

Pipe Body										Tool Joint										Assembly				
Nominal Size (in)	Weight (lbs/ft)	Grade	Upset	Wall Thickness (in)	ID (in)	Torsional Strength (ft-lbs)	Tensile Strength (lbs)	Collapse Pressure (psi)	Burst Pressure (psi)	Connection	OD (in)	ID (in)	Drift (in)	Tong Length 2XL		Material Yield Strength (ksi)	Make-up Torque (ft-lbs)	Torsional Strength (ft-lbs)	Tensile Strength (ft-lbs)	Torsional Ratio	Approximate Weight/Foot (lbs/ft)	Capacity (gal/ft)	Premium	
														Pin (in)	Box (in)								OD (in)	Make-up (ft-lbs)
2 3/8	6.65	E	EU	0.280	1.815	6,250	138,000	15,600	15,500	2-3/8 SL H-90	3-1/4"	1 13/16	1 11/16	9	10	120	4,110	6,860	270,000	1.10	7.05	0.13	3 5/32	3,700
2 3/8	6.65	E	EU	0.280	1.815	6,250	138,000	15,600	15,500	NC26	3 3/8"	1 3/4	1 5/8	9	10	120	4,130	6,880	314,000	1.10	7.23	0.13	3 5/16	3,560
2 3/8	6.65	E	EU	0.280	1.815	6,250	138,000	15,600	15,500	DPHT26	3 3/8	1 3/4	1 5/8	9	12	120	5,200	8,700	313,700	1.39	7.25	0.13	NA	NA
2 3/8	6.65	X	EU	0.280	1.815	7,920	175,000	19,800	19,600	2-3/8 SL H-90	3 1/4"	1 13/16	1 11/16	9	10	120	4,110	6,860	270,000	0.87	7.03	0.13	3 5/32	3,700
2 3/8	6.65	X	EU	0.280	1.815	7,920	175,000	19,800	19,600	NC26	3-3/8"	1 3/4	1 5/8	9	10	120	4,130	6,880	314,000	0.87	7.23	0.13	3 5/16	3,560
2 3/8	6.65	X	EU	0.280	1.815	7,920	175,000	19,800	19,600	DPHT26	3 3/8	1 3/4	1 5/8	9	12	120	5,200	8,700	313,700	1.10	7.25	0.13	NA	NA
2 3/8	6.65	G	EU	0.280	1.815	8,750	194,000	21,800	21,700	2-3/8 SL H-90	3 1/4"	1 13/16	1 11/16	9	10	120	4,110	6,860	270,000	0.78	7.05	0.13	3 5/32	3,700
2 3/8	6.65	G	EU	0.280	1.815	8,750	194,000	21,800	21,700	NC26	3 5/8"	1 3/4	1 5/8	9	10	120	4,130	6,880	314,000	0.79	7.23	0.13	3 5/16	3,560
2 3/8	6.65	G	EU	0.280	1.815	8,750	194,000	21,800	21,700	DPHT26	3 3/8	1 3/4	1 5/8	9	12	120	5,200	8,700	313,700	0.99	7.25	0.13	NA	NA
2 3/8	6.65	S	EU	0.280	1.815	11,300	249,000	28,100	27,900	2-3/8 SL H-90	3 1/4"	1 13/16	1 11/16	9	10	120	4,110	6,860	270,000	0.61	7.05	0.13	3 1/4	4,110
2 3/8	6.65	S	EU	0.280	1.815	11,300	249,000	28,100	27,900	NC26	3 5/8"	1 3/4	1 5/8	9	10	120	4,260	7,100	314,000	0.63	7.5	0.13	3 13/32	4,260
2 3/8	6.65	S	EU	0.280	1.815	11,300	249,000	28,100	27,900	DPDS26	3 1/2"	1 11/16	1 9/16	9	10	120	5,800	9,700	333,900	0.86	7.35	0.13	3 5/16	4,800
2 3/8	6.65	S	EU	0.280	1.815	11,300	249,000	28,100	27,900	DPHT26	3 3/8	1 3/4	1 5/8	9	12	120	5,200	8,700	313,700	0.77	7.25	0.13	NA	NA
2 7/8	10.40	E	IU	0.362	2.151	11,600	214,000	16,500	16,500	2 7/8 PAC	3 1/8"	1 1/2	1 3/8	9	11	120	3,420	5,690	273,000	0.49	10.63	0.18	3 1/8	3,420
2 7/8	10.40	E	EU	0.362	2.151	11,600	214,000	16,500	16,500	2-7/8 SL H-90	4 1/8"	2 5/32	2 1/32	9	11	120	6,730	11,200	383,000	0.97	11.22	0.19	3 5/8	4,920
2 7/8	10.40	E	IU	0.362	2.151	11,600	214,000	16,500	16,500	NC26	3 3/8"	1 3/4	1 5/8	9	10	120	4,130	6,880	314,000	0.59	10.63	0.18	3 5/8	4,130
2 7/8	10.40	E	EU	0.362	2.151	11,600	214,000	16,500	16,500	NC31	4 1/8"	2 1/8	2	9	11	120	7,070	11,800	447,000	1.02	11.25	0.19	3 27/32	4,970
2 7/8	10.40	X	IU	0.362	2.151	14,600	272,000	20,900	20,900	2 7/8 PAC	3 1/8"	1 1/2	1 3/8	9	11	120	3,420	5,690	273,000	0.39	10.63	0.18	3 1/8	3,420
2 7/8	10.40	X	EU	0.362	2.151	14,600	272,000	20,900	20,900	2-7/8 SL H-90	4	2	1 7/8	9	11	120	7,870	13,100	444,000	0.90	11.23	0.19	3 11/16	5,700
2 7/8	10.40	X	IU	0.362	2.151	14,600	272,000	20,900	20,900	NC26	3 5/8"	1 1/2	1 3/8	9	10	120	5,380	8,960	390,000	0.61	11.10	0.18	3 5/8	5,380
2 7/8	10.40	X	EU	0.362	2.151	14,600	272,000	20,900	20,900	NC31	4 1/8"	2	1 7/8	9	11	120	7,890	13,200	496,000	0.90	11.39	0.19	3 29/32	5,730
2 7/8	10.40	G	IU	0.362	2.151	16,200	300,000	23,100	23,100	2 7/8 PAC	3 1/8"	1 1/2	1 3/8	9	11	120	3,420	5,690	273,000	0.35	10.63	0.18	3 1/8	3,420
2 7/8	10.40	G	EU	0.362	2.151	16,200	300,000	23,100	23,100	2-7/8 SL H-90	4	2	1 7/8	9	11	120	7,870	13,100	444,000	0.81	11.23	0.19	3 23/32	6,100
