

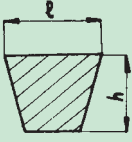
SIT V-Pulleys

On the market there are various types of **V-belts**, among which, the most 'widespread are:

- "narrow" SPZ-SPA-SPB-SPC (ISO4184 - DIN 7753)
- "classic" Z-A-B-C (ISO 4184 - DIN 2215)
- "American narrow" 3V-5V (RMA-MPTA).

The "**narrow**" **V-pulleys** (DIN2211 - ISO4183) **manufactured by SIT** and shown in this catalogue are suitable to be used with all the aforementioned types of belts. Note: for banded belts 3V - 5V - 8V use pulleys with RMA specifications (ref. pag 100). These pulleys are not standard and are available only on request.

Compatibility table between main V-belts types and SIT V-pulleys.

		V-belts										
		ISO 4184 - DIN 7753/1				RMA - MPTA			ISO 4184 - DIN 2215			
		SPZ	SPA	SPB	SPC	3V	5V	8V	Z	A	B	C
a x b	9,7 x 8	12,7 x 10	17 x 13	22 x 18	9,5 x 8	16 x 13,5	25,5 x 23	10 x 6	13 x 8	17 x 11	22 x 14	
SIT Pulleys (DIN 2211)												
PT	SPZ	○										
	SPA	-	.	-	-	-	-	-	-	○	-	-
	SPB	-	-	○	-	-	○*	-	-	-	○	-
	C	-	-	-	X	-	-	-	-	-	-	○
PBT	SPZ	○	-	-	-	○*	-	-	○	-	-	-
	SPA	-	○	-	-	-	-	-	-	○	-	-
	SPB	-	-	○	-	-	○*	-	-	-	○	-
	SPC	-	-	-	○	-	-	-	-	-	-	○
PCT	SPZ	○	-	-	-	○*	-	-	○	-	-	-
	SPA	-	○	-	-	-	-	-	-	○	-	-
	SPB	-	-	○	-	-	○*	-	-	-	○	-
	SPC	-	-	-	○	-	-	-	-	-	-	○

○ = COMPATIBLE
X = NOT COMPATIBLE

* Pitch among the grooves of SPZ pulley is different from the 3V. Similarly, the pitch is also different between SPB and 5V.

PT pulleys - solid hub

Material: cast iron DIN 1691 GG-20/GG25
 Finishing: black manganese phosphating process.

V-groove pulleys suitable for normal application for use with the following belt types:

- SPZ-Z-3V
- SPA-A
- SPB-B-5V
- C



PBT pulleys - for mounting taper bushing SER-SIT®

Material: cast iron DIN 1691 GG-20/GG25
 Finishing: black manganese phosphating process.

V-groove pulleys suitable for use with the following belts:

- SPZ-Z-3V
- SPA-A
- SPB-B-5V
- SPC-C



PCT pulleys - oversized hub for Self Locking Units

Material: cast iron DIN 1691 GG-20/GG25
 Finishing: black manganese phosphating process.

V-groove pulleys suitable for use with the following belts:

- SPZ-Z-3V
- SPA-A
- SPB-B-5V
- SPC-C



Features

Our pulleys can be used for application with a speed up to 35 m/s. The pulley dimensions are very accurate as they are manufactured only by means of CNC or automatic lathes. For higher speed is strongly recommended to use steel as material of construction.

Balancing

Our PBT pulleys are statically balanced according to ISO. The PT pulleys are not balanced, as they do not have a finished bores.

