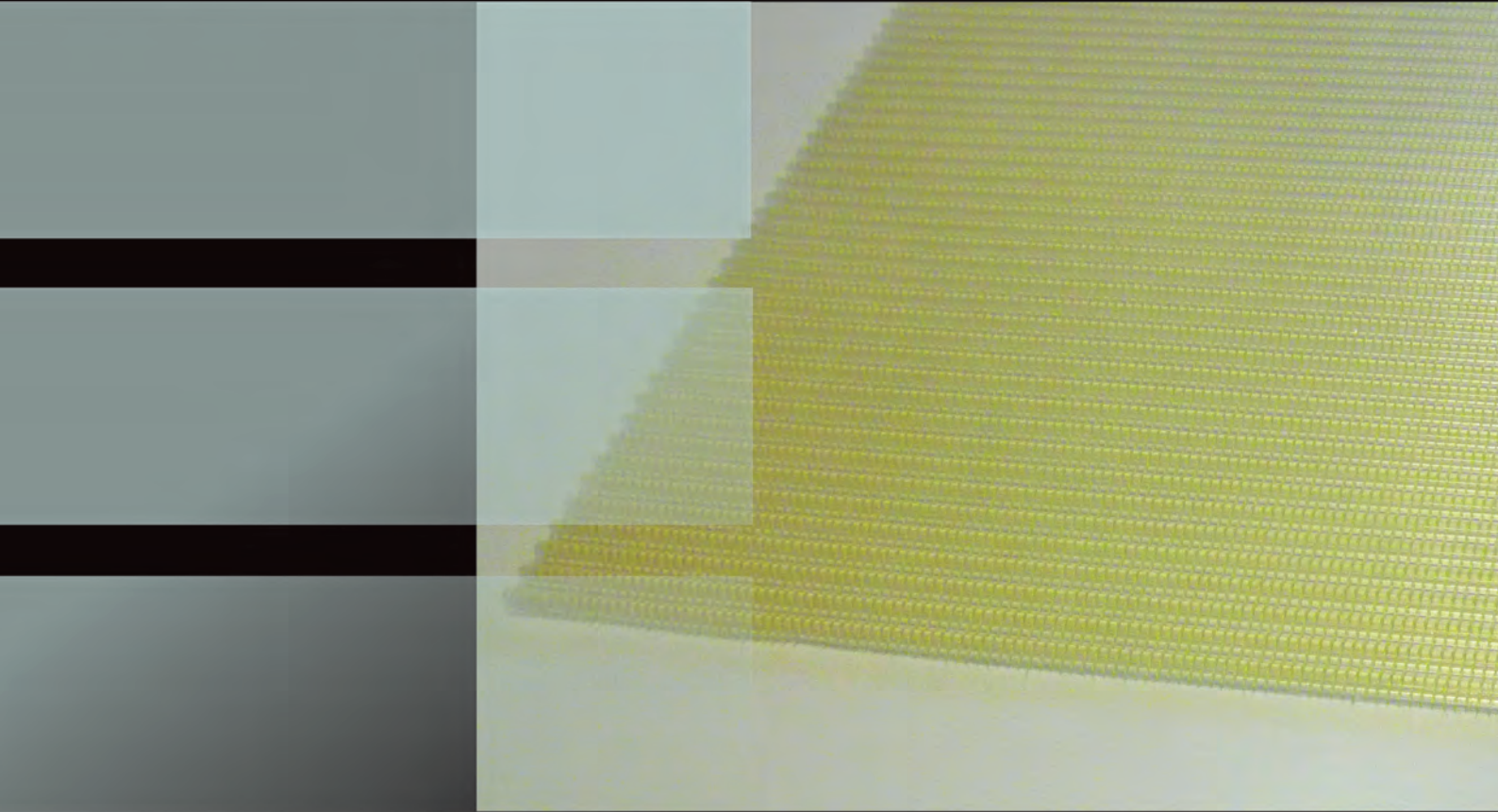


# ELATECH® SYNCRO-MAX®



# ELATECH® SYNCRO-MAX® Extra-wide

ELATECH® SYNCRO-MAX® Extra-wide Polyurethane Belts extend the advantages of synchronous timing belts to wider surfaces and to the typical applications of flat and modular conveyor belts.

