

terra
infrastructure

safety: efficient and sustainable



VIBRODRILL
VD 100

VIBRODRILL VD 100

Frequency from 85 Hz to 120 Hz

VD 100 is a VibroDrill especially developed for:

- Micropile drilling up to a casing diameter of 9 inches (ø228,6 mm)
- Overburden drilling up to an outside casing diameter of 8 inches (ø203,2 mm)
- Threaded hollow bar drilling (self-drilling anchors) up to a bar diameter of 6 inches (ø152,4 mm)
- Geothermal drilling with one-time drill bit up to a casing diameter of 8 inches (ø203,2 mm)
- Geotechnical drilling for soil sampling up to a diameter of 8 inches (ø203,2 mm)

VD 100 has a standard built-in special rubber damping mechanism to avoid vibrations from being transferred into the drill mast.

VD 100 achieves optimum drilling performance in different types of soil by adjusting the static moment; different static moments are available.

VD 100 offers two different high-speed and high-pressure motors (480 cm³, 677 cm³).

VD 100 has a total weight of 1,050 kg.

Vibro Unit	85 Hz	Standard	
		100 Hz	120 Hz
Operating pressure	260 - 340 bar	260 - 340 bar	260 - 340 bar
Oil flow rate	97 l/min	108 l/min	101 l/min
Centrifugal force	185 kN	200 kN	195 kN
Motor size Casing	1 x 19 cm ³	1 x 18 cm ³	1 x 14 cm ³
weight	2.750 kg	2.050 kg	1.200 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 max.	Ø228,6 mm
Drilling depth	up to 80 m
Soil conditions	sand, gravel, clay, medium-hard rock

