DOING BUSINESS WITH BORRAS

Version 18.6

Edited by GRIFERIAS ANTONIO BORRAS, S.L.
B08317463

Images contained in this document might not correspond to reality.
3. Management system
4. ISO 9001:2015 (I)
5. ISO 9001:2015 (II)

6. Branding
7. The Company
8. Exhibitions
9. International outlook

10. Borras quality standards
11. Compliance rules
12. Recommended usage conditions
13. Manufacturer warranty
14. Brass
15. Chrome finishing
16. Ceramic cartridge : General points (I)
17. Ceramic cartridge : General points (II)
18. Ceramic cartridge : 2 steps opening
19. Ceramic cartridge : Cold opening
20. Thermostatic cartridge : General points (I)
21. Thermostatic cartridge : General points (II)
22. Thermostatic cartridge : Cool Touch
23. Flexible hose
24. Aerator
25. Aerator : Coin Slot
26. Other mechanical parts : Diverter
27. Other mechanical parts : Handles
28. Complements : Shower sets
29. Complements : Shower columns
30. Accessories

31. Sales tools
32. Company website
33. General Catalogue
34. Kitchen Catalogue

35. Contact details
ISO 9001:2015 MANAGEMENT SYSTEM
DOING BUSINESS WITH BORRAS

Version 18.5

Edited by GRIFERIAS ANTONIO BORRAS, S.L.
B08317463

Images contained in this document might not correspond to reality
Management System

ISO 9001:2015

Scope of certification is the manufacture and sale of sanitary and kitchen fittings

Working areas:

• Context of the organization, understanding the needs and expectations of the interested parties and establishing the scope of the Quality Management System.

• Quality policy, roles, responsibility and authority.

• Quality objectives and planning of actions to address risks and opportunities.

• Support, communication and documented information.

• Planning and control of processes.

• Monitoring, measurement and analysis by internal audits reviewed by management.

• Improvement, non-conformities and corrective actions, continuous improvement.
Management System

Benefits:

Conveniently equipped facilities and working system.

1. The entire production process is subjected to exhaustive control to guarantee quality.
2. Effective quality controls, an agile delivery service and an after-sales service fully oriented to continuous improvement.
BORRAS BRANDING
DOING BUSINESS WITH BORRAS

Version 18.5

Edited by GRIFERIAS ANTONIO BORRAS, S.L.
B08317463

Images contained in this document might not correspond to reality
GRIFERIAS BORRAS is a family business founded by Mr. Antonio Borras, established in Barcelona since 1940, dedicated to the complete manufacture and commercialization of faucets for washbasins, kitchens and shower columns for more than 78 years.

The fundamental priority in our activity is the quality of our products. Our purchasing department has a strategic function within the company, always attentive allows us to offer the best quality standards, collected in this document for your knowledge.

The commercial department is made up of a team of professionals working on initiating new distribution channels, promoting product, developing export business, creating brand awareness, increasing the exposure of Borràs in the sector, increasing the commercial network and product development.
We like to confront our faucets in front of the most demanding consumers, in order to boost our brand image annually we expose the best selection of washbasin and kitchen faucets in CEVISAMA Valencia and BIG5 Dubai, fairs of international prestige.

This effort allows us to offer a catalog that meets the most demanding standards, comfort and design complete the podium of priorities for Borràs, making it an indispensable tool to work with the new trends in toilets and kitchens.
As a result of the company policy of betting on the quality of its product, we have distributed our products in more than 15 countries across 4 continents, scrupulously complying with local and international regulations. The configuration of our manufactured offer is adapted to such different markets such as Central Asia, Saharan Africa or the Caribbean.

