

DAIKIN

CHILLWALL

COOLING YOUR IDEAS

CW-Series

INTUITIVE &
MODULAR-
CONTROLLED
FAN WALL



SUPERIOR AISLE COOLING

Airflow : 14,000 - 76,000 CMH

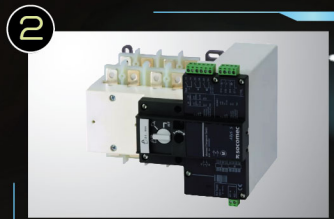
Cooling Capacity : 58 ~ 324 kW

TAILORED COMPONENTS FOR UNRIVALLED DATA CENTER AISLE COOLING

Daikin ChillWall combines cutting-edge technology and high-quality components to deliver unparalleled performance and efficiency in data center cooling.



- 1 INTEGRATED CONTROL CABINET**
- ◆ Water-tight metal enclosure with PU gasket door
 - ◆ Rigid, double-folded gutter at door frame



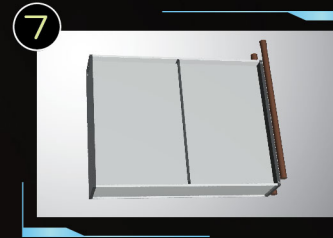
- 2 AUTOMATIC TRANSFER SWITCH**
- ◆ Integrated 4-pole motorised changeover switch
 - ◆ Stable position, pressure contact changeover



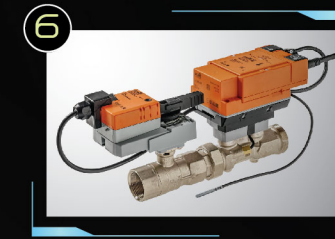
- 3 UNINTERRUPTED POWER SUPPLY**
- ◆ Back-up power protection for unstable power events
 - ◆ Automatic voltage regulation



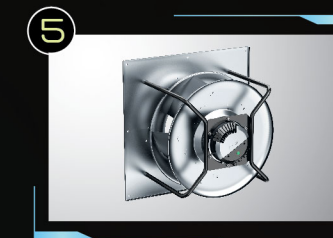
- 4 ACTIVE HARMONIC FILTER**
- ◆ Reduces THDi of the current from typically 35% to below 5%
 - ◆ Switching frequency of 50kHz, which results in efficient elimination of high harmonics



