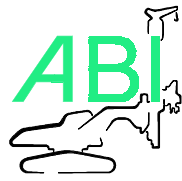
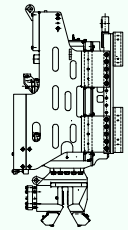




**ABI TM 14-17 L
Telescopic Mast Leader Rig**



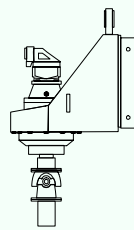
Applications for the ABI MOBILRAM-SYSTEM TM 14/17L



ABI Pile driving and extracting vibrator MRZV and MRZV-V

for installing and removing of

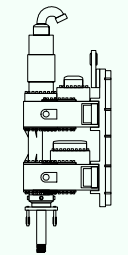
- sheet piles and trench sheetpiles
- steel beams and girders
- steel pipes / casings
- full displacement sections
- injection probes



ABI Auger drive MBA

for augering operations as e. g.

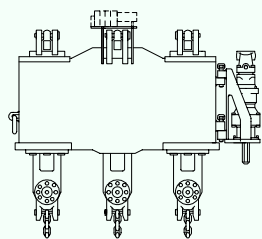
- ground release augering and augering for ground investigation
- augering for soldier pile installation
- displacement augering
- CFA piles
- injection and soil improvement for foundations



ABI Double auger head system VDW 3525

for auger / drilling operations as e. g.

- pile walls (counterfort type, tangential, secant and on - the - wall)
- augering cased for soldier pile installation
- well construction (dewatering)
- injection and soil improvement for foundations
- displacement augering



ABI HYDRO-PRESS-SYSTEM HP

for the vibration-free pushing and extracting of

- cold-rolled steel sheet pile sections with interlock

ABI HYDRO-PRESS-SYSTEM HPZ

for the vibration-free pushing and extracting of

- steel sheet pile Z - sections

ABI - Custom-made innovations

All stated figures are approximate values which may change.

Design subject to modifications.

03/98

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<http://www.abi-gmbh.de>
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Your partner in civil engineering

