

CRANE SUSPENDED VIBRO HAMMER
SVR 200 NF // INDONESIA



www.omsvibro.com

OMS VIBRATORY HAMMERS

SVR SERIES

Crane Suspended Vibro Hammer
(Normal Frequency & Variable Moment)

OVR SERIES

Excavator Mounted Vibro Hammer
(Standard & Variable Moment)

SVR 200 NF Video



POWERFUL VIBRATORY PILE DRIVING EQUIPMENT BY OMS

Manufacturer of Pile Driving Equipment for over 35 years!

Why Choose the OMS?

OMS offers its nature-respecting and sustainable solutions, which are part of our mission to our customers and business partners in the best way with its quality and the environment of trust it provides. Also, OMS is growing rapidly by including new dealers in its structures while continuing to have a say in international trade. These are the top reasons why OMS is preferred and why we are getting closer to our vision of being situated in the most reliable and respected position in the sector and being the "brand of the future" day by day.



OMS vibratory pile driving equipment is used in the field of construction and infrastructure in all conditions around the globe.

- Crane hanging, excavator mounted and side grip vibratory hammers,
- Vibroflot and wick drain installation machine,
- Hydraulic vibratory hammer from 2 kgm ~ 200 kgm, with centrifugal forces from 140 kN ~ 4380 kN.
- Combined with OMS power packs engine (kW/HP) up to 1170/1592,
- Wide range for various ground conditions and depths,
- Extensive range of accessories and clamps,
- Suitable for near historical buildings to use with variable (resonance - free) models,
- 70% in-house production provides the quality control,
- Fast delivery and professional after sales team,
- Spare parts and training support,
- Easy and effortless documentation and shipping.

SVR Series

Crane Suspended Vibro Hammer

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OVR Series

Excavator Mounted Vibro Hammer

Standard (S) —> Page 12

Variable Moment (VM) —> Page 16

OMS vibratory pile driving machines save time and cost by providing the latest technology and the best performance. With 24/7 access to technical and spare part support, all piling applications can be conducted without any problem occurring.



CRANE SUSPENDED VIBRO HAMMER
SVR 30 NF // GHANA



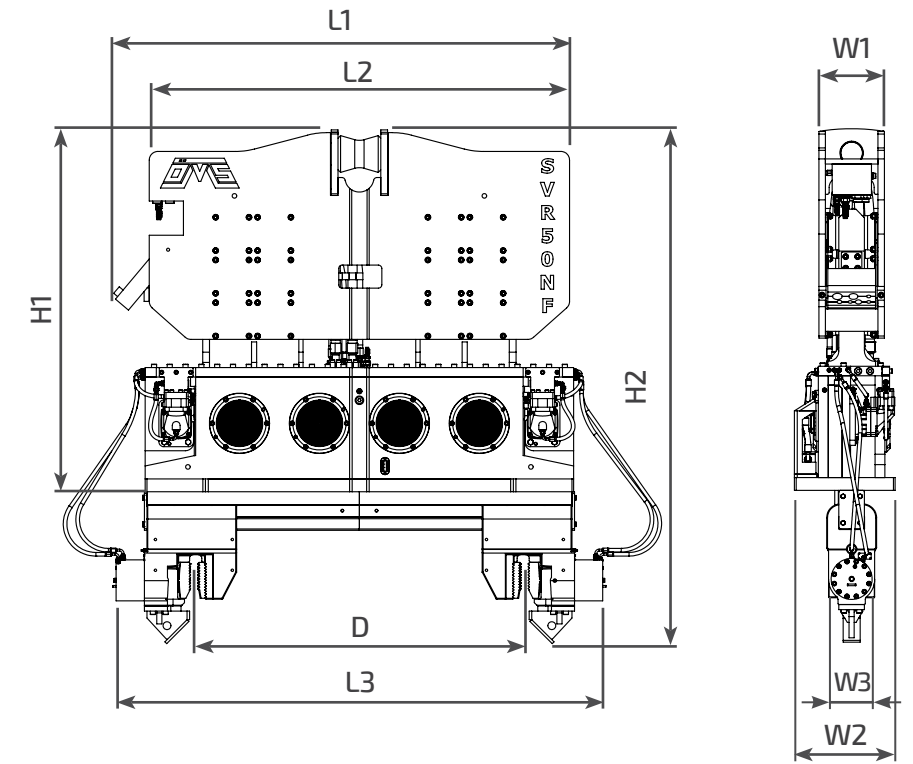
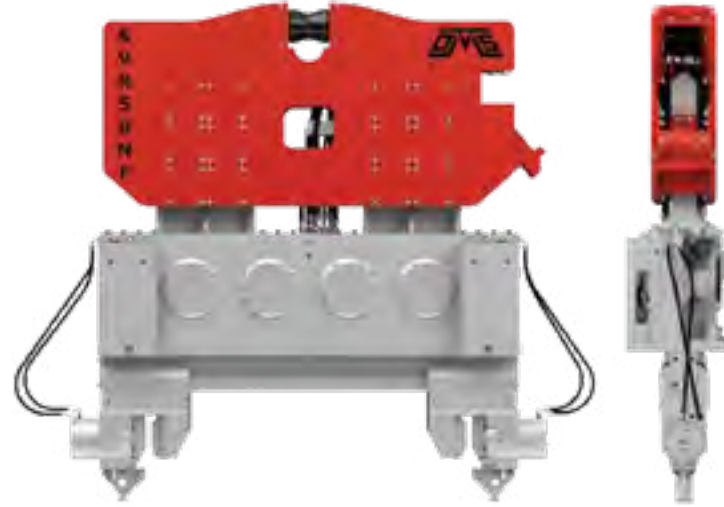
Scan the code with your mobile camera or with a QR reader app to watch the working video of SVR 30 NF.

For various ground conditions and depths, long-lasting, powerful and high-performance vibratory pile driver / extractor.

SVR Series

Crane Suspended Vibro Hammers

Normal Frequency (NF)



Metric System

Technical Specifications	25 NF	30 NF	50 NF	80 NF	120 NF	200 NF
Eccentric Moment (kgm)	25	32.6	50.2	82.6	120	203.2
Centrifugal Force (kN)	795	1036	1409	2318	2846	4380
Frequency (rpm)	1700	1700	1600	1600	1480	1400
Oil Flow (lpm)	366	421	605	959	1122	1792
Power (kW)	195	243	352	559	655	1045
Amplitude (mm)	22	24	24	23	26	19
Pulling Force (kN) Max.	470	590	706	1059	1059	1880
Weight and Dimensions						
Dyn. Weight W/O Clamp (kg)	2270	2750	4130	7109	9145	21700
Total Weight W/O Clamp (kg)	3100	4485	6150	10257	12172	26100
Length / L1 (mm)	1998	2599	2650	3315	3315	3660
Length / L2 (mm)	1796	2420	2460	3070	3070	3350
Length / L3 (mm)	1848	2812	2848	3410	3390	-
Height / H1 (mm)	1610	2034	2117	2200	2682	3620
Height / H2 (mm)	2282	2704	2861	3615	3786	-
Width / W1 (mm)	371	364	384	451	455	493
Width / W2 (mm)	550	575	590	761	728	2070
Width / W3 (mm)	250	250	292	370	370	-
Throat Width (mm)	360	350	360	461	430	800
Clamps for Sheet Piles	SCN 120	SCN 120	SCN 165	SCN 350	SCN 350	-
Clamping Force (kN)	1216	1216	1700	3560	3560	-
Weight (kg)	851	851	866	2553	2553	-
Clamps for Casing	KCN 60x2	KCN 60x2	KCN 90x2	KCN 165x2	KCN 185x2	KCN 185x4
Diameter (min.-max.) / D (mm)	340 - 1030	340 - 1900	460 - 1900	520 - 2100	520 - 2000	1000 - 3000
Clamping Force (kN)	643 x 2	643 x 2	890 x 2	1700 x 2	1858 x 2	1858 x 4
Weight (kg)	307 x 2	307 x 2	538 x 2	1164 x 2	1164 x 2	1164 x 4
Recommended Power Pack	PP 320	PP 428	PP 536	PP 768	PP 1072	PP 1536
Power (kW)	235	315	394	565	394 x 2	565 x 2

Imperial System

Technical Specifications	25 NF	30 NF	50 NF	80 NF	120 NF	200 NF
Eccentric Moment (in.lbs)	2170	2830	4357	7170	10416	17637
Centrifugal Force (tons)	89	116	159	261	320	493
Frequency (rpm)	1700	1700	1600	1600	1480	1400
Oil Flow (gpm)	97	111	160	254	297	474
Power (hp)	262	326	472	750	878	1402
Amplitude (in)	0.9	0.9	0.9	0.9	1	0.7
Pulling Force Max. (tons)	53	66	80	119	119	212
Weight and Dimensions						
Dyn. Weight W/O Clamp (lbs)	5004	6063	9105	15673	20162	47841
Total Weight W/O Clamp (lbs)	6834	9888	13559	22613	26835	57541
Length / L1 (in)	79	102	105	131	131	144
Length / L2 (in)	71	95	97	121	121	132
Length / L3 (in)	73	111	112	134	133	-
Height / H1 (in)	63	80	84	87	106	143
Height / H2 (in)	90	106	113	143	149	-
Width / W1 (in)	15	14	15	18	18	20
Width / W2 (in)	22	23	23	30	29	82
Width / W3 (in)	10	10	12	15	15	-
Throat Width (in)	14.2	13.8	14.2	18.2	16.9	31.5
Clamps for Sheet Piles	SCN 120	SCN 120	SCN 165	SCN 350	SCN 350	-
Clamping Force (tons)	137	137	191	400	400	-
Weight (lbs)	1876	1876	1909	5629	5629	-
Clamps for Casing	KCN 60x2	KCN 60x2	KCN 90x2	KCN 165x2	KCN 185x2	KCN 185x4
Diameter (min.-max.)/D (in)	14 - 41	14 - 75	18 - 75	21 - 83	21 - 83	40 - 118
Clamping Force (tons)	145	145	200	382	418	836
Weight (lbs)	1354	1354	2372	5133	5133	10264
Recommended Power Pack	PP 320	PP 428	PP 536	PP 768	PP 1072	PP 1536
Power (hp)	320	428	536	768	536 x 2	768 x 2



Scan the code with your mobile camera or with a QR reader app to watch the working video of SVR 50 NF.



High Eccentric Moment and Vibration Amplitude...

SVR series are designed to drive and extract all types of piles including sheet, tube (casing), also H - beam, I - beam, and steel plates.

SVR series is recommended in projects requiring a high driving or extracting force. SVR type vibro hammers are powered by OMS Power Packs, which have equipped with remote control and touch screen control panels.

Advantages

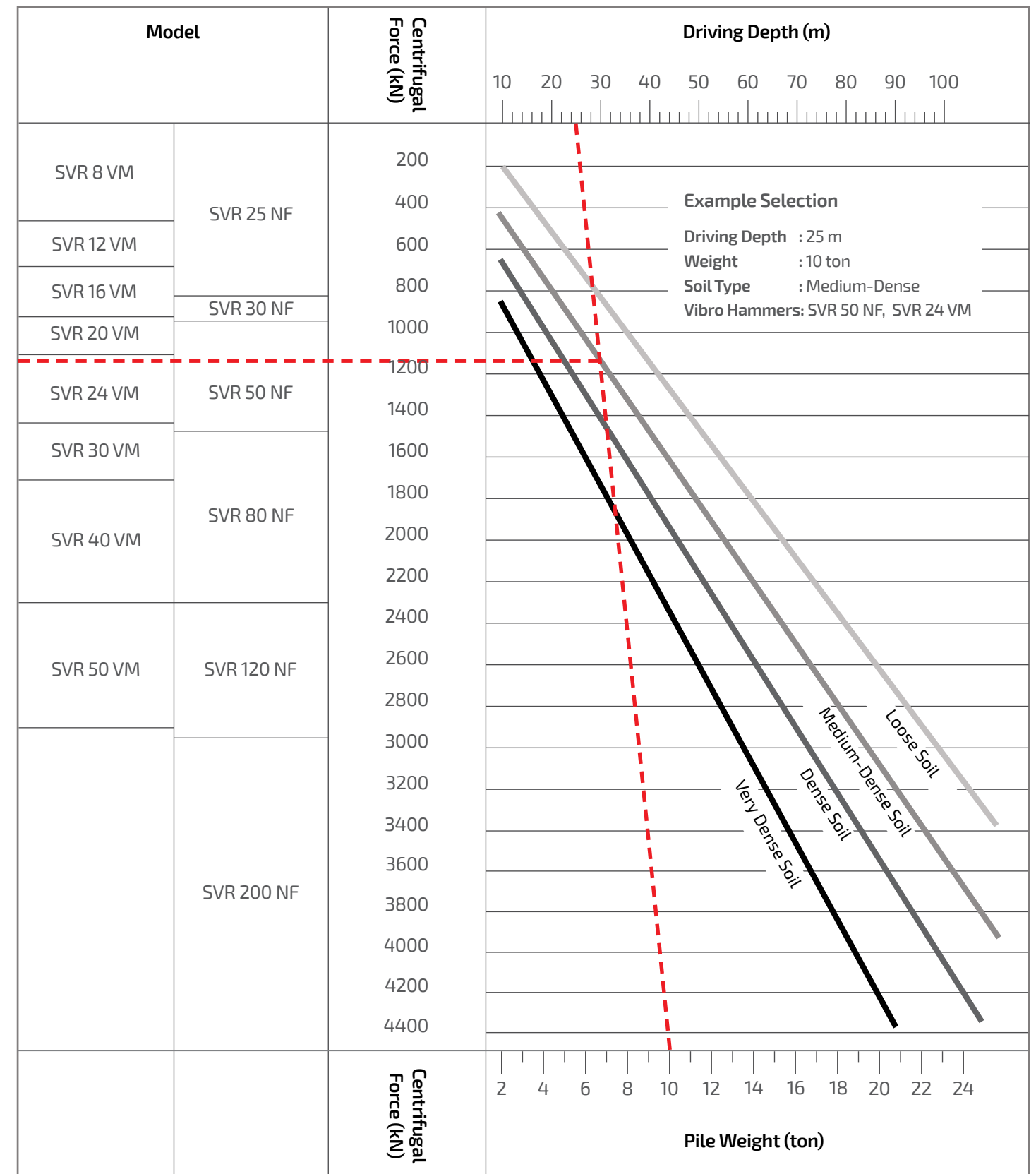
- Various clamp types to suit all pile types,
- High eccentric moment and vibration amplitude,
- Adjustment of power settings and monitoring of the process through the control system,
- Powerful, reliable and long life.



