



YMC HT Glass Columns

High Temperature Glass Columns
For Laboratory Scale

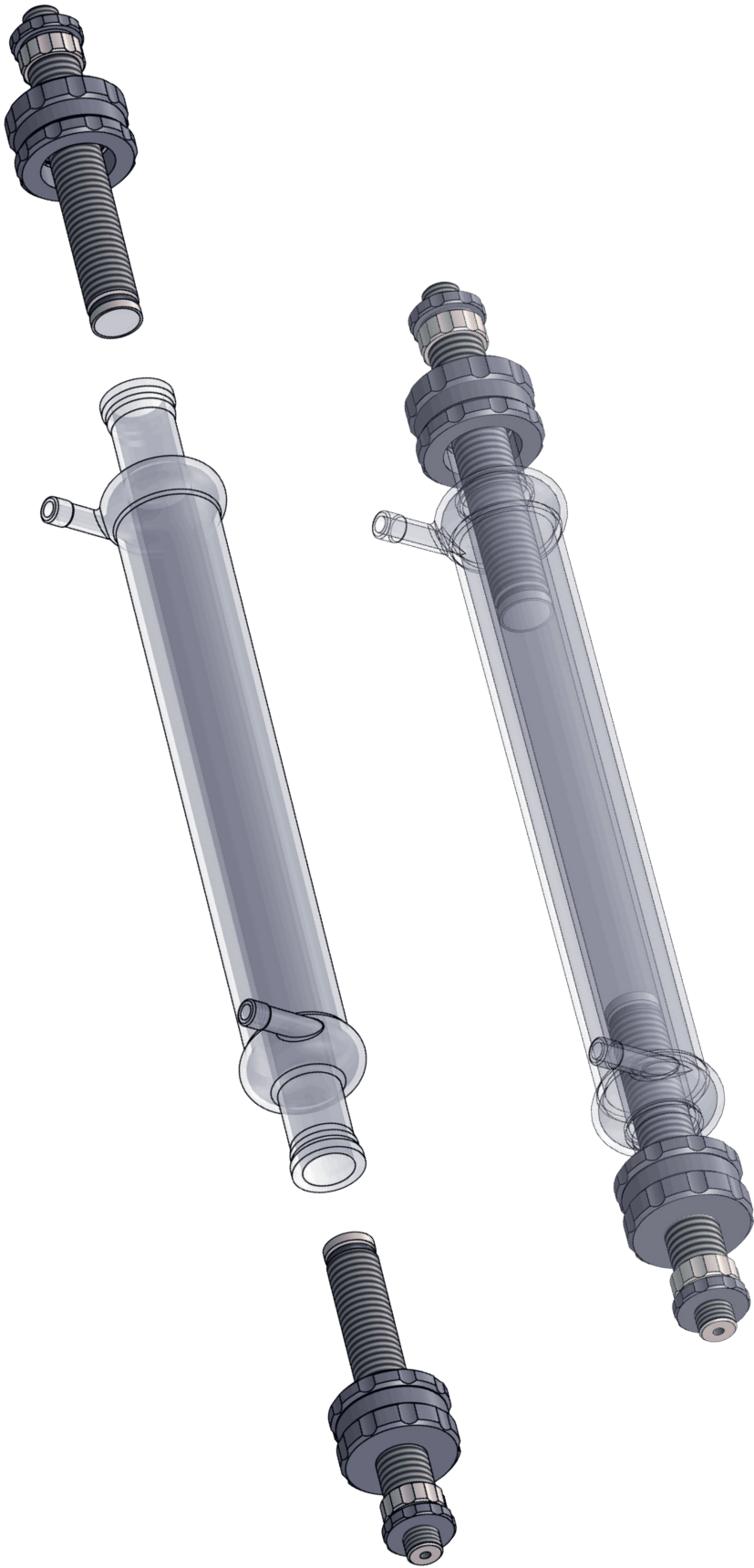


**High Temperature
Applications**

**Easy Handling
and Operation**

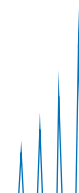
Self-packing





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Product Range

Inner Diameter [mm]	10, 15, 25, 50
Length Glass Body [mm]	120, 200, 300, 450, 750, 1000
Temperature Range [°C]	4–70
Pressure Range* [bar]	30–10

