



CONVERTECH, INC.

AIR SHAFTS THAT WORK

973-328-1850 voice
973-328-7256 fax



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Interview Contact:

Larry Taitel 973-328-1850
larry@converttech.com
<http://www.converttech.com>

Converttech company profile

Chosen by major OEM's for simplicity, reliability, and cost-effectiveness

Since 1978 Converttech has provided the wide and narrow web industry with reliable, high-quality expanding shafts and chucks with the fastest lead-time in the industry. Our focus on customer service creates an environment of inspiration and innovation which we pass to our customers through superior and cost-effective product design.

Simplicity in design means reliability

Beginning with the first leaf shaft we produced 26 years ago and continuing with the latest air roll lock differential shafts we continue to focus on reliability through simplicity of design. By focusing our efforts on you, the customer, we manufacture our shafts and chucks using the materials and workmanship you've come to know us for. Everything we do each day is focused on what you need: reliability, durability, quality, and delivery time. Each shaft and chuck is designed and manufactured from the ground up to meet your exact specifications and will be delivered to your door faster than any other shaft and chuck manufacturer.

Simplicity in repair means less down time

Why waste your valuable time repairing your shafts and chucks with banding tools or a hydraulic press? Converttech shafts and chucks are simple and easy to repair: a set of allen wrenches and a snap-ring plier is all you need to get your shaft back in production. We've simplified our repair process to keep you up and running more of the time and repairing less of the time. Spending an hour or more repairing a bladder? Our innovative bladder sealing methods can reduce your bladder repair time to as little as ten minutes.

Two week lead time ensures you have what you need

If you've been waiting 8 to 16 weeks for a shaft or chuck you've been waiting much too long. At Converttech we pride ourselves on our fast lead time; the fastest in the industry at the same (or less) cost than other shafts and chucks. In about two weeks we can custom manufacture your shaft or chuck and have it shipped directly to you.

No hassle ordering, less waiting on delivery, highest quality shafts and chucks

Because we focus on simplicity and reliability in production we can pass the same simplicity and reliability of shafts and chucks on to our customers. Our superior quality products and our incredibly fast speed of delivery means Converttech is the right choice for any shaft or chuck. We're here to help; call, email, fax, or write and we'll be there with a solution and a smile.



Expanding shaft overview

What are expanding shafts? Expanding shafts (also called core shafts, air shafts, and mandrels) are actually axles for roll or web products which unwind or rewind on various machines such as slitters, printing presses, laminators, bag machines, film winders, and converting machines. Expanding core shafts are pneumatically or mechanically expanded, and have various methods of connecting the shaft to the roll core. The expanding elements can be lugs, buttons, strips, or leaves. The main purpose of an expanding shaft is to increase the ease of changing cores. The bodies can be of steel, aluminum or carbon fiber.

Types of expanding shafts from Converttech. There are several types of expanding shafts available from Converttech. Each type has a different application and a specialized method of expansion.

Lug and Continuou Lug type air shafts



are the most popular and versatile of the gripping types. They are the most economical, easiest and quickest to repair. Converttech has lugs available in aluminum for light weight, steel for rough jobs, and rubber for metal or plastic cores. Converttech lug shafts feature our easy-to-use bladder cartridge. You can reduce your repair time to as little as ten minutes. There are no special banding tools or hydraulic presses required. Converttech continuous lug shafts feature a three-bladder system rather than just a single bladder. Designed for medium to heavy-duty applications, Converttech continuous lug shafts feature many standard parts and are very easy to repair.

Mechanical type expanding shafts



are usually reserved for high web speeds where roll concentricity is very important. The mechanical shaft can hold the roll more accurately with less effort. It usually is more expensive initially than an air shaft and requires regular maintenance and lubrication in order for the internal screws and slides to work efficiently. The bodies are usually only of steel.

Lateral Motion type air shaft



are designed to be used when precision lateral adjustments are required. Using a mechanical crank the shaft can be adjusted in a 1" range of lateral movement to insure concentricity of rolls.

Concentric type air shaft



are bladderless shafts which are used to keep rolls perfectly concentric using mechanical actuation. Shafts are available with either leaves or lugs. Pneumatic/mechanical and mechanical designs ensure concentric rotation of core ID.



