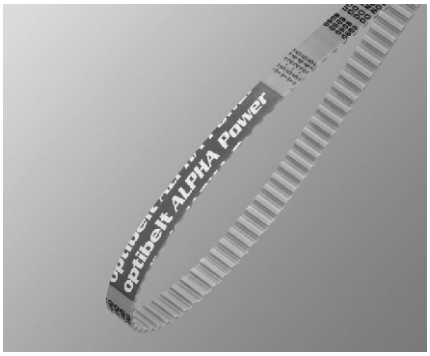
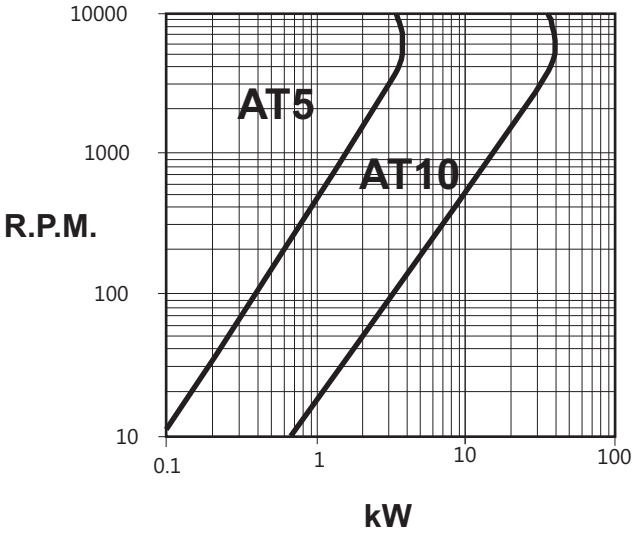
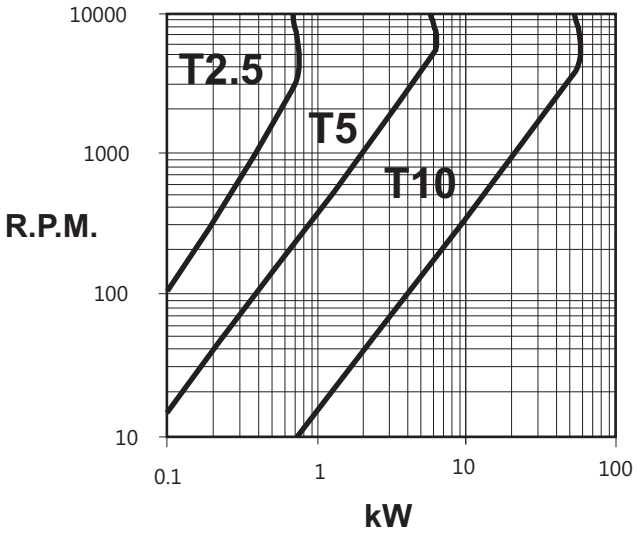
Metric T & AT Pulley & Belt Drives



The metric T & AT series was created to meet industries need for polyurethane belts with a high price/quality ratio. They provide maximum power transmission combined with perfect tooth meshing. Capable of transmitting up to 60kW and speeds of 10,000 rpm. To select a drive it is necessary to know the driver and driven shaft speeds, the demand power, proposed centre distance and duty cycle. The Optibelt belt range chart below can be used to select the optimum belt size for a drive. For further information or help in selecting a drive contact Naismith Engineering.





Alpha
Optibelt Alpha timing belts consist of high tensile strength, flexible tension cord and abrasion resistant polyurethane. Available in T2.5, T5 and T10 as well as AT5 and AT10.

Alpha Power
Alpha Power timing belts are a result of the consistent developments undertaken by Optiblet. The new Alpha Power belt has more resistant and more durable polyurethane compounds, and an increase in performance of 30%. The Optimized interplay between the polyurethane and the steel cord components guarantees that the Optibelt Alpha Power belt will be an extremely economical solution for a wide range of applications.

Metric Timing Belts T2.5 & T5

	Pitch (mm)	T	B
T2.5	2.50	0.70	1.30
T5	5.00	1.20	2.20

optibelt
Power Transmission

Belt	Teeth	Pitch Length
120-T2.5	48	120
145-T2.5	58	145
160-T2.5	64	160
177.5-T2.5	71	178
180-T2.5	72	180
182.5-T2.5	73	183
185-T2.5	74	185
200-T2.5	80	200
230-T2.5	92	230
245-T2.5	98	245
265-T2.5	106	265
285-T2.5	114	285
290-T2.5	116	290
305-T2.5	122	305
317.5-T2.5	127	318
330-T2.5	132	330
380-T2.5	152	380
395-T2.5	158	395
420-T2.5	168	420
480-T2.5	192	480
500-T2.5	200	500
540-T2.5	216	540
600-T2.5	240	600
620-T2.5	248	620
650-T2.5	260	650
680-T2.5	272	680
700-T2.5	280	700
780-T2.5	312	780
880-T2.5	352	880
915-T2.5	366	915
950-T2.5	380	950
1185-T2.5	474	1185

Standard widths of:-

6mm Code = Length-T2.5-6

Off standard widths are available on request.

Belt	Teeth	Pitch Length
150-T5	30	150
165-T5	33	165
180-T5	36	180
185-T5	37	185
200-T5	40	200
210-T5	42	210
215-T5	43	215
220-T5	44	220
225-T5	45	225
245-T5	49	245
250-T5	50	250
255-T5	51	255
260-T5	52	260
270-T5	54	270
275-T5	55	275
280-T5	56	280
295-T5	59	295
305-T5	61	305
315-T5	63	315
330-T5	66	330
340-T5	68	340
350-T5	70	350
355-T5	71	355
365-T5	73	365
390-T5	78	390
400-T5	80	400
410-T5	82	410
420-T5	84	420
445-T5	89	445
450-T5	90	450
455-T5	91	455
460-T5	92	460
475-T5	95	475
480-T5	96	480
500-T5	100	500
510-T5	102	510
525-T5	105	525
545-T5	109	545
550-T5	110	550
560-T5	112	560

Belt	Teeth	Pitch Length
575-T5	115	575
590-T5	118	590
600-T5	120	600
610-T5	122	610
620-T5	124	620
625-T5	125	625
630-T5	126	630
640-T5	128	640
650-T5	130	650
660-T5	132	660
675-T5	135	675
690-T5	138	690
700-T5	140	700
720-T5	144	720
750-T5	150	750
780-T5	156	780
815-T5	163	815
830-T5	166	830
840-T5	168	840
860-T5	172	860
885-T5	177	885
900-T5	180	900
940-T5	188	940
990-T5	198	990
1075-T5	215	1075
1100-T5	220	1100
1160-T5	232	1160
1200-T5	240	1200
1215-T5	243	1215
1275-T5	255	1275
1280-T5	256	1280
1315-T5	263	1315
1355-T5	271	1355
1380-T5	276	1380
1440-T5	288	1440
1955-T5	391	1955

Standard widths of:-

10mm Code = Length-T5-10

16mm Code = Length-T5-16

25mm Code = Length-T5-25

Long Length up to 32mm wide is available.

