



DRIVE DESIGN  
AND TECHNICAL MANUAL

**HIGH PERFORMANCE POWERPLUS  
POLYURETHANE MOULDED TIMING BELT  
SLEEVE IMPERIAL TOOTH**

**DRIVE BELT  
TECHNOLOGY .**

## SECTION 2.2.1 | TIMING BELTS | POLYURETHANE BELTS

DIN 7721 / ISO 13050 / IP27 RMA-MPTA

HIGH PERFORMANCE POWERPLUS POLYURETHANE MOULDED TIMING BELT SLEEVE IMPERIAL TOOTH MXL, XL, L, H AND D-MXL, D-XL

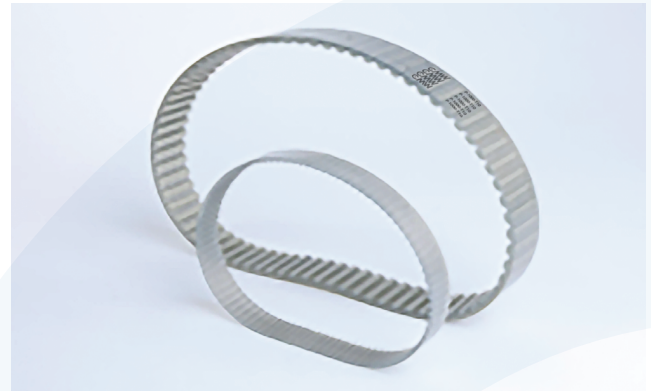
### FEATURES

Produced from robust thermoset molding process it delivers extreme high breaking loads, low elongation to reach high transmission power.

Built to deliver exceptional dimensional stability, abrasion resistance, no pilling generation, exceptional rigidity.

Our precision moulded truly endless polyurethane process offers a perfect power synchronous transmission belts where clean and quiet operation is required while maintaining over time and fatigue a perfect tooth meshing. The specially-developed precision-moulding endless-PU-process ensures high pitch precision across the entire belt.

Can be produced in multiple forms for your application convenience. Non static conductive, maximum oil and ozone resistance Heat resistance, support flex fatigue Multiple applications are possible with this belt.



Our CMW Power Transmission in Power are also available with aramid or polyester cords for special requirements such as non-magnetic, water exposed and high flexible drives. They deliver an extremely high breaking load with low elongation, resulting in high transmission power.

### STRUCTURE DETAILS

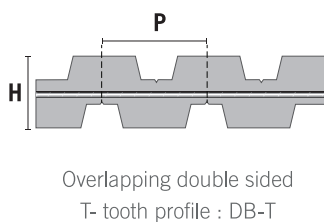
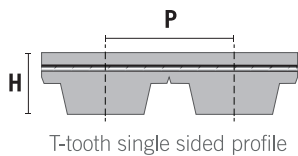
#### Polyurethane Body

High-grade mixed thermoset polyurethane compound (CPU) delivers a range of benefits. Exceptional dimensional stability and rigidity with excellent abrasion resistance. Provides excellent resistance to wear, fatigue and environmental conditions.

#### Tensile cord

Encapsulated within the polyurethane layers, steel wires form a tensile cord that delivers an extremely high breaking load, with low elongation to reach high transmission power.

#### Dimensions



ISO 5296	MXL	XL	L	H
Pitch (inches)	2/25	1/5	3/8	1/2
Pitch (mm)	2.032	5.080	9.525	12.700
Height (mm)	0.51	1.27	1.91	2.29
Angle (°) +/-1	40	50	40	40
Width (mm)	114	2.57	4.65	6.12
Foot radius (mm)	0.13	0.38	0.51	1.02
Head radius (mm)	0.13	0.38	0.51	1.02
Belt thickness (mm)	115	2.30	3.60	4.30
Belt weight per meter per 100mm width (Kg/m)	0.15	0.26	0.40	0.46
Min. Crimp Steel Cord (mm)	20	30	60	80
Min. Crimp Kevlar Cord (mm)	20	30	60	80
Min. Crimp Polyester Cord (mm)	25	35	65	85
Teeth range (min-max)	65-268	30-315	33-194	40-220
Pitch length (mm)	132.08-544.58	152.40-2540.0	314.33-1847.85	508.0-2794.0

