

# Standard Pipe A53 CW and ERW



**Wheatland** *Tube*

JMC STEEL GROUP

# Standard Pipe

## A53 CW and ERW

Wheatland Tube is known as a leader in the standard pipe industry. We've been producing tube and pipe for more than 75 years and our reputation for quality and durability is unmatched. We're the only full-line producer of continuous welded and electric resistance weld 1/4" to 12" pipe, and we set the standards worldwide for hot dip galvanized products.

We produce from 1/4" to 12" Nominal sizes and stock 1/8" to 12" pipe sizes in a variety of ASTM standards so we can meet all of your requirements.

Wheatland offers over 350 different combinations of finish, end treatments and lengths on our standard pipe. We're strategically located and carry a large inventory so we can ship quickly to satisfy your delivery schedules.

We're the only CW producer in the North America.

### Hot-Dipped Galvanized

Our standard process is to galvanize to the ASTM A53 requirements.

### Surface and End Finishes

Surface Finishes: black, passivate, galvanized, uncoated, pickled and oiled, pickled, bare and soluble oil.

End Finishes: plain ends, roll groove, cut groove, threaded and coupled, and threads only (one or both ends).

### Choose From a Full Line of Standard Pipe

ASTM A53 is used for mechanical and low pressure applications and in ordinary uses in steam, water, gas and air lines. It can be formed and welded. Our products include:

### A53 Continuous Welded Pipe

- Type F, Grade A
- Black, Passivate, Bare, Pickled and Oiled, and Hot-dipped Galvanized
- Sizes: 1/2" - 4"
- Standard and Extra Heavy
- MIC Shield Coatings Compatible with CPVC



- UL Listed; FM Approved : NSF61
- Suitable for Welding, Threading, Grooving and Bending
- Produced to ASTM A53A 53M, Federal Specification WW-P404 and ASME B36.10M

### Hydrostatic Testing

Hydrostatic test pressures for plain-end pipe are indicated below.

NPS	Standard Weight -PSI	Extra Strong Weight -PSI
1/2 through 1	1500	1500
1-1/4 -1-1/2	2000	2000
2 through 3	2500	2500
3 1/2 -4	2800	2800

### Tensile Requirements

Tensile Strength, min. 48,000 psi  
 Yield Strength, min. 30,000 psi  
 Elongation in 2" Refer to A 53 table x 4.1, latest revisions - ASTM A53/A 53M

### Bending Test - Less than NPS 2"

	Degree of Bend	Diameter of Mandrel
Standard	90°	12 x outside pipe diameter
Close Coiling	90°	8 x outside pipe diameter

### Flattening Test - NPS 2 1/2" and Greater

As a test for quality of the weld, position the weld at 90° from the direction of force and flatten until the OD is 3/4 of the original outside diameter. No cracks shall occur along the inside or outside surface of the weld.

# Dimensions and Weight Chart - ASTM A 53 Type E

STANDARD (SCHEDULE 40) BLACK PLAIN END			
Nominal Size	O.D. Inches	Nominal Wall	Weight/Lb. Ft.
2"	2.375	.154	3.66
2-1/2"	2.875	.203	5.80
3"	3.500	.216	7.58
4"	4.500	.237	10.88
5"	5.563	.258	14.63
6"	6.625	.280	18.99
8"	8.625	.322	28.58
10"	10.750	.365	40.52
12"	12.750	.375	49.61

## A53 Electric-Resistance Welded Type E, Grade B

- Black and hot-dipped galvanized
- Nominal Sizes: Schedule 40 2" – 12"
- UL Listed; FM Approved
- Suitable for welding, threading and grooving
- Produced to ASTM A 53/53M, Federal Specification WW-P404 and ASME B36.10M.

## Hydrostatic Testing and Nondestructive Electric Testing

Hydrostatic inspection test pressures for plain-end pipe are listed in Table X 2.2 of the A53/A 53M specification. Test pressures shall be maintained for a minimum of five seconds.

Nondestructive electric testing of the weld seam is required on each length of ERW pipe NPS 2 and larger.