* Pressure limit depends on inner diameter

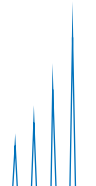
Wetted Parts	PEEK pistons, glass frits, FFKM O-ring, borosilicate glass body
Connections	The columns are supplied with different adapters to allow direct connection to any LC-system (e.g. ÄKTA system)
Accessories Supplied (columns with ID 10–15 mm)	1 x frit removal tool 2 x plugs, PTFE (1/4"-28G) 1 x 2 m FEP tubing (0.8 x 1.6 mm) 4 x 1/4"-28G nut and ferrule for 1/16" tubing 2 x M6 nut and ferrule for 1/16" tubing 2 x 10-32 fitting for 1/16" tubing
Accessories Supplied (columns with ID 25–50 mm)	1 x frit removal tool 2 x plugs, PTFE (1/4"-28G) 1 x 2 m FEP tubing (1.6 x 3.2 mm) 4 x 1/4"-28G nut and ferrule for 1/8" tubing 2 x M6 nut and ferrule for 1/8" tubing

YMC HT Glass Columns

YMC HT glass columns are the perfect match for high temperature applications. The new column line has been especially developed for conditions of up to 70°C. This offers more flexibility in your method development. Due to the innovative column design aqueous buffers and organic solvents can be used. Easy handling and self-packing make the YMC HT glass columns your ideal partner for elevated temperature-sensitive applications.



- First choice for applications at elevated temperatures up to 70°C
- Pressure limit 30–10 bar depending on the inner diameter
- Practical column stands available for columns with 25 mm and 50 mm ID

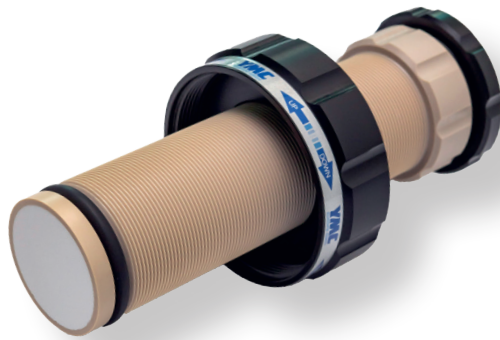


YMC HT Glass Columns – Your Benefits



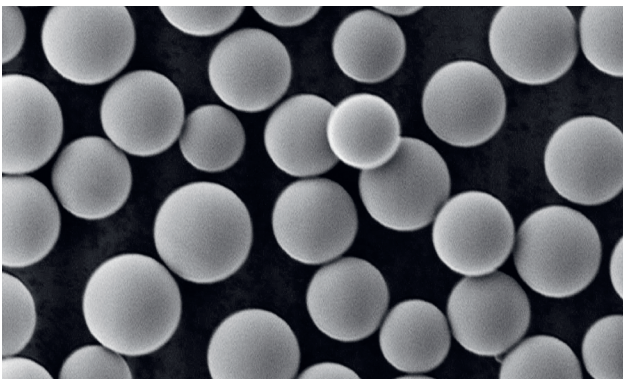
Engineered for Temperature-Sensitive Applications

- Wide temperature range from 4–70 °C
- Long lasting column design
- Reliable connection to the heating jacket



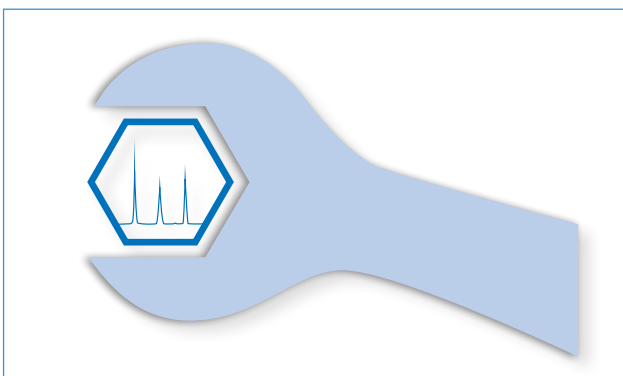
Easy Handling and Column Packing

- Optimum flow distribution
- Reliable sealing
- Reproducible packing results



Full Resin Compatibility

- For all types of silica and soft gels
- Metal free flow path for BioLC applications
- Resistant towards organic solvents



Easy Maintenance

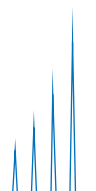
- Fast replacement wetted parts (e. g. frits and O-rings)
- Efficient cleaning due to high solvent resistance

Engineered for Temperature Sensitive Applications

Due to the high temperature stability and innovative design, temperatures of 4–70°C can be used even for continuous operation. The robust column hardware makes it possible.

