

Component Weights 20FR-E.E14
Rev 1.0E, Sep-01-2005

(also includes Series 20FR-EC)

Table 20FR-E.E14.1A

Component Weights (lbs or lbs per foot)

Size in.	Rating psi	Pipe (lb/ft)	Fig.10 Flange	Fig.16 Blind Flange	Fig.20 90 Elbow	Fig.30 45 Elbow	Fig.40 Tee Fitting
1.00	200	1.0	1.4	0.9	0.2	0.1	2.4
1.50	200	1.3	1.6	1.0	0.4	0.2	3.4
2.00	200	1.5	2.4	1.6	0.7	0.3	2.0
2.50	200	1.9	3.0	2.0	0.9	0.4	2.4
3.00	200	2.2	3.5	2.3	1.5	0.8	3.4
4.00	200	2.9	5.0	3.5	2.6	1.3	5.0
6.00	200	5.9	10.0	6.0	6.6	3.3	10.5
8.00	200	8.9	15.5	9.6	15.9	8.0	22.8
10.00	200	12.4	24.9	14.6	29.1	14.5	38.9
12.00	200	16.4	35.3	21.7	51.2	25.6	65.2
14.00	150	17.1	41.1	24.0	64.8	32.4	79.6
16.00	150	21.6	53.9	32.3	90.0	45.0	107.4
18.00	150	28.9	68.6	39.7	127.5	63.8	228.4
20.00	150	34.7	83.8	49.2	165.7	82.9	284.8
22.00	150	41.0	97.8	56.8	200.9	100.4	359.5
24.00	150	47.8	120.0	72.2	274.9	137.5	445.8
30.00	100	51.5	166.4	102.0	368.4	184.2	525.0
36.00	100	70.9	277.0	188.4	611.3	305.7	820.2
42.00	50	50.3	240.0	177.1	494.5	247.3	587.1
48.00	50	63.5	340.8	245.6	741.0	370.5	840.8
54.00	50	84.9	505.0	377.6	1119.4	559.7	1305.4
60.00	50	101.9	780.4	576.5	1455.7	727.8	1649.1
66.00	50	120.4	988.8	748.0	1764.8	882.4	
72.00	50	140.4	1206.4	925.6	2013.6	1006.8	



Component Weights 20FR-E.E14
Rev 1.0E, Sep-01-2005

(also includes Series 20FR-EC)

Table 20FR-E.E14.1B

Component Weights (lbs or lbs per foot)

Size in.	Rating psi	Fig.46 Flgd Saddle	Fig.48 PE Saddle	Fig.60 Reducer	Fig.80 Lateral	Fig.96 Hemicap	Shop Butt Weld
1.00	200	2.8	1.5		3.3		0.4
1.50	200	3.6	2.0	0.1	4.6		0.5
2.00	200	4.9	2.5	0.3	5.1	0.1	0.7
2.50	200	6.0	3.1	0.2	6.2	0.2	0.8
3.00	200	7.0	3.6	0.4	8.1	0.2	1.0
4.00	200	9.6	4.7	0.5	11.5	0.4	1.3
6.00	200	18.6	9.9	1.8	25.7	1.1	2.5
8.00	200	38.8	21.9	3.2	53.0	2.5	6.1
10.00	200	60.4	34.6	4.6	84.1	4.6	10.1
12.00	200	84.3	58.4	6.8	132.0	8.2	13.8
14.00	150	83.1	55.5	7.4	141.0	10.3	13.6
16.00	150	118.1	80.3	8.9	199.0	14.3	18.2
18.00	150	152.5	105.5	11.3	283.7	20.3	24.9
20.00	150	186.8	128.8	13.2	359.9	26.4	31.5
22.00	150	244.8	175.2	16.0	448.2	32.0	41.0
24.00	150	294.4	207.0	18.2	565.2	43.8	50.1
30.00	100	318.4	203.2	58.6	670.9	58.6	46.7
36.00	100	534.6	323.8	81.1	1097.9	97.3	74.2
42.00	50	346.0	159.9	56.2	800.6	78.7	31.3
48.00	50	479.5	222.1	73.7	1131.6	117.9	45.5
54.00	50	748.3	349.7	99.0	1723.0	178.2	72.9
60.00	50	1079.5	477.1	115.8	2260.6	231.7	92.2
66.00	50	1415.4	630.4	140.4	2737.2	280.9	120.1
72.00	50	1713.3	743.6	160.2	3200.1	320.5	146.6



Component Weights 20FR-E.E14
Rev 1.0F, Dec-12-2009

(also includes Series 20FR-EC)

Table 20FR-E.E14M.1A

Component Weights (kg or kg per meter)

