



Industrial Batteries – Sonnenschein A700
The durable high energy and reliable battery system.

Specifications

- The success of Sonnenschein A700 batteries comes from the internationally superior dryfit technology
- High current discharge capability, with excellent energy storage capacity
- Maintenance-free during the whole service life due to the Sonnenschein dryfit technology
- Nominal capacity 21Ah–280 Ah C₁₀
- Design life of 12 years and longer at 20°C (80% remaining capacity)
- Case material polypropylene (PP)
- Thick grid plate construction consisting of a lead calcium alloy
- 6 volt and 4 volt monoblocs
- Very low gassing due to internal gas recombination
- Shelf life up to 2 years at 20°C due to the very low self discharge rate
- Short recharging time
- Proof against deep discharge according to DIN 43 539 T5
- Trouble-free transportation of operational blocs, no restrictions for rail, road, sea and air transportation (IATA, DGR clause A 67)
- Completely recyclable



Applications

Sonnenschein A700 batteries make a completely reliable means of energy source for many applications including: telecommunications; UPS, security, emergency lighting, railways and other power supplies for safety systems.



Valve regulated
lead acid
batteries



Grid plate



Nominal capacity
21 – 280 Ah



Bloc battery



Design life:
12 years and
longer



Maintenance-
free

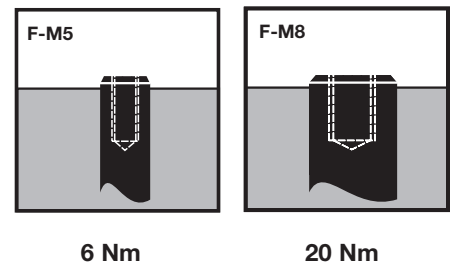


Proof against
deep discharge
acc. to
DIN 43 539 T5

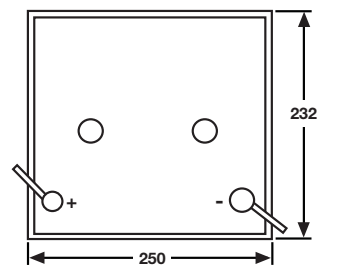
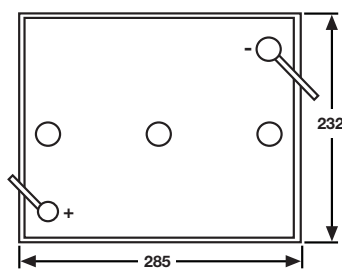
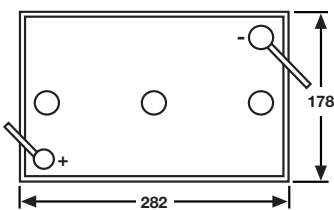
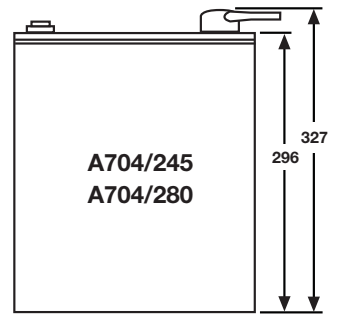
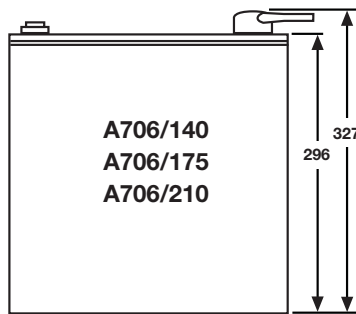
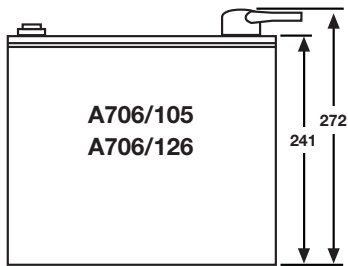
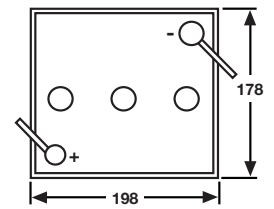
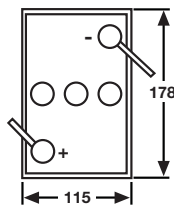
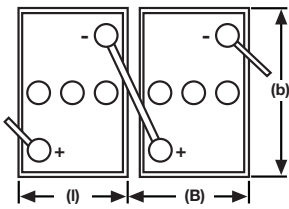
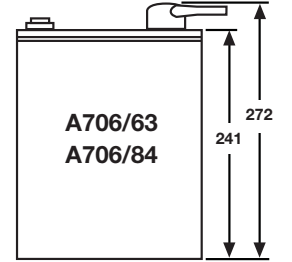
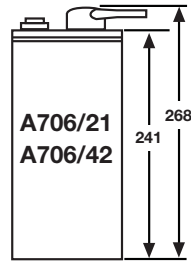


