

Always New!

제어반 전용 에어컨 및 냉각기

机柜专用空调及冷却器

DAE YANG Slim Air-Conditionner
& Fan Cooler of Switch Cabinet



적정 온도 유지

维持适当温度

To maintain the right temperature

습기 제거

除湿

To remove humidity

응결수 자체 증발(배수호스 불필요)

冷凝水在空调内部自动蒸发(无需排水管)

To evaporate condensed water itself
(No need of a draining hose)

이물질 혼입방지

防止混入异物

To prevent contaminated substances entering

창의적인 제품 기술로 보답하는

创意产品以技术保障的

A company with the creative technology

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DAE YANG MECHATRONICS CO., LTD.

대양기전주식회사
DAE YANG MECHATRONICS CO., LTD.

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대양 제어반 전용 에어컨은

국제 품질 인증으로 NC공작기계, 로봇 및 공장자동화용 제어반 내부를 항상 쾌적하게 유지시켜 귀사 설비의 수명을 연장시키고 고장율을 줄여 생산성 향상에 일익을 담당하겠습니다.

大洋机电柜空调、是获得国际认证。在NC机床、机器人及自动化设备等控制柜内部，长时间保持恒定温度环境，使得延长客户设备的使用寿命和降低设备故障率、从而提高客户生产效率。

The cooling system of DAEYANG will help your business by improving productive efficiency of your equipments.

KEEP PRODUCTION LINES UP.

NC공작기계, ROBOT 및 공장자동화 시스템의 제어반들은 그 기능이 다양해진 반면, 공간은 적고 밀폐화를 요구하고 있어 고온도·고습도·고분진에 의하여 제어반은 서서히 손상을 입어, 어느날 갑자기 뚜렷한 이유없이 장비가 SHUT-DOWN이나 TRIPPING이 발생되기도 합니다.

이로 인해 제어반이 오작동 및 기능을 멈추는 사례가 흔히 발생하고 있어, 국내외에서도 막대한 손실과 피해를 입는 업체가 늘어나고 있는 실정입니다. 당사는 29년간 제어반 내부로 유입되는 이물질을 차단 하면서 열과 습기를 제거하는 에어컨을 개발하여 왔고, 금번 신제품을 통해 귀사의 생산설비에 더욱 신뢰성을 향상시켜 드릴 것입니다.

目前，NC机床、机器人及自动化设备的控制柜，在功能上多样化发展，但要求空间小、高密闭性，而且控制柜处在高温、高湿、高粉尘环境。因此控制柜逐渐受到损伤，突然有一天发生故障或者损坏整个设备。在韩国国内也有控制柜失灵及停止操作等实例比比皆是，从而发生较大的经济损失。本公司成立29年以来，始终专业开发并生产控制柜专用空调。在控制柜内，防止异物侵入、除热、除湿、保持恒定温度，从而通过此次新产品提高贵公司的生产设备的可靠性。

The switch cabinet of NC machines, robots and F.A. systems have been required not only many features but also being compacted and sealed. Otherwise, they are exposed to a great risk of high temperature, humidity and dust, causing SHUT-DOWN or TRIPPING problems of equipments.

DAEYANG, the company with over 29 years of experiences, can prevent such problems so that your business can be more effective and reliable in your field.

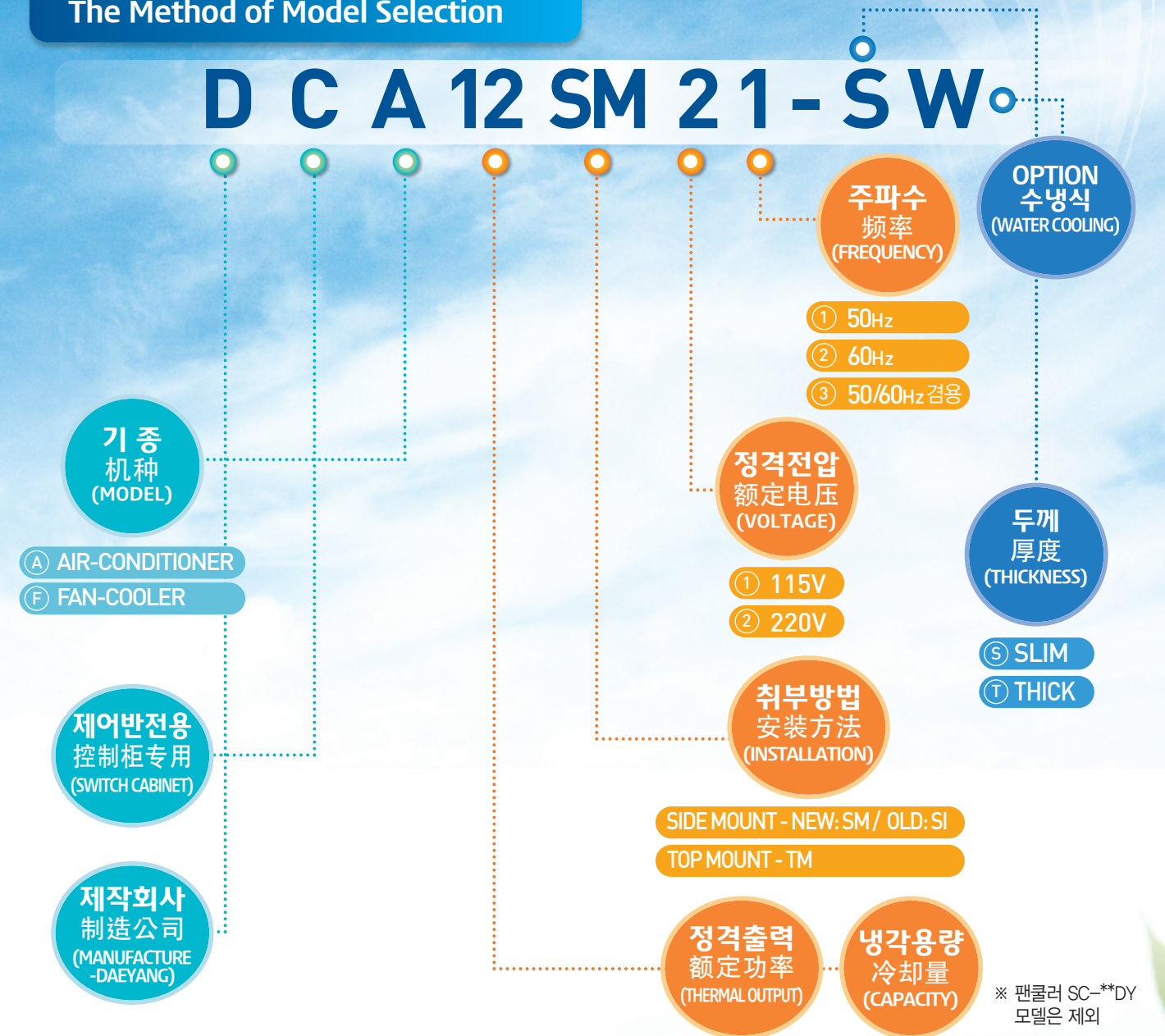
사용처 | 使用处 | WHERE TO USE

판금공장, 주물공장, 용접공장, 기계가공공장, 제지공장, 방직공장 등 공장주변 온도가 높고 습기가 많은 곳.

五金厂、铸造厂、焊接车间，机加工厂、纸制品厂、纺织厂等工厂周围，安装在高温高湿环境上。

The plants where are exposed to high temperature and humidity (such as sheet metal, casting, welding, mechanical working, paper making and spinning plants, etc.)

모델 선정 방법 | 选型方法 The Method of Model Selection



- ▶ 50Hz 제품 사용 국가에서는 THERMAL OUTPUT(열교환능력) 표시를 참고하여 적용하세요.
- ▶ 50Hz使用国家请参照并使用THERMAL OUTPUT(热交换能力)表示.
- ▶ Which country in using 50Hz model please refering and applying in THERMAL OUTPUT mark (Heat exchange ability).
- ▶ 110V 제품과 표시가 안 된 제품도 다수 보유(주문제작 가능).
- ▶ 110V의电压产品和无显示的产品都可以制定(可以订单定制).
- ▶ We have 110V model and a lot of not displaying model(All products can be made to order).
- ▶ 제품의 품질개선을 위하여 사양과 색상은 예고없이 변경될 수 있습니다.
- ▶ 为了改善产品的质量，样品和颜色随时可以变更。
- ▶ To improve products quality, anytime all specification and color of products can be changed.
- ▶ 에어컨의 응축열은 옵션인 Air Guide에 의해 방향 조절이 가능합니다.

제어반용 슬림 에어컨 | 微型机柜空调

AIR CONDITIONER OF SWITCH CABINET

| 용도 | 用途 | PURPOSE

공장 온도보다 제어반 내부 온도를 낮게 유지하고 습기를 제거하고자 하는 제반 생산설비에 이용됩니다.
产品用途在要控制的生产设备中, 保持比工厂温度低的温度, 而且具有除湿效果。

To lower the temperature and remove humidity in switch cabinet.

| 원리 | 原理 | PRINCIPLE

컴프레서에서 냉매를 압축하여 증발기로 보내 기화열에 의하여 제어반 내부의 열을 흡수하여 제어반 내부를 냉각시킵니다. 이 때 습기도 제거되며 외부 공기유입은 차단되어 이루어지므로 제어반 내부는 항상 쾌적한 온도와 습도를 유지합니다.

将制冷剂通过压缩机压缩成液体后移送到蒸发器, 在此处制冷剂蒸发后把控制柜内部热量吸收而导致把控制柜内部冷却。此次除湿, 同时外部空气不得侵入控制柜内部, 因此控制柜内部保持舒适的温度和湿度。

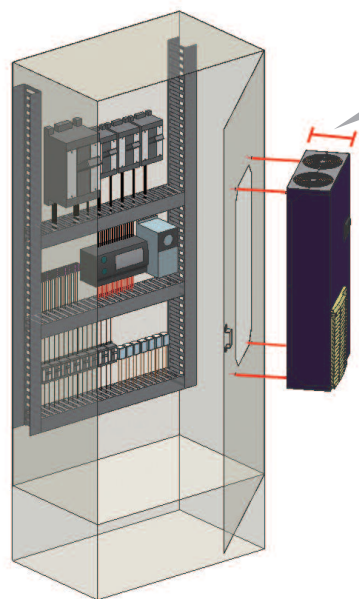
The refrigerant compressed by a compressor moves into an evaporator while absorbing the heat and cooling the temperature inside of the control panel simultaneously.

Thus, the inside of the switch cabinet can maintain the appropriate level of temperature and humidity all the time.

길고 무더운 장마가 다가오고 있습니다. 대양 슬림 에어컨에 가공설비를 맡겨보십시오!
暑期到来, 请贵公司的加工设备使用大洋机电控制柜用微型机空调。

The hot and rainy seasons are fast approaching and becoming longer.
Leave your facility management up to DAEYANG's slim air conditioner of switch cabinet.

| 특징점 | 特征 | SPECIAL FEATURES



250~500 kcal/h is only 13~14.5KG(Thickness : 130mm)
625 kcal/h is only 19KG(Thickness : 138mm)

두께가 얇고 가볍다.

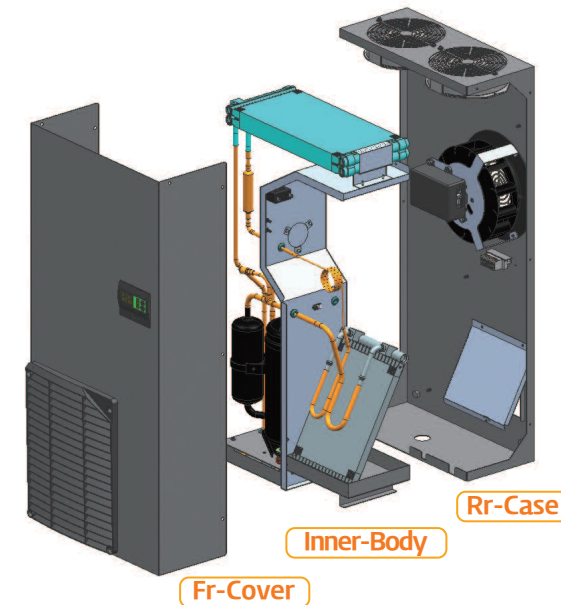
厚度薄, 重量轻

Thin and light

문짝에 부착해도 전혀 무게감이 없고 돌출감이 없다.

安装在控制柜门, 开门较轻、无凹凸之感

There are no sagging and projecting when installed on the door.



A/S 하기 쉽게 설계되어졌다.

便于售后服务而设计

Easy for after service

카트리지가 타입으로 에어컨에 문제가 발생시 쉽게 내부몸체를 빼낼 수 있다

为了便于维护而设计, 因此维修时可以把内部整块容易拆卸。

When the air conditioner has a problem, the inner-body is easy to be taken out since designed as the cartridge.

필터 청소가 용이하다.

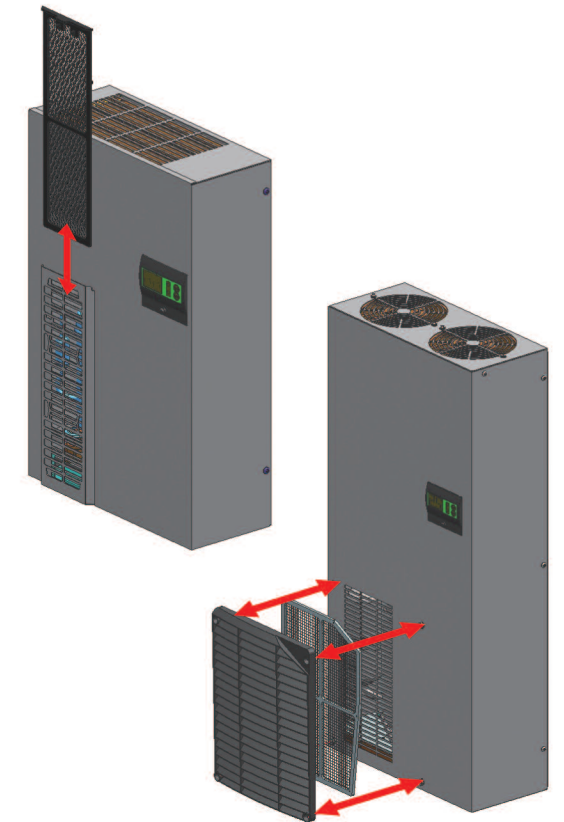
便于清理过滤网

Easy to clean the filter

일체형 프리망사필터(Pre mesh filter)를 사용하여 청소가 매우 쉽고, 또한 원터치 홀더 형태의 구조로 되어 있어 필터커버가 한번에 탈부착이 용이하다.

使用整体式过滤网, 因而便于清理;
采用卡扣式结构, 因而便于一次性装拆。

It is very easy to clean by using the pre-filter and also has a detachable feature.



배수호스가 필요 없다. | 无需排水管 | No need of the drain hose

전 제품이 히터(300W, 500W)를 사용한 강제 증발 방식이 아닌, 냉동 사이클에 의하여 자체적으로 응축수를 증발시킨다.

기존의 전기히터(300~500W)를 이용한 방식이 아니므로 전기 소모가 적고 누전 위험이 없는 안전한 구조로 설계되었다. (습도 80%시 60~120cc/hr 자가증발)

不采用将制冷剂利用电阻丝加热(300W, 500W)而蒸发方式, 而采用本系统根据制冷循环周期把冷凝水自动蒸发方式。

All products evaporate the condensed water by using the cooling cycle itself. Therefore, they don't need heating features, lowering the electric charges and the risk of electric leakage (when 80% of humidity, self-evaporate for 60~120cc/hr)

▶ 용량계산방법 | 制冷量计算方法 The Method of Cooling Capacity Calculation

$$C \text{ (총소요 냉각용량)} = A \text{ (판넬내부 발생열량)} + B \text{ (판넬 표면을 통한 유입열량)}$$

$$C \text{ (总冷却量)} = A \text{ (控制柜内部发热量)} + B \text{ (控制表面导热量)}$$

$$C \text{ (Total Heat Loss)} = A \text{ (Panel Installation Heat Loss)} + B \text{ (Input Heat Through Panel Surface)}$$

A는 판넬내부의 전자회로에 발생하는 열량
(발열량 선정자료 참조 또는 입력선과 출력선의 전압 및 전류를 측정해도 알 수 있음)

A是指在控制柜内部电子电路发生的热量
(请参考选定发热量资料, 测量输入电压和电流而得)

A is Heat generated in the electricity and electron circuits within the Panel.
(Please refer to select caloric value or measure both voltage and current of input/output lines)

예) 소비전력이 500W인 경우
 $500W \times 0.86Kcal/h = 430Kcal/h$

比如) 使用功率为500W时
 $500W \times 0.86Kcal/h = 430Kcal/h$

Example: When the power consumption is 500W,
 $500W \times 0.86Kcal/h = 430Kcal/h$

B는 에어컨을 설치했을 시 판넬 내부온도가 낮아져 외부열이 판넬표면을 통해 유입되는 열량으로
판넬 내 · 외부 온도차이와 표면적에 비례하므로 아래표에서 선정합니다.

B是指控制柜表面传热量, 跟控制柜内外有温差和表面积成正比。在控制柜内外温度差系数表中选定。

B is heat input though the surface of the panel while the temperature inside of the panel becomes lower compared to the outside. So, B is correlated with the temperature difference between inside and outside as well as the surface area. (See the table below)

예) 판넬 내 · 외부 온도차이가 15°C이고 표면적이 4.6㎡인 경우
 $55.3Kcal/h/m^2 \times 4.6m^2 = 254Kcal/h$

比如) 控制柜内外温度之差15°C, 表面积 4.6㎡时,
 $55.3Kcal/h/m^2 \times 4.6m^2 = 254Kcal/h$

Example: When the temperature difference between inside and outside is 15°C and the surface area is 4.6㎡,
 $55.3Kcal/hr/m^2 \times 4.6m^2 = 254Kcal/h$

▶ 판넬 내 · 외부 온도차이별 계수 | 控制柜内外温度差系数 Temperature Differential Conversion Chart

Temperature Differential (°C)	(kcal / h/m²)	(BTU / h/m²)
5	16.7	66.3
10	42.2	167.4
15	55.3	219.4
20	92.2	365.8
25	116.7	463.1
30	142.2	564.2
35	166.9	662.3

$C \text{ (총소요 냉각용량)} = A + B = 430Kcal/h + 254Kcal/h = 684Kcal/h$
※ 이 경우 자사 모델 DCA750SM SERIES을 적용하십시오.

$C \text{ (总制冷量)} = A + B = 430Kcal/h + 254Kcal/h = 684Kcal/h$
※ 此时使用本公司 DCA750SM产品.

