



DATA & REGROOVING BOOK
TRUCK, BUS & VAN TYRES

2020

INTRODUCTION



This manual has been prepared to help you obtain the maximum safety and value from Firestone tyres. While not completely comprehensive, it provides useful definitions, advice on proper selection and care, and lists the detailed specifications of a wide range of patterns and sizes.

We hope that you will get the very most out of our high quality products.

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The protection of our copyrights and tyre designs is a crucial aspect of our business. Therefore, we will take legal measures against any production or distribution of counterfeit products which infringe our copyrights or designs, as well as against other unfair business practices.

Due to the constant advance of tyre technology, the contents of this publication are subject to change without notice.

GENERAL CONTENT

General Information	6
1. Tyre Sidewall Information	6
2. Tyre Size Designations	7
3. Tyre Dimensions	7
4. Load Index	8
5. Speed Symbol	11
6. Pressure Unit Conversion Table	11
7. FRT Marking	12
8. M+S and Alpine Markings	12
9. Tyre Selection	12
10. Care and Maintenance	13
11. Types of Valves	17
12. Dual Spacing & Rim Widths	19
Info	22
Technology Guide	22
Application Data	23
On Road	23
Light & Medium Trucks	31
On/Off Road	35
City Bus	41
Van Tyres	43
Technical Data Chart	47
Regrooving Data	53
Bridgestone Addresses	70
Alphabetical Index	72

INDEX

Application Data 23

ON ROAD

FS422 PLUS 24

FS400 25

FD622 PLUS 26

FD600 27

FT522 PLUS 28

TSP3000 29

LIGHT & MEDIUM TRUCKS

FS411 32

FD611 33

ON/OFF ROAD

FS833 36

UT3000 PLUS 37

FD833 38

FT833 39

TMP3000 40

CITY BUS

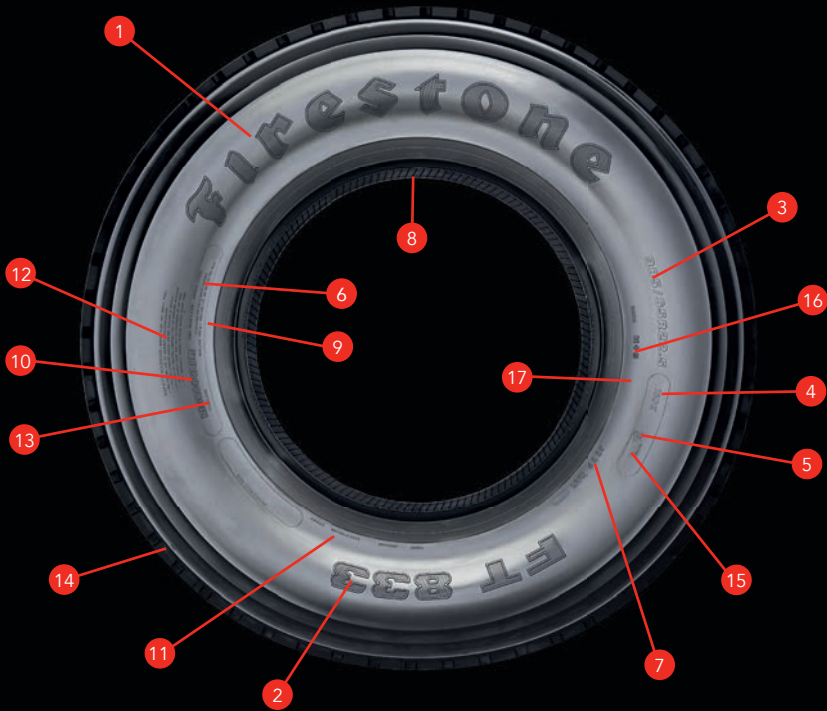
FS492 42

VAN TYRES

VANHAWK 2 44

VANHAWK WINTER / VANHAWK 2 WINTER 45

GENERAL INFORMATION



1. Tyre Sidewall information

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

GENERAL INFORMATION

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:

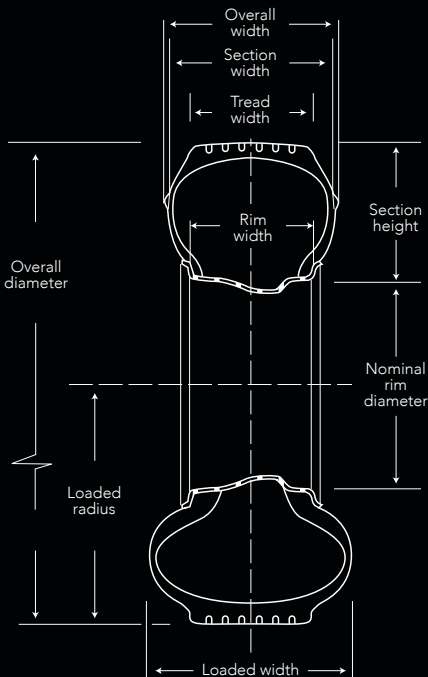
315/80 R 22.5 154/150 M

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.

