ROTAX MAX CHALLENGE INTERNATIONAL TROPHY

MICRO MAX & MINI MAX
Technical Regulations 2025

1. GENERAL

The RMC Technical Regulations 2025 replace the RMC Technical Regulations 2024.

Anything which is not expressly allowed in the technical regulations is forbidden.

The English language is the authentic version.

1.1 CATEGORIES

Karts used in the Rotax MAX Challenge (RMC), and International Rotax MAX Challenge Events (IRMCE) are divided into the following classes:

- 125 Micro MAX
- 125 Mini MAX

Note

The 125 Junior MAX engine is the basis for the engine configurations 125 Micro MAX and 125 Mini MAX. Only the deviations for 125 Micro MAX and 125 Mini MAX from the standard Technical Regulation for the 125 Junior MAX engine are defined.

1.2 AMOUNT OF EQUIPMENT

For each RMC race event (from qualifying practice to the final) the following maximum amount of equipment is allowed:

- 1 chassis
- 1 set of dry tires *
- 1 set of wet tires *
- 2 engines

*In the event of a race tire being damaged (Slick or Wet), the technical scrutineer may allow the competitor to nominate a "USED" tire of similar wear from the drivers registered practice tires as a replacement. The damage must be reported to the scrutineer immediately after the on-track action where the damage occurred, and prior to leaving the parc ferme / scale area.

2. EQUIPMENT

2.1 CHASSIS 125 MICRO MAX, 125 MINI MAX

For IRMCE or National RMC's any chassis sanctioned by an authorized Rotax distributor or with a valid CIK-FIA homologation is allowed with a wheelbase of 950 mm. Front brakes are not allowed.

The brake system, bodywork and front bumper must have a valid CIK-FIA homologation.

2.2 CHASSIS PROTECTION

It is permitted to attach chassis protectors to the chassis rails left, right and front. The only material permitted is plastic. The installation and wear must satisfy the scrutineers of the event.

2.3 BODYWORK 125 MICRO MAX, 125 MINI MAX,

In accordance with regulations of national Federations or CIK-FIA. At IRMCE bodywork with current CIK-FIA homologation validity only is allowed.

2.4 TIRES

At all RMC and IRMCE following tires have to be used:

			Front Tyre	Rear Tyre
125 Micro MAX	Dry	Mojo C2 CIK Mini	4.0 / 10.0 - 5	5.0 / 11.0 - 5
	Wet	Mojo CW CIK Mini	10 x 3,60 - 5	11 x 4,50 - 5
125 Mini MAX	Dry	Mojo C2 CIK Mini	4.0 / 10.0 - 5	5.0 / 11.0 - 5
	Wet	Mojo CW CIK Mini	10 x 3,60 - 5	11 x 4,50 - 5
	Wet	Mojo W5 CIK	10 x 4,50 - 5	11 x 6,00 - 5

- Strictly no modifications or tire treatment allowed.
- Recommended equipment to detect tire treatment is Mini-RAE-Lite.
- Threshold value of maximum 4 ppm is recommended.
- Tires must be mounted according to the sense of rotation defined on the tire.

2.5 DATA ACQUISITION

Systems which permit the reading/recording of following data only are allowed:

- Lap time
- Engine rpm (by induction on the high-tension cable)
- Two indications of temperature
- The speed of one wheel
- Acceleration in X/Y direction
- Position (via GPS system)
- Steering wheel angle sensor
- Connection of the data acquisition system to the original Rotax battery is allowed
- During free practice also, telemetry systems are allowed
- ROTAX TRAX System

2.6 COMPOSITE MATERIALS

Composite materials (carbon-fiber, etc.) are banned except for the seat and the floor tray.

Alloys from different metals / substances are not considered as composite materials.

2.7 SAFETY EQUIPMENT

For RMC overalls, helmets, kart shoes, gloves, neck protection and other kind of driver protection must comply with the regulations of the national Federation or CIK-FIA.

For IRMCE article 7 of CIK-FIA technical regulations apply.

2.8 FUEL / OIL

- Unleaded fuel 98 octane, from TOTAL ACCESS service station located at Voie de la Liberté RD 323, Aérodrome, 72100 LE MANS
- The use of gasoline with a different octane rating and/or a different origin than the gas-station designated by the Promoter is strictly forbidden. The use of additive is forbidden.
- At any moment of the competition, the Chief Scrutineer can change the fuel used by the Driver or the Entrant by another one supplied by the Organizer.
- For IRMCE, Continental (Zone) and National RMCs events only
- XPS CASTOR RACING OIL 2T oil mixed at a 2% ratio is mandatory

2.9 ADVERTISING ON ENGINES

No sponsor stickers are allowed on the engine and engine accessories, except ROTAX, BRP, Mojo, XPS.

