

Scottish Curling-Ice Group

PEBBLE CAN TESTS

The two pebble cans used were identical, as illustrated, with equal lengths of hose, copper extension and fittings to provide an inside diameter of at least 18mm from the cans to the pebble head.

Can 1 The first can had its original hose as supplied, which was of flexible rubber with smooth inner skin, fitted with a 22mm copper extension and Speedfit couplings. The connection from can to hose was of plastic, **with a narrower diameter of 15mm for a distance of 25mm**, as supplied by the manufacturer.

Can 2 The second can is shown here with a modification of the fitting from can to hose, **using a connector and brass elbow used for 22mm copper (19mm I/D)**. The pipe is standard Tricoflex 18mm fitted directly to the copper extension.

The pebble head used was made by Shorty Jenkins, and was descaled and cleaned before using. It was an extra-fine head, 65/0.45mm, with all the pebbling done by the same person at the same speed and rhythm.

The cans were filled with warm water (35°C) to the base of the strainer at the top and then emptied, with the time recorded. The actions and times are below.



	<u>Can 1</u>	<u>Can 2</u>
1. Cans emptied without the pebble head	63 secs	34 secs
2. Cans emptied through stationary pebble head	947 secs	865 secs
3. Cans emptied with normal pebble action	559 secs	502 secs

It is clear that the very small restriction to the flow of water has a considerable influence on the amount of water delivered through the pebble head, in this case some 10% less water with the restricted flow. Where there is no restriction, as with the second can, the pressure remains very constant even to the last litre of water, and this can is regularly used to pebble four sheets twice with no need to refill. With the restricted flow the first can will only pebble three sheets twice before the pressure is inadequate.

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12 May 2004*

A later experiment tested a highly domed 52/0.45 XF head supplied by Fred Veale, which pebbled the second can empty in 444 secs. It is not clear why a head with fewer holes should empty the can faster, and the distribution of pebble was poor. What is clear from many other tests on various pebble heads is the difference in performance from one manufacturer to another, with the distribution very much affected by hole number, size and placement, as well as the shape of the head, temperature of the water and action of the pebbling arm. To date the make of head found to be superior to all others is that of Shorty Jenkins.

7 March 2006