DATA & REGROOVING BOOK 2024

TRUCK, BUS & VAN TYRES

www.firestone.eu

Firestone
ALWAYS DEPENDABLE

Introduction

Wherever you're headed, whoever or whatever you're taking with you… Firestone boasts over 100 years of know-how, experience and dedication to getting you there safely and surely.

And the same goes for its latest range of quality, no-nonsense truck and bus tyres for long and short-haul operations.
Tyres that are designed and built to get the job done on time and with total peace of mind. **That is how Firestone takes you and your business further!**

GENERAL CONTENT

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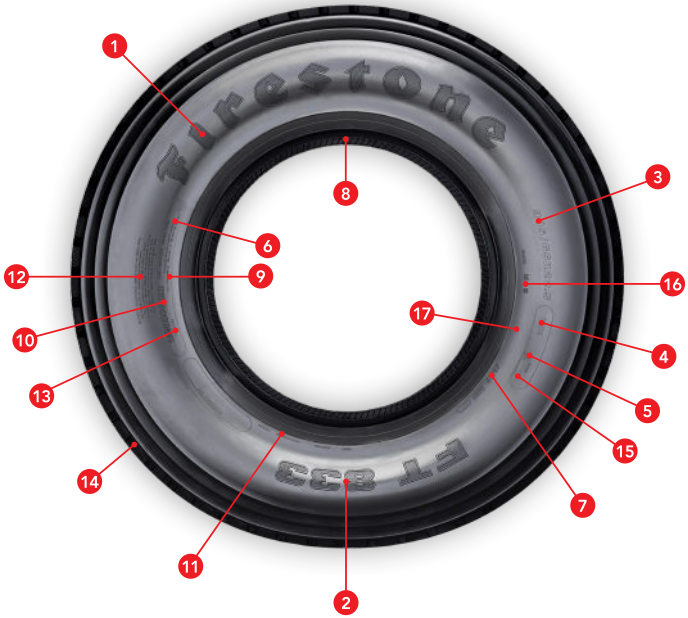
GENERAL INFORMATION



1. Tyre Sidewall Information

1. Manufacturers name or brand
2. Pattern Name
3. Size information
   385 = Tyre width in mm (or inch)
   65 = Aspect ratio (section height to section width) = 65%
4. Service Description
   160 = Load index for single fitment
   K = Speed index code letter
5. E = Tyre complies to ECE 54 Regulations
   4 = Country in which approval was granted (4 = Netherlands)
6. Load Range in accordance with USA standard
7. DOT
8. Unique serial number (on the other side)
9. USA Load Rating & Max inflation pressure
10. Regroovable
    It is permitted for the tyre to be regrooved
11. Country of Origin
12. USA Safety standard construction data
13. Tubeless
    Tyre operated without a tube
14. Tread wear indicator
15. FRT marking
16. M+S Marking
17. Alpine Marking

2. Tyre Size Designations

The tyre size designation marked on the tyre sidewalls includes dimensional and construction characteristics close to the service description which consists of one or two load index and a speed symbol.

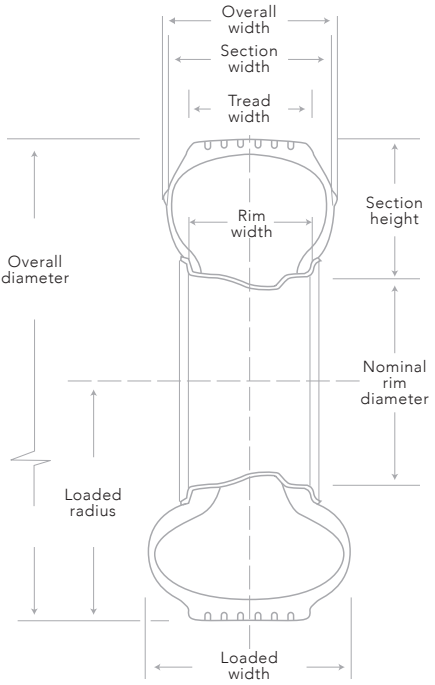
ECE Regulation 54 permits the marking of an additional service description or sometimes known as the unique point on the tyre sidewall. This is located close to the principal service description as shown below:

315/80 R 22.5 154/150 M

Example [1]:

315	/	80	R	22.5	154/150	M
Nominal Section Width		Nominal Aspect Ratio	Construction Code	Nominal Rim Diameter Code	Load indices (Single/Dual)	Speed Symbol

3. Tyre Dimensions



1) Additional marking 'FRT' identifies tyres restricted to the equipment of non-driven axles, excluding motor vehicle front steering axles.

4. Load Index

The LOAD INDEX is a numerical code associated with the maximum load a tyre can carry at the speed indicated by its Speed Symbol under specified service conditions identified by the tyre manufacturer (up to and including 210 km/h).

4.1 Load index and carrying capacity

LI	Kg	LI	Kg	LI	Kg	LI	Kg
85	515	115	1,215	145	2,900	175	6,900
86	530	116	1,250	146	3,000	176	7,100
87	545	117	1,285	147	3,075	177	7,300
88	560	118	1,320	148	3,150	178	7,500
89	580	119	1,360	149	3,250	179	7,750
90	600	120	1,400	150	3,350	180	8,000
91	615	121	1,450	151	3,450	181	8,250
92	630	122	1,500	152	3,550	182	8,500
93	650	123	1,550	153	3,650	183	8,750
94	670	124	1,600	154	3,750	184	9,000
95	690	125	1,650	155	3,875	185	9,250
96	710	126	1,700	156	4,000	186	9,500
97	730	127	1,750	157	4,125	187	9,750
98	750	128	1,800	158	4,250	188	10,000
99	775	129	1,850	159	4,375	189	10,300
100	800	130	1,900	160	4,500	190	10,600
101	825	131	1,950	161	4,625	191	10,900
102	850	132	2,000	162	4,750	192	11,200
103	875	133	2,060	163	4,875	193	11,500
104	900	134	2,120	164	5,000	194	11,800
105	925	135	2,180	165	5,150	195	12,150
106	950	136	2,240	166	5,300	196	12,500
107	975	137	2,300	167	5,450	197	12,850
108	1,000	138	2,360	168	5,600	198	13,200
109	1,030	139	2,430	169	5,800	199	13,600
110	1,060	140	2,500	170	6,000		
111	1,090	141	2,575	171	6,150		
112	1,120	142	2,650	172	6,300		
113	1,150	143	2,725	173	6,500		
114	1,180	144	2,800	174	6,700		

4.2 Variation in load carrying capacity with speed and inflation pressure compensation

Speed (km/h)	VARIATION IN LOAD CARRYING CAPACITY (%)						Inflation Pressure compensation (%) [1]
	Speed Symbol						
	F 80(50)	G 90(56)	J 100(62)	K 110(68)	L 120(75)	M 130(81)	
Static	+150.0	+150.0	+150.0	+150.0	+150.0	+150.0	+40
5	+110.0	+110.0	+110.0	+110.0	+110.0	+110.0	+40
10	+80.0	+80.0	+80.0	+80.0	+80.0	+80.0	+30
15	+65.0	+65.0	+65.0	+65.0	+65.0	+65.0	+25
20	+50.0	+50.0	+50.0	+50.0	+50.0	+50.0	+21
25	+35.0	+35.0	+35.0	+35.0	+35.0	+35.0	+17
30	+25.0	+25.0	+25.0	+25.0	+25.0	+25.0	+13
35	+19.0	+19.0	+19.0	+19.0	+19.0	+19.0	+11
40	+15.0	+15.0	+15.0	+15.0	+15.0	+15.0	+10
45	+13.0	+13.0	+13.0	+13.0	+13.0	+13.0	+9
50	+12.0	+12.0	+12.0	+12.0	+12.0	+12.0	+8
55	+11.0	+11.0	+11.0	+11.0	+11.0	+11.0	+7
60	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+6
65	+7.5	+8.5	+8.5	+8.5	+8.5	+8.5	+4
70	+5.0	+7.0	+7.0	+7.0	+7.0	+7.0	+2
75	+2.5	+5.5	+5.5	+5.5	+5.5	+5.5	+1
80	0	+4.0	+4.0	+4.0	+4.0	+4.0	0
85		+2.0	+3.0	+3.0	+3.0	+3.0	0
90		0	+2.0	+2.0	+2.0	+2.0	0
95			+1.0	+1.0	+1.0	+1.0	0
100			0	0	0	0	0
110				0	0	0	0
120					0	0	0
130						0	0

1) Increments to be applied in the absence of any specific agreement with the tyre manufacturer.

Note:

1. The load carrying capacity of tyres in dual fitment is twice the load carrying capacity in single up to 40 km/h.
2. Bonus loads are not permitted for speed of 40km/h and above if the wheel axles are rigidly fixed to the body of the vehicle.
3. Bonus loads can not be applied to trailers and semi-trailers at speeds over 65 km/h.
4. A sign indicating the max speed must be attached to trailers restricted to speeds below 100 km/h.
5. Above compensations are not applicable to the additional service description known as unique point.

