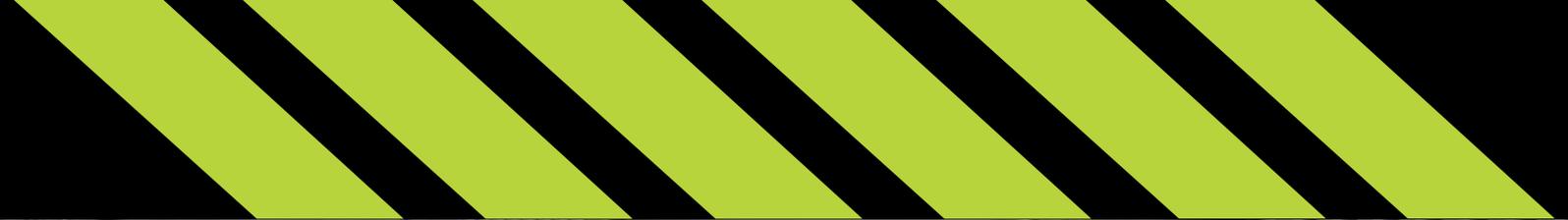


AS SEEN IN
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TRUXTA^{4x4}





Ron Blackhurst is firmly back in the compact plant business with his new Tufftruk company these first Truxta Bendi dumpers – from left, the TB300D, TB300E and TB300G.

TALKING TUFF

The tiny hamlet of Sheen in the beautiful Derbyshire Dales is a most unlikely place to find a construction equipment maker. Let alone two.

The long established construction equipment maker in Sheen is Altrad Belle, best known for its bright orange tip-up mixers. The newcomer is Tufftruk which is now making its mark with a range of micro dumpers distinguished by their lime green skips.

The link between the two very different sized plant makers currently residing in Sheen is the Blackhurst family. What is now Altrad Belle was established by the late Doug Blackhurst in the 1950s and now his son Ron has started a new business called Tufftruk UK.

Nick Johnson visits the latest plant maker in Sheen to check out the new small Truxta Bendi micro dumper.

Having been raised in Sheen, and closely involved with the original Belle family business from a very young age, Ron Blackhurst is certainly no stranger to compact plant or its efficient manufacture. Following the death of his father in 1995, he became the Chairman of the Belle Group which he then ran until 2008, when

the business was sold to Altrad. Whilst Doug Blackhurst will be best remembered for really putting mini mixers firmly onto the construction equipment map, one of his earliest products was in fact a small motor barrow. And it is with small dumpers and barrows that Ron Blackhurst is returning to the compact plant market.

Whilst the new business is called Tufftruk, the machines themselves are branded Truxta. And, as was first revealed by Ron Blackhurst at last year's Saltex sports, amenities and landscaping exhibition, there will ultimately be two types of small pedestrian operated Truxta 4x4 materials movers – the articulated Bendi micro dumper and the Rigid power barrow.

Constructive Feedback

Prototypes of the newcomers were displayed at Saltex 2014 where visitors expressed most interest in the Bendi. This led to further exhibition appearances of the articulated Bendi at both the Executive Hire Show in February and Plantworx in June to gain more constructive feedback from different types of potential buyers and users. This exhibition exposure has allowed the Bendi design to be refined with practical and operational improvements added before it went into volume production.

The first Bendis to enter the market are 300kg payload machines and customers get a choice of petrol, diesel or electric power. The petrol-powered unit is initially proving to be most popular and, complete with a 3.6kW (4.8hp) Honda GX160 4 stroke engine, this is



A Yanmar engined TB300D Bendi dumper undergoing endurance testing on the special circuit at Sheen.

PLANT APPRAISAL

known as the Bendi TB300G.

The Bendi TB300D has an electric start 3.5kW (4.7hp) Yanmar L48 diesel engine and the Bendi TB300E is fitted with an 800W/24V DC brushless electric motor which is powered by two sealed 12V Trojan lead acid batteries. The electric dumper has an integral battery charger with both 230V and 110V input leads. A full recharge is achieved in 12 hours.

The centre joint of the Bendi utilises a specially produced gimbal that provides 40° of articulation left and right and oscillation of 9° either side of centre. This arrangement ensures that all wheel contact is maintained when traversing rough ground. The petrol and diesel powered units have hydrostatic drive with a belt driven central pump motor linked by chains to the wheels.

Test Track

The four-wheel drive system on the 725mm wide Bendi dumpers has been patented and the machines are robustly built. Drawing on his experiences at Belle, Ron Blackhurst has constructed a similar endurance testing track on which to check out his new dumpers.

Tethered to a central column, a well laden Bendi has been continuously travelling around a circular track complete with 'speed bumps' to double check the strength of its components. This testing has been carried out for 1,000 hours to provide the equivalent of 5,000 hours of normal working life.

Parts for the new Bendi dumpers are being fabricated by a company called Alpha Manufacturing which is based at Hixon in



The compact dimensions and good controllability allowed the TB300G to easily enter the narrow doorway of this old cottage.



A Honda powered Bendi TB300G being assembled in the Tufftruk production facility in Sheen.



The articulated steering allows the small Truxta Bendi dumper to access places others cannot get into.

Staffordshire. This business is a well-established sheet metal worker able to carry out laser cutting, CNC metal folding, CNC metal punching, CNC metal turning, MIG Welding, TIG welding and powder coating. Its parent company is the commercial van converter, Bri-Stor Systems.

