



hydor

horticulture

**For more than 50 years, Hydor have provided flexibility in environmental control within glasshouses, polytunnels and garden centres.**

Our systems are designed to increase air movement and offer significant reductions in fungal diseases such as Botrytis, particularly in winter months when vents are closed and natural air flow is reduced.

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# introduction

Ventilation systems for horticulture are more than fans alone; a properly designed and installed ventilation system offers controls, automated inlets and outlets, recirculation fans and evaporative cooling.

Hydor's extensive range of products allow us to provide the industry with the very best in ventilation, lighting, glasshouse climate control and irrigation control systems. Our control systems provide a **comprehensive array of features** including the supply, operation and regulation of fans, curtains, heaters, cooling systems, management programs and data management. As well as an extensive range of drive systems to enable control of roof and side vents.

As designers and manufacturers of complete environmental ventilation and control systems, **we have worked closely with commercial growers to provide optimum results** in the management and output of their crops, with minimum initial outlay and operational costs. Insufficient or incorrect ventilation can cause unnecessary wastage, quickly reducing potential profits.

Whether your business is glasshouses, polytunnels or garden centres, Hydor will have the equipment and systems to provide your produce, staff and customers with a comfortable environment.









# case studies

## Winchester Growers

**Fifteen Turbulator fans were supplied to award winning Winchester Growers to help create the perfect growing conditions in Lincolnshire.**

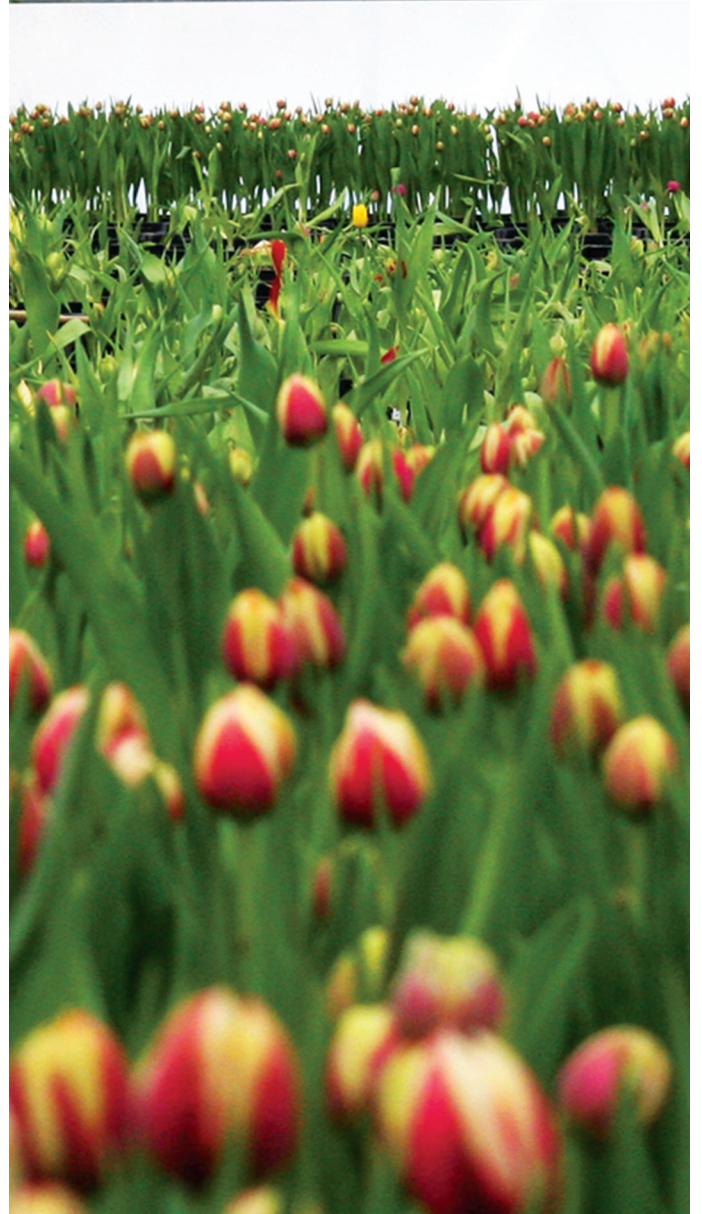
Award winners at Chelsea and Hampton Court Flower Shows, Winchester Growers were experiencing problems with cold and stale air pockets which caused moisture to form on the leaves of the product. The well known horticulturists chose Hydor as their ventilation suppliers and ordered an initial six 630mm diameter Turbulator fans. This was followed by a further order for nine Turbulators for their principal site in Pinchbeck, Lincolnshire. The fans are designed to have a long throw, move air efficiently and give a measure of temperature and humidity control.

Jack Blower of Winchester Growers said:

**"We are very pleased with the fans and their performance. Our greenhouses are warmed by hot-water pipes and the recirculating Turbulator Fans help to eliminate cold or stale pockets of air, creating an even temperature. Most importantly, they help prevent the build-up of moisture on the leaves of our tulips and lilies, which reduces the chance of disease and ensures first class quality of our seasonal flowers and bulbs."**

Winchester Growers Limited is the UK's leading grower of seasonal flowers and bulbs, and packer of other bulb based flowers, bouquets, potted plants and added-value arrangements. Winchester Growers currently produce thirty million stems of tulips and fourteen million stems of lilies, supplying major UK High Street multiples including Tesco, Sainsbury's, Morrisons and Waitrose.

Image courtesy of Winchester Growers





# East Malling Research

**Hydor fans were selected by one of the UK's foremost providers of scientific research into the food chain and other sectors of land-based industry.**

East Malling Research (EMR) is a 202 hectare estate in Kent which is licensed to carry out controlled trials using their team of scientists' extensive knowledge in a wide range of areas from animal breeding and molecular genetics, to pests, disease biology and environmental science. Central to the EMR facility is its glasshouse unit which comprises 3,000 square metres of research space. These glasshouses play a fundamental role in the EMR's work, providing the means to achieve very specific conditions under which trials can be carried out. Trials are typically pest and disease experiments, involving cool temperature crops such as apples and strawberries.

The air within the glasshouses has to be very tightly controlled so that no insects or other potential contaminants can be introduced to invalidate a trial. Fans were required to maintain a positive pressure within the research glasshouses, thereby ensuring that any air within the units is expelled outside via filters to maintain the controlled environment.

**Hydor were selected to produce two bespoke wall mounting fan units to EMR's specific requirements. These included automated dampers, direction inlet louvres and the fitting of aphid screens to ensure no insects could be introduced to the glasshouses via the fans. Hydor have developed a strong relationship with EMR since supplying the research facility with twenty bespoke fans in the early 1990's. The excellent service provided by Hydor staff meant that over the years, Hydor have been chosen to supply more individual fan units for specific applications. Following the success of this project, additional bespoke fan units are planned by EMR as part of a refurbishment schedule.**

EMR is a subsidiary of the East Malling Trust, a Charitable Trust funded by the Department for the Environment, Food and Rural Affairs (DEFRA) and commercial companies who use the research facilities.

Image courtesy of East Malling Research



# applications

## hydroponics

**Hydroponics is playing an increasingly important role in agricultural production; providing commercial & domestic growers with a wide variety of fresh produce including fruit, vegetables, cut flowers and other leading crops.**

Air movement is an essential part of maintaining optimal growth conditions by modifying temperature, humidity and carbon dioxide levels at the leaf surface where the important plant process of photosynthesis and transpiration are occurring.

High-quality air flow also assists with reducing high humidity levels and diminishes the incidence of associated diseases such as mildew and Botrytis as well as bacterial infection where moisture forms on the leaf surfaces.

Irrespective of whether Hydroponic crops are grown on a size and scale for either commercial or residential consumption, Hydor are committed to providing growers with the right air movement conditions through correctly sized supply / extract fans, circulating fans and controllers to optimise climate control.

We have a product range designed specifically for the needs of hydroponic growers, please contact us for more detailed information or a copy of our dedicated Hydroponics Brochure.





# greenhouses

Ventilation in greenhouses maximises plant growth and reduces fungal diseases by creating an even temperature and a desirable environment.

Air movement is vital in the greenhouse to provide the crop with a more natural environment. It also results in a reduction in the instances of fungal disease due to the consistent temperature and humidity. The air movement also helps to maintain a drier leaf surface - inhibiting the germination of disease and reducing the number of sprays required.

The continuous positive air movement created by ventilation in greenhouses is highly desirable as it equalises temperature, carbon dioxide and humidity levels to encourage growth.

By creating improved environmental conditions, healthier plants can be grown and problems with disease, associated with high humidity or stale air, lessened. It is suggested that a minimum velocity of 40 feet per minute should be provided. Below this level air flow is unpredictable and mixing throughout the greenhouse area will not be achieved. A velocity of 40 feet per minute will cause slight leaf movement with plants that have long branched leaves.

Hydor offer a range of belt driven HV Fans that offer high levels of air movement and are particularly suited to larger houses. Our Turbulator Fans and Ceiling Fans can also be used to circulate the air within the unit and prevent temperature fluctuations.

When temperatures are excessive, Hydor's Evaporative Cooling System can reduce the internal air temperatures to a comfortable temperature for plants and personnel alike. If necessary, humidity can also be increased.

To operate your ventilation components and create the ideal climate, Hydor supply control panels and computerised control systems to maximise your product's potential and increase productivity.

For localised ventilation or potential cooling of personnel, Hydor's Pedestal or Wall Mounted fans can be used. These portable fan units can be plugged into a convenient power socket and moved with the staff as they perform their duties, providing a more comfortable environment for increased productivity and reduced heat stress.



# applications

## polytunnels

Air movement is essential to ensure a successful crop. Hydor will assess the crop needs, size and location of the polytunnel and provide the best possible solution.

Polytunnels are used for a variety of products but, due to their construction, are ventilated longitudinally with the air passing from inlet dampers or air-operated back-draught shutters at one end, to the fans at the opposite end. This is known as tunnel ventilation and ensures hot spots and humidity in the centre of the unit are eliminated.

