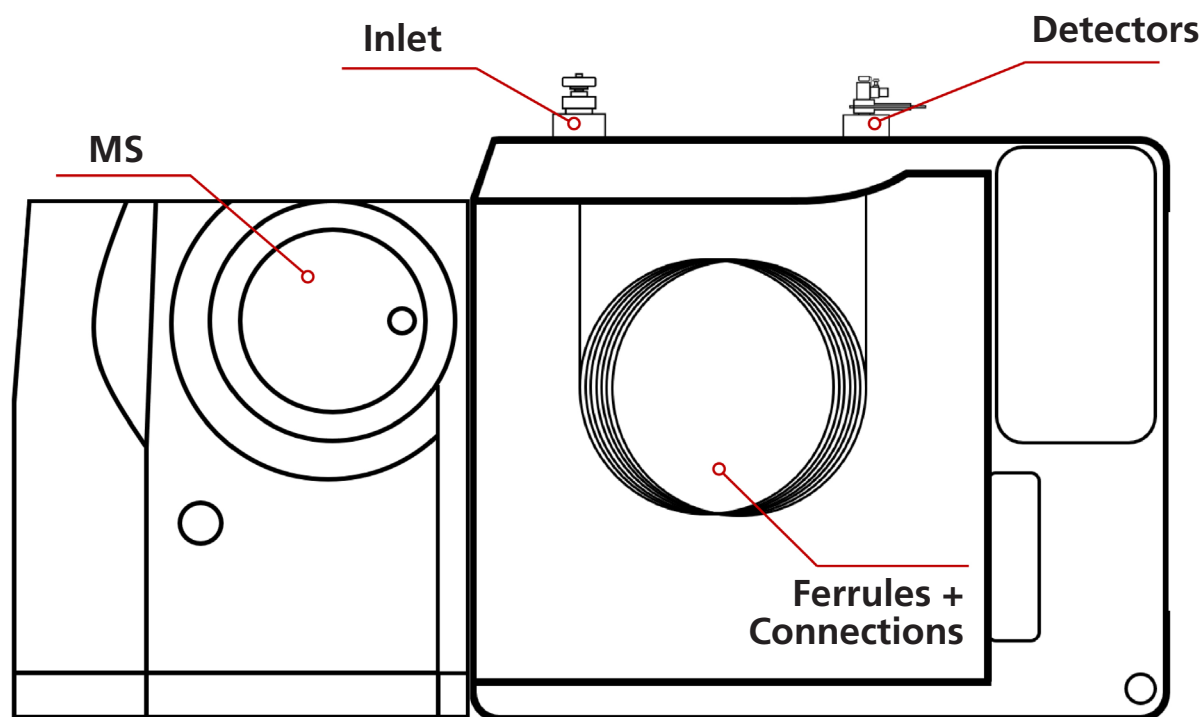


Gas Chromatograph
Gas Chromatograph Mass Spectrometer

GC/GCMS Consumables



Table of Contents



Inlet Parts	3
Septa	3
O-rings	3
Liners.....	3
Ferrules and Connections.....	4
Graphite Ferrules.....	4
Graphite Ferrule Jigs.....	4
Graphite Vespel Ferrules.....	5
Graphite Vespel Ferrule Jigs.....	5
ClickTek.....	6
Detectors.....	7
FID	7
FTD (NPD)	8
FPD	8
SCD.....	9
MS – QP2050.....	10
MS – QP2010 Plus, QP2010 Ultra, TQ8030 and NX Series.....	12
MS – QP2010 Series, TQ8030 and NX Series	13
Syringes.....	14
Tools (+).....	14
Gaskets and Filters.....	14
Gas Filters.....	15
Replacement Filter Cartridges.....	15
Replacement Filter Bundles.....	15
Accessories.....	15
Appendix.....	16
Converting to Different Columns.....	16

Inlet Parts (SPL, WBI, PTV, OCI)

Septa

Compatible with GC-2030, GC-2050, GC-2014, GC-2010+

Part No.	Description	Notes
221-76650-01	Septa, Premium Green	Low bleed, Medium temperature (up to 340 °C), pack of 25
227-35004-01	Septa, Premium Green	Low bleed, Medium temperature (up to 340 °C), pack of 50
227-35511-01	Xtra life inlet septa, red	Long life, up to 400°C, pack of 25

O-rings

Compatible with GC-2030, GC-2050, GC-2014, GC-2010+

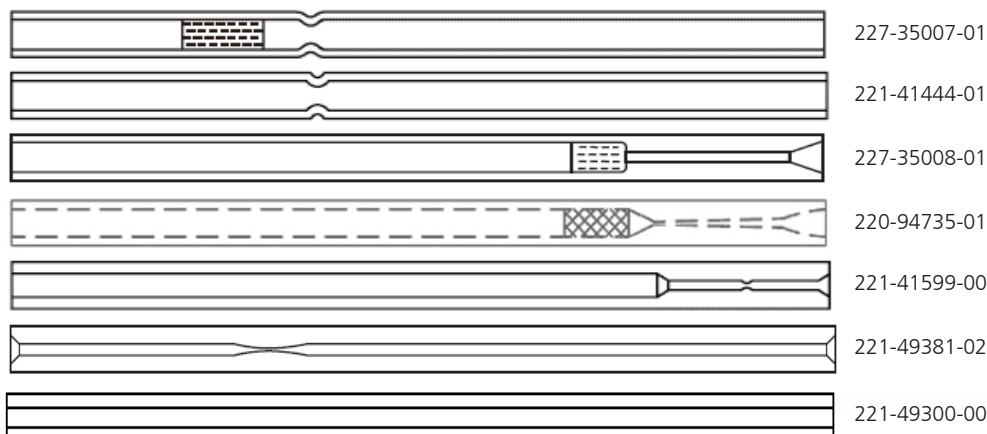
Part No.	Description	Notes
036-11203-84	O-ring for liner, SPL/WBI	O-ring for sealing glass liners, fluoride rubber, 5/pk
036-11201	O-ring for liner, OCI/PTV	O-ring for sealing OCI liner, each
036-11544-01	O-ring, high temp, SPL/WBI	High-temperature low-bleed type for SPL/WBI, pack of 1, suitable for FPD and other high-sensitivity analysis
036-11544-02	O-ring, high temp, OCI/PTV	High-temperature low-bleed type for OCI/PTV, pack of 1, suitable for FPD and other high-sensitivity analysis

