

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

**MINIMUM SPECIFICATION FOR GRANT-AIDED CALVING GATES AND  
MOBILE CATTLE CRUSHES.**

**The receiving of this specification does not imply approval of a grant application.** However, if written approval is issued, then this specification becomes part of the contract between the applicant and the Department of Agriculture Food and the Marine.

This is a minimum specification. Where the word “SHALL” is used, then that standard (at least) **must** be followed in grant-aided buildings. Where a procedure is “RECOMMENDED”, this is advice only on good practice.

Note that all references to other Department Specifications are to the current edition of that specification [available on the Department of Agriculture, Food and the Marine’s Website ([www.agriculture.gov.ie](http://www.agriculture.gov.ie)) under Farm buildings]. Similarly, references to Standards are to the current edition of the Irish, British or European Standard, as appropriate.

## **1 Safety**

### **1.1 Responsibility for Safety**

Applicants are reminded that they have a duty under the Safety, Health, and Welfare at Work Act 2005 to provide a safe working environment on the farm, including farm buildings, for all people who may work on that farm. There is a further duty to ensure that any contractor, or person hired to do building work, provides and/or works in a safe environment during construction.

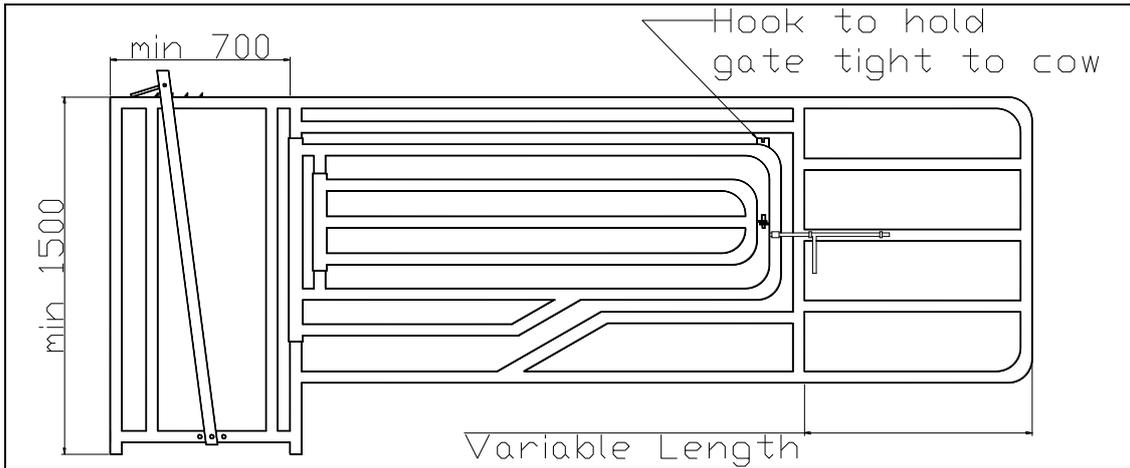
## **2 Calving Gates**

A calving gate is unit that consists of a manual crush gate and a multi-part gate, as shown in Figure 1 below. It can be used to hold a cow for calving, caesarean section or to restrain a cow to enable a calf to suckle. The multi-part gate shall consist of a main outer frame with one, two or three internal portions that open separately to the main frame. The internal portions of the gate can swing to coax an animal into the crush gate and act as a barrier alongside an animal held in the crush. The calving gate shall be installed so that when an animal is in the unit the left hand side of cow is accessible.

The crush gate should be positioned perpendicular to a gate or opening pen divider. It is recommended that the crush gate of a calving gate should not be against a wall.

The calving gate shall be a minimum of 1.5m high above ground level and shall be securely held in place. The main frame of the calving gate shall consist of, at least, Circular Hollow Section (tubular) steel with an outside diameter of 48.3 mm and a thickness of 2.5 mm. Alternatively, Square Hollow Section steel may be used, of at least, 50.0 mm x 50.0 mm x 2.5 mm.

The infill elements of the gate shall consist of, at least, C.H.S. 41.28 mm O.D. x 1.5 mm or S.H.S. 38.1 mm x 38.1 mm x 2.0 mm. The average spacing between horizontal rails shall not exceed 250 mm and no one space shall exceed 300 mm.



**Figure 1:** A sample calving gate with two internal opening parts.

The crush gate shall have a quick release facility at both the top and bottom. The bottom horizontal bar of the crush gate shall not be more than 100mm above ground level. The crush gate shall be a minimum of 700mm wide. Where a ratchet system is used at the top of the crush gate, the grooves or blocks shall not be more than 12mm deep. The bottom of crush bar shall not be secured using a nut and bolt system, and any pin system shall be retained using an R clip, or similar and shall not use a split pin. It is recommended that the pin has a chain attached to it so that it will be easier to access in the event a cow goes down in the crush unit.

