TECHNICAL DATA OF BLACK AND HOT DIP GALVANIZED STEEL PIPES CONFORMING TO ASTM A 53 GRADE A & B SCH-40 ASTM A795 GRADE A & B SCH - 40

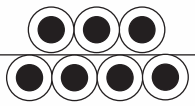
		OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT OF BLACK PIPES				TEST PRESSURE				SOCKET DIMENSIONS				NO. OF PCS PER LIFT
NOMINAL PIPE SIZE		STANDARD		STANDARD		PLAIN END				GRADE A		GRADE B		MIN OUTSIDE DIA		MIN LENGTH		
INCH	MM	INCH	MM	INCH	MM	KG/MTR	MTR/TON	LB/FT	FT/TON	PSI	KPA	PSI	KPA	INCH	MM	INCH	MM	
1/2	15	0.840	21.3	0.109	2.77	1.27	787	0.85	2583	700	4800	700	4800	1.063	27.0	1.500	38.1	120
3/4	20	1.050	26.7	0.113	2.87	1.69	592	1.13	1941	700	4800	700	4800	1.313	33.4	1.563	39.7	84
1	25	1.315	33.4	0.133	3.38	2.50	400	1.68	1312	700	4800	700	4800	1.576	40.0	1.938	49.2	60
1.1/4	32	1.660	42.2	0.140	3.56	3.39	295	2.27	968	1200	8300	1300	9000	1.900	48.3	2.000	50.8	42
1.1/2	40	1.900	48.3	0.145	3.68	4.05	247	2.72	810	1200	8300	1300	9000	2.200	55.9	2.000	50.8	36
2	50	2.375	60.3	0.154	3.91	5.44	184	3.66	603	2300	15900	2500	17200	2.750	69.8	2.063	52.4	26
2.1/2	65	2.875	73.0	0.203	5.16	8.63	116	5.80	380	2500	17200	2500	17200	3.250	82.5	3.063	77.8	18
3	80	3.500	88.9	0.216	5.49	11.29	89	7.58	291	2220	15300	2500	17200	4.000	101.6	3.188	81.0	14
3.1/2	90	4.000	101.6	0.226	5.74	13.57	74	9.12	242	2030	14000	2370	16300	4.625	117.5	3.313	84.1	12
4	100	4.500	114.3	0.237	6.02	16.07	62	10.80	204	1900	13100	2210	15200	5.000	127.0	3.438	87.3	10
5	125	5.563	141.3	0.258	6.55	21.77	46	14.63	151	1670	11500	1950	13400	6.296	159.9	3.688	93.7	7
6	150	6.625	168.3	0.280	7.11	28.26	35	18.99	116	1520	10500	1780	12300	7.390	187.7	4.938	125.4	7
8	200	8.625	219.1	0.322	8.18	42.55	24	28.58	79	1340	9200	1570	10800	--	--	--	--	5

TECHNICAL DATA OF BLACK AND HOT DIP GALVANIZED STEEL PIPES CONFORMING TO ASTM A53 GRADE A & B SCHEDULE 80

NOMINAL PIPE SIZE		OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT OF BLACK PIPES				TEST PRESSURE				NO. OF PCS PER LIFT
		STANDARD		STANDARD		PLAIN END				GRADE A		GRADE B		
INCH	MM	INCH	MM	INCH	MM	KG/MTR	MTR/ TON	LB/FT	FT/ TON	PSI	KPA	PSI	KPA	
2	50	2.375	60.3	0.218	5.54	7.48	134	5.03	439	2500	17200	2500	17200	26
2.1/2	65	2.875	73	0.276	7.01	11.41	88	7.67	288	2500	17200	2500	17200	18
3	80	3.500	88.9	0.300	7.62	15.27	65	10.26	215	2500	17200	2500	17200	14
4	100	4.500	114.3	0.337	8.56	22.32	45	15.00	147	2700	18600	2800	19300	10

