

# LONG-SPAN Timing Belts



## LONG-SPAN Timing Belts

These belts were developed to meet the needs of industries that have pursued automation and energy conservation in production processes in recent years. These long-span timing

belts come into two types: open-end belts that are used for reciprocating motion and endless belts that are used for rotary motion.

### Features of Open-end Belts (For Reciprocating Motion)

#### Long spans

Belt length can be freely set as shown in the below table and long spans are possible.

#### Applicable for accurate reciprocating motions

Belts accurately engage pulleys to properly transmit reciprocating motion without slipping.

#### Quiet operation

Because metal engages rubber or resin, the level of noise emission is low.

#### Clean and oil-free

Oiling is unnecessary in timing belt applications. This minimizes contamination of nearby machinery and products.

#### Maintenance-free

Belt elongation is very small and tension rarely needs adjusting if properly installed.

[Note] Use open-end belts only for reciprocating motion.

### Available Open-End Belt Ranges (Max. Belt Length)

#### G Type (Rubber)

Table 1-84 (Unit: m)

Nominal width	025	037	050	075	100	150
Width (mm)	6.4	9.5	12.7	19.1	25.4	38.1
Tooth Profile						
MXL	67	44	34	-	-	-
XL	129	86	64	-	-	-
L	-	-	72	47	34	-
H	-	-	129	86	63	41

Example indication for order

Ex. **OTG 86 XL 037**  
 Open-end belt      Belt length (m)      Nominal width (inchX100)      Tooth Profile  
 \* Nominal width is given in mm for MXL belts.  
 \* Order open-end belts by the roll (max. belt length).

Table 1-85 (Unit: m)

Tooth Profile	Nominal width	40	60	100	150	200	250	300	400	500	600
S2M	89	58	35								
S3M		110	65	43							
S5M			78	50	87	68	-	40			
S8M				124	82	60	48	55	39	30	24
S14M						58	48	34	27	-	

Example indication for order

Ex. **OTG 250 S8M 48**  
 Open-end belt      Nominal width (mmX10)      Tooth Profile      Belt length (m)  
 \* Order belts by the above lengths.  
 Note: Use open-end belts only for reciprocating motion.

#### U Type (Polyurethane)

Table 1-86

Nominal width	3.2	019(4.8)	025(6.4)	037(9.5)	050	075
Width (mm)	3.2	4.8	6.4	9.5	12.7	19.1
Tooth Profile						
T80	99	68	52	35	-	-
XL	-	94	71	48	36	17
L	-	-	-	51	38	10

Nominal width for T80 given in ( ). Unit: m

#### U Type (Polyurethane) Metric

Table 1-87 Unit: m

Tooth Profile	Nominal width	5	10	15	20	25
T5	87	44	29	-	-	-
T10	-	49	32	17	13	

Example indication for order

Ex. **UKOTG T80 6.4 52**  
 Open-end belt      Tooth Profile      Belt length (m)      Nominal width (mm)  
 \* Belt widths for XL and L belts are given as inch x 100.  
 \* Order open-end belts by the roll (max. belt length).

#### Round Tooth (S2M,S3M)

Table 1-88 Unit: m

Tooth Profile	Nominal width (mm)	40	50	60	100	150
S2M	99	80	67	-	-	-
S3M	-	98	82	50	33	

Example indication for order

Ex. **UKOTG S2M 60 67**  
 Open-End      Tooth Profile      Belt length (m)      Nominal width (mm X 10)

### Features of Endless Belts (For Rotary Motion)

#### High degree of freedom in long span design

Belt length can be designed within the ranges shown in the table below, therefore rotary motion is possible with long spans.

#### Low power (synchronized) transmission for long spans

As long as distances between motors and followers are within the ranges shown in the table below, synchronized motion is possible.

#### Available endless belt ranges (G Type)

Table 1-89

Tooth Profile	Belt width				Max. Belt Length (m)
	Min. width (mm)	Min.Nominal width (inchX100)	Max. width (mm)	Max.Nominal width (inchX100)	
L	12.7	050	355	1400	20
H	19.1	075	343	1350	20
XH	50.8	200	406	1600	20
XXH	50.8	200	406	1600	20

Note: Allowed tension is 1/2 that of short timing belts.

Example indication for order

Ex. **GLTG 2000 H 300**  
 Endless belt      Belt length (inchX10)      Nominal width (inchX100)      Tooth Profile

#### Synchronized transport possible without slipping

Synchronized transport is possible because the belt properly engages pulleys.

Table 1-90

Tooth Profile	Belt width				Belt Length (m)
	Min. width (mm)	Min.Nominal width (mmX10)	Max. width (mm)	Max.Nominal width (mmX10)	
S8M	19.1	191	342	3420	20
S14M	50.0	500	406	4060	20

Note: Allowed tension is 1/2 that of short SUPER TORQUE Timing Belts.

Example indication for order

Ex. **GLTG 400 S8M 5600**  
 Endless belt      Belt Nominal width (mmX10)      Tooth Profile      Belt length (mm)

