

BRIDGESTONE

DATA BOOK

2021

OFF-THE-ROAD TIRES



BRIDGESTONE **MASTERCORE**

46/90R57 VRWP

46/90R57 VZTB

Subterranean LHD

26.5R25 VSMS2



Worldwide Olympic and Paralympic Partner

GENERAL INFORMATION

RADIAL TIRE

BIAS TIRE

REMARKS & SPECIAL OPERATIONS

O-RING, FLAP, RIM, VALVE, CONVERSION TABLES

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CONTENTS

INTRODUCTION

- 1. Industry Standard 1
- 2. Application Vehicle Matching Chart 1

GENERAL INFORMATION

- 1. Structural Diagram 2
- 2. Definitions 3
- 3. Classification 4
- 4. Tire Markings 6
- 5. Ton-Kilometer-Per-Hour (TKPH)..... 11
- 6. Bridgestone MASTERCORE 13
- 7. Subterranean Products for Underground Mines 14

RADIAL TIRE

- 1. Tread Designs 15
- 2. Application 26
- 3. Technical Data 34

BIAS TIRE

- 1. Tread Designs 60
- 2. Application 64
- 3. Technical Data 70

REMARKS & SPECIAL OPERATIONS

- 1. Remarks..... 84
- 2. Special Operations 88

OTHER SPECIFICATION

- 1. O-Ring Specifications 92
- 2. Flap Specifications 92
- 3. Rim and Valve 93

OTHER INFORMATION

- 1. Unit Conversion Tables..... 100
- 2. Specific Weight (Approximately)..... 103

INTRODUCTION

1. Industry Standard

Bridgestone Corporation has developed a wide range of tire patterns and specifications, so that the proper Off-the-Road tire can be matched to any vehicle, service, or operating conditions.

Bridgestone’s Off-the-Road tires are designed and produced to meet the commonly accepted international standards, those set by the TRA (Tire and Rim Association) in the U.S.A., by the ETRTO (European Tire and Rim Technical Organization) in Europe and/or by the JATMA (Japan Automobile Tire Manufacturers’ Association) in Japan*.

Load capacities, inflation pressures, dimensions such as overall tire diameter and width, as well as the relative rims and tube valves follow these standards.

If a tire is to be used for a purpose other than that for which it is originally intended, please consult Bridgestone Corporation for advice.

*Where differences exist between the TRA, ETRTO and JATMA standards, Bridgestone selects the most applicable.

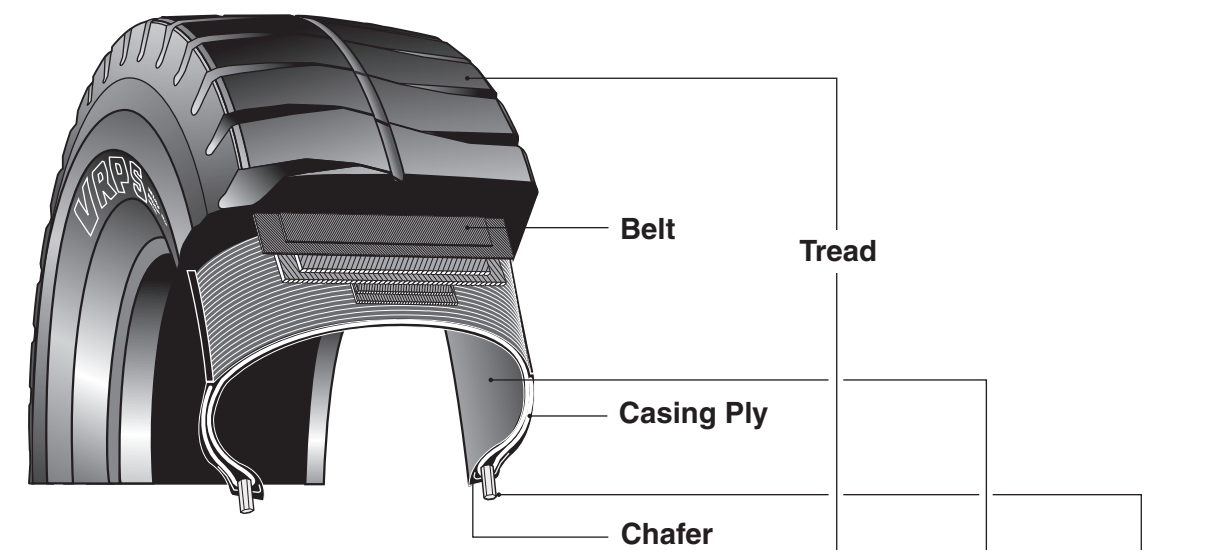
2. Application Vehicle Matching Chart

APPLICATION	VEHICLE
Earthmover Service	Dump Trucks, Motor Scrapers, Articulated Dump Trucks, Coal Haulers, Logging Trucks, Other Mining Trucks, etc.
Grader Service	Motor Graders
Loader & Dozer Service	Front-End Loaders, Back-hoe Loaders, Skid Steer Loaders, Dozers, Underground Trucks, Load-Haul-Dumps, etc.
Mobile Crane Service (High-Speed)	All-Terrain Cranes, High-Speed Vehicles, etc.
Industrial Service	Straddle Carriers, Aircraft Towing Tractors, Container Stackers, Counter-balanced Lift Trucks, Mobile Crushers, Log Stackers, etc.
Logging Service	Log-Skidders
Compactor Service	Compactor, Road Rollers
Sand Service	Sand Service Trucks
Underground Service	Underground Trucks, Load Haul Dumps, Drilling Jumbo

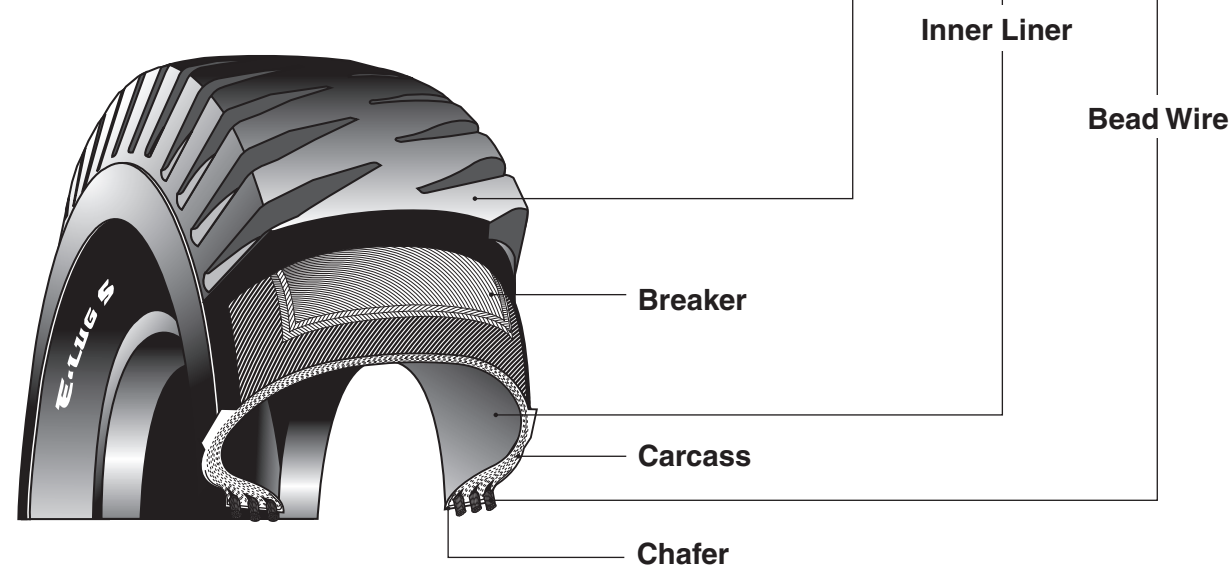
GENERAL INFORMATION

1. Structural Diagram

Off-The-Road Radial Tire (ORR)



Off-The-Road Bias Tire (ORS)



2. Definitions

2.1 Tire Size

The size of each tire is indicated by nominal width and rim diameter in inches and mm. Radial structure is indicated by the letter "R". For some tire the aspect ratio is indicated by percentage.

Example

Radial Tire ; 40.00R57, 33.25R35, 445/95R25
Bias Tire ; 21.00-35, 45/65-45

2.2 Star Rating, Ply Rating and Load Index

The load capacity of a tire is indicated by the star rating (in case of radial tire) and the ply rating (in case of bias tire). The load index is applied in countries where the ETRTO standards are used.

2.3 Overall Diameter (OD)

"Overall Diameter" is twice the section height of a new tire, plus the nominal rim diameter, including 24-hour inflation growth.

2.4 Overall Width (OW)

"Overall Width" is the width of a new tire, including 24-hour inflation growth, and including protective side ribs, bars or decorations.

2.5 Section Width (SW)

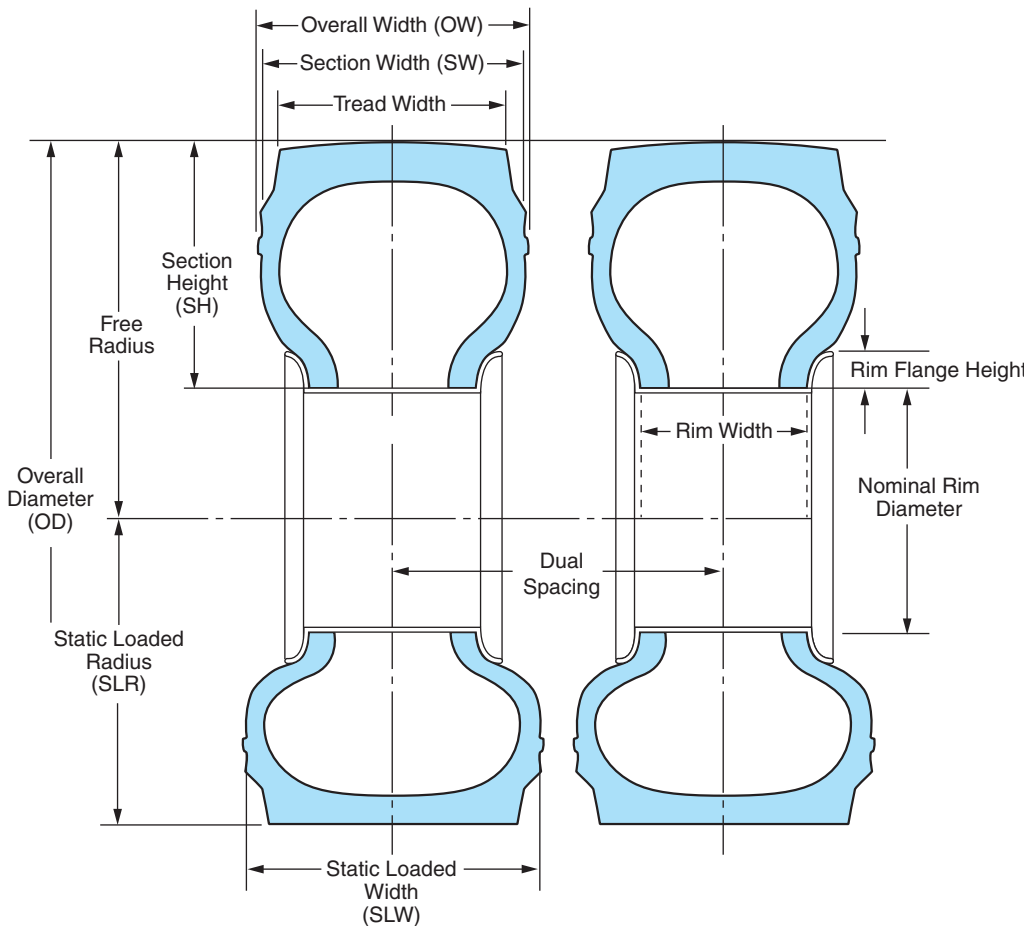
"Section Width" is the width of a new tire, including 24-hour inflation growth and including normal sidewalls, but not including protective side ribs, bars, or decorations.

2.6 Static Loaded Radius and Width (SLR, SLW)

"Static Loaded Radius" is the shortest distance from the axle center to the contact surface of a tire and "Static Loaded Width" is the overall width of a tire, mounted on the approved rim at the specified inflation pressure and placed still and vertically on a flat board, and loaded with the specified load.

2.7 Original Tread Depth (OTD)

"Original Tread Depth" is the tread depth of a new tire measured at the point of tread-indicator where available or one-fourth the width of the tire crown section from the crown center, including 24-hour inflation growth.



3. Classification

3.1 Uses and Characteristics of Off-The-Road Tires

The characteristics that Off-The-Road tires must possess differ according to their function and the type of vehicles they are mounted on.

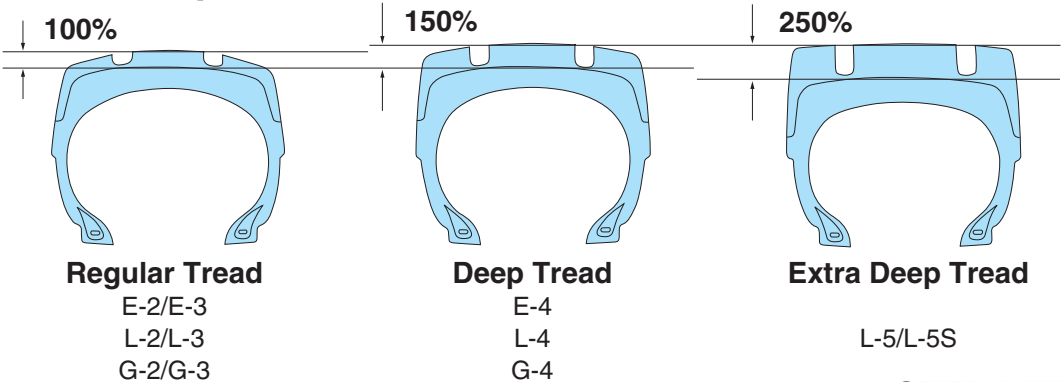
Type/Service	Function	Vehicles	Main tire characteristics required
Earthmover	Transporting	 Rigid dump trucks  Articulated dump trucks  Coal haulers  Scrapers  Off road trucks	Heat-resistance, Cut-resistance, Wear-resistance Shock burst-resistance
Grader	Grading, Leveling	 Graders	Traction, Maneuverability, (directional stability)
Loader and dozer	Loading and dozing	 Loaders, Bulldozers	Cut-resistance, Wear-resistance Stability
Compactor	Compacting	 Tire-rollers	Oil-resistance, Cut-resistance, Wear-resistance
Logging	Log-skidding	 Log-skidders	Traction, Flotation, Cut-resistance
Mobile crane (High-speed)	High-speed Travelling	 All-Terrain Cranes	Heat-resistance, Wear-resistance, Traction
Industrial	Handling & Towing	 Handling & Towing Equipments	Uneven wear, Wear-resistance, Stability
Underground	Underground	 LHDs  Drilling Jumbo  Underground Trucks	Cut-resistance, Wear-resistance

3.2 TRA Classification and Corresponding Bridgestone Off-The-Road Tires

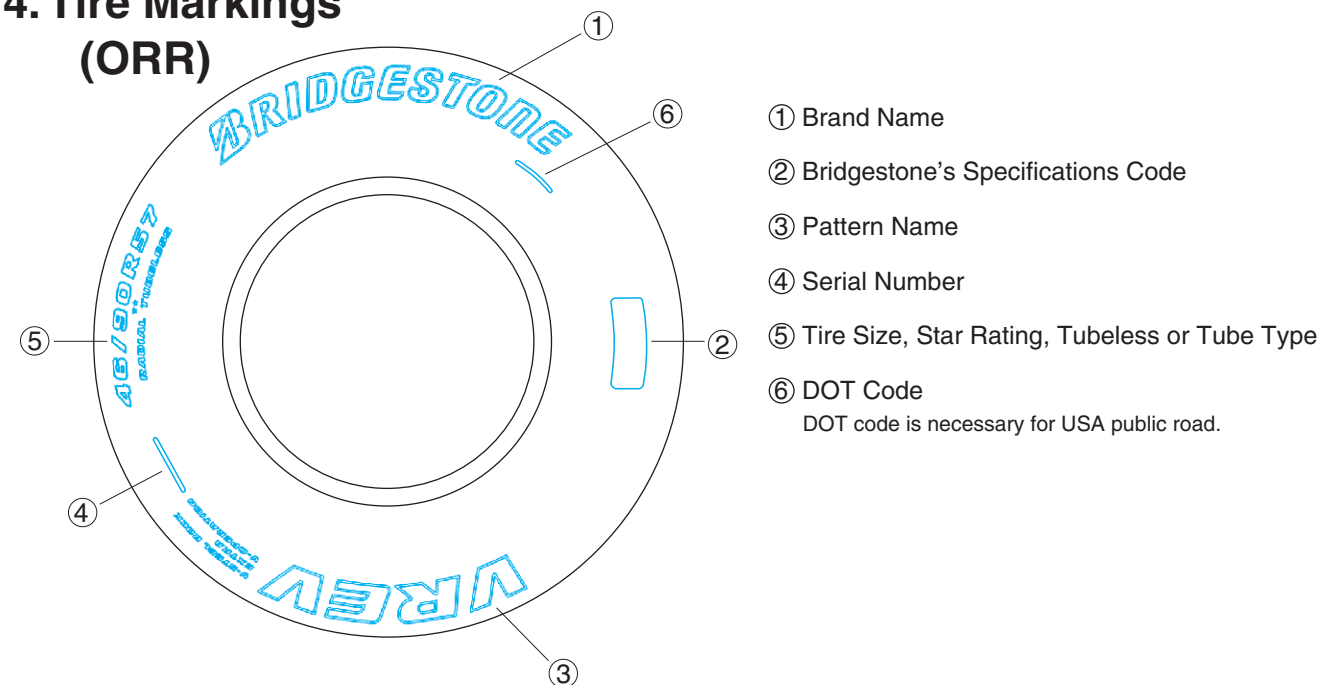
Off-The-Road tires are classified by the TRA as follows, and the names of the tread patterns of the corresponding Bridgestone Off-The-Road tires are described below.

TRA Classification	Tread Type	Bridgestone Tread Pattern	
		Radial	Bias
E= Earthmover (Haulage Service)			
E-2	Traction	VUT VKT VSB VFT VHS VSW	WL RL VL2
E-3	Rock	VLT VMT VTS VRL VRF	
E-4	Rock Deep	L317 VLTS VSNT VMTS VMTP VZTS VZTP VZTB VELS VRLS VREP VRDP VRPS VREV VRWP VRQP	
E-7	Flotation	VSJ	
G=Grader			
G-1	Rib		RG
G-2	Traction	VUT VSW	GL FG
G-3	Rock	VJT	RL
G-4	Rock Deep	VMTS	
L=Loader & Dozer (Slow Speed Service)			
L-2	Traction Regular	VUT VSW	GL FG
L-3	Rock Regular	VLT VJT VTS	RL VL2
L-4	Rock Deep	VLTS VSNT VSNL	RLS
L-5	Rock Extra-Deep	VSDT VSDL VSDR	DL
L-5S	Smooth Extra-Deep	VSMS VSMS2	STMS
C=Compactor Service			
C-1	Smooth		RR
C-2	Grooved		AL2
LS=Logging Service			
LS-2	Intermediate	VSB	
Mobile Crane Service (High-Speed)			
Mobile Crane Service		VGT VHB VHS VHS2 VSW	
Industrial Service			
Industrial Service		VHB VCH VCHD VCHR VCHP VCHS VELS VRLS VSDL VSMS	RL RLS ELS2 STMS YS2
Underground Service			
Underground Service		VSNL VSNT VSDR VSDL VMDL VSDT VSMS VSMS2	STMS DL

Design Tread-Depth



4. Tire Markings (ORR)



4.1 Type of Tire Size Designation

Regular 27.00 R 49 ☆ ☆

- Star Rating
- Rim Diameter (inches)
- Radial Structure
- Section Width (inches)

Wide Base 33.25 R 35 ☆ ☆

- Star Rating
- Rim Diameter (inches)
- Radial Structure
- Section Width (inches)

Super Wide Base 40 / 65 - 39 30PR

- Ply Rating
- Rim Diameter (inches)
- Aspect Ratio 65 Series
- Section Width (inches)

170 E 385 / 95 R 24

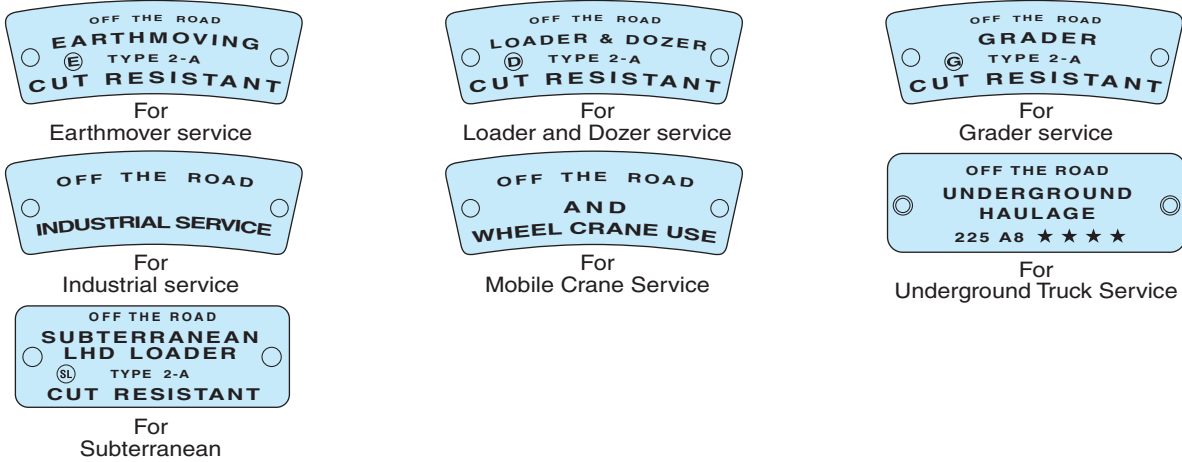
- Rim Diameter (inches)
- Radial Structure
- Aspect Ratio 95 Series
- Section Width (mm)
- Speed Symbol
- Load Index

***Tire Aspect Ratio**

SH, SW : See Page 3

4.2 Type of Tire Structures Classified by Service and Designated by Bridgestone

Each Bridgestone tire has a Bridgestone code number on the tire sidewall according to its specifications.



Tire Structures Classified by Type of Service and Bridgestone's Designations

Service	BS Code No.	Structure
Earthmover Service (E)	1A	Standard
	2A	Cut-resistant
	3A	Heat-resistant
Grader Service (G)	1A	Standard
	2A	Cut-resistant
Loader & Dozer Service (D)	2A	Cut-resistant
	2V*	Special cut-resistant (Type“V”)
	2Z*	Special cut-resistant (Type“Z”)
Logging Service (S)	2V	**Standard
Subterranean (L)	2A	Cut-resistant

NOTES: *Bias Tire Only
**2V tires are standard for log skidder service since the possibility of the cutting is high in log skidder operations.

D 2 A

- Structure: { A: Standard, V: Cut-resistant type “V” (Steel Breaker), Z: Cut-resistant type “Z” (Side Steel Breaker) }
- Characteristics: { 1: Standard, 2: Cut-resistant, 3: Heat-resistant }
- Type of Service: { E: Earthmover, G: Grader, D: Loader & Dozer, S: Logging, L: Subterranean }

Steel Breaker Tire

Steel breaker construction Side steel breaker construction

Steel Breaker Bias Tire
Steel Breaker Off-the-Road tires feature breaker material which is changed from nylon to steel in order to resist cutting and cut bursting. Bridgestone Steel Breaker Off-the-Road tires are widely used on loaders at mining and quarry sites, loaders and underground trucks in underground mines, and also on log loaders.

Side Steel Breaker Bias Tire
In this tire the steel breaker extends to the sidewall of the tire to protect it against damage. The construction is similar to that described above.

4.3 Load Index

The LOAD INDEX is an international numerical code for the maximum load a tire can carry at the speed indicated by its speed symbol under service conditions specified by Bridgestone.

LI	kg	LI	kg	LI	kg	LI	kg	LI	kg	LI	kg
0	45	50	190	100	800	150	3 350	200	14 000	250	60 000
1	46.2	51	195	101	825	151	3 450	201	14 500	251	61 500
2	47.5	52	200	102	850	152	3 550	202	15 000	252	63 000
3	48.7	53	206	103	875	153	3 650	203	15 500	253	65 000
4	50	54	212	104	900	154	3 750	204	16 000	254	67 000
5	51.5	55	218	105	925	155	3 875	205	16 500	255	69 000
6	53	56	224	106	950	156	4 000	206	17 000	256	71 000
7	54.5	57	230	107	975	157	4 125	207	17 500	257	73 000
8	56	58	236	108	1 000	158	4 250	208	18 000	258	75 000
9	58	59	243	109	1 030	159	4 375	209	18 500	259	77 500
10	60	60	250	110	1 060	160	4 500	210	19 000	260	80 000
11	61.5	61	257	111	1 090	161	4 625	211	19 500	261	82 500
12	63	62	265	112	1 120	162	4 750	212	20 000	262	85 000
13	65	63	272	113	1 150	163	4 875	213	20 600	263	87 500
14	67	64	280	114	1 180	164	5 000	214	21 200	264	90 000
15	69	65	290	115	1 215	165	5 150	215	21 800	265	92 500
16	71	66	300	116	1 250	166	5 300	216	22 400	266	95 000
17	73	67	307	117	1 285	167	5 450	217	23 000	267	97 500
18	75	68	315	118	1 320	168	5 600	218	23 600	268	100 000
19	77.5	69	325	119	1 360	169	5 800	219	24 300	269	103 000
20	80	70	335	120	1 400	170	6 000	220	25 000	270	106 000
21	82.5	71	345	121	1 450	171	6 150	221	25 750	271	109 000
22	85	72	355	122	1 500	172	6 300	222	26 500	272	112 000
23	87.5	73	365	123	1 550	173	6 500	223	27 250	273	115 000
24	90	74	375	124	1 600	174	6 700	224	28 000	274	118 000
25	92.5	75	387	125	1 650	175	6 900	225	29 000	275	121 000
26	95	76	400	126	1 700	176	7 100	226	30 000	276	125 000
27	97	77	412	127	1 750	177	7 300	227	30 750	277	128 000
28	100	78	425	128	1 800	178	7 500	228	31 500	278	132 500
29	103	79	437	129	1 850	179	7 750	229	32 500	279	136 000
30	106	80	450	130	1 900	180	8 000	230	33 500		
31	109	81	462	131	1 950	181	8 250	231	34 500		
32	112	82	475	132	2 000	182	8 500	232	35 500		
33	115	83	487	133	2 060	183	8 750	233	36 500		
34	118	84	500	134	2 120	184	9 000	234	37 500		
35	121	85	515	135	2 180	185	9 250	235	38 750		
36	125	86	530	136	2 240	186	9 500	236	40 000		
37	128	87	545	137	2 300	187	9 750	237	41 250		
38	132	88	560	138	2 360	188	10 000	238	42 500		
39	136	89	580	139	2 430	189	10 300	239	43 750		
40	140	90	600	140	2 500	190	10 600	240	45 000		
41	145	91	615	141	2 575	191	10 900	241	46 250		
42	150	92	630	142	2 650	192	11 200	242	47 500		
43	155	93	650	143	2 725	193	11 500	243	48 750		
44	160	94	670	144	2 800	194	11 800	244	50 000		
45	165	95	690	145	2 900	195	12 150	245	51 500		
46	170	96	710	146	3 000	196	12 500	246	53 000		
47	175	97	730	147	3 075	197	12 850	247	54 500		
48	180	98	750	148	3 150	198	13 200	248	56 000		
49	185	99	775	149	3 250	199	13 600	249	58 000		

4.4 Speed Symbol

The SPEED SYMBOL indicates the speed at which the tire can carry a load corresponding to its load index under service conditions specified by Bridgestone.

Speed Symbol	Speed (km/h)
A1	5
A2	10
A3	15
A4	20
A5	25
A6	30
A7	35
A8	40

Speed Symbol	Speed (km/h)
B	50
C	60
D	65
E	70
F	80
G	90

4.5 Conversion Table: Star Rating to Ply Rating

Service	Tire Size	Star Rating	Corresponding Ply Rating
Earthmover	12.00R24	★3	up to 24
	14.00R24	★3	up to 32
	14.00R25	★3	up to 32
	16.00R25	★2	up to 36
	18.00R25	★1	up to 24
		★2	up to 36
	18.00R33	★2	up to 40
	21.00R35	★2	up to 44
	40.00R57	★2	up to 74
	17.5R25	★1	up to 16
	20.5R25	★1	up to 24
		★2	up to 28
	23.5R25	★1	up to 24
		★2	up to 32
	26.5R25	★2	up to 32
	29.5R25	★2	up to 34
	29.5R29	★2	up to 40
	33.25R29	★2	up to 44
	33.25R35	★2	up to 44
	37.25R35	★2	up to 48
	37.5R39	★2	up to 52
	40.5/75R39	★2	up to 54

Service	Tire Size	Star Rating	Corresponding Ply Rating
Grader	14.00R24	★1	up to 16
	16.00R24	★1	up to 16
	17.5R25	★1	up to 16
Loader	15.5R25	★1	up to 16
	17.5R25	★1	up to 16
	20.5R25	★1	up to 24
		★2	up to 28
	23.5R25	★1	up to 24
		★2	up to 32
	26.5R25	★1	up to 24
		★2	up to 36
	29.5R25	★1	up to 28
		★2	up to 34
	29.5R29	★1	up to 34
	35/65R33	★1	up to 36
	45/65R45	★1	up to 50
	50/65R51	★2	up to 54

Note: Due to the practice of altering inflation pressure to improve flotation on sand, Bridgestone does not apply a star rating to tire size 21.00R25 VSJ.

4.6 Size Conversion Table

Metric	Inch
385/95R24, 25	14.00R24, 25
445/95R24, 25	16.00R24, 25
445/80R25	17.5R25
505/95R25	18.00R25
525/80R25	20.5R25
750/65R25	30/65R25

4.7 Dual Specification Codes

Some Bridgestone Off-The-Road Tires have dual specification codes which can be used for both services.

Combination	Construction	Size Designation
Loader & Dozer Service + Earthmover Service	Radial	26.5R25 MS* VLT T DE2 ★1 D2A ★2 E2A
	Bias	26.5 – 25 20 VL2 T DE2 D2A E2A
Loader & Dozer Service + Grader Service	Radial/Bias	17.5 – 25 12 FG T DG2 D2A G2A
Earthmover Service + Grader Service	Radial	17.5R25 ★1 VKT T EG2 E2A G2A
Underground Trucks + Loader & Dozer Service	Radial	35/65R33 MT* VSNT T DUH Underground Truck D2A

* Multiple Star Rating

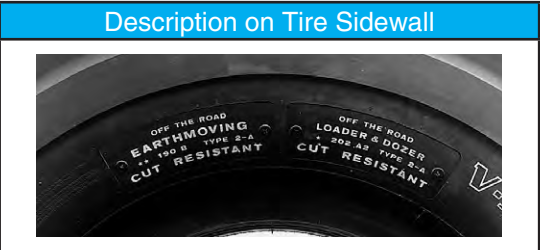
Bridgestone Radial Tires marked with “LOADER & DOZER ★(one star)” and “EARTHMOVER ★★(two star)” have specified load capacity on each servicing condition.