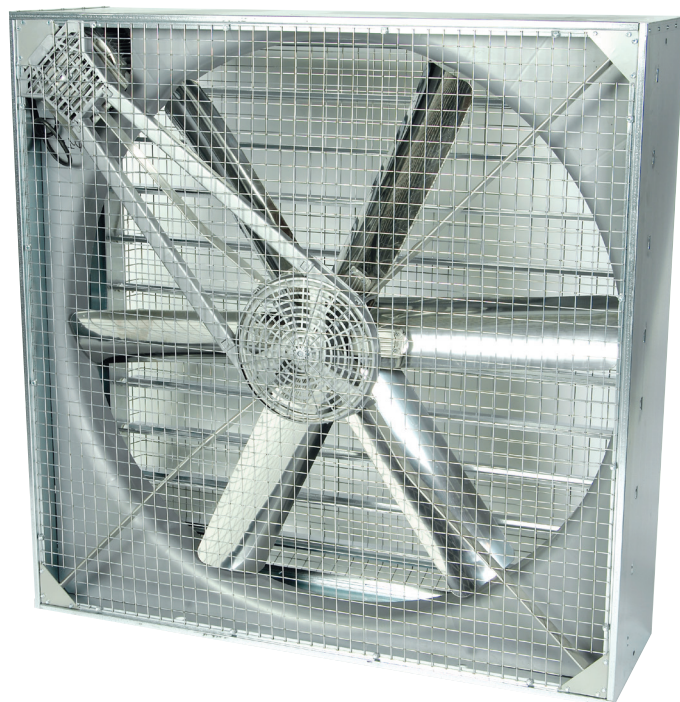
Polytunnel ventilation can be achieved in smaller structures with door openings at each end allowing a through draught which is essential on warmer days. A louvre vent panel can also be installed to release the heat that builds up in the upper roof space.

With an extractor fan at one end and louvres at the other, effective air movement, regardless of the outside conditions, can be achieved. The Hydor belt driven HV Fans, or the High Efficiency plate-mounted range, are perfect for this application.

For larger polythene covered, open sided structures, Hydor's Turbulator Fan units are ideal for circulating the air within the area. These will generate air movement over the produce which is especially advantageous on still air days. Turbulator Fans will create even temperatures within the structure and reduce the risk of fungal diseases; improving product quality and productivity.

When the external temperature is excessively high, Evaporative Cooling can be introduced to reduce the internal temperature to a more comfortable level for both the product and personnel. If required, this system can also be used to increase humidity.

Hydor supply controls for all aspects of mechanical climate control including fans, dampers, shutters and heaters to maximise your products potential and increase productivity.





## garden centres

Garden centres come in all shapes and sizes and Hydor offer fans and controls to meet all requirements; whether it is for general purpose, restaurant or personnel ventilation.

Recirculating the air around a garden centre ensures an even temperature throughout and therefore, a better growing environment that is less affected by outside temperatures. This results in decreased running times of heaters for a reduction in heating bills. Cold spots will be eliminated to provide more growing areas and increased plant growth can be achieved. It also provides a comfortable environment for customers and staff. In winter the fans will help the movement of warm air and in summer, fans can reduce the variance of hot and cool air. Whether it be plate mounted, destratification, ceiling, pedestal, wall mounted or bespoke fan units, Hydor can supply a fan to keep temperatures stable throughout the garden centre. All products can be matched with appropriate Hydor controls to create the perfect environment.



General ventilation can be serviced by wall or roof bespoke fan units or plate fans mounted in the side walls, with appropriate guarding to protect customers and staff. Bespoke fan units can be designed to either extract or induce air in the building.

Ceiling Fans or Destratification Fans suspended from the roof, or ceiling, produce a circulation of air which will cool in summer and warm in winter. Hot air rising in winter is blown downwards to help temper the air lower down, reducing heating requirements at crop level, whilst improving conditions for personnel and customers. Both ceiling and destratification fans can be automatically controlled; switching on or off as the temperature differential between upper and lower levels changes.

Portable Pedestal Fans can be moved around to meet localised personnel cooling requirements. Wall mounted versions are available for permanent locations. Restaurants within the centre can be ventilated separately with wall mounted fans or roof mounted bespoke fan units. Hydor can also supply fans for cooker hoods and general kitchen ventilation.

Hydor control panels can be specifically designed to meet your requirement for environmental climate control. Our experienced representatives can advise and create an individual solution to cater for specific applications.



# product selector

The product selector is designed to provide a simple overview of the products we offer for horticulture applications.

Minimum and maximum weights expressed based on fan diameter size range | HV Weights detailed include louvre | HXP Weights detailed are ring mounted models.



## HTS Turbulator Recirculation Fan

pg 16

Product Code **HTS**

Airflow m<sup>3</sup>/s **1.31 - 2.34**

Impellers **Adjustable pitch aerofoil impellers (6 blades)**

Motors **Weatherproofed to IP55, Class F Insulation**

Ambient Operating Temperature **50°C**

Weight (kg) **20 - 30**



## HTH Turbulator Fan Heater

pg 18

Product Code **HTH**

Airflow m<sup>3</sup>/s **0.25**

Ambient Operating Temperature **50°C**



## HVFB Typhoon Fan

pg 19

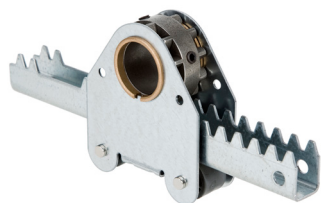
Product Code **HVFB** | Airflow m<sup>3</sup>/s **1.83**

Impellers **Fixed pitch aluminium bladed**

Motors **High performance 3 speed**

Ambient Operating Temperature **50°C**

Weight (kg) **2.3 - 5.9**



## Winches

pg 20

Product Code **GW** | Torque Nm **100 - 1350**

Types **Rack & pinion chain coupling drum**

Motor Voltages **24v DC | 230/1/50 | 415/3/50**

Ambient Operating Temperature **40°C**

Weight (kg) **23 - 38**



## conversions

### volume

1 m<sup>3</sup>/hr = 0.00028 m<sup>3</sup>/s = 0.278 L/s = 0.589 CFM

### pressure

1"WG = 249.1 Pa

### velocity

1 m/s = 196.85 ft/min

### power

1 Hp = 0.746 kW



### HXP Plate Fan

pg 22

Product Code **HXP**

Airflow m<sup>3</sup>/s **Up to 5.45**

Impellers **Adjustable pitch aerofoil impellers (6 blades)**

Motors **Weatherproofed to IP55, Class F Insulation**

Ambient Operating Temperature **70°C**

Weight (kg) **15 - 35**



### HV Belt Drive Fan

pg 24

Product Code **HV**

Airflow m<sup>3</sup>/s **Up to 20.13**

Impellers **Stainless steel impeller blades (6 blades)**

Motors **Totally enclosed metric to IP55, Class F Insulation**

Ambient Operating Temperature **50°C**

Weight (kg) **44 - 100**



### HIDSF Destratification Fan

pg 26

Product Code **HIDSF** | Airflow m<sup>3</sup>/s **1.8 - 2.2**

Impellers **Fixed pitch steel bladed**

Motors **High performance external rotor**

Ambient Operating Temperature **50°C**

Weight (kg) **27 - 42**



### HCF Ceiling Fan

pg 28

Product Code **HCF**

Airflow m<sup>3</sup>/s **3.92**

Impellers **Pressed steel, epoxy powder coated (3 Blades)**

Motors **Capacitor start and run motor, Class E Insulation**

Ambient Operating Temperature **40°C**

Weight (kg) **4 - 5**

# product selector

The product selector is designed to provide a simple overview of the products we offer for horticulture applications.

Minimum and maximum weights expressed based on fan diameter size range | HV Weights detailed include louvre | HXP Weights detailed are ring mounted models.



## HPFA Range

pg 30

Product Code **HPFA**

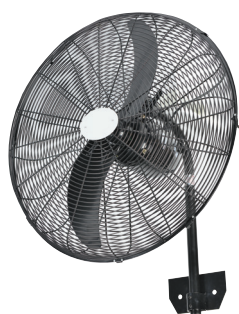
Airflow m<sup>3</sup>/s **3.83**

Impellers **High quality aluminium, epoxy powder coated (2 Blades)**

Motors **High performance motors**

Ambient Operating Temperature **45°C**

Weight (kg) **23**



## HWFA Range

pg 31

Product Code **HWFA**

Airflow m<sup>3</sup>/s **3.83**

Impellers **High quality aluminium, epoxy powder coated (2 Blades)**

Motors **High performance motors**

Ambient Operating Temperature **45°C**

Weight (kg) **14.3**



## SuperDos

pg 32

Injection Range **0.2% to 5%**

Water flow **up to 4, 6 or 8 m<sup>3</sup>/h**

Operating Pressure **5 psi to 100 psi**



## MiniDos

pg 34

Injection Range **0.5% to 2.5%**

Water flow **up to 2 m<sup>3</sup>/h**

Operating Pressure **6 psi to 140 psi**



## conversions

### volume

$1 \text{ m}^3/\text{hr} = 0.00028 \text{ m}^3/\text{s} = 0.278 \text{ L/s} = 0.589 \text{ CFM}$

### pressure

$1''\text{WG} = 249.1 \text{ Pa}$

### velocity

$1 \text{ m/s} = 196.85 \text{ ft/min}$

### power

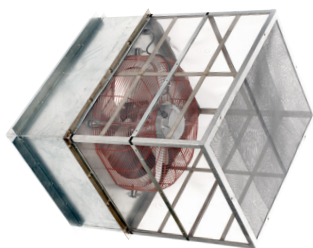
$1 \text{ Hp} = 0.746 \text{ kW}$



pg 36

## TwistII Clean Filter

Description The TwistII Clean filters have many unique and patented features and benefits placing them in a class of their own.



pg 38

## Bespoke Fan Units

Product Code **HBSFU**

Airflow  $\text{m}^3/\text{s}$  **Up to 5.4**

Impellers **Adjustable pitch aerofoil impellers [6 blades]**

Motor **Weatherproofed to IP55, Class F insulation**

Ambient Operating Temperature **70°C**

Description **Alu-Zinc cased fan unit with directional outlet louvres, actuator operated shut-off damper and insect mesh inlet.**



pg 40

## Evaporative Cooling System

Pump Litre/hr **760/1500**

Description **A multi-jet bespoke high pressure evaporative cooling system designed to cool, clean and humidify the air. Using micro-misting nozzles with low water and energy consumption. Supplied through a 12mm pipe.**

**Easy installation.**

Nozzle Output Litre/hr **0.2 nozzle = 4 Litres/hr | 0.3 nozzle = 6 Litres/hr**



pg 41

## Bespoke & Standard Controllers

Description Hydor can supply both standard and bespoke panels to control all aspects of ventilation and associated products, speed controlling or stage controlling fans whilst opening and closing vents to maintaining a set temperature or pressure. Linked to this, heating and/or cooling can be incorporated, along with recorded maximum and minimum temperatures.

