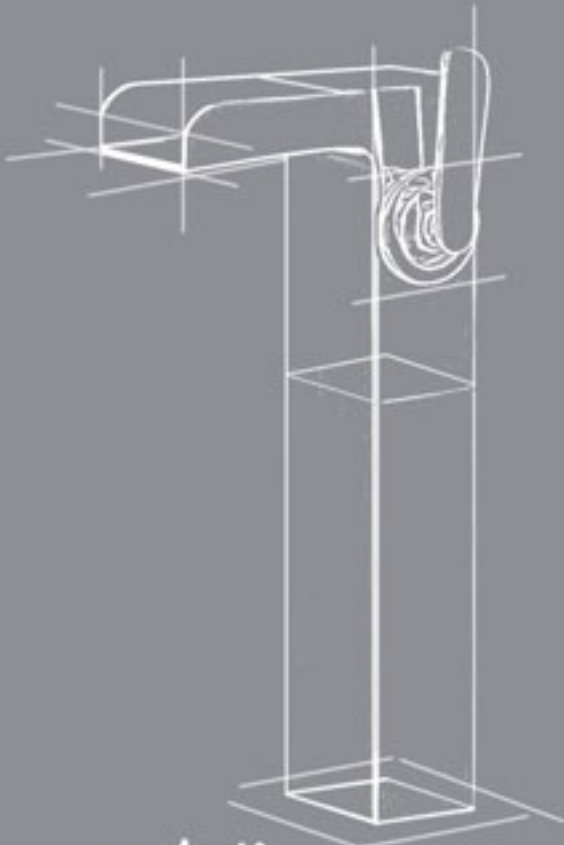
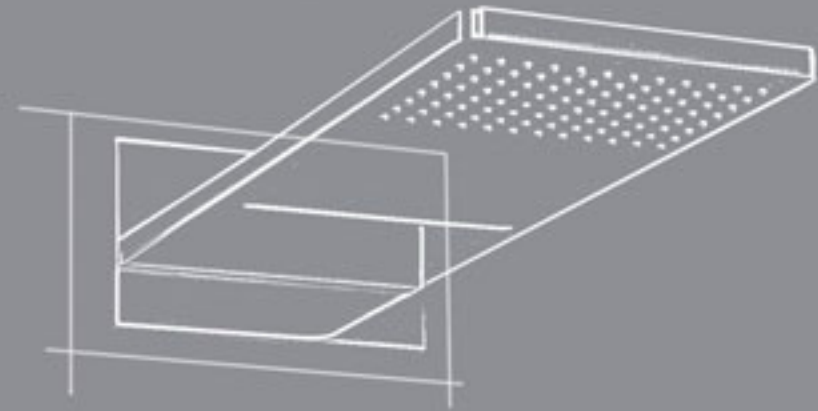


