hydroexperts

Hydroponic Flexible Air Ducts

hydroponic series

afs.com.tr

AFS HYDROPONIC DUCT RANGE

HYDROPONIC (HYDRO CRUNCH) SYSTEMS

Hydroponics (sometimes referred to as hydro-crunch) are defined as soilless agriculture systems. These systems are new generation greenhouses that can be installed easily and individually even at homes. NASA also uses these systems for the space experiments. By means of these systems, it is possible to grow plants by consuming less water and achieve high efficiency. The ventilation of the system is crucial for the plants to be able to photosynthesize. Ventilation is also important to prevent the overheating of the reflectors which are substituted the sunlight. Therefore, the ventilation of the hydroponics could be examined into two main topics;

1. Ventilation of the growing area
2.Ventilation or cooling the reflector

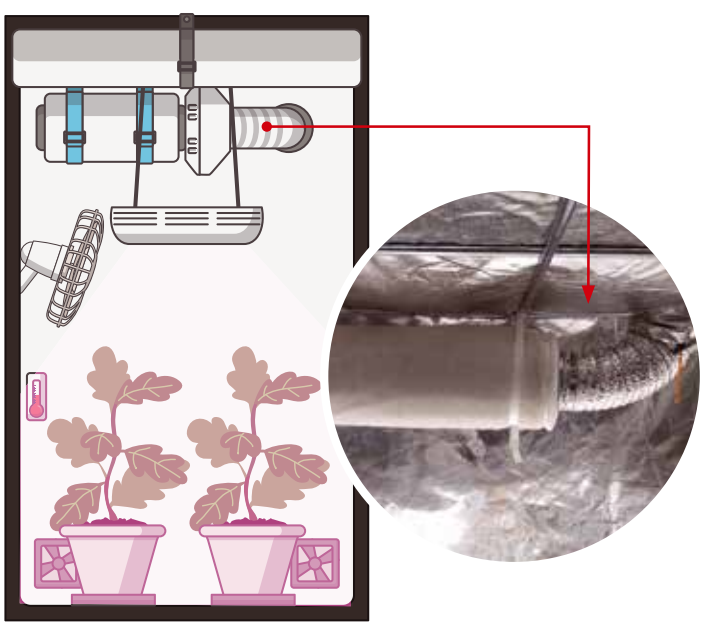
1. VENTILATION OF THE GROWING AREA

The proper ventilation should be maintained in order to balance the CO_2 concentration and control the humidity levels inside the greenhouses. Two basic ventilation systems are used in the hydroponics.

1. Passive Intake System: While a fan is exhausting the dirty air in the greenhouse, the fresh air supply is provided by the holes.

2. Active intake system: While a fan is exhausting the dirty air in the greenhouse, the fresh air supply is provided with another fan.

Hydroponics Ventilation Layout



Hydroponic Flexible Air Duct

While the plants are growing, there are massive amount of unpleasant smell and humidity occur. To be able to remove this smell and humid air from the environment and to supply the proper amount of air for the photosynthesis, a well-designed ventilation system should be installed to the growing room.

Also, the importance of the quality of the products will be used in the ventilation system should be considered to avoid the growth of mold and fungus.

2. VENTILATION / COOLING OF THE REFLECTOR

Sunlight is another important parameter for the plants. Because of the hydroponics are closed systems, the reflectors are used to substitute the sunlight. The ventilation of the reflector should be arrange to prevent the overheating by using proper fan and the flexible ducts. The ducts are used for cooling the reflector should be select carefully to avoid effecting the light quality of the reflector.

Also depends on the system the reflector might be in motion, therefore, the flexible ducts should resist the possible damages caused by this movement. You can find below a drawing for the ventilation of a hydroponic area and the reflectors.

AFS HYDROPONIC DUCT RANGE

Here we are introducing our new products for the ventilation of Hydroponics, besides the wide range of ducts for construction ventilation and industrial areas. You can review and select the best product for your applicant area.

HYDROPONIC ALUAFS SHINE

It can be used both cooling of a reflector and ventilation of the hydroponic systems. It is the proper choice with the durable aluminum/polyester construction. Due to the reflective aluminum outer surface, it reflects the light to the growing area.

Features and Benefits;

- Coated spring steel wire maintains duct shape and prevents corrosion
- Durable duct high humidity and high heat conditions without duct failure
- Airtight
- Customize lengths and wide diameters range available upon request
- Distributed by AFS with 30 years of experience in HVAC Field
- Eco-friendly insulated version is available
- Low pressure loss, reducing energy consumption (pressure loss diagrams available)
- Insulated acoustic version is available (transmission loss data)
- Kit form is available

HYDROPONIC ANTIMOLD

The inner side of the duct is coated with a special antimicrobial solution to prevent the growth of mold and fungus inside the duct. It is best choice to exhaust the hot and humid air from the system. Due to the reflective aluminum outer surface, it reflects the light to the growing area.

Features and Benefits;

- Coated spring steel wire maintains duct shape and prevents corrosion
- Durable duct high humidity and high heat conditions without duct failure

• Airtight
• Customize lengths and wide diameters range available upon request
• Special antimicrobial coating prevents growth of mold and fungus
• Distributed by AFS with 30 years of experience in HVAC Field
• Eco-friendly insulated version is available
• Low pressure loss, reducing energy consumption (pressure loss diagram available)
• Insulated acoustic version is available (transmission loss data)
• Kit form is available

HYDROPONIC COMBIAFS.S BLACK

Especially for cooling of the reflector, the HYDROPONIC COMBIAFS.S BLACK could be used conveniently for hydroponics. Thanks to black color inside of the duct, the light of the reflector is not be effected.