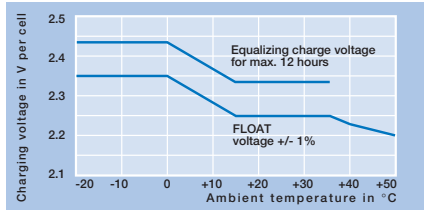
Recyclable

Type	Part number	Type corresponds to DIN 40741 T1	Nominal voltage V	Nominal capacity C_{10} 1.8 V/C 20°C Ah	Length (l) max. mm	Width (b) max. mm	Height up to top of cover (h1) max. mm	Height incl. connectors (h2) max. mm	Installed length (B) mm	Weight approx. kg	Internal resistance acc. to IEC 896-2 m Ω	Short circuit current acc. to IEC 896-2 A	Terminal
A706/21	NGA7060021HS0FA	6V 1 OGiV 18	6	21	115	178	241	268	125	8.5	16.30	376	F-M5
A706/42	NGA7060042HS0FA	6V 2 OGiV 36	6	42	115	178	241	268	125	10.8	8.50	731	F-M5
A706/63	NGA7060063HS0FA	6V 3 OGiV 54	6	63	198	178	241	272	208	17.0	5.80	1058	F-M8
A706/84	NGA7060084HS0FA	6V 4 OGiV 72	6	84	198	178	241	272	208	19.5	4.30	1409	F-M8
A706/105	NGA7060105HS0FA	6V 5 OGiV 90	6	105	282	178	241	272	292	25.3	3.60	1726	F-M8
A706/126	NGA7060126HS0FA	6V 6 OGiV 108	6	126	282	178	241	272	292	27.3	2.90	2092	F-M8
A706/140	NGA7060140HS0FA	6V 4 OGiV 128	6	140	285	232	296	327	295	39.5	3.00	2083	F-M8
A706/175	NGA7060175HS0FA	6V 5 OGiV 160	6	175	285	232	296	327	295	42.5	2.60	2383	F-M8
A706/210	NGA7060210HS0FA	6V 6 OGiV 192	6	210	285	232	296	327	295	46.0	2.20	2876	F-M8
A704/245	NGA7040245HS0FA	4V 7 OGiV 224	4	245	250	232	296	327	260	37.4	1.70	3181	F-M8
A704/280	NGA7040280HS0FA	4V 8 OGiV 256	4	280	250	232	296	327	260	39.0	1.17	3490	F-M8

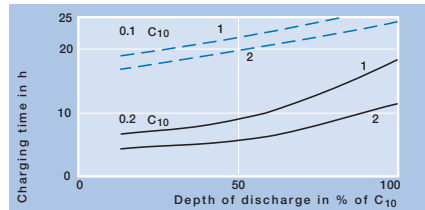
Container, approval, terminal and torque

Container: Polypropylene (PP) acc. to UL 94-HB

Approval: Germanischer Lloyd (GL)
DIN/Gost/TÜV, Russia





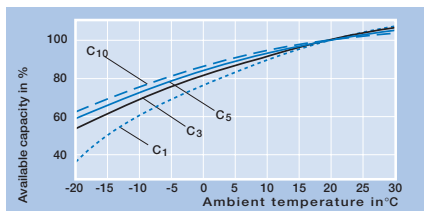
2.25 V per cell is recommended for continuous charging. The charging voltage must be compensated according to the curve for continuously different battery ambient temperature.



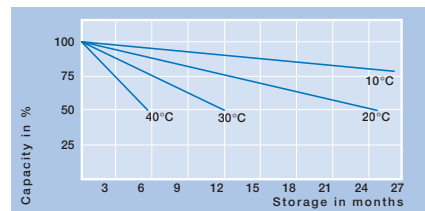
Recharging times in relation to the initial charging current at 20°C.

