



EPIC™ PERFORATING CATALOG

Issue 1 - May 7, 2026

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About GEODynamics

GEODynamics is the global technology and manufacturing leader in perforating, downhole completion, intervention, and wireline-conveyed solutions. GEODynamics creates and delivers downhole solutions that enable unsurpassed well economics, performance, and lifespan.

Patents

www.oilstatesintl.com/patents

Terms and Conditions

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Revisions

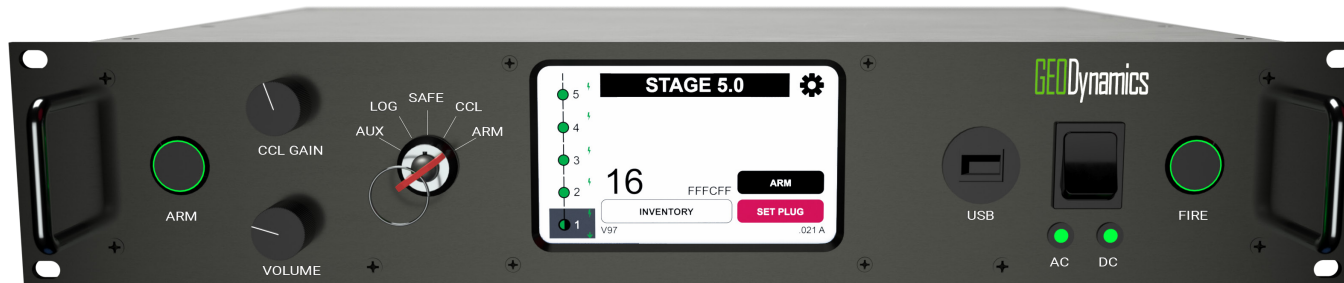
ISSUE	DATE	NOTES
1	May 1, 2024	Initial release of EPIC™ Perforating Catalog.
1	February 6, 2025	Issue 1, 2025. Added 2.50" OD EPIC Precision, 2.50" OD EPIC Flex, 2.75" Flex Orbit, and 3.125' Flex Orbit systems. Updated charge performance details (FracIQ and Basix Frac). Added EPIC Flex reusable sub with rebuild kit details. Additional edits and updates throughout.
1	May 7, 2026	2026 release, Issue 1: - Several 33A shaped charge part numbers changed to implement a transition to the universal grooved charge case. Most of these are constant entry hole charges (FracIQ and Basix Frac) and our popular deep-penetrating charges. For example, P/N EC2-33A1471-BF changed to EC2-33A1471-BFG. Because these were changes with the charge case only, performance data did not change. - STRATX gun systems were removed. - Restructured each gun system to expand bottom gun to setting tool options; separate pages cover ignitor module vs. conventional ignitor crossovers. - Added EPIC Flex Disposable sub with Lock Ring, new version of sub rebuild kit. - Added new firing head crossovers 2.75 and 3.13 OD for Diamondback DB10, DB20 and King K20 to Recon setting tools with conventional ignitors.

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GEODynamics' EPIC™ Command shooting panel interfaces between the wireline and a logging system to deliver state-of-the-art efficiency in perforating operations. Seamless integration with GEODynamics' EPIC addressable switches and the EPIC Test box makes for a feature-rich plug-and-perf shooting panel for today's high speed, multi-well, zipper frac completion techniques. Command's advanced electronic telemetry makes for trouble-free conveyance and POOH, while shooting on the fly is a breeze. The EPIC Command shooting panel inventories the string at a rate of one (1) switch per second, reducing risk in shooting-on-the-fly operations.



EM-ASSP-BP-0002

FEATURES

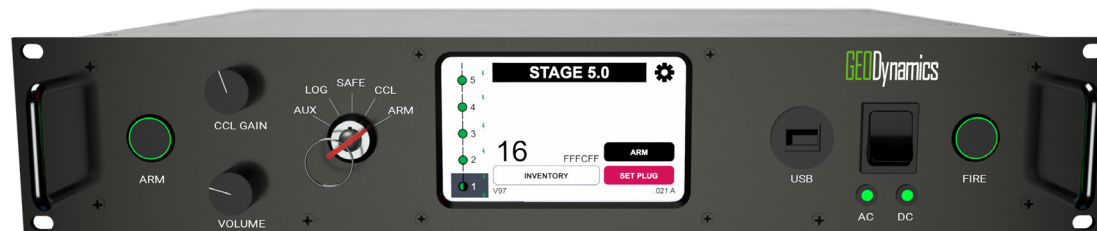
- Shot plot display on panel for real-time review; shot plot data stored for future review
- All switch interactions stored in an easily readable text file with simple USB download
- Auto-adjust telemetry requires no user intervention; successfully tested on over 35k' greaseless wireline
- CCL hosting capabilities for on-panel display, audible CCL alarm, and output to logging system
- LOG and AUX line routing to host non-ballistic services
- HDMI output to support panel display on an external monitor
- Check-fire capabilities
- Depth control input
- Go/no-go firing control
- Ability to disable the ignitor and fire the bottom gun

BENEFITS

- Clean, intuitive, touch-screen user interface
- Drop-in replacement for existing panels
- Shot power controlled via button fire sequence
- Panel delivers only enough power to initiate the ignitor or detonator, then ends the shot to minimize abuse on wireline and collector rings
- No separate panel required for CCL hosting or check-fire functions

SPECIFICATIONS

- Firing voltage up to 350V, software limited to 2A maximum
- Variable Correlation Voltage (Switch Mode vs. WRT Mode)
- Correlation current hardware limited to 125mA
- Safe Key termination per RP-67
- 2ru rackmount height
- Compatible with GEODynamics EPIC™ Switches and wireline release tools



FUNCTIONAL OVERVIEW

ARM	Used with the FIRE button to enable shooting power supply.
CCL GAIN & VOLUME	Adjust CCL gain and signal volume when key is in CCL mode.
KEY POSITION (Operating Modes)	AUX Signal feedthrough via the AUX jack on back. Typical connection to another wireline panel. LOG Signal feedthrough via the LOG connection on back. SAFE No power on the line; line is terminated per RP-67. Safe key is removable. CCL Displays the virtual CCL meter. Signal is routed through the rear CCL port to CCL logging system. ARM Enables inventory, arming, and shooting functions.
TOUCH SCREEN	Input commands and view system/function responses.
USB	Download job-specific data files or perform panel software update.
POWER SWITCH	Controls both AC and DC power.
FIRE	Used along with the ARM button to enable shooting power supply.



REAR INPUTS and OUTPUTS

AC INPUTS	120VAC input (5A, 3AG fused)
DC INPUTS	12V truck battery input (2A, 3AG fused)
LIGHTS	2A, 3AG fuse for safe light circuit
USB	Reserved for future use
CCL	CCL output to logging system
HDMI	HDMI output to support panel display on an external monitor
ETHERNET	Reserved for future use
LIGHTS	Standard output to truck safe lights
AUX	¼" phone connection; LINE is routed here when key is in AUX position
LOG	PL-259 connection; LINE is routed here when key is in LOG position
LINE	Wireline connection

GEODynamics' EPIC™ Test box delivers an all-in-one testing, diagnostics, and configuration solution for perforating toolstrings equipped with EPIC™ Switch technologies. The test box acknowledges the presence of switches and detonators, facilitates pre-run validation and switch configuration, and reports any problems detected.

FEATURES

- Allows switch configuration to operate as a Set/Fire or BRT switch
- Real-time indication of detonator/ignitor presence on surface
- All switch interactions stored in an easily readable text file with simple USB download
- Rugged and water-resistant for field operational environments
- Automatic sleep/shutdown after idle periods to minimize battery consumption
- Easy replacement of rechargeable battery for minimal downtime
- Magnet supplied for easy ground connection

BENEFITS

- Clean, intuitive, touch-screen user interface
- Test traceability from the gun shop to the wellsite
- No offline downtime for battery charging
- Battery status indicator displayed on every screen

SPECIFICATIONS

- Facilitates switch string interrogation and switch configuration
- Redundant current limit on interrogation supply
- RP-67 compliant; certified per Franklin Applied Physics
- Powered by a single rechargeable battery (spare battery included)
- Communicates with GEODynamics EPIC™ Switches and wireline release tools



EM-ASTB-0001-0000

GEODynamics' EPIC™ Switches deliver the safety and intelligence of an addressable system and facilitate compatibility with standard pass-through bulkheads and non-ported subs, offering unparalleled flexibility.

On surface, the EPIC™ Test box is used to inventory the perforating string. The inventory process is repeatable while running in hole as a verification of viable switches.

CAPABILITIES

- Intrinsically safe
- Shoot on the fly
- Dual fire (switch types: normal or Set/Fire)
- Convertible to wireline/ballistic release tool
- Viable switch count before each shot—checks connections to detonator, feed-through, and ground
- Reassign address on surface without disassembly
- Skip gun capability (skip a problematic gun and prevent non-productive time (NPT))
- Inventory rate: One (1) switch per second

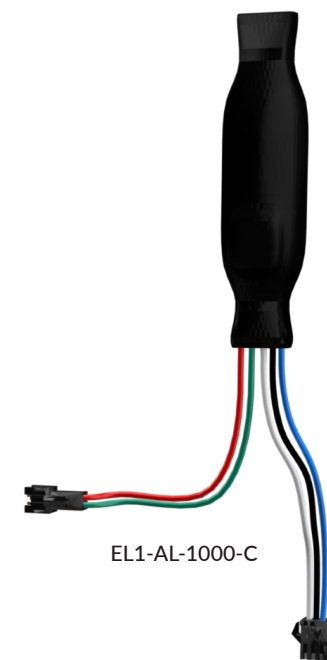
COMMON FEATURES

Performance	Stable communications protocol capable on over 34,000ft (10,363m) of 0.288in (0.7315cm) greaseless line cable
Set/Fire Efficiency	Plug set and fire first gun from a single switch (dual fire capability)
Safety	• Independent Third Party Organization (ITPO) certified RF Safe, ESD Safe, and API RP-67 compliant • All wired connections, including detonator, safely tested with the EPIC Test box
Quality	Fully tested post-manufacturing; Quality Assured to ISO:9001:2015

COMPATIBILITIES

Equipment	EL1-AL-1000 / EL1-AL-1000-C	ASW-130 / ASW-130-C
EPIC™ Command Shooting Panel	EM-ASSP-0002 Serial No. 100xxx-2 or 000xxx-2	EM-ASSP-BP-0002 Serial No. BPT-xxx or BPG-xxx
EPIC™ Test Box	EM-ASTB-0001-0000	EM-ASTB-0001-0000
Switches are compatible with Canatex® BRT, ICSI® BRT, and Hunting release tools, and can also be run with the Probe® Shooting Panel and Warrior® Interface Panel.		

Warrior® is a registered trademark of Scientific Data Systems, Inc.
 Probe® is a registered trademark of Probe Technologies Holdings, Inc.
 Canatex® is a registered trademark of Canatex Completions Solutions, Inc.
 ICSI® is a registered trademark of Innovative Completion Systems, Inc.



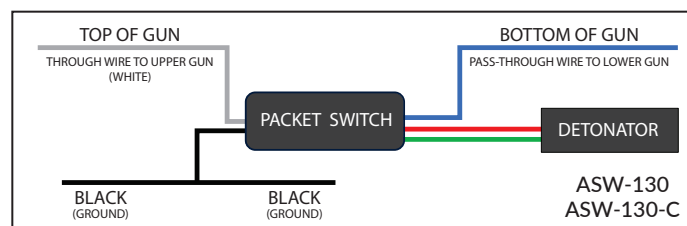
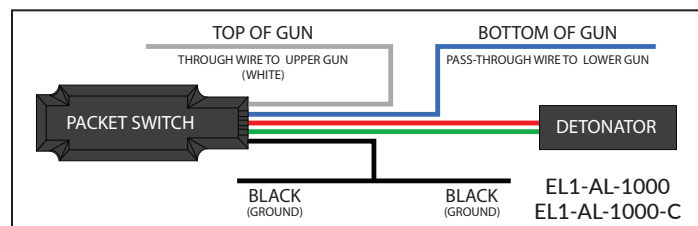
SPECIFICATIONS

Electrical		
EPIC Packet Switch	EL1-AL-1000 / EL1-AL-1000-C	ASW-130 / ASW-130-C
Firing Voltage Polarity	Negative	Negative
Operating Voltage	-20 VDC to -70 VDC	-20 VDC to -300 VDC
Dump Fire Voltage	> -140 VDC	-180 VDC
Operating Temperature Range	-70°F to 350°F	-20°F to 347°F

Mechanical	
Part Number	Dimensions (L x W x H)
EL1-AL-1000	2.25" x 0.625" x 0.25"
ASW-130	1.50" L x 0.75" W

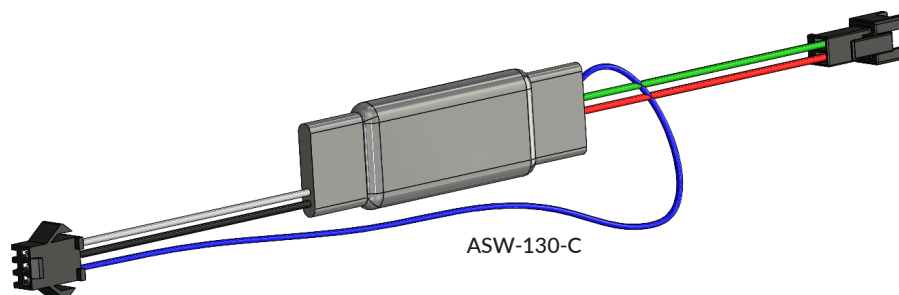
Accessories	Part Number
UY2 Scotchlok Connector <i>(recommended)</i>	AP-M-26224
UY Scotchlok Connector <i>(may be substituted for the above UY2, but use on switch wires only)</i>	AP-M-26214
UR2 Scotchlok Connector <i>(three-gang for ground wires)</i>	AP-M-26201

WIRING CONNECTIONS



GEODynamics' EPIC™ Flex and Flex Orbit perforating systems offer locking-pin connectors, which facilitate quick, reliable, and error-free wiring connections from gun to switch (3-pin) and switch to detonator (2-pin).

Both EPIC addressable packet switches are available with standard flying leads or preinstalled locking-pin connectors. Refer to EPIC Flex and EPIC Flex Orbit sections in this catalog for more information about these versatile perforating systems.



2-1/2 in (64 mm) EPIC™ Precision RFX

Specifications, GID Spiral Phasing



GEODynamics' advanced EPIC™ Precision RFX offers a factory-loaded, plug-and-play, limited entry perforating system for unconventional reservoirs. Precision integrates EPIC™ Slim U addressable switch technology with industry-standard detonator options into a programmable detonator module, delivering an intrinsically-safe, deployment-ready design. Quick and simple gun-string assembly saves time and increases efficiencies at the wellsite. GEODynamics delivers EPIC Precision RFX carriers fully loaded to match customer specifications and preferences.

APPLICATION SPECIFICATIONS

Shot Density and Phasing Options	Multiple Shot & Phasing Options
Initiation Point	Top-fired, wireline
Mode of Fire	Select fire, addressable
Detonating Cord	40-grain ribbon
Compatible Perforating Charges	Connex®, Razor®, Basix™, Refrax™
Maximum Gun Swell (in)[mm]	2.66" [67.56] @ 11.5g (In Fluid)

ENVIRONMENTAL

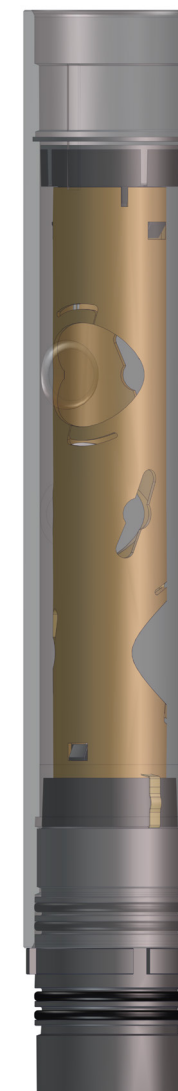
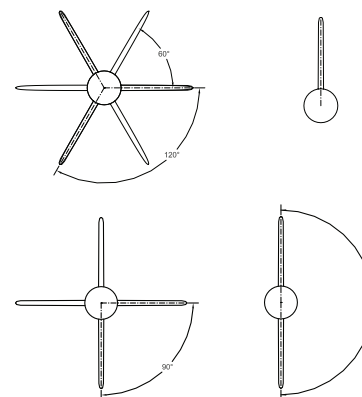
Maximum Pressure (psi)[MPa]	20,000 [137.90]
Maximum Tensile* (lbf)[kN]	137,500 [611.63] *Hardware Calculated Breaking Point

CARRIER SPECIFICATIONS

Carrier Assembly Part Number	Shot & Phasing Options		Gun Lengths		Gun End to Center of First Scallop @ 0°		Distance Shot to Shot		Shipping Assy Weights		Make-Up Lengths with T094 Tandem Sub	
	# Shots	Phasing	(in)	(cm)	(in)	(mm)	(in)	(mm)	(lbs)	(kgs)	(in)	(cm)
GID25-O01	1 Shot	0°	9.5	24.1	5.25	133.35	N/A		4.0	1.8	9.88	25.1
GID25-J02	2 Shot	180°	11.5	29.2			2.0	50.8	5.3	2.4	11.88	30.2
GID25-G03	3 Shot	120°	13.5	34.3					6.6	3.0	13.88	35.3
GID25-B04	4 Shot	90°	15.5	39.4					7.9	3.6	15.88	40.3
GID25-A06	6 Shot	60°	19.5	49.5					10.6	4.8	19.88	50.5

Additional shot and phasing options available by special order with lead time:

- Up to 10 shots per gun with 0° phasing (2.4" shot spacing (5 spf equivalent)).
- Up to 12 shots per gun with 60°, 90°, 120°, or 180° phasing (2" shot spacing (6 spf equivalent)).
- Nitrile or Viton o-rings available with any assembly.
- Contact your sales representative for additional shot and phasing options.



2-1/2 in (64 mm) EPIC™ Precision RFX Charge Performance



DEEP PENETRATING/EXTREME DEEP PENETRATING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea	
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	TTP (in)[cm]
2-1/2" 11.5g	2511 Connex SDP	EC2-25A1121-RC	Fluid	11.5g, RDX	6 spf / 60°	3-1/2" 9.2# L-80			0.28 [0.71]	11.50 [29.21]
		EC2-25A1122-RC		11.5g, HMX					0.29 [0.74]	12.00 [30.48]
	2511 Razor XDP	EC1-25A1121		11.5g, RDX					0.26 [0.66]	13.00 [33.02]
		EC1-25A1122		11.5g, HMX			0.32 [0.81]	31.10 [78.99]	0.24 [0.61]	12.23 [31.06]
	2511 Basix XDP	EC2-25A1121-E		11.5g, RDX					0.30 [0.76]	9.10 [23.11]
		EC2-25A1122-E		11.5g, HMX						

DUAL CASING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Inner Casing				Outer Casing			
						OD/Wt/ Material	EHD Range (in)[cm]	EHD Avg (in)[cm]	EHD Variance*	OD/Wt/ Material	EHD Range (in)[cm]	EHD Avg (in)[cm]	EHD Variance*
2-1/2" 11.0g	2511 Refrax	EC2-25A1171-R	Fluid	11.0g, RDX	6 spf / 60°	3-1/2" 9.2# P110	0.39-0.41 [0.99-1.04]	0.40 [1.02]	2.23 %	4-1/2" 13.5# P110	0.43-0.49 [1.09-1.24]	0.46 [1.17]	5.68 %
						4" 9.5# P110	0.37-0.45 [0.94-1.14]	0.40 [1.02]	8.25 %	5-1/2" 23# P110	0.38-0.48 [0.97-1.22]	0.43 [1.09]	8.26 %
	2511 Connex	EC2-25A1121-RC	Fluid	11.0g, RDX		3-1/2" 9.2# P110	0.34-0.40 [0.86-1.02]	0.36 [0.91]	4.69 %	4-1/2" 13.5# P110	0.28-0.33 [0.71-0.84]	0.31 [0.79]	6.53 %
	2511 Basix	EC2-25A1121-E	Fluid	11.0g, RDX		3-1/2" 9.2# P110	0.37-0.41 [0.94-1.04]	0.39 [0.99]	3.47 %	4-1/2" 13.5# P110	0.32-0.37 [0.81-0.94]	0.33 [0.84]	5.49 %

*EHD variation decentralized.

Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, casing weight, and casing grade specified.

^EHD performance in stressed berea represents API RP19B Section 2 testing results with casing flat metal plate equivalent to 0.500" 120KSI yield and penetration (TTP) in stressed berea rock.

FLUID: Qualified for shooting in FLUID only with perforating systems qualified by GEODynamics.

IN FLUID or DRY: Qualified for shooting in FLUID or DRY GAS with perforating systems qualified by GEODynamics.

Revised: May 7, 2026 10:27 AM

2-1/2 in (64 mm) EPIC™ Precision RFX Design Overview



Revised: May 7, 2026 10:27 AM

2-1/2 in (64 mm) EPIC™ Precision RFX Quick Change and Tandem Subs



DIRECT CONNECT QUICK CHANGE

2.50" Direct Connect Quick Change Assy (<i>direct to top gun tandem</i>) Intermediate Rebuild Kit (<i>contacts, teflon tubing, screw, spring, insulating ret.</i>) Complete Rebuild Kit with O-Rings (<i>all required parts</i>) Direct connect quick change rebuild kit details	GN-QC25-GIC25 RKI-GN-QC31-0001 RKC-GN-QC31-0001
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**2.50" DIRECT CONNECT
QUICK CHANGE ASSY**
GN-QC25-GIC25

REBUILD KITS:
RKI-GN-QC31-0001
RKC-GN-QC31-0001

TANDEM SUBS AND DETONATOR

2.50" Precision Tandem Sub Assemblies and Accessories Disposable Portless Tandem Disposable Portless Orienting Tandem Lock Ring, Left-Hand Thread (<i>for T279-A</i>) Tandem Sub Removal Tool (<i>1/2" drive socket</i>) O-Rings Nitrile (<i>Standard</i>) O-Rings Viton 95D (<i>Optional</i>)	GN-R25-T094-A GN-R25-T279-A GN-R25-L75-320 GN-SIT-0250-A OR-N569-225 OR-V95G-225
Detonating Cord	DET-80R111 (RDX) DET-80H212 (HMX)
Initiation Booster, HMX	DT-0875-400
EPIC™ Slim Detonator Module	DT-EPIC-230-R140

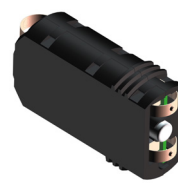
Refer to the following pages for setting tool and firing head crossover information.



**EPIC PRECISION DISPOSABLE
TANDEM SUB ASSY**
GN-R25-T094-A



**EPIC PRECISION DISPOSABLE
ORIENTING TANDEM SUB ASSY**
GN-R25-T279-A



**EPIC SLIM DETONATOR
MODULE**
DT-EPIC-230-R140

HARDWARE

Gun Body Configuration/Material	Threaded and scalloped, proprietary gun steel, similar to 41XX alloy steel
Charge Tube Type & Retention	Round steel tube strip; bend tab retention
Type of Tandem Connection	Booster to booster (no splice)
Nominal OD / Wall Thickness (in)[mm]	2.50" [63.50] / 0.250 [6.35]
Upper/Lower Thread Connections	2.092" - 8 STUB ACME 2G



**2.50" EPIC PRECISION DISPOSABLE
PORTLESS TANDEM SUB ASSY**
GN-R25-T094-A



EPIC SLIM DETONATOR MODULE
DT-EPIC-230-R140



**2.50" EPIC PRECISION RFX
CARRIER ASSEMBLY**
GID25-G03 (SHOWN)

MULTIPLE SHOT AND
PHASING OPTIONS AVAILABLE



**2.50" EPIC PRECISION DISPOSABLE
PORTLESS TANDEM SUB ASSY**
GN-R25-T094-A



EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106



**2.50" CROSSOVER, GI BOX X
SIZE 10 SETTING TOOL**
GN-RX25-BK10-GIC (SHOWN)

Revised: May 7, 2026 10:27 AM

2-1/2 in (64 mm) EPIC™ Precision RFX Ignitor Module and Setting Tool Crossovers

EPIC IGNITOR SETTING TOOL CROSSOVERS

EPIC™ Precision and EPIC™ Flex perforating systems provide reliable and efficient connections from the bottom gun to the setting tool.

The EPIC Slim Ignitor Module is a patented combination of electronics and ignitor technology, initiated by the bottom switch in the gun string. These non-addressable ignitor modules are designed to run with the EPIC™ Command Shooting Panel and are fully compatible with third-party addressable switches.

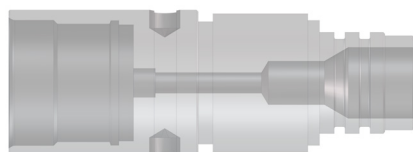
The bottom gun in the perforating string uses a disposable tandem sub to connect to the crossover and then connects directly to the setting tool.



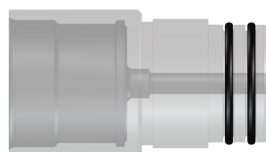
PRECISION DISPOSABLE TANDEM SUBS
GN-R25-T094-A

EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106

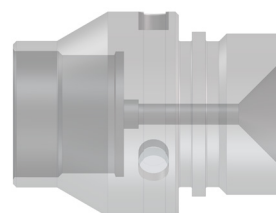
Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-1/2"	GN-RX25-BK10-GIC	2.50" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX25-2500-GID	2.50" Crossover, GI Box x 2.5" Shorty	#224	2.25"
	GN-RX25-3500-GID	2.50" Crossover, GI Box x 3.5" Shorty	#332	3.00"



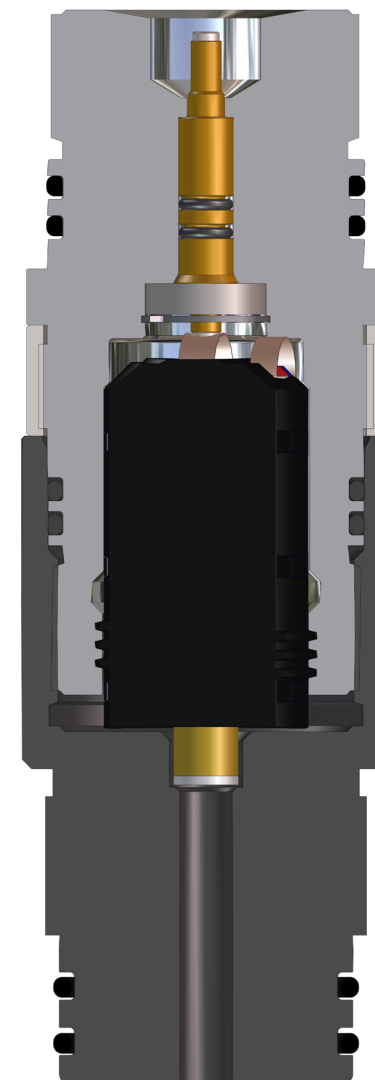
BK SIZE 10



2-1/2" SHORTY



3-1/2" SHORTY



GN-R25-T279-A, TANDEM SUB (SHOWN)
IGN-EPIC-230-106, IGNITOR MODULE
GN-RX25-2500-GID, CROSSOVER

2-1/2 in (64 mm) EPIC™ Precision RFX Conventional Ignitor and Setting Tool Crossovers

CONVENTIONAL IGNITOR FIRING HEAD CROSSEVERS

For applications with industry-standard ignitors, 2-1/2" EPIC™ Precision and EPIC Flex gun strings can be run with standard firing head box connections to GO33 setting tools. The bottom gun in the perforating string uses an EPIC Flex Tandem Sub to connect with the reusable firing head crossover assembly.

Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-1/2"	GN-RX25-GO33-A	2.50" Crossover Assy, GI Box to Size 10 Setting Tool	#222	8.05"
		Assembly includes two crossover components: 2.50" GI Box x GO Box Crossover, GN-RX25-GO33 2.75" GO Firing Head Pin x Size 10 Setting Tool Crossover, GN-RX27-BK10-GO		



POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101

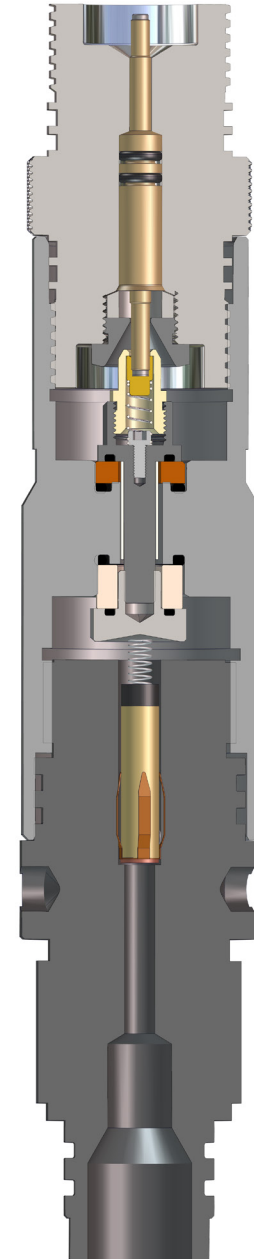
Rebuild Kits for GO33	
Partial Rebuild*	RKI-GN-RX31-GO33
Full Rebuild*	RKC-GN-RX31-GO33

[Firing head crossover rebuild kit details](#)

FLEX REUSABLE
TANDEM SUB (SHOWN)
GN-R25-T077-A

GI BOX TO SIZE 10 SETTING TOOL
CROSSOVER
GN-RX25-GO33-A

POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



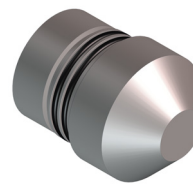
ADDITIONAL CROSSEVERS AND BULL PLUG



2.50" DISPOSABLE CROSSOVER
GI PIN x 1.63" ACME BOX
GN-R25-T172-A
(QUICK CHANGE CONNECTION)



THREAD PROTECTOR (THREADED INSERT)
FOR 1.63" ACME BOX
EM-EL1-THD-GOQCP



2.50" BULL PLUG
GN-R25-STRX-BP
(BOTTOM GUN, E.G. FOR TOE
PREPS IN VERTICAL WELLS)

O-RING FOR THREADED INSERT
OR-N569-222

2-1/2 in (64 mm) EPIC™ Flex RFX

Specifications, GIB Spiral Phasing

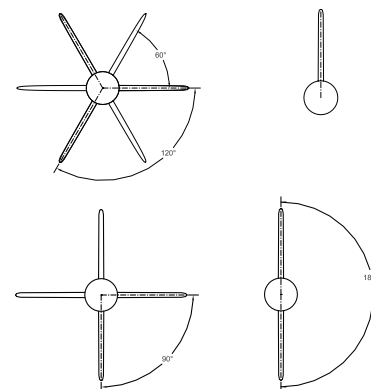
GEODynamics' advanced EPIC™ Flex RFX perforating system delivers a versatile, addressable switch-ready, portless solution that provides high levels of precision and reliability. The open architecture design allows engineering teams to plan and complete multistage plug-and-perf operations more safely, precisely, and cost-effectively. Flex RFX can accommodate a variety of market-leading shaped charge designs, including GEODynamics charges. GEODynamics can provide Flex RFX fully loaded, or ready to load, and with or without an addressable switch.

