



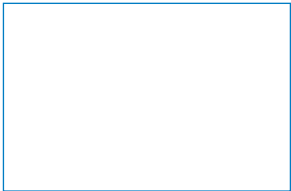
New Tension Control literature

Wichita offers the most complete product line dedicated to the tension control market, and drawing on our experience, we've now developed high-performance control systems to work in open- and closed-loop modes with brakes and motors. The product line-up is detailed in a new master catalogue, "Tension Control Systems" – you'll find 56 pages packed with information, leading you from the principles of tension control, through the decisions and calculations needed to arrive at the ideal solution for your application. It's available from our head office or your local distributor, so ask for your copy now.



Ring in the new

In case you missed the last issue of 'All Torque', Wichita is celebrating its 40th Anniversary this year. It's no secret that we're relieved to have reached this milestone following a few tough years in recent times, so



we're celebrating with a **bold** new corporate image. That style is being carried through to all aspects of our business – for example, regular readers of the trade and technical press will have seen one or more of a new series of Wichita advertisements in circulation. Quite apart from the importance of attracting your attention to new developments, the style is all part of projecting a simple but

vital message –
**Wichita is a
 revitalised
 company planning
 for another 40
 years of success.**



image. That style is being carried through to all aspects of our business – for example, regular



Exhibition update

February saw Wichita taking part in the International Converting Exhibition, ICE 2001, in Amsterdam. Although a relatively small show, we welcomed visitors from across Europe and Scandinavia on our stand, numbering several OEMs among them and generating many requests for quotations. As expected, the ModEvo brake was one of the stars of the show, and our new Tension Control Systems attracted plenty of attention too.



ICE 2001

In April it was the turn of the Hanover Fair, which proved another good opportunity to meet with customers and distributors. Importantly, it was also our first chance to exhibit with two other companies in the Colfax PT Group, Marland Clutch and Industrial Clutch Products – the latter's products are now of course available through the Wichita sales team. As part of our ongoing commitment to the paper converting market, we're already booked to appear at the International Packaging Exhibition IPEX, taking place at the NEC in Birmingham, UK between the 9th and 17th of April 2002. IPEX is held every 4 years and the organisers have announced that for the first time, an entire hall is to be dedicated to converting. We'll be bringing you more news on this event nearer the time.

No rest for Wichita

We're not shutting down this summer!

So, while you're carrying out essential maintenance during the quiet season, we'll be here to support you, offering our regular service throughout the holiday period – 8.30 a.m. to 5.15 p.m. Monday to Thursday and 8.30 a.m. to 4.15 p.m. Friday. And don't forget the Wichita 24-hour helpline – manned by a real live engineer, not a recorded message – is on hand at all other times on +44 (0)1234 324324.

Testing, testing...

Failed Disc



Wichita Disc



Among other duties, Wichita's test room facilities are regularly put to work checking the reliability of new friction materials. The importance of doing this was brought home to us recently when we were sent these pictures by our distributor in Japan.

The first shows what happened when Sumitomo Industries used non-OE friction linings in a Wichita 348LI high-torque clutch fitted to a 500-tonne press. After just 5 weeks, the friction discs literally fell apart! As a comparison, the second photo is of Wichita original equipment friction discs used in the same application, for the same length of time – showing no signs of abnormal wear.

Taylor Clutches still going strong

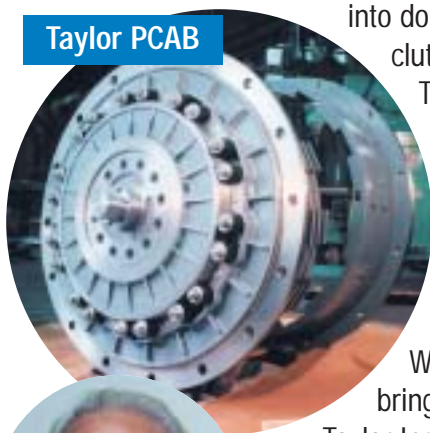
Taylor Bros. started life back in 1919 as a general engineering business, and by the late 1930s had diversified into doing what it is best known for today – building combined pneumatic clutch/brakes as Taylor Industrial Clutch.

Taylor became a limited company in the 1960s, and was acquired by Wichita in 1987. However, changing fortunes within the industry led to the decision to close Taylor in 1994. Many mourn the passing of a company whose designs were way ahead of their time – the basic design has only needed minor tweaks since 1938 – until they discover that Taylor Industrial Clutch manufacturing is very much alive and thriving today within the Wichita factory at Bedford.

