

# Thermocouple Gauge Tubes

For semiconductor and vacuum applications. All of our thermocouples are drop-in replacements for the OEM gauges offered at a savings.



COMPETITION		Fil-Tech	
Agilent	F0472301	TC531	\$85
Agilent	F0472310	TC531VCR	190
AMAT	F2518001	TC004V	57
AMAT	3310-01012	TC531	85
AMAT	3310-01074	TC531VCR	190
AMAT	3310-00236	TC6M	80
AMAT	3310-01071	TC6MVCR	190
Axcelis	3300008	TC004V	57
Axcelis	33001330	TC004KF16	190
Axcelis	33000002	TC002	115
Axcelis	33001009	TC3309	75
Axcelis	7435-0001-0001	TC7435-1	100
Axcelis	7435-0003-0001	TC7435-3	105
CVC	GTC-004	TC004	57
CVC	GTC-036	TC036	65

COMPETITION		Fil-Tech	
Hastings	DV-6M	TC6M	\$80
Hastings	DV-6-VCR	TC6MVCR	190
Hastings	DV-6-KF16	TC6MKF16	190
Hastings	DV-6-KF25	TC6MKF25	215
Hastings	DV-4D	TC4D	90
MKS	270006	TC6M	80
MKS	8112105	TC6MVCR	190
MRC	405052	TC520	120
Novellus	60-00005-00	TC6M	80
Novellus	60-00180-00	TC6MKF25	215
Temescal	6920-4263-0	TC6M	80
Thermionics	6343-004M	TC004V	57



## InstruTech® Convection Gauges

We offer the complete InstruTech line of low cost, drop-in plug compatible replacements for Convector® gauges. Call for pricing.

FITTING	HORNET 400 Fil-Tech	HORNET 401 Fil-Tech	HORNET 402 Fil-Tech
NW16KF	IGM400YBX \$908	IGM401YBD \$1,108	IGM402YBD \$1,364
NW25KF	IGM400YCX 924	IGM401YCD 1,132	IGM402YCD 1,400
NW40KF	IGM400YDX 935	IGM401YDD 1,144	IGM402YDD 1,414
2 3/4CF	IGM400YFX 948	IGM401YFD 1,158	IGM402YFD 1,414
1/2" Cajon 8VCR	IGM400YHX 948	IGM401YHD 1,158	IGM402YHD 1,414

\*275071: Novellus 27-229979  
 \*\*275203: Axcelis 3300317  
 \*\*\*275185: AMAT 275262  
 Novellus/Lam 77-1090453-001  
 Novellus 60-00055-00

FITTING	WORKER BEE	MKS Fil-Tech	SUPER BEE	MKS Fil-Tech	STINGER	MKS Fil-Tech
1/8" NPT	CVG101GA	275071* \$148	CVM201GAA	275850 \$559	CVM211GAA	275800 \$388
NW16KF	CVG101GB	275203** 173	CVM201GBA	275865 586	CVM211GBA	275806 409
NW25KF	CVG101GC	275196 191	CVM201GCA	275867 605	CVM211GCA	275807 420
NW40KF	CVG101GD	275316 203	CVM201GDA	275858 622	CVM211GDA	275808 433
1/4" VCR	CVG101GG	275185*** 191	CVM201GGA	275851 605	CVM211GGA	275801 420

## Thermocouple Controllers

### DIGITAL PANEL MOUNT Fil-Tech

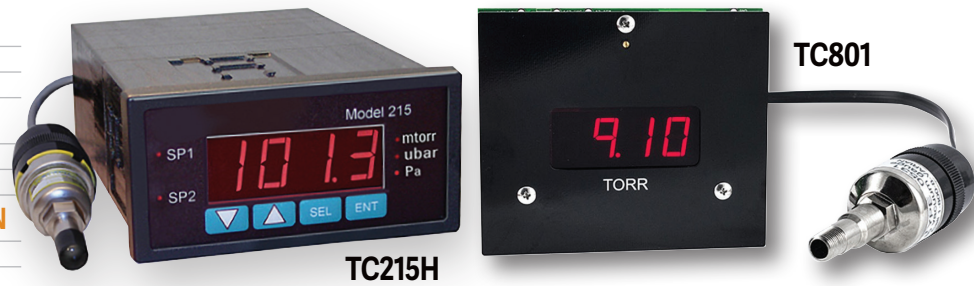
TC801	TC531 Tube	\$600
TC215H	TC6M Tube	995

