

## SIT LINE-LASER® - pulleys alignment laser device

In order to get the proper performances and lifetime of the belt drive, pulley must be correctly aligned. The LINE-LASER® is the ideal solution for the perfect and quick alignment.

Light and reliable, it combines the laser technology precision with the easy use.

### Advantages

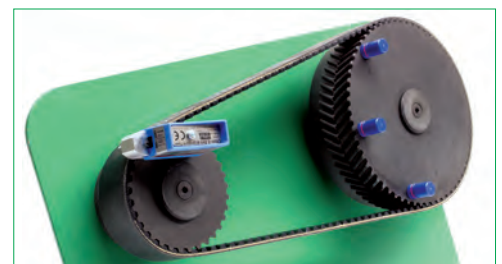
- Belts, pulleys and bearings longer life
- Suitable for any pulley type
- Vibrations reduction
- It corrects axial and angular misalignments
- Lower friction and energy consumption
- Three control references

### Characteristics

- Max allowable center distance: 2 meters (more than can be used, but the beam width is added to the error of pointing)
- Maximum error: 1 mm per meter

Note: The device, by shocks (eg. Accidental fall) could lose the alignments.

Check periodically on a reference surface the tool alignment.



## Drive alignment

Synchronous belts are very sensitive to misalignment. Tension carrying members are generally twisted, multiple strands, of fibreglass cord. Fibreglass has a high tensile strength and resistance to elongation, resulting in a very stable belt product. Any misalignment will lead to inconsistent belt wear, uneven load distribution and premature tensile failure. In general, synchronous drives should not be used where misalignment is a problem.

Misalignment should be limited to 1/4 degree or 4.3 mm per metre of centre distance.

Misalignment can be defined in one of two ways. First, if two sprockets are not located equally on shafts, sprockets are then misaligned, as in Fig. 1. Second, shafts may not be parallel, resulting in misalignment, as in Fig. 2.

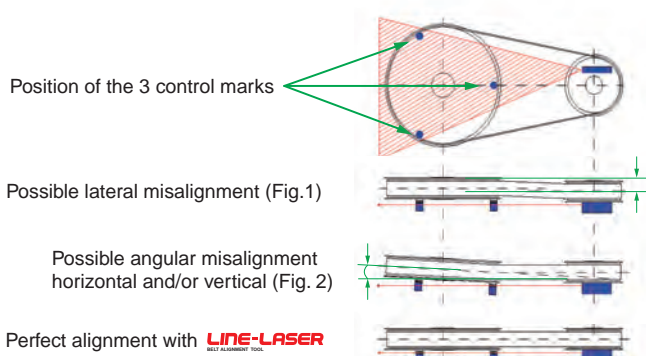
### Misaligned

Any degree of misalignment will reduce belt life and cause edge wear. Therefore, LINE-LASER® should be used to check proper alignment verifying that sprockets and shafts are parallel.

Misalignment, at times, may cause tracking problems. Although some tracking is normal and won't affect belt performance, it may be caused by poorly aligned sprockets. Flanges may control a tracking problem. Considering a two sprocket drive, belt contact on a single flange is acceptable. Belt contact with the opposite flanges of two sprockets should be avoided.

### Aligned

Misalignment can also be attributed to the improper installation of a bushing or loose drive framework. Refer to sprocket manufacture guidelines for proper bushing installation. Secure motor and framework to eliminate vibration centre to centre fluctuations.



## Belt storage

The transmission belts must be stored at a temperature between the 15 and the 20 °C , in a dry and clean place. They must be stored in a horizontal position to avoid deformations.

The belts must never be bent or hung on spikes or hooks. A long exposure to the direct sunlight and light can damage belts.