Wichita doesn't just continue the manufacturing tradition of Taylor though – it brings experience and expertise to the table too, in the form of Alan Bamford, our Taylor Industrial Clutch Specialist. Acknowledged as the world's leading authority on these products, Alan joined Taylor in 1957 as a turner, before serving a 7-year apprenticeship in the drawing office there. By the time Taylor closed its doors in 1994, he was the company's General Manager. Today Alan travels the country identifying Taylor units and spares, and generally making sure that the brand's profile and reputation for service is maintained.

The Taylor combined clutch/brake is favoured for large presses and has been used by many big names in industries ranging from food to laundry to aerospace. Even the largest combined clutch/brakes built by Taylor – 46-inch units used on a 1000-ton multi-forge machine for pressing turbine blades – are still in service today in northern England.

Taylor PCAB



Alan Bamford

Last chance for MRD spares

The MRD tension control brake was discontinued more than ten years ago, and we're now coming to the end of our stock of friction pucks – so if you've got an MRD, get your order in quick! For anyone wondering what to replace an obsolete MRD with when it comes to the crunch, help is at hand in the form of ModEvo, a thoroughly modern alternative. For a quotation on replacing your old unit, just give our sales team a call.

+44 (0) 1234 350 311

Our web site needs YOU!

In the previous issue of All Torque, we highlighted some of the features of our new web site. The site has continued to attract a lot of visitors, and we want to make sure that people return to it on a regular basis and pick up all the latest information available to them.

That's where you come in... who better to tell us what you'd like to find at www.wichita.co.uk! One idea we've had is to create a web forum, so that you can share information and tips with other Wichita users – but do let us have your view on how useful you'd find this. Or perhaps you have some other suggestions that would benefit all of the site's users? Let us know by e-mailing us at clutch@wichita.co.uk.

Some Finn's Bruin

In each issue of *All Torque*, we aim to highlight and expand upon at least one application for Wichita products. This time it's the turn of dynamometers. We've done quite a few of these over the years, for applications ranging from marine engines to agricultural tractors to military tanks, but this one was different again.

Finnish company Metso Hydraulics makes around 11,000 'Black Bruin' hydraulic motors each year, and they wanted to test each one as it rolled off the production line. The motors are used to generate high torque at very low speeds for hydrostatic drives in off-road industrial vehicles and winches, and a hydraulic or electrical generator type of loading system simply wouldn't be capable of such high torque/low speed duty. Wichita CSM water-cooled brakes, on the other hand, are ideal for providing accurate torque measurements right down to zero speed. One advantage of working with just the motors rather than the vehicles or machinery they're fitted to was that the dyno setup could be installed vertically to save space. After considering the heat, torque and maximum speed profiles of the Wichita CSM range, we specified one CSM136 for testing higher-powered motors (shown on the left-hand shaft in the photograph), and for testing smaller motors, a CSM118 and CSM127 mounted co-axially on both the centre and the right-hand shafts. The CSM118 brakes are concealed within the white support housing of each of the CSM127 brakes.

As Wichita brakes apply load in proportion to air pressure, theoretically a torque level could be obtained based on air pressure measurement alone. In practice though, a separate torque-measuring device is preferred, and for this reason, the brakes are trunnion mounted, incorporating load cells on the trunnions to sense the torque.

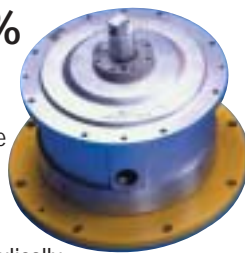
Various options can be incorporated into the CSM/Dyno brake – copper plates can be skimmed flat for more precise torque control or made thicker for extended life, they can be fitted with thermocouples, and speed sensors can be added, to name just a few.

If you have a dynamometer application that Wichita could help you with, call our sales office on **+44 (0)1234 350311** and we'll be pleased to share our experience in this area with you.



Industrial Clutch Products can increase productivity by a massive 50%

To bring you up to speed on the range of products from Industrial Clutch that are now available from Wichita, we'll be taking a closer look at some of them in each issue of *All Torque*. Let's start with the CBH Hydraulically Actuated Combination Clutch/Brake.