Metric Timing Belts T10

	Pitch (mm)	T	B
T10	10.00	2.50	4.50

optibelt
Power Transmission

Belt	Teeth	Pitch Length
260-T10	26	260
340-T10	34	340
370-T10	37	370
390-T10	39	390
400-T10	40	400
410-T10	41	410
440-T10	44	440
450-T10	45	450
480-T10	48	480
500-T10	50	500
530-T10	53	530
560-T10	56	560
600-T10	60	600
610-T10	61	610
630-T10	63	630
660-T10	66	660
690-T10	69	690
700-T10	70	700
720-T10	72	720
730-T10	73	730
750-T10	75	750
780-T10	78	780
810-T10	81	810
840-T10	84	840
880-T10	88	880
890-T10	89	890
900-T10	90	900
910-T10	91	910
920-T10	92	920
960-T10	96	960
970-T10	97	970
980-T10	98	980
1010-T10	101	1010

Belt	Teeth	Pitch Length
1080-T10	108	1080
1100-T10	110	1100
1110-T10	111	1110
1140-T10	114	1140
1150-T10	115	1150
1210-T10	121	1210
1240-T10	124	1240
1250-T10	125	1250
1300-T10	130	1300
1320-T10	132	1320
1350-T10	135	1350
1390-T10	139	1390
1400-T10	140	1400
1420-T10	142	1420
1450-T10	145	1450
1460-T10	146	1460
1500-T10	150	1500
1560-T10	156	1560
1610-T10	161	1610
1750-T10	175	1750
1780-T10	178	1780
1800-T10	180	1800
1880-T10	188	1880
1960-T10	196	1960
2250-T10	225	2250

Standard widths of:-

16mm Code = Length-T10-16

25mm Code = Length-T10-25

32mm Code = Length-T10-32

50mm Code = Length-T10-50

Long Length up to 100mm wide is available.

Metric Double Sided Timing Belts T5 & T10

	Pitch (mm)	T	B
T5	5.00	1.20	3.30
T10	10.00	2.50	6.70

optibelt
Power Transmission

Belt	Teeth	Pitch Length
260-T5DL	52	260
410-T5DL	82	410
460-T5DL	92	460
480-T5DL	96	480
515-T5DL	103	515
590-T5DL	118	590
620-T5DL	124	620
750-T5DL	150	750
815-T5DL	163	815
860-T5DL	172	860
940-T5DL	188	940
1100-T5DL	220	1100

Standard widths of:-

10mm Code = Length-T5-10

16mm Code = Length-T5-16

25mm Code = Length-T5-25

Off standard widths are available on request.

Belt	Teeth	Pitch Length
260-T10DL	26	260
530-T10DL	53	530
600-T10DL	60	600
630-T10DL	63	630
660-T10DL	66	660
720-T10DL	72	720
840-T10DL	84	840
920-T10DL	92	920
980-T10DL	98	980
1100-T10DL	110	1100
1210-T10DL	121	1210
1240-T10DL	124	1240
1250-T10DL	125	1250
1320-T10DL	132	1320
1350-T10DL	135	1350
1420-T10DL	142	1420
1610-T10DL	161	1610
1880-T10DL	188	1880

Standard widths of:-

16mm Code = Length-T10-16

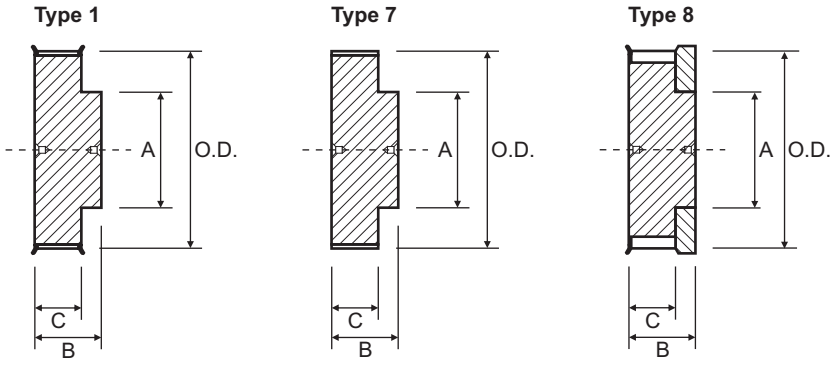
25mm Code = Length-T10-25

32mm Code = Length-T10-32

50mm Code = Length-T10-50

Off standard widths are available on request.

T2.5 Metric Timing Pulleys

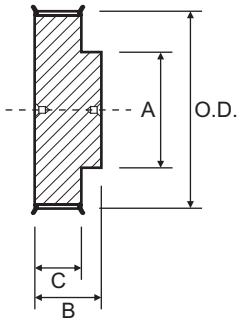


T2.5-6 Suit 6mm wide belt						
Part No.	**O.D.**	**Type**	**A**	**B**	**C = 10.0**	
12-T2.5-6F	9.0	8	6.5	16.0	Aluminium	Flanged
14-T2.5-6F	10.6	8	8.5	16.0		
15-T2.5-6F	11.4	8	10.0	16.0		
16-T2.5-6F.	12.2	1	9.0	16.0		
18-T2.5-6F	13.8	1	9.0	16.0		
19-T2.5-6F	14.6	1	9.0	16.0		
20-T2.5-6F	15.4	1	11.0	16.0		
22-T2.5-6F	17.0	1	11.0	16.0		
24-T2.5-6F	18.6	1	12.0	16.0		
25-T2.5-6F	19.4	1	13.0	16.0		
26-T2.5-6F	20.2	1	14.0	16.0		
28-T2.5-6F	21.8	1	14.0	16.0		
30-T2.5-6F	23.4	1	16.0	16.0		
32-T2.5-6F	25.0	1	16.0	16.0		
36-T2.5-6F	28.1	1	20.0	16.0		
40-T2.5-6F	31.3	1	22.0	16.0		
44-T2.5-6F	34.5	1	24.0	16.0		
48-T2.5-6	37.7	7	28.0	16.0		N.F.
60-T2.5-6	47.3	7	34.0	16.0		

