

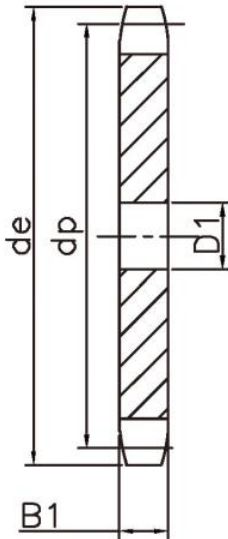
## SPROCKETS & PLATE WHEELS

Piñones & discos

### 03A-1

#### PLATE WHEELS 5x2.5mm

For chain Acc.to DIN 8187  
ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	5
Radius width C	0.6
Tooth width $B_1$	2.3

#### CHAIN mm

Pitch	5
Internal width	2.5
Roller $\Phi$	3.2

H=4mm, From Z=51 the width of the plate is increased

Z	$d_e$	$d_p$	S
			$D_1$
8	15.2	13.06	4
9	16.8	14.62	4
10	18.3	16.18	4
11	19.9	17.75	5
12	21.5	19.32	5
13	23.0	20.89	5
14	24.6	22.47	6
15	26.2	24.04	6
16	27.8	25.63	6
17	29.4	27.20	6
18	30.9	28.79	6
19	32.5	30.38	6
20	34.1	31.96	6
21	35.7	33.54	8
22	37.3	35.13	8
23	38.9	36.72	8
24	40.5	38.30	8
25	42.0	39.89	8
26	43.6	41.48	8
27	45.2	43.07	8
28	46.8	44.65	8
29	48.4	46.25	8
30	50.0	47.83	8
31	51.0	49.42	8
32	53.2	51.01	8
33	54.8	52.60	8
34	56.3	54.19	8
35	57.9	55.78	8
36	59.5	57.37	8
37	61.1	58.96	8
38	62.7	60.54	8
39	64.3	62.13	8
40	65.9	63.73	8
41	67.5	65.30	8
42	69.1	66.91	8
43	70.6	68.49	8
44	72.2	70.09	8
45	73.8	71.68	8
46	75.4	73.27	8
47	77.0	74.86	8
48	78.6	76.45	8
49	80.2	78.03	8
50	81.8	79.63	8
51	83.4	81.22	10
52	85.0	82.81	10
53	86.6	84.40	10
54	88.1	85.97	10
55	89.7	87.58	10
56	91.3	89.17	10
57	92.9	90.76	10
58	94.5	92.35	10
59	96.1	93.94	10
60	97.7	95.53	10
62	100.9	98.72	12
64	104.1	101.90	12
65	105.6	103.49	12
66	107.2	105.08	12
68	110.4	108.26	12
70	113.6	111.44	12
72	116.8	114.63	12
75	121.6	119.40	12
76	123.1	120.99	12
78	126.3	124.17	12
80	129.5	127.35	12
85	137.5	135.31	14
90	145.4	143.27	14
95	153.4	151.22	14
100	161.3	159.18	14
110	177.2	175.09	14
114	183.6	181.45	14
120	193.2	191.01	14
125	201.1	198.96	14



SPROCKET  
Piñones

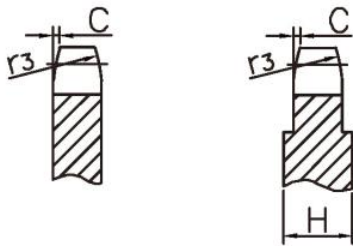
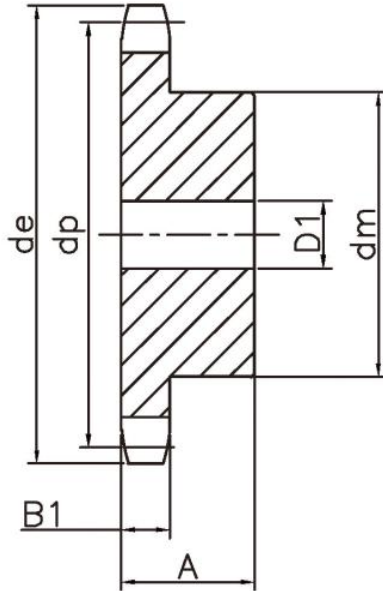
## SPROCKETS & PLATE WHEELS

Piñones & discos

### 03B-1

#### SPROCKETS 5x2.5mm

For chain Acc.to DIN 8187  
ISO/R606



#### SPROCKETS mm

Tooth radius $r_3$	5
Radius width C	0.6
Tooth width $B_1$	2.3

#### CHAIN mm

Pitch	5
Internal width	2.5
Roller $\Phi$	3.2

H=4mm, From Z=80 the width of the plate is increased

Z	$d_e$	$d_p$	SIMPLEX		
			$d_m$	$D_1$	A
8	15.2	13.06	7	4	10
9	16.8	14.62	8	5	10
10	18.3	16.18	9	5	10
11	19.9	17.75	11	6	10
12	21.5	19.32	12	6	10
13	23.0	20.89	14	6	10
14	24.6	22.47	15	6	10
15	26.2	24.04	16	6	10
16	27.8	25.63	18	8	13
17	29.4	27.20	18	8	13
18	30.9	28.79	18	8	13
19	32.5	30.38	18	8	13
20	34.1	31.96	18	8	13
21	35.7	33.54	20	8	13
22	37.3	35.13	20	8	13
23	38.9	36.72	20	8	13
24	40.5	38.30	20	8	13
25	42.0	39.89	20	8	13
26	43.6	41.48	25	8	15
27	45.2	43.07	25	8	15
28	46.8	44.65	25	8	15
29	48.4	46.25	25	8	15
30	50.0	47.83	25	8	15
31	51.0	49.42	30	8	15
32	53.2	51.01	30	8	15
33	54.8	52.60	30	8	15
34	56.3	54.19	30	8	15
35	57.9	55.78	30	8	15
36	59.5	57.37	30	8	15
37	61.1	58.96	30	8	15
38	62.7	60.54	30	8	15
39	64.3	62.13	30	8	15
40	65.9	63.73	30	8	15
41	67.5	65.30	40	8	18
42	69.1	66.91	40	8	18
43	70.6	68.49	40	8	18
44	72.2	70.09	40	8	18
45	73.8	71.68	40	8	18
46	75.4	73.27	40	8	18
47	77.0	74.86	40	8	18
48	78.6	76.45	40	8	18
49	80.2	78.03	40	8	18
50	81.8	79.63	40	8	18
51	83.4	81.22	40	8	18
52	85.0	82.81	40	8	18
53	86.6	84.40	40	8	18
54	88.1	85.97	40	8	18
55	89.7	87.58	40	8	18
56	91.3	89.17	40	8	18
57	92.9	90.76	40	8	18
58	94.5	92.35	50	8	20
59	96.1	93.94	50	8	20
60	97.7	95.53	50	8	20
62	100.9	98.72	50	8	20
64	104.1	101.90	50	8	20
65	105.6	103.49	50	8	20
66	107.2	105.08	50	8	20
68	110.4	108.26	50	8	20
70	113.6	114.44	50	8	20
72	116.8	114.63	50	8	20
75	121.6	119.40	50	8	20
76	123.1	120.99	50	8	20
78	126.3	124.17	70	8	30
80	129.5	127.35	70	8	30
85	137.5	135.31	70	8	30
90	145.4	143.27	70	8	30
95	153.4	151.22	70	8	30
100	161.3	159.18	70	8	30
110	177.2	175.09	70	8	30
114	183.6	181.45	70	8	30
120	193.2	191.01	70	8	30
125	201.1	198.96	70	8	30

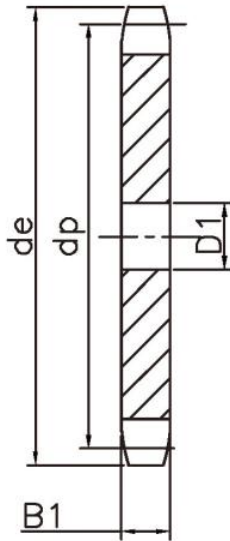
## SPROCKETS & PLATE WHEELS

Piñones & discos

### 04A-1

#### PLATEWHEELS 6x2.8mm

For chain Acc.to DIN 8187  
ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	6
Radius width C	0.7
Tooth width $B_1$	2.6

#### CHAIN mm

Pitch	6
Internal width	2.8
Roller $\Phi$	4

H=4mm, From Z=51 the width of the plate is increased

Z	$d_e$	$d_p$	S
			$D_1$
8	18.0	15.67	5
9	19.9	17.54	5
10	21.7	19.42	6
11	23.6	21.30	6
12	25.4	23.18	6
13	27.3	25.05	8
14	29.2	26.96	8
15	31.0	28.86	8
16	33.0	30.76	8
17	35.0	32.65	8
18	36.9	34.55	8
19	38.8	36.44	8
20	40.7	38.34	8
21	42.6	40.25	8
22	44.5	42.16	8
23	46.4	44.06	8
24	48.3	45.96	8
25	50.1	47.87	8
26	52.1	49.76	8
27	54.0	51.67	8
28	55.9	53.58	8
29	57.8	55.50	8
30	59.8	57.42	8
31	61.7	59.31	8
32	63.6	61.21	8
33	65.5	63.11	8
34	67.4	65.02	8
35	69.3	66.93	8
36	71.2	68.84	8
37	73.1	70.75	8
38	75.0	72.66	8
39	76.9	74.57	8
40	78.9	76.47	8
41	80.9	78.38	10
42	82.7	80.28	10
43	84.7	82.20	10
44	86.6	84.10	10
45	88.5	86.01	10
46	90.4	87.92	10
47	92.3	89.83	10
48	94.2	91.74	10
49	96.1	93.64	10
50	98.0	95.55	10
51	99.9	97.46	12
52	101.8	99.37	12
53	103.7	101.27	12
54	105.6	103.17	12
55	107.6	105.08	12
56	109.5	107.00	12
57	111.4	108.93	12
58	113.3	110.82	12
59	115.2	112.71	12
60	117.1	114.62	12
62	120.9	118.45	14
64	124.7	122.27	14
65	126.6	124.18	14
66	128.5	126.09	14
68	132.4	129.91	14
70	136.2	133.72	14
72	140.0	137.53	16
75	145.7	143.28	16
76	147.6	145.19	16
78	151.5	149.01	16
80	155.3	152.82	16
85	164.8	162.37	16
90	174.4	171.92	16
95	183.9	181.47	16
100	193.5	191.01	16
110	212.6	210.11	16
114	220.2	217.75	16
120	231.7	229.20	16
125	241.2	238.75	16



SPROCKET  
Piñones

## SPROCKETS & PLATE WHEELS

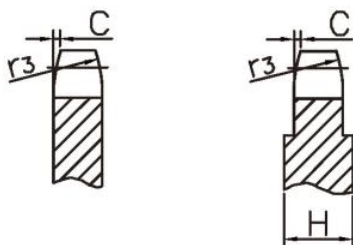
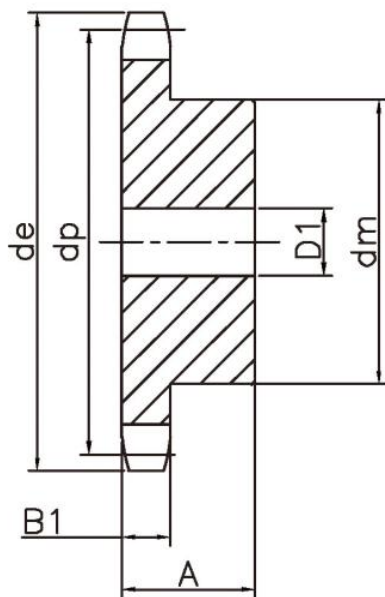
Piñones & discos

### 04B-1

#### SPROCKETS 6x2.8mm

For chain Acc.to DIN 8187

ISO/R606



#### SPROCKETS mm

Tooth radius $r_3$	6
Radius width C	0.7
Tooth width $B_1$	2.6

#### CHAIN mm

Pitch	6
Internal width	2.8
Roller $\Phi$	4

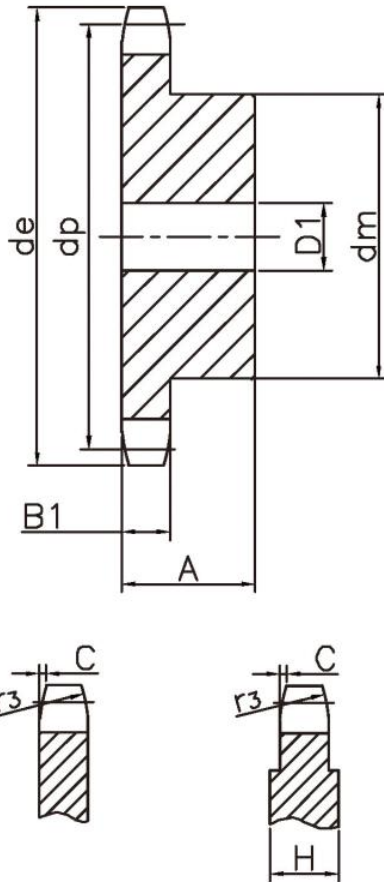
H=4mm, From Z=66 the width of the plate is increased

Z	$d_e$	$d_p$	SIMPLEX		
			$d_m$	$D_1$	A
8	18.0	15.67	9.8	5	10
9	19.9	17.54	11.5	5	10
10	21.7	19.42	13	6	10
11	23.6	21.30	14	6	10
12	25.4	23.18	16	6	10
13	27.3	25.05	18	8	10
14	29.2	26.96	20	8	10
15	31.0	28.86	20	8	13
16	33.0	30.76	20	8	13
17	35.0	32.65	20	8	13
18	36.9	34.55	20	8	13
19	38.8	36.44	20	8	13
20	40.7	38.34	20	8	13
21	42.6	40.25	25	8	13
22	44.5	42.16	25	8	13
23	46.4	44.06	25	8	13
24	48.3	45.96	25	8	13
25	50.1	47.87	25	8	13
26	52.1	49.76	30	8	15
27	54.0	51.67	30	8	15
28	55.9	53.58	30	8	15
29	57.8	55.50	30	8	15
30	59.8	57.42	30	8	15
31	61.7	59.31	30	8	15
32	63.6	61.21	30	8	15
33	65.5	63.11	30	8	15
34	67.4	65.02	30	8	15
35	69.3	66.93	30	8	15
36	71.2	68.84	30	8	15
37	73.1	70.75	30	8	15
38	75.0	72.66	30	8	15
39	76.9	74.57	30	8	15
40	78.9	76.47	30	8	15
41	80.9	78.38	40	8	18
42	82.7	80.28	40	8	18
43	84.7	82.20	40	8	18
44	86.6	84.10	40	8	18
45	88.5	86.01	40	8	18
46	90.4	87.92	40	8	18
47	92.3	89.83	40	8	18
48	94.2	91.74	40	8	18
49	96.1	93.64	40	8	18
50	98.0	95.55	40	8	18
51	99.9	97.46	40	8	18
52	101.8	99.37	40	8	18
53	103.7	101.27	40	8	18
54	105.6	103.17	40	8	18
55	107.6	105.08	40	8	18
56	109.5	107.00	40	8	18
57	111.4	108.93	40	8	18
58	113.3	110.82	50	8	20
59	115.2	112.71	50	8	20
60	117.1	114.62	50	8	20
62	120.9	118.45	50	8	20
64	124.7	122.27	50	8	20
65	126.6	124.18	50	8	20
66	128.5	126.09	50	8	20
68	132.4	149.01	50	8	20
70	136.2	152.82	50	8	20
72	140.0	162.37	50	8	20
75	145.7	143.28	50	8	20
76	147.6	145.19	70	8	30
78	151.5	149.01	70	8	30
80	155.3	152.82	70	8	30
85	164.8	162.37	70	8	30
90	174.4	171.92	70	8	30
95	183.9	181.47	70	8	30
100	193.5	191.01	70	8	30
110	212.6	210.11	70	8	30
114	220.2	217.75	70	8	30
120	231.7	229.20	70	8	30
125	241.2	238.75	70	8	30

**SPROCKETS & PLATE WHEELS**

Piñones & discos

**1/4" x 1/8"**  
**SPROCKETS 1/4" x 1/8"**  
 For chain Acc.to DIN 8187  
 ISO/R606



SPROCKETS	mm
Tooth radius r <sub>3</sub>	6.4
Radius width C	0.7
Tooth width B <sub>1</sub>	2.9
CHAIN	mm
Pitch	6.35
Internal width	3.18
RollerΦ	3.3

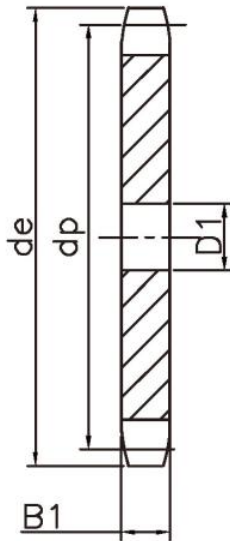
H=4mm, From Z=62 the width of the plate is increased

Z	d <sub>e</sub>	d <sub>p</sub>	SIMPLEX		
			d <sub>m</sub>	D <sub>1</sub>	A
8	19.4	16.58	10	6	12
9	21.4	18.56	11.5	6	12
10	23.3	20.55	13	6	12
11	25.3	22.54	15	8	13
12	27.3	24.53	17	8	13
13	29.3	26.53	17	8	13
14	31.3	28.53	17	8	13
15	33.3	30.53	20	8	13
16	35.3	32.55	22	8	14
17	37.3	34.55	22	8	14
18	39.4	36.56	25	8	14
19	41.4	38.58	25	8	14
20	43.4	40.58	25	8	14
21	45.4	42.60	30	8	14
22	47.4	44.62	30	8	14
23	49.4	46.63	30	8	14
24	51.4	48.64	30	8	14
25	53.5	50.66	30	8	14
26	55.5	52.67	30	8	14
27	57.5	54.69	30	8	16
28	59.5	56.71	30	8	16
29	61.5	58.73	30	8	16
30	63.6	60.75	30	8	16
31	65.6	62.76	30	8	16
32	67.6	64.78	30	8	16
33	69.6	66.80	30	8	16
34	71.6	68.82	30	8	16
35	73.6	70.84	30	8	16
36	75.6	72.85	30	8	16
37	77.7	74.87	30	8	16
38	79.7	76.89	30	8	16
39	81.7	78.91	30	8	16
40	83.7	80.93	30	8	16
41	85.7	82.95	40	10	18
42	87.8	84.97	40	10	18
43	89.8	86.98	40	10	18
44	91.8	89.01	40	10	18
45	93.8	91.03	40	10	18
46	95.8	93.05	40	10	18
47	97.9	95.07	40	10	18
48	99.9	97.09	40	10	18
49	101.9	99.10	40	10	18
50	103.9	101.13	40	10	18
51	105.9	103.14	40	10	18
52	108.0	105.16	40	10	18
53	110.0	107.18	40	10	18
54	112.0	109.18	40	10	18
55	114.0	111.23	40	10	18
56	116.0	113.25	40	10	18
57	118.1	115.27	40	10	18
58	120.1	117.29	50	10	20
59	122.1	119.31	50	10	20
60	124.1	121.32	50	10	20
62	128.2	125.37	50	10	20
64	132.2	129.41	50	10	20
65	134.2	131.43	50	10	20
66	136.2	133.45	50	10	20
68	140.3	137.49	50	10	20
70	144.3	141.53	50	10	20
72	148.4	145.58	50	10	20
75	154.4	151.63	50	10	20
76	156.5	153.66	50	10	20
78	160.5	157.70	70	10	30
80	164.5	161.74	70	10	30
85	174.6	171.85	70	10	30
90	184.7	181.95	70	10	30
95	194.8	192.05	70	10	30
100	204.9	202.15	70	10	30
110	225.1	222.37	70	10	30
114	233.2	230.45	70	10	30
120	245.4	242.58	70	10	30
125	255.5	252.68	70	10	30

