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TEST TEXT AND PHOTOS: THEO EGBERTS, ANDERSOM TESTING



Crown's QuickPick Remote system delivers substantially higher productivity and lower energy consumption during the order-picking process

CROWN GPC 3000 QUICKPICK REMOTE

BETTER BY FAR

By using remote control, Crown's GPC 3000 order picker with QuickPick Remote offers an easier and more efficient order-picking method. In our test, the benefits were clearly evident. What's more, the system also saves energy. As from now, there's a whole new way to pick orders!

Crown presented the company's order-picking solution for the first time at LogiMAT 2013, where the innovation won the Best Product Award. Since then, Crown has deliberately kept quiet about QuickPick Remote (QPR) while thoroughly optimising the system.

The concept is based on the principle that the order picker should not have to climb back onto the truck in order to proceed to the next pick location. Instead, he or she simply presses a button to move the truck from one pick location to the next. The truck stops when

the button is released. As a result, pickers can pick more orders per hour, because they no longer need to walk back to the truck, climb onto it, operate it, and then climb off it again.

PATENTED GLOVE

In Crown's solution, all communication takes place between the truck's control system and a patented glove worn by the order picker. Thanks to this 'driving glove', users always have the drive button within easy reach. What's more, the system is still easy to use even when they have their hands full of items they have picked.

So how does it work? At the start of the shift, the picker must first connect truck and glove, using a simple key combination on the glove and truck display. This pairing only has to be done once. As long as contact is maintained with the truck, the combination stays active. Stepping back onto the truck disconnects the QPR system, but as soon as the operator steps off the truck again, the system is automatically reactivated. The electronic control unit can be removed from the (washable) glove.

Crown offers a broad selection of glove sizes and configurations, depending on the order picker's build and whether they are right or left-handed. For safety reasons, the Crown truck travels and accelerates more slowly when the QuickPick function is in use. With driver on board, the truck's maximum speed is 12.4 km/h; this falls to 4.1 km/h when the QPR system is active. We found this speed perfectly acceptable during the test, although we felt it could have been slightly higher. The truck also takes twice as long to accelerate over 10 metres when the QPR system is in use – 8.9 seconds rather than 4.9 seconds.

PROS WITH NO CONS

To test the system, we simulated a picking process. First, we distributed a total of 12 pick locations over a driving distance of 175 metres. We picked one item from each location, then turned round and repeated the operation on the way back, meaning we stopped at pick locations a total of 24 times. In total, we used three different picking layouts, varying the spacing between pick locations in the QuickPick zone from 6.3 metres down to 4.0 metres, although the total distance remained the same. Depending on the distance we were travelling, we rode on the truck whenever this made more sense than walking alongside it to the next pick location. As an order picker, you quickly develop an intuitive feel for when it's better to use the remote control and when it's better to step back onto the truck.

Once we'd finished the simple process of pairing truck and glove, we started the test. First, we completed the entire picking route riding on the truck, without using the glove. We measured the time required to pick orders, and the truck's energy consumption. Then we did the same thing all over again, but this time we used the remote control over distances where this made more sense. According to Crown's logistical specialists, the spaces between

pick locations in our first layout were too lengthy. Even so, after picking 1,000 orders, we measured an improvement of at least 10%. Energy consumption also fell by 12.5%, because when you use the remote control, the truck doesn't drive or accelerate as fast. These figures steadily improved as the spacing between pick locations in the QuickPick zone was reduced: over the two shorter distances, we observed productivity gains of 27.5% and more than 39% respectively when we used QuickPick Remote. When we covered the same distances the conventional way – riding on the truck – the scores stayed more or less unchanged, regardless of the spacing between pick locations. Finally, the energy saved by using the QPR system worked out at 18.2%.

In addition to higher productivity and lower energy consumption, we also found that the order-picking process was much more relaxed – it's just much less tiring. We even observed a motivating effect, precisely because the whole process is so logical and works so smoothly.

AUTOMATIC CONTROL

The QuickPick Remote system offers more than just an extremely smart glove and a responsive truck. The Crown GPC 3000 is also distinctive, thanks to a good-looking design with attractively rounded shapes, and good workmanship using solid materials. The operator handle is easy to operate and works well, although it would be nice if it was height-adjustable. The entry step is wide, low, pleasantly rounded and slightly flattened, so you can climb up and down easily and safely. The truck also provides ample storage space.

The safety features on the GPC 3000 are especially worthy of note. While the QuickPick function is active, the truck uses laser scanning to make sure there are no obstacles in its path – the truck stops automatically as soon as it detects an obstacle. Once the path is clear, the truck continues to follow instructions.

The Crown truck is also able to travel along a preselected side of the aisle – left, right, or straight down the middle. The truck always drives in a perfectly straight line, even if it is parked askew when you first start using the Remote system. The truck detects minor obstacles – such as poorly positioned pallets – and automatically avoids them, returning to its preset path immediately afterwards. Order pickers can also instruct the truck to maintain a fixed distance from the racks. If they need more space, they simply change the setting so the truck's travel path is slightly further away from the pick face.

CONCLUSION

According to the manufacturer, Crown, the QuickPick system not only improves productivity – it also improves the wellbeing of order pickers. Our test proved they weren't exaggerating. The benefits of this intuitive system multiply in direct proportion to the intensity of the order-picking process. The unique Auto Steer Correction feature plays an important role by

enabling continuous, trouble-free order picking. The cleverly devised glove control system is the key to this successful solution. We are very curious to see how other brands respond to this system, because the patent means they can't copy it. And we make a rock-solid prediction – that this order-picking truck with remote control will take the market by storm!



Thanks to lower speed and acceleration, using the QuickPick Remote system delivers energy savings of up to 20%



The scanner keeps a watchful eye on things, ensuring the truck stops automatically when it spots an obstacle



The folding step is also very convenient, making it much easier for pickers to reach the second picking level



The green lamp lights up to indicate that the truck is ready for remote-controlled operation



A large part of the power of Crown QuickPick Remote resides in the smart, patented glove



Even with your hands full, you can still press the drive button to move the truck to exactly the right place, minimising the distance you have to walk



The operator platform on the GPC 3000 is spacious, nicely rounded and provides excellent footing for entries and exits



Thanks to the highly visible markings, it's hard not to see the tips of the GPC 3000's forks

		Picks per hour	Productivity increase (picks/hour)	Energy consumption (kWh/1000 picks)	Reduction in energy consumption
Circuit 1*)	Riding on the truck	292		4.0	
	Using QuickPick	323	10.6%	3.5	12.5%
Circuit 2*)	Riding on the truck	290		3.7	
	Using QuickPick	370	27.5%	2.9	21.6%
Circuit 3*)	Riding on the truck	296		3.3	
	Using QuickPick	413	39.5%	2.7	18.2%
		Acceleration over 10 metres (sec)	Max. speed (km/h)		
	Riding on the truck	4.9	12.38		
	Using QuickPick	8.9	4.14		

*) Circuit 1: av. distance between pick locations 6.3 metres: number of QuickPick locations 12
 Circuit 2: av. distance between pick locations 4.9 metres: number of QuickPick locations 18
 Circuit 3: av. distance between pick locations 4.0 metres: number of QuickPick locations 22

QUICK SCAN

Pros:

- + Productivity
- + Safety
- + Automatic steering correction

Room for improvement:

- Height adjustment of operator handle