



GC columns accessories and solutions



contact us: info@mega.mi.it





















About us



For more than 35 years, MEGA has developed and manufactured gas chromatography GC columns offering both general-purpose and application-specific solutions to analysts around the world. Today we produce and offer:

- one of the most complete range of analytical columns for GC, GC-MS, FAST-GC, Wide-Bore GC, Chiral-GC
- special and innovative products and accessories for Multidimensional-GC (inlcuding GCxGC), High Temperature GC and MEMS micro-fabricated "Lab-on-a-chip" GC
- excellent efficiency and inertness; we produce and test each column one-by-one to assure the maximum column-to-column reproducibility and quality
- custom products by request
- support and services for Your GC analysis

our experience in Gas Chromatography at Your service

GC Columns Available Dimensions

Internal Diameter	0.05mm	0.075mm	0.10mm	0.15mm
Length*	from I to 5m	from I to I0m	from I to 20m	from I to 40m
Film Thickness**	from 0.05 to 0.25µm	from 0.05 to 0.50µm	from 0.05 to 1.40µm	from 0.05 to 2.00µm FAST
Internal Diameter	0.18mm	0.20mm	0.25mm	0.32mm
Length*	from 5 to 60m	from 5 to 105m	from 5 to 105m	from 5 to 105m
Film Thickness**	from 0.05 to 2.00µm	from 0.05 to 2.00µm	from 0.05 to 3.00µm	from 0.05 to 10.00µm /ENTIONAL
Internal Diameter	0.45mm	0.53mm		
Length*	from 5 to 75m	from 5 to 75m		
Film Thickness**	up to 7.00µm	up to 10.00µm	١	WIDE-BORE

Completely customize your column by selecting every combination of sizes and asking for out-ofcatalog configurations. Since 1980 we develop ad-hoc solutions for your specific analytical problem. We are also able to tune the selectivity of the stationary phase to respond to particular needs.

All our stationary phases are available for FAST, Conventional, Wide-Bore and Multidimensional-GC, including solutions and kits for GCxGC.

Products Highlight

Metal MTX capillary columns for high temperature GC (up to 420-430°C with our HT phases). You can require almost every stationary phase (not HT too) to be coated onto the high inertness metal capillary tubing. Contact us to have more details and send your request	
MEGA-WAX Plus column is a new high stable and inert PEG phase (270°C max Temperature) excellent also for GC-MS analysis, truly equivalent to InnoWax columns. Crossbonded and water resistant	Mega WAX plus
MEGA-FFAP EXT column is a crossbonded and water resistant version of the well known MEGA-ACID (FFAP) phase with also an extended working temperature range	<i>mega</i> FFAP EXT
MEGA-2D single column is a revolutionary unique tubing column coated with two in series different stationary phases for GCxGC and MD-GC applications. No connections are needed. Contact us to have more information and discover new selectivities using MEGA- 2D technology applied to conventional ID GC too	
MEGA-XMLB column is a new selectivity low polarity phase ideal as confirmation column . MEGA-XMLB is a low bleeding and high temperature stable column (up to 360°C) excellent for Pesticides, PCBs and PAHs analysis for example	<i>mega</i> XMLB
MEGA-PAH 2 column arrives beside MEGA-PAH column to solve EU-regulated PAHs isomers separation . High termal stability and low bleeding assure an excellent signal-to-noise ratio	Maga PAH 2
MEGA-WAX BA is a basic treated PEG column specifically designed for basic compounds analysis , including alkylamines, diamines, triamines etc.	Maga WAX BA



