ROTAX MOJO MAX Challenge
Technical Regulations 2014
Appendix for 125 Mini MAX and 125 Micro MAX

(The Technical Regulations 2014 replace the Technical Regulations 2013
Version 31.10.2014

1. United States Mini Max:

-For the Mini Max, everything that is not specified below, latest technical regulation 2014 for engine configuration 125 Junior Max is valid, along with 2014 USRMC Supplemental Technical Regulation.

1.1. Chassis

-Wheelbase: 1041.4 mm (41 inches) maximum
-Maximum overall width 1333.50 mm (52.50 inches) including side pod protection.

1.2. Rear Protection

-Full coverage rear bumper is mandatory. Full coverage is defined as covering inside half of each rear tire at all times, and may not protrude outboard of outer edge of rear tires, under all conditions.

1.3 Tires

-Mini Max (Dry) D1 Mojo: Front Slicks: 4.5 x 10.0 – 5, Rear Slicks: 4.5 x 10.0 – 5
-Mini Max (Wet) W2 Mojo: Front and Rear: 4.5 x 10.0 – 5

1.4 Mini Max Carburetor

-Only idle jets stamped 30 or 60 are allowed.
-Only idle emulsion tubes 30 or 60 are allowed.
-It is not mandatory that the idle jet and emulsion tube show the same size.

1.5 Mini Max Gearing

-13 tooth front drive sprocket is required.
-82 tooth rear driver sprocket is required.

9.10) Technical Specification (within the engine seal) for ROTAX kart engine 125 Mini MAX (10 kW):

For the engine configuration 125 Mini MAX, everything that is not specified below, latest technical regulation 2013 for engine configuration 125 Junior MAX is valid.
It is the responsibility of the competitor to check his equipment (all components outside the engine seal and mentioned below), to assure that his equipment is in line with the technical specification below!

9.10.1) Squish gap:

a) 125 Mini MAX 1,20-1,80mm

For the United States:
-125 Mini Max 2.80 mm minimum

To achieve the defined squish gap, a spacer (ROTAX part no. 626 420), plus the different required base gaskets must be used. The squish gap must be measured with a certified slide gauge and by using a 3 mm tin wire. The crankshaft must be turned by hand slowly over TDC (top dead center) to squeeze the tin wire.
Recommended 3 mm tin wire (ROTAX part no. 580 132).
The squish gap must be measured on the left and right side in the direction of the piston pin.
The average value of the two measurements counts.

9.10.2) Inlet System:

The gap between the two reed petal stoppers must be of a minimum of 20.5 mm in any place between the two stoppers and must be evenly spaced from the center of the reed cage, as shown in the illustration below. The stoppers must be of original curvature and shape.

9.11) Technical Specification (outside the engine seal) for ROTAX kart engine 125 Mini MAX (10 kW):

For the engine configuration 125 Mini MAX, everything that is not specified below, the Technical Specification of items 9.2 for engine configuration 125 Junior MAX is valid. It is the responsibility of the competitor to check his equipment (all components outside the engine seal and mentioned below), to assure that his equipment is in line with the technical specification below!

9.11.1) Intake restrictor:

Authorized distributors organizing a national MAX Challenge for the category 125 Mini MAX may determine which intake restrictor must be used.

a) Version 1
   The intake restrictor (ROTAX part no. 267 535) must be fitted between the carburetor flange and the carburetor.
   The intake restrictor must show an inner diameter of 19,0 +0,0/-0,2 mm.
   The intake restrictor must show a blue anodized surface.

9.11.2) Exhaust system:

a) The exhaust restrictor (ROTAX part no. 273 972) must be used instead of the original exhaust socket (fitted to the cylinder).
b) The exhaust restrictor must show an inner-diameter not bigger than 22,0 + 0,20 mm.
c) Exhaust steel mat is an allowed option.

