



Management System
ISO 9001:2015

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DUMECH VENTILATION EQUIPMENT MFG L.L.C

Dubai-UAE

MIST HOOD



DUMECH Mist Hoods are more reliable and provide you with prudent investment which can, with proper installation, operation and regular maintenance gives trouble free operation and a long service life. DUMECH Misty Hoods are highly efficient and are fully automated which can be used over variety of cooking operations.

Some of the key features of **DUMECH Mist Hood** are

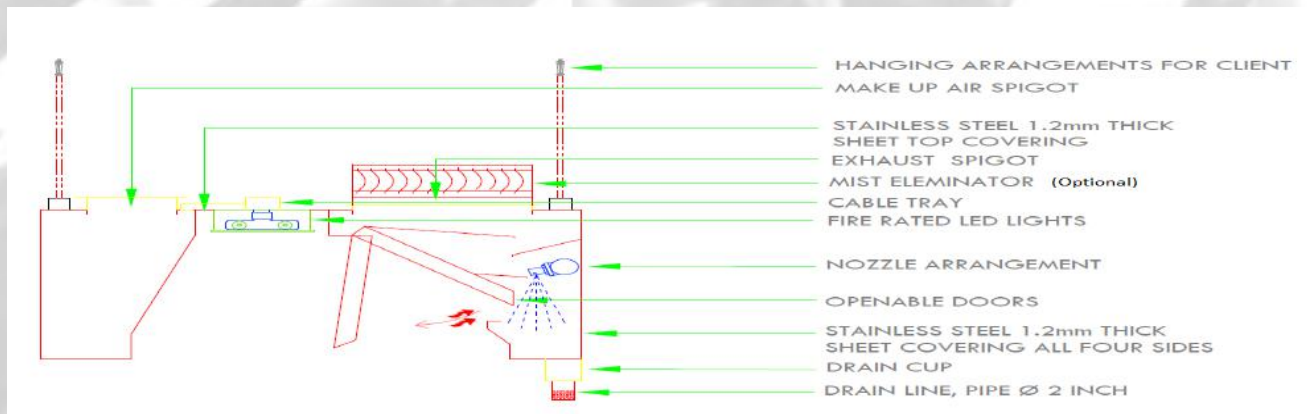
1. Easily Serviceable.
2. Fully automatic operation.
3. Completely 100% Stainless Steel 304 weld construction.
4. All metal design makes them more durable.
5. IP 65, V-0 fire rates LED lights (Operating Temperature from -40°C to 150°C).
5. Reduces buildup of grease in the duct line.
6. Reduces fire hazards in hood as well as in the duct.
7. User friendly HMI interface Control Panel with energy efficient system.
8. ON / OFF switch on the hood for easy access.
9. Auto shut off in case of fire.
10. Exhaust fan and hood interlinking option in the control panel.
11. Factory installed spray and manifold assembly.
12. Water flow monitoring system with warning alarm (updated on Feb'20)
13. "JET AIR VENT " principle applied in Make up air to reduce the air flow to 70% against design requirement based on DW172 stds , and thereby reducing the energy consumption.

CONSTRUCTION:

DUMECH Mist Hoods are completely made in Stainless steel 316 Gr/SS 304Gr material. It consists of SS-316 Flat spray nozzles and grease collection channel running through the full length of the hood. Mist eliminators made in Stainless steel are provided at the exhaust spigots to trap the water content. Easy to operate hinged inspection door provided in the hood for inspection of nozzle, filter and the water pipe line. Mist eliminator and spraying nozzles can be removed from the system for periodic cleaning. Nonstandard spigot sizes and position can be provided in hood as per the client requirement without affecting the efficiency of the Hood. Fire rated LED lights are provided in the hood. ON/OFF switch (optional) is provided on the hood for the easy access for the user. All piping works and fittings inside the hood and Control cabinet are of SS 316 grade .

Mist Hood Control cabinet is made of stainless steel 316 grade with IP65 protection. This control panel will be equipped with user friendly HMI interface. Control panel has a provision to interlink the exhaust fan with the hood and also it has auto shut off option in case of fire accident.