# HTS Turbulator Recirculation Fan

**The Turbulator range of recirculation fans provide a constant airflow and are suitable for all year round ventilation, removing condensation and providing evenness of temperature and humidity throughout a wide variety of agricultural and horticultural buildings.**

Designed to circulate air using minimal power consumption, thereby offering a swift payback period.

The range also includes a stainless steel model for more corrosive environments.

Hydor's capabilities in manufacturing and design extend well beyond this, enabling us to provide any additional sizes or bespoke requirements you may have, such as Turbulators with integrated heaters and controls.



## key features

- Control of insects in the summer months – many insects and flies are discouraged by the constant airflow created by the circulating fans
- Provides a reduction in livestock heat stress, thereby reducing veterinary expenses
- Air circulation results in improved root growth and a healthier plant in horticulture applications
- Improved evaporation of moisture in the air eliminates condensation on walls and ceilings in winter
- Air circulation moves fumes away from animals, circulating gases to a higher level for extraction at roof level
- Ceiling mounted, provides optimum coverage at any angle
- Disperses dust
- Offers precise environmental control and an improved environment for workers
- Built to withstand challenging, humid and corrosive conditions



**IP55**  
 protection

**50°C**  
 temperature

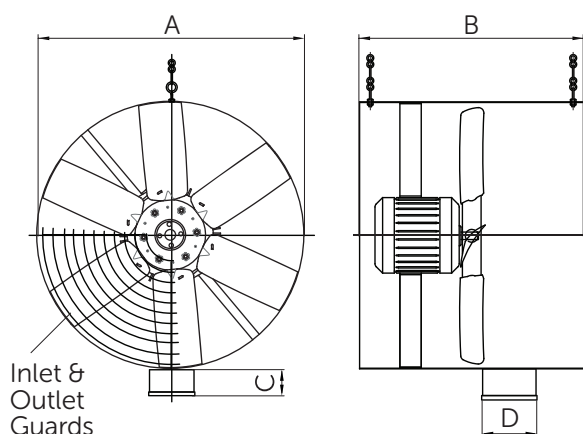
product information	Diameter (mm)	Speed (r/min)	Airflow (m <sup>3</sup> /s)	Throw (metres)	dBA @ 3m	Power (kW)	FLC (Amps)
HTS450	450	1360	1.31	23.4	64	0.545	2.31
HTS500	500	945	1.21	19.7	57	0.280	1.33
HTS630	630	945	2.34	22.5	64	0.721	3.15

Alu-Zinc casing as standard. Stainless steel upon request.

Throw termination @0.5m/s.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20μPa and is presented for comparative purposes only.

## dimensional drawing



## features and benefits

- 3 sizes from 450mm to 630mm diameter
- Suitable for 230V single phase supply
- Rust resistant air straightener for long axial air throw
- Full range of thermostats and speed controllers available
- Lightweight motors
- Non-corrosive plastic impellers for a long service life
- Rust resistant powder coated wire guards
- IP55 rated Junction Box and 3 metre cable with 3 pin plug
- Electronic or manual thermostats available
- Alu-Zinc or stainless steel casings
- Suspension eyes and chain for ease of mounting
- 12 months product warranty

## dimensions

	A	B	C	D	Weight (kg)
HTS450	460	440	75	115	20
HTS500	510	440	70	115	19
HTS630	660	630	70	115	30

Dimensions in mm.

## accessories

	Inverter Controller	Mechanical Thermostat HS1	Electronic Thermostat HP11W
HTS450	007828	003306	002371
HTS500	007827	003306	002371
HTS630	007828	003306	002371

# HTH Turbulator Fan Heater

50°C  
temperature

The HTH Turbulator Fan Heater is a highly efficient unit fitted with a variable thermostat with a range of 3°C to 30°C, a heat selection switch giving either 1.3kW or 2.6kW output and a three position switch to allow the fan to operate with or without heat to ensure maximum benefit from the air movement created.

## features and benefits

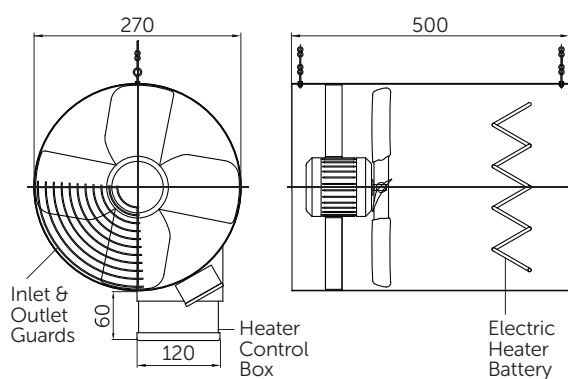
- Three position switch, fan/heat, off, fan only
- Full heat and half heat settings
- Stainless steel casing, with suspension eyes
- Thermostat +3°C to +30°C with remote temperature sensor
- Ready to run, supplied with 1.5 metres of cable, and fitted with a 13amp 3 pin plug
- Single phase 220V to 240V 50Hz



## product information

	Airflow (m³/s)	Heat Output (kW)	FLC (Amps)
HTH	0.25	1.3 / 2.6	12

## dimensional drawing



Dimensions in mm.



# HVFB Typhoon Fan

Floor  
mounted

40°C  
operation

The Hydor HVFB Typhoon range are versatile circulation fans, ideal in glasshouses for cooling personnel, with a high performance motor, efficient cooling and quiet operation.

## features and benefits

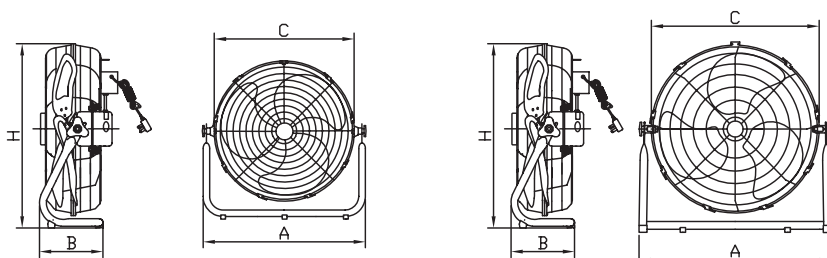
- Floor or wall mounted circulation fan
- Ideal for a variety of horticultural, agricultural and equine buildings
- High performance 3 speed motors
- Efficient quiet operation
- Chrome safety guard
- Single phase 220V to 240V 50Hz



## product information

	Airflow m <sup>3</sup> /s	Power Watts	Full Load Current A	Maximum Tilt °
HVFB30	0.75	55	0.22	30
HVFB45	1.83	180	0.81	30

## dimensional drawing



HVFB-30

HVFB-45

## dimensions

	Blade Size	A	B	C	H	Weight kg
HVFB30	300	401	182	360	385	3.8
HVFB45	450	555	195	509	525	5.5

Dimensions in mm.

# Winches

**Hydor Ventilation Systems are an important part of horticultural ventilation. It is essential to maintain the ideal conditions and environment in any glasshouse operation to produce maximum yields of high quality produce. This can be achieved by introducing fans in conjunction with an outlet system, or relying on a natural ventilation system using winch operated inlet or outlet systems.**

Hydor's knowledge gained from decades of experience in the operating principles of ventilation systems and design, enable us to help you to operate your glasshouse more efficiently and economically. This can be done whilst increasing productivity and reducing costs, culminating in increased profitability.

Hydor's range of robust, powerful motor/gearbox winch units are available in single or three phase versions, or 24volt DC. The winches are connected to rotating shafts which operate the rack and pinion units connected to the sections of the inlets or outlets. Various power outputs are available from 100Nm to 1350Nm using a double chain connection to connect to the drive shafts. Drive shaft systems can be designed to suit your particular layout with shafts, bearing units, transfer gear-boxes and rack drive units.

Manual chain-wheel units can be installed for use in an emergency or for use in the smaller simpler systems.

Systems can be designed which are fully automated with the inlets, outlets and fans being controlled from a computerised control unit. The winch units are positioned using a feed-back system with a potentiometer situated in the winch gear-box, coupled with the limit switch cassette that prevents the winch from over-travel in both the fully open and fully closed positions. The amount or rate of air exchange needed is controlled in order to maintain the optimum ventilation rates, supplementing heating rates and the air velocity through the openings as changes in weather conditions.

Hydor designed systems maintain an economic and controlled environment all year round.



Manual Chain Wheel



Feed-back Potentiometer



Safety Switch Cassette



Chain Drive Motor Gear-box Unit



Chain Sprocket



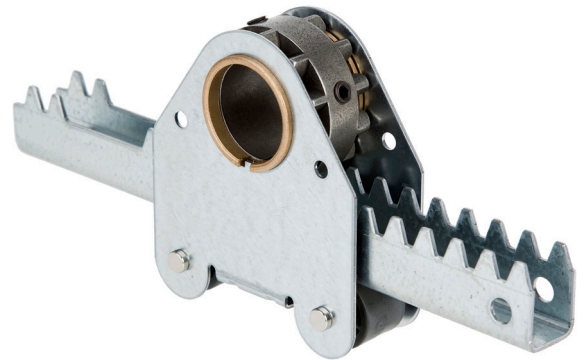
Rack Drive Units

## THG30 Rack & pinion system for multiple purposes

Our rack and pinion system THG30, used globally for ventilation systems, has undergone a facelift. The application range and working of the system has been improved and optimised along with the overall functionality. By using the optional parts available, it is now also possible to use the THG30 system under several difficult conditions.