Made of Polyurethane and reinforced with Aramid, ELATECH® SYNCRO-MAX® Extra-wide Belts provide positive drive and synchronous conveying resulting in no slippage, better tracking, higher indexing/positioning precision, smaller drive pulley requirements, lower belt tension, lower shaft loads and consequently power saving.

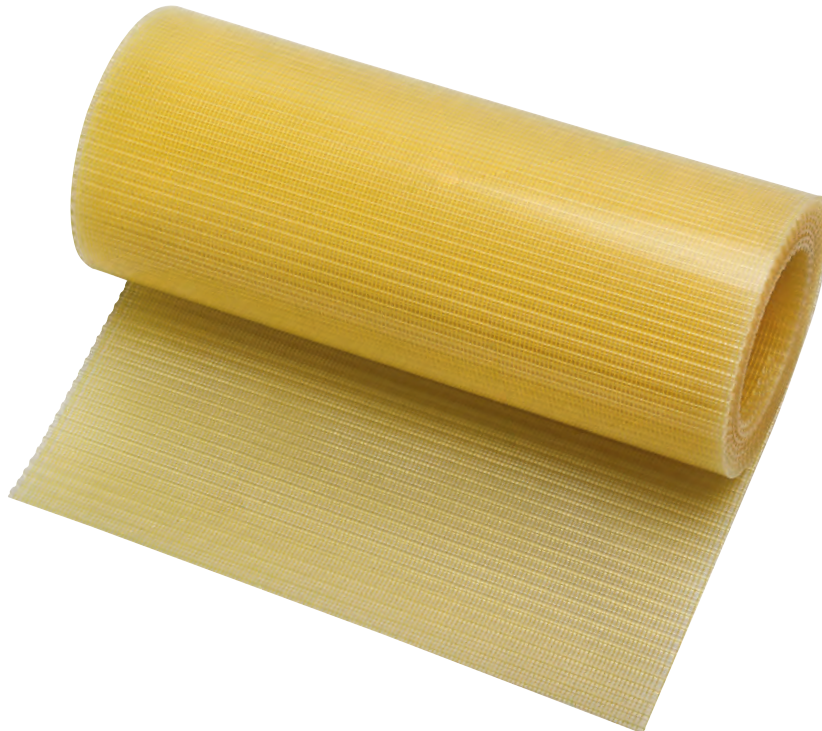
Open or jointed, coated with Silicon, Rubber, PU or PVC backings, perforated or grooved with complex design, and equipped with a wide range of tracking guides and profiles of different shapes and dimensions, ELATECH® SYNCRO-MAX® Extra-wide Belts offer the best solution for a great number of applications such as the production of baby diapers and feminine hygiene products and the production of tires as well as in many other industrial fields like food, tobacco, metal, wood, glass, and of course conveying and packaging.

## Product overview

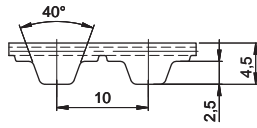
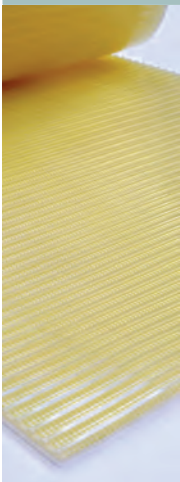
- Natural colour PU compound material
- High durability
- Cut resistant
- Grease, chemicals and water resistant
- Non-marking
- Kevlar (Aramid) parallel cord reinforcement
- No cords exposure on belt edges
- Even cord tension

## Available options

- FDA-compliant PU compound
- PAZ/PAR for noise reduction
- Tracking guides on teeth and/or on back
- Silicon, PU, PVC and rubber backings
- Wide range of cleats, flights and profiles
- Perforation by high precision water-jet cutting technology



# SYNCRO-MAX® W-T10



## Belt characteristics

- Polyurethane timing belt with Aramid tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Natural colour PU compound 92 Sh A
- Standard roll length = 50 m

