

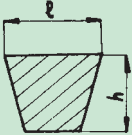
## SIT V-Pulleys

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**

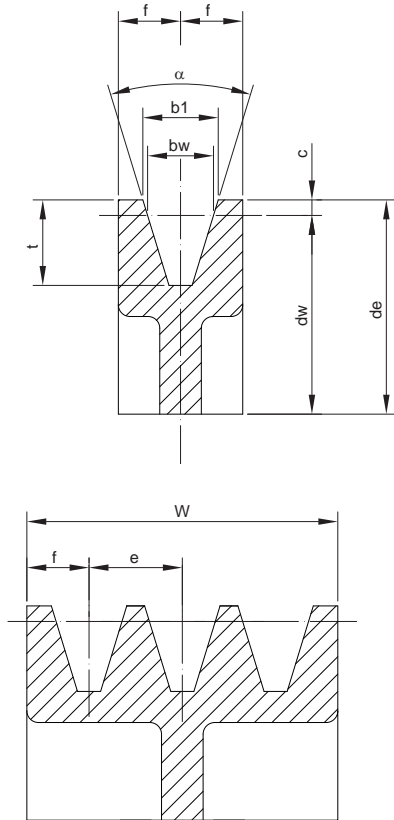
dw [mm]	Tolerance of pitch diameter dw [mm]	Eccentricity tolerance relevant to the outside diameter [mm]
50	± 0,4	0,2
56	± 0,4	
63	± 0,5	
71	± 0,6	
80	± 0,6	
90	± 0,7	
100	± 0,8	0,3
112	± 0,9	
118	± 1,0	
125	± 1,0	
135	± 1,0	
140	± 1,1	
150	± 1,2	0,4
160	± 1,3	
180	± 1,4	
190	± 1,5	
200	± 1,6	
212	±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

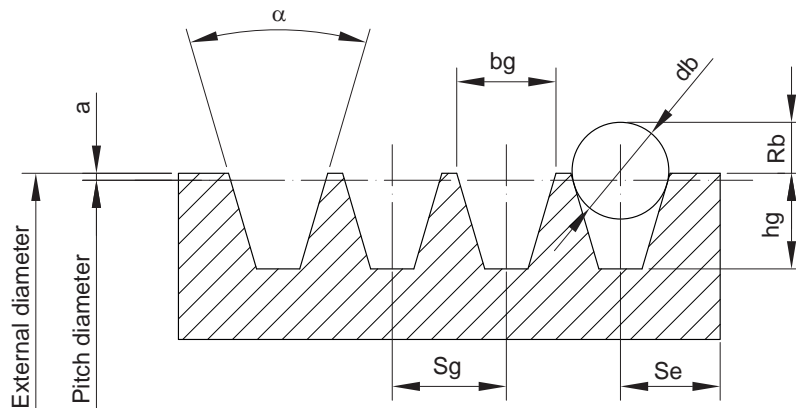
Due to a constant improvement of our products, technical data of the pulleys may be subject to changes.

