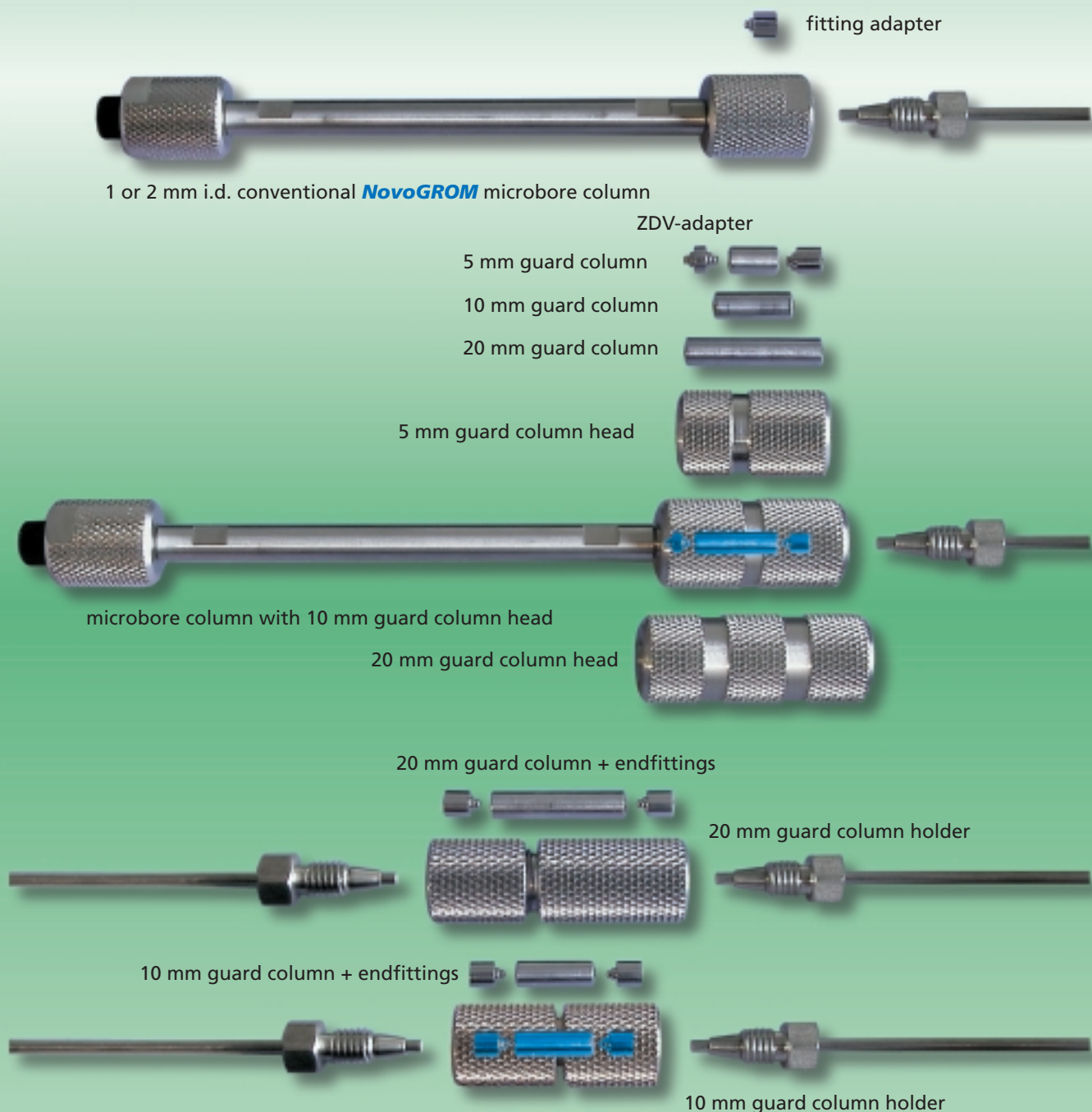


## NovoGROM Microbore Columns – 1 and 2 mm i.d. –

Many of the modern biochemical applications requiring micro-column HPLC may be conveniently solved by the employment of **NovoGROM microbore columns**. With 2 or 1 mm i.d. columns, a 4-fold or 16-fold increase in sensitivity, respectively, is obtained relative to conventional 4 mm i.d. columns. At the same time, the solvent consumption at constant linear flow-rate decreases by 75% or 93% respectively. The requirements for microbore HPLC (in particular constant flow at low volumetric flow-rates) are fulfilled by all modern HPLC systems, so that customers can take advantage of this modern form of HPLC simply by the use of **NovoGROM microbore columns**.