2 7/8	10.40	G	IU	0.362	2.151	16,200	300,000	23,100	23,100	NC26	3 5/8"	1 1/2	1 3/8	9	10	120	5,380	8,960	390,000	0.55	11.1	0.18	3 5/8	5,380
2 7/8	10.40	G	EU	0.362	2.151	16,200	300,000	23,100	23,100	NC31	4 1/8"	2	1 7/8	9	11	120	7,890	13,200	496,000	0.81	11.39	0.19	3 15/16	6,110
2 7/8	10.40	S	IU	0.362	2.151	20,800	386,000	29,700	29,700	2 7/8 PAC	3 1/8"	1 1/2	1 3/8	9	11	120	3,420	5,690	273,000	0.27	10.63	0.18	3 1/8	3,420
2 7/8	10.40	S	EU	0.362	2.151	20,800	386,000	29,700	29,700	2-7/8 SL H-90	4 1/8"	1 5/8	1 1/2	9	11	120	10,300	17,100	572,000	0.82	11.77	0.18	3 27/32	7,750
2 7/8	10.40	S	IU	0.362	2.151	20,800	386,000	29,700	29,700	NC26	3 5/8"	1 1/2	1 3/8	9	10	120	5,380	8,960	390,000	0.43	11.1	0.18	3 5/8	5,380
2 7/8	10.40	S	EU	0.362	2.151	20,800	386,000	29,700	29,700	NC31	4 3/8"	1 5/8	1 1/2	9	11	120	10,100	16,800	624,000	0.81	12.12	0.18	4 1/16	7,690
2 7/8	10.40	S	EU	0.362	2.151	20,800	386,000	29,700	29,700	DPDS31	4 1/8"	2	1 7/8	9	11	120	10,300	17,200	495,700	0.83	11.27	0.18	3 15/16	8,700
3 1/2	13.30	E	EU	0.368	2.764	18,600	272,000	14,100	13,800	3 1/2 SL H-90	4 3/4	2 13/16	2 11/16	10	12 1/2	120	9,670	16,100	469,000	0.87	14.24	0.31	4 9/32	7,110
3 1/2	13.30	E	IU	0.368	2.764	18,600	272,000	14,100	13,800	NC31	4 1/8	2 1/8	2	9	11	120	7,070	11,800	44,700	0.63	13.98	0.30	4 1/32	7,070
3 1/2	13.30	E	EU	0.368	2.764	18,600	272,000	14,100	13,800	NC38	4 3/4	2 11/16	2 9/16	10	12 1/2	120	10,800	18,100	587,000	0.97	14.44	0.31	4 1/2	7,210
3 1/2	13.30	X	EU	0.368	2.764	23,500	334,000	17,900	17,500	3 1/2 SL H-90	4 3/4	2 9/16	2 7/16	10	12 1/2	120	12,400	20,700	596,000	0.88	14.63	0.31	4 3/8	8,740

Pipe Body										Tool Joint										Assembly				
Nominal Size (in)	Weight (lbs/ft)	Grade	Upset	Wall Thickness (in)	ID (in)	Torsional Strength (ft-lbs)	Tensile Strength (lbs)	Collapse Pressure (psi)	Burst Pressure (psi)	Connection	OD (in)	ID (in)	Drift (in)	Tong Length 2XL		Material Yield Strength (ksi)	Make-up Torque (ft-lbs)	Torsional Strength (ft-lbs)	Tensile Strength (ft-lbs)	Torsional Ratio	Approximate Weight/Foot (lbs/ft)	Capacity (gal/ft)	Premium	
														Pin (in)	Box (in)								OD (in)	Make-up (ft-lbs)
3 1/2	13.30	X	IU	0.368	2.764	23,500	334,000	17,900	17,500	NC31	4 1/8	2	1 7/8	9	11	120	7,890	13,200	496,000	0.56	14.12	0.30	4 1/8	7,890
3 1/2	13.30	X	EU	0.368	2.764	23,500	334,000	17,900	17,500	NC38	5	2 9/16	2 7/16	10	12 1/2	120	12,100	20,100	649,000	0.86	15.07	..31	4 19/32	8,820
3 1/2	13.30	G	EU	0.368	2.764	26,000	380,000	19,800	19,300	3 1/2 SLH-90	4 3/4	2 9/16	2 7/16	10	12 1/2	120	12,400	20,700	596,000	0.80	14.63	0.31	4 19/32	9,860
3 1/2	13.30	G	IU	0.368	2.764	26,000	380,000	19,800	19,300	NC31	4 1/8	2	1 7/8	9	11	120	7,890	13,200	496,000	0.51	14.12	0.30	4 1/8	7,890
3 1/2	13.30	G	EU	0.368	2.764	26,000	380,000	19,800	19,300	NC38	5	2 7/16	2 5/16	10	12 1/2	120	13,200	22,000	708,000	0.85	15.26	0.30	4 13/16	9,880
3 1/2	13.30	G	EU	0.368	2.764	26,000	380,000	19,800	19,300	DPHT31	4 1/8	2	1 7/8	9	13	120	11,300	18,900	495,700	0.73	14.04	0.30	4	9,700
3 1/2	13.30	G	EU	0.368	2.764	26,000	380,000	19,800	19,300	DPHT38	4 3/4	2 11/16	2 9/16	10	15 1/2	120	15,200	25,300	587,300	0.97	14.45	0.30	4 7/16	9,850
3 1/2	13.30	S	EU	0.368	2.764	33,400	489,000	25,400	24,800	3 1/2 SLH-90	5	2 1/8	2	10	12 1/2	120	16,700	27,800	789,000	0.83	15.68	0.30	4 19/32	12,700
3 1/2	13.30	S	IU	0.368	2.764	33,400	489,000	25,400	24,800	NC31	4 1/8	2	1 7/8	9	11	120	7,890	13,200	496,000	0.40	14.12	0.30	4 1/8	7,890
3 1/2	13.30	S	EU	0.368	2.764	33,400	489,000	25,400	24,800	NC38	5	2 1/8	2	10	12 1/2	120	15,900	26,500	842,000	0.79	15.68	0.30	4 13/16	12,600
3 1/2	13.30	S	EU	0.368	2.764	33,400	489,000	25,400	24,800	DPHT31	4 1/8	2	1 7/8	9	13	120	11,300	18,900	495,700	0.57	14.04	0.30	NA	NA
3 1/2	13.30	S	EU	0.368	2.764	33,400	489,000	25,400	24,800	DPHT38	4 3/4	2 9/16	2 7/16	10	15 1/2	120	16,100	26,900	649,200	0.81	14.63	0.31	4 9/16	12,950
