

Drive Solutions for Rollers.

Linde Hydraulics

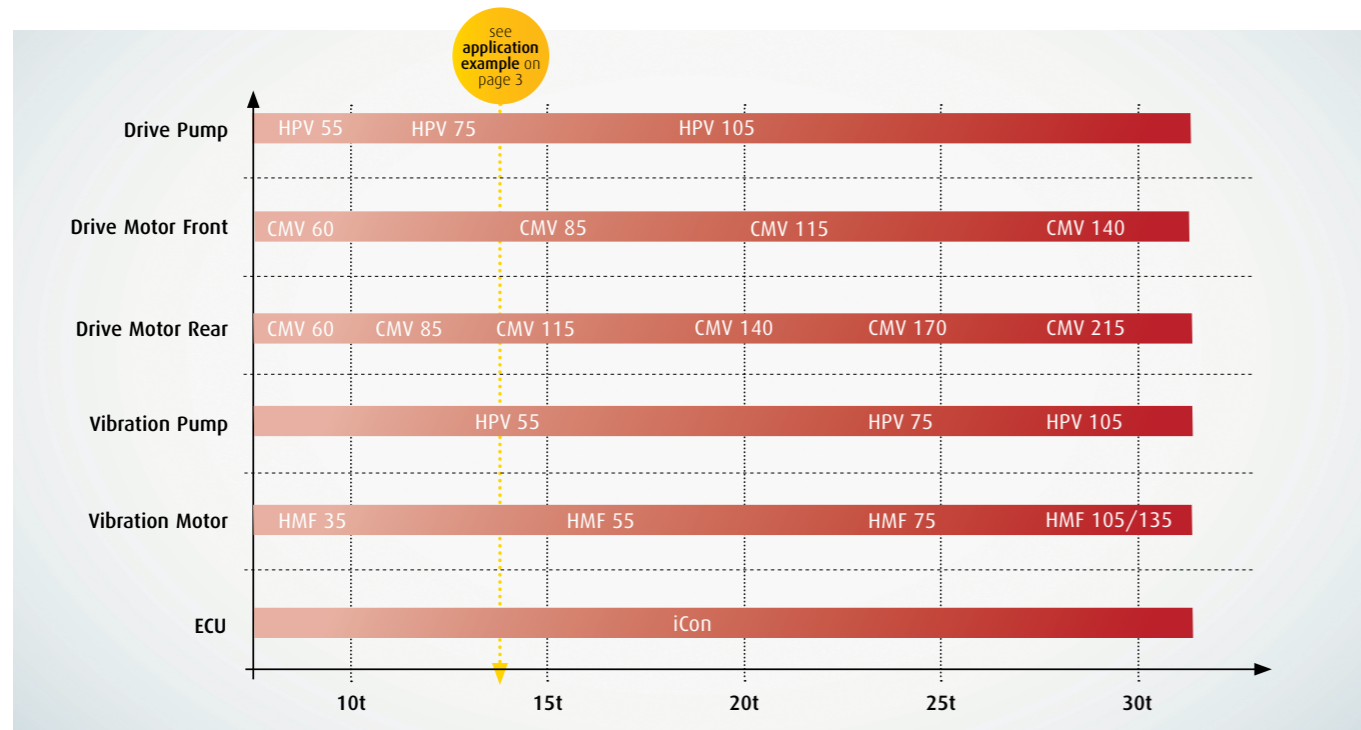
Linde



Single Drum Roller Solutions. Our Portfolio.

The graphic below provides a help for the selection of units with the focus on single drum vibrating rollers. But Linde Hydraulics is your partner for every kind of compactor machine. 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.

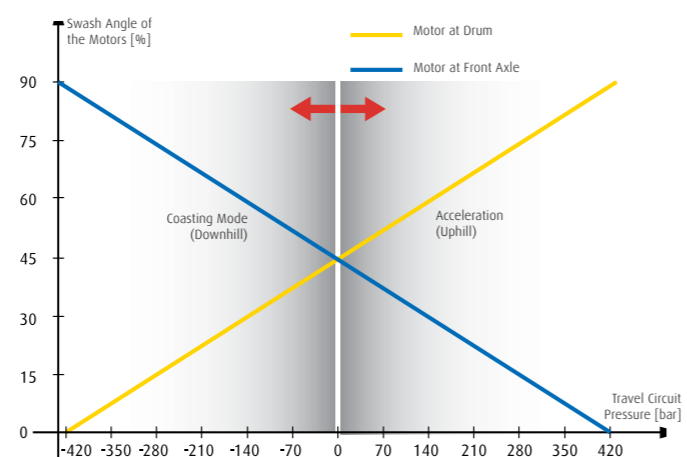


Even, jolt-free starting, driving and rolling set all Linde drive units apart. The key feature of the drive unit in the compactor in this example is the hydraulic traction control. The compactor boasts two hydraulic motors connected in parallel. One of these drives the rear axle, while another rotates the drum.

