



hydor

crop storage

As a leading manufacturer of ventilation products to the agricultural sector, Hydor is driven by achieving a system design that is not only cost effective to the crop producer, but helps protect the crop itself.

For more than 50 years, Hydor have been provided flexibility in environmental control within crop storage units to keep the produce in first class condition.

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introduction

Produce must be in optimum condition to achieve premium returns. It is essential when storing produce to maintain optimum climate conditions.

Crop storage produces high quantities of heat, which along with excess humidity, needs to be removed to prevent premature germination and rodent infestation. Hydor can design and supply efficient ventilation and control products to ensure the environment is perfect for the crop.

Hydor fans and systems can be used in conjunction with drying and cooling fans, to improve overall conditions by providing a simple and cost effective solution to eradicate heat and moisture.





applications

stirrer store - temperature drying

Problem To remove moisture from the crop, air heated to 50°C is blown through a central duct, dispersing heat beneath the slatted floor and forcing hot air up through the crop to a height of up to 4.2 metres and out into the roof void. Stirrers travel along the length of the store rotating the crop to aid even movement of heated air.

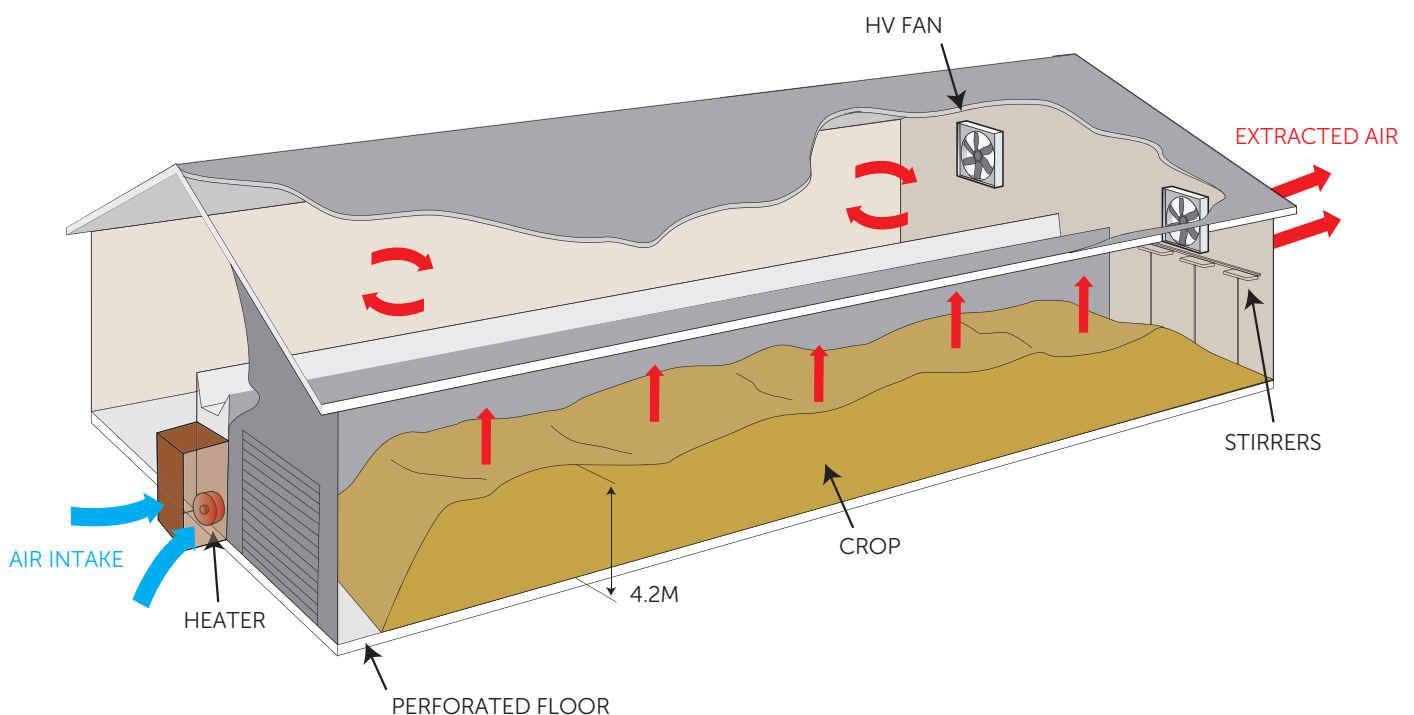
The hot air rises above the crop, at temperatures of around 30°C with very high humidity level. Condensation forms and clings to the metal purlins and drops back onto the grain stored, providing the perfect environment for premature germination or the crop condition deteriorates.

Solution Hydor belt-driven HV fans situated at a high level opposite the drying fan, irrespective of where shutter doors are situated. The doors are usually closed during the drying process, thus eliminating any chance of the air short circuiting. The HV fans extract the humid air thus eradicating the condensation for a more efficient drying process. The extract fans only operate when the drying fans are on, preventing unnecessary energy usage. Installing humidity sensors to activate fans should the humidity build up after

the drying fans have been switched off, reduces the risk of germination occurring. Because the blower brings air into the building, there is no need for ventilation louvres, therefore reducing installation costs.

Calculation The calculation of air requirement is based on the amount of air provided by the drying fan, and the amount of air between the top of the crop stored and the roof that requires ventilating. Initially, when the store is being filled, there will be less air changes provided by the exhaust fans due to the larger free air space.

