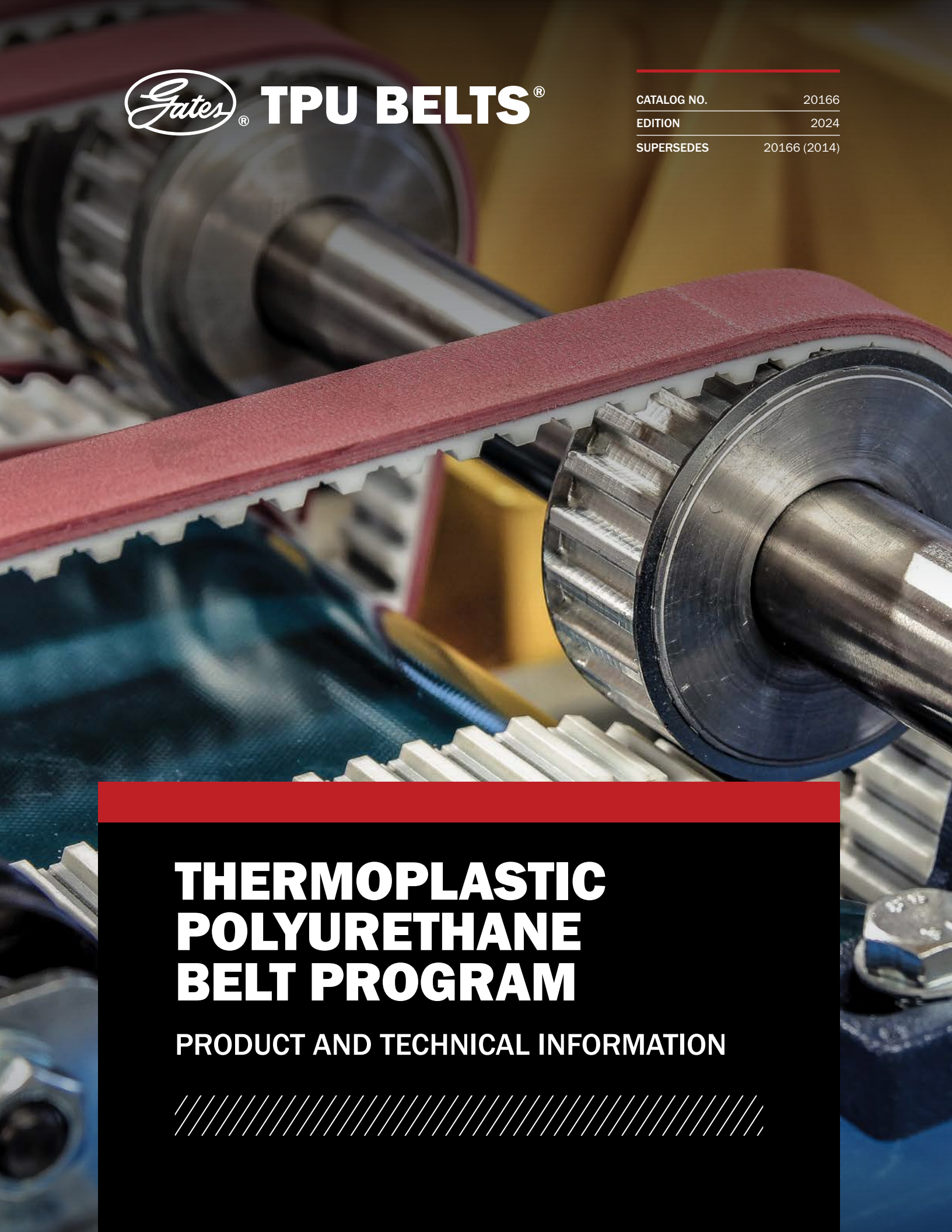


TPU BELTS®

CATALOG NO.	20166
EDITION	2024
SUPERSEDES	20166 (2014)

THERMOPLASTIC POLYURETHANE BELT PROGRAM

PRODUCT AND TECHNICAL INFORMATION

INDEX

INTRODUCTION

OUR EXPERTISE

Gates TPU brings a world-class combination of expert knowledge, global coverage, and superior service to exceed our customers' expectations. Backed by 100 years of Gates innovation and industry leading product performance and quality, we offer the most compelling thermoplastic polyurethane belt portfolio in the market.

Our products are used in various industries including material handling, intralogistics, general automation, and food processing.

KNOWLEDGE

APPLICATION KNOW-HOW

Our technical experts will work with your team to deliver a solution that meets your application need.

EXPERTISE

Our dedicated team can answer questions, provide training and information, and solve challenges.

PRODUCT

QUALITY

Our products deliver the performance and reliability that customers expect from Gates around the world. We guaranty the highest quality, meeting & exceeding the standards of ISO 9001, ISO 14001 and ISO 50001.

OFFERING

We offer a full TPU belt portfolio for all positioning, conveyance, and lifting applications.

EXPERIENCE

RESPONSIVENESS

Our regional teams are flexible, close to the market, and able to provide hands on service at customer sites.

DELIVERY

With a global production and distribution footprint, including distribution partners worldwide, Gates offers global service to solve your challenges. Exceptional on time delivery performance and short lead times set the standard in the industry.

SUSTAINABILITY

HUMAN HEALTH

Gates products comply with the requirements laid down in the REACH (Registration, Evaluation, Authorization of Chemical Substances) regulation. All substances in our belts requiring registration will be duly registered in the central database run by the European Chemicals Agency (ECHA).

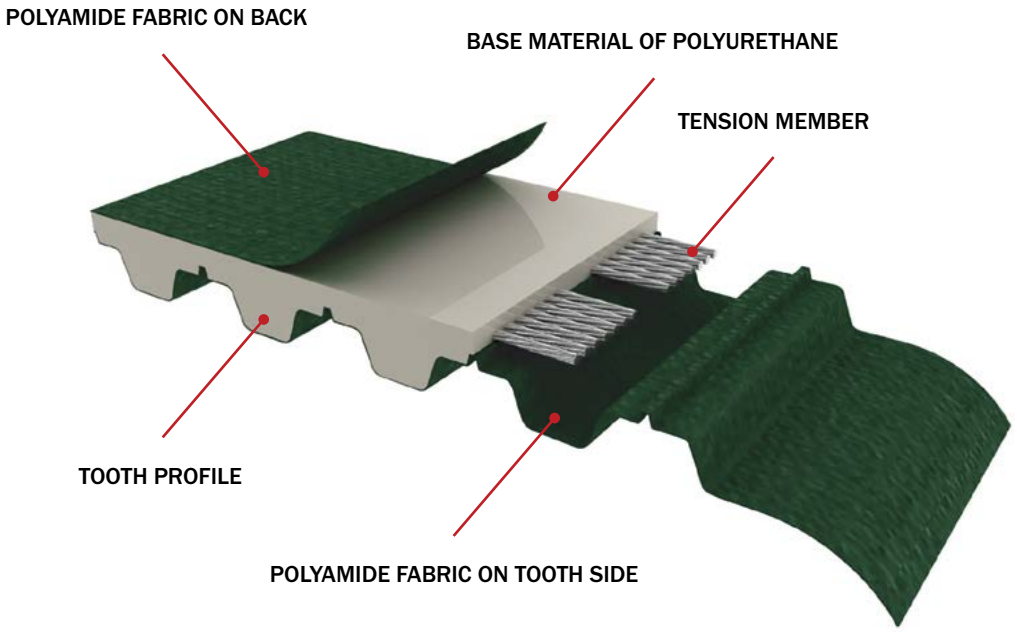
ENVIRONMENT

Gates products help preserving our planet by saving energy, less environmental impact, less noise pollution, less waste.

POLYURETHANE BELTS

OUR PRODUCT QUALITY IS REVEALED IN THE DETAILS. — NARROW TOLERANCES AND PERFECT TOOTH ENGAGEMENT ARE GUARANTEED.

Gates TPU Polyurethane Timing Belts are made from high quality, abrasion-resistant polyurethane in combination with high strength steel or aramid cords. Nearly every extruded belt type can be additionally customized by special machining or the addition of various coatings or profiles.



ATTRIBUTES

- Low-maintenance polyurethane construction
- High tensile strength
- Abrasion and UV resistant
- Low pre-tension
- Excellent durability vs. moisture
- Various cord and polyurethane grades available

CHEMICAL ATTRIBUTES

- Long-lasting
- High chemical resistance
- High durability vs. detergent
- Excellent durability vs. oil and fat
- Conditionally permanent vs. acids and bases

TOOTH PROFILES

IMPERIAL TOOTH PROFILE

PITCH: XL / L / H / XH
Imperial pitch belt compatible with pulleys according to ISO 5296

ATTRIBUTES

- Low tooth profiles with large surface area

APPLICATIONS:

- Low to medium load conveying

T TOOTH PROFILE

PITCH: T2.5 / T5 / T10 / T20
T pitch belt compatible with pulleys according to ISO 17396

ATTRIBUTES:

- Developed to enable higher load carrying capacity combined with lower backlash

APPLICATIONS:

- Low to medium load conveying

AT TOOTH PROFILE

PITCH: AT5 / AT10 / AT20
AT pitch belt compatible with pulleys according to ISO 17396

ATTRIBUTES

- Stronger cords and higher tooth shear strength for improved performance

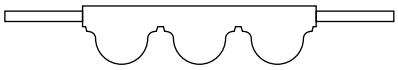
APPLICATIONS:

- Linear positioning
- Power transmission
- Medium to high load conveying

TOOTH PROFILES

HTD TOOTH PROFILE

PITCH: HTD5 / HTD8 / HTD14
HTD pitch belt compatible with pulleys according to ISO 13050



ATTRIBUTES:

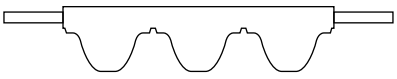
- Higher tooth meshing, equal tension distribution and load transmission
- Reduced wear and noise characteristics

APPLICATIONS:

- Linear / rotary positioning
- Power transmission

HPL TOOTH PROFILE

PITCH: HPL3, HPL5 and HPL8



ATTRIBUTES

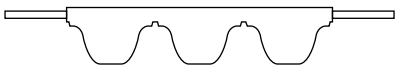
- High-performance synchronous belt Gates GT™ tooth shape

APPLICATIONS:

- Linear positioning
- Lifting

STD TOOTH PROFILE

PITCH: STD5 / STD8
STD pitch belt compatible with pulleys according to ISO 13050



ATTRIBUTES

- Reduced wear and noise characteristics

APPLICATIONS:

- Linear positioning
- Power transmission

TOOTH PROFILES

GPP TOOTH PROFILE

PITCH: GPP8 / GPP14
GPP pitch belt compatible with pulleys according to ISO 13050

ATTRIBUTES

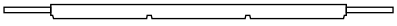
- Reduced wear and noise characteristics

APPLICATIONS:

- Linear positioning
- Lifting

FLAT BELTS

PITCH: F20 / F30 / F48



ATTRIBUTES

- Easy belt guiding Small pulley diameters

APPLICATIONS:

- Lifting
- Pulling

WIDE BELTS

PITCH: WT5 / WT10 / WH / GMT3 / WHTD8 / WSTD8

ATTRIBUTES

- Standard width 200mm for WT5 and 450mm or 18” for all other wide belts
- Alternative to plastic modular chains and flat belting

APPLICATIONS:

- Synchronous conveying
- Hygienic Industry
- Tire Industry
- Food industry applications

MATERIALS

POLYURETHANE GRADES

TPU RESIN	BELT TYPES	HARDNESS	TEMP RANGE [°C]	TEMP RANGE [°F]
TPU RESINS FOR STANDARD APPLICATIONS				
R1	Linear, Flat & Wide Belt	92° Shore A	-5 to +70	+23 to +158
R2	Linear, Flat & Wide Belt	85° Shore A	-10 to +60	+14 to +140
R3	Sleeves	84° Shore A	-25 to +75	-13 to +167
R23	Flex Belt	90° Shore A	-5 to +70	+23 to +158
TPU RESINS FOR LOW TEMPERATURE APPLICATIONS				
R23T	Linear, Flat & Flex Belt	90° Shore A	-30 to +50	-22 to +122
TPU RESINS FOR FOOD CONTACT *				
R9	Linear WR series	92°Shore A	-5 to +70	+23 to +158
R23F	Flex Belt	90°Shore A	-5 to +70	+23 to +158
FDA	Linear & Wide Belt	85° Shore A	-10 to +60	+14 to +140

* Please contact our application engineers for available belt constructions that meet USDA or EU food regulations.

CORD CONSTRUCTIONS

DESIGNATOR	DESCRIPTION
BSL	Basic steel
SL	Steel
HF	High Flexible Steel
RSL	Reinforced Steel
RHF	Reinforced High Flexible Steel
NIRO	Stainless Steel
KV	Aramid
RKV	Reinforced Aramid

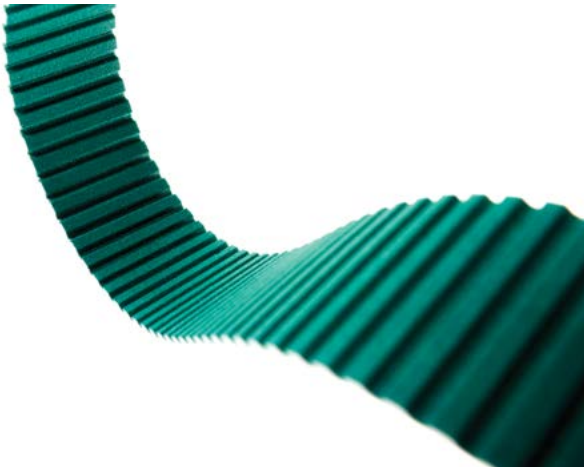
POLYAMID FABRIC OPTIONS

NT	Polyamid fabric on tooth side
NB	Polyamid fabric on back
NTB	Polyamid fabric on tooth and back
AS	Antistatic Polyamid fabric on tooth and back

GATES TPU PRODUCTS

SYNCHRO-POWER LINEAR

Open ended or endless welded TPU timing belt for linear movement and conveying.



SYNCHRO-POWER FLEX

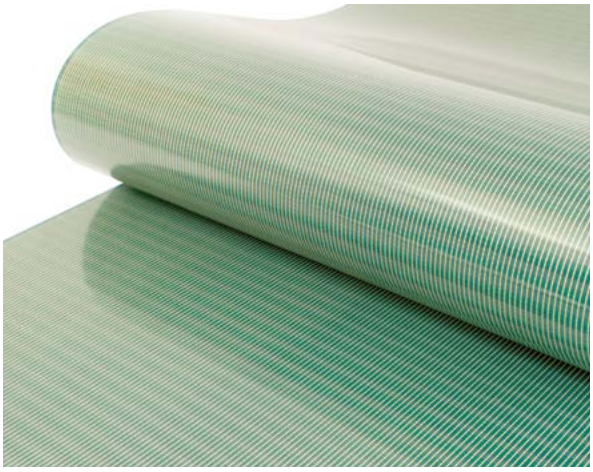
Truly endless TPU timing belt up to 22,9m for power transmission and rotary positioning.

SYNCHRO-POWER FLAT

Open ended TPU flat belt for pulling and lifting applications.

BELTS WITH BACKINGS

Endless welded TPU timing belt for conveying and transportation.



SYNCHRO-POWER WIDE
Endless welded wide TPU timing belt for synchronous conveying.

BELT WITH PROFILES
Endless welded TPU timing belt for conveying and transportation.

SYNCHRO-POWER SLEEVES
Truly endless timing belt for light power transmission and rotary positioning.

FABRICATED BELTS
Endless welded TPU timing belt for conveying and transportation.

HOW TO ORDER

METRIC PITCHES

METHOD 1 (GATES INTERNAL)

E - AT10 - 200 - 1080 - SL - R1 - WT - NT

- NT: Polyamid fabric option (see table product data)
- WT: Designator for color (see table product data)
- R1: Designator for TPU resin (see table)
- SL: Designator for cord (see table technical data)
- 1080: Length: 2520 mm
- 200: Width: 200 mm
- AT10: Pitch: AT10
- E: R: Roll stock (standard roll length); G: Open ended belt (cut to length); E: Endless welded belt; P: Prepared ends for endless welding; M: Mechanically spliced belt; F: Flex (truly endless belt); S: Sleeve (truly endless belt)

METHOD 2 (INDUSTRY STANDARD)

50 AT10 / 1080 , Welded Endless , Steel , 92A , White , Nylon Tooth

- Nylon Tooth: Polyamid fabric option (see table product data)
- White: Color (see table product data)
- 92A: Resin Type (92A, 85A, FDA, etc.)
- Steel: Cord Material (see table technical data)
- Welded Endless: Belt Type (roll stock, open ended, welded endless, or prepared ends)
- 1080: Length: 1080 mm
- AT10: Pitch: AT10
- 50: Width: 50mm

For the adding of backings, profiles, machining, or other custom charactersitcs, please include a description and drawing of your request and add it to the information above.

HOW TO ORDER

IMPERIAL PITCHES

METHOD 1 (GATES INTERNAL)

E - H - 4 - 84 - SL - R1 - CL - NTB

- NTB: Polyamid fabric option (see table product data)
- CL: Designator for color (see table product data)
- R1: Designator for TPU resin (see table)
- SL: Designator for cord (see table technical data)
- 84: Length: 84"
- 4: Width: 4"
- H: Pitch: H (1/2")
- E: R: Roll stock (standard roll length); G: Open ended belt (cut to length); E: Endless welded belt; P: Prepared ends for endless welding; M: Mechanically spliced belt; F: Flex (truly endless belt); S: Sleeve (truly endless belt)

METHOD 2 (INDUSTRY STANDARD)

840 - H - 400 - Welded Endless - Steel - 92A - Clear - Nylon Tooth and Back

- Nylon Tooth and Back: Polyamid fabric option (see table product data)
- Clear: Color (see table product data)
- 92A: Resin Type (92A, 85A, FDA, etc.)
- Steel: Cord Material (see table technical data)
- Welded Endless: Belt Type (roll stock, open ended, welded endless, or prepared ends)
- 400: Width: 4.0" x 100 = 400
- H: Pitch: H (1/2")
- 840: Length: 84" x 10 = 840

For the adding of backings, profiles, machining, or other custom charactersitcs, please include a description and drawing of your request and add it to the information above.

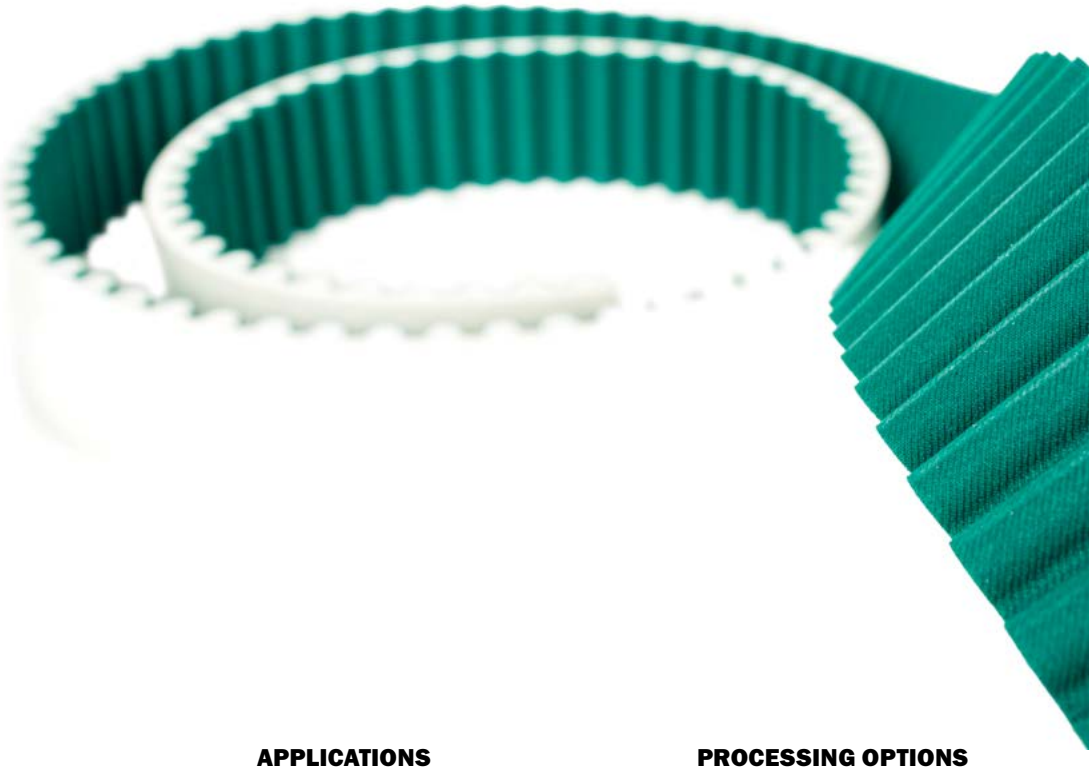
SYNCHRO-POWER LINEAR

TIMING BELTS

Gates TPU linear timing belts are manufactured in standard roll lengths in different pitches, constructions and tooth shapes. The wide range of various designs offers the exact solution for nearly every application. Linear belts are available as roll stock, open ended (long length), pre-punched or endless, thermal welded belts.

For special custom applications, the belts can be coated with various backings and/or manufactured with welded on profiles.

GATES TPU LINEAR BELTS ARE DESIGNED TO ENSURE HIGH GRADE PERFORMANCE FOR BOTH, POWER TRANSMISSION AND LINEAR APPLICATIONS AND CAN BE USED FOR A BROAD RANGE OF DEMANDS, SPEEDS, AND APPLICATIONS.



ATTRIBUTES

- Thermoplastic polyurethane construction
- High tensile strength and stiffness
- Parallel cord construction for uniform tensioning
- Smooth, low-noise operation
- Temperature range:
  Standard TPU: R1
  - 5° to + 70° C / +23 to +158°F
  Low temp TPU: R23T
  - 30° to + 50°C / -22 to +122°F
- Extended service temperature range is available on request
- FDA and EU food approval for various pitches

APPLICATIONS

- Conveying- and handling equipment
- Linear applications
- Vertical Lifting
- Synchronous conveying applications
- Automatic assembly machines
- Door drives
- Textile industry

PROCESSING OPTIONS

- Backings - Further information on page 186
- Profiles - Further information on page 194
- Special processing - Further information on page 108

T5 / PITCH: 5MM

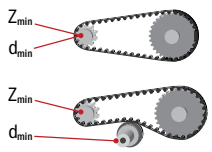
PRODUCT DATA

PITCH	5 mm	0.197"
STANDARD THICKNESS	2.2 mm	0.087"
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.96"	+-0.5 mm	+-0.020"
> 50MM WIDTH / 1.96"	+-0.75 mm	+-0.030"
MINIMUM WELDED BELT LENGTH		
≤ 50MM WIDTH	440mm	17.323"
>50MM WIDTH	450mm	17.717"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

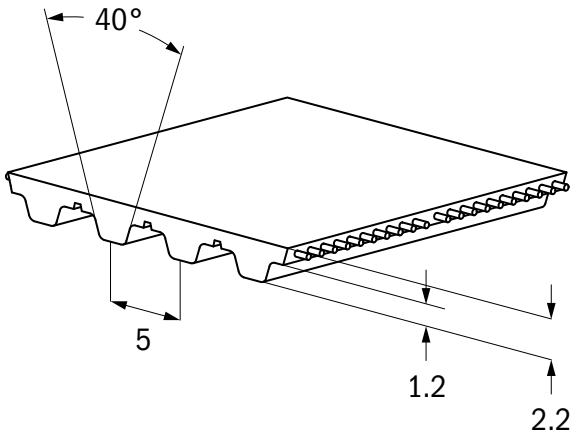
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL / ARAMID	
NO BACK BENDING	**z min**	10 teeth	
	d min	16 mm	0.63"
BACK BENDING	**z min**	15 teeth	
	d min	30 mm	1.18"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]		10	16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE									
Steel (SL)	[N]	1,250	2,000	3,375	4,250	6,875	10,375	13,875	20,875
	[lbf]	280	450	760	955	1,545	2,335	3,120	4,695
Aramid (K)	[N]	2,670	4,539	7,209	9,345	14,685	22,161	29,637	N/A
	[lbf]	600	1,020	1,620	2,100	3,300	4,980	6,665	N/A
ALLOWABLE BELT FORCE / OPEN ENDED									
Steel (SL)	[N]	311	498	840	1,058	1,711	2,582	3,453	5,196
	[lbf]	70	112	189	238	385	580	776	1,168
Aramid (K)	[N]	339	576	916	1,187	1,865	2,814	3,764	N/A
	[lbf]	76	129	206	267	419	633	846	N/A
ALLOWABLE BELT FORCE / ENDLESS WELDED									
Steel (SL)	[N]	156	249	420	529	856	1,291	1,727	2,598
	[lbf]	35	56	94	119	192	290	388	584
Aramid (K)	[N]	254	432	687	890	1,399	2,111	2,823	N/A
	[lbf]	57	97	154	200	315	475	635	N/A
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH									
	[N]	250	400	625	800	1,250	1,875	2,500	3,750
	[lbf]	56	90	141	180	281	422	562	843
BELT WEIGHT									
Steel (SL)	[kg/m]	0.020	0.040	0.060	0.070	0.110	0.160	0.220	0.330
	[lb/ft]	0.013	0.027	0.040	0.047	0.074	0.108	0.148	0.222
Aramid (K)	[kg/m]	0.020	0.030	0.050	0.060	0.100	0.150	0.200	N/A
	[lb/ft]	0.013	0.020	0.034	0.040	0.067	0.101	0.134	N/A
SPECIFIC BELT STIFFNESS									
Steel (SL)	[N]	77,778	124,444	210,000	264,444	427,778	645,556	863,333	1,298,889
	[lbf]	17,486	27,978	47,212	59,452	96,173	145,134	194,095	292,016
Aramid (K)	[N]	84,769	144,106	228,875	296,690	466,227	703,579	940,931	N/A
	[lbf]	19,058	32,398	51,456	66,702	104,817	158,179	211,540	N/A

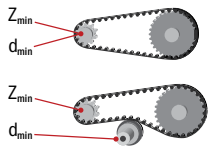
T5-AS / PITCH: 5MM

PRODUCT DATA

PITCH	5 mm	0.197"
STANDARD THICKNESS	2.7 mm	0.106"
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.96"	+-0.5 mm	+-0.020"
> 50MM WIDTH / 1.96"	+-0.75 mm	+-0.030"
MINIMUM WELDED BELT LENGTH		
≤ 50MM WIDTH	440mm	17.323"
>50MM WIDTH	450mm	17.717"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	Clear	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Antistatic fabric on tooth and back	
MEETS ANTISTATIC STANDARDS	IES DTS 60079-32, TRBS2153, CENELEC TR50404	

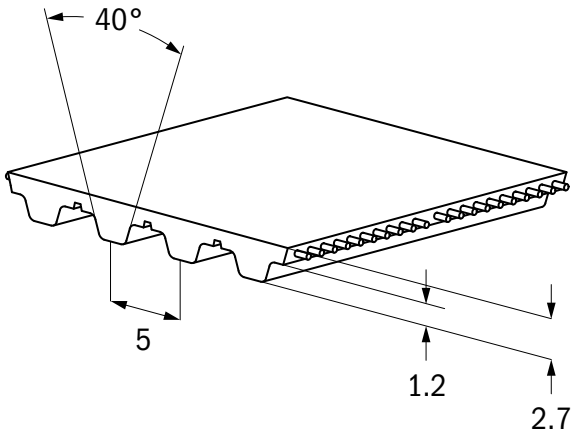
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID	
z min	10 teeth	
d min	16 mm	0.63"
z min	15 teeth	
d min	30 mm	1.18"

POLYURETHANE	HARDNESS [°SHOREA]	TEMPERATUR RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]		10	16	25	32	50	75	100
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	1,250	2,000	3,375	4,250	6,875	10,375	13,875
	[lbf]	280	450	760	955	1,545	2,335	3,120
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	311	498	840	1,058	1,711	2,582	3,453
	[lbf]	70	112	189	238	385	580	776
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	[N]	156	249	420	529	856	1,291	1,727
	[lbf]	35	56	94	119	192	290	388
ALLOWABLE EFFECTIVE FORCE / MIN. 12 TEETH IN MESH								
	[N]	250	400	625	800	1,250	1,875	2,500
	[lbf]	56	90	141	180	281	422	562
SPECIFIC BELT WEIGHT								
Steel (SL)	(kg/m)	0.022	0.035	0.055	0.070	0.110	0.165	0.220
	[lb/ft]	0.015	0.024	0.037	0.047	0.074	0.111	0.148
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	77,778	124,444	210,000	264,444	427,778	645,556	863,333
	[lbf]	17,486	27,978	47,212	59,452	96,173	145,134	194,095

T10 / PITCH: 10MM

PRODUCT DATA

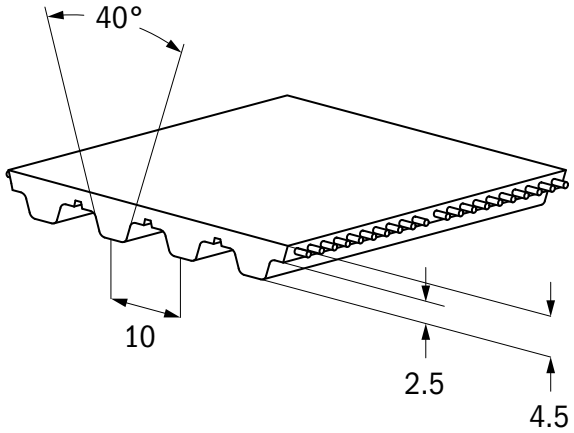
PITCH	10 mm	0.394”
STANDARD THICKNESS		
T10	4.5 mm	0.177”
T10HB	6.6 mm	0.260"
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.96”	+-0.5 mm	+-0.020”
> 50MM WIDTH / 1.96”	+-0.75 mm	+-0.030”
MINIMUM WELDED BELT LENGTH		
≤ 100MM WIDTH / 3.94”	450 mm	17.717"
> 100MM WIDTH / 3.94”	850mm	33.465"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	
ANTISTATIC NYLON	Optional	

MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL / ARAMID		STEEL HF	
NO BACK BENDING	**z min**	14 teeth		12 teeth	
	d min	45 mm	1.77”	38 mm	1.5”
BACK BENDING	**z min**	20 teeth		15 teeth	
	d min	60 mm	2.36”	50 mm	1.96”

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



HB = 6.6

For how to order, please refer to pages 8 & 9

TECHNICAL DATA

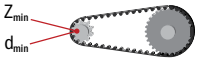
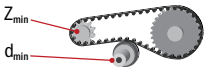
STANDARD WIDTH [MM]		12	16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE									
Steel (SL)	[N]	2,940	4,200	7,140	9,240	14,700	22,260	29,820	44,940
	[lbf]	660	945	1,605	2,075	3,305	5,005	6,705	10,105
Aramid (K)	[N]	3,234	4,851	8,085	10,241	16,709	25,333	33,957	51,205
	[lbf]	725	1,090	1,820	2,300	3,755	5,695	7,635	11,510
Steel HF (HF)	[N]	4,340	6,200	10,540	13,640	21,700	32,860	44,020	66,340
	[lbf]	975	1,395	2,370	3,065	4,880	7,390	9,895	14,915
ALLOWABLE BELT FORCE / OPEN ENDED									
Steel (SL)	[N]	786	1,123	1,909	2,470	3,929	5,950	7,971	12,012
	[lbf]	177	252	429	555	883	1,338	1,792	2,701
Aramid (K)	[N]	425	638	1,064	1,347	2,198	3,332	4,467	6,736
	[lbf]	96	143	239	303	494	749	1,004	1,514
Steel HF (HF)	[N]	964	1,376	2,340	3,028	4,818	7,295	9,773	14,728
	[lbf]	217	309	526	681	1,083	1,640	2,197	3,311
ALLOWABLE BELT FORCE / ENDLESS WELDED									
Steel (SL)	[N]	393	561	954	1,235	1,965	2,975	3,985	6,006
	[lbf]	88	126	214	278	442	669	896	1,350
Aramid (K)	[N]	319	479	798	1,010	1,648	2,499	3,350	5,052
	[lbf]	72	108	179	227	371	562	753	1,136
Steel HF (HF)	[N]	482	688	1,170	1,514	2,409	3,648	4,886	7,364
	[lbf]	108	155	263	340	542	820	1,098	1,656
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH									
	[N]	683	910	1,423	1,821	2,845	4,268	5,690	8,535
	[lbf]	154	205	320	409	640	960	1,279	1,919
BELT WEIGHT									
Steel (SL)	[kg/m]	0.05	0.07	0.11	0.14	0.22	0.33	0.44	0.66
	[lb/ft]	0.03	0.05	0.07	0.09	0.15	0.22	0.30	0.44
Aramid (K)	[kg/m]	0.04	0.06	0.09	0.12	0.18	0.27	0.36	0.54
	[lb/ft]	0.03	0.04	0.06	0.08	0.12	0.18	0.24	0.36
Steel HF (HF)	[kg/m]	0.06	0.08	0.12	0.15	0.24	0.35	0.47	0.71
	[lb/ft]	0.04	0.05	0.08	0.10	0.16	0.24	0.32	0.48
HB Steel (SL)	[kg/m]	0.08	0.11	0.17	0.21	0.34	0.50	0.67	1.01
	[lb/ft]	0.05	0.07	0.11	0.14	0.23	0.34	0.45	0.68
HB Aramid (K)	[kg/m]	0.07	0.10	0.15	0.19	0.30	0.44	0.59	0.89
	[lb/ft]	0.05	0.07	0.10	0.13	0.20	0.30	0.40	0.60
HB Steel HF (HF)	[kg/m]	0.09	0.12	0.18	0.22	0.36	0.52	0.70	1.06
	[lb/ft]	0.06	0.08	0.12	0.15	0.24	0.35	0.47	0.71
SPECIFIC BELT STIFFNESS									
Steel (SL)	[N]	196,463	280,662	477,125	617,456	982,316	1,487,507	1,992,699	3,003,081
	[lbf]	44,169	63,098	107,267	138,817	220,844	334,422	447,999	675,153
Aramid (K)	[N]	106,350	159,525	265,875	336,775	549,475	833,075	1,116,675	1,683,875
	[lbf]	23,910	35,864	59,774	75,714	123,533	187,292	251,051	378,569
Steel HF (HF)	[N]	240,882	344,118	585,000	757,059	1,204,412	1,823,824	3,443,235	3,682,059
	[lbf]	54,155	77,365	131,520	170,202	270,776	410,032	774,109	827,801

T10-AS / PITCH: 10MM

PRODUCT DATA

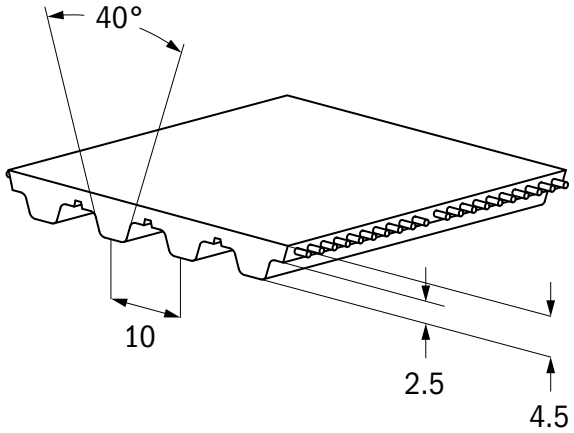
PITCH	10 mm	0.394”
STANDARD THICKNESS	4.5 mm	0.177”
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.96”	+-0.5 mm	+-0.020”
> 50MM WIDTH / 1.96”	+-0.75 mm	+-0.030”
MINIMUM WELDED BELT LENGTH	480 mm	18.898"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	Black	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Antistatic fabric on tooth and back	
MEET ANTISTATIC STANDARD	ISO 9563	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL
z min	14 teeth
d min	45 mm / 1.77”
z min	20 teeth
d min	60 mm / 2.36”

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]		16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel	[N]	4,200	7,140	9,240	14,700	22,260	29,820	44,940
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	1,123	1,909	2,470	3,929	5,950	7,971	12,012
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	[N]	561	954	1,235	1,965	2,975	3,985	6,006
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	910	1,423	1,821	2,845	4,268	5,690	8,535
BELT WEIGHT								
Steel (SL)	[kg/m]	0.07	0.11	0.14	0.22	0.33	0.44	0.66
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	280,662	477,125	617,456	982,316	1,487,507	1,992,699	3,003,081

T20 / PITCH: 20MM

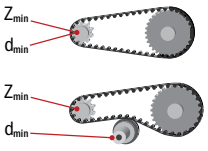
PRODUCT DATA

PITCH	20 mm	0.787"
STANDARD THICKNESS	8.0mm	0.315"
WIDTH TOLERANCE	+-1.0 mm	+-0.039"
MINIMUM WELDED BELT LENGTH	1000 mm	39.4"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1 ft
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

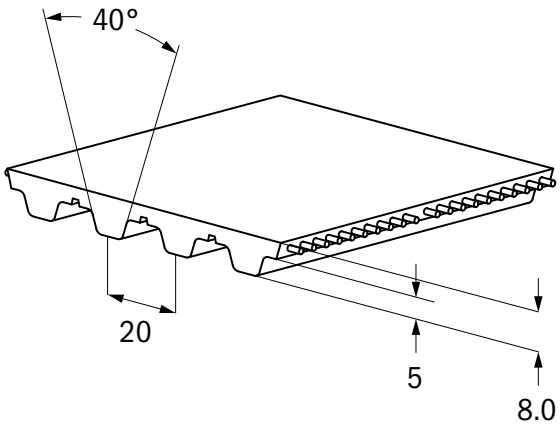
NO BACK BENDING

BACK BENDING



	STEEL / ARAMID		STEEL HF		STAINLESS STEEL	
z min	15 teeth		12 teeth		20 teeth	
d min	95 mm	3.76"	76 mm	3.01"	127 mm	5.00"
z min	25 teeth		22 teeth		30 teeth	
d min	120 mm	4.72"	100 mm	3.94"	160 mm	6.30"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	14,250	18,050	29,450	44,650	59,850	90,250
	[lbf]	3,205	4,060	6,620	10,040	13,455	20,290
Aramid (K)	[N]	16,185	20,501	33,449	50,713	67,977	102,505
	[lbf]	3,640	4,610	7,520	11,400	15,285	23,045
Steel HF (HF)	[N]	12,975	16,435	26,815	40,655	54,495	82,175
	[lbf]	2,915	3,695	6,030	9,140	12,250	18,475
Stainless Steel (NIRO)	[N]	10,688	13,538	22,088	33,488	44,888	67,688
	[lbf]	2,405	3,045	4,965	7,530	10,090	15,220
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	[N]	3,741	4,739	7,731	11,722	15,712	23,693
	[lbf]	841	1,065	1,738	2,635	3,532	5,327
Aramid (K)	[N]	1,675	2,175	3,461	5,247	7,033	10,606
	[lbf]	376	489	778	1,180	1,581	2,384
Steel HF (HF)	[N]	3,456	4,378	7,142	10,829	14,515	21,888
	[lbf]	777	984	1,606	2,435	3,263	4,921
Stainless Steel (NIRO)	[N]	2,806	3,554	5,799	8,791	11,784	17,770
	[lbf]	631	799	1,304	1,976	2,649	3,995
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Steel (SL)	[N]	2,104	2,572	4,209	6,313	8,417	12,626
	[lbf]	473	578	946	1,419	1,892	2,839
Aramid (K)	[N]	1,256	1,631	2,596	3,935	5,275	7,954
	[lbf]	282	367	584	885	1,186	1,788
Steel HF (HF)	[N]	1,728	2,189	3,571	5,414	7,258	10,944
	[lbf]	388	492	803	1,217	1,632	2,460
Stainless Steel (NIRO)	[N]	1,403	1,777	2,899	4,396	5,892	8,885
	[lbf]	315	399	652	988	1,325	1,997
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	3,075	3,936	6,150	9,225	12,300	18,450
	[lbf]	691	885	1,383	2,074	2,765	4,148
BELT WEIGHT							
Steel (SL)	[kg/m]	0.19	0.24	0.37	0.56	0.75	1.12
	[lb/ft]	0.13	0.16	0.25	0.38	0.50	0.75
Aramid (K)	[kg/m]	0.18	0.23	0.36	0.54	0.72	1.08
	[lb/ft]	0.12	0.16	0.24	0.36	0.48	0.73
Steel HF (HF)	[kg/m]	0.15	0.19	0.30	0.44	0.59	0.89
	[lb/ft]	0.10	0.13	0.20	0.30	0.40	0.59
Stainless Steel (NIRO)	[kg/m]	0.19	0.24	0.37	0.56	0.74	1.11
	[lb/ft]	0.13	0.16	0.25	0.37	0.50	0.75
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	1,052,156	1,285,969	2,104,313	3,156,469	4,208,625	6,312,938
	[lbf]	236,546	289,112	473,092	709,638	946,184	1,419,276
Aramid (K)	[N]	418,650	543,687	865,210	1,311,770	1,758,330	2,651,450
	[lbf]	94,121	122,232	194,517	294,912	395,308	596,099
Steel HF (HF)	[N]	864,000	1,094,400	1,785,600	2,707,200	3,628,800	5,472,000
	[lbf]	194,245	246,043	401,439	608,633	815,827	1,230,216
Stainless Steel (NIRO)	[N]	701,438	888,488	1,449,638	2,197,838	2,946,038	4,442,438
	[lbf]	157,697	199,750	325,908	494,118	662,329	998,749

AT5 / PITCH: 5MM

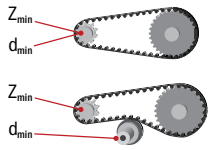
PRODUCT DATA

PITCH	5 mm	0.197”
STANDARD THICKNESS	2.7 mm	0.106”
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.96”	+-0.5 mm	0.020"
> 50MM WIDTH / 1.96”	+-0.75 mm	0.030”
MINIMUM WELDED BELT LENGTH	450 mm	17.717"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

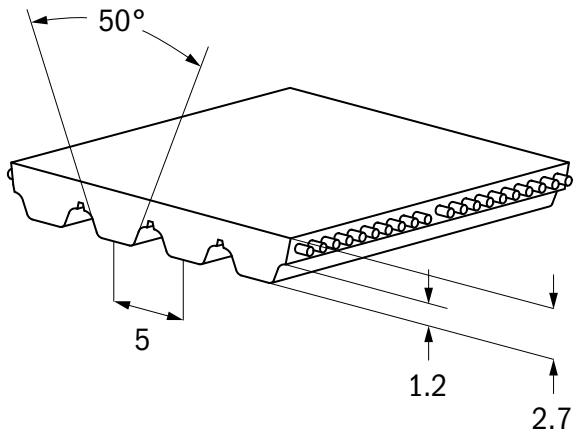
50MM AT TEMPERATURES BELOW -5°C / +23°F

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID	
z min	15 teeth	
d min	24 mm	0.94”
z min	20 teeth	
d min	60 mm	2.36”

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	16	25	32	50	75	100
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	2,565	4,275	7,125	9,120	14,535	21,945	29,355
	[lbf]	575	960	1,600	2,050	3,270	4,935	6,600
Aramid (K)	[N]	3,006	5,010	8,350	10,688	17,034	25,718	34,402
	[lbf]	675	1,125	1,875	2,405	3,830	5,780	7,735
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	634	1,056	1,761	2,253	3,591	5,422	7,253
	[lbf]	142	237	396	507	807	1,219	1,631
Aramid (K)	[N]	436	726	1,210	1,549	2,468	3,727	4,985
	[lbf]	98	163	272	348	555	838	1,121
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	[N]	317	528	880	1,127	1,796	2,711	3,627
	[lbf]	71	119	198	253	404	610	815
Aramid (K)	[N]	327	545	908	1,162	1,851	2,795	3,739
	[lbf]	74	123	204	261	416	628	841
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	480	768	1,200	1,536	2,400	3,600	4,800
	[lbf]	108	173	270	345	540	809	1,079
BELT WEIGHT								
Steel (SL)	[kg/m]	0.03	0.05	0.08	0.11	0.17	0.25	0.33
	[lb/ft]	0.02	0.04	0.06	0.07	0.11	0.17	0.22
Aramid (K)	[kg/m]	0.03	0.04	0.07	0.09	0.14	0.20	0.27
	[lb/ft]	0.02	0.03	0.05	0.06	0.09	0.14	0.18
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	158,445	264,075	440,125	563,360	897,855	1,355,585	1,813,315
	[lbf]	35,622	59,369	98,949	126,655	201,856	304,763	407,670
Aramid (K)	[N]	108,900	181,500	302,500	387,200	617,100	931,700	1,246,300
	[lbf]	24,482	40,803	68,008	87,046	138,737	209,465	280,193

ATL5 / PITCH: 5MM

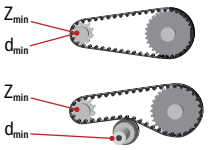
PRODUCT DATA

PITCH	5 mm	0.197"
STANDARD THICKNESS	2.7 mm	0.106"
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.96"	+-0.5 mm	0.020"
> 50MM WIDTH / 1.96"	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	450 mm	17.717"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

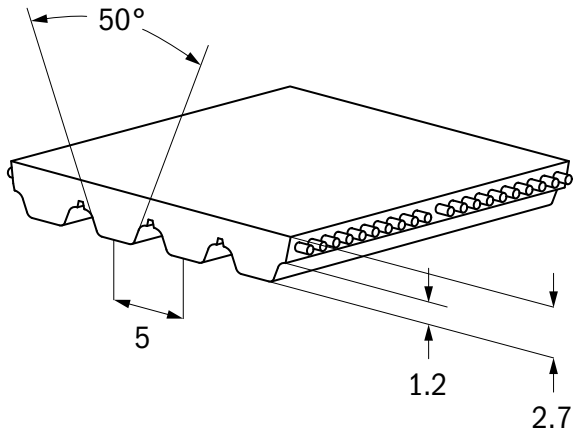
50MM AT TEMPERATURES BELOW -5°C / +23°F

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID	
z min	15 teeth	
d min	24 mm	0.94"
z min	20 teeth	
d min	60 mm	2.36"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]		10	16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE									
Steel (SL)	[N]	3,720	6,200	10,540	13,640	21,700	32,860	44,020	66,340
	[lbf]	835	1,395	2,370	3,065	4,880	7,390	9,895	14,915
ALLOWABLE BELT FORCE / OPEN ENDED									
Steel (SL)	[N]	826	1,376	2,340	3,028	4,818	7,295	9,773	14,728
	[lbf]	186	309	526	681	1,083	1,640	2,197	3,311
ALLOWABLE BELT FORCE / ENDLESS WELDED									
Steel (SL)	[N]	413	688	1,170	1,514	2,409	3,648	4,886	7,364
	[lbf]	93	155	263	340	542	820	1,098	1,656
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH									
	[N]	480	768	1,200	1,536	2,400	3,600	4,800	7,200
	[lbf]	108	173	270	345	540	809	1,079	1,619
BELT WEIGHT									
Steel (SL)	[kg/m]	0.03	0.05	0.07	0.09	0.14	0.21	0.28	0.42
	[lb/ft]	0.02	0.03	0.05	0.06	0.09	0.14	0.19	0.28
SPECIFIC BELT STIFFNESS									
Steel (SL)	[N]	206,471	344,118	585,000	757,059	1,204,412	1,823,824	2,443,235	3,682,059
	[lbf]	46,419	77,365	131,520	170,202	270,776	410,032	549,288	827,801

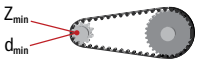
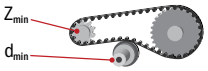
AT10 / PITCH: 10MM

PRODUCT DATA

PITCH	10 mm	0.394”
STANDARD THICKNESS		
AT10	4.5 mm	0.177”
AT10 HB	6.5 mm	0.256”
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-0.75 mm	0.030”
> 50MM WIDTH / 1.97"	+-1.00 mm	0.039”
MINIMUM WELDED BELT LENGTH		
≤ 100MM WIDTH / 3.34"	460mm	18.110"
> 100MM WIDTH / 3.34"	860mm	33.858"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

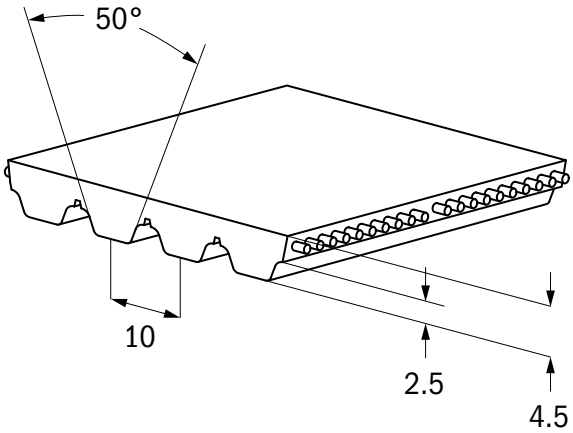
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

NO BACK BENDING	
BACK BENDING	

	STEEL / ARAMID		STEEL HF		STAINLESS STEEL	
z min	15 teeth		12 teeth		25 teeth	
d min	48 mm	1.89”	38 mm	1.5”	80 mm	3.15”
z min	25 teeth		20 teeth		40 teeth	
d min	120 mm	4.72”	100 mm	3.94”	150 mm	4.72”

