# DATA & REGROOVING BOOK

TRUCK, BUS & VAN TYRES

2023

Firestone

# 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.

# GENERAL CONTENT

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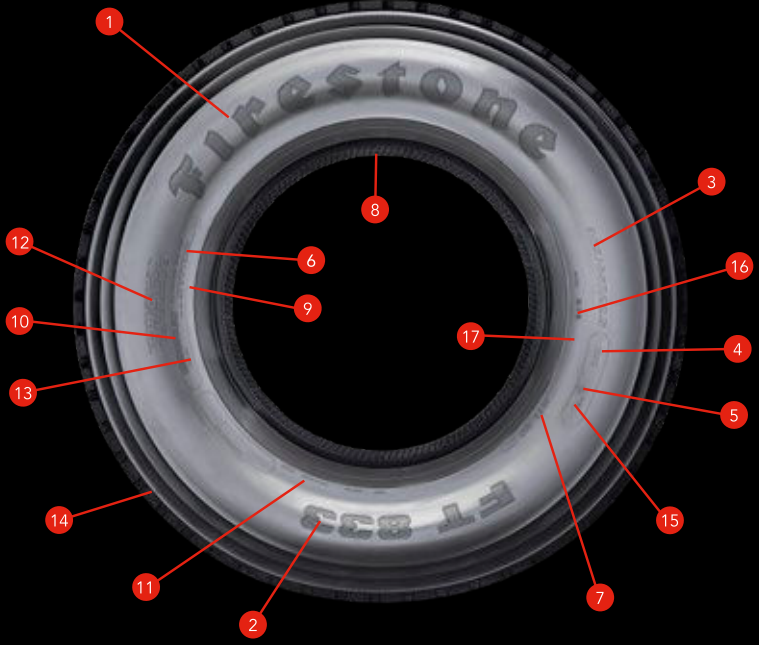
# GENERAL INFORMATION




## 1. Tyre Sidewall Information

| | |
|---|---|
| 1 | Manufacturers name or brand |
| 2 | Pattern Name |
| 3 | Size information<br>385 = Tyre width in mm (or inch)<br>65 = Aspect ratio (section height to section width) = 65% |
| 4 | Service Description<br>160 = Load index for single fitment<br>K = Speed index code letter |
| 5 | E = Tyre complies to ECE 54 Regulations<br>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<br>It is permitted for the tyre to be regrooved |
| 11 | Country of Origin |
| 12 | USA Safety standard construction data |
| 13 | Tubeless<br>Tyre operated without a tube |
| 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.

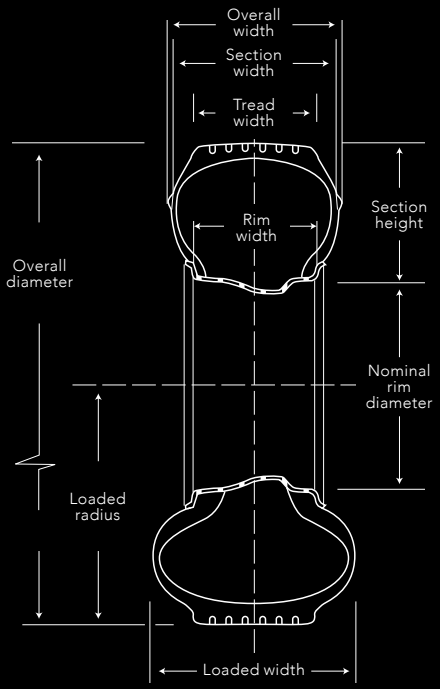
ECE Regulation 54 permits the marking of an additional service description or sometimes known as the unique point on the tyre sidewall. This is located close to the principal service description as shown below:

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 (%) [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.

# 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 (%) [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 |
| 210 | | | | | | | | | 0 | +13.0 |

*1) 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) |
|---|---|
| B | 50 |
| C | 60 |
| D | 65 |
| E | 70 |
| F | 80 |

| Speed Symbol | Speed (km/h) |
|---|---|
| G | 90 |
| J | 100 |
| K | 110 |
| L | 120 |
| M | 130 |
| N | 140 |

| Speed Symbol | Speed (km/h) |
|---|---|
| P | 150 |
| Q | 160 |
| R | 170 |
| S | 180 |
| T | 190 |
| U | 200 |
| 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.*

# 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.*
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.*

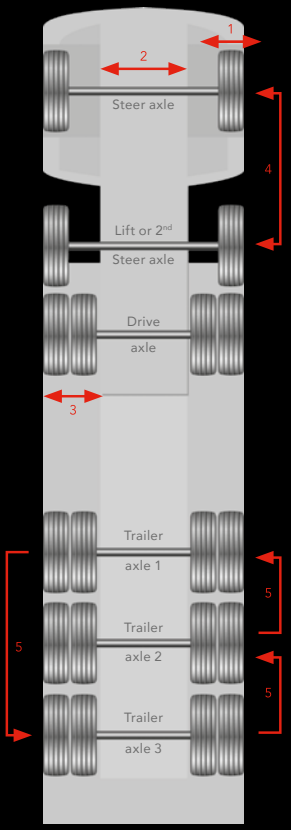
8) *Incorrect inflation pressure causes irregular tread wear. Bridgestone recommends the following in order to minimise irregular wearing:*

   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.

