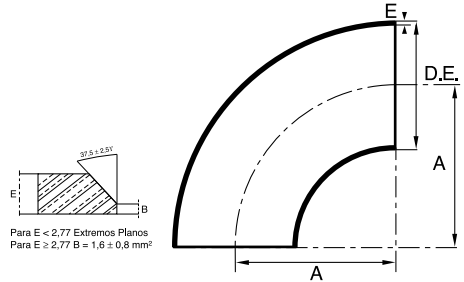


# CODOS DE ACERO INOXIDABLE ASTM A-403 (90° R.L.)



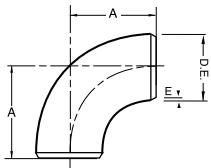
Diámetro Nominal	D.E. mm	A mm	E		Peso en Kg.
			SCH	mm	
1/2"	21.34	38	5S	1.65	0.04
			10S	2.11	0.06
			40S	2.77	0.08
			80S	3.70	0.10
3/4"	26.67	38	5S	1.65	0.04
			10S	2.11	0.06
			40S	2.87	0.09
			80S	3.90	0.11
1"	33.40	38	5S	1.65	0.08
			10S	2.77	0.13
			40S	3.38	0.16
			80S	4.55	0.22
1 1/4"	42.16	48	5S	1.65	0.12
			10S	2.77	0.21
			40S	3.56	0.25
			80S	4.85	0.42
1 1/2"	48.30	57	5S	1.65	0.17
			10S	2.77	0.29
			40S	3.68	0.40
			80S	5.08	0.53
2"	60.30	76	5S	1.65	0.28
			10S	2.77	0.49
			40S	3.91	0.71
			80S	5.54	1.05
2 1/2"	73.00	95	5S	2.11	0.55
			10S	3.05	0.83
			40S	5.16	1.36
			80S	7.01	1.76

Diámetro Nominal	D.E. mm	A mm	E		Peso en Kg.
			SCH	mm	
3"	88.90	114	5S	2.11	0.78
			10S	3.05	1.21
			40S	5.49	2.18
			80S	7.62	3.08
3 1/2"	101.60	133	5S	2.11	1.19
			10S	3.05	1.70
			40S	5.74	2.83
4"	114.30	152	5S	2.11	1.33
			10S	3.05	2.10
			40S	6.02	4.17
			80S	8.56	5.87
5"	141.30	190	5S	2.77	2.95
			10S	3.40	3.63
			40S	6.55	6.86
			80S	9.53	9.13
6"	168.30	229	5S	2.77	4.05
			10S	3.40	5.20
			40S	7.11	10.90
			80S	10.97	18.02
8"	219.1	305	5S	2.77	7.00
			10S	3.76	10.10
			40S	8.18	21.50
			80S	12.70	35.70
10"	273.0	381	5S	3.40	13.20
			10S	4.19	17.50
			40S	9.27	38.60
			80S	12.70	54.83

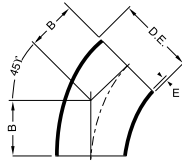
Diámetro Nominal	D.E. mm	A mm	E		Peso en Kg.
			SCH	mm	
12"	323.9	457	5S	3.96	23.50
			10S	4.57	27.00
			40S	9.53	59.40
			80S	12.70	83.37
14"	355.6	533	5S	3.96	30.00
			10S	4.78	36.30
			Std	9.53	70.30
16"	406.4	610	5S	4.19	40.80
			10S	4.78	47.50
			Std	9.53	91.60
18"	457.2	686	5S	4.19	51.80
			10S	4.78	58.60
			Std	9.53	122.0
20"	508.0	762	5S	4.78	72.00
			10S	5.54	84.00
			Std	9.53	149.70
24"	609.6	914	5S	5.54	127.00
			10S	6.35	141.00
			Std	9.53	211.00
28"	711.2	1067	10S	7.92	234.00
			Std	9.53	280.00
30"	762.0	1143	10S	7.92	271.00
			Std	9.53	326.00
32"	812.8	1219	10S	7.92	308.00
			Std	9.53	370.00
36"	914.4	1372	10S	7.92	390.00
			Std	9.53	468.00
40"	1016.0	1524	min	5.0	304.00
			max	22.0	1316.00
44"	1117.6	1676	min	6.0	441.00
			max	25.0	1807.00

SIN COSTURA HASTA 10"

