



ABI Machines at Work



ABI MOBILRAM-System

ABI MOBILRAM-System is an ideal machine for all common civil engineering works such as piling, extracting, augering, drilling and vibration free piling. The heart of this system is a slewable and in all directions inclinable telescopic or selectively fixed leader mast mounted to a special carrier. The leader mast serves as a guidance for the attachments and is available with a usable length up to 25 m.

The ABI MOBILRAM-System is characterised by compact transport dimensions and small working space requirement on the building site. Quick and safe set up from the transport position to the working position and back takes place unassisted in one step. The ABI attachments can be mounted fast and safe through the rapid change device or the state of the art Docking-System.

A high efficiency is reached using pre-stressing and extracting forces. These forces can be adapted optimally to the existing soil conditions. Guidance with minimal clearance provides high stability and precision, good noise and vibration insulation as well as reduced wear and tear.

Among further advantages of the system rank:

- good stability and high usable loads
- self-propelled carrier with high engine power
- low manpower requirements
- variety on attachments



ABI MOBILRAM-System - telescopic leader mast TM 20/25 with vibrator MRZV -V



Driving foundation pipe piles



Vibration-free piling and extracting Hydro-Press-System type HPZ



Driving sheet piles as preparation for soil exchange

Applications

- Piling and extracting of profiles, steel sheet piles, beams, full displacement profiles
- Augering and drilling, CFA, part and full displacement auger, kelly drilling, drilling with or without casing, soil mixing procedures
- Vibration free piling - static pressing and extracting of steel sheet piles
- Impacting of full displacement profiles, casings, pre-fab concrete piles



Vibropile installation with lost plate



Placing soft gel injection tubes with MRZV-V and mandrel



Clutching sheet piles

Ergonomic control system

- Menu guided control with touch screen
- Contrast image enhancement
- Trouble description in clear language
- Less wiring needed through CanBus technology

Optional:

- Built in data recording computer
- Automatic tool identification
- System diagnostic via mobile phone
- Theft prevention and global positioning as tracing feature





TM 20/25 transport configuration

Carrier

- Specific carrier
- High engine power
- Engine emissions according to the latest requirements
- heavy duty turntable

Optional:

- Telescopic undercarriage
- Detachable counterweight
- Biological degradable hydraulic oil

Transport

- Compact transport dimensions
- Fast folding down of the telescopic leader mast in the transport position and setting up into the working position unassisted
- Transport with attachment possible
- Transport weight facilitation due to the detachable counterweight



Carrier SR 35 with telescopic undercarriage and detachable counterweight



Kinematics of ABI MOBILRAM-System TM 20/25 with two folding down cylinders

Telescopic and fixed leader masts

- Tubular or box mast design
- Compact robust structure
- Rugged kinematics
- High reach and torque absorption
- Usable length up to 25 m

Attachments

- Pile driving and extracting vibrator MRZV-S
- Variable moment vibrator MRZV-V
- Auger drives and rotaries MDBA and VDW
- Hydro-Press-System
- DELMAG diesel pile hammers
- BANUT hydraulic impact hammers

Typical pile types

- Cold formed steel sheet piles
- Hot rolled steel sheet piles
- H+I beams and pipes/tubes
- Plastik/vinyl sheet piles

Change of attachments

- Quick and safe attachment change through the rapid change device or the Docking-System
- Simple low risk procedure
- Environmentally friendly

Advantages of Docking-System:

- No crossed lines
- Optional identification of attachments
- Easier monitoring of maintenance works



Ground release drilling for soldier beam wall in Los Angeles (USA)



Driving H-beams in pre-bored holes on site in Los Angeles (USA)



Test pile driving from a barge in Frankfurt am Main (Germany)



