

Drill Collar Data

		Pipe Body			
OD	ID	Connection	Bevel Diameter	Overall Length	Recommended Make-Up Torque*
(in)	(in)		(in)	(ft)	(ft-lbs)
2-7/8	1-1/2	2 3/8 PAC	2-45/64	31	2,070
3-1/8	1	2 3/8 REG	3-1/64	31	3,030
3-1/8	1-1/8	2 3/8 REG	3-1/64	31	3,030
3-1/8	1-1/4	NC23	3	31	3,330
3-1/8	1-1/4	2 3/8 REG	3-1/64	31	3,030
3-1/8	1-1/4	NC26	3	31	1,690
3-3/8	1-1/2	NC26	3-21/64	31	3,580
3-1/2	1-1/2	NC26	3-21/64	31	4,610
3-3/4	1-1/2	NC26	3-29/64	31	4,670
4-1/8	2	NC31	3-61/64	31	6,850
4-1/4	1-3/4	NC31	3-61/64	31	8,160
4-1/4	2	NC31	3-61/64	31	6,850
4-3/4	1-3/4	NC38	4-41/64	31	9,990
4-3/4	2	NC35	4-33/64	31	10,800
4-3/4	2	NC38	4-41/64	31	9,990
4-3/4	2-1/4	NC38	4-41/64	31	9,990
4-3/4	2-1/4	NC35	4-33/64	31	9,200
4-3/4	2-1/2	NC38	4-41/64	31	9,990
4-7/8	2-1/4	NC38	4-41/64	31	11,900
5	2-1/4	NC38	4-49/64	31	12,900
5-1/4	2-1/4	NC38	4-61/64	31	12,900
5-3/4	2-1/4	NC46	5-5/8	31	17,700
5-3/4	2-1/4	NC40	5-25/64	31	17,000
6	2-1/4	NC46	5-23/32	31	23,400
6	2-13/16	NC46	5-23/32	31	22,400
6-1/4	2-1/4	4 1/2 H-90	6	31	28,700
6-1/4	2-1/4	NC46	5-29/32	31	28,000
6-1/4	2-1/2	NC46	5-29/32	31	25,700
6-1/4	2-3/4	NC46	5-29/32	31	23,100
6-1/4	2-13/16	NC46	5-29/32	31	22,400
6-1/4	2-13/16	NC50	6-1/16	31	23,000
6-1/4	3	NC46	5-29/32	31	20,300
6-1/2	2-1/4	NC46	6-3/32	31	28,000
6-1/2	2-1/4	4 1/2 H-90	6	31	28,700
6-1/2	2-1/4	NC50	6-11/32	31	29,700
6-1/2	2-1/2	NC46	6-3/32	31	25,700
6-1/2	2-13/16	NC46	6-3/32	31	22,400
6-1/2	2-13/16	NC50	6-11/32	31	29,700
6-1/2	2-7/8	NC50	6-11/32	31	29,700
6-1/2	3	4 1/2 H-90	6	31	21,100
6-3/4	2-1/4	NC50	6-11/32	31	36,700
6-3/4	2-1/2	NC50	6-11/32	31	35,800
6-3/4	2-1/2	NC46	6-11/32	31	25,700
6-3/4	2-13/16	NC50	6-11/32	31	32,300
6-3/4	2-7/8	NC50	6-11/32	31	31,500
6-3/4	3	NC50	6-11/32	31	30,000

*Performances calculated for products manufactured as per API.

2-7/8" – 6-3/4"