OPTIONS

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

Rotary Drives

Motor-Version HP480 ccm

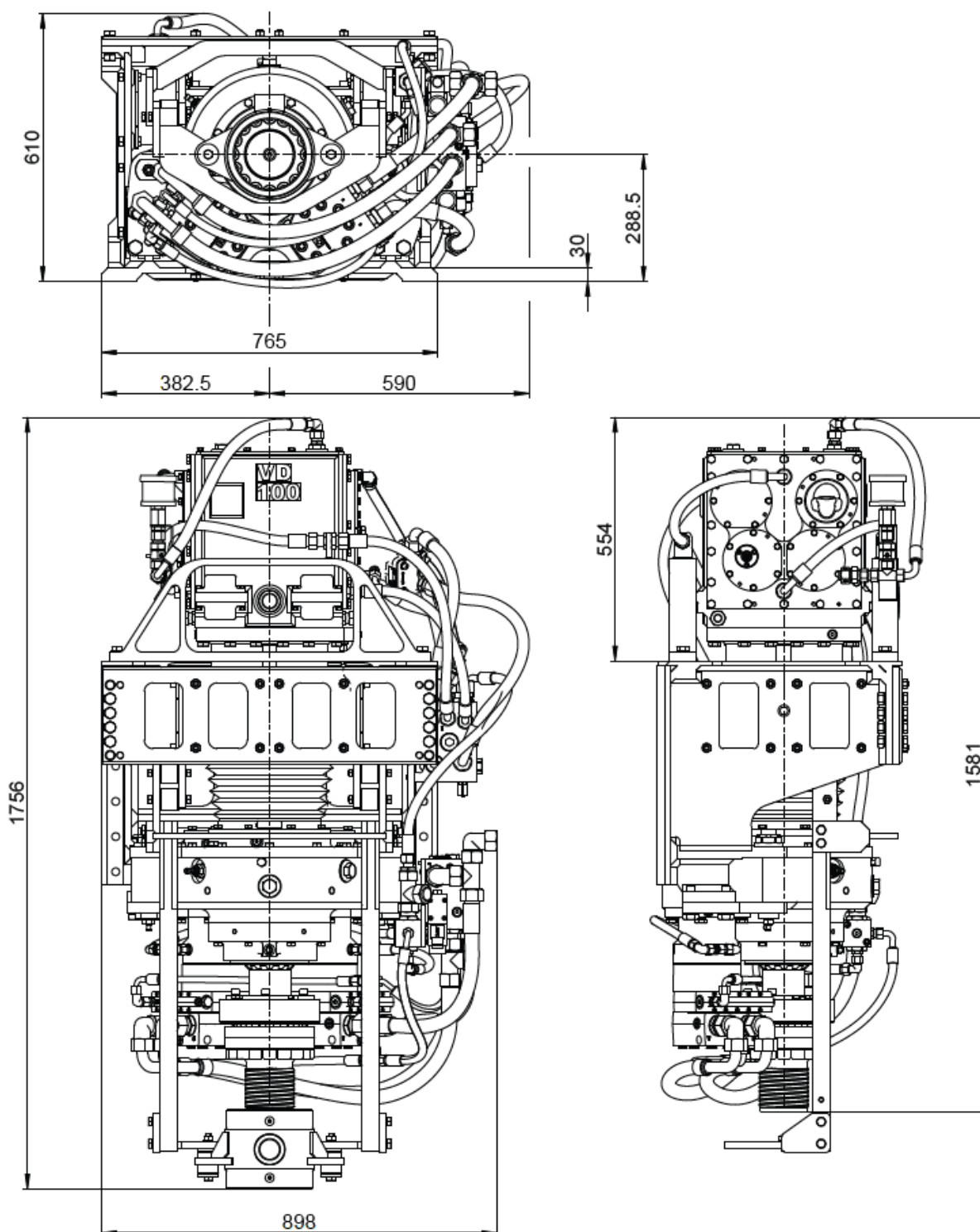
Pressure at rotary drive			170 bar				200 bar				240 bar				280 bar			
Gear			4 th	3 rd	2 nd	1 st	4 th	3 rd	2 nd	1 st	4 th	3 rd	2 nd	1 st	4 th	3 rd	2 nd	1 st
Oil flow rate (lpm)	90	Torque (Nm) Speed (rpm)	2,000 108	3,100 72	4,200 54	6,300 36	2,400 108	3,600 72	5,000 54	7,500 36	2,900 108	4,400 72	6,000 54	9,100 36	3,400 108	5,200 72	7,000 54	10,600 36
	120	Torque (Nm) Speed (rpm)	1,400 144	2,800 96	4,000 72	6,100 48	1,800 143	3,300 96	4,800 72	7,300 48	2,300 143	4,100 95	5,800 71	8,900 48	2,800 142	4,900 95	6,900 95	10,400 47
	170	Torque (Nm) Speed (rpm)	1,200 204	2,400 136	3,800 102	5,900 68	1,600 203	2,900 135	4,600 102	7,000 68	2,100 202	3,700 135	5,600 101	8,600 67	2,700 201	4,500 134	6,600 101	10,200 67
1st gear (parallel mode), 2nd gear (parallel + high-speed mode), 3rd gear (serial mode), 4th gear (serial + high-speed mode)																		

