

Drive Solutions for Forage Harvesters.

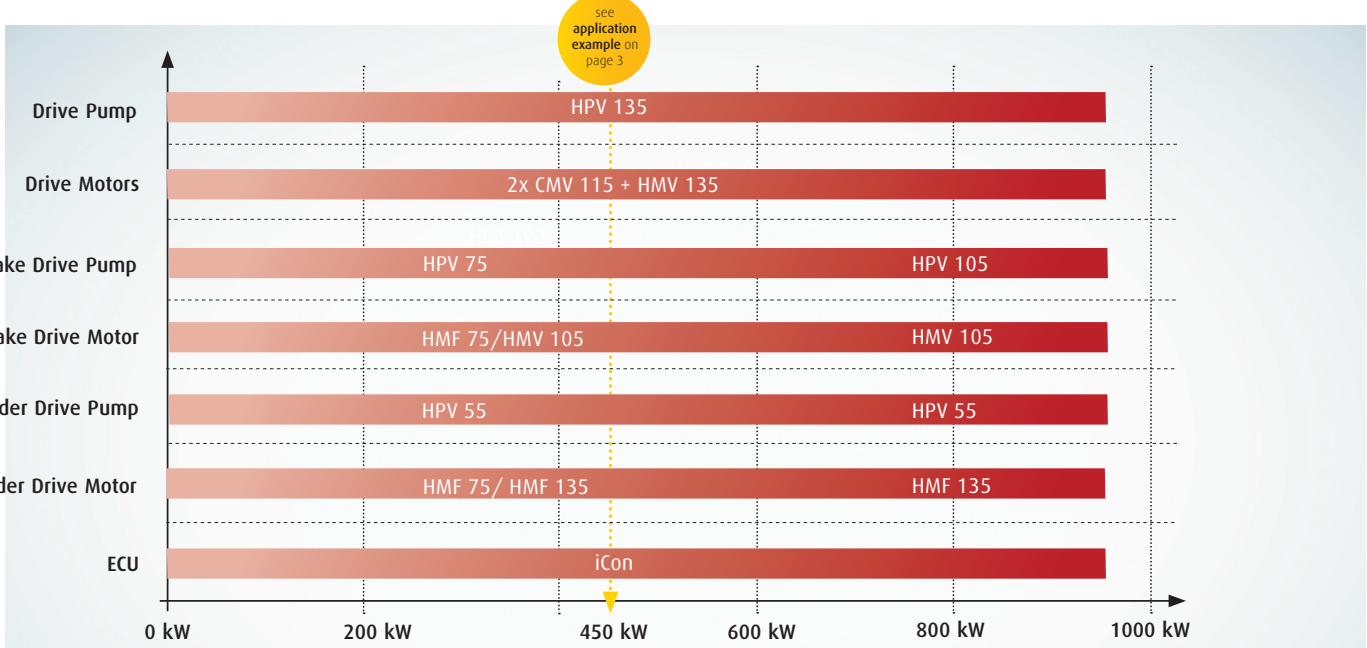
Linde Hydraulics

Linde



Forage Harvester 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.

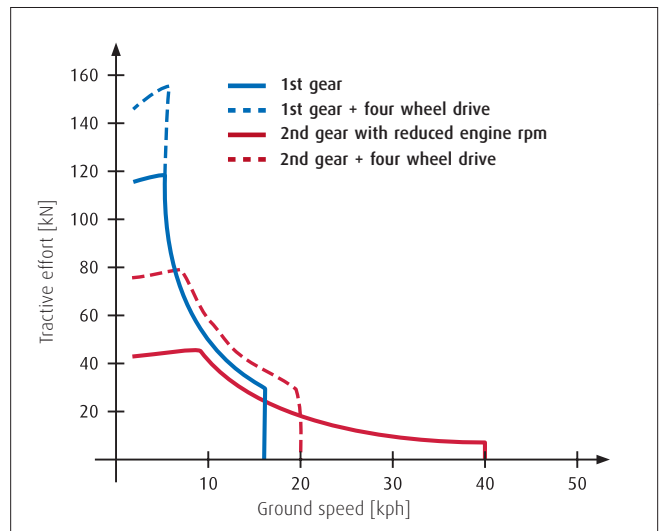
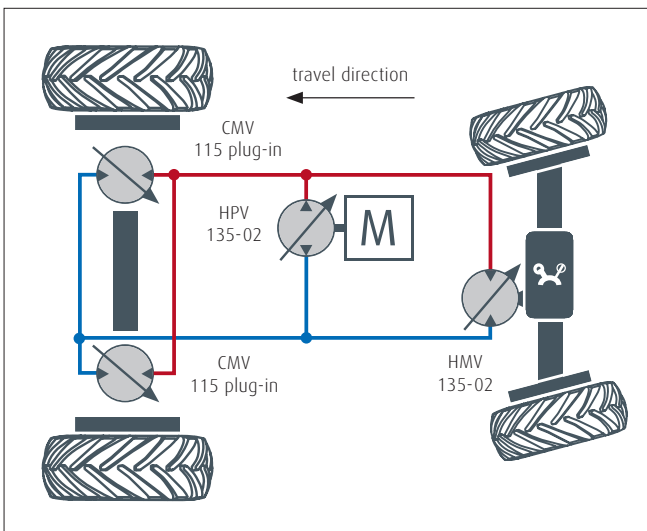


