PINGXIANG HUSHENG RUBBER PRODUCTS CO.,LTD

XL Synchronous Belt — Specification & Complete Size Chart

5.080 mm (0.200 in) Pitch Inch-Pitch Trapezoidal Timing Belt · Conforms to ISO 5296 · Shusheng Brand

Shusheng

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XL Synchronous Belt — Specification, Materials & Complete Size Chart

1. XL Synchronous Belt Overview

An inch-pitch trapezoidal tooth timing belt for light-duty precision drives in office equipment, appliances and small industrial machinery.

The XL synchronous belt (also written XL timing belt) is an **inch-pitch trapezoidal tooth** belt with a **5.080 mm (0.200 in) pitch**. It transmits power through the meshing of belt teeth with pulley grooves rather than by friction, so an XL drive runs with no slip, no speed drift and no lubrication. The XL profile is the smallest commonly used member of the classic inch-pitch trapezoidal family; it sits above MXL (2.032 mm) for heavier loads and below L (9.525 mm) for compact installations.

An XL belt delivers up to **98% transmission efficiency**, runs at line speeds up to **40 m/s** and holds a speed ratio up to **1:10**, with quiet, maintenance-free operation and support for multi-shaft drives. Every belt conforms to **ISO 5296** and is dimensionally interchangeable with equivalent-profile XL belts from other mainstream manufacturers. This document covers the belt code (section 2), the technical specification (section 3), the size list from **42XL** to **2128XL** (section 4), materials and contact details.



Figure 1: An XL synchronous belt — 5.080 mm (0.200 in) pitch, 1.27 mm tooth height, 2.3 mm belt thickness — with the pitch length code moulded on the back.

2. Belt Designation & Code Meaning

How the profile, the dimensions and the code on the belt are read.

2.1 Profile geometry

The XL profile is fixed by four numbers: a **tooth pitch of 5.080 mm (0.200 in)**, a **tooth angle of 50 degrees**, a **tooth height of 1.27 mm** and a **belt total thickness of about 2.3 mm**. The trapezoidal tooth form keeps timing accurate under reversing and shock loads.

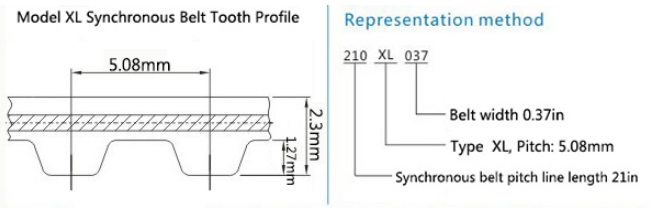


Figure 2: XL tooth profile and representation method — a 5.08 mm (0.200 in) tooth pitch, a 1.27 mm tooth height and a 2.3 mm belt total thickness, with the code read as pitch line length – type XL – belt width.

2.2 How the code reads

An XL belt is designated by its **pitch line length code** in tenths of an inch, followed by the profile letters **XL**; the width code is added only on invoices and order forms. The belt itself is printed with the length code only, for example **210XL**, which is also written **XL210** or **XL-210** — all three mean the same length: a **21.0 in (533.4 mm) pitch line length and 105 teeth**.

The full order code with a width is written **210 XL 037**, **XL210-037** or **210-XL-037**, meaning an XL belt of 21.0 in (533.4 mm) pitch length and **9.4 mm (0.37 in) width**. The number is the **pitch line length in tenths of an inch** measured at the cord line, not the outside or inside length. Pitch line length in millimetres equals the code value multiplied by 2.54 mm, and the tooth count is the pitch length divided by the 5.080 mm pitch — **42XL** is 4.2 in / 106.7 mm / 21 teeth, **210XL** is 21.0 in / 533.4 mm / 105 teeth and **2128XL** is 212.8 in / 5405.1 mm / 1064 teeth.

2.3 Belt widths

Table 1 XL standard belt widths (non-standard widths and custom lengths on request)

Width Code	Width (in / mm)	Typical Drive Duty
025	0.25 in / 6.4 mm	3D printers, small scanners, camera drives
031	0.31 in / 7.9 mm	Copier paper feeds, small appliances
037	0.37 in / 9.4 mm	Sewing machines, small conveyors
050	0.50 in / 12.7 mm	Vending machines, packaging, small robotics
075	0.75 in / 19 mm	Higher-torque light drives, wider small machinery

2.4 Marking & interchangeability

3. Technical Specifications

All sizes share the same profile, materials and performance; only the pitch length and tooth count change.

