

# GATES MAINTENANCE TRAINING

## Preventive Maintenance Training Course



Save time and money, while creating a safer environment for employees with the help of Gates. Gates Australia is committed to supplying the highest quality belt drive systems in the industry. Along with this commitment comes a dedication to the industry to deliver a state of the art Preventive Maintenance Training course.

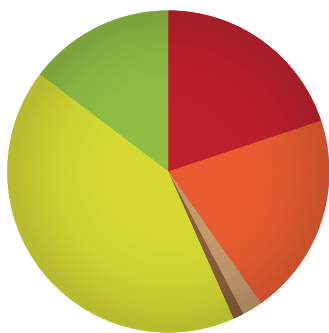
This course is suitable for all industries and accommodates all varying levels of knowledge for all individuals involved with fitting, purchasing, designing and selecting belt drives. This course guides all attendees to a proficient level, to be component to install, tension and laser align all V, joined and synchronous belts, the course stays interactive with a hands-on demonstration rig.

Aligning and tensioning drives correctly on site will provide customers thousands of dollars saving through reduced downtime and increased energy savings.

### Increase Uptime with Proper Maintenance

An effective preventive maintenance program keeps your facility running safely and at optimum capacity.

Properly maintained belt drives can be your most cost-effective and reliable power transmission solution. Industrial belt drive performance is negatively impacted by many factors:



**Improper Drive Maintenance 42%**

**Environmental Factors 15%**

**Improper Installation 20%**

**Poor Design 20%**

**Improper Handling 2%**

**Defective Components 1%**

**Eliminate any of these factors having an impact on your productivity!**

Attend the Gates Preventive Maintenance Seminar.

Source: Gates Industrial Belt and Drive Preventive Maintenance Manual

**Duration of course = 2hrs - 3 hrs.**

**Required support:**

1 x room with table and chairs  
(best number of attendees is 10-12)

1 x data projector with white wall  
(please advise if one cannot be supplied)

1 x white board

Multiple sessions can be accommodated daily so as to train everyone on site.



### 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

### Course Material

- Gates Preventive Maintenance Manual
- Gates Single Barrel Tension Tester
- Gates Belt and Pulley Gauges
- Gates Pen
- Gates Notepad
- Gates Tension Card
- Gates Belt Failure Wall Charts (Trainer)
- Certification Quiz Sheet
- Feedback Form



# GATES MAINTENANCE KITS



The Gates Maintenance Kits were designed so you can complete all drive installation and maintenance with ease. There are multiple kits to choose from so you get the best tools to suit your requirements and budget. The hard cover carry case provides excellent protection for your tools and keeps them all together. Case can be locked with a padlock for security.



## MAINTENANCE KIT 1

Item Code - GIBMAINT-1

Complete Maintenance Kit contains:

- 1 x Gates 507C 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
- 5 x Gates Aluminium Tension Plates
- 10 x Gates Tension Stickers
- 1 x Gates Pocket Tension Guide and Notebook
- 1 x Hard Cover, Protective Carry Case



## MAINTENANCE KIT 2

Item Code - GIBMAINT-2

Complete Maintenance Kit contains:

- 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
- 5 x Gates Aluminium Tension Plates
- 10 x Gates Tension Stickers
- 1 x Gates Pocket Tension Guide and Notebook
- 1 x Hard Cover, Protective Carry Case



## MAINTENANCE KIT 3

Item Code - GIBMAINT-3

Complete Maintenance Kit contains:

- 1 x Gates 507C Sonic Tension Meter
- 1 x Gates EZ Align Tool
- 1 x Gates 15kg Single Barrel Tension Tester
- 1 x Gates 30kg Double Barrel Tension Tester
- 1 x Gates Belt and Pulley Gauges
- 5 x Gates Aluminium Tension Plates
- 10 x Gates Tension Stickers
- 1 x Gates Pocket Tension Guide and Notebook
- 1 x Hard Cover, Protective Carry Case



## MAINTENANCE KIT 4

Item Code - GIBMAINT-4

Complete Maintenance Kit contains:

