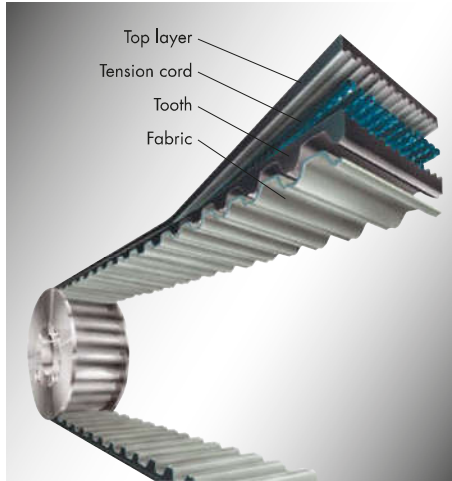


PRODUCT DESCRIPTION

optibelt OMEGA HL TIMING BELTS



Structure



Top layer

The top layer of the optibelt OMEGA HL as well as the teeth, consists of a polychloroprene compound reinforced with aramid fibres. Thus, an even more abrasion resistant surface is in contact with any reverse bend idler. The belt top layer protects the tension cord from environmental influences.

Tension cord

In contrast to the optibelt OMEGA HP with glass cord, the optibelt OMEGA HL uses a significantly higher strength glass cord. Thus, the power can be further increased by up to 25%. The resistance to shock loads is also significantly increased.

Teeth

The considerably increased tooth strength (compared to optibelt OMEGA) is made possible by the use of aramid fibres in the polychloroprene compound. This imparts very high tooth stiffness as well as increased shear strength.

Fabric

The shear strength of the teeth is enhanced by an extremely tough fabric. The shape of the optibelt OMEGA teeth and the minimal friction fabric enable a smooth meshing of the belt tooth into the pulley groove. In addition, the special polyamide fabric is very wear resistant.

The new high performance timing belt for extremely high loads across the whole speed spectrum

Optibelt has developed this belt in the sections 8M and 14M especially for drives with high torques and severe shock loads. These types of drives can often be found in general engineering.

For this use, the structure and the material of the timing belt have been optimised in such a way that highest operational reliability combined with optimal economic efficiency can be achieved when re-designing a drive. Initially, the belt will be available in the 8M section. optibelt OMEGA HL timing belts are used in optibelt ZRS HTD pulleys or in RPP timing belt pulleys. For applications in other pulleys, please contact the Optibelt Application Engineering Department.

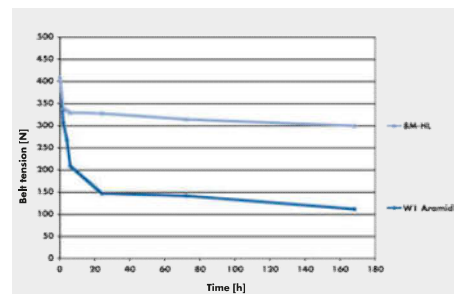
A reinforced glass tension cord is used. This innovative glass cord stands out due to the combination of the following, important characteristics:

- good resistance to shock loads
- very high dynamic resistance
- very low permanent and elastic stretch

Therefore, the belt performance can be increased by an additional 15%, compared to optibelt OMEGA HP. In contrast to an aramid cord, which also has a very high resistance to shock loading, the reinforced glass cord has a considerably lower permanent stretch during the running time. Aramid cord has a high permanent stretch (see diagram) during running. The minimal tension loss of the reinforced glass cord enables a keeping of the pitch and thus to a load which is distributed more evenly on the teeth during running.

In addition, the reinforced glass cord can also be used at medium and high speeds while the use of the aramid cord is limited to low and medium speeds. In contrast to the aramid cord, the reinforced glass cord enables a considerable extension to the range of applications.

Belt tension loss



PRODUCT DESCRIPTION

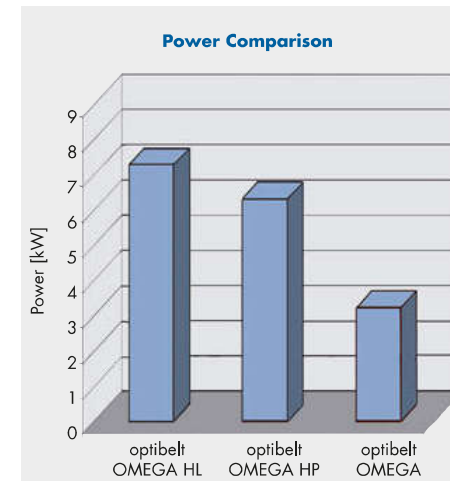
optibelt OMEGA HL TIMING BELTS

CHARACTERISTICS, ADVANTAGES AND APPLICATION EXAMPLES



Power ratings overview

Profile and design	8M HL	8M HP	8M
Pitch [mm]	8	8	8
Width [mm]	20	20	20
Pulley diameter [mm]	96.77	96.77	96.77
Speed [min ⁻¹]	600	600	600
Nominal power [kW]	6.86	5.96	2.82



Preferred application areas

- textile machines
- machine tools
- compressors
- printing machines
- wood working machines
- paper machines

