

Hydraulikrüttler

Hydraulic Vibrators

RTG Rammtechnik



MR-Rüttlerreihe | MR-Vibrator Series

Hauptmerkmale der MR-Rüttlerreihe

- Resonanzfreier An- und Auslauf des Rüttlers
- Spezial Zylinderrollenlager
 - Extrem hohe Lagerlebensdauer
 - Zwangsschmierung der Lager
- Trockensumpfschmierung
 - Verwendung von Hydrauliköl des Trägergerätes (Bio-Öl möglich)
 - hohe Getriebeeffizienz ohne Planschverluste
 - keine separaten Ölwechsel notwendig
 - geringe Betriebstemperatur im Getriebe
- Überwachung aller für die Betriebssicherheit notwendiger Rüttlerdaten, wie Klemmdruck, Lecköldruck, Schmieröldruck und Temperatur

Optional:

- ACS automatisches Kupplungssystem für Anbaugeräte
- Zentralschmierung am Rüttler
- SilentVibro Paket
- SCA Bodenbeschaffungsassistent (siehe SCA Broschüre)
- SBA Spundbohlenassistent

Main features of the MR-vibrator series:

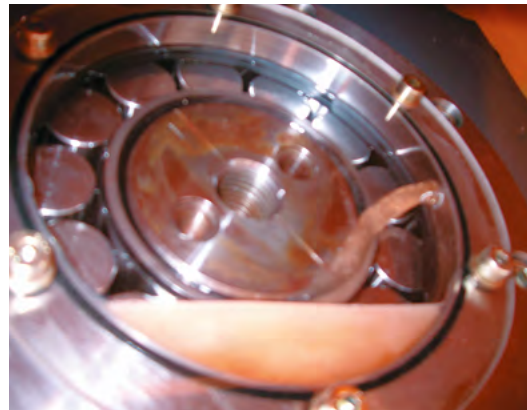
- Resonance-free start up and shutdown of vibrator
- Special cylindrical roller bearing
 - Extremely high life-time of bearings
 - Force-feed lubrication of bearings
- Lubrication with hydraulic oil of base carrier (also with bio-degradable oil)
 - high efficiency of gearbox without splash losses
 - Separate oil changes can be omitted
 - Low operating temperature in gearbox
- Recording and control of safety-relevant operating data of the vibrator such as clamping pressure, leak oil pressure, lubrication oil pressure and temperature

Optional:

- ACS Automatic coupling system for hydraulic connections of all attachments
- Central lubrication at the vibrator
- SilentVibro package
- SCA Soil Condition Assistant (see SCA brochure)
- SBA Sheet pile assistant



Rüttler mit ACS und SilentVibro
Vibrator with ACS and SilentVibro



Trockensumpfschmierung
Lubrication with hydraulic oil of base carrier



Soil Condition Assistant
Soil Condition Assistant



Spundbohlenassistent
Sheet pile assistant

Aktive Rüttler-Verstellung bei AVM Rüttlern

Die optimale Rüttleranpassung an verschiedene Bodenverhältnisse erfolgt durch Vorwahl von 3 Betriebsprogrammen:

- Standardmodus:
 - Maximale Ausnutzung der installierten Motorleistung bis zu 570 kW
 - Einsatz mit max. Leistungsbedarf vom Grundgerät z. B. Rammen von Spundwandbohlen.
- Amplitudenmodus:
 - Verschiebung der Rüttlerkennlinie in Richtung der maximalen Amplitude
 - Einsatz in Bodenverhältnissen mit hohem Spitzenwiderstand und/oder schwerem Rammgut, z. B. vibrierte Vollverdrängerpfähle.
- Drehzahlmodus:
 - Verschiebung der Rüttlerkennlinie in Richtung der maximalen Drehzahl
 - Einsatz in Böden, für die keine erhöhten Bodenvibrationen erlaubt sind, z. B. Rammen im Feinsand.