- - - State of charge 100%
- State of charge 90%

Charging voltage: 1: 2.25 V/C
 2: 2.40 V/C



Available capacity in relation to the ambient temperature.



Self-discharge in relation to the storage temperature.

1.80 V/C – Discharge in A												
Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h
A706/21	NGA7060021HS0FA	36.3	31.3	26.4	23.1	18.9	11.5	7.3	5.5	3.7	2.6	2.1
A706/42	NGA7060042HS0FA	72.5	62.6	52.8	46.2	37.8	23.0	14.6	11.0	7.4	5.2	4.2
A706/63	NGA7060063HS0FA	108.9	93.9	79.2	69.3	56.7	34.5	21.9	16.5	11.1	7.7	6.3
A706/84	NGA7060084HS0FA	145.2	125.2	105.6	92.4	75.6	46.0	29.3	22.0	14.8	10.3	8.4
A706/105	NGA7060105HS0FA	181.5	156.5	132.0	115.5	94.5	57.5	36.6	27.6	18.5	12.9	10.5
A706/126	NGA7060126HS0FA	217.8	187.8	158.4	138.6	113.4	69.0	43.9	33.1	22.2	15.5	12.6
A706/140	NGA7060140HS0FA	203.4	190.0	161.9	144.0	125.8	81.8	50.5	37.1	25.6	17.4	14.0
A706/175	NGA7060175HS0FA	254.3	237.5	202.4	180.0	157.3	102.3	63.1	46.4	32.0	21.7	17.5
A706/210	NGA7060210HS0FA	305.1	285.0	242.9	216.0	188.7	122.7	75.7	55.7	38.4	26.0	21.0
A704/245	NGA7040245HS0FA	356.0	332.5	283.4	252.0	220.2	143.2	88.3	64.9	44.8	30.4	24.5
A704/280	NGA7040280HS0FA	406.8	380.0	323.8	288.0	251.6	163.6	100.9	74.2	51.2	34.7	28.0

1.77 V/C – Discharge in A												
Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h
A706/21	NGA7060021HS0FA	40.2	34.2	28.0	24.2	19.3	11.9	7.3	5.5	3.8	2.6	2.1
A706/42	NGA7060042HS0FA	80.4	68.4	55.9	48.5	38.6	23.7	14.6	11.0	7.5	5.2	4.2
A706/63	NGA7060063HS0FA	120.6	102.5	83.9	72.7	58.0	35.6	21.9	16.5	11.3	7.7	6.3
A706/84	NGA7060084HS0FA	160.8	136.7	111.8	97.0	77.3	47.4	29.3	22.0	15.1	10.3	8.4
A706/105	NGA7060105HS0FA	201.0	170.9	139.8	121.2	96.6	59.3	36.6	27.6	18.9	12.9	10.5
A706/126	NGA7060126HS0FA	241.2	205.1	167.8	145.4	115.9	71.2	43.9	33.1	22.6	15.5	12.6
A706/140	NGA7060140HS0FA	224.5	205.8	171.6	149.7	128.4	83.1	51.6	38.2	25.9	17.7	14.0
A706/175	NGA7060175HS0FA	280.6	257.3	214.5	187.1	160.5	103.9	64.5	47.8	32.4	22.1	17.5
A706/210	NGA7060210HS0FA	336.7	308.7	257.5	224.5	192.6	124.7	77.4	57.4	38.9	26.5	21.0
A704/245	NGA7040245HS0FA	392.8	360.2	300.4	261.9	224.7	145.5	90.3	66.9	45.5	31.0	24.5
A704/280	NGA7040280HS0FA	448.9	411.6	343.3	299.3	256.8	166.2	103.2	76.5	51.9	35.4	28.0

