacity, narrower drive designs
- Abrasion resistant, longer life
- Static conductive to ISO 9563
- Fully operational in a wide range of temperatures: -40°F to +248°F (-40°C to +120°C) with intermittent use up to 284°F (140°C)



**AT LEAST 200% CAPACITY  
OVER HTD BELTS MEANS  
YOU CAN HALVE YOUR  
DRIVE WIDTH USING  
POWERGRIP® GT4 BELTS.**

POWERGRIP® GT3 PITCH SIZES			
	Pitch (mm)	T (mm)	B (mm)
2MGT	2.0	0.7	1.5
3MGT	3.0	1.1	2.4
5MGT	5.0	1.9	3.8

POWERGRIP® GT4 PITCH SIZES			
	Pitch (mm)	T (mm)	B (mm)
8MGT	8.0	3.4	5.6
14MGT	14.0	6.0	10.0

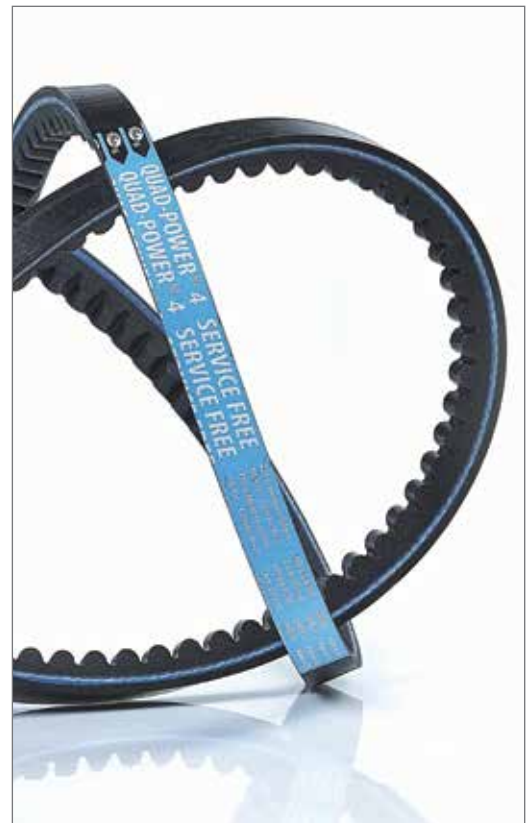
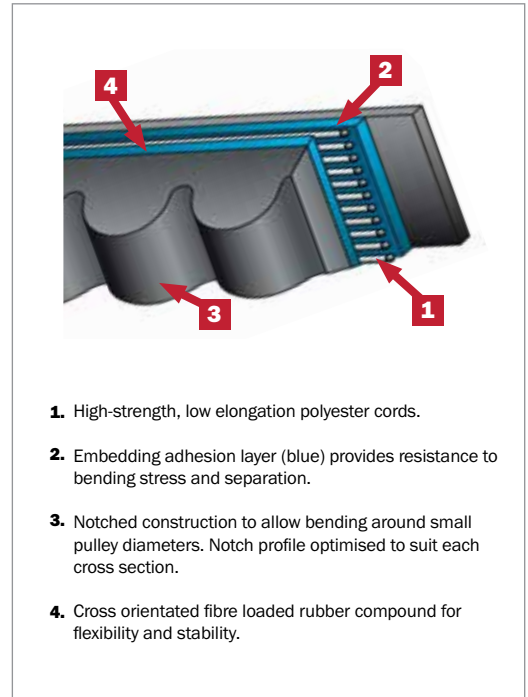


# QUAD-POWER® 4 HIGH TEMPERATURE RAW-EDGE, NOTCHED, NARROW SECTION V-BELT

Applications with extreme heat. Need to reduce you maintenance and downtime? Pulleys too small for your wrapped V-belts?

