



RANGE SUMMARY

Introduction to . . . The VARTA TSP Range



VARTA® pocket plate NiCd cells are suitable for industrial applications requiring proven reliability and the highest safety integrity. The TSP range is optimised for applications covering discharges of 1 second to 30 minutes or more.

Typical TSP battery applications include diesel start, UPS and marine.

With over 100 years of experience in the design and manufacture of NiCd batteries, supported by an ethos of continuous improvement and technical development, EnerSys™ offers a world-leading range of solutions to suit varying applications.

Cost effectiveness, safety and durability make the VARTA TSP range NiCd battery one of the most reliable and powerful systems on the market.

Features & Benefits

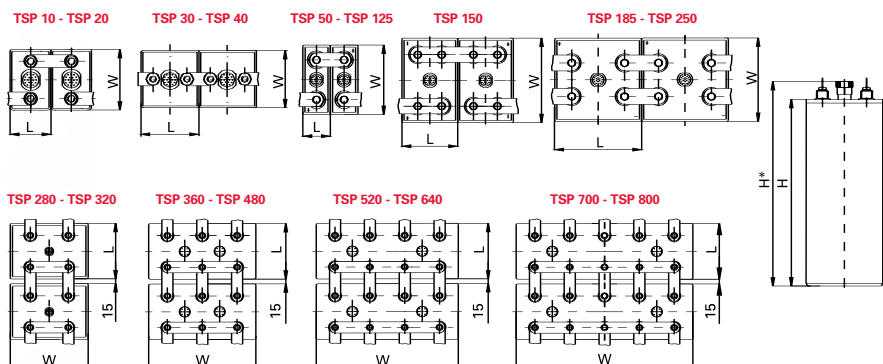
- Capacity Range: 10Ah - 800Ah
- Recommended discharge time: 1 second to 30 minutes
- Ni-Cd cells of this range are especially constructed for high current discharging and starting applications
- Excellent resistance against electrical and mechanical stress
- No risks of terminal decomposition or sudden death due to the plate construction
- Proven long service life: 20 years in stationary cycling operations
- Operational temperature: - 40°C to + 50°C
- Long storage life
- Robust construction - hard-wearing and insensitive to faults in maintenance
- Long maintenance interval
- Translucent plastic cases for visible electrolyte level
- Conforms to DIN40771 and IEC60623/KH...P

