



hydor

poultry & game

After more than 50 years of creating the right environmental conditions for poultry producers, Hydor can boast a thing or two on ventilation systems and design.

Whatever the application; hatcheries, pullets, free range eggs, barn eggs, battery hens or the broiler industry, with intense and free range housing, Hydor will evaluate and develop the most effective solution for your project.

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introduction

Hydor can supply heating, ventilation and control solutions to cater to every aspect of a poultry producer's requirements.

As ventilation requirements change with the time of day, season, temperature, humidity, wind, animal age and density, Hydor's flexibility in matching client requirements enable poultry producers to enhance animal welfare, growth and feed conversion.





ventilation

Ventilation comes in various forms. The conventional powered systems with fans mounted in the roof, which draw air from the sides of the building, or the reverse flow systems with fans mounted in the side-wall and inlets in the roof. Houses can be ventilated longitudinally with tunnel ventilation, so that fans and inlets are in the opposite end walls, with the air being drawn along the house. Narrow houses can be cross ventilated with fans and inlets on opposite sides of the house. Houses can also be naturally ventilated or have combined natural and powered ventilation.

The poultry industry is very much driven by costs and efficiency of growth and production, particularly with energy and feed prices being so high. The environment of the stock has a significant impact on this equation and can influence the levels of profitability.

The environment's raw materials are as follows; **Air Quality, Heat / Temperature, Moisture Content, Light, Food and Water.**

Ventilation is very important in maintaining the correct environment and directly affects all of the aforementioned points, particularly in enclosed housing. The main objective of poultry ventilation is to maintain a natural fresh air condition, at an acceptable temperature to suit the age and type of stock housed.

Poultry, compared to other animals, have a high rate of respiration as they do not sweat so their only means of reducing body temperature is to breathe more, hence "panting" in hot temperatures. This therefore uses up the available oxygen quickly and releases large amounts of carbon dioxide, heat and moisture into the air. Poultry are very susceptible to respiratory problems and stale air in the house only heightens these problems, with airborne disease-carrying microorganisms becoming more concentrated in stale air.



key requirements

To meet the key requirements, a ventilation system should:

- Supply oxygen-laden fresh air
- Remove heat released during respiration and activity, and the solar gain through the structure (particularly in the summer)
- Remove moisture from the air (released during respiration or evaporating moisture in the droppings)
- Remove harmful gases (carbon dioxide released during breathing or ammonia evaporating from the droppings)
- Remove dust particles suspended in the air from the skin of the birds
- Dilute disease-causing microorganisms in the air

All of these affect the production cycle. If any of the factors do not meet the key requirements, it can result in the birds:

- Eating more to keep warm
- Drinking more to cool down
- Breathing faster and using up more energy
- "Bunching" which can lead to suffocation
- Being more vulnerable to disease, therefore increasing mortality rates

In the case of laying birds, particularly breeding stock, the light levels must be strictly controlled meaning light baffling is required which reduces the performance of the fans and must be considered when calculating the overall ventilation requirements.

conditions

All living things give off heat, and within certain limits, give off more total heat as the temperature falls and less total heat as the temperature rises. This is generally at a balance of about 23°C for poultry. With fully grown poultry, anything above this temperature will start to cause distress. Excessive temperatures can potentially be fatal for bird stock.

Maximum ventilation requirements are calculated to maintain an internal temperature at no more than 2.5°C above external temperatures. The provision of the correct amount of air may not be sufficient and some form of evaporative cooling may be required to supplement extreme conditions.

The speed and direction of the air flow is equally as important, if not more so. Correct placement of the fans relative to the inlets etc is very important, and when calculating the ventilation, one must consider the resistance created by the inlets, suspended items within the house and restrictions to a smooth air-flow. A normal back pressure encountered is on average between 25 and 40 Pascals.

The correct amount of air movement required is calculated on a rate to suit the stock based on weight and ambient conditions. With increasing temperatures in summer, these rates have been revised upwards to allow for these higher temperatures.

applications

Hydor are able to supply belt-driven fans, plate mounted fans, roof mounted fans, winches and heating and control and misting systems for all aspects of poultry ventilation.

Broilers are usually housed in large enclosed houses containing up to fifty or sixty thousand birds from one day old until maturity, depending on the specific weight requirement.

The birds live and sleep on the floor which is covered in wood shavings, chopped straw or any suitable absorbent materials. Birds are allowed to "roam freely" within the confines of the house and are totally dependent on the controlled environment i.e. heat, ventilation, light, feed and water. The droppings remain on the floor and are absorbed in the litter and evaporated by the ventilation.

Initially, when heat is being used to maintain a high temperature for the young birds, one or two fans are operated on an interval timed system to a minimum rate of air movement, to replenish oxygen levels. These rates are increased as stock grows and temperatures are reduced. Fans are generally switched on sequentially in four or more stages, by increasing numbers to maintain the temperatures required. A general rule for a twenty fan house being:

Stage 1: 2 Fans

Stage 2: 2 / 3 Fans

Stage 3: 5 Fans

Stage 4: 10 Fans



broiler houses

Broiler houses can be ventilated using several methods; Conventional, Reverse-Flow and Tunnel ventilation.

Heating and fans are interlocked with each other to prevent unnecessary cooling. The inlets are operated in conjunction with the fans, to maintain a set air speed and resistance. This will force the air to disperse in the intended manner. Particularly in winter time when air entering the house needs to be tempered with the internal air, so as not to chill the birds.

In high summer, misting evaporative cooling systems could be switched on to reduce temperatures. These should be carefully set to switch off when humidity levels rise too much or the stock could "drown".

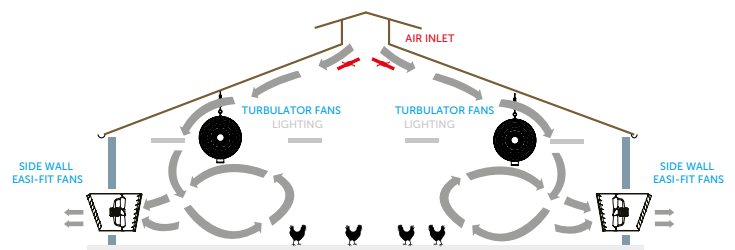
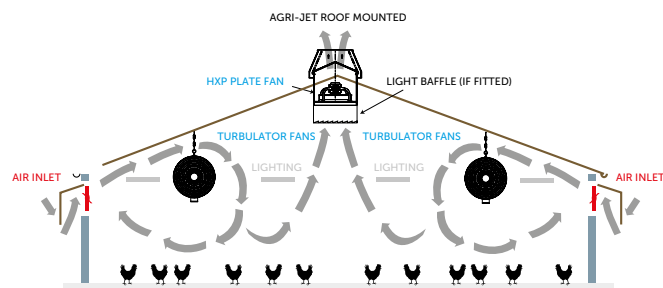
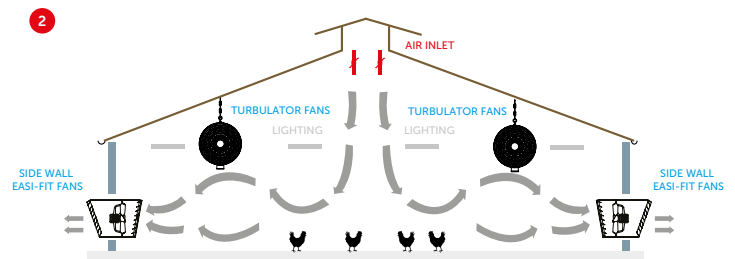
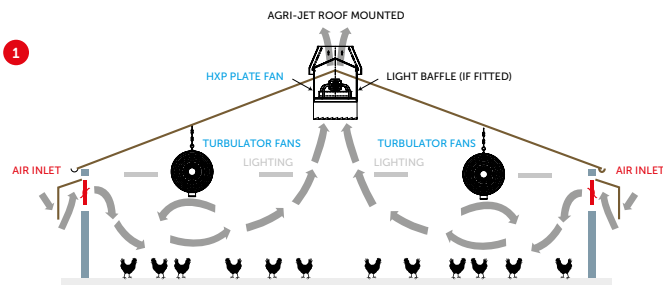
Please refer to the accompanying diagrams on this page for summer and winter conditions for both conventional and reverse-flow broiler house systems.

1 Conventional Ventilation

Here fans are mounted in the roof with inlets along the two side walls. The Hydor Agri-Jet unit has advantages for use in this application since it is easy to fit. It presents a low resistance to the fans when operating and expels the stale air vertically into the atmosphere. This eliminates dust falling on the roof sheeting, which could be washed down to the gutters and fouling the soil through the soak ways. This method is now favoured by Councils when submitting for planning permits etc.

2 Reverse-Flow Ventilation

Here fans are mounted in the side walls and inlets in the roof. The Hydor Side Wall Easi-Fit unit, is a complete fan unit to mount in the wall of the house, with internal shuttered door and external louvre outlet, to reduce the direct sunlight entering the house. Both of which can be easily removed for cleaning. Light-proofing modules can be fitted to both the Agri-Jet and the Side Wall Easi-Fit units.



applications

broiler houses

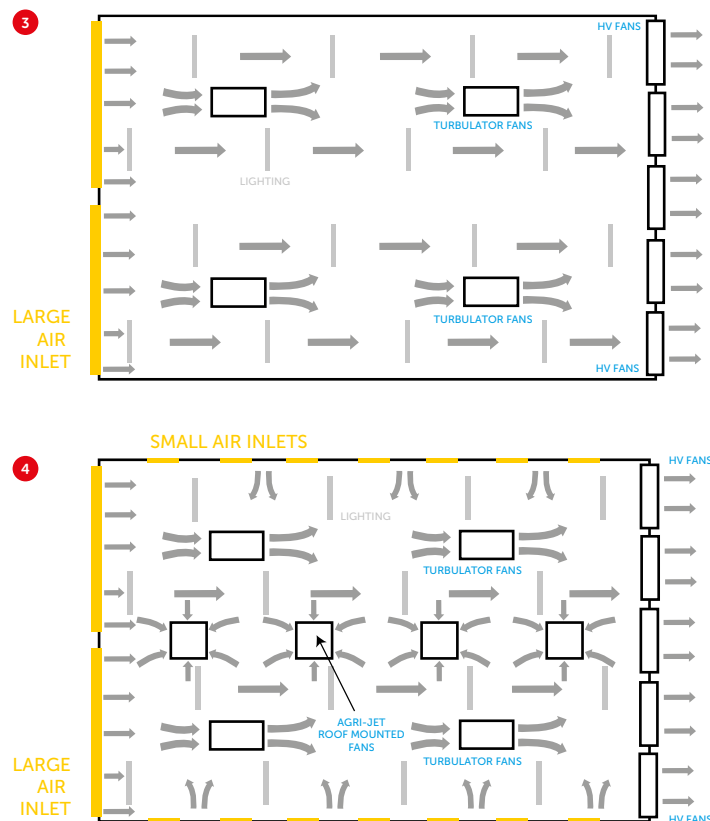
3 Tunnel Ventilation

In this system large belt-driven fans are installed in the wall at one end and inlets in the wall at the opposite end, allowing the air to be drawn along the length of the house.