Liners

Compatible with GC-2030, GC-2050, GC-2014, GC-2010+

Part No.	Description	Notes
227-35007-01	Split liner with wool	General purpose split liner with wool, 5/pk, for SPL-17/2010/2014/2030, come as standard accessory of GC-2030
221-41444-01	Split liner w/o wool	General purpose split liner w/o wool, individually packed
227-35008-01	Splitless liner wool at bottom	Splitless liner with wool, 5/pk, for SPL-17/2010/2014/2030, come as standard accessory of GC-2030, replacement for 221-48876-03
220-94735-01	Direct injection liner with wool on bottom	Liner for direct injections of dirty samples, wool acts as a filter, 5/pk
221-41599-00	Liner for widebore capillary columns, w/o wool	Liner for direct injections with 0.53mm columns, 5/pk, replacement for 220-94768-00
221-49381-02	OCI glass liner	Liner for 'simple on-column' or 'near on-column', for use with columns smaller than 0.53mm ID
221-49300-00	LVI/PTV glass liner	Liner for large volume injections on a capillary column w/o wool for PTV inlet

See liner brochure for all options



Ferrules and Connections

| Graphite Ferrules

Compatible with GC-2030, GC-2050, GC-2014, GC-2010+ (with graphite ferrule capillary adaptors); (not compatible with MS, SCD, HS-20)

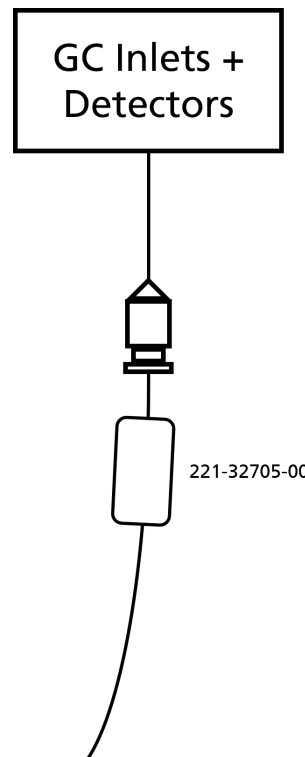
Part No.	Description	Notes
220-90765-00	Ferrule, 0.4mm	Graphite ferrules, for 0.18mm-0.25mm ID capillary columns, 10/pk
221-32126-05	Ferrule, 0.5mm	Graphite ferrules, for 0.25mm-0.32mm ID capillary columns, 10/pk
221-32126-08	Ferrule, 0.8mm	Graphite ferrules, for 0.53mm ID capillary columns, 10/pk
221-32705-00	Column nut for GC	Slotted nut for column connection on injection port and detector side for GC
221-42998-00	Injection port capillary adaptor for GC	Adaptor for connecting capillary columns to a standard GC

Graphite ferrules are soft and easy to use, help maintain a leak-free GC system and prevent column damage due to overtightening. Because they can be used up to 450 °C, they are ideal for high temperature applications.

Tightening tip: make column nut finger-tight and finish with a quarter-turn with a wrench. You'll feel the ferrule 'bite'!

| Graphite Ferrule Jigs

Part No.	Description	Notes
221-41532-92	Graphite Ferrule Jig FID/FTD-2010, FTD-2030	Used to set insertion depth for FID/FTD-2010 and FTD-2030, does not work for ClickTek
221-48610-01	Graphite Ferrule Jig capillary TCD-2010	Used to set insertion depth for capillary TCD-2010 (not for packed TCD), does not work for ClickTek
221-48610-03	Graphite Ferrule Jig ECD-2010	Used to set insertion depth for ECD-2010 (not for ECD-Exceed series), does not work for ClickTek
221-41532-91	Graphite Ferrule Jig SPL	Used to set the insertion depth for SPL-2010/2014/2030, does not work for ClickTek
221-41532-02	Graphite Ferrule Jig BID	Used to set the insertion depth for BID-2010/2030 series, does not work for ClickTek
221-41532-04	Graphite Ferrule Jig, FID-2030	Used to set the insertion depth for FID-2030, does not work for ClickTek
221-48610-02	Graphite Ferrule Jig, FPD-2010/2030	Used to set the insertion depth for FPD-2010/2030, does not work for ClickTek



| Graphite Vespel Ferrules

Compatible with GC-2030, GC-2050, GC-2014, GC-2010+ (with graphite vespel ferrule capillary adaptors); (not compatible with GC detector FID, TCD, ECD, FPD, FTD or BID)

Part No.	Description	Notes
220-90418-14	Ferrule: GVF-004	SCD/MS ferrule for 0.25mm ID capillary columns, 10/pk
220-90418-15	Ferrule: GVF-005	SCD/MS ferrule for 0.32mm ID capillary columns, 10/pk
220-90418-18	Ferrule: GVF-008	SCD/MS ferrule for 0.53mm ID capillary columns, 10/pk
670-11009-00	Column nut	Column nut 1/16" for SCD and MS (on MS systems), 5/pk
225-10167-91	Injection port capillary adaptor for GCMS	Adaptor for connecting capillary columns for SPL on MS