3 1/2	13.30	S	EU	0.368	2.764	33,400	489,000	25,400	24,800	DPDS38	4 7/8	2 9/16	2 7/16	10	12 1/2	120	15,400	25,700	649,200	0.77	14.63	0.31	4 11/16	12,950
3 1/2	15.50	E	EU	0.449	2.602	21,100	323,000	16,800	16,800	NC38	5	2 9/16	2 7/16	10	12 1/2	120	12,100	20,100	649,000	0.95	17.13	0.28	4 17/32	7,790
3 1/2	15.50	E	EU	0.449	2.602	21,100	323,000	16,800	16,800	DPHT38	4 3/4	2 9/16	2 7/16	10	15 1/2	120	16,100	26,900	649,000	1.27	16.71	0.28	4 1/4	7,700
3 1/2	15.50	X	EU	0.449	2.602	26,700	409,000	21,200	21,300	NC38	5	2 7/16	2 5/16	10	12 1/2	120	13,200	22,000	708,000	0.82	17.32	0.27	4 21/32	9,880
3 1/2	15.50	X	EU	0.449	2.602	26,700	409,000	21,200	21,300	DPHT38	4 3/4	2 9/16	2 7/16	10	15 1/2	120	16,100	26,900	649,000	1.01	16.71	0.28	4 3/8	9,800
3 1/2	15.50	G	EU	0.449	2.602	29,500	452,000	23,500	23,600	NC38	5	2 1/8	2	10	12 1/2	120	15,900	26,500	842,000	0.90	17.74	0.27	4 23/32	11,000
3 1/2	15.50	G	EU	0.449	2.602	29,500	452,000	23,500	23,600	NC40	5 1/4	2 9/16	2 7/16	9	12	120	16,600	27,700	838,000	0.94	17.43	0.28	4 15/32	11,400
3 1/2	15.50	G	EU	0.449	2.602	29,500	452,000	23,500	23,600	DPHT38	4 3/4	2 9/16	2 7/16	10	15 1/2	120	16,100	26,900	649,000	0.91	16.71	0.28	4 7/16	10,900
3 1/2	15.50	S	EU	0.449	2.602	38,000	581,000	30,200	30,300	NC38	5	2 1/8	2	10	12 1/2	120	15,900	26,500	842,000	0.70	17.74	0.27	4 29/32	14,300
3 1/2	15.50	S	EU	0.449	2.602	38,000	581,000	30,200	30,300	NC40	5 1/2	2 1/4	2 1/8	9	12	120	19,600	32,700	980,000	0.86	18.34	0.27	5 3/32	14,400
3 1/2	15.50	S	EU	0.449	2.602	38,000	581,000	30,200	30,300	DPHT38	4 3/4	2 7/16	2 5/16	10	15 1/2	120	17,000	28,400	708,100	0.75	16.9	0.28	4 19/32	14,000
3 1/2	15.50	S	EU	0.449	2.602	38,000	581,000	30,200	30,300	DPDS38	5	2 7/16	2 5/16	10	12 1/2	120	17,500	29,200	708,100	0.77	17.11	0.27	4 23/32	14,000
4	14.00	E	IU	0.330	3.340	23,300	285,000	11,400	10,800	NC40	2 1/4	2 13/16	2 11/16	9	12	120	14,000	23,300	712,000	1.00	15.84	0.44	4 27/32	9,600
4	14.00	E	EU	0.330	3.340	23,300	285,000	11,400	10,800	NC46	6	3 1/4	3 1/8	9	12	120	19,000	33,200	901,000	1.42	16.79	0.45	5 13/32	12,100
4	14.00	E	EU	0.330	3.340	23,300	285,000	11,400	10,800	DPHT38	4 3/4	2 11/16	2 9/16	10	15 1/2	120	15,200	25,300	587,300	1.09	15.28	0.44	4 3/8	8,800
4	14.00	E	EU	0.330	3.340	23,300	285,000	11,400	10,800	DPHT40	5 1/4	2 13/16	2 11/16	9	15	120	19,100	31,900	711,600	1.37	15.93	0.44	4 19/32	13,900
4	14.00	X	IU	0.330	3.340	29,500	361,000	11,400	13,700	NC40	5 1/4	2 11/16	2 9/16	9	12	120	15,300	25,500	776,000	0.86	16.03	0.44	4 15/16	11,400
4	14.00	X	EU	0.330	3.340	29,500	361,000	11,400	13,700	NC46	6	3 1/4	3 1/8	9	12	120	19,900	33,200	901,000	1.13	16.79	0.45	5 13/32	12,100
4	14.00	X	EU	0.330	3.340	29,500	361,000	11,400	13,700	DPHT38	4 3/4	2 11/16	2 9/16	10	15 1/2	120	15,200	25,300	587,300	0.86	15.28	0.44	4 17/32	11,900
4	14.00	X	EU	0.330	3.340	29,500	361,000	11,400	13,700	DPHT40	5 1/4	2 13/16	2 11/16	9	15	120	19,100	31,900	711,600	1.08	15.93	0.44	4 23/32	14,400
4	14.00	G	IU	0.330	3.340	32,600	400,000	15,900	15,200	NC40	5 1/4	2 7/16	2 5/16	9	12	120	17,900	29,800	897,000	0.91	16.87	0.43	5	12,600
4	14.00	G	EU	0.330	3.340	32,600	400,000	15,900	15,200	NC46	6	3 1/4	3 1/8	9	12	120	19,900	33,200	901,000	1.02	16.79	0.45	5 7/16	12,800

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Nominal Size (in)	Weight (lbs/ft)	Grade	Upset	Wall Thickness (in)	ID (in)	Torsional Strength (ft-lbs)	Tensile Strength (lbs)	Collapse Pressure (psi)	Burst Pressure (psi)	Connection	OD (in)	ID (in)	Drift (in)	Tong Length 2XL		Material Yield Strength (ksi)	Make-up Torque (ft-lbs)	Torsional Strength (ft-lbs)	Tensile Strength (ft-lbs)	Torsional Ratio	Approximate Weight/Foot (lbs/ft)	Capacity (gal/ft)	Premium	
														Pin (in)	Box (in)								OD (in)	Make-up (ft-lbs)
4	14.00	G	EU	0.330	3.340	32,600	400,000	15,900	15,200	DPHT38	5	2 9/16	2 7/16	10	15 1/2	120	17,800	29,600	649,200	0.91	15.95	0.44	4 17/32	12,500
