COBRA TECHNICAL
PRODUCT CATALOGUE

FLUSHVALVES

COBRA

2018 | 2019

INTRODUCTION

Cobra is an iconic South African brand with a history of more than 60 years in the supply and manufacturing of plumbers' brassware in the country. Our technical range of products are designed and engineered to perform to perfection and provide a care free installation to the Plumber and DIY enthusiast.

Our products are manufactured in South Africa using top of the range, latest technology in our world class facilities. In order to ensure we remain renowned for our quality and durability, we use the highest quality materials suitable to outlast hash water and environmental conditions. Now 100% owned by LIXIL, we have access to the knowledge, capabilities and product platforms of the biggest and most innovative sanitary ware company in the world. This, combined with a wealth of local industry knowledge, experience and skills, will ensure we continue to make a significant impact in the industry.

We are entering into a new era for Cobra. It is one which promises innovative new products for both the professional and end user, ensuring we remain the brand you trust.

I would like to take this opportunity to thank all our customers, who have played an integral role in building our brand and look forward to continuing our success story with you.

Yours sincerely
Natie van der Westhuizen
Chief Operations Officer, LIXIL Africa

ABOUT US

Cobra is the tried-and-tested, much-loved South African brand that plumbers and plumbing merchants rely on for its extensive range of plumbing hardware. The comprehensive range includes compression fittings, wastes and traps, flush valves and pressure control valves amongst others.

With over 60 years of expertise, we have made a name for ourselves as the market leader in plumbing fittings. This, along with our unwavering commitment to produce the best quality products that adhere to the highest independent standards, ensures that our products boast state-of-the-art global appeal.

Cobra is truly a South African icon that continues to leave a lasting impression.

ORGANISATIONAL TIMELINE

1880

1873
Carl Nestler, the technological leader for thermostats was founded

1940

1943
Vaal Pottery started off by manufacturing ornaments, ashtrays and crockery

1946
Vaal Sanitaryware started manufacturing sanware

1936
Friderich Grohe buys Berkenhoff & Paschedag

1948
B&P was renamed after Friedrich Grohe Armaturenfabrik

1950

1950
Friedrich Grohe infiltrated the South African market

1951
Made by Friedrich Grohe
Crutch

1960

1956
GROHE acquires Carl Nestler, creating the subsidiary GROHE Thermostat GmbH

1961
GROHE expands internationally

1964
First Pressure Reducing Valve launched in South Africa
Ovent

1967
First Pressure Control Valve (PCV) launched in South Africa
Closy Slim

1969
Closy PCV as
know it today
Closy Slim P

1971
Day-Nite Plastics was renamed as Plexicor and started producing acrylic bathroom fittings - leading to the production of baths in **1974**

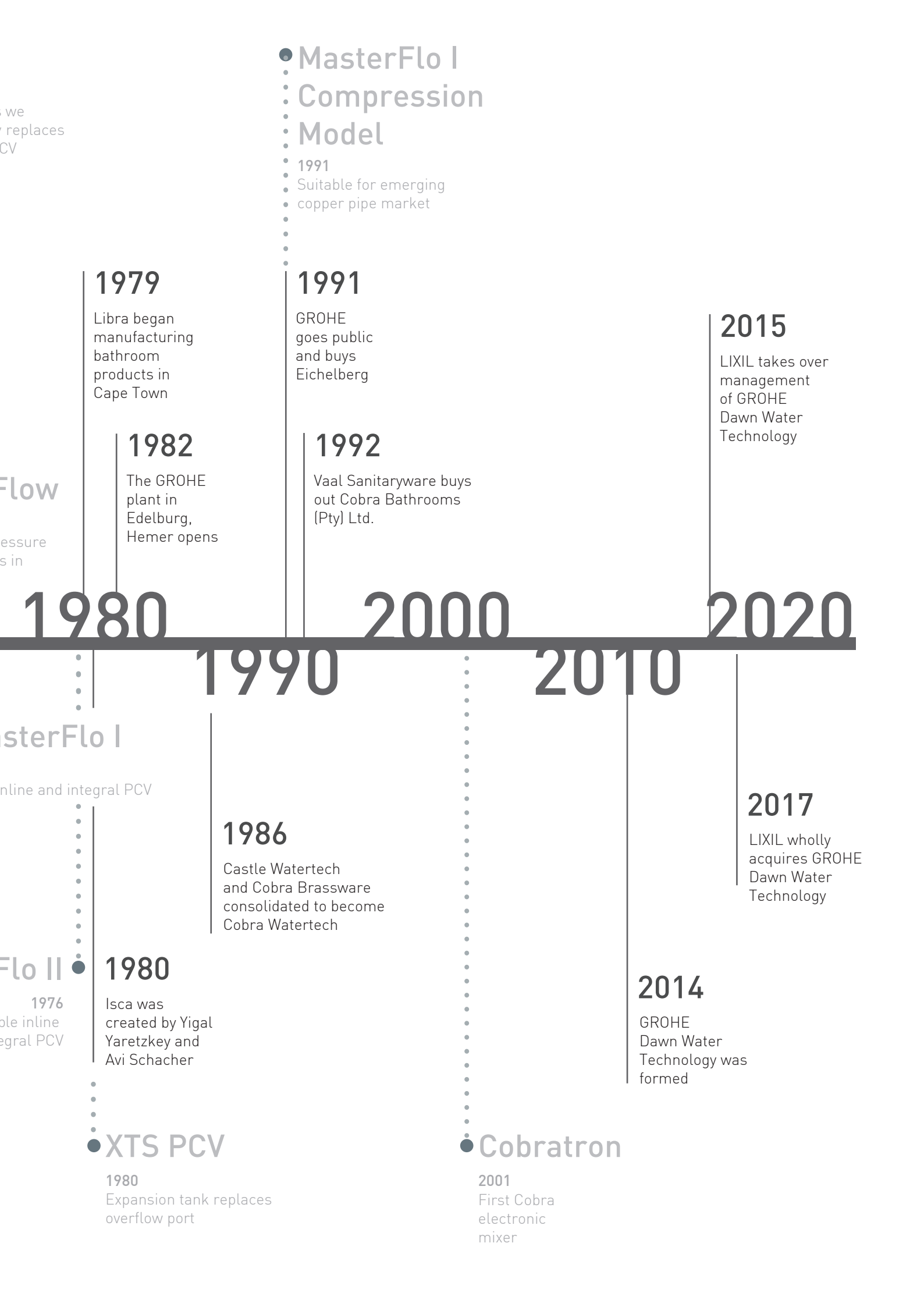
1970
First High Pr
PCV launche
South Africa
Kwik F