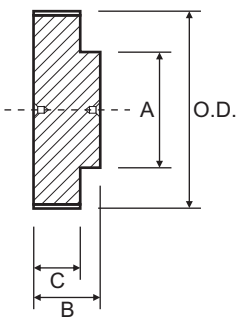
N.F. - No Flanges

T5 Metric Timing Pulleys

Type 1



Type 7

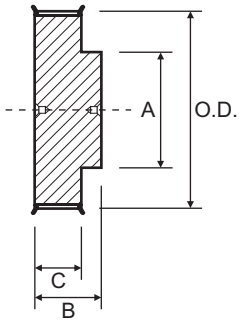


T5-10 Suit 10mm wide belt							T5-16 Suit 16mm wide belt						
Part No.	**O.D.**	**Type**	**A**	**B**	**C = 15.0**		**Part No.**	**O.D.**	**Type**	**A**	**B**	**C = 21.0**	
10-T5-10F	15.1	1	8.0	21.0	Aluminium	Flanged	10-T5-16F	15.1	1	8.0	27.0	Aluminium	Flanged
12-T5-10F	18.3	1	11.0	21.0			12-T5-16F	18.3	1	11.0	27.0		
14-T5-10F	21.5	1	14.0	21.0			14-T5-16F	21.5	1	14.0	27.0		
15-T5-10F	23.1	1	16.0	21.0			15-T5-16F	23.1	1	16.0	27.0		
16-T5-10F	24.6	1	18.0	21.0			16-T5-16F	24.6	1	18.0	27.0		
18-T5-10F	27.8	1	20.0	21.0			18-T5-16F	27.8	1	20.0	27.0		
19-T5-10F	29.4	1	22.0	21.0			19-T5-16F	29.4	1	22.0	27.0		
20-T5-10F	31.0	1	23.0	21.0			20-T5-16F	31.0	1	23.0	27.0		
22-T5-10F	34.3	1	24.0	21.0			22-T5-16F	34.3	1	24.0	27.0		
24-T5-10F	37.4	1	26.0	21.0			24-T5-16F	37.4	1	26.0	27.0		
25-T5-10F	39.0	1	26.0	21.0			25-T5-16F	39.0	1	26.0	27.0		
26-T5-10F	40.6	1	26.0	21.0			26-T5-16F	40.6	1	26.0	27.0		
27-T5-10F	42.2	1	30.0	21.0			27-T5-16F	42.2	1	30.0	27.0		
28-T5-10F	43.8	1	32.0	21.0			28-T5-16F	43.8	1	32.0	27.0		
30-T5-10F	47.0	1	34.0	21.0			30-T5-16F	47.0	1	34.0	27.0		
32-T5-10F	50.1	1	38.0	21.0			32-T5-16F	50.1	1	38.0	27.0		
36-T5-10F	56.5	1	38.0	21.0			36-T5-16F	56.5	1	38.0	27.0		
40-T5-10F	62.9	1	40.0	21.0			40-T5-16F	62.9	1	40.0	27.0		
42-T5-10F	66.0	1	40.0	21.0			42-T5-16F	66.0	1	40.0	27.0		
44-T5-10	69.2	7	45.0	21.0		N.F.	44-T5-16	69.2	7	45.0	27.0		N.F.
48-T5-10	75.6	7	50.0	21.0			48-T5-16	75.6	7	50.0	27.0		
60-T5-10	94.7	7	65.0	21.0			60-T5-16	94.7	7	65.0	27.0		

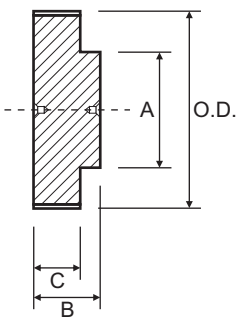
N.F. - No Flanges

T5 Metric Timing Pulleys

Type 1



Type 7

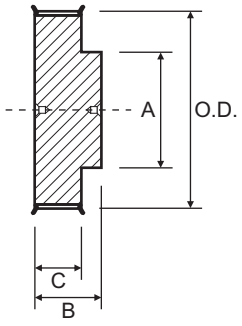


T5-25 Suit 25mm wide belt Part No.	O.D.	Type	A	B	C = 30.0	
10-T5-25F	15.1	1	8.0	36.0	Aluminium	Flanged
12-T5-25F	18.3	1	11.0	36.0		
14-T5-25F	21.5	1	14.0	36.0		
15-T5-25F	23.1	1	16.0	36.0		
16-T5-25F	24.6	1	18.0	36.0		
18-T5-25F	27.8	1	20.0	36.0		
19-T5-25F	29.4	1	22.0	36.0		
20-T5-25F	31.0	1	23.0	36.0		
22-T5-25F	34.3	1	24.0	36.0		
24-T5-25F	37.4	1	26.0	36.0		
25-T5-25F	39.0	1	26.0	36.0		
26-T5-25F	40.6	1	26.0	36.0		
27-T5-25F	42.2	1	30.0	36.0		
28-T5-25F	43.8	1	32.0	36.0		
30-T5-25F	47.0	1	34.0	36.0		
32-T5-25F	50.1	1	38.0	36.0		
36-T5-25F	56.5	1	38.0	36.0		
40-T5-25F	62.9	1	40.0	36.0		
42-T5-25F	66.0	1	40.0	36.0		
44-T5-25	69.2	7	45.0	36.0		N.F.
48-T5-25	75.6	7	50.0	36.0		
60-T5-25	94.7	7	65.0	36.0		

