Bernco®
Distributors of Laboratory Taps

Technical Information

Water fittings

The range of water fittings have been designed to meet the requirements of EN 200 (Specification for the performance of draw off taps with metal bodies for water service) and have been approved by the Water Research Council.

SPECIFICATION

Brass DIN 17660 with sealing in EPDM and PVDF. Wrist operated fittings have ceramic headwork's made of Al-oxide.

Handles of chemical resistant polypropylene, coloured to match the service medium in accordance with DIN EN13792-2002.

All fittings are protected by a surface treatment of Polyester powder coat which is highly resistant to most chemicals.

Outlets
Serrated nozzles (removable) suitable for 8 mm to 13 mm ID rubber tubing or full bore anti-splash nozzles are fitted on request.

Installation
It is a condition of Approval of the XL range of Labtaps that the following information is given to our customers: "Supply shall be by gravity from a cistern by means of a distributing pipe which does not supply any other fitting at a lower level" (IRN 105) (Byelaws 22 and 25)

Also check with local water board their requirements regarding AUK 3 back flow prevention regulations.

All water systems should be thoroughly flushed before use.

Testing
All fittings are tested and inspected before dispatch.

Maximum design working pressure is 1000 kPa (10 bar).

The maximum installation test pressure is 1000 kPa (10 bar).

Please note the following information

Single Water Fittings
All FIXED swan neck fittings will be supplied with a FIXED nozzle with right-handed operation, coded for cold water unless otherwise specified. All SWIVEL swan neck fittings will be supplied with a REMOVABLE nozzle and coded for cold water unless otherwise specified.

Mixer Fittings
A balanced tank storage water supply for BOTH hot and cold services is required for all non-divided flow mixer fittings.

Direct mains cold water supply may ONLY be used with the XL1223 (divided flow) mixer.

NOTE: Maximum Test Pressure: 1000 kPa (10 bar).

Maximum Working Pressure: 1000 kPa (10 bar).

If water fittings are to be installed in an area where robust use or vandalism may occur we would recommend the use of anti-rotational plate XL 1171-0. This will prevent the fitting from being turned on the work top.

Special Water Fittings

SPECIFICATION

These fittings are suitable for de-ionised, distilled, de-mineralised and R/O types of pure water. They can be used with other media that should not be in contact with non-ferrous metals (ask for details).

Materials
The materials that are in contact with the media are POM, PEX and EPDM. On recirculation fittings the material is ABS. (We can supply these fittings in PP or Stainless Steel if required), and like all other fittings they have the Polyester finish to protect from chemicals.

Mounting
Is similar to the water and technical gas fitting see page with mounting instructions.

The recirculation valve requirements should be discussed with the special water supplier.

Testing
All fittings are tested and inspected before dispatch.

Maximum working pressure is 1000 kPa (10 Bar).

Maximum test pressure is 1000 kPa (10 Bar).

Laboratory furniture companies should always liaise with the installer of the pure water systems to ensure the fittings are compatible with the rest of the system.

When the system is completed it should be flushed for up to 3 hours to remove any swarf and glue from the installation.

Drop Lever Gas Cocks

XL 1256, 1258, 1263, 1264, 1265, 1267 (Supplied with 1/4" BSP SHANK)

SPECIFICATION

Outlet Connections: Fixed serrated nozzles suitable for 8 mm to 13 mm ID rubber hose.

Inlet Connection: 1/4" BSP shank by 65 mm.

Construction: Fire safe plug cocks of brass constructed using grease suitable for Natural Gas and LPG.

Installation
Supply pressure should be in the range from 1.5 kPa to 5 kPa.

A qualified installer should be used. LPG supplies should be regulated locally in order to prevent pressure surges.

NOTE: The maximum possible pressure should never exceed 5 kPa.

Connection:
Fitting connection is a 1/4" BSP male threaded shank 65 mm long. The connection end of the shank is designed to fit 8 mm Table X tubing using a compression nut.

NOTE: The use of compression fittings, if used for domestic gas or LPG, should be in accordance with gas board regulations.

Testing
All drop lever gas cocks components are tested at 135 kPa before despatch (based on BS 1552). Finally assembled drop lever gas cocks are tested at 13,8 kPa. Installation test pressures on systems incorporating drop lever gas cocks should NOT EXCEED 13,8 kPa otherwise the lubricant will be blown out and the cocks may leak.

