

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Higher frequencies (Höhere Frequenzen)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2.1	0.0142	0.0268	0.0339	0.0494	0.0490	0.0531	0.0417	0.0380	0.0413	0.0409
2.3	0.0152	0.0298	0.0315	0.0474	0.0459	0.0491	0.0667	0.0653	0.0743	0.0632
2.5	0.0154	0.0269	0.0299	0.0361	0.0354	0.0389	0.0330	0.0345	0.0348	0.0386
2.7	0.0157	0.0235	0.0264	0.0289	0.0313	0.0324	0.0292	0.0311	0.0342	0.0327
2.9	0.0165	0.0235	0.0265	0.0292	0.0271	0.0315	0.0306	0.0301	0.0321	0.0340
3.1	0.0154	0.0237	0.0289	0.0312	0.0295	0.0331	0.0304	0.0317	0.0329	0.0321
3.3	0.0165	0.0227	0.0291	0.0277	0.0299	0.0326	0.0293	0.0302	0.0326	0.0318
3.5	0.0141	0.0226	0.0269	0.0301	0.0300	0.0308	0.0323	0.0330	0.0336	0.0344
3.7	0.0154	0.0257	0.0306	0.0337	0.0298	0.0303	0.0326	0.0307	0.0328	0.0338
3.9	0.0148	0.0209	0.0260	0.0283	0.0292	0.0288	0.0294	0.0296	0.0333	0.0305
4.1	0.0154	0.0251	0.0281	0.0295	0.0318	0.0308	0.0284	0.0329	0.0341	0.0332
4.3	0.0137	0.0232	0.0292	0.0299	0.0293	0.0314	0.0312	0.0320	0.0344	0.0355
4.5	0.0148	0.0212	0.0246	0.0264	0.0290	0.0316	0.0308	0.0316	0.0317	0.0298
4.7	0.0142	0.0221	0.0240	0.0277	0.0285	0.0315	0.0322	0.0310	0.0359	0.0316
4.9	0.0143	0.0229	0.0268	0.0304	0.0300	0.0301	0.0318	0.0317	0.0346	0.0332
5.1	0.0141	0.0227	0.0265	0.0288	0.0310	0.0303	0.0308	0.0324	0.0332	0.0292
5.3	0.0138	0.0222	0.0281	0.0294	0.0296	0.0293	0.0299	0.0354	0.0343	0.0336
5.5	0.0148	0.0216	0.0273	0.0301	0.0313	0.0314	0.0316	0.0359	0.0340	0.0354
5.7	0.0147	0.0217	0.0251	0.0295	0.0283	0.0315	0.0301	0.0283	0.0316	0.0311
5.9	0.0144	0.0229	0.0287	0.0288	0.0319	0.0318	0.0345	0.0373	0.0371	0.0388
6.1	0.0159	0.0260	0.0290	0.0295	0.0332	0.0342	0.0344	0.0349	0.0374	0.0393
6.3	0.0156	0.0248	0.0279	0.0312	0.0297	0.0315	0.0314	0.0340	0.0351	0.0332
6.5	0.0174	0.0242	0.0277	0.0310	0.0302	0.0355	0.0342	0.0359	0.0367	0.0384
6.7	0.0157	0.0247	0.0270	0.0308	0.0293	0.0338	0.0347	0.0370	0.0363	0.0365
6.9	0.0163	0.0250	0.0303	0.0307	0.0354	0.0330	0.0341	0.0347	0.0378	0.0381
7.1	0.0154	0.0218	0.0269	0.0285	0.0304	0.0300	0.0317	0.0324	0.0329	0.0325
7.3	0.0143	0.0195	0.0253	0.0290	0.0273	0.0296	0.0313	0.0302	0.0316	0.0314
7.5	0.0142	0.0192	0.0250	0.0268	0.0276	0.0289	0.0321	0.0289	0.0334	0.0307
7.7	0.0140	0.0223	0.0246	0.0291	0.0302	0.0297	0.0288	0.0290	0.0300	0.0294
7.9	0.0131	0.0214	0.0241	0.0252	0.0275	0.0276	0.0301	0.0317	0.0323	0.0304
8.1	0.0128	0.0205	0.0226	0.0253	0.0281	0.0273	0.0289	0.0276	0.0283	0.0306
8.3	0.0139	0.0218	0.0231	0.0304	0.0279	0.0289	0.0257	0.0308	0.0303	0.0309
8.5	0.0133	0.0217	0.0272	0.0282	0.0298	0.0265	0.0278	0.0300	0.0318	0.0299
8.7	0.0134	0.0203	0.0213	0.0248	0.0287	0.0263	0.0282	0.0277	0.0297	0.0301
8.9	0.0133	0.0204	0.0227	0.0265	0.0283	0.0295	0.0283	0.0305	0.0289	0.0297

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Model: SPH 5000TL3 BH-UP, SPA 5000TL3 BH-UP										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Ordinal number (Ordnungszahl)	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2	0.5697	0.6676	0.7421	0.7779	0.8097	0.8317	0.8441	0.8538	0.8552	0.8607
3	0.0924	0.0469	0.0910	0.1214	0.1545	0.1724	0.1890	0.1972	0.2207	0.2414
4	0.6883	1.1228	1.2014	1.1572	1.0993	1.0855	1.0855	1.1062	1.1572	1.1793
5	0.0759	0.0593	0.0924	0.1145	0.1324	0.1062	0.1228	0.1048	0.0786	0.0883
6	0.2897	0.3476	0.5531	0.6234	0.6897	0.7710	0.8497	0.9255	0.9641	1.0138
7	0.0345	0.0634	0.0359	0.0372	0.0497	0.0552	0.0634	0.0634	0.0634	0.0593
8	0.0593	0.1159	0.1200	0.1062	0.0883	0.0759	0.0800	0.0828	0.0897	0.0869
9	0.0538	0.0469	0.0290	0.0276	0.0386	0.0441	0.0469	0.0428	0.0455	0.0414
10	0.1131	0.1297	0.1200	0.0524	0.0897	0.2069	0.3297	0.4083	0.4566	0.5090
11	0.0290	0.0414	0.0359	0.0262	0.0290	0.0345	0.0483	0.0483	0.0497	0.0497
12	0.0690	0.1379	0.1172	0.0966	0.0497	0.0814	0.1834	0.2524	0.3062	0.3366
13	0.0414	0.0414	0.0331	0.0221	0.0262	0.0290	0.0303	0.0290	0.0290	0.0262
14	0.0414	0.0303	0.0497	0.0441	0.0290	0.0290	0.0386	0.0428	0.0441	0.0469
15	0.0386	0.0497	0.0331	0.0276	0.0359	0.0372	0.0372	0.0372	0.0359	0.0331
16	0.0814	0.0662	0.0759	0.0717	0.0662	0.0428	0.0469	0.0883	0.1269	0.1545
17	0.0276	0.0248	0.0386	0.0400	0.0317	0.0317	0.0359	0.0428	0.0455	0.0483
18	0.0759	0.0524	0.1062	0.0924	0.0703	0.0441	0.0552	0.0952	0.1297	0.1531
19	0.0234	0.0248	0.0234	0.0234	0.0248	0.0262	0.0248	0.0276	0.0276	0.0290
20	0.0221	0.0262	0.0262	0.0248	0.0317	0.0331	0.0276	0.0276	0.0262	0.0248
21	0.0207	0.0221	0.0221	0.0248	0.0290	0.0262	0.0248	0.0221	0.0234	0.0248
22	0.0497	0.0428	0.0414	0.0510	0.0524	0.0497	0.0428	0.0497	0.0662	0.0855
23	0.0248	0.0234	0.0221	0.0290	0.0248	0.0221	0.0234	0.0234	0.0234	0.0248
24	0.0676	0.0538	0.0372	0.0524	0.0400	0.0372	0.0317	0.0317	0.0455	0.0607
25	0.0221	0.0207	0.0207	0.0221	0.0276	0.0221	0.0248	0.0234	0.0234	0.0221
26	0.0221	0.0221	0.0207	0.0234	0.0207	0.0207	0.0221	0.0234	0.0234	0.0221
27	0.0221	0.0221	0.0221	0.0221	0.0221	0.0221	0.0221	0.0207	0.0234	0.0234
28	0.0386	0.0359	0.0234	0.0317	0.0276	0.0262	0.0331	0.0303	0.0290	0.0345
29	0.0234	0.0234	0.0234	0.0234	0.0262	0.0248	0.0317	0.0234	0.0262	0.0262
30	0.0276	0.0331	0.0386	0.0234	0.0317	0.0359	0.0469	0.0345	0.0386	0.0428
31	0.0221	0.0221	0.0234	0.0207	0.0248	0.0221	0.0248	0.0221	0.0262	0.0248
32	0.0234	0.0234	0.0248	0.0262	0.0290	0.0248	0.0290	0.0234	0.0276	0.0262
33	0.0207	0.0221	0.0234	0.0193	0.0317	0.0234	0.0276	0.0248	0.0290	0.0276
34	0.0248	0.0276	0.0317	0.0276	0.0331	0.0290	0.0359	0.0345	0.0345	0.0359
35	0.0234	0.0248	0.0248	0.0262	0.0331	0.0248	0.0290	0.0290	0.0317	0.0331
36	0.0331	0.0317	0.0345	0.0331	0.0386	0.0303	0.0345	0.0359	0.0372	0.0386
37	0.0221	0.0248	0.0290	0.0262	0.0428	0.0359	0.0331	0.0428	0.0386	0.0386
38	0.0221	0.0276	0.0317	0.0303	0.0441	0.0276	0.0290	0.0290	0.0317	0.0303
39	0.0234	0.0276	0.0331	0.0303	0.0359	0.0276	0.0276	0.0303	0.0317	0.0276
40	0.5697	0.6676	0.7421	0.7779	0.8097	0.8317	0.8441	0.8538	0.8552	0.8607

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Inter-harmonics (Zwischenharmonische)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
75	0.1892	0.3428	0.4266	0.4297	1.6994	0.4970	0.6407	0.5015	0.5122	0.5622
125	0.0481	0.0882	0.1161	0.1294	0.2219	0.1482	0.1805	0.1508	0.1551	0.1633
175	0.0406	0.0796	0.1006	0.1139	0.2028	0.1308	0.1441	0.1301	0.1276	0.1256
225	0.0466	0.1031	0.1383	0.1543	0.2015	0.1999	0.2121	0.1801	0.1773	0.1771
275	0.0548	0.0856	0.1123	0.1144	0.1391	0.1228	0.1332	0.1175	0.1143	0.1068
325	0.0309	0.0485	0.0725	0.0860	0.1274	0.1258	0.1360	0.1200	0.1158	0.1144
375	0.0342	0.0418	0.0715	0.0854	0.1196	0.1118	0.1151	0.1066	0.0981	0.0978
425	0.0276	0.0380	0.0479	0.0462	0.0466	0.0458	0.0476	0.0417	0.0451	0.0433
475	0.0260	0.0368	0.0446	0.0444	0.0450	0.0454	0.0446	0.0429	0.0434	0.0438
525	0.0320	0.0454	0.0435	0.0428	0.0575	0.0606	0.0656	0.0650	0.0645	0.0640
575	0.0280	0.0386	0.0424	0.0414	0.0520	0.0524	0.0608	0.0568	0.0554	0.0585
625	0.0307	0.0414	0.0453	0.0401	0.0475	0.0474	0.0561	0.0557	0.0576	0.0567
675	0.0260	0.0416	0.0421	0.0381	0.0452	0.0484	0.0511	0.0501	0.0492	0.0538
725	0.0231	0.0306	0.0383	0.0384	0.0387	0.0371	0.0388	0.0368	0.0391	0.0386
775	0.0215	0.0311	0.0351	0.0362	0.0393	0.0391	0.0374	0.0373	0.0393	0.0364
825	0.0213	0.0324	0.0390	0.0369	0.0381	0.0383	0.0414	0.0394	0.0425	0.0437
875	0.0209	0.0320	0.0354	0.0370	0.0381	0.0367	0.0396	0.0415	0.0407	0.0415
925	0.0211	0.0294	0.0351	0.0362	0.0382	0.0375	0.0398	0.0366	0.0405	0.0406
975	0.0204	0.0299	0.0352	0.0403	0.0367	0.0371	0.0384	0.0388	0.0410	0.0419
1025	0.0202	0.0276	0.0329	0.0358	0.0350	0.0363	0.0360	0.0353	0.0366	0.0362
1075	0.0198	0.0290	0.0328	0.0330	0.0340	0.0330	0.0348	0.0330	0.0364	0.0363
1125	0.0193	0.0283	0.0316	0.0344	0.0356	0.0348	0.0348	0.0363	0.0397	0.0371
1175	0.0198	0.0282	0.0315	0.0328	0.0349	0.0351	0.0345	0.0363	0.0373	0.0363
1225	0.0207	0.0292	0.0309	0.0314	0.0351	0.0389	0.0353	0.0358	0.0385	0.0381
1275	0.0214	0.0325	0.0348	0.0358	0.0375	0.0372	0.0355	0.0386	0.0384	0.0391
1325	0.0200	0.0290	0.0324	0.0337	0.0340	0.0343	0.0360	0.0354	0.0378	0.0357
1375	0.0210	0.0295	0.0325	0.0338	0.0370	0.0340	0.0369	0.0356	0.0376	0.0373
1425	0.0203	0.0289	0.0311	0.0332	0.0367	0.0351	0.0353	0.0342	0.0357	0.0351
1475	0.0184	0.0270	0.0300	0.0310	0.0412	0.0342	0.0348	0.0363	0.0369	0.0365
1525	0.0209	0.0304	0.0327	0.0342	0.0408	0.0368	0.0408	0.0361	0.0404	0.0380
1575	0.0286	0.0401	0.0411	0.0374	0.0433	0.0346	0.0427	0.0362	0.0377	0.0402
1625	0.0194	0.0272	0.0330	0.0321	0.0459	0.0358	0.0444	0.0365	0.0369	0.0362
1675	0.0199	0.0268	0.0334	0.0329	0.0493	0.0350	0.0415	0.0393	0.0405	0.0416
1725	0.0200	0.0265	0.0366	0.0321	0.0503	0.0386	0.0441	0.0425	0.0447	0.0463
1775	0.0200	0.0276	0.0388	0.0333	0.0545	0.0431	0.0504	0.0480	0.0552	0.0561
1825	0.0222	0.0302	0.0423	0.0366	0.0577	0.0474	0.0576	0.0533	0.0594	0.0582
1875	0.0217	0.0311	0.0433	0.0384	0.0564	0.0463	0.0549	0.0536	0.0576	0.0567
1925	0.0231	0.0356	0.0455	0.0449	0.0519	0.0477	0.0516	0.0520	0.0534	0.0508
1975	0.0242	0.0401	0.0543	0.0579	0.0546	0.0645	0.0593	0.0702	0.0674	0.0646