### features and benefits

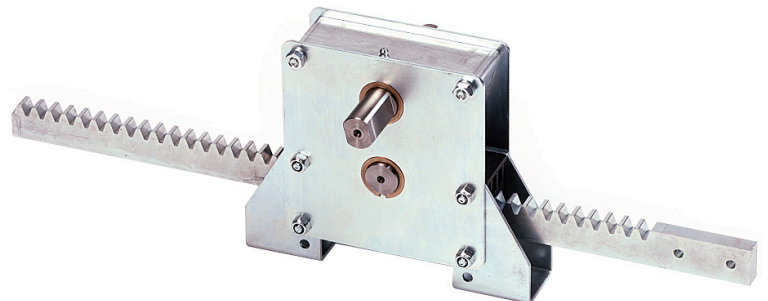
- Optimised functioning and application
- Run-out and Blow-out safeguard
- Adapter bushes for 27mm tube
- Optional clip for stronger unit
- Easy to apply in the replacement market
- Can be used in combination with GW motor gearboxes



## THG25R Truss-rail ventilation

The THG25R, mounted on the truss, forms part of the truss-rail ventilation system. The rack box is driven by a GW motor gearbox with the rack driving the pull-push tube. As a standard, the THG25R is supplied with a rack (stroke lengths 750 mm, 900 mm or 1100 mm). The centre of the rack lies 60 mm from the top of the truss (40 mm is optional).

The THG25R is also available with locking plates or rings. The entry shaft of the gearcase can be connected with the 1" or 5/4" drive tubes by means of sleeve joint chain coupling sets, sleeve joint couplings and shaft locking clips. Coupling sets are available for coupling with the pull-push tube (ø27 mm or ø32 mm). Other rack lengths or connections to the pull-push tube are available on request.





# HXP Plate Fan

With a heavy duty construction the HXP range is a modern, high quality, hard working range of propeller fans designed to pass large volumes of air with higher efficiencies to conform to current European ErP legislation.

A common component in many existing and new glasshouses, the standard HXP range is available from stock for swift delivery in both single phase and three phase variants. Hydor HXP Fans boast a highly efficient and robust motor suitable for speed control, with proven reliability for long life and trouble free operation. An excellent all round unit.



## SINGLE Phase

220V to 240V / 50Hz

	Speed (r/min)	Airflow m <sup>3</sup> /s @ Static Pressure (Pa)						Overall Eff. %	FMEG	Input (kW)	FLC (Amps)	dBA @ 3m
		0	25	50	75	100	150					
HXP45041#	1347	1.835	1.725	1.582	1.419	1.256		32.1	N40	0.416	1.91	54
HXP45061#	962	1.329	1.190	0.996				29.3	N40	0.184	0.85	48
HXP50041#	1379	2.204	2.097	1.968	1.813	1.626		32.8	N40	0.543	2.53	57
HXP50061#	954	1.623	1.463	1.257	0.941			35.0	N45	0.206	0.91	45
HXP63061#	924	3.365	3.163	2.934	2.677	2.355		37.0	N44	0.654	3.12	52
HXP71061#	913	3.982	3.675	3.294	2.784			32.6	N40	0.663	3.11	59
HXP80061#	914	5.450	4.989	4.544	4.073	3.477		36.3	N42	0.963	4.22	62

Data in accordance with ErP 327/2011 of the European Parliament. Measurement category used to determine energy efficiency: A. FLC Amps @ 230V / 1Ph / 50Hz. # Add A or B for airflow when ordering.

## THREE Phase

380V to 415V / 50Hz

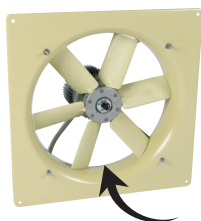
	Speed (r/min)	Airflow m <sup>3</sup> /s @ Static Pressure (Pa)						Overall Eff. %	FMEG	Input (kW)	FLC (Amps)	dBA @ 3m
		0	25	50	75	100	150					
HXP45043#	1435	1.850	1.754	1.647	1.526	1.387	1.037	36.3	N44	0.433	1.08	57
HXP45063#	945	1.276	1.111	0.904				29.5	N40	0.163	0.64	48
HXP50043#	1372	2.701	2.569	2.431	2.281	2.111	1.616	34.6	N41	0.712	1.36	57
HXP50063#	926	1.654	1.469	1.246	0.879			33.4	N44	0.211	0.68	44
HXP56043#	1322	3.344	3.175	2.996	2.810	2.614	2.134	35.6	N42	0.916	1.60	57
HXP56063#	872	2.254	1.985	1.689				31.5	N41	0.294	0.74	46
HXP63063#	912	3.323	3.010	2.689	2.301			36.6	N44	0.493	1.21	53
HXP63083#	688	2.233	1.826	1.296				29.7	N40	0.222	0.77	46
HXP71063#	862	4.498	4.138	3.678	3.117			35.4	N42	0.689	1.41	58
HXP80063#	896	5.042	4.620	4.177	3.687	3.007		42.0	N49	0.724	1.54	61

Data in accordance with ErP 327/2011 of the European Parliament. Measurement category used to determine energy efficiency: A. FLC Amps @ 400V / 3Ph / 50Hz. # Add A or B for airflow when ordering.

### A airflow



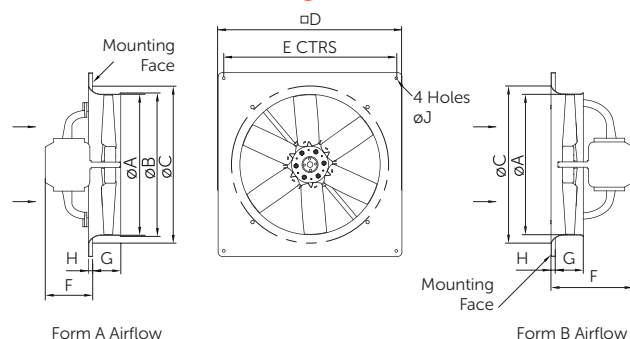
### B airflow



**IP55**  
protection

**55°C**  
temperature

## dimensional drawing



## features and benefits

- 6 standard sizes from 450mm to 800mm
- Volume up to 5.4m<sup>3</sup>/s
- Highly efficient, lightweight induction motors
- Suitable for A or B airflows
- Fully speed controllable
- Single phase 220V to 240V or Three phase 380V to 415V 50Hz

## dimensions

	A	B	C	D	E	F(A)	F(B)	G	H	J	Weight (kg)
HXP45041	450	462	500	575	535	157	269	95	15	10	15
HXP45043	450	462	500	575	535	186	199	95	15	10	15
HXP45061	450	462	500	575	535	173	186	95	15	10	15
HXP50041	500	512	560	655	615	182	305	100	15	10	19
HXP50043	500	512	560	655	615	182	305	100	15	10	19
HXP50061	500	512	560	655	615	169	293	100	15	10	20
HXP50063	500	512	560	655	615	169	293	100	15	10	20
HXP56043	560	577	620	725	670	182	321	100	15	10	22
HXP63061	630	647	700	805	750	189	328	105	20	10	30
HXP63063	630	647	700	805	750	189	328	105	20	10	30
HXP63083	630	647	700	805	750	187	326	105	20	10	30
HXP71061	710	725	765	850	810	204	341	103	27	10	30
HXP71063	710	725	765	850	810	191	328	103	27	10	30
HXP80061	800	817	880	973	910	202	353	105	30	10	35
HXP80063	800	817	880	973	910	202	354	105	30	10	35

Dimensions in mm.

## accessories

	Plastic Louvre Shutters	Single Phase Electronic Controller	Single Phase Transformer Voltage Controller	Three Phase Transformer Voltage Controller (5 Step)
HXP4504#	HLVS450	HFC3.0	TC014	TC033
HXP4506#	HLVS450	HFC1.7	TC012	TC033
HXP5004#	HLVS500	HFC3.0	TC014	TC035
HXP5006#	HLVS500	HFC1.7	TC012	TC033
HXP5604#	HLVS560	-	-	TC033
HXP5606#	HLVS560	HFC1.7	TC012	TC033
HXP6306#	HLVS630	HFC6.0	TC014	TC033
HXP6308#	HLVS630	-	-	TC033
HXP7106#	-	HFC6.0	TC014	TC033
HXP8006#	-	HFC6.0	TC018	TC033

# HV Belt Drive Fan

The Hydor HV Belt Drive fan unit is specifically designed to ventilate larger buildings where substantial amounts of air are moved at low pressure with minimal energy consumption.

The HV range is available in six versions and five sizes; 800mm, 1000mm, 1250mm 1.1kW, 1250mm 1.5kW, 1500mm and 2000mm diameter, each with single or three phase motors and the option of louvres and guards. This powerful fan produces air volumes up to 20m<sup>3</sup>/s. Constructed from galvanised steel with a specially designed stainless steel impeller, these fans are extremely hard wearing and robust in application. The drive mechanism includes sealed for life maintenance free ball bearings, which means low noise and vibration levels. The HV range is available in three variations; wall mounting with shutters, suspension mounting from the roof space or floor mounting with wheels. The HV range are supplied fully assembled with internal and external safety guards or a centrifugal operated backdraught shutter on the external side.



## SINGLE Phase

220V to 240V / 50Hz

	Speed (r/min)	Airflow m <sup>3</sup> /s @ Static Pressure (Pa)						Power (kW)	FLC (Amps)	Start (Amps)	dBA @ 3m
		0	20	40	60	80	100				
HV800	630	4.588	4.091	3.589	2.840	-	-	0.75	4.5	14.3	58
HV1000	520	7.096	6.447	5.550	4.296	3.139	1.827	0.75	5.4	14.9	59
HV1250 (1.1kW)	400	11.002	9.578	8.030	6.190	4.028	-	1.1	7.2	25.7	60
HV1250 H (1.5kW)	440	12.104	10.863	9.465	7.866	5.746	3.189	1.5	8.4	29.5	63
HV1500	360	12.828	11.360	9.503	6.815	-	-	1.5	9.4	33.0	61
HV2000	280	20.137	16.539	12.970	7.639	-	-	1.5	10.0	35.0	59

Measurement category used to determine energy efficiency: A. FLC Amps @ 230V / 1Ph / 50Hz.

