



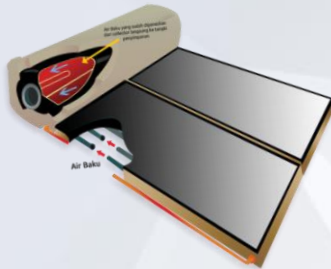
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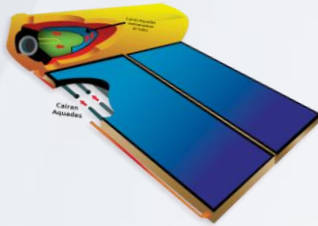
Solar Water Heater

Pengganti pemanas air listrik konvensional yang dapat mengurangi emisi CO2 sebanyak 3 ton setiap tahun, Dengan begitu, kami pun turut membantu menjaga kelestarian bumi kita.



Direct Solar Water Heater

- Air baku dipanaskan secara langsung di collector oleh sinar matahari dan disimpan didalam tangki. Sistem kerja ini disebut Thermosiphon.



Indirect Solar Water Heater

- Air didalam tangki dipanaskan oleh media pemanas, media tersebut bersirkulasi (thermosiphon) pada jacket tank (closed circuit).
- Saat melalui jacket tank media pemanas tersebut memanaskan air Yang disimpan dalam tangki air panas.

Free Heat Series *Solar Water Heater*



Spesifikasi Sistem

System	181 JBT	302 JBT	
Weight (full)	306,5	519	Kg
Weight (empty)	108	187	Kg
Length	2,63	2,63	m
Height	0,51	0,51	m
Width	1,62	2,43	m
Working Pressure	1000	1000	kPa
Test Pressure	2100	2100	kPa
Tank Type	180 FH	300 FH	
Collector Type	BT	BT	
No Of Collectors	1	2	

Spesifikasi Tangki

Tank	180 FH	300 FH	
Capacity	180	300	L
Weight (full)	172,5	436	Kg
Weight (empty)	71,5	106	Kg
Length	1,494	2,31	m
Height	0,51	0,51	m
Width	0,51	0,51	m
Cylinder Material	Stell, 2,8 mm		
Cylinder Lining	Primaglaze: Ceramic Lining 2 Coats		
Insulation	Polyurethane: Pressure Injection Foam, Zero CFC		
Skin	Alumunium: Marine Grade, 0,4 mm (0,15")		
End Caps	Polypropylene: Carbon Black, UV Stabilished		
Anode	Magnesium with Steel Core 32 mm		

Gold KF Series *Solar Water Heater*

Spesifikasi Sistem

System	G 181 K	G 182 K	G 302 K	G303 K	
Delivery (solar)	160	285	285	410	L
Delivery (aux)	135	230	230	325	L
Weight (full)	305	346	517	558	Kg
Weight (empty)	104	144	185	225	Kg
Length	2,45	2,45	2,45	2,45	m
Height	0,51	0,51	0,51	0,51	m
Width	1,485	2,32	2,32	3,38	m
Working Pressure	1000	1000	1000	1000	kPa
Test Pressure	2100	2100	2100	2100	kPa
Tank Type	180 G	180 G	300 G	300 G	
Collector Tpe	K	K	K	K	
No of Collector	1	2	2	3	

Spesifikasi Tangki



Tank	G 180	G 300	
Capacity	180	300	L
Weight (full)	270	434	Kg
Weight (empty)	70	104	Kg
Length	1,494	2,31	m
Height	0,51	0,51	m
Width	0,51	0,51	m
Cylinder Material	Steel 2,5 mm (10")		
Cylinder Lining	Primaglaze: Ceramic Lining 2 Coats		
Insulation	Polyurethane: Pressure Injection Foam, Zero CFC		
Skin	Aluminium: Marine Grade, 0,4 mm (0,15")		
End Caps	Polypropylene: Carbon Black, UV Stablished		
Anode	Magnesium with Steel Core 20 mm		