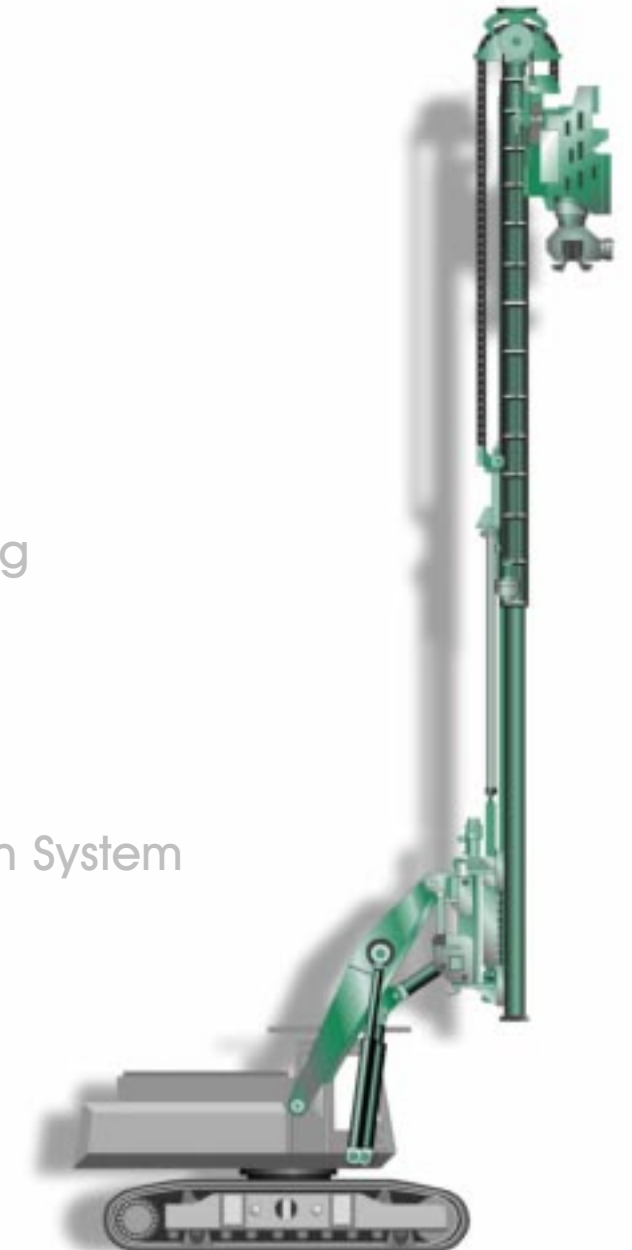
● ● ● Pile Driving

● ● ● Extracting

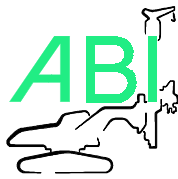
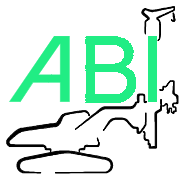
● ● ● Augering

● ● ● Silent Piling

● ● ● with System



ABI MOBILRAM-SYSTEM TM 14/17L



ABI Telescopic leader system

Technical Data		TM 14/17L	
Usable length			
with pile driving and extracting vibrator (depending on type)	mm	ca.	16.000
with auger drive	mm	ca.	16.500
Underground lowering depth	mm	ca.	3.500

Height - leader base set down, not telescoped, main boom in lowest position	mm	ca.	10.200
Height - leader cylinders I and II extended main boom in highest position	mm	ca.	19.700

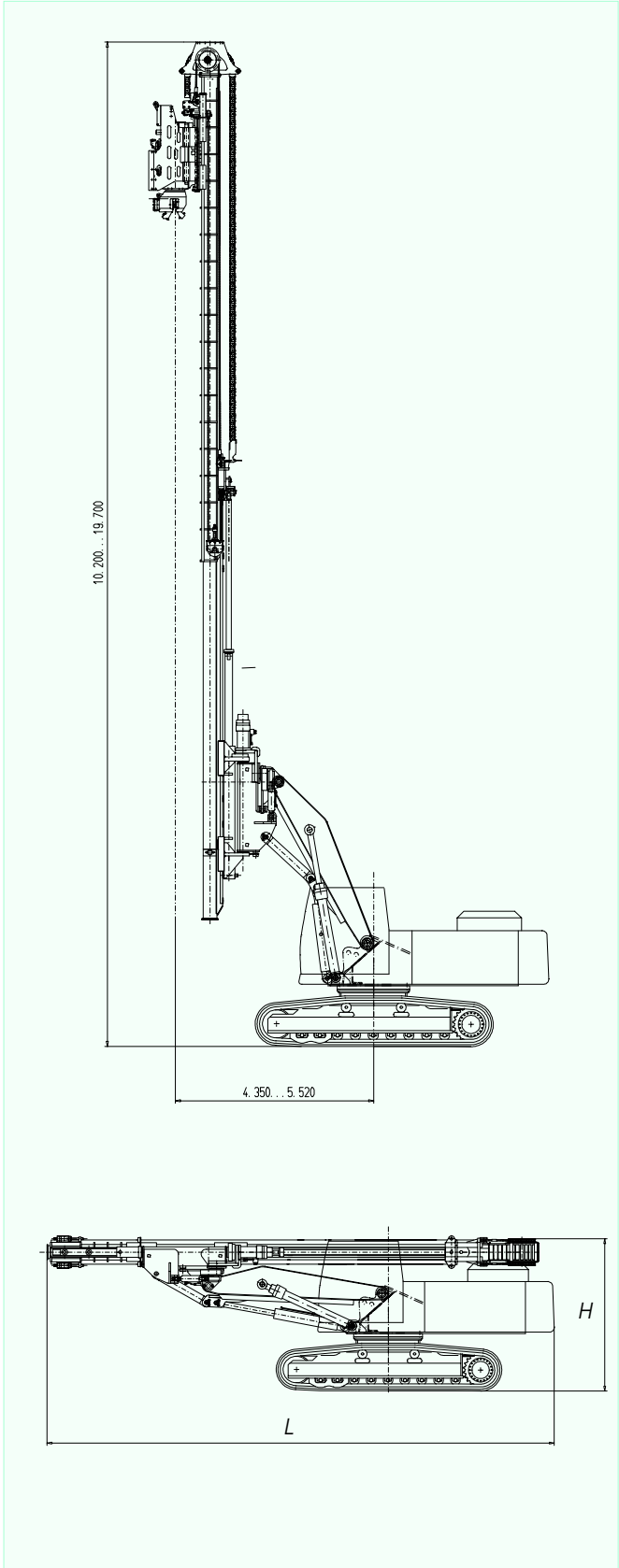
Prestressing force Leader cylinder I	kN	max.	70
Prestressing force Leader cylinder II	kN	max.	90
Extraction force Leader cylinder I	kN	max.	140
Extraction force Leader cylinder II	kN	max.	175
Torque absorption	daNm	max.	3.100

