

Drill pipe			New Tool Joint Data				Premium class			Class 2		
National size in	Non weight lb/ft	Type upset & grade	Conn.	New OD in	New ID in	Make up Torque fit/lb	Min OD Tool Joint in	Min. Box Shoulder with Eccentric wear in	Make – up Torque for Min. OD Tool Joint Ft-lb	Min OD Tool Joint in	Min. Box shoulder with Eccentric wear	Make-up Torque for Min. OD Tool joint ft-lb
2 3/8	4.85	EU –E75	NC26	3 3/8	1 3/4	4,125B	3 1/8	3/64	1,945	33/32	1/32	1,689
	4.85	EU –E75	W.O.	3 3/8	2	2,541p	3 1/16	1/16	1,994	31/32	3/64	1,746
	4.85	EU –E75	2 3/8 OHLW	3 1/8	2	2,716p	3	1/16	1,723	2 31/32	3/64	1,481
	4.85	EU –E75	2 3/8 SI-H90	3 1/4	2	3,042p	2 31/32	1/16	1,996	2 15/16	3/64	1,726
2 3/8	6.65	IU- E75	2 3/8 PAC ²	2 7/8	1 3/8	2,803P	2 25/32	9/64	2,455	2 23/32	7/64	2,055
	6.65	EU –E75	NC26	3 3/8	1 3/4	4,125B	3 3/16	5/64	2,467	3 5/32	1/16	2,204
	6.65	EU –E75	2 3/8 SL-H90	3 1/4	2	3,042P	3 1/32	3/32	2,549	2 31/32	1/16	1,996
	6.65	EU –E75	2 3/8 OHSW	3 1/4	1 3/4	3,783B	3 1/16	3/32	2,216	3 1/32	5/64	1,967
2 3/8	6.65	EU –X95	NC26	3 3/8	1 3/4	4,125B	3 1/4	7/64	3,005	3 7/32	3/32	2,734
2 3/8	6.65	EU+G105	NC26 ²	3 3/8	1 3/4	4,125B	3 9/32	1/8	3,279	3 1/4	7/64	3,005
2 7/8	6.85	EU –E75	NC31	4 1/8	2 1/8	7,074P	3 11/16	5/64	3,154	3 21/32	1/16	2,804
	6.85	EU –E75	2 3/8 WO	4 1/8	2 7/16	4,209P	3 5/8	5/64	3,216	3 19/32	1/16	2,876
	6.85	EU –E75	2 7/8 OHLW ²	3 3/4	2 7/16	3,290P	3 1/2	7/64	3,290	3 7/16	5/64	2,804
	6.85	EU –E75	2 7/8 SL-H90	3 7/8	2 7/16	4,504P	3 1/2	3/32	3,397	3 7/16	1/16	2,666
2 7/8	10.40	EU –E75	NC31	4 1/8	2 1/8	7,014P	3 13/16	9/64	4,597	3 3/4	7/64	3,867
	10.40	IU-E75	2 7/8 XH	4 1/4	1 7/8	7,853P	3 23/32	9/64	4,357	3 21/32	7/64	3,664
	10.40	IU-E75	NC26 ²	3 3/8	1 3/4	4,125B	3 3/8	11/64	4,125	3 11/32	5/32	3,839
	10.40	EU –E75	2 7/8 OHSW ²	3 7/8	2 5/32	5,194P	3 19/32	5/32	4,411	3 9/16	7/64	4,079
	10.40	EU –E75	2 7/8 SL-H90	3 7/8	2 5/32	6,732P	3 19/32	9/64	4,529	3 17/32	7/64	3,770
	10.40	IU –E75	2 7/8 PAC ²	3 1/8	1 1/2	3,424P	3 1/8	15/64	3,424	31/8	15/64	3,424
2 7/8	10.40	EU –X95	NC31	4 1/8	2	7,895P	3 29/32	3/16	5,726	3 27/32	5/32	4,969
	10.40	EU –X95	2 7/8 SL-H90 ²	3 7/8	2 5/32	6,732P	3 11/16	3/16	5,702	3 5/8	5/32	4,915
2 7/8	10.40	EU-G105	NC31	4 1/8	2	7,895P	3 15/16	13/64	6,110	3 7/8	11/64	5,345
2 7/8	10.40	EU-S135	NC31	4 3/8	1 5/8	10,086P	4 1/6	17/64	7,694	4	15/64	6,893

3 ½	9.50	EU –E75	NC38	4 ¾	3	7,595P	4 13/32	1/8	5,773	4 11/32	3/32	4,797