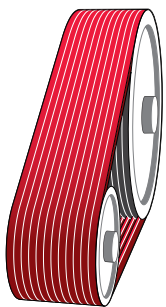
**Quad-Power® 4 belts are the answer.**

- Service Free
- Increased temperature range -50 °C to +130 °C
- Increase efficiency up to 3%
- Reduce drive width up to 50%
- Space saving and design freedom
- Static conductive to ISO 1812 and IP3-3
- Match Free to UNISSET & V80 matching systems
- Available as single belts or Powerbands

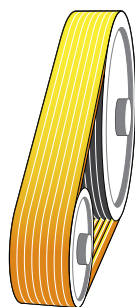


QUAD-POWER® 4 CROSS SECTIONS		
Belt Type	Narrow (ISO)	Narrow (RMA)
Singles	XPZ, XPA, XPB, XPC	3VX, 5VX, 8VX
Powerbands	XPZ, XPA, XPB	3VX, 5VX

**NOTE:** Some Narrow (RMA) belts and Powerbands are labelled Super HC® Molded Notch



**Hi-Power® II 12 x B46**  
Pulley Width = 234mm  
25,000 hr belt life



**Super HC® 8 x SPB1250**  
Pulley Width = 158mm  
25,000 hr belt life



**Quad-Power® 4 5 x XPB1250**  
Pulley Width = 101mm  
25,000 hr belt life



**UPGRADED EPDM RUBBER  
CONSTRUCTION IS RATED  
TO +130 °C**



# PREVENTIVE MAINTENANCE TRAINING

Gates offers Preventive Maintenance Training to assist in achieving the best performance from your belt drives and keeping downtime and maintenance at a minimum.

The most common causes of poor belt life are improper maintenance and improper installation. The course aims to ensure that these causes are illustrated to provide trouble free drives and increase your uptime.

## THE COURSE COVERS THE FOLLOWING:

- Belt identification
  - Belt construction
  - Features and benefits
  - Belt drive problems
  - Pulley and belt inspection
  - Guard maintenance
  - Shutdown procedures
  - Pulley installation and alignment
  - Belt tensioning techniques
  - Re-tension periods
  - Training on the use of tension and laser alignment tools
  - Troubleshooting failure modes
- Duration of course = 3 – 4 hrs.  
Max 12 per class.**



# MAINTENANCE KITS

Optimum belt drive performance is not achieved via guess work, you need the right tools for the job.

Gates most popular Maintenance Tool Kit [GIBMAINT-3] allows any belt drive to be accurately installed and maintained. It includes Gates premium 508C Sonic Tension Meter and EZ Align® Green laser alignment tool. The Belt Wear Gauges allow for quick V-belt pulley inspections.

The aluminium tension plates can be installed on the drive or guard to ensure belt details and tensioning data are always on hand.

Three other kit versions are available with slightly different components included to suit your requirements and budget.



**MAINTENANCE KIT 3**

## MAINTENANCE KIT 1

### Item Code - GIBMAINT-1

- 1 x Hard Carry Case with foam liner
- 1 x Gates 508C Sonic Tension Meter
- 1 x Gates AT-1 Laser Alignment Tool
- 1 x Gates 15kg Single Barrel Tension Tester
- 1 x Gates 30kg Double Barrel Tension Tester
- 1 x Gates Belt and Pulley Gauges
- 2 x Gates Aluminium Tension Plates
- 2 x Gates Tension Stickers
- 1 x Gates Steel Ruler
- 1 x Gates Measuring Tape
- 1 x Gates Pocket Tension Guide

## MAINTENANCE KIT 3

### Item Code - GIBMAINT-3

- 1 x Hard Carry Case with foam liner
- 1 x Gates 508C Sonic Tension Meter
- 1 x Gates EZ Align® Green Laser Alignment Tool
- 1 x Gates 15kg Single Barrel Tension Tester
- 1 x Gates 30kg Double Barrel Tension Tester
- 1 x Gates Belt and Pulley Gauges
- 2 x Gates Aluminium Tension Plates
- 2 x Gates Tension Stickers
- 1 x Gates Steel Ruler
- 1 x Gates Measuring Tape
- 1 x Gates Pocket Tension Guide

### Item Code - GIBMAINT-3A

- Same as above, also includes:
- 1 x Inductive Sensor (magnet included)

## MAINTENANCE KIT 2

### Item Code - GIBMAINT-2

- Same as Kit 1 minus
- the 508C Sonic Tension Meter

## MAINTENANCE KIT 4

### Item Code - GIBMAINT-4

- Same as Kit 3 minus
- the 508C Sonic Tension Meter

**MORE THAN 60% OF ALL BELT DRIVE ISSUES ARE CAUSED BY IMPROPER DRIVE MAINTENANCE OR INSTALLATION.**

**THE RIGHT TRAINING MATCHED WITH THE APPROPRIATE PRODUCT AND TOOLS REDUCE DOWNTIME AND INCREASE EFFICIENCY, SAVING ENERGY AND MONEY.**