TOLERANCES

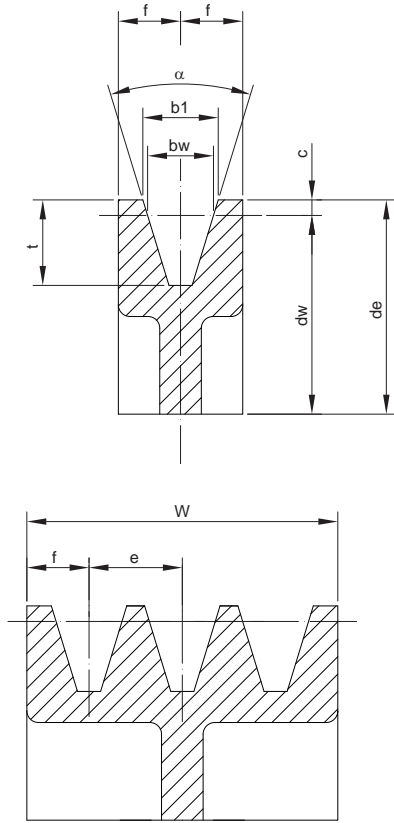
dw [mm]	Tolerance of pitch diameter dw [mm]	Eccentricity tolerance relevant to the outside diameter [mm]
50	± 0,4	0,2
56	± 0,4	
63	± 0,5	
71	± 0,6	
80	± 0,6	
90	± 0,7	
100	± 0,8	0,3
112	± 0,9	
118	± 1,0	
125	± 1,0	
135	± 1,0	
140	± 1,1	
150	± 1,2	0,4
160	± 1,3	
180	± 1,4	
190	± 1,5	
200	± 1,6	
212	± 1,7	
224	± 1,8	0,5
236	± 1,9	
250	± 2,0	
280	± 2,2	
300	± 2,4	
315	± 2,5	
355	± 2,8	0,6
400	± 3,2	
450	± 3,6	
500	± 4,0	
560	± 4,5	
630	± 5,0	
710	± 5,7	0,8
800	± 6,4	
900	± 7,2	
1000	± 8,0	
1120	± 9,0	
1250	± 10,0	

Max. difference among the pitch diameter of the grooves of the same pulley [mm]	
SPZ - SPA - SPB	SPC
0,4	0,6

Note

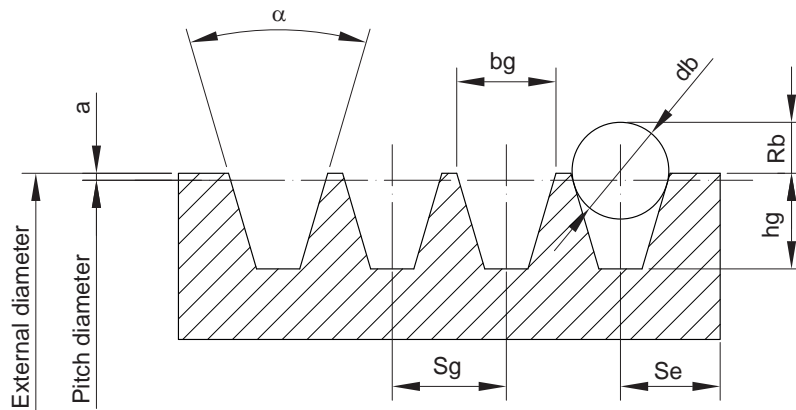
Due to a constant improvement of our products, technical data of the pulleys may be subject to changes.

Dimension of grooves (DIN 2211)



Section	SPZ [mm]	SPA [mm]	SPB [mm]	C/SPC [mm]	
b _w [mm]	8,5	11,0	14,0	19,0	
b ₁ [mm] (±0,2)	9,7	12,7	16,3	22,0	
c [mm]	2,0	2,8	3,5	4,8	
e [mm]	12 ± 0,3	15 ± 0,3	19 ± 0,4	25,5 ± 0,5	
f [mm]	8 ± 0,6	10 ± 0,6	12,5 ± 0,8	17 ± 1	
t [mm] min.	11 ^{+0,6} ₀	13,8 ^{+0,6} ₀	17,5 ^{+0,6} ₀	C: 20 SPC: 23,8 ^{+0,6} ₀	
α 34° per dw [mm]	≤ 80	≤ 118	≤ 190	≤ 315	
α 38° per dw [mm]	> 80	> 118	> 190	> 315	
Tolerance	± 1°	± 1°	± 1°	± 1°	
W Crown width for number of grooves Z [mm]	Z = 1	16	20	25	34
	2	28	35	44	59,5
	3	40	50	63	85
	4	52	65	82	110
	5	64	80	101	136
	6	76	95	120	161,5
	7	88	110	139	187
	8	100	125	158	212,5
	9	112	140	177	238
	10	124	155	196	263,5
	11	136	170	215	289
	12	148	185	234	314,5

