

*The Ultimate in Performance & Reliability*

# *Turbo Winch Water Winch*

**Ri** Rodney  
Industries

*a division of*

**Vinidex**  
Systems & Solutions



*T45, T35, T30*

*P35, P30, P25*



# Water Winch

SPRINKLER NELSON	Nozzle Dia.		Sprinkler Pressure		Output		Wetted Width		Approx. Lane Spacing		300M (15 Chain) Run					
	mm	Ins	kPa	P.S.I.	l.p.s.	G.P.M	m	Ft.	m	Ft.	Approx. Area Per Run		Gross Application			
											ha	ac	11 Hr. Run 18" per Min.		22 Hr Run 9" per Min.	
NELSON SR100 21°	18.0	0.712	413	60	5.15	68	69	228	45	148	1.36	3.36	14.9	0.59	29.9	1.18
			482	70	5.53	73	72	237	47	154	1.42	3.50	15.4	0.61	30.9	1.22
	19.5	0.768	413	60	6.06	80	71	232	46	151	1.39	3.43	17.2	0.68	34.5	1.36
			482	70	6.59	87	74	243	48	158	1.45	3.59	18.0	0.71	36.0	1.42
	20.6	0.812	413	60	6.97	92	72	237	47	154	1.42	3.50	19.5	0.77	39.1	1.54
			482	70	7.43	98	77	252	50	164	1.51	3.73	19.5	0.77	39.1	1.54
	21.8	0.857	413	60	7.88	104	77	252	50	164	1.51	3.73	20.5	0.81	41.1	1.62
482			70	8.56	113	81	267	53	174	1.60	3.95	21.0	0.83	42.1	1.66	
22.7	0.895	413	60	8.94	118	80	262	52	170	1.56	3.86	22.6	0.89	45.2	1.78	
		482	70	9.63	127	86	281	56	183	1.68	4.16	22.6	0.89	45.2	1.78	
23.6	0.927	413	60	10.38	137	81	267	53	174	1.60	3.95	25.6	1.01	51.8	2.02	
		482	70	11.22	148	87	286	57	186	1.71	4.22	25.9	1.02	51.8	2.04	
24.5	0.965	413	60	11.60	153	83	272	54	177	1.63	4.02	28.1	1.11	56.3	2.22	
		482	70	12.51	165	89	291	58	189	1.74	4.30	28.4	1.12	56.8	2.24	
NELSON SR150 21°	21.8	0.86	482	70	7.58	100	80	262	52	170	1.56	3.86	19.0	0.75	38.3	1.51
			551	80	8.11	107	83	272	54	177	1.63	4.02	19.5	0.77	39.3	1.55
	24.6	0.97	482	70	9.78	129	86	281	56	183	1.68	4.16	22.8	0.90	45.9	1.81
			551	80	10.38	137	89	291	58	189	1.74	4.30	23.6	0.93	47.2	1.86
	27.4	1.08	482	70	12.43	164	92	301	60	196	1.80	4.45	27.1	1.07	54.6	2.15
			551	80	13.27	175	94	310	61	202	1.86	4.59	28.1	1.11	56.3	2.22
	30.0	1.18	482	70	15.47	204	98	320	64	208	1.92	4.73	32.0	1.26	63.7	2.51
551			80	16.45	217	101	330	66	215	1.98	4.89	32.7	1.29	65.7	2.59	
32.0	1.26	482	70	18.65	246	104	340	68	221	2.03	5.02	36.3	1.43	72.6	2.86	
		551	80	19.86	262	106	349	69	227	2.09	5.16	37.5	1.48	75.1	2.96	
34.0	1.34	482	70	22.44	296	108	354	70	230	2.12	5.23	41.9	1.65	83.8	3.30	
		551	80	24.03	317	112	369	73	240	2.21	5.45	43.1	1.70	86.3	3.40	
NELSON SR200 21°	32.8	1.29	551	80	18.35	242	107	351	70	228	2.10	5.15	34.5	1.36	69.3	2.73
			620	90	19.56	258	110	361	72	235	2.15	5.30	35.8	1.41	71.6	2.82
	37.1	1.46	551	80	24.03	317	116	380	75	247	2.25	5.60	41.9	1.65	83.8	3.30
			620	90	25.55	337	120	394	78	256	2.30	5.80	42.9	1.69	85.8	3.38
	39.6	1.56	551	80	28.13	371	122	399	79	259	2.35	5.85	46.7	1.84	93.4	3.68
			620	90	30.03	396	126	413	82	268	2.45	6.05	48.2	1.90	96.2	3.79
	42.2	1.66	551	80	32.53	429	127	418	83	272	2.50	6.15	51.5	2.03	102.8	4.05
620			90	34.42	454	132	432	86	281	2.55	6.35	52.8	2.08	105.4	4.15	
44.2	1.74	551	80	37.23	491	132	432	86	281	2.55	6.35	56.8	2.24	114.0	4.49	
		620	90	39.50	521	136	447	88	291	2.60	6.60	58.4	2.30	116.8	4.60	
46.5	1.83	551	80	42.61	562	136	447	88	291	2.60	6.60	62.9	2.48	125.9	4.96	
		620	90	45.19	596	140	461	91	300	2.70	6.80	64.7	2.55	129.5	5.10	
49.0	1.93	551	80	50.88	671	142	466	92	303	2.75	6.85	72.1	2.84	144.5	5.69	
		620	90	53.99	712	146	480	95	312	2.85	7.05	74.4	2.93	148.8	5.86	