COMPONENT DETAILS:



WORKING PRINCIPLE:

Water Mist Hood system is the latest technology used for reducing the temperature and grease content in the fume extracted out from kitchen. As contaminated hot air rises from the cooking appliance to the hood extraction opening a fresh water mist is sprayed into the internal plenum of the canopy using high pressure nozzles under controlled conditions which dictate the correct amount of water to ensure the system and air stream is cleaned. During this process the cold water mist condenses grease contaminated air where grease is in a gaseous state. The grease mixes with water and runs into dedicated collection channel and then into the drain. This method drastically reduces the risk of spreading flames should a fire break out on the cooking surface below. Additionally, because grease is filtered and cleaned, there is no buildup which would hinder airflow and function over time. Finally the air is passed through the mist eliminator before leaving the air through the duct. Highly recommend stainless steel duct from the delivery of unit to a length of 2 meters.

In Double skin Mist hoods, to compensate the air extracted from the kitchen and to balance the Kitchen ventilation system a provision have been provided to supply Makeup air. This Makeup air can be supplied either by face supply (Treated Air) or by the method of air curtain in the Hood (Untreated or Treated Air).

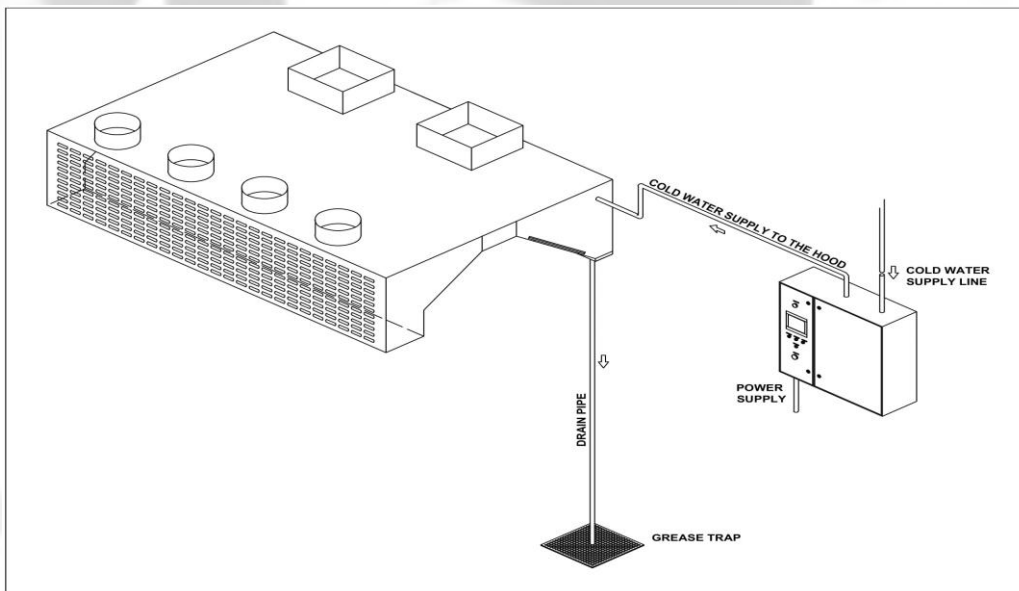
ADVANTAGES:

1. Low maintenance.
2. Minimal grease deposition on the duct inner wall.
3. Reduce the risk of fire.
4. Grease trap helps stifle flames from spreading in the event of a fire.

Maintenance of Hood:

- 1.The Mist hood doors should be opened and periodic cleaning has to be carried out inside the plenum after every 150 hours of operation.
- 2.The flat spray nozzles has to be removed and cleaned with 0.5 mm pin.
- 3.Please make sure the spray pattern of the nozzles is parallel to the length of the hood on installing the nozzles after cleaning operation.

TYPICAL INSTALLATION:



LED RECESSED LIGHT UNIT :

GoGreen Hood is equipped with LONGAR® TYPE 1 LED SLIM LIGHT UNIT to meet the demands of today's modern kitchen, LONGAR® Type 1 LED SLIM which has great design aspects, easy to maintain, water tightness meeting IP65, and an optimal light unit for a better work environment. The LONGAR® Type 1 LED SLIM offers superior aesthetics with slim line design, radiused corners and a wealth of design features.

