

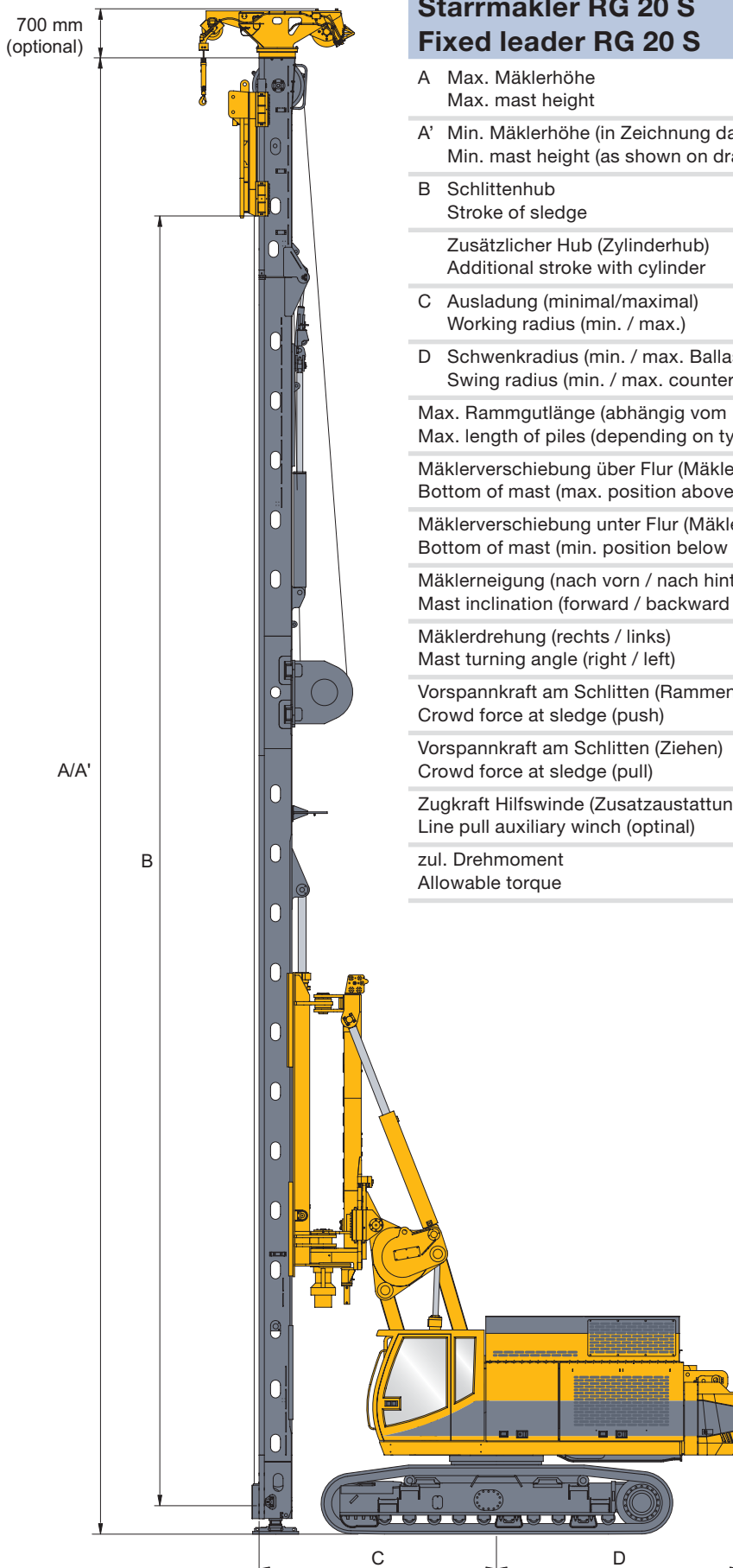
RTG RAMMTECHNIK

RG 20 S

Starmäklergerät
Pile driver with fixed leader

12/2009





Starrmäkler RG 20 S Fixed leader RG 20 S

A	Max. Mäklerrhöhe Max. mast height	24,5 m	80.4 ft
A'	Min. Mäklerrhöhe (in Zeichnung dargestellt) Min. mast height (as shown on drawing)	22,2 m	72.8 ft
B	Schlittenhub Stroke of sledge	19,5 m	64.0 ft
	Zusätzlicher Hub (Zylinderhub) Additional stroke with cylinder	2,2 m	7.2 ft
C	Ausladung (minimal/maximal) Working radius (min. / max.)	3,6 – 5,4 m	11.8 – 17.7 ft
D	Schwenkradius (min. / max. Ballast) Swing radius (min. / max. counterweight)	3,5 – 3,9 m	11.5 – 12.8 ft
	Max. Rammgutlänge (abhängig vom Rüttlertyp) Max. length of piles (depending on type of vibrator)	21,4 m	70.2 ft
	Mäklerverschiebung über Flur (Mäklerrfußpunkt) Bottom of mast (max. position above ground)	2,2 m	7.2 ft
	Mäklerverschiebung unter Flur (Mäklerrfußpunkt) Bottom of mast (min. position below ground)	3,2 m	10.5 ft
	Mäklerrneigung (nach vorn / nach hinten / seitlich) Mast inclination (forward / backward / sideways)	4°/15°/4°	4°/15°/4°
	Mäklerrdrehung (rechts / links) Mast turning angle (right / left)	90°/90°	90°/90°
	Vorspannkraft am Schlitten (Rammen) Crowd force at sledge (push)	400 kN	89,924 lbf
	Vorspannkraft am Schlitten (Ziehen) Crowd force at sledge (pull)	400 kN	89,924 lbf
	Zugkraft Hilfswinde (Zusatz-ausstattung) Line pull auxiliary winch (optional)	55 kN	12,364 lbf
	zul. Drehmoment Allowable torque	200 kNm	147,512 lbf-ft

Serienausstattung Standard equipment

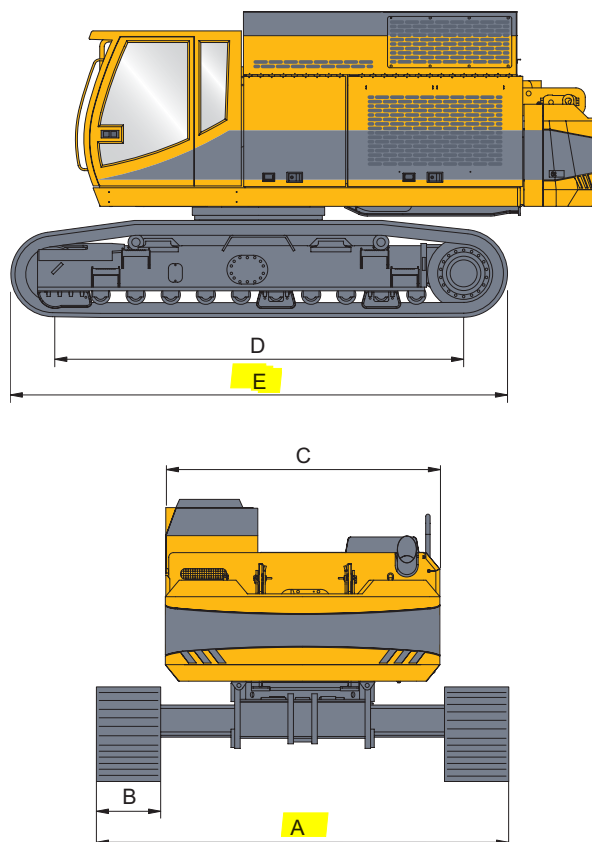
abnehmbarer Ballast (ca. 6,0 + 4,2 + 2,0 t) Removable counterweight (approx. 13,228 + 9,259 + 4,409 lb)
