

PCC
AIRLESS DISPENSING SYSTEMS



FILLING RECOMMENDATION

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The POWER CONTAINER CORP. SYSTEMS can be used with standard aerosol cans either aluminum or tin plate with a 1" opening [25.4 mm]. The filling is carried out with traditional aerosol filling equipment.

Operations

1. Valve introduction in the can
2. Crimping and under-cup-gassing (UCG)

Crimping proposal

Caution: these parameters are for information only and parameters can vary according to can executions and manufacturers, diameter, type of the machined neck, filling equipment.

Cup/Can	Crimping height	Crimping diameter
Aluminum / Aluminum	Approx. 5.2 mm 0.205 in	Approx. 27.2 mm 1.070 in
Laminated-DSC	Approx. 4.7 mm 0.185	Approx. 27.2 mm 1.070 in

**To be verified*

With a 45mm [1.771] diameter and larger, aluminium cans must have a machined neck. See "machined neck" drawing enclosed.

- Crimping head: 8 segments with 0.8 mm radius.
- Net crimping head pressure: between 75 and 95 kg [165 and 201 lb].
- Quality of air used: no oil, dry air, i.e. below 30% relative humidity at 20°C [68°F].

Filling ratio and internal pressure

It is possible to determine the initial pressure taking into account the 60/40% ratio, active product (60%) and air (40%) according to FEA Standards. In any case, the maximum inner pressure of filled can cannot exceed 10 bar at 20°C [145 PSI at 68°F]. For articles compatible with irradiation treatment, the maximum pressure is 8 bar at 20°C[116 PSI at 68°F] (please consult us for details).

Example:

Pressure before product filling: 3,5 bars [50 PSI]

Pressure after product filling: about 9 bars [130 PSI]

3. Active product filling

- Product injection pressure: max. 30 bars [435 PSI] (head closed)
- Volume injected: max. 102 % of specified volume
- Maximum inner pressure of filled can: 10 bars at 20°C [145 PSI at 68°F] ⁽¹⁾

⁽¹⁾ *Caution: this is the maximum pressure for the system. Depending on can specifications and aerosol / product security regulations in force, the maximum pressure may be reduced.*

Important

It is important to verify that the dome of the valve is not damaged by the filling needle. Each pouch size is designed for a specific can size and pouch filling volume.

Controls

We highly recommend the following controls:

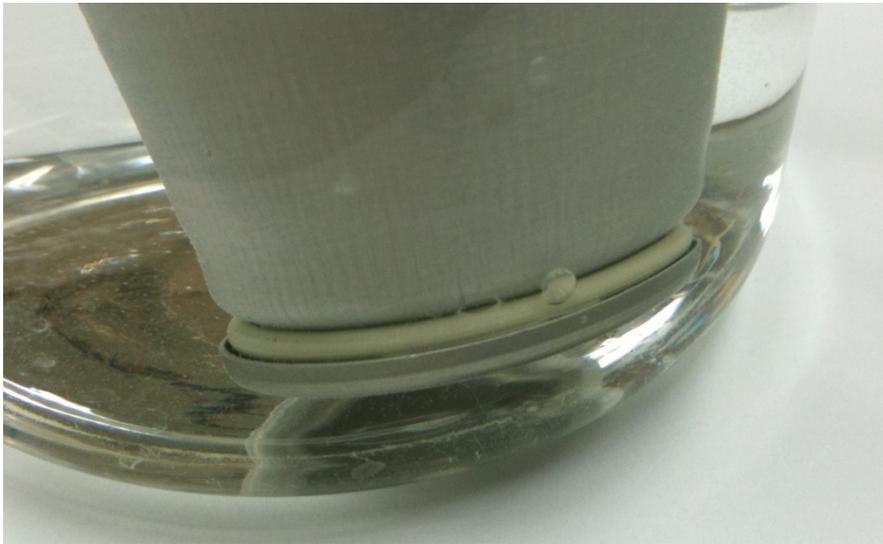
- Before production (set up control)
- During production (in process control)

Pressure control: internal pressure before filling can be checked just after UCG, meaning before product filling and/or after product filling.

