

Pipe Size In.	Nom. Wt. Lb/Ft	Wall Thick. In.	Pipe ID In.	Plain End Wt. Lb/Ft	Upset Wt. Lb	Pipe End Dia. ID	Pipe End Dia. OD	API Designation	Tool Joint		with Tool Joint		without Tool Joint		
									ID In.	Length Ft.	Weight Lb	Capacity Bbls/Ft	Displ. Bbls/Ft	Capacity Bbls/Ft	Displ. Bbls/Ft
<b>External Upset – Grade E</b>															
2 7/8	10.40	0.362	2.151	9.72	2.40	2.151	3.219	OH	3.875	2.156	1.29	34.99	0.00451	0.00389	0.00449
3 1/2	13.30	0.368	2.764	12.31	4.00	2.602	3.824	NC 38 (IF)	4.750	2.688	1.54	61.10	0.00741	0.00515	0.00742
3 1/2	15.50	0.449	2.602	14.63	2.80	2.602	3.824	NC 38 (IF)	5.000	2.563	1.59	74.82	0.00658	0.00606	0.00658
<b>Internal External Upset – Grade X</b>															
5	19.50	0.362	4.276	17.93	16.80	3.653	5.188	NC 50 (EH)	6.375	3.500	1.65	120.23	0.01745	0.00784	0.01776
<b>External Upset – Grade G</b>															
4	14.00	0.330	3.340	12.93	14.40	3.063	4.625	NC 46 (IF)	6.000	3.250	1.70	108.76	0.01082	0.00587	0.01084
4 1/2	16.60	0.337	3.826	14.98	17.20	3.563	5.188	NC 50 (IF)	6.375	3.750	1.67	113.10	0.01421	0.00663	0.01422
<b>Internal External Upset – Grade G</b>															
4 1/2	20.00	0.430	3.640	18.69	17.60	2.813	4.250	NC 46 (EH)	6.250	2.500	1.71	142.46	0.01252	0.00830	0.01287
5	19.50	0.362	4.276	17.93	16.80	3.563	5.188	NC 50 (IF)	6.625	2.750	1.70	157.37	0.01719	0.00827	0.01776
5	25.60	0.500	4.000	24.03	15.40	3.313	5.188	5 1/2 FH	7.250	3.250	1.82	188.17	0.01523	0.01075	0.01554
5	25.60	0.500	4.000	24.03	15.40	3.313	5.188	5 1/2 FH	7.250	3.500	1.82	179.97	0.01535	0.01066	0.01554
5 1/2	21.90	0.361	4.778	19.81	21.00	3.813	5.563	5 1/2 FH	7.250	3.500	1.79	184.41	0.02162	0.00925	0.02218
<b>Internal External Upset – Grade S</b>															
5 1/2	21.90	0.361	4.778	19.81	21.00	3.813	5.563	HT 55	7.000	4.000	2.33	199.19	0.02172	0.00925	0.02218
5 1/2	24.70	0.415	4.670	22.54	18.40	3.813	5.563	HT 55	7.000	3.750	2.31	210.15	0.02067	0.01042	0.02119
5 7/8	23.40	0.361	5.153						7.000	4.25			0.02521	0.00971	0.02579
6 5/8	25.20	0.330	5.965	22.19	25.87	5.315	6.929	HT 65	8.000	5.000	2.35	240.81	0.03385	0.01078	0.03456
6 5/8	27.70	0.362	5.901	24.21	24.00	5.315	6.929	HT 65	8.000	4.750	2.39	284.15	0.03297	0.01194	0.03383