Dimension of grooves of V-Pulleys suitable for banded belts (RMA)



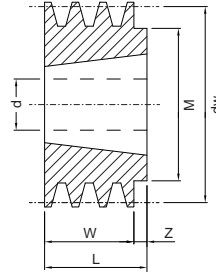
Section	D [mm]	α [°]	bg [mm]	hg min. [mm]	a [mm]	Rb min. [mm]	db [mm]	Sg [mm]	Se [mm]
3V	≤ 89	36 ± 0,25	8,89 ± 0,13	8,63	0,63	4,6	8,73 ± 0,01	10,3 ± 0,4	9 ⁻² ₋₁
	90 ÷ 152	38 ± 0,25	8,89 ± 0,13	8,63	0,63	4,6	8,73 ± 0,01	10,3 ± 0,4	9 ⁻² ₋₁
	153 ÷ 1305	40 ± 0,25	8,89 ± 0,13	8,63	0,63	4,7	8,73 ± 0,01	10,3 ± 0,4	9 ⁻² ₋₁
	> 305	42 ± 0,25	8,89 ± 0,13	8,63	0,63	4,8	8,73 ± 0,01	10,3 ± 0,4	9 ⁻² ₋₁
5V	≤ 254	38 ± 0,25	15,24 ± 0,13	14,98	1,27	8,4	15,08 ± 0,01	17,5 ± 0,4	13 ⁻³ ₋₁
	255 ÷ 406	40 ± 0,25	15,24 ± 0,13	14,98	1,27	8,4	15,08 ± 0,01	17,5 ± 0,4	13 ⁻³ ₋₁
	> 406	42 ± 0,25	15,24 ± 0,13	14,98	1,27	8,5	15,08 ± 0,01	17,5 ± 0,4	13 ⁻³ ₋₁
8V	≤ 406	38 ± 0,25	25,4 ± 0,13	25,14	2,54	14,6	25,4 ± 0,01	28,6 ± 0,4	19 ⁻⁶ ₋₂
	407 ÷ 569	40 ± 0,25	25,4 ± 0,13	25,14	2,54	14,7	25,4 ± 0,01	28,6 ± 0,4	19 ⁻⁶ ₋₂
	> 569	42 ± 0,25	25,4 ± 0,13	25,14	2,54	14,9	25,4 ± 0,01	28,6 ± 0,4	19 ⁻⁶ ₋₂