Pressure gauge needle has to be the same as filling needle.

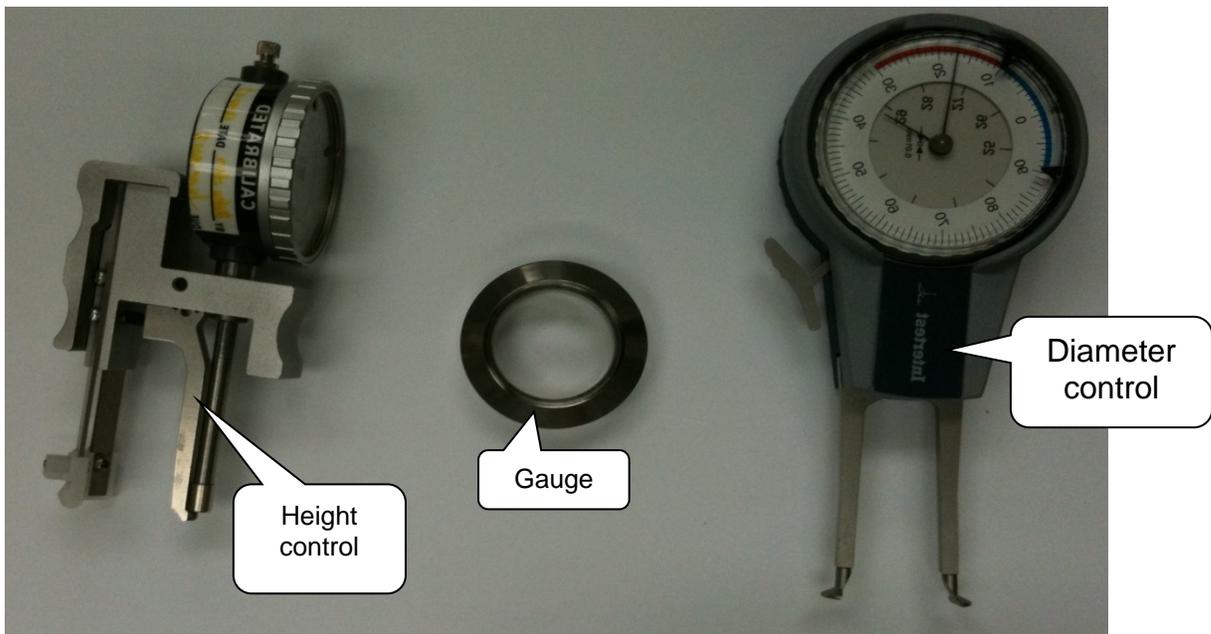
Filling volume control: by automatic check weighing. We draw your attention to the fact that the weight of air is insignificant compared to product (approx. 0.3 to 2 gr. [.0006 to .0045 lb]). Therefore, control of air presence cannot be done by weighing!

Tightness control: by immersing cans into water during approx. 3 minutes. A repeat of micro-bubbles means a tightness problem.



Measuring equipment:

The below shown pictures are the official instruments to be used for the tightness control





4. Actuator placement

The actuator can be placed manually or automatically directly after filling station in order to avoid any problem arising from the potential swelling of the internal gasket.

General Information

Storing ranges (before filling)

Temperature: min. 0°C - maxi. 40°C [32°F – 104°F].

