Block battery Ni-Cd range

SBLE, SBM, SBH types for standard range
Installation & operating instructions for Block battery range

Safety precautions

- **WARNING: Risk of fire, explosion, or burns. Do not disassemble, heat above +70°C (+158°F), or incinerate.**
- **Never smoke while performing any operation on the battery.**
- **For protection, wear rubber gloves, long sleeves and appropriate splash goggles or face shield.**
- **The electrolyte is harmful to skin and eyes. In the event of contact with skin or eyes, wash immediately with plenty of water. If eyes are affected, flush with water, and obtain immediate medical attention.**
- **Remove all rings, watches and other items with metal parts before working on the battery.**
- **Use insulated tools.**
- **Avoid static electricity and take measurements for protection against electric shocks.**
- **Discharge any possible static electricity from clothing and/or tools by touching an earth-connected part "ground" before working on the battery.**
- **Ventilation, in accordance with the IEC 62485-2 standard, is mandatory during commissioning and operation**

1. Receiving the shipment

Do not overturn the package. Upon receipt of the goods, any transportation damage, electrolyte spillage or irregularities must be reported to the carrier and to Saft.

If the cells are shipped filled and charged, the cells are ready for assembly. Storage of cells must not exceed the maximum storage time indicated on the packing case.

2. Storage

To ensure maximum protection of the cells, always store the product in its original packaging.

The cells must be stored in a dry, clean and well-ventilated indoor location, away from sunlight and other UV-sources at an ambient temperature between 0°C and +30°C (+32°F and +86°F).

Storage of cells at temperatures above +30°C (+86°F) can result in permanent change and loss of product performance.

Cells filled and charged

Cells may be stored filled and charged for a period not exceeding 12 months from the date of manufactory. Storage longer than that can result in permanent change and loss of product performance

Cells empty and discharged

Saft recommends to store cells empty and discharged, following our recommendations, between 0°C and +30°C (+32°F and +86°F).

Cells can be stored like this for many years.

3. Installation

3.1. Location

Install the battery in a dry and clean room. Avoid heat, direct sunlight and other UV-source.

The battery will give the best performance when the ambient temperature is between +10°C to +30°C (+50°F to +86°F).

3.2. Mounting

For cells with handles, both must be used when lifting and moving. To prevent electrolyte spillage, do not tip cells.

Verify that cells are correctly interconnected with the appropriate polarity and that the connectors are correctly torqued.

Connections between the battery and the load shall be made with nickel plated cable lugs. Tightening torque for the terminals must be:

• M 6 = 11 ± 1.1 N m (97.4 ± 9.8 lbf.in)

• M 8 = 20 ± 2 N m (177.0 ± 17.7 lbf.in)

• M10 = 30 ± 3 N m (265.0 ± 26.6 lbf.in)

The connectors and terminals should be corrosion-protected by coating with a thin layer of anti-corrosion oil, grease (NO-OX) or approved equal.

3.3. Ventilation

During operation the battery emits a gas mixture of oxygen and hydrogen.

Ventilation inside the battery room must be adequately managed, comply with IEC 62485-2 and local regulations.

To calculate the required ventilation, contact your local Saft representant or use Saft sizing tool, BaSiCs.

3.4. Electrolyte

Cells filled and charged

If electrolyte is ever spilled from a cell and the level is below the minimum level mark (lower), then refilling with E22 electrolyte is required. Contact your local Saft representative for more details.

Cells empty and discharged

Important: The commissioning charge must start within 24 hours but not before 4 hours after the electrolyte has been filled.

If the electrolyte is supplied dry, prepare it according to its separate instructions sheet. The electrolyte to be used is E22. Fill the cells about 20 mm above the minimum level mark (lower) with electrolyte. Then add 25 ml of the cell oil to each vent hole.

4. Commissioning

Verify that the vents are closed and ventilation, in accordance with the IEC 62485-2 standard is provided during this operation.

A good commissioning is important and mandatory. After commissioning, the battery must be charged permanently according to section 5.

Prior and during commissioning charge, record all data requested in SAFT's commissioning report available on saft4u.saft.com.