Intelligent electronic controls offer an extended range of sophisticated comfort-, application- and safety features. The controls ensure that the diesel engine, variable-displacement pump and -motor are perfectly matched to each other in every situation. Utilisation of the installed power is optimised, and the fuel is used efficiently. The electronics themselves offer an impressively high level of safety – in both concept and design. If, however, external circumstances cause the control signals to fail, the hydraulic units set their swash plate angles back to minimum volume. The machine decelerates moderately until standstill, without over-revving the diesel engine.

The powerful CMV 115 hydraulic motors enable speeds of up to 40 kph on the road. The harvesting gear covers a speed range up

to 15 kph, which makes shifting gears unnecessary on the field. The optimum speed is pre-selected in each case, and is reliably maintained thanks to the automatic regulation; after turning round, it is rapidly regained.

An additional hydraulic motor can be activated at the rear axle. The two axles can be controlled independently of each other, and the axles are not mechanically coupled. The tractive effort is distributed to the front and rear axles to suit the situation so that the traction limit is reached on both axles simultaneously. The mechanical decoupling of the two axles protects the soil, even when driving in tight curves. Reducing the effective torque to zero ensures that the vehicle retains full steering properties at all times, even when decelerating sharply.



Application Example.

Forage Harvester, 450 kW.

Equipment

- A** 1x HPV 135-02 E2 (drive pump)
- B** 2x CMV 115 plug-in E6 (drive motor)
- C** 1x H MV 135-02 E6 (drive motor)
- D** 1x H[M]PV 75-02 E6 (intake drive pump)
- E** 1x H MV 105-02 E6 (intake drive motor)
- F** 1x HPV 55-02 E1 (header drive pump)
- G** 1x H MF 135-02 (header drive motor)
- H** 1x iCon (electronic control unit)

Advantages

- Intelligent propel drive management thanks to electronic control
- High harvesting power and fuel efficiency
- High machine protection in case of emergency stop in unforeseen situation
- Switchable intelligent hydraulic four-wheel drive

Options

- Without or with permanent four wheel drive
- "Shift in Motion"
- Intake Drive with quick-stop control



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
Max. operating 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

- 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/HMF-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
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/HMF-02

- 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



VARIABLE DISPLACEMENT MOTORS FOR CLOSED AND OPEN CIRCUITS							
CMV		60	85	115	140	170	215
Max. displacement	cc/rev	60	85	115	140	170	215
Max. operating speed at V_{max}	rpm	4450	3900	3550	3350	3100	2900
Max. speed (intermittent) at V_{min}	rpm	7200	6800	6150	5800	4900	4600
Nominal pressure	bar	450	450	450	450	450	450
Peak pressure (intermittent)	bar	500	500	500	500	500	500
Output torque ($\Delta p=430$ bar and V_{max})	Nm	411	582	787	958	1163	1471
Corner power ($V_{max} \times n_{max}$ at $V_{min} \times \Delta p$ 430 bar)	kW	191	238	293	336	378	447
Weight	kg	27.7	36.3	44.8	59.2	62.1	76.4

PRODUCT ADVANTAGES

CMV

- high power density
- high speeds
- low windage losses
- standardized interfaces
- high external load
- standard and plug-in version

still at development stage
Contact us!