Ø = 2000 mm (79 inch)

Selection Chart

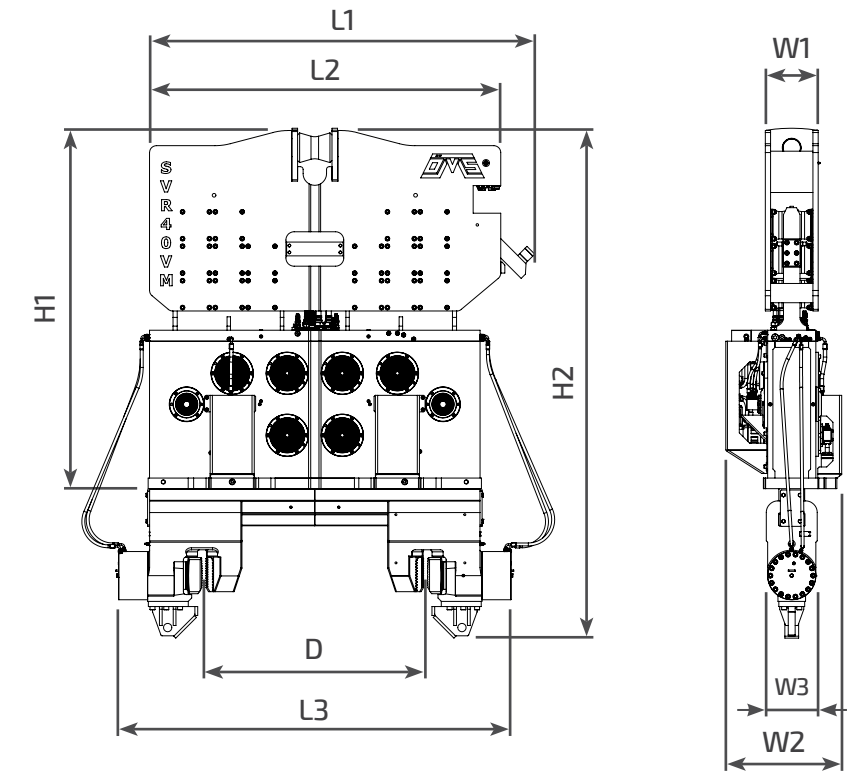
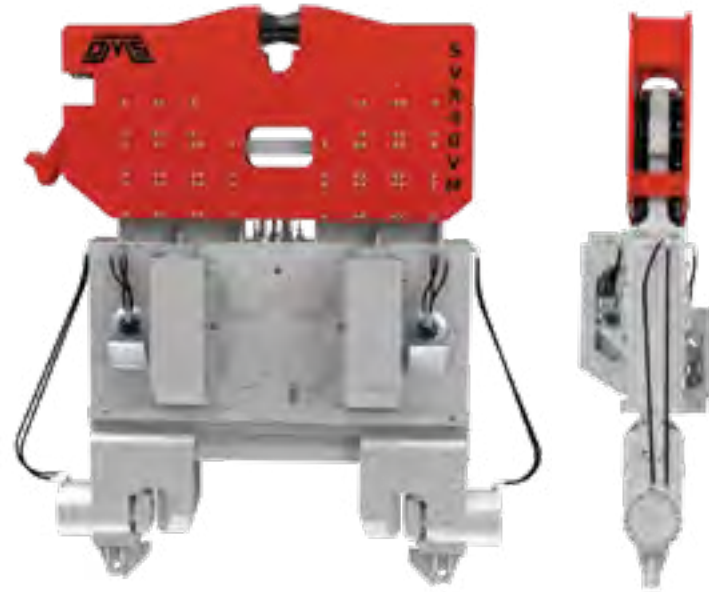
Crane Suspended Vibro Hammers



SVR Series

Crane Suspended Vibro Hammers

Variable Moment (VM)



Metric System

Technical Specifications	8 VM	12 VM	16 VM	20 VM	24 VM	30 VM	40 VM	50 VM
Eccentric Moment (kgm)	0 - 8	0 - 12	0 - 16	0 - 20	0 - 24	0 - 30	0 - 40	0 - 50
Centrifugal Force (kN) Max.	464	698	934	1166	1370	1746	2348	2923
Frequency (rpm)	2300	2300	2300	2300	2300	2300	2300	2300
Oil Flow (lpm)	237	362	492	500	675	767	934	1380
Power (kW)	138	211	287	292	394	448	548	805
Amplitude (mm)	12	13	12	13	15	13	16	16
Pulling Force (kN) Max.	147	235	235	471	471	706	942	1060
Weight and Dimensions								
Dyn. Weight W/O Clamp (kg)	1337	1850	2733	3000	3252	4650	5094	6200
Total Weight W/O Clamp (kg)	1857	2570	3650	4280	4523	6218	7603	8200
Length / L1 (mm)	1280	1695	1945	2080	2080	2210	2797	2885
Length / L2 (mm)	1070	1395	1750	1840	1840	1990	2550	2650
Length / L3 (mm)	895	1822	2084	2002	2002	1900	2849	2847
Height / H1 (mm)	1566	1695	2002	2115	2115	2460	2616	1971
Height / H2 (mm)	2312	2407	2785	3005	3005	3364	3701	2861
Width / W1 (mm)	300	301	315	380	388	388	384	384
Width / W2 (mm)	471	485	659	635	655	729	841	950
Width / W3 (mm)	320	200	350	380	460	400	370	292
Throat Width (mm)	320	320	314	360	360	390	360	350
Clamps for Sheet Piles								
	SCN 60	SCN75/100	SCN 120	SCN 165	SCN 165	SCN 200	SCN 350	SCN 350
Clamping Force (kN)	643	814/1005	1216	1700	1700	2262	3560	3560
Weight (kg)	327	502/620	851	866	866	1195	2553	2553
Clamps for Casing								
	KCN 40x2	KCN 40x2	KCN 60x2	KCN 80x2	KCN 90x2	KCN 120x2	KCN 165x2	KCN 185x2
Diameter (min.-max.) / D (mm)	320 - 700	320 - 970	340 - 1300	460 - 1260	460 - 1260	540 - 1500	520 - 1580	520 - 1700
Clamping Force (kN)	425 x 2	425 x 2	643 x 2	814 x 2	890 x 2	1216 x 2	1700 x 2	1858 x 2
Weight (kg)	185 x 2	185 x 2	307 x 2	538 x 2	538 x 2	948 x 2	1164 x 2	1164 x 2
Recommended Power Pack								
	PP 218	PP 320	PP 428	PP 536	PP 536	PP 768	PP 1072	PP 1536
Power (kW)	160	235	315	394	394	565	394 x 2	565 x 2

Imperial System

Technical Specifications	8 VM	12 VM	16 VM	20 VM	24 VM	30 VM	40 VM	50 VM
Eccentric Moment (in.lbs)	0 - 695	0 - 1041	0 - 1389	0 - 1736	0 - 2083	0 - 2603	0 - 3472	0 - 4340
Centrifugal Force Max. (tons)	52	79	105	131	154	197	264	329
Frequency (rpm)	2300	2300	2300	2300	2300	2300	2300	2300
Oil Flow (gpm)	63	96	130	132	179	203	247	365
Power (hp)	185	283	385	392	529	601	735	1080
Amplitude (in)	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6
Pulling Force Max. (tons)	17	27	27	53	53	80	106	120
Weight and Dimensions								
Dyn. Weight W/O Clamp (lbs)	2948	4079	6026	6614	7170	10252	11230	13669
Total Weight W/O Clamp (lbs)	4094	5666	8047	9436	9972	13709	16762	18078
Length / L1 (in)	51	67	77	82	82	87	110	114
Length / L2 (in)	42	55	69	72	73	79	100	105
Length / L3 (in)	35	72	82	79	79	75	112	112
Height / H1 (in)	62	67	79	83	83	97	103	78
Height / H2 (in)	91	95	110	118	118	133	146	113
Width / W1 (in)	12	12	13	15	15	15	15	15
Width / W2 (in)	19	19	26	25	26	29	33	38
Width / W3 (in)	13	8	14	15	18	16	15	12
Throat Width (in)	12.6	12.6	12.4	14.2	14.2	15.4	14.2	13.8
Clamps for Sheet Piles								
	SCN 60	SCN75/100	SCN 120	SCN 165	SCN 165	SCN 200	SCN 350	SCN 350
Clamping Force (tons)	73	92/113	137	191	191	255	400	400
Weight (lbs)	721	1106/1367	1876	1909	1909	2635	5629	5629
Clamps for Casing								
	KCN 40x2	KCN 40x2	KCN 60x2	KCN 80x2	KCN 90x2	KCN 120x2	KCN 165x2	KCN 185x2
Diameter (min.-max.)/D (in)	13 - 28	13 - 38	14 - 51	18 - 50	18 - 50	22 - 59	21 - 63	21 - 67
Clamping Force (tons)	96	96	145	183	200	273	382	418
Weight (lbs)	815	815	1354	2372	2372	4180	5133	5133
Recommended Power Pack								
	PP 218	PP 320	PP 428	PP 536	PP 536	PP 768	PP 1072	PP 1536
Power (hp)	218	320	428	536	536	768	536 x 2	768 x 2



VARIABLE MOMENT VIBRO HAMMER
SVR 24 VM // RUSSIA

Amplitude / eccentric moment can easily be adjusted between its minimum and maximum by variable moment technology.

The variable moment technology (phase shifter mechanism) of SVR Variable Moment Vibratory Hammers is to adjust the position of eccentric masses with respect to the resonance free starting and stopping of vibration case.

Scan the code with your mobile camera or with a QR reader app to watch the working video of SVR 24 VM.



Principle of Resonance - Free Starting and Stopping Vibration Case

The "Phase Shifter Mechanism" patented by OMS, displaces the eccentric masses and allows the adjustment of the amplitude.



Eccentric Masses in Balance State

The phase shifter changes the position of eccentric masses to the balance situation by remote control or control panel which means no resonance.

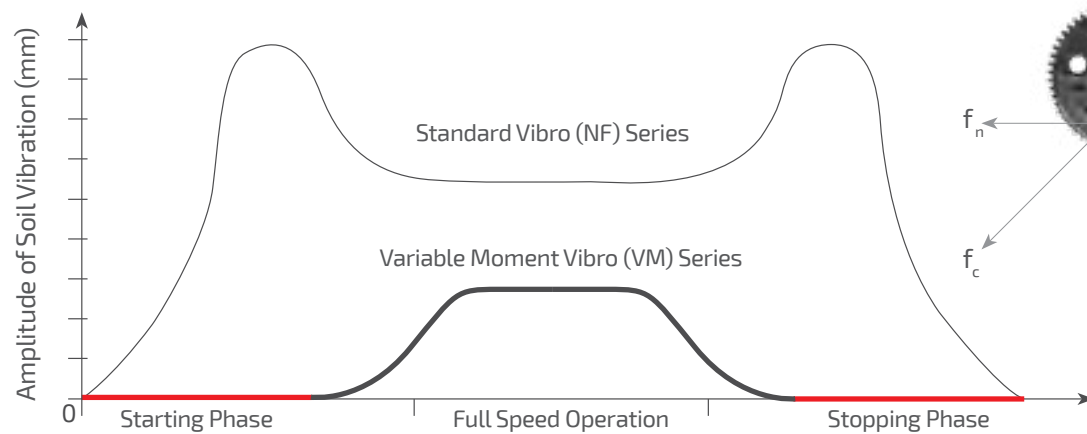
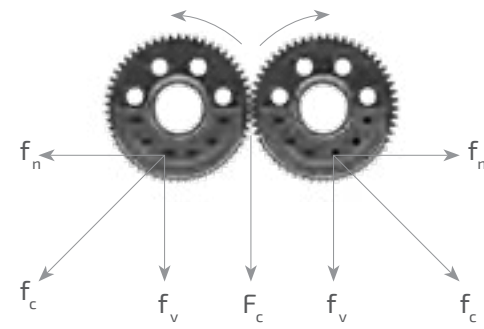


Eccentric masses shifting to unbalance state from balance state

The phase shifter changes the position of eccentric masses from 0° to 180° so that the vibratory pile driver can work at maximum amplitude.



Eccentric Masses in Unbalance State (180° Full Power)



Advantages

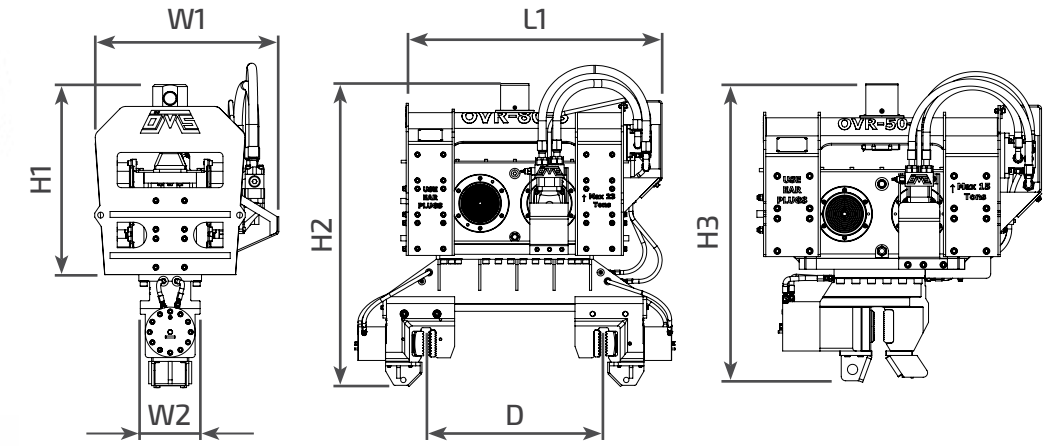
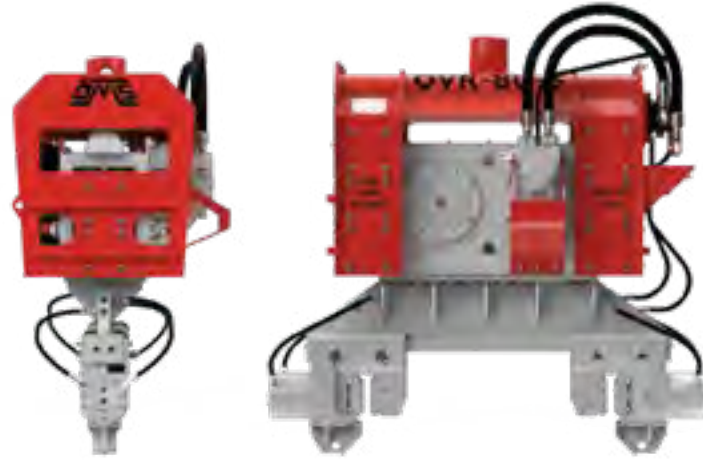
- Environmentally friendly technology,
- Controlled amplitude by means of adjustable eccentric moment,
- Resonance free start - stop,
- Optimum force application to the ground through variable moment feature,
- Minimized sound transmission through high-capacity anti-vibration mounts,
- Powerful, reliable and long life.