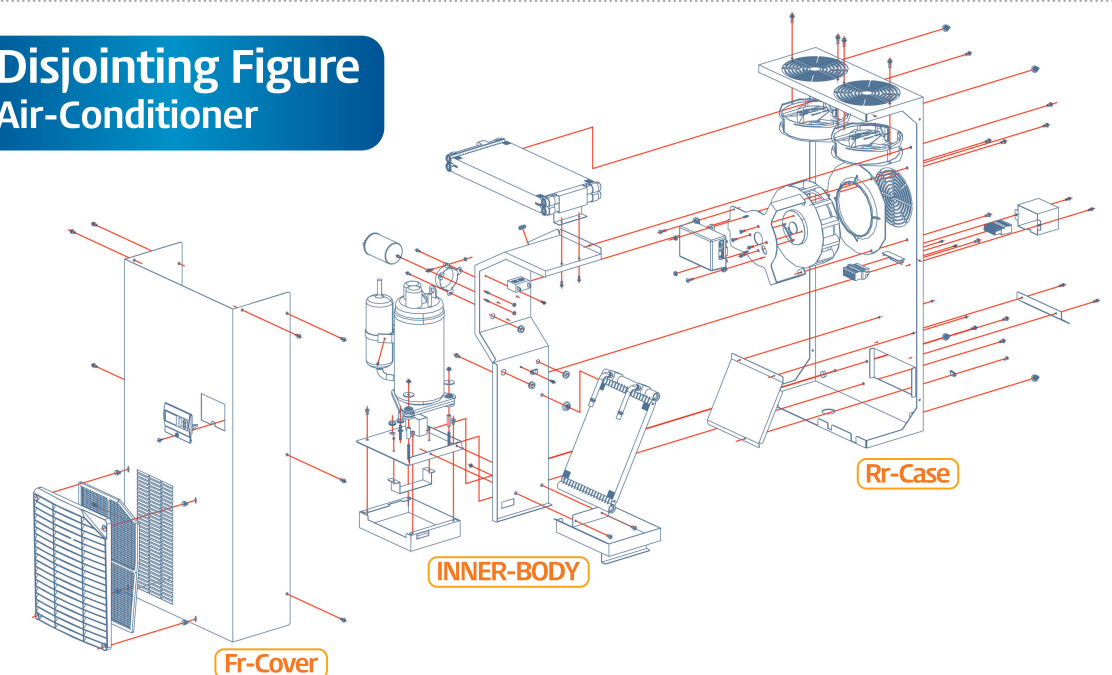
$C \text{ (Total heat loss)} = A + B = 430Kcal/h + 254Kcal/h = 684Kcal/h$
※ In this Case, Daeyang Model DCA750SM SERIES is the best Choice.

예제) 제어반 크기(W x H x D) = 800 x 1600 x 500mm인 경우
※ 제어반 표면적 계산방법(공장바닥 설치 시)
 $(0.8m \times 1.6m \times 2EA) + (1.6m \times 0.5m \times 2EA) + (0.8m \times 0.5m \times 1EA) = 4.6m^2$

比如) 控制柜大小(W x H x D) = 800 x 1600 x 500mm时,
※ 控制柜表面积计算方法(安装在地表面时)
 $(0.8m \times 1.6m \times 2EA) + (1.6m \times 0.5m \times 2EA) + (0.8m \times 0.5m \times 1EA) = 4.6m^2$

Example : Control panel volume(W x H x D) - 800 x 1600 x 500,
※ The method of calculating the surface area control panel(in the case of installing on the factory floor)
 $(0.8m \times 1.6m \times 2EA) + (1.6m \times 0.5m \times 2EA) + (0.8m \times 0.5m \times 1EA) = 4.6m^2$

Disjointing Figure Air-Conditioner



▶ 발열량 선정 자료 | 选定发热量资料 | SELECT CALORIC VALUE

전원·변압기류 | 制冷量计算方法 | CURRENT AND TRANCFORMING DEVICES

반내설치기기 (MACHINERY INSTALLED IN PANEL)	발열량 (일반적기준) (HEAT LOSS-GENERAL STANDARDS)	비 고 (REMARKS)
소형 변압기 (TRANSFORMER)	정격용량 (RATED CAPACITY) -10KVA 50% 정도(Approximately 50%) -100VA 20% 정도(Approximately 20%) -1KVA 10% 정도(Approximately 10%) -3KVA 6% 정도(Approximately 6%)	• 소형일수록 발열비율이 커집니다. (Smaller in size leads to more HEAT LOSS RATE)
전압 조정기 (VOLTAGE CONTROL UNIT)	정격용량의 10% 정도 (Approximately 10% of RATED CAPACITY)	• 손실 - 발열량 (HEAT LOSS)
대형저항기 (고정, 가변) (HEAVY RESISTOR, FIXED, VARIABLE)	정격용량의 1/3 정도 (Approximately 1/3 of RATED CAPACITY)	
정전압 전원 (CONSTANT-VOLTAGE SWITCH)	정격용량의 10~15% 정도 (Approximately 10~15% of RATED CAPACITY)	• 손실 - 발열량 (HEAT LOSS)
무정전 전원장치 (UPS)	정격용량의 1~5KVA (RATED CAPACITY KVA) 35% 정도 (Approximately 35%) 정격용량의 20KVA (RATED CAPACITY KVA) 25% 정도 (Approximately 25%)	• 소형일수록 발열비율이 커집니다. (Smaller in size leads to more HEAT LOSS RATE) • 발열량은 충전지 충전 상태에서의 값. (HEAT LOSS is the value in charging the Storage Battery) • 상시 인버터 급전 타입. (Full-time Inverter Emergency Type)
직류 안정화 전원 (switching regulator)	정격용량의 30~55% 정도 (Approximately 30~55% of RATED OUTPUT)	• 정격출력 100% 일 때의 발열량. (HEAT LOSS at 100% of RATED OUTPUT) • 소형일수록 발열비율이 커집니다. (the Smaller in size leads to the more HEAT LOSS RATE)
저압콘덴서 (LOW-TENSION CONDENSER)	정격용량의 0.2% 정도 (Approximately 0.2% of RATED OUTPUT)	• 정격용량은 KVA. (RATED CAPACITY is KVA) (100V, 60HZ, 1KVA = 256.3 μ F)

증폭기류 | 制冷量计算方法 | AMPLIFYING DEVICES

반내설치기기 (MACHINERY INSTALLED IN PANEL)	발열량 (일반적기준) (HEAT LOSS-GENERAL STANDARDS)	비 고 (REMARKS)
AC SERVO AMP	정격용량 (RATED CAPACITY) -0.1KW 50% 정도(Approximately 50%) -0.5VA 20% 정도(Approximately 20%) -1KW 15% 정도(Approximately 15%) -3KW 10% 정도(Approximately 10%)	• 앰프1개당 정격출력 100%일때의 발열량. (HEAT LOSS at 100% of RATED OUTP in an AMP) • 소형일수록 발열비율이 커집니다. (The Smaller in size leads to the more HEAT LOSS RATED) • 전원내장상태. (Built-in Power Supply Type)
POWER UNIT (SERVO AMP)	정격용량의 3~5% 정도 (Approximately 3~5% of RATED CAPACITY)	• 정격출력 100% 일때의 발열량. (HEAT LOSS at 100% of RATED OUTPUT) • 내장기기 (Built-in Machinery) 트랜드, 정류유니트, 콘덴서(TRANSFORMER, RECTIFICATION UNIT, CONDENSER)
인버터 (INVERTER)	정격용량의 5~10% 정도 (Approximately 5~10% of RATED CAPACITY)	• 정격출력 100% 일때의 발열량. (HEAT LOSS at 100% of RATED OUTPUT) • 소형일수록 발열비율이 커집니다. (The Smaller in size leads to the more HEAT LOSS RATE) • 연속정격 출력시. (At the time of continuous RATED OUTPUT)

컴퓨터 장치류 | 控制柜内外温度差系数 | COMPUTER DEVICE

반내설치기기 (MACHINERY INSTALLED IN PANEL)	발열량 (일반적기준) (HEAT LOSS-GENERAL STANDARDS)	비 고 (REMARKS)
컴퓨터 본체 (FACTORY COMPUTER)	1대당 100~300W 정도 (1 UNIT : Approximately 100~300W)	
CRT	1대당 60~130W 정도 (1 UNIT : Approximately 60~130W)	• 크기(인치수)에 따라 다름. (Vary according to size(inch))
FLOPPY DISC (THERMOSTAT)	3.5~5인치 2매용 20W 정도 (2 UNITS of 3.5~5inches : 20W)	
FIXED DISC	10~20M byte 100W 정도	• 전원유(Power Supply)

배선용 기기류 | 制冷量计算方法 | WIRING DEVICES

반내설치기기 (MACHINERY INSTALLED IN PANEL)	발열량 (일반적기준) (HEAT LOSS-GENERAL STANDARDS)	비 고 (REMARKS)
배선용 차단기 (NFB, ELB)	(NBF) 정격용량 (RATED CAPACITY) - 50A 15W 정도(Approximately 15W) -100A 35W 정도(Approximately 35W) -225A 55W 정도(Approximately 55W) -400A 85 정도 (Approximately 85W) (NBF) NBF+5W 20W 정도(Approximately 25W) (누진전자회로부등) LEAKAGE FROM ELECTRONIC CIRCUITS	• 정격출력 100% 일때의 발열량 (HEAT LOSS at 100% of RATED CAPACITY) • 극수에 비례 (Proportionate to the Number of Poles) • 3P의 경우 (in case of 3P) • 누진전자 회로부는 극수와 무관함 (Leakage from electronic circuits has nothing to dowith the number of Poles) • 소형일수록 발열비율이 커집니다. (Smaller in size leads to more HEAT LOSS RATE)
전자접촉기 (ELECTRO-MAGNETIC RELAY)	정격용량 (RATED CAPACITY) - 4KW 10W 정도(Approximately 10W) -7.5KW 20W 정도(Approximately 20W) -22KW 80W 정도(Approximately 80W) -30KW 110 정도(Approximately 110W)	• 정격출력 100% 일때의 발열량 (HEAT LOSS at 100% of RATED CAPACITY) • 3P인 경우 (in case of 3P) • AC220V 인 경우 (in case of AC220V)
열동형 과부하 계전기 (THERMAL RELAY)	정격용량 (RATED CAPACITY) - 35A 4W 정도(Approximately 4W/POLE) -100A 8W 정도(Approximately 8W/POLE) -150A 10W 정도(Approximately 10W/POLE)	• 정격출력 최대값 통전시의 발열량 (When Applying Maximum Static CAPACITY)
전자계전기 (RELAY)	5W 정도	• 정격출력 100% 일때의 발열량 (When Applying Maximum Static CAPACITY)

제어용 기기류 | 制冷量计算方法 | COMPUTER DEVICES

반내설치기기 (MACHINERY INSTALLED IN PANEL)	발열량 (일반적 기준) (HEAT LOSS-GENERAL STANDARDS)
소형릴레이 (COMPACT RELAY)	1개당 1~2W 정도 (NFB) (1UNIT : Approximately 1~2W)
솔리드 스테이트 릴레이 (SSC, SSR)	사용전류 x 1.6W (Using Current x Approximately 1.6W)
온도 조절계 (THERMOSTAT METER)	48 x 96 사이즈 5W 정도 (48 x 96 SIZE Approximately 5W) 96 x 96 사이즈 10W 정도 (96 x 96 SIZE Approximately 10W)

기타 | 制冷量计算方法 | OTHER DEVICES

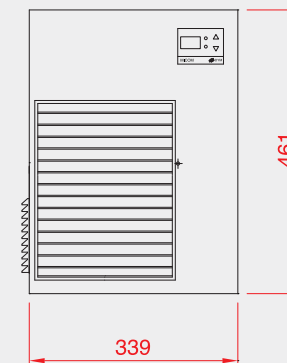
반내설치기기 (MACHINERY INSTALLED IN PANEL)	발열량 (일반적 기준) (HEAT LOSS-GENERAL STANDARDS)
FAN MOTER	90° 사이즈 10W 정도 (90 SIZE Approximately 10W) 120° 사이즈 13W 정도 (120 SIZE Approximately 13W) 150° 사이즈 40W 정도 (150 SIZE Approximately 40W)

㉠ SMA2000

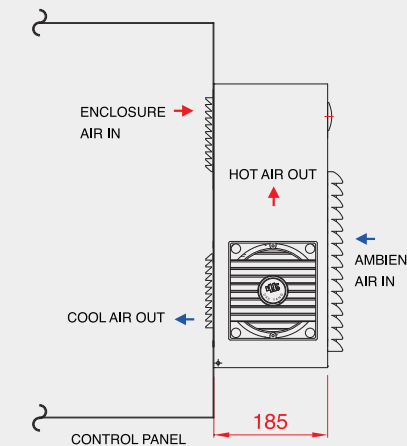


MODEL	SMA2000	
VOLTAGE [V]	220	
FREQUENCY [Hz]	50 / 60	
CAPACITY	kcal/h	425 / 500
	BTU/h	1700 / 2000
	W	495 / 582
POWER CONSUMPTION [W]	320 / 361	
RATED CURRENT STA-RUN [A]	12.0-2.0 / 12.0-2.0	
USE ENVIRONMENT	20~45°C, 70% RH	
W*H*D [mm]	339*461*185	
WEIGHT [Kg]	22.0	
EXTERNAL AIRFLOW [m³/h-CFM]	300-177 / 360-213	
INTERNAL AIRFLOW [m³/h-CFM]	300-177 / 360-213	
REFRIGERANT	R134a	

FRONT VIEW

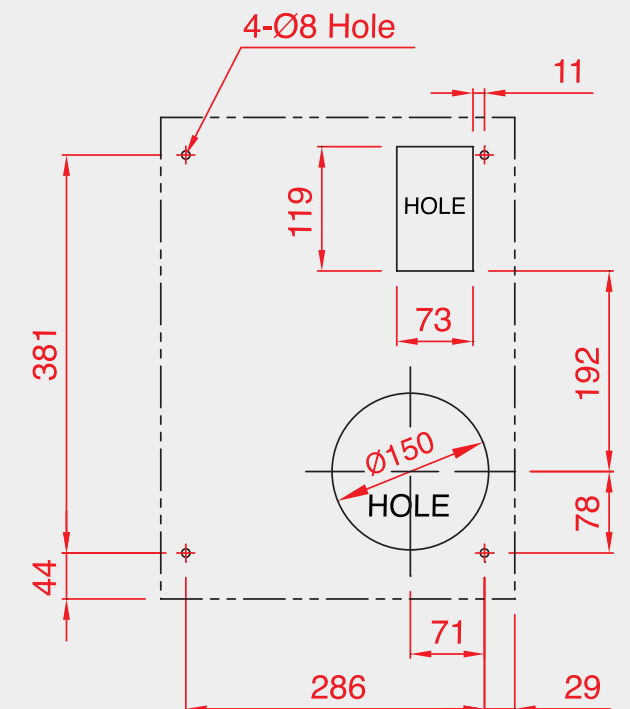


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

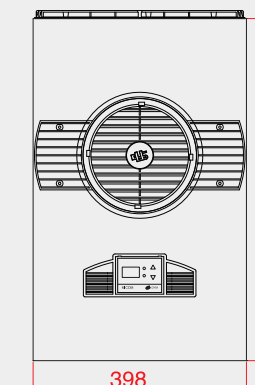


㉠ DCA2500SE

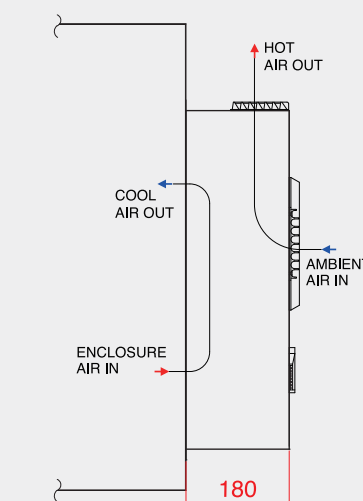


MODEL	DCA2500SE	
VOLTAGE [V]	220	
FREQUENCY [Hz]	50 / 60	
CAPACITY	kcal/h	530 / 625
	BTU/h	2100 / 2500
	W	620 / 725
POWER CONSUMPTION [W]	575	
RATED CURRENT STA-RUN [A]	13.0-2.5 / 13.0-2.5	
USE ENVIRONMENT	20~45°C, 70% RH	
W*H*D [mm]	398*638*180	
WEIGHT [Kg]	27.0	
EXTERNAL AIRFLOW [m³/h-CFM]	435-257 / 490-289	
INTERNAL AIRFLOW [m³/h-CFM]	300-177 / 360-213	
REFRIGERANT	R134a	

FRONT VIEW

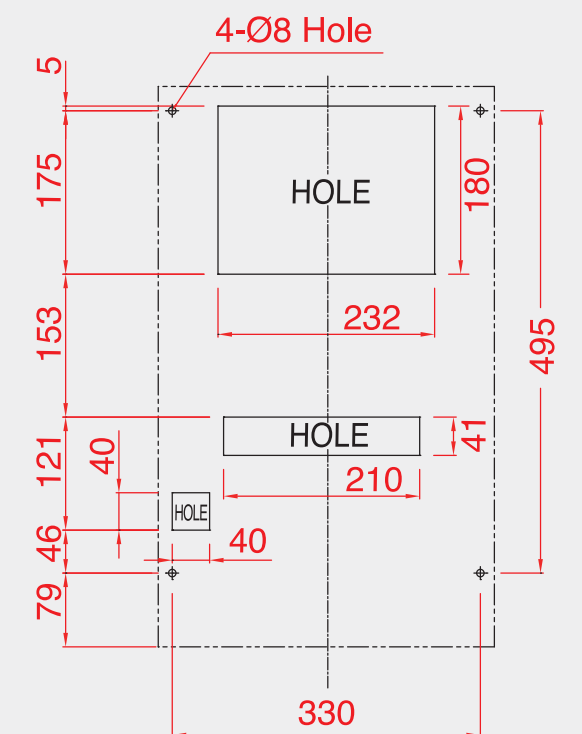


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

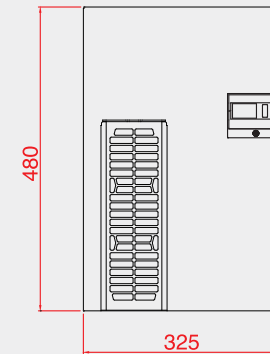


● DCA250SM SERIES

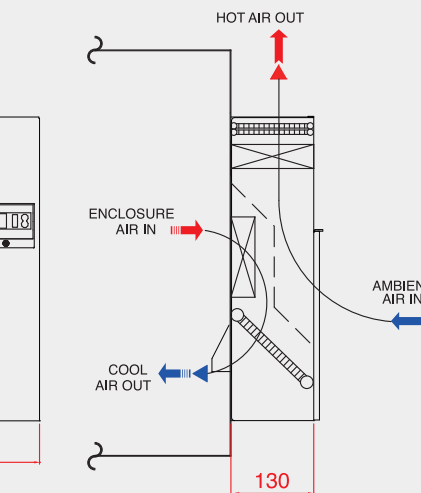


MODEL		DCA250SM21-S	DCA250SM22-S
VOLTAGE [V]		220	
FREQUENCY [Hz]		50	60
CAPACITY	kcal/h	250	250
	BTU/h	1000	1000
	W	290	290
POWER CONSUMPTION [W]		283	261
RATED CURRENT STA-RUN [A]		4.4-1.6	4.8-1.3
USE ENVIRONMENT		20~45℃, 70% RH	
W*H*D [mm]		325*480*130	
WEIGHT [Kg]		13.5	
EXTERNAL AIRFLOW [m³/h-CFM]		300-177	348-205
INTERNAL AIRFLOW [m³/h-CFM]		224-132	257-151
REFRIGERANT		R134a	

