

Tomoe works Column Product Catalog



STANDARD COLUMN BODY FOR HPLC

Ferrule Column



Threaded Column



- ▶ Standard column bodies are available in two types: threaded and ferrule.
- ▶ End fittings are available in Waters and Parker types for columns with an internal diameter of 5.0 mm or less, and Waters types are standard for columns with an internal diameter of 6.0 mm or more.
- ▶ Filter: Standard filtration accuracy is 2 μm . Materials include SUS316, PEEK, and PE.
- ▶ Please feel free to contact us regarding sizes not listed above.

METAL-FREE COLUMN BODY

PEEK Column Body

- ▶ This PEEK column body for ion chromatography is compatible with most organic solvents, acids, and salts used in HPLC.
- ▶ Can be filled up to 30 MPa.
- ▶ In addition to PEEK, polyethylene filters are also available.

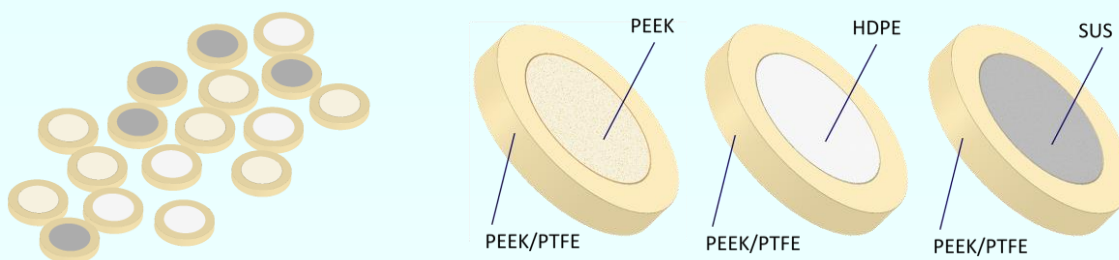


Bioinert Column Body (High-Pressure PEEK Column)

- ▶ Inert PEEK is used for the wetted parts, preventing adsorption or denaturation of the target components.
- ▶ This is a metal-free column made of a composite tube of stainless steel and resin.
- ▶ It has a pressure resistance of 100 MPa, significantly higher than conventional PEEK columns. It can be used as a thin, high-pressure, metal-free column.
- ▶ Inner diameter sizes are $\phi 0.5$ mm, 1.0 mm, and 2.1 mm. The filter is PEEK.



COLUMN FILTERS (FRITS)



- ▶ General-purpose filter: This sintered stainless steel filter can be used with our general columns.
- ▶ Low-pressure drop filter: Unlike conventional sintered stainless steel filters, this hybrid filter achieves the low pressure drop of a mesh filter and the strength of a sintered filter. Recommended when reducing column pressure or using highly viscous solvents.
- ▶ Inert Filter: A column filter made of biocompatible PEEK or PE resin. It is stable against most solvents used in HPLC and is ideal for ion chromatography, as well as biochromatography applications for proteins, peptides, nucleic acids, etc.
- ▶ Please inquire about other sizes, filtration accuracy, shapes, etc. *Each filter has a resin gasket called a sleeve that seals the fluid.

*Each filter has a resin gasket called a sleeve that seals the fluid.

*Sleeve materials can be selected from PEEK, PTFE, etc. and are included in sets with each filter.

PEEK Plugs and Fittings



Product	Sealing plug	One-piece fitting	Two-piece fitting
Pressure resistance	50 MPa	15 MPa	30 MPa
Tightening	Hand-tightened Blue version also available	Hand-tightened Tightening angle: 150° or more	Use a wrench Tightening angle: 200-240°

- ▶ PEEK plugs are commonly used for HPLC columns and prevent the column from drying out after packing.
- ▶ PEEK fittings are commonly used for connecting low-pressure 1/16" tubing to column tubing. They are available in one-piece and two-piece types and can be connected by tightening a No. 10-32 UNF thread.