# 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.*

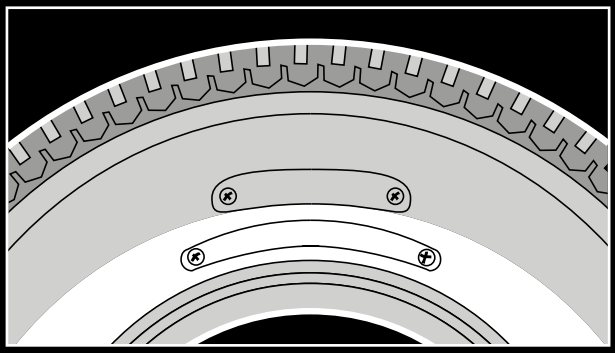
## 10.8 Repair and Retreading

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.*

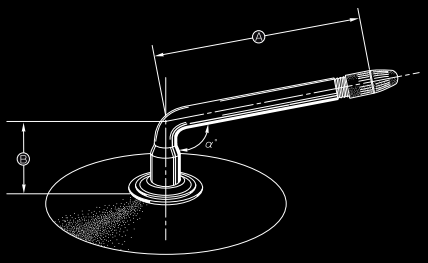
# 11. Types Of Valves

### SCREW-ON UNIVERSAL VALVES

## 11.1 Screw on valve

### 11.1.1 Single bend screw-on universal valves

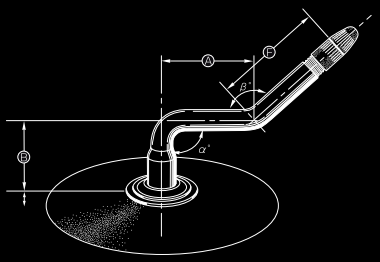
| Valves No. | Dimensions (mm) | | |
|---|---|---|---|
| | A | B | α° |
| V3-02-2 | 43 | 22.5 | 120 |
| V3-02-3 | 44.5 | 33 | 95 |
| V3-02-5 | 47.5 | 20.5 | 90 |
| V3-02-7 | 71.5 | 22.5 | 100 |
| V3-02-8 | 89.5 | 20.5 | 94 |
| V3-02-9 | 99.5 | 20.5 | 94 |
| V3-02-10 | 115 | 20.5 | 94 |
| V3-02-11 | 126 | 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

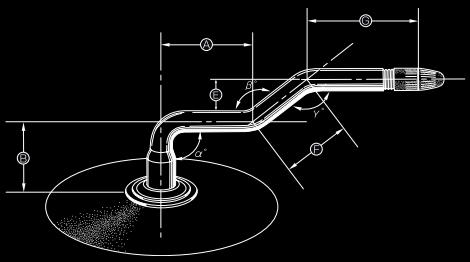
## 11.1.2 Double bend screw-on universal valves

| 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 |



## 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.*

# 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 |
| | 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 |

# 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 |
| | 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.

| 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 |
| | 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

| FEATURES | | FUNCTION | BENEFIT |
|---|---|---|---|
|  | FS411,<br>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,<br>FS422 PLUS EVO | Combats the likelihood of river wear and other irregular wear types occuring on the tyres' inner ribs. | Improved wear life through reduced irregular wear. |
|  | FS400,<br>FS422 PLUS,<br>FS422 PLUS EVO,<br>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,<br>FS833, FD611,<br>FD622 PLUS,<br>FT522 PLUS,<br>FS422 PLUS,<br>FS422 PLUS EVO | Reduced bead filler volume and tyre weight (~1,5 Kg) without compromising the tyre durability. | Fuel savings. |
|  | FS411,<br>FS422 PLUS,<br>FS422 PLUS EVO | Reduces irregular wear.<br>Stable cornering behaviour. | Longer tyre life. |
|  | FS400, FS422 PLUS,<br>FS422 PLUS EVO,<br>FS411 | Eject stones from the ribs. | Reduction in stone drilling. Improved casing retreadability and value. |
|  | FD833,<br>FS833,<br>FT833,<br>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,<br>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,<br>FS422 PLUS EVO,<br>FS411,<br>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. |
|  | FD622 PLUS,<br>FS422 PLUS,<br>FS422 PLUS EVO | Increases casing stability and durability. | Higher load capability. Higher casing retreadability and value. |