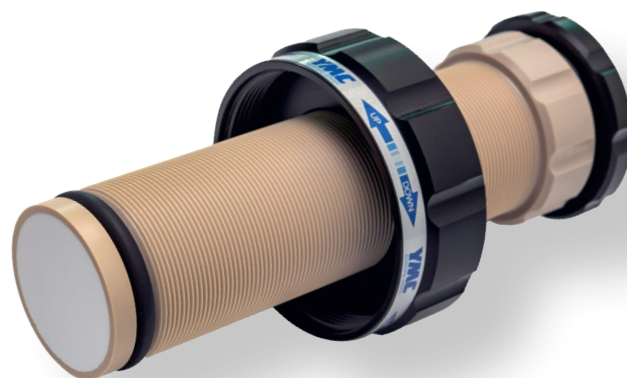


Borosilicate glass 3.3 heating jacket provides full organic solvent compatibility for efficient cleaning. This can drastically extend the column lifetime.



Easy Handling and Column Packing

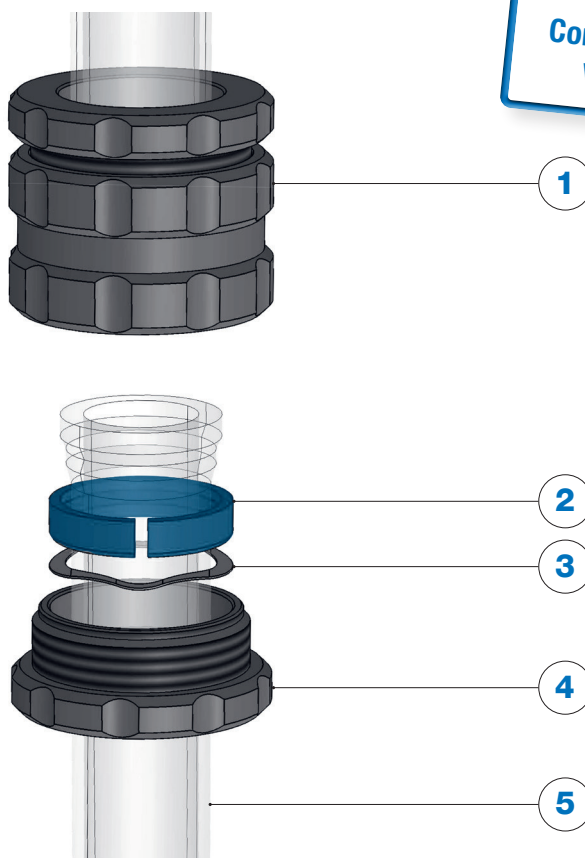
The fully porous frits, which are securely fixed in the piston, lead to optimal flow distribution. In combination with the linear piston movement, excellent packing results are achieved. Even at temperatures of 70 °C, reliable sealing due to the squeezed O-ring is guaranteed.



Packing Adapter

Packing adapters are used if the packing method requires additional column volume during the packing process. For the slurry method a suspension of approximately 30–50 % packing material is prepared and therefore often a higher column volume required. The adapter is coupled to the column and gives the higher volume for packing. The additional packing solvent and packing adapter above the finished column bed can easily be removed after the packing process.

1. Coupling unit
2. Snap ring
3. Spring washer
4. Counter screw
5. Glass body



Completely compatible
with ECO adapter

Full Resin Compatibility

The YMC HT columns are produced exclusively from highly robust materials. Still, the flow path remains metal-free. This allows the versatile use of YMC HT columns for all common LC modes such as NP, RP, affinity, IEX and HIC.