Tunnel Ventilation uses large belt-driven fans which are mounted in the end walls. The air is drawn along the length of the house from the inlets situated the cold end, to as near bird height as possible. The disadvantage with this system is the possible temperature gradient along the house from one end to the other. With this in mind a combination of conventional and tunnel ventilation is used.

4 Combination Ventilation

In winter, the house with reduced numbers of fans operates normally. In summer, the fans are reversed and the tunnel fans are used in conjunction to increase the air flow across the birds. Warm air passing at speed across the body has a cooling effect by evaporating the sweat by ruffling the feathers.



laying birds

Laying birds are mostly kept in colony cages within large sheds holding up to 50,000 birds. These can be naturally ventilated with or without powered ventilation in the warmer weather. Increasingly, laying birds tend to be kept in free range houses or barn egg houses, which can also be naturally ventilated with or without power assistance.

The cage birds are kept inside continuously in multi-tiered batteries and rely solely on ventilation, lighting, feeding and water. Fans are mounted in the roof with side inlets and light baffles to reduce the light ingress. Some caged houses use tunnel ventilation, with the air drawn between and along the lines of cages, using belt-driven fans.

5 Naturally Ventilated Houses

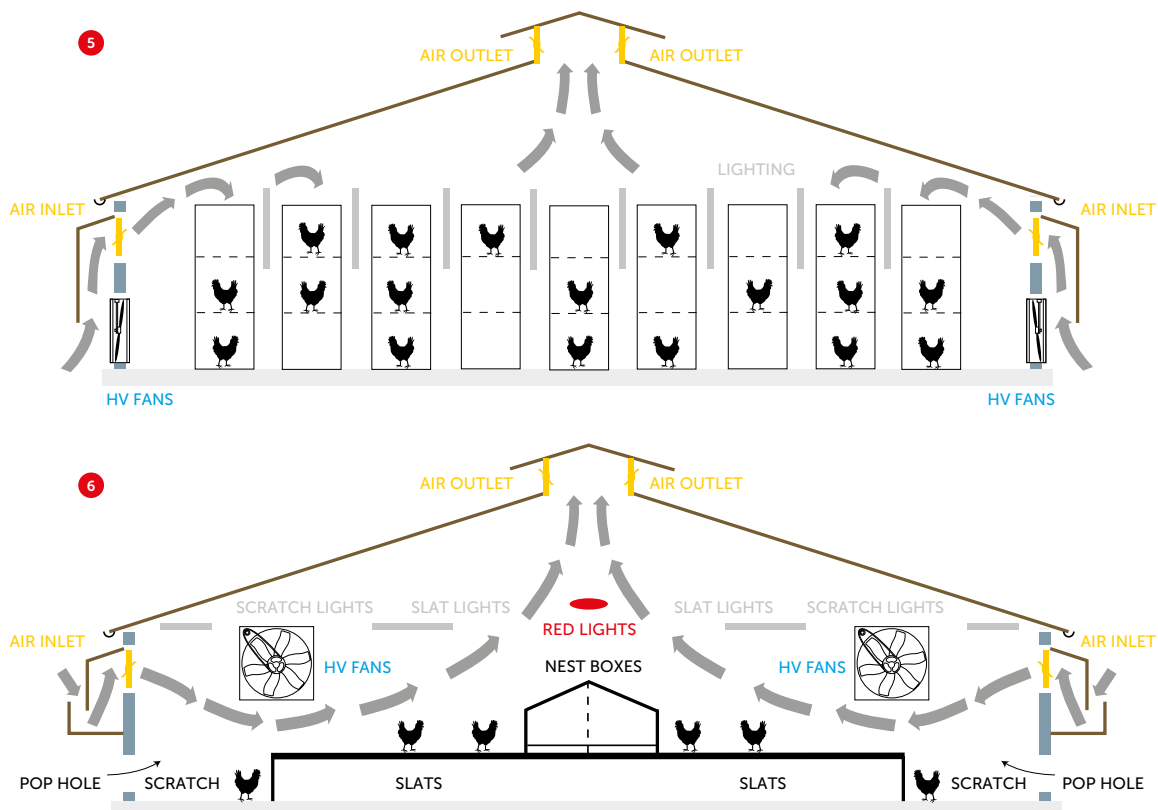
In naturally ventilated houses, the inlet vents at the sides and the outlet vents at the ridge are opened and closed in tandem, to maintain air movement and reduce temperature in four stages. Additional stages can bring in powered ventilation. All of these requirements can be controlled by Rotem control panels supplied by Hydor. Free range birds

are contained in houses with nest boxes in the centre of the house on top of a slatted area on both sides. This area is raised to allow droppings to fall and keep it comparatively clean, with an area at ground level for the birds to scratch. The birds are released to go outside for most of the day through "pop-holes" which are opened automatically by winches.

6 Additional Powered Ventilation

The houses that are normally naturally ventilated and contain no more than 16,000 birds, however in bright sunshine, when it is warm, the birds tend to come in out of the sun. Temperatures inside these houses therefore increase and additional powered ventilation in the form of belt-driven fans in the end wall or internal re-circulation fans to assist in air movement should be considered. Similar conditions prevail in barn egg houses as well.

Hydor are able to supply Roof Fans, Belt-driven Fans, Re-circulation Fans, Winches for both inlets and outlets and also for the pop-holes, as well as panels to control all of these requirements.



breeders



Breeding birds are kept in houses similar to broiler houses, although the houses are sub-divided to keep birds in manageable numbers for the Cocks.

Fans are used for either conventional or reverse-flow ventilation, but with light baffles fitted to both inlets and outlets as strict light control is essential. This adds resistance to the system and this must be considered in the initial calculations.

Breeders are normally given plenty of space and plenty of air, with occupancy levels much lower per square metre.

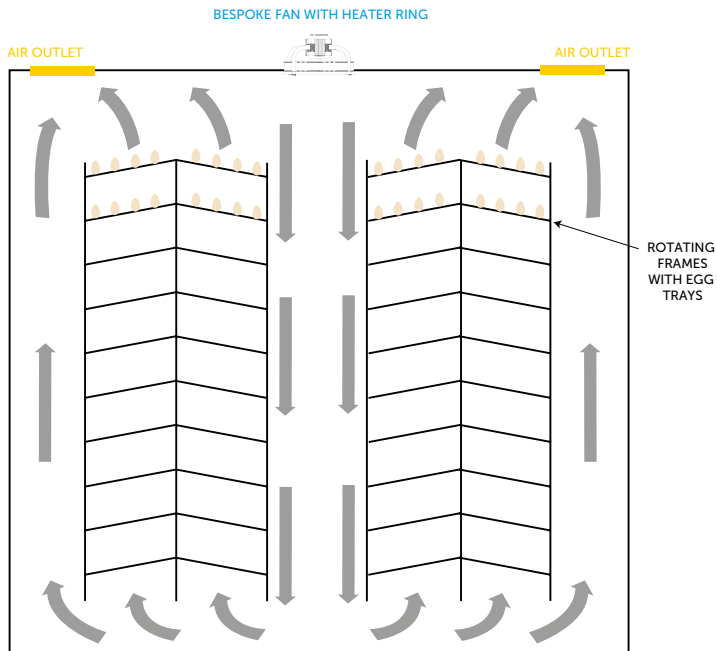
pullets



Pullets are usually grown in houses similar to broiler houses, with roof extract and side inlets, or side extract and roof inlets, and are dependent completely on heat, ventilation, light, feeding and water. Layout and air movements would be similar to Conventional or Reverse-flow Houses, but would require light proofing.

The birds come in at a day old, requiring temperatures of 32°C (88°F) reducing as they grow to 20°C (68 F) until they are moved at point of lay at approximately 16-18 weeks. During this time they will have grown to 1.1-1.4 kilograms (2.5 - 3.1 lbs).

hatcheries



Hydor has supplied fans for many years to incubator manufacturers to meet their requirements in this very exacting process, and are able to supply replacement fan units at any time.

free range broilers



Free range broilers are a growing market, becoming increasingly popular with the general public. The stock is contained in smaller units and they are free to roam at pre-determined times with access to the outside world through "pop holes". The house has a litter section for the birds to scratch and a raised slatted area where the droppings fall below, which gives the birds a "clean area" to rest.

These houses are normally naturally ventilated with some fan assistance provided in the form of roof or end mounted fans for high summer. Temperatures are controlled by opening and closing inlets in the side walls and outlets in the roof together, to give a variable air flow.

product selector

The product selector is designed to provide a simple overview of the products we offer for poultry 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 18

Product Code **HTS**

Airflow m³/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**



HXP Plate Fan

pg 20

Product Code **HXP**

Airflow m³/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 22

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**



HVLB Light Baffle

pg 24

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**



HXRU Roof Mounted Agri-Jet

pg 26

Product Code **HXRU**

Airflow (m³/s) **Up to 4.84**

Construction **Alu-Zinc and recycled plastic unit. Easy to install into roof.**

Complete with backdraught shutters. Vertical Jet discharge ensures clean roof.