Dimensions of V-Pulleys PBT - mounting taper bushing SER-SIT®

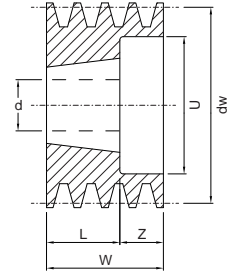


“PBT” SPA-A

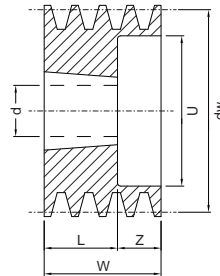
dw [mm]	Number of grooves	Type	SER-SIT® Taper bushing	d min-max [mm]	M [mm]	L [mm]	Z [mm]	U [mm]	W [mm]
67	2	10	1108	11-28	-	22	13	37	35
71	1	1	1108	11-28	60	22	2	-	20
	2	10	1108	11-28	-	22	13	40	35
	3	10	1108	11-28	-	22	28	40	50
75	1	1	1108	11-28	60	22	2	-	20
	2	10	1108	11-28	-	22	13	44	35
	3	10	1108	11-28	-	22	28	44	50
80	1	1	1210	11-32	84	25	5	-	20
	2	10	1210	11-32	-	25	10	50	35
	3	10	1210	11-32	-	25	25	50	50
85	1	1	1210	11-32	88	25	5	-	20
	2	10	1210	11-32	-	25	10	55	35
	3	10	1210	11-32	-	25	25	55	50
90	1	1	1210	11-32	90	25	5	-	20
	2	10	1610	12-42	-	25	10	60	35
	3	10	1610	12-42	-	25	25	56	50
	4	10	1615	12-42	-	38	27	60	65
95	1	1	1210	11-32	90	25	5	-	20
	2	10	1610	12-42	-	25	10	62	35
	3	10	1610	12-42	-	25	25	62	50
	4	10	1615	12-42	-	38	27	62	65
100	1	1	1610	12-42	92	25	5	-	20
	2	10	1610	12-42	-	25	10	66	35
	3	2	1610	12-42	-	25	25	66	50
	4	2	1615	12-42	-	38	27	66	65
	5	2	1615	12-42	-	38	42	66	80
106	1	1	1610	12-42	85	25	5	-	20
	2	10	1610	12-42	-	25	10	72	35
	3	2	1610	12-42	-	25	25	72	50
	4	10	2012	14-50	-	32	33	72	65
	5	10	2012	14-50	-	32	48	72	80
112	1	1	1610	12-42	90	25	5	-	20
	2	10	1610	12-42	-	25	10	77	35
	3	10	2012	14-50	-	32	18	77	50
	4	10	2012	14-50	-	32	33	77	65
	5	10	2012	14-50	-	32	48	77	80
118	1	1	1610	12-42	96,4	25	5	-	20
	2	10	1610	12-42	-	25	10	85	35
	3	2	2012	14-50	-	32	18	85	50
	4	2	2012	14-50	-	32	33	85	65
	5	2	2012	14-50	-	32	48	85	80
125	1	1	1610	12-42	92	25	20	-	20
	2	10	1610	12-42	-	25	10	92	35
	3	2	2012	14-50	-	32	18	92	50
	4	2	2012	14-50	-	32	33	92	65
	5	11	2012	14-50	-	32	24	92	80
132	1	1	1610	12-42	92	25	5	-	20
	2	10	2012	14-50	-	32	3	97	35
	3	2	2012	14-50	-	32	18	97	50
	4	2	2517	18-65	-	45	20	97	65
	5	11	2517	18-65	-	45	17,5	102	80
140	1	1	1610	12-42	92	25	5	-	20
	2	10	2012	14-50	-	32	3	106	35
	3	10	2517	18-65	-	45	5	106	50
	4	2	2517	18-65	-	45	20	106	65
	5	11	2517	18-65	-	45	17,5	106	80



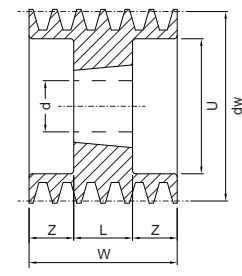
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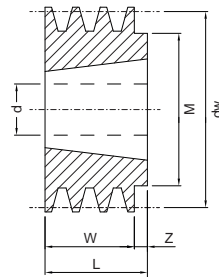
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Dimensions of V-Pulleys PBT - mounting taper bushing SER-SIT®

