

# UNIC

## Mini Crawler Cranes

# URW 547

## (4.0t x 2.7m)

***Extended reach with a maximum lifting height of 18.6m at 4 tonne.***

- ▶ Capacity 4.0t x 2.7m
- ▶ Total width 1.4m
- ▶ Max working radius 17.83m
- ▶ Max boom length 18.02m
- ▶ Diesel powered optional mains electric
- ▶ Zero length increase with electric option
- ▶ Operator control of outrigger extension
- ▶ Intelligent voice warning system
- ▶ Radio remote control as standard
- ▶ Working area limitation
- ▶ Slew limitation (optional)
- ▶ Intelligent throttle activation for economy and ecology

### CRANE SPECIFICATIONS

Crane capacity	Capacity:	4.0t x 2.7m
Max working radius	Max:	17.83m
Max lifting height	Approx:	18.6m
Rope length	Approx:	21.75m (4 fall), 43.5m (2 fall), 87m (1 fall)
Dimensions	Folded:	4955mm (l) x 1400mm (w) x 1980mm (h)
Weight	Unladen:	5010kg
Hook speed	approx:	17m/min (with 4 layers and 4 falls)
Telescopic system	Boom length:	3.99 - 18.02m
	telescoping speed:	11.78m/35 seconds
	boom type:	7 section hydraulically telescoping boom, hexagonal box construction
Derricking angle/speed	approx:	0 - 80°/18 seconds
Slewing angle/speed	approx:	360° (continuous) 2.5min <sup>-1</sup> (rpm)
Traction system	drive:	hydrostatic 2 speed
	gradability:	23°
	travel speed:	0 - 3km/h
	track ground length:	1750mm
	track ground pressure:	47.1kPa (0.46kg/cm <sup>2</sup> )
	track width:	300mm
Engine	manufacturer:	Mitsubishi
	fuel:	Diesel (electric dual power option)
	maximum output:	18kW (24.5PS) / 2100min <sup>-1</sup> (rpm)
	starting method:	Electric
	tank capacity:	40 litres
	power:	7.5kW
	voltage:	400v AC 50/60Hz
Standard equipment	Computer controlled moment limiter (safe load indicator), computer controlled intelligent voice warning system, overload warning lamps, radio remote control, intelligent throttle activation	
Optional equipment	2 fall hook block, 1 fall hook block, LPG dual power, mains electric dual power (400v), diesel engine, low marking tracks, slew limitation, Rayco - Wylie i3000 SLI	



Radio Remote



Emergency stop



Warning lights



SLI pre-programmed with fly jib and searcher hook data



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### Second stage extended: 3.99m—7.7m boom length

Outriggers	Working radius (m)	Up to 2.5	2.7	3	3.5	4	4.5	5	5.5	6	7	7.25	7.51
	Max-extended kg	4,000	4,000	3,500	3,000	2,550	2,250	2,000	1,800	1,630	1,350	1,350	1,300
	Mid-extended kg	4,000	4,000	3,500	3,000	2,550	2,200	1,850	1,630	1,400	1,010	1,010	850
	Min-extended kg	4,000	4,000	3,500	3,000	2,550	2,100	1,640	1,320	1,080	750	750	620

### Third stage extended: 7.7—10.66m boom length

Outriggers	Working radius (m)	Up to 3.5	4	5	6	7	8	9	10	10.2	10.47
	Max-extended kg	3,000	2,550	2,000	1,650	1,350	1,100	850	600	600	520
	Mid-extended kg	3,000	2,550	1,850	1,400	1,100	830	630	490	490	430
	Min-extended kg	3,000	2,550	1,650	1,150	840	620	460	350	350	300

### Forth stage extended: 10.66-13.57m boom length

Outriggers	Working radius (m)	Up to 4	4.5	5	6	7	8	9	10	11	12	13	13.1	13.38
	Max-extended kg	2,200	1,900	1,700	1,370	1,150	1,000	900	800	660	500	410	410	800
	Mid-extended kg	2,200	1,800	1,600	1,300	1,050	850	700	550	450	360	290	290	260
	Min-extended kg	2,200	1,800	1,600	1,150	800	650	520	400	320	250	190	190	170