- 1 x Gates EZ Align Tool
- 1 x Gates 15kg Single Barrel Tension Tester
- 1 x Gates 30kg Double Barrel Tension Tester
- 1 x Gates Belt and Pulley Gauges
- 5 x Gates Aluminium Tension Plates
- 10 x Gates Tension Stickers
- 1 x Gates Pocket Tension Guide and Notebook
- 1 x Hard Cover, Protective Carry Case

# GATES 507C SONIC TENSION METER

## High accuracy belt tensioning device



### Item Code - 7420-0507

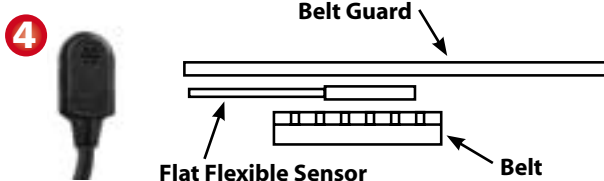
The 507c Sonic Tension Meter can easily be operated by one person for fast, accurate readings on all types of synchronous belt drive systems and V-belt drives. Use the standard cord sensor to reach inside cramped compartments where conventional measurements would be impossible.

This smaller, lighter and more user friendly version of the 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)**  
Flexible for hard to reach places.
- 2. Flexible Sensor (7420-0204)**  
Bend to required shape for convenient, one-hand operation.
- 3. Inductive Sensor (7420-0212)**  
For high noise or windy environments.
- 4. Flat Flexible Sensor (7420-0205) - NEW**  
For improved performance in narrow spaces, microphone points directly at belt.  
More flexible and durable than 7420-0204.



# EZ ALIGN LASER ALIGNMENT TOOL

## High accuracy belt drive aligning device



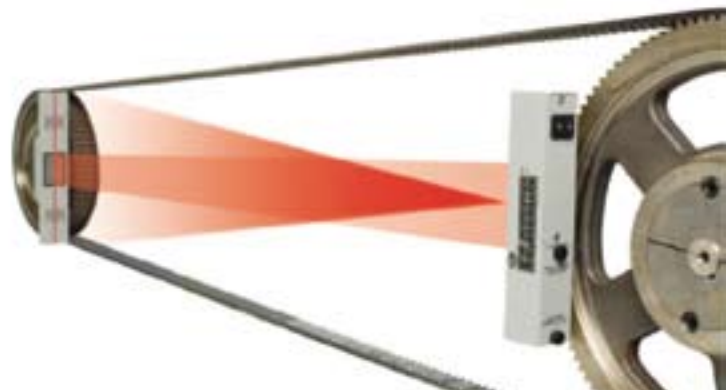
### Item Code - 7420-1000

With the new Gates EZ Align™ precision laser alignment device you can align all of your industrial belt drives quickly and easily with just one tool. Gates EZ Align tool uses powerful laser line technology for maximum angular accuracy on belt drives up to six feet in length.

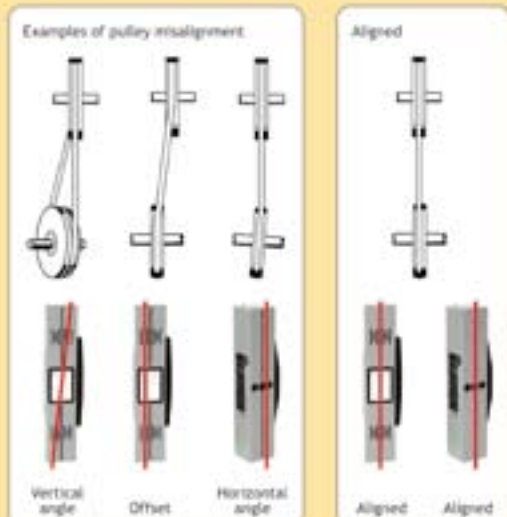
- Reduces vibration and belt noise.
- Prolongs belt and pulley life.
- FAST and EASY.
- Suitable for both V-belt and synchronous belt drives.
- Shows parallel and angular misalignment simultaneously.
- More accurate and efficient than any other tool or method.
- For both horizontally and vertically mounted drives.
- Alignment can be made by one operator.