Stationary Phase	T max *	Equivalent/Alternative to	EPA/USP Methods **	Applications
MEGA- I 100% methyl polysiloxane	up to 350°C	DB-1, HP-1, AT-1(+), ZB-1, 007-1, Rtx-1, BP-1, SPB-1, CP Sil 5 CB	EPA: 504.1, 505, 551, 606, 612, 8141A/B, etc.** USP: G1, G2, G9, G38	General purpose column Solvent impurities, PCBs, SimDist, drugs, natural gases, essential oils, semivolatiles, pesticides, phenols, etc.
MEGA-5 5% phenyl, 95% methyl polysiloxane	up to 350°C	DB-5, HP-5, AT-5(+), ZB-5, 007-5, Rtx-5, BP-5, SPB-5, CP Sil 8 CB	EPA: 506, 611, 604, 607, 608, 8015, 8041, 8082, 8091, etc.** USP: G27, G36, G41	General purpose column Solvent impurities, PCBs, hydrocarbons, essential oils, semivolatiles, pesticides, phenols, etc.
MEGA-SE52 5% phenyl, 95% methyl polysiloxane	up to 350°C	SE52	USP: G27, G36, G41	General purpose column Solvent impurities, PCBs, hydrocarbons, essential oils, semivolatiles, triglycerides, pesticides, poly-waxes, etc.
MEGA-SE54 5% phenyl, 1% vinyl, 94% methyl polysiloxane	up to 350°C	SE54	USP: G27, G36, G41	General purpose column Solvent impurities, PCBs, hydrocarbons, essential oils, semivolatiles, allergens, pesticides, etc.
MEGA-1701 14% cyanopropylphenyl, 86% methyl polysiloxane	up to 280°C	DB-1701, HP-1701, AT-1701(+), ZB-1701, 007-1701, Rtx-1701, BP-10, SPB-1701, CP Sil 19 CB	EPA: 513, 515.2, 552.2, 607, 619, 622, 8091, 8121, etc.** USP: G46	General purpose column Residual solvents, oxygenated pesticides, essential oils, allergens, etc. Ideal as confirmation column and GCxGC applications
MEGA-17 50% phenyl, 50% methyl polysiloxane	up to 340°C	DB-17, DB-608, HP-17, AT-50(+), ZB-50, 007-17, Rtx-17, BPX-50, SPB-50, CP Sil 24 CB	EPA: 604, 608, 619, 8060, 8081, etc.** USP: G3, G17	General purpose column Phthalate esters, herbicides, pharmaceuticals, etc. Ideal as confirmation column and GCxGC applications
MEGA-624 6% cyanopropylphenyl, 94% methyl polysiloxane	up to 280°C	DB-624, HP-624, AT-624(+), ZB-624, 007-624, Rtx-624, Vocol, SPB-624, VF-624 ms	EPA: 501.3, 502.1, 502.2, 601, 624, 1624, 8020, 8021, etc.** USP: G43, 467 (OVIs)	General purpose column Volatile organic pollutants, purgeable aromatics, purgeable hydrocarbons, VOCs, pharmaceuticals, etc.
MEGA-WAX	up to 250°C	DB-Wax, HP-Wax, AT-Wax(+), ZB-Wax, 007-CW, Rtx-Wax, BP-20, CP Wax 52 CB	EPA: 602, 603, 619, 8015C, etc.** USP: G14, G15, G16, 467 (OVIs)	General purpose column FAMEs, flavor compounds, essential oils, BTEX aromatics, solvents, alcohols, etc. Tune your Wax column polarity (i.e. WAX-20M, WAX-400, WAX-8M and more!). Ask us for more info
MEGA-I MS low bleeding 100% methyl polysiloxane	up to 350°C	DB-1 ms (UI), HP-1 ms, AT-1 ms(+), ZB-1 ms, Rtx-1 ms, Equity-1, CP Sil 5 CB ms	EPA: 504.1, 505, 606, etc.** USP: G1, G2, G9, G38	General purpose column for GC-MS See MEGA-1 phase on this page
MEGA-5 MS low bleeding 5% phenyl, 95% methyl polysiloxane	up to 360°C	DB-5 ms (UI), HP-5 ms, AT-5 ms(+), ZB-5 ms, 007-5 ms, Rtx-5 ms, Equity-5, BPX-5	EPA: 513, 528, 552, 610, 613, 1625, 1653, 8015B, 8091, 8100, 8141A/B, 8280A, etc.** USP: G27, G36, G41	General purpose column for GC-MS See MEGA-5 phase on this page