Size mm	Rating bar	Pipe (kg/m)	Fig.10 Flange	Fig.16 Blind Flange	Fig.20 90 Elbow	Fig.30 45 Elbow	Fig.40 Tee Fitting
25	14	1.5	0.6	0.4	0.1	0.0	1.1
38	14	2.0	0.7	0.4	0.2	0.1	1.6
51	14	2.3	1.1	0.7	0.3	0.2	0.9
64	14	2.8	1.4	0.9	0.4	0.2	1.1
76	14	3.3	1.6	1.1	0.7	0.3	1.5
102	14	4.4	2.3	1.6	1.2	0.6	2.3
152	14	8.8	4.5	2.7	3.0	1.5	4.8
203	14	13.2	7.0	4.3	7.2	3.6	10.4
254	14	18.4	11.3	6.7	13.2	6.6	17.7
305	14	24.4	16.0	9.9	23.3	11.6	29.6
356	10	25.5	18.7	10.9	29.4	14.7	36.1
406	10	32.2	24.5	14.7	40.8	20.4	48.8
457	10	43.0	31.2	18.0	57.9	28.9	103.7
508	10	51.7	38.1	22.3	75.2	37.6	129.3
559	10	61.1	44.4	25.8	91.2	45.6	163.2
610	10	71.2	54.5	32.8	124.8	62.4	202.4
762	7	76.7	75.5	46.3	167.3	83.6	238.4
914	7	105.6	125.8	85.5	277.6	138.8	372.4
1067	3	74.9	108.9	80.4	224.5	112.3	266.5
1219	3	94.5	154.7	111.5	336.4	168.2	381.7
1372	3	126.5	229.3	171.4	508.2	254.1	592.7
1524	3	151.8	354.3	261.7	660.9	330.4	748.7
1676	3	179.3	448.9	339.6	801.2	400.6	
1829	3	209.1	547.7	420.2	914.2	457.1	



Component Weights 20FR-E.E14
Rev 1.0F, Dec-12-2009

(also includes Series 20FR-EC)

Table 20FR-E.E14M.1B

Component Weights (kg or kg per meter)

Size mm	Rating bar	Fig.46 Flgd Saddle	Fig.48 PE Saddle	Fig.60 Reducer	Fig.80 Lateral	Fig.96 Hemicap	Shop Butt Weld
25	14	1.3	0.7		1.5		0.2
38	14	1.6	0.9	0.0	2.1		0.2
51	14	2.2	1.1	0.1	2.3	0.0	0.3
64	14	2.7	1.4	0.1	2.8	0.1	0.4
76	14	3.2	1.6	0.2	3.7	0.1	0.4
102	14	4.3	2.1	0.2	5.2	0.2	0.6
152	14	8.4	4.5	0.8	11.7	0.5	1.2
203	14	17.6	10.0	1.4	24.1	1.2	2.8
254	14	27.4	15.7	2.1	38.2	2.1	4.6
305	14	38.3	26.5	3.1	59.9	3.7	6.3
356	10	37.7	25.2	3.3	64.0	4.7	6.2
406	10	53.6	36.5	4.1	90.4	6.5	8.2
457	10	69.2	47.9	5.1	128.8	9.2	11.3
508	10	84.8	58.5	6.0	163.4	12.0	14.3
559	10	111.1	79.5	7.3	203.5	14.5	18.6
610	10	133.7	94.0	8.3	256.6	19.9	22.7
762	7	144.6	92.3	26.6	304.6	26.6	21.2
914	7	242.7	147.0	36.8	498.5	44.2	33.7
1067	3	157.1	72.6	25.5	363.5	35.7	14.2
1219	3	217.7	100.8	33.5	513.8	53.5	20.7
1372	3	339.7	158.8	44.9	782.2	80.9	33.1
1524	3	490.1	216.6	52.6	1026.3	105.2	41.9
1676	3	642.6	286.2	63.8	1242.7	127.5	54.5
1829	3	777.8	337.6	72.7	1452.8	145.5	66.6



Component Weights 20FR-E.E14
Rev 1.0B, Oct-15-2003

(also includes Series 20FR-EC)

Table 20FR-E.E14.1D

Component Weights (lbs or lbs per foot)

(Pressure ratings are 200psig: 1" - 12", 150psig: 14" - 24", 100psig: 30" - 36", 50psig: 42" and larger)

