

Frequently Asked Questions

WHO IS CAMSCO?

Camsco® is the largest thermal desorption tube manufacturer in the world. In the last two decades, we have successfully delivered nearly 2 million tubes for a variety of end use applications.

WHY HAVEN'T WE HEARD ABOUT CAMSCO?

In the past, Camsco supplied tubes almost exclusively to military and intelligence communities, minimizing our exposure to commercial segments. In 2008, we started to actively promote our brand outside the military, and we currently serve customers in environmental monitoring, occupational health and safety, industrial hygiene, residual volatiles, materials emissions, food, flavor and fragrance, transportation safety, detector research and forensics.

HOW DO CAMSCO'S PRICES COMPARE WITH OTHER SUPPLIERS?

As the largest thermal desorption tube manufacturer, our economies of scale allow us to manufacture higher quality tubes at lower prices than our competitors. It's that simple.

WHAT IS THE COGNI™ SYSTEM?

You have more than one tube, and tracking individual tube usage becomes a challenge over time. The accuracy and reliability of barcodes help, but you should also be able to recognize a tube at the first glance. The COGNI System (Camsco's One Glance and Numeric Identification) combines the best of both worlds. Our barcodes are embedded on the tubes, providing much better identification solution over other methods. Our banding format is unique in the industry, and most of the time we offer them at no additional cost.

HOW DOES THE QUALITY OF CAMSCO'S PRODUCTS COMPARE WITH INSTRUMENT MANUFACTURERS AND OTHER RESELLERS?

Since 1991, militaries have trusted Camsco's reliability on the front line of battlefields, and behind the scene of chemical weapons destruction facilities.

All tubes are made in the United States by our highly-skilled artisans, the majority of whom have over 10,000 hours of tube building experience.

Unlike instrument manufacturers who make tubes as a by-product of their core business, we are completely focused on tubes. Our state-of-the-art manufacturing facility is the culmination of years of practical experience. This facility allows for improved productivity, best-in-class quality and supply reliability enabling Camsco to lead the industry as the premier single-source tube provider. While other companies see tubes as a small part of the equation, it's our sole focus.

Camsco's skilled and experienced artisans manufacture all of our products – and we are proud to say that we are AS 9100, NATO AQAP 110 and ISO 9001 certified.

WHY WOULD I BUY FROM CAMSCO INSTEAD OF AN INSTRUMENT MANUFACTURER?

Higher quality tubes, lower prices and guaranteed complete compatibility. And when you pick up the phone and call our office, you will always be able to talk with an expert who will understand your needs. We know tubes – inside and out – and offer a 100% replacement guarantee.

CAN CAMSCO MAKE CUSTOM TUBES TO MEET SPECIFIC NEEDS?

We regularly customize tubes for our clients. Our dynamic in house capabilities permit rapid prototyping and same day testing.

WHAT IF I WANT TO TEST A SAMPLE BEFORE I COMMIT TO AN ORDER?

We frequently ship free samples to new customers. Once people see the high quality tubes that we manufacture, and experience our great customer service, it becomes obvious why Camsco is the market leader. Just let us know which tube or product you'd like and we'll ship it for free.

HOW DO I CONTACT CAMSCO?

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The COGNI™ SYSTEM



Working closely with clients and listening to their needs, Camsco has developed an innovative identification system – COGNI™ (Camsco's One Glance Numeric Identification) System.

Managing and tracking tube usage becomes a challenge over time. The accuracy and reliability of barcodes help, but you should also be able to recognize a tube at one glance. The COGNI™ System combines the best of both worlds. Our barcodes are embedded on each individual tube, providing a much better identification solution over traditional methods. Our banding format is the first in the industry and it comes standard on many of our tubes. This system is also designed to be recognized by LIMS, Laboratory Information Management Systems. COGNI™ is the best-in-class identification method available.