A competent Gas Engineer should always test Natural Gas installations.

Leakage should be checked using soap and water or trapped pressure drop over 15 minutes.

Burning gas "Lift & Turn" fittings

XL 1300 Series

SPECIFICATION

Outlet Connections: Fixed serrated nozzles suitable for 8 mm to 13 mm ID rubber tubing.

Inlet Connection: 1/2" BSP shank by 60 mm.

Construction: Brass body.
Seals: Nitrile.

Testing
All fittings are tested and inspected before dispatch.

Maximum design Test Pressure: 1000 kPa (10 bar).

Maximum design Working Pressure: 700 kPa (7 bar).

Technical Gas, Burning Gas, & Vacuum Valves

SPECIFICATION

Materials
Brass DIN 17660 and nickel with Viton sealing & PDVF. High flow headworks have SS 2343.

The 4.0 grade Oxygen valves are specially cleaned and have an O_2 lubricant.

Handels are moulded in chemical resistant polypropylene coloured to match the service medium in accordance with DIN EN13792:2002

Outlets
Serrated nozzles suitable for 8 mm to 13 mm bore rubber tubing, and if the nozzle is removed a 3/8" female connection is available. (See the range of nipples and sockets in the section with accessories)

Important Note
Oxygen service valves are specially cleaned, lubricated and packed. USE ONLY SPECIFICALLY CONSTRUCTED FITTINGS FOR OXYGEN.

Max Pressure & Testing
All fittings are leak tested before leaving the factory.
For maximum pressure levels see specifications on page 4-6.

Purging of new installations with compressed air or nitrogen is recommended to clean the system.

Medical gas cleanness for Oxygen fittings
Oxygen (or other grade 4.0 clean technical gases) lines require purging with grade 4.0 Nitrogen in order to avoid contamination.

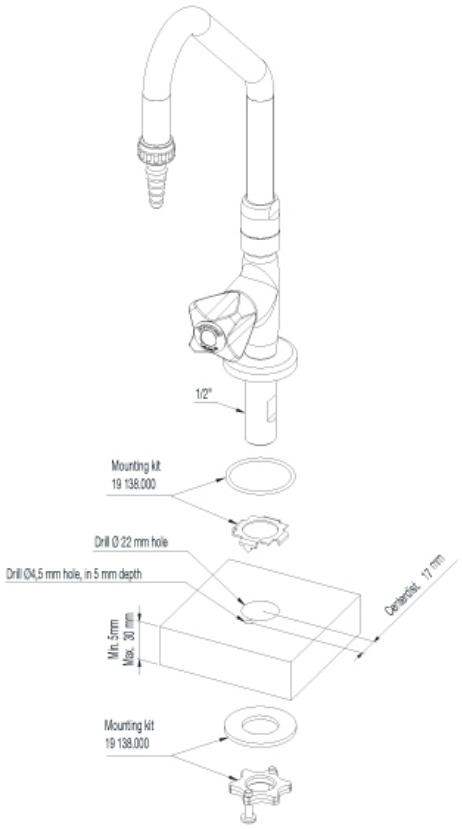
Hazardous or aggressive gases (ie. ammonia) may require special fittings. For advice please consult us.

The gas supply should be clean, and free of contamination. Vacuum taps can be fitted with flow restrictors to help balance the system.

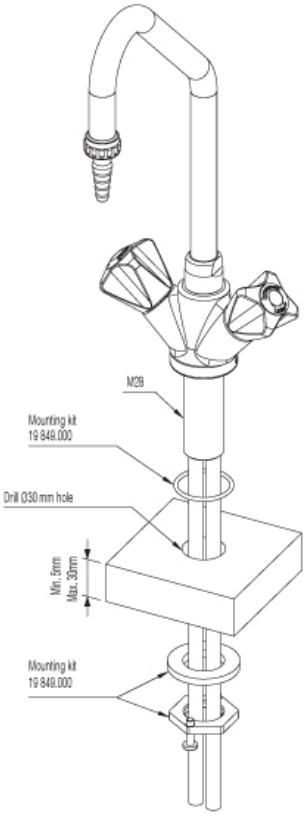
Supply pressure for gases should be reduced to at least 1.4 Bar from the supply cylinder, for safety reasons (ref BS3202: 1959" recommendations on Laboratory furniture and fittings").