Strength of tire casing is designed to constrain inflation pressure used.
<26.5R25 as an example>

	Type of Service	Star Rating	Inflation Pressure	Load (Load Index)	Speed (Speed Symbol)
MS	Loader	★(one star)	500kPa	15,000 kg (202)	10 km/h (A2)
	Earthmover	★★(two stars)	525kPa	11,500 kg (193)	50 km/h (B)

<35/65R33 as an example>

MT	Underground Trucks	★★★★(four stars)	800kPa	29,000 kg (225)	40 km/h (A8)
	Loader	★★(two stars)	650kPa	28,000 kg (224)	10 km/h (A2)



5. Ton-Kilometer-Per-Hour (TKPH)

5.1 Operating TKPH

Earth-moving, mining and logging tires have become increasingly important with the development of large construction vehicles. The primary task of these heavy-duty tires is to haul heavy loads faster, over longer distances. This heavy hauling inevitably causes heat built-up in the tires. As tires have limited resistance to heat, deterioration of the tire may occur at an early stage of operation if used beyond the rated TKPH.

Accordingly, it is necessary when selecting tires, to determine the amount of work which will keep the tire within a safe range to avoid over-heating when the vehicle is operated under given conditions. The amount of work done under the given conditions and within a safe range is shown as “Operating Ton-Kilometer-Per-Hour (Operating TKPH)” which can be determined by the following formula:

Formula for Calculation of Operating TKPH

Operating TKPH = $\left(\frac{\text{Mean Tire-Load (MTL)}}{2} \right) \times \left(\text{Average Work Shift Speed (AWSS)} \right)$

Mean Tire-Load (MTL)

Average Work Shift Speed (AWSS)

MTL [metric tons] = $\frac{\text{Tire Load (Empty)} + \text{Tire Load (Loaded)}}{2}$

AWSS [km/hour] = $\frac{\text{Round Trip Distance[km]} \times \text{Number of Cycles per Shift}}{\text{Total Hours of Operation per Shift}}$

*Calculation formula of “Operating TKPH” may be different between tire manufacturers.

5.2 Tire TKPH

Tire TKPH varies depending on the tire’s design (size, tread pattern and the type of compound). A High TKPH tire generates less heat than that of lower TKPH tire. However, the lower TKPH tire will have greater cut and wear resistance than the higher TKPH one.

The TKPH method is applicable in the following situations.

- (1) One way distance: within 16 km (10 miles)
 - a. When haul length exceeds 16 km one way, consult a Bridgestone Representative.
 - b. If the round-trip distance is less than 5km (3miles), Tire TKPH figures can be increased by 12%.
- (2) Ambient temperature: 38°C (100°F)

For ambient temperatures other than 38°C (100°F), the Tire TKPH rating should be revised based on the following formula.

a. Radial Tire

Revised TKPH rating = $[1 + \alpha \times (38^{\circ}\text{C} - \text{Max. Ambient Temperature } ^{\circ}\text{C})] \times \text{Tire TKPH}$

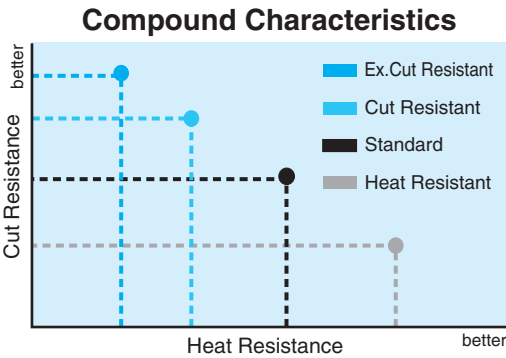
Below 27.00 (33.5) inches in Section Width: $\alpha = 0.010$
Above 30.00 (37.25) inches in Section Width: $\alpha = 0.009$

b. Bias Tire

Revised TKPH rating = $[1 + \alpha \times (38^{\circ}\text{C} - \text{Max. Ambient Temperature } ^{\circ}\text{C})] \times \text{Tire TKPH}$

Below 27.00 (33.5) inches in Section Width: $\alpha = 0.006$
Above 30.00 (37.25) inches in Section Width: $\alpha = 0.005$

*Revising coefficient: The value is shown in the following table.



Revising Coefficient

Ambient Temperature		Bias Tire		Radial Tire	
		Tire Section		Tire Section	
°C	°F	27.00 and below	30.00 and over	27.00 and below	30.00 and over
14	57	1.144	1.120	1.240	1.216
15	59	1.138	1.115	1.230	1.207
16	61	1.132	1.110	1.220	1.198
18	64	1.120	1.100	1.200	1.180
20	68	1.108	1.090	1.180	1.162
22	72	1.096	1.080	1.160	1.144
24	75	1.084	1.070	1.140	1.126
26	79	1.072	1.060	1.120	1.108
28	82	1.060	1.050	1.100	1.090
30	86	1.048	1.040	1.080	1.072
32	90	1.036	1.030	1.060	1.054
34	93	1.024	1.020	1.040	1.036
36	97	1.012	1.010	1.020	1.018
38	100	1.000	1.000	1.000	1.000
40	104	0.988	0.990	0.980	0.982
42	108	0.976	0.980	0.960	0.964
44	111	0.964	0.970	0.940	0.946
46	115	0.952	0.960	0.920	0.928
48	118	0.940	0.950	0.900	0.910
50	122	0.928	0.940	0.880	0.892

For all ambient temperatures below 14°C (57°F), the same TKPH value as calculated at 14°C (57°F) should be used.

(3) Maximum speed

a. Radial Tire

For 65km/h(40mph) maximum speed, the loads must be reduces 12% with no change in inflation pressure.

b. Bias Tire

When the maximum speed exceeds 50 km/h (30 mph) under loaded conditions, the following formula is used:

Revised TKPH Rating = $\frac{50 \text{ km/h}}{\text{Max. speed}} \times \text{Tire TKPH}$

Example:

The TKPH Rating for 21.00-35, 36PR RLS E1A is 226; if the tire is to run at 60 km/h when loaded.

$\frac{50}{60} \times 226 = 188$

(4) To obtain the TKPH(TMPH) for type 2A-LS, multiply type 2A rating by 0.8.

(5) The respective types of vehicles are subject to the following speed limitations.

Maximum Speed

Type of Vehicle	Maximum Speed
Dump & Scraper	50 km/h (30 mph)
Grader	40 km/h (25 mph)
Loader & Dozer	10 km/h (5 mph)

5.3 Proper TKPH

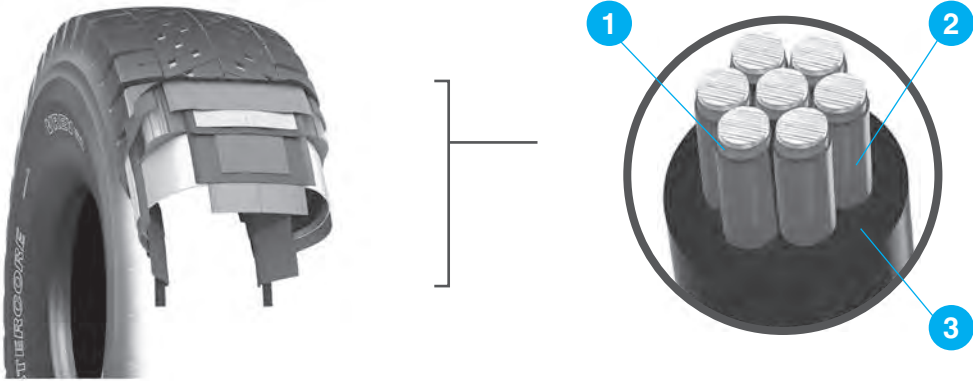
The average operating TKPH, calculated after several samples, should not exceed the tire TKPH rating. Exceeding the tire TKPH may result in serious tire damage or failure.

6. *BRIDGESTONE* *MASTERCORE*

6.1 Bridgestone MASTERCORE

MASTERCORE tires are engineered for ultra-high durability with performance that can be customized to various mine sites and operations. These tires can be customized to meet the needs of any site so you can run your mines more efficiently, with greater productivity.

With currently available MASTERCORE tires, users can customize the usage: Up to 5% more durability, 10% faster speeds, or 15% greater payloads.*1 MASTERCORE tire's flexibility is made possible by new compounds and a revolutionary steel cord with new anti-rust and adhesion coatings.



1. Optimized Bonding Agent

Proprietary process applies bonding agent to the steel cord for improved rubber coverage & adhesion.

2. Anti-rust Steel Cord

Improved resistance to rust and damaged belts from cuts and moisture exposure versus conventional tires.

3. New Rubber Compound

Significant improvement in crack propagation resulting in improved belt & casing life.

6.2 Available Sizes and Patterns

59/80R63	53/80R63	50/80R57	46/90R57
• MASTERCORE VRF	• MASTERCORE VREV	• MASTERCORE VREV	• MASTERCORE VRWP
• MASTERCORE VRPS			• MASTERCORE VZTB
• MASTERCORE VREV			

6.3 Conventional vs MASTERCORE Load Capacity (based on cold inflation)

Size	Recommended Rim / Flange	Tire	80 psi	83 psi	87 psi	91 psi	94 psi	98 psi	102 psi
59/80R63	44.00/5.0	Conventional	85,000	87,500	90,000	92,500	95,000	97,500	100,000
		MasterCore	97,500	100,000	103,000	106,000	109,000	112,000	115,000
59/80R63	41.00/5.0	Conventional	82,000	84,000	86,000	89,000	91,000	94,000	96,000
		MasterCore	94,000	96,000	99,000	102,000	105,000	108,000	110,000
53/80R63	36.00/5.0	Conventional	69,000	71,000	75,000	77,500	80,000	80,000	82,500
		MasterCore	80,000	82,500	85,000	87,500	90,000	92,500	95,000
50/80R57	32.00/6.0 (34.00/5.0) (34.00/6.0)	Conventional	61,500	63,000	65,000	67,000	69,000	71,000	73,000
		MasterCore	71,000	73,000	75,000	77,500	80,000	82,500	85,000
50/80R57	29.00/6.0	Conventional	54,500	56,000	58,000	60,000	61,500	63,000	65,000
		MasterCore	63,000	65,000	67,000	69,000	71,000	73,000	75,000
46/90R57	29.00/6.0 (32.00/6.0)	Conventional	53,000	54,500	56,000	58,000	60,000	61,500	63,000
		MasterCore	60,000	63,000	65,000	67,000	69,000	71,000	73,000

Please make sure you are running the appropriate Tire Load Limit, as these vary based on your operation. Contact your Bridgestone representative for additional support.

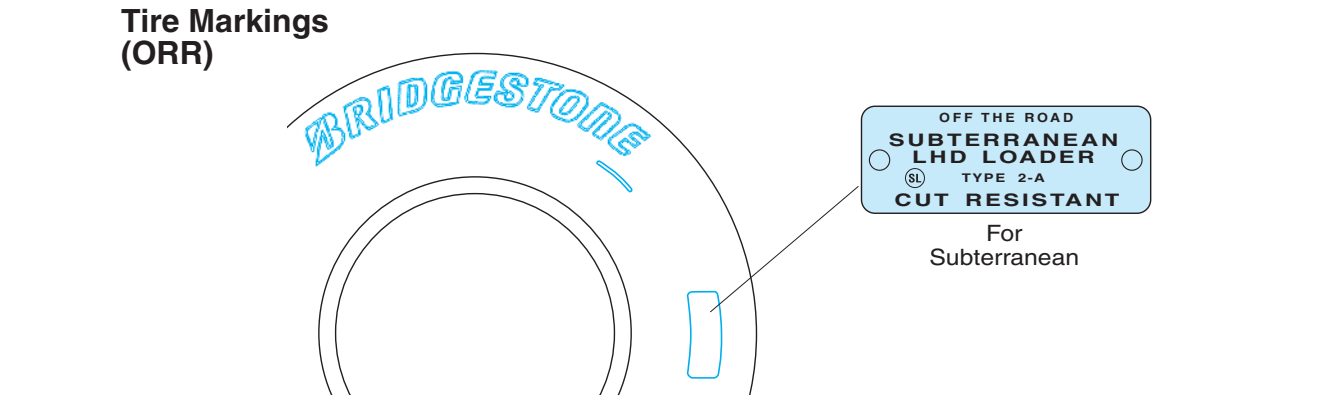
*1 Comparison based on conventional Bridgestone VRPS vs Bridgestone MASTERCORE VRPS and conventional Bridgestone VRF vs Bridgestone MASTERCORE VRF when same size apply from field data and internal testing. Tire wear may increase when maximum speed or payload capacity is increased. Results may vary.

7. Subterranean Products for Underground Mines

7.1 Subterranean LHD Standard

Registered to JATMA and TRA-EDI, the Subterranean LHD Standard standardizes higher load capacity while maintaining lower air pressure.

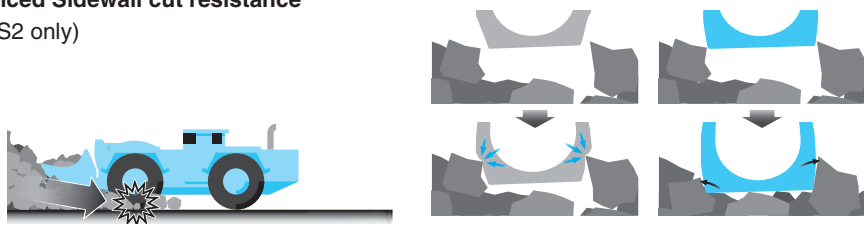
The standard table of Tire load limits at various cold inflation pressures is shown under 7.4.



7.2 Subterranean LHD (L2A) products

Subterranean LHD (L2A) products have +15% load capacity compared to D2A products at the same inflation pressure(94psi/650kPa). This performance is made possible by bead construction enhancement and belt construction optimization. In addition, VSMS2 has an upgraded sidewall structure which ensures maximum sidewall cut resistance.

- Enhanced case durability
 - Enhanced bead construction
 - Optimized belt construction
- Enhanced Sidewall cut resistance (VSMS2 only)



7.3 Available Sizes and Patterns

- 26.5R25

 - VMDL (LHD5) L2A
 - VSMS2 (LHD5S) L2A
- 29.5R29

 - VSMS2 (LHD5S) L2A
- <Further Development>

 - 17.5R25
 - 18.00R25
 - 29.5R25
 - 35/65R33

7.4 Conventional(D2A) vs Subterranean LHD(L2A) Load Capacity (based on cold inflation)

Tire Size	Pattern	TRA Code or Application	Spec	Star rating	Inflation Pressure	★1						★2
						73 psi	76 psi	80 psi	83 psi	87 psi	91 psi	94 psi
26.5R25	VSDL	L5	D2A	Conventional		15,000kg	15,500kg	16,000kg	16,500kg	17,000kg	18,000kg	18,500kg
	VSMS2	L5S										
	VMDL	LHD5	L2A	Subterranean LHD		17,500kg	18,500kg	19,000kg	19,500kg	20,000kg	20,600kg	21,200kg
	VSMS2	LHD5S										
29.5R29	VSMS2	L5S	D2A	Conventional		19,500kg	20,000kg	20,600kg	21,200kg	22,400kg	23,000kg	23,600kg
	VSMS2	LHD5S	L2A	Subterranean LHD		22,400kg	23,600kg	24,300kg	25,000kg	25,750kg	26,500kg	27,250kg

RADIAL TIRE

1. Tread Designs

Earthmover Service



VUT

V-STEEL ULTRA TRACTION
E-2



Non-directional pattern VUT features superior traction and excellent self-cleaning. Lighter weight provides superior maneuverability and fuel consumption.



VKT

V-STEEL K-TRACTION
E-2



Ideal for soft or muddy surfaces, offering good traction and flotation.



VSB

V-STEEL S-BLOCK
E-2



VSB exhibits excellent traction and maneuverability. Suitable for both gravel and hard packed surfaces like paved roads. Designed for heavy-duty trucks and trailers.



VFT

V-STEEL F-TRACTION
E-2



Provides good traction, generates low heat and assures long tread life on soft, muddy or packed surfaces.



VHS

V-STEEL H-SERVICE
E-2



Minimum heat build-up enables high-speed operation for coal and bauxite hauling. Reducing irregular wear means a longer tread life. Suitable for rigid or bottom-type coal haulers in high TKPH operations.



VSW

V-STEEL SNOW WEDGE
E-2



VSW is the first of its kind in snow radials, especially developed for machines used in snow removal work. This tire has excellent traction from a standing start and during acceleration as well as superior cornering and braking performance, especially on icy, packed or soft snow surfaces. VSW provides all-season service, requiring no replacement during summer and offers exceptional ability to be retreaded.

Earthmover Service



VLT

V-STEEL L-TRACTION
E-3



For ADT For Scraper

Wide and self-cleaning tread pattern offers excellent maneuverability, traction and floatation on soft or muddy surfaces.



VMT

V-STEEL M-TRACTION
E-3



Wide Base Regular

Normal-depth tread with a non-directional traction pattern, featuring strong resistance to heat build-up. Most suitable for hauling equipment used in coal mines, and equally applicable to operations on soft or muddy surfaces.



VTS

V-STEEL TRACTION-STABILITY
E-3



VTS tire offers exceptional stability, superior riding comfort, optimum traction and reduced cost per performance than the 80 series of the same tread class.



VRL

V-STEEL R-LUG
E-3



Wide Base Regular

Tough lug-pattern VRL features excellent traction as well as good resistance to cutting and casing fatigue. Suitable for scrapers on rocky surfaces.



VRF

V-STEEL ROCK FAST
E-3



VRF has great wear and cut resistance and has a long tread life as an E-3 premium pattern. MASTERCORE VRF can be customized to meet the needs of any site so you can run your mines more efficiently, with greater productivity.



L317

E-4



This tire's features are extra-long life, superior cut resistance and excellent traction. The casing is reinforced by ★3 for heavy-duty mining trucks in cyclical operation.

Earthmover Service



VLTS

V-STEEL L-TRACTION S
E-4



Offers outstanding cut resistance and long tread life on rocky or gravel surfaces in mining, quarry and construction, with superior traction.



VSNT

V-STEEL N-TRACTION
E-4



Unique non-directional traction pattern VSNT provides optimum traction without compromising tread life. The wide tread is our concept to minimize side-wall cuts. Applicable for underground trucks in underground mines.



VMTS

V-STEEL M-TRACTION S
E-4



Non-directional deep tread pattern for strong traction, especially resistant to side-slipping. High wear resistance ensures long tread life. Applicable for muddy or soft surfaces.



VMTP

V-STEEL M-TRACTION PREMIUM
E-4



Non-directional extra-deep tread corresponding to E4.5 ensures long tread life and offers superior traction, especially on muddy surfaces.



VZTS

V-STEEL Z-TRACTION S
E-4



Deep tread pattern with sidewall protectors. Specifically designed for giant dump trucks. Non-directional deep tread pattern ensures excellent traction and strong resistance to side-slipping as well as long life and cut resistance on rocky surfaces.



VZTP

V-STEEL Z-TRACTION PREMIUM
E-4



Extra-deep tread pattern with sidewall protectors. VZTP focuses especially on traction, extra-long tread life and superior cut resistance. Narrow center tread grooves, which reduce tread block movement and help with heat dissipation, along with wider side lugs, achieves the perfect balance of opposing performance targets: traction, tread life, and heat resistance. VZTP can be the best solution for large, rigid dump trucks working on muddy surfaces.

Earthmover Service



VELS

V-STEEL E-LUG S
E-4



18.00R25~
21.00R35 40.00R57

Deep tread pattern with sidewall protectors. Suited for abrasive roads, such as rocky, gravel or packed surfaces. High resistance to cutting, chipping and shock damage.



VRLS

V-STEEL R-LUG S
E-4



14.00R24~
16.00R25 21.00R33~
37.00R57

Rock-deep tread with tough lug and sidewall protectors. High resistance to cutting and chipping for long tread life. Specially designed for dump trucks engaged in earthmoving.



VREP

V-STEEL ROCK E-PREMIUM
E-4



Without sacrificing wear resistance compared to the current standard pattern, VREP minimizes heat generation and achieves the highest TKPH among current E-4 rock patterns. This makes it suitable for giant rigid dump trucks running at high speeds which can cause extreme heat buildup inside the tire.



VRDP

V-STEEL ROCK DEEP PREMIUM
E-4



Extra-Deep rock tread with sidewall protectors is the main feature of VRDP, enabling extended tread life and super cut resistance without compromising resistance to heat build-up. VRDP is suitable for giant rigid dump trucks. Can be used on abrasive or rocky road surfaces and can reduce cost per performance of standard E-4 rock patterns.



VRPS

V-STEEL ROCK PREMIUM SERVICE
E-4



46/90R57
50/90R57 53/80R63

With a special tread pattern and optimal tire rigidity, VRPS tires boost longer tread life and great resistance to wear and tear, so they are recommended especially for the mine require extra protection against wear, cuts and penetration.



VRPS

V-STEEL ROCK PREMIUM SERVICE
E-4



59/80R63

MASTERCORE VRPS can be customized to meet the needs of any site so you can run your mines more efficiently, with greater productivity in addition to longer tread life and great resistance to wear and tear.

Earthmover Service



BRIDGESTONE MASTERCORE

VREV

V-STEEL ROCK EXTRA V-OPERATION
E-4



59/80R63 53/80R63 50/80R57

The VREV pattern achieves minimized heat generation that allows maximum workload. MASTERCORE VREV can be customized to meet the needs of any site so you can run your mines more efficiently, with greater productivity in addition to extra protection against wear, cuts and penetration.



BRIDGESTONE MASTERCORE

VRWP

V-STEEL ROCK WEAR PREMIUM
E-4



New tread pattern designed specifically to provide higher wear resistance. Grooves reduce pattern strain and provide additional heat reduction. MASTERCORE VRWP can be customized to meet the needs of any site so you can run your mines more efficiently, with greater productivity in addition to extra protection against wear, cuts and penetration.



BRIDGESTONE MASTERCORE

VZTB

V-STEEL Z-TRACTION BEYOND
E-4



New tread pattern designed specifically to provide maximum traction and increased airflow which reduces temperature and extends tire life. Full width grooves aid traction and increase material ejection for superior grip. MASTERCORE VZTB can be customized to meet the needs of any site so you can run your mines more efficiently, with greater productivity in addition to high traction/grip performance.



VRQP

V-STEEL ROCK QUARRY PREMIUM
E-4



Extra-thick tread pattern VRQP assures longer tread life and superior cut resistance. Greatly reduces total tire costs for replacement. Specially developed for mid-size rigid dump trucks working in quarries and other tough operations.

Sand Service

VSJ

V-STEEL JAMAL
E-7



The unique tread design ensures maximum flotation and traction. VSJ is designed with a steel radial construction for operating on desert or soft ground, as well as paved roads.

Grader Service



VUT

V-STEEL ULTRA TRACTION
G-2



Non-directional pattern VUT features superior traction and excellent self-cleaning. Lighter weight provides superior maneuverability and fuel consumption.



VSW

V-STEEL SNOW WEDGE
G-2



VSW is the first of its kind in snow radials, especially developed for machines used in snow removal work. This tire has excellent traction from a standing start and during acceleration as well as superior cornering and braking performance, especially on icy, packed or soft snow surfaces. VSW provides all-season service, requiring no replacement during summer and offers exceptional ability to be retreaded.



VJT

V-STEEL J-TRACTION
G-3



Next-generation pattern reduces vibrations, and achieves higher riding comfort plus VMT's long-standing grip and long tread life. VJT is suitable for construction and general duties.

Grader Service



VMTS

V-STEEL M-TRACTION S
G-4



Non-directional deep tread pattern offers superior traction and extra-long tread life. Designed especially for graders in underground mines or quarries.



VLT

V-STEEL L-TRACTION
L-3



Suitable for wet, soft or muddy surfaces with excellent maneuverability, traction and flotation.



VUT

V-STEEL ULTRA TRACTION
L-2



For Compact Loader 335/80R20~405/70R20 **For Loader** 15.5R25~23.5R25

Non-directional pattern VUT features superior traction and excellent self-cleaning. Lighter weight provides superior maneuverability and fuel consumption.

Loader & Dozer Service



VSW

V-STEEL SNOW WEDGE
L-2



VSW is the first of its kind in snow radials, especially developed for machines used in snow removal work. This tire has excellent traction from a standing start and during acceleration as well as superior cornering and braking performance, especially on icy, packed or soft snow surfaces. VSW provides all-season service, requiring no replacement during summer and offers exceptional ability to be retreaded.



VJT

V-STEEL J-TRACTION
L-3



Next-generation pattern reduces vibrations, and achieves higher riding comfort plus VMT's long-standing grip and long tread life. VJT is suitable for construction and general duties.



VTS

V-STEEL TRACTION-STABILITY
L-3



VTS tire offers exceptional stability, superior riding comfort, optimum traction and reduced cost per performance than the 80 series of the same tread class. Designed primarily for wheeled loaders as the preferred line.



VLTS

V-STEEL L-TRACTION S
L-4



Offers best cut resistance and long tread life with superior traction on rocky or gravel surfaces in mines, quarries and construction sites.



VSNT

V-STEEL N-TRACTION
L-4



Unique non-directional traction pattern VSNT can provide optimum traction without compromising tread life. The wide tread is our concept to minimize sidewall cuts. Applicable for wheeled loaders operating in quarries or mining for load and carry operations with sure longitudinal traction.



VSNL

V-STEEL N-LUG
L-4



14.00R20 35/65R33
45/65R45

Rock pattern design offers outstanding traction, stability and comfort. Sidewall protection reduces cuts and other damage. Primarily designed for underground mining, they are also suitable for load and carry operations in open pits and quarries.

Loader & Dozer Service



VSDT

V-STEEL SUPER DEEP TRACTION
L-5



Extra-deep tread for excellent traction, comfortable ride, superior cut resistance and long tread life. The wide tread is our concept to minimize sidewall cuts. For use in underground mines, open pits and quarries.



VSDR

V-STEEL SUPER DEEP ROCK
L-5



Extra super deep tread designed for severe or rocky surfaces, offering excellent traction, stability and a comfortable ride. Specially designed sidewall provides extended protection from cutting. For use in underground mines, open pits and quarries.



VSDL

V-STEEL D-LUG
L-5



8.25R15~
12.00R20 15.5R25~
60/80R57

Extra-deep tread designed for severe or rocky surfaces, offering excellent traction, stability and a comfortable ride. Specially designed sidewall provides extended protection from cutting. For use in underground mines, open pits and quarries.



VMDL

V-STEEL MINING D-LUG
LHD-5



VMDL is applied Subterranean LHD Standard for use in underground mines. Extra-deep tread designed for severe or rocky surfaces, offering excellent traction, stability and a comfortable ride. Specially designed sidewall provides extended protection from cutting.



VSMS

V-STEEL SMOOTH TREAD-MS
L-5S



Specially compounded, smooth, extra-deep tread rubber ensures maximum resistance to cutting and wearing. Designed for operating over severe rocky surfaces, in underground mines, open pits and quarries.



VSMS2

V-STEEL SMOOTH TREAD-MS 2
L-5S / LHD-5S



Optimized sidewall shape ensures maximum sidewall cut resistance. VSMS2 boost longer tire life compare to VSMS. Designed for operating over severe rocky surfaces, in underground mines, open pits and quarries.

Mobile Crane Service (High-Speed)



VHS

V-STEEL HIGHWAY SERVICE



Newly developed technology assures excellent performance, especially for mobile crane service (on-road conditions). New tread rubber achieves extra-long life and ideal tread pattern (closed shoulder, variable pitches) reduces noise level. Suitable for all-terrain cranes.

❖ DOT approved



VSW

V-STEEL SNOW WEDGE



VSW is the first of its kind in snow radials, especially developed for machines used in snow removal work. This tire has excellent traction from a standing start and during acceleration as well as superior cornering and braking performance, especially on icy, packed or soft snow surfaces. VSW provides all-season service, requiring no replacement during summer and offers exceptional ability to be retreaded.

❖ DOT approved



VHB

V-STEEL H-BLOCK



Designed for all-terrain cranes. Featuring long tread life thanks to a wear-resistant tread rubber compound. Great flotation and traction due to the unique tread pattern. And reliable durability and high resistance to cutting and heat build-up.

❖ DOT approved



VHS2

V-STEEL HIGHWAY SERVICE2



Bridgestone's newest addition to their range of premium Off-the-road crane tyres is built to deliver longest lasting heavy-duty performance. Combining outstanding durability and long wear life with excellent on-road performance, this advanced all-terrain crane tyre has all the ingredients to lift both your payload and your business to new heights.

❖ DOT approved



VGT

V-STEEL G-TRACTION



Block pattern with normal-depth tread suitable for higher speeds and longer transport operations on paved or packed roads with strong resistance to heat build-up and irregular wear. On rough terrain, this tire offers strong traction and flotation. Especially applicable to fire engines at airports or all-terrain cranes.

❖ DOT approved

Industrial Service



VRLS

V-STEEL R-LUG S



Designed for container handling equipment, such as straddle carriers. Features great resistance to heat build-up for high speed operations.



VCH

V-STEEL CONTAINER HANDLER



Features extra-long life, thanks to newly developed tread compound and smooth wear due to optimized contact pressure. Specially designed for container handling equipment, such as straddle carriers, container stackers, etc.



VC HS

V-STEEL CONTAINER HANDLER SS



Newly developed all-steel radial casings improve operational stability and safety. The unique pattern is designed for longer tread life by preventing irregular wearing. Specially designed for container handling equipment, such as container stackers.



VCHP

V-STEEL CONTAINER HANDLER PREMIUM



The VCHP has an exceptionally longer tread life with superior driving comfort and enhanced overall driving efficiency. Specially optimized for Straddle Carrier operation.



VCHR

V-STEEL CONTAINER HANDLER RIB



The VCHR has an exceptionally longer tread life with superior driving comfort and enhanced overall driving efficiency. Specially developed for Straddle Carrier operation.



VCHD

V-STEEL CONTAINER HANDLER DEEP



Features extra-long life, thanks to newly developed tread compound and smooth wear due to optimized contact pressure. Specially designed for container handling equipment, such as straddle carriers, container stackers, etc.

Industrial Service



VELS

V-STEEL E-LUG S



Designed for container handling equipment. Features great resistance to heat build-up for high speed operations.



VHB

V-STEEL H-BLOCK



Features exceptional casing durability. Specially designed for mobile harbor cranes and towing tractors.



VSMS

V-STEEL SMOOTH TREAD-MS



Smooth extra-deep tread with a reinforced all-steel radial casing. For container handling equipment especially on abrasive concrete surfaces.