4.3 Variation in load carrying capacity with speed and inflation pressure compensation for Light Commercial Vehicles

Speed (km/h)	VARIATION IN LOAD CARRYING CAPACITY (%)									Inflation Pressure compensation (%) [1]
	Speed Symbol									
	L	M	N	P	Q	R	S	T	H	
Static	+110.0	+110.0	+110.0	+110.0	+110.0	+110.0	+110.0	+110.0	+110.0	+40
5	+90.0	+90.0	+90.0	+90.0	+90.0	+90.0	+90.0	+90.0	+90.0	+35
10	+75.0	+75.0	+75.0	+75.0	+75.0	+75.0	+75.0	+75.0	+75.0	+35
15	+60.0	+60.0	+60.0	+60.0	+60.0	+60.0	+60.0	+60.0	+60.0	+30
20	+50.0	+50.0	+50.0	+50.0	+50.0	+50.0	+50.0	+50.0	+50.0	+30
25	+42.0	+42.0	+42.0	+42.0	+42.0	+42.0	+42.0	+42.0	+42.0	+30
30	+35.0	+35.0	+35.0	+35.0	+35.0	+35.0	+35.0	+35.0	+35.0	+30
35	+29.0	+29.0	+29.0	+29.0	+29.0	+29.0	+29.0	+29.0	+29.0	+30
40	+25.0	+25.0	+25.0	+25.0	+25.0	+25.0	+25.0	+25.0	+25.0	+28
45	+22.0	+22.0	+22.0	+22.0	+22.0	+22.0	+22.0	+22.0	+22.0	+25
50	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+22
55	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+18
60	+15.0	+15.0	+15.0	+15.0	+15.0	+15.0	+15.0	+15.0	+15.0	+15
65	+13.5	+13.5	+13.5	+13.5	+13.5	+13.5	+13.5	+13.5	+13.5	+15
70	+11.0	+11.0	+11.0	+11.0	+11.0	+11.0	+11.0	+11.0	+11.0	+14
75	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+10.0	+12
80	+8.5	+8.5	+8.5	+8.5	+8.5	+8.5	+8.5	+8.5	+8.5	+10
85	+7.5	+7.5	+7.5	+7.5	+7.5	+7.5	+7.5	+7.5	+7.5	+9
90	+6.5	+6.5	+6.5	+6.5	+6.5	+6.5	+6.5	+6.5	+6.5	+8
95	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0	+6
100	+3.75	+3.75	+3.75	+3.75	+3.75	+3.75	+3.75	+3.75	+3.75	+4
110	+2.5	+2.5	+2.5	+2.5	+2.5	+2.5	+2.5	+2.5	+2.5	+2
115	+1.25	+1.25	+1.25	+1.25	+1.25	+1.25	+1.25	+1.25	+1.25	+1
120	0	0	0	0	0	0	0	0	0	0
130		0	0	0	0	0	0	0	0	0
140			0	0	0	0	0	0	0	0
150				0	0	0	0	0	0	0
160					0	0	0	0	0	0
170						0	0	0	0	+3.0
180							0	0	0	+5.0
190								0	0	+8.0
200									0	+11.0

1) Increments to be applied in the absence of any specific agreement with the tyre manufacturer.

5. Speed Symbol

The SPEED SYMBOL indicates the maximum speed at which the tyre can carry a load corresponding to its Load Index under specified service conditions identified by the tyre manufacturer.

Speed Symbol	Speed (Km/h)	Speed Symbol	Speed (Km/h)	Speed Symbol	Speed (Km/h)
B	50	J	100	Q	160
C	60	K	110	R	170
D	65	L	120	S	180
E	70	M	130	T	190
F	80	N	140	U	200
G	90	P	150	H	210

6. Pressure Unit Conversion Table

kPa	bar	lb/in² 1) (p.s.i.)	kg/cm² 1)
100	1.0	15	1.0
150	1.5	22	1.5
200	2.0	29	2.0
250	2.5	36	2.6
300	3.0	44	3.1
350	3.5	51	3.6
400	4.0	58	4.1
450	4.5	65	4.6
500	5.0	73	5.1
550	5.5	80	5.6
600	6.0	87	6.1
650	6.5	94	6.6
700	7.0	102	7.1
750	7.5	109	7.7
800	8.0	116	8.2
850	8.5	123	8.7
900	9.0	131	9.2
950	9.5	138	9.7
1000	10.0	145	10.2
1050	10.5	152	10.7

1) Value in p.s.i. and kg/cm² rounded to the nearest practical unit.

7. FRT (Free Rolling Tyre)

7.1 Definition

In the case of trucks, an FRT (Free Rolling Tyre) is a tyre which may only be fitted on trailer or tag axles and not on drive or front steer axles.

7.2 Claim policy

Bridgestone recommends that truck tyres marked "FRT" (Free Rolling Tyre) only be fitted on trailer or tag axles and not on drive or front steer axles.

Neither Bridgestone nor any of its affiliated entities may be held liable for any damage, loss or any other claim relating to an FRT-marked tyre which has been fitted in the drive or front steer position against Bridgestone's recommendation, unless such damage, loss or claim arises due to a fault of Bridgestone or its affiliated companies.

8. M+S and Alpine Markings

8.1 M+S Marking (Mud + Snow)

Definition

Based on manufacturer's own statement, the M+S marking relates to the tyre's tread pattern, tread compound or structure providing better grip and braking performance in mud and fresh or melting snow.

ECE54 regulation

8.2 Alpine Marking 

Definition

All our tyres carrying the Alpine marking have passed a snow acceleration test in winter conditions as defined in the UNECE Regulation 117.02 and the UNECE 109 which makes them suitable for winter use on snowy or icy roads.

9. Tyre Selection

9.1 General

Replacement tyres must be suitable for the type of vehicles and the operating conditions to which they will be applied. The applications may vary depending on the type of service, route, load, speed, etc...

9.2 Mixing radial and Bias tyres

1) *Never mix different tyre sizes or tyre constructions on the same axle.*
2) *Trucks with two axles: if the vehicle is equipped with dual rear tyres or with wide base single tyres, radial or bias ply tyres may be used on the front axle, the rear axle, or on both axles. If the vehicle is equipped with single tyres in all positions, then radial tyres should not be used on the front axle unless they are also used on the rear axle. They may however be used on the rear axle only. For four-wheel drive vehicles, all tyres must be of the same construction, either bias or radial.*
3) *Trucks with more than two axles: the front tyres may be either bias or radial and can be run with either bias or radial tyres on the drive axles. The tyres on the rear axles should be either all bias or all radial. If a vehicle has multiple drive axles, then all tyres on those positions must be either all bias or all radial.*
4) *Trailers: single axle trailers may use either bias or radial tyres. Multiple axle trailers may use radial and bias tyres on all axles or may be intermixed so long as all tyres mounted on the same axle are of the same construction.*

9.3 Application guide

See our application guide for optimal performance of your Bridgestone tyre.

10. Care And Maintenance

10.1 Mounting and demounting

10.1.1 General

Tyre changing can be dangerous and should be done by trained personnel using proper tools and procedures.

10.1.2 Deflation and disassembly

1) *Always check the tyre/rim assembly for proper component seating prior to removing it from the vehicle.*
2) *Always deflate tyres completely by taking off the valve core before removing the tyre and rim assembly from the vehicle or the disassembly of components.*
3) *Always remove the valve core and core housing and deflate the tyre completely before servicing.*
4) *Never lean, stand or reach over the tyre/rim assembly during tyre deflation.*
5) *Never attempt to unseat beads of an inflated tyre.*
6) *Never hit the tyre or rim with a hammer.*
7) *Always follow the mounting and demounting procedures recommended by the RMA (Rubber Manufacturers Association) or ETRTO Road Safety Data Book.*

10.1.3 Assembly and inflation

1) *Always inspect the inside of the tyre for loose cords, cuts, penetrating objects, or other casing damage.*
2) *Always inspect the inside of the tyre for dirt, liquid or foreign materials and remove them before installing a tube.*
3) *Never install a buckled or creased tube.*

4) *Always use new tubes and flaps in new tyres.*

5) *Never use a tube that is larger or smaller than that specified by Bridgestone for a given tyre.*

6) *Always check to be sure that the tube is clean before installation.*

7) *Use only lubricants that are approved for tyre mounting. Never use anti-freeze, silicones or petroleum-base lubricants.*

8) *Never hit the tyre or rim with a hammer.*

9) *Always be sure that the rim components are properly seated before inflating.*

10) *Never exceed 3 p.s.i. (0.2 bar) inflation without placing the tyre/rim assembly in a safety cage or other equivalent restraining device.*

11) *Always use a safety cage or other equivalent restraining device when inflating the tyre to seat the beads and/or inflating the tyre to normal operating inflation pressure.*

12) *Always use an extension hose with a gauge and clip-on chuck to allow the operator to stand aside during inflation.*

13) *Never attempt to seat rings while the tyre is totally or partially inflated.*

14) *Never re-inflate or add inflation pressure to a flat or seriously underinflated tyre without removing and checking the tyre, tube and rim for damage.*

15) *Seriously inspect valve cores for proper air retention. Replace damaged or leaky cores.*

16) *Always inflate tyres to Bridgestone's recommended cold operating pressure.*

17) *Always use radial tubes and flaps when mounting radial tyres.*

10.2 Wheels and Rims

1) *Always select the proper tyre size and construction to match the manufacturer's rim or wheel rating and size.*