GENERAL INFORMATION

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		

GENERAL INFORMATION

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

Speed (km/h)	VARIATION IN LOAD CARRYING CAPACITY (%)						Inflation Pressure compensation (%) (*)
	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

(*) 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.

GENERAL INFORMATION

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 (%) (*)
	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
210									0	+13.0

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

GENERAL INFORMATION

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	G	90	P	150
C	60	J	100	Q	160
D	65	K	110	R	170
E	70	L	120	S	180
F	80	M	130	T	190
		N	140	U	200
				H	210

6. Pressure Unit Conversion Table

kPa	bar	lb/in ² (p.s.i.)	kg/cm ² *
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

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

GENERAL INFORMATION

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.*

GENERAL INFORMATION

- (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.*

GENERAL INFORMATION

- (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

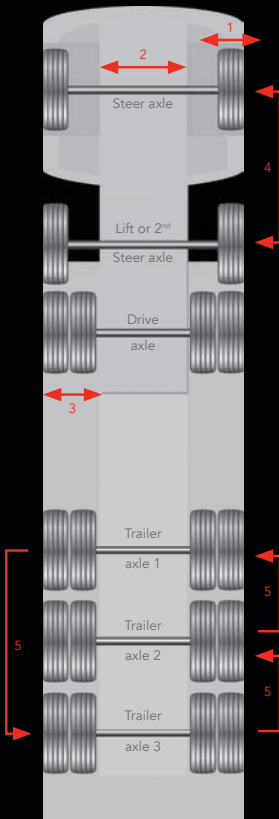
- (1) *Most tyre damage is due to incorrect inflation pressure. Truck and bus tyres must be inflated according to the load they carry.*
- (2) *Check tyre pressure at least every two weeks using a reliable pressure gauge.*
- (3) *Tyre pressure checks should be made on cold tyres.*
- (4) *The sealing valve 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.*

GENERAL INFORMATION

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.

GENERAL INFORMATION

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.

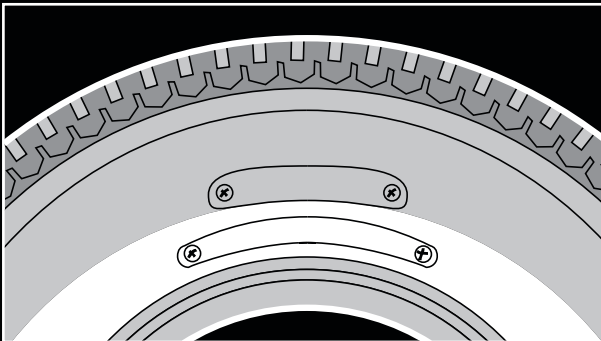
10.8 Repair and Retreading

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.



GENERAL INFORMATION

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.

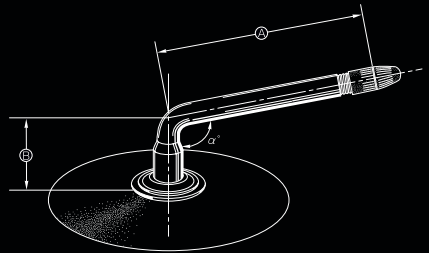
11. Types Of Valves

SCREW-ON UNIVERSAL VALVES

11.1 Screw on valve

11.1.1 Single bend screw-on universal valves

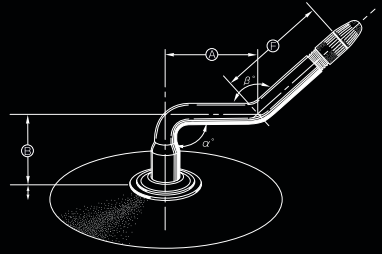
Valves No.	Dimensions (mm)		
	A	B	α°
V3-02-2	43	22.5	120
V3-02-3	44.5	33	95
V3-02-5	47.5	20.5	90
V3-02-7	71.5	22.5	100
V3-02-8	89.5	20.5	94
V3-02-9	99.5	20.5	94
V3-02-10	115	20.5	94
V3-02-11	126	20	98
V3-02-12	132	20.5	94
V3-02-13	133.5	20.5	90
V3-02-14	138.5	20.5	94
V3-02-15	145.5	20.5	94
V3-02-16	149.5	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