Active Vibrator Management for AVM vibrators

The optimal vibrator management for various soil conditions is achieved by pre-selecting 3 different operation programs:

- Standard mode:
 - Optimal utilization of the installed engine power of 570 kW (764 hp)
 - for operation with maximum output of the base machine, e. g. driving of sheet pile.
- High amplitude mode:
 - Vibrator characteristic curves are displaced towards the maximum amplitude
 - for operation in soil conditions with high point resistance and/or heavy elements to be driven, e. g. vibrated full displacement piles.
- High speed mode:
 - Vibrator characteristic curves are displaced towards the maximum speed
 - for operation in soil conditions with restricted ground vibrations, e. g. driving in fine sand.



Optional:

ACS-2 Automatisches Kupplungssystem

- Autarkes Kuppeln der Steuerblöcke beim Anbau
- Aktives Verspannen der Kupplungspaare im Betrieb
- Automatisch schließende Abdeckungen der Kupplungen als Schutz gegen Verschmutzung
- Integrierte automatische Kupplung der Elektrik
- Reduzierte Durchflusswiderstände
- Austauschbarkeit der einzelnen Kupplungen gegeben
- Kein Verlust an Nutzlänge

Optional:

ACS-2 Automatic Coupling System

- Automatic coupling of control blocks during assembly
- Active full restraint of ACS blocks during operation
- Automatically closing shields protect the automatic coupling system from dirt
- Integrated automatic electrical connection
- Reduced flow resistance
- Hydraulic couplings can be replaced individually
- No loss in the effective stroke length



Optional:

SilentVibro Paket

- Schalldämmung des Federjochs
- Integration der Hydraulikinstallation ins Federjoch
- Komplette Einkapselung des Frontbereiches einschließlich der Hydraulikmotoren
- Schallisolierung zwischen Federjoch und Klemmzange über ein flexibles Formelement
- Schallreduzierung im Bereich der Kette und Kettenaufnahmepunkte

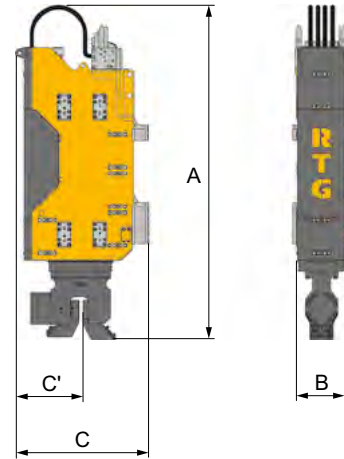
Optional:

SilentVibro Package

- Soundproofing of spring suspension unit
- Integration of hydraulic installation into spring suspension unit
- Complete encapsulation of the front section including hydraulic motors
- Soundproofing between spring suspension unit and clamping head by way of a flexible enclosure
- Noise reduction in area around the chain and chain attachment points