2) *Always check the rim diameter to be sure that it matches exactly the rim diameter specification molded on the tyre sidewall.*

3) *Never mount or use a damaged rim.*

4) *Always inspect and clean the rim.*

5) *Never rework, weld, heat or braze the rim.*

6) *Always be sure that rim components are properly coordinated.*

7) *Never use a rim/wheel component which cannot be identified.*

8) *Always use approved tyre rims when mounting.*

10.3 Inflation Pressure

1) *Most tyre damage is due to incorrect inflation pressure. Truck and bus tyres must be inflated according to the load they carry.*

2) *Check tyre pressure at least every two weeks using a reliable pressure gauge.*

3) *Tyre pressure checks should be made on cold tyres.*

4) *The sealing valve cap acts as a supplementary air seal and should be secured at all times.*

5) *Inflation pressure may increase as high as 20% (10 to 15 p.s.i.) during operation, which is allowed for in the tyre design. Therefore, never adjust the inflation pressure when the tyre is warm; it will return to normal as the tyre cools.*

6) *Avoid running the vehicle with under-inflated or flat tyres.*

7) *A warm tyre is under-inflated if it has less than the recommended cold inflation pressure.*

8) *Incorrect inflation pressure causes irregular tread wear. Bridgestone recommends the following in order to minimise irregular wearing:*
   1) *Always inflate tyres according to recommended cold pressures.*
   2) *When severe irregular wearing occurs under correct inflation pressure, please consult a Bridgestone technical representative or the Technical Service Section at the Bridgestone Head Office.*

10.4 Tyre Rotation

10.4.1 General

Tyre Rotation is a practical means of reducing tyre costs. Rotation can smooth out irregular tyre wear and extend tread life.

1. **Turn the tyre on the rim, whilst it remains in the same vehicle position**

   It counteracts one-sided shoulder wear and it is also beneficial in applications where the tyre is susceptible to higher amounts of sidewall wear or abrasions.

   N.B.: The reason for irregular wear should be checked.

2. **Swap wheel right to left on the same axle**

   Equalizes the effect of different wear rates due to road characteristics such as camber or sidewall abrasions from kerbs in vehicles used in predominantly urban applications.

3. **Swap wheels outside and inside**

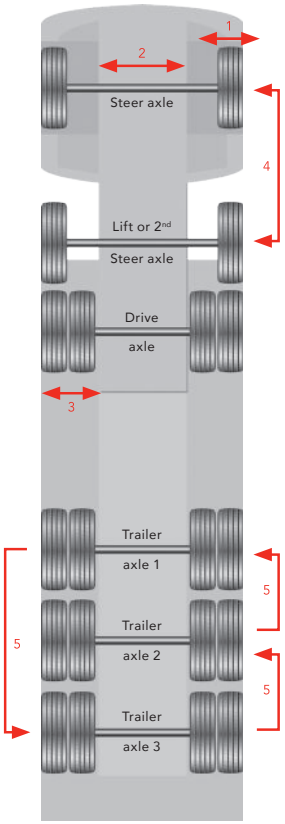
   It equalizes wear between dual tyres and brings the outer sidewall to the inside.

4. **Change from one axle to another**

   Maximizes tyre life between 1st and 2nd axles for 6 X 2 vehicles where there are differences in cornering forces lead to higher wear rates at the steer axle.

5. **Re-position trailer tyre 1st axle to 3rd axle, 3rd to 2nd and 2nd to 1st axle**

   Maximises life and resistance to irregular wear across all trailer axles.



10.5 Damage

1) *Ignoring tyre damage is dangerous.*
2) *Repair tyre damage as soon as possible in order to avoid further deterioration of the tyre structure.*

10.6 Minimum tread depth

Bridgestone recommends removing a tyre at 3mm of remaining tread depth (RTD). However different minimum legal remaining tread depths are set in different countries, so each country should follow local regulations as well as fleet's specifications (or signed agreement) to agree on end of life removal.

10.7 Regrooving

Regrooving beyond the original pattern depth is permitted provided there is sufficient rubber left to protect the tyre casing. Before regrooving a tyre, check that the word "REGROOVABLE" is molded on the sidewall.

Note: For further information, please consult a Bridgestone technical representative or the Technical Service Section at the Bridgestone Head Office.

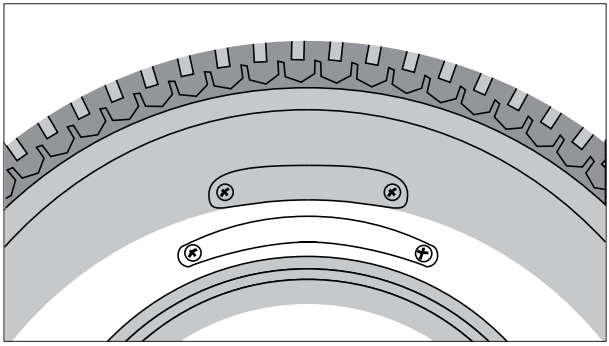
10.8 Repair and Retreading

Firestone casings can be repaired and/or retreaded. Always have a specialist carefully examine the casing to determine its retreadability. Bridgestone recommends the Bandag retreading process.

10.9 Branding

The location for branding a tyre must be chosen carefully because of the thin sidewall gauge.

1) *Branding between the rim line and the size-panel line in the white area shown in the following picture is the most advisable location.*
2) *Allowed depth of branding on the above mentioned location is 0.5 mm maximum.*
3) *For radial ply tyres, never brand on the sidewalls critical flexing areas, which are near the maximum section width.*



10.10 Storage

1) *For prolonged storage of tyres, note the following:*
   1) *Never store tyres in direct sunlight or near heat sources. Keep tyres away from motors and generators which yield ozone.*
   2) *Keep tyres away from oils and chemicals.*
2) *To prevent permanent deformation of tyres when stacking horizontally, limit each stack to a maximum of approx. 1.5 m.*
3) *For all-steel radial tyres, excessive moisture permeation may cause deterioration of the tyre structure and possibly cause tyre failure.*
   Bridgestone recommends the following methods:
   1) *Store unmounted tyres indoors in a dry location away from moisture.*
   2) *Before mounting a tyre on a rim or a wheel, be sure that the tyre's inside surface, tube flap and the inside surface of the rim or wheel are dry and clean.*
   3) *Keep compressed air sources for tyre inflation free of moisture.*

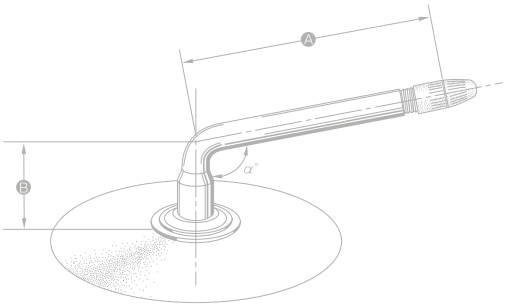
11. Types Of Valves

SCREW-ON UNIVERSAL VALVES

11.1 Screw on valve

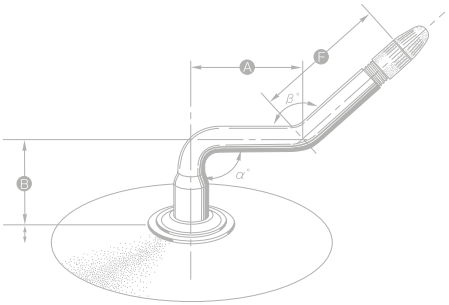
11.1.1 Single bend screw-on universal valves

Valves No.	Dimensions (mm)		
	A	B	α°
V3-02-2	43	22.5	120
V3-02-3	44.5	33	95
V3-02-5	47.5	20.5	90
V3-02-7	71.5	22.5	100
V3-02-8	89.5	20.5	94
V3-02-9	99.5	20.5	94
V3-02-10	115	20.5	94
V3-02-11	126	20	98
V3-02-12	132	20.5	94
V3-02-13	133.5	20.5	90
V3-02-14	138.5	20.5	94
V3-02-15	145.5	20.5	94
V3-02-16	149.5	20.5	90
V3-02-17	156.5	20.5	90
V3-02-18	74.5	22.5	90
V3-02-19	60	20.5	94
V3-02-23	66.5	29.5	90
V3-02-24	117	20.5	90
V3-02-27	75	20.0	94



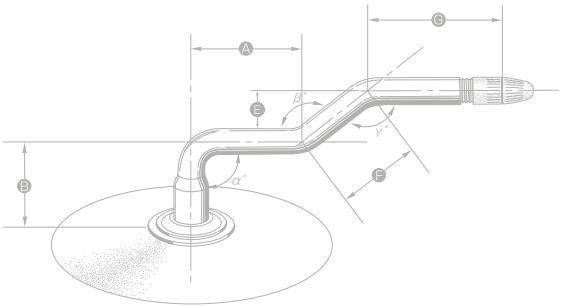
11.1.2 Double bend screw-on universal valves

Valves No.	Dimensions (mm)				
	A	B	F	α°	β°
V3-04-1	32	20.5	37	90	138
V3-04-2	38	20.5	41.5	90	153
V3-04-3	59	20	38.5	94	163
V3-04-4	74	20	40	94	144
V3-04-5	76	20	47.5	90	153
V3-04-6	86	20	47.5	90	153
V3-04-10	47	20.5	53	90	154
V3-04-11	47	20.5	63.5	90	154
V3-04-17	65	20	45	90	160
V3-04-24	58	20	47	94	164
V3-04-26	99	20	42	99	189