According to customers requirements, **NovoGROM microbore** columns can be supplied packed with any of the stationary phases described in this catalogue, or can be packed by the **GROM column-filling-service** with any other (eg., customer's own) stationary phase.

### Conventional, ferrule-type fitting



All **NovoGROM microbore columns** are available in four versions:

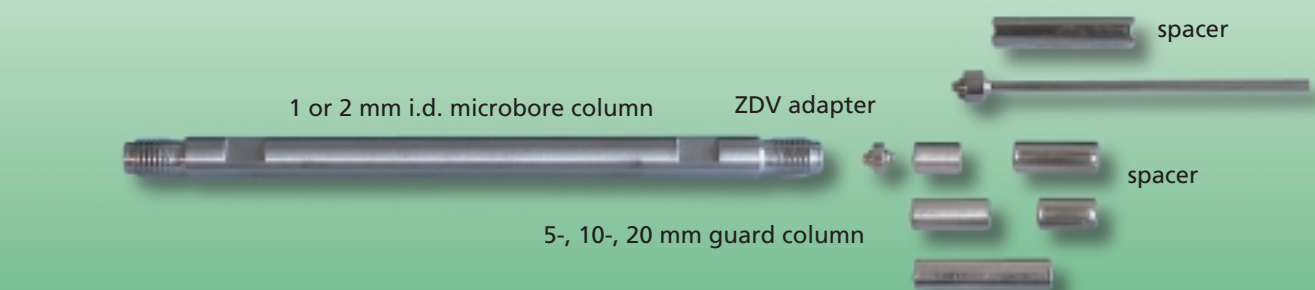
- as packed columns, complete with column head and fitting adaptors.
- as packed cartridges, with sealing gaskets and sieves, but sealed with screw caps.
- as empty columns, complete with column heads and fitting adaptors.
- as empty cartridges with sealing gaskets, sieves and sealing screw caps.

The **NovoGROM microbore system** is distinguished by its simple manual handling (quickly connected without tools - finger-tight) and the flexibility and variability of its usage.

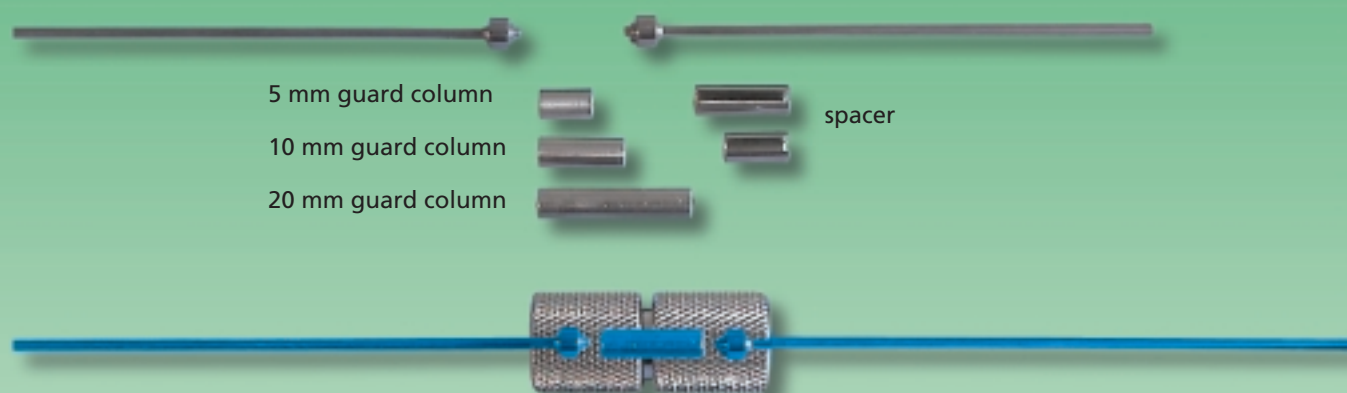
### Modern, advanced low-dispersion quick connector fitting



