

Specification of Monotype-XV

Accepted 1993

3. CONSTRUCTION AND MEASUREMENT RULES

	MAX	MIN	
3.1 FUSELAGE			
3.1.1	Length overall	7465	7435
3.1.2	Distance from bow to mast step pivoting point(middle hole of the ball)	1380	1350
3.1.3	Distance from bow to front of the first cockpit	2655	2625
3.1.4	Distance from bow to the front of the second cockpit	4505	4475
3.1.5	Distance from bow to the end of the second cockpit (to the point of intersection of seat back and deck)	5615	5585
3.1.6	Distance from bow to pivot axis of steering runner	7165	7135
3.1.7	Thickness of plywood details		
3.1.7.1	Cockpit bottom, bulkhead, sides	6,4	5,6
3.1.7.2	Deck between cockpits	opt.	4,0
3.1.7.3	In other places	opt.	3,0
3.1.8	Not more than six additional beams should be used for bow deck reinforcement and two additional floors for bow bottom.		
3.1.9	Design of the mast plank(strengthening construction between deck and bottom) is optional.		
3.1.10	Minimum cross-section of bottom stringers is 25x25mm.		
3.1.11	Minimum cross-section of deck stringers is 25x35mm.		
3.1.12	Deck stringers are reinforced in cockpit part with stringer, but the thickness of deck stringer and reinforcement should not be less than 60mm.		
3.1.13	Fuselage shall be constructed of wood only and edges can be covered once with fibreglass. Max distance of reinforcements from the edge - 35mm.		

All other dimensions should be taken from the official plan.

3.2 RUNNER PLANK

3.2.1	Length overall	4300	4280
3.2.2	Width under fuselage	258	252
3.2.3	Thickness under fuselage	103	90
3.2.4	Width at ends	228	222
3.2.5	Thickness at ends	43	37
3.2.6	Distance from centreline to shroud plate (stay tang)	1250	1230
3.2.7	Curve	35	

- 3.2.8 *Runner plank should be constructed of softwood. Fibreglass is not permitted.*
- 3.2.9 *Construction of runner plank is optional.*
- 3.2.10 *Fixing of runner plank to fuselage is optional except bolts should not reeve the runner plank.*

3.3 MAST

3.3.1	<i>Length overall(including hardware)</i>	7250	7230
3.3.2	<i>Width - measured 400mm from mast heel 4400mm on</i>	183	177
3.3.3	<i>Thickness - measured 400mm from mast heel 4400mm on</i>	75	69
3.3.4	<i>Distance from mast heel to sail mark</i>	7000	6990
3.3.5	<i>Width at sail mark</i>	85	75
3.3.6	<i>Thickness at sail mark</i>	56	46
3.3.7	<i>Distance from mast heel to mast hound</i>	3930	3830
3.3.8	<i>Distance from mast heel to lower crosspiece</i>	2085	2065
3.3.9	<i>Distance from mast heel to upper crosspiece</i>	3930	3830
3.3.10	<i>Length of lower cross-piece</i>	240	210
3.3.11	<i>Length of upper cross-piece</i>	500	450
3.3.12	<i>The bottom of the mast must be fitted with a socket that will pivot freely on the mast step deck ball.</i>		
3.3.13	<i>Halyard should be out of mast and using of stopper at masthead is prohibited.</i>		
3.3.14	<i>Mast shall be constructed of softwood. Fiberglass is not permitted.</i>		
3.3.15	<i>Mast must be hollow.</i>		
3.3.16	<i>The profile of cross-section of mast must assume a reasonable fair and continuous curve.</i>		

3.4 BOOM

3.4.1	<i>Length overall</i>	4500	4480
3.4.2	<i>Width(in the area 800mm from the front edge 3200mm on towards bow)</i>	123	117
3.4.3	<i>Thickness</i>	49	43
3.4.4	<i>Distance between the front edge of the sail mark and aft edge of the mast</i>	4400	4390
3.4.5	<i>Boom must be constructed of softwood.</i>		
3.4.6	<i>Boom must be hollow.</i>		
3.4.7	<i>Fixing of boom to mast is optional.</i>		
3.4.8	<i>The profile of cross-section of boom must assume a reasonable fair and continuous curve.</i>		
3.4.9	<i>For repairs of mast, boom and runner plank fiberglass, with less length than 500mm, is permitted.</i>		

3.5 RUNNERS

3.5.1	<i>Steel plate type</i>		
3.5.1.1	<i>Side runners</i>		
3.5.1.1.1	<i>Plate thickness</i>	11	9
3.5.1.1.2	<i>Plate length</i>	1250	1130
3.5.1.1.3	<i>Plate height</i>	175	165
3.5.1.1.4	<i>Distance between the front edge and bolt hole centre</i>	785	755
3.5.1.1.5	<i>Distance from runner upper edge to the centre of the bolt hole</i>	32	28
3.5.1.2	<i>Steering runner</i>		
3.5.1.2.1	<i>Plate thickness</i>	11	9
3.5.1.2.2	<i>Plate length</i>	910	810
3.5.1.2.3	<i>Plate height</i>	175	140
3.5.1.2.4	<i>Distance between the front edge and centre of the bolt hole</i>	555	525
3.5.1.2.5	<i>Distance from runner upper edge to the centre of the bolt hole</i>	32	28
3.5.2	<i>Length of the runner assembly should not be less than 50% of the runner length and height of the assembly should not be less than 60mm.</i>		
3.5.3	<i>Type of steel plate is optional.</i>		
3.5.4	<i>Wood type runners</i>		
3.5.4.1	<i>Hard wood shall be used(oak), fiberglass may be added.</i>		
3.5.4.2	<i>350mm from the front edge up to 100mm from the back edge runner section profile is optional.</i>		
3.5.4.3	<i>Side runners</i>		
3.5.4.3.1	<i>Length</i>	1535	1485
3.5.4.3.2	<i>Height</i>	175	165
3.5.4.3.3	<i>Thickness(chock area)</i>	49	46
3.5.4.3.4	<i>Distance between front edge of the runner and bolt hole centre</i>	935	885
3.5.4.3.5	<i>Distance from runner upper edge to the centre of the bolt hole</i>	32	28
3.5.4.4	<i>Steering runner</i>		
3.5.4.4.1	<i>Length</i>	1115	1065
3.5.4.4.2	<i>Height</i>	150	140
3.5.4.4.3	<i>Thickness (chock area)</i>	49	46
3.5.4.4.4	<i>Distance from the front edge of the runner to bolt hole centre</i>	665	615
3.5.4.4.5	<i>Distance from the upper edge of the runner to the centre of the bolt hole</i>	32	28
3.5.5	<i>The front upper edge of the runner should have a 15mm radius. Two sets of runners can be used during one event.</i>		