# CODOS DE ACERO INOXIDABLE ASTM A-403 (90° R.C. Y 45° R.L.)



ANSI B16.28  
MSS SP-43



ANSI B16.9  
MSS SP-43



## Diámetro Nominal - 90° R. C.

Diámetro Nominal	Diámetro Exterior en mm	A mm.	E		Peso en Kg.
			SCH	mm.	
1"	33.40	25.40	10S	2.77	0.09
			40S	3.38	0.11
			80S	4.55	0.15
1 1/4"	42.16	31.75	10S	2.77	0.14
			40S	3.56	0.17
			80S	4.85	0.22
1 1/2"	48.30	38.10	10S	2.77	0.20
			40S	3.68	0.25
			80S	5.08	0.34
2"	60.30	50.80	10S	2.77	0.33
			40S	3.91	0.46
			80S	5.54	0.63
2 1/2"	73.00	63.50	10S	3.05	0.59
			40S	5.16	0.84
			80S	7.01	1.19
3"	88.90	76.20	10S	3.05	0.85
			40S	5.49	1.38
			80S	7.62	1.75
4"	114.30	101.60	10S	3.05	1.52
			40S	6.02	2.70
			80S	8.56	3.87
5"	141.30	127.00	10S	3.40	2.72
			40S	6.55	5.30
			80S	9.53	6.90
6"	168.30	152.40	10S	3.40	4.07
			40S	7.11	7.60
			80S	10.97	11.08
8"	219.10	203.20	10S	3.76	7.88
			40S	8.18	16.72
			80S	12.70	23.37
10"	273.00	254.00	10S	4.19	15.56
			40S	9.27	28.00
			80S	12.70	42.55
12"	323.85	304.80	10S	4.57	17.80
			40S	9.53	35.56
			80S	12.70	54.00

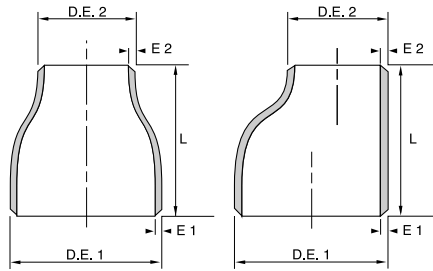
SIN COSTURA HASTA 10"

## Diámetro Nominal - 45° R. L.

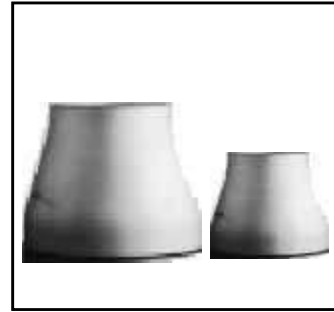
Diámetro Nominal	Diámetro Exterior en mm	B mm.	E		Peso en Kg.
			SCH	mm.	
1/2"	21.34	15.87	10S	2.11	0.039
			40S	2.77	0.052
			80S	3.70	0.050
3/4"	26.67	11.43	10S	2.11	0.064
			40S	2.87	0.077
			80S	3.90	0.060
1"	33.40	22.2	10S	2.77	0.103
			40S	3.38	0.130
			80S	4.55	0.140
1 1/4"	42.16	25.4	10S	2.77	0.142
			40S	3.56	0.184
			80S	4.85	0.240
1 1/2"	48.30	28.6	10S	2.77	0.239
			40S	3.68	0.326
			80S	5.08	0.370
2"	60.30	35	10S	2.77	0.406
			40S	3.91	0.683
			80S	5.54	0.540
2 1/2"	73.00	44.45	10S	3.05	0.571
			40S	5.16	1.020
			80S	7.01	1.010
3"	88.90	51	10S	3.05	0.764
			40S	5.49	1.410
			80S	7.62	1.540
4"	114.30	63.5	10S	3.05	0.985
			40S	6.02	1.920
			80S	8.56	2.960
5"	141.30	79.4	10S	3.40	1.710
			40S	6.55	3.420
			80S	9.53	5.420
6"	168.30	95.25	10S	3.40	2.430
			40S	7.11	5.450
			80S	10.97	9.300
8"	219.10	127.00	10S	3.76	4.650
			40S	8.18	10.320
			80S	12.70	17.880
10"	273.00	158.70	10S	4.19	8.050
			40S	9.27	18.530
			80S	12.70	27.410
12"	323.90	190.15	10S	4.57	12.420
			40S	9.53	28.500
			80S	12.70	41.690

SIN COSTURA HASTA 10"