Super L Series *Solar Water Heater*

Spesifikasi Collector

Collector	Super L
Aperture Area	1,86
Capacity	3,2
Weight (full)	44,2
Weight (empty)	41
Length	1,937
Depth	0,077
Width	1,022
Working Pressure	1000
Test Pressure	2100
No. Of Riser	12
Riser Material	Cu
Absorber Material	Alluminium 0,65 mm
Absorber Surface	100 % Silicone Polymer
Tray Material	Alumunium 0,7 mm
Tray Insulation	Glass Wool 55 mm
Collector Cover	Low Iron Solar Tempered Glass 3,4 mm

Spesifikasi Tangki



Tank	180 SL	300 SL	
Capacity	180	300	L
Weight (full)	234	269	Kg
Weight (empty)	54	69	Kg
Length	1,5	2,31	m
Height & width	0,51	0,51	m
Cylinder Material	Steel 2,5 mm (10")		
Cylinder Lining	Primaglaze: Ceramic Lining 2 Coats		
Insulation	Polyurethane Pressure Injected Foam		
Case	Alumunium Marine Grade 0,4 mm		
End Caps	Polypropylene: Carbon Black, UV Stabilized		
Anode	Magnesium: With Steel Core		
Auxiliary Electric Booster	Type: Cu Sheaft, Imersion Ratings (kW): 1,0; 1,8; Supply Voltage (V): 220,230		

L Series *Solar Water Heater*

Spesifikasi Tangki

Tank	181 L	302 L	
Capacity	180	300	L
Weight (full)	234	369	Kg
Weight (empty)	54	69	Kg
Length	1,494	2,31	m
Height & width	0,51	0,51	m
Cylinder Material	Steel 2,5 mm (10")		
Cylinder Lining	Primaglaze: Ceramic Lining 2 Coats		
Insulation	Polyurethane Pressure Injected Foam		
Case	Alumunium Marine Grade 0,4 mm		
End Caps	Polypropylene: Carbon Black, UV Stabilized		
Anode	Magnesium: With Steel Core		
Auxiliary Electric Booster	Type: Cu Sheaft, Imersion Ratings (kW): 1,0; 1,8; Supply Voltage (V): 220,230		

Spesifikasi Collector



Collector	L	M2
Aperture Area	1,86	l
Capacity	3	kg
Weight (full)	35	kg
Weight (empty)	32	m
Length	1,937	m
Depth	0,077	m
Width	1,002	kPa
Working Pressure	1000	kPa
Test Pressure	2100	
No. Of Riser	6	
Riser Material	Cu	
Absorber Material	Alluminium 0,65 mm	
Absorber Surface	100 % Silicone Polymer	
Tray Material	Alumunium 0,7 mm	
Tray Insulation	Glass Wool 55 mm	
Collector Cover	Low Iron Solar Tempered Glass 3,4 mm	

Perbandingan Produk

Solar Water Heater

L Series	Super L Series	Gold KF Series	Free Heat Series
			
6 Alur Collector	12 Alur Collector	36 Alur Collector	13 Alur Collector
Black Tempered Glass	Black Tempered Glass	Black Tempered Glass	Blue Sputtered Glass
Silver Tank	Silver Tank	Gold Tank	Gold Tank
Pemanasan Direct	Pemanasan Direct	Pemanasan Indirect (Aquades)	Pemanasan Indirect (Aquades)
Waktu Pemanasan 4 Jam	Waktu pemanasan 3 Jam	Waktu Pemanasan 2,5 Jam	Waktu Pemanasan 2,5 Jam

Electric Water Heater



	86H-25P	86H-55P	86H-100P
Kapasitas	25 liter	55 liter	100 liter
Preset Temperature	60°C	60°C	60°C
Heating Element Input	350 W	500 W	1000 W
Empty Tank Weight	17 kg	25 kg	36 kg
Operation Tank Weight	42 kg	80 kg	136 kg

Aman Digunakan

Dilengkapi dengan ELCB, serta Safety Valve (Katup Pengaman terhadap tekanan dan suhu dengan sensor ada di dalam tangki, membuat tangki Solahart terjamin keamanannya).

Kualitas Terbaik

Untuk menghindari terjadinya pengurangan panas air dalam tangki, tangki diisolasi dengan polyurethane foam setebal 5 cm sehingga dapat menyimpan panas lebih lama.

