

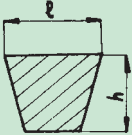
SIT V-Pulleys

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

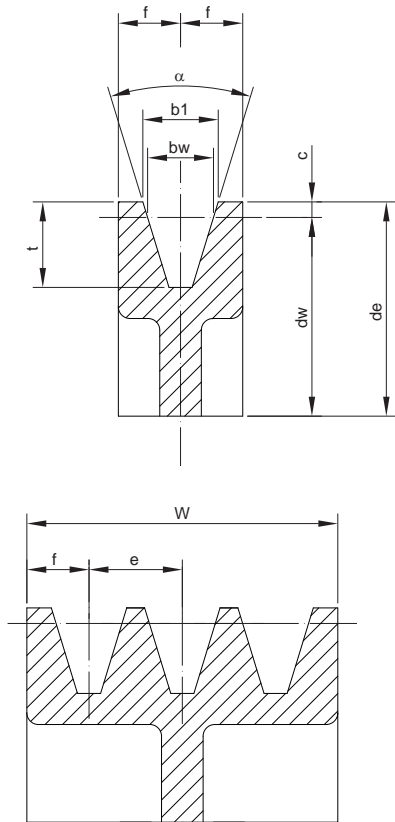
dw [mm]	Tolerance of pitch diameter dw [mm]	Eccentricity tolerance relevant to the outside diameter [mm]
50	± 0,4	0,2
56	± 0,4	
63	± 0,5	
71	± 0,6	
80	± 0,6	
90	± 0,7	
100	± 0,8	0,3
112	± 0,9	
118	± 1,0	
125	± 1,0	
135	± 1,0	
140	± 1,1	
150	± 1,2	0,4
160	± 1,3	
180	± 1,4	
190	± 1,5	
200	± 1,6	
212	±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

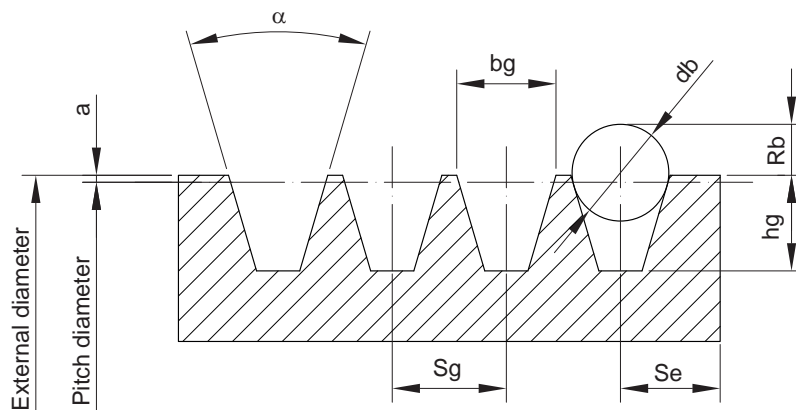
Due to a constant improvement of our products, technical data of the pulleys may be subject to changes.

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 PT - solid hub

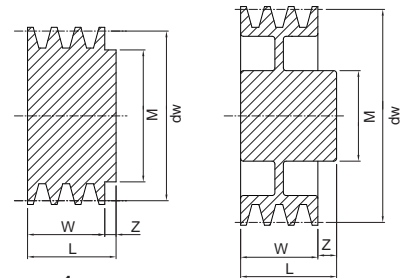
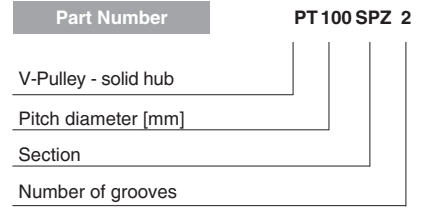


