

Reference	Description
TR-C-160	Holder
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 NH ₂
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	NH ₂ 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 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 Precolumns

- 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

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 ₂	3-pk
UP-C-756	Amino Phase NH ₂	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

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 ₂	3-pk
UP-C-762	Amino Phase NH ₂	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

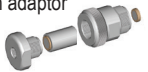
UP-C-281 2.0mm ID C18 Cartridges (6-pk) with (1) C-270 Assembly

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

Tk Guard Columns for HPLC

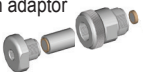
Europa™ Guardcolumns

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

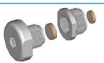
Ultraguard™, Ultrafit Guardcolumn adaptor (guard column not included)		TR-010068
Guard Column Peptide C18 10 x 3.2 mm (5 units)		TR-C-160-19
Guard Column Protein 300 C18 10 x 3.2 mm (5 units)		TR-C-160-16
Guard Column Protein 300 C8 10 x 3.2 mm (5 units)		TR-C-160-14
Guard Column Protein 300 C4 10 x 3.2 mm (5 units)		TR-C-160-13

Tracer Excel™ Guardcolumns

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 10 x 3.2 mm (5 units)		TR-C-160-3
Guard Column NH2 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™ sea₁₈ Guardcolumns

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)		TR-010071
Guard Column Sea8 10 x 3.2 mm (5 units)		TR-010073
Guard Column Sea4 10 x 3.2 mm (5 units)		TR-010074

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.

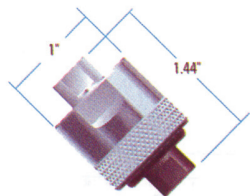


Column-Guard Column connectors U-284 Union Column-Precolumn

Reference	Description
UP-U-284	Fingertight F-200 coupler, Delrin®, and .007" ID stainless steel tubing.
UP-U-287	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
UP-C-1000	Semi-Prep holder
TR-C-360K1	Semi-Prep cartridge ODS (2 units) + UP-C-1000 holder
TR-C-360K2	Semi-Prep cartridge Si (2 units) + UP-C-1000 holder
TR-C-360K3	Semi-Prep cartridge C8 (2 units) + UP-C-1000 holder
TR-C-360K4	Semi-Prep cartridge NH2 (2 units) + UP-C-1000 holder
TR-C-360K6	Semi-Prep cartridge CN (2 units) + UP-C-1000 holder
TR-C-360K13	Semi-Prep cartridge Protein C4 (2 units) + UP-C-1000 holder
TR-C-360K14	Semi-Prep cartridge Protein C8 (2 units) + UP-C-1000 holder
TR-C-360K16	Semi-Prep cartridge Protein C18 (2 units) + UP-C-1000 holder
TR-C-360K17	Semi-Prep cartridge Peptide C18 (2 units) + UP-C-1000 holder
TR-C-360K18	Semi-Prep cartridge Mediterranean Sea 18 (2 units) + UP-C-1000 holder
TR-C-360-1	Semi-Prep cartridge ODS (2 units)
TR-C-360-2	Semi-Prep cartridge Si (2 units)
TR-C-360-3	Semi-Prep cartridge C8 (2 units)
TR-C-360-4	Semi-Prep cartridge NH2 (2 units)
TR-C-360-6	Semi-Prep cartridge CN (2 units)
TR-C-360-13	Semi-Prep cartridge Protein C4 (2 units)
TR-C-360-14	Semi-Prep cartridge Protein C8 (2 units)
TR-C-360-16	Semi-Prep cartridge Protein C18 (2 units)
TR-C-360-17	Semi-Prep cartridge Peptide C18 (2 units)
TR-C-360-18	Semi-Prep cartridge Mediterranean Sea 18 (2 units)

Spares for Guard Column cartridges

Reference	Description
TR-C-1030	Stainless steel frit 2 µm
TR-C-1031	Titanium frit 2 µm