Leader inclination front/rear	degree	max.	±4°
Leader inclination laterally	degree	max.	±4°
Leader inclination transport position	degree	max.	- 90°
Leader slewing range	degree	max.	±100°

Attachment weight incl. main boom and main boom cylinder	kg	ca.	11.500
Weight of piling equipment without attachment depending on carrier unit	t	ca.	43to 47

Transport dimensions			
Length L	mm	ca.	11.900
Width	mm	ca.	3.000
Height H	mm	ca.	3.350

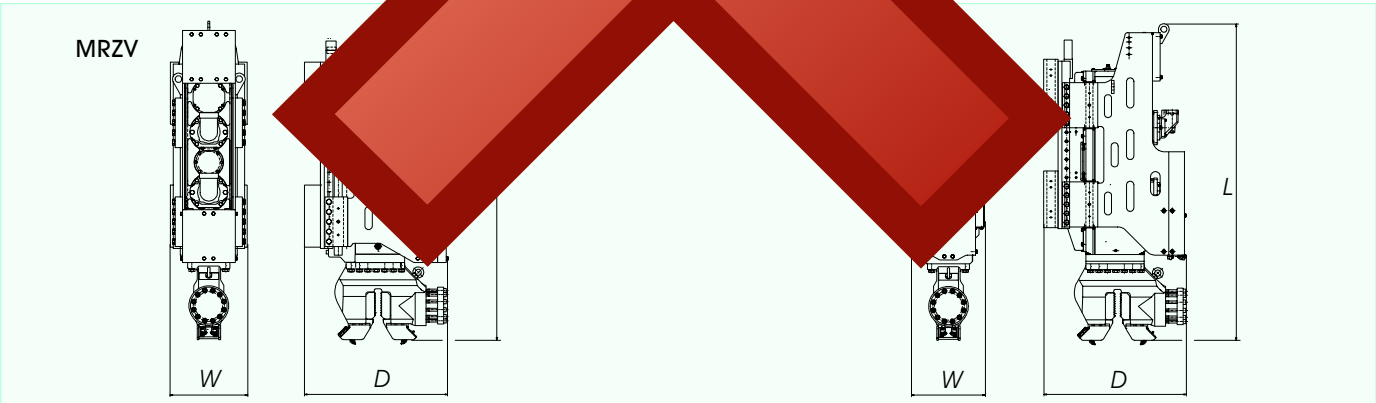
All stated figures are approx. values which may change depending on the carrier type.