2.2.1 HIGH PERFORMANCE POWERPLUS POLYURETHANE MOULDED TIMING BELT SLEEVE IMPERIAL TOOTH

Applications



Appliances/  
Machinery



Packaging



Textile

Marking

Sleeves

**CMW**  
**CMW**  
**CMW**  
**CMW**  
**CMW**

P-344-XL-PUS-K  
P-344-XL-PUS-K  
P-344-XL-PUS-K  
P-344-XL-PUS-K  
P-344-XL-PUS-K

batch code/worker code

Cut pieces

**CMW**  
**CMW**  
**CMW**  
**CMW**  
**CMW**

P-510-H-037-PU-S  
P-510-H-037-PU-S  
P-510-H-037-PU-S  
P-510-H-037-PU-S  
P-510-H-037-PU-S

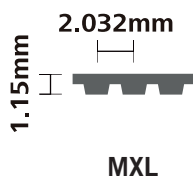
batch code/worker code

Product Codification

P-87-MXL-300-PU-S means

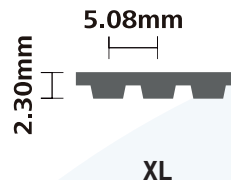
P	87	MXL	300	PU	S
Performance line	Length in inches x 10 8,7 inches - 176,78mm	Section MXL Pitch 1/2 inches - 12,700mm	Width 300 mm	PU Transparent	Steel cord (or K : Kevlar)

2.2.1 HIGH PERFORMANCE POWERPLUS POLYURETHANE MOULDED TIMING BELT SLEEVE IMPERIAL TOOTH



Standard Width	
code	mm
012	3.2
019	4.8
025	6.4
031	7.9

MXL



Standard width	
code	mm
025	6.4
031	7.9
037	9.5
050	12.7
075	19.1

XL

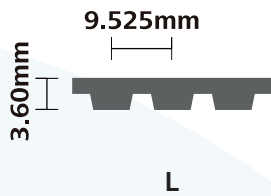
Standard Belt Range

CMW Product code	GTIN (EAN) code	Number of teeth	Pitch Length Lp (mm)
P-B75-MXL-200-PU-S	3666445017781	75	152,4
P-B85-MXL-200-PU-S	3666445017774	85	172,72
P-B86-MXL-200-PU-S	3666445017767	86	174,752
P-B87-MXL-200-PU-S	3666445017750	87	176,784
P-B98-MXL-200-PU-S	3666445017743	98	199,136
P-B105-MXL-200-PU-S	3666445017736	105	213,36
P-B106-MXL-300-PU-S	3666445017729	106	215,392
P-B108-MXL-200-PU-S	3666445017712	108	219,456
P-B112-MXL-200-PU-S	3666445017705	112	227,584
P-B112-MXL-300-PU-S	3666445017699	112	227,584
P-B118-MXL-200-PU-S	3666445017682	118	239,776
P-B120-MXL-200-PU-S	3666445017675	120	243,84
P-B122-MXL-200-PU-S	3666445017668	122	247,904
P-B130-MXL-200-PU-S	3666445017651	130	264,16
P-B132-MXL-200-PU-S	3666445017644	132	268,224
P-B158-MXL-300-PU-S	3666445017637	158	321,056
P-B162-MXL-200-PU-S	3666445017620	162	329,184
P-B165-MXL-200-PU-S	3666445017613	165	335,28
P-B166-MXL-200-PU-S	3666445017606	166	337,312
P-B170-MXL-200-PU-S	3666445017590	170	345,44
P-B184-MXL-200-PU-S	3666445017583	184	373,888
P-B184-MXL-400-PU-S	3666445017576	184	373,888
P-B370-MXL-300-PU-S	3666445017569	370	751,84
P-B390-MXL-300-PU-S	3666445017552	390	792,48
P-B466-MXL-300-PU-S	3666445017545	466	946,912

