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TECHNICAL SPECIFICATIONS

The Vitop Compact Tap

As the Vitop Standard tap, the Vitop Compact tap is suitable for a wide range of food applications including liquids such as wine, fruit juices, water and edible oils.
The taps are generally used with Bag-in-Box (BIB) packaging but are also placed upon stand-up pouches or other containers.

1. Associations with Vitop Spouts

Vitop offers one model of spout that can be used in association with the Vitop Compact tap:

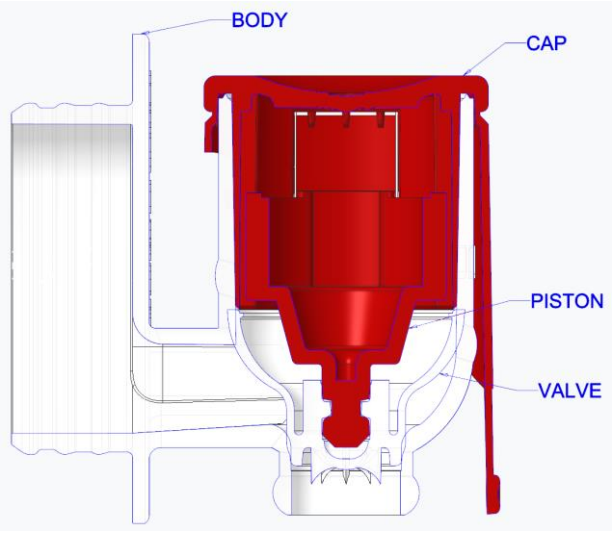
Vitop Compact Spout: suitable for a wide range of liquids such as wine, fruit juices and water.

For further details please see our technical specification sheet issued for each Vitop Spout.

2. Components and Materials

The Vitop Compact tap is made of four components, see list below for identification.

COMPONENT	MATERIAL
Cap	Polypropylene (PP)
Body	Polypropylene (PP)
Piston	Polyethylene (PE)
Valve	Thermoplastic elastomer (TPE)



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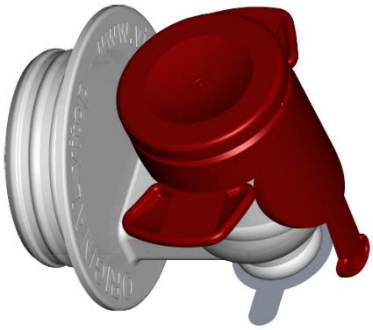
3. Vitop Compact with Foil

Vitop proposes, as an option, that an additional foil seal (laminate foil with PE for sealing) be placed over the pouring hole of the Vitop Compact tap.



A common example would be some taps used on “aseptic” filling machines, where the customer may wish to add an additional barrier against micro-organisms. Since many of the “aseptic” filling machines are filling fruit juice, often the orange and natural tap with the additional seal is chosen. Another typical example would be for use with Stand-up pouches (SUP) where the tap is exposed in a retail environment, and it is felt that the extra seal provides for additional hygienic security.

As the Vitop Compact taps are equipped with a first-rate tamper evident seal, the extra foil seal is not necessary for tamper evidence. Also, since the Vitop Compact tap offer an exceptional oxygen barrier due to the tightness of the flexible valve to body fit, the extra seal is also not critical to achieving a high barrier against oxygen ingress.

4. Performance

4.1 Weight

The Vitop Compact tap weighs about: 9 ± 0.2 g

4.2 Colour

Currently colour options include, for the:

- **Body:** Natural (translucent) or Black.
- **Cap and Piston:** red, orange, light blue, green, white.

Vitop can produce other colors on demand with a minimum batch

4.3 Leak proof

Each tap must undergo and pass a tightness test at a pressure of 0.3 bars and Vitop confirms that the Vitop Compact tap remains tight to 0.5 bars when fully inserted in its spout.

4.4 Oxygen permeability

The Vitop Compact tap has a typical average Oxygen Transmission Rate of around 0.1 cm^3 per day, 21% oxygen, 50% relative humidity, measured using a coulometric sensor at our production plant at room temperature (22° ± 2° C).

4.5 Flow rate

The Vitop Compact tap has a flow rate of about 4 L/min (± 0.5 L/min), calculated from the flow rate of 1 L poured from a column of water with measurement taken between 1.5 and 0.5 L levels at room temperature (22° ± 2°C).

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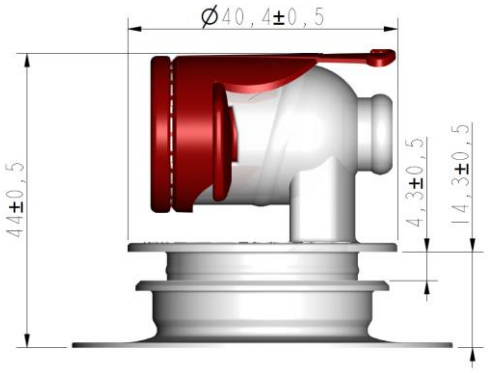
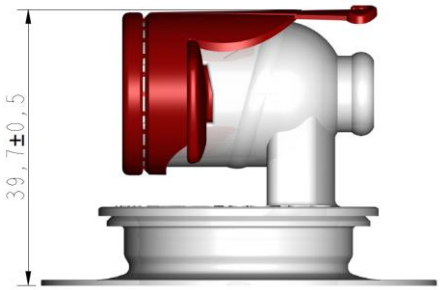
4.6 Overall dimensions

Below are images of the Vitop Compact tap inserted into the Vitop Compact Spout. These images show the more common critical dimension necessary relative to filling machines; typical dimensions provided for information purposes.