VSDL

V-STEEL D-LUG

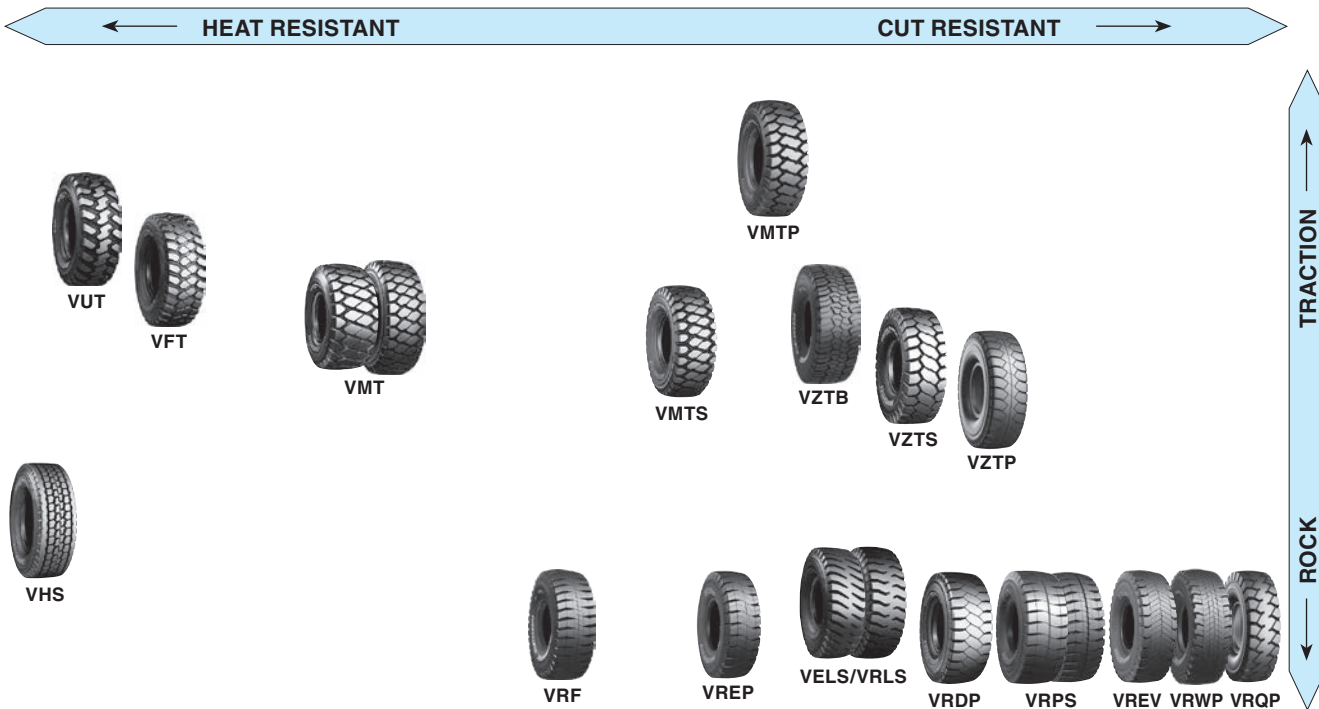


Extra-deep tread with a reinforced all-steel radial casing for heavy reach stackers.

2. Application

■ Earthmover Service

Rigid dump trucks / Bottom dump trucks



Size	Type	Star Rating
VUT(E2)		
335/80 R 20	T/L	
365/80 R 20	T/L	
405/70 R 20	T/L	

VKT(E2)		
29.5 R 29	T/L	★2
37.5 R 39	T/L	★2

VSU(E2)		
14.00 R 25	T/L	★3

VFT(E2)		
27.00 R 49	T/L	★2

VHS(E2)		
36.00 R 51	T/L	★2

*VSW(E2)		
20.5 R 25	T/L	MS
23.5 R 25	T/L	MS

T/T: Tube Type T/L: Tubeless Type
MS: Multiple Star Rating (★1/★2)
MT: Multiple Star Rating (★2/★4)
(Please see P.10 for more details.)

*VSW is especially designed for snow surface operations.

Size	Type	Star Rating
VLT(E3)		
20.5 R 25	T/L	MS
23.5 R 25	T/L	MS ★2
750/65(30/65) R 25	T/L	MS
26.5 R 25	T/L	MS
29.5 R 25	T/L	MS ★2
33.25 R 29	T/L	★2
37.25 R 35	T/L	★2
40.5/75 R 39	T/L	★2

VTS(E3)		
875/65 R 29	T/L	MS

VMT(E3)		
30.00 R 51	T/L	★2
33.00 R 51	T/L	★2
40.00 R 57	T/L	★2

VRL(E3)		
29.5 R 35	T/L	★2
33.25 R 35	T/L	★2

VRF(E3)		
BRIDGESTONE MASTERCORE		
New 59/80 R 63	T/L	★2

Size	Type	Star Rating
L317(E4)		
11.00 R 20	T/T	★3
12.00 R 20	T/T	★3
11 R 22.5	T/L	14
12 R 22.5	T/L	★3
12.00 R 24	T/T	★3

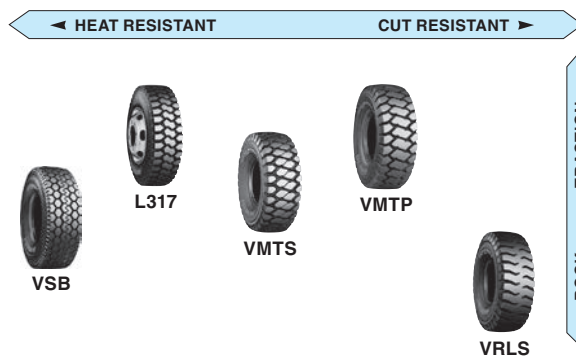
VLTS(E4)		
20.5 R 25	T/L	MS
23.5 R 25	T/L	MS
750/65(30/65) R 25	T/L	★2
26.5 R 25	T/L	★2
29.5 R 25	T/L	★2
875/65 R 29	T/L	MS
33.25 R 29	T/L	★2

VMTS(E4)		
14.00 R 25	T/L	★3
16.00 R 25	T/L	★2
18.00 R 25	T/L	★2
27.00 R 49	T/L	★2

Articulated dump trucks



Off road trucks



Size	Type	Star Rating
VMT(E4)		
12.00 R 24	T/T	★3
18.00 R 33	T/L	★2
21.00 R 33	T/L	★2
21.00 R 35	T/L	★2
24.00 R 35	T/L	★2
27.00 R 49	T/L	★2
33.00 R 51	T/L	★2

VZTS(E4)		
37.00 R 57	T/L	★2
40.00 R 57	T/L	★2

VZTP(E4)		
46/90 R 57	T/L	★2

VELS(E4)		
18.00 R 25	T/L	★2
18.00 R 33	T/L	★2
21.00 R 35	T/L	★2
40.00 R 57	T/L	★2

T/T: Tube Type
T/L: Tubeless Type

Size	Type	Star Rating
VRLS(E4)		
14.00 R 24	T/T	★3
14.00 R 25	T/L	★3
16.00 R 25	T/L	★2
21.00 R 33	T/L	★2
	T/T	★2
24.00 R 35	T/L	★2
27.00 R 49	T/L	★2
30.00 R 51	T/L	★2
33.00 R 51	T/L	★2
36.00 R 51	T/L	★2
37.00 R 57	T/L	★2

VREP(E4)		
27.00 R 49	T/L	★2

VRDP(E4)		
27.00 R 49	T/L	★2
33.00 R 51	T/L	★2
42/90 R 57	T/L	★2
40.00 R 57	T/L	★2
46/90 R 57	T/L	★2

VRPS(E4)		
33.00 R 51	T/L	★2
42/90 R 57	T/L	★2

Scrapers



Size	Type	Star Rating
VRPS(E4) (continued)		
40.00 R 57	T/L	★2
46/90 R 57	T/L	★2
50/90 R 57	T/L	★2
53/80 R 63	T/L	★2
BRIDGESTONE MASTERCORE		
New 59/80 R 63	T/L	★2

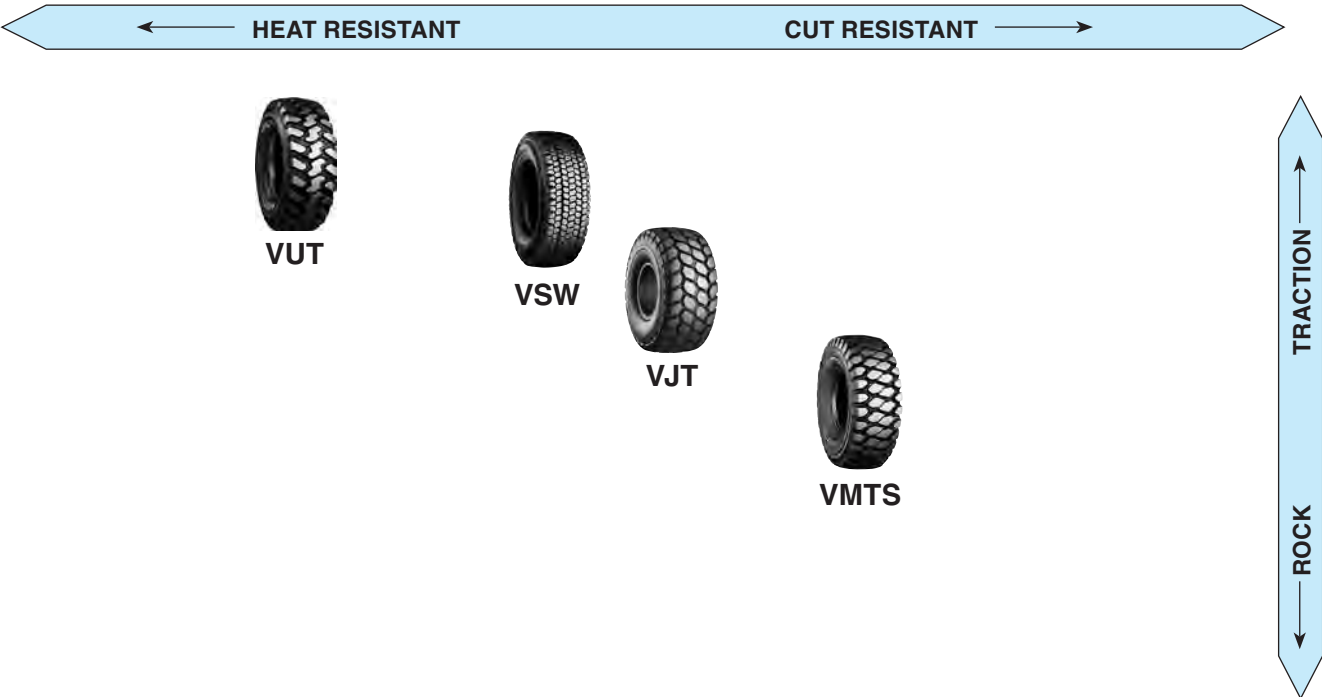
VREV(E4)		
27.00 R 49	T/L	★2
46/90 R 57	T/L	★2
BRIDGESTONE MASTERCORE		
New 50/80 R 57	T/L	★2
New 53/80 R 63	T/L	★2
New 59/80 R 63	T/L	★2

VRQP(E4)		
18.00 R 33	T/L	★2
24.00 R 35	T/L	★2

VRWP(E4)		
BRIDGESTONE MASTERCORE		
New 46/90 R 57	T/L	★2

VZTB(E4)		
BRIDGESTONE MASTERCORE		
New 46/90 R 57	T/L	★2

Grader Service



Size	Type	Star Rating
------	------	-------------

VUT(G2)

13.00 R 24 TG	T/L	★1
14.00 R 24 TG	T/L	★1
15.5 R 25	T/L	★1
17.5 R 25	T/L	★1
20.5 R 25	T/L	★1
23.5 R 25	T/L	★1

*VSW(G2)

14.00 R 24 TG	T/L	★1
16.00 R 24 TG	T/L	★1
17.5 R 25	T/L	★1

VJT(G3)

20.5 R 25	T/L	★1
23.5 R 25	T/L	★1

VMTS(G4)

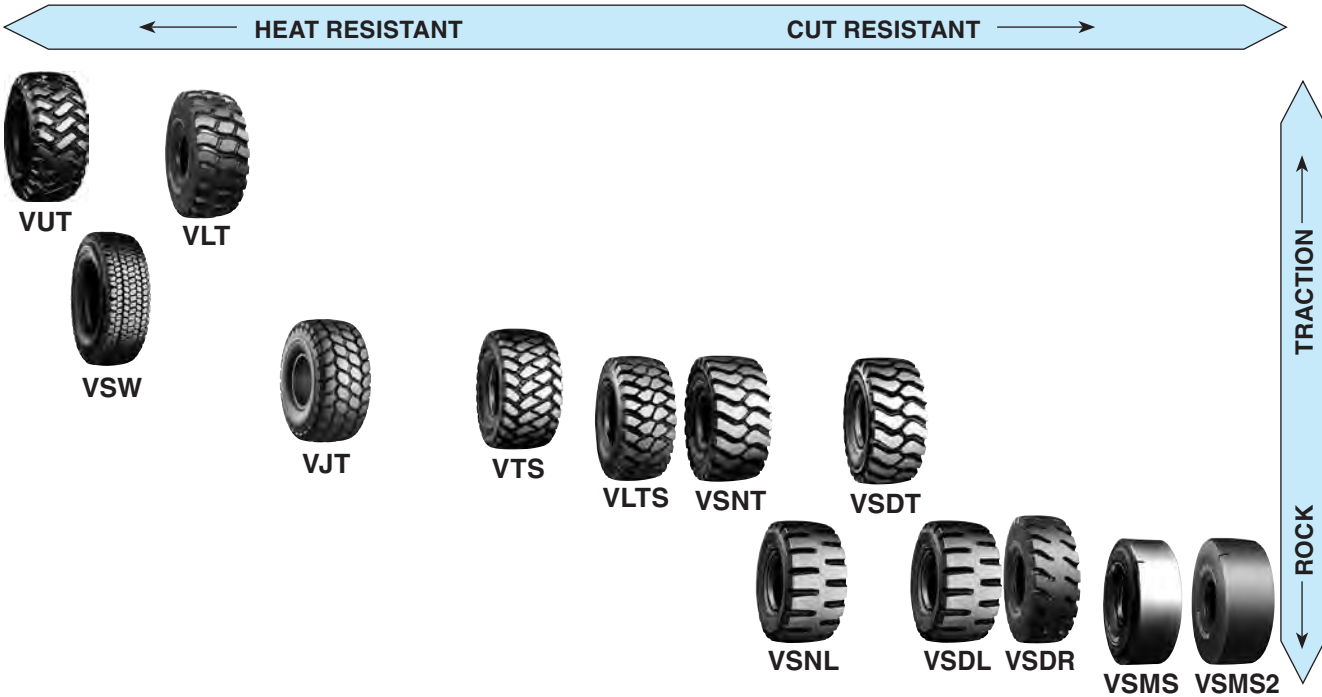
14.00 R 24 TG	T/L	★1
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*VSW is especially designed for snow surface operations.

T/L: Tubeless Type

TG: For Semi-Drop Center Rim

Loader & Dozer Service



Size	Type	Star Rating
------	------	-------------

VUT(L2)

335/80 R 20	T/L	
365/80 R 20	T/L	
405/70 R 20	T/L	
15.5 R 25	T/L	★1
17.5 R 25	T/L	★1
20.5 R 25	T/L	★1
23.5 R 25	T/L	★1

*VSW(L2)

14.00 R 24 TG	T/L	★1
17.5 R 25	T/L	★1
20.5 R 25	T/L	MS
23.5 R 25	T/L	MS
600/65 R 25	T/L	★1

VLT(L3)

20.5 R 25	T/L	MS
23.5 R 25	T/L	MS
750/65(30/65) R 25	T/L	MS
26.5 R 25	T/L	MS
29.5 R 25	T/L	MS

VJT(L3)

17.5 R 25	T/L	★1★2
20.5 R 25	T/L	★1
23.5 R 25	T/L	★1★2
26.5 R 25	T/L	★1★2
29.5 R 25	T/L	★1★2

T/T: Tube Type

T/L: Tubeless Type

MS: Multiple Star Rating (★1/★2)

MT: Multiple Star Rating (★2/★4)

TG: For Semi-Drop Center Rim
(Please see P.10 for more details.)

*VSW is especially designed for snow surface operations.

Size	Type	Star Rating
------	------	-------------

VTS(L3)

550/65 R 25	T/L	★1
650/65 R 25	T/L	★1
775/65 R 29	T/L	★1
875/65 R 29	T/L	MS

VLTS(L4)

20.5 R 25	T/L	MS
23.5 R 25	T/L	MS
875/65 R 29	T/L	MS

VSNT(L4)

26.5 R 25	T/L	MS ★2
29.5 R 25	T/L	MS ★2
29.5 R 29	T/L	MS ★2
35/65 R 33	T/L	MT MS ★2

VSNL(L4)

14.00 R 20	T/T	★2
35/65 R 33	T/L	★2
45/65 R 45	T/L	★2

VSDT(L5)

23.5 R 25	T/L	★1★2
26.5 R 25	T/L	★1★2
29.5 R 25	T/L	★1★2
29.5 R 29	T/L	★1★2
35/65 R 33	T/L	★1★2

VSDL(L5)

8.25 R 15	T/T	★2
10.00 R 15	T/T	★2
14.5 R 15	T/L	★2
12.00 R 20	T/T	★2

Size	Type	Star Rating
------	------	-------------

VSDL(L5) (continued)

15.5 R 25	T/L	★1
17.5 R 25	T/L	★1★2
20.5 R 25	T/L	★1★2
23.5 R 25	T/L	★1★2
26.5 R 25	T/L	★1★2
29.5 R 25	T/L	★1★2
29.5 R 29	T/L	★1★2
33/65 R 29	T/L	★2
35/65 R 33	T/L	★1★2
45/65 R 39	T/L	★1
45/65 R 45	T/L	★1★2★3
50/65 R 51	T/L	★2
55.5/80 R 57	T/L	
60/80 R 57	T/L	

VSDR(L5)

20.5 R 25	T/L	★1★2
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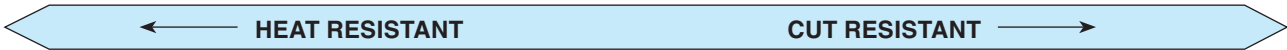
VSMS(L5S)

9.00 R 20	T/T	★2
12.00 R 20	T/T	★2
12.00 R 24	T/T	★2
14.00 R 24	T/T	★2
17.5 R 25	T/L	★1★2
18.00 R 25	T/L	★1★2
26.5 R 25	T/L	★1★2
29.5 R 29	T/L	★2

VSMS2(L5S)

17.5 R 25	T/L	★2
26.5 R 25	T/L	★2
29.5 R 25	T/L	★2
29.5 R 29	T/L	★2

■ Underground Service



VSNT



VSDT



VSNL



VSDL VMDL /VSDR



VSMS VSMS2



Size	Type
------	------

VSNT(E4/L4)

26.5 R 25	T/L	MS ★2
29.5 R 25	T/L	MS ★2
29.5 R 29	T/L	MS ★2
35/65 R 33	T/L	MT MS ★2

VSNL(L4)

14.00 R 20	T/T	★2
35/65 R 33	T/L	★2
45/65 R 45	T/L	★2

VSDT(L5)

23.5 R 25	T/L	★1★2
26.5 R 25	T/L	★1★2
29.5 R 25	T/L	★1★2
29.5 R 29	T/L	★1★2
35/65 R 33	T/L	★1★2

VSDR(L5)

20.5 R 25	T/L	★1★2
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Size	Type
------	------

VSDL(L5)

8.25 R 15	T/T	★2
10.00 R 15	T/T	★2
14.5 R 15	T/L	★2
12.00 R 20	T/T	★2
15.5 R 25	T/L	★1
17.5 R 25	T/L	★1★2
20.5 R 25	T/L	★1★2
23.5 R 25	T/L	★1★2
26.5 R 25	T/L	★1★2
29.5 R 25	T/L	★1★2
29.5 R 29	T/L	★1★2
33/65 R 29	T/L	★2
35/65 R 33	T/L	★1★2

VMDL(LHD5) Subterranean LHD(L2A)

New 26.5 R 25	T/L	★2
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Size	Type
------	------

VSMS(L5S)

9.00 R 20	T/T	★2
12.00 R 20	T/T	★2
12.00 R 24	T/T	★2
14.00 R 24	T/T	★2
17.5 R 25	T/L	★1★2
18.00 R 25	T/L	★1★2
26.5 R 25	T/L	★1★2
29.5 R 29	T/L	★2

VSMS2(L5S)

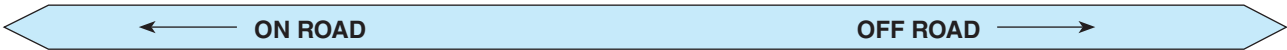
17.5 R 25	T/L	★2
26.5 R 25	T/L	★2
29.5 R 25	T/L	★2
29.5 R 29	T/L	★2

VSMS2(LHD5S) Subterranean LHD(L2A)

26.5 R 25	T/L	★2
New 29.5 R 29	T/L	★2

T/T: Tube Type
T/L: Tubeless Type
MS: Multiple Star Rating (★1/★2)
MT: Multiple Star Rating (★2/★4)

■ Mobile Crane Service (High-Speed)



VGT



VSW VHS VHS2



Size	Type
------	------

VGT

170E 445/80 R 25	T/L
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VHB

170E 385/95 R 24	T/T
177E 445/95 R 25	T/L
186E 505/95 R 25	T/L

Size	Type
------	------

VHS

170E 385/95 R 24	T/T
170E 385/95 R 25	T/L
170F 385/95 R 25	T/L
177E 445/95 R 25	T/L
174F 445/95 R 25	T/L
186E 505/95 R 25	T/L
179E 525/80 R 25	T/L
176F 525/80 R 25	T/L

VHS2

174F 445/95 R 25	T/L
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Size	Type
------	------

*VSW

170E 385/95 R 25	T/L
177E 445/95 R 25	T/L

*VSW is especially designed for snow surface operations.

T/T: Tube Type
T/L: Tubeless Type

Industrial Service

Lift trucks, Empty container handlers	Loaded container handlers	Straddle carriers	Harbor cranes	Automated guided vehicles
VCH VCHS	VCHS VELS VSDL VSMS	VRLS VCH VCHR VCHD VCHP	VHB	VHB VCHS

Size	Type	
VHB		
14.00 R 24	T/T	★3
16.00 R 25	T/L	★2
18.00 R 25	T/L	★3
VCH		
12.00 R 20	T/T	★3
12.00 R 24	T/T	★2
14.00 R 24	T/T	★3
VCHD		
16.00 R 25	T/L	
VCHS		
12.00 R 20	T/T	
12.00 R 24	T/T	
14.00 R 24	T/T	★3
14.00 R 24 TG	T/L	★3
18.00 R 25	T/L	★3
18.00 R 33	T/L	★3

Size	Type	
VELS		
18.00 R 33	T/L	★3
VRLS		
16.00 R 25	T/L	★2
VSDL		
23.5 R 25	T/L	★2
35/65 R 33	T/L	★2
VSMS		
18.00 R 25	T/L	★2
VCHR		
16.00 R 25	T/L	
VCHP		
New 450/95 R 25	T/L	

Sand Service



VSJ(E7)		
16.00 R 20	T/L	28
	T/T	28
21.00 R 25	T/L	

T/T: Tube Type
T/L: Tubeless Type

T/T: Tube Type
T/L: Tubeless Type
TG: For Semi-Drop Center Rim

3. Technical Data

3.1 Earthmover, Grader, Loader & Dozer Service

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
								OD	OW	SLR	SLW			
								mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
15"														
8.25R15	VSDL		★2	L5	D2A	-	-	880 34.6	248 9.8	405 15.9	285 11.2	48.0	- -	6.50T
10.00R15	VSDL		★2	L5	D2A	-	-	905 35.6	287 11.3	416 16.4	330 13.0	48.0	- -	7.50V
14.5R15 Tubeless	VSDL		★2	L5	D2A	-	-	899 35.4	359 14.1	413 16.3	412 16.2	48.0	- -	11.00/1.5
20"														
9.00R20	VSMS		★2	L5S	D2A	-	-	1054 41.5	260 10.2	474 18.7	303 11.9	51.0	-	7.00T
11.00R20	L317		★3	E4	-	188	129	1107 43.6	290 11.4	512 20.2	325 12.8	25.0	335 13.2	8.00V
12.00R20	L317		★3	E4	-	208	142	1146 45.1	308 12.1	523 20.6	346 13.6	25.0	384 15.1	8.50V
	VSDL		★2	L5	D2A	-	-	1168 46.0	320 12.6	538 21.2	359 14.1	57.0	- -	
	VSMS		★2	L5S	D2A	-	-	1173 46.2	312 12.3	540 21.3	351 13.8	57.0	- -	
14.00R20	VSNL		★2	L4	D2A	-	-	1196 47.1	360 14.2	550 21.7	414 16.3	34.0	- -	10.00WI
335/80R20 Tubeless	VUT	136B		E2	DE2	-	-	1036 40.8	319 12.6	463 18.2	357 14.1	19.0	- -	11x20
		147A2		L2										
365/80R20 Tubeless	VUT	141B		E2	DE2	-	-	1087 42.8	347 13.7	483 19.0	389 15.3	21.0	- -	11x20
		153A2		L2										
405/70R20 Tubeless	VUT	143B		E2	DE2	-	-	1092 43.0	398 15.7	485 19.1	446 17.6	20.0	- -	13x20
		155A2		L2										

For the TKPH(TMPH) Ratings, please refer to page 11.

Pattern		Application		Tire Load Limits at Various Cold Inflation Pressures																		Size	
		Max.Speed																					
		km/h	mph																				
15"																							
			kPa psi	400 58	425 62	450 65	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94	675 98	700 102	725 105	750 109	775 112	800 115	825 120	8.25R15	
VSDL	Loader 10 5	★	★2																				
		kg								2200 4860	2275 5020	2350 5200	2425 5360	2500 5540	2575 5700	2650 5860	2725 6000	2800 6200	2875 6350	2950 6500	3025 6650	3100 6800	
VSDL		★	★2																				
		kg								2875 6350	2975 6550	3075 6800	3175 7000	3275 7200	3375 7450	3475 7650	3575 7850	3650 8050	3750 8250	3850 8500	3950 8700	4025 8900	10.00R15
VSDL		★	★2																		14.5R15		
		kg	2425 5360	2550 5620	2650 5860	2775 6100	2875 6350	2975 6600	3100 6800	3200 7050	3300 7250	3400 7500	3500 7700										
		lbs																					
20"																							
VSMS	Loader 10 5	★	★2																		9.00R20		
		kg								3075 6800	3250 7150	3350 7400	3450 7600	3550 7850	3650 8050	3750 8250	3875 8550	4000 8800	4000 8800	4125 9100		4250 9350	4375 9650
L317	E/M 50 30	★	★3																		11.00R20		
		kg			2500 5510	2600 5730	2710 5970	2810 6200	2910 6420	3010 6640	3100 6830	3200 7050	3300 7280	3390 7470	3480 7670	3570 7880	3670 8080	3760 8290					
L317		★	★3																		12.00R20		
		kg			2770 6110	2880 6350	2990 6590	3110 6860	3220 7100	3330 7340	3430 7560	3540 7800	3650 8050	3750 8270	3850 8490	3950 8720	4060 8940	4160 9170					
VSDL VSMS	Loader 10 5	★	★2																		12.00R20		
		kg								4375 9650	4500 9900	4625 10200	4875 10700	5000 11000	5150 11400	5300 11700	5450 12000	5600 12300	5800 12800	5800 12800		6000 13200	6150 13600
VSNL		★	★2																		14.00R20		
		kg								5200 11400	5400 11900	5550 12300	5750 12600	5900 13000	6100 13400	6250 13800	6450 14200	6600 14600	6800 15000	6950 15300		7100 15700	7300 16100
		kPa psi	275 40	300 44	325 47	350 51	375 54																335/80R20
VUT	E/M 50 30	★ kg lbs	1800 4000	1900 4200	2000 4400	2120 4700	2240 5000																
VUT	Loader 10 5	★ kg lbs	2430 5350	2575 5700	2725 6000	2900 6400	3075 6800																365/80R20
VUT	E/M 50 30	★ kg lbs	2060 4500	2180 4800	2300 5100	2430 5400	2575 5700																405/70R20
VUT	Loader 10 5	★ kg lbs	2900 6400	3075 6800	3250 7150	3450 7600	3650 8000																
VUT		E/M 50 30	★ kg lbs	2180 4800	2300 5100	2430 5400	2575 5700	2725 6000															
VUT	Loader 10 5	★ kg lbs	3075 6800	3250 7250	3450 7600	3650 8100	3875 8550																

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
								OD	OW	SLR	SLW			
								mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
22.5"														
11R22.5 Tubeless	L317		14	E4	-	150	103	1078 42.4	270 10.6	502 19.8	300 11.8	25.0	318 12.5	8.25
12R22.5 Tubeless	L317		★3	E4	-	188	129	1109 43.7	292 11.5	517 20.4	327 12.9	25.0	343 13.5	9.00
24"														
12.00R24	L317		★3	E4	-	177	121	1254 49.4	319 12.6	577 22.7	355 14.0	31.5	391 15.4	8.50V
	VMTP		★3	E4	E2A	136	93	1254 49.4	319 12.6	577 22.7	355 14.0	31.5	391 15.4	
	VSMS		★2	L5S	D2A	-	-	1275 50.2	312 12.3	573 22.6	364 14.3	57.0	- -	
13.00R24 TG Tubeless	VUT		★1	G2	G2A	-	-	1290 50.8	357 14.1	585 23.0	380 15.0	25.0	- -	8.00TG
14.00R24	VSBS		★3	E2	E2A	179	123	1365 53.7	390 15.4	628 24.7	433 17.0	21.0	450 17.7	10.00W
	VRLS		★3	E4	E2A-LS	85	58	1403 55.2	390 15.4	644 25.4	432 17.0	39.0	450 17.7	
	VSMS		★2	L5S	D2A	-	-	1394 54.8	390 15.4	634 25.0	437 17.2	72.0	- -	
14.00R24 TG Tubeless	VUT		★1	G2	G2A	-	-	1350 53.1	373 14.7	608 23.9	420 16.5	25.5	- -	8.00TG
	VSW	153A8	★1	G2	DG2	-	-	1351 53.2	370 14.6	594 23.4	426 16.8	23.5	-	
		175A2		L2									-	
	VMTS		★1	G4	G2A			1400 55.1	373 14.7	645 25.4	415 16.3	38.0	- -	
16.00R24 TG Tubeless	VSW		★1	G2	-	-	-	1485 58.5	417 16.4	680 26.8	467 18.4	22.5	- -	10.00VA
25"														
14.00R25 Tubeless	VSBS		★3	E2	E2A-LS	179	123	1365 53.7	390 15.4	628 24.7	433 17.0	21.0	450 17.7	10.00/1.5
	VMTS		★3	E4	E2A-LS - E3A	91 - 136	62 - 93	1406 55.4	391 15.4	650 25.6	435 17.1	38.0	450 17.7	
	VRLS		★3	E4	E2A	85	58	1403 55.2	391 15.4	650 25.6	435 17.1	39.0	450 17.7	

For the TKPH(TMPH) Ratings, please refer to page 11.