## Dimension of grooves (DIN 2211)



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

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



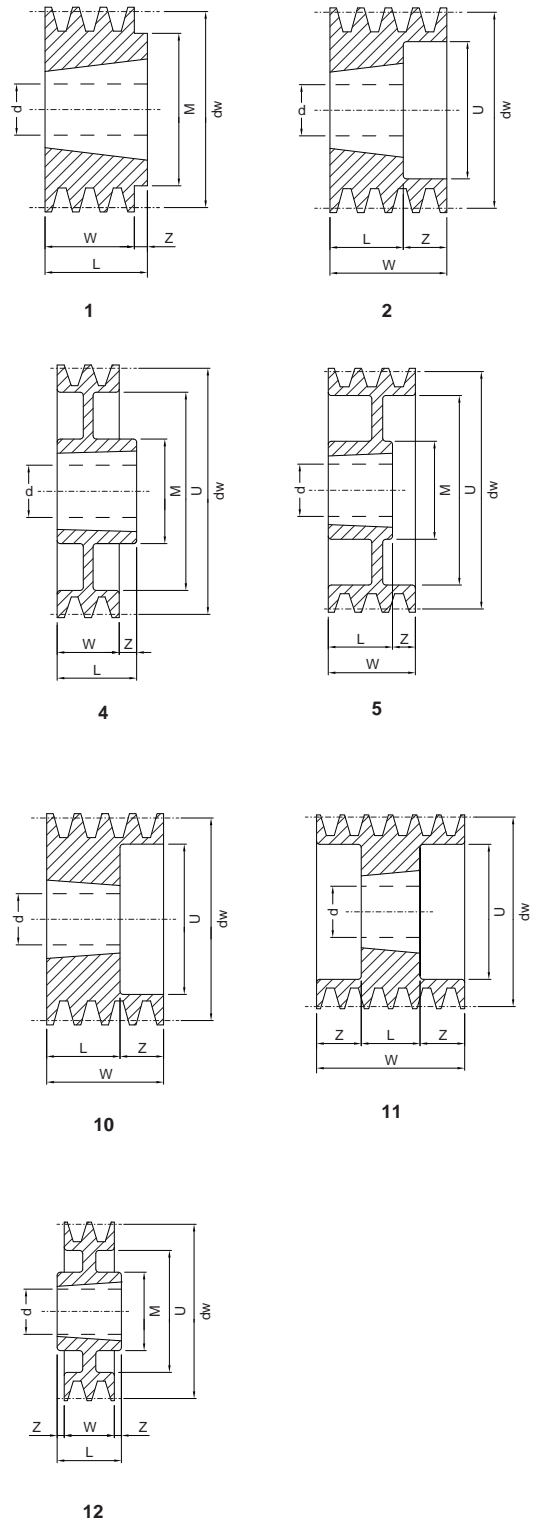
Section	D [mm]	α [°]	bg [mm]	hg min. [mm]	a [mm]	Rb min. [mm]	db [mm]	Sg [mm]	Se [mm]
<b>3V</b>	≤ 89	36 ± 0,25	8,89 ± 0,13	8,63	0,63	4,6	8,73 ± 0,01	10,3 ± 0,4	9 <sup>-2</sup> <sub>-1</sub>
	90 ÷ 152	38 ± 0,25	8,89 ± 0,13	8,63	0,63	4,6	8,73 ± 0,01	10,3 ± 0,4	9 <sup>-2</sup> <sub>-1</sub>
	153 ÷ 1305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

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



## “PBT” SPB-B-5V

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]
90	1	1	1210	14-50	-	-	25	-	-	25
	2	10	1210	14-50	-	-	25	19	52	44
	3	10	1210	14-50	-	-	25	38	50	63
100	1	1	1610	12-42	-	-	25	-	-	25
	2	10	1610	12-42	-	-	25	19	57	44
	3	10	1610	12-42	-	-	25	38	57	63
112	1	1	1610	12-42	-	-	25	-	-	25
	2	2	1610	12-42	-	-	25	19	69	44
	3	10	1610	12-42	-	-	25	38	69	63
	4	10	1610	12-42	-	-	25	57	72	82
118	1	1	1610	12-42	-	-	25	-	-	25
	2	2	1610	12-42	-	-	25	19	69	44
	3	10	1610	12-42	-	-	25	38	76	63
125	1	1	1610	12-42	-	-	25	-	-	25
	2	2	2012	14-50	-	-	32	12	86	44
	3	2	2012	14-50	-	-	32	31	86	63
	4	11	2012	14-50	-	-	32	25	86	82
132	1	1	1610	12-42	-	-	25	-	-	25
	2	2	2012	14-50	-	-	32	12	89	44
	3	2	2012	14-50	-	-	32	31	89	63
	4	11	2012	14-50	-	-	32	25	89	82
	5	10	2517	18-65	-	-	45	56	94	101
140	1	1	1610	12-42	-	-	25	-	-	25
	2	2	2012	14-50	-	-	32	12	97	44
	3	2	2012	14-50	-	-	32	31	97	63
	4	11	2517	18-65	-	-	45	18,5	102	82
	5	11	2517	18-65	-	-	45	28	102	101
	6	11	2517	18-65	-	-	45	37,5	102	120
150	1	4	1610	12-42	1	-	25	-	-	25
	2	2	2012	14-50	-	-	32	12	107	44
	3	2	2517	18-65	-	-	45	18	107	63
	4	11	2517	18-65	-	-	45	18,5	107	82
	5	11	2517	18-65	-	-	45	28	107	101
	6	11	2517	18-65	-	-	45	37,5	107	120
160	1	4	1610	12-42	1	-	25	-	-	25
	2	2	2012	14-50	-	-	32	12	120	44
	3	2	2517	18-65	-	-	45	18	120	63
	4	11	2517	18-65	-	-	45	18,5	117	82
	5	11	2517	18-65	-	-	45	28	117	101
	6	11	3020	22-75	-	-	51	34,5	123	120
	8	11	3020	22-75	-	-	51	53,5	123	158
	170	1	4	1610	12-42	-	-	25	-	-
2		2	2012	14-50	-	-	32	12	130	44
3		2	2517	18-65	-	-	45	18	130	63
4		11	2517	18-65	-	-	45	18,5	127	82
5		11	3020	22-75	-	-	51	25	127	101
6		11	3020	22-75	-	-	51	34,5	127	120
8		11	3030*	25-75	-	-	51	53,5	130	158
180		1	6	1610	12-42	-	90	25	-	132
	2	1	2517	18-65	-	120	45	1	-	44
	3	2	2517	18-65	-	-	45	18	137	63
	4	11	2517	18-65	-	-	45	18,5	137	82
	5	11	3020	22-75	-	-	51	25	142	101
	6	11	3020	22-75	-	-	51	34,5	137	120
	8	11	3030	25-75	-	-	76	41	137	158
	190	1	12	2012	14-50	-	104	32	3,5	147
2		1	2517	18-65	-	120	45	1	-	44
3		2	2517	18-65	-	-	45	18	147	63
4		11	2517	18-65	-	-	45	18,5	147	82
5		11	3020	22-75	-	-	51	25	147	101
6		11	3020	22-75	-	-	51	34,5	147	120
8		11	3030	25-75	-	-	76	41	147	158