**NovoGROM** microbore column with quick connectors, assembled



low-dispersion microbore column with integrated 10 mm guard column

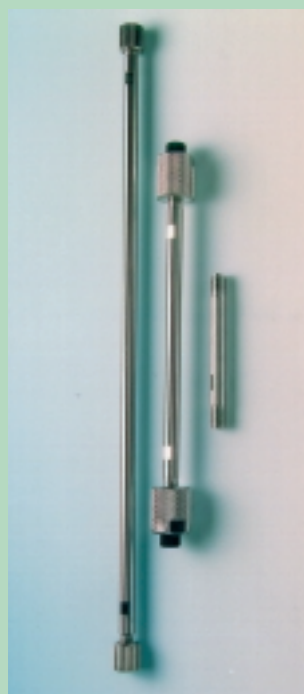


guard column holder with 10 mm guard column

## Microbore HPLC columns, packed\*



Order number	Description**
***... V0001V	<b>Guard columns-MICRO</b> - 5 x 1 mm - (Pk. of 5)
***... V0101V	<b>Guard columns-MICRO</b> - 10 x 1 mm - (Pk. of 5)
***... V0201V	<b>Guard columns-MICRO</b> - 20 x 1 mm - (Pk. of 5)
***... V0002V	<b>Guard columns-MICRO</b> - 5 x 2 mm - (Pk. of 5)
***... V0102V	<b>Guard columns-MICRO</b> - 10 x 2 mm - (Pk. of 5)
***... V0202V	<b>Guard columns-MICRO</b> - 20 x 2 mm - (Pk. of 5)



***... S0201, resp. *... K0201	<b>Column (S) or cartridge (K)-MICRO</b> 20 mm x 1 mm
***... S0301, resp. *... K0301	<b>Column (S) or cartridge (K)-MICRO</b> 30 mm x 1 mm
***... S0401, resp. *... K0401	<b>Column (S) or cartridge (K)-MICRO</b> 40 mm x 1 mm
***... S0501, resp. *... K0501	<b>Column (S) or cartridge (K)-MICRO</b> 50 mm x 1 mm
***... S0601, resp. *... K0601	<b>Column (S) or cartridge (K)-MICRO</b> 60 mm x 1 mm
***... S0801, resp. *... K0801	<b>Column (S) or cartridge (K)-MICRO</b> 75 mm x 1 mm
***... S1001, resp. *... K1001	<b>Column (S) or cartridge (K)-MICRO</b> 100 mm x 1 mm
***... S1201, resp. *... K1201	<b>Column (S) or cartridge (K)-MICRO</b> 125 mm x 1 mm
***... S1501, resp. *... K1501	<b>Column (S) or cartridge (K)-MICRO</b> 150 mm x 1 mm
***... S2001, resp. *... K2001	<b>Column (S) or cartridge (K)-MICRO</b> 200 mm x 1 mm
***... S2501, resp. *... K2501	<b>Column (S) or cartridge (K)-MICRO</b> 250 mm x 1 mm
***... S3001, resp. *... K3001	<b>Column (S) or cartridge (K)-MICRO</b> 300 mm x 1 mm
***... S0202, resp. *... K0202	<b>Column (S) or cartridge (K)-MICRO</b> 20 mm x 2 mm
***... S0302, resp. *... K0302	<b>Column (S) or cartridge (K)-MICRO</b> 30 mm x 2 mm
***... S0402, resp. *... K0402	<b>Column (S) or cartridge (K)-MICRO</b> 40 mm x 2 mm
***... S0502, resp. *... K0502	<b>Column (S) or cartridge (K)-MICRO</b> 50 mm x 2 mm
***... S0602, resp. *... K0602	<b>Column (S) or cartridge (K)-MICRO</b> 60 mm x 2 mm
***... S0802, resp. *... K0802	<b>Column (S) or cartridge (K)-MICRO</b> 75 mm x 2 mm
***... S1002, resp. *... K1002	<b>Column (S) or cartridge (K)-MICRO</b> 100 mm x 2 mm
***... S1202, resp. *... K1202	<b>Column (S) or cartridge (K)-MICRO</b> 125 mm x 2 mm
***... S1502, resp. *... K1502	<b>Column (S) or cartridge (K)-MICRO</b> 150 mm x 2 mm
***... S2002, resp. *... K2002	<b>Column (S) or cartridge (K)-MICRO</b> 200 mm x 2 mm
***... S2502, resp. *... K2502	<b>Column (S) or cartridge (K)-MICRO</b> 250 mm x 2 mm
***... S3002, resp. *... K3002	<b>Column (S) or cartridge (K)-MICRO</b> 300 mm x 2 mm