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Higher frequencies (Höhere Frequenzen)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2.1	0.0186	0.0256	0.0344	0.0306	0.0349	0.0297	0.0268	0.0304	0.0286	0.0274
2.3	0.0212	0.0296	0.0342	0.0403	0.0361	0.0463	0.0402	0.0467	0.0467	0.0403
2.5	0.0163	0.0204	0.0248	0.0248	0.0297	0.0244	0.0254	0.0246	0.0243	0.0247
2.7	0.0140	0.0201	0.0218	0.0228	0.0227	0.0236	0.0239	0.0247	0.0239	0.0226
2.9	0.0130	0.0171	0.0205	0.0207	0.0237	0.0222	0.0230	0.0226	0.0218	0.0228
3.1	0.0120	0.0174	0.0209	0.0186	0.0216	0.0209	0.0209	0.0221	0.0233	0.0224
3.3	0.0125	0.0186	0.0190	0.0199	0.0228	0.0232	0.0222	0.0215	0.0251	0.0241
3.5	0.0126	0.0182	0.0208	0.0206	0.0211	0.0227	0.0223	0.0219	0.0244	0.0235
3.7	0.0127	0.0179	0.0258	0.0210	0.0212	0.0212	0.0236	0.0208	0.0233	0.0253
3.9	0.0123	0.0192	0.0221	0.0226	0.0217	0.0218	0.0206	0.0218	0.0238	0.0236
4.1	0.0141	0.0184	0.0212	0.0246	0.0231	0.0262	0.0244	0.0247	0.0215	0.0230
4.3	0.0113	0.0180	0.0228	0.0233	0.0211	0.0213	0.0219	0.0217	0.0236	0.0260
4.5	0.0125	0.0203	0.0201	0.0211	0.0217	0.0236	0.0231	0.0213	0.0212	0.0223
4.7	0.0121	0.0184	0.0203	0.0224	0.0227	0.0231	0.0214	0.0215	0.0237	0.0230
4.9	0.0128	0.0173	0.0199	0.0204	0.0211	0.0231	0.0223	0.0211	0.0232	0.0217
5.1	0.0124	0.0181	0.0212	0.0227	0.0235	0.0222	0.0230	0.0230	0.0254	0.0243
5.3	0.0119	0.0181	0.0205	0.0187	0.0210	0.0225	0.0219	0.0216	0.0212	0.0232
5.5	0.0135	0.0183	0.0202	0.0219	0.0234	0.0220	0.0240	0.0247	0.0239	0.0248
5.7	0.0131	0.0186	0.0194	0.0238	0.0224	0.0239	0.0234	0.0222	0.0240	0.0226
5.9	0.0132	0.0197	0.0208	0.0219	0.0202	0.0226	0.0249	0.0248	0.0241	0.0258
6.1	0.0134	0.0193	0.0211	0.0230	0.0254	0.0264	0.0257	0.0267	0.0270	0.0284
6.3	0.0146	0.0202	0.0216	0.0216	0.0226	0.0233	0.0250	0.0265	0.0255	0.0249
6.5	0.0136	0.0206	0.0217	0.0220	0.0251	0.0244	0.0227	0.0252	0.0271	0.0254
6.7	0.0132	0.0203	0.0218	0.0214	0.0238	0.0227	0.0217	0.0249	0.0234	0.0227
6.9	0.0155	0.0228	0.0245	0.0260	0.0255	0.0268	0.0256	0.0278	0.0289	0.0272
7.1	0.0133	0.0182	0.0220	0.0200	0.0239	0.0217	0.0233	0.0203	0.0225	0.0245
7.3	0.0120	0.0165	0.0193	0.0194	0.0214	0.0221	0.0216	0.0228	0.0224	0.0228
7.5	0.0121	0.0187	0.0207	0.0212	0.0208	0.0222	0.0237	0.0216	0.0215	0.0213
7.7	0.0119	0.0170	0.0206	0.0205	0.0205	0.0224	0.0209	0.0203	0.0205	0.0211
7.9	0.0125	0.0174	0.0168	0.0192	0.0206	0.0203	0.0218	0.0194	0.0195	0.0199
8.1	0.0109	0.0219	0.0203	0.0199	0.0213	0.0210	0.0209	0.0207	0.0214	0.0202
8.3	0.0112	0.0177	0.0208	0.0198	0.0193	0.0214	0.0217	0.0215	0.0223	0.0267
8.5	0.0118	0.0153	0.0191	0.0192	0.0214	0.0201	0.0215	0.0220	0.0210	0.0196
8.7	0.0119	0.0209	0.0186	0.0201	0.0211	0.0209	0.0219	0.0210	0.0225	0.0217
8.9	0.0113	0.0166	0.0190	0.0199	0.0212	0.0210	0.0201	0.0197	0.0188	0.0232

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Model: SPH 6000TL3 BH-UP, SPA 6000TL3 BH-UP										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Ordinal number (Ordnungszahl)	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2	0.0897	0.1575	0.2000	1.5448	0.2207	0.2678	0.3322	0.3782	0.4241	0.4655
3	0.5080	0.5920	0.6368	0.6862	0.6793	0.6943	0.7046	0.7172	0.7276	0.7322
4	0.0954	0.1207	0.1770	0.4057	0.2195	0.2483	0.3011	0.3586	0.4023	0.4414
5	0.7701	1.0034	0.9724	0.9069	0.8885	0.8954	0.9276	0.9621	0.9690	0.9736
6	0.0782	0.0609	0.0632	0.2023	0.0563	0.0540	0.0517	0.0517	0.0494	0.0552
7	0.0816	0.4368	0.5126	0.5701	0.6437	0.7034	0.7747	0.8103	0.8655	0.9011
8	0.0345	0.0310	0.0529	0.1126	0.0736	0.0782	0.0747	0.0632	0.0575	0.0563
9	0.0678	0.1069	0.0908	0.0908	0.0644	0.0644	0.0747	0.0782	0.0839	0.0862
10	0.0264	0.0241	0.0241	0.0655	0.0483	0.0575	0.0678	0.0655	0.0632	0.0655
11	0.1379	0.1000	0.0529	0.0851	0.1943	0.2759	0.3529	0.4034	0.4299	0.4448
12	0.0230	0.0218	0.0230	0.0471	0.0264	0.0253	0.0276	0.0287	0.0287	0.0310
13	0.1218	0.0908	0.0874	0.0494	0.0805	0.1494	0.2241	0.2632	0.2908	0.3080
14	0.0218	0.0218	0.0218	0.0391	0.0264	0.0345	0.0391	0.0437	0.0448	0.0391
15	0.0299	0.0414	0.0391	0.0368	0.0264	0.0322	0.0356	0.0368	0.0379	0.0391
16	0.0368	0.0345	0.0356	0.0437	0.0437	0.0529	0.0586	0.0632	0.0575	0.0529
17	0.0437	0.0655	0.0563	0.0586	0.0299	0.0356	0.0851	0.1195	0.1368	0.1540
18	0.0241	0.0253	0.0241	0.0368	0.0253	0.0276	0.0310	0.0299	0.0287	0.0276
19	0.0575	0.0793	0.0828	0.0598	0.0356	0.0483	0.0908	0.1172	0.1356	0.1437
20	0.0207	0.0230	0.0230	0.0345	0.0241	0.0276	0.0379	0.0402	0.0437	0.0414
21	0.0218	0.0253	0.0207	0.0322	0.0253	0.0218	0.0230	0.0230	0.0253	0.0218
22	0.0195	0.0195	0.0207	0.0276	0.0195	0.0195	0.0253	0.0276	0.0322	0.0310
23	0.0368	0.0253	0.0402	0.0425	0.0414	0.0368	0.0460	0.0632	0.0747	0.0851
24	0.0207	0.0207	0.0195	0.0310	0.0218	0.0195	0.0207	0.0218	0.0230	0.0230
25	0.0552	0.0276	0.0425	0.0391	0.0333	0.0299	0.0299	0.0448	0.0563	0.0690
26	0.0195	0.0172	0.0195	0.0287	0.0207	0.0195	0.0207	0.0218	0.0230	0.0253
27	0.0172	0.0184	0.0184	0.0287	0.0184	0.0195	0.0195	0.0207	0.0195	0.0207
28	0.0195	0.0184	0.0195	0.0287	0.0207	0.0218	0.0218	0.0276	0.0276	0.0287
29	0.0310	0.0276	0.0230	0.0322	0.0230	0.0253	0.0241	0.0276	0.0333	0.0391
30	0.0172	0.0195	0.0184	0.0310	0.0207	0.0195	0.0207	0.0218	0.0230	0.0241
31	0.0241	0.0276	0.0207	0.0299	0.0299	0.0322	0.0287	0.0345	0.0402	0.0460
32	0.0195	0.0207	0.0195	0.0299	0.0230	0.0195	0.0207	0.0218	0.0241	0.0241
33	0.0207	0.0207	0.0230	0.0299	0.0218	0.0218	0.0218	0.0207	0.0241	0.0230
34	0.0207	0.0184	0.0207	0.0310	0.0253	0.0218	0.0207	0.0253	0.0276	0.0287
35	0.0253	0.0241	0.0230	0.0299	0.0253	0.0276	0.0287	0.0287	0.0333	0.0368
36	0.0253	0.0207	0.0195	0.0310	0.0276	0.0253	0.0230	0.0276	0.0299	0.0276
37	0.0310	0.0264	0.0287	0.0287	0.0299	0.0299	0.0299	0.0322	0.0310	0.0356
38	0.0241	0.0207	0.0241	0.0287	0.0299	0.0333	0.0322	0.0322	0.0345	0.0322
39	0.0253	0.0207	0.0207	0.0276	0.0276	0.0241	0.0241	0.0264	0.0253	0.0264
40	0.0276	0.0207	0.0230	0.0287	0.0253	0.0287	0.0276	0.0276	0.0276	0.0310