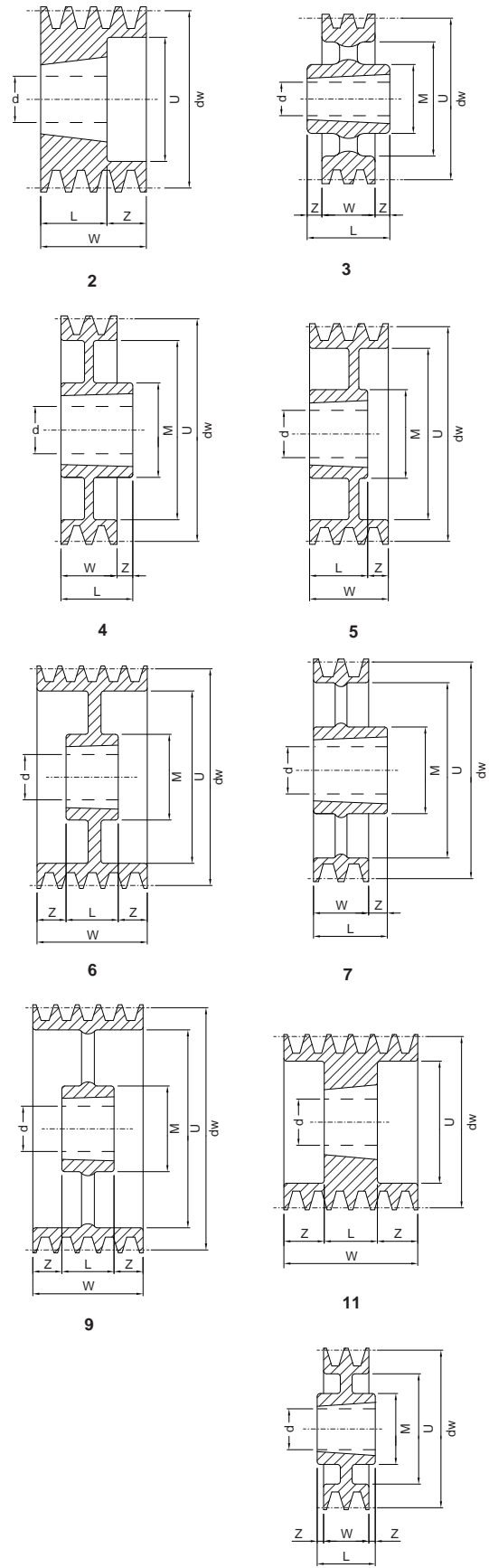
\* = PBT170SPB8 - taper bush type 3020 up to sold out.

