



ZF in electric counterbalanced forklift trucks – electromechanical steering system

ZF eSTEER EPS3 for electrical counterbalance lift trucks has set new standards for electromechanical steering systems.

The electromechanical steering system replaces the commonly used hydrostatic steering in three-wheel front-drive counterbalance forklifts with a maximum lifting capacity of up to 2t.

This allows electric lift truck to follow the course plotted by the car industry over the last few years: the move from hydraulic steering to energy-efficient electromechanical steering.

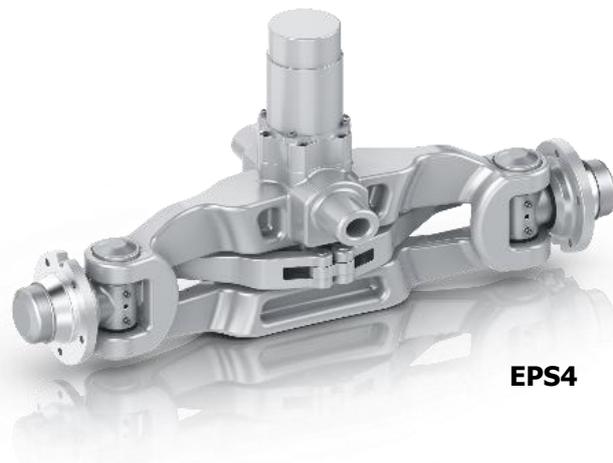
Combined with ZF eTRAC dual-motor drives, this solution ensures highest reliability and efficiency.

eSTEER: Electromechanical power steering

- Energy saving > 10 % (power-on-demand)
- Functional safety: Performance Level D
- Steer by wire
- Excellent driving ergonomics (e.g. steering speed adjusted to actual driving situation)
- Low noise level
- Optimally protected against environmental influences
- Reduced installation effort at the forklift assembly



EPS3



EPS4

Product and performance classes

| | EPS3 |
|----------------------|--------------------|
| Max. output torque | 1,230 Nm |
| Max. wheel size | 15" |
| Max. wheel load | 1,900 kg |
| Nom. Steering speed | 90 °/sec |
| Max. steering angle | +/- 135° |
| Motor technology | Induction, 3 phase |
| Inverter voltage | 48 Vdc |
| Motor power @ S3-70% | 400 W |
| Transmission ratio | 176 |

| | EPS4 |
|--|------|
| EPS4 specifically developed for 4-wheel lift trucks with a lifting capacity of 2 t and 3.5 t | |

Note: The figures above are only indicative, based on testing results for typical material handling application.