The cell container temperature is to be monitored during commissioning charge. If the temperature exceeds +45°C (+113°F) during charging, then it must be stopped to reduce the temperature. The charging can be resumed when cell container temperature drops below ambient temperature.

Block battery Ni-Cd range

Note: When full battery performance is required for capacity test purposes, the battery has to be charged in accordance with IEC 60623 section 7 (7.2 & 7.3).

4.1. Cells filled and charged by the factory stored up to 6 months

Always conduct a commissioning charge before use.

4.1.1 Constant current charge

Charge for 10 h at 0.2 C_5 A (see Table A).

If the current limit is lower than indicated in the table A, extend the charge time proportionally.

Note: At the end of the charge, the cell voltage may reach the level of 1.80 V per cell, thus the charger shall be able to supply such voltage. When the charger maximum voltage setting is too low to supply constant current charging, divide the battery into two parts to be charged individually.

4.1.2 Constant voltage charge

Cells filled and charged by the factory

Charge for 24 h at 1.65 V/cell, current limited to 0.2 C_5 A or charge for 48 h at 1.55 V/cell, current limited to 0.2 C_5 A (see Table A).

4.2. Cells filled and charged by the factory stored for more than 6 months or cells empty and discharged filled on location

Always conduct a commissioning charge before use.

4.2.1 Constant current charge

Charge for 10 h at 0.2 C_5 A (see Table A)

Discharge at 0.2 C_5 A to 1.0 V/cell

Charge for 10 h at 0.2 C_5 A (see Table A).

If the current limit is lower than indicated in the table A, extend the charge time proportionally.

Note: At the end of the charge, the cell voltage may reach the level of 1.80 V per cell, thus the charger shall be able to supply such voltage. When the charger maximum voltage setting is too low to supply constant current charging, divide the battery into two parts to be charged individually.

4.2.2. Constant voltage charge

Charge for 30 h at 1.65 V/cell with current limited to 0.2 C_5 A (see Table A).

Discharge at 0.2 C_5 A to 1.0 V/cell

Charge for 30 h at 1.65 V/cell with current limited to 0.2 C_5 A or charge for 48 h at 1.55 V/cell current limited to 0.2 C_5 A (see Table A).

4.3.Electrolyte adjustment after commissioning

4.3.1 Cells filled and charged by the factory

Check the electrolyte level and adjust it to the maximum level mark (upper) by adding distilled or deionized water.

4.3.2 Cells empty and discharged filled on location

Check the electrolyte level and adjust it to the maximum level mark (upper) by adding E22 electrolyte.

5. Charging in service

Maintaining the recommended battery charging voltage is very important to ensure long life to the battery. The battery charger must be set to the recommended charging values.

To minimizes the need for topping-up maintenance at high temperatures and increases the charge acceptance at low temperatures. Temperature Compensated Voltage (TCV) is optional and the conditions to apply TCV depend on ambient operating temperature.

TCV from -20°C to +20°C (-4°F to +68°F) increase the charge voltage by 3 mV/°C/cell (+1.7 mV/°F/cell) and from +20°C to +40°C (+68°F to +104°F) decrease the charge voltage by 3 mV/°C/cell (–1.7 mV/°F/cell).

5.1. Continuous standby operation, with occasional battery discharge.

Recommended charging voltage at +20°C to +25°C (+68°F to +77°F):

• Single level charge:

1.43 - 1.50 ± 0.01 V/cell

• Two level charge:

Float level

1.42 ± 0.01 V/cell for L cells

1.40 ± 0.01 V/cell for M and H cells

High rate (boost) level

1.47 - 1.70 ± 0.01 V/cell for L cells

1.45 - 1.70 ± 0.01 V/cell for M and H cells.

A high voltage will increase the speed and efficiency of the recharging.

5.2. Buffer operation, where the load exceeds the charger rating.

Recommended charging voltage at +20°C to +25°C (+68°F to +77°F):

1.50 - 1.60 ±0.01 V/cell

6. Preventive maintenance

It is good practice with any system to carry out an inspection of the system once per year or at the recommended topping-up interval period to ensure that the charging system, the battery and the ancillary electronics are all functioning correctly. Additionally, follow your standard preventative maintenance procedures.