COGNI™ SYSTEM: A SYSTEMATIC SOLUTION FOR YOU TO IDENTIFY TUBES

To reduce the complexity of your lab work, Camsco believes you should be able to get the most important information, such as sorbent type and batch identification at one glance. Our laser bands on stainless steel tubes, optional colored bands on glass tubes, and colored spacers in PTFE tubes offer exactly that – and then some. Camsco is the first in the industry to define a standard banding scheme for the most popular ATD tubes:

- 3 bands indicate a Tenax™ TA tube
- 2 bands indicate an Air Toxics tube
- 1 band indicates a Carbotrap™ B tube
- all other tubes have no band
- 4 bands available for customer specified requirements

We also offer custom banding options for all tubes. Tracking accuracy is easily managed with both bar-coded and numeric serial numbers on tubes. This is especially important for stainless steel tubes which will

not physically allow you to see the sorbent inside. Our barcodes are encrypted with code 39 which will work with most plug-and-play LED scanners.

PEACE OF MIND

In case the records of your tubes get lost, just contact Camsco with the serial number and we'll help you to retrieve the entire history of the tube, such as:

- sorbent info (type, amount, mesh size, lot number, etc)
- name of the assembly worker and quality assurance personnel
- date of manufacturing/shipping
- pressure drop tolerance and conditioning instructions

Visually elegant, instantly convenient and technically advanced, the COGNI™ System is standard on most of Camsco's commercial tubes. Contact Camsco to design your own tubes with a unique COGNI™ System to fit your application.

	Type of ID	Available On	Description	Example
One Glance ID	Laser Bands	Stainless Steel Tubes	For ATD tubes: 3 bands indicate a Tenax™ TA tube; 2 bands indicate an Air Toxics tube; 1 band indicates a Carbotrap™ B tube; all other tubes have no band, 4 bands available for customer specified applications.	
	Colored Bands	Glass Tubes	For ATD tubes: 3 bands indicate a Tenax™ TA tube; 2 bands indicate an Air Toxics tube; 1 band indicates a Carbotrap™ B tube; all other tubes have no band, 4 bands available for customer specified applications. For military tubes: Any number of bands in any combination of blue black, red, green and yellow, defined by customer. Non fritted tubes come with an arrow to indicate direction of flow.	
	Colored Spacers	PTFE (Teflon) Tubes	Spacers can be arranged in any combination of blue, black, red, green and yellow as defined by customer. Colorless spacers come standard when no other colors are specified.	
Numeric ID	Barcode Serial Numbers	All Tubes	Permanently Laser marked on Stainless steel tubes. Permanently fired/embedded on the surface of centerless ground glass tubes. High/low temperature barcode stickers on all other tubes.	
	Numeric Serial Numbers	All Tubes		

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Sorbent Tubes for PerkinElmer, Markes and Shimadzu Instruments

PerkinElmer, Markes and Shimadzu use sorbent tubes that are generally considered the “industry standard.” Camsco’s® expansive in-house manufacturing and glass blowing capabilities provide flexibility for clients, including the ability to fuse glass frits, centerless grinding, lapping, annealing and polishing – all with the experience that comes with having manufactured almost two million thermal desorption tubes since 1991. Camsco makes stainless steel and glass tubes in several configurations for all of the PerkinElmer, Markes and Shimadzu instruments.

STANDARD FEATURES

Camsco uses only the best raw materials. Our borosilicate-33 glass tube stock is Schott-Duran and we never use Simax tubing. The steel used to manufacture these tubes is the highest grade 316L stainless. Both glass and steel have unique serial numbers and flow direction arrows are included on fritless glass tubes. The glass tubes have fused glass frits.

To ensure sample and testing accuracy, we inert coat all internal metal parts as part of our standard manufacturing process. The wire cloth disks and retention clips are less likely to introduce active sites and interfere with your analysis.

COGNI™ SYSTEM

Barcode, serial number, and circumferential band(s) come standard as part of the COGNI (Camsco’s One Glance and Numeric Identification) System. The identification marks are permanently embedded on the tubes offering an inherent advantage over other identification methods.

- Three bands for Tenax TA tubes
- Two bands for Air Toxic tubes
- One band for Carboxpack™ B tubes
- No band for other tubes
- Four bands available for customer specified requirements



CUSTOM FEATURES – STAINLESS STEEL

Custom options include inert coatings and conditioned tubes can be shipped with compression fittings. Cap options include compression caps (brass, steel and PTFE) and analytical caps (brass and PTFE) for conditioned tubes.

