GRIFFIN WHEELCO.



CHILLED TREAD CAR WHEELS

LIST AND DESCRIPTION

of

Wheel Patterns

Steam Railroads and Electric Railways

for

and

All Kinds of Cars and Machinery Operating on Rails

GRIFFIN WHEEL COMPANY

General Office-CHICAGO, ILL., U. S. A.

FOUNDRIES LOCATED AT

BOSTON CLEVELAND DETROIT CHICAGO CINCINNATI ST. PAUL KANSAS CITY COUNCIL BLUFFS DENVER SALT LAKE LOS ANGELES TACOMA

Description of Product and Its Use

WITH thirteen foundries located in the United States, extending from the Pacific to the Atlantic, the Griffin Wheel Company is the largest manufacturer of CHILLED-TREAD CAR WHEELS in the world; having an annual capacity of two million car wheels.

The excellent performance of Griffin Wheels in railroad service during the past sixty years has brought them into such prominence that their users have for years considered them as representing the standard of the car wheel industry.

Griffin Chilled-Tread car wheels are poured integrally in a mould, the lower and upper sections of which are of sand, both enclosed by a heavy ring of iron or steel known as a "chiller." That portion of the iron coming in contact with the sand forms the body of the wheel and is tough and easily machined; while the iron poured against the chiller forms the tread and flange section and is of clear white iron, comparable in hardness to tempered tool steel

On each wheel is cast the maker's name, location of foundry, date on which cast, serial number, weight of wheel and pattern number. This enables the manufacturer to ascertain the record of manufacture in event of the user wishing to check up the performance of the wheels at a later date.

As there is a variation of about $\frac{5}{8}$ " in the circumference of wheels due to shrinkage of the iron, each wheel is measured on the tread with a steel tape and the size stenciled or cast on the plate. This is very important as it is necessary, in mounting wheels, that each wheel on the axle be of the same exact circumference.

In the manufacture of Griffin chilled-tread car wheels two points are constantly borne in mind these are SAFETY AND DURABILITY. To accomplish this the product of the thirteen foundries is manufactured strictly in accordance with a standardized method of operation. A complete knowledge of both the physical and chemical qualities of the iron is essential and to this end the Griffin Wheel Company maintains a modern laboratory for testing and analyzing all raw materials as well as the finished product. Wheels are subjected to rigid inspection and tests to insure that they are of the proper strength for the particular service in which they are to be used. These include the Drop Test to ascertain the breaking strength and depth of chill and the Thermal Test representing the radial stresses developed when the tread is subjected to excessive heating from brake shoe friction.

The following are some of the reasons why the Griffin Chilled-Tread wheel has been looked upon as the ideal wheel for all classes of service:

1st: It possesses the highest factor of safety commensurate with the lowest initial cost.

2nd: The admirable combination of its design and composition enables it to sustain, without deformation, the heaviest loads; in fact, loads heavier than those for which the rail on which it operates is designed.

3rd: The deep uniform chill in tread and flange insures a maximum wearing value.

4th: Its composition is such that there is a minimum of abrasion to flanges, treads and rails. It has been estimated that the saving in rail wear alone, by the use of Griffin wheels, will more than pay for the entire cost of wheel operation.

5th: The co-efficient of friction between the metal in the tread and the brake shoe is approximately 25% higher than for wheels made of other material; therefore, less braking power is required when Griffin wheels are used.

6th: Due to the hardness of the tread, its resistance to wear caused by brake shoe friction is far greater than that of any other type of wheel.

7th: Brake shoe tests indicate that there is 20% less metal worn from the brake shoes with Griffin wheels than with wheels made of other material.

8th: Its maintenance cost is of the lowest, as it can be applied, removed and maintained with the minimum amount of mechanical energy.

9th: The low initial cost, high scrap value and proximity of distributing Centers make Griffin Wheels the most economical in service today.

SINGLE PLATE WHEELS WITH A. R. A. STANDARD TREAD AND FLANGE FOR FREIGHT, PASSENGER AND ENGINE TENDER SERVICE





NOTE:- TREAD, FLANGE AND HUB CAN BE ALTERED TO SULT CUSTOMERS REQUIREMENTS.

