

# PRODUCT DESCRIPTION

## TIMING BELTS IN optibelt OMEGA PROFILE

### STANDARD PROPERTIES



All optibelt OMEGA timing belts have inherent resistance to oil, heat, cold, ozone and tropical conditions. Special labelling is not required.

#### Oil resistance

The limited oil resistance prevents the damaging effects of mineral oils and greases, as long as these substances are not in permanent contact with the timing belt and/or are not present in large quantities. With increased demands for resistance, e.g. to mineral oils, the performance of the optibelt OMEGA timing belts can be improved by using special belt constructions. Please contact the optibelt Application Engineering Department.

#### Temperature resistance

The timing belt can withstand ambient temperatures from  $\approx -30\text{ }^{\circ}\text{C}$  to  $+100\text{ }^{\circ}\text{C}$ . Temperatures outside this range lead to premature ageing and embrittlement of the timing belts and thus to their premature failure. The temperature resistance of optibelt OMEGA timing belts can be extended using special belt constructions, e.g. up to  $+140\text{ }^{\circ}\text{C}$ . Please contact the OPTIBELT Application Engineering Department.

#### Antistatic properties

Antistatic properties enable the safe discharge of electrostatic charges. This charging can have such a strong impact on timing belts with insufficient electrical conductivity that there is the danger of ignition due to sparks. The use of antistatic timing belts requires that the properties be checked in accordance with ISO 9563, and is confirmed by the issue of an inspection certificate. OMEGA HP and OMEGA HL timing belts in profiles 8M and 14M as well as OMEGA FAN POWER are antistatic according to ISO 9563 by standard and are thus labelled accordingly.

#### Noise emission

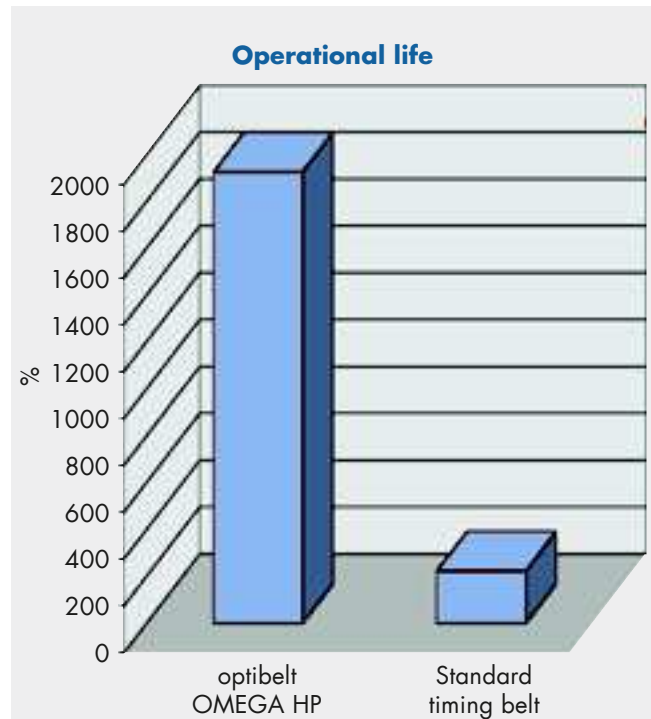
The optimized tooth shape and the indent in the tooth tip of the optibelt OMEGA promote a significantly lower noise level. In combination with the newly developed materials, the noise level is further reduced, even at high speeds and with high belt tensions.

#### Operational life

Belt designs with increased capacity can exceed the potential operational life of standard designs many times over, particularly for highly loaded or overloaded drives. Example: Dynamic tests with optibelt OMEGA HP show that the running times, compared to standard timing belts, are up to 18 times higher.

#### Efficiency

The specially developed tooth fabric and the flexible belt design make possible a virtually frictionless drive with an efficiency of up to 98%.



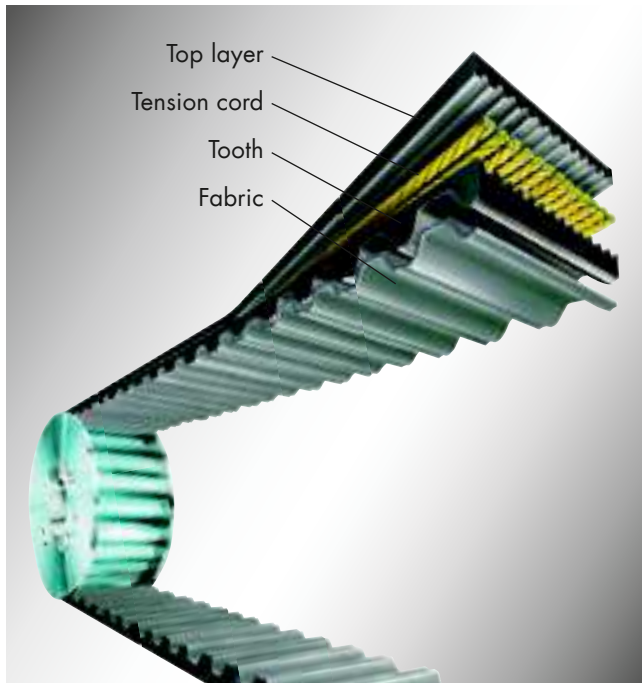
Application example: roller path

# PRODUCT DESCRIPTION

## optibelt OMEGA TIMING BELTS



### Structure



### Top layer

The belt top layer consists of a flexible polychloroprene compound which protects the tension cord from external influences. In addition, it offers limited resistance to mineral oils and humidity as well as protection from frictional wear and tear.