Mode	YMC HT
IEX	Compatible
SEC	Compatible
HIC	Compatible
Affinity	Compatible
MMC	Compatible
RP	Compatible
NP	Compatible

Available Resin from YMC



Download the Purification Resins Phase Chart



Chemical Resistance

Solvent	Wetted parts: Borosilicate glass 3.3, PEEK, FFKM, FEP and glass frits
Acetone	Resistant
Acetonitrile	Resistant
Ammonium dihydrogen phosphate	Resistant
Cyclohexane	Resistant
Dichlormethane	Limited resistant
EDTA (3 %)	Resistant
Acetic acid (6 %)	Resistant
Ethanol	Resistant
Ethyl acetate	Resistant
n-hexane	Resistant
Isopropanol	Resistant
Methanol	Resistant
NaOH (2M)	Resistant
HCl (1 M)	Resistant
Urea (8M)	Resistant
NaCl (1 M)	Resistant
Na ₂ SO ₄ (0.5M)	Resistant

Limited resistant

Resistant

If your solvent is not listed, please contact us for a chemical resistance check.

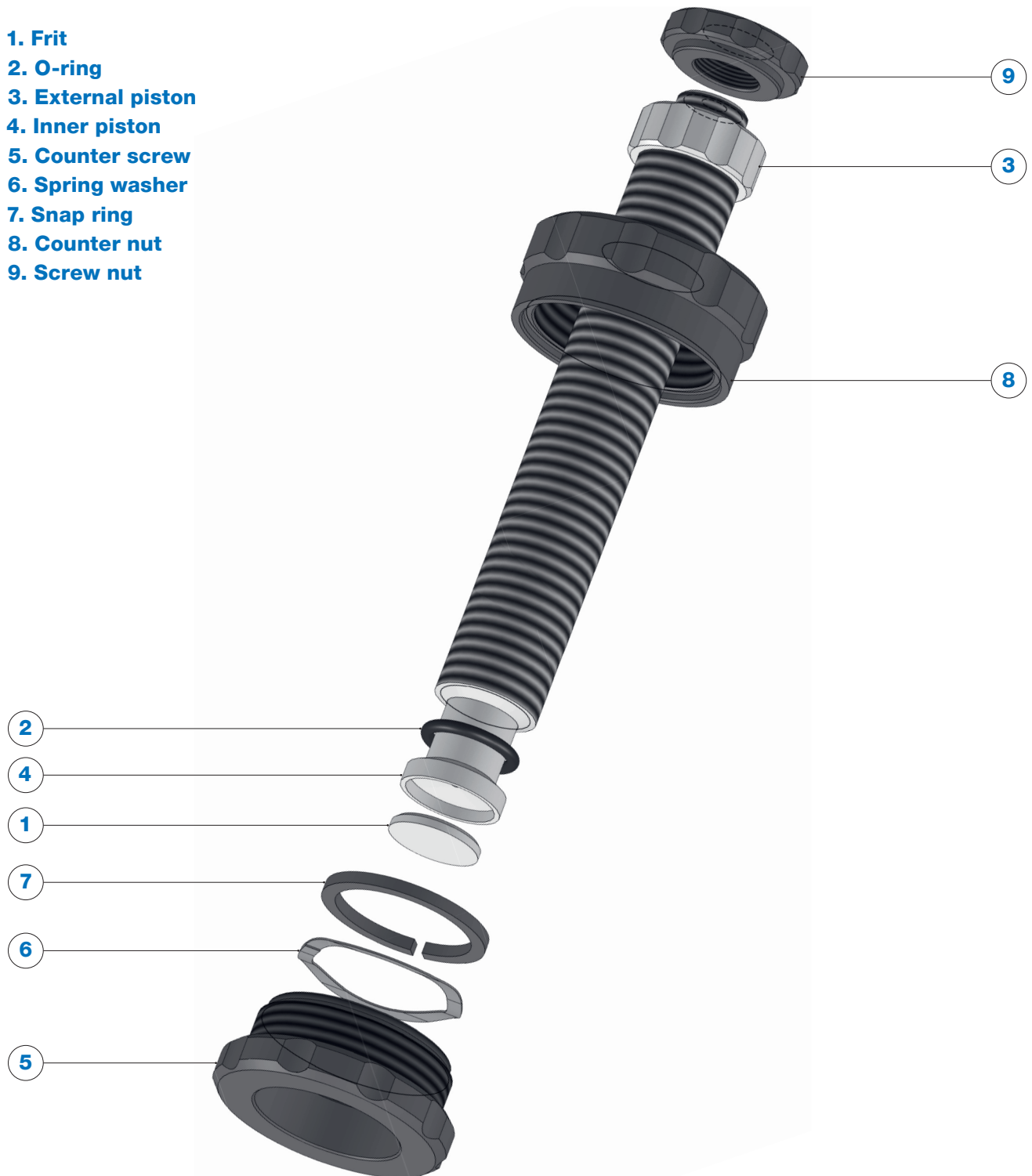
Note: The resistance of the standard versions is based on the resistance of each wetted part. If one part is limited or not resistant, the whole column is marked with this characteristic as this part is critical.

