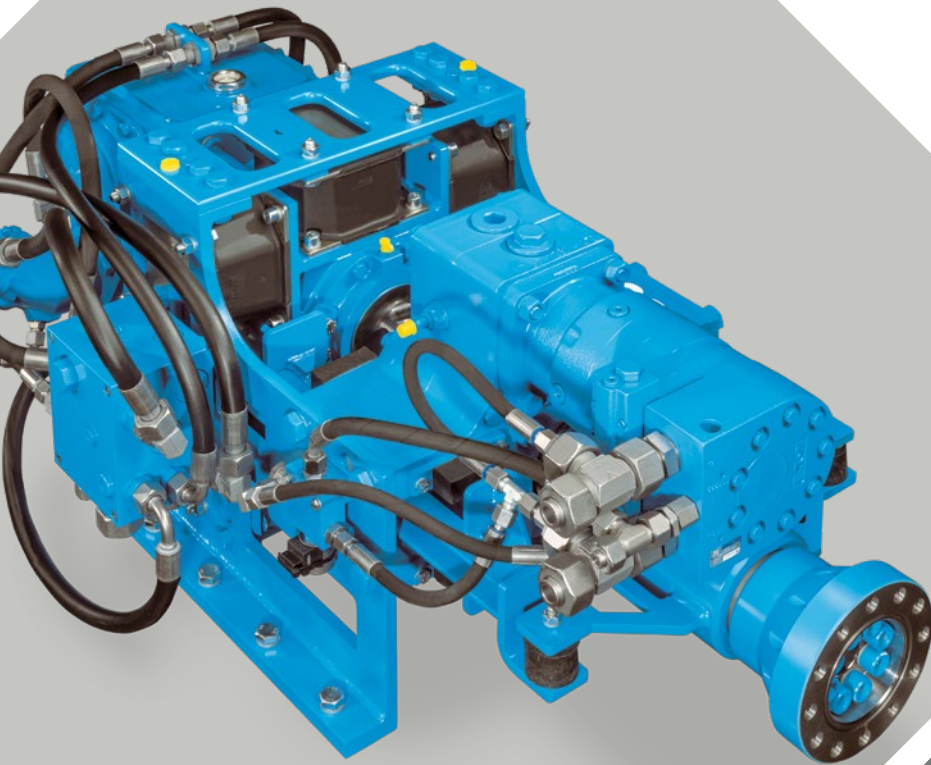


terra
infrastructure

safety: efficient and sustainable



VIBRO DRILL
VD50

VIBRO DRILL VD50

Frequency from 85 Hz to 120 Hz

VD50 is a VibroDrill especially developed for:

- Micropile drilling up to a casing diameter of 5 inches (ø133 mm)
- Overburden drilling up to an outside casing diameter of 4 inches (ø101 mm)
- Threaded hollow bar drilling (self-drilling anchors) up to a bar diameter of 2 inches (ø52 mm)
- Geothermal drilling with one-time drill bit up to a casing diameter of 5 inches (ø133 mm)
- Geotechnical drilling for soil sampling up to a diameter of 4.5 inches (ø114.3 mm)

VD50 has a standard built-in special rubber damping mechanism to avoid vibrations from being transferred into the drill mast.

VD50 achieves optimum drilling performance in different types of soil by adjusting the eccentric moment; different centrifugal forces (impact energies) are available.

VD50 offers two different high-speed and high-pressure motors (480 cm³, 677 cm³).

VD50 has a total weight of 480 kg.

Vibro Unit	85 Hz	100 Hz	120 Hz
Operating pressure	240 - 340 bar	240 - 340 bar	240 - 340 bar
Oil flow rate	72 l/min	72 l/min	72 l/min
Impact rate	5,100 min ⁻¹	6,000 min ⁻¹	7,200 min ⁻¹
Centrifugal force	95 kN	100 kN	90 kN
Motor size	1 × 14 cm ³	1 × 12 cm ³	1 × 10 cm ³
Casing weight	1,500 kg	1,200 kg	800 kg

Performance Data

Drilling performance	up to 1 m per minute
Drilling accuracy	more precise (1-2 % deviation)
Drilling angle	0° - 90° (horizontal - vertical)
Casing diameter range	Ø 76.1 - 133 mm
Drilling depth	up to 50 m
Soil conditions	sand, gravel, clay, medium-hard rock

