

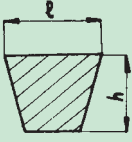
SIT V-Pulleys

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

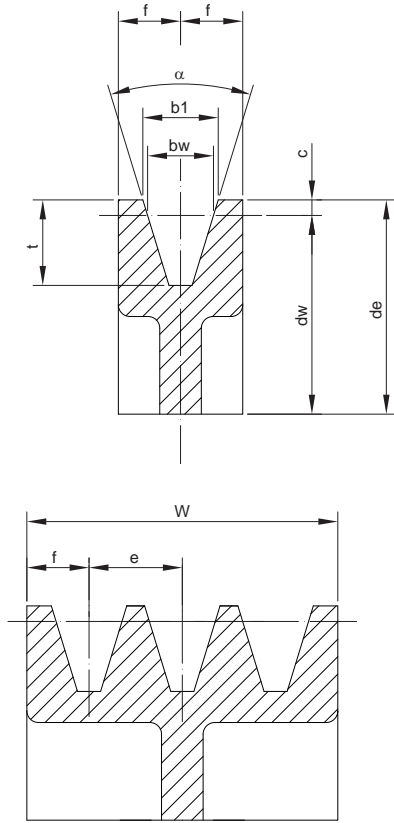
dw [mm]	Tolerance of pitch diameter dw [mm]	Eccentricity tolerance relevant to the outside diameter [mm]
50	± 0,4	0,2
56	± 0,4	
63	± 0,5	
71	± 0,6	
80	± 0,6	
90	± 0,7	
100	± 0,8	0,3
112	± 0,9	
118	± 1,0	
125	± 1,0	
135	± 1,0	
140	± 1,1	
150	± 1,2	0,4
160	± 1,3	
180	± 1,4	
190	± 1,5	
200	± 1,6	
212	±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

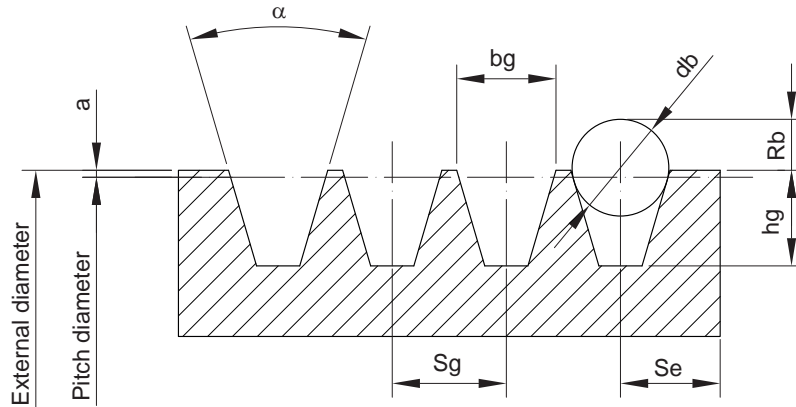
Due to a constant improvement of our products, technical data of the pulleys may be subject to changes.

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)



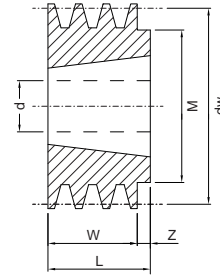
Section	D [mm]	α [°]	bg [mm]	hg min. [mm]	a [mm]	Rb min. [mm]	db [mm]	Sg [mm]	Se [mm]
3V	≤ 89	36 ± 0,25	8,89 ± 0,13	8,63	0,63	4,6	8,73 ± 0,01	10,3 ± 0,4	9 ⁻² ₋₁
	90 ÷ 152	38 ± 0,25	8,89 ± 0,13	8,63	0,63	4,6	8,73 ± 0,01	10,3 ± 0,4	9 ⁻² ₋₁
	153 ÷ 1305	40 ± 0,25	8,89 ± 0,13	8,63	0,63	4,7	8,73 ± 0,01	10,3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