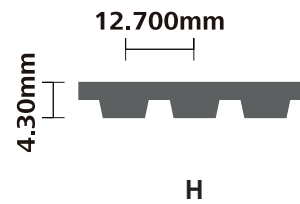
Standard Belt Range

CMW Product code	GTIN (EAN) code	Number of teeth	Pitch Length Lp (mm)
P-80-XL-200-PU-S	3666445017538	40	203,2
P-108-XL-400-PU-S	3666445017521	54	274,32
P-110-XL-400-PU-S	3666445017514	55	279,4
P-160-XL-400-PU-S	3666445017507	80	406,4
P-228-XL-400-PU-S	3666445017491	114	579,12
P-258-XL-400-PU-S	3666445017484	129	655,32
P-270-XL-400-PU-S	3666445017477	135	685,8
P-344-XL-400-PU-S	3666445017460	172	873,76
P-360-XL-400-PU-S	3666445017453	180	914,4

2.2.1 HIGH PERFORMANCE POWERPLUS POLYURETHANE MOULDED TIMING BELT SLEEVE IMPERIAL TOOTH



Standard width	
code	mm
050	12.7
075	19.1
100	25.4
150	38.1
200	50.8



Standard width	
code	mm
075	19.1
100	25.4
150	38.1
200	50.8
300	76.2

Standard Belt Range

CMW Product code	GTIN (EAN) code	Number of teeth	Pitch Length Lp (mm)
P-165-L-300-PU-S	3666445017446	44	419,1
P-202-L-300-PU-S	3666445017439	54	514,35
P-195-L-300-PU-S	3666445017422	52	495,3
P-187-L-300-PU-S	3666445017415	50	476,25
P-334-L-400-PU-S	3666445017408	89	847,725
P-360-L-300-PU-S	3666445017392	96	914,4

Standard Belt Range

CMW Product code	GTIN (EAN) code	Number of teeth	Pitch Length Lp (mm)
P-210-H-400-PU-S	3666445017385	42	533,4
P-240-H-400-PU-S	3666445017378	48	609,6
P-255-H-400-PU-S	3666445017361	51	647,7
P-270-H-400-PU-S	3666445017354	54	685,8
P-280-H-400-PU-S	3666445017347	56	711,2
P-510-H-400-PU-S	3666445017330	102	1295,4
P-600-H-400-PU-S	3666445017323	120	1524
P-700-H-400-PU-S	3666445017316	140	1778
P-950-H-400-PU-S	3666445017309	190	2413
P-1000-H-400-PU-S	3666445017293	200	2540

## POWER RATING

### 2.2.1 HIGH PERFORMANCE POWERPLUS POLYURETHANE MOULDED TIMING BELT SLEEVE IMPERIAL TOOTH

#### Section MXL

<b>BELT WIDTH (mm)</b>	<b>3,2 (012")</b>	<b>4,8 (019")</b>	<b>6,4 (025")</b>
<b>PULLEY WIDTH B2 (mm)</b>	5,6	7,1	8,9
<b>BELT WEIGHT (gr/cm)</b>	0,035	0,053	0,073

