

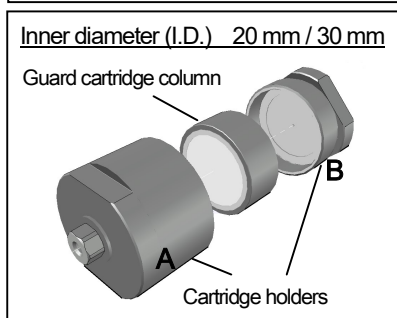
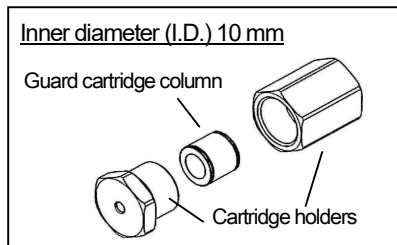
# Instruction for use

## YMC Semi-Preparative Guard Cartridge Column

### 1. Introduction

YMC Semi-Preparative Guard Cartridge Column is a guard cartridge column packed with YMC \* GEL with various functional groups.

### 2. Specifications of YMC Semi-Preparative Guard Cartridge Column



- YMC Semi-Preparative Guard Cartridge Column is composed of a pair of cartridge holders and a guard cartridge column.
- The cartridge holder is reusable. Please replace a guard cartridge column when it deteriorates.
- It is recommended to select the guard cartridge column with the same functional group with the main column.
- Guard cartridge columns with several types of functional groups are available in three sizes; 10 x 10 mm I.D., 10 x 20 mm I.D. and 10 x 30 mm I.D. .
- Cartridge holders are available in three types. Choose the holders corresponding to the inner diameter of the guard cartridge column.
- See the pairing of the guard cartridge column and holders in the table below.

Column inner diameter	Product code	
	Guard cartridge column*	Cartridge holder
10 mm	□□□□□□-0110CC	XPCHSPW1
20 mm	□□□□□□-0120CCN	XPGHFSP20ID
30 mm	□□□□□□-0130CCN	XPGHFSP30ID

\* The part shown with □ varies depends on the functional group used. See the catalog or Website.

### 3. How to use

#### STEP 1: Assembly of Semi-Preparative Guard Cartridge

- Attach a guard cartridge column to cartridge holders. There is no specified direction for the column setting.
- For 20 mm I.D. / 30 mm I.D. guard cartridge column, insert the column to the holder B first, and put the cartridge holder A on top of them, then tighten the holders. When replacing a guard cartridge column, remove the holder A first placing the holder B on the bottom for smooth operation.
- Tighten guard cartridge holders by hand as much as possible, and then use a spanner to tighten them further.
  - 10 mm I.D. column  
Tighten guard cartridge holders by rotating about 30 degrees. Use a 24mm spanner or monkey-wrench.
  - 20 mm I.D. and 30 mm I.D. column  
Tighten guard cartridge holders by rotating about 15 degrees. Use a 32 mm spanner or monkey-wrench for 20mm I.D. column, and a 40 mm spanner or monkey-wrench for 30 mm I.D. column.
- If leakage occurs, carefully tighten the guard cartridge holders little by little. Do not over tighten them, or the guard cartridge column may be damaged.

#### STEP 2: Connection of the guard cartridge column





- Connect the assembled guard cartridge column in front of the main-column (the injector side) using tools such as a column coupler. Use a short tube to avoid diffusion of the injection sample solution.
- Do not change the flow direction of the guard cartridge column which is used once. Re-connection in reverse direction may cause an inflow of impurities which was adsorbed at inlet-side of the guard cartridge column to the main column.
- If leakage occurs, gradually tighten the holder until the leakage stops.
- The operating pressure should be kept under 30 MPa (4,350 psi).

#### STEP 3: Replacement of the guard cartridge column

- The replacement timing of a guard cartridge column can be judged by the increase of pressure, the change in peak shapes and resolution.
- Repeated injections of a large amount of the sample may cause adsorption of impurities to the main column resulting in deterioration in the performance of the main column.
- It is recommended to replace a guard cartridge column at the early stage that it shows the sign of deterioration to prevent contamination of the main column.

## [Precautions for using semi-preparative guard cartridge]

- The current guard cartridge holders and guard cartridge columns are not compatible with the discontinued guard cartridge holders and guard cartridge columns.  
The discontinued guard cartridge columns cannot be used with the current guard cartridge holders, and the current guard cartridge columns cannot be used in combination with the discontinued guard cartridge holders.
- Using a guard cartridge column and guard cartridge holders in a wrong combination may cause leakage.
- The current guard cartridge column has a resin O-ring at the edge of the filter but the discontinued guard cartridge column has no O-ring.

	Guard cartridge holders	Guard cartridge columns
Current products	 <p>Product No. XPGHFSP20ID (Inner diameter 20mm) XPGHFSP30ID (Inner diameter 30mm)</p>	 <p>Product No. XXXXXXXX-0120CCN XXXXXXXX-0130CCN</p>
Discontinued products	 <p>Product No. XPCHSPW2 (Inner diameter 20mm) XPCHSPW3 (Inner diameter 30mm)</p>	 <p>Product No. XXXXXXXX-0120CC XXXXXXXX-0130CC</p>

**The current products and the discontinued products are not compatible with each other.**