4	14.00	G	EU	0.330	3.340	32,600	400,000	15,900	15,200	DPHT40	5 1/4	2 13/16	2 11/16	9	15	120	19,100	31,900	711,600	0.98	15.93	0.44	4 25/32	15,500
4	14.00	S	IU	0.330	3.340	41,900	514,000	20,100	19,500	NC40	5 1/2	2 7/16	2 5/16	9	12	120	17,900	29,800	897,000	0.71	16.87	0.43	5 3/16	16,300
4	14.00	S	EU	0.330	3.340	41,900	514,000	20,100	19,500	NC46	6	3	2 7/8	9	12	120	23,400	39,000	1,050,000	0.93	17.24	0.45	5 9/16	15,800
4	14.00	S	EU	0.330	3.340	41,900	514,000	20,100	19,500	DPHT38	5	2 7/16	2 5/16	10	15 1/2	120	19,800	33,000	708,100	0.79	16.13	0.44	4 11/16	15,900
4	14.00	S	EU	0.330	3.340	41,900	514,000	20,100	19,500	DPHT40	5 1/4	2 11/16	2 9/16	9	15	120	21,500	35,900	776,400	0.86	16.12	0.44	4 29/32	16,000
4	14.00	S	EU	0.330	3.340	41,900	514,000	20,100	19,500	DPDS40	5 1/4	2 11/16	2 9/16	9	12	120	19,600	32,700	776,400	0.78	15.82	0.44	5	15,900
4	15.70	E	IU	0.380	3.240	25,800	324,000	12,900	12,500	NC40	5 1/4	2 11/16	2 9/16	9	12	120	15,300	25,500	776,000	0.99	17.6	0.41	4 7/8	10,200
4	15.70	E	EU	0.380	3.240	25,800	324,000	12,900	12,500	NC46	6	3 1/4	3 1/8	9	12	120	19,900	33,200	901,000	1.29	18.35	0.43	5 13/32	12,100
4	15.70	E	EU	0.380	3.240	25,800	324,000	12,900	12,500	DPHT40	5 1/4	2 13/16	2 11/16	9	15	120	19,100	31,900	711,600	1.24	17.49	0.42	4 5/8	13,500
4	15.70	X	IU	0.380	3.240	32,700	411,000	16,300	15,800	NC40	5 1/4	2 7/16	2 5/16	9	12	120	17,600	29,400	897,000	0.90	17.97	0.41	5	12,600
4	15.70	X	EU	0.380	3.240	32,700	411,000	16,300	15,800	NC46	6	3 1/4	3 1/8	9	12	120	19,900	33,200	901,000	1.02	18.35	0.43	5 7/16	12,800
4	15.70	X	EU	0.380	3.240	32,700	411,000	16,300	15,800	DPHT40	5 1/4	2 13/16	2 11/16	9	15	120	19,100	31,900	711,600	0.98	17.49	0.42	4 25/32	15,500
4	15.70	G	IU	0.380	3.240	36,100	454,000	18,100	17,500	NC40	5 1/2	2 7/16	2 5/16	9	12	120	17,900	29,800	897,000	0.83	18.44	0.41	5 1/16	13,800
4	15.70	G	EU	0.380	3.240	36,100	454,000	18,100	17,500	NC46	6	3 1/4	3 1/8	9	12	120	19,900	33,200	901,000	0.92	18.35	0.43	5 15/32	13,500
4	15.70	G	EU	0.380	3.240	36,100	454,000	18,100	17,500	DPHT40	5 1/4	2 13/16	2 11/16	9	15	120	19,100	31,900	711,600	0.88	17.49	0.42	4 27/32	16,000
4	15.70	S	IU	0.380	3.240	46,500	583,000	23,200	22,400	NC40	5 1/2	2	1 7/8	9	12	120	21,800	36,300	1,080,000	0.78	19.01	0.40	5 1/4	17,600
4	15.70	S	EU	0.380	3.240	46,500	583,000	23,200	22,400	NC46	6	3	2 7/8	9	12	120	23,400	39,000	1,050,000	0.84	18.81	0.42	5 21/32	18,100
4	15.70	S	EU	0.380	3.240	46,500	583,000	23,200	22,400	DPHT40	5 1/4	2 9/16	2 7/16	9	15	120	23,700	39,500	838,300	0.85	17.88	0.42	4 15/16	17,200
4	15.70	S	EU	0.380	3.240	46,500	583,000	23,200	22,400	DPDS40	5 1/4	2 9/16	2 7/16	9	12	120	21,800	36,400	838,300	0.78	17.57	0.42	5 1/32	17,100
4 1/2	16.60	E	IEU	0.337	3.826	30,800	331,000	10,400	9,830	4 1/2 FH	6	3	2 7/8	9	12	120	20,600	34,400	976,000	1.12	19.30	0.57	5 3/8	12,100
4 1/2	16.60	E	IEU	0.337	3.826	30,800	331,000	10,400	9,830	NC46	6 1/4	3	2 7/8	9	12	120	23,400	39,000	1,050,000	1.27	19.85	0.57	5 13/32	12,100
4 1/2	16.60	E	EU	0.337	3.826	30,800	331,000	10,400	9,830	NC50	6 5/8	3 3/4	3 5/8	9	12	120	22,400	37,300	939,000	1.21	19.50	0.59	5 13/32	14,100
4 1/2	16.60	E	EU	0.337	3.826	30,800	331,000	10,400	9,830	DPHT46	6 1/4	3 1/4	3 1/8	9	15	120	28,600	47,600	901,200	1.55	19.59	0.58	5 13/32	24,800
4 1/2	16.60	E	EU	0.337	3.826	30,800	331,000	10,400	9,830	DPHT50	6 1/4	3 3/4	3 5/8	9	15	120	31,600	52,700	939,100	1.71	18.73	0.60	5 13/16	27,000
4 1/2	16.60	X	IEU	0.337	3.826	39,000	419,000	12,800	12,500	4 1/2 FH	6	3	2 7/8	9	12	120	20,600	34,400	976,000	0.88	10.30	0.57	5 1/2	14,900
4 1/2	16.60	X	IEU	0.337	3.826	39,000	419,000	12,800	12,500	NC46	6 1/4	3 1/4	3 1/8	9	12	120	19,900	33,200	901,000	0.85	19.39	0.58	5 17/32	15,000
4 1/2	16.60	X	EU	0.337	3.826	39,000	419,000	12,800	12,500	NC50	6 5/8	3 3/4	3 5/8	9	12	120	22,400	37,300	939,000	0.96	19.50	0.59	5 27/32	14,900