Ambient Operating Temperature **50°C**

Weight (kg) **60 - 64**

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



HXRUS Agri-Jet Silent

Product Code **HXRUS**

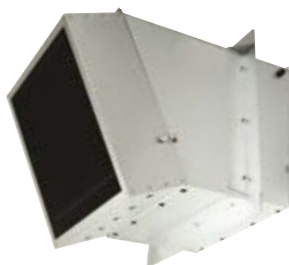
Airflow (m³/s) **Up to 4.84**

Construction **Alu-Zinc and recycled plastic unit. Easy to install into roof. Complete with backdraught shutters. Vertical Jet discharge ensures clean roof. Complies with IPPC regulations. Reduces sound levels by up to 14 dBA.**

Ambient Operating Temperature **50°C**

Weight (kg) **100 - 160**

pg 28



HXSU Side Wall Easi-Fit

Product Code **HXSU**

Airflow (m³/s) **Up to 4.84**

Construction **Alu-Zinc enclosure with HXP fan unit. Easily installed in prepared aperture with connection cable.**

Ambient Operating Temperature **50°C**

Weight (kg) **60 - 63**

pg 30



HRSBN Poultry Brooders

Product Code **HSRBN5 (DSI) & HSRBN9 (PI)**

Heat Capacity (Btu/hr) **40,900**

Construction **Spun Aluminium canopy, unique 60° 'Angled' stainless steel insulated emitter. Direct Spark or Pilot Ignition models available.**

Reflector Diameter (mm) **890**

pg 32



HDSF Destratification Fan

Product Code **HDSF**

Airflow (m³/s) **3.36**

Construction **Alu-Zinc enclosure with HXP fan unit. Easily suspended from internal ceiling.**

Ambient Operating Temperature **50°C**

Weight (kg) **34**

pg 33



HHWCH Hot Water Coil Heater

Product Code **HHWCH**

Construction **The radiator is constructed of cast iron which is hot dip galvanised after construction, with an aluzinc coated sheet steel body. Water connections on the radiator is 1" BSP flow and return. Supplied with 4 suspension eyes for hanging.**

pg 34

product selector

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

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



HRH Radiant Heater

pg 36

Product Code **HRH**

Heat Output (kW) **30.3 - 45.5**

Construction **Aluminium reflector and Calorised-Aluminium coated steel emitter tube. Infra-red heat. Various heat outputs. Protected to IP55 (waterproof). Economic to run.**

Dimensions (mm) **1000 - 16000**

Weight (kg) **62 - 96**



HAI High Flow Air Inlets

pg 38

Product Code **HAI**

Airflow (m³/s) **2900**

Construction **Polyurethane foam, highly resistant to chemicals Simple to install. Minimal resistance.**

Dimensions (mm) **842 x 305**

Weight (kg) **5 - 10**



Control Panels

pg 40

Description **High quality bespoke control panels designed to your requirements.**

Controls for; Ventilation, Lighting, Feeding, Inlet Controls. Simple single function controls to automatic multi-functional combined controls are available. All to the latest standards.



Rotem Controllers

pg 42

Description **Various computerised controls for maintaining and monitoring the environment inside poultry houses. Controls for; Ventilation, Heating, Cooling, Feeding, Lighting, Feed mixing, Weighing, Bird Weighing, Silo Monitoring, Alarm Systems and Data Recording.**



Bird Weighing

pg 44

Description **The Rotem Bird Weigher can save you hours each day by allowing your birds to weigh themselves.**

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 44

Feed Weighing

Description The Rotem Feed Weigher accurately mixes, weighs and records feed consumption.



pg 45

Lighting

Description A range of high frequency and digitally controlled fluorescent lights are available to IP67. Dimming to 1% light output. High efficiency, low running costs, easy to install. Quick return on capital investment.



pg 45

HFTD Lightsaber

Product Code HFTD

Construction Acrylic smash-proof outer tube, easy tube replacement, T5 digitally controlled inner tube for economy, 20,000 hours warranty, can be installed vertically or horizontally. Dimming to 1% light output, IP67.



pg 46

Evaporative Cooling System

Pump (L/hr) 760/1500

Description A multi-jet bespoke high pressure evaporative cooling system designed to suit various applications. Using micro-misting nozzles to eliminate droplets wetting the birds. Supplied through a 12mm pipe. Easy installation.

Nozzle Output (L/hr) 0.2 nozzle = 4 Litres/hr | 0.3 nozzle = 6 Litres/hr



pg 47

Winches

Product Code GW

Torque (Nm) 100 - 1350

Types Rack & Pinion, Chain Coupling, Drum

Motors Voltages 24V DC, 230/1/50, 415/3/50

Ambient Operating Temperature 40°C

Weight (kg) 23 - 38

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

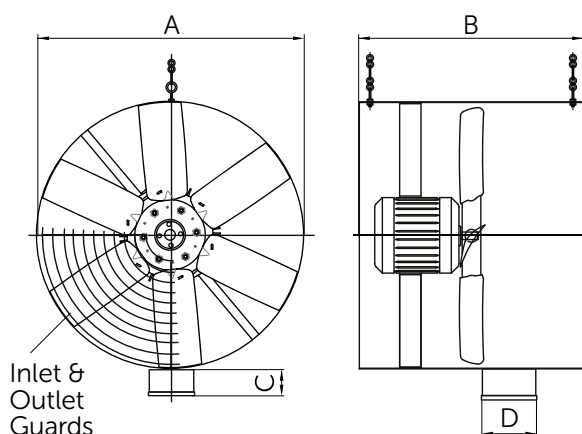
product information	Diameter (mm)	Speed (r/min)	Airflow (m ³ /s)	Throw (metres)	dBA @ 3m	Power (kW)	FLC (Amps)
HTS450	450	1360	1.31	23.4	64	0.545	2.31
HTS500	500	945	1.21	19.7	57	0.280	1.33
HTS630	630	945	2.34	22.5	64	0.721	3.15

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

HXP Plate Fan

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

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. A common component in many existing and new sheds, the standard HXP range is available from stock for swift delivery in both single phase and three phase variants. Cool running motors encased in aluminum prevent unwanted heat build up within the shed which can impact on the delicately controlled environment within.



SINGLE Phase

220V to 240V / 50Hz

	Speed (r/min)	Airflow m ³ /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

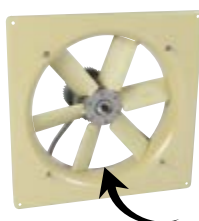
	Speed (r/min)	Airflow m ³ /s @ Static Pressure (Pa)						Overall Eff. %	FMEG	Input (kW)	FLC (Amps)	dBA @ 3m
		0	25	50	75	100	150					
HXP45043#	1435	1.850	1.754	1.647	1.526	1.387	1.037	36.3	N44	0.433	1.08	57
HXP45063#	945	1.276	1.111	0.904				29.5	N40	0.163	0.64	48
HXP50043#	1372	2.701	2.569	2.431	2.281	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



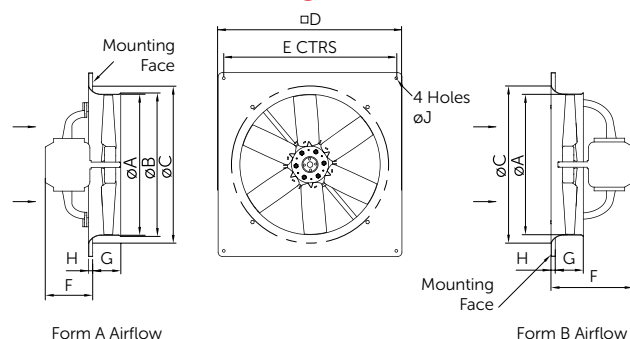
B airflow



IP55
protection

70°C
temperature

dimensional drawing



features and benefits

- 6 sizes from 450mm to 800mm diameter
- Robust construction incorporating GRP aerofoil impeller
- High volume air movement
- Optional motor / propeller side guards
- ErP compliant
- Quick and easy installation
- Two year extended warranty available on motors
- Cool-running motors constructed with a finned aluminium casing to give excellent heat dissipation and increased lifecycle

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 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

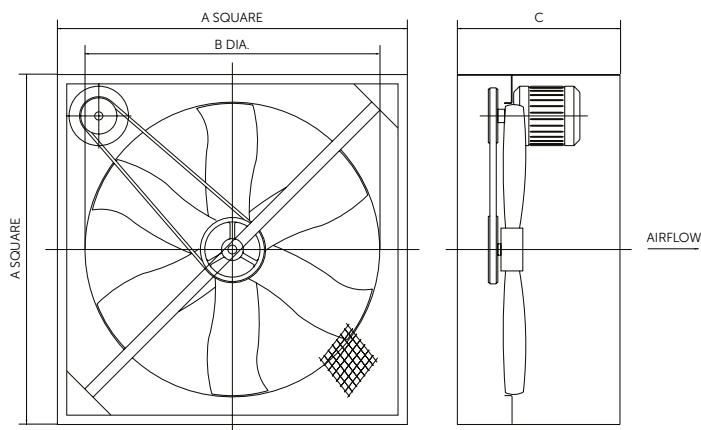
	Speed (r/min)	Airflow m ³ /s @ Static Pressure (Pa)						Power (kW)	FLC (Amps)	Start (Amps)	dBA @ 3m
		0	20	40	60	80	100				
HV800	630	4.588	4.091	3.589	2.840	-	-	0.75	2.0	5.9	58
HV1000	520	7.096	6.447	5.550	4.296	3.139	1.827	0.75	2.6	7.8	59
HV1250 (1.1kW)	400	11.002	9.578	8.030	6.190	4.028	-	1.1	2.9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

HVLB Light Baffle

The control of light ingress in modern poultry farming is very important; Hydor's Light Baffles allow the farmer to achieve the exact light conditions required to assist in meeting production targets.

Light levels are of particular importance within pullet houses where correct control of light intensity and duration must be precisely controlled to make it possible for the breeder birds to reach maturity at the optimum time to stimulate egg production.

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 stale, dirty air remains paramount. Hydor light baffles are designed to fit to inlets, outlets and wall and roof mounted fan units to reduce the ingress of light in tunnel, reverse-flow, cross-flow and roof extract ventilated buildings.

With 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 (virtually 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 tunnel ventilated buildings. Removal of the fan units 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.

