

2. Synchronous Belt (Rubber/Polyurethane) Product Introduction

The synchronous belts are belts for synchronous power transmission that combine the features of gears, chains, and flat belts. They are available in abundant types and sizes and are therefore easy to design for a wide range of applications from light duty to heavy duty. They are available in synthetic rubber type and polyurethane type (Bancollan); select them based on their respective features.

(1) Synchronous Belt (rubber)

Features

■ Accurate power transmission

The belt and pulleys mesh accurately and therefore provide revolutions and the amount of movement as calculated.

■ Economical power transmission

- No metal-to-metal contact eliminates the necessity for lubrication devices.
- As high initial tension is unnecessary, the bearing and motor can be miniaturized.

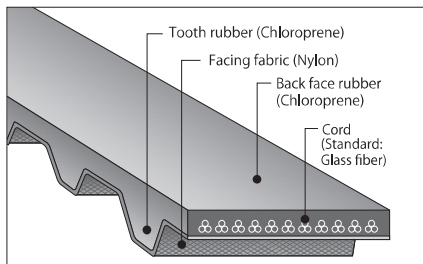
■ Wide range of operating conditions

In addition to the standard specifications, we manufacture the following special specification synchronous belts.

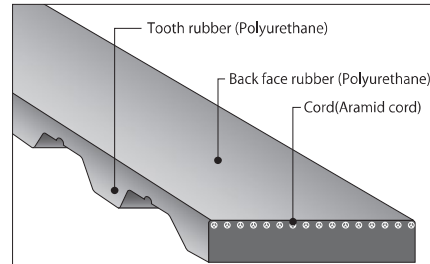
- Oil-resistant synchronous belt (when the belt is used where it is subject to a large amount of oil)
- Heat-resistant synchronous belt (when the belt is used at high temperatures from 90°C to 120°C)
- High-electrical-resistance synchronous belt (when insulation of 100 M.Ω or more is required)

Structure

(1) Synchronous Belt (rubber)



(2) Bancollan Synchronous Belt (polyurethane)



*Glass fiber cords are also available; please contact us.

(2) Bancollan Synchronous Belt (polyurethane)

Features

■ Resistant to oil and ozone

Non-occurrence of swelling by oil and of cracking by ozone makes the belt most suitable for the following applications.

- Applications in which the oil from gears and bearings adhere to the belt, such as metal working machines and printing machines
- Applications that involve ozone generation, such as optical machines, copiers, and developers

■ Clean power transmission and conveyance

The beautiful color and the non-dispersion of rubber pieces allow sections around the belt to be kept clean. The belt is suitable for OA equipment and food packaging machines.

Belt dimensions and indication method

(1) Synchronous Belt (rubber)

Belt type	Dimension (mm)	Belt indication method
Type MXL		B 250 MXL 6.4 Belt No. of teeth of belt (250 teeth: 508.0 mm) Belt type (Type MXL) Belt width (6.4mm)
Type XXL		60 XXL 4.8 No. of teeth of belt (60 teeth: 190.5 mm) Belt type (Type XXL) Belt width (4.8mm)
Type XL		250 XL 025 G Belt nominal length (25 inches: 635 mm) Belt type (Type XL) Belt nominal width (0.25 inches: 6.4 mm) Cord symbol
Type L		300 L 100 G Belt nominal length (30 inches: 762 mm) Belt type (Type L) Belt nominal width (1.0 inches: 25.4 mm) Cord symbol
Type H		600 H 200 G Belt nominal length (60 inches: 1524 mm) Belt type (Type H) Belt nominal width (2.0 inches: 50.8 mm) Cord symbol
Type XH		700 XH 400 G Belt nominal length (70 inches: 1778 mm) Belt type (Type XH) Belt nominal width (4.0 inches: 101.6 mm) Cord symbol
Type XXH		1200 XXH 600 G Belt nominal length (120 inches: 3048 mm) Belt type (Type XXH) Belt nominal width (6.0 inches: 152.4 mm) Cord symbol