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



AT10=4.5
AT10HB=6.5

For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	8,550	14,250	18,050	29,450	44,650	59,850	90,250
	[lbf]	1,920	3,205	4,060	6,620	10,040	13,455	20,290
Aramid (K)	[N]	9,711	16,185	20,501	33,449	50,713	67,977	102,505
	[lbf]	2,185	3,640	4,610	7,520	11,400	15,285	23,045
Steel HF (HF)	[N]	7,785	12,975	16,435	26,815	40,655	54,495	82,175
	[lbf]	1,750	2,915	3,695	6,030	9,140	12,250	18,475
Stainless Steel (NIRO)	[N]	6,413	10,688	13,538	22,088	33,488	44,888	67,688
	[lbf]	1,440	2,405	3,045	4,965	7,530	10,090	15,220
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	2,245	3,741	4,739	7,731	11,722	15,712	23,693
	[lbf]	505	841	1,065	1,738	2,635	3,532	5,327
Aramid (K)	[N]	1,005	1,675	2,121	3,461	5,247	7,033	10,606
	[lbf]	226	377	477	778	1,180	1,581	2,384
Steel HF (HF)	[N]	1,944	3,240	4,104	6,696	10,152	13,608	20,520
	[lbf]	437	728	923	1,505	2,282	3,059	4,613
Stainless Steel (NIRO)	[N]	1,683	2,806	3,554	5,799	8,791	11,784	17,770
	[lbf]	378	631	799	1,304	1,976	2,649	3,995
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	[N]	1,286	2,104	2,572	4,209	6,313	8,417	12,626
	[lbf]	289	473	578	946	1,419	1,892	2,839
Aramid (K)	[N]	754	1,256	1,591	2,596	3,935	5,275	7,954
	[lbf]	170	282	358	584	885	1,186	1,788
Steel HF (HF)	[N]	972	1,620	2,052	3,348	5,076	6,804	10,260
	[lbf]	219	364	461	753	1,141	1,530	2,307
Stainless Steel (NIRO)	[N]	842	1,403	1,777	2,899	4,396	5,892	8,885
	[lbf]	189	315	400	652	988	1,325	1,998
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	1,651	2,580	3,302	5,160	7,740	10,320	15,480
	[lbf]	371	580	742	1,160	1,740	2,320	3,480
BELT WEIGHT								
Steel (SL)	[kg/m]	0.09	0.14	0.18	0.29	0.43	0.57	0.86
	[lb/ft]	0.06	0.10	0.12	0.19	0.29	0.38	0.58
Aramid (K)	[kg/m]	0.07	0.11	0.13	0.21	0.32	0.42	0.63
	[lb/ft]	0.05	0.07	0.09	0.14	0.21	0.28	0.42
Steel HF (HF)	[kg/m]	0.09	0.14	0.18	0.27	0.41	0.55	0.82
	[lb/ft]	0.06	0.09	0.12	0.18	0.28	0.37	0.55
Stainless Steel (NIRO)	[kg/m]	0.11	0.17	0.21	0.34	0.50	0.67	1.01
	[lb/ft]	0.07	0.11	0.14	0.23	0.34	0.45	0.68
HB Steel (SL)	[kg/m]	0.13	0.20	0.26	0.40	0.60	0.80	1.21
	[lb/ft]	0.09	0.14	0.17	0.27	0.41	0.54	0.81
HB Aramid (K)	[kg/m]	0.10	0.16	0.21	0.33	0.49	0.65	0.98
	[lb/ft]	0.07	0.11	0.14	0.22	0.33	0.44	0.66
HB Steel HF (HF)	[kg/m]	0.12	0.20	0.25	0.39	0.59	0.78	1.17
	[lb/ft]	0.08	0.13	0.17	0.26	0.39	0.52	0.79
HB Stainless Steel (NIRO)	[kg/m]	0.14	0.23	0.29	0.45	0.68	0.90	1.35
	[lb/ft]	0.10	0.15	0.19	0.30	0.46	0.61	0.91
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	642,984	1,052,156	1,285,969	2,104,313	3,156,469	4,208,625	6,312,938
	[lbf]	144,556	236,546	289,112	473,092	709,638	946,184	1,419,276
Aramid (K)	[N]	251,190	418,650	530,290	865,210	1,311,770	1,758,330	2,651,450
	[lbf]	56,473	94,121	119,220	194,517	294,912	395,308	596,099
Steel HF (HF)	[N]	486,000	810,000	1,026,000	1,674,000	2,538,000	3,402,000	5,130,000
	[lbf]	109,263	182,104	230,665	376,349	570,594	764,838	1,153,327
Stainless Steel (NIRO)	[N]	420,863	701,438	888,488	1,449,638	2,197,838	2,946,038	4,442,438
	[lbf]	94,618	157,697	199,750	325,908	494,118	662,329	998,750

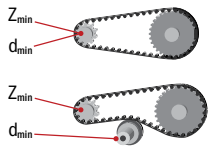
ATL10 / PITCH: 10MM

PRODUCT DATA

PITCH	10 mm	0.394”
STANDARD THICKNESS	4.8 mm	0.177”
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-1.00 mm	0.030”
> 50MM WIDTH / 1.97"	+-1.50 mm	0,039”
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

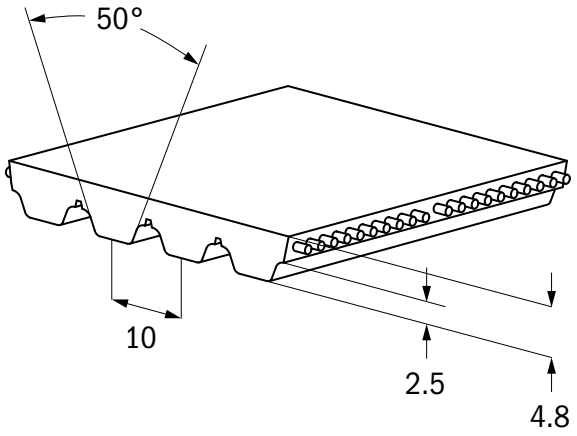
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL/ARAMID		STEEL HF		STEEL RHF	
z min	25 teeth		20 teeth		40 teeth	
d min	80 mm	3.15”	64 mm	2.51”	127 mm	5.00”
z min	30 teeth		25 teeth		42 teeth	
d min	150 mm	5.91”	130 mm	5.12”	200 mm	7.87”

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

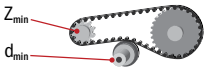
STANDARD WIDTH [MM]	UNIT	16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	13,840	24,220	31,140	50,170	76,120	102,070	153,970
	[lbf]	3,110	5,445	7,000	11,280	17,115	22,945	34,615
Steel HF (HF)	[N]	15,400	26,950	34,650	55,825	84,700	113,575	171,325
	[lbf]	3,460	6,060	7,790	12,550	19,040	25,535	38,515
Steel RHF (RHF)	[N]	N/A	41,250	52,250	82,500	123,750	165,000	247,500
	[lbf]	N/A	9,275	11,745	18,550	27,820	37,095	55,645
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	3,349	5,860	7,534	12,139	18,147	24,696	37,253
	[lbf]	753	1,317	1,694	2,729	4,080	5,552	8,375
Steel HF (HF)	[N]	2,902	5,079	6,530	10,521	15,963	21,404	32,288
	[lbf]	652	1,142	1,468	2,365	3,589	4,812	7,259
Steel RHF (RHF)	[N]	N/A	9,600	12,160	19,200	28,800	38,400	57,600
	[lbf]	N/A	2,158	2,734	4,317	6,475	8,633	12,950
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	1,651	2,580	3,302	5,160	7,740	10,320	15,480
	[lbf]	371	580	742	1,160	1,740	2,320	3,480
BELT WEIGHT								
Steel (SL)	[kg/m]	0.11	0.17	0.21	0.34	0.50	0.67	1.01
	[lb/ft]	0.07	0.11	0.14	0.23	0.34	0.45	0.68
Steel HF (HF)	[kg/m]	0.12	0.18	0.23	0.36	0.54	0.72	1.08
	[lb/ft]	0.08	0.12	0.15	0.24	0.36	0.48	0.73
Steel RHF (RHF)	[kg/m]	N/A	0.21	0.27	0.42	0.63	0.85	1.27
	[lb/ft]	N/A	0.14	0.18	0.28	0.42	0.57	0.85
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	837,143	1,465,000	1,883,571	3,034,643	4,604,286	6,173,929	9,313,214
	[lbf]	188,207	329,362	423,465	682,249	1,035,136	1,388,024	2,093,798
Steel HF (HF)	[N]	725,571	1,269,750	1,632,536	2,630,196	3,990,643	5,351,089	8,071,982
	[lbf]	163,123	285,465	367,027	591,321	897,177	1,203,033	1,814,744
Steel RHF (RHF)	[N]	N/A	2,400,000	3,040,000	4,800,000	7,200,000	9,600,000	14,400,000
	[lbf]	N/A	539,568	683,453	1,079,137	1,618,705	2,158,273	3,237,410

AT20 / PITCH: 20MM

PRODUCT DATA

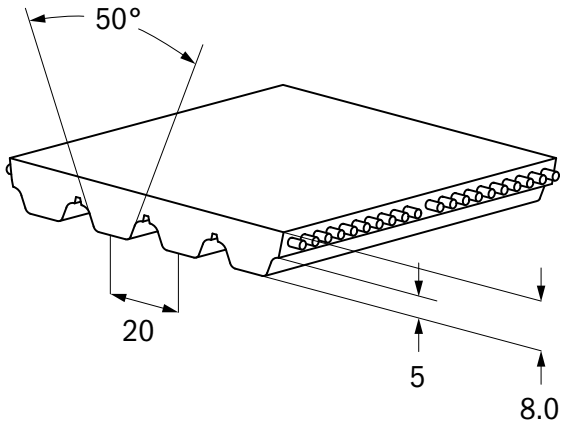
PITCH	20 mm	0.787”
STANDARD THICKNESS	8.0 mm	0.315"
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-1.00 mm	0.039”
> 50MM WIDTH / 1.97"	+-1.50 mm	0,059”
MINIMUM WELDED BELT LENGTH	1000mm	39.370"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL / ARAMID	
z min	18 teeth	
d min	115 mm	4.53”
z min	25 teeth	
d min	180 mm	7.09”

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	24,220	31,140	50,170	76,120	102,070	153,970
	[lbf]	5,445	7,000	11,280	17,115	22,945	34,615
Aramid (K)	[N]	21,798	28,026	45,153	68,508	91,863	138,573
	[lbf]	4,900	6,300	10,150	15,400	20,655	31,155
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	[N]	5,860	7,534	12,139	18,417	24,696	37,253
	[lbf]	1,317	1,694	2,729	4,141	5,552	8,375
Aramid (K)	[N]	1,989	2,585	4,120	6,251	8,382	12,643
	[lbf]	447	581	926	1,405	1,884	2,842
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Steel (SL)	[N]	2,930	3,767	6,069	9,209	12,348	18,626
	[lbf]	659	847	1,364	2,070	2,776	4,188
Aramid (K)	[N]	1,492	1,939	3,090	4,688	6,286	9,483
	[lbf]	335	436	695	1,054	1,413	2,132
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	5,450	6,976	10,900	16,350	21,800	32,700
	[lbf]	1,225	1,568	2,451	3,676	4,901	7,352
BELT WEIGHT							
Steel (SL)	[kg/m]	0.24	0.31	0.48	0.73	0.97	1.45
	[lb/ft]	0.16	0.21	0.32	0.49	0.65	0.97
Aramid (K)	[kg/m]	0.18	0.23	0.37	0.55	0.73	1.10
	[lb/ft]	0.12	0.16	0.25	0.37	0.49	0.74
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	1,465,000	1,883,571	3,034,643	4,604,286	6,173,929	9,313,214
	[lbf]	329,362	423,465	682,249	1,035,136	1,388,024	2,093,798
Aramid (K)	[N]	497,210	646,373	1,029,935	1,562,660	2,095,385	3,160,836
	[lbf]	111,783	145,318	231,550	351,317	471,085	710,620

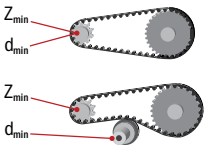
ATL20 / PITCH: 20MM

PRODUCT DATA

PITCH	20 mm	0.787”
STANDARD THICKNESS	8.0 mm	0.315”
WIDTH TOLERANCE	+-2.00 mm	0.079”
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

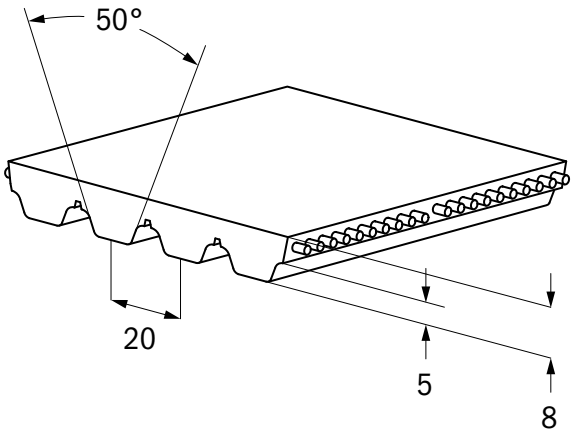
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL	
z min	25 teeth	
d min	159 mm	6.27"
z min	30 teeth	
d min	250 mm	9.84"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE						
Steel (SL)	[N]	41,600	70,400	105,600	144,000	217,600
	[lbf]	9,355	15,825	23,740	32,375	48,920
ALLOWABLE BELT FORCE / OPEN ENDED						
Steel (SL)	[N]	9,106	15,410	23,115	31,520	47,631
	[lbf]	2,047	3,464	5,197	7,086	10,708
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	[N]	6,976	10,900	16,350	21,800	32,700
	[lbf]	1,568	2,451	3,676	4,901	7,352
BELT WEIGHT						
Steel (SL)	[kg/m]	0.35	0.54	0.81	1.08	1.63
	[lb/ft]	0.23	0.36	0.55	0.73	1.09
SPECIFIC BELT STIFFNESS						
Steel (SL)	[N]	2,276,477	3,852,500	5,778,749	7,880,113	11,907,726
	[lbf]	511,798	866,120	1,299,179	1,771,608	2,677,097

HTD5 / PITCH: 5MM

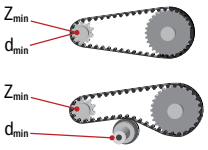
PRODUCT DATA

PITCH	5 mm	0.197"
STANDARD THICKNESS	3.6 mm	0.142"
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-0.5 mm	0.020"
> 50MM WIDTH / 1.97"	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	450mm	17.717"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

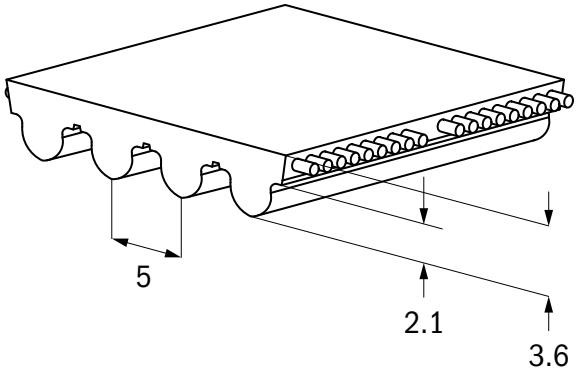
50MM AT TEMPERATURES BELOW -5°C / +23°F

NO BACK BENDING	
BACK BENDING	



	STEEL BASIC / ARAMID		STEEL	
z min	16 teeth		14 teeth	
d min	25 mm	0.98"	22mm	0.88"
z min	20 teeth		18 teeth	
d min	80 mm	3.15"	60 mm	2.36"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	15	20	25	30	50	100	150
BREAKING FORCE / AVERAGE VALUE									
Steel basic (BSL)	[N]	2,520	3,780	5,460	7,140	8,400	14,700	29,820	44,940
	[lbf]	565	850	1,230	1,605	1,890	3,305	6,705	10,105
Steel (SL)	[N]	3,720	5,580	8,060	10,540	12,400	21,700	44,020	66,340
	[lbf]	835	1,255	1,810	2,370	2,790	4,880	9,895	14,915
Aramid (K)	[N]	2,695	4,312	5,929	8,085	9,702	16,709	33,957	51,205
	[lbf]	605	970	1,335	1,820	2,180	3,755	7,635	11,510
ALLOWABLE BELT FORCE / OPEN ENDED									
Steel basic (BSL)	[N]	674	1,010	1,459	1,909	2,245	3,929	7,971	12,012
	[lbf]	151	227	328	429	505	883	1,792	2,701
Steel (SL)	[N]	826	1,239	1,789	2,340	2,753	4,818	9,773	14,728
	[lbf]	186	279	402	526	619	1,083	2,197	3,311
Aramid (K)	[N]	355	567	780	1,064	1,276	2,198	4,467	6,736
	[lbf]	80	127	175	239	287	494	1,004	1,514
ALLOWABLE BELT FORCE / ENDLESS WELDED									
Steel basic (BSL)	[N]	337	505	730	954	1,123	1,965	3,985	6,006
	[lbf]	76	114	164	215	252	442	896	1,350
Steel (SL)	[N]	413	619	895	1,170	1,376	2,409	4,886	7,364
	[lbf]	93	139	201	263	309	542	1,098	1,656
Aramid (K)	[N]	266	425	585	798	957	1,648	3,350	5,052
	[lbf]	60	96	132	179	215	371	753	1,136
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH									
	[N]	450	675	900	1,125	1,350	2,250	4,500	6,750
	[lbf]	101	152	202	253	304	506	1,012	1,518
BELT WEIGHT									
Steel basic (BSL)	[kg/m]	0.04	0.07	0.09	0.11	0.13	0.22	0.44	0.66
	[lb/ft]	0.03	0.04	0.06	0.07	0.09	0.15	0.30	0.44
Steel (SL)	[kg/m]	0.05	0.07	0.10	0.12	0.15	0.25	0.49	0.74
	[lb/ft]	0.03	0.05	0.07	0.08	0.10	0.16	0.33	0.49
Aramid (K)	[kg/m]	0.03	0.04	0.06	0.07	0.09	0.15	0.29	0.44
	[lb/ft]	0.02	0.03	0.04	0.05	0.06	0.10	0.19	0.29
SPECIFIC BELT STIFFNESS									
Steel basic (BSL)	[N]	168,397	252,596	364,860	477,125	561,324	982,316	1,992,699	3,003,081
	[lbf]	37,859	56,789	82,028	107,267	126,197	220,844	447,999	675,153
Steel (SL)	[N]	206,471	309,706	447,353	585,000	688,235	1,204,412	2,443,235	3,682,059
	[lbf]	46,419	69,628	100,574	131,520	154,729	270,776	549,288	827,801
Aramid (K)	[N]	88,625	141,800	194,975	265,875	319,050	549,475	1,116,675	1,683,875
	[lbf]	19,925	31,879	43,834	59,774	71,729	123,533	251,051	378,569

HTD8 / PITCH: 8MM

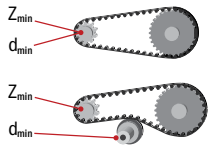
PRODUCT DATA

PITCH	8 mm	0.315”
STANDARD THICKNESS	5.6 mm	0.220”
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-0.75 mm	0.030”
> 50MM WIDTH / 1.97"	+-1.00 mm	0.039”
MINIMUM WELDED BELT LENGTH	456mm	17.953"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

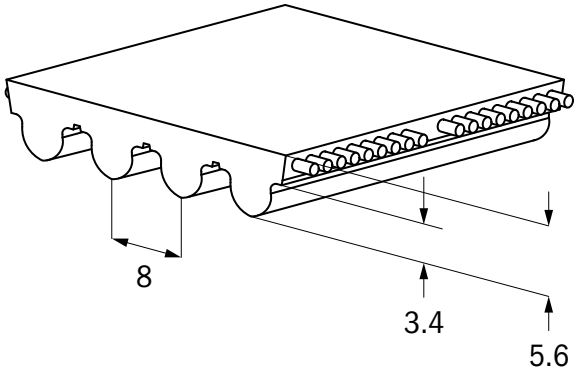
50MM AT TEMPERATURES BELOW -5°C / +23°F

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID		STEEL HF		STAINLESS STEEL	
z min	18 teeth		16 teeth		25 teeth	
d min	46 mm	1.80"	41 mm	1.60"	64 mm	2.51"
z min	20 teeth		18 teeth		30 teeth	
d min	120 mm	4.72"	100 mm	3.94"	150 mm	5.91"

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

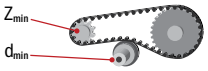
STANDARD WIDTH [MM]	UNIT	10	15	20	25	30	50	85	100	150
BREAKING FORCE / AVERAGE VALUE										
Steel (SL)	[N]	4,750	7,600	10,450	14,250	17,100	29,450	50,350	59,850	90,250
	[lbf]	1,070	1,710	2,350	3,205	3,845	6,620	11,320	13,455	20,290
Aramid (K)	[N]	5,395	8,632	11,869	16,185	19,422	33,449	57,187	67,977	102,505
	[lbf]	1,215	1,940	2,670	3,640	4,365	7,520	12,855	15,285	23,045
Steel HF (HF)	[N]	4,325	6,920	9,515	12,975	15,570	26,815	45,845	54,495	82,175
	[lbf]	970	1,555	2,140	2,915	3,500	6,030	10,305	12,250	18,475
Stainless Steel (NIRO)	[N]	3,563	5,700	7,838	10,688	12,825	22,088	37,763	44,888	67,688
	[lbf]	800	1,280	1,760	2,405	2,885	4,965	8,490	10,090	15,220
ALLOWABLE BELT FORCE / OPEN ENDED										
Steel (SL)	[N]	1,247	1,995	2,743	3,741	4,489	7,731	13,218	15,712	23,693
	[lbf]	280	449	617	841	1,009	1,738	2,972	3,532	5,327
Aramid (K)	[N]	603	960	1,317	1,675	2,032	3,461	5,962	7,033	10,606
	[lbf]	136	216	296	376	457	778	1,340	1,581	2,384
Steel HF (HF)	[N]	1,152	1,843	2,534	3,456	4,147	7,142	12,211	14,515	21,888
	[lbf]	259	414	570	777	932	1,606	2,745	3,263	4,921
Stainless Steel (NIRO)	[N]	935	1,496	2,058	2,806	3,367	5,799	9,914	11,784	17,770
	[lbf]	210	336	463	631	757	1,304	2,229	2,649	3,995
ALLOWABLE BELT FORCE / ENDLESS WELDED										
Steel (SL)	[N]	701	1,169	1,520	1,871	2,338	4,209	7,014	8,417	12,626
	[lbf]	158	263	342	421	526	946	1,577	1,892	2,839
Aramid (K)	[N]	452	720	988	1,256	1,524	2,596	4,471	5,275	7,954
	[lbf]	102	162	222	282	343	584	1,005	1,186	1,788
Steel HF (HF)	[N]	576	922	1,267	1,728	2,074	3,571	6,106	7,258	10,944
	[lbf]	129	207	285	388	466	803	1,373	1,632	2,460
Stainless Steel (NIRO)	[N]	468	748	1,029	1,403	1,683	2,899	4,957	5,892	8,885
	[lbf]	105	168	231	315	378	652	1,114	1,325	1,998
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH										
	[N]	930	1,395	1,860	2,325	2,790	4,650	7,905	9,300	13,950
	[lbf]	209	314	418	523	627	1,045	1,777	2,091	3,136
BELT WEIGHT										
Steel (SL)	[kg/m]	0.07	0.10	0.14	0.17	0.21	0.34	0.58	0.69	1.03
	[lb/ft]	0.05	0.07	0.09	0.12	0.14	0.23	0.39	0.46	0.69
Aramid (K)	[kg/m]	0.05	0.07	0.09	0.12	0.14	0.24	0.40	0.47	0.71
	[lb/ft]	0.03	0.05	0.06	0.08	0.09	0.16	0.27	0.32	0.47
Steel HF (HF)	[kg/m]	0.07	0.10	0.13	0.17	0.20	0.33	0.56	0.66	0.99
	[lb/ft]	0.04	0.07	0.09	0.11	0.13	0.22	0.38	0.44	0.67
Stainless Steel (NIRO)	[kg/m]	0.07	0.10	0.14	0.17	0.20	0.34	0.58	0.68	1.02
	[lb/ft]	0.05	0.07	0.09	0.11	0.14	0.23	0.39	0.46	0.69
SPECIFIC BELT STIFFNESS										
Steel (SL)	[N]	350,719	584,531	759,891	935,250	1,169,063	2,104,313	3,507,188	4,208,625	6,312,938
	[lbf]	78,849	131,414	170,839	210,263	262,829	473,092	788,487	946,184	1,419,276
Aramid (K)	[N]	157,500	250,833	344,167	437,500	530,833	904,167	1,557,500	1,837,500	2,770,833
	[lbf]	35,409	56,392	77,376	98,359	119,342	203,275	350,157	413,107	622,939
Steel HF (HF)	[N]	288,000	460,800	633,600	864,000	1,036,800	1,785,600	3,052,800	3,628,800	5,472,000
	[lbf]	64,748	103,597	142,446	194,245	233,094	401,439	686,331	815,827	1,230,216
Stainless Steel (NIRO)	[N]	233,813	374,100	514,388	701,438	841,725	1,449,638	2,478,413	2,946,038	4,442,438
	[lbf]	52,566	84,105	115,645	157,697	189,237	325,908	557,197	662,329	998,750

HTDL8 / PITCH: 8MM

PRODUCT DATA

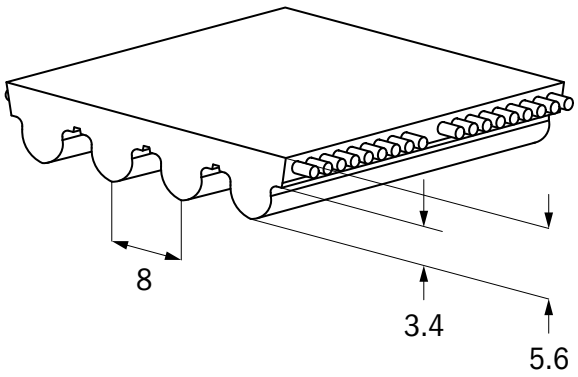
PITCH	8 mm	0.315”
STANDARD THICKNESS	5.6 mm	0.220”
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-1.00 mm	0.030”
> 50MM WIDTH / 1.97"	+-1.50 mm	0.039”
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL / ARAMID		STEEL HF	
z min	31 teeth		25 teeth	
d min	80mm	3.15"	64mm	2.51"
z min	38 teeth		32 teeth	
d min	150mm	5.91"	130mm	5.12"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	20	25	30	50	85	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	19,030	24,220	29,410	50,170	86,500	102,070	153,970
	[lbf]	4,280	5,445	6,610	11,280	19,445	22,945	34,615
Aramid (K)	[N]	17,127	21,798	26,469	45,153	77,850	91,863	138,573
	[lbf]	3,850	4,900	5,950	10,150	17,500	20,655	31,155
Steel HF (HF)	[N]	21,175	26,950	32,725	55,825	96,250	113,575	171,325
	[lbf]	4,760	6,060	7,355	12,550	21,640	25,535	38,515
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	4,604	5,860	7,116	12,139	20,929	24,696	37,253
	[lbf]	1,035	1,317	1,600	2,729	4,705	5,552	8,375
Aramid (K)	[N]	1,563	1,989	2,415	4,120	7,103	8,382	12,643
	[lbf]	351	447	543	926	1,597	1,884	2,842
Steel HF (HF)	[N]	3,991	5,079	6,167	10,521	18,139	21,404	32,288
	[lbf]	897	1,142	1,386	2,365	4,078	4,812	7,259
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	1,860	2,325	2,790	4,650	7,905	9,300	13,950
	[lbf]	418	523	627	1,045	1,777	2,091	3,136
BELT WEIGHT								
Steel (SL)	[kg/m]	0.16	0.20	0.24	0.39	0.67	0.79	1.18
	[lb/ft]	0.11	0.13	0.16	0.26	0.45	0.53	0.79
Aramid (K)	[kg/m]	0.09	0.11	0.14	0.23	0.38	0.45	0.68
	[lb/ft]	0.06	0.08	0.09	0.15	0.26	0.30	0.45
Steel HF (HF)	[kg/m]	0.17	0.21	0.25	0.42	0.71	0.83	1.25
	[lb/ft]	0.11	0.14	0.17	0.28	0.48	0.56	0.84
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	1,151,071	1,465,000	1,778,929	3,034,643	5,232,143	6,173,929	9,313,214
	[lbf]	258,784	329,362	399,939	682,249	1,176,291	1,388,024	2,093,798
Aramid (K)	[N]	390,665	497,210	603,755	1,029,935	1,775,750	2,095,385	3,160,836
	[lbf]	87,829	111,783	135,736	231,550	399,224	471,085	710,619
Steel HF (HF)	[N]	997,661	1,269,750	1,541,839	2,630,196	4,534,821	5,351,089	8,071,982
	[lbf]	224,294	285,465	346,636	591,321	1,019,519	1,203,033	1,814,744

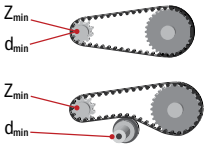
HTD14 / PITCH: 14MM

PRODUCT DATA

PITCH	14 mm	0.551”
STANDARD THICKNESS	10.0 mm	0.394”
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-1.00 mm	0.039”
> 50MM WIDTH / 1.97"	+-1.50 mm	0.059”
> 100MM WIDTH / 3.94"	+-2.00 mm	0.079”
MINIMUM WELDED BELT LENGTH	1000 mm	39.370"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

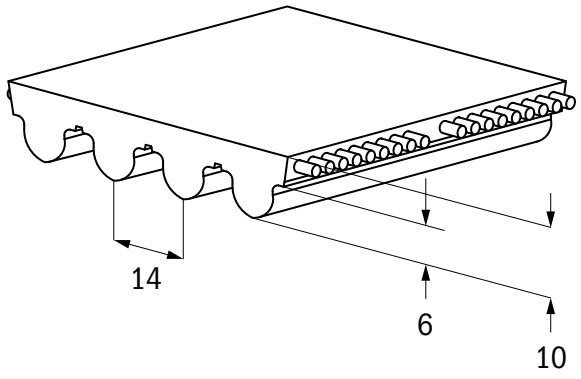
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID		STEEL HF	
z min	28 teeth		23 teeth	
d min	125 mm	4.92"	102 mm	4.06"
z min	36 teeth		32 teeth	
d min	180 mm	7.09"	160 mm	6.30"

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	40	55	85	115	170
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	24,220	39,790	55,360	86,500	117,640	174,730
	[lbf]	5,445	8,945	12,445	19,445	26,447	39,281
Aramid (K)	[N]	18,684	31,140	43,596	66,951	91,863	137,016
	[lbf]	4,200	7,000	9,800	15,050	20,655	30,805
Steel HF (HF)	[N]	26,950	44,275	61,600	96,250	130,900	194,425
	[lbf]	5,860	9,627	13,848	21,638	29,427	43,708
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	[N]	5,860	9,627	13,394	20,929	28,463	42,276
	[lbf]	1,317	2,164	3,011	4,705	6,399	9,504
Aramid (K)	[N]	1,705	2,841	3,978	6,109	8,382	12,501
	[lbf]	383	639	894	1,373	1,884	2,810
Steel HF (HF)	[N]	5,079	8,344	11,609	18,139	24,669	36,641
	[lbf]	1,142	1,876	2,610	4,078	5,546	8,237
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Steel (SL)	[N]	2,930	4,814	6,697	10,464	14,231	21,138
	[lbf]	659	1,082	1,506	2,352	3,199	4,752
Aramid (K)	[N]	1,279	2,131	2,983	4,581	6,286	9,376
	[lbf]	288	479	671	1,030	1,413	2,108
Steel HF (HF)	[N]	2,540	4,172	5,805	9,070	12,335	18,321
	[lbf]	571	938	1,305	2,039	2,773	4,119
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	4,313	6,900	9,488	14,663	19,838	29,325
	[lbf]	970	1,551	2,133	3,297	4,460	6,593
BELT WEIGHT							
Steel (SL)	[kg/m]	0.27	0.43	0.60	0.92	1.24	1.84
	[lb/ft]	0.18	0.29	0.40	0.62	0.84	1.24
Aramid (K)	[kg/m]	0.21	0.34	0.46	0.71	0.97	1.43
	[lb/ft]	0.14	0.23	0.31	0.48	0.65	0.96
Steel HF (HF)	[kg/m]	0.28	0.45	0.62	0.96	1.29	1.91
	[lb/ft]	0.19	0.30	0.42	0.64	0.87	1.28
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	1,289,000	2,148,333	3,007,667	4,618,917	6,337,583	9,452,667
	[lbf]	289,793	482,989	676,184	1,038,426	1,424,816	2,125,150
Aramid (K)	[N]	433,283	714,562	995,841	1,558,398	2,120,956	3,152,312
	[lbf]	97,411	160,648	223,885	350,359	476,834	708,703
Steel HF (HF)	[N]	1,117,380	1,862,300	2,607,220	4,003,945	5,493,785	8,194,120
	[lbf]	251,210	418,683	586,156	900,167	1,235,114	1,842,203

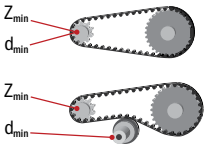
HTDL14 / PITCH: 14MM

PRODUCT DATA

PITCH	14 mm	0.551”
STANDARD THICKNESS	10.0 mm	0.394”
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-1.00 mm	0.039”
> 50MM WIDTH / 1.97"	+-1.50 mm	0.059”
> 100MM WIDTH / 3.94"	+-2.00 mm	0.079”
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

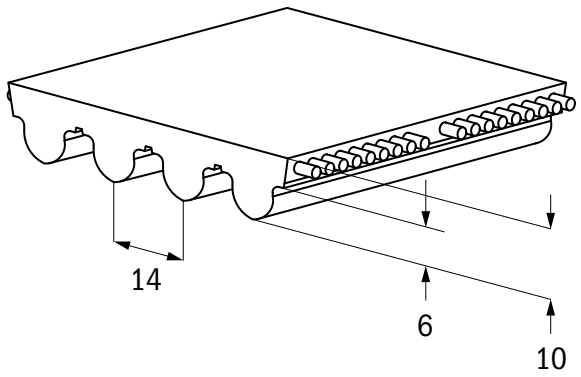
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL	
z min	36 teeth	
d min	160mm	6.27"
z min	43 teeth	
d min	250 mm	9.84"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	55	85	115	170
BREAKING FORCE / AVERAGE VALUE					
Steel (SL)	[N]	76,800	121,600	163,200	246,400
	[lbf]	17,265	27,340	36,690	55,395
ALLOWABLE BELT FORCE / OPEN ENDED					
Steel (SL)	[N]	16,811	26,617	35,723	53,935
	[lbf]	3,779	5,984	8,031	12,126
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH					
	[N]	9,488	14,663	19,838	29,325
	[lbf]	2,133	3,297	4,460	6,593
BELT WEIGHT					
Steel (SL)	[kg/m]	0.68	1.04	1.41	2.09
	[lb/ft]	0.45	0.70	0.95	1.40
SPECIFIC BELT STIFFNESS					
Steel (SL)	[N]	4,202,727	6,654,318	8,930,795	13,483,750
	[lbf]	944,858	1,496,025	2,007,823	3,031,419

HPL3 / PITCH: 3MM

PRODUCT DATA

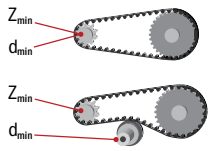
PITCH	3 mm	0.118"
STANDARD THICKNESS	2.6 mm	0.102"
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-0.5 mm	0.020"
> 50MM WIDTH / 1.97"	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1"
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

PULLEY DEFINITION

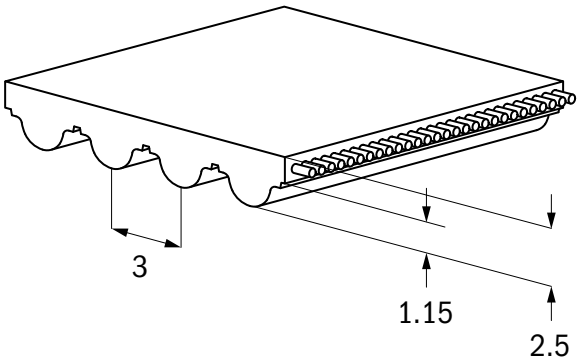
HPL3 BELT RUNS IN GATES 3MGT PULLEY PROFILE

MIN PULLEY TOOTH COUNT AND DIAMETER

		STEEL	
NO BACK BENDING	**z min**	25 teeth	
	d min	24 mm	0.945"
BACK BENDING	**z min**	27 teeth	
	d min	60 mm	2.36"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	16	25	32	50	75	100
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	4,275	7,125	9,120	14,535	21,945	29,355
	[lbf]	961	1,600	2,050	3,270	4,935	6,600
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	[N]	1,056	1,761	2,253	3,591	6,335	7,253
	[lbf]	237	396	507	807	1,424	1,631
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	448	700	896	1,400	2,100	2,800
	[lbf]	101	157	201	315	472	629
BELT WEIGHT							
Steel (SL)	[kg/m]	0.05	0.07	0.09	0.15	0.22	0.29
	[lb/ft]	0.03	0.05	0.06	0.10	0.15	0.19
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	264,075	440,125	563,360	897,855	1,583,690	1,813,315
	[lbf]	59,369	98,949	126,655	201,856	356,045	407,670

HPL5 / PITCH: 5MM

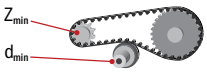
PRODUCT DATA

PITCH	5 mm	0.197"
STANDARD THICKNESS	3.8 mm	0.150"
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-0.5 mm	0.020"
> 50MM WIDTH / 1.97"	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1"
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

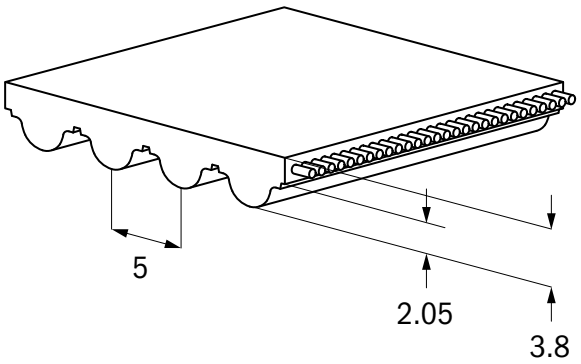
PULLEY DEFINITION

HPL5 BELT RUNS IN GATES 5MGT PULLEY PROFILE

MIN PULLEY TOOTH COUNT AND DIAMETER

			STEEL	
NO BACK BENDING		**z min**	24 teeth	
		d min	39 mm	1.54"
BACK BENDING		**z min**	28 teeth	
		d min	100 mm	3.94"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	30	50	75	100	150
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	12,975	15,570	26,815	40,655	54,495	82,175
	[lbf]	2,915	3,500	6,030	9,140	12,250	18,475
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	[N]	3,456	4,147	7,142	10,829	14,515	21,888
	[lbf]	777	932	1,606	2,435	3,263	4,921
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	1,138	1,365	2,275	3,413	4,550	6,825
	[lbf]	256	307	511	767	1,023	1,534
BELT WEIGHT							
Steel (SL)	[kg/m]	0.12	0.14	0.23	0.35	0.46	0.69
	[lb/ft]	0.08	0.09	0.15	0.23	0.31	0.46
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	864,000	1,036,800	1,785,600	2,707,200	3,628,800	5,472,000
	[lbf]	194,245	233,094	401,439	608,633	815,827	1,230,216

HPL8 / PITCH: 8MM

PRODUCT DATA

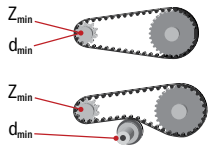
PITCH	8 mm	0.315"
STANDARD THICKNESS	5.7 mm	0.224"
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-1.0 mm	0.039"
> 50MM WIDTH / 1.97"	+-1.5 mm	0.059"
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1"
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

PULLEY DEFINITION

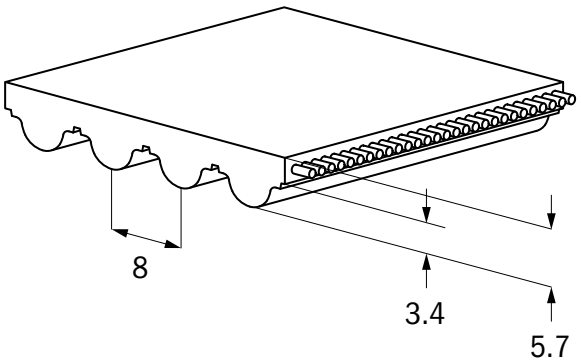
HPL8 BELT RUNS IN GATES 8MGT PULLEY PROFILE

MIN PULLEY TOOTH COUNT AND DIAMETER

		STEEL		STEEL HF	
NO BACK BENDING	**z min**	32 teeth		25 teeth	
	d min	81 mm	3.19"	64 mm	2.51"
BACK BENDING	**z min**	34 teeth		30 teeth	
	d min	150 mm	5.91"	130 mm	5.12"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	20	25	30	50	85	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	19,030	24,220	29,410	50,170	86,500	102,070	153,970
	[lbf]	4,280	5,445	6,610	11,280	19,445	22,945	34,615
Steel HF (HF)	[N]	21,175	26,950	32,725	55,825	96,250	113,575	171,325
	[lbf]	4,760	6,060	7,355	12,550	21,640	25,535	38,515
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	4,604	5,860	7,116	12,139	20,929	24,696	37,253
	[lbf]	1,035	1,317	1,600	2,729	4,705	5,552	8,375
Steel HF (HF)	[N]	3,991	5,079	6,167	10,521	18,139	21,404	32,288
	[lbf]	897	1,142	1,386	2,365	4,078	4,812	7,259
ALLOWABLE EFFECTIVE FORCE / MINIMUM 15 TEETH IN MESH								
	[N]	1,900	2,375	2,850	4,750	8,075	9,500	14,250
	[lbf]	427	534	641	1,068	1,815	2,136	3,204
BELT WEIGHT								
Steel (SL)	[kg/m]	0.16	0.20	0.24	0.39	0.67	0.79	1.18
	[lb/ft]	0.11	0.13	0.16	0.26	0.45	0.53	0.79
Steel HF (HF)	[kg/m]	0.17	0.21	0.25	0.42	0.71	0.83	1.25
	[lb/ft]	0.11	0.14	0.17	0.28	0.48	0.56	0.84
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	1,151,071	1,465,000	1,778,929	3,034,643	5,232,143	6,173,929	9,313,214
	[lbf]	258,784	329,362	399,939	682,249	1,176,291	1,388,024	2,093,798
Steel HF (HF)	[N]	997,661	1,269,750	1,541,839	2,630,196	4,534,821	5,351,089	8,071,982
	[lbf]	224,294	285,465	346,636	591,321	1,019,519	1,203,033	1,814,744

STD5 / PITCH: 5MM

PRODUCT DATA

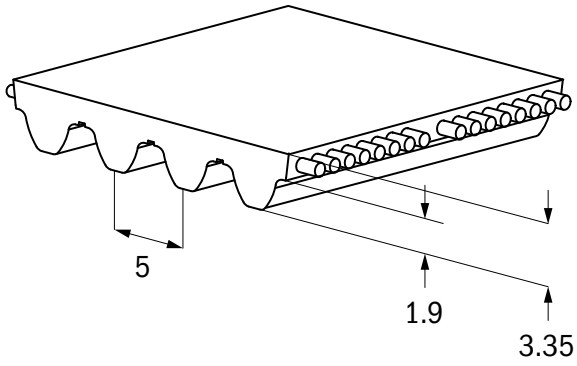
PITCH	5 mm	0.197"
STANDARD THICKNESS	3.35 mm	0.132"
WIDTH TOLERANCE	+-0.5 mm	0.020
MINIMUM WELDED BELT LENGTH	450 mm	17.717"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1"
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL		ARAMID	
NO BACK BENDING	**z min**	14 teeth		16 teeth	
	d min	22 mm	0.88"	25 mm	0.98"
BACK BENDING	**z min**	18 teeth		20 teeth	
	d min	60 mm	2.36"	80 mm	3.15"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	15	20	25	30	50
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	3,720	5,580	8,060	10,540	12,400	21,700
	[lbf]	835	1,255	1,810	2,370	2,790	4,880
Aramid (K)	[N]	2,695	4,312	5,929	8,085	9,702	16,709
	[lbf]	605	970	1,335	1,820	2,180	3,755
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	[N]	826	1,239	1,789	2,340	2,753	4,818
	[lbf]	186	279	402	526	619	1,083
Aramid (K)	[N]	355	567	780	1,064	1,276	2,198
	[lbf]	80	127	175	239	287	494
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Steel (SL)	[N]	413	619	895	1,170	1,376	2,409
	[lbf]	93	139	201	263	309	542
Aramid (K)	[N]	266	425	585	798	957	1,648
	[lbf]	60	96	132	179	215	371
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	410	615	820	1,025	1,230	2,050
	[lbf]	92	138	184	230	277	461
BELT WEIGHT							
Steel (SL)	[kg/m]	0.04	0.06	0.08	0.09	0.11	0.19
	[lb/ft]	0.03	0.04	0.05	0.06	0.08	0.13
Aramid (K)	[kg/m]	0.03	0.04	0.06	0.07	0.09	0.15
	[lb/ft]	0.02	0.03	0.04	0.05	0.06	0.10
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	206,471	309,706	447,353	585,000	688,235	1,204,412
	[lbf]	46,419	69,628	100,574	131,520	154,729	270,776
Aramid (K)	[N]	88,625	141,800	194,975	265,875	319,050	549,475
	[lbf]	19,924	31,878	43,832	59,774	71,725	123,533

STD8 / PITCH: 8MM

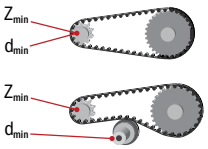
PRODUCT DATA

PITCH	8 mm	0.315”
STANDARD THICKNESS	5 mm	0.197”
WIDTH TOLERANCE		
≤ 50MM WIDTH / 1.97"	+-0.75 mm	0.030”
> 50MM WIDTH / 1.97"	+-1.00 mm	0.039”
MINIMUM WELDED BELT LENGTH	456mm	17.953"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

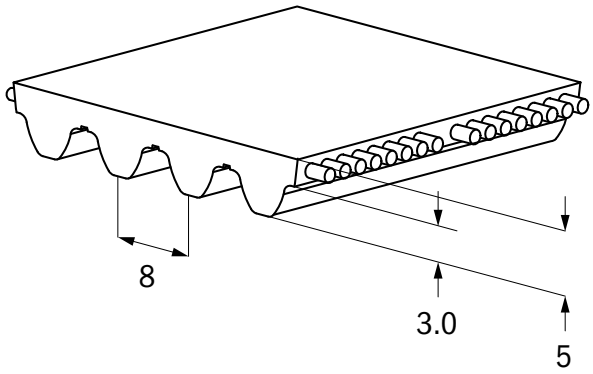
50MM AT TEMPERATURES BELOW -5°C / +23°F

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID		STEEL HF		STAINLESS STEEL	
z min	18 teeth		16 teeth		25 teeth	
d min	46 mm	1.80"	41 mm	1.60"	64 mm	2.51"
z min	20 teeth		18 teeth		30 teeth	
d min	120 mm	4.72"	100 mm	3.94"	150 mm	5.91"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	15	20	25	30	50	85	100	150
BREAKING FORCE / AVERAGE VALUE										
Steel (SL)	[N]	5,700	9,500	12,350	14,250	19,000	34,200	57,000	68,400	102,600
	[lbf]	1,280	2,135	2,775	3,205	4,270	7,690	12,815	15,380	23,065
Aramid (K)	[N]	5,395	8,632	11,869	16,185	19,422	33,449	57,187	67,977	102,505
	[lbf]	1,215	1,940	2,670	3,640	4,365	7,520	12,855	15,285	23,045
Steel HF (HF)	[N]	5,190	8,650	11,245	12,975	17,300	31,140	51,900	62,280	93,420
	[lbf]	1,165	1,945	2,530	2,915	3,890	7,000	11,670	14,000	21,005
Stainless Steel (NIRO)	[N]	4,275	7,125	9,263	10,688	14,250	25,650	42,750	51,300	76,950
	[lbf]	960	1,600	2,080	2,405	3,205	5,765	9,610	11,535	17,300
ALLOWABLE BELT FORCE / OPEN ENDED										
Steel (SL)	[N]	1,496	2,494	3,242	3,741	4,988	8,978	14,964	17,957	26,935
	[lbf]	336	561	729	841	1,121	2,019	3,364	4,037	6,056
Aramid (K)	[N]	630	1,003	1,377	1,750	2,123	3,617	6,230	7,350	11,083
	[lbf]	142	225	310	393	477	813	1,401	1,652	2,492
Steel HF (HF)	[N]	1,382	2,304	2,995	3,456	4,608	8,294	13,824	16,589	24,883
	[lbf]	311	518	673	777	1,036	1,865	3,108	3,729	5,594
Stainless Steel (NIRO)	[N]	1,122	1,871	2,432	2,806	3,741	6,734	11,223	13,468	20,201
	[lbf]	252	421	547	631	841	1,514	2,523	3,028	4,542
ALLOWABLE BELT FORCE / ENDLESS WELDED										
Steel (SL)	[N]	748	1,247	1,621	1,871	2,494	4,489	7,482	8,978	13,468
	[lbf]	168	280	364	421	561	1,009	1,682	2,019	3,028
Aramid (K)	[N]	473	753	1,033	1,313	1,593	2,713	4,673	5,513	8,313
	[lbf]	106	169	232	295	358	610	1,051	1,239	1,869
Steel HF (HF)	[N]	691	1,152	1,498	1,728	2,304	4,147	6,912	8,294	12,442
	[lbf]	155	259	337	388	518	932	1,554	1,865	2,797
Stainless Steel (NIRO)	[N]	561	935	1,216	1,403	1,871	3,367	5,612	6,734	10,101
	[lbf]	126	210	273	315	421	757	1,262	1,514	2,271
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH										
	[N]	880	1,320	1,760	2,200	2,640	4,400	7,480	8,800	13,200
	[lbf]	198	297	396	495	594	989	1,682	1,978	2,968
BELT WEIGHT										
Steel (SL)	[kg/m]	0.07	0.10	0.14	0.17	0.21	0.34	0.58	0.69	1.03
	[lb/ft]	0.05	0.07	0.09	0.12	0.14	0.23	0.39	0.46	0.69
Aramid (K)	[kg/m]	0.05	0.07	0.09	0.12	0.14	0.24	0.40	0.47	0.71
	[lb/ft]	0.03	0.05	0.06	0.08	0.09	0.16	0.27	0.32	0.47
Steel HF (HF)	[kg/m]	0.07	0.10	0.13	0.17	0.20	0.33	0.56	0.66	0.99
	[lb/ft]	0.04	0.07	0.09	0.11	0.13	0.22	0.38	0.44	0.67
Stainless Steel (NIRO)	[kg/m]	0.07	0.10	0.14	0.17	0.20	0.34	0.58	0.68	1.02
	[lb/ft]	0.05	0.07	0.09	0.11	0.14	0.23	0.39	0.46	0.69
SPECIFIC BELT STIFFNESS										
Steel (SL)	[N]	374,100	623,500	810,550	935,250	1,247,000	2,244,600	3,741,000	4,489,200	6,733,800
	[lbf]	84,105	140,175	182,228	210,263	280,351	504,631	841,052	1,009,263	1,513,894
Aramid (K)	[N]	157,500	250,833	344,167	437,500	530,833	904,167	1,557,500	1,837,500	2,770,833
	[lbf]	35,409	56,392	77,376	98,359	119,342	203,275	350,157	413,107	622,939
Steel HF (HF)	[N]	345,600	460,800	633,600	864,000	1,036,800	1,785,600	3,052,800	3,628,800	5,472,000
	[lbf]	77,698	103,597	142,446	194,245	233,094	401,439	686,331	815,827	1,230,216
Stainless Steel (NIRO)	[N]	280,575	467,625	607,913	701,438	935,250	1,683,450	2,805,750	3,366,900	5,050,350
	[lbf]	63,079	105,132	136,671	157,697	210,263	378,473	630,789	756,947	1,135,420

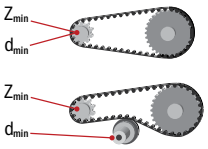
GPP8 / PITCH: 8MM

PRODUCT DATA

PITCH	8 mm	0.315”
STANDARD THICKNESS	5.4 mm	0.213”
WIDTH TOLERANCE	+-0.50 mm	0.020”
MINIMUM WELDED BELT LENGTH		
≤ 100MM WIDTH / 3.34"	552 mm	21.7”
> 100MM WIDTH / 3.34"	960 mm	37.8”
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Standard: NT	
	Optional: NTB	