# **TYRE DATA**
ON ROAD

# ON ROAD

## FS422 PLUS / 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 | 152/148 M | 305 | 1044 | 486 | 3172 | 9.00 | 8.25 | C | B | A | 71 | ✔ | ✔ |
| 315/80 R 22.5 | 156/150 L | 314 | 1068 | 497 | 3246 | 9.00 | 9.75 | C | B | A | 70 | ✔ | ✔ |
| | 154/150 M | | | | | | | | | | | | |
| 315/70 R 22.5 | 154/150 L | 314 | 1016 | 469 | 3089 | 9.00 | 9.75 | C | B | A | 71 | ✔ | ✔ |
| | 152/148 M | | | | | | | | | | | | |
| 385/65 R 22.5 | 160 K | 378 | 1078 | 498 | 3277 | 11.75 | 12.25 | C | B | A | 71 | ✔ | ✔ |
| | 158 L | | | | | | | | | | | | |
| 385/55 R 22.5 | 160 K | 386 | 995 | 464 | 3024 | 12.25 | 11.75 | B | B | A | 72 | ✔ | ✔ |
| **FS422 PLUS EVO** | | | | | | | | | | | | | |
| 295/80 R 22.5 | 154/149 M | Available soon | | | | | | | | | | ✔ | ✔ |
| 315/70 R 22.5 | 156/150 L | 307 | 1016 | 469 | 3088 | 9.00 | 9.75 | C | C | A | 71 | ✔ | ✔ |
| | 154/150 M | | | | | | | | | | | | |

1) *Compared to its predecessor, the Firestone FS422.*

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

# 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 | M+S | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.5 R 17.5 | 129/127 M | 232 | 845 | 338 | 2568 | 6.75 | 6.00 | E | B | C | 74 | ✔ | ✔ |
| 12 R 22.5 | 152/148 L | 292 | 1082 | 503 | 3288 | 9.00 | 8.25 | D | C | B | 73 | ✔ | ✔ |
| 275/70 R 22.5 | 148/145 M | 274 | 962 | 447 | 2924 | 8.25 | 7.50 | D | B | B | 74 | ✔ | ✔ |

GROOVE FENCE

STONE EJECTOR

# 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 | 305 | 1055 | 491 | 3205 | 9.00 | 8.25 | D | C | A | 73 | ✔ | ✔ |
| 315/80 R 22.5 | 156/150 L | 314 | 1081 | 502 | 3286 | 9.00 | 9.75 | D | C | A | 72 | ✔ | ✔ |
| | 154/150 M | | | | | | | | | | | | |
| 315/70 R 22.5 | 154/150 L | 314 | 1027 | 474 | 3122 | 9.00 | 9.75 | D | B | B | 75 | ✔ | ✔ |
| | 152/148 M | | | | | | | | | | | | |

SLIM BEAD | UNI DIRECTIONAL | WAVED BELT


# FT522 PLUS

TRAILER

- Profit from longer tyre life [1] 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 | M+S | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 385/65 R 22.5 [2] | 160 K | 378 | 1078 | 498 | 3277 | 11.75 | 12.25 | C | B | A | 69 | ✔ | ✔ |
| | 158 L | | | | | | | | | | | | |
| 385/55 R 22.5 [2] | 160 K | 386 | 999 | 465 | 3037 | 12.25 | 11.75 | C | B | A | 70 | ✔ | ✔ |
| | 158 L | | | | | | | | | | | | |

*1) Compared to its predecessor, the Firestone FT522.*
*2) FRT marked tyre.*

SLIM BEAD

# ON ROAD

## 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 [1] | 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 | ✔ | ✔ |

*1) Available within 1st quarter of 2023.*
*2) Only available for 215/75 R 17.5.*

C.T.D.M. GROOVE FENCE SQUARE SHOULDER STONE EJECTOR VPS

SLIM BEAD [2]

# 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 [1] | 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 | ✔ | ✔ |