TECHNICAL DATA OF BLACK AND HOT DIP GALVANIZED STEEL PIPES CONFORMING TO ASTM A53 GRADE A & B/ ASTM A 795 GRADE A & B SCH-10

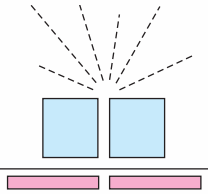
		OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT OF BLACK PIPES				TEST PRESSURE				NO. OF PCS PER LIFT
NOMINAL PIPE SIZE		STANDARD		STANDARD		PLAIN END				GRADE A		GRADE B		
INCH	MM	INCH	MM	INCH	MM	KG/MTR	MTR/ TON	LB/FT	FT/ TON	PSI	KPA	PSI	KPA	
3/4	20	1.050	26.7	0.083	2.11	1.28	781	0.86	2563	700	4800	700	4800	84
1	25	1.315	33.4	0.109	2.77	2.09	478	1.41	1570	700	4800	700	4800	60
1.1/4	32	1.660	42.2	0.109	2.77	2.69	372	1.81	1220	1000	6900	1000	6900	42
1.1/2	40	1.900	48.3	0.109	2.77	3.11	322	2.09	1055	1000	6900	1000	6900	36
2	50	2.375	60.3	0.109	3.05	3.93	254	2.64	835	1000	6900	1000	6900	26
2.1/2	65	2.875	73	0.120	3.05	5.26	190	3.53	624	1000	6900	1000	6900	18
3	80	3.500	88.9	0.120	3.05	6.46	155	4.34	508	1000	6900	1000	6900	14
3.1/2	90	4.000	101.6	0.120	3.05	7.41	135	4.98	443	1200	8300	1200	8300	12
4	100	4.500	114.3	0.120	3.05	8.37	119	5.62	392	1200	8300	1200	8300	10
5	125	5.563	141.3	0.134	3.4	11.58	86	7.78	283	1200	8300	1200	8300	7
6	150	6.625	168.3	0.134	3.4	13.85	72	9.30	237	1000	6900	1000	6900	7
8	200	8.625	219.1	0.188*	4.78	25.26	40	16.96	130	800	5500	800	5500	5
8	200	8.625	219.1	0.148	3.76	19.97	50	13.41	164	800	5500	800	5500	5



Strip Levelling



Square end cutting



Butt welding

MECHANICAL PROPERTIES

Properties ⟶	Tensile Strength		Yield Strength	
	psi	MPa	psi	MPa
Grade-A	48000	330	30000	205
Grade-B	60000	415	35000	240

Min Percentage Elongation in 2"[50mm] rounded to nearest 1/2

$$e = 625{,}000[1940] \times (A^{0.2}/U^{0.9})$$

A= cross sectional area of the tension specimen, rounded to the nearest 0.01 inch^2[1mm^2], based on specified outside diameter. If the area is more than 0.75 inch^2 [500mm^2], then the value 0.75 inch^2 [500mm^2] shall be used.
U= specified minimum tensile strength, psi[MPa].

TOLERANCES

OUTSIDE DIAMETER

SIZE FROM	SIZE TO	TOLERANCE INCH(MM)	
INCH (MM)	INCH (MM)	POSITIVE	NEGATIVE
1/2 (15)	1.1/2(40)	1/64 (0.40)	1/64 (0.40)
2 (50)	8 (200)	1% OF OD	1% OF OD

THICKNESS — 12.5% max under the nominal wall thickness.

WEIGHT — + / - 10% on calculated standard weight.

END FINISH — Square Cut Ends for sizes less than or equal to 1.1/2" NPS
Beveled Ends at 30^0 $-0^0/+5^0$ for sizes 2" NPS and above.

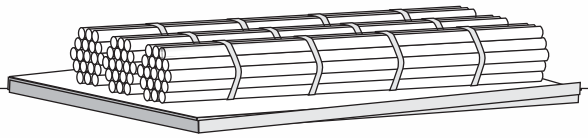
BEND TEST — Applicable for sizes 2" NPS and below
90^0 bending radius should be 12 times of the tube diameter.