4 1/2	16.60	X	EU	0.337	3.826	39,000	419,000	12,800	12,500	DPHT46	6 1/4	3 1/4	3 1/8	9	15	120	28,600	47,600	901,200	1.22	19.50	0.58	5 13/32	24,800
4 1/2	16.60	X	EU	0.337	3.826	39,000	419,000	12,800	12,500	DPHT50	6 1/4	3 3/4	3 5/8	9	15	120	31,600	52,700	939,100	1.35	18.73	0.60	5 13/16	27,000
4 1/2	16.60	G	IEU	0.337	3.826	43,100	463,000	13,800	13,800	4 1/2 FH	6	3	2 7/8	9	12	120	20,600	34,400	976,000	0.80	19.30	0.57	5 9/16	16,400
4 1/2	16.60	G	IEU	0.337	3.826	43,100	463,000	13,800	13,800	NC46	6 1/4	3	2 7/8	9	12	120	23,400	39,000	1,050,000	0.90	19.85	0.57	5 19/32	16,500
4 1/2	16.60	G	EU	0.337	3.826	43,100	463,000	13,800	13,800	NC50	6 5/8	3 3/4	3 5/8	9	12	120	22,400	37,300	939,000	0.87	19.50	0.59	5 29/32	16,600
4 1/2	16.60	G	EU	0.337	3.826	43,100	463,000	13,800	13,800	DPHT46	6 1/4	3 1/4	3 1/8	9	15	120	28,600	47,600	901,200	1.10	19.59	0.58	5 13/32	24,800
4 1/2	16.60	G	EU	0.337	3.826	43,100	463,000	13,800	13,800	DPHT50	6 1/4	3 3/4	3 5/8	9	15	120	31,600	52,700	939,100	1.22	18.73	0.60	5 13/16	27,000



Pipe Body										Tool Joint										Assembly				
Nominal Size (in)	Weight (lbs/ft)	Grade	Upset	Wall Thickness (in)	ID (in)	Torsional Strength (ft-lbs)	Tensile Strength (lbs)	Collapse Pressure (psi)	Burst Pressure (psi)	Connection	OD (in)	ID (in)	Drift (in)	Tong Length 2XL		Material Yield Strength (ksi)	Make-up Torque (ft-lbs)	Torsional Strength (ft-lbs)	Tensile Strength (ft-lbs)	Torsional Ratio	Approximate Weight/Foot (lbs/ft)	Capacity (gal/ft)	Premium	
														Pin (in)	Box (in)								OD (in)	Make-up (ft-lbs)
4 1/2	16.60	S	IEU	0.337	3.826	55,500	595,000	16,800	17,700	4 1/2 FH	6 1/4	2 1/2	2 3/8	9	12	120	26,500	44,200	1,240,000	0.80	20.66	0.56	5 3/4	20,900
4 1/2	16.60	S	IEU	0.337	3.826	55,500	595,000	16,800	17,700	NC46	6 1/4	2 3/4	2 5/8	9	12	120	26,600	44,400	1,180,000	0.80	20.27	0.57	5 25/32	21,200
4 1/2	16.60	S	EU	0.337	3.826	55,500	595,000	16,800	17,700	NC50	6 5/8	3 1/2	3 3/8	9	12	120	26,700	44,500	1,110,000	0.80	20.03	0.59	6 1/16	21,000
4 1/2	16.60	S	IEU	0.337	3.826	55,500	595,000	16,800	17,700	DPHT46	6 1/4	3 1/4	3 1/8	9	15	120	28,600	47,600	901,200	0.86	19.59	0.58	5 1/2	25,500
4 1/2	16.60	S	IEU	0.337	3.826	55,500	595,000	16,800	17,700	DPDS46	6 1/4	3 1/4	3 1/8	9	12	120	26,000	43,300	901,200	0.78	19.14	0.59	5 19/32	24,200
4 1/2	16.60	S	EU	0.337	3.826	55,500	595,000	16,800	17,700	DPHT50	6 3/8	3 1/2	3 3/8	9	15	120	39,400	65,700	1,109,900	1.18	19.52	0.59	5 13/16	26,500
4 1/2	20.00	E	IEU	0.430	3.640	36,900	412,000	13,000	12,500	NC46	6 1/4	3	2 7/8	9	12	120	23,400	39,000	1,050,000	1.06	23.15	0.52	5 1/2	14,300
4 1/2	20.00	E	EU	0.430	3.640	36,900	412,000	13,000	12,500	NC50	6 5/8	3 5/8	3 1/2	9	12	120	24,500	40,900	1,030,000	1.11	23.07	0.54	5 13/16	14,100
4 1/2	20.00	E	IEU	0.430	3.640	36,900	412,000	13,000	12,500	DPHT46	6 1/4	3 1/4	3 1/8	9	15	120	28,600	47,600	901,200	1.29	22.89	0.53	5 13/32	24,500
4 1/2	20.00	E	IEU	0.430	3.640	36,900	412,000	13,000	12,500	DPHT50	6 1/4	3 5/8	3 1/2	9	15	120	35,500	59,200	1,026,000	1.60	22.31	0.54	5 13/16	25,500
4 1/2	20.00	X	IEU	0.430	3.640	46,700	522,000	16,400	15,900	NC46	6 1/4	2 3/4	2 5/8	9	12	120	26,600	44,400	1,180,000	0.95	23.57	0.52	5 21/32	18,100
4 1/2	20.00	X	EU	0.430	3.640	46,700	522,000	16,400	15,900	NC50	6 5/8	3 1/2	3 3/8	9	12	120	26,700	44,500	1,110,000	0.95	23.33	0.54	5 15/16	17,500
4 1/2	20.00	X	IEU	0.430	3.640	46,700	522,000	16,400	15,900	DPHT46	6 1/4	3 1/4	3 1/8	9	15	120	28,600	47,600	901,200	1.02	22.89	0.53	5 13/32	24,800
4 1/2	20.00	X	IEU	0.430	3.640	46,700	522,000	16,400	15,900	DPHT50	6 1/4	3 1/2	3 3/8	9	15	120	37,600	62,700	1,109,900	1.34	22.55	0.54	5 13/16	26,500
4 1/2	20.00	G	IEU	0.430	3.640	51,700	577,000	18,100	17,600	NC46	6 1/4	2 1/2	2 3/8	9	12	120	29,600	49,300	1,310,000	0.95	23.96	0.51	5 23/32	19,600