Technische Daten

Technical Data



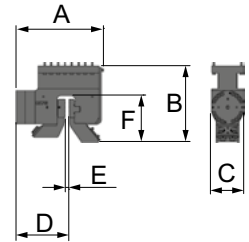
	MR 75 V	MR 105 V	MR 125 V	MR 145 V
Max. Fliehkraft <i>Max. centrifugal force</i>	750 kN <i>168,610 lbf</i>	1.050 kN <i>236,050 lbf</i>	1.250 kN <i>281,020 lbf</i>	1.450 kN <i>325,980 lbf</i>
Max. Drehzahl <i>Max. rotation speed</i>	2.300 U/min <i>2,300 rpm</i>	2.300 U/min <i>2,300 rpm</i>	2.300 U/min <i>2,300 rpm</i>	2.160 U/min <i>2,160 rpm</i>
Statisches Moment <i>Eccentric moment</i>	0 – 13 kgm <i>0 – 94.0 lbf-ft</i>	0 – 18,2 kgm <i>0 – 131.6 lbf-ft</i>	0 – 21,6 kgm <i>0 – 156.2 lbf-ft</i>	0 – 28,4 kgm <i>0 – 205.4 lbf-ft</i>
Gesamtgewicht <i>Total weight</i>	4.100 kg <i>9,039 lb</i>	4.850 kg <i>10,692 lb</i>	5.000 kg <i>11,023 lb</i>	5.240 kg <i>11,552 lb</i>
Hydr. Leistung am Rüttler <i>Hydr. power at vibrator</i>	250 kW <i>335 HP</i>	380 kW <i>509 HP</i>	460 kW <i>617 HP</i>	460 kW <i>617 HP</i>
Max. empfohlenes Rammgutgewicht <i>Max. weight of pile (recommended)</i>	2.000 kg <i>4,409 lb</i>	4.000 kg <i>8,818 lb</i>	5.000 kg <i>11,023 lb</i>	7.000 kg <i>15,432 lb</i>
Empfohlenes Trägergerät <i>Base carrier (recommended)</i>	BS 55 R / BS 55 RS-Eco	BS 65 RS / BS 90 RS-Eco	BS 65 RS / BS 90 RS	BS 65 RS / BS 90 RS
Klemmzange <i>Clamp assembly</i>	MRZ 85	MRZ 130	MRZ 130	MRZ 150
A Länge <i>Length</i>	3.557 mm <i>11.7 ft</i>	3.734 mm <i>12.3 ft</i>	3.734 mm <i>12.3 ft</i>	3.734 mm <i>12.3 ft</i>
B Breite (Taille) <i>Width</i>	530 mm <i>1.7 ft</i>	530 mm <i>1.7 ft</i>	530 mm <i>1.7 ft</i>	530 mm <i>1.7 ft</i>
C Tiefe <i>Vibrator thickness</i>	1.400 mm <i>4.6 ft</i>	1.416 mm <i>4.7 ft</i>	1.416 mm <i>4.7 ft</i>	1.416 mm <i>4.7 ft</i>
C' Abstand zur Wand <i>Distance to wall</i>	686 mm <i>2.2 ft</i>	694 mm <i>2.3 ft</i>	694 mm <i>2.3 ft</i>	694 mm <i>2.3 ft</i>
Transport-Abmessungen (mit Transportgestell) Transport dimensions (with transport rack)				
Länge <i>Length</i>	3.650 mm <i>12 ft</i>	3.800 mm <i>12.5 ft</i>	3.800 mm <i>12.5 ft</i>	3.800 mm <i>12.5 ft</i>
Breite <i>Width</i>	1.270 mm <i>4.2 ft</i>	1.270 mm <i>4.2 ft</i>	1.270 mm <i>4.2 ft</i>	1.270 mm <i>4.2 ft</i>
Tiefe <i>Vibrator thickness</i>	1.520 mm <i>5.0 ft</i>	1.615 mm <i>5.3 ft</i>	1.615 mm <i>5.3 ft</i>	1.615 mm <i>5.3 ft</i>
Transportgewicht <i>Weight for transport</i>	4.625 kg <i>10,196 lb</i>	5.375 kg <i>11,850 lb</i>	5.525 kg <i>12,181 lb</i>	5.765 kg <i>12,710 lb</i>

