

**Molded Butt 45**

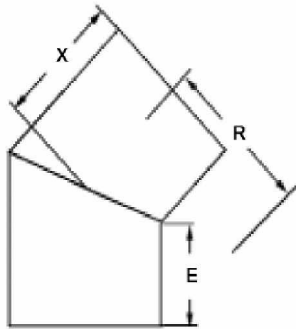
Produced to ASTM D2513 and D3261

2" and larger PE 3408 are also produced to AWWA C906-99

<u>Butt 45</u> <u>Degree Ells</u>	<u>DR/Wall</u>	<u>Dimensions</u> <u>A x B (in)</u>	<u>Package</u> <u>Weight (lbs.)</u>	<u>CSA</u>	<u>IAPMO</u>	<u>FM</u>	
						<u>150</u>	<u>200</u>
2" IPS	DR 7	2.45 x 3.20	20.0				
	DR 9		18.6				
	DR 11		15.2				
	DR 17		13.0				
3" IPS	DR 7	3.10 x 5.38	11.4				
	DR 9		10.8				x
	DR 11 / 11.5		9.0	x		x	
	DR 13.5						
	DR 17						
4" IPS	DR 7	3.00 x 5.38	15.1				
	DR 9						x
	DR 11 / 11.5	3.00 x 4.93	9.4	x		x	
	DR 13.5			x			
	DR 17						
6" IPS	DR 7	4.25 x 7.12	20.4				
	DR 9						x
	DR 11 / 11.5	4.00 x 6.38	13.3	x	x	x	
	DR 13.5			x			
	DR 17						
8" IPS	DR 7	6.00 x 10.00	22.7				
	DR 9						x
	DR 11		17.0	x		x	
	DR 13.5		16.3	x			
	DR 17						



**INDEPENDENT  
PIPE PRODUCTS**



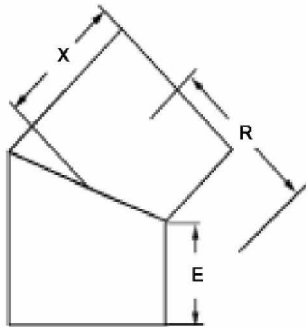
**IPS 45°  
2 Segment Elbow  
Fabricated (1/8 Bend)**

(Dimensions in Inches)

IPS Size	R/D Ratio	R	X	E	SDR	WPR (psi)	Weight (lbs)
4"	1.5	6.8	6.9	6.0	7	200	3.5
					9	160	3
					11&17	128/80	2.5
6"	1.5	10.0	7.4	6.0	7	200	8
					9	160	7
					11&17	128/80	6
8"	1.25	10.7	8.3	6.5	7	200	19
					9	160	15
					11	128	13
					17	80	9
10"	1.25	13.5	8.7	6.5	7	200	31
					9	160	26
					11	128	21
					17	80	15
12"	1.25	16.0	10.6	8.0	7	200	52
					9	160	42
					11	128	35
					17	80	24
14"	1.05	14.5	10.9	8.0	7	200	66
					9	160	53
					11	128	44
					17	80	30
16"	1.05	16.8	11.3	8.0	7	200	86
					9	160	70
					11	128	58
					17	80	39
18"	1.05	18.4	11.7	8.0	7	200	114
					9	160	93
					11	128	78
					17	80	53
20"	1.02	20.4	12.1	8.0	7	200	148
					9	160	119
					11	128	99
					17	80	67



**INDEPENDENT  
PIPE PRODUCTS**



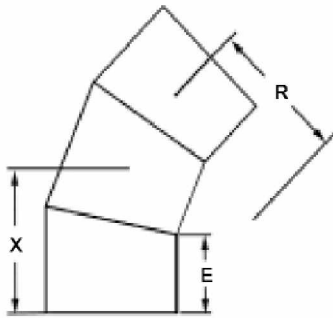
**IPS 45°  
2 Segment Elbow  
Fabricated (1/8 Bend)**

(Dimensions in Inches)