Installation instructions

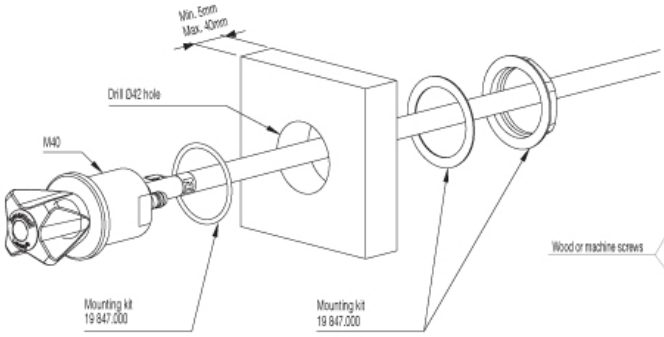
Installation of 1/2” fittings



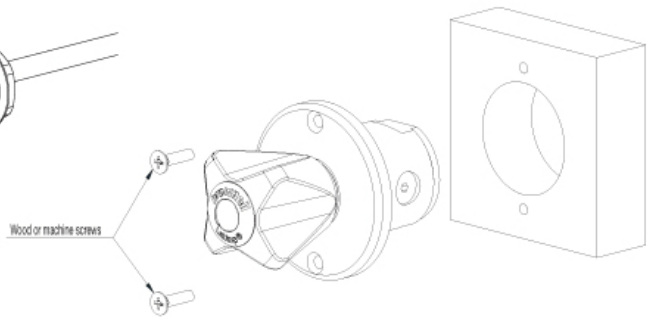
Installation of M28 mixer



Installation of M40 front control valves, with mounting kit

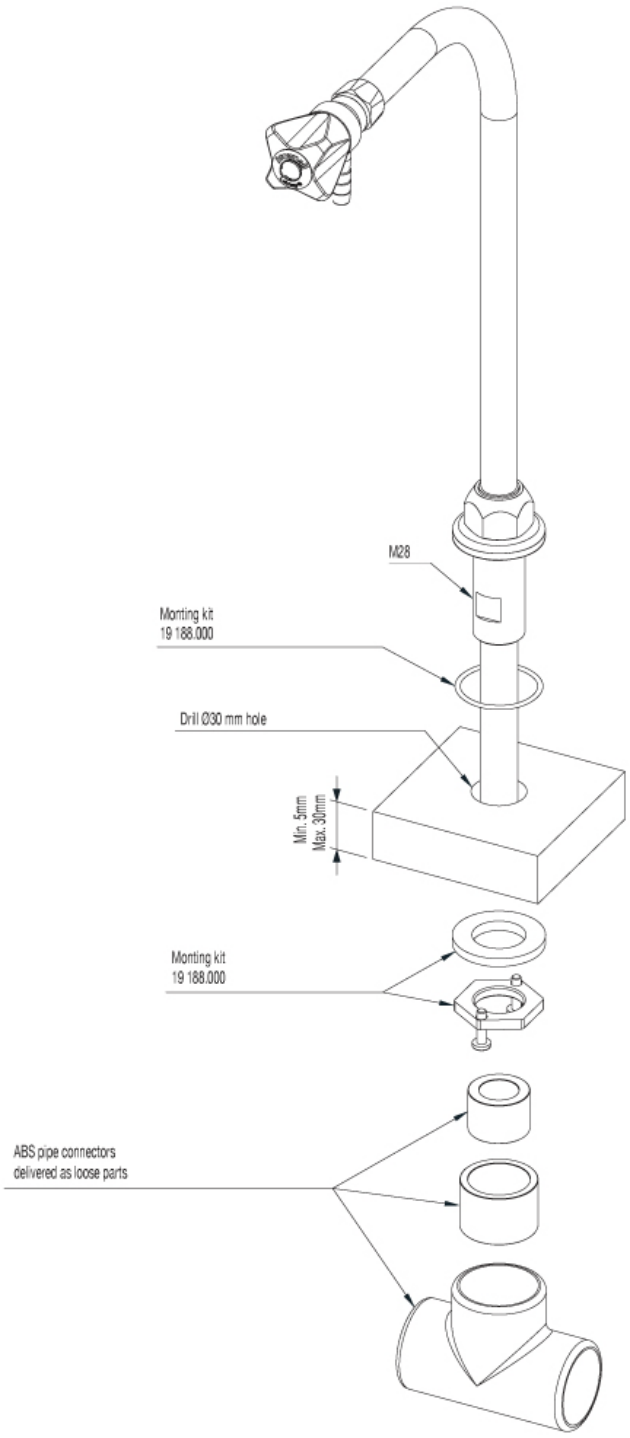


Installation of front control valves, with screws



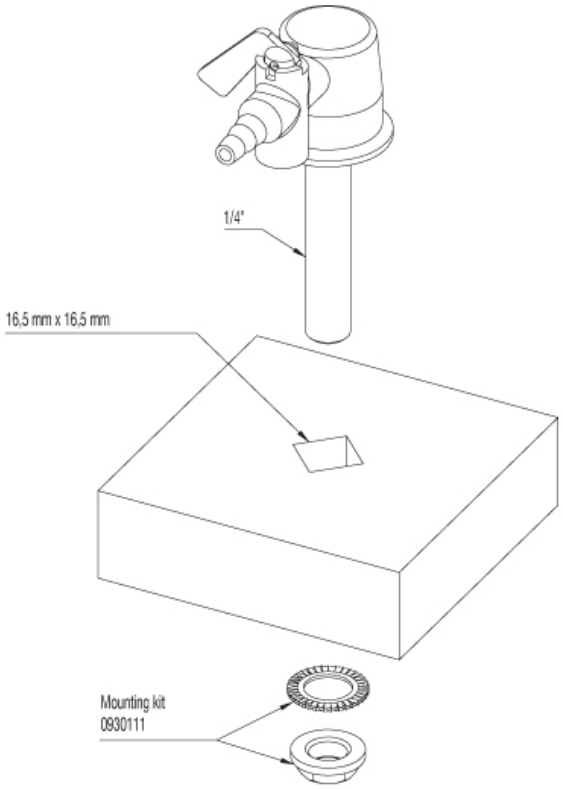
Installation instructions

Installation M28 recirculating fittings