4 1/2	20.00	G	IEU	0.430	3.640	51,700	577,000	18,100	17,600	NC50	6 5/8	3 1/2	3 3/8	9	12	120	26,700	44,500	1,110,000	0.86	23.33	0.54	6 1/32	20,100
4 1/2	20.00	G	IEU	0.430	3.640	51,700	577,000	18,100	17,600	DPHT46	6 1/4	3 1/4	3 1/8	9	15	120	28,600	47,600	901,200	0.92	22.89	0.53	5 7/16	25,500
4 1/2	20.00	G	IEU	0.430	3.640	51,700	577,000	18,100	17,600	DPHT50	6 1/4	3 1/2	3 3/8	9	15	120	37,600	62,700	1,109,900	1.21	22.55	0.54	5 13/16	26,500
4 1/2	20.00	S	IEU	0.430	3.640	66,400	742,000	23,300	22,600	NC46	6 1/4	2 1/4	2 1/8	9	12	120	32,300	53,800	1,420,000	0.81	24.31	0.50	5 15/16	25,300
4 1/2	20.00	S	EU	0.430	3.640	66,400	742,000	23,300	22,600	NC50	6 5/8	3	2 7/8	9	12	120	34,500	57,500	1,420,000	0.87	24.29	0.52	6 7/32	25,600
4 1/2	20.00	S	IEU	0.430	3.640	66,400	742,000	23,300	22,600	DPHT46	6 1/4	3	2 7/8	9	15	120	34,600	57,700	1,048,400	0.87	23.34	0.53	5 9/16	26,500
4 1/2	20.00	S	EU	0.430	3.640	66,400	742,000	23,300	22,600	DPHT50	6 3/8	3 1/2	3 3/8	9	15	120	39,400	65,700	1,109,900	0.99	22.85	0.54	5 13/16	26,500
5	19.50	E	IEU	0.362	4.276	41,200	396,000	9,960	9,500	5 1/2 FH	7	3 3/4	3 5/8	10	12	120	37,700	62,900	1,450,000	1.53	23.43	0.73	6 13/32	17,100
5	19.50	E	IEU	0.362	4.276	41,200	396,000	9,960	9,500	NC50	6 5/8	3 3/4	3 5/8	9	12	120	22,400	37,300	939,000	0.91	22.32	0.73	5 7/8	15,800
5	19.50	E	IEU	0.362	4.276	41,200	396,000	9,960	9,500	DPHT50	6 5/8	3 3/4	3 5/8	9	15	120	32,000	53,300	939,000	1.29	22.57	0.73	5 13/16	25,800
5	19.50	X	IEU	0.362	4.276	52,100	501,000	12,000	12,000	5 1/2 FH	7	3 3/4	3 5/8	10	12	120	37,700	62,900	1,450,000	1.21	23.43	0.73	6 1/2	20,200
5	19.50	X	IEU	0.362	4.276	52,100	501,000	12,000	12,000	NC50	6 3/8	3 1/2	3 3/8	9	12	120	26,700	44,500	1,110,000	0.85	22.28	0.72	6 1/32	20,100
5	19.50	X	IEU	0.362	4.276	52,100	501,000	12,000	12,000	DPHT50	6 5/8	3 3/4	3 5/8	9	15	120	32,000	53,300	939,000	1.02	22.57	0.73	5 13/16	25,800
5	19.50	G	IEU	0.362	4.276	57,600	554,000	13,300	13,300	5 1/2 FH	7	3 3/4	3 5/8	10	12	120	37,700	62,900	1,450,000	1.09	23.43	0.73	6 9/16	22,300
5	19.50	G	IEU	0.362	4.276	57,600	554,000	13,300	13,300	NC50	6 5/8	3 1/4	3 1/8	9	12	120	30,700	51,200	1,270,000	0.89	23.35	0.71	6 3/32	21,900
5	19.50	G	IEU	0.362	4.276	57,600	554,000	13,300	13,300	DPHT50	6 5/8	3 1/2	3 3/8	9	15	120	39,700	66,200	1,109,900	1.15	23.10	0.73	5 13/16	26,500
5	19.50	G	IEU	0.362	4.276	57,600	554,000	13,300	13,300	DPDS50	6 5/8	3 1/2	3 3/8	9	12	120	36,200	60,400	1,110,200	1.05	22.61	0.73	5 13/16	23,000
5	19.50	S	IEU	0.362	4.276	74,100	712,000	15,700	17,100	5 1/2 FH	7 1/4	3 1/2	3 3/8	10	12	120	43,300	72,200	1,620,000	0.97	24.67	0.72	6 3/4	28,700
5	19.50	S	IEU	0.362	4.276	74,100	712,000	15,700	17,100	NC50	6 5/8	2 3/4	2 5/8	9	12	120	38,000	63,400	1,550,000	0.86	24.23	0.70	6 5/16	28,400



Drill Pipe and Tool Joint Data - 2-3/8" - 6-5/8"

Pipe Body										Tool Joint								Assembly						
Nominal Size (in)	Weight (lbs/ft)	Grade	Upset	Wall Thickness (in)	ID (in)	Torsional Strength (ft-lbs)	Tensile Strength (lbs)	Collapse Pressure (psi)	Burst Pressure (psi)	Connection	OD (in)	ID (in)	Drift (in)	Tong Length 2XL		Material Yield Strength (ksi)	Make-up Torque (ft-lbs)	Torsional Strength (ft-lbs)	Tensile Strength (ft-lbs)	Torsional Ratio	Approximate Weight/Foot (lbs/ft)	Capacity (gal/ft)	Premium	
														Pin (in)	Box (in)								OD (in)	Make-up (ft-lbs)
5	19.50	S	IEU	0.362	4.276	74,100	712,000	15,700	17,100	DPHT50	6 5/8	3 1/2	3 3/8	9	15	120	39,700	66,200	1,109,900	0.89	23.10	0.73	5 15/16	29,000
5	19.50	S	IEU	0.362	4.276	74,100	712,000	15,700	17,100	DPD550	6 5/8	3 1/2	3 3/8	9	12	120	36,200	60,400	1,110,200	0.82	22.61	0.73	6 1/32	29,000
5	25.60	E	IEU	0.500	4.000	52,300	530,000	13,500	13,100	5 1/2 FH	7	3 1/2	3 3/8	10	12	120	37,700	62,900	1,620,000	1.20	29.39	0.64	6 1/2	20,200
5	25.60	E	IEU	0.500	4.000	52,300	530,000	13,500	13,100	NC50	6 5/8	3 1/2	3 3/8	9	12	120	26,700	44,500	1,110,000	0.85	28.28	0.64	6 1/32	20,100