OVR Series

Excavator Mounted Vibro Hammers

Standard (S)



Metric System

Technical Specifications	20 S	40 S	50 S	60 S	70 S	80 S	120 S
Eccentric Moment (kgm)	2.1	4	5.2	6.3	7.3	9	12.3
Centrifugal Force (kN)	140	276	354	434	502	615	838
Centrifugal Force (kN) Max.	170	334	428	525	607	744	1015
Frequency (rpm)	2500	2500	2500	2500	2500	2500	2500
Frequency (rpm) Max.	2750	2750	2750	2750	2750	2750	2750
Oil Flow (lpm)	62	100	150	201	233	275	313
Oil Flow (lpm) Max.	69	110	165	221	256	303	344
Power (kW)	33	53	80	107	124	147	167
Power (kW) Max.	37	59	88	118	137	162	183
Amplitude (mm)	16	15	14	16	16	14	19
Pulling Force (kN) Max.	59	147	147	147	147	235	235

Weight and Dimensions

Dyn. Weight W/O Clamp (kg)	270	534	749	771	929	1255	1292
Total Weight W/O Clamp (kg)	384	786	1080	1096	1253	1740	1798
Length / L1 (mm)	755	1200	1282	1282	1343	1466	1487
Height / H1 (mm)	891	762	835	779	893	970	1027
Height / H2 (mm)	-	-	-	1352	1480	1547	1842
Height / H3 (mm)	1295	1250	1320	1344	1402	1510	1634
Width / W1 (mm)	482	735	778	778	804	890	842

Clamps for Sheet Piles	SCN 20	SCN 30	SCN 60	SCN 60	SCN 60/75	SCN 75/100	SCN 100
Width / W2 (mm)	160	200	262	262	262 / 305	305 / 320	320
Clamping Force (kN)	203	304	643	643	643 / 814	814 / 1005	1005
Weight (kg)	88	192	327	327	327 / 502	502 / 620	620

Clamps for Casing	-	-	-	KCN 40x2	KCN 40x2	KCN 40x2	KCN 60 x 2
Diameter (min.-max.) / D (mm)	-	-	-	320 - 666	320 - 666	320 - 970	340 - 1000
Clamping Force (kN)	-	-	-	425 x 2	425 x 2	425 x 2	643 x 2
Weight (kg)	-	-	-	185 x 2	185 x 2	185 x 2	307 x 2

Recommended Excavator Working Weight (ton)

6 - 12	18 - 22	24 - 26	25 - 30	30 - 36	36 - 40	40 - 50
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Imperial System

Technical Specifications	20 S	40 S	50 S	60 S	70 S	80 S	120 S
Eccentric Moment (lbs.in)	183	347	451	547	634	782	1068
Centrifugal Force (tons)	16	31	40	49	57	70	94
Centrifugal Force (tons) Max.	20	38	49	59	68	84	114
Frequency (rpm)	2500	2500	2500	2500	2500	2500	2500
Frequency (rpm) Max.	2750	2750	2750	2750	2750	2750	2750
Oil Flow (gpm)	17	27	40	53	62	73	83
Oil Flow (gpm) Max.	19	29	44	58	68	80	91
Power (hp)	45	71	108	144	166	198	224
Power (hp) Max.	49	79	118	158	184	217	245
Amplitude (in)	0.6	0.6	0.6	0.6	0.6	0.6	0.7
Pulling Force (tons) Max.	7	17	17	17	17	27	27

Weight and Dimensions

Dyn. Weight W/O Clamp (lbs)	596	1178	1651	1700	2048	2767	2848
Total Weight W/O Clamp (lbs)	847	1732	2380	2417	2762	3836	3964
Length / L1 (in)	30	47	51	51	53	58	59
Height / H1 (in)	35	30	33	31	35	38	41
Height / H2 (in)	-	-	-	53	58	61	73
Height / H3 (in)	51	50	52	53	55	60	64
Width / W1 (in)	19	29	31	31	32	35	33

Clamps for Sheet Piles	SCN 20	SCN 30	SCN 60	SCN 60	SCN 60 / 75	SCN 75/100	SCN 100
Width / W2 (in)	6	8	10	10	10 / 12	12 / 13	13
Clamping Force (tons)	23	34	73	73	73 / 92	92 / 113	113
Weight (lbs)	194	423	720	720	720 / 1106	1106 / 1367	1367

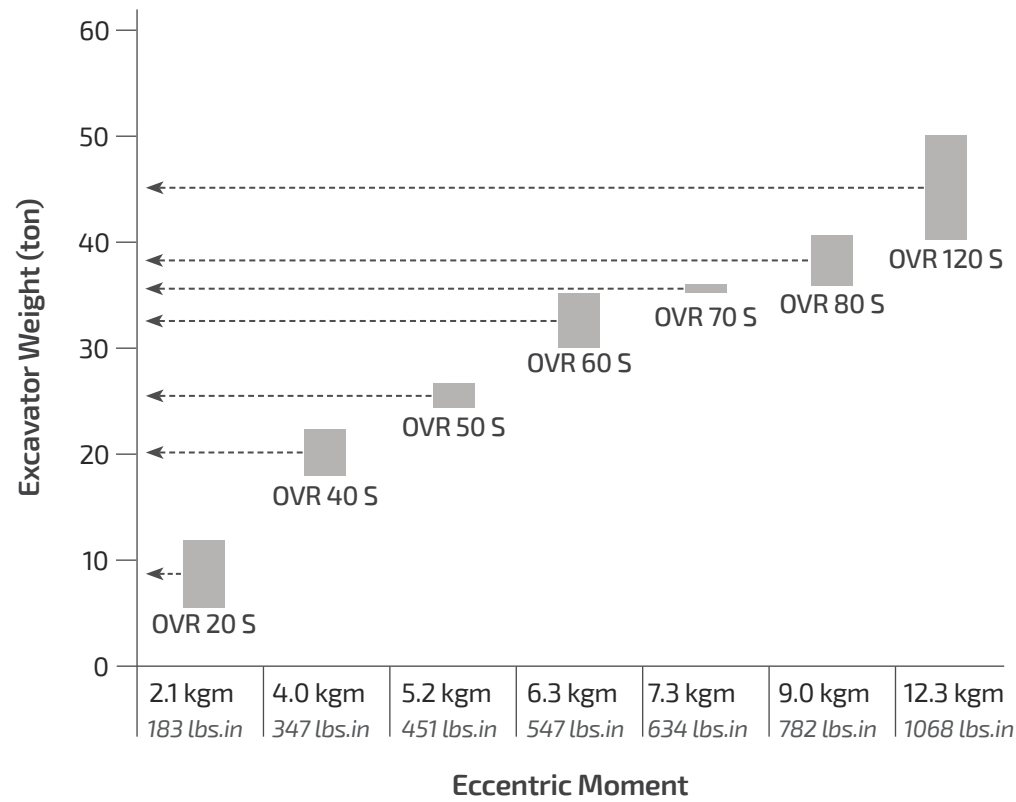
Clamps for Casing	-	-	-	KCN 40x2	KCN 40x2	KCN 40x2	KCN 60 x 2
Diameter (min.-max.) / D (in)	-	-	-	13 - 26	13 - 26	13 - 38	14 - 40
Clamping Force (tons)	-	-	-	96	96	96	145
Weight (lbs)	-	-	-	815	815	815	1354

Recommended Excavator Working Weight (ton)

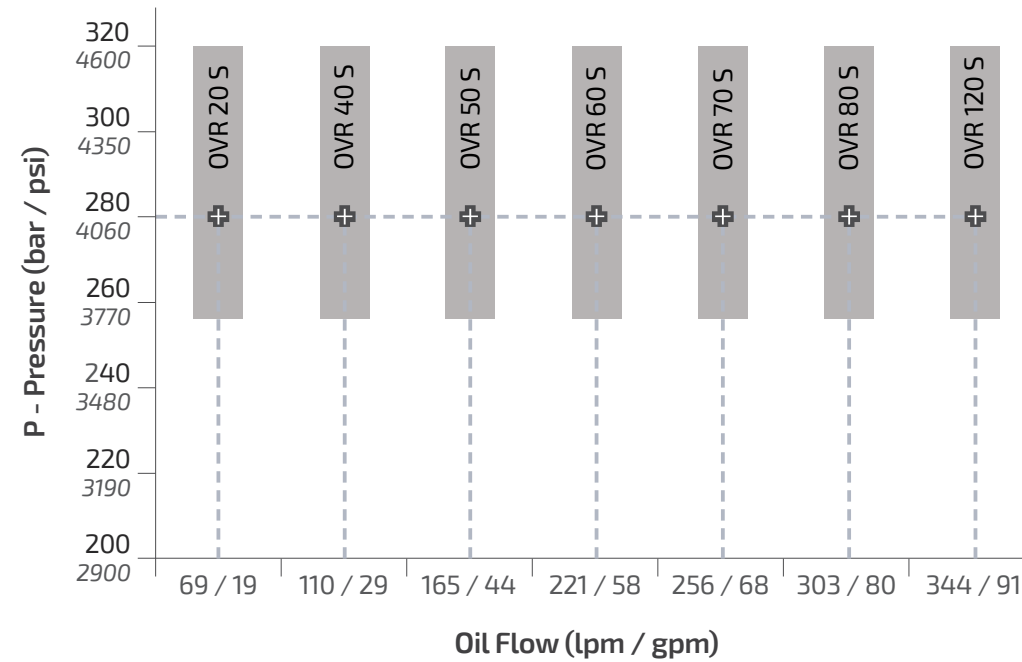
6 - 12	18 - 22	24 - 26	25 - 30	30 - 36	36 - 40	40 - 50
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Selection Chart Excavator Mounted Vibro Hammers



Oil Pressure & Oil Flow (Optimum) Excavator Mounted Vibro Hammers



High Performance and Pile Driving / Extracting Power!..

With its ergonomic design and high performance, OMS excavator mounted vibro hammers with various capacities provide long lasting, problem free piling applications.

Specially designed OVR excavator mounted vibro hammers are easily adapted to the excavator by connection bracket produced by OMS. These are hydraulically driven by the excavators and easily operated by the excavator operators. OVR series excavator mounted vibro hammers do not require any modifications on the excavators. OVR series vibro hammers can be used with all types of piles by means of OMS hydraulic clamps and, thus provide time and cost efficiency.



Photo Credit:
GREENWALL PVC Sheet Pile - Italy
www.greenwallpvc.com

OMS is All Over The World!



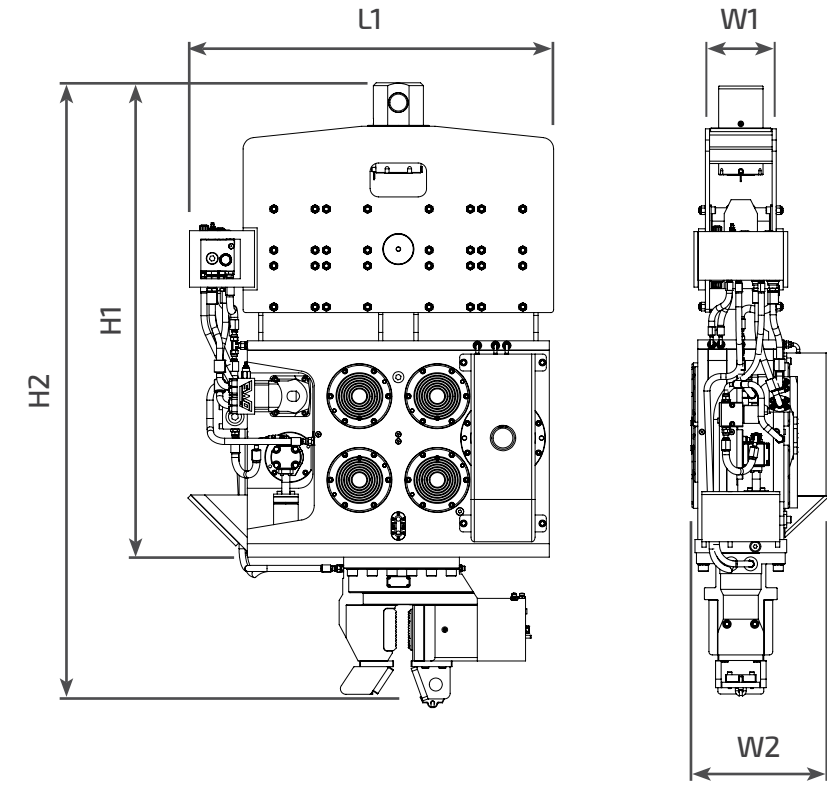
OVR Series

Excavator Mounted Vibro Hammers

Variable Moment (VM)

Advantages

- Environmentally friendly technology,
- Controlled amplitude by means of adjustable eccentric moment,
- Resonance - free start - stop,
- Optimum force application to the ground via variable moment feature,
- Minimized sound transmission through high-capacity anti-vibration mounts,
- Powerful, reliable and long life.



Metric System

Technical Specifications	OVR 80 VM	OVR120VM
Eccentric Moment (kgm) Max.	0 - 8	0 - 12
Centrifugal Force (kN) Max.	464	698
Frequency (rpm)	2300	2300
Oil Flow (lpm)	237	362
Power (kW)	127	193
Amplitude (mm)	12	13
Pulling Force (kN) Max.	147	235
Weight and Dimensions		
Dyn. Weight W/O Clamp (kg)	1337	1850
Total Weight W/O Clamp (kg)	1650	2300
Length / L1 (mm)	1280	1477
Height / H1 (mm)	1680	1774
Height / H2 (mm)	2075	2358
Width / W1 (mm)	255	255
Width / W2 (mm)	471	471
Clamps for Sheet Piles		
	SCN 60	SCN 75/100
Clamping Force (kN)	643	814 / 1005
Weight (kg)	327	502 / 620
Clamps for Casing		
	KCN 40x2	KCN 40x2
Diameter (min.-max.) / D (mm)	320 - 700	320 - 970
Clamping Force (kN)	425 x 2	425 x 2
Weight (kg)	185 x 2	185 x 2
Recommended Excavator Working Weight (ton)		
	20 - 28	25 - 35

Imperial System

Technical Specifications	OVR 80 VM	OVR120VM
Eccentric Moment (in.lbs) Max.	0 - 695	0 - 1041
Centrifugal Force (tons) Max.	52	79
Frequency (rpm)	2300	2300
Oil Flow (gpm)	63	96
Power (hP)	170	259
Amplitude (in)	0.5	0.6
Pulling Force (tons) Max.	17	27
Weight and Dimensions		
Dyn. Weight W/O Clamp (lbs)	2948	4078
Total Weight W/O Clamp (lbs)	3637	5070
Length / L1 (in)	51	59
Height / H1 (in)	66	70
Height / H2 (in)	82	93
Width / W1 (in)	10	10
Width / W2 (in)	19	19
Clamps for Sheet Piles		
	SCN 60	SCN 75/100
Clamping Force (tons)	73	92 / 113
Weight (lbs)	721	1107 / 1366
Clamps for Casing		
	KCN 40x2	KCN 40x2
Diameter (min.-max.) / D (in)	13 - 28	13 - 38
Clamping Force (tons)	96	96
Weight (lbs)	815	815
Recommended Excavator Working Weight (ton)		
	20 - 28	25 - 35



VARIABLE MOMENT VIBRO HAMMER
OVR 70 VM // ENGLAND



VARIABLE MOMENT VIBRO HAMMER
OVR 70 VM // POLAND

Amplitude / eccentric moment can easily be adjusted between its minimum and maximum by variable moment technology.

The variable moment technology (phase shifter mechanism) of SVR Variable Moment Vibratory Hammers is to adjust the position of eccentric masses with respect to the resonance free starting and stopping of vibration case.

Scan the code with your mobile camera or with a QR reader app to watch the working video of OVR 70 VM.



VARIABLE MOMENT VIBRO HAMMER
OVR 70 VM // TURKIYE

Suitable for near historical buildings to use with variable (resonance - free) models.

Advantages

- Environmentally friendly technology,
- Controlled amplitude by means of adjustable eccentric moment,
- Resonance free start - stop,
- Optimum force application to the ground through variable moment feature,
- Minimized sound transmission through high-capacity anti-vibration mounts,
- Powerful, reliable and long life.