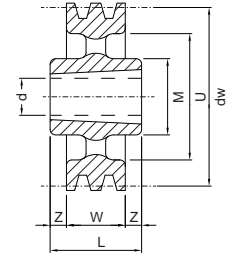


“PBT” SPC-C

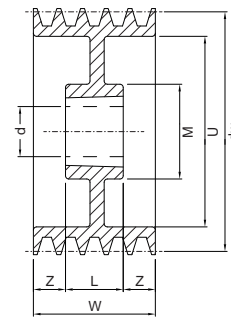
dw [mm]	Number of grooves	Type	SER-SIT® Taper bushing	d min-max [mm]	Type to exhaustion	M [mm]	L [mm]	Z [mm]	U [mm]	W [mm]
212	3	11	3020	22-75	-	-	51	17	156	85
	4	11	3020	22-75	-	-	51	29,5	156	110,5
	5	11	3535	25-90	-	-	89	23,5	156	136
	6	11	3535	25-90	-	-	89	36,25	156	161,5
	8	11	3535	25-90	-	-	89	61,75	156	212,5
224	3	11	3020	22-75	-	-	51	17	173	85
	4	11	3535	49-90	-	-	89	11	168	110,5
	5	11	3535	25-90	-	-	89	23,5	173	136
	6	11	3535	25-90	-	-	89	36,25	173	161,5
236	3	11	3020	22-75	-	-	51	17	180	85
	4	11	3535	25-90	-	-	89	10,75	180	110,5
	5	11	3535	25-90	-	-	89	23,5	180	136
	6	11	3535	25-90	-	-	89	36,25	180	161,5
250	3	11	3020	22-75	-	-	51	17	194	85
	4	11	3535	25-90	-	-	89	10,75	198	110,5
	5	11	3535	25-90	-	-	89	23,5	198	136
	6	11	3535	25-90	-	-	89	36,25	198	161,5
265	3	1	3535	25-90	-	175	89	4	-	85
	4	11	3535	25-90	-	-	89	11	209	110,5
	5	11	3535	25-90	-	-	89	23,5	209	136
	6	11	3535	25-90	-	-	89	36,5	209	161,5
	8	11	3535	25-90	-	-	89	62	209	212,5
280	3	1	3535	49-90	-	175	89	4	-	85
	4	6	3535	25-90	-	175	89	10,75	228	110,5
	5	6	3535	25-90	-	-	89	23,5	224	136
	6	6	3535	25-90	-	175	89	36,25	228	161,5
300	3	12	3535	25-90	-	-	89	62	224	212,5
	4	6	3535	25-90	-	175	89	2	244	85
	5	6	3535	25-90	-	175	89	10,75	244	110,5
	6	6	3535	25-90	-	175	89	23,5	247	136
315	6	6	3535	25-90	-	175	89	36,25	247	161,5
	8	11	4040	40-100	-	-	102	55,5	244	212,5
	3	12	3535	25-90	-	175	89	2	259	85
	4	6	3535	25-90	-	175	89	11	259	110,5
335	5	6	3535	25-90	-	175	89	23,5	279	136
	6	6	3535	25-90	-	175	89	36,5	279	161,5
	8	6	4040	40-100	-	210	102	55,25	282	212,5
	3	3	3535	25-90	-	175	89	2	279	85
355	4	9	3535	25-90	-	175	89	11	299	110,5
	5	9	3535	25-90	-	175	89	23,5	299	136
	6	6	3535	25-90	-	175	89	36,5	299	161,5
	8	6	4040	40-100	-	216	102	55,5	299	212,5
400	3	3	3535	25-90	-	178	89	2	342	85
	4	9	3535	25-90	-	178	89	10,75	342	110,5
	5	9	3535	25-90	-	175	89	23,5	342	136
	6	6	4040	40-100	-	215	102	29,75	342	161,5
450	8	6	4545	55-110	-	242	114	49,5	344	212,5
	3	3	3535	25-90	-	178	89	2	393	85
	4	9	3535	25-90	-	178	89	10,75	393	110,5
	5	9	4040	40-100	-	215	102	17	393	136
450	6	6	4545	55-110	9	242	114	24	393	161,5
	8	6	5050	50-125	-	267	127	43	393	212,5