Teknologi Canggih Solahart

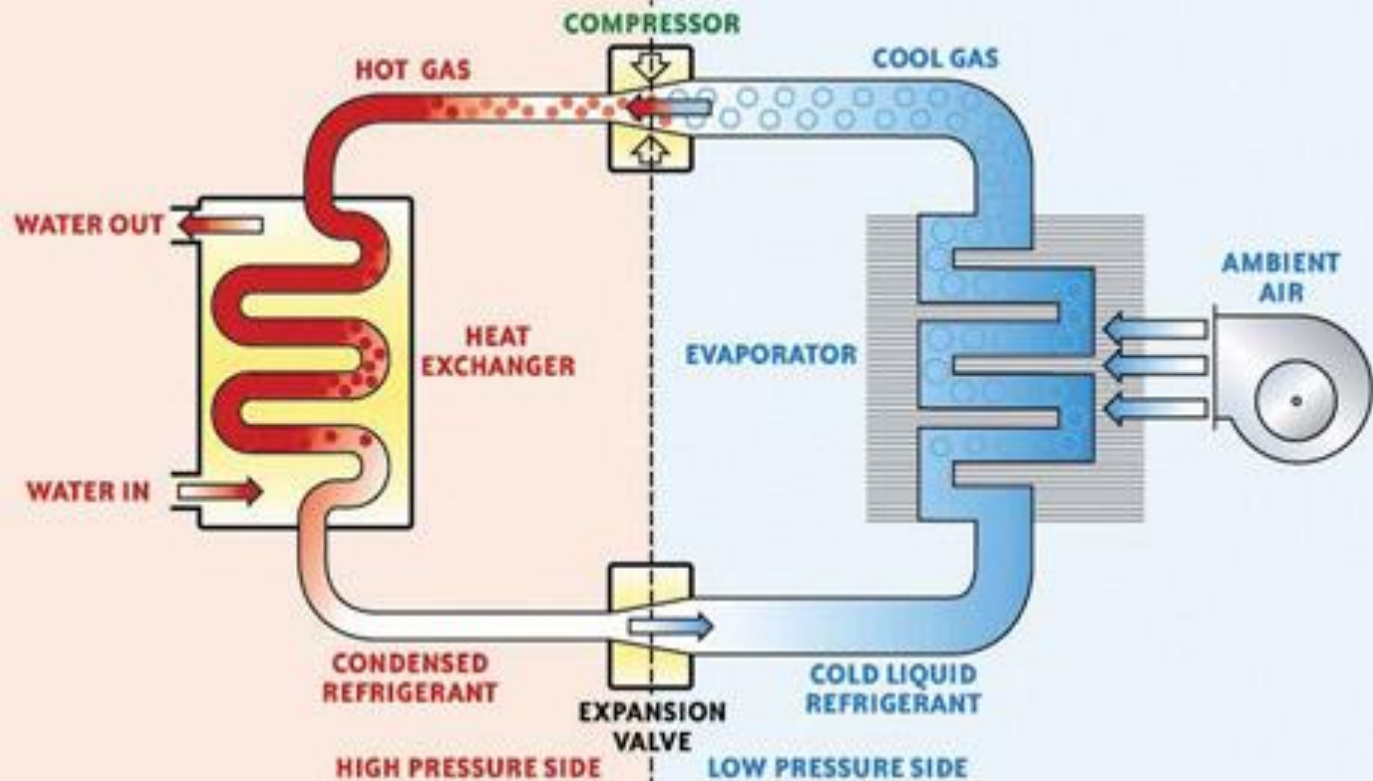
Memiliki dua metode perlindungan korosi. Pertama, tangki dilapisi enamel eksklusif yang dipanaskan pada suhu 870°C hingga hasil yang didapatkan halus, kuat , seperti lapisan kaca yang menahan korosi ke silinder baja. Kedua, perlindungan dari Anoda sebagai tumbal tangki.



Heat Pump Water Heater

Suatu sistem pemanas air yang memanfaatkan udara panas dari luar untuk memanaskan air. Cara kerjanya seperti kebalikan dari siklus refrigerasi.