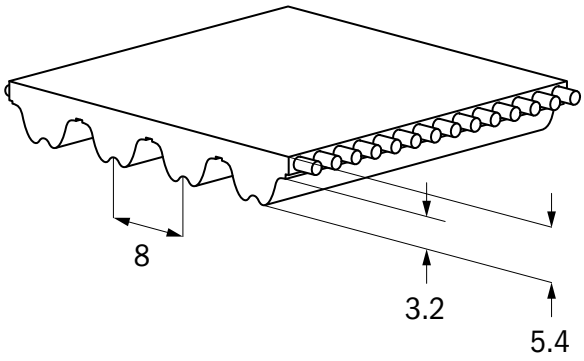
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID		STEEL HF		STAINLESS STEEL	
z min	18 teeth		16 teeth		25 teeth	
d min	46 mm	1.80"	41 mm	1.60"	64 mm	2.51"
z min	20 teeth		18 teeth		30 teeth	
d min	120 mm	4.72"	100 mm	3.94"	150 mm	5.91"

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	15	20	25	30	50	85	100	150
BREAKING FORCE / AVERAGE VALUE										
Steel (SL)	[N]	5,700	8,550	12,350	15,200	19,000	32,300	56,050	66,500	98,800
	[lbf]	1,280	1,920	2,775	3,415	4,270	7,260	12,600	14,950	22,210
Steel HF (HF)	[N]	5,190	7,785	11,245	13,840	17,300	29,410	51,035	60,550	89,960
	[lbf]	1,165	1,750	2,530	3,110	3,890	6,610	11,475	13,615	20,225
Stainless Steel (NIRO)	[N]	4,275	6,413	9,263	11,400	14,250	24,225	42,038	49,875	74,100
	[lbf]	960	1,440	2,080	2,565	3,205	5,445	9,450	11,215	16,660
ALLOWABLE BELT FORCE / OPEN ENDED										
Steel (SL)	[N]	1,403	2,104	3,040	3,741	4,676	7,950	13,795	16,367	24,317
	[lbf]	315	473	683	841	1,051	1,787	3,101	3,680	5,467
Steel HF (HF)	[N]	1,296	1,944	2,808	3,456	4,320	7,344	12,744	15,120	22,464
	[lbf]	291	437	631	777	971	1,651	2,865	3,399	5,050
Stainless Steel (NIRO)	[N]	1,052	1,578	2,280	2,806	3,507	5,962	10,346	12,275	18,237
	[lbf]	237	355	513	631	788	1,340	2,326	2,760	4,100
ALLOWABLE BELT FORCE / ENDLESS WELDED										
Steel (SL)	[N]	701	1,052	1,520	1,871	2,338	3,975	6,897	8,183	12,158
	[lbf]	158	237	342	421	526	894	1,551	1,840	2,733
Steel HF (HF)	[N]	648	972	1,404	1,728	2,160	3,672	6,372	7,560	11,232
	[lbf]	146	219	316	388	486	826	1,433	1,700	2,525
Stainless Steel (NIRO)	[N]	526	798	1,140	1,403	1,754	2,981	5,173	6,138	9,119
	[lbf]	118	179	256	315	394	670	1,163	1,380	2,050
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH										
	[N]	920	1,380	1,840	2,300	2,760	4,600	7,820	9,200	13,800
	[lbf]	207	310	414	517	621	1,034	1,758	2,068	3,103
BELT WEIGHT										
Steel (SL)	[kg/m]	0.05	0.08	0.10	0.13	0.15	0.25	0.42	0.50	0.75
	[lb/ft]	0.03	0.05	0.07	0.08	0.10	0.17	0.28	0.34	0.51
Steel HF (HF)	[kg/m]	0.05	0.07	0.09	0.12	0.14	0.23	0.39	0.47	0.70
	[lb/ft]	0.03	0.05	0.06	0.08	0.09	0.16	0.26	0.32	0.47
Stainless Steel (NIRO)	[kg/m]	0.05	0.07	0.10	0.12	0.15	0.25	0.42	0.50	0.74
	[lb/ft]	0.03	0.05	0.07	0.08	0.10	0.17	0.28	0.33	0.50
SPECIFIC BELT STIFFNESS										
Steel (SL)	[N]	350,719	526,078	759,891	935,250	1,169,063	1,987,406	3,448,734	4,091,719	6,079,125
	[lbf]	78,849	118,273	170,839	210,263	262,829	446,809	775,345	919,901	1,366,710
Steel HF (HF)	[N]	324,000	486,000	702,000	864,000	1,080,000	1,836,000	3,186,000	3,780,000	5,616,000
	[lbf]	72,842	109,263	157,824	194,245	242,806	412,770	716,277	849,820	1,262,590
Stainless Steel (NIRO)	[N]	263,039	394,559	569,918	701,438	876,797	1,490,555	2,586,551	3,068,789	4,559,344
	[lbf]	59,136	88,705	128,129	157,697	197,122	335,107	581,509	689,926	1,025,032

GPP8-RSL / PITCH: 8MM

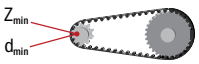
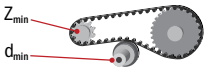
PRODUCT DATA

PITCH	8 mm	0.315”
STANDARD THICKNESS	5.4 mm	0.213”
WIDTH TOLERANCE	+-0.50 mm	0.020”
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Standard: NT Optional: NTB	

PULLEY DEFINITION

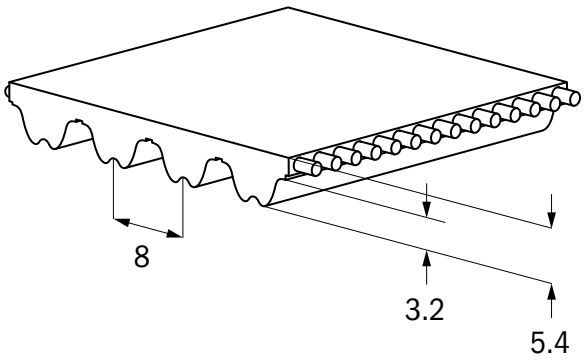
GPP8-RSL BELT REQUIRES A SPECIAL PULLEY PROFILE
PLEASE CONTACT OUR APPLICATION ENGINEERS

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL		STEEL HF	
z min	31 teeth		25 teeth	
d min	80 mm	3.15"	64 mm	2.51"
z min	38 teeth		32 teeth	
d min	150 mm	5.91"	130 mm	5.12"

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	15	20	25	30	50	85	100	150
BREAKING FORCE / AVERAGE VALUE									
Steel (RSL)	[N]	13,840	19,030	25,950	31,140	51,900	91,690	103,800	155,700
	[lbf]	3,110	4,280	5,835	7,000	11,670	20,615	23,335	35,005
Steel HF (HF)	[N]	15,400	21,175	28,875	34,650	57,750	102,025	115,500	173,250
	[lbf]	3,460	4,760	6,490	7,790	12,985	22,935	25,965	38,950
ALLOWABLE BELT FORCE / OPEN ENDED									
Steel (RSL)	[N]	3,349	4,604	6,279	7,534	12,557	22,184	25,114	37,671
	[lbf]	753	1,035	1,412	1,694	2,823	4,987	5,646	8,469
Steel HF (HF)	[N]	2,902	3,991	5,442	6,530	10,884	19,228	21,767	32,651
	[lbf]	652	897	1,223	1,468	2,447	4,323	4,894	7,341
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH									
	[N]	1,380	1,840	2,300	2,760	4,600	7,820	9,200	13,800
	[lbf]	310	414	517	621	1,034	1,758	2,068	3,103
BELT WEIGHT									
Steel (RSL)	[kg/m]	0.11	0.15	0.18	0.22	0.37	0.63	0.72	1.09
	[lb/ft]	0.07	0.10	0.12	0.15	0.25	0.42	0.49	0.73
Steel HF (HF)	[kg/m]	0.11	0.15	0.18	0.22	0.37	0.63	0.72	1.09
	[lb/ft]	0.07	0.10	0.12	0.15	0.25	0.42	0.49	0.73
SPECIFIC BELT STIFFNESS									
Steel (RSL)	[N]	837,143	1,151,071	1,569,643	1,883,571	3,139,286	5,546,071	6,278,571	9,417,857
	[lbf]	188,207	258,784	352,887	423,465	705,775	1,246,868	1,411,549	2,117,324
Steel HF (HF)	[N]	725,571	997,661	1,360,446	1,632,536	2,720,893	4,806,911	5,441,786	8,162,679
	[lbf]	163,123	224,294	305,856	367,027	611,712	1,080,690	1,223,423	1,835,135

GPP14 / PITCH: 14MM

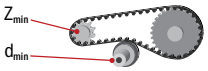
PRODUCT DATA

PITCH	14 mm	0.551”
STANDARD THICKNESS	9.7 mm	0.382”
WIDTH TOLERANCE	+-1.00 mm	0.039”
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Standard: NT Optional: NTB	

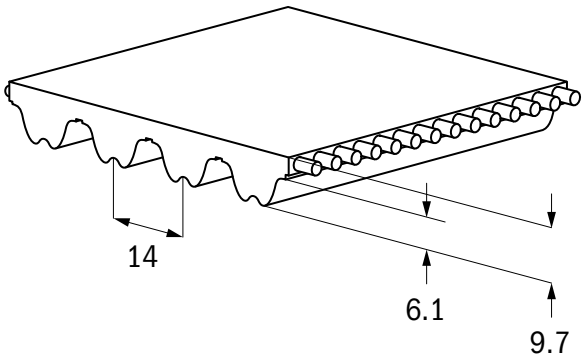
PULLEY DEFINITION

GPP14 BELT RUNS IN RPP14 AND HTD14M PULLEY PROFILES
FOR HEAVY LIFTING AND HIGH DYNAMIC APPLICATION PLEASE CONTACT OUR APPLICATION ENGINEERS

MIN PULLEY TOOTH COUNT AND DIAMETER

			STEEL	
NO BACK BENDING		**z min**	32 teeth	
		d min	140 mm	5.51”
BACK BENDING		**z min**	32 teeth	
		d min	200 mm	7.87”

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	40	55	85	115	150	170
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	64,600	87,400	136,800	186,200	247,000	273,600
	[lbf]	14,525	19,650	30,755	41,860	55,530	61,510
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	[N]	17,850	24,150	37,800	51,450	68,250	75,600
	[lbf]	4,013	5,429	8,498	11,567	15,344	16,996
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	6,900	9,488	14,663	19,838	25,875	29,325
	[lbf]	1,551	2,133	3,297	4,460	5,817	6,593
BELT WEIGHT							
Steel (SL)	[kg/m]	0.50	0.69	1.07	1.44	1.88	2.13
	[lb/ft]	0.34	0.46	0.72	0.97	1.26	1.43
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	4,462,500	6,037,500	9,450,000	12,862,500	17,062,500	18,900,000
	[lbf]	1,003,260	1,357,352	2,124,550	2,891,749	3,835,994	4,249,101

GPP14-RSL / PITCH: 14MM

PRODUCT DATA

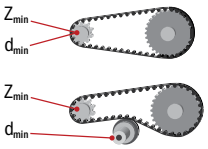
PITCH	14 mm	0.551”
STANDARD THICKNESS	9.7 mm	0.382”
WIDTH TOLERANCE	+-1.00 mm	0.039”
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Standard: NT Optional: NTB	

PULLEY DEFINITION

GPP14-RSL BELT REQUIRES A SPECIAL PULLEY PROFILE
PLEASE CONTACT OUR APPLICATION ENGINEERS

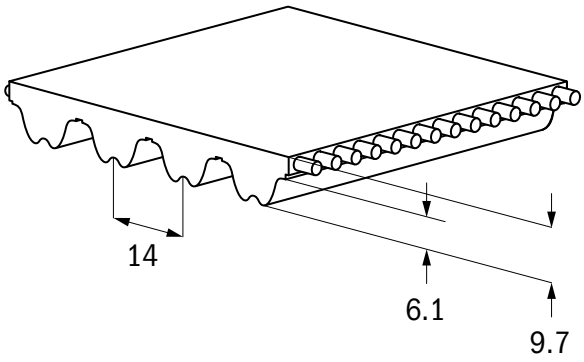
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL	
z min	34 teeth	
d min	152 mm	5.98”
z min	34 teeth	
d min	250 mm	9.84”

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	40	55	85	115	150	200
BREAKING FORCE / AVERAGE VALUE							
Steel (RSL)	[N]	82,500	112,500	180,000	247,500	322,500	427,500
	[lbf]	18,550	25,290	40,470	55,645	72,505	96,110
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (RSL)	[N]	19,621	26,756	42,810	58,864	76,701	101,674
	[lbf]	4,411	6,015	9,625	13,234	17,244	22,858
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	6,900	9,488	14,663	19,838	25,875	34,500
	[lbf]	1,551	2,133	3,297	4,460	5,817	7,756
BELT WEIGHT							
Steel (RSL)	[kg/m]	0.56	0.76	1.18	1.60	2.08	2.78
	[lb/ft]	0.37	0.51	0.79	1.08	1.40	1.87
SPECIFIC BELT STIFFNESS							
Steel (RSL)	[N]	4,905,312	6,689,062	10,702,499	14,715,936	19,175,311	25,418,435
	[lbf]	1,102,813	1,503,836	2,406,137	3,308,439	4,310,996	5,714,576

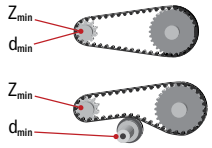
XL / PITCH: 0.20"

PRODUCT DATA

PITCH	0.200"	5.08 mm
STANDARD THICKNESS	0.090"	2.29 mm
WIDTH TOLERANCE		
≤ 2" / 50 MM WIDTH	+-0.020 "	+-0.5 mm
> 2" / 50 MM WIDTH	+-0.030"	+-0.75 mm
MINIMUM WELDED BELT LENGTH	17"	431.80 mm
STANDARD ROLL LENGTH (TOLERANCE ±1%)	200 ft	61 m
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

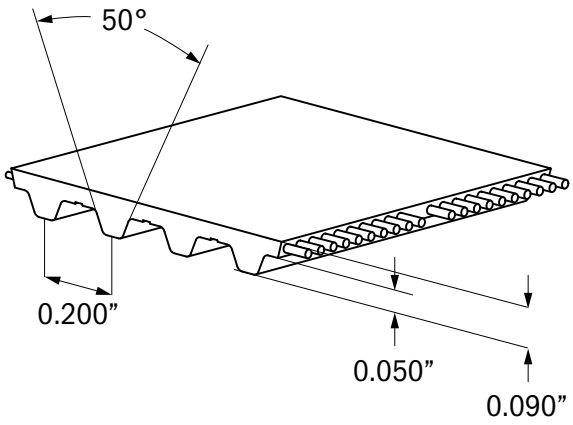
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID	
z min	10 teeth	
d min	0.64"	16 mm
z min	15 teeth	
d min	1.18"	30 mm

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

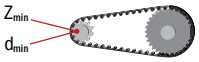
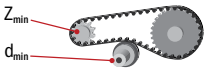
STANDARD WIDTH ["/MM]	UNIT	0.25"/ 6.35MM	0.31"/ 7.874MM	0.375"/ 9.525MM	0.5"/ 12.7MM	0.75"/ 19.05MM	1"/ 25.4MM	2"/ 50.8MM
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	750	875	1,125	1,625	2,500	3,375	6,875
	[lbf]	170	195	255	365	560	760	1,545
Aramid (K)	[N]	1,240	1,550	1,860	2,635	4,030	5,448	11,005
	[lbf]	279	348	418	592	906	1,225	2,474
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	190	221	284	411	632	853	1,738
	[lbf]	43	50	64	92	142	192	391
Aramid (K)	[N]	213	266	319	452	691	930	1,887
	[lbf]	48	60	72	102	155	209	424
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	[N]	95	111	142	205	316	427	869
	[lbf]	21	25	32	46	71	96	195
Aramid (K)	[N]	159	199	239	339	518	698	1,415
	[lbf]	36	45	54	76	116	157	318
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	157	194	235	314	470	627	1,254
	[lbf]	35	44	53	70	106	141	282
BELT WEIGHT								
Steel (SL)	[kg/m]	0.014	0.017	0.021	0.028	0.042	0.056	0.111
	[lb/ft]	0.009	0.015	0.018	0.024	0.036	0.048	0.097
Aramid (K)	[kg/m]	0.012	0.015	0.018	0.024	0.036	0.048	0.097
	[lb/ft]	0.008	0.010	0.012	0.016	0.024	0.032	0.065
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	47,413	55,316	71,120	102,729	158,044	213,360	434,622
	[lbf]	10,659	12,436	15,989	23,096	35,531	47,968	97,712
Aramid (K)	[N]	53,151	67,436	83,049	112,947	172,742	232,537	471,718
	[lbf]	11,949	15,161	18,671	25,393	38,836	52,279	106,052

L / PITCH: 0.375"

PRODUCT DATA

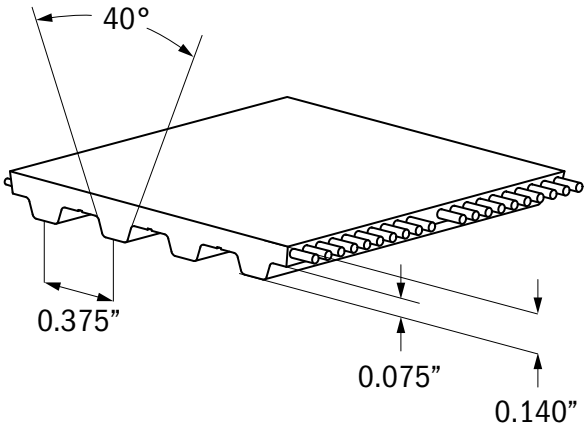
PITCH	0.375"	9.525 mm
STANDARD THICKNESS	0.140"	3.56 mm
WIDTH TOLERANCE		
≤ 2" / 50 MM WIDTH	+-0.020 "	+-0.5 mm
> 2" / 50 MM WIDTH	+-0.030"	+-0.75 mm
MINIMUM WELDED BELT LENGTH	17"	431.80 mm
STANDARD ROLL LENGTH (TOLERANCE ±1%)	328 ft	100 m
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL / ARAMID	
z min	10 teeth	
d min	1.19"	30 mm
z min	14 teeth	
d min	2.36"	60 mm

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

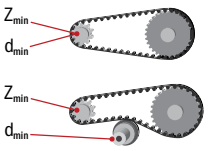
STANDARD WIDTH [“]	UNIT	0.38”/ 9.525MM	0.5”/ 12.7MM	0.75”/ 19.05MM	1”/ 25.4MM	1,5”/ 38.1MM	2”/ 50.8MM	4”/ 101.6MM
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	2,280	3,135	4,845	6,555	9,975	13,395	27,075
	[lbf]	515	705	1,090	1,475	2,245	3,010	6,085
Aramid (K)	[N]	2,672	3,674	5,678	7,682	11,690	15,698	31,730
	[lbf]	600	825	1,275	1,725	2,630	3,530	7,135
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	574	790	1,221	1,652	2,513	3,375	6,821
	[lbf]	129	178	275	371	565	759	1,533
Aramid (K)	[N]	428	588	909	1,229	1,871	2,512	5,078
	[lbf]	96	132	204	276	421	565	1,142
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	[N]	287	395	610	826	1,257	1,687	3,411
	[lbf]	65	89	137	186	283	379	767
Aramid (K)	[N]	321	441	681	922	1,403	1,884	3,808
	[lbf]	72	99	153	207	315	424	856
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	505	674	1,010	1,347	2,021	2,694	5,388
	[lbf]	114	151	227	303	454	606	1,211
BELT WEIGHT								
Steel (SL)	[kg/m]	0.03	0.04	0.07	0.09	0.13	0.18	0.36
	[lb/ft]	0.02	0.03	0.05	0.06	0.09	0.12	0.24
Aramid (K)	[kg/m]	0.03	0.04	0.07	0.09	0.13	0.18	0.36
	[lb/ft]	0.02	0.03	0.05	0.06	0.09	0.12	0.24
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	143,609	197,463	305,170	412,877	628,291	843,705	1,705,362
	[lbf]	32,286	44,394	68,608	92,823	141,252	189,682	383,400
Aramid (K)	[N]	106,901	146,989	227,164	307,340	467,691	628,043	1,269,448
	[lbf]	24,033	33,046	51,071	69,096	105,146	141,197	285,397

H / PITCH: 0.50"

PRODUCT DATA

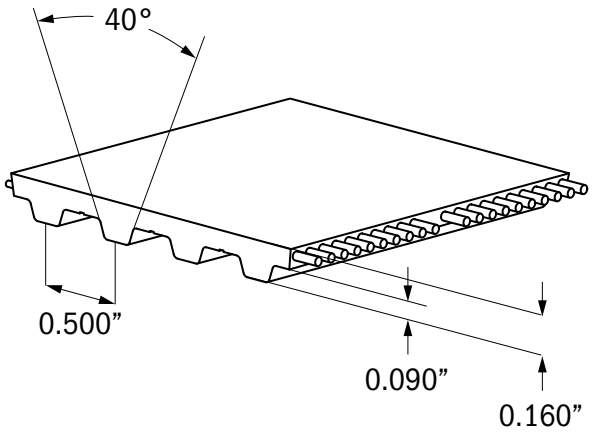
PITCH	0.500"	12.7 mm
STANDARD THICKNESS	0.160"	4.06 mm
WIDTH TOLERANCE		
≤ 2" / 50MM WIDTH	+-0.020"	+-0.5 mm
> 2" / 50MM WIDTH	+-0.030"	+-0.75 mm
MINIMUM WELDED BELT LENGTH		
≤ 4" / 100MM WIDTH	17"	431.80 mm
> 4" / 100MM WIDTH	33.5"	850.90 mm
STANDARD ROLL LENGTH (TOLERANCE ±1%)	328 ft	100 m
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER



		STEEL		STEEL HF	
NO BACK BENDING	**z min**	14 teeth		12 teeth	
	d min	2.23"	57 mm	1.91"	49 mm
BACK BENDING	**z min**	20 teeth		18 teeth	
	d min	3.15"	80 mm	2.36"	60 mm

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	0.5"/ 12.7MM	0.75"/ 19.05MM	1"/ 25.4MM	1.5"/ 38.1MM	2"/ 50.8MM	3"/ 76.2MM	4"/ 101.6MM	6"/ 152.4MM
BREAKING FORCE / AVERAGE VALUE									
Steel (SL)	[N]	3,360	5,040	7,140	10,920	14,700	22,260	29,820	44,940
	[lbf]	755	1,135	1,605	2,455	3,305	5,005	6,705	10,105
Aramid (K)	[N]	3,773	5,929	8,085	12,397	16,709	25,333	33,957	51,205
	[lbf]	850	1,335	1,820	2,785	3,755	5,695	7,635	11,510
Steel HF (HF)	[N]	4,960	7,440	10,540	16,120	21,700	32,860	44,020	66,340
	[lbf]	1,115	1,675	2,370	3,625	4,880	7,390	9,895	14,915
ALLOWABLE BELT FORCE / OPEN ENDED									
Steel (SL)	[N]	912	1,369	1,939	2,966	3,992	6,045	8,098	12,205
	[lbf]	205	308	436	667	898	1,359	1,821	2,744
Aramid (K)	[N]	504	792	1,081	1,657	2,233	3,386	4,538	6,843
	[lbf]	113	178	243	373	502	761	1,020	1,538
Steel HF (HF)	[N]	1,119	1,678	2,377	3,636	4,895	7,412	9,929	14,964
	[lbf]	252	377	534	817	1,100	1,666	2,232	3,364
ALLOWABLE BELT FORCE / ENDLESS WELDED									
Steel (SL)	[N]	456	684	970	1,483	1,996	3,023	4,049	6,102
	[lbf]	103	154	218	333	449	680	910	1,372
Aramid (K)	[N]	378	594	810	1,243	1,675	2,539	3,404	5,132
	[lbf]	85	134	182	279	377	571	765	1,154
Steel HF (HF)	[N]	559	839	1,189	1,818	2,447	3,706	4,965	7,482
	[lbf]	126	189	267	409	550	833	1,116	1,682
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH									
	[N]	825	1,238	1,650	2,475	3,300	4,950	6,600	9,900
	[lbf]	185	278	371	556	742	1,113	1,484	2,226
BELT WEIGHT									
Steel (SL)	[kg/m]	0.05	0.08	0.10	0.15	0.20	0.30	0.40	0.61
	[lb/ft]	0.03	0.05	0.07	0.10	0.13	0.20	0.27	0.41
Aramid (K)	[kg/m]	0.04	0.06	0.08	0.12	0.16	0.24	0.33	0.49
	[lb/ft]	0.03	0.04	0.05	0.08	0.11	0.16	0.22	0.33
Steel HF (HF)	[kg/m]	0.05	0.08	0.11	0.16	0.22	0.33	0.44	0.66
	[lb/ft]	0.03	0.05	0.07	0.11	0.15	0.22	0.30	0.44
SPECIFIC BELT STIFFNESS									
Steel (SL)	[N]	228,122	342,183	484,759	741,396	998,033	1,511,307	2,024,582	3,051,130
	[lbf]	51,286	76,930	108,984	166,681	224,378	339,772	455,167	685,956
Aramid (K)	[N]	126,060	198,095	270,129	414,198	558,267	846,404	1,134,542	1,710,817
	[lbf]	28,341	44,536	60,730	93,120	125,510	190,289	255,068	384,626
Steel HF (HF)	[N]	279,699	419,548	594,360	909,021	1,223,682	1,853,005	2,482,327	3,740,972
	[lbf]	62,882	94,323	133,624	204,366	275,108	416,593	558,077	841,046

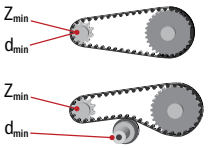
XH / PITCH: 0.875"

PRODUCT DATA

PITCH	0.875"	22.225 mm
STANDARD THICKNESS	0.440"	11.18 mm
WIDTH TOLERANCE	+-0.040 "	+-1.00 mm
MINIMUM WELDED BELT LENGTH	30.4"	1,000.76 mm
STANDARD ROLL LENGTH (TOLERANCE ±1%)	200 ft	61m
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

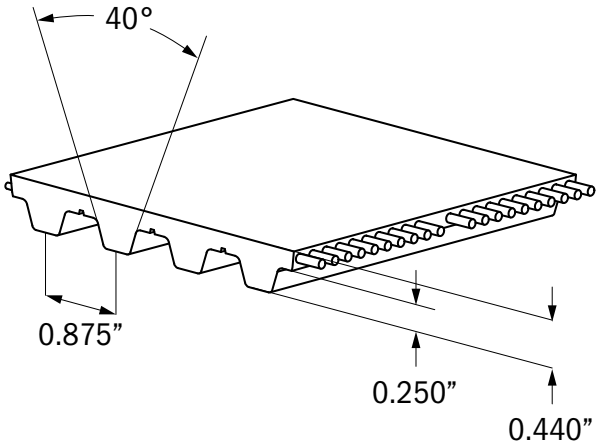
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID	
z min	18 teeth	
d min	5.01"	127 mm
z min	25 teeth	
d min	7.09"	180 mm

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA A22:I51

STANDARD WIDTH [“/MM]	UNIT	1”/25.4MM	1,5”/38.1MM	2”/50.8MM	3”/76.2MM	4”/101.6MM	6”/152.4MM
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	14,250	21,850	29,450	44,650	59,850	90,250
	[lbf]	3,205	4,910	6,620	10,040	13,455	20,290
Aramid (K)	[N]	16,185	24,817	33,449	50,713	67,977	102,505
	[lbf]	3,640	5,580	7,520	11,400	15,285	23,045
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	[N]	3,801	5,828	7,855	11,909	15,964	24,072
	[lbf]	855	1,310	1,766	2,677	3,589	5,412
Aramid (K)	[N]	1,778	2,726	3,675	5,571	7,468	11,261
	[lbf]	400	613	826	1,252	1,679	2,532
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Steel (SL)	[N]	1,900	2,914	3,928	5,955	7,982	12,036
	[lbf]	427	655	883	1,339	1,795	2,706
Aramid (K)	[N]	1,134	2,045	2,756	4,178	5,601	8,446
	[lbf]	255	460	620	939	1,259	1,899
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	3,804	5,706	7,608	11,412	15,216	22,824
	[lbf]	855	1,283	1,710	2,566	3,421	5,131
BELT WEIGHT							
Steel (SL)	[kg/m]	0.27	0.40	0.54	0.81	1.08	1.62
	[lb/ft]	0.18	0.27	0.36	0.54	0.73	1.09
Aramid (K)	[kg/m]	0.23	0.35	0.46	0.69	0.92	1.39
	[lb/ft]	0.15	0.24	0.31	0.46	0.62	0.93
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	950,214	1,456,995	1,963,776	2,977,337	3,990,899	6,018,022
	[lbf]	213,627	327,562	441,496	669,365	897,234	1,352,973
Aramid (K)	[N]	444,500	681,567	918,633	1,392,767	1,866,900	2,815,167
	[lbf]	99,933	153,230	206,527	313,122	419,717	632,906

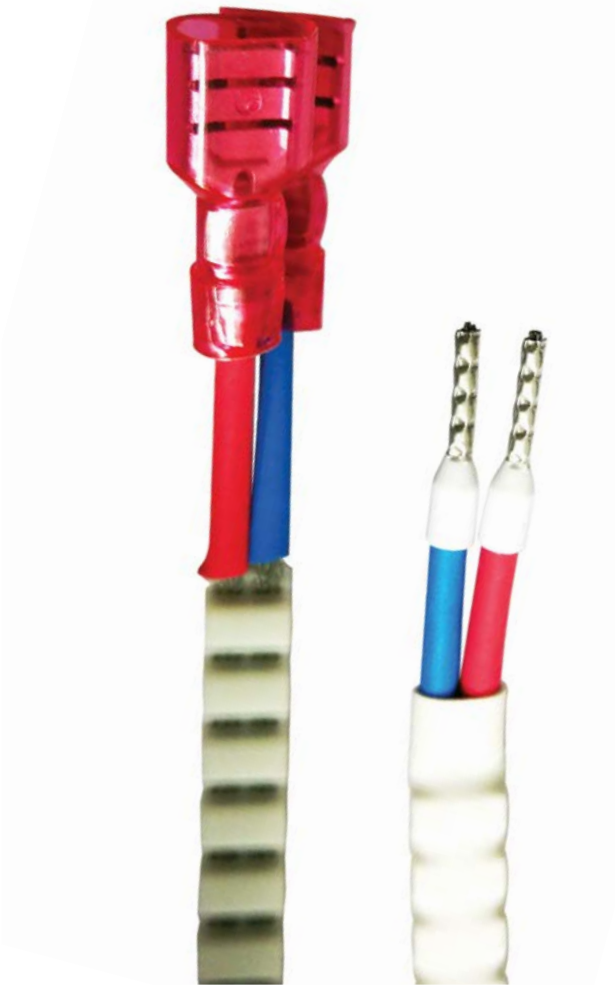
E-BELT

GATES TPU E-BELT TRANSMIT ELECTRICAL POWER AND SIGNALS

Gates TPU e-belts are Synchro-Power Linear belts that can transmit electric power or signals while incorporating the high tensile strength of the steel reinforcement. The steel cords are exposed at the belt ends for electrical connector attachment. The open-ended e-Belts can be cut to custom length. Several timing belt pitches and flat belts are available.

PRODUCT SPECIFICATIONS

PITCH	T5 / T10 / T20 / AT5 / ATL5 / AT10 / ATL10 / F20 / WR5 / WRT10 / WRAT10
CORD	Steel, Steel HF, Stainless Steel
COLOR	White, F20 Black
FDA/EU APPROVAL	No
POLYURETHANE	92° Shore A
POLYAMIDE FABRIC	N/A
TEMPERATURE RANGE	-5˚C to +60˚C / +23 to +140°F
MAXIMUM VOLTAGE	24V DC
MAXIMUM ELECTRICAL POWER	Depending on cord construction
OTHER TECHNICAL DATA	Depending on belt construction



FEATURES + BENEFITS

- Belt with exposed steel cords
- Optional applied connectors
- Synchronous belt pitches or flat belt
- Electric power transmission up to 24V DC
- Maximum power depends upon steel cord construction
- Electrical signal transmission
- Steel reinforcement options for a wide range of applications
- Available within WR Belt series with fully encapsulated cord
- EU, RoHS, and REACH compliant
- Engineering support for custom designs

Gates e-Belts supply limited electric power to small motors or actuators and can transmit electrical signals. The maximum power is determined by the construction and the number of steel cords used for the electrical transmission. Gates TPU delivers customized solutions with your specified connectors applied to the belt.

USING GATES E-BELT CAN SAVE COST AND SPACE FOR SEPARATE ELECTRICAL CABLES AND CABLE GUIDING SYSTEMS

WR – WATER RESISTANT BELTS

LINEAR WR

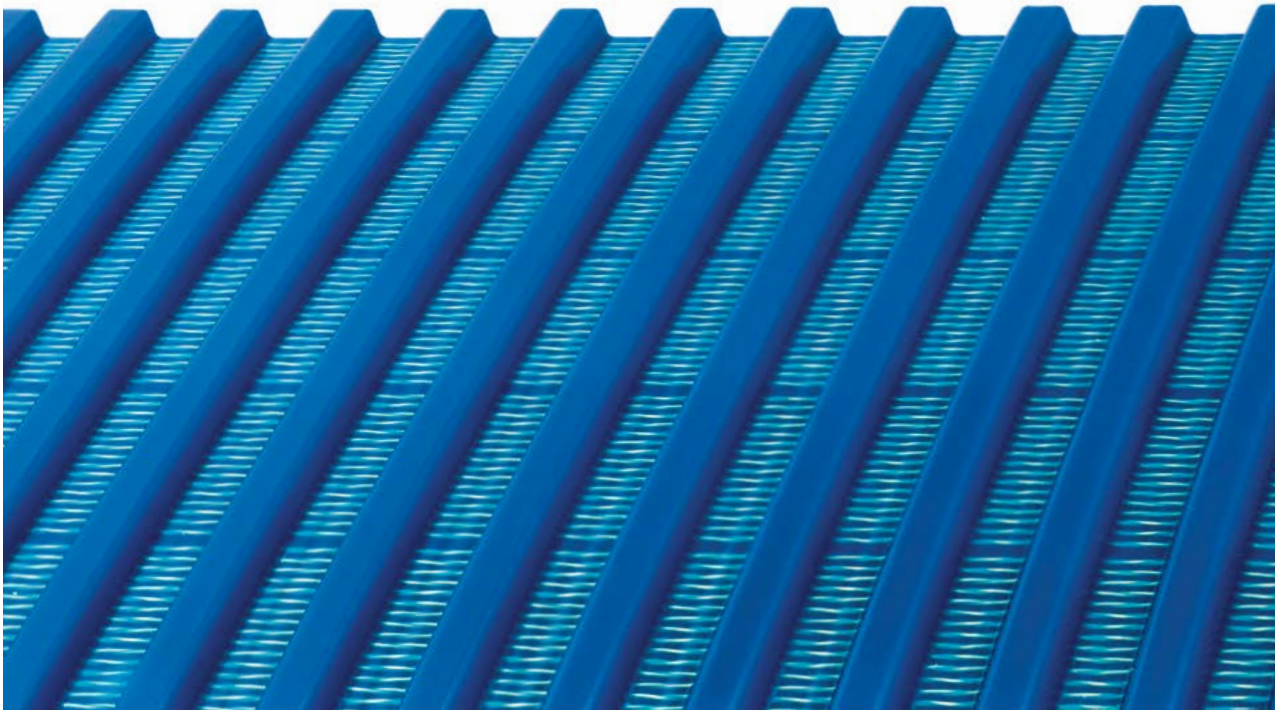
Gates Synchro-Power Linear WR series belts are designed for applications in highly corrosive environments and/or for the requirements in applications with direct food contact and the related cleaning processes.

The fully incapsulated cord is not exposed to the environment, prevents hidden contaminations and is easy to clean.

Extruded with wear resistant polyurethane the belt can be equipped with steel or Aramid cord. Various cord options offer fit for purpose tensile strength and stiffness at small pulley diameters.

Backings and profiles suitable for food contact are available for customized conveying and transportation solutions.

SYNCHRO-POWER LINEAR WR SERIES BELTS ARE COMMONLY USED AS ENDLESS WELDED BELT IN CONVEYING AND PROCESSING APPLICATIONS OR IN HIGHLY CORROSIVE ENVIRONMENTS.



ATTRIBUTES

- Fully incapsulated cord
- Excellent resistance to chemicals and corrosion
- Steel or Aramid reinforcement
- Certified for wet and dry food contact
- Meets FDA and EU food regulations
- High level of hygienic integrity, easy to clean

APPLICATIONS

- In corrosive environments: outdoor equipment, sunshades, chemical industry
- Food conveying applications

WR5 / PITCH: 5MM

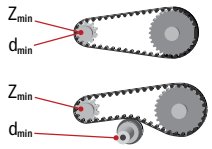
PRODUCT DATA

PITCH	5 mm	0.197"
STANDARD THICKNESS	2.7 mm	0.106"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.5 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	480 mm	18.9"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	Blue	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	No	

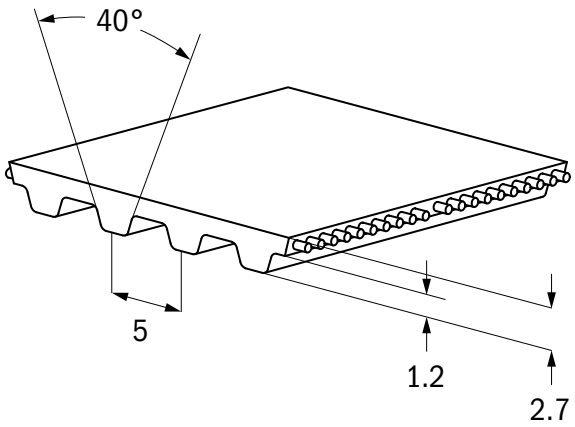
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL / ARAMID	
NO BACK BENDING	**z min**	10 teeth	
	d min	16 mm	0.63"
BACK BENDING	**z min**	15 teeth	
	d min	30 mm	1.18"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R9	92	-5 to +70	+23 to +158	FDA Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	16	25	32	50	75	100
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	1,250	2,000	3,375	4,250	6,875	10,375	13,875
	[lbf]	280	450	760	955	1,545	2,335	3,120
Aramid (K)	[N]	2,670	4,539	7,209	9,345	14,685	22,161	29,637
	[lbf]	600	1,020	1,620	2,100	3,300	4,980	6,665
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	311	498	840	1,058	1,711	2,582	3,453
	[lbf]	70	112	189	238	385	580	776
Aramid (K)	[N]	339	576	916	1,187	1,865	2,814	3,764
	[lbf]	76	129	206	267	419	633	846
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	[N]	156	249	420	529	856	1,291	1,727
	[lbf]	35	56	94	119	192	290	388
Aramid (K)	[N]	254	432	687	890	1,399	2,111	2,823
	[lbf]	57	97	154	200	315	475	635
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	250	400	625	800	1,250	1,875	2,500
	[lbf]	56	90	141	180	281	422	562
BELT WEIGHT								
Steel (SL)	[kg/m]	0.022	0.035	0.055	0.070	0.110	0.165	0.220
	[lb/ft]	0.015	0.024	0.037	0.047	0.074	0.111	0.148
Aramid (K)	[kg/m]	0.020	0.032	0.050	0.064	0.100	0.150	0.200
	[lb/ft]	0.013	0.022	0.034	0.043	0.067	0.101	0.134
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	77,778	124,444	210,000	264,444	427,778	645,556	863,333
	[lbf]	17,486	27,978	47,212	59,452	96,173	145,134	194,095
Aramid (K)	[N]	84,769	144,106	228,875	296,690	466,227	703,579	940,931
	[lbf]	19,058	32,398	51,456	66,702	104,817	158,179	211,540

WRT10 / PITCH: 10MM

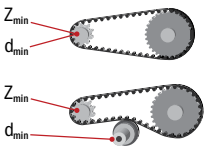
PRODUCT DATA

PITCH	10 mm	0.394"
STANDARD THICKNESS	4.5 mm	0.177"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.5 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH		
≤ 100MM WIDTH	480 mm	18.9"
> 100MM WIDTH	960 mm	37.8"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328 ft
STANDARD COLOR	Blue	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	No	

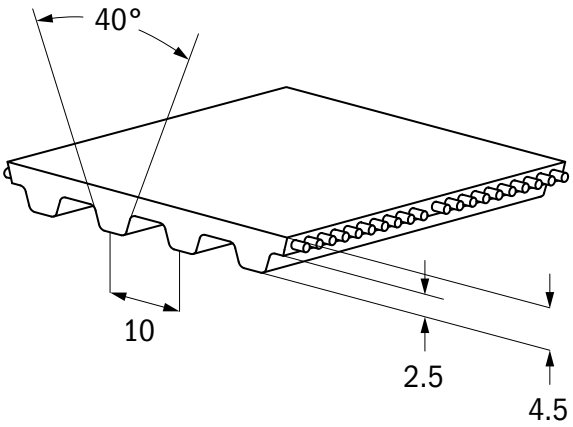
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL/ARAMID		STEEL HF	
NO BACK BENDING	**z min**	14 teeth		12 teeth	
	d min	1.77"	45 mm	1.5"	38 mm
BACK BENDING	**z min**	20 teeth		15 teeth	
	d min	2.36"	60 mm	1.96"	50 mm



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R9	92	-5 to +70	+23 to +158	FDA Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	12	16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE									
Steel (SL)	[N]	2,940	4,200	7,140	9,240	14,700	22,260	29,820	44,940
	[lbf]	660	945	1,605	2,075	3,305	5,005	6,705	10,105
Aramid (K)	[N]	3,234	4,851	8,085	10,241	16,709	25,333	33,957	51,205
	[lbf]	725	1,090	1,820	2,300	3,755	5,695	7,635	11,510
Steel HF (HF)	[N]	4,340	6,200	10,540	13,640	21,700	32,860	44,020	66,340
	[lbf]	975	1,395	2,370	3,065	4,880	7,390	9,895	14,915
ALLOWABLE BELT FORCE / OPEN ENDED									
Steel (SL)	[N]	786	1,123	1,909	2,470	3,929	5,950	7,971	12,012
	[lbf]	177	252	429	555	883	1,338	1,792	2,701
Aramid (K)	[N]	425	638	1,064	1,347	2,198	3,332	4,467	6,736
	[lbf]	96	143	239	303	494	749	1,004	1,514
Steel HF (HF)	[N]	964	1,376	2,340	3,028	4,818	7,295	9,773	14,728
	[lbf]	217	309	526	681	1,083	1,640	2,197	3,311
ALLOWABLE BELT FORCE / ENDLESS WELDED									
Steel (SL)	[N]	393	561	954	1,235	1,965	2,975	3,985	6,006
	[lbf]	88	126	214	278	442	669	896	1,350
Aramid (K)	[N]	319	479	798	1,010	1,648	2,499	3,350	5,052
	[lbf]	72	108	179	227	371	562	753	1,136
Steel HF (HF)	[N]	482	688	1,170	1,514	2,409	3,648	4,886	7,364
	[lbf]	108	155	263	340	542	820	1,098	1,656
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH									
	[N]	683	910	1,423	1,821	2,845	4,268	5,690	8,535
	[lbf]	154	205	320	409	640	960	1,279	1,919
BELT WEIGHT									
Steel (SL)	[kg/m]	0.05	0.06	0.09	0.12	0.18	0.27	0.36	0.54
	[lb/ft]	0.04	0.04	0.06	0.08	0.12	0.18	0.24	0.36
Aramid (K)	[kg/m]	0.04	0.06	0.09	0.12	0.18	0.27	0.36	0.54
	[lb/ft]	0.03	0.04	0.06	0.08	0.12	0.18	0.24	0.36
Steel HF (HF)	[kg/m]	0.06	0.08	0.12	0.15	0.24	0.35	0.47	0.71
	[lb/ft]	0.04	0.05	0.08	0.10	0.16	0.24	0.32	0.47
SPECIFIC BELT STIFFNESS									
Steel (SL)	[N]	196,463	280,662	477,125	617,456	982,316	1,487,507	1,992,699	3,003,081
	[lbf]	44,169	63,098	107,267	138,817	220,844	334,422	447,999	675,153
Aramid (K)	[N]	106,350	159,525	265,875	336,775	549,475	833,075	1,116,675	1,683,875
	[lbf]	23,910	35,864	59,774	75,714	123,533	187,292	251,051	378,569
Steel HF (HF)	[N]	240,882	344,118	585,000	757,059	1,204,412	1,823,824	3,443,235	3,682,059
	[lbf]	54,155	77,365	131,520	170,202	270,776	410,032	774,109	827,801

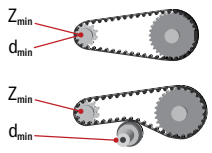
WRAT10 / PITCH: 10MM

PRODUCT DATA

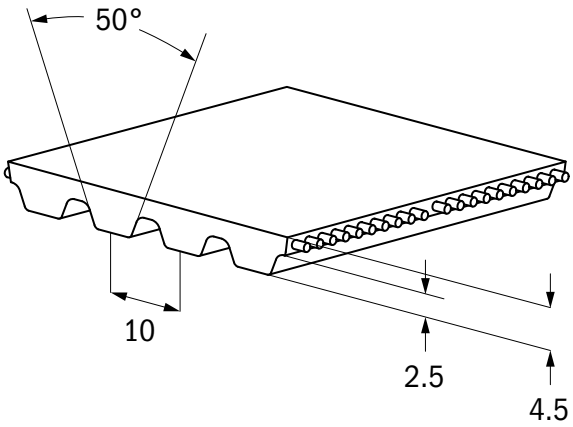
PITCH	10 mm	0.394"
STANDARD THICKNESS	4.5 mm	0.177"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.75 mm	0.030"
> 50MM WIDTH	+-1.00 mm	0.039"
MINIMUM WELDED BELT LENGTH		
≤ 100MM WIDTH	480 mm	18.9"
> 100MM WIDTH	960 mm	37.8"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328 ft
STANDARD COLOR	Blue	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Yes	

MIN PULLEY TOOTH COUNT AND DIAMETER

		STEEL / ARAMID	
NO BACK BENDING	**z min**	15 teeth	
	d min	48 mm	1.89"
BACK BENDING	**z min**	25 teeth	
	d min	120 mm	4.72"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R9	92	-5 to +70	+23 to +158	FDA Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

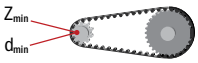
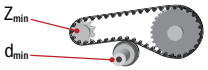
STANDARD WIDTH [MM]	UNIT	16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	8,550	14,250	18,050	29,450	44,650	59,850	90,250
	[lbf]	1,920	3,205	4,060	6,620	10,040	13,455	20,290
Aramid (K)	[N]	9,711	16,185	20,501	33,449	50,713	67,977	102,505
	[lbf]	2,185	3,640	4,610	7,520	11,400	15,285	23,045
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	2,245	3,741	4,739	7,731	11,722	15,712	23,693
	[lbf]	505	841	1,065	1,738	2,635	3,532	5,327
Aramid (K)	[N]	1,005	1,675	2,121	3,461	5,247	7,033	10,606
	[lbf]	226	377	477	778	1,180	1,581	2,384
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	[N]	1,286	2,104	2,572	4,209	6,313	8,417	12,626
	[lbf]	289	473	578	946	1,419	1,892	2,839
Aramid (K)	[N]	754	1,256	1,591	2,596	3,935	5,275	7,954
	[lbf]	170	282	358	584	885	1,186	1,788
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	1,651	2,580	3,302	5,160	7,740	10,320	15,480
	[lbf]	371	580	742	1,160	1,740	2,320	3,480
BELT WEIGHT								
Steel (SL)	[kg/m]	0.09	0.14	0.18	0.29	0.43	0.57	0.86
	[lb/ft]	0.06	0.10	0.12	0.19	0.29	0.38	0.58
Aramid (K)	[kg/m]	0.07	0.11	0.13	0.21	0.32	0.42	0.63
	[lb/ft]	0.05	0.07	0.09	0.14	0.21	0.28	0.42
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	642,984	1,052,156	1,285,969	2,104,313	3,156,469	4,208,625	6,312,938
	[lbf]	144,556	236,546	289,112	473,092	709,638	946,184	1,419,276
Aramid (K)	[N]	251,190	418,650	530,290	865,210	1,311,770	1,758,330	2,651,450
	[lbf]	56,473	94,121	119,220	194,517	294,912	395,308	596,099

WRATL20 / PITCH: 20MM

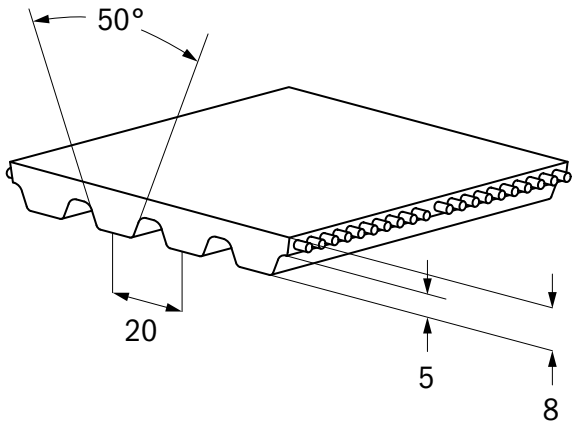
PRODUCT DATA

PITCH	20 mm	0.787"
STANDARD THICKNESS	8.0 mm	0.315"
WIDTH TOLERANCE	+-2.0 mm	0.079"
MINIMUM WELDED BELT LENGTH	N/A	
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	No	

MIN PULLEY TOOTH COUNT AND DIAMETER

			STEEL	
NO BACK BENDING		**z min**	25 teeth	
		d min	159 mm	6.27"
BACK BENDING		**z min**	30 teeth	
		d min	250 mm	9.84"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	50	75	100	150	155
BREAKING FORCE / AVERAGE VALUE						
Steel (SL)	[N]	70,400	105,600	144,000	217,600	224,000
	[lbf]	15,825	23,740	32,375	48,920	50,360
ALLOWABLE BELT FORCE / OPEN ENDED						
Steel (SL)	[N]	15,410	23,115	31,520	47,631	49,032
	[lbf]	3,464	5,197	7,086	10,708	11,023
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	[N]	10,900	16,350	21,800	32,700	33,790
	[lbf]	2,451	3,676	4,901	7,352	7,597
BELT WEIGHT						
Steel (SL)	[kg/m]	0.54	0.81	1.08	1.63	1.68
	[lb/ft]	0.36	0.55	0.73	1.09	1.13
SPECIFIC BELT STIFFNESS						
Steel (SL)	[N]	3,852,500	5,778,749	7,880,113	11,907,726	12,257,953
	[lbf]	866,120	1,299,179	1,771,608	2,677,097	2,755,835

GATES TPU SYNCHRO-CLEAN

MODERN GATES TECHNOLOGY SOLVES FOOD PROCESSING CHALLENGES

With decades of experience developing synchronous timing belt systems, Gates TPU Food Belting is the next generation for food processing belts.

- Embedded tension cords virtually eliminate stretch
- Robust pin splice speeds belt fastening and removal
- Special extrusion process improves cleanability and limits contamination areas
- Split-tooth weld delivers greater strength

Gates TPU Food Belting is high-performance, high-quality, easy-to-clean, and allows customisation options to meet your specific food processing needs.

FDA APPROVED

Meets material requirements for wet food contact.