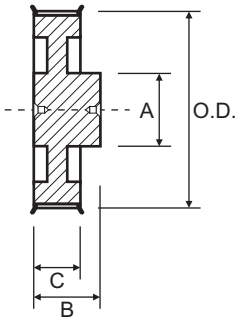
N.F. - No Flanges

T10 Metric Timing Pulleys

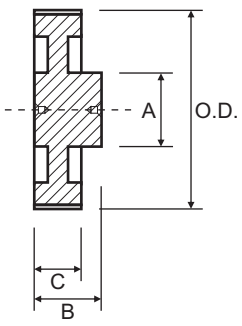
Type 1



Type 2



Type 5

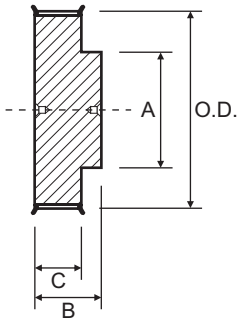


T10-16 Suit 16mm wide belt							T10-25 Suit 25mm wide belt						
Part No.	O.D.	Type	A	B	C = 21.0		Part No.	O.D.	Type	A	B	C = 30.0	
12-T10-16F	36.4	1	28.0	31.0	Aluminium	Flanged	12-T10-25F	36.4	1	28.0	40.0	Aluminium	Flanged
14-T10-16F	42.7	1	32.0	31.0			14-T10-25F	42.7	1	32.0	40.0		
15-T10-16F	45.9	1	32.0	31.0			15-T10-25F	45.9	1	32.0	40.0		
16-T10-16F	49.1	1	35.0	31.0			16-T10-25F	49.1	1	35.0	40.0		
18-T10-16F	55.5	1	40.0	31.0			18-T10-25F	55.5	1	40.0	40.0		
19-T10-16F	58.6	1	44.0	31.0			19-T10-25F	58.6	1	44.0	40.0		
20-T10-16F	61.8	1	46.0	31.0			20-T10-25F	61.8	1	46.0	40.0		
22-T10-16F	68.2	1	52.0	31.0			22-T10-25F	68.2	1	52.0	40.0		
24-T10-16F	74.6	1	58.0	31.0			24-T10-25F	74.6	1	58.0	40.0		
25-T10-16F	77.7	1	60.0	31.0			25-T10-25F	77.7	1	60.0	40.0		
26-T10-16F	80.9	1	60.0	31.0			26-T10-25F	80.9	1	60.0	40.0		
27-T10-16F	84.1	1	60.0	31.0			27-T10-25F	84.1	1	60.0	40.0		
28-T10-16F	87.3	1	60.0	31.0			28-T10-25F	87.3	1	60.0	40.0		
30-T10-16F	93.7	1	60.0	31.0			30-T10-25F	93.7	1	60.0	40.0		
32-T10-16F	100.0	1	65.0	31.0			32-T10-25F	100.0	1	65.0	40.0		
36-T10-16F	112.8	1	70.0	31.0			36-T10-25F	112.8	1	70.0	40.0		
40-T10-16F	125.5	2	80.0	31.0			40-T10-25F	125.5	2	80.0	40.0		
44-T10-16	138.2	5	88.0	31.0		N.F.	44-T10-25	138.2	5	88.0	40.0		N.F.
48-T10-16	151.0	5	95.0	31.0			48-T10-25	151.0	5	95.0	40.0		
60-T10-16	189.1	5	110.0	31.0			60-T10-25	189.1	5	110.0	40.0		

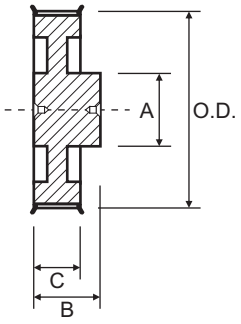
N.F. - No Flanges

T10 Metric Timing Pulleys

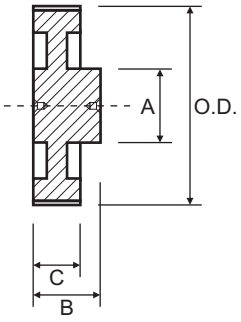
Type 1



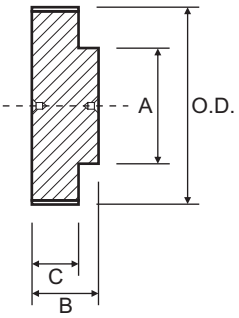
Type 2



Type 5



Type 7



T10-32 Suit 32mm wide belt							T10-50 Suit 50mm wide belt						
Part No.	O.D.	Type	A	B	C = 37.0		Part No.	O.D.	Type	A	B	C = 56.0	
18-T10-32F	55.5	1	40.0	47.0	Aluminium	Flanged	18-T10-50F	55.5	1	40.0	66.0	Aluminium	Flanged
19-T10-32F	58.6	1	44.0	47.0			19-T10-50F	58.6	1	44.0	66.0		
20-T10-32F	61.8	1	46.0	47.0			20-T10-50F	61.8	1	46.0	66.0		
22-T10-32F	68.2	1	52.0	47.0			22-T10-50F	68.2	1	52.0	66.0		
24-T10-32F	74.6	1	58.0	47.0			24-T10-50F	74.6	1	58.0	66.0		
25-T10-32F	77.7	1	60.0	47.0			25-T10-50F	77.7	1	60.0	66.0		
26-T10-32F	80.9	1	60.0	47.0			26-T10-50F	80.9	1	60.0	66.0		
27-T10-32F	84.1	1	60.0	47.0			27-T10-50F	84.1	1	60.0	66.0		
28-T10-32F	87.3	1	60.0	47.0			28-T10-50F	87.3	1	60.0	66.0		
30-T10-32F	93.7	1	60.0	47.0			30-T10-50F	93.7	1	60.0	66.0		
32-T10-32F	100.0	1	65.0	47.0			32-T10-50F	100.0	1	65.0	66.0		
36-T10-32F	112.8	1	70.0	47.0			36-T10-50F	112.8	1	70.0	66.0		
40-T10-32F	125.5	2	80.0	47.0			40-T10-50F	125.5	2	80.0	66.0		
44-T10-32	138.2	5	88.0	47.0		N.F.	44-T10-50	138.2	5	88.0	66.0		N.F.
48-T10-32	151.0	5	95.0	47.0			48-T10-50	151.0	5	95.0	66.0		
60-T10-32	189.1	5	110.0	47.0			60-T10-50	189.1	5	110.0	66.0		

N.F. - No Flanges

Metric Timing Belts AT5 & AT10

	Pitch (mm)	T	B
AT5	5.00	1.20	2.50
AT10	10.00	2.70	4.50

optibelt
Power Transmission

Belt	Teeth	Pitch Length
225-AT5	45	225
255-AT5	51	255
275-AT5	55	275
280-AT5	56	280
300-AT5	60	300
340-AT5	68	340
375-AT5	75	375
390-AT5	78	390
420-AT5	84	420
450-AT5	90	450
455-AT5	91	455
500-AT5	100	500
545-AT5	109	545
600-AT5	120	600
610-AT5	122	610
630-AT5	126	630
660-AT5	132	660
710-AT5	142	710
720-AT5	144	720
750-AT5	150	750
780-AT5	156	780
825-AT5	165	825
860-AT5	172	860
975-AT5	195	975
1050-AT5	210	1050
1125-AT5	225	1125
1500-AT5	300	1500
2000-AT5	400	2000

Standard widths of:-

10mm Code = Length-AT5-10

16mm Code = Length-AT5-16

25mm Code = Length-AT5-25

Long Length up to 32mm wide is available.