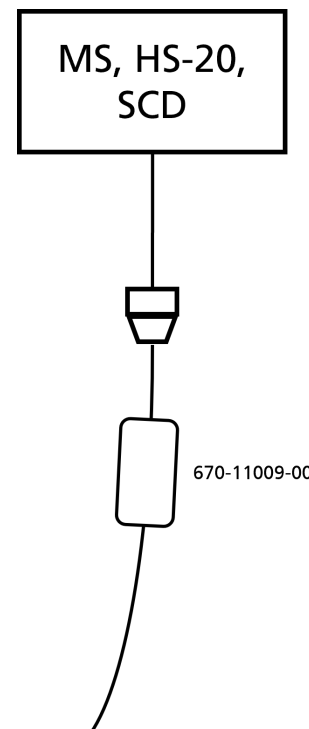
Because of the lower permeability to oxygen compared to graphite, they are ideal for GC-MS applications. They can be used up to 325 °C and should be re-tightened after a few temperature cycles.

Tightening tip: re-tighten after a few temperature cycles.

| Graphite Vespel Ferrule Jigs

Part No.	Description	Notes
221-83764-00	Graphite Vespel Ferrule Jig SCD-2030, Left-side	Used to set insertion depth for SCD-2030 left side model

See MS section for GVF Inlet Jig

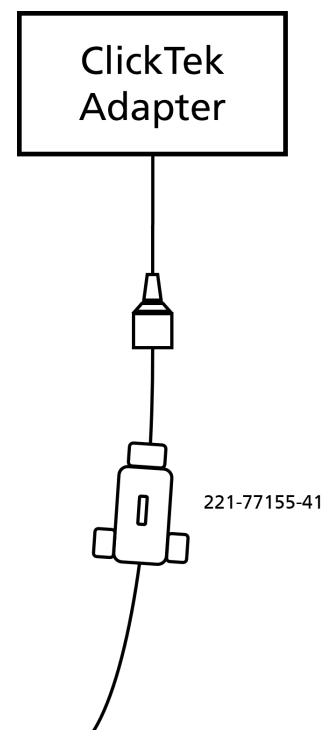


ClickTek

Compatible with GC-2030, GC-2050 (not compatible with MS, SCD, HS-20) (with ClickTek ferrule capillary adaptors)

ClickTek technologies were created with the user's point of view in mind, to simplify the troublesome process of replacing consumables. Just a single touch is needed to open the injection port and connect the column, making the liner and column replacement simple and easy. They also eliminate the risk of over-tightening or under-tightening the nuts, which could lead to damaged nuts or air-leaks. They were introduced with Nexis GC-2030 and are also available for GC-2050. The ClickTek ferrules can be used up to 350 °C.

Part No.	Description	Notes
221-77155-41	Column connector, ClickTek	Use with ClickTek ferrules to install capillary columns in GC-2030 or GC-2050 with ClickTek adaptors
221-81162-01	ClickTek Ferrule 0.4mm, pk of 6 *	To be used with ClickTek Adaptor (not included), for capillary columns with 0.18-0.25mm ID
221-81162-02	ClickTek Ferrule 0.5mm, pk of 6 *	To be used with ClickTek Adaptor (not included), for capillary columns with 0.32mm ID
221-81162-03	ClickTek Ferrule 0.8mm, pk of 6 *	To be used with ClickTek Adaptor (not included), for capillary columns with 0.53mm ID
221-81162-00	ClickTek Ferrule without holes, pk of 6	To be used with ClickTek Adaptor, ferrule without a hole for sealing injector/detector
221-81162-11	ClickTek Ferrule Kit, 0.4mm	Include 1pk of ferrules and 1 simple ferrule fixing tool, to be used with ClickTek Adaptor (not included), for capillary columns with 0.18-0.25mm ID
221-81162-12	ClickTek Ferrule Kit, 0.5mm	Include 1pk of ferrules and 1 simple ferrule fixing tool, to be used with ClickTek Adaptor (not included), for capillary columns with 0.32mm ID
221-81162-13	ClickTek Ferrule Kit, 0.8mm	Include 1pk of ferrules and 1 simple ferrule fixing tool, to be used with ClickTek Adaptor (not included), for capillary columns with 0.53mm ID
<i>ClickTek Ferrules must be fixed using ClickTek Jig (the simple tool is included in the ClickTek Ferrule Kits) or the Smart jig</i>		
221-77156-41	ClickTek adapter, SPL/WBI	Use with ClickTek ferrules (sold separately) for capillary columns, includes insulation cup and gold gasket
221-77156-42	ClickTek adapter, FID	Use with ClickTek ferrules (sold separately) for capillary columns, includes insulation cup and gold gasket
221-77156-46	ClickTek adapter, FPD	Use with ClickTek ferrules (sold separately) for capillary columns, includes insulation cup and gold gasket
221-77156-58	ClickTek adapter, BID, Ver.2	Use with ClickTek ferrules (sold separately) for capillary columns, includes insulation cup and gold gasket
221-77156-59	ClickTek adapter, FTD, Ver.2	Use with ClickTek ferrules (sold separately) for capillary columns, includes insulation cup and gold gasket
221-77156-57	ClickTek adaptor, ECD, Ver.2	Use with ClickTek ferrules (sold separately) for capillary columns, includes insulation cup and gold gasket; not compatible with Contamination prevention kit
221-76547-43	Smart jig for ClickTek Ferrule Ver. 2	Convenient jig to set insertion depth and fix ClickTek ferrules, use with ClickTek Adaptors listed above
<i>ClickTek adaptors are not available for OCI, PTV, TCD, SCD or ECD with Contamination prevention kit</i>		