Keep the battery clean using only deionized or distilled water. Do not use a wire brush or solvents of any kind. Vent plugs can be rinsed in clean (warm) water if necessary.

It is important that the recommended charging voltage remains unchanged. The charging voltage should be checked and recorded at least once yearly. If a cell float voltage is found below 1.35 V/cell, high-rate charge isrecommended to apply to the cell concerned.

High water consumption is usually caused by an improper voltage setting or voltage drift that is above the recommended in-service charging voltages. To maximize the topping-up interval check the charging voltage and adjust as required.

Visually check the electrolyte level. Never let the level fall below the minimum level mark. Use only distilled or deionized water to top-up (see Table A for the quantity of water per cell).

Electrolyte density measurements do not indicate state of charge or state of health.

Ensure all terminals and connectors are coated with a thin layer of anti-corrosion oil, anti-corrosion grease (NO-OX) or approved equal.

Note that all these maintenance recommendations followed the IEEE 1106 standard 'Recommended Practice for Installation, Maintenance, Testing and Replacement of Vented Nickel-Cadmium Batteries for Stationary Applications'.

6.1. Changing Electrolyte

In most stationary battery applications, the electrolyte will retain its effectiveness for the life of the battery. However, under special battery operating conditions, if the electrolyte is found to be carbonated, the battery performance can be restored by replacing the electrolyte.

The electrolyte type to be used for replacement is E13 according 'Electrolyte Instructions'.

7. Environment

To protect the environment all used batteries must be recycled. Contact your local Saft representative for further information.