Preparative Guard Column

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



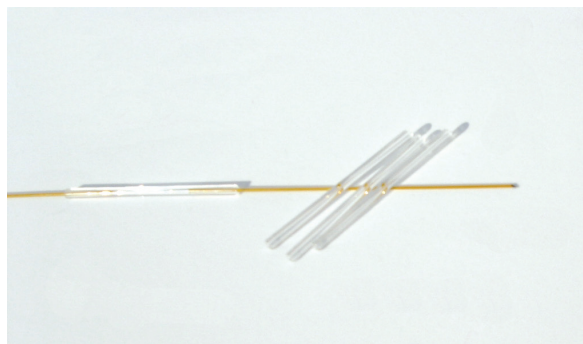
Reference	Description
TR-C-260	Preparative Holder
TR-C-260K1	Prep cartridge ODS (2 units) + TR-C-260 Preparative Holder
TR-C-260K2	Prep cartridge Peptide C18 (2 units) + TR-C-260 Preparative Holder
TR-C-260K3	Prep cartridge C8 (2 units) + TR-C-260 Preparative Holder
TR-C-260K4	Prep cartridge NH2 (2 units) + TR-C-260 Preparative Holder
TR-C-260K6	Prep cartridge CN (2 units) + TR-C-260 Preparative Holder
TR-C-260K13	Prep cartridge Protein C4 (2 units) + TR-C-260 Preparative Holder
TR-C-260K14	Prep cartridge Protein C8 (2 units) + TR-C-260 Preparative Holder
TR-C-260K16	Prep cartridge Protein C18 (2 units) + TR-C-260 Preparative Holder
TR-C-260K17	Prep cartridge Si (2 units) + TR-C-260 Preparative Holder
TR-C-260K18	Prep cartridge Mediterranean Sea 18 (2 units) + TR-C-260 Preparative Holder
TR-C-260-1	Prep cartridge ODS (2 units)
TR-C-260-2	Prep cartridge Peptide C18 (2 units)
TR-C-260-3	Prep cartridge C8 (2 units)
TR-C-260-4	Prep cartridge NH2 (2 units)
TR-C-260-6	Prep cartridge CN (2 units)
TR-C-260-13	Prep cartridge Protein C4 (2 units)
TR-C-260-14	Prep cartridge Protein C8 (2 units)
TR-C-260-16	Prep cartridge Protein C18 (2 units)
TR-C-260-17	Prep cartridge Si (2 units)
TR-C-260-18	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
TR-C-260-F	In Line Filter
TR-C-260-FX	Replacement Filter (10 units)



UNIVERSAL PRESS FIT CONNECTORS

Deactivated Universal **Description**

TR-330001	Universal Press Fit 12pk
TR-330002	Universal Press Fit Angled Y/ 1 unit
TR-330032	Universal Press Fit Angled Y/ 3 units



MEDIUM POLAR (INTERMEDIATE)

Phenyl-methyl deactivated, USP (467) suitable for methylene chloride, hexane, toluene, and a wide range of similar solvents

Internal Diam.(mm)	Length (m)	Part. N°. (P/N)
0,25	3 x 1	TR-200012
	1 x 5	TR-200052
	1 x 10	TR-200042
	1 x 20	TR-200082
0,32	3 x 1	TR-200013
	1 x 5	TR-200053
	1 x 10	TR-200043
	1 x 20	TR-200083
0,53	3 x 1	TR-200015
	1 x 5	TR-200055
	1 x 10	TR-200045
	1 x 20	TR-200085

NON POLAR
MEDIUM POLAR (INTERMEDIATE)
POLAR
AQUASAFE
BASE-DEACTIVATED

NON POLAR

Methyl deactivated, suitable for pentane/hexane and other non polar solvents.

Internal Diam.(mm)	Length (m)	Part. N°. (P/N)
0,25	3 x 1	TR-100012
	1 x 5	TR-100052
	1 x 10	TR-100042
	1 x 20	TR-100082
0,32	3 x 1	TR-100013
	1 x 5	TR-100053
	1 x 10	TR-100043
	1 x 20	TR-100083
0,53	3 x 1	TR-100015
	1 x 5	TR-100055
	1 x 10	TR-100045
	1 x 20	TR-100085

POLAR

Polyethylene glycol deactivated, suitable for methanol, water and a wide range of similar polar solvents.