	MR 85 AVM	MR 95 AVM	MR 130 AVM	MR 150 AVM
Max. Fliehkraft Max. centrifugal force				
Standardmodus <i>Standard mode</i>	750 kN <i>168,610 lbf</i>	870 kN <i>195,580 lbf</i>	1.050 kN <i>236,050 lbf</i>	1.250 kN <i>281,010 lbf</i>
Amplitudenmodus <i>High amplitude mode</i>	850 kN <i>191,090 lbf</i>	950 kN <i>213,570 lbf</i>	1.300 kN <i>292,250 lbf</i>	1.500 kN <i>337,220 lbf</i>
Drehzahlmodus <i>High speed mode</i>	650 kN <i>146,130 lbf</i>	800 kN <i>179,850 lbf</i>	1.050 kN <i>236,050 lbf</i>	1.250 kN <i>281,010 lbf</i>
Max. Drehzahl Max. rotation speed				
Standardmodus <i>Standard mode</i>	2.300 U/min <i>2,300 rpm</i>	2.300 U/min <i>2,300 rpm</i>	2.300 U/min <i>2,300 rpm</i>	2.300 U/min <i>2,300 rpm</i>
Amplitudenmodus <i>High amplitude mode</i>	2.020 U/min <i>2,020 rpm</i>	2.030 U/min <i>2,030 rpm</i>	2.180 U/min <i>2,180 rpm</i>	2.200 U/min <i>2,200 rpm</i>
Drehzahlmodus <i>High speed mode</i>	2.600 U/min <i>2,600 rpm</i>	2.575 U/min <i>2,575 rpm</i>	2.500 U/min <i>2,500 rpm</i>	2.500 U/min <i>2,500 rpm</i>
Max. statisches Moment Max. eccentric moment				
Standardmodus <i>Standard mode</i>	13,0 kgm <i>94.0 lbf-ft</i>	15,0 kgm <i>109 lbf-ft</i>	18,2 kgm <i>132 lbf-ft</i>	21,6 kgm <i>156 lbf-ft</i>
Amplitudenmodus <i>High amplitude mode</i>	19,0 kgm <i>137.4 lbf-ft</i>	21,0 kgm <i>152 lbf-ft</i>	25,0 kgm <i>181 lbf-ft</i>	28,4 kgm <i>205.4 lbf-ft</i>
Drehzahlmodus <i>High speed mode</i>	9,0 kgm <i>65 lbf-ft</i>	11,0 kgm <i>79.6 lbf-ft</i>	15,4 kgm <i>111 lbf-ft</i>	18,2 kgm <i>131.6 lbf-ft</i>
Technische Spezifikation Technical specifications				
Gesamtgewicht <i>Total weight</i>	4.160 kg <i>9,171 lb</i>	4.220 kg <i>9,304 lb</i>	4.900 kg <i>10,803 lb</i>	5.240 kg <i>11,552 lb</i>
Hydr. Leistung am Rüttler <i>Hydr. power at vibrator</i>	295 kW <i>396 HP</i>	340 kW <i>456 HP</i>	380 kW <i>510 HP</i>	480 kW <i>644 HP</i>
Empfohlenes Trägergerät <i>Base carrier (recommended)</i>	BS 55 R / BS 55 RS-Eco	BS 55 RS	BS 65 RS / BS 90 RS-Eco	BS 65 RS / BS 90 RS
Klemmzange <i>Clamp assembly</i>	MRZ 85	MRZ 106	MRZ 130	MRZ 150
A Länge <i>Length</i>	3.557 mm <i>11.7 ft</i>	3.557 mm <i>11.7 ft</i>	3.734 mm <i>12.3 ft</i>	3.734 mm <i>12.3 ft</i>
B Breite (Taille) <i>Width</i>	530 mm <i>1.7 ft</i>	530 mm <i>1.7 ft</i>	530 mm <i>1.7 ft</i>	530 mm <i>1.7 ft</i>
C Tiefe <i>Vibrator thickness</i>	1.400 mm <i>4.6 ft</i>	1.400 mm <i>4.6 ft</i>	1.416 mm <i>4.7 ft</i>	1.416 mm <i>4.7 ft</i>
C ¹ Abstand zur Wand <i>Distance to wall</i>	686 mm <i>2.3 ft</i>	686 mm <i>2.3 ft</i>	694 mm <i>2.3 ft</i>	694 mm <i>2.3 ft</i>
Transport-Abmessungen (mit Transportgestell) Transport dimensions (with transport rack)				
Länge <i>Length</i>	3.650 mm <i>12.0 ft</i>	3.650 mm <i>12.0 ft</i>	3.800 mm <i>12.5 ft</i>	3.800 mm <i>12.5 ft</i>
Breite <i>Width</i>	1.270 mm <i>4.2 ft</i>	1,270 mm <i>4.2 ft</i>	1,270 mm <i>4.2 ft</i>	1,270 mm <i>4.2 ft</i>
Tiefe <i>Vibrator thickness</i>	1,520 mm <i>5.0 ft</i>	1,520 mm <i>5.0 ft</i>	1.615 mm <i>5.3 ft</i>	1.615 mm <i>5.3 ft</i>
Transportgewicht <i>Weight for transport</i>	4.685 kg <i>10,329 lb</i>	4.745 kg <i>10,461 lb</i>	5.425 kg <i>11,960 lb</i>	5.765 kg <i>12,710 lb</i>