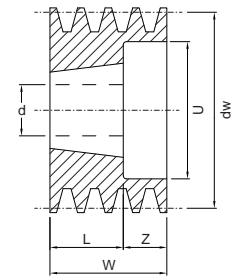


» "PBT" SPA-A

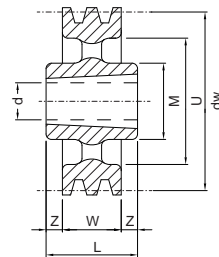
dw [mm]	Number of grooves	Type	SER-SIT® Taper bushing	d min-max [mm]	Type to exhaustion	M [mm]	L [mm]	Z [mm]	U [mm]	W [mm]
150	1	4	1610	12-42	-	92	25	5	-	20
	2	10	2012	14-50	-	-	32	3	116	35
	3	10	2517	18-65	-	-	45	5	116	50
	4	2	2517	18-65	-	-	45	20	116	65
	5	11	2517	18-65	-	-	45	17,5	116	80
160	1	4	1610	12-42	1	92	25	5	-	20
	2	10	2012	14-50	-	-	32	3	126	35
	3	10	2517	18-65	-	-	45	5	126	50
	4	2	2517	18-65	-	-	45	20	126	65
	5	11	2517	18-65	-	-	45	17,5	126	80
170	1	4	1610	12-42	-	92	25	5	-	20
	2	10	2012	14-50	-	-	32	3	135	35
	3	10	2517	18-65	-	-	45	5	135	50
	4	2	2517	18-65	-	-	45	20	135	65
	5	11	2517	18-65	-	-	45	17,5	135	80
180	1	4	1610	12-42	-	92	25	5	146	20
	2	6	2012	14-50	-	108	32	1,5	146	35
	3	10	2517	18-65	-	-	45	5	146	50
	4	2	2517	18-65	-	-	45	20	146	65
	5	11	3020	22-75	-	-	51	14,5	146	80
190	1	4	1610	12-42	7	92	25	5	156	20
	2	6	2012	14-50	-	108	32	1,5	156	35
	3	10	2517	18-65	-	-	45	5	165	50
	4	2	2517	18-65	-	-	45	20	165	65
	5	2	3020	22-75	-	-	51	29	165	80
200	1	4	2012	14-50	-	108	32	12	165	20
	2	12	2517	18-65	-	123	45	5	165	35
	3	6	2517	18-65	-	123	45	2,5	177	50
	4	2	3020	22-75	-	-	51	14	165	65
	5	11	3020	22-75	-	-	51	14,5	165	80
212	1	4	2012	14-50	-	110	32	12	178	20
	2	4	2517	18-65	-	120	45	10	178	35
	3	6	2517	18-65	-	123	45	2,5	189	50
	4	2	3020	22-75	-	-	51	14	178	65
224	1	7	2012	14-50	-	112	32	12	189	20
	2	4	2517	18-65	-	124	45	10	189	35
	3	6	2517	18-65	-	124	45	2,5	189	50
	4	2	3020	22-75	-	-	51	14	189	65
	5	2	3020	22-75	-	-	51	29	189	80
236	1	7	2012	14-50	-	110	32	12	203	20
	2	7	2517	18-65	-	124	45	10	203	35
	3	9	2517	18-65	-	124	45	2,5	203	50
	4	6	3020	22-75	-	146	51	7	203	65
	5	6	3020	22-75	-	155	51	14,5	203	80
250	1	3	2012	14-50	-	112	32	6	215	20
	2	3	2517	18-65	-	124	45	5	215	35
	3	9	2517	18-65	-	124	45	2,5	215	50
	4	6	3020	22-75	-	159	51	7	215	65
	5	6	3020	22-75	-	159	51	14,5	215	80
280	1	7	2012	14-50	-	110	32	10	246	20
	2	7	2517	18-65	-	120	45	10	246	35
	3	9	2517	18-65	-	124	45	2,5	246	50
	4	9	3020	22-75	-	146	51	7	246	65
	5	12	3535	25-90	-	175	89	4,5	246	80
300	1	7	2012	14-50	-	112	32	12	266	20
	2	7	2517	18-65	-	124	45	10	266	35
	3	7	3020	22-75	-	146	51	1	266	50
	4	9	3020	22-75	-	146	51	7	266	65
	5	4	3535	25-90	-	175	89	9	266	80