# 508C - SONIC TENSION METER

Item Code - 7420-0508

The 508C Sonic Tension Meter can easily be operated by one person for fast, accurate readings on all types of synchronous and V-belt drive systems. Use the standard cord sensor to reach inside cramped compartments where conventional methods would be impossible. This small, light and user friendly meter features:

- Output readings measurable in hertz, pounds, kilograms and newtons.
- Improved frequency range from 10-5000 hertz.
- Variable frequency range filters.
- Auto gain control automatically adjusts meter sensitivity.
- 20 memory registers for belt contents.
- LCD screen with back light.



### OPTIONAL SENSORS:

1. Standard Cord Sensor (7420-0206)
2. Flat Flexible Sensor (7420-0205)  
(Included with 7420-0508)
3. Inductive Sensor (7420-0212)  
(Magnets included)
4. Replacement Magnet (7420-1212)

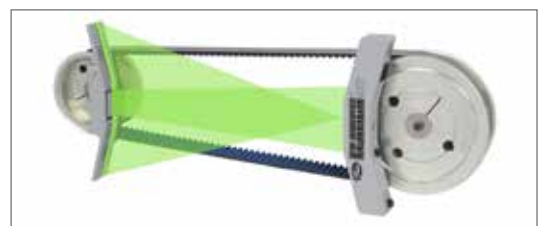


# EZ ALIGN® GREEN - LASER ALIGNMENT TOOL

Item Code - 7420-3000

Gates EZ Align® Green precision laser alignment device allows a single person to quickly and easily align a belt drive. The green laser is **10x brighter** than the previous red laser design allowing for much easier use in bright areas. Gates EZ Align® Green tool uses powerful laser line technology for maximum angular accuracy on belt drives up to 7.6 metres in centre distance.

- FAST and EASY
- Shows parallel and angular misalignment simultaneously
- More accurate and efficient than any other laser tool or method
- Reduces vibration and belt noise
- Prolongs belt and pulley life
- Suitable for both V-belt and synchronous belt drives
- For both horizontally and vertically mounted drives
- Alignment can be adjusted by one operator
- New design includes stronger magnetic brackets to hold the tool more firmly in place
- LED torch now included in the end of the Laser unit of this new design





# BIRD™ - BELT INSTALLATION AND ROTATION DEVICE INNOVATIVE SAFETY DEVICE TO PROTECT OPERATORS FROM INJURY

## Item Code - 7420-1001

Gates have developed the Belt Installation + Rotation Device (BIRD™) to minimise finger and hand injuries due to hands getting caught in pinch points during routine installation and maintenance. While a drive is shut down and locked out, the BIRD safely facilitates a rotational inspection of a drive.

Prior to the launch of the BIRD, in order to inspect or install a drive, personnel would pull on the belt or grab the edges of the pulley or sprocket to turn the drive. Regardless of the care taken, this procedure is inherently dangerous — a split second leads to a hand or finger pulled into a pinch point.

- Keeps hands and fingers away from pinch points, reducing the potential for injury
- Provides a more ergonomic way to rotate belt drives
- Switchable on/off magnets allow for easy installation and removal of the BIRD
- Durable case to protect the BIRD when not in use



REDUCE THE POTENTIAL FOR OPERATOR HANDS AND FINGERS BEING CAUGHT IN PINCH POINTS



ON/OFF SWITCHES ACTIVATE THE MAGNETS

ALUMINIUM HANDLES ALLOW FOR SAFE DRIVE ROTATION





## AT-1 LASER ALIGNMENT TOOL

**Item Code - 7401-10010**

This tool can be used to align both V-belt and synchronous belt drives. It can show both parallel and angular misalignment between the pulleys.



## V-BELT & PULLEY GAUGES

**Item Code - 7401-0015**

Gates colour coded V-belt and pulley gauges provide a simple solution for detecting worn pulleys and identifying V-belt cross sections.

The pulley wear gauges fit standard industrial grooves, identifying excessive wear before it leads to premature belt failure.



