

weldable Round- and V-belts Special profiles

Product overview, applications, features and accessories



“ Behabelt specializes in designing and extruding a high quality line of thermoplastic profiles. Our portfolio includes round and V profiles, with and without reinforcement as well as a wide variety of special profiles. Customer specific custom profiles can be produced efficiently and at a low cost due to an in house tool shop and state-of-the-art extrusions lines. ”

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Extruded thermoplastic profiles in conveying and material handling

Many products large and small are manufactured, packaged and shipped on highly automated Industrial processing equipment. Efficient and reliable material flow through the manufacturing processes requires a wide range of conveying solutions.

Round and V-profiles from Behabelt can be ordered in rolls and fabricated to the final dimensions or mounted and welded on site with our own dedicated tools. Our complete line of Behabelt welding tools are quick and easy to use minimizing down time on repairs.

BELT PROFILES AND SPECIAL CHARACTERISTICS FOR YOUR APPLICATION

Behabelt processes high-grade PU and TPE materials that guarantee optimal performance and longevity in demanding applications. This includes FDA/EU compliant compounds in a broad spectrum of shore hardness. Each material composition can be enhanced

with special features in order to optimize your product for the requirements of your specific process. We use brand names to identify the special properties of profiles.

PU soft

describes a highly flexible, non-slip and wear resistant compound for profiles with a hardness of 65° Shore A. Perfectly suited for applications that require smallest pulley diameters. PUsoft is often used as a silicone alternative.

PU plus

is a special material composition for elevated load capacity and reduced elongation with the same product design and unchanged pulley diameters, compared to products made of standard PU compounds

PU safe

identifies metal and X-ray detectable conveyor belts and profiles. The food industry is increasingly using detectable profiles and belts as additional safety measure to prevent contamination of foodstuff with foreign objects.



INDUSTRIES AND APPLICATIONS

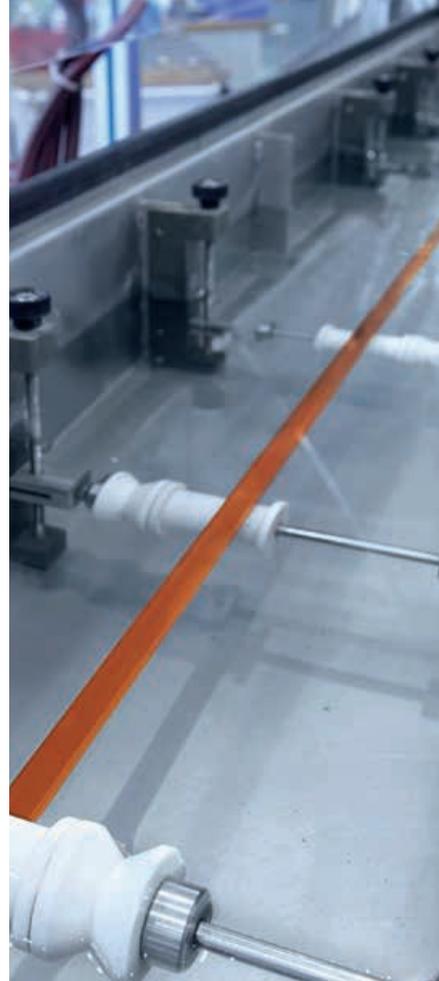
A few common industries and applications that work with round belts, V-belts or special profiles are listed in the table below:

INDUSTRIES	APPLICATIONS
Food (Pizza, sliced Meat or Cheese, processing of Dough, Confectionery) Packaging (Food and Non-Food packaging machines) Wood- and Furniture Paper / Printing Logistics Material Handling Construction materials	Conveying of sliced goods Pizza Topping lines Spreader belts in Confectionery machines Feeder belts in Packaging machines Paper cutting and processing machines General conveying Live-roller drive belts and many others

Materials and special features

BEHAbelt offers a broad spectrum of belting profiles made of PU and TPE. Our products are available in various shore-hardness grades to ensure optimal performance and longevity in power transmission and conveying applications.

At BEHAbelt you get extruded Round belts, V-belts and special profiles with smooth or rough surfaces as following:



OVERVIEW

- PU - from 65° to 95° Shore A
- TPE - from 40° to 63° Shore D
- different color variants - e.g. white, various blue colors, red, orange, green, beige, transparent and many more
- Round belts - from 2mm to 20mm diameter
- V-profiles - from 6x4mm to 32x20mm
- Special profiles like ridge top- or parallel V-belts, Profiles in U- or Rectangular shape and much more
- Profiles re-inforced with Polyester, Aramide, Steel and weldable glass fiber

MATERIAL CHARACTERISTICS

The following special features can be integrated into almost every product or are available as standard:



FDA/EC conformity for structured surfaces.
FDA/EC/USDA conformity for smooth surfaces.



By adding special additives, electrostatic charge is automatically dissipated via the sliding base.



Metal detectable belts for utmost food safety. These products are part of the PU SAFE product line



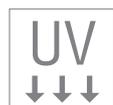
X-ray detectable belts for utmost food safety. These products are part of the PU SAFE product line



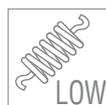
Hydrolysis-resistant belt profiles for use in warm, humid and wet environments



Microbe-resistant belt profiles provide no breeding ground for microorganisms.



Special additives increase the resistance of the belt profiles to UV-C waves, e.g. in disinfection processes



The unique "PUplus" material compound optimizes the elongation behavior of the belt profiles, i.e. the dimensional stability, in critical applications.



Belt profiles with this property are retained in low-temperature or deep-freeze applications their flexibility and product properties.



The 2-component production enables the combination of different material hardnesses, properties and colours.



BEHAbelt is offering a broad spectrum of possible and even individual color options.

Customized profiles

BEHAbelt offers the exclusive and fast understanding of your tailor-made profile.

If a standard profile does not fit to your application, BEHAbelt is ready to develop customer specific profiles - based on your input and design requirements!

QUICK TURN AROUND ON SPECIAL DESIGNED PROFILES

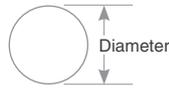
- Many years of experience, in-house tool-shop, individual consultation and development of customer specific profiles, belts and coatings.
- Optimized for your application
- Based on your design

ECONOMICAL ADVANTAGES

- Exclusivity / Protect the After Sales Market and Sparepart Business
- Special material combinations possible
- Optimize your application through tailor-made profile geometry
- Increased longevity and functionality
- Dedicated welding technology



Round belts



The broad portfolio of BEHbelt PU and TPE round belts enables the optimal selection of the most suitable product for conveying or power-transmission applications.