GENERAL INFORMATION

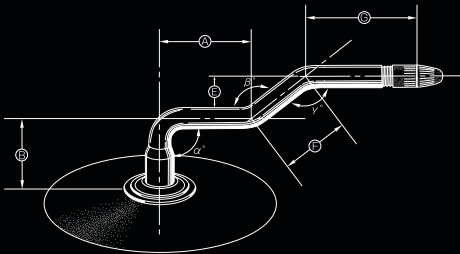
11.1.2 Double bend screw-on universal valves

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



GENERAL INFORMATION

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*
	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

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

GENERAL INFORMATION

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	RIM WIDTH CODE
"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
265	8.25	295
	6.75	286
	7.50	295
275	8.25	303
	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

GENERAL INFORMATION











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
9	6.75	251
	6.00	250
9.5	6.75	259
	6.00	261
10	6.75	270
	6.75	277
11	7.50	286
	7.50	305
12	8.25	314
	8.25	329
13	9.00	338
	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.

TYRE SIZES	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	6.75	270
& 245/70 R 19.5	7.50	279
265/70 R 19.5	7.50	295
285/70 R 19.5	8.25	303
	8.25	318
215/75 R 17.5	9.00	327
	6.00	239
235/75 R 17.5	6.75	246
	6.75	262
	7.50	271

TECHNOLOGY GUIDE

FEATURES	FUNCTION	BENEFIT
	FS411, FD611 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.
	FS422 PLUS Combats the likelihood of river wear and other irregular wear types occurring on the tyres' inner ribs.	Improved wear life through reduced irregular wear.
	FS400, FS422 PLUS, FS411 Reduces noise.	Driver's comfort. Help to meet severest noise regulation standards.
	FS492 Protects casing against sidewall damage from kerbs and other road hazards.	Longer casing life. Higher retreadability and casing value.
	FD833, FT833, FS411, FS833, FD611, FD622 PLUS, FT522 PLUS, FS422 PLUS Reduced bead filler volume and tyre weight (~1,5 Kg) without compromising the tyre durability.	Fuel savings.
	FS411 Reduces irregular wear. Stable cornering behaviour.	Longer tyre life.
	FS400, FS422 PLUS, FS411 Eject stones from the ribs.	Reduction in stone drilling. Improved casing retreadability and value.
	FD833, FS833, FT833, FD611 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.
	FD622 PLUS, FD611 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.
	FS492 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.
	FS422 PLUS, FS411, FD611 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.



TYRE DATA

On road



ON ROAD



FS422 PLUS

steer

- » Improved rolling resistance* and up to 10% greater mileage* 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				M+S		
295/80 R 22.5	152/148 M	298	1044	491	3205	8.25	9.00	C	B		71	✓	✓
315/80 R 22.5	156/150 L	314	1068	497	3246	9.00	9.75	C	B		70	✓	✓
	154/150 M												
315/70 R 22.5	154/150 L	314	1016	469	3089	9.00	9.75	C	B		71	✓	✓
	152/148 M												
385/65 R 22.5	160 K	378	1078	498	3277	11.75	12.25	C	B		71	✓	✓
	158 L												
385/55 R 22.5	160 K	381	995	466	3024	11.75	12.25	**			✓	✓	

FS422 PLUS EVO

315/70 R 22.5	156/150 L	310	1016	469	3088	9.00	9.75	C	B		71	✓	✓
	154/150 M												

* Compared to its predecessor, the Firestone FS422.

** Refer to www.firestone.eu website for final tyre information.














FS400

steer

- » Easy handling and reliable braking, in both wet and dry conditions.
- » Proven resistance to irregular wear to take you further.
- » Stable, constant performance throughout the life of the tyre.
- » Highly retreadable casing for even better mileage.

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		
9.5 R 17.5	129/127 M	232	845	392	2568	6.75	6.00	E	B	 74	✓	✓
285/70 R 19.5	145/143 M	266	888	410	2699	8.25	7.50/9.00	D	B	 76		
12 R 22.5	152/148 L	292	1082	502	3286	9.00	8.25	D	B	 73	✓	✓
275/70 R 22.5	148/145 M	266	962	447	2924	8.25	7.50	D	B	 74	✓	✓





ON ROAD



FD622 PLUS

drive

- » Profit from a low total cost per kilometre thanks to the tyre's excellent mileage potential.
- » Get the grip you need for excellent wet-weather handling with a unique unidirectional pattern.
- » Extend the life of your tyres thanks to a sturdy construction and 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	
295/80 R 22.5	152/148 M	298	1055	486	3172	8.25	9.00	D	C		73	✓	✓
315/80 R 22.5	156/150 L	314	1081	502	3286	9.00	9.75	D	C		72	✓	✓
	154/150 M												
315/70 R 22.5	154/150 L	314	1027	474	3122	9.00	9.75	D	B		75	✓	✓
	152/148 M												














FD600

drive

- » Ideal for long distance and regional haulers.
- » Excellent traction for confident braking and handling, even in the wet.
- » Great handling and stable performance in a variety of conditions.
- » Featuring a robust casing for longer tyre life and enhanced retreadability.

