

# ARDEA SEAL<sup>®</sup>

*The* WINE CLOSURE





## ArdeaSeal technology

A warranty for excellence

The idea of a new seal concept, a stopper for traditional glass bottled wine, came along in 1999 from a division of the Guala Group. ArdeaSeal is the result of an accurate project, an in-depth study of materials, avant-garde manufacturing process and testing procedures. A seal made up of different components produced with highly technological synthetic materials. One of these components is the core, which is designed to grant the same performance as the best traditional corks and maintain all the characteristics as long as the wine requires.

This is the safest and reliable alternative to traditional corks.



## We are the reference

With our production system, we have become a reference in the wine industry

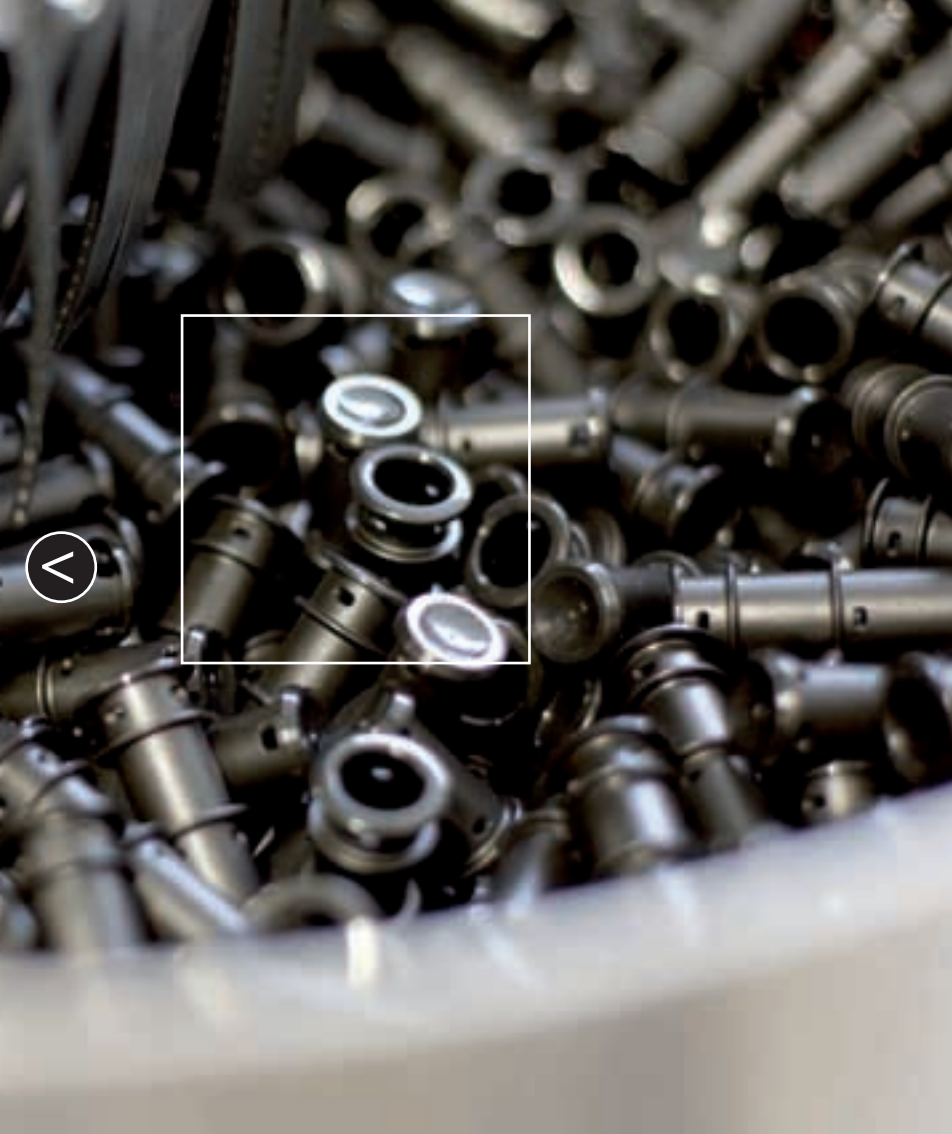


## ArdeaSeal sealing

A warranty for the best wines







What distinguishes an ArdeaSeal closure is  
an innovative core

## Materials

To obtain the expected performances from the product, technopolymers were selected and used with these objectives:

- Mechanical and resilience properties (uniformity in time)
- Gas permeability properties, especially oxygen
- Chemical inertia properties (no interaction between content and contact surface)

Results determined a series of characteristics which can be obtained only through the combination of three components, each with its precise task:



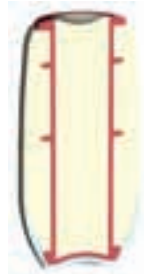
The Chassis

The chassis is the core, the structural component of ArdeaSeal closure. Its task is to mechanically control the whole system, avoiding lengthening and keeping constant and uniform in time the interference with the neck of the bottle. It is a stiff support and containment element realized in high rigidity technopolymer through injection molding process. It is protected by international patents. Thanks to its design it facilitates the insertion of the cork-screw, which is guided, preventing any risks of accidental breaking of the bottle neck.