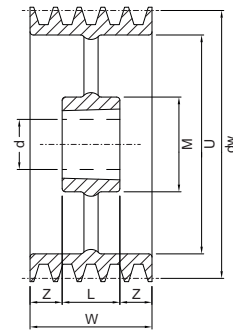
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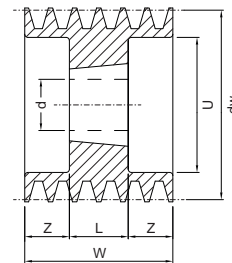
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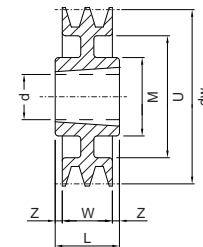
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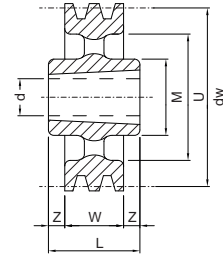
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Dimensions of V-Pulleys PBT - mounting taper bushing SER-SIT®

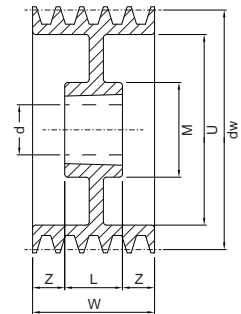


» “PBT” SPC-C

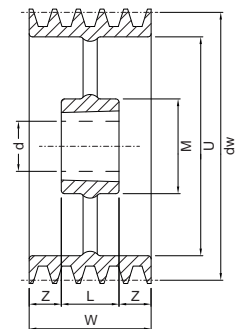
dw [mm]	Number of grooves	Type	SER-SIT® Taper bushing	d min-max [mm]	Type to exhaustion	M [mm]	L [mm]	Z [mm]	U [mm]	W [mm]
475	3	3	3535	25-90	-	170	89	2	419	85
500	3	3	3535	25-90	-	178	89	2	443	85
	4	9	3535	25-90	-	175	89	11	443	110,5
	5	9	4040	40-100	-	215	102	17	443	136
	6	9	4545	55-110	-	242	114	24	443	161,5
	8	6	5050	50-125	9	267	127	42,75	443	212,5
560	3	3	3535	25-90	-	178	89	2	503	85
	4	9	4040	40-100	-	215	102	4,25	503	110,5
	5	9	4545	55-110	-	242	114	11	503	136
	6	9	5050	50-125	-	267	127	17,25	503	161,5
	8	9	5050	50-125	-	267	127	42,75	503	212,5
630	3	3	4040	40-100	-	215	102	8,5	573	85
	4	9	4545	55-110	-	242	114	1,5	573	110,5
	5	9	5050	50-125	-	267	127	4,5	573	136
	6	9	5050	50-125	-	265	127	17,75	573	161,5
	8	9	5050	50-125	-	267	127	42,75	573	212,5
710	3	3	4040	40-100	-	215	102	8,5	654	85
	4	3	5050	50-125	-	267	127	8	654	110,5
	5	9	5050	50-125	-	265	127	4,5	654	136
	6	9	5050	50-125	-	265	127	17,25	654	161,5
	8	9	5050	50-125	-	265	127	43,75	654	212,5
800	3	3	4545	55-110	-	240	114	14,5	737	85
	4	3	5050	50-125	-	265	127	8,25	737	110,5
	5	9	5050	50-125	-	265	127	4,5	737	136
	6	9	5050	50-125	-	267	127	17,25	737	161,5
	8	9	5050	50-125	-	265	127	42,75	737	212,5
1000	3	3	5050	50-125	-	265	127	21	937	85
	4	3	5050	50-125	-	265	127	8,25	937	110,5
	5	9	5050	50-125	-	265	127	4,5	937	136
	6	9	5050	50-125	-	265	127	17,25	937	161,5
	8	9	5050	50-125	-	265	127	42,75	937	212,5
1250	3	3	5050	50-125	-	267	126	20,5	1190	85
	4	3	5050	50-125	-	267	126	7,75	1190	110,5
	5	9	5050	50-125	-	280	127	4,5	1190	136
	6	9	5050	50-125	-	280	127	17,25	1190	161,5
	8	9	5050	50-125	-	280	127	42,75	1190	212,5



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