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Stationary Phase	T max *	Equivalent/Alternative to	EPA/USP Methods **	Applications
MEGA-5 MS XII low bleeding silphenylene based MS phase	up to 360°C	DB-5 ms (UI), Rtx-5 Sil ms, SLB-5 ms, ZB-5 ms	EPA: 513, 515.2, 521, 525, 529, 552.2, 604, 610, 625, 1613, 1625, 8041 8061A, 8081A, 8121, 8270C, etc.** USP: G27, G36, G41	General purpose column for GC-MS Dioxins and furans, herbicides, phthalate esters, POCs, chlorinated acids, etc.
MEGA-35 MS low bleeding 35% phenyl, 65% methyl polysiloxane	up to 340°C	DB-35 ms, BPX-35, BPX-608, ZB-MultiResidue-2, Rtx-35 Sil ms	EPA: 507, 508, 552, 614, 615, 622, 8141A, 8151A, etc.** USP: G28, G32, G42	General purpose column for GC-MS See MEGA-35 phase on the next page
MEGA-17 MS low bleeding 50% phenyl, 50% methyl polysiloxane	up to 340°C	DB-17 ms, Rtx-17 Sil ms	EPA: 505, 610, 614, 619, 8040, 8041, etc.** USP: G3, G17	General purpose column for GC-MS See MEGA-17 phase on the previous page
MEGA-225 MS low bleeding 25% cyanopropyl, 25% phenyl, 50% methyl polysiloxane	up to 240°C	DB-225 ms	EPA: 8095, etc.** USP: G7, G19	General purpose column for GC-MS See MEGA-225 phase on the next page
MEGA-624 MS low bleeding 6% cyanopropylphenyl, 94% methyl polysiloxane	up to 280°C	VF-1301 ms, VF-624 ms	EPA: 8260B, etc.** USP: G43, 467 (OVIs)	General purpose column for GC-MS See MEGA-624 phase on the previous page
MEGA-WAX MS low bleeding polyethylene glycol (PEG)	up to 270°C	Stabilwax, ZB-Wax plus, InnoWax, VF-WAX ms	EPA: 602, 603, 619, 8015C, 8121, etc.** USP: G14, G15, G16, etc.**	General purpose column for GC-MS See MEGA-WAX phase on the previous page
MEGA-10	up to 260°C	HP-88, AT-Silar, Silar 10 Rtx-2560, SP-2560, BPX-70 CP Sil 88, ZB-FAME	EPA: 613, 1613, 8290B, etc.** USP: G5, G8, G48	High polarity column ideal for <i>cisltrans</i> FAMEs isomers analysis, available also for FAST-GC
MEGA-13 13% phenyl, 87% methyl polysiloxane	up to 350°C	CP Sil 13 CB	EPA: 601, 602, 624, etc.**	General purpose column, ideal as confirmation column
MEGA-20 20% phenyl 80% methyl polysiloxane	up to 340°C	AT-20(+), 007-7, Rtx-20, SPB-20	USP: G28, G32	General purpose column, ideal as confirmation column
MEGA-200 trifluoropropyl, methyl polysiloxane	up to 250°C	DB-200, DB-210, AT-210(+), 007-210, Rtx-200, SP-2401, VF-200 ms	EPA: 551, 612, 625, 8095, etc.** USP: G6	Unique selectivity column, Freon fluorocarbons, ketones, alcohols, organophosphorus pesticides, etc.