ABI Pile driving and extracting vibrators

Technical Data	MRZV 600	MRZV 700	MRZV 800	MRZV 600V	MRZV 800V	MRZV 925V
				variable - static moment		
Centrifugal force at max. frequency	600	700	800	600	800	925
Static moment	8	10	16	6,8	0 bis 12	0 bis 16
Max. revolutions	2.530	2.530	2.530	2.470	2.470	2.300
Required hydr. power at max. frequency		> 160		>200	>200	>250
Dynamic weight*		1.630		2.290	2.290	2.350
Total weight*		2.690		3.470	3.470	3.770
Clamping force with standard jaw				720	1.000	1.120
Maximum weight of pile elements				1.500	2.000	2.500
Length* L	mm			2.270	2.670	2.670
Width W	mm			600	600	600
Depth D	mm			1.170	1.190	1.190

* including standard jaw assembly



ABI Auger drives

Technical Data		SW-M 100	
Torque	daNm		
Hexagon connection*	mm		
Max. oil pressure	bar		
Max. oil quantity	l/min ⁻¹		
Required oil quantity per rotation	l/rot.		
Max. revolutions	min ⁻¹		
Max. auger diameter	mm		
Total weight	kg		
Length L	mm		
Width W	mm		
Depth D	mm		

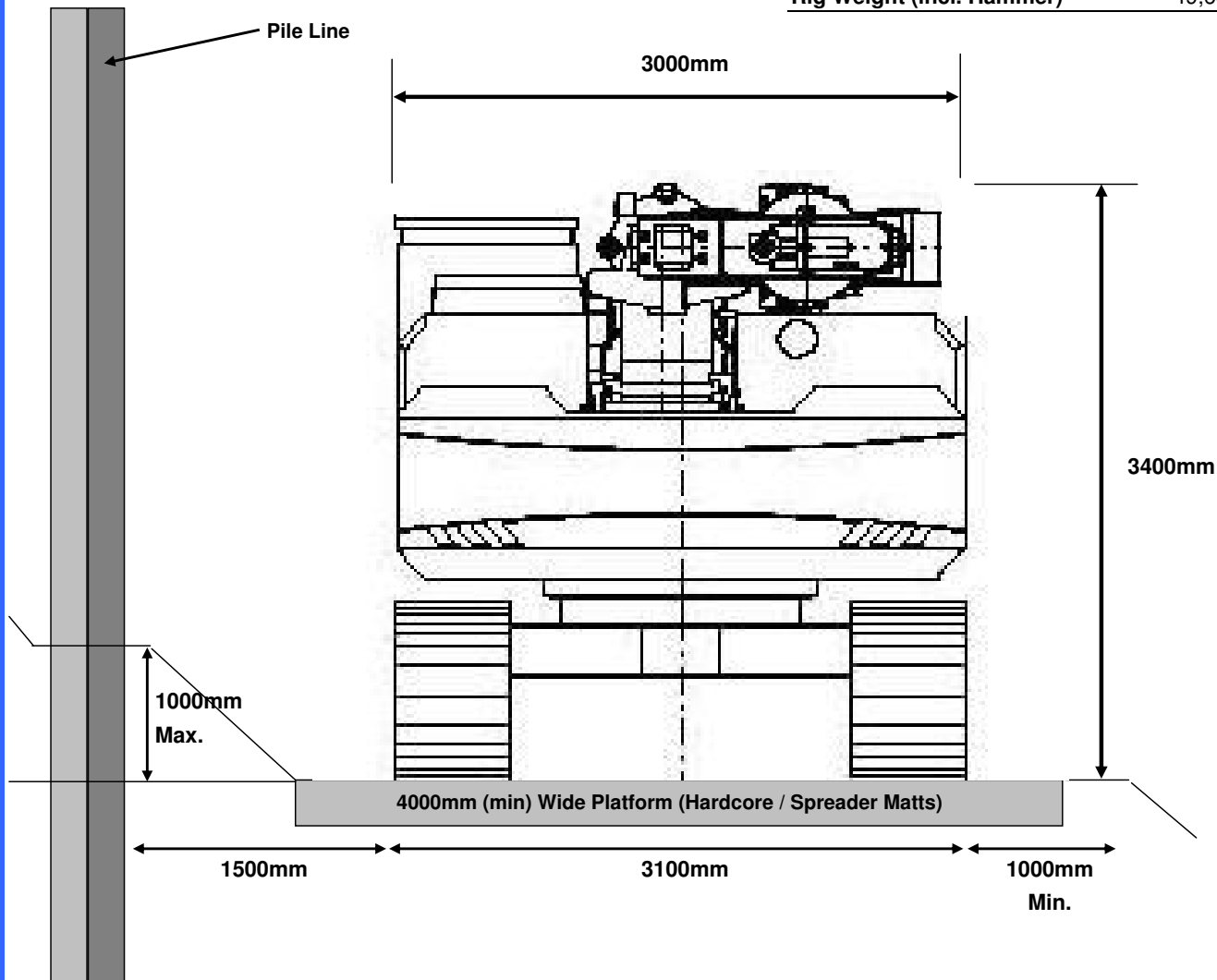
* SW-M as socket / female

Leader Rig

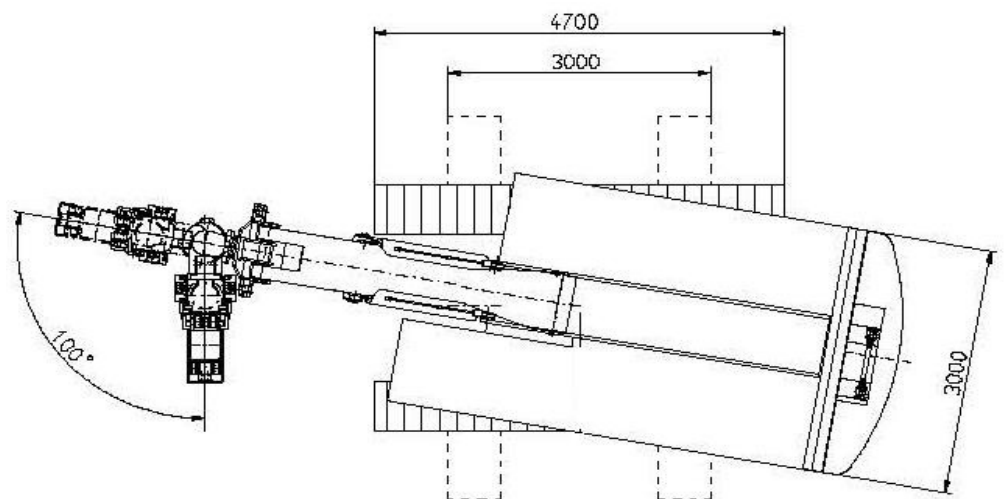
ABI TM 14/17 L

Rig Weight (incl. Hammer)

49,685 kg



SECTION



Direction of Piling Works

PLAN

VolkerSteel Foundations

Head Office: Springwell Road
Springwell
Gateshead
Tyne on Wear
NE9 7SP

Project/Client:

Drawing Number:

N/A

Scale:

N.T.S

Drawing Description:

TM 14/17 L Leader Rig Platform Requirements
and Operational Detail

Drawn by:

DWG

Date:

