

# NuStep® T4r

## Recumbent Cross Trainer Specifications

### Overall Features

- User controlled step length up to 8½" (21.5 cm)
- Small machine footprint:
  - Machine 25.0 in (63 cm) x 58.7in (150 cm)
  - Required free area 73.0 in (185 cm) x 82.7 in (210 cm)
- StrideLock® to immobilize arms and pedals
- Sturdy grab ring to support user during ingress / egress
- Easy startup with no button press required
- Front lifting handle and rear wheels for portability
- Free-standing, cordless design
- Step through height 9 ½" – 13 ½" (24 cm – 34 cm)
- Fits users from 4'6"- 6'4" (137-193cm) in height
- User weight capacity of 400 lb (182 kg)
- Latex free construction

### Display

- Two dedicated program buttons "Quick Start", "Pace Partner"
- Large readouts for TIME, CAL, SPM, LOAD, SEAT POSITION, HEART RATE, METS / WATTS, and STEPS / DISTANCE
- 3 Minute console shut-down
- Polar® telemetry heart rate monitoring (coded receiver)
- Membrane available in 9 languages: Chinese, Danish, Dutch, English, French, German, Italian, Japanese, Spanish
- Average button gives workout average from start
- Uses 4 AA alkaline or NiMH rechargeable batteries
- Weight readout in US standard and metric units
- Media rack to support book, cell phone, tablet, MP3 player, etc.
- Convenient to reach 3" diameter water bottle holder
- USB port for *Data Logging* and software updates
- Provides capability to communicate with BLE compatible devices

### Seat

- Seat adjustment along the rail of 15" (38cm)
- Seat height of 21 ½"-23" (55 cm – 59 cm), width of 17" (43 cm)
- 360° Ball bearing swivel seat which locks every 45 degrees
- Integrated sturdy armrests to support user during ingress / egress
- Large non-handed accessible rail / swivel adjustment levers
- Ergonomically designed with contoured back support
- Easy-to-clean heavy-duty vinyl seat covering

### Drivetrain / Resistance System

- Instant freewheel capability
- Non-contact, frictionless eddy current magnetic braking
- 10 Workload levels with resistance range of 0-800 watts
- Quiet, high-performance poly-v and timing belts
- Durable maintenance-free sealed roller bearings

### Frame & Covers

- Heavy-duty welded steel frame
- Rust resistant coatings on all parts
- Stable, 4-point contact, with two leveling feet
- Strong, high-impact polystyrene easy clean covers



### Arms and Handles

- Anodized aluminum arms with rubber handgrips
- Handle adjustment of 15" (38 cm)
- Clamshell style upper arm lock

### Foot pedals

- Durable molded plastic pedals with non-slip texture
- 4-bar linkage to stabilize pedal angle through stepping range
- Integrated *Foot Secure System* mounts

### Adaptive accessories

- Leg stabilizer
- WellGrip®
- Polar heart rate monitors: T31c & H7
- Foot secure system
- Transporter
- Lap belt

### Unit Dimensions

	<u>Unit only</u>	<u>Fully Packaged</u>
• Length	60" (152 cm)	61" (155 cm)
• Width	27" (69 cm)	30 ½" (77 cm)
• Height	45" (115 cm)	44 ½" (113 cm)
• Weight	210 lbs (95 kg)	284 lbs (129 kg)

### Warranty and Quality

- Limited 10-year frame, 5-year parts and 1-year labor warranty (US and Canada)
- Quality system registered to ISO 9001:2008
- Patents 6,042,518; 6,361,479; 6,666,799; 9,004,598; and patents pending

### Directives and Standards

- Medical Device Directive 93/42/EEC, class 1
- EMC Directive 2004/108/EC
- RoHS Directive 2011/65/EU
- R&TTE Directive 1999/5/EC
- EN 20957-1:2013 Class SB
- EN 50581:2012
- EN 55011:2009/A1:2010
- EN 60601-1:2006
- EN 60601-1-2:2007
- EN 957-8:1998

