

SIT timing pulleys - METRIC PITCH

Standard timing pulleys METRIC PITCH are made in aluminum, in solid hub execution.

Solid hub

Material: aluminum

Pitch:

- T 2,5
- T 5
- T 10

- AT5
- AT 10



Solid hub

Material: on request

Pitch:

- T20

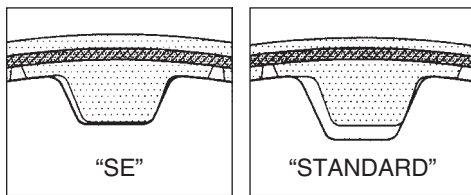
- AT 20



Special executions

Upon request, SIT is able to design and manufacture any type of pulley based on customer requirements.

For standard executions the teeth shape and the consequent backlash are related to the number of teeth.

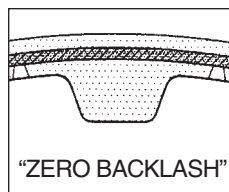


Z < 20

Z > 20

SE: reduced backlash

On demand, in case of very precise applications (e.g. positioning systems), a "zero backlash" version can be supplied.



On demand

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

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.

Protective coating

Lifetime of aluminum pulleys can be reduced because the nylon coating of the belt teeth has a slightly abrasive effect.

This disadvantage can be reduced applying a high thickness anodization coating on the pulley teeth.

Note

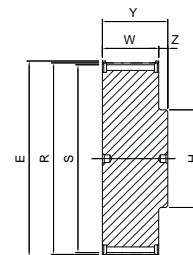
Due to a constant improvement of our products, technical data of the pulleys may be subject to changes.

Dimensions of timing pulleys METRIC PITCH "AT" - solid hub

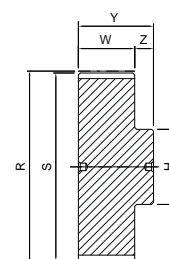
Pitches AT 5 - AT 10 - AT 20



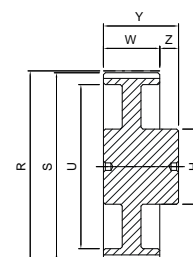
Part Number	PMAT 16 AT5 /12
METRIC PITCH timing pulley "AT"	
Total width (mm)	
Pitch	
Number of teeth	



1



1A



3A

AT 5

Code	Teeth nr.	Type	E [mm]	R [mm]	S [mm]	H [mm]	Belt width						Z [mm]	Material
							10 mm		16 mm		25 mm			
							W [mm]	Y [mm]	W [mm]	Y [mm]	W [mm]	Y [mm]		
PMAT quoteY AT5/12	12	1	23,0	19,10	17,88	11,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	aluminum
PMAT quoteY AT5/14	14	1	25,0	22,28	21,06	14,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/15	15	1	28,0	23,87	22,65	16,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/16	16	1	32,0	25,46	24,24	18,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/18	18	1	32,0	28,65	27,43	20,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/19	19	1	36,0	30,24	29,02	22,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/20	20	1	36,0	31,83	30,61	23,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/22	22	1	38,0	35,01	33,79	24,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/24	24	1	42,0	38,20	36,98	26,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/25	25	1	44,0	39,79	38,57	26,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/26	26	1	44,0	41,38	40,16	26,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/27	27	1	48,0	42,97	41,75	30,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/28	28	1	48,0	44,56	43,34	32,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/30	30	1	51,0	47,75	46,53	34,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/32	32	1	54,0	50,93	49,71	36,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/36	36	1	64,0	57,30	56,08	38,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/40	40	1	67,0	63,66	62,44	40,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/42	42	1	70,0	66,85	65,62	40,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/44	44	1A	-	70,03	68,81	45,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/48	48	1A	-	76,39	75,17	50,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	
PMAT quoteY AT5/60	60	1A	-	95,49	94,27	65,0	15,0	21,0	21,0	27,0	30,0	36,0	6,0	

