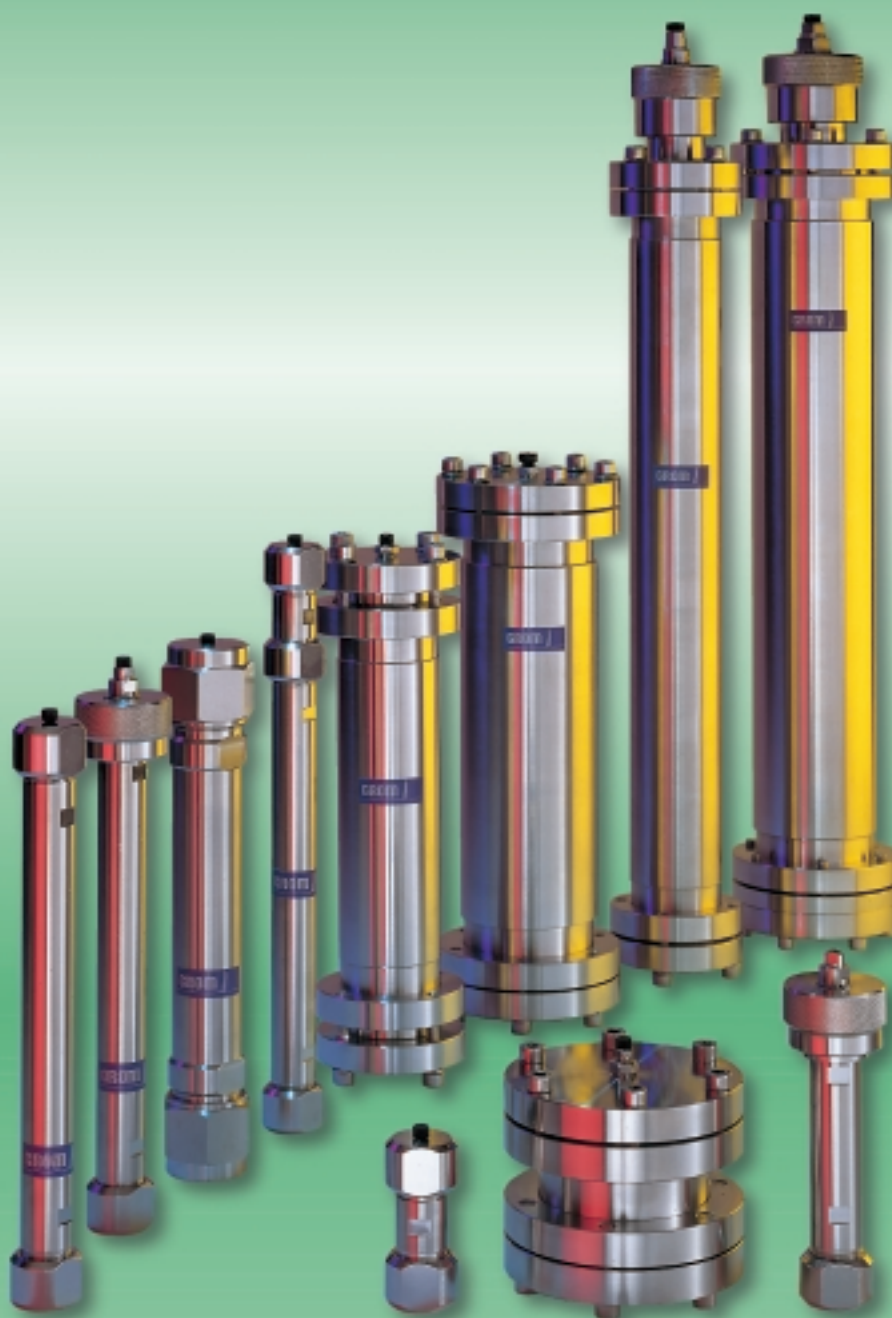


SEMI-PREPERATIVE- and PREPARATIVE *NovoGROM* HPLC-Columns - 0.8 to 10.0 cm i.d. -

Semi-preparative- and preparative *NovoGROM* columns in various dimensions, made of stainless steel or glass are available both empty or packed with any of the *GROM* stationary phases or with stationary phases from other manufacturers. Selection of a suitable stationary phase for preparative separation is greatly facilitated by the *GROM* Method-Development Sets. The Up-scaling sets (page 136) then assist in transferring the analytical-scale separation to a preparative scale with a minimum of effort.