Product		PU60A SOFT		PU70A		PU75A		PU75A PLUS		PU80A		PU80A SAFE		PU80A			
Hardness / Shore		65°A		76°A		80°A		80°A		84°A		84°A		84°A			
Pretension		5...max. 10%		4...max. 8%		4...max. 8%		3...max. 6%		4...max. 8%		3...max. 6%		(0,5)...max. 2%			
approx. CoF (steel) - μ		0,90		0,75		0,70		0,70		0,55 / 0,65 / 0,65 / 0,65		0,65		0,65			
Surface		smooth		smooth		smooth		matt		slightly rough / smooth		smooth		smooth			
FDA/EC		yes		yes		yes		no		yes		yes		yes			
Colors																	
Special feature						HY, low temperature		low elongation		HY		metal detectable					
Reinforcement														Polyester			
Profile \varnothing		Pulley \varnothing		Fmax/belt		Pulley \varnothing		Fmax/belt		Fmax/belt		Pulley \varnothing		Fmax/belt		Fmax/belt	
mm	inch	mm	kg	mm	kg	mm	kg	kg	mm	kg	kg	mm	kg	kg	mm	kg	kg
2,0	5/64					10	0,8	0,9	15	1,1	0,6						
3,0	1/8	10	0,9	15	1,4	20	1,8	1,8	25	2,1	1,6						
4,0	5/32	20	1,5	25	2,5	30	3,1	3,6	35	4,1	2,9						
4,8	3/16			30	3,5	35	4,5	5,2	40	5,8	4,0						
5,0	1/5	30	2,2	35	3,6	40	4,9	5,7	45	6,2	5,6						
6,0	7/32	40	3,4	45	5,6	50	7,3	8,1	55	9,0	6,4	55 (75)	9,0	(18,9)			
6,3	1/4					55	8,0	8,9	60	10,1	6,9	60 (80)	10,1	(21,2)			
7,0	9/32					60	9,8	11,1	65	12,4	9,3	65 (85)	12,4	(25,4)			
8,0	5/16	50	6,0	55	9,9	65	12,9	14,4	75	16,1	12,0	80 (105)	16,1	(33,8)			
9,5	3/8	65	8,5			75	18	20,4	90	22,7	17,0	90 (120)	22,7	(47,7)			
10,0	7/16	70	9,4			80	19,6	22,6	95	25,3	18,9	100 (130)	25,3	(53,1)			
12,0	15/32					90	29,4		110	36,4	27,2	110 (145)	36,4	(76,5)			
12,5	1/2					100	31,4		115	39,4	29,4	115 (150)	39,4	(82,8)			
14,3	9/16								130		37,0	130 (165)	49,4	(104,0)			
15,0	19/32					120	45,1		140	56,7	42,4						
18,0	3/4						64,7		170	81,5							
20,0	25/32						80,4		180	100,6		190 (245)	100,6	(211,5)			

Product		PU90A		PU90A			PU95A			PU95A		TPE40D			
Hardness / Shore		92°A		92°A			95°A			95°A		40°D/95°A			
Pretension		3...max. 5%		0,5...max. 2%			0,5...max. 2%			0,5...max. 2%		2...max. 4%			
approx. CoF (steel) - μ		0,50		0,50			0,35			0,35		0,50			
Surface		smooth		smooth			smooth / slightly rough			smooth		smooth			
FDA/EC		no		no			no			no		yes			
Colors															
Special feature															
Reinforcement				Polyester			Aramid			Steel					
Profile \varnothing		Pulley \varnothing		Fmax/belt		Pulley \varnothing		Fmax/belt		Fmax/belt		Pulley \varnothing		Fmax/belt	
mm	inch	mm	kg	mm	kg	mm	kg	kg	mm	kg	kg	mm	kg	kg	
2,0	5/64	20	1,9									20	1,9		
3,0	1/8	30	3,4									30	4,1		
4,0	5/32	40	5,9									40	7,6		
4,8	3/16	50	8,5									50	10,8		
5,0	1/5	55	9,3									55	11,7		
6,0	7/32	65	13,3	70 (90)	13,4	(22,5)						65	17,0		
6,3	1/4	70	14,6	75 (100)	14,8	(26,3)						70	18,7		
7,0	9/32	75	18,3	80 (105)	18,4	(37,5)						75	23,0		
8,0	5/16	85	23,8	90 (115)	24,0	(48,8)						85	30,1		
9,5	3/8	95	33,3	105 (135)	33,6	(56,3)	120 (160)	35,5	(210,0)	380	250,0	95	42,8		
10,0	7/16	105	37,3	110 (145)	37,6	(60,0)	125 (165)	39,3	(210,0)			105	47,1		
12,0	15/32	120	53,3	125 (165)	53,8	(101,3)	150 (195)	56,6	(210,0)			120	67,9		
12,5	1/2	125	58,0	130 (170)	58,6	(108,8)	160 (205)	61,6	(210,0)			125	74,0		
15,0	19/32	150	83,6	155 (200)	84,5	(172,5)						150	106,5		
18,0	3/4	185	119,8	190 (245)	121,0	(225,0)						185	151,4		
20,0	25/32	200	148,3	210 (270)	-	-						200	188,2		

General Advise:

Data and specifications valid for round belts at temperature of 20°C (±10°C) | Indication of minimal pulley diameter applies to neutral layer of the belt (for products with overlap-welding +30%)
 Pre-tension: for products with overlap-welding the indicated min.-value applies | „HY“ in field „Special Feature“ stands for „Hydrolysis Resistance“

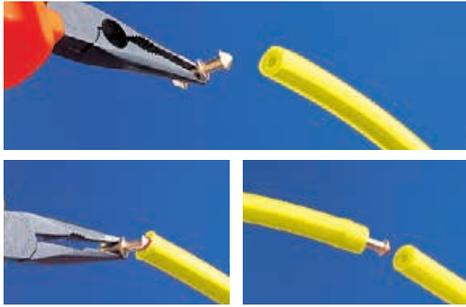
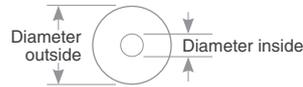
Extruded round belts are available in various shore-hardness grades and diameters. We are offering food compliant products and belts with special features for demanding applications.

Round belts can be quick and reliable welded on-site with our dedicated BEHbelt welding tools.

Product		PU85A			PU85A PLUS		PU85A			PU85A		PU85A			
Hardness / Shore		88°A			88°A		88°A			88°A		88°A			
Pretension		4...max. 8%		3...max. 6%	3...max. 6%		(0,5)...max. 2%			(0,5)...max. 2%		(0,5)...max. 2%			
approx. CoF (steel) - μ		0,60 / 0,60 / 0,45		0,60	0,45		0,60			0,60 / 0,45		0,60 / 0,45			
Surface		smooth / smooth / rough		smooth		rough		smooth			smooth / rough		smooth / rough		
FDA/EC		yes / no / no		no		no		yes			no		no		
Colors															
Special feature		HY		antistatic		low elongation		HY			weldable reinforcement				
Reinforcement								Polyester			Glass fibre PU		Aramid		
Profile \varnothing		Pulley \varnothing	Fmax/belt	Fmax/belt	Fmax/belt	Pulley \varnothing	Fmax/belt (Standard)	Fmax/belt (Overlap)	Pulley \varnothing	Fmax/belt (Standard)	Pulley \varnothing	Fmax/belt (Standard)	Fmax/belt (Overlap)		
mm	inch	mm	kg	kg	kg	mm	kg	kg	mm	kg	mm	kg	kg		
2,0	5/64	15	1,2		1,3										
3,0	1/8	25	2,7	2,3	3,0										
4,0	5/32	35	4,7	4,1	5,3										
4,8	3/16	45	6,7		7,5										
5,0	1/5	50	7,1	6,2	8,1						55	7,1	-		
6,0	7/32	60	10,4	9,1	11,7	60 (80)	9,7	(21,6)			60 (80)	10,4	(23,0)		
6,3	1/4	65	11,4		12,8	65 (85)	10,7	(23,9)			65 (85)	11,4	(25,2)		
7,0	9/32	70	14,1		16,0	70 (90)	13,1	(29,3)			70 (90)	14,1	(31,1)		
8,0	5/16	80	18,4		20,7	80 (110)	17,2	(38,3)	85	19,8	80 (110)	18,4	(40,5)		
9,5	3/8	95	25,9		29,3	95 (125)	24,4	(54,5)	100	28,1	95 (125)	25,9	(57,2)		
10,0	7/16	100	28,6		32,5	100 (130)	26,9	(59,9)	105	31,0	100 (130)	28,6	(63,0)		
12,0	15/32	120	40,8			120 (155)	38,8	(86,4)	125	44,7	120 (155)	40,8	(90,0)		
12,5	1/2	125	44,9			125 (165)	42,2	(94,1)	130	48,6	125 (165)	44,9	(99,0)		
14,3	9/16								150	63,4	145 (180)	59,0	(130,1)		
15,0	19/32	150	64,9			150 (195)	60,8	(135,5)	155	69,9	150 (195)	64,9	(143,1)		
18,0	3/4	180	92,8						195	n/a	190 (245)	92,8	(204,8)		
20,0	25/32	220	115,3						205	n/a	200 (260)	115,3	(254,3)		