We have a network of 22 commercial agents in the field, whose work is invaluable to keep Borràs as synonymous with quality in such a competitive sector.
BORRAS QUALITY STANDARDS
DOING BUSINESS WITH BORRAS

Version 18.5

Edited by GRIFERIAS ANTONIO BORRAS, S.L.
B08317463

Images contained in this document might not correspond to reality
Borras Quality standards

Compliance rules

Hydraulic and mechanical behavior

- EN 817: Sanitary fittings, mechanical mixers general specifications
- EN 816: Sanitary faucets, self-closing taps
- EN 200: Sanitary faucets, simple taps and mixers, general technical specifications
- EN 246: Sanitary fittings, simple taps and mixers for water supply systems type 1 and 2, general technical specifications
- EN 1111: Sanitary fittings, thermostatic mixers, general technical specifications
- EN 22768: Sanitary fittings, general tolerances
- UNE 19702: Sanitary faucets for food, terminology
- UNE 19703: Conventional sanitary taps, technical specifications
- UNE 19704: Single tap with concealed bidet outlet, mounted on horizontal surface, dimensional characteristics

Chrome finished

- EN 248: Sanitary fittings, general technical specifications of Ni-Cr electrolytic coatings (Nickel-Chromium)
Borras Quality standards

Recommended use conditions

<table>
<thead>
<tr>
<th></th>
<th>Limits of use</th>
<th>Recommended limits for a better performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic pressure</td>
<td>0,5 bar minimum</td>
<td>1 bar ≤ P ≤ 5 bar</td>
</tr>
<tr>
<td>Static pressure</td>
<td>10 bar maximum</td>
<td>-</td>
</tr>
<tr>
<td>Temperature</td>
<td>≤ 90 °C</td>
<td>≤ 65 °C</td>
</tr>
</tbody>
</table>

- 1 bar it’s a metric unit of pressure (1 bar = 1,01972 kgf/cm²)
- The static pressure is that which has a fluid, regardless of the speed of it.
- When the fluids move in a conduit, the inertia of the movement produces an additional increase of the static pressure, the pressure known as dynamic.
- All materials in contact with water for human consumption do not represent any health problem until reaching 90 °C (remember that 100 °C is its boiling point) because there are no significant variations in food quality, appearance, smell nor the taste.
Borras Quality standards

Product warranty

GRIFERIAS ANTONIO BORRAS, with more than 75 years of experience dedicated to the manufacture and complete commercialization of high quality fittings for bathrooms, kitchens and hydro massage columns, guarantees its products for 5 YEARS for all mechanical parts, covering their replacement and 2 YEARS in the finishes, previous revision in the factory (except accessories and complements).

As a result of strict compliance with the obligations to maintain the ISO 9001 certificate, its high quality standards are reflected in this warranty.
Borras Quality standards

Brass

The body of our taps is solid brass, resistant to corrosion and neutral for drinking water in accordance with the German Drinking Water Ordinance (TrinkwV), endorsed by the German Environment Agency (Umweltbundesamt – UBA).

It is the standard that is included in the "European Acceptance System (EAS)" and the "4MS-Harmonized Composition List of Accepted Metallic Materials", harmonized system of Germany, France, the Netherlands and the United Kingdom of hygienic evaluation of products in contact with drinking water. Not being mandatory in Spain, our commitment to quality makes us assimilate the most demanding market standards.

The brass used in our products it follows the German Environment Agency (Umweltbundesamt – UBA), as it is stated in the 4MS (*) Common approach document for METALLIC MATERIALS USED FOR PRODUCTS IN CONTACT WITH DRINKING WATER.

With the aim to reduce to the maximum the % of Pb and Ni in the alloys, the used brass alloys are:

Brass CC757S / CuZn39Pb2Al-C for the casting/foundry parts.

<table>
<thead>
<tr>
<th>Product Code</th>
<th>EN Symbol</th>
<th>ASTM</th>
<th>Cu</th>
<th>Zn</th>
<th>Pb</th>
<th>Sn</th>
<th>Fe</th>
<th>Ni</th>
<th>Al</th>
<th>Mn</th>
<th>Si</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Pressure Ingot CC757S</td>
<td>CuZn39Pb2Al-C</td>
<td>C85700</td>
<td>Min %</td>
<td>58,0</td>
<td>Rem.</td>
<td>0,2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0,3</td>
<td>-</td>
</tr>
<tr>
<td>Max %</td>
<td>63,0</td>
<td>Rem.</td>
<td>1,4</td>
<td>0,5</td>
<td>0,3</td>
<td>0,2</td>
<td>0,9</td>
<td>0,05</td>
<td>0,05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each of the other elements< 0,02 %

Brass CW617N / CuZn40Pb2 for the bar machined parts.

