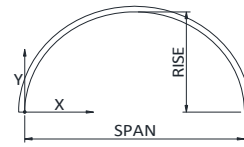




**VERSA™ SERIES SINGLE-RADIUS COORDINATES FOR HYDRAULIC MODELING (FT.)**



VS8		LEFT										MID-SPAN										RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
6	1.35	0	0.55	0.93	1.17	1.31	1.35	1.31	1.17	0.93	0.55	0	0	0.55	0.93	1.17	1.31	1.35	1.31	1.17	0.93	0.55	0
7	2.06	0	0.92	1.47	1.81	2.00	2.06	2.00	1.81	1.47	0.92	0	0	0.92	1.47	1.81	2.00	2.06	2.00	1.81	1.47	0.92	0
8	4	0	2.40	3.20	3.67	3.92	4.00	3.92	3.67	3.20	2.40	0	0	2.40	3.20	3.67	3.92	4.00	3.92	3.67	3.20	2.40	0
8	5	0	3.40	4.20	4.67	4.92	5.00	4.92	4.67	4.20	3.40	0	0	3.40	4.20	4.67	4.92	5.00	4.92	4.67	4.20	3.40	0
8	6	0	4.40	5.20	5.67	5.92	6.00	5.92	5.67	5.20	4.40	0	0	4.40	5.20	5.67	5.92	6.00	5.92	5.67	5.20	4.40	0
8	7	0	5.40	6.20	6.67	6.92	7.00	6.92	6.67	6.20	5.40	0	0	5.40	6.20	6.67	6.92	7.00	6.92	6.67	6.20	5.40	0
8	8	0	6.40	7.20	7.67	7.92	8.00	7.92	7.67	7.20	6.40	0	0	6.40	7.20	7.67	7.92	8.00	7.92	7.67	7.20	6.40	0
8	9	0	7.40	8.20	8.67	8.92	9.00	8.92	8.67	8.20	7.40	0	0	7.40	8.20	8.67	8.92	9.00	8.92	8.67	8.20	7.40	0
8	10	0	8.40	9.20	9.67	9.92	10.00	9.92	9.67	9.20	8.40	0	0	8.40	9.20	9.67	9.92	10.00	9.92	9.67	9.20	8.40	0
8	11	0	9.40	10.20	10.67	10.92	11.00	10.92	10.67	10.20	9.40	0	0	9.40	10.20	10.67	10.92	11.00	10.92	10.67	10.20	9.40	0

VS10		LEFT										MIDDLE										RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
7	1.43	0	0.57	0.97	1.23	1.38	1.43	1.38	1.23	0.97	0.57	0	0	0.57	0.97	1.23	1.38	1.43	1.38	1.23	0.97	0.57	0
8	2	0	0.84	1.39	1.74	1.94	2.00	1.94	1.74	1.39	0.84	0	0	0.84	1.39	1.74	1.94	2.00	1.94	1.74	1.39	0.84	0
9	2.82	0	1.29	2.03	2.49	2.74	2.82	2.74	2.49	2.03	1.29	0	0	1.29	2.03	2.49	2.74	2.82	2.74	2.49	2.03	1.29	0
10	5	0	3.00	4.00	4.58	4.90	5.00	4.90	4.58	4.00	3.00	0	0	3.00	4.00	4.58	4.90	5.00	4.90	4.58	4.00	3.00	0
10	6	0	4.00	5.00	5.58	5.90	6.00	5.90	5.58	5.00	4.00	0	0	4.00	5.00	5.58	5.90	6.00	5.90	5.58	5.00	4.00	0
10	7	0	5.00	6.00	6.58	6.90	7.00	6.90	6.58	6.00	5.00	0	0	5.00	6.00	6.58	6.90	7.00	6.90	6.58	6.00	5.00	0
10	8	0	6.00	7.00	7.58	7.90	8.00	7.90	7.58	7.00	6.00	0	0	6.00	7.00	7.58	7.90	8.00	7.90	7.58	7.00	6.00	0
10	9	0	7.00	8.00	8.58	8.90	9.00	8.90	8.58	8.00	7.00	0	0	7.00	8.00	8.58	8.90	9.00	8.90	8.58	8.00	7.00	0
10	10	0	8.00	9.00	9.58	9.90	10.00	9.90	9.58	9.00	8.00	0	0	8.00	9.00	9.58	9.90	10.00	9.90	9.58	9.00	8.00	0
10	11	0	9.00	10.00	10.58	10.90	11.00	10.90	10.58	10.00	9.00	0	0	9.00	10.00	10.58	10.90	11.00	10.90	10.58	10.00	9.00	0