Belt	Teeth	Pitch Length
500-AT10	50	500
560-AT10	56	560
600-AT10	60	600
610-AT10	61	610
660-AT10	66	660
700-AT10	70	700
730-AT10	73	730
780-AT10	78	780
800-AT10	80	800
810-AT10	81	810
840-AT10	84	840
890-AT10	89	890
920-AT10	92	920
960-AT10	96	960
980-AT10	98	980
1000-AT10	100	1000
1010-AT10	101	1010
1050-AT10	105	1050
1080-AT10	108	1080
1100-AT10	110	1100
1150-AT10	115	1150
1200-AT10	120	1200
1210-AT10	121	1210

Belt	Teeth	Pitch Length
1250-AT10	125	1250
1280-AT10	128	1280
1300-AT10	130	1300
1320-AT10	132	1320
1350-AT10	135	1350
1360-AT10	136	1360
1400-AT10	140	1400
1420-AT10	142	1420
1480-AT10	148	1480
1500-AT10	150	1500
1600-AT10	160	1600
1700-AT10	170	1700
1720-AT10	172	1720
1800-AT10	180	1800
1860-AT10	186	1860
1940-AT10	194	1940

Standard widths of:-

16mm Code = Length-AT10-16

25mm Code = Length-AT10-25

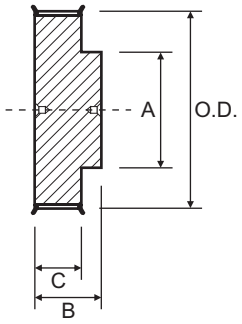
32mm Code = Length-AT10-32

50mm Code = Length-AT10-50

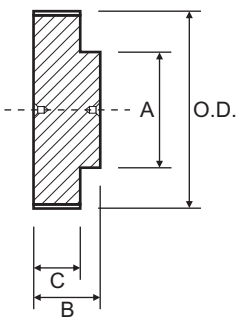
Long Length up to 50mm wide is available.

AT5 Metric Timing Pulleys

Type 1



Type 7

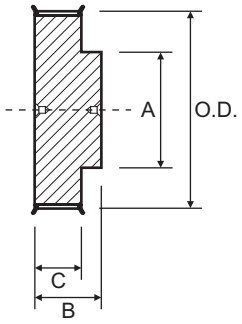


AT5-10 Suit 10mm wide belt							AT5-16 Suit 16mm wide belt						
Part No.	O.D.	Type	A	B	C = 15.0		Part No.	O.D.	Type	A	B	C = 21.0	
12-AT5-10F	17.9	1	11.0	21.0	Aluminium	Flanged	12-AT5-16F	17.9	1	11.0	27.0	Aluminium	Flanged
14-AT5-10F	21.1	1	14.0	21.0			14-AT5-16F	21.1	1	14.0	27.0		
15-AT5-10F	22.7	1	16.0	21.0			15-AT5-16F	22.7	1	16.0	27.0		
16-AT5-10F	24.2	1	18.0	21.0			16-AT5-16F	24.2	1	18.0	27.0		
18-AT5-10F	27.4	1	20.0	21.0			18-AT5-16F	27.4	1	20.0	27.0		
19-AT5-10F	29.0	1	22.0	21.0			19-AT5-16F	29.0	1	22.0	27.0		
20-AT5-10F	30.6	1	23.0	21.0			20-AT5-16F	30.6	1	23.0	27.0		
22-AT5-10F	34.9	1	24.0	21.0			22-AT5-16F	34.9	1	24.0	27.0		
24-AT5-10F	37.0	1	26.0	21.0			24-AT5-16F	37.0	1	26.0	27.0		
25-AT5-10F	38.6	1	26.0	21.0			25-AT5-16F	38.6	1	26.0	27.0		
26-AT5-10F	40.2	1	26.0	21.0			26-AT5-16F	40.2	1	26.0	27.0		
27-AT5-10F	41.8	1	30.0	21.0			27-AT5-16F	41.8	1	30.0	27.0		
28-AT5-10F	43.4	1	32.0	21.0			28-AT5-16F	43.4	1	32.0	27.0		
30-AT5-10F	46.6	1	34.0	21.0			30-AT5-16F	46.6	1	34.0	27.0		
32-AT5-10F	49.7	1	38.0	21.0			32-AT5-16F	49.7	1	38.0	27.0		
36-AT5-10F	56.1	1	38.0	21.0			36-AT5-16F	56.1	1	38.0	27.0		
40-AT5-10F	62.5	1	40.0	21.0			40-AT5-16F	62.5	1	40.0	27.0		
42-AT5-10F	65.6	1	40.0	21.0			42-AT5-16F	65.6	1	40.0	27.0		
44-AT5-10	68.8	7	45.0	21.0		N.F.	44-AT5-16	68.8	7	45.0	27.0		N.F.
48-AT5-10	75.2	7	50.0	21.0			48-AT5-16	75.2	7	50.0	27.0		
60-AT5-10	94.3	7	65.0	21.0			60-AT5-16	94.3	7	65.0	27.0		

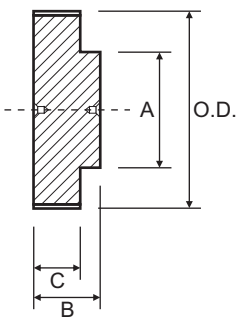
N.F. - No Flanges

AT5 Metric Timing Pulleys

Type 1



Type 7

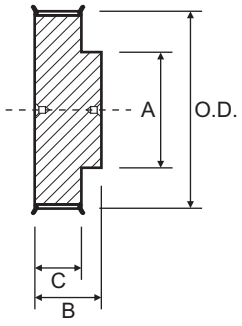


AT5-25 Suit 25mm wide belt Part No.	O.D.	Type	A	B	C = 30.0	
12-AT5-25F	17.9	1	11.0	36.0	Aluminium	Flanged
14-AT5-25F	21.1	1	14.0	36.0		
15-AT5-25F	22.7	1	16.0	36.0		
16-AT5-25F	24.2	1	18.0	36.0		
18-AT5-25F	27.4	1	20.0	36.0		
19-AT5-25F	29.0	1	22.0	36.0		
20-AT5-25F	30.6	1	23.0	36.0		
22-AT5-25F	34.9	1	24.0	36.0		
24-AT5-25F	37.0	1	26.0	36.0		
25-AT5-25F	38.6	1	26.0	36.0		
26-AT5-25F	40.2	1	26.0	36.0		
27-AT5-25F	41.8	1	30.0	36.0		
28-AT5-25F	43.4	1	32.0	36.0		
30-AT5-25F	46.6	1	34.0	36.0		
32-AT5-25F	49.7	1	38.0	36.0		
36-AT5-25F	56.1	1	38.0	36.0		
40-AT5-25F	62.5	1	40.0	36.0		
42-AT5-25F	65.6	1	40.0	36.0		
44-AT5-25	68.8	7	45.0	36.0		N.F.
48-AT5-25	75.2	7	50.0	36.0		
60-AT5-25	94.3	7	65.0	36.0		