General Specifications

Type*	Nominal Capacity C ₅ (Ah)	Nominal Dimensions						Weight				Terminal		
		Length		Width		Height		Without electrolyte		Total weight				
		mm	in	mm	in	mm	in	mm	in	kg	lbs	kg	lbs	
TSP 10	10	46	1.8	85	3.3	237	9.3	257	10.1	1.11	2.4	1.62	3.6	M10 M
TSP 14	14	46	1.8	85	3.3	237	9.3	257	10.1	1.41	3.1	1.81	4.0	M10 M
TSP 20	20	46	1.8	85	3.3	237	9.3	257	10.1	1.57	3.5	1.90	4.2	M10 M
TSP 30	30	85	3.3	85	3.3	237	9.3	257	10.1	2.25	5.0	3.11	6.6	M10 M
TSP 40	40	85	3.3	85	3.3	237	9.3	257	10.1	2.86	6.3	3.56	7.8	M10 M
TSP 50	50	53	2.1	134	5.3	330	13.0	360	14.2	3.59	7.9	4.61	10.2	M8 F
TSP 65	65	69	2.7	134	5.3	330	13.0	360	14.2	4.52	10.0	6.10	13.4	M8 F
TSP 80	80	69	2.7	134	5.3	330	13.0	360	14.2	5.37	11.8	6.63	14.6	M8 F
TSP 100	100	103.5	4.1	134	5.3	330	13.0	360	14.2	6.49	14.3	8.82	19.4	M8 F
TSP 125	125	103.5	4.1	134	5.3	330	13.0	360	14.2	7.82	17.2	9.69	21.4	M8 F
TSP 150	150	108	4.3	164	6.5	330	13.0	360	14.2	8.87	19.6	11.90	26.2	M8 F
TSP 185	185	164	6.5	158	6.2	330	13.0	360	14.2	10.57	23.3	15.59	34.4	M8 F
TSP 200	200	164	6.5	158	6.2	330	13.0	360	14.2	11.38	25.1	16.18	35.7	M8 F
TSP 235	235	164	6.5	158	6.2	330	13.0	360	14.2	12.60	27.8	17.06	37.6	M8 F
TSP 250	250	164	6.5	158	6.2	330	13.0	360	14.2	13.00	28.7	17.35	38.2	M8 F
TSP 280	280	176	6.9	246	9.7	330	13.0	360	14.2	16.98	37.4	23.70	52.2	M10 F
TSP 300	300	176	6.9	246	9.7	330	13.0	360	14.2	17.68	39.0	24.18	53.3	M10 F
TSP 320	320	176	6.9	246	9.7	330	13.0	360	14.2	18.46	40.7	24.60	54.2	M10 F
TSP 360	360	176	6.9	368	14.5	330	13.0	373	14.2	22.68	50.0	33.86	74.6	M10 F
TSP 390	390	176	6.9	368	14.5	330	13.0	373	14.2	23.78	52.4	34.66	76.4	M10 F
TSP 420	420	176	6.9	368	14.5	330	13.0	373	14.2	24.83	54.7	35.40	78.0	M10 F
TSP 450	450	176	6.9	368	14.5	330	13.0	373	14.2	25.98	57.3	36.25	79.9	M10 F
TSP 480	480	176	6.9	368	14.5	330	13.0	373	14.2	27.08	59.7	37.04	81.7	M10 F
TSP 520	520	176	6.9	448	17.6	330	13.0	373	14.2	31.50	69.4	44.73	98.6	M10 F
TSP 560	560	176	6.9	448	17.6	330	13.0	373	14.2	33.00	72.8	45.86	101.1	M10 F
TSP 600	600	176	6.9	448	17.6	330	13.0	373	14.2	34.50	76.1	47.00	103.6	M10 F
TSP 640	640	176	6.9	448	17.6	330	13.0	373	14.2	36.00	79.4	48.11	106.1	M10 F
TSP 700	700	176	6.9	558	22.0	330	13.0	373	14.2	41.13	90.7	57.20	126.1	M10 F
TSP 750	750	176	6.9	558	22.0	330	13.0	373	14.2	43.00	94.8	58.60	129.2	M10 F
TSP 800	800	176	6.9	558	22.0	330	13.0	373	14.2	44.88	98.9	60.00	132.3	M10 F

* Includes height over terminals

Battery Layout



Current (Amps) to 1.15V @ 20°C (68°F)