	9.50	EU –E75	NC38	4 ¾	2 ^{11/15}	10,843	4 13/32	1/8	5,773	4 11/32	3/32	4,797
	9.50	EU –E75	3 ½ OHLW	4 ¾	3	7,082P	4 9/32	1/8	5,340	4 ¼	7/64	4,868
	9.50	EU –E75	3 ½ SL-H90	4 5/8	3	7,469P	4 3/16	7/64	5,521	4 5/32	3/32	5,003
3 ½	13.30	EU –E75	NC38	4 ¾	2 ^{11/16}	10,843P	4 ½	11/64	7,274	47/16	9/64	6,268
	13.30	EU –E75	NC31 ²	4 1/8	2 ^{1/8}	7,074P	4	15/64	6,893	3 ^{15/16}	13/64	6,110
	13.30	EU-E75	3 1/2 OHSW	4 ¾	2 ^{11/16}	10,300P	4 ^{13/32}	3/16	7,278	4 ^{11/32}	5/32	6,299
	13.30	EU –E75	3 1/2 H90	5 1/4	2 ^{3/4}	14,043P	4 ^{17/33}	1/8	7,064	4 ½	7/64	6,487
	13.30	EU –X95	NC38	5	2 ^{9/16}	12,057P	4 ^{19/32}	7/32	8,822	4 17/32	3/16	7,785
	13.30	EU –X95	3 ^{1/2} SL-H90 ²	4 5/8	2 ^{11/16}	11,073P	4 ^{3/8}	13/64	8,742	4 5/16	11/64	7,647
	13.30	EU –X95	3 1/2 H90	5 1/4	2 3/4	14,043P	4 ^{5/8}	11/64	8,826	4 9/16	9/64	7,646
3 1/2	13.30	EU-G105	NC38	5	2 7/16	13,221P	4 ^{21/32}	¼	9,879	4 19/32	7/32	8,822
3 1/2	13.30	EU-S135	NC40	5 3/8	2 7/16	17,358P	5	9/32	12,569	4 29/32	15/64	10,708
	13.30	EU-S135	NC38	5	2 1/8	15,902P	4 ^{13/16}	21/64	12,614	4 23/32	9/32	10,957
3 1/2	15.50	EU-E75	NC38	5	2 ^{9/16}	12057P	4 ^{17/32}	3/16	7,785	4 15/32	5/32	6,769
3 1/2	15.50	EU-X95	NC38	5	2 ^{7/16}	13,221P	4 ^{21/32}	¼	9,879	4 19/32	7/32	8,822
3 1/2	15.50	EU-G105	NC38	5	2 ^{1/8}	15,902P	4 ^{23/32}	9/32	10,957	4 5/8	15/64	9,348
	15.50	EU-G105	NC40	5 1/4	2 9/16	16,616P	4 ^{15/16}	¼	11,363	4 27/32	13/64	9,595
3 1/2	15.50	EU-S135	NC40	5 1/2	2 ¼	19,616P	5 ^{3/32}	21/64	14,419	3 31/32	17/64	11,963
4	11.85	EU-E75	NC46	6	3 1/4	19,937P	5 ^{7/32}	7/64	7,843	5 5/32	5/64	6,476
	11.85	EU-E75	4 WO	5 3/4	3 7/16	17,186P	5 ^{7/32}	7/64	7,843	5 5/32	5/64	6,476
	11.85	EU-E75	4 OHLW	5 1/4	3 ^{13/32}	13,186P	5	9/64	7,886	4 ^{13/16}	7/64	6,593
	11.00	IU-E75	4H90	5 1/2	2 ^{13/16}	21,185P	4 7/8	7/64	7,630	4 ^{27/32}	3/32	6,962
4	14.00	IU-E75	NC40	5 1/4	2 ^{13/16}	13,968P	4 ^{13/16}	3/16	9,017	4 ¾	5/32	7,877
	14.00	EU-E75	NC46	6	3 ^{1/4}	19,937P	5 ^{9/32}	9/64	9,233	5 7/32	7/64	7,843
	14.00	IU-E75	4 SH ²	4 ^{5/8}	2 9/16	9,016P	4 ^{7/16}	13/64	8,782	4 3/8	13/64	7,817
	14.00	EU-E75	4OHSW	5 2/1	3 ¼	16,236P	5 ^{1/16}	11/64	9,131	5	9/64	7,839
	14.00	IU-E75	4H90	5 2/1	2 ^{13/16}	21,185P	4 ^{15/16}	9/64	8,986	4 ^{7/8}	7/64	7,630
4	14.00	IU-X95	NC40	5 ¼	2 ^{11/16}	15,319P	4 ^{15/16}	¼	11,363	4 ^{27/32}	13/64	9,595

	14.00	EU-X95	NC46	6	3 ^{1/4}	19,937P	5 ^{3/8}	3/16	11,363	5 ^{5/16}	5/32	9,937