EU COMPLIANT

Meets material requirements for wet food contact.

USDA ACCEPTED

For meat, poultry and dairy processing equipment.

GATES TPU TOOK ADVANTAGE OF ITS 30 YEARS OF TENSIONED TIMING BELTS TO REDESIGN THE “BLUE BELT” BY ADDING KEVLAR TENSION MEMBERS.

ADVANTAGES

- Prevents stretch under load
- Prevents continuation of accidental belt cut
- Belt can be run tensioned or un-tensioned

BENEFITS

- Ease of cleaning and reduced risk of food contamination
- Able to clean-in-place (CIP)
- Water, cleaning labor and waste water savings
- 35%, 54% and 35% respectively when compared to plastic modular belt

ASK FOR THE GATES TPU SYNCHRO-CLEAN CATALOG.

SELF-TRACKING BELTS

TRACKING BELTS

Gates TPU Self Tracking Belts are composed of our standard polyurethane belts and our specially designed polyurethane V-Guides, which provide highest flexibility and allow the use of small pulley diameters. Self-tracking belts can be manufactured in two different production processes depending on your need:

- **FABRICATED V-GUIDES ARE APPLIED TO STANDARD BELT VIA A SECONDARY OPERATION AND CAN BE COMBINED WITH ANY BELT TYPE AND BELT WIDTH.**
- **INTEGRAL V-GUIDES ARE INTEGRATED BY CO-EXTRUSION IN THE BELT PRODUCTION PROCESS AND ENSURE HIGHER STRENGTH AND CONSISTENCY.**

ATTRIBUTES

- V-Guides can be added to nearly every belt type
- Synchronous operations
- Operation without flanged pulleys possible
- Reliable tracking which is not affected by lateral forces
- Reduction of lateral movement

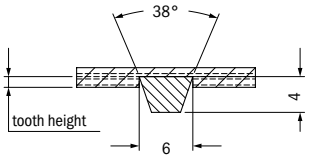
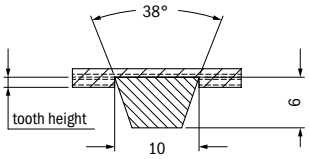
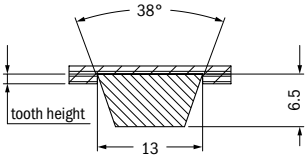
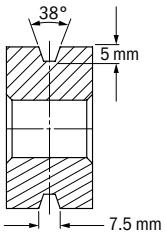
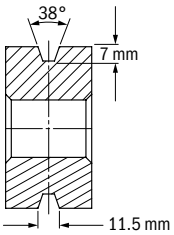
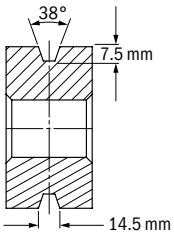
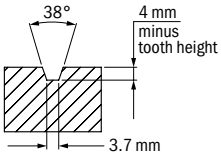
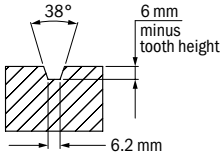
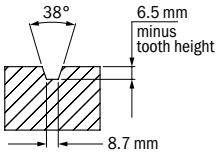
APPLICATIONS

- Where lateral forces apply and pulleys with flanges cannot be used
- Long length conveying or linear / rotary positioning, where tracking is an issue
- Conveying applications where design considerations prevent the use of pulley flanges

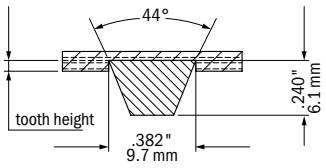
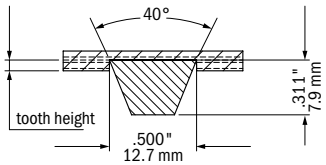
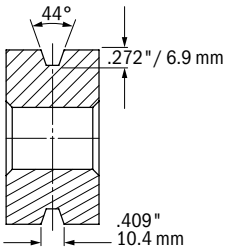
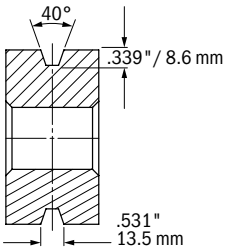
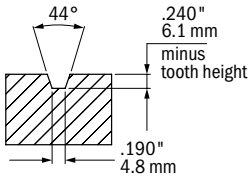
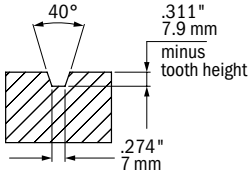
PROCESSING OPTIONS

- Further information about backings shown on page 186
- Further information about profiles shown on page 194
- Special processing Further information on page 202

FOR METRIC TOOTH PITCH BELTS

K6-SECTION	K10-SECTION	K13-SECTION
BELT DIMENSIONS		
		
PULLEY DIMENSIONS		
		
SLIDER BED DIMENSIONS		
		

FOR IMPERIAL TOOTH PITCH BELTS

O-SECTION	A-SECTION
BELT DIMENSIONS	
	
PULLEY DIMENSIONS	
	
SLIDER BED DIMENSIONS	
	

T5V / PITCH: 5MM

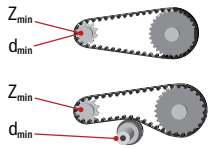
PRODUCT DATA

PITCH	5 mm	0.197"
INTEGRATED V-GUIDE	K6	
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.5 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	920mm	36.221"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

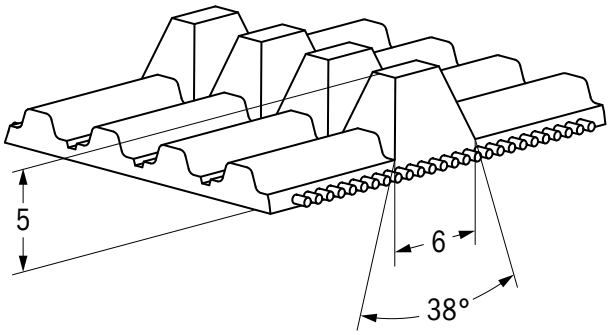
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL / ARAMID	
NO BACK BENDING	**z min**	25 teeth	
	d min	40 mm	1.57"
BACK BENDING	**z min**	28 teeth	
	d min	80 mm	3.15"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

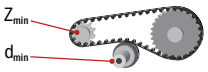
STANDARD WIDTH [MM]	UNIT	16	25	32	50	75	100
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	2,000	3,375	4,250	6,875	10,375	13,875
	[lbf]	450	760	955	1,545	2,335	3,120
Aramid (K)	[N]	4,539	7,209	9,345	14,685	22,161	29,637
	[lbf]	1,020	1,620	2,100	3,300	4,980	6,665
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	[N]	498	840	1,058	1,711	2,582	3,453
	[lbf]	112	189	238	385	580	776
Aramid (K)	[N]	576	916	1,187	1,865	2,814	3,764
	[lbf]	129	206	267	419	633	846
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Steel (SL)	[N]	249	420	529	856	1,291	1,727
	[lbf]	56	94	119	192	290	388
Aramid (K)	[N]	432	687	890	1,399	2,111	2,823
	[lbf]	97	154	200	315	475	635
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	250	475	650	1,100	1,725	2,350
	[lbf]	56	107	146	247	388	528
BELT WEIGHT							
Steel (SL)	[kg/m]	0.07	0.08	0.09	0.13	0.19	0.24
	[lb/ft]	0.05	0.05	0.06	0.09	0.13	0.16
Aramid (K)	[kg/m]	0.06	0.07	0.08	0.12	0.17	0.22
	[lb/ft]	0.04	0.05	0.05	0.08	0.11	0.15
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	124,444	210,000	264,444	427,778	645,556	863,333
	[lbf]	27,978	47,212	59,452	96,173	145,134	194,095
Aramid (K)	[N]	144,106	228,875	296,690	466,227	703,579	940,931
	[lbf]	32,396	51,456	66,699	104,817	158,179	211,540

T10VS / PITCH: 10MM

PRODUCT DATA

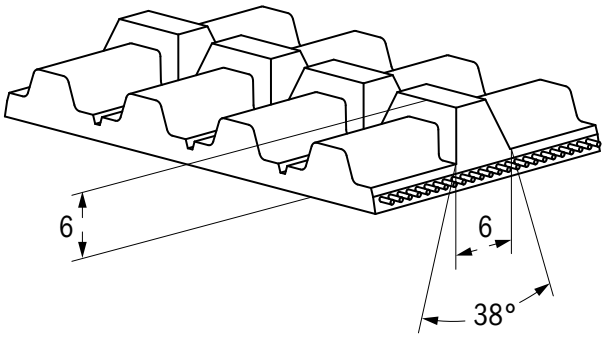
PITCH	10 mm	0.394"
INTEGRATED V-GUIDE	K6	
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.5 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	900 mm	35.433"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL / ARAMID	
z min	20 teeth	
d min	64 mm	2.52"
z min	25 teeth	
d min	80 mm	3.15"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	4,200	7,140	9,240	14,700	22,260	29,820	44,940
	[lbf]	945	1,605	2,075	3,305	5,005	6,705	10,105
Aramid (K)	[N]	4,851	8,085	10,241	16,709	25,333	33,957	51,205
	[lbf]	1,090	1,820	2,300	3,755	5,695	7,635	11,510
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	[N]	1,123	1,909	2,470	3,929	5,950	7,971	12,012
	[lbf]	252	429	555	883	1,338	1,792	2,701
Aramid (K)	[N]	638	1,064	1,347	2,198	3,332	4,467	6,736
	[lbf]	143	239	303	494	749	1,004	1,514
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	[N]	561	954	1,235	1,965	2,975	3,985	6,006
	[lbf]	126	215	278	442	669	896	1,350
Aramid (K)	[N]	491	798	1,010	1,648	2,499	3,350	5,052
	[lbf]	110	179	227	371	562	753	1,136
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	569	1,081	1,479	2,504	3,926	5,349	8,194
	[lbf]	128	243	333	563	883	1,203	1,842
BELT WEIGHT								
Steel (SL)	[kg/m]	0.09	0.13	0.16	0.24	0.35	0.46	0.67
	[lb/ft]	0.06	0.09	0.11	0.16	0.23	0.31	0.45
Aramid (K)	[kg/m]	0.06	0.11	0.13	0.20	0.27	0.36	0.54
	[lb/ft]	0.04	0.07	0.09	0.13	0.18	0.24	0.36
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	280,662	477,125	617,456	982,316	1,487,507	1,992,699	3,003,081
	[lbf]	63,098	107,267	138,817	220,844	334,422	447,999	675,153
Aramid (K)	[N]	159,525	265,875	336,755	549,475	833,075	1,116,675	1,683,875
	[lbf]	35,864	59,774	75,714	123,533	187,292	251,051	378,569

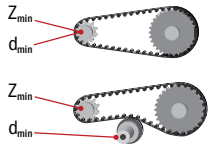
T10V / PITCH: 10MM

PRODUCT DATA

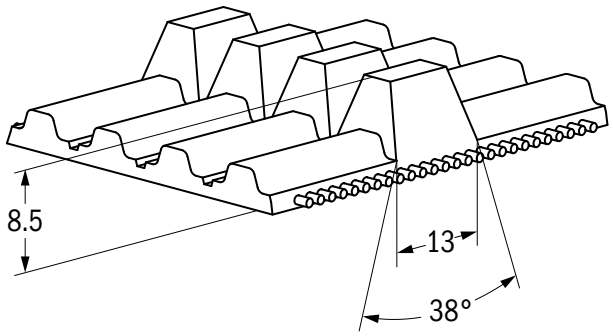
PITCH	10 mm	0.394"
INTEGRATED V-GUIDE	K13	
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.5 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	900 mm	35.433"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

		STEEL / ARAMID	
NO BACK BENDING	**z min**	20 teeth	
	d min	64 mm	2.52"
BACK BENDING	**z min**	25 teeth	
	d min	80 mm	3.15"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	32	50	75	100	150
Breaking Force Average Value							
Steel (SL)	N	7,140	9,240	14,700	22,260	29,820	44,940
	[lbf]	1,605	2,075	3,305	5,005	6,705	10,105
Aramid (K)	N	8,085	10,241	16,709	25,333	33,957	51,205
	[lbf]	1,820	2,300	3,755	5,695	7,635	11,510
Allowable Belt Force Open Ended							
Steel (SL)	N	1,909	2,470	3,929	5,950	7,971	12,012
	[lbf]	429	555	883	1,338	1,792	2,701
Aramid (K)	N	1,064	1,347	2,198	3,332	4,467	6,736
	[lbf]	239	303	494	749	1,004	1,514
Allowable Belt Force Endless Welded							
Steel (SL)	N	954	1,235	1,965	2,975	3,985	6,006
	[lbf]	214	278	442	669	896	1,350
Aramid (K)	N	798	1,010	1,648	2,499	3,350	5,052
	[lbf]	179	227	371	562	753	1,136
Allowable Effective Force Minimum 12 Teeth in mesh							
	N	683	1,081	2,105	3,528	4,950	7,795
	[lbf]	154	243	473	793	1,113	1,752
Belt Weight							
Steel (SL)	kg/m	0.18	0.21	0.29	0.40	0.50	0.72
	[lb/ft]	0.12	0.14	0.19	0.27	0.34	0.49
Aramid (K)	kg/m	0.16	0.18	0.25	0.34	0.43	0.61
	[lb/ft]	0.11	0.12	0.17	0.23	0.29	0.41
Specific Belt Stiffness							
Steel (SL)	N	477,125	617,456	982,316	1,487,507	1,992,699	3,003,081
	[lbf]	107,267	138,817	220,844	334,422	447,999	675,153
Aramid (K)	N	265,875	336,775	549,475	833,075	1,116,675	1,683,875
	[lbf]	59,774	75,714	123,533	187,292	251,051	378,569

AT5V / PITCH: 5MM

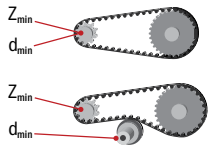
PRODUCT DATA

PITCH	5 mm	0.197"
INTEGRATED V-GUIDE	K6	
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.5 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	900 mm	35.433"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

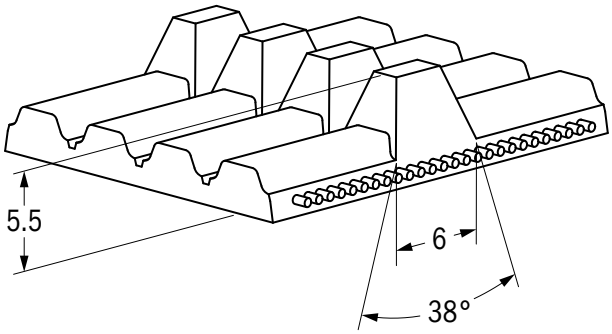
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL / ARAMID	
NO BACK BENDING	z min	25 teeth	
	d min	40 mm	1.57"
BACK BENDING	z min	28 teeth	
	d min	80 mm	3.15"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	16	25	32	50
BREAKING FORCE / AVERAGE VALUE					
Steel (SL)	N	4,275	7,125	9,120	14,535
	[lbf]	960	1,600	2,050	3,270
Aramid (K)	N	5,010	8,350	10,688	17,034
	[lbf]	1,125	1,875	2,405	3,830
ALLOWABLE BELT FORCE / OPEN ENDED					
Steel (SL)	N	1,056	1,761	2,253	3,591
	[lbf]	237	396	507	807
Aramid (K)	N	757	1,210	1,562	2,468
	[lbf]	170	272	351	555
ALLOWABLE BELT FORCE / ENDLESS WELDED					
Steel (SL)	N	528	880	1,127	1,796
	[lbf]	119	198	253	404
Aramid (K)	N	568	908	1,172	1,851
	[lbf]	128	204	263	416
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH					
	N	480	912	1,248	2,112
	[lbf]	108	205	281	475
BELT WEIGHT					
Steel (SL)	kg/m	0.08	0.10	0.12	0.18
	[lb/ft]	0.05	0.07	0.08	0.12
Aramid (K)	kg/m	0.07	0.09	0.11	0.16
	[lb/ft]	0.05	0.06	0.07	0.11
SPECIFIC BELT STIFFNESS					
Steel (SL)	N	264,075	440,125	563,360	897,855
	[lbf]	59,369	98,949	126,655	201,856
Aramid (K)	N	181,500	302,500	387,200	617,100
	[lbf]	40,803	68,008	87,046	138,737

ATL5V / PITCH: 5MM

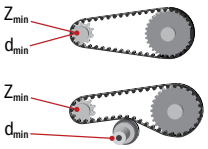
PRODUCT DATA

PITCH	5 mm	0.197"
INTEGRATED V-GUIDE	K6	
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.5 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
MINIMUM WELDED BELT LENGTH	960 mm	37.8"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

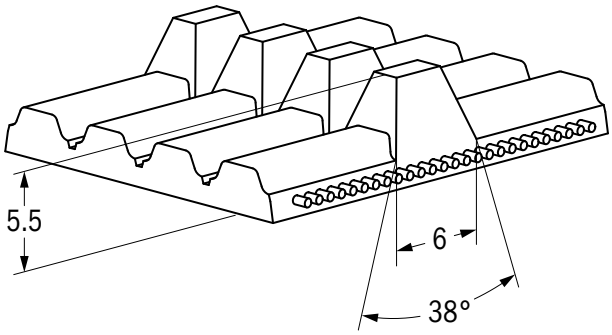
50MM AT TEMPERATURES BELOW -5°C / +23°F

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID	
z min	25 teeth	
d min	40 mm	1.57"
z min	28 teeth	
d min	80 mm	3.15"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

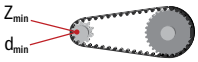
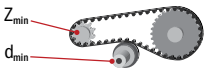
STANDARD WIDTH [MM]	UNIT	16	25	32	50
BREAKING FORCE / AVERAGE VALUE					
Steel (SL)	N	6,200	10,540	13,640	21,700
	[lbf]	1,395	2,370	3,065	4,880
ALLOWABLE BELT FORCE / OPEN ENDED					
Steel (SL)	N	1,376	2,340	3,028	4,818
	[lbf]	309	526	681	1,083
ALLOWABLE BELT FORCE / ENDLESS WELDED					
Steel (SL)	N	688	1,170	1,514	2,409
	[lbf]	155	263	340	542
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH					
	N	480	912	1,248	2,112
	[lbf]	108	205	281	475
BELT WEIGHT					
Steel (SL)	kg/m	0.08	0.11	0.14	0.20
	[lb/ft]	0.05	0.07	0.09	0.13
SPECIFIC BELT STIFFNESS					
Steel (SL)	N	344,118	585,000	757,059	1,204,412
	[lbf]	77,365	131,520	170,202	270,776

AT10VS / PITCH: 10MM

PRODUCT DATA

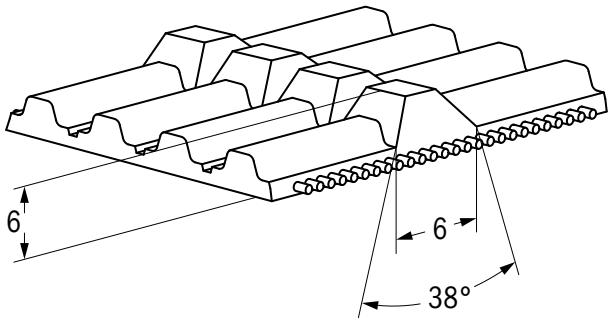
PITCH	10 mm	0.394"
INTEGRATED V-GUIDE	K6	
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.75 mm	0.030"
> 50MM WIDTH	+-1.00 mm	0.039"
MINIMUM WELDED BELT LENGTH	900 mm	35.433"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL / ARAMID	
z min	20 teeth	
d min	64 mm	2.52"
z min	38 teeth	
d min	120 mm	4.72"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	N	14,250	18,050	29,450	44,650	59,850	90,250
	[lbf]	3,205	4,060	6,620	10,040	13,455	20,290
Aramid (K)	N	16,185	20,501	33,449	50,713	67,977	102,505
	[lbf]	3,640	4,610	7,520	11,400	15,285	23,045
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	N	3,741	4,739	7,731	11,722	15,712	23,693
	[lbf]	841	1,065	1,738	2,635	3,532	5,327
Aramid (K)	N	1,675	2,121	3,461	5,247	7,033	10,606
	[lbf]	377	477	778	1,180	1,581	2,384
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Steel (SL)	N	1,871	2,369	3,866	5,861	7,856	11,847
	[lbf]	421	533	869	1,318	1,766	2,663
Aramid (K)	N	1,256	1,591	2,596	3,935	5,275	7,954
	[lbf]	282	358	584	885	1,186	1,788
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	N	1,961	2,683	4,541	7,121	9,701	14,861
	[lbf]	441	603	1,021	1,601	2,181	3,341
BELT WEIGHT							
Steel (SL)	kg/m	0.21	0.25	0.35	0.50	0.64	0.93
	[lb/ft]	0.14	0.17	0.24	0.33	0.43	0.62
Aramid (K)	kg/m	0.17	0.20	0.28	0.38	0.41	0.62
	[lb/ft]	0.12	0.14	0.19	0.26	0.27	0.41
SPECIFIC BELT STIFFNESS							
Steel (SL)	N	935,250	1,184,650	1,932,850	2,930,450	3,928,050	5,923,250
	[lbf]	210,263	266,333	434,544	658,824	883,105	1,331,666
Aramid (K)	N	418,650	530,290	865,210	1,311,770	1,758,330	2,651,450
	[lbf]	94,121	119,220	194,517	294,912	395,308	596,099

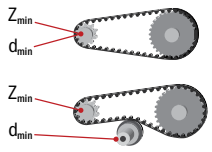
AT10V / PITCH: 10MM

PRODUCT DATA

PITCH	10 mm	0.394"
INTEGRATED V-GUIDE	K13	
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.75 mm	0.030"
> 50MM WIDTH	+-1.00 mm	0.039"
MINIMUM WELDED BELT LENGTH	950 mm	37.402"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

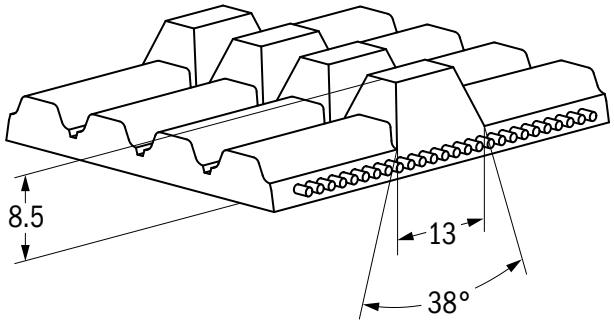
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL / ARAMID		STEEL HF		STAINLESS STEEL	
z min	20 teeth		18 teeth		32 teeth	
d min	64 mm	2.52"	57 mm	2.24"	102 mm	4.02"
z min	25 teeth		22 teeth		40 teeth	
d min	120 mm	4.72"	100 mm	3.94"	150 mm	5.91"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

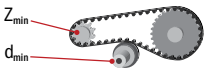
STANDARD WIDTH [MM]	UNIT	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	N	14,250	18,050	29,450	44,650	59,850	90,250
	[lbf]	3,205	4,060	6,620	10,040	13,455	20,290
Aramid (K)	N	16,185	20,501	33,449	50,713	67,977	102,505
	[lbf]	3,640	4,610	7,520	11,400	15,285	23,045
Steel HF (HF)	N	12,975	16,435	26,815	40,655	N/A	N/A
	[lbf]	2,915	3,695	6,030	9,140	N/A	N/A
Stainless Steel (NIRO)	N	10,688	13,538	22,088	33,488	N/A	N/A
	[lbf]	2,405	3,045	4,965	7,530	N/A	N/A
ALLOWABLE BELT FORCE / OPEN ENDED							
Steel (SL)	N	3,741	4,739	7,731	11,722	15,712	23,693
	[lbf]	841	1,065	1,738	2,635	3,532	5,327
Aramid (K)	N	1,675	2,121	3,461	5,247	7,033	10,606
	[lbf]	377	477	778	1,180	1,581	2,384
Steel HF (HF)	N	3,456	4,378	7,142	10,829	N/A	N/A
	[lbf]	777	984	1,606	2,435	N/A	N/A
Stainless Steel (NIRO)	N	2,806	3,554	5,799	8,791	N/A	N/A
	[lbf]	631	799	1,304	1,976	N/A	N/A
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Steel (SL)	N	1,871	2,369	3,866	5,861	7,856	11,847
	[lbf]	421	533	869	1,318	1,766	2,663
Aramid (K)	N	1,256	1,591	2,596	3,935	5,275	7,954
	[lbf]	282	358	584	885	1,186	1,788
Steel HF (HF)	N	1,728	2,189	3,571	5,414	N/A	N/A
	[lbf]	388	492	803	1,217	N/A	N/A
Stainless Steel (NIRO)	N	1,403	1,777	2,899	4,396	N/A	N/A
	[lbf]	315	400	652	988	N/A	N/A
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	N	1,238	1,961	3,818	6,398	8,978	14,138
	[lbf]	278	441	858	1,438	2,018	3,179
BELT WEIGHT							
Steel (SL)	kg/m	0.21	0.25	0.35	0.50	0.64	0.93
	[lb/ft]	0.14	0.17	0.24	0.33	0.43	0.62
Aramid (K)	kg/m	0.17	0.20	0.28	0.38	0.49	0.68
	[lb/ft]	0.12	0.14	0.19	0.26	0.33	0.46
Steel HF (HF)	kg/m	0.20	0.24	0.34	0.48	N/A	N/A
	[lb/ft]	0.14	0.16	0.23	0.32	N/A	N/A
Stainless Steel (NIRO)	kg/m	0.21	0.25	0.35	0.49	N/A	N/A
	[lb/ft]	0.14	0.17	0.24	0.33	N/A	N/A
SPECIFIC BELT STIFFNESS							
Steel (SL)	N	935,250	1,184,650	1,932,850	2,930,450	3,928,050	5,923,500
	[lbf]	210,263	266,333	434,544	658,824	883,105	1,331,722
Aramid (K)	N	418,650	530,290	865,210	1,311,770	1,758,330	2,651,450
	[lbf]	94,121	119,220	194,517	294,912	395,308	596,099
Steel HF (HF)	N	864,000	1,094,400	1,785,600	2,707,200	N/A	N/A
	[lbf]	194,245	246,043	401,439	608,633	N/A	N/A
Stainless Steel (NIRO)	N	701,438	888,488	1,449,639	2,197,839	N/A	N/A
	[lbf]	157,697	199,750	325,908	494,118	N/A	N/A

AT20V / PITCH: 20MM

PRODUCT DATA

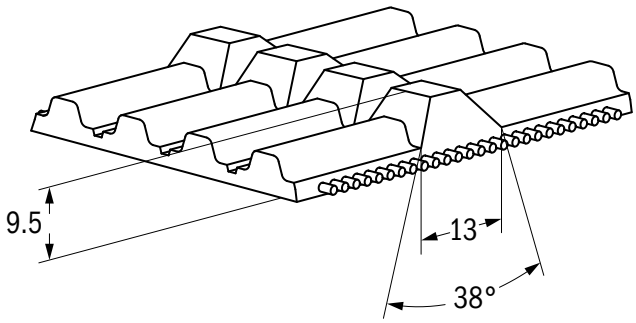
PITCH	20 mm	0.787"
INTEGRATED V-GUIDE	K13	
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-1.0 mm	0.039"
> 50MM WIDTH	+-1.5 mm	0.059"
MINIMUM WELDED BELT LENGTH	1000 mm	39.4"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL	
z min	20 teeth	
d min	127mm	5.00"
z min	25 teeth	
d min	180 mm	7.09"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

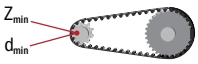
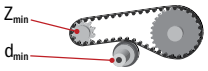
STANDARD WIDTH [MM]	UNIT	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE						
Steel (SL)	N	31,140	50,170	76,120	102,070	153,970
	[lbf]	7,000	11,280	17,115	22,945	34,615
Aramid (K)	N	28,026	45,153	68,508	91,863	138,573
	[lbf]	6,300	10,150	15,400	20,655	31,155
ALLOWABLE BELT FORCE / OPEN ENDED						
Steel (SL)	N	7,534	12,139	18,417	24,696	37,253
	[lbf]	1,694	2,729	4,141	5,552	8,375
Aramid (K)	N	2,585	4,120	6,251	8,382	12,643
	[lbf]	581	926	1,405	1,884	2,842
ALLOWABLE BELT FORCE / ENDLESS WELDED						
Steel (SL)	N	3,767	6,069	9,209	12,139	18,626
	[lbf]	847	1,364	2,070	2,729	4,188
Aramid (K)	N	1,939	3,090	4,688	6,286	9,483
	[lbf]	436	695	1,054	1,413	2,132
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	N	4,142	8,066	13,516	18,966	29,866
	[lbf]	931	1,813	3,039	4,264	6,714
BELT WEIGHT						
Steel (SL)	kg/m	0.31	0.48	0.73	0.97	1.45
	[lb/ft]	0.21	0.32	0.49	0.65	0.97
Aramid (K)	kg/m	0.23	0.37	0.55	0.73	1.10
	[lb/ft]	0.16	0.25	0.37	0.49	0.74
SPECIFIC BELT STIFFNESS						
Steel (SL)	N	1,883,571	3,034,643	4,604,286	6,173,929	9,313,214
	[lbf]	423,465	682,249	1,035,136	1,388,024	2,093,798
Aramid (K)	N	646,373	1,029,935	1,562,660	2,095,385	3,160,836
	[lbf]	145,318	231,550	351,317	471,085	710,620

HTD5V / PITCH: 5MM

PRODUCT DATA

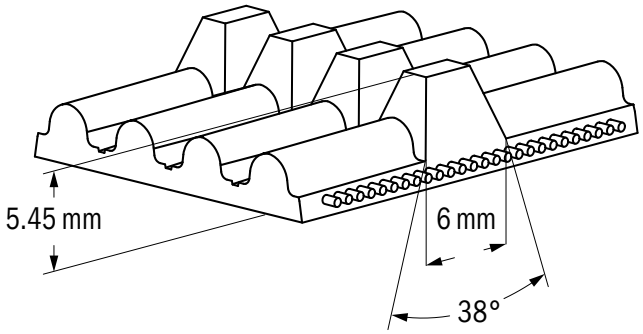
PITCH	5 mm	0.197"
STANDARD THICKNESS	K6	
WIDTH TOLERANCE	+-0.5 mm	0.020"
MINIMUM WELDED BELT LENGTH	1000 mm	18.9"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL / ARAMID	
z min	25 teeth	
d min	40mm	1.57"
z min	30 teeth	
d min	80 mm	3.15"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

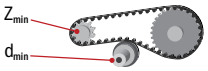
STANDARD WIDTH [MM]		20	25	30	50
BREAKING FORCE / AVERAGE VALUE					
Steel (SL)	[N]	8,060	10,540	12,400	21,700
	[lbf]	1,810	2,370	2,790	4,880
Aramid (K)	[N]	5,929	8,085	9,702	16,709
	[lbf]	1,335	1,820	2,180	3,755
ALLOWABLE BELT FORCE / OPEN ENDED					
Steel (SL)	[N]	1,789	2,340	2,753	4,818
	[lbf]	402	526	619	1,083
Aramid (K)	[N]	780	1,064	1,276	2,198
	[lbf]	175	239	287	494
ALLOWABLE BELT FORCE / ENDLESS WELDED					
Steel (SL)	[N]	895	1,170	1,376	2,409
	[lbf]	201	263	309	542
Aramid (K)	[N]	585	798	957	1,648
	[lbf]	132	179	215	371
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH					
	[N]	630	855	1,080	1,980
	[lbf]	142	192	243	445
BELT WEIGHT					
Steel (SL)	[kg/m]	0.09	0.11	0.13	0.21
	[lb/ft]	0.06	0.07	0.09	0.14
Aramid (K)	[kg/m]	0.07	0.08	0.10	0.17
	[lb/ft]	0.05	0.06	0.07	0.11
SPECIFIC BELT STIFFNESS					
Steel (SL)	[N]	447,353	585,000	688,235	1,204,412
	[lbf]	100,574	131,520	154,729	270,776
Aramid (K)	[N]	194,975	265,875	319,050	549,475
	[lbf]	43,834	59,774	71,729	123,533

HV / PITCH: 0.50”

PRODUCT DATA

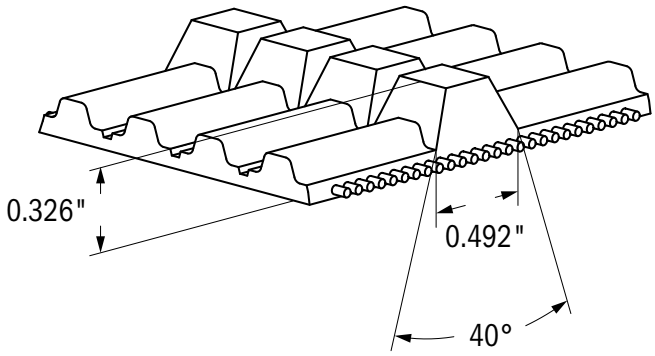
PITCH	0.500"	12.7 mm
INTEGRATED V-GUIDE	A-Section	
WIDTH TOLERANCE		
≤ 2" / 50MM WIDTH	+-0.020"	+-0.5 mm
> 2" / 50MM WIDTH	+-0.030"	+-0.75 mm
MINIMUM WELDED BELT LENGTH	36"	914.4 mm
STANDARD ROLL LENGTH (TOLERANCE ±1%)	200 ft	61 m
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL / ARAMID	
z min	16 teeth	
d min	65mm	2.56"
z min	20 teeth	
d min	80 mm	3.15”

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

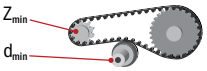
STANDARD WIDTH [“/MM]	UNIT	1.5”/38.1MM	2”/50.8MM	3”/76.2MM	4”/101.6MM	6”/152.4MM
BREAKING FORCE / AVERAGE VALUE						
Steel (SL)	N	10,920	14,700	22,260	29,820	44,940
	[lbf]	2,455	3,305	5,005	6,705	10,105
Aramid (K)	N	12,397	16,709	25,333	33,957	51,205
	[lbf]	2,785	3,755	5,695	7,635	11,510
ALLOWABLE BELT FORCE / OPEN ENDED						
Steel (SL)	N	2,919	3,929	5,950	7,971	12,012
	[lbf]	656	883	1,338	1,792	2,701
Aramid (K)	N	1,657	2,233	3,386	4,538	6,843
	[lbf]	373	502	761	1,020	1,538
ALLOWABLE BELT FORCE / ENDLESS WELDED						
Steel (SL)	N	1,459	1,965	2,975	3,985	6,006
	[lbf]	328	442	669	896	1,350
Aramid (K)	N	1,243	1,675	2,539	3,404	5,132
	[lbf]	279	377	571	765	1,154
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	N	1,663	2,488	4,138	5,788	9,088
	[lbf]	374	559	930	1,301	2,043
BELT WEIGHT						
Steel (SL)	kg/m	0.22	0.27	0.37	0.47	0.67
	[lb/ft]	0.15	0.18	0.25	0.32	0.45
Aramid (K)	kg/m	0.19	0.23	0.31	0.39	0.56
	[lb/ft]	0.13	0.15	0.21	0.26	0.37
SPECIFIC BELT STIFFNESS						
Steel (SL)	N	729,721	982,316	1,487,507	1,992,699	3,003,081
	[lbf]	164,056	220,844	334,422	447,999	675,153
Aramid (K)	N	414,198	558,267	846,404	1,134,542	1,710,817
	[lbf]	93,120	125,510	190,289	255,068	384,626

HVO / PITCH: 0.50”

PRODUCT DATA

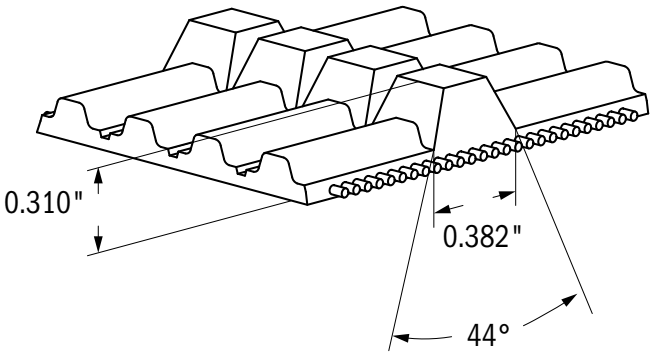
PITCH	0.500"	12.7 mm
INTEGRATED V-GUIDE	O-Section	
WIDTH TOLERANCE		
≤ 2" / 50MM WIDTH	+-0.020"	+-0.5 mm
> 2" / 50MM WIDTH	+-0.030"	+-0.75 mm
MINIMUM WELDED BELT LENGTH	36"	914.4 mm
STANDARD ROLL LENGTH (TOLERANCE ±1%)	200 ft	61 m
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL / ARAMID	
z min	16 teeth	
d min	65mm	2.56"
z min	20 teeth	
d min	80 mm	3.15”

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [“/MM]	UNIT	1.5”/38.1MM	2”/50.8MM	3”/76.2MM	4”/101.6MM	6”/152.4MM
BREAKING FORCE / AVERAGE VALUE						
Steel (SL)	N	10,920	14,700	22,260	29,820	44,940
	[lbf]	2,455	3,305	5,005	6,705	10,105
Aramid (K)	N	12,397	16,709	25,333	33,957	51,205
	[lbf]	2,785	3,755	5,695	7,635	11,510
ALLOWABLE BELT FORCE / OPEN ENDED						
Steel (SL)	N	2,919	3,929	5,950	7,971	12,012
	[lbf]	656	883	1,338	1,792	2,701
Aramid (K)	N	1,657	2,233	3,386	4,538	6,843
	[lbf]	373	502	761	1,020	1,538
ALLOWABLE BELT FORCE / ENDLESS WELDED						
Steel (SL)	N	1,459	1,965	2,975	3,985	6,006
	[lbf]	328	442	669	896	1,350
Aramid (K)	N	1,243	1,675	2,539	3,404	5,132
	[lbf]	279	377	571	765	1,154
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	N	1,845	2,670	4,320	5,970	9,270
	[lbf]	415	600	971	1,342	2,084
BELT WEIGHT						
Steel (SL)	kg/m	0.19	0.25	0.35	0.45	0.65
	[lb/ft]	0.13	0.17	0.24	0.30	0.44
Aramid (K)	kg/m	0.16	0.21	0.29	0.37	0.56
	[lb/ft]	0.11	0.14	0.19	0.25	0.38
SPECIFIC BELT STIFFNESS						
Steel (SL)	N	729,721	982,316	1,487,507	1,992,699	3,003,081
	[lbf]	164,056	220,844	334,422	447,999	675,153
Aramid (K)	N	414,198	558,267	846,404	1,134,542	1,710,817
	[lbf]	93,120	125,510	190,289	255,068	384,626

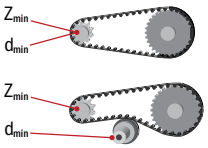
WHV / PITCH: 0.50”

PRODUCT DATA

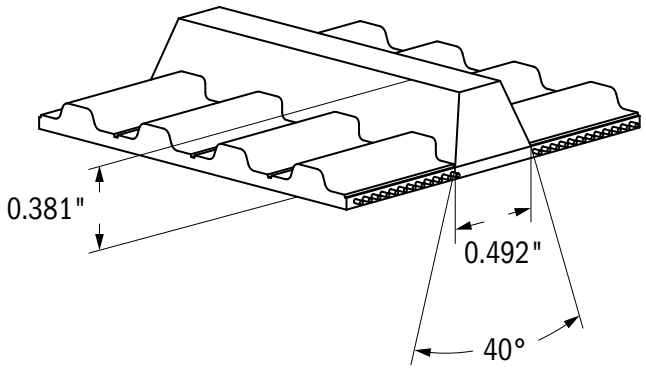
PITCH	0.500"	12.7 mm
INTEGRATED V-GUIDE	A-Section	
MINIMUM WELDED BELT LENGTH	43.5"	1104.9mm
STANDARD ROLL LENGTH (TOLERANCE ±1%)	200 ft	61 m
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

		ARAMID	
NO BACK BENDING	**z min**	16 teeth	
	d min	76 mm	3.00"
BACK BENDING	**z min**	20 teeth	
	d min	107 mm	4.2"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	With Aramid Cord Only



*Notched v-guide available upon request.

For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [“/MM]	UNIT	6” / 152.4 MM	8” / 203.2 MM	10” / 254 MM	12” / 304.8 MM	14” / 355.6 MM	18” / 457.2 MM
BREAKING FORCE / AVERAGE VALUE							
Aramid (K)	[N]	25,333	34,496	43,120	51,744	60,368	77,077
	[lbf]	5,695	7,755	9,695	11,635	13,570	17,330
ALLOWABLE BELT FORCE / OPEN ENDED							
Aramid (K)	[N]	6,750	9,191	11,489	13,787	16,085	20,537
	[lbf]	1,518	2,066	2,583	3,100	3,616	4,617
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Aramid (K)	[N]	3,375	4,596	5,745	6,894	8,042	10,269
	[lbf]	759	1,033	1,292	1,550	1,808	2,309
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	9,075	12,375	15,675	18,975	22,275	28,875
	[lbf]	2,040	2,782	3,524	4,266	5,008	6,492
BELT WEIGHT							
Aramid (K)	[kg/m]	0.50	0.70	0.80	1.00	1.10	1.40
	[lb/ft]	0.34	0.47	0.54	0.67	0.74	0.94
SPECIFIC BELT STIFFNESS							
Aramid (K)	[N]	843,744	1,148,928	1,436,160	1,723,392	2,010,624	2,567,136
	[lbf]	189,691	258,302	322,878	387,453	452,029	577,144

GATES TPU PINLOK

MECHANICAL JOINING SYSTEM

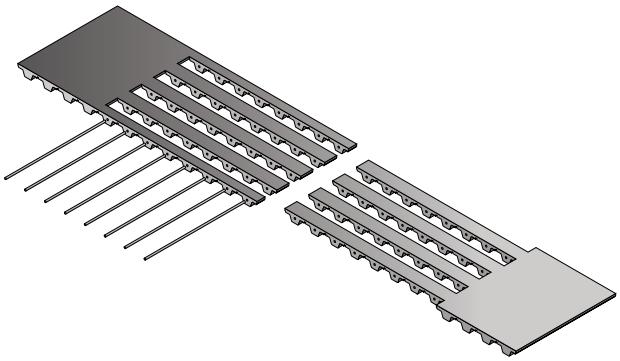
Gates PinLok™ is mechanical belt joining system that allows belt installation without machine disassembly.

- IDEAL FOR APPLICATIONS WHERE IT IS DIFFICULT TO INSTALL & REPLACE BELTS
- EASY ON-SITE ASSEMBLY
- AVAILABLE IN VARIOUS PITCHES UP TO 100 MM WIDTH
- WORKS WITH STEEL OR ARAMID CORD
- AVAILABLE FOR BELT WITH SPECIAL BACKINGS OR PROFILES

PRODUCT SPECIFICATIONS	
MAXIMUM BELT SPEED	2 m/s
SERVICE TEMPERATURE	0 -50˚C / +32 to 122°F
MINIMUM LENGTH	
≤ 50 MM WIDTH	600 mm
75 AND 100 MM WIDTH	1000 mm

	MINIMUM NUMBER OF PULLEY TEETH	MINIMUM BACK BEND DIAMETER
T10	16	80
T10V, T10VS	25	80
T20	16	120
AT5	20	80
AT10, HTD8	16	120
AT10V, AT10VS	25	120
H	16	80
HV	25	80

PINLOK (SECTION)



TECHNICAL DATA: ALLOWABLE FORCE [N]

PITCH / STANDARD WIDTH (MM)	16	25	32	50	75	100
AT5	280	525				
T10, T10V*, T10VS*		395	450	825	1250	1675
AT10		660	770	1365	1760	2070
HTD8		660	770	1365		
AT10V, AT10VS*, T20			770	1365	1760	2070
PITCH / STANDARD WIDTH (MM)		**1"**	**1.5"**	**2"**	**3"**	**4"**
H, HV**		395	450	825	1250	1675

Allowable Tension is valid for all available cord constructions.
* T10V, T10VS and AT10VS are available in 32mm and 50mm only
** HV available in 1" and 2" only

SYNCHRO-POWER FLAT

FLAT BELTS

Gates TPU flat belts made from high strength polyurethane are produced in standard rolls or open ended belts and are commonly used in lifting and pulling applications. Flat belts are typically attached at one or both ends with clamping plates or with our new FIX-FLAT clamping system

Our flat belts are suited for a wide range of mechanical requirements. We offer various combinations of polyurethane types and cords to support the diverse needs of the market.

We also have a range of belts specially designed for applications in the food processing industry that are FDA and EU approved.

OUR LATEST DEVELOPMENT FIX-FLAT, THE FLAT BELT CLAMP, ENABLES THE SECURE CLAMPING OF ANY FLAT BELTS AT BOTH ENDS EASILY, QUICKLY AND SAFELY.