Bancollan Synchronous Belt (polyurethane) standard lengths

Type T2.5 Pitch: 2.5 mm					Type T5 Pitch: 5.0 mm				
Belt nominal length	Pitch length (mm)	No. of teeth	R	U	Belt nominal length	Pitch length (mm)	No. of teeth	R	U
T2.5-120	120.0	48	-	○	T5-165	165.0	33	-	○
T2.5-145	145.0	58	-	○	T5-185	185.0	37	-	○
T2.5-160	160.0	64	-	○	T5-200	200.0	40	-	○
T2.5-177.5	177.5	71	-	○	T5-215	215.0	43	-	○
T2.5-182.5	182.5	73	-	○	T5-220	220.0	44	-	○
T2.5-200	200.0	80	-	○	T5-225	225.0	45	-	○
T2.5-230	230.0	92	-	○	T5-245	245.0	49	-	○
T2.5-245	245.0	98	-	○	T5-250	250.0	50	-	○
T2.5-265	265.0	106	-	○	T5-255	255.0	51	-	○
T2.5-285	285.0	114	-	○	T5-260	260.0	52	-	○
T2.5-305	305.0	122	-	○	T5-270	270.0	54	-	○
T2.5-317.5	317.5	127	-	○	T5-275	275.0	55	-	○
T2.5-330	330.0	132	-	○	T5-280	280.0	56	-	○
T2.5-380	380.0	152	-	○	T5-295	295.0	59	-	○
T2.5-420	420.0	168	-	○	T5-300	300.0	60	-	○
T2.5-480	480.0	192	-	○	T5-305	305.0	61	-	○
T2.5-492.5	492.5	197	-	○	T5-325	325.0	65	-	○
T2.5-500	500.0	200	-	○	T5-330	330.0	66	-	○
T2.5-600	600.0	240	-	○	T5-340	340.0	68	-	○
T2.5-620	620.0	248	-	○	T5-350	350.0	70	-	○
T2.5-650	650.0	260	-	○	T5-355	355.0	71	-	○
T2.5-780	780.0	312	-	○	T5-365	365.0	73	-	○
T2.5-915	915.0	366	-	○	T5-375	375.0	75	-	○
T2.5-950	950.0	380	-	○	T5-390	390.0	78	-	○
					T5-400	400.0	80	-	○
					T5-410	410.0	82	-	○
					T5-420	420.0	84	-	○
					T5-425	425.0	85	-	○
					T5-450	450.0	90	-	○
					T5-455	455.0	91	-	○
					T5-465	465.0	93	-	○
					T5-475	475.0	95	-	○
					T5-480	480.0	96	-	○
					T5-500	500.0	100	-	○
					T5-510	510.0	102	-	○
					T5-525	525.0	105	-	○
					T5-545	545.0	109	-	○
					T5-550	550.0	110	-	○
					T5-560	560.0	112	-	○
					T5-575	575.0	115	-	○
					T5-600	600.0	120	-	○
					T5-610	610.0	122	-	○
					T5-620	620.0	124	-	○
					T5-630	630.0	126	-	○
					T5-640	640.0	128	-	○
					T5-650	650.0	130	-	○
					T5-660	660.0	132	-	○
					T5-675	675.0	135	-	○
					T5-690	690.0	138	-	○
					T5-695	695.0	139	-	○
					T5-700	700.0	140	-	○
					T5-720	720.0	144	-	○
					T5-750	750.0	150	-	○
					T5-780	780.0	156	-	○
					T5-800	800.0	160	-	○
					T5-815	815.0	163	-	○
					T5-840	840.0	168	-	○
					T5-850	850.0	170	-	○
					T5-900	900.0	180	-	○
					T5-940	940.0	188	-	○
					T5-990	990.0	198	-	○
					T5-1000	1000.0	200	-	○
					T5-1075	1075.0	215	-	○
					T5-1100	1100.0	220	-	○
					T5-1140	1140.0	228	-	○
					T5-1215	1215.0	243	-	○
					T5-1380	1380.0	276	-	○
					T5-1440	1440.0	288	-	○

R: Rubber
U: Polyurethane

Type T10 Pitch: 10.0 mm				
Belt nominal length	Pitch length (mm)	No. of teeth	R	U
T10-260	260.0	26	-	○
T10-370	370.0	37	-	○
T10-400	400.0	40	-	○
T10-410	410.0	41	-	○
T10-440	440.0	44	-	○
T10-450	450.0	45	-	○
T10-500	500.0	50	-	○
T10-530	530.0	53	-	○
T10-560	560.0	56	-	○
T10-610	610.0	61	-	○
T10-630	630.0	63	-	○
T10-660	660.0	66	-	○
T10-690	690.0	69	-	○
T10-700	700.0	70	-	○
T10-720	720.0	72	-	○
T10-750	750.0	75	-	○
T10-780	780.0	78	-	○
T10-810	810.0	81	-	○
T10-840	840.0	84	-	○
T10-880	880.0	88	-	○
T10-890	890.0	89	-	○
T10-900	900.0	90	-	○
T10-920	920.0	92	-	○
T10-960	960.0	96	-	○
T10-970	970.0	97	-	○
T10-980	980.0	98	-	○
T10-1000	1000.0	100	-	○
T10-1010	1010.0	101	-	○
T10-1080	1080.0	108	-	○
T10-1100	1100.0	110	-	○
T10-1110	1110.0	111	-	○
T10-1140	1140.0	114	-	○
T10-1150	1150.0	115	-	○
T10-1210	1210.0	121	-	○
T10-1240	1240.0	124	-	○
T10-1250	1250.0	125	-	○
T10-1300	1300.0	130	-	○
T10-1320	1320.0	132	-	○
T10-1350	1350.0	135	-	○
T10-1390	1390.0	139	-	○
T10-1400	1400.0	140	-	○
T10-1420	1420.0	142	-	○
T10-1440	1440.0	144	-	○
T10-1450	1450.0	145	-	○
T10-1460	1460.0	146	-	○
T10-1500	1500.0	150	-	○
T10-1560	1560.0	156	-	○
T10-1610	1610.0	161	-	○
T10-1750	1750.0	175	-	○
T10-1780	1780.0	178	-	○
T10-1880	1880.0	188	-	○
T10-1960	1960.0	196	-	○
T10-2250	2250.0	225	-	○