11.1.3 Triple bend screw-on universal valves

Valves No.	Dimensions (mm)							
	A	B	E	F	G	α°	β°	γ°
V3-06-1	30.5	20.5	17	19.5	35.5	90	139	139
V3-06-2	44.5	20.5	17	12	37.5	90	125	125
V3-06-3	46	20.5	17	20.5	47.5	90	140	140
V3-06-5	62.5	20.5	17	19.5	49	90	139	139
V3-06-6	79.5	20	17	19.5	37.5	90	139	139
V3-06-7	45.5	20.5	17	18.5	42.5	90	137	137
V3-06-8	61.5	24.5	7.5	14.5	50.5	94	153	153
V3-06-9	67.5	20.5	17	19.5	54.5	90	139	139
V3-06-12	71.5	23.5	11.5	19.5	25.5	90	150	150
V3-06-14	50	20	7	13	40	94	153	153
V3-06-15	60	20	7	13	40	94	153	153
V3-06-16	62	20	7	13	50	94	153	153
V3-06-17	75	20	7	13	50	94	153	153



12. Dual Spacing & Rim Widths

12.1 Recommended minimum dual spacing sizes on 5° tapered or Flat-Base Rims

Dual spacing specifies the distance between the centre lines of tyres in dual fitment.

Nominal Tyre Section	Rim Width Code	Recommended Minimum Dual Spacing (mm)
9.00	6.00	285
	6.50	291
	7.00	297
	7.50	302
10.00	6.50	305
	7.00	311
	7.33	314
	7.50	316
	8.00	322
11.00	7.33	321
	7.50	323
	8.00	329
	8.50	335
	9.00	340
12.00	7.33	346
	8.00	354 [1]
	8.50	360
	9.00	366
14.00	9.00	414
	10.00	426
325	8.50	368
	9.00	374
	10.00	386
335	8.50	377
	9.00	383
	10.00	394
385	9.00	424
	10.00	436

1) 344 mm may be allowed for some tyres in certain countries.

12.2 Recommended minimum dual spacing sizes on 15° drop-centre Rims

Dual spacing specifies the distance between the centre lines of tyres in dual fitment.

Nominal Tyre Section	Rim Width Code	Recommended Minimum Dual Spacing (mm)
	"60" Metric Series	
285/60	8.25	313
	9.00	321
295/60	9.00	329
	9.75	338
305/60	9.00	336
	9.75	344
315/60	9.00	344
	9.75	352
	"70" - "75" and "80" Metric Series	
205	5.25	222
	6.00	231
	6.75	239
215	6.00	239
	6.75	246
225	6.00	246
	6.75	254
235	6.75	262
	7.50	271
245	6.75	270
	7.50	279
255	6.75	278
	7.50	287
	8.25	295
265	6.75	286
	7.50	295
	8.25	303
275	7.50	303
	8.25	311
285	7.50	311
	8.25	318
	9.00	327
295	8.25	326
	9.00	335
305	8.25	334
	9.00	343
315	9.00	351
	9.75	360

Nominal Tyre Section	Rim Width Code	Recommended Minimum Dual Spacing (mm)
Normal Section Sizes		
8	6.00	234
	6.75	243
8.5	5.25	233
	6.00	242
	6.75	251
9	6.00	250
	6.75	259
9.5	6.00	261
	6.75	270
10	6.75	277
	7.50	286
11	7.50	305
	8.25	314
12	8.25	329
	9.00	338
13	9.00	351
	9.75	360

12.3 Recommended minimum dual spacing free rolling sizes

Dual spacing specifies the distance between the centre lines of tyres in dual fitment.

Nominal Tyre Section	Rim Width Code	Recommended Minimum Dual Spacing (mm)
9.5 R 17.5	6.00	261
	6.75	270
10 R 17.5	6.75	277
	7.50	286
205/65 R 17.5	6.00	231
	6.75	239
245/70 R 17.5 & 245/70 R 19.5	6.75	270
	7.50	279
265/70 R 19.5	7.50	295
	8.25	303
285/70 R 19.5	8.25	318
	9.00	327
215/75 R 17.5	6.00	239
	6.75	246
235/75 R 17.5	6.75	262
	7.50	271

TECHNOLOGY GUIDE

Function		Benefit
	Blocks interlocking and deformation reduction.	Wear-up and irregular wear decrease.
	C.T.D.M. optimises the casing contour for various performance factors.	Improved handling. Improved retreadability. Improved irregular wear. Improved wear life. Lower fuel consumption.
	Improves wet/winter performance as well as reducing stone retention.	Excellent handling. Improved casing value.
	Combats the likelihood of river wear and other irregular wear types occuring on the tyres' inner ribs.	Improved wear life through reduced irregular wear.
	Reduces noise.	Driver's comfort. Help to meet severest noise regulation standards.
	Reduces wear energy. Better control of the block movements.	Increased mileage. Reduced fuel consumption.
	Protects casing against sidewall damage from kerbs and other road hazards.	Longer casing life. Higher retreadability and casing value.
	Reduced bead filler volume and tyre weight (~1,5 Kg) without compromising the tyre durability.	Fuel savings.
	Reduces irregular wear. Stable cornering behaviour.	Longer tyre life.
	Eject stones from the ribs.	Reduction in stone drilling. Improved casing retreadability and value.
	The tie-bars between the tread blocks in the shoulder area increases circumferential stiffness.	The increased stiffness minimises heel and toe wear which leads to a longer service life, reduction of the need to turn the tyres to even the wear and reduction of tyre maintenance costs. Quiet running with less heel and toe wear.
	Disperses water quickly away from the centre of the tyre and into the main grooves allowing a full footprint in wet conditions.	High level of wet handling and braking for improved ride comfort and safety.
	The Variable Depth Sipes give a higher density of siping in the tread.	High traction for improved wet performance, especially braking. Solid ribs means high level of handling performance.
	Reduces the noise generated by a regular pattern spacing. The overall noise level is reduced by spreading the frequency range.	Noise level reduced both externally and internally to the vehicle. Comfort improved, especially in bus & coaches.
	Increases casing stability and durability.	Higher load capability. Higher casing retreadability and value.

Enliten Technology

ENLITEN is a combination of cutting-edge technologies. Providing improved sustainability characteristics and Enhance TCO. Without compromising on Safety and Outstanding tyre performance.

SAFETY

Safety will always be our number one priority on which we will not compromise. That is why we develop tyres in a way to ensure the highest levels of safety in dry, wet & snow conditions.

SUSTAINABILITY

ENLITEN enables a lower environmental impact through CO_2 emissions reduction, resource efficiency and material circularity.

PERFORMANCE

Our tyres offer outstanding performance in the focus area of each product, delivering on the criteria that matter most to the customer.

NOTES


TYRE DATA
ON ROAD

FS424 / FS424 EVO

ENLITEN

STEER

» **Longer mileage.** Increased mileage from 10% to 21% compared to predecessor. [1)]

» **All year-round operational.** Wet Grip Label grades in line with competitors. Winter ready with 3PMSF.

» **Competitive fuel efficiency.** RRC label grades in line with competitors. Reduced Rolling Resistance 8% to 15% compared to predecessor. [1)]

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
295/80 R 22.5	152/148 M	Available soon											
315/80 R 22.5	156/150 L	314	1067	496	3243	9.00	9.75	C	B	69	A	✔	✔
	154/150 M												
315/70 R 22.5	154/150 L	314	1014	468	3083	9.00	9.75	B	B	71	A	✔	✔
	152/148 M												
385/65 R 22.5	160 K	Available soon										✔	✔
	158 L												
385/55 R 22.5	160 K	Available soon										✔	✔
	158 L												
FS424 EVO													
315/70 R 22.5	156/150 L	312	1014	468	3082	9.00	9.75	C	B	70	A	✔	✔
	154/150 M												
385/65 R 22.5	164 K	Available soon										✔	✔
	158 L												

C.T.D.M. SLIM BEAD VDS VPS WAVED BELT

1) Based on internal benchmark improvement vs. predecessor line-up (FS422 Plus). Results can vary depending on the road conditions, weather, pattern and size.

NEW

FS422 PLUS EVO

STEER

- Improved rolling resistance [1] and up to 10% greater mileage [1] thanks to the latest compound technologies.
- The Equalizer Rib Design in combination with the multiple sipes provides high resistance to irregular wear as well as excellent wet and dry handling.
- Extend the life of your tyres even further with robust, retreadable casings.
- Enjoy a smooth, comfortable and quiet ride with noisedampening Groove Fences and Variable Pitch Sipes.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
295/80 R 22.5	154/149 M	305	1044	486	3172	9.00	8.25	C	B	A	68	✔	✔

ERD | GROOVE FENCE | SLIM BEAD | SQUARE SHOULDER | STONE EJECTOR | VPS | WAVED BELT

1) Compared to its predecessor, the Firestone FS422.

FD624
ENLITEN

DRIVE

» **Longer mileage.** Increased mileage from 10% to 21% compared to predecessor. [1)]

» **All year-round operational.** Wet Grip Label grades in line with competitors. Winter ready with 3PMSF.

