

POWERGRIP® - HTD®

TOOTHED BELTS

The HTD® toothed belts are produced with the following pitches: 3mm., 5mm., 8mm., 14mm. and 20mm.

The 3mm., 5mm., 8mm. and 14mm. pitches are marketed by **CHIARAVALLI Trasmissioni S.p.A.** in a wide range of lengths and widths.

The main belt dimensions are as follows:

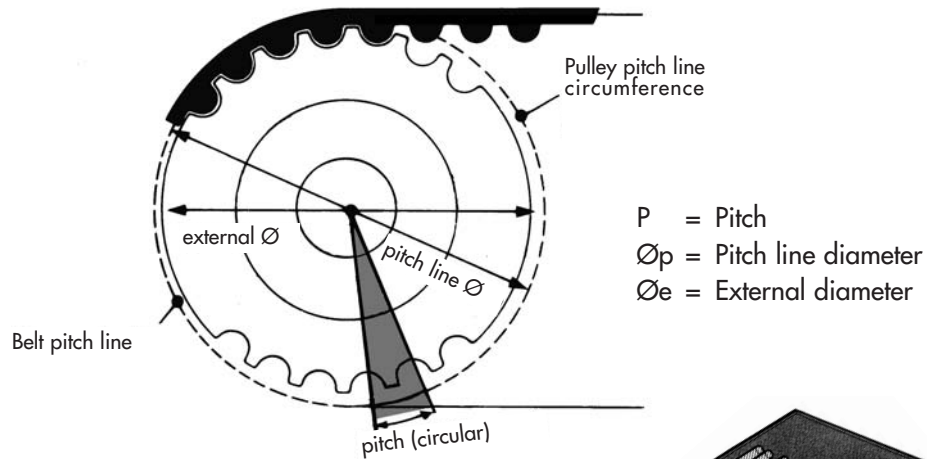
PITCH LINE LENGTH - PITCH - WIDTH

The product of the pitch by the number of teeth of a given belt corresponds to the belt's pitch line length.

The belt pitch is given by the distance between the axes of two adjacent teeth, in mm., measured along the belt's pitch line.

The theoretical pitch line of a HTD® belt is positioned halfway along the reinforcing inserts.

Belt characteristics



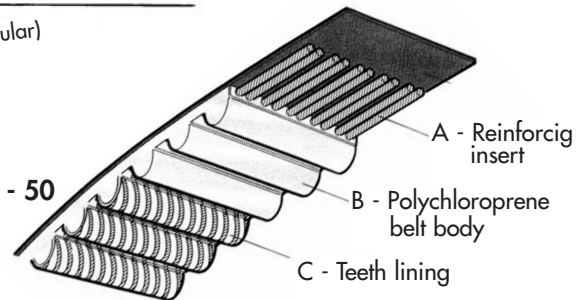
Belt identification

Pitch line extension

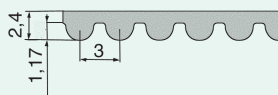
Pitch in mm.