	14.00	IU-X95	4H90	5 ^{2/1}	2 ^{13/16}	21,185P	5 ^{1/32}	3/16	11,065	4 ^{31/32}	5/32	9,673
4	14.00	IU-G105	NC40	5 ^{2/1}	2 ^{7/16}	17,858P	5	9/32	12,569	4 ^{29/32}	15/64	10,768
	14.00	EU-G105	NC46	6	3 ^{1/4}	19,937P	5 ^{7/16}	7/32	12,813	5 ^{11/32}	11/64	10,647
	14.00	EU-G105	4H90	5 ^{2/1}	2 ^{13/16}	21,185P	5 ^{3/32}	7/32	12,481	5 ^{1/32}	3/16	11,065
4	14.00	EU-S135	NC46	6	3	23,399P	5 ^{9/16}	9/32	15,787	5 ^{1/2}	1/4	14,288
4	15.70	EU-E75	NC40	5 ^{2/1}	2 ^{11/16}	15,319P	4 ^{7/8}	7/32	10,179	4 ^{25/32}	11/64	8,444
	15.70	EU-E75	NC46	6	3 ^{1/4}	19,937P	5 ^{5/16}	5/32	9,937	5 ^{1/4}	1/8	8,535
	15.70	IU-E75	4H90	5 ^{2/1}	2 ^{13/16}	21,185P	4 ^{31/32}	5/32	9,673	4 ^{29/32}	1/8	8,305
4	15.70	IU-X95	NC40	5 ^{2/1}	2 ^{7/16}	17,858P	5	9/32	12,569	4 ^{29/32}	15/64	10,768
	15.70	EU-X95	NC46	6	3	23,399P	5 ^{7/16}	7/32	12,813	5 ^{11/32}	11/64	10,647
	15.70	IU-X95	4H90	5 ^{2/1}	2 ^{13/16}	21,185P	5 ^{3/32}	7/32	12,481	5 ^{1/32}	3/16	11,065
4	15.70	EU-G105	NC46	6	3	23,399P	5 ^{15/32}	15/64	13,547	5 ^{13/32}	13/64	12,085
	15.70	IU-G105	4H90	5 ^{1/2}	2 ^{13/16}	21,185P	5 ^{5/32}	1/4	13,922	5 ^{1/16}	13/64	11,770
4	15.70	IU-S135	NC46	6	2 ^{5/8}	26,982B	5 ^{21/32}	21/64	18,083	5 ^{17/32}	17/64	15,035
	15.70	EU-S135	NC46	6	2 ^{7/8}	25,038P	5 ^{21/32}	21/64	18,083	5 ^{17/32}	17/64	15,035
4 1/2	16.60	IEU-E75	4 1/2 FH	6	3	20,620P	5 ^{3/8}	13/64	12,125	5 ^{9/32}	5/32	10,072
	16.60	IEU-E75	NC46	6 ^{1/4}	3 ^{1/4}	19,937P	5 ^{13/32}	13/64	12,085	5 ^{11/32}	11/64	10,647
	16.60	IEU-E75	4 1/2 OHSW	5 ^{7/8}	3 ^{3/4}	16,162P	5 ^{7/16}	13/64	11,862	5 ^{3/8}	11/64	10,375
	16.60	EU-E75	NC50	6 ^{5/8}	3 ^{3/4}	22,361P	5 ^{23/32}	5/32	11,590	5 ^{11/16}	9/64	10,773
	16.60	IEU-E75	4 1/2 H-90	6	3 ^{1/4}	23,126P	5 ^{11/32}	3/16	12,215	5 ^{9/32}	5/32	10,642
4 1/2	16.60	IEU-X95	4 1/2 FH	6	2 ^{3/4}	23,695P	5 ^{1/2}	17/64	14,945	5 ^{13/32}	7/32	12,821
	16.60	IEU-X95	NC46	6 ^{1/4}	3	19,937P	5 ^{17/32}	17/64	15,035	5 ^{7/16}	7/32	12,813
	16.60	EU-X95	NC50	6 ^{5/8}	3 ^{3/4}	22,361P	5 ^{27/32}	7/32	14,926	5 ^{25/32}	3/16	13,245
	16.60	IEU-X95	4 1/2 H-90	6	3	26,969P	5 ^{15/32}	1/4	15,441	5 ^{3/8}	13/64	13,013
4 1/2	16.60	IEU-G105	4 1/2 FH	6	2 ^{3/4}	23,695P	5 ^{9/16}	19/64	16,391	5 ^{15/32}	1/4	14,231
	16.60	IEU-G105	NC46	6 ^{1/4}	3	23,399P	5 ^{19/32}	19/64	16,546	5 ^{1/2}	1/4	14,288
	16.60	EU-G105	NC50	6 ^{5/8}	3 ^{3/4}	22,361P	5 ^{29/32}	1/4	16,633	5 ^{13/16}	13/64	14,082