### DIGITAL PANEL MOUNT SINGLE STATION

TC101D	TC531 Tube	505
TC201D	TC6M Tube	505

### DIGITAL CABINET MOUNT SINGLE STATION

TC101DC	TC531 Tube	540
TC201DC	TC6M Tube	540



## MG15 Multi Gauge Ion Controller

Supports 4 Active & up to 3 Passive Gauge

Our MG15 ion gauge controller can support up to 4 active gauges and 3 passive gauges, extending the measurement range to 2 x 10<sup>-12</sup> mbar. The MG15 supports all Bayard Alpert style gauges, Baratron, UHV nude gauges and others. It can be remotely controlled by one of its available interfaces and has 10 individually programmable set points with threshold and hysteresis functions. The MG15 can support four active gauges and up to three passive gauges. Price varies with 1, 2 or 3 passive gauges.

POR

## Ion Implantation

AXCELIS	DESCRIPTION	Fil-Tech	
3300002	3/4" Glass, Twin Tungsten	G75PT	\$175
7631-0001-0002	3/4" Kovar, Twin Tungsten	G75KT	210
3300008	Thermocouple Gauge	TC004V	57

AMAT			
5300019	1" Glass, Twin Tungsten	G100PT	\$180
K7360301	1" Glass, Twin Tungsten	G100PT	180
4053050	1" Kovar, Twin Tungsten, 2 3/4" Flange	G100KTF	267
3310-90003	1" Glass, Twin Tungsten	G100PT	180
F2518001	Thermocouple Gauge	TC004V	57
3310-00236	Thermocouple Gauge	TC6M	80
3310-01071	Thermocouple Gauge VCR	TC6MVCR	185
3310-01012	Thermocouple Gauge	TC531	85
3310-01074	Thermocouple Gauge VCR	TC531VCR	175

LAM/NOVELLUS			
27-229-700-00	1" Glass, Iridium, PT Coated, Broad Range	G8136P/1	270
60-00005-00	Thermocouple Gauge	TC6M	80
60-00180-00	Thermocouple Gauge VCR	TC6MVCR	175

SEN			
33S0298	3/4" Glass, Twin Tungsten	G75PT-02S	180

## Vacuum Applications

AGILENT	DESCRIPTION	PRICE	Fil-Tech	
X3004-64301	1" Glass, Iridium	245	G100P	222
X3004-64302	1" Kovar, Iridium	278	G100K	250
X3004-64303	1" Kovar, Iridium, 2 3/4" Flange	353	G100KF	315
X3004-64304	3/4" Glass, Iridium	233	G75P	215
X3004-64305	3/4" Kovar, Iridium	266	G75K	255
K7360301	1" Glass, Twin Tungsten	218	G100PT	180
K7360302	1" Kovar, Twin Tungsten	258	G100KT	210
K7360303	3/4" Glass, Twin Tungsten	218	G75PT	175
K7360304	3/4" Kovar, Twin Tungsten	258	G75KT	210
K7360307	1" Kovar, Twin Tungsten, 2 3/4" Flange	323	G100KTF	267
K2500301	1" Glass, Iridium, Pt Coated, Broad Range		G8136P/1	270
K2500302	1" Kovar, Iridium, Pt Coated, Broad Range		G8136K/1	350
K2500303	1" Kovar, Iridium, Pt Coated, 2 3/4" Flange, BR		G8136F	455

NO LONGER AVAILABLE  
 STILL AVAILABLE AT FIL-TECH

MKS				
274102	3/4" Glass, Iridium	270	G75P	215
274103	3/4" Kovar, Iridium	275	G75K	255
274105	1" Glass, Iridium	N/A	G100P	222
274106	1" Kovar, Iridium	320	G100K	255
274107	3/4" Kovar, Iridium, 2 3/4" Flange	440	G75KF	320
274108	1" Kovar, Iridium, 2 3/4" Flange	475	G100KF	315
274012	3/4" Glass, Twin Tungsten		G75PT	175
274013	3/4" Kovar, Twin Tungsten		G75KT	210
274015	1" Glass, Twin Tungsten	191	G100PT	180
274016	1" Kovar, Twin Tungsten		G100KT	210
274132	1" Kovar, Iridium, KF25 Flange	395	G100KF25	315

MRC				
4050300	.709" Glass, Twin Tungsten		G71PT	200



## Ionization & Thermocouple Gauge Tubes



All Fil-Tech ionization gauge tubes are identical or functionally equivalent to the competitive tubes listed. They are all manufactured by two companies and privately labeled. See comparative prices for savings.



