

Load Calculation for Icepeak X-One size Z6



IP X-One Z6		Total strength							
	Strength daN	Level	Level 1	Level 2	Level 3	Level 4	Level 5		
a1	8000U-070	65.8	4	0	0	0	131.6	131.6	
a2	8000U-070	65.8	4	0	0	0	131.6	131.6	
a3	8000U-070	65.8	4	0	0	0	131.6	131.6	
a4	8000U-070	65.8	4	0	0	0	131.6	131.6	
a5	8000U-070	65.8	4	0	0	0	131.6	131.6	
a6	8000U-070	65.8	4	0	0	0	131.6	131.6	
a7	8000U-070	65.8	4	0	0	0	131.6	131.6	
a8	8000U-070	65.8	4	0	0	0	131.6	131.6	
a9	8000U-050	51.6	5	0	0	0	0	103.2	
a10	DC 40	45.7	4	0	0	0	91.4	91.4	
a11	DC 35	33.9	4	0	0	0	67.8	67.8	
a12	DC 35	33.9	4	0	0	0	67.8	67.8	
a13	DC 35	33.9	3	0	0	67.8	67.8	67.8	
a14	DC 35	33.9	3	0	0	67.8	67.8	67.8	
A1	8000U-130	121.75	3	0	0	243.5	0	0	
A2	8000U-130	121.75	3	0	0	243.5	0	0	
A3	8000U-130	121.75	3	0	0	243.5	0	0	
A4	8000U-130	121.75	3	0	0	243.5	0	0	
A5	8000U-090	97.9	3	0	0	195.8	0	0	
A6	8000U-090	97.9	3	0	0	195.8	0	0	
A7	8000U-090	97.9	3	0	0	195.8	0	0	
A8	8000U-090	97.9	3	0	0	195.8	0	0	
A9	8000U-050	51.6	4	0	0	0	103.2	0	
2a1	8000U-230	243.75	2	0	487.5	0	0	0	
2a2	8000U-230	243.75	2	0	487.5	0	0	0	
2a3	8000U-190	199.85	2	0	399.7	0	0	0	
2a4	8000U-190	199.85	2	0	399.7	0	0	0	
2a5	8000U-070	65.8	3	0	0	131.6	0	0	
2a6	8000U-070	65.8	3	0	0	131.6	0	0	
3a1	8000U-470	491.85	1	983.7	0	0	0	0	
3a2	8000U-360	370.6	1	741.2	0	0	0	0	
3a3	8000U-130	121.75	2	0	243.5	0	0	0	
4A1	8000U-190	199.85	1	399.7	0	0	0	0	
b1	8000U-070	65.8	4	0	0	0	131.6	131.6	
b2	8000U-070	65.8	4	0	0	0	131.6	131.6	
b3	8000U-070	65.8	4	0	0	0	131.6	131.6	
b4	8000U-070	65.8	4	0	0	0	131.6	131.6	
b5	8000U-050	51.6	4	0	0	0	103.2	103.2	
b6	8000U-050	51.6	4	0	0	0	103.2	103.2	
b7	8000U-050	51.6	4	0	0	0	103.2	103.2	
b8	8000U-050	51.6	4	0	0	0	103.2	103.2	
b9	8000U-050	51.6	5	0	0	0	0	103.2	
c1	8000U-070	65.8	4	0	0	0	131.6	131.6	
c2	8000U-070	65.8	4	0	0	0	131.6	131.6	
c3	8000U-070	65.8	4	0	0	0	131.6	131.6	
c4	8000U-070	65.8	4	0	0	0	131.6	131.6	
c5	8000U-070	65.8	3	0	0	131.6	131.6	131.6	
c6	8000U-070	65.8	3	0	0	131.6	131.6	131.6	
c7	8000U-070	65.8	3	0	0	131.6	131.6	131.6	
c8	8000U-070	65.8	3	0	0	131.6	131.6	131.6	
c9	DC 40	45.7	3	0	0	91.4	91.4	91.4	
c10	DC 40	45.7	3	0	0	91.4	91.4	91.4	
c11	DC 40	45.7	3	0	0	91.4	91.4	91.4	
c12	DC 40	45.7	3	0	0	91.4	91.4	91.4	
c13	DC 35	33.9	3	0	0	67.8	67.8	67.8	
c14	DC 35	33.9	3	0	0	67.8	67.8	67.8	
CD1	8000U-090	97.9	3	0	0	195.8	0	0	
CD2	8000U-090	97.9	3	0	0	195.8	0	0	
CD3	8000U-090	97.9	3	0	0	195.8	0	0	
CD4	8000U-090	97.9	3	0	0	195.8	0	0	
2c1	8000U-130	121.75	2	0	243.5	0	0	0	
2c2	8000U-130	121.75	2	0	243.5	0	0	0	
2c3	8000U-130	121.75	2	0	243.5	0	0	0	
2c4	8000U-130	121.75	2	0	243.5	0	0	0	
2c5	8000U-050	51.6	2	0	103.2	0	0	0	
2c6	8000U-050	51.6	2	0	103.2	0	0	0	
3c1	8000U-230	243.75	1	487.5	0	0	0	0	
3c2	8000U-230	243.75	1	487.5	0	0	0	0	
3c3	8000U-070	65.8	1	131.6	0	0	0	0	
d1	DC 35	33.9	4	0	0	0	67.8	67.8	
d2	DC 35	33.9	4	0	0	0	67.8	67.8	
d3	DC 35	33.9	4	0	0	0	67.8	67.8	
d4	DC 35	33.9	4	0	0	0	67.8	67.8	
stab	8000U-090	97.9	2	0	195.8	0	0	0	
br1	DC 35	33.9	NO LOAD CALCULATION						
br2	DC 35	33.9	NO LOAD CALCULATION						
br3	DC 35	33.9	NO LOAD CALCULATION						
br4	DC 35	33.9	NO LOAD CALCULATION						
br5	DC 35	33.9	NO LOAD CALCULATION						
br6	DC 35	33.9	NO LOAD CALCULATION						
br7	DC 35	33.9	NO LOAD CALCULATION						
br8	DC 35	33.9	NO LOAD CALCULATION						
br9	DC 35	33.9	NO LOAD CALCULATION						
br10	DC 35	33.9	NO LOAD CALCULATION						
br11	DC 35	33.9	NO LOAD CALCULATION						
br12	DC 35	33.9	NO LOAD CALCULATION						
br13	DC 35	33.9	NO LOAD CALCULATION						
2BR1	DC 35	33.9	NO LOAD CALCULATION						
2BR2	DC 35	33.9	NO LOAD CALCULATION						
2BR3	DC 35	33.9	NO LOAD CALCULATION						
2BR4	DC 35	33.9	NO LOAD CALCULATION						
2BR5	DC 35	33.9	NO LOAD CALCULATION						
2BR6	DC 35	33.9	NO LOAD CALCULATION						
4BR1	8000U-050	51.6	NO LOAD CALCULATION						
4BR2	8000U-050	51.6	NO LOAD CALCULATION						
4BR3	8000U-050	51.6	NO LOAD CALCULATION						
brmian	8000U-090	97.9	NO LOAD CALCULATION						
br5.1	TARAX-200	103.2	NO LOAD CALCULATION						
			L1	L2	L3	L4	L5		
	Total strength		3231.2	3394.1	3966.8	4283	4386.2		
	Theoretical Z3G		23	L1<L2	L2<L3	L3<L4	L4<L5		
	MTOW (kg)		143.207907	150.427691	175.809954	189.824048	194.397908		
	Max allowed weight		143.207907						