### Fifth stage extended: 13.57—16.48m boom length

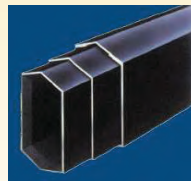
Outriggers	Working radius (m)	Up to 5	5.5	6	7	8	9	10	11	12	13	14	15	16	16.29
	Max-extended kg	1,100	950	880	730	620	570	520	460	410	350	290	230	180	170
	Mid-extended kg	1,100	950	880	700	600	520	450	400	350	300	250	190	150	140
	Min-extended kg	1,100	950	850	700	500	420	390	340	290	230	180	140	100	100

### Sixth stage extended: 16.48—18.02m boom length

Outriggers	Working radius (m)	Up to 6	7	8	9	10	11	12	13	14	15	16	17	17.83
	Max-extended kg	300	250	230	200	170	160	150	140	130	120	110	80	50
	Mid-extended kg	300	250	230	200	170	160	150	140	130	120	110	80	50
	Min-extended kg	300	250	230	200	170	160	150	140	130	120	110	80	50



Optional low marking tracks



Hexagonal boom minimises sway



Optional searcher hook

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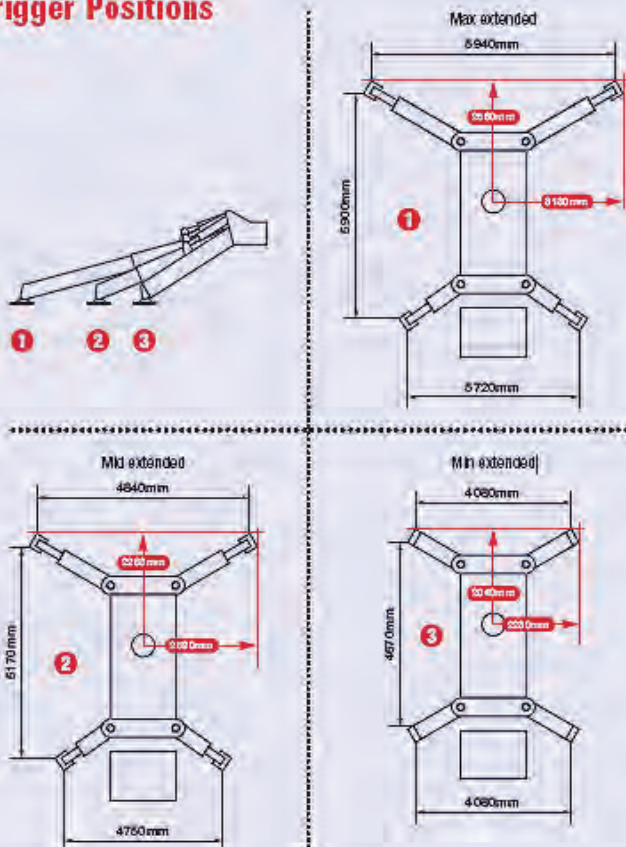
## (4.0t x 2.7m)

### Searcher Hook Net Rated Loads - Boom up to 16.48m

RADIUS RATED	SEARCHER HOOK NET RATED LOADS (kg)			
	WORKING RADIUS m	OUTRIGGERS MAX-EXTENDED	OUTRIGGERS MID-EXTENDED	OUTRIGGERS MIN-EXTENDED
3.0	500	500	500	500
4.0	500	500	500	500
5.0	500	500	500	500
6.0	500	500	500	500
7.0	400	350	320	320
8.0	330	280	220	220
9.0	270	230	180	180
10.0	220	190	130	130
11.0	180	160	100	100
12.0	150	130	PROHIBITED	PROHIBITED
13.0	130	100		
14.0	120			
15.0	110			
16.0	100			

<b>Lifting capacity</b>	500kg
<b>Length</b>	800mm
<b>Weight</b>	20kg (excluding bracket and first section)
<b>Tilt angles</b>	0°, 20°, 40°, 60°

### Outrigger Positions



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## (4.0t x 2.7m)

### Point Loadings

Calculation of reaction forces of the outriggers for model URW295C with fully extended outriggers