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Inter-harmonics (Zwischenharmonische)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
75	0.2023	0.2862	0.3501	1.0890	0.4141	0.4594	0.4524	0.4943	0.5045	0.4921
125	0.0519	0.0933	0.1006	0.4441	0.1190	0.1326	0.1389	0.1578	0.1554	0.1476
175	0.0388	0.0729	0.0869	0.2373	0.1055	0.1037	0.1046	0.1054	0.1046	0.1055
225	0.0395	0.0868	0.1219	0.2066	0.1580	0.1687	0.1431	0.1507	0.1378	0.1334
275	0.0464	0.0724	0.0958	0.1667	0.1092	0.1128	0.1048	0.0883	0.0866	0.0849
325	0.0292	0.0415	0.0754	0.1384	0.1089	0.1107	0.1012	0.0973	0.0891	0.0841
375	0.0322	0.0448	0.0677	0.1166	0.0945	0.1024	0.0933	0.0882	0.0884	0.0768
425	0.0264	0.0335	0.0393	0.0762	0.0368	0.0404	0.0400	0.0395	0.0424	0.0410
475	0.0267	0.0314	0.0348	0.0695	0.0368	0.0411	0.0429	0.0401	0.0403	0.0394
525	0.0306	0.0349	0.0329	0.0638	0.0485	0.0554	0.0566	0.0548	0.0545	0.0512
575	0.0234	0.0288	0.0327	0.0592	0.0446	0.0484	0.0461	0.0481	0.0503	0.0494
625	0.0275	0.0325	0.0331	0.0601	0.0429	0.0468	0.0468	0.0499	0.0465	0.0423
675	0.0228	0.0337	0.0305	0.0518	0.0415	0.0477	0.0490	0.0480	0.0485	0.0469
725	0.0205	0.0292	0.0300	0.0507	0.0342	0.0350	0.0343	0.0357	0.0356	0.0361
775	0.0200	0.0261	0.0290	0.0461	0.0323	0.0344	0.0345	0.0353	0.0353	0.0345
825	0.0198	0.0272	0.0308	0.0460	0.0325	0.0358	0.0371	0.0377	0.0394	0.0362
875	0.0197	0.0259	0.0308	0.0433	0.0321	0.0349	0.0365	0.0366	0.0385	0.0364
925	0.0189	0.0271	0.0296	0.0450	0.0314	0.0327	0.0350	0.0366	0.0354	0.0330
975	0.0185	0.0260	0.0306	0.0412	0.0321	0.0344	0.0369	0.0373	0.0400	0.0387
1025	0.0189	0.0253	0.0284	0.0406	0.0299	0.0329	0.0310	0.0313	0.0334	0.0333
1075	0.0186	0.0248	0.0274	0.0385	0.0293	0.0331	0.0324	0.0320	0.0355	0.0325
1125	0.0185	0.0239	0.0266	0.0409	0.0300	0.0327	0.0314	0.0336	0.0351	0.0344
1175	0.0183	0.0244	0.0285	0.0404	0.0303	0.0327	0.0319	0.0322	0.0352	0.0335
1225	0.0188	0.0240	0.0279	0.0395	0.0308	0.0315	0.0295	0.0322	0.0343	0.0340
1275	0.0200	0.0272	0.0275	0.0406	0.0313	0.0342	0.0336	0.0358	0.0367	0.0374
1325	0.0182	0.0247	0.0263	0.0404	0.0303	0.0328	0.0315	0.0307	0.0337	0.0345
1375	0.0180	0.0265	0.0276	0.0424	0.0316	0.0325	0.0326	0.0333	0.0350	0.0344
1425	0.0172	0.0244	0.0259	0.0423	0.0291	0.0317	0.0301	0.0309	0.0331	0.0327
1475	0.0181	0.0227	0.0244	0.0410	0.0302	0.0299	0.0305	0.0327	0.0334	0.0334
1525	0.0191	0.0249	0.0266	0.0426	0.0319	0.0316	0.0319	0.0328	0.0356	0.0375
1575	0.0251	0.0314	0.0314	0.0446	0.0317	0.0314	0.0306	0.0342	0.0354	0.0342
1625	0.0185	0.0237	0.0264	0.0434	0.0304	0.0321	0.0323	0.0351	0.0360	0.0341
1675	0.0196	0.0253	0.0253	0.0435	0.0326	0.0324	0.0327	0.0342	0.0381	0.0346
1725	0.0209	0.0233	0.0281	0.0440	0.0360	0.0334	0.0336	0.0381	0.0407	0.0401
1775	0.0231	0.0235	0.0292	0.0421	0.0416	0.0377	0.0378	0.0443	0.0480	0.0457
1825	0.0259	0.0262	0.0305	0.0421	0.0493	0.0427	0.0417	0.0487	0.0562	0.0507
1875	0.0254	0.0245	0.0319	0.0435	0.0487	0.0411	0.0441	0.0491	0.0553	0.0498
1925	0.0257	0.0279	0.0336	0.0395	0.0435	0.0400	0.0418	0.0463	0.0481	0.0467
1975	0.0270	0.0322	0.0419	0.0394	0.0530	0.0572	0.0601	0.0597	0.0568	0.0559

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Higher frequencies (Höhere Frequenzen)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2.1	0.0199	0.0177	0.0196	0.0249	0.0219	0.0248	0.0259	0.0268	0.0272	0.0281
2.3	0.0185	0.0203	0.0252	0.0275	0.0343	0.0401	0.0409	0.0371	0.0368	0.0390
2.5	0.0139	0.0157	0.0175	0.0247	0.0207	0.0254	0.0224	0.0236	0.0226	0.0249
2.7	0.0124	0.0165	0.0197	0.0226	0.0197	0.0213	0.0211	0.0215	0.0218	0.0228
2.9	0.0108	0.0154	0.0177	0.0197	0.0197	0.0189	0.0188	0.0203	0.0198	0.0210
3.1	0.0120	0.0163	0.0191	0.0193	0.0174	0.0219	0.0198	0.0209	0.0201	0.0221
3.3	0.0121	0.0170	0.0185	0.0190	0.0186	0.0197	0.0208	0.0228	0.0216	0.0220
3.5	0.0122	0.0177	0.0181	0.0188	0.0223	0.0220	0.0198	0.0218	0.0222	0.0202
3.7	0.0108	0.0156	0.0216	0.0192	0.0203	0.0223	0.0194	0.0212	0.0210	0.0228
3.9	0.0115	0.0160	0.0179	0.0203	0.0190	0.0197	0.0214	0.0201	0.0216	0.0228
4.1	0.0122	0.0181	0.0192	0.0196	0.0211	0.0242	0.0217	0.0205	0.0203	0.0220
4.3	0.0114	0.0152	0.0189	0.0210	0.0185	0.0229	0.0210	0.0222	0.0213	0.0200
4.5	0.0120	0.0170	0.0176	0.0178	0.0214	0.0223	0.0233	0.0223	0.0199	0.0196
4.7	0.0112	0.0146	0.0175	0.0188	0.0207	0.0207	0.0213	0.0213	0.0217	0.0216
4.9	0.0114	0.0150	0.0176	0.0185	0.0182	0.0202	0.0185	0.0199	0.0213	0.0224
5.1	0.0116	0.0180	0.0176	0.0190	0.0184	0.0208	0.0222	0.0208	0.0201	0.0200
5.3	0.0106	0.0151	0.0182	0.0188	0.0187	0.0214	0.0212	0.0224	0.0223	0.0238
5.5	0.0128	0.0167	0.0181	0.0193	0.0207	0.0225	0.0224	0.0223	0.0211	0.0215
5.7	0.0115	0.0167	0.0174	0.0188	0.0200	0.0212	0.0210	0.0215	0.0225	0.0234
5.9	0.0119	0.0169	0.0170	0.0238	0.0209	0.0226	0.0229	0.0243	0.0244	0.0251
6.1	0.0135	0.0175	0.0195	0.0219	0.0221	0.0235	0.0246	0.0235	0.0266	0.0250
6.3	0.0124	0.0180	0.0194	0.0222	0.0201	0.0241	0.0224	0.0232	0.0221	0.0232
6.5	0.0120	0.0166	0.0188	0.0230	0.0206	0.0230	0.0243	0.0261	0.0269	0.0297
6.7	0.0131	0.0180	0.0193	0.0199	0.0205	0.0206	0.0215	0.0215	0.0232	0.0229
6.9	0.0134	0.0208	0.0222	0.0219	0.0229	0.0244	0.0222	0.0238	0.0243	0.0249
7.1	0.0120	0.0153	0.0185	0.0200	0.0192	0.0198	0.0194	0.0204	0.0217	0.0220
7.3	0.0115	0.0152	0.0175	0.0193	0.0201	0.0190	0.0199	0.0193	0.0208	0.0204
7.5	0.0120	0.0159	0.0189	0.0202	0.0215	0.0204	0.0221	0.0205	0.0194	0.0206
7.7	0.0112	0.0163	0.0168	0.0206	0.0171	0.0199	0.0175	0.0184	0.0212	0.0200
7.9	0.0107	0.0141	0.0163	0.0185	0.0181	0.0187	0.0174	0.0183	0.0182	0.0191
8.1	0.0109	0.0153	0.0162	0.0181	0.0174	0.0191	0.0195	0.0192	0.0197	0.0196
8.3	0.0105	0.0156	0.0194	0.0181	0.0178	0.0216	0.0210	0.0199	0.0182	0.0191
8.5	0.0110	0.0159	0.0169	0.0182	0.0214	0.0183	0.0175	0.0179	0.0181	0.0190
8.7	0.0100	0.0152	0.0169	0.0186	0.0182	0.0211	0.0213	0.0200	0.0207	0.0192
8.9	0.0105	0.0144	0.0176	0.0190	0.0182	0.0193	0.0181	0.0177	0.0169	0.0194

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Model: SPH 7000TL3 BH-UP, SPA 7000TL3 BH-UP										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Ordinal number (Ordnungszahl)	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2	0.0533	0.0957	0.0730	0.0690	0.0966	0.1114	0.1351	0.1519	0.2002	0.2041
3	0.4596	0.5375	0.5740	0.5957	0.6114	0.6243	0.6272	0.6391	0.6400	0.6400
4	0.0335	0.0661	0.0947	0.1124	0.1331	0.1469	0.1844	0.2081	0.2278	0.2544
5	0.7160	0.8649	0.8185	0.7860	0.7899	0.8146	0.8511	0.8669	0.8402	0.8915
6	0.0345	0.0493	0.0533	0.0444	0.0454	0.0325	0.0335	0.0394	0.0365	0.0414
7	0.1272	0.3994	0.4704	0.5473	0.6183	0.6884	0.7268	0.7870	0.7525	0.8116
8	0.0404	0.0276	0.0316	0.0365	0.0424	0.0414	0.0394	0.0375	0.0385	0.0414
9	0.0641	0.0868	0.0720	0.0562	0.0572	0.0621	0.0641	0.0700	0.0720	0.0740
10	0.0316	0.0178	0.0197	0.0207	0.0237	0.0276	0.0296	0.0296	0.0345	0.0335
11	0.1154	0.0878	0.0276	0.1341	0.2387	0.3097	0.3619	0.3807	0.3728	0.4310
12	0.0227	0.0197	0.0187	0.0187	0.0217	0.0217	0.0256	0.0247	0.0247	0.0237
13	0.1174	0.0858	0.0572	0.0444	0.1321	0.2022	0.2426	0.2751	0.2525	0.2840
14	0.0197	0.0187	0.0168	0.0178	0.0187	0.0187	0.0217	0.0217	0.0227	0.0256
15	0.0217	0.0355	0.0266	0.0207	0.0286	0.0316	0.0325	0.0325	0.0335	0.0365
16	0.0276	0.0237	0.0247	0.0286	0.0325	0.0335	0.0355	0.0355	0.0345	0.0296
17	0.0325	0.0542	0.0542	0.0375	0.0335	0.0779	0.1134	0.1302	0.1233	0.1588
18	0.0217	0.0247	0.0237	0.0227	0.0237	0.0256	0.0276	0.0276	0.0256	0.0247
19	0.0473	0.0789	0.0641	0.0355	0.0414	0.0789	0.1075	0.1292	0.1154	0.1400
20	0.0178	0.0178	0.0178	0.0187	0.0207	0.0227	0.0266	0.0256	0.0286	0.0266
21	0.0158	0.0187	0.0197	0.0227	0.0178	0.0178	0.0187	0.0207	0.0197	0.0197
22	0.0168	0.0158	0.0168	0.0168	0.0168	0.0178	0.0187	0.0187	0.0178	0.0197
23	0.0296	0.0266	0.0365	0.0365	0.0306	0.0404	0.0582	0.0720	0.0730	0.0878
24	0.0148	0.0158	0.0168	0.0158	0.0178	0.0168	0.0168	0.0178	0.0178	0.0197
25	0.0414	0.0256	0.0345	0.0296	0.0237	0.0276	0.0434	0.0582	0.0533	0.0710
26	0.0158	0.0158	0.0158	0.0158	0.0158	0.0178	0.0168	0.0168	0.0158	0.0178
27	0.0138	0.0158	0.0158	0.0148	0.0168	0.0158	0.0158	0.0168	0.0178	0.0168
28	0.0158	0.0148	0.0148	0.0158	0.0178	0.0168	0.0178	0.0207	0.0197	0.0197
29	0.0296	0.0187	0.0217	0.0178	0.0237	0.0227	0.0256	0.0306	0.0345	0.0434
30	0.0168	0.0168	0.0158	0.0168	0.0168	0.0178	0.0187	0.0187	0.0217	0.0217
31	0.0227	0.0276	0.0178	0.0256	0.0266	0.0247	0.0335	0.0424	0.0404	0.0473
32	0.0158	0.0168	0.0168	0.0168	0.0178	0.0187	0.0187	0.0178	0.0207	0.0227
33	0.0178	0.0158	0.0197	0.0197	0.0217	0.0217	0.0227	0.0197	0.0227	0.0227
34	0.0148	0.0168	0.0217	0.0197	0.0217	0.0227	0.0237	0.0227	0.0237	0.0247
35	0.0217	0.0227	0.0296	0.0256	0.0286	0.0345	0.0325	0.0325	0.0404	0.0454
36	0.0207	0.0187	0.0276	0.0325	0.0375	0.0424	0.0394	0.0345	0.0434	0.0394
37	0.0286	0.0256	0.0276	0.0296	0.0335	0.0365	0.0365	0.0355	0.0394	0.0414
38	0.0197	0.0207	0.0316	0.0345	0.0355	0.0365	0.0375	0.0375	0.0375	0.0375
39	0.0237	0.0187	0.0365	0.0404	0.0355	0.0365	0.0385	0.0385	0.0385	0.0375
40	0.0237	0.0178	0.0227	0.0237	0.0247	0.0286	0.0286	0.0276	0.0296	0.0296

