

OVERVIEW

Injection fittings are generally used within dosing systems and are the means of introducing chemicals into main pipeline streams. Prochem manufactures a wide range of both withdrawable and fixed fittings. Fixed injection fittings are installed semi-permanently and can only be removed with the main de-pressurised whereas withdrawable injection fittings (WIF) offer much more versatility being capable of withdrawal whilst the main is under pressure to allow for maintenance or cleaning. Sample lances can also be fixed or withdrawable (WSL).

DESIGN

All Prochem W.I.F.'s are designed for maximum ease of use and incorporate anti blow-out stops to prevent inadvertent complete expulsion of the lance during withdrawal. The sealing gland uses a 'live' loaded 'O' ring system to provide both adequate sealing to design pressures and also a good degree of friction control over the lance against line expulsion forces during withdrawal. The lances can incorporate NRV's to prevent backflow and are equipped with a diffuser to accelerate dispersion. Different designs of diffuser are available for handling difficult chemicals which tend to build up on the lance on contact with the main flow. The construction is such that a wide variety of materials can be used and combinations of both plastics and metals are quite usual. More information on these options is given below.

SIZE AND MOUNTING

The sizing of the injection fitting is governed by the flow rate of the injected chemical (dosage) as this dictates the lance diameter. The lance diameter then dictates the minimum size of pipeline connection that will accommodate that lance - see below. The sizing is given as the lance diameter followed by the mounting connection. i.e. 1/2" x 1" Type B indicates a 1/2" lance on a type B fitting having a 1" BSP mains tapping. Prochem injection fittings have either screwed or flanged connections and although operating in any position the preferred installation position is vertically down as this is most often more convenient when removing the lance. Dosage connections are normally screwed, flanged or are available with built in hose tail.

Lance Diameter	<14.0mm	<19.5mm	<23.5mm	<30.0mm	<37.0mm	<49.0mm	<52.0mm	<63.0mm
Min. Mains Conn.	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"

INJECTION FITTING OR SAMPLE LANCE DESIGNATIONS

Lance size	Mains size	Conns lance	Conns mains	Lance type	Lance style	Mains valve	Dosing conn NRV	Lance material	Lance seals	Lance tip/diff	Extras	Insertion length	X
Ø12mm	1/2"	Blank = BSP female	Blank = BSPT male	A	WIF	N = None	N = None	0 = UPVC	0 = EPDM	0 = Std diff	SC = Safety chain	Lance insertion in mm past mains connection to end of lance tip	
1/4"	1/2"	N = NPT	N = NPT	B	WSL	S = 316	SB = Sprung ball	2 = PTFE	2 = FPM	1 = O-ring diffuser			Add X and include any additional features required
3/8"	3/4"	F = Flange	F = Flange	C	IF	B = Bronze		3 = Hast C276	3 = PTFE	2 = 30° bevel			
1/2"	1"	T = Hosetail	S = BSPT male no valve	D	SL	P = PVC		4 = Monel 400	4 = None	3 = Special			
3/4"	1 1/4"	U = Union	3 = 316L male 12mm only					5 = Titanium	5 = Nitrile	4 = 45° bevel			
1"	1 1/2"	C = Triclamp	H = BSP female					6 = Monel 400	6 = NRV	5 = No tip			
1 1/4"	2"	M = BSP male	M = BSP male					7 = UPVC/316L clamp assy	7 = None	6 = NRV			
1 1/2"	2 1/2"	S = Spigot	W = Socket weld only					8 = Duplex	8 = None	5 = No tip			
2"	3"	R = Reinforced	X = If Conns lance selected	X				9 = Other	9 = None	6 = NRV			
NB except for 12mm	Minimum mains sizes	X = IF Conns mains selected											

Note - most insertion lengths are possible, usually specified at least a third to halfway into mains. Type D have limits due to screw action design. Length is specified from the end of the mains connection to the tip of the lance.