FRONT VIEW

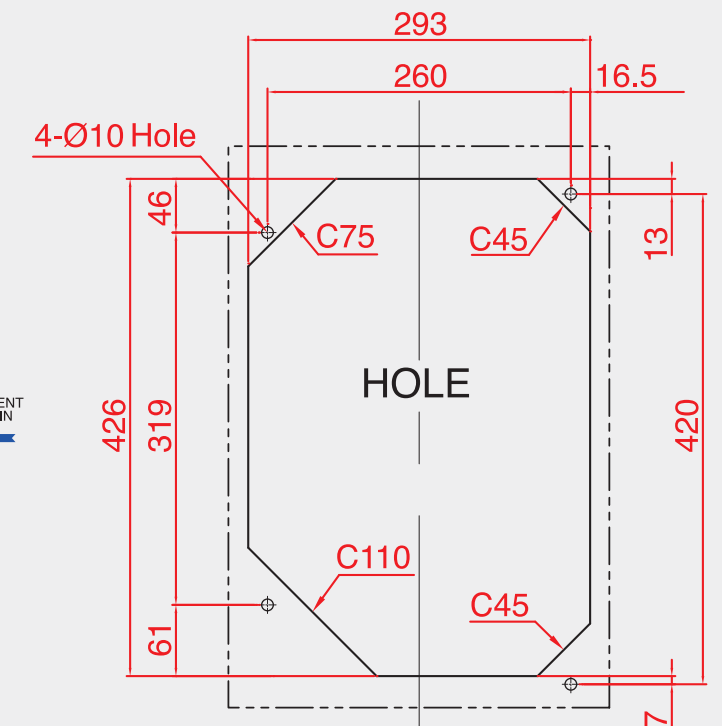


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

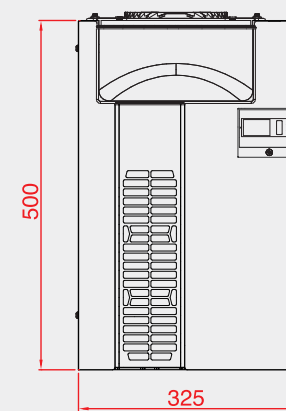


● DCA375SM/500SM SERIES

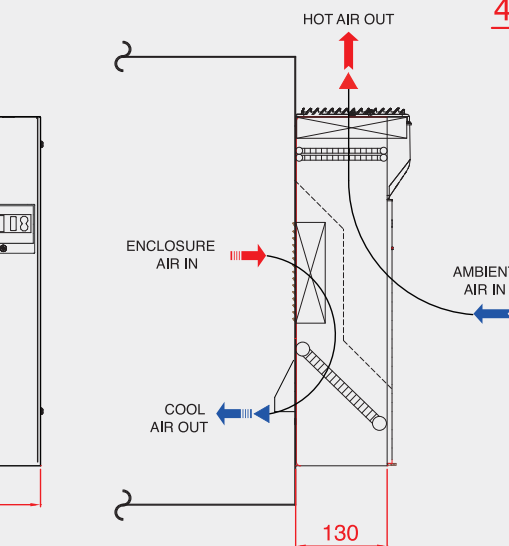


MODEL	DCA375SM21-S	DCA375SM22-S	DCA500SM21-T	DCA500SM22-T
VOLTAGE [V]	220			
FREQUENCY [Hz]	50	60	50	60
CAPACITY	kcal/h	375	375	500
	BTU/h	1500	1500	2000
	W	440	440	590
POWER CONSUMPTION [W]	310	286	385	455
RATED CURRENT STA-RUN [A]	4.4-1.6	4.8-1.3	5.7-1.8	8.0-2.2
USE ENVIRONMENT	20~45°C, 70% RH			
W*H*D [mm]	325*500*130			
WEIGHT [Kg]	13.0			
EXTERNAL AIRFLOW [m³/h-CFM]	300-177	360-213	448-264	514-302-
INTERNAL AIRFLOW [m³/h-CFM]	240-142	282-166	300-177	360-213
REFRIGERANT	R134a			

FRONT VIEW

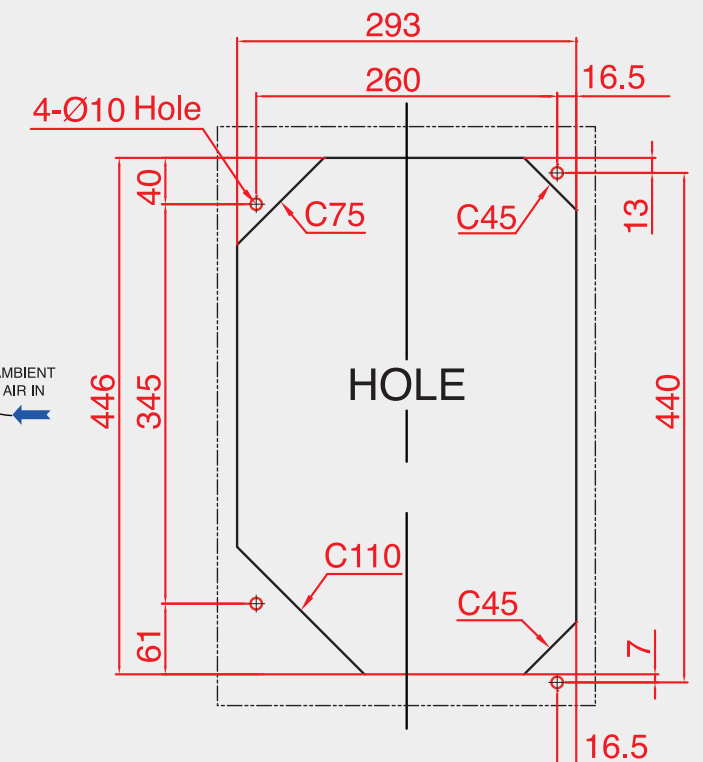


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

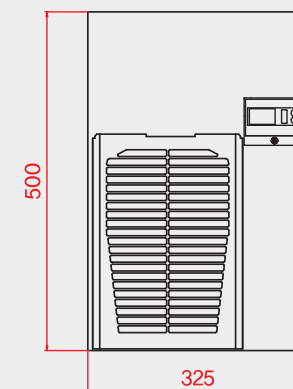


DCA500SM SERIES

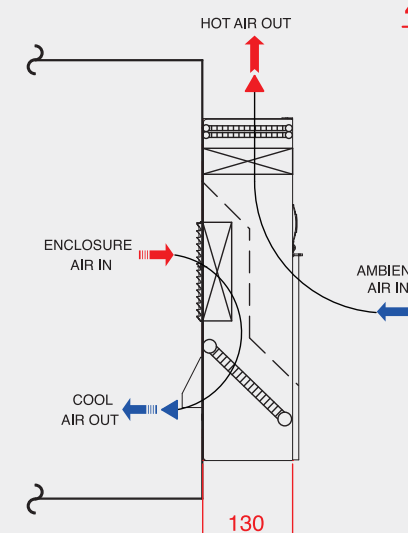


MODEL	DCA500SM23-S	DCA500SM21-S	DCA500SM22-S
VOLTAGE [V]	220		
FREQUENCY [Hz]	50 / 60	50	60
CAPACITY	kcal/h	420 / 500	500
	BTU/h	1660 / 2000	2000
	W	490 / 590	590
POWER CONSUMPTION [W]	445 / 478	385	455
RATED CURRENT STA-RUN [A]	5.9-2.1/5.7-2.1	5.7-1.8	8.0-2.2
USE ENVIRONMENT	20~45°C, 70% RH		
W*H*D [mm]	325*500*130		
WEIGHT [Kg]	14.5		
EXTERNAL AIRFLOW [m³/h-CFM]	448-264 / 514-302	448-264	514-302
INTERNAL AIRFLOW [m³/h-CFM]	300-177 / 360-213	300-177	360-213
REFRIGERANT	R134a		

FRONT VIEW

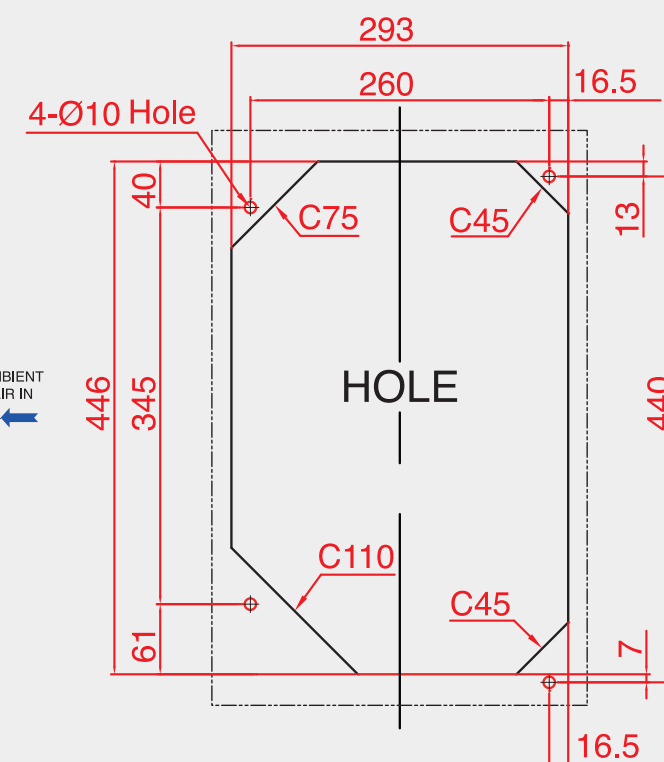


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

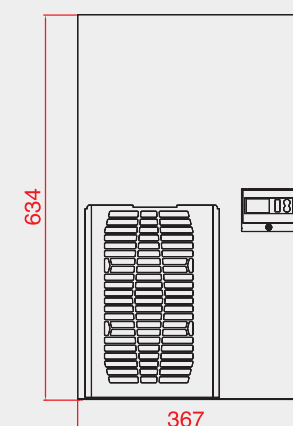


DCA625SM SERIES

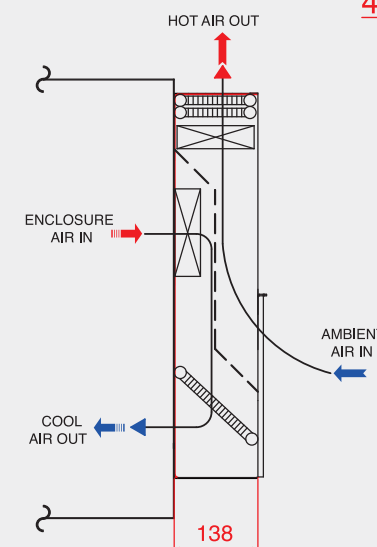


MODEL	DCA625SM23-S	DCA625SM21-S	DCA625SM22-S
VOLTAGE [V]	220		
FREQUENCY [Hz]	50 / 60	50	60
CAPACITY	kcal/h	520 / 625	625
	BTU/h	2060 / 2500	2500
	W	603 / 730	730
POWER CONSUMPTION [W]	451 / 490	391	467
RATED CURRENT STA-RUN [A]	5.8-2.1/5.8-2.2	5.7-1.8	8.0-2.3
USE ENVIRONMENT	20~45°C, 70% RH		
W*H*D [mm]	367*634*138		
WEIGHT [Kg]	19.0		
EXTERNAL AIRFLOW [m³/h-CFM]	448-264 / 514-302	448-264	514-302
INTERNAL AIRFLOW [m³/h-CFM]	425-250 / 498-293	300-177	360-213
REFRIGERANT	R134a		

FRONT VIEW

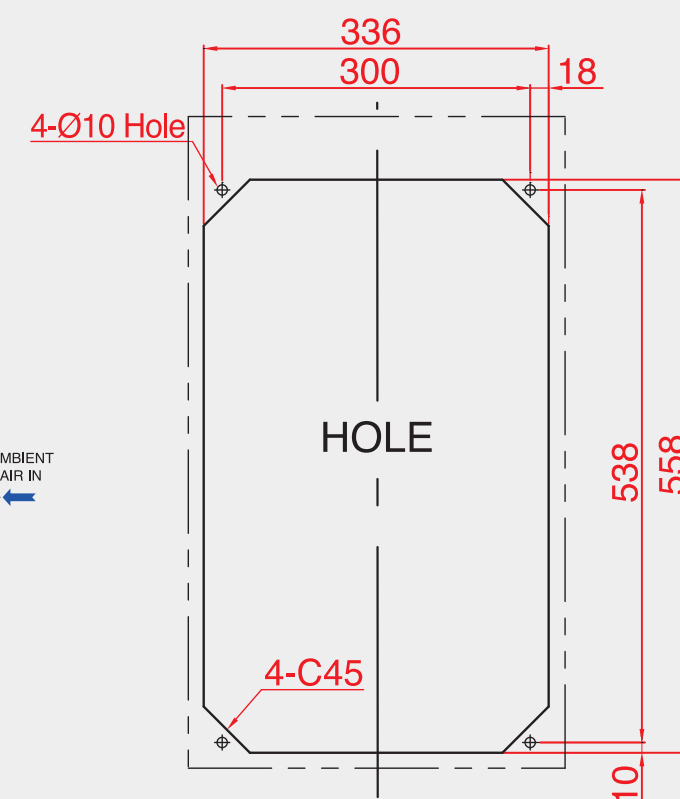


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

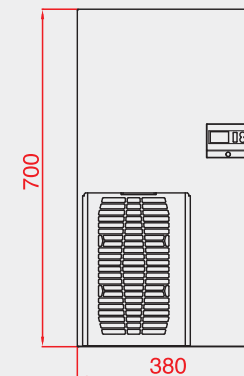


DCA750SM SERIES

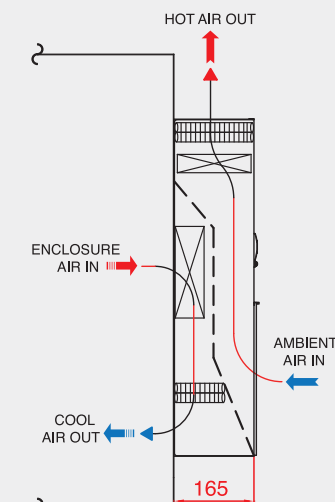


MODEL	DCA750SM23-S	DCA750SM21-S	DCA750SM22-S
VOLTAGE [V]	220		
FREQUENCY [Hz]	50 / 60	50	60
CAPACITY	kcal/h	620 / 750	750
	BTU/h	2500 / 3000	3000
	W	720 / 872	872
POWER CONSUMPTION [W]	460 / 516	417	491
RATED CURRENT STA-RUN [A]	6.0-2.3/5.9-2.3	5.7-1.8	8.0-2.2
USE ENVIRONMENT	20~45°C, 70% RH		
W*H*D [mm]	380*700*165		
WEIGHT [Kg]	22.0		
EXTERNAL AIRFLOW [m³/h-CFM]	600-354/720-425	600-354	720-425
INTERNAL AIRFLOW [m³/h-CFM]	450-266/500-296	450-266	500-296
REFRIGERANT	R134a		

FRONT VIEW

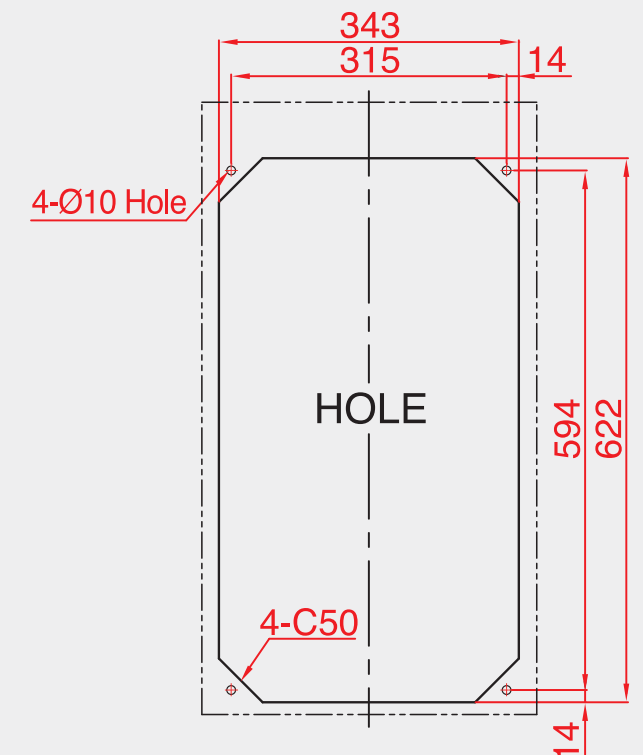


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

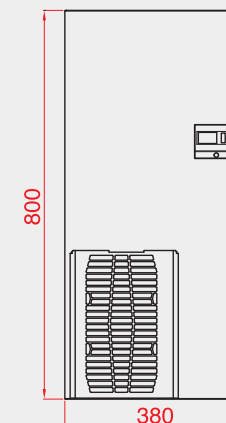


DCA1000SM SERIES

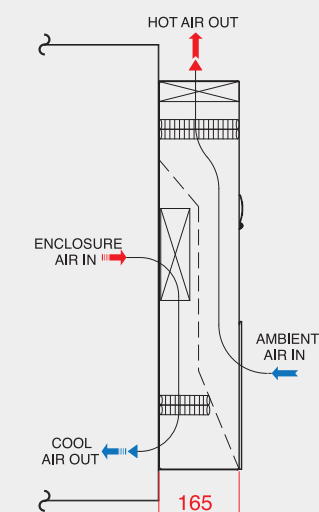


MODEL	DCA1000SM23-S	DCA1000SM21-S	DCA1000SM22-S
VOLTAGE [V]	220		
FREQUENCY [Hz]	50 / 60	50	60
CAPACITY	kcal/h	830 / 1000	1000
	BTU/h	3300 / 4000	4000
	W	965 / 1160	1160
POWER CONSUMPTION [W]	657 / 755	620	730
RATED CURRENT STA-RUN [A]	17.3-3.1/17.3-3.3	17.0-3.0	17.1-3.2
USE ENVIRONMENT	20~45°C, 70% RH		
W*H*D [mm]	380*800*165		
WEIGHT [Kg]	30.0		
EXTERNAL AIRFLOW [m³/h-CFM]	600-354/720-425	600-354	720-425
INTERNAL AIRFLOW [m³/h-CFM]	540-320/600-354	540-320	600-354
REFRIGERANT	R134a	R134a	R410a