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Inter-harmonics (Zwischenharmonische)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
75	0.1962	0.2830	0.3215	0.3391	0.3818	0.3841	0.3942	0.4457	0.4962	0.4664
125	0.0448	0.0758	0.0940	0.0960	0.1114	0.1169	0.1135	0.1279	0.1581	0.1374
175	0.0331	0.0547	0.0666	0.0728	0.0790	0.0773	0.0793	0.0856	0.1025	0.0917
225	0.0396	0.0928	0.1205	0.1306	0.1343	0.1234	0.1141	0.1179	0.1399	0.1110
275	0.0441	0.0696	0.0843	0.0878	0.0951	0.0880	0.0812	0.0740	0.0845	0.0761
325	0.0260	0.0487	0.0728	0.0865	0.0977	0.0868	0.0777	0.0762	0.0910	0.0741
375	0.0265	0.0445	0.0669	0.0765	0.0834	0.0831	0.0809	0.0718	0.0802	0.0631
425	0.0202	0.0276	0.0301	0.0303	0.0324	0.0371	0.0358	0.0329	0.0390	0.0341
475	0.0216	0.0259	0.0282	0.0285	0.0296	0.0332	0.0339	0.0306	0.0377	0.0334
525	0.0265	0.0286	0.0310	0.0400	0.0451	0.0502	0.0478	0.0444	0.0547	0.0438
575	0.0208	0.0236	0.0264	0.0349	0.0416	0.0379	0.0435	0.0423	0.0469	0.0374
625	0.0249	0.0278	0.0269	0.0322	0.0373	0.0419	0.0416	0.0370	0.0454	0.0362
675	0.0203	0.0284	0.0272	0.0321	0.0406	0.0400	0.0408	0.0438	0.0451	0.0406
725	0.0177	0.0220	0.0273	0.0265	0.0273	0.0270	0.0288	0.0299	0.0344	0.0308
775	0.0168	0.0226	0.0241	0.0258	0.0275	0.0268	0.0297	0.0289	0.0333	0.0305
825	0.0181	0.0238	0.0257	0.0272	0.0289	0.0307	0.0332	0.0318	0.0366	0.0333
875	0.0166	0.0247	0.0250	0.0263	0.0274	0.0311	0.0302	0.0336	0.0357	0.0310
925	0.0173	0.0245	0.0258	0.0241	0.0281	0.0298	0.0304	0.0303	0.0354	0.0312
975	0.0176	0.0237	0.0250	0.0251	0.0278	0.0293	0.0308	0.0332	0.0347	0.0323
1025	0.0163	0.0206	0.0226	0.0244	0.0246	0.0257	0.0276	0.0289	0.0329	0.0282
1075	0.0164	0.0216	0.0227	0.0247	0.0250	0.0263	0.0266	0.0279	0.0310	0.0274
1125	0.0169	0.0213	0.0232	0.0244	0.0258	0.0265	0.0272	0.0292	0.0337	0.0275
1175	0.0154	0.0198	0.0228	0.0250	0.0247	0.0268	0.0282	0.0275	0.0308	0.0295
1225	0.0161	0.0211	0.0237	0.0252	0.0275	0.0264	0.0269	0.0254	0.0330	0.0288
1275	0.0179	0.0211	0.0235	0.0263	0.0270	0.0282	0.0306	0.0311	0.0330	0.0313
1325	0.0158	0.0201	0.0222	0.0244	0.0252	0.0272	0.0266	0.0275	0.0321	0.0279
1375	0.0167	0.0221	0.0235	0.0238	0.0247	0.0265	0.0267	0.0283	0.0317	0.0280
1425	0.0167	0.0204	0.0212	0.0248	0.0244	0.0251	0.0269	0.0276	0.0316	0.0295
1475	0.0155	0.0206	0.0216	0.0232	0.0257	0.0257	0.0270	0.0268	0.0303	0.0274
1525	0.0171	0.0217	0.0229	0.0257	0.0264	0.0263	0.0265	0.0293	0.0339	0.0310
1575	0.0223	0.0261	0.0244	0.0244	0.0257	0.0272	0.0282	0.0276	0.0331	0.0297
1625	0.0164	0.0202	0.0236	0.0242	0.0247	0.0274	0.0290	0.0286	0.0326	0.0288
1675	0.0166	0.0203	0.0232	0.0252	0.0260	0.0281	0.0296	0.0292	0.0342	0.0317
1725	0.0172	0.0206	0.0244	0.0269	0.0270	0.0281	0.0328	0.0309	0.0371	0.0345
1775	0.0194	0.0204	0.0252	0.0263	0.0278	0.0306	0.0315	0.0311	0.0381	0.0344
1825	0.0203	0.0212	0.0287	0.0308	0.0327	0.0349	0.0376	0.0378	0.0448	0.0414
1875	0.0217	0.0206	0.0278	0.0302	0.0314	0.0333	0.0340	0.0328	0.0381	0.0371
1925	0.0226	0.0207	0.0266	0.0299	0.0309	0.0329	0.0339	0.0340	0.0393	0.0357
1975	0.0237	0.0237	0.0333	0.0318	0.0315	0.0340	0.0354	0.0340	0.0387	0.0353

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Higher frequencies (Höhere Frequenzen)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2.1	0.0192	0.0154	0.0185	0.0226	0.0221	0.0219	0.0222	0.0239	0.0296	0.0253
2.3	0.0157	0.0156	0.0209	0.0269	0.0268	0.0253	0.0295	0.0274	0.0299	0.0290
2.5	0.0101	0.0141	0.0143	0.0159	0.0180	0.0183	0.0168	0.0179	0.0199	0.0196
2.7	0.0093	0.0145	0.0149	0.0168	0.0170	0.0171	0.0167	0.0181	0.0222	0.0180
2.9	0.0091	0.0137	0.0149	0.0151	0.0150	0.0164	0.0167	0.0173	0.0203	0.0189
3.1	0.0100	0.0137	0.0146	0.0163	0.0182	0.0170	0.0178	0.0176	0.0206	0.0173
3.3	0.0100	0.0142	0.0150	0.0151	0.0174	0.0171	0.0182	0.0178	0.0197	0.0198
3.5	0.0104	0.0157	0.0174	0.0176	0.0167	0.0171	0.0170	0.0185	0.0199	0.0177
3.7	0.0094	0.0112	0.0138	0.0150	0.0153	0.0165	0.0154	0.0158	0.0203	0.0168
3.9	0.0092	0.0132	0.0143	0.0151	0.0162	0.0155	0.0163	0.0175	0.0206	0.0189
4.1	0.0119	0.0141	0.0169	0.0194	0.0173	0.0162	0.0169	0.0182	0.0188	0.0169
4.3	0.0102	0.0129	0.0134	0.0148	0.0148	0.0150	0.0165	0.0169	0.0210	0.0159
4.5	0.0106	0.0131	0.0145	0.0167	0.0162	0.0150	0.0183	0.0171	0.0178	0.0189
4.7	0.0090	0.0121	0.0135	0.0140	0.0151	0.0159	0.0157	0.0158	0.0189	0.0190
4.9	0.0102	0.0136	0.0147	0.0149	0.0153	0.0147	0.0156	0.0176	0.0174	0.0174
5.1	0.0103	0.0131	0.0156	0.0160	0.0156	0.0172	0.0177	0.0175	0.0194	0.0182
5.3	0.0108	0.0128	0.0137	0.0152	0.0166	0.0153	0.0165	0.0178	0.0196	0.0180
5.5	0.0094	0.0126	0.0140	0.0161	0.0155	0.0159	0.0169	0.0174	0.0201	0.0188
5.7	0.0108	0.0142	0.0142	0.0170	0.0160	0.0165	0.0150	0.0159	0.0209	0.0197
5.9	0.0108	0.0132	0.0159	0.0165	0.0185	0.0168	0.0192	0.0203	0.0213	0.0219
6.1	0.0116	0.0150	0.0164	0.0180	0.0183	0.0190	0.0205	0.0205	0.0244	0.0226
6.3	0.0110	0.0130	0.0154	0.0168	0.0183	0.0174	0.0188	0.0203	0.0210	0.0171
6.5	0.0105	0.0138	0.0144	0.0147	0.0163	0.0174	0.0193	0.0233	0.0253	0.0232
6.7	0.0098	0.0138	0.0155	0.0162	0.0159	0.0157	0.0165	0.0173	0.0208	0.0177
6.9	0.0111	0.0161	0.0173	0.0179	0.0185	0.0194	0.0178	0.0193	0.0224	0.0214
7.1	0.0094	0.0129	0.0132	0.0147	0.0147	0.0162	0.0164	0.0159	0.0199	0.0179
7.3	0.0094	0.0121	0.0132	0.0151	0.0158	0.0152	0.0161	0.0155	0.0180	0.0167
7.5	0.0099	0.0129	0.0143	0.0147	0.0153	0.0157	0.0172	0.0173	0.0194	0.0174
7.7	0.0096	0.0116	0.0131	0.0142	0.0149	0.0153	0.0147	0.0153	0.0193	0.0170
7.9	0.0091	0.0129	0.0139	0.0132	0.0151	0.0150	0.0148	0.0157	0.0174	0.0164
8.1	0.0092	0.0131	0.0141	0.0147	0.0167	0.0153	0.0151	0.0177	0.0185	0.0184
8.3	0.0088	0.0127	0.0129	0.0130	0.0148	0.0148	0.0132	0.0142	0.0176	0.0150
8.5	0.0088	0.0140	0.0172	0.0155	0.0141	0.0136	0.0157	0.0163	0.0165	0.0153
8.7	0.0100	0.0123	0.0134	0.0151	0.0159	0.0162	0.0161	0.0174	0.0179	0.0168
8.9	0.0087	0.0112	0.0130	0.0141	0.0144	0.0146	0.0159	0.0142	0.0163	0.0139