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## Travelling Irrigator Special Features

**Four-Wheel Stance:** Solid construction with wide wheel track and high crop clearance.

Automotive type steering ensures excellent tracking ability.

Pivoting front axle adjusts to suit uneven terrain.

**Piston Drive:** Machine is fitted with a double acting piston drive which is manufactured from Gunmetal and Stainless Steel.

The control valve is similar construction and is actuated mechanically.

This design has the minimum of moving parts and gives simple, trouble-free and reliable service.

**Other Features:** Chassis is of heavy construction which makes the machine very robust and able to support the feature of high crop clearance.

All machine parts are of heavy duty design i.e.

- Pawl and ram bolts
- Cable drum shaft
- Rocker arm shaft
- Hose reel spool shaft, and
- Front axle pivot pin

These high stress points are also fitted with heavy duty bearings.

Hose reel is horizontally mounted and fitted with a clutch and adjustable hose reel brake. It is driven from the P.T.O. by a gearbox through sprockets and roller chain.

Filter: Inline full flow filter is fitted to protect valve and ram from sand particles.

The filter can be flushed during operation.

**Protection:** All main machine parts are galvanized or plated before assembly.

**MAXIMUM TRAVEL SPEED**  
36" / MINUTE





# Turbo Winch

Table

400M (20Chain) Run						Average Precipitation Rate (Full Circle)		Angus Hose Friction Loss (PSI/KPA) Per 100 Mets @ 70PSI / 482KPA									
Approx Area Per Run		Gross Application						2.5"		3"		3.5"		4"		4.5"	
		11 Hr. Run 24" per Min.		22 Hr. Run 12" per Min.													
ha	ac	mm	Ins	mm	Ins	mmp.h	p.p.h.	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI	KPA	PSI
1.81	4.48	11.1	0.44	22.3	0.88	5.3	21	29.4	4.2								
1.88	4.66	11.6	0.46	23.3	0.92	5.3	21	33.5	4.8								
1.84	4.58	12.9	0.51	25.9	1.02	6.0	24	43.1	6.2								
1.93	4.78	13.4	0.53	26.9	1.06	6.0	24	49.0	7.1								
1.88	4.66	14.7	0.58	29.4	1.16	6.8	27	50.8	7.3								
2.00	4.96	14.7	0.58	29.4	1.16	6.3	25	60.3	8.7								
2.00	4.96	15.4	0.61	30.9	1.22	6.8	27	66.5	9.6								
2.12	5.28	16.0	0.63	32.0	1.26	6.6	26	73.5	10.6								
2.09	5.16	17.0	0.67	34.0	1.34	7.1	28	78.4	11.3								
2.24	5.54	17.0	0.67	34.0	1.34	6.8	27	93.6	13.5								
2.13	5.28	19.3	0.76	38.6	1.52	8.1	32	107.8	15.6	36.3	5.2						
2.28	5.64	19.5	0.77	39.1	1.54	7.6	30	125.5	18.2	42.2	6.1						
2.16	5.36	21.0	0.83	42.1	1.66	8.6	34	134.3	19.4	46.8	6.8						
2.32	5.72	21.3	0.84	42.6	1.68	8.1	32	150.4	21.8	51.2	7.4						