*1) Available within 1st quarter of 2023.*

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

SLIM BEAD TIE BAR

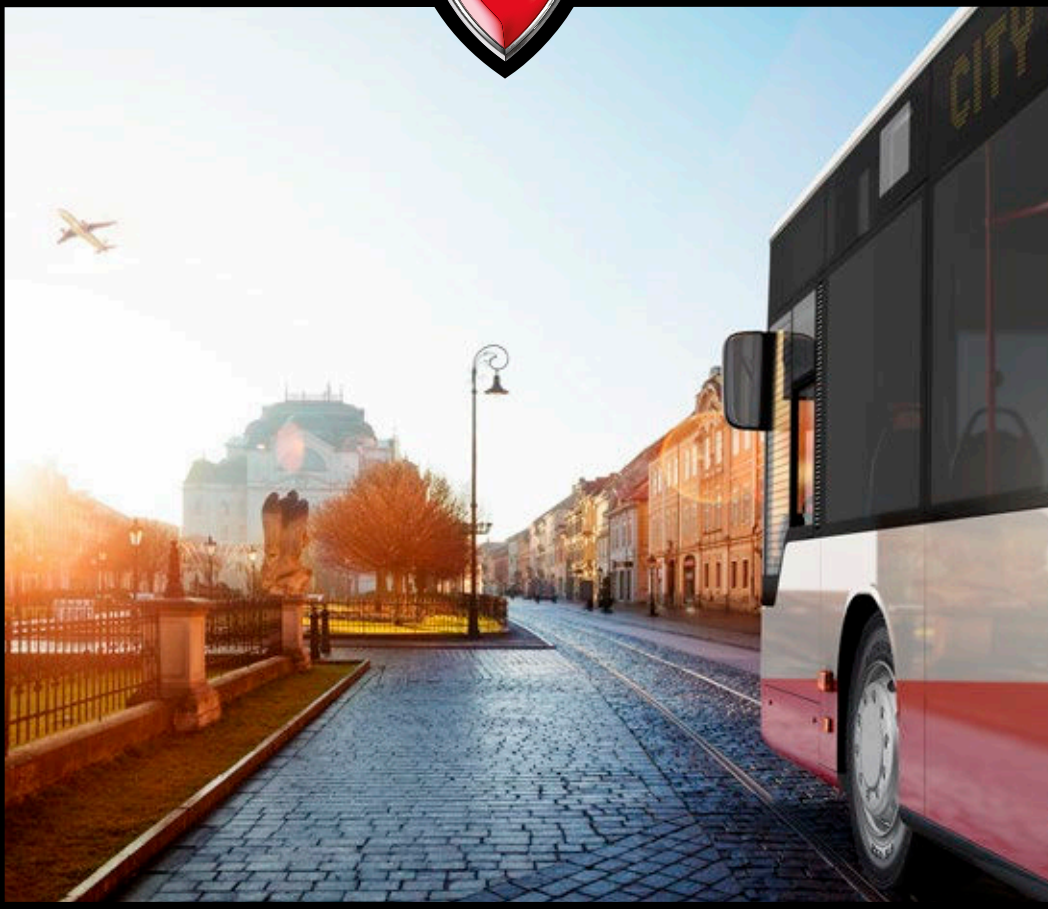
# ON/OFF ROAD

## 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 | | 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 | 150/148 J | 275 | 959 | 446 | 2917 | 7.50 | 8.25 | D | B | A | 69 | ✔ | ✔ |
| | 152/148 E | | | | | | | | | | | | |

SIDE GUARD VDS


# 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 | |
|---|---|---|---|---|---|---|---|
| 165/70 R 14 C | 89/87 R | C | B | B | 71 | | |
| 175/65 R 14 C | 90/88 T | C | B | B | 72 | | |
| 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 | | |

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

| Size | Load/ Speed Index | | | | dB | M+S | |
|---|---|---|---|---|---|---|---|
| 225/75 R 16 C | 121/120 R | C | B | B | 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 | B | 73 | ✔ | ✔ |
| | 109/107 T | | | | | | |
| 225/65 R 16 C | 112/110 R | C | B | B | 73 | ✔ | ✔ |
| 235/65 R 16 C | 115/113 R | C | B | B | 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 | B | 73 | ✔ | ✔ |

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

# VAN TYRES

## 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 | ✔ | ✔ |

| Size | Load/ Speed Index | | | | dB | M+S | |
|---|---|---|---|---|---|---|---|
| 215/75 R16 C | 113/111 R | D | B | B | 73 | ✔ | ✔ |
| 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<br>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 | ✔ | ✔ |

*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 | | | | | | |

# 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** | | |
| | | | | | | | | | | | | |
| | | | 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.*

