

Instructions for using Omnifit Chromatography Columns.



For 3mm bore columns

Precision glass chromatography columns designed for low to mid-pressure liquid chromatography.

1.0 Inventory list and specification

1.1 Inventory List

Item	Qty	Component	Material	Fluid contact
Glass column	1	Chromatographic tube	Borosilicate glass	Yes
Fixed End pieces,	2	Frit holder	PCTFE	Yes
		'O'-ring	FKM/FPM	Yes
		Frit – 2µm	316 Stainless Steel	Yes
		Connection cap – 1/4"-28 UNF	Polypropylene	No
Fittings kit 1/16"x0.5mm tube assembly	2	Gripper case	316 Stainless steel	No
		Gripper seal	PTFE	Yes
		Gripper fitting	Polypropylene	No
		Flexible tubing	PTFE	yes
1 x 0.5m long				
1 x 2.0m long				

1.2 Description – Please refer to the exploded diagram, numbers in parentheses in text relate to numbers in diagram

1.2.1 Chromatographic tube (6)

The high-precision bore, borosilicate glass tube is available in lengths as described in the Table. It has ground glass threads (5) at each end ensuring secure connection of endpieces.

1.2.2 Fixed column end pieces (8)

The frit holder (2), frit (4) and 'O'-ring (3) assembly is secured onto the glass chromatographic tube (6) by the connection cap (1) via the ground glass threads that are integral to the chromatographic tube.

The end piece seals against the end of the chromatographic tube via a FKM/FPM O-ring (3).

A 2µm 316 Stainless Steel frit (4) is supplied pre-fitted into the frit holder (2). This frit supports the gel bed.

The endpiece also incorporates a connector cap (1) into which a standard 1/4"-28 UNF male tube end fitting can be connected. Ready assembled tub and fittings are supplied in the fittings kit included with this column.

1.2.3 Tubing. Omnifit columns are supplied with PTFE capillary tubing pre-fitted with 1/4"-28 UNF type Gripper fittings and Grippers. Two lengths are supplied, 2m and 0.5m, which can be connected to either the fixed or adjustable endpieces.

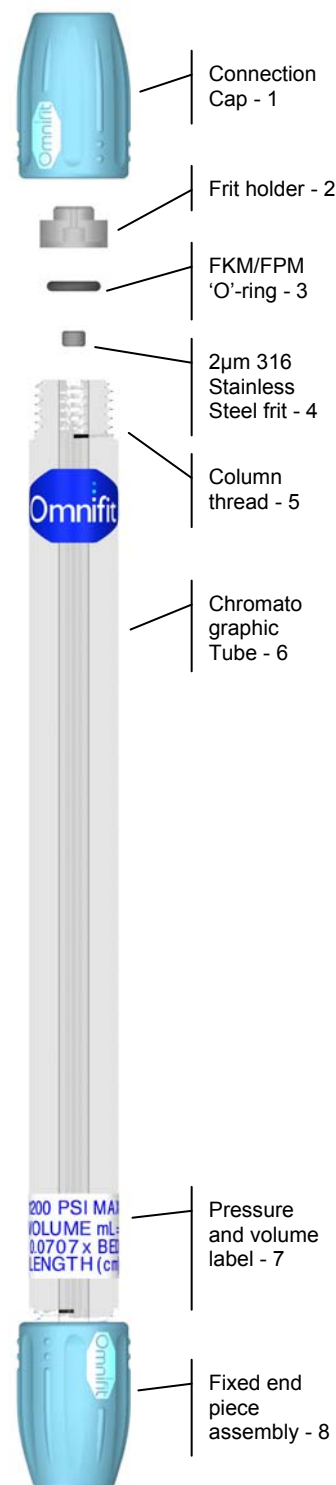
1.3 Resistance

For highest chemical inertness, the 316 Stainless Steel frit supplied fitted, should be replaced with the PTFE version available as a spare part. Care should be taken not to expose column components to materials that may cause damage or even failure. Components normally in fluid contact are described in the Inventory table. The columns may be used at temperatures up to 60°C and at pressures as shown in the following table:

Bore size	Rating – Psi
3	1200

Note: - columns must never be used under gas pressure. This may result in an explosion.

When applying pressure to the system, the column assembly must be adequately shielded



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2.0 Instructions for use.

2.1 Unpacking

Omnifit columns are supplied assembled and ready for use, with all the tubing, fittings and connections needed to get started. Unpack the column carefully and check that all components are supplied complete and undamaged.

2.2 Cleaning.

Although every effort is made to maintain the cleanliness of the chromatography components during manufacture, it cannot however, be guaranteed. It is suggested that the end pieces and glass column be washed before use to remove any possible contaminants. Take care not to lose the 'O'-ring seal from the end piece.

Suitable cleaning agents are soapy water or laboratory detergents. The frit holder, Stainless steel frit, 'O'-ring and the glass chromatographic tube are autoclavable.

2.3 Dismantling the column

1. Unscrew the fixed end piece assembly to release it from the ground glass threads on the chromatographic tube.
2. Repeat for other end if required.

2.4 Assembling the column

2.4.1 Fitting the fixed end piece

1. Ensure the threads on both the glass and retaining cap are free from debris.
2. Screw the retaining cap onto the ground glass threads. Do not tighten, see note opposite.

Note: under no circumstance should the column connector be screwed tightly onto the glass column. This may result in damage to the glass threads. Always screw the column connector onto the column until it stops, do not use any tools for this operation, finger tight is sufficient.

2.4.2 Filling and packing the column

The column can now be filled and packed with the chosen medium, as directed by the manufacturer. Printed on the column is a pressure and volume label. The equation on the label allows simple calculation of the bed volume when used in conjunction with the known chromatographic tube length.

2.5 Connecting tubing to the column

Omnifit Grippers and Gripper fittings enable quick connection and disconnection whether the columns are dismantled, assembled or even already packed

1. Using the pre-assembled tubing sets supplied, screw the Gripper fitting into the tubing connector cap until finger-tight.
2. Connect open ends of tube into ¼"-28 UNF ports of required system.

Replacement parts and accessories

Complete Omnifit columns and replacement chromatographic columns are available in the following sizes:

ID/Length	25 mm	50 mm	100 mm	150 mm	250 mm	500 mm	750 mm	1000 mm
3 mm	✓	✓	✓	✓	✓			

For further accessories, replacement parts and catalogue numbers please contact your local representative or visit our website at www.dibaind.com