Detectors

FID

Collectors

Part No.	Description	Notes
221-72322-95	Collector, FID-2030	For FID-2030
221-87525-41	Collector, FID-2050	For FID-2050
221-81021-41	Collector, FID-2014	For FID-2014
221-72322-91	Collector, FID-2010	For FID-2010 series

Collectors

Part No.	Description	Notes
221-75597-03	Nozzle, standard capillary, FID-2030	0.3mm ID, for FID-2030
221-75597-08	Nozzle, Aqueous, FID-2030	0.8mm ID, for analysis of aqueous samples, FID-2030/2050
221-85179-41	Nozzle, Packed, FID-2030	0.5mm ID, for FID-2030, to be used with packed columns
221-70162-93	Nozzle, Capillary, FID-2014	0.3mm ID, for FID/FTD-2014
221-70162-92	Nozzle, Factory Capillary, FID-2014	0.5mm ID, for FID/FTD-2014, comes standard with single capillary FID-2014
221-70162-95	Nozzle, Factory Packed, FID-2014	0.5mm ID, for FID/FTD-2014, comes standard with dual packed FID-2014
221-70162-96	Nozzle, Aqueous, FID-2014	0.8mm ID, for FID/FTD-2014
221-48258-91	Nozzle, Capillary, FID-2010	0.3mm ID, for FID-2010 (not for FID-2014/2030), FTD-2010/2030/2014 (capillary model only)
221-48885-91	Nozzle, Packed, FID-2010	0.5mm ID, for FID/FTD-2010 series to be used with packed columns
221-49373-91	Nozzle, Aqueous, FID-2010	0.8mm ID, for FID/FTD-2010 series

Igniter Filaments

Part No.	Description	Notes
221-41847-94	Igniter filament, FID-2030	Glow plug for FID-2030
221-87528-41	Igniter filament, FID-2050	Glow plug for FID-2050
221-41847-93	Igniter filament, FID-2010/2014	Glow plug for FID-2010 series and FID-2014 series

High Voltage Clips

Part No.	Description	Notes
221-81947-41	High Voltage Clip, FID-2030	High voltage electrode for FID-2030/2050
221-47146-92	High Voltage Clip, FID-2014	High voltage electrode for FID/FTD-2014
221-47146-91	High Voltage Clip, FID-2010	High voltage electrode for FID/FTD-2010 series

FTD (NPD)

Collector Beads

Part No.	Description	Notes
221-71513-91	Collector Bead, FTD-2010 Plus	For FTD-2010 Plus and FTD-2030
221-45586-91	Collector Bead, FTD-2010	For FTD-2010 and capillary FTD-2014C
221-18704-91	Collector Bead (standard), FTD-2014	For FTD-2014 (packed model)
221-42512-91	Collector Bead (special), FTD-2014	For FTD-2014 (packed model), for pesticide analysis

Regeneration Kit

Part No.	Description	Notes
221-49079-91	Collector regeneration kit	Used to regenerate the collector assy
221-70846-91	Collector regeneration adapter	Used to hold the collector assy during regeneration

See FID section for nozzles

FPD

Filters

Part No.	Description	Notes
221-80888-01	Filter for S	For FPD-2030/2050
221-80888-02	Filter for P	For FPD-2030/2050
221-80888-03	Filter for Sn	For FPD-2030/2050
221-46310-01	Filter for S	For FPD-2010 and FPD-2014
221-46310-02	Filter for P	For FPD-2010 and FPD-2014
221-46310-03	Filter for Sn	For FPD-2010 and FPD-2014
221-73354-01	Filter for S	For FPD-2010 Plus
221-73354-02	Filter for P	For FPD-2010 Plus
221-73354-03	Filter for Sn	For FPD-2010 Plus

Photomultiplier Tubes

Part No.	Description	Notes
221-73413-00	PMT for FPD-2010 Plus and FPD-2030/2050	PMT R5983+ for FPD-2010 Plus and FPD-2030/2050
221-48578-00	PMT for FPD-2010 and FPD-2014	PMT R5983 for FPD-2010 and FPD-2014

O-rings

Part No.	Description	Notes
221-81602-41	O-ring for FPD Filter	For FPD-2030/2050
036-19006-17	O-ring for FPD Filter	O-ring for outside the filter, for FPD-2010 series and FPD-2014
036-19006-14	O-ring for FPD Filter	O-ring for inside the filter, for FPD-2010 series and FPD-2014
036-11018-00	O-ring for photomultiplier housing	O-ring for PMT housing for FPD-2010 and FPD-2014
036-11019-84	O-ring for photomultiplier housing	O-ring for PMT housing for FPD-2010 Plus, 5pk

FPD, continued

Igniter Filaments

Part No.	Description	Notes
221-81905-41	Igniter filament	For FPD-2030/2050
221-73430-82	Igniter filament	For FPD-2010
221-73430-91	Igniter filament	For FPD-2010 Plus
221-73430-93	Igniter filament	For FPD-2014

Quartz Tubes/Nozzles

Part No.	Description	Notes
221-46552-00	Quartz tube	For FPD-2010 series, FPD-2014 and FPD-2030/2050
221-48423-91	Quartz nozzle	For packed analysis on FPD-2010 series
221-70348-91	Quartz nozzle	For packed analysis on FPD-2014
221-70562-00	Aluminum washer	For FPD-2014 under the igniter head section
221-70735-91	Stainless steel nozzle	For capillary analysis on FPD-2014

