

saskrs 'Box Rule'

Metre Class Rules and formulations:

An open source model and whereby yachts have to fit within the box to compete in class

The model is focussed on displacement type hulls, and where planing type hulls fall outside the box parameters.

The General methodology is that as approach planing downwind SA/D levels, the boats fall outside the box, and is self compensating in that boats towards the top of box range usually are a bit shorter on waterline. i.a.w. the model limits actual sail area in that cannot achieve max "box #" and max "box waterline" at the same time.

The box formula is very simple and creates an "IRC Type" Hull Factor (HF) divided by the yachts DLR #, adjusts for bulb keel and genoa overlap "range", and times a constant to convert formula to a comparable #, and which by default must be less than 1.000

The formula is:
$$\frac{(MSA+SPA)/3*1000}{DLR*(overlap\ factor)/("underlap"\ factor)*(keel\ factor)*24} \text{---HF-----}$$

General restrictions: any sail fabric, no carbon masts, IMS type mainsail roach (MHW/E<0.651)

NO fixed prop or R/Furler allowance.

Shoal draft bulb/wing keels =std draft fin keel #

Larger heavier cruisers can be included if under box # and over LOA range, and if rest of fleet consents.

SBR# , is Sportboat Rating Formula "cut" ex USA.

Class 10M

SBR # <17.5

Box < 1.000

Range LWP+SO=<10.0m or LWP+SO=<9.00 but LOA > 10.00

Class	LOA	LWP	SO	Mass	MSA	JSA	SPA	LPG>145%	LPG<125%	DLR	Keel	Box #	SBR#
Petersen 33	9.98	8.66	0.45	5000	20.40	39.40	68.70	1.20	1.0	215	1.00	0.797	13.56

Stadt 34 FR		10.30	8.43	0.90	4697	34.30	34.30	69.70	1.00	1.0	219	1.0	0.811	17.14
Stadt 34 MH		10.30	8.43	0.90	4953	24.00	38.10	75.80	1.20	1.0	230	1.0	0.839	15.25
Ocean 31		9.31	8.80	0.34	4489	21.90	30.17	61.80	1.00	1.0	184	1.0	0.812	13.82
Muir-2	#3	9.40	9.09	0.21	4535	28.50	23.75	64.00	1.00	1.1	168	1.1	0.970	14.84
Charger 33		10.05	8.81	0.63	4690	35.56	32.64	63.69	1.00	1.0	191	1.0	0.885	16.85
Norlin 34		10.24	8.50	0.39	5742	26.13	41.98	89.70	1.20	1.0	261	1.0	0.743	14.24
Atlantis 36		11.00	9.00	0.90	6630	25.60	41.78	81.70	1.20	1.0	253	1.0	0.613	13.04
Holiday 34 MH		10.40	9.09	0.42	5140	25.30	33.00	65.35	1.20	1.0	191	1.0	0.888	13.78
Dufour 34		10.30	9.25	0.66	5562	34.37	32.80	74.00	1.00	1.0	196	1.1	0.874	15.64
Bavaria 36	#1	10.96	9.40	0.41	5500	31.50	37.50	74.44	1.00	1.0	185	1.1	0.918	15.60
First 345		10.55	8.37	1.33	5335	28.30	36.50	69.96	1.20	1.0	254	1.0	0.697	14.82
First 35 s5		10.64	9.24	0.60	5450	36.00	33.30	62.73	1.20	1.0	193	1.0	0.903	15.17