- ▶ Working Radius - 1400mm
- ▶ Rated Load - 4000kg
- ▶ Number of Booms - 1

Angle	OR1	OR2	OR3	OR4
0	2995	2100	2100	2995
5	3050	2160	2045	2930
10	3100	2230	1990	2865
15	3145	2300	1945	2795
20	3185	2375	1905	2720
25	3220	2450	1875	2645
30	3245	2530	1850	2565
35	3265	2610	1830	2485
40	3275	2690	1815	2400
45	3280	2775	1810	2320
50	3280	2855	1815	2235
55	3270	2940	1825	2155
60	3255	3020	1840	2075
65	3230	3100	1865	1995
70	3200	3175	1895	1920
75	3160	3245	1930	1845
80	3120	3315	1975	1775
85	3070	3380	2025	1710
90	3015	3440	2080	1650
95	2955	3495	2140	1595
100	2890	3545	2205	1545
105	2820	3590	2275	1505
110	2745	3625	2345	1465
115	2670	3655	2420	1435
120	2595	3680	2500	1415
125	2510	3695	2580	1395
130	2430	3705	2660	1385
135	2350	3710	2745	1385
140	2265	3705	2830	1390
145	2185	3690	2910	1400
150	2100	3670	2990	1420
155	2025	3645	3070	1445
160	1945	3615	3145	1480
165	1870	3575	3220	1520
170	1800	3530	3290	1565
175	1735	3475	3360	1615
180	1675	3420	3420	1675
Max	3280	3710	3420	2995

Weight measurements in kg



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## (4.0t x 2.7m)

### Point Loadings

Calculation of reaction forces of the outriggers for model URW295C with fully extended outriggers

- ▶ Working Radius - 3000mm
- ▶ Rated Load - 3750kg
- ▶ Number of Booms - 1+2



Angle	OR1	OR2	OR3	OR4
0	3640	1295	1295	3640
5	3760	1425	1180	3510
10	3865	1565	1070	3375
15	3960	1710	975	3225
20	4040	1865	895	3075
25	4110	2025	825	2915
30	4165	2190	775	2750
35	4205	2355	735	2580
40	4230	2525	710	2410
45	4240	2700	700	2240
50	4235	2870	705	2065
55	4215	3040	725	1895
60	4180	3205	755	1730
65	4130	3370	805	1565
70	4065	3530	870	1410
75	3990	3680	945	1255
80	3900	3825	1035	1115
85	3800	3955	1140	980
90	3685	4080	1255	855
95	3560	4195	1380	740
100	3425	4300	1515	640
105	3280	4390	1655	550
110	3130	4465	1805	470
115	2970	4530	1965	410
120	2810	4580	2130	360
125	2640	4615	2295	325
130	2470	4630	2465	305
135	2300	4635	2635	300
140	2130	4625	2810	310
145	1955	4600	2980	335
150	1790	4560	3145	375
155	1625	4510	3310	430
160	1465	4440	3470	495
165	1310	4360	3625	580
170	1165	4265	3770	675
175	1025	4155	3910	780
180	900	4040	4040	900
Max	4240	4635	4040	3640

Weight measurements in kg

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## Mini Crawler Cranes

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## (4.0t x 2.7m)

### Point Loadings

Calculation of reaction forces of the outriggers for model URW295C with fully extended outriggers

- ▶ Working Radius - 6000mm
- ▶ Rated Load - 2500kg
- ▶ Number of Booms - 1+2+3



Angle	OR1	OR2	OR3	OR4
0	3865	290	290	3865
5	4035	470	125	3690
10	4210	630	0	3465
15	4475	705	0	3130
20	4705	805	0	2800
25	4895	930	0	2480
30	5050	1085	0	2175
35	5160	1265	0	1880
40	5230	1470	0	1610
45	5260	1695	0	1355
50	5245	1945	0	1120
55	5190	2210	0	910
60	5095	2490	0	725
65	4955	2790	0	565
70	4780	3095	0	435
75	4565	3415	0	330
80	4310	3745	0	255
85	4090	4010	65	145
90	3895	4220	195	0
95	3560	4535	210	0
100	3230	4825	255	0
105	2905	5075	330	0
110	2585	5290	435	0
115	2275	5470	565	0
120	1980	5605	725	0
125	1695	5700	910	0
130	1430	5760	1120	0
135	1185	5770	1355	0
140	960	5740	1610	0
145	755	5670	1880	0
150	575	5560	2175	0
155	420	5410	2480	0
160	290	5220	2800	0
165	190	4990	3130	0
170	120	4725	3465	0
175	75	4425	3810	0
180	30	4125	4125	30
Max	5260	5770	4125	3865

Weight measurements in kg

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## (4.0t x 2.7m)

### Point Loadings

Calculation of reaction forces of the outriggers for model URW295C with fully extended outriggers

- ▶ Working Radius - 9000mm
- ▶ Rated Load - 1200kg
- ▶ Number of Booms - 1+2+3+4

