

# Guard Columns for HPLC



## Guard Column 1 cm x 0,32 cm



Reference	Description
TR-C-160	Holder for 1 cm guard columns
TR-C-160K1	Holder + 2 cartridges ODS
TR-C-160K2	Holder + 2 cartridges Si
TR-C-160K3	Holder + 2 cartridges C8
TR-C-160K4	Holder + 2 cartridges NH2
TR-C-160K5	Holder + 2 cartridges SAX
TR-C-160K6	Holder + 2 cartridges CN
TR-C-160K7	Holder + 2 cartridges PAH
TR-C-160K8	Holder + 2 cartridges C6H5
TR-C-160K9	Holder + 2 cartridges CARBOHYDRATES
TR-C-160K10	Holder + 2 cartridges ANION
TR-C-160K11	Holder + 2 cartridges SCX
TR-C-160K12	Holder + 2 cartridges C2
TR-C-160K13	Holder + 2 cartridges 300 C4
TR-C-160K14	Holder + 2 cartridges 300 C8
TR-C-160K15	Holder + 2 cartridges DIOL
TR-C-160K16	Holder + 2 cartridges 300 C18
TR-C-160K17	Holder + 2 cartridges C4
TR-C-160K18	Holder + 2 cartridges PRP-1
TR-C-160K19	Holder + 2 cartridges PEPTIDE C18
TR-C-160K20	Holder + 2 cartridges C1
TR-C-160K21	Holder + 2 cartridges C6
TR-C-160-1	ODS Cartridges (5 units)
TR-C-160-2	Si Cartridges (5 units)
TR-C-160-3	C8 Cartridges (5 units)
TR-C-160-4	NH2 Cartridges (5 units)
TR-C-160-5	SAX Cartridges (5 units)
TR-C-160-6	CN Cartridges (5 units)
TR-C-160-7	PAH Cartridges (5 units)
TR-C-160-8	C6H5 Cartridges (5 units)
TR-C-160-9	CARBOHYDRATES Cartridges (5 units)
TR-C-160-10	ANION Cartridges (5 units)
TR-C-160-11	SCX Cartridges (5 units)
TR-C-160-12	C2 Cartridges (5 units)
TR-C-160-13	300C4 Cartridges (5 units)
TR-C-160-14	300C8 Cartridges (5 units)
TR-C-160-15	DIOL Cartridges (5 units)
TR-C-160-16	300C18 Cartridges (5 units)
TR-C-160-17	C4 Cartridges (5 units)
TR-C-160-18	PRP-1 Cartridges (5 units)
TR-C-160-19	PEPTIDE C18 Cartridges (5 units)
TR-C-160-20	C1 Cartridges (5 units)
TR-C-160-21	C6 Cartridges (5 units)

## Guard Column 1 cm x 0,40 cm



Reference	Description
TR-C-160	Holder for 1 cm guard columns
TR-C-160K1-4	Holder + 2 cartridges ODS
TR-C-160K2-4	Holder + 2 cartridges Si
TR-C-160K3-4	Holder + 2 cartridges C8
TR-C-160K4-4	Holder + 2 cartridges NH2
TR-C-160K5-4	Holder + 2 cartridges SAX
TR-C-160K6-4	Holder + 2 cartridges CN
TR-C-160K7-4	Holder + 2 cartridges PAH
TR-C-160K8-4	Holder + 2 cartridges C6H5
TR-C-160K9-4	Holder + 2 cartridges CARBOHYDRATES
TR-C-160K10-4	Holder + 2 cartridges ANION
TR-C-160K11-4	Holder + 2 cartridges SCX
TR-C-160K12-4	Holder + 2 cartridges C2
TR-C-160K13-4	Holder + 2 cartridges 300 C4
TR-C-160K14-4	Holder + 2 cartridges 300 C8
TR-C-160K15-4	Holder + 2 cartridges DIOL
TR-C-160K16-4	Holder + 2 cartridges 300 C18
TR-C-160K17-4	Holder + 2 cartridges C4
TR-C-160K18-4	Holder + 2 cartridges PRP-1
TR-C-160K19-4	Holder + 2 cartridges PEPTIDE C18
TR-C-160K20-4	Holder + 2 cartridges C1
TR-C-160K21-4	Holder + 2 cartridges C6
TR-C-160-1-4	ODS Cartridges (5 units)
TR-C-160-2-4	Si Cartridges (5 units)
TR-C-160-3-4	C8 Cartridges (5 units)
TR-C-160-4-4	NH2 Cartridges (5 units)
TR-C-160-5-4	SAX Cartridges (5 units)
TR-C-160-6-4	CN Cartridges (5 units)
TR-C-160-7-4	PAH Cartridges (5 units)
TR-C-160-8-4	C6H5 Cartridges (5 units)
TR-C-160-9-4	CARBOHYDRATES Cartridges (5 units)
TR-C-160-10-4	ANION Cartridges (5 units)
TR-C-160-11-4	SCX Cartridges (5 units)
TR-C-160-12-4	C2 Cartridges (5 units)
TR-C-160-13-4	300C4 Cartridges (5 units)
TR-C-160-14-4	300C8 Cartridges (5 units)
TR-C-160-15-4	DIOL Cartridges (5 units)
TR-C-160-16-4	300C18 Cartridges (5 units)
TR-C-160-17-4	C4 Cartridges (5 units)
TR-C-160-18-4	PRP-1 Cartridges (5 units)
TR-C-160-19-4	PEPTIDE C18 Cartridges (5 units)
TR-C-160-20-4	C1 Cartridges (5 units)
TR-C-160-21-4	C6 Cartridges (5 units)

