



شرکت بازرگانی فراز پالایش نفتا

FARAZ PALAYESH NAFTA



FARAZ PALAYESH NAFTA



شرکت فراز پالایش نفتا در راستای تامین و تجهیز پروژه‌های فعال در حوزه نفت، گاز، پتروشیمی و نیروگاهی فعالیت خود را آغاز نموده است.

مدیران این شرکت با تجربه ای نزدیک به ۳۰ سال در امر تهیه و توزیع انواع لوله، اتصالات، شیرآلات و فلنج آماده خدمت‌رسانی و مشاوره به شرکتها و پروژه‌های عمرانی و صنعتی می‌باشند. همچنین این شرکت قادر است انواع کالاهای درخواستی مشتریان خود را در سریع‌ترین زمان و با به صرفه‌ترین قیمت از سراسر جهان در اختیار مشتریان عزیز قرار دهد.

PRODUCT LIST

PRODUCT	MATERIAL	CONSTRUCTION	NORMS	GRADE	RANGE
Pipes/Tubes	Carbon Steel	Seamless	API 5L A106/A53	B, X42,X52,X60,X65	1/4" - 24"
		Welded (ERW,SAW)	API 5L A53	B	1/4" - 24"
	Carbon Steel-Low Temp	Seamless	A333	Gr3, Gr6	2" - 48"
	Alloy Steel	Welded	A671	CC 60, CC65	2" - 48"
	Stainless Steel	Seamless	A335	P1/P12/P22/P5/P9/P92/91	1/4" - 24"
		Seamless	A312	TP 316/316L TP 304/304L	20" - 48"
Flanges		Welded	A312/A358	TP 316/316L TP 304/304L TP 321	3/8" - 12"
	Duplex/Super Duplex Stainless Steel	Seamless	A790	UNS 51803/UNS 32750/ UNS760	2" - 60"
		Welded	A790/A928		1/2" - 8"
	Carbon Steel		A105	LF2	2" - 60"
	Carbon Steel Low Temp		A350		1/4" - 48"
	Carbon&Alloy Steel High Press		A694	F52, F60	1/4" - 48"
Fittings	Stainless Steel- Austenitic		A182	F316/316L, F304/304L	1/4" - 48"
	Stainless Steel Duplex/Super Alloy Steel		A182	F51/F55	1/2" - 48"
			A182	F11/F22/F5/F91	1/2" - 48"
	Wrought Carbon Steel	Seamless/Welded	A234	WPB	1/4" - 48"
	Wrought Carbon Steel Low Temp	Seamless/Welded	A420	WPL6, WPHY52	1/2" - 24"
	Forged Carbon Steel	Forged	A105		1/4" - 4"
Valves	Forged Carbon Steel Low Temp	Forged	A350	LF2	1/4" - 4"
	Stainless Steel - Austenitic	Seamless/Welded	A403	WP304/304L, WP316/316L	1/4" - 24"
	Stainless Steel - Austenitic	Forged	A182	F304/304L, F316/316L	1/4" - 4"
	Stainless Steel Duplex/ Super Alloy Steel	Seamless/Welded	A185	UNS 51803/UNS 32750/ UNS 760	1/4" - 4"
		Seamless/Welded	A234	WP11/WP22/WP5/WP91	1/2" - 16"
					1/2" - 48"
Stud Bolts	(Forged and Cast)	Butterfly	ASTM	Cast Iron,Ductile Iron, B62/61 BS1400	2" - 96"
	Carbon Steel	Gate,Globe,Check		A216WCB,A214WC6,A217WC9,A351CF8	1/2" - 56"
	Forged Carbon Steel - Low Temp	Ball, Plug		A351CF8M,A351F3,A351CF3M	1/2" - 56"
	Duplex Stainless Steel- Forged	ESDV, Stainers		A352 LCB,A352LCC,A105, A350 LF2	1/2" - 56"
	Stainless Steel	Safety Relief Valve		CrMo, 20CrMo, 25Crmo,WC1,WC6,WC9	2" - 24"
	Duplex/Super Duplex Cast Steel			CF8,CF8M,CF3,CF3M,304,316,304L,	2" - 24"
Nut	Carbon Steel		A193	B7,B7M	1/4" - 3"
	Carbon Steel Low Temperature		A320	L7,L7M	1/4" - 2"
	Stainless Steel		A193	B8,B8M2	
Product	Type		Material		Range
Gaskets	Spiral Wound Gaskets		Carbon Steel/ Stainless with Outer and inner Ring & Winding		1/4" - 48"
	Non Asbestos Soft cut Gaskets				1/4" - 48"
	Ring Joint Gaskets		Compressed Fibre Jointing Material Neoprene, EPDM, VITON, NBR & Silicon		1/2" - 24"