FRONT VIEW

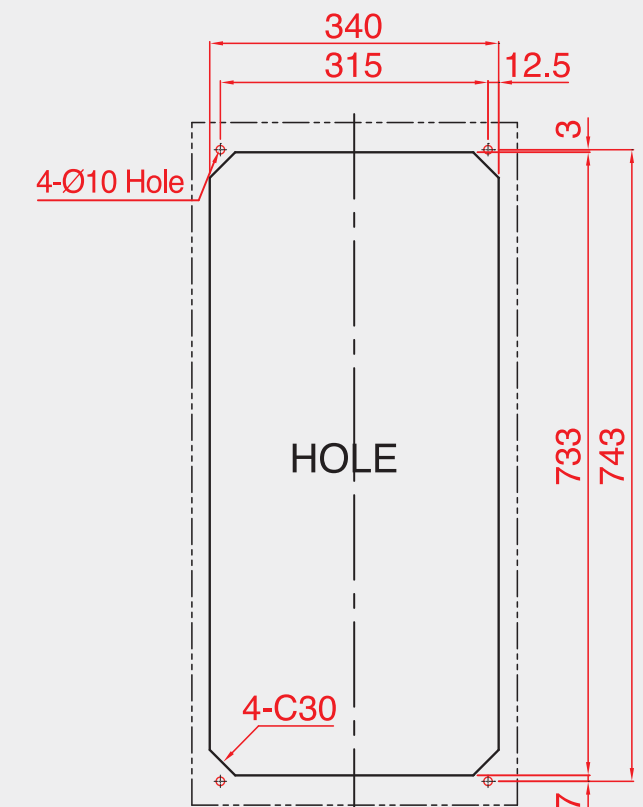


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

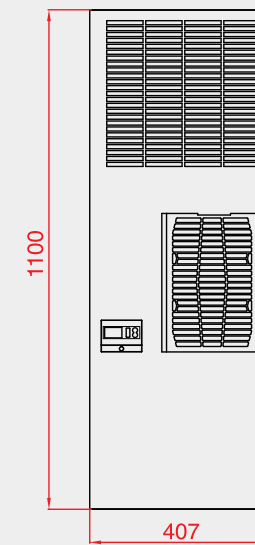


DCA1500SM SERIES

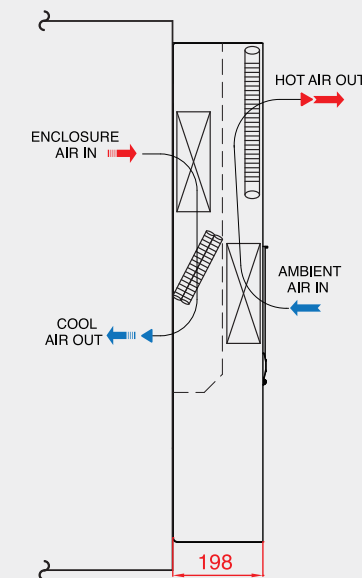


MODEL	DCA1500SM23-S	DCA1500SM21-S	DCA1500SM22-S
VOLTAGE [V]	220		
FREQUENCY [Hz]	50 / 60	50	60
CAPACITY	kcal/h	1200 / 1500	1500
	BTU/h	4800 / 6000	6000
	W	1400 / 1740	1740
POWER CONSUMPTION [W]	680 / 810	650	800
RATED CURRENT STA-RUN [A]	17.5-3.4/17.5-3.8	17.1-3.1	17.3-3.6
USE ENVIRONMENT	20~45°C, 70% RH		
W*H*D [mm]	407*1100*198		
WEIGHT [Kg]	42.0		
EXTERNAL AIRFLOW [m³/h-CFM]	750-444/808-478	750-444	808-478
INTERNAL AIRFLOW [m³/h-CFM]	750-444/808-478	750-444	808-478
REFRIGERANT	R134a	R410a	R410a

FRONT VIEW

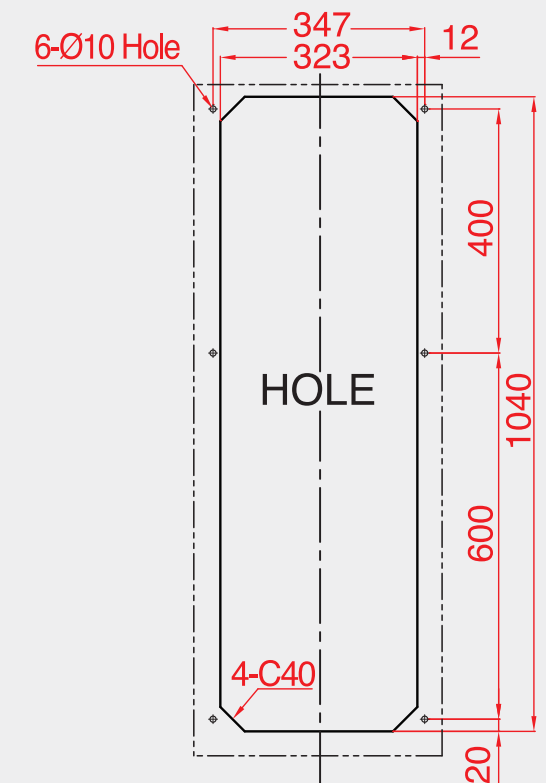


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

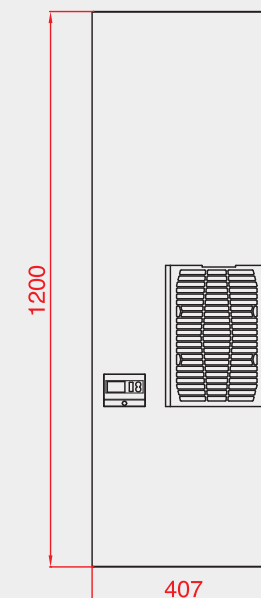


DCA2250SM SERIES

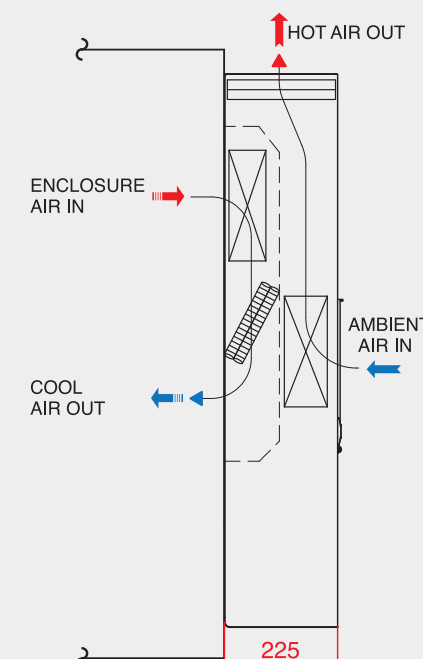


MODEL	DCA2250SM23-T	DCA2250SM21-T	DCA2250SM22-T
VOLTAGE [V]	220		
FREQUENCY [Hz]	50 / 60	50	60
CAPACITY	kcal/h	1913 / 2250	2250
	BTU/h	7650 / 9000	9000
	W	2176 / 2560	2560
POWER CONSUMPTION [W]	992 / 1202	977	1185
RATED CURRENT STA-RUN [A]	21.4-4.6/21.5-5.7	27.2-4.6	27.6-5.8
USE ENVIRONMENT	20~45°C, 70% RH		
W*H*D [mm]	407*1200*225		
WEIGHT [Kg]	48.5		
EXTERNAL AIRFLOW [m³/h-CFM]	1080-638/1210-714	1080-638	1210-714
INTERNAL AIRFLOW [m³/h-CFM]	750-444/808-478	750-444	808-478
REFRIGERANT	R134a	R410a	R410a

FRONT VIEW

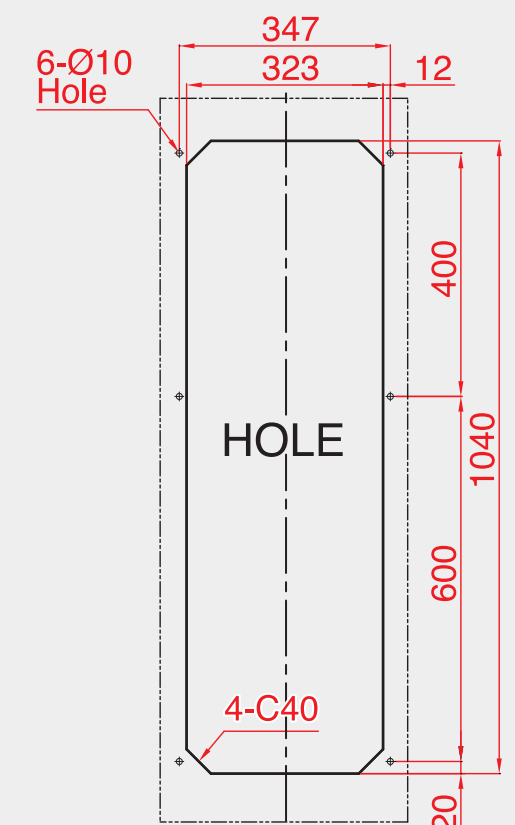


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT

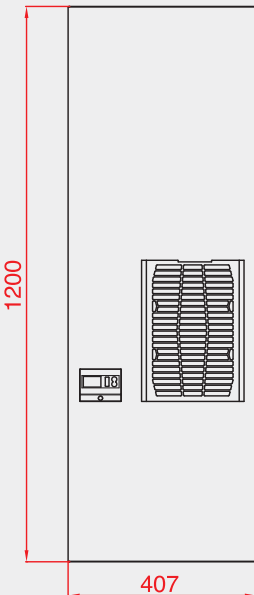


DCA3000SM SERIES

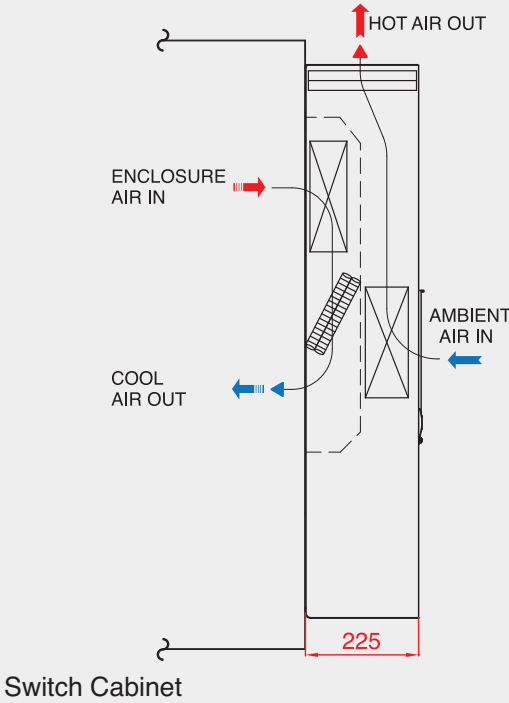


MODEL	DCA3000SM23-T	DCA3000SM21-T	DCA3000SM22-T
VOLTAGE [V]	220		
FREQUENCY [Hz]	50 / 60	50	60
CAPACITY	kcal/h	2500 / 3000	3000
	BTU/h	10000 / 12000	12000
	W	2915 / 3490	3490
POWER CONSUMPTION [W]	1357 / 1687	1357	1687
RATED CURRENT STA-RUN [A]	26.3-6.2 / 26.4-7.0	26.3-6.2	26.4-7.0
USE ENVIRONMENT	20~45°C, 70% RH		
W*H*D [mm]	407*1200*225		
WEIGHT [Kg]	48.5		
EXTERNAL AIRFLOW [m³/h-CFM]	1080-638 / 1210-714	1080-638	1210-714
INTERNAL AIRFLOW [m³/h-CFM]	750-444 / 808-478	750-444	808-478
REFRIGERANT	R134a	R410a	R410a

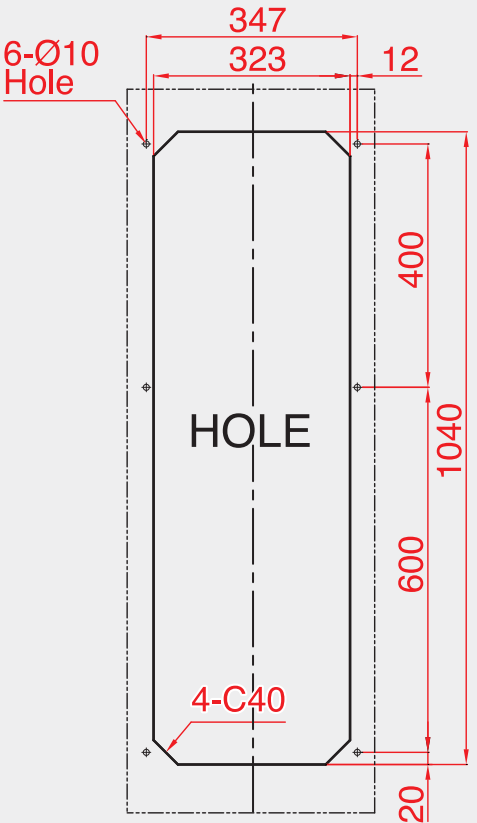
FRONT VIEW



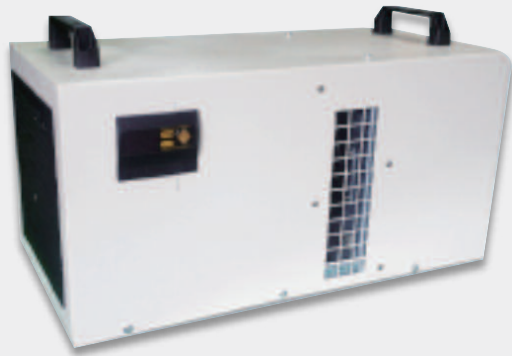
SIDE VIEW



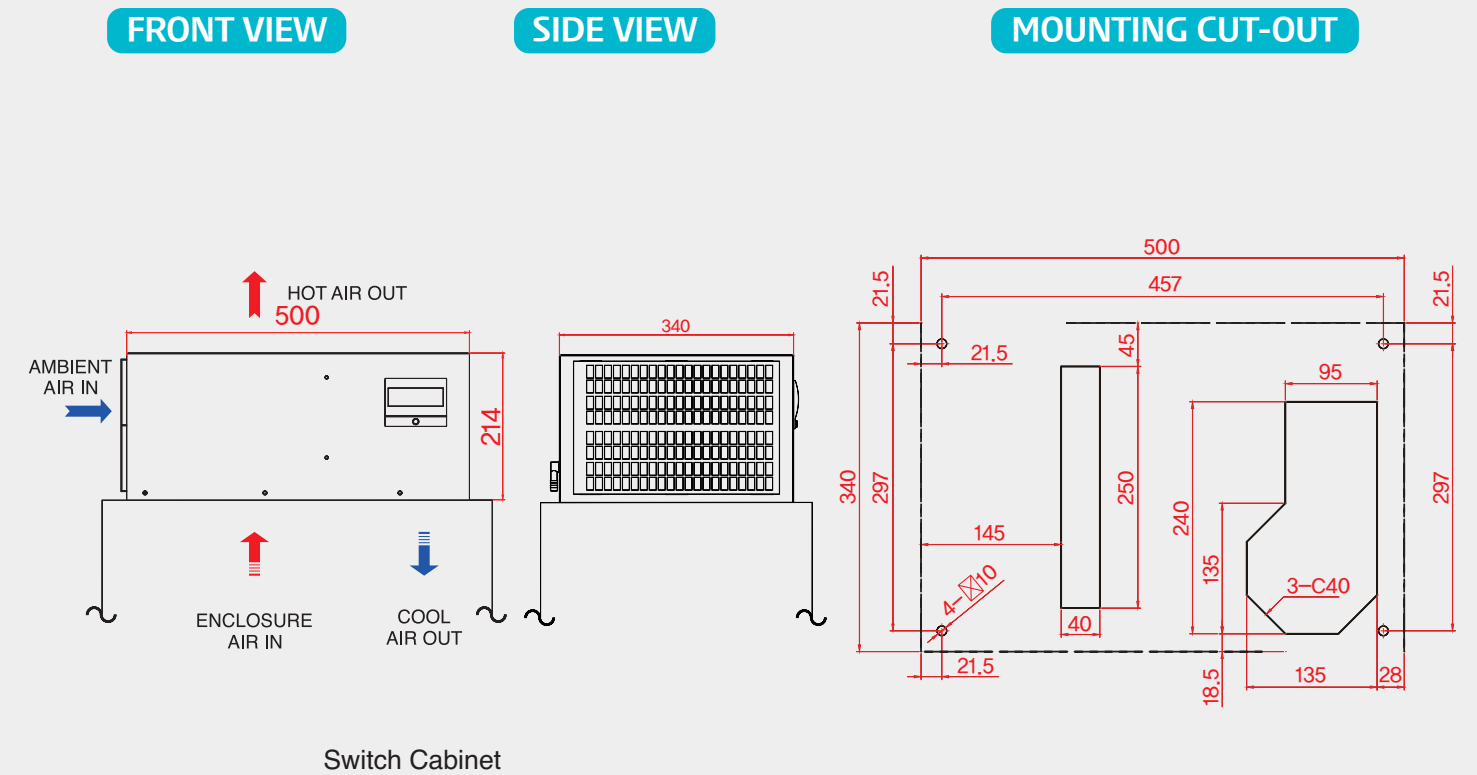
MOUNTING CUT-OUT



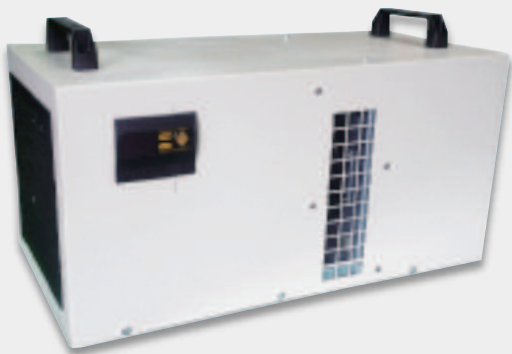
● DCA250TM SERIES



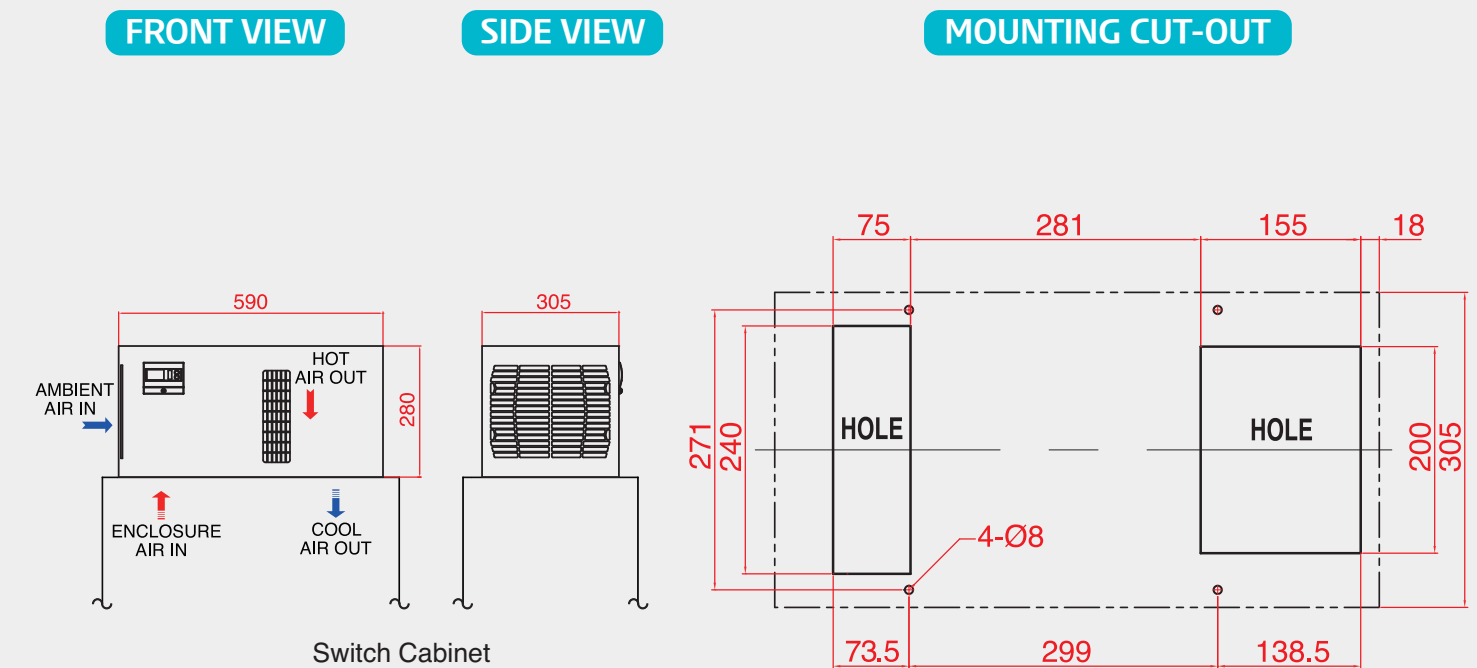
MODEL	DCA250TM21-T	DCA250TM22-T
VOLTAGE [V]	220	
FREQUENCY [Hz]	50	60
CAPACITY	kcal/h	250
	BTU/h	1000
	W	290
POWER CONSUMPTION [W]	283	261
RATED CURRENT STA-RUN [A]	4.4-1.6	4.8-1.3
USE ENVIRONMENT	20~45°C, 70% RH	
W*H*D [mm]	500*214*340	
WEIGHT [Kg]	19.0	
EXTERNAL AIRFLOW [m³/h-CFM]	300-177	348-205
INTERNAL AIRFLOW [m³/h-CFM]	224-132	257-151
REFRIGERANT	R134a	