Agri-Jet and Light Baffle

For roof extract ventilated buildings the Light Baffle is attached to the internal side of the Agri-Jet unit at the base of the fan trunk, connected by over-centre clips and retainers. The additional resistance created by the light baffles 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 the 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 of the Agri-Jet, which reduces the resistance to below 20Pa.

Reverse-Flow Ventilation

Hydor Light Baffles are fitted to the external side of the Side Wall Easi-Fit units. The external chevron unit is removed and the Light Baffle fitted in its place using the existing retainers and the over centre clips fitted to the baffle. Due to the angular nature of the discarded chevron unit and the smooth aerodynamic vanes of the new light baffle the additional resistance can be ignored. Light Baffles should also be fitted to the roof air inlets if necessary.

Cross-Flow Ventilation

Light Baffles are fitted externally to each inlet. In order to accurately calculate the resistance to the system, the maximum air speed passing through and the size of the inlet must be known.

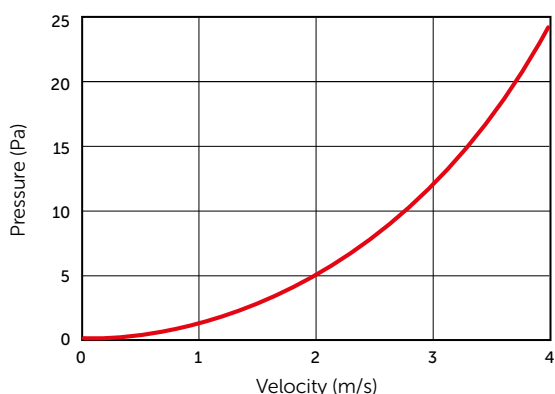
Most systems will have been installed using low resistances as the inlets are open and unimpeded to the airflow. However if higher pressures are being used by restricting the airflow through the inlet, the additional resistance for the baffle may increase the static pressure above the normal working pressure of the fans being used.

light baffle cross section

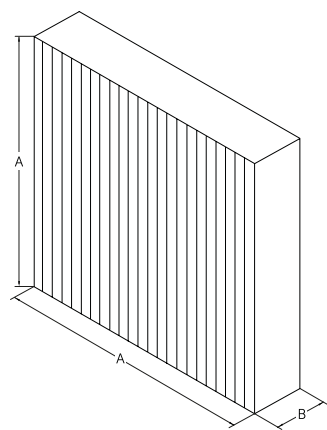


Dimensions in mm.

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.

HXRU Roof Mounted Agri-Jet

The Agri-Jet roof mounted unit is a high velocity jet extraction unit for on or off-ridge installations.

The design of the inlet ensures that it operates at high efficiency by maximising air flow and operating at low back pressure which minimises operating costs. Stale air is expelled through the cowl to a height of approximately 60 feet, ensuring that any dust, moisture, ammonia and smells are dissipated as they leave the building.



SINGLE Phase

220V to 240V / 50Hz

	Speed (r/min)	Airflow SFP	Airflow m ³ /s @ Static Pressure (Pa)				Electrical Data		dBA @ 3m	
			0	25	50	75	FLC	Input kW		
HXRU63061	924	m ³ /s	2.871	2.694	2.468	2.181	3.70	0.769	Inlet	60 dBA
		W/(L/s)	0.23	0.25	0.29	0.35			Outlet	59 dBA
HXRU71061	913	m ³ /s	3.322	2.989	2.494	-	5.30	0.805	Inlet	61 dBA
		W/(L/s)	0.24	0.27	0.32	-			Outlet	60 dBA
HXRU80061	914	m ³ /s	4.391	3.944	3.467	2.848	5.30	1.173	Inlet	59 dBA
		W/(L/s)	0.27	0.29	0.32	0.39			Outlet	58 dBA

Agri-jet assembly is out of the scope of 1253/2014 legislation. FLC Amps @ 230V / 1Ph / 50Hz.

THREE Phase

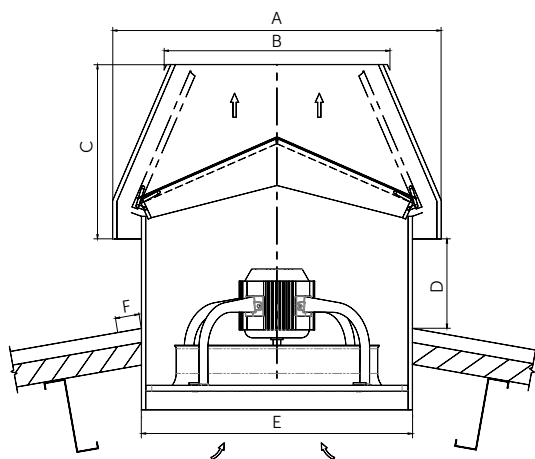
380V to 415V / 50Hz

	Speed (r/min)	Airflow SFP	Airflow m ³ /s @ Static Pressure (Pa)				Electrical Data		dBA @ 3m	
			0	25	50	75	FLC	Input kW		
HXRU63063	912	m ³ /s	2.841	2.529	2.130	-	1.70	0.583	Inlet	60 dBA
		W/(L/s)	0.20	0.23	0.27	-			Outlet	59 dBA
HXRU71063	862	m ³ /s	3.721	3.332	2.808	-	1.70	0.689	Inlet	61 dBA
		W/(L/s)	0.22	0.25	0.30	-			Outlet	60 dBA
HXRU80063	896	m ³ /s	4.107	3.694	3.205	2.527	2.10	0.860	Inlet	56 dBA
		W/(L/s)	0.20	0.23	0.26	0.33			Outlet	55 dBA

Agri-jet assembly is out of the scope of 1253/2014 legislation. FLC Amps @ 400V / 3Ph / 50Hz.

Please contact us for full technical data.

dimensional drawing



features and benefits

- 3 sizes 630mm - 800mm
- High efficiency fan easily accessible for cleaning and maintenance
- Minimal back pressure ensures maximum fan efficiency
- High velocity exhaust jet of approximately 60 feet ensures no roof dust deposit
- Plastic thermal barrier trunk reduces noise levels and in-house condensation
- Supplied as ready-assembled units for on-ridge or off-ridge installation
- Low silhouette design provides tidy and unobtrusive appearance
- Roof mounted units can be opened using an optional cable system as a fail safe contingency
- Agri-Jet top sections can be coloured to suit local planning requirements

dimensions

	A	B	C	D	E	F
HXRU630	900	421	509	193	805	300
HXRU710	941	454	543	199	847	300
HXRU800	1067	503	603	197	971	300

Dimensions in mm.

accessories

- Propeller Side Guards are available for low mounted applications
- Removable Light Baffle boards for eliminating light
- Agri-Jet top section units are available to mount over existing trunks, giving increased air output

HXRUS Agri-Jet Silent

Hydor have developed a version of their renowned Agri-Jet specifically to address stringent noise emission legislation where installations are in proximity to residential buildings.

The Agri-Jet Silent roof mounted unit is a high velocity jet extraction unit for on or off ridge installations. The design of the inlet ensures that it operates at high efficiency by maximising air flow and operating at low back-pressure, therefore minimising operating cost. Stale air is expelled through the cowl to a height of approximately 60 feet, ensuring that any dust, moisture, ammonia and smells are dissipated as they leave the building.



SINGLE Phase

220V to 240V / 50Hz

	Speed (r/min)	Airflow m ³ /s @ Static Pressure (Pa)						Overall Eff. %	FMEG	Input (kW)	FLC (Amps)	dBA @ 3m
		0	25	50	75	100	150					
HXRUS630	924	3.365	3.163	2.934	2.677	2.355		37.0	N44	0.654	3.12	52
HXRUS710	913	3.982	3.675	3.294	2.784			32.6	N40	0.663	3.11	59
HXRUS800	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

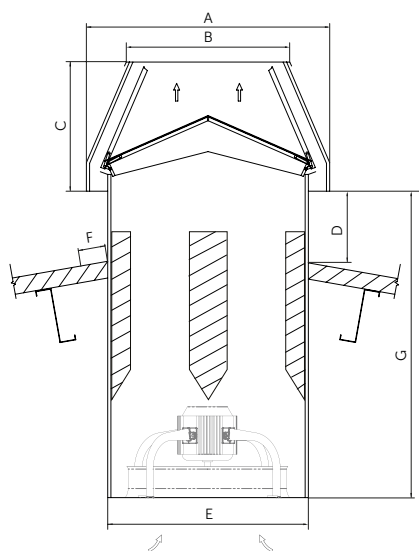
380V to 415V / 50Hz

	Speed (r/min)	Airflow m ³ /s @ Static Pressure (Pa)						Overall Eff. %	FMEG	Input (kW)	FLC (Amps)	dBA @ 3m
		0	25	50	75	100	150					
HXRUS630	688	2.233	1.826	1.296				29.7	N40	0.222	0.77	46
HXRUS710	862	4.498	4.138	3.678	3.117			35.4	N42	0.689	1.41	58
HXRUS800	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.

Please contact us for full technical data.

dimensional drawing



features and benefits

- The additional attenuator allows for a lower discharge sound spectrum to be generated to meet planning authorities criteria
- A cushioned rubber edging minimises noise when outlet shutter blades fall into the closed position. Blades are inter-linked to eliminate lifting in cross winds and the associated noise this can generate
- Enhanced airflow generated by the high efficiency fan coupled with low back pressure resistance means minimal operating costs
- Low silhouette design provides tidy and unobtrusive appearance
- Supplied as ready assembled units for either on or off-ridge installations, the units are simple and cost effective to install compared to circular vertical discharge units
- Easy internal access for cleaning and maintenance
- Agri-Jet top sections can be coloured to suit local planning requirements

dimensions

	A	B	C	D	E	F*	G
HXRUS630	900	421	509	193	805	300	1750
HXRUS710	941	454	543	199	847	300	1750
HXRUS800	1067	503	603	197	971	300	1750

Dimensions in mm. *Weather skirt.