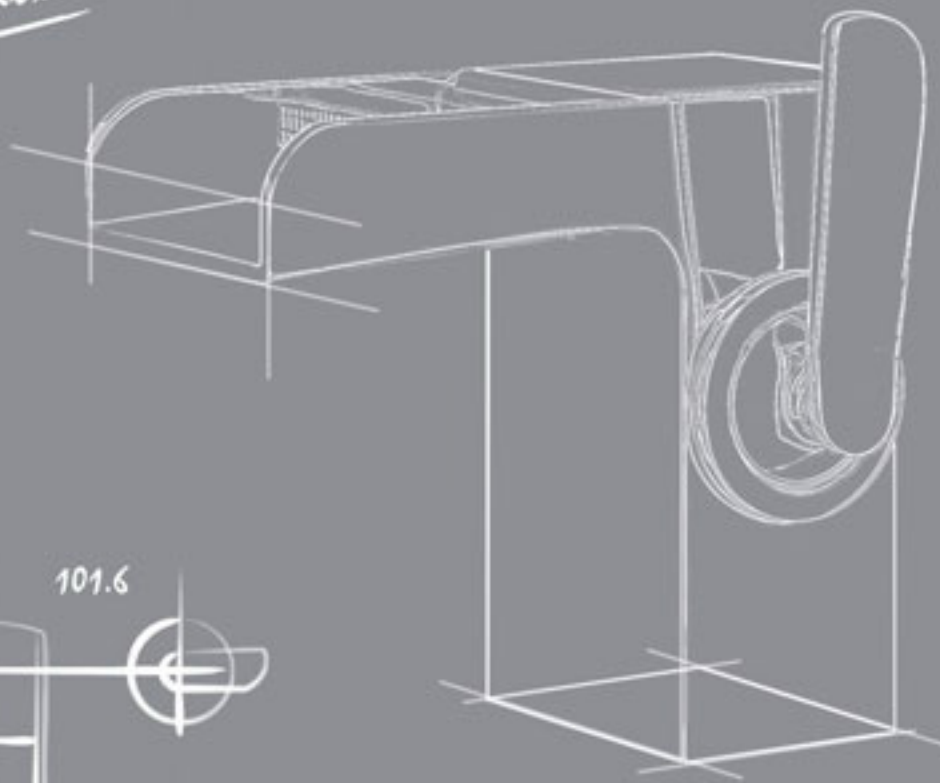
Techno-Mix Technical Data



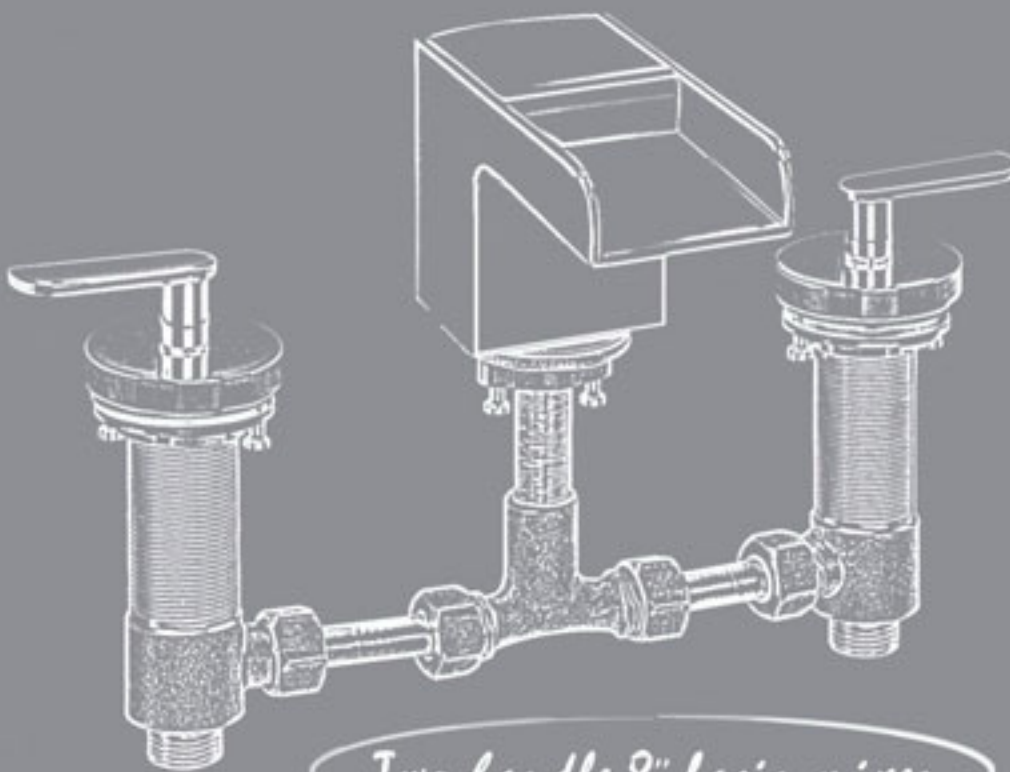
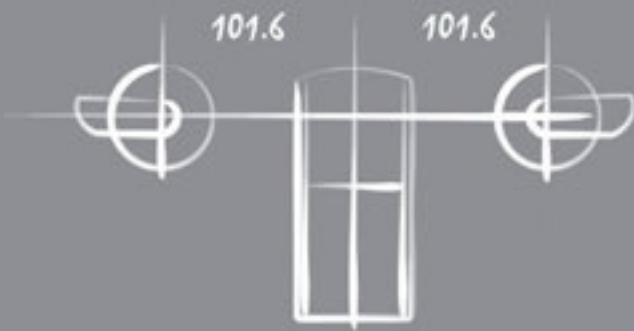
Single lever monobloc basin mixer



