

Jungheinrich EFG 216k

## Up to its standards

**As a pioneer in the AC technology, Jungheinrich has a name to retain within the segment of electric fork lift trucks. With the new EFG-series, the German manufacturer again sets the standard in the popular segment of three wheel counterbalance trucks. The combination of economy and productivity has never been found so well. And thanks to the sideways battery changing, the EFG-range is completely up-to-date.**

Test report: Theo Egberts, Andersom Testing

Jungheinrich has been producing forklift trucks and warehouse equipment with AC technology since the mid nineties. Because of the absence of carbon brushes, AC trucks are cheaper in maintenance and more reliable during deployment. Moreover, the trucks are more powerful, resistant to dirt and moisture and they offer many additional features such as an automatic parking brake and regenerative braking on the driving engines.

At that time already, the brand showed that AC technology also enables a high productivity. And with the new EFG series, this aspect again proves to be successful. There is more reason for enthusiasm. The energy consumption is very low. On our standard test track there hasn't been a truck before that was as fast and efficient as the Jungheinrich EFG 216k with ZT mast. This is a three-wheel truck with a lifting capacity of 1.6 tonnes which is equipped with a dual mast with a lifting height of 3300 mm and integrated side shift. The k behind the type means the chassis is shorter than the usual EFG 216, and it is intended for use in compact spaces. Obviously the maximum battery of 750 Ah does not fit in this truck. Instead we find a version with 625 Ah. We drove the test with this truck at both state 3 (slightly milder) and state 5 (full power).

### **Power demands choices**

During the test on a concrete floor in good conditions, it turns out that the EFG in position 5 is so strong that the behaviour is less predictable. At position 3, this effect virtually disappears, leaving the truck as an open book. The predictability is high, so working becomes relaxed and the driver experiences a high degree of control. The good visibility through the dual mast is obviously a great advantage too. This makes it easier to both keep an eye on the working environment as well as to pick up loads and drive to the different working locations. Ad the powerful acceleration, the regenerative braking on the driving engines and the light steering and you'll get outstanding figures. No truck before was this productive. Even more special is the fact the energy consumption belongs to the best values ever as well. Despite the smaller battery, the practical usage of the EFG 216k with ZT mast is extremely large with over 10 hours.

Only the Hyster J1.6XNT showed a similar energy consumption, but that was during the test in saving eLo setting for maximum energy savings. It than noted a significantly lower productivity as well. Expressed in consumption per 100 moved pallets, the Jungheinrich is more efficient.

### **More space**

Looking at the design, the new EFG strongly looks like its predecessor, but more modern. The steering column has clearly become much leaner. The steering of the new models is fully electric. The hydraulic orbitrole unit in the column was no longer necessary. The previously criticized limited knee space of the old EFG immediately belongs to the past. It now is easier to get on and off. The steering wheel is still easily adjustable in height and depth.

Small downside is the limited foot space, as we get stuck with the tip of our shoe behind the braking pedal. It is therefore important to lift our foot or to turn it to prevent this. In our opinion, the design of the steering column and steering unit needs a bit more attention.

The sit on the well suspended and adjustable seat is fine. The right arm is comfortably supported by the sturdy and fully adjustable armrest. It also offers many optional switches to lights, wipers etc. if they were present. Because of its reasonable size, the armrest takes away a bit of the view on the paper clip and reduces the accessibility of the various storage options.

### **Safe sideways battery exchange**

The mast functions are controlled over the SOLO-PILOT, which is also placed on the armrest. The unit probably is the most successful in the range of possibilities Jungheinrich offers: it is quick and intuitive to use and fully proportional in its effect. Simultaneous operation of the mast functions is possible as well.

This is one of the reasons the mast functions of the new EFG are operated easily, smoothly and predictable.

This also applies to the way of battery exchange. With a robust, easy to open side door we get to the battery compartment. It is enclosed by a sturdy chassis. The battery can be removed and transported safely with virtually any type of pallet truck. The sturdy chassis, in its turn, is substantiated by a fully comprehensive cabin structure. The lack of openings and seams guarantees the strength. The roundings ensure an attractive look and feel.

In short: with the new EFG, Jungheinrich introduces a modern, excellent performing electric three wheel counter balance truck with unprecedented high sores and a high degree of predictability. It will be a great challenge for the competition to exceed this.

### **Andersom Testing**

Theo Egberts (46) of the independent Dutch agency Andersom Testing has been performing tests with forklift trucks and warehouse equipment since years. The tests were published in the Dutch magazine "T+O Heftrucks", as well as in the German "Fördern und Heben". He stood on the basis of the existing test concepts 21 years ago and drove all test trucks personally since then. With well

over 300 counter balance and warehouse trucks in his testing experience, he has an objective view and judgement on internal transport equipment.

>Photo captions:

(1)

The new Jungheinrich EFG 216k with dual mast ZT is in the center of attention in this test. It's strength: a good combination of power, speed and economy

(3)

Instead of the standard lap belt, a so called "BodyGuard" can be fitted to keep the driver inside the cab with any calamity

(4, 12)

The display is informative and complete; for optimum view it is mounted right on the barrier board

(5.6)

Thanks to the fully electric steering, the steering column is much slimmer and offers more room than at the previous model EFG

(7, 8)

The new armrest is sturdy, fully adjustable and equipped with the very practical SOLO-PILOT mast control unit

(10)

The hinge construction is sturdy and the door opens widely to handle the battery well

(14)

All frame corners are nicely rounded and feel nice; the area around the foot pedals is slightly tight

>Graphics:

Liftspeed with load 1000 kg (cm/sec)

Number of pallets per 8 hours

Acceleration over 27,20 meters (sec)

Consumption during test including regeneration (kW/h)

Speed with load 1000 kg (km/h)

Practical usage including regeneration (hours:minutes)