Overview of the advantages and characteristics of the optibelt OMEGA HL

- dimensionally stable structure with high flexibility
- very low permanent and elastic stretch of the cord
- friction and abrasion resistant, fabric with high shear strength
- up to 2.5 times higher power transmission capability (an increase of up to 150%) compared to standard optibelt OMEGA timing belts
- approx. up to 15% increase of the power transmission compared to the established high performance design optibelt OMEGA HP
- suitable for low and high speed, dynamically highly loaded drives
- good resistance to medium and high shock loading
- further extended, very large range of applications
- electrically antistatic to ISO 9563 confirmed on request

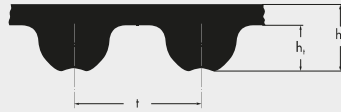
Advantages and characteristics of a drive with optibelt OMEGA HL timing belts in these application areas

- reduced installation space compared to optibelt OMEGA HP and in particular to optibelt OMEGA timing belts in standard design
- reduced costs for belts and pulleys
- better options for drive design
- reduced shaft diameters and smaller bearings
- reduced running noise
- improved efficiency

Significant system cost reduction and high operational reliability for even greater economic efficiency in new drives.

For additional advantages and characteristics, see optibelt OMEGA on page 20.

PRODUCT DESCRIPTION
optibelt OMEGA HL TIMING BELTS
STANDARD PRODUCT RANGE



Profile	8M HL
t [mm]	8.0
hs [mm]	5.4
hi [mm]	3.2

optibelt OMEGA 8M HL								
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 8MHL•	288.00	36	1064 8MHL•	1064.00	133	2800 8MHL	2800.00	350
352 8MHL•	352.00	44	1080 8MHL•	1080.00	135	3048 8MHL	3048.00	381
376 8MHL•	376.00	47	1096 8MHL•	1096.00	137	3280 8MHL•	3280.00	410
416 8MHL•	416.00	52	1120 8MHL•	1120.00	140	3600 8MHL	3600.00	450
424 8MHL•	424.00	53	1128 8MHL•	1128.00	141			
480 8MHL	480.00	60	1160 8MHL•	1160.00	145			
536 8MHL•	536.00	67	1184 8MHL•	1184.00	148			
560 8MHL	560.00	70	1200 8MHL	1200.00	150			
576 8MHL•	576.00	72	1216 8MHL•	1216.00	152			
584 8MHL•	584.00	73	1224 8MHL•	1224.00	153			
600 8MHL•	600.00	75	1248 8MHL•	1248.00	156			
608 8MHL	608.00	76	1280 8MHL	1280.00	160			
632 8MHL•	632.00	79	1304 8MHL	1304.00	163			
640 8MHL	640.00	80	1344 8MHL•	1344.00	168			
656 8MHL	656.00	82	1360 8MHL	1360.00	170			
680 8MHL•	680.00	85	1400 8MHL•	1400.00	175			
712 8MHL•	712.00	89	1424 8MHL	1424.00	178			
720 8MHL	720.00	90	1440 8MHL	1440.00	180			
760 8MHL•	760.00	95	1520 8MHL•	1520.00	190			
776 8MHL	776.00	97	1552 8MHL•	1552.00	194			
784 8MHL	784.00	98	1584 8MHL•	1584.00	198			
800 8MHL	800.00	100	1600 8MHL	1600.00	200			
824 8MHL•	824.00	103	1680 8MHL•	1680.00	210			
840 8MHL•	840.00	105	1696 8MHL•	1696.00	212			
848 8MHL•	848.00	106	1728 8MHL•	1728.00	216			
856 8MHL•	856.00	107	1760 8MHL	1760.00	220			
880 8MHL	880.00	110	1800 8MHL	1800.00	225			
896 8MHL•	896.00	112	1936 8MHL•	1936.00	242			
912 8MHL	912.00	114	2000 8MHL	2000.00	250			
920 8MHL	920.00	115	2240 8MHL	2240.00	280			
960 8MHL	960.00	120	2248 8MHL•	2248.00	281			
976 8MHL•	976.00	122	2272 8MHL•	2272.00	284			
1000 8MHL•	1000.00	125	2400 8MHL	2400.00	300			
1040 8MHL	1040.00	130	2504 8MHL•	2504.00	313			
1056 8MHL•	1056.00	132	2600 8MHL	2600.00	325			

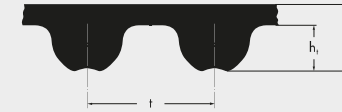
Standard width: 20 mm, 30 mm, 50 mm, 85 mm
 (Further sizes and special width ranges on request) • Not available ex stock

Order example:

TIMING BELTS: optibelt OMEGA HL 1200 8M HL 20

1200 = 1200 mm pitch length
 8M HL = profile and design
 20 = 20 mm belt width

PRODUCT DESCRIPTION
optibelt OMEGA HL TIMING BELTS
STANDARD PRODUCT RANGE



Profile	14M HL
t [mm]	14.0
hs [mm]	9.5
hi [mm]	5.6

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

Standard width: 40 mm, 55 mm, 85 mm, 115 mm, 170 mm
 (Further sizes and special width ranges on request) • Not available ex stock

Order example:

TIMING BELTS: optibelt OMEGA HL 1400 14M HL 40

1400 = 1400 mm pitch length
 14M HL = profile and design
 40 = 40 mm belt width