2.08	5.15	14.4	0.57	28.9	1.14	6.0	24	62.0	9.0	20.0	2.8						
2.16	5.36	14.7	0.58	29.4	1.16	6.0	24	68.0	9.8	21.6	3.1						
2.24	5.54	17.2	0.68	34.5	1.36	6.8	27	94.4	13.7	32.4	4.7	20.3	2.8				
2.32	5.72	17.7	0.70	35.5	1.40	6.8	27	107.8	15.6	36.3	5.2	23.0	3.3				
2.40	5.94	20.5	0.81	40.8	1.61	7.6	30	147.0	21.3	50.5	7.3	31.6	4.6	12.7	1.8		
2.44	6.12	21.0	0.83	42.4	1.67	7.6	30			55.9	8.1	35.5	5.1	14.2	2.0		
2.56	6.30	23.8	0.94	48.0	1.89	8.3	33			75.5	10.9	47.4	6.8	19.3	2.8		
2.64	6.52	24.6	0.97	49.2	1.94	8.3	33			84.3	12.2	52.9	7.6	21.5	3.1		
2.72	6.70	27.1	1.07	54.3	2.14	8.8	35			107.8	15.6	67.6	9.8	27.4	3.9	18.2	2.6
2.76	6.88	28.1	1.11	56.3	2.22	9.1	36			117.6	17.0	74.5	10.8	31.4	4.5	20.6	2.9
2.80	6.96	31.4	1.24	62.9	2.48	9.9	39			149.5	21.7	93.8	13.6	38.2	5.5	26.3	3.8
2.92	7.28	32.2	1.27	64.5	2.54	9.9	39					107.8	15.6	39.2	5.7	29.4	4.2
2.79	6.89	25.9	1.02	52.0	2.05	8.3	33					66.5	9.6	26.0	3.7	18.1	2.6
2.85	7.04	26.9	1.06	53.7	2.12	8.3	33					73.6	10.7	30.2	4.3	20.5	2.9
3.00	7.40	31.4	1.24	62.7	2.47	9.1	36					107.8	15.6	39.2	5.7	29.4	4.2
3.10	7.70	32.2	1.27	64.5	2.54	9.1	36					140.6	20.4	47.5	6.9	32.8	4.7
3.20	7.80	35.0	1.38	70.1	2.76	9.9	39							58.8	8.5	39.2	5.7
3.30	8.10	36.3	1.43	72.3	2.85	9.9	39							63.7	9.2	48.0	6.9
3.30	8.20	38.6	1.52	77.2	3.04	10.4	41							78.4	11.3	52.9	7.6
3.40	8.50	39.6	1.56	78.9	3.11	10.4	41							85.2	12.3	58.5	8.5
3.40	8.50	42.6	1.68	85.5	3.37	11.1	44							102.9	14.9	68.6	9.9
3.46	8.55	43.8	1.72	89.6	3.45	11.1	44							113.0	16.4	72.5	10.5
3.46	8.55	47.2	1.86	94.4	3.72	11.9	47							122.5	17.7	82.3	11.9
3.59	8.87	48.5	1.91	97.1	2.82	11.9	47									93.1	13.5
3.66	9.04	54.1	2.13	108.4	4.27	12.9	51									117.6	17.0
3.80	9.39	55.8	2.19	111.6	4.40	12.9	51									132.3	19.2

Friction losses are to be used as a guide only

## Travelling Irrigator Special Features

**Four-Wheel Stance:** Solid stability contributes to the irrigators' tracking ability. Automotive-type steering mechanism further assists straight tracking ability. Robust construction; easily attached to towing vehicle; no jack needed to support draw bar. Pivoting front axle adjusts to uneven terrain.

**MAXIMUM TRAVEL SPEED**  
60" / MINUTE



**Exclusive Radial Inflow Turbine:** Specifically designed for travelling irrigator requirements. Delivers high torque at low RPMs; especially efficient when under load. Full power available when most needed—near end of run. Simple one-man operation. Requires no sophisticated filtration. Few wearing parts for long durability, simplified maintenance.