FLANGES

Carbon Steel, Stainless Steel, Alloy Steel and other Austenitic steel Grades Size (1/2 to 48 inch)
Material Grades: ASTM A 105 N, ASTM A 350 LF2/LF3, F5/F11, ASTM A 182 F 304/304L, F 316/316L, F 321, F 347, F 51, A 694 F 42 to F 80

BUTT WELD FITTINGS

Carbon Steel, Stainless Steel Grades Size (1/2 to 48 inch) ELBOWS, EQUAL & UN EQUAL TEE, CROSS, CONCENTRIC / ECCENTRIC REDUCERS, CAP

Material Grades: ASTM A 234 WPB, ASTM A 420 WPL6/WP3, WP11/ 5, A304/304, 403L, 316/316L, P-5P11, WPHY ASTM A 860 X-42 X 80



FORGED FITTINGS

Carbon Steel, Stainless Steel and other Austenitic Steel Grades Size (1/2 to 6 inch) Elbows, tee, Reducing tee, caps, bushing, couplings. Union, and O let, Swage/Hex Nipples. Size (1/2 to 4 inch)

Class 9000 - 3000 (SW and NPT)

Material Grades: ASTM A 105N, ASTM A 350 LF2/LF3, F11, F22, SS F 304/304L, 316/316L

VALVES

Carbon steel, Stainless Steel, Duplex/super Duplex Ball Valves, Gate valves, Globe Valves, Check Valves, Butterfly Valves in Low Temp, Cast, forged and BW.

Cast Steel Size (2 to 48 inch) Rating: ANSI, #600, #300, #150 #2500, #1500, #900 Ends:

Flanged RF, RTJ, BW PN 10, PN16 Forged Steel Sizes (2 to 1/2 inch) Rating: ANSI #2500, #1500, #800, #600, #300, #150 Ends: Screwed, Socket Weld, Flanged RF, RTJ, BW.



GASKETS

SPIRAL WOUND, RING JOINT, INSULATION SET, CAF, CNAF Etc. 304/316, INS 625, INS 825, DUPLEX STEEL, NEOPRENE RUBBER, FIBER ETC





PIPE

Type	Range	Grade
Carbon Steel Seamless	1/4" - 24"	A106/A53 Gr.B / API GR.B /X42/X52/X60/X65
Carbon Steel Low Temperature Seamless	1/4" - 24"	A333 GR6/A333 GR 3
Carbon Steel Low Temperature Welded	20" - 48"	A671 CC60 & A671 CC65
Carbon Steel Welded ERW/HFW/SAW/DSAW	2" - 48"	A53 GR.B/API 5L GR.B/X42/X52/X60/X65
Stainless Steel Seamless/Welded	3/8" - 12"	A312 TP316/316L/A312 Tp304/304L/A312 TP321
Stainless Steel Welded	2" - 24"	A312 TP316/316L/A312 TP304/304L/A358 TP316
Alloy Pipes	1/2" - 24"	ASTM-A 335 P1/P2/P5/P9/P12/11& P22