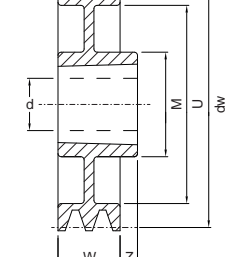
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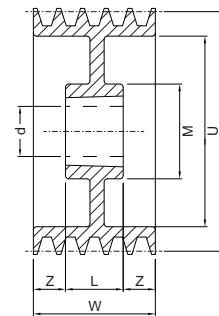
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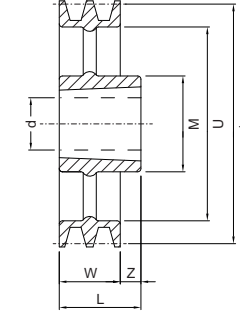
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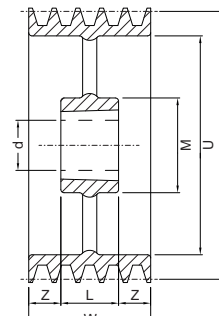
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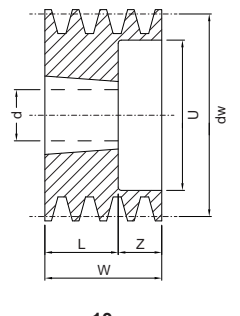
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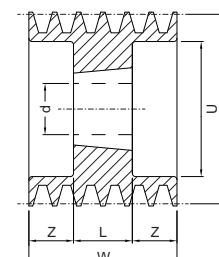
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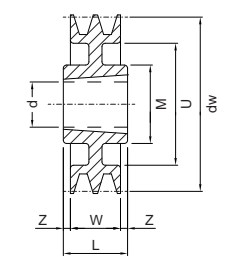
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12

Dimensions of V-Pulleys PBT - mounting taper bushing SER-SIT®



» “PBT” SPA-A

dw [mm]	Number of grooves	Type	SER-SIT® Taper bushing	d min-max [mm]	Type to exhaustion	M [mm]	L [mm]	Z [mm]	U [mm]	W [mm]
315	1	7	2012	14-50	-	110	32	10	282	20
	2	7	2517	18-65	-	120	45	10	282	35
	3	3	3020	22-75	-	146	51	0,5	282	50
	4	9	3020	22-75	-	146	51	7	282	65
	5	12	3535	25-90	3	175	89	4,5	282	80
355	1	7	2012	14-50	-	110	32	10	322	20
	2	7	2517	18-65	-	120	45	10	322	35
	3	3	3020	22-75	-	146	51	0,5	322	50
	4	9	3020	22-75	-	146	51	7	322	65
	5	3	3535	22-75	-	175	89	4,5	322	80
400	1	7	2012	14-50	-	110	32	10	366	20
	2	7	2517	18-65	-	120	45	10	366	35
	3	7	3020	22-75	-	159	51	1	366	50
	4	9	3020	22-75	-	146	51	7	366	65
	5	3	3535	25-90	-	180	89	9	366	80
450	1	7	2012	14-50	-	110	32	12	416	20
	2	7	2517	18-65	-	120	45	10	416	35
	3	7	3020	22-75	-	159	51	1	416	50
	4	9	3020	22-75	-	146	51	7	416	65
	5	3	3535	22-75	-	175	89	4,5	416	80
500	1	7	2517	18-65	-	120	45	25	467	20
	2	7	2517	18-65	-	120	45	10	467	35
	3	7	3020	22-75	-	159	51	1	465	50
	4	9	3020	22-75	-	146	51	7	467	65
	5	3	3535	25-90	-	180	89	9	467	80
560	1	7	2517	18-65	-	124	45	25	526	20
	2	7	3020	22-75	-	146	51	16	526	35
	3	7	3020	22-75	-	146	51	1	526	50
	4	3	3535	25-90	-	175	89	12	526	65
	5	3	3535	25-90	-	178	89	9	526	80
630	1	7	2517	18-65	-	124	45	25	596	20
	2	3	3020	22-75	-	159	51	8	596	35
	3	7	3020	22-75	-	160	51	1	596	50
	4	3	3535	25-90	-	175	89	12	596	65
	5	3	3535	25-90	-	178	89	9	596	80
800	2	3	3535	25-90	-	178	89	27	765	35
	3	3	3535	25-90	-	178	89	19,5	765	50
	4	3	3535	25-90	-	178	89	12	765	65
	5	3	4040	40-100	-	216	102	11	765	80
	900	3	3	3535	25-90	-	178	89	19,5	865
4		3	3535	25-90	-	178	89	12	865	65
5		3	4040	40-100	-	216	102	11	865	80
1000	3	3	3535	25-90	-	178	89	19,5	965	50
	4	3	4040	40-100	-	216	102	18,5	965	65
	5	3	4545	55-110	-	242	114	17	965	80

