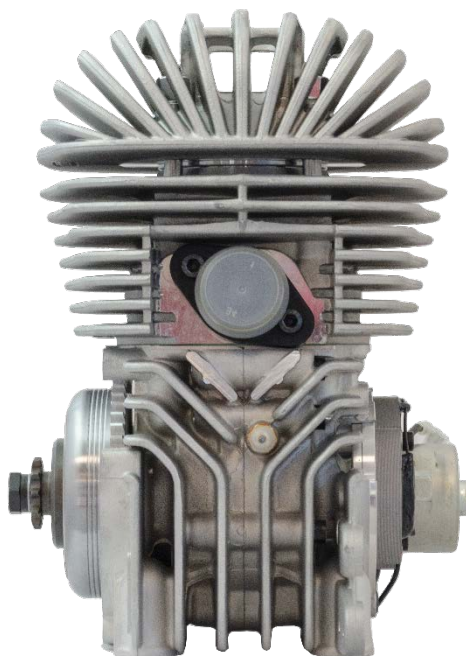


MINI ROK 2025

IDENTIFICATION SHEET

This Identification Sheet reproduces descriptions, illustrations and dimensions of the **MINI ROK**.



ATTENTION

ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.

Neither engines nor accessories can be modified. By this we mean any shape, content or function changes which may differ from what originally produced (manufactured and assembled). Furthermore, this includes any addition and /or removal of material.

All dimensions in the technical drawings are in mm.

MINI ROK 2025

UNIQUE "AU" SERIAL NUMBER SIMPLE FOR COMPLIANCE WITH KA HOMOLOGATION



NO DEVIATION FROM THE MANUFACTURER'S AUSTRALIAN "AU" SPEC ENGINE IS ALLOWED.

All components must remain OEM and therefore only engines stamped with the "AU" as the second and third identifier in the serial number for example 4AU0001 will comply with Australian Homologation.

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MINI ROK 2025

TECHNICAL INFORMATION AND CHARACTERISTICS

ORIGINAL BORE	41,96 mm
MAX ALLOWED BORE	42.10 mm
STROKE	43 +/- 0,1 mm
ORIGINAL DISPLACEMENT	60 cc
CONROD C-TO-C DISTANCE	90 +/- 0,1 mm
WEIGHT OF CONROD	94g +/- 2g
SPROCKET	Z10-Z11-Z12

CYLINDER DEVELOPMENT AND DISTRIBUTION

EXHAUST PORT	154° MAX
MAIN TRANSFER	116° ±1.5°
INLET PORT	143° ±1.5°







Measurement must be done with engine head dismantled (studs tightening torque: 1.8 kg.).

