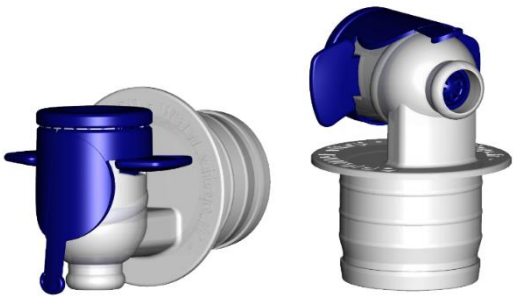


TECHNICAL SPECIFICATIONS

The Vitop Standard Blue Tap

The Vitop Standard tap is suitable for a wide range of applications but in some cases a higher level of oxidative resistance may be required. In this case a special additive is added to the membrane (valve) material. In order to distinguish this version from our Vitop standard tap, we add a blue colorant to the membrane material as well as to the top cap and winged piston. When associated with our special Vitop Standard Blue Spout, the Vitop Standard Blue tap may be well suited for detergents and certain other non-food applications. The taps are generally used with Bag-in-Box (BIB) packaging but are also placed on stand-up pouches.



1. Associations with Vitop Spout

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



Vitop Blue Spout: from a high resistance material that is well suited for detergents and other non-food applications.



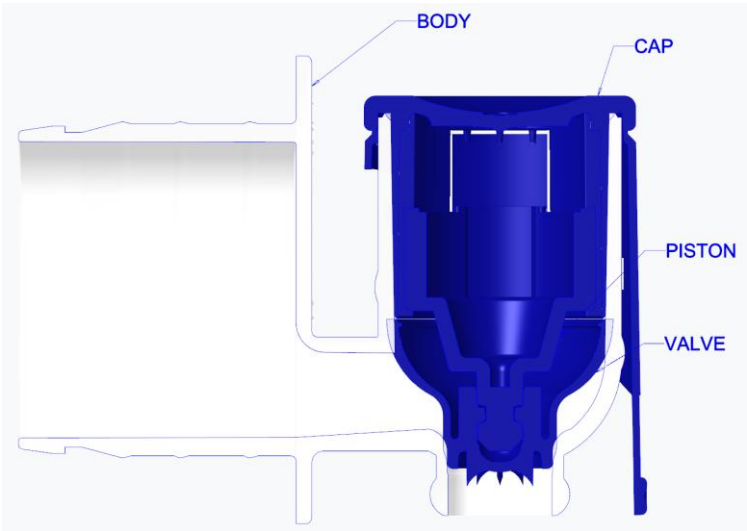
Vitop Ivory Spout: from a high resistance material that is well suited for hot filling, high alcoholic beverages, and other special applications.

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

2. Components and Materials

The Vitop Standard Blue 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)



3. Performance

3.1 Weight

The Vitop Standard Blue tap weighs about: 10.4 ± 0.2 g

3.2 Colour

Currently colour options include, for the:

- **Body:** translucent.
- **Cap and Piston:** blue.
- **Valve:** blue.

3.3 Leak proof

Each tap must undergo and pass a tightness test at a pressure of 0.4 bars and Vitop confirms that the Vitop Standard Blue tap remains tight to 0.5 bars when fully inserted in its gland.

3.4 Oxygen permeability

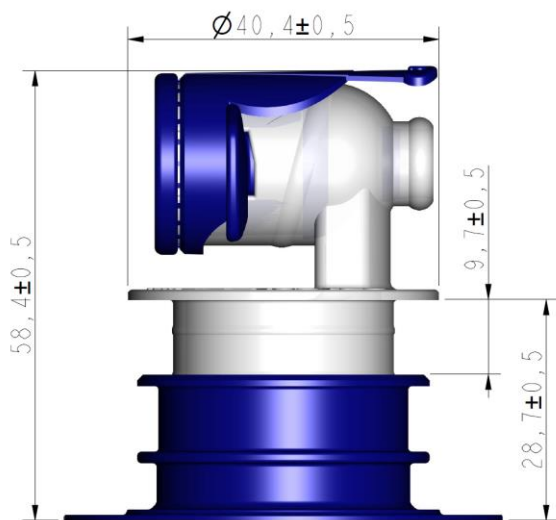
The Vitop Standard Blue tap has a typical average Oxygen Transmission Rate of around 0.1 cm^3 per day, 21% oxygen, 50% relative humidity, measured using a coulometric sensor at our production plant at room temperature ($22^\circ \pm 2^\circ \text{C}$).

