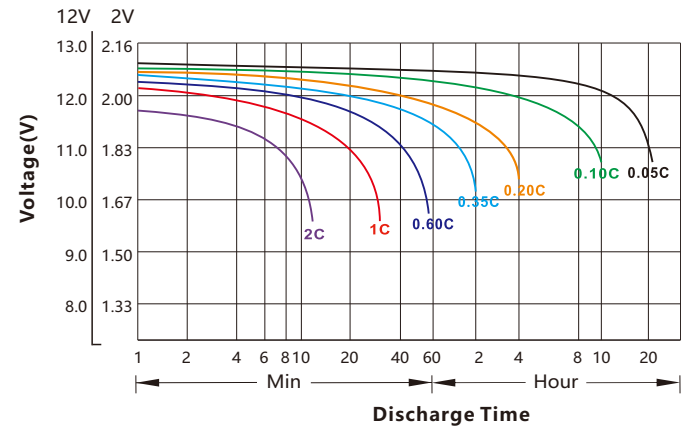
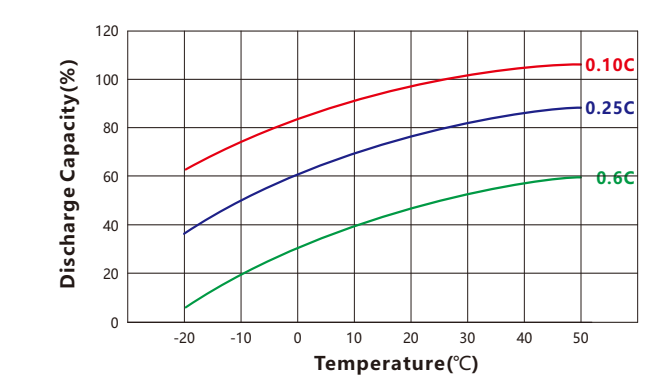


### Performance Curve

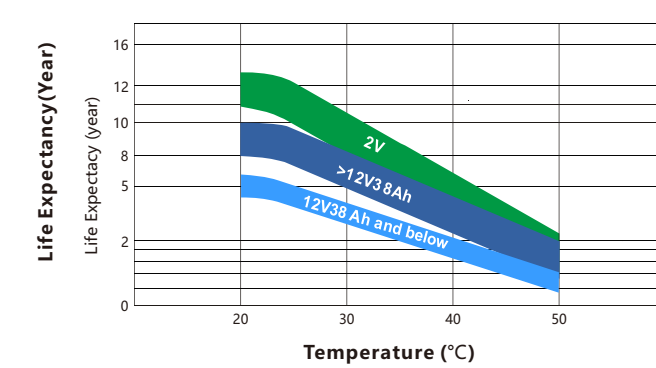
Discharge Characteristics (25°C)



