



Costo Referencial de Posesión y Operación de Equipo Mecánico del MTC

* Octubre 2008 *

Maquinaria

N°	Unidad base para el Cálculo	Potencia (HP)	Capacidad	Peso (Kg.)	Costo de Posesión			Costo de Operación							Costo Horario de Posesión y Operación (a+b)	
					Depreciación	Seguro 0.46%	Total (a)	Mant. y Rep.	Consumo de Combustible	Lubr. + Grasas	Filtros	Llantas	Operador	Total (b)		
Equipos para Perforación																
1	Compresoras Neumáticas	76	125-175 PCM	2,000	4.1	0.0	4.1	3.2	22.5	2.9	1.2	0.0	8.3	38.1	42.2	
2		87	250-330 PCM	2,000	9.7	0.0	9.7	7.6	28.8	2.9	1.2	0.0	8.3	48.7	58.4	
3		93	335-575 PCM	2,500	13.2	0.3	13.4	10.3	45.0	3.3	1.3	0.0	8.3	68.2	81.6	
4		150	380-590 PCM	3,500	17.9	0.4	18.2	14.0	47.5	4.0	1.6	0.0	8.3	75.4	93.6	
5		196	600-690 PCM	5,000	13.8	0.3	14.0	10.8	91.3	6.1	2.4	0.0	8.3	118.9	132.9	
6		240	700-800 PCM	6,500	15.2	0.3	15.5	11.9	108.8	7.5	3.0	0.0	8.3	139.6	155.1	
7	Martillos Neumáticos		24 Kg	24	3.3	0.0	3.3	2.6	0.0	0.0	0.0	0.0	0.0	2.6	5.9	
8			29 Kg	29	4.2	0.1	4.3	3.3	0.0	0.0	0.0	0.0	0.0	3.3	7.6	
9	Motoperforadora	1400 RPM	185 CC	26	5.2	0.1	5.2	1.7	0.0	0.0	0.0	0.0	0.0	1.7	6.9	
10	Perforadora sobre Orugas		660-690 PCM	6,000	21.1	0.5	21.6	16.9	0.0	0.0	0.0	0.0	0.0	16.9	38.4	
Equipos para Movimiento de Tierra																
11	Cargador sobre Oruga	50-79	0.7-1.3 Yd ³	10,000	20.9	0.5	21.3	13.9	41.3	3.6	1.4	0.0	8.3	68.5	89.8	
12		80-105	1.5-1.75 Yd ³	12,967	24.7	0.5	25.3	16.5	45.0	4.7	1.9	0.0	8.3	76.3	101.6	
13		110-135	2.0-2.25 Yd ³	16,275	42.6	0.9	43.5	28.4	45.0	5.4	2.2	0.0	8.3	89.2	132.8	
14		150-180	2.5-2.75 Yd ³	18,387	51.8	1.1	52.9	34.5	70.0	5.8	2.3	0.0	8.3	120.9	173.8	
15		190-225	3.2-3.75 Yd ³	25,173	91.7	2.0	93.7	36.7	77.5	7.5	3.0	0.0	8.3	133.0	226.7	
16		245	4.0-6.0 Yd ³	28,000	95.4	2.1	97.4	38.2	87.5	7.9	3.2	0.0	8.3	145.0	242.5	
17	Cargador Retroexcavador	62	1 Yd ³	8,000	22.8	0.4	23.2	12.7	38.8	3.7	1.5	0.1	8.3	65.2	88.3	
18	Cargador sobre Llantas	80-95	1.5-1.75 Yd ³	9,031	30.8	0.6	31.3	20.4	25.0	3.3	1.3	1.2	8.3	59.5	90.8	
19		100-115	2.0-2.35 Yd ³	10,308	27.9	0.5	28.5	18.5	35.0	4.3	1.7	1.2	8.3	69.0	97.5	
20		100-125	2.50 Yd ³	11,500	41.3	0.8	42.1	27.5	35.0	5.0	2.0	0.9	8.3	78.7	120.7	
21		125-155	3.0 Yd ³	16,584	41.3	0.8	42.0	27.4	56.3	5.0	2.0	1.0	8.3	100.0	142.0	