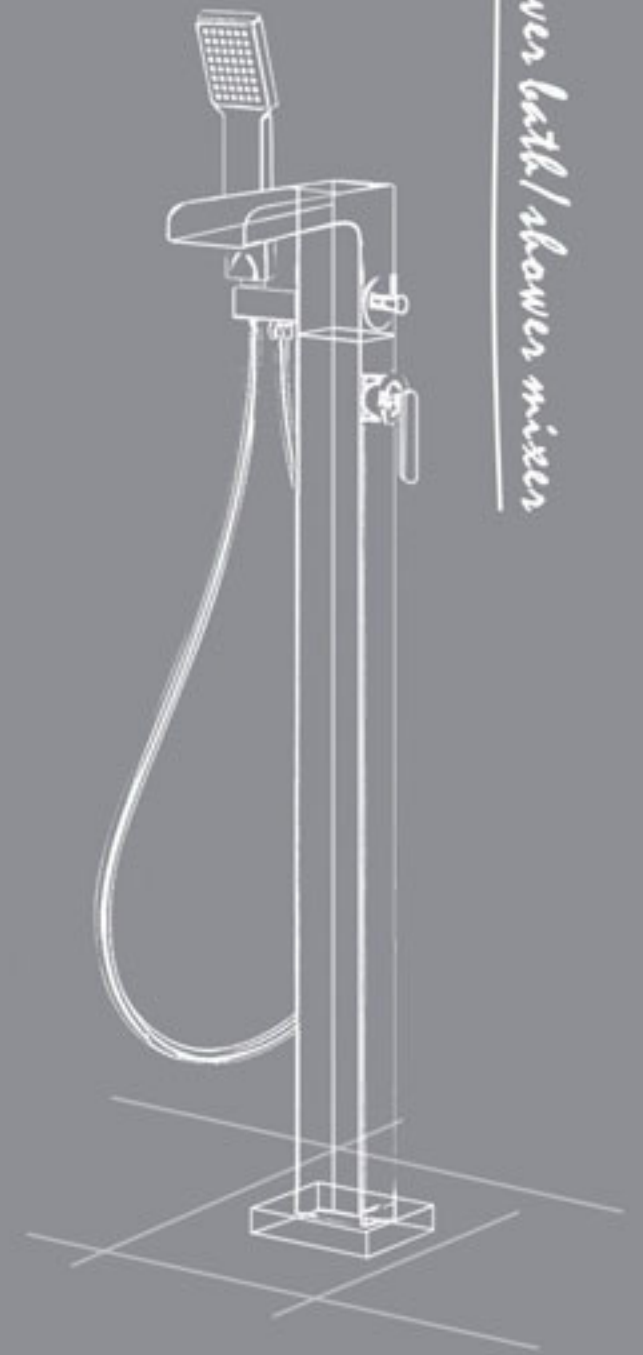
Rain Shower



Single lever bath/shower mixer



Two-handle 8" basin mixer





Introducing of LEED® The rating system of The U.S. Green Building Council

The Leadership in Energy and Environment Design (LEED) Green Building Rating System is a voluntary, but nationally accepted benchmark for the design, construction, and operation of high performance green building in the U.S.

LEED provided a comprehensive rating system for building owners and operators covering all aspects of green building design and construction within six major categories including sustainable site development, water saving, energy efficiency, material selection and indoor environmental quality.

The U.S Green Building Council was accredited as an official Standards Developing Organization by the American National Standards Institute (ANSI).

Techno-Mix, as a member of U.S. Green Building Council, help LEED projects within the categories of water



LEED®



"The LEED® (Leadership in Energy and Environmental Design) Green Building Rating System is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings."

"The 'USGBC Member Logo' is a trademark owned by the U.S. Green Building Council and is used by permission. The logo signifies only that TECHNO-MIX® Sanitary FZCO is a USGBC member; USGBC does not review, certify, or endorse the products or services offered by its members."

NEOPERL^{®(1)} Components applied by Techno-Mix[®]:

Techno-Mix[®] is applying the advanced NEOPERL[®] innovative solutions in drinking water's technology. Techno-Mix[®] faucets supplied with NEOPERL[®] products shape water streams, regulate flow rates and protect water from contamination.



Faucet Aerators

For the use in bathroom and kitchen



Flow Regulators

A flow regulator is a component which maintains a predefined constant flow rate independent of the prevailing line



Check valves

A check valve is a safety valve which permits water to merely flow in one direction and prevents unwanted backflow of water in the opposite direction. It is also referred to as non-return valve. Without a check valve



Connecting Hoses

Essential accessory in domestic



Shower Hoses

High quality, universal shower hoses in various colors.



flow, stop and go[®]

(1) NEOPERL[®] is a Swiss brand which is engineered and produced in Germany.



FAUCET AERATORS
Made by NEOPERL® in Germany
Used in Techno-Mix® Faucets.

NEOPERL®

flow, stop and go®

The aerator is a key component in the overall performance of the faucet. Here is how you should expect your aerator to perform, when using Techno-Mix® faucets equipped with

- control the stream straightness and diameter
- reduce splash by aerating the stream and eliminating side spray
- save water and reduce energy costs
- meet local plumbing codes and standards

STREAM PATTERNS



AERATED STREAM

Aerators introduce air into the water stream to produce a larger and whiter stream soft to the touch and non-splashing. Techno-Mix® mixers are supplied with this kind of aerator as they are the ideal choice for residential faucet



LAMINAR STREAM

Laminar stream straighteners produce a non-aerated water stream. Ideal for high flow applications or health care facilities (no mix water/air) Techno-Mix® is using NEOPERL® laminar spout-end devices to deliver a crystal clear and non-splashing stream.