CUSTOM FEATURES – BOROSILICATE GLASS

Options include fused glass frits, without glass frits and quartz wool. Tube manufacturing includes centerless grinding, ground ends, chamfers, lapping, annealing, polishing and fire-polishing.

CAPPING OPTIONS

Compression caps, analytical caps and passive sampling caps are available. Please refer to the Capping Options insert sheet for more information.

If compression caps are ordered with conditioned tubes, Camsco guarantees that each cap is torqued to optimal tightness.

Protective micro caps are provided when no cap option is specified.

STEEL SORBENT TUBE



GLASS SORBENT TUBE (WITH FRIT)



GLASS SORBENT TUBE (WITHOUT FRIT)



Steel ATD Sample Tubes	Part Number*
Tenax™ TA 60/80 mesh	SC60520-60-B
Air Toxics	SC60501-B
Carbopack™ B 60/80 mesh	SC60541-B
Chromosorb® 106 60/80 mesh	SC60503-B
Tenax™ GR 60/80 mesh	SC60520-GR-B
Carbopack™ B/Carbosieve™ SIII	SC60528-B
Carboxen™ 569 20/45 mesh	SC60530-B
Carbosieve™ SIII 60/80 mesh	SC60510-B

Glass ATD Sample Tubes	Part Number*
Tenax™ TA 60/80 mesh	GC60520-60-B
Air Toxics	GC60501-B
Carbopack™ B 60/80 mesh	GC60541-B
Chromosorb® 106 60/80 mesh	GC60503-B
Tenax™ GR 60/80 mesh	GC60520-GR-B
Carbopack™ B/Carbosieve™ SIII	GC60528-B
Carboxen™ 569 20/45 mesh	GC60530-B
Carbosieve™ SIII 60/80 mesh	GC60510-B

*All part numbers correlate to the following options: Conditioned;
Brass Compression Caps (Swagelok)

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Sorbent Tubes for CDS Dynatherm Instruments

Camsco® manufactures tubes used in Dynatherm instruments. Dynatherms have been used for many years for both civilian and military applications. Camsco has the in-house capabilities to address several complex applications from fused glass frits, precision bore, centerless grinding to multiple compound outside diameters, glass blowing, grinding, lapping, annealing and polishing.

STANDARD FEATURES

Camsco uses only the best raw materials. Our borosilicate-33 glass tube stock is Schott-Duran and we never use Simax tubing. All of the sorbent tubes and traps that Camsco makes for the Dynatherms are centerless ground to an exacting OD tolerance of $\pm .00225"$. We offer the choice of frit sizes, porosities and pressure drop test all tubes to make certain that the frit hasn't restricted flow during the annealing process which historically has been a problem with other manufacturers. Individual tube conditioning and glass storage vials or caps are optional.

COGNI™ SYSTEM

Barcode, serial number, and circumferential band(s) come standard as part of the COGNI (Camsco's One Glance and Numeric Identification) System. The identification marks are permanently embedded on the tubes offering an inherent advantage over other identification methods.

CUSTOM OPTIONS

Camsco offers silanized and unsilanized glass and quartz wools, as well as more robust focusing traps with captured spacers on each end.

CAPPING OPTIONS

Both compression and micro caps are available. Please refer to the Capping Options insert sheet for more information.

If compression caps are ordered with conditioned tubes, Camsco guarantees that each cap is torqued to optimal tightness.