**Industrial Type 4-Speed Gearbox:** Speed of travel to suit the crop can be easily selected. Extremely flexible speed range.

**Drive Clutch:** Automatically engages when water is turned on. No need to return to irrigator for adjustments after positioning machine.

**Travel Shut-off Mechanism:** Simple valve automatically shuts off water supply to turbine and engages disc brake at end of run. No creeping after shutdown.

**Hose Reel Drive Release:** Manually disengage drive for easy hose layout.

**P.T.O. Connections At Front:** Hose purge and hose wind-up operations are carried out from the towing position. This means machine anchorage and convenience of operation.

**Integrally-Mounted Horizontal Hose Reel:** Reel is always with the irrigator, ready to retrieve hose at end of run. Compact; easy to operate, heavy tubular steel spool. When winding up, reel accepts hose at a wide variety of angles.

**Purging Unit:** Standard equipment on the travelling irrigator. High capacity and low pressure provide a highly effective means of purging hose of water before wind up. Utilises a splined shaft to fit the power take-off shaft from operator's tractor.



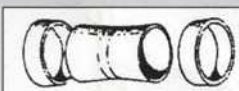
# Turbo Winch/Water Winch Irrigators

MODELS	ANGUS HOSE LENGTH					NELSON SPRINKLERS (Big Guns) with Ring Set & Gauge			WIRE ROPE		GROUND CLEARANCE	LTH	WIDTH	HT	•WEIGHT
	2.5" (65mm)	3" (77mm)	3.5" (90mm)	4" (102mm)	4.5" (115mm)	21" SR100	21" SR150	21" SR200	SIZE (mm)	LTH (mtrs)	(mm)	(mm)	(mm)	(mm)	(kgs)
<b>TURBO</b> (Turbine Drive) <b>T45</b>				*200m (10 Chain)	200m (10 Chain)		✓	*✓	8mm	410	250	4500	1950	2000	1200
<b>T35</b>			*200m (10 Chain)	150m (7.5 Chain)			*✓	✓	7mm	410	250	4000	1830	2000	875
<b>T30</b>		*200m (10 Chain)	150m (7.5 Chain)			✓	*✓		6mm	410	250	4000	1830	2000	825
<b>WATER WINCH</b> (Piston Drive) <b>P35</b>			*200m (10 Chain)	150m (7.5 Chain)			*✓	✓	7mm	410	250	2450	1830	1800	875
<b>P30</b>		*200m (10 Chain)	150m (7.5 Chain)			✓	*✓		6mm	410	250	2450	1830	1800	825
<b>P25</b>	200m (10 Chain)	*150m (7.5 Chain)				✓	*✓		6mm	310	250	2250	1830	1800	725

Note: STANDARD UNIT\* P25 Unit Standard with 150m Hose and 310m Wire Rope


\*Weight is not including Big Gun or Hose

## Irrigator Hose Fittings




**Hose Joiners**


- HOSE TO HOSE
- HOSE TO ALUMINIUM
- HOSE TO IRRIGATOR
- HOSE TO B.S.P.
- HOSE TO FLANGE




**Mainline Adaptors**




**Hose Coupler (Standard)**




**Flanged Table 'D' to Half Joiner**




**Flanged Table 'D' To Bell**




**Hose Couplers (Ring Type)**



**Coupler Joiners**



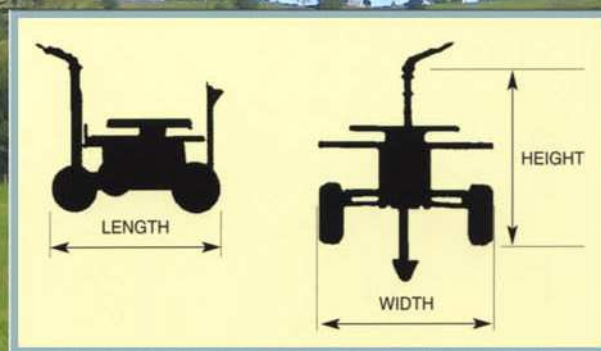
**Hose Coupler (Less Lugs)**



**Thread to Half Hose Joiner**



*We Use & Recommend  
Nelson Big Guns &  
Angus Irrigation Hose*



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