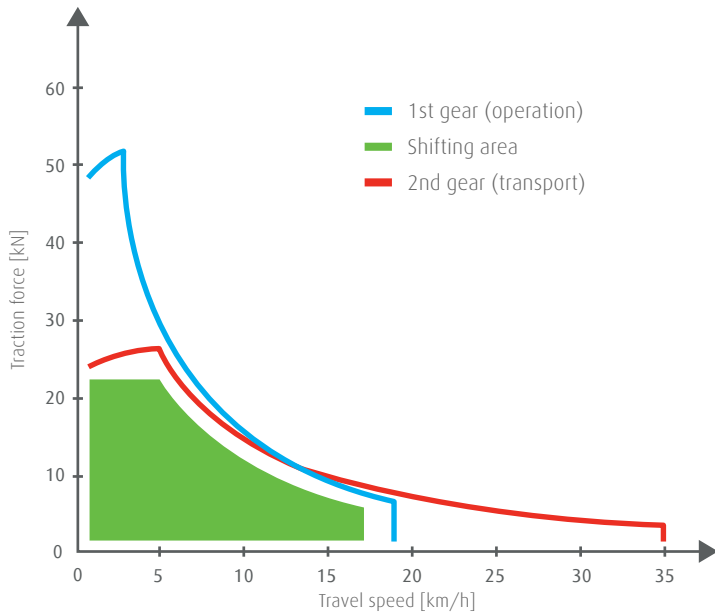


# SHIFT IN MOTION

## Hydrostatic drive System solution

Linde Hydraulics

*Linde*



Shift in Motion enables shifting procedures in a moving machine, equipped with a manual transmission that is intended to be shifted at standstill by electro-hydraulically synchronising the drivetrain. This system is particularly suitable for vehicles that often change between transport and operation, i.e. vehicles that require both high tractive effort and a high top speed above 25 kilometres per hour.

The shifting procedure is load-free thanks to electro-hydraulically synchronised gears and the ability to adjust the drive component's speed and torque. Thus there is no need for multi-disc clutches and mechanical synchronisation using synchronizer rings and moreover there's less pinion engagement. This makes the shifting procedures wear-free and also increases the transmission's efficiency.

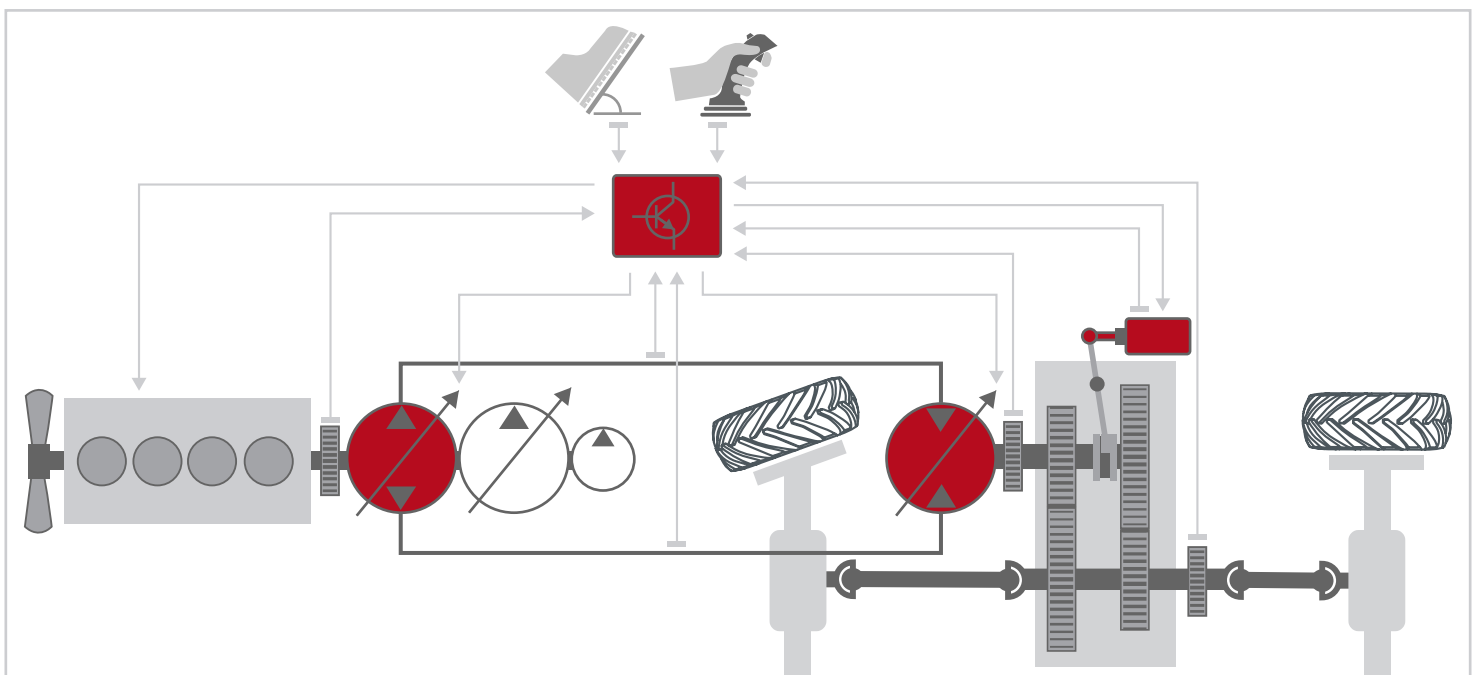
### Design characteristics

- >> Hydrostatically controlled synchronization of manual gear boxes shifted at standstill
- >> Full utilization of the kinetic energy while changing between transport to operation (and vice versa)
- >> Compared to conventional drives, Shift in Motion includes only 2 additional components

### Advantages

- >> Automated and jerkless gear changes (<0.7 sec.) without standstill and the need of expensive synchromesh gear boxes
- >> Considerable reduction of fuel consumption and noise emissions
- >> Minimum space requirement

### Concept



# SHIFT IN MOTION

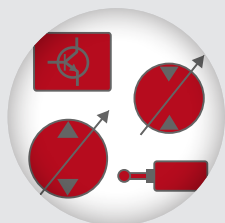
## Hydrostatic drive System solution

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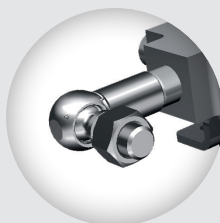
### Drive

#### Linde components



- >> Variable displacement pump **HPV-02**
- >> Variable displacement motor **HVM-02**
- >> Shift actuator **Actuator**
- >> Electronic control **iCon**

#### Interface



- >> Shift rod with clevis or spherical head
- >> Multiple positions of rest and analog position signal
- >> Defined default behavior

#### System requirements



- >> Standstill transmission with 2 or more gears and defined neutral position
- >> Admissible tractive effort interruption of <0.7 sec

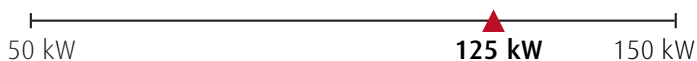
### Application examples



#### Category



#### Category



#### Equipment

- A** 1 x K 75-02 E2
- B** 1 x Actuator
- C** 1 x iCon

#### Equipment

- A** 1 x HPV 105-02 E2
- B** 1 x HVM 165-02 E6
- C** 1 x Actuator
- D** 1 x iCon

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