3. TECHNICAL SPECIFICATION WITHIN THE ENGINE SEAL FOR ROTAX MAX KART ENGINES

3.1 SQUISH GAP

The crankshaft must be turned by hand slowly over top dead center to squeeze the tin wire.

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.

		Minimum
125 Micro MAX	3-mm tin wire (Rotax 580132)	2,40 mm
125 Mini MAX	2-mm tin wire (Rotax 580130)	1,20 mm

To achieve the defined minimum squish gap one spacer (Rotax 626420, with same shape as cylinder base gasket) in combination with at least two-cylinder base gaskets (one below the spacer and one above the spacer) must be used.

3.2 CYLINDER

3.2.1 Cylinder has to be marked with “ROTAX RACING” logo (see pictures below).

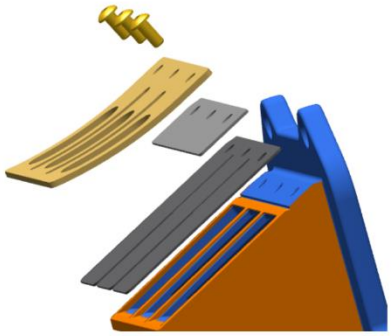
125 Micro MAX, 125 Mini MAX :

Cylinder with one main exhaust port and without exhaust valve.

Cylinders marked with identification code **413530 only** are legal to be used.

3.3 INLET SYSTEM

For 125 Micro MAX and 125 Mini MAX



It is mandatory to add 2 x additional “distance plates” to the reed block assy.

The “distance plates” must be secured tightly between the reed petals and the curved stopper plate on both sides of the reed assy and in the order as show in the diagram.

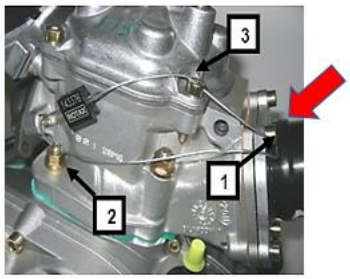
It is allowed to install up to 2 gaskets between the reed block assy and the cylinder..

For Information only / non-tech item:

The assembly should utilize only oval head screws M3x6

(ROTAX Part number 240351).

The use of tap tight fixings is not recommended for this application.



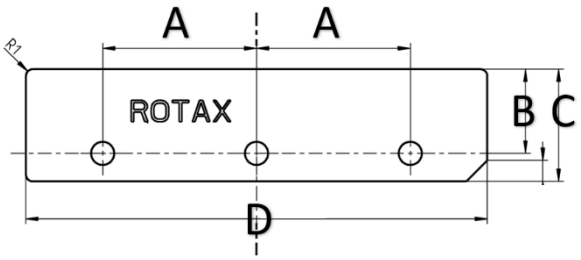
For identification purposes that the distance plates are installed, a M6 washer should be placed under the bolt which is secured with the seal in position 1 as indicated in the picture.

The 2 x distance plates must be engraved “ROTAX“ (as per the drawing below)

The plate must be flat with no curvature and meet the below specification.

A ROTAX part number may be engraved on the plate.

	Measurement	Tolerance
A	22,00 mm	+0,2 mm -0,2 mm
B	10,00 mm	+0,3 mm -0,3 mm
C	16,00 mm	+0,3 mm -0,3 mm
D	66,00 mm	+0,7 mm -0,7 mm
Distance plate thickness	0,70 mm	+0,08 mm -0.08 mm
Location holes	3,3 mm	+0.2 mm -0,2 mm



3.3.1 Crankcase

125 Micro MAX and 125 Mini MAX

The only crankcases legal to be used for racing in the 125 Micro MAX and 125 Mini MAX categories will be the original machined pick-up flange type with casting codes 6211885 (ignition sensor side) and 6211893 (clutch side).

4. TECHNICAL SPECIFICATION OUTSIDE THE ENGINE SEAL FOR ROTAX MAX KART ENGINES

4.1 IGNITION SYSTEM

Digital battery ignition system, variable ignition timing, no adjustments Possible.