Table 2 XL Synchronous Belt — Profile & Dimensions

Property	Specification
Profile / System	Inch-pitch synchronous belt, trapezoidal tooth (XL series)
Tooth Pitch	5.080 mm (0.200 in)
Tooth Angle	50 degrees
Tooth Height	1.27 mm (0.050 in)
Belt Total Thickness	~2.3 mm (0.090 in)
Minimum Pulley Diameter	16 mm (0.625 in), 10 teeth
Standard Widths	025 / 031 / 037 / 050 / 075 (0.25 / 0.31 / 0.37 / 0.50 / 0.75 in); non-standard widths on request
Standard	Conforms to ISO 5296 (synchronous belt drives, inch-pitch trapezoidal tooth profile)

Table 3 XL Synchronous Belt — Performance & Ordering Data

Property	Specification
Tensile Member	High-strength glass fiber cord with very low elongation
Body Compound	Premium synthetic chloroprene rubber (CR), blended with rubber additives
Tooth Facing	Specially treated high-elasticity Nylon 66 fabric
Transmission Efficiency	Up to 98%
Maximum Linear Speed	40 m/s
Speed Ratio	Up to 1:10 (multi-shaft drives supported)
Operating Temperature	−30 °C to +90 °C
Pitch Length Range	42XL to 2128XL — 4.2 in to 212.8 in (106.7 mm to 5405.1 mm, 260 standard models)
Minimum Order Quantity	100 pcs per size (standard); custom sizes on request
Indicative Price Range	US$0.34 – US$54.05 per piece (varies by length and width)
Lead Time	15–20 days

Every code in the range maps directly to its dimensions: the **number in the code is the pitch line length in tenths of an inch**, the **millimetre length is that value multiplied by 2.54**, and the **tooth count is the pitch length divided by the 5.080 mm pitch**. So 42XL is 4.2 in / 106.7 mm / 21 teeth, 210XL is 21.0 in / 533.4 mm / 105 teeth, and 2128XL is 212.8 in / 5405.1 mm / 1064 teeth.

4. Complete XL Size Chart

The table below lists every stocked XL belt with its pitch line length and tooth count. The number in an XL belt code is the pitch line length in tenths of an inch — so **210XL** is a belt with a **21.0 in (533.4 mm) pitch line length and 105 teeth** — and the tooth count follows as pitch length divided by the 5.080 mm pitch.