## THREE Phase

400V / 50Hz

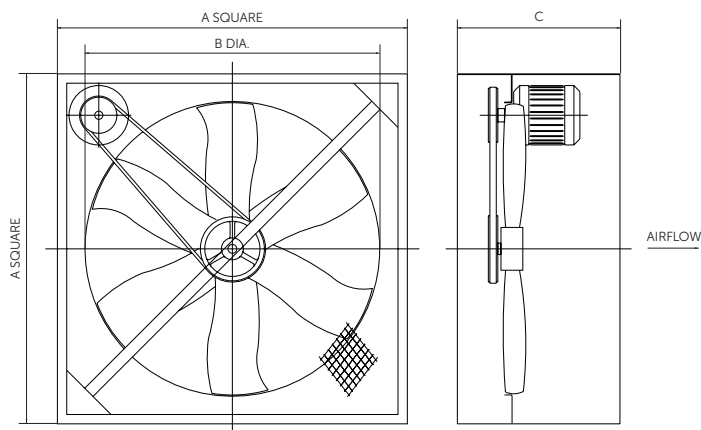
	Speed (r/min)	Airflow m <sup>3</sup> /s @ Static Pressure (Pa)						Power (kW)	FLC (Amps)	Start (Amps)	dBA @ 3m
		0	20	40	60	80	100				
HV800	630	4.588	4.091	3.589	2.840	-	-	0.75	2.0	5.9	58
HV1000	520	7.096	6.447	5.550	4.296	3.139	1.827	0.75	2.6	7.8	59
HV1250 (1.1kW)	400	11.002	9.578	8.030	6.190	4.028	-	1.1	2.9	8.7	60
HV1250 H (1.1kW)	450	11.356	10.208	8.839	7.139	4.947	2.216	1.1	3.0	6.8	62
HV1500	360	12.828	11.360	9.503	6.815	-	-	1.5	3.6	10.8	61
HV2000	280	20.137	16.539	12.970	7.639	-	-	1.5	3.8	12.5	59

Measurement category used to determine energy efficiency: A. FLC Amps @ 400V / 3Ph / 50Hz.  
Note: Motor electrical data is approximate, as it varies from one motor manufacturer to another



IP55  
protection50°C  
temperature

## dimensional drawing



## features and benefits

- Free standing air circulation fan
- Ideal for industrial, commercial and agricultural applications
- Extracts stale and humid air from the building
- Fitted with a mesh safety guard on both sides
- 3 step speed switch for increased energy
- Single phase 220V to 240V 50Hz
- Three phase 380V to 440V 50Hz

dimensions	A	B	C	Depth inc Louvre	Depth inc Louvre & Guard	Weight (kg)	Weight inc Louvre (kg)
HV800	960	800	330	405	470	32	44
HV1000	1150	1000	330	405	470	40	50
HV1250 (1.1kW)	1380	1250	330	405	470	50	70
HV1250 H (1.1kW)	1380	1250	330	405	470	50	70
HV1250 H (1.5kW)	1380	1250	330	405	470	52	72
HV1500	1495	1350	430	430	500	55	85
HV2000	1930	1760	450	450	515	75	100

Dimensions in mm.

accessories	1Ø 3 Step Speed Controller	1Ø DOL Starter	3Ø DOL Starter	Blackout Filter	HV Wall Cowl	Fixed Intake Weather Louvre with Guard		
						Mill	Paint	Watertight
HV800	FC0149-TC110HV	004828	003644	000295	HVWC800	003316	003320	004625
HV1000	FC0149-TC110HV	004828	004726	000301	HVWC1000	003317	003321	004626
HV1250 (1.1kW)	FC0149-TC110HV	004831	003645	000310	HVWC1250	003318	003322	004627
HV1250 H (1.1kW)	-	-	003645	000310	HVWC1250	003318	003322	004627
HV1250 H (1.5kW)	FC0149-TC112HV	004834	-	000310	HVWC1250	003318	003322	004627
HV1500	FC149-TC116HV	004833	004296	-	HVWC1500	-	-	-
HV2000	-	004833	004296	-	HVWC2000	003319	003323	004628

# HIDSF Destratification Fan

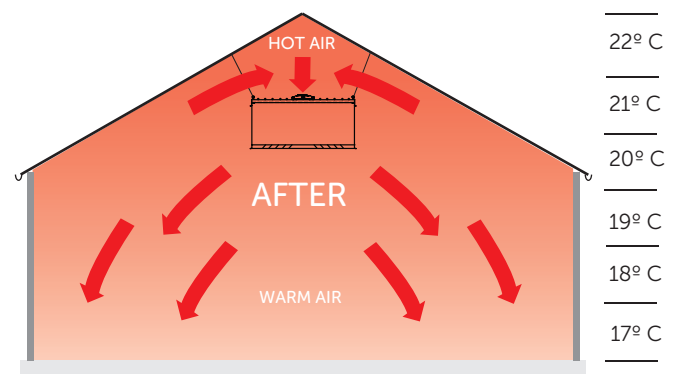
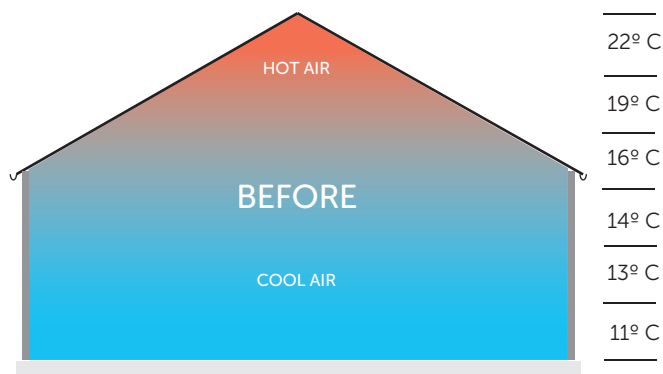
**With Hydor Destratification fans installed in the ceiling space, the accumulated warm air is redistributed down towards floor level and recirculated around the building to sustain even temperatures and reduce run time of heaters.**

Within Horticulture buildings, heat rises from floor level and collects in the ceiling void, even in a well ventilated building the difference in temperature levels can be as much as 5°C.

Heaters are required to operate more frequently in this situation to restore temperatures at floor height to acceptable levels for the plants housed. This results in higher fuel costs and wasted energy.

The redistribution of warm air creates a more even temperature around the building and allows the floor level temperature to be sustained for longer without the prolonged and frequent use of heaters, thereby reducing energy expenditure significantly.

Tests have also proven that the fans aid maintenance of a constant temperature at floor level. In comparison, a house reliant solely on heaters recorded considerable fluctuations in temperature.



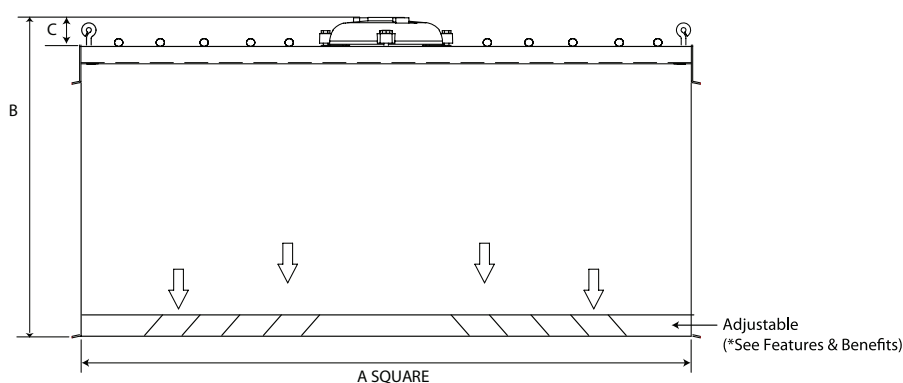


## product information

	Airflow (m <sup>3</sup> /s)	Speed (r/min)	Power (W)	FLC (Amps)	Start (Amps)	Weight (kg)
HIDSF500	1.80	1300	420	1.65	5.9	27
HIDSF630	2.20	940	460	2.30	6.0	42

Units are available in three phase if required.

## dimensional drawing



## dimensions

	A	B	C
HIDSF500	655	295	60
HIDSF630	805	325	60

Dimensions in mm.

## features and benefits

- Available in two sizes; 500mm for smaller buildings and 630mm for larger units
- High efficiency fan easily accessible for cleaning and maintenance
- The advanced performance impeller produces up to 2.2m<sup>3</sup>/sec
- Highly efficient motors are matched to the aerodynamic performance of the impeller for maximum efficiency
- Suspension eyelets fitted as standard for easy installation
- Fitted with motor-side guards for safety
- The louvres set in four directions enable 360° cover
- The outlet louvres are adjustable, allowing the air to be directed at varying angles to suit the requirement  
(See dimensional drawing above)

# HCF Ceiling Fan

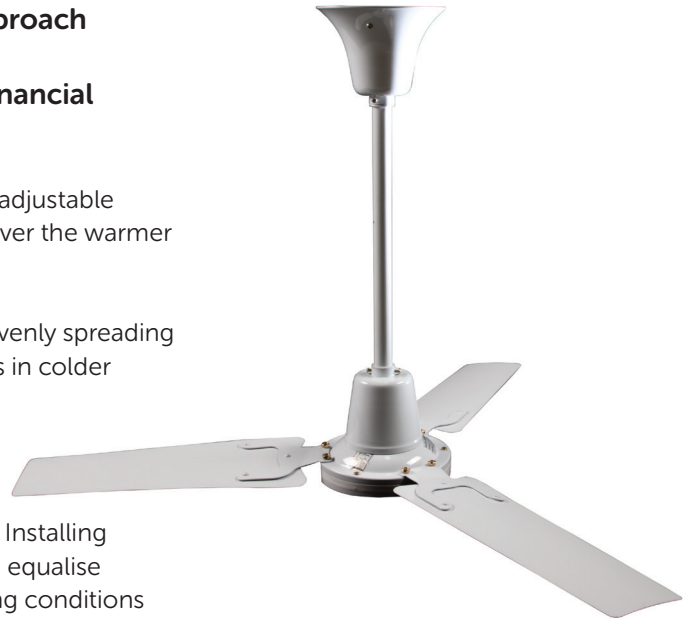
**HCF Ceiling Fans present a straight forward, low cost approach towards air circulation. With the need to improve energy consumption levels, the Hydor ceiling fan makes good financial sense.**

It is important to maximise the benefits of your ceiling fans and the adjustable speed settings; even on low speeds, the Hydor ceiling fans will recover the warmer air at ceiling levels, ensuring this does not escape through the roof.