FEATURES

- Smooth, vibration free operation
- High strength combined with low elongation
- Sealed belt edges result in no cord fraying
- Easy belt guide with flanged pulleys or guiding rails
- No re-tensioning required

TYPICAL APPLICATIONS:

- Heavy load lifting or lowering
- Exercise machines
- Applications with small pulley diameters

PROCESSING OPTIONS:

- Backings Further information on page 186
- Profiles Further information on page 194
- Special processing Further information on page 202

CLAMP CONNECTION

- Clamp FIX-FLAT Further information on page 122

F 20

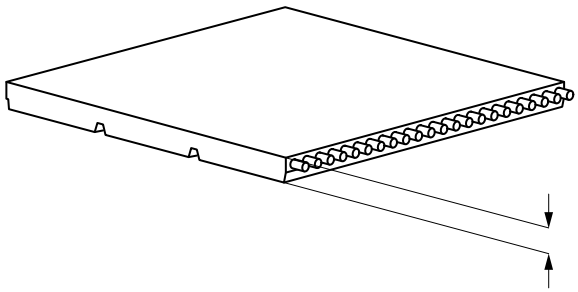
PRODUCT DATA

STANDARD THICKNESS	2 mm	0.079"
MINIMUM WELDED BELT LENGTH	483mm	19"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+/- 0.5mm	0.020"
> 50MM WIDTH	+/- 0.75mm	0.030"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1ft
STANDARD COLOR	Black	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

	STEEL / ARAMID		STEEL HF		STEEL RSL / STAINLESS		ARAMID RKV		STEEL RHF
PULLEY ON FLIGHT SIDE	35 mm	1.38"	30 mm	1.18"	48 mm	1.89"	48 mm	1.89"	38 mm
IDLER ON THE BACK	60 mm	2.36"	50 mm	1.97"	72 mm	2.83"	72 mm	2.83"	57 mm

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	16	25	50	75	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	N	2,520	4,200	7,140	14,700	22,260	29,820	44,940
	[lbf]	570	940	1,610	3,300	5,000	6,700	10,100
Aramid (K)	N	2,695	4,851	8,085	16,709	25,333	33,957	51,205
	[lbf]	610	1,090	1,820	3,760	5,700	7,630	11,510
Steel HF (HF)	N	3,720	6,200	10,540	21,700	32,860	44,020	66,340
	[lbf]	840	1,390	2,370	4,880	7,390	9,900	14,910
Steel RSL (RSL)	N	4,750	8,550	14,250	29,450	44,650	59,850	90,250
	[lbf]	1,070	1,920	3,200	6,620	10,040	13,460	20,290
Aramid RKV (RKV)	N	5,395	9,711	16,158	33,449	50,713	67,977	102,505
	[lbf]	1,210	2,180	3,630	7,520	11,400	15,280	23,050
Steel RHF (RHF)	N	4,325	7,785	12,975	26,815	40,655	54,495	82,175
	[lbf]	972	1,750	2,917	6,028	9,140	12,251	18,474
Stainless Steel (NIRO)	N	3,563	6,413	10,688	22,068	33,488	44,888	67,688
	[lbf]	800	1,440	2,400	4,960	7,530	10,090	15,220

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	16	25	50	75	100	150
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	N	842	1,403	2,386	4,912	7,438	9,963	15,015
	[lbf]	189	315	536	1,104	1,672	2,240	3,376
Aramid (K)	N	425	655	1,064	2,747	4,165	5,583	8,419
	[lbf]	96	147	239	618	936	1,255	1,893
Steel HF (HF)	N	1,032	1,721	2,925	6,022	9,119	12,216	18,410
	[lbf]	232	387	658	1,354	2,050	2,746	4,139
Steel RSL (RSL)	N	1,559	2,806	4,676	9,664	14,652	19,640	29,616
	[lbf]	350	631	1,051	2,173	3,294	4,415	6,658
Aramid RKV (RKV)	N	698	1,256	2,093	4,326	6,559	8,792	13,257
	[lbf]	157	282	471	973	1,475	1,977	2,980
Steel RHF (RHF)	N	1,440	2,592	4,320	8,928	13,536	18,144	27,360
	[lbf]	324	583	971	2,007	3,043	4,079	6,151
Stainless Steel (NIRO)	N	1,169	2,104	3,507	7,248	10,989	14,730	22,212
	[lbf]	263	473	788	1,629	2,471	3,312	4,994
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	N	421	702	1,193	2,456	3,719	4,982	7,508
	[lbf]	95	158	268	552	836	1,120	1,688
Aramid (K)	N	222	399	665	1,374	2,083	2,792	4,210
	[lbf]	50	90	150	309	468	628	946
Steel HF (HF)	N	516	860	1,463	3,011	4,560	6,108	9,205
	[lbf]	116	193	329	677	1,025	1,373	2,069
Steel RSL (RSL)	N	779	1,403	2,338	4,832	7,326	9,820	14,808
	[lbf]	175	315	526	1,086	1,647	2,208	3,329
Aramid RKV (RKV)	N	349	628	1,047	2,163	3,279	4,396	6,629
	[lbf]	78	141	235	486	737	988	1,490
Steel RHF (RHF)	N	720	1,296	2,160	4,464	6,768	9,072	13,680
	[lbf]	162	291	486	1,004	1,522	2,040	3,076
Stainless Steel (NIRO)	N	585	1,052	1,754	3,624	5,495	7,365	11,106
	[lbf]	131	237	394	815	1,235	1,656	2,497
BELT WEIGHT								
Steel (SL)	kg/m	0.03	0.05	0.08	0.15	0.23	0.30	0.45
	[lb/ft]	0.02	0.03	0.05	0.10	0.15	0.20	0.30
Aramid (K)	kg/m	0.02	0.04	0.06	0.12	0.17	0.23	0.35
	[lb/ft]	0.02	0.02	0.04	0.08	0.12	0.15	0.23
Steel HF (HF)	kg/m	0.03	0.05	0.08	0.17	0.25	0.33	0.50
	[lb/ft]	0.02	0.04	0.06	0.11	0.17	0.22	0.33
Steel RSL (RSL)	kg/m	0.04	0.06	0.10	0.19	0.29	0.38	0.57
	[lb/ft]	0.03	0.04	0.06	0.13	0.19	0.26	0.38
Aramid RKV (RKV)	kg/m	0.02	0.04	0.06	0.11	0.17	0.22	0.33
	[lb/ft]	0.01	0.02	0.04	0.07	0.11	0.15	0.22
Steel RHF (RHF)	kg/m	0.04	0.06	0.09	0.18	0.26	0.35	0.53
	[lb/ft]	0.02	0.04	0.06	0.12	0.18	0.24	0.35
Stainless Steel (NIRO)	kg/m	0.04	0.06	0.09	0.19	0.28	0.37	0.56
	[lb/ft]	0.02	0.04	0.06	0.12	0.19	0.25	0.37
SPECIFIC BELT STIFFNESS								
Steel (SL)	N	168,397	280,662	477,125	982,316	1,487,507	1,992,699	3,003,081
	[lbf]	37,859	63,098	107,267	220,844	334,422	447,999	675,153
Aramid (K)	N	88,625	159,525	265,875	549,475	833,075	1,116,675	1,683,875
	[lbf]	19,925	35,864	59,774	123,533	187,292	251,051	378,569
Steel HF (HF)	N	206,471	344,118	585,000	1,204,412	1,823,824	2,443,235	3,682,059
	[lbf]	46,419	77,365	131,520	270,776	410,032	549,288	827,801
Steel RSL (RSL)	N	311,750	561,150	935,250	1,932,850	2,930,450	3,928,050	5,923,250
	[lbf]	70,088	126,158	210,263	434,544	658,824	883,105	1,331,666
Aramid RKV (RKV)	N	139,550	251,190	418,650	865,210	1,311,770	1,758,330	2,651,450
	[lbf]	31,374	56,473	94,121	194,517	294,912	395,308	596,099
Steel RHF (RHF)	N	288,000	518,400	864,000	1,785,600	2,707,200	3,628,800	5,472,000
	[lbf]	64,748	116,547	194,245	401,439	608,633	815,827	1,230,216
Stainless Steel (NIRO)	N	263,039	473,470	789,117	1,630,842	2,472,567	3,314,292	4,997,742
	[lbf]	59,136	106,446	177,409	366,646	555,883	745,120	1,123,593

F30

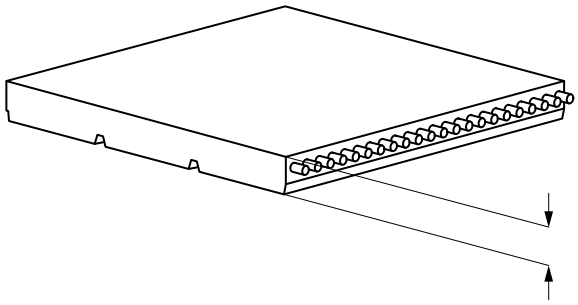
PRODUCT DATA

STANDARD THICKNESS	3 mm	0.118"
MINIMUM WELDED BELT LENGTH	508 mm	20"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+/- 1.0 mm	0.039"
> 50MM WIDTH	+/- 1.5 mm	0.059"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1ft
STANDARD COLOR	Black	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

	STEEL		ARAMID		STEEL HF		STEEL RSL		ARAMID RKV	
PULLEY ON FLIGHT SIDE	80 mm	3.15"	60 mm	2.36"	64 mm	2.52"	140 mm	5.51"	80 mm	3.15"
IDLER ON THE BACK	120 mm	4.72"	120 mm	4.72"	96 mm	3.78"	200 mm	7.87"	150 mm	5.91"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	



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For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	16	25	50	75	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	N	8,650	13,840	24,220	50,170	76,120	102,070	153,970
	[lbf]	1,940	3,110	5,450	11,280	17,110	22,950	34,620
Aramid (K)	N	2,695	4,851	8,085	16,709	25,333	33,957	51,205
	[lbf]	610	1,090	1,820	3,760	5,700	7,630	11,510
Aramid RKV (RKV)	N	7,785	12,456	21,798	45,153	68,508	91,863	138,573
	[lbf]	1,750	2,800	4,900	10,150	15,400	20,650	31,150
Steel HF (HF)	N	9,625	15,400	26,950	55,825	84,700	113,575	171,325
	[lbf]	2,160	3,460	6,060	12,550	19,040	25,530	38,520
Steel RSL (RSL)	N	9,600	19,200	32,000	70,400	105,600	144,000	217,600
	[lbf]	2,160	4,320	7,190	15,830	23,740	32,370	48,920

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	16	25	50	75	100	150
ALLOWABLE BELT FORCE / OPEN ENDED								
Steel (SL)	N	2,616	4,186	7,325	15,173	23,021	30,870	46,566
	[lbf]	588	941	1,647	3,411	5,176	6,940	10,469
Aramid (K)	N	443	798	1,329	2,747	4,165	5,583	8,419
	[lbf]	100	179	299	618	936	1,255	1,893
Aramid RKV (RKV)	N	888	1,421	2,486	5,150	7,813	10,477	15,804
	[lbf]	200	319	559	1,158	1,757	2,355	3,553
Steel HF (HF)	N	2,267	3,628	6,349	13,151	19,953	26,755	40,360
	[lbf]	510	816	1,427	2,957	4,486	6,015	9,074
Steel RSL (RSL)	N	2,627	5,253	8,756	19,262	28,894	39,401	59,539
	[lbf]	591	1,181	1,969	4,330	6,496	8,858	13,386
ALLOWABLE BELT FORCE / ENDLESS WELDED								
Steel (SL)	N	1,308	2,093	3,663	7,587	11,511	15,435	23,283
	[lbf]	294	471	824	1,706	2,588	3,470	5,234
Aramid (K)	N	222	399	665	1,374	2,083	2,792	4,210
	[lbf]	50	90	150	309	468	628	946
Aramid RKV (RKV)	N	444	710	1,243	1,509	3,907	5,238	7,902
	[lbf]	100	160	279	339	878	1,178	1,777
Steel HF (HF)	N	1,134	1,814	3,174	6,575	9,977	13,378	20,180
	[lbf]	255	408	714	1,478	2,243	3,008	4,537
Steel RSL (RSL)	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	[lbf]	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BELT WEIGHT								
Steel (SL)	kg/m	0.06	0.09	0.15	0.29	0.44	0.59	0.88
	[lb/ft]	0.04	0.06	0.10	0.20	0.30	0.40	0.59
Aramid (K)	kg/m	0.03	0.05	0.08	0.16	0.23	0.31	0.47
	[lb/ft]	0.02	0.03	0.05	0.10	0.16	0.21	0.31
Aramid RKV (RKV)	kg/m	0.03	0.05	0.08	0.16	0.24	0.32	0.48
	[lb/ft]	0.02	0.03	0.05	0.11	0.16	0.22	0.32
Steel HF (HF)	kg/m	0.06	0.10	0.16	0.32	0.48	0.64	0.96
	[lb/ft]	0.04	0.07	0.11	0.21	0.32	0.43	0.64
Steel RSL (RSL)	kg/m	0.07	0.11	0.18	0.35	0.53	0.71	1.06
	[lb/ft]	0.05	0.08	0.12	0.24	0.36	0.47	0.71
SPECIFIC BELT STIFFNESS								
Steel (SL)	N	523,214	837,143	1,465,000	3,034,643	4,604,286	6,173,929	9,313,214
	[lbf]	117,629	188,207	329,362	682,249	1,035,136	1,388,024	2,093,798
Aramid (K)	N	88,625	159,525	265,875	549,475	833,075	1,116,675	1,683,875
	[lbf]	19,925	35,864	59,774	123,533	187,292	251,051	378,569
Aramid RKV (RKV)	N	177,575	284,120	497,210	1,029,935	1,562,660	2,095,385	3,160,836
	[lbf]	39,922	63,876	111,783	231,550	351,317	471,085	710,620
Steel HF (HF)	N	453,482	725,571	1,269,750	2,630,196	3,990,643	5,351,089	8,071,982
	[lbf]	101,952	163,123	285,465	591,321	897,177	1,203,033	1,814,744
Steel RSL (RSL)	N	525,341	1,050,682	1,751,136	3,852,500	5,778,749	7,880,113	11,907,726
	[lbf]	118,107	236,214	393,691	866,120	1,299,179	1,771,608	2,677,097

F48

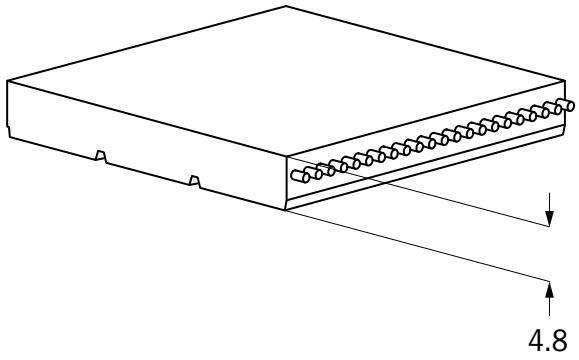
PRODUCT DATA

STANDARD THICKNESS	4.8 mm	0.189"
WIDTH TOLERANCE	+/- 2.0mm	0.079"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	50 m	164.1ft
STANDARD COLOR	Black	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

	STEEL	
PULLEY ON FLIGHT SIDE	150mm	5.91"
IDLER ON THE BACK	225mm	8.86"

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	50	75	100	150
BREAKING FORCE / AVERAGE VALUE						
Steel (SL)	N	45,000	97,500	150,000	202,500	307,500
	[lbf]	10,120	21,920	33,720	45,530	69,130
ALLOWABLE BELT FORCE / OPEN ENDED						
Steel (SL)	N	13,378	28,986	44,594	60,201	91,417
	[lbf]	3,008	6,517	10,026	13,534	20,552
ALLOWABLE BELT FORCE / ENDLESS WELDED						
Steel (SL)	N	N/A	N/A	N/A	N/A	N/A
	[lbf]	N/A	N/A	N/A	N/A	N/A
BELT WEIGHT						
Steel (SL)	kg/m	0.27	0.54	0.81	1.08	1.62
	[lb/ft]	0.18	0.36	0.54	0.73	1.09
SPECIFIC BELT STIFFNESS						
Steel (SL)	N	2,675,622	5,797,181	8,918,740	12,040,299	18,283,417
	[lbf]	601,534	1,303,323	2,005,112	2,706,902	4,110,480

LRB-77 LIVE ROLLER DRIVE BELT

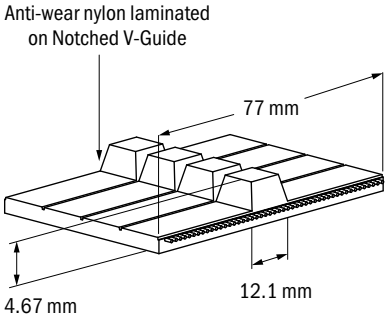
HIGH SPEED AND DURABLE INTRALOGISTICS BELT SOLUTION

The LRB-77 is an open ended flat belt specifically designed for the Honeywell Intelligrated system. The top side of the belt is flat for interaction with the conveyor rollers, while the bottom side has a notched v-guide for self-tracking. Aramid cords provide tensile strength while still allowing for high flexibility.

LRB-77 (SECTION)

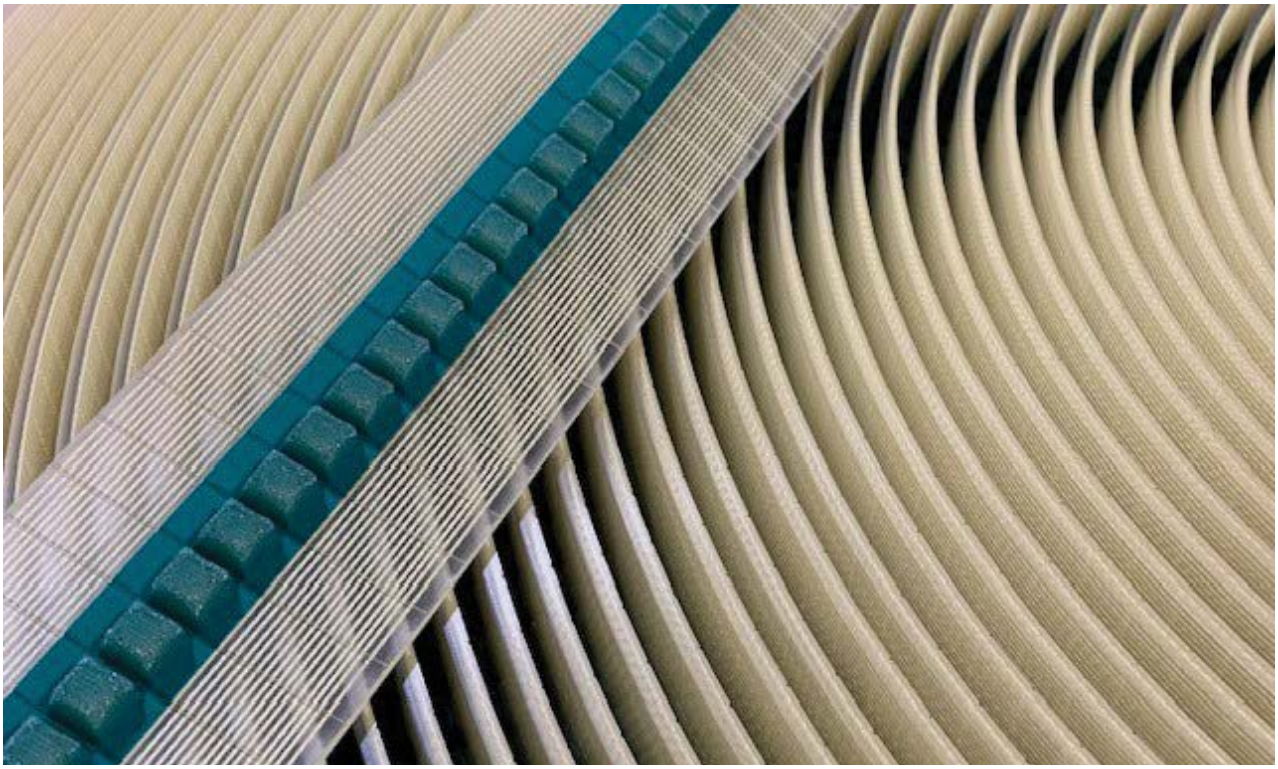
PRODUCT SPECIFICATIONS

	METRIC	IMPERIAL
STANDARD WIDTH	77 mm	3.03"
OVERALL THICKNESS	10.4 mm	0.409"
WEB THICKNESS	4 mm	0.157"
STANDARD ROLL LENGTH	500 ft	
STANDARD COLOR	Clear	
CORD	Aramid	
MINIMUM PULLEY DIAMETER	100 mm	4"
FDA/EU APPROVAL	No	
POLYURETHANE	85 Shore A	
TOP SURFACE	Smooth Polyurethane	
BOTTOM SURFACE	Antiwear Nylon Covered V-guide	
OPERATING TEMPERATURE	5°C to 70°C	23°F to 158°F
SPLICE	Interleaved Finger Heat Weld	
RECOMMEND FINGER LENGTH	76 x 9.5 mm	3" x .75"



TECHNICAL DATA

ULTIMATE TENSILE STRENGTH	24260 N	5454 lbf
ALLOWABLE BELT TENSION	3600 N	810 lbf
SPECIFIC BELT STIFFNESS	31905 N/mm	182100 lbf/in



FEATURES + BENEFITS

- OEM specified belt
- Nylon laminated v-guide for low friction self-tracking
- High flexibility due to aramid cords, notched v-guide, and 85A resin

LRB-45 LIVE ROLLER DRIVE BELT

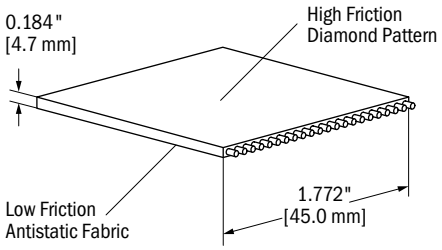
HIGH SPEED AND DURABLE INTRALOGISTICS BELT SOLUTION

The LRB-45 belt is an open ended flat belt with a high grip top side to the live rollers and a low friction and anti-static fabric bottom side to improve safety and reliability. Aramid reinforcement ensures a safe and longer lifespan operation for our customers' warehouse and distribution conveyors.

LRB-45 (SECTION)

PRODUCT SPECIFICATIONS

	METRIC	IMPERIAL
STANDARD THICKNESS	4.7 +/- 0.2 mm	0.184 +/-0.008 in
STANDARD ROLL LENGTH*	up to 152 m	500 ft
STANDARD COLOR	Black	Black
CORD	Aramid	Aramid
MINIMUM PULLEY DIAMETER	100 mm	3.94 in
FDA/EU APPROVAL	No	No
POLYURETHANE	92 ˚ Shore A	92 ˚ Shore A
TOP SURFACE	Knurled Polyurethane	Knurled Polyurethane
BOTTOM SURFACE	Antistatic Fabric	Antistatic Fabric
OPERATING TEMPERATURE	-25°C to +80°C	-13°F to 175°F
SPLICE	Interleaved finger heat welded	Interleaved finger heat welded
RECOMMEND FINGER LENGTH	155 mm (min.)	6.1 in (min.)



TECHNICAL DATA

STANDARD WIDTH	45 +0/-1 mm	1.77 +0/-0.04 in
ULTIMATE TENSILE STRENGTH	33300 N	7490 lbf
ALLOWABLE BELT TENSION	4450 N	1000 lbf
SPECIFIC BELT WEIGHT	0.21 kg/m	1.52lb/ft
SPECIFIC BELT STIFFNESS	731,370 N	164,420 lbf

FEATURES + BENEFITS

- High friction, knurled diamond pattern on top ensures high grip and less slip on the rollers
- Low friction antistatic fabric on the bottom prevents static load buildup
- Aramid cord design for lower stretch and longer life compared to competitor belts
- Designed to be spliced with OEM equipment
- Available in roll lengths up to 660 ft (200 meters)

CLAMP CONNECTION FIX-FLAT

FIX FLAT

OUR LATEST DEVELOPMENT FIX-FLAT, THE FLAT BELT CLAMP, ENABLES THE SECURE CLAMPING OF ANY FLAT BELTS AT BOTH ENDS EASILY, QUICKLY AND SAFELY.

The patented Flat Belt Clamp holds all types of Flat Belts easily and safely.
The FIX-FLAT process is suitable for all Flat belt constructions.

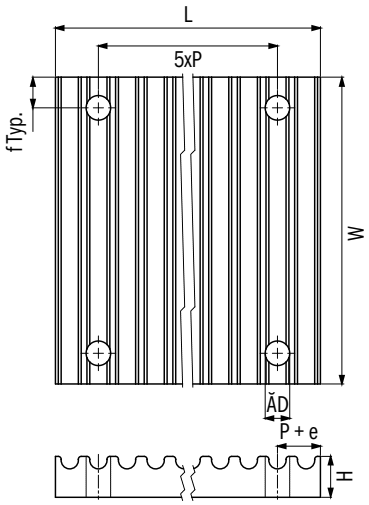
MORE INFORMATION IS AVAILABLE ON REQUEST.

FIX FLAT CLAMP DIMENSIONS

DIMENSION [MM]	L	H	D	P	e	f	W				
							Belt width 25	Belt width 50	Belt width 75	Belt width 100	Belt width 150
HTD8	66	15	9	8	5	8	50	75	100	125	175
HTD14	116	22	11	14	9	10	56	81	106	131	181

CLAMPING F30 STEEL RSL OR F48 STEEL: 2 CLAMPING PLATES ARE REQUIRED

TYPE	PITCH
F20 Steel	HTD8
F20 Aramid	HTD8
F20 Steel HF	HTD8
F20 Steel RSL	HTD8
F20 Aramid RKV	HTD8
F20 RHF	HTD8
F20 NIRO	HTD8
F30 Steel	HTD14
F30 Aramid	HTD8
F30 Aramid RKV	HTD14
F30 Steel HF	HTD14
F30 Steel RSL	HTD14
F48 Steel	HTD14



FEATURES

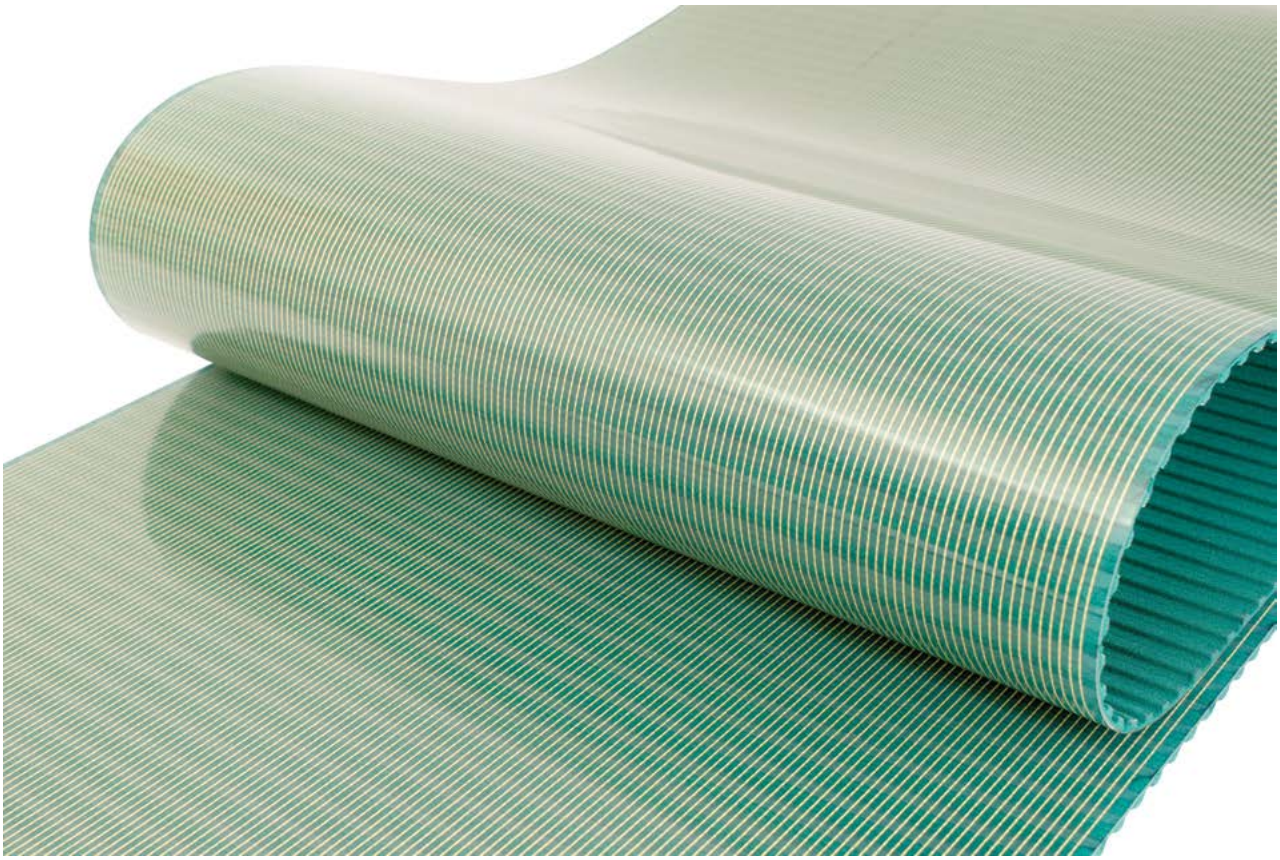
- Suitable for all types of flat belts.
- Easy
- Safe
- Fast

SYNCHRO-POWER WIDE

WIDE BELTS

Gates TPU Wide Belts are ideal for conveying applications that require greater than 150mm width, precise product positioning, and smooth-running operation. The high strength aramid cords ensure even tension characteristics. The high quality polyurethane is cut resistant and non-marking, making this belt ideal for abrasive environments.

GATES TPU WIDE BELTS OFFER AN ALTERNATIVE TO PLASTIC MODULAR AND CONVEYOR BELTING WITH OUR EASY TO CLEAN, ABRASION RESISTANT, SMOOTH DRIVE WIDE BELTS.



ATTRIBUTES

- Easy to clean
- Cut resistant
- Widths up to 450 mm available
- Suitable for synchronous conveying applications
- No cord exposure at the edges of the belt
- Low-noise, smooth operation
- FDA and EU food approval for various pitches

APPLICATIONS

- Synchronous conveying applications
- Bulk conveying
- Food and confectionary conveying
- Clean room or wash down environments
- Hygienic applications

PROCESSING OPTIONS

- Backings Further information on page 186
- Profiles Further information on page 194
- Special processing Further information on page 202

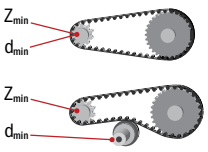
GMT3 / PITCH: 3MM

PRODUCT DATA

PITCH	3 mm	0.118"
STANDARD THICKNESS	2.6 mm	0.102"
MINIMUM WELDED BELT LENGTH	1002 mm	39.449"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	60 m	196.9 ft
STANDARD COLOR	PosiBlue	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	N/A	

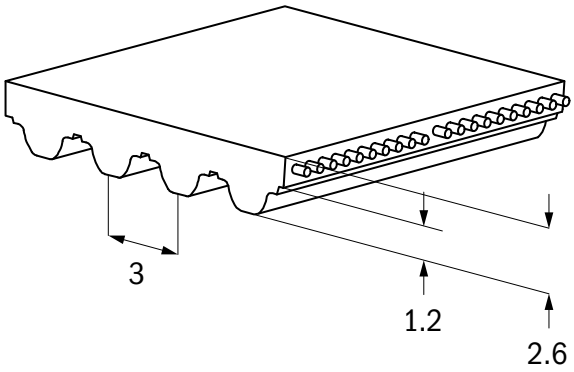
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	ARAMID	
z min	19 teeth	
d min	18mm	0.71"
z min	25 teeth	
d min	30 mm	1.18"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	50	100	150	200	250	300	350	450
BREAKING FORCE / AVERAGE VALUE									
Aramid (K)	[N]	3,363	6,851	10,338	13,826	17,313	20,801	24,288	30,018
	[lbf]	755	1,540	2,325	3,110	3,890	4,675	5,460	6,750
ALLOWABLE BELT FORCE / OPEN ENDED									
Aramid (K)	[N]	498	1,014	1,530	2,046	2,561	3,077	3,593	4,441
	[lbf]	112	228	344	460	576	692	808	998
ALLOWABLE BELT FORCE / ENDLESS WELDED									
Aramid (K)	[N]	373	760	1,147	1,534	1,921	2,308	2,695	3,331
	[lbf]	84	171	258	345	432	519	606	749
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH									
	[N]	1,200	2,400	3,600	4,800	6,000	7,200	8,400	10,800
	[lbf]	270	540	810	1,080	1,350	1,620	1,890	2,430
BELT WEIGHT									
Aramid (K)	[kg/m]	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.9
	[lb/ft]	0.07	0.13	0.20	0.27	0.34	0.40	0.47	0.60
SPECIFIC BELT STIFFNESS									
Aramid (K)	[N]	124,389	253,385	382,381	511,377	640,373	769,369	898,365	1,110,287
	[lbf]	27,965	56,966	85,967	114,968	143,969	172,970	201,971	249,615

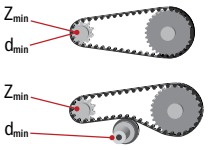
WT5 / PITCH: 5MM

PRODUCT DATA

PITCH	5 mm	0.197"
STANDARD THICKNESS	2.5 mm	0.098"
MINIMUM WELDED BELT LENGTH	810 mm	31.87"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	100 m	328.1ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

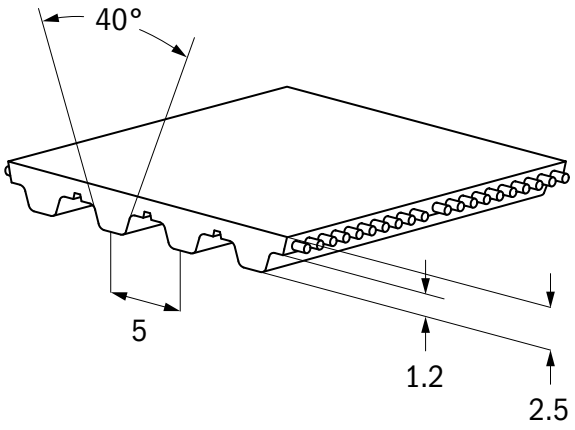
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	ARAMID	
z min	10 teeth	
d min	16mm	0.63"
z min	15 teeth	
d min	30 mm	1.18"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	150	200
BREAKING FORCE / AVERAGE VALUE			
Aramid (K)	[N]	22,161	29,637
	[lbf]	4,980	6,665
ALLOWABLE BELT FORCE / OPEN ENDED			
Aramid (K)	[N]	2,814	3,764
	[lbf]	633	846
ALLOWABLE BELT FORCE / ENDLESS WELDED			
Aramid (K)	[N]	2,111	2,823
	[lbf]	475	635
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH			
	[N]	3,750	5,000
	[lbf]	843	1,124
BELT WEIGHT			
Aramid (K)	[kg/m]	0.3	0.4
	[lb/ft]	0.18	0.24
SPECIFIC BELT STIFFNESS			
Aramid (K)	[N]	703,579	940,931
	[lbf]	158,179	211,540

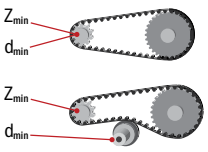
WT10 / PITCH: 10MM

PRODUCT DATA

PITCH	10 mm	0.394"
STANDARD THICKNESS	4.5 mm	0.117"
MINIMUM WELDED BELT LENGTH	900 mm	35.433"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	60 m	196.9ft
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

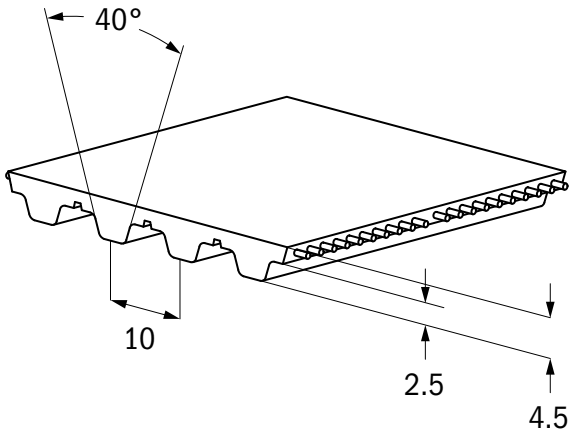
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	ARAMID	
z min	14 teeth	
d min	45mm	1.77"
z min	20 teeth	
d min	60 mm	2.36"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	150	200	250	300	450
BREAKING FORCE / AVERAGE VALUE						
Aramid (K)	[N]	25,333	33,957	42,581	51,205	77,077
	[lbf]	5,695	7,635	9,575	11,510	17,330
ALLOWABLE BELT FORCE / OPEN ENDED						
Aramid (K)	[N]	6,750	9,048	11,346	13,644	20,537
	[lbf]	1,518	2,034	2,551	3,067	4,617
ALLOWABLE BELT FORCE / ENDLESS WELDED						
Aramid (K)	[N]	3,375	4,524	5,673	6,822	10,269
	[lbf]	759	1,017	1,275	1,534	2,309
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	[N]	8,535	11,380	14,225	17,070	25,605
	[lbf]	1,919	2,558	3,198	3,838	5,757
BELT WEIGHT						
Aramid (K)	[kg/m]	0.6	0.8	1.0	1.2	1.8
	[lb/ft]	0.39	0.52	0.66	0.79	1.18
SPECIFIC BELT STIFFNESS						
Aramid (K)	[N]	843,744	1,130,976	1,418,208	1,705,440	2,567,136
	[lbf]	189,691	254,266	318,842	383,417	577,144

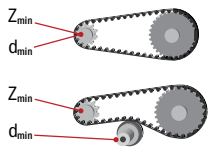
WHTD8 / PITCH: 8MM

PRODUCT DATA

PITCH	8 mm	0.315"
STANDARD THICKNESS	5.6 mm	0.220"
MINIMUM WELDED BELT LENGTH	848 mm	33.386"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	60 m	196.9ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

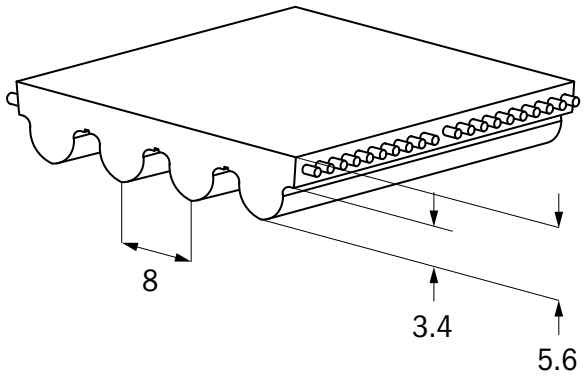
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	ARAMID	
z min	14 teeth	
d min	45 mm	1.77"
z min	20 teeth	
d min	60 mm	2.36"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

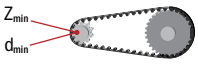
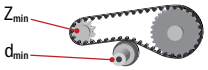
STANDARD WIDTH [MM]	UNIT	150	200	250	300	450
BREAKING FORCE / AVERAGE VALUE						
Aramid (K)	[N]	50,713	67,977	85,241	102,505	154,297
	[lbf]	11,401	15,282	19,163	23,044	34,687
ALLOWABLE BELT FORCE / OPEN ENDED						
Aramid (K)	[N]	8,225	11,025	13,825	16,625	25,025
	[lbf]	1,849	2,479	3,108	3,737	5,626
ALLOWABLE BELT FORCE / ENDLESS WELDED						
Aramid (K)	[N]	4,113	5,513	6,913	8,313	12,513
	[lbf]	925	1,239	1,554	1,869	2,813
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	[N]	13,950	18,600	23,250	27,900	41,850
	[lbf]	3,135	4,180	5,225	6,270	9,410
BELT WEIGHT						
Aramid (K)	[kg/m]	0.4	0.5	0.6	0.7	1.1
	[lb/ft]	0.26	0.33	0.40	0.48	0.74
SPECIFIC BELT STIFFNESS						
Aramid (K)	[N]	1,370,833	1,837,500	2,304,167	2,770,831	4,170,834
	[lbf]	308,176	413,086	517,997	622,908	937,641

WH / PITCH: 0.500"

PRODUCT DATA

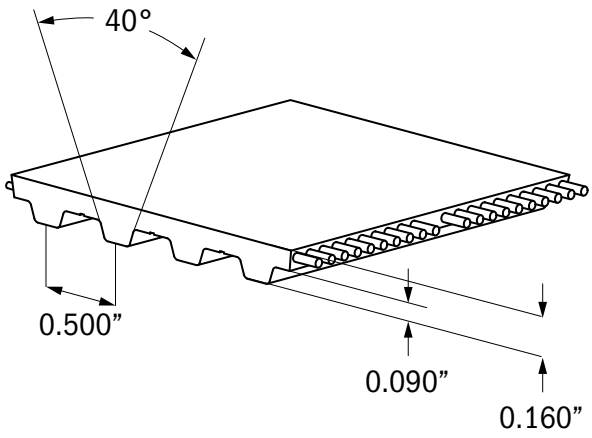
PITCH	0.500"	12.7 mm
STANDARD THICKNESS	0.160"	4.06 mm
MINIMUM WELDED BELT LENGTH	33"	838.2 mm
STANDARD ROLL LENGTH (TOLERANCE ±1%)	200 ft	61 m
STANDARD COLOR	Clear	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	ARAMID	
z min	14 teeth	
d min	2.23"	57 mm
z min	20 teeth	
d min	3.15"	80 mm

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

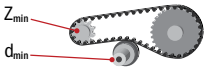
STANDARD WIDTH [“/MM]	UNITT	6”/152.4MM	8”/203.2MM	10”/254MM	12”/304.8MM	14”/355.6MM	18”/457.2MM
BREAKING FORCE / AVERAGE VALUE							
Aramid (K)	[N]	25,333	34,496	43,120	51,744	60,368	77,077
	[lbf]	5,695	7,755	9,695	11,635	13,570	17,330
ALLOWABLE BELT FORCE / OPEN ENDED							
Aramid (K)	[N]	6,750	9,191	11,489	13,787	16,085	20,537
	[lbf]	1,518	2,066	2,583	3,100	3,616	4,617
ALLOWABLE BELT FORCE / ENDLESS WELDED							
Aramid (K)	[N]	3,375	4,596	5,745	6,894	8,042	10,269
	[lbf]	759	1,033	1,292	1,550	1,808	2,309
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	9,900	13,200	16,500	19,800	23,100	29,700
	[lbf]	2,225	2,970	3,710	4,450	5,195	6,675
BELT WEIGHT							
Aramid (K)	[kg/m]	0.5	0.7	0.8	1.0	1.1	1.4
	[lb/ft]	0.34	0.47	0.54	0.67	0.74	0.94
SPECIFIC BELT STIFFNESS							
Aramid (K)	[N]	843,744	1,148,928	1,436,160	1,723,392	2,010,624	2,567,136
	[lbf]	189,691	258,302	322,878	387,453	452,029	577,144

CC8 / PITCH: 8MM

PRODUCT DATA

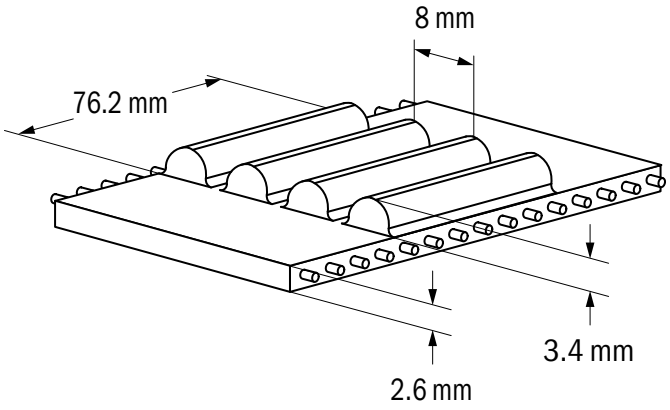
PITCH	8 mm	0.315"
STANDARD THICKNESS	6 mm	0.236"
MINIMUM WELDED BELT LENGTH	1004 mm	39.528"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	61 m	200 ft
STANDARD COLOR	PosiBlue	
FDA/EU APPROVAL	FDA	
POLYAMIDE FABRIC	N/A	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	ARAMID	
z min	20 teeth	
d min	51mm	2.0"
z min	22 teeth	
d min	110mm	4.33"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
FG	90	-5 to +70	+23 to +158	Standard



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	150	200	250	300	450
BREAKING FORCE / AVERAGE VALUE						
Aramid (K)	[N]	11,858	14,014	16,170	18,326	24,794
	[lbf]	2,665	3,150	3,635	4,120	5,575
ALLOWABLE BELT FORCE / OPEN ENDED						
Aramid (K)	[N]	2,370	2,801	3,231	3,662	4,955
	[lbf]	533	630	726	823	1,114
ALLOWABLE BELT FORCE / ENDLESS WELDED						
Aramid (K)	[N]	1,185	1,400	1,616	1,831	2,477
	[lbf]	266	315	363	412	557
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	[N]	6,975	6,975	6,975	6,975	6,975
	[lbf]	1,568	1,568	1,568	1,568	1,568
BELT WEIGHT						
Aramid (K)	[kg/m]	0.67	0.84	1.01	1.17	1.51
	[lb/ft]	0.45	0.56	0.68	0.79	1.01
SPECIFIC BELT STIFFNESS						
Aramid (K)	[N]	394,944	466,752	538,560	610,368	825,792
	[lbf]	88,791	104,935	121,079	137,223	185,655

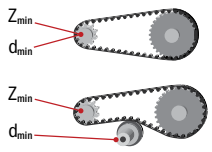
WSTD8 / PITCH: 8MM

PRODUCT DATA

PITCH	8 mm	0.315"
STANDARD THICKNESS	5.0mm	0.197"
MINIMUM WELDED BELT LENGTH	952 mm	37.48"
STANDARD ROLL LENGTH (TOLERANCE ±1%)	60 m	196.9 ft
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT, NB & NTB	

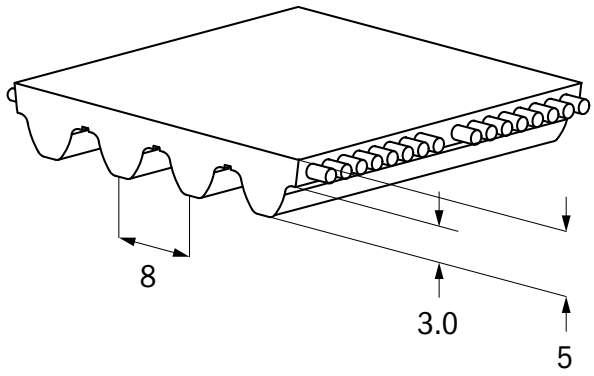
MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	ARAMID	
z min	14 teeth	
d min	45 mm	1.77"
z min	20 teeth	
d min	60 mm	2.36"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R1	92	-5 to +70	+23 to +158	Standard
R2	85	-10 to +60	+14 to +140	
FDA	85	-10 to +60	+14 to +140	



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	150	200	250	300	450
BREAKING FORCE / AVERAGE VALUE						
Aramid (K)	[N]	50,713	67,977	85,241	102,505	154,297
	[lbf]	11,400	15,285	19,165	23,045	34,690
ALLOWABLE BELT FORCE / OPEN ENDED						
Aramid (K)	[N]	8,225	11,025	13,825	16,625	25,025
	[lbf]	1,849	2,479	3,108	3,737	5,626
ALLOWABLE BELT FORCE / ENDLESS WELDED						
Aramid (K)	[N]	4,113	5,513	6,913	8,313	12,513
	[lbf]	925	1,239	1,554	1,869	2,813
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	[N]	13,950	18,600	23,250	27,900	41,850
	[lbf]	3,135	4,180	5,225	6,270	9,410
BELT WEIGHT						
Aramid (K)	[kg/m]	0.4	0.5	0.6	0.7	1.1
	[lb/ft]	0.27	0.34	0.40	0.47	0.74
SPECIFIC BELT STIFFNESS						
Aramid (K)	[N]	1,370,833	1,837,500	2,304,167	2,770,831	4,170,834
	[lbf]	308,191	413,107	518,023	622,939	937,688

MECHANICAL FABRICATION PROCESSES

Gates TPU offers a wide range of TPU Wide Belt modifications within our full range of fabrication options. Gates TPU wide belt solutions include grinding edges to tight tolerances, punching or machining holes and slots, and CNC machining of 3-dimensional contours.

APPLICATIONS

- Vacuum conveying belts - machined tooth side & perforations
- Precision machined belts for precise product movement
- Distinct product orientation and location within automated processing

SYNCHRO-POWER SLEEVE

SLEEVE BELTS

Gates TPU Synchro-Power Sleeve Belts are designed to meet the higher strength and stiffness requirements that certain power transmission and high-performance positioning applications demand.

Our Synchro-Power Sleeves belts are cast on fixed molds and have continuously wound steel cords that provide more strength and stiffness than a welded belt can provide. They are manufactured in various exact sizes, constructions, and pitches to fulfill customer requirements.

CAST ENDLESS BELTS OFFER PREMIUM CAPACITY FOR POWER TRANSMISSIONS AND ROTARY POSITIONING APPLICATIONS WHILE MEETING A BROAD RANGE OF LOADS, SPEEDS, AND APPLICATION REQUIREMENTS.

ATTRIBUTES

- High quality thermo-set polyurethane construction
- Helically wound steel cords for high strength, truly endless power transmission capabilities.
- Excellent abrasion resistance
- Smooth, low noise, non-marking operation
- High tooth strength reduces deforming under load
- Excellent resistance to chemicals

APPLICATIONS

- Paper processing industry
- Wood processing industry
- Glass processing industry
- Textile industry
- Packaging machines
- Exercise equipment

FURTHER INFORMATION

- Backings Further information on page 186
- Special processing Further information on page 202

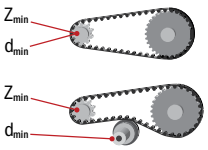
MXL / PITCH: 0.080"

PRODUCT DATA

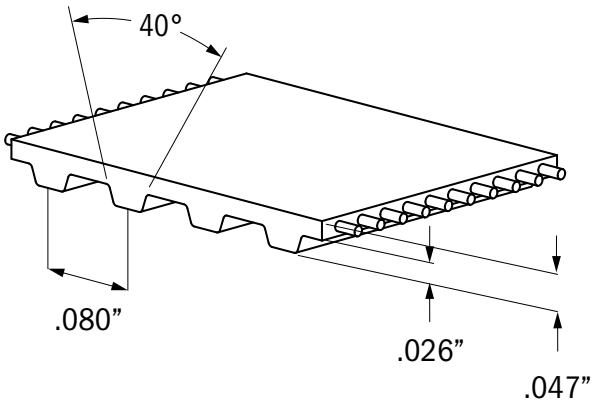
PITCH	0.080"	2.032 mm
STANDARD THICKNESS	0.047"	1.2 mm
STANDARD POLYURETHANE R3	88°ShoreA	
STANDARD COLOR	Natural	
FDA/EU APPROVAL	No	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL		ARAMID	
z min	10 teeth		12 teeth	
d min	0.25"	6.5 mm	0.31"	7.8 mm
z min	12 teeth		14 teeth	
d min	0.59"	15 mm	0.71"	18 mm



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [" / MM]	UNIT	0.12" / 3.2MM	0.19" / 4.8MM	0.25" / 6.4MM
ALLOWABLE EFFECTIVE FORCE 12 TEETH IN MESH				
	[N]	28	42	56
	[lbf]	6	9	13
BELT WEIGHT				
Steel (SL)	[kg/m]	0.01	0.01	0.01

See next page for maximum widths

MXL / PITCH: 0.080"

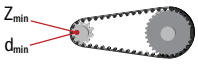
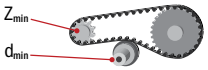
NUMBER OF TEETH	BELT TYPE	LENGTH [MM]	LENGTH [“]	WIDTH [MM]	WIDTH [“]
55	440 MXL	111.7	4.40	100	3.94
57	456 MXL	115.8	4.56	100	3.94
60	480 MXL	121.9	4.80	120	4.72
70	560 MXL	142.2	5.60	100	3.94
72	576 MXL	146.3	5.76	270	10.63
75	600 MXL	152.4	6.00	120	4.72
76	608 MXL	154.4	6.08	100	3.94
79	632 MXL	160.5	6.32	100	3.94
80	640 MXL	162.5	6.40	300	11.81
82	656 MXL	166.6	6.56	300	11.81
88	704 MXL	178.8	7.04	300	11.81
91	728 MXL	184.9	7.28	300	11.81
92	736 MXL	186.9	7.36	300	11.81
96	768 MXL	195.1	7.68	300	11.81
101	808 MXL	205.2	8.08	300	11.81
102	816 MXL	207.2	8.16	300	11.81
103	824 MXL	209.2	8.24	300	11.81
105	840 MXL	213.4	8.40	300	11.81
110	880 MXL	223.5	8.80	300	11.81
114	912 MXL	231.6	9.12	300	11.81
118	844 MXL	239.8	9.44	300	11.81
120	960 MXL	243.8	9.60	300	11.81
130	1040 MXL	264.1	10.40	300	11.81
132	1056 MXL	268.2	10.56	300	11.81
135	1080 MXL	274.3	10.80	300	11.81
140	1120 MXL	284.4	11.20	300	11.81
145	1160 MXL	294.6	11.60	300	11.81
150	1200 MXL	304.8	12.00	300	11.81
155	1240 MXL	314.9	12.40	300	11.81
175	1400 MXL	355.6	14.00	300	11.81
190	1520 MXL	386.1	15.20	300	11.81
200	1600 MXL	406.4	16.00	300	11.81
221	1768 MXL	449.1	17.68	300	11.81
256	2048 MXL	520.1	20.48	300	11.81
280	2240 MXL	568.9	22.40	300	11.81
285	2280 MXL	579.1	22.80	300	11.81
308	2464 MXL	625.8	24.64	300	11.81
332	2656 MXL	674.6	26.56	300	11.81
352	2816 MXL	715.2	28.16	300	11.81
360	2880 MXL	731.5	28.80	300	11.81
395	3160 MXL	802.6	31.60	300	11.81
405	3240 MXL	822.9	32.40	300	11.81
412	3296 MXL	837.1	32.96	300	11.81
432	3456 MXL	877.8	34.56	300	11.81
454	3632 MXL	922.5	36.32	300	11.81
485	3880 MXL	985.5	38.80	300	11.81

XL / PITCH: 0.200"

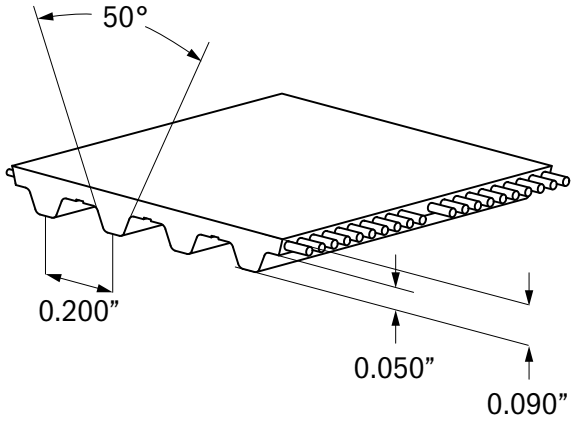
PRODUCT DATA

PITCH	0.200"	5.08 mm
STANDARD THICKNESS	0.090"	2.3 mm
STANDARD POLYURETHANE R3	88°ShoreA	
STANDARD COLOR	Natural	
FDA/EU APPROVAL	No	
CORD	Steel (SL)	
	Optional Aramid (K)	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL		ARAMID	
z min	10 teeth		10 teeth	
d min	0.64"	16 mm	0.64"	16 mm
z min	15 teeth		15 teeth	
d min	1.18"	30 mm	1.18"	30 mm



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [" / MM]	UNIT	0.25" / 6.4MM	0.31" / 7.9MM	0.37" / 9.4MM
ALLOWABLE EFFECTIVE FORCE 12 TEETH IN MESH				
	[N]	160	198	235
	[lbf]	36	44	53
BELT WEIGHT				
Steel (SL)	[kg/m]	0.01	0.02	0.02

See next page for maximum widths

XL / PITCH: 0.200"

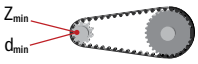
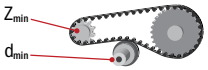
NUMBER OF TEETH	BELT TYPE	LENGTH [MM]	LENGTH [“]	WIDTH [MM]	WIDTH [“]
30	60 XL	152.4	6.00	300	11.81
35	70 XL	177.8	7.00	300	11.81
38	76 XL	193	7.60	300	11.81
40	80 XL	203.2	8.00	300	11.81
45	90 XL	228.6	9.00	300	11.81
48	96 XL	243.8	9.60	300	11.81
50	100 XL	254	10.00	300	11.81
53	106 XL	269.2	10.60	300	11.81
55	110 XL	279.4	11.00	300	11.81
60	120 XL	304.8	12.00	300	11.81
65	130 XL	330.2	13.00	300	11.81
67	134 XL	340.4	13.40	300	11.81
70	140 XL	355.6	14.00	300	11.81
75	150 XL	381	15.00	300	11.81
80	160 XL	406.4	16.00	300	11.81
85	170 XL	431.8	17.00	300	11.81
90	180 XL	457.2	18.00	300	11.81
95	190 XL	482.6	19.00	300	11.81
97	194 XL	492.7	19.40	300	11.81
100	200 XL	508	20.00	300	11.81
105	210 XL	533.4	21.00	300	11.81
110	220 XL	558.8	22.00	300	11.81
115	230 XL	584.2	23.00	300	11.81
120	240 XL	609.6	24.00	300	11.81
125	250 XL	635	25.00	300	11.81
130	260 XL	660.4	26.00	300	11.81
135	270 XL	685.8	27.00	300	11.81
144	288 XL	731.5	28.80	300	11.81
145	290 XL	736.6	29.00	300	11.81
150	300 XL	762	30.00	300	11.81
178	356 XL	904.2	35.60	300	11.81
207	414 XL	1051.2	41.39	300	11.81
225	450 XL	1143	45.00	300	11.81
283	566 XL	1437.6	56.60	300	11.81