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		
9.5 R 17.5	129/127 M	232	849	394	2581	6.75	6.00	F	C	 72	✓	✓
285/70 R 19.5	145/143 M	266	892	411	2713	8.25	7.50/9.00	F	C	 73	✓	✓
12 R 22.5	152/148 L	296	1096	509	3331	9.00	8.25	F	C	 74	✓	✓
275/70 R 22.5	148/145 M	263	973	452	2959	7.50	8.25	F	C	 74	✓	✓



ON ROAD



FT522 PLUS

trailer

- » Profit from longer tyre life** thanks to a durable construction and good resistance to irregular wear.
- » Go even further with excellent retreading and regrooving capabilities.
- » Rely on solid, consistent handling, even in the wet.

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		
385/65 R 22.5*	160 K	378	1078	498	3277	11.75	12.25	C	B		69	✓	✓
	158 L												
385/55 R 22.5	160 K	381	999	465	3037	11.75	12.25	C	***		71	✓	✓
	158 L												

* FRT marked tyre.

** Compared to its predecessor, the Firestone FT522.

*** Refer to www.firestone.eu website for final tyre information.
















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		
9.5 R 17.5	143/141 J	232	844	392	2564	6.75	6.00	D	D	 72	✓	✓
215/75 R 17.5	135/133 J	212	776	363	2359	6.00	6.75	E	C	 71	✓	✓
235/75 R 17.5	143/141 J	238	805	375	2447	6.75	7.50	C	B	 70	✓	✓
245/70 R 17.5	143/141 J	244	797	368	2423	6.75	7.50	D	D	 71	✓	✓
265/70 R 19.5	143/141 J	250	870	402	2644	7.50	6.75	D	B	 70	✓	✓
285/70 R 19.5	150/148 J	265	890	410	2705	8.25	7.50/9.00	D	C	 70	✓	✓
315/80 R 22.5	154/150 M	312	1074	499	3265	9.00	9.75	*				
425/65 R 22.5	165 K	416	1137	523	3456	13.00	14.00	C	D	 70		

* Not in scope of regulation.

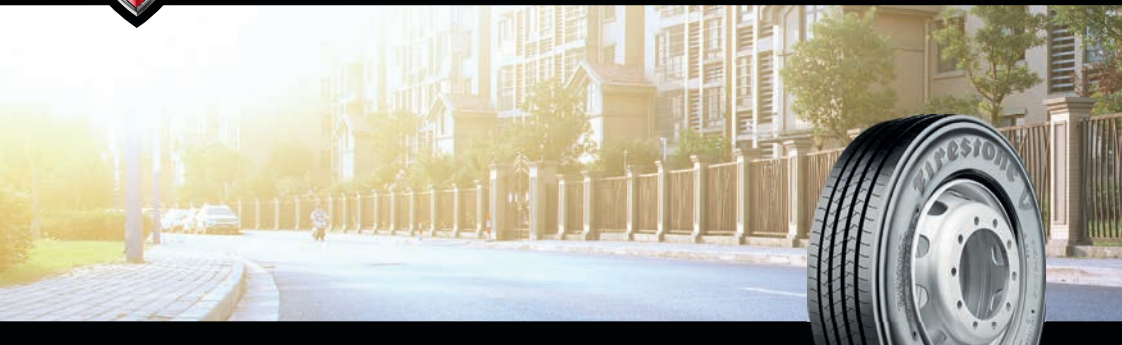


TYRE DATA

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				M+S	
205/75 R 17.5	124/122 M	205	748	351	2299	6.00	6.75	**	B	72	✓	✓
215/75 R 17.5	126/124 M	212	761	357	2313	6.00	6.75	C	B	72	✓	✓
225/75 R 17.5	129/127 M	231	777	364	2362	6.75	6.00	C	B	70	✓	✓
235/75 R 17.5	132/130 M	238	791	370	2404	6.75	7.50	C	B	71	✓	✓
245/70 R 17.5	136/134 M	243	788	364	2395	7.50	6.75	C	B	72	✓	✓
245/70 R 19.5	136/134 M	242	833	387	2532	7.50	6.75	C	B	72	✓	✓
265/70 R 19.5	140/138 M	252	859	398	2611	7.50	6.75/8.25	C	B	71	✓	✓
285/70 R 19.5	145/143 M	270	887	409	2696	9.00	8.25	C	B	72	✓	✓

* Only available for 215/75 R 17.5.