There is less crop, so there is less condensation being produced. As the store fills, the free air space decreases and the amount of air changes increase accordingly until the maximum rate is reached.



crop store - drying & cooling

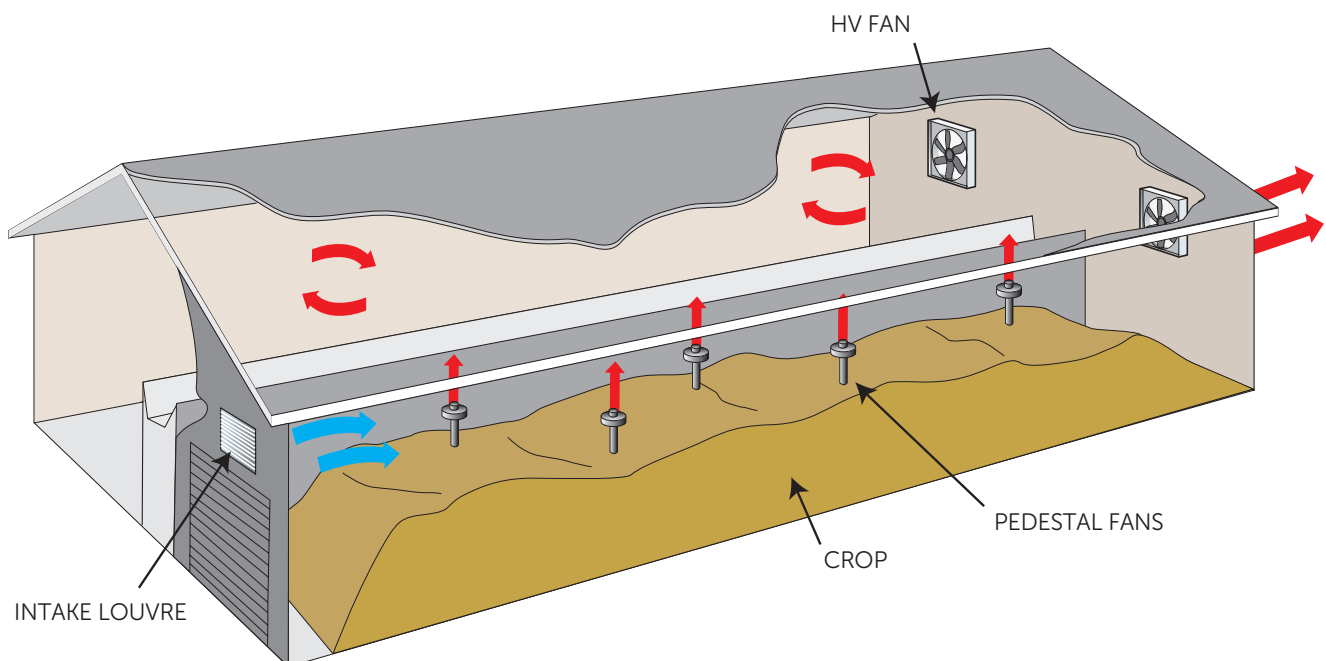
Problem Pedestal fans installed within the store are utilised after the drying process, to cool the grain and ensure the condition of the crop is maintained.

They draw air from the bottom of the pile and discharge the warm, humid air, into the ceiling void again creating a problem of condensation and drips forming.

Solution In this situation the intake louvres are utilised to provide the fresh air required by the extract fans. Air is drawn in at high level, passing over the crop with the aid of pedestal fans and is extracted at high level by Hydor belt-driven HV fans, positioned at the opposite end of the store.

This operation removes the warm air and aids the cooling and drying process, which in turn eliminates the condensation and reduces the operational time of the pedestal fans, thus saving energy.

It is necessary to fit intake louvres or intake fans in the wall opposite the extract fans in order to supply fresh air into the building.



applications

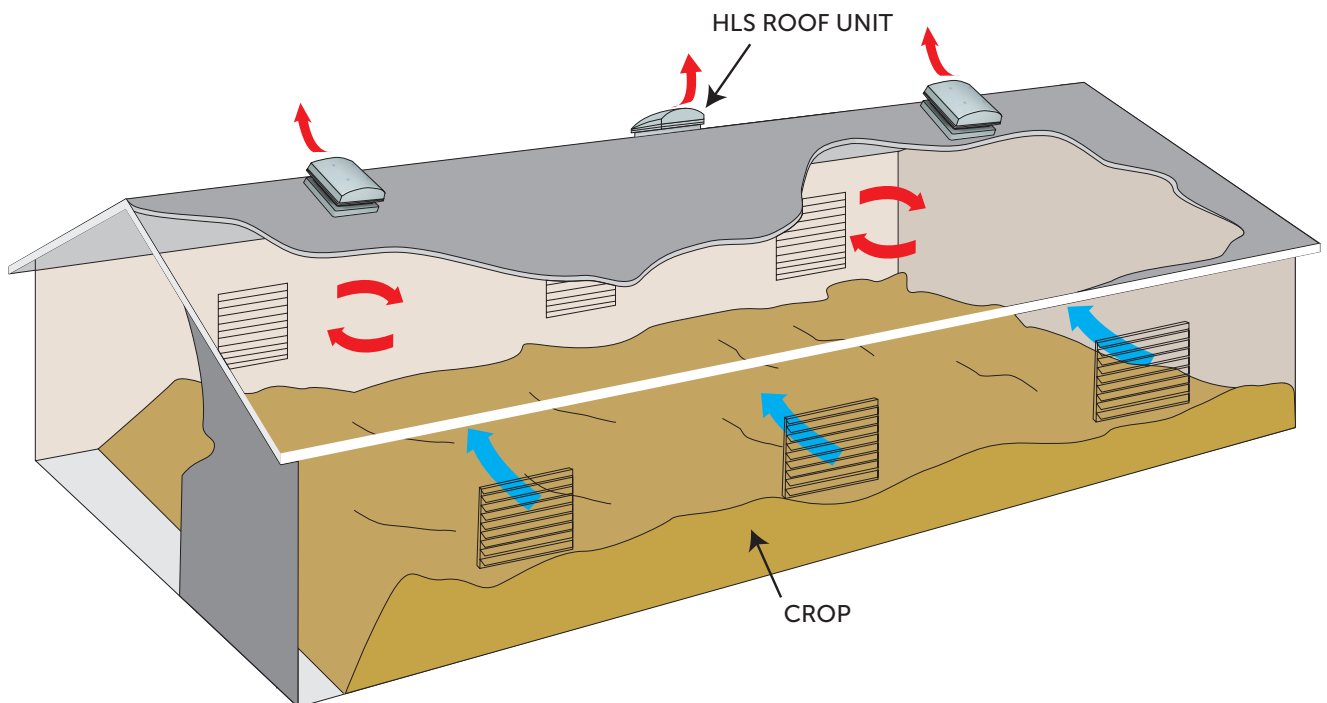
roof extract

Problem Humidity generated by the warmth in the crop (there is no artificial heating), causes condensation to form on the fittings and moisture drops back down resulting in germination or the crop condition deteriorating.

