



# Owen Oil Tools

## Hard Rock Perforators

### Canadian Charge Performance Summary

O.D. (in.)	O.D. (mm)	Charge Type	Shot Density (spm) Dry or Fluid	Phasing	Charge P/N	Explosive Weight (g)	Casing O.D. (in.)	Casing O.D. (mm)	Entry Hole (in.)	Penetration (in.)	Penetration Normalized @ 5000 psi (in.)	Temp 1hr	Data Source
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### Through Tubing Perforating

#### Shogun Systems

1 11/16	42.8	SDP	13F/20F	0°/60°/40°	STP-1687-401NTX	8.4	4.5	114.3	0.24	19.31	22.14	375°F	API-RP19B
1 11/16	42.8	BH	13F/20F	0°/60°/40°	STP-1687-401NB	8.8	5.5	139.7	0.40	9.57	9.57	375°F	QC
1 11/16	42.8	SDP	13F/20F	0°/60°/40°	STP-1687-401NT	9.0	5	127	0.24	16.40	17.69	375°F	API-RP43
2 1/8	54	BH	13F/20F	0°/60°/40°	STP-2125-401NB	13.4	5.5	139.7	0.50	11.86	11.86	375°F	QC
2 1/8	54	SDP	13F/20F	0°/60°/40°	STP-2125-401NTX	13.9	5.5	139.7	0.28	25.25	29.75	375°F	API-RP19B
2 1/8	54	SDP	13F/20F	0°/60°/40°	STP-2125-401NT	14.0	5.5	139.7	0.26	23.64	24.30	375°F	API-RP43
2 1/2	63.5	SDP	13F	60°	STP-2500-401NT	24.5	5.5	139.7	0.35	33.33	34.94	375°F	API-RP43
2 1/2	63.5	SDP	13F	60°	STP-2500-401NTXII	26.4	5.5	139.7	0.36	32.62	39.28	375°F	API-RP19B

#### Retrievable Tubing Gun Systems

1 11/16	42.8	BH	13D/20D	60°	RTG-1687-301BH	3.3	4.5	114.3	0.37	3.29	3.29	330°F	EPA
1 11/16	42.8	SDP	13D/20D	60°	RTG-1687-401NT	3.5	4.5	114.3	0.18	8.14	9.08	400°F	API-RP43
1 11/16	42.8	SDP	13D/20D	60°	SDP-1687-401NTX	3.5	3.5	88.9	0.21	10.72	10.90	400°F	API-RP43
1 11/16	42.8	SDP	13D/20D	60°	SDP-1687-402NT3	3.3	2.875	73	0.18	13.18	13.18	400°F	QC
2 1/8	54	BH	13D/20D	60°	RTG-2125-302BH	6.4	4.5	114.3	0.45	3.79	3.79	330°F	EPA
2 1/8	54	DP	13D/20D	60°	RTG-2125-302	6.5	4.5	114.3	0.29	10.73	11.49	330°F	API-RP43
2 1/8	54	SDP	13D/20D	60°	SDP-2125-402NTX	6.5	4.5	114.3	0.26	20.01	22.13	400°F	API-RP43
2 1/8	54	SDP	13D/20D	60°	SDP-2125-402NT3	6.5	2.875	73	0.24	19.38	23.62	400°F	API-RP19B
2 1/2	63.5	SDP	13D/20D	60°	SDP-2500-402NT3	11.1	3.5	88.9	0.32	24.68	29.81	400°F	API-RP19B
2 1/2	63.5	BH	13D/20D	60°	TAG-2500-401F	11.5	3.5	88.9	0.67	4.55	6.09	400°F	API-RP19B
2 1/2	63.5	SDP	20D	60°	TAG-2500-402NT	11.0	4.5	114.3	0.36	20.17	20.17	400°F	EPA

### Expendable Charges and Carriers

#### Uzi Squeeze Gun Systems

3 3/8	86	DP	118F	120°/10°	HSC-2500-301	3.0	4.5	114.3	0.22	5.03	5.03	330°F	EPA
4	101	DP	118F	120°/10°	HSC-2500-302	6.0	5.5	139.7	0.24	5.67	5.67	330°F	EPA
5	127	DP	118F	120°/10°	HSC-2500-302	6.0	7	177.8	0.20	7.20	7.20	330°F	EPA