THE HEAT PUMP CYCLE



Commercial

Heat Pump Water Heater



Spesifikasi

Spesifications	SHS063-3	SHS108-3	SHS190-3	SHS250-3
Voltage	380-415	380-415	380-415	380-415
Phase	3	3	3	3
Hertz	50	50	50	50
MOC (Max Operating Current)	13,38	20,06	36,4	38,72
Rated Load Amps 120C SST/51SCT	9,64	15,46	27,7	28,6
Max Leaving Water Temperature (Celcius)	61	61	61	61
Ambient (Celcius) DB	30	30	30	30
Relative Humidity %	60	60	60	60
Min CB Size	20	25	63	63
Heating kW	25,43	39,35	68,01	78,7
Power	4,98	7,59	13,93	15,3
COP	5,11	5,18	4,88	15,14
No of Fans	2	2	2	2
Air Flow L/S	1600	2300	4700	4700
Water Flowrate L/S	1	1,57	2,71	3,13
Cooper Water Connection Size mm	32	50,8	50,8	65
Weight (kg)	100	170	300	400
Dimensions (mm)	1150 x 565 x 980	1750 x 1800 x 825	1800 x 800 x 1220	1750 x 1175 x 1300

All in One

Heat Pump Water Heater



Spesifikasi

Spesifications		SHP270-3805	SHP340-3805
Water Slide	Heat Exchange Type	Copper Pipe Coiled Outside The Tank	
	Tank Capacity (L)	270	340
	Maximum Pressure (Mpa)	0,85	
Power Supply		220~50 Hz	
Power Supply		16A/250V	
Power Supply		3800 W	
HP Heating Rated Input	Power (watts)	950	
	Current (amps)	4,3	
Auxiliary Heating Input	Power (watts)	2400	
	Current (amps)	10,9	
Rated Water Output (liter/hr)		80	
Work Temperature		30~65 (Ex-work setting 55)	
Refrigerant		R134a (1,35 Kg)	
Air Side	Heat Exchanger Type	Female fitting hydrophilic aluminium foil	
	Air Outlet	Side Exhaust	
Storage Tank	Diameter (mm)	648	
	Height (mm)	1815	2125
	Net Weight (kg)	15	130



Solahart Solar Cell

Solahart solar cells are designed to be durable and engineered to meet the highest quality standards and provide a stable, consistent power output.

The 255W Series panel is certified to International Standards IEC 61215 & IEC 61730 and meets the requirements of all relevant Australian authorities.

255W Series *Solar Cell Panel*

Electrical Characteristics			Specifications	
Maximum Power (Pmax)		255W	Dimensions	1665mm x 991mm x 38mm
Power Class		0/+5W	Weight	18 kg
Open Circuit Voltage (Voc)		37,6 V	Cell Type and Configuration	60 SOL PE multi-crystalline cells 3 strings of 20 cells
Short Circuit Current (Vmpp)		8,95 A	Glass	Solar glass with anti-reflection surface treatment
Maximum Power Voltage		30,5 V	Backsheet	Double layer highly resistant polyester
Maximum Power Current (Immp)		8,42 A	Frame	Anodised Aluminium Alloy
Module Efficiency		15,50%	Temperature Range	-40°C to + 80°C
Temperature Coefficients	P	0.40%/ °C	Junction Box	Protection Class IP 67
	V	0.27%/ °C	Connectors	Multi-contact MC4
	I	+0.024%/ °C	Part Number	SOL255PE
Maximum System Voltage (IEC)		1000 V	Solahart Warranty	10 years (1 year labour) on panels*

SMA Inverter

The SMA 20000TL/25000TL is the ideal inverter for large-scale commercial and industrial plants.

Not only does it deliver extraordinary high yields with an efficiency of 98.4%, but it also offers enormous design flexibility and compatibility with many PV modules thanks to its multistring capabilities and wide input voltage range.