» **Competitive fuel efficiency.** RRC label grades in line with competitors.
Reduced Rolling Resistance 8% to 15% compared to predecessor. [1)]

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
295/80 R 22.5	152/148 M	Available soon										✔	✔
315/80 R 22.5	156/150 L	314	1078	501	3277	9.00	9.75	C	C	74	B	✔	✔
	154/150 M												
315/70 R 22.5	154/150 L	314	1024	472	3113	9.00	9.75	C	C	74	B	✔	✔
	152/148 M												
295/60 R22.5		Available soon										✔	✔

3D SIPES · C.T.D.M. · LOW ENERGY PATTERN · SLIM BEAD · TIE BAR · UNI DIRECTIONAL · VPS · WAVED BELT

1) Based on internal benchmark improvement vs. predecessor line-up (FD622 Plus). Results can vary depending on the road conditions, weather, pattern and size.

FT524 / FT524 EVO

ENLITEN

TRAILER

» **Longer mileage.** Increased mileage from 10% to 21% compared to predecessor. [1)]

» **All year-round operational.** Wet Grip Label grades in line with competitors. Winter ready with 3PMSF.

» **Competitive fuel efficiency.** RRC label grades in line with competitors. Reduced Rolling Resistance 8% to 15% compared to predecessor. [1)]

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
385/65 R 22.5	160 K 158 L	Available soon										✔	✔
385/55 R 22.5 [2)]	160 K 158 L	386	999	465	3037	12.25	11.75	B	B	A	70	✔	✔
FT524 EVO													
385/65 R 22.5 [2)]	164 K 158 L	381	1076	498	3271	11.75	12.25	B	B	70	A	✔	✔

C.T.D.M. | SLIM BEAD | SQUARE SHOULDER | WAVED BELT

1) Based on internal benchmark improvement vs. predecessor line-up (FT522 Plus). Results can vary depending on the road conditions, weather, pattern and size.
2) FRT marked tyre.

TSP3000

TRAILER

- Highly durable trailer tyre.
- Good resistance to irregular wear for excellent mileage.
- Quality casings ideal for regrooving and retreading.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
9.5 R 17.5	143/141 J	232	844	392	2564	6.75	6.00	D	D	B	72	✔	✔
215/75 R 17.5	135/133 K	212	776	363	2359	6.00	6.75	E	C	B	71	✔	✔
235/75 R 17.5	143/141 J	238	805	375	2447	6.75	7.50	D	D	A	70	✔	✔
	144/144 F												
245/70 R 17.5	143/141 J	252	797	368	2423	7.50	6.75	D	D	B	71	✔	✔
	146/146 F												
265/70 R 19.5	143/141 K	250	870	402	2644	7.50	8.25	D	B	A	70	✔	✔
285/70 R 19.5	150/148 J	265	890	410	2705	8.25	7.50	D	C	A	70	✔	✔
425/65 R 22.5	165 K	416	1137	523	3456	13.00	14.00	C	D	A	70	✔	✔


TYRE DATA
LIGHT & MEDIUM TRUCKS

LIGHT & MEDIUM TRUCKS

FS411

STEER

- Take corners with ease while extending the life of your tyres thanks to the FS411's square shoulder design.
- Avoid wear and damage from stones courtesy of built-in stone ejectors.
- Enjoy a smooth and comfortable ride thanks to noise-dampening groove fences.
- Proven year-round safety with alpine and M+S markings.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
205/75 R 17.5	124/122 M	205	748	351	2274	6.00	5.25/6.75	C	B	B	72	✔	✔
215/75 R 17.5	126/124 M	213	761	357	2313	6.00	6.75	C	B	B	72	✔	✔
225/75 R 17.5	129/127 M	231	777	364	2362	6.75	6.00	C	B	A	70	✔	✔
235/75 R 17.5	132/130 M	238	791	370	2404	6.75	7.50	C	B	A	71	✔	✔
245/70 R 17.5	136/134 M	251	788	364	2395	7.50	6.75	C	B	B	72	✔	✔
245/70 R 19.5	136/134 M	242	833	387	2532	7.50	6.75	C	B	B	72	✔	✔
265/70 R 19.5	140/138 M	252	859	398	2611	7.50	6.75/8.25	C	B	A	71	✔	✔
285/70 R 19.5	145/143 M	270	887	409	2696	8.25	7.50/9.00	C	B	B	72	✔	✔

C.T.D.M. | GROOVE FENCE | SQUARE SHOULDER | STONE EJECTOR | VPS | SLIM BEAD [1)]

1) Only available for 215/75 R 17.5.

FD611

DRIVE

- Drastically reduce premature wear thanks to integrated tie bars.
- Count on reliable wet braking, even on winter roads, with the FD611's unidirectional tread.
- Great value for money backed by the quality and reliability of the Bridgestone group.
- Proven year-round safety with alpine and M+S markings.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
205/75 R 17.5	124/122 M	205	748	351	2275	6.00	5.25/6.75	D	C	A	73	✔	✔
215/75 R 17.5	126/124 M	213	763	357	2318	6.00	6.75	C	B	A	72	✔	✔
225/75 R 17.5	129/127 M	231	778	364	2365	6.75	6.00	C	B	A	72	✔	✔
235/75 R 17.5	132/130 M	238	791	370	2404	6.75	7.50	D	B	A	72	✔	✔
245/70 R 17.5	136/134 M	251	785	363	2386	7.50	6.75	C	B	B	74	✔	✔
245/70 R 19.5	136/134 M	242	833	387	2532	7.50	6.75	D	B	B	75	✔	✔
265/70 R 19.5	140/138 M	252	865	400	2629	7.50	6.75/8.25	C	B	A	72	✔	✔
285/70 R 19.5	145/143 M	270	889	410	2702	8.25	7.50/9.00	C	B	B	75	✔	✔

C.T.D.M. SLIM BEAD TIE BAR UNI DIRECTIONAL VPS

NOTES


TYRE DATA
ON/OFF ROAD

ON/OFF ROAD

FS833

STEER

- Durable, reinforced compounds deliver long-lasting performance.
- Robust construction minimises the risk of cuts and chips.
- The rib lug pattern design gives you the steering and the grip you need.
- Retreadable casings extend the life of your tyres even further.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
13 R 22.5	156/150 K	316	1127	522	3426	9.75	9.00	C	B	A	70	✔	✔
315/80 R 22.5	156/150 K	310	1081	502	3284	9.00	9.75	C	B	A	70	✔	✔

SLIM BEAD

TIE BAR

UT3000 PLUS

ALL POSITION

- Superb traction both on and off the road.
- High resistance to cutting and chipping, even in harsh conditions.
- Highly durable tread and casing compound to help you get the most from your tyres.
- Excellent retreadability for an even longer lifespan.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
11 R 22.5	148/145 K	272	1059	493	3219	8.25	7.50	E	C	A	70	✔	✔
12 R 22.5	152/148 K	292	1089	506	3310	9.00	8.25	D	C	B	72	✔	✔
295/80 R 22.5	152/148 K	296	1059	493	3219	9.00	8.25	D	C	B	71	✔	✔

ON/OFF ROAD

FD833

DRIVE

- Really grips the surface thanks to great traction.
- New compound ensures high resistance to cuts and chips.
- Deep & wide tread blocks truly go the distance.
- Cleans itself as you drive for consistent performance.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
13 R 22.5	156/150 K	315	1134	525	3447	9.75	9.00	D	B	D	75	✔	✔
315/80 R 22.5	156/150 K	308	1092	507	3319	9.00	9.75	D	B	D	75	✔	✔

SLIM BEAD

TIE BAR

FT833

TRAILER

- Great ON/OFF capabilities to tackle any surface condition with confidence.
- Long tyre life thanks to solid resistance to irregular wear.
- Durable casings deliver high payloads and high mileage.
- High resistance to cutting and chipping, so you can just focus on job at hand.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
385/65 R 22.5	160 K	378	1083	501	3292	11.75	12.25	C	B	B	71	✔	✔

ON/OFF ROAD

TMP3000

TRAILER

- Long-lasting performance, even in tough conditions.
- Very even-wearing tyre for performance you can count on, again and again.
- Durable tread and casing compound, ensuring excellent mileage.
- High resistance to cutting and chipping, making it ideal for ON/OFF applications.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
265/70 R 19.5	143/141 J	252	877	405	2666	7.50	8.25	E	C	B	73	✔	
275/70 R 22.5	148/145 K	273	974	452	2961	8.25	7.50	D	D	A	71	✔	
445/65 R 22.5	169 K	456	1162	534	3532	14.00	9.75	D	C	B	72	✔	


TYRE DATA
CITY BUS

CITY BUS

FS492

ALL POSITION

- Durable construction for long-lasting performance.
- Reliable grip in all conditions, all year round.
- Robust, highly retreadable casings.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional				dB	M+S	
275/70 R 22.5	152/148 J 150/148 K	275	959	446	2917	7.50	8.25	D	C	A	71	✔	✔

SIDE GUARD

VDS

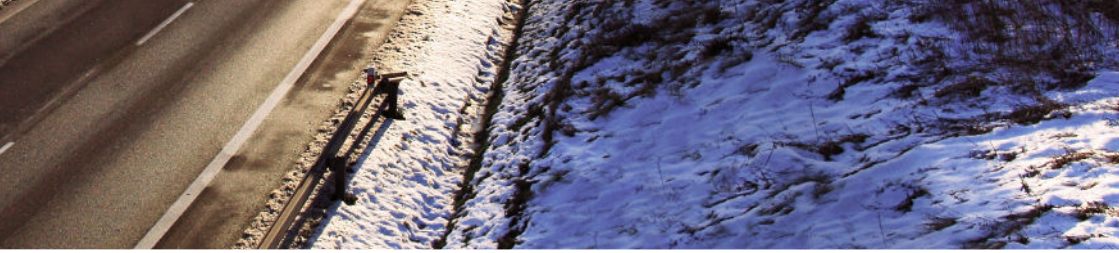

TYRE DATA
WINTER

ROADHAWK WINTER STEER

STEER

- Winter driving performance for reliable handling in mild snow and wet conditions.
- Resistance against irregular wear.
- Suitable and optimized for all year round driving.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional	dB	M+S	
385/65 R 22.5	160 K	Available soon							✔	✔
	158 L									
385/55 R 22.5	160 K	Available soon							✔	✔
	158 L									



ROADHAWK WINTER DRIVE

DRIVE

- Winter driving performance for reliable traction in snow conditions.
- Anti-slip blocks for adequate stability and wet-weather handling.
- Suitable and optimized for all year round driving.

