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TUBOS, ACCESORIOS
LISOS Y CORRUGADOS EN HDPE



FLUID
ENGINEERING S.A.C

Especialistas en HDPE, Flujómetros y Válvulas



TUBOS, ACCESORIOS LISOS Y CORRUGADOS EN HDPE

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DIMENSIONES SEGÚN NTP ISO 4427

Día Ext. (mm)	PE 100													
	SDR 26 (PN 6)		SDR 21 (PN 8)		SDR 17 (PN 10)		SDR 13.6 (PN 12.5)		SDR 11 (PN 16)		SDR 9 (PN 20)		SDR 7.4 (PN 25)	
	6 BAR	85.2 PSI	8 BAR	113.6 PSI	10 BAR	142 PSI	12.5 BAR	177.5 PSI	16 BAR	227.2 PSI	20 BAR	294 PSI	25 BAR	368 PSI
	PE 80													
	SDR 26 (PN 5)		SDR 21 (PN 6)		SDR 17 (PN 8)		SDR 13.6 (PN 10)		SDR 11 (PN 12.5)		SDR 9 (PN 16)		SDR 7.4 (PN 20)	
	5 BAR	71 PSI	6 BAR	85.5 PSI	8 BAR	113.6 PSI	10 BAR	142 PSI	12.5 BAR	177.5 PSI	16 BAR	227.2 PSI	20 BAR	294 PSI
	Espesor Pared (mm)	Día Int. (mm)	Espesor Pared (mm)	Día Int. (mm)	Espesor Pared (mm)	Día Int. (mm)	Espesor Pared (mm)	Día Int. (mm)	Espesor Pared (mm)	Día Int. (mm)	Espesor Pared (mm)	Día Int. (mm)	Espesor Pared (mm)	Día Int. (mm)
20 (3/4)	---	---	---	---	---	---	1.80	16.40	1.90	16.20	2.30	15.40	3.0	14.00
25 (1)	---	---	---	---	1.80	21.40	1.90	21.20	2.30	20.40	2.80	19.40	3.50	18.00
32 (1 1/4)	---	---	---	---	2.00	28.00	2.40	27.20	3.00	26.00	3.60	24.80	4.40	23.20
40 (1 1/2)	---	---	1.90	36.20	2.40	35.20	3.00	34.00	3.70	32.60	4.50	31.00	5.50	29.00
50 (1 3/4)	2.0	46.0	2.40	45.20	3.00	44.00	3.80	42.40	4.60	40.80	5.60	38.80	6.90	36.20
63 (2)	2.5	58.0	3.00	57.00	3.80	55.40	4.70	53.60	5.80	51.40	7.10	48.80	8.60	45.80
75 (2 1/2)	2.9	69.2	3.60	67.80	4.50	66.00	5.60	63.80	6.80	61.40	8.40	58.20	10.30	54.40
90 (3)	3.5	83.0	4.30	81.40	5.40	79.20	6.70	76.60	8.20	73.60	10.10	69.80	12.30	65.40
110 (4)	4.2	101.6	5.30	99.40	6.60	96.80	8.10	93.80	10.00	90.00	12.30	85.40	15.10	79.80
125 (4 1/2)	4.8	115.4	6.00	113.00	7.40	110.20	9.20	106.60	11.40	102.20	14.00	97.00	17.10	90.80
140 (5)	5.4	129.2	6.40	127.20	8.30	123.40	10.30	119.40	12.70	114.60	15.70	108.60	19.20	101.60
160 (6)	6.2	147.6	7.70	144.60	9.50	141.00	11.80	136.40	14.60	130.80	17.90	124.20	21.90	116.20
180 (7)	6.9	166.2	8.60	162.80	10.70	158.60	13.30	153.40	16.40	147.20	20.10	139.80	24.60	130.80
200 (8)	7.7	184.6	9.60	180.80	11.90	176.20	14.70	170.60	18.20	163.60	22.40	155.20	27.40	145.20
225 (9)	8.6	207.8	10.80	203.40	13.40	198.20	16.60	191.80	20.50	184.00	25.20	174.60	30.80	163.40
250 (10)	9.6	230.8	11.90	226.20	14.80	220.40	18.40	213.20	22.70	204.60	27.90	194.20	34.20	181.60
280 (11)	10.7	258.6	13.40	253.20	16.60	246.80	20.60	238.80	25.40	229.20	31.30	217.40	38.30	203.40
315 (12)	12.1	290.8	15.00	285.00	18.70	277.60	23.20	268.60	28.60	257.80	35.20	244.60	43.10	228.80
355 (14)	13.6	327.8	16.90	321.20	21.10	312.80	26.10	302.80	32.20	290.60	39.70	275.60	48.50	258.00
400 (16)	15.3	369.4	19.10	361.80	23.70	352.60	29.40	341.20	36.30	327.40	44.70	310.60	54.70	290.60
450 (18)	17.2	415.6	21.50	407.00	26.70	396.60	33.10	383.80	40.90	368.20	50.30	349.40	61.50	327.00
500 (20)	19.1	461.8	23.80	452.40	29.50	441.00	36.80	426.40	45.50	409.00	55.60	388.80	---	---
560 (22)	21.4	517.2	26.70	506.60	33.20	493.60	41.20	477.60	50.80	458.40	62.30	435.40	---	---
630 (24)	24.1	581.8	30.00	570.00	37.40	555.20	46.30	537.40	57.20	515.60	70.00	490.00	---	---