Size in.	Fig.88 Reducing Lateral (includes header pipe)									
	Size	(lb)	Size	(lb)	Size	(lb)	Size	(lb)	Size	(lb)
1.00										
1.50	x 1.00						x 1.00			
2.00	x 1.50	3.7	x 1.00	3.4			x 1.50	x 1.00		
2.50	x 2.00	4.4	x 1.50	4.3	x 1.00	4.0	x 2.00	x 1.50	x 1.00	
3.00	x 2.50	6.0	x 2.00	5.8	x 1.50	5.6	x 2.50	x 2.00		x 1.50
4.00	x 3.00	9.0	x 2.50	8.4	x 2.00	8.1	x 3.00	x 2.50		x 2.00
6.00	x 4.00	19.2	x 3.00	18.0	x 2.50	17.3	x 4.00	x 3.00		x 2.50
8.00	x 6.00	37.5	x 4.00	33.0	x 3.00	31.8	x 6.00	x 4.00		x 3.00
10.00	x 8.00	64.2	x 6.00	57.3	x 4.00	52.8	x 8.00	x 6.00		x 4.00
12.00	x 10.00	95.6	x 8.00	85.7	x 6.00	78.7	x 10.00	x 8.00		x 6.00
14.00	x 12.00	120.9	x 10.00	110.2	x 8.00	100.3	x 12.00	x 10.00		x 8.00
16.00	x 14.00	157.9	x 12.00	150.6	x 10.00	139.9	x 14.00	x 12.00		x 10.00
18.00	x 16.00		x 14.00	216.1	x 12.00	208.8	x 16.00	x 14.00		x 12.00
20.00	x 18.00		x 16.00		x 14.00	262.5	x 18.00	x 16.00		x 14.00
22.00	x 20.00		x 18.00		x 16.00		x 20.00	x 18.00		x 16.00
24.00	x 22.00		x 20.00		x 18.00		x 22.00	x 20.00		x 18.00
30.00	x 24.00		x 22.00		x 20.00		x 24.00	x 22.00		x 20.00
36.00	x 30.00		x 24.00		x 22.00		x 30.00	x 24.00		x 22.00
42.00	x 36.00		x 30.00		x 24.00		x 36.00	x 30.00		x 24.00
48.00	x 42.00		x 36.00		x 30.00		x 42.00	x 36.00		x 30.00
54.00	x 48.00		x 42.00		x 36.00		x 48.00	x 42.00		x 36.00
60.00	x 54.00		x 48.00		x 42.00		x 54.00	x 48.00		x 42.00
66.00	x 60.00		x 54.00		x 48.00		x 60.00	x 54.00		x 48.00
72.00	x 66.00		x 60.00		x 54.00		x 66.00	x 60.00		x 54.00



Component Weights 20FR-E.E14
Rev 1.0C, Dec-12-2009

(also includes Series 20FR-EC)

Table 20FR-E.E14M.1D

Component Weights (kg or kg per meter)

(Pressure ratings are 13.8bar: 1" - 12", 10.3bar: 14" - 24", 6.9bar: 30" - 36", 3.4bar: 42" and larger)

Size in.	Fig.88 Reducing Lateral (includes header pipe)									
	Size	(lb)	Size	(lb)	Size	(lb)	Size	(lb)	Size	(lb)
25										
38	x 25						x 25			
51	x 38	1.7	x 25	1.6			x 38		x 25	
64	x 51	2.0	x 38	1.9	x 25	1.8	x 51		x 38	x 25
76	x 64	2.7	x 51	2.6	x 38	2.5	x 64		x 51	x 38
102	x 76	4.1	x 64	3.8	x 51	3.7	x 76		x 64	x 51
152	x 102	8.7	x 76	8.2	x 64	7.9	x 102		x 76	x 64
203	x 152	17.0	x 102	15.0	x 76	14.4	x 152		x 102	x 76
254	x 203	29.2	x 152	26.0	x 102	24.0	x 203		x 152	x 102
305	x 254	43.4	x 203	38.9	x 152	35.8	x 254		x 203	x 152
356	x 305	54.9	x 254	50.0	x 203	45.5	x 305		x 254	x 203
406	x 356	71.7	x 305	68.4	x 254	63.5	x 356		x 305	x 254
457	x 406		x 356	98.1	x 305	94.8	x 406		x 356	x 305
508	x 457		x 406		x 356	119.2	x 457		x 406	x 356
559	x 508		x 457		x 406		x 508		x 457	x 406
610	x 559		x 508		x 457		x 559		x 508	x 457
762	x 610		x 559		x 508		x 610		x 559	x 508
914	x 762		x 610		x 559		x 762		x 610	x 559
1067	x 914		x 762		x 610		x 914		x 762	x 610
1219	x 1067		x 914		x 762		x 1067		x 914	x 762
1372	x 1219		x 1067		x 914		x 1219		x 1067	x 914
1524	x 1372		x 1219		x 1067		x 1372		x 1219	x 1067
1676	x 1524		x 1372		x 1219		x 1524		x 1372	x 1219
1829	x 1676		x 1524		x 1372		x 1676		x 1524	x 1372



Component Weights 20FR-E.E14
 Rev 1.0B, Oct-15-2003

(also includes Series 20FR-EC)

Table 20FR-E.E14.1E

Component Weights (lbs or lbs per foot)

