AN ROINN TALMHAÍOCHTA BIA AGUS MARA
DEPARTMENT OF AGRICULTURE, FOOD AND THE MARINE

S.123 D: ACCEPTED SIMPLE AERATION SYSTEMS FOR GRANT-AID

This list details all the companies that are accepted as producing simple aeration systems that are eligible for grant-aid. Aeration systems supplied by manufacturers not on this list cannot be grant aided.

If an aeration system manufacturing company which is not on this list wishes to be included, they should contact: Engineering Unit, Nitrates, Biodiversity and Engineering Division, Pavilion A, Grattan Business Park, Dublin Road, Portlaoise, Co. Laois, Ireland.

Note 1: Full external agitation points are required where simple aeration systems are installed in new tanks.
Note 2: Where simple aeration systems are installed in existing tanks, any **internal agitation point(s) shall be removed** and at least one external extraction point shall be provided. The external extraction point shall consist of a 225mm pipe that runs from the top of the tank wall to the nearest external point where a vacuum hose is connected. The extraction point shall be covered with a manhole cover.
Note 3: Where aeration systems are being retrofitted to existing tanks, the existing tanks shall be fully emptied prior to the commencement of any work on the installation of the aeration system. Before anybody enters the tank, the tank shall be tested for the presence of any harmful gases. This test shall include, but not be limited to, testing for hydrogen sulphide (H_2S), methane (CH_4), ammonia (NH_3) and carbon dioxide (CO_2). If there is any doubt as to the levels of gases present, full breathing apparatus shall be used by anyone entering the tank. Gas testing and breathing apparatus shall only be used by trained, competent personnel.
Note 4: Where the simple aeration system is to be installed in a tank within an existing building, the ventilation in the building shall be brought up to the standard set out in current edition of S. 101 (Details given in Appendix A of this specification).
Note 5: The use of simple aeration systems is not recommended where the cattle are fed on bale silage or where straw bedding or other long material may get mixed into the slurry.
Note 6: Where these systems are used, the maximum tank length is increased to 75m for any tank layout (clause 4.4 of S.123), however, there shall be external extraction points at no greater than 50m intervals and in cases where there are spine walls present, there shall be openings in the spine wall so that slurry does not have to flow more than 40m to the nearest extraction point.

System name	Manufacturing Company	Authorised Agents
ASBS (Automatic Slurry Bubble System)	Linton Environmental Ltd, The Glebe, Rossgier, Lifford, Co. Donegal 0044 28 7173 0277	Linton Environmental Ltd, The Glebe, Rossgier, Lifford, Co. Donegal 0044 28 7173 0277

System name	Manufacturing Company	Authorised Agents
Aeration System	Mecàniques Segalés S.L, C/Savassona s/n 08503 Gurb, Barcelona, Spain	Finrone Systems Limited, New Buildings Industrial Estate, Victoria Road, Newbuildings, Londonderry, Northern Ireland BT47 2SX, Tel: 048 71343495
Robox Slurry Mixing System	EPS Pumping & Treatment Systems, Mallow Business & Technology Park, Quatertown, Mallow, Co. Cork	Also: Ballyhaunis, Co. Mayo; Mountrath, Co. Laois; Unit J2, M7 Buisness Park, Naas, Co. Kildare
SAMS	SAMS Air Mixing Systems, Glenholme, Garstang, Claughton-on-Brock, Near Preston, PR3 0RA, England. Tel: 0044 1995 640583	O'Doherty Farm Services Ltd, Lakyle, Ardnacrusha, Co. Clare. Tel. 061 344 276
Slurry Aeration Management System	O'Donovan Dairy Services Ltd., Whites Cross, Cork, Ireland. Tel: 021-4306425	
Slurry Technology	EasyFix, Persse Business Park, Ballinasloe, Co. Galway H53 VK10 Tel: 09096 43344	Michael White Pumps and Dairy Services Ltd, Bandon, Cork Tel: 023 8841398

Appendix A: Extract from S.101 (July 2016) in relation to Ventilation:

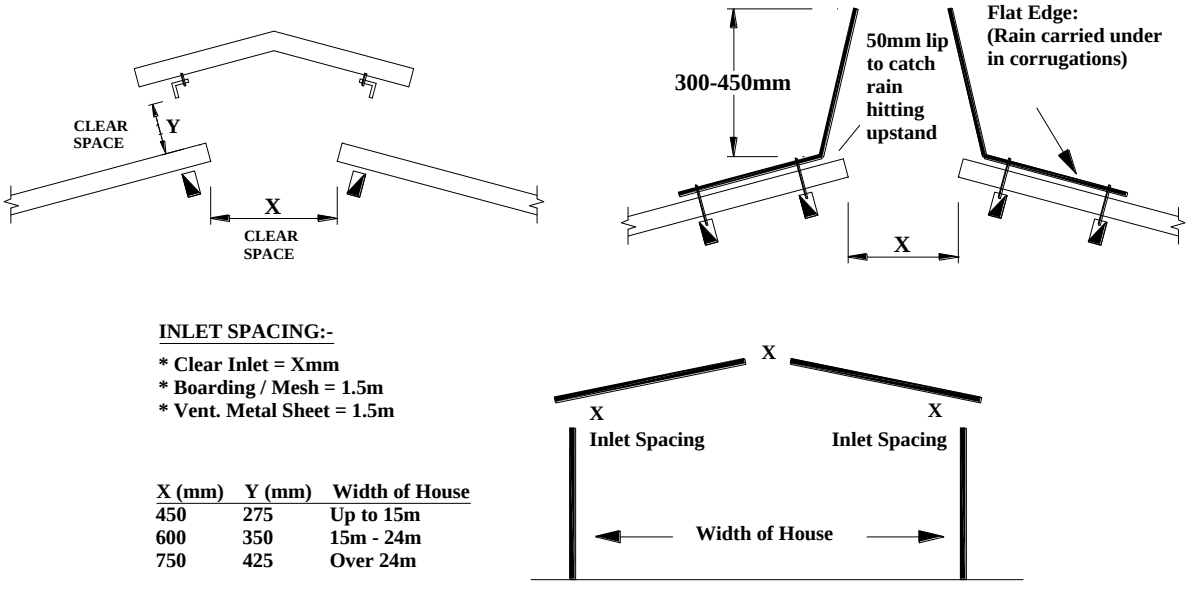
A.1.1 Proper Ventilation shall be provided to all livestock buildings as a strict condition of grant-aid, in order to protect animal health and the working life of the structure. The minimum requirements outlined below shall be followed for housing for dairy cows, suckler cows, beef cattle, calves, sheep, and deer. Full ventilation shall also be provided in any conversion or extension of existing buildings. Department specifications for the housing of horses, goats, pigs and poultry shall be followed separately.