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MINI ROK 2025

<i>PICTURE ENGINE UPPER SIDE</i>	<i>PICTURE ENGINE LOWER SIDE</i>
	
<i>CYLINDER BASE</i>	<i>CYLINDER HEAD AND COMBUSTION CHAMBER</i>
	
<i>PICTURE OF THE CRANKCASE</i>	<i>INTERIOR PICTURE OF THE CRANKCASE</i>
	

ATTENTION

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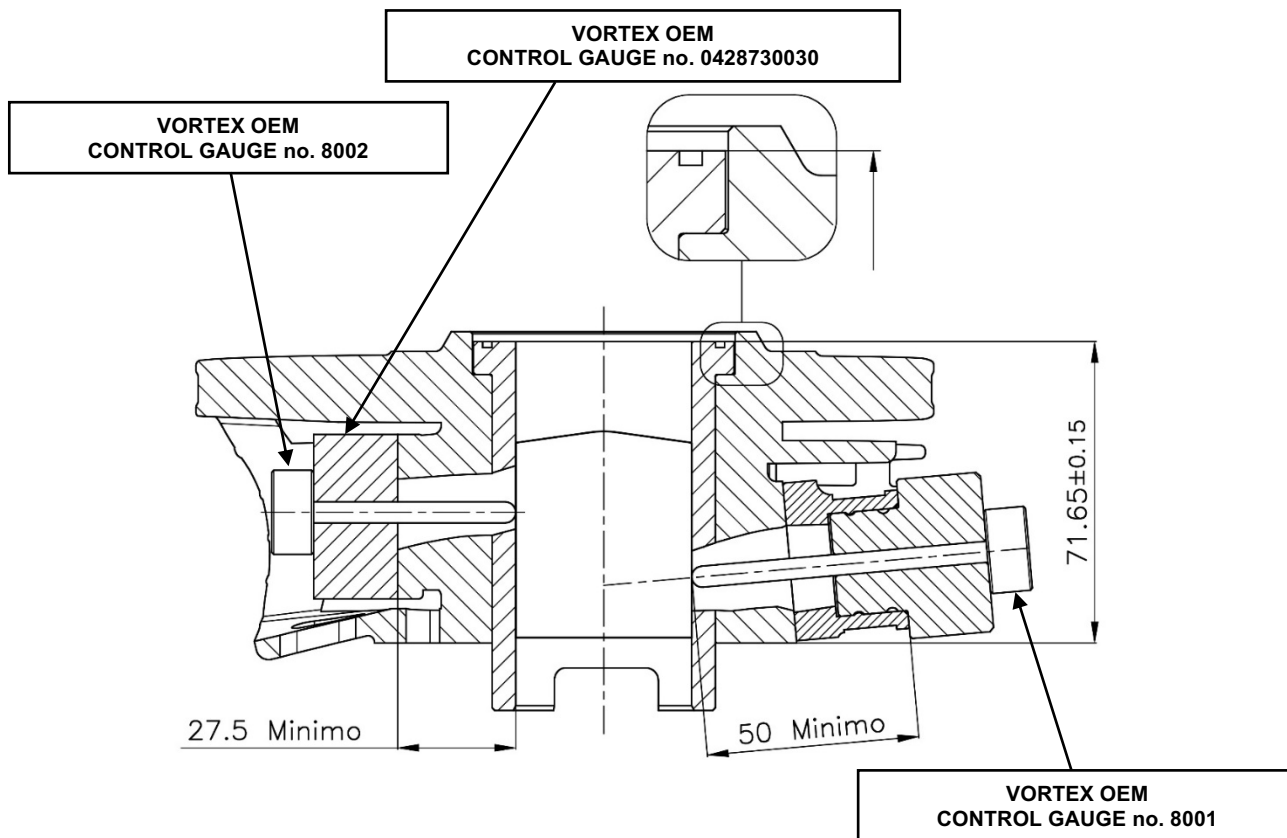
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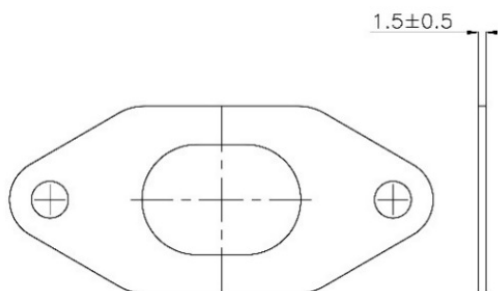
MINI ROK 2025

CYLINDER SECTION

MINIMUM DISTANCE OF THE CARBURETTOR SUPPORTING PLATE FROM THE CYLINDER AXLE



EXHAUST GASKET



ATTENTION

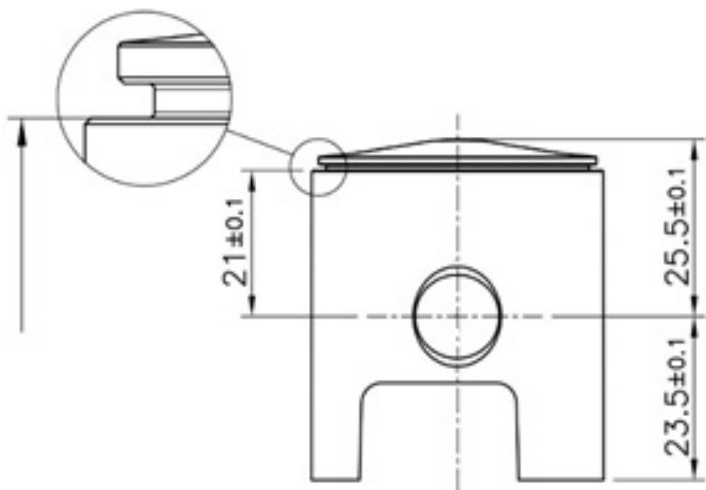
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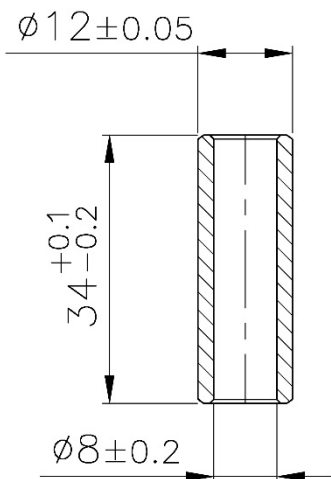
MINI ROK 2025

