SIT timing pulleys - IMPERIAL PITCH

Timing pulleys IMPERIAL PITCH are available with solid hub execution and for assembly with SER-SIT® taper bushing.
These types of pulleys are available in a wide range of pitches and teeth number.

Solid hub
Material: aluminum/cast iron/steel.
Finishing: black manganese phosphating (aluminum is not treated).

Pitch:
- **XL**
- **L**
- **H**
- **XH**
- **XXH**

For mounting taper bushing SER-SIT®
Material: cast iron.
Finishing: black manganese phosphating.

Pitch:
- **L**
- **H**
- **XH**

Special executions

Upon request, SIT is able to design and manufacture any type of pulley based on customer requirements.
For peripheral speed exceeding 33 m/s it is strongly recommended to use steel as material of construction.

$$\text{peripheral speed [m/s]} = \frac{\text{pulley diameter [mm]} \cdot \text{rpm}}{19100}$$

In order to reduce the system weight, the pulleys can be manufactured from light metals; in this case the lifetime will be reduced when compared to the standard because the nylon belt coating has a slightly abrasive effect. This disadvantage can be reduced with a high thickness anodization coating of the teeth.

Flanged pulleys

Timing belts, when in motion, have a slight lateral displacement. It is therefore necessary to use at least one flanged pulley to prevent the belt jumping out of the pulley.
Usually, in order to reduce the costs, the flanged pulley is the one with the smaller diameter.
In any case, when the distance of the axes is greater than 8 times the diameter of the small pulley, or when the transmission is working on shafts arranged in a position that is not horizontal, both pulleys have to be flanged.

TOLERANCES

Pulley diameter tolerances

External diameter [mm]	Tolerances [mm]
up to 25,4	-0,05 +0,00
from 25,5 to 50,8	-0,08 +0,00
from 50,9 to 102	-0,10 +0,00
from 103 to 178	-0,13 +0,00
from 179 to 305	-0,15 +0,00
from 306 to 509	-0,18 +0,00
from 510 to 761	-0,20 +0,00
from 762 to 1015	-0,23 +0,00
more than 1016	-0,25 +0,00

Radial circular runout

External diameter [mm]	Measured total eccentricity [mm]
up to 203,2	0,13
more than 203,2	add 0,013 for any 25,4 of diameter

Cylindricity tolerance

Pulley width	Tolerances
for any 100 mm	0,1 mm without exceeding the external diameter tolerance

Protective coating

All (steel and cast iron) pulleys are treated with a black manganese phosphating process that gives greater resistance against oxidizing agents. This treatment does not modify the profile or the dimensions of the pulleys.
On request SIT can provide a wide range of special coating, related to the customer specific needs or environmental critical conditions.

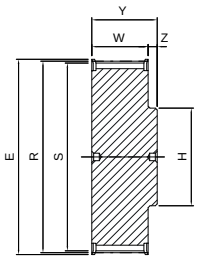
Note
Due to a constant improvement of our products, technical data of the pulleys may be subject to changes.

