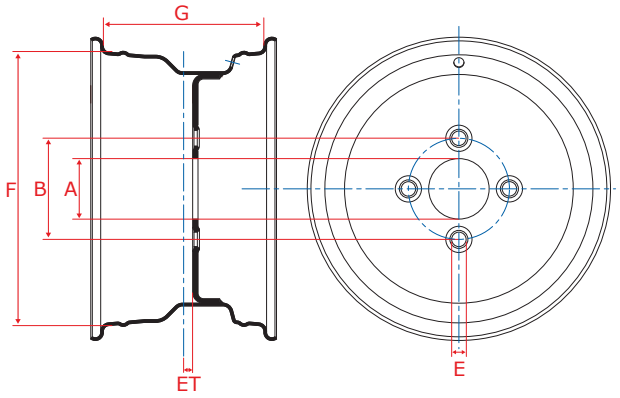
HUB FITTING WHEELS AND RIM TERMS

Hub fitting wheels have a bore and a number of stud holes to suit the hub to which it is being attached. When fitting the wheeks to the hub, it is very important to tighten at the correct torque in order to prevent nuts from working loose. It is also important to check after a short period of use and on a regular basis thereafter. The correct nut must be used to suit the wheel seating eg. conical or spherical.

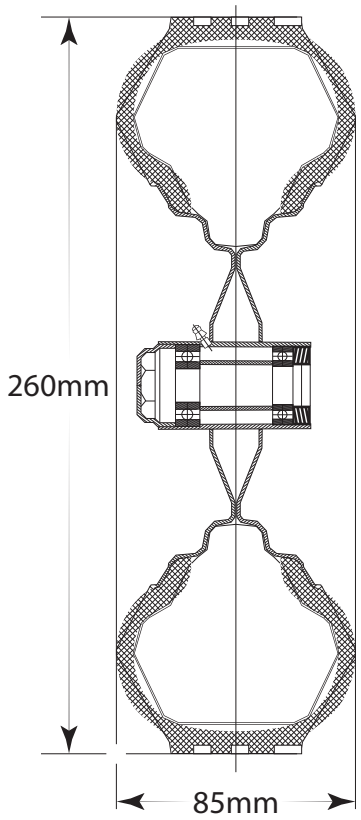


A = Bore (mm)
B = Pitch circle Diameter (PCD) mm
BD = Back depth (mm)
ET = Offset (mm)
E = stud hole diameter (mm)
F = Rim diameter (Inches)
G = Rim width (Inches)

Common Stud Patterns				
NO. STUDS	**PCD INCHES**	**PCD METRIC**	**STUD TO STUD**	**TYPE**
4	4"	101.6mm	71.84mm	Mini
4	4¼"	108mm	76.33mm	Escort/Cortina
4	4½"	114.3mm	80.82mm	Most Japanese
4	4¾"	120.65mm	85.31mm	
5	4¼"	108mm	63.45mm	HT Holden
5	4½"	114.3mm	67.18mm	Falcon/Toyota
5	4¾"	120.65mm	70.92mm	Holden HQ
5	5"	127.00mm	74.65mm	Delta Alloy
5		140mm	82.29mm	Ag
6	5½"	139.7mm	69.85mm	Landcruiser

MEASUREMENT

- 4 stud multiply stud to stud by 1.4 142 for PCD
- 5 stud multiply stud to stud measurement by 1.7013 for PCD
- 6 stud multiply stud to stud measurement by 2.00 for PCD
- Treadway have a PCD measuring tools, item No. 99974



TYRE SIZE DESIGNATIONS

How to read a tyre (300-4)	
DIMENSION	**EXPLAINATION**
300-4	Tyre width 3.00" / Rim Diameter 4"
10x3	Former designation in inches: Tyre Width 3" / Tyre diameter 10" (=3" x 2 + 4")
260x85	Designation in millimetres: Tyre diameter 260mm / Tyre width 85mm The former designation in inches converted to mm: 10" x 25.4 = approx. 260mm 3" x 25.4 = approx. 85mm
85/100-4	This is how the designation would be, had it been a passenger car tyre. Tyre width 85mm / Profile 100% / Rim diameter 4".
10x3.00-4	American designation, mainly used for low proflie and turf tyres: Tyre Diameter 10" / Tyre Width 3" / Rim diameter 4"