Where there is a facility to secure the internal gate portion of the gate behind the animal, the fastening point shall be above the height of the cow.

Only factory made calving gates are acceptable. There are multiple design options available, and not all options are suitable for undertaking caesarean sections on cows.

**Calving gates shall be placed over solid floor areas only and in pens meeting the minimum dimensions set out in specification S.147.**

### **3 Mobile Cattle Crush**

Mobile cattle handling equipment is defined as being equipment that can be transported using a trailer unit, attachable wheels or tractor three-point linkage. The equipment shall not be concreted, bolted or permanently fixed in place.

Each mobile crush shall consist of, at least, a front gate, rear gate, non-slip floor and full sides. The crush shall be a minimum of 2.0m long, and the sides shall be a minimum of 1.45m high.

The front gate may be a manual, semi-automatic or automatic crush gate. The crush gate at the front shall be not less than 1.6m high. The front gate must finish within 300mm of the floor.

**If the front gate is fully automatic (hydraulic opening) then it is permitted for the head restraint to finish up to 600mm above floor level.**

The sides of the crush shall consist of at least 4 bars, or hinged solid panels, to a height of 1.45m minimum above crush floor level. A combination of solid panels and bars are acceptable. The sides may open fully, or partially, to allow access to treat the animal contained within the crush. There shall be, at least, 2 steel hoops across both the top and bottom of the crush holding the sides together.

Each mobile crush unit must have a facility to secure mobile penning to the back of the crush unit.

All side rails and hoops shall consist of, at least, Circular Hollow Section (tubular) steel with an outside diameter of 48.3 mm and a thickness of 2.5 mm. Alternatively Square Hollow Section steel may be used, of at least 50.0 mm x 50.0 mm x 2.5 mm.

Note 1: A mobile cattle crush can have other equipment incorporated at the manufacturing stage, such as a leg hoist/lifter, weighing scales, head scoop etc.

Note 2: It is strongly recommended that the mobile crush is securely fixed when in use.

#### **4 Mobile Cattle Penning**

Mobile penning (cattle hurdles) shall be at least 1.5m high (above ground level), and shall consist of at least 5 rails. The pen sections shall be design to be interlocking, preferable using pins, and shall be able to be fastened to the mobile crush unit.

The panels may be either mounted on skids or have straight legs.

The pen sections shall consist of, at least, Circular Hollow Section (tubular) steel with an outside diameter of 41.28 mm and a thickness of 1.5 mm. Alternatively Square Hollow Section steel may be used, of at least 38.1 mm x 38.1 mm x 2.5 mm.

Note 4: The use of field or yard gates as mobile penning is not permitted.

Note 5: Where it is desired to install sleeves into the ground to stabilise the pillars joining mobile penning, these sleeves shall not be placed in a concrete yard.

#### **5 Protection of Steel**

All steel used for the manufacture of mobile crushes, mobile penning or calving gates shall be protected using one of the following systems:

##### **SYSTEM I: Hot Dipped Galvanising:**

Hop dip galvanised coating shall be applied **after fabrication** in accordance with I.S. EN ISO 1461:2009 to a minimum average coating weight of 610gr/m<sup>2</sup>.

Small areas of galvanised coating damaged by any subsequent welding, cutting, or by excessively rough treatment during transit and erection may be renovated by the use of at least 2 coats of "spray-on cold galvanising" supplied by the galvanising company; or at least 2 coats of zinc-rich paint/primer or 2 coats of 'ZINGA', [Agreement Certificate No. 94/3042].

**Note:** Hot Dipped Galvanising is strongly recommended.

##### **SYSTEM II: Shot-blasting, Priming, and Painting:**

All scale and rust shall be removed by shot-blasting to Sa 2.5 or ISO 8501-1:2007. A holding zinc-rich primer of 25 microns shall be applied within 12 hours of shot-blasting. A further 50 microns of primer, and 50 microns of micaceous iron oxide finishing coat, shall provide a total dried coat of minimum 125 microns. (80 microns in two coats of the proprietary paint "ZINGA" can be used as an alternative on shot-blasted steel to the above standard).

## **6 Related Department Specifications**

The current edition of the specifications listed below shall also be followed as required:-

- 1) 'S137: Minimum Specification for Cattle Crush, Race and Enclosure.'
- 2) 'S147: Minimum Specification for Calving Pens, Separation Pens, and Isolation Boxes.'

Copies of these and other relevant Department specifications are available on the department website at: [www.agriculture.gov.ie](http://www.agriculture.gov.ie) under farm buildings or by contacting the one of the local offices of the Department of Agriculture, Food and the Marine.

### **Appendix I: Date of clause revisions and additions**

All changes from the previous version are highlighted in red.

**Version: August 2017 (published 25<sup>th</sup> August 2017)**

Clauses modified: 2, 3