## Guard Column 2 cm x 0,32 cm



Reference	Description
TR-C-460	Holder for 2 cm guard columns
TR-C-460K1	Holder + 2 cartridges ODS
TR-C-460K2	Holder + 2 cartridges Si
TR-C-460K3	Holder + 2 cartridges C8
TR-C-460K4	Holder + 2 cartridges NH2
TR-C-460K5	Holder + 2 cartridges SAX
TR-C-460K6	Holder + 2 cartridges CN
TR-C-460K7	Holder + 2 cartridges PAH
TR-C-460K8	Holder + 2 cartridges C6H5
TR-C-460K9	Holder + 2 cartridges CARBOHYDRATES
TR-C-460K10	Holder + 2 cartridges ANION
TR-C-460K11	Holder + 2 cartridges SCX
TR-C-460K12	Holder + 2 cartridges C2
TR-C-460K13	Holder + 2 cartridges 300 C4
TR-C-460K14	Holder + 2 cartridges 300 C8
TR-C-460K15	Holder + 2 cartridges DIOL
TR-C-460K16	Holder + 2 cartridges 300 C18
TR-C-460K17	Holder + 2 cartridges C4
TR-C-460K18	Holder + 2 cartridges PRP-1
TR-C-460K19	Holder + 2 cartridges PEPTIDE C18
TR-C-460K20	Holder + 2 cartridges C1
TR-C-460K21	Holder + 2 cartridges C6
TR-C-460-1	ODS Cartridges (5 units)
TR-C-460-2	Si Cartridges (5 units)
TR-C-460-3	C8 Cartridges (5 units)
TR-C-460-4	NH2 Cartridges (5 units)
TR-C-460-5	SAX Cartridges (5 units)
TR-C-460-6	CN Cartridges (5 units)
TR-C-460-7	PAH Cartridges (5 units)
TR-C-460-8	C6H5 Cartridges (5 units)
TR-C-460-9	CARBOHYDRATES Cartridges (5 units)
TR-C-460-10	ANION Cartridges (5 units)
TR-C-460-11	SCX Cartridges (5 units)
TR-C-460-12	C2 Cartridges (5 units)
TR-C-460-13	300C4 Cartridges (5 units)
TR-C-460-14	300C8 Cartridges (5 units)
TR-C-460-15	DIOL Cartridges (5 units)
TR-C-460-16	300C18 Cartridges (5 units)
TR-C-460-17	C4 Cartridges (5 units)
TR-C-460-18	PRP-1 Cartridges (5 units)
TR-C-460-19	PEPTIDE C18 Cartridges (5 units)
TR-C-460-20	C1 Cartridges (5 units)
TR-C-460-21	C6 Cartridges (5 units)