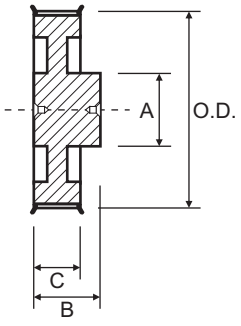
N.F. - No Flanges

AT10 Metric Timing Pulleys

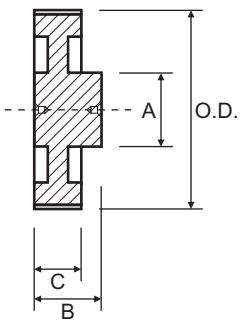
Type 1



Type 2



Type 5

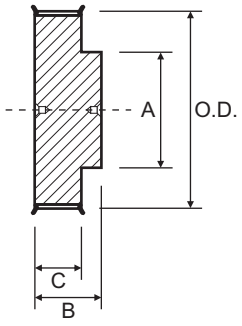


AT10-16 Suit 16mm wide belt							AT10-25 Suit 25mm wide belt						
Part No.	O.D.	Type	A	B	C = 21.0		Part No.	O.D.	Type	A	B	C = 30.0	
15-AT10-16F	45.9	1	32.0	31.0	Aluminium	Flanged	15-AT10-25F	45.9	1	32.0	40.0	Aluminium	Flanged
16-AT10-16F	49.1	1	35.0	31.0			16-AT10-25F	49.1	1	35.0	40.0		
18-AT10-16F	55.5	1	40.0	31.0			18-AT10-25F	55.5	1	40.0	40.0		
19-AT10-16F	58.6	1	44.0	31.0			19-AT10-25F	58.6	1	44.0	40.0		
20-AT10-16F	61.8	1	46.0	31.0			20-AT10-25F	61.8	1	46.0	40.0		
22-AT10-16F	68.2	1	52.0	31.0			22-AT10-25F	68.2	1	52.0	40.0		
24-AT10-16F	74.6	1	58.0	31.0			24-AT10-25F	74.6	1	58.0	40.0		
25-AT10-16F	77.7	1	60.0	31.0			25-AT10-25F	77.7	1	60.0	40.0		
26-AT10-16F	80.9	1	60.0	31.0			26-AT10-25F	80.9	1	60.0	40.0		
27-AT10-16F	84.1	1	60.0	31.0			27-AT10-25F	84.1	1	60.0	40.0		
28-AT10-16F	87.3	1	60.0	31.0			28-AT10-25F	87.3	1	60.0	40.0		
30-AT10-16F	93.7	1	60.0	31.0			30-AT10-25F	93.7	1	60.0	40.0		
32-AT10-16F	100.0	1	65.0	31.0			32-AT10-25F	100.0	1	65.0	40.0		
36-AT10-16F	112.8	1	70.0	31.0			36-AT10-25F	112.8	1	70.0	40.0		
40-AT10-16F	125.5	2	80.0	31.0			40-AT10-25F	125.5	2	80.0	40.0		
44-AT10-16	138.2	5	88.0	31.0		N.F.	44-AT10-25	138.2	5	88.0	40.0		N.F.
48-AT10-16	151.0	5	95.0	31.0			48-AT10-25	151.0	5	95.0	40.0		
60-AT10-16	189.1	5	110.0	31.0			60-AT10-25	189.1	5	110.0	40.0		

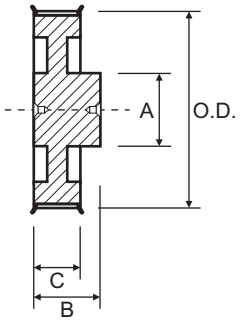
N.F. - No Flanges

AT10 Metric Timing Pulleys

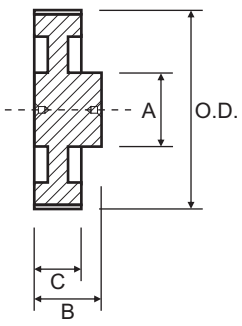
Type 1



Type 2



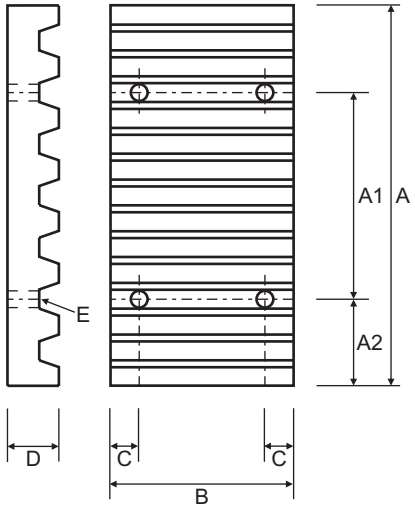
Type 5



AT10-32 Suit 32mm wide belt							AT10-50 Suit 50mm wide belt						
Part No.	O.D.	Type	A	B	C = 37.0		Part No.	O.D.	Type	A	B	C = 56.0	
18-AT10-32F	55.5	1	40.0	47.0	Aluminium	Flanged	18-AT10-50F	55.5	1	40.0	66.0	Aluminium	Flanged
19-AT10-32F	58.6	1	44.0	47.0			19-AT10-50F	58.6	1	44.0	66.0		
20-AT10-32F	61.8	1	46.0	47.0			20-AT10-50F	61.8	1	46.0	66.0		
22-AT10-32F	68.2	1	52.0	47.0			22-AT10-50F	68.2	1	52.0	66.0		
24-AT10-32F	74.6	1	58.0	47.0			24-AT10-50F	74.6	1	58.0	66.0		
25-AT10-32F	77.7	1	60.0	47.0			25-AT10-50F	77.7	1	60.0	66.0		
26-AT10-32F	80.9	1	60.0	47.0			26-AT10-32F	80.9	1	60.0	66.0		
27-AT10-32F	84.1	1	60.0	47.0			27-AT10-50F	84.1	1	60.0	66.0		
28-AT10-32F	87.3	1	60.0	47.0			28-AT10-50F	87.3	1	60.0	66.0		
30-AT10-32F	93.7	1	60.0	47.0			30-AT10-50F	93.7	1	60.0	66.0		
32-AT10-32F	100.0	1	65.0	47.0			32-AT10-50F	100.0	1	65.0	66.0		
36-AT10-32F	112.8	1	70.0	47.0			36-AT10-50F	112.8	1	70.0	66.0		
40-AT10-32F	125.5	2	80.0	47.0			40-AT10-50F	125.5	2	80.0	66.0		
44-AT10-32	138.2	5	88.0	47.0		N.F.	44-AT10-50	138.2	5	88.0	66.0		N.F.
48-AT10-32	151.0	5	95.0	47.0			48-AT10-50	151.0	5	95.0	66.0		
60-AT10-32	189.1	5	110.0	47.0			60-AT10-50	189.1	5	110.0	66.0		

N.F. - No Flanges

Timing Belt Clamping Plates



Ideal for applications where the belt must be firmly held in one spot. Perfect for use with long length belting. Naismith Engineering keep a large range of Clamp Plates on the shelf.