Verzurraugen an Raupenträgern Transport securing lugs on crawler units
Aufstiegsleiter zum Oberwagen Access ladder on uppercarriage
Bordwerkzeugsatz On-board tool set
Bordbeleuchtungssatz (4 Scheinwerfer) On-board lighting set (4 spotlights)
elektrische Betankungspumpe Electric refuelling pump
Diagnoseleiste für hydraulische Funktionen Diagnostic panel for hydraulic functions
Vollgasautomatik für Rüttlerbetrieb Automatic full throttle control for vibrator operation
Mastneigungsautomatik Automatic alignment of mast
Vorbereitung für Rüttler mit verstellbaren Unwuchten Pre-equipped for vibrator with variable eccenters
Schmierölsystem für Rüttler Lube-oil system for vibrator
Rohrbruchsicherungen für alle Zylinder Pipe burst protection for all cylinders
Parallelogrammkinematik Parallelogram kinematic linkage system
Betrieb von Entspannungsbohrantrieben Preboring mode
Hydraulisch verklemmbarer Teleskopunterwagen UW 70 R Extendable undercarriage UW 70 R with hydraulic clamping
Komfortfahrerkabine High-comfort operator's cab
Radio mit CD Player Radio with CD player
ergonomischer Fahrersitz Ergonomically designed operator seat
FOPS Dachschutzgitter Protective roof grate (FOPS compliant)
Klimaanlage Air conditioning system
Wisch-Wasch Anlage für Dach- und Frontscheiben Wash and wipe at front and roof windows
Trittroste (neben der Kabine) Catwalk (on side of operator's cab)
Ballastablegevorrichtung über den Mast Counterweight lowering facility with lowered mast
Hydraulische Verbolzung der Mäkler-Schwenkeinrichtung mit Zylinder Hydraulic bolting of mast swing mechanism with cylinder