## Guard Column 2 cm x 0,40 cm



Reference	Description
TR-C-460	Holder for 2 cm guard columns
TR-C-460K1-4	Holder + 2 cartridges ODS
TR-C-460K2-4	Holder + 2 cartridges Si
TR-C-460K3-4	Holder + 2 cartridges C8
TR-C-460K4-4	Holder + 2 cartridges NH2
TR-C-460K5-4	Holder + 2 cartridges SAX
TR-C-460K6-4	Holder + 2 cartridges CN
TR-C-460K7-4	Holder + 2 cartridges PAH
TR-C-460K8-4	Holder + 2 cartridges C6H5
TR-C-460K9-4	Holder + 2 cartridges CARBOHYDRATES
TR-C-460K10-4	Holder + 2 cartridges ANION
TR-C-460K11-4	Holder + 2 cartridges SCX
TR-C-460K12-4	Holder + 2 cartridges C2
TR-C-460K13-4	Holder + 2 cartridges 300 C4
TR-C-460K14-4	Holder + 2 cartridges 300 C8
TR-C-460K15-4	Holder + 2 cartridges DIOL
TR-C-460K16-4	Holder + 2 cartridges 300 C18
TR-C-460K17-4	Holder + 2 cartridges C4
TR-C-460K18-4	Holder + 2 cartridges PRP-1
TR-C-460K19-4	Holder + 2 cartridges PEPTIDE C18
TR-C-460K20-4	Holder + 2 cartridges C1
TR-C-460K21-4	Holder + 2 cartridges C6
TR-C-460-1-4	ODS Cartridges (5 units)
TR-C-460-2-4	Si Cartridges (5 units)
TR-C-460-3-4	C8 Cartridges (5 units)
TR-C-460-4-4	NH2 Cartridges (5 units)
TR-C-460-5-4	SAX Cartridges (5 units)
TR-C-460-6-4	CN Cartridges (5 units)
TR-C-460-7-4	PAH Cartridges (5 units)
TR-C-460-8-4	C6H5 Cartridges (5 units)
TR-C-460-9-4	CARBOHYDRATES Cartridges (5 units)
TR-C-460-10-4	ANION Cartridges (5 units)
TR-C-460-11-4	SCX Cartridges (5 units)
TR-C-460-12-4	C2 Cartridges (5 units)
TR-C-460-13-4	300C4 Cartridges (5 units)
TR-C-460-14-4	300C8 Cartridges (5 units)
TR-C-460-15-4	DIOL Cartridges (5 units)
TR-C-460-16-4	300C18 Cartridges (5 units)
TR-C-460-17-4	C4 Cartridges (5 units)
TR-C-460-18-4	PRP-1 Cartridges (5 units)
TR-C-460-19-4	PEPTIDE C18 Cartridges (5 units)
TR-C-460-20-4	C1 Cartridges (5 units)
TR-C-460-21-4	C6 Cartridges (5 units)

## Guard Columns for HPLC Columns

- Interposed between the injector and the column these precolumns lengthen the life of the column and improve the reproducibility of their results.
- Packed with the most modern HPLC packings and Novabond™ proprietary packing procedures.
- Economic and easily replaced.
- For general use in any HPLC system.
- Packed at high pressure for maximum stability and duration.
- Their use does not imply any loss of efficiency, even with packings of 3 µm or with microbore columns of 2mm ID

## BIOCOMPATIBLE Guard Columns

- 100% biocompatible.
- Economical cartridge system with titanium frits.

Constructed in PEEK® and packed with de-activated silica: the steel holder also ensures a total biocompatibility by having every µm in contact with the mobile phase made of PEEK®.

### Guard Column Cartridges, Biocompatible

#### 2.0mm ID X 1 cm, 10 µm

Product	Description	Cat.Nbr.
UP-C-280	Reversed Phase C18	3-pk
UP-C-282	Reversed Phase C18	10-pk
UP-C-753	Absorption Si	3-pk
UP-C-754	Absorption Si	10-pk
UP-C-755	Amino Phase NH <sub>2</sub>	3-pk
UP-C-756	Amino Phase NH <sub>2</sub>	10-pk
UP-C-757	Cyano Phase CN	3-pk
UP-C-758	Cyano Phase CN	10-pk

### Guard Column Cartridges, Biocompatible

#### 4.3mm ID X 1 cm, 5 µm

Product	Description	Cat.Nbr.
UP-C-750	Reversed Phase C18	3-pk
UP-C-752	Reversed Phase C18	10-pk
UP-C-759	Absorption Si	3-pk
UP-C-760	Absorption Si	10-pk
UP-C-761	Amino Phase NH <sub>2</sub>	3-pk
UP-C-762	Amino Phase NH <sub>2</sub>	10-pk
UP-C-763	Cyano Phase CN	3-pk
UP-C-764	Cyano Phase CN	10-pk