30/04/10

Vibratoren MRZV-V

Vibrators MRZV-V

MRZV 10V

12V

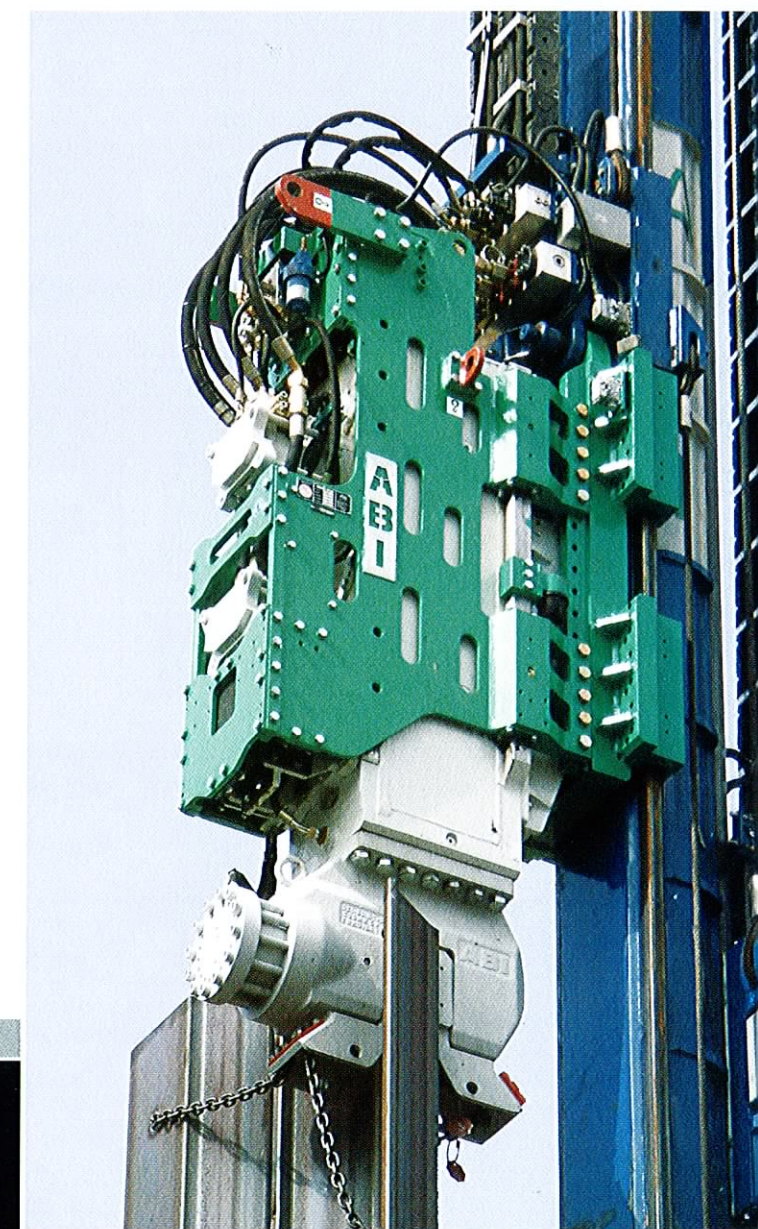
16V

18V

20V

30V

36V



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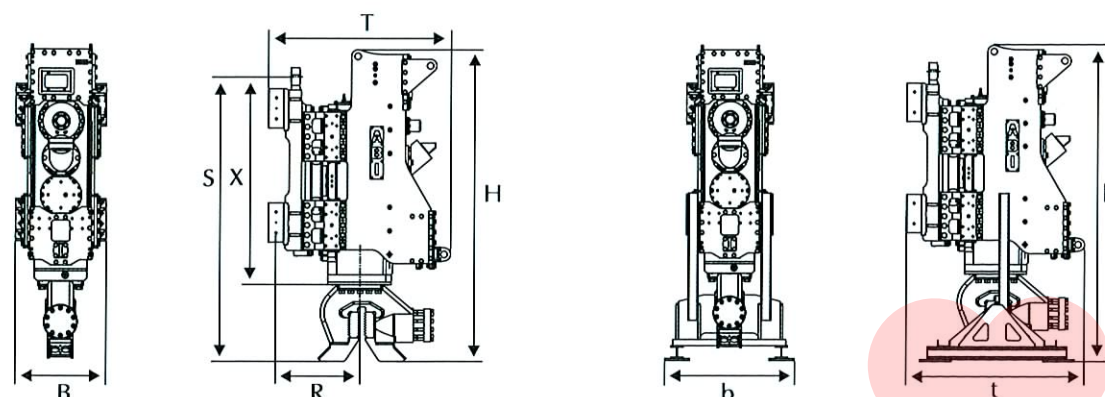
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ave to be regarded as approximate. The illustrations
al outfits which are not part of the standard scope of

