

Zorbax Rapid Resolution HT (1.8µm) HPLC Columns from Hichrom Limited

- 1.8µm particle size
- Ultra-fast LC and LC-MS separations
- Reduce analysis time by up to 95%
- High resolution with short column lengths
- Wide range of phases
- High pressure (600bar) columns for ultra high speed

Table 1. Comparison of efficiencies of RRHT (1.8µm) and RR (3.5µm) columns

Column Dimensions (mm)	Resolving Power	
	N (3.5µm)	N (1.8µm)
High Resolution		
150	21,000	32,500
100	14,000	24,000
75	10,500	17,000*
Ultra Fast		
50	7000	12,000
30	4200	6000
20	-	3500
15	2100	2500
Resolution $\propto N^{1/2}$		

* Available as a custom column

Zorbax Rapid Resolution HT (RRHT) 1.8µm columns use a totally porous 1.8µm particle to provide maximum resolution in fast, ultra-fast and high resolution analyses. The small particles provide high resolving power, while very short column lengths (15 – 50mm) enable the high speed analyses.

Rapid Resolution HT columns are available packed with Zorbax Eclipse Plus, Eclipse XDB, StableBond and Extend phases. The same bonded phases are used as in the 3.5µm and 5µm particles. This means that methods can easily be converted from longer columns to shorter, faster columns while maintaining the same separation selectivity.

According to Agilent Technologies these 1.8µm particles offer up to double the efficiency of the equivalent 3.5µm particles (see Table 1) and up to 3 times more efficiency than comparable 5µm particles of the same column length, using an optimised HPLC system. Agilent data shows that a 95% decrease in analysis time can be achieved by converting from a 5µm 250 x 4.6mm column to a 1.8µm 30 x 4.6mm column, without significantly compromising resolution. This also leads to increased sample throughput of up to 15 times, while improving sensitivity.

In order to achieve maximum efficiency, extra column effects must be minimized. This involves using a fast detector response time for a high data sampling rate and minimizing extra column volume by using narrow connecting tubing (0.12mm i.d.), small flow cell and small injection volumes.

In addition to the initial range of 1.8µm 400bar columns and cartridges (see overleaf), an expanded range of high pressure (600bar) columns is available for use with higher pressure LC systems, such as the Agilent 1200.



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Ordering Information

Zorbax Rapid Resolution HT (1.8 μ m)

Tel: 0118 930 3660, Fax: 0118 932 3484, sales@hichrom.co.uk

Zorbax Rapid Resolution HT 1.8 μ m Columns for High Pressure (Maximum Pressure: 600bar, 9000psi)

Description	Dimensions (mm)	Eclipse Plus C18	Eclipse Plus C8	Eclipse Plus PAH	Eclipse XDB-C18	Eclipse XDB-C8	Extend-C18	List Price
Narrow Bore RRHT	20 x 2.1	-	-	-	926700-902	926700-906	726700-902	£189
Narrow Bore RRHT	30 x 2.1	959731-902	959731-906	-	924700-902	924700-906	724700-902	£227
Narrow Bore RRHT	50 x 2.1	959741-902	959741-906	959741-918 ¹	927700-902	927700-906	727700-902	£319
Narrow Bore RRHT	100 x 2.1	959764-902	959764-906	959764-918 ²	928700-902	928700-906	728700-902	£391
Narrow Bore RRHT	150 x 2.1	959794-902	-	-	-	-	-	£488
Solvent Saver HT	20 x 3.0	-	-	-	926975-302	926975-306	726975-302	£189
Solvent Saver HT	30 x 3.0	-	-	-	924975-302	924975-306	724975-302	£227
Solvent Saver HT	50 x 3.0	959941-302	959941-306	-	927975-302	927975-306	727975-302	£319
Solvent Saver HT	100 x 3.0	959964-302	959964-306	-	928975-302	928975-306	728975-302	£391
Rapid Resolution HT	20 x 4.6	-	-	-	926975-902	926975-906	726975-902	£189
Rapid Resolution HT	30 x 4.6	959931-902	959931-906	959931-918 ³	924975-902	924975-906	724975-902	£227
Rapid Resolution HT	50 x 4.6	959941-902	959941-906	959941-918 ¹	927975-902	927975-906	727975-902	£319
Rapid Resolution HT	100 x 4.6	959964-902	959964-906	959964-918 ²	928975-902	928975-906	728975-902	£391
Rapid Resolution HT	150 x 4.6	959994-902	-	-	-	-	-	£488