OPTIONS

- External flushing head for casings, self-drilling hollow bars and soil sampling
- Build-in RPM sensors with external box for speed and frequency indication
- Special drill rods, casings and drill bits
- Soil sampling drilling tools

Rotary Drive

Motor HP480 ccm

Pressure at rotary drive		170 bar				200 bar				240 bar				280 bar			
Gear				2 nd	1 st			2 nd	1 st			2 nd	1 st			2 nd	1 st
Oil flow rate (lpm)	90 Torque (Nm) Speed (rpm)			1,900 100	2,900 66			2,300 99	3,500 66			2,700 99	4,100 66			3,200 98	4,800 65
	120 Torque (Nm) Speed (rpm)			1,800 136	2,800 91			2,200 135	3,400 90			2,600 135	4,000 90			3,100 135	4,700 90
	170 Torque (Nm) Speed (rpm)			1,500 198	2,600 132			2,000 194	3,200 129			2,400 192	3,800 128			2,900 192	4,500 128

1st gear (low-speed mode), 2nd gear (high-speed mode)

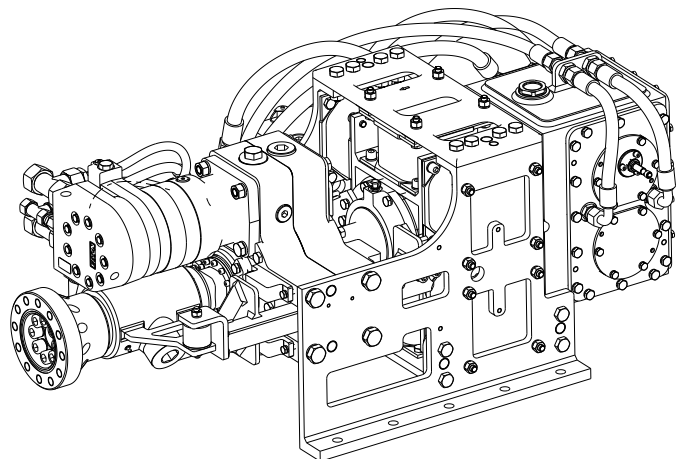
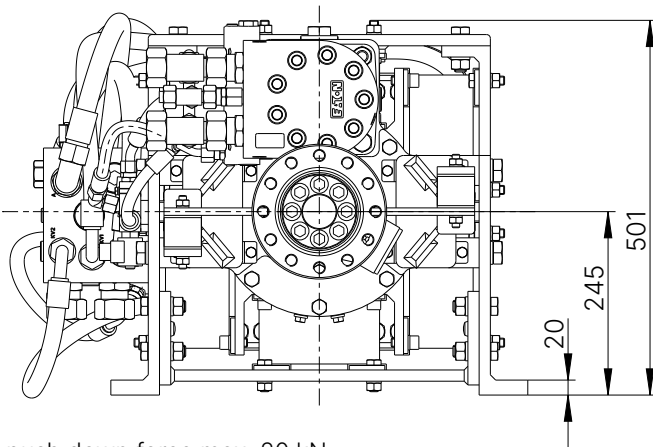
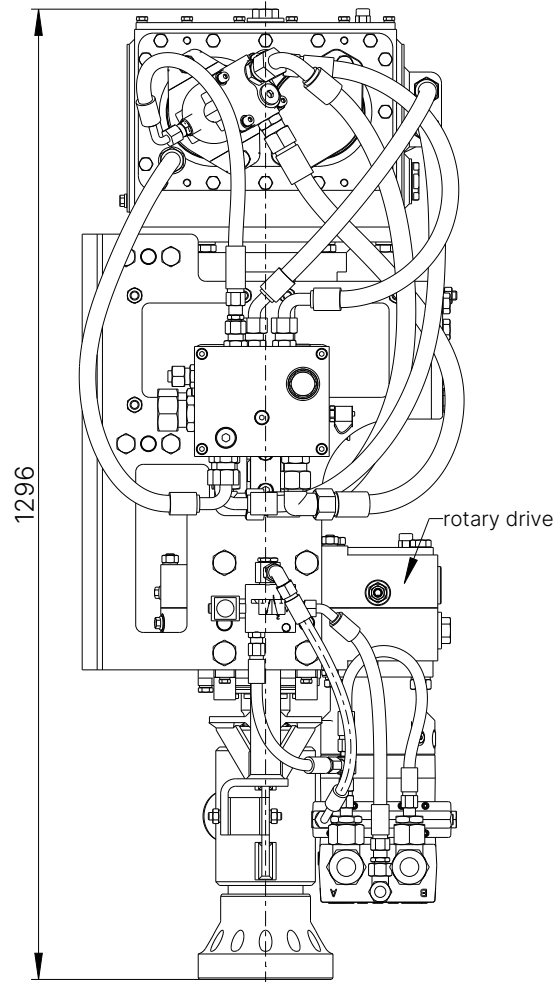
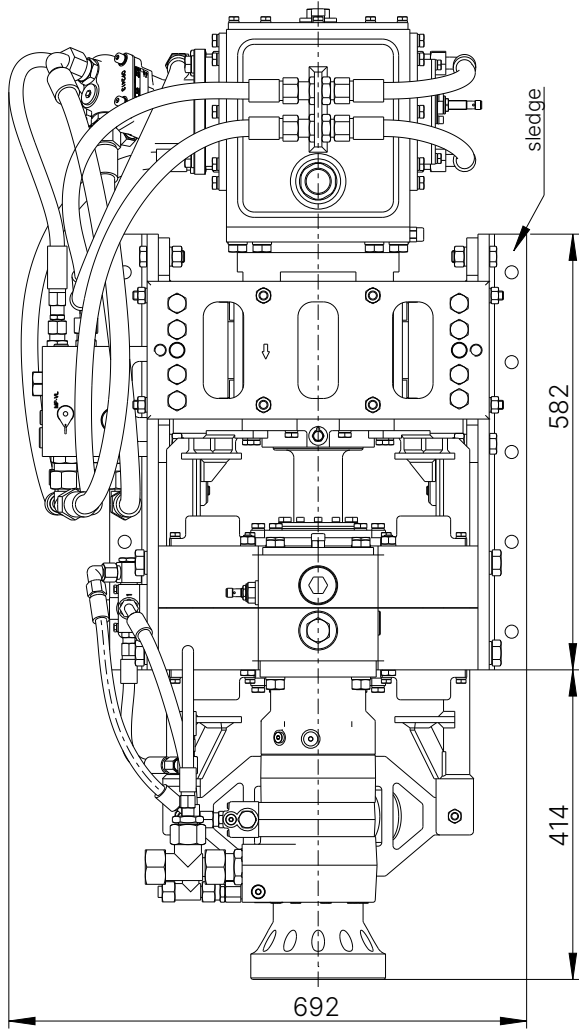
Motor HP677 ccm (standard)