Einzelklemmzangen | Single Clamp Assembly

Klemmbacken mit oder ohne Schlossaussparung
Jaws with or without interlock

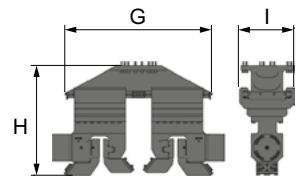
	MRZ 85	MRZ 106	MRZ 130	MRZ 150
Für max. Fliehkraft <i>For centrifugal forces up to</i>	850 kN <i>191,088 lbf</i>	1.060 kN <i>238,300 lbf</i>	1.300 kN <i>292,252 lbf</i>	1.500 kN <i>337,213 lbf</i>
Klemmkraft <i>Clamping force</i>	1.020 kN <i>229,305 lbf</i>	1.300 kN <i>292,252 lbf</i>	1.700 kN <i>382,175 lbf</i>	1.800 kN <i>404,656 lbf</i>
Gewicht <i>Weight</i>	700 kg <i>1,543 lb</i>	720 kg <i>1,587 lb</i>	900 kg <i>1,984 lb</i>	1.140 kg <i>2,513 lb</i>
Klemmdruck <i>Clamping pressure</i>	350 bar <i>5,076 psi</i>	350 bar <i>5,076 psi</i>	350 bar <i>5,076 psi</i>	350 bar <i>5,076 psi</i>
A	800 mm <i>2.6 ft</i>	847 mm <i>2.8 ft</i>	880 mm <i>2.9 ft</i>	967 mm <i>3.2 ft</i>
B	655 mm <i>2.1 ft</i>	719 mm <i>2.4 ft</i>	760 mm <i>2.5 ft</i>	840 mm <i>2.8 ft</i>
C	350 mm <i>1.1 ft</i>	320 mm <i>1.05 ft</i>	360 mm <i>1.2 ft</i>	360 mm <i>1.2 ft</i>
D	551 mm <i>1.8 ft</i>	535 mm <i>1.7 ft</i>	580 mm <i>1.9 ft</i>	585 mm <i>1.9 ft</i>
E	39 mm <i>0.1 ft</i>	39 mm <i>0.1 ft</i>	39 mm <i>0.1 ft</i>	39 mm <i>0.1 ft</i>
F	443 mm <i>1.5 ft</i>	506 mm <i>1.66 ft</i>	477 mm <i>1.6 ft</i>	515 mm <i>1.7 ft</i>
Stahl-Träger <i>Steel beam</i>	IPB-320 / IPB-300 *	IPB-320 / IPB-300 *	IPB-320 / IPB-300 *	IPB-320 / IPB-300 *



Rohrtraversen | Traverse for Casings

Verschiebbar auf T-Schienen
Movable on T-bars

	T 1 **	T 2 ***	T 3 ***	T 4 ***
2 Klemmzangen <i>2 Clamp assemblies</i>	MRZ 85	SZ 83	SZ 83	SZ 83
Gewicht der Traverse <i>Weight of traverse</i>	760 kg <i>1,676 lb</i>	810 kg <i>1,786 lb</i>	750 kg <i>1,653 lb</i>	500 kg <i>1,102 lb</i>
Min. Rohrrinnendurchmesser <i>Min. casing inner diameter</i>	500 mm <i>1.6 ft</i>	500 mm <i>1.6 ft</i>	500 mm <i>1.6 ft</i>	500 mm <i>1.6 ft</i>
Max. Rohrrinnendurchmesser <i>Max. casing inner diameter</i>	930 mm <i>3.1 ft</i>	940 mm <i>3.1 ft</i>	830 mm <i>2.7 ft</i>	680 mm <i>2.2 ft</i>
G	1.620 mm <i>5.3 ft</i>	1.732 mm <i>5.7 ft</i>	1.622 mm <i>5.3 ft</i>	1.472 mm <i>4.8 ft</i>
H	980 mm <i>3.2 ft</i>	1.089 mm <i>3.6 ft</i>	1.089 mm <i>3.6 ft</i>	1.089 mm <i>3.6 ft</i>
I	610 mm <i>2.0 ft</i>	500 mm <i>1.6 ft</i>	500 mm <i>1.6 ft</i>	500 mm <i>1.6 ft</i>