Pattern		Application		Tire Load Limits at Various Cold Inflation Pressures																	Size	
		Max.Speed																				
		km/h	mph																			
22.5"																						
				kPa	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	815		11R22.5
				psi	65	69	73	76	80	83	87	91	94	98	102	105	109	112	115	118		
L317	E/M 50 30	★	14PR																			
		kg	2150	2240	2330	2420	2500	2590	2670	2760	2840	2920	3000									
		lbs	4740	4940	5140	5340	5510	5710	5890	6080	6260	6440	6610									
L317		★																		★3		
	kg	2410	2510	2610	2700	2800	2890	2990	3080	3170	3260	3350	3440	3530	3620	3710	3760				12R22.5	
	lbs	5310	5530	5750	5950	6170	6370	6590	6790	6990	7190	7390	7580	7780	7980	8180	8290					
24"																						
				kPa	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800	825		12.00R24
				psi	65	69	73	76	80	83	87	91	94	98	102	105	109	112	115	120		
L317	E/M 50 30	★	★3																			
VMTP		kg	3050	3180	3300	3430	3550	3670	3790	3900	4020	4140	4250									
		lbs	6720	7010	7280	7560	7830	8090	8360	8600	8860	9130	9370									
VSMS	Loader 10 5	★	★2																			
		kg					4875	5150	5300	5450	5600	5800	6000	6150	6300	6500	6500	6700	6900			
	lbs					11000	11400	11700	12000	12300	12800	13200	13600	13900	14300	14300	14700	15200				
				kPa	200	225	250	275	300	325	350	375										13.00R24 TG
				psi	29	33	36	40	44	47	51	54										
VUT	Grader 40 25	★	★1																			
		kg	1850	2000	2180	2360	2500	2650	2800	3000												
	lbs	4080	4400	4800	5200	5520	5840	6150	6600													
				kPa	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800		14.00R24	
				psi	65	69	73	76	80	83	87	91	94	98	102	105	109	112	115			
VSBS	E/M 50 30	★	★3																			
VRLS		kg	4000	4125	4375	4500	4625	4750	5000	5150	5300	5450	5600	5710	5830	5940	6050					
		lbs	8800	9100	9650	9900	10200	10500	11000	11400	11700	12000	12300	12500	12800	13100	13400					
VSMS	Loader 10 5	★	★2																			
		kg	5950	6200	6450	6700	6950	7200	7450	7700	7950	8200	8450	8700	8950	9200	9500					
	lbs	13120	13700	14220	14800	15300	15900	16400	16980	17500	18080	18630	19180	19690	20680	20900						
				kPa	200	225	250	275	300	325	350	375							525	550		14.00R24 TG
				psi	29	33	36	40	44	47	51	54							76	80		
VUT	Grader 40 25	★	★1																			
VSW		kg	2240	2430	2650	2800	3000	3250	3350	3650												
VMTS		lbs	4940	5360	5840	6150	6600	7150	7400	8050												
VSW	Loader 10 5	★	★1																			
		kg															6700	6900				
	lbs															14800	15200					
VSW	Grader 40 25	★	★1																			
		kg	2900	3150	3350	3650	3875	4125	4375	4625												
	lbs	6400	6950	7400	8050	8550	9100	9650	10200													
25"																						
				kPa	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800		14.00R25	
				psi	65	69	73	76	80	83	87	91	94	98	102	105	109	112	115			
VSBS	E/M 50 30	★	★3																			
VMTS		kg	4000	4125	4375	4500	4625	4750	5000	5150	5300	5450	5600	5710	5830	5940	6050					
VRLS		lbs	8800	9100	9650	9900	10200	10500	11000	11400	11700	12000	12300	12500	12800	13100	13400					

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
								OD	OW	SLR	SLW			
								mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
15.5R25 Tubeless	VUT		★1	G2, L2	DG2	-	-	1269 50.0	383 15.1	559 22.0	436 17.2	27.0	- -	12.00/1.3
	VSDL		★1	L5	D2A	-	-	1329 52.3	393 15.5	606 23.9	443 17.4	64.0	- -	
16.00R25 Tubeless	VMTS		★2	E4	E2A-LS	123	84	1535 60.4	450 17.7	696 27.4	507 20.0	45.0	513 20.2	11.25/2.0
	VRLS		★2	E4	E2A E1A	112 146	77 100	1531 60.3	448 17.6	697 27.4	510 20.1	45.0	513 20.2	
17.5R25 Tubeless	VUT		★1	G2, L2	DG2	-	-	1340 52.8	444 17.5	586 23.1	500 19.7	28.0	- -	14.00/1.5
	VSW	153A8	★1	G2	DG2	-	-	1340 52.8	440 17.3	597 23.5	480 18.9	27.0	- -	
		176A2		L2										
	VJT	176A2	★1	L3	D2A	-	-	1352 53.2	443 17.4	604 23.8	510 20.1	30.0	- -	
		182A2	★2											
	VSDL		★2	L5	D2A	-	-	1400 55.1	440 17.3	639 25.2	495 19.5	68.0	- -	
			★1											
	VSMS		★2	L5S	D2A	-	-	1371 54.0	440 17.3	631 24.8	487 19.2	68.5	- -	
			★1											
VSMS2		★2	L5S	D2A	-	-	1371 54.0	453 17.8	631 24.8	487 19.2	68.5	- -		
18.00R25 Tubeless	VMTS		★2	E4	E2A	169	116	1654 65.1	505 19.9	754 29.7	571 22.5	51.0	587 23.1	13.00/2.5
	VELS		★2	E4	E2A E1A	144 179	99 123	1642 64.6	515 20.3	744 29.3	580 22.8	50.0	587 23.1	
	VSMS		★2	L5S	D2A	-	-	1675 65.9	512 20.2	733 28.9	592 23.3	84.5	- -	
★1														

For the TKPH(TMPH) Ratings, please refer to page 11.
 Will be discontinued.

Pattern	Application		Tire Load Limits at Various Cold Inflation Pressures														Size				
	Max.Speed																				
	km/h	mph																			
			kPa psi	400 58	425 62	450 65	475 69	500 73								15.5R25					
VUT VSDL	Loader 10 5	★	★1																		
		kg lbs	5000 11000	5150 11400	5450 12000	5600 12300	5800 12800														
			kPa psi	125 18	150 22	175 25	200 29	225 33	250 36	275 40	300 44										
VUT	Grader 40 25	★	★1										For slope and ditching service, inflation pressures should be increased by 100kPa (15psi) with no increase in load rating. For extreme conditions, consult a Bridgestone Representative for additional recommended operating requirements.				16.00R25				
		kg lbs	1550 3420	1750 3860	2000 4400	2180 4800	2360 5200	2575 5680	2800 6150	3000 6600											
			kPa psi	450 65	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94	675 98	700 102							
VMTS VRLS	E/M 50 30	★	★2												17.5R25						
		kg lbs	5150 11400	5450 12000	5600 12300	5800 12800	6000 13200	6300 13900	6500 14300	6700 14800	6900 15200	7100 15700	7300 16100								
			kPa psi	400 58	425 62	450 65	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94							
VUT VSW VJT VSDL VSMS VSMS2	Loader 10 5	★	★1										★2				18.00R25				
		kg lbs	6000 13200	6150 13600	6500 14300	6700 14800	7100 15700	7300 16100	7500 16500	7750 17100	8000 17600	8250 18200	8500 18700								
			kPa psi	125 18	150 22	175 25	200 29	225 33	250 36	275 40	300 44										
VUT VSW	Grader 40 25	★	★1										For slope and ditching service, inflation pressures should be increased by 100kPa (15psi) with no increase in load rating. For extreme conditions, consult a Bridgestone Representative for additional recommended operating requirements.				18.00R25				
		kg lbs	1850 4080	2120 4680	2360 5200	2650 5840	2900 6400	3075 6800	3350 7400	3650 8050											
			kPa psi	450 65	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94	675 98	700 102	725 105	750 109		775 112	800 115	825 120	
VMTS VELS	E/M 50 30	★	★2																18.00R25		
		kg lbs	6700 14800	7100 15700	7300 16100	7500 16500	7750 17100	8000 17600	8250 18200	8500 18700	8750 19300	9000 19800	9250 20400								
VSMS	Loader 10 5	★	★1														★2				18.00R25
		kg lbs					11200 24700	11800 26000	12150 26800	12500 27600	12850 28300	13200 29100	13600 30000	14000 30900	14500 32000	15000 33100	15000 33100	15500 34200	16000 35300		

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
								OD	OW	SLR	SLW			
								mm inch	mm inch	mm inch	mm inch		mm inch	inch
20.5R25 Tubeless	VSW		MS	E2, L2	DE2	-	-	1470 57.9	530 20.9	640 25.2	603 23.7	29.0	- -	17.00AL/1.7(★1only) 17.00/2.0
	VUT		★1	G2, L2	DG2	-	-	1473 58.0	533 21.0	643 25.3	608 23.9	30.5	- -	
	VL	177B 186A2	MS	E3 L3	DE2	149 -	102 -	1498 59.0	530 20.9	676 26.6	586 23.1	40.0	- -	
	VJT	186A2	★1	G3, L3	DG2	-	-	1480 58.3	530 20.9	652 25.7	609 24.0	33.0	- -	
	VLTS	177B 186A2	MS	E4 L4	DE2	126 -	86 -	1478 58.2	530 20.9	667 26.3	581 22.9	49.0	- -	
	VSDL		★2 ★1	L5	D2A	-	-	1552 61.1	531 20.9	702 27.6	600 23.6	78.0	- -	
	VSDR		★2 ★1	L5	D2A	-	-	1552 61.1	531 20.9	702 27.6	600 23.6	78.0	- -	
23.5R25 Tubeless	VSW		MS	E2, L2	DE2	-	-	1596 62.8	620 24.4	692 27.2	689 27.1	31.5	- -	19.50/2.5
	VUT		★1	G2, L2	DG2	-	-	1599 63.0	620 24.4	702 27.6	688 27.1	33.5	- -	
	VL	185B 195A2	★2 MS	E3 L3	E2A DE2	190 153	130 105	1629 64.1 1623 63.9	610 24.0 616 24.3	734 28.9 734 28.9	670 26.4 680 26.8	42.5 42.5	- -	
	VJT	195A2 201A2	★1 ★2 ★1	L3 G3	D2A G2A	- -	- -	1600 63.0	617 24.3	696 27.4	695 27.4	35.0	- -	
	VLTS	185B 195A2	MS	E4 L4	DE2	161 -	110 -	1616 63.6	612 24.1	729 28.7	675 26.6	54.0	- -	
	VSDT	201A2 195A2	★2 ★1	L5	D2A	-	-	1660 65.4	621 24.4	745 29.3	680 26.8	79.0	- -	
	VSDL		★2 ★1	L5	D2A	-	-	1672 65.8	613 24.1	755 29.7	677 26.7	87.0	- -	
550/65R25 Tubeless	VTS		★1	L3	D2A	-	-	1350 53.1	547 21.5	594 23.4	605 23.8	32.5	- -	(14.00/1.5) 17.00/2.0
600/65R25 Tubeless	VSW	187A2	★1	L2	D2A	-	-	1424 56.0	600 23.6	627 24.7	668 26.3	31.5	- -	(17.00/1.7, 17.00/2.0) 19.50/2.5
650/65R25 Tubeless	VTS		★1	L3	D2A	-	-	1502 59.1	642 25.3	660 26.0	710 28.0	37.0	- -	19.50/2.5

For the TKPH(TMPH) Ratings, please refer to page 11.

Pattern		Application		Tire Load Limits at Various Cold Inflation Pressures														Size			
		Max.Speed																			
		km/h	mph																		
				kPa	275	300	325	350	375	400	425	450	475	500	525			20.5R25			
				psi	40	44	47	51	54	58	62	65	69	73	76						
VSW	E/M	★		★2																	
VLT	50	kg		4375	4750	5000	5300	5600	5800	6150	6500	6700	6900	7300							
VLTS	30	lbs		9650	10500	11000	11700	12300	12800	13600	14300	14800	15200	16100							
				kPa	125	150	175	200	225	250	275	300									
				psi	18	22	25	29	33	36	40	44									
VUT	Grader	★		★1																	
VJT	40	kg		2430	2800	3150	3450	3875	4125	4375	4625										
	25	lbs		5360	6150	6950	7600	8550	9100	9650	10200										
				For slope and ditching service, inflation pressures should be increased by 100kPa (15psi) with no increase in load rating. For extreme conditions, consult a Bridgestone Representative for additional recommended operating requirements.																	
				kPa	400	425	450	475	500	525	550	575	600	625	650						
				psi	58	62	65	69	73	76	80	83	87	91	94						
VUT(★1)	Loader	★		★1														★2			
VSW(★1)	10	kg		8000	8250	8750	9000	9500	9750	10000	10300	10900	11200	11500							
VLT(★1)	5	lbs		17600	18200	19300	19800	20900	21500	22000	22700	24000	24700	25400							
VJT(★1)																					
VLTS(★1)																					
VSDL																					
VSDR																					
				kPa	275	300	325	350	375	400	425	450	475	500	525						
				psi	40	44	47	51	54	58	62	65	69	73	76						
VSW	E/M	★		★2																	
VLT	50	kg		5600	6000	6500	6700	7100	7500	7750	8250	8500	9000	9250							
VLTS	30	lbs		12300	13200	14300	14800	15700	16500	17100	18200	18700	19800	20400							
				kPa	125	150	175	200	225	250	275	300									
				psi	18	22	25	29	33	36	40	44									
VUT	Grader	★		★1																	
VJT	40	kg		3150	3550	4000	4500	4875	5300	5600	6000										
	25	lbs		6950	7850	8800	9900	10700	11700	12300	13200										
				For slope and ditching service, inflation pressures should be increased by 100kPa (15psi) with no increase in load rating. For extreme conditions, consult a Bridgestone Representative for additional recommended operating requirements.																	
				kPa	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	
				psi	40	44	47	51	54	58	62	65	69	73	76	80	83	87	91	94	
VLT(★1)	Loader	★		★1														★2			
VJT	10	kg								10300	10600	11200	11500	12150	12500	12850	13200	13600	14000	14500	
VLTS(★1)	5	lbs								22700	23400	24700	25400	26800	27600	28300	29100	30000	30900	32000	
VSDT																					
VSDL																					
VUT(★1)																					
VSW(★1)																					
VTS	Loader	★		★1																	
	10	kg								7500	7750	8250	8500								
	5	lbs								16500	17100	18200	18700								
VSW		★		★1																	
		kg								8750	9000	9500	9750								
		lbs								19300	19800	20900	21500								
VTS		★		★1																	
		kg								10000	10600	10900	11500								
		lbs								22000	23400	24000	25400								

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
								OD	OW	SLR	SLW			
								mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
750/65R25 (30/65R25) Tubeless	VLT	190B	MS	E3	DE2	225	154	1625	765	718	831	43.0	-	(22.00/3.0) 24.00/3.0
		202A2		L3		-	-	64.0	30.1	28.3	32.7		-	
	VLTS	190B	★2	E4	E2A-LS	195	134	1623	765	713	832	55.0	-	
26.5R25 Tubeless	VLT	193B	MS	E3	DE2	190	130	1747	684	787	736	45.0	-	22.00/3.0
		202A2		L3		-	-	68.8	26.9	31.0	29.0		-	
	VJT	202A2	★1	L3	D2A	-	-	1737	682	754	795	38.0	-	
		209A2	★2					68.4	26.9	29.7	31.3		-	
	VLTS	193B	★2	E4	E2A-LS	186	127	1736	678	784	743	59.0	-	
								68.3	26.7	30.9	29.3		-	
	VSNT		MS	E4	DE2	165	113	1779	685	780	774	57.5	-	
				L4		-	-	70.0	27.0	30.7	30.5		-	
			★2		D2A									
	VSDT	209A2	★2	L5	D2A	-	-	1775	697	790	778	88.0	-	
		202A2	★1					69.9	27.4	31.1	30.6		-	
	VSDL		★2	L5	D2A	-	-	1790	684	797	761	95.5	-	
			★1					70.5	26.9	31.4	30.0		-	
	VMDL		★2	LHD5	L2A	-	-	1785	685	780	778	95.5	-	
								70.3	27.0	30.7	30.6		-	
	VSMS		★2	L5S	D2A	-	-	1775	684	800	760	95.0	-	
			★1					69.9	26.9	31.5	29.9		-	
	VSMS2		★2	L5S	D2A	-	-	1775	704	800	760	95.0	-	
								69.9	27.7	31.5	29.9		-	
	VSMS2		★2	LHD5S	L2A	-	-	1775	704	786	789	95.0	-	
								69.9	27.7	30.9	31.1		-	
29.5R25 Tubeless	VLT	200B	★2	E3	E3A	292	200	1877	762	840	843	48.0	-	25.00/3.5
								73.9	30.0	33.1	33.2		-	
		208A2	MS		DE2	200	137	1877	762	840	830	48.0	-	
				L3		-	-	73.9	30.0	33.1	32.7		-	
	VJT	216A2	★2	L3	D2A	-	-	1865	762	810	878	42.0	-	
		208A2	★1					73.4	30.0	31.9	34.6		-	
	VLTS	200B	★2	E4	E2A-LS	225	154	1865	762	835	844	65.0	-	
								73.4	30.0	32.9	33.2		-	
	VSNT		MS	E4	DE2	220	151	1905	773	849	835	60.0	-	
				L4		-	-	75.0	30.4	33.4	32.9		-	
			★2		D2A									
	VSDT	216A2	★2	L5	D2A	-	-	1905	779	845	869	96.0	-	
								75.0	30.7	33.3	34.2		-	
		208A2	★1					1903						
								74.9						
	VSDL		★2	L5	D2A	-	-	1925	766	855	846	104.0	-	
			★1					75.8	30.2	33.7	33.3		-	
	VSMS2		★2	L5S	D2A	-	-	1908	790	857	879	104.0	-	
								75.1	31.1	33.7	34.6		-	

For the TKPH(TMPH) Ratings, please refer to page 11.
Will be discontinued.

Pattern	Application		Tire Load Limits at Various Cold Inflation Pressures																	Size		
	Max.Speed																					
			kPa	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650			
			psi	40	44	47	51	54	58	62	65	69	73	76	80	83	87	91	94			
VLT	E/M	★	★2																	750/65R25 (30/65R25)		
VLTS	50	kg	6900	7300	7750	8250	8750	9250	9750	10300	10600											
	30	lbs	15200	16100	17100	18200	19300	20400	21500	22700	23400											
VLT	Loader	★	★1																	26.5R25		
	10	kg							13200	13600	14500	15000										
	5	lbs							29100	30000	32000	33100										
VLTS	E/M	★	★2																	26.5R25		
VSNT	50	kg	7100	7500	8000	8500	9000	9500	9750	10300	10600	11200	11500									
VLT	30	lbs	15700	16500	17600	18700	19800	20900	21500	22700	23400	24700	25400									
VLT(★1)	Loader	★	★1																			
VJT	10	kg							12850	13200	14000	14500	15000	15500	16000	16500	17000	18000	18500			
VSNT	5	lbs							28300	29100	30900	32000	33100	34200	35300	36400	37500	39700	40800			
VSDT																						
VSDL																						
VSMS																						
VSMS2 (D2A)																						
VMDL	LHD	★	★1																	29.5R25		
VSMS2 (L2A)	10	kg										16500	17000	17500	18500	19000	19500	20000	20600		21200	
	5	lbs										36400	37500	38600	40800	41900	43000	44100	45400		46700	
VLT	E/M	★	★2																	29.5R25		
VLTS	50	kg	8500	9250	9750	10300	10900	11500	11800	12500	12850	13600	14000									
VSNT	30	lbs	18700	20400	21500	22700	24000	25400	26000	27600	28300	30000	30900									
VLT	Loader	★	★1																	29.5R25		
VJT	10	kg							15500	16000	17000	17500	18000	19000	19500	20000	20600	21200	22400			
VSNT	5	lbs							34200	35300	37500	38600	39700	41900	43000	44100	45400	46700	49400			
VSDT																						
VSDL																						
VSMS2																						

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
								OD	OW	SLR	SLW			
								mm inch	mm inch	mm inch	mm inch	mm inch	mm inch	inch
29"														
775/65R29 Tubeless	VTS		★1	L3	D2A	-	-	1740	775	762	843	43.0	-	(24.00/3.5)
								68.5	30.5	30.0	33.2	-	25.00/3.5	
875/65R29 Tubeless	VTS	203B	MS	E3	DE2	237	162	1865	850	792	963	47.5	-	27.00/3.5
		214A2		L3		-	-	73.4	33.5	31.2	37.9	-	(28.00/3.5)	
	VLTS	203B	MS	E4	DE2	225	154	1868	858	827	938	60.0	-	
		214A2		L4		-	-	74.0	33.8	32.6	36.9	-		
29.5R29 Tubeless	VKT		★2	E2	E2A-LS E1A	330 401	226 275	1958 77.1	765 30.1	870 34.3	841 33.1	44.0	- -	25.00/3.5
	VSNT		MS	E4	DE2	232	159	2000	774	905	849	60.0	- -	
				L4									- -	
	VSDT	218A2	★2	L5	D2A	-	-	1989	779	883	872	96.0	- -	
		211A2	★1											
	VSDL		★2	L5	D2A	-	-	2008	776	900	856	104.5	- -	
			★1											
	VSMS		★2	L5S	D2A	-	-	2008 79.1	773 30.4	912 35.9	829 32.6	104.5	- -	
VSMS2		★2	L5S	D2A	-	-	2008 79.1	792 31.2	912 35.9	874 34.4	104.5	- -		
New VSMS2		★2	LHD5S	L2A	-	-	2006 79.0	793 31.2	892 35.1	870 34.3	104.5	- -		
33.25R29 Tubeless	VLT		★2	E3	E2A	349	239	2081 81.9	853 33.6	925 36.4	950 37.4	54.0	- -	27.00/3.5
	VLTS		★2	E4	E2A	254	174	2093 82.4	853 33.6	930 36.6	948 37.3	69.0	- -	
33/65R29 Tubeless	VSDL		★2	L5	D2A	-	-	1927 75.9	843 33.2	853 33.6	930 36.6	90.3	- -	27.00/3.5
33"														
18.00R33 Tubeless	VMTP		★2	E4	E2A E1A	185 229	127 157	1870 73.6	515 20.3	846 33.3	575 22.6	55.0	587 23.1	13.00/2.5
	VELS		★2	E4	E2A E1A	170 211	116 145	1856 73.1	512 20.2	856 33.7	575 22.6	49.0	587 23.1	
	VRQP		★2	E4	E2ALS E2A	122 152	84 104	1890 74.4	515 20.3	876 34.5	575 22.6	64.5	587 23.1	
21.00R33 Tubeless	VMTP		★2	E4	E2A E1A	237 293	162 201	1998 78.7	578 22.8	909 35.8	650 25.6	61.0	701 27.6	15.00/3.0
	VRLS		★2	E4	E2A	227	155	1978 77.9	578 22.8	899 35.4	650 25.6	54.0	701 27.6	
21.00R33														

For the TKPH(TMPH) Ratings, please refer to page 11.
Will be discontinued.

Pattern		Application Max.Speed	Tire Load Limits at Various Cold Inflation Pressures																	Size		
		km/h mph																				
29"																						
		kPa psi	275 40	300 44	325 47	350 51	375 54	400 58	425 62	450 65	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94		775/65R29		
VTS	Loader 10 5	★ kg lbs					15000 33100	15500 34200	16500 36400	17000 37500												
VTS VLTS	E/M 50 30	★ kg lbs	10000 22000	10900 24000	11500 25400	12150 26800	12850 28300	13600 30000	14000 30900	14500 32000	15500 34200									875/65R29		
VTS VLTS	Loader 10 5	★ kg lbs					18500 40800	19500 43000	20600 45400	21200 46700												
VKT VSNT	E/M 50 30	★ kg lbs	9250 20400	9750 21500	10300 22700	10900 24000	11500 25400	12150 26800	12500 27600	13200 29100	13600 30000	14500 32000	15000 33100							29.5R29		
VSNT VSDT VSDL	Loader 10 5	★ kg lbs	★1										★2									
VSMS VSMS2 (D2A)																						
VSMS2 (L2A)	LHD 10 5	★ kg lbs	★1										★2									
VLT VLTS	E/M 50 30	★ kg lbs	11200 24700	12150 26800	12850 28300	13600 30000	14000 30900	15000 33100	15500 34200	16500 36400	17000 37500	17500 38600	18500 40800							33.25R29		
VSDL	Loader 10 5	★ kg lbs	★1										★2									
33"																						
		kPa psi	450 65	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94	675 98	700 102							18.00R33		
VMTP VELS VRQP	E/M 50 30	★ kg lbs	7750 17100	8000 17600	8500 18700	8750 19300	9000 19800	9250 20400	9750 21500	10000 22000	10300 22700	10600 23400	10900 24000									
VMTP VRLS		★ kg lbs																		21.00R33		
		★ kg lbs	10000 22000	10300 22700	10900 24000	11200 24700	11500 25400	11800 26000	12500 27600	12850 28300	13200 29100	13600 30000	14000 30900									

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
								OD	OW	SLR	SLW			
								mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
45"														
45/65R45 Tubeless	VSNL		★2	L4	D2A	-	-	2730 107.5	1123 44.2	1190 46.8	1275 50.2	75.0	- -	36.00/4.5
	VSDL	New	★3	L5	D2A	-	-	2734 107.6	1124 44.3	1200 47.2	1241 48.9	111.5	- -	
			★2					2730 107.5	1123 44.2	1188 46.8	1274 50.2	111.5		
			★1											
49"														
27.00R49 Tubeless	VFT		★2	E2	E2A - E3A	557 - 804	382 - 551	2646 104.2	750 29.5	1207 47.5	860 33.9	44.0	892 35.1	19.50/4.0
	VMTS		★2	E4	E2A E1A E3A	486 600 702	333 411 481	2690 105.9	750 29.5	1230 48.4	860 33.9	64.0	892 35.1	
	VMTP		★2	E4	E2A E1A E3A	440 544 636	301 373 436	2700 106.3	750 29.5	1239 48.8	860 33.9	73.0	892 35.1	
	VRLS		★2	E4	E2A E1A E3A	415 513 600	284 351 411	2687 105.8	750 29.5	1228 48.3	860 33.9	66.5	892 35.1	
	VREP		★2	E4	E2A E1A E3A	457 564 660	313 386 452	2690 105.9	750 29.5	1231 48.4	860 33.9	66.5	892 35.1	
	VRDP		★2	E4	E2A E1A E3A	415 513 600	284 351 411	2711 106.7	750 29.5	1240 48.8	860 33.9	76.0	892 35.1	
	VREV		★2	E4	E2A E1A E3A	415 513 600	284 351 411	2720 107.1	750 29.5	1246 49.1	860 33.9	83.0	892 35.1	
51"														
30.00R51 Tubeless	VMT		★2	E3	- - E3A	- - 1065	- - 729	2850 112.2	854 33.6	1294 50.9	950 37.4	45.0	993 39.1	22.00/4.5
	VRLS		★2	E4	E2A E1A E3A	496 603 717	340 413 491	2904 114.3	854 33.6	1311 51.6	963 37.9	74.5	993 39.1	
33.00R51 Tubeless	VMT		★2	E3	- E1A E3A	- 1018 1209	- 697 828	2988 117.6	932 36.7	1338 52.7	1052 41.4	48.0	1074 42.3	24.00/5.0
	VMTP		★2	E4	E2A E1A E3A	591 700 832	405 479 570	3063 120.6	932 36.7	1376 54.2	1052 41.4	89.5	1074 42.3	
	VRLS		★2	E4	E2A E1A E3A	558 679 807	382 465 553	3035 119.5	932 36.7	1371 54.0	1051 41.4	78.5	1074 42.3	
	VRDP		★2	E4	E2A E1A E3A	558 679 807	382 465 553	3061 120.5	932 36.7	1376 54.2	1051 41.4	87.0	1074 42.3	
	VRPS		★2	E4	E2A E1A E3A	558 679 807	382 465 553	3061 120.5	932 36.7	1376 54.2	1051 41.4	87.0	1074 42.3	
36.00R51 Tubeless	VHS		★2	E2	- - E3A	- - 1485	- - 1017	3108 122.4	1015 40.0	1390 54.7	1163 45.4	44.0	1184 46.6	26.00/5.0
	VRLS		★2	E4	E2A E1A E3A	642 781 927	440 535 635	3204 126.1	1015 40.0	1431 56.3	1153 45.4	86.5	1184 46.6	
50/65R51 Tubeless	VSDL		★2	L5	D2A	-	-	3070 120.9	1278 50.3	1347 53.0	1361 53.6	128.0	- -	40.00/4.5

For the TKPH(TMPH) Ratings, please refer to page 11.
New Will be discontinued.

