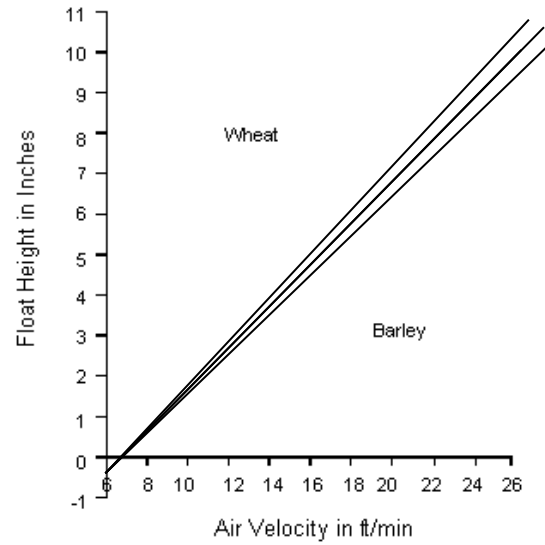
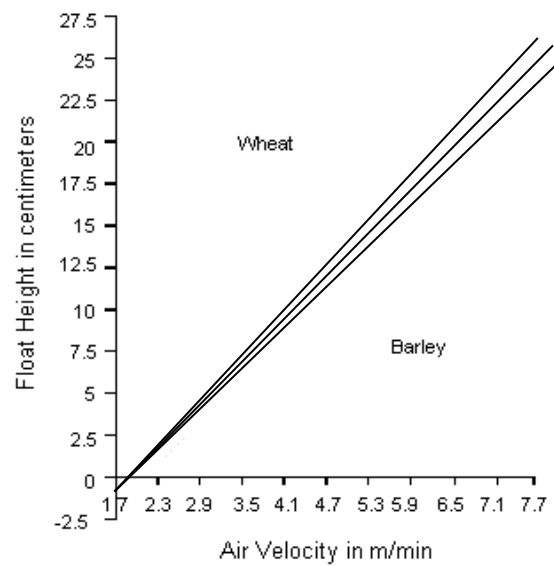


Casella Airflow Meter

AIRFLOW METER CALIBRATION ON WHEAT AND BARLEY



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Martin Lishman

Casella Airflow Meter



Distributed by
Martin Lishman Ltd

Casella Airflow Meter

1. Introduction

Ventilated grain ensures that the moisture content of the stored grain is kept within a safe limit by the steady flow of air through the grain. The Casella Airflow Meter for grain is an essential instrument for the successful storage of grain in bulk. It is used during the drying of grain using blowing fans to confirm that there is an adequate flow of air from the surface of the grain.

2. Principle of operation

A lightweight float made from a thin aluminium disc, moves up and down a tapered transparent tube.

A wire running through the centre holds the float in place. The float has been designed to spin, removing possible errors by reducing friction.

Air passing up the tube supports the float at a height where its weight is balanced by the pressure drop of the air.

A scale on one side gives the flow rate in both ft/min and m/min. On the opposite side of the tube is a white strip to aid reading the flow rate.

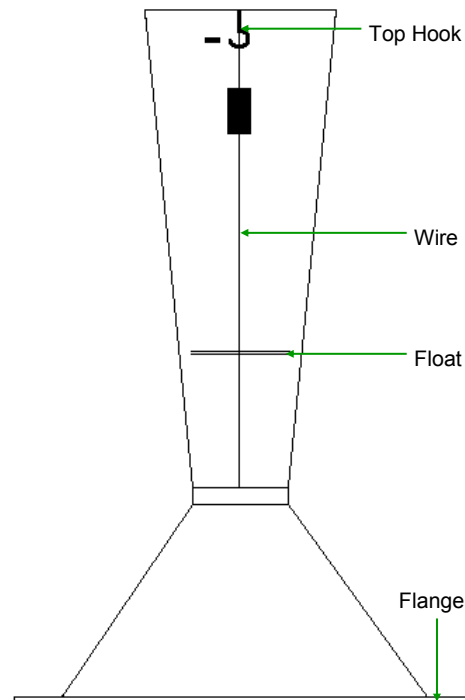


Figure 1:
The Airflow Meter

Casella Airflow Meter

3. Method of Operation

1. Flatten/level an area on the surface of the grain with your hand. Do not compact as this will affect the flow rate.
2. Place the meter on the surface and gently press down until you just start to feel resistance, then stop. The flange should be level with the grain.
3. Read the airflow from the edge of the float to the nearest ft/min, m/min mark.

4. Calibration

The following can cause variation in airflow in bulk stored grain;

- The variety of grain
- Tightness of packing
- Moisture content

The scale provided is an average between wheat and barley, with wheat slightly high and for barley slightly low. For the practical purposes for which this instrument is intended, departures from the mean are not serious for any cereal grains of similar characteristics to wheat and barley.

Two graphs on the next page (m/min and ft/min) show the position of the mean line used for the instrument scale, compared with calibrations on wheat and barley.

Warranty

The Casella Airflow Meter is guaranteed for 12 months from the date of purchase against any defect or malfunction caused by faulty parts or workmanship. To claim under warranty, the item should be returned, at the claimant's expense, to Martin Lishman Ltd with a written explanation of the problem. Should there prove to be a defect or malfunction caused by faulty parts or workmanship, it will be repaired or replaced and returned to the claimant without charge. If a warranty claim is rejected, the cost of replacement or repair will be notified to the claimant before any work is carried out.

Any warranty claim will automatically be invalidated if the item has been modified or internally tampered with in any way. The manufacturers will not cover under warranty damage or faults occurring to the item which have been caused by inappropriate use or by use not in accordance with the operating instructions.

Under no circumstances will Martin Lishman Ltd reimburse any costs associated with a warranty claim if these costs have been incurred without agreement in advance.

Under the terms of warranty for the Casella Airflow Meter, under no circumstances will liability exceed the cost of replacement or repair. Martin Lishman Ltd will not be liable for any consequential or indirect loss suffered by purchasers or users, whether this loss arises from correct or incorrect use, defect or malfunction caused by faulty parts or workmanship or in any other way. Non-exhaustive illustrations of consequential or indirect loss include loss of profits and loss of contracts.