1970

Early 60's
British company Pegler, SANBRA, McKechnies & GROHE amalgamate to form Consolidated Brass Foundries (Cobra)

1973
First i
Ma

MasterF
Easily servicab
inte


MasterFlo I Compression Model
1991
Suitable for emerging copper pipe market
1979
Libra began manufacturing bathroom products in Cape Town
1991
GROHE goes public and buys Eichelberg
2015
LIXIL takes over management of GROHE Dawn Water Technology
1982
The GROHE plant in Edelburg, Hemer opens
1992
Vaal Sanitaryware buys out Cobra Bathrooms (Pty) Ltd.
1980
1990
2000
2010
2020
1986
Castle Watertech and Cobra Brassware consolidated to become Cobra Watertech
2017
LIXIL wholly acquires GROHE Dawn Water Technology
1980
Isca was created by Yigal Yaretzkey and Avi Schacher
2014
GROHE Dawn Water Technology was formed
XTS PCV
1980
Expansion tank replaces overflow port
Cobratron
2001
First Cobra electronic mixer


COBRA

WHY COBRA

- Established in 1954 by Frederich Grohe – 63 years of local experience & expertise.
- Our factory quality management systems are ISO 9001 certified.
- We hold permits to apply the SABS mark to products covered by the following South African National Standards.*
- Eco-friendly manufacturing plant.
- Providing jobs for 1 700 employees.
- 10 years genuine warranty support.
- National after-sales service support by qualified plumbers (on-site repair or replacement within 48 hours). Local call centre 0861 21 21 21.
- Recipients of the 2016 Customer Service Award of the Year from SEIFSA (Steel & Engineering Industries Federation of South Africa).
- Made in RSA & developed for African conditions ensuring product longevity against the presence of lead & nickel (DZR brass).
- Spares & parts widely available.
- Backing of two global giants (GROHE & LIXIL).
- Our products come standard with water saving technology.
- Local marketing support & investment to drive sell-through (promoters, activations etc.).
- Local training support for your teams.
- Tried & quality-proven local exclusive ranges on offer.
- Our products have a global footprint.

*SANS Standards

SANS 198	Functional control and safety valves
SANS 226 classes 1 and 2	Screw-down taps and mixers, basin, bath and shower sets
SANS 752	Float valves
SANS 776	Gate valves
SANS 1056	Ball cocks
SANS 1067- Part 1	Compression fittings
SANS 1067- Part II	Capillary fittings
SANS 1240	Automatic shut-off valves
SANS 1480	Single lever mixers
SANS 1808 – 9	Metering taps
SANS 1808 – 10	Spring-loaded check valves
SANS 1808 – 53	Drain cocks
SANS 1808 – 58	In-line strainers
SANS 1808 – 66	Demand taps
SANS 21003 Cobra	Multilayer Piping Systems for hot and cold water-installations inside buildings; pipes (MLP).

OUR EXPERTISE

Customer Service and Spares

At Cobra, we are renowned for our after-sales service and availability of spares, affording our customers peace of mind. Our service team was recipient of the 2016 Customer Service Award of the Year from the Steel & Engineering Industries Federation of South Africa (SEIFSA). Our dedicated national after-sales service number (0861 21 21 21) enables customers to speak directly to a service consultant for over-the-phone advice or to book a service call for a consultant to personally visit the site in question. We are committed to attending to our customers' calls within 24 hours.

Quality/Certifications

Quality remains one of the key pillars of continuous improvement. At Cobra, our people are continually coached to ensure they adhere to our quality principles and observe correct procedures.

Our quality management systems at our manufacturing facilities in Krugersdorp and Springs are SABS ISO 9001 certified.

Our technical products are produced and tested to meet in-house standards. Where there is a South African standard in place, such as the South Africa National Standard (SANS) by the South Africa Bureau of Standards (SABS), our products are tested and certified to ensure they conform.

Selected Cobra products are also Joint Acceptance Scheme for Water Installation Components (Jaswic) approved and listed, which means they are accepted for use by municipal bodies.

STATE OF THE ART FACILITIES

Our Factories

With ongoing investment into our factories, we will continue to produce world-class products using the latest plant equipment and technologies.

This improved efficiency allows Cobra to stay consistently abreast of international trends.

Water Saving

Cobra offers an extensive range of water saving products that are sophisticated in both design and function. This includes electronic taps and mixers, metered and demand taps, water saving shower heads, pressure reducing valves and toilet flush mechanisms.

Our research teams constantly investigate ways in which to improve the water efficiency of our products and we often develop specific technologies to complement the existing systems where critical consumption management is required.

AERATORS

A major function of Cobra aerators is anti-splash. The increased surface area of aerated water ensures this by breaking down the surface tension of the water stream. This results in a dramatic decrease of splashing, keeping tiles dry and cupboards under basins free of mould.

Aerators save water. Air bubbles in the stream displace water and a tap fitted with an aerator delivers less water on full flow than the same tap with the aerator removed. In addition, the reduced water usage of aerated taps means energy is saved when producing hot water.

Cobra aerators also control stream straightness and diameter and meet the requirements of European standard EN 246. Their noise level is less than 15 db (A) at 3 bar (43.5 PSI).