5	25.60	E	IEU	0.500	4.000	52,300	530,000	13,500	13,100	DPHT50	6 5/8	3 3/4	3 5/8	9	15	120	32,000	53,300	939,100	1.02	28.01	0.65	5 13/16	25,800
5	25.60	X	IEU	0.500	4.000	66,200	672,000	17,100	16,600	5 1/2 FH	7	3 1/2	3 3/8	10	12	120	37,700	62,900	1,620,000	0.95	29.39	0.64	6 21/32	25,500
5	25.60	X	IEU	0.500	4.000	66,200	672,000	17,100	16,600	NC50	6 5/8	3	2 7/8	9	12	120	34,500	57,500	1,420,000	0.87	29.24	0.62	6 7/32	25,600
5	25.60	X	IEU	0.500	4.000	66,200	672,000	17,100	16,600	DPHT50	6 5/8	3 1/2	3 3/8	9	15	120	39,700	66,200	1,109,900	1.00	28.53	0.64	5 13/16	26,500
5	25.60	G	IEU	0.500	4.000	73,200	742,000	18,900	18,400	5 1/2 FH	7 1/4	3 1/2	3 3/8	10	12	120	43,300	72,200	1,620,000	0.99	30.06	0.64	6 23/32	27,600
5	25.60	G	IEU	0.500	4.000	73,200	742,000	18,900	18,400	NC50	6 5/8	2 3/4	2 5/8	9	12	120	38,000	63,400	1,550,000	0.87	29.66	0.62	6 9/32	27,400
5	25.60	G	IEU	0.500	4.000	73,200	742,000	18,900	18,400	DPHT50	6 5/8	3 1/2	3 3/8	9	15	120	39,700	66,200	1,109,900	0.90	28.53	0.64	5 29/32	26,500
5	25.60	G	IEU	0.500	4.000	73,200	742,000	18,900	18,400	DPD550	6 5/8	3 1/2	3 3/8	9	12	120	36,200	60,400	1,110,200	0.83	28.08	0.64	6 1/32	29,000
5	25.60	S	IEU	0.500	4.000	94,100	954,000	24,300	23,600	5 1/2 FH	7 1/4	3 1/4	3 1/8	10	12	120	47,200	78,700	1,780,000	0.84	30.58	0.63	6 15/16	35,400
5	25.60	S	IEU	0.500	4.000	94,100	954,000	24,300	23,600	NC50	6 5/8	2 3/4	2 5/8	9	12	120	38,000	63,400	1,550,000	0.67	29.66	0.62	6 17/32	35,200
5	25.60	S	IEU	0.500	4.000	94,100	954,000	24,300	23,600	DPHT50	6 5/8	3 1/2	3 3/8	9	15	120	39,700	66,200	1,109,900	0.70	28.53	0.64	6 3/16	36,000
5	25.60	S	IEU	0.500	4.000	94,100	954,000	24,300	23,600	DPD550	6 5/8	3 1/2	3 3/8	9	12	120	36,200	60,400	1,110,200	0.64	28.08	0.64	6 9/32	35,000
5 1/2	21.90	E	IEU	0.361	4.778	50,700	437,000	8,410	8,610	5 1/2 FH	7	4	3 7/8	10	12	120	33,400	55,700	1,270,000	1.10	25.17	0.90	6 15/32	19,200
5 1/2	21.90	E	IEU	0.361	4.778	50,700	437,000	8,410	8,610	DPHT55	7	4	3 7/8	10	15	120	46,300	77,200	1,265,800	1.52	25.32	0.91	6 13/32	28,500
5 1/2	21.90	X	IEU	0.361	4.778	64,200	554,000	10,000	10,900	5 1/2 FH	7	3 3/4	3 5/8	10	12	120	37,700	62,900	1,450,000	0.98	25.75	0.89	6 5/8	24,400
5 1/2	21.90	X	IEU	0.361	4.778	64,200	554,000	10,000	10,900	DPHT55	7	4	3 7/8	10	15	120	46,300	77,200	1,265,800	1.20	25.42	0.91	6 13/32	28,500
5 1/2	21.90	G	IEU	0.361	4.778	71,000	612,000	10,800	12,100	5 1/2 FH	7 1/4	3 1/2	3 3/8	10	12	120	43,300	72,200	1,620,000	1.02	26.96	0.88	6 23/32	27,600
5 1/2	21.90	G	IEU	0.361	4.778	71,000	612,000	10,800	12,100	DPHT55	7	4	3 7/8	10	15	120	46,300	77,200	1,265,800	1.09	25.42	0.91	6 13/32	28,500
5 1/2	21.90	G	IEU	0.361	4.778	71,000	612,000	10,800	12,100	DPD555	7	4	3 7/8	10	12	120	44,500	74,200	1,292,500	1.05	24.83	0.91	6 7/16	26,400
5 1/2	21.90	S	IEU	0.361	4.778	91,300	787,000	12,700	15,500	5 1/2 FH	7 1/2	3	2 7/8	10	12	120	52,100	86,800	1,930,000	0.95	28.68	0.87	6 15/16	35,400
5 1/2	21.90	S	IEU	0.361	4.778	91,300	787,000	12,700	15,500	DPHT55	7	4	3 7/8	10	15	120	46,300	77,200	1,265,800	0.85	25.42	0.91	6 5/8	35,300
5 1/2	21.90	S	IEU	0.361	4.778	91,300	787,000	12,700	15,500	DPD555	7	4	3 7/8	10	12	120	44,500	74,200	1,292,500	0.81	24.83	0.91	6 11/16	37,500
5 1/2	24.70	E	IEU	0.415	4.670	56,600	497,000	10,500	9,900	5 1/2 FH	7	4	3 7/8	10	12	120	33,400	55,700	1,270,000	0.98	27.59	0.86	6 9/16	22,300
5 1/2	24.70	E	IEU	0.415	4.670	56,600	497,000	10,500	9,900	DPHT55	7	4	3 7/8	10	15	120	46,300	77,200	1,265,800	1.36	27.85	0.87	6 13/32	28,500
5 1/2	24.70	X	IEU	0.415	4.670	71,700	630,000	12,900	12,500	5 1/2 FH	7 1/4	3 1/2	3 3/8	10	12	120	43,300	72,200	1,620,000	1.01	29.38	0.85	6 23/32	27,600
5 1/2	24.70	X	IEU	0.415	4.670	71,700	630,000	12,900	12,500	DPHT55	7	4	3 7/8	10	15	120	46,300	77,200	1,265,800	1.08	27.85	0.87	6 13/32	28,500