1.75 V/C – Discharge in A												
Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h
A706/21	NGA7060021HS0FA	42.8	36.1	29.0	25.0	19.6	12.1	7.3	5.5	3.8	2.6	2.1
A706/42	NGA7060042HS0FA	85.6	72.2	58.0	50.0	39.2	24.2	14.6	11.0	7.5	5.2	4.2
A706/63	NGA7060063HS0FA	128.4	108.3	87.0	75.0	58.8	36.6	21.9	16.5	11.3	7.7	6.3
A706/84	NGA7060084HS0FA	171.2	144.4	116.0	100.0	78.4	48.4	29.3	22.0	15.1	10.3	8.4
A706/105	NGA7060105HS0FA	214.0	180.5	145.0	125.0	98.0	60.5	36.6	27.6	18.9	12.9	10.5
A706/126	NGA7060126HS0FA	256.8	216.6	174.0	150.0	117.6	72.6	43.9	33.1	22.6	15.5	12.6
A706/140	NGA7060140HS0FA	238.5	216.4	178.1	153.5	130.1	84.0	52.3	39.0	26.2	17.9	14.0
A706/175	NGA7060175HS0FA	298.1	270.5	222.6	191.8	162.7	105.0	65.4	48.8	32.7	22.4	17.5
A706/210	NGA7060210HS0FA	357.8	324.6	267.2	230.2	195.2	126.0	78.5	58.5	39.2	26.9	21.0
A704/245	NGA7040245HS0FA	417.4	378.7	311.7	268.5	227.8	147.0	91.6	68.3	45.8	31.4	24.5
A704/280	NGA7040280HS0FA	477.0	432.8	356.2	306.9	260.3	168.0	104.6	78.0	52.3	35.8	28.0

1.70 V/C – Discharge in A

Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h
A706/21	NGA7060021HS0FA	48.0	39.0	31.0	26.5	20.4	12.1	7.4	5.5	3.8	2.6	2.1
A706/42	NGA7060042HS0FA	96.0	78.0	62.0	53.0	40.8	24.2	14.8	11.0	7.6	5.2	4.2
A706/63	NGA7060063HS0FA	144.0	117.0	93.0	79.5	61.2	36.3	22.2	16.5	11.4	7.7	6.3
A706/84	NGA7060084HS0FA	192.0	156.0	124.0	106.0	81.6	48.4	29.7	22.0	15.3	10.3	8.4
A706/105	NGA7060105HS0FA	240.0	195.0	155.0	132.5	102.0	60.5	37.1	27.6	19.1	12.9	10.5
A706/126	NGA7060126HS0FA	288.0	234.0	186.0	159.0	122.4	72.6	44.5	33.1	22.9	15.5	12.6
A706/140	NGA7060140HS0FA	266.4	234.0	194.6	166.4	137.6	85.2	52.3	39.0	26.2	17.9	14.0
A706/175	NGA7060175HS0FA	333.0	292.6	243.2	208.1	172.0	106.5	65.4	48.8	32.7	22.4	17.5
A706/210	NGA7060210HS0FA	399.0	351.1	291.8	249.7	206.4	127.8	78.5	58.5	39.2	26.9	21.0
A704/245	NGA7040245HS0FA	466.2	409.6	340.5	291.3	240.8	149.1	91.6	68.3	45.8	31.4	24.5
A704/280	NGA7040280HS0FA	532.8	468.1	389.1	332.9	275.2	170.4	104.6	78.0	52.3	35.8	28.0

1.65 V/C – Discharge in A

Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h
A706/21	NGA7060021HS0FA	52.0	41.0	32.5	26.9	20.4	12.2	7.4	5.6	3.8	2.6	2.1
A706/42	NGA7060042HS0FA	104.0	82.0	65.0	53.8	40.8	24.4	14.8	11.2	7.6	5.2	4.2
A706/63	NGA7060063HS0FA	156.0	123.0	97.5	80.7	61.2	36.6	22.2	16.9	11.4	7.7	6.3
A706/84	NGA7060084HS0FA	208.0	164.0	130.0	107.6	81.6	48.8	29.7	22.5	15.3	10.3	8.4
A706/105	NGA7060105HS0FA	260.0	205.0	162.5	134.5	102.0	61.0	37.1	28.1	19.1	12.9	10.5
A706/126	NGA7060126HS0FA	312.0	246.0	195.0	161.4	122.4	73.2	44.5	33.7	22.9	15.5	12.6
A706/140	NGA7060140HS0FA	290.7	246.6	202.2	171.2	139.0	85.3	52.5	39.2	26.2	17.9	14.0
A706/175	NGA7060175HS0FA	363.4	308.2	252.7	214.0	173.8	106.6	65.7	49.0	32.7	22.4	17.5
A706/210	NGA7060210HS0FA	436.1	369.8	303.2	256.8	208.5	128.0	78.8	58.8	39.2	26.9	21.0
A704/245	NGA7040245HS0FA	508.7	431.5	353.8	299.6	243.3	149.3	91.9	68.6	45.8	31.4	24.5
A704/280	NGA7040280HS0FA	581.4	493.1	404.3	342.4	278.0	170.6	105.1	78.4	52.3	35.8	28.0