Hydor ceiling fans push air down and around in a circular motion, evenly spreading the air throughout the building to eliminate cold spots and draughts in colder months.

In warmer months, warm, muggy air sits in the building which creates uncomfortable conditions for staff, customers and products and could cause heat stress for personnel. Installing ceiling fans within the building will provide a positive air movement, equalise temperature levels, discourage flies and insects and improve working conditions for staff and customers alike.

Various types of controls are available to operate your ceiling fans, either singly or in banks, both electronically or by stepped transformer, manually or automatic.



## key features

- The air circulation created by the fans has the effect of breaking up the air layer that builds up around the product and ensures that fresh air replaces the stale air
- Forcing air around the building means that flying insects will stay away, or remain close to the ground
- Hydor ceiling fans will keep your building cooler - improving the comfort of your staff and customers
- The fans are easy to install and can be suspended from the roof trusses and therefore do not impede onto the structure of the building
- The continual movement of air reduces harmful bacteria and germs which would otherwise multiply in stagnant air found on hot stifling days
- The constant air movement will also reduce odours

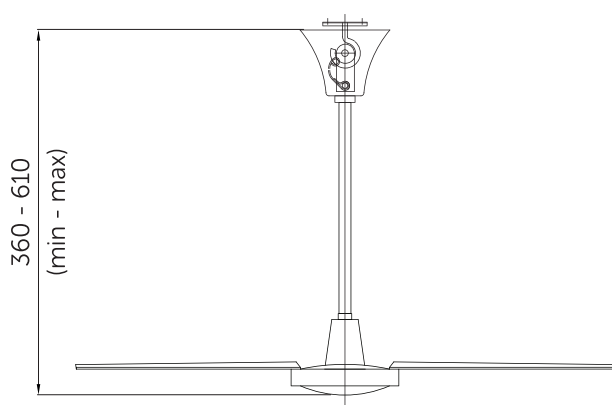


**Ball**  
bearing

**40°C**  
operation

performance data	Power (W)	Speed (r/min)	FLC (Amps)	Air Delivery Max (m³/s)
HCF900	43	330	0.21	2.25
HCF1200	55	315	0.25	3.50
HCF1400	67	290	0.30	3.92

## dimensional drawing



## features and benefits

- Ceiling mounted air circulation fan
- Ideal for a variety of agricultural, horticultural and commercial applications
- Easy to install and maintain
- Long life ball bearings and silent automatic shutters
- Safety cable included
- Single phase 220V to 240V 50Hz

## dimensions

	Fan Diameter	Weight (kg)
HCF900	900	4.0
HCF1200	1200	4.5
HCF1400	1400	5.0

Dimensions in mm.

## accessories

	Electronic Controller	TC Step Transformer Controller	Automatic Ceiling Controller
HCF900	HCF1.7	TC12 / TC14 / TC18	HCFDC
HCF1200	HCF1.7	TC12 / TC14 / TC18	HCFDC
HCF1400	HCF1.7	TC12 / TC14 / TC18	HCFDC

# HPFA Pedestal Fan

90°  
turning arc

45°C  
temperature

The Hydor HPFA Pedestal air circulation fans are designed for use in a wide variety of horticultural applications.

Pedestal fans provide the benefit of local cooling for staff, for example in staff rest rooms, workshops or larger offices.

Whether it is for your plants, garden centre or staff, Hydor pedestal fans provide powerful, cool, yet effective, positive air movement, thereby improving the environmental conditions for both humans and plants.

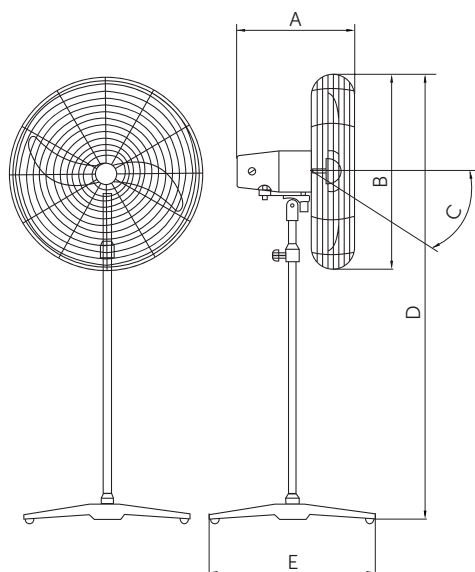
## features and benefits

- Free standing air circulation fan
- Ideal for a variety of agricultural, horticultural and commercial applications
- Adjustable height and airflow direction
- 3 speed settings
- Black meshed guard for protection
- Single phase 220V to 240V 50Hz



product information	Speed (r/min)	Airflow (m³/s)	Power (W)	FLC (Amps)	dBA @ 3m	Maximum Tilt	Weight (kg)
HPFA650 Low	890	1.83	130	0.56	46	30°	23
HPFA650 Med	1050	2.83	140	0.62	50	30°	23
HPFA650 High	1380	3.83	170	0.80	59	30°	23

## dimensional drawing



## dimensions

	A	B	C	D	E
HPFA	360	690	30°	1460-1860 (min-max)	525

Dimensions in mm

# HWFA Wall Fan

90°  
turning arc

45°C  
temperature

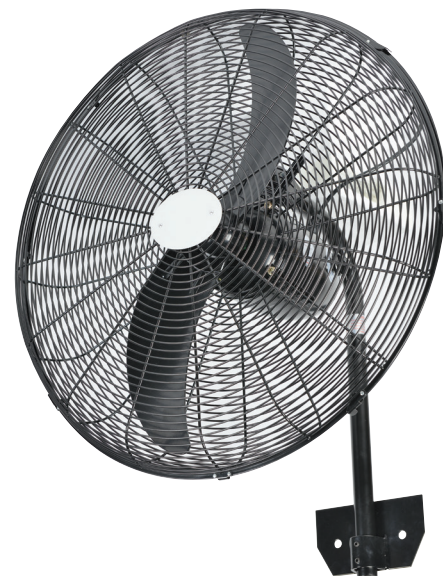
The Hydor HWFA Wall mounted air circulation fans are designed for use in a wide variety of horticultural applications.

Wall mounted units are highly suitable for mounting in garden centres, personnel areas; where customers or staff congregate, but are primarily designed to benefit the plants.

Whether it is for your plants, garden centre or staff, Hydor wall mounted fans provide powerful, cool, yet effective, positive air movement, thereby improving the environmental conditions for both humans and plants.

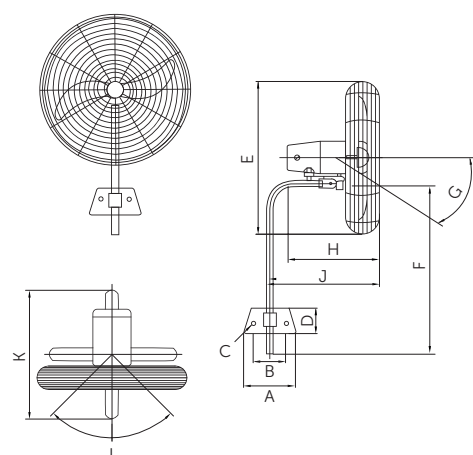
## features and benefits

- Wall mounted air circulation fan
- Ideal for a variety of agricultural, horticultural and commercial applications
- Adjustable airflow direction
- 3 speed settings
- Black meshed guard for protection
- Single phase 220V to 240V 50Hz



product information	Speed (r/min)	Airflow (m³/s)	Power (W)	FLC (Amps)	dBA @ 3m	Maximum Tilt	Weight (kg)
HWFA650 Low	890	1.83	130	0.56	46	30°	14.3
HWFA650 Med	1050	2.83	140	0.62	50	30°	14.3
HWFA650 High	1380	3.83	170	0.80	59	30°	14.3

## dimensional drawing



## dimensions

	A	B	C	D	E	F	G	H	J	K	L
HWFA	190	114	12.5	112	690	445	30°	360	525	590	90°

Dimensions in mm



# SuperDos

## Non electric, fluid driven proportional injectors

SuperDos operates without electricity to inject precise liquid concentrates into a water supply line using fluid flow as the power source.

SuperDos is designed with a patented internal mixing chamber that promotes homogeneous mixing, while segregating harsh chemicals from critical internal components.

SuperDos comes in various models that easily satisfy the demands of your most challenging applications.

- Proprietary composite body for chemical compatibility and for mixing aggressive chemicals
- Built-in on/off switch (30 and 45 models only) which allows the user to stop the injection, but not the system
- Separate internal mixing chamber to prevent chemical contact with motor piston, for longer life and uniform mixing
- Interchangeable lower ends with the ability to adjust ratios while in operation

### principal applications

Injection of liquid or soluble fertilizers, pest and insect control, misting systems, fruit and vegetable sanitising, cleaning and disinfecting of irrigation pipes, drip irrigation, pH control, fertigation in small and medium greenhouses.