Pattern	Application	Tire Load Limits at Various Cold Inflation Pressures																			Size	
	Max.Speed																					
		km/h																				
		mph																				
45"																						
			kPa	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775	800		45/65R45
			psi	58	62	65	69	73	76	80	83	87	91	94	98	102	105	109	112	116		
VSNL	Loader	★																				
VSDL	10	kg																				
		5	lbs																			
49"																						
VFT	E/M	★																				27.00R49
VMTS	50	kg																				
VMTP	30	lbs																				
VRLS																						
VREP																						
VRDP																						
VREV																						
51"																						
VMT	E/M	★																				
VRLS	50	kg																				
	30	lbs																				
VMT		★																				33.00R51
VMTP		kg																				
VRLS		lbs																				
VRDP																						
VHS		★																				36.00R51
VRLS		kg																				
		lbs																				
VSDL	Loader	★																				50/65R51
	10	kg																				
	5	lbs																				

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
								OD	OW	SLR	SLW			
								mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
57"														
37.00R57 Tubeless	VZTS		★2	E4	E2A E1A E3A	694 845 1003	475 579 687	3422 134.7	1044 41.1	1541 60.7	1190 46.9	87.5	1217 47.9	27.00/6.0
	VRLS		★2	E4	E2A E1A E3A	694 845 1003	475 579 687	3410 134.3	1044 41.1	1535 60.4	1190 46.9	87.5	1217 47.9	
42/90R57 Tubeless	VRDP		★2	E4	E2A E1A E3A	715 870 1033	490 596 708	3456 136.1	1060 41.7	1539 60.6	1210 47.7	97.0	1323 52.1	27.00/6.0 (29.00/6.0)
	VRPS		★2	E4	E2A E1A E3A	715 870 1033	490 596 708	3456 136.1	1060 41.7	1539 60.6	1210 47.7	97.0	1323 52.1	
40.00R57 Tubeless	VMT		★2	E3	E2A E1A E3A	1204 1463 1739	825 1002 1191	3512 138.3	1108 43.6	1560 61.4	1264 49.8	64.0	1311 51.6	29.00/6.0
	VZTS		★2	E4	E2A E1A E3A	773 940 1117	529 644 765	3585 141.1	1140 44.9	1606 63.2	1289 50.7	91.5	1311 51.6	
	VELS		★2	E4	E2A E1A E3A	773 940 1117	529 644 765	3562 140.2	1127 44.4	1582 62.3	1291 50.8	91.5	1311 51.6	
	VRDP		★2	E4	E2A E1A E3A	773 940 1117	529 644 765	3572 140.6	1114 43.9	1591 62.6	1264 49.8	97.0	1311 51.6	
	VRPS		★2	E4	E2A E1A E3A	773 940 1117	529 644 765	3572 140.6	1114 43.9	1591 62.6	1264 49.8	97.0	1311 51.6	
46/90R57 Tubeless	VZTP		★2	E4	E2A E1A E3A	766 927 1103	525 635 755	3585 141.1	1145 45.1	1591 62.6	1299 51.1	97.0	1412 55.6	29.00/6.0 (32.00/6.0)
	New BRIDGESTONE / MASTERCORE VZTB		★2	E4	E2A E1A E3A	796 (837)* 968 (1017)* 1150 (1209)*	545 (573)* 663 (697)* 788 (828)*	3580 140.9	1145 45.1	1567 61.7	1316 51.8	91.5	1432 56.4	
	VRDP		★2	E4	E2A E1A E3A	796 968 1150	545 663 788	3572 140.6	1145 45.1	1586 62.4	1299 51.1	97.0	1412 55.6	
	VRPS		★2	E4	E2A E1A E3A	796 968 1150	545 663 788	3572 140.6	1145 45.1	1586 62.4	1299 51.1	97.0	1412 55.6	
	VREV		★2	E4	E2A E1A E3A	876 968 (1065)* 1150 (1265)*	600 663 (729)* 788 (866)*	3572 140.6	1145 45.1	1586 62.4	1299 51.1	97.0	1412 55.6	
	New BRIDGESTONE / MASTERCORE VRWP		★2	E4	E2A E1A E3A	876 968 (1065)* 1150 (1265)*	600 663 (729)* 788 (866)*	3595 141.5	1145 45.1	1571 61.9	1319 51.9	97.0	1432 56.4	
55.5/80R57 Tubeless	VSDL			L5	D2A	-	-	3740 147.2	1395 54.9	1634 64.3	1616 63.6	125.5	- -	44.00/6.0

For the TKPH(TMPH) Ratings, please refer to page 11.
*If you operate with this TKPH(TMPH), consult your Bridgestone Representative.
 Will be discontinued.

Pattern		Application		Tire Load Limits at Various Cold Inflation Pressures													Size
		Max.Speed															
		km/h	mph														
57"																	
			kPa	450	475	500	525	550	575	600	625	650	675	700			37.00R57
			psi	65	69	73	76	80	83	87	91	94	98	102			
VZTS	E/M	★	★2														
VRLS	50	kg	37500	38750	40000	41250	43750	45000	46250	47500	48750	50000	51500				
	30	lbs	82500	85500	88000	91000	96500	99000	102000	104500	107500	110000	113500				
VRDP	VRPS	★	★2													42/90R57	
		kg	38750	40000	41250	42500	45000	46250	47500	48750	50000	51500	53000				
		lbs	85500	88000	91000	96500	99000	102000	104500	107500	110000	113500	117000				
VMT	VZTS	★	★2													40.00R57	
VELS		kg	42500	45000	46250	48750	50000	51500	53000	54500	56000	58000	60000				
VRDP		lbs	93500	99000	102000	107500	110000	113500	117000	120000	123500	128000	132500				
VRPS																	
VZTP	VRDP	★	★2													46/90R57	
VRE		kg	45000	47500	48750	51500	53000	54500	56000	58000	60000	61500	63000				
		lbs	99000	104500	107500	113500	117000	120000	123500	128000	132500	135500	139000				
BRIDGESTONE MASTERCORE		★	★2													55.5/80R57	
VZTB	Loader	kg	51500	54500	56000	58000	60000	63000	65000	67000	69000	71000	73000				
VRWP	10	lbs	113500	120000	123500	128000	132500	139000	143500	147500	152000	156500	161000				
VSDL	5	★														55.5/80R57	
		kg											* Regarding exceptions, please consult a Bridgestone representative.				
		lbs											82500 182000 85000 187500 90000 198000 92500 203500 95000 209000 97500 214500 100000 220500 103000 227000 106000 233500				

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

3.2 Industrial Service

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Spec	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
						OD	OW	SLR	SLW			
						mm inch	mm inch	mm inch	mm inch		mm inch	inch
Industrial Service												
20"												
12.00R20	VCH		★3	Industrial Service	IDU	1140 44.9	315 12.4	512 20.2	360 14.2	29.5	380 15.0	8.50V
	VCHS	176A5		Industrial Service	-	1139 44.8	297 11.7	507 20.0	355 14.0	41.5	375 14.8	
24"												
12.00R24	VCH		★2	Industrial Service	IDU	1254 49.4	323 12.7	558 22.0	376 14.8	29.5	391 15.4	8.50V
	VCHS	178A5		Industrial Service	-	1263 49.7	310 12.2	580 22.8	351 13.8	42.0	391 15.4	
14.00R24	VHB		★3	Industrial Service	IDU	1357 53.4	383 15.1	630 24.8	410 16.1	23.5	450 17.7	10.00W
	VCH		★3	Industrial Service	IDU	1393 54.8	390 15.4	610 24.0	460 18.1	32.0	480 18.9	
	VCHS		★3	Industrial Service	IDU	1412 55.6	383 15.1	626 24.6	445 17.5	63.0	480 18.9	
14.00R24 TG Tubeless	VCHS		★3	Industrial Service	IDU	1412 55.6	383 15.1	626 24.6	445 17.5	63.0	480 18.9	10.00VA
25"												
16.00R25 Tubeless	VHB		★2	Industrial Service	IDU	1484 58.4	440 17.3	690 27.2	475 18.7	22.5	513 20.2	11.25/2.0
	VCHD	200A5		Industrial Service	-	1500 59.1	435 17.1	655 25.8	503 19.8	54.0	513 20.2	
	VCHR	200A5		Industrial Service	-	1504 59.2	435 17.1	674 26.5	500 19.7	50.0	513 20.2	
	VRLS		★2	Industrial Service	IDU	1531 60.3	448 17.6	713 28.1	488 17.6	45.0	540 21.3	
450/95R25 Tubeless	VCHP	204A5		Industrial Service	-	1504 59.2	435 17.1	674 26.5	500 19.7	50.0	513 20.2	11.25/2.0
18.00R25 Tubeless	VHB		★3	Industrial Service	IDU	1610 63.4	515 20.3	733 28.9	565 22.2	26.0	587 23.1	13.00/2.5
	VCHS		★3	Industrial Service	IDU	1650 65.0	504 19.8	707 27.8	596 23.5	64.0	600 23.6	
	VSMS		★2	Industrial Service	IDU	1681 66.2	512 20.2	730 28.7	592 23.3	84.5	612 24.1	
23.5R25 Tubeless	VSDL		★2	Industrial Service	IDU	1672 65.8	613 24.1	755 29.7	687 27.0	87.0	722 28.4	19.50/2.5
33"												
18.00R33 Tubeless	VCHS		★3	Industrial Service	IDU	1856 73.1	494 19.4	803 31.6	585 23.0	70.0	600 23.6	13.00/2.5
	VELS		★3	Industrial Service	IDU	1860 73.2	512 20.2	800 31.5	604 23.8	49.0	634 25.0	
35/65R33 Tubeless	VSDL		★2	Industrial Service	IDU	2075 81.7	880 34.6	900 35.4	986 38.8	95.0	- -	28.00/3.5

Off-the-Road Tires Used for Industrial Vehicle Applications (IDU Spec)

- 1) Industrial Vehicles comprise vehicles such as counter-balanced lift trucks, container handlers, straddle carriers, aircraft tow tractors, mobile crushers, log stackers etc., used on hard improved surfaces, smooth floors and runways.
- 2) Use Specifications of **Industrial Service only**.

■ Will be discontinued.

Pattern		Star Rating	Inflation Pressure	Tire Load Limits at Various Speeds												Size	
Industrial Service																	
20"																	
			kPa psi	km/h mph	0 Static	Creep Creep	5 3	10 5	15 9	20 12	25 15	30 19	35 22				12.00R20
VCH VCHS	★3	Load Wheel	1000 145	kg lbs	9230 20350	9230 20350	9230 20350	9230 20350	9230 20350	9230 20350	9230 20350	8875 19570	8875 19570				
		Steering Wheel	1000 145	kg lbs	7100 15620	7100 15620	7100 15620	7100 15620	7100 15620	7100 15620	7100 15620	6570 14480	6570 14480				
24"																	
VCH	★2	Load Wheel	960 139	kg lbs	12420 27385	11040 24345	10005 22060	9315 20540	8970 19780	8765 19320	8625 19020				12.00R24		
		Steering Wheel	960 139	kg lbs	9935 21910	8830 19475	8005 17650	7450 16430	7175 15825	7010 15455	6900 15215						
VCHS		Load Wheel	1000 145	kg lbs	9750 21500	9750 21500	9750 21500	9750 21500	9750 21500	9750 21500	9750 21500	9375 20670	9375 20670	*Compliant with the ETRTO standard of industrial tires			
		Steering Wheel	1000 145	kg lbs	7500 16500	7500 16500	7500 16500	7500 16500	7500 16500	7500 16500	7500 16500	6935 15200	6935 15200				
VHB VCH VCHS	★3	Load Wheel	1000 145	kg lbs	18000 39690	16000 35280	14500 31970	13500 29765	13000 28665	12700 28005	12500 27560	12400 27340				14.00R24	
		Steering Wheel	1000 145	kg lbs	14400 31750	12800 28225	11600 25580	10800 23815	10400 22930	10160 22400	10000 22050	9920 21875					
VCHS	★3	Load Wheel	1000 145	kg lbs	18000 39690	16000 35280	14500 31970	13500 29765	13000 28665	12700 28005	12500 27560	12400 27340				14.00R24 TG	
		Steering Wheel	1000 145	kg lbs	14400 31750	12800 28225	11600 25580	10800 23815	10400 22930	10160 22400	10000 22050	9920 21875					
25"																	
VHB VRLS	★2	Load Wheel	960 139	kg lbs	21870 48225	19440 42865	17615 38845	16400 36165	15795 34825	15430 34025	15185 33490	15065 33220				16.00R25	
		Steering Wheel	960 139	kg lbs	17495 38580	15550 34290	14095 31075	13120 28935	12635 27860	12345 27220	12150 26790	12050 26575					
VCHD VCHR			1000 145	kg lbs	18200 40140	18200 40140	18200 40140	18200 40140	14000 30900	14000 30900	14000 30900	*Compliant with the ETRTO standard of industrial tires (For straddle carrier use only)					
VCHP			1000 145	kg lbs	17600 38800	17600 38800	17600 38800	17600 38800	17600 38800	17600 38800	16000 35275	15400 33950	14800 32630				450/95 R25
VHB VCHS	★3	Load Wheel	1000 145	kg lbs	30600 67475	27200 59975	24650 54355	22950 50605	22100 48730	21590 47605	21250 46855	21080 46480				18.00R25	
		Steering Wheel	1000 145	kg lbs	24480 53980	21760 47980	19720 43480	18360 40485	17680 38985	17270 38085	17000 37485	16865 37185					
VSMS	★2	Load Wheel	960 139	kg lbs	28800 63505	25600 56450	23200 51155	21600 47630	20800 45865	20320 44805	20000 44100	19840 43745					18.00R25
		Steering Wheel	960 139	kg lbs	23040 50805	20480 45160	18560 40925	17280 38100	16640 36690	16255 35845	16000 35280	15870 34995					
VSDL	★2	Load Wheel	690 100	kg lbs	26100 57550	23200 51155	21025 46360	19575 43160	18850 41565	18415 40605	18125 39965	17980 39645				23.5R25	
		Steering Wheel	690 100	kg lbs	20880 46040	18560 40925	16820 37090	15660 34530	15080 33250	14730 32485	14500 31970	14385 31715					
33"																	
VCHS VELS	★3	Load Wheel	1000 145	kg lbs	35100 77395	31200 68795	28275 62345	26325 58045	25350 55895	24765 54605	24375 53745	24180 53315				18.00R33	
		Steering Wheel	1000 145	kg lbs	28080 61915	24960 55035	22620 49875	21060 46435	20280 44715	19810 43685	19500 42995	19345 42655					
VSDL	★2	Load Wheel	780 113	kg lbs	50400 111130	44800 98785	40600 89525	37800 83350	36400 80260	35560 78410	35000 77175				35/65R33		
		Steering Wheel	780 113	kg lbs	40320 88905	35840 79025	32480 71620	30240 66680	29120 64210	28450 62725	28000 61740						

3.3 Mobile Crane Service (High-Speed)

Tire Size	Pattern	LI/SS	TRA Code or Application	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
				OD	OW	SLR	SLW			
				mm inch	mm inch	mm inch	mm inch			
Mobile Crane Service (High-Speed) 24"										
385/95R24	VHS	170E	Mobile Crane Service	1356 53.4	384 15.1	626 24.6	422 16.6	23.0	450 17.7	10.00W
	VHB	170E	Mobile Crane Service	1357 53.4	383 15.1	630 24.8	410 16.1	23.5	450 17.7	
25"										
385/95R25 Tubeless	VHS	170E	Mobile Crane Service	1356 53.4	384 15.1	626 24.6	422 16.6	23.0	450 17.7	10.00/1.5
		170F								
	VSW	170E	Mobile Crane Service	1355 53.3	394 15.5	631 24.8	427 16.8	23.5	450 17.7	
445/95R25 Tubeless	VHB	177E	Mobile Crane Service	1484 58.4	440 17.3	690 27.2	475 18.7	22.5	513 20.2	11.25/2.0
	VHS	177E	Mobile Crane Service	1484 58.4	435 17.1	684 26.9	480 18.9	25.5	513 20.2	
		174F								
	VHS2	174F	Mobile Crane Service	1484 58.4	435 17.3	684 26.9	480 18.9	25.5	513 20.2	
VSW	177E	Mobile Crane Service	1484 58.4	435 17.1	695 27.4	476 18.7	23.0	513 20.2		
445/80R25 Tubeless	VGT	170E	Mobile Crane Service	1339 52.7	440 17.3	610 24.0	485 19.1	24.0	- -	14.00/1.5
505/95R25 Tubeless	VHB	186E	Mobile Crane Service	1610 63.4	515 20.3	778 30.6	565 22.2	26.0	587 23.1	13.00/2.5
	VHS	186E	Mobile Crane Service	1590 62.6	510 20.1	727 28.6	565 22.2	25.5	587 23.1	
525/80R25 Tubeless	VHS	179E	Mobile Crane Service	1480 58.3	537 21.1	677 26.7	578 22.8	31.0	- -	17.00/2.0
		176F								

3.4 Logging Service

Tire Size	Pattern	LI/SS	TRA Code or Application	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
				OD	OW	SLR	SLW			
				mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
Logging Service 25"										
14.00R25* Tubeless	VSB		Truck, Trailers	1365 53.7	387 15.2	628 24.7	433 17.0	21.0	450 17.7	10.00

* USA use only
Will be discontinued.

Pattern	Application	Inflation Pressure	Tire Load Limits at Various Speeds															Size
Mobile Crane Service (High-Speed) 24"			*Consult a Rim Manufacturer when inflation pressure exceeds 800kPa (116psi).															
		kPa psi	km/h mph	0 Static	Creep Creep	5 3	10 5	15 9	20 12	30 19	40 25	50 31	60 37	70 43	80 50	90 56	100 62	385/95R24
VHS	High-Speed	900 131	kg lbs	17700 39000	14400 31700	12700 28100	11000 24300	9850 21700	8900 19600	7800 17200	7450 16400	7100 15600	6700 14800	6000 13200	4925 10800	4200 9250	3600 7950	
VHB (170E)																		
25"																		
VHS VSW (170E)	High-Speed	900 131	kg lbs	17700 39000	14400 31700	12700 28100	11000 24300	9850 21700	8900 19600	7800 17200	7450 16400	7100 15600	6700 14800	6000 13200	4925 10800	4200 9250	3600 7950	385/95R25
VHS (170F)		900 131	kg lbs	17700 39000	14400 31700	12700 28000	11000 24200	9900 21800	9000 19800	7500 16500	6900 15200	6700 14800	6600 14500	6300 13900	6000 13200	5640 12400	5100 11200	
VHB	High-Speed	900 131	kg lbs	21500 47500	17500 38500	15500 34200	13400 29600	12000 26400	10800 23800	9500 20900	9050 20000	8600 19000	8100 18000	7300 16100	6000 13200	5100 11300	4375 9650	445/95R25
VHS VSW (177E)																		
VHS VHS2 (174F)	High-Speed	900 131	kg lbs	21500 47400	17600 38800	15500 34100	13500 29700	11100 24400	10000 22200	8400 18500	7700 17000	7500 16500	7400 16200	7050 15500	6700 14800	6300 13900	5700 12600	445/95R25
VGT	High-Speed	700 102	kg lbs	17700 39000	14400 31700	12700 28100	11000 24300	9850 21700	8900 19600	7800 17200	7450 16400	7100 15600	6700 14800	6000 13200	4925 10800	4200 9250	3600 7950	445/80R25
VHB VHS	High-Speed	900 131	kg lbs	28000 61800	22700 50200	20200 44500	17500 38500	15600 34300	14100 31000	12300 27200	11800 26000	11200 24700	10600 23400	9500 20900	7800 17200	6650 14700	5700 12600	505/95R25
VHS (179E)	High-Speed	700 102	kg lbs	22900 50400	18600 40900	16500 36300	14300 31400	12700 28000	11500 25300	10100 22200	9600 21200	9150 20200	8700 19100	7750 17100	6350 14000	5400 12000	4650 10200	525/80R25
VHS (176F)		High-Speed	700 102	kg lbs	21500 47200	17600 38700	15500 34100	13500 29600	11700 25800	10600 23500	8900 19600	8200 18000	7950 17500	7800 17200	7450 16400	7100 15600	6700 14700	

Maximum load at mentioned speed symbol.

Pattern		Application	Tire Load Limits at Various Cold Inflation Pressures													Size	
		Max.Speed															
		km/h															
		mph															
Logging Service																	
25"																	
			kPa		450	480	520	550	590	620	660	690	720	760	790		14.00R25
			psi		65	70	75	80	85	90	95	100	105	110	115		
VSB*	Truck, Trailers	Load Range	J L														
			kg	3610	3780	3950	4110	4270	4420	4580	4750	4880	5010	5150			
																lbs	
			Dual	7960	8340	8710	9070	9410	9750	10090	10500	10800	11100	11400			
			kg	3700	3910	4110	4310	4500	4690	4870	5150	5300	5450	5600			
			lbs	8150	8620	9070	9500	9930	10340	10730	11400	11700	12000	12300			

* USA use only

3.5 Sand Service

Tire Size	Pattern	LI/SS	Star Rating	TRA Code or Application	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
					OD	OW	SLR	SLW			
					mm	mm	mm	mm	mm	mm	inch
Sand Service											
20"											
16.00R20	VSJ		28	E7	1315	414	590	475	18.5	520	10.00V
Tubeless *1					51.8	16.3	23.2	18.7			
16.00R20											10.00W
25"											
21.00R25	VSJ			E7	1728	589	784	649	22.5	685	15.00/3.0
Tubeless					68.0	23.2	30.9	25.6		27.0	

*1 When you mount 16.00R20 VSJ tubeless tire on flat base rim (10.00V), installation of "sealing ring" is recommended.
For further information, please consult a Bridgestone representative.

Pattern	Application	Ply Rating	Max. Speed	Tire Cold Inflation Pressures at Various Load Limits																Size	
Sand Service 20"				*It is Recommended that 90% of the below indicated loads per tire is to be applied when used on a dual axle.																	
				kg lbs	4250 9370	4500 9920	4750 10470	5000 11020	5250 11570	5500 12130	6000 13230	7000 15430	8000 17640	8500 18740	9000 19840	9500 20940			16.00R20		
VSJ	Sand	28PR	65km/h 40mph	kPa psi	490 71	540 78	580 84	630 91	680 98	720 105											
			50km/h 30mph	kPa psi	390 57	420 61	450 65	490 71													
			16km/h 10mph	kPa psi	280 41	300 44	320 47	350 51													
25"																					
VSJ	Sand	-	65km/h 40mph	kPa psi							330 48	410 60	490 71	540 78	590 85	630 92			21.00R25		
			50km/h 30mph	kPa psi							260 38	320 47	390 57	420 61							
			16km/h 10mph	kPa psi							200 28	230 34	280 41	300 44							

BIAS TIRE

1. Tread Designs

Earthmover Service



RL

R-LUG
E-3



RL's regular tread is designed with a specially compounded rubber to resist cutting and wearing, as well as overheating. Designed for operating on rock, coal and earth surfaces.



VL2

V-LUG2
E-3



VL2 has incorporated all the benefits of RL, while increasing durability and lowering vibrations.



WL

W-LUG
E-3



WL's regular tread with wide lugs has been designed for operations on rock, coal and earth, and it resists cutting and irregular wearing on paved roads.

Grader Service



RL

R-LUG
G-3



RL's regular tread is designed with a specially compounded rubber to resist cutting and wearing, as well as overheating. Designed for operating on rock, coal and earth surfaces.

Loader & Dozer Service



GL

G-LUG
L-2



The GL features excellent traction and self-cleaning for easy operation in heavy dirt and mud.



FG

FAST GRIP
L-2



FG's separate lugs are tapered for greater traction and self-cleaning, resulting in better driving on heavy dirt and in mud.

Grader Service



RG

RIB GRADER
G-1



The RG, ideal for use on the steer axle of graders, features a rib-type pattern which minimizes side slipping and gives good maneuverability.



FG

FAST GRIP
G-2



FG's separate lugs are tapered for greater traction and self-cleaning, resulting in better driving on heavy dirt and in mud.



GL

G-LUG
G-2



The GL features excellent traction and self-cleaning for easy operation in heavy dirt and mud.

Loader & Dozer Service



RL

R-LUG
L-3



RL's regular tread is designed with a specially compounded rubber to resist cutting and wearing, as well as overheating. Designed for operating on rock, coal and earth surfaces.



VL2

V-LUG2
L-3



VL2 has incorporated all the benefits of RL, while increasing durability and lowering vibrations.



RLS

R-LUG S
L-4



RLS's deep specially compounded rubber resists cutting and overheating. Designed for operating on rock, coal and earth surfaces where serviceability and tread cutting are problems.

Loader & Dozer Service



DL

D-LUG
L-5



DL's extra-deep and specially compounded rubber and shoulder protecting ribs ensure maximum serviceability and resistance to cutting. Designed for severe rocky surfaces, and offers excellent traction and stability.



STMS

SMOOTH TREAD-MS
L-5S



STMS's smooth, extra-deep, and specially compounded rubber ensures maximum resistance to cutting and wearing. Designed for severe, rocky surfaces, such as those in underground mines, open pits and quarries.

Compactor Service



RR

ROAD ROLLER
C-1



RR's smooth tread is specially designed for compacting road materials.



AL2

ALLIGATOR2
C-2



AL2's unique tread pattern offers maximum flotation with minimum resistance to rolling. Ideal for use in the desert and on soft ground.

Industrial Service



RL

R-LUG



RL has a standard tread depth and is applicable to a wide range of industrial type machines, especially the slow wearing type, such as a rubber-tired gantry crane (RTG).



RLS

R-LUG S



RLS's features are long tread life, thanks to extra-deep tread. Unique rubber compound resists cutting and wearing on smooth surface. Suitable for empty container handlers.



ELS2

E-LUG S2



Extra-deep tread corresponding to E4.5 is the main features of ELS2, which ensures longer tread life. Suitable for container handling equipment such as loaded container handlers (reach stackers), notorious for being the most severe conditions for tire wear.



STMS

SMOOTH TREAD-MS



STMS's main features are extra-long tread life and best riding comfort due to extra-deep and smooth tread design. Suitable for empty and loaded container handlers, especially on abrasive concrete surfaces.



YS2

YARD SERVICE-2



YS2 delivers excellent wear resistance for long serviceability as well as good traction and braking. Wear indicators inserted around the tread's circumference allow for easy measuring of the tread depth from any position. Specially designed for straddle carriers.

2. Application

■Earthmover Service



Size	Type	Ply Rating
------	------	------------

WL(E3)

9.00-20	T/T	14
---------	-----	----

RL(E3)

10.00-20	T/T	14
11.00-20	T/T	14
12.00-20	T/T	18
12.00-24	T/T	20
14.00-24	T/T	24 28
16.00-25	T/L	28
18.00-25	T/L	32
37.25-35	T/L	36

VL2(E3)

20.5-25	T/L	16 20
23.5-25	T/L	16 20 24
26.5-25	T/L	20 24 26
29.5-25	T/L	22 28

T/T: Tube Type
T/L: Tubeless Type

■Grader Service



Size	Type	Ply Rating
------	------	------------

RG(G1)

9.00-20	T/T	10
---------	-----	----

GL(G2)

9.00-20	T/T	14
---------	-----	----

FG(G2)

13.00-24 TG	T/L	12
	T/T	10
14.00-24 TG	T/L	12 14
	T/T	12 16
16.00-24 TG	T/T	16
17.5-25	T/L	12
20.5-25	T/L	12

RL(G3)

16.00-24 TG	T/T	16
-------------	-----	----

T/T: Tube Type
T/L: Tubeless Type
TG: For Semi-Drop Center Rim

■ Loader & Dozer Service



Size	Type	Ply Rating
GL(L2)		
9.00-20	T/T	14

FG(L2)		
27x8.50-15	T/T	4
33x12.5-15	T/T	8
12.5/70-16	T/L	6 8
10-16.5	T/L	6 8
12-16.5	T/L	8 10
	T/T	8
15.5/60-18	T/L	8
15.5/70-18	T/L	8
10.00-20	T/T	14
11.00-20	T/T	10 16
42x17-20	T/T	10
17.5/65-20	T/L	10
13.00-24 TG	T/L	12
14.00-24 TG	T/L	12
	T/T	12
16.9-24	T/T	10
18.4-24	T/T	10
17.5-25	T/L	12
20.5-25	T/L	12

Size	Type	Ply Rating
FGF(L2)		
10.00-20	T/T	16

RL(L3)		
12.00-24	T/T	20
14.00-24 TG	T/L	12
16.00-24 TG	T/T	16

VL2(L3)		
15.5-25	T/L	12
17.5-25	T/L	16
	T/T	16
20.5-25	T/L	16 20
	T/T	16 20
23.5-25	T/L	16 20 24
	T/T	16 20 24
26.5-25	T/L	16 20 24 26
	T/T	24
29.5-25	T/L	22 28

RLS(L4)		
14.00-24	T/T	20
26.5-25	T/L	26
29.5-25	T/L	28

T/T: Tube Type
T/L: Tubeless Type
TG: For Semi-Drop Center Rim



Size	Type	Ply Rating
DL(L5)		
17.5-25	T/L	16
20.5-25	T/L	16
23.5-25	T/L	20
26.5-25	T/L	20 26
29.5-25	T/L	28
35/65-33	T/L	42
40/65-39	T/L	56
45/65-45	T/L	58
50/65-51	T/L	62
65/65-57	T/L	62

Size	Type	Ply Rating
STMS(L5S)		
12.00-24	T/T	16 20
14.00-24	T/T	20
17.5-25	T/L	20
18.00-25	T/L	24 28 32
26.5-25	T/L	32 36
29.5-29	T/L	34

T/T: Tube Type
T/L: Tubeless Type

Compactor Service



RR



AL2

Size	Type	Ply Rating
------	------	------------

RR(C1)

7.50-15	T/T	12
9.5/65-15	T/T	6
7.50-16	T/L	6
	T/T	6
10.5/80-16	T/L	6
9.00-20	T/T	10
14/70-20	T/T	12

AL2(C2)

23.1-26	T/L	8
	T/T	8

Industrial Service

Lift trucks, Empty container handlers	Loaded container handlers	Straddle carriers	Harbor cranes	Rubber tired gantry cranes
 RL RLS YS2 STMS*	 RL RLS ELS2* STMS*	 YS2	 RL	 RL

*When the average operating speed exceeds 10 km/h, consult your Bridgestone representative.

