

Costo Referencial de Posesión y Operación de Equipo Mecánico del MTC

* Agosto 2009 *

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		76	125-175 PCM	2,000	3.9	0.0	3.9	3.1	22.5	2.9	1.2	0.0	8.3	37.9	41.9
2		87	250-330 PCM	2,000	9.3	0.0	9.3	7.2	28.8	2.9	1.2	0.0	8.3	48.4	57.7
3	Compresoras Neumáticas	93	335-375 PCM	2,500	12.6	0.3	12.9	9.9	45.0	3.3	1.3	0.0	8.3	67.8	80.7
4		150	380-590 PCM	3,500	17.1	0.3	17.5	13.4	47.5	4.0	1.6	0.0	8.3	74.8	92.3
5		196	600-690 PCM	5,000	13.2	0.3	13.5	10.3	91.3	6.1	2.4	0.0	8.3	118.5	131.9
6		240	700-800 PCM	6,500	14.6	0.3	14.9	11.4	108.8	7.5	3.0	0.0	8.3	139.1	154.0
7	Martillos Neumáticos		24 Kg	24	3.1	0.0	3.2	2.4	0.0	0.0	0.0	0.0	0.0	2.4	5.6
8			29 Kg	29	4.1	0.0	4.1	3.2	0.0	0.0	0.0	0.0	0.0	3.2	7.3
9	Motoperforadora	1400 RPM	185 CC	26	4.9	0.1	5.0	1.6	0.0	0.0	0.0	0.0	0.0	1.6	6.6
10	Perforadora sobre Orugas		660-690 PCM	6,000	20.2	0.4	20.7	16.2	0.0	0.0	0.0	0.0	0.0	16.2	36.9
Equipos para Movimiento de Tierra															
11	Cargador sobre Oruga	50-79	0.7-1.3 Yd ³	10,000	20.0	0.4	20.5	13.3	41.3	3.6	1.4	0.0	8.3	67.9	88.4
12		80-105	1.5-1.75 Yd ³	12,967	23.7	0.5	24.2	15.8	45.0	4.7	1.9	0.0	8.3	75.6	99.9
13		110-135	2.0-2.25 Yd ³	16,275	40.9	0.9	41.8	27.2	45.0	5.4	2.2	0.0	8.3	88.1	129.8
14		150-180	2.5-2.75 Yd ³	18,387	49.7	1.1	50.8	33.1	70.0	5.8	2.3	0.0	8.3	119.5	170.2
15		190-225	3.2-3.75 Yd ³	25,173	88.0	1.9	89.9	35.2	77.5	7.5	3.0	0.0	8.3	131.5	221.4
16		245	4.0-6.0 Yd ³	28,000	91.5	2.0	93.5	36.6	87.5	7.9	3.2	0.0	8.3	143.5	236.9
17	Cargador Retroexcavador	62	1 Yd ³	8,000	21.8	0.4	22.2	12.2	38.8	3.7	1.5	0.1	8.3	64.6	86.9
18	Cargador sobre Llantas	80-95	1.5-1.75 Yd ³	9,031	29.5	0.6	30.0	19.6	25.0	3.3	1.3	1.2	8.3	58.6	88.7
19		100-115	2.0-2.35 Yd ³	10,308	26.8	0.5	27.3	17.8	35.0	4.3	1.7	1.2	8.3	68.3	95.5
20		100-125	2.50 Yd ³	11,500	39.6	0.7	40.3	26.3	35.0	5.0	2.0	0.9	8.3	77.5	117.8
21		125-155	3.0 Yd ³	16,584	39.6	0.7	40.3	26.3	56.3	5.0	2.0	1.0	8.3	98.9	139.2
22		160-195	3.5 Yd ³	18,585	51.5	1.0	52.4	34.2	60.0	5.4	2.2	1.7	8.3	111.8	164.2
23		200-250	4.0 - 4.1 Yd ³	20,826	57.5	1.2	58.8	38.2	62.5	6.1	2.4	2.3	8.3	119.8	178.6