- Width tolerance:  $\pm 1,0$  [mm]
- Thickness tolerance:  $\pm 0,3$  [mm]

## Technical Data

Belt width b [mm]	Allowable tensile load Type M $F_{Tzul}$ [N]	Allowable tensile load Type V $F_{Tzul}$ [N]	Breaking load Type M $F_{Br}$ [N]	Specific spring rate $C_{spez}$ [N]	Weight [kg/m]
200	8140	4070	31159	1017500	0,76
250	10210	5105	39088	1276250	0,95
300	12280	6140	47016	1535000	1,14
350	14360	7180	54945	1795000	1,33
400	16430	8215	62874	2053750	1,52
450	18500	9250	70802	2312500	1,71
500 / 510	20570	10285	78731	2571250	1,90

## Flexibility

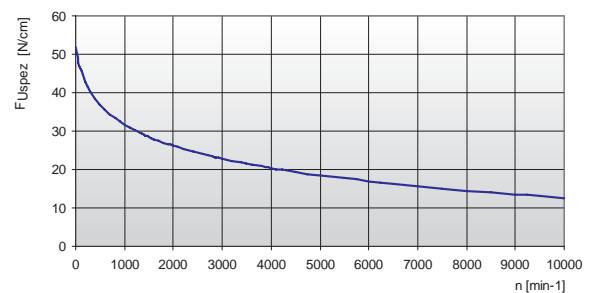
Minimum pulley number of teeth and minimum idler diameter	Type of cord	
	ARAMID	
 Drive without reverse bending	Timing pulley $z_{min}$	15
	Flat idler running on belt teeth $d_{min}$	60 mm
 Drive with reverse bending	Timing pulley $z_{min}$	20
	Flat idler running on belt back $d_{min}$	60 mm

Other widths are available on request.

## Tooth shear strength

rpm	$F_{Uspez}$ [N/cm]	rpm	$F_{Uspez}$ [N/cm]	rpm	$F_{Uspez}$ [N/cm]	rpm	$F_{Uspez}$ [N/cm]
0	51,80	800	33,34	1900	26,53	4500	19,40
20	50,32	900	32,44	2000	26,12	5000	18,51
40	49,04	1000	31,63	2200	25,34	5500	17,70
60	47,92	1100	30,89	2400	24,63	6000	16,97
80	46,95	1200	30,21	2600	23,97	6500	16,29
100	46,11	1300	29,58	2800	23,36	7000	15,66
200	42,75	1400	28,99	3000	22,78	7500	15,07
300	40,28	1440	28,76	3200	22,25	8000	14,52
400	38,36	1500	28,44	3400	21,74	8500	14,00
500	36,80	1600	27,92	3600	21,27	9000	13,51
600	35,49	1700	27,43	3800	20,81	9500	13,05
700	34,35	1800	26,97	4000	20,39	10000	12,61

## Tooth shear strength / rpm

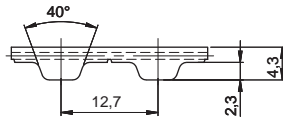
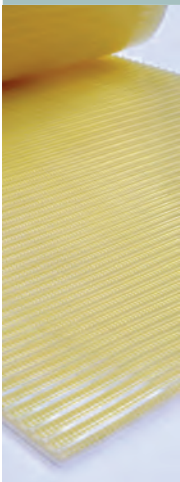


The specific load  $F_{Uspez}$  is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions. This force is related to the drive rpm. The total load  $F_u$  transmissible by the belt in the drive is calculated by:

$$F_u \text{ [N]} = F_{Uspez} \cdot z_e \cdot b$$

**Note:** Ultimate tensile strengths are listed for reference purposes only. The values listed above are a theoretical calculation based on average cord strength and may not represent actual tensile test results.