The Shield

The only component that comes in contact with the wine, designed ad hoc to allow the use of the best available technopolymer in terms of absence of chemical interactions. This component is produced with no additives through injection molding process.



The Body

Realized during the final manufacturing phase, the body is the soft part which, thanks to the interference with the internal surface of the bottle neck, will guarantee with regularity and uniformity the sealing properties of the closure. The material used is a thermoplastic elastomer and the process technology is injection overmolding assisted by foaming realized through specific agents. The research and development phase requested the use of a proper technology developed by M.I.T. in Boston, which employs gas in its supercritical phase to foam the technopolymer. The part of the body inside the structure is the support for the cork-screw.

## Performance warranty

Thanks to its components and its core (anti-elongation structure protected by international patents) which maintains its mechanical properties, the wine stopper ArdeaSeal guarantees the ideal performance: the total absence of chemical interactions and organoleptic deviations, together with the right oxygen permeability so to store the bottle as long as required with no alterations: natural evolution of the wine and no organoleptic deviations.

## Materials

Three different components, each with its specific function, were used to obtain a closure that would guarantee maximum performance. The structure, the core which keeps the mechanical properties, a shield to guarantee chemical inertia and a body in technopolymers selected to guarantee duration and simplify removal.

## Production process

The production process is equipped with computerized systems and visual control to ensure uniformity in the product. Phases of the project are: component injection molding, assembly and injection overmolding. Production conforms to the highest organization criteria allowing for complete traceability of the entire industrial process.

## Customization

In addition to having an innovative design which adds value to the product, ArdeaSeal closures are customized through colour combination and the printing of wineries' tailored artworks with the support of our graphics office.

## Applications

ArdeaSeal was developed as the best alternative to cork stopper. Premium brewers, olive oil producers and other spirits manufacturers later adopted it. Many producers decided using this system to ensure the protection of their products thus adding value to their packaging and simplifying the capping process.

## Tests and certifications

The project and its fulfilment have reached maximum levels and while defining both specifics and project a new quality protocol had to be defined. In many cases specific equipment was planned and set up together with numerous oenological tests in collaboration with Enosis (Oenological Centre based in Piemonte region) and I.C.V. (Institut Coopératif du Vin based in South East France).

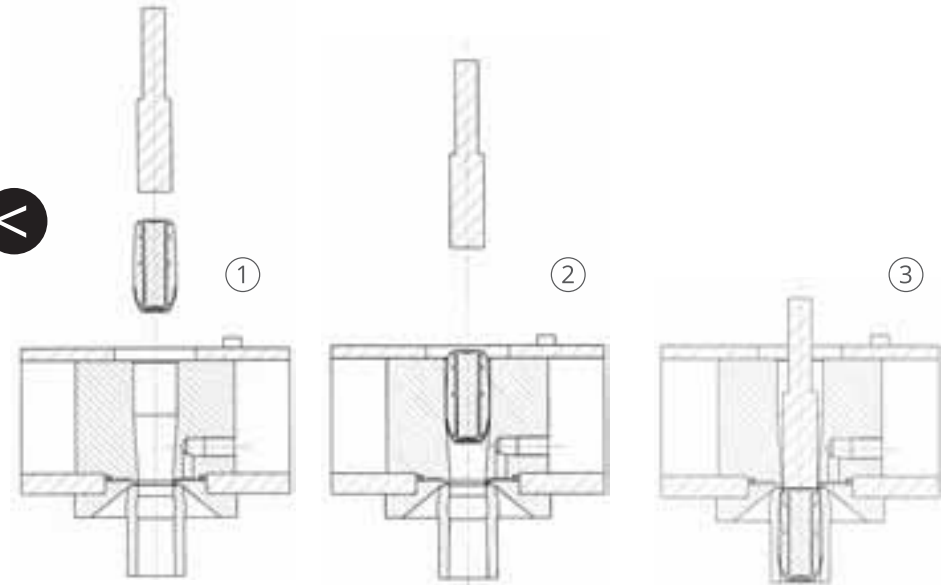


## Bottling

ArdeaSeal closures, realized to guarantee excellence in wine, are also appreciated and used by important olive oil, brewer and other spirits producers.