#### Shallow Gas Slick Gun Systems

3 1/8	79	DP	7/13D	60°/90°	HSC-4000-324SG	16.0	4.5	114.3	0.55	19.91	19.91	225°F	QC
3 1/8	79	DP	7/13D	60°/90°	HSC-4000-324SG2	14.0	4.5	114.3	0.39	22.55	22.55	225°F	QC
4	101	DP	7/13D	60°/90°	HSC-4000-324SG	16.0	5.5	139.7	0.46	19.00	19.00	225°F	QC

D = Dry; F = Fluid



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## Hard Rock Perforators

### Canadian Charge Performance Summary

O.D. (in.)	O.D. (mm)	Charge Type	Shot Density (spm) Dry or Fluid	Phasing	Charge P/N	Explosive Weight (g)	Casing O.D. (in.)	Casing O.D. (mm)	Entry Hole (in.)	Penetration (in.)	Penetration Normalized @ 5000 psi (in.)	Temp 1hr	Data Source
<b>Expendable Casing Gun Perforating Systems</b>													
2 7/8	73	SDP	20F	60°	SDP-2875-402NT3	15.6	4.5	114.3	0.36	29.73	29.73	400°F	QC
2 7/8	73	BH	20F	60°	TAG-3125-301	15.0	4.5	114.3	0.69	7.01	7.01	330°F	EPA
2 7/8	73	SDP	20F	60°	TAG-3125-302	15.0	4.5	114.3	0.33	21.88	24.32	330°F	API-RP43
3 3/8	86	BH	13D/17D/20D	90°/60°/60°	HSC-3375-301	20.0	5	127	0.73	6.05	6.73	330°F	API-RP43
3 3/8	86	DP	13D/17D/20D	90°/60°/60°	HSC-4000-311Z	23.0	4.5	114.3	0.41	24.52	24.52	330°F	QC
3 3/8	86	SDP	13D/17D/20D	90°/60°/60°	HSC-4000-311NT	23.0	5	127	0.37	30.23	31.66	330°F	RP-43
3 3/8	86	GH	13D/17D/20F	90°/60°/60°	TAG-3375-302	25.0	4.5	114.3	0.67	24.70	24.70	330°F	QC
3 3/8	86	SDP	13D/17D/20F	90°/60°/60°	SDP-3375-311NT3	25.0	4.5	114.3	0.44	41.93	41.93	330°F	QC
3 3/8	86	SDP	13D/17D/20F	90°/60°/60°	SDP-3375-411NT3	25.0	4.5	114.3	0.48	41.39	45.84	400°F	API-RP19B
3 3/8	86	DP	13D/17D/20F	90°/60°/60°	HSC-4000-318	26.0	4.5	114.3	0.48	27.07	27.07	330°F	EPA
3 3/8	86	DP	13D/17F	90°/60°	TAG-5000-360	32.0	4.5	114.3	0.44	22.20	23.92	330°F	API-RP43
4	101	BH	20D	60°	HSC-3375-301	20.0	5.5	139.7	0.74	6.98	6.98	330°F	EPA
4	101	DP	20D	60°	HSC-4000-311Z	23.0	5.5	139.7	0.41	25.42	25.42	330°F	QC
4	101	SDP	20D	60°	HSC-4000-311NT	23.0	5.5	139.7	0.36	32.82	32.82	330°F	EPA
4	101	GH	20D	60°	TAG-3375-302	25.0	5.5	139.7	0.65	26.35	26.35	330°F	QC
4	101	SDP	20D	60°	SDP-3375-311NT3	25.0	5.5	139.7	0.43	39.26	39.26	330°F	QC
4	101	SDP	20D	60°	SDP-3375-411NT3	25.0	5.5	139.7	0.44	41.93	41.93	400°F	QC
4	101	DP	20D	60°	HSC-4000-318	26.0	5.5	139.7	0.42	27.09	27.09	330°F	EPA
4	101	DP	20F	60°	TAG-5000-360	32.0	7	177.8	0.41	26.77	28.81	330°F	API-RP43