TRANSMITTABLE POWER (kW/cm of tooth in mesh)													
n\z	10	12	14	16	18	20	24	26	28	30	32	36	40
600	0,0015	0,0018	0,0021	0,0024	0,0027	0,0029	0,0035	0,0038	0,0041	0,0044	0,0047	0,0053	0,0059
800	0,0019	0,0022	0,0026	0,0030	0,0033	0,0037	0,0044	0,0048	0,0052	0,0056	0,0059	0,0067	0,0074
1000	0,0022	0,0026	0,0031	0,0035	0,0040	0,0044	0,0053	0,0057	0,0062	0,0066	0,0071	0,0079	0,0088
1400	0,0029	0,0034	0,0040	0,0046	0,0052	0,0057	0,0069	0,0074	0,0080	0,0086	0,0092	0,0103	0,0114
1800	0,0035	0,0041	0,0048	0,0055	0,0062	0,0069	0,0083	0,0090	0,0097	0,0104	0,0111	0,0125	0,0138
2000	0,0037	0,0045	0,0052	0,0060	0,0067	0,0075	0,0090	0,0097	0,0105	0,0112	0,0120	0,0135	0,0150
3000	0,0050	0,0060	0,0070	0,0080	0,0090	0,0100	0,0120	0,0130	0,0141	0,0151	0,0161	0,0181	0,0201
4000	0,0061	0,0074	0,0086	0,0098	0,0110	0,0123	0,0147	0,0159	0,0172	0,0184	0,0196	0,0221	0,0245
5000	0,0071	0,0085	0,0100	0,0114	0,0128	0,0142	0,0171	0,0185	0,0199	0,0214	0,0228	0,0256	0,0285
8000	0,0096	0,0115	0,0134	0,0153	0,0172	0,0191	0,0230	0,0249	0,0268	0,0287	0,0306	0,0344	0,0383

#### Section XL

<b>BELT WIDTH (mm)</b>	<b>6,4 (025")</b>	<b>7,9 (031")</b>	<b>9,4 (037")</b>
<b>PULLEY WIDTH B2 (mm)</b>	8,9	10,4	12,2
<b>BELT WEIGHT (gr/cm)</b>	0,121	0,153	0,182

TRANSMITTABLE POWER (kW/cm of tooth in mesh)													
n\z	10	12	14	16	18	20	24	28	32	40	48	60	72
100	0,0017	0,0021	0,0024	0,0028	0,0031	0,0034	0,0041	0,0049	0,0055	0,0069	0,0083	0,0104	0,0124
200	0,0031	0,0038	0,0044	0,0051	0,0057	0,0062	0,0076	0,0089	0,0102	0,0126	0,0152	0,0190	0,0228
600	0,0081	0,0098	0,0114	0,0131	0,0147	0,0159	0,0195	0,0228	0,0260	0,0326	0,0391	0,0489	0,0586
1000	0,0125	0,0150	0,0175	0,0201	0,0226	0,0244	0,0300	0,0351	0,0401	0,0501	0,0602	0,0752	0,0902
1500	0,0175	0,0211	0,0245	0,0281	0,0315	0,0341	0,0421	0,0491	0,0562	0,0702	0,0842	0,1053	0,1264
2000	0,0222	0,0267	0,0311	0,0355	0,0400	0,0432	0,0534	0,0622	0,0711	0,0889	0,1067	0,1333	0,1599
3000	0,0309	0,0370	0,0432	0,0494	0,0555	0,0600	0,0740	0,0863	0,0987	0,1233	0,1480	0,1850	0,2220
4000	0,0388	0,0465	0,0542	0,0620	0,0698	0,0753	0,0930	0,1085	0,1240	0,1550	0,1860	0,2325	0,2791
5000	0,0461	0,0554	0,0646	0,0739	0,0831	0,0897	0,1108	0,1293	0,1477	0,1847	0,2215	0,2769	0,3323
8000	0,0661	0,0794	0,0926	0,1058	0,1190	0,1285	0,1588	0,1852	0,2117	0,2646	0,3175	0,3969	0,4763

#### Section L

<b>BELT WIDTH (mm)</b>	<b>12,7 (050")</b>	<b>19,1 (075")</b>	<b>25,4 (100")</b>
<b>PULLEY WIDTH B2 (mm)</b>	19	25,4	29,7
<b>BELT WEIGHT (gr/cm)</b>	0,437	0,661	0,878