Size	Type	Ply Rating
------	------	------------

RL

12.00-20	T/T	20
14.00-24	T/T	24 28
14.00-24 TG	T/L	24
16.00-25	T/L	28 32
18.00-25	T/L	40
21.00-25	T/L	40
21.00-35	T/L	40

RLS

16.00-25	T/L	28 32
----------	-----	-------

Size	Type	Ply Rating
------	------	------------

ELS2

18.00-25	T/L	40
18.00-33	T/L	36
21.00-35	T/L	40

STMS

12.00-24	T/T	20
18.00-25	T/L	40

YS2

16.00-25	T/L	32
----------	-----	----

T/T: Tube Type
T/L: Tubeless Type

T/T: Tube Type
T/L: Tubeless Type
TG: For Semi-Drop Center Rim

3. Technical Data

3.1 Earthmover, Grader, Loader & Dozer, Compactor Service

Tire Size	Pattern	Ply Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
							OD	OW	SLR	SLW			
							mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
15"													
7.50-15	RR	12	C1	-	-	-	775 30.5	209 8.2	360 14.2	225 8.9	-	250 9.8	6.00GS
27x8.50-15	FG	4	L2	-	-	-	686 27.0	208 8.2	317 12.5	218 8.6	16.5	-	7JA
9.5/65-15	RR	6	C1	-	-	-	669 26.3	238 9.4	312 12.3	242 9.5	-	-	7JA
33x12.5-15	FG	8	L2	-	-	-	851 33.5	318 12.5	TBA TBA	TBA TBA	22.5	-	10.00F
16"													
7.50-16 Tubeless	RR	6	C1	-	-	-	814 32.0	228 9.0	379 14.9	243 9.6	-	250 9.8	6.00GS 6LB
7.50-16							776 30.6	220 8.7	361 14.2	224 8.8			
10.5/80-16 Tubeless	RR	6	C1	-	-	-	804 31.7	272 10.7	375 14.8	285 11.2	-	-	8LB
12.5/70-16 Tubeless	FG	6 8	L2	-	-	-	860 33.9	319 12.6	389 15.3	336 13.2	21.0	-	10LB
16.5"													
10-16.5 Tubeless	FG	6 8	L2	-	-	-	771 30.4	268 10.6	353 13.9	278 10.9	19.5	-	8.25
12-16.5 Tubeless		8 10					831 32.7	315 12.4	376 14.8	325 12.8	20.0	-	9.75
12-16.5		8											
18"													
15.5/60-18 Tubeless	FG	8	L2	-	-	-	932 36.7	398 15.7	416 16.4	404 15.9	21.5	-	W10
15.5/70-18 Tubeless	FG	8	L2	-	-	-	1035 40.7	405 15.9	459 18.1	424 16.7	20.5	-	W13

Pattern		Application		Tire Load Limits at Various Cold Inflation Pressures																		Size					
		Max.Speed																									
				km/h	mph																						
15"																											
				kPa	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750		7.50-15				
				psi	51	54	58	62	65	69	73	76	80	84	87	91	94	98	102	105	109						
RR	Compactor	PR	10	kg	1700	1750	1850	1900	1950	2060	2120	2180	2240	2300	2300	2360	2430	2500	2575	2575	2650	7.50-15					
					lbs	3740	3860	4080	4180	4300	4540	4680	4800	4940	5080	5080	5200	5360	5520	5680	5680		5840				
				kPa	180	200	220	240	260	280	300	325											9.5/65-15				
				psi	26	29	32	35	38	41	44	47															
FG	Loader	PR	10	kg	4																	27x8.50-15					
					lbs	695	740	780	820	860																	
				lbs	1530	1630	1720	1805	1895																		9.5/65-15
RR	Compactor	PR	10	kg	6																	9.5/65-15					
					lbs					1100	1155	1205	1255	1315													
				lbs					2430	2550	2560	2770	2900													33x12.5-15	
				kPa	120	140	160	180	200	220	240	260	280	300	325	350	375	400	425	450		33x12.5-15					
				psi	17	20	23	26	29	32	35	38	41	44	47	51	54	58	62	65							
FG	Loader	PR	10	kg	8																	33x12.5-15					
					lbs					1510	1605	1695	1785	1870	1950	2035	2130										
				lbs					3330	3540	3735	3935	4125	4300	4485	4695											
16"																											
RR	Compactor	PR	10	kg	6																	7.50-16					
					lbs					1405	1470	1535	1600	1675	1750	1820	1890										
				lbs					3100	3240	3380	3530	3690	3860	4010	4170											
RR		PR	10	kg	6																	10.5/80-16					
					lbs					1645	1725	1800	1875														
				lbs					3630	3800	3970	4130															
FG	Loader	PR	10	kg	8																	12.5/70-16					
					lbs	1050	1145	1240	1330	1410	1495	1570	1645														
				lbs	2315	2525	2735	2930	3110	3295	3460	3625															
16.5"																											
FG	Loader	PR	10	kg	6																	10-16.5					
					lbs					1140	1215	1285	1350	1415	1475	1540	1610	1685	1750	1820							
				lbs					2515	2680	2830	2975	3120	3250	3395	3550	3715	3860	4010								
FG		PR	10	kg	8																	12-16.5					
					lbs					1470	1565	1655	1740	1820	1905	1980	2075	2170						2540	5600		
				lbs					3240	3450	3650	3835	4010	4200	4365	4575	4785										
18"																											
FG	Loader	PR	10	kg	8																	15.5/60-18					
					lbs	1525	1670	1805	1935	2060	2195																
				lbs	3360	3680	3980	4265	4540	4840																	
FG		PR	10	kg	8																	15.5/70-18					
					lbs	1725	1885	2040	2185	2325	2455																
				lbs	3800	4155	4495	4815	5125	5410																	

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	Ply Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
							OD	OW	SLR	SLW			
							mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
20"													
9.00-20	RG	10	G1	-	-	-	1023 40.3	267 10.5	473 18.6	291 11.5	15.0	- -	7.00T
	RR	10	C1	-	-	-	1001 39.4	268 10.6	458 18.0	291 11.5	-	310 12.2	
	GL	14	G2, L2	-	-	-	1023 40.3	255 10.0	478 18.8	276 10.9	21.0	- -	
	WL	14	E3	SCR	-	-	1027 40.4	257 10.1	466 18.3	280 11.0	19.5	310 12.2	
10.00-20	FG	14	L2	-	-	-	1076 42.4	281 11.1	479 18.9	307 12.1	24.0	- -	7.50V
	FGF	16	L2	-	-	-	1057 41.6	276 10.9	478 18.8	302 11.9	18.0	334 13.1	
	RL	14	E3	CRT	42	29	1067 42.0	285 11.2	489 19.3	304 12.0	22.5	- -	
11.00-20	FG	10 16	L2	-	-	-	1100 43.3	299 11.8	510 20.0	323 12.7	24.5	352 13.9	8.00V
	RL	14	E3	CRT	49	34	1090 42.9	296 11.7	514 20.2	311 12.2	24.0	344 13.5	
12.00-20	RL	18	E3	SCR	52	36	1138 44.8	316 12.4	513 20.2	331 13.0	25.5	382 15.0	8.50V
14/70-20	RR	12	C1	-	-	-	972 38.3	373 14.7	448 17.6	382 15.0	-	- -	11.00TG
42x17-20	FG	10	L2	-	-	-	1085 42.7	435 17.1	480 18.9	452 17.8	25.5	- -	14.00TG
17.5/65-20 Tubeless	FG	10	L2	-	-	-	1107 43.6	450 17.7	494 19.4	477 18.8	25.0	- -	W14L

For the TKPH(TMPH) Ratings, please refer to page 11.

Pattern		Application		Tire Load Limits at Various Cold Inflation Pressures																		Size	
		Max.Speed																					
		km/h	mph																				
20"																							
		kPa psi	140 20	160 23	180 26	200 29	220 32	240 35	260 38	280 41	300 44	325 47	350 51	375 54	400 58	425 62	450 65	475 69	500 73		9.00-20		
RG GL	Grader 40 25	PR kg lbs	10										14										
			955 2110	1035 2280	1110 2450	1180 2600	1245 2740	1310 2890	1375 3040	1435 3160	1495 3300	1565 3460	1635 3600	1705 3760	1780 3920	1850 4060	1910 4210	1965 4340	2025 4480				
		kPa psi	350 51	375 54	400 58	425 62	450 65	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94	675 98	700 102						
RR	Compactor 10 5	PR kg lbs	10																				
			2900 6400	3000 6600	3150 6950	3250 7150	3350 7400	3450 7600	3550 7850	3650 8050													
GL	Loader 10 5	PR kg lbs	14																				
									3150 6950	3250 7150	3350 7400	3450 7600	3550 7850	3630 8000	3710 8190	3790 8360	3875 8550						
		kPa psi	200 29	220 32	240 35	260 38	280 41	300 44	325 47	350 51	375 54	400 58	425 62	450 65	475 69	500 73	525 76	550 80					
WL	E/M 50 30	PR kg lbs	14																				
			1280 2820	1350 2980	1420 3130	1490 3280	1555 3430	1620 3570	1695 3740	1770 3900	1845 4070	1915 4220	1985 4380	2055 4530	2120 4670	2185 4820	2245 4950	2310 5090					
		kPa psi	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94	675 98	700 102	725 105	750 109									
FG FGF	Loader 10 5	PR kg lbs	14										16										
			3550 7850	3650 8050	3750 8250	3875 8550	4000 8800	4125 9100	4125 9100	4250 9350	4345 9580	4440 9790	4530 9990	4620 10180									
		kPa psi	200 29	220 32	240 35	260 38	280 41	300 44	325 47	350 51	375 54	400 58	425 62	450 65	475 69	500 73							
RL	E/M 50 30	PR kg lbs	14																				
			1445 3190	1530 3370	1610 3550	1685 3710	1760 3880	1830 4030	1920 4230	2005 4420	2085 4600	2170 4780	2245 4950	2320 5110	2395 5280	2470 5450							
		kPa psi	450 65	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94	675 98	700 102										
FG	Loader 10 5	PR kg lbs	10										16										
			3750 8300	3875 8550	4000 8800	4125 9100	4250 9350	4250 9350	4375 9650	4500 9900	4675 10300	4780 10540	4880 10740										
		kPa psi	200 29	220 32	240 35	260 38	280 41	300 44	325 47	350 51	375 54	400 58	425 62	450 65	475 69								
RL	E/M 50 30	PR kg lbs	14																				
			1570 3460	1660 3660	1750 3860	1830 4030	1910 4210	1990 4390	2085 4600	2180 4810	2270 5000	2355 5190	2440 5380	2525 5570	2605 5740								
		kPa psi	275 40	300 44	325 47	350 51	375 54	400 58	425 62	450 65	475 69	500 73											
RL	E/M 50 30	PR kg lbs	18																				
			2180 4800	2300 5080	2430 5360	2500 5520	2650 5840	2725 6000	2800 6150	2900 6400	3000 6600	3075 6800											
		kPa psi	240 35	260 38	280 41	300 44	325 47	350 51	375 54	400 58	425 62	450 65											
RR	Compactor 10 5	PR kg lbs	12																				
			2775 6100	2905 6400	3035 6700	3160 6950	3310 7300	3460 7650	3600 7950	3740 8250	3875 8550	4005 8850											
		kPa psi	120 17	140 20	160 23	180 26	200 29	220 32	240 35	260 38	280 41	300 44											
FG	Loader 10 5	PR kg lbs	10																				
							2740 6040	2915 6425	3080 6790	3240 7140	3395 7485	3545 7815	3690 8135										
FG		PR kg lbs	10																				
			2130 4695	2330 5135	2520 5555	2700 5950	2875 6340	3040 6700	3195 7045														

- 1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	Ply Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
							OD	OW	SLR	SLW			
							mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
25"													
15.5-25 Tubeless	VL2	12	L3	D2A	-	-	1284 50.6	410 15.6	568 22.4	448 17.6	27.0	- -	12.00/1.3
16.00-25 Tubeless	RL	28	E3	E2A	139	95	1478 58.2	432 17.0	671 26.4	459 18.1	33.5	513 20.2	11.25/2.0
17.5-25 Tubeless	FG	12	G2, L2	DG2	-	-	1345 53.0	450 17.7	588 23.1	480 18.9	27.5	- -	14.00/1.5
	VL2	16	L3	D2A	-	-	1348 53.1	444 17.5	597 23.5	470 18.5	30.5	- -	
	DL	16	L5	D2A	-	-	1410 55.5	445 17.5	656 25.8	470 18.5	69.5	- -	
	STMS	20	L5S	D2A	-	-	1385 54.5	450 17.7	645 25.4	462 18.2	69.0	- -	
				D2Z	-	-							
17.5-25	VL2	16	L3	D2A	-	-	1348 53.1	444 17.5	597 23.5	470 18.5	30.5	- -	
18.00-25 Tubeless	RL	32	E3	E2A	173	118	1607 63.3	508 20.0	727 28.6	572 22.5	37.5	587 23.1	13.00/2.5
		STMS	L5S	D2A	-	-	1675 65.9	520 20.5	762 30.0	550 21.7	84.0	- -	
20.5-25 Tubeless	FG	12	G2, L2	DG2	-	-	1493 58.8	534 21.0	652 25.7	551 21.7	29.5	- -	17.00/1.7 (12,16PR) 17.00/2.0
	VL2	16	E3	DE2	80	55	1494 58.8	542 21.3	641 25.2	587 23.1	33.0	- -	
		20	L3		-	-							
	DL	16	L5	D2A	-	-	1558 61.3	548 21.6	714 28.1	570 22.4	79.5	- -	
20.5-25	VL2	16	L3	D2A	-	-	1494 58.8	542 21.3	641 25.2	587 23.1	33.0	- -	
		20											

For the TKPH(TMPH) Ratings, please refer to page 11.

Pattern		Application		Tire Load Limits at Various Cold Inflation Pressures																Size		
		Max.Speed																				
		km/h	mph																			
25"																						
				kPa	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575		15.5-25	
				psi	33	36	40	44	47	51	54	58	62	65	69	73	76	80	83			
VL2	Loader	PR		12																		
		10	kg	4000	4250	4500	4750	4875	5150	5300	5600											
		5	lbs	8800	9350	9900	10500	10700	11400	11700	12300											
RL	E/M	PR		28																16.00-25		
		50	kg			4375	4625	4875	5000	5300	5450	5600	5800	6000	6300	6500	6500	6700				
		30	lbs			9650	10200	10700	11000	11700	12000	12300	12800	13200	13900	14300	14300	14800				
				kPa	125	150	175	200													17.5-25	
				psi	18	22	25	29														
FG	Grader	PR		12																		
		40	kg	2120	2360	2575	2900															
		25	lbs	4680	5200	5680	6400															
				For slope and ditching service, inflation pressures should be increased by 100kPa (15psi) with no increase in load rating. For extreme conditions, consult a Bridgestone Representative for additional recommended operating requirements.																		
				kPa	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575		18.00-25	
				psi	33	36	40	44	47	51	54	58	62	65	69	73	76	80	83			
FG	Loader	PR		12																		
VL2	10	kg		4750	5000	5300	5600	5800	6150	6300	6700	6900	7100	7300	7500	7750	8000	8250		18.00-25		
DL	5	lbs		10500	11000	11700	12300	12800	13600	13900	14800	15200	15700	16100	16500	17100	17600	18200				
STMS																						
RL	E/M	PR		32																18.00-25		
		50	kg			5600	6000	6300	6500	6900	7100	7300	7500	7750	8000	8250	8500	8750				
		30	lbs			12300	13200	13900	14300	15200	15700	16100	16500	17100	17600	18200	18700	19300				
				kPa	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750		20.5-25
				psi	54	58	62	65	69	73	76	80	83	87	91	94	98	102	105	109		
STMS	Loader	PR		24																		
		10	kg	10000	10450	10900	11500	11500	11800	12150	12500	12850	13200	13600	13600	14000	14500	14500	15000			
		5	lbs	22000	23000	24000	25400	25400	26000	26800	27600	28300	29100	30000	30000	30900	32000	32000	33100			
				kPa	125	150	175	200	225	250	275	300	325	350	375	400	425	450				
				psi	18	22	25	29	33	36	40	44	47	51	54	58	62	65				
VL2	E/M	PR		16																		
		50	kg			4125	4500	4875	5150	5450	5800	6000										
		30	lbs			9100	9900	10700	11400	12000	12800	13200										
FG	Grader	PR		12																		
		40	kg	2800	3150	3550																
		25	lbs	6150	6950	7850																
				For slope and ditching service, inflation pressures should be increased by 100kPa (15psi) with no increase in load rating. For extreme conditions, consult a Bridgestone Representative for additional recommended operating requirements.																		
FG	Loader	PR		12																		
VL2	10	kg				6300	6700	7100	7500	7750	8250	8500	8750	9250	9500						20.5-25	
DL	5	lbs				13900	14800	15700	16500	17100	18200	18700	19300	20400	20900							

Tire Size	Pattern	Ply Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
							OD	OW	SLR	SLW			
							mm inch	mm inch	mm inch	mm inch			
23.5-25 Tubeless	VL2	16	E3	DE2	107	73	1607	618	682	688	43.0	-	19.50/2.5
		20	L3		-	-	63.3	24.3	26.9	27.1	-		
		24											
	20		D2A										
	DL	20	L5	D2A	-	-	1680	616	770	652	88.0	-	
							66.1	24.3	30.3	25.7		-	
23.5-25	VL2	16	L3	D2A	-	-	1607	618	682	688	43.0	-	
		20					63.3	24.3	26.9	27.1	-		
		24											
26.5-25 Tubeless	VL2	20	E3	DE2	132	90	1738	683	745	734	44.0	-	22.00/3.0
		24	L3		-	-	68.4	26.9	29.3	28.9	-		
		26											
		16			D2A								
	24												
	RLS	26	L4	D2A	-	-	1785	707	792	736	67.0	-	
							70.3	27.8	31.2	29.0		-	
	DL	20	L5	D2A	-	-	1798	694	809	735	97.0	-	
		26					70.8	27.3	31.9	28.9		-	
STMS	32	L5S	D2A	-	-	1798	680	827	719	95.0	-		
	36					70.8	26.8	32.6	28.3		-		
26.5-25	VL2	24	L3	D2A	-	-	1738	683	745	734	44.0	-	
							68.4	26.9	29.3	28.9		-	
29.5-25 Tubeless	VL2	22	E3	DE2	150	103	1850	770	792	833	49.0	-	25.00/3.5
		28	L3		-	-	72.8	30.3	31.2	32.8	-		
	RLS	28	L4	D2A	-	-	1912	784	813	805	74.0	-	
							75.3	30.9	32.0	31.7		-	
	DL	28	L5	D2A	-	-	1900	768	873	805	105.5	-	
							74.8	30.2	34.4	31.7		-	
26"													
23.1-26 Tubeless	AL2	8	C2	-	-	-	1490	595	654	618	19.0	-	DW20A DW20B
							58.7	23.4	25.7	24.3		-	
23.1-26	AL2	8	C2	-	-	-	1490	595	654	618	19.0	-	
							58.7	23.4	25.7	24.3		-	
29"													
29.5-29 Tubeless	STMS	34	L5S	D2A	-	-	2009	777	931	792	103.0	-	25.00/3.5
				D2Z			79.1	30.6	36.7	31.2		-	
33"													
35/65-33 Tubeless	DL	42	L5	D2V	-	-	2075	896	979	945	97.0	-	28.00/3.5
							81.7	35.3	38.5	37.2	97.0	-	

For the TKPH(TMPH) Ratings, please refer to page 11.

Pattern	Application Max.Speed		Tire Load Limits at Various Cold Inflation Pressures																		Size
	km/h	mph																			
			kPa psi	175 25	200 29	225 33	250 36	275 40	300 44	325 47	350 51	375 54	400 58	425 62	450 65	475 69	500 73	525 76	550 80		630 92
VL2 DL	Loader 10 5	PR	16																		

1) Figures under the star rating denote the maximum load and inflation pressures.
2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

Tire Size	Pattern	Ply Rating	TRA Code or Application	Spec	TKPH	TMPH	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
							OD	OW	SLR	SLW			
							mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
35"													
37.25-35 Tubeless	RL	36	E3	E1A	358	245	2403	947	1051	979	51.5	-	31.00/4.0
							94.6	37.3	41.4	38.5		-	
39"													
40/65-39 Tubeless	DL	56	L5	D2V	-	-	2420	1020	1112	1070	106.5	-	32.00/4.0
							95.3	40.2	43.8	42.1		-	
45"													
45/65-45 Tubeless	DL	58	L5	D2V	-	-	2730	1146	1261	1185	116.0	-	36.00/4.5
							107.5	45.1	49.6	46.6		-	
51"													
50/65-51 Tubeless	DL	62	L5	D2A	-	-	3070	1260	1412	1300	127.5	-	40.00/4.5
				D2V								-	
57"													
65/65-57 Tubeless	DL	62	L5	D2V	-	-	3735	1640	1672	1706	142.5	-	52.00/6.0
							147.0	64.6	65.8	67.2		-	

For the TKPH(TMPH) Ratings, please refer to page 11.

Pattern	Application		Tire Load Limits at Various Cold Inflation Pressures																			Size		
	Max.Speed																							
	km/h	mph																						
35"																								
			kPa psi	175 25	200 29	225 33	250 36	275 40	300 44	325 47													37.25-35	
RL	E/M	PR	36																					
			kg lbs	13600 30000	14500 32000	15500 34200	16500 36400	17500 38600	18500 40800	19500 43000														
39"																								
			kPa psi	275 40	300 44	325 47	350 51	375 54	400 58	425 62	450 65	475 69	500 73	525 76	550 80	575 83	600 87	625 91	650 94	675 98	700 102	40/65-39		
DL	Loader	PR	56																					
			kg lbs	22400 49400	23600 52000	25000 55100	25750 56800	27250 60000	28000 61500	29000 64000	30000 66000	30750 68000	31500 69500	32500 71500	34500 76100	34500 76000	36500 80500	37500 82700	38750 85400	40000 88200	41250 90900			
45"																								
DL	Loader	PR	58																			45/65-45		
			kg lbs	30000 66000	31500 69500	32500 71500	34500 76000	35500 78500	37500 82500	38750 85500	40000 88000	41250 91000	42500 93500	43750 96500	45000 99000	46250 102000	47250 104200	48250 106400	49250 108600	50000 110000				
51"																								
DL	Loader	PR	62																			50/65-51		
			kg lbs	37500 82500	40000 88000	42500 93500	43750 96500	46250 102000	47500 104500	48750 107500	51500 113500	53000 117000	54500 120000	56000 123500	58000 128000	58000 128000	60000 132500	61500 135500	63000 139000					
57"																								
DL	Loader	PR	62																			65/65-57		
			kg lbs	67000 147500	71000 156500	73000 161000	77500 171000	80000 176500	82500 182000	87500 193000	90000 198500	92500 204000	95000 209500											

- 1) Figures under the star rating denote the maximum load and inflation pressures.
- 2) For Loader & Dozer Service, Tire Load Limits will depend on a type of the operation. Please refer to page 88.

3.2 Industrial Service

Tire Size	Pattern	Ply Rating	TRA Code or Application	Spec	Approximate Inflated Dimensions				OTD	Minimum Dual Spacing	Recommended Rim/Flange Height
					OD	OW	SLR	SLW			
					mm inch	mm inch	mm inch	mm inch	mm	mm inch	inch
Industrial Service											
20"											
12.00-20	RL	20	Industrial Service	IDU	1138 44.8	316 12.4	507 20.0	348 13.7	24.0	378 14.9	8.50V
24"											
12.00-24	STMS	20	Industrial Service	IDU	1275 50.2	321 12.6	606 23.9	339 13.3	55.0	391 15.4	8.50V
14.00-24	RL	24 28	Industrial Service	IDU	1366 53.8	387 15.2	627 24.7	400 15.7	28.0	450 17.7	10.00W
14.00-24 TG Tubeless	RL	24	Industrial Service	IDU	1360 53.5	395 15.6	614 24.2	410 16.1	28.0	450 17.7	10.00VA
25"											
16.00-25 Tubeless	RL	28 32	Industrial Service	IDU	1495 58.9	445 17.5	671 26.4	459 18.1	33.5	513 20.2	11.25/2.0
	RLS	28 32	Industrial Service	IDU	1548 60.9	438 17.2	722 28.4	460 18.1	57.0	513 20.2	
	YS2	32	Industrial Service	IDU	1465 57.7	430 16.9	658 25.9	472 18.6	49.2	513 20.2	
18.00-25 Tubeless	RL	40	Industrial Service	IDU	1608 63.3	508 20.0	727 28.6	572 22.5	36.0	587 23.1	13.00/2.5
	ELS2	40	Industrial Service	IDU	1685 66.3	515 20.3	796 31.3	530 20.9	66.5	587 23.1	
	STMS	40	Industrial Service	IDU	1675 65.9	520 20.5	762 30.0	550 21.7	84.0	587 23.1	
21.00-25 Tubeless	RL	40	Industrial Service	IDU	1750 68.9	570 22.4	775 30.5	620 24.4	41.0	668 26.3	15.00/3.0
33"											
18.00-33 Tubeless	ELS2	36	Industrial Service	IDU	1878 73.9	515 20.3	887 34.9	533 21.0	66.5	587 23.1	13.00/2.5
35"											
21.00-35 Tubeless	RL	40	Industrial Service	IDU	2008 79.1	570 22.4	937 36.9	648 25.5	41.0	701 27.6	15.00/3.0
	ELS2	40	Industrial Service	IDU	2040 80.3	592 23.3	955 37.6	617 24.3	67.0	701 27.6	

Off-the-Road Tires Used for Industrial Vehicle Applications (IDU Spec)

- 1) Industrial Vehicles comprise vehicles such as counter-balanced lift trucks, container handlers, straddle carriers, aircraft tow tractors, mobile crushers, log stackers etc., used on hard improved surfaces, smooth floors and runways.
- 2) Use Specifications of **Industrial Service only**.
- 3) Consult a Rim Manufacturer when inflation pressure exceeds 800kPa (116psi).

Pattern		Ply Rating	Inflation Pressure	Tire Load Limits at Various Speeds										Size
Industrial Service														
20"														
			kPa psi	km/h mph	0 Static	Creep Creep	5 3	10 5	15 9	20 12	25 15	30 19	12.00-20	
RL	20	Load Wheel	1000 145	kg lbs	11880 26200	10560 23290	9570 21100	8910 19650	8580 18920	8380 18480	8250 18190	8185 18050		
		Steering Wheel	1000 145	kg lbs	9505 20960	8450 18630	7655 16880	7130 15720	6865 15135	6705 14785	6600 14550	6550 14440		
24"														
STMS	20	Load Wheel	1000 145	kg lbs	12420 27385	11040 24345	10005 22060	9315 20540	8970 19780	8765 19320	8625 19020	8555 18865	12.00-24	
		Steering Wheel	1000 145	kg lbs	9935 21910	8830 19475	8005 17650	7450 16430	7175 15825	7010 15455	6900 15215	6845 15090		
RL	24	Load Wheel	1000 145	kg lbs	17100 37705	15200 33515	13775 30375	12825 28280	12350 27230	12065 26605	11875 26185	11780 25975	14.00-24	
		Steering Wheel	1000 145	kg lbs	13680 30165	12160 26810	11020 24300	10260 22625	9880 21785	9650 21280	9500 20945	9425 20780		
	28	Load Wheel	1000 145	kg lbs	18000 39690	16000 35280	14500 31970	13500 29765	13000 28665	12700 28005	12500 27560	12400 27340		
		Steering Wheel	1000 145	kg lbs	14400 31750	12800 28225	11600 25580	10800 23815	10400 22930	10160 22400	10000 22050	9920 21875		
25"														
RL RLS YS2	28	Load Wheel	900 131	kg lbs	20700 45645	18400 40570	16675 36770	15525 34230	14950 32965	14605 32205	14375 31695	14260 31445	16.00-25	
		Steering Wheel	900 131	kg lbs	16560 36515	14720 32455	13340 29415	12420 27385	11960 26370	11685 25765	11500 25355	11410 25155		
	32	Load Wheel	1000 145	kg lbs	22500 49610	20000 44100	18125 39965	16875 37210	16250 35830	15875 35005	15625 34455	15500 34175		
		Steering Wheel	1000 145	kg lbs	18000 39690	16000 35280	14500 31970	13500 29765	13000 28665	12700 28005	12500 27560	12400 27340		
RL ELS2 STMS	40	Load Wheel	1000 145	kg lbs	30600 67475	27200 59975	24650 54355	22950 50605	22100 48730	21590 47605	21250 46855	21080 46480	18.00-25	
		Steering Wheel	1000 145	kg lbs	24480 53980	21760 47980	19720 43480	18360 40485	17680 38985	17270 38085	17000 37485	16865 37185		
RL	40	Load Wheel	1000 145	kg lbs	36385 80230	32345 71320	29310 64630	27290 60170	26280 57950	25670 56610	25270 55720	25065 55270	21.00-25	
		Steering Wheel	1000 145	kg lbs	29110 64185	25875 57055	23450 51705	21830 48135	21025 46360	20535 45290	20215 44575	20050 44215		
33"														
ELS2	36	Load Wheel	1000 145	kg lbs	33300 73425	29600 65270	26825 59150	24975 55070	24050 53030	23495 51805	23125 50990	22940 50580	18.00-33	
		Steering Wheel	1000 145	kg lbs	26640 58740	23680 52215	21460 47320	19980 44055	19240 42425	18795 41445	18500 40790	18350 40465		
35"														
RL ELS2	40	Load Wheel	1000 145	kg lbs	43740 96445	38880 85730	35235 77695	32805 72335	31590 69655	30860 68050	30375 66975	30130 66440	21.00-35	
		Steering Wheel	1000 145	kg lbs	34990 77155	31105 68585	28190 62155	26245 57870	25270 55725	24690 54440	24300 53580	24105 53150		

- 4) For Speeds exceeding 30km/h (18mph), consult a Bridgestone Representative.
- 5) For tire sizes and star ratings other than listed above, consult a Bridgestone Representative.
- 6) For RTG (Rubber Tired Gantry Crane) operation, consult a Bridgestone Representative.

REMARKS & SPECIAL OPERATIONS

1. Remarks

Both rules of 1.1 and 1.2 can't be applied at the same time.

1.1 Excess Load

Due to the specialized nature of Off-The-Road vehicle usage, loads in excess of those in the appropriate above-listed load tables are often encountered. These excess loads result from items such as actual vehicle weight exceeding the design weight, varying density of materials, field modifications to the equipment, load transfer, etc. Only under these conditions, the actual tire load in service may exceed the above load ratings for the tire(*) by an amount not greater than shown in the following table:

For Radial Tires

	E2, E3, E4*	L**
Maximum Excess Load	7%	7%
Maximum Excess Pressure	14%	14%
Maximum Pressure	800kPa	825kPa
	116psi	120psi

(except for underground vehicles) Please see P.89, 90

When excess loads are encountered, cold inflation pressures must be increased to compensate for higher loads. For each 1% increase in load, the inflation pressure must be increased by 2%.

*except following sizes on the list

11.00R20	335/80R20	405/70R20	12.00R24
12.00R20	365/80R20	12R22.5	

About 63" tires, consult a Bridgestone representative.

**except 55.5/80R57 and 60/80R57

The maximum excess loads will result in reduced tire performance.

For Bias Tires

	E2, E3, E4*	L**	
			L5/L5S***
Maximum Excess Load	15%	15%	0%
Maximum Excess Pressure	30%	30%	+100kPa
Maximum Pressure	825kPa	825kPa	
	120psi	120psi	

(except for underground vehicles) Please see P.89, 90

When excess loads are encountered, cold inflation pressures must be increased to compensate for higher loads. For each 1% increase in load, the inflation pressure must be increased by 2%.

*except following sizes on the list

9.00-20	10.00-20	11.00-20
---------	----------	----------

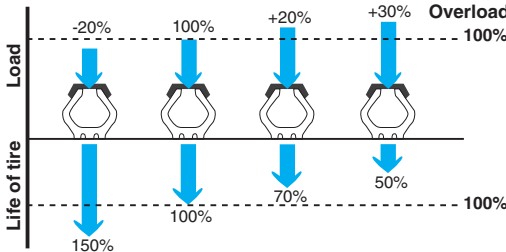
**except following sizes on the list

27x8.50-15	10-16.5	15.5/70-18	16.9-24
33x12.5-15	12-16.5	42x17-20	18.4-24
12.5/70-16	15.5/60-18	17.5/65-20	

***For L5/L5S tires following sizes on the list, on front tires for front end loaders, it is permissible to increase inflation pressure up to 100kPa (15psi) above, with no increase in load. (Maximum inflation pressure should not exceed 825 kPa (120psi).)

17.5-25	26.5-25	35/65-33	50/65-51
20.5-25	29.5-25	40/65-39	65/65-57
23.5-25	29.5-29	45/65-45	

The maximum excess loads will result in reduced tire performance.



1.2 The Variation in Load Carrying Capacity with Operating Speed

For Radial Tires

Maximum Speed (km/h)	G	L*
Static	-	+60%
Creep		+30%
5		+15%
10		0
15		-13%
20		-
25		-20%
30		-
35		
40	0	
45	-	
50	-9%	
55	-	
60	-18%	
65	-27%	

(except for underground vehicles) Please see P.89, 90

Reference speed for calculating load variance
* About the size of 55.5/80R57 and 60/80R57, consult a Bridgestone representative.