## TENSION TESTERS

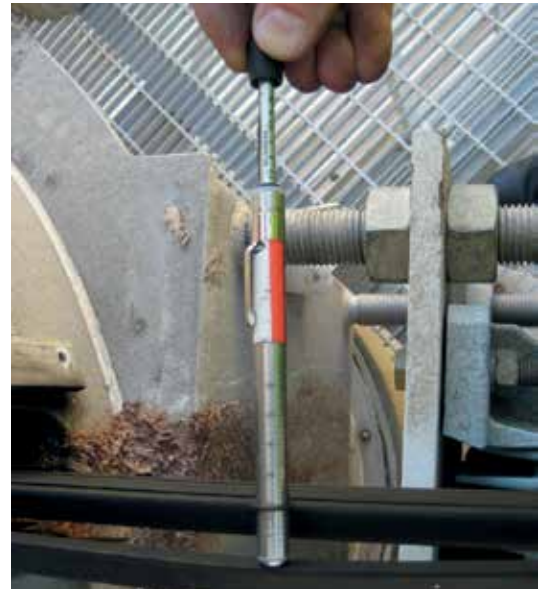
**Item Codes - Single Barrel - 15kg (7401-0076)**

**Double Barrel - 30kg (7401-0075)**

Gates has available two tension testing tools for use in the servicing of belt drives.

The single barrel (15kg) and the double barrel (30kg) tester can be used to accurately measure the tension of individual or joined belts upon installation or during maintenance.

Using the tension tester ensures that correct tension is maintained and is repeatable. This will yield not only a longer service life but a predictable one, enabling scheduled replacement rather than breakdown replacement.



## INDUSTRIAL BELT MEASURER

**Item Code - 7401-10001**

Gates belt measurer can be mounted on your wall to easily find the inside length of a V-belt. It provides an accurate measure of all belt sizes between 600mm to 4100mm. When used in conjunction with our belt and pulley gauges belt identification is simple.



## TENSION PLATES & STICKERS

**Item Codes - Plates (496-1997) Sticker (496-5008)**

No more guessing tensions or wondering what the correct belt should be. Gates can supply all your drive critical information on adhesive backed aluminium plates or stickers that can be attached right onto the machine.

With the plate and sticker specifying which belt, how many and the tensioning data, incorrect belt installation is avoided.

## ENGINEERING TECHNICAL SERVICES

Gates field team members are available to work with you on site to provide solutions for any new drives or belt drive problems you are currently experiencing.

Gates can visit and survey your entire site/plant, offering:

- Drive design expertise
- On-site drive performance evaluations
- Laser alignment
- Belt tensioning
- Drive operating condition analysis
- Belt failure analysis
- Solutions for special application requirements
- Recommendations and solutions



## DESIGN FLEX® PRO™ BELT DRIVE DESIGN SOFTWARE

Gates Design Flex® Pro™ software is the ideal tool for checking existing belt drives and designing new ones.

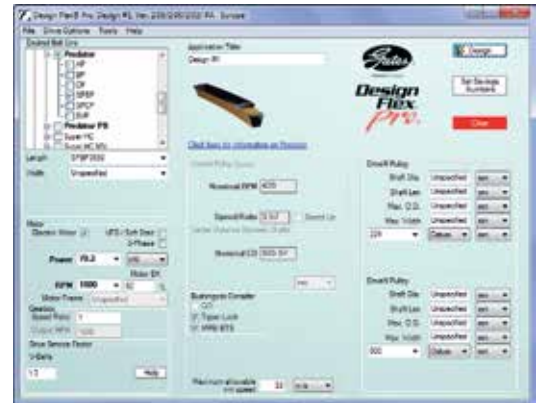
### Fast and Easy

With as little as 6 pieces of data you can instantly generate a report providing you with the capacity and accurate tensioning details for your belt drive.

If you are trying to modify an existing drive, or design a completely new one, then just select the desired belt types, enter in the required parameters and you will have a list of all possible drive options. All you need to do then is select the solution that best suits your requirements.

The detailed design reports generated can easily be printed or saved as a PDF and emailed to clients or staff.

**Download FREE from [www.Gates.com/DesignFlex](http://www.Gates.com/DesignFlex)**



**Design  
Flex® Pro™**





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