

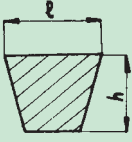
SIT V-Pulleys

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

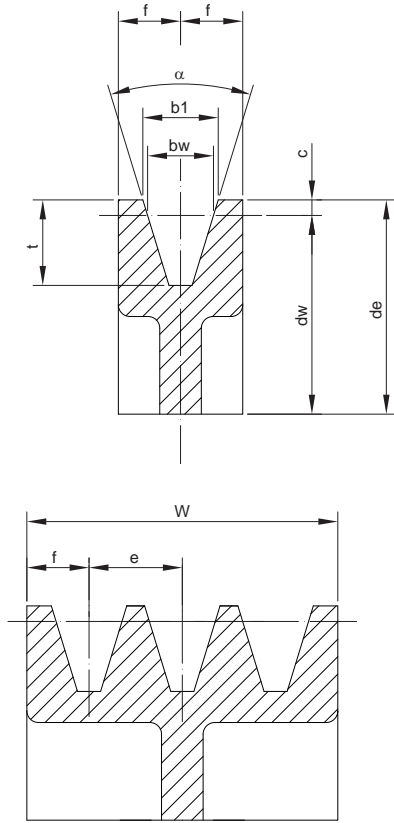
dw [mm]	Tolerance of pitch diameter dw [mm]	Eccentricity tolerance relevant to the outside diameter [mm]
50	± 0,4	0,2
56	± 0,4	
63	± 0,5	
71	± 0,6	
80	± 0,6	
90	± 0,7	
100	± 0,8	0,3
112	± 0,9	
118	± 1,0	
125	± 1,0	
135	± 1,0	
140	± 1,1	
150	± 1,2	0,4
160	± 1,3	
180	± 1,4	
190	± 1,5	
200	± 1,6	
212	± 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

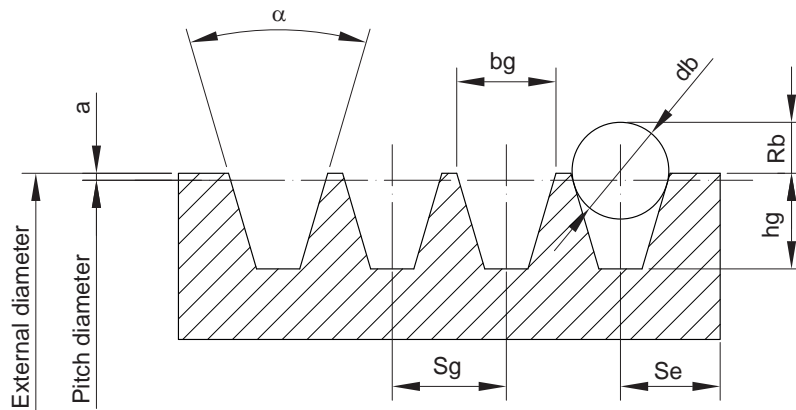
Due to a constant improvement of our products, technical data of the pulleys may be subject to changes.

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)



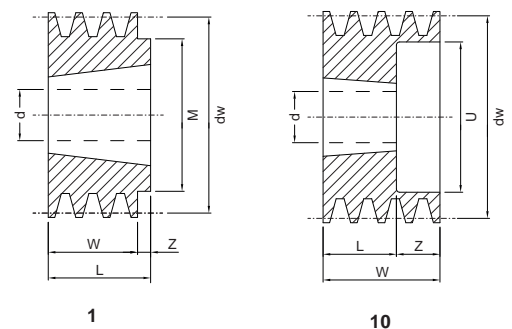
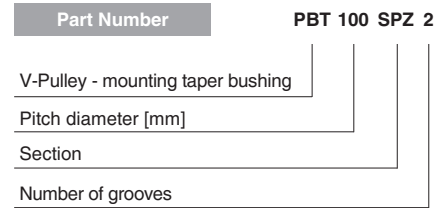
Section	D [mm]	α [°]	bg [mm]	hg min. [mm]	a [mm]	Rb min. [mm]	db [mm]	Sg [mm]	Se [mm]
3V	≤ 89	36 ± 0,25	8,89 ± 0,13	8,63	0,63	4,6	8,73 ± 0,01	10,3 ± 0,4	9 ⁻² ₋₁
	90 ÷ 152	38 ± 0,25	8,89 ± 0,13	8,63	0,63	4,6	8,73 ± 0,01	10,3 ± 0,4	9 ⁻² ₋₁
	153 ÷ 1305	40 ± 0,25	8,89 ± 0,13	8,63	0,63	4,7	8,73 ± 0,01	10,3 ± 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” SPZ-Z-3V