VARIABLE MOMENT VIBRO HAMMER
OVR 70 VM // TURKIYE



HITACHI



www.omsvibro.com

OMS SIDE GRIP VIBRO HAMMER

.....

SG SERIES

Excavator Mounted Vibro Hammer
30° Tilting and 360° Rotating



POWERFUL VIBRATORY PILE DRIVING EQUIPMENT BY OMS

Manufacturer of Pile Driving Equipment for over 35 years!

Why Choose the OMS?

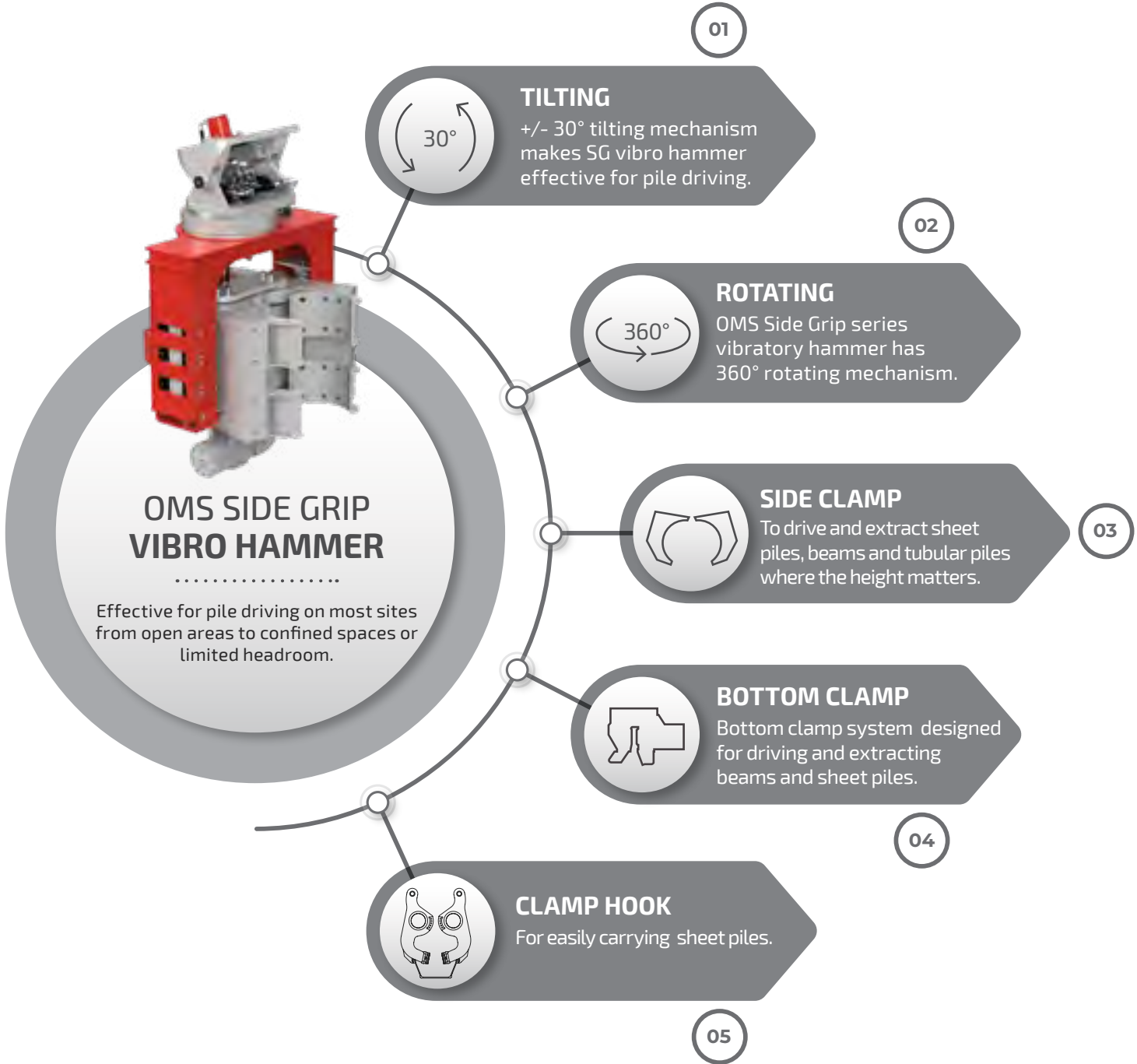
OMS offers its nature-respecting and sustainable solutions, which are part of our mission to our customers and business partners in the best way with its quality and the environment of trust it provides. Also, OMS is growing rapidly by including new dealers in its structures while continuing to have a say in international trade. These are the top reasons why OMS is preferred and why we are getting closer to our vision of being situated in the most reliable and respected position in the sector and being the "brand of the future" day by day.



SG Series Excavator Mounted Side Grip Vibro Hammer

- OMS Side Grip Vibro Hammer Features 4
- OMS Side Grip Vibro Hammer System 7
- OMS Side Grip Pile Arms 10
- OMS Side Grip Bottom Clamp 11
- Selection Guide For Side Grip Vibro Hammer 12
- Usage of Side Grip Pile Driver 13
- Technical Specifications 14

OMS EXCAVATOR MOUNTED SIDE GRIP VIBRO HAMMER



OMS SIDE GRIP VIBRO HAMMER FEATURES

01. Excavator Mounted

- Suitable for all crawler types and wheeled excavators,
- Controlled by a special electronic control system,
- Easy to operate,
- Works with excavator's standard hydraulic system.

02. Advanced Mobility

With 360° rotating system and 30° tilt mechanism, OMS vibro hammer can be worked in small areas. Side grip sheet pile drivers are capable of handling, pitching, and driving/extracting.

03. Wide Product Range

Depending on your excavator power or project requirements, OMS has different sizes and capacity OVR-SG machines. These machines have various types of arms for sheet piling, pipe piling and timber piling.

04. Quick Setup Time

OMS Side Grip Vibro Hammer can be fitted easily and quickly without any modifications required to the excavator and is controlled directly by the excavator operator.

OMS Side Grip Vibro Hammer equipped with both gripping arms/clamp and the bottom clamp. One of the clamps is located in front of vibration case, while the other one is below the vibration case. Hydraulic clamps have gripping jaws. The hydraulic cylinder operates the gripping arms with force up to 500 kN. Bottom clamp is operated with up to 440 kN, depending on clamp relief pressure. The clamps can be opened and closed directly from excavator "Joy Stick" or from the electrical remote control monitor. Clamping and un-clamping occurs in a few seconds.





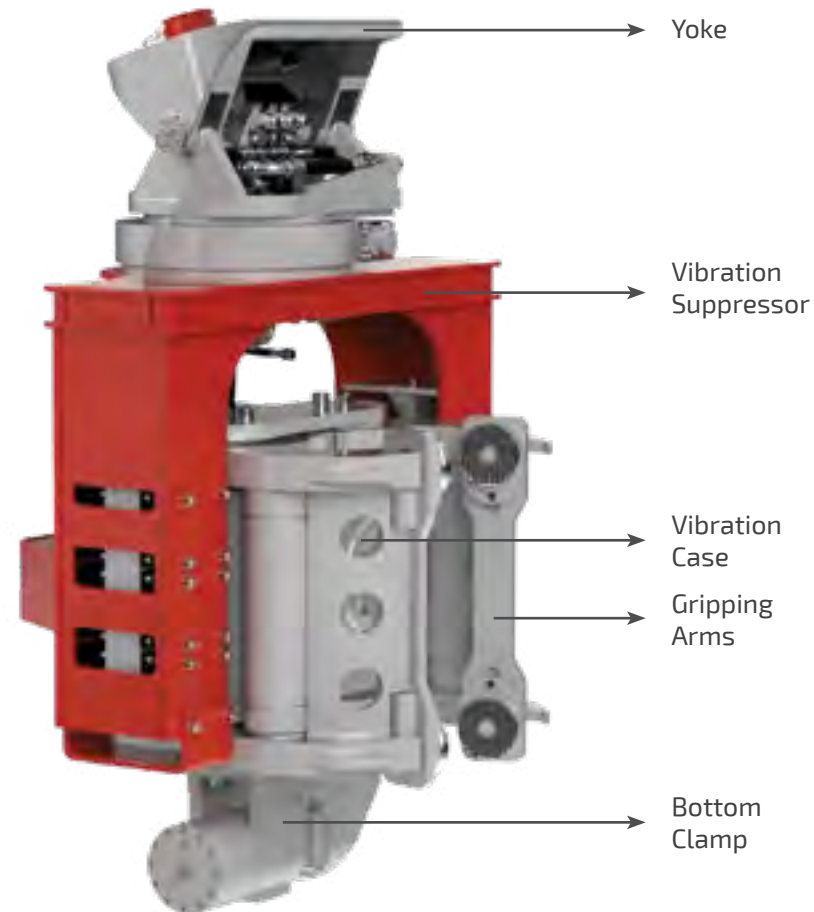
OMS SIDE GRIP VIBRO HAMMER SYSTEM

OMS Side Grip Vibro Hammer can handle, pitch and drive the sheet piles. It is capable to accomplish the whole pile driving process without need for manual handling of the piles or assisting machinery.

High Performance and Pile Driving / Extracting Power!..

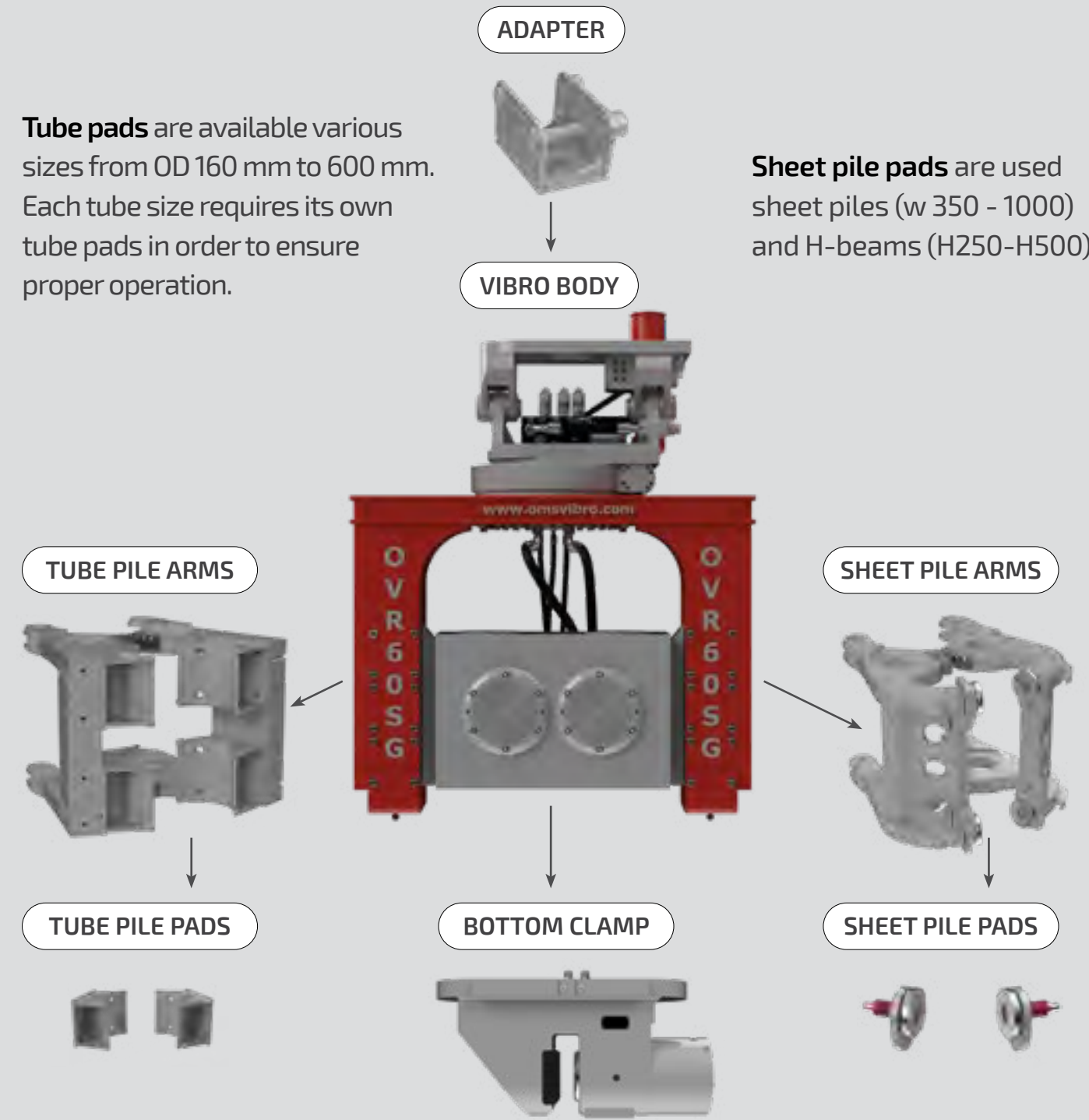
The equipment consists of five major components.

- Yoke
- Vibration Suppressor
- Vibration Case
- Gripping Arms
- Bottom Clamp

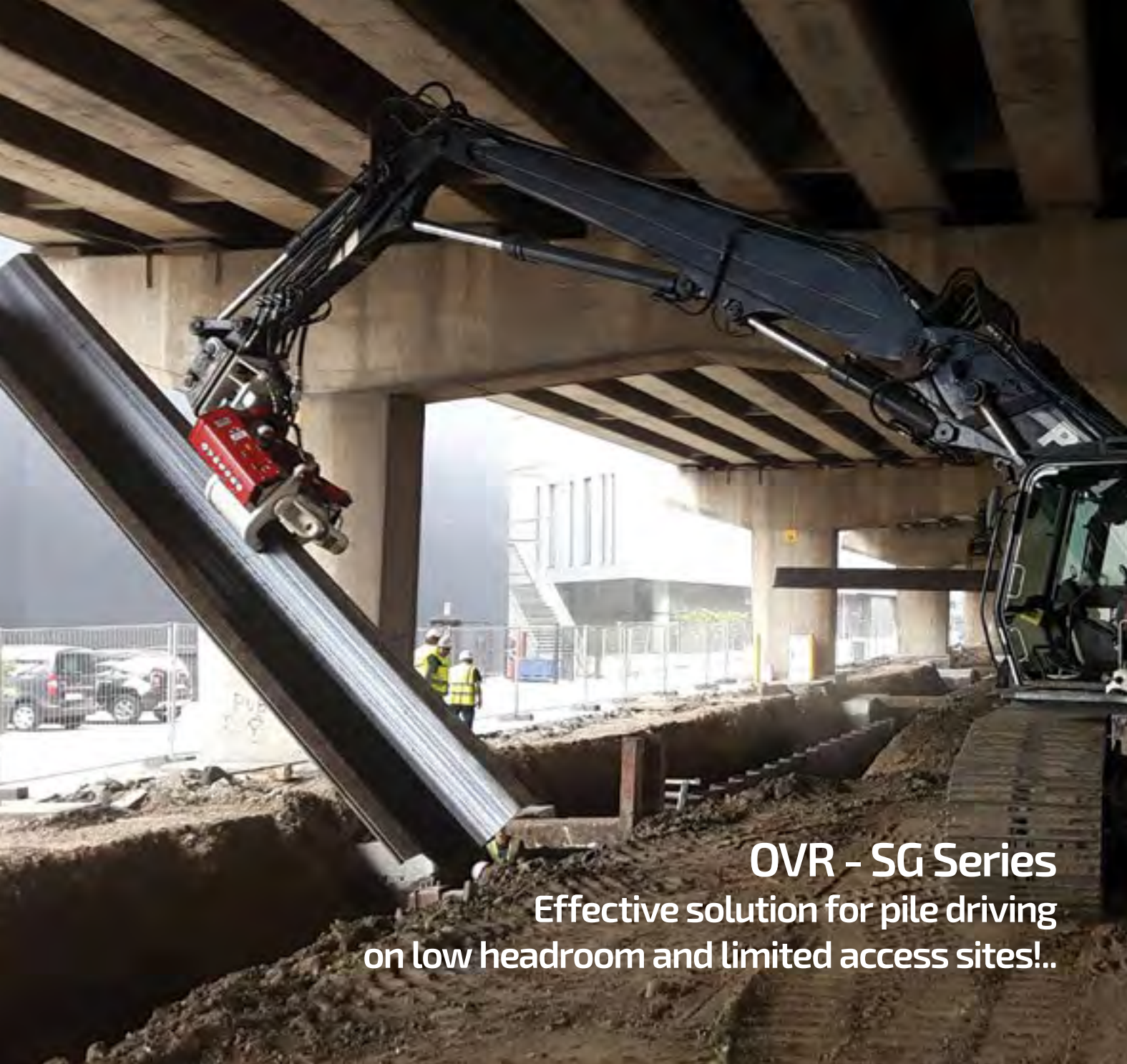


Tube pads are available various sizes from OD 160 mm to 600 mm. Each tube size requires its own tube pads in order to ensure proper operation.