Solution In this situation the doors are kept closed, therefore it is necessary to introduce fans along the roof as well as inlet louvres along the side walls as illustrated below. Hydor HLS Low Silhouette Roof Units provide the answer alongside Hydor External Fixed Intake Weather Louvres with vermin mesh fitted in the walls. The air is drawn across the crop and exhausted through the roof, removing the condensation and moist air.

The back draught shutters fitted to the roof units prevent any unnecessary air movement.

A humidity sensor should be installed to ensure optimum operation of the fans.

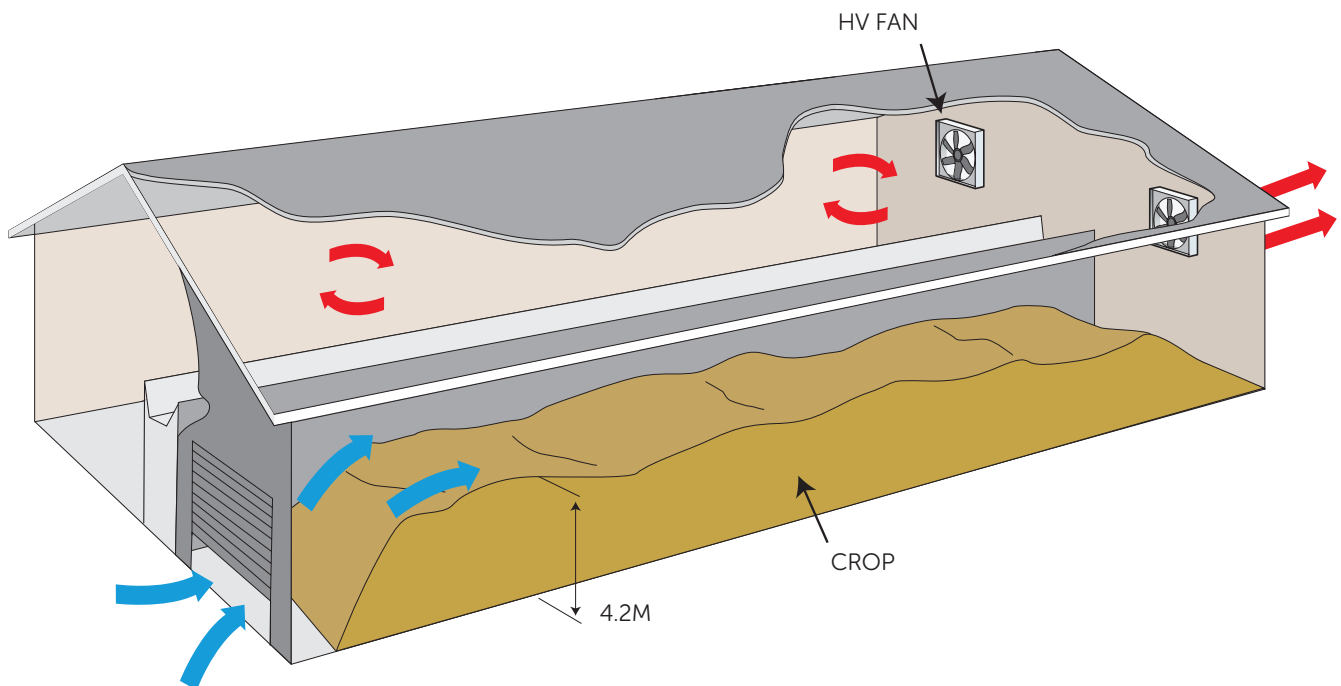


drying

Problem This situation is commonly found in stores housing root crop such as carrots and potatoes. Humid warm air collects in the ceiling void, forming condensation on fittings and causing moisture to drop back down onto the crop, resulting in germination or the crop condition deteriorating.

Solution In this situation the shutter doors provide the fresh air required by the extract fans. Air is drawn in at low level, passing over the crop and is extracted at high level by Hydor belt-driven HV fans positioned at the opposite end of the store, thereby removing the condensation. Any shutter doors at the fan end should be kept closed to prevent short circuiting of the air.

In situations where the doors are required to be kept shut, it is necessary to fit the same size and number of fans in the wall opposite the extract fans to supply fresh air into the building. The supply fans should be protected from the elements by Hydor HVMC Wall Cowls to prevent the ingress of rain. A humidity sensor should be installed to ensure optimum operation of the fans.



