

**EMV 70**  
**EMV 300**



**DAWSON**

**EMV 400**  
**EMV 525**

# EXCAVATOR MOUNTED VIBRATORS



## SHEET PILING WITH AN EMV

Driving short sheet piles can be a pain as most experienced piling foremen will know. Using conventional frames you have to take them away almost immediately after pitching because there is no length to drive. Then trying to control line or lean with an air hammer or vibro on the end of a long string from a crane is virtually impossible.

The solution is to grab hold of the pile head with a hydraulic clamp on the end of an excavator boom. This means you can horse the pile head around until it is exactly where you want it.

You then need a vibrator in between the boom head and hydraulic clamp to provide linear vibrations which, in conjunction with the excavator crowd force (shove), will stuff the pile into most ground conditions.

That is precisely what EMV's do.

You can also pull the piles out with this tool and, if you run into obstructions, simply detach the vibro, put the bucket back on and hook it out. But for goodness sake don't try doing this with long sheets. They should be accurately pitched and never horsed around afterwards.

Generally you only have 5 to 6 metres (15-20 feet) of headroom under the bucket so this governs the pile length.



### ADVANTAGES OF THE EMV'S

- Compact, robust and reliable
- Simple and fast attachment to excavator
- Minimal height to maximise pile length
- Slim design to drive single piles
- High power to weight ratio
- Universal joint suspension for easy alignment of piles
- Extremely low vibration transmitted to excavator
- Environmentally friendly – low noise/localised directional vibration
- Automatic hydraulic clamp operation
- Flexibility in application
- Flow regulator prevents excessive oil supply to vibrator

### WHAT DO YOU NEED

**An excavator, wheeled or tracked with adequate hydraulic power.**

Simply remove the bucket off the excavator and pin on the EMV using appropriate shafts, spacers and washers to ensure adequate strength and minimum slack.

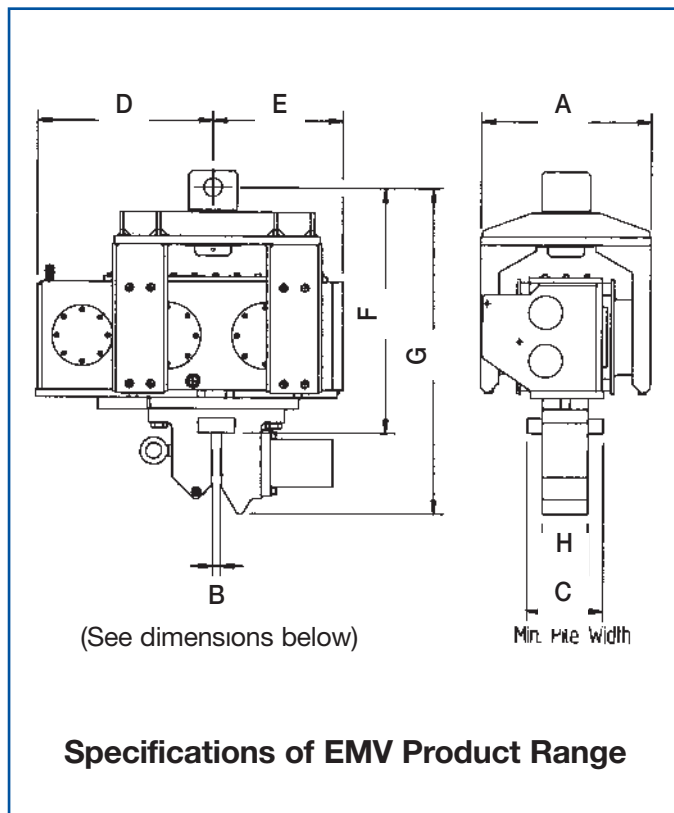
Connect up the bucket cylinder hoses to the EMV. Run a drain line from the EMV back to the tank.

Sequence valves control the rest. Operate the bucket cylinder control lever and the clamping cylinder will close. Leave it in



position and the cylinder will come up to pressure, keep the lever in position and the sequence valve will then direct oil flow to the monitor which will start up vibrations.

Centre the bucket cylinder control lever and the monitor runs down to a stop. When the motor has stopped turning the hydraulic clamp can be released by operating the bucket lever in the opposite direction, **HAVING FIRST ENSURED THAT IT IS SAFE TO DO SO, I.E. DO NOT DROP ANYTHING.**



Characteristic	Units	EMV70	EMV300	EMV300A	EMV400	EMV400D	EMV525
Static Moment	in.lbs	60	400	400	545	545	674
	kgm	0.7	4.6	4.6	6.2	6.2	7.6
Frequency	vpm	3,000	2,400	2,400	2,460	2,460	2,500
Centrifugal Force	lbs	15,730	67,420	67,420	91,340	91,340	119,880
	kN	70	300	300	400	400	525
Amplitude – peak to peak	ins	0.134	0.58	0.58	0.55	0.5	0.51
	mm	3.4	14.7	14.7	14	12	13
Minimum Required Flow Rate	gpm	8	35	35	52	52	68
	l/min	30	130	130	195	195	256
Maximum Allowable Flow Rate	gpm	32	67	67	94	94	107
	l/min	120	250	250	350	350	400
Minimum Hydraulic Pressure	psi	3,480	3,480	3,480	3,480	3,480	3,625
	bar	240	240	240	240	240	280
Maximum Hydraulic Pressure	psi	5,076	5,076	5,076	5,076	5,076	5,076
	bar	350	350	350	350	350	350
Minimum Hydraulic Motor Power	hp	16	70	70	107	107	160
	kW	12	52	52	80	80	120
Dynamic Mass	lbs	900	1,380	1,380	2,038	2,240	2,576
	kg	410	625	625	910	1,000	1,150
Total Mass	lbs	1,150	1,890	1,890	2,632	2,834	3,360
	kg	520	860	860	1,175	1,265	1,500
Maximum Pile Mass	lbs	1,760	1,760	1,760	2,240	2,240	3,136
	kg	800	800	800	1,000	1,000	1,400
Maximum Push/Pull Loading	lbs	6,171	17,600	33,600	33,600	33,600	33,600
	kg	2,800	8000	15,000	15,000	15,000	15,000
Typical Excavator Weight	Ton	5.5 to 17	13 to 39	13 to 39	27 to 50	27 to 50	33 to 60
	Tonne	5 to 15	12 to 35	12 to 35	25 to 45	25 to 45	30 to 55
Dimensions mm (inch)	A	360 (14.2)	560 (22)	615 (24)	615 (24)	615 (24)	750 (29.5)
	B	25 (1)	25 (1)	25 (1)	25 (1)	32 (1.25)	40 (1.5)
	C	250 (10)	250 (10)	250 (10)	220 (8.7)	230 (9)	230 (9)
	D	455 (18)	582 (23)	582 (23)	640 (25)	640 (25)	850 (33.5)
	E	340 (13.4)	429 (17)	429 (17)	510 (20)	510 (20)	560 (22)
	F	672 (26.5)	816 (32)	927 (36.5)	970 (38)	945 (37)	985 (39)
	G	942 (37)	1085 (43)	1200 (47.25)	1250 (49)	1250 (49)	1400 (55)
	H	150 (6)	150 (6)	150 (6)	150 (6)	160 (6.4)	195 (7.7)



Plastic sheeting – special double clamp



EMV400 – Caisson Beam Clamp (Adjustable)



EMV400D – ‘Double’ sheet pile clamp for pairs of Z-sheets

**CE** This product complies with the EEC Machinery Directive

**DEALER:**

**LANGUAGE:**



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