4.1.1 Spark plug

125 Micro MAX and 125 Mini MAX:

Spark plug: NGK GR8DI or NGK GR9DI

Electrode gap (maximum): Pin gauge 1,20 mm must not fit in between the two electrodes.

4.1.2 ECU

The electronic control unit (ECU) is labelled with stickers and is still legal also if the sticker is unreadable or disappeared.

125 Micro MAX: "666815"

125 Mini MAX: "666818"

The ECU tester must indicate following results:

125 Micro MAX category

① 666815MAX

② !! Test OK !!

125 Mini MAX category

① 666818MINIMAX

② !! Test OK !!

4.2 CARBURETTOR

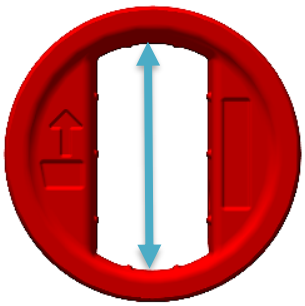
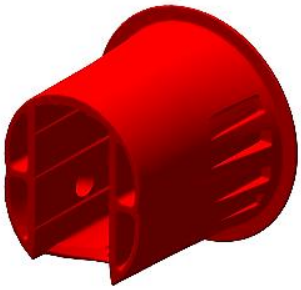
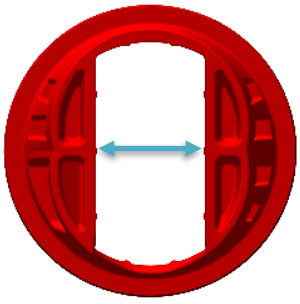
125 Micro MAX and Mini MAX:

The throttle body restrictor must be fully inserted into the carburettor body and in the correct orientation at all times.

(see picture for reference).

ROTAX part number: 267536

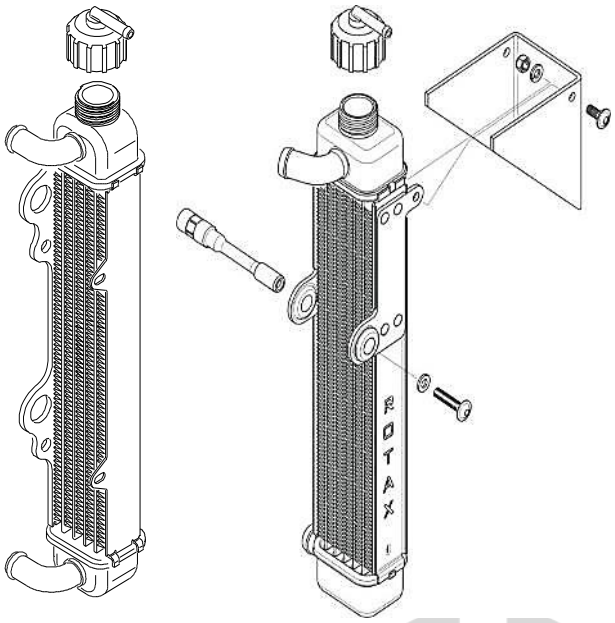
No modifications are allowed, the ribbed surface on the inlet is to help ensure dimensions have not been modified.

Max distance = 35,0 mm 		
Max distance = 18,0 mm 	Min length = 35,0 mm 	

4.3 RADIATOR

125 Micro MAX and 125 Mini MAX:

Two different versions as shown in the illustrations are legal to be used.



Cooling area:

Height:	280 – 300 mm
Width:	58 – 62 mm
Thickness of radiator:	30 – 34 mm

To remove the original flap is an allowed modification.

4.4 EXHAUST SOCKET (RESTRICTOR)

125 Micro MAX and 125 Mini MAX:

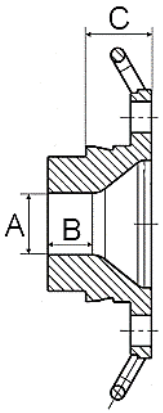
Just exhaust sockets with gasket ring are legal to be used.

Diameter (A) must apply for a length (B) of at least 12 mm.

Maximum inner diameter (A) of exhaust sockets are:

125 Micro MAX:	18,30 mm (Rotax part no. 273 192)
125 Mini MAX:	22,20 mm (Rotax part no. 273 196)

The measurement (C) must be at least 18,5 mm.



The internal profile of the exhaust socket has to be checked with the template, Rotax 277 405.