### Awards / Certifications

- Arthritis Foundation Ease-of-Use Commendation

# NuStep® T4r Recumbent Cross Trainer

## Predicted Metabolic Equivalentents

Predicted METs equation as a function of power and weight

$$\text{T4r METs} = (-98.039 + (4.533 \cdot \text{wt}) + (12.137 \cdot \text{Watts})) / (\text{wt} \cdot 3.5) \quad (\text{weight in kilograms})$$

$$\text{T4r METs} = (-98.039 + (4.533 \cdot \text{wt} \cdot 2.24) + (12.137 \cdot \text{Watts})) / (\text{wt} \cdot 2.24 \cdot 3.5) \quad (\text{weight in pounds})$$

		User weight													
		lb	100	125	150	175	200	225	250	275	300	325	350	375	400
		kg	45	57	68	79	91	102	113	125	136	147	159	170	181
Power [Watts]	25	2.6	2.3	2.2	2.0	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.6	1.6	
	50	4.5	3.9	3.4	3.1	2.9	2.7	2.6	2.5	2.4	2.3	2.2	2.1	2.1	
	75	6.4	5.4	4.7	4.2	3.9	3.6	3.3	3.2	3.0	2.9	2.8	2.7	2.6	
	100	8.3	6.9	6.0	5.3	4.8	4.4	4.1	3.9	3.6	3.5	3.3	3.2	3.1	
	125	10.2	8.4	7.3	6.4	5.8	5.3	4.9	4.5	4.3	4.0	3.8	3.7	3.5	
	150	12.1	10.0	8.5	7.5	6.7	6.1	5.6	5.2	4.9	4.6	4.4	4.2	4.0	
	175	14.1	11.5	9.8	8.6	7.7	7.0	6.4	5.9	5.5	5.2	4.9	4.7	4.5	
	200	16.0	13.0	11.1	9.7	8.6	7.8	7.2	6.6	6.2	5.8	5.5	5.2	5.0	
	225	17.9	14.6	12.4	10.8	9.6	8.7	7.9	7.3	6.8	6.4	6.0	5.7	5.4	
	250		16.1	13.6	11.9	10.5	9.5	8.7	8.0	7.5	7.0	6.6	6.2	5.9	
	275		17.6	14.9	13.0	11.5	10.4	9.5	8.7	8.1	7.6	7.1	6.7	6.4	
	300			16.2	14.0	12.5	11.2	10.2	9.4	8.7	8.2	7.7	7.2	6.9	
	325			17.4	15.1	13.4	12.1	11.0	10.1	9.4	8.8	8.2	7.8	7.4	
	350				16.2	14.4	12.9	11.8	10.8	10.0	9.3	8.8	8.3	7.8	
	375				17.3	15.3	13.8	12.5	11.5	10.6	9.9	9.3	8.8	8.3	
400					16.3	14.6	13.3	12.2	11.3	10.5	9.9	9.3	8.8		

**Note:**  
All values derived from regression analysis performed by Dr. John Porcari, University of Wisconsin - La Crosse, La Crosse WI 54601, January 2013

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## Predicted Caloric Expenditure per Minute

Predicted caloric expenditure equation as a function of power and weight

$$T4r \text{ Kcal/min} = (-0.490 + (0.023 * wt) + (0.061 * Watts))$$

(weight in kilograms)

$$T4r \text{ Kcal/min} = (-0.490 + (0.023 * wt * 2.24) + (0.061 * Watts))$$

(weight in pounds)