24	Mototrailas Autocargable	200-250	4.6 Yd ³	22,000	59.8	1.3	61.0	39.7	66.3	7.9	3.2	2.3	8.3	127.6	188.6
25		260-300	5.0-5.50 Yd ³	31,105	82.8	1.8	84.5	55.0	68.8	9.0	3.6	2.3	8.3	149.9	231.5
26		375	8.0 Yd ³	49,738	119.5	2.6	122.1	79.5	87.5	11.1	4.4	3.1	8.3	193.9	316.0
27		140-200	11.0 Yd ³	14,200	61.7	1.2	62.9	20.4	66.3	6.2	2.5	2.4	8.3	106.1	168.9
28		210-300	16.0 Yd ³	20,600	93.3	1.7	95.0	31.0	93.8	9.0	3.6	3.0	8.3	148.6	243.6
29		310-350	23.0 Yd ³	32,800	90.5	2.0	92.5	30.1	120.0	10.8	4.3	2.2	8.3	175.6	268.1
30	310-400	14-20 Yd ³	20,000	87.9	1.9	89.8	29.2	125.0	11.8	4.7	2.3	8.3	181.4	271.2	
31	405-480	21-31 Yd ³	15,500	139.8	3.0	142.8	46.5	165.0	14.3	5.7	3.3	8.3	243.0	385.8	
32	Retroexcavadora sobre Llantas	58	1 Yd ³	9,000	18.0	0.3	18.3	7.8	25.0	2.5	1.0	0.2	8.3	44.9	63.2
33	Retroexcavadora sobre Oruga	80-110	0.50-1.3 Yd ³	17,300	48.9	0.9	49.8	19.6	41.3	8.7	3.5	0.0	8.3	81.3	131.1
34		115-165	0.75-1.60 Yd ³	23,400	68.0	1.3	69.3	27.2	62.5	8.8	3.5	0.0	8.3	110.3	179.6
35		170-250	1.10-2.75 Yd ³	33,800	112.8	2.1	114.8	45.1	87.5	9.9	4.0	0.0	8.3	154.8	269.6
36		325	2.0-3.8 Yd ³	61,600	188.6	3.5	192.1	75.4	112.5	10.1	4.0	0.0	8.3	210.4	402.4
37	Ripper (Potencia 150 HP)			2,000	3.5	0.1	3.6	1.9	0.0	0.0	0.0	0.0	0.0	1.9	5.5
38	Ripper (Potencia 250 HP)			2,600	5.8	0.1	5.9	3.2	0.0	0.0	0.0	0.0	0.0	3.2	9.2
39	Ripper (Potencia 300 HP)			4,400	10.1	0.2	10.3	5.6	0.0	0.0	0.0	0.0	0.0	5.6	15.9
40	Ripper (Potencia 470 HP)			6,600	13.2	0.2	13.4	7.3	0.0	0.0	0.0	0.0	0.0	7.3	20.8
41	Tractor sobre Orugas	60-70		6,711	20.9	0.4	21.3	11.1	30.0	2.5	1.0	0.0	8.3	53.0	74.3
42		75-100		9,090	31.9	0.6	32.5	17.0	31.3	2.7	1.1	0.0	8.3	60.3	92.9
43		105-135		12,300	45.1	0.8	45.9	24.0	37.5	4.7	1.9	0.0	8.3	76.4	122.3
44		140-160		14,900	39.4	0.7	40.1	21.0	62.5	5.4	2.2	0.0	8.3	99.4	139.5
45		190-240		20,520	75.6	1.6	77.2	40.3	68.8	7.2	2.9	0.0	8.3	127.4	204.6
46		270-295		21,863	73.0	1.9	74.9	39.0	87.5	7.9	3.2	0.0	8.3	145.8	220.7
47		300-330		31,980	72.7	1.9	74.6	48.5	128.8	8.6	3.5	0.0	8.3	197.6	272.3
48		335-410		37,170	80.0	2.1	82.1	53.4	137.5	10.4	4.2	0.0	8.3	213.7	295.9
49		410-470		52,007	109.9	2.9	112.7	58.6	163.8	12.8	5.1	0.0	8.3	248.6	361.3