Type	Seconds				Minutes						
	1	5	10	30	1	5	10	15	30	60	90
TSP 10	53.80	43.80	40.00	33.80	30.00	20.00	17.00	15.00	11.30	7.50	6.00
TSP 14	75.30	61.30	56.00	47.30	42.00	28.00	23.80	21.00	15.80	10.50	8.40
TSP 20	107.50	87.50	80.00	67.50	60.00	40.00	34.00	30.00	22.50	15.00	12.00
TSP 30	161.30	131.30	120.00	101.30	90.00	60.00	51.00	45.00	33.80	22.50	18.00
TSP 40	215.00	175.00	160.00	135.00	120.00	80.00	68.00	60.00	45.00	30.00	24.00
TSP 50	243.00	206.30	189.40	165.60	146.90	103.10	87.50	81.30	60.00	40.80	28.90
TSP 65	316.90	268.10	246.20	215.30	190.90	134.10	113.80	105.60	78.00	53.00	37.60
TSP 80	390.00	330.00	303.00	265.00	235.00	165.00	140.00	130.00	96.00	65.20	46.30
TSP 100	432.00	360.00	336.00	292.00	256.00	184.00	160.00	140.00	108.00	72.00	56.00
TSP 125	540.00	450.00	420.00	365.00	320.00	230.00	200.00	175.00	135.00	90.00	70.00
TSP 150	576.00	499.00	466.00	405.00	357.00	259.00	219.00	191.00	150.00	114.00	84.00
TSP 185	710.00	615.00	575.00	500.00	440.00	320.00	270.00	235.00	185.00	141.00	104.00
TSP 200	752.00	656.00	616.00	528.00	468.00	344.00	296.00	260.00	212.00	152.00	112.00
TSP 235	884.00	771.00	724.00	620.00	550.00	404.00	348.00	306.00	249.00	179.00	132.00
TSP 250	940.00	820.00	770.00	660.00	585.00	430.00	370.00	326.00	265.00	190.00	140.00
TSP 280	1075.00	931.00	870.00	756.00	666.00	483.00	409.00	357.00	280.00	213.00	157.00
TSP 300	1152.00	998.00	932.00	810.00	714.00	518.00	438.00	382.00	300.00	228.00	168.00
TSP 320	1229.00	1065.00	994.00	864.00	762.00	553.00	467.00	407.00	320.00	243.00	179.00
TSP 360	1382.00	1198.00	1118.00	972.00	857.00	622.00	526.00	458.00	360.00	274.00	202.00
TSP 390	1498.00	1297.00	1212.00	1053.00	928.00	673.00	569.00	497.00	390.00	296.00	218.00
TSP 420	1613.00	1397.00	1305.00	1134.00	1000.00	725.00	613.00	535.00	420.00	319.00	235.00
TSP 450	1728.00	1497.00	1398.00	1215.00	1071.00	777.00	657.00	573.00	450.00	342.00	252.00
TSP 480	1843.00	1597.00	1491.00	1296.00	1142.00	829.00	701.00	611.00	480.00	365.00	269.00
TSP 520	1997.00	1730.00	1615.00	1404.00	1238.00	898.00	759.00	662.00	520.00	395.00	291.00
TSP 560	2150.00	1863.00	1740.00	1512.00	1333.00	967.00	818.00	713.00	560.00	426.00	314.00
TSP 600	2304.00	1996.00	1864.00	1620.00	1428.00	1036.00	876.00	764.00	600.00	456.00	336.00
TSP 640	2458.00	2129.00	1988.00	1728.00	1523.00	1105.00	934.00	815.00	640.00	486.00	358.00
TSP 700	2688.00	2329.00	2175.00	1890.00	1666.00	1209.00	1022.00	891.00	700.00	532.00	392.00
TSP 750	2880.00	2495.00	2330.00	2025.00	1785.00	1295.00	1095.00	955.00	750.00	570.00	420.00
TSP 800	3072.00	2661.00	2485.00	2160.00	1904.00	1381.00	1168.00	1019.00	800.00	608.00	448.00

Current (Amps) to 1.10V @ 20°C (68°F)