		User weight												
		100	125	150	175	200	225	250	275	300	325	350	375	400
lb		45	57	68	79	91	102	113	125	136	147	159	170	181
kg		45	57	68	79	91	102	113	125	136	147	159	170	181
Metabolic Equivalents (METs)	1	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2
	2	1.6	2.0	2.4	2.8	3.2	3.6	4.0	4.4	4.8	5.2	5.6	6.0	6.4
	3	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.5	7.1	7.7	8.3	8.9	9.5
	4	3.2	4.0	4.8	5.6	6.4	7.1	7.9	8.7	9.5	10.3	11.1	11.9	12.7
	5	4.0	5.0	6.0	6.9	7.9	8.9	9.9	10.9	11.9	12.9	13.9	14.9	15.9
	6	4.8	6.0	7.1	8.3	9.5	10.7	11.9	13.1	14.3	15.5	16.7	17.9	19.1
	7	5.6	6.9	8.3	9.7	11.1	12.5	13.9	15.3	16.7	18.1	19.4	20.8	22.2
	8	6.4	7.9	9.5	11.1	12.7	14.3	15.9	17.5	19.1	20.6	22.2	23.8	25.4
	9	7.1	8.9	10.7	12.5	14.3	16.1	17.9	19.6	21.4	23.2	25.0	26.8	28.6
	10	7.9	9.9	11.9	13.9	15.9	17.9	19.8	21.8	23.8	25.8	27.8	29.8	31.8
	11	8.7	10.9	13.1	15.3	17.5	19.6	21.8	24.0	26.2	28.4	30.6	32.7	34.9
	12	9.5	11.9	14.3	16.7	19.1	21.4	23.8	26.2	28.6	31.0	33.3	35.7	38.1
	13	10.3	12.9	15.5	18.1	20.6	23.2	25.8	28.4	31.0	33.5	36.1	38.7	41.3
	14	11.1	13.9	16.7	19.4	22.2	25.0	27.8	30.6	33.3	36.1	38.9	41.7	44.5
	15	11.9	14.9	17.9	20.8	23.8	26.8	29.8	32.7	35.7	38.7	41.7	44.7	47.6
	16	12.7	15.9	19.1	22.2	25.4	28.6	31.8	34.9	38.1	41.3	44.5	47.6	50.8
	17	13.5	16.9	20.2	23.6	27.0	30.4	33.7	37.1	40.5	43.9	47.2	50.6	54.0
	18	14.3	17.9	21.4	25.0	28.6	32.1	35.7	39.3	42.9	46.4	50.0	53.6	57.2

**Note:** All values derived from regression analysis performed by Dr. John Porcari, University of Wisconsin - La Crosse, La Crosse WI 54601, January 2013.

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NuStep® T4r Recumbent Cross Trainer  
 Estimated Power (Watts) at Various Step Rates

		T4r Load Level									
		1	2	3	4	5	6	7	8	9	10
Steps Per Minute (SPM)	15	1	1	1	2	3	3	3	4	6	6
	30	3	3	3	5	8	10	11	15	19	21
	40	5	5	5	9	12	17	19	26	32	35
	50	7	7	8	13	18	25	29	39	48	53
	60	10	10	12	18	25	34	41	55	67	75
	70	13	14	16	23	32	45	56	74	90	100
	80	17	18	21	30	41	57	73	96	116	129
	90	21	23	27	37	51	71	92	121	145	161
	100	25	29	33	45	62	87	113	148	178	198
	110	30	35	40	54	74	104	137	179	214	238
	120	35	42	47	64	87	122	162	212	253	281
	130	41	49	55	75	101	142	190	247	295	328
	140	47	57	64	86	117	163	220	286	341	379
	150	53	65	73	98	133	186	252	327	390	434
	160	60	74	83	111	150	211	287	372	442	492
	170	67	84	94	125	169	237	323	419	498	554
180	75	94	105	139	188	264	362	469	556	619	
190	83	104	117	155	209	293	403	521	618	688	
200	92	116	130	171	230	323	446	577	684	761	

**Note:**

All values were computed from testing at NuStep using a controlled step length with various test subjects. Actual displayed values on the NuStep T4r will differ from those listed in the chart due to variations in the user's step length and workout style.

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