3.5.6	<i>Runner base and cut</i>		
3.5.6.1	<i>Longitudinal distance from pivot axis of steering runner to pivot axis of side runner</i>	4910	4890
3.5.6.2	<i>Lateral distance between side runner edges below pivot axis (to be measured in sailing trim excluding ballast and sailors)</i>	4059	4037

3.6 SAIL

3.6.1	<i>Material may be nylon, cotton or dacron.</i>		
3.6.2	<i>Length of hoist</i>	6850	6600
3.6.3	<i>Length of foot</i>	4400	4220
3.6.4	<i>Length of leech</i>	6800	6600
3.6.5	<i>There shall be two girth measurements including bolt rope to be determined by folding the sail in quarters. Top girth measurement 1320mm or less. Middle girth measurement 2450mm or less.</i>		
3.6.6	<i>The sail shall be constructed with five batten pockets. All five batten pockets shall be full length, extending from the leech to bolt rope.</i>		
3.6.7	<i>Batten pockets shall lie in horizontal position.</i>		
3.6.8	<i>Batten material and structural characteristics are optional.</i>		
3.6.9	<i>Batten pockets width 85mm or less.</i>		
3.6.10	<i>Distance between centre lines of batten pockets</i>	1080	1040
3.6.11	<i>The headboard width shall be 120mm or less.</i>		
3.6.12	<i>Sail may have two rows of reef points.</i>		
3.6.13	<i>An iceboat is restricted to the use of two sails in a regatta.</i>		
3.6.14	<i>National letter(s), yacht number and insignia "XV" shall be affixed top on both sides of the sail, the colour of the material used should contrast with the sail and be a minimum of 350mm high.</i>		

3.7 RIGGING

3.7.1	<i>Forestay shall be 7mm or more in diameter.</i>
3.7.2	<i>Shrouds shall be 6mm or more in diameter.</i>
3.7.3	<i>All other stays and steel cables shall be 3mm or more in diameter.</i>
3.7.4	<i>Nine sheet blocks shall be installed.</i>
3.7.5	<i>Three sheet blocks shall be installed aft of the second cockpit - two on boom and one on deck.</i>
3.7.6	<i>Six sheet blocks shall be installed between cockpits - three on boom, one on deck and two in fuselage (below deck).</i>
3.7.7	<i>Two sheet cleats may be installed.</i>

3.8 FITTINGS

3.8.1	<i>Side chock</i>		
3.8.1.1	<i>Length of chock</i>	342	338
3.8.1.2	<i>Depth of chock</i>	103	97
3.8.1.3	<i>Width of runner slot at the smallest dimension where the chock comes in contact with the side of the runner or stiffening element</i>	49	47
3.8.1.4	<i>Distance from lower edge of the chock to the centre of the bolt hole</i>	32	28
3.8.1.5	<i>Construction of side chock is optional.</i>		
3.8.2	<i>Steering</i>		
3.8.2.1	<i>Steering wheel diameter</i>	opt.	400
3.8.2.2	<i>Diameter of hawser reel</i>	40	35
3.8.2.3	<i>Diameter of steering runner sector</i>	opt.	380
3.8.2.4	<i>Depth of steering chock</i>	95	opt.
3.8.2.5	<i>Distance from the lower edge of the steering runner to the centre of the bolt hole</i>	27	23
3.8.2.6	<i>Steering chock axis diameter</i>	opt.	27
3.8.2.7	<i>Diameter of steering chock steel cable shall be 3mm or more.</i>		
3.8.2.8	<i>Steering chock may incorporate a shock absorbing feature.</i>		
3.8.2.9	<i>Construction and dimensions of fittings not fixed in these rules are optional.</i>		
3.8.2.10	<i>Light metals and their alloys are prohibited except when used for sheet blocks systems.</i>		

3.9 WEIGHT

The complete Monotype-XV minimum weight should be 205kg. Complete Monotype-XV should consist of:

- fuselage with all hardware, blocks;*
- mast with stays hardware and halyard used while sailing;*
- runner plank with hardware;*
- runners - one set;*
- sail with five battens.*

4. ADDITIONAL RULES

4.1 Ballast

The use of ballast during competitions is allowed and it should be installed in the cockpit. Ballast, placed outside the cockpit, can be used during speed races only and should be fixed properly. Sand, lead or steel shot is recommended for ballast. The use of big separate heavy things is prohibited.

4.2 Crew

During competitions the crew may be one or two persons.

5. PLANS

The following are the current plans, effective January 1, 1993

General Class Plan 1993

Fuselage 1993

Runners 1993

Runner Plank 1993

Mast 1993

Boom 1993