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



» “PBT” SPB-B-5V

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]
200	1	12	2012	14-50	-	104	32	3,5	157	25
	2	4	2517	18-65	-	117	45	1	-	44
	3	2	2517	18-65	-	-	45	18	157	63
	4	11	3020	22-75	-	-	51	15,5	157	82
	5	11	3020	22-75	-	-	51	25	157	101
	6	11	3020	22-75	-	-	51	34,5	157	120
212	1	11	3535	25-90	-	-	89	34,5	160	158
	1	3	2012	14-50	-	104	32	3,5	169	25
	2	4	2517	18-65	-	125	45	1	169	44
	3	5	2517	18-65	-	125	45	18	169	63
	4	11	3020	22-75	-	-	51	15,5	169	82
	5	11	3020	22-75	-	-	51	25	169	101
224	6	11	3535	25-90	-	-	89	15,5	169	120
	8	11	3535	25-90	-	-	89	34,5	173	158
	1	12	2012	14-50	-	104	32	3,5	181	25
	2	4	2517	18-65	-	117	45	1	181	44
	3	5	2517	18-65	-	117	45	18	181	63
	4	11	3020	22-75	-	-	51	15,5	181	82
236	5	11	3020	22-75	-	-	51	25	181	101
	6	11	3535	25-90	-	-	89	15,5	181	120
	8	11	3535	25-90	-	-	89	34,5	185	158
	2	4	2517	18-65	-	117	45	1	193	44
	3	5	2517	18-65	-	117	45	18	193	63
	4	11	3020	22-75	-	-	51	15,5	193	82
250	5	11	3535	25-90	-	-	89	6	196	101
	6	11	3535	25-90	-	-	89	15,5	193	120
	8	11	3535	25-90	-	-	89	34,5	197	158
	1	12	2012	14-50	3	104	32	3,5	207	25
	2	4	2517	18-65	7	124	45	1	207	44
	3	5	3020	22-75	-	144	51	12	207	63
280	4	6	3020	22-75	-	144	51	15,5	207	82
	5	11	3535	25-90	-	-	89	6	207	101
	6	11	3535	25-90	-	-	89	15,5	207	120
	8	11	3535	25-90	-	-	89	34,5	207	158
	1	3	2012	14-50	-	104	32	3,5	237	25
	2	7	2517	18-65	-	125	45	1	237	44
300	3	9	3020	22-75	-	144	51	6	237	63
	4	6	3020	22-75	-	144	51	15,5	237	82
	5	6	3535	25-90	-	175	89	6	237	101
	6	6	3535	25-90	-	175	89	15,5	237	120
	8	6	3535	25-90	-	175	89	34,5	237	158
	1	3	2012	14-50	-	104	32	3,5	285	25
315	2	7	2517	18-65	4	125	45	1	257	44
	3	9	3020	22-75	-	144	51	6	257	63
	4	4	3535	25-90	-	175	89	7	257	82
	5	6	3535	25-90	-	175	89	6	257	101
	6	6	3535	25-90	-	175	89	15,5	257	120
	8	6	3535	25-90	-	178	89	34,5	260	158
1	3	2012	14-50	-	104	32	3,5	272	25	
335	2	7	2517	18-65	-	125	45	1	272	44
	3	9	3020	22-75	-	144	51	6	272	63
	4	3	3535	25-90	-	175	89	3,5	272	82
	5	6	3535	25-90	-	175	89	6	272	101
	6	6	3535	25-90	-	175	89	15,5	272	120
	8	6	3535	25-90	-	175	89	34,5	272	158
2	7	2517	18-65	-	125	45	1	292	44	
355	3	9	3020	22-75	-	144	51	6	292	63
	4	3	3535	25-90	-	175	89	3,5	292	82
	5	6	3535	25-90	-	175	89	6	292	101
	6	6	3535	25-90	9	175	89	15,5	292	120
	8	6	3535	25-90	9	175	89	34,5	292	158



