

**NEW**

**hydor**



# Agri-Jet Silent

Roof Mounted Ventilation Units



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# Agri-Jet Silent

## Roof Mounted Ventilation Units



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 with the largest unit in the range emitting **just 47dBA** at a distance of 3 metres.



**Wherever fan noise is a problem, Hydor makes gaining planning consent far easier.**

With IPPC Regulations and National and European Governments requiring reductions in noise levels, local planning officers are now looking very closely at noise emissions from agricultural sites. In particular, they are considering ventilation systems, especially where proposed poultry sites - or extensions to existing sites - are in close proximity to residential dwellings.



Meeting the criteria of local planning authorities is becoming increasingly difficult as most standard fans produce similar levels of noise. During the daytime hours of 7am - 11pm, noise levels of 55dBA to 63dBA are generally permitted. At night between the hours of 11pm - 7am, when fewer fans are normally required thanks to lower external temperatures, this reduces to only 45dBA to 57dBA. When planning permission is being sought, even lower noise levels would be preferable and therefore more readily accepted by the relevant authorities.

An obvious, but an important point, is that fan noise is accumulative. The more fans that are in operation, the more noise will be created. As a general rule of thumb, every time the number of operating fans is doubled, the noise level increases by 3dBA. Conversely, every time the distance from the source is doubled, the sound level decreases by 6dBA. But this is based on the assumption that all the fans are at the same point, which in reality will never be the case, as fans are usually spread throughout the length of any animal housing.

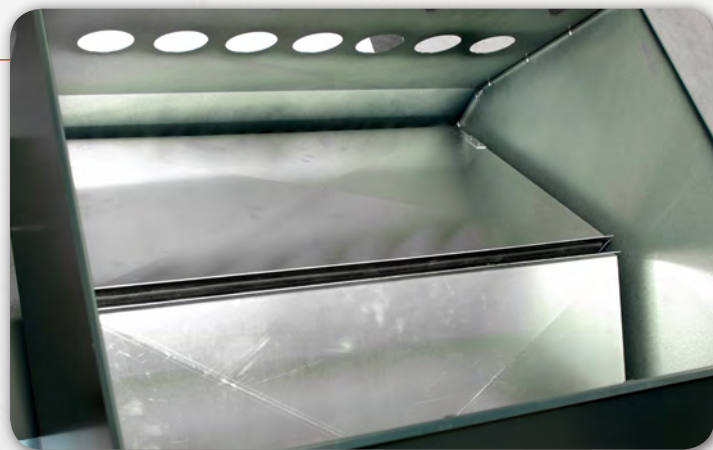
However, this is only a simple guide and, in practice, it is better to assume that only 80% of the difference (i.e. 5dBA) is actually obtained. This invariably means that the services of an acoustic engineer are required in gaining the necessary approvals.

Hydor has manufactured various models of its renowned Agri-jet, roof-mounted units for over twenty-five years, to suit differing applications worldwide. Suitable for on-ridge or off-ridge installation, these versatile, high-velocity, jet-extraction units eject the air vertically. Dust and noise are carried upwards to 20 metres before being dissipated in the surrounding atmosphere.

## Features & Benefits

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.

- 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, vital in times of escalating energy 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, at additional cost.

Please turn over for electrical data, dimensional data and accessories.

Enhanced airflow, created through low back-pressure resistance coupled with high-efficiency fans, helps minimise operational costs. This can prove vital for many producers in these times of escalating energy prices.

**“Lower noise levels are more readily accepted by the relevant authorities.”**

In order to reduce noise levels in line with regulations, Hydor has recently introduced the Hydor Agri-jet ‘Silent’<sup>1</sup>. These units have the same proven versatility as the original Agri-jet but with sound levels measured at 3 metres (the standard distance of measurement from source), noise levels of the largest unit in the range (the 760mm diameter 900r/min fan) have been reduced from 61dBA to just 47dBA. This is a considerable reduction and is comparative to the levels normally associated with a quiet office.

A cushioned, rubber edging has also been introduced to the unit, in order to minimise any noise caused by the shutter blades falling to the closed position. The shutter blades are linked together to prevent lifting by external crosswinds when the fan is non-operational.

Models in the Agri-jet range are available in various sizes to suit Hydor’s 450-760mm diameter, high-efficiency fans. Hydor also supplies units to fit other manufacturer’s fans and/or existing fan trunks in need of replacement. Units are easy to install and come fully assembled with a surrounding metal flashing to suit the specified roof angle and hold the unit in position. For increased longevity, the units are easily cleaned



with pressure hoses and there are no internal ledges to trap unwanted dust or disease. The internal fans can be unclipped and hinged down for ease of inspection and maintenance.