The system is able to complete its functions with very little input. Only a single pressure sensor monitors the drive pressure in the drive train. A tilt angle sensor is not necessary for the system to function. The more the drive resistance increases, either due to higher speeds, rougher terrain, or gradients, the more the pressure increases in the drive circuit of the machine. A pressure sensor detects this and reports the status to the electronic control unit, which sends a control signal to the motors.

When accelerating and driving on slopes, the transferable torque moves to the rear axle. The motors are adjusted accordingly and continuously shift a higher percentage of torque from the front to the rear axle – i.e. the axle with the better traction. In coasting mode, the drive torque is distributed to the binding to benefit the front axle. This generates increased supporting torque, which allows the machine to move in a controlled manner. The drive on the rear axle is increasingly relaxed to maintain good steering properties.

Thanks to the rapid response time of the controller and motor, this all happens very evenly and without any interruption of tractive effort. The driving speed remains constant. The operator does not have to intervene manually and can concentrate fully on the task of achieving consistently high compacting quality. This is further supported by the vibration drive for the drum. The strength and frequency can be set independently from the driving speed.



Application Example. Single Drum Roller, 14 t.

Equipment

- A** 1x HPV 105-02 E1 (drive pump) + 1x HPV 55-02 E5 (vibration pump)
- B** 1x CMV 115 E400 (drive motor rear)
- C** 1x CMV 60 E400 (drive motor front)
- D** 1x HMF 35-02 (vibration motor)
- E** 1x iCon (electronic control unit)

Advantages

- High compression power and compacting quality, even with a small number of passes
- Eases the operation for the driver
- Automatic traction control thanks to torque transfer

Options

- Decentralized design with two wheel motors, so that the engine can be positioned lower, which allows a lower centre of gravity



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

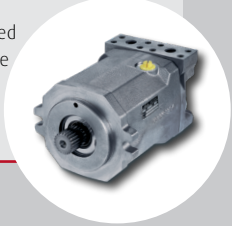


FIXED DISPLACEMENT MOTORS FOR OPEN AND CLOSED CIRCUIT OPERATION									
HMF-02		28	35	55	63	75	85	105	135
Max. displacement	cc/rev	28.6	35.6	54.7	63	75.9	85.6	105	135.6
Max. operating speed	rpm	4500	4500	4100	3900	3800	3600	3500	3200
Max. speed (intermittent)	rpm	4800	4800	4400	4200	4100	3850	3800	3500
Nominal pressure	bar	450	450	450	450	450	450	450	450
Peak pressure (intermittent)	bar	500	500	500	500	500	500	500	500
Output torque ($\Delta p=430$ bar)	Nm	196	244	374	431	519	586	719	928
Corner power (theor.) ($V_{max} \times n_{max} \times \Delta p$ 430 bar)	kW	92	115	161	176	207	221	263	311
Weight	kg	16	16	19	24	26	33	33	39

PRODUCT ADVANTAGES

HMF-02

- steady low speed
- high starting torque
- compact design
- high power density
- high reliability
- long service life
- available with integrated directional control valve for direct swing drive control



VARIABLE DISPLACEMENT MOTORS FOR CLOSED AND OPEN CIRCUITS								
CMV		60	85	115	140	170	215	CMF 80
Max. displacement	cc/rev	60	85	115	140	170	215	80
Max. operating speed at V_{max}	rpm	4450	3900	3550	3350	3100	2900	4500
Max. speed (intermittent) at V_{min}	rpm	7200	6800	6150	5800	4900	4600	5000
Nominal pressure	bar	450	450	450	450	450	450	450
Peak pressure (intermittent)	bar	500	500	500	500	500	500	500
Output torque ($\Delta p=430$ bar and V_{max})	Nm	411	582	787	958	1163	1471	547
Corner power ($V_{max} \times n_{max}$ at V_{min} x Δp 430 bar)	kW	191	238	293	336	378	447	258
Weight	kg	27.7	36.3	44.8	59.2	62.1	76.4	23.0

PRODUCT ADVANTAGES

CMV/CMF

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

status at development stage
Contact us!

