

terra  
infrastructure

safety: efficient and sustainable



DRIFTER  
HB50

# DRIFTER HB50

HB50 is a Drifter (top-hammer) especially developed for:

- Micropile drilling up to a casing diameter of 9 inch (ø228,6 mm)
- Overburden drilling up to an outside casing diameter of 8 inch (ø203,2 mm)
- Threaded hollow bar drilling (self-drilling anchors) up to a bar diameter of 6 inch (ø152,4 mm)

HB50 has a standard built-in rubber damping mechanism to avoid blank impacts and to allow percussion during retraction of casings; optional with a hydraulic damping mechanism.

HB50 achieves an optimal drilling performance in different types of soil by adjusting the impact frequency and the impact energy, therefore 3 different impact frequencies and impact energies are available.

HB50 offers 3 different ways to switch between the percussion mechanism and the speed of the rotary drive, either electrically or hydraulically or manually and it offers three different high-speed and high-pressure motors (344 ccm, 480 ccm, 677 ccm).

## Percussion Unit

Operating pressure	180 - 200 bar
Oil flow rate	80 - 90 l/min
Impact rate	(20   32   40 Hz) 1.200   1.900   2.400 min <sup>-1</sup>
Single impact energy	840   540   420 Nm

## Shank Adaptors (Striker Bars)

Male thread (standard)	C112 left   C112 right
Male thread	T90 left   C90 left   C90 right
Male thread	R(H)112 left   R(H)112 right

### OPTIONS

- External flushing head for casings and self-drilling hollow bars
- Built-in RPM sensor with external box for speed indication
- Alternative: hydraulic damping mechanism
- Central lubrication system

## Rotary Drives

### Motor-Version 344 ccm (Two-Speed)

Pressure at rotary drive		170 bar				200 bar				240 bar				280 bar				
Gear		4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	
Oil flow rate (lpm)	90	Torque (Nm) Speed (rpm)	1.600 126	2.600 84	3.600 63	5.500 42	1.900 126	3.100 84	4.300 63	6.600 42	2.400 126	3.800 84	5.200 63	7.900 42	2.900 126	4.500 84	6.100 63	9.300 42
	120	Torque (Nm) Speed (rpm)	1.200 168	2.400 112	3.500 84	5.400 56	1.600 168	2.900 112	4.200 84	6.400 56	2.000 168	3.600 112	5.100 84	7.800 56	2.500 168	4.300 112	6.000 84	9.100 56
	170	Torque (Nm) Speed (rpm)	1.100 238	2.100 158	3.300 119	5.100 79	1.400 238	2.600 158	4.000 119	6.200 79	1.900 238	3.300 158	4.900 119	7.500 79	2.300 238	4.000 158	5.800 119	8.900 79
1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)																		