Angle	OR1	OR2	OR3	OR4
0	3205	140	140	3205
5	3340	290	5	3055
10	3585	325	0	2770
15	3805	385	0	2495
20	3995	465	0	2220
25	4155	575	0	1955
30	4280	700	0	1705
35	4370	850	0	1460
40	4430	1020	0	1235
45	4455	1205	0	1025
50	4440	1410	0	830
55	4395	1630	0	660
60	4315	1860	0	505
65	4200	2110	0	375
70	4055	2365	0	265
75	3880	2630	0	175
80	3670	2900	0	115
85	3430	3170	0	80
90	3230	3385	65	0
95	2955	3650	80	0
100	2680	3885	115	0
105	2410	4095	175	0
110	2145	4275	265	0
115	1890	4420	375	0
120	1645	4535	505	0
125	1410	4615	660	0
130	1190	4660	830	0
135	990	4670	1025	0
140	800	4645	1235	0
145	635	4590	1460	0
150	485	4495	1705	0
155	355	4370	1955	0
160	250	4215	2220	0
165	165	4025	2495	0
170	105	3805	2770	0
175	70	3555	3055	0
180	30	3310	3310	30
Max	4455	4670	3310	3205

Weight measurements in kg



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## Mini Crawler Cranes

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## (4.0t x 2.7m)

### Point Loadings

Calculation of reaction forces of the outriggers for model URW295C with fully extended outriggers

- ▶ Working Radius - 10000mm
- ▶ Rated Load - 700kg
- ▶ Number of Booms - 1+2+3+4+5

Angle	OR1	OR2	OR3	OR4
0	2680	350	350	2680
5	2785	460	245	2570
10	2875	580	155	2450
15	2960	710	70	2325
20	3035	840	0	2185
25	3150	920	0	1990
30	3245	1015	0	1795
35	3315	1125	0	1615
40	3360	1250	0	1445
45	3380	1395	0	1285
50	3370	1545	0	1140
55	3335	1710	0	1010
60	3275	1885	0	895
65	3190	2070	0	795
70	3080	2265	0	715
75	2985	2420	45	610
80	2910	2545	120	485
85	2820	2665	210	365
90	2720	2770	310	260
95	2610	2870	420	160
100	2495	2960	535	70
105	2360	3050	650	0
110	2160	3185	715	0
115	1970	3295	795	0
120	1785	3380	895	0
125	1610	3440	1010	0
130	1445	3475	1140	0
135	1290	3480	1285	0
140	1150	3465	1445	0
145	1020	3420	1615	0
150	910	3350	1795	0
155	815	3255	1990	0
160	735	3135	2185	0
165	655	3010	2375	20
170	530	2930	2500	100
175	410	2835	2620	195
180	295	2735	2735	295
Max	3380	3480	2735	2680

Weight measurements in kg





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## (4.0t x 2.7m)

### Point Loadings

Calculation of reaction forces of the outriggers for model URW295C with fully extended outriggers

- ▶ Working Radius - 14000mm
- ▶ Rated Load - 500kg
- ▶ Number of Booms - 1+2+3+4+5+6

Angle	OR1	OR2	OR3	OR4
0	2795	110	110	2795
5	2920	230	0	2660
10	3130	260	0	2415
15	3315	315	0	2180
20	3480	385	0	1945
25	3615	475	0	1720
30	3720	585	0	1505
35	3800	710	0	1300
40	3850	855	0	1105
45	3870	1015	0	925
50	3860	1190	0	760
55	3820	1375	0	610
60	3750	1575	0	480
65	3655	1785	0	365
70	3530	2005	0	275
75	3375	2230	0	200
80	3200	2460	0	150
85	2995	2695	0	115
90	2835	2865	70	40
95	2635	3055	115	0
100	2405	3255	150	0
105	2170	3435	200	0
110	1945	3590	275	0
115	1730	3715	365	0
120	1520	3810	480	0
125	1320	3880	610	0
130	1130	3915	760	0
135	955	3925	925	0
140	795	3905	1105	0
145	655	3855	1300	0
150	525	3780	1505	0
155	415	3670	1720	0
160	325	3535	1945	0
165	255	3375	2180	0
170	205	3185	2415	0
175	175	2975	2660	0
180	85	2825	2825	85
Max	3870	3925	2825	2795

Weight measurements in kg