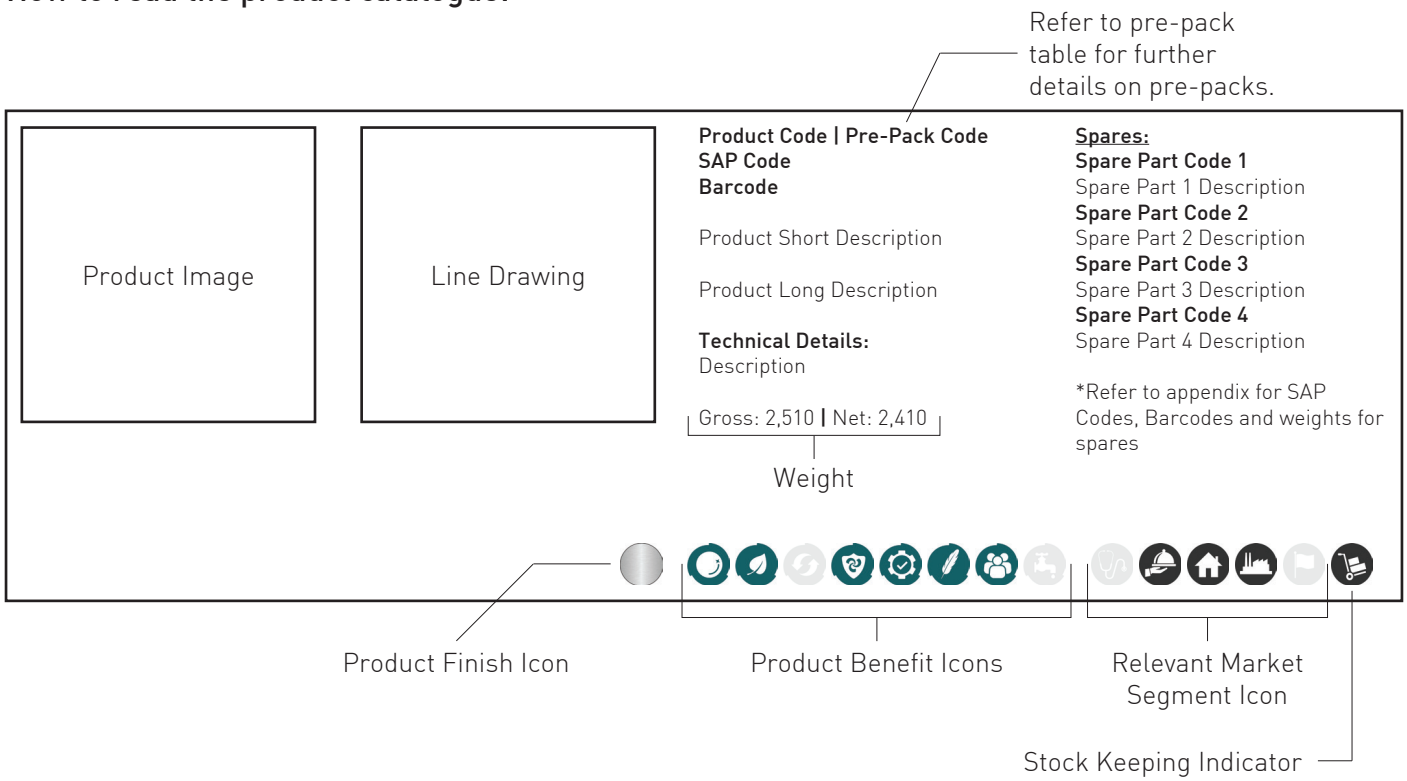
Lime build-up in and on aerators reduces air intake and water outlet, thereby reducing aeration, resulting in splashing and loss of water stream shape. Lime build-up also supports the growth of bacteria. Cobra aerators are manufactured from a polymer that resists lime build-up.

GLOSSARY + GUIDELINE TABLE

Products bearing this mark have met all requirements of the relevant South African National Standards (SANS) standard and have been certified by the South African Bureau of Standards (SABS).

Products bearing this mark were manufactured and/or assembled in manufacturing facilities where the quality management systems have been SABS ISO 9001 certified.

How to read the product catalogue:



Product Finish:

- **Chrome**
- **Rough chrome**
- **White**
- **Brass**
- **Black**

Some of our Cobra Technical products are finished with our Cobra PureShine chrome finish. SANS requires a chrome plate thickness of 0.3 microns (µm) to reduce wear on the product. Cobra chrome plating exceeds this with an average thickness of 0.44µm, while the electroplated nickel substrate on our products exceeds the statutory 12µm with an average of 13.75µm.

Ultimately, users can be assured that Cobra chrome plated products offer superior wear resistance. The below icons indicate the colour of the corresponding product in the catalogue section of this book.

Product Features and Benefits:

Cobra products are produced to offer maximum added value to customers. The figure below shows the various features and benefits of our product portfolio.

In the catalogue section of this book, the features attributed to each product are denoted by the relevant icon.

PureShine

Durable chrome surfaces protect the products from scratches, are resistant to dirt and easy to maintain.

EcoMind

Save precious resources with water-saving technology.

Flow restrictors supplied with Cobra taps and mixers can be easily serviced by home owners. The restrictors are pressure compensating, meaning the stipulated flow will not be exceeded, regardless of inlet pressure.

EasySwitch

For a fresh look, change out the head of your tap without changing the body.

The handle assembly can be removed from Cobra screw down type taps. Depending on the type of headpart used in the tap (½" light pattern, ½" heavy pattern or ¾"), various designs of Cobra handle assemblies can be used to replace the old design.

Dezincification resistant brass (DR/DZR brass)

Dezincification relates to the corrosion of brass. The minimisation of this is a critical aspect of the quality (fitness for purpose) of plumbing fittings that come into contact with water. The risk and rate of dezincification increases with water hardness and the acidity or alkalinity of water (away from a PH of 7).

Dezincification-resistant brass, or DZR/DR brass, is brass that is characterised by exceptional resistance to this type of corrosion. The resistance is achieved by adherence to exacting specifications for chemical composition and careful process controls. All DZR brass must pass an ISO 6509 dezincification resistance laboratory test.

In South Africa, the use of DZR brass for components of brass plumber's fittings come into contact with water is national law. Building inspectors are being trained to demand the removal of plumber's brassware that does not conform to statutory law.

FeatherTouch

The lightest of touches is required for effortless opening and closing of the single lever mixer.

TeamAssist

Trained and dedicated service teams are in place to provide support pre and post installation.

Cobra Genuine

Genuine spare parts are locally made and readily available.

Low Water Pressure

Suitable for use in environments with low water pressure.

Product Market Segments:

Cobra products are produced to satisfy the needs of a variety of market segments or project types.
The below shows the various market segments serviced by the Cobra product portfolio.

In the catalogue section of this book, the appropriate market segments attributed to each product are denoted by the relevant icon.

Health Facilities

This segment includes public and private hospitals, clinics, frail care facilities, veterinary hospitals and doctors' rooms.

Residential

This includes high, medium and entry-level housing.

Government

This segment includes the Department of Public Works and Department of Correctional Services; South African Police Services; Departments of Human Settlements, Health, Basic Education; Department of Higher Education and Training; Department of Defence; Department of Rural Development; South African Revenue Services; Department of Sport and Recreation and the Department of Transport.