APPLICATION SPECIFICATIONS

Shot Density and Phasing Options	Multiple Shot & Phasing Options
Initiation Point	Bottom-fired, wireline
Mode of Fire	Select fire, addressable
Detonating Cord	40-grain ribbon
Compatible Perforating Charges	Connex®, Razor®, Basix™, Refrax™
Maximum Gun Swell (in)[mm]	2.66" [67.56] @ 11.5g (In Fluid)

ENVIRONMENTAL

Maximum Pressure (psi)[MPa]	20,000 [137.90]
Maximum Tensile* (lbf)[kN]	137,500 [611.63] *Hardware Calculated Breaking Point

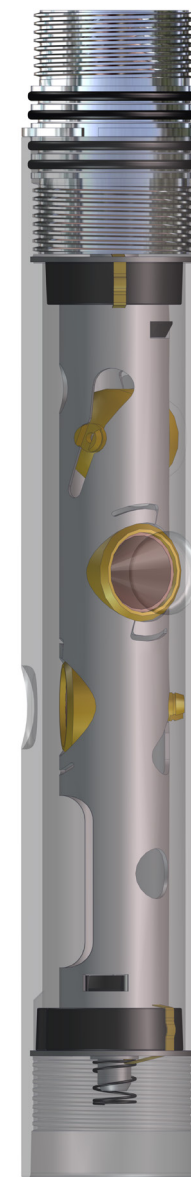


CARRIER SPECIFICATIONS

Carrier Assembly Part Number	Shot & Phasing Options		Gun Lengths		Gun End to Center of First Scallop @ 0°		Distance Shot to Shot		Shipping Assy Weights		Make-Up Lengths with T078 Tandem Subs	
	# Shots	Phasing	(in)	(cm)	(in)	(mm)	(in)	(mm)	(lbs)	(kgs)	T078 subs (in)	T077 subs (in)
GIB25-O01	1	0°	12.31	31.27	7.0	177.80	N/A		6.0	2.72	12.44	13.21
GIB25-J02	2	180°	13.91	35.33			2.4	61.0	7.4	3.36	14.04	14.81
GIB25-G03	3	120°	15.50	39.37			2.0	50.8	7.8	3.54	15.63	16.40
GIB25-B04	4	90°	17.50	44.45					9.0	4.08	17.63	18.40
GIB25-A06	6	60°	21.50	54.61					11.8	5.35	21.63	22.40

Additional shot and phasing options available by special order with lead time:

- Up to 12 shots per gun with 0° or 180° phasings (2.4" shot spacing (5 spf equivalent)).
- Up to 12 shots per gun with 60°, 90°, or 120° phasings (2" shot spacing (6 spf equivalent)).
- Nitrile or Viton o-rings available with any assembly.
- Contact your sales representative for additional shot and phasing options.



2-1/2 in (64 mm) EPIC™ Flex RFX

Charge Performance



DEEP PENETRATING/EXTREME DEEP PENETRATING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea	
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	TTP (in)[cm]
2-1/2" 11.5g	2511 Connex SDP	EC2-25A1121-RC	Fluid	11.5g, RDX	6 spf / 60°	3-1/2" 9.2# L-80			0.28 [0.71]	11.50 [29.21]
		EC2-25A1122-RC		11.5g, HMX					0.29 [0.74]	12.00 [30.48]
	2511 Razor XDP	EC1-25A1121		11.5g, RDX					0.26 [0.66]	13.00 [33.02]
		EC1-25A1122		11.5g, HMX			0.32 [0.81]	31.10 [78.99]	0.24 [0.61]	12.23 [31.06]
	2511 Basix XDP	EC2-25A1121-E		11.5g, RDX					0.30 [0.76]	9.10 [23.11]
		EC2-25A1122-E		11.5g, HMX						

DUAL CASING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Inner Casing				Outer Casing			
						OD/Wt/ Material	EHD Range (in)[cm]	EHD Avg (in)[cm]	EHD Variance*	OD/Wt/ Material	EHD Range (in)[cm]	EHD Avg (in)[cm]	EHD Variance*
2-1/2" 11.0g	2511 Refrax	EC2-25A1171-R	Fluid	11.0g, RDX	6 spf / 60°	3-1/2" 9.2# P110	0.39-0.41 [0.99-1.04]	0.40 [1.02]	2.23 %	4-1/2" 13.5# P110	0.43-0.49 [1.09-1.24]	0.46 [1.17]	5.68 %
						4" 9.5# P110	0.37-0.45 [0.94-1.14]	0.40 [1.02]	8.25 %	5-1/2" 23# P110	0.38-0.48 [0.97-1.22]	0.43 [1.09]	8.26 %
	2511 Connex	EC2-25A1121-RC	Fluid	11.0g, RDX		3-1/2" 9.2# P110	0.34-0.40 [0.86-1.02]	0.36 [0.91]	4.69 %	4-1/2" 13.5# P110	0.28-0.33 [0.71-0.84]	0.31 [0.79]	6.53 %
	2511 Basix	EC2-25A1121-E	Fluid	11.0g, RDX		3-1/2" 9.2# P110	0.37-0.41 [0.94-1.04]	0.39 [0.99]	3.47 %	4-1/2" 13.5# P110	0.32-0.37 [0.81-0.94]	0.33 [0.84]	5.49 %

*EHD variation decentralized.

Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, casing weight, and casing grade specified.

^EHD performance in stressed berea represents API RP19B Section 2 testing results with casing flat metal plate equivalent to 0.500" 120KSI yield and penetration (TTP) in stressed berea rock.

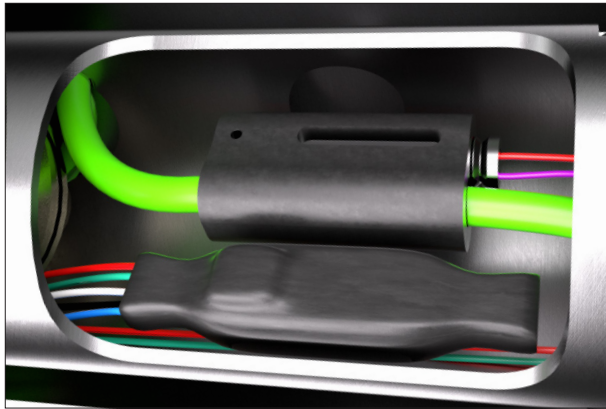
FLUID: Qualified for shooting in FLUID only with perforating systems qualified by GEODynamics.

IN FLUID or DRY: Qualified for shooting in FLUID or DRY GAS with perforating systems qualified by GEODynamics.

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2-1/2 in (64 mm) EPIC™ Flex RFX

Design Overview



DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

DETONATOR PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS

DET-E-A140S-CA

DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

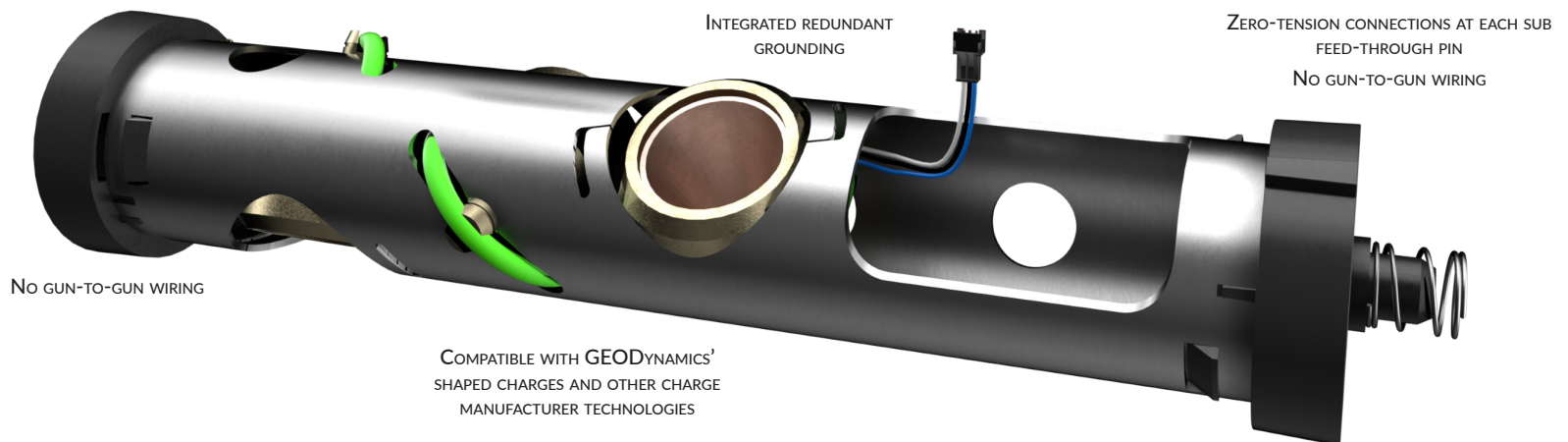


COMPLIANT WITH
MULTIPLE ELECTRO-MECHANICAL SYSTEMS

ADDRESSABLE SWITCH PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS

EL1-AL-1000-C
ASW-130-C

THIRD-PARTY ADDRESSABLE SWITCHES AVAILABLE



INTEGRATED REDUNDANT
GROUNDING

ZERO-TENSION CONNECTIONS AT EACH SUB
FEED-THROUGH PIN

NO GUN-TO-GUN WIRING

NO GUN-TO-GUN WIRING

COMPATIBLE WITH GEODYNAMICS'
SHAPED CHARGES AND OTHER CHARGE
MANUFACTURER TECHNOLOGIES

2-1/2 in (64 mm) EPIC™ Flex RFX

Quick Change and Tandem Subs



DIRECT CONNECT QUICK CHANGE

2.50" Direct Connect Quick Change Assy (*direct to top gun tandem*)
 Intermediate Rebuild Kit (*contacts, teflon tubing, screw, spring, insulating ret.*)
 Complete Rebuild Kit with O-Rings (*all required parts*)
[Direct connect quick change rebuild kit details](#)

GN-QC25-GIC25
 RKI-GN-QC31-0001
 RKC-GN-QC31-0001

TANDEM SUBS AND DETONATOR

2.50" Flex Tandem Sub Assemblies and Accessories
 Disposable Portless Tandem (*solid feed-through*)
 Reusable Portless Tandem
 Complete Rebuild Kit (*feed-through assembly, retainer nut, contact support bushing*)
 Tandem Sub Removal Tool (*1/2" drive socket*)
 O-Rings Nitrile (*Standard*)
 O-Rings Viton 95D (*Optional*)

GN-R25-T078-A
 GN-R25-T077-A
 RKC-RXX-T077
 GN-SIT-0250-A
 OR-N569-225
 OR-V95G-225

Detonator, A140S, RDX, with locking pin connectors

DET-E-A140S-CA

Refer to the following pages for setting tool and firing head crossover information.



FLEX DISPOSABLE
TANDEM SUB
GN-R25-T078-A



FLEX REUSABLE
TANDEM SUB
GN-R25-T077-A



Current version (use until inventory is depleted)
 New version (retainer nut with integrated bushing)
 FLEX REUSABLE SUB REBUILD KIT
 RKC-RXX-T077

HARDWARE

Gun Body Configuration/Material

Threaded and scalloped, proprietary gun steel, similar to 41XX alloy steel

Charge Tube Type & Retention

Round steel tube strip; bend tab retention

Type of Tandem Connection

Booster to booster (no splice)

Nominal OD / Wall Thickness (in)[mm]

2.50" [63.50] / 0.250 [6.35]

Upper/Lower Thread Connections

2.092" - 8 STUB ACME 2G



2.50" DIRECT CONNECT
QUICK CHANGE ASSY
GN-QC25-GIC25

REBUILD KITS:
 RKI-GN-QC31-0001
 RKC-GN-QC31-0001



2.50" EPIC FLEX DISPOSABLE
PORTLESS TANDEM SUB ASSY
GN-R25-T078-A



2.50" EPIC FLEX RFX
CARRIER ASSEMBLY
GIB25-G03 (SHOWN)

MULTIPLE SHOT AND
PHASING OPTIONS AVAILABLE



2.50" EPIC PRECISION DISPOSABLE
PORTLESS TANDEM SUB ASSY
GN-R25-T094-A



EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106



2.50" CROSSOVER, GI BOX X
SIZE 10 SETTING TOOL
GN-RX25-BK10-GIC (SHOWN)

Revised: May 7, 2026 10:27 AM

2-1/2 in (64 mm) EPIC™ Flex RFX Ignitor Module and Setting Tool Crossovers

EPIC IGNITOR SETTING TOOL CROSSOVERS

EPIC™ Precision and EPIC™ Flex perforating systems provide reliable and efficient connections from the bottom gun to the setting tool.

The EPIC Slim Ignitor Module is a patented combination of electronics and ignitor technology, initiated by the bottom switch in the gun string. These non-addressable ignitor modules are designed to run with the EPIC™ Command Shooting Panel and are fully compatible with third-party addressable switches.

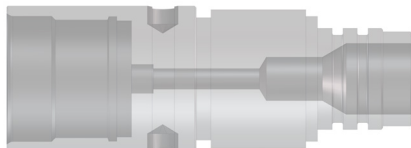
The bottom gun in the perforating string uses a disposable tandem sub to connect to the crossover and then connects directly to the setting tool.



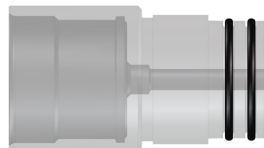
PRECISION DISPOSABLE TANDEM SUBS
GN-R25-T094-A

EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106

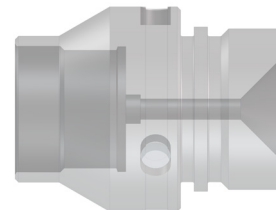
Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-1/2"	GN-RX25-BK10-GIC	2.50" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX25-2500-GID	2.50" Crossover, GI Box x 2.5" Shorty	#224	2.25"
	GN-RX25-3500-GID	2.50" Crossover, GI Box x 3.5" Shorty	#332	3.00"



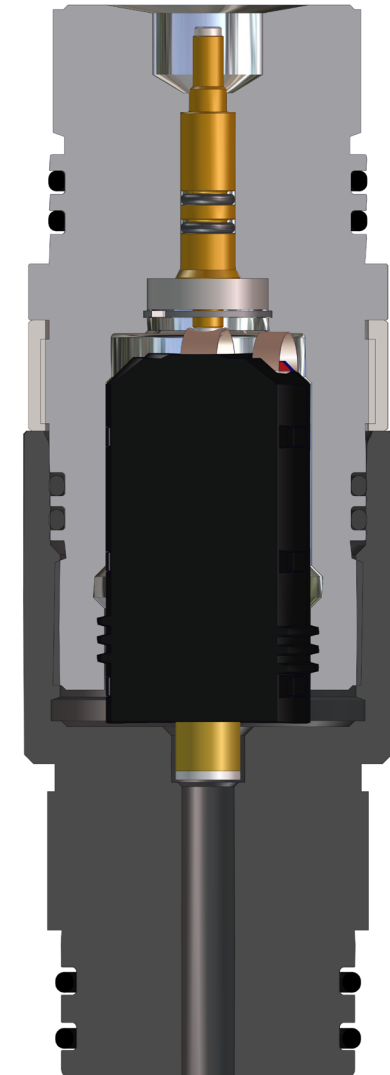
BK SIZE 10



2-1/2" SHORTY



3-1/2" SHORTY



GN-R25-T279-A, TANDEM SUB (SHOWN)
IGN-EPIC-230-106, IGNITOR MODULE
GN-RX25-2500-GID, CROSSOVER

2-1/2 in (64 mm) EPIC™ Flex RFX Conventional Ignitor and Firing Head Crossovers

CONVENTIONAL IGNITOR FIRING HEAD CROSSOVERS

For applications with industry-standard ignitors, 2-1/2" EPIC™ Precision and EPIC Flex gun strings can be run with standard firing head box connections to GO33 setting tools. The bottom gun in the perforating string uses an EPIC Flex Tandem Sub to connect with the reusable firing head crossover assembly.

Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-1/2"	GN-RX25-GO33-A	2.50" Crossover Assy, GI Box to Size 10 Setting Tool	#222	8.05"
		Assembly includes two crossover components: 2.50" GI Box x GO Box Crossover, GN-RX25-GO33 2.75" GO Firing Head Pin x Size 10 Setting Tool Crossover, GN-RX27-BK10-GO		



POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101

Rebuild Kits for GO33	
Partial Rebuild*	RKI-GN-RX31-GO33
Full Rebuild*	RKC-GN-RX31-GO33

[Firing head crossover rebuild kit details](#)

ADDITIONAL CROSSOVERS AND BULL PLUG



2.50" DISPOSABLE CROSSOVER
GI PIN x 1.63" ACME BOX
GN-R25-T172-A
(QUICK CHANGE CONNECTION)



THREAD PROTECTOR (THREADED INSERT)
FOR 1.63" ACME BOX
EM-EL1-THD-GOQCP

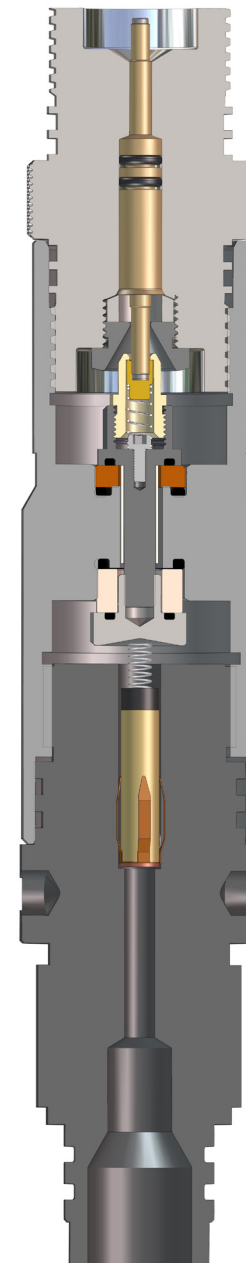


2.50" BULL PLUG
GN-R25-STRX-BP
(BOTTOM GUN, E.G. FOR TOE
PREPS IN VERTICAL WELLS)

FLEX REUSABLE
TANDEM SUB (SHOWN)
GN-R25-T077-A

GI BOX TO SIZE 10 SETTING TOOL
CROSSOVER
GN-RX25-GO33-A

POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Precision RFX

Specifications, GID Spiral Phasing



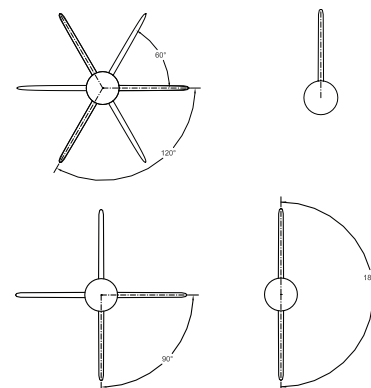
GEODynamics' advanced EPIC™ Precision RFX offers a factory-loaded, plug-and-play, limited entry perforating system for unconventional reservoirs. Precision integrates EPIC™ Slim U addressable switch technology with industry-standard detonator options into a programmable detonator module, delivering an intrinsically-safe, deployment-ready design. Quick and simple gun-string assembly saves time and increases efficiencies at the wellsite. GEODynamics delivers EPIC Precision RFX carriers fully loaded to match customer specifications and preferences.

APPLICATION SPECIFICATIONS

Shot Density and Phasing Options	Multiple Shot & Phasing Options
Initiation Point	Top-fired, wireline
Mode of Fire	Select fire, addressable
Detonating Cord	80-grain round
Compatible Perforating Charges	FracIQ®, Connex®, Razor®, Basix™, Refrax™
Maximum Gun Swell (in)[mm]	2.91 [73.91] @ 15.0g In Fluid; 3.02 [76.20] @ 15.0g Dry

ENVIRONMENTAL

Maximum Pressure (psi)[MPa]	23,000 [158] 6 spf, 60° phasing
Maximum Tensile* (lbf)[kN]	166,700 [741] *Hardware Calculated Breaking Point

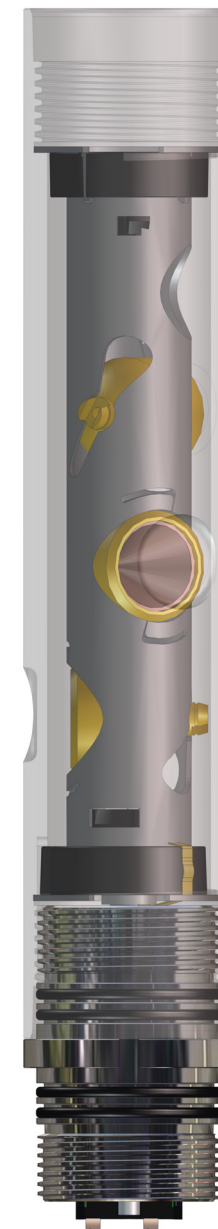


CARRIER SPECIFICATIONS

Carrier Assembly Part Number	Shot & Phasing Options		Gun Lengths		Gun End to Center of First Scallop @ 0°		Distance Shot to Shot		Shipping Assy Weights		Make-Up Lengths with T094 Tandem Sub	
	# Shots	Phasing	(in)	(cm)	(in)	(mm)	(in)	(mm)	(lbs)	(kgs)	(in)	(cm)
GID27-O01	1	0°	9.5	24.1	5.25	133.35	N/A		6.4	2.9	9.88	25.10
GID27-J02	2	180°	11.5	29.2			2.0	50.80	7.8	3.5	11.88	30.18
GID27-G03	3	120°	13.5	34.3					8.9	4.0	13.88	35.26
GID27-B04	4	90°	15.5	39.4					10.4	4.7	15.88	40.34
GID27-A06	6	60°	19.5	49.5					13.4	6.1	19.88	50.50

Additional shot and phasing options available by special order with lead time:

- Up to 12 shots per gun with 0°, 60°, 90°, 120°, or 180° phasings (2" shot spacing (6 spf equivalent)).
- Nitrile or Viton o-rings available with any assembly.
- Contact your sales representative for additional shot and phasing options.



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2-3/4 in (70 mm) EPIC™ Precision RFX Charge Performance



CONSTANT ENTRY HOLE AND PENETRATION

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	API 19B Targeted Pipe*	Performance in Concrete		Performance in Stressed Berea		
							EHD [^] (in)[cm]	TTP (in)[cm]	EHD [^] (in)[cm]	EHD Variation Decentralized	TTP (in)[cm]
2-3/4" 11g-15g	FracIQ 30	EC2-27A1171	Fluid	11.0g, RDX	6 spf / 60°	4-1/2" OD P110	0.30 [0.76]	13.0 [33.02]	0.30 [0.76]	2.7 %	5.0 [12.70]
	FracIQ 35	EC2-27A1271		12.0g, RDX			0.35 [0.89]		0.35 [0.89]	5.9 %	
	FracIQ 40	EC2-27A1571		15.0g, RDX			0.40 [1.02]		0.40 [1.02]	6.3 %	

DEEP PENETRATING/EXTREME DEEP PENETRATING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea	
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD [^] (in)[cm]	TTP (in)[cm]
2-3/4" 15g	2715 Connex SDP	EC2-27A1521-RC	In Fluid or Dry	15.0g, RDX	6 spf / 60°	4-1/2" 11.6# L-80			0.30 [0.76]	11.70 [29.72]
		EC2-27A1522-RC		15.0g, HMX					0.31 [0.79]	12.18 [30.94]
	2715 Razor XDP	EC2-27A1521		15.0g, RDX			0.39 [0.99]	37.45 [95.12]		
		EC2-27A1522		15.0g, HMX			0.39 [0.99]	37.45 [95.12]		
		EC2-27A1523		15.0g, HNS					0.31 [0.79]	10.50 [26.67]
		EC2-27A1521-E		15.0g, RDX			0.39 [0.99]	31.80 [80.77]	0.32 (0.81)	9.40 [23.88]
	2715 Basix XDP	EC2-27A1522-E		15.0g, HMX			0.38 [0.97]	32.75 [83.19]	0.35 [0.89]	10.60 [26.92]

DUAL CASING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Inner Casing		Outer Casing	
						O.D./Material	EHD (in)[cm]	O.D./Material	EHD (in)[cm]
2-3/4" 11g-15g	2711 Refrax	EC2-27A1171-R	Fluid	11.0g, RDX	6 spf / 60°	4" P110	0.29-0.30 [0.74-0.76]	5-1/2" P110	0.37-0.41 [0.94-1.04]
	2715 Refrax	EC2-27A1571-R		15.0g, RDX			0.34-0.36 [0.86-0.91]		0.34-0.42 [0.86-1.07]

Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, casing weight, and casing grade specified.

[^]EHD performance in stressed berea represents API RP19B Section 2 testing results with casing flat metal plate equivalent to 0.500" 120KSI yield and penetration (TTP) in stressed berea rock.

FLUID: Qualified for shooting in FLUID only with perforating systems qualified by GEODynamics.

IN FLUID or DRY: Qualified for shooting in FLUID or DRY GAS with perforating systems qualified by GEODynamics.

Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Precision RFX Design Overview



2-3/4 in (70 mm) EPIC™ Precision RFX Quick Change and Tandem Subs



DIRECT CONNECT QUICK CHANGE

2.75" Direct Connect Quick Change Assy (<i>direct to top gun tandem</i>) Intermediate Rebuild Kit (<i>contacts, teflon tubing, screw, spring, insulating ret.</i>) Complete Rebuild Kit with O-Rings (<i>all required parts</i>) Direct connect quick change rebuild kit details	GN-QC27-GIC27 RKI-GN-QC31-0001 RKC-GN-QC31-0001
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**2.75" DIRECT CONNECT
QUICK CHANGE ASSY**
GN-QC27-GIC27

REBUILD KITS:
RKI-GN-QC31-0001
RKC-GN-QC31-0001

TANDEM SUBS AND DETONATOR

2.75" Precision Tandem Sub Assemblies and Accessories Disposable Portless Tandem Disposable Portless Orienting Tandem Lock Ring, Left-Hand Thread (<i>for T279-A</i>) Tandem Sub Removal Tool (<i>1/2" drive socket</i>) O-Rings Nitrile (<i>Standard</i>) O-Rings Viton 95D (<i>Optional</i>)	GN-R27-T094-A GN-R27-T279-A GN-R27-L75-275 GN-SIT-2750-A OR-N569-227 OR-V95G-227
Detonating Cord	DET-80R111 (RDX) DET-80H212 (HMX)
Initiation Booster, HMX	DT-0875-400
EPIC™ Slim Detonator Module	DT-EPIC-230-R140

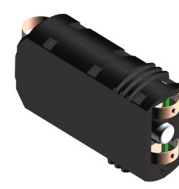
Refer to the following pages for setting tool and firing head crossover information.



**EPIC PRECISION DISPOSABLE
TANDEM SUB ASSY**
GN-R27-T094-A



**EPIC PRECISION DISPOSABLE
ORIENTING TANDEM SUB ASSY**
GN-R27-T279-A



**EPIC SLIM DETONATOR
MODULE**
DT-EPIC-230-R140

HARDWARE

Gun Body Configuration/Material	Threaded and scalloped, proprietary gun steel, similar to 41XX alloy steel
Charge Tube Type & Retention	Round steel tube strip; bend tab retention
Type of Tandem Connection	Booster to booster (no splice)
Nominal OD / Wall Thickness (in)[mm]	2.75" [69.85] / 0.313 [7.95]
Upper/Lower Thread Connections	2.375" - 8P ACME 2G



**2.75" EPIC PRECISION DISPOSABLE
TANDEM SUB ASSY**
GN-R27-T094-A



EPIC SLIM DETONATOR MODULE
DT-EPIC-230-R140



**2.75" EPIC PRECISION RFX
CARRIER ASSEMBLY**
GID27-G03 (SHOWN)

MULTIPLE SHOT AND
PHASING OPTIONS AVAILABLE



**2.75" EPIC PRECISION DISPOSABLE
TANDEM SUB ASSY**
GN-R27-T094-A



EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106



**2.75" CROSSOVER, GI BOX X
SIZE 10 SETTING TOOL**
GN-RX27-BK10-GID (SHOWN)

Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Precision RFX Ignitor Module and Setting Tool Crossovers

EPIC IGNITOR SETTING TOOL CROSSOVERS

EPIC™ Precision and EPIC™ Flex perforating systems provide reliable and efficient connections from the bottom gun to the setting tool.