## Tensile Requirements

Tensile Strength, min. 60,000 psi  
Yield Strength, min. 35,000 psi

## Bending Test (Cold)

	For NPS 2 and under
Degree of Bend	90°
Diameter of Mandrel	12 x outside pipe diameter

## Flattening Test

As a test for ductility of the weld for pipe 2-1/2" NPS and larger, position the weld at 0° and alternately at 90° to the direction of force and flatten until the OD is 2/3 of the original outside diameter. No cracks shall occur along the inside or outside surface of the weld.

All of our facilities have quality systems in place. At a minimum, they're registered to ISO 9001:2008 Quality Management Systems.



## Dimensions and Weight Chart - ASTM A53 Type F

BLACK PLAIN END					
Nominal Size	OD Inches	Sch. 40		Sch. 80	
		Wall Inches	Weight Lb./Ft.	Wall Inches	Weight Lb./Ft.
1/2"	0.84	0.109	0.85	0.147	1.09
3/4"	1.05	0.113	1.13	0.154	1.48
1"	1.315	0.133	1.68	0.179	2.17
1-1/4"	1.66	0.14	2.27	0.191	3
1-1/2"	1.9	0.145	2.72	0.2	3.63
2"	2.375	0.154	3.66	0.218	5.03
2-1/2"	2.875	0.203	5.8	0.276	7.67
3"	3.5	0.216	7.58	0.3	10.26
3-1/2"	4	0.226	9.12	0.318	12.52
4"	4.5	0.237	10.8	0.337	15

## Standard Pipe Schedule 40 - ASTM A53 Grades A and B

NPS Designator	DN Designator	Outside Diameter		Inside Diameter		Wall Thickness		Nominal Weight (Mass) per unit Length			
		(Inches)	(mm)	(Inches)	(mm)	(Inches)	(mm)	Plain End (lb/ft)	Plain End (kg/m)	Threads & Couplings (lb/ft)	Threads & Couplings (kg/m)
1/8"	6	0.405	10.3	0.269	6.8	0.068	1.73	0.24	0.37	0.25	0.37
1/4"	8	0.540	13.7	0.364	9.2	0.088	2.24	0.43	0.63	0.43	0.63
3/8"	10	0.675	17.1	0.493	12.5	0.091	2.31	0.57	0.84	0.57	0.84
1/2"	15	0.840	21.3	0.622	15.8	0.109	2.77	0.85	1.27	0.86	1.27
3/4"	20	1.050	26.7	0.824	20.9	0.113	2.87	1.13	1.69	1.14	1.69
1"	25	1.315	33.4	1.049	26.6	0.133	3.38	1.68	2.50	1.69	2.50
1-1/4"	32	1.660	42.2	1.380	35.1	0.140	3.56	2.27	3.39	2.28	3.40
1-1/2"	40	1.900	48.3	1.610	40.9	0.145	3.68	2.72	4.05	2.74	4.04
2"	50	2.375	60.3	2.067	52.5	0.154	3.91	3.66	5.44	3.68	5.46
2-1/2"	65	2.875	73.0	2.469	62.7	0.203	5.16	5.80	8.63	5.85	8.67
3"	80	3.500	88.9	3.068	77.9	0.216	5.49	7.58	11.29	7.68	11.35
3-1/2"	90	4.000	101.6	3.548	90.1	0.226	5.74	9.12	13.57	9.27	13.71
4"	100	4.500	114.3	4.026	102.3	0.237	6.02	10.8	16.07	10.92	16.23
5"	125	5.563	141.3	5.047	158.2	0.258	6.55	14.63	21.77	14.90	22.07
6"	150	6.625	168.3	6.065	154.1	0.280	7.11	18.99	28.26	19.34	28.58
8"	200	8.625	219.1	7.981	202.7	0.322	8.18	28.58	42.55	29.35	43.73
10"	250	10.750	273.0	10.020	254.5	0.365	9.27	40.52	60.29	41.49	63.36
12 <sup>1</sup>	300	12.750	323.8	12.000	304.8	0.375	9.52	49.61	73.78	51.28	76.21