For all columns, where the combination of the wetted parts varies from the above listed ones, the chemical resistance can vary, too. Therefore, please contact us if you need assistance regarding the chemical resistance.

Easy Maintenance

Quick and easy maintenance: The simple construction of the end piece makes it possible to replace spare parts such as O-rings and frits quickly and easily.

1. Frit
2. O-ring
3. External piston
4. Inner piston
5. Counter screw
6. Spring washer
7. Snap ring
8. Counter nut
9. Screw nut



For ordering accessories or spare parts, please contact YMC!

Specifications

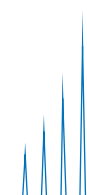
Inner diameter column [mm]	Pressure limit [bar]	Bed length range [mm]	Column volume range [mL]
10	30	15-120	1.5-9
		95-200	9-15
		195-300	17-23
		345-450	30-35
		645-750	55-58
		905-1000	77-78
15	25	10-120	2-19
		90-200	18-32
		190-300	37-49
		335-450	65-73
		635-750	121-122
		885-1000	163-170
25	15	10-120	6-60
		90-200	55-100
		195-300	113-156
		345-450	200-230
		645-750	375-390
		895-1000	515-520
50	10	20-120	45-235
		100-200	225-390
		205-300	453-593
		355-450	785-885
		655-750	1450-1480
		905-1000	1970-2000

Ordering Guide

Column (Glass body and TWO adjustable end pieces)

The part numbers for the columns contain information on the column type, inner diameter, maximum bed length and frits.

Inner diameter column [mm]	Maximum bed length [mm]	Frit porosity [μm]	Product code
HT10	120	10–16	HT10/120G10
	200		HT10/200G10
	300		HT10/300G10
	450		HT10/450G10
	750		HT10/750G10
	1000		HT10/999G10
HT15	120	10–16	HT15/120G10
	200		HT15/200G10
	300		HT15/300G10
	450		HT15/450G10
	750		HT15/750G10
	1000		HT15/999G10
HT25	120	10–16	HT25/120G10
	200		HT25/200G10
	300		HT25/300G10
	450		HT25/450G10
	750		HT25/750G10
	1000		HT25/999G10
HT50	120	10–16	HT50/120G10
	200		HT50/200G10
	300		HT50/300G10
	450		HT50/450G10
	750		HT50/750G10
	1000		HT50/999G10



Also find out
about our glass column
packing service.

Packing Adapter (Column coupler and glass body)

Two different columns – one packing adapter:

The same packing adapters can be used for the new YMC HT as well as for the ECO line.

1. Select the correct column coupler

	Inner diameter column	Identification for coupling unit	O-ring (FFKM)
Combinations	ECO10 (10 mm ID) ECO15 (15 mm ID) ECO25 (25 mm ID) ECO50 (50 mm ID)	KU/	K-3
Example	ECO10	KU/	K-3

2. Select the correct glass body

The inner diameters for the glass body must be the same as that of the YMC HT column.

Glass bodies with the following dimensions are available:

Inner Diameter [mm]	Column length [mm]
10, 15, 25, 50	120, 200, 450, 750, 1000

The length of the additional glass body must be selected according to the resin packaging instructions. To select the correct length of the additional glass body, the following points can be used as a guide:

- **Double the volume of slurry compared to the required packed bed volume if packing silica materials**
- **Triple the volume of slurry for softer packing materials**

The part number of the glass body is: **ECO ID/length** (e.g. ECO 10/120)

If you need assistance in choosing the right packing adapter, please contact YMC!