## SPROCKETS & PLATE WHEELS

Piñones & discos

**1/4" x 1/8"**  
**PLATE WHEELS 1/4" x 1/8"**  
 For chain Acc.to DIN 8187  
 ISO/R606



### PLATE WHEELS mm

Tooth radius r <sub>3</sub>	6.4
Radius width C	0.7
Tooth width B <sub>1</sub>	2.9

### CHAIN mm

Pitch	6.35
Internal width	3.18
RollerΦ	3.3

H=4mm, From Z=51 the width of the plate is increased

Z	d <sub>e</sub>	d <sub>p</sub>	S
			D <sub>1</sub>
8	19.4	16.58	6
9	21.4	18.56	6
10	23.3	20.55	6
11	25.3	22.54	8
12	27.3	24.53	8
13	29.3	26.53	8
14	31.3	28.53	8
15	33.3	30.53	8
16	35.3	32.55	8
17	37.3	34.55	8
18	39.4	36.56	8
19	41.4	38.58	8
20	43.4	40.58	8
21	45.4	42.60	8
22	47.4	44.62	8
23	49.4	46.63	8
24	51.4	48.64	8
25	53.5	50.66	8
26	55.5	52.67	8
27	57.5	54.69	8
28	59.5	56.71	8
29	61.5	58.73	8
30	63.6	60.75	8
31	65.6	62.76	10
32	67.6	64.78	10
33	69.6	66.80	10
34	71.6	68.82	10
35	73.6	70.84	10
36	75.6	72.85	10
37	77.7	74.87	10
38	79.7	76.89	10
39	81.7	78.91	10
40	83.7	80.93	10
41	85.7	82.95	10
42	87.8	84.97	10
43	89.8	86.98	10
44	91.8	89.01	10
45	93.8	91.03	10
46	95.8	93.05	10
47	97.9	95.07	10
48	99.9	97.09	10
49	101.9	99.10	10
50	103.9	101.13	10
51	105.9	103.14	12
52	108.0	105.16	12
53	110.0	107.18	12
54	112.0	109.18	12
55	114.0	111.23	12
56	116.0	113.25	12
57	118.1	115.27	12
58	120.1	117.29	12
59	122.1	119.31	12
60	124.1	121.32	12
62	128.2	125.37	12
64	132.2	129.41	12
65	134.2	131.43	12
66	136.2	133.45	14
68	140.3	137.49	14
70	144.3	141.53	14
72	148.4	145.58	14
75	154.4	151.63	14
76	156.5	153.66	14
78	160.5	157.70	16
80	164.5	161.74	16
85	174.6	171.85	16
90	184.7	181.95	16
95	194.8	192.05	16
100	204.9	202.15	16
110	225.1	222.37	16
114	233.2	230.45	16
120	245.4	242.58	16
125	255.5	252.68	16



SPROCKET  
Piñones

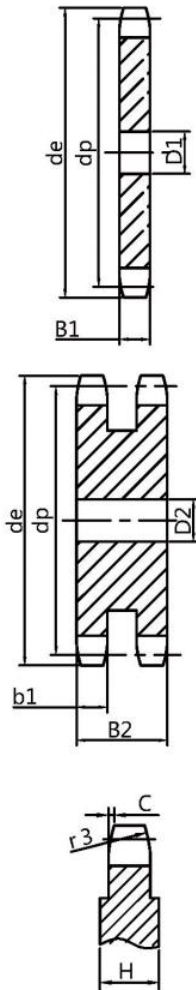
## SPROCKETS & PLATE WHEELS

Piñones & discos

### 05A-1-2

#### PLATEWHEELS 8x3mm

For chain Acc.to DIN 8187  
ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	8
Radius width $C$	1.0
Tooth width $B_1$	2.8
Tooth width $b_1$	2.7
Tooth width $B_2$	8.3

#### CHAIN mm

Pitch	8
Internal width	3
Roller $\Phi$	5

H=4mm, From Z=46 the width of the plate is increased

Z	$d_e$	$d_p$	D	
			$D_1$	$D_2$
8	24.0	20.90	6	8
9	26.6	23.39	6	8
10	29.2	25.89	8	8
11	31.7	28.39	8	8
12	34.2	30.91	8	8
13	36.7	33.42	8	8
14	39.2	35.95	8	8
15	41.7	38.48	8	8
16	44.3	41.01	8	10
17	46.8	43.53	8	10
18	49.3	46.07	8	10
19	51.9	48.61	8	10
20	54.4	51.14	8	10
21	57.0	53.68	8	10
22	59.5	56.21	8	10
23	62.0	58.75	8	10
24	64.6	61.29	8	10
25	67.5	63.83	8	10
26	69.5	66.37	10	12
27	72.2	68.91	10	12
28	74.8	71.45	10	12
29	77.3	73.99	10	12
30	79.8	76.53	10	12
31	82.4	79.08	10	12
32	84.9	81.61	10	12
33	87.5	84.16	10	12
34	90.0	86.70	10	12
35	92.5	89.25	10	12
36	95.0	91.79	10	12
37	97.6	94.33	10	12
38	100.2	96.88	10	12
39	102.7	99.42	10	12
40	105.3	101.97	10	12
41	107.8	104.51	12	14
42	110.4	107.05	12	14
43	112.9	109.60	12	14
44	115.5	112.14	12	14
45	118.0	114.69	12	14
46	120.6	117.23	12	14
47	123.1	119.77	12	14
48	125.6	122.32	12	14
49	128.2	124.86	12	14
50	130.7	127.41	12	14
51	133.3	128.95	14	16
52	135.8	132.49	14	16
53	138.4	135.59	14	16
54	140.9	137.59	14	16
55	143.5	140.13	14	16
56	146.0	142.68	14	16
57	148.6	145.22	14	16
58	151.0	147.77	14	16
59	153.6	150.31	14	16
60	156.2	152.86	14	16
62	162.0	157.95	16	20
64	167.1	163.04	16	20
65	169.6	165.58	16	20
66	172.2	168.13	16	20
68	177.3	173.22	16	20
70	182.4	178.31	16	20
72	187.5	183.40	20	20
75	195.1	191.04	20	20
76	197.7	193.59	20	20
78	202.8	198.68	20	20
80	207.9	203.77	20	20
85	220.6	216.50	20	20
90	233.4	229.23	20	20
95	246.1	241.96	20	20
100	258.9	254.68	20	20
110	284.3	280.15	20	20
114	294.5	290.33	20	20
120	310.0	305.61	20	20
125	322.5	318.34	20	20



SPROCKET  
Piñones

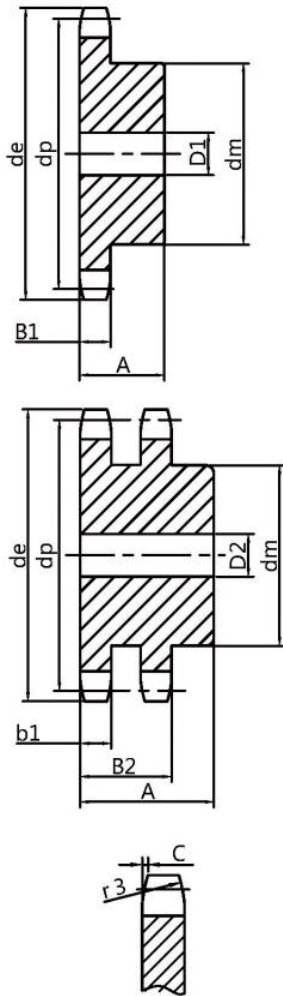
**SPROCKETS & PLATE WHEELS**

Piñones & discos

**05B-1-2**

**SPROCKETS 8x3mm**

For chain Acc.to DIN 8187  
ISO/R606



Z	$d_e$	$d_p$	SIMPLEX			DUPLEX		
			$d_m$	$D_1$	A	$d_m$	$D_2$	A
8	24.0	20.90	13	6	12	12	8	18
9	26.6	23.39	15	6	12	15	8	18
10	29.2	25.89	17	8	12	17	8	18
11	31.7	28.39	18	8	13	19	8	18
12	34.2	30.91	20	8	13	21	8	18
13	36.7	33.42	23	8	13	24	8	18
14	39.2	35.95	25	8	13	26	8	18
15	41.7	38.48	28	8	13	29	8	18
16	44.3	41.01	30	8	14	32	10	20
17	46.8	43.53	30	8	14	34	10	20
18	49.3	46.07	30	8	14	37	10	20
19	51.9	48.61	30	8	14	39	10	20
20	54.4	51.14	30	8	14	40	10	20
21	57.0	53.68	35	8	14	40	10	20
22	59.5	56.21	35	8	14	40	10	20
23	62.0	58.75	35	8	14	40	10	20
24	64.6	61.29	35	8	14	40	10	20
25	67.1	63.83	35	8	14	40	10	20
26	69.5	66.37	40	10	16	50	12	22
27	72.2	68.91	40	10	16	50	12	22
28	74.8	71.45	40	10	16	50	12	22
29	77.3	73.99	40	10	16	50	12	22
30	79.8	76.53	40	10	16	50	12	22
31	82.4	79.08	40	10	16	60	12	22
32	84.9	81.61	40	10	16	60	12	22
33	87.5	84.16	40	10	16	60	12	22
34	90.0	86.70	40	10	16	60	12	22
35	92.5	89.25	40	10	16	60	12	22
36	95.0	91.79	40	10	16	60	12	22
37	97.6	94.33	40	10	16	60	12	22
38	100.2	96.88	40	10	16	60	12	22
39	102.7	99.42	40	10	16	60	12	22
40	105.3	101.97	40	10	16	60	12	22
41	107.8	104.51	58	10	20	78	12	38
42	110.4	107.05	58	10	20	78	12	38
43	112.9	109.60	58	10	20	78	12	38
44	115.5	112.14	58	10	20	78	12	38
45	118.0	114.69	58	10	20	78	12	38
46	120.6	117.23	58	10	20	78	12	38
47	123.1	119.77	58	10	20	78	12	38
48	125.6	122.32	58	10	20	78	12	38
49	128.2	124.86	58	10	20	78	12	38
50	130.7	127.41	58	10	20	78	12	38
51	133.3	128.95	78	10	20	78	12	38
52	135.8	132.49	78	10	20	78	12	38
53	138.4	135.59	78	10	20	78	12	38
54	140.9	137.59	78	10	20	78	12	38
55	143.5	140.13	78	10	20	78	12	38
56	146.0	142.68	78	10	20	78	12	38
57	148.6	145.22	78	10	20	78	12	38
58	151.0	147.77	78	10	34	78	12	38
59	153.6	150.31	78	10	34	78	12	38
60	156.2	152.86	78	10	34	78	12	38
62	162.0	157.95	78	10	34	78	12	38
64	167.1	163.04	78	10	34	78	12	38
65	169.6	165.58	78	10	34	78	12	38
66	172.2	168.13	78	10	34	78	12	38
68	177.3	173.22	78	10	34	78	12	38
70	182.4	178.31	78	10	34	78	12	38
72	187.5	183.40	78	10	34	78	12	38
75	195.1	191.04	78	10	34	78	12	38
76	197.7	193.59	78	10	34	78	12	38
78	202.8	198.68	*78	10	34	*78	12	38
80	207.9	203.77	*78	10	34	*78	12	38
85	220.6	216.50	*78	10	34	*88	12	43
90	233.4	229.23	*78	10	34	*88	12	43
95	246.1	241.96	*78	10	34	*88	12	43
100	258.9	254.68	*78	10	34	*88	12	43
110	284.3	280.15	*88	10	39	*88	12	43
114	294.5	290.33	*88	10	39	*88	12	43
120	310.0	305.61	*88	10	39	*88	12	43
125	322.5	318.34	*88	10	39	*88	12	43

**SPROCKETS** mm

Tooth radius $r_3$	8
Radius width C	1.0
Tooth width $B_1$	2.8
Tooth width $b_1$	2.7
Tooth width $B_2$	8.3

**CHAIN** mm

Pitch	8
Internal width	3
RollerΦ	5

Material: C 45  
\*Weld on hub



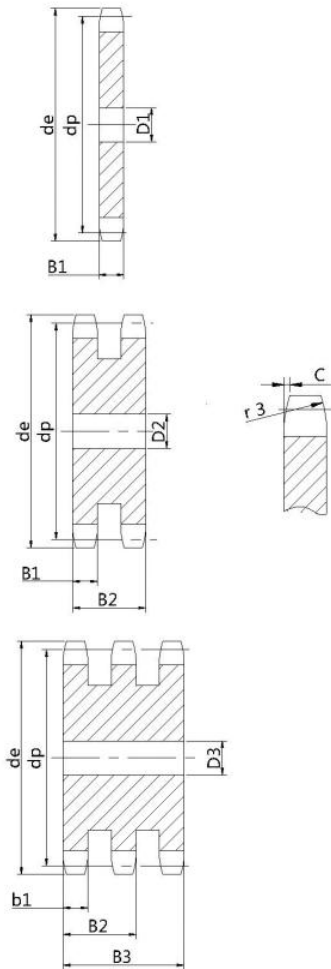
## SPROCKETS & PLATE WHEELS

Piñones & discos

### 06A-1-2-3

#### PLATE WHEELS 3/8" x 7/32"

For chain Acc.to DIN 8187  
ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	10
Radius width C	1
Tooth width $B_1$	5.3
Tooth width $b_1$	5.2
Tooth width $B_2$	15.4
Tooth width $B_3$	25.6

#### CHAIN mm

Pitch	9.525
Internal width	5.72
Roller $\Phi$	6.35

H=4mm, From Z=100 the width of the plate is increased

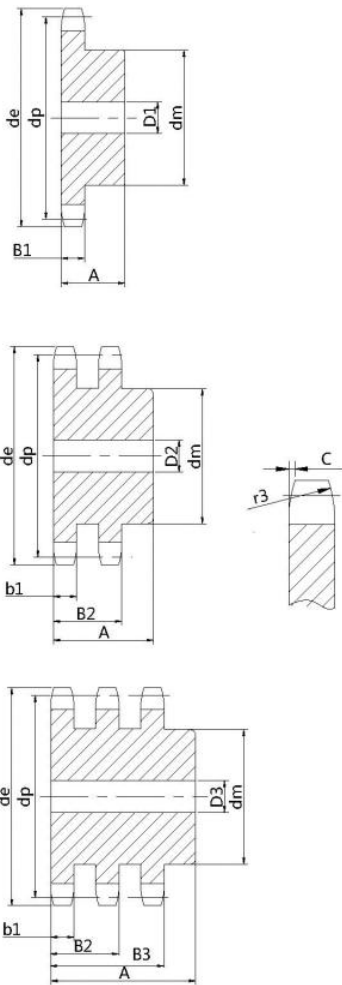
Z	$d_e$	$d_p$	S	D	T
			$D_1$	$D_2$	$D_3$
8	28.0	24.89	6	8	8
9	31.0	27.85	8	8	8
10	34.0	30.82	8	8	10
11	37.0	33.80	8	10	10
12	40.0	36.80	8	10	10
13	43.0	39.79	8	10	10
14	46.3	42.80	8	10	12
15	49.3	45.81	8	10	12
16	52.3	48.82	10	12	12
17	55.3	51.82	10	12	12
18	58.3	54.85	10	12	12
19	61.3	57.87	10	12	12
20	64.3	60.89	10	12	12
21	68.0	63.91	10	12	14
22	71.0	66.93	10	12	14
23	73.5	66.95	10	12	14
24	77.0	72.97	10	12	14
25	80.0	76.00	10	12	14
26	83.0	79.02	10	12	14
27	86.0	82.05	10	12	14
28	89.0	85.07	10	12	14
29	92.0	88.09	10	12	14
30	94.7	91.12	10	12	14
31	98.3	94.15	12	14	16
32	101.3	97.17	12	14	16
33	104.3	100.20	12	14	16
34	107.3	103.23	12	14	16
35	110.4	106.26	12	14	16
36	113.4	109.29	12	14	16
37	116.4	112.32	12	14	16
38	119.5	115.35	12	14	16
39	122.5	118.37	12	14	16
40	125.5	121.40	12	14	16
41	128.5	124.43	16	16	16
42	131.6	127.46	16	16	16
43	134.6	130.49	16	16	16
44	137.6	133.52	16	16	16
45	140.7	136.55	16	16	16
46	143.7	139.58	16	16	16
47	146.7	142.61	16	16	16
48	149.7	145.64	16	16	16
49	152.7	148.66	16	16	16
50	155.7	151.69	16	16	16
51	158.7	154.72	16	16	20
52	161.8	157.75	16	16	20
53	164.8	160.78	16	16	20
54	167.8	163.82	16	16	20
55	170.8	166.85	16	16	20
56	173.8	169.88	16	16	20
57	176.9	172.91	16	16	20
58	179.9	175.93	16	16	20
59	183.0	178.96	16	16	20
60	186.0	181.99	16	16	20
62	192.1	188.06	20	20	20
64	198.2	194.12	20	20	20
65	201.6	197.15	20	20	20
66	204.6	200.18	20	20	25
68	210.7	206.24	20	20	25
70	216.7	212.30	20	20	25
72	222.8	218.37	20	20	25
75	231.9	227.46	20	20	25
76	234.9	230.49	20	20	25
78	241.0	236.55	20	20	25
80	247.1	242.61	20	20	25
85	262.2	257.77	20	20	25
90	277.4	272.93	20	20	25
95	292.5	288.08	20	20	25
100	307.7	303.25	20	20	25
110	338.0	333.55	20	20	25
114	349.5	345.68	20	20	25
120	368.3	363.86	20	20	25
125	383.5	379.02	20	20	25



## SPROCKETS & PLATE WHEELS

Piñones & discos

### 06B-1-2-3 SPROCKETS 3/8" x 7/32" For chain Acc.to DIN 8187 ISO/R606



#### SPROCKETS mm

Tooth radius r <sub>3</sub>	10
Radius width C	1
Tooth width B <sub>1</sub>	5.3
Tooth width b <sub>1</sub>	5.2
Tooth width B <sub>2</sub>	15.4
Tooth width B <sub>3</sub>	25.6