Vitop Compact tap inserted to pre-assembled position with the Vitop Compact Spout



Vitop Compact tap inserted to assembled (final) position with the Vitop Compact Spout

4.7 Resistance

Given the complex set of product and process parameters at the filling level (that Vitop cannot control), it is essential that customers first test our Vitop Compact tap for a specific hot fill application (with their specific product and filling technology) before any commercial launch as Vitop cannot guarantee suitability under all conditions.

According to Vitop experience there is no issue in filling with the Vitop Compact tap at 80 to 85°C.

Please however also refer to the technical specification relative to the Spout used as its resistance may not be the same as for the Vitop Compact tap.

After filling, once the bags have been inserted into the boxes, it is strongly recommended to store the bags with the taps facing upwards to reduce bending of the spouts and reduce the risk of stress cracking, especially under high temperature.

The Vitop Compact tap is intended for food applications, and we do not claim that it is suitable for chemicals.

Given the complex set of product ingredients and filling and use conditions, Vitop cannot furnish an exhaustive list of compatible or non-compatible chemicals. It is essential that customers test the suitability of the Vitop Compact tap with their specific product and filling technology, over the expected shelf life, before any commercial launch.

Although Vitop cannot give any guarantee on the chemical compatibility with a specific product; but based on our experience, Vitop Compact tap has no stress-crack issues with usual detergents, except those including high levels of aggressive chemicals such as Hydrogen Peroxide, Chlorine, high alcohol solutions and other aggressive chemicals.

5. Food contact and other statements

The Vitop Compact tap meets EU and FDA food contact requirements; specific statements for food contact are provided by Vitop on request.

In case of other food requirements are necessary is mandatory to require them before any commercial launch as Vitop cannot guarantee compliance under all conditions.

6. Packaging

Units per box: 1 400 Vitop Compact taps.

Pallets:

- 24 cardboard boxes (33 600 taps in total) – Dimensions 80 x 120 x 230 cm
- 30 cardboard boxes (42 000 taps in total) – Dimensions 100 x 120 x 230 cm

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Each cardboard box is identified with a proper label and with an identification code that includes the traceability code.
In order to guarantee a correct traceability system, the traceability code must be recorded by bag manufacturers in their production records. Vitop's code must be retrievable when identifying a specific batch of bags with the traceability code used by the bag manufacturer.

7. Storage specification and shelf-life

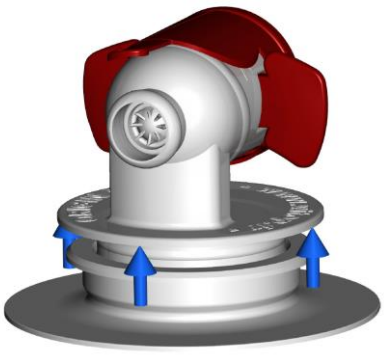
Store Vitop Compact tap only in the original boxes and keep them sealed until use.
In order to prevent damage to the taps or box, no pallet should be stacked on another one, except for a short period of time (example: transport not exceeding 48 hours).

The temperature of the zone where the taps are stocked shall be over 4°C and less than 30°C with relative humidity under 75%. This storage area should be in an inside room that is dry, clean and exempt from odorous or poisonous compounds that could potentially contaminate our product.
The Vitop Compact tap however should be brought to the temperature and humidity conditions prevailing in the room where they are to be converted into finished packages prior to any conversion. Special care should be taken to avoid microbiological or chemical contamination of our products during the various steps involved in incorporating them into containers.

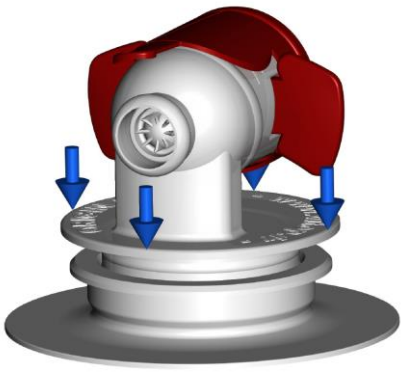
Vitop suggests to use FIFO stock management.
The period of delivery of the taps by Vitop and their installation on the container by the manufacturer shall not exceed one year. Also, the period between delivery of the taps by Vitop to the container manufacturer and their use by the final consumer must not exceed two years.

8. Filling and fitting information

Filling centers are provided with Bag-in-Box or Stand-Up Pouch containers with the taps partially inserted in the spout.
On inserting the tap inside the spout, the tap must be centered to prevent any damage to either part.
Additionally, in order to prevent damage to the tap during uncapping and insertion, Vitop recommends to pull up and to push down on the round back-plate of the body rather than on the top of the tap.



On uncapping the tap from the spout pull up on the round back-plate of the body



On inserting the tap inside the spout push down on the round back-plate of the body

Vitop suggests keeping pallets in the production department at least 24 hours in advance to make sure that operations with Vitop taps and spouts will be carried out at room temperature (22° ± 2°C).

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9. Responsibility

The information provided above is supplied in good faith and it does not comprise a guarantee or warranty of any kind either expressed or implied. This data should be considered as average typical properties observed rather than a guaranteed specification.

It is the customer's responsibility to test the suitability of these products for its specific application.

Vitop cannot be considered responsible for any improper use of its products by the buyer and/or the final consumer and assumes no liability for any incidents that may arise from the use of this data.

As the regulations and products mentioned in this statement change over time, Vitop advises its customers to ask for a new declaration periodically.

Food contact compliance letters are available upon request.

It is the responsibility of the end user to assure compliance with any packaging regulations applicable to the end use for which the product is manufactured.

This declaration cancels any previous version.