Dimensions of timing pulleys IMPERIAL PITCH - solid hub

PD ... L 050

L

Code	Teeth nr.	Type	E [mm]	R [mm]	S [mm]	U [mm]	H [mm]	d [mm]	W [mm]	Y [mm]	Z [mm]	Flange	Material
PD10L050	10	1	37,0	30,32	29,56	-	20,0	-	19,0	30,0	11,0	with flanges	steel
PD11L050	11	1	37,0	33,35	32,59	-	20,0	-	19,0	30,0	11,0		
PD12L050	12	1	43,0	36,38	35,62	-	27,0	-	19,0	30,0	11,0		
PD13L050	13	1	44,0	39,41	38,65	-	27,0	-	19,0	30,0	11,0		
PD14L050	14	1	48,0	42,45	41,69	-	29,0	-	19,0	30,0	11,0		
PD15L050	15	1	51,0	45,48	44,72	-	32,0	-	19,0	30,0	11,0		
PD16L050	16	1	54,0	48,51	47,75	-	37,0	-	19,0	30,0	11,0		
PD17L050	17	1	57,0	51,54	50,78	-	37,0	-	19,0	30,0	11,0		
PD18L050	18	1	60,0	54,57	53,81	-	41,0	-	19,0	30,0	11,0		
PD19L050	19	1	64,0	57,61	56,84	-	41,0	-	19,0	30,0	11,0		
PD20L050	20	1	66,5	60,64	59,88	-	47,0	-	19,0	30,0	11,0		
PD21L050	21	1	70,0	63,67	62,91	-	47,0	-	19,0	30,0	11,0		
PD22L050	22	1	75,0	66,70	65,94	-	50,0	-	19,0	30,0	11,0		
PD23L050	24	1	79,0	69,73	68,97	-	50,0	-	19,0	30,0	11,0		
PD24L050	26	1	79,0	72,77	72,01	-	55,0	-	19,0	32,0	13,0		
PD25L050	25	1	82,5	75,80	75,04	-	58,0	-	19,0	32,0	13,0		
PD26L050	26	1	86,0	78,83	78,07	-	64,0	-	19,0	32,0	13,0		
PD27L050	27	1	86,0	81,86	81,10	-	64,0	-	19,0	32,0	13,0		
PD28L050	28	1	91,0	84,89	84,13	-	70,0	-	19,0	32,0	13,0		
PD29L050	29	1	94,0	87,93	87,16	-	70,0	-	19,0	32,0	13,0		
PD30L050	30	1	97,0	90,96	90,20	-	72,0	-	19,0	34,0	15,0		
PD32L050	32	1	102,0	97,02	96,26	-	75,0	-	19,0	34,0	15,0		
PD33L050	33	1	106,0	100,05	99,29	-	80,0	-	19,0	34,0	15,0		
PD34L050	34	1	112,0	103,08	102,32	-	85,0	-	19,0	34,0	15,0		cast iron
PD35L050	35	1	112,0	106,12	105,35	-	88,0	-	19,0	34,0	15,0		
PD36L050	36	1	115,0	109,15	108,39	-	88,0	-	19,0	34,0	15,0		
PD40L050	40	3	128,0	121,28	120,52	100,0	68,0	11,0	19,0	34,0	15,0		
PD41L050	41	3	128,0	124,31	123,55	103,0	68,0	11,0	19,0	34,0	15,0		
PD42L050	42	3	135,0	127,34	126,58	106,0	68,0	11,0	19,0	34,0	15,0		
PD44L050	44	3	142,0	133,40	132,64	112,0	68,0	11,0	19,0	34,0	15,0		
PD45L050	45	3	142,0	136,44	135,67	115,0	68,0	11,0	19,0	34,0	15,0		
PD47L050	47	3	150,0	142,50	141,74	121,0	68,0	11,0	19,0	34,0	15,0		
PD48L050	48	3	150,0	145,53	144,77	124,0	68,0	11,0	19,0	46,0	27,0		
PD49L050	49	3A	-	148,56	147,80	127,0	68,0	12,0	19,0	46,0	27,0	without flanges	
PD50L050	50	3A	-	151,60	150,83	130,0	68,0	12,0	19,0	46,0	27,0		
PD52L050	52	3A	-	157,66	156,90	136,0	68,0	12,0	19,0	46,0	27,0		
PD56L050	56	3A	-	169,79	169,02	139,0	68,0	12,0	19,0	46,0	27,0		
PD57L050	57	3A	-	172,82	172,06	152,0	68,0	12,0	19,0	46,0	27,0		
PD60L050	60	3A	-	181,91	181,15	160,0	68,0	12,0	19,0	46,0	27,0		
PD65L050	65	3A	-	197,07	196,31	176,0	68,0	12,0	19,0	46,0	27,0		
PD66L050	66	3A	-	200,11	199,34	179,0	68,0	12,0	19,0	46,0	27,0		
PD72L050	72	3A	-	218,30	217,54	197,0	75,0	12,0	19,0	46,0	27,0		
PD84L050	84	3A	-	254,68	253,92	233,0	75,0	12,0	19,0	46,0	27,0		
PD90L050	90	3A	-	272,87	272,11	252,0	75,0	12,0	19,0	46,0	27,0		
PD96L050	96	3A	-	291,06	290,30	270,0	80,0	12,0	19,0	46,0	27,0		
PD120L050	120	5A	-	363,83	363,07	342,0	85,0	18,0	19,0	46,0	27,0		



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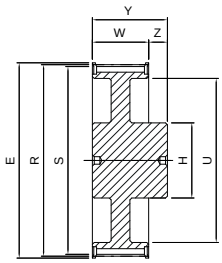

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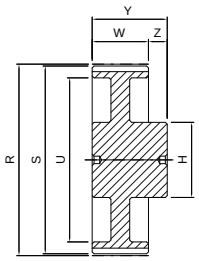

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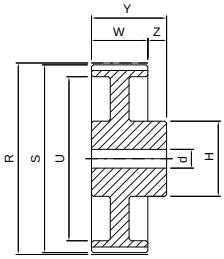

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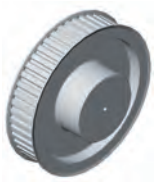
* = A prebore, with a maximum diameter “d”, might be present.