## INFICON Vacuum Gauges & Controllers

INFICON authorized distributor

Fil-Tech distributes INFICON's comprehensive range of vacuum gauges and controllers designed for precise measurement and monitoring of vacuum levels in industrial processes. INFICON advanced instruments deliver accurate, real-time data, ensuring reliable process control and efficiency across various applications. Contact Fil-Tech for competitive pricing.

<p>Trigon BCG552 Hot Ionization Gauge</p> <p>ATM to Ultra High Vacuum TripleGauge®</p>	<p>Trigon BAG552 Hot Ionization Gauge</p> <p>Medium to Ultra High Vacuum Single Gauge</p>	<p>MPG40X Cold Cathode Gauges</p> <p>Inverted Magnetron Pirani Gauges, measure from 5 x 10<sup>-9</sup> mbar to atmosphere</p>	<p>PSG50X Pirani Gauge</p> <p>ATM to Medium Vacuum Gauge, high volume standard applications</p>	<p>BAG302 Hot Ionization Gauges</p> <p>Single Hot Ionization gauge OLED Display, RS485</p>	<p>SKY® CDG025D Capacitance Manometers</p> <p>Full scale 0.0...1000 Torr/mbar</p>
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## Leak Detector Filaments

Fil-Tech's LD10's are drop-in replacements for the OEM part. Our filament is welded into the slotted posts for greater reliability and longer life.



LD7



LD10

FILAMENT	ALCATEL	Fil-Tech	
Filament	053146	LD10	\$150
Collector Single	083485	LD11	35
Collector Double	101127	LD12	40

FILAMENT	AGILENT	Fil-Tech Repair Exchange	
Tungsten	82850301	LD7RE	\$80
Iridium	82850302	LD8RE	110

## Nude Gauges & Filaments



Visit [www.filtech.com](http://www.filtech.com) for a complete listing of our nude gauges and replacement filaments.

AGILENT • AMAT • MKS

### Bayard Alpert Gauges/Pin Guards

Flange 2 3/4" • Header Ceramic to Metal Seal • Degas E-Beam Only

MKS		AMAT	DESCRIPTION	Fil-Tech	
274128	\$640		Iridium Single	GB20IR	\$490
274103	730	3310-01081	Iridium Single With Pin Guard	GB43IR	665

### UHV Gauges/Pin Guards

Flange 2 3/4" • Header Ceramic to Metal Seal • Degas E-Beam Only

MKS		DESCRIPTION	Fil-Tech	
274022	\$640	Tungsten Dual	GU21T	\$490
274123	760	Iridium Dual	GU21IR	550
274050	653	Tungsten Dual, NW40KF	GU50T	590
274041	725	Tungsten Dual With Pin Guard	GU41T	650
274142	730	Iridium Dual With Pin Guard	GU42IR	650

### AGILENT

X3004-64401	750	Iridium Dual	GU24IR	675
9715008	707	Tungsten Dual	GU24T	625

### Replacement Filaments

AGILENT		DESCRIPTION	Fil-Tech	
9710018	\$131	Tungsten Dual	GF18	\$52
X3004-64403	249	Iridium Dual	GF28	106

### MKS

274024	220	Tungsten Dual	GF24	80
274125	260	Tungsten Dual	GF25	106
274129	225	Iridium Single	GF29	106

One filament per box

## CALIBRATED HELIUM LEAKS

	NEW	Fil-Tech	RECALIBRATION
CL7	10-7ccHe/sec	\$800	Certification \$450
CL8	10-8ccHe/sec	850	NIST Traceable Certification

## Fil-Tech Fluid vs Torrlube

Fil-Tech Fluid dramatically increases bearing life in vacuum and semiconductor processes by reducing friction. It has exceptional lubricating properties for sliding and rotating applications to 10<sup>-8</sup> torr. Fil-Tech Fluid functions in a wide temperature range (-20°C to 260°C) and is chemically inert in the presence of most semiconductor gases such as fluorine at 200°C and trifluoride at 50°C.