SPRAY

When the flow rate is too low to produce an aerated or laminar stream, Techno-Mix® is inserting a spray device to produce a miniature shower pattern to provide full coverage of the hands during washing. Sprays are recommended for

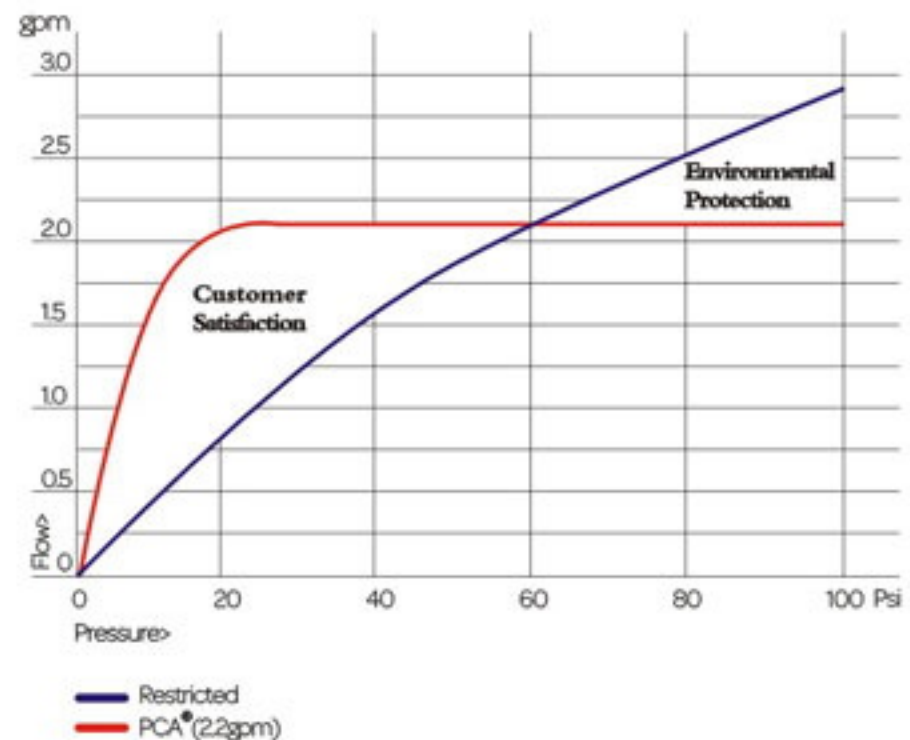


Techno-Mix® is using also WATER SAVING Aerators with pressure compensating flow regulator from NEOPERL® type (PCA)

With standard aerator the flow rate goes up as the pressure increases, but with Techno-Mix adopted aerator from NEOPERL, NEOPERL® PCA® technology, the pressure compensating flow regulator produces by means of the o-ring

The fields of application for such technology include:

- markets with a standard defining the maximum flow rate
- water conservation
- plumbing systems where an even distribution of



Different types of Aerator Made by NEOPERL® in Germany and adopted by Techno-Mix®

PERLATOR® HONEYCOMB Aerator



Improved lime protection: integrated HONEYCOMB structure replaces conventional wire mesh screens prone to lime buildup; extended life; perfect stream quality even under difficult flow conditions; very low noise level; damage proof: unlike conventional wire mesh screens, the HONEYCOMB structure can

CASCADE® Aerator



Superior lime protection; extended life; perfect stream quality even under difficult flow conditions; very low noise level; damage proof: unlike conventional wire mesh screens, the CASCADE® structure can not be crushed; integrated anti-clogging dome screen filters

Aerators with special features supplied in Techno-Mix® Faucets, against special requirements:



CASCADE®SLC Aerator- Smart Lime Cleaning function

CASCADE® SLC aerator is a long lifetime of maximum lime resistance product. The reason for the outstanding qualities in terms of lime resistance and durability is the special feature Smart Lime Cleaning (S.L.C.). When using CASCADE® SLC aerators lime deposits can be easily rubbed off thanks to a soft elastomer layer. The water-jet instantly becomes splash-free again. Consequently, there is no need to disassemble the aerator for cleaning



AC Aerator- Auto Clean feature

The AC (auto-clean) aerator with its auto-cleaning feature flushes out sediments and particles up to 0.7mm even after a long period of use with no changes in stream pattern or flow rate; no need to disassemble the aerator to remove debris from the dome screen; a perfect stream quality



SSR Aerator- with adjustable stream direction

The angle of the water stream can be adjusted directly at the aerator simply by moving the adjustable tilting plate. Sometimes when a faucet is installed with a wash basin, the faucet stream direction is less than optimum



Due to its excellent hygienic characteristics, PEX has been used for many years in the markets where EPDM material is not allowed for use in drinking water applications, e.g. in Scandinavia and Japan. TECHNO-MIX® faucets are supplied with either the NEOFLEX® SPX hoses or NEOFLEX® MLT hoses (Multi-Layer Technology) which are utilizing an advance PEX material that is significantly more flexible than standard PEX hoses.