LONGAR® TYPE I LED SLIM LIGHT UNIT FEATURES

- Efficient T5 LED lighting with 2 year warranty.
- Standard sizes ex stock.
- TUV approved lamp with 50,000 working hour's lamp.
- Fully assembled, no dismantling required to install.
- New improved Stainless Self Drilling Torx screws.
- Robust unit conforms to IP65, slim line unit at 45mm thick.
- Compact design, curved safety corners – new improved design.
- CNC machine made for perfection every time, built to last other than routine maintenance.
- Fully assembled, upgraded heat resistant seals.
- UK design and build, 40 years of industry experience driven R&D.
- Templates supplied FOC (on request) to facilitate easy canopy installation.
- Meets DW-172 requirements.
- New easy mount system (optional extra)



Features :

Material	Stainless steel ,1.2 mm(430Gr 240 Grit)
Glass	Satin glass-4 mm toughened Heat and impact resistant
IP Rating	IP 65
Input Voltage	220 V @ 50/60 Hz
Power factor	>0.95
LED life span	50,000 hrs.
LED fire rating	V-0
LED Diffusser material	Polycarbonate
LED tube housing	Aluminium
Colour temperature	5500 K
CE marked	EU directive 93/68/EEC
Lamp power (2ft)	10W x 3
Mounting Bracket	620(L) x 230(W) , in mm
Cut Out	615 (L) x 202(W) , in mm
Light output	625 lux @1.2 m

HMI CONTROL PANEL:

Construction :

Material	SS 316 Gr/SS 304 Gr , 2B finish
Thk	1.5 mm

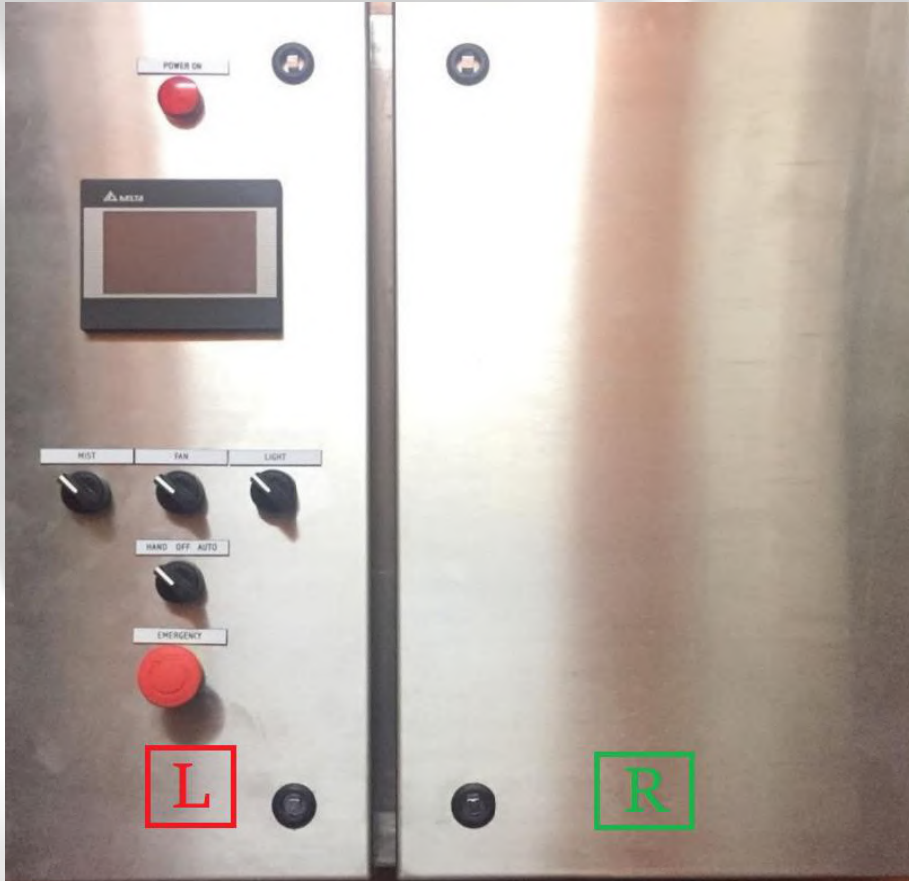
The control panel has two compartments .The left compartment is occupied with HMI ,PLC and other circuits. The right compartment occupies inlet pipe to the control panel and outlet pipe to Mist hood . The piping includes components like Strainers, Ball valves ,Flow switch and solenoid valve. Water flow monitoring system with warning alarm is the most advanced feature of Dumech mist hood. If the water flow is less than the designed volume in the control panel,Warning alarm is displayed in the control panel.