***... P0302	<b>Column-MICRO, PEEK, 30 mm x 2 mm</b>
***... P0502	<b>Column-MICRO, PEEK, 50 mm x 2 mm</b>
***... P1002	<b>Column-MICRO, PEEK, 100 mm x 2 mm</b>
***... P1502	<b>Column-MICRO, PEEK, 150 mm x 2 mm</b>
***... P2502	<b>Column-MICRO, PEEK, 250 mm x 2 mm</b>
***... P3002	<b>Column-MICRO, PEEK, 300 mm x 2 mm</b>



1500 Set of **Quick connectors-MICRO**, for rapid, manual connection of micro cartridges - pressure resistant to 40 MPa - complete with two 100 mm x 0.12 mm i.d. capillaries with fitting adapters



1550 Set of **Quick connectors-MICRO** same as 1500, but with 50 mm x 0.12 mm i.d. capillaries with fitting adapters

2500 **Guard column holder-MICRO** - fingertight - for 5, 10 and 20 mm MICRO guard columns - pressure resistant to 40 MPa - complete, consisting of two capillaries with fitting adapters (100 mm x 0.12 mm i.d.) and two spacers for 5 and 10 mm guard columns

2550 **Guard column holder-MICRO**, same as 2500, but with 50 mm x 0.12 mm i.d. capillaries with fitting adapters

\* **NovoGROM** microbore HPLC 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).

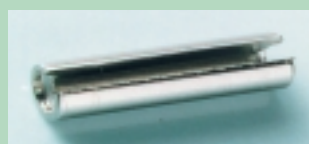
Order number	Description
2551	<b>Guard column holder-MICRO</b> for 10 mm guard column, same as 2500, but for conventional fittings
2555	<b>Guard column holder-MICRO</b> for 20 mm guard column, same as 2500, but for conventional fittings
2600	<b>Guard column holder-MICRO</b> , same as 2500, but in addition supplied with two fitting adapters
3500	<b>Guard column head-MICRO</b> , for dead volume free coupling of <b>NovoGROM</b> -Microbore columns with 5, 10 and 20 mm MICRO guard columns - pressure resistant to 40 MPa - consisting of capillary with fitting adapter (100 mm x 0.12 mm i.d.), ZDV adapter and three spacers for 5 and 10 mm guard columns or for use without guard column
3550	<b>Guard column head-MICRO</b> , same as 3500, but with 50 mm x 0.12 mm i.d. capillary with fitting adapter
3551	<b>Guard column head-MICRO</b> for conventional fitting of 5 mm guard column, but without capillary
3552	<b>Guard column head-MICRO</b> for conventional fitting of 10 mm guard column, but without capillary
3555	<b>Guard column head-MICRO</b> for conventional fitting of 20 mm guard column, but without capillary
4500	<b>Guard column combination-MICRO</b> , for dead volume free coupling of <b>NovoGROM</b> - Microbore columns with 5, 10 and 20 mm MICRO guard columns - pressure resistant to 40 MPa - consisting of two capillaries with fitting adapter (100 mm x 0.12 mm), one MICRO quick connector and one MICRO guard column head, ZDV adapter and three spacers for 5 and 10 mm guard columns or for use without guard column
4550	<b>Guard column combination-MICRO</b> , same as 4500, but with 50 mm x 0.12 mm i.d. capillaries with fitting adapter
6501	<b>Connector</b> for direct coupling of two MICRO-columns
6502	<b>Quick-connector head-MICRO</b> (cap nut)
6510	<b>Spanner</b> (wrench) <b>SW 5</b> , for tightening MICRO columns
6511	<b>Spacer</b> for 5 mm MICRO guard columns (length 15 mm)