9.11.3) Noise emissions:

a) Noise isolating mat (see illustration exhaust system) has to be replaced by an original ROTAX spare part, if the noise emission is exceeding 90 dB (A).
b) Noise emission measuring procedure:
   The measuring place has to be at section of the track where the engine is operated under full load and at a range between 9.000 and 10.000 rpm.
   The microphone has to be installed 1 meter above the level of the track in a rectangular angle to the track.
   The distance between the microphone and the kart on the ideal line on the track has to be 7,5 meters.
   The kart has to be operated under full load at the ideal line on the track.

2. United States Micro Max:

-For the Micro Max, everything that is not specified below, latest technical regulation 2014 for engine configuration 125 Junior Max is valid, along with 2014 USRMC Supplemental Technical Regulation.

2.1. Chassis

-Maximum wheelbase 950 mm and Minimum 900 mm.
-Maximum over all width including all body work 1270 mm (50 inches).

1.2. Rear Protection

-Full coverage rear bumper is mandatory. Full coverage is defined as covering inside half of each rear tire at all times, and may not protrude outboard of outer edge of rear tires, under all conditions.

1.3 Tires

-Micro Max (Dry) D1 Mojo: Front Slicks: 4.5 x 10.0 – 5, Rear Slicks: 4.5 x 10.0 – 5
-Micro Max (Wet) W2 Mojo: Front and Rear: 4.5 x 10.0 – 5

1.4 Micro Max Carburetor

-3.6 floats only, 60 idle jet only, 60 insert idle jet only
-All other 2014 specified regulations apply.

- - Micro Max main jets limited to those supplied in Rotax Micro Max jet package, 115-118-120-122-125-128-130.

1.5 Micro Max Gearing

-14 tooth front drive sprocket is required
-73 tooth rear driver sprocket is required

9.12) Technical Specification (within the engine seal) for ROTAX kart engine 125 Micro MAX (5 kW):

For the engine configuration 125 Micro MAX, everything that is not specified below, the Technical Specification of items 9.1 for engine configuration 125 Junior MAX is valid.

9.12.1) Squish gap:

a) 125 Micro MAX 2,40-2,70mm
   Authorized distributors organizing a national MAX Challenge for the category 125 Micro MAX may determine a more restrictive squish gap within this tolerance.
b) To achieve the defined squish gap, a spacer (ROTAX part no. 626 420, same shape as a cylinder base gasket) with a thickness of 1,25mm OR 1mm plus the different required base gaskets must be used.
   The squish gap must be measured with a certified slide gauge and by using a 3 mm tin wire. The crankshaft must be turned by hand slowly over TDC (top dead center) to squeeze the tin wire.
   Recommended 3mm tin wire (ROTAX part no. 580 132).
   The squish gap must be measured on the left and right side in the direction of the piston pin.
   The average value of the two measurements counts.

9.13) Technical Specification (outside the engine seal) for ROTAX kart engine 125 Micro MAX (5 kW):

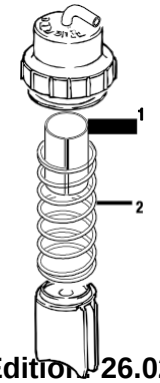
For the engine configuration 125 Micro MAX, everything that is not specified below, latest technical regulation 2012 for engine configuration 125 Junior MAX is valid.
It is the responsibility of the competitor to check his equipment (all components outside the engine seal and mentioned below), to assure that his equipment is in line with the technical specification below!

9.13.1) Exhaust restrictor:

a) The exhaust restrictor (ROTAX part no. 273 972) must be used instead of the original exhaust socket (fitted to the cylinder).
b) The exhaust restrictor must show an inner-diameter not bigger than 22,0 +0,20 mm.