L / PITCH: 0.375"

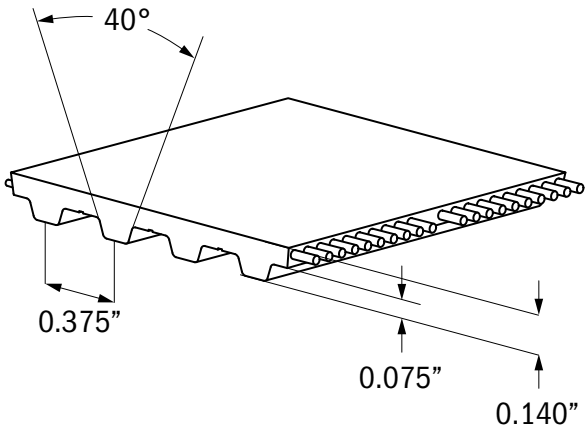
PRODUCT DATA

PITCH	0.375"	9.525 mm
STANDARD THICKNESS	0.140"	3.6 mm
STANDARD POLYURETHANE R3	88°ShoreA	
STANDARD COLOR	Natural	
FDA/EU APPROVAL	No	
CORD	Steel (SL)	
	Optional Aramid (K)	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL		ARAMID	
z min	15 teeth		15 teeth	
d min	1.79"	45 mm	1.79"	45 mm
z min	20 teeth		20 teeth	
d min	.36"	60 mm	2.36"	60 mm



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [" / MM]	UNIT	0.50" / 12.7MM	0.75" / 19.1MM	1.00" / 25.4MM
ALLOWABLE EFFECTIVE FORCE 12 TEETH IN MESH				
	[N]	462	695	925
	[lbf]	104	156	208
BELT WEIGHT				
Steel (SL)	[kg/m]	0.04	0.07	0.09

See next page for maximum widths

L / PITCH: 0.375"

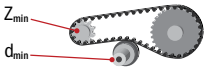
NUMBER OF TEETH	BELT TYPE	LENGTH [MM]	LENGTH [“]	WIDTH [MM]	WIDTH [“]
23	86 L	218.6	8.61	300	11.81
33	124 L	314.3	12.37	300	11.81
40	150 L	381.0	15.00	300	11.81
46	173 L	439.4	17.30	300	11.81
50	187 L	476.2	18.75	300	11.81
54	202 L	514.4	20.25	300	11.81
56	210 L	533.4	21.00	300	11.81
60	225 L	571.5	22.50	300	11.81
64	240 L	609.6	24.00	300	11.81
68	255 L	647.7	25.50	300	11.81
72	270 L	685.8	27.00	300	11.81
76	285 L	723.9	28.50	300	11.81
80	300 L	762.0	30.00	300	11.81
86	322 L	819.5	32.26	300	11.81
92	345 L	876.3	34.50	300	11.81
98	367 L	933.4	36.75	300	11.81
104	390 L	990.6	39.00	300	11.81
112	420 L	1066.8	42.00	300	11.81
120	450 L	1143.0	45.00	300	11.81
128	480 L	1219.2	48.00	300	11.81
136	510 L	1295.4	51.00	300	11.81
144	540 L	1371.6	54.00	300	11.81
152	570 L	1447.8	57.00	300	11.81
160	600 L	1524.0	60.00	300	11.81

H / PITCH: 0.500"

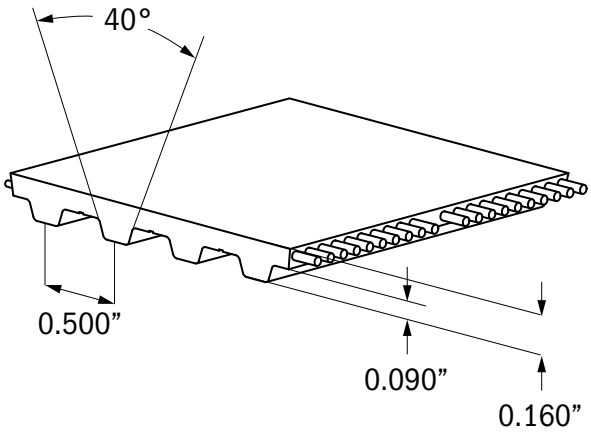
PRODUCT DATA

PITCH	0.500"	12.7 mm
STANDARD THICKNESS	0.160"	4.1 mm
STANDARD POLYURETHANE R3	88°ShoreA	
STANDARD COLOR	Natural	
FDA/EU APPROVAL	No	
CORD	Steel (SL)	
	Optional Aramid (K)	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL		ARAMID	
z min	14 teeth		14 teeth	
d min	2.23"	57 mm	2.23"	57 mm
z min	20 teeth		20 teeth	
d min	3.15"	80 mm	3.15"	80 mm



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [" / MM]	UNIT	0.75" / 19.1MM	1.00" / 25.4MM	1.50" / 38.1MM	2.00" / 50.8MM	3.00" / 76.2MM
ALLOWABLE EFFECTIVE FORCE 12 TEETH IN MESH						
	[N]	1291	1717	2576	3434	5151
	[lbf]	290	386	579	772	1,158
BELT WEIGHT						
Steel (SL)	[kg/m]	0.08	0.10	0.15	0.20	0.30

See next page for maximum widths

H / PITCH: 0.500"

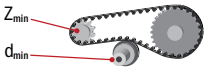
NUMBER OF TEETH	BELT TYPE	LENGTH [MM]	LENGTH [“]	WIDTH [MM]	WIDTH [“]
46	230 H	584.2	23.00	300	11.81
48	240 H	609.6	24.00	300	11.81
54	270 H	685.8	27.00	300	11.81
60	300 H	762.0	30.00	300	11.81
66	330 H	838.2	33.00	300	11.81
72	360 H	914.4	36.00	300	11.81
78	390 H	990.6	39.00	300	11.81
84	420 H	1066.8	42.00	300	11.81
90	450 H	1143.0	45.00	300	11.81
96	480 H	1219.2	48.00	300	11.81
102	510 H	1295.4	51.00	300	11.81

T2.5 / PITCH: 2.5MM

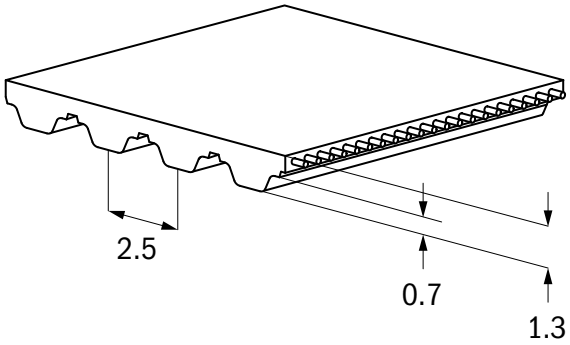
PRODUCT DATA

PITCH	2.5 mm	0.098"
STANDARD THICKNESS	1.3 mm	0.051"
STANDARD POLYURETHANE R3	88°ShoreA	
STANDARD COLOR	Natural	
FDA/EU APPROVAL	No	
CORD	Steel (SL)	
	Optional Aramid (K)	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL		ARAMID	
z min	10 teeth		12 teeth	
d min	8 mm	0.31"	9.5mm	0.38"
z min	12 teeth		14 teeth	
d min	15 mm	0.59"	18 mm	0.71"



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	4	6	8	10	12	16	20	25	32	50
ALLOWABLE EFFECTIVE FORCE 12 TEETH IN MESH											
	[N]	35	53	70	88	106	141	176	220	282	440
	[lbf]	8	12	16	20	24	32	40	49	63	99
BELT WEIGHT											
Steel (SL)	[kg/m]	0.005	0.007	0.010	0.012	0.014	0.022	0.028	0.035	0.045	0.070
	[lb/ft]	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.05

See next page for maximum widths

T2.5 / PITCH: 2.5MM

LENGTH [MM]	LENGTH ["]	WIDTH [MM]	WIDTH ["]	NUMBER OF TEETH
120	4.72	240	9.45	48
145	5.71	240	9.45	58
160	6.30	300	11.81	64
177.5	6.99	300	11.81	71
180	7.09	300	11.81	72
182.5	7.19	300	11.81	73
200	7.87	300	11.81	80
210	8.27	300	11.81	84
230	9.06	300	11.81	92
245	9.65	300	11.81	98
265	10.43	300	11.81	106
277.5	10.93	300	11.81	111
285	11.22	300	11.81	114
290	11.42	300	11.81	116
305	12.01	300	11.81	122
317.5	12.50	300	11.81	127
330	12.99	300	11.81	132
342.5	13.48	300	11.81	137
380	14.96	300	11.81	152
420	16.54	300	11.81	168
480	18.90	300	11.81	192
500	19.69	300	11.81	200
540	21.26	300	11.81	216
600	23.62	300	11.81	240
620	24.41	300	11.81	248
650	25.59	300	11.81	260
680	26.77	300	11.81	272
700	27.56	300	11.81	280
780	30.71	300	11.81	312
880	34.65	300	11.81	352
915	36.02	300	11.81	366
950	37.40	300	11.81	380
1185	46.65	300	11.81	474

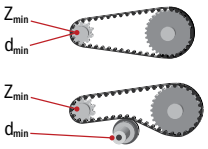
T5 / PITCH: 5MM

PRODUCT DATA

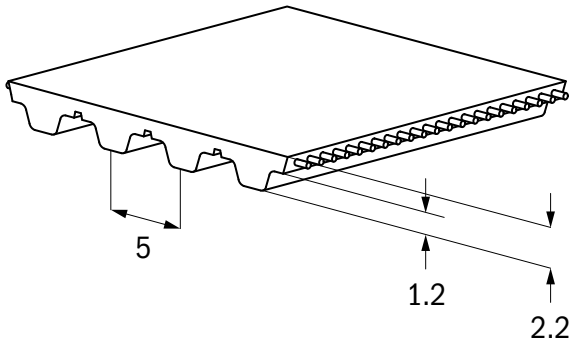
PITCH	5 mm	0.197"
STANDARD THICKNESS	2.2 mm	0.087"
STANDARD THICKNESS	3.4 mm	0.134"
STANDARD POLYURETHANE R3	88°ShoreA	
STANDARD COLOR	Natural	
FDA/EU APPROVAL	No	
CORD	Steel (SL)	
	Optional Aramid (K)	

MIN PULLEY TOOTH COUNT AND DIAMETER

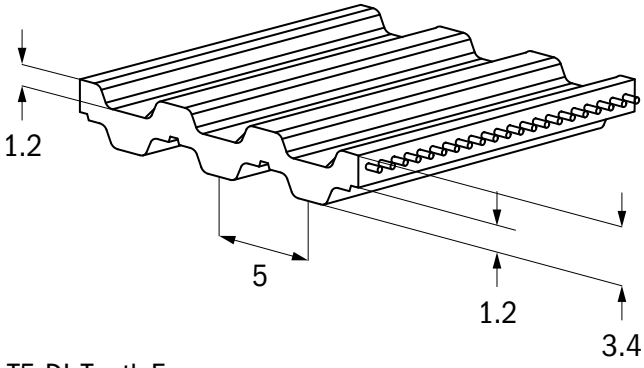
NO BACK BENDING	
BACK BENDING	



	STEEL		ARAMID	
z min	10 teeth		10 teeth	
d min	16 mm	0.63"	16 mm	0.63"
z min	15 teeth		15 teeth	
d min	30 mm	1.18"	30 mm	1.18"



T5 Tooth Form



T5-DL Tooth Form

For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	4	6	8	10	12	16	20	25	32	50	75
ALLOWABLE EFFECTIVE FORCE 12 TEETH IN MESH												
	[N]	100	150	200	250	300	400	500	625	800	1250	1875
	[lbf]	22	34	45	56	67	90	112	141	180	281	422
BELT WEIGHT												
Steel (SL)	[kg/m]	0.008	0.013	0.016	0.022	0.026	0.035	0.044	0.055	0.070	0.110	0.165
	[lb/ft]	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.07	0.11
DL Steel (SL)	[kg/m]	0.011	0.016	0.021	0.026	0.031	0.042	0.052	0.065	0.083	0.130	0.195
	[lb/ft]	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.06	0.09	0.13

See next page for maximum widths

T5

LENGTH [MM]	LENGTH ["]	WIDTH [MM]	WIDTH ["]	NO. TEETH
120	4.72	240	9.45	24
150	5.91	240	9.45	30
165	6.50	240	9.45	33
180	7.09	300	11.81	36
185	7.28	300	11.81	37
200	7.87	300	11.81	40
210	8.27	300	11.81	42
215	8.46	300	11.81	43
220	8.66	300	11.81	44
225	8.86	300	11.81	45
245	9.65	300	11.81	49
250	9.84	300	11.81	50
255	10.04	300	11.81	51
260	10.24	300	11.81	52
270	10.63	300	11.81	54
275	10.83	300	11.81	55
280	11.02	300	11.81	56
295	11.61	300	11.81	59
300	11.81	300	11.81	60
305	12.01	300	11.81	61
330	12.99	300	11.81	66
340	13.39	300	11.81	68
350	13.78	300	11.81	70
355	13.98	300	11.81	71
365	14.37	300	11.81	73
375	14.76	300	11.81	75
390	15.35	300	11.81	78
400	15.75	300	11.81	80
410	16.14	300	11.81	82
420	16.54	300	11.81	84
425	16.73	300	11.81	85
440	17.32	300	11.81	88
445	17.52	300	11.81	89
450	17.72	300	11.81	90
455	17.91	300	11.81	91
460	18.11	300	11.81	92
475	18.70	300	11.81	95
480	18.90	300	11.81	96
500	19.69	300	11.81	100
510	20.08	300	11.81	102
525	20.67	300	11.81	105
545	21.46	300	11.81	109

LENGTH [MM]	LENGTH ["]	WIDTH [MM]	WIDTH ["]	NO. TEETH
550	21.65	300	11.81	110
560	22.05	300	11.81	112
575	22.64	300	11.81	115
590	23.23	300	11.81	118
600	23.62	300	11.81	120
610	24.02	300	11.81	122
620	24.41	300	11.81	124
630	24.80	300	11.81	126
640	25.20	300	11.81	128
650	25.59	300	11.81	130
660	25.98	300	11.81	132
675	26.57	300	11.81	135
690	27.17	300	11.81	138
700	27.56	300	11.81	140
720	28.35	300	11.81	144
725	28.54	300	11.81	145
750	29.53	300	11.81	150
780	30.71	300	11.81	156
800	31.50	300	11.81	160
815	32.09	300	11.81	163
830	32.68	300	11.81	166
840	33.07	300	11.81	168
850	33.46	300	11.81	170
860	33.86	300	11.81	172
885	34.84	300	11.81	177
900	35.43	300	11.81	180
920	36.22	300	11.81	184
940	37.01	300	11.81	188
990	38.98	300	11.81	198
1075	42.32	300	11.81	215
1100	43.31	300	11.81	220
1200	47.24	300	11.81	240
1215	47.83	300	11.81	243
1275	50.20	300	11.81	255
1315	51.77	300	11.81	263
1355	53.35	300	11.81	271
1380	54.33	300	11.81	276
1440	56.69	300	11.81	288
1470	57.87	300	11.81	294
1500	59.06	300	11.81	300
1580	62.20	300	11.81	316
1955	76.97	300	11.81	391

DL T5

LENGTH [MM]	LENGTH ["]	WIDTH [MM]	WIDTH ["]	NO. TEETH
410	16.14	300	11.81	82
460	18.11	300	11.81	92
515	20.28	300	11.81	103
525	20.67	300	11.81	105
550	21.65	300	11.81	110
590	23.23	300	11.81	118
620	24.41	300	11.81	124
685	26.97	300	11.81	137
700	27.56	300	11.81	140
750	29.53	300	11.81	150
815	32.09	300	11.81	163
840	33.07	300	11.81	168
860	33.86	300	11.81	172
940	37.01	300	11.81	188
1100	43.31	300	11.81	220

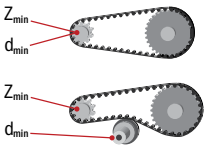
T10 / PITCH: 10MM

PRODUCT DATA

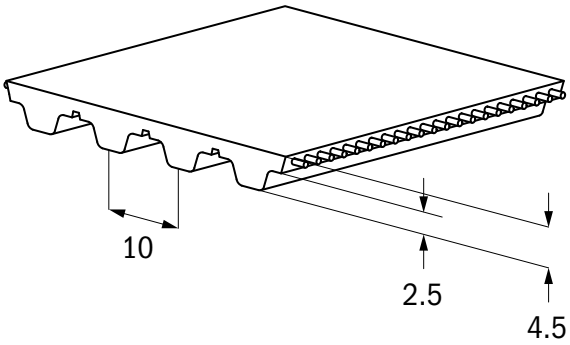
PITCH	10 mm	0.394"
STANDARD THICKNESS	4.5 mm	0.177"
STANDARD THICKNESS	7.0 mm	0.276"
STANDARD POLYURETHANE R3	88°ShoreA	
STANDARD COLOR	Natural	
FDA/EU APPROVAL	No	
CORD	Steel (SL)	
	Optional Aramid (K)	

MIN PULLEY TOOTH COUNT AND DIAMETER

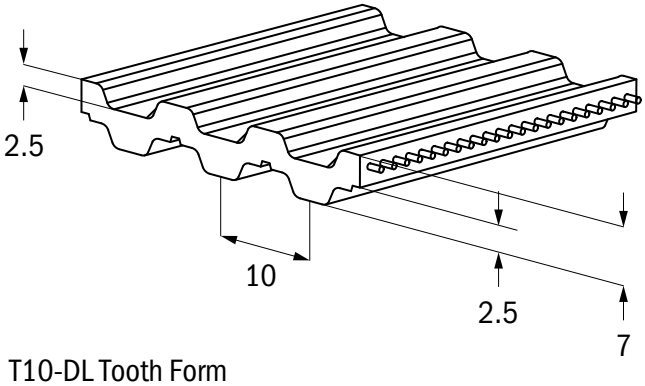
NO BACK BENDING	
BACK BENDING	



	STEEL		ARAMID	
z min	12 teeth		12 teeth	
d min	38mm	1.5"	38mm	1.5"
z min	20 teeth		20 teeth	
d min	60 mm	2.36"	60 mm	2.36"



T10 Tooth Form



T10-DL Tooth Form

For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	12	16	20	25	32	50	75
ALLOWABLE EFFECTIVE FORCE 12 TEETH IN MESH									
	[N]	569	683	910	1138	1423	1821	2845	4268
	[lbf]	128	154	205	256	320	409	640	960
BELT WEIGHT									
Steel (SL)	[kg/m]	0.046	0.055	0.074	0.092	0.115	0.147	0.230	0.345
	[lb/ft]	0.03	0.04	0.05	0.06	0.08	0.10	0.15	0.23
DL Steel (SL)	[kg/m]	0.059	0.071	0.094	0.118	0.148	0.189	0.295	0.443
	[lb/ft]	0.04	0.05	0.06	0.08	0.10	0.13	0.20	0.30

See next page for maximum widths

T10

LENGTH [MM]	LENGTH ["]	WIDTH [MM]	WIDTH ["]	NO. TEETH
260	10.24	240	9.45	26
320	12.60	240	9.45	32
340	13.39	240	9.45	34
370	14.57	300	11.81	37
390	15.35	300	11.81	39
400	15.75	300	11.81	40
410	16.14	300	11.81	41
440	17.32	300	11.81	44
450	17.72	300	11.81	45
480	18.90	300	11.81	48
500	19.69	300	11.81	50
530	20.87	300	11.81	53
550	21.65	300	11.81	55
560	22.05	300	11.81	56
600	23.62	300	11.81	60
610	24.02	300	11.81	61
630	24.80	300	11.81	63
650	25.59	300	11.81	65
660	25.98	300	11.81	66
690	27.17	300	11.81	69
700	27.56	300	11.81	70
720	28.35	300	11.81	72
730	28.74	300	11.81	73
750	29.53	300	11.81	75
780	30.71	300	11.81	78
800	31.50	300	11.81	80
810	31.89	300	11.81	81
840	33.07	300	11.81	84
850	33.46	300	11.81	85
880	34.65	300	11.81	88
890	35.04	300	11.81	89
900	35.43	300	11.81	90
910	35.83	300	11.81	91
920	36.22	300	11.81	92
950	37.40	300	11.81	95

LENGTH [MM]	LENGTH ["]	WIDTH [MM]	WIDTH ["]	NO. TEETH
960	37.80	300	11.81	96
970	38.19	300	11.81	97
980	38.58	380	14.96	98
1000	39.37	380	14.96	100
1010	39.76	380	14.96	101
1050	41.34	380	14.96	105
1080	42.52	380	14.96	108
1100	43.31	380	14.96	110
1110	43.70	380	14.96	111
1140	44.88	380	14.96	114
1150	45.28	380	14.96	115
1200	47.24	380	14.96	120
1210	47.64	380	14.96	121
1240	48.82	380	14.96	124
1250	49.21	380	14.96	125
1300	51.18	380	14.96	130
1320	51.97	380	14.96	132
1350	53.15	380	14.96	135
1390	54.72	380	14.96	139
1400	55.12	380	14.96	140
1420	55.91	380	14.96	142
1440	56.69	380	14.96	144
1450	57.09	380	14.96	145
1460	57.48	380	14.96	146
1500	59.06	380	14.96	150
1560	61.42	380	14.96	156
1600	62.99	200	7.87	160
1610	63.39	200	7.87	161
1700	66.93	200	7.87	170
1750	68.90	200	7.87	175
1780	70.08	200	7.87	178
1800	70.87	200	7.87	180
1880	74.02	200	7.87	188
1960	77.17	200	7.87	196
2250	88.58	200	7.87	225

DL T10

LENGTH [MM]	LENGTH ["]	WIDTH [MM]	WIDTH ["]	NO. TEETH
530	20.87	300	11.81	53
630	24.80	300	11.81	63
660	25.98	300	11.81	66
700	27.56	300	11.81	70
720	28.35	300	11.81	72
840	33.07	300	11.81	84
900	35.43	300	11.81	90
920	36.22	300	11.81	
980	38.58	300	11.81	98
1100	43.31	300	11.81	110
1210	47.64	300	11.81	121
1240	48.82	300	11.81	124
1250	49.21	300	11.81	125
1320	51.97	300	11.81	132
1350	53.15	300	11.81	135
1420	55.91	300	11.81	142
1600	62.99	300	11.81	160
1610	63.39	300	11.81	161
1880	74.02	300	11.81	188

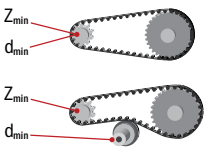
AT5 / PITCH: 5MM

PRODUCT DATA

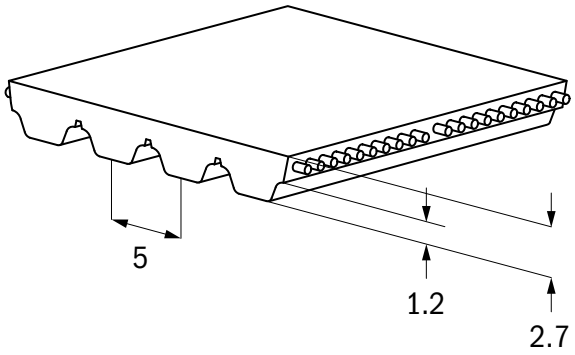
PITCH	5 mm	0.197"
STANDARD THICKNESS	2.7 mm	0.106"
STANDARD POLYURETHANE R3	88°ShoreA	
STANDARD COLOR	Natural	
FDA/EU APPROVAL	No	
CORD	Steel (SL)	
	Optional Aramid (K)	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL		ARAMID	
z min	15 teeth		15 teeth	
d min	24 mm	0.94"	24 mm	0.94"
z min	20 teeth		20 teeth	
d min	60 mm	2.36"	60 mm	2.36"



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	4	6	8	10	12	16	20	25	32	50	75
ALLOWABLE EFFECTIVE FORCE 12 TEETH IN MESH												
	[N]	188	282	376	470	564	752	940	1175	1504	2350	3525
	[lbf]	42	63	85	106	127	169	211	264	338	528	792
BELT WEIGHT												
Steel (SL)	[kg/m]	0.013	0.02	0.027	0.034	0.041	0.054	0.068	0.085	0.109	0.17	0.255
	[lb/ft]	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.11	0.17

See next page for maximum widths

AT5 / PITCH: 5MM

LENGTH [MM]	LENGTH [IN]	WIDTH [MM]	WIDTH [IN]	NUMBER OF TEETH
225	8.86	300	11.81	45
255	10.04	300	11.81	51
275	10.83	300	11.81	55
280	11.02	300	11.81	56
300	11.81	300	11.81	60
330	12.99	300	11.81	66
340	13.39	300	11.81	68
375	14.76	300	11.81	75
390	15.35	300	11.81	78
420	16.54	300	11.81	84
450	17.72	300	11.81	90
455	17.91	300	11.81	91
500	19.69	300	11.81	100
525	20.67	300	11.81	105
545	21.46	300	11.81	109
600	23.62	300	11.81	120
610	24.02	300	11.81	122
630	24.80	300	11.81	126
660	25.98	300	11.81	132
670	26.38	300	11.81	134
710	27.95	300	11.81	142
720	28.35	300	11.81	144
750	29.53	300	11.81	150
780	30.71	300	11.81	156
825	32.48	300	11.81	165
860	33.86	300	11.81	172
975	38.39	300	11.81	195
1050	41.34	300	11.81	210
1125	44.29	300	11.81	225
1500	59.06	300	11.81	300
2000	78.74	300	11.81	400

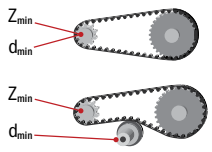
AT10 / PITCH: 10MM

PRODUCT DATA

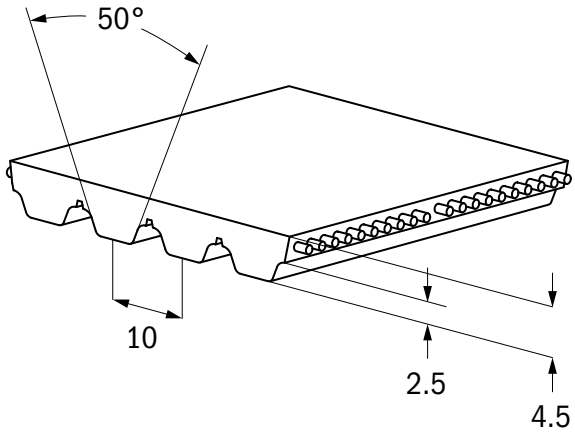
PITCH	10 mm	0.394"
STANDARD THICKNESS	4.5 mm	0.177"
STANDARD POLYURETHANE R3	88°ShoreA	
STANDARD COLOR	Natural	
FDA/EU APPROVAL	No	
CORD	Steel (SL)	
	Optional Aramid (K)	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	



	STEEL		ARAMID	
z min	15 teeth		15 teeth	
d min	48 mm	1.9"	48 mm	1.9"
z min	25 teeth		25 teeth	
d min	120 mm	4.7"	120 mm	4.7"



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	12	16	20	25	32	50	75
ALLOWABLE EFFECTIVE FORCE 12 TEETH IN MESH									
	[N]	1050	1260	1680	2100	2625	3360	5250	7875
	[lbf]	236	283	378	472	590	755	1,180	1,770
BELT WEIGHT									
Steel (SL)	[kg/m]	0.07	0.08	0.10	0.13	0.16	0.21	0.33	0.49
	[lb/ft]	0.04	0.05	0.07	0.09	0.11	0.14	0.22	0.33

See next page for maximum widths

AT10 / PITCH: 10MM

LENGTH [MM]	LENGTH [“]	WIDTH [MM]	WIDTH [“]	NUMBER OF TEETH
370	14.57	300	11.81	37
500	19.69	300	11.81	50
560	22.05	300	11.81	56
580	22.83	300	11.81	58
600	23.62	300	11.81	60
610	24.02	300	11.81	61
630	24.80	300	11.81	63
660	25.98	300	11.81	66
700	27.56	300	11.81	70
730	28.74	300	11.81	73
780	30.71	300	11.81	78
800	31.50	300	11.81	80
810	31.89	300	11.81	81
840	33.07	300	11.81	84
880	34.65	300	11.81	88
890	35.04	300	11.81	89
920	36.22	300	11.81	92
960	37.80	300	11.81	96
980	38.58	300	11.81	98
1000	39.37	300	11.81	100
1010	39.76	300	11.81	101
1050	41.34	300	11.81	105
1080	42.52	300	11.81	108
1100	43.31	300	11.81	110
1150	45.28	300	11.81	115
1190	46.85	300	11.81	119
1200	47.24	300	11.81	120
1210	47.64	300	11.81	121
1220	48.03	300	11.81	122
1230	48.43	300	11.81	123
1240	48.82	300	11.81	124
1250	49.21	300	11.81	125
1280	50.39	300	11.81	128
1300	51.18	300	11.81	130
1320	51.97	300	11.81	132
1350	53.15	300	11.81	135
1360	53.54	300	11.81	136
1400	55.12	300	11.81	140
1420	55.91	300	11.81	142
1480	58.27	300	11.81	148
1500	59.06	300	11.81	150
1600	62.99	300	11.81	160
1630	64.17	300	11.81	163
1700	66.93	300	11.81	170
1720	67.72	300	11.81	172
1800	70.87	300	11.81	180
1860	73.23	300	11.81	186
1940	76.38	300	11.81	194

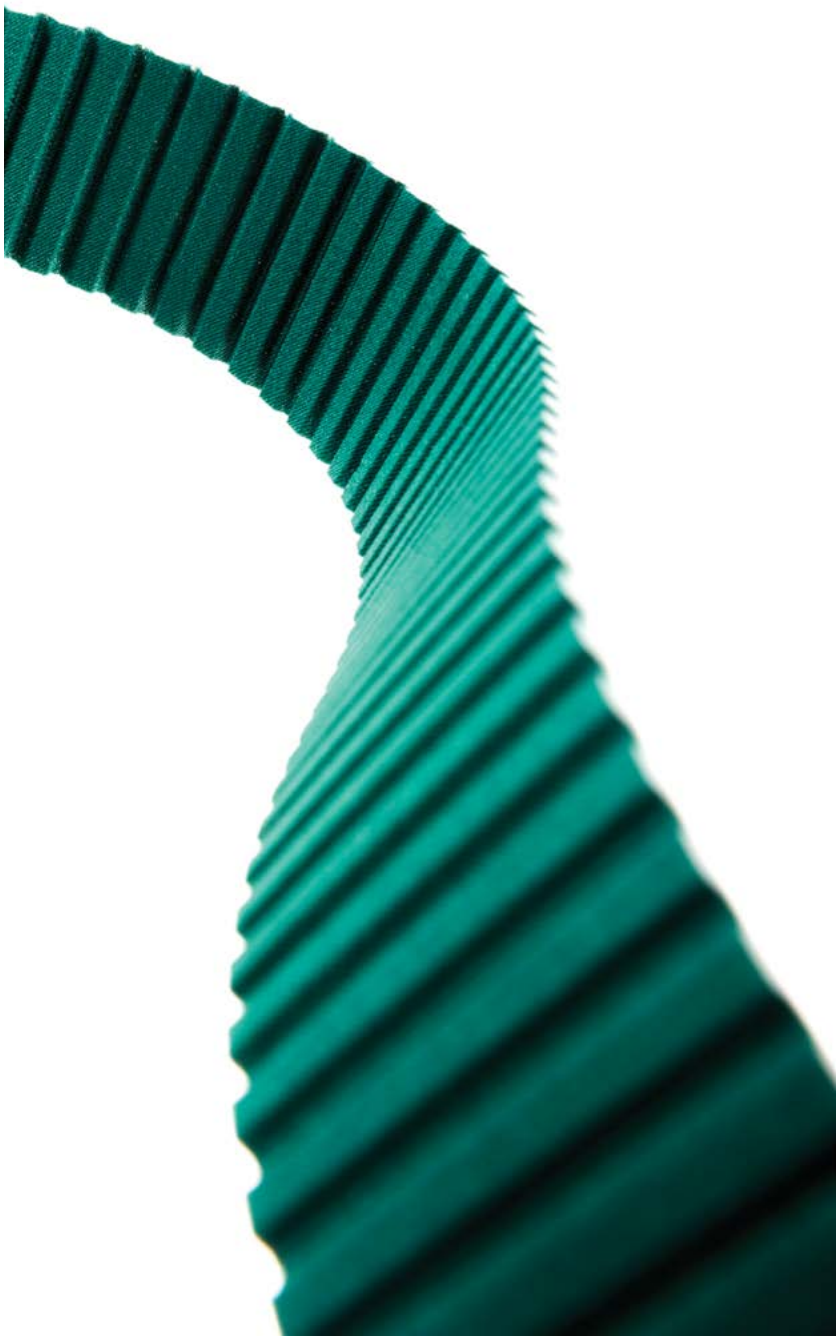
SYNCHRO-POWER FLEX

FLEX BELTS

Gates TPU Synchro-Power Flex Belts are designed for high power transmission drives and heavy load conveying applications.

Our flex belts are available in both standard and low-temperature urethanes to suit a range of application environments. Enhanced with our full range of backing and profile options, we are able to create customized conveying and positioning solutions.

FLEX BELTS ARE TRULY ENDLESS EXTRUDED BELTS PRODUCED WITH HELICALLY WOUND STEEL CORDS AND ABRASION-RESISTANT POLYURETHANE, A CONSTRUCTION THAT PROVIDES LONG LASTING BELT SYSTEM SOLUTIONS FOR EVEN THE MOST DEMANDING INDUSTRIES AND APPLICATIONS.



ATTRIBUTES

- Extruded, thermoplastic polyurethane construction
- High performance and power transmission based on truly endless cords
- Synchronous tracking

APPLICATIONS

- Glass & Ceramics
- Packaging
- Intralogistics
- Wood, Paper & Furniture
- Textile industry
- Machine tools
- Power transmission
- High load conveying applications

PROCESSING OPTIONS

- Backings Further information on page 186
- Profiles Further information on page 194
- Special processing Further information on page 202

Further constructions are available on request.

T5 / PITCH: 5MM

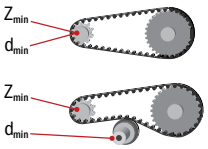
PRODUCT DATA

PITCH	5 mm	0.197"
SLEEVE WIDTH	100 mm	3.94"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.50 mm	0.02"
> 50MM WIDTH	+-0.75 mm	0.03"
LENGTH RANGE	1520 - 12000 mm	59.8 - 472.4"
MIN LENGTH OF BELT WITH NT	1750 mm	68.9"
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT	

MIN PULLEY TOOTH COUNT AND DIAMETER

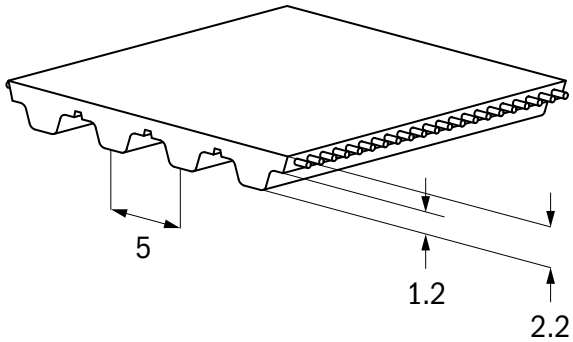
50MM AT TEMPERATURES BELOW -5°C / +23°F

NO BACK BENDING	
BACK BENDING	

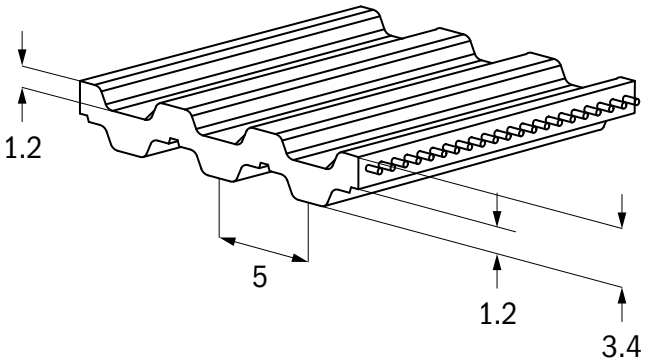


	STEEL	
z min	10 teeth	
d min	16 mm	0.62"
z min	15 teeth	
d min	30 mm	1.18"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23T	90	-30 to +50	-22 to +122	Low Temperature



T5 Tooth Form



T5-DL Tooth Form

For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	16	25	32	50	75	100
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	1,250	2,000	3,375	4,250	6,875	10,375	13,875
	[lbf]	280	450	760	960	1,550	2,330	3,120
ALLOWABLE BELT FORCE								
Steel (SL)	[N]	311	498	840	1,058	1,711	2,582	3,453
	[lbf]	70	112	189	238	385	580	776
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	250	400	625	800	1,250	1,875	2,500
	[lbf]	56	90	141	180	281	422	562
BELT WEIGHT								
Standard	[kg/m]	0.02	0.04	0.06	0.06	0.11	0.17	0.22
	[lb/ft]	0.01	0.02	0.04	0.04	0.07	0.11	0.15
DL	[kg/m]	0.03	0.04	0.07	0.09	0.14	0.21	0.28
	[lb/ft]	0.02	0.03	0.05	0.06	0.09	0.14	0.19
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	77,778	124,444	210,000	264,444	427,778	645,556	863,333
	[lbf]	17,486	27,978	47,212	59,452	96,173	145,134	194,095

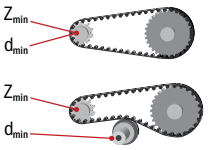
T10 / PITCH: 10MM

PRODUCT DATA

PITCH	10 mm	0.394"
SLEEVE WIDTH		
LENGHTH < 12000 MM	150 mm	5.91"
LENGHTH > 12000 MM	100 mm	3.94"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.50 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
LENGTH RANGE		
T10 STEEL	1,520 - 22,900 mm	59.8 - 901.6"
T10 NIRO	1,520 - 12,000 mm	59.8 - 472.4"
T10 ARAMID	1,600 - 12,000 mm	63 - 472.4"
MIN LENGTH OF BELT WITH NT	1750 mm	68.9"
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT	

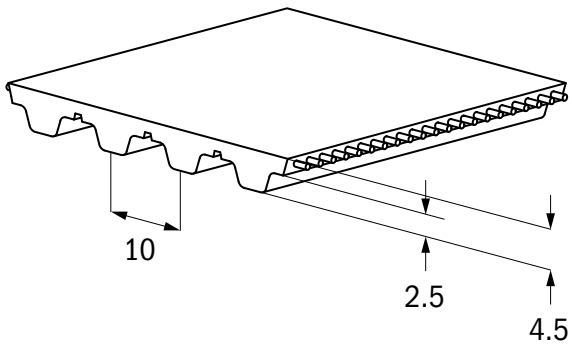
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

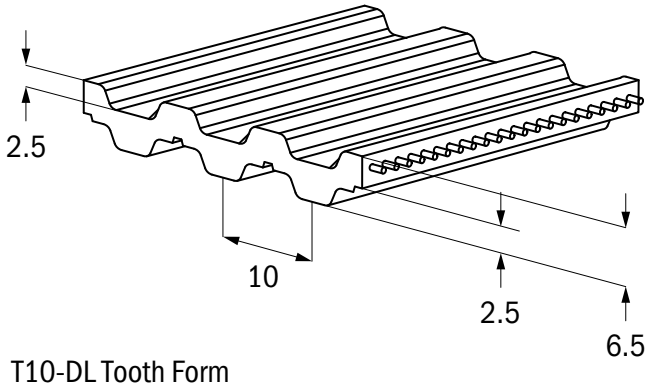


		STEEL / ARAMID		STEEL HF		STAINLESS STEEL		DL STEEL		DL STEEL HF		DL STAINLESS STEEL	
NO BACK BENDING	**z min**	14 teeth		12 teeth		25 teeth		20 teeth		18 teeth		18 teeth	
	d min	45 mm	1.77"	38 mm	1.5"	80 mm	3.15"	64 mm	2.52"	57 mm	2.24"	57 mm	2.24"
BACK BENDING	**z min**	20 teeth		15 teeth		40 teeth		20 teeth		40 teeth		40 teeth	
	d min	60 mm	2.36"	50 mm	1.96"	130 mm	5.12"	64 mm	2.52"	130 mm	5.12"	130 mm	5.12"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23F	90	-5 to +70	+23 to +158	With NIRO Cord Only
R23T	90	-30 to +50	-22 to +122	Low Temperature



T10 Tooth Form



T10-DL Tooth Form

For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	16	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	4,200	7,140	9,240	14,700	22,260	29,820	44,940
	[lbf]	945	1,605	2,075	3,305	5,005	6,705	10,105
Aramid (K)	[N]	5,390	9,163	11,858	18,865	28,567	38,269	57,673
	[lbf]	1,210	2,060	2,665	4,240	6,420	8,605	12,965
Steel HF (HF)	[N]	6,200	10,540	13,640	21,700	32,860	44,020	66,340
	[lbf]	1,395	2,370	3,065	4,880	7,390	9,895	14,915
Stainless Steel (NIRO)	[N]	3,400	5,780	7,480	11,900	18,020	24,140	36,380
	[lbf]	765	1,300	1,680	2,675	4,050	5,425	8,180
ALLOWABLE BELT FORCE								
Steel (SL)	[N]	1,123	1,909	2,470	3,929	5,950	7,971	12,012
	[lbf]	252	429	555	883	1,338	1,792	2,701
Aramid (K)	[N]	704	1,196	1,548	2,463	3,730	4,997	7,531
	[lbf]	158	269	348	554	839	1,123	1,693
Steel HF (HF)	[N]	1,376	2,340	3,028	4,818	7,295	9,773	14,728
	[lbf]	309	526	681	1,083	1,640	2,197	3,311
Stainless Steel (NIRO)	[N]	1,048	1,782	2,306	3,669	5,556	7,442	11,216
	[lbf]	236	401	518	825	1,249	1,673	2,522
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	910	1,423	1,821	2,845	4,268	5,690	8,535
	[lbf]	205	320	409	640	960	1,279	1,919
BELT WEIGHT								
Steel (SL)	[kg/m]	0.07	0.11	0.14	0.22	0.33	0.44	0.66
	[lb/ft]	0.05	0.07	0.09	0.15	0.22	0.30	0.44
Aramid (K)	[kg/m]	0.08	0.12	0.15	0.24	0.35	0.47	0.71
	[lb/ft]	0.05	0.08	0.10	0.16	0.24	0.32	0.47
Steel HF (HF)	[kg/m]	0.06	0.09	0.12	0.18	0.27	0.36	0.54
	[lb/ft]	0.04	0.06	0.08	0.12	0.18	0.24	0.36
Stainless Steel (NIRO)	[kg/m]	0.07	0.11	0.14	0.22	0.34	0.45	0.67
	[lb/ft]	0.05	0.07	0.10	0.15	0.23	0.30	0.45
DL Steel (SL)	[kg/m]	0.08	0.13	0.17	0.27	0.40	0.54	0.81
	[lb/ft]	0.06	0.09	0.12	0.18	0.27	0.36	0.54
DL Aramid (K)	[kg/m]	0.07	0.11	0.15	0.23	0.34	0.46	0.69
	[lb/ft]	0.05	0.07	0.10	0.15	0.23	0.31	0.46
DL Steel HF (HF)	[kg/m]	0.09	0.14	0.18	0.28	0.43	0.57	0.85
	[lb/ft]	0.06	0.09	0.12	0.19	0.29	0.38	0.57
DL Stainless Steel (NIRO)	[kg/m]	0.08	0.13	0.17	0.27	0.40	0.54	0.81
	[lb/ft]	0.06	0.09	0.11	0.18	0.27	0.36	0.54
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	280,662	477,125	617,456	982,316	1,487,507	1,992,699	3,003,081
	[lbf]	63,098	107,267	138,817	220,844	334,422	447,999	675,153
Aramid (K)	[N]	175,946	299,109	387,082	615,813	932,516	1,249,220	1,882,627
	[lbf]	39,556	67,246	87,024	138,447	209,648	280,850	423,252
Steel HF (HF)	[N]	344,118	585,000	757,059	1,204,412	1,823,824	2,443,235	3,682,059
	[lbf]	77,365	131,520	170,202	270,776	410,032	549,288	827,801
Stainless Steel (NIRO)	[N]	262,059	445,500	576,529	917,206	1,388,912	1,860,618	2,804,029
	[lbf]	58,916	100,157	129,615	206,206	312,255	418,304	630,402

T20 / PITCH: 20MM

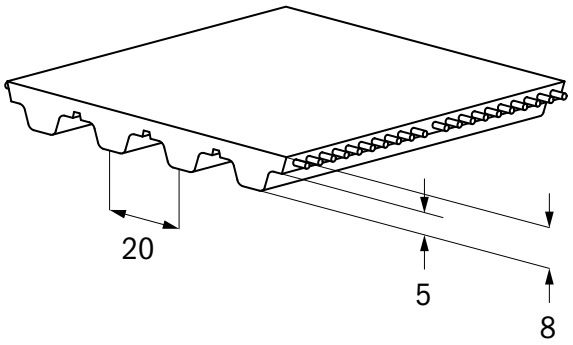
PRODUCT DATA

PITCH	20 mm	0.787"
SLEEVE WIDTH		
LENGHTH < 12000 MM	150 mm	5.91"
LENGHTH > 12000 MM	100 mm	3.94"
WIDTH TOLERANCE	+-1.0 mm	0.039"
LENGTH RANGE	1520 - 22900 mm	59.8 - 901.6"
MIN LENGTH OF BELT WITH NT	1760 mm	69.3"
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT	

MIN PULLEY TOOTH COUNT AND DIAMETER

		STEEL		STEEL HF		STAINLESS STEEL	
NO BACK BENDING	**z min**	15 teeth		12 teeth		20 teeth	
	d min	95 mm	3.76"	76 mm	3.01"	127 mm	5.00"
BACK BENDING	**z min**	25 teeth		22 teeth		30 teeth	
	d min	120 mm	4.72"	100 mm	3.94"	160 mm	6.30"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23F	90	-5 to +70	+23 to +158	With NIRO Cord Only
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	16,150	20,900	33,250	50,350	67,450	101,650
	[lbf]	3,630	4,700	7,475	11,320	15,165	22,855
Steel HF (HF)	[N]	14,705	19,030	30,275	45,845	61,415	92,555
	[lbf]	3,305	4,280	6,805	10,305	13,805	20,810
Stainless Steel (NIRO)	[N]	12,113	15,675	24,938	37,763	50,588	76,238
	[lbf]	2,725	3,524	5,606	8,490	11,373	17,140
ALLOWABLE BELT FORCE							
Steel (SL)	[N]	3,662	4,739	7,539	11,416	15,293	23,047
	[lbf]	823	1,065	1,695	2,567	3,438	5,181
Steel HF (HF)	[N]	3,383	4,378	6,964	10,546	14,128	21,291
	[lbf]	761	984	1,566	2,371	3,176	4,787
Stainless Steel (NIRO)	[N]	3,156	4,085	6,499	9,841	13,183	19,867
	[lbf]	710	918	1,461	2,212	2,964	4,467
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	3,075	3,936	6,150	9,225	12,300	18,450
	[lbf]	691	885	1,383	2,074	2,765	4,148
BELT WEIGHT							
Steel (SL)	[kg/m]	0.19	0.24	0.38	0.56	0.75	1.13
	[lb/ft]	0.13	0.16	0.25	0.38	0.50	0.76
Steel HF (HF)	[kg/m]	0.18	0.23	0.36	0.54	0.72	1.08
	[lb/ft]	0.12	0.15	0.24	0.36	0.48	0.73
Stainless Steel (NIRO)	[kg/m]	0.19	0.24	0.37	0.56	0.74	1.11
	[lb/ft]	0.12	0.16	0.25	0.37	0.50	0.75
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	915,411	1,184,650	1,884,670	2,853,930	3,823,189	5,761,707
	[lbf]	205,800	266,330	423,710	641,620	859,530	1,295,350
Steel HF (HF)	[N]	845,673	1,094,400	1,741,091	2,636,509	3,531,927	5,322,764
	[lbf]	190,120	246,040	391,430	592,740	794,050	1,196,660
Stainless Steel (NIRO)	[N]	789,118	1,021,211	1,624,654	2,460,191	3,295,727	4,966,800
	[lbf]	177,410	229,589	365,255	553,100	740,946	1,116,637

AT5 / PITCH: 5MM

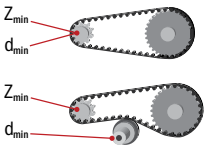
PRODUCT DATA

PITCH	5 mm	0.197"
SLEEVE WIDTH	100 mm	3.94"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.50 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
LENGTH RANGE	1520-15000mm	59.8 - 590.6"
MIN LENGTH OF BELT WITH NT	1750 mm	68.9"
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT	

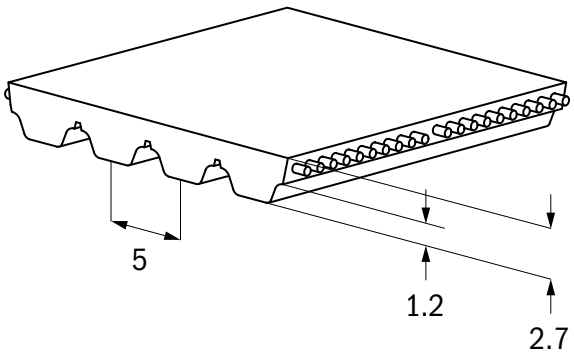
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

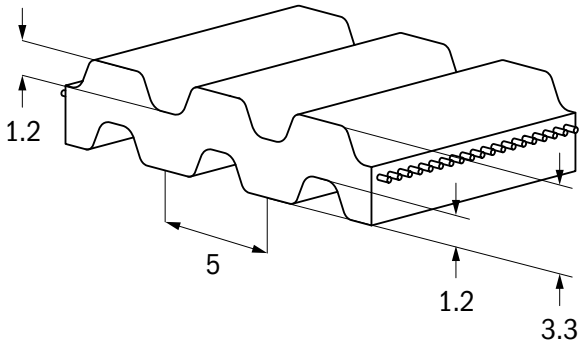
		STEEL		STEEL HF	
NO BACK BENDING	**z min**	15 teeth		12 teeth	
	d min	24 mm	0.94"	19 mm	0.75"
BACK BENDING	**z min**	20 teeth		18 teeth	
	d min	60 mm	2.36"	50 mm	1.97"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23T	90	-30 to +50	-22 to +122	Low Temperature