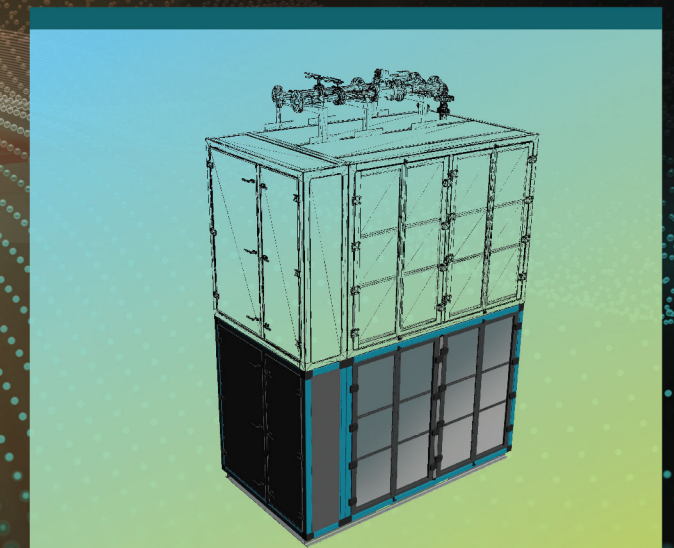
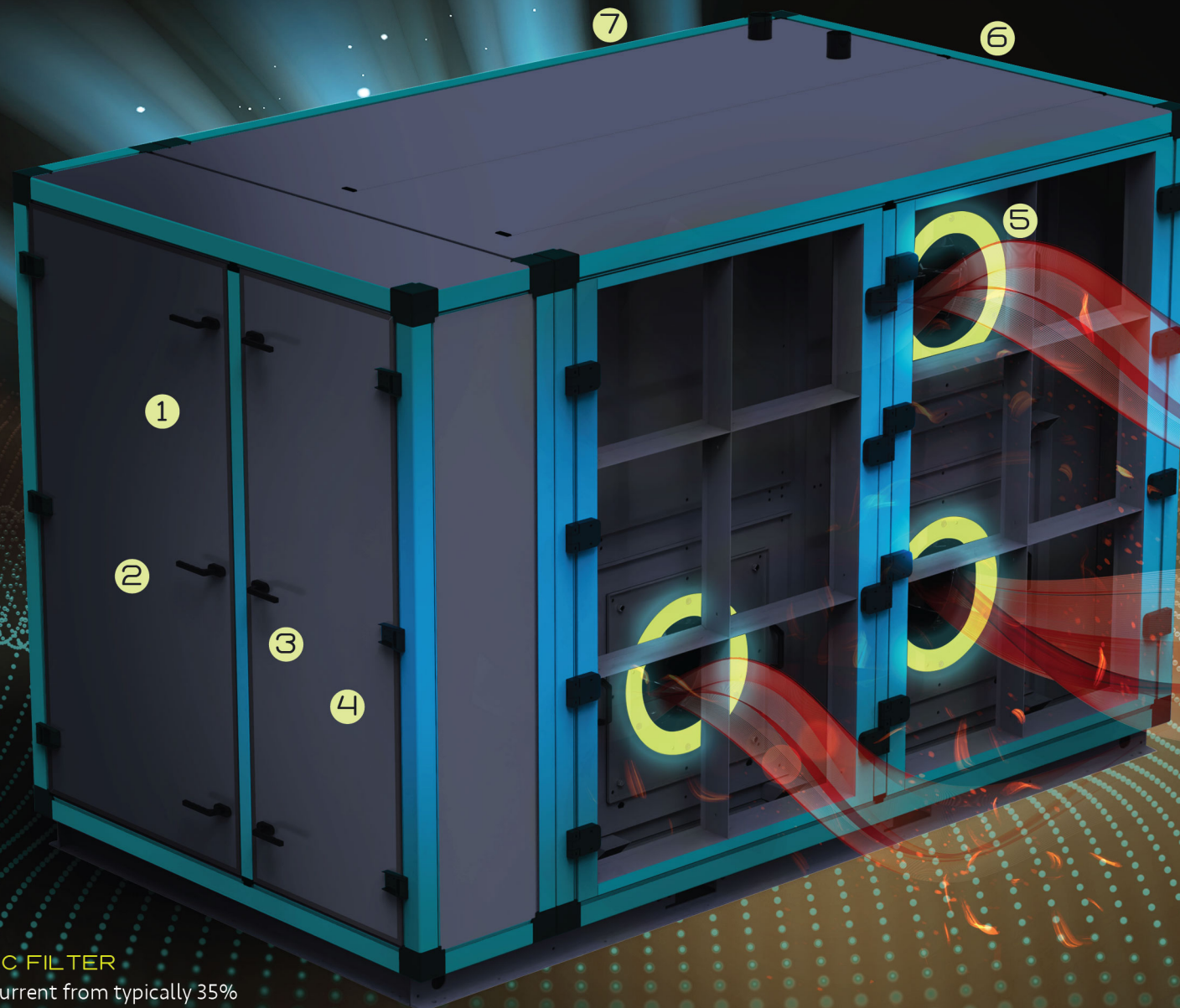
- 7 COIL ASSEMBLY**
- ◆ Customized design circuit to cater to high Delta T (ΔT) requirement
 - ◆ Optional coating to enhance coil durability



- 6 BUILT-IN PICV/ENERGY VALVE**
- ◆ Characterised control valve with thermal energy meter
 - ◆ Sensor-operated 2-way flow control
 - ◆ Power and energy monitoring function



- 5 EC CENTRIFUGAL FAN**
- ◆ High-efficiency aluminium impeller with air foil blades
 - ◆ Flow-optimized inlet ring made of galvanized sheet steel
 - ◆ Welded support strut design
 - ◆ Total harmonic distortion of no more than 5% ($THDi \leq 5\%$)
 - ◆ Thermal overload protection for electronics and motor
 - ◆ Retractable designed frame for ease of maintenance



STACKED MODULAR CAPABILITY FOR MORE SPACE SAVINGS AND TO MEET DIFFERENT CONFIGURATIONS.