### Guard Column Cartridge Holders, Biocompatible

UP-C-270 High Pressure, Stainless Steel, with (2) F-200 Fittings

UP-C-283 Low Pressure, Teflon, with (2) P-200/P-245 Fittings

### Cartridge Guard Column Kits

UP-C-281 2.0mm ID C18 Cartridges (6-pk) with (1) C-270 Assembly

UP-C-751 4.3mm ID C18 Cartridges (6-pk) with (1) C-270 Assembly

## Europa™ Guard Columns

Product	Description	Cat.Nbr.
Ultrafilter™	Ultrafit prefilter adaptor (frit not included)	TR-010067
	Frits of 0.5 µm pore (10 units)	TR-010069
	Frits of 2.0 µm pore (10 units)	TR-010070
Ultraguard™	Ultrafit Guardcolumn adaptor (guard column not included)	TR-010068
Guard Column	Peptide C18 10 x 3.2 mm (5 units)	TR-C-160-19
Guard Column	Protein 300 C18 10 x 3.2 mm (5 units)	TR-C-160-16
Guard Column	Protein 300 C8 10 x 3.2 mm (5 units)	TR-C-160-14
Guard Column	Protein 300 C4 10 x 3.2 mm (5 units)	TR-C-160-13

## Tracer Excel™ Guard Columns

Product	Description	Cat.Nbr.
Ultrafilter™	Ultrafit prefilter adaptor (frit not included)	TR-010067
	Frits of 0.5 µm pore (10 units)	TR-010069
	Frits of 2.0 µm pore (10 units)	TR-010070
Ultraguard™	Ultrafit Guardcolumn adaptor (guard column not included)	TR-010068
Guard Column	ODS 10 x 3.2 mm (5 units)	TR-C-160-1
Guard Column	Si 10 x 3.2 mm (5 units)	TR-C-160-2
Guard Column	C8 x 3.2 mm (5 units)	TR-C-160-3
Guard Column	NH <sub>2</sub> 10 x 3.2 mm (5 units)	TR-C-160-4
Guard Column	CN 10 x 3.2 mm (5 units)	TR-C-160-6
Guard Column	Ph 10 x 3.2 mm (5 units)	TR-C-160-8
Guard Column	C4 10 x 3.2 mm (5 units)	TR-C-160-17
Guard Column	C1 10 x 3.2 mm (5 units)	TR-C-160-20

## mediterranea™ sea Guard Columns

Product	Description	Cat.Nbr.
Ultrafilter™	Ultrafit prefilter adaptor (frit not included)	TR-010067
	Frits of 0.5 µm pore (10 units)	TR-010069
	Frits of 2.0 µm pore (10 units)	TR-010070

Ultraguard™, Ultrafit Guardcolumn adaptor  
(guard column not included) **TR-010068**



Guard Column Sea18 10 x 3.2 mm (5 units)	<b>TR-010071</b>
Guard Column Sea8 10 x 3.2 mm (5 units)	<b>TR-010073</b>
Guard Column Sea4 10 x 3.2 mm (5 units)	<b>TR-010074</b>

## COLUMN-GUARD COLUMN CONNECTOR

- Economical
- Minimum dead volume
- This column-Guard Column connector is the ideal solution for this type of connection, as its dead volume is practically negligible.



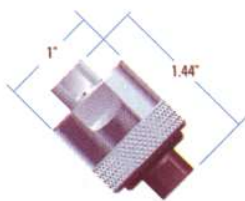
### Column-Guard Column connectors

U-284 Union Column-Precolumn

Reference	Description
<b>UP-U-284</b>	Fingertight F-200 coupler, Delrin®, and .007" ID stainless steel tubing.
<b>UP-U-287</b>	Fingertight F-300 coupler, PEEK®, and .007" ID stainless steel tubing.

## Semipreparative Guard Columns

- For semipreparative HPLC and SFC 1 cm I.D.



