Razor®

BIGGER OR DEEPER SIMPLY BETTER

GEODynamics®

Razor® XDP

Industry-leading shaped charge performance=
Better connection to the reservoir=
BETTER WELL PERFORMANCE

This performance is achieved by combining cutting edge designs, state of the art production processes, and rigorous quality control.

BEST IN CLASS PERFORMANCE

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]*
1-9/16"	1503 Razor XDP	EC1-15A0321	Fluid	3.2g, RDX	6 spf / 60°	2-7/8" L-80	0.17 [0.43]	12.13 [30.81]	0.13 [0.33]	5.30 [13.46]
		EC1-15A0322	In Fluid or Dry	3.2g, HMX	4 spf / 0°		0.19 [0.48]	13.09 [33.25]		
			Fluid		6 spf / 60°		0.19 [0.48]	13.09 [33.25]	0.13 [0.33]	5.23 [13.28]
		EC1-15A0323		3.2g, HNS					0.11 [0.28]	5.00 [12.70]
	1503 Razor XDP LS	EC1-15A0321-L	Dry	2.9g, RDX	6 spf / 0°	2-7/8" L-80				
		EC1-15A0322-L		2.9g, HMX			0.19 [0.48]	12.80 [32.51]	0.18 [0.46]	6.50 [16.51]
1-3/4"	1705 Razor XDP	EC1-17A0521	Fluid	5.1g, RDX	6 spf / 0°	4-1/2" L-80				
		EC1-17A0522		5.1g, HMX			0.26 [0.66]	21.63 [54.94]	0.20 [0.51]	7.70 [19.56]
		EC1-17A0523		5.1g, HNS					0.19 [0.48]	6.20 [15.75]
2"	2007 Razor XDP	EC1-20A0721	Fluid	6.8g, RDX	6 spf / 60°	3-1/2" L-80	0.25 [0.64]	21.83 [55.45]	0.22 [0.56]	9.55 [24.26]
		EC1-20A0722		6.8g, HMX		2-7/8" L-80	0.25 [0.64]	22.30 [56.64]		
		EC1-20A0722		6.8g, HMX		3-1/2" L-80	0.24 [0.61]	24.40 [61.98]		
	2007 Razor XLS XDP	EC1-20B0721	In Fluid or Dry	6.5g, RDX		2-7/8" L-80				
		EC1-20B0722		6.5g, HMX			0.25 [0.64]	22.30 [56.64]	0.19 [0.48]	10.80 [27.43]
2-3/8"	2311 Razor XDP	EC2-23A1121	Fluid	11.0g, RDX	6 spf /60°	3-1/2" L-80			0.25 [0.64]	12.70 [32.26]
		EC2-23A1122		11.0g, HMX			0.31 [0.79]	30.11 [76.48]	0.24 [0.61]	11.40 [28.96]
		EC2-23A1123		11.0g, HNS			0.25 [0.64]	22.70 [57.68]	0.23 [0.58]	9.20 [23.37]
	2311 Razor XDP LS	EC2-23A1121-LS	Dry	11.0g, RDX	‡ 5 spf / 0°	3-1/2" L-80				
		EC2-23A1122-LS		11.0g, HMX			0.31 [0.79]	30.11 [76.48]		
		EC2-23A1121-LS	Fluid	11.0g, RDX	6 spf / 0°					
		EC2-23A1122-LS		11.0g, HMX			0.31 [0.79]	30.11 [76.48]		
2-1/2"	2511 Razor XDP	EC1-25A1121	Fluid	11.5g, RDX	6 spf /60°	3-1/2" L-80			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]
2-3/4"	2715 Razor XDP	EC2-27A1521	In Fluid or Dry	15.0g, RDX	6 spf /60°	4-1/2" L-80	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]
2-7/8"	2715 Razor XDP	EC2-27A1521	In Fluid or Dry	15.0g, RDX	6 spf /60°	4-1/2" L-80			0.26 [0.66]	13.50 [34.29]
		EC2-27A1522		15.0g, HMX			0.34 [0.86]	42.46 [107.85]	0.30 [0.76]	13.13 [33.35]
		EC2-27A1523		15.0g, HNS					0.31 [0.79]	10.50 [26.67]
	2818 Razor XDP	EC2-28A1821	Fluid	18.0g, RDX			0.43 [1.09]	40.05 [101.73]	0.41 [1.04]	14.10 [35.81]
		EC2-28A1822		18.0g, HMX			0.43 [1.09]	40.05 [101.73]	0.37 [0.94]	15.33 [38.94]
		EC2-28A1823		18.0g, HNS			0.32 [0.81]	32.38 [82.25]	0.33 [0.84]	10.95 [27.81]

‡ For 2-3/8" in dry gas, maximum shot density is 5 spf and limited to low-swell (LS) charges 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.
Performance in concrete represents API RP43 or API RP19B Section I testing results with the shot density/phasing, casing OD, 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.