Features and Benefits;

• Coated spring steel wire maintains duct shape and prevents corrosion
• Durable duct high humidity and high heat conditions without duct failure
• Airtight
• Customize lengths and wide diameters range available upon request
• Distributed by AFS with 30 years of experience in HVAC Field
• Eco-friendly insulated version is available
• Low pressure loss, reducing energy consumption (pressure loss diagram available)
• Insulated acoustic version is available (transmission loss data)
• Kit form is available

HYDROPONIC COMBIAFS.S WHITE

Especially for cooling of the reflector, HYDROPONIC COMBIAFS.S WHITE could be used conveniently for hydroponics. Thanks to black color inside of the duct, the light of the reflector is not be effected. Also the white color of the outside of the duct prevents absorbing the light inside the growing room and offers a maximum efficiency.

Features and Benefits;

• Coated spring steel wire maintains duct shape and prevents corrosion
• Durable duct high humidity and high heat conditions without duct failure
• Airtight
• Customize lengths and wide diameters range available upon request
• Distributed by AFS with 30 years of experience in HVAC Field
• Eco-friendly insulated version is available
• Low pressure loss, reducing energy consumption (pressure lossdiagram available)
• Insulated acoustic version is available (transmission loss data)
• Kit form is available

HYDROPONIC ALUAFS SHINE

Duct Construction	:	1 ply Aluminium + 2 ply Polyester (Black)
Nominal Thickness	:	45 micron
Diameter Range (Ø)	:	102 - 508 mm
Wire Spacing	:	40 mm (≥ Ø 127 mm)
Color	:	Aluminium (Outer Face) Black (Inner Face)
Operating Temperature Range	:	-30 °C / +120 °C
Air Velocity	:	30 m/s (max.)
Operating Pressure	:	+3000 Pa (max.)
Standard Length	:	5 m / 10 m
Packing	:	Single Box
Application Areas	:	Ventilation heating and cooling Hydroponic ventilation Indoor agriculture Grow rooms Low and medium pressure applications
Certificates	:	RoHS COMPLIANT

HYDROPONIC ALUAFS ANTIMOLD

Duct Construction	:	3 ply Aluminium + 2 ply Polyester
Nominal Thickness	:	70 micron + Hygiene Coating
Diameter Range (Ø)	:	102 - 508 mm
Wire Spacing	:	35 mm (≥ Ø 127 mm)
Color	:	Aluminium (Outer Face) Blue or Black (Inner Face)
Operating Temperature Range	:	-30 °C / +150 °C
Air Velocity	:	30 m/s (max.)
Operating Pressure	:	+3000 Pa (max.)
Standard Length	:	5 m / 10 m
Packing	:	Single Box
Application Areas	:	Ventilation heating and cooling Hydroponic ventilation Indoor agriculture Grow rooms Low and medium pressure applications
Certificates	:	IMSL (UK) Eurofins Biolab (Italy) Fiti Testing & Research Institute (Korea)

The dimensions, tolerances, and mechanical resistance of all flexible ducts are tested, classified and certified according to EN 13180. All technical details are for information only. All information and technical data in this leaflet is subject to change without prior notice. Based on these, permissible length tolerance is (-)3% for stated length (measured after fully streched according to EN 13180)

HYDROPONIC COMBIAFS.S WHITE

Duct Construction	:	1 ply Aluminium 2 ply Polyester (Black) 1 ply PVC (White)
Nominal Thickness	:	115 micron
Diameter Range (ø)	:	102 - 508 mm
Wire Spacing	:	40 mm (≥ Ø 127 mm)
Color	:	White (Outer Face) Black (Inner Face)
Operating Temperature Range	:	-30 °C / +120 °C
Air Velocity	:	30 m/s (max.)
Operating Pressure	:	+3000 Pa (max.)
Standard Length	:	5 m / 10 m
Packing	:	Single Box
Application Areas	:	Ventilation heating and cooling Hydroponic ventilation Indoor agriculture Grow rooms Low and medium pressure applications Applications where mechanical strength against exterior influences is required
Certificates	:	RoHS COMPLIANT

HYDROPONIC COMBIAFS.S BLACK

Duct Construction	:	1 ply Aluminium 2 ply Polyester (Black) 1 ply PVC (Black)
Nominal Thickness	:	125 micron
Diameter Range (ø)	:	102 - 508 mm
Wire Spacing	:	40 mm (≥ Ø 127 mm)
Color	:	Black (Outer Face) Black (Inner Face)
Operating Temperature Range	:	-30 °C / +120 °C
Air Velocity	:	30 m/s (max.)
Operating Pressure	:	+3000 Pa (max.)
Standard Length	:	5 m / 10 m
Packing	:	Single Box
Application Areas	:	Ventilation heating and cooling Hydroponic ventilation Indoor agriculture Grow rooms Low and medium pressure applications Applications where mechanical strength against exterior influences is required
Certificates	:	RoHS COMPLIANT

Hydroponic Flexible Air Ducts

FLEXIBLE KANAL AŞ

İvedik OSB 1468. Cad. No: 153
06370 Yenimahalle ANKARA/TÜRKİYE
T: +90 312 395 48 60
F: +90 312 395 48 68

afs.com.tr

afsflex

Turkey
Discover
the potential