These hoses meet all existing mechanical and hygienic



CONNECTING HOSES
Made by NEOPERL® in Germany
Used in Techno-Mix® Faucets.



flow, stop and go®

Techno-Mix are using NEOFLEX® special hoses made in Germany by NEOPERL® to secure the

- Excellent hygienic properties (Microbiologically pure, no taste, or smell transferred to the water)
- Excellent pressure resistance
- High flexibility (SOFTPEX® inner hoses used for the NEOFLEX® SPX are by far more flexible than conventional PEX)
- Improved chemical resistance (The inner hose resists against chlorine and chloramine additives to the drinking water)
- International Approvals (One hose material (SOFTPEX®) designed to meet all relevant international standards)

Design



Braiding
Stainless steel

Inner hose
SOFTPEX®



RANGE OF SHOWER HOSES

TECHNO-MIX® are using many of the NEOPERL® wide range of shower hoses. These flexible hoses fulfill the requirements of EN1113, which includes different durability tests for shower hoses. With a large range of colors, surfaces and fittings, the NEOPERL® shower hose collection offers many innovating design choices.



CHROMALUX® SHOWER HOSES
MADE BY NEOPERL® IN GERMANY
USED IN TECHNO-MIX® FAUCETS.

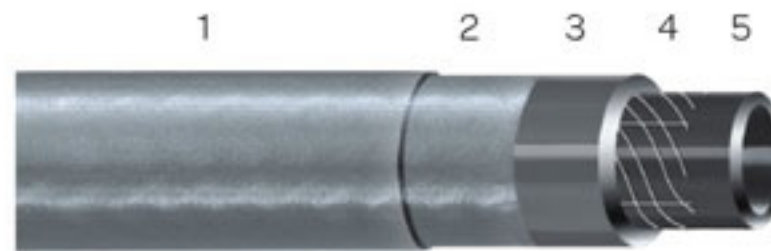


Techno-Mix® are using different NEOPERL® shower hoses as these flexible hoses are fulfilling the requirements of EN 1113, which includes different durability tests for shower hoses.

With a large range of colors and fittings, the Techno-Mix mixers supplied with NEOPERL® shower hose collection offers many innovative design choices, and include the following main features:

- Smooth, soft and flexible shower hose with stunning appearance
- Easy to clean
- Anti-liming coating
- High tensile strength due to special crimping process fulfills EN1113 standards (functional/durability test) with hose
- certified according to KTW, ACS, ETA

Design



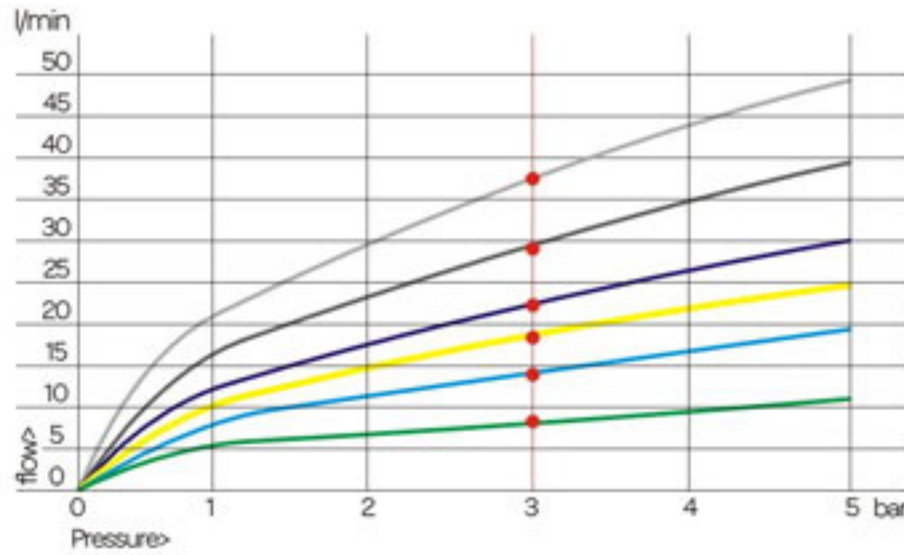
- | | | | | |
|-------------------|---------------------|------------------|------------------------------------|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Outer hose | Colored foil | PVC Layer | Reinforcement | Inner hose |
| Transparent PVC | | | Longitudinal and crosslinked wires | PVC |

Different colors on request.