APPLICATIONS

- Conventional reservoirs
- Unconventional reservoirs
- High temperature and high pressure
- Plug and perf
- Multi-string
- Plug and abandonment

Razor® XDP

Industry-leading shaped charge performance=
Better connection to the reservoir=
BETTER WELL PERFORMANCE

This performance is achieved by combining cutting edge designs, state of the art production processes, and rigorous quality control.

BEST IN CLASS PERFORMANCE

EXTREME DEEP PENETRATING (cont.)

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"	3319 Razor XDP	EC2-33A1921	‡ Fluid or Dry	19.0g, RDX	6 spf / 60°	4-1/2" L-80	0.51 [1.30]	42.07 [106.86]		
		EC2-33A1922		19.0g, HMX			0.49 [1.24]	41.10 [104.39]	0.43 [1.09]	14.60 [37.08]
	3323 Razor XDP	EC2-33A2321	Fluid	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]
3-3/8"	3319 Razor XDP	EC2-33A1921	In Fluid or Dry	19.0g, RDX	6 spf / 60°	4-1/2"	0.51 [1.30]	42.07 [106.86]		
		EC2-33A1922		19.0g, HMX					0.43 [1.09]	14.60 [37.08]
	3323 Razor XDP	EC2-33A2321	In Fluid or Dry	22.7g, RDX		4-1/2" L-80			0.41 [1.04]	16.40 [41.66]
		EC2-33A2322		22.7g, HMX			0.45 [1.14]	46.32 [117.65]	0.44 [1.12]	15.68 [39.83]
		EC2-33A2323		22.7g, HNS					0.37 [0.94]	12.12 [30.78]
	3325 Razor XDP	EC2-33B2521	Fluid	25.0g, RDX		4-1/2" L-80	0.45 [1.14]	44.58 [113.23]	0.39 [0.99]	17.10 [43.43]
		EC2-33B2522		25.0g, HMX			0.53 [1.35]	47.30 [120.14]	0.50 [1.27]	16.27 [41.33]
		EC2-33B2523		25.0g, HNS			0.37 [0.94]	30.20 [76.71]	0.36 [0.91]	13.20 [33.53]
4"	3325 Razor XDP	EC2-33B2521	In Fluid or Dry	25.0g, RDX	6 spf / 60°	5-1/2" L-80				
		EC2-33B2522		25.0g, HMX			0.47 [1.19]	46.11 [117.12]		
	4039 Razor XDP	EC2-40A3921	Fluid	39.0g, RDX	4 spf / 60°	5-1/2" L-80	0.39 [0.99]	53.00 [134.62]	0.38 [0.97]	18.60 [47.24]
		EC2-40A3922		39.0g, HMX	4 spf / 90°		0.39 [0.99]	53.00 [134.62]	0.37 [0.94]	19.10 [48.51]
4-1/2"	3323 Razor XDP	EC2-33A2321	Fluid	22.7g, RDX	12 spf / 135°-45°	7.0" L-80			0.43 [1.09]	15.70 [39.88]
		EC2-33A2322		22.7g, HMX			0.38 [0.97]	34.90 [88.65]		
	3325 Razor XDP	EC2-33B2521	In Fluid or Dry	25.0g, RDX	6 spf / 60°	7.0"			0.44 [1.12]	16.30 [41.40]
		EC2-33B2522		25.0g, HMX					0.34 [0.86]	15.70 [39.88]
	4039 Razor XDP	EC2-40A3921	Fluid	39.0g, RDX	5 spf / 60°	7.0" L-80	0.44 [1.12]	58.59 [148.82]	0.38 [0.97]	18.60 [47.24]
		EC2-40A3922		39.0g, HMX			0.45 [1.14]	72.93 [185.24]	0.37 [0.94]	19.10 [48.51]
4-5/8"	3323 Razor XDP	EC2-33A2321	Fluid	22.7g, RDX	12 spf / 135°-45°	7.0" L-80				
		EC2-33A2322		22.7g, HMX			0.37 [0.94]	35.03 [88.98]		
	4039 Razor XDP	EC2-40A3921	Fluid	39.0g, RDX	5 spf / 60°	7.0"			0.38 [0.97]	18.60 [47.24]
		EC2-40A3922		39.0g, HMX					0.37 [0.94]	19.10 [48.51]
		EC2-40A3923		39.0g, HNS					0.33 [0.84]	16.40 [41.66]
5-1/8"	3323 Razor XDP	EC2-33A2321	Fluid	† 22.7g, RDX	12 spf / 135°-45°	7-5/8"				
		EC2-33A2322		† 22.7g, HMX					0.38 [0.97]	12.60 [32.00]
7"	4039 Razor XDP	EC2-40A3921	Fluid	39.0g, RDX	12 spf / 135°-45°	9-5/8"			0.38 [0.97]	16.90 [42.93]
		EC2-40A3922		39.0g, HMX			0.41 [1.04]	53.59 [136.12]	0.44 [1.12]	17.65 [44.83]

‡ 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.
† 33A charge case must be grooved. For 5-1/8" 12 spf, max. explosive load is 22.7g. For 22 spf, max. explosive load is 19g.