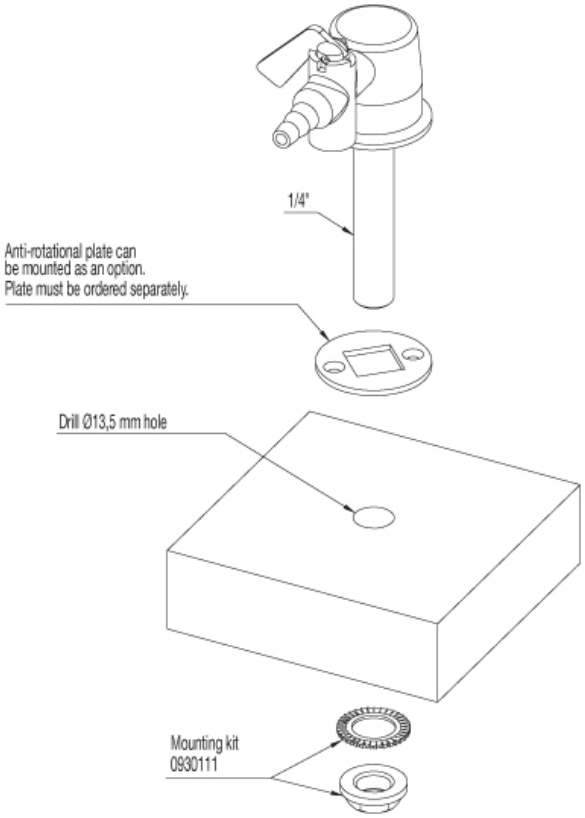


Installation instructions

Installation of drop lever



Installation of drop lever with anti-rotational plate



Mounting

The 1⁄4" BSP threaded shank requires a square hole in the mounting surface of 16.5mm across flats in order to engage the squaring feature at the base of the fitting and prevent rotation. If a safety plate (XL1170) is used then a round hole 13.5mm (17/32 inch) can be used.