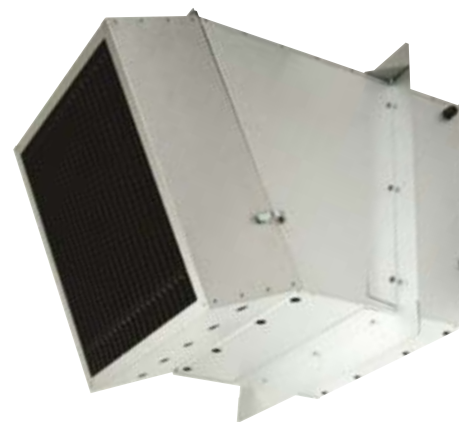
accessories

- Propeller Side Guards are available for low mounted applications
- Removable Light Baffle boards for eliminating light

HSU Side Wall Easi-Fit

The Side Wall Easi-Fit ventilation unit is a high velocity exhaust fan unit for side wall installation. It has been specifically designed for ease of installation on site, increased service life and outstanding performance for poultry houses.

Each unit extracts air at high velocity, deflecting it outwards and downward to throw unclean air away from the building. This reduces the amount of dust deposit around the fan and in turn removes problems of smell, unsightliness, pollution and consequent damage to cladding materials.



SINGLE Phase

220V to 240V / 50Hz

	Speed (r/min)	Airflow m ³ /s @ Static Pressure (Pa)						Overall Eff. %	FMEG	Input (kW)	FLC (Amps)	dBA @ 3m
		0	25	50	75	100	150					
HSU450	1347	1.833	1.725	1.581	1.421	1.256		32.1	N40	0.416	1.91	54
HSU500	954	1.623	1.463	1.257	0.941			35.0	N45	0.206	0.91	45
HSU630	924	3.365	3.163	2.934	2.677	2.355		37.0	N44	0.654	3.12	52
HSU710	913	3.982	3.675	3.294	2.784			32.6	N40	0.663	3.11	59
HSU800	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

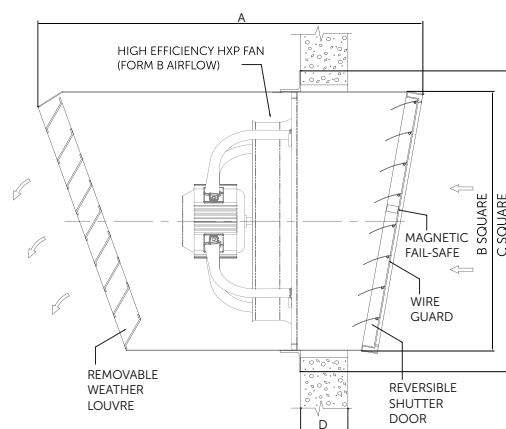
380V to 415V / 50Hz

	Speed (r/min)	Airflow m ³ /s @ Static Pressure (Pa)						Overall Eff. %	FMEG	Input (kW)	FLC (Amps)	dBA @ 3m
		0	25	50	75	100	150					
HSU450	1435	1.850	1.754	1.647	1.526	1.387	1.037	36.3	N44	0.433	1.08	57
HSU500	1322	3.344	3.175	2.996	2.810	2.614	2.134	35.6	N42	0.916	1.60	57
HSU630	872	2.254	1.985	1.689				31.5	N41	0.294	0.74	46
HSU710	862	4.498	4.138	3.678	3.117			35.4	N42	0.689	1.41	58
HSU800	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 @ 230V / 1Ph / 50Hz. # Add A or B for airflow when ordering.

Please contact us for full technical data.

dimensional drawing



features and benefits

- 6 sizes 450mm - 800mm
- High efficiency fan with bell mouth ring
- High velocity of exhausted air angled to 30° disperses dust
- Low back pressure for maximum efficiency and low noise levels
- Easily removable external weather chevron module for ease of cleaning
- Manually reversible shutter door complete with wire guard (optional)
- Electrically switched fan reversal option
- Supplied ready-assembled and easily fitted into prepared apertures
- Slimline profile design for minimum in house projection

dimensions	A	B	C	D
HSU450	828	575	714	100
HSU500	840	655	755	100
HSU560	870	725	825	100
HSU630	900	805	866	100
HSU710	956	847	955	100
HSU800	1070	971	1025	100

Dimensions in mm.

accessories

- Custom built control panels are designed and built to order and conform to IEE regulations (further details are available on request)
- Optional Plastic slide-in brooder panels are available on request
- HVLB Light Baffle

HRSBN Poultry Brooders

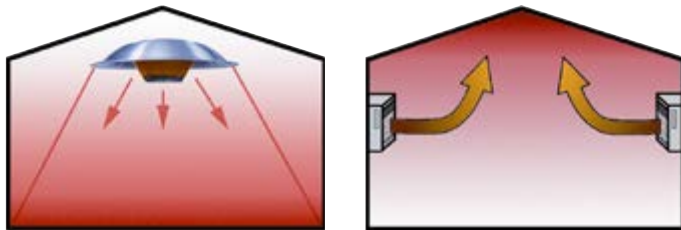
Hydor's range of direct spark and pilot ignition radiant heaters have been specifically designed to provide an efficient and cost saving heating method for poultry farms.

Whilst there is a particular emphasis upon commercial rearing of broilers, pullets and other birds, ignition brooders are equally suited for smaller domestic poultry applications.

Radiant Heat vs Forced Air

Hydor's Poultry Brooders use radiant heaters which are designed to warm the bird directly. The benefit of radiant heat, as shown in the diagram below, is that radiant heaters are designed to direct the heat where it is needed most-directly at the birds.

Radiant heat helps keep the litter area dry and warms the birds directly to save fuel. Whole house heaters force the heated air to the upper areas of the house first, then to the floor area.



Direct Spark Ignition Brooder pictured.

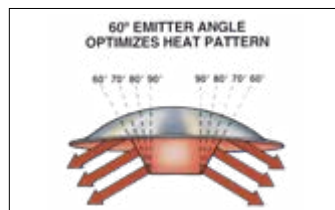
features & benefits

- Heating capacity of 40,900 Btu/hr (12kW)
- Save fuel with Direct Spark Ignition (DSI) version - saving up to 22 litres of LPG every 24 hours per 14 Brooder houses
- Unique 60° 'angled' stainless steel insulated emitter- Larger Surface Area efficiently delivers heat directly to the birds
- Enclosed Insulation will not crumble or distort
- The Pilot Ignition (PI) version benefits from a low maintenance pilot assembly
- Unique 'Quick Adjust', 'Low Profile' hanging bracket raises the brooder closer to the roof when not in use
- 'Spun' Aluminium canopy- maximises downward heat effect

product information

	Average No. of Birds					Input Rating (kW)	Mounting Height (mm)	Brooder Spacing max. (m)	Reflector Dia. (mm)
	Broilers	Pullets	Pheasants	Ducks	Turkeys				
HSRBN5 (DSI) & HRSBN9 (PI)	2000 - 3000	1500 - 2000	1500 - 2000	750 - 1000	750 - 1000	12	1520 - 1830	12.2	890
	Brooder Height (mm)	Brooder Weight (kg)	Gas Consumption p/hr		Min. Clearance to Combustibles (mm)			Ventilation Requirement (m³/hr)	Electrical Supply
			Propane (GPH)	Natural (Therm)	Side	Below	Top		
HSRBN5 (DSI) & HRSBN9 (PI)	460	12.0	0.43	0.40	915	1220	460	285	24 VAC 1Ph 50Hz 0.5A

DSI Direct Spark Ignition PI Pilot Ignition Brooder



60° Emitter Angle Optimises Heat Pattern



Maintenance Friendly



Patented Windbuster™ Pilot (PI version only)



Enclosed Emitter Assembly

HDSF Destratification Fan

15%
fuel saving

Hydor's Destratification Fans are installed in the ceiling space to redistribute warm air towards floor level, where it's needed most.

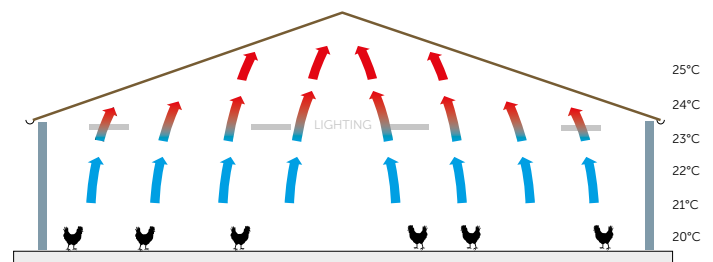
Warm heated air rises to the highest point of an enclosed area, thereby causing cooler air to reside at floor level. Traditionally temperatures have been maintained at floor level by continued and pro-longed use of heaters to saturate the entire building with heat. This results in much higher fuel consumption and relative energy expenditure.



7 Without Destratification Fans

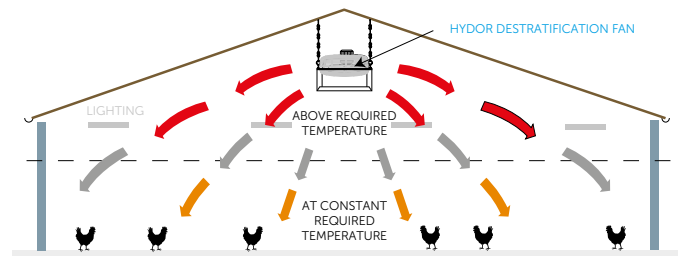
Without the Destratification fans installed, heat rises from floor level and collects in the ceiling void. In a well ventilated poultry building the difference in temperature levels can be as much as 5°C.

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



8 With Destratification Fans

With Hydor Destratification fans installed in the ceiling space, the accumulated warm air is redistributed down towards floor level and re-circulated around the building. This operation creates a more even temperature around the housing and allows the floor level temperature to be sustained for a longer period of time 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 shed reliant solely on heaters recorded considerable fluctuations in temperature which is unsuitable for the wellbeing of the birds.

The Hydor Destratification Fan incorporates the renowned Hydor HXP Fan, one of the most efficient fans available on the market. With a heavy duty construction, the fans are robust for arduous environments. The units include both motor-side and propeller-side guards for safety. Suspension eyelets are fitted as standard.

With the installation of Hydor Destratification Fans the litter in poultry houses is notably drier, alleviating the problems incurred with frequent wet litter. Improved air quality with reduced levels of ammonia result in an improved crop of birds and greater profit potential.