Classical	Part No	A	A1	A2	B	C	D	E
XL	PIA-XL025	42.5	25.4	8.6	25.4	6.0	8.0	5.5
	PIA-XL037	42.5	25.4	8.6	28.5	6.0	8.0	5.5
L	PIA-L050	76.6	47.6	14.5	39.1	8.0	15.0	9.0
	PIA-L075	76.6	47.6	14.5	45.0	8.0	15.0	9.0
	PIA-L100	76.6	47.6	14.5	51.5	8.0	15.0	9.0
H	PIA-H050	106.9	63.5	21.7	45.0	10.0	22.0	11.0
	PIA-H075	106.9	63.5	21.7	51.0	10.0	22.0	11.0
	PIA-H100	106.9	63.5	21.7	57.4	10.0	22.0	11.0

HTD	Part No	A	A1	A2	B	C	D	E
5M	PIA-5M09	41.8	25.0	8.4	28.0	6.0	8.0	5.5
	PIA-5M15	41.8	25.0	8.4	34.0	6.0	8.0	5.5
	PIA-5M25	41.8	25.0	8.4	44.0	6.0	8.0	5.5
8M	PIA-8M20	66.0	40.0	13.0	45.0	8.0	15.0	9.0
	PIA-8M30	66.0	40.0	13.0	55.0	8.0	15.0	9.0
	PIA-8M50	66.0	40.0	13.0	75.0	8.0	15.0	9.0
	PIA-8M85	66.0	40.0	13.0	110.0	8.0	15.0	9.0
14M	PIA-14M40	116.0	70.0	23.0	71.0	10.0	22.0	11.0
	PIA-14M55	116.0	70.0	23.0	86.0	10.0	22.0	11.0
	PIA-14M85	116.0	70.0	23.0	116.0	10.0	22.0	11.0
	PIA-14M115	116.0	70.0	23.0	146.0	10.0	22.0	11.0
	PIA-14M170	116.0	70.0	23.0	201.0	10.0	22.0	11.0

Metric	Part No	A	A1	A2	B	C	D	E
T5	PIA-T5/10	41.8	25.0	8.4	29.0	6.0	8.0	5.5
	PIA-T5/16	41.8	25.0	8.4	35.0	6.0	8.0	5.5
	PIA-T5/25	41.8	25.0	8.4	44.0	6.0	8.0	5.5
T10	PIA-T10/16	80.0	50.0	15.0	41.0	8.0	15.0	9.0
	PIA-T10/25	80.0	50.0	15.0	50.0	8.0	15.0	9.0
	PIA-T10/32	80.0	50.0	15.0	57.0	8.0	15.0	9.0
	PIA-T10/50	80.0	50.0	15.0	75.0	8.0	15.0	9.0
AT5	PIA-AT5/10	41.8	25.0	8.4	29.0	6.0	8.0	5.5
	PIA-AT5/16	41.8	25.0	8.4	35.0	6.0	8.0	5.5
	PIA-AT5/25	41.8	25.0	8.4	44.0	6.0	8.0	5.5
AT10	PIA-AT10/16	80.0	50.0	15.0	41.0	8.0	15.0	9.0
	PIA-AT10/25	80.0	50.0	15.0	50.0	8.0	15.0	9.0
	PIA-AT10/32	80.0	50.0	15.0	57.0	8.0	15.0	9.0
	PIA-AT10/50	80.0	50.0	15.0	75.0	8.0	15.0	9.0

Taper Bushes

Taper bushes are designed to give the following:-
1. Easy assembly.
2. Rapid dismantling of the pulley and other transmission equipment.
3. No special tool requirement except hexagonal allan key.

A large range of bores are available off the shelf which ensures that an immediate assembly can be made, thus avoiding costly factory down-time.
The bushes are machined with standard keyways. This, in addition to clamping screws is sufficient to meet the required torque.

Part No.		Stock Bore Sizes	OD	L
1008	mm	12, 14, 15, 16, 18, 19, 20, 22, 24, 25	35.0	22.2
	inch	1/2", 5/8", 3/4", 7/8", 1"		
1108	mm	12, 14, 15, 16, 18, 19, 20, 22, 24, 25, 28	38.0	22.2
	inch	1/2", 5/8", 3/4", 7/8", 1", 1 1/8"		
1210	mm	12, 14, 15, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32	47.5	25.4
	inch	1/2", 5/8", 3/4", 7/8", 1", 1 1/8", 1 1/4"		
1215	mm	12, 14, 16, 18, 19, 20, 22, 24, 25, 28, 30, 32	47.5	38.1
	inch	1/2", 5/8", 3/4", 7/8", 1", 1 1/8", 1 1/4"		
1610	mm	12, 14, 16, 18, 19, 20, 22, 24, 25, 28, 30, 32, 35, 38, 40, 42	57.0	25.4
	inch	1/2", 5/8", 3/4", 7/8", 1", 1 1/8", 1 1/4", 1 3/8", 1 1/2", 1 5/8"		
1615	mm	12, 14, 16, 18, 19, 20, 22, 24, 25, 28, 30, 32, 35, 38, 40, 42	57.0	38.1
	inch	1/2", 5/8", 3/4", 7/8", 1", 1 1/8", 1 1/4", 1 3/8", 1 1/2", 1 5/8"		
2012	mm	16,19,20,22,24,25,28,30,32,35,38,40,42,45,48,50	70.0	31.8
	inch	3/4", 7/8", 1", 1 1/8", 1 1/4", 1 3/8", 1 1/2", 1 5/8", 1 3/4", 1 7/8", 2"		
2017	mm	19, 20, 22, 24, 25, 28, 30, 32, 35, 38, 40, 42, 45, 48, 50	70.0	44.4
	inch	3/4", 7/8", 1", 1 1/8", 1 3/8"		
2517	mm	19, 20, 22, 24, 25, 28, 30, 32, 35, 38, 40, 42, 45, 48, 50, 55, 60	85.5	44.5
	inch	3/4", 7/8", 1", 1 1/8", 1 1/4", 1 3/8", 1 1/2", 1 5/8", 1 3/4", 1 7/8", 2", 2 1/8",		
	inch	2 1/4", 2 3/8", 2 1/2"		
2525	mm	19, 20, 22, 24, 25, 28, 30, 32, 35, 38, 40, 42, 45, 48, 50, 55, 60	85.6	63.5
	inch	3/4", 7/8", 1", 1 1/8"		
3020	mm	24, 25, 28, 30, 32, 35, 38, 40, 42, 45, 48, 50, 55, 60, 65, 70, 75	108.0	50.8
	inch	1", 1 1/8", 1 1/4", 1 3/8", 1 1/2", 1 5/8", 1 3/4", 1 7/8", 2", 2 1/8", 2 1/4", 2 3/8",		
		2 1/2", 2 5/8", 2 3/4", 2 7/8", 3"		
3030	mm	32, 35, 38, 40, 42, 45, 48, 50, 55, 60, 65, 70, 75	108.0	76.2
	inch	1 1/4", 1 3/8", 1 1/2", 1 5/8", 1 3/4", 1 7/8", 2", 2 1/8", 2 1/4", 2 3/8", 2 1/2",		
	inch	2 5/8", 2 3/4", 2 2/8", 3"		
3525	mm	35, 38, 40, 42, 45, 48, 50, 55, 60, 65, 70, 75, 80, 85, 90	108.0	63.5
3535	mm	35, 38, 40, 42, 45, 48, 50, 55, 60, 65, 70, 75, 80, 85, 90	127.0	88.9
	inch	1 1/2", 1 5/8", 1 3/4", 1 7/8", 2", 2 1/8", 2 1/4", 2 3/8", 2 1/2", 2 5/8", 2 3/4",		
	inch	2 7/8", 3", 3 1/8, 3 1/4", 3 3/8", 3 1/2"		
4030	mm	40, 42, 45, 48, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100	146.0	76.2
4040	mm	40, 42, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100	146.0	101.6
	inch	1 3/8", 1 3/4, 1 7/8", 2", 2 1/8", 2 1/4", 2 1/2", 2 5/8", 2 3/4",		
	inch	3", 3 1/4",3 1/2", 3 3/4", 4"		
4535	mm	60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110	162.0	88.9
4545	mm	60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110	162.0	114.3
	inch	3", 3 1/8", 3 1/4", 3 3/8", 3 1/2", 3 3/4", 4 1/2"		
5040	mm	70, 95, 100, 110, 115, 120, 125	177.5	101.6
5050	mm	70, 95, 100, 110, 115, 120, 125	177.5	127.0