VS12		LEFT										MIDDLE										RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
8	1.53	0	0.60	1.03	1.31	1.47	1.53	1.47	1.31	1.03	0.60	0	0	0.60	1.03	1.31	1.47	1.53	1.47	1.31	1.03	0.60	0
9	2.03	0	0.83	1.39	1.76	1.96	2.03	1.96	1.76	1.39	0.83	0	0	0.83	1.39	1.76	1.96	2.03	1.96	1.76	1.39	0.83	0
10	2.69	0	1.16	1.88	2.34	2.60	2.69	2.60	2.34	1.88	1.16	0	0	1.16	1.88	2.34	2.60	2.69	2.60	2.34	1.88	1.16	0
11	3.60	0	1.68	2.61	3.18	3.50	3.60	3.50	3.18	2.61	1.68	0	0	1.68	2.61	3.18	3.50	3.60	3.50	3.18	2.61	1.68	0
12	6	0	3.60	4.80	5.50	5.88	6.00	5.88	5.50	4.80	3.60	0	0	3.60	4.80	5.50	5.88	6.00	5.88	5.50	4.80	3.60	0
12	7	0	4.60	5.80	6.50	6.88	7.00	6.88	6.50	5.80	4.60	0	0	4.60	5.80	6.50	6.88	7.00	6.88	6.50	5.80	4.60	0
12	8	0	5.60	6.80	7.50	7.88	8.00	7.88	7.50	6.80	5.60	0	0	5.60	6.80	7.50	7.88	8.00	7.88	7.50	6.80	5.60	0
12	9	0	6.60	7.80	8.50	8.88	9.00	8.88	8.50	7.80	6.60	0	0	6.60	7.80	8.50	8.88	9.00	8.88	8.50	7.80	6.60	0
12	10	0	7.60	8.80	9.50	9.88	10.00	9.88	9.50	8.80	7.60	0	0	7.60	8.80	9.50	9.88	10.00	9.88	9.50	8.80	7.60	0
12	11	0	8.60	9.80	10.50	10.88	11.00	10.88	10.50	9.80	8.60	0	0	8.60	9.80	10.50	10.88	11.00	10.88	10.50	9.80	8.60	0

VS16		LEFT										MIDDLE										RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10	1.75	0	0.68	1.17	1.50	1.69	1.75	1.69	1.50	1.17	0.68	0	0	0.68	1.17	1.50	1.69	1.75	1.69	1.50	1.17	0.68	0
11	2.19	0	0.87	1.48	1.88	2.11	2.19	2.11	1.88	1.48	0.87	0	0	0.87	1.48	1.88	2.11	2.19	2.11	1.88	1.48	0.87	0
12	2.71	0	1.11	1.85	2.34	2.62	2.71	2.62	2.34	1.85	1.11	0	0	1.11	1.85	2.34	2.62	2.71	2.62	2.34	1.85	1.11	0
13	3.33	0	1.42	2.32	2.90	3.23	3.33	3.23	2.90	2.32	1.42	0	0	1.42	2.32	2.90	3.23	3.33	3.23	2.90	2.32	1.42	0
14	4.13	0	1.84	2.94	3.62	4.00	4.13	4.00	3.62	2.94	1.84	0	0	1.84	2.94	3.62	4.00	4.13	4.00	3.62	2.94	1.84	0
15	5.22	0	2.51	3.83	4.63	5.07	5.22	5.07	4.63	3.83	2.51	0	0	2.51	3.83	4.63	5.07	5.22	5.07	4.63	3.83	2.51	0
16	8	0	4.80	6.40	7.33	7.84	8.00	7.84	7.33	6.40	4.80	0	0	4.80	6.40	7.33	7.84	8.00	7.84	7.33	6.40	4.80	0
16	9	0	5.80	7.40	8.33	8.84	9.00	8.84	8.33	7.40	5.80	0	0	5.80	7.40	8.33	8.84	9.00	8.84	8.33	7.40	5.80	0
16	10	0	6.80	8.40	9.33	9.84	10.00	9.84	9.33	8.40	6.80	0	0	6.80	8.40	9.33	9.84	10.00	9.84	9.33	8.40	6.80	0
16	11	0	7.80	9.40	10.33	10.84	11.00	10.84	10.33	9.40	7.80	0	0	7.80	9.40	10.33	10.84	11.00	10.84	10.33	9.40	7.80	0