AT 10

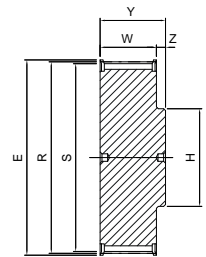
Code	Teeth nr.	Type	E [mm]	R [mm]	S [mm]	U [mm]	H [mm]	Belt width								Z [mm]	Material
								16 mm		25 mm		32 mm		50 mm			
								W [mm]	Y [mm]	W [mm]	Y [mm]	W [mm]	Y [mm]	W [mm]	Y [mm]		
PMAT quoteY AT10/15	15	1	51,0	47,75	45,93	-	31,0	21,0	31,0	30,0	40,0	-	-	-	-	10,0	aluminum
PMAT quoteY AT10/16	16	1	54,0	50,93	49,11	-	35,0	21,0	31,0	30,0	40,0	-	-	-	-	10,0	
PMAT quoteY AT10/18	18	1	60,0	57,3	55,48	-	40,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/19	19	1	66,0	60,48	58,66	-	44,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/20	20	1	66,0	63,66	61,84	-	46,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/22	22	1	75,0	70,03	68,21	-	52,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/24	24	1	83,0	76,39	74,57	-	58,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/25	25	1	83,0	79,58	77,76	-	60,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/26	26	1	87,0	82,76	80,94	-	60,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/27	27	1	91,0	85,94	84,12	-	60,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/28	28	1	93,0	89,13	87,31	-	60,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/30	30	1	97,0	95,49	93,67	-	60,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/32	32	1	106,0	101,86	100,04	-	65,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/36	36	1	119,0	114,59	112,77	-	70,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/40	40	1	131,0	127,32	125,50	-	80,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/44	44	3A	-	140,06	138,24	118,0	88,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/48	48	3A	-	152,79	150,97	130,0	95,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	
PMAT quoteY AT10/60	60	3A	-	190,99	189,17	165,0	110,0	21,0	31,0	30,0	40,0	37,0	47,0	56,0	66,0	10,0	

Dimensions of timing pulleys METRIC PITCH “AT” - solid hub

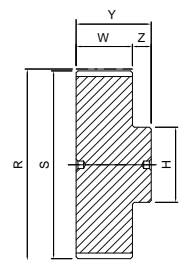


AT 20

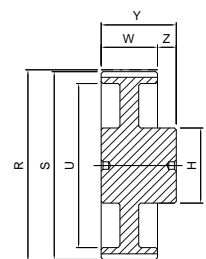
Code	Teeth nr.	Type	E [mm]	R [mm]	S [mm]	U [mm]	H [mm]	d Ø	Belt width									Material
									32 mm			50 mm			100 mm			
									W [mm]	Y [mm]	Z [mm]	W [mm]	Y [mm]	Z [mm]	W [mm]	Y [mm]	Z [mm]	
PMAT quoteY AT20/18	18	1	118,0	114,59	111,77	-	80,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	on request
PMAT quoteY AT20/20	20	1	134,0	127,32	124,50	-	90,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/22	22	1	150,0	140,06	137,24	-	90,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/24	24	1	158,0	152,79	149,97	-	95,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/25	25	1	166,0	159,15	156,33	-	95,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/30	30	1	200,0	190,99	188,17	-	110,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/32	32	1A	-	203,72	200,90	-	110,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/36	36	1A	-	229,18	226,36	-	110,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/40	40	3A	-	254,65	251,83	210,0	110,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/48	48	3A	-	305,58	302,76	260,0	130,0	-	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/60	60	3A	-	381,97	379,15	338,0	130,0	22,0	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	
PMAT quoteY AT20/72	72	3A	-	458,37	455,55	415,0	140,0	22,0	42,0	53,0	11,0	60,0	71,0	11,0	110,0	123,0	13,0	



1



1A



3A