	16.60	IEU-G105	4 1/2 H-90	6	3	26,969P	5 ^{1/2}	17/64	16,264	5 ^{7/16}	15/64	14,625

4 ½	16.60	IEU-S135	NC46	6 ¼	2 ¾	26,615P	5 ²⁵ / ₃₂	25/64	21,230	5 ²¹ / ₃₂	21/64	18,083
	16.60	EU-S135	NC50	6 5/8	3 ½	26,674P	6 ¹ / ₁₆	21/64	21,017	5 ³¹ / ₃₂	9/32	18,367
4 ½	20.00	IEU-E75	4 ½ FH	6	3	20,620P	5 ¹⁵ / ₃₂	¼	14,231	5 3/8	13/64	12,125
	20.00	IEU-E75	NC46	6 ¼	3	23,399P	5 ½	¼	14,288	5 ¹³ / ₃₂	13/64	12,085
	20.00	EU-E75	NC50	6 5/8	3 5/8	24,549P	5 ¹³ / ₁₆	13/64	14,082	5 ¾	12/64	12,415
	20.00	IEU-E75	4 ½ H-90	6	3	26,969P	5 13/32	7/32	13,815	5 ¹¹ / ₃₂	3/16	12,215
4 ½	20.00	IEU-X95	4 ½ FH	6	2 ½	26,528P	55/8	21/64	17,861	5 ¹⁷ / ₃₂	9/32	15,665
	20.00	IEU-X95	NC46	6 ¼	2 ¾	26,615P	5 ²¹ / ₃₂	21/64	18,083	5 ⁹ / ₁₆	9/32	15,787
	20.00	EU-X95	NC50	6 5/8	3 ½	26,674P	5 ¹⁵ / ₁₆	17/64	17,497	5 7/8	15/64	15,776
	20.00	IEU-X95	4 ½ H-90	6	3	26,969P	5 9/6	19/64	17,29	5 15/32	1/4	15,441
4 ½	20.00	IEU-G105	NC46	6 ¼	2 ½	29,578P	5 23/32	23/64	19,644	5 5/8	5/16	17,311
	20.00	EU-G105	NC50	6 5/8	3 ½	26,674P	6 1/32	5/16	20,127	5 29/32	¼	16,633
4 ½	20.00	EU-S135	NC50	6 5/8	3	34,520P	6 7/32	13/32	25,569	6 3/32	11/32	21,914
5	19.50	IEU-E75	NC50	6 5/8	3 ¾	22,361P	5 7/8	15/64	15,776	5 13/16	13/64	14,082
5	19.50	IEU-X95	NC50	6 5/8	3 ½	26,674P	6 1/32	5/16	20,127	5 15/16	17/64	17,497
	19.50	IEU-X95	5H-90	6 ½	3 ¼	30,732P	5 27/32	19/64	19,862	5 ¾	¼	17,116
5	19.50	IEU-G105	NC50	6 5/8	3 ¼	30,730P	6 3/32	11/32	21,914	6	19/64	19,244
	19.50	IEU-G105	5H-90	6 ½	3	34,805P	5 29/32	21/64	21,727	5 13/16	9/32	18,940
5	19.50	IEU-S135	NC50	6 5/8	2 ¾	38,036P	6 5/16	29/64	28,381	6 3/16	25/64	24,645
	19.50	IEU-S135	5 ½ FH	7 ¼	3 ½	43,328P	6 ¾	3/8	28,737	6 5/8	5/16	24,412
5	25.60	IEU-E75	NC50	6 5/8	3 ½	26,674P	6 1/32	5/16	20,127	5 15/16	17/64	17,497
	25.60	IEU-E75	5 ½ FH	7	3 ½	37,742B	6 ½	¼	20,205	6 13/32	13/64	17,127
5	25.60	IEU – X95	NC50	6 5/8	3	34,520P	6 2/32	13/32	25,569	6 3/32	11/32	21,914
	25.60	IEU – X95	5 ½ FH	7	3 ½	37,742B	6 21/32	21/64	25,483	6 9/16	9/32	22,294
5	25.60	IEU- G105	NC50	6 5/8	2 ¾	38,036P	6 9/32	7/16	27,437	6 5/32	3/8	23,728
	25.60	G105	5 ½ FH	7 ¼	3 ½	43,328P	6 23/32	23/64	27,645	6 5/8	5/16	24,412
5	25.60	IEU–S135	5 ½ FH	7 ¼	3 ¼	47,230B	6 15/16	15/32	35,446	6 13/16	13/32	30,943
5 ½	21.90	IEU – E75	5 ½ FH	7	4	33,412P	6 15/32	15/64	19,172	6 13/32	13/64	17,127
5 ¼	21.90	IEU-X95	5 ½ FH	7	3 ¾	37,742B	6 5/8	5/16	24,412	6 17/32	17/64	21,246