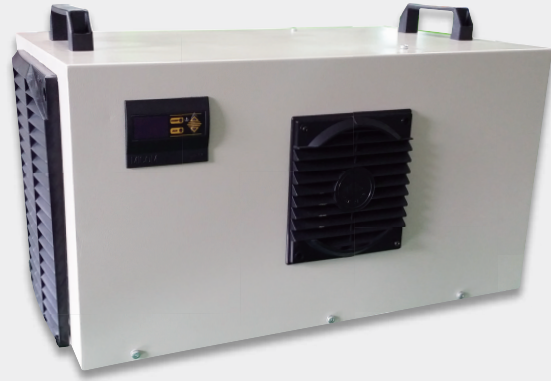
● DCA500TM SERIES



MODEL	DCA500TM21-T	DCA500TM22-T
VOLTAGE [V]	220	
FREQUENCY [Hz]	50	60
CAPACITY	kcal/h	500
	BTU/h	2000
	W	580
POWER CONSUMPTION [W]	414	513
RATED CURRENT STA-RUN [A]	5.8-2.0	8.2-2.5
USE ENVIRONMENT	20~45°C, 70% RH	
W*H*D [mm]	590*280*305	
WEIGHT [Kg]	23.5	
EXTERNAL AIRFLOW [m³/h-CFM]	300-177	360-213
INTERNAL AIRFLOW [m³/h-CFM]	300-177	360-213
REFRIGERANT	R134a	

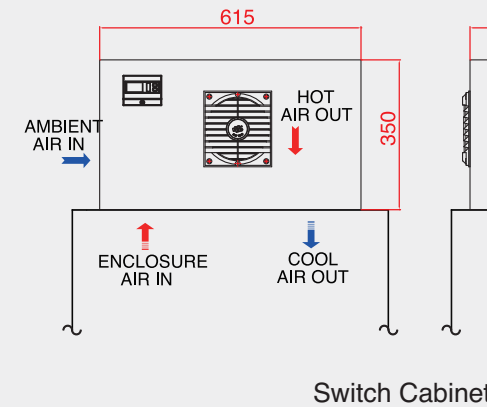


DCA750TM SERIES

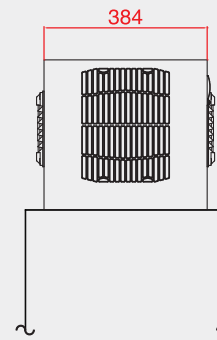


MODEL	DCA750TM23-T	DCA750TM21-T	DCA750TM22-T
VOLTAGE [V]	220		
FREQUENCY [Hz]	50 / 60	50	60
CAPACITY	kcal/h	620 / 750	750
	BTU/h	2500 / 3000	3000
	W	720 / 872	872
POWER CONSUMPTION [W]	522 / 575	480	540
RATED CURRENT STA-RUN [A]	6.2-2.5 / 6.1-2.5	6.0-2.2	6.1-2.3
USE ENVIRONMENT	20~45°C, 70% RH		
W*H*D [mm]	615*350*384		
WEIGHT [Kg]	28.3		
EXTERNAL AIRFLOW [m³/h-CFM]	600-354 / 720-425	600-354	720-425
INTERNAL AIRFLOW [m³/h-CFM]	540-319 / 605-357	540-319	605-357
REFRIGERANT	R134a		

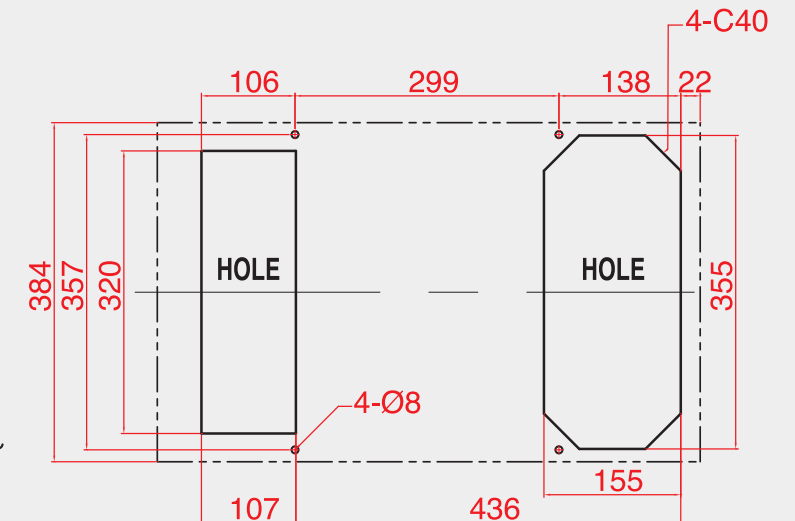
FRONT VIEW



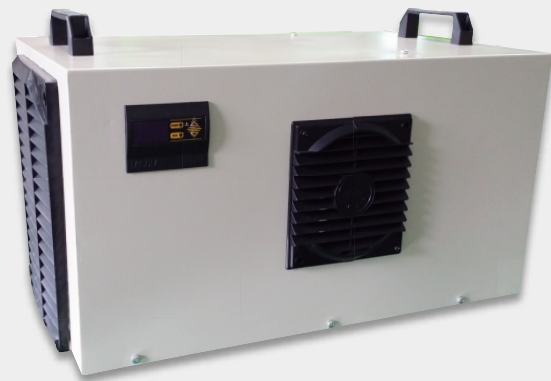
SIDE VIEW



MOUNTING CUT-OUT

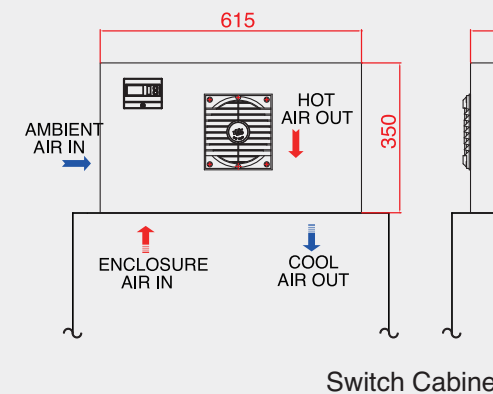


DCA1000TM SERIES

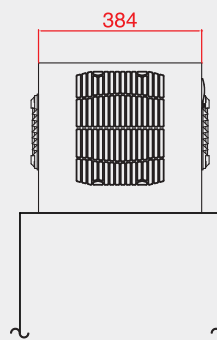


MODEL	DCA1000TM23-T	DCA1000TM21-T	DCA1000TM22-T
VOLTAGE [V]	220		
FREQUENCY [Hz]	50 / 60	50	60
CAPACITY	kcal/h	830 / 1000	1000
	BTU/h	3300 / 4000	4000
	W	965 / 1160	1160
POWER CONSUMPTION [W]	657 / 755	620	730
RATED CURRENT STA-RUN [A]	17.3-3.1 / 17.3-3.3	16.9-2.9	17.1-3.1
USE ENVIRONMENT	20~45°C, 70% RH		
W*H*D [mm]	615*350*384		
WEIGHT [Kg]	33.3		
EXTERNAL AIRFLOW [m³/h-CFM]	600-354 / 720-425	600-354	720-425
INTERNAL AIRFLOW [m³/h-CFM]	554-327 / 583-344	540-319	605-357
REFRIGERANT	R134a	R410a	R410a

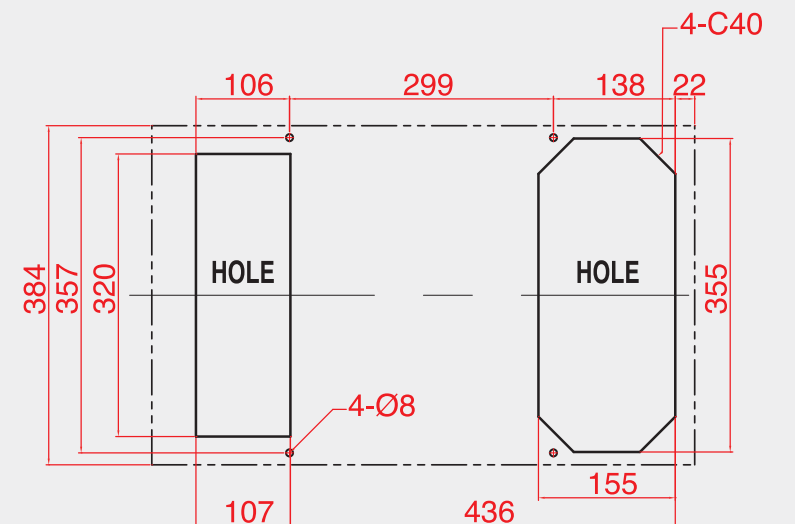
FRONT VIEW



SIDE VIEW



MOUNTING CUT-OUT



NEW

FAN COOLER

[인증마크 | 认证证书]



FAN COOLER

| 용도 | 用途 | PURPOSE

공장내부 공기를 이용하여 제어반 내부 온도를 낮추는 간접냉각용이 필요한 방전가공기, FA제어반, 로봇, NC공작기계 등에 적용합니다.

是利用厂房内部空气降低控制柜内部温度的间接冷却方式，用在电火花设备、FA控制装置、机器人、NC机床。

To lower the temperature inside of the panel by indirected cooling from the ambient temperature, applying to electric discharge machines, FA panels, robots, and NC machines, etc.

| 원리 | 原理 | PRINCIPLE

제어반 내부 발생열과 공장 외부 찬공기를 각각의 팬모터에 의해 공기를 순환시켜 COOLING FIN UNIT에 의해서, 외부 찬공기가 제어반 내부에 직접 유입시키지 않고, 열전도와 대류에 의해서 제어반 내부 온도를 외부 공기 온도에 근접시킨다.

将控制柜内部发生的热空气和厂外较冷空气，利用风机循环后，通过铝箔片传热，这时使得外部空气不得侵入到控制柜内，只根据热传导和对流把控制机内部温度接近外部空气温度。

Since each fan motor with the cooling fin unit circulates the air between the inside of the panel (hot air) and the outside (cool air), it doesn't flow the external cool air inside and also reaches the internal temperature similar to the external one by heat conduction and convection current.

| 특징점 | 特征 | SPECIAL FEATURES

1. 열전도성이 높은 알루미늄 냉각핀 유니트의 가로막구조의 설계로 외부의 이물질 및 습기유입이 일체 차단된다.
2. 경량이라 탈부착이 용이하고, 가볍기 때문에 청소가 쉽다.
3. FAN GUARD사용으로 안정성이 보장되며, 모터A/S가 용이하다.
4. 보호등급 INT IP54, EXT IP34를 만족한다.
5. 볼베어링 팬모터 적용으로 평균 수명시간이 50,000시간(주변온도 20℃, 습도65%시)이며, -10℃~70℃의 높은 온도 범위에서 사용가능하다.
6. 높은 내구성에 비해 가격이 저렴하다.

1. 利用传热效果好的铝箔冷却肋片层叠而成，因此切断外部异物和湿气侵入到控制柜内。
2. 由于重量轻，因此便于安装，而且便于清理。
3. 采用风机罩，因此提高完全性，而且便于马达稍后服务。
4. 满足保护等级 INT IP54, EXT IP34。
5. 采用滚珠轴承结构的风机，因此平均寿命达到50,000小时(环境温度20℃, 湿度65%时)，在-10℃~70℃的较大温度范围之内能够使用。
6. 耐久性方面相互比较时，价格低廉。

1. The aluminum cooling fin unit with higher heat conductivity has a structure of horizontal film, which is designed to prevent any alien substances and humidity completely.
2. Because of its light weight, the cooling system can be easily installed, removed and cleaned.
3. The use of the FAN GUARD ensures the system's safety and facilitates services of the motor.
4. FAN COOLER meets the requirements of INT IP54 and EXT IP34.
5. BALL BEARING FAN MOTOR : Life is 50,000hr(ambient 20℃, 65%) Operating Temperature is -10℃~70℃
6. While it meets high durability, the price is reasonably cheap.

▶ 용량계산방법 | 制冷量计算方法 The Method of Cooling Capacity Calculation

팬쿨러 미장착시 제어반 내부온도(T)?

未安装板式热交换器时, 控制柜内部温度(T)?

When no-mounting the Fan-Cooler, temperature allowance inside of the panel(T)?

$$T = t + \frac{Q}{h \times A}$$

t = 외기온도(The Ambient Temperature)°C

Q = 내부발열량(Heat Loss) W

h = 제어반 열대류율(Convection heat transfer coefficient)
painted sheet steel: 5~6w/m²°C

A = 제어반 표면적(The surface area of panel) m²

ex) 제어반 내부 발열량(Q)=520W

공장온도(t) = 35°C

제어반 표면적(A)

[(W×H×D) = (800×1300×500)(FREE STANDIG)]

(A) = (0.8×1.3×2EA)+(0.5×1.3×2EA) + (0.8×0.5) = 3.8m²

$$T = 35^{\circ}\text{C} + \frac{520\text{W}}{5.5\text{W/m}^2\text{C} \times 3.8\text{m}^2} = 60^{\circ}\text{C}$$

$$T = t + \frac{Q}{h \times A}$$

t = 外部温度(The Ambient Temperature)°C

Q = 内部发热量(Heat Loss) W

h = 控制柜热对流率
(Convection heat transfer coefficient)
painted sheet steel: 5~6w/m²°C

A = 控制柜表面积(The surface area of panel) m²

ex) 控制柜内部发热量(Q)=520W

工厂温度(t) = 35°C

控制柜表面积(A)

[(W×H×D) = (800×1300×500)(FREE STANDIG)]

(A) = (0.8×1.3×2EA)+(0.5×1.3×2EA) + (0.8×0.5) = 3.8m²

$$T = 35^{\circ}\text{C} + \frac{520\text{W}}{5.5\text{W/m}^2\text{C} \times 3.8\text{m}^2} = 60^{\circ}\text{C}$$

팬쿨러(MODEL DCF-20SI)장착시 제어반 내부 허용온도(To)?

安装板式热交换器(MODEL DCF-20SI)时, 控制柜内部容许温度(To)?

When mounting the Fan-Cooler, temperature allowance inside of the panel(T)?

$$T = t + \frac{Q}{q + (h \times A)}$$

$$T = 35^{\circ}\text{C} + \frac{520\text{W}}{20\text{W/C} + (5.5\text{W/m}^2\text{C} \times 3.8\text{m}^2)} = 47.7^{\circ}\text{C}$$

q = 정격출력(额定功率)(Thermal output)W/°C

▶ GRAPH 읽는 방법 | 图表阅读方法 The Method of reading the graph

- 1) PANEL 내부의 발열량 520W에서 공장외기온도(35°C)와 허용내부온도(47.7°C)와의 차 12.7°C와의 교점 A를 구한다.
- 2) A점에서 횡축과 평행선을 그어서, PANEL표면적(3.8m²)과의 교점 B를 구한다.
- 3) 교점 B에서 Thermal output(W/°C)로 향하여 수직선을 그으면, 20W/°C의 Thermal output를 구하여 팬쿨러모델 또는 하이쿨러모델을 선정합니다.

- 1) 控制柜内部热量520W的垂直线、环境温度(35°C)和容许内部温度(47.7°C)之温差线(12.7°C)的, 这两者交点为 A.
- 2) 通过A点的水平线、控制柜表面积(3.8 m²)的斜线, 这两者交点为B.
- 3) 通过B点的垂直线, 跟横轴之间交点(20W/°C)。根据该交点表示的数值选择板式热交换器型号。

-Heat loss in watts(W) : 520W

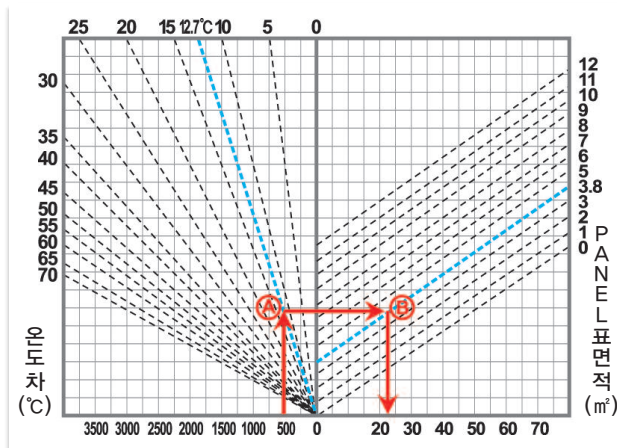
-Required enclosure temperature : 47.7°C

-Ambient temperature(t) : 35°C

-The temperature difference(°C) : 47.7-35=12.7°C

-The effective surface area of the enclosure(m²) : 3.8

-This led us to select Hi-COOLER & FAN COOLER Model with a specific thermal output of 20W/°C



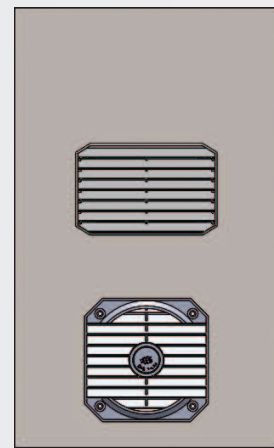
PANEL 내부의 발열량(W) FAN-COOLER 정격출력(W/°C)
控制柜内部发热量(W) FAN-COOLER 额定功率(W/°C)

제품사양(TECHNICAL DATA)