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Model: SPH 8000TL3 BH-UP, SPA 8000TL3 BH-UP										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Ordinal number (Ordnungszahl)	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2	0.0854	0.0708	1.4909	0.2856	0.3727	0.4443	0.5168	0.5893	0.6402	0.6221
3	0.4124	0.4780	0.5298	0.5272	0.5384	0.5470	0.5557	0.5565	0.5548	0.5505
4	0.0475	0.0699	0.3296	0.2502	0.2977	0.3624	0.4193	0.4745	0.5160	0.5418
5	0.6739	0.7489	0.6868	0.6825	0.6963	0.7368	0.7412	0.7506	0.7679	0.7990
6	0.0431	0.0380	0.2079	0.0509	0.0535	0.0552	0.0587	0.0569	0.0561	0.0578
7	0.1700	0.3650	0.4297	0.5073	0.5764	0.6109	0.6764	0.6937	0.7161	0.7204
8	0.0242	0.0250	0.1001	0.0664	0.0621	0.0500	0.0371	0.0397	0.0431	0.0457
9	0.0664	0.0708	0.0578	0.0492	0.0552	0.0569	0.0604	0.0656	0.0664	0.0647
10	0.0190	0.0164	0.0406	0.0638	0.0777	0.0716	0.0716	0.0673	0.0638	0.0518
11	0.0915	0.0613	0.0569	0.1682	0.2502	0.2994	0.3261	0.3469	0.3693	0.3909
12	0.0164	0.0173	0.0328	0.0181	0.0190	0.0207	0.0190	0.0216	0.0207	0.0207
13	0.1001	0.0725	0.0285	0.0802	0.1562	0.1959	0.2286	0.2347	0.2450	0.2519
14	0.0173	0.0164	0.0224	0.0311	0.0423	0.0466	0.0457	0.0431	0.0449	0.0380
15	0.0164	0.0311	0.0233	0.0207	0.0259	0.0276	0.0302	0.0319	0.0328	0.0354
16	0.0242	0.0216	0.0276	0.0431	0.0587	0.0647	0.0587	0.0483	0.0440	0.0414
17	0.0345	0.0466	0.0423	0.0224	0.0535	0.0854	0.1061	0.1225	0.1337	0.1398
18	0.0190	0.0190	0.0276	0.0198	0.0198	0.0181	0.0198	0.0181	0.0190	0.0198
19	0.0354	0.0682	0.0440	0.0276	0.0561	0.0846	0.1009	0.1079	0.1182	0.1217
20	0.0155	0.0164	0.0233	0.0224	0.0345	0.0414	0.0406	0.0380	0.0371	0.0345
21	0.0147	0.0138	0.0207	0.0190	0.0164	0.0173	0.0164	0.0181	0.0164	0.0155
22	0.0147	0.0138	0.0207	0.0147	0.0207	0.0285	0.0319	0.0311	0.0319	0.0285
23	0.0293	0.0302	0.0311	0.0293	0.0311	0.0466	0.0578	0.0682	0.0733	0.0802
24	0.0155	0.0164	0.0242	0.0147	0.0155	0.0155	0.0147	0.0164	0.0155	0.0164
25	0.0319	0.0302	0.0242	0.0224	0.0233	0.0336	0.0440	0.0526	0.0604	0.0647
26	0.0129	0.0138	0.0198	0.0147	0.0181	0.0216	0.0233	0.0242	0.0250	0.0242
27	0.0138	0.0147	0.0181	0.0129	0.0147	0.0147	0.0155	0.0155	0.0164	0.0155
28	0.0129	0.0138	0.0207	0.0173	0.0190	0.0233	0.0259	0.0285	0.0302	0.0259
29	0.0259	0.0173	0.0181	0.0181	0.0190	0.0207	0.0233	0.0293	0.0345	0.0397
30	0.0138	0.0155	0.0173	0.0147	0.0164	0.0155	0.0147	0.0164	0.0155	0.0173
31	0.0216	0.0190	0.0224	0.0250	0.0224	0.0267	0.0293	0.0354	0.0388	0.0414
32	0.0147	0.0155	0.0181	0.0190	0.0164	0.0190	0.0198	0.0216	0.0224	0.0224
33	0.0155	0.0164	0.0198	0.0173	0.0173	0.0190	0.0181	0.0181	0.0181	0.0216
34	0.0129	0.0147	0.0198	0.0216	0.0207	0.0250	0.0242	0.0242	0.0233	0.0242
35	0.0173	0.0207	0.0216	0.0250	0.0285	0.0285	0.0276	0.0285	0.0302	0.0354
36	0.0173	0.0181	0.0198	0.0259	0.0285	0.0293	0.0259	0.0242	0.0233	0.0302
37	0.0242	0.0242	0.0198	0.0259	0.0293	0.0311	0.0293	0.0319	0.0285	0.0380
38	0.0198	0.0233	0.0181	0.0293	0.0293	0.0285	0.0276	0.0336	0.0293	0.0336
39	0.0173	0.0207	0.0181	0.0302	0.0311	0.0293	0.0285	0.0336	0.0354	0.0362
40	0.0173	0.0181	0.0198	0.0224	0.0233	0.0233	0.0242	0.0276	0.0250	0.0276

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Inter-harmonics (Zwischenharmonische)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
75	0.1652	0.2458	0.4388	0.3378	0.3456	0.3547	0.3678	0.3919	0.4015	0.4036
125	0.0438	0.0687	0.2105	0.0911	0.1008	0.1073	0.1104	0.1241	0.1212	0.1332
175	0.0344	0.0553	0.1073	0.0704	0.0747	0.0740	0.0734	0.0852	0.0810	0.0787
225	0.0453	0.0867	0.1247	0.1171	0.1134	0.1108	0.1057	0.0962	0.1035	0.0951
275	0.0444	0.0642	0.0938	0.0949	0.0844	0.0706	0.0626	0.0638	0.0658	0.0568
325	0.0259	0.0471	0.0860	0.0838	0.0729	0.0655	0.0657	0.0590	0.0611	0.0570
375	0.0233	0.0438	0.0683	0.0784	0.0787	0.0678	0.0574	0.0612	0.0570	0.0546
425	0.0216	0.0272	0.0342	0.0308	0.0320	0.0297	0.0283	0.0347	0.0312	0.0301
475	0.0212	0.0237	0.0294	0.0330	0.0354	0.0294	0.0286	0.0318	0.0289	0.0295
525	0.0252	0.0261	0.0303	0.0402	0.0426	0.0387	0.0376	0.0415	0.0366	0.0369
575	0.0205	0.0235	0.0312	0.0359	0.0381	0.0390	0.0336	0.0332	0.0353	0.0349
625	0.0222	0.0257	0.0290	0.0318	0.0362	0.0325	0.0321	0.0335	0.0302	0.0307
675	0.0218	0.0255	0.0273	0.0334	0.0345	0.0388	0.0340	0.0341	0.0366	0.0335
725	0.0165	0.0232	0.0254	0.0238	0.0252	0.0262	0.0257	0.0278	0.0265	0.0272
775	0.0177	0.0222	0.0245	0.0240	0.0245	0.0252	0.0236	0.0276	0.0257	0.0245
825	0.0170	0.0232	0.0242	0.0243	0.0266	0.0264	0.0265	0.0264	0.0279	0.0269
875	0.0169	0.0237	0.0237	0.0252	0.0255	0.0285	0.0267	0.0266	0.0272	0.0278
925	0.0168	0.0229	0.0258	0.0242	0.0258	0.0264	0.0255	0.0258	0.0257	0.0254
975	0.0158	0.0231	0.0246	0.0241	0.0248	0.0284	0.0281	0.0293	0.0278	0.0289
1025	0.0164	0.0220	0.0238	0.0218	0.0225	0.0242	0.0238	0.0253	0.0252	0.0241
1075	0.0167	0.0215	0.0246	0.0216	0.0224	0.0241	0.0242	0.0250	0.0253	0.0224
1125	0.0162	0.0200	0.0240	0.0231	0.0236	0.0245	0.0241	0.0242	0.0249	0.0251
1175	0.0159	0.0218	0.0243	0.0227	0.0234	0.0258	0.0247	0.0242	0.0246	0.0230
1225	0.0158	0.0216	0.0251	0.0225	0.0222	0.0239	0.0246	0.0240	0.0248	0.0243
1275	0.0164	0.0220	0.0276	0.0218	0.0257	0.0266	0.0263	0.0270	0.0283	0.0261
1325	0.0169	0.0206	0.0271	0.0217	0.0215	0.0228	0.0231	0.0245	0.0236	0.0236
1375	0.0164	0.0212	0.0270	0.0225	0.0244	0.0248	0.0245	0.0242	0.0253	0.0256
1425	0.0154	0.0191	0.0265	0.0221	0.0213	0.0248	0.0234	0.0247	0.0245	0.0238
1475	0.0152	0.0191	0.0273	0.0217	0.0210	0.0226	0.0227	0.0233	0.0243	0.0238
1525	0.0153	0.0214	0.0304	0.0213	0.0236	0.0240	0.0245	0.0251	0.0257	0.0258
1575	0.0226	0.0242	0.0295	0.0218	0.0225	0.0241	0.0241	0.0252	0.0251	0.0252
1625	0.0156	0.0207	0.0318	0.0230	0.0231	0.0243	0.0234	0.0239	0.0259	0.0237
1675	0.0149	0.0202	0.0337	0.0230	0.0236	0.0238	0.0246	0.0258	0.0251	0.0253
1725	0.0155	0.0196	0.0320	0.0250	0.0251	0.0253	0.0254	0.0250	0.0283	0.0303
1775	0.0155	0.0208	0.0271	0.0265	0.0241	0.0257	0.0277	0.0283	0.0314	0.0307
1825	0.0164	0.0226	0.0256	0.0263	0.0275	0.0285	0.0287	0.0298	0.0328	0.0336
1875	0.0162	0.0213	0.0245	0.0263	0.0262	0.0278	0.0283	0.0295	0.0294	0.0308
1925	0.0170	0.0236	0.0246	0.0260	0.0264	0.0270	0.0279	0.0301	0.0286	0.0307
1975	0.0171	0.0299	0.0243	0.0296	0.0298	0.0292	0.0318	0.0340	0.0317	0.0334

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Higher frequencies (Höhere Frequenzen)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2.1	0.0123	0.0160	0.0160	0.0173	0.0196	0.0200	0.0195	0.0206	0.0209	0.0230
2.3	0.0171	0.0163	0.0195	0.0258	0.0262	0.0247	0.0271	0.0267	0.0291	0.0286
2.5	0.0109	0.0130	0.0206	0.0165	0.0155	0.0180	0.0172	0.0160	0.0202	0.0193
2.7	0.0101	0.0129	0.0152	0.0155	0.0154	0.0144	0.0161	0.0148	0.0150	0.0156
2.9	0.0094	0.0116	0.0134	0.0136	0.0162	0.0146	0.0151	0.0167	0.0186	0.0178
3.1	0.0095	0.0122	0.0131	0.0157	0.0144	0.0158	0.0155	0.0169	0.0172	0.0170
3.3	0.0099	0.0139	0.0126	0.0137	0.0143	0.0137	0.0149	0.0153	0.0152	0.0161
3.5	0.0100	0.0118	0.0135	0.0148	0.0185	0.0171	0.0171	0.0180	0.0193	0.0176
3.7	0.0093	0.0113	0.0143	0.0128	0.0147	0.0154	0.0167	0.0157	0.0178	0.0169
3.9	0.0110	0.0129	0.0132	0.0141	0.0130	0.0140	0.0149	0.0155	0.0153	0.0156
4.1	0.0105	0.0127	0.0143	0.0159	0.0163	0.0159	0.0175	0.0186	0.0188	0.0184
4.3	0.0101	0.0129	0.0137	0.0163	0.0153	0.0168	0.0168	0.0154	0.0169	0.0174
4.5	0.0110	0.0150	0.0132	0.0140	0.0142	0.0140	0.0156	0.0150	0.0155	0.0160
4.7	0.0099	0.0128	0.0133	0.0144	0.0149	0.0167	0.0154	0.0169	0.0173	0.0185
4.9	0.0102	0.0125	0.0140	0.0145	0.0155	0.0161	0.0161	0.0151	0.0167	0.0171
5.1	0.0106	0.0149	0.0143	0.0140	0.0139	0.0143	0.0144	0.0158	0.0159	0.0157
5.3	0.0099	0.0129	0.0125	0.0133	0.0153	0.0170	0.0156	0.0161	0.0186	0.0178
5.5	0.0103	0.0135	0.0143	0.0152	0.0163	0.0162	0.0165	0.0170	0.0159	0.0165
5.7	0.0105	0.0140	0.0123	0.0146	0.0146	0.0150	0.0149	0.0160	0.0158	0.0174
5.9	0.0106	0.0135	0.0151	0.0148	0.0161	0.0176	0.0192	0.0195	0.0205	0.0226
6.1	0.0112	0.0130	0.0144	0.0172	0.0165	0.0177	0.0187	0.0212	0.0215	0.0205
6.3	0.0105	0.0141	0.0137	0.0151	0.0168	0.0161	0.0172	0.0167	0.0163	0.0153
6.5	0.0099	0.0113	0.0150	0.0170	0.0198	0.0225	0.0240	0.0263	0.0255	0.0248
6.7	0.0107	0.0132	0.0145	0.0152	0.0171	0.0179	0.0186	0.0187	0.0206	0.0205
6.9	0.0126	0.0146	0.0144	0.0161	0.0161	0.0166	0.0174	0.0178	0.0174	0.0198
7.1	0.0104	0.0137	0.0140	0.0146	0.0149	0.0157	0.0155	0.0182	0.0182	0.0187
7.3	0.0104	0.0121	0.0140	0.0147	0.0148	0.0143	0.0138	0.0149	0.0163	0.0175
7.5	0.0100	0.0132	0.0131	0.0134	0.0150	0.0138	0.0137	0.0127	0.0148	0.0149
7.7	0.0094	0.0125	0.0125	0.0128	0.0139	0.0143	0.0151	0.0152	0.0159	0.0160
7.9	0.0091	0.0123	0.0119	0.0136	0.0145	0.0145	0.0143	0.0152	0.0152	0.0140
8.1	0.0100	0.0133	0.0127	0.0147	0.0128	0.0128	0.0140	0.0141	0.0143	0.0144
8.3	0.0093	0.0116	0.0120	0.0125	0.0135	0.0126	0.0130	0.0137	0.0151	0.0160
8.5	0.0100	0.0118	0.0117	0.0130	0.0147	0.0169	0.0149	0.0154	0.0154	0.0132
8.7	0.0106	0.0120	0.0131	0.0132	0.0129	0.0132	0.0140	0.0135	0.0137	0.0135
8.9	0.0090	0.0124	0.0119	0.0125	0.0130	0.0135	0.0127	0.0130	0.0140	0.0132