Sheet pile pads are used sheet piles (w 350 - 1000) and H-beams (H250-H500)



OMS Side Grip comes with pile arms and clamp system. Depending on your needs, arms can be changed. OMS Side Grip Pile Driver has two types of clamp: These are **"tube pile arms"** and **"sheet pile arms"**. With the help of these arms, many types of sheet piles, H beams, I beams and tubular piles can be used.



OVR - SG Series
Effective solution for pile driving
on low headroom and limited access sites!..

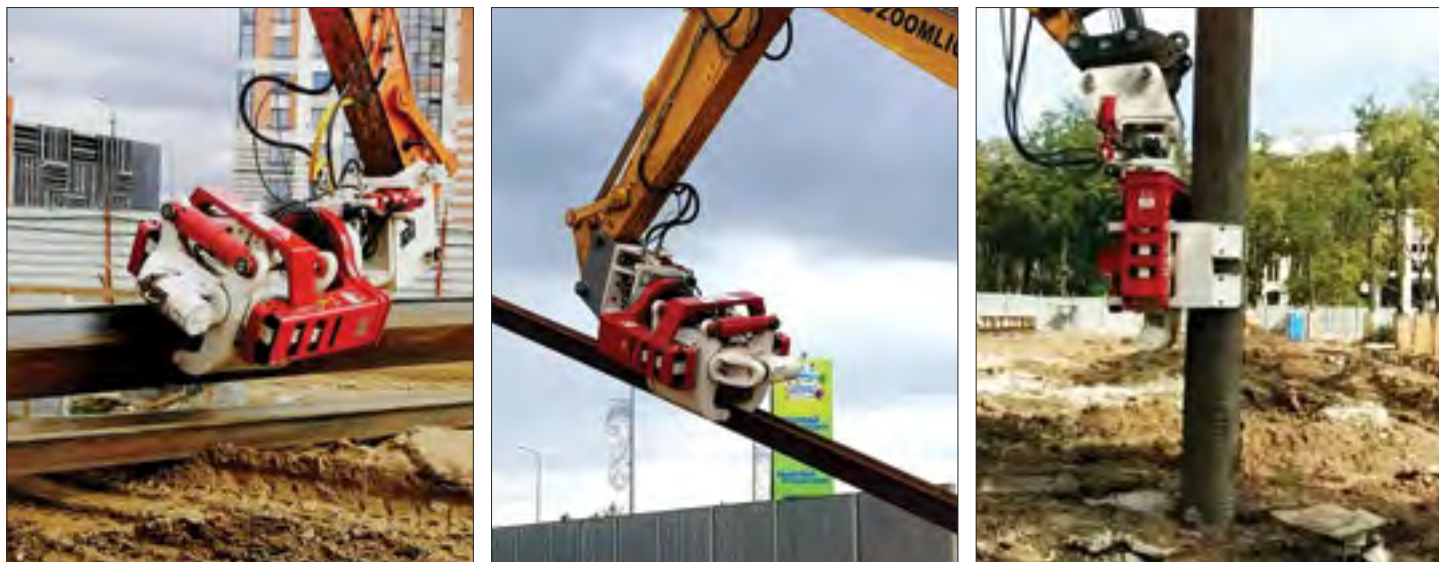
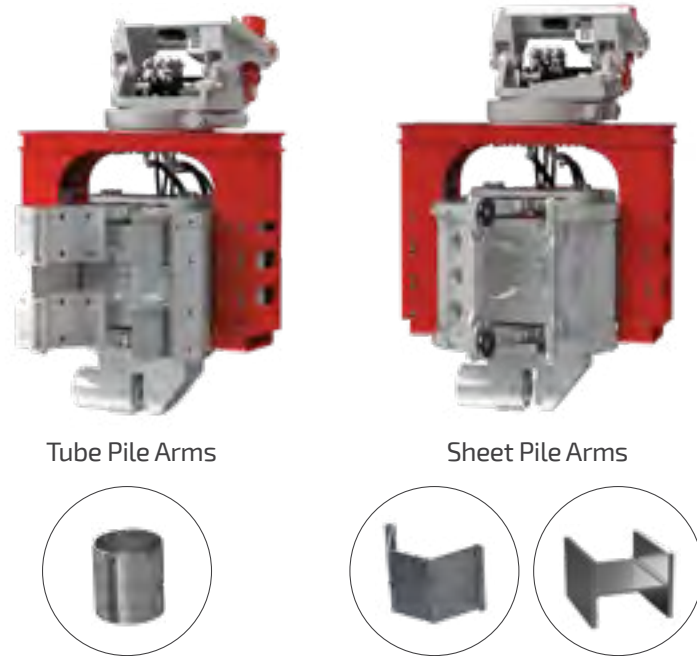


Side Grip Arms and Bottom Clamp

OMS Side Grip Vibro Hammer equipped with both gripping arms/clamp and the bottom clamp. One of the clamps is located in front of vibration case while the other one is below the vibration case.

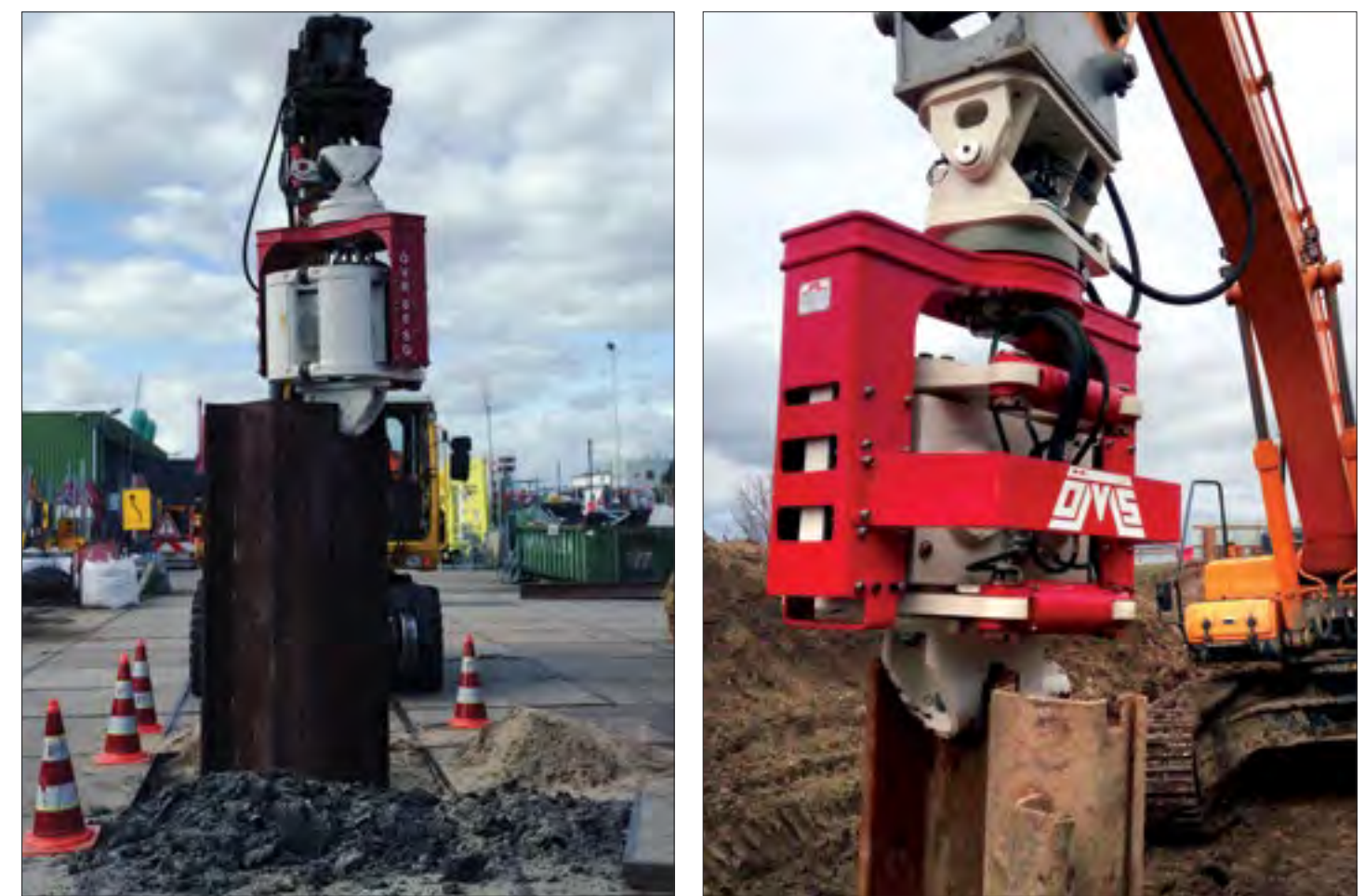
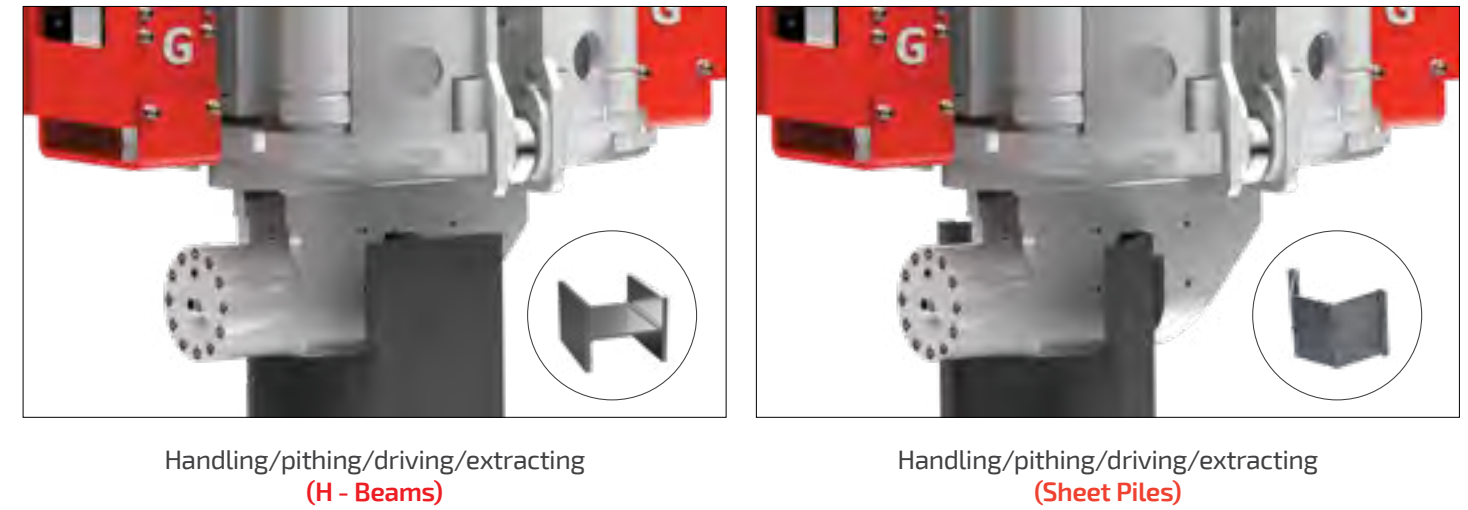
OVS SIDE GRIP PILE ARMS

Main feature of side grip vibro hammer is **“side grip pile arms”**. Side Grip arms are designed for handling, pitching, driving and extracting of various types of piles. Depending on your needs, arms can be changed. With the help of these arms many types of sheet piles, H beams, I beams and tubular piles can be used.



OVS SIDE GRIP BOTTOM CLAMP

The bottom clamp system is designed for driving and extracting beams and sheet piles. With the help of bottom clamp system OVR SG machines can be worked as excavator mounted standard vibro hammer system.

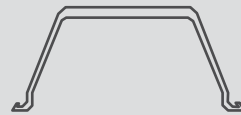
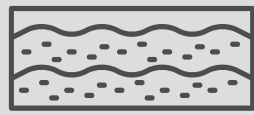
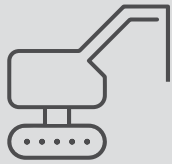


SELECTION GUIDE FOR SIDE GRIP VIBRO HAMMER

USAGE OF SIDE GRIP PILE DRIVER

To finalize your selection and further information please contact **OMS** technical support!

Selecting the right vibro hammer depends on some main criteria. These criteria are, excavator power, the type of pile to be driven, the driving depth and most importantly the type of soil (SPT-N Value).



EXCAVATOR WORKING WEIGHT

The technical specifications of the excavator must meet the minimum requirements for the operation of the vibro hammer (hydraulic power "oil flow @ pressure"). Excavators lifting capacity and hydraulic system designs are also important. This information must be gathered from excavator manufacturer.

SOIL TYPE

Soil conditions must be known. Vibro hammer driving depth can be changed depending on loose, medium and very dense soil type.

TYPE OF PILE AND DRIVING DEPTH

Type of pile (H-beam, I beam, sheet pile, timber pile and tube pile etc.) is important to choose right arms for vibro hammer. Depending on pile and driving depth, vibro hammer model can be changed.