PP Bio-affinity Column Body

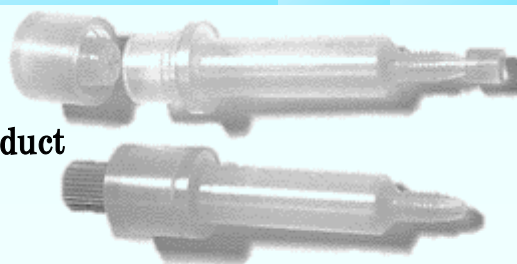
Both the biocolumn and cartridge column are made entirely of polypropylene with polyethylene frits, eliminating adsorption and ion elution of biological samples and allowing for a wide range of solvent compatibility, including acidic and alkaline solutions.

Biocolumn PP Bio-affinity Column Body



Size	Connection	Frits	Quantity
1ml	Utilizes No. 10-32 UNF threads and 1/16" tubing.	20µm	10 pc or more
5ml			

**New shape :
Developed product**



- ▶ Typical applications include purification of biochemical reagents and evaluation of packing materials.
- ▶ With a pressure resistance of up to 1 MPa, the cartridges can be connected to standard 1/16" HPLC tubing.
- ▶ The new design features an outlet that is securely sealed prior to use and enables direct insertion when in operation.
- ▶ Contract packing services with resin are also available upon request.

PP SPE cartridge Column body



- ▶ These cartridges are designed for use as disposable SPE cartridges.
- ▶ The transparent column tube allows visual monitoring of the extraction process.
- ▶ Users can pack their preferred sorbent to create original SPE cartridges.
- ▶ They are also suitable for use as mini columns for fractionation or as filter cartridges.

Product	PN	Quantity
SPE cartridge with lid TypeL(0.8ml)	CL0211	50pc with frits
SPE cartridge with lid TypeM(0.5ml)	CL0311	50pc with frits
Syringe Cartridge S (1ml)	CS0111	50pc with frits
Syringe Cartridge M (3ml)	CS0211	50pc with frits
Replacement frit for SPE cartridge Type L	CF0001	100pc
Replacement frit for SPE cartridge Type M	CF0005	100pc
Replacement frit for syringe-type cartridge, Type S	CF0002	100pc
Replacement frit for syringe-type cartridge, Type M	CF0003	100pc

After filling, the cartridge cap should be press-fitted and securely closed by the customer, using a commercially available hand press or a similar tool.

PREPARATIVE COLUMN BODIES AND CHEMICAL REACTION VESSELS



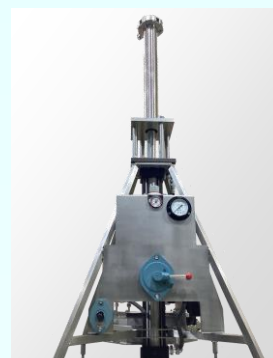
Stainless steel



Polypropylene



Fraction collector
with movable valve
and heat transfer jacket



DAC column

- ▶ We manufacture and fabricate fractionation column bodies made of SUS (stainless steel) and resin.
- ▶ We also have experience producing reaction vessels for catalysts and flow chemistry applications.
- ▶ Manufacturing of DAC columns is also available ($\phi 20$ / $\phi 50$, other sizes negotiable).
- ▶ Pressure resistance and nitrogen leak tests can be performed in-house.

Other products



Design of small-scale
piping systems for
labs and plants



Valve parts
(Customer-designed)



Acrylic resin
Columns

- ▶ In addition to columns, we have handled numerous custom-made parts.
- ▶ We have experience manufacturing small piping systems and resin columns made from acrylic materials as per customer requests.
- ▶ Please feel free to contact us if you have any issues or special requirements.