Technische Daten		MRZV 10V	MRZV 12V	MRZV 16V	MRZV 18V
Statisches Moment	kgm	0-10	0-12	0-16	0-18
Dynamische Masse*	kg	2020 (1990**)	2180 (2150**)	2710	2730
Schwingweite	mm	10	11	12	13
Nenndrehzahl	min ⁻¹	2135	2135	2300	2160
Fliehkraft bei Nenndrehzahl	kN	500	600	925	925
Statische Zugkraft max.	kN	200 (180**)	200 (180**)	200	200
Arbeitsdruck	MPa	32	32	32	32
Hydr. Volumenstrom max.	l/min	288	385	621	693
Hydr. Eckleistung	kW	155	205	330	360
Gesamtgewicht*/Transportgewicht*	kg	2965/3180	3125/3340	4070/4285	4120/4335
Rammgutgewicht max. ***	kg	1500	2000	2500	2750

Maße					
H Höhe	mm	2375	2375	2720	2720
B Breite	mm	690	690	690	690
T Tiefe	mm	1405	1405	1405	1405
R Führung bis Rammachse	mm	650	650	650	650
S Verriegelung bis Unterkante*	mm	2170	2170	2530	2530
X Verriegelung bis Unterkante Erregerzelle	mm	1585	1585	1880	1880
Transportmaße					
Höhe (h)/Breite (b)/Tiefe (t)	mm	2475/1030/1405	2475/1030/1405	2800/1030/1405	2800/1030/1405

* mit Standardklemmzange, ** Ausführung für Mäkler mit einer Führungsbreite bis 450mm, *** höhere Werte auf Anfrage



Technical data		MRZV 10V	MRZV 12V	MRZV 16V	MRZV 18V
Static moment	kgm	0-10	0-12	0-16	0-18
Dynamic mass*	kg	2020 (1990**)	2180 (2150**)	2710	2730
Amplitude x 2	mm	10	11	12	13
Nominal revolutions	min ⁻¹	2135	2135	2300	2160
Centrifugal force at nominal frequency	kN	500	600	925	925
Static extraction force max.	kN	200 (180**)	200 (180**)	200	200
Nominal oil pressure	MPa	32	32	32	32
Hydraulic flow rate max.	l/min	288	385	621	693
Required hydr. power at vibrator	kW	155	205	330	360
Total weight*/transport weight*	kg	2965/3180	3125/3340	4070/4285	4120/4335
Weight of pile elements max. ***	kg	1500	2000	2500	2750

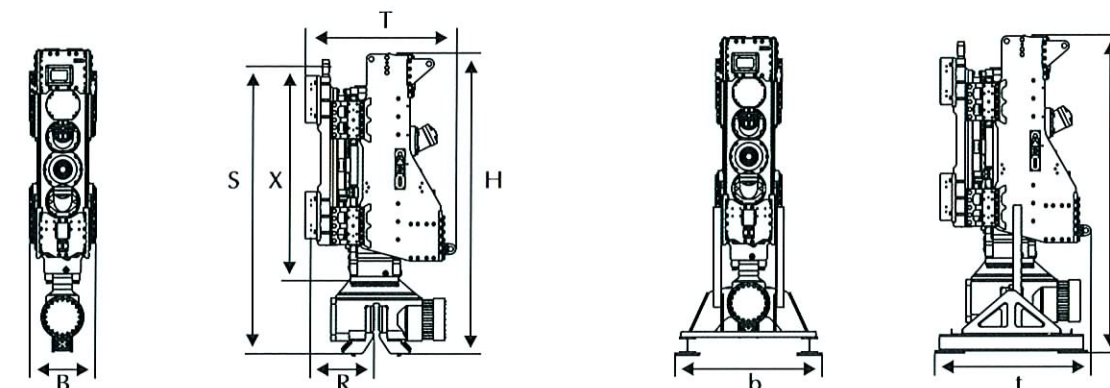
Dimensions					
H Height	mm	2375	2375	2720	2720
B Width	mm	690	690	690	690
T Depth	mm	1405	1405	1405	1405
R Guide to driving axle	mm	650	650	650	650
S Locking to bottom*	mm	2170	2170	2530	2530
X Locking to vibrator body	mm	1585	1585	1880	1880
Transport dimensions					
Height (h)/width (b)/depth (t)	mm	2475/1030/1405	2475/1030/1405	2800/1030/1405	2800/1030/1405

* with standard clamp assembly, ** version for mast with guide width up to 450 mm, *** higher values on request