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Model: SPH 10000TL3 BH-UP, SPA 10000TL3 BH-UP										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Ordinal number (Ordnungszahl)	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2	0.0442	0.0738	0.1263	0.1850	0.2291	0.2747	0.3161	0.3478	0.3823	0.4168
3	0.3609	0.4134	0.4306	0.4451	0.4507	0.4548	0.4582	0.4576	0.4576	0.4576
4	0.0683	0.1077	0.1208	0.1567	0.2077	0.2436	0.2767	0.3264	0.3644	0.3920
5	0.5804	0.5811	0.5514	0.5666	0.6032	0.6080	0.6232	0.6494	0.6605	0.6667
6	0.0338	0.0393	0.0345	0.0359	0.0366	0.0393	0.0359	0.0373	0.0400	0.0366
7	0.2029	0.3195	0.3961	0.4693	0.5162	0.5590	0.5749	0.5866	0.6177	0.6425
8	0.0179	0.0317	0.0435	0.0407	0.0366	0.0283	0.0311	0.0345	0.0366	0.0442
9	0.0649	0.0504	0.0380	0.0435	0.0469	0.0490	0.0538	0.0531	0.0594	0.0607
10	0.0138	0.0166	0.0304	0.0407	0.0400	0.0400	0.0380	0.0338	0.0345	0.0359
11	0.0718	0.0200	0.1180	0.2050	0.2567	0.2754	0.2981	0.3209	0.3340	0.3375
12	0.0145	0.0138	0.0145	0.0152	0.0166	0.0173	0.0173	0.0179	0.0193	0.0179
13	0.0669	0.0449	0.0483	0.1297	0.1718	0.1925	0.2008	0.2084	0.2264	0.2319
14	0.0124	0.0131	0.0159	0.0235	0.0276	0.0235	0.0255	0.0262	0.0304	0.0262
15	0.0193	0.0207	0.0159	0.0214	0.0235	0.0242	0.0262	0.0276	0.0297	0.0311
16	0.0186	0.0207	0.0242	0.0359	0.0373	0.0331	0.0276	0.0283	0.0276	0.0276
17	0.0366	0.0400	0.0200	0.0462	0.0794	0.0973	0.1104	0.1166	0.1208	0.1325
18	0.0145	0.0145	0.0152	0.0159	0.0159	0.0159	0.0166	0.0166	0.0159	0.0145
19	0.0317	0.0462	0.0228	0.0455	0.0759	0.0883	0.0973	0.1014	0.1035	0.1035
20	0.0117	0.0145	0.0152	0.0214	0.0235	0.0242	0.0248	0.0235	0.0242	0.0228
21	0.0152	0.0131	0.0152	0.0138	0.0131	0.0131	0.0138	0.0131	0.0131	0.0131
22	0.0104	0.0110	0.0117	0.0131	0.0173	0.0186	0.0186	0.0207	0.0207	0.0193
23	0.0173	0.0255	0.0255	0.0235	0.0421	0.0531	0.0594	0.0663	0.0718	0.0780
24	0.0110	0.0117	0.0131	0.0131	0.0131	0.0124	0.0138	0.0145	0.0145	0.0145
25	0.0255	0.0255	0.0207	0.0173	0.0317	0.0435	0.0504	0.0552	0.0594	0.0621
26	0.0110	0.0110	0.0117	0.0124	0.0145	0.0152	0.0159	0.0179	0.0179	0.0186
27	0.0117	0.0117	0.0104	0.0117	0.0124	0.0117	0.0124	0.0117	0.0138	0.0138
28	0.0110	0.0110	0.0131	0.0131	0.0173	0.0173	0.0186	0.0179	0.0200	0.0173
29	0.0179	0.0159	0.0138	0.0152	0.0186	0.0255	0.0283	0.0331	0.0359	0.0407
30	0.0104	0.0117	0.0131	0.0117	0.0124	0.0145	0.0138	0.0159	0.0152	0.0152
31	0.0159	0.0110	0.0200	0.0193	0.0235	0.0283	0.0304	0.0366	0.0366	0.0386
32	0.0117	0.0110	0.0124	0.0124	0.0145	0.0131	0.0138	0.0159	0.0173	0.0179
33	0.0117	0.0117	0.0138	0.0131	0.0138	0.0138	0.0131	0.0138	0.0159	0.0166
34	0.0117	0.0110	0.0159	0.0145	0.0159	0.0173	0.0166	0.0179	0.0207	0.0179
35	0.0166	0.0138	0.0186	0.0200	0.0221	0.0255	0.0242	0.0283	0.0317	0.0304
36	0.0124	0.0138	0.0207	0.0200	0.0214	0.0235	0.0173	0.0228	0.0242	0.0193
37	0.0152	0.0173	0.0207	0.0207	0.0242	0.0262	0.0228	0.0297	0.0317	0.0297
38	0.0124	0.0145	0.0221	0.0228	0.0235	0.0242	0.0214	0.0235	0.0235	0.0242
39	0.0166	0.0152	0.0242	0.0255	0.0269	0.0269	0.0276	0.0297	0.0290	0.0297
40	0.0145	0.0166	0.0179	0.0173	0.0200	0.0200	0.0200	0.0207	0.0214	0.0207

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Inter-harmonics (Zwischenharmonische)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
75	0.1752	0.2137	0.2339	0.2714	0.2630	0.2953	0.3056	0.3428	0.3289	0.3469
125	0.0402	0.0599	0.0714	0.0790	0.0782	0.0912	0.0944	0.1021	0.0978	0.1028
175	0.0306	0.0442	0.0530	0.0573	0.0536	0.0585	0.0603	0.0632	0.0646	0.0674
225	0.0430	0.0761	0.0896	0.0937	0.0788	0.0812	0.0745	0.0786	0.0755	0.0762
275	0.0435	0.0576	0.0618	0.0671	0.0548	0.0478	0.0491	0.0529	0.0531	0.0550
325	0.0205	0.0486	0.0590	0.0650	0.0483	0.0512	0.0463	0.0499	0.0512	0.0509
375	0.0217	0.0443	0.0552	0.0597	0.0539	0.0466	0.0496	0.0471	0.0446	0.0437
425	0.0184	0.0213	0.0226	0.0222	0.0261	0.0245	0.0271	0.0274	0.0314	0.0285
475	0.0180	0.0224	0.0224	0.0245	0.0257	0.0259	0.0283	0.0252	0.0252	0.0273
525	0.0212	0.0221	0.0292	0.0324	0.0325	0.0318	0.0362	0.0324	0.0303	0.0342
575	0.0182	0.0207	0.0282	0.0316	0.0309	0.0294	0.0296	0.0299	0.0297	0.0299
625	0.0206	0.0206	0.0255	0.0297	0.0297	0.0263	0.0266	0.0241	0.0272	0.0260
675	0.0194	0.0191	0.0255	0.0314	0.0283	0.0303	0.0267	0.0310	0.0273	0.0289
725	0.0150	0.0191	0.0197	0.0206	0.0219	0.0218	0.0210	0.0244	0.0231	0.0227
775	0.0151	0.0180	0.0186	0.0203	0.0215	0.0213	0.0210	0.0211	0.0217	0.0203
825	0.0149	0.0182	0.0201	0.0219	0.0226	0.0236	0.0223	0.0239	0.0221	0.0222
875	0.0144	0.0189	0.0185	0.0202	0.0231	0.0226	0.0226	0.0213	0.0229	0.0233
925	0.0147	0.0187	0.0185	0.0191	0.0209	0.0209	0.0202	0.0201	0.0228	0.0217
975	0.0138	0.0181	0.0196	0.0216	0.0231	0.0216	0.0242	0.0239	0.0233	0.0239
1025	0.0130	0.0164	0.0186	0.0179	0.0192	0.0199	0.0212	0.0203	0.0204	0.0198
1075	0.0139	0.0165	0.0168	0.0183	0.0197	0.0189	0.0206	0.0203	0.0206	0.0188
1125	0.0137	0.0159	0.0180	0.0187	0.0201	0.0199	0.0205	0.0206	0.0193	0.0211
1175	0.0128	0.0159	0.0177	0.0180	0.0200	0.0194	0.0201	0.0202	0.0209	0.0214
1225	0.0137	0.0167	0.0178	0.0185	0.0203	0.0198	0.0195	0.0196	0.0193	0.0212
1275	0.0142	0.0175	0.0196	0.0199	0.0229	0.0216	0.0218	0.0229	0.0237	0.0237
1325	0.0134	0.0166	0.0177	0.0173	0.0193	0.0197	0.0207	0.0194	0.0197	0.0199
1375	0.0143	0.0167	0.0192	0.0190	0.0194	0.0190	0.0211	0.0208	0.0200	0.0212
1425	0.0130	0.0162	0.0173	0.0173	0.0192	0.0189	0.0190	0.0190	0.0201	0.0210
1475	0.0129	0.0154	0.0174	0.0174	0.0187	0.0188	0.0188	0.0197	0.0200	0.0215
1525	0.0134	0.0162	0.0172	0.0177	0.0191	0.0190	0.0203	0.0193	0.0213	0.0234
1575	0.0181	0.0186	0.0175	0.0181	0.0197	0.0199	0.0196	0.0198	0.0221	0.0214
1625	0.0133	0.0166	0.0179	0.0194	0.0198	0.0203	0.0201	0.0201	0.0216	0.0209
1675	0.0137	0.0166	0.0188	0.0193	0.0213	0.0210	0.0210	0.0200	0.0215	0.0216
1725	0.0140	0.0159	0.0194	0.0196	0.0222	0.0213	0.0241	0.0225	0.0244	0.0252
1775	0.0144	0.0166	0.0197	0.0211	0.0233	0.0243	0.0237	0.0237	0.0274	0.0287
1825	0.0151	0.0181	0.0220	0.0225	0.0244	0.0252	0.0254	0.0263	0.0287	0.0290
1875	0.0154	0.0182	0.0216	0.0219	0.0237	0.0236	0.0251	0.0257	0.0264	0.0270
1925	0.0160	0.0192	0.0207	0.0233	0.0243	0.0241	0.0244	0.0239	0.0252	0.0259
1975	0.0185	0.0207	0.0227	0.0237	0.0257	0.0257	0.0265	0.0263	0.0262	0.0270

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Bescheinigungsnummer): CN-PV-210126

