# GOLDENROD - "WINDING TOOLS" BROCHURE (quick reference)

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# GOLDENROD DIFFERENTIAL SHAFTS :

Two Styles (1) 1250 DFX / DFB – core slips on body of shaft.

(2) 1250 CL (Cam Lock) - Cam lock ring locks core ID and ring slips on body of shaft.

**General** - These shafts are used when the material being slit varies in thickness across the web. If you're using manual differentials that require core spacers, this creates production bottle-necks due to long set-up times – our shafts are the answer and will pay for themselves in less than 6 mo.'s. Tension ledges are filled w/ variable air pressure, increasing as roll diameter builds. Air pressure is increased to allow for less and less slip. Ea. slit roll builds at it's own rate.

Differentials can be made as small as 1" diam. and handle slit widths of 1" and less.

**1250 DFX** (patent) – More of them retrofitted on older machines than any other style differential; most replacing the older yoke & spacer design. Benefits are higher beam strength then a cam lock, able to work with all core materials (cardboard, plastic, metal), and simple, easy set-up with movable, rotating core stops and removable core stop tray.

**1250 DFB** (patent) – is available in DFX shafts 6" diameter and larger. The continuous surface roller bearings keep the ID of the core from coming into direct contact w/ the shaft surface. As roll weight increases – the bearings allow the tension to be accurately controlled by the segmented tension ledges. These bearings prevent drag.

**1250 CL** – Excellent alternative to the DFX when customer is using cardboard cores and demands "dust free" winding. Set up is simple.

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# **EXPANDING SHAFTS:**

Multiple Bladder & Lightweight Shafts – Greater Expansion – up to 3/8", allowing for easier insertion and retraction into tight cores. Continuous grip on surface – narrow cores will always have positive grip unlike a button or lug shaft. Bladder repair in less than 10 minutes. If you're using a lug or button design now – you'll save over\$120/repair! You don't remove the journals. Razor proof – bladders are protected by a steel back plate adhered to the rubber grip ledge. Depending on the application – you can have up to 5 ledges in the 3" shaft and 9 ledges in the 6" shaft. The It. wt. 3" style weighs .3 lbs/in of body the 6" It. wt. design weighs .64 lbs/in (not including journals).	<b>Slitter Drive Shafts</b> – These shafts are used in <b>SHEAR</b> slit operations to house the lower, female knife rings. The shaft eliminates the need for the operator to loosen/tighten set screws. If you're changing slit set-ups 2 to 3 times/shift – This shaft will pay for itself in less than 6 months!
	<b>Small Diameter Shafts</b> – Sizes as small as .5" diam. <b>1" with 3 grip ledges!</b> Great for tape, ribbon and bag making rewinds.
<b>Roll Centering Shafts -</b> For high speed jobs (800 FPM or faster) or where shaft/core concentricity is critical. Centering shafts can eliminate roll loping and help eliminate wrinkles. Shaft has both metal centering ledges and rubber grip ledges. Centering ledges expand first to center the core, then the grip ledges expand to grip the core. Excellent for Printing, Laminating, Coating applications. Excellent for Foils and metalized films. (1260-LDB)	<b>Ultra-Light, Multi Bladder Leaf Shaft</b> (1260-LF) – designed for light duty applications (500 pound solid roll, 150 lb multi-slit). 3" diameter only. This shaft weighs only .25 pounds per inch of body.
	Large Diameter / Milled Body – These are typically found in tissue mills where tissue is rewound directly from the paper machine on these shaft using cardboard cores. Typical reel spool diameters are 10" up to 24" and have face lengths in excess of 200". Our 1260-LDB shafts are the industry standard and use centering ledges to obtain speeds of 6000 fpm and has internal check valves
Pneumatic/mechanical shafts are used in heavy duty applications (metal coils) and use a piston to force lugs tied to wedge blocks to expand concentrically. Not too common.	
<b>Coreless Shafts</b> – Attractive to those that ship direct to consumers (trash bags, wipes, etc) and want to eliminate the cost of the core.	NOTE: 1260 LDX"X" indicates one valve. If air is lost in one bladder, all bladders will deflate. 1260 LDNo "X" indicates an internal check valve. If one bladder fails, all remaining will continue to hold air.

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### **GR Carbon Pultrusion Shafts – (patented):**

Our patented (1263-LDC) Pultrusion - we pull strands of carbon fiber thru the hollows of the alum. extrusion. Very strong design and we get the benefits of a multi-bladder shaft (ease of maint. /continuous grip). Carbon is completely encapsulated. Journals are seated into metal. Excellent for high speed applications that require shafts with low inertia characteristics. Available in 3", 4", 5", 6" & 6.75" profiles.

**Single, internal bladder shafts –** Yes – we make single, internal bladder shafts. This is old technology, but some customers still want this option. We offer both lug, button and leaf style.

# **EXPANDING CHUCKS:**

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<b>Pneumo/Mechanical Chucks</b> - Air driven piston forces expanders (lug or leaf) up inclined planes for perfect roll centering and excellent grip. Base chucks can accept sleeve adapters for quick changeover – (3" to 6", or 6" to 10", etc.). This design is for heavy duty, high tension applications where constant grip is essential. Good for continuous run or stop & go applications. (1420 LF).	Multi-bladder Chuck Adapters – (1460-LDX) These have all the features of our features of our multi bladder air shafts – easy maintenance & continuous grip. They are designed to fit over existing 3" shafts to convert to 6", 8", etc. Very light weight. Comes with either clamp collar or set screw locking mechanism.
<b>Mechanical Chucks</b> – We offer two styles:	Safety Chucks – These are a convenient, safe bearing system for air shafts.
(1480-LFTX) <b>Torque Chuck</b> – This is perhaps the easiest chuck to retrofit. Requires no air or side force for expansion. As soon as the roll of material begins its motion, the torque leaves tilt and grip. Not of stop & go applications, requires constant motion.	We offer a wide range of options that include both Tilt open and Slide open. Flange and Pillow block mounting styles. These come standard with a redundant lock system
(1480 LGAX) <b>Axial Chuck</b> – Easy to retrofit. Requires side force to expand grip lugs. Chucks are mounted to arms that move in to insert the chucks into the core; once the core hits the expansion flange, the lugs expand and grip	(operator must press a button to open) and have finger guards to avoid pinch points. (See separate Goldenrod brochure)
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**Tire Chucks** (1440-RC) – Most sizes are available from stock... (3", 4", 5", 6", 8", 10" and 12").

Our 6" Tire Chuck pricing is the lowest in the industry ......\$230/chuck.



Tough molded rubber tires that are cycle tested for long life.

Just about everybody uses tire chucks.

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