	WE	WEIGHT OF WHEEL, POUNDS										
SAFE LOAD PER WHEEL	36" DIA.	33" DIA.	30" DIA.	28" DIA.	26" DIA.	24" DIA.						
10,000 LBS.	725	650	550	485	435	390						
12,000 "	750	650	575	500	450	405						
14,000 "	775	700	600	5zo	465	420						
16,000 "	800	700	625	540	480	435						
18,000 "	840	750	640	560	495	450						
20,000 "	860	750	660	580	510	460						
22,500 .	925	850	700	620	540							
25,000 "	980	850	740	660								
27,500 "	1040	900			5-11							
30,000 "	1100	950										

	DIME	WHE	ELS.						
	B	C	D	E	F	G	Н	J	к
650*	1"	13/8"	4 1/32	525/32	91/2°	91/2"	51/4	7"	7/8"
700*	1"	U U			103/8	103/8	6"	7″	7/8"
750#	1"	U	- 0		11"	11"	61/2"	7"	7/8
850 #	1"			"	12"	111/2	71/8	73/4"	11/8"

SINGLE PLATE WHEELS FOR ELECTRIC RAILWAY SERVICE





FOR CITY	SERV	ICE Z	1/2 TR	EAD,	2/8 F	LANGE	Ε.					
SAFE LOAD	1-33 A	WEIGHT OF WHEEL, POUNDS.										
PER WHEEL	33" DIA	30' DIA	28" DIA.	24" DIA.	22" DIA.	21" DIA.	ZO"					
3,000 LBS.	480	370	300	265	240	225	215					
4,000 "	490	380	325	280	250	230	220					
5,000 "	500	400	360	300	260	245	225					
6,000 "	520	425	400	325								
7,000 "	540	450	425	350								

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Fee	11-1.00	C	See	2" Tonto	3/" = + +
FOK	HEAVY	CITY	JERVICE	S IREAD,	74 FLANGE

	WEIGHT OF WHEEL, POUNDS								
SAFE LOAD PER WHEEL	33" DIA.	30" DIA.	28 DIA.	24" DIA.					
7,000 LBS.	565	475	450	375					
8,000 "	590	500	475	400					
9,000 "	615	525	500	425					
10,000 "	640	550	525	450					

SPOKE WHEELS WITH 2¹/₂" TREAD & ⁵/₈" FLANGE FOR ELECTRIC RY. CITY SERVICE



NOTE:- TREAD, FLANGE AND HUB CAN BE ALTERED TO SUIT CUSTOMERS REQUIREMENTS.

SAFE LOAD	WEIGHT OF WHEEL, POUNDS										
PER WHEEL	33 ["] DIA.	30" DIA.	28" DIA.	24" DIA.	ZZ" DIA.	ZI" DIA.	ZO" DIA				
3,000 LBS.	480	370	300	265	240	225	215				
4,000 "	490	380	325	280	250	230	220				
5,000 "	500	400	360	300	260	245	225				
6,000 "	520	425	400	325							
7,000 "	540	450	425	350	1-1-1-2						

SINGLE PLATE WHEELS FOR INDUSTRIAL SERVICE RECOMMENDED WEIGHTS FOR VARIOUS LOADS





NOTE:-	TREAD, FLANGE AND HUB CAN BE SUPPLIED
	TO SUIT CUSTOMERS REQUIREMENTS.

SAFE LOAD		WEIGHT OF WHEEL, POUNDS								
PER WHEEL	24" DIA.	ZZ" DIA.	ZO" DIA.	18 ["] DIA.	IG" DIA.	14" DIA.	12" DIA.	IO" DIA.		
1,000 LBS.	310	225	200	150	95	80	60	45		
2,000 "	310	225	200	150	110	95	85	60		
3,000 "	310	235	200	150	125	115	100	80		
4,000 "	310	235	220	175	150	140	120	80		
5,000 "	325	260	235	190	175	160	125			
6,000 "	330	285	250	200	190	170				
7,000 "	350	300	265	220	200	180	4			
8,000 "	390	320	275	240	225					
9,000 "	400	350	305	260						
10,000 #	425	350	330	280						