dw [mm]	Number of grooves	Type	SER-SIT® Taper bushing	d min-max [mm]	M [mm]	L [mm]	Z [mm]	U [mm]	W [mm]
63	1	1	1108	11-28	62	22	6	-	16
	2	10	1108	11-28	-	22	6	38	28
	3	10	1108	11-28	-	22	18	38	40
67	1	1	1108	11-28	62	22	6	-	16
	2	10	1108	11-28	-	22	6	38	28
	3	10	1108	11-28	-	22	18	38	40
71	1	1	1108	11-28	62	22	6	-	16
	2	10	1108	11-28	-	22	6	42	28
	3	10	1108	11-28	-	22	18	42	40
75	1	1	1108	11-28	62	22	6	-	16
	2	10	1210	11-32	-	25	3	48	28
	3	10	1210	11-32	-	25	15	48	40
	4	10	1210	11-32	-	25	27	48	52
80	1	1	1210	11-32	75	25	9	-	16
	2	10	1210	11-32	-	25	3	52	28
	3	10	1210	11-32	-	25	15	52	40
	4	10	1210	11-32	-	25	27	52	52
85	1	1	1210	11-32	86	25	9	-	16
	2	10	1610	12-42	-	25	3	57	28
	3	10	1610	12-42	-	25	15	57	40
	4	10	1610	12-42	-	25	27	57	52
	5	10	1610	12-42	-	25	39	57	64
90	1	1	1210	11-32	86	25	9	-	16
	2	10	1610	12-42	-	25	3	62	28
	3	10	1610	12-42	-	25	15	62	40
	4	10	1610	12-42	-	25	27	62	52
	5	10	1610	12-42	-	25	39	62	64
	6	10	1610	12-42	-	26	50	62	76
95	1	1	1210	11-32	86	25	9	-	16
	2	10	1610	12-42	-	25	3	67	28
	3	10	1610	12-42	-	25	15	67	40
	4	10	1610	12-42	-	25	27	67	52
	5	10	1610	12-42	-	25	39	67	64
	6	10	1610	12-42	-	26	50	67	76
100	1	1	1210	11-32	86	25	9	-	16
	2	10	1610	12-42	-	25	3	71	28
	3	10	1610	12-42	10	25	15	71	40
	4	10	1610	12-42	-	25	27	71	52
	5	10	2012	14-50	-	32	32	71	64
	6	10	2012	14-50	-	32	44	71	76
106	1	1	1610	12-42	92	25	9	-	16
	2	10	1610	12-42	-	25	3	76	28
	3	10	1610	12-42	-	25	15	76	40
	4	10	1610	12-42	-	25	27	76	52
	5	10	2012	14-50	-	32	32	76	64
	6	10	2012	14-50	-	31	45	76	76
112	1	1	1610	12-42	92	25	9	-	16
	2	10	1610	12-42	-	25	3	84	28
	3	10	2012	14-50	-	32	8	84	40
	4	10	2012	14-50	-	32	20	84	52
	5	10	2012	14-50	-	32	32	84	64
	6	10	2012	14-50	-	31	45	84	76