Product		TPE55D		TPE55D			TPE55D		TPE55D		TPE63D		TPE63D	
Hardness / Shore		55°D/100°A		55°D/100°A			55°D/100°A		55°D/100°A		63°D/>100°A		63°D/>100°A	
Pretension		2...max. 4%		(0,5)...max. 2%			(0,5)...max. 2%		max. 0,5%		(0,5)...max. 2%		(0,5)...max. 2%	
approx. CoF (steel) - μ		0,35		0,35			0,35		0,35		0,30		0,30	
Surface		smooth		smooth			smooth		smooth		smooth		smooth	
FDA/EC		yes		yes			yes		yes		yes		yes	
Colors														
Special feature											UV resistance			
Reinforcement				Polyester			Aramid		Steel		Polyester		Aramid	
Profile \varnothing		Pulley \varnothing	Fmax/belt	Pulley \varnothing	Fmax/belt (Standard)	Fmax/belt (Overlap)	Fmax/belt (Overlap)	Pulley \varnothing	Fmax/belt (CRIMP)	Pulley \varnothing	Fmax/belt (Standard)	Fmax/Riemen (Overlap)		
mm	inch	mm	kg	mm	kg	kg	kg	mm	kg	mm	kg	kg		
2,0	5/64	30	2,4											
3,0	1/8	35	5,6											
4,0	5/32	50	9,9											
4,8	3/16	60	14,4											
5,0	1/5	65	15,7											
6,0	7/32	75	22,4	75 (100)	22,4	(45,0)								
6,3	1/4	80	24,8	80 (105)	24,8	(48,8)								
7,0	9/32	90	30,4	90 (115)	30,4	(60,0)								
8,0	5/16	100	40,0	100 (130)	40,0	(71,3)								
9,5	3/8	120	56,0	120 (160)	56,0	(90,0)	(225,0)	380	(250,0)	140 (185)	59,4	(225,0)		
10,0	7/16	125	62,9	125 (165)	62,9	(97,5)	(225,0)	380	(250,0)	150 (195)	67,0	(225,0)		
12,0	15/32	150	90,6	150 (195)	90,6	(127,5)	(225,0)	380	(250,0)	190 (245)	96,0	(225,0)		
12,5	1/2	160	97,6	160 (205)	97,6	(135,0)	(225,0)	380	(250,0)	200 (260)	102,8	(225,0)		
15,0	19/32	180	140,8	180 (240)	140,8	(206,3)								
18,0	3/4	240	203,2	240 (320)	203,2	(243,8)								
20,0	25/32	300	251,2	300	-	-								

Hollow round belts



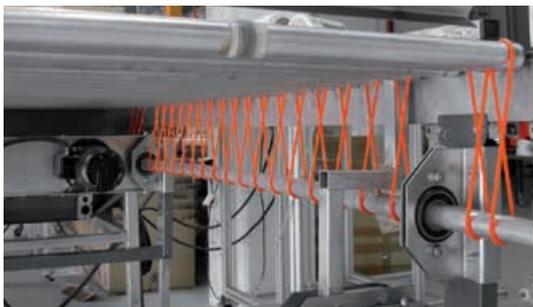
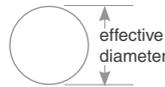
Hollow round belts should be generally installed with welded joining. However, in case of emergency repairs, they can be fixed with fitting-connectors to reduce downtime.

Product	PU75A		PU85A			PU90A		
Hardness / Shore	80°A		88°A			92°A		
Pretension welded:	4...max. 8%		4...max. 8%			3...max. 5%		
Fitting connector:	max. 3...6%		max. 3...6%			max. 2...4%		
approx. CoF (steel) - μ	0,70		0,60 / 0,45		0,60	0,50		
Surface	smooth		smooth / rough		smooth	smooth		
FDA/EC	yes	no	no		yes	no		
Colors								
Special feature	low temperature, HY					HY		
Diameter Ø mm	Pulley Ø mm	Fmax/belt kg	Pulley Ø mm	Fmax/belt kg	Fmax/belt kg	Pulley Ø mm	Fmax/belt kg	
Outside	Inside							
4,8	1,8	30	4,5	35	5,3	5,1	45	8,6
6,3	2,5	45	8,0	55	9,4	9,0	60	12,4
8,0	3,2	55	12,9	65	15,3	14,4	75	19,0
9,5	3,8	65	18	75	20,4	20,6	85	28,5
12,5	5,2	85	31,4	100	36,7	35,0	115	47,5
15,0	5,2	100	45,1	120	57,1	53,5	140	72,3



Brass fitting

Twisted round belt (with hook joint)



Twisted round belts with hook joint are applicable as live roller drive belts, whereas several belts are installed on on shaft. The mechanical hook joint enables quick and easy assembling. Twisted round belts are available in fabricated length from 250mm to 710mm.

Further dimensions on request.

Product	PU70A		PU75A PLUS		
Hardness / Shore	76°A		80°A		
Pretension	8...max. 10%		6...max. 8%		
approx. CoF (steel) - μ	0,75		0,70		
Surface	smooth		smooth (matt)		
FDA/EC	yes		no		
Colors					
Special feature			low elongation		
Profile Ø	Pulley Ø mm	Fmax/belt kg	Pulley Ø mm	Fmax/belt kg	
mm	inch				
5,0	1/5	40	2,6	40	5,9

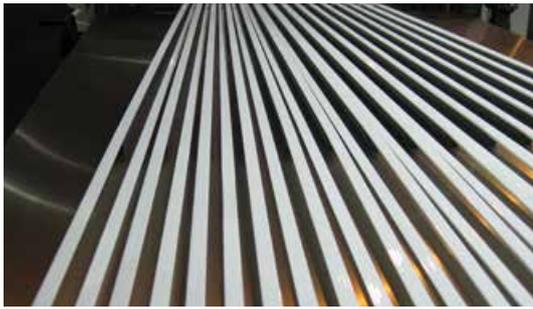
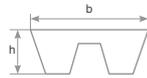


Measure the correct belt length tip to tip (production length Lf), without the hook

General Advise:

Data and specifications valid for round belts at temperature of 20°C (±10°C) | Indication of minimal pulley diameter applies to neutral layer of the belt | „HY“ in field „Special Feature“ stands for „Hydrolysis Resistance“

Twin-V-belts



Twin-V-belts are an ideal solution for the reliable conveying of product strands e.g. on spreader applications in Food (Bakery or Confectionery) processing. Our portfolio includes various design and shore hardness options as well as reinforced products.

General Advise:

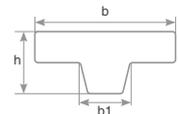
Data and specifications valid for Twin-V-belts at temperature of 20°C (±10°C) | Indication of minimal pulley diameter applies to neutral layer of the belt (for products with overlap-welding +30%) | Pre-tension: for products with overlap-welding the indicated min.-value applies

Product	PU75A		PU80A		PU85A			PU95A		
Hardness / Shore	80°A		84°A		88°A			95°A		
Pretension	3...max. 6%		3...max. 6%		0,5...max. 2%			3...max. 5%		
approx. CoF (steel) - μ	0,70		0,65		0,60			0,45		
Surface	smooth		smooth		smooth			smooth		
FDA/EC	no		yes		no			yes		
Colors										
Special feature										
Reinforcement					Polyester					
Dimension w x h	Pulley ∅	Fmax/belt	Pulley ∅	Fmax/belt	Fmax/belt (Standard)	Pulley ∅	Fmax/belt (Standard)	Fmax/belt (Overlap)	Pulley ∅	Fmax/belt
mm	mm	kg	mm	kg	kg	mm	kg	kg	mm	kg
24 x 6,8			60	28,8					100	62,1
21 x 8	60	23,0	80	28,8	28,8					
30 x 8	60	45,5	80	45,6	45,6	100 (130)	69,8	(102,6)		

T-Profiles



T-profiles are a very good solution to convey different light-weight goods and food product. On such conveyors there are usually several T-profile belts installed parallel to each other. The V-guide on the running side ensures a straight and precise movement. BEHAbelt offers T-profiles in various geometries, shore-hardness and color combinations.