DOUBLE FLANGED WHEELS FOR CRANES AND CONVEYING MACHINERY RECOMMENDED WEIGHTS FOR VARIOUS LOADS





SAFE LOAD	5-12-2-2	WEIGHT OF WHEEL, POUNDS.										
PER WHEEL	36"	33"	30"	24"	Z.O"	18"	16"	15"	12"			
	DIA.	DIA.	DIA.	DIA.	DIA.	DIA.	DIA.	DIA.	DIA.			
4,000 LBS.								115	95			
8,000 "					210	195	180	150	130			
12,000 "				345	250	235	200	180	165			
16,000 "				360	325	315	250					
20,000 "				520	400	335	315					
24,000 "		740	650	530								
28,000 "	850	800	700	600	1.000			THE E				
32,000 "		850	725	610								
36,000 "	985		760	630								
40,000 "			875	640								
50,000 *	1200	1040	920		· · · · ·							
60,000 "	1275		950									
75,000 "	1425	1200	1000					1				
100,000 *	1750	1525	1275			(mail 1997)			1.4.3.1			
115,000 "	1800					11 - 10	1.1.5					

STANDARD A. R. A. AXLES FOR FREIGHT, PASSENGER AND ENGINE TENDER SERVICE



40,000	60,000	80,000	100,000	140,000	200,000
15,000	24,000	32,000	40,000	50,000	60,000
A	В	С	D	Е	F
	1	-			
33/4"	41/4"	5"	5½"	6"	61/2"
7″	8"	9″	10"	11	12"
4 3/4"	51/4	61/8	65/8	71/4	73/4
5/8"	5/8"	3/4"	3/4"	7/8"	7/8"
43/4"	51/4	61/8	65/8	71/4	73/4"
21/2"	Z"	Z"	2"	Z1/4"	21/4"
51/8"	53/4"	61/2"	7"	75/8"	81/8
81/6	816	81/16	81/16	8 5/8	8 5/8
5½	61/8	67/8	73/8"	8"	81/2
13/16	13/16"	13/16	13/16	13/4"	13/4
41/4"	4 3/4"	53/8"	5 7/8"	6 7/16"	67/8"
47/8"	5 7/16	63/16"	63/4	73/16	7 3/16
831/4"	84 1/4"	86 1/2"	881/2	903/4"	92 3/4"
	$\begin{array}{c} 40,000\\ 15,000\\ A\\ \hline \\ 3^{3}/4"\\ 7"\\ 4^{3}/4"\\ 5/8"\\ 4^{3}/4"\\ 2^{1}/2"\\ 5^{1}/8"\\ 8^{1}/6"\\ 5^{1}/2"\\ 1^{3}/6"\\ 4^{7}/8"\\ 4^{7}/8"\\ 8^{3}/4"\\ \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$40,000$ $60,000$ $80,000$ $100,000$ $140,000$ $15,000$ $24,000$ $32,000$ $40,000$ $50,000$ A B C D E $3^{3}/4"$ $4^{1}/4"$ 5" $5^{1}/2"$ 6" $7"$ 8" 9" $10"$ $11"$ $4^{3}/4"$ $5^{1}/4"$ 6 $1/8"$ $6^{5}/8"$ $7^{1}/4"$ $5/8"$ $5/8"$ $9''$ $10"$ $11"$ $4^{3}/4"$ $5^{1}/4"$ $6^{1}/8"$ $6^{5}/8"$ $7^{1}/4"$ $5/8"$ $5/8"$ $7^{1}/4"$ $5^{1}/4"$ $6^{1}/8"$ $6^{5}/8"$ $7^{1}/4"$ $4^{3}/4"$ $5^{1}/4"$ $6^{1}/8"$ $6^{5}/8"$ $7^{1}/4"$ $2^{1}/2"$ $2"$ $2"$ $2"$ $2!/4"$ $5^{1}/8"$ $5^{1}/4"$ $6^{1}/8"$ $6^{5}/8"$ $7^{1}/4"$ $5^{1}/8"$ $5^{1}/8"$ $6^{1}/8"$ $6^{1}/8"$ $8^{1}/6"$ $8^{1}/6"$ $4^{3}/4"$ $5^{1}/8"$ $6^{1}/8"$ $6^{1}/8"$ $7^{1}/8"$ $8^{1}/4"$