Type	Seconds				Minutes						
	1	5	10	30	1	5	10	15	30	60	90
TSP 10	66.30	56.30	51.30	43.00	38.80	27.50	22.50	20.00	15.00	9.00	6.30
TSP 14	92.80	78.80	71.80	60.20	54.30	38.50	31.50	28.00	21.00	12.60	8.90
TSP 20	132.50	112.50	102.50	86.00	77.50	55.00	45.00	40.00	30.00	18.00	12.70
TSP 30	198.80	168.80	153.80	129.00	116.30	82.50	67.50	60.00	45.00	27.00	19.00
TSP 40	265.00	225.00	205.00	172.00	155.00	110.00	90.00	80.00	60.00	36.00	25.30
TSP 50	300.00	265.60	243.80	209.40	187.50	137.50	115.60	106.30	76.30	48.10	32.30
TSP 65	390.00	345.30	316.90	272.20	243.80	178.80	150.30	138.10	99.10	62.60	42.00
TSP 80	480.00	425.00	390.00	335.00	300.00	220.00	185.00	170.00	122.00	77.00	51.70
TSP 100	548.00	464.00	424.00	368.00	328.00	240.00	204.00	184.00	144.00	96.00	64.80
TSP 125	685.00	580.00	530.00	460.00	410.00	300.00	255.00	230.00	180.00	120.00	81.00
TSP 150	742.00	645.00	596.00	511.00	454.00	324.00	276.00	239.00	186.00	132.00	89.40
TSP 185	915.00	795.00	735.00	630.00	560.00	400.00	340.00	295.00	230.00	163.00	110.00
TSP 200	928.00	805.00	744.00	656.00	596.00	440.00	364.00	316.00	256.00	176.00	119.00
TSP 235	1090.00	946.00	874.00	771.00	700.00	517.00	427.00	371.00	301.00	207.00	140.00
TSP 250	1160.00	1006.00	930.00	820.00	745.00	550.00	454.00	395.00	320.00	220.00	149.00
TSP 280	1385.00	1204.00	1113.00	954.00	847.00	605.00	515.00	446.00	347.00	246.00	167.00
TSP 300	1484.00	1290.00	1192.00	1022.00	908.00	648.00	552.00	478.00	372.00	264.00	179.00
TSP 320	1583.00	1376.00	1271.00	1090.00	969.00	691.00	589.00	510.00	397.00	282.00	191.00
TSP 360	1781.00	1548.00	1430.00	1226.00	1090.00	778.00	662.00	574.00	446.00	317.00	215.00
TSP 390	1929.00	1677.00	1550.00	1329.00	1180.00	842.00	718.00	621.00	484.00	343.00	232.00
TSP 420	2078.00	1806.00	1669.00	1431.00	1271.00	907.00	773.00	669.00	521.00	370.00	250.00
TSP 450	2226.00	1935.00	1788.00	1533.00	1362.00	972.00	828.00	717.00	558.00	396.00	268.00
TSP 480	2374.00	2064.00	1907.00	1635.00	1453.00	1037.00	883.00	765.00	595.00	422.00	286.00
TSP 520	2572.00	2236.00	2066.00	1771.00	1574.00	1123.00	957.00	829.00	645.00	458.00	310.00
TSP 560	2770.00	2408.00	2225.00	1908.00	1695.00	1210.00	1030.00	892.00	694.00	493.00	334.00
TSP 600	2968.00	2580.00	2384.00	2044.00	1816.00	1296.00	1104.00	956.00	744.00	528.00	358.00
TSP 640	3166.00	2752.00	2543.00	2180.00	1937.00	1382.00	1178.00	1020.00	794.00	563.00	381.00
TSP 700	3463.00	3010.00	2781.00	2385.00	2119.00	1512.00	1288.00	1115.00	868.00	616.00	417.00
TSP 750	3710.00	3225.00	2980.00	2555.00	2270.00	1620.00	1380.00	1195.00	930.00	660.00	447.00
TSP 800	3957.00	3440.00	3179.00	2725.00	2421.00	1728.00	1472.00	1275.00	992.00	704.00	477.00

Current (Amps) to 1.05V @ 20°C (68°F)