<table>
<thead>
<tr>
<th>Product Code</th>
<th>EN Symbol</th>
<th>EN No</th>
<th>ASTM</th>
<th>Cu</th>
<th>Zn</th>
<th>Pb</th>
<th>Sn</th>
<th>Fe</th>
<th>Ni</th>
<th>Al</th>
<th>Si</th>
<th>Others Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>S617</td>
<td>CuZn40Pb2</td>
<td>CW617N</td>
<td>C38000</td>
<td>Min %</td>
<td>57,0</td>
<td>Rem.</td>
<td>1,6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Max %</td>
<td>59,0</td>
<td>Rem.</td>
<td>2,5</td>
<td>0,3</td>
<td>0,3</td>
<td>0,3</td>
<td>0,05</td>
<td>-</td>
<td>0,2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(*) S617DW</td>
<td>CuZn40Pb2-DW</td>
<td>CW617N-DW</td>
<td>C38000</td>
<td>Min %</td>
<td>57,0</td>
<td>Rem.</td>
<td>1,6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Max %</td>
<td>59,0</td>
<td>Rem.</td>
<td>2,2</td>
<td>0,3</td>
<td>0,3</td>
<td>0,1</td>
<td>0,05</td>
<td>0,03</td>
<td>0,2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*)Each of the other elements< 0,02 %
Chrome finishing

Chrome thickness
Cr 0.25-0.3um, Ni 10-13um
In compliance with "EN 248: Sanitary fittings, general technical specifications of Ni-Cr electrolytic coatings".

Test of corrosion resistance
EN ISO 9227 – Test with neutral salty fog
The surface must withstand a laboratory test consisting of spraying salt spray (5% sodium chloride in demineralized water) for more than 200 hours without any defects. They make it possible to simulate, in a comparable way, the effort caused by natural environmental conditions.

Non-direct relationship between thickness and resistance

How do I clean my faucet?
Among several existing options, the simplest and most effective is to use a solution of vinegar with water and rub gently with a cloth or disposable wipe. If the lime stains are very visible we can even use a natural lemon.

La superficie cromada es vulnerable a ...
Hydrochloric acid (contained in some aggressive cleaning products) and methane gas (CH4), comes from drains.
Borras Quality standards

Ceramic cartridge : General points (I)

1. A single-lever mixer is a type of stopcock for running water with a single control that performs both flow regulation and mixing hot and cold water.
2. A simple operation reproduces the movement of the handle of the faucet, adjusting the position of the exit holes with respect to the water supply (cold and hot), which is mixed inside the mechanism before leaving the tap.
Borras Quality standards

Ceramic cartridge: General points (II)

The cartridge is the centerpiece of each single lever and is where the ceramic discs (96% Al2O3) slide on each other. The polished mirror surface of the discs is coated with industrial lubricant for a friction-free performance.

**Pressure test**

Pneumatic: 6 bar

Endurance test: 70,000 cycles in compliance with EN-817 and NF-077, 350,000 cycles in compliance with ASME A112.18.1

Breaking pressure: 40-50 bar

Water hammer (NF-077): 100 cycles

A water hammer is created by stopping and/or starting a liquid flow suddenly.
Borras Quality standards

Ceramic cartridge : 2 steps opening

Water saving

The user can decide to open the tap at its first stop, which limits the flow by 50% (4-7 l / min), or at its second stop, allowing 100% of the water flow.

You can save 50% of water consumption with the two-step system

The system allows both positions to work within the standards during the life of the product. Open (step) 4-9 Nm / 3-9 Nm after 30,000 cycles according to EN-817.

Step 1 : 4-7 l/min
Step 2 : 100% flow
The normal mixer cartridge is opened in the intermediate position, opens the mixed water and ignites the water heater.

**With the Cold opening ceramic cartridge**, when the tap is opened with the lever in the central position, only cold water will come out, so the water heater will not start up unnecessarily, and therefore there will be an energy saving. When hot water is needed we will have to turn the handle to the left until obtaining mixed water, turning completely will leave 100% hot.