SCD

Igniter Filaments

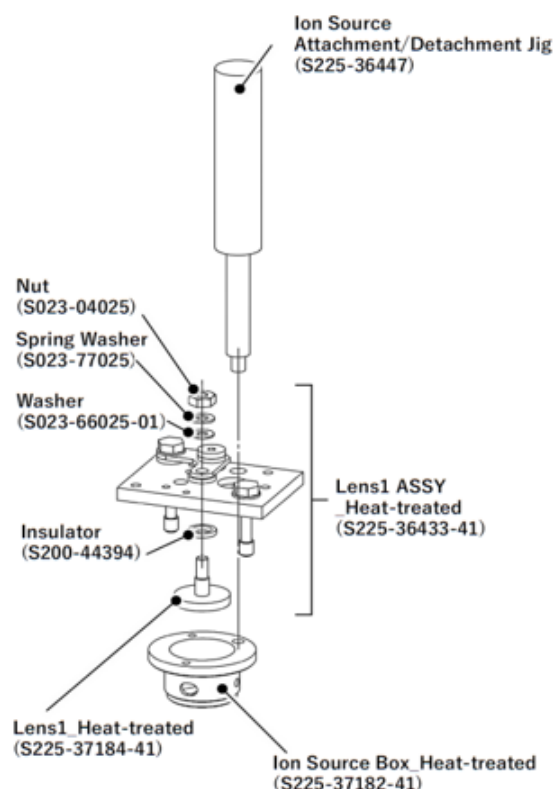
Part No.	Description	Notes
221-84141-41	SCD consumables kit, SCD-2030	High quality pyrotubes for additional sensitivity. contains 3 inner pyrotubes, 1 outer pyrotubes, 3 ferrules for the inner pyrotube, 1 back ring for the inner pyrotube, 1 O-ring for the outer pyrotube, 1 ferrule for the transfer line
221-84141-42	SCD Consumables kit, economical, SCD-2030	Contains 3 inner pyrotubes, 1 outer pyrotubes, 3 ferrules for the inner pyrotube, 1 back ring for the inner pyrotube, 1 O-ring for the outer pyrotube, 1 ferrule for the transfer line
221-84384-41	Ozone scrubber set, SCD-2030	Pre-filled ozone scrubber assembly with fittings
221-87403-41	SCD inner pyro tube jig	Jig for installing inner pyrotubes



MS – GCMS-QP2050

Ion Source

Part No.	Description	Notes
225-10340-91	Filament	Standard filament for QP-2010 Plus, NX series and QP-2050
225-41730-91	Long-Life Filament	Long life filament for QP-2050 and GCMS NX series
225-37182-41	Box EI (Heat Treated)	Ion source box for QP-2050
225-37184-41	Lens 1	Lens 1 for QP-2050
225-37162-91	Wire Set, Filament	Wire set for filament
225-37162-41	Filament Wire S	Short filament wire for the QP-2050
225-37162-42	Filament Wire L	Long filament wire for the QP-2050
225-01068	Ceramic insulator, bushing	Ceramic insulator bushing for repeller
023-04025	Nut	Repeller securing nut
023-77025	Spring Washer, M2.5	Repeller washer
023-66025-01	Washer	Repeller washer
225-36433-41	Lens 1 Assembly	Contains entire lens 1 assembly: nut, spring washer, washer, insulator and lens 1 heat treated.
200-44394-00	Ceramic insulator, spacer	Ceramic insulator spacer for repeller



Tool Kit

Part No.	Description	Notes
225-45181-91	Tool Kit	Tool Kit for QP2050
<i>Tool Kit contains the following parts</i>		
086-00476-02	Torque Wrench	Torque wrench comes as standard accessory in QP-2050 tool kit
086-00474-87	Socket Wrench, 1/4	Socket wrench comes as a standard accessory in the QP-2050 tool kit
086-16111-01	Tweezers, TSP-21	Tweezers for MS service come as a standard accessory in the QP-2050 tool kit
086-10414-01	Phillips head screwdriver, #300	300 mm Phillips head screwdriver comes as a standard accessory in the QP-2050 tool kit
086-12045-02	Nutdriver	Nutdriver comes as a standard accessory in the QP-2050 tool kit
086-10403	Flathead Screwdriver	Flathead screwdriver comes as a standard accessory in QP-2050 tool kit
225-36447	Ion source removal tool	For removing the ion source from the MS on the QP-2050
225-37026-41	Lens assembly tool	Lens assembly tool for the QP-2050
225-37155	Lens tool	Lens tool for the QP-2050
086-03011	Wrench, 10mm and 12mm	Open ended 10mm and 12mm wrench for tubing connections
086-03047-01	Wrench, 6mm and 8mm	Open ended 6mm and 8mm wrench
225-01453-94	MS column measurement tool	Tool for measuring proper insertion depth into the MS
225-01453-95	INJ column measurement tool	Tool for measuring proper insertion depth into the INJ
221-50595-91	Cutter, Capillary column	Tool used for cutting capillary column
221-35566-92	G-type plug	G-type plug for leak checking injection port, 2/pk
018-20211-11	Yellow tape	Can be used to temporarily mark capillary columns