PISTON



- WEIGHT -
59 gr +/- 5 gr

PISTON PIN



-WEIGHT-
15 gr Min

PISTON RING DETAIL PIECE



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MINI ROK 2025

PICTURE AND MARKING OF THE PISTON

Mandatory to have the brand VORTEX cast piston as shown in the picture.

Mandatory to have the number of the Mold cast as shown in the picture.

OPTION 1



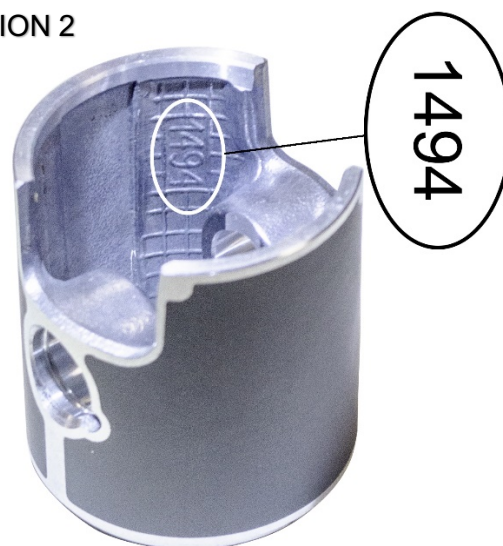
OPTION 1



OPTION 2



OPTION 2



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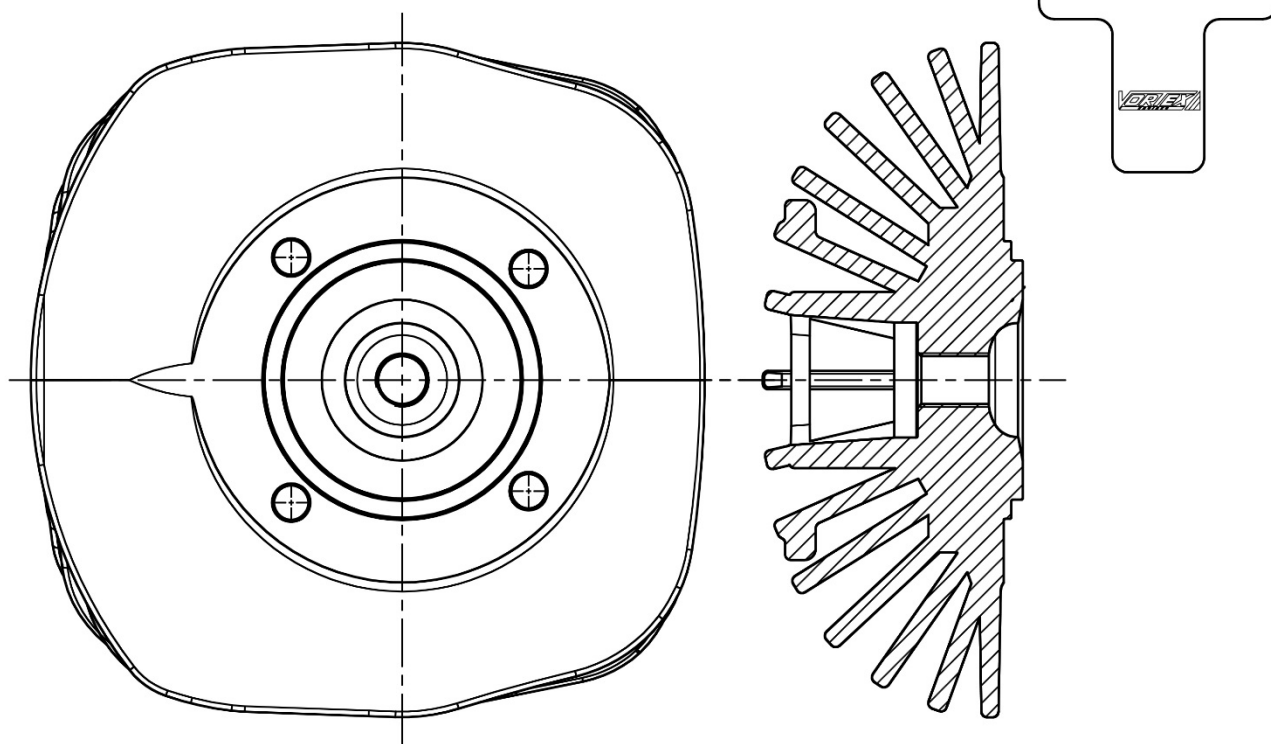
All dimensions in the technical drawings are in mm.