SMA Inverter

Technical Data	Sunny Tripower	
	20000TL	25000TL
Input (DC)		
Max. DC power (@ $\cos\phi = 1$) / DC rated power	20440 W / 20440 W	25550 W / 25550 W
Max. input voltage	1000 V	1000 V
MPP voltage range / rated input voltage	320 V to 800 V / 600 V	390 V to 800 V / 600 V
Min. input voltage / start input voltage	150 V / 188 V	150 V / 188 V
Max. input current input A / input B	33 A / 33 A	33 A / 33 A
Number of independent MPP inputs / strings per MPP input	2 / A:3; B:3	2 / A:3; B:3
output (AC)		
Rated power (@ 230 V, 50 Hz)	20000 W	25000 W
Max. AC apparent power	20000 VA	25000 VA
AC nominal voltage	3 / N / PE; 220 V / 380 V	
	3 / N / PE; 230 V / 400 V	
	3 / N / PE; 240 V / 415 V	
AC voltage range	180 V to 280 V	
AC grid frequency / range	50 Hz / 44 Hz to 55 Hz	
	60 Hz / 54 Hz to 65 Hz	
Rated power frequency / rated grid voltage	50 Hz / 230 V	
Max. output current / Rated output current	29 A / 29 A	36.2 A / 36.2 A
Power factor at rated power / Adjustable displacement power factor	1 / 0 overexcited to 0 underexcited	
THD	$\leq 3\%$	
Feed-in phases / connection phases	3 / 3	

SMA Inverter

Efficiency	Sunny Tripower	Sunny Tripower
	20000TL	25000TL
Max. efficiency / European Efficiency	98.4% / 98.0%	98.3% / 98.1%
protective devices		
DC-side disconnection device	•	
Ground fault monitoring / grid monitoring	• / •	
DC surge arrester (Type II) can be integrated	○	
DC reverse polarity protection / AC short-circuit current capability / galvanically isolated	• / • / —	
All-pole sensitive residual-current monitoring unit	•	
Protection class (according to IEC 62109-1) / overvoltage category (according to IEC 62109-1)	I / AC: III; DC: II	

SMA Inverter

General data	Sunny Tripower	Sunny Tripower
	20000TL	25000TL
Dimensions (W / H / D)	661 / 682 / 264 mm (26.0 / 26.9 / 10.4 inch)	
Weight	61 kg (134.48 lb)	
Operating temperature range	-25 °C to +60 °C (-13 °F to +140 °F)	
Noise emission (typical)	51 dB(A)	
Self-consumption (at night)	1 W	
Topology / cooling concept	Transformerless / Opticool	
Degree of protection (as per IEC 60529)	IP65	
Climatic category (according to IEC 60721-3-4)	4K4H	
Maximum permissible value for relative humidity (non-condensing)	100%	

SMA Inverter

Features / function / Accessories	Sunny Tripower	Sunny Tripower
	20000TL	25000TL
DC connection / AC connection	SUNCLIX / spring-cage terminal	
Display	○	
Interface: RS485, Speedwire/Webconnect	○ / ●	
Data interface: SMA Modbus / SunSpec Modbus	● / ●	
Multifunction relay / Power Control Module	○ / ○	
OptiTrack Global Peak / Integrated Plant Control / Q on Demand 24/7	● / ● / ●	
Off-Grid capable / SMA Fuel Save Controller compatible	● / ●	
Guarantee: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○	
Certificates and permits (more available on request) *Does not apply to all national appendices of EN 50438	ANRE 30, AS 4777, BDEW 2008, C10/11:2012, CE, CEI 0-16, CEI 0-21, EN 50438*, G59/3, IEC 60068-2-x, IEC 61727, IEC 62109-1/2, IEC 62116, MEA 2013, NBR 16149, NEN EN 50438, NRS 097-2-1, PEA 2013, PPC, RD 1699/413, RD 661/2007, Res. n°7:2013, SI4777, UTE C15-712-1, VDE 0126-1-1, VDE-AR-N 4105, VFR 2014	
Type designation	STP 20000TL-30	STP 25000TL-30