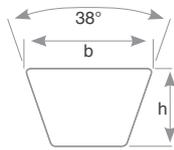


Product	PU65A	PU70A	PU75A	PU80A	PU85A	PU80A	PU80A	PU85A	PU85A
Hardness / Shore	72°A	76°A	80°A	84°A	88°A	84°A	84°A	88°A	88°A
Pretension	4...max. 8%	4...max. 8%	4...max. 8%	4...max. 8%	3...max. 6%	4...max. 8%	4...max. 8%	3...max. 6%	3...max. 6%
approx. CoF (steel) - μ	0,75	0,70	0,70	0,65	0,65	0,65	0,65	0,60	0,60
Surface	smooth	smooth / ribbed	smooth / embossed						
FDA/EC	yes	no							
Colors									
Special feature	HY		HY		HY			HY	
Reinforcement									
Dimension / mm	15 x 5	9 x 4	8 x 5	9,5 x 3,5		10 x 4,5	15 x 5	25 x 5	
Pulley ∅ / mm	25	25	35	30	40	40	40	50	100
Fmax/belt / kg	6,5	4,5	6,0	5,2	6,0	8,1	9,6	15,2	16,0
									21,4

General Advise:

Data and specifications valid for T-profiles at temperature of 20°C (±10°C) | Indication of minimal pulley diameter applies to neutral layer of the belt | „HY“ in field „Special Feature“ stands for „Hydrolysis Resistance“

V-belts



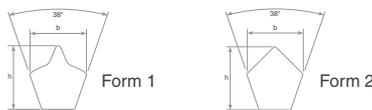
V-belts can be found in several power-transmission and conveying applications.

Extruded V-belts are often applied as guiding profile on the running side of conveyor belts. BEHAbelt offers high quality materials, on request even with special features like UV-C resistance, detectable or antistatic.

Product	PU75A		PU75A		PU75A	
Hardness / Shore	80°A		80°A		80°A	
Pretension	4...max. 8%		0,5...max. 2%		0,5...max. 2%	
approx. CoF (steel) - μ	0,70		0,70		0,70	
Surface	smooth		smooth		smooth	
FDA/EC	yes / no		no		no	
Colors						
Special feature			weldable reinforcement			
Reinforcement			Glass fibre PU		Polyester	
Profile dimension	Pulley \varnothing	Fmax/belt	Pulley \varnothing	Fmax/belt	Pulley \varnothing	Fmax/belt (Standard) / Fmax/belt (Overlap)
mm	mm	kg	mm	kg	mm	kg / kg
6 x 4 (Y)	35	4,9				
8 x 5 (M)	40	8,2				
10 x 6 (Z)	50	12,2				
13 x 8 (A)	80	20,6	110	25,3	90	20,6 (41,2)
17 x 11 (B)	100	37,2	140	45,0	120	37,2 (83,8)
22 x 14 (C)	145	60,8	180	66,2	160	60,8 (127,5)
32 x 20 (D)	210	127,4				

Product	PU85A		PU90A		PU90A			PU95A			TPE40D	
Hardness / Shore	88°A		92°A		92°A			95°A			40°D/95°A	
Pretension	0,5...max. 2%		3...max. 5%		0,5...max. 2%			0,5...max. 2%			2...max. 4%	
approx. CoF (steel) - μ	0,60		0,50		0,50			0,45			0,50	
Surface	smooth		smooth		smooth			smooth			smooth	
FDA/EC	no		no		no			yes			yes	
Colors												
Special feature	weldable reinforcement											
Reinforcement	Glass fibre PU				Polyester			Polyester				
Profile dimension	Pulley \varnothing	Fmax/belt	Pulley \varnothing	Fmax/belt	Pulley \varnothing	Fmax/belt (Standard)	Fmax/belt (Overlap)	Pulley \varnothing	Fmax/belt (Standard)	Fmax/belt (Overlap)	Pulley \varnothing	Fmax/belt
mm	mm	kg	mm	kg	mm	kg	kg	mm	kg	kg	mm	kg
6 x 4 (Y)												
8 x 5 (M)			60	15,4	60	15,4	(25,7)				70	19,3
10 x 6 (Z)			80	23,0	80	17,5	(37,5)				90	28,9
13 x 8 (A)	125	32,8	105	38,4	105	30,0	(63,8)	115	40,0	(67,5)	115	49,4
17 x 11 (B)	160	55,4	140	69,1	140	53,0	(112,5)	150	72,0	(120,0)	150	87,7
22 x 14 (C)	220	92,4	200	115,2	200	87,7	(187,5)	210	120,0	(202,0)	210	144,5
32 x 20 (D)			320	240,0								

Ridge-top-V-belts



Ridge-top-V-belts by BEHAbelt are made of weldable PU or TPE. They are specially suitable for demanding conveyor applications in tile processing and production of construction materials. This product range is made of durable compounds in different shore-hardness-grades.

Product	PU75A / PU80A		PU75A / PU80A		PU80A		PU80A	
Hardness / Shore	80°A / 84°A		80°A / 84°A		84°A		84°A	
Pretension	3...max. 6%		0,5...max. 2%		3...max. 6%		0,5...max. 2%	
approx. CoF (steel) - μ	0,65		0,65		0,65		0,65	
Surface	smooth (Form 2)		smooth (Form 2)		smooth (Form 2)		smooth (Form 2)	
FDA/EC	no		no		no		no	
Colors								
Special feature	2 compound extrusion		2 compound extrusion					
Reinforcement			Aramid				Polyester	
Profile dimension	Pulley \varnothing	Fmax/belt	Pulley \varnothing	Fmax/belt (Standard)	Pulley \varnothing	Fmax/belt	Pulley \varnothing	Fmax/belt (Standard)
mm	mm	kg	mm	kg	mm	kg	mm	kg
17 x 19	160	48,0	160	48,0				
22 x 25	200	84,0	200	84,0	210	87,6	210	87,6

General Advise:

Data and specifications valid for V-belts at temperature 20°C (±10°C) | Indication of minimal pulley diameter applies to neutral layer of the belt | with horizontal overlap welding, the pulley diameter is not affected | Pre-tension: for products with overlap-welding the indicated min.-value applies | „HY“ in field „Special Feature“ stands for „Hydrolysis Resistance“