** Refer to www.firestone.eu website for final tyre information.





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		
205/75 R 17.5	124/122 M	205	748	351	2299	6.00	6.75	*	B		73	✓	✓
215/75 R 17.5	126/124 M	212	763	357	2318	6.00	6.75	C	B		72	✓	✓
225/75 R 17.5	129/127 M	231	778	364	2365	6.75	6.00	C	B		72	✓	✓
235/75 R 17.5	132/130 M	238	791	370	2404	6.75	7.50	D	B		72	✓	✓
245/70 R 17.5	136/134 M	243	785	363	2386	7.50	6.75	C	B		74	✓	✓
245/70 R 19.5	136/134 M	242	833	387	2532	7.50	6.75	D	B		75	✓	✓
265/70 R 19.5	140/138 M	252	865	400	2629	7.50	6.75/8.25	C	B		72	✓	✓
285/70 R 19.5	145/143 M	270	889	410	2702	9.00	8.25	C	B		75	✓	✓

* Refer to www.firestone.eu website for final tyre information.





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		70	✓	✓
315/80 R 22.5	156/150 K	310	1081	502	3284	9.00	9.75	C	B		70	✓	✓





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	
9.00 R 20*	144/142 K	255	1024	439	3113	7.00	6.00/6.50	E	C		70	✓	
							7.5						
11 R 22.5	148/145 K	272	1059	493	3219	8.25	7.50	E	C		70	✓	
12 R 22.5	152/148 K	292	1089	506	3310	9.00	8.25	D	C		72	✓	
295/80 R 22.5	152/148 K	288	1059	493	3219	8.25	9.00	D	C		71	✓	

* 20 inch sizes ON/OFF still available in non Plus specification.



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		75	✓	✓
315/80 R 22.5	156/150 K	308	1092	507	3319	9.00	9.75	D	B		75	✓	✓





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		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		
265/70 R 19.5	143/141 J	252	877	405	2666	7.50	8.25	E	C		73	✓	
275/70 R 22.5	148/145 K	273	974	452	2961	8.25	7.50	D	D		71	✓	
445/65 R 22.5	169 K	456	1162	534	3532	14.00		D	C		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		
275/70 R 22.5	150/148 J	275	959	446	2917	7.50	8.25	D	B	69	✓	✓
	152/148 E											





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		
185/75 R 14 C	102/100 R	C	B	72		
165/70 R 14 C	89/87 R	C	B	71		
175/65 R 14 C	90/88 T	C	B	72		
225/70 R 15 C	112/110 S	C	B	71		
215/70 R 15 C	109/107 S	C	B	72		
205/70 R 15 C	106/104 R	C	B	72		
195/70 R 15 C	104/102 R	C	B	71		
215/65 R 15 C	104/102 T	C	B	71		
205/65 R 15 C	102/100 T	C	B	72		
215/75 R 16 C	113/111 R	C	B	72		
205/75 R 16 C	110/108 R	C	B	72		

Size	Load/ Speed Index			dB		
195/75 R 16 C	107/105 R	C	B	71		
185/75 R 16 C	104/102 H	C	B	71		
175/75 R 16 C	101/99 R	C	B	72		
235/65 R 16 C	115/113 R	C	B	71		
215/65 R 16 C	109/107 T	C	B	72		
205/65 R 16 C	107/105 T	C	B	72		
195/65 R 16 C	104/102 T	C	B	72		
215/60 R 16 C	103/101 T	C	B	72		
195/60 R 16 C	99/97 H	C	B	72		



VANHAWK WINTER / VANHAWK 2 WINTER winter

- » Outstanding performance in snow and ice.*
- » Robust construction and high mileage potential.
- » Enhanced wet grip and braking.**

Size	Load/Speed Index				dB	M+S	
------	------------------	--	--	--	----	-----	--

VANHAWK WINTER

225/70 R15 C	112/110 R	F	C		73	✓	✓
215/70 R15 C	109/107 R	F	B		73	✓	✓
215/75 R16 C	113/111 R	E	B		73	✓	✓
205/75 R16 C	110/108 R	E	B		73	✓	✓
195/75 R16 C	107/105 R	F	B		73	✓	✓
235/65 R16 C	115/113 R	F	C		73	✓	✓
225/65 R16 C	112/110 R	F	C		73	✓	✓
215/65 R16 C	109/107 T	F	C		73	✓	✓
205/65 R16 C	107/105 R	F	C		73	✓	✓
195/65 R16 C	104/102 R	F	C		73	✓	✓