Pipe Body		Slick		Spiraled		OD (in)
Torsional Strength*	Bending Strength Ratio	Total Weight Slick	Weight/Foot Slick	Total Weight Spiral	Weight/Foot Spiral	
(ft-lbs)		(lbs)	(lbs/ft)	(lbs)	(lbs/ft)	
3,640	2.58	495	16	N/A	N/A	
5,330	2.57	720	23	681	22	
5,330	2.65	698	23	660	21	
5,860	2.57	674	22	635	21	
5,330	2.75	674	22	635	21	
2,970	1.33	674	22	635	21	
6,300	2.07	750	24	711	23	
8,110	2.42	821	27	780	25	
8,220	3.18	970	32	928	30	
12,100	2.44	1,070	35	1,010	33	
14,400	2.51	1,230	40	1,170	38	
12,100	2.75	1,150	38	1,090	36	
17,600	1.73	1,600	52	1,520	50	
19,100	2.58	1,520	50	1,440	47	
17,600	1.80	1,520	50	1,440	47	
17,600	1.92	1,430	47	1,360	44	
16,200	2.82	1,430	47	1,360	44	
17,600	2.10	1,340	44	1,260	41	
21,000	2.14	1,530	50	1,450	47	
22,700	2.38	1,630	53	1,550	51	
22,700	2.88	1,840	60	1,740	57	
31,200	1.68	2,290	75	2,190	71	
30,000	3.04	2,290	75	2,190	71	
41,200	2.02	2,530	83	2,410	79	
39,500	2.24	2,300	75	2,170	71	
56,200	2.31	2,780	91	2,650	87	
49,300	2.38	2,780	91	2,650	87	
45,200	2.47	2,680	88	2,560	83	
40,700	2.60	2,580	84	2,450	80	
39,500	2.64	2,550	83	2,420	79	
40,500	1.71	2,550	83	2,420	79	
35,700	2.79	2,460	80	2,330	76	
49,300	2.77	3,040	99	2,890	94	
56,200	2.69	3,040	99	2,890	94	
52,200	1.89	3,040	99	2,890	94	
45,200	2.87	2,940	96	2,790	91	
39,500	3.07	2,810	92	2,660	87	
52,200	2.03	2,810	92	2,660	87	
52,200	2.05	2,780	91	2,630	86	
41,200	3.14	2,720	89	2,570	84	
64,700	2.21	3,310	108	3,160	103	
63,000	2.26	3,210	105	3,060	100	
45,200	3.30	3,210	105	3,060	100	
56,800	2.37	3,080	101	2,920	95	
55,500	2.39	3,050	100	2,890	95	
52,700	2.46	2,990	98	2,830	93	

Drill Collar Data

		Pipe Body			
OD	ID	Connection	Bevel Diameter	Overall Length	Recommended Make-Up Torque*
(in)	(in)		(in)	(ft)	(ft-lbs)
7	2-1/4	NC50	6-31/64	31	38,400
7	2-1/2	NC50	6-31/64	31	35,800
7	2-13/16	NC50	6-31/64	31	32,300
7	2-13/16	5 1/2 H-90	6-5/8	31	36,500
7	2-13/16	5 1/2 H-90	6-5/8	31	36,500
7	2-13/16	5 1/2 FH	6-23/32	31	32,800
8	2-1/4	6 5/8 REG	7-33/64	31	60,300
8	2-1/2	6 5/8 REG	7-33/64	31	57,400
8	2-13/16	6 5/8 REG	7-33/64	31	53,300
8	2-13/16	NC56	7-31/64	31	48,200
8	3	6 5/8 REG	7-33/64	31	50,700
8	3	6 5/8 H-90	7-1/2	31	53,600
8	3-1/4	6 5/8 REG	7-33/64	31	46,900
8	3-3/8	6 5/8 REG	7-33/64	31	44,900
8-1/4	2-13/16	6 5/8 REG	7-45/64	31	53,300
8-1/4	3	6 5/8 REG	7-45/64	31	50,700
8-1/4	3-3/16	6 5/8 REG	7-45/64	31	47,900
8-1/4	3-1/4	6 5/8 REG	7-45/64	31	46,900
8-1/2	2-13/16	6 5/8 REG	7-45/64	31	53,300
8-1/2	2-13/16	NC61	8	31	68,400
8-1/2	3	6 5/8 REG	7-45/64	31	50,700
8-1/2	3-1/4	6 5/8 REG	7-45/64	31	46,900
9	2-13/16	7 5/8 REG	8-1/2	31	84,400
9	2-13/16	6 5/8 FH	8-29/64	31	84,000
9	3	7 5/8 REG	8-1/2	31	84,400
9	3	6 5/8 FH	8-29/64	31	81,000
9	3-1/2	6 5/8 FH	8-29/64	31	72,100
9-1/2	2-3/4	7 5/8 REG	8-13/16	31	92,600
9-1/2	2-13/16	7 5/8 REG	8-13/16	31	91,600
9-1/2	3	7 5/8 REG	8-13/16	31	88,600
9-1/2	3	NC70	8-31/32	31	102,000
9-1/2	3-1/16	7 5/8 REG	8-13/16	31	87,500
9-1/2	3-1/2	7 5/8 REG	8-13/16	31	79,500
9-3/4	3	7 5/8 REG LT	9-1/4	31	91,800
10	3	8 5/8 REG	9-23/32	31	109,000
10	3	7 5/8 REG LT	9-1/4	31	91,800
11	3	8 5/8 REG LT	10-1/2	31	131,000

*Performances calculated for products manufactured as per API.