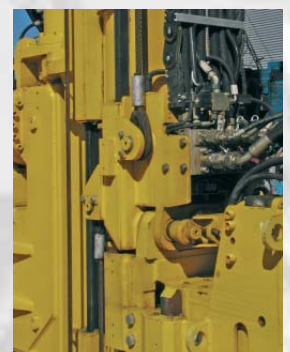
Docking-System just about to lock



Attachment completely connected



Rapid change device just about to lock



Rapid change device locked

ABI pile driving and extracting vibrators MRZV-S and MRZV-V

- High frequency vibrators
- MRZV-V vibrators with a variable eccentric moment for resonance free starting and stopping
- minimum vibration transfer to adjacent buildings

Field of application

- Driving and extracting of all common steel sheet piles, H+I-beams and casings
- Vibropile installation, a driven cast-in-situ foundation pile
- Soil improvement
- Geo-Textil pile installation
- Wick drain installation
- Soft gel horizontal diaphragm installation



MRZV-V with casing clamp assembly to drive pipes in Los Angeles (USA)



MRZV-V on telescopic leader mast TM 10/12,5 driving sheet piles



MRZV-V with dual Z-shaped sheet piles



MRZV-V driving sheet piles in a football stadium in Bremen (Germany)

ABI auger drives MDBA

- Vibration free
- Low noise
- Equipped with high pressure swivel
- High production

Field of application

- Ground release drilling
- Soil mixing wet (WSM) and dry (DSM) method
- Cased drilling with casing turn device
- Part and full displacement augering
- Kelly drilling on TM B versions
- Rock drilling with rock tools or DTH hammers



Casing and auger raised and lowered with 90 degrees cardanic joint



Cased drilling using MDBA and casing turn device on ABI MOBILRAM-System



ABI MOBILRAM-System at work in front of the Frauenkirche in Dresden (Germany)



Wet Speed-Mixing with MDBA auger drive



Twinmix TMBA 2100 with WSM attachment



Dry Speed-Mixing in Thailand as ground improvement

ABI double auger head system VDW

- Vibration free
- Noise reduced
- Economical
- Easy set up due to cardanic joint
- Suitable in most soil foundations

Field of application

- VDW-method is well suited for the installation of single, contiguous and secant pile walls
- Soil removal and replacement
- Displacement augering



ABI MOBILRAM-System setting up casing and auger tool



In front of the wall procedure VDW installing secant-pile wall



During extraction the re-inforcement is pulled up



Circular cover dam done with VDW-method



Finished wall exposed mirroring the drill through brick wall



Straight wall with H-beam reinforcement

ABI Hydro-Press-System

- Vibration free and low noise for installing and removing sheet piles
- Application in sensitive areas as near hospitals, historical buildings etc.
- High productive due to panel operation of 3 or 4 sheets at a time
- HPS-Press for cold rolled U sheet piles
 HPU-Press for hot rolled U sheet piles
 HPZ-Press for hot rolled Z sheet piles



HPU pushing sheet piles in St. Petersburg (Russia)



Universal press HPZ 500-720 with adjustable section width



Pitching Z-shaped sheet piles with HPZ-Press



HPZ during pressing, centre pairs of sheet piles are pushed down



HPZ 500-720 with clamped and Z sheet piles during pressing operation

Add-on vibrators HVR and add-on auger drives BA/DBA

- Excavator stick boom mounted
- Controlled and fed by the excavator's hydraulic system
- High frequency and revolution
- Low weight
- Compact design



Driving sheets in sandy soils



Limited headroom application



Pitching the sheet with the vibrator, safe and fast



ABI auger drive with casing turn device for foundation piles along rail way



Cased drilling with BA 2250 and casing

Besides standard machines and equipment ABI has made in the past custom tailored machines. We have the means to design and manufacture to special needs.



Timber pile driver off shore



Timber pile drive on shore



ABI fixed leader mast MY



Kelly drilling with ABI fixed leader mast SM 9/10 with extra long reach



Special furnace cleaner on CAT carrier



For further informations please contact your ABI sales assistant.
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ABI GmbH
Am Knüchel 4
D-63843 Niedernberg
Germany

Telefon: +49 (0) 6028 123-101, -102
Telefax: +49 (0) 6028 123-109
eMail: info@abi-gmbh.de
Web: www.abi-gmbh.de