# REDUCCIONES DE ACERO INOXIDABLE CONCENTRICAS Y EXCENTRICAS ASTM A-403



ANSI B16.9 - MSS SP-43

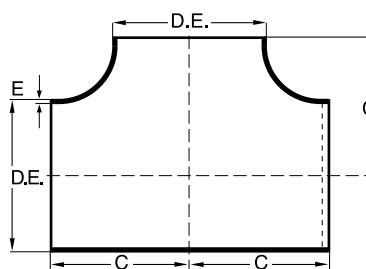


DIAMETRO NOMINAL	DIAMETRO EXTERIOR		ESPESOR EN PARED EN MM.						L mm.
			SCH 10		SCH 40		SCH 80		
	D.E. 1	D.E. 2	D.E. 1	D.E. 2	D.E. 1	D.E. 2	D.E. 1	D.E. 2	
3/4" x 3/8"	26.67	17.10	2.11	2.11	2.87	2.31	3.90	3.20	38
3/4" x 1/2"	26.67	21.34	2.11	2.11	2.87	2.77	3.90	3.70	38
1" x 3/8"	33.40	17.10	2.77	2.11	3.38	2.31	4.55	3.20	51
1" x 1/2"	33.40	21.34	2.77	2.11	3.38	2.77	4.55	3.70	51
1" x 3/4"	33.40	26.67	2.77	2.11	3.38	3.38	4.55	3.90	51
1 1/4" x 1/2"	42.16	21.34	2.77	2.11	3.56	2.77	4.85	3.70	51
1 1/4" x 3/4"	42.16	26.67	2.77	2.11	3.56	2.87	4.85	3.90	51
1 1/4" x 1"	42.16	33.40	2.77	2.77	3.56	3.38	4.85	4.55	51
1 1/2" x 1/2"	48.30	21.34	2.77	2.11	3.68	2.77	5.08	3.70	64
1 1/2" x 3/4"	48.30	26.67	2.77	2.11	3.68	2.87	5.08	3.90	64
1 1/2" x 1"	48.30	33.40	2.77	2.77	3.68	2.87	5.08	4.55	64
1 1/2" x 1 1/4"	48.30	42.16	2.77	2.77	3.68	3.55	5.08	4.85	64
2" x 3/4"	60.30	26.67	2.77	2.11	3.91	2.87	5.54	3.90	76
2" x 1"	60.30	33.40	2.77	2.77	3.91	2.87	5.54	4.55	76
2" x 1 1/4"	60.30	42.16	2.77	2.77	3.91	3.56	5.54	4.85	76
2" x 1 1/2"	60.30	48.30	2.77	2.77	3.91	3.68	5.54	5.08	76
2 1/2" x 1"	73.00	33.40	3.05	2.77	5.16	3.38	7.01	4.55	89
2 1/2" x 1 1/4"	73.00	42.16	3.05	2.77	5.16	3.56	7.01	4.85	89
2 1/2" x 1 1/2"	73.00	48.30	3.05	2.77	5.16	3.68	7.01	5.08	89
2 1/2" x 2"	73.00	60.30	3.05	2.77	5.16	3.91	7.01	5.54	89
3" x 1"	88.90	33.40	3.05	2.77	5.49	3.38	7.62	4.55	89
3" x 1 1/4"	88.90	42.16	3.05	2.77	5.49	3.56	7.62	4.85	89
3" x 1 1/2"	88.90	48.30	3.05	2.77	5.49	3.68	7.62	5.08	89
3" x 2"	88.90	60.30	3.05	2.77	5.49	3.91	7.62	5.54	89
3" x 2 1/2"	88.90	73.00	3.05	3.05	5.49	5.16	7.62	7.01	89
4" x 1 1/2"	114.30	48.30	3.05	2.77	6.02	3.68	8.56	5.08	102
4" x 2"	114.30	60.30	3.05	2.77	6.02	3.91	8.56	5.54	102
4" x 2 1/2"	114.30	73.00	3.05	3.05	6.02	5.16	8.56	7.01	102
4" x 3"	114.30	88.90	3.05	3.05	6.02	5.49	8.56	7.62	102
5" x 3"	141.30	88.90	3.40	3.05	6.55	5.49	9.53	7.62	127
5" x 4"	141.30	114.30	3.40	3.05	6.55	6.02	9.53	8.56	127
6" x 2 1/2"	168.30	73.00	3.40	3.05	7.11	5.16	10.97	7.01	140
6" x 3"	168.30	88.90	3.40	3.05	7.11	5.49	10.97	7.62	140
6" x 4"	168.30	114.30	3.40	3.05	7.11	6.02	10.97	8.56	140
6" x 5"	168.30	141.30	3.40	3.40	7.11	6.55	10.97	9.53	140
8" x 4"	219.10	114.30	3.76	3.05	8.18	6.02	12.70	8.56	152
8" x 5"	219.10	141.30	3.76	3.40	8.18	6.55	12.70	9.53	152
8" x 6"	219.10	168.30	3.76	3.40	8.18	7.11	12.70	10.97	152
10" x 5"	273.00	141.30	4.19	3.40	9.27	6.55	12.70	9.53	178
10" x 6"	273.00	168.30	4.19	3.40	9.27	7.11	12.70	10.97	178
10" x 8"	273.00	219.10	4.19	3.76	9.27	8.18	12.70	12.70	178
12" x 6"	323.90	168.30	4.57	3.40	9.53	7.11	12.70	10.97	203
12" x 8"	323.90	219.10	4.57	3.76	9.53	8.18	12.70	12.70	203
12" x 10"	323.90	273.00	4.57	4.19	9.53	9.27	12.70	12.70	203