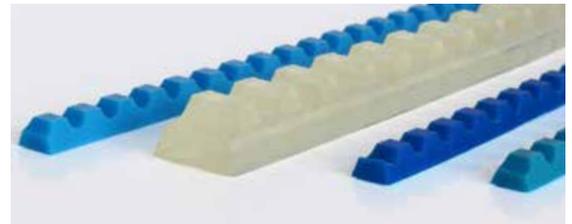
PU80A SAFE		PU80A		PU80A			PU85A		PU85A PLUS		PU85A		
84° A		84° A		84° A			88° A		88° A		88° A		
3...max. 6%		4...max. 8%		0,5...max. 2%			4...max. 8%		3...max. 6%		0,5...max. 2%		
0,65		0,65		0,65			0,60		0,60		0,60		
smooth		smooth		smooth			smooth		matt		smooth		
yes		yes		yes			yes / no		no		no		
													
metal detectable									low elongation				
				Polyester							Aramid		
Pulley Ø	Fmax/belt	Pulley Ø	Fmax/belt	Pulley Ø	Fmax/belt (Standard)	Fmax/belt (Overlap)	Pulley Ø	Fmax/belt	Pulley Ø	Fmax/belt	Pulley Ø	Fmax/belt (Standard)	Fmax/belt (Overlap)
mm	kg	mm	kg	mm	kg	kg	mm	kg	mm	kg	mm	kg	kg
40	4,6	40	6,2				45	6,9	45	7,9			
45	7,6	45	10,3	50	10,3	(21,6)	50	11,6	50	13,2	60	11,6	(25,7)
55	11,6	55	15,4	60	15,4	(32,4)	65	17,5	65	19,9	70	17,5	(37,5)
85	19,6	85	26,3	90	26,3	(54,5)	95	30,0	95	33,8	100	30,0	(63,8)
110	35,0	110	46,9	120	46,9	(98,6)	120	53,0	120	60,3	140	53,0	(112,5)
150	60,8	150	77,0	160	77,0	(150,0)	160	87,7	160	99,3	180	87,7	(187,5)
		220	160,5	260	160,5	(n/a)	275	193,8	275	206,8	275	193,8	(n/a)

TPE55D		TPE55D		
55°D/100°A		55°D/100°A		
2...max. 4%		0,5...max. 2%		
0,35		0,35		
smooth		smooth		
yes		yes		
				
		Polyester		
Pulley Ø	Fmax/belt	Pulley Ø	Fmax/belt (Standard)	Fmax/belt (Overlap)
mm	kg	mm	kg	kg
80	25,6			
110	38,4	110	48,0	(70,0)
130	64,0	130	80,0	(110,0)
180	116,8	180	146,0	(180,0)
250	192,0	250	240,0	(300,0)

Notched design

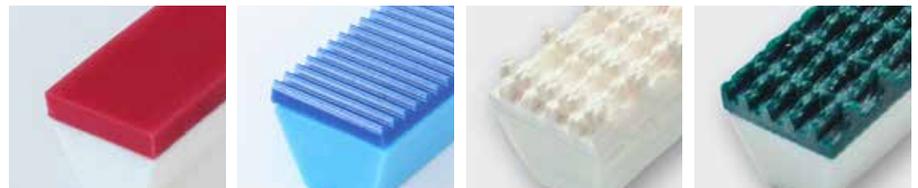
*The minimum pulley diameter is reduced by 25%.

On request we can offer all V-belts in notched design.



Coatings for V-belts

The use of coatings on V-belts allows certain material properties to be achieved, e.g. better grip, accumulation operation or better release of the conveyed material.



PUtex (Alternative for Linatex), red, 55° and 65° Shore A

PU transversal grooves (TGA), ultramarine blue, 84° Shore A, FDA

Supergrip PVC white 65° Shore A, FDA

Supergrip PVC green, 40° Shore A

PU85A		PU85A		PU85A		PU85A		PU85A		PU95A		PU95A	
88° A		88° A		88° A		88° A		88° A		95° A		95° A	
3...max. 6%		3...max. 6%		0,5...max. 2%		0,5...max. 2%		0,5...max. 2%		3...max. 5%		3...max. 5%	
0,60		0,60		0,60		0,60		0,60		0,45		0,45	
smooth (Form 1)		smooth (Form 2)		smooth (Form 2)		smooth (Form 1)		smooth (Form 2)		smooth (Form 1)		smooth (Form 2)	
no		no		no		no		no		no		no	
													
								weldable reinforcement					
				Polyester		Glass fibre PU							
Pulley Ø	Fmax/belt (Standard)	Pulley Ø	Fmax/belt	Pulley Ø	Fmax/belt (Standard)	Pulley Ø	Fmax/belt (Standard)	Pulley Ø	Fmax/belt (Standard)	Pulley Ø	Fmax/belt	Pulley Ø	Fmax/belt
mm	kg	mm	kg	mm	kg	mm	kg	mm	kg	mm	kg	mm	kg
180	53,8	190	59,0	190	59,0	240	78,0	260	85,2	200	97,5	210	106,5
220	90,0	240	100,7	240	100,7	280	130,4	300	146,0	250	163,0	260	182,5

Special profiles



BEHAbelt specializes in customized profiles made of PU and TPE.

Our in house tool shop combined with our technical expertise allows for quick turn around from inception to design and production.

Product	PU75A, PJ2 / PJ3 / PJ4			PU85A PLUS, PJ2 / PJ3 / PJ4			PU75A	PU80A	PU85A	PU80A	PU85A	PU80A
Hardness / Shore	80°A			88°A			80°A	84°A	88°A	84°A	88°A	84°A
Pretension	3...max. 6%			3...max. 6%			4...max. 8%			3...max. 6%	0,5...max. 2%	4...max. 8%
approx. CoF (steel) - μ	0,70			0,60			0,70	0,65	0,60	0,65	0,60	0,65
Surface	smooth			smooth			smooth			smooth	smooth	smooth
FDA/EC	no			no			yes			yes	yes	yes
Colors												
Special feature	low temperature, low elongation			low elongation			vaulted top, HY			additional height		3-ribbed
Reinforcement										Aramid		
Dimension / mm	4,7 x 4 (PJ2)	7 x 4 (PJ3)	9,3 x 4 (PJ4)	4,7 x 4 (PJ2)	7 x 4 (PJ3)	9,3 x 4 (PJ4)	8 x 6,5 (M)			10 x 8		17 x 11 (B) 22 x 14 (C)
Pulley \varnothing / mm	30			40			40	50	55	80	85	110 150
Fmax/belt / kg	7,2	10,5	14,4	10,3	15,0	20,6	10,0	11,0	13,2	18,6	19,9	43,8 72,0

Product	PU80A	PU85A	T-V-belt PU90A	TPE55D	TPE55D <i>sluPower</i>	TPE55D	PU85A	PU95A
Hardness / Shore	84°A	88°A	92°A	55°D/100°A	55°D/100°A	55°D/100°A	88°A	95°A
Pretension	3...max. 6%		0,5...max. 2%	2...max. 4%		2...max. 4%	4...max. 8%	3...max. 5%
approx. CoF (steel) - μ	0,65	0,60	0,50	0,35		0,35	0,60	0,45
Surface	smooth		smooth	smooth		smooth	smooth	smooth
FDA/EC	no		no	yes		yes	yes	yes
Colors								
Special feature	Doppelkeil			additional height		vaulted top	with chamfer	
Reinforcement			Aramid			Polyester	Polyester	
Dimension / mm	17 x 13,5		17 x 13 x 25 22 x 16 x 25	22 x 16		17 x 11,3	17 x 11,4	
Pulley \varnothing / mm	150	160	210 280	280		175 180	175 180	
Fmax/belt / kg	61,6	69,7	90,2 135,4	299,5		119,2 119,2 / (150,0)	116,0 116,0 / (150,0)	

Product	3L T-Top PU80A	Crown Top PU80A	Wing Top PU80A	T-Profil PU80A	Corn belt PU80A	Pear Profile PU80A	PU85A (French fries)	Rectangle PU85A
Hardness / Shore	84°A	84°A	84°A	84°A	84°A	84°A	88°A	88°A
Pretension	3...max. 6%		3...max. 6%	3...max. 6%	3...max. 6%	0,5...max. 2%	3...max. 6%	4...max. 8%
approx. CoF (steel) - μ	0,65		0,65	0,65	0,65	0,65	0,60	0,60
Surface	smooth		smooth	smooth	smooth	smooth	smooth	smooth
FDA/EC	yes		yes	yes	yes	yes	yes	no
Colors								
Special feature				half-round	w/o / with serrations		HY	
Reinforcement						Polyester		
Dimension / mm	14,3 x 7,5	14,3 x 6,3	17 x 11 x 16,5	19,2 x 5,5	33 x 8	28 x 29	11,8 x 11,8 18 x 11,8	22 x 8
Pulley \varnothing / mm	80	80	125	40	50	350	120 120	95
Fmax/belt / kg	17,3	13,9	35,1	15,6	45,6	163,6	35,9 43,9	63,8