4	101	BH	14D/17D	90°/60°	HSC-5000-325F	32.0	5.5	139.7	0.93	6.30	6.68	330°F	API-RP43
4	101	DP	14D/17D	90°/60°	HSC-5000-321Z	32.0	5.5	139.7	0.48	28.76	28.76	330°F	QC
4	101	DP	14D/17F	90°/60°	TAG-5000-313Z	36.0	5.5	139.7	0.44	38.63	38.63	330°F	QC
4	101	SDP	14D/17F	90°/60°	TAG-5000-382	39.0	5.5	139.7	0.51	37.45	37.45	330°F	QC
4	101	SDP	14D/17F	90°/60°	TAG-5000-482	39.0	5.5	139.7	0.46	36.11	40.38	400°F	API-RP43
4	101	SDP	14D/17F	90°/60°	SDP-5000-400	39.0	5.5	139.7	0.48	48.13	48.13	400°F	QC
4 1/2	114	BH	17D	60°	HSC-5000-325F	32.0	7	177.8	0.83	9.66	9.66	330°F	EPA
4 1/2	114	DP	17D	60°	HSC-5000-321Z	32.0	7	177.8	0.40	38.31	38.31	330°F	QC
4 1/2	114	DP	17F	60°	TAG-5000-313Z	36.0	7	177.8	0.44	36.73	36.73	330°F	QC
4 1/2	114	SDP	17F	60°	TAG-5000-382	39.0	7	177.8	0.46	37.61	38.21	330°F	API-RP43
4 1/2	114	SDP	17F	60°	TAG-5000-482	39.0	7	177.8	0.46	37.61	38.21	400°F	API-RP43
4 1/2	114	SDP	17F	60°	SDP-5000-400	39.0	7	177.8	0.42	39.20	46.48	400°F	API-RP19B
5	127	BH	20D	60°	HSC-3375-301	20.0	7	177.8	0.75	6.70	6.70	330°F	QC
5	127	DP	20D	60°	HSC-4000-311Z	23.0	7	177.8	0.39	23.76	23.76	330°F	QC
5	127	SDP	20D	60°	HSC-4000-311NT	23.0	7	177.8	0.38	34.20	34.20	330°F	QC
5	127	GH	20D	60°	TAG-3375-302	25.0	7	177.8	0.65	23.55	23.55	330°F	QC
5	127	SDP	20D	60°	SDP-3375-311NT3	25.0	7	177.8	0.44	38.79	38.79	330°F	QC
5	127	SDP	20D	60°	SDP-3375-411NT3	25.0	7	177.8	0.46	41.28	41.28	400°F	QC
5	127	DP	20D	60°	HSC-4000-318	26.0	7	177.8	0.46	25.41	25.41	330°F	QC
5*	127	DP	20D	60°	TAG-5000-360	32.0	7	177.8	0.46	29.98	29.98	330°F	EPA
5*	127	BH	26F	135°/45°	HSC-5000-305Z	30.0	7	177.8	0.97	9.96	9.96	330°F	EPA
5	127	BH	26F	135°/45°	HSC-5000-305ZPF	30.0	7	177.8	1.05	8.03	8.03	330°F	QC
5	127	DP	26F	135°/45°	TAG-5000-314	32.5	7	177.8	0.57	22.62	22.62	330°F	QC
5	127	BH	14D/17D	90°/60°	HSC-5000-325F	32.0	7	177.8	1.06	6.90	6.90	330°F	QC
5	127	DP	14D/17D	90°/60°	HSC-5000-321Z	32.0	7	177.8	0.53	26.47	26.47	330°F	QC
5	127	DP	14D/17D	90°/60°	TAG-5000-313Z	36.0	7	177.8	0.46	38.93	38.93	330°F	QC
5	127	SDP	14D/17D	90°/60°	TAG-5000-382	39.0	7	177.8	0.52	37.55	37.55	330°F	QC
5*	127	SDP	14D/17D	90°/60°	TAG-5000-482	39.0	7	177.8	0.48	37.74	37.74	400°F	EPA
5	127	SDP	14D/17D	90°/60°	SDP-5000-400	39.0	7	177.8	0.48	44.65	44.65	400°F	QC

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\*[5-1/8" data used to format 5" data]



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