Fit the template (**125 Micro MAX** "18 mm", **125 Mini MAX** "22 mm") as far as Possible into the exhaust socket (without gasket, carbon deposits removed). There has to be a constant crack light between the profile of the exhaust socket and the profile of the template.

4.5 EXHAUST SYSTEM

- Replacing the isolating mat (just one original isolating mat may be fitted) inside the silencer and the silencer end cap with perforated tube by original Rotax spares parts.
  - 125 Micro MAX ROTAX part number 297982
  - **125 Mini MAX** **ROTAX part number 297985**

4.6 125 MICRO MAX

A specific Exhaust system has to be used for the 125 Micro MAX engine.

ROTAX Part number 273136

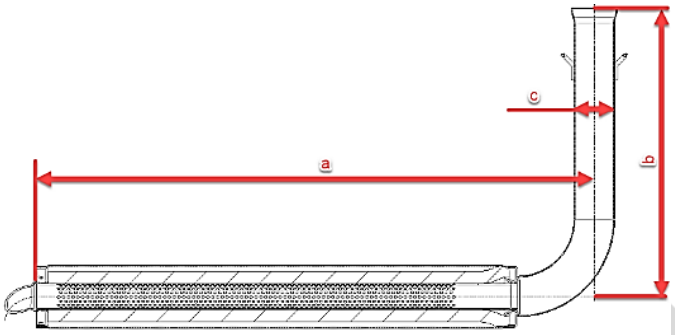
The Exhaust external body is a common component to Mini MAX, but with alternative internal components (Inserts).

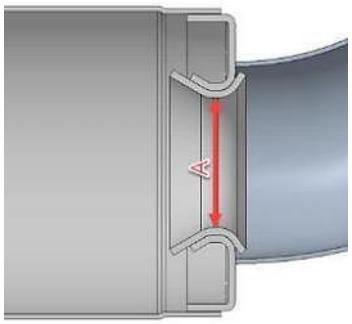
The silencer must be mounted in a Position where the direction of the 90° elbow outlet (direction of the hot exhaust gasses) does not harm any component of the chassis.

The exhaust must be mounted and secured in such a way to ensure a full sealing around the exhaust socket and the gasket ring.

The measurements in the diagram to the right are as follows:

- (a) 580 mm +/- 5mm
- (b) 299 mm +/- 5mm
- (c) 42 mm +/- 3mm





A solid flat plate measuring 28.0mm diameter and 1.5mm thick must not pass through Section “A” and

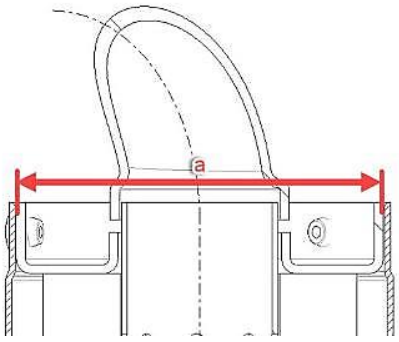
A steel ball with a 26.0mm diameter must be able pass through Section “A” in the below diagram from the inlet and through the 90-degree elbow completely. All exhaust gases must pass through section “A” at all times.

(Internal exhaust components must first be removed)

The inner measurement of the exhaust system silencer end (a) in the diagram must be a maximum of 63.0 mm.

Note

This is not a measurement of the perforated tube



The Exhaust must be installed firmly to the chassis using a rigid mount/s.

The Exhaust must be mounted to the rigid mount/s using 2 ROTAX silent blocks.

(Part 660920 and or 260657 allowed).

The deflection of the 2 silent blocks is the only Exhaust movement allowed.

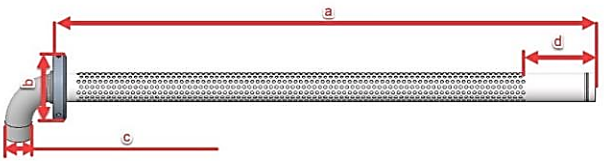
The Exhaust must be mounted in a neutral Position with no stress on the 2 silent blocks.