Type	Seconds				Minutes						
	1	5	10	30	1	5	10	15	30	60	90
TSP 10	78.80	66.30	62.50	52.50	46.30	33.80	26.30	23.80	17.50	9.40	6.50
TSP 14	108.90	92.80	87.50	73.50	64.80	47.30	36.80	33.30	24.50	13.20	9.10
TSP 20	155.50	132.50	125.00	105.00	92.50	67.50	52.50	47.50	35.00	18.80	13.00
TSP 30	236.30	198.80	187.50	157.50	138.80	101.30	78.80	71.30	52.50	28.10	19.50
TSP 40	315.00	265.00	250.00	210.00	185.00	135.00	105.00	95.00	70.00	37.50	26.00
TSP 50	350.00	309.40	287.50	250.00	231.30	168.60	138.80	121.90	84.40	49.10	33.10
TSP 65	455.00	402.00	373.80	325.00	300.60	219.40	180.40	158.40	109.70	63.80	43.10
TSP 80	560.00	495.00	460.00	400.00	370.00	270.00	222.00	195.00	135.00	78.50	53.00
TSP 100	640.00	540.00	496.00	432.00	396.00	304.00	252.00	220.00	164.00	98.40	66.20
TSP 125	800.00	675.00	620.00	540.00	495.00	380.00	315.00	275.00	205.00	123.00	82.70
TSP 150	908.00	758.00	701.00	612.00	551.00	405.00	341.00	308.00	243.00	135.00	90.60
TSP 185	1120.00	935.00	865.00	755.00	680.00	500.00	420.00	380.00	300.00	167.00	112.00
TSP 200	1130.00	950.00	875.00	768.00	696.00	536.00	452.00	428.00	304.00	180.00	121.00
TSP 235	1328.00	1117.00	1028.00	902.00	818.00	630.00	531.00	503.00	357.00	212.00	142.00
TSP 250	1413.00	1188.00	1094.00	960.00	870.00	670.00	565.00	535.00	380.00	226.00	151.00
TSP 280	1695.00	1415.00	1309.00	1142.00	1029.00	756.00	637.00	575.00	454.00	252.00	169.00
TSP 300	1816.00	1516.00	1402.00	1224.00	1102.00	810.00	682.00	616.00	486.00	270.00	181.00
TSP 320	1937.00	1617.00	1495.00	1306.00	1175.00	864.00	727.00	657.00	518.00	288.00	193.00
TSP 360	2179.00	1819.00	1682.00	1469.00	1322.00	972.00	818.00	739.00	583.00	324.00	217.00
TSP 390	2361.00	1971.00	1823.00	1591.00	1433.00	1053.00	887.00	801.00	632.00	351.00	236.00
TSP 420	2542.00	2122.00	1963.00	1714.00	1543.00	1134.00	955.00	862.00	680.00	378.00	254.00
TSP 450	2724.00	2274.00	2103.00	1836.00	1653.00	1215.00	1023.00	924.00	729.00	405.00	272.00
TSP 480	2906.00	2426.00	2243.00	1958.00	1763.00	1296.00	1091.00	986.00	778.00	432.00	290.00
TSP 520	3148.00	2628.00	2430.00	2122.00	1910.00	1404.00	1182.00	1068.00	842.00	468.00	314.00
TSP 560	3390.00	2830.00	2617.00	2285.00	2057.00	1512.00	1273.00	1150.00	907.00	504.00	338.00
TSP 600	3632.00	3032.00	2804.00	2448.00	2204.00	1620.00	1364.00	1232.00	972.00	540.00	362.00
TSP 640	3874.00	3234.00	2991.00	2611.00	2351.00	1728.00	1455.00	1314.00	1037.00	576.00	387.00
TSP 700	4237.00	3537.00	3271.00	2856.00	2571.00	1890.00	1591.00	1437.00	1134.00	630.00	423.00
TSP 750	4540.00	3790.00	3505.00	3060.00	2755.00	2025.00	1705.00	1540.00	1215.00	675.00	453.00
TSP 800	4843.00	4043.00	3739.00	3264.00	2939.00	2160.00	1819.00	1643.00	1296.00	720.00	483.00

Current (Amps) to 1.00V @ 20°C (68°F)