#### CHAIN mm

Pitch	9.525
Internal width	5.72
RollerΦ	6.35

Material: C 45  
\*Weld on hub

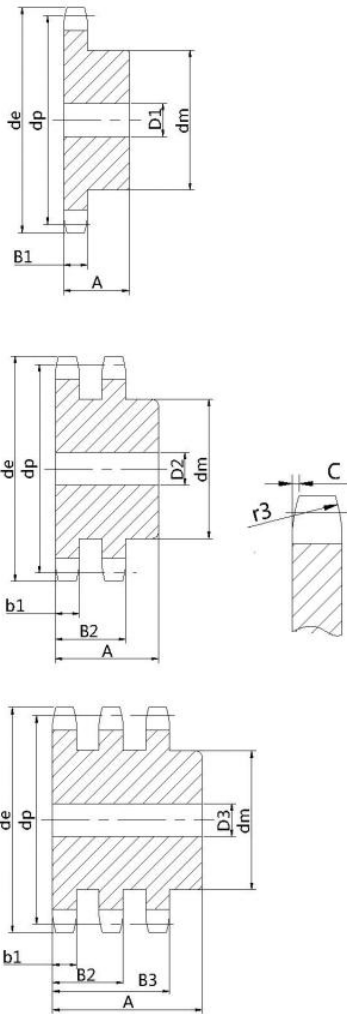
Z	d <sub>e</sub>	d <sub>p</sub>	SIMPLEX			DUPLEX			TRIPLEX		
			d <sub>e</sub>	D <sub>1</sub>	A	d <sub>e</sub>	D <sub>2</sub>	A	d <sub>e</sub>	D <sub>3</sub>	A
8	28.0	24.89	15	8	20	15	8	22	15	8	32
9	31.0	27.85	18	8	20	18	8	22	18	8	32
10	34.0	30.82	20	8	20	20	8	22	20	10	32
11	37.0	33.80	22	8	25	22	10	25	22	10	35
12	40.0	36.80	25	8	25	25	10	25	25	10	35
13	43.0	39.79	28	10	25	28	10	25	28	10	35
14	46.3	42.80	31	10	25	31	10	25	31	12	35
15	49.3	45.81	34	10	25	34	10	25	34	12	35
16	52.3	48.82	37	10	28	37	12	30	37	12	35
17	55.3	51.82	40	10	28	40	12	30	40	12	35
18	58.3	54.85	43	10	28	43	12	30	43	12	35
19	61.3	57.87	45	10	28	46	12	30	46	12	35
20	64.3	60.89	46	10	28	49	12	30	49	12	35
21	68.0	63.91	48	12	28	52	12	30	52	14	40
22	71.0	66.93	50	12	28	55	12	30	55	14	40
23	73.5	66.95	52	12	28	58	12	30	58	14	40
24	77.0	72.97	54	12	28	61	12	30	61	14	40
25	80.0	76.00	57	12	28	64	12	30	64	14	40
26	83.0	79.02	60	12	28	67	12	30	67	14	40
27	86.0	82.05	60	12	28	70	12	30	70	14	40
28	89.0	85.07	60	12	28	73	12	30	73	14	40
29	92.0	88.09	60	12	28	76	12	30	76	14	40
30	94.7	91.12	60	12	28	79	12	30	79	14	40
31	98.3	94.15	65	14	30	80	16	30	80	16	40
32	101.3	97.17	65	14	30	80	16	30	80	16	40
33	104.3	100.20	65	14	30	80	16	30	80	16	40
34	107.3	103.23	65	14	30	80	16	30	85	16	40
35	110.4	106.26	65	14	30	80	16	30	85	16	40
36	113.4	109.29	70	14	30	90	16	30	90	16	40
37	116.4	112.32	70	14	30	90	16	30	90	16	40
38	119.5	115.35	70	14	30	90	16	30	90	16	40
39	122.5	118.37	70	14	30	90	16	30	90	16	40
40	125.5	121.40	70	14	30	90	16	30	90	16	40
41	128.5	124.43	78	14	32	90	16	40	90	16	56
42	131.6	127.46	78	14	32	90	16	40	90	16	56
43	134.6	130.49	78	14	32	90	16	40	90	16	56
44	137.6	133.52	78	14	32	90	16	40	90	16	56
45	140.7	136.55	78	14	32	90	16	40	90	16	56
46	143.7	139.58	78	14	32	90	16	40	90	16	56
47	146.7	142.61	78	14	32	90	16	40	90	16	56
48	149.7	145.64	78	14	32	90	16	40	90	16	56
49	152.7	148.66	78	14	32	90	16	40	90	16	56
50	155.7	151.69	78	14	32	90	16	40	90	16	56
51	158.7	154.72	78	14	32	90	16	40	90	16	56
52	161.8	157.75	78	14	32	90	16	40	90	16	56
53	164.8	160.78	78	14	32	90	16	40	90	16	56
54	167.8	163.82	78	14	32	90	16	40	90	16	56
55	170.8	166.85	78	14	32	90	16	40	90	16	56
56	173.8	169.88	78	14	32	90	16	40	90	16	56
57	176.9	172.91	78	14	32	90	16	40	90	16	56
58	179.9	175.93	78	14	32	90	16	40	90	16	56
59	183.0	178.96	78	14	32	90	16	40	90	16	56
60	186.0	181.99	78	14	32	90	16	40	90	16	56
62	192.1	188.06	78	14	32	90	16	40	90	16	56
64	198.2	194.12	78	14	32	90	16	40	90	16	56
65	201.6	197.15	*78	14	32	*90	16	40	*90	16	56
66	204.6	200.18	*78	14	32	*90	16	40	*90	16	56
68	210.7	206.24	*78	14	32	*90	16	40	*90	16	56
70	216.7	212.30	*78	14	32	*90	16	40	*90	16	56
72	222.8	218.37	*78	14	32	*90	16	40	*90	16	56
75	231.9	227.46	*78	14	32	*90	16	40	*90	16	56
76	234.9	230.49	*78	14	32	*90	16	40	*90	16	56
78	241.0	236.55	*78	14	32	*90	16	40	*90	16	56
80	247.1	242.61	*78	14	32	*90	16	40	*90	16	56
85	262.2	257.77	*80	14	32	*90	16	40	*90	16	56
90	277.4	272.93	*80	14	32	*90	16	40	*90	16	56
95	292.5	288.08	*80	14	32	*90	16	40	*90	16	56
100	307.7	303.25	*80	14	32	*90	16	40	*90	16	56
110	338.0	333.55	*80	14	32	*90	16	40	*90	16	56
114	349.5	345.68	*80	14	32	*90	16	40	*90	16	56
120	368.3	363.86	*80	14	32	*90	16	40	*90	16	56
125	383.5	379.02	*80	14	32	*90	16	40	*90	16	56



**SPROCKETS & PLATE WHEELS**

Piñones & discos

**10B-1-2-3**  
**SPROCKETS 5/8" x 3/8"**  
 For chain Acc.to DIN 8187  
 ISO/R606



**SPROCKETS** mm

Tooth radius $r_3$	16
Radius width C	1.6
Tooth width $B_1$	9.1
Tooth width $b_1$	9
Tooth width $B_2$	25.5
Tooth width $B_3$	42.1

**CHAIN** mm

Pitch	15.875
Internal width	9.65
Roller $\Phi$	10.16

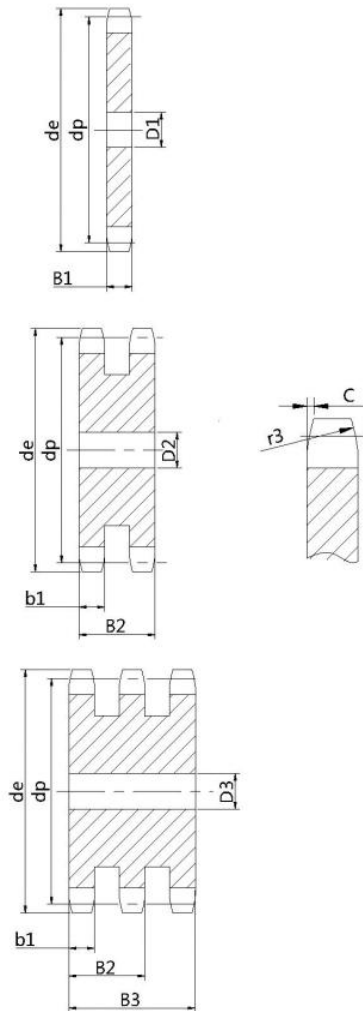
Material: C 45  
 \*Weld on hub

Z	$d_e$	$d_p$	SIMPLEX			DUPLEX			TRIPLEX		
			$d_e$	$D_1$	A	$d_e$	$D_2$	A	$d_e$	$D_3$	A
8	47.0	41.48	25	10	25	25	12	40	25	12	55
9	52.6	46.42	30	10	25	30	12	40	30	12	55
10	57.5	51.37	35	10	25	35	12	40	35	12	55
11	63.0	56.34	37	12	30	39	14	40	39	16	55
12	68.0	61.34	42	12	30	44	14	40	44	16	55
13	73.0	66.32	47	12	30	49	14	40	49	16	55
14	78.0	71.34	52	12	30	54	14	40	54	16	55
15	83.0	76.36	57	12	30	59	14	40	59	16	55
16	88.0	81.37	60	12	30	64	16	45	64	16	60
17	93.0	86.39	60	12	30	69	16	45	69	16	60
18	98.3	91.42	70	14	30	74	16	45	74	16	60
19	103.3	96.45	70	14	30	79	16	45	79	16	60
20	108.4	101.49	75	14	30	84	16	45	84	16	60
21	113.4	106.52	75	16	30	85	16	45	85	20	60
22	118.3	111.55	80	16	30	90	16	45	90	20	60
23	123.5	116.68	80	16	30	95	16	45	95	20	60
24	128.3	121.62	80	16	30	100	16	45	100	20	60
25	134.0	126.66	80	20	30	105	16	45	105	20	60
26	139.0	131.70	85	20	35	110	20	45	110	20	60
27	144.0	136.75	85	20	35	110	20	45	110	20	60
28	148.7	141.78	90	20	35	115	20	45	115	20	60
29	153.8	146.83	90	20	35	115	20	45	115	20	60
30	158.8	151.87	90	20	35	120	20	45	120	20	60
31	163.9	156.92	95	20	35	120	20	45	120	20	60
32	168.9	161.95	95	20	35	120	20	45	120	20	60
33	174.5	167.00	95	20	35	120	20	45	120	20	60
34	179.0	172.05	95	20	35	120	20	45	120	20	60
35	184.1	177.10	95	20	35	120	20	45	120	20	60
36	189.1	182.15	100	20	35	120	20	45	120	25	60
37	194.2	187.20	100	20	35	120	20	45	120	25	60
38	199.2	192.24	100	20	35	120	20	45	120	25	60
39	204.2	197.29	100	20	35	120	20	45	120	25	60
40	209.3	202.34	100	20	35	120	20	45	120	25	60
41	214.8	207.38	*100	20	40	*120	20	50	*130	25	60
42	219.9	212.34	*100	20	40	*120	20	50	*130	25	60
43	224.9	217.48	*100	20	40	*120	20	50	*130	25	60
44	230.0	222.53	*100	20	40	*120	20	50	*130	25	60
45	235.0	227.58	*100	20	40	*120	20	50	*130	25	60
46	240.1	232.63	*100	20	40	*120	20	50	*130	25	60
47	245.1	237.68	*100	20	40	*120	20	50	*130	25	60
48	250.2	242.73	*100	20	40	*120	20	50	*130	25	60
49	255.2	247.78	*100	20	40	*120	20	50	*130	25	60
50	260.3	252.82	*100	20	40	*120	20	50	*130	25	60
51	265.3	257.87	*100	20	40	*120	20	50	*130	25	60
52	270.4	262.92	*100	20	40	*120	20	50	*130	25	60
53	275.4	267.97	*100	20	40	*120	20	50	*130	25	60
54	280.5	273.03	*100	20	40	*120	20	50	*130	25	60
55	285.5	278.08	*100	20	40	*120	20	50	*130	25	60
56	290.6	283.13	*100	20	40	*120	20	50	*130	25	60
57	296.0	288.18	*100	20	40	*120	20	50	*130	25	60
58	300.7	293.23	*100	20	43	*120	20	57	*130	25	64
59	305.7	298.28	*100	20	43	*120	20	57	*130	25	64
60	310.8	303.33	*100	20	43	*120	20	57	*130	25	64
62	321.4	313.43	*100	20	43	*120	20	57	*130	25	64
64	331.5	323.53	*100	20	43	*120	20	57	*130	25	67
65	336.5	328.58	*100	20	43	*120	20	57	*130	25	67
66	351.7	333.64	*100	20	43	*120	20	57	*130	25	67
68	361.7	343.74	*100	20	43	*120	20	57	*130	25	67
70	371.9	353.84	*100	20	43	*120	20	57	*130	25	67
72	387.1	363.94	*100	20	43	*120	20	57	*130	25	67
75	387.1	379.10	*100	20	43	*120	20	57	*130	25	67
76	392.1	379.10	*100	20	43	*120	20	57	*130	25	67
78	402.2	384.15	*100	20	43	*120	20	57	*130	25	67
80	412.3	394.25	*100	20	43	*130	20	57	*130	25	67
85	437.6	404.36	*100	20	50	*130	20	58	*130	25	67
90	462.8	454.88	*100	20	50	*130	20	58	*130	25	67
95	488.5	480.14	*100	20	50	*130	20	58	*130	25	67
100	513.4	505.40	*100	20	50	*130	20	58	*130	25	67
110	563.9	555.92	*100	20	50	*130	20	58	*130	25	67
114	584.1	576.13	*100	20	50	*130	20	58	*130	25	67
120	614.4	606.45	*100	20	50	*130	20	58	*130	25	67
125	639.7	631.51	*100	20	50	*130	20	58	*130	25	67

## SPROCKETS & PLATE WHEELS

Piñones & discos

### 12A-1-2-3 PLATE WHEELS 3/4" x 7/16" For chain Acc.to DIN 8187 ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	19
Radius width C	2
Tooth width $B_1$	11.1
Tooth width $b_1$	10.8
Tooth width $B_2$	30.3
Tooth width $B_3$	49.8

#### CHAIN mm

Pitch	19.05
Internal width	11.68
Roller $\Phi$	12.07

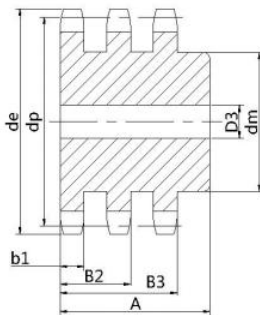
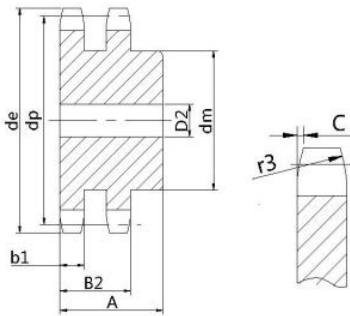
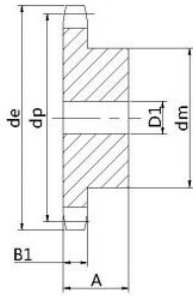
Z	$d_o$	$d_p$	S		D		T	
			$D_1$	$D_2$	$D_1$	$D_2$	$D_1$	$D_2$
8	57.6	49.78	10		12		12	
9	62.0	55.70	10		12		12	
10	69.0	61.64	10		12		12	
11	75.0	67.61	12		14		16	
12	81.5	73.61	14		14		16	
13	93.6	79.59	14		14		16	
14	99.8	85.61	14		14		16	
15	105.5	91.63	14		14		16	
16	111.5	97.65	14		16		16	
17	118.0	103.67	14		16		16	
18	124.2	109.71	14		16		16	
19	129.7	115.75	14		16		16	
20	136.0	121.78	14		16		16	
21	141	127.82	16		16		20	
22	149.0	133.86	16		16		20	
23	153.9	139.90	16		16		20	
24	172.3	145.94	16		16		20	
25	178.0	152.00	16		16		20	
26	184.1	158.04	16		20		20	
27	190.5	164.09	16		20		20	
28	196.3	170.13	16		20		20	
29	203.3	176.19	16		20		20	
30	209.3	182.25	16		20		20	
31	214.6	188.31	20		20		25	
32	221.0	194.35	20		20		25	
33	226.8	200.40	20		20		25	
34	232.9	206.46	20		20		25	
35	239.0	212.52	20		20		25	
36	245.1	218.58	20		25		25	
37	257.3	224.64	20		25		25	
38	264.5	230.69	20		25		25	
39	270.5	236.75	20		25		25	
40	276.5	242.81	20		25		25	
41	257.3	248.86	25		25		25	
42	264.5	254.92	25		25		25	
43	207.5	260.98	25		25		25	
44	276.5	267.03	25		25		25	
45	282.5	273.09	25		25		25	
46	287.9	279.15	25		25		25	
47	294.0	285.21	25		25		25	
48	300.1	291.27	25		25		25	
49	306.2	297.33	25		25		25	
50	312.3	303.39	25		25		25	
51	318.4	309.45	25		25		25	
52	324.5	315.51	25		25		25	
53	330.5	321.57	25		25		25	
54	336.6	327.63	25		25		25	
55	342.7	333.69	25		25		25	
56	348.7	339.75	25		25		25	
57	355.4	345.81	25		25		30	
58	361.5	351.87	25		25		30	
59	367.5	357.93	25		25		30	
60	373.0	363.99	25		25		30	
62	385.1	376.12	25		30		30	
64	397.2	388.24	25		30		30	
65	403.2	394.30	25		30		30	
66	409.3	400.36	30		30		30	
68	421.4	412.49	30		30		30	
70	433.6	424.61	30		30		30	
72	447.0	436.73	30		30		30	
75	463.9	454.92	30		30		30	
76	469.9	460.98	30		30		30	
78	482.1	473.10	30		30		30	
80	494.2	485.23	30		30		30	
85	524.5	515.54	30		30		30	
90	554.8	545.85	30		30		30	
95	585.1	576.17	30		30		30	
100	615.4	606.48	30		30		30	
110	676.1	667.11	30		30		30	
114	700.6	691.36	30		30		30	
120	736.7	727.74	30		30		30	
125	767.0	758.06	30		30		30	



**SPROCKETS & PLATE WHEELS**

Piñones & discos

**12B-1-2-3**  
**SPROCKETS 3/4" x 7/16"**  
 For chain Acc.to DIN 8187  
 ISO/R606



**SPROCKETS** mm

Tooth radius r <sub>3</sub>	19
Radius width C	2
Tooth width B <sub>1</sub>	11.1
Tooth width b <sub>1</sub>	10.8
Tooth width B <sub>2</sub>	30.3
Tooth width B <sub>3</sub>	49.8