Conversion Tyre Dimension		
	180x45	7x1¾
	200x35	8x1¼
	200x50	8x2
	220x50	8½x2
2.50-3	210x65	8x2.5
3.00-4	260x85	10x3
4.00-4	300x100	12x4
4.00-5	330x100	
2.00-6		10x2
3.50-6		13x3
4.00-6		14x4
2.25-8		12½x2¼
4.00-8	400x100	16x4
5.00-8		18x5
6.00-9		21x6
16x650-8	170/60-8	
16.5x6.5-8	165/65-8	
18x8.50-8	210/60-8	
18.5x8.5-8	215/60-8	
18x8.00-10	195/50-10	
20.5x8.00-10	205/65-10	
24x8.00-14.5	200/60-14.5	

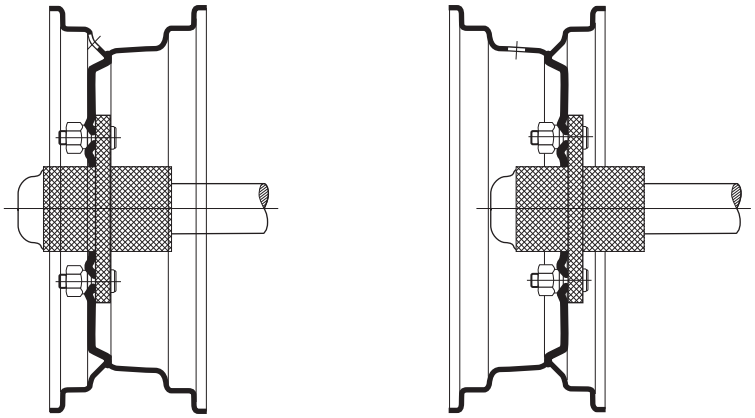
Common tyre conversions for small tyres used in the following sectors.

* Handtrucks and internal transport
* Mobility and wheelchairs
* Tyres for ride on Mowers
* Tyres for Hay equipment

OFFSET

The offset (ET) is the distance from the centre-line to the back side of the wheel disc (Where the wheel is fitted to the hub). The off set can be positive (+) or negative (-). A positive offset results in a narrower track width, i.e. Brings the wheel closer to the machine body. A negative offset will result in a wider track width, thus taking the wheel further away from the machine body. The following drawings illustrate positive and negative offsets.

+ -



PRESSURE CONVERSION CHART

Conversion – Inflation Pressure			
KPA	bar	kg/cm2	psi
10	0.1	0.1	1
20	0.2	0.2	3
30	0.3	0.3	4
40	0.4	0.4	6
50	0.5	0.5	7
60	0.6	0.6	9
70	0.7	0.7	10
80	0.8	0.8	12
90	0.9	0.9	13
100	1	1	14
110	1.1	1.1	16
120	1.2	1.2	17
130	1.3	1.3	19
140	1.4	1.4	20

Conversion – Inflation Pressure			
KPA	bar	kg/cm2	psi
150	1.5	1.5	22
160	1.6	1.6	23
170	1.7	1.7	25
180	1.8	1.8	26
190	1.9	1.9	28
200	2	2	29
210	2.1	2.1	30
220	2.2	2.2	32
230	2.3	2.3	33
240	2.4	2.4	35
250	2.5	2.6	36
260	2.6	2.7	38
270	2.7	2.8	39
280	2.8	2.9	41

Conversion – Inflation Pressure			
KPA	bar	kg/cm2	psi
290	2.9	3	42
300	3	3.1	43
320	3.2	3.3	46
340	3.4	3.5	49
360	3.6	3.7	52
380	3.8	3.9	55
400	4	4.1	58
450	4.5	4.6	65
500	5	5.1	72
600	6	6.1	87
700	7	7.1	101
800	8	8.2	116
900	9	9.2	130
1000	10	10.2	145

CONVESION psi = kpa ÷ 6.895 | kpa = psi x 6.895 | bar = kpa ÷ 100

Treadway®

Technical Information

LOAD AND SPEED RATINGS

On the sidewall of a tyre you can find the load index and Speed Symbol following the key sidewall size markings.