50		510		54,760	139.2	3.6	142.8	74.2	163.8	14.6	5.8	0.0	8.3	266.8	409.6
51		650		70,320	179.0	4.7	183.7	119.3	206.3	31.5	12.6	0.0	8.3	377.9	561.6
52	Tractor sobre Llantas	200-250		20,500	42.0	0.8	42.8	27.9	102.5	10.6	4.2	2.3	8.3	155.8	198.6
53		300-350		30,380	55.1	1.0	56.2	36.5	148.8	14.2	5.7	4.5	8.3	217.9	274.1
54		400-500		46,355	118.4	2.2	120.6	78.6	150.0	17.7	7.1	4.9	8.3	266.6	387.1
55	Pala Frontal	195	3.0 Yd ³	38,380	146.5	2.7	149.2	117.2	136.3	7.2	2.9	0.0	8.3	271.8	421.0
Equipos de Compactación															
56	Vibrador de Concreto	4	1.25 Pulg.		2.7	0.0	2.8	1.5	0.0	0.0	0.0	0.0	0.0	1.5	4.2
57		4	1.50 Pulg.		2.8	0.0	2.9	1.5	0.0	0.0	0.0	0.0	0.0	1.5	4.4
58		4	2.40 Pulg.		3.4	0.0	3.4	1.8	0.0	0.0	0.0	0.0	0.0	1.8	5.3
59	Compactador Vibrador Tipo Plancha	4		95	1.9	0.0	2.0	0.8	3.4	0.4	0.2	0.0	8.3	13.1	15.1
60		5.8		145	2.4	0.0	2.4	1.0	3.9	0.8	0.3	0.0	8.3	14.3	16.7
61		7		160	3.6	0.0	3.7	1.2	4.1	1.1	0.5	0.0	8.3	15.2	18.9
62		10.8	0.8 - 1.1 Ton.	800	3.8	0.1	3.9	3.0	5.6	1.8	0.7	0.0	8.3	19.5	23.4
63	Rodillo Liso Vibratorio Manual	70-100	7-9 Ton.	7,300	15.3	0.3	15.6	8.1	26.3	3.3	1.3	0.8	8.3	47.9	63.5
64	Rodillo Liso Vibratorio Autopropulsado	101-135	10-12 Ton.	11,100	16.3	0.3	16.6	8.6	43.8	5.0	2.0	0.8	8.3	68.4	85.0
65		136-170	15-17 Ton.	13,700	20.0	0.4	20.4	10.6	46.3	5.4	2.2	0.8	8.3	73.4	93.8
66		210	19-23 Ton.	19,600	22.9	0.4	23.4	12.1	69.9	7.2	2.9	1.1	8.3	101.5	124.8
67		Rodillo Liso Vibratorio de Tiro	50-80	4-5.5 Ton.	5,500	5.8	0.1	5.9	3.1	23.8	2.9	1.2	0.0	8.3	39.2
68	Rodillo Neumático Autopropulsado	60-80	3.0-5.0 Ton.	3,700	11.8	0.3	12.0	4.7	21.3	2.9	1.2	0.2	8.3	38.6	50.6
69		81-100	5.5-20 Ton.	5,500	15.8	0.3	16.1	4.2	25.0	3.3	1.3	0.2	8.3	42.3	58.4
70		127	8.23 Ton.	8,000	11.9	0.3	12.2	6.3	38.8	4.7	1.9	0.2	8.3	60.2	72.4
71		135	9.26 Ton.	9,000	12.2	0.3	12.5	6.5	38.3	4.7	1.9	0.2	8.3	59.8	72.2
72	Pata de Cabra Vibratorio Autopropulsado	84	8.1 Ton.	8,200	9.1	0.2	9.3	7.2	28.3	2.9	1.2	0.7	8.3	48.6	57.9
73		100-135	11-13 Ton.	11,300	15.9	0.4	16.3	8.4	37.9	4.7	1.9	0.7	8.3	61.9	78.2
74		136-180	15-17 Ton.	15,300	16.9	0.4	17.3	11.2	50.6	5.7	2				