(Pressure ratings are 200psig: 1" - 12", 150psig: 14" - 24", 100psig: 30" - 36", 50psig: 42" and larger)

Header Size in.	Fig.46 Flanged Olet (includes header pipe) (branch size is shown horizontally)																						
	1.00	1.50	2.00	2.50	3.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	30.00	36.00	42.00	48.00	54.00	60.00	
1.00																							
1.50	3.9																						
2.00	4.1	5.0																					
2.50	4.4	5.3	6.8																				
3.00	4.7	5.7	7.1	8.4																			
4.00	5.3	6.3	7.8	9.2	10.4																		
6.00	7.8	9.0	10.8	12.4	13.9	17.5																	
8.00	10.2	11.8	13.7	15.6	17.4	21.4	33.4																
10.00	13.1	14.9	17.2	19.4	21.4	26.1	39.2	63.5															
12.00	16.5	18.6	21.2	23.7	26.1	31.4	45.9	71.5	98.6														
14.00	17.1	19.3	22.0	24.5	27.0	32.4	47.1	73.0	100.3	129.9													
16.00	20.8	23.4	26.5	29.4	32.2	38.4	54.6	82.0	110.8	141.8	147.9												
18.00	26.9	30.1	33.8	37.3	40.7	48.1	66.8	96.6	127.8	161.3	169.8	214.4											
20.00	31.7	35.4	39.6	43.6	47.5	55.8	76.4	108.2	141.4	176.8	187.2	233.8	279.7										
22.00	37.0	41.2	45.9	50.4	54.9	64.2	86.9	120.8	156.1	193.6	206.1	254.8	302.8	350.8									
24.00	42.7	47.4	52.7	57.8	62.8	73.3	98.3	134.4	171.9	211.7	226.5	277.4	327.7	378.0	451.9								
30.00	45.7	50.8	56.4	61.8	67.1	78.2	104.4	141.8	180.5	221.6	237.5	289.7	341.2	392.7	467.9	534.7							
36.00	61.9	68.6	75.8	82.8	89.7	104.1	136.8	180.6	225.9	273.4	295.8	354.5	412.5	470.4	552.0	625.3	720.2						
42.00	44.7	49.7	55.1	60.4	65.6	76.6	102.3	139.3	177.7	218.3	233.8	285.6	336.7	387.8	462.5	528.9	603.2	869.7					
48.00	55.7	61.8	68.3	74.8	81.1	94.2	124.4	165.7	208.5	253.5	273.5	329.6	385.1	440.6	519.7	590.6	678.0	957.7	832.5				
54.00	73.6	81.5	89.8	98.0	106.1	122.8	160.2	208.7	258.6	310.8	337.9	401.3	463.9	526.6	612.9	690.8	799.7	1100.9	997.3	1215.7			
60.00	87.8	97.0	106.8	116.4	125.9	145.5	188.5	242.6	298.2	356.0	388.8	457.8	526.1	594.5	686.4	770.0	895.9	1214.1	1127.4	1362.8	1733.4		
66.00	103.2	114.0	125.3	136.4	147.5	170.1	219.2	279.6	341.3	405.3	444.3	519.4	593.9	668.4	766.5	856.3	1000.6	1337.2	1269.0	1522.9	1912.0	2363.6	
72.00	119.8	132.3	145.2	158.1	170.8	196.7	252.5	319.5	387.9	458.6	504.2	586.0	667.2	748.3	853.0	949.5	1113.8	1470.5	1422.2	1696.1	2105.2	2576.8	

Component Weights 20FR-E.E14
 Rev 1.0C, Dec-12-2009

(also includes Series 20FR-EC)

Table 20FR-E.E14M.1E

Component Weights (kg or kg per meter)
 (Pressure ratings are 13.8bar: 1" - 12", 10.3bar: 14" - 24", 6.9bar: 30" - 36", 3.4bar: 42" and larger)