Type	Seconds				Minutes						
	1	5	10	30	1	5	10	15	30	60	90
TSP 10	92.50	78.80	71.30	61.30	55.00	40.00	31.30	27.50	18.50	9.50	6.60
TSP 14	129.50	110.30	99.80	85.80	77.10	56.00	43.80	38.50	25.90	13.30	9.20
TSP 20	185.00	157.50	142.50	122.50	110.10	80.00	62.50	55.00	37.00	19.00	13.20
TSP 30	277.50	236.30	213.80	183.80	165.00	120.00	93.80	82.50	55.50	28.50	19.80
TSP 40	370.00	315.00	285.00	245.00	220.00	160.00	125.00	110.00	74.00	38.00	26.40
TSP 50	409.40	362.50	334.40	290.60	268.80	196.90	159.40	134.40	87.50	50.00	33.50
TSP 65	532.20	471.30	434.70	377.80	349.40	255.90	207.20	174.70	113.80	65.00	43.60
TSP 80	665.00	580.00	535.00	465.00	430.00	315.00	255.00	215.00	140.00	80.00	53.60
TSP 100	704.00	604.00	560.00	496.00	452.00	344.00	300.00	256.00	176.00	100.00	67.20
TSP 125	880.00	755.00	700.00	620.00	565.00	430.00	375.00	320.00	220.00	125.00	84.00
TSP 150	1038.00	892.00	835.00	714.00	641.00	454.00	381.00	336.00	258.00	138.00	92.40
TSP 185	1280.00	1100.00	1030.00	880.00	790.00	560.00	470.00	415.00	318.00	170.00	114.00
TSP 200	1288.00	1120.00	1040.00	910.00	840.00	648.00	560.00	500.00	344.00	184.00	123.00
TSP 235	1513.00	1316.00	1222.00	1070.00	987.00	761.00	658.00	588.00	404.00	216.00	145.00
TSP 250	1610.00	1400.00	1300.00	1138.00	1050.00	810.00	700.00	626.00	430.00	230.00	154.00
TSP 280	1938.00	1665.00	1559.00	1333.00	1197.00	847.00	711.00	627.00	482.00	258.00	172.00
TSP 300	2076.00	1784.00	1670.00	1428.00	1282.00	908.00	762.00	672.00	516.00	276.00	185.00
TSP 320	2214.00	1903.00	1781.00	1523.00	1367.00	969.00	813.00	717.00	550.00	294.00	197.00
TSP 360	2491.00	2141.00	2004.00	1714.00	1538.00	1090.00	914.00	806.00	619.00	331.00	222.00
TSP 390	2699.00	2319.00	2171.00	1856.00	1667.00	1180.00	991.00	874.00	671.00	359.00	240.00
TSP 420	2906.00	2498.00	2338.00	1999.00	1795.00	1271.00	1067.00	941.00	722.00	386.00	259.00
TSP 450	3114.00	2676.00	2505.00	2142.00	1923.00	1362.00	1143.00	1008.00	774.00	414.00	277.00
TSP 480	3322.00	2854.00	2672.00	2285.00	2051.00	1453.00	1219.00	1075.00	826.00	442.00	296.00
TSP 520	3598.00	3092.00	2895.00	2475.00	2222.00	1574.00	1321.00	1165.00	894.00	478.00	320.00
TSP 560	3875.00	3330.00	3117.00	2666.00	2393.00	1695.00	1422.00	1254.00	963.00	515.00	345.00
TSP 600	4152.00	3568.00	3340.00	2856.00	2564.00	1816.00	1524.00	1344.00	1032.00	552.00	370.00
TSP 640	4429.00	3806.00	3563.00	3046.00	2735.00	1937.00	1626.00	1434.00	1101.00	589.00	394.00
TSP 700	4844.00	4163.00	3897.00	3332.00	2991.00	2119.00	1778.00	1568.00	1204.00	644.00	431.00
TSP 750	5190.00	4460.00	4175.00	3570.00	3205.00	2270.00	1905.00	1680.00	1290.00	690.00	462.00
TSP 800	5536.00	4757.00	4453.00	3808.00	3419.00	2421.00	2032.00	1792.00	1376.00	736.00	493.00

Current (Amps) to 0.85V @ 20°C (68°F)