General Advise:

Data and specifications valid for special profiles at temperature 20°C ($\pm 10^\circ\text{C}$) | Indication of minimal pulley diameter applies to neutral layer of the belt | with horizontal overlap welding, the pulley diameter is not affected | Pre-tension: for products with overlap-welding the indicated min.-value applies | „HY“ in field „Special Feature“ stands for „Hydrolysis Resistance“

Pulley shapes

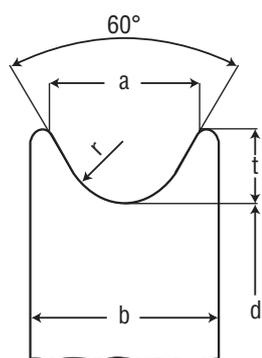
“What impact has the pulley diameter on the belt?”

The diameter of pulleys have an important influence on the life-time of belts. The catalogue values for minimum pulley diameters should be considered. Diameters below recommendation, usually reduce the service life of the belt due to an increased number of bending cycles, that accelerates material fatigue. Our minimum pulley diameter indications are based on the neutral layer of the belt, at 180° wrap angle. This is the contact angle, on which the belt is guided around the pulley.

Our values are recommendations and may allow slight variation in specific circumstances. Durability and material fatigue are influenced by the conveyor design, bending frequency and the actual application/process environment.

Our recommendations are based on the assumption of a bending every 4 seconds on a conveyor with 2m center-distance and constant speed of 0.5m/s. For specific calculation support, please contact our application engineers or hand in a dully filled technical inquiry form.

Recommended pulleys for round belts

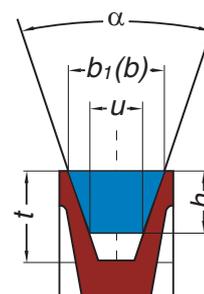


Profile \varnothing mm	2	3	4	4,8	5	6	6,3	7	8	9,5	10	12	12,5	15	18	20
a	4,5	5,5	7	8	8	10	10	11	12	14,5	15	18	18,5	23	28	30
b	6,5	8	10	12	12	14	14	15	16	19	19	22	23,0	27	32	36
t	2,5	3	3,5	4	4	5	5	5,5	6	7	7,5	9	9	12	14	15
r	1,4	1,9	2,5	3	3	3,5	3,5	4	4,5	5,5	5,5	6,5	7	8	9,5	11

Please select the appropriate minimum pulley diameter according to the different PU/Polyester qualities. The best qualified materials for pulleys are steel, high-alloyed steel, aluminium or Polyamid when it comes to plastic. Please keep in mind the low friction coefficient μ when using plastic material.

Pulleys for V-belts

Profile according to DIN 2215	6	8	10	13	17	22	32
Global standard acc. to ISO 4184	Y	M	Z	A	B	C	D
Upper width b (mm)	6	8	10	13	17	22	32
Height h (mm)	4	5	6	8	11	14	20
Lower width u (mm)	3,3	4,55	5,9	7,5	9,4	12,35	18,25
Pulley angle α	$\angle 34 - 38^\circ$						
Groove width b1	6	8	10	13	17	22	32
	→ depending on how much the profile should stick out above the upper pulley edge						
Groove depth t (mm)	h + 2,0 mm						



For BEHAbelt V-belts according to DIN 2215 / ISO 4184 pulleys for V-belts according to DIN 2217/ISO 4183 have to be used.

Belt pulleys / Guide rails

Design of pulleys for Round belts and T-Profiles

Considering the pairing of belts and pulleys it is generally recommended to work with materials and/or surface that create sufficient friction to PU/TPE e.g. Aluminium or Steel. This is important to ensure proper power transmission. Beware that Aluminium can lead to discoloration (blackening) of belts. All other pulleys, guiding elements or slider beds should be made of low-friction materials for example PE or HDPE.

Grooved pulleys for round belts:

For the sake of conveyor design simplicity these are often the same pulleys as used for V-belts. However, V-belt pulleys are not ideal as the dedicated grooves can literally clamp a round belt and lead to premature damages. Therefore, a special round belt pulley is recommended. Different to a V-belt, round belts need to contact the flank and the bottom of the groove, which must be considered when manufacturing respective pulleys.

Pulleys for T-Profiles:

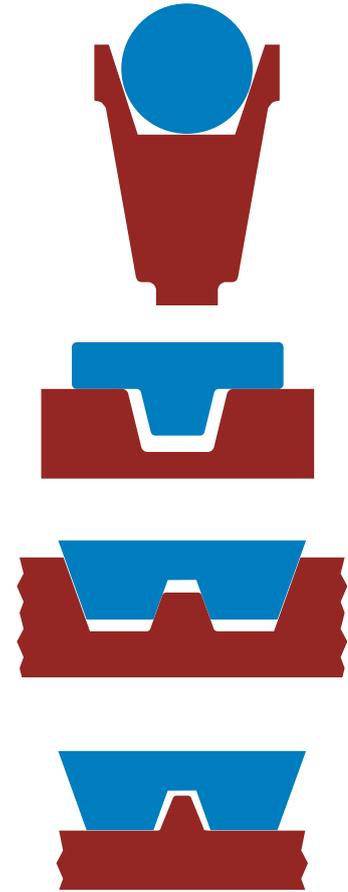
The power-transmission of such belts takes place on the flat area of the belt reverse side. This means the V-guide is not an element to transmit power but has guiding purpose only. Hence, the guide should run free in the groove with little space and must never be clamped!

Pulleys for Twin V-belts:

With parallel V-belts, a distinction is made between the use as a drive conveyor belt or as spreader belt.

In the case of a drive, the pulley design must be in such a way that the power is transmitted by the flanks.

In spreading table applications, it has proved to be a good idea to guide the belt exclusively by the central groove and drive it by the underside of the profile.

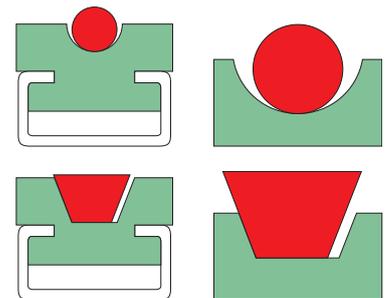


Guide rails and supporting rollers

Grooved pulleys, supporting rolls and guide rails are recommended to keep the belting in position to carry the load. When guiding V-belts, the V belt groove should be designed so that the belt is being supported on the bottom of the groove and is only allowed to touch one side of the groove at a time to avoid jamming.

The diameter and number of the required supporting rolls depends on the length of

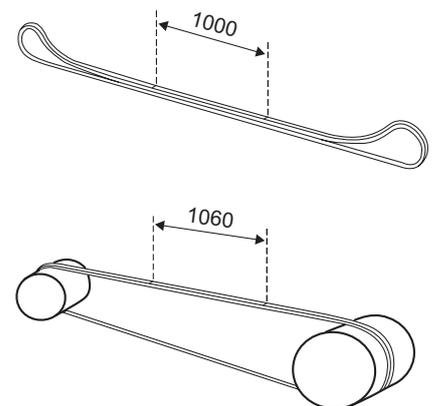
the conveyor as well as on the weight and dimensions of the goods to be conveyed. Supporting guide rails with a smooth surface can be grooved to support transport belts. The dimensions of the groove are to be designed in a width that prevents the belt from jamming. The guiding rails should be made of materials with good sliding qualities (PE – HDPE). If you are looking for a supplier please contact us, we can give you a recommendation.