MS – GCMS-QP2050, continued

Entry Kit

Part No.	Description	Notes
227-35013-01	Installation Consumables Kit	Consumables kit containing: septa, syringe, inserts/liners, ferrules, column nuts and o-rings for NX series and QP2050
221-34618	Syringe for AOC-20, AOC-30	10 µL syringe for AOC-20, AOC-30
227-35004-01	Premium Green Septum, 50/pk	Low bleed, Medium temperature (up to 340 °C), pack of 50
220-90418-14	Ferrule, GVF/004, 10/pk	Vespel ferrule for 0.25 mm column
220-90418-15	Ferrule, GVF/005, 10/pk	Vespel ferrule for 0.32 mm column
227-35005-01	O-ring, 10/pk	Viton O-ring for glass liners in any split/splitless injector
227-35007-01	Split liner with wool	General purpose split liner with wool, 5/pk, for SPL, come as standard accessory of QP2050
227-35008-01	Splitless liner wool at bottom	Splitless liner with wool, 5/pk, for SPL, come as standard accessory of QP2050
670-11009	Nut, Column, 5/pk	Nut used to connect column

Maintenance Kit

Part No.	Description	Notes
225-38070-92	Maintenance Kit	Maintenance kit for the QP-2050
221-77580-42	Split filter for GC-2030, GC-2050	Split line filter for GC-2030/2050 SPL
221-49065-91	Gold gasket, 5/pk	Replacement gaskets for injection port adapter
225-10340-91	Filament	Standard filament for QP2010 Plus and GCMS NX series
225-41730-91	Long-Life Filament	Long life filament for QP2050 and GCMS NX series
225-37182-41	Box EI (Heat Treated)	Ion source box for QP2050
225-37184-41	Lens 1	Lens 1 for QP2050
225-20804-91	Abrasive cloth with cut	Abrasive cloth with cut for polishing the ion source
225-01068	Ceramic insulator	Ceramic insulator bushing for repeller



MS – QP2010 Plus, QP2010 Ultra, TQ8030 and NX Series

Ion Source

Part No.	Description	Notes
023-04020	Nut, 4 mm	Repeller securing nut
023-77020	Spring washer	Repeller washer
023-66120	Washer	Repeller washer
225-01068	Ceramic insulator	Ceramic insulator bushing for repeller
225-17697-91	El Ion Source	El Ion Source for QP-2010 Plus/ QP-2010 Ultra/ TQ8030/ NX series
225-17705-91	CI Ion Source	CI Ion Source for QP-2010 Plus/ QP-2010 Ultra/TQ-8030/ NX series
225-17705-92	NCI Ion Source	NCI Ion Source for QP-2010 Plus/QP-2010 Ultra/TQ-8030/ NX series
225-17698-91	Repeller	Repeller for QP-2010 Plus/2010 Ultra/TQ-8030/ NX series
225-17659-91	Repeller Assembly	Repeller assembly for QP-2010 Plus/2010 Ultra/TQ-8030/ NX series
225-17711-91	Repeller 2, CI + DI	Repeller for TQ-8030/ NX series for CI Analysis with DI
225-10194-91	Ion source removal tool	For removing the ion source from the MS
225-10340-91	Filament	Filament, 1/pk
225-10238	Filament Nut	Filament retaining nut



MS – QP2010 Series, TQ8030 and NX Series

DI-2010

Part No.	Description	Notes
225-09470	Quartz vial	Quartz sample vials, 10/pk
225-09344	Pyrex vials	Pyrex sample vials, 100/pk
225-04209	Sample vial holding cap	1/pk
036-15551-18	O-Ring	O-ring ARP 118 4D
036-15552-11	O-Ring	O-ring ARP 211 4D
036-15551-13	O-Ring	O-ring ARP 113 4D
036-15551-10	O-Ring	O-ring ARP 110 4D
225-01206-02	DI chamber button	DI chamber button
036-10204-84	O-Ring	O-ring 1A P6, 5/pk
225-01207-01	Spring for DI chamber button	Spring for DI chamber button
036-11237	O-Ring	O-ring 4D P35
200-33168	Probe Teflon Seals	Teflon seals for probe, 1/pk
036-15550-12	O-Ring	O-ring ARP 012 4D
202-73225	Washer	Washer for DI probe, 1/pk

Tool Kit

Part No.	Description	Notes
225-10194-91	Ion source removal tool	For removing the ion source from the MS
225-11657-08	MS column measurement tool	Tool for measuring proper insertion depth into the MS
225-11657-09	INJ column measurement tool	Tool for measuring proper insertion depth into the INJ
086-16101	Tweezers	For use during MS service
086-11002	Phillips screwdriver	#2 Phillips screwdriver
086-10403	Flat-head screwdriver	Flat-head 100mm screwdriver
086-12011	Hex nut driver, 4mm	For removing the ion source from the MS
086-03804	Allen wrench, 3mm	Allen wrench, 3mm
086-03806	Allen wrench, 5mm	Allen wrench, 5mm
086-03011	Wrench, 10mm and 12mm	Open ended 10mm and 12mm wrench for tubing connections
221-46977	Injection port wrench	Wrench used to open injection port top for insert/o-ring replacement
221-35566-92	G-type plug	G-type plug for leak checking injection port, 2/pk
086-03410	Wrench, 1/4 and 5/16	Open ended 1/4 and 5/16 wrench for column nuts
086-03003	Wrench, 6mm and 8mm	Open ended 6mm and 8mm wrench
086-03818	Allen wrench, 1.5mm	Allen wrench, 1.5mm
225-20051-91	Tool Kit for GCMS	Tool kit that comes with the GCMS unit (for all QP and TQ)

Additional Items

Part No.	Description	Notes
220-90775-03	PFTBA Tuning Standard	PFTBA standard 1mL vial
220-94775-00	AART Standard Test Mix	N-alkane test mix for running AART, 1mL