VANHAWK 2 WINTER

165/70 R14 C	89/87 R	E	B		72	✓	✓
175/65 R14 C	90/88 T	F	B		72	✓	✓
225/70 R15 C	112/110 R	E	B		73	✓	✓
215/70 R15 C	109/107 R	E	B		73	✓	✓

Size	Load/Speed Index				dB	M+S	
------	------------------	--	--	--	----	-----	--

205/70 R15 C	106/104 R	E	B		72	✓	✓
195/70 R15 C	104/102 R	E	B		72	✓	✓
205/65 R15 C	102/100 T	E	B		72	✓	✓
225/75 R16 C	121/120 R	E	B		73	✓	✓
215/75 R16 C	113/111 R	E	B		73	✓	✓
205/75 R16 C	110/108 R	E	B		72	✓	✓
195/75 R16 C	107/105 R	E	B		72	✓	✓
185/75 R16 C	104/102 R	E	B		72	✓	✓
235/65 R16 C	115/113 R	E	B		73	✓	✓
225/65 R16 C	112/110 R	E	B		73	✓	✓
215/65 R16 C	106/104 T	E	B		73	✓	✓
	109/107 T					✓	✓
205/65 R16 C	107/105 T	E	B		73	✓	✓
195/65 R16 C	104/102 T	E	B		72	✓	✓
215/60 R16 C	103/101 T	E	B		73	✓	✓
195/60 R16 C	99/97 T	F	B		72	✓	✓

* Certified for snow with 3PMSF
 ** 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										
8.5 R 17.5	121/120	M (130)	121	S	2230	2330	2430	2530	2620	2720
			120	D	4310	4500	4690	4880	5060	5240
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						

TECHNICAL DATA CHART

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		
2810	2900											
5430	5600											
			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

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

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						
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						
		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						

TECHNICAL DATA CHART

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	



REGROOVING DATA

RECOMMENDATIONS

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.

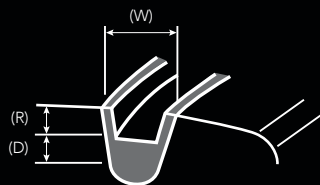
LEGISLATION

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

Regrooving Data 55

ON ROAD

FS422 PLUS 56

FS400 57

FD622 PLUS 58

FD600 59

FT522 PLUS 60

TSP3000 61

LIGHT & MEDIUM TRUCKS

FS411 62

FD611 63

ON/OFF ROAD

FS833 64

UT3000 PLUS 65

FD833 66

FT833 67

TMP3000 68

CITY BUS

FS492 69

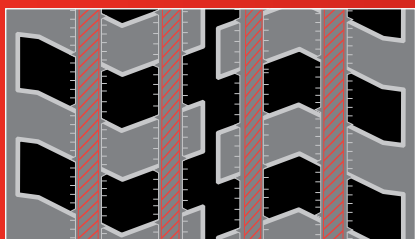


ON ROAD



FS422 PLUS

steer

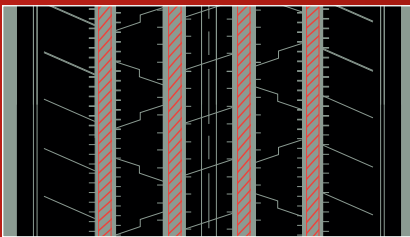


Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
295/80 R 22.5	2.0	7.0 - 8.0
315/80 R 22.5	2.0	7.0 - 8.0
315/70 R 22.5	2.5	7.0 - 8.0
315/70 R 22.5	2.0	7.0 - 8.0
385/65 R 22.5	2.0	7.0 - 8.0
385/55 R 22.5	2.5	7.0 - 8.0



FS400

steer



Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
9.5 R 17.5	3.0	6.0 - 7.0
245/70 R 19.5	2.5	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

