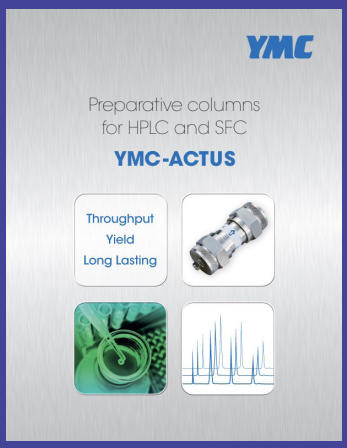
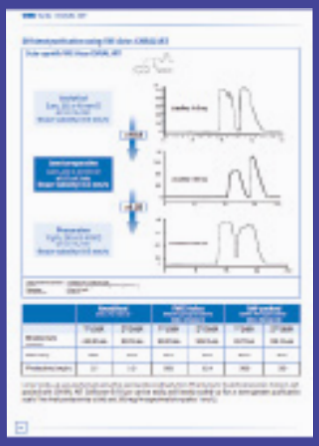
YMC-Actus Columns

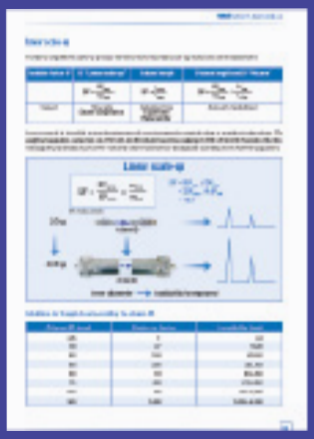
Dynamic Axial Compression (DAC) columns are widely used for preparative separation at pilot or production scale. The axial compression technology results in the uniform high-density packing that is necessary for highly efficient and stable HPLC columns.

YMC-Actus preparative columns were developed by applying this same technology. The column bed is compressed when attaching the inlet end assembly of the YMC-Actus hardware. This provides increased bed density (10% higher than that of conventional columns) and bed uniformity. Packed with YMC resins, Actus columns have been shown to maintain high stability under high flow rates and steep gradient conditions.

To learn more about YMC-Actus preparative columns, view the complete brochure online. Contents include hardware specifications, applications, scale-up information, and more.







Scan the QR code to download your copy.

You can also access it via this link:
https://www.ymcamerica.com/resource/ymc-actus/

Prep Resources

YMC-Actus Hardware Specifications

Hardware Code	-xxxxWX	-xxxxDX	-xxxxAX
ID	20, 30 mm	50 mm	
Lengths	50, 75, 100, 150, 250 mm	100, 150, 250 mm	
Max. Pressure	300 bar (for 5 µm)	200 bar (for 5 µm)	
Port depth	3.3 mm (0.13", 1/16")		3.3mm (0.13", 1/16")
Connection		Female Swagelok nut connection (1/8")	
Fitting		1/8"	1/16"
Stationary Phases	YMC-Triart, Reversed phase classics, CHIRAL ART		

Preparative Column Selection Guide

This guide is designed to assist in determining the following:

- Column ID for the required sample loading
- Particle size for optimum efficiency
- Column length for the necessary resolution

Note: These calculations are based on estimates that may vary depending on actual conditions. A loading study should always be completed for best results.

			Lab Scale → Production Scale								
Columns inner diameter [mm id]			4.6	10	20	30	50	100	200	500	1,000
Cross sectional area ratio			1.0	4.7	19	42	118	473	1890	11,800	47,300
Example of calculation	**Flow rate [ml/min]**		0.5	2.4	9.5	21	60	235	950	6,000 (6 L)	24,000 (24 L)
			1.0	4.7	19	42	120	470	1,900	12,000 (12 L)	47,000 (47 L)
	Loading [mg]		5	25	100	220	600	2,500	10,000	60,000 (60 g)	240,000 (240 g)
HIGH Column efficiency, pressure, costs **LOW**	**Particle size [µm]**	**5**	+++	+++	+++	+++	++	+	+		
		10	++	+++	+++	+++	+++	++	++	++	++
		10-20	+	++	++	++	+++	+++	+++	++	++
		15-30		+	+	+	++	+++	+++	+++	++
		50-					+	++	++	+++	+++

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