



SYNCHRONOUS BELTS FOR UNMATCHED POWER CAPACITY

## POLY CHAIN® GT CARBON™

*Polyurethane synchronous belt with patented carbon tensile cords*



Through providing you with precise drive solutions of unsurpassed quality and leading edge technology Gates brings you the ultimate in synchronous drive systems. Poly Chain® GT Carbon™ is Gates' newest polyurethane synchronous belt with patented carbon tensile cord design also suited for high torque, low speed drives. The materials development engineers from Gates are the first to have incorporated a high fatigue-resisting carbon fibre tensile cord into the belt which is made of a new polyurethane compound. Consequently, Poly Chain® GT Carbon™ is the most powerful synchronous belt in the market providing a maintenance-free, energy saving and environmentally friendly operation offering an excellent alternative to roller chain and gear drives.



### Identification

Three part number on the back of the belt indicating tooth pitch, pitch length and belt width in millimeters. Belt inside colour is blue.

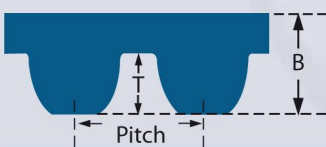
### Construction

- The basic belt consists of a newly developed tough, lightweight polyurethane compound which is chemically resistant and ensures optimum adhesion with the carbon tensile cords.
- The carbon fibre reinforcement provides high strength and length stability with improved shock load and fatigue resistance, while reducing stretch and increasing flexibility.
- The facing is a nylon fabric that acts as a wear resistant surface, protecting the teeth. It also helps keep frictional losses to a minimum.
- The special modified curvilinear tooth profile improves stress distribution and allows higher overall loading.
- **Now also available in two special belt constructions:**
  - **Poly Chain® GT Carbon™ High Temperature**  
Special polyurethane compound provides superb heat resistance. It enables the belt to remain fully operational under extreme temperatures ranging up to 120°C and even up to 140°C during shorter periods;
  - **Poly Chain® GT Carbon™ Hot Oil**  
Special polyurethane compound provides superb oil and heat resistance, ensuring a problem-free operation in oil environments at temperatures ranging up to 120°C (suitable for transfer cases, gear boxes...).

### Advantages

- Extraordinary power capacity: at least 25% higher power ratings than Poly Chain® GT2 belts.
- Clean, quiet, compact, durable, maintenance-free, energy saving and environmentally friendly operation.
- Virtual constant belt tension over belt life.
- Ability to use back idlers.
- Designed to fit with current Poly Chain® GT pulleys.
- Suitable for temperatures from -54°C to +85°C. Special versions can be used up to 140°C.
- Wide application range: industrial equipment (mining, construction, food and beverage, wood, paper, pulp, textile), conveying equipment, lifting and handling equipment, agricultural and forestry equipment, machine tools, motorcycle rear wheel drives, bicycle drives ... and many more.

### Sections and nominal dimensions



	Pitch mm	T mm	B mm
<b>8MGT</b>	8.0	3.4	5.9
<b>14MGT</b>	14.0	6.0	10.2





8MGT		
Pitch: 8 mm		
Description	Pitch length mm	Number of teeth
8MGTC-640	640	80
8MGTC-720	720	90
8MGTC-800	800	100
8MGTC-896	896	112
8MGTC-960	960	120
8MGTC-1000	1000	125
8MGTC-1040	1040	130
8MGTC-1120	1120	140
8MGTC-1200	1200	150
8MGTC-1224	1224	153
8MGTC-1280	1280	160
8MGTC-1440	1440	180
8MGTC-1600	1600	200
8MGTC-1760	1760	220
8MGTC-1792	1792	224
8MGTC-2000	2000	250
8MGTC-2200	2200	275
8MGTC-2240	2240	280
8MGTC-2400	2400	300
8MGTC-2520	2520	315
8MGTC-2600	2600	325
8MGTC-2800	2800	350
8MGTC-2840	2840	355
8MGTC-3048	3048	381
8MGTC-3200	3200	400
8MGTC-3280	3280	410
8MGTC-3600	3600	450
8MGTC-4000	4000	500
8MGTC-4400	4400	550
8MGTC-4480	4480	560

Available in widths of 12 mm, 21 mm, 36 mm and 62 mm.

14MGT		
Pitch: 14 mm		
Description	Pitch length mm	Number of teeth
14MGTC-994	994	71
14MGTC-1120	1120	80
14MGTC-1190	1190	85
14MGTC-1260	1260	90
14MGTC-1400	1400	100
14MGTC-1568	1568	112
14MGTC-1610	1610	115
14MGTC-1750	1750	125
14MGTC-1890	1890	135
14MGTC-1960	1960	140
14MGTC-2100	2100	150
14MGTC-2240	2240	160
14MGTC-2310	2310	165
14MGTC-2380	2380	170
14MGTC-2450	2450	175
14MGTC-2520	2520	180
14MGTC-2590	2590	185
14MGTC-2660	2660	190
14MGTC-2800	2800	200
14MGTC-3136	3136	224
14MGTC-3304	3304	236
14MGTC-3360	3360	240
14MGTC-3500	3500	250
14MGTC-3850	3850	275
14MGTC-3920	3920	280
14MGTC-4326	4326	309
14MGTC-4410	4410	315

Available in widths of 20 mm, 37 mm, 68 mm, 90 mm and 125 mm.

NOTES

**Poly Chain® GT Carbon™ High Temperature and Poly Chain® GT Carbon™ Hot Oil** are available in standard lengths up to 2000 mm. The belts are only available on request. For more detailed information and correct usage, please contact your Gates representative.

**Poly Chain® GT Carbon™ Spiral Spliced range**  
Due to a new production process which enables belt manufacture in per-tooth increments, Gates is able to manufacture longer Poly Chain® GT Carbon™ endless belts and wider Long Length Poly Chain® GT Carbon™ open-end belts. Non-standard lengths from 1600 mm to virtually any length can be produced in both 8MGT and 14MGT pitches on a made-to-order basis. This special construction makes it possible to equip long centre-distance applications with Gates Poly Chain® GT Carbon™.

**Poly Chain® GT Carbon™ ordering code is composed as follows:**

**14MGTC-3360-37**  
**14MGTC** - Pitch 14 mm  
**3360** - Pitch length (mm)  
**37** - Belt width (mm)

All dimensions are available from stock.

COMPACT SYNCHRONOUS BELTS

**MINI POLY CHAIN® GT CARBON™**  
 Synchronous belt with 8 mm, GT tooth profile



This compact polyurethane synchronous belt opens up new opportunities in the design of conveyor drives and is an alternative to roller chains. Poly Chain® GT Carbon™ does not require lubrication or tensioning and is characterised by low noise levels even at high transport speeds. The special construction is highly resistant to aggressive influences such as dust, oil and chemicals.

8M		
Pitch: 8 mm		
Description	Pitch length mm	Number of teeth
8MC-248	248	31
8MC-288	288	36
8MC-352	352	44
8MC-416	416	52
8MC-456	456	57
8MC-480	480	60
8MC-544	544	68
8MC-608	608	76

Available in widths of 11.2 mm, 21 mm, 36 mm and 62 mm.

**Mini Poly Chain® GT Carbon™ ordering code is composed as follows:**

**8MC-352-11.2**  
**8MC** - Pitch 8 mm  
**352** - Pitch length (mm)  
**11.2** - Belt width (mm)

All dimensions are available from stock.