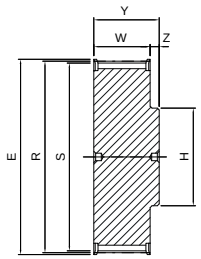
Dimensions of timing pulleys IMPERIAL PITCH - solid hub



PD ... L 075

L

Code	Teeth nr.	Type	E [mm]	R [mm]	S [mm]	U [mm]	H [mm]	d [mm]	W [mm]	Y [mm]	Z [mm]	Flange	Material
PD10L075	10	1	37,0	30,32	29,56	-	20,0	-	25,4	38,0	12,6	with flanges	steel
PD11L075	11	1	37,0	33,35	32,59	-	20,0	-	25,4	38,0	12,6		
PD12L075	12	1	43,0	36,38	35,62	-	27,0	-	25,4	38,0	12,6		
PD13L075	13	1	44,0	39,41	38,65	-	27,0	-	25,4	38,0	12,6		
PD14L075	14	1	48,0	42,45	41,69	-	29,0	-	25,4	38,0	12,6		
PD15L075	15	1	51,0	45,48	44,72	-	32,0	-	25,4	38,0	12,6		
PD16L075	16	1	54,0	48,51	47,75	-	37,0	-	25,4	38,0	12,6		
PD17L075	17	1	57,0	51,54	50,78	-	37,0	-	25,4	38,0	12,6		
PD18L075	18	1	60,0	54,57	53,81	-	41,0	-	25,4	38,0	12,6		
PD19L075	19	1	64,0	57,61	56,84	-	41,0	-	25,4	38,0	12,6		
PD20L075	20	1	66,5	60,64	59,88	-	47,0	-	25,4	38,0	12,6		
PD21L075	21	1	70,0	63,67	62,91	-	47,0	-	25,4	38,0	12,6		
PD22L075	22	1	75,0	66,70	65,94	-	50,0	-	25,4	38,0	12,6		
PD23L075	23	1	79,0	69,73	68,97	-	50,0	-	25,4	38,0	12,6		
PD24L075	24	1	79,0	72,77	72,01	-	57,0	-	25,4	38,0	12,6		
PD25L075	25	1	83,0	75,80	75,04	-	58,0	-	25,4	38,0	12,6		
PD26L075	26	1	87,0	78,83	78,07	-	64,0	-	25,4	38,0	12,6		
PD27L075	27	1	87,0	81,86	81,10	-	64,0	-	25,4	38,0	12,6		
PD28L075	28	1	91,0	84,89	84,13	-	70,0	-	25,4	38,0	12,6		
PD29L075	29	1	93,0	87,93	87,16	-	70,0	-	25,4	38,0	12,6		
PD30L075	30	1	97,0	90,96	90,20	-	72,0	-	25,4	38,0	12,6		
PD32L075	32	1	102,0	97,02	96,26	-	75,0	-	25,4	38,0	12,6		
PD33L075	33	1	106,0	100,05	99,29	-	80,0	-	25,4	38,0	12,6		cast iron
PD34L075	34	1	112,0	103,08	102,32	-	85,0	-	25,4	38,0	12,6		
PD35L075	35	1	112,0	106,12	105,35	-	88,0	-	25,4	38,0	12,6		
PD36L075	36	1	128,0	109,15	108,39	-	88,0	-	25,4	38,0	12,6		
PD40L075	40	3	128,0	121,28	120,52	100,0	68,0	11,0	25,4	38,0	12,6		
PD41L075	41	3	128,0	124,31	123,55	103,0	68,0	11,0	25,4	38,0	12,6		
PD42L075	42	3	135,0	127,34	126,58	106,0	68,0	11,0	25,4	38,0	12,6		
PD44L075	44	3	142,0	133,40	132,64	112,0	68,0	11,0	25,4	38,0	12,6		
PD45L075	45	3	150,0	136,44	135,67	115,0	68,0	11,0	25,4	38,0	12,6		
PD47L075	47	3	150,0	142,50	141,74	121,0	68,0	11,0	25,4	38,0	12,6		
PD48L075	48	3	150,0	145,53	144,77	124,0	68,0	11,0	25,4	48,0	22,6		
PD49L075	49	3A	-	148,56	147,80	127,0	68,0	12,0	25,4	48,0	22,6	senza flange	
PD50L075	50	3A	-	151,60	150,83	130,0	68,0	12,0	25,4	48,0	22,6		
PD52L075	52	3A	-	157,66	156,90	136,0	68,0	12,0	25,4	48,0	22,6		
PD56L075	56	3A	-	169,79	169,02	139,0	68,0	12,0	25,4	48,0	22,6		
PD57L075	57	3A	-	172,82	172,06	152,0	68,0	12,0	25,4	48,0	22,6		
PD60L075	60	3A	-	181,91	181,15	160,0	68,0	12,0	25,4	48,0	22,6		
PD65L075	65	3A	-	197,07	196,31	176,0	68,0	12,0	25,4	48,0	22,6		
PD66L075	66	3A	-	200,11	199,34	179,0	68,0	12,0	25,4	48,0	22,6		
PD72L075	72	3A	-	218,30	217,54	197,0	75,0	12,0	25,4	48,0	22,6		
PD84L075	84	3A	-	254,68	253,92	233,0	75,0	12,0	25,4	48,0	22,6		
PD90L075	90	3A	-	272,87	272,11	252,0	75,0	12,0	25,4	48,0	22,6		
PD96L075	96	3A	-	291,06	290,30	270,0	80,0	12,0	25,4	48,0	22,6		
PD120L075	120	5A	-	363,83	363,07	342,0	85,0	18,0	25,4	48,0	22,6		