### Motor-Version HP480 ccm (Two-Speed)

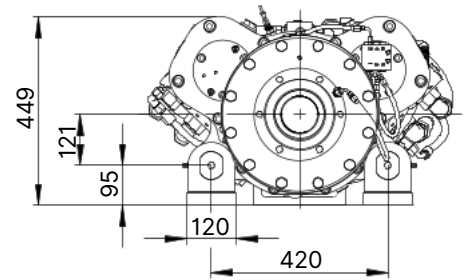
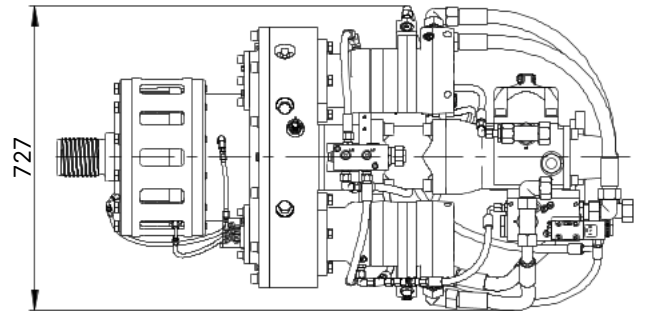
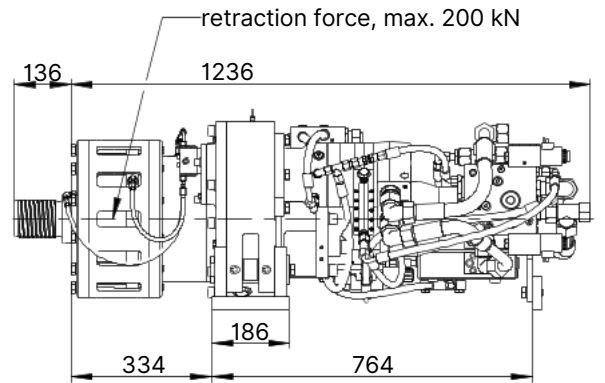
Pressure at rotary drive		170 bar				200 bar				240 bar				280 bar				
Gear		4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	
Oil flow rate (lpm)	90	Torque (Nm) Speed (rpm)	2.200 90	3.600 60	5.100 45	7.700 30	2.700 90	4.300 60	6.000 45	9.100 30	3.400 90	5.300 60	7.300 45	11.100 30	4.000 90	6.200 60	8.600 45	13.000 30
	120	Torque (Nm) Speed (rpm)	1.700 120	3.400 80	4.900 60	7.500 40	2.200 120	4.100 80	5.900 60	8.900 40	2.800 120	5.000 80	7.200 60	10.900 40	3.500 120	6.000 80	8.400 60	12.800 40
	170	Torque (Nm) Speed (rpm)	1.500 170	2.900 114	4.600 85	7.200 57	2.000 170	3.600 114	5.600 85	8.600 57	2.600 170	4.600 114	6.800 85	10.500 57	3.200 170	5.500 114	8.100 85	12.400 57
1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)																		

### Motor-Version HP677 ccm (Two-Speed)

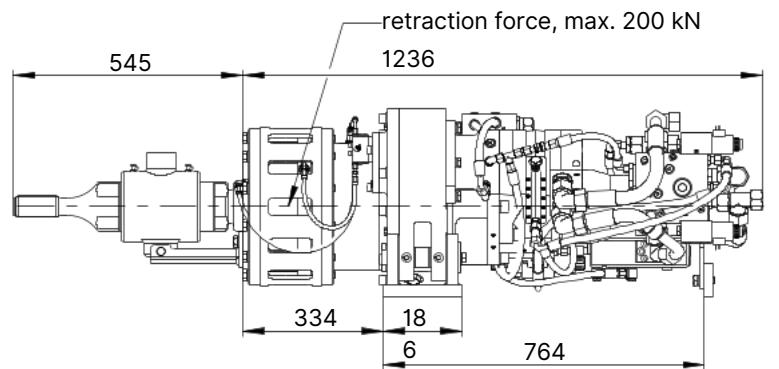
Pressure at rotary drive		170 bar				200 bar				240 bar				280 bar				
Gear		4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	1 <sup>st</sup>	
Oil flow rate (lpm)	90	Torque (Nm) Speed (rpm)	3.200 64	5.100 43	7.100 32	10.900 21	3.800 64	6.100 43	8.500 32	12.900 21	4.700 64	7.400 43	10.300 32	15.600 21	5.600 64	8.800 43	12.100 32	18.300 21
	120	Torque (Nm) Speed (rpm)	2.400 85	4.800 57	6.900 43	10.600 28	3.100 85	5.800 57	8.300 43	12.600 28	4.000 85	7.100 57	10.100 43	15.300 28	4.900 85	8.500 57	11.900 43	18.000 28
	170	Torque (Nm) Speed (rpm)	2.100 121	4.100 80	6.500 60	10.100 40	2.800 121	5.100 80	7.900 60	12.100 40	3.700 121	6.400 80	9.700 60	14.800 40	4.600 121	7.800 80	11.400 60	17.500 40
1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)																		

## Dimensions

with rubber damping mechanism



with rubber damping mechanism & external flushing head





HB50 drilling in a basalt quarry

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