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^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.

Razor® SBH

WORLD RECORD PERFORMANCE

WHEN SELECTING A BIG HOLE SYSTEM
WHY CHOOSE ANYTHING BUT THE BIGGEST?

SUPER 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]*
4-5/8"	4626 Razor SBH TL LD	[1] EC2-46A2631	Fluid	26.0g, RDX	16 spf/ 140°-20°	7.0" L-80	0.90 [2.29]	5.50 [13.97]		
		[1] EC2-46A2632		26.0g, HMX						
		[1] EC2-46A2631		26.0g, RDX		7-3/4" C-110	0.96 [2.44]	5.40 [13.72]		
4-3/4"	4818 Razor SBH	EC2-48K1831	Fluid	18.0g, RDX	24 spf/ 90°-45°	7.0" L-80				
		EC2-48K1832		18.0g, HMX			0.73 [1.85]	4.81 [12.22]		
						† 7-3/4" Q-125	0.63 [1.60]	3.70 [9.40]		
5-1/8"	5132 Razor SBH TL LD	[2] EC2-51A3231	Fluid	32.0g, RDX	16 spf / 140°-20°	7-5/8" L-80	1.07 [2.72]	6.60 [16.76]		
		[2] EC2-51A3232		32.0g, HMX						
	5132 Razor SBH LD	[2] EC2-51B3231		32.0g, RDX	12 spf/135°-45°		1.05 [2.67]	7.08 [17.98]		
				32.0g, RDX	16 spf / 140°-20°		1.05 [2.67]	6.88 [17.48]		
6-3/4"	6852 Razor SBH	EC2-68K5231	Fluid	52.0g, RDX	22 spf/ 90°-45°	9-5/8" L-80				
		EC2-68K5232		52.0g, HMX			1.08 [2.74]	5.62 [14.27]		
						‡ 9-7/8" Q-125	0.97 [2.46]	5.35 [13.59]		
7"	7039 Razor SBH TL LD	EC2-70C3931	Fluid	39.0g, RDX	15 spf / 140°-20°	9-5/8" L-80	1.24 [3.15]	7.08 [17.98]		
		EC2-70C3932		39.0g, HMX						
	7039K Razor SBH	EC2-70K3931		39.0g, RDX	20 spf / 90°-45°	9-5/8" L-80	1.04 [2.64]	6.31 [16.03]	1.10 [2.79]	4.40 [11.18]
		EC2-70K3932		39.0g, HMX					1.18 [3.00]	4.60 [11.68]
	7052 Razor SBH TL LD	EC2-70C5231	Fluid	52.0g, RDX	15 spf / 140°-20°	9-5/8" L-80	1.39 [3.53]	6.50 [16.51]		
						^^10-1/8" SM-125S	1.12 [2.84]	6.60 [16.76]		
		EC2-70C5232		52.0g, HMX		9-5/8"				
	7052K Razor SBH**	EC2-70K5231		52.0g, RDX	20 spf / 90°-45°	9-5/8" L-80	1.41 [3.58]	5.67 [14.40]		
		EC2-70K5232		52.0g, HMX			1.42 [3.61]	7.06 [17.93]		

Charge cases 45B, 46A, 46B with 26g load are compatible with 4-1/2" carrier and 4046A load tube. Maximum shot density in 4-1/2" carrier is 12 spf.
[1] Charge cases 45A & 46A are zinc; charge cases 45B & 46B are steel. [1] Blank charge case P/N: EP-1085-100-D (4-1/2" BH LD, zinc).
† Heavy weight 7-3/4" 45.51#, Q-125 casing was used in lieu of 7" 31.70# L-80. [2] Charge case 51A is zinc; charge case 51B is steel.
‡ Heavy weight 9-7/8" 61.80#, Q-125 casing was used in lieu of 9-5/8" 46.18# L-80. ^^ Heavy weight 10-1/8" 79.75# SM-125S grade casing used in lieu of 9-5/8" 47# L-80.

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^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.

World record area open to flow... even when shooting through heavy-wall casing

API RP 19B SECTION 1 REGISTERED & WITNESSED TEST

GUN SIZE	CHARGE NAME	CASING INFO	ENTRY HOLE	PENETRATION	AREA OPEN TO FLOW
			inches	inches	IN^2/FT
4-5/8" 16 SPF	4626 RAZOR® SBH	7" 46.1# C-110	0.96	5.4	11.58
5-1/8" 16 SPF	5132 RAZOR® SBH	7-5/8" 33.7#L80	1.07	6.7	14.39
7" 15 SPF	7052 RAZOR® SBH	9-5/8" 47.0#L80	1.39	6.5	27.76

Maximizing flow area ensures optimum well performance and maximizes the life of sand control systems

APPLICATIONS

- Gravel Pack / Frac Pack
- Sand control
- Plug and abandonment
- Unconsolidated reservoirs
- Conventional reservoirs

Razor®

ARE YOU REALLY GETTING THE PERFORMANCE YOU EXPECT FROM YOUR PERFORATING SYSTEM?

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