Header Size mm	Fig.46 Flanged Olet (includes header pipe) (branch size is shown horizontally)																						
	25	38	51	64	76	102	152	203	254	305	356	406	457	508	559	610	762	914	1067	1219	1372	1524	
25	1.8																						
38	1.9	2.3																					
51	2.0	2.4	3.1																				
64	2.1	2.6	3.2	3.8																			
76	2.4	2.9	3.5	4.2	4.7																		
102	3.5	4.1	4.9	5.6	6.3	7.9																	
152	4.6	5.3	6.2	7.1	7.9	9.7	15.2																
203	6.0	6.8	7.8	8.8	9.7	11.8	17.8	28.8															
254	7.5	8.4	9.6	10.8	11.8	14.2	20.8	32.5	44.8														
305	7.8	8.8	10.0	11.1	12.2	14.7	21.4	33.1	45.5	59.0													
356	9.5	10.6	12.0	13.3	14.6	17.4	24.8	37.2	50.3	64.4	67.1												
406	12.2	13.7	15.3	16.9	18.5	21.8	30.3	43.9	58.0	73.2	77.1	97.4											
457	14.4	16.1	18.0	19.8	21.6	25.4	34.7	49.1	64.2	80.3	85.0	106.1	127.0										
508	16.8	18.7	20.8	22.9	24.9	29.2	39.5	54.8	70.9	87.9	93.6	115.7	137.5	159.3									
559	19.4	21.5	23.9	26.2	28.5	33.3	44.6	61.0	78.1	96.1	102.8	126.0	148.8	171.6	205.2								
610	20.8	23.1	25.6	28.0	30.5	35.5	47.4	64.4	82.0	100.6	107.8	131.5	154.9	178.3	212.4	242.7							
762	28.1	31.2	34.4	37.6	40.7	47.3	62.1	82.0	102.5	124.1	134.3	160.9	187.3	213.6	250.6	283.9	327.0						
914	20.3	22.6	25.0	27.4	29.8	34.8	46.5	63.2	80.7	99.1	106.2	129.7	152.9	176.1	210.0	240.1	273.8	394.8					
1067	25.3	28.0	31.0	33.9	36.8	42.8	56.5	75.2	94.6	115.1	124.1	149.7	174.9	200.0	236.0	268.1	307.8	434.8	378.0				
1219	33.4	37.0	40.8	44.5	48.2	55.8	72.7	94.7	117.4	141.1	153.4	182.2	210.6	239.1	278.2	313.6	363.1	499.8	452.8	551.9			
1372	39.8	44.1	48.5	52.9	57.2	66.0	85.6	110.2	135.4	161.6	176.5	207.9	238.9	269.9	311.6	349.6	406.7	551.2	511.8	618.7	787.0		
1524	46.8	51.7	56.9	61.9	67.0	77.2	99.5	126.9	155.0	184.0	201.7	235.8	269.6	303.4	348.0	388.7	454.3	607.1	576.1	691.4	868.1	1073.1	
1676	54.4	60.1	65.9	71.8	77.5	89.3	114.7	145.1	176.1	208.2	228.9	266.0	302.9	339.7	387.3	431.1	505.7	667.6	645.7	770.0	955.8	1169.9	
1829																							

Component Weights 20FR-E.E14
 Rev 1.0B, Oct-15-2003

(also includes Series 20FR-EC)

Table 20FR-E.E14.1F

Component Weights (lbs or lbs per foot)

(Pressure ratings are 200psig: 1" - 12", 150psig: 14" - 24", 100psig: 30" - 36", 50psig: 42" and larger)

Header Size in.	Fig.48 Plain End Olet (includes header pipe) (branch size is shown horizontally)																						
	1.00	1.50	2.00	2.50	3.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	30.00	36.00	42.00	48.00	54.00	60.00	
1.00	2.6																						
1.50	2.8	3.5																					
2.00	3.1	3.8	4.4																				
2.50	3.3	4.1	4.8	5.5																			
3.00	3.9	4.7	5.4	6.2	7.0																		
4.00	6.4	7.5	8.4	9.5	10.5	12.6																	
6.00	8.9	10.2	11.4	12.7	14.0	16.5	24.7																
8.00	11.8	13.4	14.9	16.5	18.0	21.2	30.5	46.7															
10.00	15.1	17.0	18.9	20.8	22.7	26.5	37.2	54.7	72.7														
12.00	15.7	17.7	19.6	21.6	23.6	27.5	38.4	56.1	74.5	104.0													
14.00	19.5	21.8	24.1	26.5	28.8	33.5	45.9	65.1	84.9	115.9	120.3												
16.00	25.6	28.5	31.4	34.4	37.3	43.2	58.1	79.7	102.0	135.4	142.2	176.6											
18.00	30.4	33.9	37.2	40.7	44.1	51.0	67.8	91.3	115.5	150.9	159.6	196.0	232.8										
20.00	35.7	39.6	43.5	47.5	51.4	59.4	78.3	103.9	130.2	167.7	178.5	217.0	255.9	292.8									
22.00	41.3	45.9	50.3	54.8	59.4	68.4	89.6	117.5	146.1	185.8	198.9	239.6	280.8	320.0	382.3								
24.00	44.4	49.2	54.0	58.8	63.7	73.3	95.7	124.9	154.7	195.6	209.9	251.9	294.3	334.7	398.3	447.3							
30.00	60.6	67.0	73.4	79.9	86.3	99.2	128.1	163.8	200.0	247.5	268.2	316.7	365.5	412.4	482.4	538.0	605.1						
36.00	43.4	48.1	52.8	57.5	62.2	71.7	93.7	122.5	151.8	192.4	206.3	247.8	289.8	329.8	392.9	441.6	488.0	658.8					
42.00	54.4	60.2	66.0	71.8	77.6	89.3	115.7	148.9	182.6	227.6	245.9	291.8	338.2	382.6	450.1	503.2	562.8	746.9	646.4				
48.00	72.3	79.9	87.5	95.1	102.7	117.9	151.5	191.8	232.8	284.9	310.3	363.4	417.0	468.5	543.3	603.5	684.6	890.1	811.2	958.3			
54.00	86.4	95.5	104.4	113.5	122.5	140.6	179.8	225.8	272.4	330.1	361.2	420.0	479.2	536.4	616.8	682.6	780.8	1003.2	941.3	1105.4	1334.9		
60.00	101.8	112.4	122.9	133.5	144.1	165.2	210.6	262.7	315.5	379.4	416.7	481.6	547.0	610.3	696.9	768.9	885.4	1126.4	1082.9	1265.5	1513.5	1761.3	
66.00	118.5	130.7	142.9	155.1	167.4	191.8	243.9	302.7	362.1	432.7	476.6	548.2	620.2	690.2	783.4	862.1	998.7	1259.6	1236.1	1438.7	1706.7	1974.4	
72.00																							