	21.90	IEU-X95	5 ½ H-90	7	3 ½	34,820P	6 3/16	21/64	24,414	6 3/32	9/32	21,349
5 ½	21.90	IEU-G105	5 ½ FH	7 ¼	3 ½	43,328P	6 23/32	23/64	27,645	6 19/32	19/64	23,350
5 ½	21.90	IEU-E75	5 ½ FH	7 ½	3	52,059P	6 15/16	15/32	35,446	6 13/16	13/32	30,943
5 ½	24.70	IEU-S135	5 ½ FH	7	4	33,412P	6 9/16	9/32	22,294	6 15/32	15/64	19,172
5 ½	24.70	IEU-X95	5 ½ FH	7 ¼	3 ½	43,328P	6 23/32	23/64	27,645	6 19/32	19/64	23,350
5 ½	24.70	IEU-G105	5 ½ FH	7 ¼	3 ½	43,328P	6 25/32	25/64	29,836	6 11/16	11/32	26,560
5 ½	24.70	IEU-S135	5 ½ FH	7 ½	3	52,059P	7 1/32	33/64	38,901	6 7/8	7/16	33,180
6 5/8	25.20	IEU-E75	6 5/8 FH	8	5	43,934P	7 7/16	¼	26,810	7 3/8	7/32	24,100
		IEU-X95	6 5/8 FH	8	5	43,934P	7 5/8	11/32	35,139	7 ½	9/32	29,552
		IEU-G105	6 5/8 FH	8 ¼	4 ¾	51,280P	7 11/16	5/8	37,983	7 19/32	21/64	33,730
		IEU-S135	6 5/8 FH	8 ½	4 ¾	65,012P	7 29/32	31/64	48,204	7 25/32	27/64	42,312
6 5/8	27.70	IEU – E75	6 5/8 FH	8	5	43,934P	7 ½	9/32	29,552	7 13/32	15/64	25,451
		IEU – X95	6 5/8 FH	8 ¼	4 ¾	51,280P	7 11/16	3/8	37,983	7 9/16	5/16	32,329
		IEU-G105	6 5/8 FH	8 ¼	4 ¾	51,280P	7 3/4	13/32	40,860	7 21/32	23/64	36,556
		IEU-S135	6 5/8 FH	8 ½	4 ¾	65,012P	8	17/32	52,714	7 27/32	29/94	45,241

1. The use of outside diameters OD) smaller than those listed in the table may be acceptable due to special service requirements.
2. Tool joint with dimensions shown has lower torsional yield ratio than the 0.80 which is generally used.
3. Recommended make-up torque is based on 72,000 psi stress.
4. In calculation of torsional strengths of tool joints. Both new and worn, the bevels of the tool joint shoulders are disregarded. This thickness measurement should be made in the plane of the face from the I.D of the counter bore to the outside diameter of the box, disregarding the bevels.
5. Any tool joint with an outside diameter less than API bevel diameter should be provided with a minimum 1/32 inch depth*45 degree bevel on the outside and inside diameter of the box shoulder and outside diameter of the pin shoulder.
6. P=Pin limit; B=Box limit.

*Tool joint diameters specified are required to retain torsional strength in the tool joint comparable to the torsional strength of the attached drill pipe. These should be adequate for all service. Tool joints with torsional strengths considerably below that of the drill pipe may be adequate for much drilling service.