The EPIC Slim Ignitor Module is a patented combination of electronics and ignitor technology, initiated by the bottom switch in the gun string. These non-addressable ignitor modules are designed to run with the EPIC™ Command Shooting Panel and are fully compatible with third-party addressable switches.

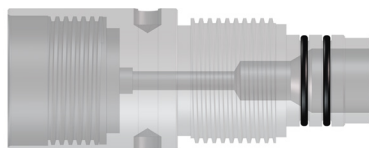
The bottom gun in the perforating string uses a disposable tandem sub to connect to the crossover and then connects directly to the setting tool.



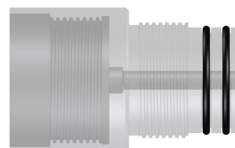
PRECISION DISPOSABLE TANDEM SUBS
GN-R27-T094-A

EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106

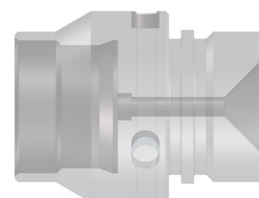
Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-3/4"	GN-RX27-BK10-GID	2.75" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX27-2500-GID	2.75" Crossover, GI Box x 2.5" Shorty	#224	2.75"
	GN-RX27-3500-GID	2.75" Crossover, GI Box x 3.5" Shorty	#332	2.83"



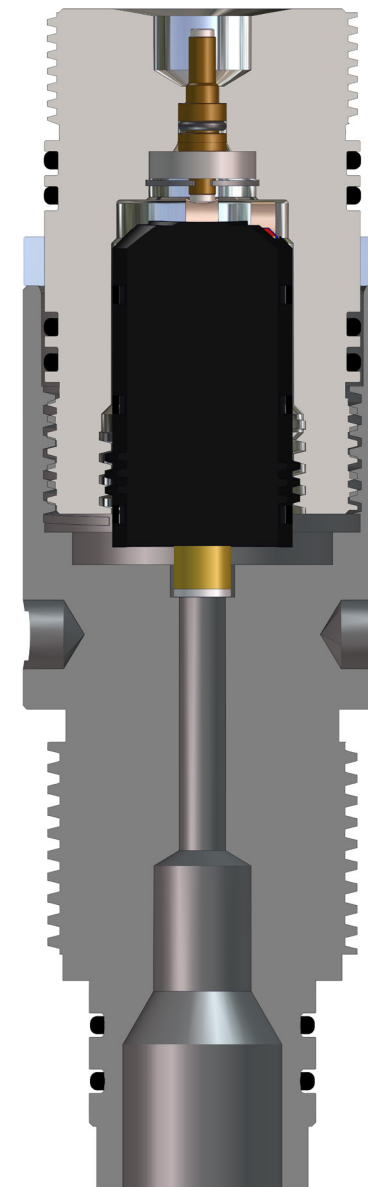
BK SIZE 10



2-1/2" SHORTY



3-1/2" SHORTY



GN-R27-T094-A, TANDEM SUB
IGN-EPIC-230-106, IGNITOR MODULE
GN-RX27-BK10-GID, CROSSOVER

Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Precision RFX Conventional Ignitor and Firing Head Crossovers

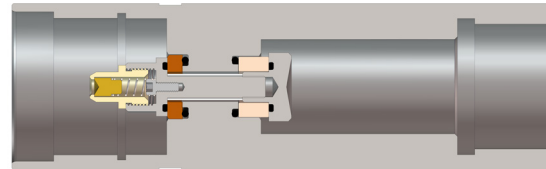
CONVENTIONAL IGNITOR FIRING HEAD CROSSEOVERS

For applications with industry-standard ignitors, 2-3/4" EPIC™ Precision, EPIC Flex, and EPIC Flex Orbit gun strings can be run with standard firing head box connections to the setting tool. The bottom gun in the perforating string uses an EPIC Flex Tandem Sub to connect with the reusable firing head crossover assembly.

Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-3/4"	GN-RX27-DB10-A	2.75" Crossover Assy, GI Box x DB10 Firing Head Box	n/a	9.03"
	GN-RX27-GO33-A	2.75" Crossover Assy, GI Box to Size 10 Setting Tool	#222	8.05"
		Assembly includes two crossover components: 2.75" GI Box x GO Box Crossover, GN-RX27-GO33 2.75" GO Firing Head Pin x Size 10 Setting Tool Crossover, GN-RX27-BK10-GO		



POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



GI BOX TO DIAMONDBACK DB10 FIRING HEAD BOX CROSSOVER
GN-RX27-DB10-A

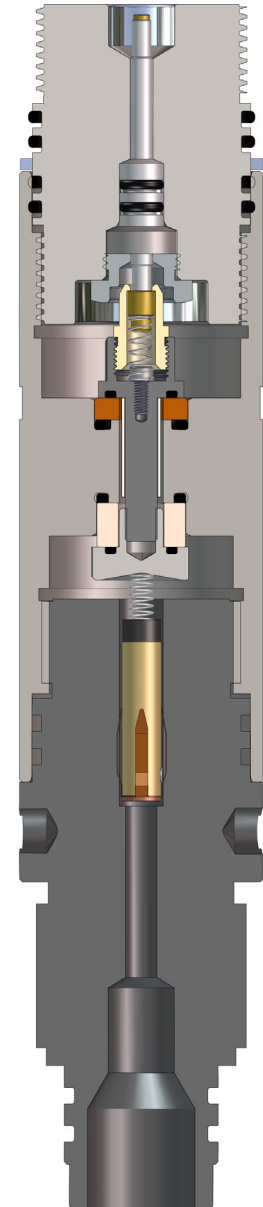
Rebuild Kits for DB10, GO33	
Partial Rebuild*	RKI-GN-RX31-GO33
Full Rebuild*	RKC-GN-RX31-GO33

[Firing head crossover rebuild kit details](#)

FLEX DISPOSABLE
TANDEM SUB
GN-R27-T078-A

GI BOX TO SIZE 10 SETTING TOOL
CROSSOVER
GN-RX27-GO33-A

POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



ADDITIONAL CROSSEOVERS AND BULL PLUG



2.75" DISPOSABLE CROSSOVER
GI PIN x 1.63" ACME BOX
GN-R27-T172-A
(QUICK CHANGE CONNECTION)



O-RING FOR THREADED INSERT
OR-N569-222

THREAD PROTECTOR (THREADED INSERT)
FOR 1.63" ACME BOX
EM-EL1-THD-GOQCP



2.75" BULL PLUG
GN-R27-STRX-BP
(BOTTOM GUN, E.G. FOR TOE
PREPS IN VERTICAL WELLS)

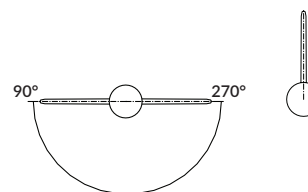
2-3/4 in (70 mm) EPIC™ Flex Orbit Specifications, GOB Self-Orienting



GEODynamics' advanced EPIC™ Flex Orbit perforating system delivers a versatile, addressable switch-ready, portless, self-orienting solution that provides high levels of precision and reliability. The open architecture design allows engineering teams to plan and complete multistage plug-and-perf operations more safely, precisely, and cost-effectively. Flex Orbit can accommodate a variety of market-leading shaped charge designs, including GEODynamics charges. GEODynamics can provide Flex Orbit fully loaded, or ready to load, and with or without an addressable switch.

APPLICATION SPECIFICATIONS

Shot Density and Phasing Options	Multiple Shot & Phasing Options
Initiation Point	Bottom-fired, Wireline
Mode of Fire	Select fire, addressable
Detonating Cord	80-grain round
Compatible Perforating Charges	FracIQ®, Connex®, Razor®, Basix™, Refrax™
Maximum Gun Swell (in)[mm]	Details available upon request



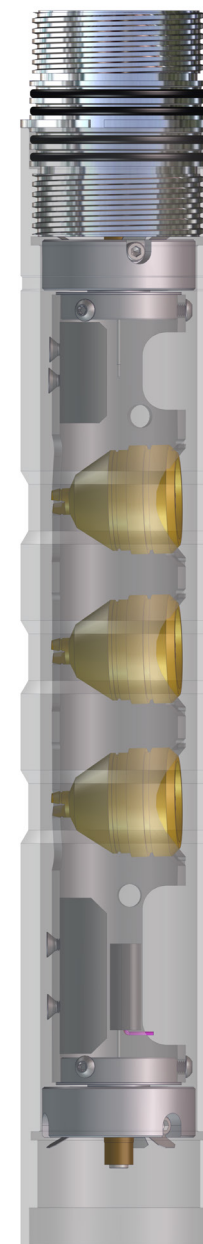
ENVIRONMENTAL

Maximum Pressure (psi)[MPa]	23,000 [158]
Maximum Tensile* (lbf)[kN]	140,000 [622] *Hardware Calculated Breaking Point

CARRIER SPECIFICATIONS

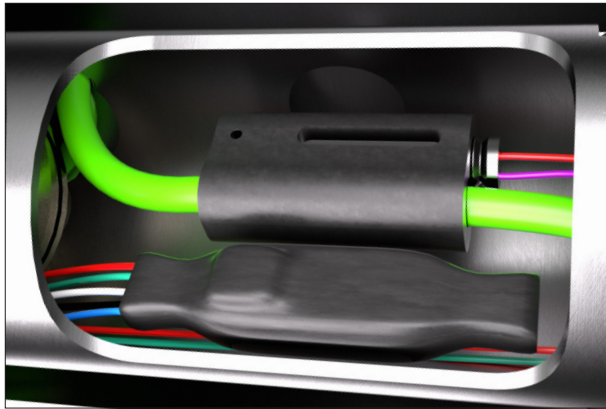
Carrier Assembly Part Number	Shot & Phasing Options		Gun Lengths		Gun End to Center of First Band		Distance Band to Band		Shipping Assy Weights (no sub)		Make-Up Lengths with Tandem Sub	
	# Shots	Phasing	(in)	(cm)	(in)	(mm)	(in)	(mm)	(lbs)	(kgs)	T078 (in)	T077 (in)
GOB27-O01	1	0°	13.2	33.5	7.19	182.63	2.4	61.0	7.9	3.6	13.33	14.10
GOB27-O02	2		15.6	39.6					8.6	3.9	15.73	16.50
GOB27-O03	3		18.0	45.7					9.3	4.2	18.13	18.90
GOB27-O04	4		20.4	51.8					10.0	4.5	20.53	21.30
GOB27-O06	6		25.2	64.0					11.4	5.2	25.33	26.10
GOB27-O08	8		30.0	76.2					12.8	5.8	30.13	30.90
GOB27-O10	10		34.8	88.4					14.2	6.4	34.93	35.70
GOB27-W02	2	90°/270°	15.6	39.6	7.19	182.63	2.4	61.0	2.8	1.3	15.73	16.50
GOB27-W04	4		20.4	51.8					4.2	1.9	20.53	21.30
GOB27-W06	6		25.2	64.0					5.6	2.5	25.33	26.10
GOB27-W08	8		30.0	76.2					7.0	3.2	30.13	30.90
GOB27-W10	10		34.8	88.4					8.4	3.8	34.93	35.70

- Additional shot and phasing options available with lead time.
- For proper weight distribution, GOB27-WXX guns require blank charge cases when loaded with an odd number of shots.
- Nitrile or Viton o-rings available with any assembly.



Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Flex Orbit Design Overview



DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

DETONATOR PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS
DET-E-A140S-CA

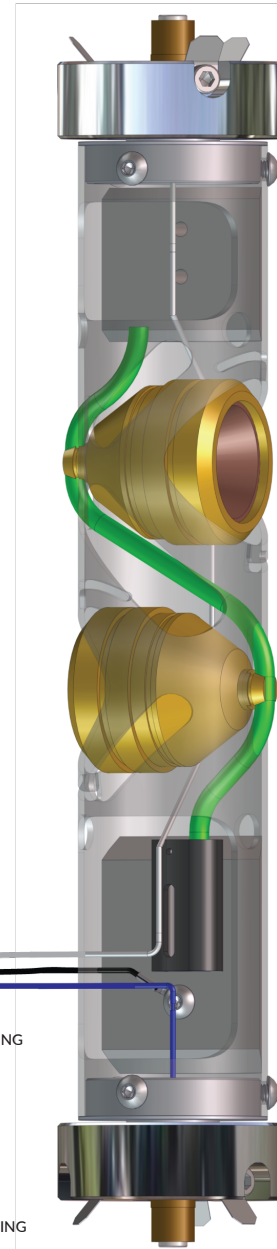
ADDRESSABLE SWITCH PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS
EL1-AL-1000-C
ASW-130-C
THIRD-PARTY ADDRESSABLE SWITCHES AVAILABLE

COMPLIANT WITH
MULTIPLE ELECTRO-MECHANICAL SYSTEMS



INTEGRATED GROUNDING

NO GUN-TO-GUN WIRING



NO GUN-TO-GUN WIRING

ALUMINUM END PLATES

LOW-FRICTION BALL BEARINGS FACILITATE
EASY ROTATIONAL POSITIONING

INTERNAL ECCENTRIC WEIGHT SYSTEM
ENABLES PRECISE SHOT PLACEMENT

COMPATIBLE WITH GEODYNAMICS'
SHAPED CHARGES AND OTHER CHARGE
MANUFACTURER TECHNOLOGIES

DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

2-3/4 in (70 mm) EPIC™ Flex Orbit

Quick Change and Tandem Subs



DIRECT CONNECT QUICK CHANGE

2.75" Direct Connect Quick Change Assy (<i>direct to top gun tandem</i>) Intermediate Rebuild Kit (<i>contacts, teflon tubing, screw, spring, insulating ret.</i>) Complete Rebuild Kit with O-Rings (<i>all required parts</i>) Direct connect quick change rebuild kit details	GN-QC27-GIC27 RKI-GN-QC31-0001 RKC-GN-QC31-0001
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TANDEM SUBS AND DETONATOR

2.75" Flex Tandem Sub Assemblies and Accessories Disposable Portless Tandem (<i>solid feed-through</i>) Reusable Portless Tandem Complete Rebuild Kit (<i>feed-through assembly, retainer nut, contact support bushing</i>) Tandem Sub Removal Tool (<i>1/2" drive socket</i>) O-Rings Nitrile (<i>Standard</i>) O-Rings Viton 95D (<i>Optional</i>)	GN-R27-T078-A GN-R27-T077-A RKC-RXX-T077 GN-SIT-2750-A OR-N569-227 OR-V95G-227
Detonator, A140S, RDX, with locking pin connectors	DET-E-A140S-CA

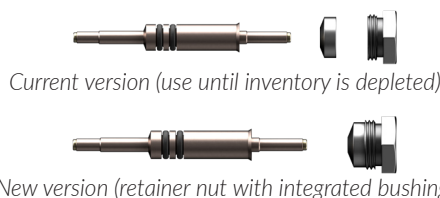
Refer to the following pages for setting tool and firing head crossover information.



FLEX DISPOSABLE
TANDEM SUB
GN-R27-T078-A



FLEX REUSABLE
TANDEM SUB
GN-R27-T077-A



FLEX REUSABLE SUB REBUILD KIT
RKC-RXX-T077

HARDWARE

Gun Body Configuration/Material	Threaded and scalloped, proprietary gun steel, similar to 41XX alloy steel
Charge Tube Type & Retention	Round steel tube strip; bend tab retention
Type of Tandem Connection	Disposable and reusable tandem subs
Nominal OD / Wall Thickness (in)[mm]	2.750 [69.85] / 0.3125 [7.94]
Upper/Lower Thread Connections	2.375" 8P ACME 2G



2.75" DIRECT CONNECT
QUICK CHANGE ASSY
GN-QC27-GIC27



2.75" EPIC FLEX DISPOSABLE
PORTLESS TANDEM SUB ASSY
GN-R27-T078-A



2.75" EPIC FLEX DISPOSABLE
PORTLESS TANDEM SUB ASSY
GN-R27-T078-A



2.75" EPIC PRECISION DISPOSABLE
PORTLESS TANDEM SUB ASSY
GN-R27-T094-A



EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106



2.75" CROSSOVER, GI BOX X
SIZE 10 SETTING TOOL
GN-RX27-BK10-GID (SHOWN)

Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Flex Orbit Ignitor Module and Setting Tool Crossovers

EPIC IGNITOR SETTING TOOL CROSSOVERS

EPIC™ Precision and EPIC™ Flex perforating systems provide reliable and efficient connections from the bottom gun to the setting tool.

The EPIC Slim Ignitor Module is a patented combination of electronics and ignitor technology, initiated by the bottom switch in the gun string. These non-addressable ignitor modules are designed to run with the EPIC™ Command Shooting Panel and are fully compatible with third-party addressable switches.

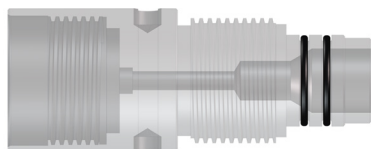
The bottom gun in the perforating string uses a disposable tandem sub to connect to the crossover and then connects directly to the setting tool.



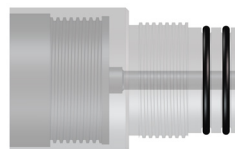
PRECISION DISPOSABLE TANDEM SUBS
GN-R27-T094-A

EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106

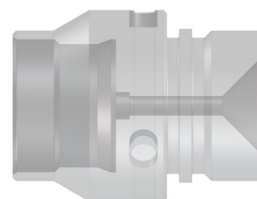
Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-3/4"	GN-RX27-BK10-GID	2.75" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX27-2500-GID	2.75" Crossover, GI Box x 2.5" Shorty	#224	2.75"
	GN-RX27-3500-GID	2.75" Crossover, GI Box x 3.5" Shorty	#332	2.83"



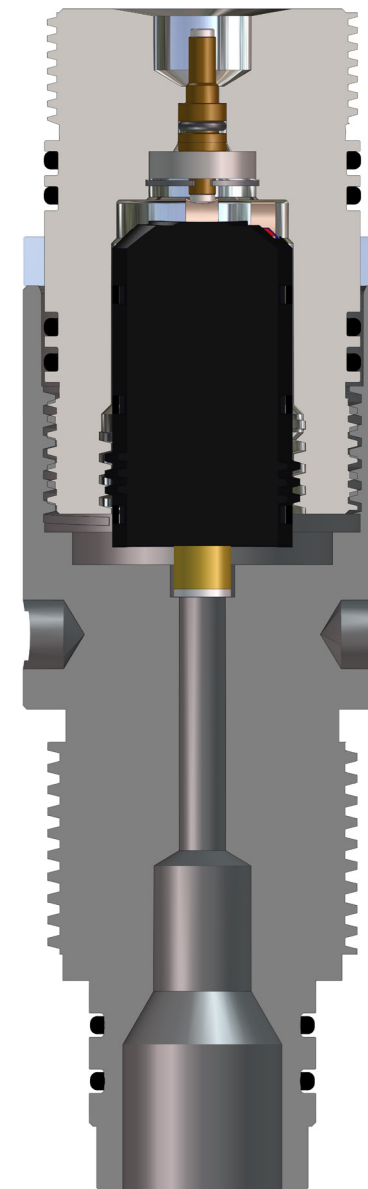
BK SIZE 10



2-1/2" SHORTY



3-1/2" SHORTY



GN-R27-T094-A, TANDEM SUB
IGN-EPIC-230-106, IGNITOR MODULE
GN-RX27-BK10-GID, CROSSOVER

Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Flex Orbit Conventional Ignitor and Firing Head Crossovers

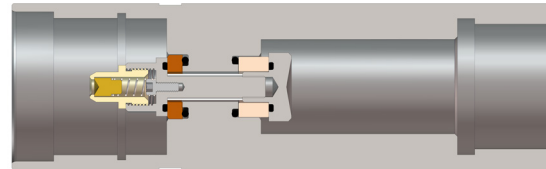
CONVENTIONAL IGNITOR FIRING HEAD CROSSOVERS

For applications with industry-standard ignitors, 2-3/4" EPIC™ Precision, EPIC Flex, and EPIC Flex Orbit gun strings can be run with standard firing head box connections to the setting tool. The bottom gun in the perforating string uses an EPIC Flex Tandem Sub to connect with the reusable firing head crossover assembly.

Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-3/4"	GN-RX27-DB10-A	2.75" Crossover Assy, GI Box x DB10 Firing Head Box	n/a	9.03"
	GN-RX27-GO33-A	2.75" Crossover Assy, GI Box to Size 10 Setting Tool	#222	8.05"
		Assembly includes two crossover components: 2.75" GI Box x GO Box Crossover, GN-RX27-GO33 2.75" GO Firing Head Pin x Size 10 Setting Tool Crossover, GN-RX27-BK10-GO		



POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



GI BOX TO DIAMONDBACK DB10 FIRING HEAD BOX CROSSOVER
GN-RX27-DB10-A

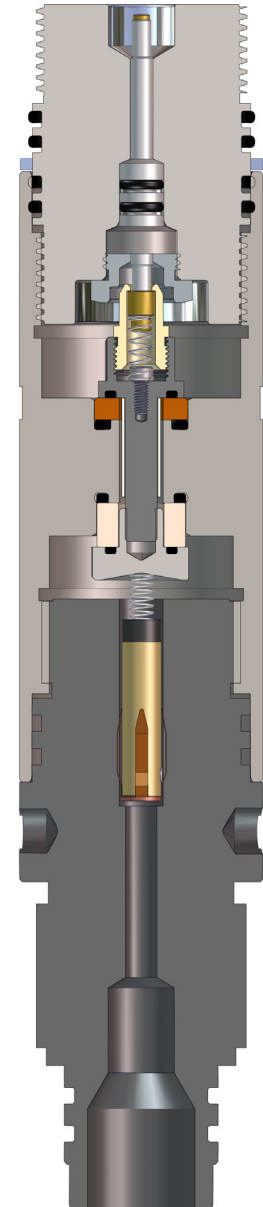
Rebuild Kits for DB10, GO33	
Partial Rebuild*	RKI-GN-RX31-GO33
Full Rebuild*	RKC-GN-RX31-GO33

[Firing head crossover rebuild kit details](#)

FLEX DISPOSABLE
TANDEM SUB
GN-R27-T078-A

GI BOX TO SIZE 10 SETTING TOOL
CROSSOVER
GN-RX27-GO33-A

POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



ADDITIONAL CROSSOVERS AND BULL PLUG



2.75" DISPOSABLE CROSSOVER
GI PIN x 1.63" ACME BOX
GN-R27-T172-A
(QUICK CHANGE CONNECTION)



O-RING FOR THREADED INSERT
OR-N569-222

THREAD PROTECTOR (THREADED INSERT)
FOR 1.63" ACME BOX
EM-EL1-THD-GOQCP



2.75" BULL PLUG
GN-R27-STRX-BP
(BOTTOM GUN, E.G. FOR TOE
PREPS IN VERTICAL WELLS)

2-3/4 in (70 mm) EPIC™ Flex RFX

Specifications, GIB Spiral Phasing



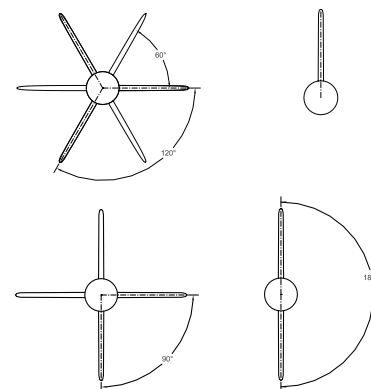
GEODynamics' advanced EPIC™ Flex RFX perforating system delivers a versatile, addressable switch-ready, portless solution that provides high levels of precision and reliability. The open architecture design allows engineering teams to plan and complete multistage plug-and-perf operations more safely, precisely, and cost-effectively. Flex RFX can accommodate a variety of market-leading shaped charge designs, including GEODynamics charges. GEODynamics can provide Flex RFX fully loaded, or ready to load, and with or without an addressable switch.

APPLICATION SPECIFICATIONS

Shot Density and Phasing Options	Multiple Shot & Phasing Options
Initiation Point	Bottom-fired, wireline
Mode of Fire	Select fire, addressable
Detonating Cord	80-grain round
Compatible Perforating Charges	FracIQ®, Connex®, Razor®, Basix™, Refrax™
Maximum Gun Swell (in)[mm]	2.91 [73.91] @ 15.0g In Fluid; 3.02 [76.20] @ 15.0g Dry

ENVIRONMENTAL

Maximum Pressure (psi)[MPa]	23,000 [158] 6 spf, 60° phasing
Maximum Tensile* (lbf)[kN]	166,700 [741] *Hardware Calculated Breaking Point

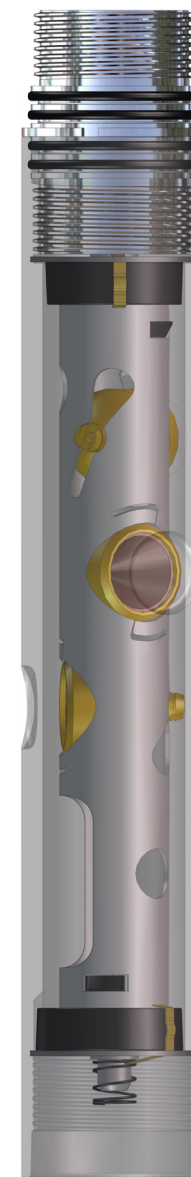


CARRIER SPECIFICATIONS

Carrier Assembly Part Number	Shot & Phasing Options		Gun Lengths		Gun End to Center of First Scallop @ 0°		Distance Shot to Shot		Shipping Assy Weights		Make-Up Lengths with T078 Tandem Subs	
	# Shots	Phasing	(in)	(cm)	(in)	(mm)	(in)	(mm)	(lbs)	(kgs)	(in)	(cm)
GIB27-O01	1	0°	11.5	29.21	7.0	177.80	N/A		7.7	3.5	11.63	29.54
GIB27-J02	2	180°	13.5	34.29			2.0	50.8	9.3	4.2	13.63	34.62
GIB27-G03	3	120°	15.5	39.37					10.9	5.0	15.63	39.70
GIB27-B04	4	90°	17.5	44.45					12.5	5.7	17.63	44.78
GIB27-A06	6	60°	21.5	54.61					15.7	7.1	21.63	54.86

Additional shot and phasing options available by special order with lead time:

- Up to 12 shots per gun with 0°, 60°, 90°, 120°, or 180° phasings (2" shot spacing (6 spf equivalent)).
- Nitrile or Viton o-rings available with any assembly.
- Contact your sales representative for additional shot and phasing options.



2-3/4 in (70 mm) EPIC™ Flex RFX

Charge Performance



CONSTANT ENTRY HOLE AND PENETRATION

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	API 19B Targeted Pipe*	Performance in Concrete		Performance in Stressed Berea		
							EHD [^] (in)[cm]	TTP (in)[cm]	EHD [^] (in)[cm]	EHD Variation Decentralized	TTP (in)[cm]
2-3/4" 11g-15g	FracIQ 30	EC2-27A1171	Fluid	11.0g, RDX	6 spf / 60°	4-1/2" OD P110	0.30 [0.76]	13.0 [33.02]	0.30 [0.76]	2.7 %	5.0 [12.70]
	FracIQ 35	EC2-27A1271		12.0g, RDX			0.35 [0.89]		0.35 [0.89]	5.9 %	
	FracIQ 40	EC2-27A1571		15.0g, RDX			0.40 [1.02]		0.40 [1.02]	6.3 %	

DEEP PENETRATING/EXTREME DEEP PENETRATING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea	
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD [^] (in)[cm]	TTP (in)[cm]
2-3/4" 15g	2715 Connex SDP	EC2-27A1521-RC	In Fluid or Dry	15.0g, RDX	6 spf / 60°	4-1/2" 11.6# L-80			0.30 [0.76]	11.70 [29.72]
		EC2-27A1522-RC		15.0g, HMX					0.31 [0.79]	12.18 [30.94]
	2715 Razor XDP	EC2-27A1521		15.0g, RDX			0.39 [0.99]	37.45 [95.12]		
		EC2-27A1522		15.0g, HMX			0.39 [0.99]	37.45 [95.12]		
		EC2-27A1523		15.0g, HNS					0.31 [0.79]	10.50 [26.67]
		EC2-27A1521-E		15.0g, RDX			0.39 [0.99]	31.80 [80.77]	0.32 (0.81)	9.40 [23.88]
	2715 Basix XDP	EC2-27A1522-E		15.0g, HMX			0.38 [0.97]	32.75 [83.19]	0.35 [0.89]	10.60 [26.92]

DUAL CASING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Inner Casing		Outer Casing	
						O.D./Material	EHD (in)[cm]	O.D./Material	EHD (in)[cm]
2-3/4" 11g-15g	2711 Refrax	EC2-27A1171-R	Fluid	11.0g, RDX	6 spf / 60°	4" P110	0.29-0.30 [0.74-0.76]	5-1/2" P110	0.37-0.41 [0.94-1.04]
	2715 Refrax	EC2-27A1571-R		15.0g, RDX			0.34-0.36 [0.86-0.91]		0.34-0.42 [0.86-1.07]

Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, casing weight, and casing grade specified.