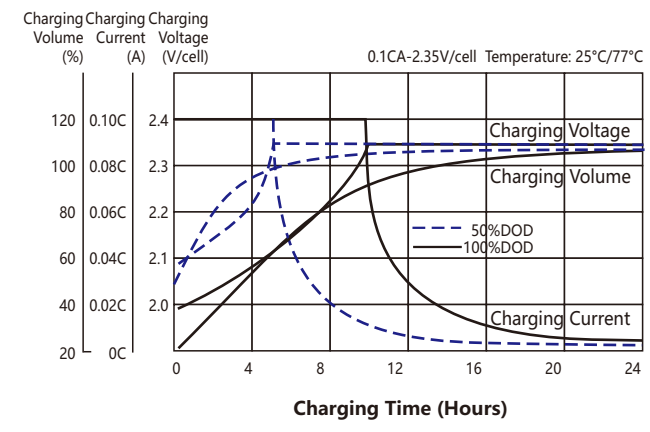
Capacity With Different Temperature



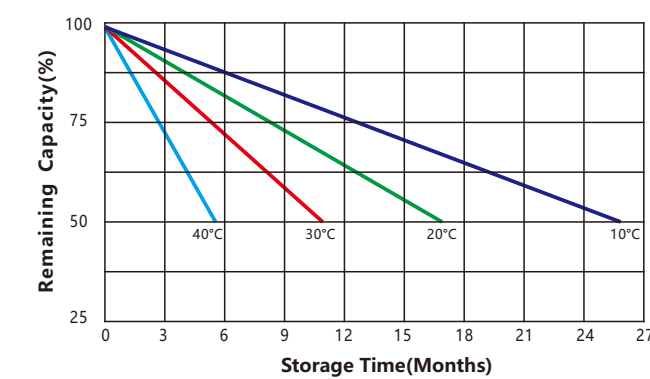
Float Life at Different Temperature



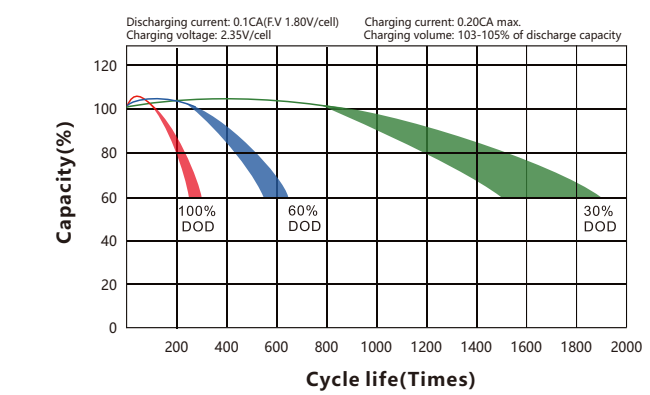
Charging Characteristics (25°C)



