

Drive Solutions for Telehandlers.

Linde Hydraulics

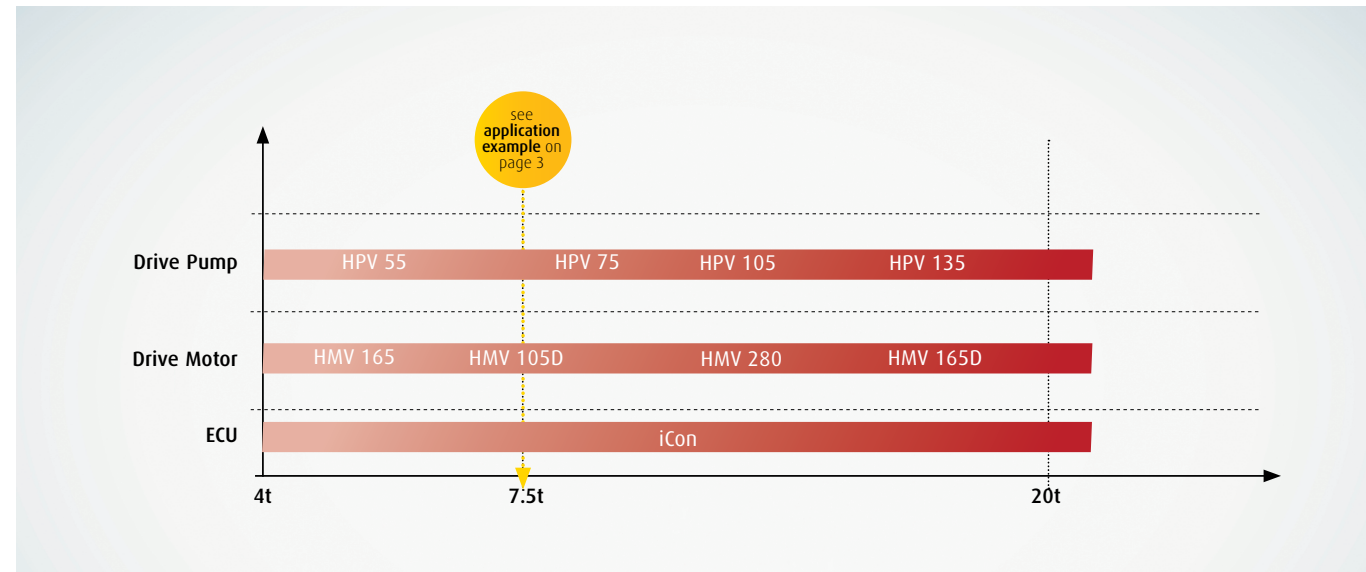
Linde



Telehandler Solutions. Our Portfolio.

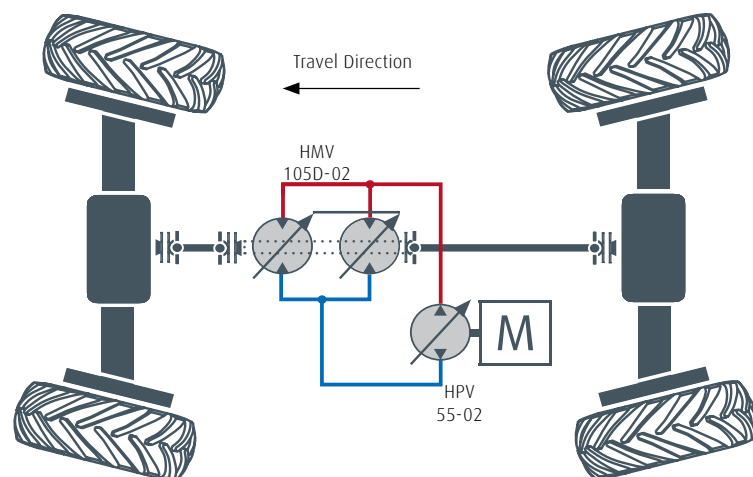
By the logic combination of individual products that perfectly complement each other we offer solutions for almost every class of machines.

Due to these capabilities we can always offer the best possible system to our customers.