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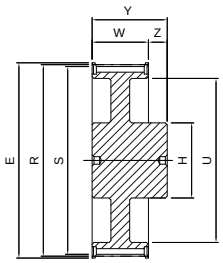

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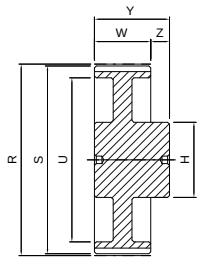

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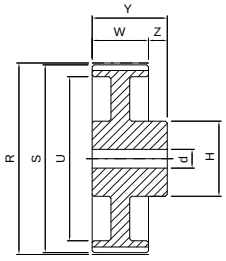

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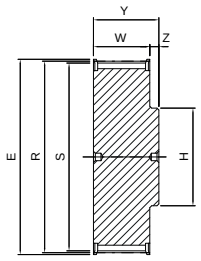
* = A prebore, with a maximum diameter “d”, might be present.

Dimensions of timing pulleys IMPERIAL PITCH - solid hub

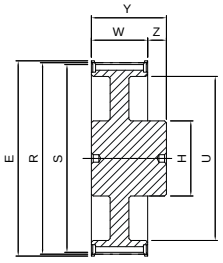
PD ... L 100

L

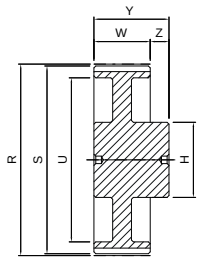
Code	Teeth nr.	Type	E [mm]	R [mm]	S [mm]	U [mm]	H [mm]	d [mm]	W [mm]	Y [mm]	Z [mm]	Flange	Material
PD10L100	10	1	37,0	30,32	29,56	-	20,0	-	32,0	46,0	14,0	with flanges	steel
PD11L100	11	1	37,0	33,35	32,59	-	20,0	-	32,0	46,0	14,0		
PD12L100	12	1	43,0	36,38	35,62	-	27,0	-	32,0	46,0	14,0		
PD13L100	13	1	44,0	39,41	38,65	-	27,0	-	32,0	46,0	14,0		
PD14L100	14	1	48,0	42,45	41,69	-	29,0	-	32,0	46,0	14,0		
PD15L100	15	1	51,0	45,48	44,72	-	32,0	-	32,0	46,0	14,0		
PD16L100	16	1	54,0	48,51	47,75	-	37,0	-	32,0	46,0	14,0		
PD17L100	17	1	57,0	51,54	50,78	-	37,0	-	32,0	46,0	14,0		
PD18L100	18	1	60,0	54,57	53,81	-	41,0	-	32,0	46,0	14,0		
PD19L100	19	1	64,0	57,61	56,84	-	41,0	-	32,0	46,0	14,0		
PD20L100	20	1	66,5	60,64	59,88	-	47,0	-	32,0	46,0	14,0		
PD21L100	21	1	70,0	63,67	62,91	-	47,0	-	32,0	46,0	14,0		
PD22L100	22	1	75,0	66,70	65,94	-	50,0	-	32,0	46,0	14,0		
PD23L100	23	1	79,0	69,73	68,97	-	50,0	-	32,0	46,0	14,0		
PD24L100	24	1	79,0	72,77	72,01	-	57,0	-	32,0	46,0	14,0		
PD25L100	25	1	82,5	75,80	75,04	-	58,0	-	32,0	46,0	14,0		
PD26L100	26	1	86,0	78,83	78,07	-	64,0	-	32,0	46,0	14,0		
PD27L100	27	1	86,0	81,86	81,10	-	64,0	-	32,0	46,0	14,0		
PD28L100	28	1	91,0	84,89	84,13	-	70,0	-	32,0	46,0	14,0		
PD29L100	29	1	93,0	87,93	87,16	-	70,0	-	32,0	46,0	14,0		