Selection Chart

	OVR 40 SG	OVR 50 SG	OVR 60 SG	OVR 70 SG
Excavator Class	18-22 ton	24-26	25-30	30-36
Sheet Piles (mm)	350-800		400-1000	
H-Beams	H200-H500		H250-H500	
Timber Piles (mm)	Ø120-400		Ø160-600	
Tube Piles (mm)	Ø120-400		Ø160-600	

Handling



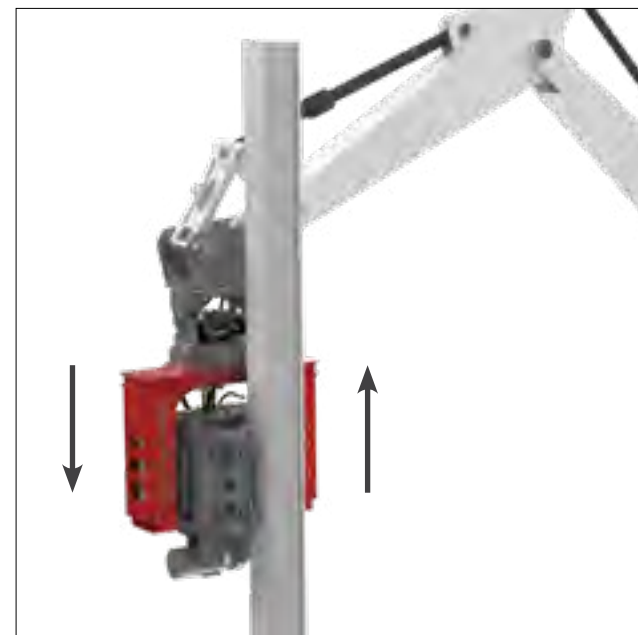
Carrying Sheet Piles



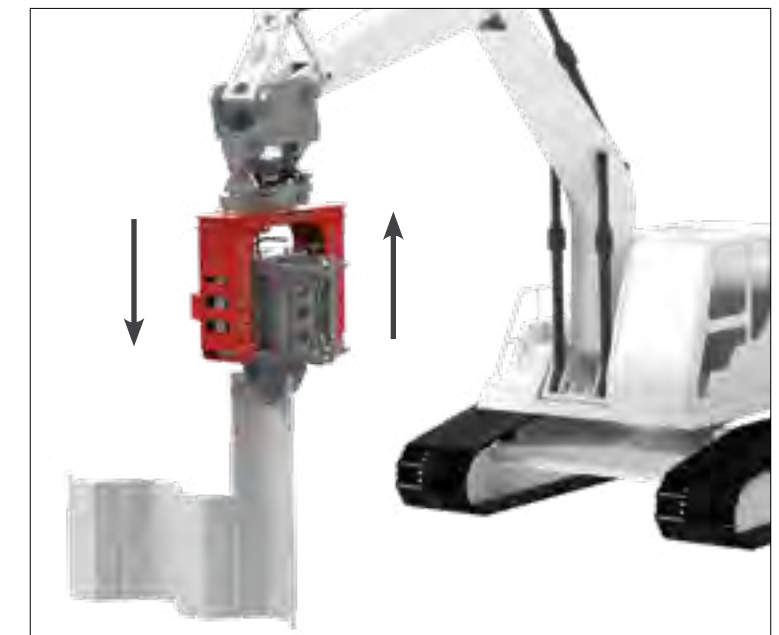
Pitching



Driving / Extracting (Side Clamp)



Driving / Extracting (Bottom Clamp)

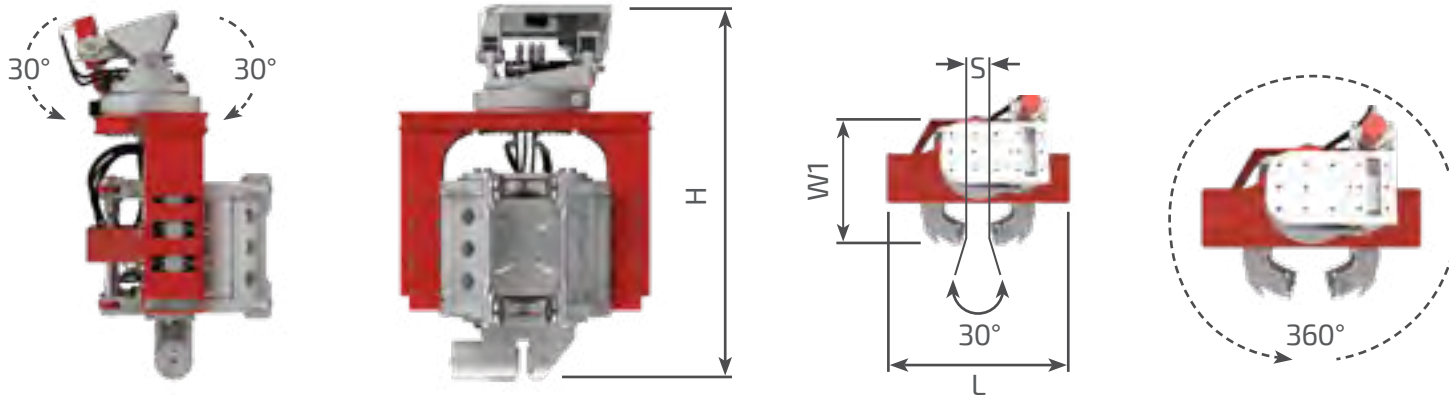


OVR Series®

Excavator Mounted Vibro Hammers

Side Grip (SG)

SHEET PILE DRIVERS (SG - SP)



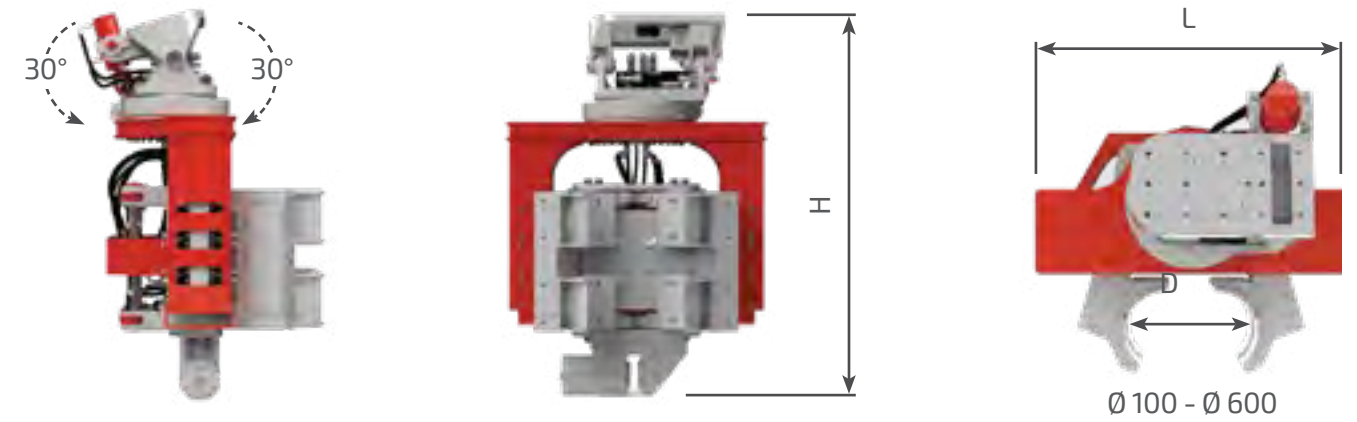
Technical Specifications	40 SG-SP 40 SG - TP		50 SG-SP 50 SG - TP		60 SG-SP 60 SG - TP		70 SG-SP 70 SG - TP	
	Metric	US	Metric	US	Metric	US	Metric	US
Unit								
Eccentric Moment (kgm) (in.lbs)	4	347	5.2	451	6.3	547	7.3	634
Centrifugal Force (kN) (tons)	276	31	354	40	434	49	502	56
Centrifugal Force Max. (kN) (tons)	334	37	428	48	525	59	607	68
Frequency (rpm)	2500	2500	2500	2500	2500	2500	2500	2500
Frequency Max. (rpm)	2750	2750	2750	2750	2750	2750	2750	2750
Oil Flow (L/min) (gpm)	100	26	150	40	201	53	233	61
Oil Flow Max. (L/min) (gpm)	110	29	165	44	221	58	256	68
Power (kW) (hP)	53	71	80	107	107	143	124	166
Power Max. (kW) (hP)	59	79	88	118	118	158	137	183
Amplitude (mm) (in)	5	0.2	6	0.2	6	0.2	7	0.3
Pulling Force (kN) (tons)	117	13	117	13	177	20	177	20
Side Gripping Force (kN) (tons)	439	49	439	49	532	60	532	60
Bottom Clamping Force (kN) (tons)	292	33	292	33	442	50	442	50

OVR Series®

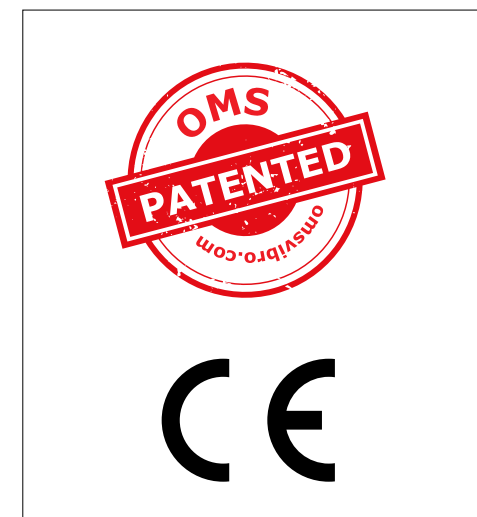
Excavator Mounted Vibro Hammers

Side Grip (SG)

TUBE PILE DRIVERS (SG - TP)



Weight and Dimensions	40 SG-SP		50 SG-SP		60 SG-SP		70 SG-SP	
	Metric	US	Metric	US	Metric	US	Metric	US
Dynamic Weight (kg) (lbs)	1573	3468	1643	3622	2055	4530	2085	4597
Total Weight (kg) (lbs)	2530	5578	2660	5864	3110	6856	3140	6923
Length / L (mm) (in)	1420	56	1420	56	1450	57	1450	57
Height / H (mm) (in)	2124	84	2124	84	2257	89	2257	89
Width / W1 (mm) (in)	1190	47	1190	47	1215	48	1215	48
Arm Stroke / S (mm) (in)	225	9	225	9	225	9	225	9





OMS GROUND IMPROVEMENT EQUIPMENT



OVF SERIES
Stone Column Equipment

WD SERIES
Prefabricated Vertical Drain (PVD)
Installation Machine



www.omsvibro.com

POWERFUL GROUND IMPROVEMENT EQUIPMENT BY OMS

Manufacturer of Pile Driving Equipment for over 35 years!

Why Choose the OMS?

OMS offers its nature-respecting and sustainable solutions, which are part of our mission to our customers and business partners in the best way with its quality and the environment of trust it provides. Also, OMS is growing rapidly by including new dealers in its structures while continuing to have a say in international trade. These are the top reasons why OMS is preferred and why we are getting closer to our vision of being situated in the most reliable and respected position in the sector and being the "brand of the future" day by day.



OVF Series Stone Column Equipment

Vibro Compaction (Top Feed)	4
Tandem Free Hanging	4
Single Free Hanging	4
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WD Series Prefabricated Vertical Drain (PVD) Installation Machine

Wick Drain Installation Machine	14
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Operation Procedure of Installation	17
WD 28-43 Technical Specifications	18

We support our customers by recommending the best ground improvement equipment solutions. Vibro compaction and vibro replacement (stone columns), as well as vertical drain (wick drain) equipment, of OMS have proved themselves in the global market from Europe to the Middle East, South East Asia and America continent.

Ground engineering plays an increasingly important role in social and industrial development, especially in connection with major construction projects such as power stations or the expansion of infrastructure systems (railways, harbours, airports, etc.). The objectives of deep **vibro compaction** and **vibro replacement** are to improve the strength and deformation characteristics of problematic soils to a certain degree so that structures can be supported safely and economically on or below the improved ground surface.

Vibro compaction and vibro replacement can be another option as technical methods which is used for unfavourable soil conditions that provide a transition between the deep foundation and soil stabilisation. These methods increase the strength of the weak layer and utilise the benefit of improved resistance.

At this point, the OMS provides the right soil improvement equipment as a solution for its customers. The vibro compaction and vibro replacement (stone columns), as well as vertical drain (wick drain) equipment, of OMS plays a crucial role in the market from Germany to the Middle East, South East Asia, and America continent.





VIBRO COMPACTION (Top Feed System)

The OMS vibro compaction method is mostly used in granular soils that are at seismic risk and thus, the method itself is suitable for land reclamation projects to mitigate the risk of liquefaction. This technique is for densifying sand-like soils on site by means of an OMS Vibroflotation probe. With the simultaneous vibration and saturation impact, loose sand particles are repacked into a more compact state and lateral confining pressure within the sand mass is increased.

The vibro compaction technique is most suitable for medium to coarse-grained sand with silt content. Cohesive soil consisting of silt and clay material does not respond to vibratory compaction. The following illustration explains the operation:

The typical OMS configurations of the vibro compaction technique:

1. Tandem Free Hanging
2. Single Free Hanging

The tandem vibro compaction configuration is consisting of two vibroflotation probes suspending from the same crane. It is mostly preferred in land reclamation, railway, highway projects etc. The quality of the compaction/stone column can be monitored with a data logger supplied by OMS. Hence, the depth, compaction rate, time related compaction and withdrawals as well as gravel volume can be measured and monitored.

The single free hanging vibroflotation probe comprises of the same interchangeable parts as the tandem set. The depth of compaction or stone column can be deeper, therefore projects that are medium to small scale are suitable for to be executed with a single free hanging system. Compared to the tandem system, the crane capacity of the vibroflotation probe is slightly smaller. On the other hand, just like a tandem system, the quality of the compaction/stone column can be monitored with a "data logger" so that, depth, compaction rate, time related compaction and withdrawals as well as gravel volume can be measured and monitored.



Operation Procedure of Vibro Compaction:

1. Penetration: The OMS vibroflot probe is penetrated to the depth required by the project with the vibration effect and water jet.



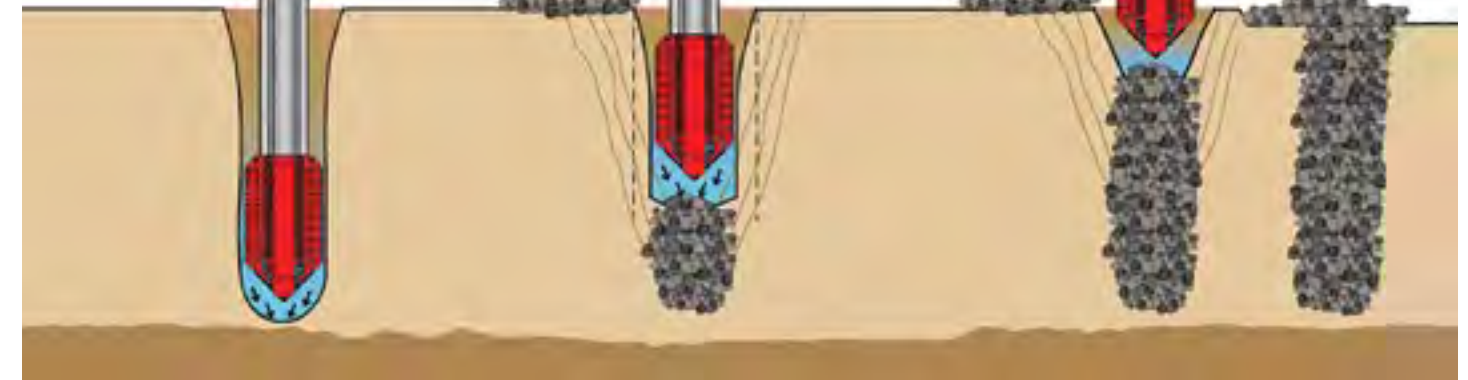
2. Compaction: Compaction is a process that continues as the vibroflot is pulled up. The probe is pulled up to a certain level and the ground walls are compressed with an action like penetrating again.