1.60 V/C – Discharge in A

Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h
A706/21	NGA7060021HS0FA	55.0	42.5	33.2	26.9	20.5	12.2	7.4	5.6	3.8	2.6	2.1
A706/42	NGA7060042HS0FA	110.0	85.0	66.4	53.8	41.0	24.4	14.8	11.2	7.6	5.2	4.2
A706/63	NGA7060063HS0FA	165.0	127.5	99.6	80.7	61.5	36.6	22.2	16.9	11.4	7.7	6.3
A706/84	NGA7060084HS0FA	220.0	170.0	132.8	107.6	82.0	48.8	29.7	22.5	15.3	10.3	8.4
A706/105	NGA7060105HS0FA	275.0	212.5	166.0	134.5	102.5	61.0	37.1	28.1	19.1	12.9	10.5
A706/126	NGA7060126HS0FA	330.0	255.0	199.2	161.4	123.0	73.2	44.5	33.7	22.9	15.5	12.6
A706/140	NGA7060140HS0FA	309.6	253.9	208.1	173.4	139.0	85.3	52.5	39.2	26.2	17.9	14.0
A706/175	NGA7060175HS0FA	387.0	317.4	260.1	216.7	173.8	106.6	65.7	49.0	32.7	22.4	17.5
A706/210	NGA7060210HS0FA	464.4	380.9	312.1	260.1	208.5	128.0	78.8	58.8	39.2	26.9	21.0
A704/245	NGA7040245HS0FA	541.8	444.4	364.1	303.4	243.3	149.3	91.9	68.6	45.8	31.4	24.5
A704/280	NGA7040280HS0FA	619.2	507.8	416.1	346.8	278.0	170.6	105.1	78.4	52.3	35.8	28.0

1.80 V/C – Discharge in W/bloc										
Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h
A706/21	NGA7060021HS0FA	186	157	137	121	97	65	41	31	21
A706/42	NGA7060042HS0FA	372	315	274	241	195	129	82	62	42
A706/63	NGA7060063HS0FA	558	472	411	362	292	194	123	93	63
A706/84	NGA7060084HS0FA	744	629	548	482	389	258	164	124	84
A706/105	NGA7060105HS0FA	930	786	685	603	486	323	205	155	105
A706/126	NGA7060126HS0FA	1115	944	822	724	584	388	246	186	126
A706/140	NGA7060140HS0FA	1007	886	809	733	640	439	295	218	148
A706/175	NGA7060175HS0FA	1259	1108	1012	916	801	548	368	272	185
A706/210	NGA7060210HS0FA	1510	1330	1214	1099	961	658	442	327	222
A704/245	NGA7040245HS0FA	1175	1034	944	855	747	512	344	254	173
A704/280	NGA7040280HS0FA	1342	1182	1079	977	854	585	393	290	198

1.77 V/C – Discharge in W/bloc										
Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h
A706/21	NGA7060021HS0FA	199	165	144	126	100	66	42	31	21
A706/42	NGA7060042HS0FA	398	331	288	252	200	131	83	62	42
A706/63	NGA7060063HS0FA	596	496	432	377	300	197	125	93	63
A706/84	NGA7060084HS0FA	795	661	576	503	401	263	166	124	84
A706/105	NGA7060105HS0FA	994	826	719	629	501	328	208	155	105
A706/126	NGA7060126HS0FA	1193	992	863	755	601	394	249	186	126
A706/140	NGA7060140HS0FA	1083	952	859	776	659	449	300	222	150
A706/175	NGA7060175HS0FA	1354	1190	1074	971	823	561	375	277	188
A706/210	NGA7060210HS0FA	1625	1428	1288	1165	988	673	450	332	225
A704/245	NGA7040245HS0FA	1264	1111	1002	906	768	523	350	258	175
A704/280	NGA7040280HS0FA	1445	1270	1145	1035	878	598	400	295	200