FLATTENING TEST — Applicable for sizes 2" NPS and above in three stages.

STAGE-1 — For weld ductility until 2/3 of outside dia of specimen tube.
STAGE-2 — For ductility of steel until 1/3 of outside dia of specimen tube.
STAGE-3 — Full flattening for testing of laminated and unsound material.

ZINC COATING
MINIMUM : 1.60 oz / ft^2 [490 Gm / Mtr^2]
AVERAGE : 1.80 oz / ft^2 [550 Gm / Mtr^2]

MARKING



MARKING:

1. METALLIC SPRINKLER PIPES

For ½" & ¾" ASTM A53 Grade A SCH 40

(UL) LISTED 3KBY STEEL AJSPC/ASTM A53/ASME SA53/SIZE/SCH 40/GRADE A /TYPE E/NDE/LENGTH/ HEAT NO...../OMAN.

For 1" to 8" ASTM A53 Grade A & B SCH 40

(UL) LISTED 3KBY STEEL FM APPROVED AJSPC/ASTM A53/ASTM A795/ ASME SA53/SIZE/ SCH 40/ GRADE /TYPE E /NDE/LENGTH/ HEAT NO/OMAN.

For 1/2" to 6" ASTM A53 Gr A/B & ASTM A795 Grade A/B SCH 10

(UL) LISTED 3KBY STEEL AJSPC/ASTM A53/ASTM A795/SIZE/SCH 10/GRADE/TYPE E/NDE/LENGTH/ HEAT NO/ OMAN.

For 8" ASTM A53 Gr A/B & ASTM A795 Grade A/B 0.188" WALL THICKNESS

(UL) LISTED 3KBY STEEL AJSPC/ASTM A53/ASTM A795/SIZE/0.188"/GRADE/TYPE E/NDE/LENGTH/ HEAT NO/ OMAN.

NOTE: AJSPC – AL JAZEERA STEEL PRODUCTS CO. SAOG

2. GALVANIZED NSF/ ANSI 372 CERTIFIED PIPES

(Galvanized Steel Pipes: ½" to 3/4" diameter size in Schedule 40)

UND. LAB. CLFD STEEL PIPE NSF 372 MH49792 AJSPC/ASTM A53/ SIZE/SCH 40/GRADE/ TYPE E /NDE/LENGTH/ HEAT NO/OMAN.

(Galvanized Steel Pipes: 1" to 8" diameter size in Schedule 40)

UND. LAB. CLFD STEEL PIPE NSF 372 MH49792 FM APPROVED AJSPC/ASTM A53/ASTM A795/SIZE/SCH 40/GRADE/ TYPE E/NDE/LENGTH/ HEAT NO/OMAN.

(Galvanized Steel Pipes: ½" to 8" diameter size in Schedule 10)

UND. LAB. CLFD STEEL PIPE NSF 372 MH49792 AJSPC/ASTM A53/ASTM A795/SIZE/SCH 10/GRADE/TYPE E/ NDE/LENGTH/ HEAT NO/OMAN.

NOTE: A) AJSPC – AL JAZEERA STEEL PRODUCTS CO. SAOG

3.BLACK STEEL NSF/ ANSI 61 AND NSF/ ANSI 372 CERTIFIED PIPES

(Black Steel Pipes) – ½" to 3/4" diameter in Schedule 40)

UL CLFD. PIPE NSF 61/NSF 372 MH49792 AJSPC/ASTM A53/SIZE/ SCH 40/ GRADE /TYPE E/NDE/LENGTH/ HEAT NO/OMAN.

(Black Steel Pipes) – 1" to 3", 5" to 08" diameter in Schedule 40)

UL CLFD. PIPE NSF 61/NSF 372 MH49792 FM APPROVED AJSPC/ASTM A53/ASTM A795/ SIZE/ SCH 40/ GRADE/ TYPE E/NDE/LENGTH/ HEAT NO/OMAN.