Hospitality

This segment includes hotels, guest houses, guest lodges, inns, self-catering lodges and convention centres.

Commercial or Industrial

Included in this segment is office buildings, petrol garages, warehouses, factories, shopping centres, shopping malls, retail outlets, sports facilities and distribution centres.

Stock Keeping Policy:

The LIXIL stock keeping policy differentiates between products where stock is stored in distribution centres for future sales and products that are either made, assembled or purchased according to customer order.

Stock Keeping Items

• These products have been identified as part of the brand's core range where it has proved beneficial for stock to be stored in order to fulfil orders.

• Sales forecast quantities for these items are put together monthly by the LIXIL sales team and stock is produced, assembled or ordered in in advance according to these forecasts as well as any expected new business or promotional activity.

• The primary objective of this policy is quicker stock delivery times to customers as there would already be stock on hand available to be delivered.

Make to Order Items

• These products have infrequent order patterns and are not part of the brand's core ranges. Keeping stock of these items often adds complexity and higher costs to the supply chain process.

• Products and/or parts are only produced or ordered when a customer order has been received.

• Although this may add time to the expected delivery date, the cost savings we achieve by not holding stock of these items allows us to offer other benefits to customers, such as reduced pricing and marketing campaigns.

PRODUCT CARE & MAINTENANCE

Cleaning

To maintain the lustre of chrome plated surfaces simply wipe occasionally with a soft damp cloth using a mild dishwashing detergent or soap solution. Rinse, dry and buff with a soft cloth.

Warning!

Many household and industrial cleaners contain abrasives and/or harsh chemical compounds and acids. Do not use these cleaners as they may irreparably discolour, dissolve or scuff the chrome plated finish.
Avoid using abrasive cloths or scouring pads.

Maintenance

The frequency and extent of maintenance required for this product varies according to prevailing site and operational conditions. No regular maintenance is required and spare parts are available for key components.

LIXIL Africa Service Call Centre:	0861 21 21 21
LIXIL Africa Service E-Mail:	service.africa@lixil.com
LIXIL Website:	www.lixil.co.za

WARRANTY

LIXIL Africa warrants that their products will be clear of material and manufacturing defects. Appraisal of the above will be done against ruling manufacturing specifications and standards at the date of manufacture. Defective product will be repaired or exchanged at LIXIL Africa's sole discretion. LIXIL Africa shall not be liable for indirect or consequential loss or damage.

THE WARRANTY WILL BE VOIDED UNDER THE FOLLOWING CONDITIONS:

- Products used with water pH falling outside of the guidelines set by the Department Of Water Affairs and Forestry or similar body.
- Products not installed by a registered or accredited installer.
- Products used with, or included in, installations where water temperatures are outside of the temperature range stipulated for that product, or as laid down in the standards for water supply and drainage (SANS 10252 & 10254) or an equivalent international standard.
- Products not installed according to manufacturer's installation instructions or according to valid Water Regulations and general good plumbing practice.
- Products which have failed as a result of dirt or debris in pipe-work which has not been flushed prior to the use of terminal fittings.
- Where a defect is attributable to the incorrect use or incorrect handling of the product.
- Where routine maintenance has been neglected.
- If spare parts other than the original spare parts are used during repairs or maintenance of the product.
- If damage was caused by transport by a third party transporter.
- If the surface of the product has been scratched.
- Products used or intended for display purposes.
- If consumables (e.g. filters, filter cartridges, aerators or batteries) or material subject to wear and tear (such as seals or hoses) are affected.
- If product damage is as a result of chemicals and cleaning agents, lime-scale build-up, aggressive environmental influences, or disruptions resulting in damage which are caused by freezing or lime-scale build-up.
- If the defect is caused by specific environmental circumstances (e.g. excess or negative pressure in the line, excess voltage or under voltage on the line).
- If the defect is attributable to wilful or negligent damage to the product by the user or a third party.

LIXIL Africa reserves the right to review any specific case in order to assess the validity of this warranty. LIXIL Africa may charge a discretionary service fee when called out to inspect products which are not LIXIL products or where there is an illegitimate claim.

THE WARRANTY IS VALID FOR:

- 10 years Taps & Mixers, Wastes, Capillary- and Compression fittings
- 3 years Showerheads
- 2 years Electronic Mixers components and Valves
- 2 years Valves (Geyser and Toilet)
- 10 years Cobra-Safe multi-layer pipe system (must be used with Cobra compression fittings and Cobra-Safe inserts or warranty shall be void)
- **10 years** all baths, shower trays and vanities, except Tanya, Widestar and Scarlett baths which carry a 5 year warranty
- 20 years on baths with Amanzonite coating
- 10 years on all sanitaryware
- 6 months on all toilet seats supplied by Vaal Sanitaryware

MISCELLANEOUS:

This warranty shall apply in the above-mentioned scope and is subject to the above-mentioned prerequisites. Proof of purchase will be required.

This LIXIL Africa warranty is carried by LIXIL Africa. Please contact our Service Department on 0861 21 21 21 for warranty enquiries or further warranty information.

FLUSH
VALVES

01

FEATURES & BENEFITS

Junior Flushmaster Flush valves:

- Traditional tried-and-tested flush valves.
- Constant flush volume saves water.
- Diaphragm operation for long functional life and low maintenance cost.
- Non-hold open feature- cannot be MADE to waste water.
- ¾" "Ball-o-stop" control inlet; water can be shut out off at the valve for servicing.
- Flush volume and flow rate can be adjusted.
- Each valve is factory tested to 2,000kPa.
- Robust metal construction renders Junior Flushmaster valves vandal-resistant.
- All components are made from specially selected materials to ensure durability.
- Size allows for space-saving, compact installations.
- Flush time is pre-set to ensure an optimum flush and water saving.
- Hygienic and easy to clean.
- Should you require replacement components, even after many years, you are assured of availability of components or sub -assemblies to ensure continued operations of your Cobra fittings.
- Manufactured from corrosion resistant DZR brass.