case study

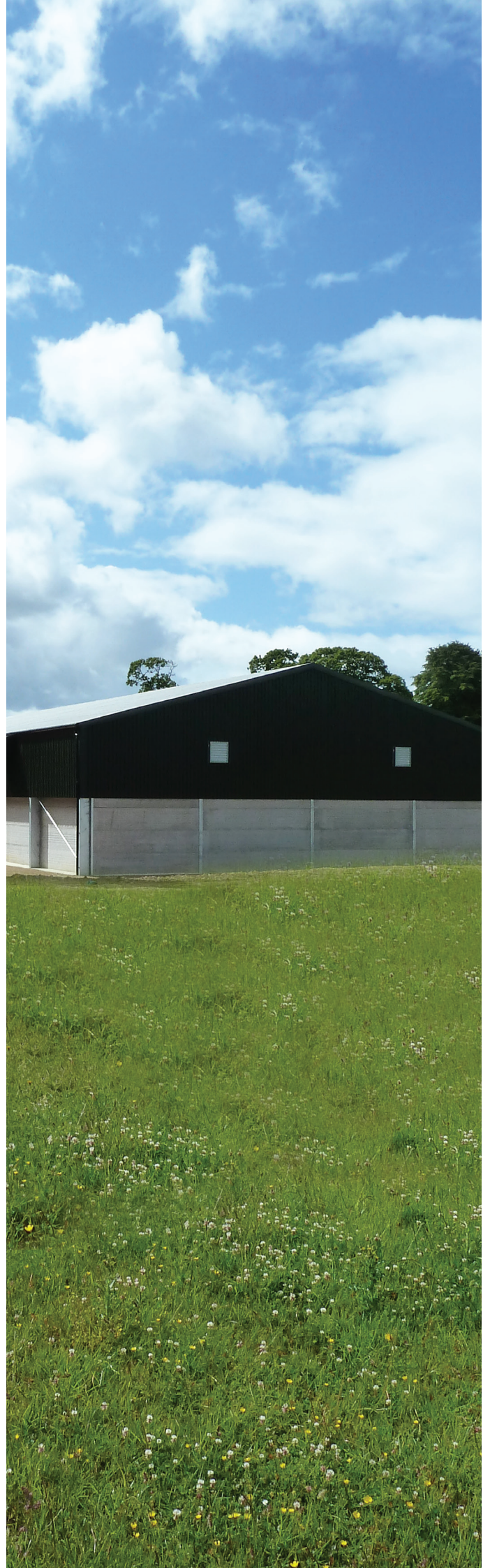
Clavering Place Farm near Saffron Walden has demonstrated the importance of adequate ventilation, to assist in the cooling and drying process following the installation of a series of Hydor HV belt drive fans.

To enable articulated lorries to enter and tip grain into a pile, which reaches 3.6 metres when full within the 4,000 tonne capacity store, the building has been constructed to a greater height than usual.

During the drying or cooling process, the moisture build up within the store was condensing on the underside of the roof and dropping onto the grain below. Two 30HP fans had been installed to blow air down the central passage and under the grain to assist drying and cooling. Farmer James Ballam realised inadequate ventilation was the problem and contacted Hydor.

The solution incorporated four HV1250 belt drive fans installed just above the highest point of the grain pile at a height of four metres. By locating the fans opposite the store's shutter doors, the ambient air required by the fans is achieved by lowering the doors to some two metres above the floor.

The extract fans then draw the air under the shutter doors and into the store, passing over the grain before being extracted through belt drive fans. The air changes that occur in the building effectively remove the moisture from the store.



clavering place farm, essex

The success of the solution was demonstrated when, as an experiment, the Hydor HV fans were left switched off overnight during the drying process. Condensation occurred again above the grain store, but within 20 minutes of activating the Hydor fans, it was completely cleared.

Other benefits include the energy conservation of the fans which are able to move large volumes of air (12 cubic metres per second) using only a small 1.1 kilowatt motor, with all of the power devoted to extracting the air due to a centrifugal clutch, which opens and holds the fan's backdraught dampers (unlike gravity shutters where a certain percentage of the power is required to hold the shutters open). These dampers also remove any need to install a weather cowl, reducing costs.

The fans are particularly effective in combating cold outside temperatures which increase the propensity for condensation problems.



“The installation of the Hydor belt drive fans has given us peace of mind. The fans perform extremely well by removing condensation. When you stand in the grain store, you can feel the air passing over you. We are very pleased.”

James Balaam

Clavering Place Farm, Essex

product selector

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

Minimum and maximum weights expressed based on fan diameter size range.



HTS Turbulator Recirculation Fan

pg 14

Product Code **HTS**

Airflow m³/s **1.27 - 2.86**

Impellers **Fixed Pitch, Glass, Reinforced polypropylene (4 blades)**

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

Ambient Operating Temperature **50°C**

Weight (kg) **13 - 29**



HV Belt Drive Fan

pg 16

Product Code **HV**

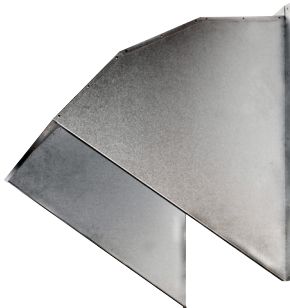
Airflow m³/s **Up to 20.13**

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**



HVWC Wall Cowl

pg 18

Product Code **HVWC**

Airflow m³/s **20.13**

Ambient Operating Temperature **50°C**

Weight (kg) **12-65**



HVWL Weather Louvre

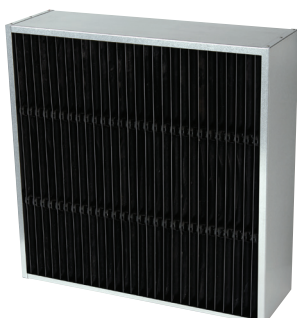
pg 19

Product Code **HWL**

Airflow m³/s **16.20**

Ambient Operating Temperature **50°C**

Weight (kg) **12.5 - 50**



HVLB Light Baffle

pg 20

Product Code **HVLB**

Airflow (m³/s) **1.4 - 16.2**

Construction **High quality light baffles suitable for all sizes of fan or inlets, with easy to assemble "snap action" interlocking vanes of PVC in a galvanised steel frame. Easy to assemble, install and clean. Low resistance.**