Button type air shafts



work well for some narrow, thick-walled cores. All Convertech button shafts include an internal button strip to prevent unnecessary maintenance work when changing the air bladder. Convertech button shafts feature our easy-to-use bladder cartridge. You can reduce your repair time to about an hour. There are no special banding tools or hydraulic presses required. By keeping a spare bladder cartridge as a backup you can reduce your repair time to about ten minutes.

Leaf type air shafts



Convertech leaf shafts are less expensive and lighter than the competition. One style features a simple interlocking extrusion leaf which is well-suited to light and medium duty web applications.

Recommended for use with thin walled cores this type of expanding shaft is well suited to narrow cores on slitters. For this type of shaft all cores must have identical inside diameters.

Knife type air shafts



typically feature urethane lugs to assure grip of all anvils or bottom knives. Made of chrome plated precision ground steel these shafts are available in diameters up to 16" and face lengths to 150".

Air Roll Lock Differential type air shafts



are typically used when multiple width rolls are needed on the same shaft. By employing a Convertech air roll lock differential shaft each winding roll turns at the rpm appropriate for roll diameter and entering web length.

Differential shafts have an internal shaft driven faster than the winding rolls. An internal clutching mechanism regulates tension accurately for each individual roll. Convertech differential shafts feature a system which uses internal slip. This system eliminates core-dusting, slip, and wobble.



Through type air shafts



are a lightweight alternative to conventional shafts. Able to mount all chuck diameters and available in steel, aluminum, and carbon fiber these innovative shafts incorporate coiled hoses and fittings for single point inflation. Primarily used in the packaging and converting industries.

Small Diameter type air shafts



are typically used in small diameter printing presses, tape and label slitters, and coating and laminating machines. Available in lug or leaf style, these shafts are available in diameters from 7/16" to 2.5"

Available shaft materials from Converttech. Steel is the primary material used for expanding shafts. It is the strongest and toughest of the shaft materials but also the heaviest. Lighter shafts are sometimes required since most times the core shaft is manipulated by the operator and a lighter load can reduce workplace injuries. Aluminum is used for lightness, but it has only one third the strength of steel so the shaft capacity has to be reduced accordingly. Sometimes, high strength is required along with lightness, and this is why carbon fiber has become a popular material choice. Also known as composite, this type of material is made by encapsulating strong fibers of carbon within an epoxy plastic. This results in a very strong and lightweight shaft. Although carbon fiber is exceptionally strong, all composites are susceptible to damage. They cannot be handled as roughly as can steel and aluminum. Converttech carbon fiber shafts are covered in an aluminum sheath to reduce the possibility of damage.

Steel can withstand a heavy workload without failure. They have the longest life of all shafts. Large shafts are sometimes too heavy for one person to safely carry and require material handling equipment for manipulation.

Aluminum is used for light weight jobs, where strength is a secondary consideration. Light weight makes lifting the shafts easier when changing rolls, reduces workplace injuries, and reduces reset time. Aluminum shafts are used for virtually all shafts over 3" in diameter.

Carbon fiber



provides high strength with light weight, but at a higher cost. It is by far the most expensive of the shaft materials. It is made with a strong but very brittle carbon fiber. It cannot withstand abuse without breaking the fibers. Converttech carbon fiber shafts can be sheathed with aluminum to prevent damage.



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Converttech Lug and Button types. The standard lug is made from aluminum, which helps keep the weight down. Steel lugs are also available and are usually used on paper converting machines when cores with steel end caps are used.

Rubber lugs are available and recommended for use with metal and plastic cores. Rubber lugs can also be used with fiber cores.

Buttons can also be used for specific applications. All Converttech button shafts feature an internal button strip to reduce the effort required to change the bladder cartridge.

Major selling points

- Fastest delivery in the industry; about two weeks from custom print to ship time
- Available in any diameter up to 16" and lengths up to 150" wide
 - Bladder repair systems can reduce shaft repair time to as little as ten minutes
- Exceptionally easy to repair; no special tools are required
- Accurate tension control
- Parts are readily available and easy to find
- Available in several mounting styles
- Pneumatic shafts use floating lugs for superior grip
- Positive expansion and retraction to a consistent diameter ensures perfectly concentric rolls
- Advanced design of differential shafts eliminates core wobble, core slip, and core dusting
- Durable and long-lasting construction

Article ideas

Incredibly fast expanding shaft delivery at no extra cost

Despite aggressive competition from larger companies Converttech has found a niche in the expanding shaft industry; incredibly fast lead times larger competitors can't beat.