3. Refill: After the ground is slightly compressed, the same as the project's gravel or different type of granular material is poured into the cavity by feeding on the top. The process is continued by moving the probe up and down the soil and vibrating it at the same time.



4. Finishing: After the process is completed, the compacted gravel column and settlement of the soil had achieved.



TANDEM FREE HANGING

The configuration of tandem vibro compaction comprises of two vibroflotation probes suspending from the same crane.



SINGLE FREE HANGING

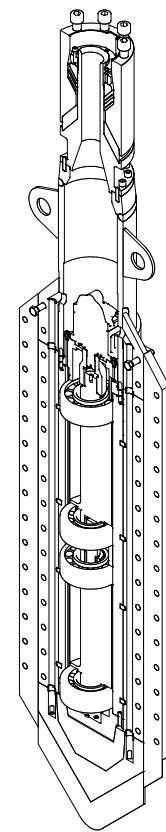
The configuration of single free hanging vibroflotation probe consists of the same interchangeable parts as the tandem set.



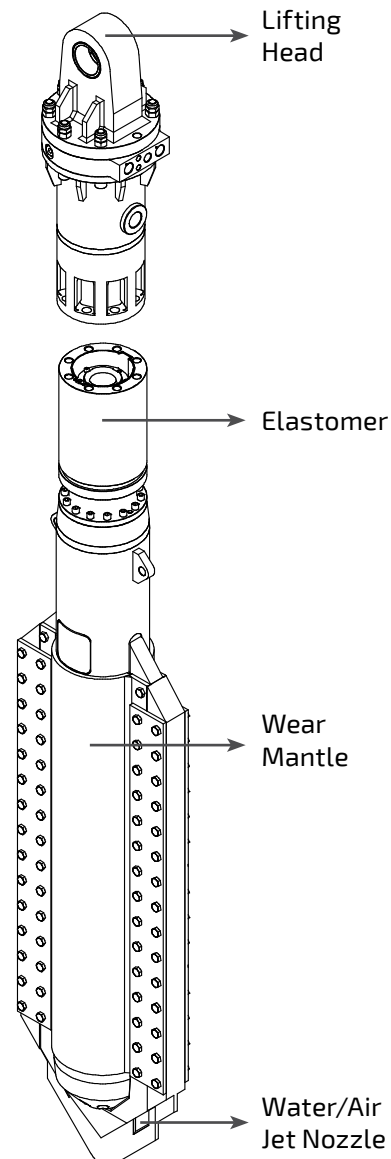
VIBRO REPLACEMENT (Bottom Feed System)



Ropes
 Spreader Beam
 Lifting Head
 Extension Tube



Vibroflotation Prob



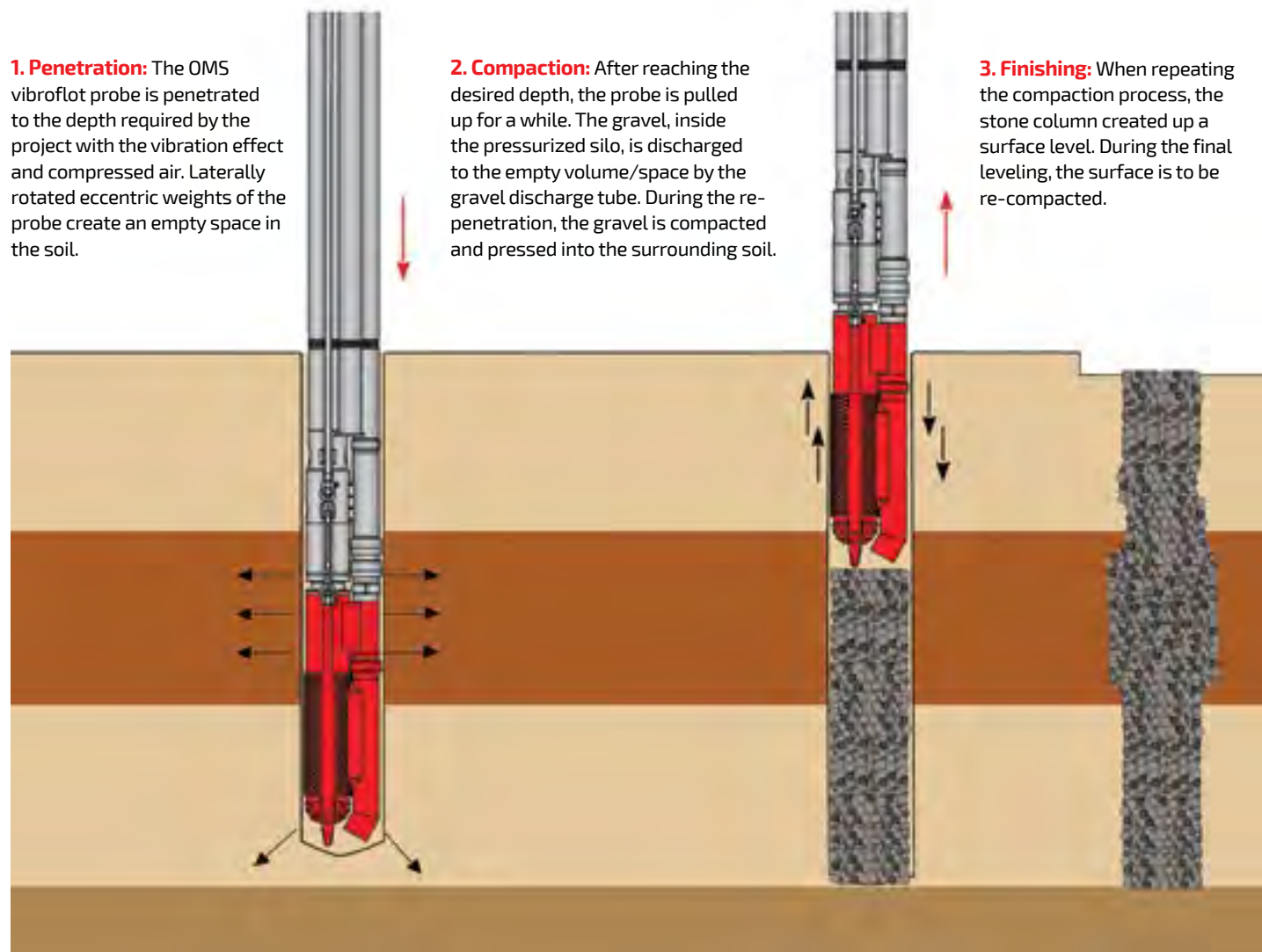
Vibro Replacement Stone Column is a soil improvement system by which vertical columns of compacted gravel are placed into soil. This is a technique that builds load-bearing columns made out of gravel or crushed stones in a cohesive soil and granular soil with high fines content.

Vibro replacement stone columns have been used to improve a wide range of soil from very soft clays and peat to materials marginally suitable for the vibro compaction method. The equipment used for the vibro replacement method is (other than for the vibro displacement method) identical to the one used in the vibro compaction method.

For the operation of vibro replacement columns (stone/gravel columns) "the bottom feed" process feeds gravel to the end of the vibroflotation probe with the aid of pressurised air. For the optimum performance of this process, OMS has developed the vibroflotation probe and gravel hopper with a pressure chamber. These OMS vibroflotation probes can be mounted on an existing drill rig or leader, crane or excavator.



Operation Procedure of Vibro Replacement:



The typical OMS configurations of the vibro replacement technique:

1. Drill Rig / Leader Mounted Bottom Feed Vibroflotation
2. Bottom Feed Free Hanging Vibroflotation
3. Excavator Mounted Bottom Feed Vibroflotation

Typical Configuration of Vibro Replacement:

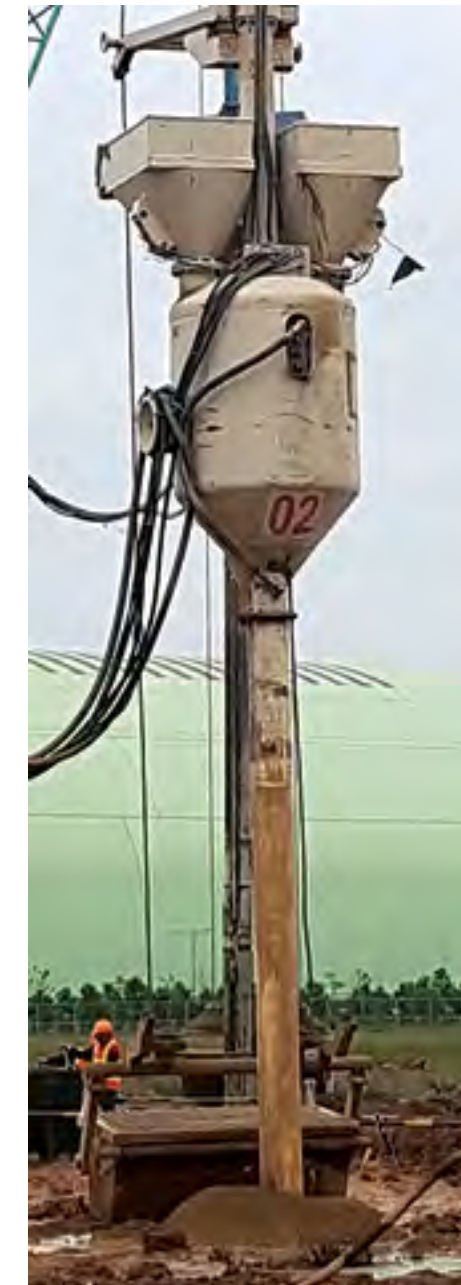
DRILL RIG / LEADER MOUNTED

Probe is easy to mount on an existing drill rig or a leader.



BOTTOM FEED FREE HANGING

Probe with a gravel hopper is suspended by a crane.



EXCAVATOR MOUNTED

Excavator selection is crucial in this configuration.



1. Drill Rig / Leader Mounted

The OMS vibroflotation probe (bottom feed system) with gravel hopper can be easily mounted on an existing drill rig or a leader with a supervisor from OMS technical team. This particular configuration is advantageous since the drill rig or leader is equipped with a pull-down system, thus, allowing additional pull-down pressure to be exerted during penetration and compaction.



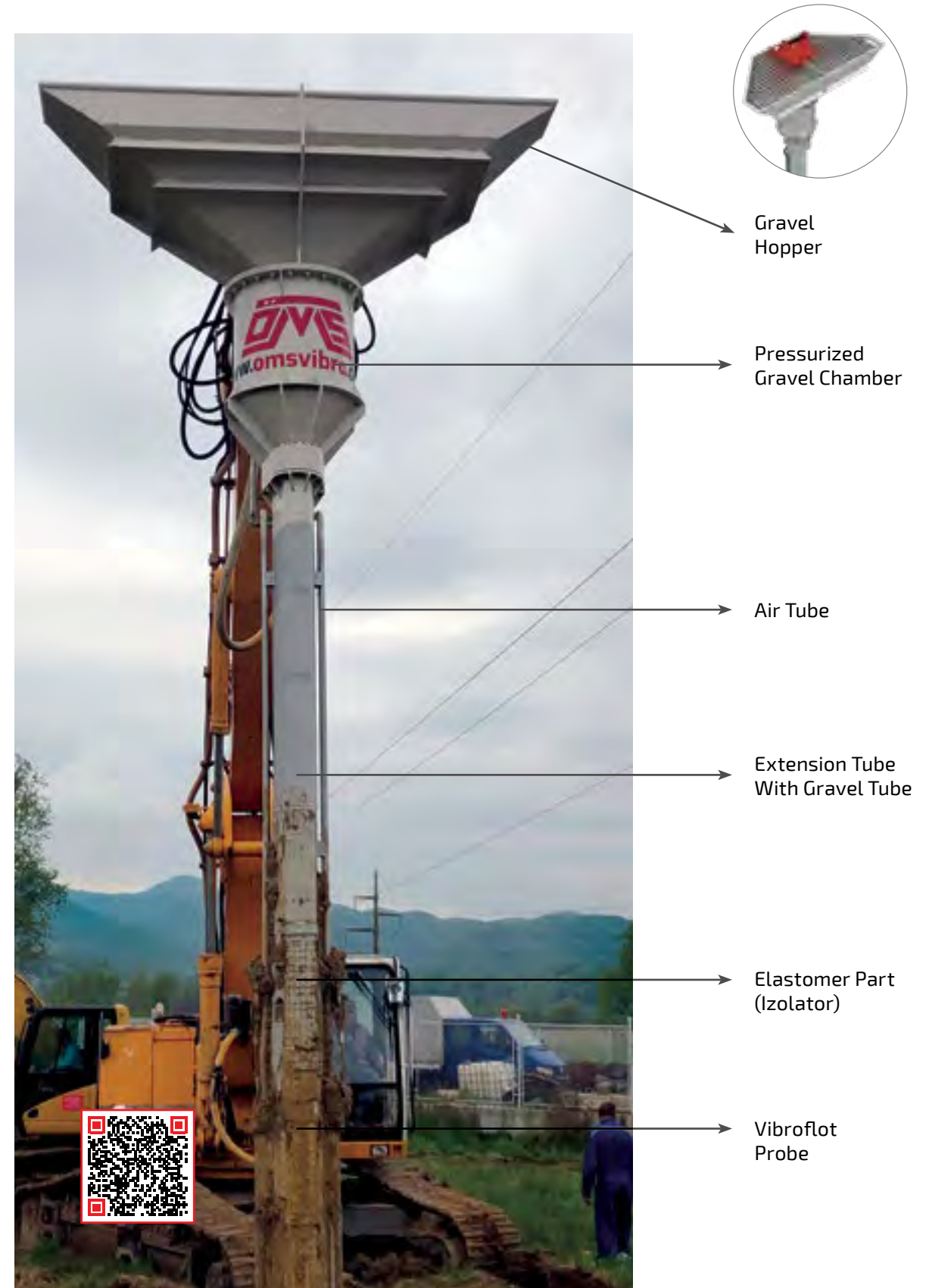
2. Bottom Feed Free Hanging

The OMS vibroflotation probe (bottom feed system) with a gravel hopper suspended by a crane. For the configuration, the crane capacity should be suitable to carry on suspended weights.



3. Excavator Mounted Bottom Feed Vibroflot

The OMS bottom feed system is easier to mount on a customer's excavator. In any case, the help of the OMS supervision team is needed. Also, it is simpler to operate and cost-friendly. However, stone columns come with limited depth because excavators have certain limits. Excavator selection is crucial in this configuration. Vibroflotation probe is operated with the excavator's hydraulic system. Depending on the excavator's limitation, the depth of the stone column becomes limited.