PD30L100	30	1	97,0	90,96	90,20	-	72,0	-	32,0	46,0	14,0		
PD32L100	32	1	102,0	97,02	96,26	-	75,0	-	32,0	46,0	14,0		
PD33L100	33	1	106,0	100,05	99,29	-	80,0	-	32,0	46,0	14,0		
PD34L100	34	1	112,0	103,08	102,32	-	85,0	-	32,0	46,0	14,0		
PD35L100	35	1	112,0	106,12	105,35	-	88,0	-	32,0	46,0	14,0		
PD36L100	36	1	115,0	109,15	108,39	-	88,0	-	32,0	46,0	14,0		
PD40L100	40	3	128,0	121,28	120,52	100,0	68,0	11,0	32,0	46,0	14,0		cast iron
PD41L100	41	3	128,0	124,31	123,55	103,0	68,0	11,0	32,0	46,0	14,0		
PD42L100	42	3	135,0	127,34	126,58	106,0	68,0	11,0	32,0	46,0	14,0		
PD44L100	44	3	142,0	133,40	132,64	112,0	68,0	11,0	32,0	46,0	14,0		
PD45L100	45	3	142,0	136,44	135,67	115,0	68,0	11,0	32,0	46,0	14,0		
PD47L100	47	3	150,0	142,50	141,74	121,0	68,0	11,0	32,0	46,0	14,0		
PD48L100	48	3	150,0	145,53	144,77	124,0	68,0	11,0	32,0	50,0	18,0		
PD49L100	49	3A	-	148,56	147,80	127,0	68,0	12,0	32,0	50,0	18,0	without flanges	
PD50L100	50	3A	-	151,60	150,83	130,0	68,0	12,0	32,0	50,0	18,0		
PD52L100	52	3A	-	157,66	156,90	136,0	68,0	12,0	32,0	50,0	18,0		
PD56L100	56	3A	-	169,79	169,02	139,0	68,0	12,0	32,0	50,0	18,0		
PD57L100	57	3A	-	172,82	172,06	152,0	68,0	12,0	32,0	50,0	18,0		
PD60L100	60	3A	-	181,91	181,15	160,0	75,0	12,0	32,0	54,0	22,0		
PD65L100	65	3A	-	197,07	196,31	176,0	75,0	12,0	32,0	54,0	22,0		
PD66L100	66	3A	-	200,11	199,34	179,0	75,0	12,0	32,0	54,0	22,0		
PD72L100	72	3A	-	218,30	217,54	197,0	75,0	12,0	32,0	54,0	22,0		
PD84L100	84	3A	-	254,68	253,92	233,0	80,0	12,0	32,0	54,0	22,0		
PD90L100	90	3A	-	272,87	272,11	252,0	80,0	12,0	32,0	54,0	22,0		
PD96L100	96	3A	-	291,06	290,30	270,0	80,0	12,0	32,0	54,0	22,0		
PD120L100	120	5A	-	363,83	363,07	342,0	90,0	18,0	32,0	54,0	22,0		



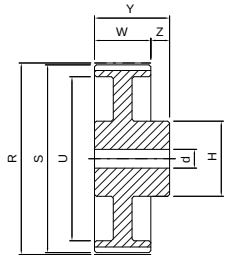
1



3*



3A*



5A

* = A prebore, with a maximum diameter “d”, might be present.