A Destratification Fan Study* carried out for Hydor Ltd by Farm Energy showed:

- Improvements in air temperature distribution
- Reduced gas consumption when fans were operating, resulting in a 15% heating fuel saving
- A saving of over £1,000 in heater running costs (cost of running approx £1.50 per day)
- Reduced heat losses of the building through the structure and air leakage
- Better growth rate and feed conversion as a result

HHWCH Hot Water Coil Heater

The Hydor Galvanised Hot Water Coil Heater has been specifically developed to work in Poultry Units, with hot water biomass boilers or gas/oil fired boilers.

heater unit

Hot Water Coil Heaters consist of a hot water radiator, arranged horizontally, into which the flow of hot water is controlled with a variable valve. The heaters are designed to be hung from the roof in the middle of the house under the ridge. These units are designed for purpose with a variable speed fan to blow air downwards through the coil to an air deflector/diffuser that directs hot air down and out to spread evenly across the width of the house (variable angles to suit roof pitch). A floor standing, horizontal version is also available.



control unit

Essential to the effective operation of the heating system, the control unit developed by Hydor enables 3 modes of operation. It achieves this by controlling a variable water valve that varies the quantity of hot water delivered to the heater. Additionally, it varies the speed of the fan using an inverter frequency drive.

temperature control

The control unit for the heaters can be easily integrated with any thermostat/climate computer already present in the chicken house. Hydor can bespoke make the control unit providing all 3 functions to work with any thermostat. Alternatively a new thermostat can be supplied, built into the control unit.

construction

The radiator is constructed of cast iron which is hot dip galvanised after construction. The body of the heater unit is made of aluzinc coated sheet steel. Water connections on the radiator are 1" BSP flow and return. The fan is a Hydor HXP 630mm, 940rpm, IP55 fan, for 3 phase 230V connection to a 230V inverter frequency drive. The heater is supplied with 4 suspension eyes for hanging with chain/wire rope.

modes of operation

Each unit has 3 modes of operation:

Destrat Fan Mode

The fan switched on and running at the set speed, with no water flowing.

Providing a heat recovery destratification function; blowing the hotter air in the roof space back down to the floor, resulting in a lower heat energy requirement.

Trickle Heat Mode

Heater providing a trickle heat. The amount of heat provided in this mode is set and adjustable on dials, for both the opening of the variable valve and the speed of the fan.

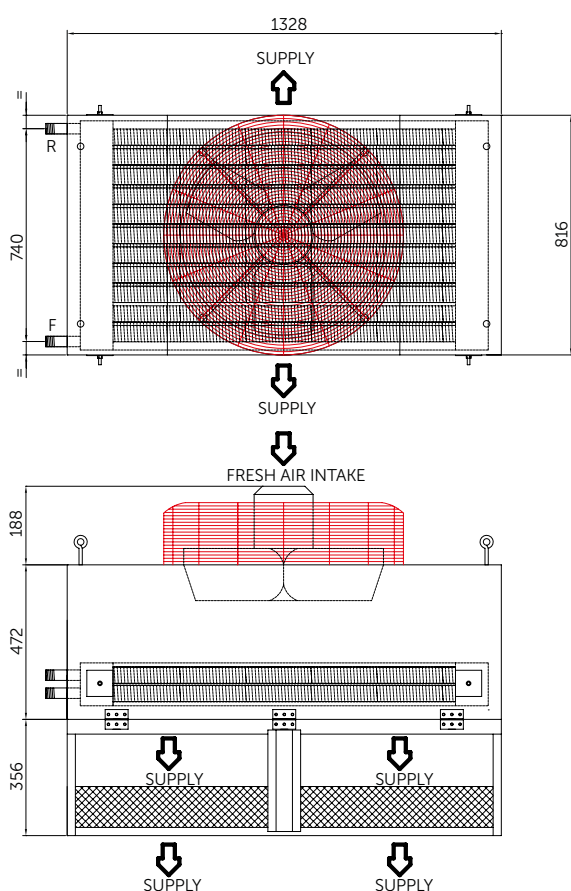
High Heat Mode

Fan working at full speed (100%) and water valve fully open (100%) providing maximum heating power of 56kW.

product information

	Airflow m ³ /s	Heat Output kW	Electrical Power W	Supply Voltage V-Ph-Hz	FLC Amps A	Start Amps A	Speed Max r/min
HHWCH	3.00	56	390	230 - 3- 50	2.2	6.2	940

dimensional drawing



features and benefits

- 56kW Rated
- Consisting of a Hot Water Radiator and HXP 630mm Fan (ErP 2015 compliant)
- 3 Modes of Operation – Destrat, Trickle Heat and High Heat
- Mounted horizontally in the Ceiling. Hot air is blown down and outwards across the floor area
- Robust quality unit, of proven design and construction
- Easy to Clean with Pressure Washers

key

1. HXP630 Fan
2. Zinc plated steel lifting eye
3. Hot dipped galvanised coil with 1" bsp(m) flow & return connections
4. Aluzinc diffuser casing
5. Mesh diffuser

dimensions

	Length mm	Width	Height	Weight Empty	Weight Operational
HHWCH	1328	816	1016	207	219

Dimensions in mm.

The above information corresponds to the hanging HHWCH unit. A floor standing, horizontal version is also available - please contact Hydor for details.

HRH Radiant Heater

Hydor's tube heaters utilise radiant heat, which is designed to maximise downward radiation, heating the floor first. Tube heaters reduce energy consumption whilst improving litter quality.

A trial carried out by Farm Energy has demonstrated that tubular radiant heating can play a significant role in reducing heating energy use for broiler production. The heaters get over some of the management problems that are inherent in older type radiant spot brooders, as they are higher in capacity and they spread heat out over a much larger area.

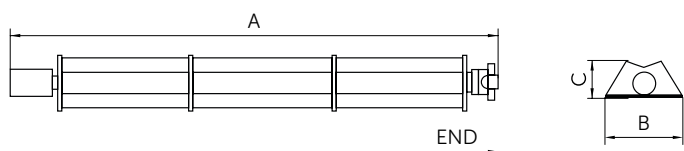
Heaters use a long radiant tube down which a gas flame is blown; the heat emission area is spread over the length of the heater, uniformity of radiant output is much better, and unit heater ratings can be much higher. This solves both the problem of localised 'spot' radiant output and having to use a large number of smaller heaters. **To download the Farm Energy report, visit www.hydor.co.uk.**



product information	Heat Input (kW)	Appliance Type	Appliance Category	Gas	Supply Pressure (mbar)	Setting Pressure (mbar)	Injector (mm)	Burner Baffle Plate (mm)	Exhaust Baffle Plate (mm)
SRLP30-N	30.3	A2, B22, C52	II2H3P	2 H G20	20	12.5	#18	11 x 13.5	Ø63.5
SRLP30-L	30.3	A2, B22, C52	II2H3P	3P G31	37	25	#33	11 x 13.5	Ø63.5
SRLP35-N	35.3	A2, B22, C52	II2H3P	2H G20	20	12.5	#14	15 x 12.7	Ø63.5
SRLP35-L	35.3	A2, B22, C52	II2H3P	3P G31	37	25	3.1	15 x 12.7	Ø63.5
SRLP40-N	40.3	A2, B22, C52	II2H3P	2H G20	30	12.5	#12	16 x 13.5	Ø63.5
SRLP40-L	40.3	A2, B22, C52	II2H3P	3P G31	37	25	3.3	16 x 13.5	Ø63.5
SRLP45-N	45.5	A2, B22, C52	I3P	3P G31	37	25	#29	17 x 13.5	Ø63.5

product information	Electrical Supply	Power Consumption (W)	Fuse Externally Rating (A)	Protection Rating	Min. Weight (kg)	Max. Weight (kg)	Gas Connection	Flue Size (mm)	Min. Mounting Height (mm)
SRLP30-N	230V ~ 50Hz	125	3	IP55	62	79	R - ½	Ø100	4.0
SRLP30-L	230V ~ 50Hz	125	3	IP55	62	79	R - ½	Ø100	4.0
SRLP35-N	230V ~ 50Hz	125	3	IP55	62	79	R - ½	Ø100	4.3
SRLP35-L	230V ~ 50Hz	125	3	IP55	62	79	R - ½	Ø100	4.3
SRLP40-N	230V ~ 50Hz	125	3	IP55	79	96	R - ½	Ø100	4.6
SRLP40-L	230V ~ 50Hz	125	3	IP55	79	96	R - ½	Ø100	4.6
SRLP45-N	230V ~ 50Hz	125	3	IP55	79	96	R - ½	Ø100	4.6

dimensional drawing



features and benefits

- 4 model ratings
- Three emitter package lengths available
- IP55 rated burner box and fan, complete with fresh air flexible connector, clips and outlet screen
- Flake free emitter tube surface - for a safer and cleaner working environment
- Propane and Natural Gas
- Aluminium (the tested and proven superior material) reflectors, designed to maximise downward radiation
- Lightweight construction - supplied in 3m sections, easy to assemble and fit
- Efficient and cost saving heating method
- CE approved

dimensions

dimensions	A				B	C	Tilt
	Maximum		Minimum				
	Length	No. of Sections	Length	No. of Sections			
SRLP30	13000	4	10000	3	300	150	30°
SRLP35	13000	4	10000	3	300	150	30°
SRLP40	16000	5	13000	4	300	150	30°
SRLP45	16000	5	13000	4	300	150	30°

clearances

	Side	Above	Below	End	Front	Rear
SRLP 30, 35, 40, 45	760	457	2285	610	760	380

Dimensions in mm.

HAI High Flow Air Inlets

The Hydor High Flow Air Inlets control the direction, path and distribution of fresh air into a building. Inlets are perhaps one of the most important parts of your ventilation system. By opening or closing the inlet, you regulate the thickness of the air jet, the air velocity, and therefore the distance the air flows into the building.

Hydor Inlet systems allow more air according to seasonal changes, by adjusting the inlets to maintain the airflow path and velocity. Inlets can be adjusted manually as required by temperature changes.

During normal conditions the aerofoil type flap guides cold air along the ceiling line to fully temper with the internal air. During hotter periods the flap deflects air downward to create airflow and turbulence at poultry level, therefore relieving animal stress and reducing potential mortality.