Size	Load/Speed Index	Section Width (mm)	Diameter (mm) Overall	Static Loaded Radius (mm)	Rolling Circ. (mm) @ 90 km/h (Tol, ± 2%)	Rim (Inch) Measuring	Rim (inch) Optional	dB	M+S	
315/80 R 22.5	154/150 M	Available soon							✔	✔
	156/150 L									
315/70 R 22.5	152/148 M	Available soon							✔	✔
	154/150 L									

NOTES

TYRE DATA
VAN TYRES

VAN TYRES

VANHAWK 2

SUMMER

» Outstanding fuel economy, rolling resistance and wet-weather handling.

» Engineered to keep on performing with robust construction and long wear life.

» Competitive total cost of ownership to give you an extra advantage.

Size	Load/Speed Index				dB	M+S	
195/70 R 15 C	104/102 R	C	B	B	71		
205/70 R 15 C	106/104 R	C	B	B	72		
215/70 R 15 C	109/107 S	C	B	B	72		
225/70 R 15 C	112/110 S	C	B	B	71		
205/65 R 15 C	102/100 T	C	B	B	72		
215/65 R 15 C	104/102 T	C	B	B	71		
175/75 R 16 C	101/99 R	C	B	B	72		
185/75 R 16 C	104/102 H	C	B	B	71		
195/75 R 16 C	107/105 R	C	B	B	71		
205/75 R 16 C	110/108 R	C	B	B	72		

Size	Load/Speed Index				dB	M+S	
215/75 R 16 C	113/111 R	C	B	B	72		
195/65 R 16 C	104/102 T	C	B	B	72		
205/65 R 16 C	107/105 T	C	B	B	72		
215/65 R 16 C	109/107 T	C	B	B	71		
215/65 R 16 C	106/104 T	C	B	B	71		
225/65 R 16 C	112/110 R	C	B	B	71		
235/65 R 16 C	115/113 R	C	B	B	71		
195/60 R 16 C	99/97 H	C	B	B	71		
215/60 R 16 C	103/101 T	C	B	B	72		

VANHAWK MULTISEASON

ALL SEASON

» Optimised fuel efficiency. [1)]

» Winter ready. [2)]

Size	Load/Speed Index				dB	M+S	
195/70 R 15 C	104/102 R	C	B	A	72	✔	✔
215/70 R 15 C	109/107 S	C	B	A	73	✔	✔
225/70 R 15 C	112/110 S	C	B	A	73	✔	✔
215/65 R 15 C	104/102 T	C	B	A	73	✔	✔
185/75 R 16 C	104/102 R	C	B	A	72	✔	✔
195/75 R 16 C	107/105 R	C	B	A	72	✔	✔
	110/108 R						
205/75 R 16 C	110/108 R	C	B	A	72	✔	✔
215/75 R 16 C	113/111 R	C	B	A	73	✔	✔
	116/114 R						

Size	Load/Speed Index				dB	M+S	
225/75 R 16 C	121/120 R	C	B	A	73	✔	✔
195/65 R 16 C	104/102 T	C	B	A	72	✔	✔
205/65 R 16 C	107/105 T	C	B	A	72	✔	✔
215/65 R 16 C	106/104 T	C	B	A	73	✔	✔
	109/107 T						
225/65 R 16 C	112/110 R	C	B	A	73	✔	✔
235/65 R 16 C	115/113 R	C	B	A	73	✔	✔
	121/119 R						
195/60 R 16 C	99/97 H	C	B	A	72	✔	✔
215/60 R 16 C	103/101 T	C	B	A	73	✔	✔

1) RRC label C.
2) Certified for snow with 3PMSF.

VANHAWK 2 WINTER

WINTER

- Outstanding performance in snow and ice. [1)]
- Robust construction and high mileage potential.
- Enhanced wet grip and braking. [2)]

Size	Load/Speed Index				dB	M+S	
165/70 R14 C	89/87 R	D	B	A	72	✔	✔
175/65 R14 C	90/88 T	E	B	A	72	✔	✔
195/70 R15 C	104/102 R	D	B	A	72	✔	✔
205/70 R15 C	106/104 R	D	B	A	72	✔	✔
215/70 R15 C	109/107 R	D	B	B	73	✔	✔
225/70 R15 C	112/110 R	D	B	B	73	✔	✔
205/65 R15 C	102/100 T	D	B	A	72	✔	✔
185/75 R16 C	104/102 R	D	B	A	72	✔	✔
195/75 R16 C	107/105 R	D	B	A	72	✔	✔
205/75 R16 C	110/108 R	D	B	A	72	✔	✔
215/75 R16 C	113/111 R	D	B	B	73	✔	✔

Size	Load/Speed Index				dB	M+S	
225/75 R16 C	121/120 R	D	B	B	73	✔	✔
195/65 R16 C	104/102 T	D	B	A	72	✔	✔
205/65 R16 C	107/105 T	D	B	B	73	✔	✔
215/65 R16 C	106/104 T 109/107 T	D	B	B	73	✔	✔
225/65 R16 C	112/110 R	D	B	B	73	✔	✔
235/65 R16 C	115/113 R	D	B	B	73	✔	✔
195/60 R16 C	99/97 T	E	B	A	72	✔	✔
215/60 R16 C	103/101 T	D	B	B	73	✔	✔
215/60 R 16 C	103/101 T	C	B	B	72		

1) Certified for snow with 3PMSF.
2) Compared to Vanhawk Winter.

TECHNICAL
DATA CHART

TECHNICAL DATA CHART

Size	Load index	Speed Symbol (km/h)	BAR		4.50	4.75	5.00	5.25	5.50	5.75
			PSI		65	69	73	77	80	84
			LI	S/D						
17.5"										
70 Series										
245/70 R 17.5	143/141	J (100)	143	S						
			141	D						
75 Series										
205/75 R 17.5	124/122	M (130)	124	S	2130	2230	2320	2410	2500	2590
			122	D	3990	4170	4340	4520	4690	4860
215/75 R 17.5	126/124	M (130)	126	S	2390	2500	2600	2710	2810	2910
			124	D	4500	4700	4890	5090	5280	5470
	135/133	J (100)	135	S						
			133	D						
225/75 R 17.5	129/127	M (130)	129	S			2750	2860	2970	3080
			127	D			5210	5410	5620	5820
235/75 R 17.5	143/141	J (100)	143	S						
			141	D						
	132/130	M (130)	132	S	2590	2710	2820	2930	3050	3160
			130	D	4920	5140	5360	5570	5780	5990
245/70 R 17.5	136/134	M (130)	136	S						
			134	D						
Standard Series										
9.5 R 17.5	143/141	J (100)	143	S						
			141	D						
	129/127	M (130)	129	S			2680	2790	2890	3000
			127	D			5070	5270	5470	5660
19.5"										
70 Series										
245/70 R 19.5	136/134	M (130)	136	S						
			134	D						
265/70 R 19.5	140/138	M (130)	140	S		3380	3530	3670	3810	3940
			138	D		6390	6650	6920	7180	7440
	143/141	J (100)	143	S						
			141	D						
285/70 R 19.5	145/143	M (130)	145	S						
			143	D						
	150/148	J (100)	150	S						
			148	D						

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00
87	90	94	98	102	106	109	112	116	120	123	127	131
			4430	4560	4690	4820	4950	5080	5200	5330	**5450**	
			8370	8620	8870	9110	9350	9590	9830	10070	**10300**	
2680	2770	2860	2950	3030	3120	**3200**						
5020	5190	5360	5520	5680	5840	**6000**						
3010	3110	3210	3310	**3400**								
5660	5850	6040	6220	**6400**								
			3630	3740	3840	3950	4050	4160	4260	**4360**		
			6860	7060	7260	7460	7660	7850	8050	**8240**		
3190	3290	3400	3500	3600	**3700**							
6020	6220	6420	6620	6810	**7000**							
			4430	4560	4690	4820	4950	5080	5200	5330	**5450**	
			8370	8620	8870	9110	9350	9590	9830	10070	**10300**	
3260	3370	3480	3590	3690	3800	3900	**4000**					
6200	6400	6610	6810	7010	7210	7410	**7600**					
				3840	3950	4060	4170	4270	4380	**4480**		
				7270	7470	7680	7880	8080	8280	**8480**		
			4430	4560	4690	4820	4950	5080	5200	5330	**5450**	
			8370	8620	8870	9110	9350	9590	9830	10070	**10300**	
3100	3200	3300	3410	3510	3610	**3700**						
5860	6050	6250	6440	6630	6820	**7000**						
				3930	4050	4160	4270	4380	**4480**			
				7440	7650	7860	8070	8280	**8480**			
4080	4210	4350	4480	4610	4750	4880	**5000**					
7700	7950	8210	8460	8710	8950	9200	**9440**					
			4540	4670	4800	4940	5070	5200	5330	**5450**		
			8570	8820	9070	9320	9570	9820	10060	**10300**		
						5020	5150	5280	5410	5550	5680	**5800**
						9430	9680	9920	10170	10420	10660	**10900**
			5330	5480	5640	5800	5950	6100	6250	6410	6560	**6700**
			10010	10310	10600	10890	11180	11470	11760	12040	12320	**12600**

1) Note: Loads indicated are based on the ETRTO standards and rounded down to the nearest 5 kg.