Slimline Junior Flushmaster Flush valves:

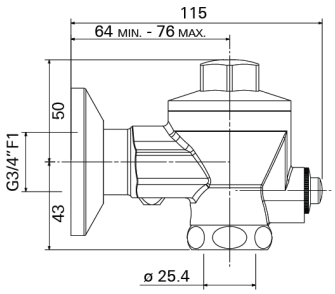
- Modern minimalistic design well-suited to upmarket public wash rooms.
- Constant flush volume saves water.
- Diaphragm operation for long functional life and low maintenance cost.
- Non-hold open feature- cannot be MADE to waste water.
- ¾" "Ball-o-stop" control inlet; water can be shut out off at the valve for servicing.
- Each valve is factory tested to 2,000kPa.
- Robust metal construction renders Slimline Junior Flushmaster valves vandal resistant.
- All components are made from specially selected materials to ensure durability.
- Flush time is pre-set to ensure an optimum flush and water saving.
- Hygienic and easy to clean.
- Manufactured from corrosion resistant DZR brass.
- Should you require replacement components, even after many years, you are assured of availability of components or sub -assemblies to ensure continued operations of your Cobra fittings.

Standard Flushmaster flush valves:

- Traditional tried-and-tested flush valves.
- Constant flush volume saves water.
- Each valve is factory tested to 2,000kPa.
- Robust metal construction renders Flushmaster valves vandal-resistant.
- All components are made from specially selected materials to ensure durability.
- Manufactured from corrosion resistant DZR brass.
- No cistern fill-up noise.
- Replaceable piston chamber (top cover assembly).
- Integral vacuum breaker prevents back-siphonage.
- Large inlet for optimum water flow.
- Flush volume and flow rate can be adjusted.
- Hard wearing piston body for long service life.
- Non-hold open feature- cannot be MADE to waste water.
- An inexpensive seal kit allows for complete overhaul if required.
- Should you require replacement components, even after many years, you are assured of availability of components or sub -assemblies to ensure continued operations of your Cobra fittings.

TOILET FLUSH VALVES

Junior Flushmaster Toilet Flush Valves



FJ2-000
FFUUSTFJ-0GT0173
6002194013129

Toilet flush valve

Exposed. Non-hold open feature. With wall flange, integral vacuum breaker, and 'Ball O Stop" control inlet. 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 150 - 500kPa for back entry WC pans: inlet flow pressure 200 - 500kPa for top entry WC pans: Maximum system pressure 600kPa.

Gross: 1,000 | Net: 0,955

Spares:
C-FL32X3
Wall flange
C-FJ8-10
Piston assembly
C-FJ8-20
Pushbutton assembly
C-FJC1-2
Flush valve top cover

FJ2-001
FFU1ST01-0GT0173
6002194021162

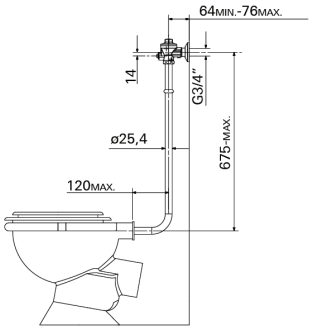
Toilet flush valve

Exposed. Non-hold open feature. With wall flange, integral vacuum breaker, and 'Ball O Stop" control inlet. 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 150 - 500kPa for back entry WC pans: inlet flow pressure 200 - 500kPa for top entry WC pans: Maximum system pressure 600kPa.

Gross: 1,100 | Net: 1,051

Spares:
C-FL32X3
Wall flange
C-FJ8-10
Piston assembly
C-FJ8-20
Pushbutton assembly
C-FJC1-2
Flush valve top cover



FJ2-100
FFUUSBFJ-0GT0173
6002194013150

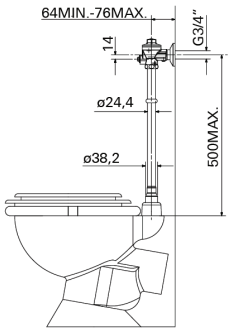
Toilet flush valve

Exposed back entry. Non-hold open feature. With wall flange, integral vacuum breaker, and "Ball O Stop" control inlet. Bent flushpipe with Rubber pan connector and seat buffer, 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 150 - 500kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 1,860 | Net: 1,786

Spares:
C-FJ8-10
Piston assembly
C-FJ8-20
Pushbutton assembly
C-FJC1-2
Flush valve top cover
FJT1-1
Flush pipe
C-FJV1-7
Rubber pan connector
C-FJV1-2
Rubber seat buffer



FJ2-210
FFUUSPFJ-0GT0173
6002194013167

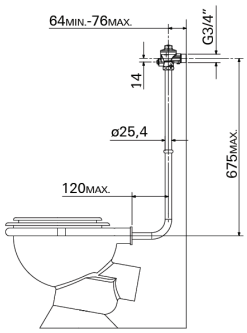
Toilet flush valve

Exposed top entry. Non-hold open feature. With wall flange, integral vacuum breaker, and "Ball O Stop" control inlet. Straight flushpipe with compression pan connector and seat buffer, 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 150 - 500kPa for back entry WC pans: Maximum system pressure 600kPa. 500mm Long flush pipe.

Gross: 2,000 | Net: 1,920

Spares:
C-FJ8-10
Piston assembly
C-FJ8-20
Pushbutton assembly
C-FJC1-2
Flush valve top cover
FJT1-2
Flush pipe
C-FJV1-2
Rubber seat buffer
C-FM8-20
Compression pan connector



FJ2-601
FFUUSEFJ-0GT0173
6002194013143

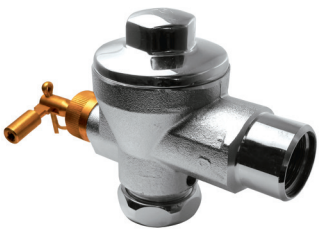
Toilet flush valve

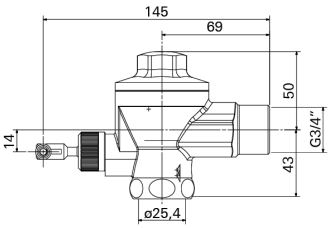
Exposed back entry. Non-hold open feature. With wall flange, integral vacuum breaker, and "Ball O Stop" control inlet. Bent flushpipe with Rubber pan connector and seat buffer, 3/4"BSP female iron connection end.