Rubber Synchronous Belt standard widths

Nominal width			025	031	037	050	075	100	150	200	300	400	500	600
Width (mm)	3.2	4.8	6.4	7.9	9.5	12.7	19.1	25.4	38.1	50.8	76.2	101.6	127.0	152.4
MXL	●	●	●		●	●								
XL(DXL)			●	●	●	●	●							
L(DL)						●	●	●	●	●				
H(DH)							●	●	●	●	●			
XH										●	●	●	●	●
XXH										●	●	●	●	●

Rubber Synchronous Belt length tolerances

MXL nominal length	Tolerance
Over 45 to 71 or less	±0.15
Over 71 to 180 or less	±0.20
Over 180 to 250 or less	±0.25
Over 250 to 379 or less	±0.30
Over 379 to 480 or less	±0.35
Over 480 to 550 or less	±0.40
551 or more	±0.45

Note) The effective length tolerance is the tolerance of center distance in length measurement.

XL/L/H/XXH nominal length	Tolerance
Over 60 to 100 or less	±0.20
Over 100 to 150 or less	±0.23
Over 150 to 200 or less	±0.25
Over 200 to 300 or less	±0.30
Over 300 to 390 or less	±0.33
Over 390 to 480 or less	±0.38
Over 480 to 600 or less	±0.40
Over 600 to 700 or less	±0.43
Over 700 to 800 or less	±0.45
Over 800 to 900 or less	±0.48
Over 900 to 1000 or less	±0.51
Over 1000 to 1100 or less	±0.53
Over 1100 to 1200 or less	±0.56
Over 1200 to 1300 or less	±0.58
Over 1300 to 1400 or less	±0.61
Over 1400 to 1500 or less	±0.64
Over 1500 to 1600 or less	±0.66
Over 1600 to 1700 or less	±0.68
Over 1700 to 1800 or less	±0.71
1801 or more	±0.75

Note) The effective length tolerance is the tolerance of center distance in length measurement.

Rubber Double-Sided Synchronous Belt length tolerances

DXL/DL/DH nominal length	Tolerance
100 or less	+0.40,-0.20
Over 100 to 150 or less	+0.46,-0.23
Over 150 to 200 or less	+0.50,-0.25
Over 200 to 300 or less	+0.60,-0.30
Over 300 to 390 or less	+0.66,-0.33
Over 390 to 480 or less	+0.76,-0.38
Over 480 to 600 or less	+0.80,-0.40
Over 600 to 700 or less	+0.86,-0.43
Over 700 to 800 or less	+0.90,-0.45
Over 800 to 900 or less	+0.96,-0.48
Over 900 to 1000 or less	+1.02,-0.51
Over 1000 to 1100 or less	+1.06,-0.53
Over 1100 to 1200 or less	+1.12,-0.56
Over 1200 to 1300 or less	+1.16,-0.58
Over 1300 to 1400 or less	+1.21,-0.61
Over 1400 to 1500 or less	+1.28,-0.64
Over 1500 to 1600 or less	+1.32,-0.66
Over 1600 to 1700 or less	+1.36,-0.68

Note) The effective length tolerance is the tolerance of center distance in length measurement.

Rubber Synchronous Belt width tolerances

XL/L/H nominal width	Tolerance	MXL nominal width	Tolerance
025	±0.4	3.2	+0.3 -0.6
031			
037			
050	±0.5	9.5	+0.4,-0.8
075			
100	±0.7		
150			
200	±0.8		
250			
300			
	±1.3		

*The tolerance for Types XH and XXH is ±2.0 mm regardless of the nominal width.