BRAKE

Lines data	Manufacturer	Material Cover	Material Core	Diameter	Strength (daN)	A/B	
DC 35	LIROS	-	Dyneema	0.38	33.9	>	20 daN
DC 40	LIROS	-	Dyneema	0.5	45.7	>	20 daN
DC 60	LIROS	-	Dyneema	0.6	71.25	>	20 daN
8000U-050	EDELRID	-	Aramid	0.5	51.6	>	20 daN
8000U-070	EDELRID	-	Aramid	0.7	65.8	>	20 daN
8000U-090	EDELRID	-	Aramid	0.8	97.9	>	20 daN
8000U-130	EDELRID	-	Aramid	1	121.75	>	20 daN
8000U-190	EDELRID	-	Aramid	1.2	199.85	>	20 daN
8000U-230	EDELRID	-	Aramid	1.3	243.75	>	20 daN
8000U-280	EDELRID	-	Aramid	1.6	270.1	>	20 daN
8000U-360	EDELRID	-	Aramid	1.7	370.6	>	20 daN
8000U-470	EDELRID	-	Aramid	1.9	491.85	>	20 daN
TARAX-200	EDELRID	Polyester	Dyneema	1.7	103.2	>	100 daN



A: The absolute minimum strength, F_{break}, obtained from the average 10 samples tested, including brake lines must be equal or greater than 20 daN.