AT5 Tooth Form



AT5-DL Tooth Form

For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	16	25	32	50	75	100
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	2,565	4,275	7,125	9,120	14,535	21,945	29,355
	[lbf]	575	960	1,600	2,050	3,270	4,935	6,600
Steel HF (HF)	[N]	2,640	4,400	7,480	9,680	15,400	23,320	31,240
	[lbf]	595	990	1,680	2,175	3,460	5,245	7,025
ALLOWABLE BELT FORCE								
Steel (SL)	[N]	634	1,056	1,761	2,253	3,591	5,422	7,253
	[lbf]	143	237	396	507	807	1,219	1,631
Steel HF (HF)	[N]	384	640	1,087	1,407	2,238	3,389	4,540
	[lbf]	86	144	244	316	503	762	1,021
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	480	768	1,200	1,536	2,400	3,600	4,800
	[lbf]	108	173	270	345	540	809	1,079
BELT WEIGHT								
Steel (SL)	[kg/m]	0.03	0.05	0.08	0.11	0.17	0.25	0.33
	[lb/ft]	0.02	0.04	0.06	0.07	0.11	0.17	0.22
Steel HF (HF)	[kg/m]	0.03	0.05	0.08	0.11	0.17	0.25	0.33
	[lb/ft]	0.02	0.04	0.06	0.07	0.11	0.17	0.22
DL Steel (SL)	[kg/m]	0.04	0.06	0.09	0.12	0.19	0.28	0.37
	[lb/ft]	0.02	0.04	0.06	0.08	0.12	0.19	0.25
DL Steel HF (HF)	[kg/m]	0.04	0.06	0.09	0.12	0.19	0.28	0.37
	[lb/ft]	0.02	0.04	0.06	0.08	0.12	0.19	0.25
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	158,445	264,075	440,125	563,360	897,855	1,355,585	1,813,315
	[lbf]	35,622	59,369	98,949	126,655	201,856	304,763	407,670
Steel HF (HF)	[N]	95,925	159,875	271,788	351,725	559,563	847,338	1,135,113
	[lbf]	21,566	35,943	61,103	79,075	125,801	190,499	255,196

ATL5 / PITCH: 5MM

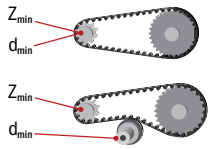
PRODUCT DATA

PITCH	5 mm	0.197"
SLEEVE WIDTH	100 mm	3.94"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.50 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
LENGTH RANGE	1520-12000mm	59.8 - 472.4"
MIN LENGTH OF BELT WITH NT	1750 mm	68.9"
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT	

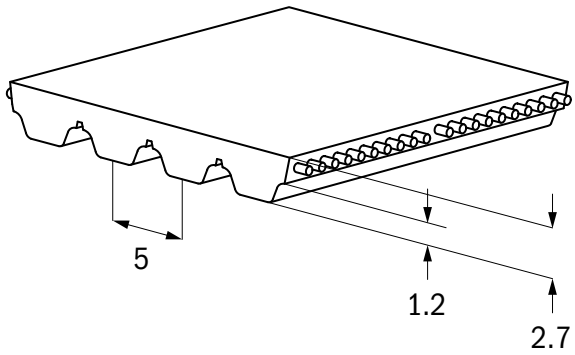
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL	
NO BACK BENDING	**z min**	15 teeth	
	d min	24 mm	0.94"
BACK BENDING	**z min**	20 teeth	
	d min	60 mm	2.36"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	10	16	25	32	50	75	100
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	3,720	6,200	10,540	13,640	21,700	32,860	44,020
	[lbf]	835	1,395	2,370	3,065	4,880	7,390	9,895
ALLOWABLE BELT FORCE								
Steel (SL)	[N]	774	1,290	2,193	2,838	4,515	6,837	9,159
	[lbf]	174	290	493	638	1,015	1,537	2,059
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	480	768	1,200	1,536	2,400	3,600	4,800
	[lbf]	108	173	270	345	540	809	1,079
BELT WEIGHT								
Steel (SL)	[kg/m]	0.04	0.07	0.11	0.14	0.22	0.33	0.44
	[lb/ft]	0.03	0.05	0.07	0.09	0.15	0.22	0.29
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	193,500	322,500	548,250	709,500	1,128,750	1,709,250	2,289,750
	[lbf]	43,503	72,504	123,258	159,510	253,766	384,274	514,782

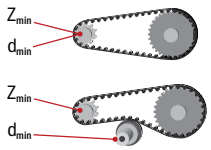
AT10 / PITCH: 10MM

PRODUCT DATA

PITCH	10 mm	0.394"
SLEEVE WIDTH		
LENGTH < 12000MM	150 mm	5.91"
LENGTH > 12000MM	100 mm	3.94"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.75 mm	0.030"
> 50MM WIDTH	+-1.0 mm	0.039"
LENGTH RANGE	1520 - 22900 mm	59.8 - 901.6"
MIN LENGTH OF BELT WITH NT	1750 mm	68.9"
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT	

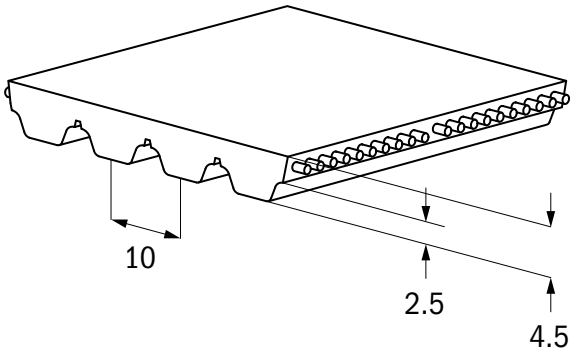
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

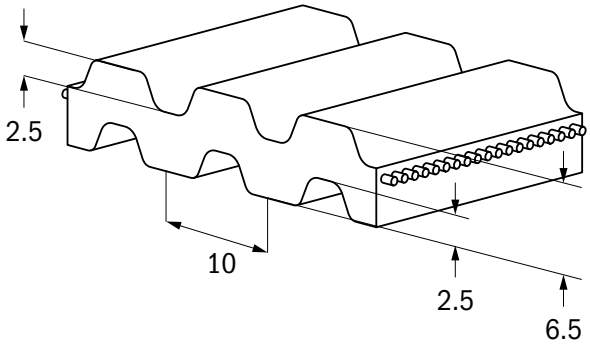


		STEEL		STEEL HF		STAINLESS STEEL	
NO BACK BENDING	**z min**	15 teeth		12 teeth		25 teeth	
	d min	48 mm	1.89"	38 mm	1.5"	80 mm	3.15"
BACK BENDING	**z min**	25 teeth		20 teeth		40 teeth	
	d min	120 mm	4.72"	100 mm	3.94"	150 mm	4.72"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23F	90	-5 to +70	+23 to +158	With NIRO Cord Only
R23T	90	-30 to +50	-22 to +122	Low Temperature



AT10 Tooth Form



AT10-DL Tooth Form

For how to order, please refer to pages 8 & 9

TECHNICAL DATA

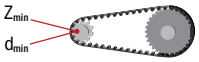
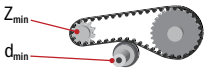
STANDARD WIDTH [MM]	UNIT	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	16,150	20,900	33,250	50,350	67,450	101,650
	[lbf]	3,631	4,699	7,475	11,320	15,164	22,853
Steel HF (HF)	[N]	14,705	19,030	30,275	45,845	61,415	92,555
	[lbf]	3,305	4,280	6,805	10,305	13,805	20,810
Stainless Steel (NIRO)	[N]	12,113	15,675	24,938	37,763	50,588	76,238
	[lbf]	2,725	3,525	5,605	8,490	11,375	17,140
ALLOWABLE BELT FORCE							
Steel (SL)	[N]	4,209	5,446	8,665	13,121	17,577	26,490
	[lbf]	946	1,224	1,948	2,950	3,952	5,955
Steel HF (HF)	[N]	3,888	5,032	8,005	12,121	16,238	24,472
	[lbf]	874	1,131	1,800	2,725	3,651	5,502
Stainless Steel (NIRO)	[N]	3,156	4,085	6,499	9,841	13,183	19,867
	[lbf]	710	918	1,461	2,212	2,964	4,467
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	2,580	3,302	5,160	7,740	10,320	15,480
	[lbf]	580	742	1,160	1,740	2,320	3,480
BELT WEIGHT							
Steel (SL)	[kg/m]	0.14	0.18	0.29	0.43	0.57	0.86
	[lb/ft]	0.10	0.12	0.19	0.29	0.38	0.57
Steel HF (HF)	[kg/m]	0.14	0.18	0.28	0.41	0.55	0.83
	[lb/ft]	0.09	0.12	0.18	0.28	0.37	0.55
Stainless Steel (NIRO)	[kg/m]	0.14	0.18	0.29	0.43	0.57	0.86
	[lb/ft]	0.10	0.12	0.19	0.29	0.38	0.57
DL Steel (SL)	[kg/m]	0.19	0.24	0.37	0.56	0.75	1.13
	[lb/ft]	0.13	0.16	0.25	0.38	0.51	0.76
DL Steel HF (HF)	[kg/m]	0.18	0.23	0.36	0.54	0.72	1.09
	[lb/ft]	0.12	0.15	0.24	0.36	0.49	0.73
DL Stainless Steel (NIRO)	[kg/m]	0.19	0.24	0.37	0.56	0.75	1.12
	[lb/ft]	0.12	0.16	0.25	0.38	0.50	0.75
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	1,052,156	1,361,614	2,166,204	3,280,252	4,394,300	6,622,395
	[lbf]	236,546	306,118	487,006	737,467	987,927	1,488,848
Steel HF (HF)	[N]	972,000	1,257,882	2,001,176	3,030,352	4,059,529	6,117,882
	[lbf]	218,525	282,797	449,905	681,284	912,664	1,375,423
Stainless Steel (NIRO)	[N]	789,118	1,021,211	1,624,654	2,460,191	3,295,727	4,966,800
	[lbf]	177,410	229,589	365,255	553,100	740,946	1,116,637

ATL10 / PITCH: 10MM

PRODUCT DATA

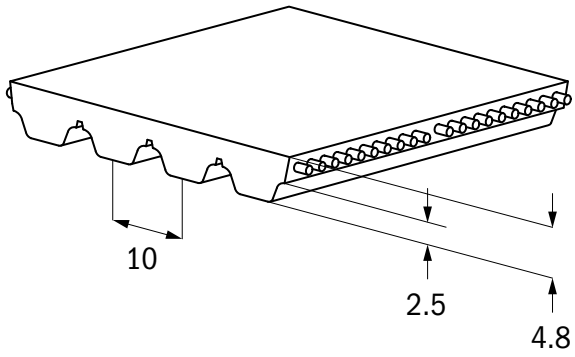
PITCH	10 mm	0.394"
SLEEVE WIDTH		
LENGTH < 12000MM	150 mm	5.906"
LENGTH > 12000MM	100 mm	3.937"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-1.0 mm	0.039"
> 50MM WIDTH	+-1.5 mm	0.059"
LENGTH RANGE	1520 - 22900 mm	59.8 - 901.6"
MIN LENGTH OF BELT WITH NT	1750 mm	68.9"
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL		STAINLESS STEEL	
z min	25 teeth		32 teeth	
d min	80 mm	3.15"	100 mm	3.94"
z min	30 teeth		40 teeth	
d min	150 mm	5.91"	160 mm	6.30"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23F	90	-5 to +70	+23 to +158	With NIRO Cord Only
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	19,030	24,220	39,790	60,550	81,310	122,830
	[lbf]	4,280	5,445	8,945	13,615	18,280	27,615
Stainless Steel (NIRO)	[N]	16,170	20,580	33,810	51,450	69,090	104,370
	[lbf]	3,635	4,625	7,600	11,565	15,535	23,465
ALLOWABLE BELT FORCE							
Steel (SL)	[N]	4,604	5,860	9,627	14,650	19,673	29,719
	[lbf]	1,035	1,317	2,164	3,294	4,423	6,681
Stainless Steel (NIRO)	[N]	3,525	4,486	7,370	11,215	15,061	22,751
	[lbf]	792	1,009	1,657	2,521	3,386	5,115
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	2,580	3,302	5,160	7,740	10,320	15,480
	[lbf]	580	742	1,160	1,740	2,320	3,480
BELT WEIGHT							
Steel (SL)	[kg/m]	0.17	0.21	0.34	0.50	0.67	1.01
	[lb/ft]	0.11	0.14	0.23	0.34	0.45	0.68
Stainless Steel (NIRO)	[kg/m]	0.17	0.21	0.34	0.50	0.67	1.01
	[lb/ft]	0.11	0.14	0.23	0.34	0.45	0.68
DL Steel (SL)	[kg/m]	0.21	0.19	0.30	0.45	0.61	0.87
	[lb/ft]	0.14	0.13	0.20	0.31	0.41	0.58
DL Stainless Steel (NIRO)	[kg/m]	0.21	0.19	0.30	0.45	0.61	0.87
	[lb/ft]	0.14	0.13	0.20	0.31	0.41	0.58
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	1,151,071	1,465,000	2,406,786	3,662,500	4,918,214	7,429,643
	[lbf]	258,784	329,362	541,094	823,404	1,105,714	1,670,333
Stainless Steel (NIRO)	[N]	881,203	1,121,531	1,842,515	2,803,828	3,765,140	5,687,765
	[lbf]	198,112	252,143	414,234	630,357	846,479	1,278,724

AT20 / PITCH: 20MM

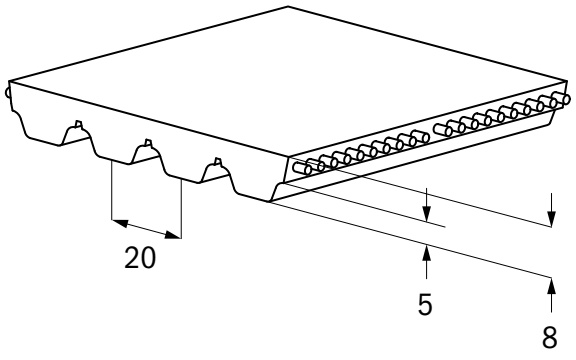
PRODUCT DATA

PITCH	20 mm	0.787"
SLEEVE WIDTH		
LENGTH < 12000MM	150 mm	5.906"
LENGTH > 12000MM	100 mm	3.937"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-1.0 mm	0.039"
> 50MM WIDTH	+-1.5 mm	0.059"
LENGTH RANGE	1520 - 22900 mm	59.8 - 901.6"
MIN LENGTH OF BELT WITH NT	1760 mm	69.3"
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT	

MIN PULLEY TOOTH COUNT AND DIAMETER

		STEEL		STAINLESS STEEL	
NO BACK BENDING	**z min**	18 teeth		22 teeth	
	d min	115 mm	4.53"	140 mm	5.51"
BACK BENDING	**z min**	25 teeth		30 teeth	
	d min	180 mm	7.09"	200 mm	7.87"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23F	90	-5 to +70	+23 to +158	With NIRO Cord Only
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

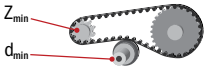
STANDARD WIDTH [MM]	UNIT	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE						
Steel (SL)	[N]	24,220	39,790	60,550	81,310	122,830
	[lbf]	5,445	5,445	13,615	18,280	27,615
Stainless Steel (NIRO)	[N]	20,580	33,810	51,450	69,090	104,370
	[lbf]	4,625	7,600	11,565	15,535	23,465
ALLOWABLE BELT FORCE						
Steel (SL)	[N]	5,860	9,627	14,650	19,673	29,719
	[lbf]	1,317	2,164	3,294	4,423	6,681
Stainless Steel (NIRO)	[N]	4,486	7,370	11,215	15,061	22,751
	[lbf]	1,009	1,657	2,521	3,386	5,115
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	[N]	6,976	10,900	16,350	21,800	32,700
	[lbf]	1,568	2,451	3,676	4,901	7,352
BELT WEIGHT						
Steel (SL)	[kg/m]	0.31	0.49	0.73	0.97	1.46
	[lb/ft]	0.21	0.33	0.49	0.65	0.98
Stainless Steel (NIRO)	[kg/m]	0.30	0.47	0.71	0.94	1.42
	[lb/ft]	0.20	0.32	0.48	0.63	0.95
SPECIFIC BELT STIFFNESS						
Steel (SL)	[N]	1,465,000	2,406,786	3,662,500	4,918,214	7,429,643
	[lbf]	329,362	541,094	823,404	1,105,714	1,670,333
Stainless Steel (NIRO)	[N]	1,121,531	1,842,515	2,803,828	3,765,140	5,687,765
	[lbf]	252,143	414,234	630,357	846,479	1,278,724

ATL20 / PITCH: 20MM

PRODUCT DATA

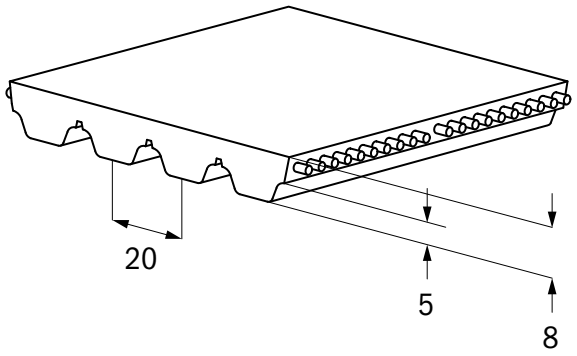
PITCH	20 mm	0.787"
SLEEVE WIDTH		
LENGTH < 12000MM	150 mm	5.91"
LENGTH > 12000MM	100 mm	3.94"
WIDTH TOLERANCE	+-2.0 mm	0.079"
LENGTH RANGE	1520 - 22900 mm	59.84 - 901.6"
MIN LENGTH OF BELT WITH NT	1760 mm	69.3"
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT	

MIN PULLEY TOOTH COUNT AND DIAMETER

NO BACK BENDING	
BACK BENDING	

	STEEL		STAINLESS STEEL	
z min	25 teeth		26 teeth	
d min	159 mm	6.27"	166 mm	6.52"
z min	30 teeth		32 teeth	
d min	250 mm	9.84"	260 mm	10.24"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23F	90	-5 to +70	+23 to +158	With NIRO Cord Only
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	32	50	75	100	150
BREAKING FORCE / AVERAGE VALUE						
Steel (SL)	[N]	35,200	57,600	86,400	118,400	179,200
	[lbf]	7,910	12,950	19,420	26,620	40,290
Stainless Steel (NIRO)	[N]	24,750	40,500	60,750	83,250	126,000
	[lbf]	5,560	9,110	13,660	18,720	28,330
ALLOWABLE BELT FORCE						
Steel (SL)	[N]	9,106	14,901	22,351	30,629	46,357
	[lbf]	2,047	3,350	5,025	6,886	10,422
Stainless Steel (NIRO)	[N]	6,110	9,999	14,998	20,553	31,107
	[lbf]	1,374	2,248	3,372	4,621	6,993
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH						
	[N]	6,976	10,900	16,350	21,800	32,700
	[lbf]	1,568	2,451	3,676	4,901	7,352
BELT WEIGHT						
Steel (SL)	[kg/m]	0.35	0.54	0.81	1.08	1.62
	[lb/ft]	0.23	0.36	0.54	0.73	1.09
Stainless Steel (NIRO)	[kg/m]	0.34	0.53	0.80	1.06	1.59
	[lb/ft]	0.23	0.36	0.53	0.71	1.07
SPECIFIC BELT STIFFNESS						
Steel (SL)	[N]	2,276,477	3,725,144	5,587,716	7,657,241	11,589,337
	[lbf]	511,798	837,487	1,256,231	1,721,502	2,605,516
Stainless Steel (NIRO)	[N]	1,527,600	2,499,709	3,749,564	5,138,291	7,776,873
	[lbf]	343,435	561,985	842,978	1,155,191	1,748,398

HTD5 / PITCH: 5MM

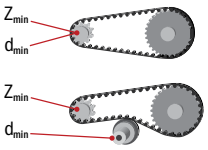
PRODUCT DATA

PITCH	5 mm	0.197"
SLEEVE WIDTH	100 mm	3.937"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.50 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
LENGTH RANGE	1520-15000mm	59.8 - 590.6"
MIN LENGTH OF BELT WITH NT	1750 mm	68.9"
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT	

MIN PULLEY TOOTH COUNT AND DIAMETER

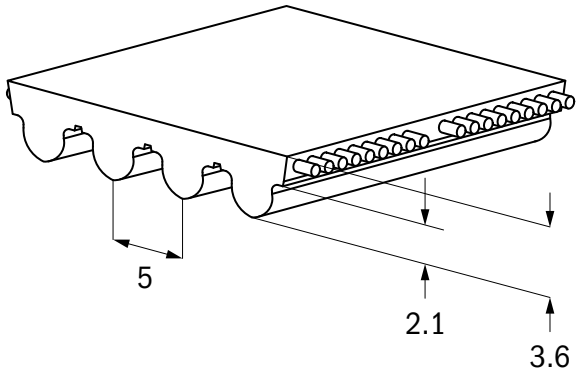
50MM AT TEMPERATURES BELOW -5°C / +23°F

NO BACK BENDING	
BACK BENDING	



	STEEL	
z min	16 teeth	
d min	25 mm	0.98"
z min	20 teeth	
d min	80 mm	3.15"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	50	75	100
		Breaking Force	**Average Value**		
Steel (SL)	[N]	7,125	14,535	21,945	29,355
	[lbf]	1,600	3,270	4,930	6,600
		Allowable Belt Force			
Steel (SL)	[N]	1,761	3,591	5,422	7,253
	[lbf]	396	807	1,219	1,631
		Allowable Effective Force	**Minimum 12 Teeth in mesh**		
	[N]	1,125	2,250	3,375	4,500
	[lbf]	253	506	759	1,012
		Belt Weight			
Steel (SL)	[kg/m]	0.11	0.22	0.33	0.44
	[lb/ft]	0.07	0.15	0.22	0.30
		Specific Belt Stiffness			
Steel (SL)	[N]	440,125	897,855	1,355,585	1,813,315
	[lbf]	98,949	201,856	304,763	407,670

HTDL5 / PITCH: 5MM

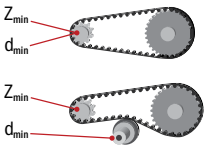
PRODUCT DATA

PITCH	5 mm	0.197"
SLEEVE WIDTH	100 mm	3.937"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.50 mm	0.020"
> 50MM WIDTH	+-0.75 mm	0.030"
LENGTH RANGE	1520-12000mm	59.8 - 472.44"
MIN LENGTH OF BELT WITH NT	1750 mm	68.9"
STANDARD COLOR	White	
FDA/EU APPROVAL	No	
POLYAMIDE FABRIC	Optional NT	

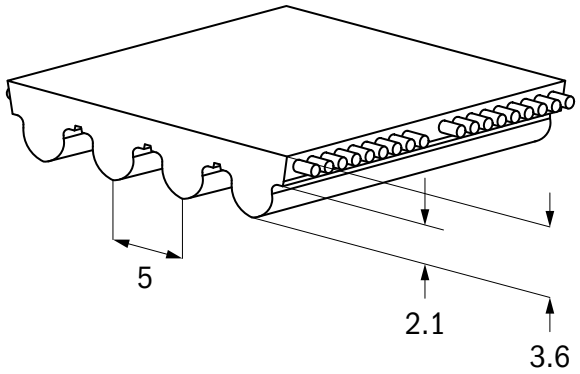
MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL	
NO BACK BENDING	**z min**	15 teeth	
	d min	24 mm	0.94"
BACK BENDING	**z min**	20 teeth	
	d min	60 mm	2.36"



POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	50	75	100
BREAKING FORCE / AVERAGE VALUE					
Steel (SL)	[N]	10,540	21,700	32,860	44,020
	[lbf]	2,370	4,880	7,390	9,900
ALLOWABLE BELT FORCE					
Steel (SL)	[N]	2,340	4,818	7,295	9,773
	[lbf]	526	1,083	1,640	2,197
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH					
	[N]	1,125	2,250	3,375	4,500
	[lbf]	253	506	759	1,012
BELT WEIGHT					
Steel (SL)	[kg/m]	0.12	0.25	0.37	0.49
	[lb/ft]	0.08	0.16	0.25	0.33
SPECIFIC BELT STIFFNESS					
Steel (SL)	[N]	585,000	1,204,412	1,823,824	2,443,235
	[lbf]	131,520	270,776	410,032	549,288

HTD8 / PITCH: 8MM

PRODUCT DATA

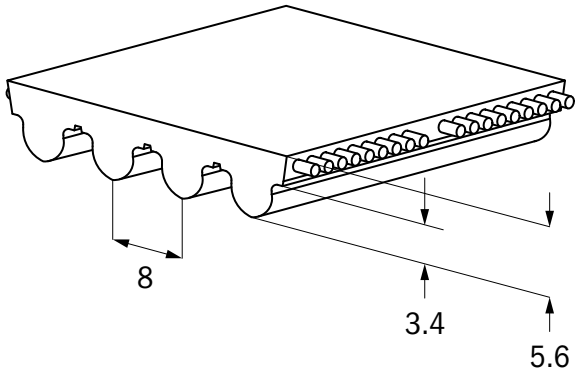
PITCH	8 mm	0.315"
SLEEVE WIDTH		
LENGTH < 12000MM	150 mm	5.91"
LENGTH > 12000MM	100 mm	3.94"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-0.75 mm	0.030"
> 50MM WIDTH	+-1.0 mm	0.039"
LENGTH RANGE	1520-22800mm	59.8 - 897.6"
MIN LENGTH OF BELT WITH NT	1752 mm	68.98"
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT	

MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL		STEEL HF		STAINLESS STEEL	
NO BACK BENDING	**z min**	18 teeth		16 teeth		25 teeth	
	d min	46 mm	1.80"	41 mm	1.60"	64 mm	2.51"
BACK BENDING	**z min**	20 teeth		18 teeth		30 teeth	
	d min	120 mm	4.72"	100 mm	3.94"	150 mm	5.91"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23F	90	-5 to +70	+23 to +158	With NIRO Cord Only
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	20	25	30	50	85	100	150
BREAKING FORCE / AVERAGE VALUE								
Steel (SL)	[N]	12,350	16,150	19,000	33,250	57,000	67,450	101,650
	[lbf]	2,775	3,630	4,270	7,475	12,815	15,165	22,855
Steel HF (HF)	[N]	11,245	14,705	17,300	30,275	51,900	61,415	92,555
	[lbf]	2,530	3,305	3,890	6,805	11,670	13,805	20,810
Stainless Steel (NIRO)	[N]	9,263	12,113	14,250	24,938	42,750	50,588	76,238
	[lbf]	2,085	2,725	3,205	5,605	9,610	11,375	17,140
ALLOWABLE BELT FORCE								
Steel (SL)	[N]	3,218	4,209	4,951	8,665	14,854	17,577	26,490
	[lbf]	723	946	1,113	1,948	3,339	3,952	5,955
Steel HF (HF)	[N]	2,379	3,110	3,659	6,404	10,978	12,990	19,577
	[lbf]	535	699	823	1,440	2,468	2,920	4,401
Stainless Steel (NIRO)	[N]	2,414	3,156	3,713	6,499	11,140	13,183	19,867
	[lbf]	543	710	835	1,461	2,504	2,964	4,467
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH								
	[N]	1,860	2,325	2,790	4,650	7,905	9,300	13,950
	[lbf]	420	525	625	1,045	1,775	2,090	3,135
BELT WEIGHT								
Steel (SL)	[kg/m]	0.14	0.17	0.21	0.35	0.59	0.69	1.04
	[lb/ft]	0.09	0.12	0.14	0.23	0.39	0.46	0.70
Steel HF (HF)	[kg/m]	0.13	0.17	0.20	0.33	0.56	0.66	0.99
	[lb/ft]	0.09	0.11	0.13	0.22	0.38	0.44	0.67
Stainless Steel (NIRO)	[kg/m]	0.14	0.17	0.20	0.34	0.58	0.68	1.02
	[lb/ft]	0.09	0.11	0.14	0.23	0.39	0.46	0.69
SPECIFIC BELT STIFFNESS								
Steel (SL)	[N]	804,590	1,052,156	1,237,831	2,166,204	3,713,493	4,394,300	6,622,395
	[lbf]	180,890	236,545	278,290	487,005	834,870	987,925	1,488,850
Steel HF (HF)	[N]	594,635	777,600	914,824	1,600,941	2,744,471	3,247,624	4,894,306
	[lbf]	133,685	174,820	205,670	359,925	617,010	730,130	1,100,340
Stainless Steel (NIRO)	[N]	603,443	789,117	928,373	1,624,653	2,785,119	3,295,725	4,966,796
	[lbf]	135,666	177,409	208,717	365,255	626,151	740,945	1,116,636

HTD14 / PITCH: 14MM

PRODUCT DATA

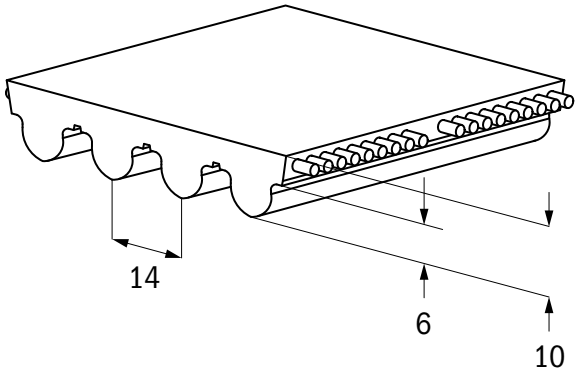
PITCH	14 mm	0.551"
SLEEVE WIDTH		
LENGTH < 12000MM	170 mm	6.693"
LENGTH > 12000MM	100 mm	3.937"
WIDTH TOLERANCE		
≤ 50MM WIDTH	+-1.0 mm	0.039"
> 50MM WIDTH	+-1.5 mm	0.059"
> 100MM WIDTH	+-2.0 mm	0.079"
LENGTH RANGE	1520-22700 mm	59.8 - 893.7"
MIN LENGTH OF BELT WITH NT	1750 mm	68.9"
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT	

MIN PULLEY TOOTH COUNT AND DIAMETER

50MM AT TEMPERATURES BELOW -5°C / +23°F

		STEEL		STAINLESS STEEL	
NO BACK BENDING	**z min**	28 teeth		32 teeth	
	d min	125 mm	4.92"	142 mm	5.59"
BACK BENDING	**z min**	36 teeth		44 teeth	
	d min	180 mm	7.09"	196 mm	7.72"

POLYURETHANE	HARDNESS [°SHORE A]	TEMPERATURE RANGE [°C]	TEMPERATURE RANGE [°F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23F	90	-5 to +70	+23 to +158	FDA (NIRO only)
R23T	90	-30 to +50	-22 to +122	Low Temperature



For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH [MM]	UNIT	25	40	55	85	115	170
BREAKING FORCE / AVERAGE VALUE							
Steel (SL)	[N]	19,030	31,140	43,250	67,470	93,420	138,400
	[lbf]	4,280	7,000	9,725	15,170	21,005	31,115
Stainless Steel (NIRO)	[N]	16,170	26,460	36,750	57,330	79,380	117,600
	[lbf]	3.635	5,949	8,262	12,889	17,846	26,439
ALLOWABLE BELT FORCE							
Steel (SL)	[N]	4,726	7,734	10,742	16,757	23,202	34,373
	[lbf]	1,063	1,739	2,415	3,767	5,216	7,728
Stainless Steel (NIRO)	[N]	3,525	5,768	8,011	12,497	17,304	25,635
	[lbf]	792	1,297	1,801	2,810	3,890	5,763
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH							
	[N]	4,313	6,900	9,488	14,663	19,838	29,325
	[lbf]	970	1,551	2,133	3,297	4,460	6,593
BELT WEIGHT							
Steel (SL)	[kg/m]	0.27	0.43	0.59	0.92	1.24	1.84
	[lb/ft]	0.18	0.29	0.40	0.62	0.83	1.23
Stainless Steel (NIRO)	[kg/m]	0.28	0.44	0.61	0.94	1.28	1.89
	[lb/ft]	0.19	0.30	0.41	0.63	0.86	1.27
SPECIFIC BELT STIFFNESS							
Steel (SL)	[N]	1,181,583	1,933,500	2,685,417	4,189,250	5,800,500	8,593,333
	[lbf]	265,644	434,690	603,736	941,828	1,304,069	1,931,954
Stainless Steel (NIRO)	[N]	881,203	1,441,969	2,002,734	3,124,265	4,325,906	6,408,749
	[lbf]	230,275	376,814	523,353	816,431	1,130,443	1,674,730

H / PITCH: 0.50”

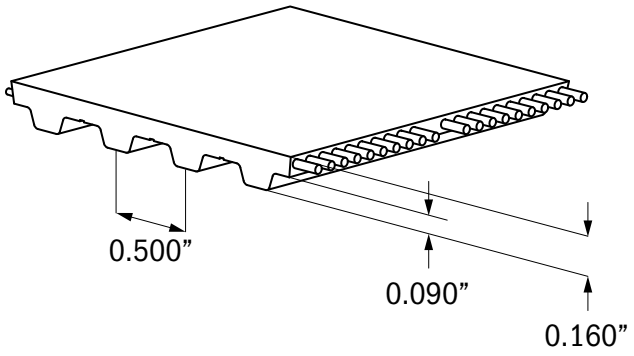
PRODUCT DATA

PITCH	0.50"	12.7 mm
SLEEVE WIDTH		
LENGTH < 12000MM	6.0"	152.4 mm
LENGTH > 12000MM	4.0"	101.6 mm
WIDTH TOLERANCE		
≤ 50MM WIDTH	0.020"	+-0.51 mm
> 50MM WIDTH	0.030"	+-0.76 mm
LENGTH RANGE	59.8 - 901.6"	1520-22900 mm
MIN LENGTH OF BELT WITH NT	69"	1752.6 mm
STANDARD COLOR	White	
FDA/EU APPROVAL	Optional	
POLYAMIDE FABRIC	Optional NT	

MIN PULLEY TOOTH COUNT AND DIAMETER

		STEEL		STEEL HF		STAINLESS STEEL	
NO BACK BENDING	**z min**	14 teeth		12 teeth		18 teeth	
	d min	2.23"	57 mm	1.91"	49 mm	2.87"	73 mm
BACK BENDING	**z min**	20 teeth		18 teeth		24 teeth	
	d min	3.15"	80 mm	2.36"	60 mm	3.94"	100 mm

POLYURETHANE	HARDNESS [˚SHORE A]	TEMPERATURE RANGE [˚C]	TEMPERATURE RANGE [˚F]	FEATURE
R23	90	-5 to +70	+23 to +158	Standard
R23F	90	-5 to +70	+23 to +158	With NIRO Cord Only
R23T	90	-30 to +50	-22 to +122	Low Temperature



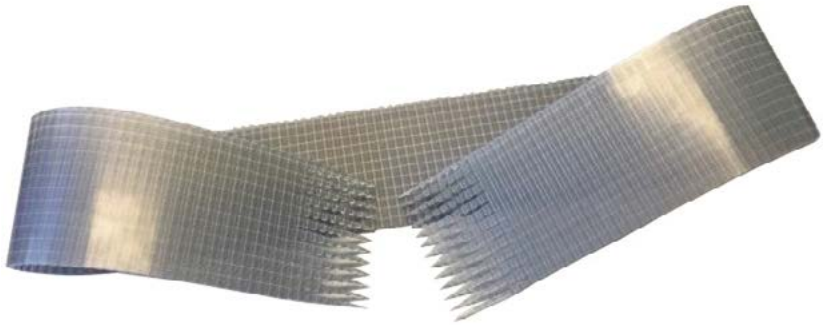
For how to order, please refer to pages 8 & 9

TECHNICAL DATA

STANDARD WIDTH INCH (MM)	UNIT	0.5"/ 12.7MM	0.75"/ 19.05MM	1"/ 25.4MM	1.5"/ 38.1MM	2"/ 50.8MM	3"/ 76.2MM	4"/ 101.6MM	6"/ 152.4MM
BREAKING FORCE / AVERAGE VALUE									
Steel (SL)	[N]	3,360	5,040	7,140	10,920	14,700	22,260	29,820	44,940
	[lbf]	760	1,130	1,610	2,460	3,300	5,000	6,700	10,100
Steel HF (HF)	[N]	4,960	7,440	10,540	16,120	21,700	32,860	44,020	66,340
	[lbf]	1,120	1,670	2,370	3,620	4,880	7,390	9,900	14,910
Stainless Steel (NIRO)	[N]	N/A	4,080	5,780	8,840	11,900	18,020	24,480	36,720
	[lbf]	N/A	920	1,300	1,990	2,680	4,050	5,500	8,260
ALLOWABLE BELT FORCE									
Steel (SL)	[N]	898	1,347	1,909	2,919	3,929	5,950	8,083	12,012
	[lbf]	202	303	429	656	883	1,338	1,817	2,701
Steel HF (HF)	[N]	1,101	1,652	2,340	3,579	4,818	7,295	9,773	14,728
	[lbf]	248	371	526	805	1,083	1,640	2,197	3,311
Stainless Steel (NIRO)	[N]	N/A	1,258	1,782	2,725	3,669	5,556	7,547	11,321
	[lbf]	N/A	283	401	613	825	1,249	1,697	2,545
ALLOWABLE EFFECTIVE FORCE / MINIMUM 12 TEETH IN MESH									
	[N]	825	1,238	1,650	2,475	3,300	4,950	6,600	9,900
	[lbf]	185	278	371	556	742	1,113	1,484	2,226
BELT WEIGHT									
Steel (SL)	[kg/m]	0.051	0.08	0.10	0.15	0.20	0.30	0.41	0.61
	[lb/ft]	0.03	0.05	0.07	0.10	0.14	0.20	0.27	0.41
Steel HF (HF)	[kg/m]	0.055	0.08	0.11	0.16	0.22	0.33	0.44	0.66
	[lb/ft]	0.04	0.06	0.07	0.11	0.15	0.22	0.29	0.44
Stainless Steel (NIRO)	[kg/m]	N/A	0.08	0.10	0.15	0.20	0.31	0.41	0.61
	[lb/ft]	N/A	0.05	0.07	0.10	0.14	0.20	0.27	0.41
SPECIFIC BELT STIFFNESS									
Steel (SL)	[N]	224,529	336,794	477,125	729,721	982,316	1,487,507	2,020,765	3,003,081
	[lbf]	50,479	75,718	107,267	164,056	220,844	334,422	454,309	675,153
Steel HF (HF)	[N]	275,294	412,941	585,000	894,706	1,204,412	1,823,824	2,443,235	3,682,059
	[lbf]	61,892	92,837	131,520	201,148	270,776	410,032	549,288	827,801
Stainless Steel (NIRO)	[N]	N/A	314,471	445,500	681,353	917,206	1,388,912	1,886,824	2,830,235
	[lbf]	N/A	70,699	100,157	153,182	206,206	312,255	424,196	636,294

ENDLESS WELDED OR TRULY ENDLESS?

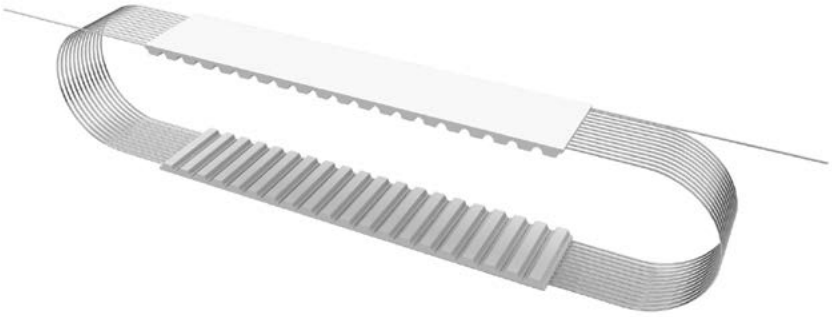
CONVEYING OR POWER TRANSMISSION APPLICATION?



ENDLESS WELDED BELT FOR MOST CONVEYING APPLICATIONS

- The weld has appr. 50 % of open ended belt strength.

TRULY ENDLESS BELT FOR ROTARY POSITIONING OR LIGHT POWER TRANSMISSION APPLICATIONS



TRULY ENDLESS BELT OFFER 100% TENSILE STRENGTH

- Synchro-Power Sleeve for length from 120 to 2250 mm / 4.72 to 88.58 in
- Synchro-Power Flex for length from 1.5 to 22.9 m / 59.06 to 901.57 in

BACKINGS

TIMING BELTS

Gates TPU offers infinite design possibilities for both open-ended and endless timing belts from over 30 different backing material options. Most belt types can be modified by adding a backing to achieve a desired coefficient of friction, abrasion resistance or cushion. Additional surface finishing achieves the required characteristic for many applications. From ground edges or surfaces and tight tolerances to punching or machining holes and slots and CNC machining of 3-dimensional contours, Gates TPU provides a range of customized solutions.

FABRICATION POSSIBILITIES

WE PROVIDE AN EXTENSIVE RANGE OF FABRICATION POSSIBILITIES, TO INCLUDE COUNTLESS COMBINATIONS OF BACKINGS IN VARIOUS MATERIAL, THICKNESS AND DIMENSIONS, THAT IS AVAILABLE UPON REQUEST.

ATTRIBUTES

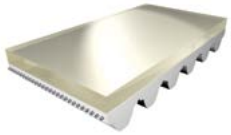
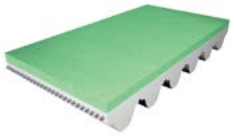
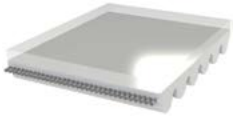
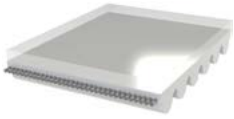
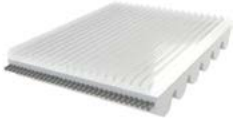
- Increase or decrease in the coefficient of friction
- Various levels of cushioning and durability
- Chemical resistance
- Oil & fat resistance
- Available with FDA/EU food approval

APPLICATIONS

- Glass & Ceramics
- Packaging
- Stone processing industry
- Cardboard transport
- Wood processing industry
- Packaging industry
- Feeding and pulling applications
- Ascending conveyors

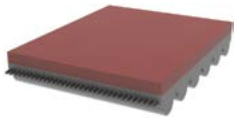
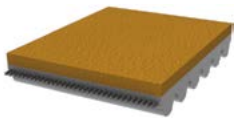
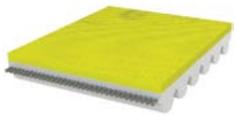
POLYURETHANE BACKINGS

Polyurethane is the most abrassion-proof, resilient and durable backing - with a variety of thickness & hardness selections avaiable, we offer options to suit your application. Polyurethane backings are thermally bonded onto the belts to ensure a strong bond to the base belt for enchanced durability.

MATERIAL	COLOR	HARDNESS	MATERIAL THICKNESS	MINIMUM PULLEY DIAMETER FACTOR	NAME	BACKING
PU	Clear	85 Shore A	2 mm/3 mm	x 30	Taracx 85	
PU	Orange	60 Shore A	2 mm/3 mm/6 mm	x 20	Taracx 60	
PU	Green	50 Shore A	2 mm/3 mm	x 20	Taracx 50	
PU	White	92 Shore A	2 mm/3 mm	x 30	Polyurethane White	
PU	Clear	85 Shore A	5 mm	Ø 120	Glass Backing	
PU	Clear	85 Shore A	3 mm	Ø 90	Ridge Top	
PU	Clear	85 Shore A	1 mm/2 mm	x 30	HV Foil	
PU	Clear	85 Shore A 95 Shore A	2.7 mm	Ø 75	Fine Glass Backing	

RUBBER BACKINGS

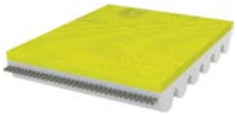
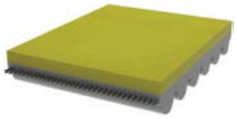
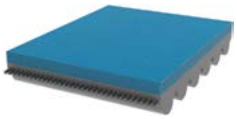
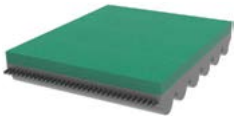
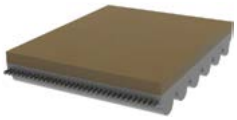
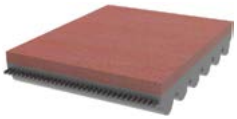
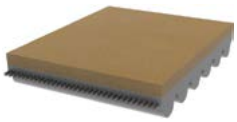
Rubber backings deliver a high coefficient of friction, temperature resistance, and are commonly used within wood processing, glass processing, and ceramics industries. Rubber backings are applied by adhesive bonding to suit the material characteristics.

MATERIAL	COLOR	HARDNESS	MATERIAL THICKNESS	MINIMUM Ø/ Ø FACTOR	NAME	BACKING
NATURAL RUBBER	Red	38 Shore A	1.6 to 12.7 mm	x 20	Linatex™	
NATURAL RUBBER (FDA Approved)	White	38 Shore A	3 mm 5 mm *	x 20	Linaplus FG™	
NATURAL RUBBER	Beige	40 Shore A	6.4 mm *	x 20	Tan Natural Rubber	
NATURAL RUBBER	Black	65 Shore A	3.2 mm 6.4 mm *	x 25	Nitrile Rubber	
NATURAL RUBBER	Orange	55 Shore A	3 mm 5mm *	x 20	Linatrile™	
NATURAL RUBBER	Yellow	38 Shore A	2 mm 4 mm *	x 20	RP400	

* Other thicknesses are available upon request.

FOAM BACKINGS

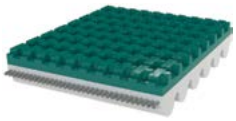
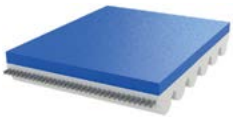
Foam Backings provide high flexibility and are commonly used within glass, paper, textile, and wood processing industries. Foam Backings are applied by adhesive bonding.

MATERIAL	COLOR	HARDNESS	MATERIAL THICKNESS	MINIMUM Ø/ Ø FACTOR	NAME	BACKING
HIGH DENSITY POLYURETHANE FOAM	Yellow	55 Shore A	2 mm to 8 mm *	x 30	HD Yellow	
POLYURETHANE FOAM	Yellow	160 kg/m³	12 mm *	x 15	Sylomer™ Yellow	
POLYURETHANE FOAM	Blue	220 kg/m³	12 mm	x 15	Sylomer Blue	
POLYURETHANE FOAM	Green	300 kg/m³	12 mm *	x 15	Sylomer Green	
POLYURETHANE FOAM	Brown	400 kg/m³	12 mm *	x 15	Sylomer Brown	
POLYURETHANE FOAM	Red	500 kg/m³	12 mm *	x 15	Sylomer Red	
CELLULAR RUBBER	Black	150-200 kg/m³	16 mm *	x 15	Neoprene	
NATURAL POLYURETHANE FOAM (High Flexibility)	Beige / Yellow	400 kg/m³	5 mm *	x 15	Natural	

* Other thicknesses are available upon request.

PVC BACKINGS

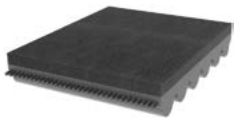
Polyvinylchlorid (PVC) Backings are commonly used in glass and wood processing, ceramic and packaging industries. Due to various FDA / EU approvals, PVC Backings are allowed within food processing or industry applications requiring high hygiene. PVC backings are applied by adhesive bonding.

MATERIAL	COLOR	HARDNESS	MATERIAL THICKNESS	MINIMUM Ø/ Ø FACTOR	NAME	BACKING
PVC	Green	46 Shore A	4.8 mm	90 mm	Rough Top	
PVC (FDA / EU approved)	White	65 Shore A	1.2 mm*	25 mm	Small Pebbles Structure	
PVC (FDA / EU approved)	White	35 Shore A	6 mm	40 mm	Large Pebbles Structure	
PVC (FDA / EU approved)	White	70 Shore A	4.5 mm	90 mm	PVC Herringbone	
PVC (FDA / EU approved)	White	40 Shore A	2.5 mm	90 mm	PVC Saw Tooth	
PVC (FDA / EU approved)	White	65 Shore A	0.7 mm	50 mm	PVC Waffle Structure	
PVC	Blue	60 Shore A	1 mm 2 mm	40 mm	PVC Blue	
PVC (FDA / EU approved)	White	65 Shore A	2 mm	40 mm	PVC White	

SPECIAL BACKINGS + FABRIC

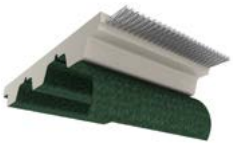
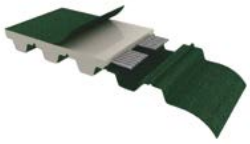
SPECIAL BACKINGS

Gates offers additional special backings such as Novo Fleece and Chrome Leather. All special backings are applied by adhesive bonding.

MATERIAL	COLOR	HARDNESS	MATERIAL THICKNESS	MINIMUM Ø	ATTRIBUTES	APPLICATION	NAME	BACKING
POLYESTER	Anthracite	Not Measurable	1.2 mm	25 mm	Suited for high temp ranges Oil/fat resistance	General Conveying Applications Glass Processing	Novo Fleece	
LEATHER	Grey	65 Shore A	2 mm 3 mm	90 mm	High coefficient of friction Abrasion resistance Oil resistance	General Conveying Applications	Chrome Leather	

FABRIC

Polyamide fabric reduces the coefficient of friction to provide smooth & enhanced operating characteristics.

MATERIAL	COLOR	CODE	BACKING
POLYAMID FABRIC ON TOOTH SIDE	Green	NT	
POLYAMID FABRIC ON BACK SIDE	Green	NB	
POLYAMID FABRIC ON TOOTH AND BACK SIDE	Green	NTB	

APPLICATIONS

- Accumulating conveyor
- Sliding applications

ATTRIBUTES

- Low coefficient of friction
- High wear resistance
- Good sliding attributes
- Low-noise operation
- Oil/fat resistance

PROFILE BELTS

Gates TPU (Thermoplastic Polyurethane) Belts can be customized with welded profiles to meet specific application requirements. The molded profiles are made of tough polyurethane and become an integral part of the belt through thermal bonding. Profiles can be manufactured in nearly any shape and construction.

Our timing belts with welded profiles are optimal for applications in packaging, general conveying and other automation equipment applications.

CHOOSE FROM OVER 2000 EXISTING PROFILES AVAILABLE FROM GATES' EXTENSIVE MOLD INVENTORY.

ATTRIBUTES

- Available for all standard pitches
- Non-marking, durable design
- Over 2 000 existing shapes and constructions
- Widths up to 18“ / 450 mm available
- Thermal bonding process fuses belt and profile together

APPLICATIONS

- Pushing applications
- General conveying applications
- Glass conveying
- Food conveying
- Hygienic industry
- Textile industry
- Wood processing industry
- Synchronous conveying applications

FABRICATION CAPABILITIES

- Minimum length: 500 mm
- Maximum length: 25 000 mm
- Maximum width: 450 mm / 18"

Special dimensions and tolerances are available on request.

PROFILE BELT DESIGN RECOMMENDATIONS

Over 2.000 profile designs are already available from Gates' extensive mold inventory. On our website, the Gates TPU Belt Profile Selector helps to find the profile for your application. If none of the existing profiles fit, our application engineers will help you to design new, custom built profiles which will fit your application.