The Bendi machines are now being assembled at Sheen by a team that includes Ron's eldest son Edward who is completing his apprenticeship with Tufftruk. The machines have been designed to provide maximum commonality of fabrications and components in order to allow efficient volume production of the different models. Flotation tyres are standard with turf tyres as an option.

Ron Blackhurst says that the production models have benefited greatly from both the exhibition feedback and the involvement of engine manufacturers. Refinements have included a hinged plastic cover to provide better access to the engine and fuel filler than the hatch in the metal cover on the prototype. It is also now easier to get to the carburettors and the GX160 installation has become fully Honda approved resulting in customers getting a three-year engine warranty.



A double pivot mechanism minimises the physical effort needed for manually tipping out a load from the dumper skip.

To put the Bendi through its paces in a typical restricted-space construction application, use was made of an old cottage being renovated near to Tufftruk's assembly facility in Sheen. Fitted with a 300kg capacity dumper skip, the narrow machine proved easy to travel up planks and through the front door of the cottage.

Once inside, the articulated chassis came into its own as the machine easily completed a tight 90° turn from the hallway into the front room. The sacks of sand in its skip were then manually tipped onto the floor of the room by using the skip release lever.

Manual discharge is accomplished by means of a clever double pivot mechanism. This is designed to keep the centre of gravity of the loaded skip behind the front axle to improve stability during travel as well as minimising the physical effort needed for tipping.

All three Bendis are controlled by a pedestrian operator using simple handlebar controls. The handlebars are wide enough to make it easy to steer the well-balanced machine whilst allowing enough side clearance to prevent hands from being scuffed when moving through a narrow opening.

Easy to Turn

The machine's ample articulation made it much easier to turn about the sharp corners inside the cottage than would have been the case with a more conventional rigid frame, four wheeled power barrow. This small dumper should be able to follow a micro excavator into all the same restricted space locations on site to provide a well-matched material extraction team.

The GX160 powered dumper has a yellow deadman's handle on its right hand handlebar grip. Once this yellow handle is held down, the dumper can be moved forwards or backwards progressively by depressing either the right or left hand travel levels. As soon as the yellow lever is released the machine stops to provide fail-safe braking.

Maximum forward speed is 4mph for the both the petrol and diesel powered machines. Maximum reverse speed for both units is

sensibly restricted to 1.5mph. The hydrostatic transmission is smooth and the latest production machines are quieter than early prototypes. The transmission brake is better than the early axle based design and now a fully laden dumper will remain completely stationary on a 25° slope.

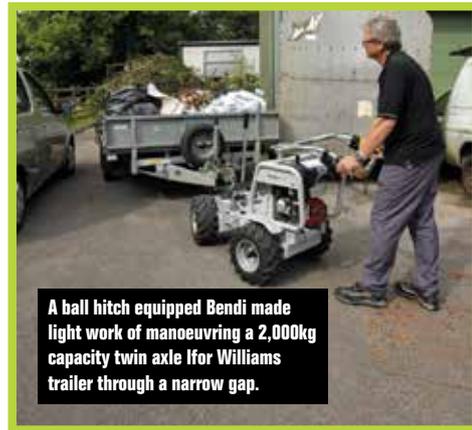
The petrol and diesel engined Bendis have respective unladen weights of 170kg and 201kg. The electric machine weighs a bit more at 224kg, but it scores by offering quieter (69dB LwA) and fume free operation. As is to be expected, the petrol and diesel machines have higher sound power ratings of 94dB LwA and 99 dB LwA respectively.

The electric machine has a slightly different control arrangement with a red deadman's lever on the left handle bar grip and a combined direction selection switch and twist grip speed control on the right hand handlebar. Maximum forward and reverse speeds are 3.5mph and 1.5mph. Usefully, a Curtis battery charge indication meter is included as standard.

Already the electric Bendi has found favour with builders busy constructing the new generation of mega basements under palatial London houses. On these jobs the machines' compact dimensions, manoeuvrability, quiet



A Bendi carrying logs on its optional flat bed platform with a second one shown folded up alongside.



A ball hitch equipped Bendi made light work of manoeuvring a 2,000kg capacity twin axle Ifor Williams trailer through a narrow gap.

operation and absence of fumes are big bonuses.

To increase operational versatility, the dumper skip on the Bendi can be easily unclatched and replaced with either a flat bed platform or a ball hitch for moving caravans or trailers. The flat bed platform has a sturdy deck made from Phenolic plywood and there is the option of slot in log poles. The deck conveniently folds up to make it easier to store. Other options being considered by Ron Blackhurst include a front snow blade, rear salt spreader and high-pressure jetter.

Future Developments

A higher capacity (450kg) Bendi is still on the cards for a future launch and development work continues on the rigid frame Rigid power barrows. As previewed at Saltex 2014, the 300kg capacity Rigids have four wheel drive rather using powered front wheels and smaller intermediate wheels to transfer power to the rear wheels like some existing designs.

Ron Blackhurst says that he is on track to meet his planned production target this year. He states that: "support is everything" and he is selectively building up a UK dealer network. He has had interest in the machines from abroad but does not intend to start exporting until next year.

There are no immediate plans to develop a high tip Truxta dumper. But the company is refining a modular ramp system that will allow a Bendi or Rigid to safely tip their loads into a builder's skip.

As more emphasis is placed on mechanising tasks previously done manually to safeguard workers' health and prevent injury claims, the days of the wheelbarrow could well be numbered. This should help the Truxta dumpers to get established and create their own niche in the construction plant market. And provide a boost to British manufacturing in the process.

i For more information on Tufftruk use the reader enquiry number below

CIRCLE READERLINK 077