125 Micro MAX Perforated tube

ROTAX part number: 273212

The measurements in the diagram below are as follows:

- (a) at least 498 mm
- (b) minimum outside diameter of 61 mm
- (c) maximum outside diameter of 26 mm
- (d) minimum length 63 mm



The measurement in the diagram to the right is as follows:

- (a) minimum outside diameter of 26.0mm

The only legal Isolation matting for 125 Micro MAX is:

ROTAX part number 297982	Measurement	Tolerance
New size minimum	480 x 270 mm	+10 mm -10 mm
New weight	207 Gram	+31 Gram -31 Gram
Used weight (old)	245 Gram	+105 Gram -105 Gram

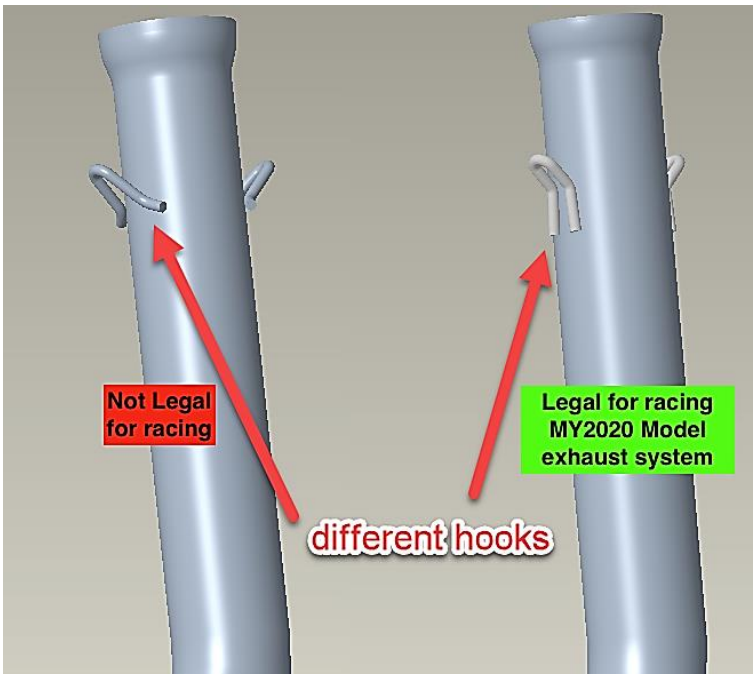
Note

The only exhaust system allowed for racing in the 125 Micro and 125 Mini MAX category's is the MY2020 version.

The exhaust has 3 clear visual differences to identify the MY2020 version.

1. Exhaust hooks
2. Connecting socket / ball joint connect at manifold
3. Wall thickness of the exhaust system is 1.0mm (older exhaust system which is not allowed for racing has a wall thickness of 1.5mm)


Not Legal for racing
Legal for racing MY2020 Exhaust system


Not Legal for racing
Legal for racing MY2020 Model exhaust system
different hooks

4.7 125 MINI MAX

A specific Exhaust system has to be used for the 125 Mini MAX engine.

ROTAX Part number 273137

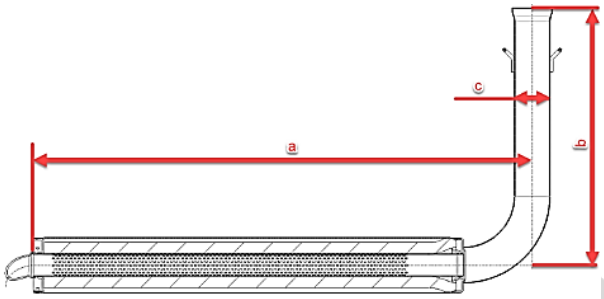
The Exhaust external body is a common component to Micro MAX but with alternative internal components.

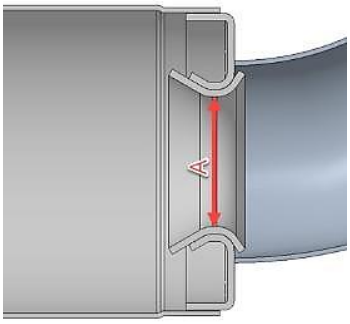
The silencer must be mounted in a Position where the direction of the 90° elbow outlet (direction of the hot exhaust gasses) does not harm any component of the chassis.

The exhaust must be mounted and secured in such a way to ensure a full sealing around the exhaust socket and the gasket ring.