MINI ROK 2025

DRAWING OF CYLINDER HEAD AND COMBUSTION CHAMBER

SQUISH THICKNESS – SQUISH: 0,8mm MIN

TEMPLATE FOR CHECKING THE
COMBUSTION CHAMBER PROFILE



ATTENTION

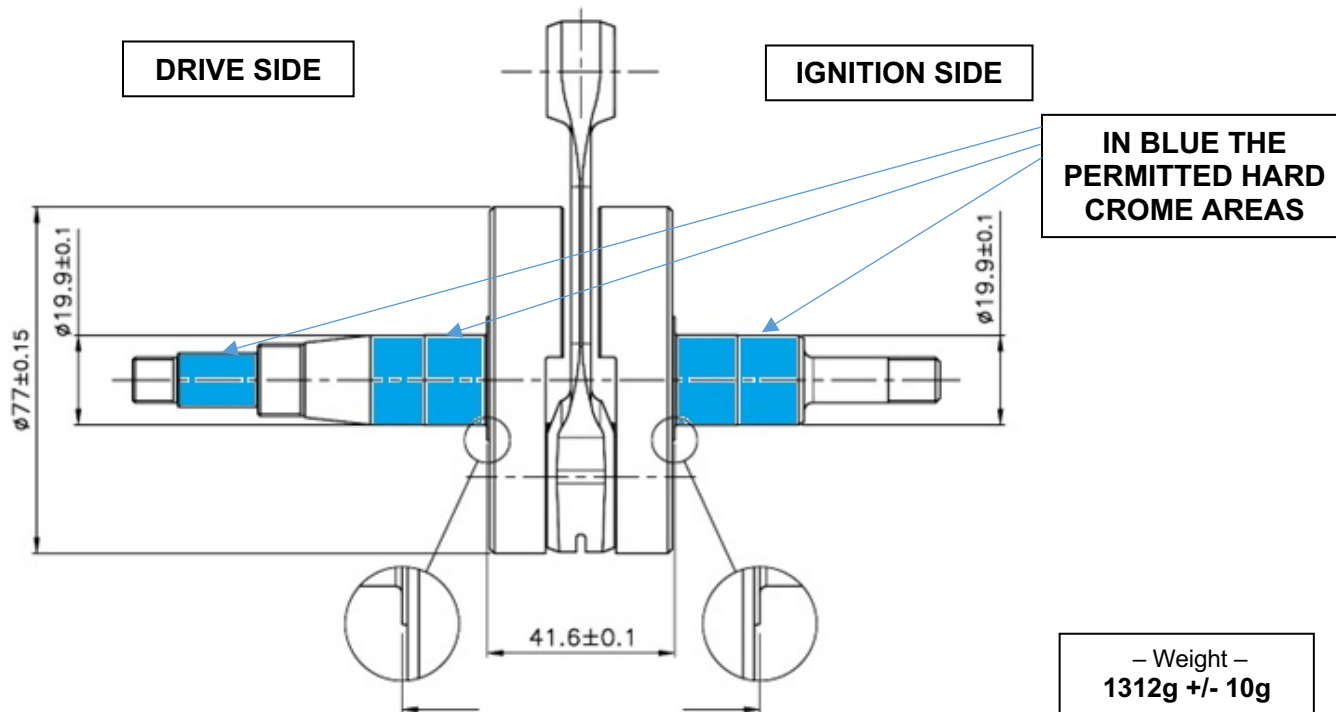
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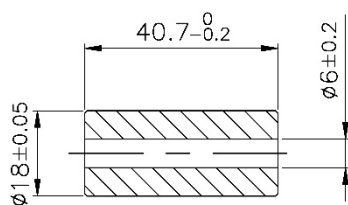
All dimensions in the technical drawings are in mm.