Dimensions (mm) **553 - 1930 sq x 250**



HLS Roof Cowl

pg 22

Product Code **HLS**

Airflow m³/s **4.07**

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

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

Ambient Operating Temperature **50°C**



HPFA Range

pg 24

Product Code **HPFA**

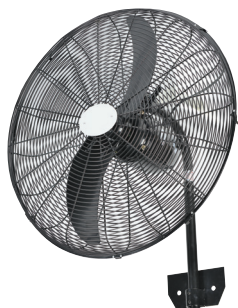
Airflow m³/s **3.83**

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

Motors **High performance motors**

Ambient Operating Temperature **45°C**

Weight (kg) **23**



HWFA Range

pg 25

Product Code **HWFA**

Airflow m³/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**



Bespoke & Standard Controllers

pg 26

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.**

conversions

volume

1 m³/hr = 0.00028 m³/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

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

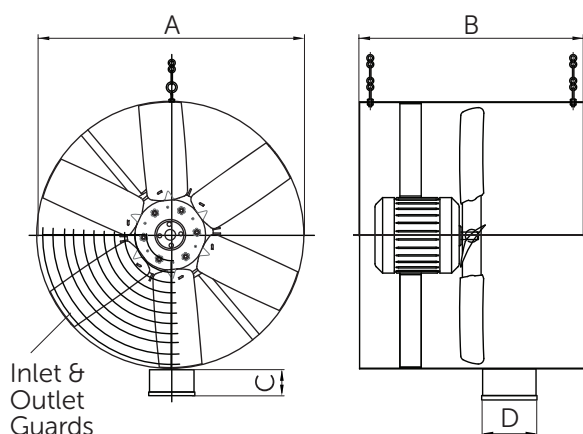
product information	Diameter (mm)	Speed (r/min)	Airflow (m ³ /s)	Throw (metres)	dBA @ 3m	Power (kW)	FLC (Amps)
HTS450	450	1360	1.31	23.4	64	0.545	2.31
HTS500	500	945	1.21	19.7	57	0.280	1.33
HTS630	630	945	2.34	22.5	64	0.721	3.15

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

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 20m³/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 ³ /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

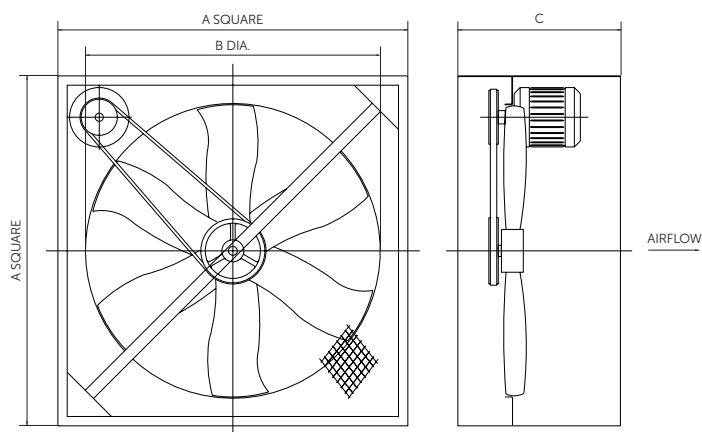
	Speed (r/min)	Airflow m ³ /s @ Static Pressure (Pa)						Power (kW)	FLC (Amps)	Start (Amps)	dBA @ 3m
		0	20	40	60	80	100				
HV800	630	4.588	4.091	3.589	2.840	-	-	0.75	2.0	5.9	58
HV1000	520	7.096	6.447	5.550	4.296	3.139	1.827	0.75	2.6	7.8	59
HV1250 (1.1kW)	400	11.002	9.578	8.030	6.190	4.028	-	1.1	2.9	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
protection

50°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

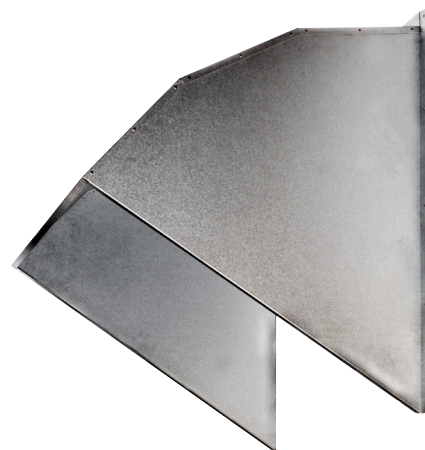
	1Ø 3 Step Speed Controller	1Ø DOL Starter	3Ø DOL Starter	Blackout Filter	HV Wall Cowl	Fixed Intake Weather Louvre with Guard		
						Mill	Paint	Watertight
HV800	FC0149-TC110HV	004828	003644	000295	HVWC800	003316	003320	004625
HV1000	FC0149-TC110HV	004828	004726	000301	HVWC1000	003317	003321	004626
HV1250 (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

HVWC Wall Cowl

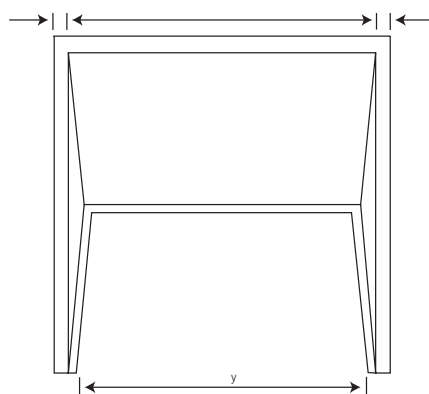
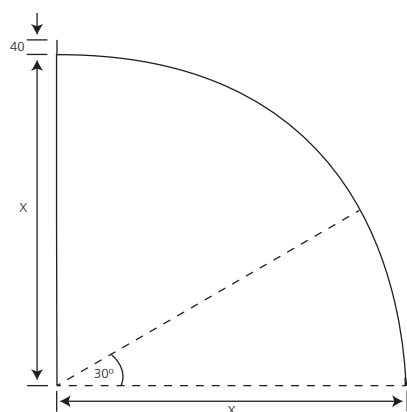
To protect fans, inlets and outlets from inclement weather and reduce external light ingress. Available in galvanised steel or Aluzinc. Dispatched in flat pack, to reduce volume and carriage costs. Can be nested to each other.

features and benefits

- Can be installed with HV Belt-driven fans or HXP High Efficiency Fans
- Can be installed with Air Inlet Louvres
- Reduces rain ingress, preventing damage to the fan motor
- Reduces wind effect, encouraging even temperatures and reduced noise levels
- Pre-galvanised sheet metal construction
- Units tapered to assist stacking and transportation
- Prevents birds entering when fitted with a mesh. Available as an optional extra



dimensional drawing



dimensions

	X - Wall Aperture	Y - Outlet
HVWC800	1000 x 1000	900 x 1000
HVWC1000	1200 x 1200	1100 x 1200
HVWC1250	1440 x 1440	1290 x 1440
HVWC2000	2000 x 2000	1700 x 2000

Wall Cowls can be supplied with bird mesh as an extra. Dimensions in mm.