Zusatzausstattung Optional equipment

Hilfswinde 55 kN (mit Seilkraftmessung) Auxiliary winch 55 kN (with load sensing)
elektronisches Steuerungs- und Kontrollsystem B-TRONIC zum Überwachen und Steuern der Arbeitsfunktionen Erfassen der Betriebsdaten Electronic monitoring and control system B-TRONIC for Monitoring and controlling of working process data Acquisition of operating data
Tiefenmessung Depth measuring device
Zentralschmierung Central lubrication
Bioölbefüllung (Panolin) Bio-degradable oil (Panolin)
Rüttlerölkühler 20 kW (für externe Rüttler) Cooler for vibrator oil 20 kW (for external vibrators)
Vorbereitung (Hydraulik und Steuerung) für: VdW, SMW, SCM, CSM Spundwandpresse SOB-System Pre-equipped with hydraulic and control installations for FoW system, SMW, SCM, CSM Hydraulic press system CFA-system
Adapter für Diesel- und Hydraulikbäre Adapter for Diesel- and hydraulic hammer
Schnecken- und Rohrführungen Auger and casing guides
Zusatzscheinwerfer Additional spotlights
Seitenscheibe zum Schieben Sliding window in cab door
Komfortfahrersitz High-comfort operator seat
Vorbereitung Schutzbelüftung Pre-equipped for pressurized air conditioning system
Panzerverglasung Tempered safety glass panels
Rückfahrkamera Video camera for reverse movement control
Mastabstützung Vertical mast support
Werkzeugkasten vor Fahrerkabine Toolbox in front of operator's cabin
Automatisches Kupplungssystem für das Grundgerät (ACS I) und alle Anbaugeräte (ACS II) Automatic coupling system for hydraulic connections of the main carrier (ACS I) and all attachments (ACS II)
Automatikvorschub mit Druckregelung für Rüttlerbetrieb Automatic crowd incl. pressure selector for vibrators

Base carrier BS 60 R (BS 60 RS)

Hydraulische Verklemmung der Teleskopholme am Unterwagen
Hydraulic clamping device between telescopic cross beams and undercarriage body



Rüttlerölkühler	integriert	included
Oil cooler (vibrator)		