DYNATHERM 6MM SAMPLE TUBE



DYNATHERM FAST FLOW FOR IACEM, ACEM & MDTU



FOCUSING TRAP FOR DYNATHERM ACEM 900



FOCUSING TRAP FOR DYNATHERM IACEM/ACEM 9300



Standard 6mm Dynatherm	Part Number*
HayeSep® D 40/60 mesh	AC60408-B
Chromosorb® 106 60/80 mesh	AC60403-B
Tenax™ TA 35/60 mesh	AC60420-B
Tenax™ GR 20/35 mesh	AC60420GR-B
Tenax™ TA/HayeSep® D	AC60430-B
Carbosieve™ SIII 60/80 mesh	AC60420-08-B
Carboxen™ 569 20/45 mesh	AC60430-20-B
Tenax™ TA/Carboxen™ 1000	AC60420-1000-B

Fast Flow Tubes for Dynatherm IACEM	Part Numbers*
HayeSep® D 40/60	AC6-100408-B
Chromosorb® 106 40/60	AC6-100403-B
Tenax™ TA 35/60	AC6-100420-B
Tenax™ GR 60/80	AC6-100420GR-B
Tenax™ TA 35/60 / HayeSep® D 40/60	AC6-100420-0820-B
Chromosorb® 106/Tenax™ TA	AC6-100419-B
Chromosorb® 106 60/80 / HayeSep® D 40/60	AC6-100420-0308-B
Carbotrap™ 317	AC6-1004317-B

6mm Focusing Traps for ACEM (7.25" Length)	Part Number*
HayeSep® D 40/60	FC60608-B
Chromosorb® 106 60/80	FC60603-B
Tenax™ TA 60/80	FC60620-B
Tenax™ GR 60/80	FC60620-GR-B
Tenax™ TA 60/80 / HayeSep® D 40/60	FC60608-20-B
Carbotrap™ 201	FC606201-B

6mm Focusing Traps for IACEM 9300 (4.5" Length)	Part Number*
HayeSep® D 40/60	IFC60608-B
Chromosorb® 106 60/80	IFC60603-B
Tenax™ TA 60/80	IFC60620-B
Tenax™ GR 60/80	IFC60620GR-B
Tenax™ TA 60/80 / HayeSep® D 60/80	IFC60608-20-B
Carbotrap™ 201	IFC606201-B
Carbotrap™ 300	IFC606300-B
Carbotrap™ 301	IFC606301-B
Carbotrap™ 370	IFC606370-B

*All part numbers correlate to the following options: Conditioned;
Brass Compression Caps (Swagelok)

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Sorbent Tubes for Gerstel Thermal Desorption Units

Camsco® manufactures both the glass and stainless steel tubes used in Gerstel instruments in the 6mm x 7" size, in addition, we offer short 6mm x 2 3/8" glass tubes. Our expansive in-house manufacturing and glass blowing capabilities provide flexibility for clients, including the ability to fuse glass frits, centerless grinding, lapping, annealing and polishing – all with the experience that comes with having manufactured well over one million thermal desorption tubes since 1991.

STANDARD FEATURES

Camsco uses only the best raw materials. Our borosilicate-33 glass tube stock is Schott-Duran and we never use Simax tubing. All glass used in the manufacture of sorbent tubes for Gerstel instruments are centerless ground for an exacting OD tolerance. Both glass and steel have unique serial numbers and flow direction arrows. The steel used in these tubes is 316L stainless and we offer fritted and non-fritted tubes.

To ensure sample an testing accuracy, we inert coat all internal metal parts as part of our standard manufacturing process. The coated wire cloth disks and retention clips are much less likely to introduce active sites to interfere with your analysis.

Individual tube conditioning and glass storage vials are optional.

CUSTOM OPTIONS

Camsco offers fritted or non-fritted 6mm x 7" glass tubes, we also offer fritted or indented 6mm x 2 3/8" short glass tubes. We also provide other options including silanized, unsilanized glass and quartz wools. Conditioned tubes can be shipped with compression fittings or glass storage containers.

COGNI™ SYSTEM

Barcode, serial number, and circumferential band(s) come standard as part of the COGNI (Camsco's One Glance and Numeric Identification) System.

CAPPING OPTIONS

Both compression and micro caps are available. Please refer to the Capping Options insert sheet for more information.

If compression caps are ordered with conditioned tubes, Camsco guarantees that each cap is torqued to optimal tightness.

We provide micro caps for free if no other caps are ordered.