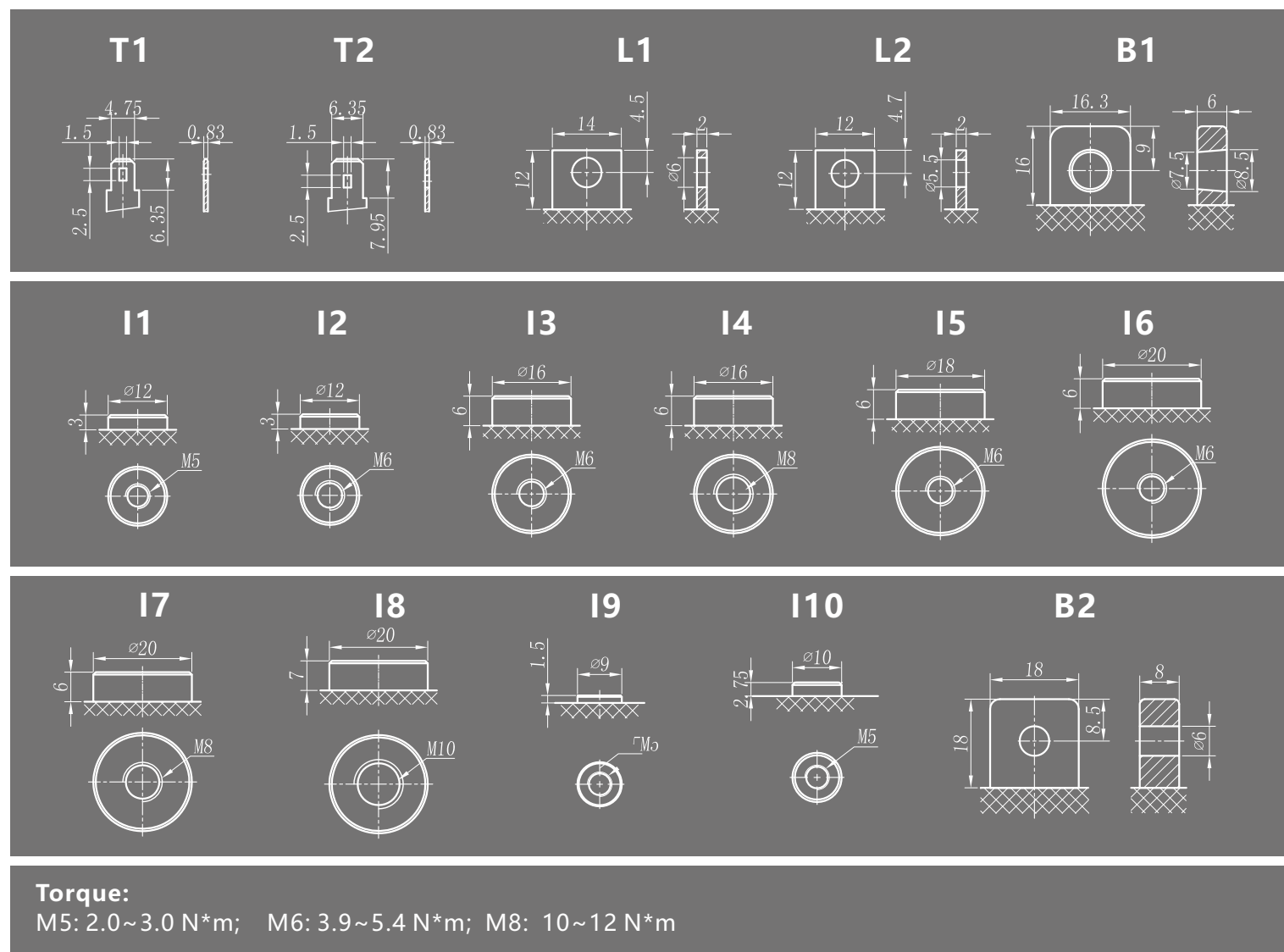
Self-Discharge Characteristics



Cycle Life with Different DOD



### Terminal Type



Torque:  
M5: 2.0~3.0 N\*m; M6: 3.9~5.4 N\*m; M8: 10~12 N\*m

**Tianneng Battery Group Co., Ltd. (HQ)**  
18 Baoqiao Road, Huaxi Industrial Function Zone,  
Zhejiang, China 313100  
Tel: +86-572-6058015  
www.tiannenggroup.com  
Email: [export@tiannenggroup.com](mailto:export@tiannenggroup.com)

**Hong Kong Branch:**  
Suite 3202, Central Plaza,  
18 Harbour Road, Wanchai, Hongkong

The documents is subject to change without prior notification.  
©2016 All rights reserved by Tianneng Group.  
Trademarks and logos are the property of Tianneng Group and its affiliates.

Version: 3.0 Release Date: 2019-04



HKEx Code: 00819

## TN Series

Maintenance Free VRLA AGM Battery  
General Type