22		160-195	3.5 Yd ³	18,585	53.7	1.0	54.7	35.7	60.0	5.4	2.2	1.7	8.3	113.3	168.0	
23		200-250	4.0 - 4.1 Yd ³	20,826	60.0	1.3	61.3	39.9	62.5	6.1	2.4	2.3	8.3	121.5	182.8	
24	Mototrallas Autocargable	200-250	4.6 Yd ³	22,000	62.3	1.4	63.7	41.4	66.3	7.9	3.2	2.3	8.3	129.3	192.9	
25		260-300	5.0-5.50 Yd ³	31,105	86.3	1.9	88.2	57.4	68.8	9.0	3.6	2.3	8.3	149.3	237.5	
26		375	8.0 Yd ³	49,738	124.6	2.7	127.3	82.9	87.5	11.1	4.4	3.1	8.3	197.3	324.6	
27		140-200	11.0 Yd ³	14,200	64.4	1.2	65.6	21.3	66.3	6.2	2.5	2.4	8.3	107.0	172.5	
28		210-300	16.0 Yd ³	20,600	97.3	1.8	99.2	32.3	93.8	9.0	3.6	3.0	8.3	149.9	249.1	
29		310-350	23.0 Yd ³	32,800	94.4	2.0	96.5	31.4	120.0	10.8	4.3	2.2	8.3	176.9	273.3	
30	Retroexcavadora sobre Llantas	310-400	14-20 Yd ³	20,000	91.7	2.0	93.7	30.5	125.0	11.8	4.7	2.3	8.3	182.6	276.3	
31		405-480	21-31 Yd ³	15,500	145.8	3.2	148.9	48.5	165.0	14.3	5.7	3.3	8.3	245.0	394.0	
32		58	1 Yd ³	9,000	18.8	0.4	19.1	8.1	25.0	2.5	1.0	0.2	8.3	45.2	64.4	
33		80-110	0.50-1.3 Yd ³	17,300	51.0	0.9	51.9	20.4	41.3	8.7	3.5	0.0	8.3	82.2	134.1	
34		Retroexcavadora sobre Oruga	115-165	0.75-1.60 Yd ³	23,400	70.9	1.3	72.2	28.4	62.5	8.8	3.5	0.0	8.3	111.5	183.7
35			170-250	1.10-2.75 Yd ³	33,800	117.6	2.2	119.7	47.0	87.5	9.9	4.0	0.0	8.3	156.7	276.5
36	325		2.0-3.8 Yd ³	61,600	196.7	3.6	200.3	78.7	112.5	10.1	4.0	0.0	8.3	213.6	413.9	
37	Ripper (Potencia 150 HP)			2,000	3.7	0.1	3.7	2.0	0.0	0.0	0.0	0.0	0.0	2.0	5.7	
38	Ripper (Potencia 250 HP)			2,600	6.1	0.1	6.2	3.4	0.0	0.0	0.0	0.0	0.0	3.4	9.6	
39	Ripper (Potencia 300 HP)			4,400	10.6	0.2	10.8	5.9	0.0	0.0	0.0	0.0	0.0	5.9	16.6	
40	Ripper (Potencia 470 HP)			6,600	13.8	0.3	14.0	7.6	0.0	0.0	0.0	0.0	0.0	7.6	21.6	
41	Tractor sobre Orugas	60-70		6,711	21.8	0.4	22.2	11.6	30.0	2.5	1.0	0.0	8.3	53.5	75.6	
42		75-100		9,090	33.3	0.6	33.9	17.8	31.3	2.7	1.1	0.0	8.3	61.1	95.0	
43		105-135		12,300	47.0	0.9	47.9	25.1	37.5	4.7	1.9	0.0	8.3	77.4	125.3	
44		140-160		14,900	41.1	0.8	41.9	21.9	62.5	5.4	2.2	0.0	8.3	100.3	142.1	
45		190-240		20,520	78.8	1.7	80.5	42.0	68.8	7.2	2.9	0.0	8.3	129.2	209.6	
46		270-295		21,863	76.2	2.0	78.1	40.6	87.5	7.9	3.2	0.0	8.3	147.5	225.6	
47		300-330		31,980	75.8	2.0	77.8	50.6	128.8	8.6	3.5	0.0	8.3	199.7	277.5	