HVWL Weather Louvre

To protect fans, inlets and outlets from inclement weather and reduce external light ingress.

The Louvre offers full control of incoming air flow, wind and various degrees of rain proofing (depending on blade spacing), whilst also providing an aesthetic external view.

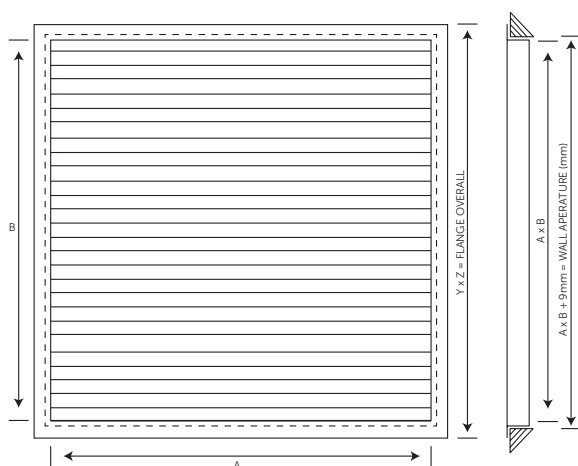
Bespoke milled aluminium finish, which can be powder coated to RAL colours, if required.



features and benefits

- Reduces light infiltration for more even light distribution overall
- Reduces rain ingress, preventing dampness
- Reduces wind effect, encouraging even temperatures and reduced noise levels
- Assists smooth airflow entering the building
- Provides optimum inlet area for airflow
- Includes bird guard

dimensional drawing



dimensions	A x B - Wall Aperture	Y x Z - Flange Overall	Weight (kg)
HVWL800	1000 x 1000	1087 x 1087	12.50
HVWL1000	1250 x 1250	1337 x 1337	16.54
HVWL1250	1400 x 1400	1487 x 1487	24.50
HVWL2000	2000 x 2000	2087 x 2087	50.00

Dimensions in mm.

HVLB Light Baffle

The control of light ingress in modern poultry farming is very important; The Hydor Light Baffle allows the elimination of external light ingress for greater control of the internal environment resulting in a reduction in sprouting and crop deterioration.

Whilst it is important that the general structure of the building is light proof, the requirement for introduction of fresh air and the extraction of hot, moisture laden air, remains paramount. Hydor light baffles are designed to fit wall mounted fan units, inlets, outlets and even roof mounted fan units to reduce the ingress of light. With the correct fitting of the light baffles, light on a bright sunny day, which can reach 150-170,000 lux can be reduced to 0.1-0.15 lux (virtual total darkness).



HV Fan and Light Baffle

The Hydor Light Baffle is attached to the internal side of the HV Belt Drive Fan unit for use in ventilated buildings. Removal of the fan unit internal guard reduces the restriction of airflow caused by the wire mesh and allows the baffle to be fitted without consideration of its increased resistance. Baffles are attached using over centre clips and retainers for easy installation and removal for cleaning. Dimensions (A square) are shown in the diagram above.

HLS Roof Mounted Fans

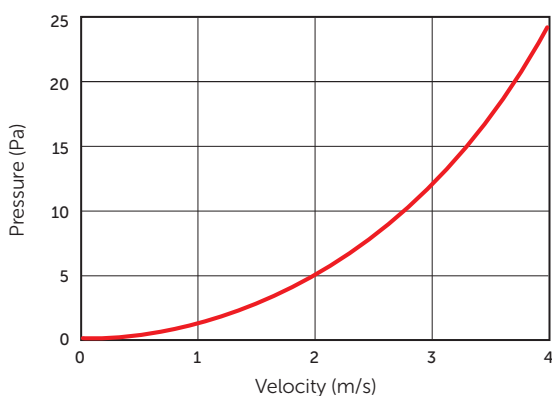
For roof extract ventilated buildings the Light Baffle is attached to the internal side of the HLS Roof Mounted Fan at the base of a short fan trunk, which will be necessary, connected by the over-centre clips and retainers. The additional resistance created by the light baffle must be taken into consideration when selecting the fans. To reduce the resistance caused by the light baffle, the size of the baffle area can be increased by a factor of 1.35 compared to standard size (as per the trunk sizing). Increasing the size reduces the air speed, which is critical to resistance. Hydor manufacture an optional Light Baffle to be fitted to the base, which reduces the resistance to below 20Pa.

light baffle cross section

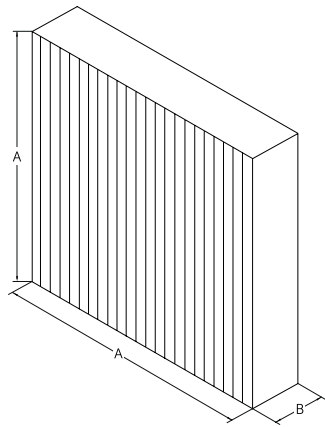


Dimensions in mm.

pressure drop curve



dimensional drawing



features and benefits

- The black, smooth faced, dull finished vanes are constructed from high quality PVC for longevity and resistance to wear and tear, sunlight and high pressure washers. Vanes are assembled vertically to allow for natural drainage and prevention of dirt build up, with no edges or ribs to block the air flow or trap dust
- Hydor light baffles are designed to suit all sizes of fan or inlet with an easy to assemble 'snap action' interlocking method of attaching vanes for trouble free installation and ease of cleaning. Baffles are suitable for high pressure air or water methods of cleaning
- The vane assembly is built into a galvanised steel frame for strength and reliability and facilitates easy fitting to fan units either internally or externally
- The aerodynamic shaped double curved vanes of the baffles allow air to pass through easily with minimal resistance whilst absorbing the light and decreasing its intensity. Vanes are set 25mm apart to give optimum light reduction and low resistance to air flow
- Due to the pressure drop or resistance, the resistance decreases as the size of the light baffle increases. This is because resistance (Pa) is directly proportional to the velocity² of the air passing across or through the obstruction
- The slower the speed of the air, the less resistance. This should be considered when adding baffles to fans and inlets. The graph opposite provides an indication of the pressure drop against air velocity

dimensions

	A	B
HV800	960	250
HV1000	1150	250
HV1250 (1.1 kW)	1380	250
HV1250 H (1.5 kW)	1380	250
HV1500	1495	250
HV2000	1930	250

Dimensions in mm.