Table 4 Complete XL Synchronous Belt Size Chart — 260 codes, 42XL to 2128XL

Belt Code	Pitch Length (in)	Pitch Length (mm)	Teeth (n)	Belt Code	Pitch Length (in)	Pitch Length (mm)	Teeth (n)	Belt Code	Pitch Length (in)	Pitch Length (mm)	Teeth (n)	Belt Code	Pitch Length (in)	Pitch Length (mm)	Teeth (n)
42XL	4.2	106.7	21	174XL	17.4	442.0	87	310XL	31.0	787.4	155	520XL	52.0	1320.8	260
44XL	4.4	111.8	22	176XL	17.6	447.0	88	312XL	31.2	792.5	156	522XL	52.2	1325.9	261
46XL	4.6	116.8	23	178XL	17.8	452.1	89	314XL	31.4	797.6	157	530XL	53.0	1346.2	265
48XL	4.8	121.9	24	180XL	18.0	457.2	90	316XL	31.6	802.6	158	532XL	53.2	1351.3	266
50XL	5.0	127.0	25	182XL	18.2	462.3	91	318XL	31.8	807.7	159	540XL	54.0	1371.6	270
54XL	5.4	137.2	27	184XL	18.4	467.4	92	320XL	32.0	812.8	160	548XL	54.8	1391.9	274
56XL	5.6	142.2	28	186XL	18.6	472.4	93	322XL	32.2	817.9	161	550XL	55.0	1397.0	275
58XL	5.8	147.3	29	188XL	18.8	477.5	94	324XL	32.4	823.0	162	552XL	55.2	1402.1	276
60XL	6.0	152.4	30	190XL	19.0	482.6	95	326XL	32.6	828.0	163	554XL	55.4	1407.2	277
62XL	6.2	157.5	31	192XL	19.2	487.7	96	328XL	32.8	833.1	164	560XL	56.0	1422.4	280
64XL	6.4	162.6	32	194XL	19.4	492.8	97	330XL	33.0	838.2	165	564XL	56.4	1432.6	282
66XL	6.6	167.6	33	196XL	19.6	497.8	98	332XL	33.2	843.3	166	566XL	56.6	1437.6	283
68XL	6.8	172.7	34	198XL	19.8	502.9	99	336XL	33.6	853.4	168	570XL	57.0	1447.8	285
70XL	7.0	177.8	35	200XL	20.0	508.0	100	338XL	33.8	858.5	169	572XL	57.2	1452.9	286
72XL	7.2	182.9	36	202XL	20.2	513.1	101	340XL	34.0	863.6	170	574XL	57.4	1458.0	287
74XL	7.4	188.0	37	204XL	20.4	518.2	102	344XL	34.4	873.8	172	576XL	57.6	1463.0	288
76XL	7.6	193.0	38	206XL	20.6	523.2	103	346XL	34.6	878.8	173	580XL	58.0	1473.2	290
78XL	7.8	198.1	39	208XL	20.8	528.3	104	348XL	34.8	883.9	174	592XL	59.2	1503.7	296
80XL	8.0	203.2	40	210XL	21.0	533.4	105	350XL	35.0	889.0	175	600XL	60.0	1524.0	300
82XL	8.2	208.3	41	212XL	21.2	538.5	106	352XL	35.2	894.1	176	612XL	61.2	1554.5	306
84XL	8.4	213.4	42	214XL	21.4	543.6	107	356XL	35.6	904.2	178	616XL	61.6	1564.6	308
86XL	8.6	218.4	43	216XL	21.6	548.6	108	360XL	36.0	914.4	180	630XL	63.0	1600.2	315
88XL	8.8	223.5	44	218XL	21.8	553.7	109	362XL	36.2	919.5	181	638XL	63.8	1620.5	319
90XL	9.0	228.6	45	220XL	22.0	558.8	110	364XL	36.4	924.6	182	648XL	64.8	1645.9	324
92XL	9.2	233.7	46	222XL	22.2	563.9	111	370XL	37.0	939.8	185	650XL	65.0	1651.0	325
94XL	9.4	238.8	47	224XL	22.4	569.0	112	372XL	37.2	944.9	186	660XL	66.0	1676.4	330
96XL	9.6	243.8	48	226XL	22.6	574.0	113	374XL	37.4	950.0	187	662XL	66.2	1681.5	331
98XL	9.8	248.9	49	228XL	22.8	579.1	114	376XL	37.6	955.0	188	670XL	67.0	1701.8	335
100XL	10.0	254.0	50	230XL	23.0	584.2	115	380XL	38.0	965.2	190	672XL	67.2	1706.9	336
102XL	10.2	259.1	51	234XL	23.4	594.4	117	382XL	38.2	970.3	191	686XL	68.6	1742.4	343
104XL	10.4	264.2	52	236XL	23.6	599.4	118	384XL	38.4	975.4	192	690XL	69.0	1752.6	345
106XL	10.6	269.2	53	238XL	23.8	604.5	119	386XL	38.6	980.4	193	700XL	70.0	1778.0	350
108XL	10.8	274.3	54	240XL	24.0	609.6	120	388XL	38.8	985.5	194	710XL	71.0	1803.4	355
110XL	11.0	279.4	55	242XL	24.2	614.7	121	390XL	39.0	990.6	195	720XL	72.0	1828.8	360
112XL	11.2	284.5	56	244XL	24.4	619.8	122	392XL	39.2	995.7	196	728XL	72.8	1849.1	364
114XL	11.4	289.6	57	246XL	24.6	624.8	123	394XL	39.4	1000.8	197	736XL	73.6	1869.4	368
116XL	11.6	294.6	58	248XL	24.8	629.9	124	396XL	39.6	1005.8	198	738XL	73.8	1874.5	369
118XL	11.8	299.7	59	250XL	25.0	635.0	125	398XL	39.8	1010.9	199	748XL	74.8	1899.9	374
120XL	12.0	304.8	60	252XL	25.2	640.1	126	400XL	40.0	1016.0	200	754XL	75.4	1915.2	377
122XL	12.2	309.9	61	254XL	25.4	645.2	127	412XL	41.2	1046.5	206	762XL	76.2	1935.5	381
124XL	12.4	315.0	62	256XL	25.6	650.2	128	414XL	41.4	1051.6	207	770XL	77.0	1955.8	385
126XL	12.6	320.0	63	258XL	25.8	655.3	129	420XL	42.0	1066.8	210	788XL	78.8	2001.5	394
128XL	12.8	325.1	64	260XL	26.0	660.4	130	422XL	42.2	1071.9	211	792XL	79.2	2011.7	396
130XL	13.0	330.2	65	262XL	26.2	665.5	131	424XL	42.4	1077.0	212	828XL	82.8	2103.1	414
132XL	13.2	335.3	66	264XL	26.4	670.6	132	430XL	43.0	1092.2	215	840XL	84.0	2133.6	420
134XL	13.4	340.4	67	266XL	26.6	675.6	133	432XL	43.2	1097.3	216	860XL	86.0	2184.4	430
136XL	13.6	345.4	68	268XL	26.8	680.7	134	434XL	43.4	1102.4	217	888XL	88.8	2255.5	444
138XL	13.8	350.5	69	270XL	27.0	685.8	135	438XL	43.8	1112.5	219	900XL	90.0	2286.0	450
140XL	14.0	355.6	70	272XL	27.2	690.9	136	440XL	44.0	1117.6	220	926XL	92.6	2352.0	463
142XL	14.2	360.7	71	274XL	27.4	696.0	137	450XL	45.0	1143.0	225	950XL	95.0	2413.0	475
144XL	14.4	365.8	72	276XL	27.6	701.0	138	456XL	45.6	1158.2	228	962XL	96.2	2443.5	481
146XL	14.6	370.8	73	278XL	27.8	706.1	139	460XL	46.0	1168.4	230	964XL	96.4	2448.6	482
148XL	14.8	375.9	74	280XL	28.0	711.2	140	462XL	46.2	1173.5	231	1014XL	101.4	2575.6	507
150XL	15.0	381.0	75	282XL	28.2	716.3	141	464XL	46.4	1178.6	232	1016XL	101.6	2580.6	508
152XL	15.2	386.1	76	284XL	28.4	721.4	142	470XL	47.0	1193.8	235	1020XL	102.0	2590.8	510
154XL	15.4	391.2	77	286XL	28.6	726.4	143	478XL	47.8	1214.1	239	1032XL	103.2	2621.3	516
156XL	15.6	396.2	78	288XL	28.8	731.5	144	480XL	48.0	1219.2	240	1066XL	106.6	2707.6	533
158XL	15.8	401.3	79	290XL	29.0	736.6	145	490XL	49.0	1244.6	245	1180XL	118.0	2997.2	590
160XL	16.0	406.4	80	292XL	29.2	741.7	146	492XL	49.2	1249.7	246	1200XL	120.0	3048.0	600
162XL	16.2	411.5	81	294XL	29.4	746.8	147	496XL	49.6	1259.8	248	1220XL	122.0	3098.8	610
164XL	16.4	416.6	82	296XL	29.6	751.8	148	498XL	49.8	1264.9	249	1280XL	128.0	3251.2	640
166XL	16.6	421.6	83	300XL	30.0	762.0	150	500XL	50.0	1270.0	250	1300XL	130.0	3302.0	650
168XL	16.8	426.7	84	302XL	30.2	767.1	151	506XL	50.6	1285.2	253	1494XL	149.4	3794.8	747
170XL	17.0	431.8	85	304XL	30.4	772.2	152	510XL	51.0	1295.4	255	1552XL	155.2	3942.1	776
172XL	17.2	436.9	86	306XL	30.6	777.2	153	514XL	51.4	1305.6	257	2128XL	212.8	5405.1	1064