Higher frequencies (Höhere Frequenzen)										
Active power (Wirkleistung) P/P_n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz (Frequency) [kHz]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]	I [%]
2.1	0.0136	0.0147	0.0162	0.0158	0.0174	0.0160	0.0171	0.0179	0.0172	0.0190
2.3	0.0109	0.0143	0.0201	0.0210	0.0210	0.0203	0.0219	0.0220	0.0213	0.0225
2.5	0.0089	0.0118	0.0127	0.0132	0.0131	0.0129	0.0135	0.0143	0.0163	0.0159
2.7	0.0089	0.0100	0.0124	0.0131	0.0136	0.0129	0.0135	0.0140	0.0145	0.0144
2.9	0.0088	0.0099	0.0110	0.0115	0.0138	0.0117	0.0133	0.0127	0.0141	0.0143
3.1	0.0080	0.0093	0.0120	0.0122	0.0117	0.0128	0.0137	0.0137	0.0137	0.0137
3.3	0.0092	0.0116	0.0125	0.0117	0.0130	0.0131	0.0129	0.0131	0.0136	0.0132
3.5	0.0103	0.0103	0.0110	0.0137	0.0142	0.0124	0.0130	0.0121	0.0141	0.0138
3.7	0.0084	0.0112	0.0113	0.0111	0.0112	0.0128	0.0151	0.0136	0.0135	0.0138
3.9	0.0093	0.0114	0.0118	0.0125	0.0122	0.0131	0.0128	0.0134	0.0130	0.0125
4.1	0.0104	0.0113	0.0121	0.0120	0.0130	0.0126	0.0130	0.0137	0.0148	0.0146
4.3	0.0088	0.0106	0.0127	0.0119	0.0120	0.0138	0.0128	0.0127	0.0129	0.0121
4.5	0.0095	0.0109	0.0122	0.0129	0.0135	0.0132	0.0128	0.0133	0.0126	0.0139
4.7	0.0086	0.0104	0.0113	0.0119	0.0120	0.0122	0.0127	0.0135	0.0145	0.0151
4.9	0.0085	0.0098	0.0111	0.0122	0.0117	0.0111	0.0134	0.0130	0.0130	0.0132
5.1	0.0097	0.0111	0.0127	0.0125	0.0132	0.0125	0.0127	0.0133	0.0134	0.0144
5.3	0.0081	0.0102	0.0119	0.0114	0.0119	0.0131	0.0125	0.0139	0.0137	0.0146
5.5	0.0086	0.0094	0.0111	0.0118	0.0122	0.0123	0.0128	0.0127	0.0123	0.0118
5.7	0.0083	0.0120	0.0124	0.0119	0.0127	0.0131	0.0136	0.0168	0.0150	0.0148
5.9	0.0099	0.0108	0.0118	0.0128	0.0136	0.0144	0.0154	0.0171	0.0197	0.0221
6.1	0.0102	0.0115	0.0124	0.0140	0.0157	0.0148	0.0151	0.0164	0.0186	0.0181
6.3	0.0090	0.0114	0.0125	0.0141	0.0134	0.0139	0.0135	0.0133	0.0146	0.0142
6.5	0.0089	0.0117	0.0126	0.0140	0.0171	0.0174	0.0183	0.0178	0.0186	0.0179
6.7	0.0094	0.0111	0.0121	0.0122	0.0125	0.0131	0.0144	0.0143	0.0152	0.0154
6.9	0.0103	0.0131	0.0141	0.0142	0.0143	0.0147	0.0162	0.0157	0.0158	0.0159
7.1	0.0086	0.0099	0.0114	0.0116	0.0122	0.0130	0.0125	0.0141	0.0156	0.0158
7.3	0.0091	0.0093	0.0113	0.0108	0.0121	0.0113	0.0127	0.0118	0.0135	0.0137
7.5	0.0097	0.0112	0.0128	0.0122	0.0122	0.0124	0.0131	0.0119	0.0132	0.0120
7.7	0.0078	0.0103	0.0116	0.0108	0.0112	0.0111	0.0119	0.0120	0.0124	0.0115
7.9	0.0083	0.0089	0.0098	0.0109	0.0111	0.0112	0.0110	0.0110	0.0108	0.0113
8.1	0.0089	0.0110	0.0114	0.0118	0.0110	0.0117	0.0128	0.0114	0.0115	0.0132
8.3	0.0079	0.0089	0.0139	0.0109	0.0110	0.0114	0.0114	0.0119	0.0114	0.0121
8.5	0.0096	0.0093	0.0090	0.0115	0.0135	0.0100	0.0110	0.0110	0.0104	0.0111
8.7	0.0086	0.0115	0.0104	0.0116	0.0124	0.0130	0.0124	0.0109	0.0120	0.0129
8.9	0.0079	0.0097	0.0113	0.0101	0.0109	0.0109	0.0106	0.0104	0.0103	0.0101

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Dieses Zertifikat ist ausschließlich für den Kunden von Intertek bestimmt und wird gemäß der Vereinbarung zwischen Intertek und seinem Kunden zur Verfügung gestellt. Die Verantwortung und Haftung von Intertek ist auf die Vertragsbedingungen beschränkt. Intertek übernimmt keine Haftung gegenüber anderen Parteien als dem Kunden gemäß der Vereinbarung für Verluste, Kosten oder Schäden, die durch die Verwendung dieses Zertifikats entstehen. Nur der Kunde ist berechtigt, das Kopieren oder Verteilen dieses Zertifikats zuzulassen. Jede Verwendung des Intertek-Namens oder einer seiner Marken für den Verkauf oder die Werbung für das getestete Material, Produkt oder die getestete Dienstleistung muss zuerst von Intertek schriftlich genehmigt werden.

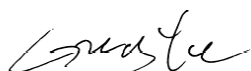
Certificate of Conformity

Certificate Number: CN-PV-210189

On the basis of the tests undertaken, the samples of the below product have been found to comply with the requirements of the referenced specifications/standards at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Shenzhen Growatt New Energy Co., Ltd 4-13/F,Building A,Sino-German(Europe) Industrial Park, Hangcheng Ave,Bao'an District,Shenzhen,China
Product:	Hybrid inverter / AC Coupled inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	SPH 4000TL3 BH-UP, SPH 5000TL3 BH-UP, SPH 6000TL3 BH-UP, SPH 7000TL3 BH-UP, SPH 8000TL3 BH-UP, SPH 10000TL3 BH-UP, SPA 4000TL3 BH-UP, SPA 5000TL3 BH-UP, SPA 6000TL3 BH-UP, SPA 7000TL3 BH-UP, SPA 8000TL3 BH-UP, SPA 10000TL3 BH-UP
Brand Name:	GROWATT
Tested according to:	IEC/EN 62109-1:2010 (First Edition) Safety of Power Converter for use in Photovoltaic Power Systems Part 1: General requirements IEC/EN 62109-2:2011 Safety of Power Converter for use in Photovoltaic Power Systems Part 2: Particular requirements for inverters
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China
Test Report No.<s>:	210121007GZU-001, 210121007GZU-002

Additional information in Appendix.



Signature

Certification Manager: Grady Ye

Date: 25 August 2021

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210189

Model	SPH 4000 TL3 BH-UP	SPH 5000 TL3 BH-UP	SPH 6000 TL3 BH-UP	SPH 7000 TL3 BH-UP	SPH 8000TL3 BH-UP	SPH 10000 TL3 BH-UP
Input data(DC)						
Max. DC voltage	1000V	1000V	1000V	1000V	1000V	1000V
Max. input current per MPP trackers	13.5A*2	13.5A*2	13.5A*2	13.5A*2	13.5A*2	13.5A*2
Max. short-circuit current per MPP trackers	16.9A*2	16.9A*2	16.9A*2	16.9A*2	16.9A*2	16.9A*2
Input/Output data(AC)						
Nominal input/output power	6000/ 4000W	7500/ 5000W	9000/ 6000W	10500/ 7000W	12000/ 8000W	15000/ 10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
AC grid frequency	50/60Hz;					
Max. input/output current	9.1/6.1A	11.4/7.6A	13.6/9.1A	15.9/10.6A	18.2/12.1A	22.7/15.2A
Power factor	0.8leading ~ 0.8lagging					
Stand alone(AC power)						
AC nominal output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000 VA	6000 VA	7000 VA	8000 VA	10000 VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
Nominal AC frequency	50/60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Battery data (DC)						
Battery voltage range	100~550V					
Max. charging / discharging current	25A					
Continuous charging / discharging power	4000W	5000W	6000W	7000W	8000W	10000W
Type of battery	lithium battery / Lead-acid battery					
Capacity of battery	7.68-76.8kWh					
Others						
Technology	Transformerless					
Protection degree	IP 65					
Operating temperature range	-25 °C ~ +60 °C With derating above 45 °C					
Pollution degree	III					
Protective Class	Class I					
Software version	YA1.0					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210189

Model	SPA 4000 TL3 BH-UP	SPA 5000 TL3 BH-UP	SPA 6000 TL3 BH-UP	SPA 7000 TL3 BH-UP	SPA 8000 TL3 BH-UP	SPA 10000 TL3 BH-UP
Output data(AC)						
Nominal input/output power	6000/ 4000W	7500/ 5000W	9000/ 6000W	10500/ 7000W	12000/ 8000W	15000/ 10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
AC grid frequency	50/60Hz;					
Max. input/output current	9.1/6.1A	11.4/7.6A	13.6/9.1A	15.9/10.6A	18.2/12.1A	22.7/15.2A
Power factor	0.8leading ~ 0.8lagging					
Stand alone(AC power)						
AC nominal output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000 VA	6000 VA	7000 VA	8000 VA	10000 VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
Nominal AC frequency	50/60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Battery data (DC)						
Battery voltage range	100~550V					
Max. charging / discharging current	25A					
Type of battery	lithium battery / Lead-acid battery					
Capacity of battery	7.68-76.8kWh					
Others						
Technology	Transformerless					
Protection degree	IP 65					
Operating temperature range	-25 °C ~ +60 °C With derating above 45 °C					
Pollution degree	III					
Protective Class	Class I					
Software version	YA1.0					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

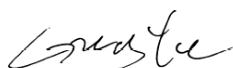
Certificate of Conformity

Certificate Number: CN-PV-210211

On the basis of the tests undertaken, the samples of the below product have been found to comply with the requirements of the referenced specifications/standards at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Shenzhen Growatt New Energy Co., Ltd 4-13/F,Building A,Sino-German(Europe) Industrial Park,Hangcheng Ave,Bao'an District,Shenzhen,China
Product:	Hybrid inverter / AC Coupled inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	SPH 4000TL3 BH-UP, SPH 5000TL3 BH-UP, SPH 6000TL3 BH-UP, SPH 7000TL3 BH-UP, SPH 8000TL3 BH-UP, SPH 10000TL3 BH-UP, SPA 4000TL3 BH-UP, SPA 5000TL3 BH-UP, SPA 6000TL3 BH-UP, SPA 7000TL3 BH-UP, SPA 8000TL3 BH-UP, SPA 10000TL3 BH-UP
Brand Name:	GROWATT
Tested according to:	EN IEC 61000-6-3:2021/IEC 61000-6-3:2020 EN IEC 61000-6-1:2019/IEC 61000-6-1:2016 EN IEC 61000-3-2:2019/IEC 61000-3-2:2018+A1:2020 EN 61000-3-3:2013+A1:2019/IEC 61000-3-3:2013+A1:2017
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China
Test Report No.<s>:	210121011GZU-001

Additional information in Appendix.



Signature

Certification Manager: Grady Ye
Date: 08 September 2021

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210211

Model Specifications	SPH 4000 TL3 BH- UP	SPH 5000 TL3 BH- UP	SPH 6000 TL3 BH- UP	SPH 7000 TL3 BH-UP	SPH 8000TL3 BH-UP	SPH 10000 TL3 BH-UP
Input data(DC)						
Max. DC voltage	1000V	1000V	1000V	1000V	1000V	1000V
Start voltage	120V	120V	120V	120V	120V	120V
Nominal voltage	600V	600V	600V	600V	600V	600V
MPP voltage range	120~1000V	120~1000V	120~1000V	120~1000V	120~1000V	120~1000V
No. of MPP trackers	2	2	2	2	2	2
No. of PV strings per MPP trackers	1	1	1	1	1	1
Max. input current per MPP trackers	13.5A*2	13.5A*2	13.5A*2	13.5A*2	13.5A*2	13.5A*2
Max. short-circuit current per MPP trackers	16.9A*2	16.9A*2	16.9A*2	16.9A*2	16.9A*2	16.9A*2
Input/Output data(AC)						
Nominal input/output power	6000/ 4000W	7500/ 5000W	9000/ 6000W	10500/ 7000W	12000/ 8000W	15000/ 10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
AC grid frequency	50/60Hz;					
Max. input/output current	9.1/6.1A	11.4/7.6A	13.6/9.1A	15.9/10.6A	18.2/12.1A	22.7/15.2A
Power factor	0.8leading ~ 0.8lagging					
Stand alone(AC power)						
AC nominal output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000 VA	6000 VA	7000 VA	8000 VA	10000 VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
Nominal AC frequency	50/60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Battery data (DC)						
Battery voltage range	100~550V					
Max. charging / discharging current	25A					
Continuous charging / discharging power	4000W	5000W	6000W	7000W	8000W	10000W
Type of battery	lithium battery / Lead-acid battery					
Capacity of battery	7.68-76.8kWh					
Others						
Technology	Transformerless					
Protection degree	IP 65					
Operating temperature range	-25 °C ~ +60 °C With derating above 45 °C					
Pollution degree	III					
Protective Class	Class I					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210211