**Energy saving**

---

**Borras Quality standards**

**Ceramic cartridge : Cold opening**

---

HOT POSITION  MIXER POSITION  MIDDLE POSITION  COLD POSITION

- Max. 55º - full hot water
- Output warm water
- Open – only cold water
- Max. 25º - full cold water
The thermostatic mixer self-regulates the different pressures / flow rate and water temperature while the tap is on. It is the advantage of the thermostatic mixer compared to the single-lever mixer. Main attributes:

- **Stable**: Temperature remains constant
- **Comfortable**: Temperature changes automatically compensated
- **Safer**: If the cold water supply is interrupted, the cartridge does not let hot water pass immediately and prevents burns (standard EN 1111)
- **Accurate**: Faucets calibrated at 38 °C in a more accurate way

Complies with:

- France
- Germany
- Australia
- USA
- United Kingdom

v18.6
Borras Quality standards

Thermostatic cartridge : General points (II)

Components

A. Wheel
B. Frame
C. Cartridge
D. Ring
E. Wheel

Double safety stop for thermostatic mixers. Device that avoids temperatures higher than 38°C involuntarily. The user must press the button to achieve temperatures of up to 45°C. Ideal for child safety. The thermostatic cartridge is manufactured with a technology that, in case the cold water supply is interrupted, prevents the hot water from escaping to avoid possible burns.
Guaranteed safety thanks to the new internal structure of the mixers with the Cool Touch technology, ensures that the chrome surface always remains comfortable to the touch.

This innovation allows the creation of a barrier between the hot water and the surface thanks to a cold water chamber to prevent burns.

Thanks to this new technology, the entire surface of Thermo DFW models never exceeds the water temperature, so there is no risk of burning with a hot chrome surface which is very beneficial especially for homes with small children.
The key to water efficiency is to reduce waste, not restrict use. Changes in user behavior can save water along with the installation of water-efficient bath products that will save water and energy.

1. **Inner PEX tube**  _Resists a wide range of temperatures (from freezing to 110 °C), retains flexibility in very low temperature conditions and has less chance of damage than rigid pipe, but is not freeze proof, has better thermal properties than copper for lower loss of heat, flat interior surface._

2. **Easy to install**  _The mechanical connections are screwed. The cross-linked polyethylene is easily folded to fit into corners and make other changes of direction. It is economical and quieter than the rigid tube. It is compatible with copper, PVC or iron systems if the appropriate transition joints are used._

---

How much do our flexible hoses as a spare part resist?

Resist 130 bars of pressure without any defect according to EN 13618 standard.

---

1. **PEX** = _cross-linked polyethylene_
Aerator

**Water saving**

The aerators are used practically in all tapware.

A. **Savings in water and energy costs.** Aerators with flow limiters where, thanks to the measurement of the flow hole, this is limited so that it corresponds to a defined value. The flow restrictors have a low flow at low pressure, while at high pressure the thick flow is higher than necessary.

B. **Sensation of abundance of water.** Also if the water flow is lower, the comfort is not altered, in fact, the water is mixed with an added amount of air. Therefore, the jet is full, round, splash-free and comfortable.

C. **Defined forms of the water jet**

D. **Reduction of tap noises**

**Why do they have rubber holes?** So they can be cleaned with your finger. The holes can be covered with lime and increase the internal pressure of the sprayer, causing overpressure and a leak.
**Aerator : PERLATOR® Coin Slot (CS)**

**Borras Quality standards**

**PERFECT JET QUALITY**: The HONEYCOMB® structure enables a perfect jet pattern

**KEYLESS**: Integrated slot that allows you to screw and unscrew simply with a coin

**WITHOUT BRASS**: Usable aerator without brass ring and without key in the taps with M24 × 1 thread

**REDUCED HEIGHT**: Fully compatible with existing M24 × 1 aerators

**DRIP CHASE**: Fully integrated and prevents dripping along the faucet

Not suitable for devices without pressure

Flow class ~5.0 l / min

Complies with UNE-EN 246:2004 for aerators
Borras Quality standards

Other mechanical parts: diverter

Water saving

The inverter of the shower bath recovers the position with low pressure:

According to norm EN 817, it recovers the initial position at a pressure lower than 0.5 bar.

Built-in anti-return valve and flow stabilizer:

The anti-return valve protects the faucet and the installation system from the unwanted reflux of dirty water with impurities from the pipe system.