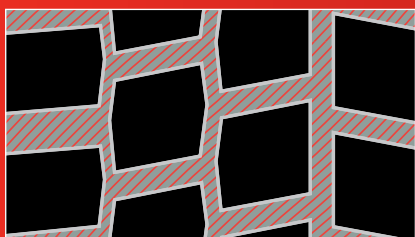


ON ROAD

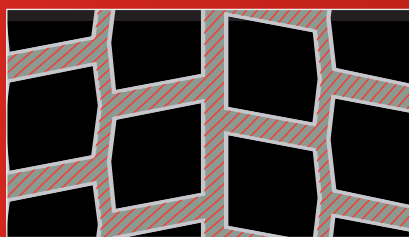


FD622 PLUS

steer



PREFERRED



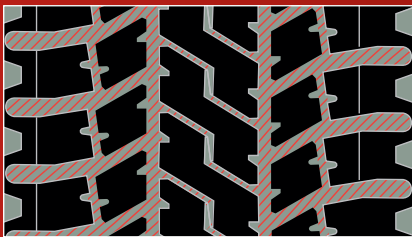
OPTIONAL

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



FD600

drive



Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
9.5 R 17.5	2.0	6.0 - 7.0
245/70 R 19.5	3.0	6.0 - 7.0
285/70 R 19.5	2.5	7.0 - 8.0
12 R 22.5	3.0	7.0 - 8.0
275/70 R 22.5	2.5	7.0 - 8.0

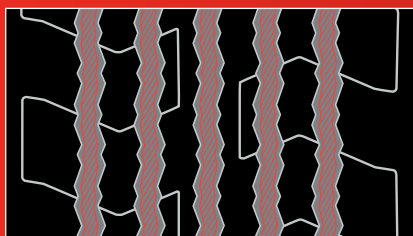


ON ROAD



FT522 PLUS

trailer

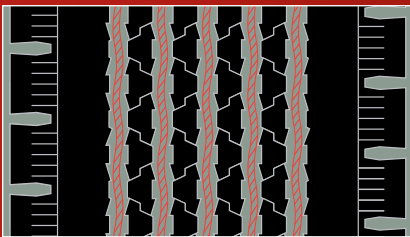


Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
385/65 R 22.5	2.0	7.0 - 8.0
385/55 R 22.5	3.0	7.0 - 8.0



TSP3000

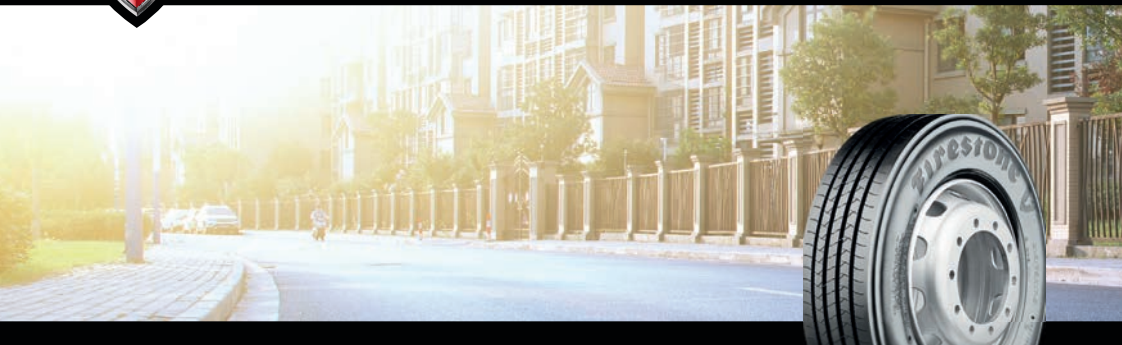
trailer



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	2.5	7.0 - 8.0
235/75 R 17.5	2.5	7.0 - 8.0
245/70 R 17.5	2.0	7.0 - 8.0
265/70 R 19.5	2.5	7.0 - 8.0
285/70 R 19.5	3.0	7.0 - 8.0
11 R 22.5	3.0	8.0 MAX
315/80 R 22.5	3.0	7.0 - 8.0
425/65 R 22.5	3.0	8.0 MAX

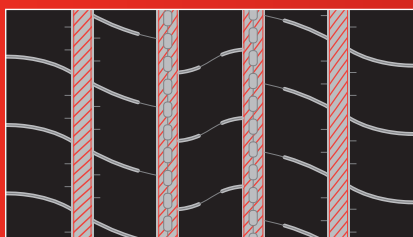


LIGHT & MEDIUM TRUCKS



FS411

steer

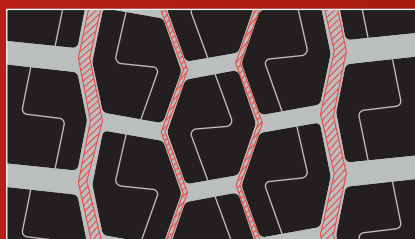


Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
205/75 R 17.5	1.0	6.0 - 7.0
215/75 R 17.5	1.0	6.0 - 7.0
225/75 R 17.5	1.0	6.0 - 7.0
235/75 R 17.5	1.0	6.0 - 7.0
245/70 R 17.5	1.0	6.0 - 7.0
245/70 R 19.5	1.0	6.0 - 7.0
265/70 R 19.5	1.0	7.0 - 8.0
285/70 R 19.5	1.0	7.0 - 8.0



