



# ROLLING CIRCUMFERENCE INDEX

RCI = Rolling Circumference Index. Indicates family of tires with similar rolling circumferences.

All sizes in a row are approximately the same outside diameter.

All sizes in the same column are approximately the same width.

For specific applications, consult OEM Data Books for actual dimensions.

MIN. RECOMMENDED ROW WIDTH		18	20	22	26	30	32	40 + Non-Row Crop				
RCI		SECTION WIDTH - REAR TIRES									Harvester	Flotation
ROLLING CIRCUMFERENCE INDEX	RC (in)	OD (appx)	290	320	380	420	480	520	620	710	800-900	1000+
			(11.2)	(12.4)	(14.9)	(16.9)	(18.4)	(20.8)	(24.5)	(28.0)	(30.5-35.5)	(40+)
<b>48</b>	243	81			380/105R50 380/90R54		480/80R50	520/85R46	650/85R38	710/70R42	800/70R38 900/65R32	
<b>47</b>	230	77		320/90R54 12.4R54	380/90R50		480/80R46 18.4R46	520/85R42 20.8R42	650/70R42	710/70R38 710/75R34	900/50R42 900/60R32	76x50-32 78x45-32
<b>46</b>	219	73		320/90R50	380/90R46 14.9R46	420/80R46	480/80R42 18.4R42	520/85R38 20.8R38	650/65R38			VA73x44-32
<b>45</b>	207	69		320/90R46			480/80R38 18.4R38	20.8R34	650/75R32 24.5R32 23.1R34 600/65R38		800/65R32 30.5LR32 67x34.0-25	68x50-32

MIN. RECOMMENDED ROW WIDTH		18	20	22	26	30	32	40 + Non-Row Crop				
RCI		SECTION WIDTH - FRONT TIRES									Harvester	Flotation
ROLLING CIRCUMFERENCE INDEX	RC (in)	OD (appx)	230	290	320	380	420	480	520	620	800	1000+
			(9.0-9.5)	(11.0-11.2)	(12.4)	(14.9)	(16.5 OR 16.9)	(18.4)	(20.8)	(23.1 OR 24.5)	(30.5)	(40+)
<b>44</b>	197	65	230/95R48		320/90R42		420/85R38 16.9R38	480/85R34 18.4R34	540/65R38	620/75R30 23.1-30		1050/50R25 66x43-25 66x44-25
<b>43</b>	187	63			12.4-24	380/80R38	420/85R34	480/70R34	540/65R34	600/70R30 23.1-26		
<b>42</b>	177	59			320/85R38 12.4-38	380/85R34 14.9R34	420/90R30 16.9R30	480/70R30 18.4-30	540/65R30	600/65R28	58x31.0-26	
<b>41</b>	168	56		290/95R34	320/85R34	380/85R30 14.9R30	420/85R28 16.9R28	18.4R26 480/70R28	540/65R28		800/50-25 54x31.0-25	
<b>40</b>	160	53				380/85R28 14.9R28	420/85R26 16.9R26	480/65R28	540/65R24			
<b>39</b>	152	50.5			340/85R28 13.6R28	14.9R26	16.9R24	480/65R24		48x25.0-20	48x31.0-20	



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## *Understanding Rolling Circumference*

Rolling circumference can be defined as the distance a tire travels in one revolution. Due to the increase in mechanical front wheel drive (MFWD) tractors in the marketplace, it is very important to understand rolling circumference when trying to determine the proper tire setup for your tractor. Since both the front and the rear tire on MFWD tractors are engaged, the front tire requires more revolutions to cover the same distance as the rear tire. It is necessary to know the gear ratio of the tractor (available from the tractor manufacturer) in order to select the tires that will adequately match the tractor's front-to-rear gear ratio.

The gear ratio on the typical MFWD ranges from 1.2 to 1.5, therefore the proper setup should allow for front tire over-speed up to 5% (consult with the tractor manufacturer for the preferred lead percentage). When selecting a new size or type of tire for your MFWD tractor, you must choose a front and rear tire combination that matches the ratio provided by the original tires. To make this easier, the tire and tractor industry have created a chart to better assist customers with tire selections for their tractor. (See chart on other page).

The first column of the table refers to the RCI (rolling circumference index) Group. All tires in a group will have a similar rolling circumference and OD. The larger the RCI group number, the larger the tire diameter and rolling circumference. The 2nd column lists the rolling circumference in inches. The 3rd column lists the Tire Diameter, (OD) for that RCI Group of tires. The chart then displays columns of wider tire widths in both inches and millimeters as you progress from left to right. The top part of the chart shows the width of field rows, and in the columns below each row width the recommended tires for that row width.

### **To better understand the chart, take a look at the following example:**

A MFWD tractor is set up for 30-inch rows with 480/80R46 (Group 47) tires on the rear and 420/90R30 (Group 42) tires on the front. Most tractors are five-step tractors, meaning that there is a difference of 5 between the RCI Group number of the rear tire and that of the front tire.\* To convert from 30-inch to 22-inch rows, go to the 22" row column and select the 380/90R50 rear, and matching front, 320/85R38.

\*Although most tractors are five-step tractors, consult with your tractor manufacturer for the correct ratio for your tractor.