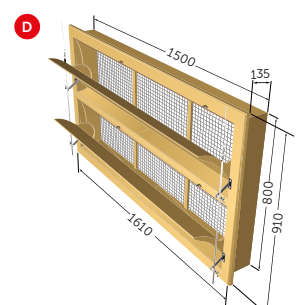
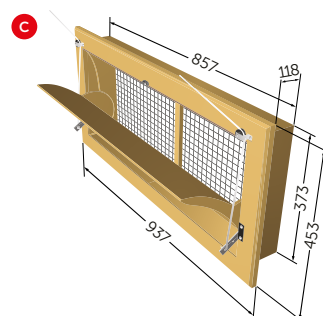
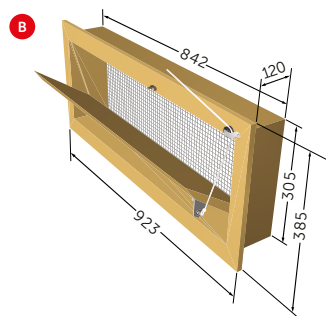
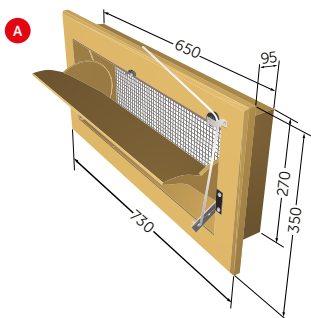
Accurate control of the flap is achieved by connecting a pull cord to a winch operated cable or rod system, which in turn can be linked to either sequential, computerised or differential pressure control systems.



features and benefits

- Inlets constructed from durable polyurethane foam
- A very high degree of insulation
- A strong structure with a low weight
- Easy to handle (adjusting, gluing etc) with quick and easy mounting
- Easy to clean and environmentally desirable
- Highly resistant to chemicals, aggressive gases and dry rot
- Inlets can be supplied for either wall or ceiling mounted applications
- Simple to install either in a new system, or as a retro-fit to upgrade an existing system design

models



Model	Airflow m ³ /hr @ Static Pressure (Pa)			Cutout Dimensions w x h (mm)
	10	25	40	
145-VFG	1450	2050	2900	650 x 270
2500-VFR	2500	3500	5000	842 x 305
3000-VFG	2900	4100	5800	857 x 373
6000-VFG-2	11600	17500	23200	1500 x 800
6000-VFG-3	17400	26250	34800	1500 x 1200
6000-VFG-4	23200	35000	46400	1500 x 1600
120-P	1100	1560	2200	630 x 230
84-P	760	1070	1520	535 x 240
4000-VFG	3900	5500	7800	715 x 565
2800-VFRM	2800	4000	5600	880 x 360

A 145 - VFG

The standard inlet for poultry units; up to 35% open, air is only let in over lip. Above 35% open, air is also let in below the flap allowing air directly on to the birds.

B 2500 - VFR

A simple model without seals or return springs but a large capacity. Very good for free-range layer units.

C 3000 - VFG

A double capacity version of the standard 145-VFG.

D 6000 - VFG - 2/3/4

Tunnel Inlet Unit.

E 120 - P & 84 - P

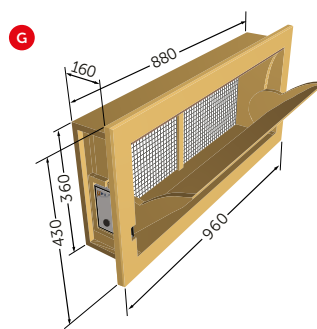
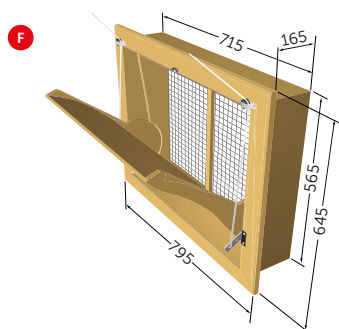
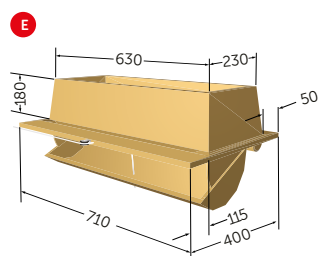
Designed for installation in the ceiling. Smaller version available, to 84-P.

F 4000 - VFG

Flange model with flange on the front. Divided air directions; up to approx. 25% air enters only from the top; after that, also from the bottom. Ideal for large ventilation capacities.

G 2800 - VFRM

Motorised air inlet valve eliminates the need for pulleys and cables. The inlets integrated actuator can be controlled by a wide range of controllers or climate computers.



Hydor Control Panels

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

A control panel is essential in every poultry 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 and prompt delivery to 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 maintaining a set temperature or pressure. Linked to this, heating and/or cooling can be incorporated, along 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 control of your buildings environment.



features and benefits

- Door interlocking main switches for safe working practices
- All circuits are protected by either miniature circuit breakers, overloads or fuses (as appropriate) and wired to the latest standards
- Units incorporate effective and reliable Pola Controls
- Simple and easy to use. A vast range available to control temperature, fan stages, humidity and more
- Neat and easy to follow layout of components with easy access for the installer
- Manual override switches for ease of use and back up

manufactured control panels

- Three phase automatic change-over panels
- Automatic fan change-over panels
- Automatic change-over fan failure panels to maintain a minimum air movement requirement from an automated daily or weekly fan rotation operational system
- Simulated dawn and dusk lighting effects
- Star-delta starter panels for single or multiple fans



VMRD1

A single fan, manual speed regulator with overload protection - models available for up to six fans.



VFST

Variable fan speed controller by temperature for automatic speed control of fans to maintain temperature.



Transformer Controls

Full range of both automatic and manual, infinitely variable or stepped transformer type controls.



Two Speed Switches

For added precision, flexibility control and regulation of energy consumption.

Lighting Controls

Dawn/dusk simulation available. Simple transformer stepped controls.

MTAS Panels

Mains and temperature alarm panels to monitor and raise alert to both high and low temperature levels.

Rotem Controllers

Hydor supply a range of high quality control panels to meet all poultry farmers' requirements. These panels conform to the latest standards and are designed to give years of trouble free service. Precise control of the environment and systems in your poultry house is of utmost importance to grow a good crop of birds.

Panels can be simple ventilation units, controlling small numbers of fans to complex automated control panels operating main ventilation fans, re-circulating fans, lighting, feeding, heating, winch inlet control, pop-hole control (either by time clock or radio control), mains and temperature alarm systems. These functions can be linked to either built-in electronic thermostats or local computer control units.

For 30 years Rotem have been designing, developing and manufacturing microprocessor control units for poultry houses. A large variety of control units and control equipment is available, ranging from single function control units up to multi function units specifically designed to operate all systems present in a modern chicken house.

There are two parts to any electrical control system. Firstly, the Rotem control units that provide the switching control and secondly, a power delivery panel is required to send electrical power to the motors, lights, heaters etc. Hydor manufacture bespoke power delivery panels to the specific requirements of the equipment in the poultry house.



PC computer control

To fully exploit the potential of Rotem Controllers, the option of operating and controlling a poultry house from a computer is possible.

Numerous poultry house control units can be linked together and communicated through the Rotem Communicator to a PC. The PC can either be located close to the controllers, or some distance away utilising telephone lines or line of sight radio signals. Advanced easy to use software for the computer is included.

The Communicator is also an advanced alarm message communication device. See table for detailed description of the controllers capabilities.

Function	Rotem Controller
Communicate to PC	via USB
Communicate to PC remotely utilising phone lines	Yes - modem included
PC Software included	Yes
Communicate to control units by wire	Yes
Communicate to control units wirelessly	Yes
Alarm communication	Yes
Alarm messages communicated by telephone	Yes
Alarm messages communicated by GSM mobile network	Yes
Call up to 8 telephone numbers with voice message in the event of an alarm	Yes
Send a text message up to 8 telephone numbers in the event of an alarm	Yes
Battery backup in the event of a power failure	Yes

Rotem Controllers

single function controllers

A large range of controllers providing a single function, be it lighting control, feed delivery control, etc. See table for details.



RLC - 1
Single Function Lighting Control



RPA - 2
Single Function Pressure Alarm



RBU - 3
Single Function Alarm Backup System

multi function controllers

A range of controllers designed to control all the systems present in a poultry house, by controlling the ventilation, temperature, humidity, heating, cooling, lighting, feeding, as well as monitoring and recording bird inventory, bird growth, feed and water consumption and environmental conditions.

Three models are available; the AC2000, Platinum Junior and Platinum Plus. The products functionality increasing dependant on model. See the comparison table for details.



AC2000 Plus
Multi Function Controller



Platinum Plus
Multi Function Controller



Platinum Junior
Multi Function Controller

single function controllers

Function	Model	Description	Accessories Required
Light	RLC - 1	Controls light periods and light intensity. Simulates sunrise and sunset	N/A
Pressure Alarm	RPA - 2	An independent static pressure alarm system. It measures static pressure inside the poultry house and activates the alarm system in case of low or high-pressure conditions in the poultry house	N/A
Alarm Backup System	RBU - 3	Monitors inside temperature, phase 1-2-3, static pressure, and temperature curve, emergency control of fan, heater, alarm and dialer, sending out an alarm in case of failure	N/A
Static Pressure	RSP - 3	Maintains a set negative pressure in the house by opening and closing air inlets	N/A
Bird Weighing	RSC - 2	Uses 1 or 2 bird weighing platforms inside the house which automatically weighs and records when the bird jumps on the scale	Bird Scale Platform (RBS - 1) or Hanging Bird Scale (RBS - 2H) plus components
Portable Bird Scale	RPBS - 1	Measures and records each bird placed on the scale. Data can be downloaded to a computer	Optional communication package for transferring data to a computer (RPBS1 - COM)
Silo Weigher	RSW - 2	Weights and records weight in 1 or 2 feed silos. Controls delivery of feed, lighting and records water consumption	Silo Load Cells (RSLC - 10) plus components
Feed Weighing / Mixing	RFS - 6	Measures up to 25kg batch of food. Proportions delivery of up to 3 food types into containers and then into feed lines. Also controls lighting and records water consumption	Batch Feed Container (RFC - 1) plus components