MINI ROK 2025

DRAWING OF THE CRANKSHAFT Crankshaft Repair by Hard Chroming (indicated by blue panels)



CRANK PIN



**- Weight -
71g +/- 1g**

OPTION 1



OPTION 2



OPTION 3



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MINI ROK 2025

PICTURES AND MARKING OF CONROD



PICTURE OF CRANKSHAFT WITH THE BALANCER



ATTENTION

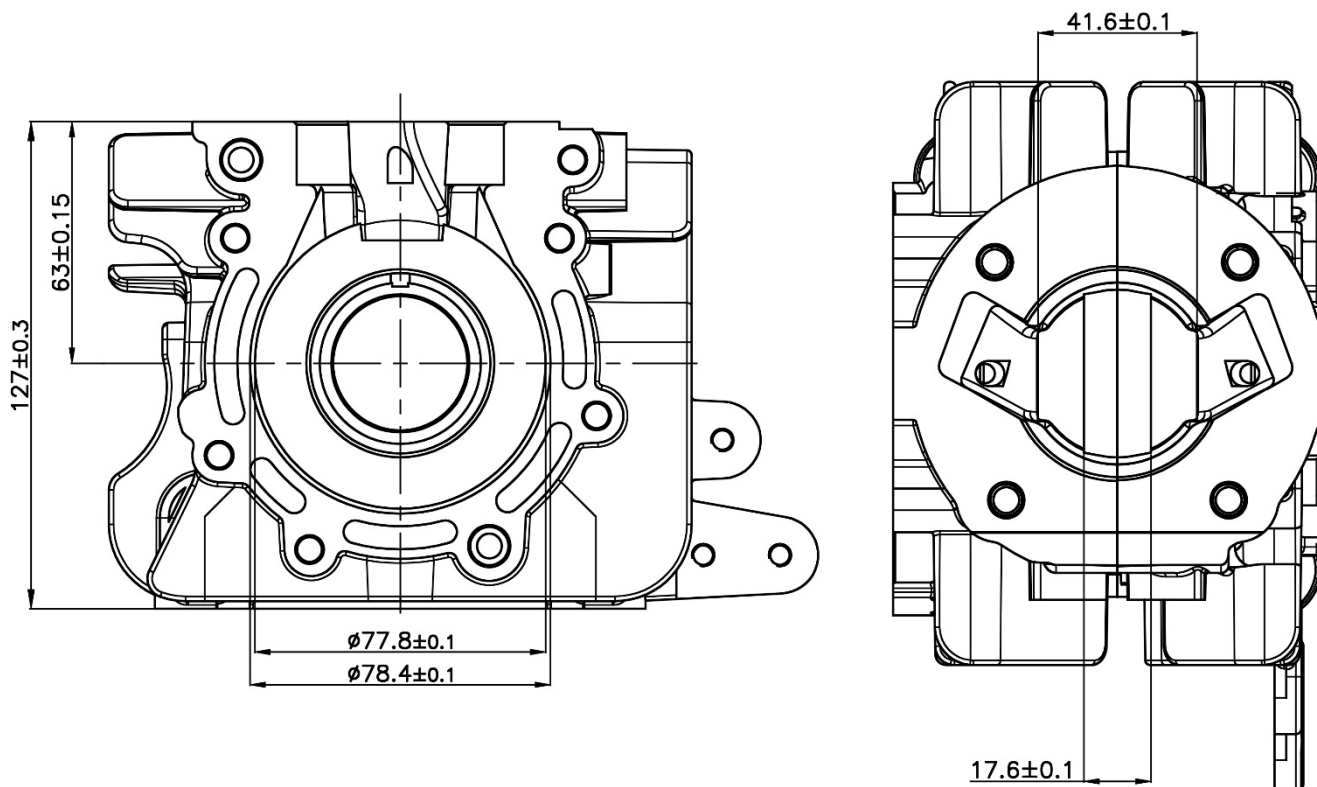
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MINI ROK 2025