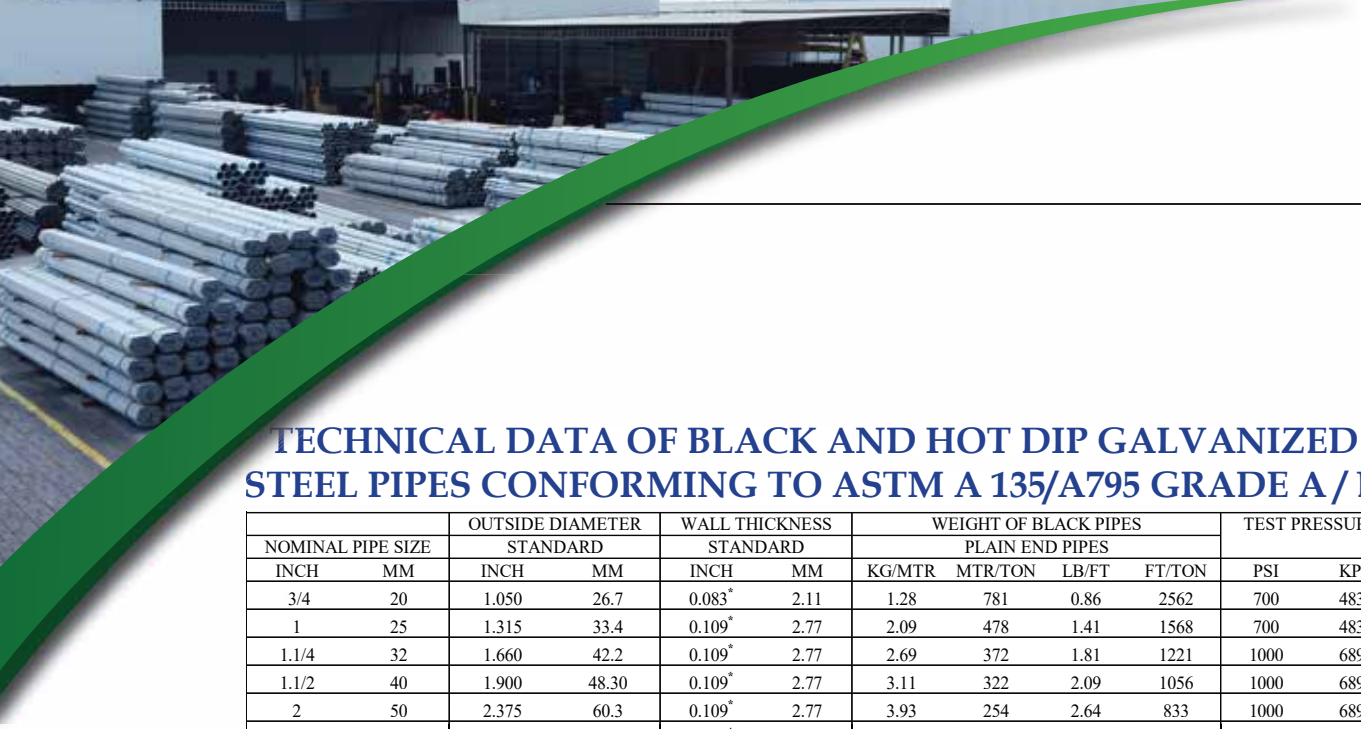
(Black Steel Pipes – ½" to 3", 5" to 08" diameter in Schedule 10)

UL CLFD. PIPE NSF 61/NSF 372 MH49792 AJSPC/ASTM A53/ASTM A795/ SIZE/SCH 10/ GRADE/ TYPE E/NDE/LENGTH/ HEAT NO/OMAN.