## Industry Battery-TN Series (General Purpose Type)

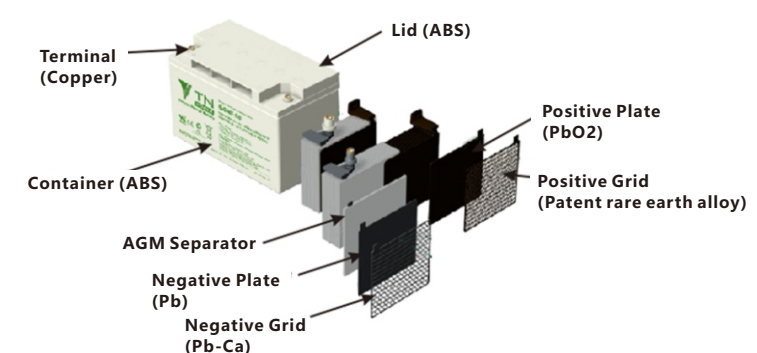
The TN Series is general purpose valve regulated lead acid (VRLA) AGM battery which combine TN power's industry scale and advanced equipment together to provide high reliability product and the most competitive price. This range offers long design life with very good cycling capability, it is highly suited to standby or cyclic application.



- Standby (or float) or Cycle application.
- Long life, low self-discharge rate and high reliability.
- It has safety, low resistance so recharge is easy and energy output is more remarkable.
- Deep discharge recoverability.
- Strictly manufacture process control and high consistency.
- ISO9001, ISO14001 certified.
- UL, IEC60896-21&22, TLC, CE and European council Directive 2006/66/EC and its amendment (2008/12/EC) certification.