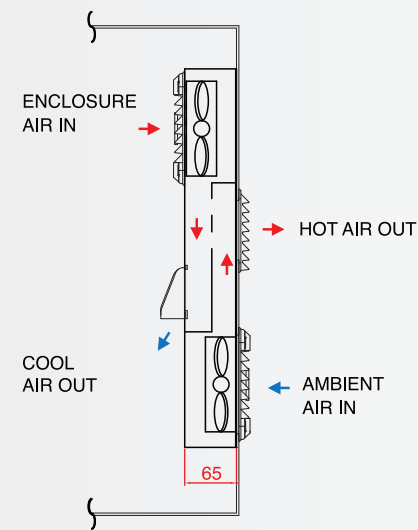
	SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (W×H×D)
OLD	DCF-5SI	DCF-5SI13-S	115-50/60	3 / 5	31 / 29	2	3.4	184*475*65
		DCF-5SI23-S	220-50/60		28 / 26			
OLD	DCF-8SI	DCF-8SI13-S	115-50/60	6 / 8	31 / 29	2	3.8	157*556*65
		DCF-8SI23-S	220-50/60		28 / 26			
OLD	DCF-10SI	DCF-10SI13-S	115-50/60	8 / 10	31 / 29	2	4.0	172*655*65
		DCF-10SI23-S	220-50/60		28 / 26			
NEW	SC-170DY	SC-170DY13-S	115-50/60	8/10	31 / 29	2	4.8	170*680*66
		SC-170DY23-S	220-50/60		28 / 26			
NEW	SC-153DY	SC-153DY13-S	115-50/60	9/11	31 / 29	2	3.0	155*395*103
		SC-153DY23-S	220-50/60		28 / 26			
NEW	DCF-12SM	DCF-12SM13-S	115-50/60		31 / 29		3.6	215*655*65
		DCF-12SM23-S	220-50/60		28 / 26	2		
OLD	DCF-12SI	DCF-12SI13-T	115-50/60	10 / 12	31 / 29		4.3	172*665*90
		DCF-12SI23-T	220-50/60		28 / 26			
NEW	SC-12DY	SC-12DY13-S	115-50/60	10 / 12	31 / 29	2	4.0	200*480*65
		SC-12DY23-S	220-50/60		28 / 26			
OLD	DCF-15SI	DCF-15SI13-S	115-50/60	12 / 15	31 / 29	2	4.9	254*655*65
		DCF-15SI23-S	220-50/60		28 / 26			
NEW	SC-15DY	SC-15DY13-S	115-50/60	12/15	31 / 29	2	4.8	300*480*65
		SC-15DY23-S	220-50/60		28 / 26			
OLD	DCF-16SI	DCF-16SI13-T	115-50/60	13 / 16	70 / 64	2	4.8	172*736*90
		DCF-16SI23-T	220-50/60		80 / 76			
NEW	DCF-18SM	DCF-18SM13-S	115-50/60		62 / 58		4.7	270*655*65
		DCF-18SM23-S	220-50/60		56 / 52	4		
		DCF-18SM13-T	115-50/60	15 / 18	70 / 64	2	5.0	245*665*90
		DCF-18SM23-T	220-50/60		80 / 76			
NEW	SC-280DY	SC-280DY13-S	115-50/60	16 / 20	62 / 58	4	5.4	280*590*66
		SC-280DY23-S	220-50/60		56 / 52			
NEW	SC-310DY	SC-310DY13-S	115-50/60	16 / 20	62 / 58	4	7.8	310*680*66
		SC-310DY23-S	220-50/60		56 / 52			
OLD	DCF-20SI	DCF-20SI13-S	115-50/60	17 / 20	62 / 58	4	6.5	308*556*65
		DCF-20SI23-S	220-50/60		56 / 52			
NEW	DCF-24SM	DCF-24SM13-S	115-50/60		62 / 58		5.5	300*655*65
		DCF-24SM23-S	220-50/60		56 / 52	4		
		DCF-24SM13-T	115-50/60	20 / 24	70 / 64	2	5.6	270*665*90
		DCF-24SM23-T	220-50/60		80 / 76			
NEW	DCF-30SM	DCF-30SM13-S	115-50/60		62 / 58		6.2	340*655*65
		DCF-30SM23-S	220-50/60		56 / 52	4		
		DCF-30SM13-T	115-50/60	25 / 30	70 / 64	2	6.3	300*665*90
		DCF-30SM23-T	220-50/60		80 / 76			
NEW	DCF-36SM	DCF-36SM13-S	115-50/60		70 / 64		6.7	370*727*65
		DCF-36SM23-S	220-50/60		80 / 76	2		
		DCF-36SM13-T	115-50/60	30 / 36	70 / 64		6.9	330*665*90
		DCF-36SM23-T	220-50/60		80 / 76			
NEW	DCF-42SM	DCF-42SM13-T	115-50/60	35 / 42	70 / 64	2	7.5	365*665*90
		DCF-42SM23-T	220-50/60		80 / 76			
NEW	DCF-48SM	DCF-48SM13-T	115-50/60	40 / 48	140 / 128	4	11.0	365*875*90
		DCF-48SM23-T	220-50/60		160 / 152			
NEW	DCF-58SM	DCF-58SM13-T	115-50/60	50 / 58	140 / 128	4	12.3	400*875*90
		DCF-58SM23-T	220-50/60		160 / 152			

DCF-5SI

FRONT VIEW

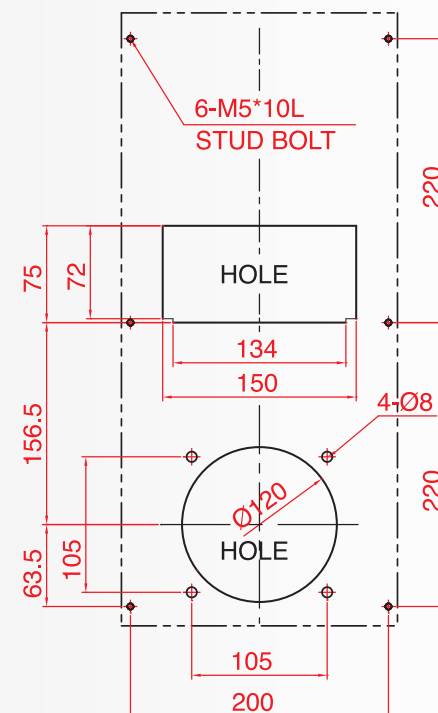


SIDE VIEW



Switch Cabinet

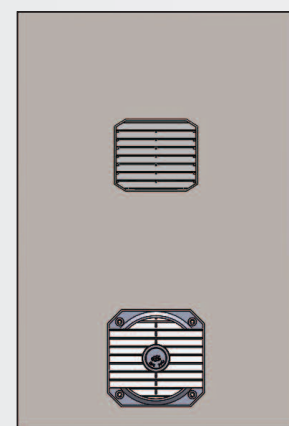
MOUNTING CUT-OUT



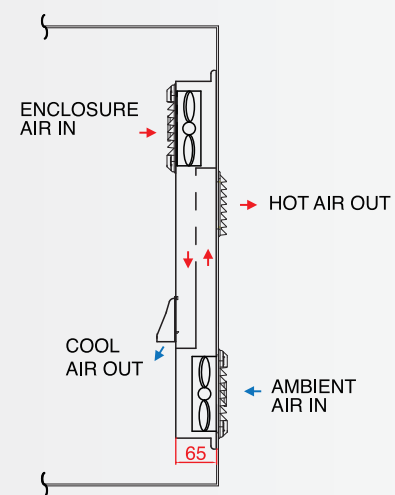
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-5SI	DCF-5SI13-S	115-50/60	3 / 5	31 / 29	2	3.4	184*475*65
	DCF-5SI23-S	220-50/60		28 / 26			

DCF-8SI

FRONT VIEW

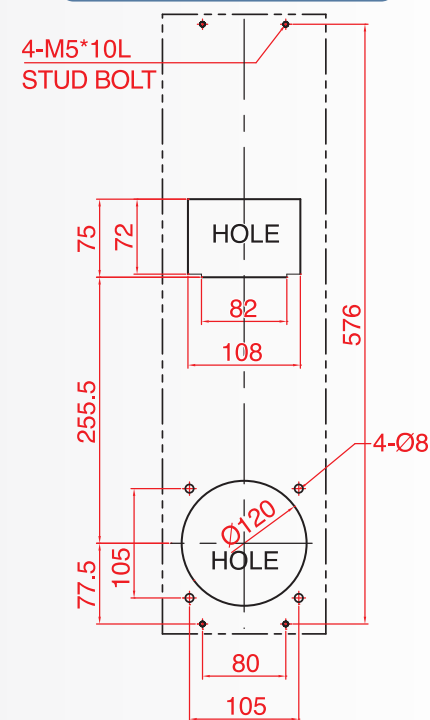


SIDE VIEW



Switch Cabinet

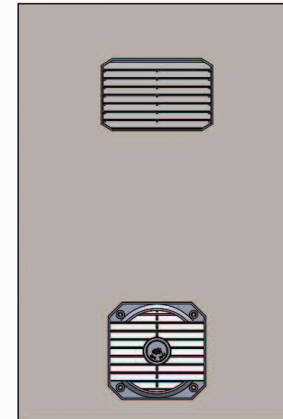
MOUNTING CUT-OUT



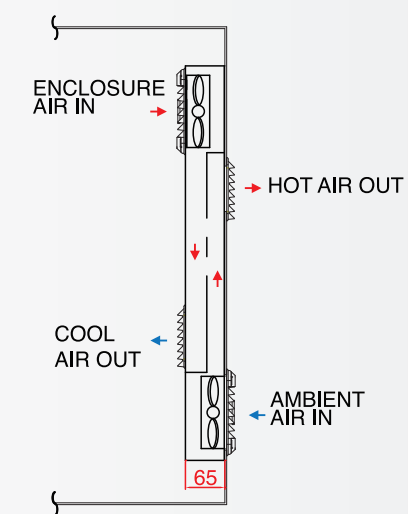
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-8SI	DCF-8SI13-S	115-50/60	6 / 8	31 / 29	2	3.8	157*556*65
	DCF-8SI23-S	220-50/60		28 / 26			

DCF-10SI

FRONT VIEW

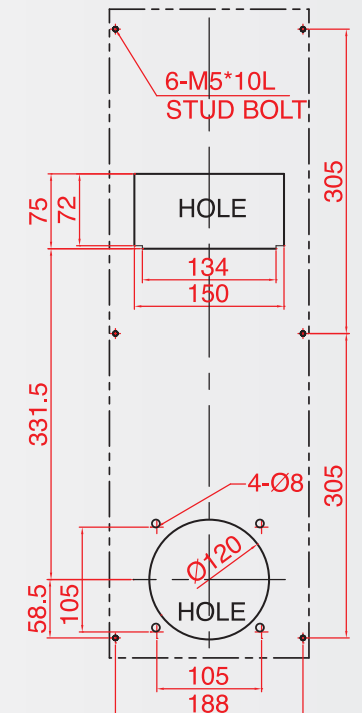


SIDE VIEW



Switch Cabinet

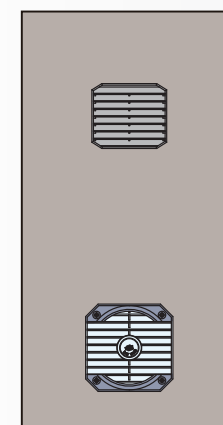
MOUNTING CUT-OUT



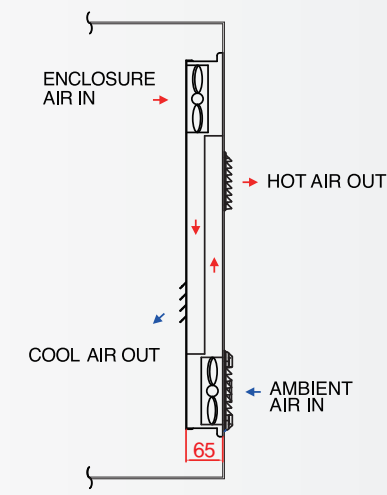
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-10SI	DCF-10SI13-S	115-50/60	8 / 10	31 / 29	2	4.0	172*655*65
	DCF-10SI23-S	220-50/60		28 / 26			

NEW SC-170DY

FRONT VIEW

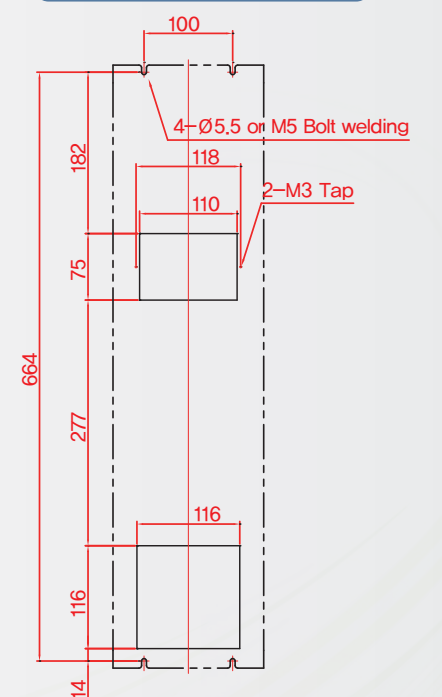


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT



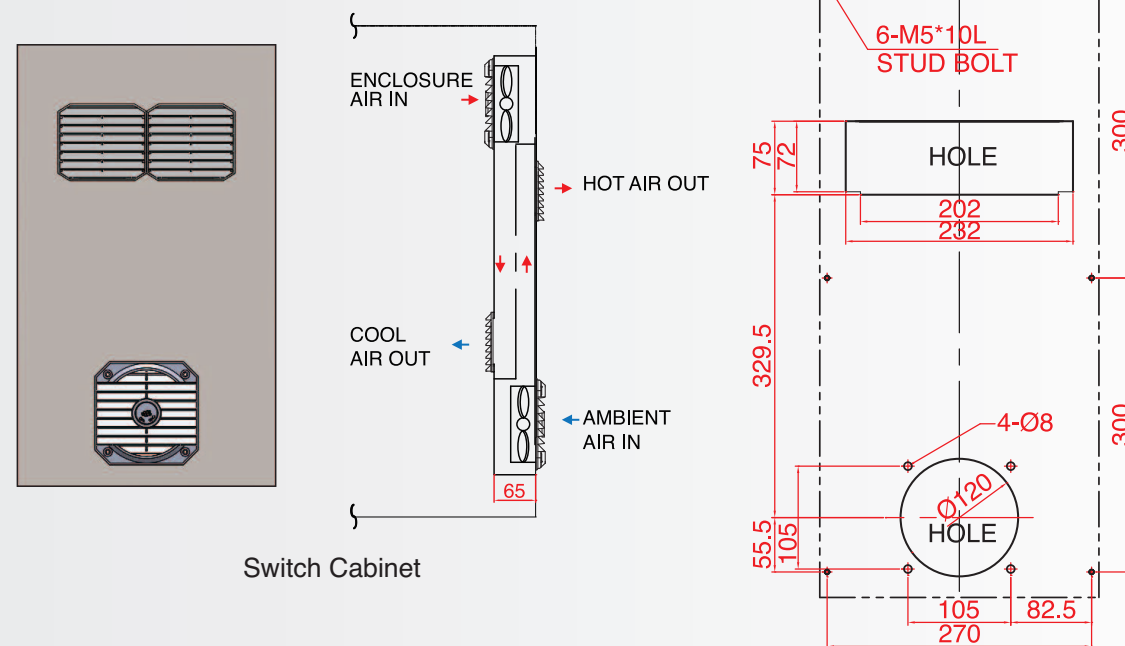
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
SC-170DY	SC-170DY13-S	115-50/60	8/10	31 / 29	2	4.8	170*680*66
	SC-170DY23-S	220-50/60		28 / 26			

DCF-15SI

FRONT VIEW

SIDE VIEW

MOUNTING CUT-OUT



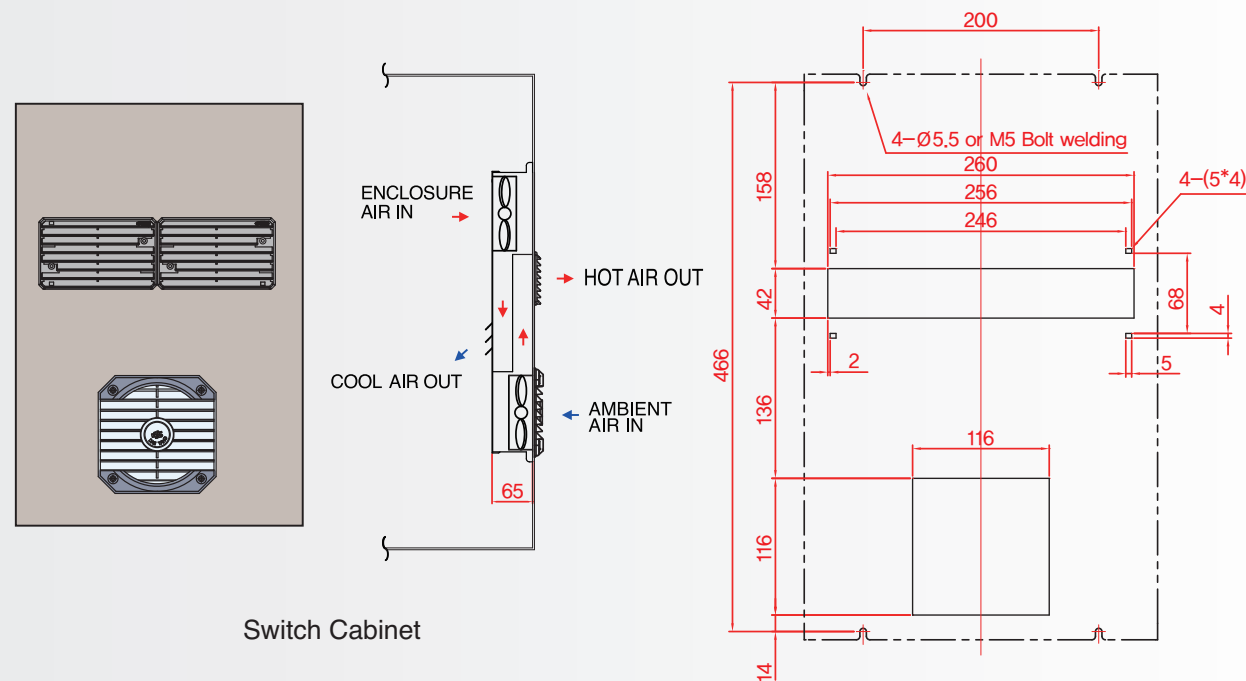
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-15SI	DCF-18SM13-S	115-50/60	15 / 18	62 / 58	4	4.7	270*655*65
	DCF-18SM23-S	220-50/60		56 / 52			

NEW SC-15DY

FRONT VIEW

SIDE VIEW

MOUNTING CUT-OUT



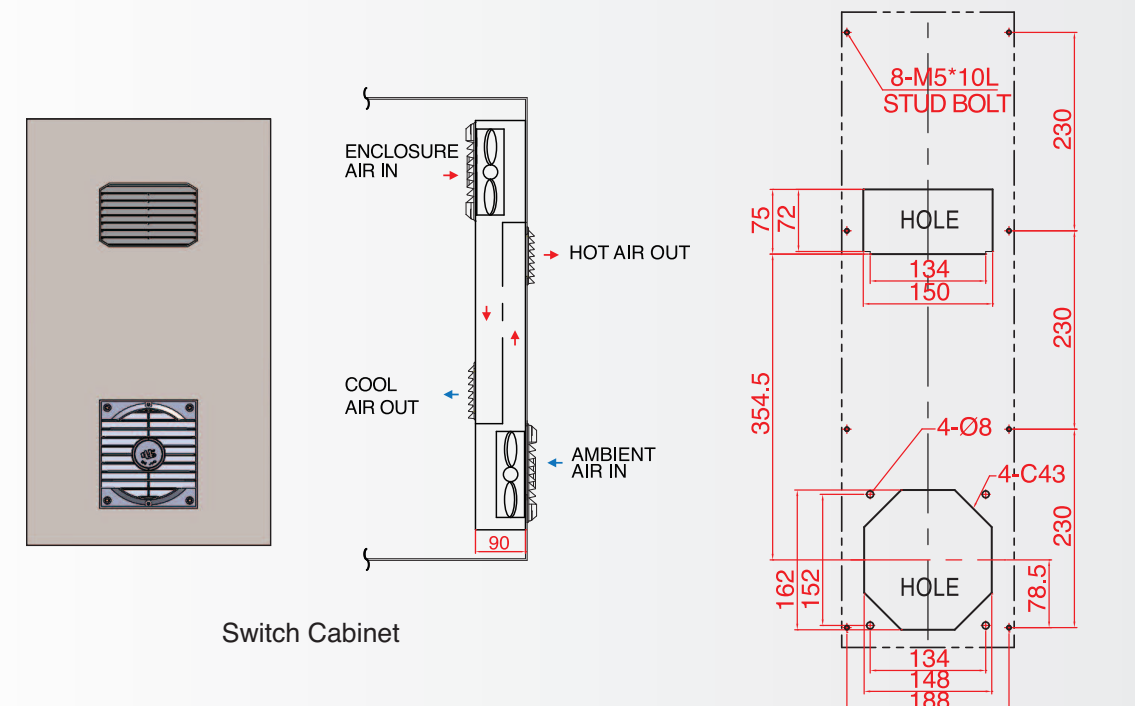
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
SC-15DY	SC-15DY13-S	115-50/60	12/15	31 / 29	2	4.8	300*480*65
	SC-15DY23-S	220-50/60		28 / 26			