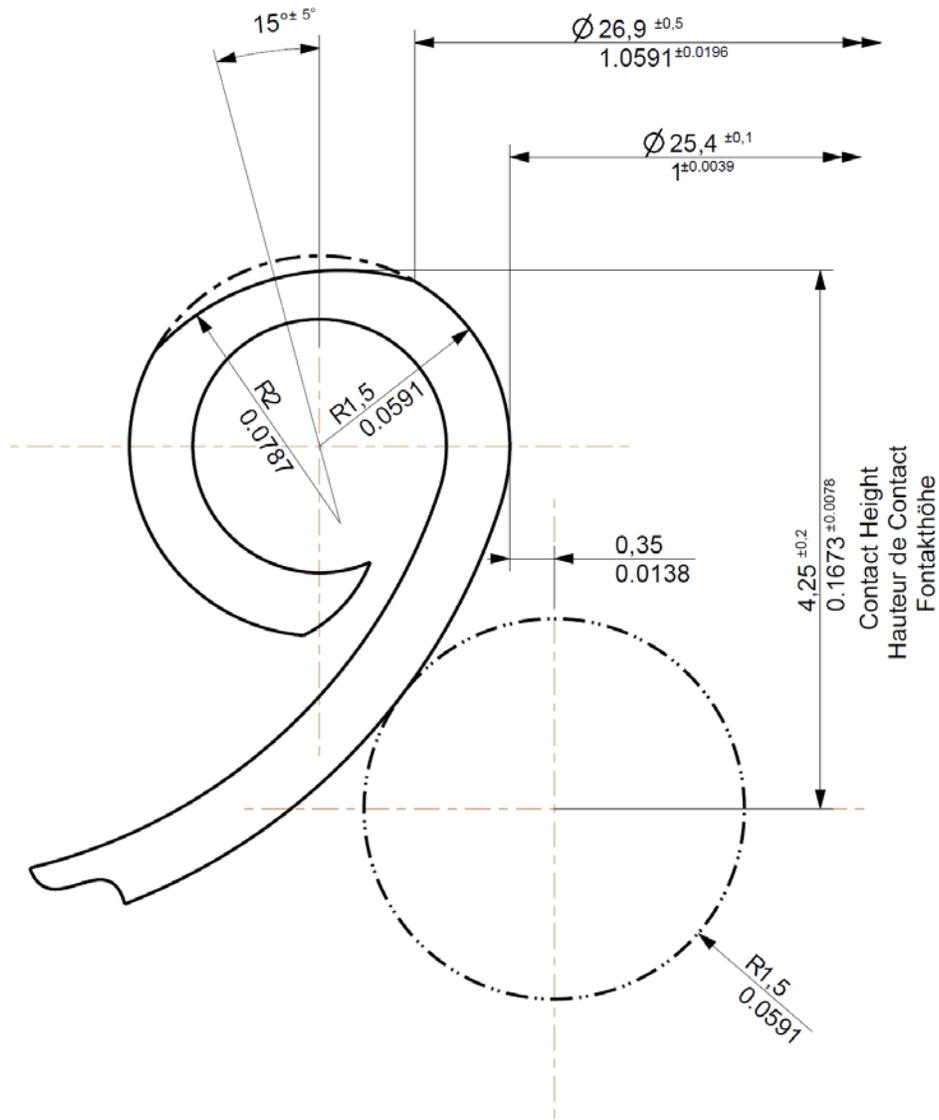
Humidity: min. 40% HR - max. 80% HR

The systems must always be stored in their original packaging.

N.B. The warranty covers obvious manufacturing defects and is limited to the free replacement of the faulty spraying systems, all other expenses excluded; there is no warranty for any direct or indirect damage. The warranty ceases to be valid if the spraying systems are modified in any way after having left PCC's factory (POWER CONTAINER CORP.). PCC may not be held liable for the chemical and/or physical interactions between its spraying systems and the chemicals contained in the cans, for

the canning/filling operations, for the components and accessories used, as well as for any damage which could result from their use; all the compatibility tests are the sole and full liability of the customer. (See general conditions of sales of POWER CONTAINER CORP.)

- Subject to change at any time without notice -



Scale

20:1

Size

A4

POWER CONTAINER CORP.
SOMERSET, NEW JERSEY, USA

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Printed : 29/04/2011

Drawn by : RE

Title

Machined Neck - FEA

Material : -

Created on : 29/04/2011

Processing : -

Control by : RT

Power Pouch

Comment : -

Drawing Number :

MDPCC_020

Revision

A

GENERAL TOLERANCES

ISO 2768-mK