### CONSTRUCTION

- ✦ **Positive plate** – Patent rare earth alloy grid with special paste for corrosion resistance
- ✦ **Negative plate** – Balanced Pb-Ca grid for improved recombination efficiency
- ✦ **Separator** – Advanced AGM separator for high pressure cell design, The electrolyte is completely absorbed into the
- ✦ **Electrolyte** – Dilute high purity sulphuric acid
- ✦ **Battery container and cover** – ABS UL94-HB (Flame-retant ABS UL94-V0 is optional)



### APPLICATION

- Standby Use:**
- Uninterrupted Power Supply (UPS)
  - Communications and electric equipment
  - Emergency lighting equipment
  - Fire alarm and security systems
  - Robots, control equipment, and other factory automation equipment
  - Emergency power supply (EPS) in power generation plants and substations
- Cycle Use:**
- Portable VTR/TV, radio and so on
  - Power tools, lawn mowers, vacuum cleaners
  - Cameras and photographic equipment
  - Portable measuring equipment
  - Portable telephone sets
  - Various power toys and hobby equipment
  - Lighting equipment

### Product Specification

Model	Nominal Voltage (V)	Nominal Capacity C <sub>10</sub> (Ah)	Nominal Capacity C <sub>20</sub> (Ah)	Dimension (mm)				Weight (Kg)	Dimension (Inch)				Weight (lbs)	Terminal
				L	W	H	TH		L	W	H	TH		
TN6-3.0	6	2.84	3.00	70	47	100	106	0.64	2.76	1.85	3.94	4.17	1.41	T1/T2
TN6-3.2	6	3.03	3.20	70	47	100	106	0.68	2.76	1.85	3.94	4.17	1.50	T1/T2
TN6-4.0	6	3.79	4.00	70	47	100	106	0.70	2.76	1.85	3.94	4.17	1.54	T1/T2
TN6-4.5	6	4.27	4.50	70	47	100	106	0.73	2.76	1.85	3.94	4.17	1.61	T1/T2
TN6-5.0	6	4.74	5.00	70	47	100	106	0.80	2.76	1.85	3.94	4.17	1.76	T1/T2
TN6-5.5	6	5.21	5.50	70	47	100	106	0.90	2.76	1.85	3.94	4.17	1.98	T1/T2
TN6-6.0	6	5.69	6.00	151	35	93	99	1.05	5.94	1.38	3.66	3.90	2.31	T1/T2
TN6-7.0	6	6.64	7.00	151	35	93	99	1.10	5.94	1.38	3.66	3.90	2.43	T1/T2
TN6-7.5	6	7.11	7.50	151	35	93	99	1.25	5.94	1.38	3.66	3.90	2.76	T1/T2
TN6-8.0	6	7.58	8.00	151	35	93	99	1.20	5.94	1.38	3.66	3.90	2.65	T1/T2
TN6-10	6	9.48	10.0	151	51	94	100	1.60	5.94	2.01	3.70	3.94	3.53	T1/T2
TN6-12	6	11.4	12.0	151	51	94	100	1.80	5.94	2.01	3.70	3.94	3.97	T1/T2
TN12-4.0	12	3.79	4.00	90	70	101	107	1.45	3.54	2.76	3.98	4.21	3.20	T1/T2
TN12-4.5	12	4.27	4.50	90	70	101	107	1.48	3.54	2.76	3.98	4.21	3.26	T1/T2
TN12-5.0L	12	4.74	5.00	151	53	93.5	99.5	1.75	5.94	2.09	3.68	3.92	3.86	T1/T2
TN12-5.0	12	4.74	5.00	90	70	101	107	1.60	3.54	2.76	3.98	4.21	3.53	T1/T2
TN12-5.5	12	5.21	5.50	90	70	101	107	1.85	3.54	2.76	3.98	4.21	4.08	T1/T2
TN12-6.0	12	5.69	6.00	151	65.5	93.5	99.5	1.98	5.94	2.58	3.68	3.92	4.37	T1/T2
TN12-6.5	12	6.16	6.50	151	65.5	93.5	99.5	2.04	5.94	2.58	3.68	3.92	4.50	T1/T2
TN12-7.0	12	6.64	7.00	151	65.5	93.5	99.5	2.14	5.94	2.58	3.68	3.92	4.72	T1/T2
TN12-8.0	12	7.58	8.00	151	65.5	93.5	99.5	2.35	5.94	2.58	3.68	3.92	5.18	T1/T2
TN12-9.0	12	8.34	8.80	151	65.5	93.5	99.5	2.64	5.94	2.58	3.68	3.92	5.82	T1/T2
TN12-10	12	9.48	10.0	151	99.5	95.5	101.5	3.15	5.94	3.92	3.76	4.00	6.94	T1/T2
TN12-12	12	11.4	12.0	151	99.5	95.5	101.5	3.65	5.94	3.92	3.76	4.00	8.05	T1/T2
TN12-15	12	14.2	15.0	182	77	170	170	4.70	7.17	3.03	6.69	6.69	10.36	I10
TN12-17	12	16.1	17.0	182	77	170	170	5.00	7.17	3.03	6.69	6.69	11.02	I10
TN12-20	12	19.0	20.0	182	77	170	170	5.70	7.17	3.03	6.69	6.69	12.57	I10
TN12-24	12	22.8	24.0	166	175	125	125	7.80	6.54	6.89	4.92	4.92	17.20	I1
TN12-24H	12	22.8	24.0	166	126.5	172.5	172.5	7.30	6.54	4.98	6.79	6.79	16.09	I1
TN12-26	12	24.6	26.0	166	175	125	125	8.50	6.54	6.89	4.92	4.92	18.74	I1
TN12-28	12	26.5	28.0	166	175	125	125	8.60	6.54	6.89	4.92	4.92	18.96	I1
TN12-28H	12	26.5	28.0	166	126.5	172.5	172.5	8.50	6.54	4.98	6.79	6.79	18.74	I1
TN12-30	12	28.4	30.0	195	130	157.5	162	9.00	7.68	5.12	6.20	6.38	19.84	I1
TN12-33	12	31.3	33.0	195	130	157.5	162	10.0	7.68	5.12	6.20	6.38	22.05	I1
TN12-35	12	33.2	35.0	195	130	157.5	162	11.1	7.68	5.12	6.20	6.38	24.47	I1