Syringes

Part No.	Description	Notes
221-75173-00	Syringe, 5µL, fixed needle	Syringe for manual injection or for use with AOC-20i or AOC-30i, 0.63mm needle (23 gauge)
221-34618-00	Syringe, 10µL, fixed needle	Syringe for manual injection or for use with AOC-20i or AOC-30i, 0.63mm needle (23 gauge)
227-35401-01	Xtra life micro-syringe, 5µL	Long life, Titanium alloy plunger, for use with AOC-20i or AOC-30i
227-35400-01	Xtra life micro-syringe, 10µL	Long life, Titanium alloy plunger, for use with AOC-20i or AOC-30i
220-90450-00	Gas Tight Syringe with PTFE Luer Lock, 5mL	Gastight syringe with PTFE plunger tip and Luer lock outlet. Needle not included. Recommended for injection of water samples into purge & trap for VOC analysis
220-90450-01	Needle for 5mL Gas Tight Syringe	Package of 6 22-gauge needles for gastight syringe

See AOC consumables guide for all syringe and vial options

Tools (+)

Part No.	Description	Notes
086-11002-00	Phillips screwdriver	#2 Phillips screwdriver
086-10403-00	Flat-head screwdriver	Flat-head 100mm screwdriver
086-03011-00	Wrench, 10mm x 12mm	Open ended 10mm and 12mm wrench
086-03003-00	Wrench, 6mm x 8mm	Open ended 6mm and 8mm wrench
221-46977-00	Injection port wrench	Used to open injection port top for insert/o-ring replacement
221-35566-92	G-type plug	Used for leak checking injection port, 2/pk
670-18800-00	Nut Driver, 8mm deep set	User for FID/FPD nozzle/jet removal
221-48600-00	Silica Wool	Deactivated wool, 2g/container
220-94702-00	Column cutting tool	Ceramic capillary cutting wafer
221-47159-00	Column Hanger, GC-2030/GC-2010 series	Hanger style
221-43947-91	Column Hanger, fits all GC models	Windmill style, compatible with any caged capillary columns, up to 2 holder with two columns
221-72849-00	Column Holder, GC-2030/GC-2010 series	Hanger style, for multiple columns
221-70200-00	Column Hanger, GC-2014	Hanger style

Gaskets and Filters

Part No.	Description	Notes
221-49065-91	Gold Gasket	Gasket used for sealing the adapter to the base, 5/pk
201-35183-00	Aluminum Gasket	Gasket used for sealing the G-fittings
221-77580-42	Split filter for GC-2030, GC-2050	Split line filter for GC-2030/2050 SPL
221-77587-00	Split filter nut for GC-2030, GC-2050	Nut for attaching Split line filter to GC-2030/2050 SPL
221-34121-94	Filter, carrier gas, GC-2010/2014	Filter for incoming carrier gas, MS-5A, GC-2010/2014
221-42559-92	Filter, split and purge GC-2010/2014	Filter for outgoing gas through split and purge, silica gel, GC-2010/2014 SPL
221-42595-92	Filter, split and purge for harsh solvents GC-2010/2014	Filter for outgoing gas through split and purge, activated carbon, GC-2010/2014 SPL
221-48441-91	Buffer tube for split line GC-2010/2014	Buffer tube for GC-2010/GC-2014 SPL

Gas Filters

Replacement Filter Cartridges

Part No.	Description	Notes
227-37037-01	Shimadzu Super-Clean Carrier Gas Filter	Replacement Filter Cartridge (Oxygen/Moisture/Hydrocarbon), for carrier gas
227-37037-02	Shimadzu Super-Clean Gas Filter for Hydrogen and Air	Replacement Filter Cartridge (Hydrocarbon/Moisture), for Hydrogen and Air for flame detectors
227-37037-04	Shimadzu Super-Clean Gas Filter for Nitrogen	Replacement Filter Cartridge (Oxygen/Moisture), for ECD makeup gas (Nitrogen or Argon/Methane)
227-37037-05	Shimadzu Super-Clean Helium-specific Carrier Gas Filter	Replacement Filter Cartridge (Oxygen/Moisture/Hydrocarbon), for Helium carrier gas

Replacement Filter Bundles

Part No.	Description	Notes
227-37038-01	Gas Filter Bundle of 3 for GC-FID/FPD	Replacement Filter Cartridge Set containing 1 of 227-37037-01 and 2 of 227-37037-02
227-37039-01	Gas Filter Bundle of 2 for GC-ECD	Replacement Filter Cartridge Set containing one each of 227-37037-01 and 227-37037-04

Accessories

Part No.	Description	Notes
226-50790-00	Shimadzu Filter Wall-mounting Bracket Set	Fit base plate of 1-3 positions
227-37031-01	Universal Ring Nut	Used to secure filters to base plate, 1 pc
227-37031-04	Flush Cap Replacement Set	Replacement filter caps, 2 pcs
227-37031-02	O-ring for base plate	Replacement O-ring for base plate, 10 pcs inlet, 10pcs outlet
227-37032-01	Shimadzu M Type Connector Set	Adapters for M-type fittings, 1 pc inlet, 1 pc outlet
227-37032-02	1/8" Stainless Steel Connector Set	1 set of two connectors for base plate and 2 sets of ferrules

Please contact your Shimadzu sales representative to order the Super-clean Gas Filter Installation Kits.