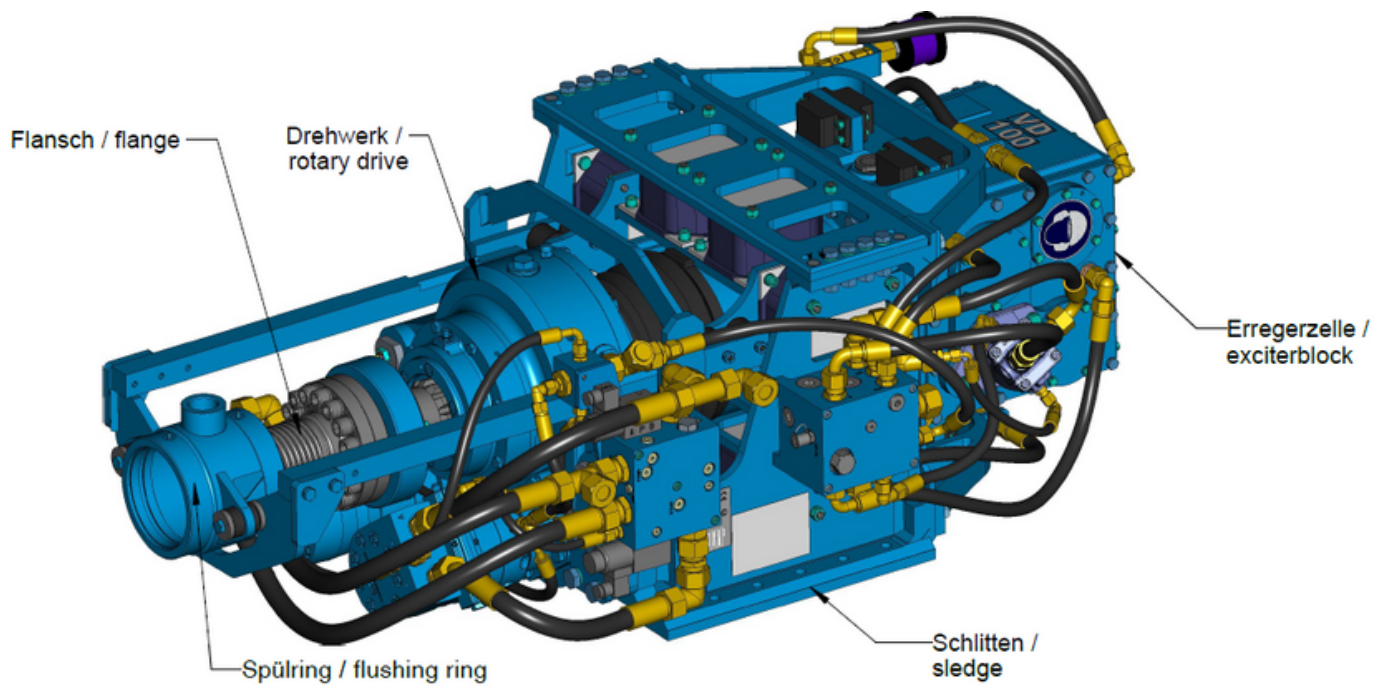
Motor-Version HP677 ccm (standard)

Pressure at rotary drive			170 bar				200 bar				240 bar				280 bar			
Gear			4 th	3 rd	2 nd	1 st	4 th	3 rd	2 nd	1 st	4 th	3 rd	2 nd	1 st	4 th	3 rd	2 nd	1 st
Oil flow rate (lpm)	90	Torque (Nm) Speed (rpm)	2,800 77	4,300 51	5,900 39	8,900 26	3,300 77	5,100 51	7,000 39	10,600 26	4,100 77	6,200 51	8,500 54	12,800 36	4,800 108	7,300 72	9,900 54	15,000 36
	120	Torque (Nm) Speed (rpm)	2,000 102	3,900 68	5,700 51	8,700 34	2,500 102	4,700 68	6,800 51	10,300 34	3,300 101	5,800 67	8,200 50	12,500 34	4,000 101	6,900 67	9,700 50	14,700 34
	170	Torque (Nm) Speed (rpm)	1,700 145	3,300 97	5,300 72	8,300 48	2,300 144	4,200 96	6,400 102	9,900 48	3,000 143	5,300 96	7,900 71	12,100 48	3,700 143	6,400 95	9,400 71	14,300 48
1st gear (parallel mode), 2nd gear (parallel + high-speed mode), 3rd gear (serial mode), 4th gear (serial + high-speed mode)																		

Dimensions

push down force max. 30 kN
retraction force max. 100 kN





VD100 drilling in granite, 25 m deep, hole diameter 120 mm, flushing with air



VD100 drilling in sand and gravel, 65 m deep, hole diameter 190 mm, flushing with water



VD100 drilling in medium-hard rock, 100 m deep, hole diameter 135 mm, flushing with air

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