Note ! Each of these items can be purchased as an empty column or ready-packed with one of the stationary phases described in this catalogue, as well with any other stationary phase chosen by the customer himself (such as Novarose materials, Toyopearl resins, etc.).

NovoGROM HPLC columns made from glass

In addition to the unique stainless steel **NovoGROM columns**, **GROM** offers three different types of glass column hardware

NovoGROM ECO glass columns are appropriate for all soft gels and aqueous eluents like buffers, etc. Variable bed volumes are adjustable via adapters. Jackets for temperature control are also available as an option.



Order number	Description	i. d.	max. bed length	bed volume	max. pressure
***... G2010Z	10 mm	200 mm	0 - 16 ml	1.0 MPa	
***... G4510Z	10 mm	450 mm	20 - 35 ml	1.0 MPa	
***... G9910Z	10 mm	999 mm	63 - 78 ml	1.0 MPa	
***... G2015Z	15 mm	200 mm	0 - 35 ml	1.0 MPa	
***... G4515Z	15 mm	450 mm	44 - 80 ml	1.0 MPa	
***... G9915Z	15 mm	999 mm	141 - 176 ml	1.0 MPa	
***... G2020Z	20 mm	200 mm	0 - 63 ml	1.0 MPa	
***... G4520Z	20 mm	450 mm	79 - 141 ml	1.0 MPa	
***... G9920Z	20 mm	999 mm	251 - 314 ml	1.0 MPa	
***... G2025Z	25 mm	200 mm	0 - 98 ml	1.0 MPa	
***... G4525Z	25 mm	450 mm	123 - 220 ml	1.0 MPa	
***... G9925Z	25 mm	999 mm	392 - 490 ml	1.0 MPa	
***... G2032Z	32 mm	200 mm	0 - 161 ml	1.0 MPa	
***... G4532Z	32 mm	450 mm	201 - 362 ml	1.0 MPa	
***... G9932Z	32 mm	999 mm	642 - 803 ml	1.0 MPa	
***... G2050Z	50 mm	200 mm	0 - 390 ml	1.0 MPa	
***... G4550Z	50 mm	450 mm	490 - 880 ml	1.0 MPa	
***... G9950Z	50 mm	999 mm	1570 - 1960 ml	1.0 MPa	

NovoGROM BIO Glass Columns are unique and versatile and are especially dedicated to biochemical applications. This outstanding column hardware meets all the needs defined by biochemists when applying high salt concentrations ion exchange or hydrophobic interaction chromatography, for instance. Due to their high maximum pressure limits they also perform rather well in normal phase, reversed phase and flash chromatography applications. The specifications of these outstanding columns are as follows: the calibrated tube is boro-silicate glass, the column head is adjustable, the frits (pore size 2 or 10 µm) consist of sintered glass, the lamelle seals are of PTFE and the cartridge holder is made from anodized aluminium.



	i. d.	bed length	bed volume	max. pressure
***... G1205L	5 mm	0 - 120 mm	0 - 2.4 ml	9.0 MPa
***... G1205T	5 mm	60 - 120 mm	1.2 - 2.4 ml	9.0 MPa
***... G2605L	5 mm	140 - 260 mm	2.8 - 5.2 ml	9.0 MPa
***... G2605T	5 mm	200 - 260 mm	4.0 - 5.2 ml	9.0 MPa
***... G1210L	10 mm	0 - 120 mm	0 - 9.4 ml	8.0 MPa
***... G1210T	10 mm	60 - 120 mm	4.7 - 9.4 ml	8.0 MPa
***... G2610L	10 mm	140 - 260 mm	11.0 - 20.0 ml	8.0 MPa
***... G2610T	10 mm	200 - 260 mm	15.6 - 20.0 ml	8.0 MPa
***... G1215L	15 mm	0 - 120 mm	0 - 21.0 ml	7.0 MPa
***... G1215T	15 mm	60 - 120 mm	10.5 - 21.0 ml	7.0 MPa
***... G2615L	15 mm	140 - 260 mm	25.0 - 46.0 ml	7.0 MPa
***... G2615T	15 mm	200 - 260 mm	35.0 - 46.0 ml	7.0 MPa
***... G1220L	20 mm	0 - 120 mm	0 - 38 ml	6.0 MPa
***... G1220T	20 mm	60 - 120 mm	19 - 38 ml	6.0 MPa
***... G2620L	20 mm	140 - 260 mm	44 - 92 ml	6.0 MPa
***... G2620T	20 mm	200 - 260 mm	63 - 92 ml	6.0 MPa
***... G1225L	25 mm	0 - 120 mm	0 - 59 ml	5.0 MPa
***... G1225T	25 mm	60 - 120 mm	29 - 59 ml	5.0 MPa
***... G2625L	25 mm	140 - 260 mm	68 - 127 ml	5.0 MPa
***... G2625T	25 mm	200 - 260 mm	98 - 127 ml	5.0 MPa