# Drillpipe Capacity & Displacement

DP OD (In.)	Weight (ppf)	ID Tube (In.)	DP Capacity (bbl/ft)	Displacement (bbl/ft)	Closed-End (bbl/ft)
2 3/8	4.85	1.995	0.00387	0.0016	0.0055
	6.65	1.815	0.00320	0.0023	0.0055
2 7/8	6.45	2.469	0.00592	0.0021	0.0080
	6.85	2.441	0.00579	0.0022	0.0080
	8.35	2.323	0.00524	0.0028	0.0080
	10.40	2.151	0.00449	0.0035	0.0080
3 1/2	8.50	3.063	0.00911	0.0028	0.0119
	9.50	2.992	0.00870	0.0032	0.0119
	11.20	2.900	0.00817	0.0037	0.0119
	13.30	2.764	0.00742	0.0045	0.0119
	15.50	2.602	0.00658	0.0053	0.0119
4	11.85	3.476	0.01174	0.0038	0.0155
	14.00	3.340	0.01084	0.0047	0.0155
	15.70	3.240	0.01020	0.0053	0.0155
4 1/2	12.75	4.000	0.01554	0.0041	0.0197
	13.75	3.958	0.01522	0.0045	0.0197
	16.60	3.826	0.01422	0.0055	0.0197
	20.00	3.640	0.01287	0.0068	0.0197
5	16.25	4.408	0.01888	0.0054	0.0243
	19.50	4.276	0.01776	0.0065	0.0243
	20.50	4.214	0.01725	0.0070	0.0243
5 1/2	21.90	4.778	0.02218	0.0072	0.0294
	24.70	4.670	0.02119	0.0082	0.0294
5 7/8	23.40	5.153	0.02579	0.0077	0.0335
	26.30	5.045	0.02472	0.0088	0.0335
	28.67	4.875	0.02309	0.0104	0.0335
6 5/8	22.20	6.065	0.03573	0.0069	0.0426
	25.20	5.965	0.03456	0.0081	0.0426
	31.90	5.761	0.03224	0.0104	0.0426
7 5/8	29.25	6.969	0.04718	0.0093	0.0565

Note: Capacity and displacement value are without tool joint.

Nominal Size In.	Nominal Tube Dimensions		Tool Joint				Approx. Weight Tube & Joints lb/ft	Make-up Torque (ft-lb)	Capacity bbls/ft	Displacement bbls/ft
	Inside Dia. In.	Wall Thickness In.	Connection Size In.	Outside Dia. In.	Inside Dia. In.					
3 1/2	2 1/16	0.719	NC 38 (3 1/2 IF)	4 3/4	2 3/16	25.3	9,900	0.0042	0.0092	
3 1/2	2 1/4	0.625	NC 38 (3 1/2 IF)	4 3/4	2 3/8	23.2	9,900	0.0050	0.0084	
4	2 9/16	0.719	NC 40 (4 FH)	5 1/4	2 11/16	27.2	13,250	0.0073	0.0100	
4 1/2	2 3/4	0.875	NC 46 (4 IF)	6 1/4	2 7/8	41.0	21,800	0.0074	0.0149	
5	3	1.000	NC 50 (4 1/2 IF)	6 5/8	3 1/16	49.3	29,400	0.0088	0.0179	
5 1/2	3 3/8	1.063	5 1/2 FH	7	3 1/2	57.0	33,200	0.0111	0.0207	
6 5/8	4 1/2	1.063	6 5/8 FH	8	4 1/2	70.8	46,900	0.0196	0.0257	

OD	ID Capacity	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"	3 3/4"
4"	Wt lb/ft	36.7	34.5	32.0	29.2	-	-	-	-	-	-
	Disp bbl/ft	0.0133	0.0125	0.0116	0.0106	-	-	-	-	-	-
4 1/4"	Wt lb/ft	42.2	40.0	37.5	34.7	-	-	-	-	-	-
	Disp bbl/ft	0.0153	0.0145	0.0136	0.0126	-	-	-	-	-	-
4 1/2"	Wt lb/ft	48.1	45.9	43.4	40.6	-	-	-	-	-	-
	Disp bbl/ft	0.0175	0.0167	0.0158	0.0148	-	-	-	-	-	-
4 3/4"	Wt lb/ft	54.3	52.1	49.6	46.8	43.6	-	-	-	-	-
	Disp bbl/ft	0.0197	0.0189	0.0181	0.0170	0.0159	-	-	-	-	-
5"	Wt lb/ft	60.8	58.6	56.1	53.3	50.1	-	-	-	-	-
	Disp bbl/ft	0.0221	0.0213	0.0204	0.0194	0.0182	-	-	-	-	-
5 1/4"	Wt lb/ft	67.6	65.4	62.9	60.1	56.9	53.4	-	-	-	-
	Disp bbl/ft	0.0246	0.0238	0.0229	0.0219	0.0207	0.0194	-	-	-	-
5 1/2"	Wt lb/ft	74.8	72.6	70.1	67.3	64.1	60.6	56.8	-	-	-
	Disp bbl/ft	0.0272	0.0264	0.0255	0.0245	0.0233	0.0221	0.0207	-	-	-
5 3/4"	Wt lb/ft	82.3	80.1	77.6	74.8	71.6	68.1	64.3	-	-	-
	Disp bbl/ft	0.0299	0.0291	0.0282	0.0272	0.0261	0.0248	0.0234	-	-	-
6"	Wt lb/ft	90.1	87.9	85.4	82.6	79.4	75.9	72.1	67.9	63.4	-
	Disp bbl/ft	0.0328	0.0320	0.0311	0.0301	0.0289	0.0276	0.0262	0.0247	0.0231	-
6 1/4"	Wt lb/ft	98.0	95.8	93.3	90.5	87.3	83.8	80.0	75.8	71.3	-
	Disp bbl/ft	0.0356	0.0349	0.0339	0.0329	0.0318	0.0305	0.0291	0.0276	0.0259	-
6 1/2"	Wt lb/ft	107.0	104.8	102.3	99.5	96.3	92.8	89.0	84.8	80.3	-
	Disp bbl/ft	0.0389	0.0381	0.0372	0.0362	0.0350	0.0338	0.0324	0.0308	0.0292	-