3.5 Flow rate

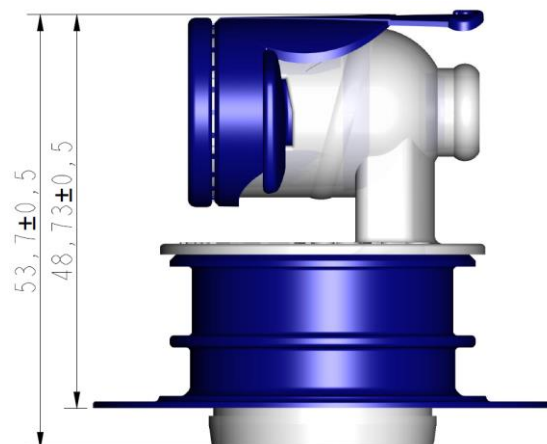
The Vitop Standard Blue tap has a flow rate of about 4 L/min (± 5 L/min), calculated from the flow rate of 1 L poured from a column of water with measurement taken between 1.5 and 0.5 L levels at room temperature ($22^\circ \pm 2^\circ \text{C}$).

3.6 Overall dimensions

Below are images of the Vitop Standard Blue tap inserted into the Vitop Blue Spout. These images show the more common critical dimension necessary relative to filling machines. Typical dimensions provided for information purposes. Non-binding and not to be considered as part of our technical specifications.



Vitop Standard Blue tap inserted to pre-assembled position with the Vitop Blue Spout



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

3.7 Resistance

Given the complex set of product ingredients and filling and use conditions, it is essential that customers first test the Vitop Standard Blue tap for a specific application (with their specific product and filling technology), over the expected shelf life, before any commercial launch as we cannot guarantee suitability under all conditions.

Vitop will not assume liability for any damages as a result of specific applications but, for information purposes (not a guarantee) we have been told by many of our detergents customers that they have no stress-crack issues with the Vitop Standard Blue tap although it should be pointed out that there is a wide diversity of active compounds in detergents and it may not be correct to generalize based upon the experience of specific detergents.

Although we cannot furnish an exhaustive list of compatible or non-compatible chemicals, we would expect (based upon information supplied by the resin manufacturer for the valve and some limited information from the field) that the Vitop Standard Blue tap is not compatible with solutions with high levels of aggressive chemicals such as Hydrogen Peroxide, Chlorine or high alcohol solutions.

It may be that some weaker solutions would be compatible but extensive testing would have to be done to determine threshold levels and, as for other testing, it is up to the customer, and not Vitop, to determine suitability.

Many other chemicals may also not be suitable depending on use conditions and targeted shelf life.

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 glands and reduce the risk of stress cracking.

4. Food contact and other statements

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

5. Packaging

Units per box: 1 000 Vitop Standard Blue taps.

Pallets:

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

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.

6. Storage specification and shelf-life

Store Vitop Standard Blue 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 Standard Blue 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.

7. Filling and fitting information

Filling centers are provided with Bag-in-Box or Stand-Up Pouch containers with the taps partially inserted in the gland. On inserting the tap inside the gland, 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 gland pull up on the round back-plate of the body



On inserting the tap inside the gland 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 glands will be carried out at room temperature ($22^{\circ} \pm 2^{\circ}\text{C}$).

8. 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.

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.