**Powerful magnetic brackets hold the EZ ALIGN firmly in place**



Simply match the laser line with red lines on the EZ ALIGN. See your results in just seconds.



# MAINTENANCE PRODUCTS



## GATES AT-1 LASER ALIGNMENT TOOL

**Item Code - 7401-10010**

Noise, wear on pulleys, belts and bearings, vibrations and ultimately machine downtime may all be caused by improper pulley alignment. This can be prevented by using Gates' laser alignment device, the LASER AT-1. Mounted in a few seconds, the laser line projected on the targets allows you to quickly ascertain and correct any misalignment. The LASER AT-1 identifies parallel as well as angular misalignment between the pulleys, and is suitable for pulley diameters of 60mm and larger.

It is so light it can be mounted on non-magnetic pulleys with double sided adhesive tape and used on both horizontally and vertically mounted machines.

- For both V-belt and synchronous belt drives.
- Shows parallel and angular misalignment between the pulleys.
- Much faster and more accurate than measuring with earlier, conventional methods.
- For both horizontally and vertically mounted drives.
- Alignment can be made by 1 operator.
- Also suitable for non-magnetic pulleys.



Replacement Targets  
Item Code - LASERTARGET

## GATES BELT AND PULLEY GAUGES

**Item Code - 7401-0015**

Gates colour coded belt and pulley gauges detect worn pulleys and identify belt cross sections. The pulley gauges fit standard industrial grooves, identifying excessive wear before it leads to premature belt failure. The belt gauges can also be used to identify belt cross sections when labels have been worn away. All grouped together on a sturdy chain, the gauges will be a valuable tool to any fitter.



## GATES TENSION TESTERS

**Item Codes -**

**Single Barrel - 15kg: 7401-0076**

**Double Barrel - 30kg: 7401-0075**

Gates have 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 testers 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.



## GATES 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.



## GATES TENSION PLATES

**Item Codes -**

**V-Belt: 496-1999**

**Synch: 496-1998**

No more guessing tensions or wondering what the correct belt should be. Gates can supply all your drive critical information on aluminium badge plates or stick-on labels that can be attached right onto the machine. With the badge or label specifying which belt to use and how many, incorrect belt installation is avoided.



# BELT DRIVE DESIGN SOFTWARE



## GATES DESIGN FLEX PRO SOFTWARE

### Design Flex® Pro™

Design Flex® Pro™ is the newest upgrade to the previous versions of our Design Flex software.

### Fast and Easy

Design a drive in minutes and get numerous drive solutions that fit your design parameters. Plus you can print, email and create a PDF of the design specifications.

Use Design Flex Pro if you want to:

- Quickly and correctly design 2-point drives.
- Get multiple design solutions.
- See both V-belt and synchronous options.
- Save time and money.
- Obtain correct tensioning data for new and existing belt drives.
- Check power capacity of new and existing belt drives.

Gates engineers and technical staff can provide complete drive evaluations and recommendations to standardise your total belt needs. A plant survey can be conducted, and an optimisation program implemented to reduce the total number of different belt and pulley lines. Because of the matching ability of the Gates products, this will enable a reduction on your onsite inventory. The optimisation would also eliminate any under or over designed drives whilst providing full tensioning details for each drive.

**Design  
Flex® Pro™**



Download FREE from  
[www.gates.com/designflex](http://www.gates.com/designflex)

## GATES DESIGN IQ SOFTWARE

### Design IQ™

Our Design IQ program provides a blank canvas for designing multi-point and complex serpentine drives.

You can enter the drive details in minutes then quickly and easily tweak the design to meet your requirements. Once the design is finalised you can create a PDF of the design specifications to email or print.

Design IQ can design drives for the majority of our belt lines including single and double-sided V-belt and synchronous belts.

**Design  
IQ™**



Download FREE from  
[www.gates.com/designiq](http://www.gates.com/designiq)



### GATES VALUE POINT: DESIGN IQ™

When used together Design Flex Pro and Design IQ provide even quicker results.

Example. If replacing a fixed centre distance roller chain drive with Poly Chain GT Carbon use Design Flex Pro to find the sizing and speeds that meets your needs. Then enter these details into Design IQ to add an idler to the system and check for a belt length.