NOTE: X-DIMENSIONS SHOWN AS PERCENTAGE OF SPAN  
Y-DIMENSIONS LISTED IN TABLES

VS20		LEFT					MIDDLE					RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
14	2.85	0	1.14	1.93	2.46	2.76	2.86	2.76	2.46	1.93	1.14	0.00	
15	3.39	0	1.39	2.32	2.92	3.27	3.39	3.27	2.92	2.32	1.39	0	
16	4	0	1.68	2.77	3.47	3.87	4	3.87	3.47	2.77	1.68	0	
17	4.73	0	2.06	3.33	4.14	4.59	4.73	4.59	4.14	3.33	2.06	0	
18	5.65	0	2.58	4.06	4.97	5.48	5.64	5.48	4.97	4.06	2.58	0	
19	6.88	0	3.38	5.09	6.13	6.7	6.88	6.7	6.13	5.09	3.38	0	
20	10	0	6	8	9.16	9.8	10	9.8	9.16	8	6	0	
20	11	0	7	9	10.16	10.8	11	10.8	10.16	9	7	0	
20	12	0	8	10	11.16	11.8	12	11.8	11.16	10	8	0	
20	13	0	9	11	12.16	12.8	13	12.8	12.16	11	9	0	

VS24		LEFT					MIDDLE					RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
18	4.06	0	1.66	2.78	3.51	3.93	4.06	3.93	3.51	2.78	1.66	0	
19	4.67	0	1.96	3.23	4.05	4.52	4.67	4.52	4.05	3.23	1.96	0	
20	5.36	0	2.31	3.76	4.68	5.2	5.37	5.2	4.68	3.76	2.31	0	
21	6.19	0	2.76	4.4	5.43	6.01	6.19	6.01	5.43	4.4	2.76	0	
22	7.21	0	3.36	5.23	6.37	7	7.2	7	6.37	5.23	3.36	0	
23	8.57	0	4.28	6.39	7.66	8.35	8.57	8.35	7.66	6.39	4.28	0	
24	12	0	7.2	9.6	11	11.76	12	11.76	11	9.6	7.2	0	
24	13	0	8.2	10.6	12	12.76	13	12.76	12	10.6	8.2	0	
24	14	0	9.2	11.6	13	13.76	14	13.76	13	11.6	9.2	0	
24	15	0	10.2	12.6	14	14.76	15	14.76	14	12.6	10.2	0	

VS30		LEFT					MIDDLE					RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
24	6	0	2.53	4.16	5.21	5.81	6	5.81	5.21	4.16	2.53	0	
25	6.71	0	2.89	4.7	5.85	6.5	6.71	6.5	5.85	4.7	2.89	0	
26	7.52	0	3.33	5.33	6.59	7.29	7.52	7.29	6.59	5.33	3.33	0	
27	8.46	0	3.87	6.09	7.46	8.22	8.46	8.22	7.46	6.09	3.87	0	
28	9.61	0	4.59	7.04	8.53	9.35	9.61	9.35	8.53	7.04	4.59	0	
29	11.16	0	5.67	8.38	9.99	10.88	11.16	10.88	9.99	8.38	5.67	0	
30	15	0	9	12	13.75	14.7	15	14.7	13.75	12	9	0	
30	16	0	10	13	14.75	15.7	16	15.7	14.75	13	10	0	
30	17	0	11	14	15.75	16.7	17	16.7	15.75	14	11	0	
30	18	0	12	15	16.75	17.7	18	17.7	16.75	15	12	0	

VS36T		LEFT					MIDDLE					RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
30	8.05	0	3.47	5.64	7.02	7.55	7.55	7.55	7.02	5.64	3.47	0	
31	8.84	0	3.9	6.26	7.75	8.35	8.35	8.35	7.75	6.26	3.9	0	
32	9.75	0	4.41	6.98	8.58	9.25	9.25	9.25	8.58	6.98	4.41	0	
33	10.80	0	5.04	7.84	9.55	10.31	10.31	10.31	9.55	7.84	5.04	0	
34	12.08	0	5.88	8.91	10.75	11.58	11.58	11.58	10.75	8.91	5.88	0	
35	13.79	0	7.1	10.41	12.37	13.29	13.29	13.29	12.37	10.41	7.1	0	
36	18	0	10.8	14.4	16.5	17.5	17.5	17.5	16.5	14.4	10.8	0	
36	19	0	11.8	15.4	17.5	18.5	18.5	18.5	17.5	15.4	11.8	0	
36	20	0	12.8	16.4	18.5	19.5	19.5	19.5	18.5	16.4	12.8	0	
36	21	0	13.8	17.4	19.5	20.5	20.5	20.5	19.5	17.4	13.8	0	