Requirements On Flow Rate And Noise Reduction

The requirements for faucet attachments with or without aeration are described in the European standard EN 246 Sanitary tapware General

specifications for flow rate regulators. To comply with this standard, faucet attachments have to meet the requirements of the Acoustic group 1 which

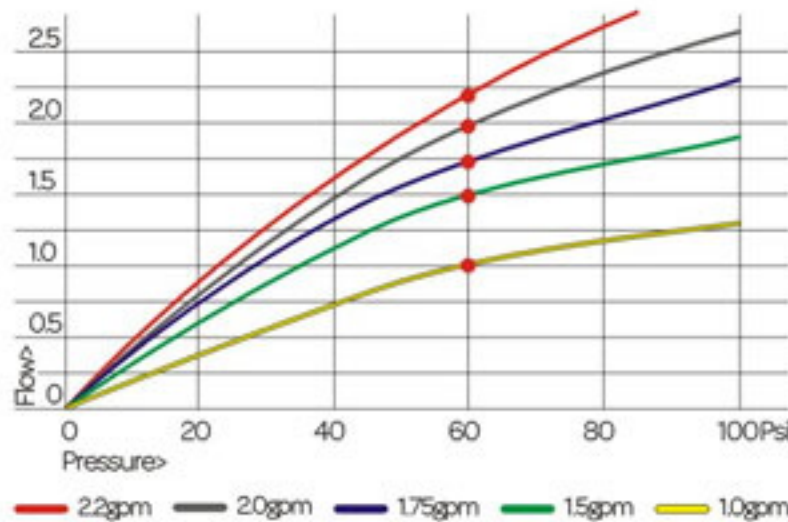


Flow rate class	Flow rate range per l/min	Dynamic pressure
Z	75-90 l/min	3bar
A	135-150 l/min	3bar
S	180-198 l/min	3bar
B	228-252 l/min	3bar
C	27-30 l/min	3bar
D	348-178 l/min	3bar

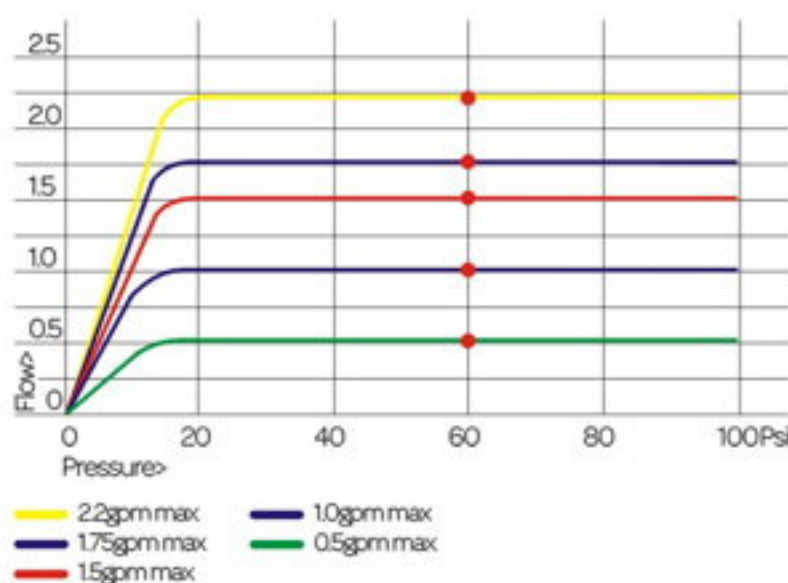
US STANDARDS:

Construction, Performance And Endurance

Restricted models



PCA models



Criteria applicable to faucet aerators and attachments include:

- Toxicity evaluation: compliance with ANSI/NSF 61
- Requirements for plating adhesion and corrosion resistance (ASTM B456)
- Maximum working temperature and pressure conditions: 160°F (70°C) and 125 psi (8.6 bar)

Flow rate class USA (A 112.18.1 M)	Maximum flow rate in gpm	Dynamic pressure measured at
Lavatory/Sink faucet	Max. 2.2gpm (8.3 l/min)	60 psi (4.14 bar)
Shower head	Max. 2.5gpm (9.5 l/min)	80 psi (5.52 bar)
Public lavatory faucet	Max. 0.5gpm (1.9 l/min)	60 psi (4.14 bar)
Metering faucet	Max. 0.25gpc (0.95 l/cycle)	60 psi (4.14 bar)

Specific products used by TECHNO-MIX® from NEOFERL® are listed with ASME A112.18.1M of IAPMO and CSA B125.1 of CSA International.

NEOFERL® product listing with A112.18.1M and CSA B125.1 are available at

Compatibility with drinking water ANSI/NSF61

ANSI/NSF61 (Drinking Water System Components Health Effects) was developed to establish minimum requirements for the control of potential adverse human health effects from products in contact with drinking water. The tests include level of lead and other regulated metals, organic contaminants and solvents.