- stable up to 50-90 bar
- low dispersion hardware
- calibrated glass tube
- fast and easy replacement of cartridge
- quick adjustment of column head
- decent, economical pricing
- fully biocompatible
- for universal usage
- no extra-column band broadening
- visible gel / packing
- no tools needed
- convenient, easy to handle
- cost saving refill service
- resistant to ammonium sulfate, sodium chloride, TFA etc.

NovoGROM PREP Glass Columns are well-designed for Up-Scaling in all common chromatographical techniques. These preparative glass columns are unmatched for conducting the different methods used in preparative high performance liquid chromatography, such as ion exchange-, hydrophobic interaction or size exclusion chromatography, as well as normal phase- or reversed phase chromatography. These columns are chemically inert, show excellent flow dispersion and are well suited to medium pressure chromatography. These columns are equipped with two adjustable column heads at both ends of the column. They are available packed with any of the stationary phases described in this catalogue or with materials from other manufacturers (like ODS-Prep from TosoHaas or ODS-AQ S-20 from YMC). Further, the prompt, quickly responding **GROM Refill Service** will enable drastical cost saving on future refills of this hardware.



Order number	Description	i. d.	max. length	bed volume ml	max. pressure
***... G1010P		10 mm	100 mm	1–8 ml	8.0 MPa
***... G2510P		10 mm	250 mm	13–20 ml	8.0 MPa
***... G5010P		10 mm	500 mm	32–39 ml	8.0 MPa
***... G1015P		15 mm	100 mm	2–18 ml	7.0 MPa
***... G2515P		15 mm	250 mm	28–44 ml	7.0 MPa
***... G5015P		15 mm	500 mm	72–88 ml	7.0 MPa
***... G1025P		25 mm	100 mm	5–49 ml	5.0 MPa
***... G2525P		25 mm	250 mm	79–123 ml	5.0 MPa
***... G5025P		25 mm	500 mm	201–245 ml	5.0 MPa
***... G1035P		35 mm	100 mm	10–96 ml	5.0 MPa
***... G2535P		35 mm	250 mm	154–240 ml	5.0 MPa
***... G5035P		35 mm	500 mm	394–481 ml	5.0 MPa
***... G1050P		50 mm	100 mm	20–196 ml	5.0 MPa
***... G2550P		50 mm	250 mm	314–491 ml	5.0 MPa
***... G5050P		50 mm	500 mm	805–981 ml	5.0 MPa

The specifications of these columns are as follows: the glass tube is borosilicate, the adjustable shaft is made from PTFE and the, the lamelle seals from PTFE and the fritts (pore size 5 or 10 µm) are of sintered steel.

Semi-preparative stainless steel and PEEK **NovoGROM** columns, 8 mm i.d., packed*

These columns can be packed with any of the stationary phases listed in the HPLC catalog or with the customer's stationary phase.