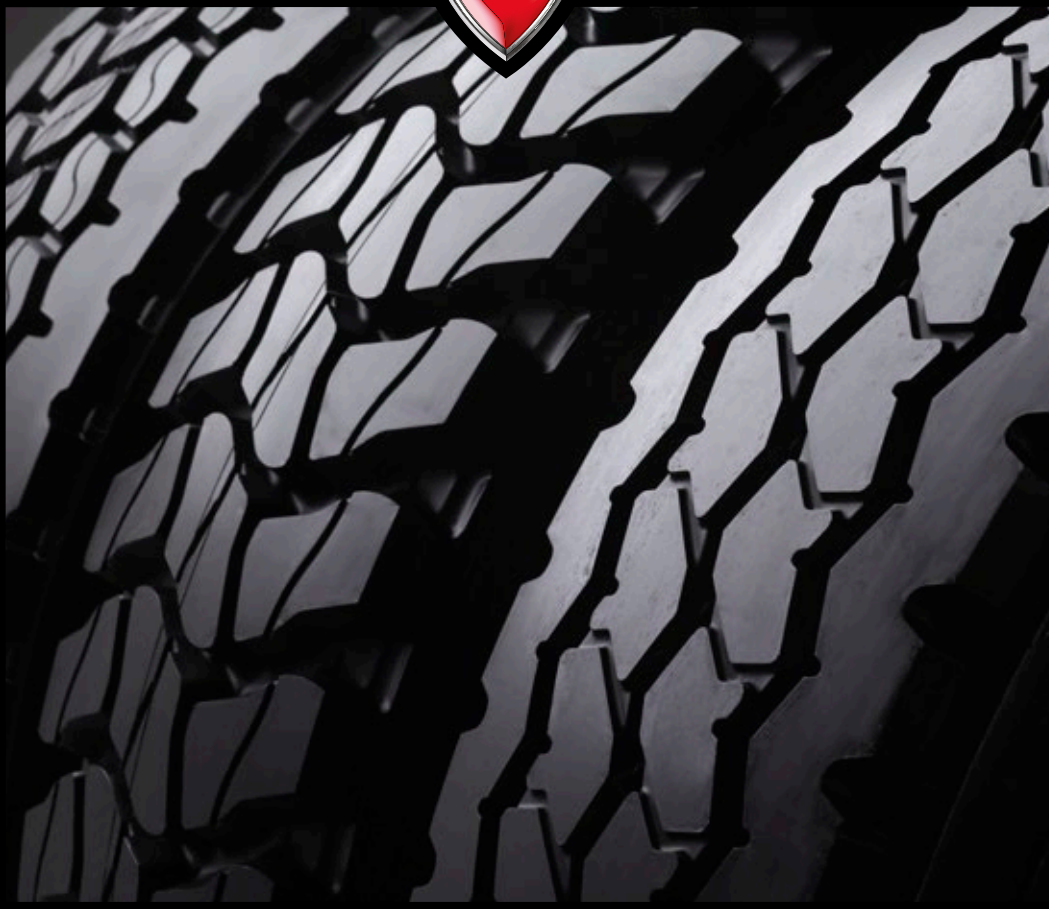
# TECHNICAL DATA CHART

| 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 | | | | | | |
| | 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 | | | | | | |

# 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** | |

# NOTES



# 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.

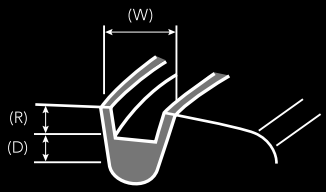
### LEGISLATION

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:**

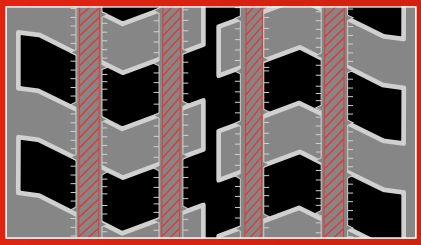
Minimum remaining tread depth = 3 mm (R)
Recommended regrooving depth = 3 mm (D)
Depth to which cutter blade is set = 6 mm (R+D)
Recommended regrooving width = W



# INDEX

# FS422 PLUS / FS422 PLUS EVO

STEER



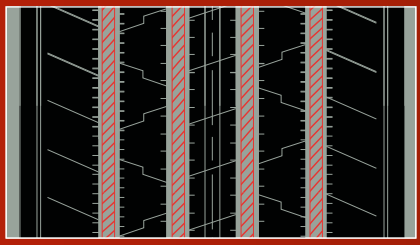
| Size | D: Regrooving depth (mm) | W: Regrooving width (mm) |
|---|---|---|
| 295/80 R 22.5 | 2.0 | 7.0 - 8.0 |
| 315/80 R 22.5 | 2.0 | 7.0 - 8.0 |
| 315/70 R 22.5 | 2.0 | 7.0 - 8.0 |
| 385/65 R 22.5 | 2.0 | 7.0 - 8.0 |
| 385/55 R 22.5 | 2.0 | 7.0 - 8.0 |

**FS422 PLUS EVO**

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

# FS400

STEER

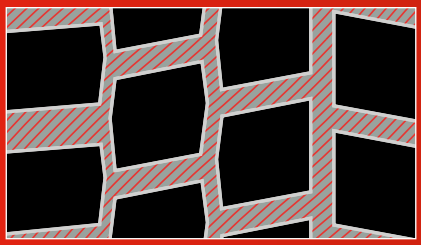


| Size | D: Regrooving depth (mm) | W: Regrooving width (mm) |
|---|---|---|
| 9.5 R 17.5 | 3.0 | 6.0 - 7.0 |
| 285/70 R 19.5 | 2.5 | 7.0 - 8.0 |
| 12 R 22.5 | 2.0 | 7.0 - 8.0 |
| 275/70 R 22.5 | 2.0 | 7.0 - 8.0 |