The measurements in the diagram below are as follows:

- (a) 580 mm +/- 5mm
- (b) 299 mm +/- 5mm
- (c) 42 mm +/- 3mm



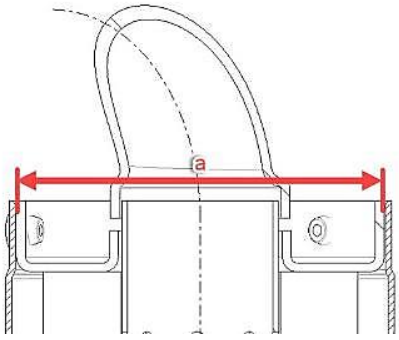


A solid flat plate measuring 28.0mm diameter and 1.5mm thick must not pass through Section “A” and

a steel ball with 26.0mm diameter must be able pass through Section “A” in the below diagram from the inlet and through the 90-degree elbow completely. All exhaust gases must pass through section “A” at all times.

(Internal exhaust components must first be removed)

The inner measurement of the exhaust system silencer end (a) in the below diagram must be a maximum of 63.0 mm.



Note

This is not a measurement of the perforated tube

The Exhaust must be installed firmly to the chassis using a rigid mount/s.

The Exhaust must be mounted to the rigid mount/s using 2 ROTAX silent blocks. (Part 660920 and or 260657 allowed).

The deflection of the 2 silent blocks is the only Exhaust movement allowed.

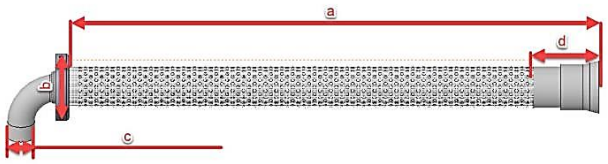
The Exhaust must be mounted in a neutral Position with no stress on the 2 silent blocks.

125 Mini MAX Perforated tube

ROTAX Part number 273211 or 273137

The measurements in the diagram below are as follows:

- (a) at least 480 mm
- (b) minimum outside diameter of 61 mm
- (c) maximum outside diameter of 26 mm
- (d) at least 63 mm



Note

Mini MAX perforated tube has a stamped ID marker "X or O" visible externally.

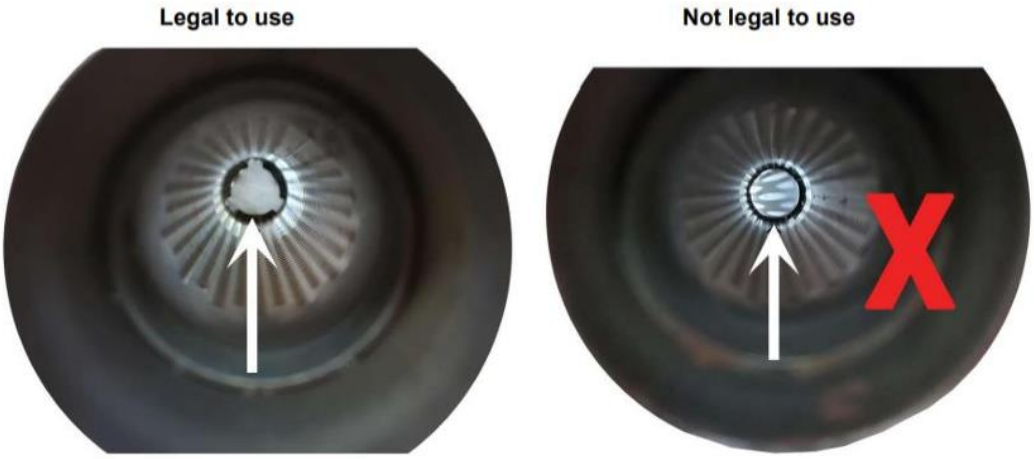
Note

The fine metal mesh must cover all the small holes on the perforated tube

The only perforated tube allowed is the perforated tube with the circle supported by 3 linking points (when looking into the tube).

The perforated tube with the dome circle is not allowed.

See pictures below :



The only legal Isolation matting for 125 Mini MAX is:

ROTAX part number 297985	Measurement	Tolerance
New size minimum	490 x 180 mm	+10 mm -10 mm
New weight	141 Gram	+22 Gram -22 Gram
Used weight (old)	230 Gram	+120 Gram -120 Gram

4.8 ADVERTISING ON ENGINES

No sponsor stickers are allowed on the engine and engine accessories, except ROTAX, BRP, Mojo, XPS, Original SODI KART badges and the following plates attached to the cylinder.

For clarification purposes:
Overflow bottles, fluid catch can, fuel line and any accessories with manufacturer branding is permitted to be used on the engine or its accessories.
It is not permitted for a ROTAX service center to call themselves a manufacturer of such items to work around this regulation.