Order number	Description**
***...V0108	Guard column cartridge , semi-preparative, stainless steel, 10 x 8 mm
***...V0208	Guard column cartridge , semi-preparative, stainless steel, 20 x 8 mm



***...V0408	Guard column , semi-preparative, stainless steel, 40 x 8 mm, complete 1 x connecting nut and ZDV adaptor
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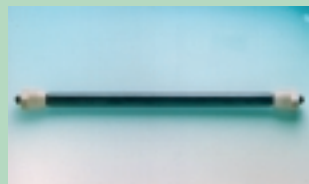
***...S0408	HPLC column, semi-preparativ, stainless steel, 40 x 8 mm, (complete)
***...S0508	HPLC column, semi-preparativ, stainless steel, 50 x 8 mm, (complete)
***...S0808	HPLC column, semi-preparativ, stainless steel, 75 x 8 mm, (complete)
***...S1008	HPLC column, semi-preparativ, stainless steel, 100 x 8 mm, (complete)
***...S1208	HPLC column, semi-preparativ, stainless steel, 125 x 8 mm, (complete)
***...S1508	HPLC column, semi-preparativ, stainless steel, 150 x 8 mm, (complete)
***...S2008	HPLC column, semi-preparativ, stainless steel, 200 x 8 mm, (complete)
***...S2508	HPLC column, semi-preparativ, stainless steel, 250 x 8 mm, (complete)
***...S3008	HPLC column, semi-preparativ, stainless steel, 300 x 8 mm, (complete)
***...S5008	HPLC column, semi-preparativ, stainless steel, 500 x 8 mm, (complete)

* **NovoGROM** semi-preparative columns can be packed with any of the stationary phases listed in this catalogue or with the customer's stationary phase.

** Other dimensions upon request.

*** To complete the order number, add here the abbreviation for the desired stationary phase (see HPLC catalogue pages 160-161).

Biocompatible, semi-preparative **NovoGROM**-PEEK columns, especially suited for biochemical applications, packed*



Order number Description**

***... P0508	PEEK column, semi-preparative, 50 x 7.5 mm, (complete)
***... P0808	PEEK column, semi-preparative, 75 x 7.5 mm, (complete)
***... P1508	PEEK column, semi-preparative, 150 x 7.5 mm, (complete)
***... P2508	PEEK column, semi-preparative, 250 x 7.5 mm, (complete)
***... P3008	PEEK column, semi-preparative, 300 x 7.5 mm, (complete)

Accessories for semi-preparative 8 mm i.d. stainless steel and PEEK **NovoGROM** columns



50.2111 **Stainless steel guard column holder**, semi-preparative, for 10 x 8 mm guard column cartridges



50.2112 **Stainless steel guard column holder**, semi-preparative, for 20 x 8 mm guard column cartridges



50.3111 **Stainless steel guard column head**, semi-preparative, for 10 x 8 mm guard column cartridges



50.3112 **Stainless steel guard column head**, semi-preparative, for 20 x 8 mm guard column cartridges



50.100 **Connecting nut**, semi-preparative, with ZDV-adaptor for direct coupling of two 8 mm i.d. columns



50.110 **Connecting nut**, semi-preparative, for direct coupling of two 8 mm i.d. columns.



50.120 **ZDV-adaptor** (stainless steel insert), semi-preparative, for 8 mm i.d. columns



50.200 **Column head**, semi-preparative, for 8 mm i.d. columns

* **NovoGROM** semi-preparative columns can be packed with any of the stationary phases listed in this catalogue or with the customer's stationary phase.



** Other dimensions upon request.

*** To complete the order number, add here the abbreviation for the desired stationary phase (see HPLC catalogue pages 160-161).

Order number	Description
	50.210 Fitting adapter , semi-preparative, for 8 mm i.d. columns
	50.220 Screw cap for semi-preparative, for 8 mm i.d. columns (Pk. of 1)
	50.300 Sealing gasket , semi-preparative, , for 8 mm i.d. columns (Pk. of 10)
	50.350 Sieve set , semi-preparative, (8 stainless steel sieves and 12 glass fiber filters), for 8 mm i.d. columns
	50.380 Glass fiber filters , semi-preparative, for 8 mm i.d. columns (Pk. of 20)
	50.400 Stainless steel sieves, 5µm , semi-preparative, (Pkt. of 10) 50.401 Stainless steel sieves, 7µm , semi-preparative, (Pkt. of 10) 50.402 Stainless steel sieves, 10µm , semi-preparative, (Pkt. of 10)

Preparative stainless steel **NovoGROM** HPLC columns are simple to use and have excellent long-term stability. guard columns can be coupled either directly or via a capillary to the preparative column.