Armed with the flexibility of a mid-sized business Converttech has proven it can deliver the highest quality expanding shafts in the least amount of time. By re-engineering many traditional shaft designs Converttech has simplified production and created an easy-to-use line of products which can be produced faster than competitors.

No quality has been lost with the reduction of delivery time. Each shaft is produced with only the highest quality steel, aluminum, or carbon fiber. All shaft products are meticulously engineered and produced to each customer's exacting custom specifications. By streamlining production and simplifying design Converttech ensures its fast delivery time.



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Wide web expanding shafts now delivered in about two weeks



Delivering expanding shafts and chucks faster than any other manufacturer in the industry Converttech is now able to extend super fast delivery service to include a full line of high-quality wide web air and mechanical shafts.

This year's equipment upgrade and expansion will now accommodate the manufacturing of larger and wider shafts for the paper, nonwoven, textiles, heavy converting, and other wide web industries. Known for super fast delivery time of about two weeks, Converttech can now provide shafts in diameters up to 16 inches and face lengths up to 150 inches just as quickly as other shaft products.

Wide web shafts are now available in steel to accommodate high load and torque requirements as well as carbon fiber and aluminum to reduce shaft weight. The new carbon fiber wide web shaft is covered in an aluminum sheath to provide additional protection.

Although larger and more time-consuming to produce, Converttech can now ship wide web shafts just as fast as narrow web products. Maintenance and trouble-free designs assure maximum uptime in even the most heavy and demanding operations.

Innovative Bladder cartridge system makes Converttech button and lug shafts easy to repair



Converttech Inc. has added a bladder cartridge system to reduce reset time on lug and button shafts. The easy-to-use bladder cartridges are designed with the safety and time of the operator in mind. Using the self-contained bladder cartridge can reduce reset time to as little as ten minutes. Converttech's lug and button shafts are optimized for wider webs and designed to support your heavier loads. These shafts are now available in 3" (standard duty and heavy duty), 4", 5" and 6" diameters.

Technological advances significantly reduce weight on large expanding shafts

Designed to be the lightest rewind and unwind shafts available Converttech's new carbon fiber shaft incorporates unique advanced technological capabilities making this lightweight, high modulus composite shaft stiffer (less deflection) than comparable aluminum shafts. The new lightweight shafts are manufactured with strong, long-life bladders and aluminum or steel lugs. Available in a pure carbon fiber or super-reinforced aluminum clad coverings for demanding applications.



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Bladderless Expanding Shafts keep rolls concentric and reduce reset time



Converttech's new concentric shafts reduce reset time and insure concentricity by eliminating wearable and inconsistent bladder parts. The core is held in place by your choice of leaf or lugs – depending on the application. This advanced design ensures a precise and concentric roll every time.

Lateral Motion Shafts allow precise control of rolls



Using a mechanical crank operators can now precisely control the lateral motion of rolls in motion for on-the-fly adjustments to the unwind/rewind. Available in diameters of 70 millimeters and larger, these shafts are the well suited for printing presses, inspection machines, and collators that support light loads and utilize webs of 20" and under.

Converttech shaft provides precisely uniform expansion and eliminates core damage



Converttech's leaf shafts expand precisely and are lighter and stronger than other leaf shafts for high torque applications. Available in diameters from 1" and up, these shafts are perfectly suited for thin walled or narrow cores. Aluminum leaves provide uniform expansion, high torque, and maximum grip for all applications. These are the perfect shafts to use with paper, fiber, or steel cores.

Lightweight Continuous Lug Shafts in about two weeks



For multiple core applications in slitters, coaters, and laminators Converttech's lightweight continuous lug shaft is well suited to the task. Converttech has revolutionized the converting industry again with the addition of their lightweight continuous lug shaft. The new lightweight shaft, available in a 3" and 6" diameter, handles moderate loads and also works well with mid to wide webs. An economical and safer alternative to heavier shafts, this version is shipped in about two weeks.

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