Component Weights 20FR-E.E14
 Rev 1.0C, Dec-12-2009

(also includes Series 20FR-EC)

Table 20FR-E.E14M.1F

Component Weights (kg or kg per meter)
 (Pressure ratings are 13.8bar: 1" - 12", 10.3bar: 14" - 24", 6.9bar: 30" - 30", 3.4bar: 42" and larger)

Header Size mm	Fig.48 Plain End Olet (includes header pipe) (branch size is shown horizontally)																						
	25	38	51	64	76	102	152	203	254	305	356	406	457	508	559	610	762	914	1067	1219	1372	1524	
25	1.2																						
38	1.3	1.6																					
51	1.4	1.7	2.0																				
64	1.5	1.9	2.2	2.5																			
76	1.8	2.1	2.5	2.8	3.2																		
102	2.9	3.4	3.8	4.3	4.8	5.7																	
152	4.0	4.6	5.2	5.8	6.3	7.5	11.2																
203	5.4	6.1	6.8	7.5	8.2	9.6	13.9	21.2															
254	6.9	7.7	8.6	9.4	10.3	12.0	16.9	24.8	33.0														
305	7.1	8.0	8.9	9.8	10.7	12.5	17.4	25.5	33.8	47.2													
356	8.8	9.9	10.9	12.0	13.1	15.2	20.8	29.6	38.6	52.6	54.6												
406	11.6	13.0	14.3	15.6	16.9	19.6	26.4	36.2	46.3	61.5	64.6	80.2											
457	13.8	15.4	16.9	18.5	20.0	23.1	30.8	41.5	52.5	68.5	72.5	89.0	105.7										
508	16.2	18.0	19.8	21.6	23.4	26.9	35.5	47.2	59.1	76.1	81.0	98.5	116.2	132.9									
559	18.8	20.8	22.8	24.9	27.0	31.1	40.7	53.4	66.3	84.4	90.3	108.8	127.5	145.3	173.6								
610	20.2	22.4	24.5	26.7	28.9	33.3	43.5	56.7	70.2	88.8	95.3	114.4	133.6	151.9	180.8	203.1							
762	27.5	30.4	33.3	36.3	39.2	45.1	58.2	74.3	90.8	112.3	121.8	143.8	166.0	187.2	219.0	244.2	274.7						
914	19.7	21.8	24.0	26.1	28.3	32.5	42.5	55.6	68.9	87.3	93.6	112.5	131.6	149.7	178.4	200.5	221.6	299.1					
1067	24.7	27.3	30.0	32.6	35.2	40.5	52.5	67.6	82.9	103.3	111.6	132.5	153.5	173.7	204.4	228.4	255.5	339.1	293.5				
1219	32.8	36.3	39.7	43.2	46.6	53.5	68.8	87.1	105.7	129.3	140.9	165.0	189.3	212.7	246.6	274.0	310.8	404.1	368.3	435.1			
1372	39.2	43.3	47.4	51.5	55.6	63.8	81.6	102.5	123.7	149.9	164.0	190.7	217.6	243.5	280.0	309.9	354.5	455.5	427.3	501.8	606.0		
1524	46.2	51.0	55.8	60.6	65.4	75.0	95.6	119.3	143.2	172.2	189.2	218.6	248.3	277.1	316.4	349.1	402.0	511.4	491.6	574.5	687.1	799.6	
1676	53.8	59.3	64.9	70.4	76.0	87.1	110.7	137.4	164.4	196.4	216.4	248.9	281.6	313.4	355.7	391.4	453.4	571.9	561.2	653.1	774.8	896.4	
1829																							