The air pressure levels given are for normal operating conditions. Under variant conditions
(such as increased load), please contact your local Firestone customer services representative.
Firestone cannot be held liable for any loss or damage for any tyre pressure below either the recommendation of Firestone or that specified by the vehicle manufacturer.

Size	Load index	Speed Symbol (km/h)	BAR		4.50	4.75	5.00	5.25	5.50	5.75
				PSI	65	69	73	77	80	84
			LI	S/D						
20"										
Standard Series										
9.00 R 20	144/142	K (110)	144	S						
			142	D						
22.5"										
55 Series										
385/55 R 22.5	160	K (110)	160	S						
65 Series										
385/65 R 22.5	158	L (120)	158	S						
	160	J (100)	160	S						
		K (110)								
425/65 R 22.5	165	K (110)	165	S						
445/65 R 22.5	169	K (110)	169	S						
70 Series										
275/70 R 22.5	148/145	K (110)	148	S						
		M (130)	145	D						
	150/148	J (100)	150	S						
			148	D						
	152/158	E (70)	152	S						
			148	D						
315/70 R 22.5	152/148	M (130)	152	S						
			148	D						
	154/150	L (120)	154	S						
			150	D						
	156/150	L (120)	156	S						
			150	D						
80 Series										
295/80 R 22.5	152/148	K (110)	152	S						
		M (130)	148	D						
315/80 R 22.5	154/150	K (110)	154	S						
		M (130)	150	D						
	156/150	J (100), K (110), L (120)	156	S						
			150	D						
Standard Series										
11 R 22.5	148/145	L (120)	148	S						
			145	D						
12 R 22.5	152/148	K (110)	152	S						
		L (120)	148	D						
13 R 22.5	156/150	K (110)	156	S						
			150	D						

6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00
87	90	94	98	102	106	109	112	116	120	123	127	131
4050	4180	4320	4440	4580	4700	4840	4970	5090	5220	5350	5480	**5600**
7660	7920	8160	8420	8660	8920	9160	9400	9640	9880	10130	10370	**10600**
					7580	7780	7990	8200	8400	8600	8800	**9000**
				7280	7490	7700	7900	8100	8300	**8500**		
6510	6730	6940	7150	7370	7580	7780	7990	8200	8400	8600	8800	**9000**
7990	8250	8520	8780	9040	9290	9550	9800	10050	**10300**			
8390	8670	8950	9220	9490	9760	10030	10300	10560	10820	11090	11350	**11600**
4550	4700	4850	5000	5150	5290	5440	5590	5730	5870	6010	6160	**6300**
8390	8670	8950	9220	9490	9760	10030	10300	10560	10820	11090	11350	**11600**
					5640	5800	5950	6100	6250	6410	6560	**6700**
					10600	10890	11180	11470	11760	12040	12320	**12600**
					5980	6140	6300	6470	6630	6790	6950	**7100**
					10600	10890	11180	11470	11760	12040	12320	**12600**
5380	5560	5730	5910	6080	6260	6430	6600	6770	6940	**7100**		
9540	9860	10170	10480	10790	11100	11400	11710	12010	12310	**12600**		
						6490	6660	6830	7000	7170	7340	**7500**
						11590	11890	12200	12500	12810	13110	**13400**
						6920	7100	7290	7470	7650	7830	**8000**
						11590	11890	12200	12500	12810	13110	**13400**
5380	5560	5730	5910	6080	6260	6430	6600	6770	6940	**7100**		
9540	9860	10170	10480	10790	11100	11400	11710	12010	12310	**12600**		
5820	6010	6200	6390	6580	6770	6950	7140	7320	**7500**			
10390	10740	11080	11420	11750	12090	12420	12750	13080	**13400**			
				6850	7050	7240	7440	7630	7820	**8000**		
				11480	11800	12130	12450	12770	13090	**13400**		
4770	4930	5090	5240	5400	5550	5700	5860	6010	6160	**6300**		
8780	9080	9360	9650	9940	10220	10500	10780	11060	11330	**11600**		
5380	5560	5730	5910	6080	6260	6430	6600	6770	6940	**7100**		
9540	9860	10170	10480	10790	11100	11400	11710	12010	12310	**12600**		
						7080	7260	7450	7640	7820	**8000**	
						11850	12170	12480	12790	13100	**13400**	

NOTES


REGROOVING
DATA

Recommendations for regrooving
Firestone steel radial tyres for trucks and buses

Introduction

Regrooving Firestone steel radial tyres for trucks and buses will ensure longer serviceability of your tyres.
Check that the word "REGROOVABLE" is molded on the tyre sidewall. If it is not, under no circumstances should regrooving be attempted.

Guidelines

1) Tyre must be demounted from the rim before regrooving.
2) Inspection:
   a. Before regrooving, check to see that there is no damage on any part of the tyre i.e. tread, shoulders, sidewalls, beads and inner liner.
   b. Remove stones which may have become embedded in the grooves, and other foreign objects such as nails from the tread.
   Repair if necessary.
   c. Particular care should be exercised when selecting a tyre for regrooving if the tread area is in any way damaged, e.g. by chipping, tearing and cutting due to abnormal operating conditions.
   d. Where a tyre has worn abnormally, it may be possible to regroove just that part of the worn tyre provided a sufficient portion of the original groove is visible before regrooving.
3) It is recommended that the minimum remaining tread depth be 3mm before regrooving.
   The tread depth should be measured around the circumference at four places to find the minimum remaining depth. Set the cutter blade according to the recommendations shown in this publication.
4) Please ensure that you regroove your Firestone steel radials to the patterns, depths and widths recommended in this publication to ensure the good service of your tyres.
5) After regrooving, check that your tyre is free from defects. It is most important to ensure that the belts under the tread have not been exposed.
6) As the number of profile grooves and tread design may vary depending on the dimensions, please contact your local Bridgestone customer services representative for further regrooving information.

Legislation

Local legislation applies regarding the use of regrooved tyres on vehicles.

Please refer to your local Bridgestone customer services representative or log on to www.bridgestone.eu and select your country of operations.

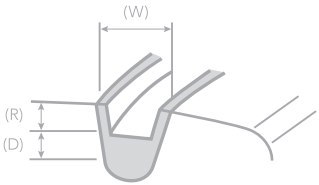
Example:

Minimum remaining tread depth = 3 mm (R)

Recommended regrooving depth = 3 mm (D)

Depth to which cutter blade is set = 6 mm (R+D)

Recommended regrooving width = W



INDEX

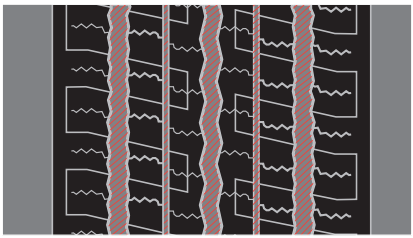
FS424 / FS424 EVO

STEER

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
295/80 R 22.5	2.0	7.0 - 10.0
315/80 R 22.5	2.0	8.0 - 10.0
315/70 R 22.5	2.0	8.0 - 10.0
385/65 R 22.5	3.0	8.0 - 10.0
385/55 R 22.5	2.0	11.0 - 13.0

FS424 EVO

315/70 R 22.5	2.0	8.0 - 10.0
385/65 R 22.5	3.0	8.0 - 10.0



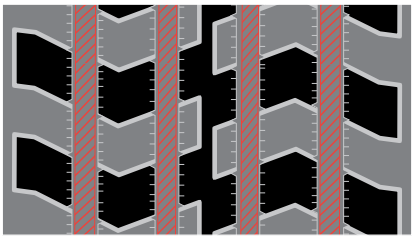
FS422 PLUS / FS422 PLUS EVO

STEER

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
295/80 R 22.5	2.0	7.0 - 8.0
315/80 R 22.5	2.0	7.0 - 8.0
315/70 R 22.5	2.0	7.0 - 8.0
385/65 R 22.5	2.0	7.0 - 8.0
385/55 R 22.5	2.0	7.0 - 8.0