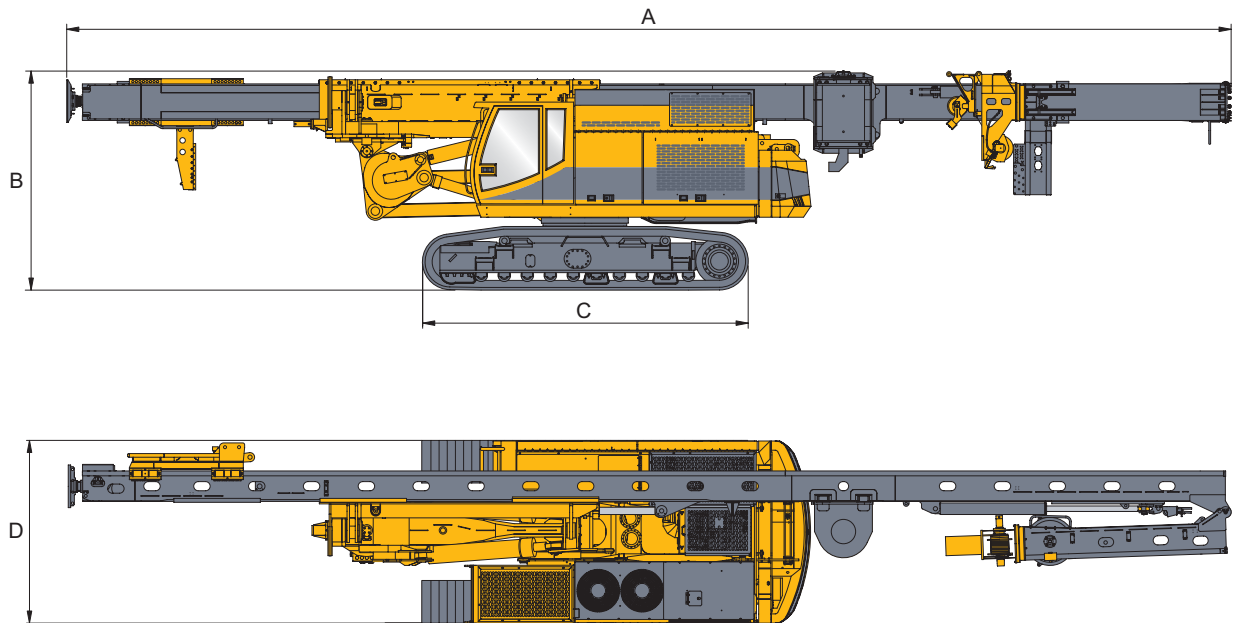
Rüttlerölkühler	integriert	included
Oil cooler (vibrator)		

Transportdaten

Transport data

Gewichtsangaben sind ca. Werte, Zusatzausrüstungen (Optionen) können das Gesamtgewicht verändern. Genaue Transportgewichte sind anzufragen.

Weights shown are approximate values; optional equipment may change the overall weight. Exact transport weights have to be inquired at your local dealer.



A	Transportlänge Transport length	19,1 m	62.7 ft
B	Transporthöhe Height for transport	3,6 m	11.8 ft
C	Länge Laufwerk Crawler length	5,35 m	17.6 ft
D	Transportbreite Width for transport	3,0 m	9.8 ft
	Gewicht * (ohne Gegengewicht) Weight * (without counterweight)	56 t	123,460 lb
	Gewicht * (mit Maximalballastierung 6,0 + 4,2 + 2,0 t) Weight * (with maximum counterweight 6.0 + 4.2 + 2.0 t)	68,2 t	150,360 lb