Table A

Cell type	Capacity	Charging current	Electrolyte vol. between level marks	Electrolyte per cell		Cell connection bolt per pole
	C_5 Ah	0.2 C_5A	cm³	kg	L	
SBLE 7.5	7,5	1,5	87	0,08	0,24	M6
SBLE 15	15	3.0	87	0,12	0,35	M6
SBLE 22	22	4.4	129	0,17	0,53	M6
SBLE 30	30	6.0	129	0,15	0,46	M6
SBLE 34	34	6.8	177	0,23	0,70	M6
SBLE 40	40	8.0	224	0,29	0,90	M6
SBLE 47	47	9.4	177	0,20	0,59	M6
SBLE 62	62	12.4	224	0,25	0,70	M6
SBLE 70	70	14.0	299	0,33	1,00	M8
SBLE 75	75	15.0	299	0,38	1,20	M8
SBLE 85	85	17.0	299	0,45	1,40	M8
SBLE 95	95	19.0	299	0,45	1,20	M8
SBLE 100	100	20.0	404	0,49	1,50	M10
SBLE 110	110	22.0	404	0,52	1,60	M10
SBLE 125	125	25.0	404	0,58	1,70	M10
SBLE 140	140	28.0	404	0,58	1,80	M10
SBLE 149	149	29.8	510	0,59	1,80	M10
SBLE 165	165	33.0	510	0,71	2,20	M10
SBLE 176	176	35.2	624	0,72	2,20	M10
SBLE 185	185	37.0	510	0,71	2,00	M10
SBLE 200	200	40.0	624	0,86	2,60	M10
SBLE 215	215	43.0	624	0,86	2,60	M10
SBLE 220	220	44.0	729	0,81	2,50	M10
SBLE 230	230	46.0	624	0,86	2,70	M10
SBLE 255	255	51.0	729	1,00	3,00	M10
SBLE 275	275	55.0	729	1,00	2,90	M10
SBLE 285	285	57.0	729	0,98	3,00	M10
SBLE 300	300	60.0	914	1,29	3,90	2xM10
SBLE 325	325	65.0	914	1,29	3,50	2xM10
SBLE 334	334	66.8	1019	1,27	3,90	2xM10
SBLE 344	344	68.8	1019	1,40	4,30	2xM10
SBLE 355	355	71.0	1019	1,42	4,30	2xM10
SBLE 365	365	73.0	1019	1,42	4,30	2xM10
SBLE 375	375	75.0	1019	1,42	4,00	2xM10
SBLE 395	395	79.0	1133	1,57	4,70	2xM10
SBLE 415	415	83.0	1133	1,57	4,30	2xM10
SBLE 425	425	85.0	1133	1,53	4,70	2xM10
SBLE 435	435	87.0	1247	1,73	5,20	2xM10
SBLE 460	460	92.0	1247	1,73	4,60	2xM10
SBLE 470	470	94.0	1247	1,69	5,20	2xM10
SBLE 480	480	96.0	1353	1,86	5,60	2xM10
SBLE 500	500	100.0	1353	1,86	5,60	2xM10
SBLE 510	510	102.0	1353	1,86	5,20	2xM10
SBLE 550	550	110.0	1458	1,99	5,80	2xM10
SBLE 570	570	114.0	1458	1,95	6,00	2xM10
SBLE 600	600	120.0	1643	2,28	6,30	3xM10
SBLE 620	620	124.0	1643	2,21	6,80	3xM10
SBLE 650	650	130.0	1757	2,44	6,60	3xM10
SBLE 700	700	140.0	1871	2,59	6,90	3xM10
SBLE 750	750	150.0	1977	2,72	7,50	3xM10
SBLE 762	762	152.4	1977	2,72	8,10	3xM10
SBLE 790	790	158.0	2082	2,85	8,50	3xM10
SBLE 830	830	166.0	2187	2,99	8,70	3xM10
SBLE 855	855	171.0	2187	2,89	8,90	3xM10
SBLE 890	890	178.0	2381	3,30	9,80	4xM10
SBLE 905	905	181.0	2381	3,18	9,80	4xM10
SBLE 925	925	185.0	2495	3,45	9,20	4xM10
SBLE 980	980	196.0	2600	3,58	10,70	4xM10
SBLE 1000	1000	200.0	2706	3,72	11,10	4xM10
SBLE 1020	1020	204.0	2706	3,76	11,30	4xM10
SBLE 1070	1070	214.0	2811	3,85	11,50	4xM10
SBLE 1100	1100	220.0	2917	3,98	11,60	4xM10
SBLE 1125	1125	225.0	2917	3,87	11,90	4xM10
SBLE 1150	1150	230.0	3119	4,31	12,90	5xM10
SBLE 1200	1200	240.0	3224	4,45	12,10	5xM10
SBLE 1250	1250	250.0	3330	4,58	13,60	5xM10
SBLE 1300	1300	260.0	3426	4,69	13,60	5xM10
SBLE 1350	1350	270.0	3540	4,84	14,40	5xM10
SBLE 1400	1400	280.0	3646	4,98	14,50	5xM10
SBLE 1450	1450	290.0	3848	5,31	15,80	6xM10
SBLE 1500	1500	300.0	4059	5,58	15,60	6xM10
SBLE 1560	1560	312.0	4164	5,71	17,00	6xM10