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Stationary Phase	T max *	Equivalent/Alternative to	EPA/USP Methods **	Applications
MEGA-225 25% cyanopropyl, 25% phenyl 50% methyl polysiloxane	up to 260°C	DB-225, HP-225, AT-225(+), 007-225, Rtx-225, BP-225, CP Sil 43 CB	EPA: 8095, etc. ** USP: G7, G19, G26	Mid-to-high polarity phase Carbohydrates, sterols, flavor compounds, etc.
MEGA-35 35% phenyl, 65% methyl polysiloxane	up to 340°C	DB-35, HP-35, AT-35(+), ZB-35, 007-11, ZB-MultiResidue-2, Rtx-35, SPB-35, SPB-608	EPA: 507, 508, 513, 551.1, 615, 622, etc.** USP: G28, G32, G42	General purpose column Pesticides, PCBs, substituted polar compounds, phenols, etc. Ideal as confirmation column
MEGA-50 50% cyanopropyl, 50% methyl polysiloxane	up to 260°C	DB-23, Silar-5, Rtx-2330, SP-2330	USP: G8	Mid-to-high polarity phase Carbohydrates, sterols, FAMEs, flavor compounds, etc.
MEGA-ALC 1&2 proprietary specific phases	up to 280°C	DB-ALC 1&2, Rtx-BAC 1&2	-	Application specific column for blood alcohols testing (see application notes on www.mega.mi.it)
MEGA-BASIC proprietary specific phase	n.d.	unique column	-	Application specific column for basic compouns (e.g. amines) (see application notes on www.mega.mi.it)
MEGA-BIODIESEL phases for biodiesel analysis	up to 380°C (EN14105)	Biodiesel Columns	EN 14105 (ASTM 6584), EN 14103, EN 14110, EN 14331	Application specific column for free and total glycerine (phase stable up to 380°C) and for FAMEs in biodiesel analysis (see application notes on www.mega.mi.it)
MEGA-DAI 1&2 proprietary unique phases for Direct Aqueous Injections	up to 320°C	unique columns	-	Application specific column for direct introduction of aqueous samples, thus minimizing sample preparation (see application notes on www.mega.mi.it)
MEGA-FFAP EXT acid modified polyethylene glycol (PEG)	up to 260°C	DB-FFAP, AT-1000(+), ZB-FFAP, 007-FFAP, Stabilwax-DA, BP-21, Nukol, CP Wax 57 CB	EPA: 8032, etc.** USP: G14, G15, G16, G25, G35, G39	General purpose column ideal for free acids, FAMEs, BTEX aromatics, flavor compounds, alcohols, spirits, polar compounds, etc. Extended temperature range phase, crossbonded. Aqueous samples compatible
MEGA-JXR	up to 350°C	no equivalent on the market	USP: G1, G2, G9, G38	General purpose apolar column
MEGA-LAP proprietary unique phase for Lipids Analysis	up to 370°C	unique column	-	Application specific column for lipids, sterols and triglycerides analysis (see application notes on www.mega.mi.it)

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EPA normative, USP requirements and/or ASTM method.