NOTE: A) AJSPC – AL JAZEERA STEEL PRODUCTS CO. SAOG

B. ASTM A53 SCHEDULE 80 PIPES

AJSPC/ASTM A53/SIZE/SCH 80/GRADE/TYPE E/LENGTH/NDE/ HEAT NO. XXXXXXX/ OMAN



TECHNICAL DATA OF BLACK AND HOT DIP GALVANIZED STEEL PIPES CONFORMING TO ASTM A 135/A795 GRADE A / B

NOMINAL PIPE SIZE		OUTSIDE DIAMETER STANDARD		WALL THICKNESS STANDARD		WEIGHT OF BLACK PIPES PLAIN END PIPES				TEST PRESSURE	
INCH	MM	INCH	MM	INCH	MM	KG/MTR	MTR/TON	LB/FT	FT/TON	PSI	KPA
3/4	20	1.050	26.7	0.083*	2.11	1.28	781	0.86	2562	700	4830
1	25	1.315	33.4	0.109*	2.77	2.09	478	1.41	1568	700	4830
1.1/4	32	1.660	42.2	0.109*	2.77	2.69	372	1.81	1221	1000	6890
1.1/2	40	1.900	48.30	0.109*	2.77	3.11	322	2.09	1056	1000	6890
2	50	2.375	60.3	0.109*	2.77	3.93	254	2.64	833	1000	6890
2.1/2	65	2.875	73.0	0.120*	3.05	5.26	190	3.53	623	1000	6890
3	80	3.500	88.9	0.120*	3.05	6.46	155	4.34	509	1000	6890
3.1/2	90	4.000	101.6	0.120*	3.05	7.41	135	4.98	443	1200	8270
4	100	4.500	114.3	0.120*	3.05	8.37	119	5.62	390	1200	8270
5	125	5.563	141.3	0.134*	3.40	11.58	86	7.78	283	1200	8270
6	150	6.625	168.3	0.134*	3.40	13.85	72	9.30	237	1000	6890
8	200	8.625	219.1	0.188**	4.78	25.26	40	16.96	130	800	5520

* Schedule 10 Thickness
** Not Schedule 10

CHEMICAL PROPERTIES

ELEMENT →	Carbon C	Manganese Mn	Phosphorus P	Sulphur S
GRADE-A	0.25	0.95	0.035	0.035
GRADE-B	0.30	1.20	0.035	0.035

MECHANICAL PROPERTIES

Properties →	Tensile Strength		Yield Strength	
	psi	MPa	psi	MPa
Grade-A	48000	330	30000	205
Grade-B	60000	415	35000	240

Min percent elongation in 2"(50mm) is
% El (Grade-A) = 56t + 16.5

% El (Grade-B) = 48t + 14
Where t = specified wall thickness (inch)

TOLERANCES

OUTSIDE DIAMETER

SIZE FROM	SIZE TO	TOLERANCE INCH(MM)	
INCH (MM)	INCH (MM)	POSITIVE	NEGATIVE
3/4 (20)	1.1/2(40)	1/64 (0.40)	1/64 (0.40)
2 (50)	8 (200)	1% OF OD	1% OF OD

THICKNESS

12.5% max under the nominal wall thickness.

WEIGHT

+/-10% on calculated standard nominal weight.

HEAT TREATMENT

Weld seam of the ERW pipe in Grade-B shall be heat treated after welding to a minimum temperature of 1000^{0}F [540^{0}C] so that no untempered martensite remains.

ZINC COATING

MINIMUM: 1.30 oz / ft^2 [400 Gm / Mtr^2]

AVERAGE : 1.50 oz / ft^2 [460 Gm / Mtr^2]

FLATTENING TEST

STAGE-1 : For weld ductility until 2/3 of outside dia of specimen tube.
STAGE-2 : For ductility of steel until 1/3 of outsidedia ofspecimen tube.
STAGE-3 : Fullflattening for testing of laminated and unsound material.

MARKING

Each pipe is stenciled as "JAZEERA STEEL OMAN, ASTM A135/A795 GR A / B-ERW SCH 10(or Thk-Inch) NPS-LENGTH-HEAT NO"