All **260** codes from **42XL** to **2128XL** are listed above; custom lengths and widths on request. Download the specification PDF from the product page: drive-belt.com/timing-belts/xl-synchronous-belt.

5. Materials, Construction & Application

> **Layer 01 — Tensile member**
> High-strength glass fiber cord carries the full tensile load with very low elongation, keeping the pitch length stable under load.

> **Layer 02 — Body compound**
> Premium synthetic chloroprene rubber (CR) blended with additives; bonds and protects the cord and resists heat, cold, oil, water, acid, alkali, ozone and flex fatigue.

> **Layer 03 — Tooth facing**
> Specially treated high-elasticity Nylon 66 fabric; low friction and high wear resistance preserve the tooth form and keep the drive quiet.

5.1 Application

XL belts drive light-duty precision equipment such as printers, copiers and scanners, sewing machines, small conveyors, packaging equipment, vending machines, camera and 3D printer drives, juicers, dryers and linear motion positioning systems.

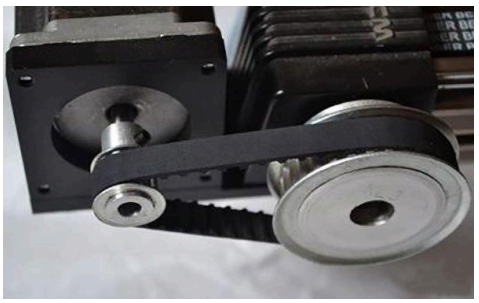


Figure 3: An XL timing belt on a small motor drive — positive tooth engagement keeps the speed exact, with no slip and no lubrication.

6. Contact & Ordering Information

Company: Pingxiang Husheng Rubber Products Co.,Ltd • **Brand:** Shusheng
Website: https://drive-belt.com • **XL Belt page:** https://drive-belt.com/timing-belts/xl-synchronous-belt
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