SBLE 1600	1600	320.0	4270	5,84	16,80	6xM10
SBLE 1660	1660	332.0	4375	5,97	17,40	6xM10
SBLE 1690	1690	338.0	4375	5,97	17,80	6xM10
SBLE 1710	1710	342.0	4375	5,78	17,80	6xM10
SBM 11	11	2.2	109	0,09	0,30	M6
SBM 15	15	3.0	129	0,10	0,33	M6
SBM 22	22	4.4	109	0,13	0,46	M6
SBM 30	30	6.0	129	0,15	0,46	M6
SBM 39	39	7.8	177	0,28	0,70	M6
SBM 43	43	8.6	255	0,32	0,95	M6
SBM 46	46	9.2	224	0,29	0,90	M6
SBM 50	50	10.0	255	0,32	1,00	M6
SBM 55	55	11.0	224	0,36	1,10	M6
SBM 56	56	11.2	255	0,38	1,10	M6
SBM 65	65	13.0	299	0,37	1,00	M8
SBM 72	72	14.4	299	0,36	1,10	M8
SBM 77	77	15.4	353	0,46	1,40	2xM6
SBM 84	84	16.8	299	0,43	1,20	M8
SBM 86	86	17.2	365	0,44	1,30	M8
SBM 90	90	18.0	365	0,42	1,30	M8
SBM 93	93	18.6	299	0,43	1,30	M8
SBM 100	100	20.0	365	0,52	1,60	M8
SBM 107	107	21.4	510	0,62	1,90	M10
SBM 112	112	22.4	365	0,52	1,40	M8
SBM 118	118	23.6	365	0,52	1,60	M8
SBM 125	125	25.0	510	0,59	1,80	M10
SBM 130	130	26.0	510	0,61	1,80	M10
SBM 138	138	27.6	457	0,66	1,70	M10
SBM 150	150	30.0	624	0,77	2,30	M10
SBM 161	161	32.2	510	0,71	2,10	M10
SBM 168	168	33.6	729	0,92	2,70	M10
SBM 169	169	33.8	510	0,68	2,10	M10
SBM 184	184	36.8	624	0,91	2,40	M10
SBM 192	192	38.4	624	0,91	2,70	M10
SBM 200	200	40.0	729	1,08	3,20	M10
SBM 208	208	41.6	729	1,08	2,90	M10
SBM 216	216	43.2	729	1,08	3,20	M10
SBM 225	225	45.0	729	1,04	3,20	2xM8
SBM 231	231	46.2	729	1,01	2,90	M10
SBM 241	241	48.2	729	1,01	3,00	M10
SBM 250	250	50.0	914	1,32	3,90	2xM10
SBM 260	260	52.0	914	1,32	3,90	2xM10
SBM 270	270	54.0	1133	1,33	4,10	2xM10
SBM 277	277	55.4	914	1,32	3,50	2xM10
SBM 286	286	57.2	914	1,27	3,90	2xM10
SBM 287	287	57.4	1247	1,54	4,20	2xM10
SBM 300	300	60.0	966	1,37	3,70	2xM10
SBM 323	323	64.6	1019	1,43	3,90	2xM10
SBM 335	335	67.0	1019	1,36	4,20	2xM10
SBM 346	346	69.2	1133	1,62	4,80	2xM10
SBM 359	359	71.8	1458	1,73	5,00	2xM10
SBM 369	369	73.8	1247	1,81	4,80	2xM10
SBM 382	382	76.4	1247	1,72	5,30	2xM10
SBM 392	392	78.4	1353	1,99	5,30	2xM10
SBM 404	404	80.8	1353	1,92	5,90	2xM10
SBM 415	415	83.0	1458	2,16	5,80	2xM10
SBM 431	431	86.2	1871	2,31	6,40	3xM10
SBM 438	438	87.6	1458	2,09	5,80	2xM10
SBM 450	450	90.0	1458	1,98	6,10	2xM10
SBM 461	461	92.2	1458	2,03	5,70	2xM10
SBM 482	482	96.4	1458	2,03	5,90	2xM10
SBM 505	505	101.0	1704	2,47	6,50	3xM10
SBM 526	526	105.2	1704	2,47	7,30	3xM10
SBM 540	540	108.0	2187	2,59	7,50	3xM10
SBM 555	555	111.0	1871	2,72	7,20	3xM10
SBM 575	575	115.0	2495	2,72	8,60	4xM10
SBM 576	576	115.2	1871	2,72	8,00	3xM10
SBM 600	600	120.0	1977	2,89	8,50	3xM10
SBM 625	625	125.0	2187	3,24	8,70	3xM10
SBM 649	649	129.8	2187	3,24	9,50	3xM10
SBM 674	674	134.8	2187	3,18	9,30	3xM10
SBM 690	690	138.0	2187	3,04	8,60	3xM10
SBM 703	703	140.6	2187	2,96	9,10	3xM10
SBM 720	720	144.0	2917	3,04	10,00	4xM10
SBM 723	723	144.6	2187	3,04	8,90	3xM10
SBM 740	740	148.0	2495	3,63	9,60	4xM10
SBM 768	768	153.6	2495	3,63	10,60	4xM10
SBM 792	792	158.4	2600	3,80	11,20	4xM10
SBM 808	808	161.6	2706	3,80	11,70	4xM10
SBM 830	830	166.0	2917	4,32	11,70	4xM10
SBM 849	849	169.8	2811	4,03	12,40	4xM10

