

Aluminum Water Well Drill Pipe

Drilling Products provides the option of aluminum drill pipe (AWWDP) for water well service. Long term experience in the manufacture of aluminum drill pipe and aluminum flex collars for directional drilling applications has developed the product knowledge that is now being used to design and manufacture an optional drill pipe configuration for the water well drilling industry.

Aluminum drill pipe offers major advantages to the water well drilling contractor.

- **High strength.** AWWDP has a high strength to weight ratio to meet the tension and torsion demands of difficult drilling conditions. (See aluminum drill pipe specification chart).

- **Light weight.** In air, AWWDP weighs about half as much as steel pipe of the same nominal size
- **Increased rig capacity.** Due to the lighter drill pipe weight, rigs using AWWDP can be upgraded to drill deeper holes.
- **Lower Transportation cost.** The lighter drill pipe weight also reduces shipping weight.
- **Flexibility.** It is about twice as flexible as the same nominal size of standard weight steel drill pipe.
- **Reduced fatigue failures.** The flexibility of the AWWDP results in lower bending stress which relates to improved fatigue strength.

Aluminum Water Well Drill Pipe Specifications

Drill Pipe				Tool Joint				Tensile Yield		Torsion Yield		10'		20'			
Nom Size	O.D.	Wall	I.D.	Stand./Opt.	Type	O.D.	I.D.	AWWDP	Grade D	AWWDP	Grade D	Alm	Stl	Alm	Stl		
2 3/8"	2 1/2"	0.5"	1 1/2"	Standard	2 3/8" IF	3 3/8	1 1/2	133,810	101,387	5,895	4,583	68	92	105	155		
				Optional	2 3/8" MJ	3	1 1/2					56	81	94	144		
				Optional	2 3/8" FEDP	3	1 1/2					56	81	94	144		
				Optional	2 3/8" MR	3 1/4	1 1/2					64	90	101	153		
2 7/8"	3"	0.5"	2"	Standard	2 7/8" IF	4	2	164,806	157,186	8,989	8,473	87	140	134	237		
				Optional	2 3/8" MJ	3 1/2	1 1/2					78	127	125	224		
				Optional	2 3/8" FEDP	3 1/2	1 1/2					78	127	125	224		
				Optional	2 3/8" MR	3 1/2	1 3/4					74	118	121	215		
				Optional	2 7/8" FEDP	3 3/4	1 7/8					80	131	127	228		
				Optional	2 3/8" IF	3 1/2	1 3/4					74	120	121	217		
3 1/2"	3 1/2"	0.5"	2 1/2"	Standard	2 7/8" IF	4 1/8	2 1/8	199,565	199,151	13,340	13,604	96	161	152	284		
				Optional	2 3/8" IF	4	1 3/4					98	145	154	268		
				Optional	3 1/2" IF	4 3/4	2 1/2					113	175	170	298		
				Optional	3 1/2" REG	4 1/4	2					103	167	159	290		
4"	4"	0.5"	3"	Standard	2 7/8" IF	4 1/2	2 1/8	228,461	209,263	17,600	17,077	117	162	183	291		
				Optional	3 1/2" REG	4 1/2	2					119	164	185	294		
				Optional	3 1/2" IF	4 3/4	2 11/16					115	179	181	308		
4 1/2"	4 1/2"	0.5"	3 1/2"	Standard	3 1/2" IF	5 1/2	2 3/4	262,847	242,409	23,508	22,592	155	197	231	347		
				Optional	4" FH	5 1/2	2 3/4					155	230	231	379		
				Optional	4" IF	6	3 1/4					168	243	244	392		
				Optional	3 1/2" REG FJ	4 1/2	1 3/4					130	206	205	356		
				Optional	2 7/8" IF FJ	4 1/2	2							125	199	201	349

Additional flush joint pipe designs available . Grade D steel dimensions and properties are based on standard pipe dimensions for the nominal sizes. Other combinations of drill pipe/tool joints available on request.