MELGES 20

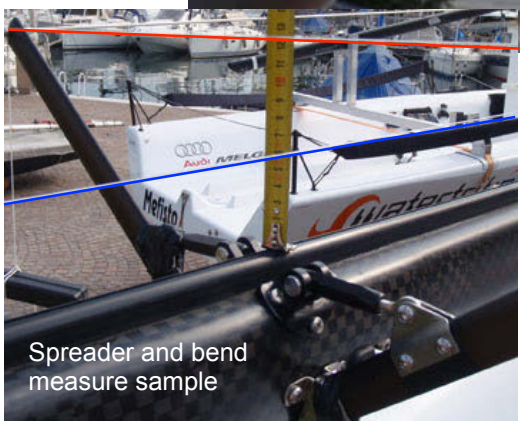
V 2.4

Tools

to make a proper job at least these tools are needed:
- tension gauge Loos&Co PT1-M
- 10 mt tape measure possibly metallic
- plier and screwdriver
- 10 mt very light rope
- caliber

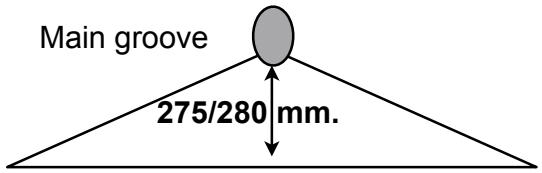
Step 1 spreaders

with the mast orizontal trim your diamond simmetrical at a tension of about 18
put a small string on the shrouds just above the speaders and measure the distance between the string and the main groove.
Tune the screws until you obtain the measures below.
Check both sides from groove to shroud to have the same measure

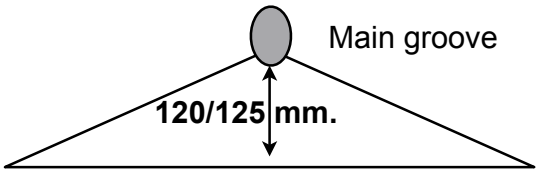


Spreader and bend measure sample

Spreaders 1 angle



Spreaders 2 angle



MELGES 20

V 2.4

Step 2 rake

Hoist the mast, leave the lowers completely slack and trim the uppers at 27 with the track completely fwd.
Check that the mast is upright.
Hoist a tape measure with the main halyard, lock it and check the “rake” measuring to the intesection of the transom and the bottom of the hull. This measure should be **9395 mm**

Step 3 shrouds setting

To have the best accuracy with the gauge is better to have high tensions, therefore we prefer to define the base setting with the tracks all the way back.
Tune your turnbuckles to obtain the numbers in the gray line below.
Obviously put the mast straight tuning the lowers.
ATTENTION: to release tracks with these tension is hard and dangerous, take care of your fingers!

Shrouds setting

Tension Gauge Loos&Co PT1-M

TWS (kn)	UPPERS	LOWERS	DIAM.	FST
0 / 6	FWD / -2	FWD / 0	- 3	0
7 / 10	2 BACK / 0	1 BACK / 0	0	0
11 / 14	MID / +2	MIDDLE / 0	+ 5	0
15 / 19	BACK / +3 (+5)	4 BACK / 0	+ 5 (TOT+10)	0
20 +	BACK / +2 (+7)	BACK / 0	+ 5 (TOT+15)	0
Base setting both tracks back	38	34	26	37

Tracks/turns variations from the base setting

Base setting with Harken digital gauge	280	200	110	250

Step 4 record your tuning

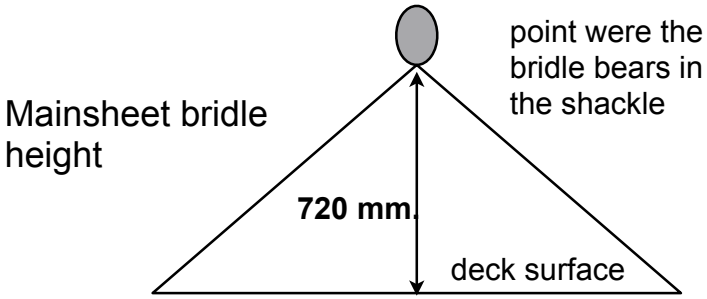
Measure with a caliber the distance between the screws in the turnbuckles and mark it, next time will be a lot easier to prepare the boat.
Remember that every material is “moving” therefore keep checking your tensions with the gauge and record the unavoidable changes.

MELGES 20

V 2.4

Step 5 mainsheet bridle

Check mainsheet bridle to be at 720mm max height from deck. See rule C.1.2 (f)



Boat handling						
TWS (kn)	Wang	Mainsheet	Outhaul	Jib lead	Jib sheet	Jib inhaul
0 / 6	off	upper TT just flying	4 cm ease	max fwd for round base	upper TT 50% flying	clew 8/14 cm in
7 / 10	off	upper TT just flying	3 cm ease	1 hole back from max fwd	upper TT 70% flying	clew 15/20 cm in
11 / 14	15 / 60 %	max for right heel	1 cm ease	2 hole back from max fwd	upper TT 100% flying	clew 10/15 cm in
15 / 19	60 / 100 %	max for right heel	max	3 hole back from max fwd	max for right heel	clew 5/10 cm in
20 +	100%	max for right heel	max	4 hole back from max fwd	max for right heel	off

MELGES 20

V 2.4

Devices effects on mast	
More S1 angle (bigger numbers in step 1)	more prebend in the lower part of the mast
More S2 angle (bigger numbers in step 1)	more prebend in the upper part of the mast
More Diamond tension	more prebend
More Uppers tension	more tension in the headstay, bend effect depending on spreaders angle
More Lowers tension	less bend in the lower part of the mast and more tension in the headstay, both effects are stronger with tracks back
Uppers track position back	more tension in the headstay
Lowers track position back	less bend in the lower part of the mast and more tension in the headstay
More wang	more tension in the main leech and more bend in the lower part of the mast

Mast prebend sample with only diamond and different spreaders angle