UP-C-1000. Holder for semipreparative cartridge

Reference	Description
<b>UP-C-1000</b>	Semi-Prep holder
<b>TR-C-360K1</b>	Semi-Prep cartridge ODS (2 units) + UP-C-1000 holder
<b>TR-C-360K2</b>	Semi-Prep cartridge Si (2 units) + UP-C-1000 holder
<b>TR-C-360K3</b>	Semi-Prep cartridge C8 (2 units) + UP-C-1000 holder
<b>TR-C-360K4</b>	Semi-Prep cartridge NH2 (2 units) + UP-C-1000 holder
<b>TR-C-360K6</b>	Semi-Prep cartridge CN (2 units) + UP-C-1000 holder
<b>TR-C-360K13</b>	Semi-Prep cartridge Protein C4 (2 units) + UP-C-1000 holder
<b>TR-C-360K14</b>	Semi-Prep cartridge Protein C8 (2 units) + UP-C-1000 holder
<b>TR-C-360K16</b>	Semi-Prep cartridge Protein C18 (2 units) + UP-C-1000 holder
<b>TR-C-360K17</b>	Semi-Prep cartridge Peptide C18 (2 units) + UP-C-1000 holder
<b>TR-C-360K18</b>	Semi-Prep cartridge Mediterranean Sea 18 (2 units) + UP-C-1000 holder
<b>TR-C-360-1</b>	Semi-Prep cartridge ODS (2 units)
<b>TR-C-360-2</b>	Semi-Prep cartridge Si (2 units)
<b>TR-C-360-3</b>	Semi-Prep cartridge C8 (2 units)
<b>TR-C-360-4</b>	Semi-Prep cartridge NH2 (2 units)
<b>TR-C-360-6</b>	Semi-Prep cartridge CN (2 units)
<b>TR-C-360-13</b>	Semi-Prep cartridge Protein C4 (2 units)
<b>TR-C-360-14</b>	Semi-Prep cartridge Protein C8 (2 units)
<b>TR-C-360-16</b>	Semi-Prep cartridge Protein C18 (2 units)
<b>TR-C-360-17</b>	Semi-Prep cartridge Peptide C18 (2 units)
<b>TR-C-360-18</b>	Semi-Prep cartridge Mediterranean Sea 18 (2 units)

## Spares for Guard Column cartridges

Reference	Description
<b>TR-C-1030</b>	Stainless steel frit 2 µm
<b>TR-C-1031</b>	Titanium frit 2 µm

## Preparative Guard Column

- Valuable prep column protection, 20-50mm ID
- Low Pressure Drop
- High performance sample distribution mechanism



Reference	Description
<b>TR-C-260</b>	Preparative Holder
<b>TR-C-260K1</b>	Prep cartridge ODS (2 units) + TR-C-260 Preparative Holder
<b>TR-C-260K2</b>	Prep cartridge Peptide C18 (2 units) + TR-C-260 Preparative Holder
<b>TR-C-260K3</b>	Prep cartridge C8 (2 units) + TR-C-260 Preparative Holder
<b>TR-C-260K4</b>	Prep cartridge NH2 (2 units) + TR-C-260 Preparative Holder
<b>TR-C-260K6</b>	Prep cartridge CN (2 units) + TR-C-260 Preparative Holder
<b>TR-C-260K13</b>	Prep cartridge Protein C4 (2 units) + TR-C-260 Preparative Holder
<b>TR-C-260K14</b>	Prep cartridge Protein C8 (2 units) + TR-C-260 Preparative Holder
<b>TR-C-260K16</b>	Prep cartridge Protein C18 (2 units) + TR-C-260 Preparative Holder
<b>TR-C-260K17</b>	Prep cartridge Si (2 units) + TR-C-260 Preparative Holder
<b>TR-C-260K18</b>	Prep cartridge Mediterranean Sea 18 (2 units) + TR-C-260 Preparative Holder

<b>TR-C-260-1</b>	Prep cartridge ODS (2 units)
<b>TR-C-260-2</b>	Prep cartridge Peptide C18 (2 units)
<b>TR-C-260-3</b>	Prep cartridge C8 (2 units)
<b>TR-C-260-4</b>	Prep cartridge NH2 (2 units)
<b>TR-C-260-6</b>	Prep cartridge CN (2 units)
<b>TR-C-260-13</b>	Prep cartridge Protein C4 (2 units)
<b>TR-C-260-14</b>	Prep cartridge Protein C8 (2 units)
<b>TR-C-260-16</b>	Prep cartridge Protein C18 (2 units)
<b>TR-C-260-17</b>	Prep cartridge Si (2 units)
<b>TR-C-260-18</b>	Prep cartridge Mediterranean Sea 18 (2 units)

## Iso-Prep™ Filter for Preparative Columns



- Economical protection for preparative HPLC column and injector
- Precolumn/Inline filter functionality
- Stable to 8,000 psi
- Replaceable filters

Reference	Description
<b>TR-C-260-F</b>	In Line Filter
<b>TR-C-260-FX</b>	Replacement Filter (10 units)