

2-1/2 in (64mm) Scalloped Hollow Carrier Gun

4 SPF (13 SPM) GUNFACTS®

Gun Body Material:	Heat treated, seamless steel tubing
Gun Body Configuration:	Bolted and scalloped, or threaded and scalloped
Charge Tube Type:	Flat strip option (for 0° and 180° bolted gun) or round steel tube
Mode of Fire:	Simultaneous or selective firing systems such as EBFire® and ControlFire®
Type of Tandem Connection:	Booster-to-booster (no splice)
Initiation Point:	Top or bottom fired options available for wireline and TCP
Recommended Detonating Cord:	40 grains/foot, FLAT RIBBON
O-Ring Material:	Nitrile – 90 Durometer (Viton – 95 Durometer for temperatures >325°F [163°C])
O-Ring Size for Bolted Gun:	0111-224-090 / 0111-224-V95
O-Ring Size for Threaded Gun:	0111-225-090 / 0111-225-V95

Phasing	0°	60°	90°	180°
Assembly Part Number	0328-A**-041 ^{^†} 0228-A**-041 [†] 0528-A**-041 [§]	0328-A**-046 [†] 0228-A**-046 [†] 0528-A**-046 [§]	0328-A**-044 [†] 0228-A**-044 [†] 0528-A**-044 [§]	0328-A**-042 ^{^†} 0228-A**-042 [†] 0528-A**-042 [§]
Nominal O.D. (in)[mm]	2.50 [64]			
Nominal Thickness (in)[mm]	0.25 [6.4]			
Typical Gun Swell at Ambient Conditions (in)[mm] Ambient Liquid. 12.0g for 0°-90°, 11.0g for 180° Ambient Gas. 11.0g	2.71 [69] Not Recommended	2.69 [68] No Test	2.69 [68] No Test	2.63 [67] @ 11.0g 2.66 [68] @ 11.0g
Min. Recommended Restriction (in)[mm]	2.71 [69]			
Drift Gauge O.D. for Gun Body I.D. (in)[mm]	1.98 [50] using Gauge Length 12in [305]			
Min. Recommended Washover Pipe Clearance: Casing Drift I.D. to Nom. Washover O.D. (in)[mm] Washover Drift I.D. to Nom. Gun O.D. (in)[mm]	N/A N/A			
Max. Hardware Temperature (°F)[°C]	500 [260]			
Max. Pressure (psi)[MPa]	13,000 [90]	20,000 [138]	20,000 [138]	18,000 [124]
Min. Detonating Cord Velocity (ft/s)[m/s]	21,000 [6,400]			
Typical Length (ft)[m] 4 ft (12 shots) 7 ft (24 shots) 11 ft (40 shots) 21 ft (80 shots)	3.92 [1.19] [†] • 4.00 [1.22] ^{†§} 6.92 [2.11] [†] • 7.00 [2.13] ^{†§} 10.92 [3.33] [†] • 11.00 [3.35] ^{†§} 20.92 [6.38] [†] • 21.00 [6.40] ^{†§}			
Gun End to Center of First Scalloped Distance (in)[mm]	7.00 [178] [†] • 7.50 [191] ^{†§}			
Approximate Weight Fully Loaded (lb/ft)[kg/m]	8.0 [11.9]			
Max. Tension (lbf)[kN]	80,000 [356] [†] • 80,000 [356] ^{†§}			
Max. Rockwell "C" Hardness	39			
Upper/Lower Head Connection	3/8-24 UNF-2B [†] • 2-1/8" - 8 Acme ^{†§}			

[†] Wireline bolted gun [‡] Threaded gun [§] Threaded gun with booster-to-booster tandem transfer kit
^{**} Gun length. Example: Use "07" for 7ft gun; etc. [^] Use "T" for charge tube instead of charge strip

API PERFORMANCE OF CHARGES COMPATIBLE WITH 2-1/2IN, 4 SPF GUN SYSTEM

Charge Name	Charge Type	Charge Part Number [†]	Explosive Weight (g)	Gun O.D. (in)[mm]	Shot Density (spf)[spm], Phasing	Entrance Hole (in)[mm]	Penetration (in)[cm]	Burr Height (in)[cm]	Casing Size (in)[mm]	Target Strength (psi)[MPa]
PERFECTA	SDP	RTG-2512-421T	12.0	2-1/2 [64]	6 [20], 60°	0.28 [7]	29.36 [74.07]	0.05 [0.13]	3-1/2 [89]	7,650 [52.7]
PERFECTA	GH	RTG-2512-431	12.0	2-1/2 [64]	6 [20], 60°	0.45 [11]	20.31 [51.99]	0.05 [0.13]	3-1/2 [89]	6,710 [46.3]
BountyHunter	BH	<i>FLO-2511-310B</i>	<i>11.0</i>	<i>2-1/2 [64]</i>	<i>4 [13] 0°</i>	<i>0.59 [15]</i>	<i>4.85 [12.32]</i>	<i>0.05 [0.13]</i>	<i>4-1/2 [114]</i>	<i>5,340 [36.8]</i>