HARNESS THE POWER OF DAIKIN'S CHILLWALL

Experience a new level of reliability and efficiency for your data center.



REDUNDANCY

N+1

Minimize downtime with redundant configuration and hot standby switching for continuous airflow and cooling.

Realized by: Standby Master



COMPACT

< 2meters in depth

Maximize space utilization with a variable dimensioning for flexible cabinet sizing (increments of 100mm in height and width)

Realized by: Retractable EC Fans, Optimized Depth



RELIABILITY

99.99% user availability

Ensure uninterrupted cooling with UPS-equipped control panels, advanced control functions, and fault-tolerant ChillWall design.

Realized by: Built-in ATS, Built-in UPS, Auto Restart



EFFICIENCY

<0.22W/cmh

Experience energy-efficient cooling with high-efficiency EC fans, optimized airflow distribution, and real-time trending optimization.

Realized by: IE4 EC Fan, 2-way PICV, High delta-T coil



AUTONOMY

Real-time monitoring and control systems enable effective responses to maintain optimal cooling efficiency.

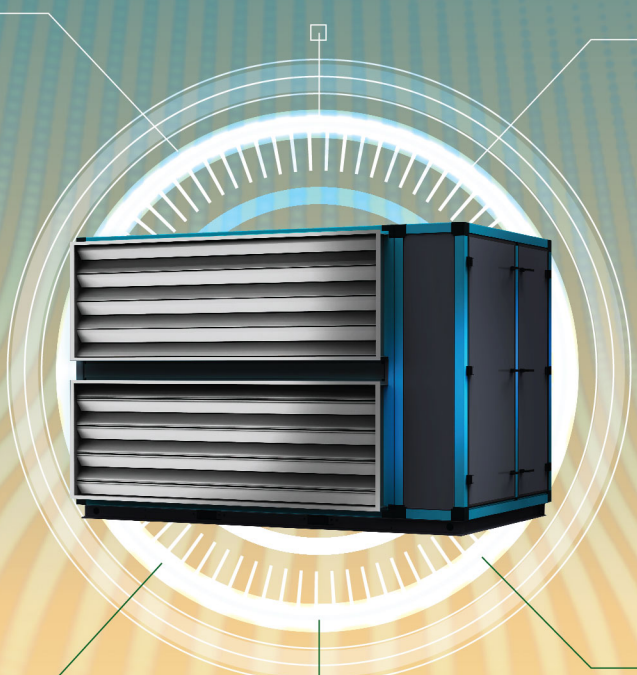
Realized by: Group Control, Real Time Tracking



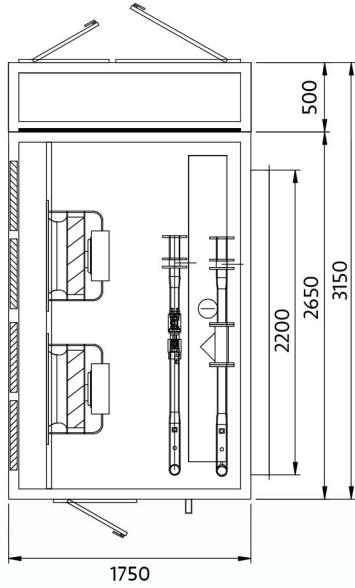
COMPLIANCE

Meet quality standards with components that comply with IEC and AHRI 1350 certification.