**Order number Description**



6512 **Spacer** for 10 mm MICRO guard columns (length 10 mm)



6513 **Spacer** for operation without guard column (length 25 mm)



6519 **Zero Dead Volume (ZDV) adapter-MICRO** for coupling of two columns



6520 **Accessory set** for guard columns (composed of order numbers 6511, 6512, 6513 and 6519)



6521 **PTFE sealing gaskets-MICRO** for microbore columns (Pk. of 40)

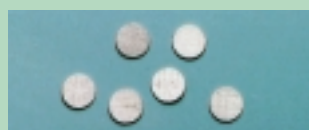
6522 **PTFE sealing gaskets-MICRO** for microbore columns (Pk. of 100)



6523P **PTFE sealing gaskets-MICRO** for SFC (Pk. of 5)



6530 **Sieve kit MICRO** (12 sieves, 6 PTFE gaskets)



6540 **Stainless steel sieves MICRO** (2 μm) for microbore columns (Pk. of 20)

6541 **Stainless steel sieves MICRO** (2 μm) for microbore columns (Pk. of 100)



6542 **Steel stopper** (cap) for microbore cartridges



6543 **Stopper** (plug) for microbore guard columns (Pk. of 10)



6544 **PE stopper** (cap) for microbore cartridges (Pk. of 10)

**Order number Description**



6570 **Double fitting adapter** (for coupling two MICRO-cartridges)



6571 **Cap nut**, slotted (for order no. 6570)



6582 **Column head MICRO** employing conventional fitting



6583 **Stainless steel fitting adapter** employing conventional fitting with column head MICRO



6591 **PEEK frit**, with ring, for 1- and 2 mm i. d. microbore column

6550 **Stainless steel capillary**, 50 mm x 0.12 mm i.d., with fitting adapter-MICRO (1 piece)

6551 **Stainless steel capillary**, 100 mm x 0.12 mm i.d., with fitting adapter-MICRO (1 piece)

6552 **Stainless steel capillary**, 250 mm x 0.12 mm i.d., with fitting adapter-MICRO (1 piece)

6553 **Stainless steel capillary**, 300 mm x 0.12 mm i.d., with fitting adapter-MICRO (1 piece)

6555 **Stainless steel capillary**, 500 mm x 0.12 mm i.d., with fitting adapter-MICRO (1 piece)

6557 **Stainless steel capillary**, 700 mm x 0.12 mm i.d., with fitting adapter-MICRO (1 piece)

6558 **Stainless steel capillary**, 800 mm x 0.12 mm i.d., with fitting adapter-MICRO (1 piece)

6560 **Stainless steel capillary**, 50 mm x 0.25 mm i.d., with fitting adapter-MICRO (1 piece)

6561 **Stainless steel capillary**, 100 mm x 0.25 mm i.d., with fitting adapter-MICRO (1 piece)

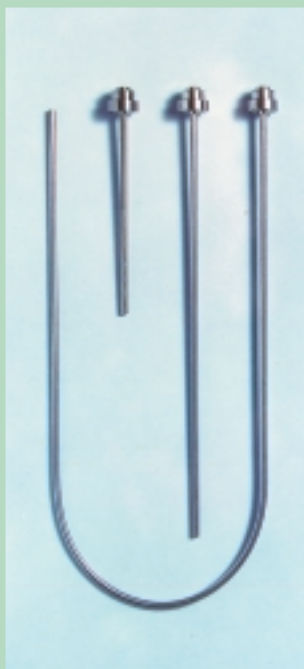
6562 **Stainless steel capillary**, 250 mm x 0.25 mm i.d., with fitting adapter-MICRO (1 piece)

6563 **Stainless steel capillary**, 300 mm x 0.25 mm i.d., with fitting adapter-MICRO (1 piece)

6564 **Stainless steel capillary**, 500 mm x 0.25 mm i.d., with fitting adapter-MICRO (1 piece)

6567 **Stainless steel capillary**, 700 mm x 0.25 mm i.d., with fitting adapter-MICRO (1 piece)

6568 **Stainless steel capillary**, 800 mm x 0.25 mm i.d., with fitting adapter-MICRO (1 piece)



Capillaries with other dimensions available upon request