- $F_u$  [N] = peripheral force
- $F_{Uspez}$  [N/cm] = specific load
- $z_e$  = number of teeth in mesh in the small pulley
- $z_{emax}$  = max. no of teeth in mesh to be considered for the calculation of the drive = 12 for ELATECH® M
- $z_{emax}$  = 6 for ELATECH® V
- $b$  [cm] = belt width in cm



**Belt characteristics**

- Polyurethane timing belt with Aramid tension cord
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 1/2" = 12,7 mm
- Natural colour PU compound 92 Sh A
- Standard roll length = 50 m

- Width tolerance: ±1,0 [mm]
- Thickness tolerance: ±0,3 [mm]

**Technical Data**

Belt width b Code / mm	Allowable tensile load Type M F <sub>Tzul</sub> [N]	Allowable tensile load Type V F <sub>Tzul</sub> [N]	Breaking load Type M F <sub>Br</sub> [N]	Specific spring rate C <sub>spez</sub> [N]	Weight [kg/m]
8 / 203,2	8140	4070	31159	1017500	0,70
10 / 254	10210	5105	39088	1276250	0,90
12 / 304,8	12280	6140	47016	1535000	1,05
14 / 355,6	14360	7180	54945	1795000	1,24
16 / 406,4	16430	8215	62874	2053750	1,42
18 / 457,2	18500	9250	70802	2312500	1,60
20 / 508	20570	10285	78731	2571250	1,80

**Flexibility**

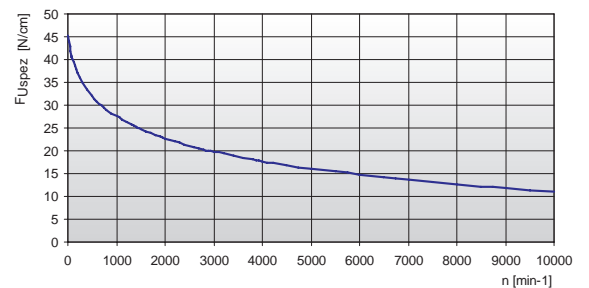
Minimum pulley number of teeth and minimum idler diameter	Type of cord	
	ARAMID	
 Drive without reverse bending	Timing pulley z <sub>min</sub>	14
	Flat idler running on belt teeth d <sub>min</sub>	60 mm
 Drive with reverse bending	Timing pulley z <sub>min</sub>	20
	Flat idler running on belt back d <sub>min</sub>	80 mm

Other widths are available on request.

**Tooth shear strength**

rpm	F <sub>Uspez</sub> [N/cm]	rpm	F <sub>Uspez</sub> [N/cm]	rpm	F <sub>Uspez</sub> [N/cm]	rpm	F <sub>Uspez</sub> [N/cm]
0	45,30	800	29,04	1900	23,11	4500	16,88
20	43,95	900	28,26	2000	22,74	5000	16,11
40	42,78	1000	27,55	2200	22,07	5500	15,41
60	41,77	1100	26,90	2400	21,44	6000	14,76
80	40,88	1200	26,31	2600	20,87	6500	14,17
100	40,11	1300	25,76	2800	20,34	7000	13,62
200	37,22	1400	25,25	3000	19,84	7500	13,11
300	35,07	1440	25,05	3200	19,37	8000	12,63
400	33,41	1500	24,77	3400	18,93	8500	12,18
500	32,05	1600	24,32	3600	18,51	9000	11,75
600	30,90	1700	23,89	3800	18,12	9500	11,35
700	29,91	1800	23,49	4000	17,75	10000	10,96

**Tooth shear strength / rpm**



The specific load F<sub>Uspez</sub> is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions. This force is related to the drive rpm. The total load F<sub>u</sub> transmissible by the belt in the drive is calculated by:

$$F_u [N] = F_{Uspez} \cdot z_e \cdot b$$

**Note:** Ultimate tensile strengths are listed for reference purposes only. The values listed above are a theoretical calculation based on average cord strength and may not represent actual tensile test results.

- F<sub>u</sub> [N] = peripheral force
- F<sub>Uspez</sub> [N/cm] = specific load
- z<sub>e</sub> = number of teeth in mesh in the small pulley
- z<sub>emax</sub> = max. no of teeth in mesh to be considered for the calculation of the drive = 12 for ELATECH® M
- z<sub>emax</sub> = 6 for ELATECH® V
- b [cm] = belt width in cm