**Spiral Drill Collars**  
 Approx. Displacement of  
 Spiral Drill Collar in bbls/ft  

$$\frac{(OD^2 - ID^2) \times 2.56}{2,747}$$

OD	ID	Capacity	1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"	3 3/4"
			0.0022	0.0030	0.0039	0.0049	0.0061	0.0073	0.0087	0.0103	0.0119	0.0137
6 3/4"	Wt lb/ft		116.0	113.8	111.3	108.5	105.3	101.8	98.0	93.8	89.3	-
	Disp bbl/ft		0.0422	0.0414	0.0405	0.0395	0.0383	0.0370	0.0356	0.0341	0.0325	-
7"	Wt lb/ft		125.0	122.8	120.3	117.5	114.3	110.8	107.0	102.8	98.3	93.4
	Disp bbl/ft		0.0455	0.0447	0.0438	0.0427	0.0416	0.0403	0.0389	0.0374	0.0358	0.0340
7 1/4"	Wt lb/ft		134.0	131.8	129.3	126.5	123.3	119.8	116.0	111.8	107.3	102.4
	Disp bbl/ft		0.0487	0.0479	0.0470	0.0460	0.0449	0.0436	0.0422	0.0407	0.0390	0.0372
7 1/2"	Wt lb/ft		144.0	141.8	139.3	136.5	133.3	129.8	126.0	121.8	117.3	112.4
	Disp bbl/ft		0.0524	0.0516	0.0507	0.0497	0.0485	0.0472	0.0458	0.0443	0.0427	0.0409
7 3/4"	Wt lb/ft		154.0	151.8	149.3	146.5	143.3	139.8	136.0	131.8	127.3	122.4
	Disp bbl/ft		0.0560	0.0552	0.0543	0.0533	0.0521	0.0509	0.0495	0.0479	0.0463	0.0445
8"	Wt lb/ft		165.0	162.8	160.3	157.5	154.3	150.8	147.0	142.8	138.3	133.4
	Disp bbl/ft		0.0600	0.0592	0.0583	0.0573	0.0561	0.0549	0.0535	0.0520	0.0503	0.0485
8 1/4"	Wt lb/ft		176.0	173.8	171.3	168.5	165.3	161.8	158.0	153.8	149.3	144.4
	Disp bbl/ft		0.0640	0.0632	0.0623	0.0613	0.0601	0.0589	0.0575	0.0560	0.0543	0.0525
8 1/2"	Wt lb/ft		187.0	184.8	182.3	179.5	176.3	172.8	169.0	164.8	160.3	155.4
	Disp bbl/ft		0.0680	0.0672	0.0663	0.0653	0.0641	0.0629	0.0615	0.0600	0.0583	0.0565
8 3/4"	Wt lb/ft		199.0	196.8	194.3	191.5	188.3	184.8	181.0	176.8	172.3	167.4
	Disp bbl/ft		0.0724	0.0716	0.0707	0.0697	0.0685	0.0672	0.0658	0.0643	0.0627	0.0609
9"	Wt lb/ft		210.2	208.0	205.6	202.7	199.6	196.0	192.2	188.0	183.5	178.7
	Disp bbl/ft		0.0765	0.0757	0.0748	0.0738	0.0726	0.0714	0.0700	0.0685	0.0668	0.0651
10"	Wt lb/ft		260.9	258.8	256.3	253.4	250.3	246.8	242.9	238.8	234.3	229.4
	Disp bbl/ft		0.0950	0.0942	0.0933	0.0923	0.0911	0.0898	0.0884	0.0869	0.0853	0.0835