If you have questions or concerns regarding the ventilation requirements for your livestock and the noise generated, Hydor can help. Hydor can develop bespoke solutions and supply performance graphs and spectrum analysis charts for submission with planning applications.

**For a full sound spectrum, test lab report or for more information, please contact Hydor.**

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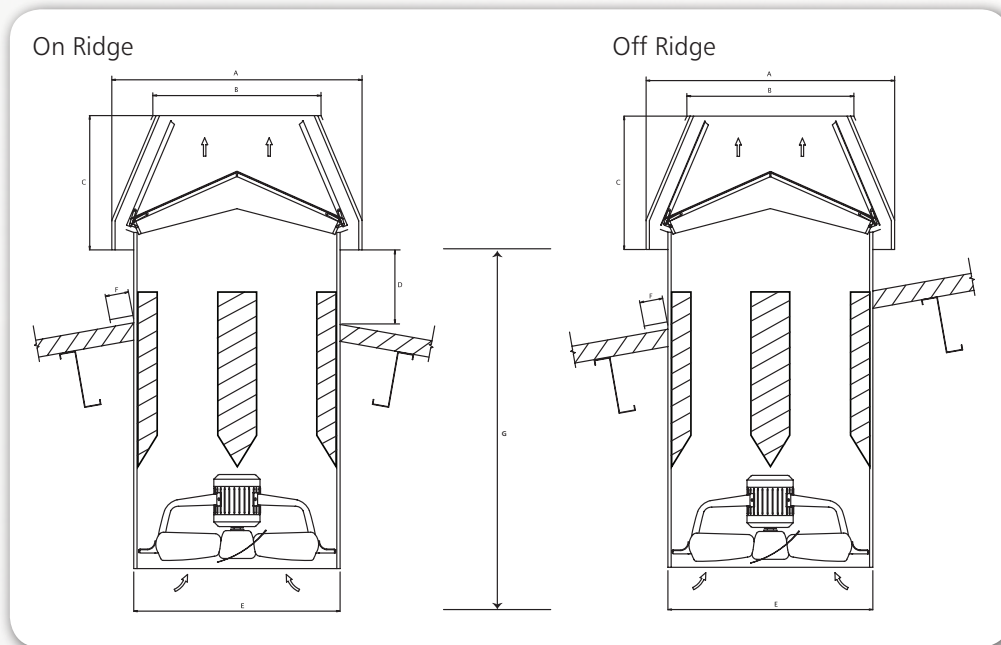
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# Performance & Electrical Data

Product Code	Airflow m <sup>3</sup> @ Static Pressure Pa				Speed r/min	Sound Level dBA@3m
	0	25	50	75		
HRUS450/4/1	1.54	1.39	1.10	0.91	1350	44
HRUS500/4/1	2.20	2.08	1.84	1.59	1350	46
HRUS630/6/1	3.04	2.76	2.35	2.10	900	44
HRUS710/6/1	3.90	3.62	3.30	2.80	900	45
HRUS760/6/1	4.31	3.80	3.58	2.72	900	47

Product Code	Motor Electrical Data 200-240V/1Ph/50Hz				Motor Electrical Data 380-420V/1Ph/50Hz		
	Power Watts	FL Amps	Start Amps	Capacitor uF	Power Watts	FL Amps	Start Amps
HRUS450/4/1	280	1.9	4.0	8	280	1.0	4.0
HRUS500/4/1	500	3.0	6.0	10	500	1.2	4.4
HRUS630/6/1	390	2.9	7.6	12	390	1.5	3.6
HRUS710/6/1	550	3.7	7.6	16	390	1.7	4.0
HRUS760/6/1	670	5.3	12.0	28	670	2.2	5.0

# Dimensional Data



Product Code	A	B	C	D	E	F*	G
HRUS450/4/1	648	600	375	182	553	300	1450
HRUS500/4/1	689	605	395	191	594	300	1450
HRUS630/6/1	800	580	460	213	705	300	1750
HRUS710/6/1	889	566	510	231	794	300	1750
HRUS760/6/1	953	610	563	245	858	300	1750

\*Weather skirt dimension.

# Accessories

- Propellor side guards are available for low mounting applications.
- Removable Light Baffle Boards for eliminating light.
- Agri-jet top sections are available to mount over existing trunks, giving increased air output.



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