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

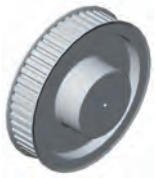
Protective coating

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.

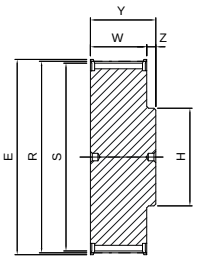
Dimensions of timing pulleys IMPERIAL PITCH - solid hub

Pitches XL - L - H - XH - XXH



Part Number	PD	40	XL	037

- PD — IMPERIAL PITCH timing pulleys - solid hub
- 40 — Number of teeth
- XL — Pitch
- 037 — Belt width in inches x 100



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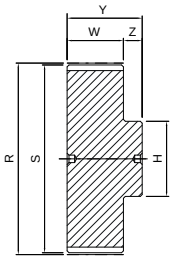
PD ... XL 037

XL

Code	Teeth nr.	Type	E [mm]	R [mm]	S [mm]	U [mm]	H [mm]	d [mm]	W [mm]	Y [mm]	Z [mm]	Flange	Material
PD10XL037	10	1	23,0	16,17	15,66	-	10,0	-	14,3	25,0	10,7	with flanges	aluminum
PD11XL037	11	1	23,0	17,79	17,28	-	10,0	-	14,3	25,0	10,7		
PD12XL037	12	1	25,0	19,40	18,89	-	12,0	-	14,3	25,0	10,7		
PD13XL037	13	1	25,0	21,02	20,51	-	12,0	-	14,3	25,0	10,7		
PD14XL037	14	1	28,0	22,64	22,13	-	15,0	-	14,3	25,0	10,7		
PD15XL037	15	1	28,0	24,25	23,74	-	15,0	-	14,3	25,0	10,7		
PD16XL037	16	1	32,0	25,87	25,36	-	17,0	-	14,3	25,0	10,7		
PD17XL037	17	1	32,0	27,49	26,98	-	20,0	-	14,3	25,0	10,7		
PD18XL037	18	1	35,0	29,11	28,60	-	20,0	-	14,3	25,0	10,7		
PD19XL037	19	1	35,0	30,72	30,21	-	20,0	-	14,3	25,0	10,7		
PD20XL037	20	1	38,0	32,34	31,83	-	24,0	-	14,3	25,0	10,7		
PD21XL037	21	1	38,0	33,96	33,45	-	24,0	-	14,3	25,0	10,7		
PD22XL037	22	1	41,0	35,57	35,06	-	27,0	-	14,3	25,0	10,7		
PD24XL037	24	1	44,0	38,81	38,30	-	30,0	-	14,3	25,0	10,7		
PD26XL037	26	1	48,0	42,03	41,53	-	30,0	-	14,3	25,0	10,7		
PD27XL037	27	1	48,0	43,66	43,15	-	32,0	-	14,3	25,0	10,7		
PD28XL037	28	1	51,0	45,28	44,77	-	34,0	-	14,3	25,0	10,7		
PD29XL037	29	1	51,0	46,89	46,38	-	34,0	-	14,3	25,0	10,7		
PD30XL037	30	1	54,0	48,51	48,00	-	38,0	-	14,3	25,0	10,7		
PD32XL037	32	1A	-	51,74	51,23	-	45,0	-	14,3	25,0	10,7	without flanges	
PD34XL037	34	1A	-	54,98	54,47	-	45,0	-	14,3	25,0	10,7		
PD35XL037	35	1A	-	56,60	56,09	-	45,0	-	14,3	25,0	10,7		
PD36XL037	36	1A	-	58,21	57,70	-	52,0	-	14,3	25,0	10,7		
PD38XL037	38	1A	-	61,45	60,94	-	52,0	-	14,3	25,0	10,7		
PD39XL037	39	1A	-	63,06	62,55	-	52,0	-	14,3	25,0	10,7		
PD40XL037	40	1A	-	64,68	64,17	-	52,0	-	14,3	25,0	10,7		
PD41XL037	41	1A	-	66,30	65,79	-	52,0	-	14,3	25,0	10,7		
PD42XL037	42	1A	-	67,91	67,40	-	52,0	-	14,3	25,0	10,7		
PD43XL037	43	1A	-	69,53	69,02	-	52,0	-	14,3	25,0	10,7		
PD44XL037	44	1A	-	71,15	70,64	-	52,0	-	14,3	25,0	10,7		
PD45XL037	45	1A	-	72,77	72,26	-	52,0	-	14,3	25,0	10,7		
PD46XL037	46	1A	-	74,38	73,87	-	52,0	-	14,3	25,0	10,7		
PD47XL037	47	1A	-	76,00	75,49	-	52,0	-	14,3	25,0	10,7		
PD48XL037	48	1A	-	77,62	77,11	-	52,0	-	14,3	25,0	10,7		
PD49XL037	49	3A	-	79,23	78,72	54,0	52,0	-	14,3	25,0	10,7		
PD52XL037	52	3A	-	84,08	83,57	58,0	52,0	-	14,3	25,0	10,7		
PD56XL037	56	3A	-	90,55	90,04	65,0	52,0	-	14,3	25,0	10,7		
PD57XL037	57	3A	-	92,17	91,66	67,0	52,0	-	14,3	25,0	10,7		
PD58XL037	58	3A	-	93,79	93,28	69,0	52,0	-	14,3	25,0	10,7		
PD59XL037	59	3A	-	95,40	94,89	70,0	52,0	-	14,3	25,0	10,7		
PD60XL037	60	3A	-	97,02	96,51	71,0	52,0	-	14,3	25,0	10,7		
PD68XL037	68	3A	-	109,96	109,45	84,0	52,0	-	14,3	25,0	10,7		
PD69XL037	69	3A	-	111,57	111,06	85,0	52,0	-	14,3	25,0	10,7		
PD70XL037	70	3A	-	113,19	112,68	87,0	52,0	-	14,3	25,0	10,7		
PD71XL037	71	3A	-	114,81	114,30	89,0	52,0	-	14,3	25,0	10,7		
PD72XL037	72	3A	-	116,43	115,92	91,0	52,0	-	14,3	25,0	10,7		



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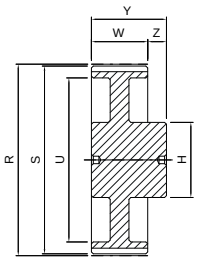

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