Monitoring and Reporting

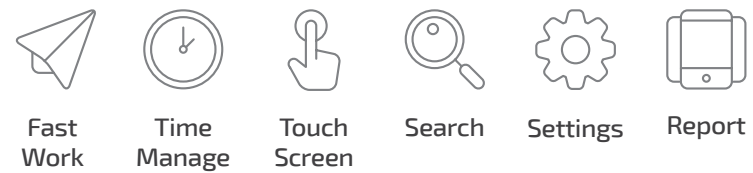


Control Panel of Data Loggers

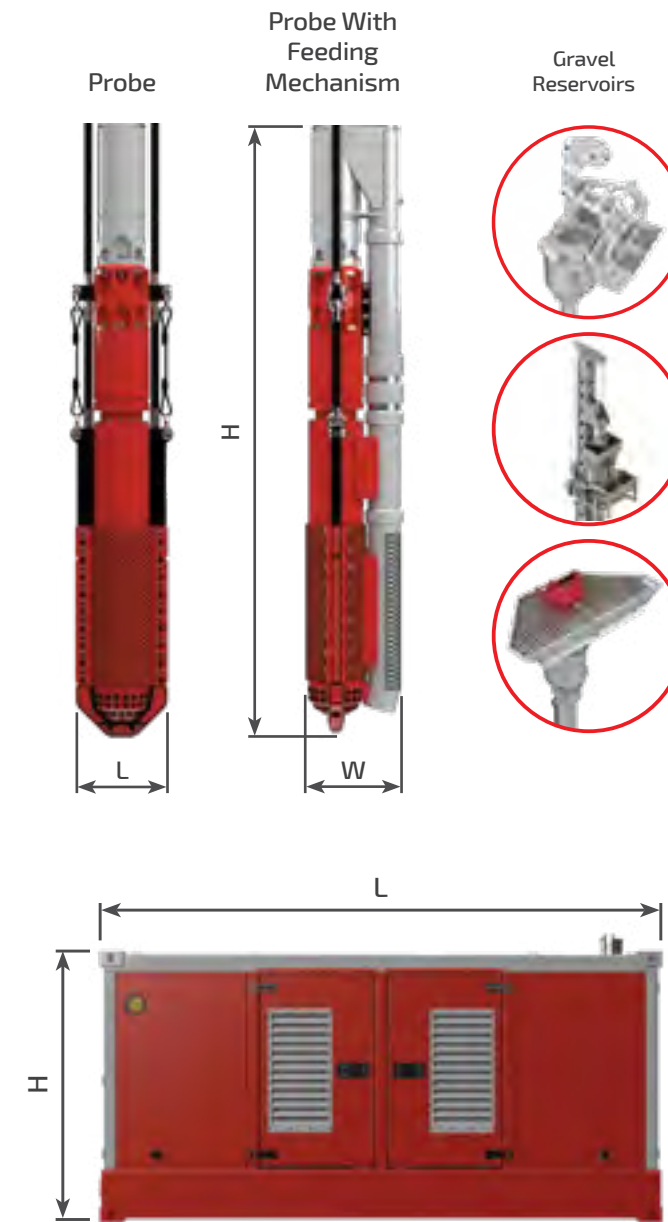
OMS vibro compaction and vibro replacement outputs can be monitored with a OMS "data logger" system. During the vibro compaction and vibro replacement operation numbers of different sites and parameters are automatically recorded. The following parameters can be measured, saved and printed as proof of production and quantities:

- Date
- Site Name
- Depth of Penetration
- Compaction Point Reference Number
- Compaction Rate (Pressure)
- Volume of Gravel

Monitors, which have a membrane keypad and LCD screen, are placed in a waterproof slot. The operator can control the compression process parameters from the screen.



Technical Specifications



Metric System

Technical Specifications	300-2	300-4	400-10
Eccentric Moment (kgm) (in.lbs)	2	4	10.2
Frequency (rpm)	3000	3000	2100
Centrifugal Force (kN) (tons)	200	396	493
Oil Flow (lpm) (gpm)	180	330	262
Power (kW)	105	193	153

Weight and Dimensions

Weight (kg) (lbs)	2100	2812	3350
Height (H) (mm) (in)	3745	4436	4463
Width (W) (mm) (in)	590	590	645
Length (L) (mm) (in)	620	620	679

Power Pack

	PP 218	PP 320	PP 320
Output (kW)	160	235	235

Imperial System

Technical Specifications

Eccentric Moment (kgm) (in.lbs)	174	347	885
Frequency (rpm)	3000	3000	2100
Centrifugal Force (kN) (tons)	22.5	44.5	55.4
Oil Flow (lpm) (gpm)	48	87	69
Power (hP)	141	259	205

Weight and Dimensions

Weight (kg) (lbs)	4630	6199	7397
Height (H) (mm) (in)	147	175	176
Width (W) (mm) (in)	23	23	25
Length (L) (mm) (in)	24	24	27

Power Pack

	PP 218	PP 320	PP 320
Output (hP)	218	320	320

Power Pack	PP - 218		PP - 320	
	Metric	US	Metric	US
Oil Flow Max . (lpm) (gpm)	232	61	460	121.4
Pressure Max. (bar) (psi)	350	5000	350	5000
Oil Capacity (liter) (gal)	450	118.8	450	118.8
Diesel Tank Capacity (liter) (gal)	450	118.8	650	171.6
Width (mm) (in)	1610	64	1650	65
Length (mm) (in)	3720	147	4200	165
Height (mm) (in)	1740	69	1840	72

* Power packs are named according to horse power of its engine. Depending on availability of engine, power pack names can be changed.



WICK DRAIN (PVD INSERTER) INSTALLATION EQUIPMENT

The **OMS Wick Drain Installation Machine** is a soil improvement machine that is used for the quick consolidation of cohesive soils. The machine is consisting of; hydromotors, sprocket gears, a mandrel and a high frequency vibro hammer. It is very useful equipment to drain the water in the cohesive soils, thus, the liquefaction risk is minimal and settlement time is faster than standard procedures.

The difficulties experienced by engineers in the design of structures built on loose and liquid soils have necessitated various improvement methods throughout history. Unpredictable long-term ground settlements cause unnecessary labor and additional costs, as well as a waste of time.

Simple and ordinary ground consolidation works can take quite a long time. This waste of time can be overcome by creating artificial vertical drainage paths through which water flow can be achieved.



Advantages of Wick Drain Equipment: Stronger, Deeper and Faster!

The driving and extracting force of the Wick Drain machine is 276 kN, and the combined force (wick drain + vibro hammer) is 711 kN. Related to the enormous static and dynamic force, the machine is **stronger** and drives **deeper**. Depending on the soil condition, the machine is **faster** due to the operation of the mandrel and its speed up to 100 m/min.

Wick drain can be applied in all areas requiring ground consolidation, including the following areas;

- Highway walls, embankments, impoundment,
- Bridge roads, routes and crossings,
- Dams,
- Railroads,
- Airports and harbors, ports,
- Storage tanks,
- Mining waste ponds.

With the OMS Wick Drain Installation Machine, the most efficient results are obtained at a low cost.



Operation Procedure of Installation Wick Drain

- Wick drains in rolls are installed in the drain drum located on the machine.
- Sand, gravel, or suitable materials are also called drain blankets shortly, are laid on the ground to be placed in the wick drain.
- The system is rigged to a vertical position with the help of an excavator. The product is ready for operation.
- The specially designed button type mandrel is driven to the desired depth by the OMS Wick Drain Installation Machine. After installing the mandrel, PVD material leaves into the ground.
- This operation is repeated at each predetermined drainage. In different areas of application, the depth at which the operation should be performed may vary.
- After the installation of all the drains is completed, the ground should be loaded with earth material required by the project. The groundwater rises to the surface through the drains.



WD 28 - 43 Technical Specifications

Technical Data WD28 - 43

Unit	Metric	US
Static (crowd) Force (kN) (tons)	276	31
Dynamic Force (kN) (tons)	435	49
Combined Force (kN) (tons)	711	80
Operating Frequency (rpm)	2500	2500
Pressure Max. (bar) (psi)	350	5076
Oil Flow Vibro Max. (L/min) (gpm)	200	53
Oil Flow Wick Max. (L/min) (gpm)	506	134
Mandrel Speed Max. (m/min) (ft/min)	100	328

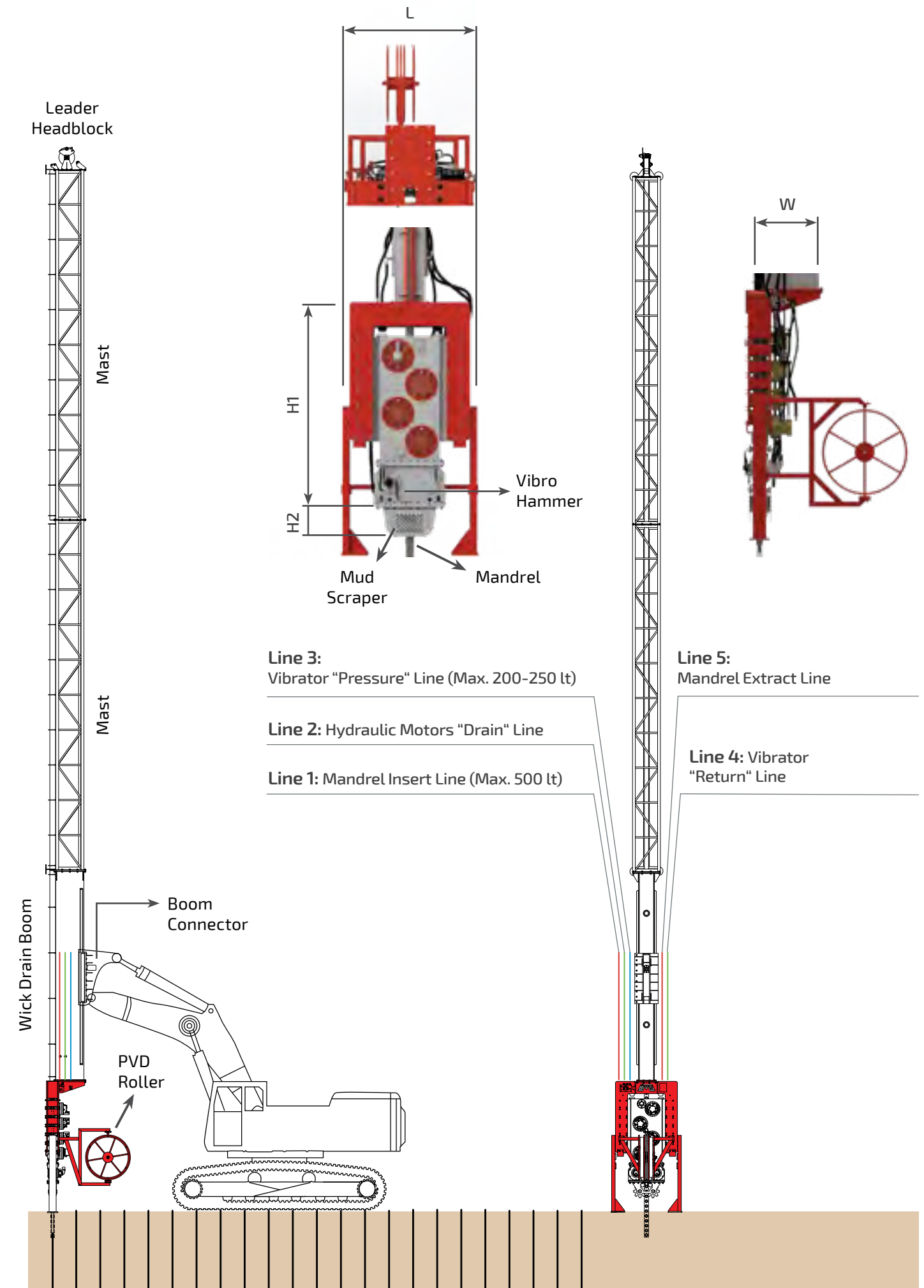
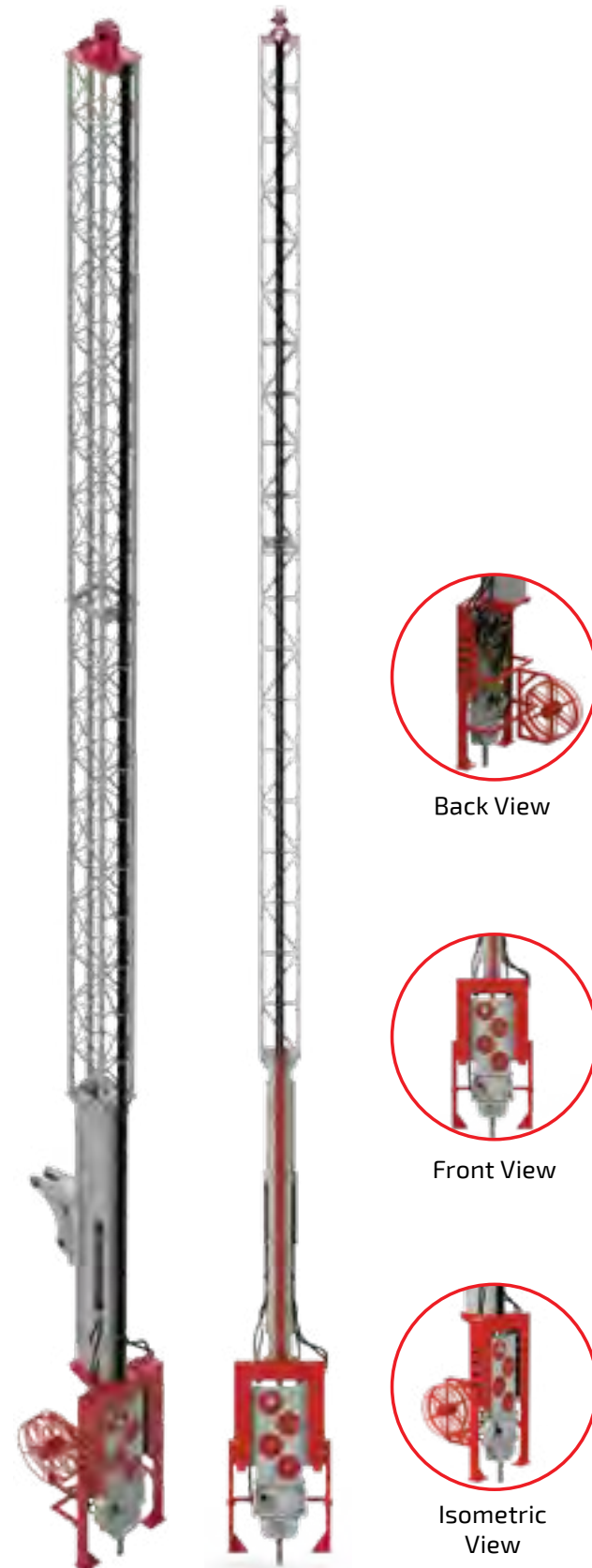
Recommended Excavator Working Weight (ton)

45 - 50



Weights and Dimensions

Unit	Metric	US
Suspended Weight (kg) (lbs)	3077	6784
Length / L (mm) (in)	2040	80
Height / H1 (mm) (in)	3005	118
Height / H2 (mm) (in)	436	17
Width / W (mm) (in)	920	36






OMS Vibro Website



WD 28-43 Video



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 / [omsvibro](https://www.omsvibro.com)

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