DCF-16SI

FRONT VIEW

SIDE VIEW

MOUNTING CUT-OUT



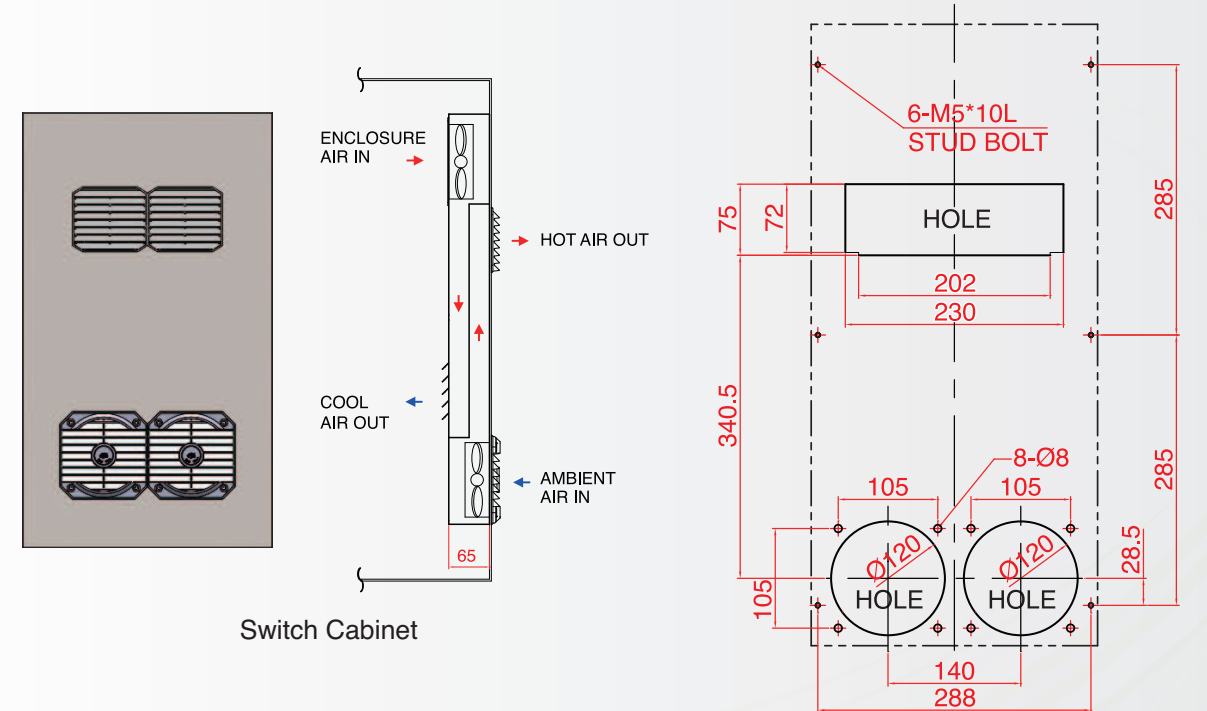
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-16SI	DCF-16SI13-T	115-50/60	13 / 16	70 / 64	2	4.8	172*736*90
	DCF-16SI23-T	220-50/60		80 / 76			

NEW DCF-18SM(SLIM)

FRONT VIEW

SIDE VIEW

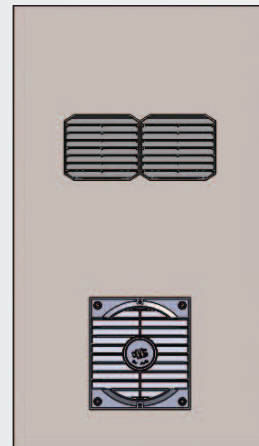
MOUNTING CUT-OUT



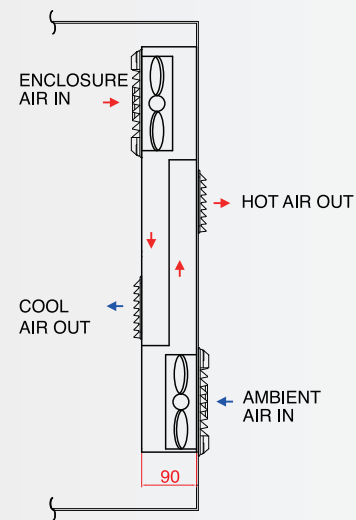
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-18SM-S	DCF-18SM13-S	115-50/60	15 / 18	62 / 58	4	4.7	270*655*65
	DCF-18SM23-S	220-50/60		56 / 52			

NEW DCF-18SM(THICK)

FRONT VIEW

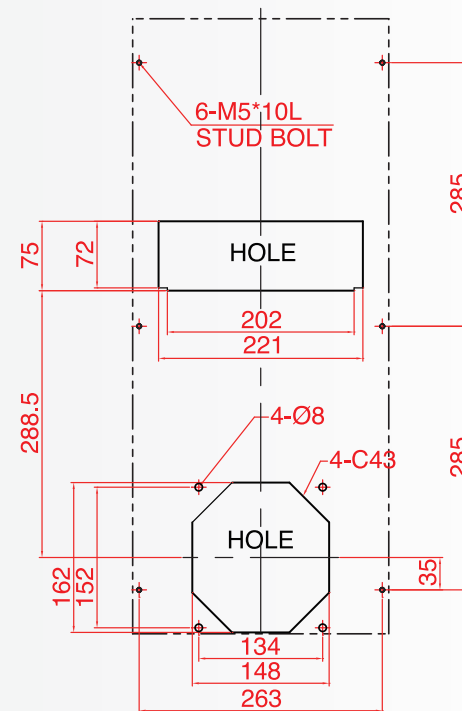


SIDE VIEW



Switch Cabinet

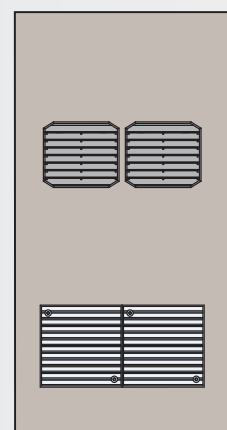
MOUNTING CUT-OUT



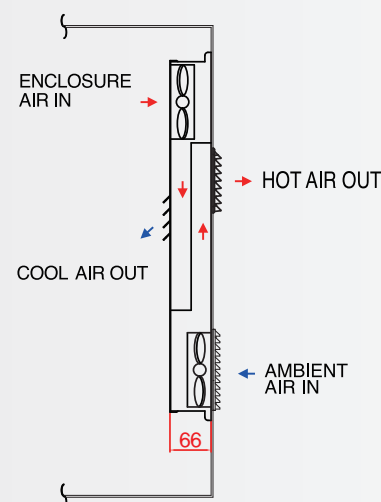
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-18SM-T	DCF-18SM13-T	115-50/60	15 / 18	70 / 64	2	5.0	245*665*90
	DCF-18SM23-T	220-50/60		80 / 76			

NEW SC-280DY

FRONT VIEW

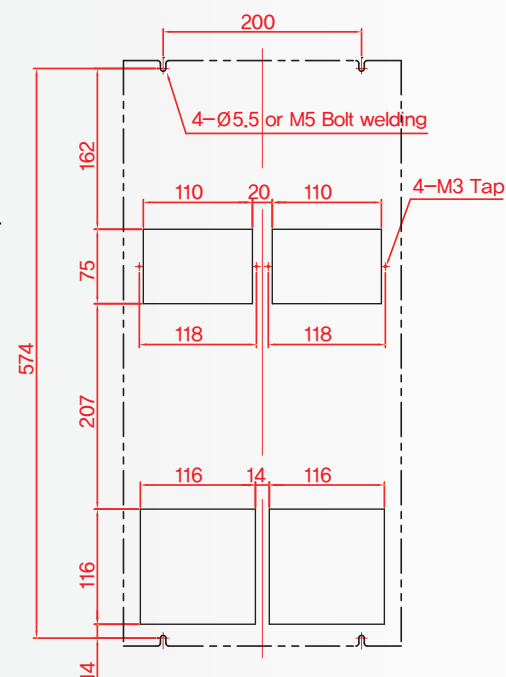


SIDE VIEW



Switch Cabinet

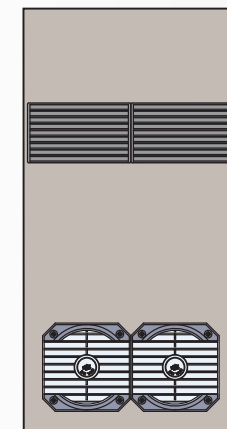
MOUNTING CUT-OUT



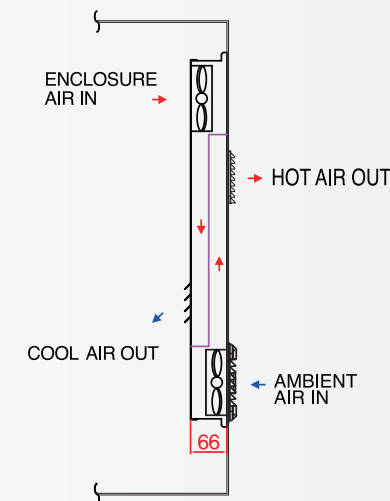
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
SC-280DY	SC-280DY13-S	115-50/60	16 / 20	62 / 58	4	5.4	280*590*66
	SC-280DY23-S	220-50/60		56 / 52			

NEW SC-310DY

FRONT VIEW

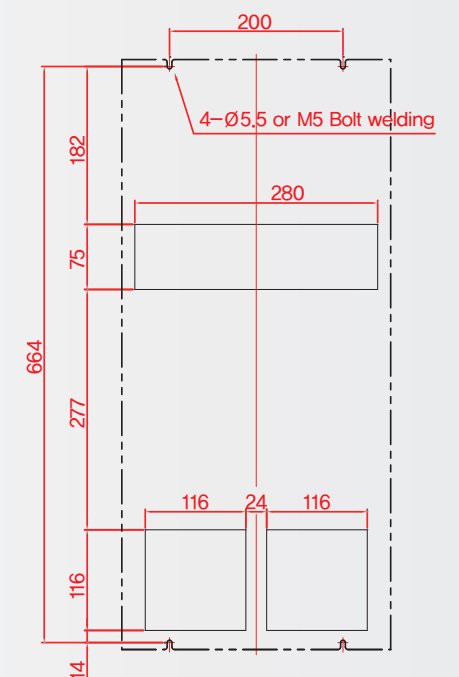


SIDE VIEW



Switch Cabinet

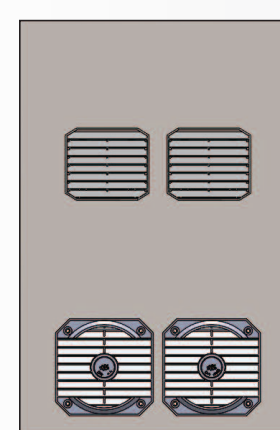
MOUNTING CUT-OUT



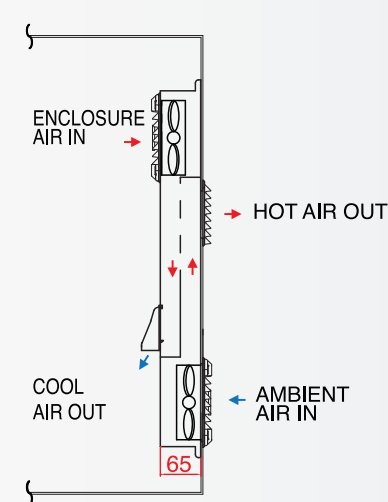
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
SC-310DY	SC-310DY13-S	115-50/60	16 / 20	62 / 58	4	7.8	310*680*66
	SC-310DY23-S	220-50/60		56 / 52			

DCF-20SI

FRONT VIEW

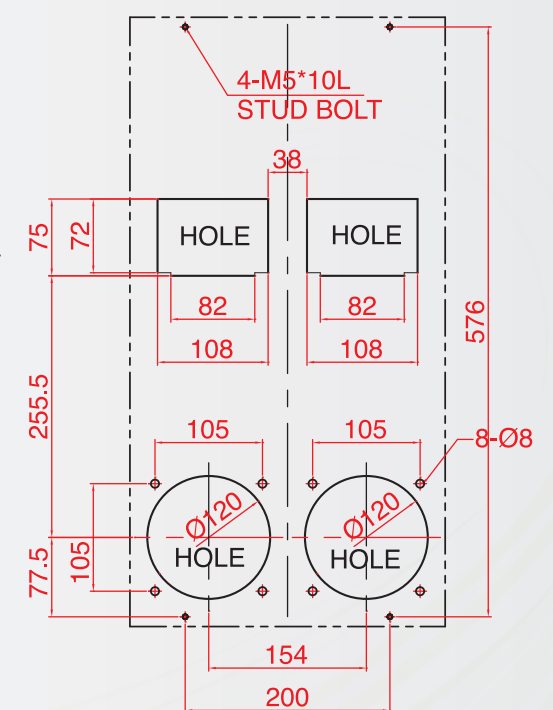


SIDE VIEW



Switch Cabinet

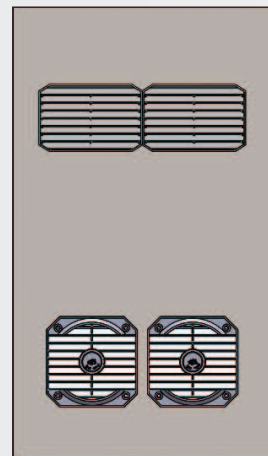
MOUNTING CUT-OUT



SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-20SI	DCF-20SI13-S	115-50/60	17 / 20	62 / 58	4	6.5	308*556*65
	DCF-20SI23-S	220-50/60		56 / 52			

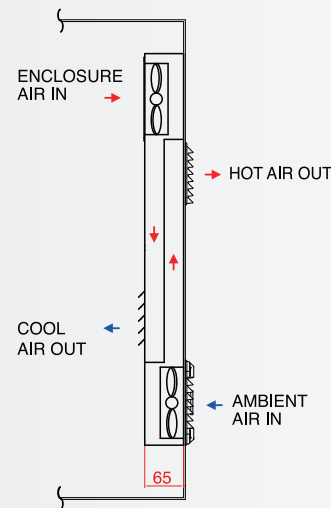
NEW DCF-24SM(SLIM)

FRONT VIEW

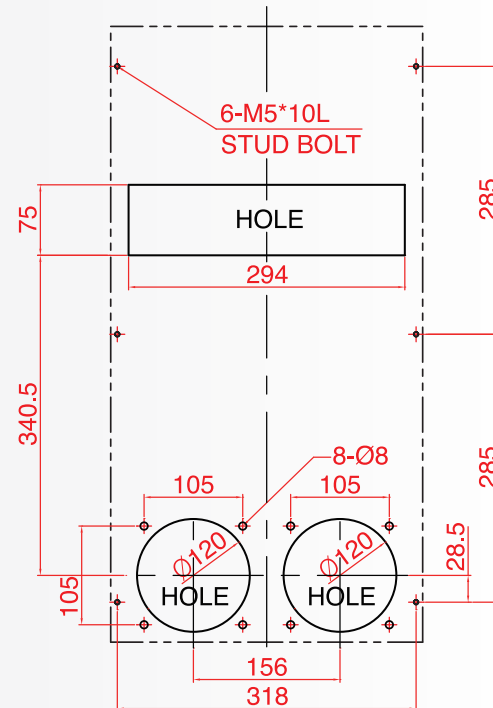


Switch Cabinet

SIDE VIEW



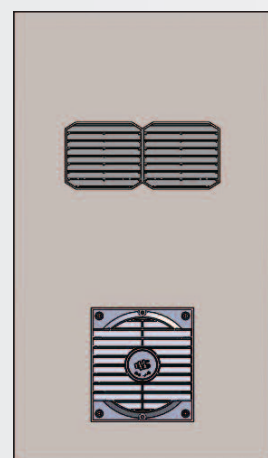
MOUNTING CUT-OUT



SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-24SM-S	DCF-24SM13-S	115-50/60	20 / 24	62 / 58	4	5.5	300*655*65
	DCF-24SM23-S	220-50/60		56 / 52			

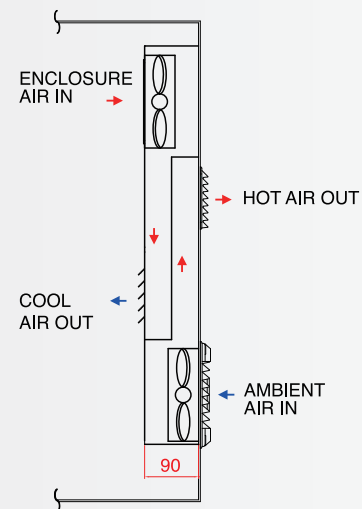
NEW DCF-24SM(THICK)

FRONT VIEW

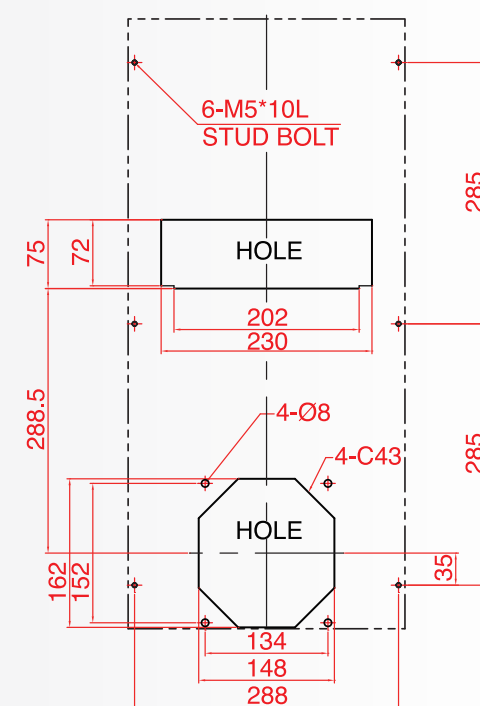


Switch Cabinet

SIDE VIEW



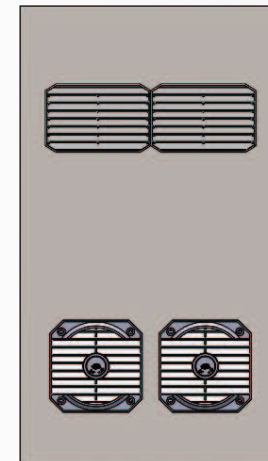
MOUNTING CUT-OUT



SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-24SM-T	DCF-24SM13-T	115-50/60	20 / 24	70 / 64	2	5.6	270*665*90
	DCF-24SM23-T	220-50/60		80 / 76			