Component Weights 20FR-E.E14
Rev 1.0B, Mar-31-2005

(also includes Series 20FR-EC)

Table 20FR-E.E14.1G

Component Weights (lbs)

Size in.	Rating psi	O-Ring Gasket	Full-Face Gasket
1.00	232	0.01	0.10
1.50	232	0.01	0.10
2.00	232	0.02	0.10
2.50	232	0.02	0.10
3.00	232	0.02	0.20
4.00	232	0.04	0.30
6.00	232	0.05	0.40
8.00	232	0.06	0.50
10.00	232	0.07	0.70
12.00	232	0.08	0.90
14.00	232	0.09	1.00
16.00	232	0.11	1.20
18.00	232	0.12	1.30
20.00	232	0.14	1.50
22.00	232		
24.00	232	0.16	1.90
30.00	150		2.50
36.00	150		3.50
42.00	100		4.50
48.00	100		5.20
54.00	50		
60.00	50		
66.00	50		
72.00	50		

Component Weights 20FR-E.E14
Rev 1.0B, Mar-31-2005

(also includes Series 20FR-EC)

Table 20FR-E.E14M.1G

Component Weights (kg)

Size mm	Rating bar	O-Ring Gasket	Full-Face Gasket
25	16	0.01	0.05
38	16	0.01	0.05
51	16	0.01	0.05
64	16	0.01	0.05
76	16	0.01	0.09
102	16	0.02	0.14
152	16	0.02	0.18
203	16	0.03	0.23
254	16	0.03	0.32
305	16	0.04	0.41
356	16	0.04	0.45
406	16	0.05	0.54
457	16	0.05	0.59
508	16	0.06	0.68
559	16		
610	16	0.07	0.86
762	10		1.14
914	10		1.59
1067	7		2.04
1219	7		2.36
1372	3		
1524	3		
1676	3		
1829	3		

Component Weights 20FR-E.E14
Rev 1.0B, Mar-31-2005

(also includes Series 20FR-EC)

Table 20FR-E.E14.1H

Component Weights (lbs)

(Pressure ratings are 200psig: 1" - 12", 150psig: 14" - 24", 100psig: 30" - 36", 50psig: 42" and larger)

Header Size in.	Fig.43 Reducing Tees			Fig.43 Reducing Tees						
	Size	(lb)	Size	(lb)	Size	(lb)	Size	(lb)	Size	(lb)
1.00										
1.50										
2.00										
2.50										
3.00										
4.00										
6.00										
8.00										
10.00										
12.00										
14.00										
16.00										
18.00										
20.00										
22.00										
24.00										
30.00										
36.00										
42.00										
48.00										
54.00										
60.00										
66.00										
72.00										
NOT USED BY SERIES 20FR-E										
NOT USED BY SERIES 20FR-E										
NOT USED BY SERIES 20FR-E										
NOT USED BY SERIES 20FR-E										
NOT USED BY SERIES 20FR-E										

Component Weights 20FR-E.E14
Rev 1.0B, Mar-31-2005

(also includes Series 20FR-EC)

Table 20FR-E.E14M.1H

Component Weights (kg)

(Pressure ratings are 13.8bar: 1" - 12", 10.3bar: 14" - 24", 6.9bar: 30" - 36", 3.4bar: 42" and larger)

Header Size mm	Fig.43 Reducing Tees			Fig.43 Reducing Tees		
	Size	(kg)	Size	(kg)	Size	(kg)
25						
38						
51						
64						
76						
102						
152						
203						
254						
305						
356						
406						
457						
508						
559						
610						
762						
914						
1067						
1219						
1372						
1524						
1676						
1829						
NOT USED BY SERIES 20FR-E						
NOT USED BY SERIES 20FR-E						
NOT USED BY SERIES 20FR-E						
NOT USED BY SERIES 20FR-E						

Component Weights 20FR-E.E14
Rev 1.0C, Jun-17-2005

(also includes Series 20FR-EC)

Table 20FR-E.E14.11

Component Weights (lbs)