FS422 PLUS EVO

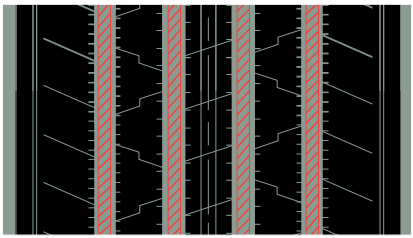
295/80 R 22.5	Available soon	Available soon
315/70 R 22.5	2.0	7.0 - 8.0



FS400

STEER

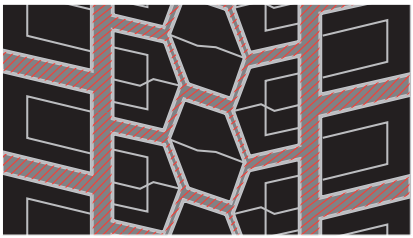
Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
9.5 R 17.5	3.0	6.0 - 7.0
285/70 R 19.5	2.5	7.0 - 8.0
12 R 22.5	2.0	7.0 - 8.0
275/70 R 22.5	2.0	7.0 - 8.0



FD624

DRIVE

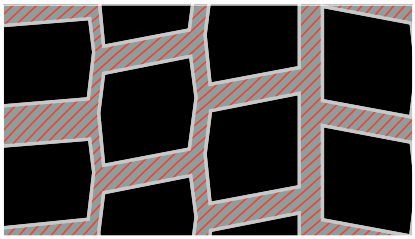
Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
295/80 R 22.5	2.0	7.0 - 9.0
315/80 R 22.5	2.0	7.0 - 9.0
315/70 R 22.5	2.0	7.0 - 9.0
295/60 R 22.5	3.0	7.0 - 9.0



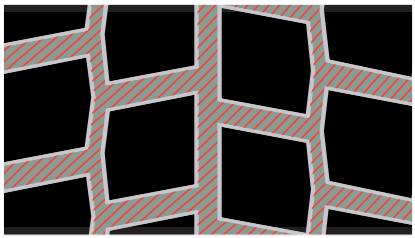
FD622 PLUS

DRIVE

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
295/80 R 22.5	2.0	7.0 - 8.0
315/80 R 22.5	2.0	7.0 - 8.0
315/70 R 22.5	2.0	7.0 - 8.0



PREFERRED



OPTIONAL

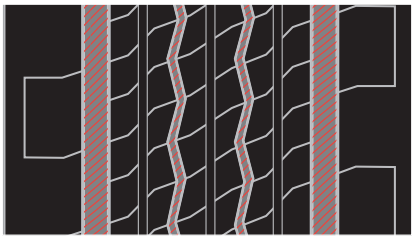
FT524 / FT524 EVO

TRAILER

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
385/65 R 22.5	2.0	11.0 - 13.0
385/55 R 22.5	2.0	14.0 - 16.0

FT524 EVO

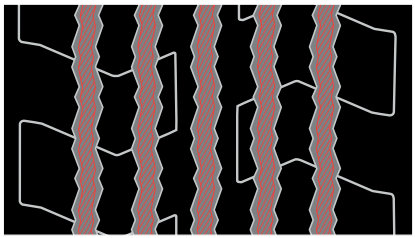
385/65 R 22.5	2.0	14.0 - 16.0



FT522 PLUS

TRAILER

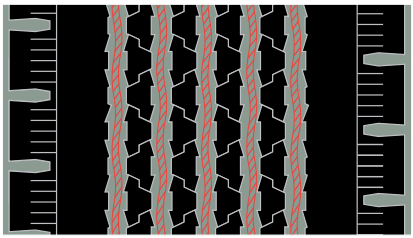
Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
385/65 R 22.5	2.0	7.0 - 8.0
385/55 R 22.5	2.0	7.0 - 8.0



TSP3000

TRAILER

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
9.5 R 17.5	2.5	7.0 - 8.0
215/75 R 17.5	3.5	7.0 - 8.0
235/75 R 17.5	2.5	7.0 - 8.0
245/70 R 17.5	1.0	7.0 - 8.0
265/70 R 19.5	2.5	7.0 - 8.0
285/70 R 19.5	4.0	7.0 - 8.0
425/65 R 22.5	3.0	8.0 MAX

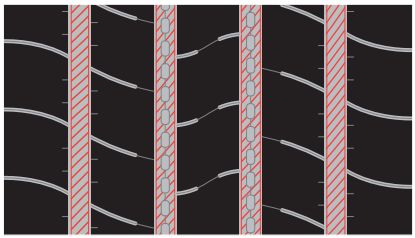


LIGHT & MEDIUM TRUCKS

FS411

STEER

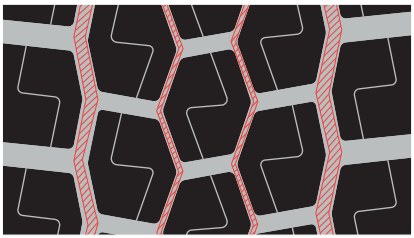
Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
205/75 R 17.5	1.0	6.0 - 7.0
215/75 R 17.5	1.0	6.0 - 7.0
225/75 R 17.5	1.0	6.0 - 7.0
235/75 R 17.5	1.0	6.0 - 7.0
245/70 R 17.5	1.0	6.0 - 7.0
245/70 R 19.5	1.0	6.0 - 7.0
265/70 R 19.5	1.0	7.0 - 8.0
285/70 R 19.5	1.0	7.0 - 8.0



FD611

DRIVE

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
205/75 R 17.5	1.0	6.0 - 7.0
215/75 R 17.5	1.0	6.0 - 7.0
225/75 R 17.5	1.0	6.0 - 7.0
235/75 R 17.5	1.0	6.0 - 7.0
245/70 R 17.5	1.0	6.0 - 7.0
245/70 R 19.5	1.0	6.0 - 7.0
265/70 R 19.5	1.0	6.0 - 7.0
285/70 R 19.5	1.0	6.0 - 7.0

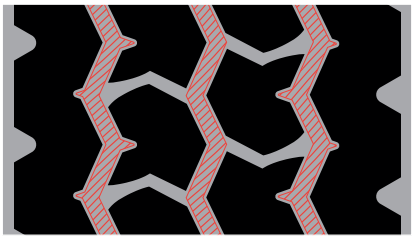


ON/OFF ROAD

FS833

STEER

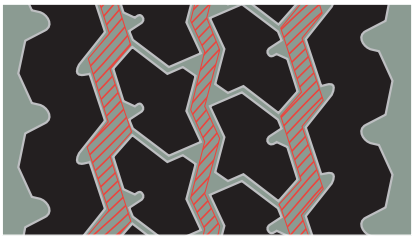
Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
13 R 22.5	3.5	8.0 MAX
315/80 R 22.5	3.5	8.0 MAX



UT3000 PLUS

ALL POSITION

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
11 R 22.5	4.0	9.0
12 R 22.5	4.0	8.0 MAX
295/80 R 22.5	4.0	8.0 MAX

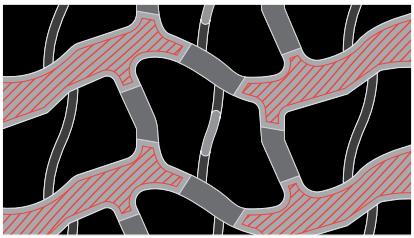


ON/OFF ROAD

FD833

DRIVE

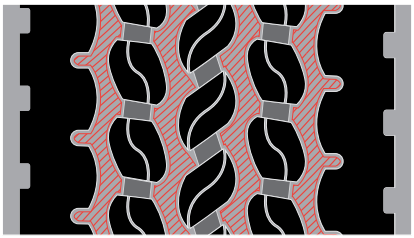
Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
13 R 22.5	2.5	8.0 MAX
315/80 R 22.5	3.0	8.0 MAX



FT833

TRAILER

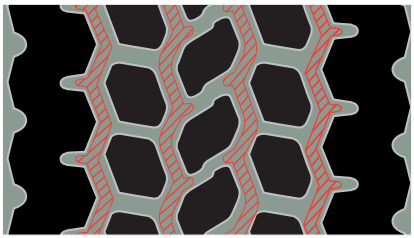
Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
385/65 R 22.5	3.0	8.0 MAX



TMP3000

TRAILER

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
265/70 R 19.5	3.5	8.0 MAX
275/70 R 22.5	4.0	8.0 MAX
445/65 R 22.5	3.0	8.0 MAX

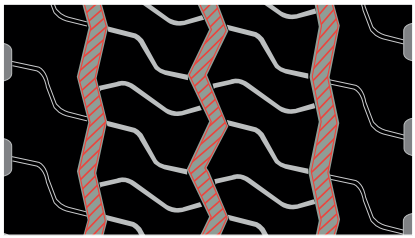


CITY BUS

FS492

ALL POSITION

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
275/70 R 22.5	2.0	8.0 MAX



WINTER

ROADHAWK WINTER STEER

STEER

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
385/65 R 22.5	Available soon	Available soon
385/55 R 22.5	Available soon	Available soon

ROADHAWK WINTER DRIVE

DRIVE

Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
315/80 R 22.5	Available soon	Available soon
315/70 R 22.5	Available soon	Available soon

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