Preparative stainless steel **NovoGROM** columns, 20 mm i.d., packed*

Order number	Description**
	***... V0120 Guard column cartridge , semi-preparative, 10 x 20 mm
	***... V0220 Guard column cartridge , semi-preparative, 20 x 20 mm
	***... S0320u Guard column , 30 x 20 mm, complete ***... S0420u Guard column , 40 x 20 mm, complete ***... S0520u Guard column , 50 x 20 mm, complete

* **NovoGROM** semi-preparative columns can be packed with any of the stationary phases listed in this catalogue or with the customer's stationary phase.

** Other dimensions upon request.

*** To complete the order number, add here the abbreviation for the desired stationary phase (see HPLC catalogue pages 160-161).



Order number Description *

***...S0320	HPLC column, preparative, stainless steel, 30 x 20 mm, complete
***...S0420	HPLC column, preparative, stainless steel, 40 x 20 mm, complete
***...S0520	HPLC column, preparative, stainless steel, 50 x 20 mm, complete
***...S0820	HPLC column, preparative, stainless steel, 75 x 20 mm, complete
***...S1020	HPLC column, preparative, stainless steel, 100 x 20 mm, complete
***...S1220	HPLC column, preparative, stainless steel, 125 x 20 mm, complete
***...S1520	HPLC column, preparative, stainless steel, 150 x 20 mm, complete
***...S2520	HPLC column, preparative, stainless steel, 250 x 20 mm, complete
***...S3020	HPLC column, preparative, stainless steel, 300 x 20 mm, complete
***...S5020	HPLC column, preparative, stainless steel, 500 x 20 mm, complete

Accessories for preparative 20 mm *NovoGROM* HPLC columns



70.2111 **Stainless steel guard column holder, preparative, for 10 x 20 mm cartridges**



70.2112 **Stainless steel guard column holder, preparative, for 20 x 20 mm cartridges**



70.3111 **Stainless steel guard column head, preparative, for 10 x 20 mm cartridges**



70.3112 **Stainless steel guard column head, preparative, for 20 x 20 mm cartridges**



70.100 **Connector with stainless steel frit for direct coupling of two 20 mm i.d. columns**



70.110 **Connector for coupling two 20 mm i.d. columns**



70.200 **Column head, preparative, for 20 mm i.d. columns**



70.210 **Fitting adapter for 20 mm i.d. columns**



70.400 **Stainless steel frit with PTFE gasket for 20 mm i.d. columns**

Preparative **NovoGROM** HPLC columns in stainless steel, 30 to 100 mm i.d., packed*



Order number	Description **
75.2112	Guard column holder for 20 x 30 mm guard column cartridge
75.2113	Guard column holder for 30 x 30 mm guard column cartridge



***... V0230	Guard column cartridge, preparative , 20 x 30 mm, complete
***... V0330	Guard column cartridge, preparative , 30 x 30 mm, complete



***... S0530	HPLC column, preparative , stainless steel, 50 x 30 mm, (complete)
***... S0830	HPLC column, preparative , stainless steel, 75 x 30 mm, (complete)
***... S1030	HPLC column, preparative , stainless steel, 100 x 30 mm, (complete)
***... S1230	HPLC column, preparative , stainless steel, 125 x 30 mm, (complete)
***... S1530	HPLC column, preparative , stainless steel, 150 x 30 mm, (complete)
***... S2530	HPLC column, preparative , stainless steel, 250 x 30 mm, (complete)
***... S0440u	Stainless steel guard column 40 x 40 mm, (complete)
***... S1240	HPLC column, preparative , stainless steel, 125 x 40 mm, (complete)
***... S2540	HPLC column, preparative , stainless steel, 250 x 40 mm, (complete)
***... S5040	HPLC column, preparative , stainless steel, 500 x 40 mm, (complete)
***... S0463u	Stainless steel guard column 40 x 63 mm, (complete)
***... S1263	HPLC column, preparative , stainless steel, 125 x 60 mm, (complete)
***... S2563	HPLC column, preparative , stainless steel, 250 x 63 mm, (complete)
***... S3063	HPLC column, preparative , stainless steel, 300 x 63 mm, (complete)
***... S5063	HPLC column, preparative , stainless steel, 500 x 63 mm, (complete)
***... S0475u	Stainless steel guard column 50 x 75 mm, (complete)
***... S2575	HPLC column, preparative , stainless steel, 250 x 75 mm, (complete)
***... S5075	HPLC column, preparative , stainless steel, 500 x 75 mm, (complete)
***... S0499u	Stainless steel guard column 50 x 100 mm, (complete)
***... S2599	HPLC column, preparative , stainless steel, 250 x 100 mm, (complete)
***... S3099	HPLC column, preparative , stainless steel, 300 x 100 mm, (complete)
***... S5099	HPLC column, preparative , stainless steel, 500 x 100 mm, (complete)