Note - not all combinations may be possible please consult Prochem for technical advice

type D lance have BSP female dosing/sample connections. NRV is an option

- WIF = withdrawable injection fitting
- WSL = withdrawable sample lance
- IF = injection fitting
- SL = sample lance
- Conns = connections
- NRV = non-return valve
- DIFF = diffuser

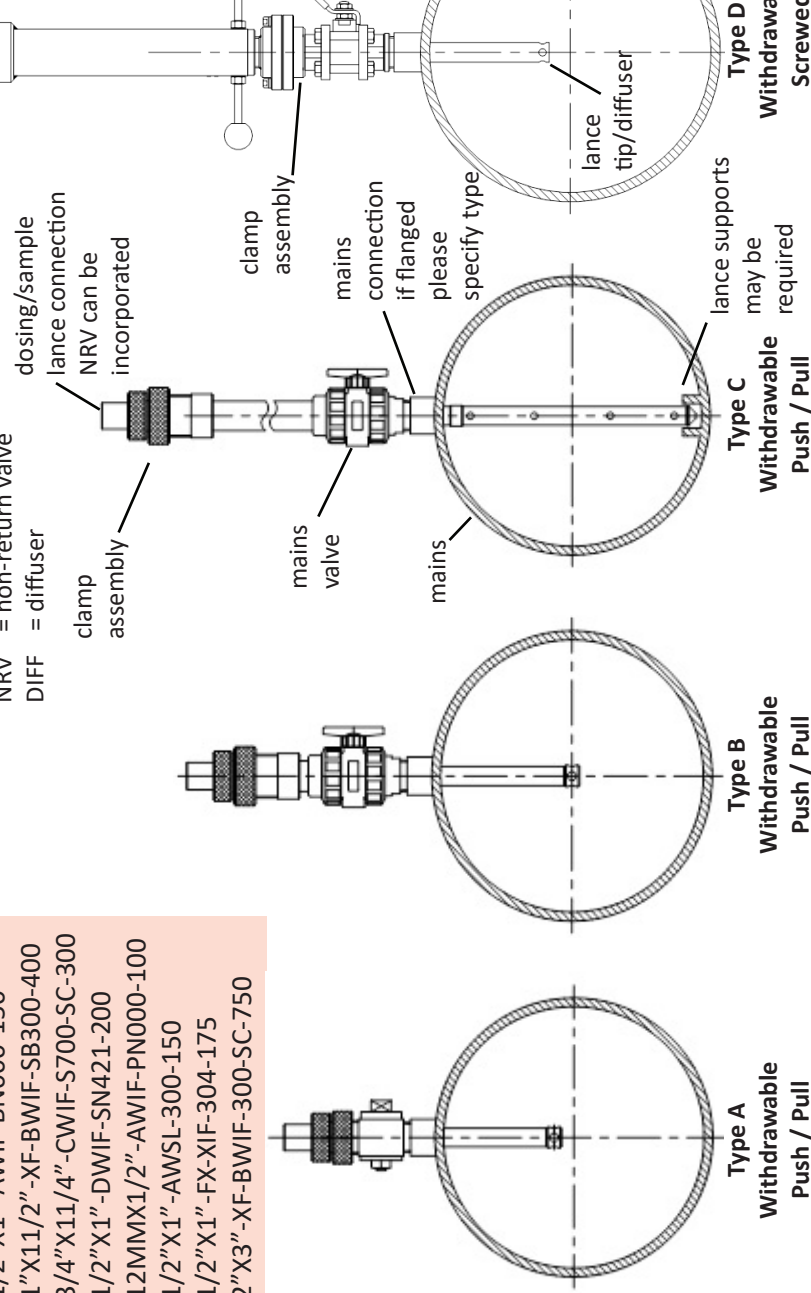
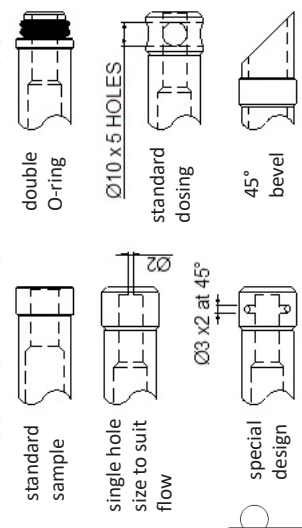
X = If Conns lance selected

1/4", 3/8" & 1/2" without a mains valve will have 1 1/8" BSP female connection to suit corp cock unless otherwise specified.

EXAMPLES OF LANCE PART NUMBERS

- 1/2"X1" -AWIF-BN000-150
- 1"X11/2" -XF-BWIF-SB300-400
- 3/4"X11/4" -CWIF-S700-SC-300
- 1/2"X1" -DWIF-SN421-200
- 12MMX1/2" -AWIF-PN000-100
- 1/2"X1" -AWSL-300-150
- 1/2"X1" -FX-XIF-304-175
- 2"X3" -XF-BWIF-300-SC-750

EXAMPLES OF LANCE TIP/DIFFUSERS INCORPORATING ANTI-BLOW OUT



SUBJECT TO CHANGE WITHOUT NOTICE