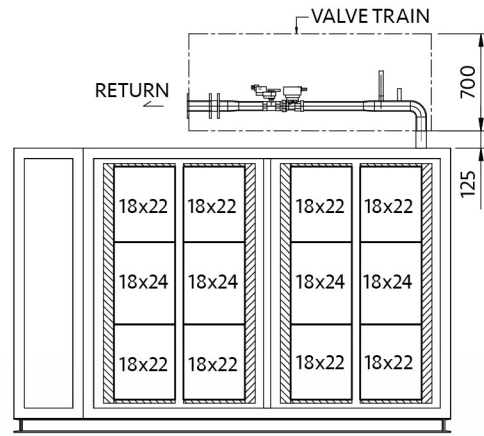
Realized by: IEC, AHRI 1350



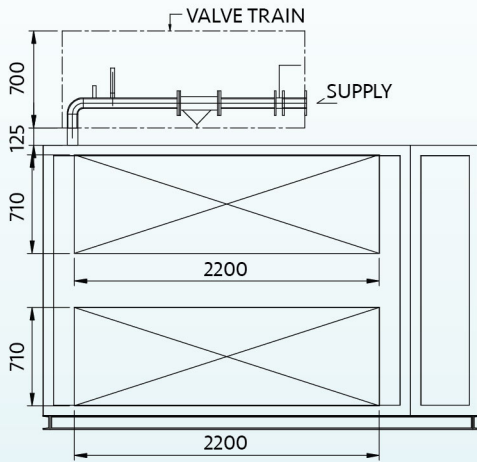
DIMENSIONS



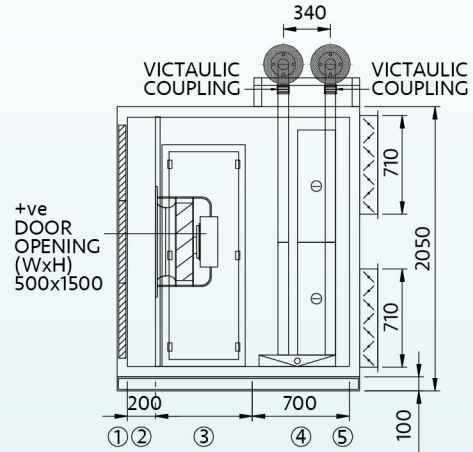
TOP VIEW



REAR VIEW



FRONT VIEW



RIGHT VIEW

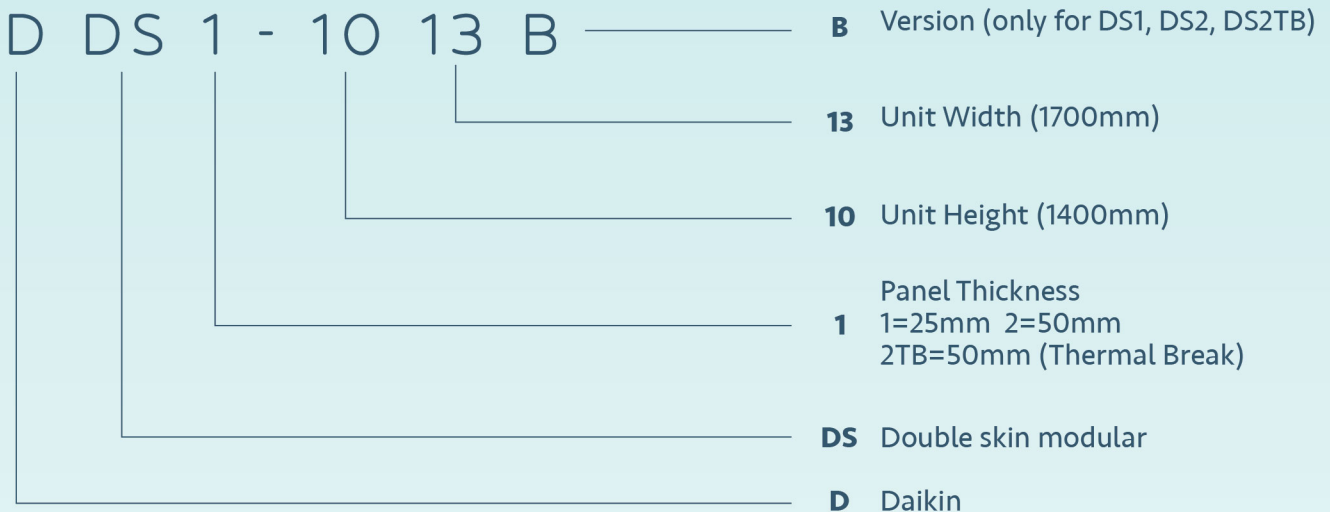
*model shown is DDS2-1521B

TECHNICAL DATA

CHILLWALL SERIES

MODEL		DDS2-1014B	DDS2-1521B	DDS2-2029B	DDS2-2138B	
Airflow	CMH	14000	26000	51000	76000	
Dimension (WxHxD) (w/o enclosure cabinet)	mm	1950 x 1550 x 1750	2650 x 2050 x 1750	3450 x 2550 x 1750	4350 x 2650 x 1750	
Dimension (WxHxD) (with enclosure cabinet)	mm	2450 x 1550 x 1750	3150 x 2050 x 1750	3950 x 2550 x 1750	4850 x 2650 x 1750	
Total Cooling Capacity	@21-29°C (EWT/LWT) Chilled Water Temp.	kW	59.2	114.2	219.8	324.6
Sensible Cooling Capacity		kW	59.2	114.2	219.8	324.6
Flow rate (L/s)		L/s	1.77	3.41	6.56	9.69
Water Pressure Drop (kPa)		kPa	8.85	18.95	11.01	12.96
Fan Quantity		2	2	4	6	
Total Fan Power	W	2209	4661	9499	15052	
ChillWall Efficiency	W/CMH	0.16	0.18	0.19	0.20	
Net Unit Weight (w/o enclosure cabinet)	kg	924	1445	1891	2821	
Net Unit Weight (with enclosure cabinet)	kg	1073	1617	2086	3024	

NOMENCLATURE



Note: Width and height in above table are based on the 25mm (DS1) panel thickness. Additional 50mm (Height & Width) for AHU with 50mm (DS2/DS2TB) panel thickness.

RATING TABLE

High Grade Low Grade

