

# Drive Solutions for Beet Harvester.

Linde Hydraulics

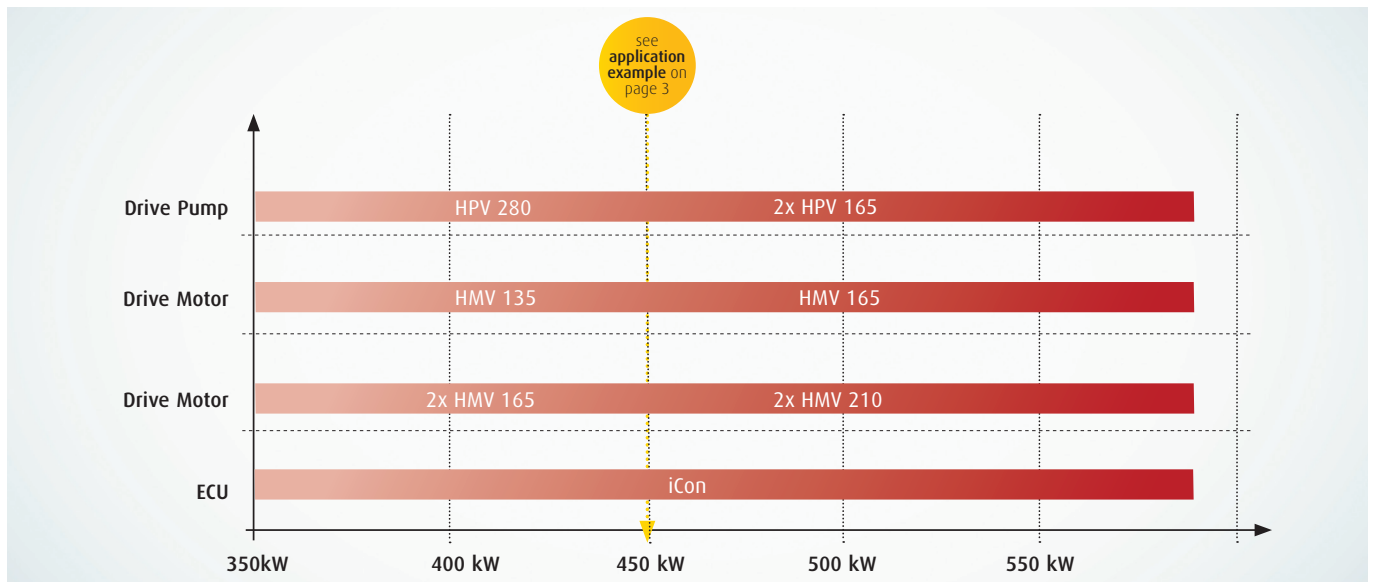
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# Beet Harvester Solutions. Our Portfolio.

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.

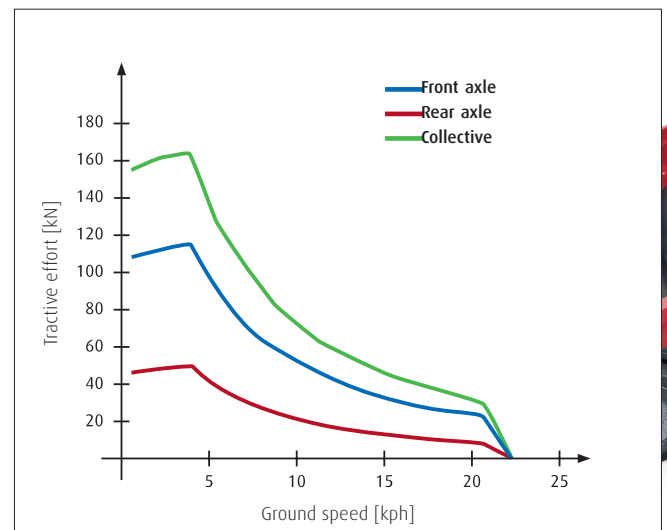
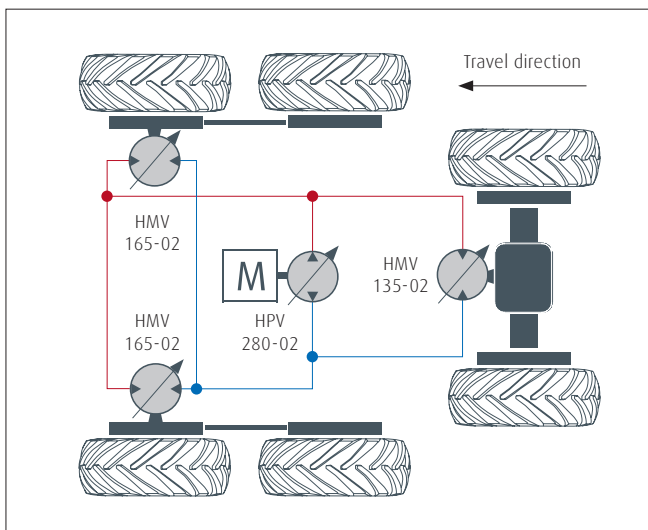


It's all about high-performance harvesting. Multi-purpose harvesting machines, with and without bunkers, quickly and efficiently perform what used to be arduous manual work. For the farmer, the number of rows, the bunker volume, the harvesting and turn-round speeds are important. It's essential at all times to ensure good harvesting quality and to avoid compacting the ground, irrespective of how quickly the machine progresses.

Machine manufacturers need hydraulic drives which enable the enormous performance of the machine and help to relieve stress on the driver. Thanks to the wide range of pumps and motors, hydrostatic systems from Linde are suitable for equipping each and every type of harvesting machine.

The drive concept is optimised in each case to suit the numbers of harvesting rows, axles and wheels, and the engine power class of the machine.

The design example shows an HPV 280-02 driving three HMV-02 variable motors in parallel. Two of these, each with 165 cc/rev maximum displacement transmit the torque via the gearbox directly to the propulsion wheels. The third motor with 135 cc/rev maximum displacement drives the twin tyres, which are offset within the travel path, via a T-axle. The motors can be controlled independently of each other. This allows tight turning circles, without any of the wheels spinning.



# Application Example.

## Beet Harvester, 400 kW.

### Equipment

- A** 1x HPV 280-02 E2 (drive pump)
- B** 1x HMV 135-02 (drive motor)
- C** 2x HMV 165-02 (drive motor)
- D** 1x iCon (electronic control unit)

### Advantages

- Low soil compaction
- Intelligent distribution of tractive effort

### Options

- With and without bunker
- Articulated joints, permanently offset axles, asymmetrical design
- Hydrostatic systems for auxiliary drives like choppers, transport belts, etc.



# 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 Vmax	rpm	4300	3800	3700	3200	3100	2700	2400	3300	2900
Max. speed at Vmax	rpm	4400	4100	3800	3500	3400	3000	2700	3400	3100
Max. operating speed at Vmin	rpm	4700	4400	4100	3700	3500	3200	2900	4100	3500
Max. speed at Vmin	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