Techincal Details:
Recommended optimum design pressures: inlet flow pressure 150 - 500kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 1,517 | Net: 1,457

Spares:
FJT1-1
Flush pipe
C-FJV1-7
Rubber pan connector
C-FJV1-2
Rubber seat buffer
C-FJ8-10
Piston assembly
C-FJ8-20
Pushbutton assembly
C-FJC1-2
Flush valve top cover





FJ4-001
FFU2STFJ-0GT0173
6002194021193

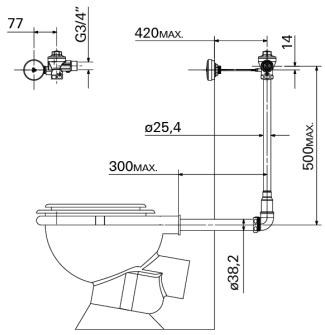
Toilet flush valve

Concealed. Non-hold open feature. With push rod captive linkage, integral vacuum breaker, and 'Ball O Stop" control inlet. 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 150 - 500kPa: Maximum system pressure 600kPa.

Gross: 1,106 | Net: 1,057

Spares:
C-FJ8-10
Piston assembly
C-FJC1-2
Flush valve top cover
C-FJ8-24
Captive linkage



FJ4-203
FFU4STFJ-0GT0173
6002194013181

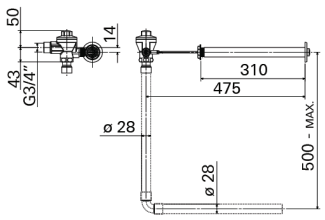
Toilet flush valve

Concealed back entry. Non-hold open feature. With integral vacuum breaker, and 'Ball O Stop" control inlet. Straight flushpipe with elbow, 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 150 - 500kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 2,880 | Net: 2,765

Spares:
FJT1-2
Flush pipe
FMT3-4CP
Flush pipe
C-FM8-45
Elbow connector
C-FM8-3
Rubber pan connector
C-KM9-14
Palm press pushbutton assembly with pushrod
C-FJ8-10
Piston assembly
C-FJC1-2
Flush valve top cover
C-FJ8-24
Captive linkage
C-FMR1-015
Pushrod



FJ4-203PR
FFU6STFJ-0GT0173
6002194015741

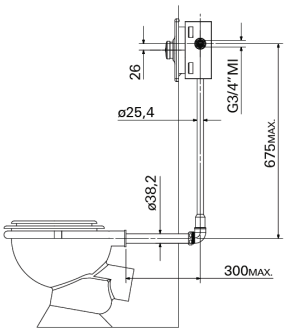
Toilet flush valve

Concealed back entry. Institutional version. Non-hold open feature. With integral vacuum breaker, and 'Ball O Stop" control inlet. Capillary reducing coupling outlet for 28mm copper flushpipes, "Through the wall"vandal resistant guide tube, pushrod and captive linkage, pushbutton assembly and rubber pan connector. 3/4"BSP female iron connection end. CP pushbutton assembly.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 150 - 500kPa: Maximum system pressure 600kPa.

Gross: 2,060 | Net: 1,978

Spares:
C-FJ8-10
Piston assembly
C-FJ8-20
Pushbutton assembly
C-FJC1-2
Flush valve top cover



KF4-213
FFU6STKF-0GT0174
6002194021636

Toilet flush valve

Concealed back entry. Non-hold open feature. With integral vacuum breaker, and 'Ball O Stop" control inlet. Junior econo flush master in a front access box with stainless steel face plate and chrome plated palm press pushbutton. With rough brass vertical and chrome plated horizontal flush pipes complete with pan connector. 1 1/4"BSP male iron connection end.

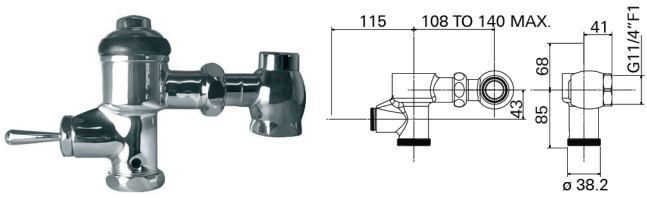
Technical Details:
Recommended optimum design pressures: inlet flow pressure 150 - 500kPa for back entry toilet pans: Maximum system pressure 600kPa.

Gross: 4,140 | Net: 4,016

Spares:
C-FJ8-10
Piston Assembly
C-FJC1-2
Flush valve top cover
C-KM9-16
Palm press button for front access box
C-FJ8-20
Pushbutton assembly
FJT1-2
Flush pipe
FMT3-4CP
Flush pipe
C-FM8-45
Elbow connector
C-FM8-3
Rubber pan connector

TOILET FLUSH VALVES

Standard Flushmaster Toilet Flush Valves



FM1-000
FFUUSTFM-0GT0174
6002194013037

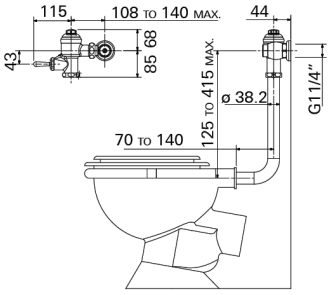
Toilet flush valve

Exposed. Non-hold open feature. With wall flange, integral vacuum breaker, and control stop with integral non-return valve inlet. Adjustable control stop to valve connection 108mm t0 140mm. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 2,460 | Net: 2,362

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FMC1-3
Control stop for Standard flushvalve
C-FM8-32
Control stop headpart
C-FMC1-5
Flush valve Handle
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



FM1-100
FFU1STFM-0GT0174
6002194013051

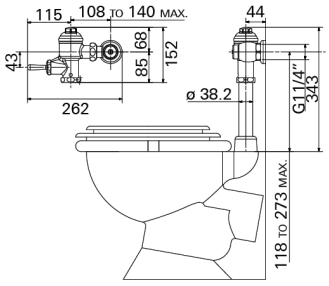
Toilet flush valve

Exposed back entry. Non-hold open feature. With wall flange, integral vacuum breaker, and control stop with integral non-return valve inlet. Adjustable control stop to valve connection 108mm t0 140mm. With bent flushpipe and rubber pan connector. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 2,920 | Net: 2,804

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FMC1-3
Control stop for Standard flushvalve
C-FM8-32
Control stop headpart
C-FMC1-5
Flush valve Handle
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



FM1-210
FFU2STFM-0GT0174
6002194013075

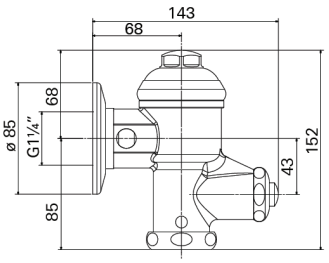
Toilet flush valve

Exposed top entry. Non-hold open feature. With wall flange, integral vacuum breaker, and control stop with integral non-return valve inlet. Adjustable control stop to valve connection 108mm t0 140mm. With straight flushpipe and compression pan connector. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 3,200 | Net: 3,104