Type	Seconds				Minutes						
	1	5	10	30	1	5	10	15	30	60	90
TSP 10	127.50	110.00	100.00	91.30	82.50	60.00	43.80	33.80	19.30	9.80	6.70
TSP 14	178.50	154.00	140.00	127.80	115.50	84.00	61.30	47.30	27.00	13.70	9.30
TSP 20	255.00	220.00	200.00	182.50	165.00	120.00	87.50	67.50	38.50	19.50	13.30
TSP 30	382.50	330.00	300.00	273.80	247.50	180.00	131.30	101.30	57.80	29.30	20.00
TSP 40	510.00	440.00	400.00	365.00	330.00	240.00	175.00	135.00	77.00	39.00	26.60
TSP 50	556.30	490.60	456.30	409.40	375.00	284.40	215.60	156.30	90.60	50.60	33.90
TSP 65	723.10	637.80	593.10	532.20	487.50	369.70	280.30	203.10	117.80	65.80	44.10
TSP 80	890.00	785.00	730.00	655.00	600.00	455.00	345.00	250.00	145.00	81.00	54.30
TSP 100	1020.00	880.00	816.00	720.00	660.00	496.00	392.00	320.00	188.00	101.60	68.20
TSP 125	1275.00	1100.00	1020.00	900.00	825.00	620.00	490.00	400.00	235.00	127.00	85.30
TSP 150	1378.00	1208.00	1119.00	981.00	908.00	689.00	559.00	442.00	276.00	140.00	94.20
TSP 185	1700.00	1490.00	1380.00	1210.00	1120.00	850.00	690.00	545.00	340.00	172.00	116.00
TSP 200	1710.00	1500.00	1390.00	1240.00	1144.00	936.00	800.00	616.00	368.00	186.00	126.00
TSP 235	2010.00	1763.00	1634.00	1457.00	1344.00	1100.00	940.00	724.00	432.00	219.00	148.00
TSP 250	2138.00	1876.00	1738.00	1550.00	1430.00	1170.00	1000.00	770.00	460.00	233.00	157.00
TSP 280	2572.00	2255.00	2089.00	1831.00	1695.00	1286.00	1043.00	825.00	515.00	261.00	176.00
TSP 300	2756.00	2416.00	2238.00	1962.00	1816.00	1378.00	1118.00	884.00	552.00	280.00	188.00
TSP 320	2940.00	2577.00	2387.00	2093.00	1937.00	1470.00	1193.00	943.00	589.00	299.00	201.00
TSP 360	3307.00	2899.00	2686.00	2354.00	2179.00	1654.00	1342.00	1061.00	662.00	336.00	226.00
TSP 390	3583.00	3141.00	2909.00	2551.00	2361.00	1791.00	1453.00	1149.00	718.00	364.00	245.00
TSP 420	3858.00	3382.00	3133.00	2747.00	2542.00	1929.00	1565.00	1238.00	773.00	392.00	264.00
TSP 450	4134.00	3624.00	3357.00	2943.00	2724.00	2067.00	1677.00	1326.00	828.00	420.00	283.00
TSP 480	4410.00	3866.00	3581.00	3139.00	2906.00	2205.00	1789.00	1414.00	883.00	448.00	301.00
TSP 520	4777.00	4188.00	3879.00	3401.00	3148.00	2389.00	1938.00	1532.00	957.00	485.00	327.00
TSP 560	5145.00	4510.00	4178.00	3662.00	3390.00	2572.00	2087.00	1650.00	1030.00	523.00	352.00
TSP 600	5512.00	4832.00	4476.00	3924.00	3632.00	2756.00	2236.00	1768.00	1104.00	560.00	377.00
TSP 640	5879.00	5154.00	4774.00	4186.00	3874.00	2940.00	2385.00	1886.00	1178.00	597.00	402.00
TSP 700	6431.00	5637.00	5222.00	4578.00	4237.00	3215.00	2609.00	2063.00	1288.00	653.00	440.00
TSP 750	6890.00	6040.00	5595.00	4905.00	4540.00	3445.00	2795.00	2210.00	1380.00	700.00	471.00
TSP 800	7349.00	6443.00	5968.00	5232.00	4843.00	3675.00	2981.00	2357.00	1472.00	747.00	502.00

Current (Amps) to 0.65V @ 20°C (68°F)