Synchronous Belt / Double-Sided Synchronous Belt

Product Introduction

Bancollan Synchronous Belt (polyurethane) standard widths

Nominal width			025	031	037	050	075	100	150	200	3	5	7	10	13	15	20	25	30	50
Width (mm)	3.2	4.8	6.4	7.9	9.5	12.7	19.1	25.4	38.1	50.8	3	5	7	10	13	15	20	25	30	50
MXL	○	○	○	○	○	○														
XL(DXL)			○	○	○	○	○													
L						○	○	○	○	○										
T2.5											○	○	○		○					
T5(DT5)												○		○		○	○	○		
T10(DT10)																○	○	○	○	○

Bancollan Synchronous Belt (polyurethane) length tolerances

Belt type	Nominal length	Tolerance (Unit: mm)
MXL	45 or more to 71 or less	±0.15
	Over 71 to 180 or less	±0.20
	Over 180 to 250 or less	±0.25
	Over 250 to 375 or less	±0.30
	Over 375 to 490 or less	±0.35
	Over 490 to 600 or less	±0.40
XL(DXL) L	Over 60 to 100 or less	±0.20
	Over 100 to 200 or less	±0.25
	Over 200 to 300 or less	±0.30
	Over 300 to 390 or less	±0.35
	Over 390 to 780 or less	±0.40
T5(DT5) T10(DT10)	Over 780 to 800 or less	±0.45
	Over 150 to 320 or less	±0.15
	Over 320 to 630 or less	±0.18
	Over 630 to 1000 or less	±0.25
	Over 1000 to 1960 or less	±0.40
Over 1960 to 2300 or less	±0.50	

Bancollan Synchronous Belt (polyurethane) width tolerances

MXL		XL (DXL)/L		T5 (DT5) / T10 (DT10)	
Nominal width	Tolerance	Nominal width	Tolerance	Width	Tolerance
3.2	+0.3 -0.6	025	±0.4	5	±0.5
4.8		031		—	
8.4		037		10	
9.5	050	±0.5	15		
12.7	+0.4, -0.8	075	±0.5	20	
		100	±0.7	25	
		150	±0.7	30	
		200	±1.0	50	

Synchronous Belt / Double-Sided Synchronous Belt

Product Introduction

3. Double-Sided Synchronous Belt (Rubber/Polyurethane) Product Introduction

The Double-Sided Synchronous Belt [rubber/polyurethane (Bancollan)] has identical tooth profiles on the top and back surfaces of the belt, and a single belt of this belt can synchronously transmit power with multiple shafts. The Bancollan Double-Sided Synchronous Belt is suitable when it is subject to oil or ozone or when dispersion of rubber pieces should be avoided.

Features

■ Multi-shaft synchronous power transmission possible

A single belt can synchronously transmit power with many shafts.

■ Easy maintenance

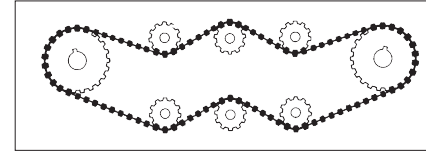
Unlike chains, it has no need to re-tension or lubricate and is easy to maintain.

■ Low noise

No metal-to-metal contact allows quiet power transmission.

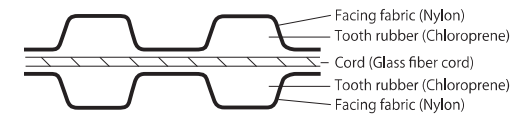
■ Clean

Unlike chains or gears, it has no need for lubrication, eliminating oil dispersion, which provides cleanliness in the sections around the belt.

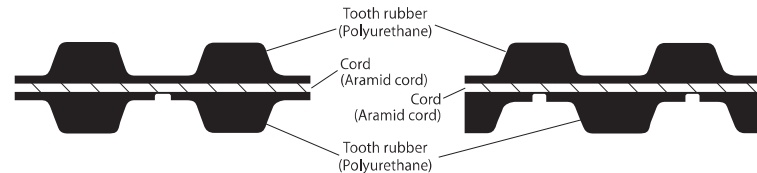


Structure

Double-Sided Synchronous Belt (Types DXL/DL/DH)



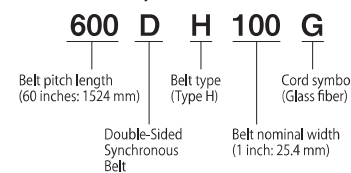
Bancollan Double-Sided Synchronous Belt (Type DXL) Bancollan Double-Sided Synchronous Belt (Types DT5/DT10)



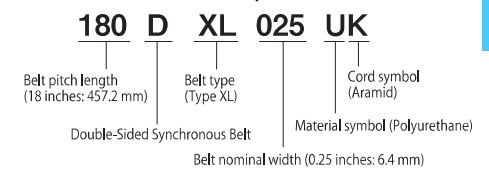
The beads type (●●) and the zigzag type (▲▲) exist taking into consideration domestic and foreign standards and compatibility with other companies' products and have no difference in performance.

Indication Method

Double-Sided Synchronous Belt



Bancollan Double-Sided Synchronous Belt



25 D T10 - 1800