DIAMETRO NOMINAL	PESO EN KG.		
	SCH 10	SCH 40	SCH 80
3/4" x 3/8"	0.090	0.050	0.100
3/4" x 1/2"	0.090	0.105	0.100
1" x 3/8"	0.110	0.120	0.140
1" x 1/2"	0.090	0.106	0.140
1" x 3/4"	0.090	0.110	0.150
1 1/4" x 1/2"	0.100	0.120	0.180
1 1/4" x 3/4"	0.120	0.140	0.190
1 1/4" x 1"	0.125	0.157	0.200
1 1/2" x 1/2"	0.154	0.204	0.260
1 1/2" x 3/4"	0.156	0.201	0.280
1 1/2" x 1"	0.170	0.219	0.290
1 1/2" x 1 1/4"	0.195	0.263	0.320
2" x 3/4"	0.214	0.298	0.450
2" x 1"	0.237	0.322	0.480
2" x 1 1/4"	0.258	0.352	0.500
2" x 1 1/2"	0.273	0.372	0.510
2 1/2" x 1"	0.349	0.793	0.660
2 1/2" x 1 1/4"	0.394	0.670	0.680
2 1/2" x 1 1/2"	0.396	0.661	0.740
2 1/2" x 2"	0.432	0.724	0.850
3" x 1"	0.408	0.716	0.840
3" x 1 1/4"	0.430	0.775	0.910
3" x 1 1/2"	0.444	0.783	0.990
3" x 2"	0.478	0.846	1.050
3" x 2 1/2"	0.548	0.983	1.300
4" x 1 1/2"	0.630	1.241	1.610
4" x 2"	0.656	1.270	1.710
4" x 2 1/2"	0.706	1.370	1.860
4" x 3"	0.748	1.450	1.970
5" x 3"	1.200	2.270	3.010
5" x 4"	1.320	2.500	3.350
6" x 2 1/2"	1.350	2.740	4.000
6" x 3"	1.500	3.040	4.160
6" x 4"	1.620	3.300	4.520
6" x 5"	1.750	3.570	5.000
8" x 4"	2.560	5.100	7.400
8" x 5"	2.700	5.400	7.750
8" x 6"	2.850	5.710	8.150
10" x 5"	3.300	8.210	14.240
10" x 6"	3.870	8.780	14.800
10" x 8"	4.210	9.580	15.580
12" x 6"	5.730	12.400	20.150
12" x 8"	6.110	13.700	20.900
12" x 10"	8.150	16.780	21.650

SIN COSTURA HASTA 10"

# TES DE ACERO INOXIDABLE ASTM A-403



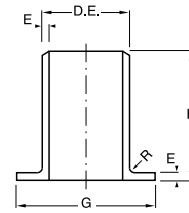
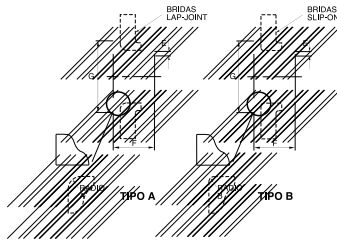
ANSI B16.9 - MSS SP-43