AHRI Standard 1350 (I-P) Classification and Rating Requirements

	DS2TB	DS2	DS1						
Casing Deflection Rating Class	CD2	CD2	CD3	Strength Class	CD1	CD2	CD3	CD4	CD5
				Rating Differential Static Pressure, in.H ₂ O	10	8	6	4	1
				Maximum Normalized Deflection, in/in of span	0.0033	0.0042	0.0042	0.0042	≥0.0042
Casing Air Leakage Class (Negative)	CL2	CL2	CL3	Casing Air Leakage Class	CL1	CL2	CL3	CL6	CL12
Casing Air Leakage Class (Positive)	CL2	CL2	CL3	Maximum Casing Air Leakage Rate, cfm/100ft ² (at P=1 in.H ₂ O)	1	2	3	6	12
Thermal Transmittance Class with Leakage	CT2	CT3	CT4	Thermal Transmittance Class	CT1	CT2	CT3	CT4	CT5
				Thermal Transmittance with Leakage (U), Btu/hr/ft ² /°F	U≤0.16	0.16>U ≥0.26	0.26>U ≥0.39	0.39>U ≥0.61	U>0.61
Thermal Transmittance Class without Leakage	CT2	CT3	CT4	Thermal Transmittance Class	CT1	CT2	CT3	CT4	CT5
				Thermal Transmittance with Leakage (U), Btu/hr/ft ² /°F	U≤0.14	0.14>U ≥0.23	0.23>U ≥0.36	0.36>U ≥0.55	U>0.55
Thermal Bridging Class	CB2	CB3	CB3	Thermal Bridging Class	CB1	CB2	CB3	CB4	CB5
				Thermal Bridging Factor, Kb	Kb≥0.8	0.8>Kb ≥0.6	0.6>Kb ≥0.4	0.4>Kb ≥0.2	Kb<0.2



Certified in accordance with the AHRI Central Station Air-handling Unit Casing Certification Program, which is based on AHRI Standard 1350. Certified Units may be found in the AHRI Directory at www.ahridirectory.org