ANSI B 36.10															ANSI B 36.19			
NP INCHES	ODMM	10	20	30	STD	40	60	XS	80	100	120	140	160	XXS	5S	10S	40S	80S
1/8	10.30				1.73 0.37	1.73 0.37		2.41 0.47	2.41 0.47							1.24 0.28	1.73 0.36	2.41 0.48
1/4	13.70				2.24 0.63	2.24 0.63		3.02 0.80	3.02 0.80							1.65 0.51	2.24 0.64	3.02 0.82
3/8	17.10				2.31 0.84	2.31 0.84		3.20 1.10	3.20 1.10							1.65 0.64	2.31 0.86	3.20 1.12
1/2	21.30				2.77 1.27	2.77 1.27		3.73 1.62	3.73 1.62				4.78 1.95	7.47 2.55	1.65 0.82	2.11 1.01	2.77 1.30	3.73 1.65
3/4	26.70				2.87 1.69	2.87 1.69		3.91 2.20	3.91 2.20				5.56 2.90	7.82 3.64	1.65 10.04	2.11 1.31	2.87 1.71	3.91 2.24
1	33.40				3.38 2.50	3.38 2.50		4.55 3.25	4.55 3.25				6.35 4.24	9.09 5.45	1.65 1.33	2.77 2.13	3.38 2.55	4.55 3.29
1 1/4	42.20				3.56 3.39	3.56 3.39		4.85 4.47	4.85 4.47				6.35 5.61	9.70 7.77	1.65 1.68	2.77 2.76	3.56 3.46	4.85 4.56
1 1/2	48.30				3.68 4.05	3.68 4.05		5.08 5.41	5.08 5.41				7.14 7.25	10.15 9.56	1.65 1.95	2.77 3.17	3.68 4.13	5.08 5.51
2	60.30				3.91 5.44	3.91 5.44		5.54 7.48	5.54 7.48				8.74 11.11	11.07 13.44	1.65 2.44	2.77 4.01	3.91 5.54	5.54 7.063
2 1/2	73.00				5.16 8.63	5.16 8.63		7.01 11.41	7.01 11.41				9.53 14.92	14.02 20.39	2.11 3.77	3.05 5.36	5.16 8.81	7.01 11.64
3	88.90				5.49 11.29	5.49 11.29		7.62 15.27	7.62 15.27				11.13 21.35	15.24 27.68	2.11 4.60	3.05 6.59	5.49 11.52	7.62 15.59
3 1/2	101.60				5.74 13.57	5.74 13.57		8.08 18.63	8.08 18.63				- -	- -	2.11 5.29	3.05 7.55	5.74 13.84	8.08 19.01
4	114.30				6.02 16.07	6.02 16.07		8.56 22.32	8.56 22.32		11.13 28.32		13.49 33.54	17.12 41.03	2.11 5.96	3.05 8.52	6.02 16.40	8.56 22.077
5	141.30				6.55 21.77	6.55 21.77		9.53 30.97	9.53 30.97		12.70 40.48		15.88 49.11	19.05 57.43	2.77 9.67	3.40 11.82	6.55 22.20	9.53 31.59
6	168.30				7.11 28.26	7.11 28.26		10.97 42.56	10.97 42.56		14.27 54.20		18.26 67.56	21.95 79.22	2.77 11.55	3.40 14.13	7.11 28.33	10.97 43.42
8	219.10		6.35 33.31	7.04 36.81	8.18 42.55	8.18 42.55	10.31 53.08	12.70 64.70	12.70 64.64	15.09 75.92	18.26 90.44	20.62 100.92	23.01 111.27	22.23 107.92	2.77 15.09	3.76 20.37	8.18 43.39	12.70 65.59
10	273.10		6.35 41.77	7.80 51.03	9.27 60.31	9.27 60.31	12.70 81.55	12.70 81.55	15.09 96.01	18.26 114.75	21.44 133.06	25.40 155.15	28.58 172.33	25.40 155.15	3.40 23.08	4.19 28.34	9.27 61.52	12.70 83.19