•Earthmover Size
For 65km/h(40mph) speed, tire load must be reduced 12% with no change in inflation pressure.

For Bias Tires

Maximum Speed (km/h)	G	L*
Static	-	+60%
Creep		+30%
5		+15%
10		0
15		-13%
20		-
25		-20%
30		-
35		
40	0	
45	-	
50	-9%	
55	-	
60	-18%	
65	-27%	

(except for underground vehicles) Please see P.89, 90

Reference speed for calculating load variance

•Earthmover Size
For 65km/h(40mph) speed, tire load must be reduced 15%(Narrow), 17%(widebase) with no change in inflation pressure.

*except following sizes on the list

27x8.50-15	10-16.5	15.5/70-18	16.9-24
33x12.5-15	12-16.5	42x17-20	18.4-24
12.5/70-16	15.5/60-18	17.5/65-20	

- These tables don't secure to prevent the risk derived from heat buildup.
- Consult Bridgestone Representative for another speed set for Earthmover Size.

1.3 The Variation in Load Carrying Capacity with Operating Speed for Mobile Crane

Speed	Maximum Load	
	Speed Symbol: E	Speed Symbol: F
30 km/h (20 mph)	+30%	+25%
40 km/h (25 mph)	+24%	+15%
50 km/h (30 mph)	+18%	+12%
60 km/h (35 mph)	+12%	+10%
70 km/h (43 mph)	0%	+5%
80 km/h (50 mph)	-18%	0%
90 km/h (55 mph)	-30%	-6%
100 km/h (62 mph)	-40%	-15%

Reference speed for calculating load variance

This table doesn't secure to prevent the risk derived from heat buildup.

1.4 Recommended Inflation Pressure Calculation

Below is the inflation pressure calculation formula for various tire load (for your reference).

Radial Tire: $\frac{W_2}{W_1} = \frac{P_2^{0.75}}{P_1^{0.75}}$ $P_2 = \left\{ P_1^{0.75} \frac{W_2}{W_1} \right\}^{(1/0.75)}$

Bias Tire: $\frac{W_2}{W_1} = \frac{P_2^{0.585}}{P_1^{0.585}}$ $P_2 = \left\{ P_1^{0.585} \frac{W_2}{W_1} \right\}^{(1/0.585)}$

Tire Load: W1, W2
Inflation Pressure: P1, P2
*Tire Load and Inflation Pressure should not exceed maximum load and pressure of tires.

1.5 Allowance in Outer Diameters for Dual Mounting

The following table lists the allowance in outer diameters for dual mounting. Exceeding the figures listed (Table 1) may result in rapid tread wear and possible damage to the tire.
For the dual mounted tires shown in Fig. 1 , if the outer diameter of tire No.1 is larger than that of No.2, the No.1 tire with a larger diameter will eventually be damaged, wear rapidly and unevenly from overloading, while the No.2 tire with a smaller diameter will rapidly wear out in the center.
Tires already mounted on vehicles can be checked by the following methods. Be sure that the tires to be checked are all inflated to their standard recommended inflation pressures.

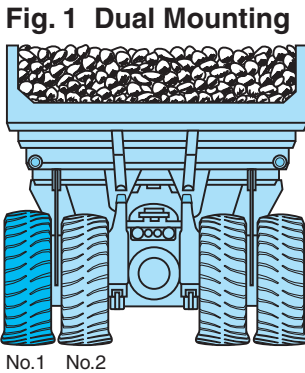
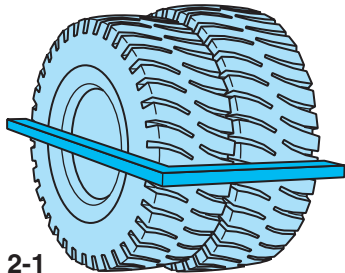


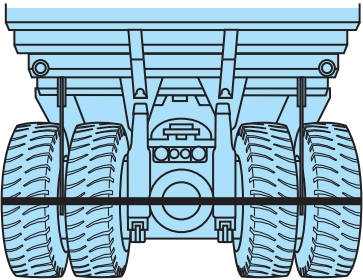
Table 1 Permissible Difference in Outer Diameters for the Dual Mounted Tires

Tire Section	Radial		Bias	
	Difference in Outer Diameters	Circumferential Difference	Difference in Outer Diameters	Circumferential Difference
less than 8.25	less than 6mm	less than 19mm	less than 8mm	less than 9mm
9.00–14.00	less than 8mm	less than 25mm	less than 13mm	less than 41mm
16.00–18.00	less than 15mm	less than 47mm	less than 20mm	less than 69mm
more than 21.00	less than 19mm	less than 60mm	less than 24mm	less than 75mm

(1) By placing a right angled square across duals, the difference in outer diameter can be obtained. (Fig. 2-1) Or measure circumference.



(2) By using a cord across both the right and left duals, the difference can be obtained. (Fig. 2-2)



- (3) Do not use regular tread (E3) and deep tread (E4) tires together for dual mounting.
- (4) Any object trapped between dual mounted tires represents a risk. Use of rock ejectors between dual mounted tires is recommended. To remove an object trapped between dual mounted tires, it is essential to deflate both tires prior to removing the wheels.

1.6 Tire Volume for Filling Nitrogen Gas

Tire Size	Tire Volume			
	Liter		U.S. Gal	
		For L5		For L5
14.5 R15	-	89	-	24
12.00 R20	137	123	36	32
16.00 R20	300	-	79	-
335/80 R20	130	-	34	-
405/70 R20	197	-	52	-
365/80 R20	159	-	42	-
12.00 R24	162	145	43	38
13.00 R24	201	-	53	-
14.00 R24	264	213	70	56
16.00 R24	359	-	95	-
14.00 R25	259	-	68	-
15.5 R25	225	213	59	56
16.00 R25	353	-	93	-
17.5 R25	295	261	78	69
18.00 R25	507	457	134	121
20.5 R25	448	398	118	105
21.00 R25	751	-	198	-
23.5 R25	631	560	167	148
25/65 R25	569	-	150	-
550/65 R25	360	-	95	-
650/65 R25	541	-	143	-
750/65 R25	750	-	198	-
26.5 R25	833	739	220	195
29.5 R25	1171	1039	309	274
775/65 R29	900	-	238	-
875/65 R29	1138	-	301	-
29.5 R29	1260	1118	333	295
33.25 R29	1586	-	419	-

Tire Size	Tire Volume			
	Liter		U.S. Gal	
		For L5		For L5
18.00 R33	582	-	154	-
21.00 R33	810	-	214	-
35/65 R33	1463	1298	387	343
37.5 R33	2444	-	646	-
21.00 R35	841	-	222	-
24.00 R35	1098	-	290	-
29.5 R35	1434	-	379	-
33.25 R35	1780	-	470	-
37.25 R35	2323	-	614	-
37.5 R39	2627	-	694	-
40.5/70 R39	2885	-	762	-
45/65 R39	-	2613	-	690
45/65 R45	-	3005	-	794
24.00 R49	1375	-	363	-
27.00 R49	1869	-	494	-
31/90 R49	1960	-	518	-
30.00 R51	2514	-	664	-
33.00 R51	3079	-	813	-
36.00 R51	3855	-	1018	-
50/65 R51	-	4027	-	1064
37.00 R57	4481	-	1184	-
42/90 R57	4799	-	1268	-
40.00 R57	5477	-	1447	-
46/90 R57	5487	-	1450	-
50/80 R57	5955	-	1573	-
50/90 R57	7800	-	2061	-
55.5/80 R57	-	7216	-	1906
53/80 R63	7305	-	1930	-
55/80 R63	8568	-	2264	-
59/80 R63	9793	-	2587	-

L5 tire has smaller tire volume than the others and the value listed specifically.

2. Special Operations

Please check your operation to make sure of the Tire Load Limit.

Type/Service	Type of Operations	Reference No.
Earthmover	Standard	-
	Underground Truck Service	2.1.3
	When the vehicle is driven over the highway for delivery, or moved by an operator to a new job site - Drive-Away	2.2.1
Loader & Dozer	Distance of picking up and relocating material Less than 76m (one way) - Standard	-
	Distance of picking up and relocating material More than 76m (one way) - Load-and-Carry Operations	2.1.1
	Underground Load Haul Dump Service	2.1.2
	Underground Truck Service	2.1.3
	When the vehicle is driven over the highway for delivery, or moved by an operator to a new job site - Drive-Away	2.2.2

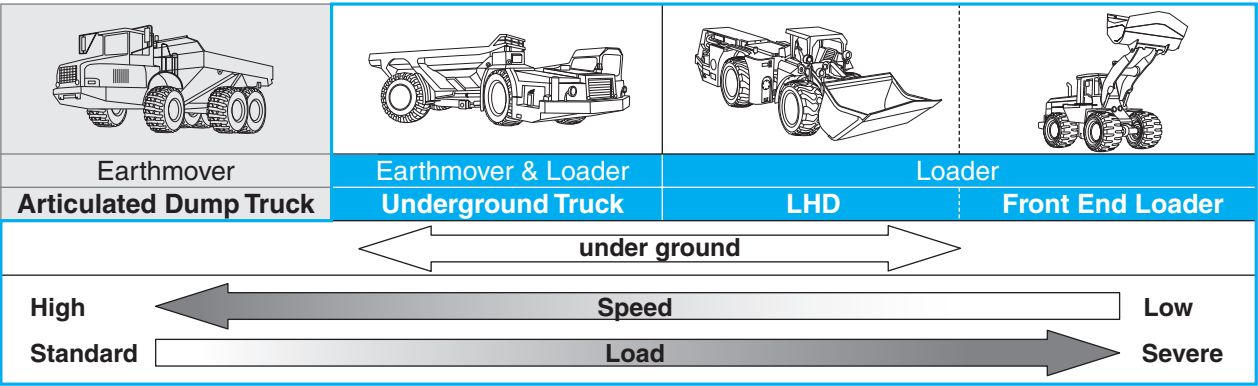
2.1 For Load-and-Carry Operations

Service conditions of a loader is defined as “picking up material and relocating a short distance away, a maximum of 76m (250 feet), one way, with a maximum speed of 10km/h (5 mph)”. However, a loader can pick up a load and transport such load to another location and return unloaded for a longer distance. This type of service is called as **Load-and-Carry** operations. Transportation usually occurs at low speeds, up to 25km/h (15 mph), and distances are limited.

The tires when used in Load-and-Carry operations may encounter heat problems especially on the front axle tires. To avoid such problems, Bridgestone recommends the following operating conditions.

For tires over 33" inch rim diameter tires, careful study is required to maximize tire life while considering Ton-Kilometer-Per-Hour limits. Please consult a Bridgestone representative for more information.

If you need to use the tire beyond this recommendation, please consult a Bridgestone representative.



2.1.1 For Front End Loader Service



For Radial Tires

Tread Class	Inflation Pressure				Load Capacity* 10km/h (5mph)	Maximum Cycle Distance (m)	Allowable Average Work-shift Speed (km/h)
	Conventional size (95 series)		Wide base size (80, 65 series)				
	★1	★2	★1	★2			
L2, L3	Standard Inflation Pressure		Standard Inflation Pressure**		100% of STD. load	1800	16
L4						14	
L5						1500 (VSDT)	10
L5S						1200 (VSDL, VSDR)	6
						1200	5

* STD.load: Maximum permissible load at standard inflation pressure for respective tire size and star rating. Please refer to the load - inflation pressure table for loader and dozer service “10km/h (5mph) service” .

** On front tires for front end loaders, it is permissible to increase inflation pressure up to 100kPa (15psi) above that shown in the load - inflation pressure table for loader and dozer service “10km/h (5mph) service” with no increase in load.

For Bias Tires

Tread Class	Inflation Pressure for Front Tires	Load Capacity* 10km/h (5mph)		Maximum Cycle Distance (m)	Allowable Average Work-shift Speed (km/h)
		Rim Diameter			
		29" and below	33" and above		
L2, L3	Standard inflation pressure + 100kpa (15psi)	90% of STD. load		1200	10
L4				500	3
L5			85% of STD. load	300	
L5S					

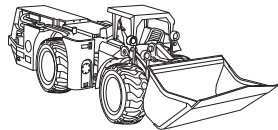
* STD.load: Maximum permissible load at standard inflation pressure for respective tire size and star rating. Please refer to the load - inflation pressure table for loader and dozer service “10km/h (5mph) service” .

** Not permissible

The inflation pressure should not exceed 825kPa (120psi).

2.1.2 For Load Haul Dump Service

Since a load haul dump (LHD) unit has a similar structure and operational characteristics as load and carry service on a front end loader, the following operating parameters are recommended.



For Radial Tires

Tread Class	Inflation Pressure		Load Capacity* 10km/h (5mph)	Maximum Cycle Distance (m)	Allowable Average Work-shift Speed (km/h)
	Conventional size (95 series)	Wide base size (80, 65 series)			
	★2 D2A / ★2 L2A				
L2, L3	**				
L4	Standard Inflation Pressure		100% of STD. load	1800	14
1500 (VSDT)				10	
1200 (VSDR,VSDL,VMDL)				6	
1200				5	
L5 / LHD5					
L5S / LHD5S					

*See note in Table 2.1.1. **Not permissible

For Bias Tires

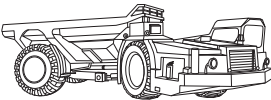
Tread Class	Inflation Pressure for Front Tires	Load Capacity* 10km/h (5mph)		Maximum Cycle Distance (m)	Allowable Average Work-shift Speed (km/h)
		Rim Diameter			
		29" and below	33" and above		
L2, L3	**				
L4	Standard inflation pressure + 100kpa (15psi)	90% of STD. load	**	500	3
L5			85% of STD. load	300	
L5S					

*See note in Table 2.1.1. **Not permissible

The inflation pressure must meet 1.1 for maximum excess load.

2.1.3 For Underground Truck Service

Underground truck service is defined as small and low vehicle height dump truck used in underground mines. However, the application is considered to be similar to load and carry operation which has relatively slower speed and shorter distance with more load than normal dump truck use. Consequently, the severity to the tire is estimated using the load and carry concept. Bridgestone defines the recommendation in this section.



For Radial Tires

Tread Class & Pattern		Spec	Inflation Pressure	Load Capacity*	Speed	
					Maximum Speed (km/h)	Allowable Average Work-shift Speed (km/h)
L4/E4	VSNT	MT DUH	700 kpa	See note in P.47	25	10
			800 kpa		40	10
L4	VSNT	★2 D2A	Standard Inflation Pressure	100% of STD. load	25	14
L5	VSDT					10
	VSDL					6
L5S	VSMS					5
	VSMS2					
E4	VELS	★2 E2A	Standard Inflation Pressure	115% of STD. load	30	14
	VMTP					
	VRLS					

*See note in 2.1.1.
For over Maximum Speed, consult a Bridgestone Representative.

For Bias Tires
Not recommendable.

2.2 Drive-Away Tires on Vehicles
2.2.1 Off-the-Road Tires for Earthmover

(1) Recommendations for Off-the-Road Tires

Because of the special extra-heavy construction of Off-the-Road tires, special precautions must be observed to protect these expensive tires when the vehicle is driven over the highway for delivery, or moved by an operator to a new job site.

If the precautions are not observed, excessive tire heat is built up and the tires most likely will fail prematurely. These precautions are as follows and apply to tires on all vehicles in transit—driven or towed. Consult a Bridgestone Representative for specific information before starting out on a drive-away trip.

(2) Load and Pressure

- [1] Vehicles must be empty during transportation.
- [2] Inflation pressure is to be checked before starting, each break and adjusted to the pressure recommended for over-the-highway transit by Bridgestone.
- [3] Inflation pressures are not to be reduced by “bleeding” tires during transportation.
- [4] Periodical inflation pressure checks during transportation (i.e. every 2 hours) is recommended. Although operational pressure build-up in tires is normal during transportation, when it increases 20% or more than the cold pressure reading, it indicates over heating, and the vehicle should be stopped and a Bridgestone Representative should be consulted.

(3)Speed

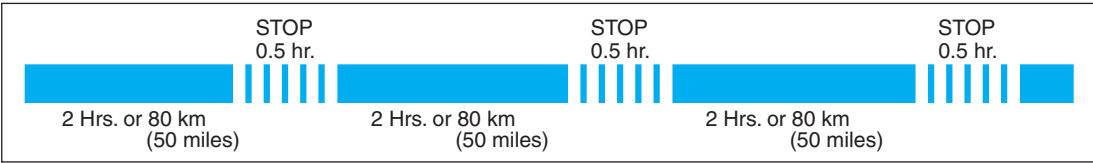
- [1] Regular tread tires (E-3):
(Note: For deep tread tires (E-4), always consult a Bridgestone Representative.)
- a. Maximum highway speed:

Maximum Speed (Drive-Away)

Radial / Bias	Maximum Speed	
	Regular	Wide Base
	50 km/h	30 mph
	32 km/h	20 mph

- b. Stop for a 30-minute cooling period after each 80 km (50 miles) of driving or before 2 hours of continual operation, whichever comes first. (shown in the following figure)
- c. One-hour minimum midday lunch stop should be observed during full day operations. (shown in the following figure)

Drive-Away



- [2] Vehicles in transit should be accompanied by responsible personnel in a pilot car to enforce these precautions and maintain a check on equipment. This is good insurance for a valuable investment.

2.2.2 Off-the-Road Tires for Loader & Dozer

During or after the operation, please wait for the following hours prior to start Drive-Away.

Size & Pattern	Load per tire [ton]		Maximum Travel Distance (One way)				
			5 km or 3.1 Mil	10 km or 6.2 Mil	20 km or 12.4 Mil	50 km or 31 Mil	60 km or 37 Mil
35/65R33 VSDL	16.6	Rest time prior to traveling (Hour)	2	4	5	7	9
		Maximum speed on traveling	10 km/h or 6.2 MPH				
45/65R45 VSDL	30.3	Rest time prior to traveling (Hour)	2	3	5	10	11
		Maximum speed on traveling	10 km/h or 6.2 MPH				
50/65R51 VSDL	40.3	Rest time prior to traveling (Hour)	3	5	9	20	23
		Maximum speed on traveling	20 km/h or 12.4 MPH			10 km/h or 6.2 MPH	
555/80R57 VSDL	64.8	Rest time prior to traveling (Hour)	1.5	3.5	7	10	14
		Maximum speed on traveling	20 km/h or 12.4 MPH			10 km/h or 6.2 MPH	
60/80R57 VSDL	69.5	Rest time prior to traveling (Hour)	1	2	4	9	11
		Maximum speed on traveling	10 km/h or 6.2 MPH				
65/65-57 DL	64.8	Rest time prior to traveling (Hour)	3	6.5	10		
		Maximum speed on traveling	20 km/h or 12.4 MPH			10 km/h or 6.2 MPH	

*Please consult a Bridgestone representative.

- Remarks;
- 1. Time for cooling temperature of the tire (Parked up the loader) should be applied prior to start to travel on the road.
 - 2. Ambient temperature of 38°C or 100°F is assumed.
 - 3. Maximum load on tire should be less than the Load per tire in the above table.
 - 4. Air pressure for “Drive-Away” should be the same as our recommended figures, and need to confirm whether it would not be higher figures that we experienced prior to travel.
 - 5. We recommend that it would be best way for Giant loaders to use tow hauler for long way traveling. The drive away distance should be shorter than 60km (37 miles) within 20 km/h as the maximum speed to minimize the risk of tire heat damage.
 - 6. If you have a plan of Drive-Away, please consult a Bridgestone representative.

1. O-Ring Specifications

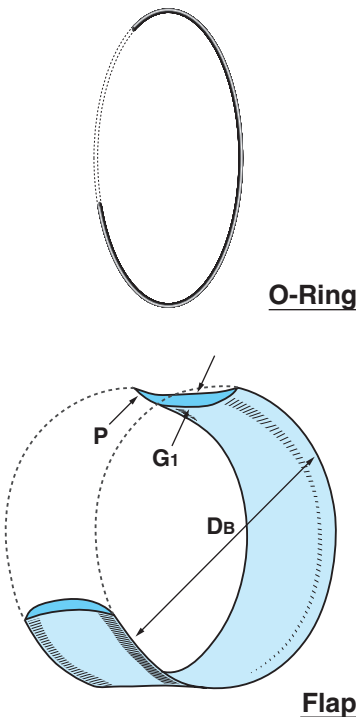
Code No.	Applicable Size		Diameter		Inner Circumference	
	Radial	Bias	mm	inch	mm	inch
P-24A	13.00R24 TG 14.00R24 TG 16.00R24 TG	13.00-24 TG 14.00-24 TG -	6.6	0.26	1768	69.61
P-25AX	14.00R25* 15.5R25 17.5R25 20.5R25* 385/95R25 445/80R25 550/65R25* 600/65R25*	- 15.5-25 17.5-25 20.5-25 - - - -	6.8	0.27	1790	70.47
P-25B	14.00R25* 16.00R25 18.00R25 20.5R25* 21.00R25 23.5R25 26.5R25 29.5R25 30/65R25(750/65R25) 445/95R25 505/95R25 525/80R25 550/65R25* 600/65R25* 650/65R25 750/65R25	- 16.00-25 18.00-25 20.5-25* 21.00-25 23.5-25 26.5-25 29.5-25 - - - - - - - -	9.8	0.39	1790	70.47
P-29B	29.5R29 33.25R29 775/65R29 875/65R29	29.5-29 - - -	9.8	0.39	2127	83.74
P-33B	18.00R33 21.00R33 35/65R33	- - 35/65-33	9.8	0.39	2382	93.78
P-35B	21.00R35 24.00R35	21.00-35 -	9.8	0.39	2557	100.67

*Detail of Application

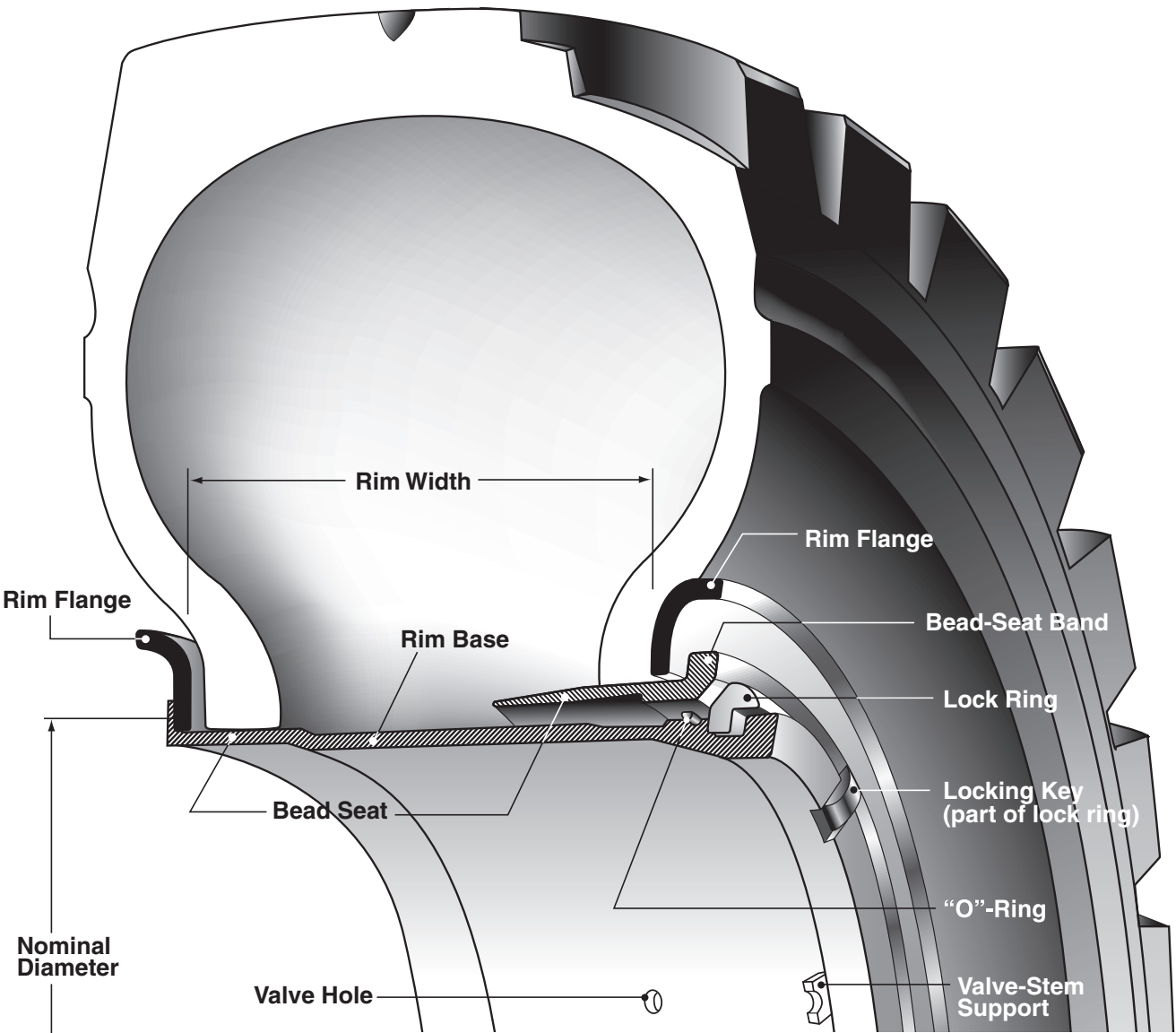
Code No.	Application Size		
	Radial	Bias	Rim
P-25AX	14.00R25 20.5R25 - 550/65R25 600/65R25	- - 20.5-25 - -	10.00-25/1.5 17.00AL-25/1.7 17.00-25/1.7 14.00-25/1.5 17.00-25/1.7
P-25B	14.00R25 20.5R25 550/65R25 600/65R25	- 20.5-25 - -	11.25-25 17.00-25 17.00-25 17.00-25 19.50-25

2. Flap Specifications

Flap	πD_b		G_1		P	
	mm	inch	mm	inch	mm	inch
550/600-15	1175	46.3	4.0	0.16	129	5.1
650/700/750-15	1177	46.3	4.5	0.18	169	6.7
12/65B-15	1196	47.1	7.0	0.28	270	10.6
750/825AR15	1201	47.3	6.0	0.24	184	7.2
750/825-R16	1255	49.4	5.0	0.20	174	6.9
200D1000-R15	1201	47.3	6.5	0.26	205	8.1
700A825-R20	1594	62.8	5.0	0.20	180	7.1
900A111-R20	1594	62.8	6.0	0.24	205	8.1
1100B13/80-R20	1594	62.8	6.5	0.26	218	8.6
1400/14/80R20	1594	62.8	8.5	0.33	240	9.4
1300A1600-20	1618	63.7	8.0	0.31	246	9.7
42x17-20	1566	61.7	9.0	0.35	384	15.1
14/70-20	1587	62.5	9.0	0.35	331	13.0
1300-24	1916	75.4	9.0	0.35	229	9.0
1200A1400-24,25	1925	75.8	9.0	0.35	232	9.1
1100B1300-R24	1922	75.7	7.5	0.30	220	8.7
1300/1400-24,25	1925	75.8	9.0	0.35	232	9.1
1400/1600R24,25	1925	75.8	9.0	0.35	261	10.3
1600-24,25	1894	74.6	9.0	0.35	289	11.4
155A1800-24,25	1928	75.9	6.0	0.24	339	13.3
235-25	1932	76.1	9.0	0.35	560	22.1
265-25	2009	79.1	12.0	0.47	570	22.4
2100R33	2553	100.5	9.0	0.35	413	16.3



3. Rim and Valve



Five-piece fully-tapered bead-seat rim with air-sealing "O"-ring gasket for earthmover

$$8.50V \times 24$$

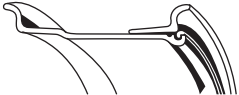
Nominal Diameter of Rim (inches)

Flange Type

Rim Width (inches)

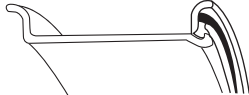
3.1 Rim Designation

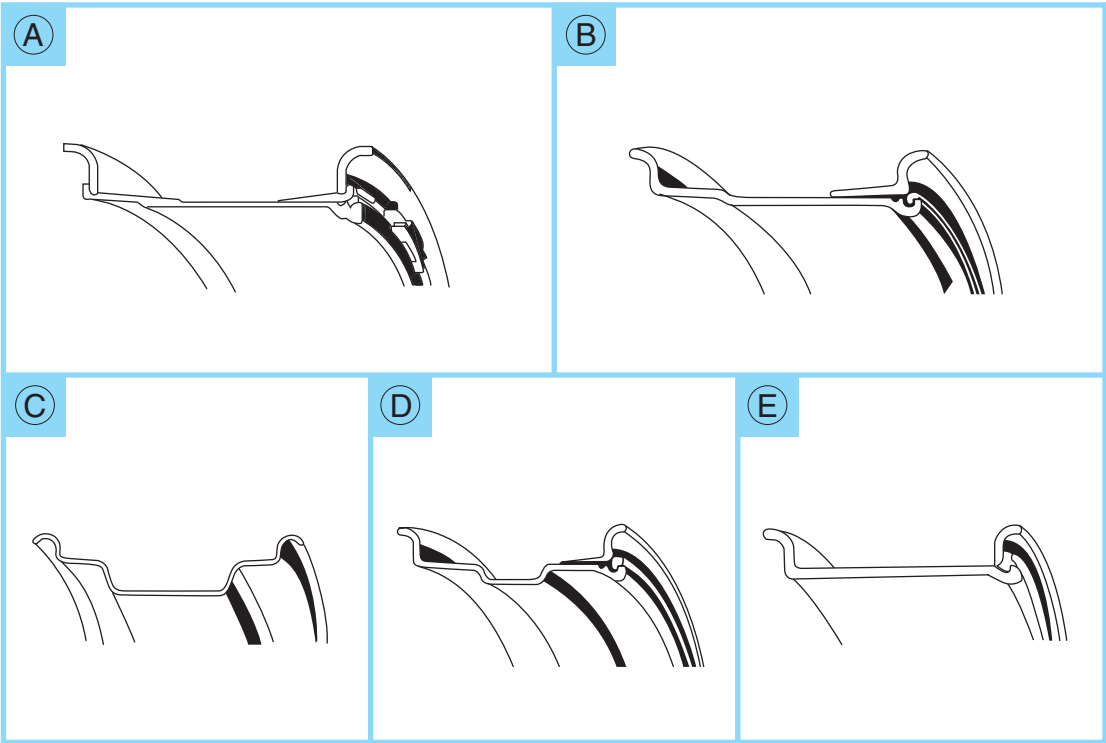
Full Tapered Bead Seat Rims (5 pieces)		
A 		
Recommended Rim/ Flange Height	Tire Size	
	Radial	Bias
11.00/1.5	14.5R15	-
11.25/2.0	16.00R25	16.00-25
	445/95R25	-
13.00/2.5	18.00R25	18.00-25
	505/95R25	-
	18.00R33	18.00-33
15.00/3.0	21.00R25	21.00-25
	21.00R33	-
	21.00R35	21.00-35
17.00/2.0	550/65R25	-
	600/65R25	-
17.00/3.5	24.00R35	24.00-35
19.50/2.5	23.5R25	23.5-25
	600/65R25	-
	650/65R25	-
19.50/4.0	27.00R49	-
22.00/3.0	750/65R25(30/65R25)	-
22.00/4.5	26.5R25	26.5-25
	30.00R51	-
24.00/3.0	750/65R25(30/65R25)	-
24.00/3.5	775/65R29	-
24.00/5.0	33.00R51	-
25.00/3.5	29.5R25	29.5-25
	775/65R29	-
	29.5R29	29.5-29
26.00/5.0	29.5R35	-
	36.00R51	-
27.00/3.5	875/65R29	-
	33.25R29	-
	33.25R35	-
27.00/6.0	37.00R57	-
	42/90R57	-
28.00/3.5	875/65R29	-
	35/65R33	35/65-33
29.00/6.0	40.00R57	-
	42/90R57	-
	46/90R57	-
	50/80R57	-
31.00/4.0	37.25R35	37.25-35
32.00/4.0	-	40/65-39
32.00/4.5	37.5R39	-
	40.5/75R39	-
	45/65R39	-
32.00/6.0	46/90R57	-
	50/80R57	-
	50/90R57	-
32.00/6.5	50/90R57	-
34.00/5.0	50/80R57	-
34.00/6.0	50/80R57	-
34.00/6.5	50/90R57	-
	50/90R57	-
36.00/4.5	45/65R39	-
	45/65R45	45/65-45
36.00/5.0	53/80R63	-
38.00/5.0	53/80R63	-
40.00/4.5	50/65R51	50/65-51
41.00/5.0	59/80R63	-
44.00/5.0	59/80R63	-
44.00/6.0	55.5/80R57	-
47.00/6.0	60/80R57	-
52.00/6.0	-	65/65-57