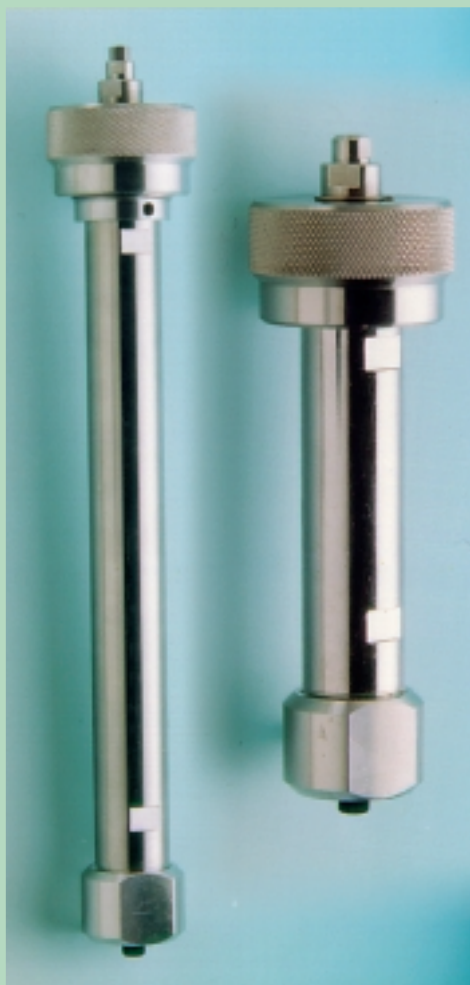
* **NovoGROM** semi-preparative columns can be packed with any of the stationary phases listed in this catalogue or with the customer's stationary phase.

** Other dimensions upon request.

*** To complete the order number, add here the abbreviation for the desired stationary phase (see HPLC catalogue pages 160-161).

Axially compressible, preparative **NovoGROM-HPLC** columns in stainless steel, 20 to 100 mm i.d., packed*

Shrinkage of the packing can be compensated for by re-positioning the adapter at the entrance of the column. In this way, dead volume between the frit and the packing is avoided, thus maintaining resolution.



Order number Description **

***... B0520	BIAX-column , preparative, 50 x 20 mm, (complete)
***... B1220	BIAX-column , preparative, 125 x 20 mm, (complete)
***... B2520	BIAX-column , preparative, 250 x 20 mm, (complete)
***... B1240	BIAX-column , preparative, 125 x 40 mm, (complete)
***... B2540	BIAX-column , preparative, 250 x 40 mm, (complete)
***... B5040	BIAX-column , preparative, 500 x 40 mm, (complete)
***... B1260	BIAX-column , preparative, 125 x 60 mm, (complete)
***... B3060	BIAX-column , preparative, 300 x 60 mm, (complete)
***... B5060	BIAX-column , preparative, 500 x 60 mm, (complete)
***... B2599	BIAX-column , preparative, 250 x 100 mm, (complete)
***... B5099	BIAX-column , preparative, 500 x 100 mm, (complete)

* **NovoGROM** preparative columns can be packed with any of the stationary phases listed in this catalogue or with the customer's stationary phase.

** Other dimensions upon request.

*** To complete the order number, add here the abbreviation for the desired stationary phase (see HPLC catalogue pages 160-161).