This is the result of a project that has met market needs through its innovative and technological contents. ArdeaSeal closure can be applied on traditional bottling lines with a minor modification that simplifies the process: the replacing of the closure compression group (usually four jaws for radial compression) with a simple funnel.

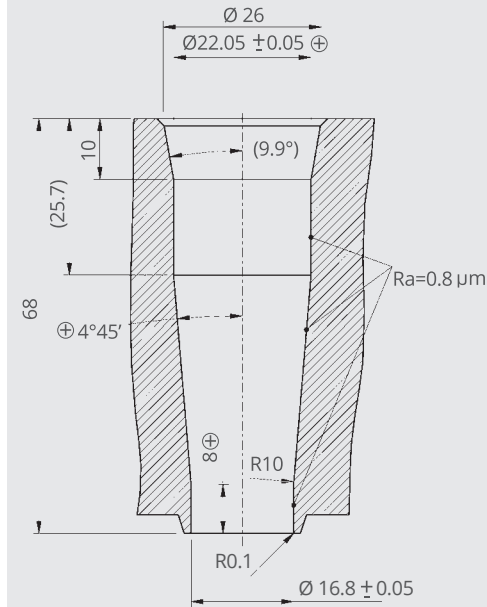
Moveable parts are thus removed reducing maintenance requirements and getting rid of an often under evaluated risk: poorly maintained jaws may damage the stopper affecting its performances.



Corking machine producers like Arol, GAI and Bertolaso in Italy, Stone and Costral in France have realized ArdeaSeal dedicated kits and have built capping machines that implement the use. ArdeaSeal stopper has to be oriented in bottling lines. Manufacturers of closure feeders like Mar.Co., Faccio, Neri, Cames and others have already developed equipment that meet these needs or have adapted already existing feeders.



## Capping device specifications

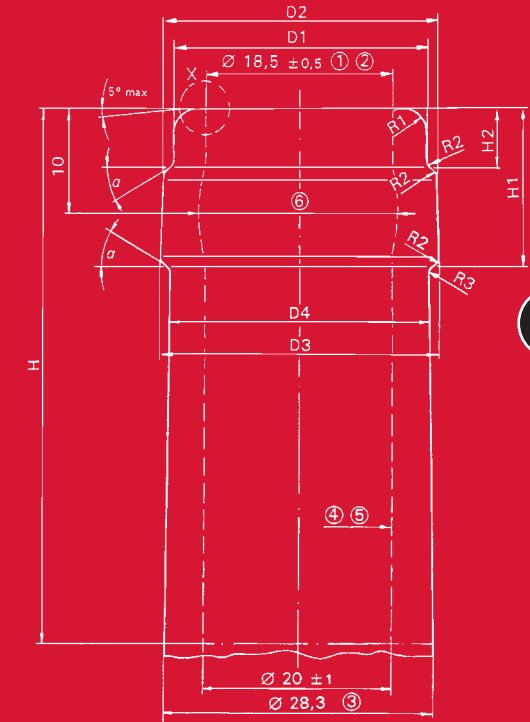


## Standard of the neck-finish

Traditional 17,5 mm	CETIE Normalized 18,5 mm
<p>Technical drawing of a traditional 17,5 mm wide bottle. The drawing shows a side profile with a dashed centerline. Dimensions include a total height of 42.7 ± 0.5 mm, a shoulder height of 12 mm, a base diameter of Ø 14 mm, a base width of Ø 21.0 mm, a neck diameter of Ø 18.5 mm, and a neck width of Ø 16.35 ± 0.05 mm.</p>	<p>Technical drawing of a CETIE Normalized 18,5 mm wide bottle. The drawing shows a side profile with a dashed centerline. Dimensions include a total height of 42.7 ± 0.5 mm, a shoulder height of 12 mm, a base diameter of Ø 13.7 mm, a base width of Ø 22.0 mm, a neck diameter of Ø 20.3 mm, a neck width of Ø 18.6 mm, and a neck width of Ø 16.35 ± 0.05 mm.</p>

## Standard reference of the neck-finish

EN 12726:2000  
Cork mouth finish with a bore diameter  
of 18.5 mm for corks and tamper evident capsules  
(CE.T.I.E. GME 50.1)



The traditional neck-finish diameter 17.5 refers to the same standard EN 12726:2000, where each position relating to internal diameter is reduced by 1mm.





ARDEASEAL®  
*The* WINE CLOSURE



ArdeaSeal sealing  
The wine stoppers with a technological core





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