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FMC1-3
Control stop for Standard flushvalve
C-FM8-32
Control stop headpart
C-FMC1-5
Flush valve Handle
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



FM2-000
FFU4STFM-0GT0174
6002194021292

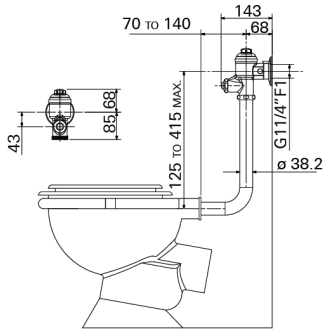
Toilet flush valve

Exposed top entry. Non-hold open feature. With wall flange, integral vacuum breaker, and butterfly control inlet. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 2,995 | Net: 2,876

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



FM2-100
FFUUSBFM-0GT0174
6002194013044

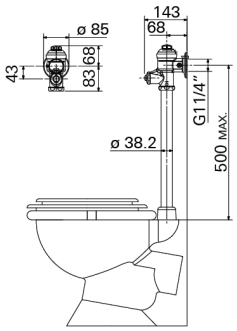
Toilet flush valve

Exposed back entry. Non-hold open feature. With wall flange, integral vacuum breaker, and butterfly control inlet. With bent flushpipe and rubber pan connector. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 2,385 | Net: 2,290

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



FM2-210
FFUUSPFM-0GT0174
6002194009092

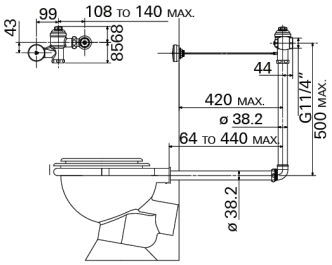
Toilet flush valve

Exposed top entry. Non-hold open feature. With wall flange, integral vacuum breaker, and butterfly control inlet. With straight flushpipe and compression pan connector. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 3,770 | Net: 3,657

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



FM3-402
FFU5STFM-7FT0174
6002194013068

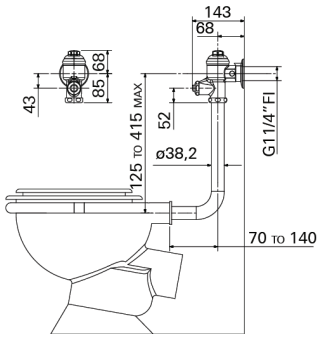
Toilet flush valve

Concealed back entry. Non-hold open feature. With integral vacuum breaker, and control stop with integral non-return valve inlet. Adjustable control stop to valve connection 108mm to 140mm. Straight vertical flushpipe RB, Elbow flushpipe conector, straight horizontal flushpipe CP, rubber pan connector. Palm press pushbutton assembly CP with pushrod and captive linkage. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 5,281 | Net: 5,123

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



KF1-104
FFU1STKF-0GT0174
6002194013105

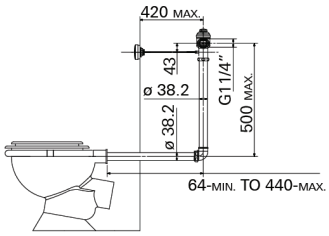
Toilet flush valve

Exposed back entry. Non-hold open feature. Econoflush with wall flange, integral vacuum breaker, and butterfly control inlet. With bent flushpipe and rubber pan connector. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 3,459 | Net: 3,356

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



KF3-402
FFU3STKF-7FT0174
6002194013099

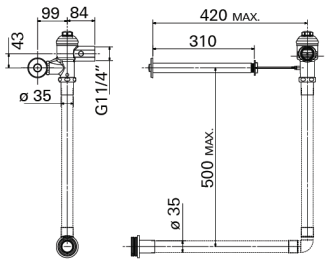
Toilet flush valve

Concealed back entry. Non-hold open feature. Econoflush with integral vacuum breaker and butterfly control inlet. Rough brass straight vertical flush pipe, elbow flush pipe connector, chrome plated straight horizontal flush pipe, rubber pan connector. Chrome plated palm press pushbutton assembly with pushrod and captive linkage. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 4,475 | Net: 4,341

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



KF3-402PR
FFU4STKF-0GT0174
6002194034056

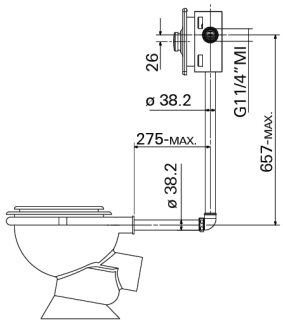
Toilet flush valve

Concealed back entry, institutional version. Non-hold open feature. Econoflush with integral vacuum breaker and butterfly control inlet. 2 x Straight couplings for 35mm copper pipes. Rubber pan connector. Chrome plated pushbutton assembly with "Thru-the-wall" vandal resistant guide tube pushrod and captive linkage. 1 1/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 2,885 | Net: 2,770

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit



KF3-412
FFU5STKF-0GT0174
6002194021629

Toilet flush valve

Concealed back entry with front access box comprising of galvanised steel underwall box with stainless steel face plate and chrome plated palm press button. Non-hold open feature. Econoflush with integral vacuum breaker and butterfly control inlet. 2 x rough brass flush pipes. Elbow flush pipe connector pre-soldered, rubber pan connector. 1 1/4"BSP female iron connection end.

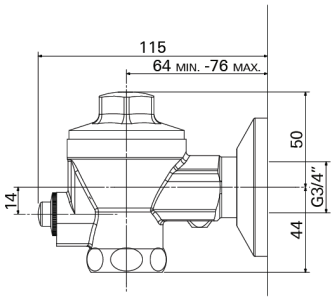
Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 300kPa for back entry WC pans: Maximum system pressure 600kPa.

Gross: 6,210 | Net: 6,055

Spares:
C-FMC1-2
Standard flushvalve top cover
C-FM8-30
Flush valve toilet piston
C-FM8-50
Standard flush valve service kit

URINAL FLUSH VALVES

Junior Flushmaster Urinal Flush Valves



FJ6-000
FFUUSUFJ-0GT0173
6002194013136

Urinal flush valve

Exposed. Non-hold open feature. With 'Ball O Stop" control inlet, wall flange, additional screw and piston for large bowl and stall urinals. 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 500kPa: Maximum system pressure 600kPa.