A.1.2 Outlet Ventilation shall be provided along the full length of the roof apex; 450mm wide for a house up to 15m wide; 600mm wide for a house up to 24m wide; and 750mm wide for larger houses. A ridge cap over the outlet is not recommended, but when provided it must stand unobstructed and fully clear of the roof by 275mm, 350mm, or 425mm respectively, for the three widths of houses noted above (denoted by "Y", **Error! Reference source not found.**4).

Curved or angled upstands placed on the roof on both sides of the ridge outlet improve the ventilation and prevent most rain access. This is a strongly recommended alternative to ridge capping. Under such upstands, the roof-sheet shall extend 50mm on each side to prevent rainwater dripping from the upstand (**Error! Reference source not found.**).

Where spaced sheeting with a gap of at least 20mm is installed over the entire roof, then a central ridge outlet, though recommended, is not mandatory. Monopitch buildings, if fitted with a front canopy, shall have a min. 275mm wide outlet along the length of the roof, positioned near the highest point.

Note: Spaced sheeting is mandatory for any new roof in extension or conversion work where a full ventilation outlet is not available.



X (mm)	Y (mm)	Width of House
450	275	Up to 15m
600	350	15m - 24m
750	425	Over 24m

Figure 1 Ventilation details

A.1.3 Outlet Ventilation in Curved Roofs. Outlet ventilation in all new roofs shall be achieved by spaced sheeting over the entire roof with a minimum gap of 20mm. When conversion work is being done to bring an existing curved-roof building into animal production, in each bay two non-adjacent sheets at the apex of the roof are to be raised for at

least one-third of their length. Using timber or (preferably) angle iron spacers, each sheet shall be lifted to provide a clear space on all sides of at least 275mm.

A.1.4 Inlet Ventilation shall be provided directly under the eaves for the full length of each side of the house, or the lower side of a mono-pitched house. An unobstructed depth of 450mm shall be provided in houses up to 15m wide; 600mm deep in houses up to 24m wide; and 750mm deep for larger houses. A roof overhang of 400mm is recommended when unobstructed inlet ventilation is used.

To reduce wind-speed and rain, prepainted steel sheets with ventilation slots (vented sheeting) over their surface are recommended for inlet ventilation, provided they are listed in Specification S102. They shall be positioned immediately below eaves for the full length of the house and have a minimum depth of 1.5m. For buildings over 15m wide and less than 24 m wide, there shall be an unobstructed opening of at least 300mm above the 1.5m vented sheeting and this opening shall be increased to not less than 450mm for buildings over 24m wide.

In bovine and sheep houses, particularly in wide span houses, it is very strongly recommended that ventilated sheets should be used for gable cladding. [There is a standard grant-aid allowance to cover the extra cost of the sheets.]

Spaced (Yorkshire) boarding or fabric/plastic mesh may also be used in the side inlet gap. These shall also be installed with a minimum depth of 1.5m along the full length of the house. Boarding shall consist of treated timber laths secured at the top to roof timber and at the bottom to a 150 x 75mm cladding rail. Laths shall be 25mm thick and a maximum width of 75mm: Gaps between laths shall be at least 25mm. Spaced boarding may also be installed in place of gable cladding.

Approved fabric or plastic mesh shall be secured in accordance with manufacturers' instructions. Such materials shall be guaranteed for 10 years in normal working conditions. These materials shall not be used above eaves level on gable ends.

Where the inlet ventilation of an existing building is impaired as a result of the presence of an adjoining new building, then the inlet ventilation provided in the new structure shall be sufficient to ventilate both buildings simultaneously. The ventilation spacings shall be sized for the combined structure and not just the new part. This may involve removing the cladding on that part of the original structure that is common with the new building, and increasing the inlet ventilation of the existing building.

Where sliding doors are present on sidewalls, the inlet ventilation requirements for that sidewall shall also apply to the sliding doors. Therefore, if for example ventilated side cladding is present, then the doors shall also incorporate this form of cladding. This also applies to unobstructed ventilation: the top part of the door shall be left open.

Note:

For side inlet ventilation spaced sheeting is inadequate, and is not permitted for such use

There is a type of inlet ventilation whereby the side cladding sheet is canted outwards to form a gap between the bottom of the sheet and the wall. This type of inlet ventilation is not permitted on its own.