* ohne Zusatzausstattung / without optional equipment

base machine- 150,360
vibratory hammer- 11,290
Assembled- 161,650

66.24ft²/

2440# per ft²
16.9 psi

Hydraulikrüttler

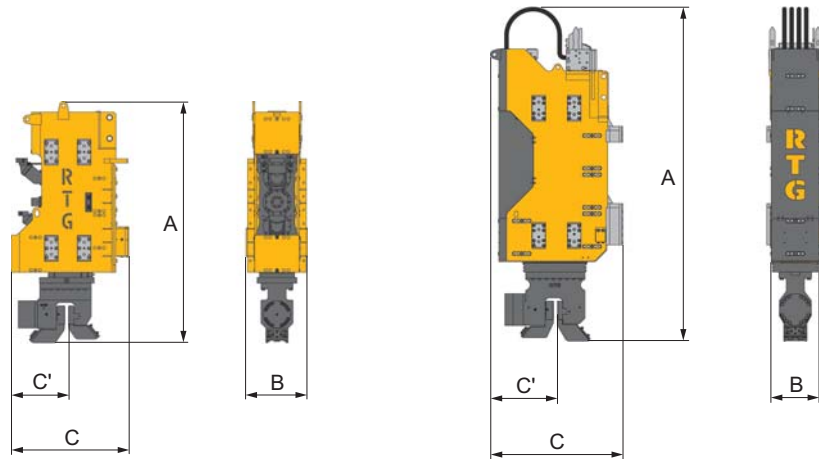
Hydraulic Vibrators

RTG Rammtechnik



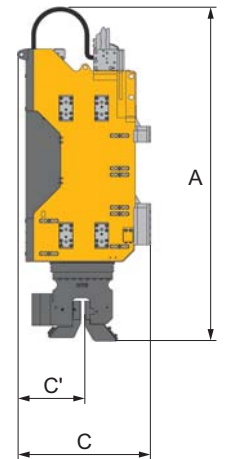
Technische Daten

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>	3.450 kg <i>7,605 lb</i>	4.700 kg <i>10,360 lb</i>	4.770 kg <i>10,515 lb</i>	5.070 kg <i>11,180 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>	BT 45 R	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>	2.655 mm <i>8.7 ft</i>	3.200 mm <i>10.5 ft</i>	3.200 mm <i>10.5 ft</i>	3.200 mm <i>10.5 ft</i>
B Breite (Taille) <i>Width</i>	490 mm <i>1.6 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>	1.295 mm <i>4.3 ft</i>	1.400 mm <i>4.6 ft</i>	1.400 mm <i>4.6 ft</i>	1.400 mm <i>4.6 ft</i>
C' Abstand zur Wand <i>Distance to wall</i>	635 mm <i>2.1 ft</i>	670 mm <i>2.2 ft</i>	670 mm <i>2.2 ft</i>	670 mm <i>2.2 ft</i>
Transport-Abmessungen (mit Transportgestell) Transport dimensions (with transport rack)				
Länge <i>Length</i>	2.910 mm <i>9.5 ft</i>	3.300 mm <i>10.8 ft</i>	3.300 mm <i>10.8 ft</i>	3.300 mm <i>10.8 ft</i>
Breite <i>Width</i>	1.310 mm <i>4.3 ft</i>	1.310 mm <i>4.3 ft</i>	1.310 mm <i>4.3 ft</i>	1.310 mm <i>4.3 ft</i>
Tiefe <i>Vibrator thickness</i>	1.400 mm <i>4.5 ft</i>	1.400 mm <i>4.5 ft</i>	1.400 mm <i>4.5 ft</i>	1.400 mm <i>4.5 ft</i>
Transportgewicht <i>Weight for transport</i>	3.800 kg <i>8,380 lb</i>	5.050 kg <i>11,130 lb</i>	5.120 kg <i>11,290 lb</i>	5.420 kg <i>11,950 lb</i>

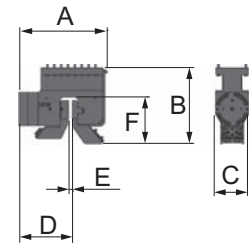
	MR 85 AVM	MR 130 AVM	MR 150 AVM
Max. Fliehkraft Max. centrifugal force			
Standardmodus <i>Standard mode</i>	750 kN <i>168,610 lbf</i>	1.050 kN <i>236,050 lbf</i>	1.250 kN <i>281,010 lbf</i>
Amplitudenmodus <i>High amplitude mode</i>	850 kN <i>191,090 lbf</i>	1.300 kN <i>292,250 lbf</i>	1.500 kN <i>337,220 lbf</i>
Drehzahlmodus <i>High speed mode</i>	650 kN <i>146,130 lbf</i>	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>
Amplitudenmodus <i>High amplitude mode</i>	2.020 U/min <i>2,020 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>	2.500 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>	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>	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>	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>	3.550 kg <i>7,826 lb</i>	4.750 wkg <i>10,470 lb</i>	5.070 kg <i>11,180 lb</i>
Hydr. Leistung am Rüttler <i>Hydr. power at vibrator</i>	296 kW <i>397 HP</i>	380 kW <i>510 HP</i>	480 kW <i>644 HP</i>
Empfohlenes Trägergerät <i>Base carrier (recommended)</i>	BS 65 RS-Eco	BS 65 RS / BS 90 RS-Eco	BS 65 RS / BS 90 RS
Klemmzange <i>Clamp assembly</i>	MRZ 85	MRZ 130	MRZ 150
A Länge <i>Length</i>	2.655 mm <i>8.7 ft</i>	3.200 mm <i>10.5 ft</i>	3.200 mm <i>10.5 ft</i>
B Breite (Taille) <i>Width</i>	490 mm <i>1.6 ft</i>	530 mm <i>1.7 ft</i>	530 mm <i>1.7 ft</i>
C Tiefe <i>Vibrator thickness</i>	1.295 mm <i>4.3 ft</i>	1.400 mm <i>4.6 ft</i>	1.400 mm <i>4.6 ft</i>
C' Abstand zur Wand <i>Distance to wall</i>	635 mm <i>2.1 ft</i>	670 mm <i>2.2 ft</i>	670 mm <i>2.2 ft</i>
Transport-Abmessungen (mit Transportgestell) Transport dimensions (with transport rack)			
Länge <i>Length</i>	2.910 mm <i>9.5 ft</i>	3.300 mm <i>10.8 ft</i>	3.300 mm <i>10.8 ft</i>
Breite <i>Width</i>	1.310 mm <i>4.3 ft</i>	1.310 mm <i>4.3 ft</i>	1.310 mm <i>4.3 ft</i>
Tiefe <i>Vibrator thickness</i>	1.400 mm <i>4.5 ft</i>	1.400 mm <i>4.5 ft</i>	1.400 mm <i>4.5 ft</i>
Transportgewicht <i>Weight for transport</i>	3.900 kg <i>8,600 lb</i>	5.100 kg <i>11,240 lb</i>	5.420 kg <i>11,950 lb</i>