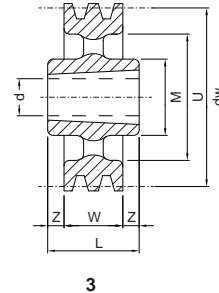
V-PULLEYS - PBT

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

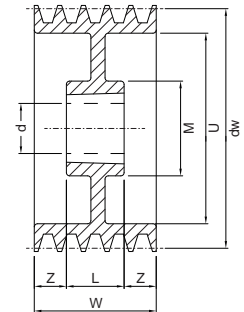


» "PBT" SPB-B-5V

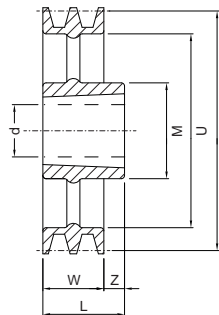
dw [mm]	Number of grooves	Type	SER-SIT® Taper bushing	d min-max [mm]	Type to exhaustion	M [mm]	L [mm]	Z [mm]	U [mm]	W [mm]
355	2	3	3020	22-75	-	146	51	3,5	315	44
	3	9	3020	22-75	-	146	51	6	315	63
	4	3	3535	25-90	-	175	89	3,5	312	82
	5	6	3535	25-90	9	175	89	6	312	101
	6	6	3535	25-90	-	175	89	15,5	312	120
	8	6	3535	25-90	9	178	89	34,5	315	158
400	2	3	3020	22-75	-	146	51	3,5	360	44
	3	3	3535	25-90	-	175	89	13	357	63
	4	3	3535	25-90	-	175	89	3,5	357	82
	5	9	3535	25-90	-	175	89	6	357	101
	6	9	3535	25-90	-	175	89	15,5	357	120
	8	6	4040	40-100	9	245	102	28	360	158
450	2	3	3020	22-75	-	150	51	3,5	407	44
	3	7	3535	25-90	-	178	89	26	410	63
	4	7	3535	25-90	-	178	89	7	410	82
	5	8	3535	25-90	-	178	89	12	410	101
	6	8	4040	40-100	-	215	102	18	410	120
	8	9	4040	40-100	-	215	102	28	410	158
500	2	3	3020	22-75	-	146	51	3,5	460	44
	3	7	3535	25-90	-	178	89	26	460	63
	4	7	3535	25-90	-	178	89	7	460	82
	5	8	3535	25-90	-	178	89	12	460	101
	6	8	4040	40-100	-	215	102	18	460	120
	8	9	4040	40-100	-	215	102	28	460	158
560	2	3	3030	25-75	-	150	76	16	520	44
	3	7	3535	25-90	-	178	89	26	520	63
	4	7	3535	25-90	-	178	89	7	520	82
	5	7	4040	40-100	-	210	102	1	520	101
	6	8	4040	40-100	-	215	102	18	520	120
	8	9	4545	55-110	-	242	114	22	520	158
630	2	3	3030	25-75	-	150	76	16	590	44
	3	7	3535	25-90	-	178	89	26	590	63
	4	7	3535	25-90	-	178	89	7	590	82
	5	7	4040	40-100	-	215	102	1	590	101
	6	8	4040	40-100	-	215	102	18	590	120
	8	9	4545	55-110	-	242	114	22	590	158
710	2	7	3535	25-90	-	185	89	45	664	44
	3	3	3535	25-90	-	175	89	13	664	63
	4	3	3535	25-90	-	185	89	3,5	664	82
	5	7	4040	40-100	-	215	101	1	664	101
	6	9	4545	55-110	-	240	114	3	664	120
	8	9	4545	55-110	-	240	114	22	664	158
800	2	3	3535	25-90	-	175	89	22,5	754	44
	3	3	3535	25-90	-	175	89	13	754	63
	4	3	4040	40-100	-	215	102	10	754	82
	5	7	4040	40-100	-	215	101	1	754	101
	6	9	4545	55-110	-	240	114	3	754	120
	8	9	4545	55-110	-	240	114	22	754	158
900	3	3	3535	25-90	-	185	89	13	854	63
	4	3	4040	40-100	-	216	102	10	854	82
	5	7	4040	40-100	-	210	102	1	854	101
	6	9	4545	55-110	-	240	114	3	854	120
	8	9	4545	55-110	-	240	114	22	854	158
1000	3	3	4040	40-100	-	216	102	6	954	63
	4	3	4040	40-100	-	216	102	4	954	82
	5	3	4545	55-110	-	240	114	6,5	954	101
	6	9	4545	55-110	-	240	114	3	954	120
	8	9	5050	50-125	-	265	127	15,5	954	158
1250	3	3	4040	50-125	-	210	102	19,5	1204	63
	4	3	4545	55-110	-	242	114	16	1204	82
	5	3	4545	55-110	-	242	114	6,5	1204	101
	6	9	4545	55-110	-	242	114	3	1204	120
	8	9	5050	50-125	-	280	127	15,5	1204	158



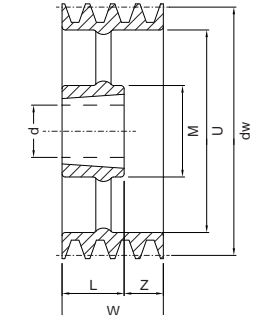
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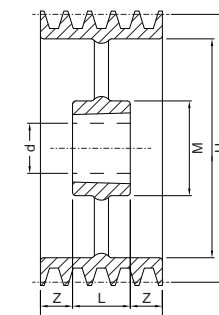
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