Ultimate performance can be achieved by following the design guidelines outlined below:

1. PROFILE SPACING

It is recommended that the profile spacing “A” correspond with the pitch of the belt. This allows the best spacing tolerances, and minimizes the effects of the belt’s overall length tolerance on the profile spacing. Profiles can be spaced on non-Pitch increments. However, if non-Pitch spacing is used, the cumulative tolerance of the belt length must be considered.

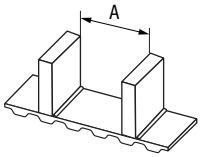
PLEASE ADD THE PROFILE SPACING TOLERANCE OF ± 0.2 MM TO CALCULATE THE PROFILE SPACING “A” AS FOLLOWS:

EXAMPLE

Profile Spacing Tolerance for pitch type T10: ± 0.54 mm

Profile Spacing “A” (notional value): 1.000 mm

Resultant positional tolerance: 1.000 mm ± 0.74 mm for pitch type T10



TIGHTER TOLERANCES FOR PROFILE SPACING ARE AVAILABLE.
PLEASE CONTACT GATES APPLICATIONS ENGINEERING FOR DETAILED INFORMATION.

PITCH TOLERANCE FOR ALL BELT TYPES	
T / STD / Imperial Pitches	± 0.54 mm per m
AT / HTD / GPP / HPL	+ 0.27 mm / - 0.54 mm per m

2. PROFILE DIMENSIONS

The most important considerations while dimensioning a profile are the size of the base of the profile (“foot” of the profile) and the position of the profile on the belt. The profile thickness can affect the flexibility of the belt, and can determine the minimum allowable pulley diameter. The flexibility of the belt can be maximized, however, by positioning the profile directly over the tooth of the belt. As the thickness of the foot of the profile increases, the minimum pulley diameter in the system must be increased according to the table below:

TOLERANCES	
Profile Width Profile Length	± 0.25 mm / ± 0.01“ ± 0.25 mm / ± 0.01“
The height tolerance of a profile in consequence of the fusion of the profile and belt at the welding area	+0.25 mm / - 0.5 mm + 0.01“ / - 0.02"

MINIMUM NUMBER OF TEETH OF PULLEY FOR PROFILES LOCATED OVER TOOTH

PROFILE FOOT THICKNESS (MM)	2	3	5	6	8	10	11	13	16	19
PROFILE FOOT THICKNESS (INCH)	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4
XL	10	10	18	25	40	50	60	100	---*	---*
L	12	12	12	18	30	40	50	60	100	---*
H / H-HF	14	14	14	14	18	25	35	45	80	100
XH	18	18	18	18	18	18	18	20	35	50
T5	12	12	18	25	40	50	60	100	---*	---*
AT5 / ATL5	15	15	18	25	40	50	60	100	---*	---*
T10 / T10-HF	14	14	16	16	18	25	35	45	80	100
AT10	15	15	18	18	22	25	35	45	80	100
ATL10 / ATL10-HF	25	25	25	25	25	25	35	45	80	100
T20 / AT20	18	18	18	18	18	18	18	20	35	50
ATL20	30	30	30	30	30	30	30	30	35	50
HTD5 / STD5 / HPL5	14	14	16	25	40	50	60	100	---*	---*
HTD8 / STD8 / HPL8 / GPP8	20	20	20	24	30	40	50	60	100	---*
HTD14	28	28	28	28	28	28	30	30	50	72
HTDL14 / GPP14	43	43	43	43	43	43	43	43	50	72

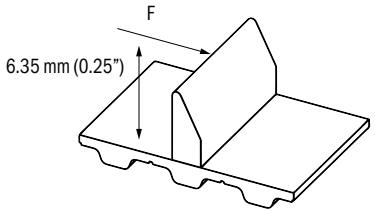
MINIMUM NUMBER OF TEETH OF PULLEY FOR PROFILES NOT LOCATED OVER TOOTH

PROFILE FOOT THICKNESS (MM)	2	3	5	6	8	10	11	13	16	19
PROFILE FOOT THICKNESS (INCH)	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4
XL	12	30	45	50	60	100	---*	---*	---*	---*
L	12	20	40	45	55	60	70	80	100	---*
H / H-HF	14	14	25	30	45	50	55	65	80	100
XH	18	18	20	30	40	45	50	54	58	60
T5	12	30	45	50	60	100	---*	---*	---*	---*
AT5 / ATL5	15	30	45	50	60	100	---*	---*	---*	---*
T10 / T10-HF / AT10	18	20	30	40	45	50	55	65	80	100
ATL10 / ATL10-HF	25	25	30	40	45	50	55	65	80	100
T20 / AT20	18	18	20	30	40	45	50	54	58	60
ATL20	30	30	30	30	40	45	50	54	58	60
HTD5 / STD5 / HPL5	18	30	45	50	60	100	---*	---*	---*	---*
HTD8 / STD8 / HPL8 / GPP8	20	20	40	45	55	60	70	80	100	---*
HTD14	28	28	30	42	58	64	72	78	82	86
HTDL14 / GPP14	43	43	43	43	58	64	72	78	82	86

* Not available

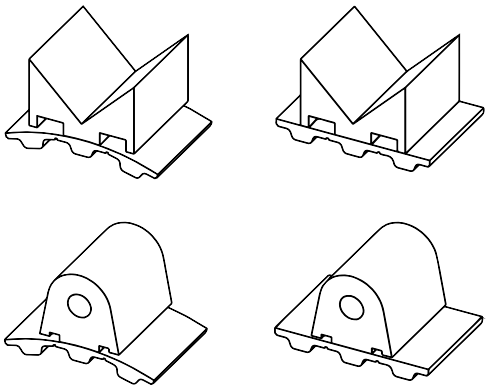
3. PROFILE STRENGTH

The strength, and therefore the capacity of the profile depends primarily on the size of the welded profile foot. The strength of the profile is affected by the type and direction of the force applied to it. Under high loads, the failure mode will normally be either bending or distortion of the profile and belt, or in some cases, the polyurethane may actually tear. The strength of the profile is approximately 6 N/mm² according to the drawing opposite.



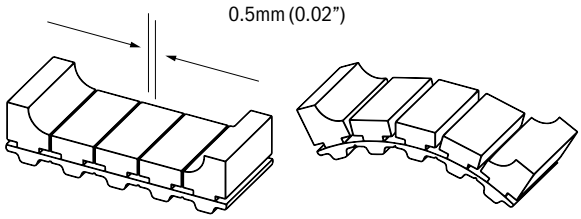
4. WIDE BASE PROFILES OR PROFILES WITH RELIEF

For profiles requiring a wide base, such as pushers, one foot should be left unwelded. This allows for flexing around the pulley yet it remains rigid when loaded.



5. SEGMENTED PROFILES

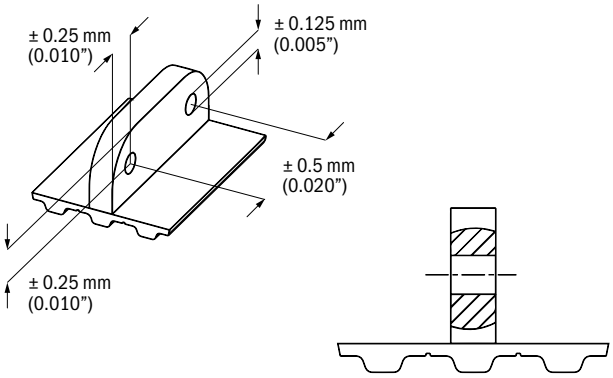
If large profiles are required as carriers, then it is necessary, that they are either segmented or slotted.



6. PROFILES WITH HOLES

Profiles with holes for securing paddles or other attachments can be produced. Holes are either drilled before bonding, or are molded into the profile depending upon the volume and requirements of the application. Tolerances of the hole placement depends upon whether the holes are drilled or molded.

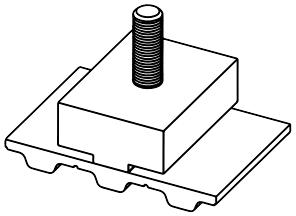
The tolerance of the hole from the belt surface is subject to the bonding process of the profile foot and the belt surface. Generally, tolerances are as shown on the right-hand side.



7. PROFILES WITH INSERTS

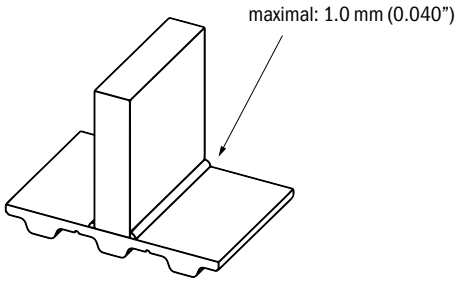
Profiles can be molded with metallic inserts. These are particularly useful in some applications to replace roller chains with attachments.

The actual inserts can either be manufactured by Gates or provided by the customer.



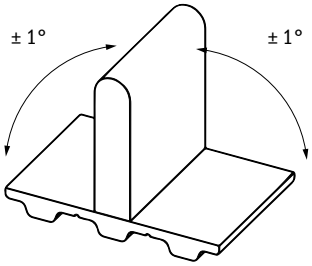
8. FLASH BEAD

The welding process can cause a weld bead of polyurethane between belt back and the lower profile edge. This can be removed on customer request.



9. PERPENDICULARITY

All profiles are perpendicular to ±1°.



10. ORDERING

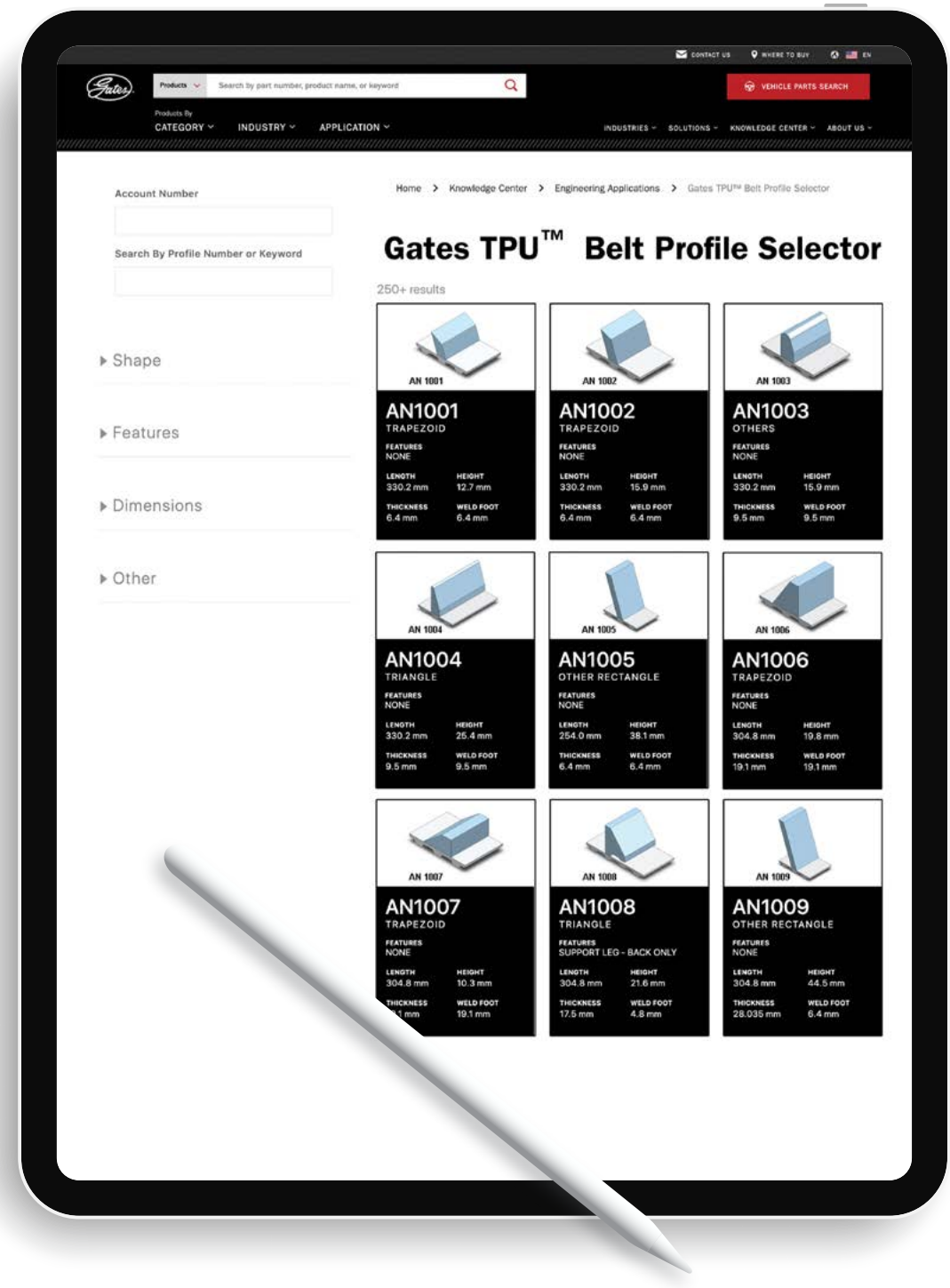
When ordering a profiled belt, it is advisable to submit a drawing of the profiled belt. For your convenience standard drawing forms are available from our Applications Engineering Department. Once a design is finalized, Gates will submit the drawing to the customer for approval. This custom belt drawing number should be used for future ordering.

PROFILE SELECTOR

OUR ONLINE PROFILE SELECTOR TOOL ALLOWS YOU TO:

- Find the right profile for your application
- Download of drawings for each selection
- Review minimum pulley recommendations
- Access the Profile Selector at **https://www.gates.com/us/en/knowledge-center/engineering-applications/gates-tpu-belt-profile-selector.html**

PLEASE CONTACT OUR APPLICATIONS ENGINEERING GROUP FOR SPECIAL PROFILE SHAPES, DIMENSIONS OR TOLERANCES.


CONTACT US
WHERE TO BUY
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Products
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VEHICLE PARTS SEARCH
Products By
CATEGORY
INDUSTRY
APPLICATION
INDUSTRIES
SOLUTIONS
KNOWLEDGE CENTER
ABOUT US
Account Number
Search By Profile Number or Keyword
Shape
Features
Dimensions
Other
Home > Knowledge Center > Engineering Applications > Gates TPU™ Belt Profile Selector
Gates TPU™ Belt Profile Selector
250+ results
AN1001
TRAPEZOID
FEATURES NONE
LENGTH 330.2 mm
HEIGHT 12.7 mm
THICKNESS 6.4 mm
WELD FOOT 6.4 mm
AN1002
TRAPEZOID
FEATURES NONE
LENGTH 330.2 mm
HEIGHT 15.9 mm
THICKNESS 6.4 mm
WELD FOOT 6.4 mm
AN1003
OTHERS
FEATURES NONE
LENGTH 330.2 mm
HEIGHT 15.9 mm
THICKNESS 9.5 mm
WELD FOOT 9.5 mm
AN1004
TRIANGLE
FEATURES NONE
LENGTH 330.2 mm
HEIGHT 25.4 mm
THICKNESS 9.5 mm
WELD FOOT 9.5 mm
AN1005
OTHER RECTANGLE
FEATURES NONE
LENGTH 254.0 mm
HEIGHT 38.1 mm
THICKNESS 6.4 mm
WELD FOOT 6.4 mm
AN1006
TRAPEZOID
FEATURES NONE
LENGTH 304.8 mm
HEIGHT 19.8 mm
THICKNESS 19.1 mm
WELD FOOT 19.1 mm
AN1007
TRAPEZOID
FEATURES NONE
LENGTH 304.8 mm
HEIGHT 10.3 mm
WELD FOOT 19.1 mm
AN1008
TRIANGLE
FEATURES SUPPORT LEG - BACK ONLY
LENGTH 304.8 mm
HEIGHT 21.6 mm
THICKNESS 17.5 mm
WELD FOOT 4.8 mm
AN1009
OTHER RECTANGLE
FEATURES NONE
LENGTH 304.8 mm
HEIGHT 44.5 mm
THICKNESS 28.035 mm
WELD FOOT 6.4 mm

FABRICATION CAPABILITIES

Gates TPU offers further finishing for belts to achieve a variety of application requirements. From ground edges or surfaces and tight tolerances to punching or machining holes and slots and CNC machining of 3-dimensional contours, Gates TPU provides a range of customized solutions.

MILLING:	
LENGTH	500 mm up to 52,000 mm
WIDTH	10 mm up to 450 mm
PUNCHING/CNC MACHINING:	
LENGTH	500 mm up to 30,000 mm
WIDTH	10 mm up to 450 mm
MIN. HOLE DIAMETER:	1 mm
NO MAX. HOLE DIAMETER	
GRINDING:	
LENGTH	420 mm up to 50,000 mm
WIDTH	10 mm up to 250 mm
REMOVING INDIVIDUAL TEETH	
SLOTTING	The flexibility can be increased by cross grooving thick coatings

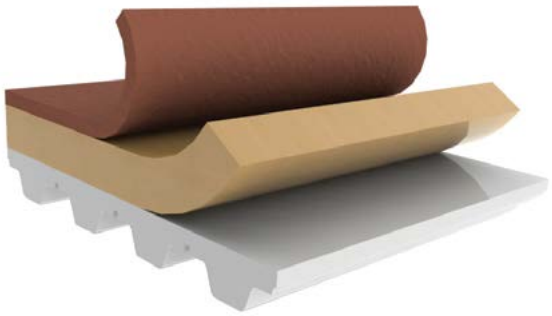
OUR APPLICATION ENGINEERS WILL HELP YOU WITH YOUR CUSTOM REQUIREMENTS.

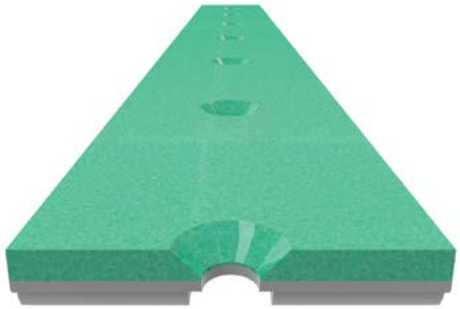
ADVANTAGES

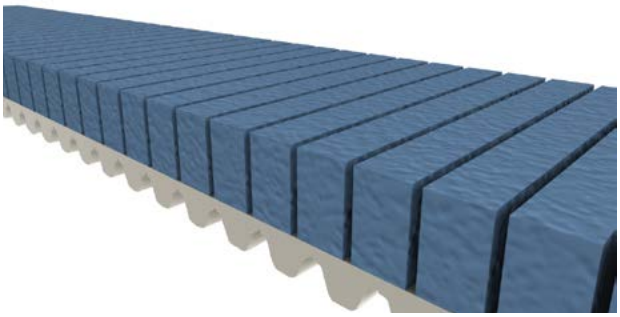
- Unlimited adaptability for nearly all dimensions, contours and configurations
- Combination of flexible base belt manufacturing and additional fabrication in one hand

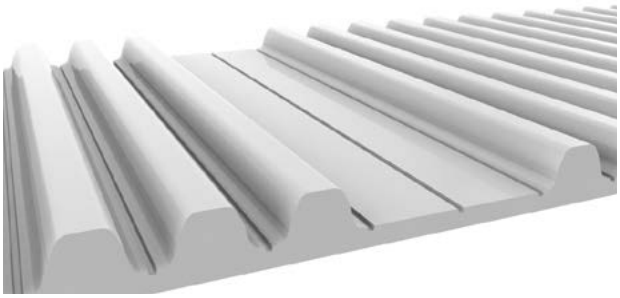
EXAMPLE OF USE

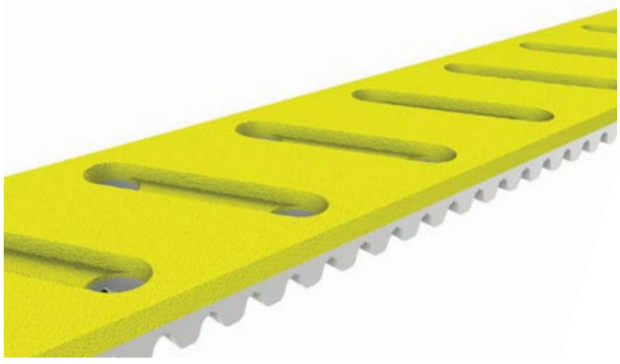
- Vacuum belts for precise transportation of light weight goods such as paper sheets or films
- Conveying for automotive production applications











TECHNICAL DESIGN

In order to ensure the design of proper belt drive systems, we provide technical data and equations to aid in the necessary calculations. For any questions regarding the information and/or data within this section, please contact our application engineers.

a	Acceleration [m/s²]	l	Gauge Length during Frequency Measurement [mm]
ß	Angle of Inclination [°]	L_1	Tight Side Length [mm]
C_R	Overall Stiffness [N]	L_2	Slack Side Length [mm]
C_{SP}	Belt Stiffness [N]	m	Mass [kg]
d	Diameter	m_a	Mass of accumulated Good [kg]
Δx	Elongation [mm]	m_b	Mass of Belt [kg/m]
Δx_{Pos}	Positional Deviation [mm]	m_c	Mass of Counter Weight [kg]
f	Frequency [Hz]	m_f	Mass of Transported Goods [kg]
F_1	Tight Side Belt Force [N]	μ	Coefficient of Friction between Belt and Support
F_{1all}	Allowable Belt Force [N]	μ_a	Coefficient of Friction between Belt and Transported Material
F_{1max}	Maximum occuring Belt Force [N]	n	Speed [1/min]
F_{2opt}	Optimal Slack Side Force [N]	p	Vacuum [N/m²]
F_a	Acceleration Force [N]	P_M	Motor Power on Output Shaft [kW]
F_{break}	Breaking Force [N]	P_N	Nominal Power [kW]
F_e	Effective Force [N]	d_{Pulley}	Diameter of Driver Pulley [mm]
F_{eall}	Allowable Effective Force [N]	S_{iBreak}	Safety Factor on Breaking Force
$F_{eallapp}$	Maximum Allowable Effective Force Application [N]	S_{iF1}	Safety Factor on allowable Belt Force
F_f	Friction Force [N]	S_{iFe}	Safety Factor on allowable Effective Force
F_{fa}	Friction Force during Accumulation [N]	S_f	Safety Factor
F_{fv}	Friction Force due to Vacuum [N]	t_m	Tooth in Mesh Factor
F_g	Gravitational Force [N]	T	Torque [Nm]
F_{pre}	Force for Pretensioning [N]	T_M	Torque of Motor Output Shaft [Nm]
F_w	Externally applied Working Force [N]	t_v	Speed Factor
g	Gravitational Acceleration [m/s²]	v	Speed [m/s]
L	Timing Belt Length [mm]	z_m	Teeth in Mesh

A) SAFETY FACTOR

Uniform loads do not require a safety factor. However, in the case of alternating, shock, accelerating, or decelerating loads a suitable safety factor should be considered.

LOAD	Safety Factor S_f
LOW ALTERNATING LOAD	1.2 - 1.5
MEDIUM ALTERNATING LOAD	1.5 - 1.8
HEAVY ALTERNATING LOAD	1.8 - 2.2

Table 1

B) TOOTH IN MESH FACTOR t_m SPEED FACTOR t_v

TEETH IN MESH	TEETH IN MESH FACTOR
Ze	tm
3	0.25
4	0.33
5	0.42
6	0.50
7	0.58
8	0.67
9	0.75
10	0.83
11	0.92
12	1.00

Table 2

SPEED [M/S]	SPEED FACTOR
v	tv
0	1.00
0.25	0.97
0.5	0.93
0.75	0.89
1	0.86
1.5	0.82
2	0.77
2.5	0.74
3	0.71
3.5	0.68
4	0.66
4.5	0.63
5	0.61
6	0.58
7	0.56
8	0.53
9	0.51
10	0.49
11	0.47
13	0.44
15	0.42
16	0.40
18	0.38
20	0.35

Table 3

C) BRAKING / EMERGENCY STOP

Belt type and width selection is based on the calculated effective force at the driver pulley, Fe, and the calculated tight side force (tension), F1. Fe and F1 should be calculated for peak load conditions, such as emergency braking, as well as for normal operating conditions. The following section illustrates how Fe and F1 are calculated for various applications.

CALCULATION OF CONVEYING APPLICATIONS

A) CALCULATION OF EFFECTIVE FORCE F_e

The effective force F_e at the driver pulley is derived from the sum of all individual forces resisting the belt motion. The individual loads contributing to the effective force must be identified and calculated based on the loading conditions and drive configurations. To determine the effective force please use the method for conveying as follows:

$$F_e = \Sigma F_{Resistance}$$

I. FRICTION FORCE F_f

The friction force between the timing belt and the slider bed due to the weight of the conveyed good that is normal (perpendicular) to the direction of conveyance.

$$F_f = \mu \times g \times m_f \times \cos\beta$$

II. FRICTION FORCE DURING ACCUMULATION F_{Fa}

The friction force between the timing belt, slider bed and the conveyed material due to the mass component of the accumulated material vertically to the direction of conveyance.

$$F_{Fa} = (\mu + \mu_a) \times g \times m_a \times \cos\beta$$

III. GRAVITATIONAL FORCE F_G

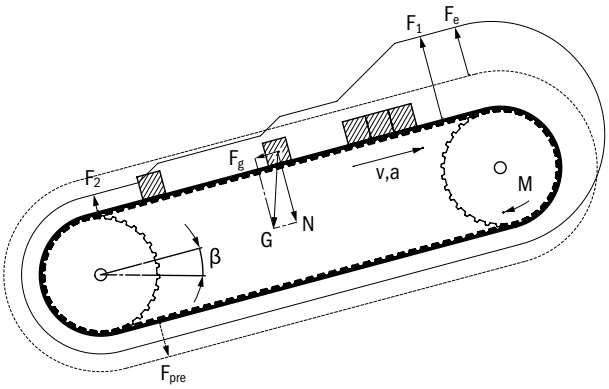
Force to lift the material being transported on an inclined conveyor.

$$F_g = m_f \times g \times \sin\beta$$

IV. ACCELERATION FORCE F_a

Force to accelerate the mass of the conveyed good.

$$F_a = m_f \times a$$



V. ADDITIONAL FORCES

Motion resistance resulting from the belt or idler mass, or other components are typically insignificant. If these additional forces are considered significant relative to the initial F_e calculated, they need to be calculated and added to F_e.

TECHNICAL DATA -COEFFICIENT OF FRICTION

- Polyurethane vs. Steel dry 0.5 up to 0.7
- Polyurethane vs. Aluminum dry 0.5 up to 0.6
- Polyurethane vs. UHMWPE dry 0.2 up to 0.4
- Polyamide vs. Steel dry 0.2 up to 0.4
- Polyamide vs. UHMWPE dry 0.1 up to 0.3

B) CALCULATION OF FORCE FOR PRE-TENSIONING F_{pre}

For trouble-free operation, it is necessary that the slack side does not fall below a certain tension. The pre-tension prevents jumping of the pulley teeth during belt operation. In order to collect the pre-tension, the optimal slack side force has to be ascertained as follows:

$F_{2opt} = (0.1...0.3) \times F_e$

Higher values are recommended for longer belt lengths.
Assuming an optimal slack side force, the force for pre-tensioning is calculated considering the tight side length L1 and the total timing belt length L as follows:

$F_{pre} = F_{2opt} + F_e \times L_1/L$

C) CALCULATION OF TIGHT SIDE BELT FORCE F_1

In the worst case the tight side belt force results as follows (application moving at full load):

$F_1 = F_e + F_{pre}$

D) BELT SELECTION

The selection of the belt type and width is determined by comparing the above calculated values, F_e and F_1, to our catalog values. After making an initial selection of a belt type, determine the number of teeth that are constantly engaged in the pulley. For example, a belt that is wrapped 180° around a pulley with 20 teeth has 10 teeth engaged in that pulley. If less than 12 teeth are engaged, the allowable effective force F_{eall} must be corrected with a tooth-in-mesh factor t_m which is found in table 2. In addition to correcting for teeth in mesh, the allowable effective force F_{eall} also needs to be corrected by applying a speed factor t_v which can be found in table 3. The result is a maximum allowable effective Force Applied as follows:

$F_{eallapp} = F_{eall} \times t_m \times t_v$

$F_{eallapp}$ and F_{1all} should be larger than the actual prevailing forces in the application.

$F_{eallapp} > F_e$

$F_{1all} > F_1$

E) CALCULATION OF SAFETY FACTOR S_f

I. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCES SF_{Fe}	$S_{iFe} = F_{eallapp} / F_e$
II. SAFETY FACTOR ON ALLOWABLE BELT FORCE SF_1	$S_{iF1} = F_{1all} / F_1$
III. SAFETY FACTOR ON ULTIMATE TENSILE STRENGH SF_{Break}	$SF_{iBreak} = F_{Break} / F_1$

Both calculated allowable safety factors S_{iFe} and S_{iF1} should be higher than required safety factor found in table 1 depending on the type of load.

CALCULATION OF LINEAR POSITIONING APPLICATIONS

A) CALCULATION OF EFFECTIVE FORCE F_e

The effective force F_e at the driver pulley is derived from the sum of all individual forces resisting the belt motion. The individual loads contributing to the effective force must be identified and calculated based on the loading conditions and drive configurations.

$$F_e = \Sigma F_{Resistance}$$

I. ACCELERATION FORCE F_a

Force to accelerate the loaded slide with mass m_f.

$$F_a = m_f \times a$$

II. FRICTION FORCE F_f

The friction force of the linear rail / bearing system.

$$F_f = \mu \times g \times m_f \times \cos\beta$$

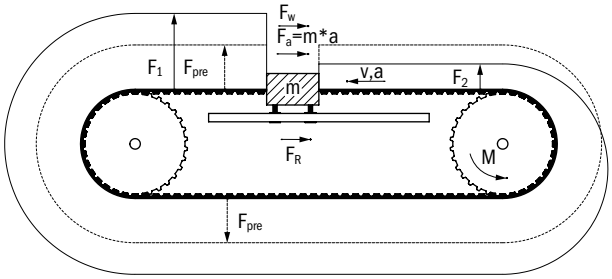
III. GRAVITATIONAL FORCE F_g

Force to lift the loaded slide with mass m_f on an inclined linear actuator.

$$F_g = m_f \times g \times \sin\beta$$

IV. ADDITIONAL FORCES

Motion resistance resulting from the belt or idler mass, or other components are typically insignificant. If these additional forces are considered significant relative to the initial F_e calculated, they need to be calculated and added to F_e.



B) CALCULATION OF FORCE FOR PRE-TENSIONING F_{pre}

For trouble-free operation, it is necessary that the slack side does not fall below a certain tension. The pre-tension prevents jumping of the pulley teeth during belt operation. In order to collect the pre-tension, the optimal slack side force has to be ascertained as follows:

$$F_{2opt} = (0.1...0.3) \times F_e$$

Higher values are recommended for longer belt lengths. Assuming an optimal slack side force, the force for pre-tensioning is calculated considering the tight side length L_1 and the total timing belt length L as follows:

$$F_{pre} = F_{2opt} + F_e \times L_1/L$$

C) CALCULATION OF TIGHT SIDE BELT FORCE F_1

In the worst case the tight side belt force results as follows (application moving at full load):

$F_1 = F_e + F_{pre}$

D) BELT SELECTION

The selection of the belt type and width is determined by comparing the above calculated values, F_e and F_1, to our catalog values. After making an initial selection of a belt type, determine the number of teeth that are constantly engaged in the pulley. For example, a belt that is wrapped 180° around a pulley with 20 teeth has 10 teeth engaged in that pulley. If less than 12 teeth are engaged, the allowable effective force F_{eall} must be corrected with a tooth-in-mesh factor t_m which is found in table 2. In addition to correcting for teeth in mesh, the allowable effective force F_{eall} also needs to be corrected by applying a speed factor t_v which can be found in table 3. The result is a maximum allowable effective Force applied as follows:

$F_{eallapp} = F_{eall} \times t_m \times t_v$

$F_{eallapp}$ and F_{1all} should be larger than the actual prevailing forces in the application.

$F_{eallapp} > F_e$

$F_{1all} > F_1$

E) CALCULATION OF SAFETY FACTOR S_F

I. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCES S_{iFe} $S_{iFe} = F_{eallapp} / F_e$

II. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCES S_{iF1} $S_{iF1} = F_{1all} / F_1$

III. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCES S_{iBreak} $S_{iBreak} = F_{Break} / F_1$

Both calculated allowable safety factors S_{iFe} and S_{iF1} should be higher than required safety factor found in table 1 depending on the type of load.

CALCULATION OF OMEGA LINEAR POSITIONING APPLICATIONS

A) CALCULATION OF EFFECTIVE FORCE F_e

The effective force F_e at the driver pulley is derived from the sum of all individual forces resisting the belt motion. The individual loads contributing to the effective force must be identified and calculated based on the loading conditions and drive configurations.

$$F_e = \Sigma F_{Resistance}$$

I. ACCELERATION FORCE F_a

Force to accelerate the loaded slide with mass m_f.

$$F_a = m_f \times a$$

II. FRICTION FORCE F_f

The friction force of the linear rail / bearing system.

$$F_f = \mu \times g \times m_f \times \cos\beta$$

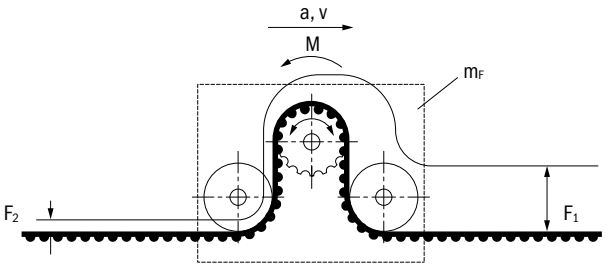
III. GRAVITATIONAL FORCE F_g

Force to lift the loaded slide with mass m_f on an inclined linear actuator.

$$F_g = m_f \times g \times \sin\beta$$

IV. ADDITIONAL FORCES

Motion resistance resulting from the belt or idler mass, or other components are typically insignificant. If these additional forces are considered significant relative to the initial F_e calculated, they need to be calculated and added to F_e.



B) CALCULATION OF FORCE FOR PRE-TENSIONING F_{pre}

For trouble-free operation, it is necessary that the slack side does not fall below a certain tension. The pre-tension prevents jumping of the pulley teeth during belt operation. In order to collect the pre-tension, the optimal slack side force has to be ascertained as follows:

$$F_{2opt} = (0.1...0.3) \times F_e$$

Higher values are recommended for longer belt lengths. Assuming an optimal slack side force, the force for pre-tensioning is calculated considering the tight side length L_1 and the total timing belt length L as follows:

$$F_{pre} = F_{2opt} + F_e \times L_1/L$$

C) CALCULATION OF TIGHT SIDE BELT FORCE F_1

In the worst case the tight side belt force results as follows (application moving at full load):

$F_1 = F_e + F_{pre}$

D) BELT SELECTION

The selection of the belt type and width is determined by comparing the above calculated values, F_e and F_1, to our catalog values. After making an initial selection of a belt type, determine the number of teeth that are constantly engaged in the pulley. For example, a belt that is wrapped 180° around a pulley with 20 teeth has 10 teeth engaged in that pulley. If less than 12 teeth are engaged, the allowable effective force F_{eall} must be corrected with a tooth-in-mesh factor t_m which is found in table 2. In addition to correcting for teeth in mesh, the allowable effective force F_{eall} also needs to be corrected by applying a speed factor t_v which can be found in table 3. The result is a maximum allowable effective Force applied as follows:

$F_{eallapp} = F_{eall} \times t_m \times t_v$

$F_{eallapp}$ and F_{1all} should be larger than the actual prevailing forces in the application.

$F_{eallapp} > F_e$

$F_{1all} > F_1$

E) CALCULATION OF SAFETY FACTOR S_F

I. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCES SF_{Fe}	$SF_{Fe} = F_{eallapp} / F_e$
II. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCES SF_1	$SF_1 = F_{1all} / F_1$
III. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCES SF_{Break}	$SF_{Break} = F_{Break} / F_1$

Both calculated allowable safety factors SF_{Fe} and SF_1 should be higher than required safety factor found in table 1 depending on the type of load.

CALCULATION OF LIFTING APPLICATIONS: TWO PULLEYS NO COUNTER WEIGHT

A) CALCULATION OF EFFECTIVE FORCE F_e

The effective force F_e at the driver pulley is derived from the sum of all individual forces resisting the belt motion. The individual loads contributing to the effective force must be identified and calculated based on the loading conditions and drive configuration.

$$F_e = \Sigma F_{Resistance}$$

I. GRAVITATIONAL FORCE F_g

Force to lift the loaded slide with mass m.

$$F_g = m \times g$$

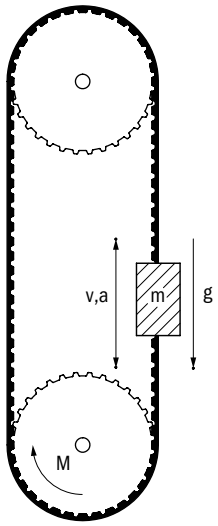
II. ACCELERATION FORCE F_a

Force to accelerate the loaded slide with mass m.

$$F_a = m \times a$$

III. ADDITIONAL FORCES

An estimate of the frictional forces that resist the belt motion should be added to the sum of the above calculated forces to determine the effective force F_e. Motion resistance resulting from the belt or idler mass, or other components are typically insignificant. If these additional forces are considered significant relative to the initial F_e calculated, they need to be calculated and added to F_e.



B) CALCULATION OF FORCE FOR PRE-TENSIONING F_{pre}

For trouble-free operation, it is necessary that the slack side does not fall below a certain tension. The pre-tension prevents jumping of the pulley teeth during belt operation. In order to collect the pre-tension, the optimal slack side force has to be ascertained as follows:

$$F_{2opt} = (0.1...0.3) \times F_e$$

Higher values are recommended for longer belt lengths. Assuming an optimal slack side force, the force for pre-tensioning is calculated considering the tight side length L_1 and the total timing belt length L as follows:

$$F_{pre} = F_{2opt} + F_e \times L_1/L$$

C) CALCULATION OF TIGHT SIDE BELT FORCE F_1

In the worst case the tight side belt force results as follows (Conveyor moving at full load):

$F_1 = F_e + F_{pre}$

D) BELT SELECTION

The selection of the belt type and width is determined by comparing the above calculated values, F_e and F_1, to our catalog values. After making an initial selection of a belt type, determine the number of teeth that are constantly engaged in the pulley. For example, a belt that is wrapped 180° around a pulley with 20 teeth has 10 teeth engaged in that pulley. If less than 12 teeth are engaged, the allowable effective force F_{eall} must be corrected with a tooth-in-mesh factor t_m which is found in table 2. In addition to correcting for teeth in mesh, the allowable effective force F_{eall} also needs to be corrected by applying a speed factor t_v which can be found in table 3. The result is a maximum allowable effective Force Applied as follows:

$F_{eallapp} = F_{eall} \times t_m \times t_v$

$F_{eallapp}$ and F_{1all} should be larger than the actual prevailing forces in the application.

$F_{eallapp} > F_e$

$F_{1all} > F_1$

E) CALCULATION OF SAFETY FACTOR S_f

I. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCE S_{iFe} $S_{iFe} = F_{eallapp} / F_e$

II. SAFETY FACTOR ON ALLOWABLE BELT FORCE S_{iF1} $S_{iF1} = F_{1all} / F_1$

III. SAFETY FACTOR ON ULTIMATE TENSILE STRENGTH S_{iBreak} $S_{iBreak} = F_{Break} / F_1$

Both calculated allowable safety factors S_{iFe} and S_{iF1} should be higher than required safety factor found in table 1 depending on the type of load.

CALCULATION OF LIFTING APPLICATIONS: TWO PULLEYS WITH COUNTER WEIGHT

A) CALCULATION OF EFFECTIVE FORCE F_e

The effective force F_e at the driver pulley is derived from the sum of all individual forces resisting the belt motion. The individual loads contributing to the effective force must be identified and calculated based on the loading conditions and drive configuration.

$$F_e = \Sigma F_{Resistance}$$

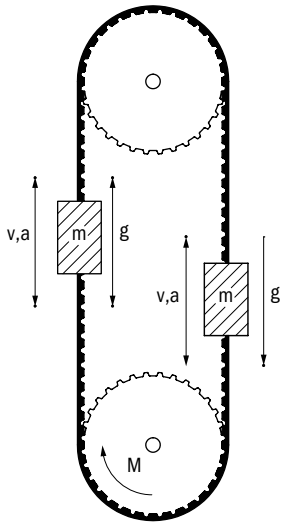
I. ACCELERATION FORCE F_a

Force to accelerate the loaded slide with mass m.

$$F_a = m \times (g + a) - m_c \times (g - a)$$

II. ADDITIONAL FORCES

An estimate of the frictional forces that resist the belt motion should be added to the sum of the above calculated forces to determine the effective force F_e. Motion resistance resulting from the belt or idler mass, or other components are typically insignificant. If these additional forces are considered significant relative to the initial F_e calculated, they need to be calculated and added to F_e.



B) CALCULATION OF FORCE FOR PRE-TENSIONING F_{pre}

For trouble-free operation, it is necessary that the slack side does not fall below a certain tension. The pre-tension prevents jumping of the pulley teeth during belt operation. In order to collect the pre-tension, the optimal slack side force has to be ascertained as follows:

$$F_{2opt} = (0.1...0.3) \times F_e$$

Higher values are recommended for longer belt lengths. Assuming an optimal slack side force, the force for pre-tensioning is calculated considering the tight side length L_1 and the total timing belt length L as follows:

$$F_{pre} = F_{2opt} + F_e \times L_1 / L$$

C) CALCULATION OF TIGHT SIDE BELT FORCE F_1

In the worst case the tight side belt force results as follows (lifter moving at full load):

$F_1 = F_a + F_{pre} + F_f$

D) BELT SELECTION

The selection of the belt type and width is determined by comparing the above calculated values, F_e and F_1, to our catalog values. After making an initial selection of a belt type, determine the number of teeth that are constantly engaged in the pulley. For example, a belt that is wrapped 180° around a pulley with 20 teeth has 10 teeth engaged in that pulley. If less than 12 teeth are engaged, the allowable effective force F_{eall} must be corrected with a tooth-in-mesh factor t_m which is found in table 2. In addition to correcting for teeth in mesh, the allowable effective force F_{eall} also needs to be corrected by applying a speed factor t_v which can be found in table 3. The result is a maximum allowable effective Force Applied as follows:

$F_{eallapp} = F_{eall} \times t_m \times t_v$

$F_{eallapp}$ and F_{1all} should be larger than the actual prevailing forces in the application.

$F_{eallapp} > F_e$

$F_{1all} > F_1$

E) CALCULATION OF SAFETY FACTOR S_f

I. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCE S_{iFe} $S_{iFe} = F_{eallapp} / F_e$

II. SAFETY FACTOR ON ALLOWABLE BELT FORCE S_{iF1} $S_{iF1} = F_{1all} / F_1$

III. SAFETY FACTOR ON ULTIMATE TENSILE STRENGTH S_{iBreak} $S_{iBreak} = F_{Break} / F_1$

Both calculated allowable safety factors S_{iFe} and S_{iF1} should be higher than required safety factor found in table 1 depending on the type of load.

CALCULATION OF LIFTING APPLICATIONS: ONE PULLEY WITH COUNTER WEIGHT

A) CALCULATION OF EFFECTIVE FORCE F_e

The effective force F_e at the driver pulley is derived from the sum of all individual forces resisting the belt motion. The individual loads contributing to the effective force must be identified and calculated based on the loading conditions and drive configuration.

$$F_e = \Sigma F_{Resistance}$$

I. ACCELERATION FORCE F_a

Force to accelerate the loaded slide with mass m.

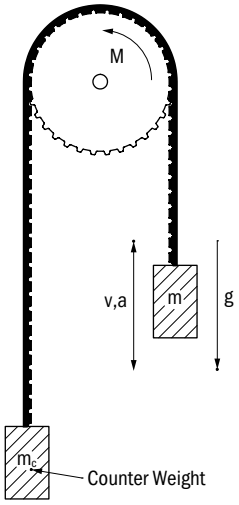
$$F_a = m \times (g + a) - m_c \times (g - a)$$

II. FRICTION FORCE F_f

The friction force of the linear rail / bearing system.

III. ADDITIONAL FORCES

Motion resistance on the basis of belt mass, idler or similar are normally insignificant, but may have a decisive influence on the total value of the effective force and therewith on the belt load as well. The importance of mentioned influences has to be estimated throughout the calculations – in extreme cases the component forces must be calculated and considered.



B) CALCULATION OF FORCE FOR PRE-TENSIONING F_{pre}

Not available for lifting applications with counter weight and one pulley.

C) CALCULATION ON TIGHT SIDE BELT FORCE F_1

In the worst chase the light side belt force results as follows (conveyor moving at full load):

$$F_1 = m \times (g + a) + F_f$$

D) BELT SELECTION

The selection of the belt type and width is determined by comparing the above calculated values, F_e and F_1, to our catalog values. After making an initial selection of a belt type, determine the number of teeth that are constantly engaged in the pulley. For example, a belt that is wrapped 180° around a pulley with 20 teeth has 10 teeth engaged in that pulley. If less than 12 teeth are engaged, the allowable effective force F_{eall} must be corrected with a tooth-in-mesh factor t_m which is found in table 2. In addition to correcting for teeth in mesh, the allowable effective force F_{eall} also needs to be corrected by applying a speed factor t_v which can be found in table 3. The result is a maximum allowable effective Force Applied as follows:

$F_{eallapp} = F_{eall} \times t_m \times t_v$

$F_{eallapp}$ and F_{1all} should be larger than the actual prevailing forces in the application.

$F_{eallapp} > F_e$

$F_{1all} > F_1$

E) CALCULATION OF SAFETY FACTOR S_f

I. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCE S_{iFe} $S_{iFe} = F_{eallapp} / F_e$

II. SAFETY FACTOR ON ALLOWABLE BELT FORCE S_{iF1} $S_{iF1} = F_{1all} / F_1$

III. SAFETY FACTOR ON ULTIMATE TENSILE STRENGTH S_{iBreak} $S_{iBreak} = F_{Break} / F_1$

Both calculated allowable safety factors S_{iFe} and S_{iF1} should be higher than required safety factor found in table 1 depending on the type of load.

CALCULATION OF CLOSED BELT APPLICATIONS

Power transmission drives should always be designed with truly endless Synchro-Power Belts or Synchro-Power Flex belts.

The use of endless welded timing belts is not recommended.

A) CALCULATION OF NOMINAL POWER

The nominal Power is used for the calculation of the required belt width

$P_N = P_M \times S_f$ S_f is found in table 1

B) CALCULATION OF EFFECTIVE FORCE F_e

The effective force F_e can be calculated with the existing movement resistance as follows:

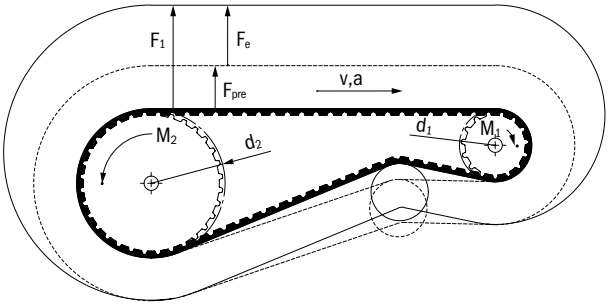
$$F_e = \Sigma F_{Resistance}$$

Furthermore the effective force can also be calculated with the existing driving power as follows:

$F_e = S_f \times (T_M \times 2000)/d$

or

$F_e = S_f \times (19100 \times P_N \times 1000)/n \times d$



B) CALCULATION OF FORCE FOR PRE-TENSIONING F_{pre}

For trouble-free operation, it is necessary that the slack side does not fall below a certain tension. The pre-tension prevents jumping of the pulley teeth during belt operation. In order to collect the pre-tension, the optimal slack side force has to be ascertained as follows:

$F_{2opt} = (0.1...0.3) \times F_e$

Higher values are recommended for longer belt lengths. Assuming an optimal slack side force, the force for pre-tensioning is calculated considering the tight side length L_1 and the total timing belt length L as follows:

$F_{pre} = F_{2opt} + F_e \times L_1/L$

C) BELT SELECTION

The selection of the belt type and width is determined by comparing the above calculated values, F_e and F_1, to our catalog values. After making an initial selection of a belt type, determine the number of teeth that are constantly engaged in the pulley. For example, a belt that is wrapped 180° around a pulley with 20 teeth has 10 teeth engaged in that pulley. If less than 12 teeth are engaged, the allowable effective force F_{eall} must be corrected with a tooth-in-mesh factor t_m which is found in table 2. In addition to correcting for teeth in mesh, the allowable effective force F_{eall} also needs to be corrected by applying a speed factor t_v which can be found in table 3. The result is a maximum allowable effective Force Applied as follows:

$F_{eallapp} = F_{eall} \times t_m \times t_v$

$F_{eallapp}$ should be larger than the actual prevailing forces in the application.

$F_{eallapp} > F_e$

D) CALCULATION OF SAFETY FACTOR S_f

I. SAFETY FACTOR ON ALLOWABLE EFFECTIVE FORCE S_{iFe}

$S_{iFe} = F_{eallapp} / F_e$

The calculated safety factor S_{iFe} should be higher than the required safety factor found in table 1 depending on the type of load.

9. ELONGATION / POSITIONING ERROR IN TIMING BELT DRIVES

A) ELONGATION Δx

The static elongation based on an applied force such as the pre-tension results as follws:

$\Delta x = F \times L / C_{sp}$

B) POSITIONING ERROR Δx_{Pos}

The positioning error mainly depends on the total stifness C_R of the slack and tight side.

$C_R = C_{sp} \times L / L1 \times L2$

Note than C_R is at its minimum when the tight and slack sides are equal.

Determine the positioning error Δx_{Pos} due to belt elongation caused by e.g. the effecitive force Fe:

$\Delta x_{Pos} = F / C_R$

10. TIMING BELT INSTALLATION

A) PRETENSION

For proper adjustment of pre-tensioning Fpre Gates recommends the Sonic Tension Meter 508 C which directly specifies the pre-tension in Newton.
Alternatively with the tension meter you may measure the belt frequency of the sonic wave that is generated by vibrating the belt span of the stationary belt.

The desired frequency can be calculated as follows:

$$f = \sqrt{\frac{F_{pre} \times 10^6}{4 \times m_b \times l^2}}$$

B) PRETENSION INSTALLATON RECOMMENDATION

Please refer to the Gates Sonic Tension Meter Manual.
The timing belt should be first installed without any tension. Apply the calculated pre-tension to the belt by using the tensioning device. When measuring the belt tnesion, turn the drive over for several revolutions to fully seat the belt into the pulleys and equalize tension in all of the spans. Repeat the tension measurements at different pulley positions. After applying the pretension, lock all adjustable shafts into place.

SONIC TENSION METER

MOD. 508C
PRODUCT #7420-0508

Our selection of time-saving tools are a technician's best friend and a facility manager's trusted companion. Gates professional tools offer simple solutions for quick onsite and equipment inspection, maintenance and repairs, backed by the Gates guarantee of world-class quality and reliable long-term performance.

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