multi function controllers

Function	AC2000 SE / Plus	Platinum Junior	Platinum Plus
Controller Type	Microprocessor Computer Controller	Microprocessor Computer Controller	Microprocessor Computer Controller
User Interface	Keyboard, LCD, Menu	Keyboard, LCD, Menu, Table Format	Keyboard, LCD, Menu, Table Format
Relays	12 / 20	Up to 20	Up to 40
Additional Relays	Optional extra 16 / 8	Optional extra 40	Optional extra 40
Manual Override Switches	No	Yes	Yes
Ventilation Control	Power, Tunnel & Natural Ventilation	Power, Tunnel & Natural Ventilation	Power, Tunnel & Natural Ventilation
Fan Control	Switching on/off	Switching on/off	Switching on/off
Variable Fan Speed Control	Yes - with analogue output	Yes - with analogue output	Yes - with analogue output
Circulation Fan Control	Yes	Yes - by time, duration and temp.	Yes - by time, duration and temp.
Pressure Control	Yes	Yes	Yes
Air Inlet Control	Yes	Yes	Yes
Temperature Control	Daily Set-points	Daily Set-points	Daily Set-points
Humidity Control	Yes - reduction by ventilation increased by up to 2 fogging system	Yes - reduction by ventilation. Increase by up to 4 fogging systems	Yes - reduction by ventilation. Increase by up to 4 fogging system
Heating System Control	Heater Switching	Heater Switching, Radiant Heater	Heater Switching, Radiant Heater
Heating Zones	Up to 6	Up to 8	Up to 8
Cooling System Control	Switching on/off	Switching on/off	Switching on/off
Lighting Control	Light periods by day and time or with variable light intensity. Dawn and dusk simulation	Light periods by day and time or with variable light intensity. Dawn and dusk simulation	Light periods by day and time or with variable light intensity. Dawn and dusk simulation
Feed Quantity Measure	By calibrated feed pulse	By weight with feed container. Silo weigher or by calibrated feed pulse	By weight with feed container. Silo weigher or by calibrated feed pulse
Feeding Control	Up to 10 feeding periods. Duration by time or feed quantity count. Define quantity per bird	Up to 10 feeding periods. Duration by time or feed quantity count. Define quantity per bird	Up to 10 feeding periods. Duration by time or feed quantity count. Define quantity per bird
Extra System Control	Up to 3	Up to 4	Up to 4
Water Quantity Measure	By calibrated water meter pulse	By calibrated water meter pulse	By calibrated water meter pulse
Temperature Sensors	Up to 6	Up to 9	Up to 9
Humidity Sensors	1	Up to 4	Up to 4
Weather Sensors	Wind direction	Wind direction & speed	Wind direction & speed
Bird Weighing	Automatic bird weight recording	Automatic bird weight recording	Automatic bird weight recording
Flock Management	Poultry count, mortality, growth day, feed inventory	Poultry count, mortality, growth day, feed inventory	Poultry count, mortality, growth day, feed inventory
Alarm	Up to 99 alarm events	Highly flexible	Highly flexible
Emergency Backup	No	Optional	Optional
Data Recording	Temperature, feed & water consumption, mortality, heaters, alarm, bird weights, feed conversion, bird data, events record	Temperature, feed & water consumption, mortality, heaters, alarm, bird weights, feed conversion, bird data, events record	Temperature, feed & water consumption, mortality, heaters, alarm, bird weights, feed conversion, bird data, events record
PC Computer Link	Yes	Yes	Yes

Bird Weighing

The Rotem Bird Weigher can save you hours each day by allowing your birds to weigh themselves.

Consisting of three components; the load cell is fixed to the ceiling, a hanging platform suspended from the load cell and a Rotem RSC-2 single function controller.

The platform is located just above floor height to encourage birds to jump on with ease. The controller records the weight of each bird, discarding abnormally heavy weights achieved when more than one bird is on the platform.

With as many as 5000 weights recorded each day the controller displays the average weight for that day from the information gathered. Additional data is also available including uniformity, coefficient of variation and standard deviation, which describe the spread of the flock.

For increased functionality the controller can be connected quickly and easily to the USB port of a computer to view the data in graphical format and allowing you to save the data on each flock for your records.



Feed Weighing

The Rotem Feed Weigher accurately mixes, weighs and records feed consumption.

Consisting of two components; the yellow feed bin with load cell and valve and a Rotem RFS-6 single function controller.

The feed bin offers the facility to mix up to three different feed types by percentage and delivers 25kg of feed at a time. Feeding time periods are set within the controller which records the daily feed consumption of the crop.

The controller will also weigh birds when connected to a weighing platform, this enables monitoring of feed conversion ratios.



Lighting

Hydor is a leader in agricultural lighting, offering modern dimmable fluorescent and LED light fittings.

Hydor is a leader in agricultural lighting, offering tungsten and analogue fluorescent lights for replacement purposes only, but supporting high frequency, digitally controlled fluorescent light fitting and LED tube light fitting for new build projects and conversions. High frequency or digital fluorescent fittings give a considerable saving in power compared to the older systems, giving even more savings in consumption. Hydor recommend T5 tubes which are warranted to 20,000 hours operation compared to 10,000 hours for the T8, whilst giving higher light output for less current. Replacing old systems could pay for themselves in the first year of operation. LED fittings and tubes are an upgrade on the T5. These LEDs are fully dimmable using the supplied controller without flicker, stepping or strobing. The light output of the 4ft unit is the same as a fluorescent 36W tube for only 8W. With a warranted lifespan of 50,000 hours, they will last over twice the life of a T5 and 5 times longer than a T8. Hydor offer a range of lighting controls with automatic time control, manual dimming and our standard Dawn and Dusk controller all available. The Dawn and Dusk controller automatically raises and lowers the light level over an adjustable time from 2 to 20 minutes.

features and benefits

- Pig tails for easy removal of fitting for cleaning and maintenance
- Easy installation
- Fittings to IP65
- Dawn/dusk simulation and manual dimming available
- Transformer stepped controls
- Infinitely variable output and accurate control, without flickers or spiralling
- 'Festoon' type catching light
- Reliable operation
- Reduced heat generation, allowing for increased energy savings
- Increased sustainability with easily replaceable clips, ballast, housing etc.
- More even spread of light



Lightsaber

Introducing Hydor's new tubular, dimmable and fluorescent light; the HFTD Lightsaber.

The unit can be mounted or suspended vertically or horizontally and has a built-in diffuser as standard, to prevent shadows and give a more even light output. The digital control ensures that the light can be dimmed to 1% of full brilliance, whilst the installation and wiring is simplified by not requiring a separate screened control cable.

The light is ideal for the poultry market and suitable for all operations, whilst reducing power usage to give the same light output as conventional units.

Product	Watts	Diameter	Total Length
HFTD4	28	25	1700 (4ft tube)
HFTD5	35	25	2000 (5ft tube)

features and benefits

- Suspended vertically or horizontally
- Pig tails for easy removal of fitting for cleaning and maintenance
- Easy installation and wiring
- Acrylic Outer Tube and End Caps
- Dimming control from 100% to 1%
- 1500mm T5 Tubes are supplied as standard
- Guaranteed for 20,000 hours operation
- Reduced power consumption compared to conventional units



Evaporative Cooling System

High pressure mist dispersed from a series of nozzles effectively reduces temperatures and controls dust levels. The system can also be run constantly, beneficial for cleaning and disinfection purposes as well as aiding the reduction of Red Mite.

summer

During the summer months the heat generated from the birds, in conjunction with the mechanical extract system, ensures the mist is evaporated and the air does not become over saturated.

Mechanical forced ventilation will not, and cannot, cool the inside temperature to lower than the outside temperature. Therefore on hot summer days, with a temperature of 30°C outside, the lowest possible temperature inside your chicken house will be 30°C using only fans to cool. An additional cooling system will be required to lower the temperature further.

The Hydor Evaporative Cooling System has been proven to reduce temperatures by up to 10°C on hot days, potentially reducing mortality rates by up to 25%. Energy usage from fans is also reduced as the temperatures are kept lower, which means the fans run less frequently or at lower speeds. The improved indoor climate also promotes increased feed intake resulting in higher growth rates.

winter

During the winter months the system can also be utilised to increase humidity in the air to the desired level, particularly relevant to young birds when the temperature is kept high with the use of heaters. The heating of air dries it and reduces humidity, but with careful control of the system utilising a climate computer, mist can be injected into the shed in 20 second bursts to restore the humidity levels to the required setting, without reducing the temperature which is maintained by the heaters.

Hydor can supply the controllers which allow the cooling system to be operated by its own unique control panel or as part of a larger building control panel incorporating fans, inlets, winches and heating products.



Winches

Hydor offer a range of winches that are manufactured to a high standard and well proven in the poultry industry for reliable operation when opening and closing inlets and popholes.

Available in a variety of speeds and power outputs to suit 24 Volt D.C, 200/230 Volt single phase or 380/415 Volt three phase, 50 or 60 Hertz. These units can operate Rack and Pinion, Double Chain and Sprocket or Single or Double Pulleys to open and close banks of side-mounted inlets in walls or roof inlet systems.

Fitted with feed-back potentiometer and operating with a suitable control, the vents can be adjusted to infinite positions to match the number of fans operating, whilst maintaining a constant inlet velocity, or to suit the increase or decrease in temperature.



Belt Drum Winch



Chain and Sprocket Winch

features and benefits

- Heavy construction for long life
- Single or three phase voltages or 24 Volt D.C
- Rack and pinion, double chain and sprocket wheel or pulley version
- Safety interlocking switches to prevent over-run
- Various feed back potentiometers for accurate positioning
- Complete wire cabling systems

Torque (Nm)	Speed (r/min)			Belt Drum	Chain & Sprocket	Rack & Pinion	230V Single Phase	415V Three Phase	24V DC
	1.3	2.6	5.2						
100	✓	✓	✓	✓	✓	✓	✓	✓	✓
200	✓	✓	✓	-	-	✓	✓	✓	✓
300	✓	✓	✓	✓	✓	-	✓	✓	✓
400	✓	✓	✓	✓	✓	-	✓	✓	✓

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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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