[^]EHD performance in stressed berea represents API RP19B Section 2 testing results with casing flat metal plate equivalent to 0.500" 120KSI yield and penetration (TTP) in stressed berea rock.

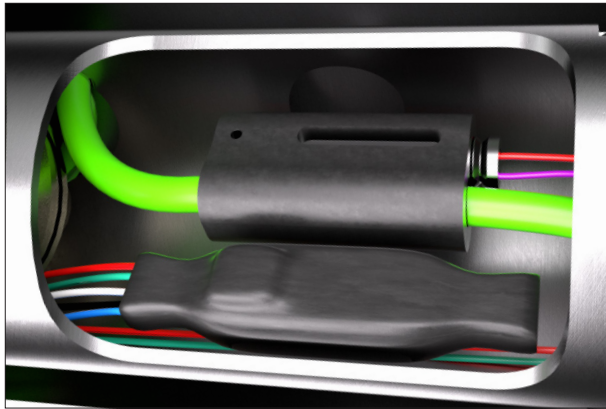
FLUID: Qualified for shooting in FLUID only with perforating systems qualified by GEODynamics.

IN FLUID or DRY: Qualified for shooting in FLUID or DRY GAS with perforating systems qualified by GEODynamics.

Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Flex RFX

Design Overview



DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

DETONATOR PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS

DET-E-A140S-CA

DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

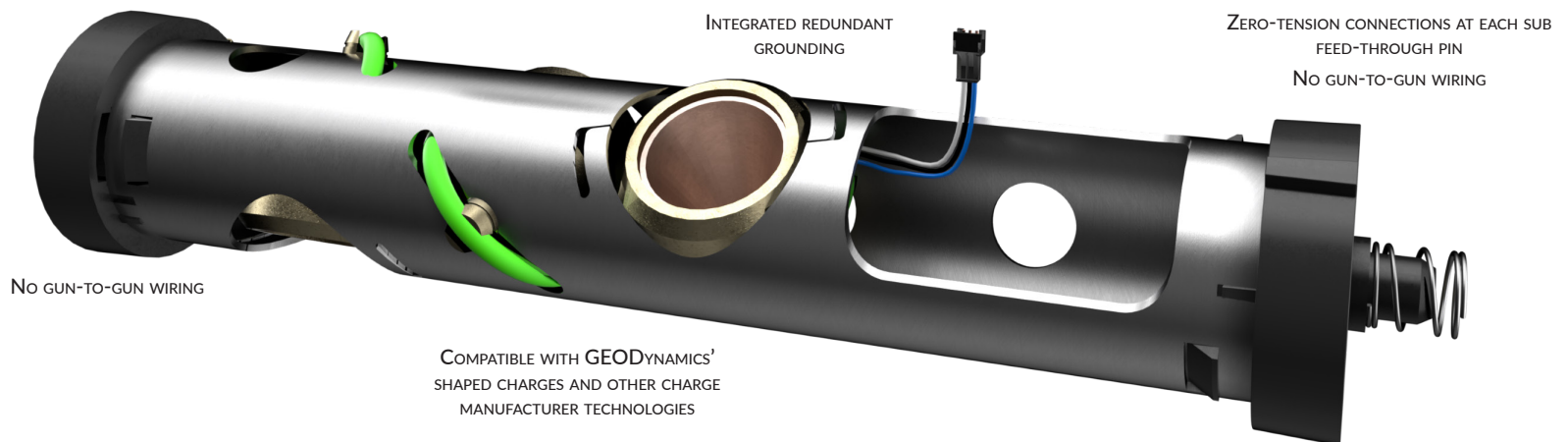


COMPLIANT WITH
MULTIPLE ELECTRO-MECHANICAL SYSTEMS

ADDRESSABLE SWITCH PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS

EL1-AL-1000-C
ASW-130-C

THIRD-PARTY ADDRESSABLE SWITCHES AVAILABLE



INTEGRATED REDUNDANT
GROUNDING

ZERO-TENSION CONNECTIONS AT EACH SUB
FEED-THROUGH PIN
NO GUN-TO-GUN WIRING

NO GUN-TO-GUN WIRING

COMPATIBLE WITH GEODYNAMICS'
SHAPED CHARGES AND OTHER CHARGE
MANUFACTURER TECHNOLOGIES

2-3/4 in (70 mm) EPIC™ Flex RFX

Quick Change and Tandem Subs



DIRECT CONNECT QUICK CHANGE

2.75" Direct Connect Quick Change Assy (<i>direct to top gun tandem</i>) Intermediate Rebuild Kit (<i>contacts, teflon tubing, screw, spring, insulating ret.</i>) Complete Rebuild Kit with O-Rings (<i>all required parts</i>) Direct connect quick change rebuild kit details	GN-QC27-GIC27 RKI-GN-QC31-0001 RKC-GN-QC31-0001
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TANDEM SUBS AND DETONATOR

2.75" Flex Tandem Sub Assemblies and Accessories Disposable Portless Tandem (<i>solid feed-through</i>) Reusable Portless Tandem Complete Rebuild Kit (<i>feed-through assembly, retainer nut, contact support bushing</i>) Tandem Sub Removal Tool (<i>1/2" drive socket</i>) O-Rings Nitrile (<i>Standard</i>) O-Rings Viton 95D (<i>Optional</i>)	GN-R27-T078-A GN-R27-T077-A RKC-RXX-T077 GN-SIT-2750-A OR-N569-227 OR-V95G-227
Detonator, A140S, RDX, with locking pin connectors	DET-E-A140S-CA

Refer to the following pages for setting tool and firing head crossover information.



FLEX DISPOSABLE
TANDEM SUB
GN-R27-T078-A



FLEX REUSABLE
TANDEM SUB
GN-R27-T077-A



Current version (use until inventory is depleted)
New version (retainer nut with integrated bushing)
FLEX REUSABLE SUB REBUILD KIT
RKC-RXX-T077

HARDWARE

Gun Body Configuration/Material	Threaded and scalloped, proprietary gun steel, similar to 41XX alloy steel
Charge Tube Type & Retention	Round steel tube strip; bend tab retention
Type of Tandem Connection	Disposable and reusable tandem subs
Nominal OD / Wall Thickness (in)[mm]	2.75" [69.85] / 0.313 [7.95]
Upper/Lower Thread Connections	2.375" - 8P ACME 2G



2.75" DIRECT CONNECT
QUICK CHANGE ASSY
GN-QC27-GIC27



2.75" EPIC FLEX DISPOSABLE
PORTLESS TANDEM SUB ASSY
GN-R27-T078-A



2.75" EPIC FLEX RFX
CARRIER ASSEMBLY
GIB27-G03 (SHOWN)

MULTIPLE SHOT AND PHASING
OPTIONS AVAILABLE



2.75" EPIC PRECISION DISPOSABLE
PORTLESS TANDEM SUB ASSY
GN-R27-T094-A



EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106



2.75" CROSSOVER, GI BOX x
SIZE 10 SETTING TOOL
GN-RX27-BK10-GID (SHOWN)

Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Flex RFX Ignitor Module and Setting Tool Crossovers

EPIC IGNITOR SETTING TOOL CROSSOVERS

EPIC™ Precision and EPIC™ Flex perforating systems provide reliable and efficient connections from the bottom gun to the setting tool.

The EPIC Slim Ignitor Module is a patented combination of electronics and ignitor technology, initiated by the bottom switch in the gun string. These non-addressable ignitor modules are designed to run with the EPIC™ Command Shooting Panel and are fully compatible with third-party addressable switches.

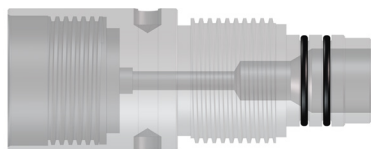
The bottom gun in the perforating string uses a disposable tandem sub to connect to the crossover and then connects directly to the setting tool.



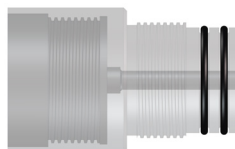
PRECISION DISPOSABLE TANDEM SUBS
GN-R27-T094-A

EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106

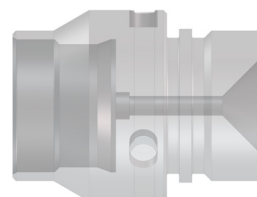
Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-3/4"	GN-RX27-BK10-GID	2.75" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX27-2500-GID	2.75" Crossover, GI Box x 2.5" Shorty	#224	2.75"
	GN-RX27-3500-GID	2.75" Crossover, GI Box x 3.5" Shorty	#332	2.83"



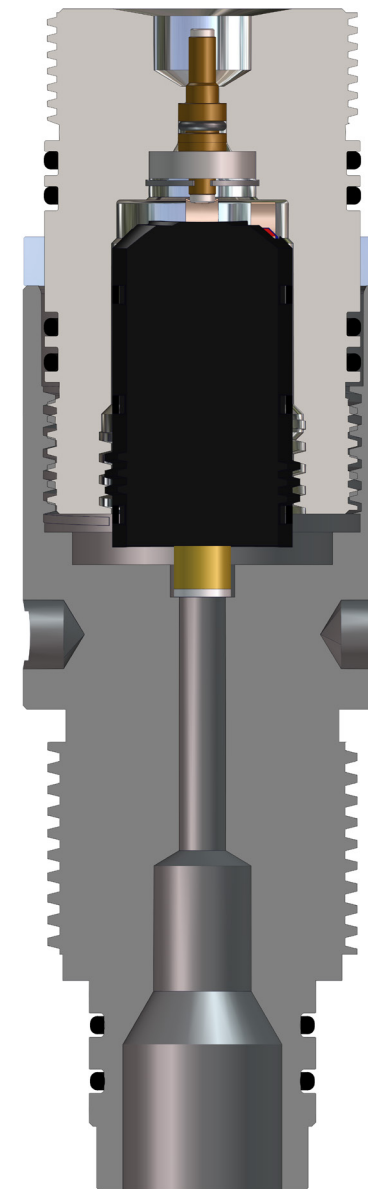
BK SIZE 10



2-1/2" SHORTY



3-1/2" SHORTY



GN-R27-T094-A, TANDEM SUB
IGN-EPIC-230-106, IGNITOR MODULE
GN-RX27-BK10-GID, CROSSOVER

Revised: May 7, 2026 10:27 AM

2-3/4 in (70 mm) EPIC™ Flex RFX Conventional Ignitor and Firing Head Crossovers

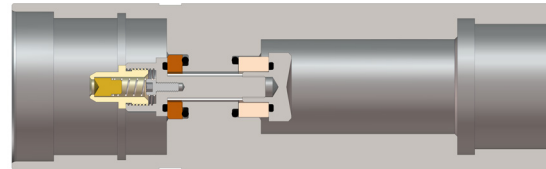
CONVENTIONAL IGNITOR FIRING HEAD CROSSEOVERS

For applications with industry-standard ignitors, 2-3/4" EPIC™ Precision, EPIC Flex, and EPIC Flex Orbit gun strings can be run with standard firing head box connections to the setting tool. The bottom gun in the perforating string uses an EPIC Flex Tandem Sub to connect with the reusable firing head crossover assembly.

Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-3/4"	GN-RX27-DB10-A	2.75" Crossover Assy, GI Box x DB10 Firing Head Box	n/a	9.03"
	GN-RX27-GO33-A	2.75" Crossover Assy, GI Box to Size 10 Setting Tool	#222	8.05"
		Assembly includes two crossover components: 2.75" GI Box x GO Box Crossover, GN-RX27-GO33 2.75" GO Firing Head Pin x Size 10 Setting Tool Crossover, GN-RX27-BK10-GO		



POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



GI BOX TO DIAMONDBACK DB10 FIRING HEAD BOX CROSSOVER
GN-RX27-DB10-A

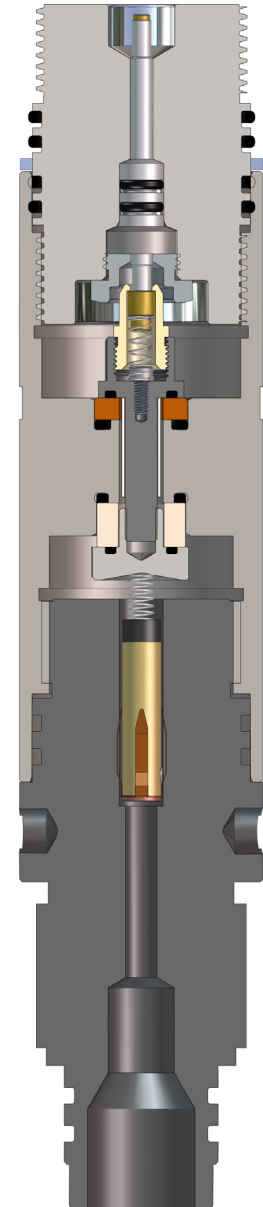
Rebuild Kits for DB10, GO33	
Partial Rebuild*	RKI-GN-RX31-GO33
Full Rebuild*	RKC-GN-RX31-GO33

[Firing head crossover rebuild kit details](#)

FLEX DISPOSABLE
TANDEM SUB
GN-R27-T078-A

GI BOX TO SIZE 10 SETTING TOOL
CROSSOVER
GN-RX27-GO33-A

POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



ADDITIONAL CROSSEOVERS AND BULL PLUG



2.75" DISPOSABLE CROSSOVER
GI PIN x 1.63" ACME BOX
GN-R27-T172-A
(QUICK CHANGE CONNECTION)



O-RING FOR THREADED INSERT
OR-N569-222

THREAD PROTECTOR (THREADED INSERT)
FOR 1.63" ACME BOX
EM-EL1-THD-GOQCP



2.75" BULL PLUG
GN-R27-STRX-BP
(BOTTOM GUN, E.G. FOR TOE
PREPS IN VERTICAL WELLS)

3-1/8 in (79mm) EPIC™ Precision Specifications, GID Spiral Phasing

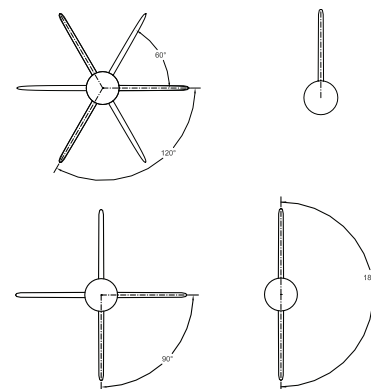
GEODynamics' advanced EPIC™ Precision offers a factory-loaded, plug-and-play, limited entry perforating system for unconventional reservoirs. Precision integrates EPIC™ slim U addressable switch technology with industry-standard detonator options into a programmable detonator module, delivering an intrinsically-safe, deployment-ready design. Quick and simple gun-string assembly saves time and increases efficiencies at the wellsite. GEODynamics delivers EPIC Precision carriers fully loaded to match customer specifications and preferences.

APPLICATION SPECIFICATIONS

Shot Density and Phasing Options	Multiple Shot & Phasing Options
Initiation Point	Top-fired, wireline
Mode of Fire	Select fire, addressable
Detonating Cord	80-grain round, factory-loaded
Compatible Perforating Charges	FracIQ®, Connex®, Razor®, Basix™, Basix Frac, Refrax™
Maximum Gun Swell (in)[mm]	3.46 [87.88] @ 22.7g In Fluid; 3.60 [91.44] @ 19.0g Dry

ENVIRONMENTAL

Maximum Pressure (psi)[MPa]	20,000 [137.90]
Maximum Tensile* (lbf)[kN]	140,000 [622.75] *Hardware Calculated Breaking Point



CARRIER SPECIFICATIONS

Carrier Assembly Part Number	Shot & Phasing Options		Gun Lengths		Gun End to Center of First Scallop @ 0°		Distance Shot to Shot		Gross Weights (Fully Loaded Gun)		Make-Up Lengths with T094 Tandem Sub	
	# Shots	Phasing	(in)	(cm)	(in)	(mm)	(in)	(mm)	(lbs)	(kgs)	(in)	(cm)
GID31-001-P	1	0°	9.5	24.1	5.42	137.67	N/A		12.1	5.5	9.88	25.10
GID31-J02-P	2	180°	12.3	31.2			2.4	61.0	14.2	6.4	11.88	30.18
GID31-G03-P	3	120°	13.5	34.3			2.0	50.8	16.2	7.4	13.88	35.26
GID31-B04-P	4	90°	15.5	39.4					18.3	8.3	15.88	40.34
GID31-A06-P	6	60°	19.5	49.5					22.5	10.2	19.88	50.50

The -P part number suffix applies to the 3-1/8" OD version only.

Additional shot and phasing options available by special order with lead time:

- Up to 10 shots per gun with 0° phasing (2.4" shot spacing (5 spf equivalent)).
- Up to 12 shots per gun with 180° phasing (2.4" shot spacing (5 spf equivalent)).
- Up to 12 shots per gun with 60°, 90°, or 120° phasings (2" shot spacing (6 spf equivalent)).
- Nitrile or Viton o-rings available with any assembly.
- Contact your sales representative for additional shot and phasing options.



3-1/8 in (79mm) EPIC™ Precision Charge Performance



CONSTANT ENTRY HOLE AND PENETRATION

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	API 19B Targeted Pipe*	Performance in Concrete		Performance in Stressed Berea		
							EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	EHD Variation Decentralized	TTP (in)[cm]
3-1/8" 12g-13g	FracIQ 20	EC2-33A1271-G	Fluid	12.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110	0.22 [0.56]	13.0 [33.02]	0.22 [0.56]	5.5%	5.0 [12.70]
	Basix Frac 25	EC2-33A1271-BFG		12.0g, RDX			0.26 [0.66]	12.0 [30.48]	0.26 [0.66]	2.4 %	4.0 [10.16]
	FracIQ 25	EC2-33A1371-G		13.0g, RDX			0.26 [0.66]	13.0 [33.02]	0.26 [0.66]	4.1 %	5.0 [12.70]
3-1/8" 13g-16g	FracIQ Connex 30 †	EC2-33A1471-FRX	Fluid	14.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110			0.31 [0.79]	6.0 %	5.0 [12.70]
	Basix Frac 30	EC2-33A1471-BFG		14.0g, RDX			0.31 [0.79]	12.0 [30.48]	0.31 [0.79]	4.0 %	4.0 [10.16]
	FracIQ 30	EC2-33A1671 ‡		16.0g, RDX			0.31 [0.79]	13.0 [33.02]	0.31 [0.79]	3.1 %	5.0 [12.70]
	FracIQ 30	EC2-33A1672 ‡		16.0g, HMX			0.34 [0.86]		0.34 [0.86]	3.8 %	
3-1/8" 16g-20g	FracIQ Connex 35 †	EC2-33A1671-FRX	Fluid	16.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110			0.36 [0.91]	5.0 %	5.0 [12.70]
	Basix Frac 35	EC2-33A1871-BFG		18.0g, RDX			0.36 [0.91]	12.0 [30.48]	0.36 [0.91]	3.4 %	4.0 [10.16]
	FracIQ 35	EC2-33A2071 ‡		20.0g, RDX			0.36 [0.91]	13.0 [33.02]	0.36 [0.91]	2.5 %	5.0 [12.70]
	FracIQ 35	EC2-33A2072 ‡		20.0g, HMX			0.37 [0.94]		0.37 [0.94]	3.0 %	
3-1/8" 19g-23g	FracIQ Connex 40 †	EC2-33A1971-FRX	Fluid	19.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110			0.41 [1.04]	6.5 %	5.0 [12.70]
	FracIQ 40	EC2-33A2371 ‡		23.0g, RDX			0.40 [1.02]	13.0 [33.02]	0.40 [1.02]	3.3 %	
	FracIQ 40	EC2-33A2372 ‡		23.0g, HMX			0.41 [1.04]		0.41 [1.04]	3.8 %	
	Basix Frac 40	EC2-33A2371-BFG		23.0g, RDX		6" OD, P110	0.40 [1.02]	12.0 [30.48]	0.40 [1.02]	6.6 %	4.0 [10.16]
	Basix Frac 40	EC2-33A2371-BFG		23.0g, RDX			0.40 [1.02]		0.40 [1.02]	7.5 %	
	Basix Frac 40	EC2-33A2372-BFG		23.0g, HMX		4-1/2" - 5-1/2" OD, P110					
3-1/8" 20g-23g	FracIQ 45	EC2-33A2071-45G	Fluid	20.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110	0.45 [1.14]	13.0 [33.02]	0.45 [1.14]	5.6 %	5.0 [12.70]
	FracIQ Connex 45 †	EC2-33A2371-FRX		21.0g, RDX					0.45 [1.14]	3.2 %	
	Basix Frac 45	EC2-33A2371-BF45G		23.0g, RDX			0.45 [1.14]	12.0 [30.48]	0.45 [1.14]	5.9 %	4.0 [10.16]
3-1/8" 23g	FracIQ 50	EC2-33A2371-50 ‡ ‡‡ EC2-33A2371-50G	Fluid	23.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110	0.50 [1.27]	13.0 [33.02]	0.50 [1.27]	1.5 %	5.0 [12.70]
	FracIQ 50	EC2-33A2372-RX		23.0g, HMX		5-1/2" OD, P110	0.50 [1.27]		0.50 [1.27]	4.6 %	
	Basix Frac 50	EC2-33A2371-BF50G		23.0g, RDX		4-1/2" - 5-1/2" OD, P110	0.50 [1.27]	12.0 [30.48]	0.50 [1.27]	4.8 %	4.0 [10.16]
	FracIQ 55	EC2-33A2371-55G		23.0g, RDX		4-1/2" OD, P110	0.55 [1.40]	13.0 [33.02]	0.55 [1.40]	3.8 %	5.0 [12.70]

†FracIQ® Connex® charges (P/Ns ending with -FRX) combine FracIQ technology with Connex Clean Perforation Technology to achieve a constant hole size and tunnel cleaning action in one charge.

‡ These FracIQ charges are also available with a custom, externally-grooved case for special applications (example P/Ns: EC2-33A2371-G and EC2-33A2371-50G).

*3-1/8" FracIQ charge performance is compatible in 4.5" 11.6-15.1# and 5.5" 17-23# P-110 casing.

Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, casing weight, and casing grade specified.

^EHD performance in stressed berea represents API RP19B Section 2 testing results with casing flat metal plate equivalent to 0.500" 120KSI yield and penetration (TTP) in stressed berea rock.

3-1/8 in (79mm) EPIC™ Precision Charge Performance



BIG HOLE

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea	
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	TTP (in)[cm]
3-1/8" 23g	3323 Basix BH	EC2-33A2331	Fluid	22.7g, RDX	6 spf / 60°	4-1/2" 11.6# L-80	0.78 [1.98]	7.60 [19.30]		
		EC2-33A2332		22.7g, HMX			0.79 [2.01]	7.80 [19.81]		

DEEP PENETRATING/EXTREME DEEP PENETRATING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea	
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	TTP (in)[cm]
3-1/8" 19g	3319 Connex RX	EC2-33A1991-RX	‡ Fluid or Dry	19.0g, RDX	5 spf / 60° (Dry) 6 spf / 60° (Fluid)	4-1/2" 11.6# L-80			0.32 [0.81]	11.30 [28.70]
		EC2-33A1992-RX		19.0g, HMX					0.32 [0.81]	11.60 [29.46]
	3319 Razor XDP	EC2-33A1921	‡ Fluid or Dry	19.0g, RDX			0.51 [1.30]	42.10 [106.93]		
		EC2-33A1922		19.0g, HMX			0.49 [1.24]	41.10 [104.39]	0.43 [1.09]	14.60 [37.08]
	3319 Basix XDP	EC2-33A1921-EG	‡ Fluid or Dry	19.0g, RDX			0.43 [1.09]	35.80 [90.93]		
		EC2-33A1922-EG		19.0g, HMX						
	3319 Basix XDP	EC2-33A1921-EG	Fluid	19.0g, RDX			0.43 [1.09]	35.70 [90.68]		
		EC2-33A1922-EG		19.0g, HMX			0.54 [1.37]	29.20 [74.17]		
	3319 Basix DP	EC2-33A1951	‡ Fluid or Dry	19.0g, RDX						
		EC2-33A1952		19.0g, HMX						
3-1/8" 23g	3323 Connex SDP	EC2-33A2321-RC	Fluid	22.7g, RDX	6 spf / 60°	4-1/2" 11.6# L-80			0.40 [1.02]	15.60 [39.62]
		EC2-33A2322-RC		22.7g, HMX					0.46 [1.17]	15.31 [38.89]
		EC2-33A2323-RC		22.7g, HNS					0.36 [0.91]	11.85 [30.10]
	3323 Razor XDP	EC2-33A2321		22.7g, RDX					0.41 [1.04]	16.40 [41.66]
		EC2-33A2322		22.7g, HMX			0.42 [1.07]	39.02 [99.11]	0.44 [1.12]	15.68 [39.83]
		EC2-33A2323		22.7g, HNS			0.35 [0.89]	26.05 [66.17]	0.37 [0.94]	12.12 [30.78]
	3323 Basix XDP	EC2-33A2321-EG		22.7g, RDX			0.42 [1.07]	46.00 [116.84]	0.39 [0.99]	12.30 [31.24]
		EC2-33A2322-EG		22.7g, HMX					0.41 [1.04]	11.90 [30.23]
		EC2-33A2322-EG		22.7g, HMX			0.43 [1.09]	46.37 [117.78]		
		EC2-33A2322-EG		22.7g, HMX			0.43 [1.09]	45.70 [116.08]	0.40 [1.02]	11.90 [30.23]

‡ For 3-1/8" 19g in dry gas, maximum shot density is 5 spf or limited to one- (1) and two- (2) shot short guns only.

Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, casing weight, and casing grade specified.

^EHD performance in stressed berea represents API RP19B Section 2 testing results with casing flat metal plate equivalent to 0.500" 120KSI yield and penetration (TTP) in stressed berea rock.

FLUID: Qualified for shooting in FLUID only with perforating systems qualified by GEODynamics.

IN FLUID or DRY: Qualified for shooting in FLUID or DRY GAS with perforating systems qualified by GEODynamics.

Revised: May 7, 2026 10:44 AM

3-1/8 in (79mm) EPIC™ Precision Charge Performance



DUAL CASING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Inner Casing		Outer Casing	
						O.D./Material	EHD (in)[cm]	O.D./Material	EHD (in)[cm]
3-1/8" 14g-23g	3314 Refrax	EC2-33A1471-D	Fluid	14.0g, RDX	6 spf / 60°	Expanded 4" P110	0.33-0.33 [0.84-0.84]	5-1/2 P110	0.30-0.30 [0.76-0.76]
	3316 Refrax	EC2-33A1671-D		16.0g, RDX			0.37-0.38 [0.94-0.95]		0.35-0.35 [0.89-0.89]
	3320 Refrax	EC2-33A2071-D		20.0g, RDX			0.41-0.42 [1.04-1.07]		0.40-0.40 [1.02-1.02]
	3316 Refrax	EC2-33A1671-D		16.0g, RDX	6 spf / 60°	4-1/2" P110	0.30-0.32 [0.76-0.81]	7.0" P110	0.39-0.41 [0.99-1.04]
	3323 Refrax	EC2-33A2371-D		23.0g, RDX			0.41-0.42 [1.04-1.07]		0.35-0.35 [0.89-0.89]

GOOD HOLE

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea	
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	TTP (in)[cm]
3-1/8" 19g	3319 Connex XEH	EC2-33A1941-RC	‡ Fluid or Dry	19.0g, RDX	5 spf / 60° (Dry) 6 spf / 60° (Fluid)	4-1/2" 11.6# L-80			0.41 [1.04]	14.20 [36.07]
		EC2-33A1942-RC		19.0g, HMX					0.42 [1.07]	14.37 [36.50]
	3319 Basix GH	EC2-33A1941		19.0g, RDX			0.60 [1.52]	28.60 [72.64]		
		EC2-33A1942		19.0g, HMX						
3-1/8" 23g	3323 Connex XEH	EC2-33A2341-RC	Fluid	22.7g, RDX	6 spf / 60°	4-1/2"			0.43 [1.09]	15.60 [39.62]
		EC2-33A2342-RC		22.7g, HMX					0.43 [1.09]	15.89 [40.36]
	3323 Basix GH	EC2-33A2341-EG		22.7g, RDX		5-1/2" 17.0# L-80	0.43 [1.09]	44.0 [111.76]		
		EC2-33A2342-EG		22.7g, HMX		4-1/2"				

‡ For 3-1/8" 19g in dry gas, maximum shot density is 5 spf or limited to one- (1) and two- (2) shot short guns only.

Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, casing weight, and casing grade specified.

^EHD performance in stressed berea represents API RP19B Section 2 testing results with casing flat metal plate equivalent to 0.500" 120KSI yield and penetration (TTP) in stressed berea rock.

FLUID: Qualified for shooting in FLUID only with perforating systems qualified by GEODynamics.

IN FLUID or DRY: Qualified for shooting in FLUID or DRY GAS with perforating systems qualified by GEODynamics.