**CHAIN** mm

Pitch	19.05
Internal width	11.68
RollerΦ	12.07

Material:C 45  
 \*Weld on hub

Z	d <sub>a</sub>	d <sub>b</sub>	SIMPLEX			DUPLEX			TRIPLEX		
			d <sub>a</sub>	D <sub>2</sub>	A	d <sub>a</sub>	D <sub>2</sub>	A	d <sub>a</sub>	D <sub>2</sub>	A
8	57.6	49.78	31	12	30	31	12	45	31	16	65
9	62.0	55.70	37	12	30	37	12	45	37	16	65
10	69.0	61.64	42	12	30	42	12	45	42	16	65
11	75.0	67.61	46	14	35	47	16	50	47	20	70
12	81.5	73.61	52	14	35	53	16	50	53	20	70
13	93.6	79.59	58	14	35	59	16	50	59	20	70
14	99.8	85.61	64	14	35	65	16	50	65	20	70
15	105.5	91.63	70	14	35	71	16	50	71	20	70
16	111.5	97.65	75	16	35	77	20	50	77	20	70
17	118.0	103.67	80	16	35	83	20	50	83	20	70
18	124.2	109.71	80	16	35	89	20	50	89	20	70
19	129.7	115.75	80	16	35	95	20	50	95	20	70
20	136.0	121.78	80	16	35	100	20	50	100	20	70
21	141	127.82	90	20	40	100	20	50	100	20	70
22	149.0	133.86	90	20	40	100	20	50	100	20	70
23	153.9	139.90	90	20	40	110	20	50	110	20	70
24	172.3	145.94	90	20	40	110	20	50	110	20	70
25	178.0	152.00	90	20	40	120	20	50	120	20	70
26	184.1	158.04	95	20	40	120	20	50	120	20	70
27	190.5	164.09	95	20	40	120	20	50	120	20	70
28	196.3	170.13	95	20	40	120	20	50	120	20	70
29	203.3	176.19	95	20	40	120	20	50	120	20	70
30	209.3	182.25	95	20	40	120	20	50	120	20	70
31	214.6	188.31	95	20	40	120	20	50	130	25	70
32	221.0	194.35	95	20	40	120	20	50	130	25	70
33	226.8	200.40	95	20	40	120	20	50	130	25	70
34	232.9	206.46	95	20	40	120	20	50	130	25	70
35	239.0	212.52	95	20	40	120	20	50	130	25	70
36	245.1	218.58	100	20	40	120	20	50	130	25	70
37	257.3	224.64	100	20	40	120	25	50	130	25	70
38	264.5	230.69	100	20	40	120	25	50	130	25	70
39	270.5	236.75	100	20	40	120	25	50	130	25	70
40	276.5	242.81	100	20	40	120	25	50	130	25	70
41	257.3	248.86	*110	20	56	*136	25	62	*140	25	70
42	264.5	254.92	*110	20	56	*136	25	62	*140	25	70
43	207.5	260.98	*110	20	56	*136	25	62	*140	25	70
44	276.5	267.03	*110	20	56	*136	25	62	*140	25	70
45	282.5	273.09	*110	20	56	*136	25	62	*140	25	70
46	287.9	279.15	*110	20	56	*136	25	62	*140	25	70
47	294.0	285.21	*110	20	56	*136	25	62	*140	25	70
48	300.1	291.27	*110	20	56	*136	25	62	*140	25	70
49	306.2	297.33	*110	20	56	*136	25	62	*140	25	70
50	312.3	303.39	*110	20	56	*136	25	62	*140	25	70
51	318.4	309.45	*110	20	56	*136	25	62	*140	25	70
52	324.5	315.51	*110	20	56	*136	25	62	*140	25	70
53	330.5	321.57	*110	20	56	*136	25	62	*140	25	70
54	336.6	327.63	*110	20	56	*136	25	62	*140	25	70
55	342.7	333.69	*110	20	56	*136	25	62	*140	25	70
56	348.7	339.75	*110	20	56	*136	25	62	*140	25	70
57	355.4	345.81	*110	20	56	*136	25	62	*140	25	70
58	361.5	351.87	*110	20	56	*136	25	62	*140	25	70
59	367.5	357.93	*110	20	56	*136	25	62	*140	25	70
60	373.0	363.99	*110	20	56	*136	25	62	*140	25	70
62	385.1	376.12	*110	20	56	*136	25	62	*140	25	70
64	397.2	388.24	*110	20	56	*140	25	62	*140	25	70
65	403.2	394.30	*110	20	56	*140	25	63	*140	25	70
66	409.3	400.36	*110	20	56	*140	25	63	*140	25	70
68	421.4	412.49	*110	20	56	*140	25	63	*140	25	70
70	433.6	424.61	*110	20	56	*140	25	63	*140	25	70
72	447.0	436.73	*110	20	56	*140	25	63	*140	25	70
75	463.9	454.92	*110	20	56	*140	25	63	*140	25	70
76	469.9	460.98	*110	20	56	*140	25	63	*140	25	70
78	482.1	473.10	*110	20	56	*140	25	63	*140	25	70
80	494.2	485.23	*110	20	56	*140	25	63	*140	25	70
85	524.5	515.54	*110	20	56	*140	25	63	*140	25	70
90	554.8	545.85	*110	20	56	*140	25	63	*140	25	70
95	585.1	576.17	*110	20	56	*140	25	63	*140	25	70
100	615.4	606.48	*110	20	56	*140	25	63	*140	25	70
110	676.1	667.11	*110	20	56	*140	25	63	*140	25	70
114	700.6	691.36	*110	20	56	*140	25	63	*140	25	70
120	736.7	727.74	*110	20	56	*140	25	63	*140	25	70
125	767.0	758.06	*110	20	56	*140	25	63	*140	25	70

## SPROCKETS & PLATE WHEELS

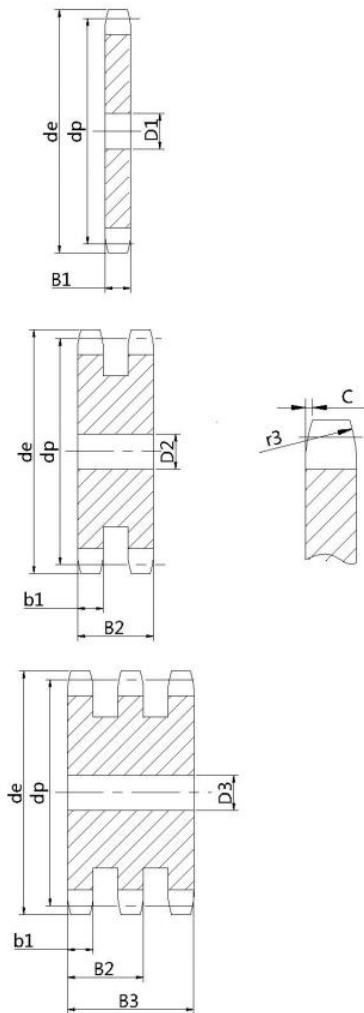
Piñones & discos

### 16A-1-2-3

#### PLATE WHEELS 1" x 17.02mm

For chain Acc.to DIN 8187

ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	26
Radius width C	2.5
Tooth width $B_1$	16.2
Tooth width $b_1$	15.8
Tooth width $B_2$	47.7
Tooth width $B_3$	79.6

#### CHAIN mm

Pitch	25.4
Internal width	17.02
Roller $\Phi$	15.88

Z	$d_o$	$d_p$	S		D		T	
			$D_1$	$D_2$	$D_1$	$D_2$	$D_1$	$D_2$
8	77.0	66.37	12	16	16			
9	85.0	74.27	12	16	16			
10	93.0	82.19	12	16	16			
11	101.5	90.14	16	20	20			
12	109.0	98.14	16	20	20			
13	117.0	106.12	16	20	20			
14	125.0	114.15	16	20	20			
15	133.0	122.17	16	20	20			
16	141.0	130.20	20	20	25			
17	149.0	138.22	20	20	25			
18	157.0	146.28	20	20	25			
19	165.2	154.33	20	20	25			
20	173.2	162.38	20	20	25			
21	181.2	170.43	20	25	25			
22	189.3	178.48	20	25	25			
23	197.5	186.53	20	25	25			
24	205.5	194.59	20	25	25			
25	213.5	202.66	20	25	25			
26	221.6	210.72	20	25	30			
27	229.6	218.79	20	25	30			
28	237.7	226.85	20	25	30			
29	245.8	234.92	20	25	30			
30	354.0	243.00	20	25	30			
31	262.0	251.08	25	25	30			
32	270.0	259.13	25	25	30			
33	278.5	267.21	25	25	30			
34	287.0	275.28	25	25	30			
35	296.2	283.36	25	25	30			
36	304.6	291.44	25	25	30			
37	312.3	299.51	25	25	30			
38	20.7	307.59	25	25	30			
39	328.8	315.67	25	25	30			
40	336.9	323.75	25	25	30			
41	345.0	331.81	25	25	30			
42	353.0	339.89	25	25	30			
43	361.1	347.97	25	25	30			
44	369.1	356.05	25	25	30			
45	377.1	364.12	25	25	30			
46	385.2	372.20	25	25	30			
47	393.2	380.28	25	25	30			
48	410.3	388.36	25	25	30			
49	409.3	396.44	25	25	30			
50	417.4	404.52	25	25	30			
51	425.5	412.60	30	30	40			
52	433.6	420.68	30	30	40			
53	441.7	428.76	30	30	40			
54	448.3	436.84	30	30	40			
55	457.9	444.92	30	30	40			
56	466.0	453.01	30	30	40			
57	474.0	461.08	30	30	40			
58	482.1	469.16	30	30	40			
59	490.2	477.24	30	30	40			
60	498.3	485.23	30	30	40			
62	514.5	501.49	30	30	40			
64	530.7	517.65	30	30	40			
65	538.8	525.73	30	30	40			
66	546.8	533.80	30	30	40			
68	562.9	549.98	30	30	40			
70	579.2	566.15	30	30	40			
72	595.4	582.31	30	30	40			
75	619.7	606.56	30	30	40			
76	627.0	614.64	30	30	40			
78	643.3	630.81	30	30	40			
80	660.0	646.97	30	30	40			
85	699.9	687.39	30	30	40			
90	740.3	727.80	30	30	40			
95	781.1	768.22	30	30	40			
100	821.1	808.64	30	30	40			
110	902.0	889.48	30	30	40			
114	934.3	921.81	30	40	40			
120	982.8	970.32	30	40	40			
125	1023.3	1010.73	30	40	40			

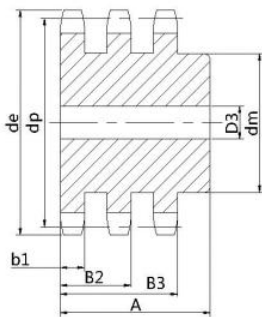
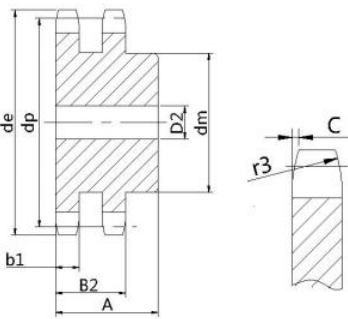
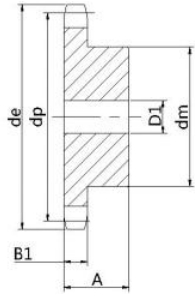


SPROCKET  
Piñones

**SPROCKETS & PLATE WHEELS**

Piñones & discos

**16B-1-2-3**  
**SPROCKETS 1" x 17.02mm**  
 For chain Acc.to DIN 8187  
 ISO/R606



**SPROCKETS** mm

Tooth radius r <sub>3</sub>	26
Radius width C	2.5
Tooth width B <sub>1</sub>	16.2
Tooth width b <sub>1</sub>	15.8
Tooth width B <sub>2</sub>	47.7
Tooth width B <sub>3</sub>	79.6

**CHAIN** mm

Pitch	25.4
Internal width	17.02
RollerΦ	15.88

Material: C 45  
 \*Weld on hub

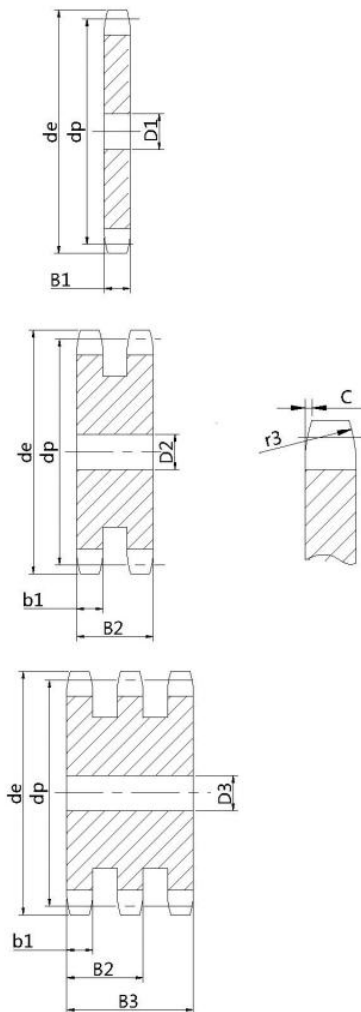
Z	d <sub>a</sub>	d <sub>b</sub>	SIMPLEX			DUPLEX			TRIPLEX		
			d <sub>a</sub>	D <sub>2</sub>	A	d <sub>a</sub>	D <sub>2</sub>	A	d <sub>a</sub>	D <sub>2</sub>	A
8	77.0	66.37	42	16	65	42	16	65	42	20	95
9	85.0	74.27	50	16	65	50	16	65	50	20	95
10	93.0	82.19	55	16	65	56	16	65	56	20	95
11	101.5	90.14	61	20	70	64	20	70	64	25	100
12	109.0	98.14	69	20	70	72	20	70	72	25	100
13	117.0	106.12	78	20	70	80	20	70	80	25	100
14	125.0	114.15	84	20	70	88	20	70	88	25	100
15	133.0	122.17	92	20	70	96	20	70	96	25	100
16	141.0	130.20	100	20	70	104	20	70	104	25	100
17	149.0	138.22	100	20	70	112	20	70	112	25	100
18	157.0	146.28	100	20	70	120	20	70	120	25	100
19	165.2	154.33	100	20	70	128	20	70	128	25	100
20	173.2	162.38	100	20	70	130	20	70	130	25	100
21	181.2	170.43	110	25	70	130	25	70	*130	25	100
22	189.3	178.48	110	25	70	*130	25	70	*130	25	100
23	197.5	186.53	110	25	70	*130	25	70	*130	25	100
24	205.5	194.59	110	25	70	*130	25	70	*130	25	100
25	213.5	202.66	110	25	70	*130	25	70	*130	25	100
26	221.6	210.72	120	25	70	*130	25	70	*130	30	100
27	229.6	218.79	120	25	70	*130	25	70	*130	30	100
28	237.7	226.85	120	25	70	*130	25	70	*130	30	100
29	245.8	234.92	120	25	70	*130	25	70	*130	30	100
30	354.0	243.00	120	25	70	*130	25	70	*130	30	100
31	262.0	251.08	*120	25	70	*140	25	70	*140	30	100
32	270.0	259.13	*120	25	70	*140	25	70	*140	30	100
33	278.5	267.21	*120	25	70	*140	25	70	*140	30	100
34	287.0	275.28	*120	25	70	*140	25	70	*140	30	100
35	296.2	283.36	*120	25	70	*140	25	70	*140	30	100
36	304.6	291.44	*120	25	70	*140	25	70	*140	30	100
37	312.3	299.51	*120	25	70	*140	25	70	*140	30	100
38	20.7	307.59	*120	25	70	*140	25	70	*140	30	100
39	328.8	315.67	*120	25	70	*140	25	70	*140	30	100
40	336.9	323.75	*120	25	70	*140	25	70	*140	30	100
41	345.0	331.81	*125	25	70	*140	25	70	*160	30	100
42	353.0	339.89	*125	25	70	*140	25	70	*160	30	100
43	361.1	347.97	*125	25	70	*140	25	70	*160	30	100
44	369.1	356.05	*125	25	70	*140	25	70	*160	30	100
45	377.1	364.12	*125	25	70	*140	25	70	*160	30	100
46	385.2	372.20	*125	25	70	*140	25	70	*160	30	100
47	393.2	380.28	*125	25	70	*140	25	70	*160	30	100
48	410.3	388.36	*125	25	70	*140	25	70	*160	30	100
49	409.3	396.44	*125	25	70	*140	25	70	*160	30	100
50	417.4	404.52	*125	25	70	*140	25	70	*160	30	100
51	425.5	412.60	*125	25	85	*150	25	85	*180	30	100
52	433.6	420.68	*125	25	85	*150	25	85	*180	30	110
53	441.7	428.76	*125	25	85	*150	25	85	*180	30	110
54	448.3	436.84	*125	25	85	*150	25	85	*180	30	110
55	457.9	444.92	*125	25	85	*150	25	85	*180	30	110
56	466.0	453.01	*125	25	85	*150	25	85	*180	30	110
57	474.0	461.08	*125	25	85	*150	25	85	*180	30	110
58	482.1	469.16	*133	25	85	*150	25	85	*180	30	110
59	490.2	477.24	*133	25	85	*150	25	85	*180	30	110
60	498.3	485.23	*133	25	85	*150	25	85	*180	30	110
62	514.5	501.49	*133	25	85	*150	25	85	*180	30	110
64	530.7	517.65	*140	25	90	*160	25	90	*180	30	110
65	538.8	525.73	*140	25	90	*160	25	90	*180	30	110
66	546.8	533.80	*140	25	90	*160	25	90	*180	30	110
68	562.9	549.98	*140	25	90	*160	25	90	*180	30	110
70	579.2	566.15	*140	25	90	*160	25	90	*180	30	110
72	595.4	582.31	*140	25	90	*160	25	90	*180	30	110
75	619.7	606.56	*140	25	90	*160	25	90	*180	30	110
76	627.0	614.64	*140	25	90	*160	25	90	*180	30	110
78	643.3	630.81	*140	25	90	*160	25	90	*180	30	110
80	660.0	646.97	*140	25	90	*160	25	90	*180	30	110
85	699.9	687.39	*140	25	90	*160	25	90	*180	30	110
90	740.3	727.80	*140	25	90	*160	25	90	*180	30	110
95	781.1	768.22	*140	25	90	*160	25	90	*180	30	110
100	821.1	808.64	*140	25	90	*160	25	90	*180	30	110
110	902.0	889.48	*140	25	90	*160	25	90	*180	30	110
114	934.3	921.81	*140	25	90	*160	25	90	*180	30	110
120	982.8	970.32	*140	25	90	*160	25	90	*180	30	110
125	1023.3	1010.73	*140	25	90	*160	25	90	*180	30	110



## SPROCKETS & PLATE WHEELS

Piñones & discos

### 20A-1-2-3 PLATE WHEELS 1 1/4" x 3/4" For chain Acc.to DIN 8187 ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	32
Radius width C	3.5
Tooth width $B_1$	18.5
Tooth width $b_1$	18.2
Tooth width $B_2$	54.6
Tooth width $B_3$	91

#### CHAIN mm

Pitch	31.75
Internal width	19.56
Roller $\Phi$	19.05

Z	$d_o$	$d_p$	S		D		T	
			$D_1$	$D_2$	$D_1$	$D_2$	$D_1$	$D_2$
8	98.1	82.96	16	20	20			
9	108.0	92.84	16	20	20			
10	117.9	102.74	16	20	20			
11	127.9	112.68	16	20	20			
12	137.8	122.68	20	20	20			
13	147.8	132.65	20	20	20			
14	157.8	142.68	20	20	20			
15	167.9	152.72	20	20	20			
16	177.9	162.75	20	20	25			
17	187.9	172.78	20	25	25			
18	198.0	182.85	20	25	25			
19	208.1	192.91	20	25	25			
20	218.1	202.98	20	25	25			
21	228.2	213.04	25	25	25			
22	238.3	223.11	25	25	25			
23	248.3	233.17	25	25	25			
24	258.4	243.23	25	25	25			
25	268.5	253.33	25	25	25			
26	278.6	263.40	25	25	25			
27	288.6	273.49	25	25	25			
28	298.7	283.56	25	25	25			
29	308.8	293.65	25	25	25			
30	318.9	303.75	25	25	25			
31	329.0	313.85	25	25	25			
32	339.1	323.91	25	25	30			
33	349.2	334.01	25	25	30			
34	359.3	344.10	25	25	30			
35	369.4	354.20	25	25	30			
36	379.5	364.30	30	30	30			
37	389.5	374.39	30	30	30			
38	399.6	384.49	30	30	30			
39	409.7	394.59	30	30	30			
40	419.8	404.69	30	30	30			
41	429.9	414.77	30	30	30			
42	440.0	424.86	30	30	40			
43	450.1	434.96	30	30	40			
44	460.2	434.96	30	30	40			
45	470.3	445.06	30	30	40			
46	480.4	455.17	30	30	40			
47	490.5	465.25	30	30	40			
48	500.6	475.35	30	30	40			
49	510.7	485.45	30	30	40			
50	520.8	495.55	30	30	40			
51	530.9	505.65	30	30	40			
52	541.0	515.75	30	30	40			
53	551.1	525.85	30	30	40			
54	561.2	535.95	30	30	40			
55	571.3	546.05	30	30	40			
56	581.4	556.15	30	30	40			
57	591.5	566.25	30	30	40			
58	601.6	576.35	30	30	40			
59	611.7	586.45	30	30	40			
60	621.8	596.56	30	30	40			
62	642.0	606.66	30	30	40			
64	662.2	626.86	30	30	40			
65	672.3	646.07	30	30	40			
66	682.4	657.17	30	30	40			
68	702.6	667.27	30	30	40			
70	722.8	687.48	30	30	40			
72	743.1	707.68	30	30	40			
75	773.3	727.89	30	30	40			
76	783.3	758.20	30	30	40			
80	823.9	768.32	30	30	40			
85	874.4	808.71	30	30	40			
90	924.9	859.23	30	30	40			
95	975.5	960.28	30	30	40			
100	1026.0	1010.80	30	30	40			
114	1167.4	1152.26	30	40	40			