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Table A

Cell type	Capacity	Charging current	Electrolyte vol. between level marks	Electrolyte per cell		Cell connection bolt per pole
	C_5 Ah	0.2 C_5A	cm³	kg	L	
SBM 866	866	173.2	2917	4,32	12,70	4xM10
SBM 890	890	178.0	2917	4,26	12,50	4xM10
SBM 900	900	180.0	3646	4,06	12,50	5xM10
SBM 920	920	184.0	2917	4,06	11,80	4xM10
SBM 940	940	188.0	2917	4,12	12,00	4xM10
SBM 965	965	193.0	3057	4,28	11,40	6xM10
SBM 1009	1009	201.8	3330	4,88	14,30	5xM10
SBM 1040	1040	208.0	3646	5,40	14,60	5xM10
SBM 1082	1082	216.4	3646	5,40	16,70	5xM10
SBM 1107	1107	221.4	3646	5,34	15,60	5xM10
SBM 1150	1150	230.0	3646	5,07	15,70	5xM10
SBM 1181	1181	236.2	3646	5,14	15,00	5xM10
SBM 1220	1220	244.0	4270	6,31	16,90	6xM10
SBM 1250	1250	250.0	4164	5,85	18,00	6xM10
SBM 1274	1274	254.8	4270	6,31	18,50	6xM10
SBM 1324	1324	264.8	4375	6,42	18,80	6xM10
SBM 1390	1390	278.0	4375	6,09	17,40	6xM10
SBM 1445	1445	289.0	4375	6,09	17,70	6xM10
SBM 1465	1465	293.0	4375	6,09	17,70	6xM10
SBH 8.3	8.3	1,7	87	0,11	0,39	M6
SBH 12	12	2.4	109	0,13	0,44	M6
SBH 16	16	3.2	129	0,15	0,48	M6
SBH 19	19	3.8	202	0,28	0,77	M6
SBH 25	25	5.0	202	0,36	0,92	M6
SBH 29	29	5.8	255	0,34	0,95	M6
SBH 34	34	6.8	224	0,36	1,10	M6
SBH 38	38	7.6	255	0,40	1,20	M6
SBH 39	39	7.8	299	0,38	1,10	M8
SBH 49	49	9.8	365	0,47	1,30	M8
SBH 51	51	10.2	299	0,45	1,30	M8
SBH 59	59	11.8	404	0,55	1,50	M10
SBH 64	64	12.8	365	0,55	1,60	M8
SBH 69	69	13.8	510	0,66	1,80	M10
SBH 77	77	15.4	404	0,55	1,60	M10
SBH 79	79	15.8	510	0,62	1,80	M10
SBH 88	88	17.6	624	0,80	2,20	M10
SBH 89	89	17.8	457	0,67	1,90	M10
SBH 98	98	19.6	624	0,76	2,20	M10
SBH 102	102	20.4	510	0,74	2,10	M10
SBH 110	110	22.0	729	0,92	2,90	M10
SBH 115	115	23.0	624	0,95	2,80	M10
SBH 118	118	23.6	729	0,88	2,70	M10
SBH 128	128	25.6	624	0,90	2,60	M10
SBH 137	137	27.4	1019	1,32	3,70	2xM10
SBH 141	141	28.2	729	1,09	3,30	M10
SBH 149	149	29.8	1019	1,33	4,10	2xM10
SBH 153	153	30.6	729	1,04	3,20	M10
SBH 157	157	31.4	1019	1,24	3,70	2xM10
SBH 170	170	34.0	1133	1,49	4,60	2xM10
SBH 177	177	35.4	1247	1,60	4,50	2xM10
SBH 179	179	35.8	914	1,33	3,80	2xM10
SBH 190	190	38.0	966	1,53	4,70	2xM10
SBH 196	196	39.2	1247	1,52	4,40	2xM10
SBH 204	204	40.8	1019	1,47	4,60	2xM10
SBH 218	218	43.6	1133	1,75	5,40	2xM10