1.75 V/C – Discharge in W/bloc										
Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h
A706/21	NGA7060021HS0FA	212	173	151	131	103	67	42	32	21
A706/42	NGA7060042HS0FA	423	347	302	262	206	133	84	64	42
A706/63	NGA7060063HS0FA	635	520	452	393	309	200	126	96	63
A706/84	NGA7060084HS0FA	847	693	603	524	412	267	168	128	84
A706/105	NGA7060105HS0FA	1058	866	754	655	515	334	210	160	105
A706/126	NGA7060126HS0FA	1270	1040	905	786	618	400	252	192	126
A706/140	NGA7060140HS0FA	1160	1018	908	820	677	458	303	223	151
A706/175	NGA7060175HS0FA	1450	1272	1135	1025	846	573	379	279	189
A706/210	NGA7060210HS0FA	1740	1527	1363	1230	1015	688	454	335	226
A704/245	NGA7040245HS0FA	1353	1187	1060	957	790	535	353	260	176
A704/280	NGA7040280HS0FA	1547	1357	1211	1094	902	611	404	297	201

1.70 V/C – Discharge in W/bloc

Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h
A706/21	NGA7060021HS0FA	230	189	159	137	106	68	43	32	22
A706/42	NGA7060042HS0FA	459	379	318	275	213	135	86	64	43
A706/63	NGA7060063HS0FA	689	568	477	412	319	203	129	96	65
A706/84	NGA7060084HS0FA	919	758	636	550	425	271	172	128	86
A706/105	NGA7060105HS0FA	1148	947	795	687	532	338	215	160	108
A706/126	NGA7060126HS0FA	1378	1137	954	825	638	406	258	192	129
A706/140	NGA7060140HS0FA	1302	1125	996	879	707	468	307	225	151
A706/175	NGA7060175HS0FA	1628	1407	1245	1098	884	585	383	281	189
A706/210	NGA7060210HS0FA	1954	1688	1494	1318	1060	702	460	337	227
A704/245	NGA7040245HS0FA	1519	1313	1162	1025	825	546	358	262	176
A704/280	NGA7040280HS0FA	1736	1501	1328	1172	943	624	409	300	202

1.65 V/C – Discharge in W/bloc

Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h
A706/21	NGA7060021HS0FA	251	202	164	141	108	68	43	32	22
A706/42	NGA7060042HS0FA	502	403	328	282	216	136	86	64	43
A706/63	NGA7060063HS0FA	753	605	492	423	324	204	129	96	65
A706/84	NGA7060084HS0FA	1003	807	655	564	432	272	172	128	86
A706/105	NGA7060105HS0FA	1254	1008	819	705	540	340	215	160	108
A706/126	NGA7060126HS0FA	1505	1210	983	846	648	408	258	192	129
A706/140	NGA7060140HS0FA	1401	1194	1051	917	725	472	308	225	152
A706/175	NGA7060175HS0FA	1751	1492	1313	1147	906	591	385	282	190
A706/210	NGA7060210HS0FA	2101	1790	1576	1376	1087	709	462	338	228
A704/245	NGA7040245HS0FA	1634	1393	1226	1070	846	551	359	263	177
A704/280	NGA7040280HS0FA	1868	1592	1401	1223	967	630	410	300	203

1.60 V/C – Discharge in W/bloc

Type	Part number	5min	10min	15min	20min	30min	1h	2h	3h	5h
A706/21	NGA7060021HS0FA	266	210	168	143	109	68	43	32	22
A706/42	NGA7060042HS0FA	532	420	335	286	218	136	86	64	44
A706/63	NGA7060063HS0FA	798	630	503	429	326	205	129	96	66
A706/84	NGA7060084HS0FA	1064	840	670	571	435	273	172	128	88
A706/105	NGA7060105HS0FA	1329	1050	838	714	544	341	215	160	110
A706/126	NGA7060126HS0FA	1595	1260	1005	857	653	409	258	192	132
A706/140	NGA7060140HS0FA	1510	1265	1101	941	735	474	309	226	152
A706/175	NGA7060175HS0FA	1888	1582	1376	1177	919	593	386	283	190
A706/210	NGA7060210HS0FA	2265	1898	1652	1412	1103	712	463	339	228
A704/245	NGA7040245HS0FA	1762	1476	1285	1098	858	553	360	264	177
A704/280	NGA7040280HS0FA	2014	1687	1468	1255	980	633	411	301	203