Pressure at rotary drive		170 bar				200 bar				240 bar				280 bar			
Gear				2 nd	1 st			2 nd	1 st			2 nd	1 st			2 nd	1 st
Oil flow rate (lpm)	90 Torque (Nm) Speed (rpm)			2,600 71	4,100 47			3,200 70	4,900 47			3,800 70	5,800 47			4,500 69	6,800 46
	120 Torque (Nm) Speed (rpm)			2,500 96	3,900 64			3,100 96	4,800 64			3,700 96	5,700 64			4,300 96	6,700 64
	170 Torque (Nm) Speed (rpm)			2,200 140	3,600 93			2,800 138	4,500 92			3,400 136	5,400 91			4,000 136	6,400 91

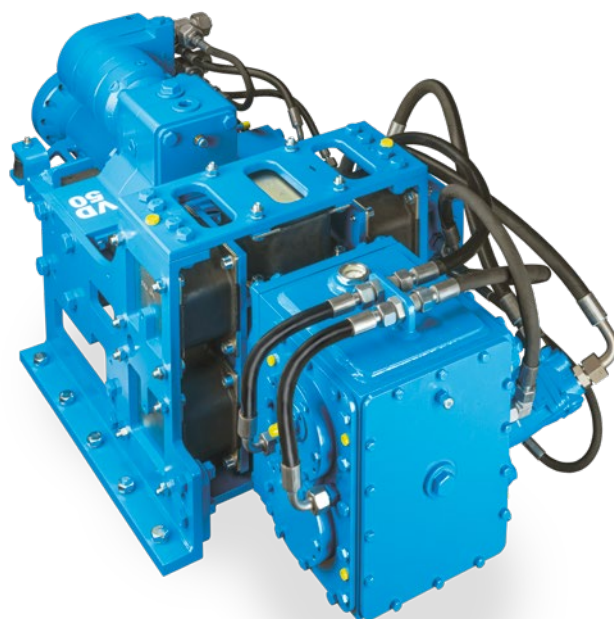
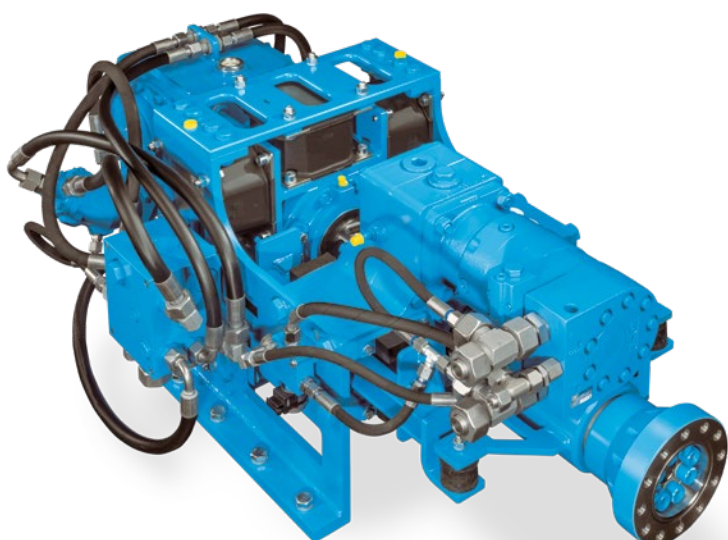
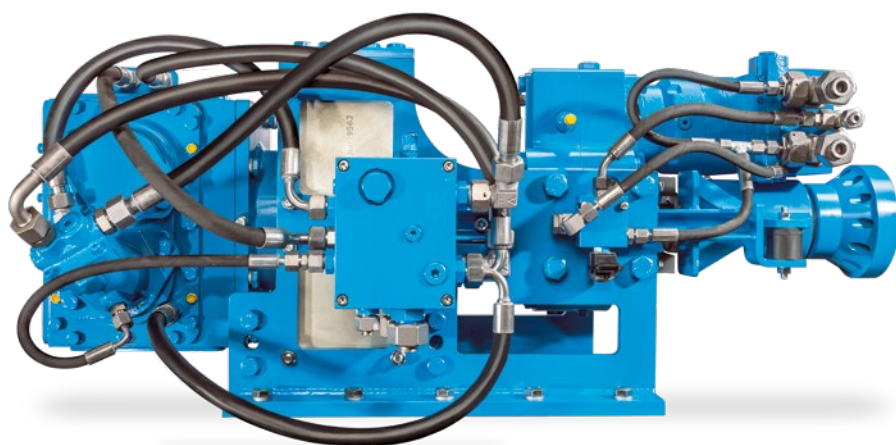
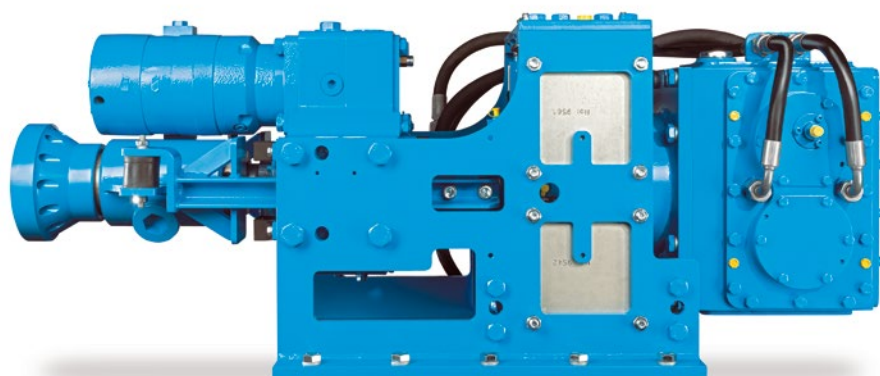
1st gear (low-speed mode), 2nd gear (high-speed mode)

Dimensions

VD50 with 2 unbalances
centrifugal force max 100 kN



push down force max. 20 kN
retraction force max. 75 kN



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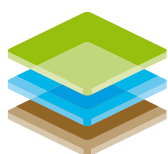
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