12	323.90		6.35 49.73	8.38 65.20	9.53 73.88	10.31 79.73	14.27 108.96	12.70 97.46	17.48 132.08	21.44 159.91	25.40 186.97	28.58 208.14	33.32 238.76	25.40 186.97	3.96	4.57 36.73	9.53 75.52	12.70 99.43
14	355.60	6.35 54.69	7.92 67.90	9.53 81.33	9.53 81.33	11.31 94.55	15.09 15.09	12.70 107.39	19.05 158.10	23.83 194.96	27.79 224.65	31.75 253.56	35.71 281.70		3.96 35.06	4.78 42.14	9.53 82.50	12.70 109.05
16	406.40	6.35 62.64	7.92 77.83	9.53 93.27	9.53 93.27	12.70 123.30	16.66 160.12	12.70 123.30	21.44 203.53	26.19 245.56	30.96 286.64	36.53 333.19	40.49 365.35		4.19 42.41	4.78 48.26	9.53 94.61	12.70 125.20
18	457.00	6.35 70.57	7.92 87.71	11.13 122.38	9.53 105.16	14.27 155.80	19.05 205.74	12.70 139.15	23.88 254.55	29.36 309.62	34.93 363.56	39.67 408.26	45.24 459.37		4.19 47.77	7.78 60.46	9.53 106.83	12.70 141.35
20	508.00	6.35 78.55	9.53 117.15	12.70 155.12	9.53 117.15	15.09 183.42	20.60 247.83	12.70 155.12	26.19 311.17	32.54 381.53	38.10 441.49	44.45 508.11	50.01 564.81		4.78 60.46	5.54 70.00	9.53 118.98	12.70 157.51
22	559.00	6.35 86.54	9.53 129.13	12.70 171.09	9.53 129.13	- -	22.23 294.25	12.70 171.09	28.58 373.83	34.93 451.42	41.28 527.02	47.63 600.63	53.98 672.26		4.78 66.57	5.54 77.06	9.53 131.07	12.70 173.66
24	510.00	6.35 94.53	9.53 141.12	14.27 209.64	9.53 141.12	17.48 255.41	24.61 355.26	12.70 187.06	30.96 442.08	38.89 547.71	46.02 640.03	52.37 720.15	59.54 808.22		5.54 84.15	8.35 96.37	9.53 143.20	12.70 189.82
26	660.00	7.92 127.36	12.70 202.72	- -	9.53 152.87	- -		12.70 202.72									9.53 155.22	12.70 205.85
28	711.00	7.92 137.32	12.70 218.69	15.88 271.21	9.53 164.85	- -		12.70 218.69									9.53 167.39	12.70 222.06
30	762.00	7.92 147.28	12.70 234.67	15.88 292.18	9.53 176.84	- -		12.70 234.67							6.35 120.72	7.92 150.36	9.53 179.56	12.70 238.28
32	813.00	7.92 167.20	12.70 250.64	15.88 312.15	9.53 188.82	17.48 342.91		12.70 250.64									9.53 191.73	12.70 254.50
34	864.00	7.92 167.20	12.70 266.61	15.88 332.12	9.53 200.31	17.48 364.90		12.70 266.61									9.53 203.90	12.70 270.72
36	914.00	7.92 176.96	12.70 282.27	15.88 351.70	9.53 212.56	19.05 420.42		12.70 282.27									9.53 215.83	12.70 286.62
38	965.00				9.53 224.54			12.70 298.24										
40	1016.00				9.53 236.53			12.70 314.22										
42	1067.00				9.53 248.52			12.70 330.19										
44	1118.00				9.53 260.50			12.70 346.16										
46	1168.00				9.53 272.25			12.70 351.82										
48	1219.00				9.53 284.24			12.70 377.79										