HLS Roof Cowl

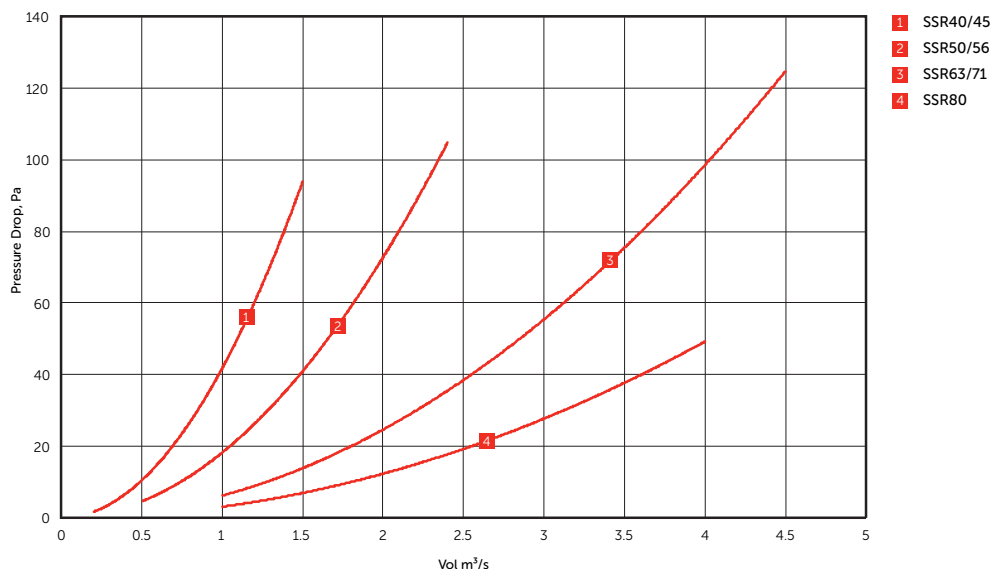
The Hydor Low Silhouette range of high performance roof cowls guarantee positive air movement independent of external climate. The low profile provides an attractive, yet unobtrusive appearance to any building.



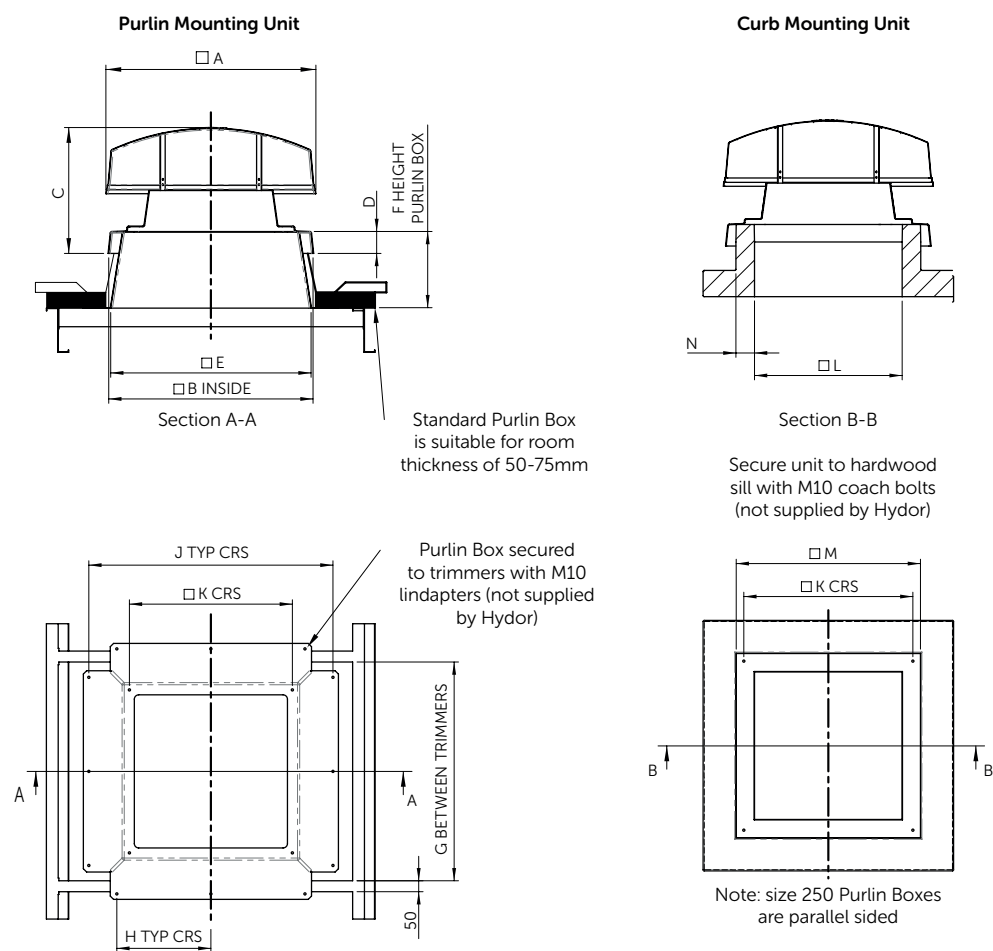
features and benefits

- Powered by highly efficient HXP propeller fan
- Manufactured from corrosion resistant glass fibre reinforced polyester
- Easy and straightforward installation
- Hard gloss UV stabilised gel coat finish is impervious to hostile weather conditions
- Low silhouette design provides attractive yet unobtrusive appearance to a building
- Low silhouette cowls supplied as Goose Wing Grey (BS 00A05) as standard, although units are available in any BS or RAL colour (at extra cost)
- Units suitable for curb or purlin mounting
- Available with a vast array of ancillaries to suit all applications
- The versatile design enables extract, supply or for use as a roof terminal only
- Ex-stock availability for the completed range
- All units are factory assembled
- Maintenance free