Revised: May 7, 2026 10:44 AM

3-1/8 in (79mm) EPIC™ Precision Design Overview



3-1/8 in (79mm) EPIC™ Precision Quick Change and Tandem Subs



DIRECT CONNECT QUICK CHANGE

3.13" Direct Connect Quick Change Assy (*direct to top gun tandem*)
Intermediate Rebuild Kit (*contacts, teflon tubing, screw, spring, insulating ret.*)
Complete Rebuild Kit with O-Rings (*all required parts*)
[Direct connect quick change rebuild kit details](#)

GN-QC31-GIC31
RKI-GN-QC31-0001
RKC-GN-QC31-0001



**3.13" DIRECT CONNECT
QUICK CHANGE ASSY**
GN-QC31-GIC31

REBUILD KITS:
RKI-GN-QC31-0001
RKC-GN-QC31-0001

TANDEM SUBS AND DETONATOR

3.13" Precision Tandem Sub Assemblies and Accessories

Disposable Portless Tandem
Disposable Portless Orienting Tandem
Lock Ring, Left-Hand Thread (*for T294-A*)
Tandem Sub Removal Tool (*1/2" drive socket*)
O-Rings Nitrile (*Standard*)
O-Rings Viton 95D (*Optional*)

GN-R31-T094-A
GN-R31-T294-A
GN-R31-L75-320
GN-SIT-3125-A
OR-N569-230
OR-V95G-230

Detonating Cord

DET-80R111 (RDX)
DET-80H212 (HMX)

Initiation Booster, HMX

DT-0875-400

EPIC™ Slim Detonator Module

DT-EPIC-230-R140

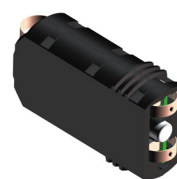
Refer to the following pages for setting tool and firing head crossover information.



**EPIC PRECISION DISPOSABLE
TANDEM SUB ASSY**
GN-R31-T094-A



**EPIC PRECISION DISPOSABLE
ORIENTING TANDEM SUB ASSY**
GN-R31-T294-A



**EPIC SLIM DETONATOR
MODULE**
DT-EPIC-230-R140

HARDWARE

Gun Body Configuration/Material

Threaded and scalloped, proprietary gun steel, similar to 41XX alloy steel

Charge Tube Type & Retention

Round steel tube strip; bend tab retention

Type of Tandem Connection

Disposable switch tandem sub

Nominal OD / Wall Thickness (in)[mm]

3.15 [80.01] / 0.315 [8.00] or 3.125 [79.38] / 0.3125 [7.94]

Upper/Lower Thread Connections

2.750" 6P ACME-2G



**3.13" EPIC PRECISION DISPOSABLE
TANDEM SUB ASSY**
GN-R31-T094-A



EPIC SLIM DETONATOR MODULE
DT-EPIC-230-R140



**3.13" EPIC PRECISION
CARRIER ASSEMBLY**
GID31-G03 (SHOWN)

MULTIPLE SHOT AND
PHASING OPTIONS AVAILABLE



**3.13" EPIC PRECISION DISPOSABLE
TANDEM SUB ASSY**
GN-R31-T094-A



EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106



**3.13" CROSSOVER, GI BOX x
SIZE 20 SETTING TOOL**
GN-RX31-BK20-GIC (SHOWN)

Revised: May 7, 2026 10:44 AM

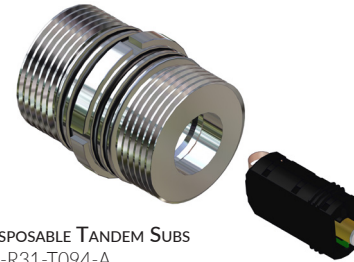
3-1/8 in (79mm) EPIC™ Precision Ignitor Module and Setting Tool Crossovers

EPIC IGNITOR SETTING TOOL CROSSOVERS

EPIC™ Precision and EPIC™ Flex perforating systems provide reliable and efficient connections from the bottom gun to the setting tool.

EPIC Ignitor Modules are a patented combination of electronics and ignitor technology, initiated by the bottom switch in the gun string. These non-addressable ignitor modules are designed to run with the EPIC™ Command Shooting Panel and are fully compatible with third-party addressable switches.

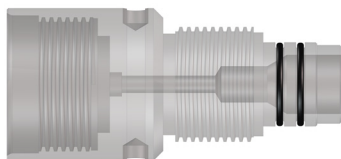
The bottom gun in the perforating string uses a disposable tandem sub to connect to the crossover and then connects directly to the setting tool.



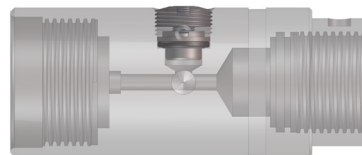
PRECISION DISPOSABLE TANDEM SUBS
GN-R31-T094-A

EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106

Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
3-1/8"	GN-RX31-BK10-GIC	3.13" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX31-BK20-GIC	3.13" Crossover, GI Box x Size 20	#328	3.00"
	GN-RX31-3625-GIC	† 3.13" Crossover, GI Box x 3.63" Compact	#226	6.53"
	GN-RX31-3500-GIC	3.13" Crossover, GI Box x 3.5" Shorty	#332	3.00"
	GN-RX31-DB20-GIC	3.13" Crossover, GI Box x Diamondback	n/a	5.67"

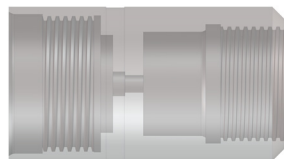


BK SIZE 10

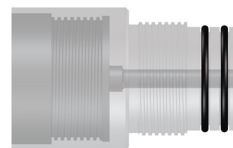


3-5/8" COMPACT †

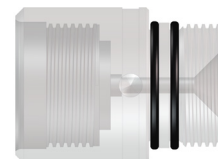
† BLEEDER VALVE COMPONENTS
BRASS RUPTURE DISC: ST-0000-001
BLEEDER NUT: 025-1020-001
O-RING: OR-N569-213



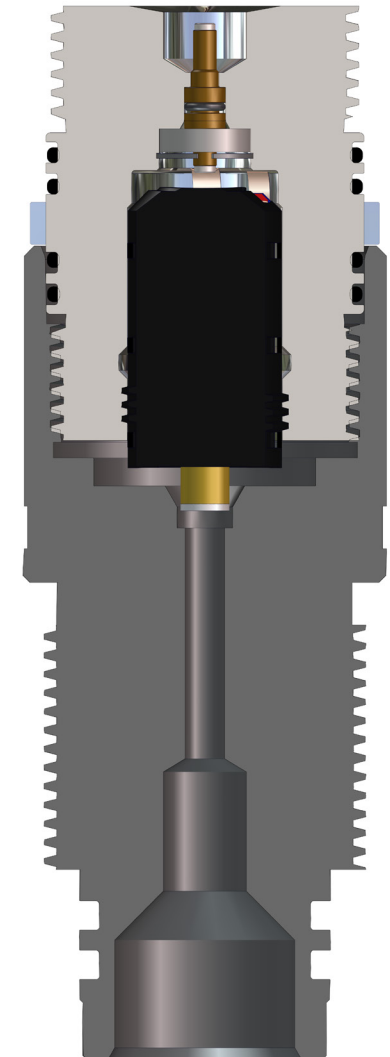
DIAMONDBACK DB20



2-1/2" SHORTY



3-1/2" SHORTY



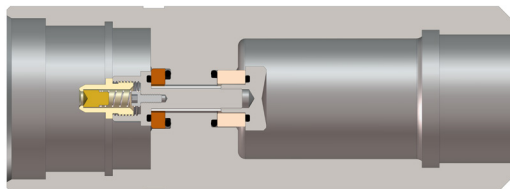
GN-R31-T094-A, TANDEM SUB
IGN-EPIC-230-106, IGNITOR MODULE
GN-RX31-BK20-GIC, CROSSOVER

3-1/8 in (79mm) EPIC™ Precision Conventional Ignitor and Firing Head Crossovers

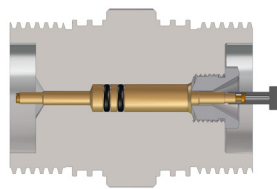
CONVENTIONAL IGNITOR FIRING HEAD CROSSEOVERS

For applications with industry-standard ignitors, 3-1/8" EPIC™ Precision, EPIC Flex, and EPIC Flex Orbit gun strings can be run with standard firing head box connections to the setting tool. The bottom gun in the perforating string uses an EPIC Flex Tandem Sub to connect with the reusable crossover.

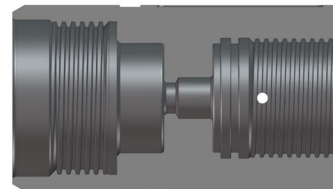
Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
3-1/8"	GN-RX31-DB20-A	3.13" Crossover Assy, GI Box x Diamondback DB20 Firing Head Box	n/a	9.03"
	GN-RX31-GO33-A	3.13" Crossover Assy, GI Box x GO33 Firing Head Box	n/a	8.44"
	GN-RX31-K20V2	3.13" Crossover, GI Box x King K20 FH Box (Requires a reusable -T077 tandem, modified feed-thru, integrated bushing, and K20 to Recon contact as shown below.)	n/a	6.03"



GI BOX TO DIAMONDBACK DB20 FH CROSSOVER
GN-RX31-DB20-A



FLEX REUSABLE TANDEM, GN-R31-T077
W/MODIFIED FEED-THRU, BUSHING, AND
K20 TO POWERSet® RECON CONTACT



GI BOX TO K20 CROSSOVER,
GN-RX31-K20V2 ONLY FOR
POWERSet® RECON SETTING TOOL

Rebuild Kits for DB10, DB20, GO33	
Partial Rebuild*	RKI-GN-RX31-GO33
Full Rebuild*	RKC-GN-RX31-GO33

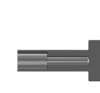
[*Firing head crossover rebuild kit details](#)



MODIFIED FEED-THRU
GN-036-110K20



INTEGRATED BUSHING
RNTD-GEO



K20 TO POWERSet
RECON CONTACT
(PROVIDED SEPARATELY)

ADDITIONAL CROSSEOVERS AND BULL PLUG



3.13" DISPOSABLE CROSSOVER
GI PIN x 1.63" ACME Box
GN-R31-T172-A
(QUICK CHANGE CONNECTION)



THREAD PROTECTOR (THREADED INSERT)
FOR 1.63" ACME Box
EM-EL1-THD-GOQCP



3.13" CROSSOVER TO PUMPDOWN SUB
GI PIN x 3.13" CONVENTIONAL PIN
GN-RX31-GIC31-050
(BOTTOM GUN TO PUMPDOWN SUB)



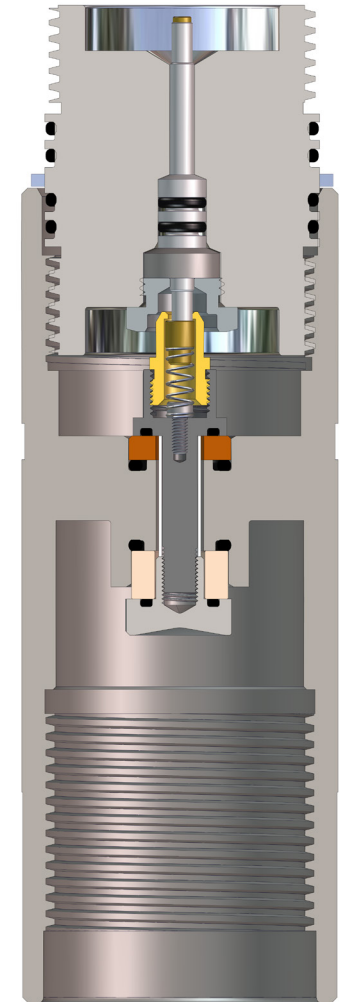
3.13" BULL PLUG
GN-R31HF-0022
(BOTTOM GUN, E.G. FOR TOE
PREPS IN VERTICAL WELLS)

FLEX DISPOSABLE
TANDEM SUB
GN-R31-T078-A

GI BOX TO GO
FH BOX CROSSOVER
GN-RX31-GO33-A



POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



3-1/8 in (79mm) EPIC™ Flex Orbit

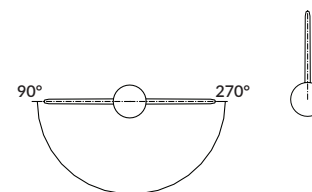
Specifications, GOB Self-Orienting



GEODynamics' advanced EPIC™ Flex Orbit perforating system delivers a versatile, addressable switch-ready, portless, self-orienting solution that provides high levels of precision and reliability. The open architecture design allows engineering teams to plan and complete multistage plug-and-perf operations more safely, precisely, and cost-effectively. Flex Orbit can accommodate a variety of market-leading shaped charge designs, including GEODynamics charges. GEODynamics can provide Flex Orbit fully loaded, or ready to load, and with or without an addressable switch.

APPLICATION SPECIFICATIONS

Shot Density and Phasing Options	Multiple Shot & Phasing Options
Initiation Point	Bottom-fired, Wireline
Mode of Fire	Select fire, addressable
Detonating Cord	80-grain round
Compatible Perforating Charges	FracIQ®, Connex®, Razor®, Basix™, Basix Frac, Refrax™
Maximum Gun Swell (in)[mm]	3.46 [87.88]



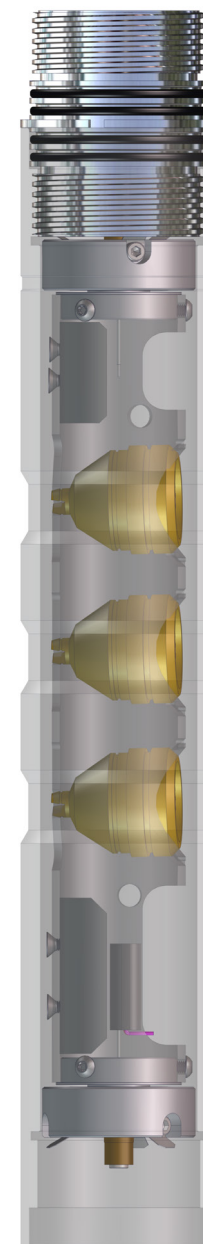
ENVIRONMENTAL

Maximum Pressure (psi)[MPa]	18,000 [124]
Maximum Tensile* (lbf)[kN]	140,000 [622] *Hardware Calculated Breaking Point

CARRIER SPECIFICATIONS

Carrier Assembly Part Number	Shot & Phasing Options		Gun Lengths		Gun End to Center of First Band		Distance Band to Band		Shipping Assy Weights (no sub)		Make-Up Lengths with Tandem Sub	
	# Shots	Phasing	(in)	(cm)	(in)	(mm)	(in)	(mm)	(lbs)	(kgs)	T078 (in)	T077 (in)
GOB31-O01	1	0°	13.2	33.5	6.10	154.9	2.4	61.0	11.7	5.3	13.33	14.10
GOB31-O02	2		15.6	39.6					14.1	6.4	15.73	16.50
GOB31-O03	3		18.0	45.7					16.5	7.5	18.13	18.90
GOB31-O04	4		20.4	51.8					18.9	8.6	20.53	21.30
GOB31-O06	6		25.2	64.0					23.7	10.7	25.33	26.10
GOB31-O08	8		30.0	76.2					28.5	12.9	30.13	30.90
GOB31-O10	10		34.8	88.4					33.3	15.1	34.93	35.70
GOB31-W02	2	90°/270°	15.6	39.6	6.10	154.9	2.4	61.0	19.4	8.8	15.73	16.50
GOB31-W04	4		20.4	51.8					24.2	11.0	20.53	21.30
GOB31-W06	6		25.2	64.0					29.0	13.2	25.33	26.10
GOB31-W08	8		30.0	76.2					33.8	15.4	30.13	30.90
GOB31-W10	10		34.8	88.4					38.6	17.6	34.93	35.70

- Additional shot and phasing options available with lead time.
- For proper weight distribution, GOB31-WXX guns require blank charge cases when loaded with an odd number of shots.
- Nitrile or Viton o-rings available with any assembly.



Revised: May 7, 2026 10:27 AM

3-1/8 in (79 mm) EPIC™ Flex Orbit

Charge Performance

CHARGE PERFORMANCE DATA, 3-1/8" BANDED CARRIER

Gun System (tested)	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Casing Tested	Performance Data		
						EHD Min. (in)	EHD Max. (in)	EHD Avg. (in)
3-1/8" OD Flex Orbit	EC2-33A1471-BFG Basix Frac 30	Fluid	14.0g, RDX	5 spf / 0°	5-1/2" 23#, P110	0.34	0.32	0.33
						0.33	0.31	0.32
						0.33	0.30	0.32
						0.33	0.31	0.32
						Average EHD (in)		0.32
						*Penetration (in)		4.0
						EHD Variation		3.95%
					**5-1/2" 17#, P110	Average EHD (in)		0.30
						**Penetration (in)		3.22

EHD measured in fully loaded gun system which was decentralized in the casing. *Penetration measured in stressed Berea rock.

**Performance data derived from iPerf software modeling. Qualified for shooting in FLUID with perforating systems qualified by GEODynamics.

Gun System (tested)	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Casing Tested	Performance Data		
						EHD Min. (in)	EHD Max. (in)	EHD Avg. (in)
3-1/8" OD Flex Orbit	EC2-33A1871-BFG Basix Frac 35	Fluid	18.0g, RDX	5 spf / 0°	5-1/2" 23#, P110	0.33	0.32	0.33
						0.34	0.31	0.33
						0.34	0.33	0.34
						0.34	0.34	0.34
						Average EHD (in)		0.33
						*Penetration (in)		4.0
						EHD Variation		3.18%
					**5-1/2" 17#, P110	Average EHD (in)		0.32
						**Penetration (in)		3.88

EHD measured in fully loaded gun system which was decentralized in the casing. *Penetration measured in stressed Berea rock.

**Performance data derived from iPerf software modeling. Qualified for shooting in FLUID with perforating systems qualified by GEODynamics.

Gun System (tested)	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Casing Tested	Performance Data		
						EHD Min. (in)	EHD Max. (in)	EHD Avg. (in)
3-1/8" OD Flex Orbit	EC2-33A2371 FracIQ 40	Fluid	23.0g, RDX	5 spf / 90°-270°	5-1/2" 23#, P110	0.40	0.41	0.41
						0.40	0.43	0.42
						0.40	0.41	0.41
						0.39	0.40	0.40
						Average EHD (in)		0.41
						*Penetration (in)		4.0
						EHD Variation		2.76%

EHD measured in fully loaded gun system which was decentralized in the casing. *Penetration measured in stressed Berea rock.

Qualified for shooting in FLUID with perforating systems qualified by GEODynamics.

3-1/8 in (79 mm) EPIC™ Flex Orbit

Charge Performance

CHARGE PERFORMANCE DATA, 3-1/8" BANDED CARRIER

Gun System <i>(tested)</i>	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Casing Tested	Performance Data		
						EHD Min. <i>(in)</i>	EHD Max. <i>(in)</i>	EHD Avg. <i>(in)</i>
3-1/8" OD Flex Orbit	EC2-33A2371-BFG Basix Frac 40	Fluid	23.0g, RDX	5 spf / 0°	5-1/2" 23#, P110	0.40	0.40	0.40
						0.39	0.39	0.39
						0.39	0.39	0.39
						0.40	0.40	0.40
						Average EHD <i>(in)</i>		0.40
						*Penetration <i>(in)</i>		4.0
					EHD Variation		1.27%	
					**5-1/2" 17#, P110	Average EHD <i>(in)</i>		0.39
**Penetration <i>(in)</i>		2.10						
3-1/8" OD Flex Orbit	EC2-33A2371-BFG Basix Frac 40	Fluid	23.0g, RDX	5 spf / 90°-270°	5-1/2" 23#, P110	0.44	0.45	0.45
						0.42	0.45	0.44
						0.45	0.45	0.45
						0.44	0.45	0.45
						Average EHD <i>(in)</i>		0.44
						*Penetration <i>(in)</i>		4.0
						EHD Variation		2.24%

EHD measured in fully loaded gun system which was decentralized in the casing. *Penetration measured in stressed Berea rock.

** Performance data derived from iPerf software modeling. Qualified for shooting in FLUID with perforating systems qualified by GEODynamics.

Gun System <i>(tested)</i>	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Casing Tested	Performance Data		
						EHD Min. <i>(in)</i>	EHD Max. <i>(in)</i>	EHD Avg. <i>(in)</i>
3-1/8" OD Flex Orbit	EC2-33A2371-BF45G Basix Frac 45	Fluid	23.0g, RDX	5 spf / 0°	5-1/2" 23#, P110	0.42	0.42	0.42
						0.43	0.41	0.41
						0.43	0.40	0.42
						0.40	0.38	0.39
						Average EHD (in)		0.41
					*Penetration (in)		4.0	
					EHD Variation		3.93%	
					**5-1/2" 17#, P110	Average EHD (in)		0.39
**Penetration (in)		2.10						

EHD measured in fully loaded gun system which was decentralized in the casing. *Penetration measured in stressed Berea rock.

**Performance data derived from iPerf software modeling. Qualified for shooting in FLUID with perforating systems qualified by GEODynamics.

HARDWARE

Gun Body Configuration/Material

Threaded and scalloped, proprietary gun steel, similar to 41XX alloy steel

Charge Tube Type & Retention

Round steel tube strip; bend tab retention

Type of Tandem Connection

Disposable and reusable tandem subs

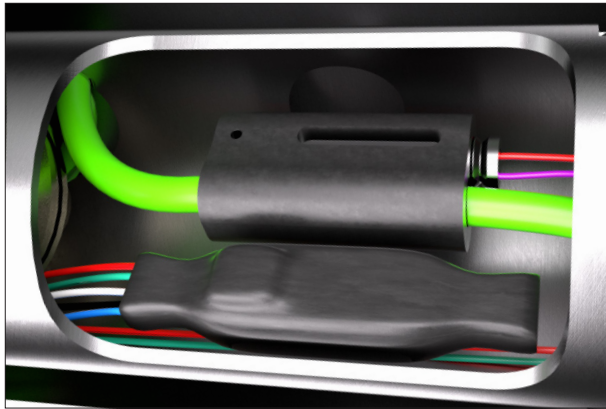
Nominal OD / Wall Thickness (in)[mm]

3.125 [79.38] / 0.3125 [7.94]

Upper/Lower Thread Connections

2.750" 6P ACME-2G

3-1/8 in (79 mm) EPIC™ Flex Orbit Design Overview



DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

DETONATOR PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS
DET-E-A140S-CA

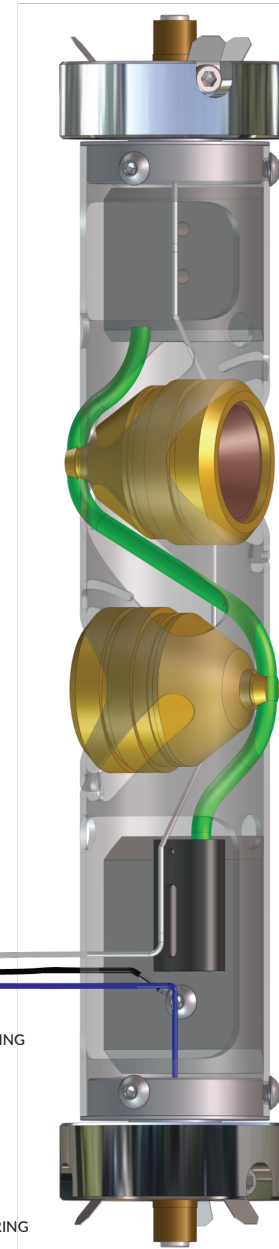
ADDRESSABLE SWITCH PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS
EL1-AL-1000-C
ASW-130-C
THIRD-PARTY ADDRESSABLE SWITCHES AVAILABLE

COMPLIANT WITH
MULTIPLE ELECTRO-MECHANICAL SYSTEMS



INTEGRATED GROUNDING

NO GUN-TO-GUN WIRING



NO GUN-TO-GUN WIRING

ALUMINUM END PLATES

LOW-FRICTION BALL BEARINGS FACILITATE
EASY ROTATIONAL POSITIONING

INTERNAL ECCENTRIC WEIGHT SYSTEM
ENABLES PRECISE SHOT PLACEMENT

COMPATIBLE WITH GEODYNAMICS'
SHAPED CHARGES AND OTHER CHARGE
MANUFACTURER TECHNOLOGIES

DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

3-1/8 in (79 mm) EPIC™ Flex Orbit Quick Change and Tandem Subs



DIRECT CONNECT QUICK CHANGE

3.13" Direct Connect Quick Change Assy (*direct to top gun tandem*)
Intermediate Rebuild Kit (*contacts, teflon tubing, screw, spring, insulating ret.*)
Complete Rebuild Kit with O-Rings (*all required parts*)
[Direct connect quick change rebuild kit details](#)

GN-QC31-GIC31
RKI-GN-QC31-0001
RKC-GN-QC31-0001

TANDEM SUBS AND DETONATOR

3.13" Flex Orbit Tandem Sub Assemblies and Accessories
Disposable Portless Tandem (*solid feed-through*)
Disposable -T076-A w/ Conversion Insert (*alternate for -T078-A*)
Reusable Portless Tandem
Complete Rebuild Kit (*feed-through assembly, retainer nut, contact support bushing*)
Tandem Sub Removal Tool (*1/2" drive socket*)
O-Rings Nitrile (*Standard*)
O-Rings Viton 95D (*Optional*)

Detonator, A140S, RDX, with locking pin connectors

GN-R31-T078-A
GN-R31-T086-AP
GN-R31-T077-A
RKC-RXX-T077
GN-SIT-3125-A
OR-N569-230
OR-V95G-230

DET-E-A140S-CA

Refer to the following pages for setting tool and firing head crossover information.



FLEX DISPOSABLE TANDEM SUB
GN-R31-T078-A



FLEX REUSABLE TANDEM SUB
GN-R31-T077-A



FLEX DISPOSABLE SUB
w/ CONVERSION INSERT
GN-R31-T086-AP



Current version (use until inventory is depleted)



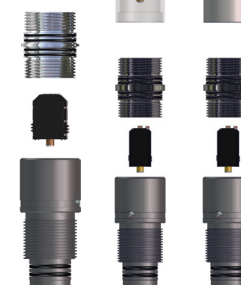
New version (retainer nut with integrated bushing)

FLEX REUSABLE SUB REBUILD KIT
RKC-RXX-T077

3.13" DISPOSABLE
TANDEM SUB ASSEMBLY
GN-R31-T076-A

GEN 1 IGNITOR MODULE
DT-0425-106

Refer to the next page
for more details.



3.13" DIRECT CONNECT
QUICK CHANGE ASSY
GN-QC31-GIC31

3.13" EPIC FLEX DISPOSABLE
PORTLESS TANDEM SUB ASSEMBLY
GN-R31-T078-A

3.13" EPIC FLEX ORBIT
GOB31-W06
6-SHOT, 90-270° SHOWN

3.13" EPIC FLEX DISPOSABLE
PORTLESS TANDEM SUB ASSEMBLY
GN-R31-T078-A

3.13" EPIC FLEX ORBIT
GOB31-W06
6-SHOT, 90-270° SHOWN

3.13" EPIC PRECISION DISPOSABLE
PORTLESS TANDEM SUB ASSEMBLY
GN-R31-T094-A

EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106

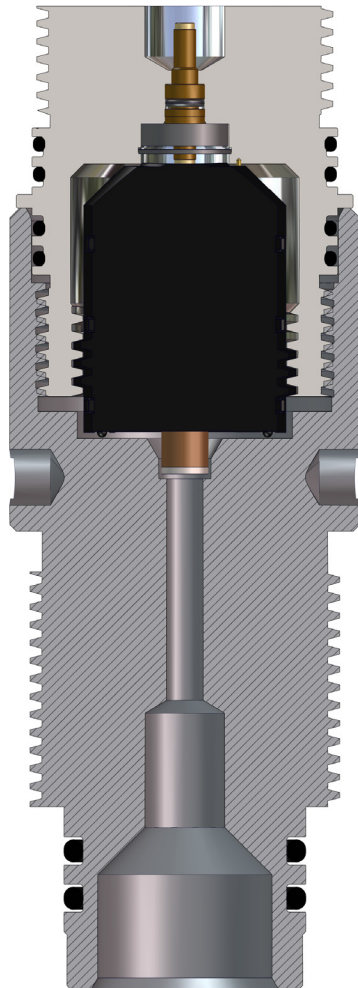
3.13" CROSSOVER,
GI BOX x SIZE 20 SETTING TOOL
GN-RX31-BK20-GIC

Revised: May 7, 2026 10:27 AM

3-1/8 in (79 mm) EPIC™ Flex Orbit Ignitor Module and Setting Tool Crossovers

EPIC IGNITOR SETTING TOOL CROSSOVERS

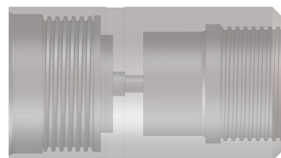
EPIC™ Precision and EPIC™ Flex perforating systems provide reliable and efficient connections from the bottom gun to the setting tool. EPIC Ignitor Modules are a patented combination of electronics and ignitor technology, initiated by the bottom switch in the gun string. These non-addressable ignitor modules are designed to run with the EPIC™ Command Shooting Panel and are fully compatible with third-party addressable switches. The bottom gun in the perforating string uses a disposable tandem sub to connect to the crossover and then connects directly to the setting tool.