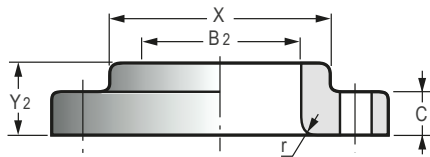
NP = NOMINAL PIPE SIZE

WALL THICKNESS = MM

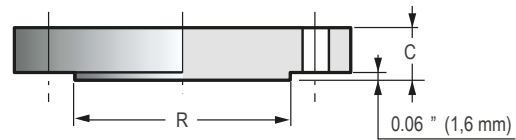
WEIGHT = KG/METRE

class 150 flanges – NPS 2/1 to 24

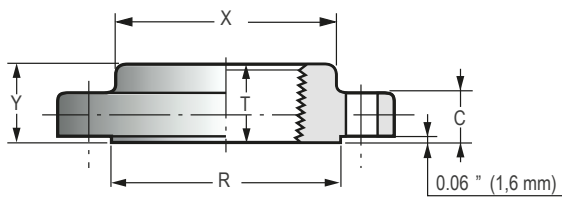
ASME B 1996 – 16.5



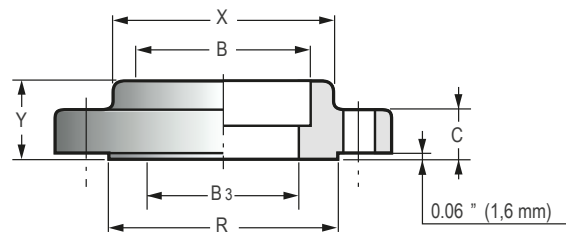
TOURNANTE / LAPPED



PLEINE / BLIND



TARAUDE / THREADED



SOCKET WELDING

B₁ : to be specified by purchaser

T : thread length

B₃ : inside diameter of pipe for STD wall pipe idem sch 40

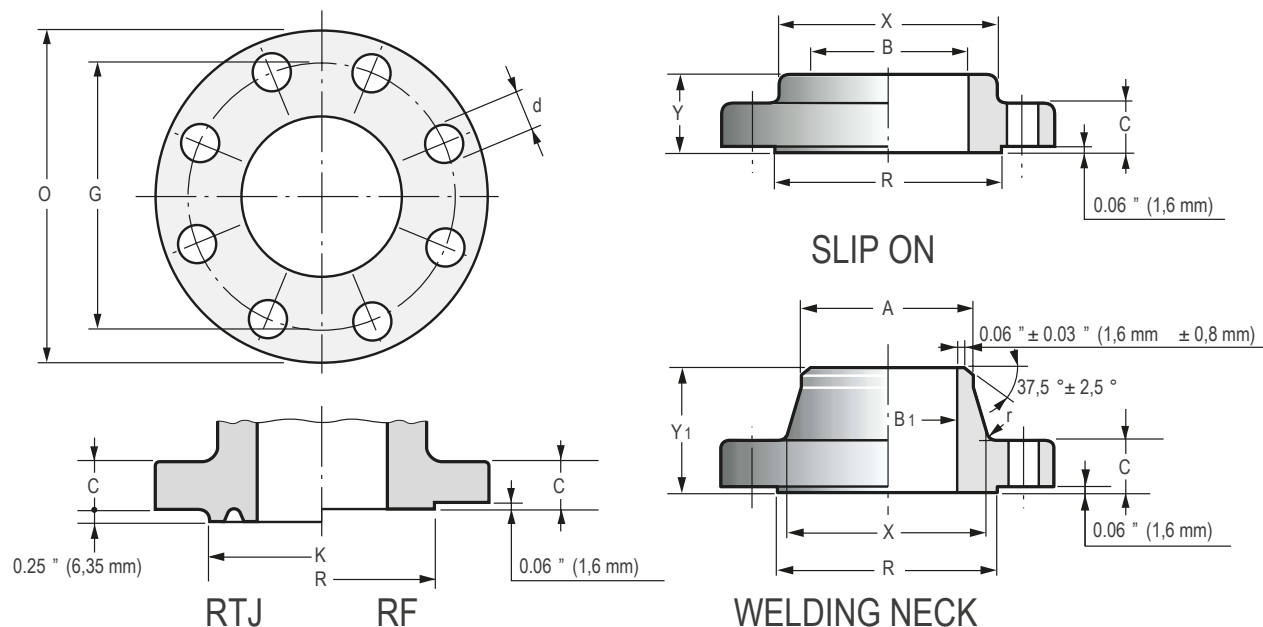
Welding neck		Lapped				Threaded		Blind	Socket welding			Diamètre Size	
Y ₁	Masse Weight	B ₂ mini	Y ₂	r	Masse Weight	T mini	Masse Weight	Masse Weight	B ₃	D	Masse Weight	NPS	DN
mm	kg	mm	mm	mm	kg	mm	kg	kg	mm	mm	kg		
48	0,6	22,9	16	3	0,8	16	0,8	1,2	15,8	10	0,8	2/1	15
52	0,8	28,2	16	3	0,9	16	0,9	1,3	20,8	11	0,9	4/3	20
56	1,1	35,0	17	3	1,0	18	1,0	1,4	26,7	13	1,0	1	25
57	1,4	43,7	21	5	1,3	21	1,3	1,8	35,0	14	1,3	4/1 1	32
62	1,8	50,0	22	6	1,5	22	1,5	2,2	40,9	16	1,4	2/1 1	40
63	2,7	62,5	25	8	2,3	25	2,3	2,8	52,6	17	2,3	2	50
70	4,0	75,4	29	8	3,7	29	3,7	4,7	62,7	19	3,0	2/1 2	65
70	4,5	91,4	30	10	4,2	30	4,2	5,5	78,0	21	3,5	3	80
71	6,2	104,1	32	11	5,3	32	5,3	6,8	–	–	–	2/1 3	–
76	7,0	116,8	33	11	5,9	33	5,9	8,0	–	–	–	4	100
89	8,6	144,5	37	11	7,0	37	7,0	9,0	–	–	–	5	125
89	10,8	171,4	40	13	8,5	40	8,5	12,0	–	–	–	6	150
102	18,0	222,2	44	13	13,5	44	13,5	20,0	–	–	–	8	200
102	24,0	277,4	49	13	19,5	49	19,5	32,0	–	–	–	10	250
114	37,0	328,2	56	13	29,0	56	29,0	40,0	–	–	–	12	300
127	47,0	360,2	79	13	45,0	57	39,0	59,0	–	–	–	14	350
127	58,0	411,2	87	13	58,0	64	47,0	77,0	–	–	–	16	400
140	64,0	462,3	97	13	66,0	68	54,0	95,0	–	–	–	18	450
144	77,0	514,4	103	13	84,0	73	70,0	123,0	–	–	–	20	500
152	118,0	616,0	111	13	118,0	83	95,0	186,0	–	–	–	24	600