Type	Seconds				Minutes						
	1	5	10	30	1	5	10	15	30	60	90
TSP 10	165.00	145.00	138.80	126.30	115.00	75.00	50.00	36.30	20.00	10.10	6.80
TSP 14	231.00	203.00	194.30	176.80	161.00	105.00	70.00	50.80	28.00	14.20	9.60
TSP 20	330.00	290.00	277.50	252.50	230.00	150.00	100.00	72.50	40.00	20.30	13.70
TSP 30	495.00	435.00	416.30	378.80	345.00	225.00	150.00	108.80	60.00	30.40	20.50
TSP 40	660.00	580.00	555.00	505.00	460.00	300.00	200.00	145.00	80.00	40.50	27.30
TSP 50	753.10	665.60	631.30	575.00	531.30	359.40	237.50	168.80	93.80	51.30	34.40
TSP 65	979.10	865.30	820.60	747.50	690.60	467.20	308.80	219.40	121.90	66.60	44.70
TSP 80	1205.00	1065.00	1010.00	920.00	850.00	575.00	380.00	270.00	150.00	82.00	55.00
TSP 100	1360.00	1200.00	1136.00	1016.00	920.00	652.00	476.00	352.00	196.00	103.20	69.30
TSP 125	1700.00	1500.00	1420.00	1270.00	1150.00	815.00	595.00	440.00	245.00	129.00	86.60
TSP 150	1808.00	1557.00	1435.00	1265.00	1151.00	876.00	641.00	462.00	281.00	141.00	94.80
TSP 185	2230.00	1920.00	1770.00	1560.00	1420.00	1080.00	790.00	570.00	346.00	174.00	117.00
TSP 200	2240.00	1928.00	1780.00	1586.00	1446.00	1106.00	912.00	696.00	374.00	188.00	126.00
TSP 235	2632.00	2265.00	2092.00	1863.00	1699.00	1299.00	1072.00	818.00	440.00	221.00	149.00
TSP 250	2800.00	2410.00	2226.00	1982.00	1807.00	1382.00	1140.00	870.00	468.00	235.00	159.00
TSP 280	3375.00	2906.00	2679.00	2361.00	2149.00	1635.00	1197.00	862.00	525.00	263.00	177.00
TSP 300	3616.00	3114.00	2870.00	2530.00	2302.00	1752.00	1282.00	924.00	562.00	282.00	190.00
TSP 320	3857.00	3322.00	3061.00	2699.00	2455.00	1869.00	1367.00	986.00	599.00	301.00	202.00
TSP 360	4339.00	3737.00	3444.00	3036.00	2762.00	2102.00	1538.00	1109.00	674.00	338.00	228.00
TSP 390	4701.00	4048.00	3731.00	3289.00	2993.00	2278.00	1667.00	1201.00	731.00	367.00	246.00
TSP 420	5062.00	4360.00	4018.00	3542.00	3223.00	2453.00	1795.00	1294.00	787.00	395.00	265.00
TSP 450	5424.00	4671.00	4305.00	3795.00	3453.00	2628.00	1923.00	1386.00	843.00	423.00	284.00
TSP 480	5786.00	4982.00	4592.00	4048.00	3683.00	2803.00	2051.00	1478.00	899.00	451.00	303.00
TSP 520	6268.00	5398.00	4975.00	4385.00	3990.00	3037.00	2222.00	1602.00	974.00	489.00	329.00
TSP 560	6750.00	5813.00	5357.00	4723.00	4297.00	3270.00	2393.00	1725.00	1049.00	526.00	354.00
TSP 600	7232.00	6228.00	5740.00	5060.00	4604.00	3504.00	2564.00	1848.00	1124.00	564.00	379.00
TSP 640	7714.00	6643.00	6123.00	5397.00	4911.00	3738.00	2735.00	1971.00	1199.00	602.00	404.00
TSP 700	8437.00	7266.00	6697.00	5903.00	5371.00	4088.00	2991.00	2156.00	1311.00	658.00	442.00
TSP 750	9040.00	7785.00	7175.00	6325.00	5755.00	4380.00	3205.00	2310.00	1405.00	705.00	474.00
TSP 800	9643.00	8304.00	7653.00	6747.00	6139.00	4672.00	3419.00	2464.00	1499.00	752.00	506.00



www.enersys.com

EnerSys
P.O. Box 14145
Reading, PA 19612-4145
USA
Tel: +1-610-208-1991
+1-800-538-3627
Fax: +1-610-372-8613

EnerSys EMEA
Brussels, Belgium
Tel: +32 (0)2 247 94 47

EnerSys Asia
Guangdong, China
Tel: +86-755-2689 3639

EnerSys Limited
Rake Lane,
Clifton Junction,
Swinton, Manchester
M27 8LR, UK
Tel: +44 (0)161 794 4611
Fax: +44 (0)161 727 3809

Contact:

© 2006 EnerSys. All rights reserved.

Trademarks and logos are the property of EnerSys and its affiliates unless otherwise noted. VARTA is a registered trademark of Varta Automotive Systems, GmbH used under license.