Pretension

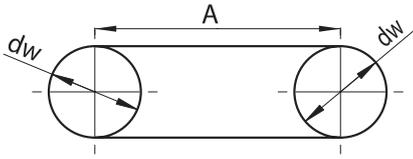
Sufficient belt pretension is a prerequisite for the functionality of a conveyor system. Our recommendation is therefore, a pretension of 0.5 - 10%, depending on the belt design. Important parameters are the belt shape (round, V-, T- etc.), reinforcement, shore hardness and the type of welding. Please consult our catalogue specifications for details about your specific BEHAbelt product.

A proven method to measure the pretension is marking the untensioned belt (apply to marks in a distance of 1000mm). If the belt requires e.g. 6% pretension, these marks should have a distance of 1060mm once the belt is installed (tensioned) on the conveyor.



Calculations

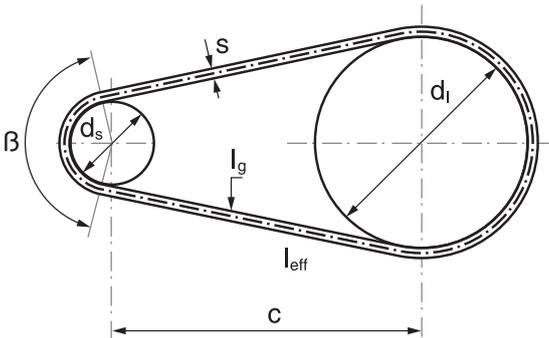
Calculation of belt length



$$L_{fl} = d_w \times \pi + 2 \times A$$

d_w = effective diameter (position of the neutral fibre of belt)
 A = center distance
for round belts: d_w = bottom of groove + diameter of belt

The recommended pretension has to be considered in addition!

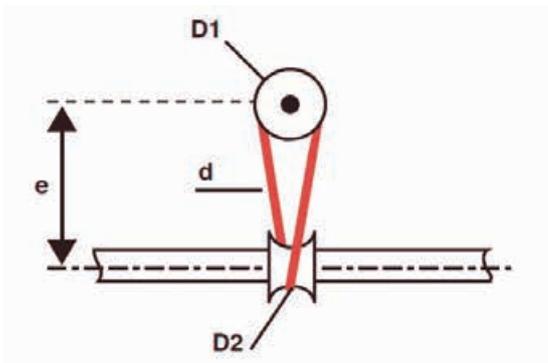


$$l_{eff} = 2c \cdot \sin\left(\frac{\beta}{2}\right) + \frac{\pi}{2} \left[d_s + d_1 + 2s + \frac{(d_1 - d_s)(180 - \beta)}{180} \right] \text{ [mm]}$$

$$\beta = 2 \arccos\left(\frac{d_1 - d_s}{2c}\right) \text{ [}^\circ\text{]}$$

c = center distance [mm]
 d_s = Diameter of the small pulley [mm]
 d_1 = Diameter of the big pulley [mm]
 β = Wrapping angle on small pulley

The recommended pretension has to be considered in addition!



Lineshaft conveyor belts (semi-crossed)

$$L_{13} = [(D_1 + d) + (D_2 + d)] \times \pi / 2 + 2 \times \sqrt{[(D_1 + d)^2 / 4 + e^2]}$$

recomm. center to center distance (e): $5 \times D_1$

D_1 : pulley diameter at bottom of groove
 D_2 : inner diameter of diabolo roller
 d : diameter of belt
 e : center distance

The recommended pretension has to be considered in addition

Quick reference for V-belts

Profile according to DIN 2215		6	8	10	13	17	22	32
Profile according to ISO 4184		Y	M	Z	A	B	C	D
Upper width w (mm)		6	8	10	13	17	22	32
Height h (mm)		4	5	6	8	11	14	20
Calculation of the belt length L_a and L_w if L_i is determined or known	$L_a = L_i +$	25	31	38	50	69	88	126
	$L_a = L_w +$	10	12	16	20	29	30	51
L_a = outside length	$L_w = L_i +$	15	19	22	30	40	58	75
L_w = effective length / cut length	$L_w = L_a -$	10	12	16	20	29	30	51
L_i = inside length								

The recommended pretension has to be considered in addition

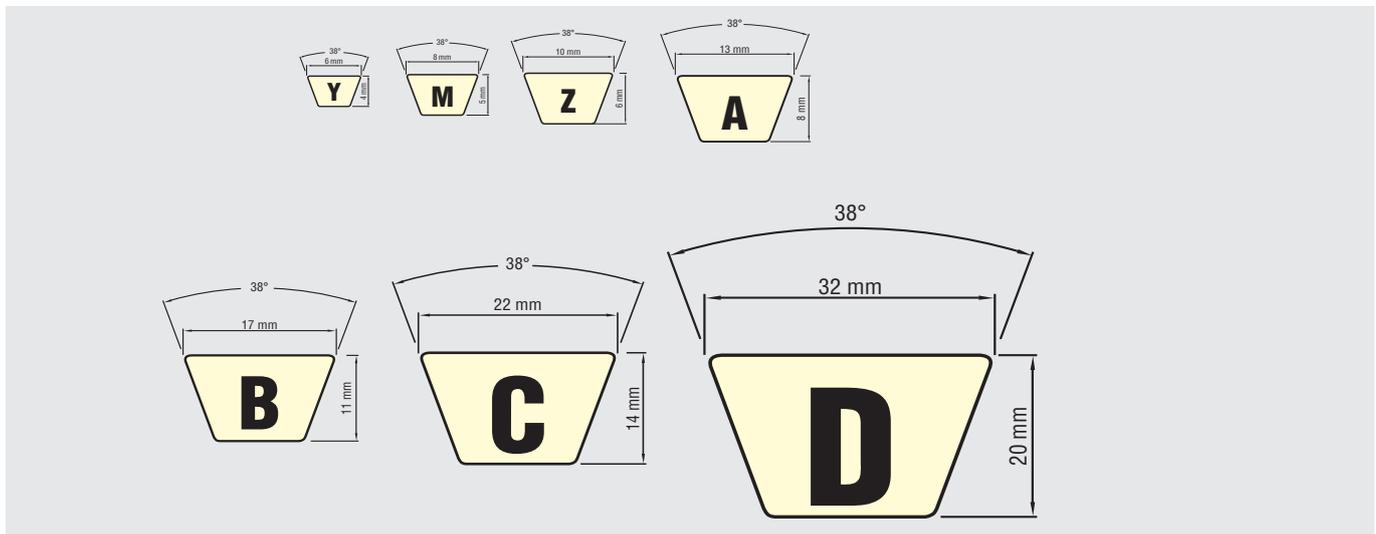
Coefficient of friction

Coefficient of friction μ for smooth surfaces (G)

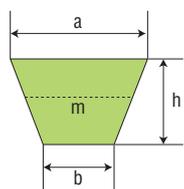
Quality	Alu	Steel	Glas	Wood (veneer)	PE	HDPE
PU60A	0,95	0,90	0,75	0,80	0,55	0,50
PU65A	0,90	0,85	0,65	0,70	0,50	0,45
PU70A	0,85	0,75	0,60	0,70	0,40	0,35
PU75A	0,85	0,70	0,50	0,65	0,40	0,35
PU80A	0,80	0,65	0,45	0,60	0,35	0,30
PU85A	0,75	0,60	0,40	0,50	0,35	0,30
PU85A rough	0,55	0,45	0,45	0,45	0,30	0,25
PU90A	0,70	0,50	0,30	0,50	0,30	0,25
PU95A	0,65	0,45	0,25	0,45	0,25	0,20
TPE40D	0,70	0,50	0,30	0,45	0,25	0,20
TPE55D	0,45	0,35	0,30	0,35	0,20	0,15
TPE63D	0,45	0,35	0,30	0,35	0,20	0,15

V-belt dimensions according to DIN 2215 and ISO 4184

All V-belts are produced with a small radius at the edges

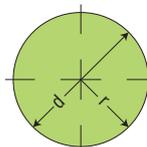


Calculation of round belt and V-belt cross section



$$A_{cm^2} = \frac{a+b}{2} \times h = m \times h$$

$$m = \frac{a+b}{2}$$



$$A_{cm^2} = \frac{\pi}{4} \times d^2 \approx 0,785 \times d^2$$

$$U = \pi \times d$$

Welding tools for PU and TPE

A belt is only as good as it's fabricated to the final dimension. Therefore, BEHAbelt develops specific tools for the precise joining of PU and TPE profiles and belts. Depending on individual needs and products to be welded, customers can select between traditional or temperature regulated paddle welding tools, the unique BEHAbelt Friction welding machines, hot presses for overlap or butt-end welding and a broad range of accessories and spare parts.