The first 2 digits of the part number are the maximum bore size in inches.
The second 2 digits of the part number are the length through bore in inches.

Useful Information

PULLEY DIAMETER - SPEED

When choosing a pulley that is made of cast iron, care must be taken not to exceed pulley rim speed of 40 m/s. Centrifugal forces developed beyond this speed may prohibit the use of stock cast iron pulleys. For rim speeds exceeding 40 m/s, contact Naismith Engineering sales representative for recommendations. The formula below will help you work out what the rim speed of your pulley will be.

$$\text{Metres/Sec} = \frac{(\text{O.D. X .001}) \text{ X } 3.142 \text{ X RPM}}{60}$$

O.D. Is in millimetres

USE OF FLANGED PULLEYS

Flanges are needed in order to keep the belt on the pulley. Due to tracking characteristics. even on the best aligned drives belts will ride off the edge of the pulleys. Flanges will prevent this belt ride off

On all drives using stock or made-to-order pulleys. the following conditions should be considered when selecting flanged pulleys;

1. On all two-pulley drives, the minimum flanging requirements are two flanges on one pulley or one flange on each pulley on opposite sides.
2. On drives where the center distance is more than eight times the diameter of the small pulley, both pulleys should be flanged on both sides.
3. On drives with more than two pulleys, the minimum flanging requirements are two flanges on every other pulley or one flange on every pulley, alternating sides around the system. On made to order pulleys. flanges must be securely fastened by using mechanical fasteners, welding, shrink fit or other equivalent methods.

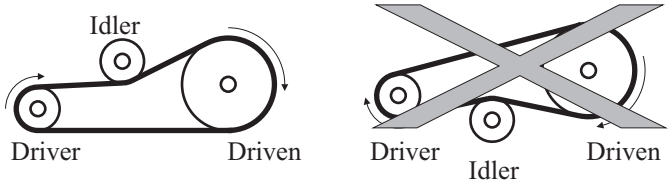
IDLERS

Use of idlers should be restricted to those cases in which they are functionally necessary. Idlers usually are used to apply tension when centres are not adjustable

Idlers should be located on the slack side of the belt drive. For inside idlers. grooved pulleys are recommended up to 40 grooves On larger diameters, flat, uncrowned idlers may be used. Inside idler diameters should not be smaller than the smallest loaded pulley in the system.

Outside or backside idlers should be flat and uncrowned. Flanges are not recommended. Diameters should generally not be smaller than the smallest loaded pulley in the system.

Slack side spring loaded idlers can be used. as long as care is taken to avoid resonant vibration conditions and load reversals.



Information on this page has been sourced from the following Gates catalogues
Powergrip HTD Design Manual - E2/20068/8.92
Gates Design Manual E2/20099

CENTRE DISTANCE AND BELT LENGTH

If you do not already know a tentative centre distance, a good estimate to use is equal to the diameter of the large pulley, or **½ (D + 3d)**, whichever is the larger. You can then find a tentative belt length using the following formula.

Tentative Belt Length = 1.57 (D + d) + (TCD X 2)

D = Pitch diameter, Large pulley
d = Pitch diameter, Small pulley
TCD = Tentative Center Distance

TEETH IN MESH

Power ratings are based on a minimum of six teeth in mesh between the belt and the pulley. In cases where fewer than six teeth are in full contact, 20% of the power rating must be subtracted for each tooth less than six. To calculate how many teeth your drive has in mesh use the formula below.

$$\text{Teeth in mesh} = \left[0.5 - \left(\frac{D - d}{6C} \right) \right] T$$

D = Pitch diameter, Large pulley
d = Pitch diameter, Small pulley
C = Center distance between shafts
T = Number of teeth in small pulley

OPERATING ENVIRONMENT

Temperature

Gates PowerGrip (XL, L, H & XH) and HTD (3M, 5M, 8M & 14M) belt performance is generally unaffected in ambient temperature environments between -25ºC and 100ºC. Gates Poly Chain GT has a temperature range of -54ºC to 85ºC. Polyurethane T and AT belts work best between -30ºC and 80ºC. In cases where belts are constantly running at or above these temperature extremes contact Naismith Engineering.

Aircraft & Motor Vehicle drives

Gates belts should not be used on aircraft, motor vehicle or hazardous applications where belt failure may cause injury.

BELT STORAGE AND HANDLING

For storage. the belt should be protected from moisture. oil, temperature extremes, direct sunlight and high ozone environments. The belt should be stored in its original package where applicable, avoiding any sharp bends or crimping, which will damage the belt.