* mit Sonderklemmbacken | *with special jaws*

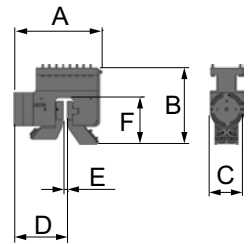
** verschiebbar und drehbar | *movable and rotatable*

*** nur verschiebbar | *only movable*

Klemmzangen für Rohre und Doppelspundwand | *Clamp Assembly for Casings and Pairs of Sheet Piles*

Radiusklemmbacken auf Anfrage
Radius jaws on request

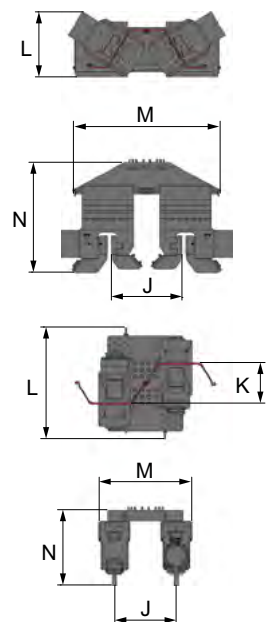
	SZ 83	MRZ 85
Für max. Fliehkraft <i>For centrifugal forces up to</i>	830 kN <i>186,591 lbf</i>	850 kN <i>191,088 lbf</i>
Klemmkraft <i>Clamping force</i>	996 kN <i>223,910 lbf</i>	1.020 kN <i>229,305 lbf</i>
Gewicht <i>Weight</i>	750 kg <i>1,653 lb</i>	700 kg <i>1,543 lb</i>
Klemmdruck <i>Clamping pressure</i>	350 bar <i>5,076 psi</i>	350 bar <i>5,076 psi</i>
A	760 mm <i>2.5 ft</i>	800 mm <i>2.6 ft</i>
B	706 mm <i>2.3 ft</i>	655 mm <i>2.1 ft</i>
C	345 mm <i>1.1 ft</i>	350 mm <i>1.1 ft</i>
D	520 mm <i>1.7 ft</i>	551 mm <i>1.8 ft</i>
E	50 mm <i>0.2 ft</i>	39 mm <i>0.1 ft</i>
F	457 mm <i>1.5 ft</i>	443 mm <i>1.5 ft</i>
Stahl-Träger <i>Steel beam</i>	IPB-320 / IPB-300 *	IPB-320 / IPB-300 *



Adapterplatten für Doppelspundwand | *Adapter Plates for Pairs of Sheet Piles*

Verschiebbar auf T-Schienen
Movable on T-bars

	AP 1 **	AP 2 ***
2 Klemmzangen <i>2 Clamp assemblies</i>	MRZ 85	SZ 83
Gewicht der Adapterplatte <i>Weight of adapter plates</i>	1.750 kg <i>3,858 lb</i>	1.000 kg <i>2,205 lb</i>
J Profilbreite <i>Profile width</i>	ab 630 mm <i>from 2.1 ft</i>	für 500/600 mm <i>for 1.6/2.0 ft</i>
K Profilhöhe <i>Profile height</i>	–	max. 590 mm <i>max. 1.9 ft</i>
L	max. 875 mm <i>max. 2.9 ft</i>	1.230 mm <i>4.0 ft</i>
M	1.620 mm <i>5.3 ft</i>	830/1.020 mm <i>2.7/3.3 ft</i>
N	1.210 mm <i>4.0 ft</i>	829 mm <i>2.7 ft</i>
Spundwandprofil <i>Sheet pile profile</i>	Z-Profil <i>Z profile</i>	U-Profil <i>U profile</i>



* siehe Einzelklemmzange | *see single clamp assemblies*

** verschiebbar und drehbar | *movable and rotatable*

*** nur verschiebbar | *only movable*

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24/7



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