Model Specifications	SPA 4000 TL3 BH- UP	SPA 5000 TL3 BH- UP	SPA 6000 TL3 BH- UP	SPA 7000 TL3 BH- UP	SPA 8000 TL3 BH- UP	SPA 10000 TL3 BH-UP
Output data(AC)						
Nominal input/output power	6000/ 4000W	7500/ 5000W	9000/ 6000W	10500/ 7000W	12000/ 8000W	15000/ 10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
AC grid frequency	50/60Hz;					
Max. input/output current	9.1/6.1A	11.4/7.6A	13.6/9.1A	15.9/10.6A	18.2/12.1A	22.7/15.2A
Power factor	0.8leading ~ 0.8lagging					
Stand alone(AC power)						
AC nominal output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000 VA	6000 VA	7000 VA	8000 VA	10000 VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
Nominal AC frequency	50/60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Battery data (DC)						
Battery voltage range	100~550V					
Max. charging / discharging current	25A					
Type of battery	lithium battery / Lead-acid battery					
Capacity of battery	7.68-76.8kWh					
Others						
Technology	Transformerless					
Protection degree	IP 65					
Operating temperature range	-25 °C ~ +60 °C With derating above 45 °C					
Pollution degree	III					
Protective Class	Class I					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Certificate of Conformity

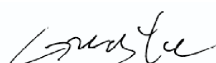
Certificate Number: CN-PV-210129

On the basis of the tests undertaken, the samples of the below product have been found to comply with the requirements of the referenced specifications /standards at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture. The manufacturer shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant Name & Address:	Shenzhen Growatt New Energy Co., Ltd. 2F and 3F,Building 4,Jiayu Company Industrial Park,Xibianling, Shangyu Village,Shiyan Street,Bao'an District,Shenzhen,China
Product Description:	Hybrid inverter / AC Coupled inverter
Ratings & Principle Characteristics:	See Annex to Certificate of Conformity
Models/Type References:	SPH 4000TL3 BH-UP, SPH 5000TL3 BH-UP, SPH 6000TL3 BH-UP, SPH 7000TL3 BH-UP, SPH 8000TL3 BH-UP, SPH 10000TL3 BH-UP, SPA 4000TL3 BH-UP, SPA 5000TL3 BH-UP, SPA 6000TL3 BH-UP, SPA 7000TL3 BH-UP, SPA 8000TL3 BH-UP, SPA 10000TL3 BH-UP
Brand Name:	GROWATT
Specification/Standard:	EN 50549-1: February 2019, Requirements for generating plants to be connected in parallel with distribution networks Part 1: Connection to a LV distribution network - Generating plants up to and including Type B Type approval for type B
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2 nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China
Test Report Number:	210121014GZU-007

According to Annex H of the standard EN 50549 1:2019, generating plants compliant with the clauses of this European Standard are considered to be compliant with the relevant Article of COMMISSION REGULATION (EU) 2016/631, provided, that all settings as provided by the DSO and the responsible party are complied with.

Additional information in Appendix.



Signature

Certification Manager: Grady Ye

Date: 03 June 2021

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210129.

Model	SPH 4000 TL3 BH-UP	SPH 5000 TL3 BH-UP	SPH 6000 TL3 BH-UP	SPH 7000 TL3 BH-UP	SPH 8000 TL3 BH-UP	SPH 10000 TL3 BH-UP
Input data(DC)						
Max. recommended PV power (for module STC)	6000W	7500W	9000W	10500W	12000W	15000W
Max. DC voltage	1000V	1000V	1000V	1000V	1000V	1000V
Start voltage	120V	120V	120V	120V	120V	120V
Nominal voltage	600V	600V	600V	600V	600V	600V
MPP voltage range	120~1000V	120~1000V	120~1000V	120~1000V	120~1000V	120~1000V
No. of MPP trackers	2	2	2	2	2	2
No. of PV strings per MPP trackers	1	1	1	1	1	1
Max. input current per MPP trackers	13.5/13.5A	13.5/13.5A	13.5/13.5A	13.5/13.5A	13.5/13.5A	13.5/13.5A
Max. short-circuit current per MPP trackers	16.9A/16.9A	16.9A/16.9A	16.9A/16.9A	16.9A/16.9A	16.9A/16.9A	16.9A/16.9A
Output / Input data(AC)						
AC nominal power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
AC grid frequency	50 Hz;					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Power factor	0.8leading ~ 0.8lagging					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210129.

Stand alone(AC power)						
AC nominal output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000 VA	6000 VA	7000 VA	8000 VA	10000 VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
Nominal AC frequency	50/60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Battery data (DC)						
Battery voltage range	100~550V					
Max. charging / discharging current	25A					
Continuous charging / discharging power	4000W	5000W	6000W	7000W	8000W	10000W
Type of battery	lithium battery / Lead-acid battery					
Capacity of battery	7.68~76.8kWh					
Others						
Technology	Transformerless					
Protection degree	IP 65					
Operating temperature range	-25 °C ~ +60 °C With derating above 45 °C					
Pollution degree	III					
Protective Class	Class I					
Software Version	YA1.0					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210129.

Model	SPA 4000 TL3 BH-UP	SPA 5000 TL3 BH-UP	SPA 6000 TL3 BH-UP	SPA 7000 TL3 BH-UP	SPA 8000 TL3 BH-UP	SPA 10000 TL3 BH-UP
Output / Input data(AC)						
AC nominal power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
AC grid frequency	50Hz;					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Power factor	0.8leading ~ 0.8lagging					
Stand alone(AC power)						
AC nominal output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000 VA	6000 VA	7000 VA	8000 VA	10000 VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
Nominal AC frequency	50/60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Battery data (DC)						
Battery voltage range	100~550V					
Max. charging / discharging current	25A					
Type of battery	lithium battery / Lead-acid battery					
Capacity of battery	7.68~76.8kWh					
Others						
Technology	Transformerless					
Protection degree	IP 65					
Operating temperature range	-25 °C ~ +60 °C With derating above 45 °C					
Pollution degree	III					
Protective Class	Class I					
Software Version	YA1.0					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210129.

Interface protection settings according to EN 50549-1:2019			
Parameter	Max. disconnection time	Min. operate time	Trip value
Undervoltage threshold stage 1 [27 <]	100s	0.1s (0.1 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Undervoltage threshold stage 2 [27 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Overvoltage threshold stage 1 [59 >]	100s	0.1s (0.1 s steps)	Trip value Config. from 1.0 to 1.2 Un (0.01 Un steps)
Overvoltage threshold stage 2 [59 >>]	5s	0.1s (0.05 s steps)	Trip value Config. from 1.0 to 1.3 Un (0.01 Un steps)
Overvoltage 10 min mean protection	Trip time Config ≤ 3s not adjustable Time delay setting = 0 ms		Trip value Config. from 1.0 to 1.15Un (0.01 Un steps)
Underfrequency threshold stage 1 [81 <]	100s	0.1s (0.1s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Underfrequency threshold stage 2 [81 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Overfrequency threshold stage 1 [81 >]	100s	0.1s (0.1s steps)	Trip value Config. from 50.0 to 52.0Hz (0.1Hz steps)
Overfrequency threshold stage 2 [81 >>]	5s	0.1s (0.05 s steps)	Trip value Config. from 50.0 to 52.0Hz (0.1Hz steps)
Starting to and reconnection settings for voltage	50%-120% adjustable, 85%Un ≤ U ≤ 1.10Un default		
Starting to generate electrical power	47Hz – 52Hz adjustable, 49.5Hz ≤ U ≤ 50.1Hz default		
Reconnection settings for frequency	47Hz – 52Hz adjustable, 49.5Hz ≤ U ≤ 50.2Hz default		
Observation time	10s-60s adjustable, 60s default		
Active power increase gradient	6%-3000%/min adjustable, 10%/min default		
Permanent DC injection	0.5% of rated inverter output		
Loss of mains according to EN 62116	Within 2s		

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

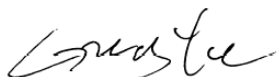
Certificate of Conformity

Certificate Number: CN-PV-210128

On the basis of the tests undertaken, the samples of the below product have been found to comply with the requirements of the referenced specifications /standards at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture. The manufacturer shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Shenzhen Growatt New Energy Co., Ltd. 2F and 3F,Building 4, Jiayu Company Industrial Park,Xibianling,Shangyu Village,Shiyan Street,Bao'an District,Shenzhen,China
Product:	Hybrid inverter / AC Coupled inverter
Ratings & Principle Characteristics:	See Appendix to Certificate of Conformity
Models:	SPH 4000TL3 BH-UP, SPH 5000TL3 BH-UP, SPH 6000TL3 BH-UP, SPH 7000TL3 BH-UP, SPH 8000TL3 BH-UP, SPH 10000TL3 BH-UP SPA 4000TL3 BH-UP, SPA 5000TL3 BH-UP, SPA 6000TL3 BH-UP, SPA 7000TL3 BH-UP, SPA 8000TL3 BH-UP, SPA 10000TL3 BH-UP
Brand Name:	GROWATT
Tested according to:	IEC 61727:2004 Photovoltaic (PV) systems – Characteristics of the utility interface IEC 62116:2014 Test procedure of islanding prevention measures for utility-interconnected photovoltaic inverters
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2 nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China
Test Reports No:	210121014GZU-005 210121014GZU-006

Additional information in Appendix.



Signature

Certification Manager: Grady Ye

Date: 03 June 2021

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210128

Model	SPH 4000 TL3 BH-UP	SPH 5000 TL3 BH-UP	SPH 6000 TL3 BH-UP	SPH 7000 TL3 BH-UP	SPH 8000 TL3 BH-UP	SPH 10000 TL3 BH-UP
Input data(DC)						
Max. recommended PV power (for module STC)	6000W	7500W	9000W	10500W	12000W	15000W
Max. DC voltage	1000V	1000V	1000V	1000V	1000V	1000V
Start voltage	120V	120V	120V	120V	120V	120V
Nominal voltage	600V	600V	600V	600V	600V	600V
MPP voltage range	120~1000V	120~1000V	120~1000V	120~1000V	120~1000V	120~1000V
No. of MPP trackers	2	2	2	2	2	2
No. of PV strings per MPP trackers	1	1	1	1	1	1
Max. input current per MPP trackers	13.5/13.5A	13.5/13.5A	13.5/13.5A	13.5/13.5A	13.5/13.5A	13.5/13.5A
Max. short-circuit current per MPP trackers	16.9A/16.9A	16.9A/16.9A	16.9A/16.9A	16.9A/16.9A	16.9A/16.9A	16.9A/16.9A
Output / Input data(AC)						
AC nominal power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
AC grid frequency	50/60Hz;					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Power factor	0.8leading ~ 0.8lagging					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210128.

Stand alone(AC power)						
AC nominal output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000 VA	6000 VA	7000 VA	8000 VA	10000 VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
Nominal AC frequency	50/60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Battery data (DC)						
Battery voltage range	100~550V					
Max. charging / discharging current	25A					
Continuous charging / discharging power	4000W	5000W	6000W	7000W	8000W	10000W
Type of battery	lithium battery / Lead-acid battery					
Capacity of battery	7.68~76.8kWh					
Others						
Technology	Transformerless					
Protection degree	IP 65					
Operating temperature range	-25 °C ~ +60 °C With derating above 45 °C					
Pollution degree	III					
Protective Class	Class I					
Software Version	YA1.0					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210128.

Model	SPA 4000 TL3 BH-UP	SPA 5000 TL3 BH-UP	SPA 6000 TL3 BH-UP	SPA 7000 TL3 BH-UP	SPA 8000 TL3 BH-UP	SPA 10000 TL3 BH-UP
Output / Input data(AC)						
AC nominal power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
AC grid frequency	50/60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Power factor	0.8leading ~ 0.8lagging					
Stand alone(AC power)						
AC nominal output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000 VA	6000 VA	7000 VA	8000 VA	10000 VA
Nominal AC voltage	3W+N+PE , 230V/400V;					
Nominal AC frequency	50/60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Battery data (DC)						
Battery voltage range	100~550V					
Max. charging / discharging current	25A					
Type of battery	lithium battery / Lead-acid battery					
Capacity of battery	7.68~76.8kWh					
Others						
Technology	Transformerless					
Protection degree	IP 65					
Operating temperature range	-25 °C ~ +60 °C With derating above 45 °C					
Pollution degree	III					
Protective Class	Class I					
Software Version	YA1.0					

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.