IPS Size	R/D Ratio	R	X	E	SDR	WPR (psi)	Weight (lbs)
22"	1.02	22.4	12.6	8.0	7	200	178
					9	160	144
					11	128	121
					17	80	82
24"	1.02	24.5	13.0	8.0	7	200	221
					9	160	180
					11	128	151
					17	80	101
26"	1.02	26.5	15.4	10.0	9	160	247
					11	128	208
					17	80	141
28"	1.02	28.5	15.8	10.0	9	160	297
					11	128	249
					17	80	165
30"	1.02	30.5	16.2	10.0	11	128	286
					17	80	193
32"	1.55	49.6	16.6	10.0	11	128	331
					17	80	224
34"	1.55	52.7	17.0	10.0	11	128	383
					17	80	257
36"	1.55	55.8	17.5	10.0	11	128	441
					17	80	296
42"	1.55	65.1	18.7	10.0	17	80	432
					21	65	352
48"	1.55	74.4	19.9	10.0	21	65	478
					26	50	389
54"	1.53	82.6	27.2	16.0	26	50	538
					32.5	40	432



**INDEPENDENT  
PIPE PRODUCTS**



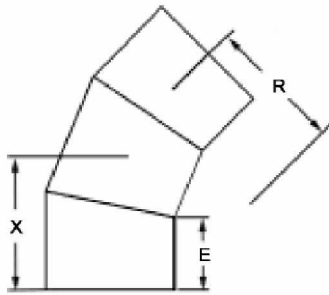
**IPS 45°  
3 Segment Elbow  
Fabricated (1/8 Bend)**

(Dimensions in Inches)

IPS Size	R/D Ratio	R	X	E	SDR	WPR (psi)	Weight (lbs)
2"	5.4	12.7	6.6	4.0	7	200	1.5
					9	160	1
					11&17	128/80	1
3"	3.8	13.2	6.8	4.0	7	200	3
					9	160	2
					11&17	128/80	2
4"	3.0	13.7	7.0	4.0	7	200	6
					9	160	5
					11&17	128/80	4
6"	2.2	14.7	9.4	6.0	7	200	1
					9	160	11
					11&17	128/80	9
8"	1.8	16.0	10.3	6.5	7	200	24
					9	160	19
					11	128	16
					17	80	12
10"	1.6	17.0	10.7	8.0	7	200	39
					9	160	32
					11	128	26
					17	80	18
12"	1.5	19.1	12.8	8.0	7	200	62
					9	160	51
					11	128	43
					17	80	29
14"	1.5	21.0	13.2	8.0	7	200	79
					9	160	64
					11	128	53
					17	80	36
16"	1.5	24.0	14.0	8.0	7	200	112
					9	160	91
					11	128	76
					17	80	51
18"	1.5	27.0	14.7	8.0	7	200	146
					9	160	119
					11	128	101
					17	80	68



**INDEPENDENT  
PIPE PRODUCTS**



**IPS 45°  
3 Segment Elbow  
Fabricated (1/8 Bend)**

(Dimensions in Inches)

IPS Size	R/D Ratio	R	E	X	E	SDR	WPR (psi)	Weight (lbs)
20"	1.5	30.0	15.5	8.0	7	200	187	
					9	160	151	
					11	128	126	
					17	80	86	
22"	1.5	33.0	16.3	8.0	7	200	243	
					9	160	197	
					11	128	165	
					17	80	111	
24"	1.5	36.0	17.0	8.0	7	200	298	
					9	160	24	
					11	128	202	
					17	80	137	
26"	1.5	39.0	19.7	10.0	9	160	330	
					11	128	277	
					17	80	187	
28"	1.5	42.0	20.5	10.0	9	160	393	
					11	128	329	
					17	80	218	
30"	1.5	45.0	21.2	10.0	11	128	388	
					17	80	262	
32"	1.5	48.0	22.0	10.0	11	128	464	
					17	80	312	
34"	1.5	51.0	22.7	10.0	11	128	537	
					17	80	361	
36"	1.5	54.0	23.5	10.0	11	128	618	
					17	80	416	
42"	1.5	63.0	25.7	10.0	17	80	621	
					21	65	506	
48"	1.5	72.0	28.0	10.0	21	65	700	
					26	50	570	
54"	1.5	81.0	36.2	16.0	26	50	954	
					32.5	40	766	