PIPING EQUIPMENT 2001 – TROUVAY & CAUVIN

Weights are approximate

brides ISO PN 20 – DN 15 à 600

ASME B 1996 – 16.5



B_1 : à préciser par l'acheteur

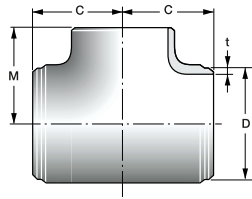
T : longueur de la partie filetée

$B3$: diamètre intérieur des tubes épaisseur STD idem sch 40

Diamètre Size											Slip on	Welding neck
DN	NPS	O	C mini	R	K	Perçage / Drilling		B mini	X	Y	Masse Weight	A
		mm	mm	mm	mm	Nombre	G mm	d mm	mm	mm	kg	mm
15	2/1	89	11,2	34,9	–	4	60,3	15,8	22,4	30	0,8	21,3
20	4/3	99	12,7	42,9	–	4	69,8	15,8	27,7	38	0,9	26,7
25	1	108	14,3	50,8	63,5	4	79,4	15,8	34,5	49	1,0	33,4
32	4/1 1	117	15,7	63,5	73,2	4	88,9	15,8	43,2	59	1,3	42,2
40	2/1 1	127	17,5	73,0	82,5	4	98,4	15,8	49,5	65	1,5	48,3
50	2	152	19,1	92,1	101,6	4	120,6	19,0	62,0	78	2,3	60,3
65	2/1 2	178	22,3	104,8	120,7	4	139,7	19,0	74,7	90	3,7	73,0
80	3	190	23,9	127,0	133,4	4	152,4	19,0	90,7	108	4,2	88,9
–	2/1 3	216	23,9	139,7	154,0	8	177,8	19,0	103,4	122	5,3	101,6
100	4	229	23,9	157,2	171,5	8	190,5	19,0	116,1	135	5,9	114,3
125	5	254	23,9	185,7	193,5	8	215,9	22,2	143,8	164	7,0	141,3
150	6	279	25,4	215,9	219,0	8	241,3	22,2	170,7	192	8,5	168,3
200	8	343	28,5	269,9	273,0	8	298,4	22,2	221,5	246	13,5	219,1
250	10	406	30,2	323,8	330,2	12	362,0	25,4	276,4	305	19,5	273,0
300	12	483	31,8	381,0	406,4	12	431,8	25,4	327,2	365	29,0	323,9
350	14	533	35,0	412,8	425,5	12	476,2	28,5	359,2	400	39,0	355,6
400	16	597	36,6	469,9	482,6	16	539,8	28,5	410,5	457	47,0	406,4
450	18	635	39,7	533,4	546,1	16	577,8	31,8	461,8	505	54,0	457,0
500	20	698	42,9	584,2	596,9	20	635,0	31,8	513,1	559	70,0	508,0
600	24	813	47,7	692,2	711,2	20	749,3	35,0	616,0	664	95,0	610,0

Les masses indiquées sont approximatives

TROUVAY & CAUVIN – PIPING EQUIPMENT 2001



ASME B 1993-16.9

straight tees ASME B 1993-16.9

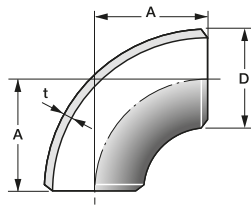
Diamètre Nominal Nominal Pipe Size (NPS)	Dia. extérieur au chanfrein Outside diameter at bevel	Encombrement Center-to-end		STD	E.F. X.S.	X.E.F. X.X.S.	SCH 10	SCH 20	SCH 30	SCH 40	SCH 60	SCH 80	SCH 100	SCH 120	SCH 140	SCH 160	Diamètre Nominal Nominal Pipe Size (NPS)												
pouces/ inches	D – mm	C – mm	M – mm	t ép/ W.T. mm masse/ weight kg													pouces/ inches												
1/2	21	25	25	2,77 0,16	3,73 0,25	7,47 **			2,41 **	Voir STD		Voir E.F.				4,78 0,28	1/2												
3/4	27	29	29	2,87 0,20	3,91 0,27	7,82 0,38			2,41 **														5,56 0,29	3/4					
1	33	38	38	3,38 0,29	4,55 0,35	9,09 0,58			2,90 **														6,35 0,45	1					
1 1/4	42	48	48	3,56 0,53	4,85 0,65	9,70 1,05			2,97 **														6,35 0,77	1 1/4					
1 1/2	48	57	57	3,68 0,77	5,08 0,96	10,16 1,56			3,18 **														7,13 1,21	1 1/2					
2	60	64	64	3,91 1,88	5,54 1,90	11,07 2,69			3,18 **														8,74 2,25	2					
2 1/2	73	76	76	5,16 2,69	7,01 3,07	14,02 4,54			4,78 **														9,52 3,42	2 1/2					
3	89	86	86	5,49 3,82	7,62 4,50	15,24 7,63			4,78 **								Refer to STD		Refer to X.S.				11,13 6,21	3					