ESPECIFICACIONES TÉCNICAS DE LA MATERIA PRIMA PEAD

PROPIEDAD	UNIDAD	PE - 80	PE - 100
Densidad	Gr. / Cm3	0.945-0.956	0.957-0.961
Índice de Fluidez (MFR) 190°C/5 kg.	Gr. / 10 min	0.3	0.4
Contenido negro de humo	%	2.0-2.5	2.0-2.5
Resistencia a la Tracción	MPa	20-23	23-25
Resistencia a la Flexión	MPa	18	23
Módulo Tensil	MPa	1000	900
Tensión de Diseño (σ)	MPa	6.3	8
Mínimo Esfuerzo Requerido (MRS)	MPa	>8	>10
Alargamiento de Rotura	%	>600	>600
Coefficiente de dilatación lineal	Mm / m°C	0.17-0.20	0.20
Temperatura de fragilidad	°C	<-70	<-70
Dureza Shore a 20°C	escala D	59	59



DIMENSIONES ASTM F714

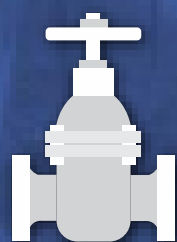
Diámetro Nominal (pulg)	Diámetro prom. externo (mm)	Espesor mínimo de pared (mm)																							
		SDR - 41		SDR - 32.5		SDR - 26		SDR - 21		SDR - 17		SDR - 15.5		SDR - 13.5		SDR - 11		SDR - 9.3		SDR - 9		SDR - 8.3		SDR - 7.3	
		e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior	e (mm)	Diá. interior
1/2	21.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3/4	26.70	—	—	—	—	—	—	—	—	1.57	23.56	1.72	23.26	1.98	22.74	2.43	21.84	2.87	20.96	2.97	20.76	3.22	20.26	3.66	—
1	33.40	—	—	—	—	—	—	1.59	30.22	1.96	29.48	2.15	29.10	2.47	28.46	3.04	27.32	3.59	26.22	3.71	25.98	4.02	25.36	4.58	24.24
1 1/4	42.20	—	—	—	—	1.62	38.96	2.01	38.18	2.48	37.24	2.72	36.76	3.13	35.94	3.84	34.52	4.54	33.12	4.69	32.82	5.08	32.04	5.78	30.64
1 1/2	48.30	—	—	—	—	1.86	44.58	2.30	43.70	2.84	42.62	3.12	42.06	3.58	41.14	4.39	39.52	5.19	37.92	5.37	37.56	5.82	36.66	6.62	35.06
2	60.30	—	—	1.86	56.58	2.32	55.66	2.87	54.56	3.55	53.20	3.89	52.52	4.47	51.36	5.48	49.34	6.48	47.34	6.70	46.90	7.27	45.76	8.26	43.78
2 1/2	73.03	1.78	69.47	2.25	68.53	2.81	67.41	3.48	66.07	4.30	64.43	4.71	63.61	5.41	62.21	6.64	59.75	7.85	57.33	8.11	56.81	8.80	55.43	10.00	53.03
3	88.90	2.16	84.58	2.74	83.42	3.43	82.04	4.24	80.42	5.23	78.44	5.74	77.42	6.58	75.74	8.08	72.74	9.55	69.80	9.88	69.14	10.72	67.46	12.17	64.56
4	114.30	2.79	108.72	3.51	107.28	4.39	105.52	5.44	103.42	6.73	100.84	7.37	99.56	8.46	97.38	10.39	93.52	12.29	89.72	12.70	88.90	13.77	86.76	15.65	83.00
6	168.28	4.11	160.06	5.18	157.92	6.48	155.52	8.01	152.26	9.91	148.46	10.85	146.58	12.47	143.34	15.29	137.70	18.08	132.12	18.69	130.90	20.27	127.74	23.06	122.16
7	181.00	4.42	172.16	5.56	169.88	6.96	167.08	8.64	163.72	10.67	159.66	11.68	157.64	13.41	154.18	16.46	148.08	19.46	142.08	20.12	140.76	21.79	137.42	24.79	131.42