SBH 230	230	46.0	1247	1,89	5,60	2xM10
SBH 236	236	47.2	1458	1,76	5,70	2xM10
SBH 244	244	48.8	1247	1,88	5,80	2xM10
SBH 256	256	51.2	1247	1,79	5,20	2xM10
SBH 265	265	53.0	1871	2,40	6,80	3xM10
SBH 270	270	54.0	1353	1,98	6,10	2xM10
SBH 281	281	56.2	1458	2,17	6,60	2xM10
SBH 293	293	58.6	1458	2,14	6,60	2xM10
SBH 294	294	58.8	1871	2,28	6,50	3xM10
SBH 307	307	61.4	1458	2,07	6,50	2xM10
SBH 323	323	64.6	1643	2,42	7,50	3xM10
SBH 334	334	66.8	1757	2,66	8,20	3xM10
SBH 345	345	69.0	1871	2,84	8,40	3xM10
SBH 353	353	70.6	2187	2,63	8,60	3xM10
SBH 363	363	72.6	1871	2,79	8,60	3xM10
SBH 375	375	75.0	1871	2,76	8,50	3xM10
SBH 383	383	76.6	1871	2,69	7,80	3xM10
SBH 393	393	78.6	2495	3,03	8,70	4xM10
SBH 400	400	80.0	1977	2,88	8,90	3xM10
SBH 410	410	82.0	2082	3,09	9,50	3xM10
SBH 422	422	84.4	2187	3,26	9,80	3xM10
SBH 440	440	88.0	2187	3,21	9,90	3xM10
SBH 450	450	90.0	2187	3,18	9,80	3xM10
SBH 460	460	92.0	2187	3,11	9,70	3xM10
SBH 471	471	94.2	2917	3,51	11,40	4xM10
SBH 473	473	94.6	2495	3,83	11,80	4xM10
SBH 484	484	96.8	2495	3,77	11,60	4xM10
SBH 491	491	98.2	3119	3,79	10,90	5xM10
SBH 510	510	102.0	2495	3,58	10,40	4xM10
SBH 523	523	104.6	2600	3,80	11,70	4xM10
SBH 537	537	107.4	2706	4,00	12,30	4xM10
SBH 560	560	112.0	2917	4,34	13,10	4xM10
SBH 575	575	115.0	2917	4,32	13,30	4xM10
SBH 589	589	117.8	2917	4,29	13,20	4xM10
SBH 590	590	118.0	3646	4,39	14,30	5xM10
SBH 600	600	120.0	2917	4,05	12,90	4xM10
SBH 615	615	123.0	2917	4,15	13,00	4xM10
SBH 630	630	126.0	3119	4,55	14,00	5xM10
SBH 640	640	128.0	3119	4,48	13,00	5xM10
SBH 655	655	131.0	3224	4,67	14,40	5xM10
SBH 670	670	134.0	3330	4,86	15,00	5xM10
SBH 680	680	136.0	3435	5,07	15,60	5xM10
SBH 690	690	138.0	3540	5,30	16,30	5xM10
SBH 705	705	141.0	3646	5,43	16,40	5xM10
SBH 725	725	145.0	3646	5,36	16,50	5xM10
SBH 753	753	150.6	3646	5,33	16,40	5xM10
SBH 765	765	153.0	3646	5,18	16,20	5xM10
SBH 785	785	157.0	3848	5,59	17,20	6xM10
SBH 800	800	160.0	3848	5,52	17,00	6xM10
SBH 825	825	165.0	4164	6,08	18,70	6xM10
SBH 840	840	168.0	4270	6,27	19,30	6xM10
SBH 865	865	173.0	4155	5,92	18,10	6xM10
SBH 890	890	178.0	4375	6,34	19,50	6xM10
SBH 910	910	182.0	4375	6,27	19,30	6xM10
SBH 920	920	184.0	4375	6,30	19,30	6xM10

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