

INSTALLATION AND MAINTENANCE INSTRUCTIONS

These injection fittings are designed to allow for the withdrawal of the injection lance from the main pipeline whilst the main is still under pressure. Plastic fittings are rated at 10 BarG. and metal units up to 25 BarG. And beyond in special cases.

THE EXPULSION FORCES GENERATED AT HIGH PRESSURES SHOULD ALWAYS BE CONSIDERED AND MADE KNOWN TO PERSONNEL USING THE EQUIPMENT. A SIMPLE CALCULATION OF LANCE CROSS SECTIONAL AREA TIMES OPERATING PRESSURE WILL PROVIDE THIS INFORMATION.

The injection fittings incorporate either a single or double 'O' ring sealing gland which prevents leakage during the withdrawal operation. **Type 'A'** has a single seal - **Types 'B' & 'C'** have double seals. All types are normally equipped with anti blow-out stops to prevent uncontrolled total expulsion of the lance under pressure.

To withdraw the lance on all types the **LANCE RELEASE NUT** is first unscrewed whilst applying pressure to the lance to prevent uncontrolled blow-out (Fig 1). **THEN:-**



Fig 1



Fig 2



Fig 3



Fig 4



Fig 5

TYPE 'A' : Slowly ease the lance out until the anti blow-out stop prevents further extraction (Fig 3). At this point the main line isolation cock can be closed off (Fig 4). When this is done the assembly release nut can be undone allowing removal of the lance assembly (Fig 5).

TYPE 'B' & 'C' : Slightly slacken off the **GLAND SEAL CLAMP NUT** whilst restraining the lance against Blowout (Fig 2). Ease the lance out until the anti blow-out stop prevents further extraction (Fig 3). At this point the main line isolation cock can be closed off (Fig 4). When this is done the **GLAND SEAL CLAMP NUT** can be fully unscrewed and the whole lance gland assembly removed (Fig 5). In all cases it is often an advantage to remove the dosage line from the lance prior to withdrawal as this reduces the loads imposed upon the lance in the extended and less unsupported position. For this reason **PROCHEM** recommend a union-hose connector be fitted to the lance dosage connection. For re-insertion simply reverse the above procedure.

TECH. DATA SHEET	PAGE	EQUIPMENT	DATE
WIFO&M	2	FIXED AND WITHDRAWABLE INJECTION LANCES W.I.F	18/11/2015

INSTALLATION

All three types of W.I.F. can be installed in any position on the main pipework. However; it is generally more practical to install on the top of the pipe main in the vertical down position as this facilitates easier removal and reduced water spillage during removal. If the W.I.F. is fitted with flanged main line connections then it should be mounted in place using a standard sealing gasket. If the W.I.F. is equipped with screwed connections then the whole assembly should be screwed in to place **USING ONLY THE STAINLESS STEEL ADAPTER HEXAGON OR CORPORATION COCK BODY** for tightening into position. **UNDER NO CIRCUMSTANCES SHOULD THE W.I.F. BE SCREWED INTO POSITION USING THE MAIN ASSEMBLY.** In the case of **Type 'A', 'B' & 'C'** fittings where the main isolation cock is a 1" solid bronze plug cock this can be screwed into place with a wrench on the plug cock body itself. Either PTFE tape or a liquid sealant should be used to seal corporation cocks. On larger units the stainless adapter is screwed down tight to the mounting boss using the PTFE disc supplied as a sealing element.

NOTE - ON TYPE 'C' W.I.F.'s A BRASS BUTTON INDICATES HOLE DRILLING LOCATION.

This may also be the case on type 'A' & 'B' where a special diffuser is fitted.

MAINTENANCE

Generally, the only maintenance required is the light lubrication of the 'O' ring seals with a lubricant such as silicon oil from time to time during plant inspections or shut downs. The 'O' rings should be replaced every 12/24 months depending upon frequency of use.

SPECIAL NOTE

Type 'A' & 'B' fittings will be supplied made to length to penetrate either a pre-set distance into the pipe main or approximately to the pipe main centre-line. **TYPE 'C' FITTINGS WITH SCREWED MAIN PIPE CONNECTIONS REQUIRE SPECIAL INITIAL INSTALLATION.** **Type 'C'** units are full width injectors and it is essential that the lance is positioned such that it locates properly in the location pocket opposite the main connection socket (if fitted). Due to variations in the depth of thread engagement when mounting the fitting on the pipe main the position of the lance relative to the lance release nut collar needs to be adjusted to suit **AFTER** the whole W.I.F. assembly has been screwed tightly home into position and sealed. This is done as follows:

The lance release nut collar is in fact two tapered collars which mate together under pressure to produce a tight, permanent fixture onto the lance itself Firstly, undo the lance release nut and draw back exposing the composite collar. Ease apart the two parts of the collar so that they are free to move on the lance. The lance should then be pushed home so that its end is located in the location pocket in the pipe wall opposite (If fitted). Noting the approx. position of the lance, withdraw it and clean the lance surface around where the collar will fit with MEK or similar. A **SMALL** smear of lubricant can be put on the mating collar tapers - **NOT ON THE BORE OR THE LANCE ITSELF.** Re-insert the lance to its pocket position, push the inner collar down to the gland seal clamp nut, slide the outer collar down and over the inner collar then bring down the lance release nut over the collar assembly. Screw the lance release nut tightly down over the collar to lock it into position on the lance. (A little lubrication on the threads sometimes makes this easier). The collar is now locked into position and on subsequent re-insertions it will be apparent if the lance is not located correctly in its stabilising pocket.

NOTE - IF THERE IS A SPECIFIC DIRECTION THAT THE LANCE ORIFICES SHOULD BE FACING DURING OPERATION IE. UPSTREAM OR DOWNSTREAM THEN THIS WILL BE INDICATED BY A BRASS BUTTON FIXED TO THE DOSING CONNECTOR.