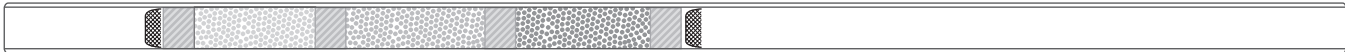
SHORT GERSTEL GLASS (6MM X 2 3/8")



GLASS TUBE (6MM X 7")



STEEL TUBE (6MM X 7")



New Gerstel Glass (6mm x 2 3/8")	Part Number
Tenax™ TA 35/60 (with Frit)	G60220-35-F
Tenax™ TA 60/80 (with Frit)	G60220-F
Chromosorb® 106 60/80 (with Frit)	G60203-F
Tenax™ GR (with Frit)	G60220-GR-F
Carbopack™ B (with Frit)	G60241-F
Tenax™ TA 35/60 (with Pinch)	G60220-35
Tenax™ TA 60/80 (with Pinch)	G60220
Chromosorb® 106 60/80 (with Pinch)	G60203
Tenax™ GR (with Pinch)	G60220-GR
Carbopack™ B (with Pinch)	G60241

Glass TDS Sample Tubes (6mm x 7")	Part Number*
Tenax™ TA	GC60720-F-B
Tenax™ GR	GC60720-GR-F-B
Chromosorb® 106	GC60703-F-B
Carbosieve™ S-III 60/80 mesh	GC60711-F-B
Carbopack™ X 60/80	GC60724-F-B
Carbotrap™ 217	GC607217-F-B
Carbopack™ X 60/80 / Tenax™ TA 60/80	GC60724-20-F-B
Carbotrap™ 300	GC607300-F-B
Carbotrap™ 349	GC607349-F-B

Gerstel Stainless (6mm x 7")	Part Number*
Tenax™ TA	SC60720-F-B
Tenax™ GR	SC60720-GR-F-B
Chromosorb® 106	SC60703-F-B
Carbosieve™ S-III 60/80 mesh	SC60711-F-B
Carbopack™ X 60/80	SC60724-F-B
Carbotrap™ 217	SC607217-F-B
Carbopack™ X 60/80 / Tenax™ TA 60/80	SC60724-20-F-B
Carbotrap™ 300	SC607300-F-B
Carbotrap™ 349	SC607349-F-B

*All part numbers correlate to the following options: Conditioned;
Brass Compression Caps (Swagelok)

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Sorbent Tubes for Teledyne Tekmar Thermal Desorption Units

Camsco® manufactures both the glass and stainless Teledyne Tekmar tubes in two sizes, 1/4" and 1/2". Our expansive in-house manufacturing and glass blowing capabilities provide flexibility for clients, including centerless grinding, lapping, annealing and polishing – all with the experience that comes with having manufactured well over one million thermal desorption tubes since 1991.

STANDARD FEATURES

Camsco uses only the best raw materials. Our borosilicate-33 glass tube stock is Schott-Duran and we never use Simax tubing. All of the glass sorbent tubes that Camsco makes for Teledyne Tekmar instruments are centerless ground for an exacting OD tolerance. Both glass and steel tubes have unique serial numbers and flow direction arrows. The steel used in these tubes is 316L stainless. Individual tube conditioning and glass storage vials are optional.

COGNI™ SYSTEM

Barcode, serial number, and circumferential band(s) come standard as part of the COGNI (Camsco's One Glance and Numeric Identification) System. The identification marks are permanently embedded on the tubes offering an inherent advantage over other identification methods.

CUSTOM OPTIONS

Camsco offers silanized, unsilanized glass and quartz wools. Conditioned tubes can be sealed and shipped with compression caps or airtight glass storage containers.

CAPPING OPTIONS

Both compression caps and micro caps are available. Please refer to the Capping Options insert sheet for more information.

If compression caps are ordered with conditioned tubes, Camsco guarantees that each cap is torqued to optimal tightness.

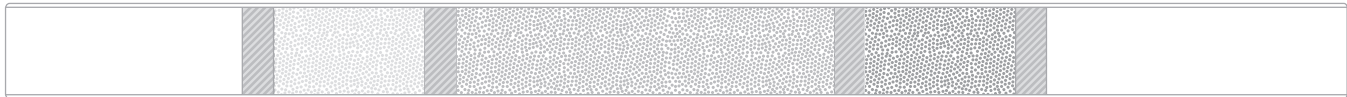
We provide micro caps for free if no other caps are ordered.