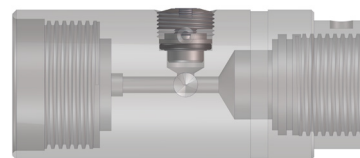
GN-R31-T076-A, TANDEM SUB
DT-0425-106, IGNITOR MODULE
GN-RX31-BK20-GIC, CROSSOVER



Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
3-1/8"	GN-RX31-BK10-GIC	3.13" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX31-BK20-GIC	3.13" Crossover, GI Box x Size 20	#328	3.00"
	GN-RX31-3625-GIC	† 3.13" Crossover, GI Box x 3.63" Compact	#226	6.53"
	GN-RX31-3500-GIC	3.13" Crossover, GI Box x 3.5" Shorty	#332	3.00"
	GN-RX31-DB20-GIC	3.13" Crossover, GI Box x Diamondback	n/a	5.67"

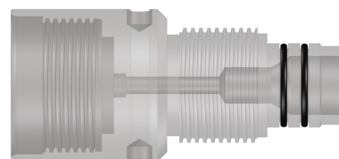


DIAMONDBACK DB20

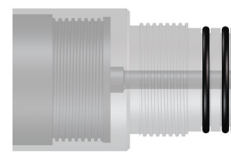


3-5/8" COMPACT †

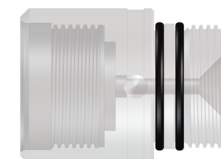
† BLEEDER VALVE COMPONENTS
BRASS RUPTURE DISC: ST-0000-001
BLEEDER NUT: 025-1020-001
O-RING: OR-N569-213



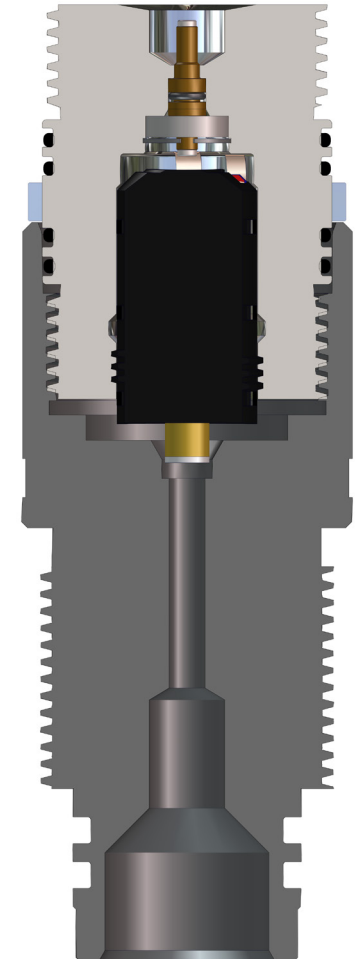
BK SIZE 10



2-1/2" SHORTY



3-1/2" SHORTY



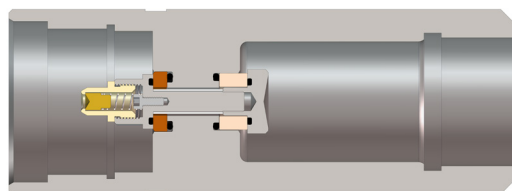
GN-R31-T094-A, TANDEM SUB
IGN-EPIC-230-106, IGNITOR MODULE
GN-RX31-BK20-GIC, CROSSOVER

3-1/8 in (79 mm) EPIC™ Flex Orbit Conventional Ignitor and Firing Head Crossovers

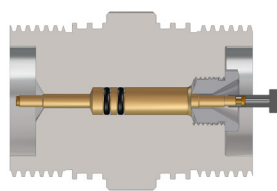
CONVENTIONAL IGNITOR FIRING HEAD CROSSOVERS

For applications with industry-standard ignitors, 3-1/8" EPIC™ Precision, EPIC Flex, and EPIC Flex Orbit gun strings can be run with standard firing head box connections to the setting tool. The bottom gun in the perforating string uses an EPIC Flex Tandem Sub to connect with the reusable crossover.

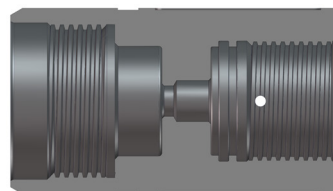
Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
3-1/8"	GN-RX31-DB20-A	3.13" Crossover Assy, GI Box x Diamondback DB20 Firing Head Box	n/a	9.03"
	GN-RX31-GO33-A	3.13" Crossover Assy, GI Box x GO33 Firing Head Box	n/a	8.44"
	GN-RX31-K20V2	3.13" Crossover, GI Box x King K20 FH Box <i>(Requires a reusable -T077 tandem, modified feed-thru, integrated bushing, and K20 to Recon contact as shown below.)</i>	n/a	6.03"



GI BOX TO DIAMONDBACK DB20 FH CROSSOVER
GN-RX31-DB20-A



FLEX REUSABLE TANDEM, GN-R31-T077
W/MODIFIED FEED-THRU, BUSHING, AND
K20 TO POWERSET® RECON CONTACT



GI BOX TO K20 CROSSOVER,
GN-RX31-K20V2 ONLY FOR
POWERSET® RECON SETTING TOOL

FLEX DISPOSABLE
TANDEM SUB
GN-R31-T078-A

GI BOX TO GO
FH BOX CROSSOVER
GN-RX31-GO33-A

Rebuild Kits for DB10, DB20, GO33	
Partial Rebuild*	RKI-GN-RX31-GO33
Full Rebuild*	RKC-GN-RX31-GO33

[*Firing head crossover rebuild kit details](#)



MODIFIED FEED-THRU
GN-036-110K20



INTEGRATED BUSHING
RNTD-GEO



K20 TO POWERSET
RECON CONTACT
(PROVIDED SEPARATELY)

ADDITIONAL CROSSOVERS AND BULL PLUG



3.13" DISPOSABLE CROSSOVER
GI PIN x 1.63" ACME Box
GN-R31-T172-A
(QUICK CHANGE CONNECTION)



THREAD PROTECTOR (THREADED INSERT)
FOR 1.63" ACME Box
EM-EL1-THD-GOQCP



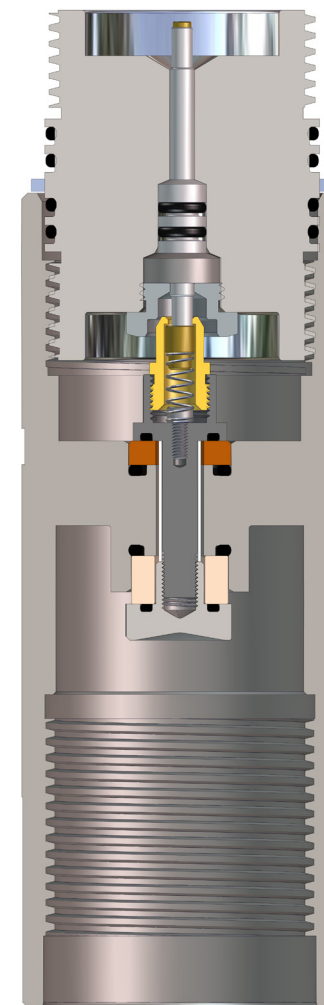
3.13" CROSSOVER TO PUMPDOWN SUB
GI PIN x 3.13" CONVENTIONAL PIN
GN-RX31-GIC31-050
(BOTTOM GUN TO PUMPDOWN SUB)



3.13" BULL PLUG
GN-R31HF-0022
(BOTTOM GUN, E.G. FOR TOE
PREPS IN VERTICAL WELLS)



POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



3-1/8 in (79mm) EPIC™ Flex

Specifications, GIB Spiral Phasing

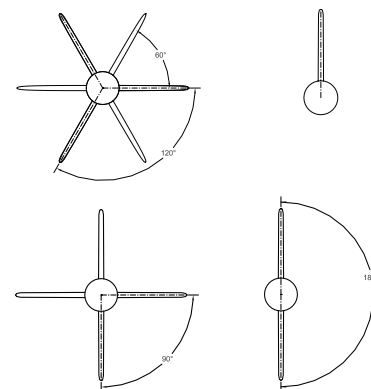
GEODynamics' advanced EPIC™ Flex perforating system delivers a versatile, addressable switch-ready, portless solution that provides high levels of precision and reliability. The open architecture design allows engineering teams to plan and complete multistage plug-and-perf operations more safely, precisely, and cost-effectively. Flex can accommodate a variety of market-leading shaped charge designs, including GEODynamics charges. GEODynamics can provide Flex fully loaded, or ready to load, and with or without an addressable switch.

APPLICATION SPECIFICATIONS

Shot Density and Phasing Options	Multiple Shot & Phasing Options
Initiation Point	Bottom-fired, wireline
Mode of Fire	Select fire, addressable
Detonating Cord	80-grain round
Compatible Perforating Charges	FracIQ®, Connex®, Razor®, Basix™, Basix Frac, Refrax™
Maximum Gun Swell (in)[mm]	3.46 [87.88] @ 22.7g In Fluid; 3.60 [91.44] @ 19.0g Dry

ENVIRONMENTAL

Maximum Pressure (psi)[MPa]	20,000 [137.90]
Maximum Tensile* (lbf)[kN]	140,000 [622.75] *Hardware Calculated Breaking Point

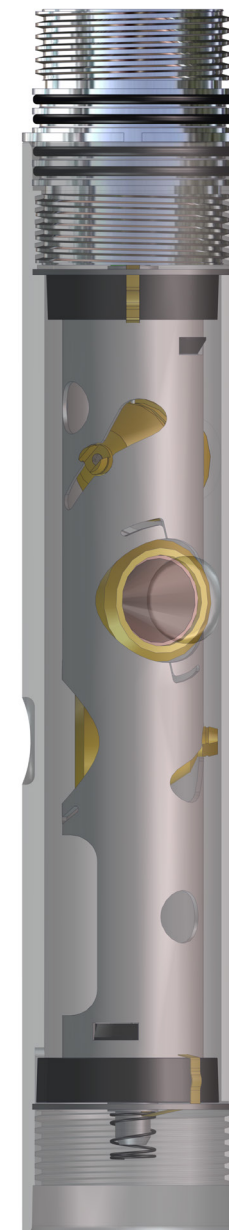


CARRIER SPECIFICATIONS

Carrier Assembly Part Number	Shot & Phasing Options		Gun Lengths		Gun End to Center of First Scallop @ 0°		Distance Shot to Shot		Shipping Assy Weights		Make-Up Lengths with T078 Tandem Subs	
	# Shots	Phasing	(in)	(cm)	(in)	(mm)	(in)	(mm)	(lbs)	(kgs)	(in)	(cm)
GIB31-O01	1	0°	11.5	29.21	7.0	177.80	N/A		8.4	3.8	11.63	29.54
GIB31-J02	2	180°	14.0	35.56			2.4	61.0	10.5	4.8	13.63	34.62
GIB31-G03	3	120°	15.5	39.37			2.0	50.8	11.8	5.4	15.63	39.70
GIB31-B04	4	90°	17.5	44.45					13.5	6.1	17.63	44.78
GIB31-A06	6	60°	21.5	54.61					16.9	7.7	21.63	54.86

Additional shot and phasing options available by special order with lead time:

- Up to 12 shots per gun with 0° phasing (2" shot spacing for -O02; 3" shot spacing -O03 and greater (4 spf equivalent)).
- Up to 12 shots per gun with 180° phasing (2.4" shot spacing (5 spf equivalent)).
- Up to 12 shots per gun with 60°, 90°, or 120° phasings (2" shot spacing (6 spf equivalent)).
- Nitrile or Viton o-rings available with any assembly.
- Contact your sales representative for additional shot and phasing options.



3-1/8 in (79 mm) EPIC™ Flex Charge Performance



CONSTANT ENTRY HOLE AND PENETRATION

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	API 19B Targeted Pipe*	Performance in Concrete		Performance in Stressed Berea		
							EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	EHD Variation Decentralized	TTP (in)[cm]
3-1/8" 12g-13g	FracIQ 20	EC2-33A1271-G	Fluid	12.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110	0.22 [0.56]	13.0 [33.02]	0.22 [0.56]	5.5%	5.0 [12.70]
	Basix Frac 25	EC2-33A1271-BFG		12.0g, RDX			0.26 [0.66]	12.0 [30.48]	0.26 [0.66]	2.4 %	4.0 [10.16]
	FracIQ 25	EC2-33A1371-G		13.0g, RDX			0.26 [0.66]	13.0 [33.02]	0.26 [0.66]	4.1 %	5.0 [12.70]
3-1/8" 13g-16g	FracIQ Connex 30 †	EC2-33A1471-FRX	Fluid	14.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110			0.31 [0.79]	6.0 %	5.0 [12.70]
	Basix Frac 30	EC2-33A1471-BFG		14.0g, RDX			0.31 [0.79]	12.0 [30.48]	0.31 [0.79]	4.0 %	4.0 [10.16]
	FracIQ 30	EC2-33A1671 ‡		16.0g, RDX			0.31 [0.79]	13.0 [33.02]	0.31 [0.79]	3.1 %	5.0 [12.70]
	FracIQ 30	EC2-33A1672 ‡		16.0g, HMX			0.34 [0.86]		0.34 [0.86]	3.8 %	
3-1/8" 16g-20g	FracIQ Connex 35 †	EC2-33A1671-FRX	Fluid	16.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110			0.36 [0.91]	5.0 %	5.0 [12.70]
	Basix Frac 35	EC2-33A1871-BFG		18.0g, RDX			0.36 [0.91]	12.0 [30.48]	0.36 [0.91]	3.4 %	4.0 [10.16]
	FracIQ 35	EC2-33A2071 ‡		20.0g, RDX			0.36 [0.91]	13.0 [33.02]	0.36 [0.91]	2.5 %	5.0 [12.70]
	FracIQ 35	EC2-33A2072 ‡		20.0g, HMX			0.37 [0.94]		0.37 [0.94]	3.0 %	
3-1/8" 19g-23g	FracIQ Connex 40 †	EC2-33A1971-FRX	Fluid	19.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110			0.41 [1.04]	6.5 %	5.0 [12.70]
	FracIQ 40	EC2-33A2371 ‡		23.0g, RDX			0.40 [1.02]	13.0 [33.02]	0.40 [1.02]	3.3 %	
	FracIQ 40	EC2-33A2372 ‡		23.0g, HMX			0.41 [1.04]		0.41 [1.04]	3.8 %	
	Basix Frac 40	EC2-33A2371-BFG		23.0g, RDX		6" OD, P110	0.40 [1.02]	12.0 [30.48]	0.40 [1.02]	6.6 %	4.0 [10.16]
	Basix Frac 40	EC2-33A2371-BFG		23.0g, RDX			0.40 [1.02]		0.40 [1.02]	7.5 %	
	Basix Frac 40	EC2-33A2372-BFG		23.0g, HMX		4-1/2" - 5-1/2" OD, P110					
3-1/8" 20g-23g	FracIQ 45	EC2-33A2071-45G	Fluid	20.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110	0.45 [1.14]	13.0 [33.02]	0.45 [1.14]	5.6 %	5.0 [12.70]
	FracIQ Connex 45 †	EC2-33A2371-FRX		21.0g, RDX					0.45 [1.14]	3.2 %	
	Basix Frac 45	EC2-33A2371-BF45G		23.0g, RDX			0.45 [1.14]	12.0 [30.48]	0.45 [1.14]	5.9 %	4.0 [10.16]
3-1/8" 23g	FracIQ 50	EC2-33A2371-50 ‡ ‡‡ EC2-33A2371-50G	Fluid	23.0g, RDX	6 spf / 60°	4-1/2" - 5-1/2" OD, P110	0.50 [1.27]	13.0 [33.02]	0.50 [1.27]	1.5 %	5.0 [12.70]
	FracIQ 50	EC2-33A2372-RX		23.0g, HMX		5-1/2" OD, P110	0.50 [1.27]		0.50 [1.27]	4.6 %	
	Basix Frac 50	EC2-33A2371-BF50G		23.0g, RDX		4-1/2" - 5-1/2" OD, P110	0.50 [1.27]	12.0 [30.48]	0.50 [1.27]	4.8 %	4.0 [10.16]
	FracIQ 55	EC2-33A2371-55G		23.0g, RDX		4-1/2" OD, P110	0.55 [1.40]	13.0 [33.02]	0.55 [1.40]	3.8 %	5.0 [12.70]

†FracIQ® Connex® charges (P/Ns ending with -FRX) combine FracIQ technology with Connex Clean Perforation Technology to achieve a constant hole size and tunnel cleaning action in one charge.

‡ These FracIQ charges are also available with a custom, externally-grooved case for special applications (example P/Ns: EC2-33A2371-G and EC2-33A2371-50G).

*3-1/8" FracIQ charge performance is compatible in 4.5" 11.6-15.1# and 5.5" 17-23# P-110 casing.

Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, casing weight, and casing grade specified.

^EHD performance in stressed berea represents API RP19B Section 2 testing results with casing flat metal plate equivalent to 0.500" 120KSI yield and penetration (TTP) in stressed berea rock.

Revised: May 7, 2026 10:27 AM

3-1/8 in (79 mm) EPIC™ Flex

Charge Performance

DEEP PENETRATING/EXTREME DEEP PENETRATING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea		
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	TTP (in)[cm]	
3-1/8" 19g	3319 Connex RX	EC2-33A1991-RX	‡ Fluid or Dry	19.0g, RDX	5 spf / 60° (Dry) 6 spf / 60° (Fluid)	4-1/2" 11.6# L-80			0.32 [0.81]	11.30 [28.70]	
		EC2-33A1992-RX		19.0g, HMX					0.32 [0.81]	11.60 [29.46]	
	3319 Razor XDP	EC2-33A1921	‡ Fluid or Dry	19.0g, RDX			0.51 [1.30]	42.10 [106.93]			
		EC2-33A1922		19.0g, HMX			0.49 [1.24]	41.10 [104.39]	0.43 [1.09]	14.60 [37.08]	
	3319 Basix XDP	EC2-33A1921-EG	‡ Fluid or Dry	19.0g, RDX			0.43 [1.09]	35.80 [90.93]			
		EC2-33A1922-EG		19.0g, HMX							
	3319 Basix XDP	EC2-33A1921-EG	Fluid	19.0g, RDX			0.43 [1.09]	35.70 [90.68]			
	3319 Basix DP	EC2-33A1951	‡ Fluid or Dry	19.0g, RDX			0.54 [1.37]	29.20 [74.17]			
		EC2-33A1952		19.0g, HMX							
3-1/8" 23g	3323 Connex SDP	EC2-33A2321-RC	Fluid	22.7g, RDX	6 spf / 60°	4-1/2" 11.6# L-80			0.40 [1.02]	15.60 [39.62]	
		EC2-33A2322-RC		22.7g, HMX					0.46 [1.17]	15.31 [38.89]	
		EC2-33A2323-RC		22.7g, HNS					0.36 [0.91]	11.85 [30.10]	
	3323 Razor XDP	EC2-33A2321		22.7g, RDX					0.41 [1.04]	16.40 [41.66]	
		EC2-33A2322		22.7g, HMX			0.42 [1.07]	39.02 [99.11]	0.44 [1.12]	15.68 [39.83]	
		EC2-33A2323		22.7g, HNS			0.35 [0.89]	26.05 [66.17]	0.37 [0.94]	12.12 [30.78]	
	3323 Basix XDP	EC2-33A2321-EG		22.7g, RDX			0.42 [1.07]	46.00 [116.84]	0.39 [0.99]	12.30 [31.24]	
									0.41 [1.04]	11.90 [30.23]	
		EC2-33A2322-EG					0.43 [1.09]	46.37 [117.78]			
				22.7g, HMX			0.43 [1.09]	45.70 [116.08]	0.40 [1.02]	11.90 [30.23]	

‡ For 3-1/8" 19g in dry gas, maximum shot density is 5 spf or limited to one- (1) and two- (2) shot short guns only.

DUAL CASING

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	Inner Casing		Outer Casing	
						O.D./Material	EHD (in)[cm]	O.D./Material	EHD (in)[cm]
3-1/8" 14g-23g	3314 Refrax	EC2-33A1471-D	Fluid	14.0g, RDX	6 spf / 60°	Expanded 4" P110	0.33-0.33 [0.84-0.84]	5-1/2 P110	0.30-0.30 [0.76-0.76]
	3316 Refrax	EC2-33A1671-D		16.0g, RDX			0.37-0.38 [0.94-0.95]		0.35-0.35 [0.89-0.89]
	3320 Refrax	EC2-33A2071-D		20.0g, RDX			0.41-0.42 [1.04-1.07]		0.40-0.40 [1.02-1.02]
	3316 Refrax	EC2-33A1671-D		16.0g, RDX	6 spf / 60°	4-1/2" P110	0.30-0.32 [0.76-0.81]	7.0" P110	0.39-0.41 [0.99-1.04]
	3323 Refrax	EC2-33A2371-D		23.0g, RDX			0.41-0.42 [1.04-1.07]		0.35-0.35 [0.89-0.89]

Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, casing weight, and casing grade specified.

^EHD performance in stressed berea represents API RP19B Section 2 testing results with casing flat metal plate equivalent to 0.500" 120KSI yield and penetration (TTP) in stressed berea rock.

FLUID: Qualified for shooting in FLUID only with perforating systems qualified by GEODynamics.

IN FLUID or DRY: Qualified for shooting in FLUID or DRY GAS with perforating systems qualified by GEODynamics.

Revised: May 7, 2026 10:27 AM

3-1/8 in (79 mm) EPIC™ Flex Charge Performance



BIG HOLE

Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea	
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	TTP (in)[cm]
3-1/8" 23g	3323 Basix BH	EC2-33A2331	Fluid	22.7g, RDX	6 spf / 60°	4-1/2" 11.6# L-80	0.78 [1.98]	7.60 [19.30]		
		EC2-33A2332		22.7g, HMX			0.79 [2.01]	7.80 [19.81]		

GOOD HOLE

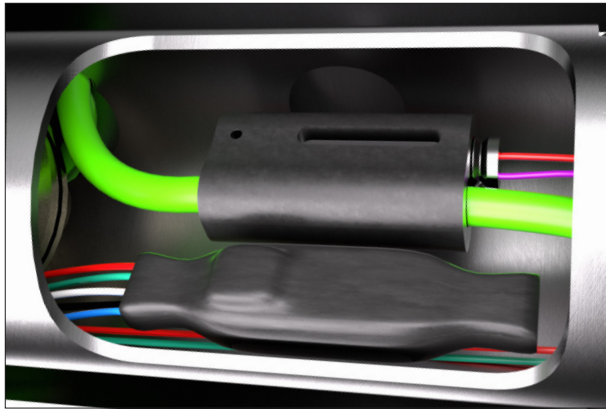
Carrier O.D.	Shaped Charge	Part Number	Perforating Condition	Explosive	Shot Density / Phasing	^Casing O.D.	Performance in Concrete		Performance in Stressed Berea	
						Application	EHD (in)[cm]	TTP (in)[cm]	EHD^ (in)[cm]	TTP (in)[cm]
3-1/8" 19g	3319 Connex XEH	EC2-33A1941-RC	‡ Fluid or Dry	19.0g, RDX	5 spf / 60° (Dry) 6 spf / 60° (Fluid)	4-1/2" 11.6# L-80			0.41 [1.04]	14.20 [36.07]
		EC2-33A1942-RC		19.0g, HMX					0.42 [1.07]	14.37 [36.50]
	3319 Basix GH	EC2-33A1941		19.0g, RDX			0.60 [1.52]	28.60 [72.64]		
		EC2-33A1942		19.0g, HMX						
3-1/8" 23g	3323 Connex XEH	EC2-33A2341-RC	Fluid	22.7g, RDX	6 spf / 60°	4-1/2"			0.43 [1.09]	15.60 [39.62]
		EC2-33A2342-RC		22.7g, HMX					0.43 [1.09]	15.89 [40.36]
	3323 Basix GH	EC2-33A2341-EG		22.7g, RDX		5-1/2" 17.0# L-80	0.43 [1.09]	44.0 [111.76]		
		EC2-33A2342-EG		22.7g, HMX		4-1/2"				

‡ For 3-1/8" 19g in dry gas, maximum shot density is 5 spf or limited to one- (1) and two- (2) shot short guns only.

HARDWARE

Gun Body Configuration/Material	Threaded and scalloped, proprietary gun steel, similar to 41XX alloy steel
Charge Tube Type & Retention	Round steel tube strip; bend tab retention
Type of Tandem Connection	Disposable and reusable tandem subs
Nominal OD / Wall Thickness (in)[mm]	3.15 [80.01] / 0.315 [8.00] or 3.125 [79.38] / 0.3125 [7.94]
Upper/Lower Thread Connections	2.750" 6P ACME-2G

3-1/8 in (79 mm) EPIC™ Flex Design Overview



DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

DETONATOR PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS

DET-E-A140S-CA

DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

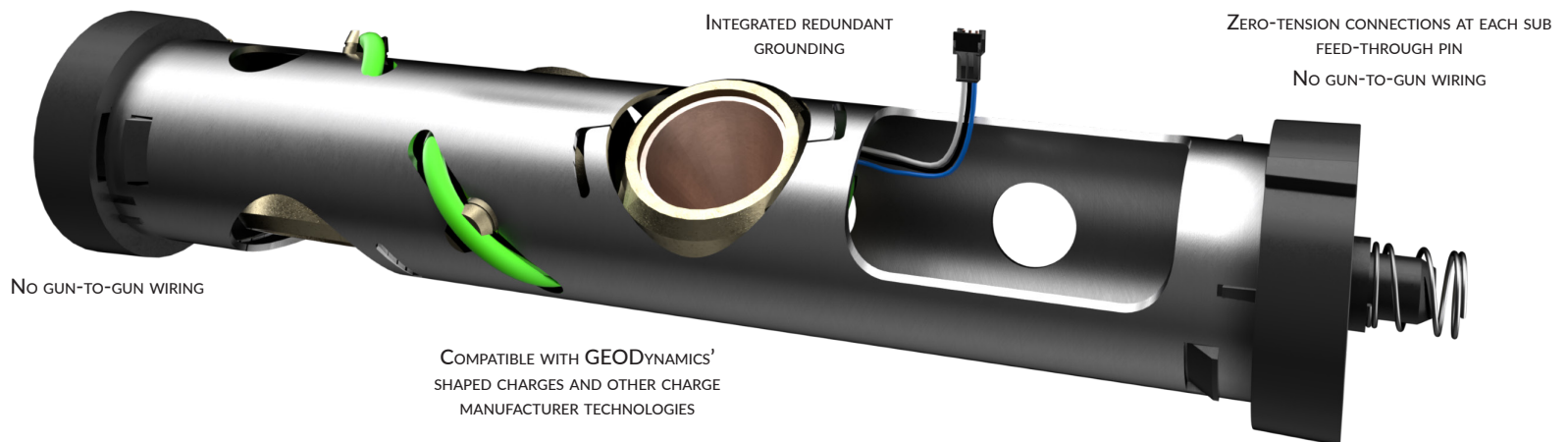


COMPLIANT WITH
MULTIPLE ELECTRO-MECHANICAL SYSTEMS

ADDRESSABLE SWITCH PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS

EL1-AL-1000-C
ASW-130-C

THIRD-PARTY ADDRESSABLE SWITCHES AVAILABLE



INTEGRATED REDUNDANT
GROUNDING

ZERO-TENSION CONNECTIONS AT EACH SUB
FEED-THROUGH PIN
NO GUN-TO-GUN WIRING

NO GUN-TO-GUN WIRING

COMPATIBLE WITH GEODYNAMICS'
SHAPED CHARGES AND OTHER CHARGE
MANUFACTURER TECHNOLOGIES

3-1/8 in (79 mm) EPIC™ Flex Quick Change and Tandem Subs



DIRECT CONNECT QUICK CHANGE

3.13" Direct Connect Quick Change Assy (*direct to top gun tandem*)
Intermediate Rebuild Kit (*contacts, teflon tubing, screw, spring, insulating ret.*)
Complete Rebuild Kit with O-Rings (*all required parts*)
[Direct connect quick change rebuild kit details](#)

GN-QC31-GIC31
RKI-GN-QC31-0001
RKC-GN-QC31-0001

TANDEM SUBS AND DETONATOR

3.13" Flex Tandem Sub Assemblies and Accessories
Disposable Portless Tandem (*solid feed-through*)
Disposable -T076-A w/ Conversion Insert (*alternate for -T078-A*)
Disposable Orienting Portless Tandem w/Lock Ring
Disposable -T279-A with Conversion Insert (*alternate for T272-A*)
Reusable Portless Tandem
Complete Rebuild Kit (*feed-through assembly, retainer nut, contact support bushing*)
Tandem Sub Removal Tool (*1/2" drive socket*)
O-Rings Nitrile (*Standard*)
O-Rings Viton 95D (*Optional*)

Detonator, A140S, RDX, with locking pin connectors

GN-R31-T078-A
GN-R31-T086-AP
GN-R31-T272-A
GN-R31-T286-AP
GN-R31-T077-A
RKC-RXX-T077
GN-SIT-3125-A
OR-N569-230
OR-V95G-230

DET-E-A140S-CA

Refer to the following pages for setting tool and firing head crossover information.



FLEX DISPOSABLE TANDEM SUB
GN-R31-T078-A



FLEX DISPOSABLE SUB
w/CONVERSION INSERT
GN-R31-T086-AP



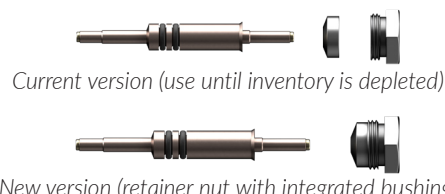
FLEX DISPOSABLE ORIENTING
SUB w/LOCK RING
GN-R31-T272-A



FLEX DISPOSABLE ORIENTING
SUB w/CONVERSION INSERT
GN-R31-T286-AP



FLEX REUSABLE TANDEM SUB
GN-R31-T077-A



New version (*retainer nut with integrated bushing*)

FLEX REUSABLE SUB REBUILD KIT
RKC-RXX-T077



3.13" DIRECT CONNECT
QUICK CHANGE ASSY
GN-QC31-GIC31



3.13" EPIC FLEX DISPOSABLE
PORTLESS TANDEM SUB ASSEMBLY
GN-R31-T078-A



3.13" EPIC FLEX GIB31-G03
3-SHOT, 120° SHOWN
MULTIPLE SHOT AND PHASING
OPTIONS AVAILABLE

3.13" DISPOSABLE
TANDEM SUB ASSEMBLY
GN-R31-T076-A



GEN 1 IGNITOR MODULE
DT-0425-106



Refer to the next page
for more details.