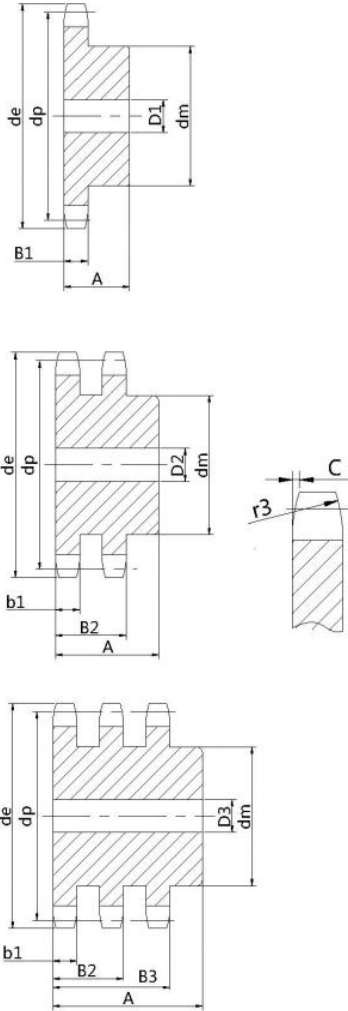


SPROCKET  
Piñones

**SPROCKETS & PLATE WHEELS**

Piñones & discos

**20B-1-2-3**  
**SPROCKETS 1 1/4" x 3/4"**  
 For chain Acc.to DIN 8187  
 ISO/R606



**SPROCKETS** mm

Tooth radius r <sub>3</sub>	32
Radius width C	3.5
Tooth width B <sub>1</sub>	18.5
Tooth width b <sub>1</sub>	18.2
Tooth width B <sub>2</sub>	54.6
Tooth width B <sub>3</sub>	91

**CHAIN** mm

Pitch	31.75
Internal width	19.56
RollerΦ	19.05

Material: C 45  
 \*Weld on hub

Z	d <sub>a</sub>	d <sub>b</sub>	SIMPLEX			DUPLEX			TRIPLEX		
			d <sub>a</sub>	D <sub>2</sub>	A	d <sub>a</sub>	D <sub>2</sub>	A	d <sub>a</sub>	D <sub>2</sub>	A
8	98.1	82.96	53	20	40	53	20	75	53	20	110
9	108.0	92.84	63	20	40	63	20	75	63	20	110
10	117.9	102.74	70	20	40	70	20	75	70	20	110
11	127.9	112.68	77	20	45	80	20	80	80	20	115
12	137.8	122.68	88	20	45	90	20	80	90	20	115
13	147.8	132.65	98	20	45	100	20	80	100	20	115
14	157.8	142.68	108	20	45	110	20	80	110	20	115
15	167.9	152.72	118	20	45	120	20	80	120	20	115
16	177.9	162.75	120	20	50	120	25	80	120	25	115
17	187.9	172.78	120	25	50	120	25	80	120	25	115
18	198.0	182.85	120	25	50	*120	25	80	120	25	115
19	208.1	192.91	120	25	50	*120	25	80	*120	25	115
20	218.1	202.98	120	25	50	*120	25	80	*120	25	115
21	228.2	213.04	140	25	55	*140	25	80	*120	25	115
22	238.3	223.11	140	25	55	*140	25	80	*140	25	115
23	248.3	233.17	140	25	55	*140	25	80	*140	25	115
24	258.4	243.23	140	25	55	*140	25	80	*140	25	115
25	268.5	253.33	140	25	55	*140	25	80	*140	25	115
26	278.6	263.40	*150	25	55	*150	25	80	*150	25	115
27	288.6	273.49	*150	25	55	*150	25	80	*150	25	115
28	298.7	283.56	*150	25	55	*150	25	80	*150	25	115
29	308.8	293.65	*150	25	55	*150	25	80	*150	25	115
30	318.9	303.75	*150	25	55	*150	25	80	*150	25	115
31	329.0	313.85	*150	25	55	*150	25	80	*150	30	115
32	339.1	323.91	*150	25	55	*150	25	80	*150	30	115
33	349.2	334.01	*150	25	55	*150	25	80	*150	30	115
34	359.3	344.10	*150	25	55	*150	25	80	*150	30	115
35	369.4	354.20	*150	25	55	*150	25	80	*150	30	115
36	379.5	364.30	*150	25	55	*150	30	80	*150	30	115
37	389.5	374.39	*150	25	55	*150	30	80	*150	30	115
38	399.6	384.49	*150	25	55	*150	30	80	*150	30	115
39	409.7	394.59	*150	25	55	*150	30	80	*150	30	115
40	419.8	404.69	*150	25	55	*150	30	80	*150	30	115
41	429.9	414.77	*150	25	70	*160	30	80	*160	30	110
42	440.0	424.86	*150	25	70	*160	30	90	*160	30	110
43	450.1	434.96	*150	25	70	*160	30	90	*160	30	110
44	460.2	434.96	*150	25	70	*160	30	90	*160	30	110
45	470.3	445.06	*150	25	70	*160	30	90	*160	30	110
46	480.4	455.17	*150	25	70	*160	30	90	*160	30	110
47	490.5	465.25	*150	25	70	*160	30	90	*160	30	110
48	500.6	475.35	*150	25	70	*160	30	90	*160	30	110
49	510.7	485.45	*150	25	70	*160	30	90	*160	30	110
50	520.8	495.55	*150	25	70	*160	30	90	*160	30	110
51	530.9	505.65	*150	25	70	*160	30	100	*180	30	123
52	541.0	515.75	*150	25	70	*160	30	100	*180	30	123
53	551.1	525.85	*150	25	70	*160	30	100	*180	30	123
54	561.2	535.95	*150	25	70	*160	30	100	*180	30	123
55	571.3	546.05	*150	25	70	*160	30	100	*180	30	123
56	581.4	556.15	*150	25	80	*160	30	100	*180	30	123
57	591.5	566.25	*150	25	80	*160	30	100	*180	30	123
58	601.6	576.35	*150	25	80	*160	30	100	*180	30	123
59	611.7	586.45	*150	25	80	*160	30	100	*180	30	123
60	621.8	596.56	*150	25	80	*160	30	100	*180	30	123
62	642.0	606.66	*150	25	80	*160	30	100	*180	30	123
64	662.2	626.86	*150	25	80	*160	30	100	*180	30	123
65	672.3	646.07	*150	25	80	*160	30	100	*180	30	123
66	682.4	657.17	*150	25	80	*180	30	100	*200	30	123
68	702.6	667.27	*150	25	80	*180	30	100	*200	30	123
70	722.8	687.48	*150	25	80	*180	30	100	*200	30	123
72	743.1	707.68	*150	25	80	*180	30	100	*200	30	123
75	773.3	727.89	*150	25	80	*180	30	100	*200	30	123
76	783.3	758.20	*150	25	80	*180	30	100	*200	30	123
80	823.9	768.32	*150	25	80	*180	30	100	*200	30	123
85	874.4	808.71	*150	25	90	*180	30	100	*200	30	123
90	924.9	859.23	*150	25	90	*180	30	100	*200	30	123
95	975.5	960.28	*150	25	90	*180	30	100	*200	30	123
100	1026.0	1010.80	*150	25	90	*180	30	100	*200	30	123
114	1167.4	1152.26	*150	25	90	*180	30	100	*200	30	126

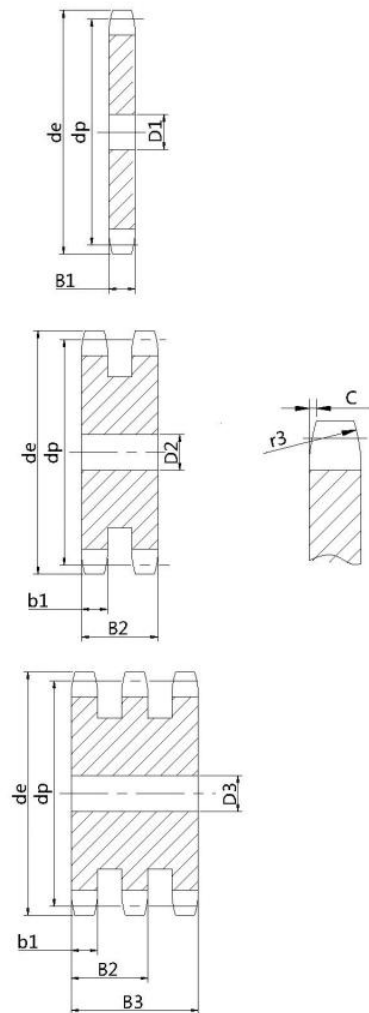
## SPROCKETS & PLATE WHEELS

Piñones & discos

### 24A-1-2-3

#### PLATE WHEELS 1 1/2" x 1"

For chain Acc.to DIN 8187  
ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	38
Radius width C	4
Tooth width $B_1$	24.1
Tooth width $b_1$	23.6
Tooth width $B_2$	72
Tooth width $B_3$	120.3

#### CHAIN mm

Pitch	38.1
Internal width	25.4
Roller $\varnothing$	25.4

Z	$d_e$	$d_p$	S	D	T
			$D_1$	$D_2$	$D_3$
8	115.0	99.55	20	25	25
9	126.4	111.40	20	25	25
10	138.0	123.29	20	25	25
11	150.0	135.21	20	25	25
12	162.0	147.22	20	25	25
13	174.2	159.18	20	25	25
14	186.2	171.22	20	25	25
15	198.2	183.26	20	25	25
16	210.3	195.30	25	25	25
17	222.3	207.34	25	25	25
18	234.3	219.42	25	25	25
19	246.5	231.49	25	25	25
20	258.6	243.57	25	25	25
21	270.3	255.65	25	25	30
22	282.7	267.73	25	25	30
23	294.8	279.80	25	25	30
24	306.8	291.88	25	25	30
25	319	304.00	25	25	30
26	331.0	316.08	30	30	30
27	343.2	328.19	30	30	30
28	355.2	340.27	30	30	30
29	367.3	352.38	30	30	30
30	379.5	364.50	30	30	40
31	391.6	376.62	30	30	40
32	403.7	388.69	30	30	40
33	415.8	400.81	30	30	40
34	427.8	412.93	30	30	40
35	440.0	425.04	30	30	40
36	452.0	437.16	30	30	40
37	464.2	449.27	30	30	40
38	476.2	461.39	30	30	40
39	488.5	473.50	30	30	40
40	500.6	485.62	30	30	40
41	512.6	497.72	40	30	40
42	524.7	509.83	40	30	40
43	536.8	521.95	40	30	40
44	549.0	534.07	40	30	40
45	561.2	546.19	40	30	40
46	573.3	558.30	40	30	40
47	585.4	570.42	40	30	40
48	597.4	582.54	40	30	40
49	609.5	594.66	40	30	40
50	621.7	606.78	40	30	40
51	633.8	618.90	40	30	40
52	646.0	631.01	40	30	40
53	658.0	643.13	40	30	40
54	670.2	655.28	40	30	40
55	682.3	667.40	40	30	40
56	694.4	679.51	40	30	40
57	706.5	691.63	40	30	40
58	718.6	703.74	40	30	40
59	730.7	715.86	40	30	40
60	742.8	727.97	40	30	40
62	767.2	752.24	40	40	40
64	791.3	776.48	40	40	40
65	803.4	788.59	40	40	40
66	815.6	800.71	40	40	40
68	839.8	824.98	40	40	40
70	864.2	849.21	40	40	40
72	888.4	873.48	40	40	40
75	924.8	909.83	40	40	40
76	936.9	921.98	40	40	40
80	985.4	970.44	40	40	40
85	1046.0	1031.10	40	40	40
90	1167.3	1152.33	40	40	40

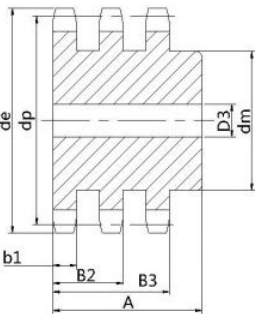
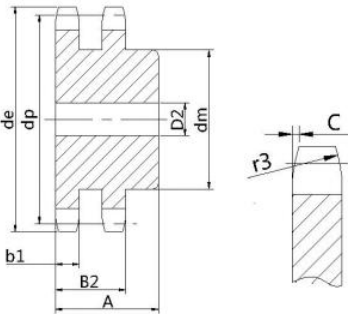
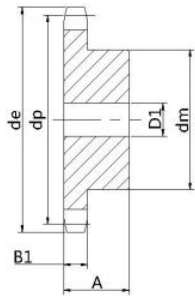


SPROCKET  
Piñones

**SPROCKETS & PLATE WHEELS**

Piñones & discos

**24B-1-2-3**  
**SPROCKETS 1 1/2" x 1"**  
 For chain Acc.to DIN 8187  
 ISO/R606



**SPROCKETS** mm

Tooth radius r <sub>3</sub>	38
Radius width C	4
Tooth width B <sub>1</sub>	24.1
Tooth width b <sub>1</sub>	23.6
Tooth width B <sub>2</sub>	72
Tooth width B <sub>3</sub>	120.3

**CHAIN** mm

Pitch	38.1
Internal width	25.4
RollerΦ	25.4

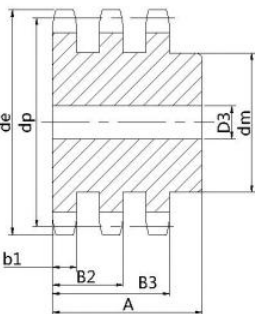
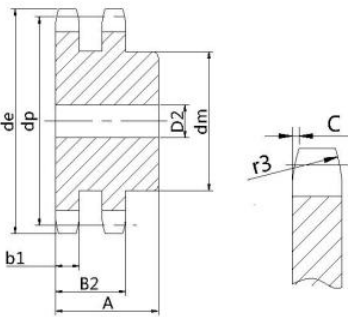
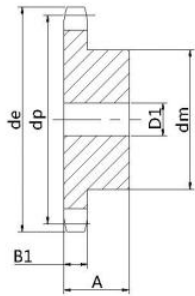
Material: C 45  
 \*Weld on hub

Z	d <sub>n</sub>	d <sub>o</sub>	SIMPLEX			DUPLEX			TRIPLEX		
			d <sub>n</sub>	D <sub>1</sub>	A	d <sub>n</sub>	D <sub>2</sub>	A	d <sub>n</sub>	D <sub>3</sub>	A
8	115.0	99.55	58	20	45	58	25	95	58	25	140
9	126.4	111.40	70	20	45	70	25	95	70	25	140
10	138.0	123.29	80	20	45	80	25	95	80	25	140
11	150.0	135.21	90	25	50	90	25	100	90	25	150
12	162.0	147.22	102	25	50	102	25	100	102	25	150
13	174.2	159.18	114	25	50	114	25	100	114	25	150
14	186.2	171.22	128	25	50	128	25	100	128	25	150
15	198.2	183.26	132	25	50	132	25	100	132	25	150
16	210.3	195.30	*136	25	55	136	25	100	136	25	150
17	222.3	207.34	*136	25	55	140	25	100	140	25	150
18	234.3	219.42	*136	25	55	*150	25	100	*150	25	150
19	246.5	231.49	*136	25	55	*160	25	100	*160	25	150
20	258.6	243.57	*136	25	55	*160	25	100	*160	25	150
21	270.3	255.65	*150	25	60	*160	25	100	*160	30	150
22	282.7	267.73	*150	25	60	*160	25	100	*160	30	150
23	294.8	279.80	*150	25	60	*160	25	100	*160	30	150
24	306.8	291.88	*150	25	60	*160	25	100	*160	30	150
25	319	304.00	*150	25	60	*160	25	100	*160	30	150
26	331.0	316.08	*150	30	60	*160	25	100	*160	30	150
27	343.2	328.19	*150	30	60	*160	30	100	*160	30	150
28	355.2	340.27	*150	30	60	*160	30	100	*160	30	150
29	367.3	352.38	*150	30	60	*160	30	100	*160	30	150
30	379.5	364.50	*150	30	60	*160	30	100	*160	40	150
31	391.6	376.62	*150	30	60	*160	30	100	*160	40	150
32	403.7	388.69	*150	30	60	*160	30	100	*160	40	150
33	415.8	400.81	*150	30	60	*160	30	100	*160	40	150
34	427.8	412.93	*150	30	60	*160	30	100	*160	40	150
35	440.0	425.04	*150	30	60	*160	30	100	*160	40	150
36	452.0	437.16	*150	30	60	*160	30	100	*160	40	150
37	464.2	449.27	*150	30	60	*160	30	100	*160	40	150
38	476.2	461.39	*150	30	60	*160	30	100	*160	40	150
39	488.5	473.50	*150	30	60	*160	30	100	*160	40	150
40	500.6	485.62	*150	30	60	*160	30	100	*200	40	150
41	512.6	497.72	*150	30	90	*160	30	100	*200	40	150
42	524.7	509.83	*160	30	90	*180	30	100	*200	40	150
43	536.8	521.95	*160	30	90	*180	30	100	*200	40	150
44	549.0	534.07	*160	30	90	*180	30	100	*200	40	150
45	561.2	546.19	*160	30	90	*180	30	100	*200	40	150
46	573.3	558.30	*160	30	90	*180	30	100	*200	40	150
47	585.4	570.42	*160	30	90	*180	30	100	*200	40	150
48	597.4	582.54	*160	30	90	*180	30	100	*200	40	150
49	609.5	594.66	*160	30	90	*180	30	100	*200	40	150
50	621.7	606.78	*160	30	90	*180	30	100	*200	40	150
51	633.8	618.90	*160	30	100	*180	30	100	*200	40	150
52	646.0	631.01	*160	30	100	*180	30	110	*200	40	150
53	658.0	643.13	*160	30	100	*180	30	110	*200	40	150
54	670.2	655.28	*160	30	100	*180	30	110	*200	40	150
55	682.3	667.40	*160	30	100	*180	30	110	*200	40	150
56	694.4	679.51	*160	30	100	*180	30	110	*200	40	150
57	706.5	691.63	*160	30	100	*180	30	110	*200	40	150
58	718.6	703.74	*160	30	100	*180	30	110	*200	40	150
59	730.7	715.86	*160	30	100	*180	30	110	*200	40	150
60	742.8	727.97	*160	30	100	*180	30	110	*200	40	150
62	767.2	752.24	*160	30	100	*180	30	110	*200	40	150
64	791.3	776.48	*160	30	100	*200	30	110	*220	40	150
65	803.4	788.59	*160	30	100	*200	30	110	*220	40	150
66	815.6	800.71	*160	30	100	*200	30	120	*220	40	150
68	839.8	824.98	*160	30	100	*200	30	120	*220	40	150
70	864.2	849.21	*160	30	100	*200	30	120	*220	40	150
72	888.4	873.48	*160	30	100	*200	30	120	*220	40	150
75	924.8	909.83	*160	30	100	*200	30	120	*220	40	150
76	936.9	921.98	*160	30	100	*200	30	120	*220	40	150
80	985.4	970.44	*160	30	100	*200	30	120	*220	40	150
85	1046.0	1031.10	*160	30	100	*200	30	120	*220	40	150
90	1167.3	1152.33	*160	30	100	*200	30	120	*220	40	150