Part number list size specifications can be discussed upon request

ID	L	Threaded Column	Ferrule Column	Bioinert	PEEK	metal
0.5	50	ES005050		BI005050		
0.5	100	ES005100		BI005100		
0.5	150	ES005150		BI005150		
1.0	50	ES010050		BI010050		
1.0	100	ES010100		BI010100		
1.0	150	ES010150		BI010150		
2.1	50	ES021050		BI021050	PC021050	MT021050
2.1	100	ES021100		BI021100	PC021100	MT021100
2.1	150	ES021150		BI021150	PC021150	MT021150
2.1	250	ES021250		BI021250	PC021250	MT021250
3.0	50	ES030050	EF030050			MT030050
3.0	100	ES030100	EF030100			MT030100
3.0	150	ES030150	EF030150			MT030150
3.0	250	ES030250	EF030250			MT030250
4.0	50	ES040050	EF040050		PC040050	MT040050
4.0	100	ES040100	EF040100		PC040100	MT040100
4.0	150	ES040150	EF040150		PC040150	MT040150
4.0	250	ES040250	EF040250		PC040250	MT040250
4.0	300	ES040300	EF040300			MT040300
4.6	50	ES046050	EF046050		PC046050	MT046050
4.6	100	ES046100	EF046100		PC046100	MT046100
4.6	150	ES046150	EF046150		PC046150	MT046150
4.6	250	ES046250	EF046250			MT046250
6.0	50	ES060050	EF060050			
6.0	100	ES060100	EF060100			
6.0	150	ES060150	EF060150			
6.0	250	ES060250	EF060250			
7.5	50		EF075050			
7.5	150		EF075150			
7.5	600		EF075600			
7.8	300		EF078300		PC078300	

ES	Threaded Type	
EF	Ferrule Column (Compression Type)	
BI	Bioinert column	Outer tube: SUS (stainless steel), wetted parts: PEEK resin
PC	PEEK column	All PEEK resin
MT	Metal touch column	All Stainless steel

Part number list size specifications can be discussed upon request

ID	L	Threaded Column	Ferrule Column	Bioinert	PEEK	metal
8.0	50	ES080050				
8.0	100	ES080100				
8.0	150	ES080150				
8.0	250	ES080250				
10.0	50	ES100050	EF100050			
10.0	150	ES100150	EF100150			
10.0	250	ES100250	EF100250			
20.0	50	ES200050				
20.0	150	ES200150				
20.0	250	ES200250				
30.0	250	ES300250				
50.0	250	ES500250				

ES Threaded Type

EF Ferrule Column (Compression Type)

SPE Size	Syringe Type	SPE cartridge with lid
S	CS0111	
M	CS0211	CL0311
L		CL0211

consumable parts	Material	Application	Size		P/N
plug	PP	For SPE	Male	Female	CP0001
Sealing plug	PEEK	For analysis	No.10-32UNF		CP0002
One-piece fitting	PEEK	For analysis	No.10-32UNF		CP0003
Two-piece fitting	PEEK	For analysis	No.10-32UNF		CP0004
SS-plug	SUS316	For preparative	No.10-32UNF		CP0005

Filters (FRITS)	Material	0.5μm	1μm	2μm	other
Sintering	SUS316	○	○	○	○
Inert	PEEK	—	○	○	—
Inert	HDPE	—	—	○	—
Mesh	SUS316	○	○	○	○
Low pressure loss	SUS316	○	○	○	—

CS Cartridge syringe type

CL Cartridge lure type

CP Consumable parts

Company Name	TOMOE WORKS CO.,LTD.
Established	1948 (Showa 23)
Capital	60 million yen
President and CEO	Yuji Toyoda
Number of Employees	75
Description of Business	Designing, manufacturing and selling of
	▪ special bolts and nuts for water and gas pipes
	▪ special empty columns and joints for liquid-chromatograph
	▪ special jointing parts for all industries
	Designing, manufacturing and management skills of civil engineering and construction materials
Main Products	Stainless Steel Bolts & Nuts
	Empty HPLC Column
Company Address	Head Office
	2-4-24 Kinrakuji-cyo, Amagasaki-shi, Hyogo, 660-0806, Japan
	TEL : (+81)6 (6401) 1530
	FAX : (+81)6 (6401) 1531
Contact Us	Osaka Office
Column Group	Mail : column-sales@tomoe-works.co.jp
	6-3-1 namiyoke, minato-ku, Osaka-shi, Osaka, 552-0001, Japan
	TEL : (+81)6 (6581) 7469
	FAX : (+81)6 (6582) 7757