3.13" PRECISION DISPOSABLE
PORTLESS TANDEM SUB ASSEMBLY
GN-R31-T094-A



EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106



3.13" CROSSOVER,
GI BOX x SIZE 20 SETTING TOOL
GN-RX31-BK20-GIC

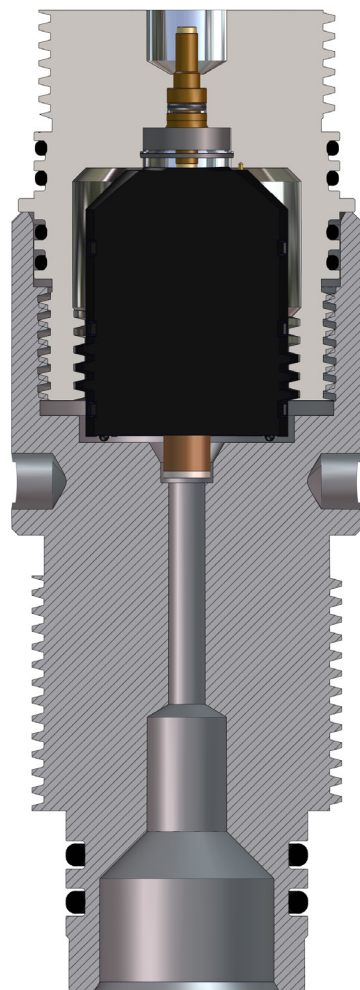


Revised: May 7, 2026 10:27 AM

3-1/8 in (79 mm) EPIC™ Flex Ignitor Module and Setting Tool Crossovers

EPIC IGNITOR SETTING TOOL CROSSOVERS

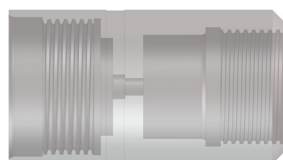
EPIC™ Precision and EPIC™ Flex perforating systems provide reliable and efficient connections from the bottom gun to the setting tool. EPIC Ignitor Modules are a patented combination of electronics and ignitor technology, initiated by the bottom switch in the gun string. These non-addressable ignitor modules are designed to run with the EPIC™ Command Shooting Panel and are fully compatible with third-party addressable switches. The bottom gun in the perforating string uses a disposable tandem sub to connect to the crossover and then connects directly to the setting tool.



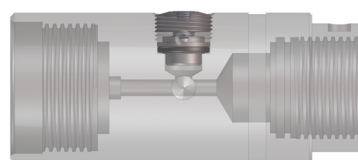
GN-R31-T076-A, TANDEM SUB
DT-0425-106, IGNITOR MODULE
GN-RX31-BK20-GIC, CROSSOVER



Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
3-1/8"	GN-RX31-BK10-GIC	3.13" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX31-BK20-GIC	3.13" Crossover, GI Box x Size 20	#328	3.00"
	GN-RX31-3625-GIC	† 3.13" Crossover, GI Box x 3.63" Compact	#226	6.53"
	GN-RX31-3500-GIC	3.13" Crossover, GI Box x 3.5" Shorty	#332	3.00"
	GN-RX31-DB20-GIC	3.13" Crossover, GI Box x Diamondback	n/a	5.67"

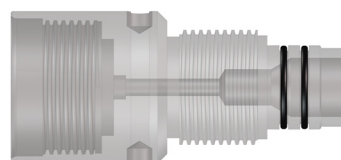


DIAMONDBACK DB20

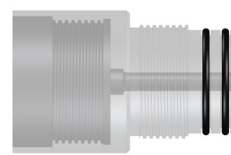


3-5/8" COMPACT †

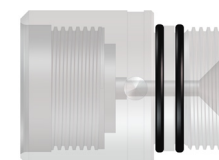
† BLEEDER VALVE COMPONENTS
BRASS RUPTURE DISC: ST-0000-001
BLEEDER NUT: 025-1020-001
O-RING: OR-N569-213



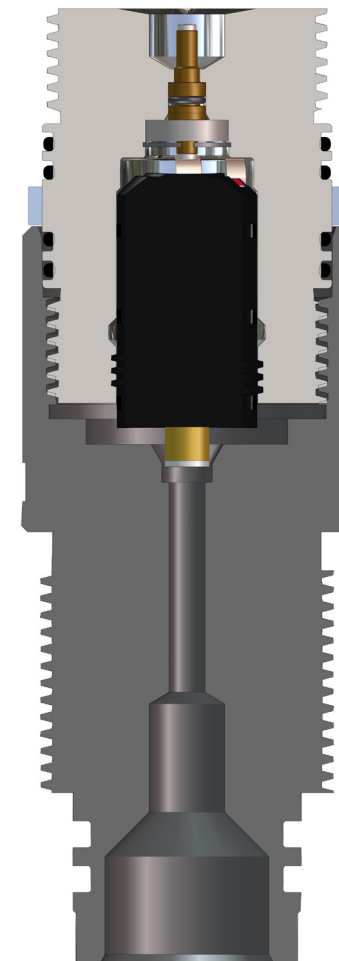
BK SIZE 10



2-1/2" SHORTY



3-1/2" SHORTY



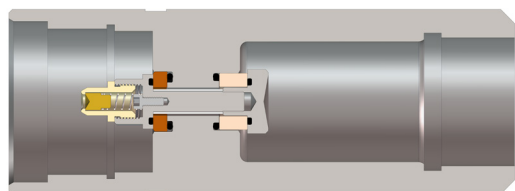
GN-R31-T094-A, TANDEM SUB
IGN-EPIC-230-106, IGNITOR MODULE
GN-RX31-BK20-GIC, CROSSOVER

3-1/8 in (79 mm) EPIC™ Flex Conventional Ignitor and Firing Head Crossovers

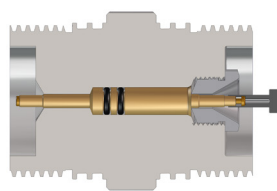
CONVENTIONAL IGNITOR FIRING HEAD CROSSOVERS

For applications with industry-standard ignitors, 3-1/8" EPIC™ Precision, EPIC Flex, and EPIC Flex Orbit gun strings can be run with standard firing head box connections to the setting tool. The bottom gun in the perforating string uses an EPIC Flex Tandem Sub to connect with the reusable crossover.

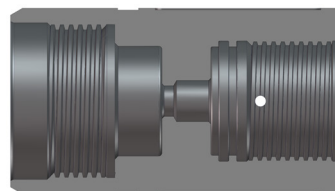
Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
3-1/8"	GN-RX31-DB20-A	3.13" Crossover Assy, GI Box x Diamondback DB20 Firing Head Box	n/a	9.03"
	GN-RX31-GO33-A	3.13" Crossover Assy, GI Box x GO33 Firing Head Box	n/a	8.44"
	GN-RX31-K20V2	3.13" Crossover, GI Box x King K20 FH Box <i>(Requires a reusable -T077 tandem, modified feed-thru, integrated bushing, and K20 to Recon contact as shown below.)</i>	n/a	6.03"



GI BOX TO DIAMONDBACK DB20 FH CROSSOVER
GN-RX31-DB20-A



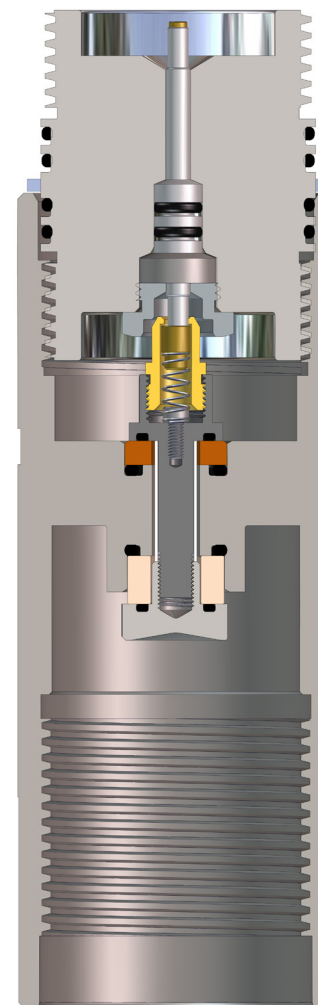
FLEX REUSABLE TANDEM, GN-R31-T077
W/MODIFIED FEED-THRU, BUSHING, AND
K20 TO POWERSet® RECON CONTACT



GI BOX TO K20 CROSSOVER,
GN-RX31-K20V2 ONLY FOR
POWERSet® RECON SETTING TOOL

FLEX DISPOSABLE
TANDEM SUB
GN-R31-T078-A

GI BOX TO GO
FH BOX CROSSOVER
GN-RX31-GO33-A



POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101

Rebuild Kits for DB10, DB20, GO33	
Partial Rebuild*	RKI-GN-RX31-GO33
Full Rebuild*	RKC-GN-RX31-GO33

[*Firing head crossover rebuild kit details](#)



MODIFIED FEED-THRU
GN-036-110K20



INTEGRATED BUSHING
RNTD-GEO



K20 TO POWERSet
RECON CONTACT
(PROVIDED SEPARATELY)

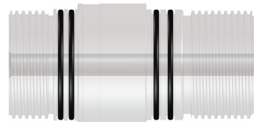
ADDITIONAL CROSSOVERS AND BULL PLUG



3.13" DISPOSABLE CROSSOVER
GI PIN x 1.63" ACME Box
GN-R31-T172-A
(QUICK CHANGE CONNECTION)



THREAD PROTECTOR (THREADED INSERT)
FOR 1.63" ACME Box
EM-EL1-THD-GOQCP



3.13" CROSSOVER TO PUMPDOWN SUB
GI PIN x 3.13" CONVENTIONAL PIN
GN-RX31-GIC31-050
(BOTTOM GUN TO PUMPDOWN SUB)



3.13" BULL PLUG
GN-R31HF-0022
(BOTTOM GUN, E.G. FOR TOE
PREPS IN VERTICAL WELLS)

4-1/2 in (114 mm) EPIC™ Flex Orbit Specifications, GOB Self-Orienting



GEODynamics' advanced EPIC™ Flex Orbit perforating system delivers a versatile, addressable switch-ready, portless, self-orienting solution that provides high levels of precision and reliability. The open architecture design allows engineering teams to plan and complete multistage plug-and-perf operations more safely, precisely, and cost-effectively. Flex Orbit can accommodate a variety of market-leading shaped charge designs, including GEODynamics charges. GEODynamics can provide Flex Orbit fully loaded, or ready to load, and with or without an addressable switch.

APPLICATION SPECIFICATIONS

Shot Density and Phasing Options	Multiple Shot & Phasing Options
Initiation Point	Bottom-fired, Wireline
Mode of Fire	Select fire, addressable
Detonating Cord	80-grain round
Compatible Perforating Charges	Connex®, Razor®, Basix™
Maximum Gun Swell (in)[mm]	TBD

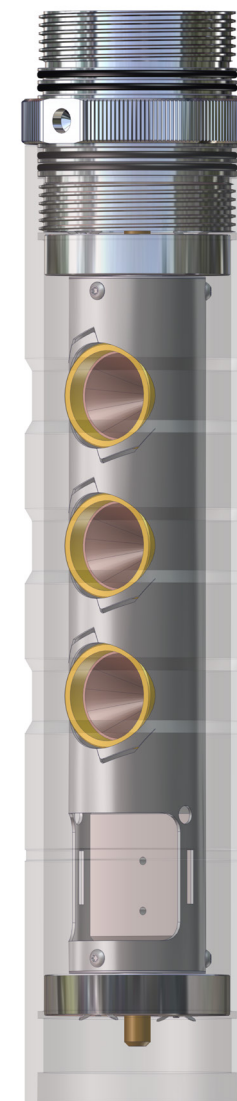
ENVIRONMENTAL

Maximum Pressure (psi)[MPa]	TBD
Maximum Tensile* (lbf)[kN]	TBD *Hardware Calculated Breaking Point

CARRIER SPECIFICATIONS

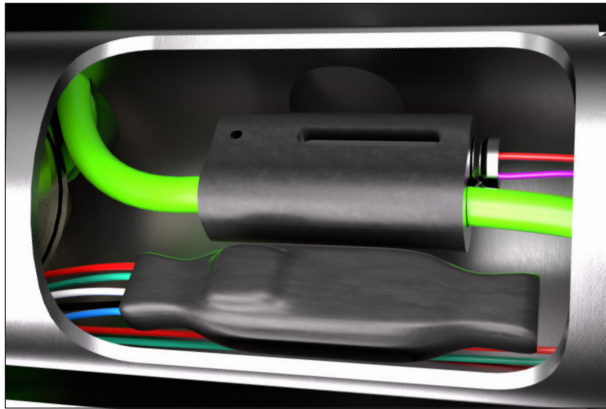
Carrier Assembly Part Number	Shot & Phasing Options		Gun Lengths		Gun End to Center of First Band		Distance Band to Band		Shipping Assy Weights (no sub)		Make-Up Lengths with Tandem Sub	
	# Shots	Phasing	(in)	(cm)	(in)	(mm)	(in)	(mm)	(lbs)	(kgs)	T078 (in)	T077 (in)
GOB45-O01	1	0°	13.2	33.5	8.19	208.03	3.0	76.2	22	9.8	13.33	14.10
GOB45-O02	2		16.2	41.2					26	11.6	16.33	17.10
GOB45-O03	3		19.2	48.8					29	13.3	19.33	20.10
GOB45-O04	4		22.2	53.4					33	15.1	22.33	23.10
GOB45-O05	5		25.2	64.0					37	16.9	25.33	26.10
GOB45-O06	6		28.2	71.6					41	18.6	28.33	29.10
GOB45-O07	7		31.2	79.3					45	20.4	31.33	32.10
GOB45-O08	8		34.2	86.9					49	22.2	34.33	35.10
GOB45-O09	9		37.2	94.5					53	23.9	37.33	38.10
GOB45-O10	10		40.2	102.1					57	25.7	40.33	41.10

Nitrile or Viton o-rings available with any assembly. Additional shot and phasing options available with lead time.



EPIC™ Flex Perforating Systems

Design Overview

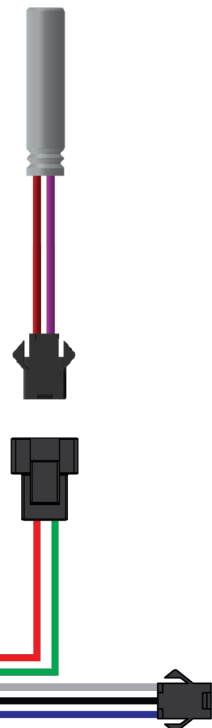


DETONATOR BLOCK INCLUDED WITH
DET-E-A140S-CA

DETONATOR PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS
DET-E-A140S-CA

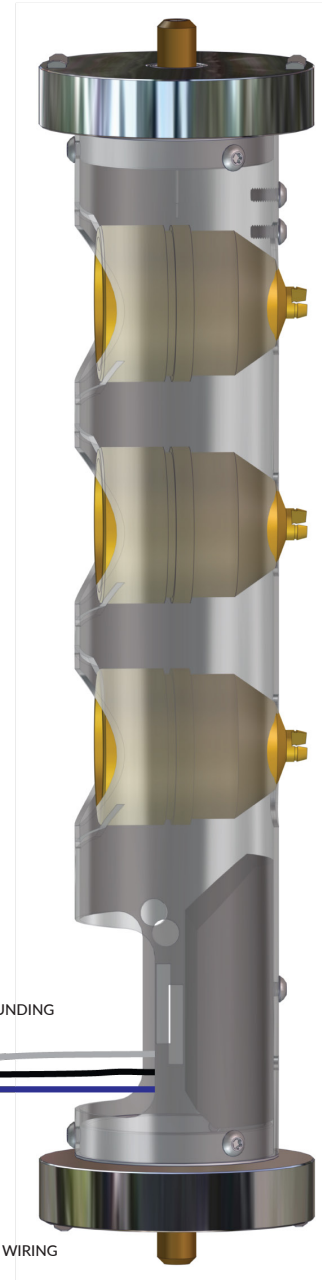
ADDRESSABLE SWITCH PROVIDED
WITH NO-HASSLE LOCKING PIN CONNECTORS
EL1-AL-1000-C
ASW-130-C
THIRD-PARTY ADDRESSABLE SWITCHES AVAILABLE

COMPLIANT WITH
MULTIPLE ELECTRO-MECHANICAL SYSTEMS



INTEGRATED GROUNDING

NO GUN-TO-GUN WIRING



NO GUN-TO-GUN WIRING

ALUMINUM END PLATES

LOW-FRICTION BALL BEARINGS FACILITATE
EASY ROTATIONAL POSITIONING

COMPATIBLE WITH GEODYNAMICS'
39-GRAM (40A) SHAPED CHARGES

INTERNAL ECCENTRIC WEIGHT SYSTEM
ENABLES PRECISE SHOT PLACEMENT

EPIC™ Flex Perforating Systems

Quick Change, Tandems, and Setting Tool Crossover

HARDWARE

Gun Body Configuration/Material	Threaded and banded, proprietary gun steel, similar to 41XX alloy steel
Charge Tube Type & Retention	Round steel tube strip; bend tab retention
Type of Tandem Connection	Disposable and reusable tandem subs
Nominal OD / Wall Thickness (in)[mm]	4.50 [114.3] / 0.375 [9.53]
Upper/Lower Thread Connections	3.9375" Dia. - 6P ACME-2G (unconventional short thread)

COMPONENTS AND ACCESSORIES

Description	Part Number(s)
4.5" Direct Connect Quick Change Assy (direct to top gun tandem) Intermediate Rebuild Kit (contacts, teflon tubing, screw, spring, insulating ret.) Complete Rebuild Kit with O-Rings (all required parts)	GN-QC45-GIC45 RKI-GN-QC31-0001 RKC-GN-QC31-0001
4.5" Disposable Portless Tandem Contact Sub Assembly (solid feed-through)	GN-R45-T078-A
4.5" Reusable Portless Tandem Contact Sub Assembly Complete Rebuild Kit (feed-through assembly, retainer nut, contact support bushing)	GN-R45-T077-A RKC-RXX-T077
O-Ring Materials and Size, Nitrile (Standard) Viton 95D (optional)	OR-N569-240 OR-V95G-240
Detonator, A140S, RDX, with locking pin connectors	DET-E-A140S-CA
EPIC™ Slim Ignitor Module (T094-A tandem sub in bottom gun (to -GIC crossover)	IGN-EPIC-230-106
4.5" Precision Disposable Tandem Sub Assembly (for slim ignitor module to crossover)	GN-R45-T094-A
4.5" Crossover, GI Box (Bottom Gun Tandem) to Setting Tool GI Box x Size 20 Setting Tool	GN-RX45-BK20-GIC
4.5" Flex Bull Plug	GN-R45-T022



EPIC FLEX REUSABLE TANDEM SUB
GN-R45-T077-A



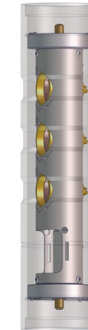
EPIC FLEX DISPOSABLE TANDEM SUB
GN-R45-T078-A



EPIC PRECISION DISPOSABLE TANDEM SUB
GN-R45-T094-A



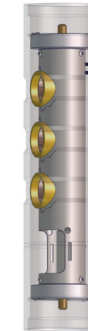
4.50" DIRECT CONNECT
QUICK CHANGE ASSY
GN-QC45-GIC45



4.50" EPIC FLEX DISPOSABLE
PORTLESS TANDEM SUB ASSEMBLY
GN-R45-T078-A



4.50" EPIC FLEX DISPOSABLE
PORTLESS TANDEM SUB ASSEMBLY
GN-R45-T078-A



4.50" EPIC FLEX ORBIT
GOB45-O03
3-SHOT, 0° SHOWN



4.50" EPIC PRECISION DISPOSABLE
PORTLESS TANDEM SUB ASSEMBLY
GN-R45-T094-A



EPIC SLIM IGNITOR MODULE
IGN-EPIC-230-106



4.50" CROSSOVER,
GI BOX x SIZE 20 SETTING TOOL
GN-RX45-BK20-GIC



EPIC™ Quick Change and Setting Tool Crossovers

Quick Change Assembly

GEODynamics' direct connect quick changes provide reliable and efficient connections directly to EPIC™ Precision and EPIC™ Flex perforating systems. The top quick change shoulders up to industry-standard casing collar locators (CCL) and makes up to the tandem sub at the top gun.

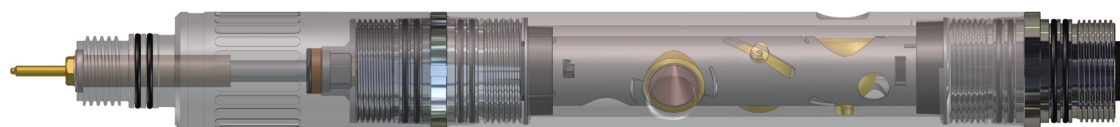
Mechanical Specifications							
Gun Size (OD)	Assembly Part Number	Housing Stamped Part Number	Upper O-Rings	Internal O-Ring	Makeup Length	Uphole Thread	Downhole Thread
2-1/2"	GN-QC25-GIC25	GN-QC25-0041	OR-N569-222	OR-N569-210	5.98 in 15.19 cm	1-5/8" 6P ACME Pin	2.092" 8 STUB ACME-2G
2-3/4"	GN-QC27-GIC27	GN-QC27-0041					2-3/8" 8P ACME Box
3-1/8"	GN-QC31-GIC31	GN-QC31-0041					2-3/4" 6P ACME Box
3-3/8"	GN-QC33-GIC33	GN-QC33-0041					2-13/16" 6P ACME Box

Environmental Specifications		
Maximum Pressure	20,000 psi	1378.95 bar
Maximum Temperature	350°F	177°C
Maximum Tensile Force	50,000 lbs	224.41 kN

Electrical Specifications	
Maximum Voltage (QC)	500VDC
Maximum Current (QC)	3A

Top Connector Rebuild Kits	
Quick Rebuild*	RKI-GN-QC31-0001
Complete Rebuild*	RKC-GN-QC31-0001

*Top connector rebuild kits on next page.



2.75" OD ASSEMBLED VIEW WITH EPIC PRECISION SYSTEMS (TOP GUN)

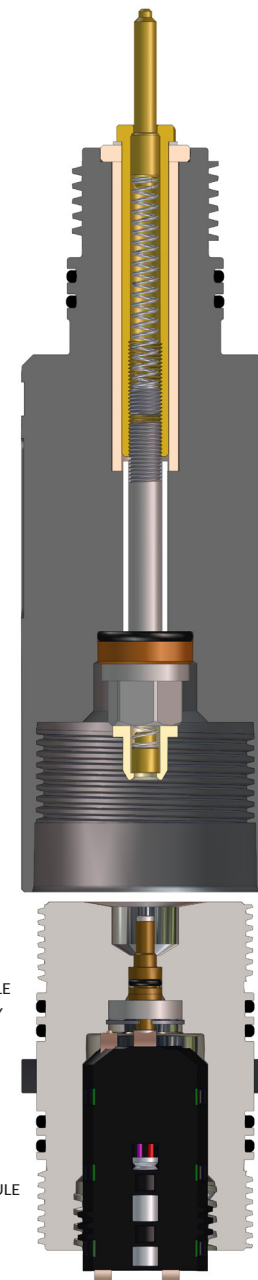
DIRECT CONNECTION TOP
CONNECTOR ASSY
GN-QC27-GIC27

HOUSING STAMPED P/N
GN-QC27-0041

EPIC™ PRECISION DISPOSABLE
PORTLESS TANDEM SUB ASSY
GN-R27-T094-A

EPIC SLIM DETONATOR MODULE
DT-EPIC-230-R140

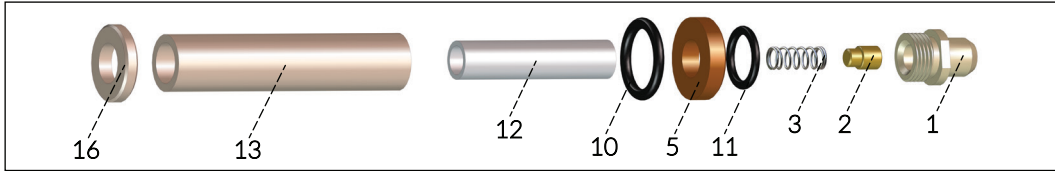
EPIC PRECISION SYSTEMS



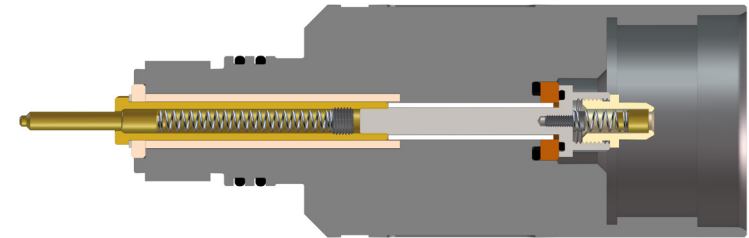
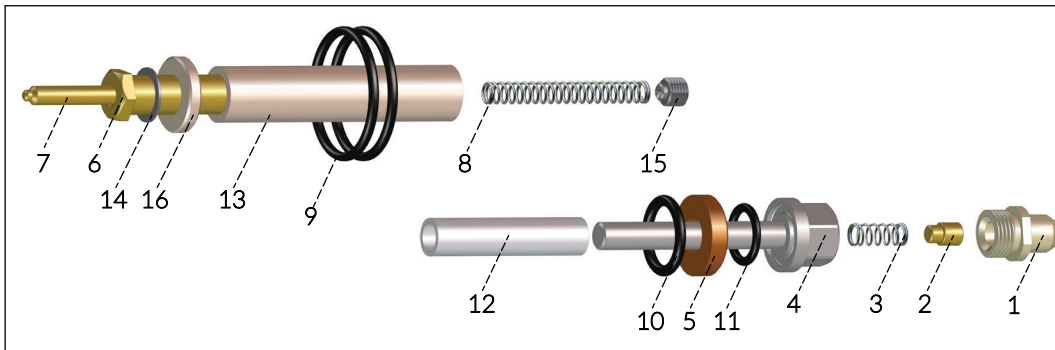
EPIC™ Quick Change and Setting Tool Crossovers

Quick Change Rebuild Kits

RKI-GN-QC31-0001, Quick Rebuild Kit



RKC-GN-QC31-0001, Complete Rebuild Kit



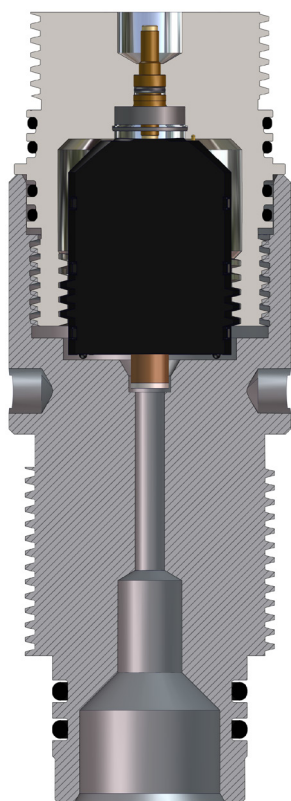
Item	Part Number	Description	QTY
1	EM-QC31-0022	Short QC Bottom Insulating Retainer	1
2	EM-032-0040	Contact, Sliding Contact V2	1
3	HD-SPG-296X236X031WD	Spring, Compression, .296 OD x .236 ID x .031 WD x .88 length, Century Spring # GG-2 SS	1
4	GN-QC27-0033	Contact Rod, 3-1/4\" Short QC V2	1
5	EM-EN-035-02684-0003	Washer, Insulating, QC Assembly	1
6	EM-EC-3354	Barrel, Sliding Contact, QC Assembly	1
7	EM-EC-3356	Contact, Plunger, QC Assembly	1
8	HD-SPG-296X224X2_63	Spring, Compression, QC Assembly, Upper	1
9	OR-N569-222	O-Ring, #222 Nitrile, 90 Durometer (six total in kit; two used for each redress)	6
10	OR-N569-210	O-Ring, #210 Nitrile, 90 Durometer	1
11	OR-HN90-114	O-Ring, HNBR #114, 90 Durometer	1
12	EM-EN-500x375x50 TT	PTFE Tubing, 3/8\" ID X 1/2\" OD by 3/8\" ID by 1/16\" Wall, 2.23\" Nominal Length	1
13	EM-EN-3354	Insulator, Sliding Contact	1
14	EM-EC-3355	Washer, Contact, Sliding, QC Assembly	1
15	EM-QC-QC275-00GO-0020	Set Screw, Modified, QC Assembly	1
16	EM-EC-3357	Washer, Insulating, Top, QC Assembly	1

Shaded rows with bold text represent parts in the quick rebuild kit.

EPIC™ Quick Change and Setting Tool Crossovers

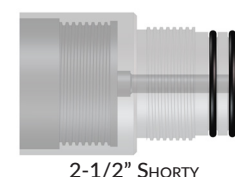
Ignitor Module and Setting Tool Crossovers

EPIC™ Precision, EPIC™ Flex, and EPIC Flex Orbit perforating systems provide reliable and efficient connections from the bottom gun to the setting tool. EPIC Ignitor Modules are a patented combination of electronics and ignitor technology, initiated by the bottom switch in the gun string. These non-addressable ignitor modules are designed to run with the EPIC™ Command Shooting Panel and are fully compatible with third-party addressable switches. The bottom gun uses a disposable tandem sub to connect to the crossover which connects directly to the setting tool.