The left side compartment door is installed with an HMI , 3 on/off selector switches and Emergency stop .The operations of Mist hood can be done in Auto mode or Manual/Hand mode.Manual operation is decided by the operator at that point of operation. In Auto mode, Autosetting of time can be done in the HMI for each day's operation . Automode prevents loss of water occurred by operators negligence in turning off the Mist hood after operational hours.

- 1.Switch 1 - Mist ON/OFF
- 2.Switch 2 - Integrating extract fan control to Mist hood panel (optional)
- 3.Switch 3 - Hood Lights ON/OFF

Maintenance.

- 1.The strainer in the right compartment should be cleaned after every150 hours of Operation.
2. Please make sure the left compartment is closed before cleaning the strainer in the right compartment.
3. The inlet valve to the strainer has to be turned off before every cleaning Operation.
4. After strainer cleaning, The right compartment of the Control panel has to be wiped out with a cotton cloth and make sure the section is completely dried before normal operation.



MIST HOOD PANEL



HMI DISPLAY

FLOW REQUIREMENTS :

Water Inlet pipe : (3/4") / (1/2")dia

Water Drain pipe : 2" dia

Water temperature : 8° C – 45° C

Water Pressure : 2 - 4 bar

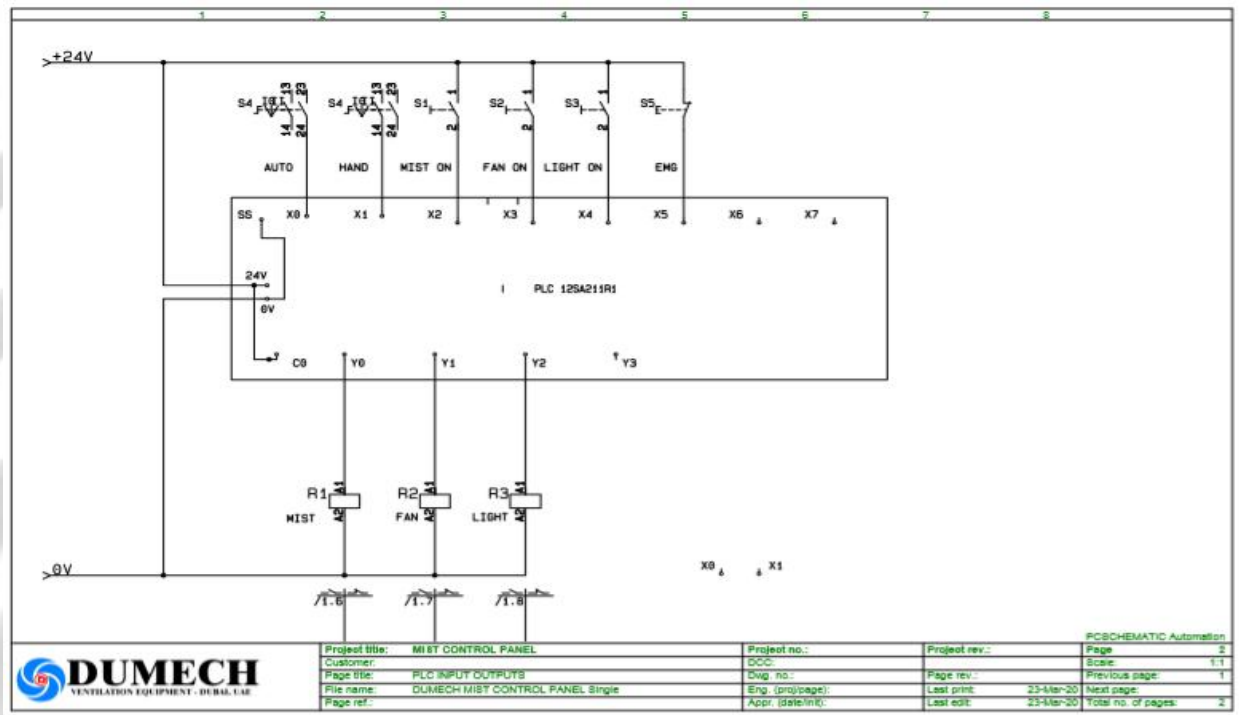
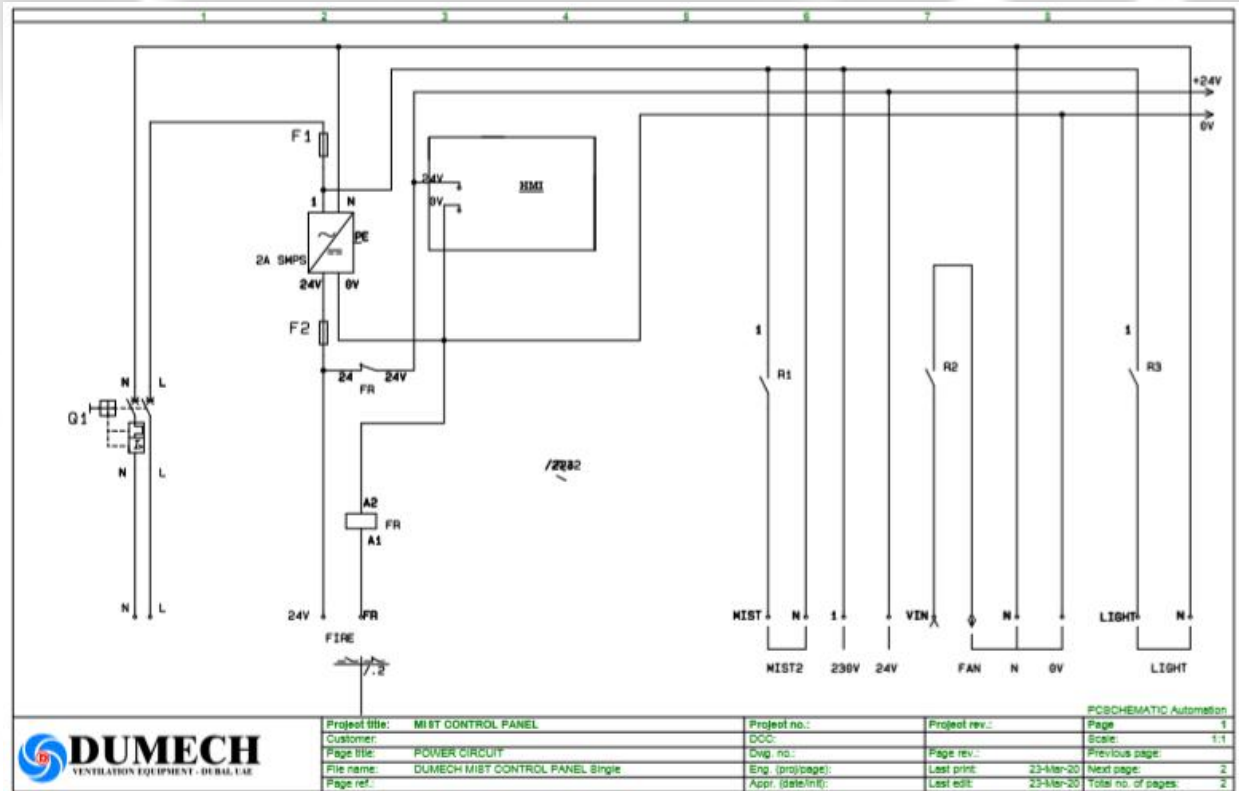
0.64 litre /min at 2 bar pressure per meter of Wall mounted Mist hood.

1.28 litre /min at 2 bar pressure per meter of Island type Mist hood.



AUTO SETTING

HMI Control panel wiring diagram :



We Drive air in your way!



DUMECH
ENGINEERING WORKS (L.L.C.)

HEAD OFFICE

Ware House No.5, Industrial Area, Al Quoze 4
Tel : 04 3474929 , Fax : 04 3474917 , P.O. Box:49771, Dubai - UAE
E-mail:dumech@eim.ae, Web :www.dumech.com



DUMECH
VENTILATION EQUIPMENT MANUFACTURING CO LLC

BRANCH

Ware House No.3, Industrial Area, Al Quoze 3
Tel : 04 3474929 , Fax : 04 3474917



DUMECH
FANS & BLOWERS

Qatar

BRANCH - INDIA

No. 154, Attibele Industrial Area, Bengalure, INDIA
Tel : 0091 80 27803001

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AUBURN ENGINEERING W.L.L.

C.R. No. 68173, B-114, Retaj Building, Salwa Road, Near Wholesale Market, Doha, Qatar