



## SERIES 200U MANDREL

Combined with our popular Force5 air chucks or standard air chucks, this shaft is a lightweight, durable solution when running multiple core diameters on the same machine.



## SERIES 500U B-LUG AIR SHAFT

Constructed with smaller slots and aluminum gripping elements this shaft delivers the highest beam strength and least deflection of any Ultrashaft.

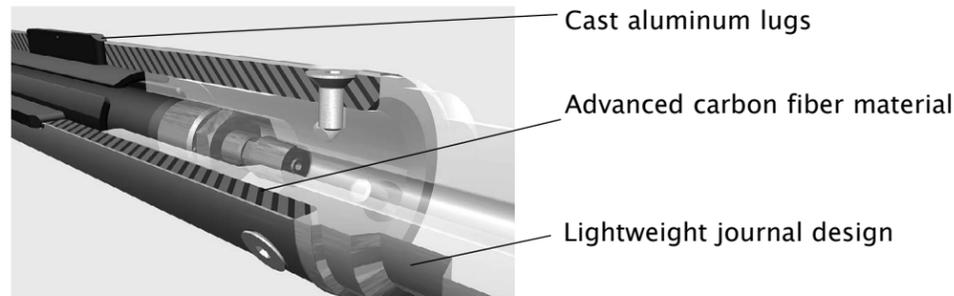


## SERIES 500U LUG AIR SHAFT

The superior torque capacity of this shaft generated by steel or aluminum gripping elements enables it to handle high inertial loads in both rewind and unwind applications.

## SERIES 550U LUG MECHANICAL

This durable shaft is excellent for use in printing and converting operations involving rapid starts and stops. Its self-centering, 60° radial grip eliminates roll bounce during winding or unwinding.



Cut-away illustration shows coating, carbon fiber tube, and journal construction



## HIGH-STRENGTH, HIGH-SPEED ERGONOMIC SOLUTION

The Ultrashaft™ combines the durability required to carry heavy loads and the reduced deflection required to operate at higher speeds without vibration in a lightweight, ergonomic carbon fiber winding solution. These shafts are constructed with precision wound, high-strength carbon filaments to provide a section modulus with a weight-to-strength ratio optimized for a wide variety of applications.

The new Ultrashaft features a black coating to ensure the carbon fiber tube is protected from abrasion, knife cuts, unexpected impact and normal wear and tear from daily shaft handling. This means lighter overall shaft weight and no more guessing if the carbon fiber under a cracked sleeve is safe for your application. For severe applications requiring aluminum or steel sleeves each sleeve is engineered to minimize the risk of cracking. So either way, you get an ultra-reliable, ultra-durable, ultra-high speed, Ultrashaft.

## GENERAL SPECIFICATIONS

Lug Shaft Body Options	Est. Shaft Weight		Load Capacity Solid Roll		Load Capacity Multi-Roll		Max. Web Speed (rpm)	
	kg	lbs	kg	lbs	kg	lbs	Solid	Multi
Ultrashaft - No Sleeve	20	43	2,799	6,172	974	2,147	1,345	1,316
Ultrashaft - Steel Sleeve	30	67	2,789	6,149	787	1,735	1,429	1,400
Ultrashaft - Aluminum Sleeve	20	43	2,488	5,487	696	1,535	1,459	1,428
Equivalent Steel-Body Lug Shaft	34	75	2,110	4,652	579	1,276	1,264	1,239
Equivalent Aluminum-Body Lug Shaft	23	51	1,336	2,946	366	806	877	859

Note: Example results found for a Lug shaft with the following application assumptions. 70" web width, 40" roll outer diameter, 10" multi slit web width, (7) multi-slit rolls, (2) steel journals - 2" diameter x 6" long, 74" face length, 80" bearing c-c, 84" hoist c-c, three-piece body design, C-28 carbon fiber composite for 500 CL shafts, full sleeve length x 0.1875" wall thickness, fiber core - 3" diameter x 0.5" wall thickness, max web speed @ fiber core 4" outer diameter, 2 pli web tension, unwind operation, center winder, kraft roll material, cast aluminum lugs. Other configurations will yield different results. Contact a Tidland Customer Service Representative for a full shaft analysis for your specific application.

## KEY FEATURES

- Lightweight carbon fiber design reduces workers' compensation costs associated with shaft handling
- High modulus, low deflection carbon fiber shaft increases profitability through higher run speeds and trouble free splices
- Sleeve options provide wear resistance and resistance to cracking. Sleeves available in aluminum or steel
- High-strength, high torque design enables safe handling of the most demanding materials
- Manufactured to your specifications for a wide variety of converting applications



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