8	219.08	5.33	208.42	6.73	205.62	8.43	202.22	10.44	198.20	12.88	193.32	14.12	190.84	16.23	186.62	19.91	179.26	23.55	171.98	24.33	170.42	26.40	166.28	30.02	159.04
10	273.05	6.65	259.75	8.41	256.23	10.49	252.07	13.00	247.05	16.05	240.95	17.63	237.79	20.22	232.66	24.82	223.41	29.36	214.33	30.33	212.39	32.89	207.27	37.41	198.23
12	323.85	7.87	308.11	9.96	303.93	12.45	298.95	15.42	293.01	19.05	285.75	20.89	282.07	23.98	275.89	29.44	264.97	34.82	254.21	35.99	251.87	39.01	245.83	44.37	235.11
14	355.60	8.66	338.28	10.95	333.70	13.67	328.26	16.94	321.72	20.93	313.74	22.94	309.72	26.34	302.92	32.33	290.94	38.23	279.14	39.52	276.56	42.85	269.90	48.72	258.16
16	406.40	9.91	386.58	12.50	381.40	15.62	375.16	19.35	367.70	23.90	358.60	26.21	353.98	30.10	346.20	36.96	332.48	43.69	319.02	45.16	316.08	48.97	308.46	55.68	295.04
18	457.20	—	—	14.07	429.06	17.58	422.04	21.77	413.66	26.90	403.40	29.49	398.22	33.86	389.48	41.55	374.10	49.15	358.90	50.80	355.60	—	—	62.64	331.92
20	508.00	—	—	15.62	476.76	19.53	468.94	24.18	459.64	29.87	448.26	32.77	442.46	37.62	432.76	46.18	415.64	54.34	398.72	56.44	395.12	—	—	69.60	368.80
24	609.60	—	—	18.77	572.10	23.44	562.72	29.03	551.54	35.76	537.88	39.32	530.96	45.16	519.28	55.42	498.76	75.56	458.48	—	—	—	—	—	—
Presión Nominal																									
PE 3408	kg/cm	2.72	3.4	4.35	5.44	6.80	7.48	8.70	10.88	13.06	13.60	14.82	17.27												
	PSI	40	50	64	80	100	110	128	160	192	200	218	254												
PE 4710	kg/cm ²	3.4	4.3	5.4	6.8	8.5	9.4	10.9	13.6	16.4	17.0	18.6	21.6												
	PSI	50	63	80	100	125	138	160	200	241	250	274	317												

ESPECIFICACIONES TÉCNICAS DE LA MATERIA PRIMA HDPE

CARACTERÍSTICAS	PE 3408	PE 4710
Densidad (gr/cm)	>0.940-0.947	>0.947-0.955
Meltindex (g/10 min)	< 0.4 - 0,15	< 0,15
Módulo de flexión MPa (PSI)	758<1.103 (110.000 -< 160.000)	758<1.103 (110.000 - 160.000)
Esfuerzo a tracción MPa (PSI)	21<24 (3.000 - 35.000)	24<28 (3.500 - < 4.000)
Slow Crawl Groth Testistence		
I. ESCR		
a. Test condition		
b. Test duration, hours		
Failure max %	100	500
II. PENT (hours)		
Molded plaque 80°C		
2.4 Mpa, Notch depth per F 14732, Table I		
HYDROSTATIC DESIGN BASIS, Mpa (PSI) 23°C	11.03 (1.600)	(1.600)

NÚMERO DE CELDA

PE 3608	345464C
PE 4608	445564C
PE 4710	445574C
PE 3408	345464C



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