The key feature of the telehandler configuration shown here is the hydraulic mechanical drive with our innovative double motor. This delivers maximum tractive effort even at minimal diesel speeds. Thanks to the through drive shaft, it can be installed if required between the cardan shafts or with one side directly towards the drive axle. The immediate power transmission ensures excellent drive and allows fast reversing, fine-touch driving, and precise shunting. Smooth at all times, even when heavily loaded. The lack of a gearbox reduces costs, increases overall efficiency, allows a smaller radiator and eliminates gear noises. The driver is free at all times to give his full attention to the load being moved.

The axial piston double motor design offers higher maximum speeds and hence a bigger transmission ratio spread of oil volume flow into rotary motion than conventional swash plate motor designs. The HMV 105D is about 30 percent lighter than a motor with transfer gear box and is shorter than other modular approaches. This is achieved through innovative design of two in-line swash plate rotating groups in "face-to-face" arrangement. This means that only one swash plate is needed to adjust the displacement volume of the two motors, and additionally inner lateral forces are compensated so that only one drive shaft and only two (instead of four) bearings are required for both rotating groups. Apart from the weight and size advantages, the double motor also offers cost reductions in the drive-train with full power take-off capability.



Application Example. Telehandler, 7.5

Equipment

- A** 1x HPV 55-02 E2
- B** 1x HMV105D-02 E6
- C** 1x iCon

Advantages

- Reduced components and weight reduction (approximately 33%) thanks to the lack of transfer box and manual gearbox
- More design space and better centre of gravity thanks to the direct installation in the drivetrain
- No interruption of tractive effort
- Cost reduction in the drivetrain and radiator

Options

- Purely hydraulic or fully-electrified system
- Customer-specific assembly points
- Decentralized layout with individual motors per axle



Technical Data Summary.

Find the right product for your application.

VARIABLE PUMPS FOR CLOSED CIRCUIT OPERATION								
HPV-02		55	75	105	135	165	210	280
Max. displacement	cc/rev	54.7	75.9	105	135.7	165.6	210.1	281.9
Permissible speed	rpm	3900	3400	3200	3000	2750	2300	2400
Max. speed (intermittent)	rpm	4150	3600	3400	3200	2950	2500	2550
Nominal pressure	bar	450	450	450	450	450	450	450
Peak pressure (intermittent)	bar	500	500	500	500	500	500	500
Torque ($\Delta p=430$ bar, charge pressure=20 bar)	Nm	374	519	719	929	1133	1438	1929
Corner Power (theor.) ($V_{max} \times n_{max} \times \Delta p$ 430 bar)	kW	153	185	241	292	326	346	485
Weight (w/H1 control)	kg	46	49	66	72	113	132	164

PRODUCT ADVANTAGES	
HPV-02	<ul style="list-style-type: none"> — compact design — high power density — dynamic response — high reliability — long service life — noise-optimized — precise and load-independent



VARIABLE DISPLACEMENT MOTORS FOR CLOSED AND OPEN CIRCUITS										
HMV-02		55	75	105	135	165	210	280	105D	165D
Max. displacement	cc/rev	54.7	75.9	105	135.6	165.6	210	281.9	210	331.2
Max. operating speed at V_{max}	rpm	4300	3800	3700	3200	3100	2700	2400	3300	2900
Max. speed at V_{max}	rpm	4400	4100	3800	3500	3400	3000	2700	3400	3100
Max. operating speed at V_{min}	rpm	4700	4400	4100	3700	3500	3200	2900	4100	3500
Max. speed at V_{min}	rpm	5300	5000	4700	4000	3900	3500	3200	4400	3700
Nominal pressure	bar	450	450	450	450	450	450	450	450	450
Max. pressure (intermittent)	bar	500	500	500	500	500	500	500	500	500
Output torque ($\Delta p=430$ bar)	Nm	374	519	719	928	1133	1438	1929	1437	2267
Corner power	kW	184	239	309	360	415	482	586	677	878
Weight	kg	28	32	42	56	76	101	146	98	149

PRODUCT ADVANTAGES	
HMV-02	<ul style="list-style-type: none"> — jerk-free low speed — high starting torque — large conversion range — zero angle possible — dynamic response — PTO through-drive motor — compact design — high power density — high reliability — long service life