Diámetro Nominal	D. Exterior	C	E		Peso en kg.
	mm.		SCH	mm.	
1/2"	21.34	25	10S	2.11	0.100
			40S	2.77	0.100
			80S	3.70	0.140
3/4"	26.67	29	10S	2.11	0.100
			40S	2.87	0.200
			80S	3.90	0.200
1"	33.40	38	10S	2.77	0.300
			40S	3.38	0.300
			80S	4.55	0.500
1 1/4"	42.16	48	10S	2.77	0.500
			40S	3.56	0.600
			80S	4.85	0.680
1 1/2"	48.3	57	10S	2.77	0.700
			40S	3.68	0.900
			80S	5.08	1.200
2"	60.3	64	10S	2.77	0.800
			40S	3.91	1.200
			80S	5.54	1.600
2 1/2"	73.0	76	10S	3.05	1.400
			40S	5.16	2.300
			80S	7.01	3.400
3"	88.9	86	10S	3.05	1.800
			40S	5.49	3.200
			80S	7.62	4.200

Diámetro Nominal	D. Exterior	C	E		Peso en kg.
	mm.		SCH	mm.	
4"	114.3	105	10S	3.05	2.600
			40S	6.02	5.100
			80S	8.56	5.800
5"	141.3	124	10S	3.40	4.600
			40S	6.55	9.400
			80S	9.53	11.200
6"	168.3	143	10S	3.40	6.300
			40S	7.11	16.100
			80S	10.97	15.500
8"	219.1	178	10S	3.76	11.400
			40S	8.18	31.000
			80S	12.70	26.500
10"	273.0	216	10S	4.19	27.100
			40S	9.27	53.100
			80S	12.70	45.500
12"	323.9	254	10S	4.57	38.000
			40S	9.53	77.000
			80S	12.70	77.000
14"	355.6	279	10S	4.78	46.000
			40S	9.53	93.000
16"	406.4	305	10S	4.78	57.000
			40S	9.53	116.000
18"	457.2	343	10S	4.78	73.000
			40S	9.53	147.000
20"	508.0	381	10S	5.54	111.000
			std	9.53	182.000
24"	609.6	432	10S	6.35	149.000
			std	9.53	245.000

SIN COSTURA HASTA 10"

# STUB ENDS DE ACERO INOXIDABLE ASTM A-403 - M.S.S. SP-43



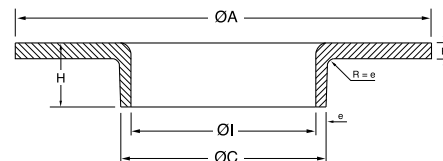
ANSI B16.9/93

DIAMETRO NOMINAL EN PULGADAS	DIAMETRO EXTERIOR EN MILIMETROS	F	G	RADIO		SCHEDULE			PESO KG.		
				A	B	10S	40S	80S	SCH 10S	SCH 40S	SCH 80S
1/2"	21.34	51	35	3	0.76	2.11	2.77	3.70	0.070	0.800	0.118
3/4"	26.67	51	43	3	0.76	2.11	2.87	3.90	0.086	0.110	0.154
1"	33.40	51	51	3	0.76	2.77	3.38	4.55	0.140	0.186	0.220
1 1/4"	42.16	51	63.5	4.83	0.76	2.77	3.56	4.85	0.208	0.263	0.360
1 1/2"	48.26	51	73	6.35	0.76	2.77	3.68	5.08	0.249	0.300	0.380
2"	60.30	63.5	92	7.87	0.76	2.77	3.91	5.54	0.376	0.539	0.690
2 1/2"	73.03	63.5	105	7.87	0.76	3.05	5.16	7.01	0.471	0.797	1.030
3"	88.90	63.5	127	9.65	0.76	3.05	5.49	7.62	0.638	1.133	1.420
3 1/2"	101.60	76.2	140	9.65	0.76	3.05	5.74	-	0.850	1.320	2.160
4"	114.30	76.2	157	11.18	0.76	3.05	6.02	8.56	0.978	1.812	1.570
5"	141.30	76.2	186	11.18	1.52	3.40	6.55	9.53	1.237	2.537	3.130
6"	168.28	88.9	216	12.7	1.52	3.40	7.11	10.97	1.950	3.72	6.350
8"	219.08	101.6	270	12.7	1.52	3.76	8.18	-	3.100	5.89	-
10"	273.05	127	324	12.7	1.52	4.19	9.27	-	4.860	10.42	-
12"	323.85	152.4	381	12.7	1.52	4.57	9.53	-	7.110	14.05	-
14"	355.60	152.4	413	12.7	1.52	4.78	9.53	-	8.140	16.00	-
16"	406.40	152.4	470	12.7	1.52	4.78	9.53	-	9.320	18.34	-
18"	457.20	152.4	533	12.7	1.52	4.78	9.53	-	10.490	20.68	-
20"	508.00	152.4	584	12.7	1.52	5.54	9.53	-	13.510	23.00	-
24"	608.60	152.4	692	12.7	1.52	5.54	9.53	-	18.580	27.72	-