### Tension cord

The tension member is composed of a pair of counter twisted glass fibre cords. These tension cords have high tensile strength, very high flexibility and very low stretch.

### Teeth

Just like the belt top layer, the teeth consist of a polychloroprene compound guaranteeing high shear strength. The dimples in the teeth promote quiet running.

### Fabric

The polyamide fabric protects the teeth from premature wear and tooth root cracking. At the same time, the low coefficient of friction lowers the operating temperature and helps to reduce the running noise.

High performance optibelt OMEGA timing belts are the result of a continuing development process. Operational experience with optibelt ZR and optibelt HTD® has been applied to this belt generation. Endless optibelt OMEGA timing belts set the standard for synchronous performance and for positioning drives.

The geometry of the optibelt OMEGA tooth profile has been developed to run in the established, curvilinear timing belt pulleys. optibelt OMEGA timing belts can be used in 3M, 5M, 8M and 14M HTD® pulley profiles. optibelt ZRS HTD® timing belt pulleys are standard items in our range with pilot bores or bored for optibelt TB taper bushes. In addition, all OMEGA timing belts can also be used in RPP® timing belt pulleys. Special timing belt pulleys for optibelt OMEGA timing belts are not required.



Application example: lawn mowers

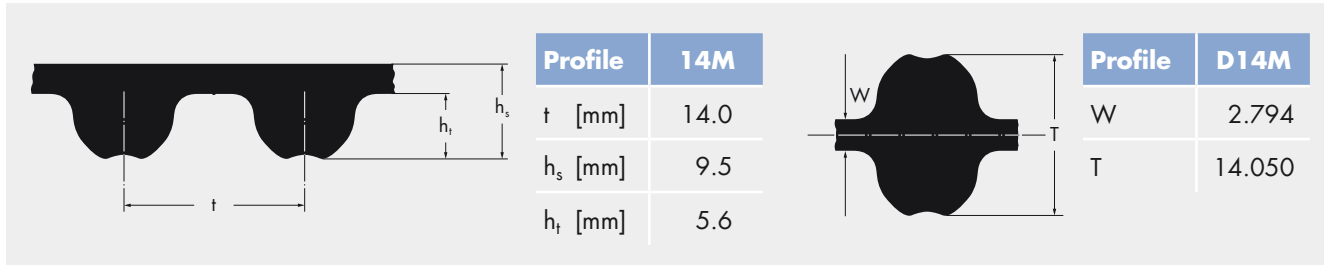
### Overview of the advantages and characteristics

- synchronous speed
- highest precision
- perceptibly lower noise level due to the OMEGA tooth profile
- use in standard HTD® and RPP® timing belt pulleys
- maintenance-free
- temperature resistant from -30 °C to +100 °C
- efficiency of up to 98 %

# PRODUCT DESCRIPTION

## optibelt **OMEGA** TIMING BELTS

### STANDARD PRODUCT RANGE



optibelt OMEGA 14M					
Belt designation	Pitch length [mm]	Number of teeth	Belt designation	Pitch length [mm]	Number of teeth
966 14M▲	966.00	69	2800 14M	2800.00	200
1092 14M	1092.00	78	3150 14M	3150.00	225
1190 14M▲	1190.00	85	3360 14M	3360.00	240
1344 14M	1344.00	96	3500 14M	3500.00	250
1400 14M▲	1400.00	100	3850 14M	3850.00	275
1456 14M	1456.00	104	4004 14M*•	4004.00	286
1512 14M	1512.00	108	4326 14M	4326.00	309
1610 14M▲	1610.00	115	4578 14M	4578.00	327
1680 14M	1680.00	120			
1778 14M▲	1778.00	127			
1890 14M▲	1890.00	135			
2100 14M▲	2100.00	150			
2310 14M▲	2310.00	165			
2450 14M	2450.00	175			
2590 14M	2590.00	185			

**Standard width:** 40 mm, 55 mm, 85 mm, 115 mm, 170 mm  
 • Not available ex stock  
 ▲ Double-sided available in HTD® \* Profile on request

**Order example:** 1400 = 1400 mm pitch length  
 14M = profile  
 55 = 55 mm belt width

TIMING BELTS: optibelt OMEGA 1400 14M 55