Model CBH is an oil-immersed unit using a spring-set, hydraulically-released brake and a hydraulically-set, spring-released clutch, arranged for mounting in an end of shaft configuration. Hydraulic actuation, and piston motion times as low as 5ms, allow cyclic rates of more than 300cpm in many applications. The high cyclic rates increase shock loading but the mechanical components of the unit are designed to withstand this, and the oil films help to damp the loads. The oil also keeps noise levels low, contributing up to 30dBA reduction over a dry unit used under the same conditions. Wear characteristics of Model CBH are excellent – just look at these results: A test unit showed no appreciable lining or mechanical wear even after 120 million cycles. That's compared with relining at 10 million cycles and complete unit replacement at 30 million cycles for a dry unit tested at the same load level!

The CBH is therefore appropriate for original equipment or conversions that cycle frequently and require the ultimate performance in life, reliability and accuracy. One such application is on turret punch presses – virtually all turret punch presses in the field today can be converted to use the Model CBH, with minimal time and money needed. In older installations, productivity can be increased by over 50%, so payback is rapid.

All Change

New appointments, but with familiar names and faces filling the positions:

Peter Bruch becomes Engineering Manager for three groups within the Heavy Duty Clutch and Brake Division of Colfax.

Steve Ryder is now European Sales Manager, and Trevor Woodhouse takes on the role of UK Sales Co-ordinator.



Peter



Steve



Trevor

Wichita and Taylor on the shelf

Many of you have asked us for shelf life information for Wichita and Taylor clutch and brake spares, so here's a summary of our main products, how long you can safely hang on to them, and how to store them in top condition. See also Asbestos Alert below when checking older stocks of friction materials.

Part	Shelf Life	Storage
Wichita airtubes and Taylor cylinder packings	5 years maximum	Store flat in a dry, cool, dark environment, and use original packaging where appropriate
Wichita and Taylor friction discs, pads and segments	7 years maximum	Store in a dry, cool, dark environment. Lay friction discs flat, and keep friction pads and segments in their original packaging
Metal parts	Unlimited, provided parts remain in good condition	Store in a dry environment and protect against corrosion. Clean parts before use, particularly surfaces that mate with friction material

Torque Sense!

We often get asked for troubleshooting tips, so starting here, we're going to include some of these as a regular feature. This issue we look at problems afflicting shears, presses and unwind stands. You're also welcome to contact us with any hints and tips of your own for working with Wichita products that may be useful to other readers.

Troubleshooting on shear or press

Problem: Flywheel slows or stops during cut. This can occur if the clutch slips during the working sector – the blade or die stops and the clutch then acts as a brake, retarding the flywheel

Possible Cause	Solution
Clutch torque too low – slips during workcycle	Check clutch is suitable for current operating conditions – contact Wichita
Air pressure too low for the application (5.5 bar is typical requirement)	Check pressure with calibrated gauge after several operating cycles
Response time of clutch too slow	Check that clutch locks up fully before blade contacts material – Wichita can verify this with health-check visit
Air starvation at clutch	Consider increased pipework diameter or air tank adjacent to press
Flow of air from reservoir restricted by in-line regulator	Adjust or remove regulator Consider fitting Quick Exhaust Valves (QEVs)
Slow brake release	Check silencers on QEVs are not blocked
Intermittent air line blockage	Check air lines thoroughly for debris or loose flaps of rubber that may only be disturbed at high air flow rates

Troubleshooting on unwind machine

Problem: Water cooled brake overheats

Possible Cause	Solution
Change in operating conditions	Check brake is suitable for new operating conditions
Tension Control system failure	Check operation of control system
Poor flow of water	Check flow rate of water is adequate for requirements
Back pressure in closed system	Check flow rate is not reduced by back pressure in system – flow rate may appear satisfactory when outlet is disconnected

FAX BACK

Please add my colleague to the All Torque mailing list. Please fill in their details below:

NAME _____
 COMPANY _____
 ADDRESS _____

 POSTCODE _____
 TEL _____

Please fax this back to +44 (0)1234 350317

Asbestos Alert

Since 1988, all Wichita and Taylor friction material is of non-asbestos composition. However, it's likely that friction material supplied before this time *does* contain asbestos, and we recommend that you discontinue using it and replace it with non-asbestos components.

Not sure how long that stock of spares has been sitting on your shelves? It's easy to check by looking at the part number – if it ends in 7, e.g. 42181-047, then it's an older part that may contain asbestos. If it ends in 8, e.g. 42181-048, it's a later part and definitely asbestos-free. If in doubt, contact our after-sales department for advice.

Remember: Asbestos-containing materials should not be machined, and any asbestos waste must be disposed of in accordance with current Health & Safety regulations.



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