It avoids cross flows, that the hot water can go to the cold water pipe and vice versa.

The flow stabilizer is manufactured with a pressure sensitive membrane, reducing water flow by up to 60%, contributing to energy savings and water consumption.
Borras Quality standards

Other mechanical parts: Handles  **Eco friendly**

Manufactured in Zamak, support 200,000 maneuvers without defects (standard EN 200)

Zamak is an alloy that has hardness, high tensile strength and density.

**Eco compatibility**

Precision fusions become metallic components that, by virtue of their eco-compatibility, versatility and low resistance to high temperatures, lend themselves to a wide range of uses, all from the full respect for the environment.
Acrylonitrile butadiene styrene or ABS (> ABS <) is a very impact resistant plastic (bumps) widely used in automotive as well as domestic and industrial uses.

Hand shower and wall brackets are made of ABS plastic, resistant to high temperature and easy to clean. The shower heads have rubber holes so that they can be cleaned with the finger, otherwise, the holes can be covered with lime and, as a result, they can increase the internal pressure of the sprayer, reaching an overpressure and a leak.

How much do flexible shower hoses withstand?

The flexible hoses for shower are manufactured under the UNE 1113 standard, resist 500N traction for 60s without showing any defect. The quality of the elastomer (PVC) determines the aging of the product and, therefore, its performance under pressure.
Borras Quality standards

Complements : Shower columns

A. Stainless steel telescopic column for shower Ø 20 mm

B. Stainless steel telescopic column for shower 20 x 20 mm

- Inverter for columns, metallic interior and glossy chrome finish
- ¾ “ output to column + ½" output to flexible hoses for thermostatic taps
- ½ “ output to column + ½" output to flexible hoses for single lever
- Chrome-plated 1.7 m long flexible hose
- Round or square plastic ABS hand shower according to shower faucet design
- Metal column wall bracket
- Chromed Ø 200 mm and 200 x 200 mm ABS shower head with ball joint
Borras Quality standards

Accessories

One and three positions Hand showers in plastic ABS

Concealed brass shower arms and bathtub spouts

Anti-calcareous ABS 200 mm and INOX 300 and 400 mm shower heads with ball joint

Articulated shower supports in ABS and Zamak plastic, fixed supports in ABS plastic, articulated brass supports with water inlet

Sliding bars of different diameters in stainless steel AISI 316 and sliding support for hand shower in ABS plastic

Why do sprinklers have rubber holes?

For easy cleaning, otherwise, the holes can be covered with lime and can increase the internal pressure of the sprayer, reaching an overpressure and a leak.
BORRAS SALES TOOLS
DOING BUSINESS WITH BORRAS

Version 18.5

Edited by GRIFERIAS ANTONIO BORRAS, S.L.
B08317463

Images contained in this document might not correspond to reality
Sales Tools

**Company website**  [http://www.griferiasborras.com/](http://www.griferiasborras.com/)

It is the tool, constantly updated, that we offer to guide your decision process, navigable in an efficient way through our 24 mixers series.

We provide HD product photographs, product technical drawings and the most up-to-date versions of our general catalog for download in Acrobat Reader .pdf file.
Currently under the direction of the family's’ third generation, constant launching of new product is necessary to adapt the company to the new market trends.

Every year we publish our general catalog, 149 pages on heavyweight paper and quality photographs to facilitate your purchase process, where we include the almost 400 references that make up our offer. To make the tool more complete, you can find in addition to the product photographs, environment photographs and technical drawings with the included dimensions.

- Series in chrome finish
- Series in other finishes
- Kitchen faucets
- Special taps
- Accessories

Price ranges
Sales Tools

Kitchen catalogue

We compiled our 51 references of kitchen faucets in this 25-page special kitchen catalog, completing the references belonging to the bathroom series with designs designed exclusively for these domestic spaces.

The full color photos are accompanied by high quality environment photos and technical drawings, always with the detailed dimensions.
Contact
GRIFERIAS ANTONIO BORRAS S.L.

Gall 7
08950 Esplugues de Llobregat - Barcelona (Spain)

Tel. +34 933712368
Fax +34 933719646

comercial@griferiasborras.com
export@griferiasborras.com

www.griferiasborras.com