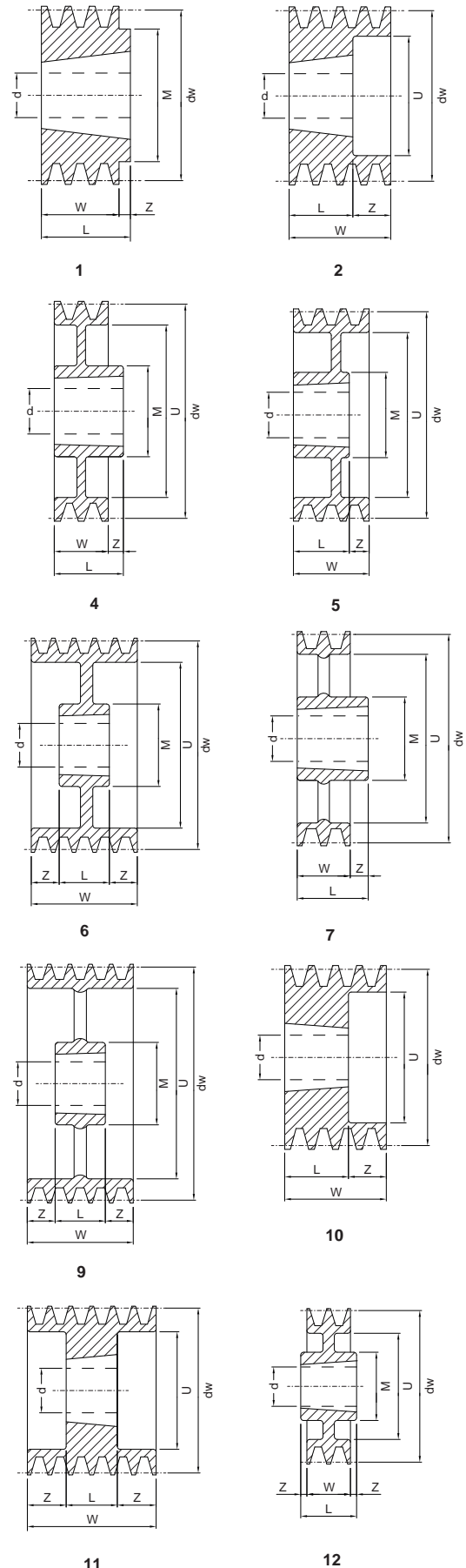


Dimensions of V-Pulleys PBT - mounting taper bushing SER-SIT®



» "PBT" SPZ-Z-3V

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]
118	1	1	1610	12-42	-	92	25	9	-	16
	2	10	1610	12-42	-	-	25	3	90	28
	3	2	2012	14-50	-	-	32	8	90	40
	4	2	2012	14-50	-	-	32	20	90	52
	5	10	2012	14-50	-	-	32	32	90	64
	6	2	2012	14-50	-	-	31	45	90	76
125	1	1	1610	12-42	-	92	25	9	-	16
	2	10	1610	12-42	-	-	25	3	98	28
	3	2	2012	14-50	-	-	32	8	98	40
	4	2	2012	14-50	-	-	32	20	98	52
	5	2	2012	14-50	-	-	32	32	98	64
	6	10	2517	18-65	-	-	46	30	98	76
132	1	1	1610	12-42	-	92	25	9	-	16
	2	10	1610	12-42	-	-	25	3	103	28
	3	2	2012	14-50	-	-	32	8	103	40
	4	2	2012	14-50	-	-	32	20	103	52
	5	10	2517	18-65	-	-	45	19	103	64
	6	2	2517	18-65	-	-	46	30	103	76
140	1	4	1610	12-42	-	92	25	9	-	16
	2	10	1610	12-42	-	-	25	3	112	28
	3	2	2012	14-50	-	-	32	8	112	40
	4	2	2012	14-50	-	-	32	20	112	52
	5	2	2517	18-65	-	-	45	19	112	64
	6	2	2517	18-65	-	-	46	30	112	76
150	1	4	1610	12-42	1	92	25	9	-	16
	2	1	2012	14-50	-	112	32	4	-	28
	3	2	2012	14-50	-	-	32	8	122	40
	4	2	2517	18-65	-	-	45	7	122	52
	5	2	2517	18-65	-	-	45	19	122	64
	6	2	2517	18-65	-	-	46	30	122	76
160	1	4	1610	12-42	-	92	25	9	-	16
	2	4	2012	14-50	-	112	32	4	-	28
	3	2	2012	14-50	-	-	32	8	131	40
	4	2	2517	18-65	-	-	45	7	131	52
	5	2	2517	18-65	-	-	45	19	131	64
	6	5	2517	18-55	-	120	46	30	133	76
180	1	4	1610	12-42	-	92	25	9	152	16
	2	4	2012	14-50	-	106	32	4	152	28
	3	5	2012	14-50	-	106	32	8	152	40
	4	2	2517	18-65	-	-	45	7	152	52
	5	2	2517	18-65	-	-	45	19	152	64
	6	5	2517	18-55	-	120	46	30	152	76
190	2	4	2012	14-50	-	106	32	10	162	28
200	1	4	2012	14-50	-	112	32	16	171	16
	2	4	2012	14-50	-	112	32	4	171	28
	3	6	2012	14-50	-	112	32	4	171	40
	4	6	2517	18-65	-	125	45	3,5	171	52
	5	6	2517	18-65	11	-	45	9,5	171	64
	6	6	2517	18-65	-	120	46	15	171	76
224	1	12	2012	14-50	-	110	32	8	195	16
	2	7	2012	14-50	-	112	32	4	195	28
	3	6	2012	14-50	-	112	32	4	195	40
	4	6	2517	18-65	9	124	45	3,5	195	52
	5	6	2517	18-65	-	124	45	9,5	195	64
	6	5	2517	18-65	-	120	46	30	195	76