TELEDYNE TEKMAR (1/4" X 7" STEEL AND GLASS)



TELEDYNE TEKMAR (1/2" X 7" STEEL AND GLASS)



Teledyne Tekmar (1/4" x 7" Steel and Glass)	Part Number*
Tenax™ TA	SC/GC602020-B
Tenax™ GR	SC/GC602020-GR-B
Chromosorb® 106	SC/GC602003-B
Carbosieve™	SC/GC602011-B
Carbotrap™ B	SC/GC602041-B
Carbotrap™ C	SC/GC602042-B
Carbotrap™ 217	SC/GC6020217-B
Carbotrap™ 300	SC/GC6020300-B
Carbotrap™ 349	SC/GC6020349-B

Teledyne Tekmar (1/2" x 7" Steel and Glass)	Part Number*
Tenax™ TA	SC/GC1302020-B
Tenax™ GR	SC/GC1302020-GR-B
Chromosorb® 106	SC/GC1302003-B
Carbosieve™	SC/GC1302011-B
Carbotrap™ B	SC/GC1302041-B
Carbotrap™ C	SC/GC1302042-B
Carbotrap™ 217	SC/GC13020217-B
Carbotrap™ 300	SC/GC13020300-B
Carbotrap™ 349	SC/GC13020349-B

* All Teledyne Tekmar tubes are preconditioned;
Part Numbers above include Brass Compression Cap (Swagelok)

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DAMMS Tubes and Preconcentrator Tubes (PCTs)

The predecessor to the U.S. Army Chemical Materials Agency developed thermal desorption tube monitoring methods for chemical warfare agents to be implemented at U.S. sites associated with CW materials. That method became known as The Depot Area Air Monitoring System (DAAMS). The method has been in use for over 20 years now. Camsco® has been a leader in the development of quality standards and innovations for DAAMS since 1991.

DAAMS & PCTS

DAAMS tubes are used for historical monitoring and surveillance at worldwide military chemical weapons storage sites, research laboratories and NATO military theaters. PCTs are used in ACAMS and CMS Minicams for near real-time monitoring of chemical warfare agents.

All DAAMS tubes and PCTs are pressure drop tested to ensure proper flow rates. All sorbents are preconditioned. Certificates of Compliance are provided to address site-specific requirements.

Camsco provides many options, including our patented ceramic barcode, high temperature barcode labels, laser bonded color ceramic appliques and color ceramic bands and dots facilitating lot identification and simplifying LIMS management.

Additionally, we

offer centerless grinding, ground ends, chamfers, lapping, annealing, polishing and fire-polishing.

To ensure sample and testing accuracy, we inert coat all internal metal parts as part of our standard manufacturing process. The coated wire cloth disks and retention clips are much less likely to introduce active sites to interfere with your analysis.

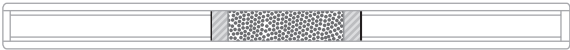
COGNI™ SYSTEM

Barcode, serial number, and circumferential band(s) are available on the 6mm and 8mm DAAMS tubes as part of the COGNI (Camsco's One Glance and Numeric Identification) System.

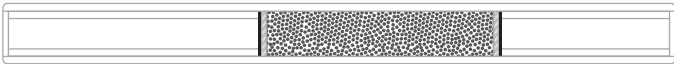
We offer five colors (blue, red, yellow, black, and green) as banding options on glass tubes.