TECHNO-MIX® Faucets using NEOFERL® products are listed with NSF. NEOFERL®

AUSTRALIAN STANDARDS



NEOPERL® flow controller

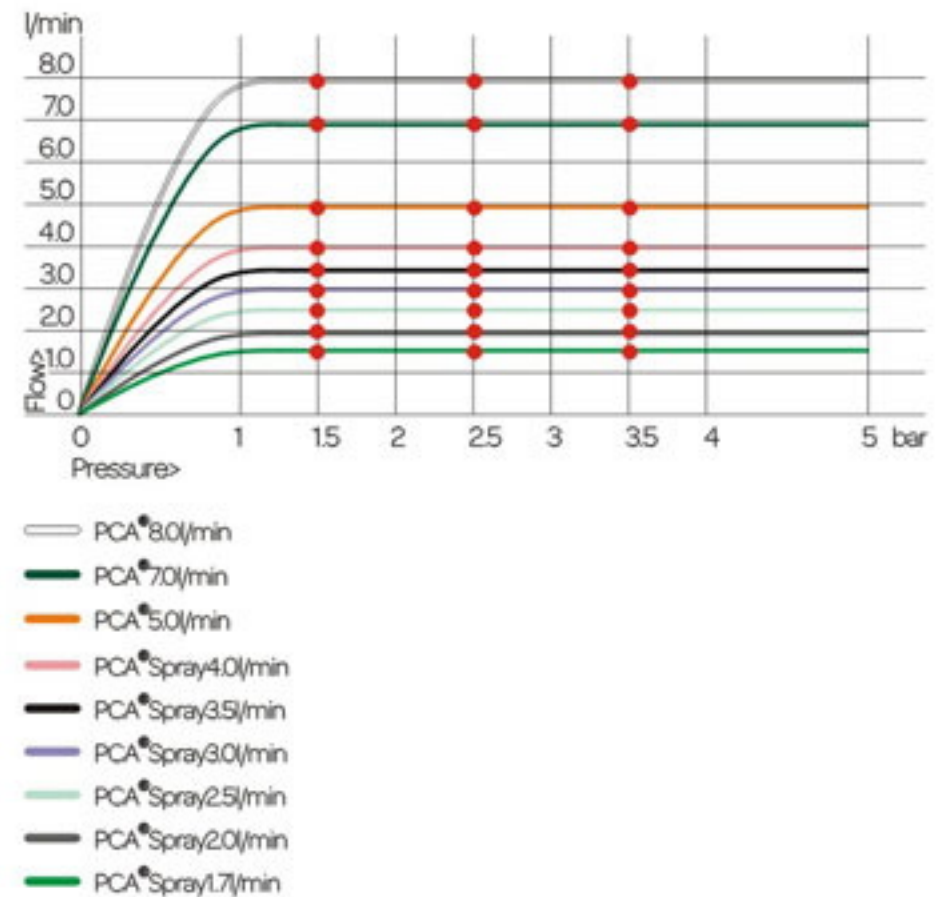


AS/NZS 6400: Water Efficient Products

This standard specifies the procedure for water-efficient products which are intended for connection supplies, to be appropriately rated relative to specified criteria. All products covered by the WELS Scheme have to be tested according to specific requirements stated in referenced product standards.

WELS

The Water Efficiency Labeling and Standards (WELS) Scheme will help to address the issue of high domestic water consumption by providing nationally consistent water efficiency information to consumers at point of purchase and by encouraging manufacturers to design more water-efficient products. The aim of the WELS Scheme is to encourage the uptake of water efficient products and appliances in domestic and commercial areas while maintaining individual choice and accounting for regional variations in water supply in urban Australia. The Scheme applies to following products: showers, toilets, domestic washing machines, dishwashers, urinals, taps, and flow controllers. A star-rating label, according to AS/NZS6400, gives a quick comparative assessment of a product's water saving efficiency. The more stars



These products are measured as stand alone aerators. Any application and restriction including upstream of the aerator may affect its performance and may affect the test results shown above which have been determined under open flow conditions and which show the results of the manufacturer's testing only under those conditions. The buyer should rely on his own assessment and undertake his own testing determine if the aerator is suitable for the buyers requirements. To the maximum extent permitted by law, the manufacturer makes no warranty or

17/18 GLOSSARY

Aerator

An aerator mixes air into a stream of water in order to smooth the flow of

Aerator marking

Spout-end devices must bear permanently legible marking A12.18.1M and the flow rate in gpm or

Air gap

Unobstructed vertical distance between the faucet spout end (aerator) and the flood rim of the sink or lavatory.

Flow regulator

Pressure compensating flow regulators maintain a constant flow rate regardless in variations of line pressure. Precise flow control improves system performance and in the case of plumbing systems provides comfort of

GPC

Gallons per cycle.

Metering faucet

When actuated mechanical or electronic metering faucets dispense water for pre-determined period of time. Combine with a PCA[®] aerator metering faucets deliver a pre-

Public Lavatory faucet

Faucet installed in non-residential bathrooms exposed to walk-in traffic.

Stream quality

Factors to consider when comparing stream quality include effective aeration, stream straightness, stream diameter, side splash, and of course

Restrictor

Refers to a fixed orifice. A restrictor produces higher flow at higher pressure (excess flow) and lower flow at lower pressure (insufficient flow).