Stationary Phase	T max *	Equivalent/Alternative to	EPA/USP Methods **	Applications
MEGA-DEX DAC Beta	up to 230°C	dex xeb chiral columns	chiral-enantiomeric separations	Diacethyl TBS Beta cyclodextrin based column. See and download on www.mega.mi.it the application notes and a database with hundreds chiral compounds separated with MEGA-DEX columns
MEGA-DEX DAC Gamma	up to 230°C	dex xeb	chiral-enantiomeric separations	Diacethyl TBS Gamma cyclodextrin based column. See and download on www.mega.mi.it the application notes and a database with hundreds chiral compounds separated with MEGA-DEX columns
MEGA-DEX DET Beta	up to 230°C	dex xab chiral columns	chiral-enantiomeric separations	Diethyl TBS Beta cyclodextrin based column. See and download on www.mega.mi.it the application notes and a database with hundreds chiral compounds separated with MEGA-DEX columns
MEGA-DEX DET Gamma	up to 230°C	dex xab chiral columns	chiral-enantiomeric separations	Diethyl TBS Gamma cyclodextrin based column. See and download on www.mega.mi.it the application notes and a database with hundreds chiral compounds separated with MEGA-DEX columns
MEGA-DEX DMP Beta	up to 230°C	dex xab chiral columns	chiral-enantiomeric separations	Dimethyl-pentyl TBS Beta cyclodextrin based column. See and download on www.mega.mi.it the application notes and a database with hundreds chiral compounds separated with MEGA-DEX columns
MEGA-DEX DMT Beta	up to 230°C	dex xab chiral columns	chiral-enantiomeric separations	Dimethyl TBS Beta cyclodextrin based column. See and download on www.mega.mi.it the application notes and a database with hundreds chiral compounds separated with MEGA-DEX columns
MEGA-DEX B-SE	up to 230°C	dex xab chiral columns	chiral-enantiomeric separations	New cyclodextrin derivative based column. See and download on www.mega.mi.it the application notes and a database with hundreds chiral compounds separated with MEGA-DEX columns
MEGA-DEX B-03	up to 230°C	dex xab chiral columns	chiral-enantiomeric separations	New cyclodextrin derivative based column. See and download on www.mega.mi.it the application notes and a database with hundreds chiral compounds separated with MEGA-DEX columns
MEGA-DEX G-01	up to 230°C	dex xab chiral columns	chiral-enantiomeric separations	New cyclodextrin derivative based column. See and download on www.mega.mi.it the application notes Unique column on the market able to separate Bornyl Acetate enantiomers
MEGA-DEX G-03	up to 250°C	dex xeb chiral columns	chiral-enantiomeric separations	New cyclodextrin derivative based column. See and download on www.mega.mi.it the application notes Developed for pyrethroids and pesticides chiral separations
dex FAS	MEC Our info A fu	GA has more than 35 years experie MEGA-DEX GC columns line is g and application notes about, for ex Il line of MEGA-DEX FAST chiral c	ence in manufacturing and dev rowing; check on our website ample, our MEGA-DEX B-01 rolumns is also available in orr	reloping chiral GC columns. e or contact us to have more and B-02 chiral phases. der to speed up your

Our MEGA-DEX GC columns line is growing; check on our website or contact us to have more info and application notes about, for example, our MEGA-DEX B-01 and B-02 chiral phases. A full line of MEGA-DEX FAST chiral columns is also available in order to speed up your enantiomeric separations while keeping excellent resolution efficiency.

Stationary Phase	T max *	Equivalent/Alternative to	EPA/USP Methods **	Applications
MEGA-IHT 100% methyl polysiloxane for high temperature	up to 400°C	high temperature column DB-1 HT, ZB-1 HT (Inferno)	-	High Temperature general purpose column See MEGA-I phase, High Molecular Weight Waxes, Motor Oils, Polymers/Plastics, Simulated Distillation
MEGA-5 HT high temperature 5% phenyl, 95% methyl polysiloxane	up to 400°C	high temperature column DB-5 HT, ZB-5 HT (Inferno)	-	High Temperature general purpose column See MEGA-5 phase. High Molecular Weight Waxes, Diesel Fuels, Simulated Distillation, Surfactants, Triglycerides
MEGA-8 HT high temperature low-to-mid polarity special phase	up to 400°C	high temperature column HT8	-	High Temperature general purpose column Ideal for PCBs compounds, Pesticides, environmental analysis
MEGA-35 HT high temperature 35% phenyl, 65% methyl polysiloxane	up to 370°C	high temperature column ZB-35 HT (Inferno)	-	High Temperature general purpose column See MEGA-35 phase. Semi-volatiles analysis, Pesticides, Pharmaceuticals
MEGA-17 HT high temperature 50% phenyl, 50% methyl polysiloxane	up to 370°C	high temperature column DB-17 HT	-	High Temperature general purpose column See MEGA-17 phase. Ideal for confirmation analysis, ideal as high polarity dimension in GCxGC-HT configurations
MEGA-65 HT high temperature 65% phenyl, 35% methyl polysiloxane	up to 360-370°C	high temperature column 007-65HT, Rtx-65TG, TAP-CB	-	High Temperature column Ideal for triglycerides separations based on carbon number and degree of unsaturation
MEGA-SE54 HT high temperature 5% phenyl, 1% vinyl, 94% methyl polysiloxane	up to 400°C	high temperature unique column	-	High Temperature general purpose column See MEGA-SE54 phase. High boiling petroleum products, Long-chained hydrocarbons
MEGA-1701 HT high temperature 14% cyanopropylphenyl, 86% methyl polysiloxane	up to 320°C	high temperature unique column	-	High Temperature general purpose column See MEGA-1701 phase. Ideal for confirmation analysis, ideal as mid-polar column in GCxGC-HT configurations
MEGA-WAX HT high temperature polyethylenglycol (PEG)	up to 300°C	high temperature unique column	-	High Temperature unique PEG phase Extend the temperature limits of your FAST-GC and GCxGC methods while using a polar WAX phase
High Temperature Colur	For spec end	our MEGA-HT High Temperatur cifically engineered high resistanc urance and flexure with superior	e Columns range with fused e polyimide coating, resultin bend radius.	l silica tubing, we use g in high temperature
FAST-GC All our stationary phases are available for FAST-GC. Contac us to have more details. You can download on www.mega.mi.it our free guide to FAST-GC with a tons of				

