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 ≈ -30 °C to +100 °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 °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%





optibelt OMEGA 8M								
Belt designation	Pitch length [mm]	Number of teeth	Belt designation	Pitch length [mm]	Number of teeth	Belt designation	Pitch length [mm]	Number of teeth
288 8M	288.00	36	912 8M	912.00	114	1432 8M (HTD)	1432.00	179
320 8M (HTD)	320.00	40	920 8M▲	920.00	115	1440 8M■	1440.00	180
352 8M	352.00	44	936 8M	936.00	117	1480 8M	1480.00	185
376 8M	376.00	47	960 8M▲	960.00	120	1520 8M■	1520.00	190
416 8M	416.00	52	968 8M	968.00	121	1552 8M■	1552.00	194
424 8M	424.00	53	976 8M	976.00	122	1584 8M=	1584.00	198
480 8M	480.00	60	1000 8M	1000.00	125	1600 8M=	1600.00	200
512 8M	512.00	64	1040 8M▲	1040.00	130	1680 8M=	1680.00	210
520 8M	520.00	65	1056 8M	1056.00	132	1696 8M	1696.00	212
536 8M	536.00	67	1064 8M	1064.00	133	1728 8M=	1728.00	216
560 8M	560.00	70	1080 8M	1080.00	135	1760 8M	1760.00	220
576 8M	576.00	72	1096 8M	1096.00	137	1800 8M	1800.00	225
584 8M	584.00	73	1120 8M=	1120.00	140	1896 8M	1896.00	237
600 8M▲	600.00	75	1128 8M=	1128.00	141	1904 8M	1904.00	238
608 8M	608.00	76	1152 8M•	1152.00	144	1936 8M	1936.00	242
624 8M	624.00	78	1160 8M=	1160.00	145	2000 8M=	2000.00	250
632 8M	632.00	79	1168 8M	1168.00	146	2080 8M=	2080.00	260
640 8M▲	640.00	80	1184 8M=	1184.00	148	2104 8M=	2104.00	263
656 8M▲	656.00	82	1192 8M•	1192.00	149	2240 8M=	2240.00	280
672 8M●	672.00	84	1200 8M=	1200.00	150	2248 8M=	2248.00	281
680 8M	680.00	85	1216 8M=	1216.00	152	2272 8M	2272.00	284
712 8M	712.00	89	1224 8M=	1224.00	153	2400 8M	2400.00	300
720 8M▲	720.00	90	1248 8M=	1248.00	156	2504 8M	2504.00	313
744 8M●	744.00	93	1256 8M=	1256.00	157	2600 8M	2600.00	325
760 8M	760.00	95	1264 8M•=	1264.00	158	2800 8M	2800.00	350
776 8M▲ 784 8M▲ 792 8M● 800 8M▲ 824 8M	776.00 784.00 792.00 800.00 824.00	97 98 99 100 103	1280 8M= 1296 8M• 1304 8M= 1320 8M 1328 8M=	1280.00 1296.00 1304.00 1320.00 1328.00	160 162 163 165 166	3048 8M 3280 8M 3600 8M 4400 8M*	3048.00 3280.00 3600.00 4400.00	381 410 450 550
840 8M 848 8M 856 8M 880 8M▲ 896 8M	840.00 848.00 856.00 880.00 896.00	105 106 107 110 112	1344 8M 1360 8M 1392 8M 1400 8M 1424 8M	1344.00 1360.00 1392.00 1400.00 1424.00	168 170 174 175 178			

Standard width: 20 mm, 30 mm, 50 mm, 85 mm

• Not available ex stock

▲ Double-sided available in HTD[®] ■ Double-sided available in OMEGA on request * Profile on request

Order example:

1200 = 1200 mm pitch length

TIMING BELTS: optibelt OMEGA 1200 8M 50

- 8M = profile 50 = 50 mm belt width