7" - 11"

Pipe Body		Slick		Spiraled		OD (in)
Torsional Strength*	Bending Strength Ratio	Total Weight Slick	Weight/Foot Slick	Total Weight Spiral	Weight/Foot Spiral	
(ft-lbs)		(lbs)	(lbs/ft)	(lbs)	(lbs/ft)	
61,400	2.54	3,590	117	3,380	110	
57,300	2.61	3,500	114	3,290	107	
51,600	2.73	3,360	110	3,150	103	
64,900	2.40	3,360	110	3,150	103	
64,900	2.40	3,360	110	3,150	103	
52,400	1.72	3,360	110	3,150	103	
96,500	2.50	4,810	157	4,560	149	
91,800	2.54	4,720	154	4,460	146	
85,400	2.60	4,580	150	4,330	142	
77,200	3.02	4,580	150	4,330	142	
81,100	2.66	4,490	147	4,240	139	
95,400	2.50	4,490	147	4,240	139	
75,100	2.75	4,360	143	4,110	134	
71,900	2.81	4,300	140	4,040	132	
85,400	2.93	4,910	161	4,630	151	
81,100	2.99	4,820	158	4,540	148	
76,600	3.07	4,730	155	4,440	145	
75,100	3.10	4,700	154	4,410	144	
85,400	3.27	5,250	172	4,960	162	
109,000	2.59	5,250	172	4,960	162	
81,100	3.34	5,160	169	4,870	159	
75,100	3.46	5,040	165	4,750	155	
135,000	2.28	5,960	195	5,430	178	
134,000	2.41	5,970	195	5,440	178	
135,000	2.31	5,880	192	5,340	175	
130,000	2.44	5,880	192	5,350	175	
115,000	2.56	5,610	184	5,080	166	
148,000	2.78	6,750	221	6,200	203	
147,000	2.78	6,720	220	6,170	202	
142,000	2.81	6,630	217	6,080	199	
164,000	2.34	6,620	217	6,070	199	
140,000	2.83	6,600	216	6,050	198	
127,000	2.93	6,370	208	5,820	190	
147,000	3.09	7,020	230	6,470	212	
175,000	1.98	7,420	243	6,800	222	
147,000	3.38	7,430	243	6,800	222	
209,000	2.84	9,140	299	8,410	275	

Drill Collar Performance Datasheet

Overview

The Drill Collar Performance Datasheet is an easy-to-use document summarizing the performances and other technical characteristics of drill collars manufactured by COMMAND SMFI.

This document provides key performance characteristics such as tensile strength, torsional strength, and make-up torque range, as well as other product specific performance data.

An overview of some additional information available in the Drill Collar Performance Datasheet is shown below.

Useful datasheet definition:

► **Bending Strength Ratio (BSR):** This bending criteria is defined in the API spec RP7G as an inertia ratio between pin and box connection. A rotary shouldered connection that has a BSR of 2.5 (or 2.5:1) is generally accepted as an average balanced connection.

Performance Datasheet Size: **7 OD x 2-13/16 ID**
DRILL COLLAR Connection: **NCS0**

DRILL COLLAR DIMENSIONS

OD	7	in	Spiral type	Spiral
ID	2-13/16	in	Connection	NCS0
Section modulus	37.045	in ³	Backlash (mm)	0.07
Overall length	31.0	ft	Backlash (in)	0.0028
Elevator recess length	16	in	Material	API 5B H Mod
Slip recess diameter	6.500	in	Grade	110 KSI
Slip recess length	18.000	in		

DRILL COLLAR ASSEMBLY DATA

HANDLING		HYDRAULICS			
Weight/Length	101.5	lb/ft	Open and displacement	1.55	US gal/R
Approx. weight				1.87	US gal/R
				0.32	US gal/R

DRILL MECHANICAL PERFORMANCES

Tensile strength	1,390,000	lbs
Torsional strength	96,800	ft-lbs
Make-up torque	Maximum	35,500 ft-lbs
	Min and Recommended	32,300 ft-lbs
Bending strength ratio	2.75	