6MM DAAMS



8MM DAAMS



3MM DAAMS TRANSFER TUBES



3MM PRECONCENTRATOR TUBES



4MM PRECONCENTRATOR TUBES



3MM PRECONCENTRATOR TUBES FOR CMS MINICAMS



6mm DAAMS Tubes	Part Number
Chromosorb® 106 60/80 mesh	60403
Tenax™ TA 35/60 mesh	60420
Tenax™ GR 60/80 mesh	60420-GR

8mm DAAMS Tubes	Part Number
Chromosorb® 106 60/80 mesh (90mm)	80403
Tenax™ TA 60/80 mesh (90mm)	80420
Tenax™ GR 60/80 mesh (90mm)	80420-GR
Chromosorb® 106 60/80 mesh (115mm)	A80403
Tenax™ TA 60/80 mesh (115mm)	A80420
Tenax™ GR 60/80 mesh (115mm)	A80420-GR

3mm DAAMS Transfer Tubes	Part Number
Chromosorb® 106 60/80 mesh	30403
Tenax™ TA 60/80 mesh	30420
Tenax™ GR 60/80 mesh	30420-GR
HayeSep® D 40/60 / Tenax TA™ 60/80	30408-20
Chromosorb® 106 60/80 / Tenax™ GR 60/80	30419

Preconcentrator Tubes – 3 or 4mm	Part Number
HayeSep® D 40/60 mesh	31608/S41608
Tenax™ TA 35/60 mesh	31620/S41620
Tenax™ GR 35/60 mesh	31620-GR/S41620-GR

Preconcentrator Tubes for MiniCams – 3 or 4mm	Part Number
HayeSep® D 40/60 mesh	M31608/M41608
Tenax™ TA 35/60 mesh	M31620/M41620
Tenax™ GR 35/60 mesh	M31620-GR/M41620-GR

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V-to-G Conversion and NO_x/HD Prefilters

The U.S. Army Chemical Materials Agency developed the DAAMS thermal desorption monitoring methods for chemical warfare agents over 20 years ago. Two important tools in this method are V-to-G conversion pads and NO_x/HD prefilters. Camsco® has been a leader in the development of quality standards and innovations since 1991.

VGT & V TO G CONVERSION PADS

Camsco V-to-G conversion pads are used to convert the nerve agent VX to the more easily detectable and volatile G analog. V-to-G conversion pads (silver fluoride/AgF pads) have been used for years by installing AgF impregnated pads in compression fittings at the distal end of sample lines.

In 2001, Camsco invented the VGT (patented). The VGT simply moves the AgF pads out of the compression fitting and into a Teflon tube. The four major benefits include:

- 2-8 AgF pads can offer less frequent change-outs and better recoveries
- Traceability – VGT tubes can be labeled and tracked in LIMS
- VGTs can be changed out while in heavy PPE
- ACAMS/MiniCams confirmation

VGTs are available in English and metric sizes from 3/16" to 5/8" in 1/16th increments with 1-8 AgF pads and in lengths from 2-24". They can be laser marked, color banded, and labeled with expiration date, lot number and flow direction.

COGNI™ SYSTEM

Barcodes and serial numbers are available upon request as part of the COGNI (Camsco's One Glance and Numeric Identification) System.

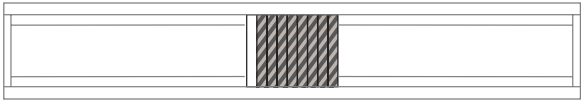
We offer five colors (blue, red, yellow, black, and green) of PTFE spacers for one glance identification.

NO_x/HD PREFILTERS

NO_x prefilters are used in conjunction with HD chemical agent realtime and historical monitoring to remove environmental NO_x, preserving sample integrity for DAAMS and PCTs. They are available in diameters from 3/16" to 5/8" in 1/16" increments and in any length. Standard tubes are made from PTFE tubing.



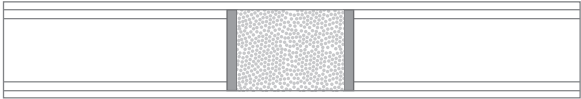
VGT CONVERSION PAD ASSEMBLY



V-TO-G CONVERSION PADS



NOx/HD PREFILTERS



VGT's V-to-G Conversion Tubes	Part Number
1/2" (13mm) VGT	VGT-13
3/8" (9.5mm) VGT	VGT-9
5/16" (8mm) VGT	VGT-8
1/4" (6mm) VGT	VGT-6
3/16" (5mm) VGT	VGT-1875

NOx/HD Pre-filter	Part Number
1/2" (13mm) NOx	13416
3/8" (9.5mm) NOx	71416
5/16" (8mm) NOx	81416
1/4" (6mm) NOx	61416

800.448.3280 TOLL FREE
713.983.0200 PHONE
713.983.7200 FAX
WWW.CAMSCO.COM

Cap Options Sorbent Tubes

Camsco® offers a variety of cap options to fit your specific application and needs.