B: The main brake line must have a minimum strength of 100 daN.

C: Strength of each type of lines test on a testing laboratory, the average of 10 samples and the speed of the procedure to break the line must be slower than 0,0166 m/s

D: At each level above, in every cascade of lines and across each line junction the calculated total strength has to be the same or stronger than

IP X-One
SERIAL big
size Each level strength

RISER A	Reference	Level 1 (DaN)	Reference	Level 2 (DaN)	Reference	Level 3 (DaN)	Reference	Level 4 (DaN)	Reference	Level 5 (DaN)
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					A1	8000U-130	121.75	a1	8000U-070	65.8	
								b1	8000U-070	65.8	
			2a1	8000U-230	243.75	A2	8000U-130	121.75	a2	8000U-070	65.8
								b2	8000U-070	65.8	
3a1	8000U-470	491.85	2a2	8000U-230	243.75	A3	8000U-130	121.75	a3	8000U-070	65.8
								b3	8000U-070	65.8	
						A4	8000U-130	121.75	a4	8000U-070	65.8
								b4	8000U-070	65.8	
							Sum L4	a1	65.8		
					A1	121.75	131.6	b1	65.8		
								a2	65.8		
			Sum L2	2a1	243.75	243.5	A2	121.75	131.6	b2	65.8
3a1	491.85	487.5						a3	65.8		
			2a2	243.75	243.5	A3	121.75	131.6	b3	65.8	
								a4	65.8		
						A4	121.75	131.6	b4	65.8	
								b4	65.8		

RISER A	Reference	Level 1 (DaN)	Reference	Level 2 (DaN)	Reference	Level 3 (DaN)	Reference	Level 4 (DaN)	Reference	Level 5 (DaN)
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					A5	8000U-090	97.9	a5	8000U-070	65.8	
								b5	8000U-050	51.6	
			2a3	8000U-190	199.85	A6	8000U-090	97.9	a6	8000U-070	65.8
								b6	8000U-050	51.6	
3a2	8000U-360	370.6	2a4	8000U-190	199.85	A7	8000U-090	97.9	a7	8000U-070	65.8
								b7	8000U-050	51.6	
						A8	8000U-090	97.9	a8	8000U-070	65.8
								b8	8000U-050	51.6	
							Sum L4	a5	65.8		
					A5	97.9	117.4	b5	51.6		
								a6	65.8		
			Sum L2	2a3	199.85	195.8	A6	97.9	117.4	b6	51.6
3a2	370.6	399.7						a7	65.8		
			2a4	199.85	195.8	A7	97.9	117.4	b7	51.6	
								a8	65.8		
						A8	97.9	117.4	b8	51.6	
								b8	51.6		

RISER A	Reference	Level 1 (DaN)	Reference	Level 2 (DaN)	Reference	Level 3 (DaN)	Reference	Level 4 (DaN)	Reference	Level 5 (DaN)
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									a9	8000U-050	51.6		
									b9	8000U-050	51.6		
					2a5	8000U-070	65.8	A9	8000U-050	51.6			
								a10	DC 40	45.7			
			3a3	8000U-130	121.75	2a6	8000U-070	65.8	a11	DC 35	33.9		
								a12	DC 35	33.9			
4A1	8000U-190	199.85	stab	8000U-090	97.9	a13	DC 35	33.9					
						a14	DC 35	33.9					
						c13	DC 35	33.9					
						c14	DC 35	33.9					
							Sum L4	A9	51.6	Sum L5	a9	51.6	
						2a5	65.8	97.3	a10	45.7	103.2	b9	51.6
									a11	33.9			
			Sum L2	3a3	121.75	131.6	2a6	65.8	67.8	a12	33.9		
4A1	199.85	219.65											
			stab	97.9	135.6	a13	33.9						
						a16	33.9						
						c13	33.9						
						c14	33.9						