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	7.0 - 8.0
285/70 R 19.5	1.0	7.0 - 8.0

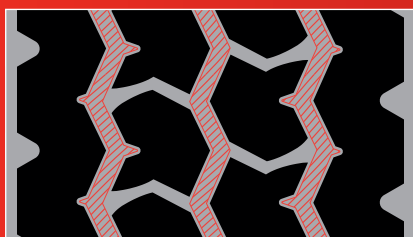


ON/OFF ROAD



FS833

steer

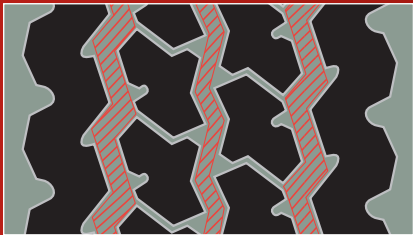


Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
13 R 22.5	3.5	8.0 MAX
315/80 R 22.5	3.5	8.0 MAX



UT3000 PLUS

all position



Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
9.00 R 20*	3.0	9.0
11 R 22.5	4.0	9.0
12 R 22.5	2.5	8.0 MAX
295/80 R 22.5	3.0	8.0 MAX

* 20 inch sizes ON/OFF still available in non Plus specification.

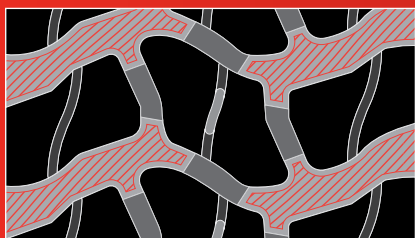


ON/OFF ROAD



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	2.5	8.0 MAX



FT833

trailer



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



ON/OFF ROAD



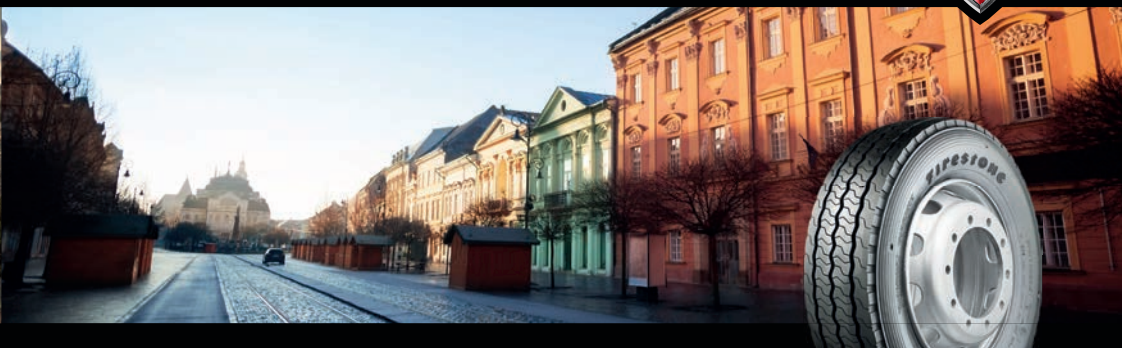
TMP3000

trailer



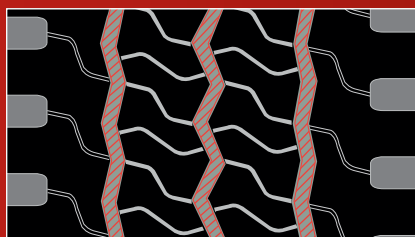
Size	D: Regrooving depth (mm)	W: Regrooving width (mm)
265/70 R 19.5	2.5	8.0 MAX
275/70 R 22.5	3.0	8.0 MAX
445/65 R 22.5	3.0	8.0 MAX

CITY BUS



FS492

all position



Size

D: Regrooving depth (mm)

W: Regrooving width (mm)

275/70 R 22.5

2.0

8.0 MAX

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ALPHABETICAL INDEX

Pattern	Specification	Regrooving
FD600	27	59
FD611	33	63
FD622 PLUS	26	58
FD833	38	66
FS400	25	57
FS411	32	62
FS422 PLUS	24	56
FS492	42	69
FS833	36	64
FT522 PLUS	28	60
FT833	39	67
TMP3000	40	68
TSP3000	29	61
UT3000 PLUS	37	65
VANHAWK 2	44	-
VANHAWK WINTER / VANHAWK 2 WINTER	45	-

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