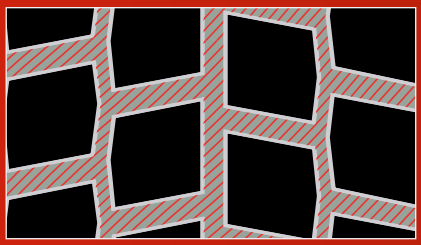
# ON ROAD

## FD622 PLUS

DRIVE



PREFERRED

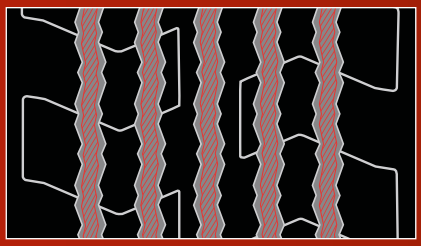


OPTIONAL

| 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 |

# FT522 PLUS

TRAILER

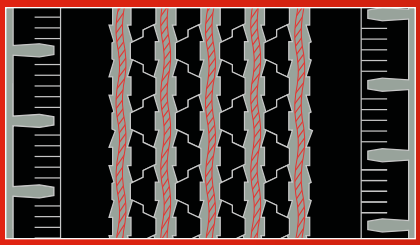


| Size | D: Regrooving depth (mm) | W: Regrooving width (mm) |
|---|---|---|
| 385/65 R 22.5 | 2.0 | 7.0 - 8.0 |
| 385/55 R 22.5 | 2.0 | 7.0 - 8.0 |

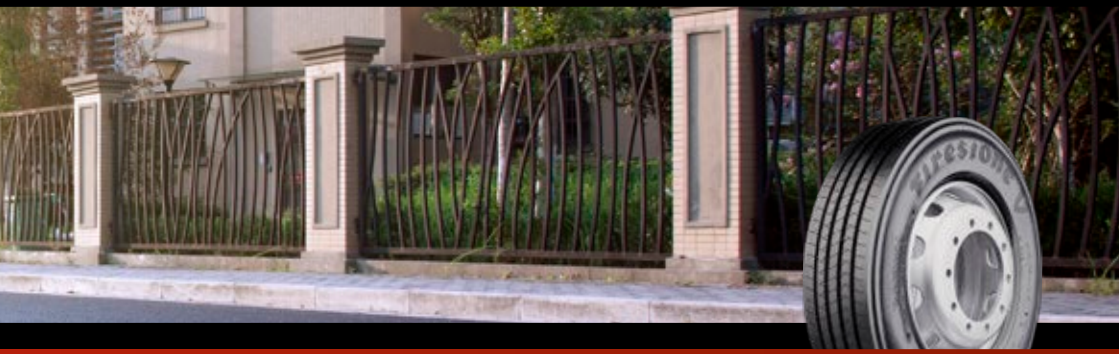
# ON ROAD

## TSP3000

TRAILER

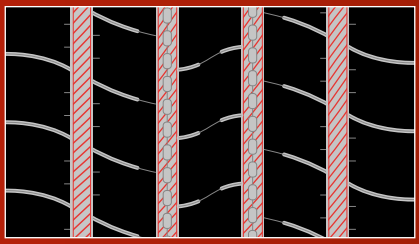


| Size | D: Regrooving depth (mm) | W: Regrooving width (mm) |
|---|---|---|
| 9.5 R 17.5 | 2.5 | 7.0 - 8.0 |
| 215/75 R 17.5 | 3.5 | 7.0 - 8.0 |
| 235/75 R 17.5 | 2.5 | 7.0 - 8.0 |
| 245/70 R 17.5 | 1.0 | 7.0 - 8.0 |
| 265/70 R 19.5 | 2.5 | 7.0 - 8.0 |
| 285/70 R 19.5 | 4.0 | 7.0 - 8.0 |
| 425/65 R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



## FS411

STEER

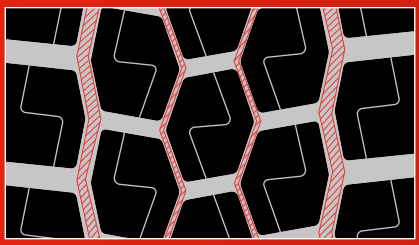


| Size | D: Regrooving depth (mm) | W: Regrooving width (mm) |
|---|---|---|
| 205/75 R 17.5 | 1.0 | 6.0 - 7.0 |
| 215/75 R 17.5 | 1.0 | 6.0 - 7.0 |
| 225/75 R 17.5 | 1.0 | 6.0 - 7.0 |
| 235/75 R 17.5 | 1.0 | 6.0 - 7.0 |
| 245/70 R 17.5 | 1.0 | 6.0 - 7.0 |
| 245/70 R 19.5 | 1.5 | 6.0 - 7.0 |
| 265/70 R 19.5 | 1.0 | 7.0 - 8.0 |
| 285/70 R 19.5 | 1.0 | 7.0 - 8.0 |