You can download on www.mega.mi.it our free guide to FAST-GC with a tons of application notes and technical tips to perform and optimize your FAST-GC analysis. 0.15mm I.D., 0.18mm I.D. and 0.20mm I.D. tubing sizes are also available for all our columns.

solutions



MEGA-GAP columns line incoroporates both guard column and analytical column in a continuous length of tubing, eliminating the connection and all connection-associated problems. The guard column side is permanently marked with our oven temperature resistant labels.

Original Large Volume Gaps (UNCORET) columns (0.53mm, 12m Integrated Gap + 3m coated) are available from MEGA.

Extend your column's lifetime with this connection-free solution!



Easy to handle - Excellent inertness - Easy to install

Retention Gaps deactivated for any purpose: our Retention Gaps are suitable for any GC analytical need. Use with polar solvents, apolar solvents, water containing samples injections and for general use. They are available in any internal diameter size (0.05, 0.075, 0.10, 0.15, 0.18, 0.20, 0.25, 0.32, 0.45 and 0.53mm I.D.) with our standard fused silica tubing or with our High-Temperature fused silica tubing. Any length available, also in precut pieces individually packaged and ready to use. By request we also pre-install (with our Press-Fit connectors, see below) the selected retention gap on the GC column for a ready-to-install solution.

MEGA Retention Gaps have an unsurpassed chemical inertness. Use our Retention Gaps for focusing the analytes when a large (liquid) sample is introduced directly into the column and/or to protect the analytcal column from contamination. Deactivated Retention Gaps are also useful as connecting pipes to various part of GC systems with different configurations.



Easy to handle - Easy to install A simple pressure to assure a perfect seal

MEGA Press-Fit Connectors allow you to simply connect, with a tight seal, different columns or Retenetion Gaps in many ways. Our Press-Fit connectors are universal to fit any tubing size. Available as linear 2-ways union (to connect two columns or a Retention Gap to the analytical column), "Y" 3-ways (e.g. ideal to connect two columns to a single injector - double detector GC configuration) or personalized Multiwas connectors for advanced analytical system configurations as MD-GC and other custom settings.



Common Phases Polarity Quick View



GCxGC Solutions

MEGA offers unique and innovative products for your GCxGC analysis.

We can provide completely custom GCxGC solutions, including readyto-use kits.

The selectivity of the stationary phase plays a fundamental role in GC and it is even more important in GCxGC. Ask us to tune the selectivity of the stationary phase thus to explore new and unique solutions and to optimize the orthogonality and the efficiency of your GCxGC configuration.



Kunzea essential oil GCxGC analysis using MEGA-WAX HT on 2nd dimension. Courtesy of R. Shellie et al.



Allergens standard mix GCxGC analysis using MEGA-2D unique column. Courtesy of University of Turin, Prof. C. Bicchi, Prof. C. Cordero et al.



Application Notes

Visit our applications webpage to discover hundreds application notes and to find useful information on how to develop your analytical method. New technical notes are constantly added.



Courtesy of University of Turin - Prof. C. Bicchi et al.

Support and Services

- Do you want to optimize Your analytical method?

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MEGA S.r.l. - Via Plinio, 29 - 20025 Legnano (MI)- Italy