## Extra Heavy Pipe Schedule 80 - ASTM A53 Type A

NPS Designator	DN Designator	Outside Diameter		Inside Diameter		Wall Thickness		Nominal Weight (Mass) per unit Length			
		(Inches)	(mm)	(Inches)	(mm)	(Inches)	(mm)	Plain End (lb/ft)	Plain End (kg/m)	Threads & Couplings (lb/ft)	Threads & Couplings (kg/m)
1/8"	6	0.405	10.3	0.215	5.5	0.095	2.41	0.31	0.47	0.32	0.46
1/4"	8	0.540	13.7	0.302	7.7	0.119	3.02	0.54	0.80	0.54	0.80
3/8"	10	0.675	17.1	0.423	10.7	0.126	3.20	0.74	1.10	0.74	1.10
1/2"	15	0.840	21.3	0.549	13.9	0.147	3.73	1.09	1.62	1.09	1.62
3/4"	20	1.050	26.7	0.742	18.8	0.154	3.91	1.48	2.20	1.48	2.21
1"	25	1.315	33.4	0.957	24.3	0.179	4.55	2.17	3.24	2.19	3.25
1-1/4"	32	1.660	42.2	1.278	32.5	0.191	4.85	3.00	4.47	3.03	4.49
1-1/2"	40	1.900	48.3	1.500	38.1	0.200	5.08	3.63	5.41	3.65	5.39
2"	50	2.375	60.3	1.939	49.3	0.218	5.54	5.03	7.48	5.08	7.55
2-1/2"	65	2.875	73.0	2.323	59.0	0.276	7.01	7.67	11.41	7.75	11.52
3"	80	3.500	88.9	2.900	73.7	0.300	7.62	10.26	15.27	10.35	15.39
3-1/2"	90	4.000	101.6	3.364	85.4	0.318	8.08	12.52	18.63	12.67	18.82
4"	100	4.500	114.3	3.826	97.2	0.337	8.56	15.00	22.32	15.20	22.60
5"	125	5.563	141.3	4.813	122.3	0.375	9.52	20.80	30.94	21.04	31.42
6"	150	6.625	168.3	5.761	146.3	0.432	10.97	28.60	42.56	28.88	43.05
8"	200	8.625	219.1	7.625	193.7	0.500	12.70	43.43	64.64	44.00	65.41

## Permissible Variations - ASTM A53 Grades A and B Pipe

Permissible Variations for ASTM A53 Grades A and B Pipe			
	O.D.	Over	Under
Outside Diameter	NPS 1/8 to 1-1/2 DN 6 to 40	1/64" (0.4mm)	1/64" (0.4mm)
	NPS 2 and up DN 50 and up	1%	1%
Wall Thickness at Any Point		-----	12.50%
Weight		10%	10%

### Mechanical Properties

**Grade A:** Yield 30,000 (205 Mpa) psi minimum Tensile: 48,000 psi (330 Mpa) minimum

**Grade B:** Yield 35,000 (240 Mpa) psi minimum Tensile: 60,000 psi (415 Mpa) minimum



**JMC Steel Group**  
*Pipe and Tube Solutions*

**Corporate Office**  
3201 Enterprise Parkway  
Suite 150  
Beachwood, OH 44122  
Ph: 216.910.3700  
info@jmcsteelgroup.com  
jmcsteelgroup.com



**Wheatland Tube**  
JMC STEEL GROUP

700 South Dock Street  
Sharon, PA 16146  
Ph: 800.257.8182  
Fax: 724.346.7260  
info@wheatland.com  
wheatland.com

Wheatland produces a full line of standard pipe — A53 CW and ERW pipe, lance pipe and seamless pressure pipe. We're the industry leader in hot-dip galvanized pipe, and we offer more than 350 different combinations of finish, end treatments and length on our standard pipe.

All Wheatland manufacturing locations' quality management systems are certified to ISO 9001:2008 requirements.

For more information contact Wheatland's Pipe Product at (888) 442-8880, email: info@wheatland.com or visit our website at [www.wheatland.com](http://www.wheatland.com).



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