Injection  
range:  
0.2% to  
5%\*

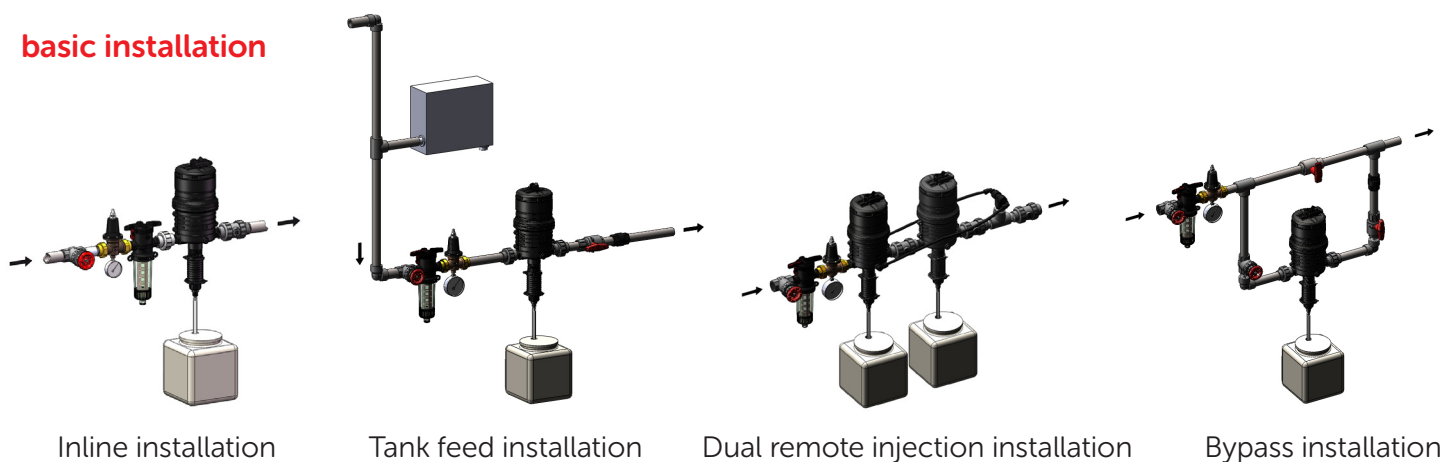
Water flow  
up to:  
8 m<sup>3</sup>/h\*

Operating  
pressure:  
5 psi to  
100 psi\*

\*Dependant on model

product information	Flow Range L/h	Operating Pressure		Injection Range	
		psi	bar	%	ratio
SuperDos 20 2.5% WSP	100 - 4500	5 - 100	0.4 - 6.9	0.3% - 2.5%	1:300 - 1:40
SuperDos 30 2.5%	100 - 6000	5 - 100	0.4 - 6.9	0.2% - 2.5%	1:500 - 1:40
SuperDos 30 5%	100 - 6000	5 - 100	0.4 - 6.9	0.4% - 5%	1:250 - 1:20
SuperDos 30 2.5% WSP	100 - 6000	5 - 100	0.4 - 6.9	0.3% - 2.5%	1:300 - 1:40
SuperDos 45 2.5%	200 - 8000	5 - 100	0.4 - 6.9	0.20% - 2.5%	1:500 - 1:40
SuperDos 45 5%	200 - 8000	5 - 80	0.4 - 6.9	1% - 5%	1:250 - 1:20

## basic installation



## general specifications

Housing	Proprietary engineered composite material
Average dosing accuracy	+/- 5%
Repeatability	+/-3%
Fluid maximum temperature	38°C
Fluid minimum temperature	1°C
Maximum vertical suction of concentrate	3.6m
Maximum horizontal suction of concentrate	15m
Self-priming	Yes
Seal material available*:	Aflas Alkaline concentrates, Viton Acids, oils & pesticides, EPDM Alkaline concentrates

\*Contact your representative for specific chemical information.

# MiniDos

## Non electric, fluid driven proportional injectors

MiniDos operates without electricity to precisely inject liquid concentrates into a water supply line using fluid flow as the power source.

MiniDos is designed with a patented internal mixing chamber that promotes homogeneous mixing, while segregating harsh chemicals from critical internal components.

MiniDos comes in various models that easily satisfy the demands of your most challenging applications.

- Proprietary composite body equals PVDF for chemical compatibility and for mixing aggressive chemicals without additional cost
- Built-in on/off switch, which allows user to stop the injection, but not the system
- Separate internal mixing chamber to prevent chemical contact with motor piston, for longer life and uniform mixing
- Highest standard operating pressure in the industry, minimising pressure surge damage



### principal applications

Fertilisation and plant treatments for gardening and landscaping, green walls and roof terrace fertilisation.

Injection  
range:  
**0.5% to  
2.5%**

Water flow  
up to:  
**2 m<sup>3</sup>/h**

Operating  
pressure:  
**6 psi to  
140 psi**

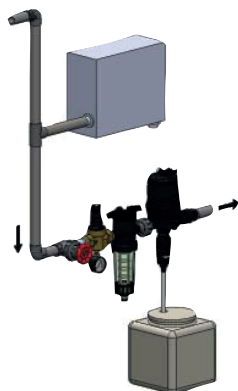


product information	Flow Range L/h	Operating Pressure		Injection Range	
		psi	bar	%	ratio
MiniDos 2.5%	50 - 2000	6 - 140	0.5 - 9.6	0.5% - 2.5%	1:200 - 1:40

## basic installation



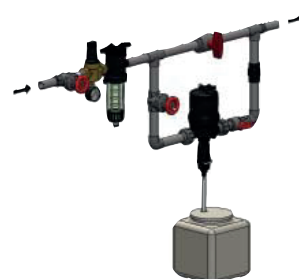
In-line installation



Tank feed installation



Dual remote injection installation



Bypass installation

## general specifications

Housing	Proprietary engineered composite material
Average dosing accuracy	+/- 5%
Repeatability	+/-3%
Maximum temperature	100°F (38°C)
Minimum temperature	34°F (1°C)
Maximum vertical suction of concentrate	3.6 m
Maximum horizontal suction of concentrate	15 m
Self-priming	Yes
Seal material available*:	<b>Aflas</b> Alkaline concentrates, <b>Viton</b> Acids, oils & pesticides, <b>EPDM</b> Alkaline concentrates
Recommended Accessories	140 mesh (104 micron) filter, check valve, pressure regulator, flow restrictor
Thread Sizes Available	3/4" npt, bsp

\*Contact your representative for specific chemical information.

# TwistII Clean Filter

## Patented reverse flushing action

The TwistII Clean filters have many unique and patented features and benefits putting them in a class of their own.

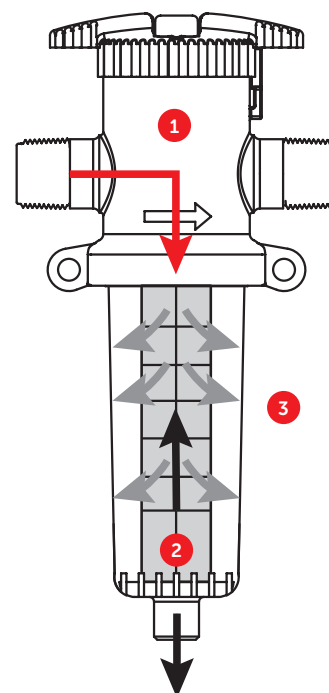
### features and benefits

- Simple 1/4" turn operation
- Filter element flushes completely clean in less than 20 seconds
- No need to turn off water to clean (eliminates air in system)
- Rugged design installs indoors or outdoors
- Long lasting stainless steel filter element
- Never buy filter cartridges again!

### patented reverse flushing action

When the top handle is turned, three events take place:

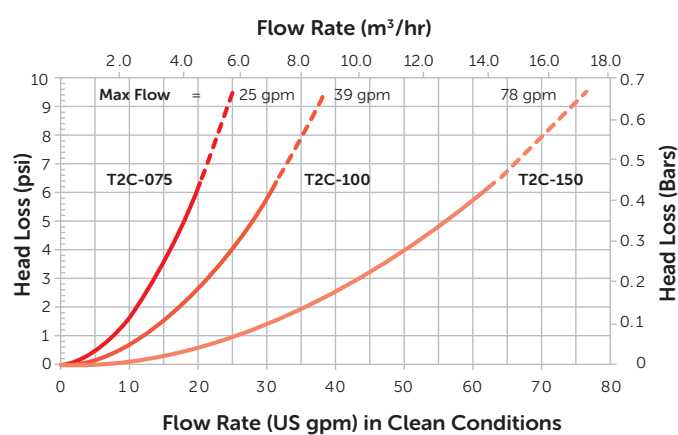
- 1 Flow direction is changed to inside-out
- 2 The filter element is lifted to open the bottom flush port
- 3 An inside-out backwash occurs, and the filter element is cleaned



## product information

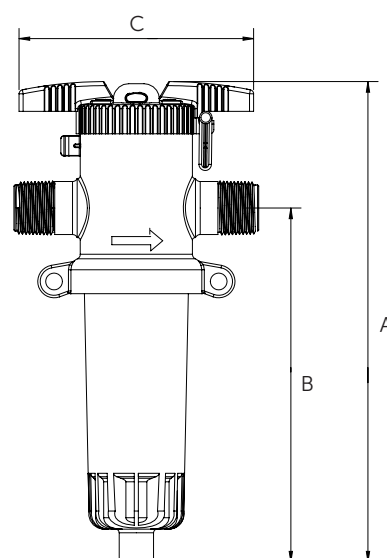
	Filter Screen Size		Max. Operating Pressure		Inlet/Outlet Pipe Conn.	Purge Outlet
	Mesh	Micron	psi	bar		
T2C 3/4" 105 Micron NPT	140	105	100	7	3/4" NPT	1/2" NPT
T2C 1" 105 Micron BSP	140	105	100	7	1" NPT	1/2" NPT
T2C 1.5" 105 Micron BSP	140	105	100	7	1.5" NPT	3/4" NPT

## technical specification



— = recommended flow range

## dimensional drawing



## dimensions

	A	B	C
T2C 3/4" 105 NPT	298	222	152
T2C 1" 105 BSP	298	222	152
T2C 1.5" 105 BSP	381	305	203

Dimensions in mm

## mesh size available

140 Mesh (105 Micron) Element (Black)



# Bespoke Fan Units

**Hydor have produced Bespoke Fan Units for horticultural research stations, universities, garden centres and government / council glasshouses and commercial growers.**