Technische Daten		MRZV 20V	MRZV 30V	MRZV 36V
Statisches Moment	kgm	0-20	0-30	0-36
Dynamische Masse*	kg	2750	3900	3950
Schwingweite	mm	15	15,5	18,2
Nenndrehzahl	min ⁻¹	2140	2135	2020
Fliehkraft bei Nenndrehzahl	kN	1000	1500	1600
Statische Zugkraft max.	kN	200	270	270
Arbeitsdruck	MPa	32	32	32
Hydr. Volumenstrom max.	l/min	769	918	870
Hydr. Eckleistung	kW	400	490	465
Gesamtgewicht*/Transportgewicht*	kg	4140/4355	5200/5790	5250/5840
Rammgutgewicht max. ***	kg	3000	3200	3200

Maße				
H Höhe	mm	2720	3000	3000
B Breite	mm	690	670	670
T Tiefe	mm	1405	1525	1525
R Führung bis Rammachse	mm	650	650	650
S Verriegelung bis Unterkante*	mm	2530	2870	2870
X Verriegelung bis Unterkante Erregerzelle	mm	1880	2100	2100
Transportmaße				
Höhe (h)/Breite (b)/Tiefe (t)	mm	2800/1030/1405	3175/1480/1570	3175/1480/1570

* mit Standardklemmzange, *** höhere Werte auf Anfrage



Technical data		MRZV 20V	MRZV 30V	MRZV 36V
Static moment	kgm	0-20	0-30	0-36
Dynamic mass*	kg	2750	3900	3950
Amplitude x 2	mm	15	15,5	18,2
Nominal revolutions	min ⁻¹	2140	2135	2020
Centrifugal force at nominal frequency	kN	1000	1500	1600
Static extraction force max.	kN	200	270	270
Nominal oil pressure	MPa	32	32	32
Hydraulic flow rate max.	l/min	769	918	870
Required hydr. power at vibrator	kW	400	490	465
Total weight*/transport weight*	kg	4140/4355	5200/5790	5250/5840
Weight of pile elements max. ***	kg	3000	3200	3200

Dimensions				
H Height	mm	2720	3000	3000
B Width	mm	690	670	670
T Depth	mm	1405	1525	1525
R Guide to driving axle	mm	650	650	650
S Locking to bottom*	mm	2530	2870	2870
X Locking to vibrator body	mm	1880	2100	2100
Transport dimensions				
Height (h)/width (b)/depth (t)	mm	2800/1030/1405	3175/1480/1570	3175/1480/1570

* with standard clamp assembly, *** higher values on request

Ground Vibration Estimation (approximate)

Hammer MRZV 16V (TM 14/17) **Type** Vibro

Vibration

$$v = C\sqrt{(W)/r}$$

v = ppv in mm/s

C = soil/hammer parameter

W = hammer energy per blow/cycle (J/blow)

r = distance to point of interest (m)

Method	Ground conditions	C
Impact	Very stiff cohesive, dense granular, rock, fill with large obstructions	1.00
	Stiff cohesive, medium dense granular, compact fill	0.75
	Soft cohesive, loose granular, loose fill, organic soils	0.50
Vibro	All soils	0.70

C = 0.70

r	W	v		ppv	Radius
m	J/cycle	mm/s	Tolerance of building (not occupants)	mm/s	m
1	8616	65.0	Ruins, buildings of architectural merit	2	32.5
2	8616	32.5	Residential	5	13.0
3	8616	21.7	Light commercial	10	6.5
4	8616	16.2	Heavy Industrial	15	4.3
5	8616	13.0	Buried Services (general)	25	2.6
6	8616	10.8	Buried Services (old brick sewers)	12.5	5.2
7	8616	9.3			
8	8616	8.1			
9	8616	7.2			
10	8616	6.5			
11	8616	5.9			
12	8616	5.4			
16	8616	4.1			
20	8616	3.2			
30	8616	2.2			

Values from EC3:5 for cosmetic damage - dependent on hammer type

Vibration Estimates