pressure drop curve



dimensional drawing



dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	Weight (kg)
HLS450	800	784	445	90	730	250	756	300	870	600	550	700	75	-	-	37
HLS500	960	934	510	100	860	250	886	350	1000	745	700	850	75	-	-	53
HLS550	960	934	510	100	860	250	886	350	1000	745	700	850	75	-	-	53
HLS630	1230	1054	590	105	1000	250	1026	435	1140	870	830	980	75	-	-	62
HLS710	1230	1054	590	105	1000	250	1026	435	1140	870	830	980	75	-	-	62
HLS800	1400	1174	670	100	1076	270	1076	470	1190	-	950	1100	75	406	990	64

Dimensions in mm.

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

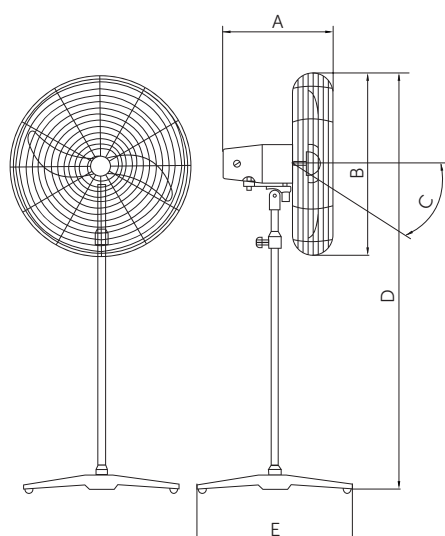
features and benefits

- 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 (m ³ /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

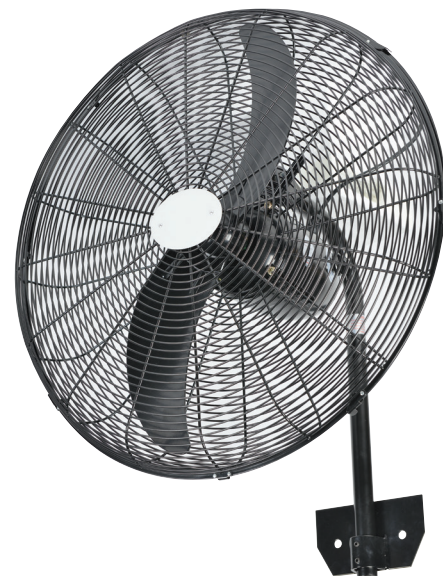
The Hydor HWFA Wall mounted air circulation fans are designed for use in a wide variety of horticultural applications.

Wall mounted units are highly suitable for mounting in personnel areas; where staff congregate.

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

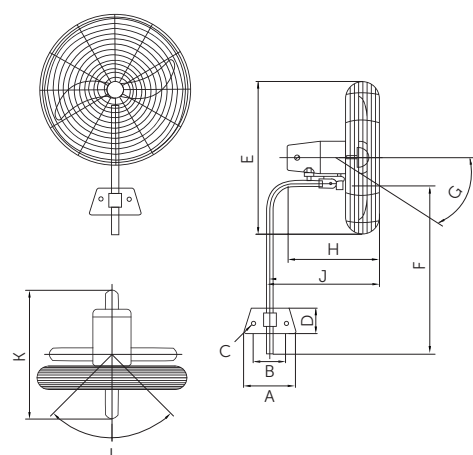
features and benefits

- 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 (m ³ /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

Bespoke & Standard Controllers

Thermostats

Hydor's range of mechanical thermostats are available as single, double or four stage units.

features and benefits

- These robust accurate units are ideal for the simpler or smaller installation
- Units are built into an IP54 rated enclosure
- Offering accurate switching in both heating and ventilation mode, with a range of 0 - 50°C
- Contacts are rated at 5 Amps and units are suitable for 200 - 240V / 1 / 50Hz supply



On / Off Start Unit

Hydor's range of starter units are available to switch all sizes of fans, both single and three phase versions.

features and benefits

- These robust accurate units are ideal for the simpler or smaller installation
- Units are built into an IP54 rated enclosure
- With built-in overload which can be accurately set to protect the fan against motor overload conditions
- Easily selected, large on and off buttons
- Available to suit 200 - 240 / 1 / 50Hz or 400 - 420 / 3 / 50Hz coil voltages



Humidistats

A range of Hydor's humistats are available to monitor the level of humidity in the store.

features and benefits

- These controllers offer the ability to switch units on or off automatically, as the humidity level varies
- Range of 30 to 100% RH
- Saving unnecessary energy usage



Time Clock

A range of time clocks are available from Hydor. These can be surface mounted stand alone units or built into a control panel, either with or without spring reserve to maintain continuous accurate time keeping in the event of a power failure.

features and benefits

- Using Hydor's time clock, fans can be switched on and off at a time set by the operator
- Reduces power wastage by eliminating unnecessary fan operating times



Bespoke Control Panels

Hydor's range of control panels for crop storage include models which control ventilation fans in conjunction with temperature and/or humidity variation. Hydor's range of panels are available to control all sizes of fans, both single and three phase versions.

features and benefits

- Robustly built in a metal enclosure for longevity
- Complete with mains isolator switch
- Each fan individually switched and electrically protected against overload
- Digital, easy to read and set thermostats and humidistats
- Fans are prevented from operating unnecessarily therefore reducing energy wastage
- Reliable and easy to install
- High versatile, available to suit 220 - 240 / 1 / 50Hz or 400 - 420 / 3 / 50Hz supply voltages
- Controls can incorporate control of inlets, lighting, grain augers etc, if required
- Capable of integrating with weighers



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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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