# LIGHT & MEDIUM TRUCKS

## FD611

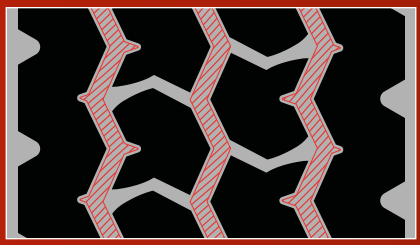
DRIVE



| 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 |

# FS833

STEER

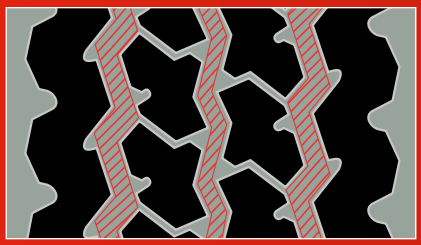


| Size | D: Regrooving depth (mm) | W: Regrooving width (mm) |
|---|---|---|
| 13 R 22.5 | 3.5 | 8.0 MAX |
| 315/80 R 22.5 | 3.5 | 8.0 MAX |

# ON/OFF ROAD

## UT3000 PLUS

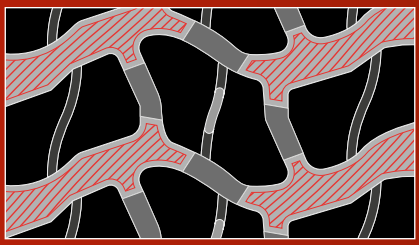
ALL POSITION



| 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 |

# FD833

DRIVE

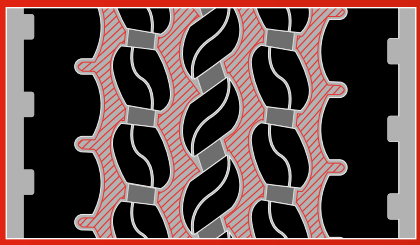


| Size | D: Regrooving depth (mm) | W: Regrooving width (mm) |
|---|---|---|
| 13 R 22.5 | 2.5 | 8.0 MAX |
| 315/80 R 22.5 | 3.0 | 8.0 MAX |

# ON/OFF ROAD


## FT833

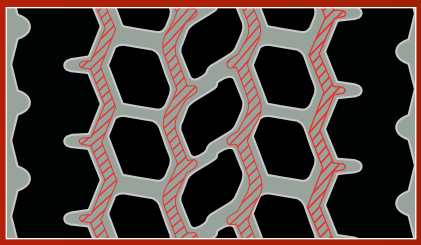
TRAILER



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

# TMP3000

TRAILER

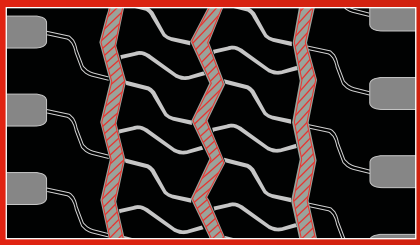


| Size | D: Regrooving depth (mm) | W: Regrooving width (mm) |
|---|---|---|
| 265/70 R 19.5 | 3.5 | 8.0 MAX |
| 275/70 R 22.5 | 4.0 | 8.0 MAX |
| 445/65 R 22.5 | 3.0 | 8.0 MAX |

# CITY BUS


## FS492

ALL POSITION



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

# NOTES

# ADDRESSES

**AUSTRIA**
Bridgestone Europe NV/SA - Niederlassung Österreich
Media Quarter Marx 3.3
Maria-Jacobi-Gasse 1
1030 Vienna - Austria
Tel.: (+43) 1 61 41 30 01
Fax: (+43) 1 61 41 31 00

**BALTICS**
Bridgestone Baltics SIA
Dzelzavas 117-303
Riga, LV-1021 - Latvia
Tel.: (+371) 67 16 20 28
Fax: (+371) 67 16 20 24

**BELGIUM - GD OF LUXEMBOURG**
Bridgestone Europe NV/SA - Belgium Luxembourg Sales Division
Da Vincilaan 1
1930 Zaventem - Belgium
Tel.: (+32) 2 719 06 78
Fax: (+32) 2 719 06 60

**BULGARIA**
Bridgestone Europa NV/SA, Branch Bulgaria Office
102, Bulgaria blvd.
1618 Sofia, Bulgaria
Tel.: (+359) 2 854 81 48
Fax: (+359) 888 40 11 73