Note: All charges available with RDX, HMX and HNS. Table displays charges that have been API-19B or API RP-43 certified

Bold indicates API-19B certification. Italics indicate API RP-43 certification

[†] xxx-xxxx-3xxx for RDX, xxx-xxxx-4xxx for HMX, xxx-xxxx-5xxx for HNS

6 SPF (20 SPM) GUNFACTS®

Gun Body Material:	Heat treated, seamless steel tubing
Gun Body Configuration:	Bolted and scalloped, or threaded and scalloped
Charge Tube Type:	Round steel tube
Mode of Fire:	Simultaneous or selective firing systems such as EBFire® and ControlFire®
Type of Tandem Connection:	Booster-to-booster (no splice)
Initiation Point:	Top or bottom fired options available for wireline and TCP
Recommended Detonating Cord:	40 grains/foot, FLAT RIBBON
O-Ring Material:	Nitrile – 90 Durometer (Viton – 95 Durometer for temperatures >325°F [163°C])
O-Ring Size for Bolted Gun:	0111-224-090 / 0111-224-V95
O-Ring Size for Threaded Gun:	0111-225-090 / 0111-225-V95

Phasing	0°	60°
Assembly Part Number	0328-A**-061 [†] 0228-A**-061 [†] 0528-A**-061 [§]	0328-A**-066 [†] 0228-A**-066 [†] 0528-A**-066 [§]
Nominal O.D. (in)[mm]	2.50 [64]	
Nominal Thickness (in)[mm]	0.25 [6.4]	
Typical Gun Swell at Ambient Conditions (in)[mm] Ambient Liquid. 11.0g Ambient Gas	2.71 [69] @ 11.0g Not Recommended	2.69 [68] @ 11.0g Not Recommended
Min. Recommended Restriction (in)[mm]	2.73 [69]	
Drift Gauge O.D. for Gun Body I.D. (in)[mm]	1.98 [50] using Gauge Length 12in [305]	
Min. Recommended Washover Pipe Clearance: Casing Drift I.D. to Nom. Washover O.D. (in)[mm] Washover Drift I.D. to Nom. Gun O.D. (in)[mm]	N/A N/A	
Max. Hardware Temperature (°F)[°C]	500 [260]	
Max. Pressure (psi)[MPa]	8,000 [55]	20,000 [138]
Min. Detonating Cord Velocity (ft/s)[m/s]	22,000 [6,700]	
Typical Length (in)[m] 4 ft (18 shots) 7 ft (36 shots) 11 ft (60 shots) 21 ft (120 shots)	3.92 [1.19] [†] 6.92 [2.11] [†] 10.92 [3.33] [†] 20.92 [6.38] [†]	• 4.00 [1.22] ^{†§} • 7.00 [2.13] ^{†§} • 11.00 [3.35] ^{†§} • 21.00 [6.40] ^{†§}
Gun End to Center of First Scallop Distance (in)[mm]	6.50 [165] [†] • 7.00 [178] ^{†§}	
Approximate Weight Fully Loaded (lb/ft)[kg/m]	9.0 [13.4]	
Max. Tension (lbf)[kN]	80,000 [356] [†] • 80,000 [356] ^{†§}	
Max. Rockwell "C" Hardness	39	
Upper/Lower Head Connection	3/8-24 UNF-2B [†] • 2-1/8" - 8 Acme ^{†§}	

[†] Wireline bolted gun [‡] Threaded gun [§] Threaded gun with booster-to-booster tandem transfer kit
^{**} Gun length. Example: Use "07" for 7ft gun; etc.

API PERFORMANCE OF CHARGES COMPATIBLE WITH 2-1/2IN, 6 SPF GUN SYSTEM

Charge Name	Charge Type	Charge Part Number [†]	Explosive Weight (g)	Gun O.D. (in)[mm]	Shot Density (spf)[spm], Phasing	Entrance Hole (in)[mm]	Penetration (in)[cm]	Burr Height (in)[cm]	Casing Size (in)[mm]	Target Strength (psi)[MPa]
PERFECTA	SDP	RTG-2512-421T	12.0	2-1/2 [64]	6 [20], 60°	0.28 [7]	29.36 [74.07]	0.05 [0.13]	3-1/2 [89]	7,650 [52.7]
PERFECTA	GH	RTG-2512-431	12.0	2-1/2 [64]	6 [20], 60°	0.45 [11]	20.31 [51.99]	0.05 [0.13]	3-1/2 [89]	6,710 [46.3]
BountyHunter	BH	<i>FLO-2511-310B</i>	<i>11.0</i>	<i>2-1/2 [64]</i>	<i>4 [13] 0°</i>	<i>0.59 [15]</i>	<i>4.85 [12.32]</i>	<i>0.05 [0.13]</i>	<i>4-1/2 [114]</i>	<i>5,340 [36.8]</i>

Note: All charges available with RDX, HMX and HNS. Table displays charges that have been API-19B or API RP-43 certified

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[†] xxx-xxxx-3xxx for RDX, xxx-xxxx-4xxx for HMX, xxx-xxxx-5xxx for HNS