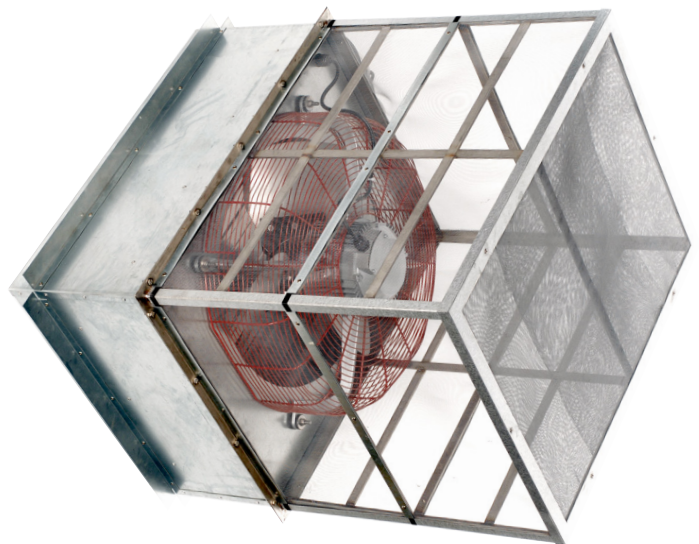
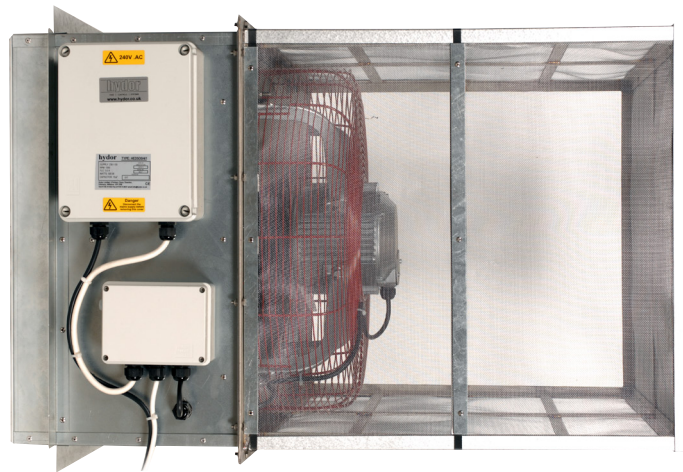
The units produced have been built to meet the exact requirements of the individual customer specification and include such features as automated dampers, internal direction louvres, external aphid mesh and/or filters.

Units can be used where positive pressures are essential to prevent any contaminants entering the test areas. Similar units are designed to mount into the glazing bars of the roof of the glasshouse or garden centre. The units can incorporate the same features as the wall mounting units but are generally used for extracting air.

Simple units can also be developed with fan sizes to suit from 315mm diameter to 800mm diameter or larger for specialist applications, although size can be dictated by the glazing bar spacing.

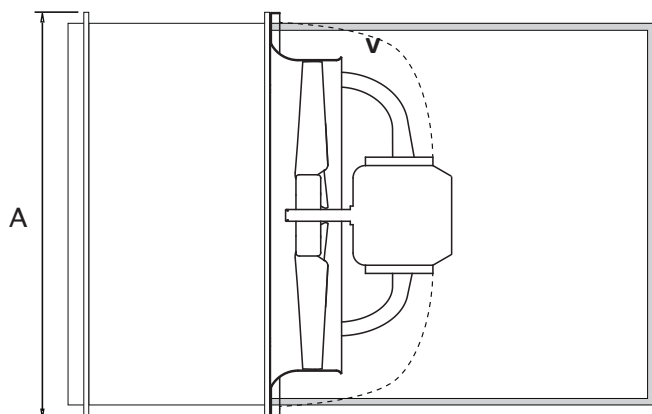
## features and benefits

- Specially designed to meet your exact specification with single or three phase fan options available
- Dampers open automatically by actuator mechanism resulting in no loss of fan performance
- Positive pressure maintains biosecurity within the test room
- Delay in fan operation until damper is open to reduce wear and tear on the fan
- Housing is manufactured from galvanised sheet steel, GRP or stainless steel, corrosion resistant for durability and longevity
- Component spares available from stock
- Air volumes produced up to 5.4m<sup>3</sup>/s  
12 month product warranty

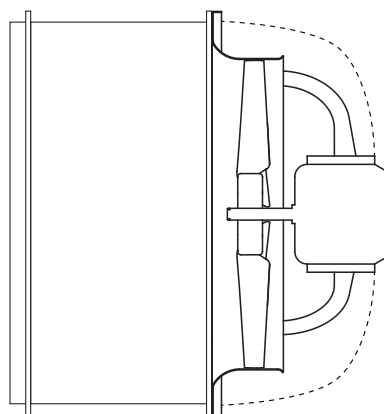


## dimensional drawing

With Aphid Screen



Without Aphid Screen



## dimensions

	A Square
HBSFU450	575
HBSFU500	655
HBSFU560	725
HBSFU630	z805
HBSFU710	850
HBSFU800	973

Dimensions in mm

## accessories

- All of our bespoke units can be supplied with the following items which must be specified at the time of ordering:
- Dampers with actuator
- Filters
- Directional outlet louvres
- Deflection louvres
- Aphid screen and frame
- Heater elements
- Mounting angles to suit glazing bars or structure

# Evaporative Cooling System



Where additional cooling is required, in areas of excessive heat conditions, the Hydor Evaporative Cooling System ensures the increased comfort of your staff and enhanced conditions for your produce.

## features and benefits

- The system greatly enhances the cooling effect, work areas, garden centres and glasshouses can all benefit from the rapid, efficient cooling the system provides, thereby reducing stress and discomfort whilst improving safety and worker productivity.
- The added benefits of the fine spray generated by the system ensure that flies and other insects are kept away. Hydor's evaporative cooling systems achieves this with proven success.
- Using our high quality, precision misting nozzles, an ultra fine mist is generated and introduced into the environment which interacts with the air to cool, clean and humidify. Using climate controllers in combination with the evaporative cooling system, the humidity can be controlled to optimise the localised climate in the glasshouse.
- Controlled temperatures and increased comfort maximise production levels both for the product and the staff. Lower temperatures reduce insect infestation, improve productivity and enhance profits. An even temperature maintained throughout the glasshouse will produce a more even crop growth.
- The systems are highly economic with low levels of water and energy consumption which makes them a very cost effective solution for any application. In addition, lower temperature levels reduce the energy consumption of the fans by running for shorter periods of time and at lower speeds.





# Bespoke & Standard Controllers

Hydor have been manufacturing precision control panels for over 50 years and have a wealth of experience with the design and manufacture of both standard units and bespoke panels.

## features and benefits

- A control panel is essential in every horticultural application that has electrical equipment and machines that need operating and controlling.
- Hydor's bespoke control panels are designed and built to meet the exacting requirements of a specific application. Our dedicated team are familiar with all aspects of control requirements and offer products of the highest quality with minimal lead times where possible. We pride ourselves on our reputation and levels of customer service and satisfaction; providing a first class completely personal service from consultation, technical advice, design, quality production, prompt delivery and after sales service.
- Hydor can supply panels to control all aspects of ventilation and associated products; speed controlling or stage controlling fans whilst opening and closing vents to maintain a set temperature or pressure. Linked to this, heating and/or cooling can be incorporated with recorded maximum and minimum temperatures.
- In addition to the vast bespoke range available, Hydor also manufacture and supply a range of standard units for the control of your building's environment.



# Bespoke & Standard Controllers

## Voltage Controllers - Transformers

A range of transformer voltage controllers used to provide five speed step control of single phase motors where the peak current of the motor does not exceed the rating of the controller. Speed control is via selector switch. Single phase units are complete with illuminated on/off switch.



product information	Supply	Max peak current (Amps)	IP Rating
TC12	230V/1Ph/50Hz	2	IP40
TC14	230V/1Ph/50Hz	4	IP40
TC18	230V/1Ph/50Hz	8	IP40

dimensions	Height	Width	Depth	Weight (kg)
TC12	245	195	95	3
TC14	245	195	95	4
TC18	305	225	125	6

Dimensions in mm

## Electronic Speed Controllers

Quality electronic type speed controllers are available for panel/wall mounting. Each unit includes a speed control knob and miniature circuit breaker, rated to suit the fan and also act as an on/off switch. Current rating up to 10Amps maximum. Available to control one or two fans.



product information	Max peak current (Amps)	IP Rating
HFC1.7	1.7	IP54
HFC2.0	2.0	IP54
HFC3.0	3.0	IP54
HFC6.0	6.0	IP54

dimensions	Height	Width	Depth	Weight (kg)
HFC1.7	110	110	60	0.3
HFC2.0	110	110	60	0.3
HFC3.0	110	110	60	0.3
HFC6.0	110	110	60	0.3

Dimensions in mm

# Bespoke & Standard Controllers

## Climate Controller

The Climate Controller provides temperature activated ventilation control for your grow room. Both intake and exhaust fans speed can be individually adjusted to provide balanced, continuous trickle ventilation.

The controller is activated by the adjustable temperature sensor which can be remotely sited to provide accurate localised temperature control.

When the temperature set point is reached, both intake and exhaust fans will increase to full speed until the temperature drops back below the set point.



## Electronic Humidistat

The Electronic Humidistat is an On/Off sensor and is adjustable between 60 – 100% RH. The sensor monitors the relative humidity level and switches the fan on to remove moisture laden air when the humidity level exceeds the set point.

## Aspirated Thermostat/Sensor

The Hydor Aspirated Thermostat, with its built-in fan, monitors the actual air temperature; unaffected by the direct heat of the sun and in combination with a computer or control panel, it controls the temperature within the glasshouse or garden centre.

## Air Quality Sensor

The electronic Air Quality Sensor monitors the levels of humidity, CO<sub>2</sub> and dampness. The ventilation system is activated when the air quality deteriorates and drops below the adjustable acceptable level.



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Hydor Ltd has a policy of continuous product development and improvement and therefore reserves the right to supply products which may differ from those illustrated and described in this publication. Confirmation of dimensions and data will be supplied on request.

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