Project *References*



- 24 Hour Guest, Lampung
- 89 Hotel , Batam
- Amaris Embong Hotel , Malang
- Amaris Hotel Padang
- Amaris Hotel Pettarani – Makasar
- Amaris Hotel, Bali
- Amaris Hotel, Bojonegoro
- Amaris Hotel, Cirebon
- Amaris Hotel, Malang
- Amaris Hotel, Mangga Dua
- Amaris Hotel, Semarang
- Amaris Hotel, Sunset Road Bali
- Amaris Thamrin City – Jakarta
- Amos Cozy Hotel, Jakarta
- Apartemen Pertamina – Balikpapan
- Apertement Paviliun - Jakarta
- British Embassy, Jakarta
- Cimanuk Hotel, Bandung
- Fave Hotel, Bogor
- Grand SAE, Solo
- Guest House 3S Pasteur – Bandung
- H Mansion – Jakarta
- Holiday Inn Hotel
- Hotel Amaris – Yogyakarta
- Hotel Amartya – Yogyakarta
- Hotel Ambon
- Hotel Art Deco Bandung
- Hotel Aston – Bojonegoro
- Hotel Aston – Lampung
- Hotel Aston Royal – Bekasi
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- Hotel Fave Malang City Point
- Hotel Fave Puri Kembangan
- Hotel Fortune – Jakarta
- Hotel Golden Tulip – Pontianak
- Hotel Gracia Spa
- Hotel Grand Inna – Bali
- Hotel Grand Permata – Purwakarta
- Hotel Green Forest – Bogor
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- Hotel Harper – Cikarang
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- Hotel M Ekspress Sorong – Papua
- Hotel Max One – Belitung
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- Hotel Ozone – Jakarta
- Hotel Pemuda – Cirebon
- Hotel Petitenget – Bali
- Hotel POP Pasar Baru – Jakarta
- Hotel Premier Inn – Pontianak
- Hotel Premier Inn Yogyakarta
- Hotel Promenade – Bali
- Hotel Quest – Balikpapan
- Hotel Royal Olive – Jakarta
- Hotel Sahid Eminence – Ciloto



- Hotel Sala View – Solo
- Hotel Salak – Bogor
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- Hotel Singkawang
- Hotel Sulis – Kuta Bali
- Hotel Sultan Raja – Cirebon
- Hotel Swiss Bell Borneo- Banjarmasin
- Hotel Swiss Bell Darmo Centrum – Surabaya
- Hotel Swiss Bell Jambi
- Hotel Swissbell Tanjungan – Surabaya
- Hotel The Kirana Canggu – Bali
- Hotel The Valley Dago – Bandung
- Hotel Triple 7 – Pajajaran
- Hotel Urban – Lampung
- Hotel Wibowo – Semarang
- Komplek Talaga Bastari, Tangerang
- Malang City Point, Malang
- Martha Tilaar Spa – Jakarta
- Mirah Hotel, BOGOR
- My Place SPA Jakarta
- Nusa Dua Convention Center – Bali
- Padjadjaran Resort, Bogor
- Padjadjaran, Tangerang
- Perum Bukit Alaya, Balikpapan
- Perum Lia Aulia, Balikpapan
- POP Hotel, BSD
- PT Arnott’s Indonesia
- Quest Hotel, Balikpapan
- RS Bethesda, Jogjakarta
- RS Fatmawati
- RS Kasih Ibu – Bali
- RS Omni – Cikarang
- RS PKU Gamping, Jogjakarta
- RS. Atmajaya – Jakarta
- RS. Banjarbaru
- RS. H.S Budiman – Pangandaran
- RS. Samarinda
- RSI Cempaka Putih, Jakarta
- RSPP, Jakarta



- RSUD, Bantul
- RSUP Prembun – Kebumen
- Santika Bogor
- Santika Hotel Jemursari
- Santika Hotel, Cikarang
- Santika Hotel, Medan
- Santika Hotel, Palu
- Savoy Hotel Bandung
- Seruni Hotel, BOGOR
- Setiabudi Regency
- Setradago – Bandung
- Singgasana Hotel, Bandung
- Sky Inn Hotel, Batam
- Soarga Villa – Bali
- Sparks Hotel, Jakarta
- Thamrin City, Jakarta
- The Groove Sport Station – Bandung
- Tongs Garden, Medan
- TP. Aflat PharmaCeutical – Bandung
- U Residence – Jakarta
- Ubud Vilage Resort, Bali
- UPI – Bandung
- Villa Ciwaruga – Bandung
- Villa Kharisma – Bali
- Villa Mekar Wangi
- Villa Ultimo – Bali
- Waterboom Panghegar – Bandung
- Winn Textile
- Wisma 25 Kamar – Bandung
- Wisma BPJS – Puncak
- Zen Spa – Bali

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