**SPROCKETS & PLATE WHEELS**

Piñones & discos

**24B-1-2-3**  
**SPROCKETS 1 3/4" x 1 1/4"**  
 For chain Acc.to DIN 8187  
 ISO/R606



**SPROCKETS** mm

Tooth radius r <sub>3</sub>	44
Radius width C	5
Tooth width B <sub>1</sub>	29.4
Tooth width b <sub>1</sub>	28.8
Tooth width B <sub>2</sub>	88.4
Tooth width B <sub>3</sub>	148

**CHAIN** mm

Pitch	44.45
Internal width	30.99
RollerΦ	27.94

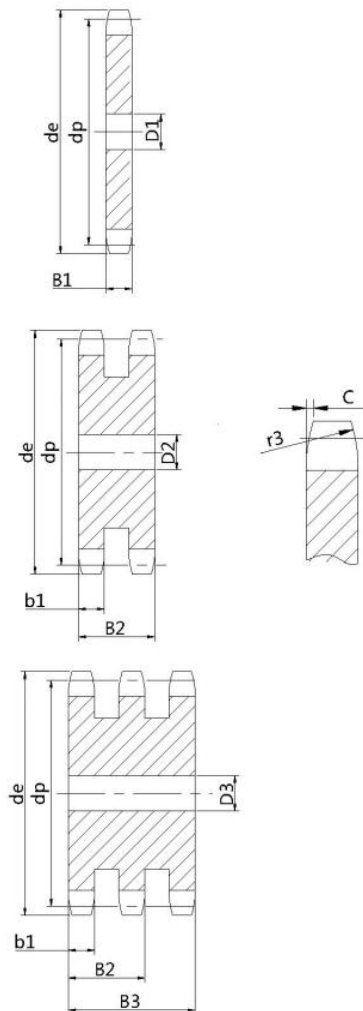
Material: C 45  
 \*Weld on hub

Z	d <sub>a</sub>	d <sub>b</sub>	SIMPLEX			DUPLEX			TRIPLEX		
			d <sub>a</sub>	D <sub>1</sub>	A	d <sub>a</sub>	D <sub>2</sub>	A	d <sub>a</sub>	D <sub>3</sub>	A
8	132.0	116.15	74	25	70	74	25	120	74	30	180
9	148.4	129.96	88	25	70	88	25	120	88	30	180
10	162.3	143.85	100	25	70	100	25	120	100	30	180
11	176.3	157.77	112	25	70	112	25	120	112	30	180
12	189.5	171.74	125	25	70	125	25	120	125	30	180
13	204.2	185.75	*125	25	70	*125	25	120	*125	30	180
14	218.2	199.76	*125	25	70	*125	25	120	*125	30	180
15	232.3	213.79	*125	25	70	*145	25	120	*145	30	180
16	246.3	227.84	*160	30	75	*160	30	120	*160	30	180
17	260.3	241.91	*160	30	75	*160	30	120	*160	30	180
18	274.0	255.98	*160	30	75	*160	30	120	*160	30	180
19	289.0	270.06	*160	30	75	*180	30	120	*180	30	180
20	303.0	284.15	*160	30	75	*180	30	120	*180	30	180
21	317.0	298.24	*160	30	75	*180	30	120	*180	30	180
22	331.0	312.34	*160	30	75	*180	30	120	*180	30	180
23	345.0	326.44	*160	30	75	*180	30	120	*180	30	180
24	359.0	340.55	*160	30	75	*180	30	120	*180	30	180
25	373.0	354.66	*160	30	75	*180	30	120	*180	40	180
26	387.0	368.77	*160	30	75	*180	30	120	*180	40	180
27	401.4	382.88	*160	30	75	*180	30	120	*180	40	180
28	416.0	397.00	*160	30	75	*180	30	120	*180	40	180
29	430.0	411.12	*160	30	75	*180	30	120	*180	40	180
30	444.0	425.24	*160	30	75	*180	30	120	*180	40	180
31	458.0	439.37	*180	30	75	*180	30	120	*180	40	180
32	472.0	453.49	*180	30	75	*180	30	120	*180	40	180
33	486.0	467.62	*180	30	75	*180	30	120	*180	40	180
34	500.0	481.75	*180	30	75	*180	30	120	*180	40	180
35	514.0	495.88	*180	30	75	*200	30	120	*200	40	180
36	529.0	510.01	*180	30	75	*200	30	120	*180	40	180
37	543.0	524.14	*180	30	75	*200	30	120	*180	40	180
38	557.0	538.27	*180	30	75	*200	30	120	*200	40	180
39	571.0	552.40	*180	30	75	*200	30	120	*200	40	180
40	585.0	566.54	*180	30	75	*200	30	120	*200	40	180
45	656.0	637.22	*180	30	90	*200	30	120	*200	40	180
50	726.0	707.91	*180	30	90	*200	30	120	*200	40	180
57	825.0	806.89	*180	30	100	*200	30	120	*200	40	180
60	869.0	849.32	*180	30	100	*200	30	130	*200	40	190
76	1095.0	1075.60	*180	30	100	*200	30	130	*200	40	190

## SPROCKETS & PLATE WHEELS

Piñones & discos

### 28A-1-2-3 PLATE WHEELS 1 3/4" x 1 1/4" For chain Acc.to DIN 8187 ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	44
Radius width C	5
Tooth width $B_1$	29.4
Tooth width $b_1$	28.8
Tooth width $B_2$	88.4
Tooth width $B_3$	148

#### CHAIN mm

Pitch	44.45
Internal width	30.99
Roller $\Phi$	27.94

Z	$d_e$	$d_p$	S	D	T
			$D_1$	$D_2$	$D_3$
8	132.0	116.15	20	25	25
9	148.4	129.96	20	25	25
10	162.3	143.85	20	25	25
11	176.3	157.77	25	25	30
12	189.5	171.74	25	25	30
13	204.2	185.74	25	25	30
14	218.2	199.76	25	25	30
15	232.3	213.79	25	25	30
16	246.3	227.84	30	30	30
17	260.0	241.91	30	30	30
18	274.0	255.98	30	30	30
19	289.0	270.06	30	30	30
20	303.0	284.15	30	30	30
21	317.0	298.24	30	30	30
22	331.0	312.34	30	30	30
23	345.0	326.44	30	30	30
24	359.0	340.55	30	30	30
25	373.0	354.66	30	30	40
26	387.0	368.77	30	30	40
27	401.4	382.88	30	30	40
28	416.0	397.00	30	30	40
29	430.0	411.12	30	30	40
30	444.0	425.24	30	30	40
31	458.0	439.37	30	30	40
32	472.0	453.49	30	30	40
33	486.0	467.62	30	30	40
34	500.0	481.75	30	30	40
35	514.0	495.88	30	30	40
36	529.0	510.01	30	30	40
37	543.0	524.14	30	30	40
38	557.0	538.27	30	30	40
39	571.0	552.40	30	30	40
40	585.0	566.54	30	30	40
45	656.0	637.22	30	30	40
50	726.0	707.91	30	30	40
57	825.0	806.89	40	40	40
60	869.0	849.32	40	40	40
76	1095.0	1075.60	40	40	40



SPROCKET  
Piñones

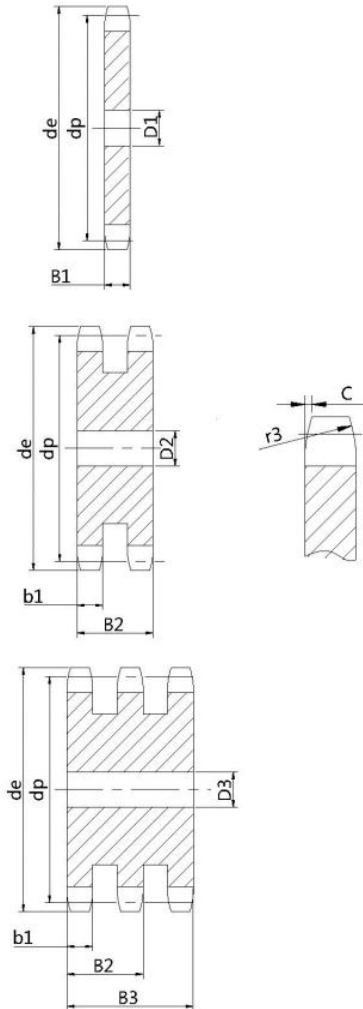
## SPROCKETS & PLATE WHEELS

Piñones & discos

### 32A-1-2-3

#### PLATE WHEELS 2" x 1 1/4"

For chain Acc.to DIN 8187  
ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	51
Radius width C	5
Tooth width $B_1$	29.4
Tooth width $b_1$	28.8
Tooth width $B_2$	87.4
Tooth width $B_3$	146

#### CHAIN mm

Pitch	50.8
Internal width	30.99
Roller $\Phi$	29.21

Z	$d_e$	$d_p$	S	D	T
			$D_1$	$D_2$	$D_3$
8	153.2	132.69	25	25	25
9	169.0	148.54	25	25	25
10	185.0	164.44	25	25	25
11	200.8	180.34	30	30	30
12	216.8	196.29	30	30	30
13	232.8	212.29	30	30	30
14	248.8	228.29	30	30	30
15	264.8	244.30	30	30	30
16	280.9	260.40	30	30	30
17	296.9	276.40	30	30	30
18	313.0	292.55	30	30	30
19	329.1	308.66	30	30	30
20	345.2	324.71	30	30	30
21	361.3	340.82	30	30	40
22	377.5	356.98	30	30	40
23	393.6	373.08	30	30	40
24	409.7	389.18	30	30	40
25	425.8	405.33	30	30	40
26	441.9	421.44	30	30	40
27	458.1	437.59	30	30	40
28	474.2	453.69	30	30	40
29	490.4	469.90	30	30	40
30	506.5	486.00	30	30	40
32	538.8	518.26	30	30	40
35	589.5	566.72	30	30	40
38	635.5	615.14	30	30	40
40	670.3	647.49	40	40	40
45	751.0	728.25	40	40	40
50	831.8	809.04	40	40	40
57	945.0	922.16	40	40	40
60	993.4	970.65	40	40	40
76	1252.0	1229.30	40	40	40

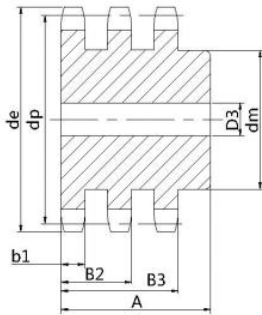
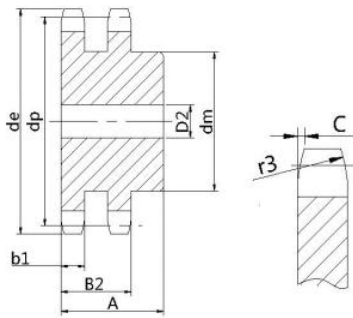
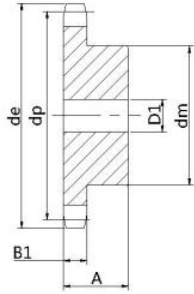


SPROCKET  
Piñones

**SPROCKETS & PLATE WHEELS**

Piñones & discos

**32B-1-2-3**  
**SPROCKETS 2" x 1 1/4"**  
 For chain Acc.to DIN 8187  
 ISO/R606



**SPROCKETS mm**

Tooth radius r <sub>3</sub>	51
Radius width C	5
Tooth width B <sub>1</sub>	29.4
Tooth width b <sub>1</sub>	28.8
Tooth width B <sub>2</sub>	87.4
Tooth width B <sub>3</sub>	146

**CHAIN mm**

Pitch	50.8
Internal width	30.99
RollerΦ	29.21

Material:C 45  
 \*Weld on hub

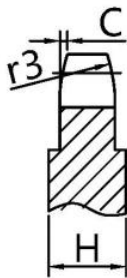
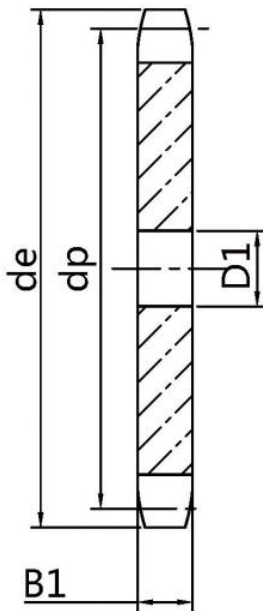
Z	d <sub>e</sub>	d <sub>p</sub>	SIMPLEX			DUPLEX			TRIPLEX		
			d <sub>r</sub>	D <sub>1</sub>	A	d <sub>m</sub>	D <sub>2</sub>	A	d <sub>m</sub>	D <sub>3</sub>	A
8	153.2	132.69	82	25	80	82	30	120	82	30	180
9	169.0	148.54	88	25	80	88	30	120	88	30	180
10	185.0	164.54	104	25	80	104	30	120	104	30	180
11	200.8	180.34	120	30	80	120	30	120	120	30	180
12	216.8	196.29	133	30	80	*133	30	120	*133	30	180
13	232.8	212.29	*145	30	80	*145	30	120	*145	30	180
14	248.8	228.29	*145	30	80	*145	30	120	*145	30	180
15	264.8	244.30	*145	30	80	*160	30	120	*160	30	180
16	280.9	260.40	*160	30	90	*160	30	120	*160	30	180
17	296.9	276.40	*160	30	90	*180	30	120	*180	30	180
18	313.0	292.55	*160	30	90	*180	30	120	*180	30	180
19	329.1	308.66	*160	30	90	*200	30	120	*200	30	180
20	345.2	324.71	*180	30	90	*200	30	120	*200	30	180
21	361.3	340.82	*180	30	90	*200	30	120	*200	40	180
22	377.5	356.98	*180	30	90	*200	30	120	*200	40	180
23	393.6	373.08	*180	30	90	*200	30	120	*200	40	180
24	409.7	389.18	*180	30	90	*200	30	120	*200	40	180
25	425.8	405.33	*180	30	90	*200	30	120	*200	40	180
26	441.9	421.44	*180	30	90	*200	30	120	*200	40	180
27	458.1	437.59	*180	30	90	*200	30	120	*200	40	180
28	474.2	453.69	*180	30	90	*200	30	120	*200	40	180
29	490.4	469.90	*180	30	90	*200	30	120	*200	40	180
30	506.5	486.00	*180	30	90	*200	30	120	*200	40	180
32	538.8	518.26	*180	30	90	*200	30	120	*200	40	180
35	589.5	566.72	*180	30	90	*200	30	120	*200	40	180
38	635.5	615.14	*180	30	90	*200	30	120	*200	40	180
40	670.3	647.49	*180	30	90	*200	30	120	*200	40	180
45	751.0	728.25	*180	30	100	*200	30	120	*200	40	180
50	831.8	809.04	*180	30	100	*200	30	120	*200	40	180
57	945.0	922.16	*180	30	100	*220	30	120	*200	40	180
60	993.4	970.65	*200	30	110	*220	30	130	*220	40	180
76	1252.0	1229.30	*200	30	110	*220	30	130	*238	40	180



## SPROCKETS & PLATE WHEELS

Piñones & discos

### 081A-1 PLATE WHEELS 1/2" x 1/8" For chain Acc.to DIN 8187 ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	13
Radius width C	1.0
Tooth width $B_1$	3

#### CHAIN mm

Pitch	12.7
Internal width	3.3
Roller $\Phi$	7.75

H=4mm, From Z=30 the width of the plate is increased  
H=6mm, From Z=90 the width of the plate is increased

Z	d.	d.	S
			D.
8	37.2	33.18	8
9	41.5	37.13	8
10	46.2	41.10	8
11	49.6	45.07	8
12	53.9	49.07	8
13	58.4	53.06	8
14	62.8	57.07	8
15	66.8	61.09	8
16	70.9	65.10	8
17	74.9	69.11	8
18	78.9	73.14	8
19	82.9	77.16	8
20	86.9	81.19	8
21	91.0	85.22	8
22	95.0	89.24	10
23	99.0	93.27	10
24	103.0	97.29	10
25	107.1	101.33	10
26	111.2	105.36	12
27	115.4	109.40	12
28	119.4	113.42	12
29	123.4	117.46	12
30	127.5	121.50	12
31	131.5	125.54	12
32	135.5	129.56	12
33	139.6	133.60	12
34	143.6	137.64	12
35	147.6	141.68	12
36	151.7	145.72	16
37	155.7	149.76	16
38	159.8	153.80	16
39	163.8	157.83	16
40	167.8	161.87	16
41	171.4	165.91	16
42	175.4	169.95	16
43	179.5	173.99	16
44	183.5	178.03	16
45	187.5	182.07	16
46	191.6	186.10	20
47	195.6	190.14	20
48	199.7	194.18	20
49	203.7	198.22	20
50	207.8	202.26	20
51	211.8	206.30	20
52	215.9	210.34	20
53	219.9	214.37	20
54	224.0	218.43	20
55	228.0	222.46	20
56	232.1	226.50	20
57	236.1	230.58	20
58	240.2	234.58	20
59	244.2	238.62	20
60	248.2	242.66	20
62	256.7	250.75	20
64	264.8	258.82	20
65	268.8	262.86	20
66	272.9	266.90	25
68	280.9	274.99	25
70	289.0	283.07	25
72	297.1	291.16	25
76	313.3	307.33	25
78	321.4	315.40	25
80	329.4	323.48	25
85	349.7	343.70	25
90	369.9	363.90	25
95	390.1	384.10	25
100	410.3	404.31	25
110	450.7	444.74	25
114	466.9	460.90	25
120	491.2	485.16	25
125	511.4	505.37	25

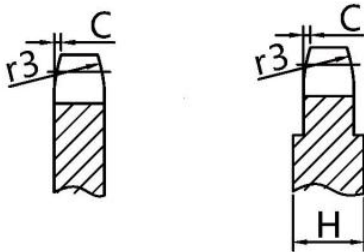
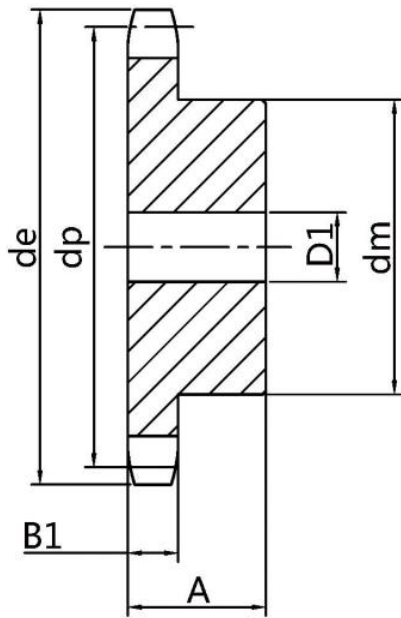