TRANSMITTABLE POWER (kW/cm of tooth in mesh)													
n\z	10	12	14	16	18	20	22	24	28	30	32	36	40
100	0,0054	0,0065	0,0076	0,0085	0,0096	0,0107	0,0118	0,0129	0,0150	0,0161	0,0159	0,0179	0,0199
200	0,0096	0,0116	0,0135	0,0154	0,0174	0,0192	0,0212	0,0231	0,0270	0,0289	0,0285	0,0321	0,0357
600	0,0237	0,0284	0,0332	0,0379	0,0426	0,0473	0,0490	0,0521	0,0572	0,0613	0,0606	0,0681	0,0757
1000	0,0354	0,0424	0,0496	0,0566	0,0637	0,0707	0,0779	0,0849	0,0990	0,1062	0,1048	0,1179	0,1311
1500	0,0483	0,0579	0,0675	0,0772	0,0868	0,0966	0,1062	0,1158	0,1351	0,1447	0,1430	0,1608	0,1787
2000	0,0597	0,0717	0,0837	0,0956	0,1076	0,1196	0,1315	0,1434	0,1674	0,1793	0,1771	0,1992	0,2214
3000	0,0800	0,0960	0,1120	0,1280	0,1440	0,1601	0,1760	0,1920	0,2240	0,2400	0,2370	0,2667	0,2963
4000	0,0975	0,1171	0,1365	0,1561	0,1756	0,1950	0,2146	0,2341	0,2731	0,2926	0,2890	0,3251	0,3613
5000	0,1131	0,1356	0,1583	0,1809	0,2036	0,2262	0,2487	0,2714	0,3167	0,3392	0,3350	0,3769	0,4188
8000	0,1511	0,1813	0,2115	0,2417	0,2719	0,3022	0,3324	0,3626	0,4230	0,4533	0,4477	0,5036	0,5596

#### Section H

<b>BELT WIDTH (mm)</b>	<b>19,1 (075")</b>	<b>25,4 (100")</b>	<b>38,1 (150")</b>	<b>50,8 (200")</b>	<b>76,2 (300")</b>
<b>PULLEY WIDTH B2 (mm)</b>	25,4	29,7	46	59	85
<b>BELT WEIGHT (gr/cm)</b>	0,745	1,059	1,594	2,121	3,194

TRANSMITTABLE POWER (kW/cm of tooth in mesh)													
n\z	14	16	18	20	22	24	26	28	30	32	36	40	44
100	0,0138	0,0153	0,0176	0,0200	0,0215	0,0230	0,0253	0,0275	0,0299	0,0316	0,0368	0,0391	0,0426
200	0,0247	0,0275	0,0316	0,0357	0,0386	0,0413	0,0455	0,0496	0,0537	0,0568	0,0660	0,0702	0,0766
600	0,0608	0,0676	0,0778	0,0879	0,0946	0,1014	0,1116	0,1217	0,1319	0,1394	0,1622	0,1724	0,1880
1000	0,0909	0,1011	0,1163	0,1314	0,1416	0,1516	0,1669	0,1820	0,1972	0,2085	0,2427	0,2578	0,2811
1500	0,1241	0,1378	0,1585	0,1792	0,1930	0,2068	0,2276	0,2482	0,2689	0,2844	0,3309	0,3516	0,3834
2000	0,1537	0,1707	0,1963	0,2220	0,2391	0,2562	0,2818	0,3074	0,3331	0,3523	0,4099	0,4355	0,4749
3000	0,2057	0,2285	0,2629	0,2971	0,3200	0,3429	0,3772	0,4115	0,4458	0,4715	0,5486	0,5830	0,6357
4000	0,2508	0,2786	0,3205	0,3623	0,3902	0,4181	0,4599	0,5017	0,5435	0,5748	0,6688	0,7106	0,7750
5000	0,2907	0,3230	0,3715	0,4200	0,4523	0,4846	0,5331	0,5815	0,6300	0,6664	0,7753	0,8238	0,8985
8000	0,3885	0,4317	0,4965	0,5612	0,6044	0,6475	0,7123	0,7770	0,8418				



## Your expert in DRIVE BELT TECHNOLOGY

CMW Power Transmission designs, manufactures and distributes rubber and polyurethane drive belts in wide variety of industrial and agricultural applications to become your favourite power transmission brand.

### **CMW Power Transmission SAS**

21 Avenue de l'Industrie, 69960 Corbas, France  
+33 4 28 29 29 82 | **email** [info@cmwpt.com](mailto:info@cmwpt.com)