Accessories and Spare Parts

1. Column stand:

For optimal positioning of the YMC HT glass column, column stands are available for **IDs of 25 and 50 mm**. The reliable and handy design enables the column to be set up quickly and easily.

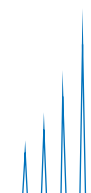


2. Packing Adapter:

Packing adapters are available for all available inner diameters in different lengths. For more information see pages 8 and 14.

3. Spare Parts:

1. O-rings and frits
2. Glass body
3. Fittings and tubing/accessory pack



Laboratory Services

Save time and choose a packed column

If you are working on a tight schedule or you do not have sufficient experience in column packing here is a solution!

Rely on the experience of YMC and ask for a packed YMC HT, ECO or ECO^{PLUS} column. Our knowledge of packing is your benefit!

Our services include packing of

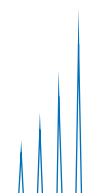
- **YMC HT, ECO and ECO^{PLUS} columns**

Depending on your required bed length, you can choose a column from our portfolio. If you can't find a suitable standard product, we will gladly discuss the options of a customised column with you.

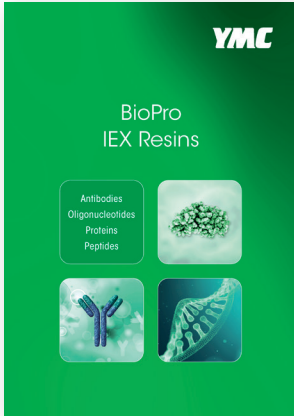
- **Stationary phases from YMC as well as from other suppliers**

If your method is restricted to a certain stationary phase, we pack your column according to your needs, using stationary phases made by YMC or any other supplier.

Ask your rep for more information!



More from YMC



YMC's BioPro IEX are polymeric ion exchange resins for the purification of biologicals. They represent one part of the three part YMC-Prep portfolio: silica, hybrid silica and polymer media.



YMC-Triart Prep is a hybrid silica phase, stable between pH 2.0–10.0. It is available with various modifications for RP purifications.

Purification Resins for Bioseparations
IEX, SEC, and RP Phases

YMC

Contact your YMC rep or info@ymcamericas.com for more information about these and other YMC resins.

Resin Name	Resin Type	Particle Size (µm)	Porosity (Å)	Flow Rate (mL/min)	Typical Applications
YMC-Triart Prep	Hybrid silica-based	5, 10, 15, 20	1000	1000	Prep LC, RP, SEC, IEX
YMC-BioPro IEX	Polymeric ion exchange	5, 10, 15, 20	1000	1000	Prep LC, IEX
YMC-Triart Prep	Hybrid silica-based	5, 10, 15, 20	1000	1000	Prep LC, RP, SEC, IEX
YMC-BioPro IEX	Polymeric ion exchange	5, 10, 15, 20	1000	1000	Prep LC, IEX

Purification Resins for General Use
NP, RP, and Chiral Phases

YMC

Contact your YMC rep or info@ymcamericas.com for more information about these and other YMC resins.

Resin Name	Resin Type	Particle Size (µm)	Porosity (Å)	Flow Rate (mL/min)	Typical Applications
YMC-Triart Prep	Hybrid silica-based	5, 10, 15, 20	1000	1000	Prep LC, RP, SEC, IEX
YMC-BioPro IEX	Polymeric ion exchange	5, 10, 15, 20	1000	1000	Prep LC, IEX
YMC-Triart Prep	Hybrid silica-based	5, 10, 15, 20	1000	1000	Prep LC, RP, SEC, IEX
YMC-BioPro IEX	Polymeric ion exchange	5, 10, 15, 20	1000	1000	Prep LC, IEX

The Purification Resins phase chart gives an overview of YMC's preparative resins.

YMC Pilot^{PLUS} is the new standard for your pilot scale applications. It is completely biocompatible and characterized by safe and easy handling. Packing, operating and unpacking the column is a smooth procedure due to a number of significant advantages.

The ECO series is optimized for use with almost all types of soft gels and medium pressure liquid chromatography, while the ECOPLUS series caters to both medium and high-pressure applications, facilitating higher flow rates or the use of RP media.