5 1/2	24.70	G	IEU	0.415	4.670	79,200	696,000	14,000	13,900	5 1/2 FH	7 1/4	3 1/2	3 3/8	10	12	120	43,300	72,200	1,620,000	0.91	29.38	0.85	6 25/32	29,800
5 1/2	24.70	G	IEU	0.415	4.670	79,200	696,000	14,000	13,900	DPHT55	7	4	3 7/8	10	15	120	46,300	77,200	1,265,800	0.97	27.85	0.87	6 15/32	29,800

Pipe Body										Tool Joint								Assembly						
Nominal Size (in)	Weight (lbs/ft)	Grade	Upset	Wall Thickness (in)	ID (in)	Torsional Strength (ft-lbs)	Tensile Strength (lbs)	Collapse Pressure (psi)	Burst Pressure (psi)	Connection	OD (in)	ID (in)	Drift (in)	Tong Length 2XL		Material Yield Strength (ksi)	Make-up Torque (ft-lbs)	Torsional Strength (ft-lbs)	Tensile Strength (ft-lbs)	Torsional Ratio	Approximate Weight/Foot (lbs/ft)	Capacity (gal/ft)	Premium	
														Pin (in)	Box (in)								OD (in)	Make-up (ft-lbs)
5 1/2	24.70	G	IEU	0.415	4.670	79,200	696,000	14,000	13,900	DPDS55	7	4	3 7/8	10	12	120	44,500	74,200	1,292,500	0.94	27.27	0.87	6 17/32	29,700
5 1/2	24.70	S	IEU	0.415	4.670	102,000	895,000	17,000	17,800	5 1/2 FH	7 1/2	3	2 7/8	10	12	120	52,100	86,800	1,930,000	0.85	31.09	0.83	7 1/32	38,900
5 1/2	24.70	S	IEU	0.415	4.670	102,000	895,000	17,000	17,800	DPHT55	7	4	3 7/8	10	15	120	46,300	77,200	1,265,800	0.76	27.85	0.87	6 23/32	38,600
5 1/2	24.70	S	IEU	0.415	4.670	102,000	895,000	17,000	17,800	DPDS55	7	4	3 7/8	10	12	120	44,500	74,200	1,292,500	0.73	27.27	0.87	6 25/32	38,500
6 5/8	25.20	E	IEU	0.330	5.965	70,600	489,000	4,790	6,540	6 5/8 FH	8	5	4 7/8	10	13	120	43,900	73,200	1,450,000	1.04	29.17	1.40	7 7/16	26800
6 5/8	25.20	E	IEU	0.330	5.965	70,600	489,000	4,790	6,540	DPHT65	8	5	4 7/8	10	16	120	59,800	99,700	1,448,400	1.41	29.38	1.42	7 11/32	35800
6 5/8	25.20	X	IEU	0.330	5.965	89,400	620,000	5,320	8,280	6 5/8 FH	8	5	4 7/8	10	13	120	43,900	73,200	1,450,000	0.82	29.17	1.40	7 5/8	35100
6 5/8	25.20	X	IEU	0.330	5.965	89,400	620,000	5,320	8,280	DPHT65	8	5	4 7/8	10	16	120	59,800	99,700	1,448,400	1.12	29.38	1.42	7 11/32	35800
6 5/8	25.20	G	IEU	0.330	5.965	98,800	685,000	5,500	9,150	6 5/8 FH	8 1/4	4 3/4	4 5/8	10	13	120	51,300	85,500	1,680,000	0.87	30.71	1.39	7 11/16	38000
6 5/8	25.20	G	IEU	0.330	5.965	98,800	685,000	5,500	9,150	DPHT65	8	5	4 7/8	10	16	120	59,800	99,700	1,448,400	1.01	29.38	1.42	7 13/32	38600
6 5/8	25.20	S	IEU	0.330	5.965	127,000	881,000	6,040	11,800	6 5/8 FH	8 1/2	4 1/4	4 1/8	10	13	120	65,000	108,000	2,100,000	0.85	32.94	1.37	7 29/32	48,200
6 5/8	25.20	S	IEU	0.330	5.965	127,000	881,000	6,040	11,800	DPHT65	8	5	4 7/8	10	16	120	59,800	99,700	1,448,400	0.79	29.38	1.42	7 5/8	48400
6 5/8	27.70	E	IEU	0.362	5.901	76,300	534,000	5,890	7,170	6 5/8 FH	8	5	4 7/8	10	13	120	43,900	73,200	1,450,000	0.96	30.97	1.38	7 1/2	29,600
6 5/8	27.70	E	IEU	0.362	5.901	76,300	534,000	5,890	7,170	DPHT65	8	5	4 7/8	10	16	120	59,800	99,700	1,448,400	1.31	31.19	1.39	7 11/32	35,800
6 5/8	27.70	X	IEU	0.362	5.901	96,600	677,000	6,760	9,080	6 5/8 FH	8 1/4	4 3/4	4 5/8	10	13	120	51,300	85,500	1,680,000	0.89	32.50	1.36	7 11/16	38,000
6 5/8	27.70	X	IEU	0.362	5.901	96,600	677,000	6,760	9,080	DPHT65	8	5	4 7/8	10	16	120	59,800	99,700	1,448,400	1.03	31.19	1.03	7 3/8	37,200
6 5/8	27.70	G	IEU	0.362	5.901	107,000	748,000	7,100	10,000	6 5/8 FH	8 1/4	4 3/4	4 5/8	10	13	120	51,300	85,500	1,680,000	0.80	32.50	1.36	7 3/4	40,900
6 5/8	27.70	G	IEU	0.362	5.901	107,000	748,000	7,100	10,000	DPHT65	8	5	4 7/8	10	16	120	59,800	99,700	1,448,400	0.93	31.19	1.39	7 15/32	41,400
6 5/8	27.70	S	IEU	0.362	5.901	137,000	962,000	7,810	12,900	6 5/8 FH	8 1/2	4 1/4	4 1/8	10	13	120	65,000	108,000	2,100,000	0.79	34.73	1.34	8	52,700
6 5/8	27.70	S	IEU	0.362	5.901	137,000	962,000	7,810	12,900	DPHT65	8	5	4 7/8	10	16	120	59,800	99,700	1,448,400	0.73	31.19	1.39	7 23/32	52,600
6 5/8	27.70	S	IEU	0.362	5.901	137,000	962,000	7,810	12,900	DPDS65	8 1/4	4 7/8	4 3/4	10	13	120	64,900	108,200	1,596,400	0.76	31.74	1.39	7 3/4	54,400