Belt width

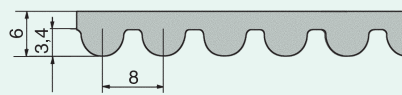
1040 - 8M - 50



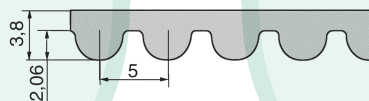
HTD® 3M



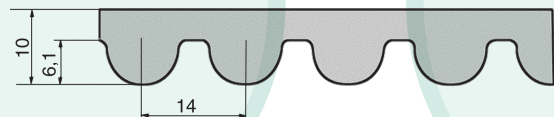
HTD® 8M



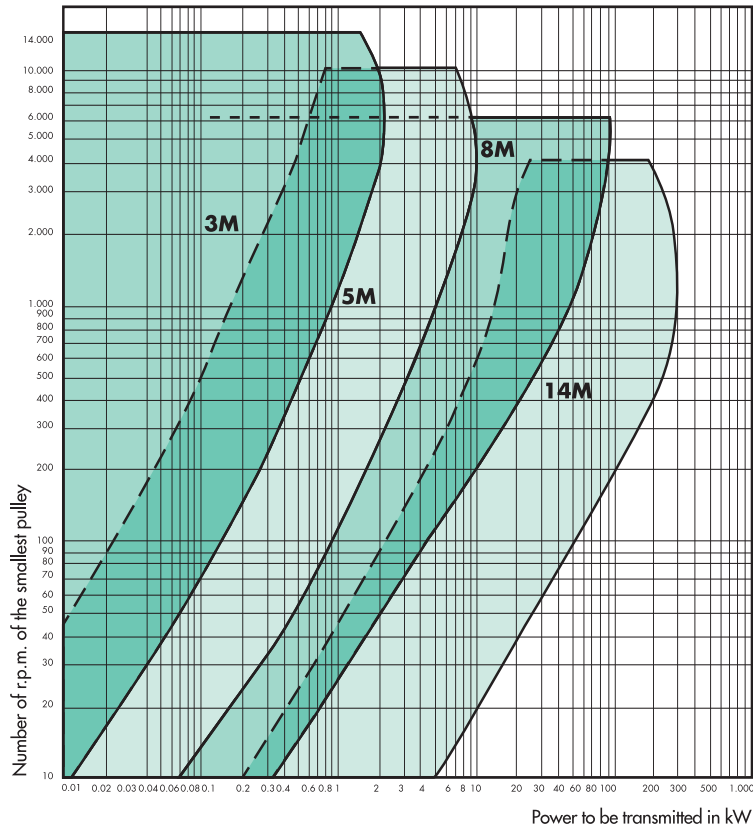
HTD® 5M



HTD® 14M



Belt tolerances along the pitch line length are limited, to achieve the correct belt tension therefore, it is necessary to be able to adjust the centres distance or tension the belt using a tensioning roller.



HTD® BELT WIDTHS

PITCH	HTD® 3M	HTD® 5M	HTD® 8M	HTD® 14M
BELT WIDTHS mm.	6 9 15	9 15 25	20 30 50 85	40 55 85 115 170

TOLERANCE ON CENTRES DISTANCE

BELTS PITCH LINE LENGTH	CENTRES DISTANCE TOLERANCE mm.
from 127 to 254	±0.2
from 255 to 381	±0.23
from 382 to 508	±0.25
from 509 to 762	±0.30
from 763 to 1016	±0.33
from 1017 to 1270	±0.38
from 1271 to 1524	±0.41
from 1525 to 1778	±0.43
longer than 1779	add ± 0.03 for every 254 mm. of additional length.

TOLERANCES ON HTD® BELT LENGTH

BELT WIDTH	TOLERANCE mm. FOR LENGTHS from 0 to 838.2	TOLERANCE mm. FOR LENGTHS from 838.2 to 1676.4	TOLERANCE mm. FOR LENGTHS from 1676.4 and longer
from 11.1 a 38.1	+ 0.8 - 0.8	+ 0.8 - 1.2	+ 0.8 - 1.2
from 38.2 a 50.8	+ 0.8 - 1.2	+ 1.2 - 1.2	+ 1.2 - 1.6
from 50.9 a 63.5	+ 1.2 - 1.2	+ 1.2 - 1.6	+ 1.6 - 1.6
from 63.6 a 76.2	+ 1.2 - 1.6	+ 1.6 - 1.6	+ 1.6 - 2.0
from 76.3 a 101.6	+ 1.6 - 1.6	+ 1.6 - 2.0	+ 2.0 - 2.0
from 101.7 a 177.8	+ 2.4 - 2.4	+ 1.6 - 2.0	+ 2.0 - 2.0
longer than 177.9			+ 4.8 - 6.4