Full Tapered Bead Seat Rims (3 pieces)		
B 		
Recommended Rim/ Flange Height	Tire Size	
	Radial	Bias
10.00/1.5	14.00R25	14.00-25
12.00/1.3	385/95R25	-
	15.5R25	15.5-25
14.00/1.5	17.5R25	17.5-25
	445/80R25	-
	550/65R25	-
17.00AL/1.7(★1only)	20.5R25	-
17.00/1.7	-	20.5-25
	600/65R25	-
17.00/2.0	20.5R25	20.5-25
	525/80R25	-
	550/65R25	-

Drop Center Rims (DC, W, DW)		
C 		
Recommended Rim/ Flange Height	Tire Size	
	Radial	Bias
7JA	-	27x8.50-15
	-	9.5/65-15
11LB	-	14.0/65-15
6LB	-	7.50-16
8LB	-	10.5/80-16
10LB	-	12.5/70-16
8.25	-	10-16.5
	11R22.5	-
9.00	12R22.5	-
9.75	-	12-16.5
W10	-	15.5/60-18
W13	-	15.5/70-18
W14L	-	17.5/65-20
W15L	-	16.9-24
W16L	-	18.4-24
DW20A	-	23.1-26
DW20B	-	23.1-26

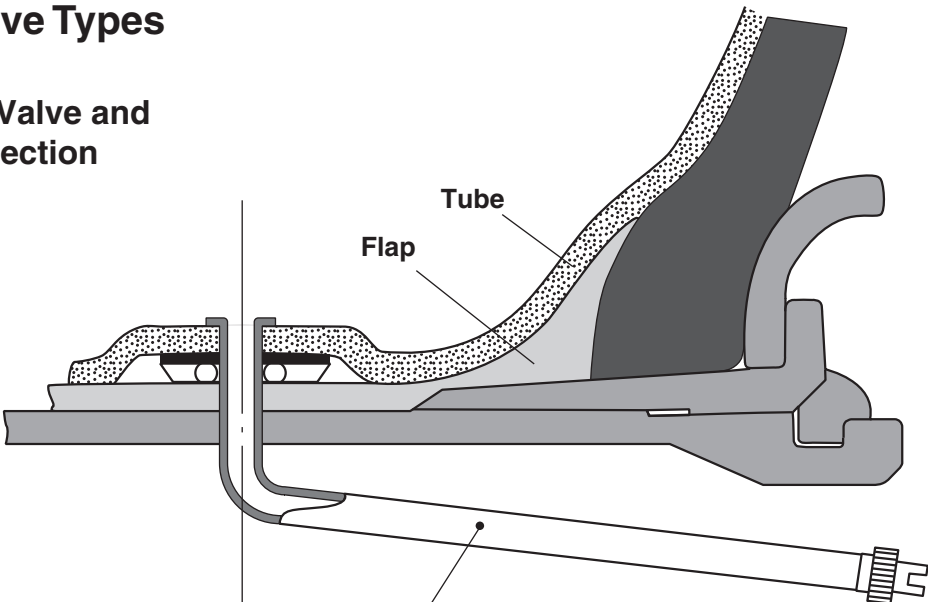
Semi Drop Center Rims (SDC)		
D 		
Recommended Rim/ Flange Height	Tire Size	
	Radial	Bias
6.00GS	-	7.50-15
	-	7.50-16
8.00TG	13.00R24 TG	13.00-24 TG
	14.00R24 TG	14.00-24 TG
10.00F	-	33x12.5-15
10.00VA	-	13.00-24 TG
	14.00R24 TG	14.00-24 TG
	16.00R24 TG	16.00-24 TG
11x20	335/80R20	-
	365/80R20	-
11.00TG	-	14/70-20
13x20	405/70R20	-
14.00TG	-	42x17-20

Flat Base Rims		
E 		
Recommended Rim/ Flange Height	Tire Size	
	Radial	Bias
6.50T	8.25R15	-
7.00T	9.00R20	9.00-20
7.50V	10.00R15	-
	-	10.00-20
8.00V	11.00R20	11.00-20
8.5	-	12.00-24
8.50V	12.00R20	12.00-20
	12.00R24	12.00-24
10.00V	16.00R20	-
10.00WI	14.00R20	-
10.00W	16.00R20	-
	14.00R24	14.00-24

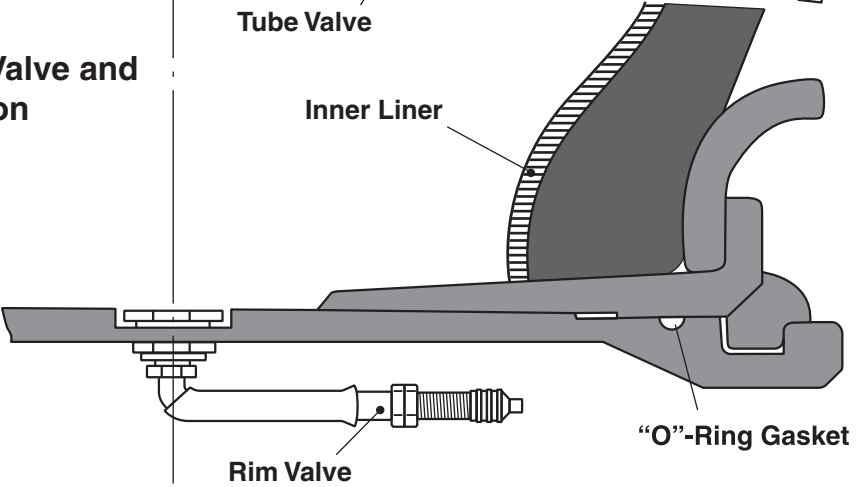


3.2 Valve Types

Tube Valve and Rim Section



Tubeless Valve and Rim Section



Tube Valve

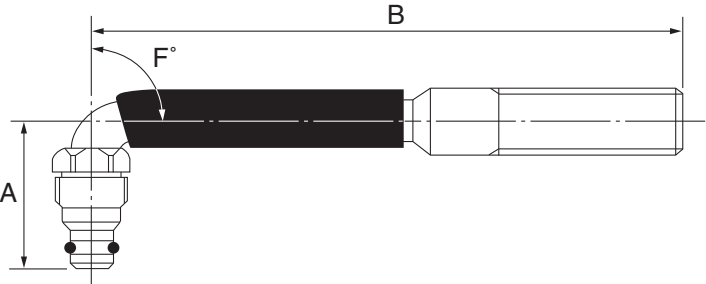


Tubeless Valve



Interchangeable Swivel Valves For Tubeless Or Tube Type Tires

TRJ4000-4 1/2



Large Bore Valves

Valve No.	Dimensions (mm)		
	A	B	F°
TRJ650	27.5	79.5	80°
TRJ4000-4 1/2	31	114.0	90°
TRJ4000-8	31	203.0	90°
TRJ4000-7 1/2	31	190.5	90°

This type of VALVE consists of a combination of the rubber base SP-4000 or SP-2.

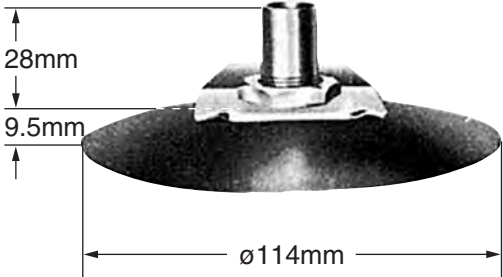
Tubeless Type Spud

SP2



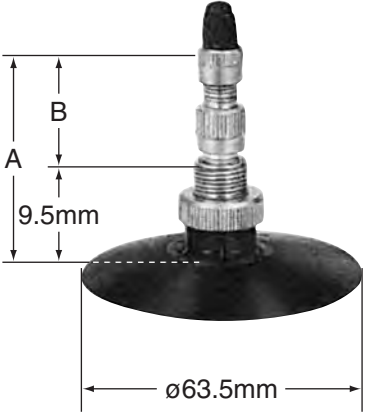
Tube Type Spud

SP4000



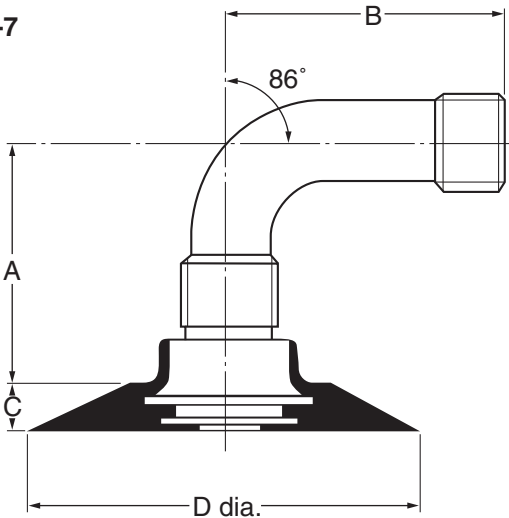
Tube Type Rubber Base Valves

TR218



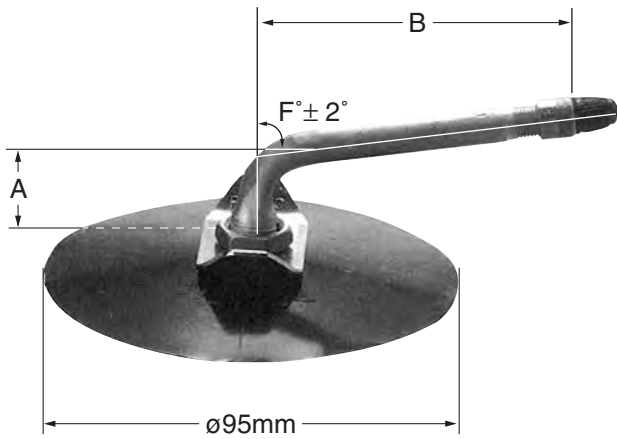
Valve No.	Dimensions (mm)	
	A	B
TR218A	20.6	11.1
TR220A	30.2	20.7

PV-7



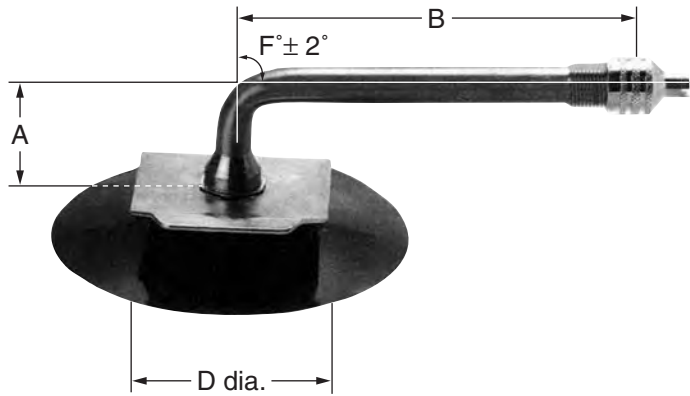
Valve No.	Dimensions (mm)			
	A	B	C	D dia.
PV-7	73	100	7	90

JS75



Valve No.	Dimensions (mm)		
	A	B	F°
JS75	24	70	82°
TR76A	24	86	86°
TR77A	24	105	86°
TR77E	35	94	86°
TR78A	24	127	86°
TR175A	24	115	86°
TR177A	24	95	86°
JS177B	28	91	86°
JS179	36	133	86°
JS179A	29	137	86°
TR179A	24	141	86°
PV38	24	136	80°
PV89	42.8	123	86°
V3-02-3	35.8	44.5	85°
V3-02-15	23.3	145.5	86°

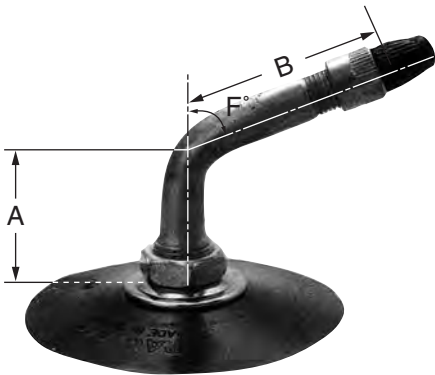
JSJ1175



Large Bore Valves

Valve No.	Dimensions (mm)			
	A	B	D dia.	F°
JSJ1078S	30	121	32	84°
JSJ1175	35	105	32	88°
JSJ1175B	35	105	32	80°
JSJ1175C	35	102	32	60°

JS2



Valve No.	Dimensions (mm)		
	A	B	F°
JS2	26	33	70°

Tube Type Rubber Covered Valves

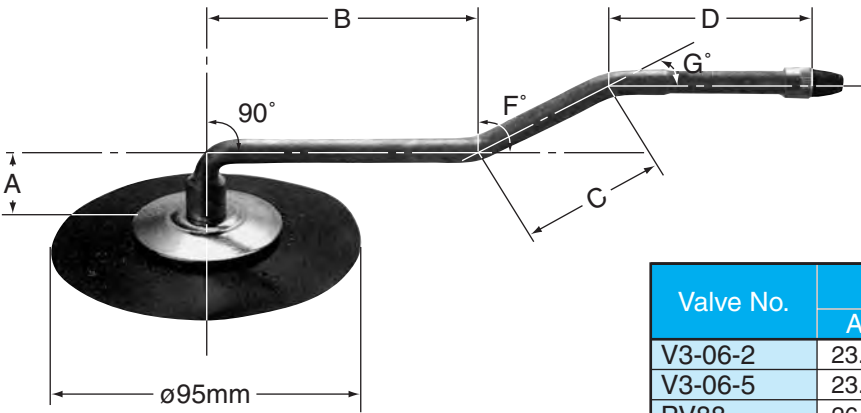
TR13



Valve No.	Dimensions (mm)
	E
TR13	11.5
TR15	16.5

Tube Type Screw-on Valves

PV88



Valve No.	Dimensions (mm)					
	A	B	C	D	F°	G°
V3-06-2	23.3	44.5	20.8	37.5	55°	55°
V3-06-5	23.3	62.5	25.9	49.0	41°	41°
PV88	26.3	80.5	47.0	54.5	30°	30°
PV118	35.4	130.0	84.0	—	10°	—

TR150CW



Valves, TR150 and TR150CW, are also called Hand Bendable Valves, that is, their stems are made of very flexible material permitting manual bending in all directions and to any angle.

1. Unit Conversion Tables

INFLATION PRESSURE

kPa	psi	Bar	kg/cm²	kPa	psi	Bar	kg/cm²	kPa	psi	Bar	kg/cm²	kPa	psi	Bar	kg/cm²
10	1	0.1	0.1	260	38	2.6	2.7	510	74	5.1	5.2	760	110	7.6	7.8
20	3	0.2	0.2	270	39	2.7	2.8	520	75	5.2	5.3	770	112	7.7	7.9
30	4	0.3	0.3	280	41	2.8	2.9	530	77	5.3	5.4	780	113	7.8	8.0
40	6	0.4	0.4	290	42	2.9	3.0	540	78	5.4	5.5	790	115	7.9	8.1
50	7	0.5	0.5	300	44	3.0	3.1	550	80	5.5	5.6	800	116	8.0	8.2
60	9	0.6	0.6	310	45	3.1	3.2	560	81	5.6	5.7	810	117	8.1	8.3
70	10	0.7	0.7	320	46	3.2	3.3	570	83	5.7	5.8	820	119	8.2	8.4
80	12	0.8	0.8	330	48	3.3	3.4	580	84	5.8	5.9	830	120	8.3	8.5
90	13	0.9	0.9	340	49	3.4	3.5	590	86	5.9	6.0	840	122	8.4	8.6
100	15	1.0	1.0	350	51	3.5	3.6	600	87	6.0	6.1	850	123	8.5	8.7
110	16	1.1	1.1	360	52	3.6	3.7	610	88	6.1	6.2	860	125	8.6	8.8
120	17	1.2	1.2	370	54	3.7	3.8	620	90	6.2	6.3	870	126	8.7	8.9
130	19	1.3	1.3	380	55	3.8	3.9	630	91	6.3	6.4	880	128	8.8	9.0
140	20	1.4	1.4	390	57	3.9	4.0	640	93	6.4	6.5	890	129	8.9	9.1
150	22	1.5	1.5	400	58	4.0	4.1	650	94	6.5	6.6	900	131	9.0	9.2
160	23	1.6	1.6	410	59	4.1	4.2	660	96	6.6	6.7	910	132	9.1	9.3
170	25	1.7	1.7	420	61	4.2	4.3	670	97	6.7	6.8	920	133	9.2	9.4
180	26	1.8	1.8	430	62	4.3	4.4	680	99	6.8	6.9	930	135	9.3	9.5
190	28	1.9	1.9	440	64	4.4	4.5	690	100	6.9	7.0	940	136	9.4	9.6
200	29	2.0	2.0	450	65	4.5	4.6	700	102	7.0	7.1	950	138	9.5	9.7
210	30	2.1	2.1	460	67	4.6	4.7	710	103	7.1	7.2	960	139	9.6	9.8
220	32	2.2	2.2	470	68	4.7	4.8	720	104	7.2	7.3	970	141	9.7	9.9
230	33	2.3	2.3	480	70	4.8	4.9	730	106	7.3	7.4	980	142	9.8	10.0
240	35	2.4	2.4	490	71	4.9	5.0	740	107	7.4	7.5	990	144	9.9	10.1
250	36	2.5	2.6	500	73	5.0	5.1	750	109	7.5	7.7	1000	145	10.0	10.2

TEMPERATURE

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
-19	-2.2	11	51.8	41	105.8	71	159.8	101	213.8	131	267.8
-18	-0.4	12	53.6	42	107.6	72	161.6	102	215.6	132	269.6
-17	1.4	13	55.4	43	109.4	73	163.4	103	217.4	133	271.4
-16	3.2	14	57.2	44	111.2	74	165.2	104	219.2	134	273.2
-15	5.0	15	59.0	45	113.0	75	167.0	105	221.0	135	275.0
-14	6.8	16	60.8	46	114.8	76	168.8	106	222.8	136	276.8
-13	8.6	17	62.6	47	116.6	77	170.6	107	224.6	137	278.6
-12	10.4	18	64.4	48	118.4	78	172.4	108	226.4	138	280.4
-11	12.2	19	66.2	49	120.2	79	174.2	109	228.2	139	282.2
-10	14.0	20	68.0	50	122.0	80	176.0	110	230.0	140	284.0
-9	15.8	21	69.8	51	123.8	81	177.8	111	231.8	141	285.8
-8	17.6	22	71.6	52	125.6	82	179.6	112	233.6	142	287.6
-7	19.4	23	73.4	53	127.4	83	181.4	113	235.4	143	289.4
-6	21.2	24	75.2	54	129.2	84	183.2	114	237.2	144	291.2
-5	23.0	25	77.0	55	131.0	85	185.0	115	239.0	145	293.0
-4	24.8	26	78.8	56	132.8	86	186.8	116	240.8	146	294.8
-3	26.6	27	80.6	57	134.6	87	188.6	117	242.6	147	296.6
-2	28.4	28	82.4	58	136.4	88	190.4	118	244.4	148	298.4
-1	30.2	29	84.2	59	138.2	89	192.2	119	246.2	149	300.2
0	32.0	30	86.0	60	140.0	90	194.0	120	248.0	150	302.0
1	33.8	31	87.8	61	141.8	91	195.8	121	249.8	160	320.0
2	35.6	32	89.6	62	143.6	92	197.6	122	251.6	170	338.0
3	37.4	33	91.4	63	145.4	93	199.4	123	253.4	180	356.0
4	39.2	34	93.2	64	147.2	94	201.2	124	255.2	190	374.0
5	41.0	35	95.0	65	149.0	95	203.0	125	257.0	200	392.0
6	42.8	36	96.8	66	150.8	96	204.8	126	258.8		
7	44.6	37	98.6	67	152.6	97	206.6	127	260.6		
8	46.4	38	100.4	68	154.4	98	208.4	128	262.4		
9	48.2	39	102.2	69	156.2	99	210.2	129	264.2		
10	50.0	40	104.0	70	158.0	100	212.0	130	266.0		

WEIGHT

FROM POUND TO KILOGRAM

lb	kg	lb	kg	lb	kg	lb	kg
1	0.5	260	117.9	1200	544.3	5000	2268.0
10	4.5	280	120.0	1300	589.7	5200	2358.7
20	9.1	300	136.1	1400	635.0	5400	2449.4
30	13.6	320	145.2	1500	680.4	5600	2540.2
40	18.1	340	154.2	1600	725.8	5800	2630.9
50	22.7	360	163.3	1700	771.1	6000	2721.6
60	27.2	380	172.4	1800	816.5	7000	3175.2
70	31.8	400	181.4	1900	861.8	8000	3628.8
80	36.3	420	190.5	2000	907.2	9000	4082.4
90	40.8	440	199.6	2200	997.9	10000	4536.0
100	45.4	460	208.7	2400	1088.6	11000	4989.6
110	49.9	480	217.7	2600	1179.4	12000	5443.2
120	54.4	500	226.8	2800	1270.1	13000	5896.8
130	59.0	520	235.9	3000	1360.8	14000	6350.4
140	63.5	540	244.9	3200	1451.5	15000	6804.0
150	68.0	560	254.0	3400	1542.2	16000	7257.6
160	72.6	580	263.1	3600	1633.0	17000	7711.2
170	77.1	600	272.2	3800	1723.7	18000	8164.8
180	81.6	700	317.5	4000	1814.4	19000	8618.4
190	86.2	800	362.9	4200	1905.1	20000	9072.0
200	90.7	900	408.2	4400	1995.8		
220	99.8	1000	453.6	4600	2086.6		
240	108.9	1100	499.0	4800	2177.3		

FROM KILOGRAM TO POUND

kg	lb	kg	lb	kg	lb	kg	lb
1	2.2	130	286.6	600	1322.8	2500	5511.5
5	11.0	140	308.6	650	1433.0	2600	5732.0
10	22.0	150	330.7	700	1543.2	2700	5952.4
15	33.1	160	352.7	750	1653.5	2800	6173.0
20	44.1	170	374.8	800	1763.7	2900	6393.3
25	55.1	180	396.8	850	1873.9	3000	6613.8
30	66.1	190	418.9	900	1984.1	3500	7716.1
35	77.2	200	440.9	950	2094.4	4000	8818.4
40	88.2	210	463.0	1000	2204.6	4500	9920.7
45	99.2	220	485.0	1100	2425.1	5000	11023.0
50	110.2	230	507.1	1200	2645.5	5500	12125.3
55	121.3	240	529.1	1300	2866.0	6000	13227.6
60	132.3	250	551.2	1400	3086.4	6500	14329.9
65	143.3	260	573.2	1500	3306.9	7000	15432.2
70	154.3	270	595.2	1600	3527.4	7500	16534.5
75	165.3	280	617.3	1700	3747.8	8000	17636.8
80	176.4	290	639.3	1800	3968.3	8500	18739.1
85	187.4	300	661.4	1900	4188.7	9000	19841.4
90	198.4	350	771.6	2000	4409.2	9500	20943.7
95	209.4	400	881.8	2100	4629.7	10000	22046.0
100	220.5	450	992.1	2200	4850.1		
110	242.5	500	1102.3	2300	5070.6		
120	264.6	550	1212.5	2400	5291.0		

TREAD DEPTH CONVERSION TABLE

FROM INCH TO MILLIMETER

inch/32	mm	inch/32	mm	inch/32	mm	inch/32	mm
1	0.8	21	16.7	41	32.5	105	83.3
2	1.6	22	17.5	42	33.3	110	87.3
3	2.4	23	18.3	43	34.1	115	91.3
4	3.2	24	19.1	44	34.9	120	95.3
5	4.0	25	19.8	45	35.7	125	99.2
6	4.8	26	20.6	46	36.5	130	103.2
7	5.6	27	21.4	47	37.3	135	107.2
8	6.4	28	22.2	48	38.1	140	111.1
9	7.1	29	23.0	49	38.9	145	115.1
10	8.0	30	23.8	50	39.7	150	119.1
11	8.7	31	24.6	55	43.7	155	123.0
12	9.5	32	25.4	60	47.6	160	127.0
13	10.3	33	26.2	65	51.6	165	131.0
14	11.1	34	27.0	70	55.6	170	134.9
15	11.9	35	27.8	75	59.5	175	138.9
16	12.7	36	28.6	80	63.5	180	142.9
17	13.5	37	29.4	85	67.5	185	146.9
18	14.3	38	30.2	90	71.4	190	150.8
19	15.1	39	31.0	95	75.4	195	154.8
20	15.9	40	31.8	100	79.4	200	158.8

FROM MILLIMETER TO INCH

mm	inch/32	mm	inch/32	mm	inch/32	mm	inch/32
1	1.3	19	23.9	37	46.6	75	95.5
2	2.5	20	25.2	38	47.9	80	10

PRESSURE

	kg/cm²	kPa	bar	psi
kg/cm²	1	98.07	0.9807	14.22
kPa	0.0102	1	0.01	0.1450
bar	1.020	100	1	14.503
psi	0.0703	6.895	0.06895	1

LENGTH

	m.meter	c.meter	meter	k.meter	inch	foot	yard	mile
m.meter	1	0.10000	0.00100	-	0.03937	0.00328	0.00109	-
c.meter	10.0000	1	0.01000	0.00001	0.39371	0.03281	0.01094	-
meter	1000.00	100.00	1	0.00100	39.3707	3.28089	1.09363	0.00062
k.meter	-	100000	1000.00	1	39370.7	3280.89	1093.63	0.62138
inch	25.3995	2.53995	0.02540	0.00003	1	0.08333	0.02778	0.00002
foot	304.794	30.4794	0.30479	0.00030	12.0000	1	0.33333	0.00019
yard	914.383	91.4383	0.91438	0.00091	36.0000	3.00000	1	0.00057
mile	-	160931	1609.31	1.60931	63360.0	5280.00	1760.00	1

AREA

	meter²	are	hectare	k.meter²	foot²	yard²	acre	mile²
meter²	1	0.010000	0.000100	0.000001	10.7639	1.19600	0.000247	0.000000
are	100.000	1	0.010000	0.000100	1076.39	119.600	0.024710	0.000039
hectare	10000.0	100.000	1	0.010000	107639.0	11960.0	2.47105	0.003861
k.meter²	-	10000.0	100.000	1	-	-	247.105	0.386098
foot²	0.092903	0.000929	0.000009	0.000000	1	0.111111	0.000023	0.000000
yard²	0.836130	0.008361	0.000084	0.000000	9.00000	1	0.000207	0.000000
acre	4046.87	40.4687	0.404687	0.004047	43560.2	4840.00	1	0.001562
mile²	-	25900.2	259.002	2.59002	-	-	640.000	1

WEIGHT

	gram	k.gram	ton	s.ton	l.ton	ounce	pound
gram	1	0.00100	-	-	-	0.03527	0.00220
k.gram	1000.00	1	0.00100	0.00110	0.00098	35.2739	2.20462
ton	-	1000.00	1	1.10230	0.98421	35273.9	2204.62
s.ton	907185	907.185	0.90719	1	0.89286	32000.0	2000.00
l.ton	-	1016.04	1.01604	1.12000	1	35840.0	2240.00
ounce	28.3495	0.02835	0.00003	0.00003	0.00003	1	0.06250
pound	453.592	0.45359	0.00045	0.00050	0.00045	16.0000	1

CAPACITY

	cub.meter	liter	cub.inch	cub.foot	cub.yard	U.S.gallon	U.K.gallon
cub.meter	1	1000.00	61027.1	35.3147	1.30802	264.186	220.216
liter	0.00100	1	61.0271	0.03532	0.00131	0.26419	0.22022
cub.inch	0.00002	0.01639	1	0.00058	0.00002	0.00433	0.00361
cub.foot	0.02832	28.3167	1728.00	1	0.03704	7.48051	6.23549
cub.yard	0.76455	764.554	46656.0	27.0000	1	201.974	168.358
U.S.gallon	0.00379	3.78543	231.000	0.13368	0.00495	1	0.83270
U.K.gallon	0.00455	4.54596	277.413	0.16037	0.00594	1.20091	1

FORCE

1 kgf = 9.81 N

POWER (horse power)

1 hp = 550 ft • lbf/s = 745.7 W
1 PS = 75 m • kgf/s = 735.5 W

2. Specific Weight (Approximately)

Material	Pounds/cu.yd	Metric Tons/m³	Material	Pounds/cu.yd	Metric Tons/m³
Anthracite	2000	1.2	Iron ore: Magnetite	4700	2.8
Basalt	3400	2.0	Limestone	2500	1.5
Bauxite	2400	1.4	Pyrites	4400	2.6
Clay: dry	2500	1.5	Over-Burden		
wet	2900	1.7	75%rock-25%earth	3400	2.0
Coal	1200	0.7	50%rock-50%earth	2900	1.7
Copper ore	2700	1.6	25%rock-75%earth	2700	1.6
Crushed gypsum	2700	1.6	Sand: dry	2400	1.4
Earth: dry	2500	1.5	wet	3000	1.8
wet	2700	1.6	Sandstone	2500	1.5
Granite	2900	1.7	Snow: dry	170	0.1
Gravel: dry	2900	1.7	wet	840	0.5
wet	3400	2.0	Uranium	2700	1.6

Note: Weight of materials varies with moisture content, grain size, degree of compaction, etc. Test must be made to know exact weight.

MEMO

DATA BOOK