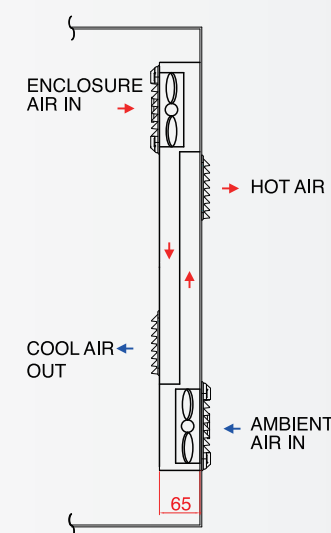
NEW DCF-30SM(SLIM)

FRONT VIEW

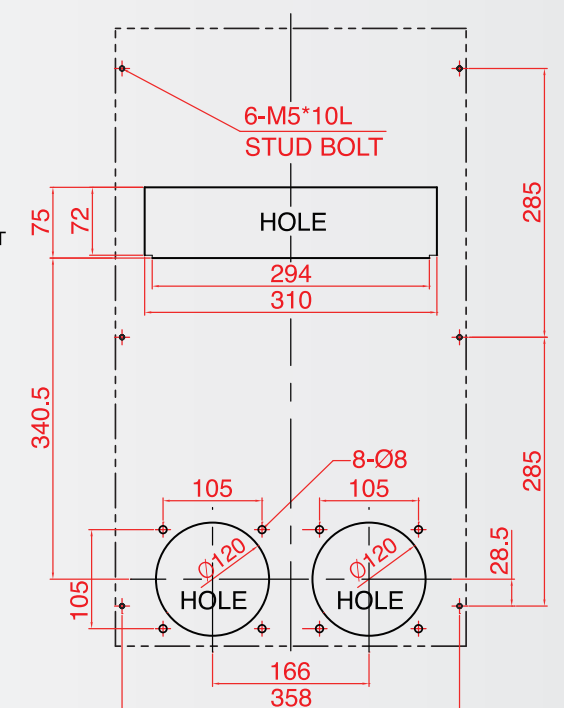


Switch Cabinet

SIDE VIEW



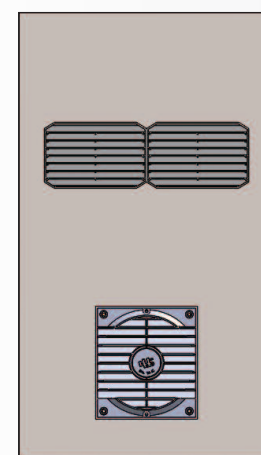
MOUNTING CUT-OUT



SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-30SM-S	DCF-30SM13-S	115-50/60	25 / 30	62 / 58	4	6.2	340*655*65
	DCF-30SM23-S	220-50/60		56 / 52			

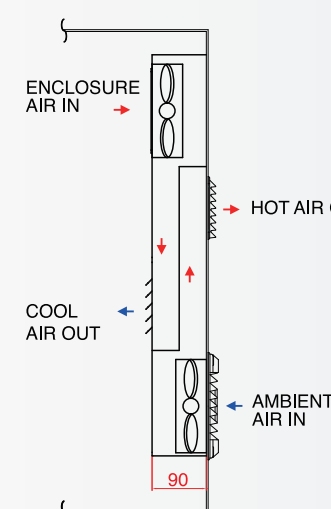
NEW DCF-30SM(THICK)

FRONT VIEW

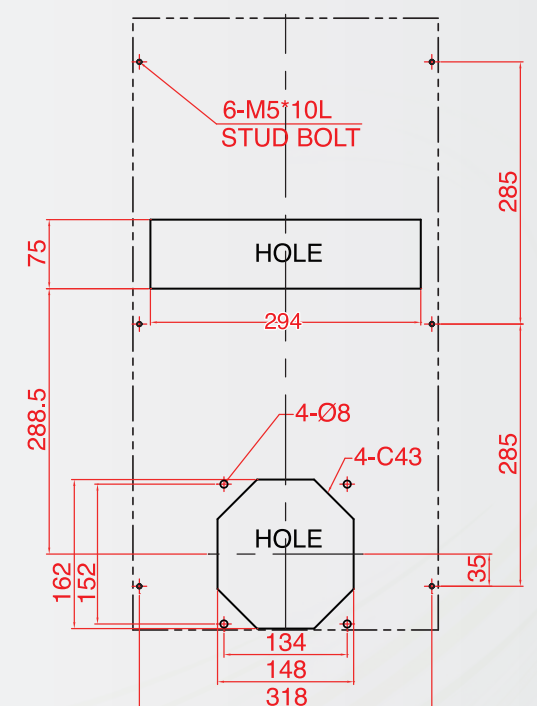


Switch Cabinet

SIDE VIEW



MOUNTING CUT-OUT



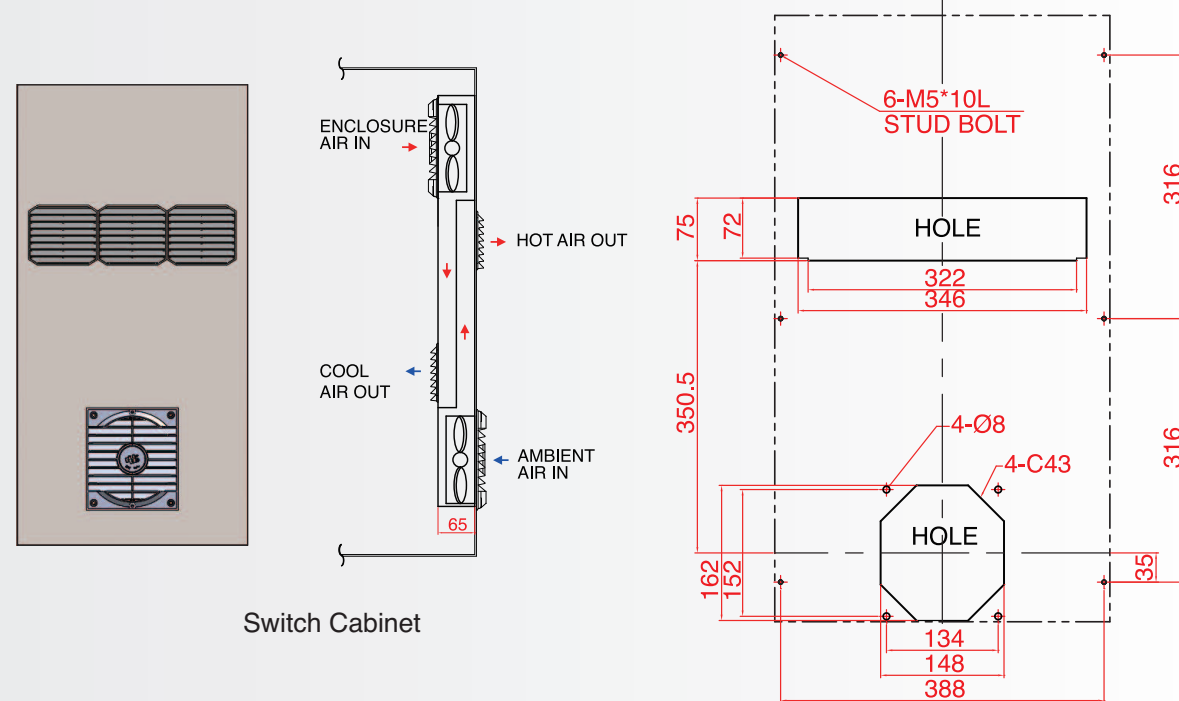
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-30SM-T	DCF-30SM13-T	115-50/60	25 / 30	70 / 64	2	6.3	300*665*90
	DCF-30SM23-T	220-50/60		80 / 76			

NEW DCF-36SM(SLIM)

FRONT VIEW

SIDE VIEW

MOUNTING CUT-OUT



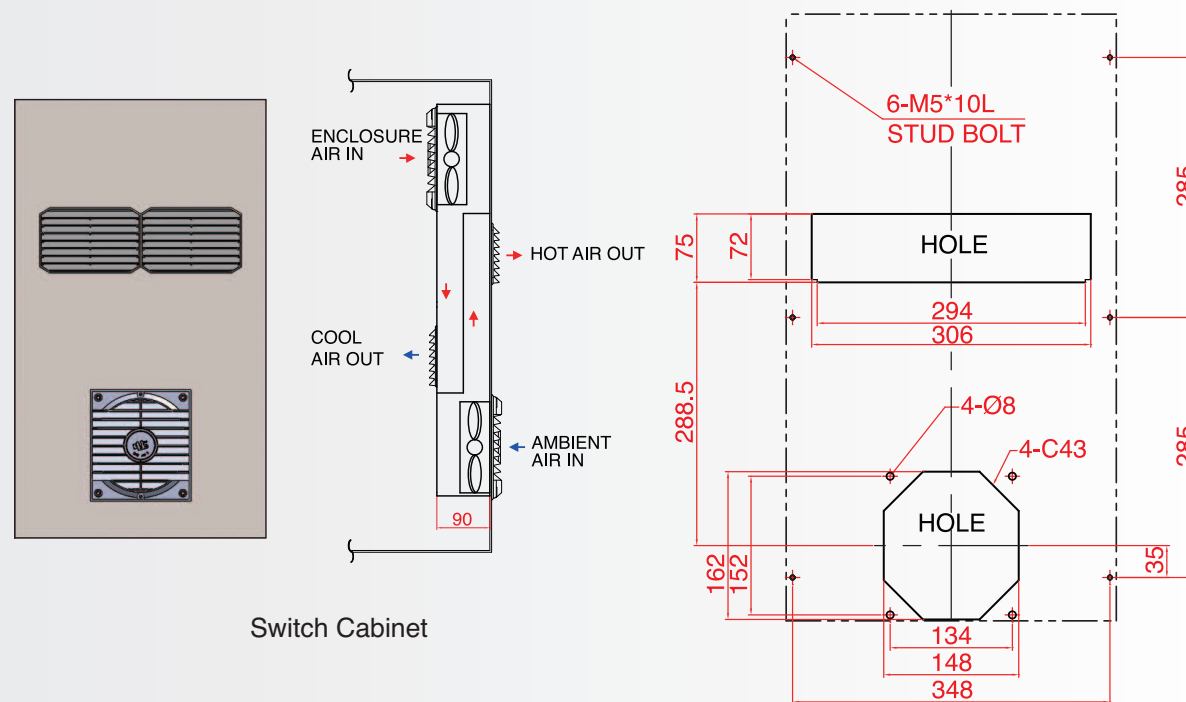
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-36SM-S	DCF-36SM13-S	115-50/60	30 / 36	70 / 64	2	6.7	370*727*65
	DCF-36SM23-S	220-50/60		80 / 76			

NEW DCF-36SM(THICK)

FRONT VIEW

SIDE VIEW

MOUNTING CUT-OUT



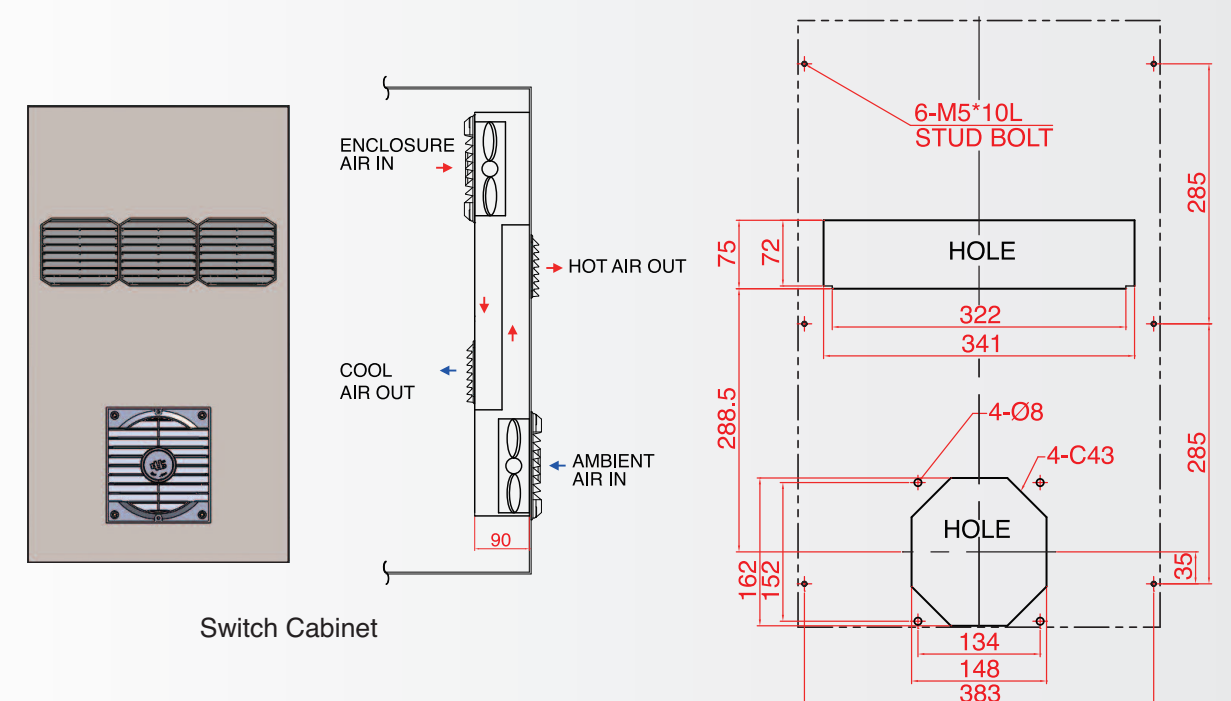
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-36SM-T	DCF-36SM13-T	115-50/60	30 / 36	70 / 64	2	6.9	330*665*90
	DCF-36SM23-T	220-50/60		80 / 76			

NEW DCF-42SM

FRONT VIEW

SIDE VIEW

MOUNTING CUT-OUT



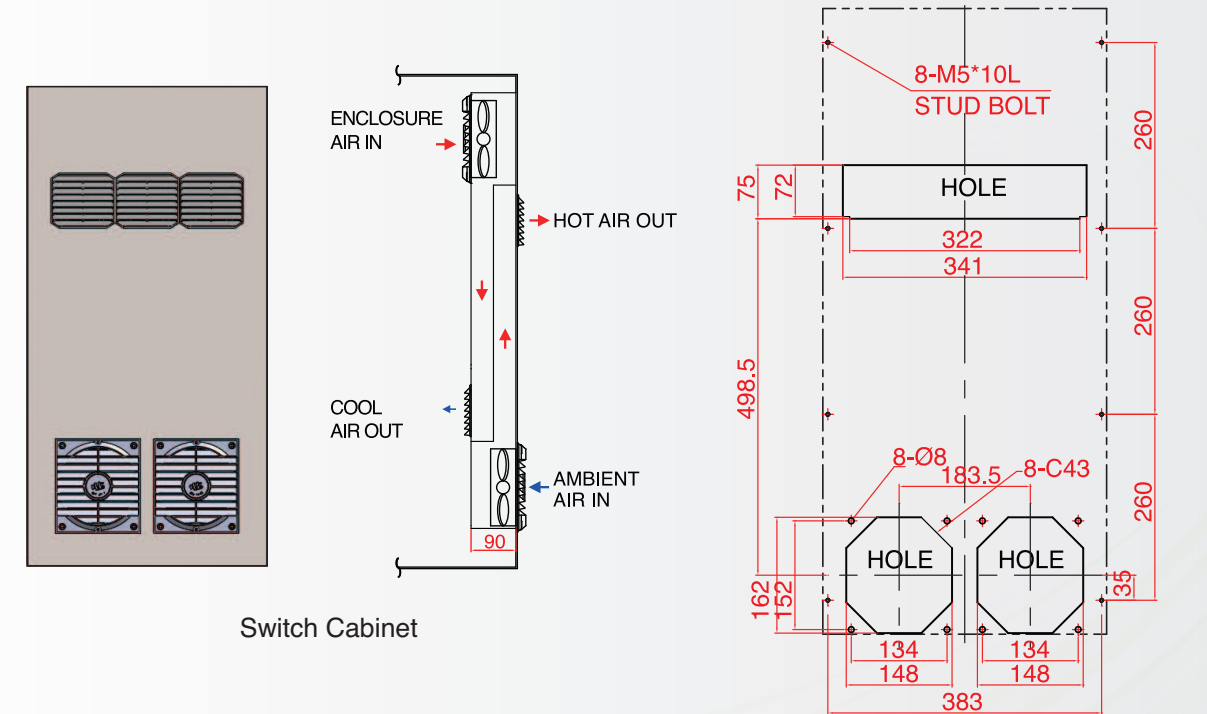
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-42SM	DCF-42SM13-T	115-50/60	35 / 42	70 / 64	2	7.5	365*665*90
	DCF-42SM23-T	220-50/60		80 / 76			

NEW DCF-48SM

FRONT VIEW

SIDE VIEW

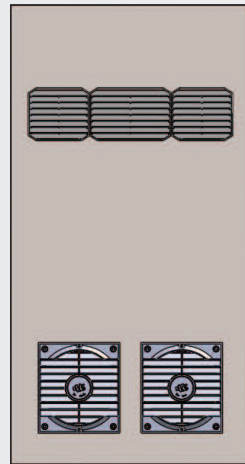
MOUNTING CUT-OUT



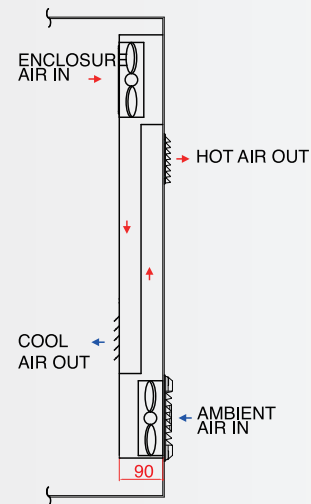
SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-48SM	DCF-48SM13-T	115-50/60	40 / 48	140 / 128	4	11.0	365*875*90
	DCF-48SM23-T	220-50/60		160 / 152			

NEW DCF-58SM

FRONT VIEW

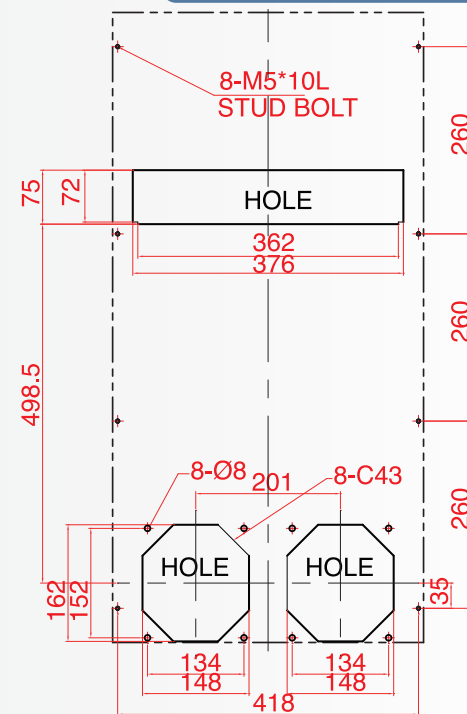


SIDE VIEW



Switch Cabinet

MOUNTING CUT-OUT



SERIES	MODEL	VOLTAGE (V/Hz)	THERMAL OUTPUT (W/°C)	INPUT POWER (W)	FANS (EA)	WEIGHT (kg)	DIMENSION (WxHxD)
DCF-58SM	DCF-58SM13-T	115-50/60	50 / 58	140 / 128	4	12.3	400*875*90
	DCF-58SM23-T	220-50/60		160 / 152			

창의적인 제품 기술로 보다
혁신적인 미래를 약속드립니다.