3 1/2	102	95	95	5,74 5,18	8,08 6,17			4,78 **																					3 1/2
4	114	105	105	6,02 6,00	8,56 8,44	17,12 17,00			4,78 **																				11,13 9,00
5	141	124	124	6,55 9,94	9,52 12,94	19,05 25,00										12,70 18,00	5												
6	168	143	143	7,11 16,48	10,97 19,30	21,95 39,00										14,27 24,00	6												
8	219	178	178	8,18 33,00	12,70 34,50	22,23 69,00	6,35 29,00	7,03 31,00			10,31 34,50		15,09 43,65	18,26 50,00	20,62 54,00	23,01 71,00	8												
10	273	216	216	9,27 49,35	12,70 58,57	25,40 98,00	6,35 34,70	7,80 36,77			12,70 58,57	15,09 68,00	18,26 74,00	21,44 93,00	25,40 99,00	28,57 120,00	10												
12	324	254	254	9,52 65,00	12,70 84,90	25,40 150,00	6,35 59,00	8,38 61,74	10,31 70,50	14,27 102,60	17,48 115,00	21,44 136,00	25,40 150,00	28,57 177,00	33,32 184,00		12												
14	356	279	279	9,52 93,00	12,70 127,12		6,35 87,16	7,92 90,00	Voir STD	11,13 114,41	15,09 141,20	19,05 165,00	23,83 206,00	27,79 240,00	31,75 275,00	35,71 300,00	14												
16	406	305	305	9,52 115,00	12,70 167,52		6,35 90,80	7,92 100,00	Refer to STD	Voir E.F. Refer to X.S.	16,66 207,93	21,44 249,00	26,19 305,00	30,96 330,00	36,53 385,00	40,49 425,00	16												
18	457	343	343	9,52 135,00	12,70 190,00		6,35 94,50	7,92 127,12	11,13 181,14	14,27 238,35	19,05 277,85	23,83 322,00	27,79 380,00	31,75 450,00	35,71 500,00	45,24 590,00	18												
20	508	381	381	9,52 168,00	12,70 245,00		6,35 120,00		12,70 265,00	15,09 320,52	20,62 378,64	26,18 459,05	32,54 540,00	38,10 590,00	44,45 720,00	50,01 790,00	20												
22	559	419	419	9,52 200,00	12,70 280,00		6,35 143,00		12,70 355,00	22,22 510,00	28,58 600,00	34,92 725,00	41,27 840,00	47,62 950,00	53,97 1100,00		22												
24	610	432	432	9,52 240,00	12,70 350,00		6,35 170,00		14,27 443,55	17,48 570,68	24,61 656,48	30,96 748,00	38,89 910,00	46,02 1100,00	52,37 1180,00	59,54 1310,00	24												
26	660	495	495	9,52 288,00	12,70 360,50		7,92 240,00										26												
28	711	521	521	9,52 337,00	12,70 421,00		7,92 280,00		15,88 526,00								28												
30	762	559	559	9,52 388,50	12,70 483,50		7,92 322,00		15,88 604,00								30												
32	813	597	597	9,52 451,00	12,70 559,00		7,92 375,00		15,88 699,00	17,48 769,00							32												
34	864	635	635	9,52 516,00	12,70 645,00		7,92 429,00		15,88 805,00	17,48 886,00							34												
36	914	673	673	9,52 587,50	12,70 731,00		7,92 488,00		15,88 913,00	19,05 1004,00							36												
38	965	711	711	9,52 638,00	12,70 812,00												38												
40	1016	749	749	9,52 690,00	12,70 894,50												40												
42	1067	762	711	9,52 831,00	12,70 1045,00												42												
44	1118	813	762	9,52 899,00	12,70 1194,00												44												
46	1168	851	800	9,52 1007,00	12,70 1346,00												46												
48	1219	889	838	9,52 1112,50	12,70 1498,50												48												