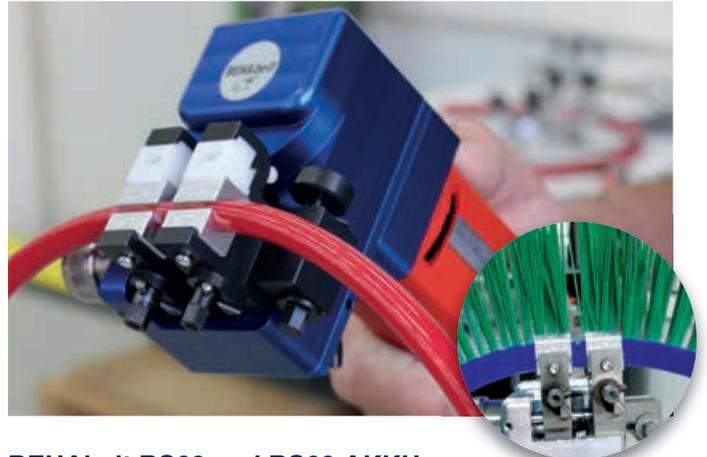
PADDLE WELDING



BEHAbelt Eergo together with Guide clamp

- Reaches melting temperature in less than two minutes.
- LED indicator tells you when it is ready to use.
- Built in protection to lay down on working table.
- FZ02/3 and FZ01 Vario: Robust and precise guide clamps for almost all profiles; special designs possible.

FRICTION WELDING



BEHAbelt RS02 and RS02 AKKU

- Aligns profile edges perfectly with special holding clamps.
- Makes perfect welds every time in seconds using friction to generate heat.
- Also available as cordless version.

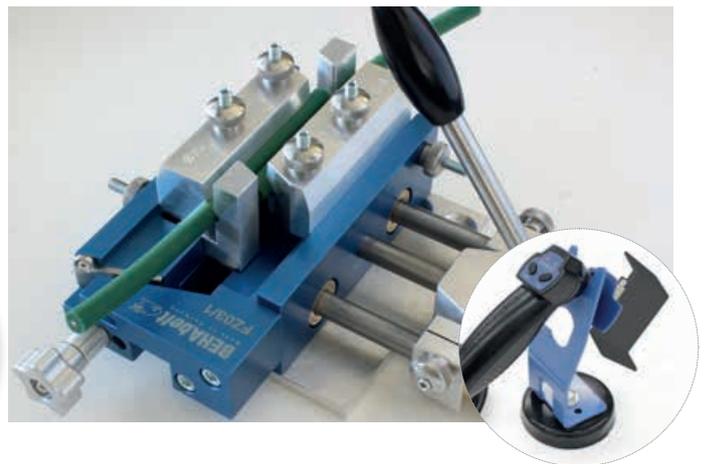
HOT PRESS



BEHAbelt HP01

- Controller guided hot press for perfect butt and overlap welds of PU and TPE profiles as well as flat belts and timing belts up to a width of 50mm.

OVERLAP WELDING SET



BEHAbelt FZ03/1 with Eergo Z

- Professional and easy to use guide clamps for overlap welding of reinforced profiles.
- Application range for round belts from 6-20mm and for V-belts from 8x5mm to 32x20mm.
- Eergo Z with special Z-paddle for overlap welding with guide clamp FZ03/1.

BEHAbelt offers much more

Corresponding to our slogan “Smart conveying” BEHAbelt develops and supplies innovative conveying and power-transmission solutions since 1974. Please see here an overview about additional products in our portfolio.

For further details, please check our website www.behabelt.com or contact our sales/customer service team.



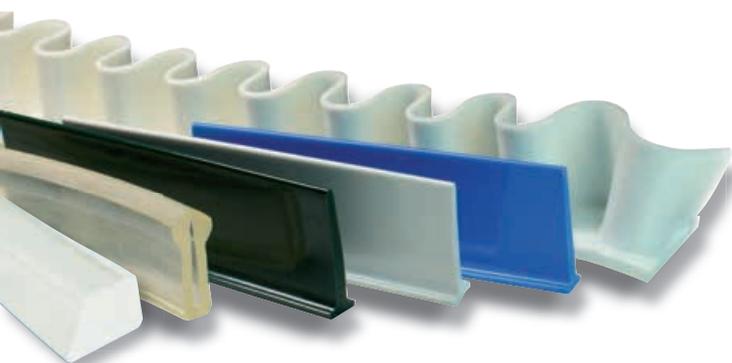
ELASTIC MONOLITHIC CONVEYOR BELTS

- Our elastic conveyor belts are made of solid PU (in practice often described as ‘monolithic’). There are no fabric layers or cords as reinforcement in the products. Therefore, these belts have a certain elasticity, depending on the actual shore hardness of the material.
- This monolithic design has advantages in hygiene sensitive applications and such belts can be easily fabricated to many dimensions.
- BEHAbelt offers the largest variety of options in terms of surface structures, colors and special features like UV-C resistance, hydrolysis resistance or detectable materials, to name a few.
- Unique on the market is our MICROclean surface finish, which ensures excellent release of sticky products and efficient cleanability. Monolithic belts offer advantages over conventional coated fabric belts in many applications in Food processing, packaging and logistics.



COATINGS FOR TIMING BELT AND V-BELTS

- BEHAbelt manufactures high quality, weldable PU coatings for timing belts and V-belts. Even our elastic, monolithic conveyor belts can be applied for this purpose.
- Depending on the specific material features, PU coatings enable acceleration, better release or lifetime improvements in your application. A special solution is our “PUtex” material, which is a cost efficient, high-grade alternative to Linatex (Rubber) coatings.



V-GUIDES AND WELDABLE PROFILES FOR CONVEYOR BELTS

- For the fabrication of conveyor belts, BEHAbelt offers several weldable PU profiles:
 - Sidewalls
 - Cleats
 - Belt edges
 - V-guides and more.
- The excellent weldability of our materials guarantees durable products with a long service-life. Our portfolio includes PU compounds that can be welded on PVC belts.

The specifications

in this brochure are based on our current knowledge and experience. They do not acquit the processor from testing our products at its own due to the plenty of possible effects during processing application of our products. The legally binding confirmation of certain properties or of the qualification for a certain purpose can not be derived from our specifications. Possible trade mark rights as well as existing laws and regulations are to be followed by recipient of our products at his own responsibility.

Changes

for the benefit of technical enhancements respectively adoption to modified standards or provisions are provided.

Pictures

in this brochure are examples of types and are not binding for the type at the time of delivery.

GET YOUR SAMPLES

We are happy to provide you with samples of your required products free of charge. We are looking forward to your message.

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