PT SPZ-Z-3V

Pitch dw [mm]	Number of grooves	Type	M [mm]	L [mm]	W [mm]	z [mm]
50	1	1	32*	28	16	12
	2	1	35*	35	28	7
	3	1	35*	44	40	4
	4	1	35*	56	52	4
56	1	1	32**	28	16	12
	2	1	40**	35	28	7
	3	1	42**	44	40	4
	4	1	42**	56	52	4
63	1	1	40	28	16	12
	2	1	40	35	28	7
	3	1	42	44	40	4
	4	1	42	56	52	4
71	1	1	40	28	16	12
	2	1	48	35	28	7
	3	1	50	44	40	4
	4	1	50	56	52	4
75	1	1	40	28	16	12
	2	1	50	35	28	7
	3	1	50	44	40	4
	4	1	50	56	52	4
80	1	4	40	28	16	12
	2	1	50	35	28	7
	3	1	50	44	40	4
	4	1	65	56	52	4
	5	1	65	68	64	4
85	1	4	40	28	16	12
	2	4	50	35	28	7
	3	1	50	44	40	4
	4	1	65	56	52	4
	5	1	65	68	64	4
90	1	4	40	28	16	12
	2	4	50	35	28	7
	3	4	50	44	40	4
	4	1	65	56	52	4
	5	1	68	68	64	4
95	1	4	45	28	16	12
	2	4	50	35	28	7
	3	4	50	40	40	-
	4	1	65	56	52	4
	5	1	68	68	64	4
100	1	4	45	28	16	12
	2	4	50	35	28	7
	3	4	60	40	40	-
	4	1	65	56	52	4
	5	1	68	68	64	4
106	1	4	45	28	16	12
	2	4	50	35	28	7
	3	4	60	40	40	-
	4	4	65	56	52	4
	5	4	68	68	64	4
112	1	4	45	28	16	12
	2	4	50	35	28	7
	3	4	60	40	40	-
	4	4	68	52	52	-
	5	5	68	60	64	4
118	1	4	45	28	16	12
	2	4	50	35	28	7
	3	4	60	40	40	-
	4	4	68	52	52	-
	5	5	75	60	64	4

» PT SPZ-Z-3V

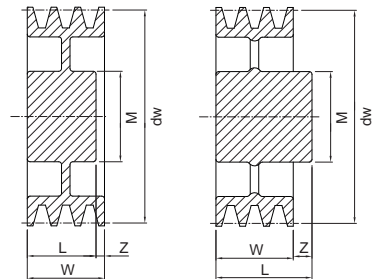
Pitch dw [mm]	Number of grooves	Type	M [mm]	L [mm]	W [mm]	z [mm]
125	1	4	45	28	16	12
	2	4	50	35	28	7
	3	4	60	40	40	-
	4	4	68	52	52	-
	5	5	75	60	64	4
132	1	4	45	28	16	12
	2	4	60	40	28	12
	3	4	60	40	40	-
	4	4	68	52	52	-
	5	5	75	60	64	4
140	1	4	55	28	16	12
	2	4	60	40	28	12
	3	4	60	40	40	-
	4	4	68	52	52	-
	5	5	75	60	64	4
150	1	4	55	32	16	16
	2	4	60	40	28	12
	3	4	68	45	40	5
	4	4	68	52	52	-
	5	5	80	60	64	4
160	1	4	55	32	16	16
	2	4	60	40	28	12
	3	4	68	45	40	5
	4	4	68	52	52	-
	5	5	80	60	64	4
180	1	4	55	32	16	16
	2	4	65	40	28	12
	3	4	68	45	40	5
	4	4	80	52	52	-
	5	5	80	60	64	4
200	1	4A	55	32	16	16
	2	4A	65	40	28	12
	3	4A	68	45	40	5
	4	4A	80	52	52	-
	5	5A	80	60	64	4
224	1	8	55	32	16	16
	2	8	65	40	28	12
	3	8	68	45	40	5
	4	8	80	52	52	-
	5	9	80	60	64	4
250	1	8	55	32	16	16
	2	8	62	40	28	12
	3	8	68	45	40	5
	4	8	80	52	52	-
	5	9	88	60	64	4
280	1	8	68	45	16	29
	2	8	68	45	28	17
	3	8	80	50	40	10
	4	8	80	52	52	-
	5	9	96	60	64	4
315	1	8	68	45	16	29
	2	8	68	45	28	17
	3	8	80	50	40	10
	4	8	96	55	52	3
	5	9	96	60	64	4
355	1	8	68	45	16	29
	2	8	68	45	28	17
	3	8	80	50	40	10
	4	8	96	55	52	3
	5	9	96	60	64	4



1

4

4A (with lightening bores)

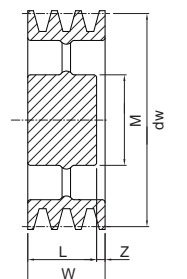


5

8 (3 spokes)

8A (6 spokes)

5A (with lightening bores)



9

9A (3 spokes)

9B (6 spokes)

* Note: the diameter at the bottom of the groove is 32 mm
 ** Note: the diameter at the bottom of the groove is 38 mm