" G A T E S [®] " P O W E R G R I P [®] B E L T S

HTD [®] 3M (3mm pitch)			HTD [®] 5M (5mm pitch)			HTD [®] 8M (8mm pitch)			HTD [®] 14M (14mm pitch)		
No. of TEETH	PITCH LINE LENGTH	BELT TYPE	No. of TEETH	PITCH LINE LENGTH	BELT TYPE	No. of TEETH	PITCH LINE LENGTH	BELT TYPE	No. of TEETH	PITCH LINE LENGTH	BELT TYPE
50	150	150-3M	36	180	180-5M	60	480	480-8M	69	966	966-14M
55	165	165-3M	45	225	225-5M	70	560	560-8M	85	1190	1190-14M
60	180	180-3M	51	255	255-5M	75	600	600-8M	100	1400	1400-14M
65	195	195-3M	56	280	280-5M	80	640	640-8M	115	1610	1610-14M
70	210	210-3M	60	300	300-5M	90	720	720-8M	127	1778	1778-14M
75	225	225-3M	61	305	305-5M	100	800	800-8M	135	1890	1890-14M
84	252	252-3M	65	325	325-5M	110	880	880-8M	150	2100	2100-14M
85	255	255-3M	68	340	340-5M	115	920	920-8M	165	2310	2310-14M
95	285	285-3M	70	350	350-5M	120	960	960-8M	175	2450	2450-14M
100	300	300-3M	75	375	375-5M	130	1040	1040-8M	185	2590	2590-14M
110	330	330-3M	80	400	400-5M	140	1120	1120-8M	200	2800	2800-14M
119	357	357-3M	85	425	425-5M	150	1200	1200-8M	225	3150	3150-14M
128	384	384-3M	90	450	450-5M	160	1280	1280-8M	250	3500	3500-14M
140	420	420-3M	95	475	475-5M	180	1440	1440-8M	275	3850	3850-14M
149	447	447-3M	100	500	500-5M	200	1600	1600-8M	309	4326	4326-14M
158	474	474-3M	105	525	525-5M	220	1760	1760-8M	327	4578	4578-14M
171	513	513-3M	110	550	550-5M	225	1800	1800-8M			
188	564	564-3M	112	560	560-5M	250	2000	2000-8M			
204	612	612-3M	115	575	575-5M	300	2400	2400-8M			
245	735	735-3M	120	600	600-5M	325	2600	2600-8M			
246	738	738-3M	127	635	635-5M	350	2800	2800-8M			
268	804	804-3M	134	670	670-5M						
			140	700	700-5M						
			150	750	750-5M						
			160	800	800-5M						
			172	860	860-5M						
			180	900	900-5M						
			190	950	950-5M						
			196	980	980-5M						
			207	1035	1035-5M						
			210	1050	1050-5M						
			235	1175	1175-5M						
			240	1200	1200-5M						
			270	1350	1350-5M						

POWERGRIP[®] HTD[®] 8M (8mm. pitch) DUAL BELTS

HTD[®] 8M (8mm pitch)

No. of TEETH	PITCH LINE LENGTH	BELT TYPE
60	480	480-8M DUAL
70	560	560-8M DUAL
75	600	600-8M DUAL
80	640	640-8M DUAL
90	720	720-8M DUAL
100	800	800-8M DUAL
110	880	880-8M DUAL
120	960	960-8M DUAL
130	1040	1040-8M DUAL
140	1120	1120-8M DUAL

HTD[®] 8M (8mm pitch)

No. of TEETH	PITCH LINE LENGTH	BELT TYPE
150	1200	1200-8M DUAL
160	1280	1280-8M DUAL
180	1440	1440-8M DUAL
200	1600	1600-8M DUAL
220	1760	1760-8M DUAL
225	1800	1800-8M DUAL
250	2000	2000-8M DUAL
300	2400	2400-8M DUAL
325	2600	2600-8M DUAL
350	2800	2800-8M DUAL

CHIARAVALLI Trasmissioni S.p.A. manufactures the HTD® pulleys in the following pitches: 3mm., 5mm., 8mm. and 14mm. and in the following versions:

- a) HTD® Pilot Bore pulleys
- b) HTD® with Taper-Lock taper bush

Belt identification:

34 8M 50 { 34 No. of teeth
8M pitch in mm.
50 belt width

TL 30 14M 55 { TL TAPER LOCK
30 No. of teeth
14M pitch in mm.
55 belt width

PULLEY BALANCING VALUES

The HTD® pulleys manufactured by our company are not balanced. Balancing is performed at cost, only on request.

We are able to balance pulleys up to a maximum diameter of 560 mm. and issue the relative certificate.

PULLEY DIAMETERS	SURFACE WIDTH	MAXIMUM UNBALANCE IN GRAMS
from 199 - 301	60	6
from 302 - 599	60	10
from 199 - 301	from 60 - 99	10
from 302 - 599		15
from 600 - 999		20
greater than 1000		30

PULLEY DIAMETER	SURFACE WIDTH	MAXIMUM UNBALANCE IN GRAMS
from 199 - 301	da 100 - 199	20
from 302 - 599		30
from 600 - 999		40
greater than 1000		60

CONSTRUCTION TOLERANCE VALUES

De pulley	Tolerance in mm.	
from Ø 0 to Ø 30	- 0	+ 0.05
from Ø 31 to Ø 50	- 0	+ 0.08
from Ø 51 to Ø 100	- 0	+ 0.10
from Ø 101 to Ø 179	- 0	+ 0.13
from Ø 180 to Ø 300	- 0	+ 0.15
from Ø 301 to Ø 500	- 0	+ 0.18
from Ø greater than Ø 51	- 0	+ 0.20

ECCENTRICITY

The bore and outer diameter must be concentric in compliance with the tolerance values indicated below

external Ø mm.	Total eccentricity (mm)
up to 199	Total measurement of the comparison 0.10
greater than 200	0.0005 per mm. diameter. This value cannot exceed the tolerance for the external Ø.