SPROCKET  
Piñones

## SPROCKETS & PLATE WHEELS

Piñones & discos

### 081B-1 SPROCKETS 1/2" x 1/8" For chain Acc.to DIN 8187 ISO/R606



#### SPROCKETS mm

Tooth radius $r_3$	13
Radius width C	1.0
Tooth width B1	3

#### CHAIN mm

Pitch	12.7
Internal width	3.3
Roller $\Phi$	7.75

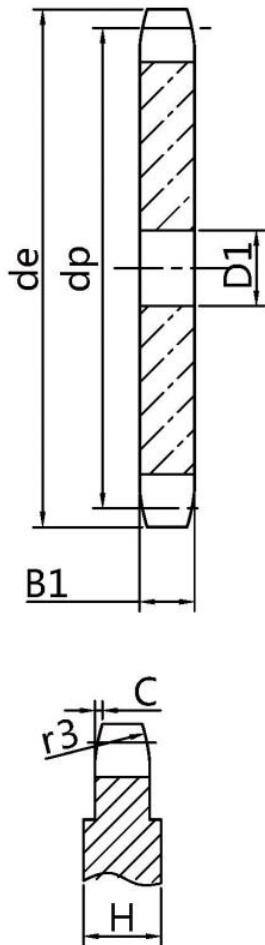
H=4mm, From Z=31 the width of the plate is increased

Z	d <sub>e</sub>	d <sub>p</sub>	SIMPLEX		
			d <sub>e</sub>	D <sub>1</sub>	A
8	37.2	33.18	21	8	14
9	41.5	37.13	25	8	14
10	46.2	41.10	28	8	14
11	49.6	45.07	31	8	16
12	53.9	49.07	35	8	16
13	58.4	53.06	39	8	16
14	62.8	57.07	43	8	16
15	66.8	61.09	47	8	16
16	70.9	65.10	50	10	18
17	74.9	69.11	50	10	18
18	78.9	73.14	50	10	18
19	82.9	77.16	50	10	18
20	86.9	81.19	50	10	18
21	91.0	85.22	60	12	20
22	95.0	89.24	60	12	20
23	99.0	93.27	60	12	20
24	103.0	97.29	60	12	20
25	107.1	101.33	60	12	20
26	111.2	105.36	70	16	20
27	115.4	109.40	70	16	20
28	119.4	113.42	70	16	20
29	123.4	117.46	70	16	20
30	127.5	121.50	70	16	20
31	131.5	125.54	70	16	20
32	135.5	129.56	70	16	20
33	139.6	133.60	70	16	20
34	143.6	137.64	70	16	20
35	147.6	141.68	70	16	20
36	151.7	145.72	70	16	25
37	155.7	149.76	70	16	25
38	159.8	153.80	70	16	25
39	163.8	157.83	70	16	25
40	167.8	161.87	70	16	25
41	171.4	165.91	78	16	32
42	175.4	169.95	78	16	32
43	179.5	173.99	78	16	32
44	183.5	178.03	78	16	32
45	187.5	182.07	78	16	32
46	191.6	186.10	78	16	32
47	195.6	190.14	78	16	32
48	199.7	194.18	78	16	32
49	203.7	198.22	*78	16	32
50	207.8	202.26	*78	16	32
51	211.8	206.30	*78	16	32
52	215.9	210.34	*78	16	32
53	219.9	214.37	*78	16	32
54	224.0	218.43	*78	16	32
55	228.0	222.46	*78	16	32
56	232.1	226.50	*78	16	32
57	236.1	230.58	*78	16	32
58	240.2	234.58	*78	16	32
59	244.2	238.62	*78	16	32
60	248.2	242.66	*78	16	32
62	256.7	250.75	*78	16	32
64	264.8	258.82	*78	16	32
65	268.8	262.86	*78	16	32
66	272.9	266.90	*78	16	32
68	280.9	274.99	*78	16	32
70	289.0	283.07	*78	16	32
72	297.1	291.16	*78	16	32
76	313.3	307.33	*78	16	32
78	321.4	315.40	*78	16	32
80	329.4	323.48	*78	16	32
85	349.7	343.70	*80	16	32
90	369.9	363.90	*80	16	32
95	390.1	384.10	*80	16	32
100	410.3	404.31	*80	16	32
110	450.7	444.74	*80	16	32
114	466.9	460.90	*80	16	32
120	491.2	485.16	*80	16	32
125	511.4	505.37	*80	16	32

## SPROCKETS & PLATE WHEELS

Piñones & discos

### 083A-1/084A-1 PLATE WHEELS 1/2" x 3/16" For chain Acc.to DIN 8187 ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	13
Radius width C	1.3
Tooth width $B_1$	4.5

#### CHAIN mm

Pitch	12.7
Internal width	4.88
Roller $\Phi$	7.75

H=6mm, From Z=90 the width of the plate is increased

Z	d <sub>1</sub>	d <sub>2</sub>	S D <sub>2</sub>
8	38.5	33.18	8
9	41.5	37.13	8
10	46.2	41.10	8
11	49.6	45.07	8
12	53.9	49.07	8
13	58.4	53.06	8
14	62.8	57.07	8
15	66.8	65.10	8
16	70.9	61.09	8
17	74.9	69.11	8
18	78.9	73.14	8
19	82.9	77.16	8
20	86.9	81.19	8
21	91.0	85.22	8
22	95.0	89.24	10
23	99.0	93.27	10
24	103.0	97.29	10
25	107.1	101.33	10
26	111.2	105.36	12
27	115.4	109.40	12
28	119.4	113.42	12
29	123.4	117.46	12
30	127.4	121.50	12
31	131.5	125.54	12
32	135.5	129.56	12
33	139.6	133.60	12
34	143.6	137.64	12
35	147.6	141.68	12
36	151.7	145.72	16
37	155.7	149.76	16
38	159.8	153.80	16
39	163.8	157.83	16
40	167.8	161.87	16
41	171.4	165.91	16
42	175.4	169.95	16
43	179.5	173.99	16
44	183.5	178.03	16
45	187.5	182.07	16
46	191.6	186.10	20
47	195.6	190.14	20
48	199.7	194.18	20
49	203.7	198.22	20
50	207.8	202.26	20
51	211.8	206.30	20
52	215.9	210.34	20
53	219.9	214.37	20
54	224.0	218.43	20
55	228.0	222.46	20
56	232.1	226.50	20
57	236.1	230.54	20
58	240.2	234.58	20
59	244.2	238.62	20
60	248.2	242.66	20
62	256.7	250.75	20
64	264.8	258.82	20
65	268.8	262.86	20
66	272.9	266.90	25
68	280.9	274.99	25
70	289.0	283.07	25
72	297.1	291.16	25
76	313.3	307.33	25
78	321.4	315.40	25
80	329.4	323.48	25
85	349.7	343.70	25
90	369.9	363.90	25
95	390.1	384.10	25
100	410.3	404.31	25
110	450.7	444.74	25
114	466.9	460.90	25
120	491.2	485.16	25
125	511.4	505.37	25

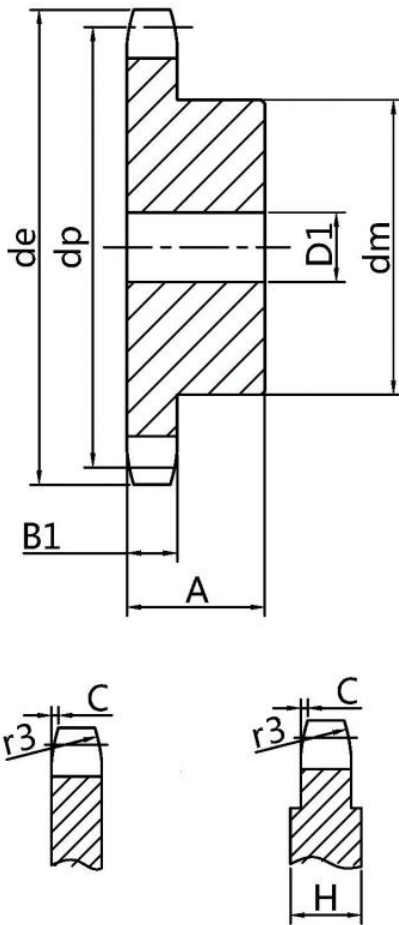


SPROCKET  
Piñones

**SPROCKETS & PLATE WHEELS**

Piñones & discos

**083B-1/084B-1**  
**SPROCKETS 1/2" x 3/16"**  
 For chain Acc.to DIN 8187  
 ISO/R606



**SPROCKETS** mm

Tooth radius r <sub>3</sub>	13
Radius width C	1.3
Tooth width B <sub>1</sub>	4.5

**CHAIN** mm

Pitch	12.7
Internal width	4.88
RollerΦ	7.75

Material:C 45

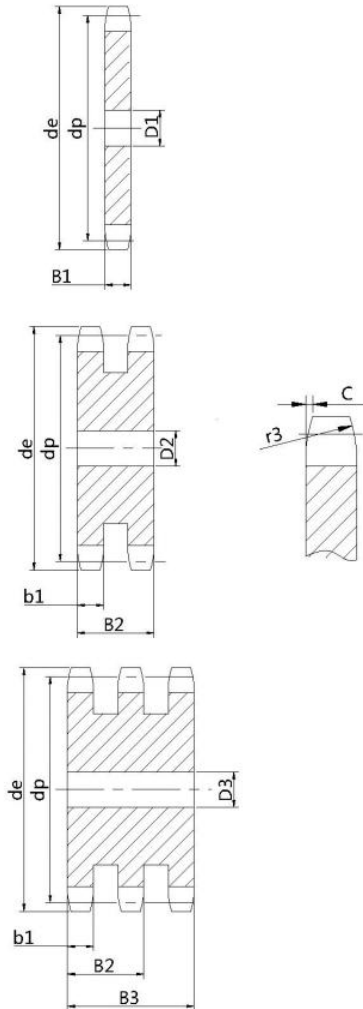
\*Weld on hub

Z	d <sub>e</sub>	d <sub>p</sub>	SIMPLEX		
			d <sub>e</sub>	D <sub>1</sub>	A
8	38.5	33.18	21	8	14
9	41.5	37.13	25	8	14
10	46.2	41.10	28	8	14
11	49.6	45.07	31	8	16
12	53.9	49.07	35	8	16
13	58.4	53.06	43	8	16
14	62.8	57.07	47	8	16
15	66.8	65.10	50	8	16
16	70.9	61.09	50	10	18
17	74.9	69.11	50	10	18
18	78.9	73.14	50	10	18
19	82.9	77.16	50	10	18
20	86.9	81.19	50	10	18
21	91.0	85.22	60	12	20
22	95.0	89.24	60	12	20
23	99.0	93.27	60	12	20
24	103.0	97.29	60	12	20
25	107.1	101.33	60	12	20
26	111.2	105.36	70	16	20
27	115.4	109.40	70	16	20
28	119.4	113.42	70	16	20
29	123.4	117.46	70	16	20
30	127.4	121.50	70	16	20
31	131.5	125.54	70	16	20
32	135.5	129.56	70	16	20
33	139.6	133.60	70	16	20
34	143.6	137.64	70	16	20
35	147.6	141.68	70	16	20
36	151.7	145.72	70	16	25
37	155.7	149.76	70	16	25
38	159.8	153.80	70	16	25
39	163.8	157.83	70	16	25
40	167.8	161.87	70	16	25
41	171.4	165.91	78	16	32
42	175.4	169.95	78	16	32
43	179.5	173.99	78	16	32
44	183.5	178.03	78	16	32
45	187.5	182.07	78	16	32
46	191.6	186.10	78	16	32
47	195.6	190.14	78	16	32
48	199.7	194.18	78	16	32
49	203.7	198.22	*78	16	32
50	207.8	202.26	*78	16	32
51	211.8	206.30	*78	16	32
52	215.9	210.34	*78	16	32
53	219.9	214.37	*78	16	32
54	224.0	218.43	*78	16	32
55	228.0	222.46	*78	16	32
56	232.1	226.50	*78	16	32
57	236.1	230.54	*78	16	32
58	240.2	234.58	*78	16	32
59	244.2	238.62	*78	16	32
60	248.2	242.66	*78	16	32
62	256.7	250.75	*78	16	32
64	264.8	258.82	*78	16	32
65	268.8	262.86	*78	16	32
66	272.9	266.90	*78	16	32
68	280.9	274.99	*78	16	32
70	289.0	283.07	*78	16	32
72	297.1	291.16	*78	16	32
76	313.3	307.33	*78	16	32
78	321.4	315.40	*78	16	32
80	329.4	323.48	*78	16	32
85	349.7	343.70	*80	16	32
90	369.9	363.90	*80	16	32
95	390.1	384.10	*80	16	32
100	410.3	404.31	*80	16	32
110	450.7	444.74	*80	16	32
114	466.9	460.90	*80	16	32
120	491.2	485.16	*80	16	32
125	511.4	505.37	*80	16	32

## SPROCKETS & PLATE WHEELS

Piñones & discos

### 085A-1-2-3 PLATE WHEELS 1/2" x 5/16" For chain Acc.to DIN 8187 ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	13
Radius width C	1.3
Tooth width $B_1$	7.2
Tooth width $b_1$	7
Tooth width $B_2$	21
Tooth width $B_3$	34.9

#### CHAIN mm

Pitch	12.7
Internal width	7.75
Roller $\Phi$	8.51

Z	$d_p$	$d_e$	S		D		T	
			$D_1$	$D_2$	$D_1$	$D_2$	$D_1$	$D_2$
8	37.2	33.18	8	10	10		10	
9	41.0	37.13	8	10	10		10	
10	45.2	41.10	8	10	10		10	
11	48.7	45.07	10	10	12		12	
12	53.0	49.07	10	10	12		12	
13	57.4	53.06	10	10	12		12	
14	61.8	57.07	10	10	12		12	
15	65.5	61.09	10	10	12		12	
16	69.5	65.10	10	12	16		16	
17	73.6	69.11	10	12	16		16	
18	77.8	73.14	10	12	16		16	
19	81.7	77.16	10	12	16		16	
20	85.8	81.19	10	12	16		16	
21	89.7	85.22	12	16	16		16	
22	93.8	89.24	12	16	16		16	
23	98.2	93.27	12	16	16		16	
24	101.8	97.29	12	16	16		16	
25	105.8	101.33	12	16	16		16	
26	110.0	105.36	16	16	16		16	
27	114.0	109.40	16	16	16		16	
28	118.0	113.42	16	16	16		16	
29	122.0	117.46	16	16	16		16	
30	126.1	121.50	16	16	16		16	
31	130.2	125.54	16	16	20		20	
32	134.3	129.56	16	16	20		20	
33	138.4	133.6	16	16	20		20	
34	142.6	137.64	16	16	20		20	
35	146.7	141.68	16	16	20		20	
36	151.0	145.72	16	20	20		20	
37	154.6	149.76	16	20	20		20	
38	158.6	153.80	16	20	20		20	
39	162.7	157.86	16	20	20		20	
40	166.8	161.87	16	20	20		20	
41	171.4	165.91	20	20	25		25	
42	175.4	169.95	20	20	25		25	
43	179.7	173.99	20	20	25		25	
44	183.8	178.03	20	20	25		25	
45	188.0	182.07	20	20	25		25	
46	192.1	186.10	20	20	25		25	
47	196.2	190.14	20	20	25		25	
48	200.3	194.18	20	20	25		25	
49	204.3	198.22	20	20	25		25	
50	208.3	202.26	20	20	25		25	
51	212.1	206.30	20	25	25		25	
52	216.1	210.34	20	25	25		25	
53	220.2	214.37	20	25	25		25	
54	224.1	218.43	20	25	25		25	
55	228.1	222.46	20	25	25		25	
56	232.2	226.50	20	25	25		25	
57	236.4	230.54	20	25	25		25	
58	240.0	234.58	20	25	25		25	
59	224.5	238.62	20	25	25		25	
60	248.6	242.66	20	25	25		25	
62	256.9	250.75	25	25	25		25	
64	265.1	258.82	25	25	25		25	
65	269.0	262.86	25	25	25		25	
66	273.0	266.90	25	25	25		25	
68	281.0	274.99	25	25	25		25	
70	289.0	283.07	25	25	25		25	
72	297.2	291.16	25	25	25		25	
75	309.2	303.28	25	25	25		25	
76	313.3	307.32	25	25	25		25	
78	321.4	315.40	25	25	25		25	
80	329.4	323.49	25	25	25		25	
85	349.0	343.69	25	25	25		25	
90	369.9	363.90	25	25	25		25	
95	390.1	384.11	25	25	25		25	
100	410.3	404.32	25	25	25		25	
110	450.7	444.74	25	25	25		25	
114	466.9	460.91	25	25	25		25	
120	491.2	485.16	25	25	25		25	
125	511.3	505.37	25	25	25		25	



SPROCKET  
Piñones

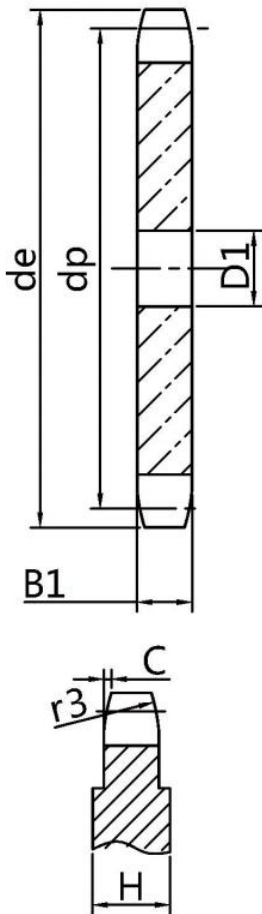
## SPROCKETS & PLATE WHEELS

Piñones & discos

### 085A-1

#### PLATE WHEELS 1/2" x 1/4" Roller 7.75

For chain Acc.to DIN 8187  
ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	13
Radius width C	1.3
Tooth width B1	5.9

#### CHAIN mm

Pitch	12.7
Internal width	6.4
Roller $\Phi$	7.75

Z	d <sub>a</sub>	d <sub>f</sub>	S
			D <sub>1</sub>
8	38.5	33.18	8
9	41.5	37.13	8
10	46.2	41.10	8
11	49.6	45.07	8
12	53.9	49.07	8
13	58.4	53.06	8
14	62.8	57.07	8
15	66.8	65.10	8
16	70.9	61.09	8
17	74.9	69.11	8
18	78.9	73.14	8
19	82.9	77.16	8
20	86.9	81.19	8
21	91.0	85.22	10
22	95.0	89.24	10
23	99.0	93.27	10
24	103.0	97.29	10
25	107.1	101.33	10
26	111.2	105.36	12
27	115.4	109.40	12
28	119.4	113.42	12
29	123.4	117.46	12
30	127.4	121.50	12
31	131.5	125.54	12
32	135.5	129.56	12
33	139.6	133.60	12
34	143.6	137.64	12
35	147.6	141.68	12
36	151.7	145.72	16
37	155.7	149.76	16
38	159.8	153.80	16
39	163.8	157.83	16
40	167.8	161.87	16
41	171.4	165.91	16
42	175.4	169.95	16
43	179.5	173.99	16
44	183.5	178.03	16
45	187.5	182.07	16
46	191.6	186.10	20
47	195.6	190.14	20
48	199.7	194.18	20
49	203.7	198.22	20
50	207.8	202.26	20
51	211.8	206.30	20
52	215.9	210.34	20
53	219.9	214.37	20
54	224.0	218.43	20
55	228.0	222.46	20
56	232.1	226.50	20
57	236.1	230.54	20
58	240.2	234.58	20
59	244.2	238.62	20
60	248.2	242.66	20
62	256.7	250.75	20
64	264.8	258.82	20
65	268.8	262.86	20
66	272.9	266.90	25
68	280.9	274.99	25
70	289.0	283.07	25
72	297.1	291.16	25
76	313.3	307.33	25
78	321.4	315.40	25
80	329.4	323.48	25
85	349.7	343.70	25
90	369.9	363.90	25
95	390.1	384.10	25
100	410.3	404.31	25
110	450.7	444.74	25
114	466.9	460.90	25
120	491.2	485.16	25
125	511.4	505.37	25