Glass Columns for Lab and Pilot Scale		YMC				
Column series	ECO ^{PLUS}	ECO	YMC HT	YMC Pilot ^{PLUS}	YMC Pilot	
Main Features	Medium and high pressure applications • Easy assembly with Quick-Lock system • Pressure range due to high-temperature	Low and medium pressure applications • Easy protein adjustment • Low energy glass holder for LC applications	Low and medium pressure applications • 1/8" to 7/16" TC • Easy handling and long-term design	Pilot scale HPLC applications • Stable flow control packing • Start-to-stop function • Long-term reliability	Pilot scale applications • Column rotation operation • Stable • Larger bed height range for SEC applications	
Available ID (mm)	4, 5, 10, 15, 20, 25, 30, 40	5, 10, 15, 20, 25, 30, 40	10, 15, 20, 25, 30	75, 100, 140, 200	500, 1400, 2000	
Available Length (mm)	125, 250, 500	120, 200, 400, 700, 1000	220, 250, 300, 450, 700, 1000	500, 1000	500, 1000	
Pressure Limits (bar)	40-80, 30, 50, 80, 15	30-5	30-10	20-5	10-3	
Column Volume (L)	0-1	0-4	0-2	0-25	0-140	
Connectivity	1/4" (200 mm) in accessories bag	1/4" (200 mm) in accessories bag	1/4" (200 mm) in accessories bag	TC or valve	TC or valve	
Tubing	• 5 - 15 mm ID, 3/16" OD (0.8 x 0.8 mm) • 20 - 40 mm ID, 1/8" OD (2.0 x 2.2 mm)	• 20 - 15 mm ID, 3/16" OD (0.8 x 0.8 mm) • 25 - 40 mm ID, 1/8" OD (2.0 x 2.2 mm)	• 10 - 15 mm ID, 3/16" OD (0.8 x 0.8 mm) • 20 - 30 mm ID, 1/8" OD (2.0 x 2.2 mm)	• 70 - 200 mm ID, 3/4" OD (18.0 x 19.0 mm) • 140 - 200 mm ID, 1/4" ID (0.8 mm)	• 1/4" OD (4.0 x 4.0 mm)	
Column stand	✓	✓	✓	✓	✓	
Packing adaptor available	✓	✓	✓	✓	✓	
Certification	PCA, ISO 9001:2015	PCA, ISO 9001:2015	PCA, ISO 9001:2015	PCA, ISO 9001:2015, USP Class VI	PCA, ISO 9001:2015	
How to connect to BIA-DA systems	Adaptor 32/32 or M6	Adaptor 32/32 or M6	Adaptor 32/32 or M6	TC25	TC25	
Scan QR code to view full brochure with more information						

The Glass Column Portfolio Overview provides a quick comparison of all of our glass columns to help you choose the best option for your process.

For help in selecting your laboratory or pilot scale glass column, please complete this questionnaire and return it to your rep or to info@ymcamerica.com.

Questionnaire for YMC Glass Columns

1. Inner diameter (mm): _____
2. Minimum bed length (mm): _____
3. Maximum bed length (mm): _____
4. Bed volume (mL): _____
5. Maximum pressure (bar): _____
6. Temperature range: _____
7. Biocompatibility: Yes No
8. Packing material: _____
9. Particle size of packing material: _____
10. Solvents: _____
11. Are you interested in column packing services? Yes No
12. Quotation for packing adapter required: Yes No
13. Regulatory requirements: _____
13. Additional notes: _____

Your local contact:

YMC America, Inc.
8 Charlestown Street
Devens, MA 01434
Phone +1 978 487 1100
Email: info@ymcamerica.com
www.ymcamerica.com

YMC

YMC CO., LTD.

www.ymc.co.jp

YMC Europe GmbH

www.ymc.eu

YMC America, Inc.

www.ymcamerica.com

YMC Switzerland LLC

www.ymc-schweiz.ch

YMC India Pvt. Ltd.

www.ymcindia.com

YMC Shanghai Rep. Office

www.ymcchina.com

YMC Korea Co., Ltd.

www.ymckorea.com

YMC Taiwan Co., Ltd.

www.ymctaiwan.com

YMC Singapore Tradelinks Pte. Ltd.

www.ymc.sg