Internal Diam.(mm)	Length (m)	Part. N°. (P/N)
0,25	3 x 1	TR-300012
	1 x 5	TR-300052
	1 x 10	TR-300042
	1 x 20	TR-300082
0,32	3 x 1	TR-300013
	1 x 5	TR-300053
	1 x 10	TR-300043
	1 x 20	TR-300083
0,53	3 x 1	TR-300015
	1 x 5	TR-300055
	1 x 10	TR-300045
	1 x 20	TR-300085

Tk Guard Columns (Retention Gap)

AQUASAFE

Proprietary deactivation suitable for water direct aqueous injections.

Internal Diam.(mm)	Length (m)	Part. N°. (P/N)
0,25	3 x 1	TR-310012
	1 x 5	TR-310052
	1 x 10	TR-310042
	1 x 20	TR-310082
0,32	3 x 1	TR-310013
	1 x 5	TR-310053
	1 x 10	TR-310043
	1 x 20	TR-310083
0,53	3 x 1	TR-310015
	1 x 5	TR-310055
	1 x 10	TR-310045
	1 x 20	TR-310085

BASE-DEACTIVATED

Proprietary deactivation suitable for analysis of amines and other basic compounds

Internal Diam.(mm)	Length (m)	Part. N°. (P/N)
0,25	3 x 1	TR-320012
	1 x 5	TR-320052
	1 x 10	TR-320042
	1 x 20	TR-320082
0,32	3 x 1	TR-320013
	1 x 5	TR-320053
	1 x 10	TR-320043
	1 x 20	TR-320083
0,53	3 x 1	TR-320015
	1 x 5	TR-320055
	1 x 10	TR-320045
	1 x 20	TR-320085

Teknokroma Metal Capillary Columns Stainless steel Teknokroma columns (TKM)



- Chemical inertness comparable to that of fused silica
- Bonded and crosslinked
- Ideal for chromatographs in industrial control processes
- Practically unbreakable
- Enables the higher analysis temperatures

Teknokroma can supply you with Teknokroma stainless steel columns with a 0.53 mm internal diameter and with an external diameter similar to that of fused silica semi-capillary columns, enabling you to use the same standard ferrules of 0.8 mm ID.

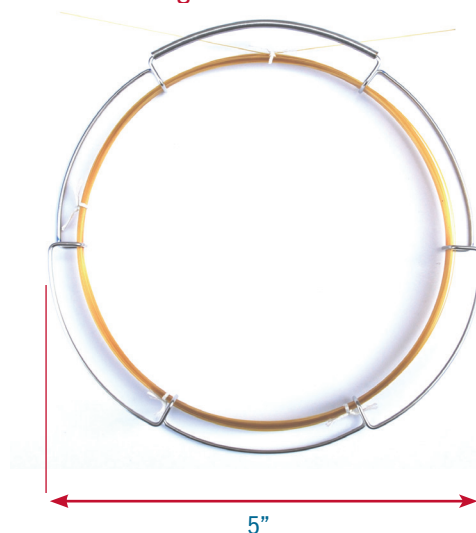
These columns are available with our most popular stationary phases.

To order a metallic column simply add the M at the end of the corresponding reference to the column in the catalog.

For example: TRB-2887 of 10 m x 0.53 mm x 2.65 μ m
P/N TR-192645

With stainless steel tube, 10 m x 0.53 mm x 2.65 μ m (TKM-2887)
P/N TR-192645M

Columns for the Agilent GC 6850 5-inch column cage



For columns that have to be placed in the oven of the 6850 chromatograph, the column must be rolled up in a 5 inch cage. To order a column in a 5 inch cage you just need to add a 5 to the end of the catalog number of the corresponding column.

For example: TRB-5, 30m x 0.25 mm x 0.25 μ m
P/N TR-120232

With 5 inch cage, TRB-5, 30m x 0.25 mm x 0.25 μ m
P/N TR-1202325