9.13.2) Carburetor:

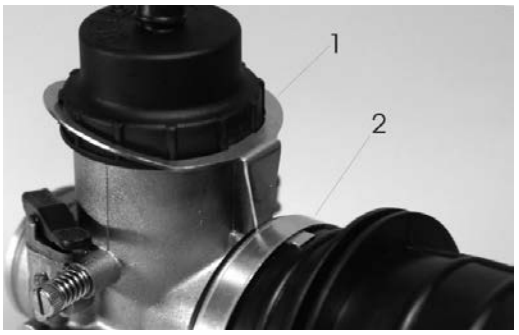
a) The spacer (pos. 1, see illustration below, ROTAX part no. 251 730) must be fitted in the carburetor to limit the opening of the throttle.
b) The length of the spacer has to be 38,0 +/-0,2 mm.



c) The tolerance gauge (ROTAX part no. 277 400) must **not** be able to turn around (opening limit of carburetor slide)!

d) The position of the cap of the carburetor must be fixed by means of the fixation plate (pos. 1 see illustration below, ROTAX part no. 251 790, see attached picture).

e) The cap of the carburetor has to be screwed completely on to the carburetor.



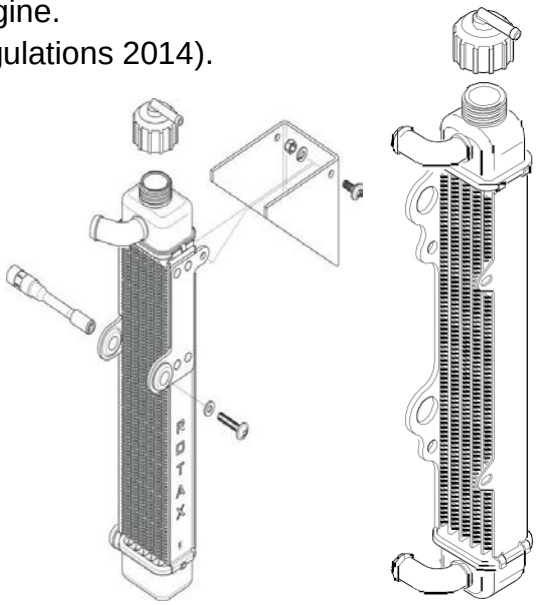
f) Only one rubber gasket is allowed to be used in the carburetor cap.

9.13.3) Radiator:

a) A specific "Micro MAX" radiator (ROTAX part no. 295 924 or 295 923) must be used instead of the original radiator.

b) Radiator must be mounted with all components similar to the illustration version 2 or 3 for the 125 MAX engine.
(see item 9.7.8 of the technical regulations 2014).

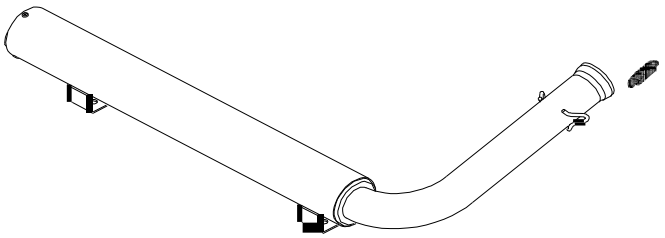
c) Cooling area:
height = 280 - 300 mm
width = 58 - 62 mm
thickness of radiator = 30 - 34 mm



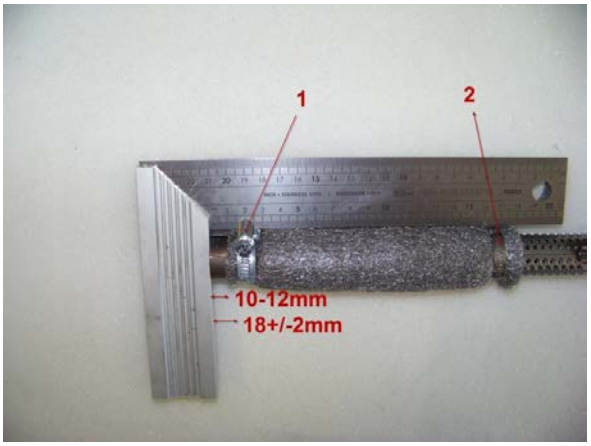
d) No additional non-original-cooling-device is allowed.
For version 1 and 2 tape applied around the radiator is the only allowed air flow control. Tape may not be removed from the radiator during operation on the track. All other means of air flow control through the radiator are prohibited (except of the original plastic flap for version 3). Only none-printed tape (no advertising) is allowed. Removal of the original flap is an acceptable configuration.