Size in.	Rating psi	Fig.10-O Orifice Flg	Fig.11 Van. "Stub"	Fig.17 Bleed Ring	Fig.18 1/4" Spc Ring	Fig.19FC Blind w/ FNPT	Fig.210,226 Wear Pad
1.00	150						0.5
1.50	150						0.7
2.00	150	4.8	7.5	2.3	0.4	3.3	0.8
2.50	150						
3.00	150	6.4	12.1	3.3	0.6	4.0	1.1
4.00	150	8.5	15.5	4.6	0.8	5.2	1.5
6.00	150	14.8	23.5	6.0	1.0	7.7	2.1
8.00	150	21.8	30.6	8.4	1.4	11.3	2.8
10.00	150	33.0	47.6	11.0	2.2	16.3	3.5
12.00	150	44.9	62.5	15.3	2.6	23.4	4.2
14.00	150	53.0	75.9			25.7	4.9
16.00	150	68.2	101.3			34.0	5.6
18.00	150	85.3	112.6			41.4	6.3
20.00	150	103.2	147.6			50.9	7.0
22.00	150	118.9				58.5	
24.00	150	145.3	183.7			73.9	8.3
30.00	100	201.5	115.4			103.7	10.4
36.00	100	325.4	182.8			190.1	12.5
42.00	50	299.4	151.4			178.8	14.5
48.00	50	415.6	218.0			247.3	16.6
54.00	50	598.0	316.2			379.3	
60.00	50	888.5	492.1			578.2	
66.00	50						
72.00	50						

Component Weights 20FR-E.E14
Rev 1.0C, Jun-17-2005

(also includes Series 20FR-EC)

Table 20FR-E.E14.1J

Component Weights (lbs)

Size in.	Rating psi	Fig.40PPF Tee w/ Flg	Fig.40X2 Tee w/ 2" Olet	Fig.70 Cross	Fig.47JF MNPT Olet	Fig.97 FNPT Olet
1.00	232			3.7	2.5	2.8
1.50	232			5.3	2.6	3.4
2.00	232			6.4		
2.50	232					
3.00	232		9.4	9.8		
4.00	232		11.1	13.8		
6.00	232		16.6	30.9		
8.00	232		28.9	66.1		
10.00	232		45.0	104.4		
12.00	232		71.3	174.0		
14.00	232		121.4	176.6		
16.00	232		172.7	257.6		
18.00	232		234.4	351.0		
20.00	232		290.9	437.2		
22.00	232		365.5			
24.00	232		451.9	693.1		
30.00	150		531.1	784.9		
36.00	150		826.3	1239.3		
42.00	100		593.1	839.8		
48.00	100		846.9	1196.4		
54.00	50					
60.00	50					
66.00	50					
72.00	50					

Component Weights 20FR-E.E14
Rev 1.0D, Dec-12-2009

(also includes Series 20FR-EC)

Table 20FR-E.E14M.11

Component Weights (kg or kg per meter)

Size mm	Rating bar	Fig.10-O Orifice Flg	Fig.11 Van. "Stub"	Fig.17 Bleed Ring	Fig.18 1/4" Spc Ring	Fig.19FC Blind w/ FNPT	Fig.210,226 Wear Pad
25	10						0.2
38	10						0.3
51	10	2.2	3.4	1.0	0.2	1.5	0.4
64	10						
76	10	2.9	5.5	1.5	0.3	1.8	0.5
102	10	3.8	7.0	2.1	0.3	2.4	0.7
152	10	6.7	10.7	2.7	0.5	3.5	1.0
203	10	9.9	13.9	3.8	0.6	5.1	1.3
254	10	15.0	21.6	5.0	1.0	7.4	1.6
305	10	20.4	28.4	7.0	1.2	10.6	1.9
356	10	24.1	34.5			11.7	2.2
406	10	30.9	46.0			15.4	2.5
457	10	38.7	51.1			18.8	2.9
508	10	46.8	67.0			23.1	3.2
559	10	54.0				26.6	
610	10	66.0	83.4			33.6	3.8
762	7	91.5	52.4			47.1	4.7
914	7	147.7	83.0			86.3	5.7
1067	3	135.9	68.7			81.2	6.6
1219	3	188.7	99.0			112.3	7.5
1372	3	271.5	143.6			172.2	
1524	3	403.4	223.4			262.5	
1676	3						
1829	3						

Component Weights 20FR-E.E14
Rev 1.0D, Dec-12-2009

(also includes Series 20FR-EC)

Table 20FR-E.E14M.1J

Component Weights (kg or kg per meter)

Size mm	Rating bar	Fig.40PPF Tee w/ Flg	Fig.40X2 Tee w/ 2" Olet	Fig.70 Cross	Fig.47JF MNPT Olet	Fig.97 FNPT Olet
25	16			1.7	1.1	1.3
38	16			2.4	1.2	1.5
51	16			2.9		
64	16					
76	16		4.3	4.4		
102	16		5.0	6.3		
152	16		7.5	14.0		
203	16		13.1	30.0		
254	16		20.4	47.4		
305	16		32.4	79.0		
356	16		55.1	80.2		
406	16		78.4	117.0		
457	16		106.4	159.4		
508	16		132.0	198.5		
559	16		166.0			
610	16		205.2	314.7		
762	10		241.1	356.3		
914	10		375.1	562.6		
1067	7		269.3	381.3		
1219	7		384.5	543.2		
1372	3					
1524	3					
1676	3					
1829	3					