¹ £197

² £258

³ £182

Description	Dimensions (mm)	SB-C18	SB-C8	SB-Phenyl	SB-CN	SB-Aq	Rx-Sil	List Price
Narrow Bore RRHT	20 x 2.1	826700-902	826700-906	-	-	-	-	£189
Narrow Bore RRHT	30 x 2.1	824700-902	824700-906	824700-912	824700-905	824700-914	-	£227
Narrow Bore RRHT	50 x 2.1	827700-902	827700-906	827700-912	827700-905	827700-914	827700-901	£319
Narrow Bore RRHT	100 x 2.1	828700-902	828700-906	828700-912	828700-905	828700-914	828700-901	£391
Narrow Bore RRHT	150 x 2.1	820700-902	820700-906	820700-912	820700-905	-	-	£488
Solvent Saver HT	20 x 3.0	826975-302	826975-306	-	-	-	-	£189
Solvent Saver HT	30 x 3.0	824975-302	824975-306	-	824975-305	-	-	£227
Solvent Saver HT	50 x 3.0	827975-302	827975-306	827975-912	827975-305	827975-314	827975-301	£319
Solvent Saver HT	100 x 3.0	828975-302	828975-306	828975-912	828975-305	828975-314	828975-301	£391
Solvent Saver HT	150 x 3.0	829975-302	829975-306	829975-312	829975-305	-	-	£488
Rapid Resolution HT	20 x 4.6	826975-902	826975-906	-	-	-	-	£189
Rapid Resolution HT	30 x 4.6	824975-902	824975-906	824975-912	824975-905	824975-914	-	£227
Rapid Resolution HT	50 x 4.6	827975-902	827975-906	827975-912	827975-905	827975-914	827975-901	£319
Rapid Resolution HT	100 x 4.6	828975-902	828975-906	828975-912	828975-905	828975-914	828975-901	£391
Rapid Resolution HT	150 x 4.6	829975-902	829975-906	829975-912	829975-905	-	-	£488

Zorbax Rapid Resolution HT 1.8 μ m Columns and Cartridges (Maximum Pressure: 400bar, 6000psi)

Description	Dimensions (mm)	1/pk		Price	3/pk		List Price
		XDB-C18	SB-C18		XDB-C18	SB-C18	
Columns							
Narrow Bore RRHT	50 x 2.1	922700-902	922700-932	£240	822700-902	822700-932	£783
Rapid Resolution HT	50 x 4.6	922975-902	922975-932	£240	822975-902	822975-932	£783
Rapid Resolution HT Cartridges¹							
Rapid Resolution HT	15 x 2.1	921700-902	921700-932	£116	821700-902	821700-932	£381
Rapid Resolution HT	30 x 2.1	923700-902	923700-932	£164	823700-902	823700-932	£536
Rapid Resolution HT	50 x 2.1	925700-902	925700-932	£233	825700-902	825700-932	£762
Rapid Resolution HT	15 x 4.6	921975-902	921975-932	£116	821975-902	821975-932	£381
Rapid Resolution HT	30 x 4.6	923975-902	923975-932	£164	823975-902	823975-932	£536
Rapid Resolution HT	50 x 4.6	925975-902	925975-932	£233	825975-902	825975-932	£762

¹ Require hardware kit 820555-901 (£100)



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