Les masses indiquées sont approximatives.
** Masse sur demande.

TROUVAY & CAUVIN - PIPING EQUIPMENT 2001

Weights are approximate.
** Weight on application.

PIPING EQUIPMENT 2001 - TROUVAY & CAUVIN



ASME B 16.9-1993

°90long radius elbows ASME B 16.9-1993

Diamètre Nominal Nominal Pipe Size (NPS)	Dia. extérieur au chanfrein Outside diameter at bevel	Centre-à- extrémité Center-to-end	STD	E.F. X.S.	X.E.F. X.X.S.	SCH 10	SCH 20	SCH 30	SCH 40	SCH 60	SCH 80	SCH 100	SCH 120	SCH 140	SCH 160	Diamètre Nominal Nominal Pipe Size (NPS)															
pouces/inches	D – mm	A – mm	t ép./ W.T. mm masse/ weight kg													pouces/inches															
1/2	21	38	2,77 0,08	3,73 0,18	7,47 **			2,41 **	Voir STD		Voir E.F.				4,78 0,22	1/2															
3/4	27	(1)38	2,87 0,08	3,91 0,20	7,82 **			2,41 **													5,56 0,25	3/4									
1	33	38	3,38 0,15	4,55 0,20	9,09 0,40			2,90 **														6,35 0,30	1								
1 1/4	42	48	3,56 0,25	4,85 0,35	9,70 0,61			2,97 **														6,35 0,44	1 1/4								
1 1/2	48	57	3,68 0,36	5,08 0,60	10,16 0,90			3,18 **														7,13 0,80	1 1/2								
2	60	76	3,91 0,65	5,54 0,94	11,07 1,80			3,18 **								Refer to STD		Refer to X.S.				8,74 1,50	2								
2 1/2	73	95	5,16 1,28	7,01 1,70	14,02 3,21			4,78 **																				9,52 2,35	2 1/2		
3	89	114	5,49 2,03	7,62 2,75	15,24 5,20			4,78 **																					11,13 4,00	3	
3 1/2	102	133	5,74 2,87	8,08 3,95				4,78 **																							3 1/2
4	114	152	6,02 3,90	8,56 5,40	17,12 10,30			4,78 **																			11,13		13,50 9,00	4	
5	141	190	6,55 6,50	9,52 8,85	19,05 18,11																						12,70		15,87 15,44	5	
6	168	229	7,11 10,20	10,97 15,35	21,95 30,00																						14,27		18,26 27,00	6	
8	219	305	8,18 20,30	12,70 29,90	22,23 54,50		6,35 16,57	7,03 17,50																10,31 26,30		15,09 38,00	18,26 40,50	20,62 52,00	23,01 58,00	8	
10	273	381	9,27 37,00	12,70 48,60	25,40 97,00		6,35 25,79	7,80 31,30																Voir E.F. Refer to X.S.	15,09 57,11	18,26 75,00	21,44 85,00	25,40 97,00	28,57 123,00	10	
12	324	457	9,52 54,00	12,70 70,00	25,40 140,00		6,35 37,23	8,38 46,06															10,31 58,15	14,27 82,62	17,48 94,82	21,44 123,00	25,40 140,00	28,57 157,00	33,32 180,00	12	
14	356	533	9,52 68,00	12,70 94,35		6,35 57,47	7,92 59,93	Voir STD															11,13 79,96	15,09 111,26	19,05 132,16	23,83 188,00	27,79 190,00	31,75 224,00	35,71 247,50	14	
16	406	610	9,52 89,20	12,70 124,75		6,35 63,20	7,92 78,09	Refer to STD															Voir E.F. Refer to X.S.	16,66 161,17	21,44 204,30	26,19 260,00	30,96 274,00	36,53 323,00	40,49 367,00	16	
18	457	686	9,52 112,90	12,70 157,50		6,35 82,00	7,92 99,43	11,13 139,83															14,27 177,06	19,05 231,54	23,83 287,84	29,36 390,00	34,93 405,00	39,67 422,00	45,24 545,00	18	
20	508	762	9,52 142,40	12,70 194,30		6,35 100,00		12,70 194,30															15,09 230,00	20,62 311,44	26,18 390,90	32,54 476,00	38,10 508,00	44,45 607,00	50,01 770,00	20	
22	559	838	9,52 178,00	12,70 236,00		6,35 120,00		12,70 250,20																22,22 412,70	28,58 523,40	34,92 638,00	41,27 700,00	47,62 850,00	53,97 1020,00	22	
24	610	914	9,52 202,00	12,70 268,50		6,35 146,00		14,27 318,70	17,48 384,00	24,61 533,90	30,96 667,40	38,89 820,00	46,02 954,00	52,37 1100,00	59,54 1270,00								24								
26	660	991	9,52 270,00	12,70 348,00		7,92 208,00																	26								
28	711	1067	9,52 300,00	12,70 404,00		7,92 242,00		15,88 478,00															28								
30	762	1143	9,52 333,00	12,70 441,00		7,92 278,00		15,88 550,00															30								
32	813	1219	9,52 390,00	12,70 510,00		7,92 316,00		15,88 627,00	17,48 689,00														32								
34	864	1295	9,52 430,00	12,70 560,00		7,92 357,00		15,88 708,00	17,48 778,00							34															
36	914	1372	9,52 482,00	12,70 625,00		7,92 400,00		15,88 795,00	19,05 951,00							36															
38	965	1448	9,53 540,00	12,70 710,00												38															
40	1016	1524	9,52 580,00	12,70 745,00												40															
42	1067	1600	9,52 655,00	12,70 840,00												42															
44	1118	1676	9,53 726,00	12,70 970,00												44															
46	1168	1753	9,53 816,00	12,70 1055,00												46															
48	1219	1829	9,52 885,00	12,70 1134,00												48															

Les masses indiquées sont approximatives

TROUVAY & CAUVIN – PIPING EQUIPMENT 2001

Weights are approximate

PIPING EQUIPMENT 2001 – TROUVAY & CAUVIN



دفتر مرکزی: شهرک غرب خیابان ایوانک خیابان محمدرضا شجریان شمالی
کوچه ۲۳ کوچه مهر انتهای کوچه یکم پلاک ۱۶ تلفن: ۰۲۱-۹۱۰۱۲۶۲۶

دفتر فروش: تهران، خیابان خیام شمالی، روبروی پارک شهر، پاساژ
شیدایی، پلاک ۲۳ تلفن: ۰۲۱-۳۳۹۰۸۱۷۲ ۳۳۹۳۰۳۲۸
وبسایت: www.fpnafta.com ایمیل: info@fpnafta.com