**CZECH REPUBLIC**
Bridgestone CR, s.r.o.
Bucharova 1281/2
158 00 Praha 5 - Czech Republic
Tel.: (+420) 226 220 330
Fax: (+420) 226 220 329

**DENMARK**
Bridgestone - filial af Bridgestone Europe NV/SA - Belgien
Sigma, 1 Søften
8382 Hinnerup - Denmark
Tel.: (+45) 87 64 66 68
Fax: (+45) 87 64 66 66

**FINLAND**
Bridgestone Europe NV/SA - Suomen sivuliike
Valokaari 8
00750 Helsinki - Finland
Tel.: (+358) 207 936 200
Fax: (+358) 207 936 295

**FRANCE**
Bridgestone Europe NV/SA,
Succursale France
19 rue d'Arcueil. CP 30450
94593 RUNGIS Cedex, France
Tel.: (+33) 1 56 70 77 00
Fax: (+33) 1 56 70 77 01

**GERMANY**
Bridgestone Deutschland GmbH
Justus-von-Liebig-Straße 1
61352 Bad Homburg - Germany
Tel.: (+49) 61 72 40 80 1
Fax: (+49) 61 72 40 84 90

**GREECE**
ELASTRAK
15, Thivaidos Street, N. Kifissia
14564 Athens - Greece
Tel.: (+30) 210 819 69 20
Fax: (+30) 210 807 78 18

**HUNGARY**
Bridgestone Hungary Sales
Váci út 135-139. C épület
1138 Budapest - Hungary
Tel.: (+36) 1 430 27 80
Fax: (+36) 1 387 93 11

**IRELAND**
Bridgestone Ireland Limited
Fingal Bay Business Park Unit 10
Balbriggan - Co. Dublin - Ireland
Tel.: (+353) 1 841 00 00
Fax: (+353) 1 841 52 45

# ADDRESSES

**ITALY**
Bridgestone Europe NV/SA - Italian Branch
Via Energy Park n. 14
20871 Vimercate (MB) - Italy
Tel.: (+39) 039 65 60 11
Fax: (+39) 039 93 00 133

**THE NETHERLANDS**
Bridgestone Europe NV/SA - Netherlands Branch
Nieuwe Weideweg 1
6121 PD BORN - The Netherlands
Tel.: (+31) 88 385 11 00
Fax: (+31) 88 385 11 01

**NORWAY**
Gjerde & Byhring AS
Jerikoveien 22
1067 Oslo - Norway
Tel.: (+47) 23 14 36 00
Fax: (+47) 23 14 36 01

**POLAND**
Bridgestone Europe NV/SA - Spółka Akcyjna Oddział w Polsce
ul. Inflancka 4
00-189 Warszawa - Poland
Tel.: (+48) 22 606 18 20
Fax: (+48) 22 606 18 22

**PORTUGAL**
Bridgestone Europe NV/SA - Sucursal em Portugal
Urbanização do Passil, Lote 96-A, Passil
2890-182 Alcochete - Portugal
Tel.: (+351) 21 230 7350
Fax: (+351) 21 230 7391

**ROMANIA**
Bridgestone Europe NV/SA Zaventem, Sucursala Bucuresti
Dacia Blvd., No. 153-155, Floor 3, Sector 2,
Bucuresti, Romania
Tel.: (+40) 21 210 21 79/80
Fax: (+40) 21 210 21 52

**SLOVAKIA**
Bridgestone Slovakia s.r.o.
Michalská 9
811 01 Bratislava - Slovakia
Tel.: (+421) 220 633 218
Fax: (+421) 220 633 219

**SPAIN**
Bridgestone Hispania SA - Sales Division
C/Isla Graciosa 3 - Planta 1$^{e}$
Poligono Industrial Norte
28703 S. Sebastián de los Reyes - Madrid - Spain
Tel.: (+34) 91 623 30 17
Fax: (+34) 91 623 30 44

**SWEDEN**
Bridgestone Sweden AB
Sigma 1
8382 Hinnerup - Denmark
Tel.: (+46) 60 14 06 00

**SWITZERLAND**
Bridgestone Europe NV/SA - Zaventem - Niederlassung Spreitenbach
Bodenäckerstraße 1
8957 Spreitenbach - Switzerland
Tel.: (+41) 56 418 71 11
Fax: (+41) 56 401 34 68

**U.K.**
Bridgestone UK Ltd.
Bridgestone House
Athena Drive
Tachbrook Park
Warwick CV34 6UX - UK
Tel.: (+44) 1926 48 85 00
Fax: (+44) 1926 48 86 00

# ALPHABETICAL INDEX

# NOTES

Firestone

BRIDGESTONE UK LTD.

Athena Drive - Tachbrook Park
Warwick CV34 6UX
United Kingdom

www.firestone.eu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