Appendix

I Converting to Different Columns

Packed S.S.COL connection for GC-2014 with Packed Injector and Detector

Part No.	Description	Notes
220-90140-02	Adaptor Kit to connect 1/8-in S.S. Column to GC-2014 with FID/ECD/FTD/FPD, not for TCD	Use with 221-14093-00 & 221-22206-00 (one of each included in the kit)
220-90140-03	Adaptor Kit to connect 1/4-in S.S. Column to GC-2014 with FID/ECD/FTD/FPD, not for TCD	Use with 221-14093-00 & 221-22206-00 (one of each included in the kit)
220-90140-05	Adaptor Kit to connect 1/8-in S.S. Column to GC-2014 with TCD detector	Use with 221-14093-00 & 221-22206-00 (one of each included in the kit)
220-90140-06	Adaptor Kit to connect 1/4-in S.S. Column to GC-2014 with TCD detector	Use with 221-14093-00 & 221-22206-00 (one of each included in the kit)
221-14093-00	Insert/Liner, Glass, tapered for S.S Adapters	Used as the liner when using stainless steel packed column, must use with spacer 221-22206-00
221-22206-00	Injection port spacer	Used with packed injection ports, must be placed under the septa (channel side down) to ensure flow through liner

Packed S.S. COL connection for GC-2010*

Part No.	Description	Notes
220-94680-01**	GC-2010 Adapter Kit FID/TCD/ECD	Includes one liner 221-48886-00
221-48886-00	Liner for direct injection (no split), SPL	Used as the liner when using the packed column and WBC adaptor

* For GC-2010 series with SPL or WBI, and FID or TCD or ECD; connection for 1/8-in S.S. columns or glass columns

Packed S.S. COL connection for GC-2030

No kit available at the moment; contact your Shimadzu sales representative

Widebore Capillary COL to Packed INJ/DET, GC-2014

Part No.	Description	Notes
221-29992-91	WBC Attachment Kit without Makeup	Order 221-10073-00 & 220-10076-91 in addition if using TCD
221-34012-91	WBC Adaptor Detector Side with Makeup	This is not a kit. Order this part in addition to WBC Attachment Kit without Makeup 221-29992-91 (above) when using a widebore column and the makeup gas for detector is desired; the flow controller is not included - order separately
221-10073-00	TCD sleeve	Used on TCD side only to connect capillary columns (no makeup connection)
221-10076-91	TCD sleeve ferrule	Used on TCD detector adapter sleeve, 10/pk
221-38107-00	Glass insert for WBC Attachment, GC-9, 14, 15, 16 and 2014	139mm, Deactivated, 1pcs, for GC-9A-16A and GC-2014 packed inlet; one piece included in 221-29992-91
221-39148-00	Glass insert for WBC Attachment, GC-8A	86mm, Deactivated, 5pcs, for GC-8A packed inlet; one piece included in 221-29992-91

| Converting to Different Columns, continued

Glass COL (5mm x 3mm) to Packed INJ, GC-2014

Part No.	Description	Notes
221-46403-92	Graphite Ferrule, 5mm	Used on the glass column
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects the column to the injector
221-14094-00	Liner for GC-9, 14, 15, 16 and 2014	Used as the injector insert for glass columns
221-22206-00	Injection port spacer	Used with packed injection ports, must be placed under the septa (channel side down) to ensure flow through liner
201-47614-00	O-RING SILICON, 20/Pk	Optional, can be used instead of graphite ferrule if max column temperature is below 250°C; see NOTES below

Glass COL (5mm x 3mm) to TCD, GC-2014

Part No.	Description	Notes
221-10076-91	TCD sleeve ferrule	Used on TCD detector adapter sleeve, 10/pk
221-10073-00	TCD sleeve	Used on TCD detector for glass column
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects the column to the detector

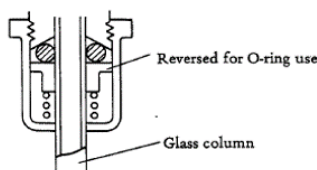
Glass COL (5mm x 3mm) to other Packed DET, GC-2014

Part No.	Description	Notes
221-46403-92	Graphite Ferrule, 5mm	Used on the glass column
221-15561-91	Glass Column Joint Kit	Used as nut, washer and back ferrule that connects the column to the detector
201-47614-00	O-RING SILICON, 20/Pk	Optional, can be used instead of graphite ferrule if max column temperature is below 250°C; see NOTES below

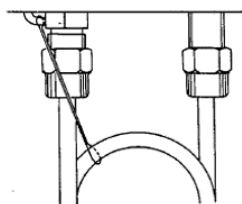
Notes:

An O-ring can be used as the gasket of a glass column joint. In this case, exercise caution about the following points.

1. The back ring of the glass column joint should be set in the opposite direction of that for graphite ferrule use.



2. Support the column with wire, etc. to prevent it from popping out of the joints due to the pressure of the carrier gas. If the column slides down by 40mm or more, hydrogen gas will leak from the detector (FID), thus causing a dangerous condition.



3. Although O-rings can be used easily, all O-rings have certain heat-resistance limits. Observe the limit for the type of O-ring used to prevent elution of compounds which will cause ghost peaks.
(Silicon rubber O-ring 250°C max.)



Shimadzu Corporation

www.shimadzu.com/an/

Shimadzu Scientific Instruments

7102 Riverwood Drive, Columbia, MD 21046

Phone: 800-477-1227

www.ssi.shimadzu.com

For Research Use Only. Not for use in diagnostic procedures.

This publication may contain references to products that are not available in your country. Please contact us to check the availability of these products in your country.

Company names, products/service names and logos used in this publication are trademarks and trade names of Shimadzu Corporation, its subsidiaries or its affiliates, whether or not they are used with trademark symbol "TM" or "®".

Third-party trademarks and trade names may be used in this publication to refer to either the entities or their products/services, whether or not they are used with trademark symbol "TM" or "®".

Shimadzu disclaims any proprietary interest in trademarks and trade names other than its own.

The contents of this publication are provided to you "as is" without warranty of any kind, and are subject to change without notice. Shimadzu does not assume any responsibility or liability for any damage, whether direct or indirect, relating to the use of this publication.