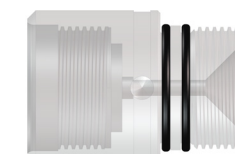


GN-R31-T076-A, TANDEM SUB
DT-0425-106, IGNITOR MODULE
GN-RX31-BK20-GIC, CROSSOVER

Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-1/2"	GN-RX25-BK10-GIC	2.50" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX25-2500-GID	2.50" Crossover, GI Box x 2.5" Shorty	#224	2.25"
	GN-RX25-3500-GID	2.50" Crossover, GI Box x 3.5" Shorty	#332	3.00"
2-3/4"	GN-RX27-BK10-GID	2.75" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX27-2500-GID	2.75" Crossover, GI Box x 2.5" Shorty	#224	2.75"
	GN-RX27-3500-GID	2.75" Crossover, GI Box x 3.5" Shorty	#332	2.83"
3-1/8"	GN-RX31-BK10-GIC	3.13" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX31-BK20-GIC	3.13" Crossover, GI Box x Size 20	#328	3.00"
	GN-RX31-3625-GIC	† 3.13" Crossover, GI Box x 3.63" Compact	#226	6.53"
	GN-RX31-3500-GIC	3.13" Crossover, GI Box x 3.5" Shorty	#332	3.00"
	GN-RX31-DB20-GIC	3.13" Crossover, GI Box x Diamondback	n/a	5.67"
3-3/8"	GN-RX33-BK10-GIC	3.38" Crossover, GI Box x Size 10	#222	3.25"
	GN-RX33-BK20-GIC	3.38" Crossover, GI Box x Size 20	#328	3.00"
	GN-RX33-3625-GIC	† 3.38" Crossover, GI Box x 3.63" Compact	#226	6.53"
	GN-RX33-3500-GIC	3.38" Crossover, GI Box x 3.5" Shorty	#332	3.00"
	GN-RX33-DB20-GIC	3.38" Crossover, GI Box x Diamondback	n/a	5.67"

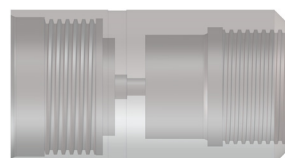


2-1/2" SHORTY

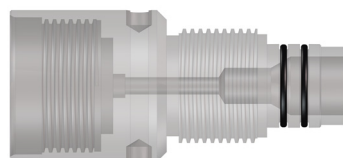


3-1/2" SHORTY

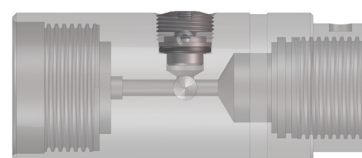
GN-R31-T094-A, TANDEM SUB
IGN-EPIC-230-106, IGNITOR MODULE
GN-RX31-BK20-GIC, CROSSOVER



DIAMONDBACK



BK Size 10



3-5/8" COMPACT †



† BLEEDER VALVE COMPONENTS
BRASS RUPTURE DISC: ST-0000-001
BLEEDER NUT: 025-1020-001
O-RING: OR-N569-213

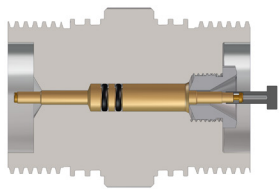
EPIC™ Quick Change and Setting Tool Crossovers

Conventional Ignitor and Firing Head Crossovers

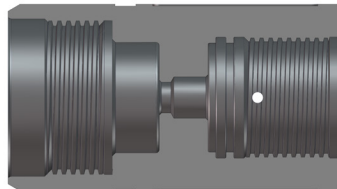
For applications with industry-standard ignitors, EPIC™ Precision, EPIC Flex, and EPIC Flex Orbit gun strings can be run with standard firing head box connections to the setting tool. The bottom gun in the perforating string uses an EPIC Flex Tandem Sub to connect with the reusable firing head crossover assembly.

Mechanical Specifications				
Gun OD	Part Number	Description	O-Ring Size	Makeup Length
2-1/2"	GN-RX25-GO33-A	2.50" Crossover Assy, GI Box to Size 10 Setting Tool	#222	8.05"
		Assembly includes two crossover components: 2.50" GI Box x GO Box Crossover, GN-RX25-GO33 2.75" GO Firing Head Pin x Size 10 Setting Tool Crossover, GN-RX27-BK10-GO		
2-3/4"	GN-RX27-DB10-A	2.75" Crossover Assy, GI Box x DB10 Firing Head Box	n/a	9.03"
	GN-RX27-GO33-A	2.75" Crossover Assy, GI Box to Size 10 Setting Tool	#222	8.05"
		Assembly includes two crossover components: 2.75" GI Box x GO Box Crossover, GN-RX27-GO33 2.75" GO Firing Head Pin x Size 10 Setting Tool Crossover, GN-RX27-BK10-GO		
3-1/8"	GN-RX31-DB20-A	3.13" Crossover Assy, GI Box x DB20 Firing Head Box	n/a	9.03"
	GN-RX31-GO33-A	3.13" Crossover Assy, GI Box x GO Firing Head Box	n/a	8.44"
	GN-RX31-K20V2*	*3.13" Crossover, GI Box x King K20 FH Box	n/a	8.56"

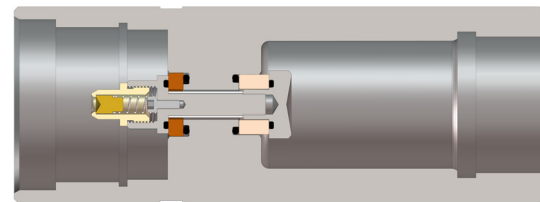
*Requires a reusable -T077 tandem, modified feed-thru, integrated bushing, and K20 to Recon contact as shown below.



FLEX REUSABLE TANDEM, GN-R31-T077
w/MODIFIED FEED-THRU, BUSHING, AND
K20 TO POWERSET® RECON CONTACT



GI BOX TO K20 CROSSOVER,
GN-RX31-K20V2 ONLY FOR
POWERSET® RECON SETTING TOOL



GI BOX TO DIAMONDBACK DB20 FIRING HEAD BOX CROSSOVER
GN-RX31-DB20-A



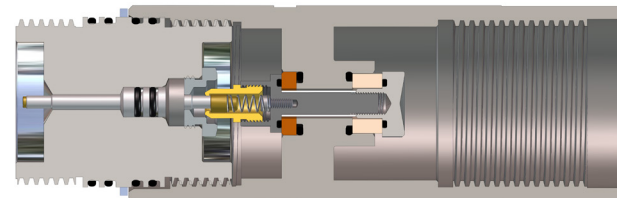
MODIFIED FEED-THRU
GN-036-110K20

INTEGRATED BUSHING
RNTD-GEO

K20 TO POWERSET
RECON CONTACT
(PROVIDED SEPARATELY)

Rebuild Kits for DB10, DB20, GO33	
Partial Rebuild*	RKI-GN-RX31-GO33
Full Rebuild*	RKC-GN-RX31-GO33

[Firing head crossover rebuild kits \(next page\).](#)



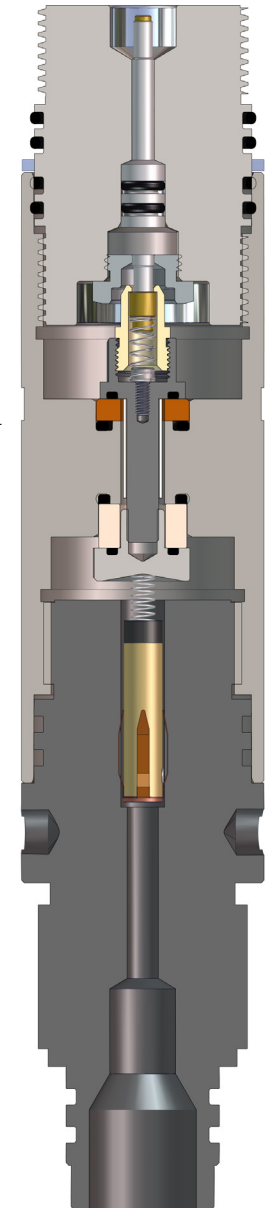
FLEX DISPOSABLE TANDEM SUB
GN-R31-T078-A

GI BOX TO GO FIRING HEAD BOX CROSSOVER
GN-RX31-GO33-A

FLEX DISPOSABLE
TANDEM SUB
GN-R25-T078-A
GN-R27-T078-A

GI BOX TO SIZE 10 SETTING TOOL
CROSSOVER
GN-RX25-GO33-A
GN-RX27-GO33-A

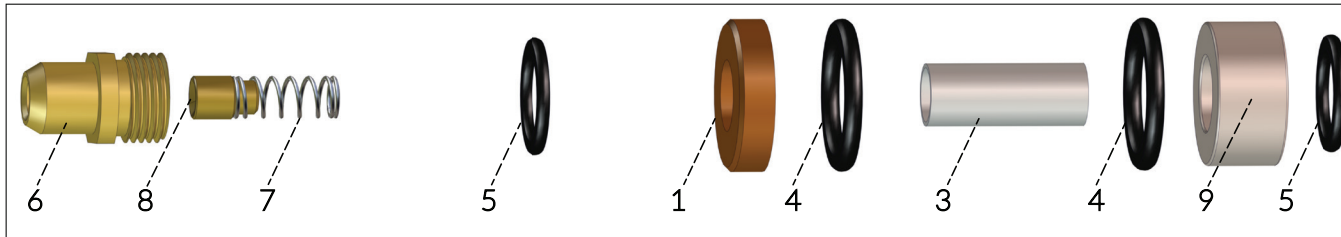
POWER CHARGE IGNITOR
WITH GROUND CLIP
DT-0425-101



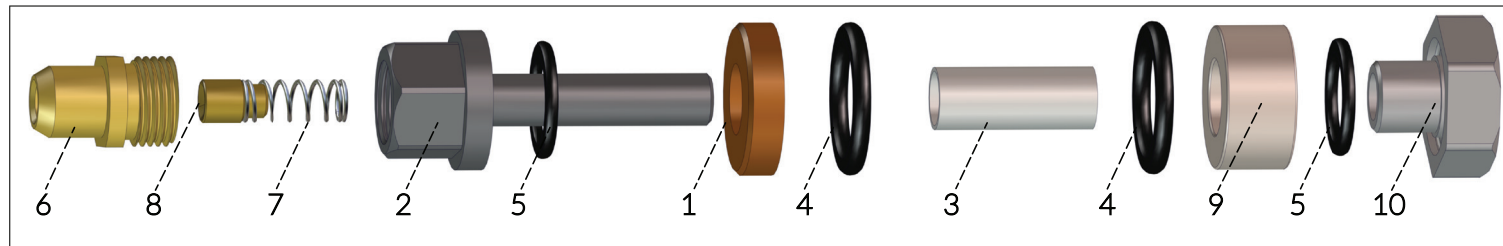
EPIC™ Quick Change and Setting Tool Crossovers

Firing Head Crossover Rebuild Kits (DB10, DB20, GO33)

RKI-GN-RX31-GO33, PARTIAL REBUILD KIT

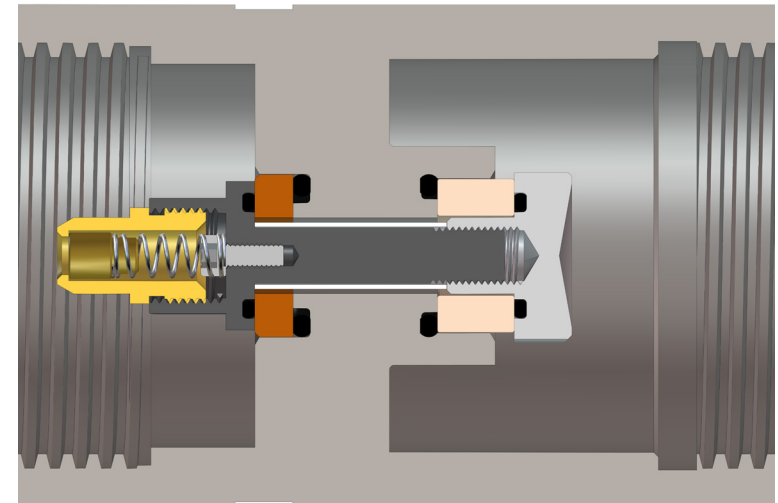


RKC-GN-RX31-GO33, FULL REBUILD KIT



Item	Part Number	Description	QTY
1	EM-EN-035-02684-0003	Washer, Insulating, QC Assembly	1
2	GN-QC27-0035	Contact Rod, 3-1/8" to GO	1
3	EM-52355K15-1125	Teflon Tubing, 3/8" ID X 7/16" OD X 1.125" Long	1
4	OR-N569-210	O-Ring, #210 Nitrile, 90 Durometer	2
5	OR-HN90-114	O-Ring, HNBR #114, 90 Durometer	2
6	EM-QC31-0022	Short QC Bottom Insulating Retainer	1
7	HD-SPG-296X236X031WD	Spring, Compression, .296" OD x .236" ID x .031" WD x .88" length, Century Spring # GG-2 SS	1
8	EM-032-0040	Contact, Sliding Contact V2	1
9	EM-EN-100X520X500	Insulating Washer, 1.00" OD X .520" ID by 1/2" Long	1
10	EM-QC-QC275-00GO-0023	Contact Rod, GO Style QC Assembly	1

Shaded rows with bold text represent parts in the partial rebuild kit.



EPIC™ Flex Accessories

Reusable Portless Tandem Sub and Rebuild Kit

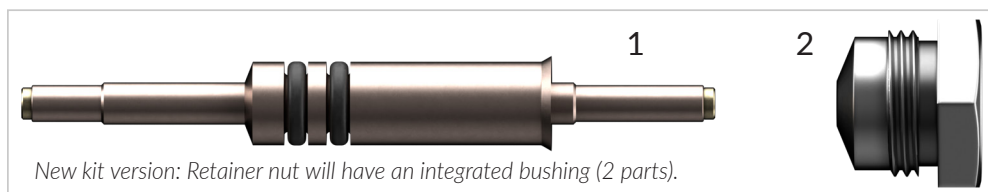
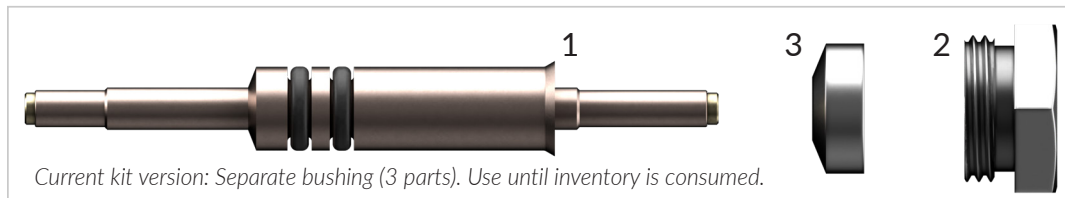
GEODynamics' EPIC™ Flex can be run with disposable or reusable tandem subs. Reusable subs are available in four sizes with a universal rebuild kit.

Rebuild the reusable sub after every run. Stop using the sub after 25 runs (25 rebuilds).

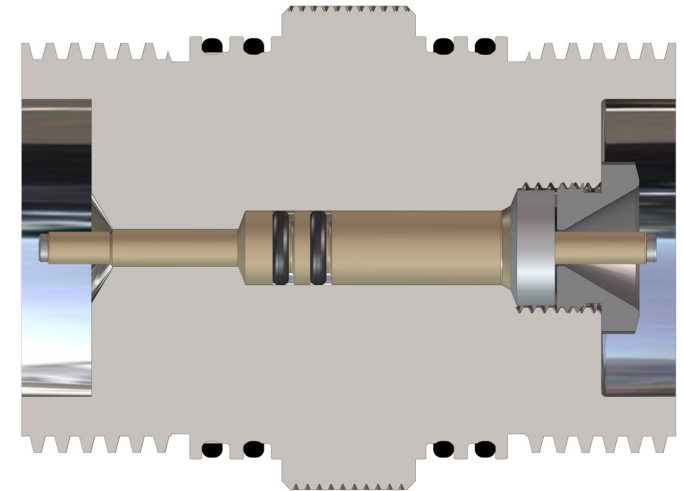
GN-RXX-T077-A, Specifications

Gun Size (OD)	Assembly Part Number	External O-Rings	Makeup Length	Rebuild Kit
2-1/2"	GN-R25-T077-A	OR-N569-225	0.90" / 2.29 cm	RKC-RXX-T077
2-3/4"	GN-R27-T077-A	OR-N569-227		
3-1/8"	GN-R31-T077-A	OR-N569-230		
3-3/8"	GN-R33-T077-A	OR-N569-231		

RKC-RXX-T077, Rebuild Kit



Item	Part Number	Description	Notes
1	GN-036-110-A	GIB Feed-Thru Assembly, Molded PEEK over SS Pin (includes two o-rings, #109 HNBR, 90 Durometer)	
2	RNTC-ZT1	Retainer Nut, ZT1 (may be substituted with P/N RNTD-GEP)	Current version kits only
	RNTD-GEO	Retainer Nut with Integrated Bushing, T Cone	New version kits (coming soon)
3	GN-IGS-121	Contact Support Bushing	Current version kits only



EPIC™ Systems Mechanical Performance

Data Summary



Carrier O.D. / System Type	SPF / Phasing (tested)	Maximum Pressure (psi) [MPa]	Maximum Tensile* (lbf)[kN]	Charge Size/Type	Charge Part Number	Perforating Condition	API Maximum Gun Swell (in)[mm]
2-1/2" EPIC Precision GID25 Series	6 spf / 60°	20,000 [138]	137,500 [612]	11.5g, HMX, Razor XDP	EC2-25A1122	Fluid	2.66 [67.56]
	6 spf / 60°			11.5g, HMX, Connex	EC2-25A1122-RC		
2-1/2" EPIC Flex GIB25 Series	6 spf / 60°	20,000 [138]	137,500 [612]	11.5g, HMX, Razor XDP	EC2-25A1122	Fluid	2.66 [67.56]
	6 spf / 60°			11.5g, HMX, Connex	EC2-25A1122-RC		
2-3/4" EPIC Precision GID27 Series	6 spf / 60°	23,000 [158]	166,700 [741]	15.0g, HMX, Razor XDP	EC2-27A1522	Fluid	2.90 [73.66]
						Dry	3.02 [76.71]
2-3/4" EPIC Flex Orbit GOB27 Series	5 spf / 0° 5 spf / 90°-270°	23,000 [158]	140,000 [622]	Various Charge Options	See Catalog Pages	Fluid	Details upon request
2-3/4" EPIC Flex GIB27 Series	6 spf / 60°	23,000 [158]	166,700 [741]	15.0g, HMX, Razor XDP	EC2-27A1522	Fluid	2.90 [73.66]
						Dry	3.02 [76.71]
3-1/8" EPIC Precision GID31 Series	6 spf / 60°	20,000 [138]	140,000 [622]	Various Charge Options	See Catalog Pages	Fluid (22.7g)	3.46 [87.88]
						‡ Dry (19.0g)	3.60 [91.44]
3-1/8" EPIC Flex Orbit GOB31 Series	5 spf / 0° 5 spf / 90°-270°	18,000 [124]	140,000 [622]	Various Charge Options	See Catalog Pages	Fluid	Details upon request
3-1/8" EPIC Flex GIB31 Series	6 spf / 60°	20,000 [138]	140,000 [622]	Various Charge Options	See Catalog Pages	Fluid (22.7g)	3.46 [87.88]
						‡ Dry (19.0g)	3.60 [91.44]
4-1/2" Flex Orbit GOB45 Series	4 spf / 0°	TBD	TBD	39.0g, 40A Charge Cases	EC2-40A39XX	Fluid	TBD

*Hardware calculated breaking point

‡ For 3-1/8" 19g in dry gas, maximum shot density is 5 spf or limited to one- (1) and two- (2) shot short guns only.

FLUID: Qualified for shooting in FLUID only with perforating systems qualified by GEODynamics.

IN FLUID or DRY: Qualified for shooting in FLUID or DRY GAS with perforating systems qualified by GEODynamics.

Revised: May 5, 2026 6:39 PM

Part Number Descriptions

EPIC™ Loaded Gun Systems



Examples: Loaded Gun Part Numbers and Descriptions

LGID27B08-08I1171-RX-DXN	EPIC™ Precision Loaded, 2.75" x 23.5", 08 Shots, 90° (6 spf), DET-80R111, EC2-27A1171-R, 08 Loaded, 0 Blank, DS-Tandem-T094A, No Switch, Nitrile-OR
LGIB27B08-08I1171-RX-BXN	EPIC™ Flex Loaded, 2.75" x 25.5", 08 Shots, 90° (6 spf), DET-80R111, EC2-27A1171-R, 08 Loaded, 0 Blank, D-Tandem-T078A, No Switch, Nitrile-OR
LGIC31A06-06I2321-EX-AXN	STRATX® Loaded, 3.13" x 19.5", 06 Shots, 60° (6 spf), DET-80R111, EC2-33A2321-E, 06 Loaded, 0 Blank, D-Tandem-T076A, No Switch, Nitrile-OR
LGIC33HF06-03I0771-30-AXV	STRATX® Loaded, 3.38" x 9.5", 06 Shots, 120/60° (HF), DET-80R111, EC2-33K0771-30, 03 Loaded, 3 Blank, D-Tandem-T076A, No Switch, Viton-OR

Gun Assembly		Gun Series	Carrier OD	Phasing	# Shots	—	# Loaded Shots	Detonating Cord	Charge P/N (without EC2-33X prefix)	—	Charge P/N (suffix)	—	Sub	Switch	O-Ring Material
LG	Loaded Gun	XX	NN	XX	NN	—	NN	X	NNNN	—	XX thru XXXXX	—	X	X	X

Gun Series		
IB	GIB	EPIC™ Flex
IC	GIC	STRATX®
ID	GID	EPIC Precision
OB	GOB	EPIC Flex Orbit
PO	GPO	EPIC Precision Orbit

Carrier OD	
Size	Code
2-1/2"	25
2-3/4"	27
3-1/8"	31
3-3/8"	33
4-1/2"	45

Phasing	
A	60°
B	90°
B4	90° (4 spf)
G	120°
G3	120° (3 spf)
J	180°
J4	180° (4 spf)
O	0°
P	72°
S	0° rotated 90°
T	0° rotated 180°
U	Reserved
V	+10°/-10°
V4	+45°/-45°
W	90° - 270°
W4	90° - 270°
Y	0° rotated 270°
HD	120°/60°
HF	120°/60°
SA	45° T, 60°
SB	45° T, 90°
SC	45° T, 135°
SD	45° T, 140°
SG	45° T, 120°
SJ	45° T, 180°
SO	45° T, 0°
SP	45° T, 72°
ST	45° T, 0 rotated 180°
SW	45° T, 90° - 270°

Shots
Total shots available in the carrier (e.g., 06, 12)

#Loaded Shots
Number of loaded shots (e.g., carrier holds 06, but 05 loaded per order)

Detonating Cord	
B	DET-40H512 (HMX)
D	DET-40R511 (RDX)
F	DET-80H212 (HMX)
I	DET-80R111 (RDX)

Charge P/N
The 4-digit charge part number followed by -XX or a 2- to 5-character suffix; e.g., EC2-33A1371 = 1371-XX EC2-33A2371-BF45 = 2371-BF45

Sub	
X	No Sub
A	T076-A (3.13" EPIC2)
B	EPIC Flex T078-A
C	Disposable XVR T172A
D	EPIC Precision T094-A (EPIC Slim)
E	T279-A Orienting (3.13" EPIC2)
F	T279-A Orienting (2.5", 2.75" EPIC Slim)
G	T294-A Orienting (3.13" EPIC Slim)
H	T076-A w/Adapter (3.13" only)
J	T279-A Orienting w/Adapter (3.13" only)
K	T076-A to T078-A Conversion, Plastic Insert
L	Flex Disposable T272-A Sub w/Lock Ring
M	T279-A to T078-A Conversion, Plastic Insert

Switch	
X	No Switch (Det Module Shipped Separately)
A	Packet Switch, EL1-AL-1000
B	Gen 2V Detonator Module, R140 (T076 subs)
C	Packet Switch, ASW-130
D	RESERVED for EPIC Packet Switch, ASW-120
E	Third Party Packet Switch
I	Slim Detonator Module, R140 (T094 subs)
K	Packet Switch, EL1-AL-1000-C (w/Connectors)
L	Packet Switch, ASW-130-C (w/Connectors)
M	Titan Single Function (w/Gun Connectors only)
N	Titan 2 Single Function (w/Connectors) (bottom gun)
O	Titan Single Function (w/Connectors)

O-Ring Material	
X	No O-Rings (No Sub)
N	Nitrile
V	Viton

Revised: May 5, 2026 6:39 PM

Part Number Descriptions

Shaped Charges

Examples: Shaped Charge Part Numbers and Descriptions

EC2-33A2341	33A Charge Case (carrier OD 3.13/3.38", or larger carrier with 33A load tube), 23 grams, RDX
EC2-33A2322	33A Charge Case (carrier OD 3.13/3.38", or larger carrier with 33A load tube), 23 grams, HMX
EC2-40A3922-RC	40A Charge Case (carrier OD 4.0", or larger carrier with 40A load tube), 39 grams, HMX, Reactive Charge

Explosive Charge	Gun Type		—	Carrier OD	Case Type	Explosive Weight	Charge Type	Explosive Type	—	Suffix
	Code	Description								
EC	1	Retrievable Tubing Gun	—	NN	X	NN (g)	N	N	—	XX thru XXXXX
	2	Retrievable Casing Gun								

Carrier OD	
Size	Code
1-9/16"	15
1-3/4"	17
2"	20
2-3/8"	23
2-1/2"	25
2-3/4"	27
2-7/8"	28
3-1/8"	31, 33
3-3/8"	33
4"	40
4-1/2"	45
4-5/8"	46
4-3/4"	48
5"	51
5-1/8"	51
6-3/4"	68
7"	70

Case Type
Represents charge case properties, such as material, case size, case shape, or shot arrangement (in the gun carrier). Used internally.

Charge Type
Represents the type of charge. Some examples are: DP, XDP, BH, SBH, GH, and Equal Hole size charges.

Explosive Type	
1	RDX
2	HMX
3	HNS

Charge P/N Suffix
Extra characters, e.g., EC2-33A2371-BF45 is (Basix Frac, 0.45" entry hole). See list below.

Charge P/N Suffixes	
-BF	Basix™ Frac
-C	IsoLoc™ Charges
-D	Refrax™ Dual Casing
-E	Economy
-EG	Economy Grooved
-FRX	FracIQ® Connex®
-G	Grooved Case
-LD	Low Debris
-L, -LS	Low Swell
-R	Refrax™ Dual Casing
-RC	Connex® Reactive Charge
-RX	Reactive Charge
-SB	SandIQ®
-SC	SandIQ®
-SD	SandIQ®
-SE	SandIQ®
-SF	SandIQ®
-SG	SandIQ®
See Nomenclature for more details	

Nomenclature

Abbreviations, Acronyms, and Terms

A - B - C

API	American Petroleum Institute
BH	Big Hole
BRT	Ballistic Release Tool
CCL	Casing Collar Locator

D - E - F

DP	Deep Penetrating
DUB	Dynamic Underbalance
EH	Entry Hole
EHD	Entry Hole Diameter
EUE	External Upset End (tubing connection)
FLUID	Fluid Only
FLUID or DRY	Fluid or Dry Gas

G - H - I

GH	Good Hole
HD	Heavy Duty
HF	HELLFire®
HMX	Cyclotetramethylene Trinitramine
HNS	Hexanitrosilbene
HP	High Pressure
HPHF	High Pressure, High Flow
ID	Internal Diameter
ISO	Internal Organization for Standardization
ITPO	Independent Third-Party Organization

J - K - L

LEH	Limited Entry Hole
LH	Left Hand (e.g., left-hand threads)

M - N - O

NPT	Non-Productive Time
OD	Outer Diameter

P - Q - R

PSA	Plug/Shoot Adapter
QC	Quick Change
RDX	Cyclotrimethylene Trinitramine
RF Safe	Radio Frequency Safe
RH	Right Hand (e.g., right-hand threads)
RTG	Retrievable Tubing Gun

S

SPF	Shots Per Foot
SPM	Shots Per Meter
SQC	Short Quick Change
STD	Standard

T - U

TCP	Tubing-Conveyed Perforating
THD	Thread

V - W - X

WL	Wireline
WRT	Wireline Release Tool

Y - Z

ZTC	Zero Tension Connector
-----	------------------------

SHAPED CHARGE ABBREVIATIONS & PART NUMBER SUFFIXES

-45	All two-digit numerical suffixes represent the entry hole diameter (EHD), e.g., BF45 is Basix Frac with 0.45" EHD.
-B	IsoLoc™ Charge
-BF	Basix™ Frac
BH	Big Hole
-C, -C1, -C3, -C4	IsoLoc™ Charges (various liner materials and performance)
CEH	Constant Entry Hole
-D	Refrax™ Dual Casing
-DP	Deep Penetrating
-E	Economy
-EG	Economy Grooved Case
-FRX	FracIQ® Connex®
-G	Grooved Case
GH	Good Hole
-L, -LS	Low Swell
-LD	Low Debris
-LEH	Limited Entry Hole
-R	Refrax™ Dual Casing
-RC	Connex® Reactive Charge
-RX	Reactive Charge other than Connex® (can be FracIQ® and other special charges with reactive liner material)
-SB, -SC, -SD, -SE, -SF, -SG	SandIQ®
SBH	Super Big Hole
SDP	Super Deep Penetrating
SGH	Super Good Hole
-T	IsoLoc™ Charge
TL	Twistlock
XDP	Extra Deep Penetrating
-XEH	Extra Entry Hole
XLS	Extra Low Swell

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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