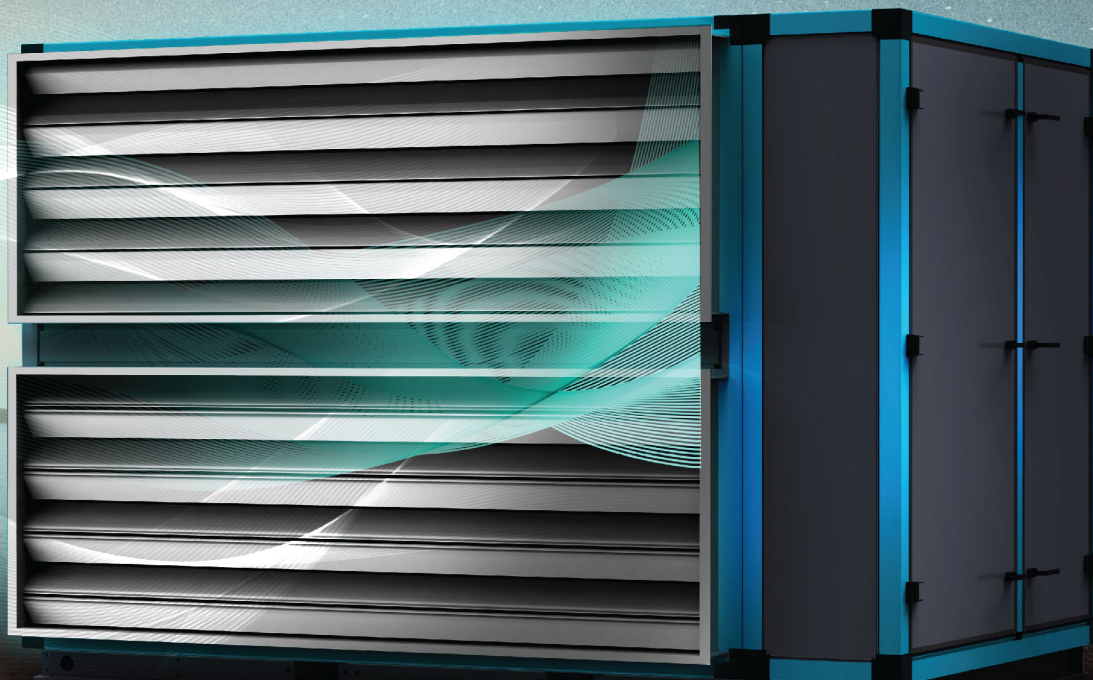
ABOUT DAIKIN

Daikin, as one of the world's largest HVAC companies, stands firmly committed to reduce our carbon footprint and the industries' move towards sustainability. Daikin's goals to achieve net-zero carbon emission is successfully realized by making conscious changes in its entire value chain - system design, life cycle of products, work processes and innovative technologies.

Today, Daikin Applied is proud to introduce the CW ChillWall series. Mainly for data centers, this cutting-edge piece of technology boasts an array of innovative features that set it apart from the competition, and positions it as a true game-changer in the world of reliable and sustainable cooling.

Equipped with features such as automatic transfer switch, uninterrupted power supply, automatic restart and an active harmonic filter, the CW ChillWall provides unparalleled reliability and unperturbed performance. And with an array of advanced components, such as highly efficient EC fans, custom designed cooling coils and tailored group feedback controls, this unit offers precise control over cooling capacity, ensuring the sustainable consumption of energy and corresponding utilities.

At Daikin, we believe in unparalleled cooling solutions that empower the seamless exchange of ideas, unlocking the full potential of your data centre. And with the CW ChillWall, we are cooling the world with innovation - one idea at a time.



Daikin Refrigeration Malaysia Sdn. Bhd.

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42700 Banting, Selangor Darul Ehsan, Malaysia.

** The ChillWall colour is for illustrative purposes only
and is not a representation of the actual product.*

240206_CW_REV_B | The Company reserves the right to change specifications without any notice.