48		335-410		37,170	83.5	2.2	85.6	55.6	137.5	10.4	4.2	0.0	8.3	216.0	301.7	
49		410-470		52,007	114.5	3.0	117.5	61.1	163.8	12.8	5.1	0.0	8.3	251.1	368.7	
50		510		54,760	145.1	3.8	148.9	77.4	163.8	14.6	5.8	0.0	8.3	269.9	418.8	
51		650		70,320	186.7	4.9	191.5	124.4	206.3	31.5	12.6	0.0	8.3	383.0	574.6	
52	Tractor sobre Llantas	200-250		20,500	43.8	0.8	44.6	29.1	102.5	10.6	4.2	2.3	8.3	157.0	201.6	
53		300-350		30,380	57.5	1.1	58.6	38.1	148.8	14.2	5.7	4.5	8.3	219.5	278.1	
54		400-500		46,355	123.4	2.3	125.7	82.0	150.0	17.7	7.1	4.9	8.3	270.0	395.7	
55	Pala Frontal	195	3.0 Yd ³	38,380	152.7	2.8	155.5	122.2	136.3	7.2	2.9	0.0	8.3	276.8	432.4	
Equipos de Compactación																
56	Vibrador de Concreto	4	1.25 Pulg.		2.8	0.0	2.9	1.5	0.0	0.0	0.0	0.0	0.0	1.5	4.4	
57		4	1.50 Pulg.		3.0	0.0	3.0	1.6	0.0	0.0	0.0	0.0	0.0	1.6	4.6	
58		4	2.40 Pulg.		3.5	0.0	3.6	1.9	0.0	0.0	0.0	0.0	0.0	1.9	5.5	
59	Compactador Vibrador Tipo Plancha	4		95	2.0	0.0	2.0	0.9	3.4	0.4	0.2	0.0	8.3	13.1	15.2	
60		5.8		145	2.5	0.0	2.5	1.1	3.9	0.8	0.3	0.0	8.3	14.4	16.9	
61		7		160	3.8	0.0	3.8	1.2	4.1	1.1	0.5	0.0	8.3	15.2	19.1	
62		10.8	0.8 - 1.1 Ton.	800	4.0	0.1	4.0	3.2	5.6	1.8	0.7	0.0	8.3	19.6	23.7	
63	Rodillo Liso Vibratorio Autopropulsado	70-100	7-9 Ton.	7,300	15.9	0.3	16.2	8.4	26.3	3.3	1.3	0.8	8.3	48.3	64.5	
64		101-135	10-12 Ton.	11,100	17.0	0.3	17.3	9.0	43.8	5.0	2.0	0.8	8.3	68.8	86.1	
65		136-170	15-17 Ton.	13,700	20.8	0.4	21.2	11.0	46.3	5.4	2.2	0.8	8.3	73.9	95.1	
66		210	19-23 Ton.	19,600	23.9	0.5	24.4	12.6	69.9	7.2	2.9	1.1	8.3	102.0	126.4	
67	Rodillo Liso Vibratorio de Tiro	50-80	4-5.5 Ton.	5,500	6.0	0.1	6.1	3.2	23.8	2.9	1.2	0.0	8.3	39.3	45.5	
68	Rodillo Neumático Autopropulsado	60-80	3.0-5.0 Ton.	3,700	12.3	0.3	12.6	4.9	21.3	2.9	1.2	0.2	8.3	38.8	51.3	
69		81-100	5.5-20 Ton.	5,500	16.4	0.4	16.8	4.4	25.0	3.3	1.3	0.2	8.3	42.5	59.3	
70		127	8.23 Ton.	8,000	12.5	0.3	12.7	6.6	38.8	4.7	1.9	0.2	8.3	60.4	73.2	
71		135	9.26 Ton.	9,000	12.7	0.3	13.0	6.8	38.3	4.7	1.9	0.2	8.3	60.1	73.1	
72	Pata de Cabra Vibratorio Autopropulsado	84	8.1 Ton.	8,200	9.5	0.2	9.7	7.5	28.3	2.9	1.2	0.7	8.3	48.9	58.6	
73		100-135	11-13 Ton.	11,300	16.6	0.4	17.0	8.8	37.9	4.7	1.9	0.7	8.3	62.2	79.2	
74		136-180	15-17 Ton.	15,300	17.6	0.4	18.0	11.7	50.6	5.7	2.3	0.7	8.3</			