Einzelklemmzangen | Single Clamp Assembly

Klemmbacken mit oder ohne Schlossaussparung
Jaws with or without interlock

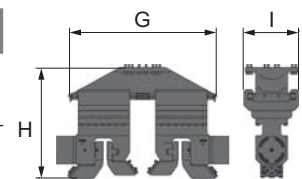
	MRZ 85	MRZ 130	MRZ 150
Für max. Fliehkraft <i>For centrifugal forces up to</i>	850 kN <i>191,088 lbf</i>	1.300 kN <i>292,252 lbf</i>	1.500 kN <i>337,213 lbf</i>
Klemmkraft <i>Clamping force</i>	1.020 kN <i>229,305 lbf</i>	1.700 kN <i>382,175 lbf</i>	1.800 kN <i>404,656 lbf</i>
Gewicht <i>Weight</i>	700 kg <i>1,543 lb</i>	880 kg <i>1,940 lb</i>	1.135 kg <i>2,502 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>
A	800 mm <i>2.6 ft</i>	880 mm <i>2.9 ft</i>	967 mm <i>3.2 ft</i>
B	655 mm <i>2.1 ft</i>	760 mm <i>2.5 ft</i>	840 mm <i>2.8 ft</i>
C	350 mm <i>1.1 ft</i>	360 mm <i>1.2 ft</i>	360 mm <i>1.2 ft</i>
D	551 mm <i>1.8 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>
F	443 mm <i>1.5 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 *



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>	1.750 kg <i>3,858 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	1.210 mm <i>4.0 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*

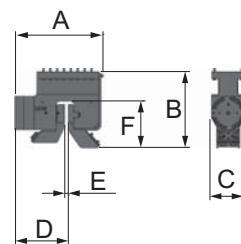
** verschiebbar und drehbar | *movable and rotatable*

*** 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

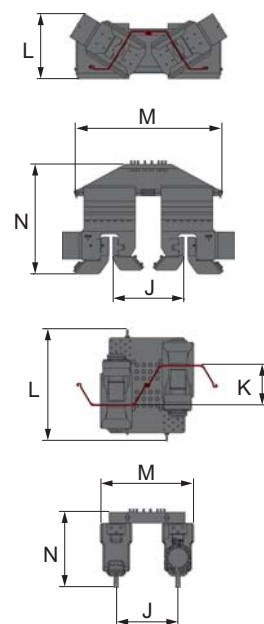
	SZ 83	MRZ 85
Für max. Fliehkraft <i>For centrifugal forces up to</i>	830 kN <i>186,591 lbf</i>	850 kN <i>191,088 lbf</i>
Klemmkraft <i>Clamping force</i>	996 kN <i>223,910 lbf</i>	1.020 kN <i>229,305 lbf</i>
Gewicht <i>Weight</i>	750 kg <i>1,653 lb</i>	700 kg <i>1,543 lb</i>
Klemmdruck <i>Clamping pressure</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*