ITEM	SIZE	TORRLUBE®	Fil-Tech FLUID™
FTF001	1 cc Syringe	\$112	\$90
FTF003	3 cc Syringe	247	250
FTF100	2-50 cc Bottles	1,280	1,000

## Diffusion Pump Silicones

All Fil-Tech's fluids are the functional equivalent to Dow Corning's DC702, DC704, and DC705, respectively. They can be mixed and/or reprocessed together in any portion with their respective counterpart. Fil-Tech sells silicones!

**FIL-TECH FT702, FT704 AND FT705 SILICONES REPLACE THE NO-LONGER-AVAILABLE DOW CORNING DC702, DC704 AND DC705 SILICONES**

### FT702 Phenylmethylsiloxane

is an economical general purpose silicone fluid for pumping large gas loads with thermal stability and oxidation resistance. Vacuum 10<sup>-5</sup> to 10<sup>-7</sup> torr.

### FT704 Tetramethyltetraphenyltrisiloxane

is a single component fluid extensively used for applicators requiring rapid pump down of large gas loads. For performance and economics, your best choice. Vacuum 10<sup>-5</sup> to 10<sup>-8</sup> torr.

### FT705 Pentaphenyltrimethyltrisiloxane

is a single component fluid for ultra high and ultra clean vacuums. For lowest ultimate pressure, your best choice. Higher resistance to crystallization. Vacuum 10<sup>-5</sup> to 10<sup>-10</sup> torr.

## Fil-Tech

	FT702	NEW	REPROCESSING
1 Gallon	\$440	\$215	
5 Gallon	2,000		
<b>FT704</b>			
500 cc	\$90		
1 Gallon	550	215	
5 Gallon	2,500		
<b>FT705</b>			
500 cc	\$140		
1 Gallon	800	230	
5 Gallon	3,800		



Call Fil-Tech at 800-743-1743 for a free DOT approved pail to collect your used fluid for remanufacture.

- TRADEMARKS**  
Fil-Tech®
- OTHER TRADEMARK OWNERS**
- Agilent® Agilent Technologies, Inc.
  - Alcatel® Alcatel Vacuum Technology
  - AMAT® Applied Materials, Inc.
  - Axcelis® Axcelis Technologies, Inc.
  - Chemours® The Chemours Company
  - Convectron® MKS Instruments
  - Dow Corning® Dow Corning Corp.
  - CTI/Brooks® Brooks Automation, Inc.
  - Frontier Vacuum® Frontier Vacuum
  - High Performance® Ferrotec Corp.
  - INFICON® INFICON
  - Advanced Adhesion Alloy®
  - Longer Life Gold®
  - Quality Crystals®
  - Stress Relieving Alloy®
  - InstruTech® InstruTech
  - Intellectrics® Intellevation Ltd.
  - Ion Tech® Veeco Instruments, Inc.
  - Kaufman & Robinson® Kaufman & Robinson
  - Krytox® The Chemours Company FC, LLC
  - Lam® Lam Research Corporation
  - Leybold® Oerlikon Leybold Vacuum
  - Maxtek® INFICON
  - MKS® MKS Instruments
  - Novellus® Novellus Systems, Inc.
  - QCM-I® Semilab Inc.
  - Q-Sense® Biolin Scientific Holding, AB
  - Santovac® Arch Technology Holding, LLC
  - Satisloh® Satisloh GmbH
  - Sloan® Veeco Instruments, Inc.
  - SuperSource® Ferrotec Corp.
  - Telemark® Telemark
  - Temescal® Ferrotec Corp.
  - Thermionics® TLI Enterprises, Inc.
  - TorrLube® The Torr Lube Company, LLC
  - ULVAC® ULVAC Technologies, Inc.
  - Umicore® Umicore
  - Unaxis® OC Oerlikon Corp., AG
  - Veeco® Veeco Instruments, Inc.
  - Windows® Microsoft, Inc.

SHOP ONLINE NOW!



## SANTOVAC 5 Polyphenyl Ether Diffusion Pump Fluid

SANTOVAC® 5 will provide vacuums in the 10<sup>-10</sup> torr range with exceptionally low vapor pressure and backstreaming. It is excellent for applications that must be free of silicones or those requiring ultra high, clean vacuums.

SANT5-006	65 cc	\$245
SANT5-01	100 cc	335
SANT5-05	500 cc	1,295
SANT5-1	1 Gallon	7,700