- The **Load Index** is a numerical code associated with the maximum load a tyre can carry.
- The **Speed Symbol** indicates the speed at which the tyre can carry a load corresponding to its load index

PLY RATING

Originally tyres were marked with the exact number of canvas layers (plies) built into the tyre. This was an indication of the strength of the tyre. As stronger materials were developed, the number of layers could be reduced - maintaining the same strength of the tyre. The designation "Ply Rating" therefore does not indicate the actual number of layers (plies) in the tyre, but the number of layers originally required to give the desired load capacity. When working with PR marked tyres, the actual manufacturers data must be used to determine the load capacity in kg (or pounds). This lead to a new distinction. Load Range as shown below.

Ply rating / Load Equivalance						
Load Range	A	B	C	D	E	F
Ply Rating	2	4	6	8	10	12

SPEED SYMBOL CONVERSION CHART

Speed Index		
SI	km/h	mph
A1	5	3
A2	10	6
A3	15	9
A4	20	13
A5	25	16
A6	30	19
A7	35	22
A8	40	25
B	50	31
C	60	38
D	65	41
E	70	44
F	80	50

Speed Index		
SI	km/h	mph
G	90	56
J	100	63
K	110	69
L	120	75
M	130	81
N	140	88
P	150	94
Q	160	100
R	170	106
S	180	113
T	190	118
H	210	130

LOAD INDEX CONVERSION CHART

Load Index		
LI	kg	lb
0	45	99
1	46.2	102
2	47.5	105
3	48.7	107
4	50	110
5	51.5	113
6	53	117
7	54.5	120
8	56	123
9	58	128
10	60	132
11	61.5	135
12	63	139
13	65	143
14	67	147
15	69	152
16	71	156
17	73	161
18	75	165
19	77.5	171
20	80	176
21	82.5	182
22	85	187
23	87.5	193
24	90	198
25	92.5	204
26	95	209
27	97.5	215

Load Index		
LI	kg	lb
28	100	220
29	103	227
30	106	233
31	109	240
32	112	246
33	115	253
34	118	260
35	121	266
36	125	275
37	128	282
38	132	290
39	136	299
40	140	308
41	145	319
42	150	330
43	155	341
44	160	352
45	165	363
46	170	374
47	175	385
48	180	396
49	185	407
50	190	418
51	195	429
52	200	440
53	206	453
54	212	466
55	218	480

Load Index		
LI	kg	lb
56	224	493
57	230	506
58	236	519
59	243	535
60	250	550
61	257	565
62	265	583
63	272	598
64	280	616
65	290	638
66	300	660
67	307	675
68	315	693
69	325	715
70	335	737
71	345	759
72	355	781
73	365	803
74	375	825
75	387	851
76	400	880
77	412	906
78	425	935
79	437	961
80	450	990
81	462	1016
82	475	1045
83	487	1071

Load Index		
LI	kg	lb
84	500	1100
85	515	1133
86	530	1166
87	545	1199
88	560	1232
89	580	1276
90	600	1320
91	615	1353
92	630	1386
93	650	1430
94	670	1474
95	690	1518
96	710	1562
97	730	1606
98	750	1650
99	775	1705
100	800	1760
101	825	1815
102	850	1870
103	875	1925
104	900	1980
105	925	2035
106	950	2090
107	975	2145
108	1000	2200
109	1030	2266
110	1060	2332
111	1090	2398

Load Index		
LI	kg	lb
112	1120	2464
113	1150	2530
114	1180	2596
115	1210	2662
116	1250	2750
117	1280	2816
118	1320	2904
119	1360	2992
120	1400	3080
121	1450	3190
122	1500	3300
123	1550	3410
124	1600	3520
125	1650	3630
126	1700	3740
127	1750	3850
128	1800	3960
129	1850	4070
130	1900	4180
131	1950	4290
132	2000	4400
133	2060	4532
134	2120	4664
135	2180	4796
136	2240	4928
137	2300	5060
138	2360	5192
139	2430	5346

Load Index		
LI	kg	lb
140	2500	5500
141	2570	5654
142	2650	5830
143	2720	5984
144	2800	6160
145	2900	6380
146	3000	6600
147	3070	6754
148	3150	6930
149	3250	7150
150	3350	7370
151	3450	7590
152	3550	7810
153	3650	8030
154	3750	8250
155	3870	8514
156	4000	8800
157	4120	9064
158	4250	9350
159	4370	9614
160	4500	9900
161	4620	10164
162	4750	10450
163	4870	10714
164	5000	11000
165	5150	11330
166	5300	11660
167	5450	11990