Model	Nominal Voltage (V)	Nominal Capacity C <sub>10</sub> (Ah)	Nominal Capacity C <sub>20</sub> (Ah)	Dimension (mm)				Weight (Kg)	Dimension (Inch)				Weight (lbs)	Terminal
				L	W	H	TH		L	W	H	TH		
TN6-150	6	150	159	260	180	245	252	21.0	10.24	7.09	9.65	9.92	46.30	I7
TN6-180	6	180	190	306	168	222	227	27.0	12.05	6.61	8.74	8.94	59.52	I7
TN6-200	6	200	212	306	168	220	227	28.0	12.05	6.61	8.66	8.94	61.73	I7
TN12-38	12	38.0	40.2	198.5	166	169.5	169.5	12.1	7.81	6.54	6.67	6.67	26.68	I3
TN12-45	12	45.0	47.6	198.5	166	169.5	169.5	13.5	7.81	6.54	6.67	6.67	29.76	I3
TN12-50	12	50.0	52.9	257	133	200	200	16.2	10.12	5.24	7.87	7.87	35.71	I3



### Product Specification

Model	Nominal Voltage (V)	Nominal Capacity C <sub>10</sub> (Ah)	Nominal Capacity C <sub>20</sub> (Ah)	Dimension (mm)				Weight (Kg)	Dimension (Inch)				Weight (lbs)	Terminal
				L	W	H	TH		L	W	H	TH		
TN12-55	12	55.0	58.2	229	138.5	211	216	16.4	9.02	5.45	8.31	8.50	36.16	I3
TN12-60	12	60.0	63.5	260	168	211	213.5	18.4	10.24	6.61	8.31	8.41	40.56	I3
TN12-65	12	65.0	68.8	350	167	180	180	21.0	13.78	6.57	7.09	7.09	46.30	I3
TN12-65E	12	62.0	65.0	350	167	180	180	19.8	13.78	6.57	7.09	7.09	43.65	I3
TN12-70	12	70.0	74.1	350	167	180	180	21.6	13.78	6.57	7.09	7.09	47.62	I3
TN12-75	12	75.0	79.4	260	168	211	213.5	22.3	10.24	6.61	8.31	8.41	49.16	I3
TN12-80	12	80.0	85.2	260	168	211	213.5	24.0	10.24	6.61	8.31	8.41	52.91	I3
TN12-90	12	90.0	95.2	306.5	168	208.5	211	26.8	12.07	6.61	8.21	8.31	59.08	I7
TN12-90L	12	90.0	95.2	330	172	214	221.5	27.8	12.99	6.77	8.43	8.72	61.29	I7
TN12-100	12	100	106	330	172	214	221.5	29.8	12.99	6.77	8.43	8.72	65.70	I7
TN12-120E	12	109	115	408	177	224	224	31.7	16.06	6.97	8.82	8.82	69.89	I7
TN12-120	12	120	127	408	177	224	224	34.0	16.06	6.97	8.82	8.82	74.96	I7
TN12-150	12	150	159	480	170	240	240	42.2	18.90	6.69	9.45	9.45	93.03	I7
TN12-150E	12	143	150	480	170	240	240	40.2	18.90	6.69	9.45	9.45	88.62	I7
TN12-180	12	180	190	532	207	215	220	53.3	20.94	8.15	8.46	8.66	117.51	I7
TN12-200	12	200	212	520	239	220	225	60.0	20.47	9.41	8.66	8.86	132.28	I7
TN12-200E	12	191	200	520	239	220	225	57.1	20.47	9.41	8.66	8.86	125.88	I7/B3
TN12-230	12	230	244	520	239	220	225	64.5	20.47	9.41	8.66	8.86	142.20	I7
TN12-250	12	250	264	520	268	220	225	72.5	20.47	10.55	8.66	8.86	159.83	I7

Model	Nominal Voltage (V)	Nominal capacity C <sub>10</sub> (AH) 1.80Vpc/25°C	Nominal capacity C <sub>20</sub> (AH) 1.80Vpc/25°C	Dimension (mm)				Weight (Kg)	Dimension (Inch)				Weight (lbs)	Terminal
				L	W	H	TH		L	W	H	TH		
TN2-100	2	100	107	172	102	205	227	7.0	6.77	4.02	8.07	8.94	15.43	I7
TN2-200B	2	200	213	170	106	330	341.5	12.6	6.69	4.17	12.99	13.44	27.78	I7
TN2-300B	2	300	320	170	150	330	341.5	17.8	6.69	5.91	12.99	13.44	39.24	I7
TN2-400B	2	400	426	170	196	330	341.5	23.5	6.69	7.72	12.99	13.44	51.81	I7
TN2-500B	2	500	533	240	170	330	341.5	29.0	9.45	6.69	12.99	13.44	63.93	I7
TN2-600B	2	600	639	285	170	330	341.5	35.5	11.22	6.69	12.99	13.44	78.26	I7
TN2-800B	2	800	852	382	170	330	341.5	47.0	15.04	6.69	12.99	13.44	103.62	I7
TN2-1000B	2	1000	1065	470	170	330	341.5	58.0	18.50	6.69	12.99	13.44	127.87	I7
TN2-200	2	200	213	171	110	328	350	13.0	6.73	4.33	12.91	13.78	28.66	I7
TN2-300	2	300	320	171	150	328	350	18.0	6.73	5.91	12.91	13.78	39.68	I7
TN2-400	2	400	426	175	210	328	350	25.5	6.89	8.27	12.91	13.78	56.22	I7
TN2-500	2	500	533	240	172	330	350	29.5	9.45	6.77	12.99	13.78	65.04	I7
TN2-600	2	600	639	300										