NOTE: X-DIMENSIONS SHOWN AS PERCENTAGE OF SPAN  
Y-DIMENSIONS LISTED IN TABLES

VS42T		LEFT					MIDDLE					RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
36	10.19	0	4.47	7.19	8.91	9.52	9.52	9.52	8.91	7.19	4.47	0	
37	11.06	0	4.96	7.89	9.72	10.4	10.4	10.4	9.72	7.89	4.96	0	
38	12.05	0	5.55	8.69	10.63	11.39	11.39	11.39	10.63	8.69	5.55	0	
39	13.21	0	6.26	9.64	11.7	12.54	12.54	12.54	11.7	9.64	6.26	0	
40	14.59	0	7.2	10.83	13.01	13.93	13.93	13.93	13.01	10.83	7.2	0	
41	16.45	0	8.56	12.47	14.78	15.78	15.78	15.78	14.78	12.47	8.56	0	
42	21	0	12.6	16.8	19.25	20.33	20.33	20.33	19.25	16.8	12.6	0	
42	22	0	13.6	17.8	20.25	21.33	21.33	21.33	20.25	17.8	13.6	0	
42	23	0	14.6	18.8	21.25	22.33	22.33	22.33	21.25	18.8	14.6	0	
42	24	0	15.6	19.8	22.25	23.33	23.33	23.33	22.25	19.8	15.6	0	

VS48T		LEFT					MIDDLE					RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
42	12.39	0	5.52	8.81	10.86	11.63	11.63	11.63	10.86	8.81	5.52	0	
43	13.33	0	6.07	9.57	11.74	12.58	12.58	12.58	11.74	9.57	6.07	0	
44	14.41	0	6.72	10.45	12.74	13.66	13.66	13.66	12.74	10.45	6.72	0	
45	15.65	0	7.52	11.49	13.9	14.9	14.9	14.9	13.9	11.49	7.52	0	
46	17.15	0	8.55	12.78	15.31	16.39	16.39	16.39	15.31	12.78	8.55	0	
47	19.13	0	10.04	14.55	17.21	18.38	18.38	18.38	17.21	14.55	10.04	0	
48	24	0	14.4	19.2	22	23.25	23.25	23.25	22	19.2	14.4	0	
48	25	0	15.4	20.2	23	24.25	24.25	24.25	23	20.2	15.4	0	
48	26	0	16.4	21.2	24	25.25	25.25	25.25	24	21.2	16.4	0	
48	27	0	17.4	22.2	25	26.25	26.25	26.25	25	22.2	17.4	0	

VS54T		LEFT					MIDDLE					RIGHT	
Span	Rise \ X	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
48	14.64	0	6.61	10.47	12.87	13.77	13.77	13.77	12.87	10.47	6.61	0	
49	15.66	0	7.22	11.3	13.81	14.8	14.8	14.8	13.81	11.3	7.22	0	
50	16.80	0	7.94	12.25	14.88	15.94	15.94	15.94	14.88	12.25	7.94	0	
51	18.13	0	8.81	13.37	16.12	17.27	17.27	17.27	16.12	13.37	8.81	0	
52	19.72	0	9.93	14.76	17.64	18.86	18.86	18.86	17.64	14.76	9.93	0	
53	21.82	0	11.55	16.65	19.66	20.97	20.97	20.97	19.66	16.65	11.55	0	
54	27	0	16.2	21.6	24.74	26.14	26.14	26.14	24.74	21.6	16.2	0	
54	28	0	17.2	22.6	25.74	27.14	27.14	27.14	25.74	22.6	17.2	0	
54	29	0	18.2	23.6	26.74	28.14	28.14	28.14	26.74	23.6	18.2	0	
54	30	0	19.2	24.6	27.74	29.14	29.14	29.14	27.74	24.6	19.2	0	

NOTE: X-DIMENSIONS SHOWN AS PERCENTAGE OF SPAN  
Y-DIMENSIONS LISTED IN TABLES