9.13.4) Exhaust system:

a) The specific "Micro MAX" exhaust system must be used instead of the original exhaust system (see illustration below).
b) The inner diameter of the 90° tube at the end of the silencer must be 15 +/- 0,30 mm.



c) No exhaust leakage allowed nor tolerated (no signs of oil). Exhaust must be sealed at socket (restrictor) to pipe using heat resistant orange or red silicone. Leakage between the cylinder and socket (restrictor) is not allowed.
d) Additional to the standard isolation mat a special steel isolation mat of the square dimension of 165 +10 mm is mandatory to be assembled underneath the standard isolation mat as in following illustration (ROTAX part no. of kit 297983).



Clamp (1) must be fitted at a distance of 18+/-2mm, measured from the end of the tube.
Clamp (2) must be fitted at the end area of the steel isolation mat.
10-12mm is a specification for assembly purpose only!
Both clamps are mandatory.

e) For measuring the exhaust gas temperature, it is allowed to weld on a socket on top of the exhaust in an area of 50 - 80 mm from the ball joint.

f) The exhaust cover outlet must be installed as supplied by ROTAX in the downward pointing position. In the case of a thermic problem an isolation mat or isolation plate can be used.
g) Usage of 4 attachment springs (Rotax part # 938795) is mandatory (exhaust pipe to exhaust flange).
h) No modification, damage or distortion of exhaust pipe and exhaust socket is permitted.
i) Exhaust pipe must be installed firmly using a rigid pipe mount. The exhaust pipe must be mounted to the rigid pipe mount using 2 Rotax silent blocks (part # 660920 and or 260657 allowed). The deflection of the 2 silent blocks is the only pipe movement allowed. The pipe must be mounted in a neutral position with no stress on the 2 silent blocks.

9.13.5) Noise emissions:

a) Noise isolating mat (see illustration exhaust system) has to be replaced by an original ROTAX spare part, if the noise emission is exceeding 90 dB (A).
b) Noise emission measuring procedure:
The measuring place has to be at section of the track where the engine is operated under full load and at a range between 8.000 and 9.000 rpm.
The microphone has to be installed 1 meter above the level of the track in a rectangular angle to the track.
The distance between the microphone and the kart on the ideal line on the track has to be 7,5 meters.
The kart has to be operated under full load at the ideal line on the track.

9.2) General information:

Micro and Mini Chassis:

-Minimum rear track width 1079.50 mm (42.5 inches).

-The highest point at the center of the seat back shall be no lower than 30.5 cm (12 inches) for the tracks surface.

-CIK axle wall thickness requirements are not applicable.

Micro and Mini Rear Protection:

-CIK type plastic rear protection system is preferred. Industry standard is also accepted, with closed loop "elephant ear" design also preferred.

-Bottom bar between frame rails is required.

-Top Bar may not be located lower than the height of the rear axle, nor higher than the plane of the rear tires.

-Minimum bar outside diameter is 16 mm.

-Event Technical Director is final acceptance of rear bumper and side protection.

Micro and Mini Tires:

-No bead locks required.

-Maximum mounted tire width of 145 mm.

-Maximum Tire Circumference at any temperature is 819.15 mm (32.25 inches). This is measured on the tire center line with a flat tape measure. Debris left on the tire must be removed with rag or gloved hand only, prior to measurement.

Micro and Mini Bodywork:

-Side pod protection must be used as supplied from chassis manufacturer and may not be modified to allow "narrow track width". Extension devices may be used, no other modification of factory design is accepted.

-Side pods may protrude a maximum of 12.7 mm (½ inch) past the outer edge of the rear wheels in all conditions, including "Wet Conditions".

-Cadet nose cone may be of full design with maximum outboard protrusion of 40 mm per side.