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



» “PBT” SPZ-Z-3V

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]
250	1	3	2012	14-50	-	110	32	8	223	16
	2	3	2012	14-50	-	110	32	2	223	28
	3	9	2012	14-50	-	112	32	4	223	40
	4	6	2517	18-65	9	124	45	3,5	223	52
	5	6	2517	18-65	-	124	45	9,5	223	64
	6	6	2517	18-65	-	120	46	15	223	76
280	1	3	2012	14-50	-	110	32	8	252	16
	2	3	2012	14-50	-	112	32	2	252	28
	3	3	2517	18-65	-	124	45	2,5	252	40
	4	9	2517	18-65	-	124	45	3,5	252	52
	5	9	2517	18-65	-	124	45	9,5	221	64
	6	8	2517	18-55	-	120	46	30	252	76
315	1	3	2012	14-50	-	110	32	8	288	16
	2	3	2012	14-50	-	110	32	2	288	28
	3	3	2517	18-65	-	120	45	2,5	288	40
	4	9	2517	18-65	-	120	45	3,5	288	52
	5	9	2517	18-65	-	120	45	9,5	288	64
	6	6	2517	18-65	-	125	45	15,5	288	76
355	1	3	2012	14-50	-	110	32	8	326	16
	2	3	2012	14-50	-	112	32	2	326	28
	3	3	2517	18-65	-	125	45	2,5	326	40
	4	9	2517	18-65	-	124	45	3,5	326	52
	5	9	2517	18-65	-	124	45	9,5	326	64
	6	8	2517	18-65	-	120	46	30	326	76
400	1	3	2012	14-50	-	110	32	8	372	16
	2	3	2517	18-65	-	120	45	8,5	372	28
	3	3	2517	18-65	-	120	45	2,5	372	40
	4	9	2517	18-65	-	120	45	3,5	372	52
	5	9	3020	22-75	-	146	51	6,5	372	64
	6	9	3030	25-75	-	150	76	-	372	76
450	1	3	2517	18-65	-	124	45	14,5	421	16
	2	3	2517	18-65	-	124	45	8,5	421	28
	3	3	2517	18-65	-	124	45	2,5	421	40
	4	9	3020	22-75	-	146	45	0,5	421	52
	5	9	3020	22-75	-	146	51	6,5	421	64
	6	8	3020	22-75	-	140	76	-	421	76
500	1	7	2517	18-65	-	120	46	30	473	16
	2	3	2517	18-65	-	125	45	8,5	473	28
	3	3	2517	18-65	-	120	45	2,5	473	40
	4	9	3020	22-75	-	146	51	1	473	52
	5	3	3030	25-75	-	146	76	6	473	64
	6	9	3020	22-75	-	140	76	-	473	76
630	1	7	2517	18-65	-	120	46	30	603	16
	2	7	2517	18-65	-	120	46	18	603	28
	3	3	2517	18-65	-	120	46	3	603	40
	4	9	3020	22-75	-	146	51	0,5	603	52
	5	9	3020	22-75	-	146	51	6,5	603	64