Gross: 1,000 | Net: 0,955

Spares:
C-FL32X3
Wall flange
C-FJ8-11
Piston assembly
C-FJC1-2
Flush valve top cover

FJ6-001
FFU1SUFJ-0GT0173
6002194021216

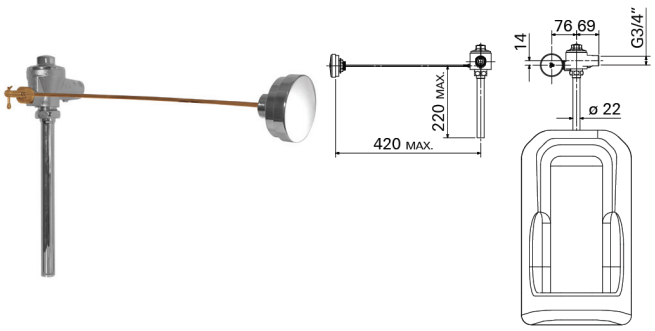
Urinal flush valve

Exposed. Non-hold open feature. Econoflush with 'Ball O Stop" control inlet, wall flange, additional screw and piston for large bowl and stall urinals. 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 500kPa: Maximum system pressure 600kPa.

Gross: 1,000 | Net: 0,955

Spares:
C-FL32X3
Wall flange
C-FJ8-11
Piston assembly
C-FJC1-2
Flush valve top cover



FJ8-102
FFU2SUFJ-0GT0173
6002194013174

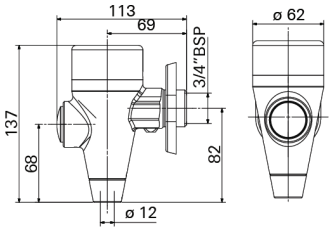
Urinal flush valve

Concealed. Non-hold open feature. Concealed. Non-hold open feature. Econoflush with 'Ball O Stop" control inlet, palm press pushbutton assembly with pushrod and captive linkage and straight urinal tail pipe. 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 500kPa: Maximum system pressure 600kPa.

Gross: 1,900 | Net: 1,824

Spares:
C-FJ8-24
Captive linkage
C-FJ8-11
Piston assembly
C-KM9-14
Palm press pushbutton assembly with pushrod
C-FJC1-2
Flush valve top cover
C-FMR1-015
Pushrod
FJT5-1
Flush pipe



FJS6-000
FFU3SUFJ-0GT0173
6002194078500

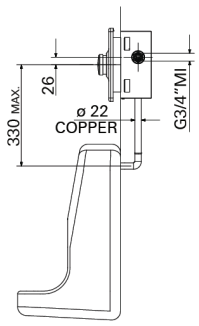
Urinal flush valve

Exposed. Non-hold open feature. Slimline flush valve with 'Ball O Stop" control inlet, wall flange, additional screw and piston for large bowl and stall urinals. 3/4"BSP female iron connection end.

Technical Details:
Recommended optimum design pressures: inlet flow pressure 30 - 500kPa: Maximum system pressure 600kPa.

Gross: 1,440 | Net: 1,376

Spares:
C-FJ8-11
Piston assembly
C-FJS8-20
Pushbutton assembly



KF8-112
FFUUSUKF-0GT0174
6002194021643

Urinal flush valve

Concealed. Non-hold open feature. 'Ball O Stop" control inlet. Econoflush with front access box with stainless steel face plate and chrome plated palm press pushbutton. With vertical 22mm copper flush pipe. 3/4"BSP male iron connection end.

Gross: 4,000 | Net: 3,880

Spares:
C-FJ8-11
#N/A
C-KM9-16
Pushbutton assembly
FJT5.1
Flush pipe
C-FJC1-2
Flush valve top cover

FLUSH VALVES

Recommended optimum design pressures and flow rates:
For optimum and correct operation, it is critical that the supply pipe to the flush valves is sized correctly by a professional and complies with SANS 10252-1:2012 requirements. In the event that you are unsure of the pipe size, please contact Cobra Technical Services on 0861 21 21 21.

The water supply system should be designed so as to yield a required flow rate at each valve as indicated:

1. Junior Flushmaster toilet flush valves are suitable for operations with flow pressures ranging from 150 - 500kPa (inlet). Minimum Flow Rate required: 65L/min.
2. Junior Flushmaster urinal flush valves are suitable for operations with flow pressure ranging from 30 - 500kPa (inlet). Minimum Flow Rate required: 18L/min.
3. Standard Flushmaster toilet flush valves are suitable for operations with flow pressures ranging from 30 - 300kPa (inlet). Minimum Flow Rate required: 108L/min.
4. Valves must be accessible for maintenance and servicing and a suggested minimum clearance of 60mm is required above the unit for this purpose.
5. The outlet of the flush valve must face vertically downward.

Important:

- All plumbing is to be installed according to the applicable regulations, rules, codes and procedures.
- Water supply lines and piping must be sized to provide the adequate volume of water for every flush cycle – refer to optimum design pressures and flow above.
- Take note of the minimum required operating pressure and flow rates required.
- Take care not to exceed the maximum system pressure of 600kPa.
- Flush all water lines prior to installation to clear them of any potential debris.
- Do not use any "toothed tools" to install or service the flushmaster flush valve – this will result in marring / scratching of the device.

Installation and functioning problems:

Problem	Cause	Solution
Valve does not operate	• Water supply	• Check water supply
Valve does not shut off	• Dirt in piston bypass • Dirt / debris at valve seat • Dirt / debris at sealing area	• Clean bypass groove • Clean valve seat • Clean piston
Insufficient water	• Incorrect Flushmaster for application • Control stop valve incorrectly installed • Piston damaged • Piston stroke too short	• Check requirements • Adjust control stop valve • Replace piston • Turn piston adjustment screw anti-clockwise
Too much water Noisy flush	• Incorrect Flushmaster for application • Control stop valve improperly adjusted • • Piston stroke too long	• Check requirements • Adjust screw at control stop valve clockwise • Turn piston adjustment screw clockwise
Lever assembly leaks	• Lever nut is loose • Fibre washer damaged • U-packing dirty	• Tighten nut • Replace washer • Disassemble lever & clean u-packing

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Factoria,

Krugersdorp, 1739

South Africa

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