SPROCKET  
Piñones

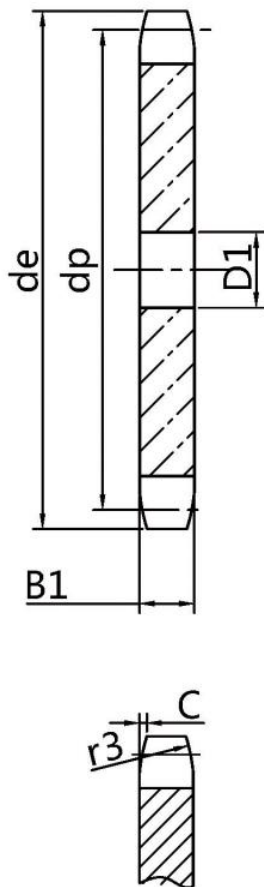
## SPROCKETS & PLATE WHEELS

Piñones & discos

### 085A-1

#### PLATE WHEELS 1/2" x 1/4" Roller 8.51

For chain Acc.to DIN 8187  
ISO/R606



#### PLATE WHEELS mm

Tooth radius $r_3$	13
Radius width C	1.3
Tooth width B1	5.9

#### CHAIN mm

Pitch	12.7
Internal width	6.4
Roller $\Phi$	8.51

Z	d <sub>a</sub>	d <sub>f</sub>	S
			D <sub>a</sub>
8	37.2	33.18	8
9	41.0	37.13	8
10	45.2	41.10	8
11	48.7	45.07	8
12	53.0	49.07	8
13	57.4	53.06	8
14	61.8	57.07	8
15	65.5	61.09	8
16	69.5	65.10	10
17	73.6	69.11	10
18	77.8	73.14	10
19	81.7	77.16	10
20	85.8	81.19	10
21	89.7	85.22	10
22	93.8	89.24	10
23	98.2	93.27	10
24	101.8	97.29	10
25	105.8	101.33	10
26	110.0	105.36	12
27	114.0	109.40	12
28	118.0	113.42	12
29	122.0	117.46	12
30	126.1	121.50	12
31	130.2	125.54	12
32	134.3	129.56	12
33	138.4	133.6	12
34	142.6	137.64	12
35	146.7	141.68	12
36	151.0	145.72	16
37	154.6	149.76	16
38	158.6	153.80	16
39	162.7	157.86	16
40	166.8	161.87	16
41	171.4	165.91	16
42	175.4	169.95	16
43	179.7	173.99	16
44	183.8	178.03	16
45	188.0	182.07	16
46	192.1	186.10	20
47	196.2	190.14	20
48	200.3	194.18	20
49	204.3	198.22	20
50	208.3	202.26	20
51	212.1	206.30	20
52	216.1	210.34	20
53	220.2	214.37	20
54	224.1	218.43	20
55	228.1	222.46	20
56	232.2	226.50	20
57	236.4	230.54	20
58	240.0	234.58	20
59	224.5	238.62	20
60	248.6	242.66	20
62	256.9	250.75	20
64	265.1	258.82	20
65	269.0	262.86	20
66	273.0	266.90	25
68	281.0	274.99	25
70	289.0	283.07	25
72	297.2	291.16	25
76	313.3	307.33	25
78	321.4	315.40	25
80	329.4	323.48	25
85	349.0	343.70	25
90	369.9	363.90	25
95	390.1	384.10	25
100	410.3	404.31	25
110	450.7	444.74	25
114	466.9	460.90	25
120	491.2	485.16	25
125	511.3	505.37	25

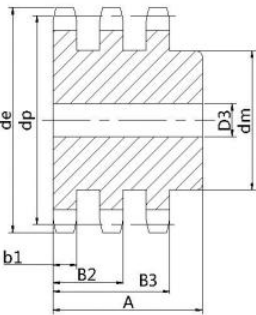
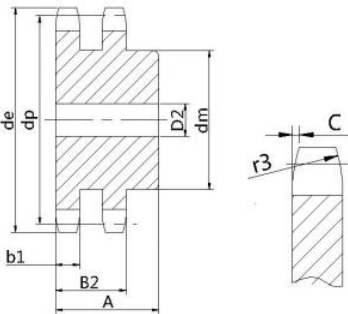
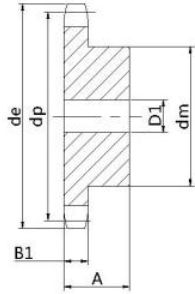


SPROCKET  
Piñones

**SPROCKETS & PLATE WHEELS**

Piñones & discos

**085B-1-2-3**  
**SPROCKETS 1/2" x 5/16"**  
 For chain Acc.to DIN 8187  
 ISO/R606



**SPROCKETS mm**

Tooth radius r3	13
Radius width C	1.3
Tooth width B1	7.2
Tooth width b1	7
Tooth width B2	21
Tooth width B3	34.9

**CHAIN mm**

Pitch	12.7
Internal width	7.75
RollerΦ	8.51

Material:C 45  
 \*Weld on hub

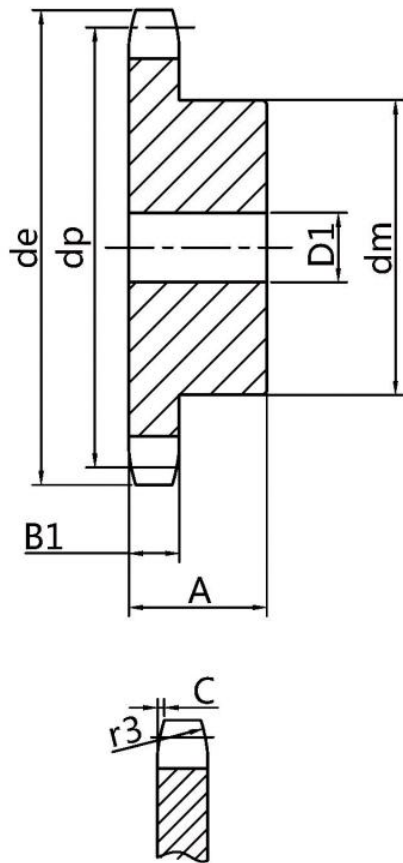
Z	d <sub>e</sub>	d <sub>p</sub>	SIMPLEX			DUPLEX			TRIPLEX		
			d <sub>e</sub>	D <sub>2</sub>	A	d <sub>e</sub>	D <sub>2</sub>	A	d <sub>e</sub>	D <sub>2</sub>	A
8	37.2	33.18	20	10	25	20	10	32	20	10	46
9	41.0	37.13	24	10	25	24	10	32	24	12	46
10	45.2	41.10	26	10	25	28	10	32	28	12	46
11	48.7	45.07	33	10	25	32	12	35	32	14	50
12	53.0	49.07	37	10	25	35	12	35	35	14	50
13	57.4	53.06	41	10	28	38	12	35	38	14	50
14	61.8	57.07	45	10	28	42	12	35	42	14	50
15	65.5	61.09	50	10	28	46	12	35	46	14	50
16	69.5	65.10	52	12	28	50	14	35	50	16	50
17	73.6	69.11	56	12	28	54	14	35	54	16	50
18	77.8	73.14	60	12	28	58	14	35	58	16	50
19	81.7	77.16	64	12	28	62	14	35	62	16	50
20	85.8	81.19	68	12	28	66	14	35	66	16	50
21	89.7	85.22	70	14	28	70	16	40	70	16	55
22	93.8	89.24	70	14	28	70	16	40	70	16	55
23	98.2	93.27	70	14	28	70	16	40	70	16	55
24	101.8	97.29	70	14	28	80	16	40	75	16	55
25	105.8	101.33	70	14	28	85	16	40	80	16	55
26	110.0	105.36	70	16	30	85	16	40	85	20	55
27	114.0	109.40	70	16	30	90	16	40	85	20	55
28	118.0	113.42	70	16	30	95	16	40	90	20	55
29	122.0	117.46	80	16	30	100	16	40	95	20	55
30	126.1	121.50	80	16	30	100	16	40	100	20	55
31	130.2	125.54	90	16	30	100	20	40	110	20	55
32	134.3	129.56	90	16	30	100	20	40	110	20	55
33	138.4	133.6	90	16	30	100	20	40	110	20	55
34	142.6	137.64	90	16	30	100	20	40	110	20	55
35	146.7	141.68	90	16	30	100	20	40	110	20	55
36	151.0	145.72	90	16	35	100	20	40	120	25	55
37	154.6	149.76	90	16	35	100	20	40	120	25	55
38	158.6	153.80	90	16	35	100	20	40	120	25	55
39	162.7	157.86	90	16	35	100	20	40	120	25	55
40	166.8	161.87	90	16	35	100	20	40	120	25	55
41	171.4	165.91	90	16	40	*108	20	50	*120	25	60
42	175.4	169.95	90	16	40	*108	20	50	*120	25	60
43	179.7	173.99	90	16	40	*108	20	50	*120	25	60
44	183.8	178.03	90	16	40	*108	20	50	*120	25	60
45	188.0	182.07	90	16	40	*108	20	50	*120	25	60
46	192.1	186.10	90	16	40	*108	20	50	*120	25	60
47	196.2	190.14	90	16	40	*108	20	50	*120	25	60
48	200.3	194.18	*90	16	40	*108	20	50	*120	25	60
49	204.3	198.22	*90	16	40	*108	20	50	*120	25	60
50	208.3	202.26	*90	16	40	*108	20	50	*120	25	60
51	212.1	206.30	*90	16	40	*108	20	50	*120	25	60
52	216.1	210.34	*90	16	40	*108	20	50	*120	25	60
53	220.2	214.37	*90	16	40	*108	20	50	*120	25	60
54	224.1	218.43	*90	16	40	*108	20	50	*120	25	60
55	228.1	222.46	*90	16	40	*108	20	50	*120	25	60
56	232.2	226.50	*90	16	40	*108	20	50	*120	25	60
57	236.4	230.54	*90	16	40	*108	20	50	*120	25	60
58	240.0	234.58	*90	16	40	*108	20	50	*120	25	60
59	224.5	238.62	*90	16	40	*108	20	50	*120	25	60
60	248.6	242.66	*90	16	40	*108	20	50	*120	25	60
62	256.9	250.75	*90	16	40	*108	20	50	*120	25	60
64	265.1	258.82	*90	16	40	*108	20	50	*120	25	60
65	269.0	262.86	*90	16	40	*108	20	50	*120	25	60
66	273.0	266.90	*90	16	40	*108	20	50	*120	25	60
68	281.0	274.99	*90	16	40	*108	20	50	*120	25	60
70	289.0	283.07	*90	16	40	*108	20	50	*120	25	60
72	297.2	291.16	*90	16	40	*108	20	55	*120	25	60
75	309.2	303.28	*90	16	40	*108	20	55	*120	25	60
76	313.3	307.33	*90	16	40	*108	20	55	*120	25	60
78	321.4	315.40	*90	16	40	*108	20	55	*120	25	60
80	329.4	323.48	*90	16	40	*108	20	55	*120	25	60
85	349.0	343.70	*90	16	40	*110	20	55	*120	25	60
90	369.9	363.90	*90	16	40	*110	20	55	*120	25	60
95	390.1	384.10	*90	16	40	*110	20	55	*120	25	60
100	410.3	404.31	*90	16	40	*110	20	55	*120	25	60
110	450.7	444.74	*90	16	40	*110	20	55	*120	25	60
114	466.9	460.90	*90	16	40	*110	20	55	*120	25	60
120	491.2	485.16	*90	16	40	*110	20	55	*120	25	60
125	511.3	505.37	*90	16	40	*110	20	55	*120	25	60



## SPROCKETS & PLATE WHEELS

Piñones & discos

**085B-1**  
**SPROCKETS 1/2" x 1/4" Roller 7.75**  
 For chain Acc.to DIN 8187  
 ISO/R606



Z	d <sub>e</sub>	d <sub>p</sub>	SIMPLEX		
			d <sub>e</sub>	D <sub>1</sub>	A
8	38.5	33.18	20	10	25
9	41.5	37.13	24	10	25
10	46.2	41.10	26	10	25
11	49.6	45.07	29	10	25
12	53.9	49.07	33	10	28
13	58.4	53.06	37	10	28
14	62.8	57.07	41	10	28
15	66.8	61.09	45	10	28
16	70.9	65.10	50	12	28
17	74.9	69.11	52	12	28
18	78.9	73.14	56	12	28
19	82.9	77.16	60	12	28
20	86.9	81.19	64	12	28
21	91.0	85.22	68	14	28
22	95.0	89.24	70	14	28
23	99.0	93.27	70	14	28
24	103.0	97.29	70	14	28
25	107.1	101.33	70	14	28
26	111.2	105.36	70	16	30
27	115.4	109.40	70	16	30
28	119.4	113.42	70	16	30
29	123.4	117.46	80	16	30
30	127.5	121.50	80	16	30
31	131.5	125.54	90	16	30
32	135.5	129.56	90	16	30
33	139.6	133.60	90	16	30
34	143.6	137.64	90	16	30
35	147.6	141.68	90	16	30
36	151.7	145.72	90	16	35
37	155.7	149.76	90	16	35
38	159.8	153.80	90	16	35
39	163.8	157.83	90	16	35
40	167.8	161.87	90	16	35
41	171.4	165.91	90	16	40
42	175.4	169.95	90	16	40
43	179.5	173.99	90	16	40
44	183.5	178.03	90	16	40
45	187.5	182.07	90	16	40
46	191.6	186.10	90	16	40
47	195.6	190.14	90	16	40
48	199.7	194.18	90	16	40
49	203.7	198.22	*90	16	40
50	207.8	202.30	*90	16	40
51	211.8	206.30	*90	16	40
52	215.9	210.34	*90	16	40
53	219.9	214.37	*90	16	40
54	224.0	218.43	*90	16	40
55	228.0	222.46	*90	16	40
56	232.1	226.50	*90	16	40
57	236.1	230.54	*90	16	40
58	240.2	234.58	*90	16	40
59	244.2	238.62	*90	16	40
60	248.2	242.66	*90	16	40
62	256.7	250.75	*90	16	40
64	264.8	258.82	*90	16	40
65	268.8	262.86	*90	16	40
66	272.9	266.90	*90	16	40
68	280.9	274.99	*90	16	40
70	289.0	283.07	*90	16	40
72	297.1	291.16	*90	16	40
76	313.3	307.33	*90	16	40
78	321.4	315.40	*90	16	40
80	329.4	323.48	*90	16	40
85	349.7	343.70	*90	16	40
90	369.9	363.90	*90	16	40
95	390.1	384.10	*90	16	40
100	410.3	404.31	*90	16	40
110	450.7	444.74	*90	16	40
114	466.9	460.90	*90	16	40
120	491.2	485.16	*90	16	40
125	511.4	505.37	*90	16	40

**SPROCKETS** mm

Tooth radius r <sub>3</sub>	13
Radius width C	1.3
Tooth width B <sub>1</sub>	5.9

**CHAIN** mm

Pitch	12.7
Internal width	6.4
RollerΦ	7.75

Material: C 45  
 \*Weld on hub

## SPROCKETS & PLATE WHEELS

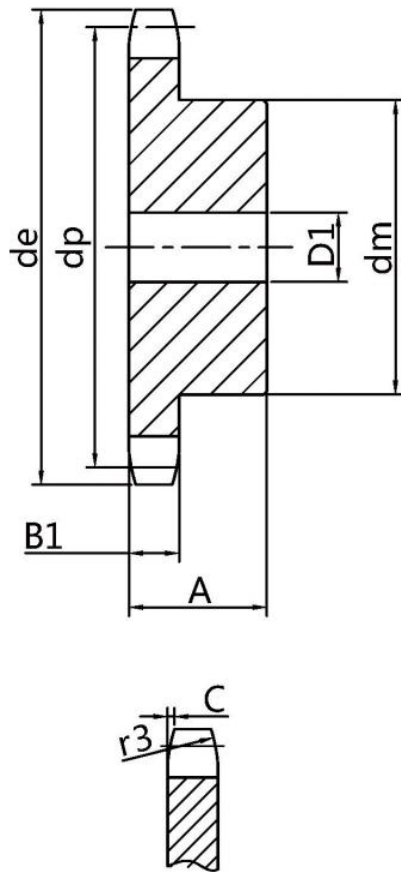
Piñones & discos

### 085B-1

#### SPROCKETS 1/2" x 1/4" Roller 8.51

For chain Acc.to DIN 8187

ISO/R606



#### SPROCKETS mm

Tooth radius r <sub>3</sub>	13
Radius width C	1.3
Tooth width B <sub>1</sub>	5.9

#### CHAIN mm

Pitch	12.7
Internal width	6.4
RollerΦ	8.51

Material: C 45

\*Weld on hub

Z	d <sub>e</sub>	d <sub>p</sub>	SIMPLEX		
			d <sub>e</sub>	D <sub>1</sub>	A
8	37.2	33.18	20	10	25
9	41.0	37.13	24	10	25
10	45.2	41.10	26	10	25
11	48.7	45.07	33	10	25
12	53.0	49.07	37	10	25
13	57.4	53.06	41	10	28
14	61.8	57.07	45	10	28
15	65.5	61.09	50	10	28
16	69.5	65.10	52	12	28
17	73.6	69.11	56	12	28
18	77.8	73.14	60	12	28
19	81.7	77.16	64	12	28
20	85.8	81.19	68	12	28
21	89.7	85.22	70	14	28
22	93.8	89.24	70	14	28
23	98.2	93.27	70	14	28
24	101.8	97.29	70	14	28
25	105.8	101.33	70	14	28
26	110.0	105.36	70	16	30
27	114.0	109.40	70	16	30
28	118.0	113.42	70	16	30
29	122.0	117.46	80	16	30
30	126.1	121.50	80	16	30
31	130.2	125.54	90	16	30
32	134.3	129.56	90	16	30
33	138.4	133.6	90	16	30
34	142.6	137.64	90	16	30
35	146.7	141.68	90	16	30
36	151.0	145.72	90	16	35
37	154.6	149.76	90	16	35
38	158.6	153.80	90	16	35
39	162.7	157.86	90	16	35
40	166.8	161.87	90	16	35
41	171.4	165.91	90	16	40
42	175.4	169.95	90	16	40
43	179.7	173.99	90	16	40
44	183.8	178.03	90	16	40
45	188.0	182.07	90	16	40
46	192.1	186.10	90	16	40
47	196.2	190.14	90	16	40
48	200.3	194.18	*90	16	40
49	204.3	198.22	*90	16	40
50	208.3	202.26	*90	16	40
51	212.1	206.30	*90	16	40
52	216.1	210.34	*90	16	40
53	220.2	214.37	*90	16	40
54	224.1	218.43	*90	16	40
55	228.1	222.46	*90	16	40
56	232.2	226.50	*90	16	40
57	236.4	230.54	*90	16	40
58	240.0	234.58	*90	16	40
59	224.5	238.62	*90	16	40
60	248.6	242.66	*90	16	40
62	256.9	250.75	*90	16	40
64	265.1	258.82	*90	16	40
65	269.0	262.86	*90	16	40
66	273.0	266.90	*90	16	40
68	281.0	274.99	*90	16	40
70	289.0	283.07	*90	16	40
72	297.2	291.16	*90	16	40
76	313.3	307.33	*90	16	40
78	321.4	315.40	*90	16	40
80	329.4	323.48	*90	16	40
85	349.0	343.70	*90	16	40
90	369.9	363.90	*90	16	40
95	390.1	384.10	*90	16	40
100	410.3	404.31	*90	16	40
110	450.7	444.74	*90	16	40
114	466.9	460.90	*90	16	40
120	491.2	485.16	*90	16	40
125	511.3	505.37	*90	16	40