Watercolors[®]

Color coding system of NEOPREL[®] aerators for easy identification of the respective model.

Psi

Pounds per square inch
1 psi = 0.06895 bar.

PCA[®]

Aerator with pressure compensating

ANSI

American National Standard Institute.

ASME

American Society Of Mechanical

CSA

Canadian Standard of Association

IAMPO

International Association of Plumbing and Mechanical Officials.

NSF

National Sanitation Foundation.

Gpm

Gallons per minute

LEED[®]

Leadership in Energy and

WELS

Australian Water Efficiency Labeling

Backpressure

The flow resistance of downstream applications (so-called "backpressure"), which has an impact on the flow performance of flow regulators.

Clear water

Refers to water, which may or may not be potable, that is filtered to remove large debris particles.

Direction of flow

Direction in which the water passes through the flow regulator. It is determined by the design of the flow regulator.

Dynamic pressure

Refers to the pressure level bar (bar/kPa) when there is an actual flow.

(Flow) Regulator

Pressure compensating flow regulators maintain a constant flow rate regardless of variations in line pressure. Precise flow control improves system performance and in the case of plumbing systems provides comfort of use at low pressure as well as water and energy saving at high pressure.

(Flow) Restrictor

Refers to a fixed orifice. A restrictor produces higher flow at higher pressure (excess flow) and lower flow at lower pressure (insufficient flow). Thus it is not pressure compensating.

Flow tolerance

Refers to a deviation from a nominal flow tolerated across the pressure range once the threshold pressure is reached. The tolerance varies by series and flow rate.

Head loss/Pressure loss/Pressure differential

Refers to pressure drop through the

Medium

Refers to fluid use in the application. NEOPERL® flow regulators and check valves are designed for clear water applications. In case of large debris in the water, it is recommended to use an accessible filter element upstream of the regulator.

Nominal Flow

Refers to the target flow rate of a regulator.

Open outlet

All flow rates indicated in this brochure refer to an open outlet.

Standard pressure

Pressures > 1 bar

Static pressure

Refers to the pressure level (bar/kPa) when there is no flow.

Temperature Range

The flow regulator performance shown in the brochure refers to a hot and cold water range up to 45°C. Using flow regulators in hot water applications up to 90°C slightly reduces the flow rate. However, the use of flow regulators in hot water applications should be checked in advance with the manufacturer.

Threshold pressure

Refers to the pressure at which the flow regulator effectively begins controlling the flow. Standard regulators begin controlling at 1 bar. Special models (low pressure flow regulators) can begin controlling as early as 0.2 bar.

Working conditions

Refers to the usual parameters of the application such as medium (usually drinking water), pressure range (usually

BACKFLOW

Indicates a reversal of flow direction. Also describes a situation where non-potable water enters a drinking water network.

BACKPRESSURE

Refers to the pressure on the downstream side of the check valve. Can be caused by piping restrictions, gravity or a separate pressure source such as a pump or pressurized tank. Also describes a condition in which the pressure in a non-potable water system is greater than in the potable water system.

BACKPRESSURE STABILITY

All NEOPERL® check valves are built to withstand backpressure commonly specified in national standards. However, there are some special models designed for higher backpressures, for example in the thermostatic mixers.

BACK SIPHONAGE

Refers to a form of backflow due to a reduction in system pressure causing a temporary sub-atmospheric pressure in a part of the water system.

CLEAR WATER

Refers to water, which may or may not be potable, that is filtered to remove large

CRACKING PRESSURE/OPENING PRESSURE

Refers to a minimum pressure differential needed between the inlet and outlet of the valve to lift the plunger off its seat and generate a flow. NEOPERL® check valves usually have a cracking pressure according to the European National Standards. However other cracking pressure points can be specified on demand.

CROSSOVER FLOW

A condition in a plumbing system (for instance a mixing valve) whereby cold water flows into the hot water system (or vice-versa) due to a differential of pressure. Check valves installed on both the cold and hot water lines can eliminate the risk of the cross-over flow.

CROSS CONNECTION

Any connection, permanent or temporary, between a potable water supply and any plumbing fixture or system through which it may be possible for non-potable water to enter the drinking water system. Example: A washing machine connected to a rainwater cistern and the drinking water supply can create a temporary cross-connection.

HEADLOSS/PRESSURELOSS



flow, stop and go®

CACHE, CASCADE, CHROMALUX, "flow, stop and go", HONEYCOMB, NEOPERL, NEOFLEX, PCA, PERIATOR, SOFTPEX, VARIO, WATERCOLOURS, and the NEOPERL logo as well as the WATERCOLOURS logo are all registered trademarks of the NEOPERL Group in Germany and/or in other countries.

LEED® is a brand of the U.S. Green Building Council.

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