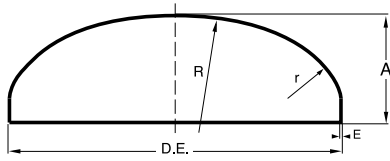
# COLLARES DE ACERO INOXIDABLE ESTAMPADOS EN UNA SOLA PIEZA

DIAMETRO EN PULGADAS	D. DEL CUELLO	MEDIDAS EN mm.					
		ALA		LIVIANOS		NORMALES	
DIAMETRO NOMINAL	ØA	H	e	E	e	E	
1/2"	21.34	40	8	1.6	2	2.5	3
3/4"	26.67	50	8	1.6	2	2.5	3
1"	33.40	58	10	1.6	2	2.5	3
1 1/4"	42.16	70	11	1.6	2	2.5	3
1 1/2"	48.26	80	12	1.6	2	2.5	3
2"	60.33	98	15	1.6	2	2.5	3
2 1/2"	73.03	117	17	1.6	2	2.5	3
3"	88.90	130	18	1.6	2	2.5	3
3 1/2"	101.60	150	20	1.6	2	2.5	3
4"	114.30	165	20	1.6	2	2.5	3
5"	141.30	190	20	1.6	2	2.5	3
6"	168.28	216	20	1.6	2	2.5	3
8"	219.08	272	22	1.6	2	2.5	3

DIAMETRO EN PULGADAS	D. DEL CUELLO	MEDIDAS EN mm.					
		ALA		LIVIANOS		NORMALES	
DIAMETRO NOMINAL	ØA	H	e	E	e	E	
10"	273.05	330	22	2.5	3	3.5	4
12"	323.85	400	25	2.5	3	3.5	4
14"	355.60	439	25	2.5	3	3.5	4
16"	406.40	500	25	2.5	3	3.5	4
18"	457.20	536	25	2.5	3	3.5	4
20"	508.00	593	25	2.5	3	3.5	4
24"	609.60	704	25	2.5	3	3.5	4



# CASQUETES PENSADOS DE ACERO INOXIDABLE ASTM A-403



Radio R = 0.8 x D.E., Radio r = 0.16 x D.E.

ANSI B16.9  
MSS SP-43



Diámetro Nominal	D. E.	A	E		Peso en kg.
	mm.		SCH	mm.	
1/2"	21.34	25	10S	2.11	0.030
			40S	2.77	0.040
			80S	3.70	0.050
3/4"	26.67	25	10S	2.11	0.050
			40S	2.87	0.070
			80S	3.90	0.080
1"	33.40	38	10S	2.77	0.080
			40S	3.38	0.100
			80S	4.55	0.180
1 1/4"	42.16	38	10S	2.77	0.110
			40S	3.56	0.180
			80S	4.85	0.220
1 1/2"	48.30	38	10S	2.77	0.140
			40S	3.68	0.230
			80S	5.08	0.250
2"	60.30	38	10S	2.77	0.170
			40S	3.91	0.270
			80S	5.54	0.330
2 1/2"	73.00	38	10S	3.05	0.250
			40S	5.16	0.450
			80S	7.01	0.650
3"	88.90	51	10S	3.05	0.400
			40S	5.49	0.710
			80S	7.62	0.940
4"	114.30	64	10S	3.05	0.650
			40S	6.02	1.220
			80S	8.56	1.950
5"	141.30	76	10S	3.40	1.020
			40S	6.55	1.840
			80S	9.53	2.600
6"	168.30	89	10S	3.40	1.360
			40S	7.11	3.230
			80S	10.97	5.000
8"	219.10	102	10S	3.76	2.490
			40S	8.18	5.670
			80S	12.70	7.800
10"	273.00	127	10S	4.19	4.900
			40S	9.27	9.210
			80S	12.70	17.000
12"	323.90	152	10S	4.57	6.530
			40S	9.53	13.100
			80S	12.70	28.000
14"	355.60	165	10S	4.78	8.160
			std	9.53	16.200
16"	406.40	178	10S	4.78	14.500
			std	9.53	22.000
18"	457.20	203	10S	4.78	18.000
			std	9.53	27.000
20"	508.00	229	10S	5.54	27.200
			std	9.53	34.000
24"	609.60	267	10S	6.35	34.500
			std	9.53	44.500