THE FUNCTIONALITY OF THE CAPS

- Compression caps are used for storage, both before and after sampling
 - All compression caps come with Camsco's universal PTFE ferrules
 - All pre-conditioned tubes should be shipped with compression caps
 - At Camsco, we numerically torque the compression caps to optimal tightness
 - For passive sampling, Camsco's PTFE compression caps are 75% lighter than the equivalent brass caps
 - Analytical caps are used for analysis and storage
 - Analytical caps will work with the robotic arms that de-cap and re-cap tubes in ATDs
 - For long-term storage, compression caps are better than analytical caps
 - Micro caps are used for short-term transportation/protection
 - Uncapped tube orders will come with micro caps at no cost to our customer
- Other than the caps designed for 1/4" OD ATD tubes, caps are also available for other tubes:
- Compression caps are available for 6mm, 1/4 inch, and 1/2 inch
 - Analytical caps are available for 1/4 inch only
 - Micro caps are available for 6mm, 1/4 inch, and 1/2 inch



Camsco's PTFE Compression Caps have the following advantages compared to brass/steel Swagelok Caps:

- Shock-absorbing
- Chemically inert
- 75% lighter than metal counterparts, weighing in at only 5 grams vs 20 grams

APPLICATION CHART

Tube Type	Compression Caps	Analytical Caps	Micro Caps	Passive Sampling Caps
Stainless Steel ATD Tubes	PTFE Brass Steel	PTFE Brass	PTFE	Aluminum
Coated Stainless Steel ATD Tubes	PTFE Brass Steel	PTFE Brass	PTFE	Aluminum
Glass ATD Tubes	PTFE Brass Steel	Brass	PTFE	N/A

Tube End Caps	Part Number ¼"
PTFE Analytical Cap (For Use with TurboMatrix)	PTFE60
Brass Analytical Cap (For use with TurboMatrix)	BS60
PTFE Compression Cap (CAMSCO)	PCC60
Diffusive End Cap	DC60
Brass Compression Cap (Swagelok)	BSC60
Stainless Steel Compression Cap (Swagelok)	SSC60

Compression Caps



Analytical Cap



Micro Cap



Passive Sampling Caps



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Free Sample Request Form

Camsco® would be happy to send you a free sample of any standard or custom sorbent tube for your review and testing. Just provide some information to help us better understand your needs and fax or mail in your request. Or pick up the phone and call 800.448.3280 if you would like to talk to an expert.

INDUSTRY

- ☐ Consumer Products
- ☐ Environmental
- ☐ First Responder
- ☐ Food
- ☐ Flavor/Fragrance
- ☐ Government
- ☐ Military
- ☐ Laboratory
- ☐ Manufacturing
- ☐ University/Research
- ☐ Other _____
- _____
- _____

INSTRUMENT TYPE

Manufacturer: _____

Instrument Model: _____

Size/Type: _____

Special Instructions/Comments: _____

CONTACT INFORMATION

Name: _____

Company: _____

Title: _____

Shipping Address: _____

City: _____

State/Province: _____

Telephone: _____

Fax: _____

E-mail: _____

FREE SAMPLE REQUEST PROCESSING

ON THE WEB

www.camsco.com/sorbent_tube_sample.htm

MAIL

Camsco

Attn: Free Tube Request

6732 Mayard

Houston, TX 77041

Toll Free 800.448.3280

Phone 713.983.0200

FAX

713.983.7200

After you receive the tube, please let us know what you think about our product. We are committed to serving our customers and we would like to know how we can become your supplier of choice. Thank you for your interest in Camsco.

For more information about Camsco, please visit our website, **www.camsco.com**.