INTERIOR VIEW OF THE CRANKCASE AND ASSEMBLY VIEW



CRANKSHAFT BEARINGS

TYPE	DIMENSIONS	CHARACTERISTICS
Brand SNR or KOYO 6204.C4	20x47x14mm	Steel Balls 8

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MINI ROK 2025

DETAIL PHOTO OF THE CRANKSHAFT OIL SEAL POSITION



Seals must be original Vortex OEM (see pictures) and fitted in the original Vortex factory location/direction and maintaining the seal spring.

Main bearings must be original Vortex OEM SNR or KOYO used.

ATTENTION

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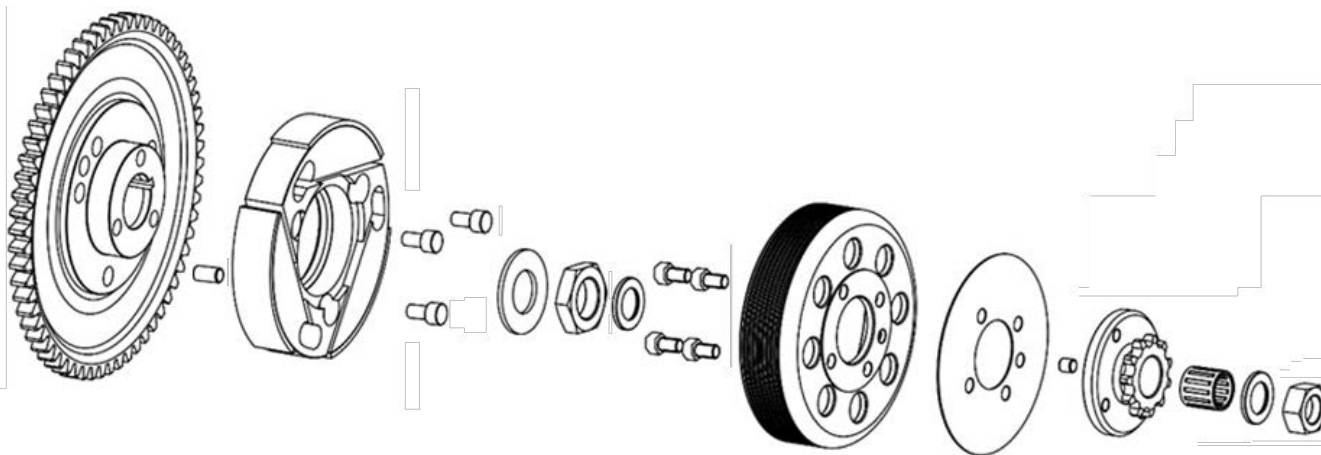
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MINI ROK 2025

COMPLETE CLUTCH ROTOR WITH STARTING GEAR AND PROTECTION

Z10-Z11-Z12 – CHAIN TYPE 219



PARTS QUANTITY: 20

WEIGHT OF THE COMPLETE CLUTCH WITH STARTING GEAR AND PROTECTION: 855 gr +/- 15g

ENGAGEMENT SPEED (MAXIMUM) CAN BE VERIFIED IN EVERY MOMENT OF THE EVENT: 3500RPM

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MINI ROK 2025

PHOTO AND MARKING OF THE EXHAUST



DURING EXAMINATION, ON THE EXHAUST IT MUST BE INDICATED THE IDENTIFICATION LOGO ROK MINI.

ATTENTION

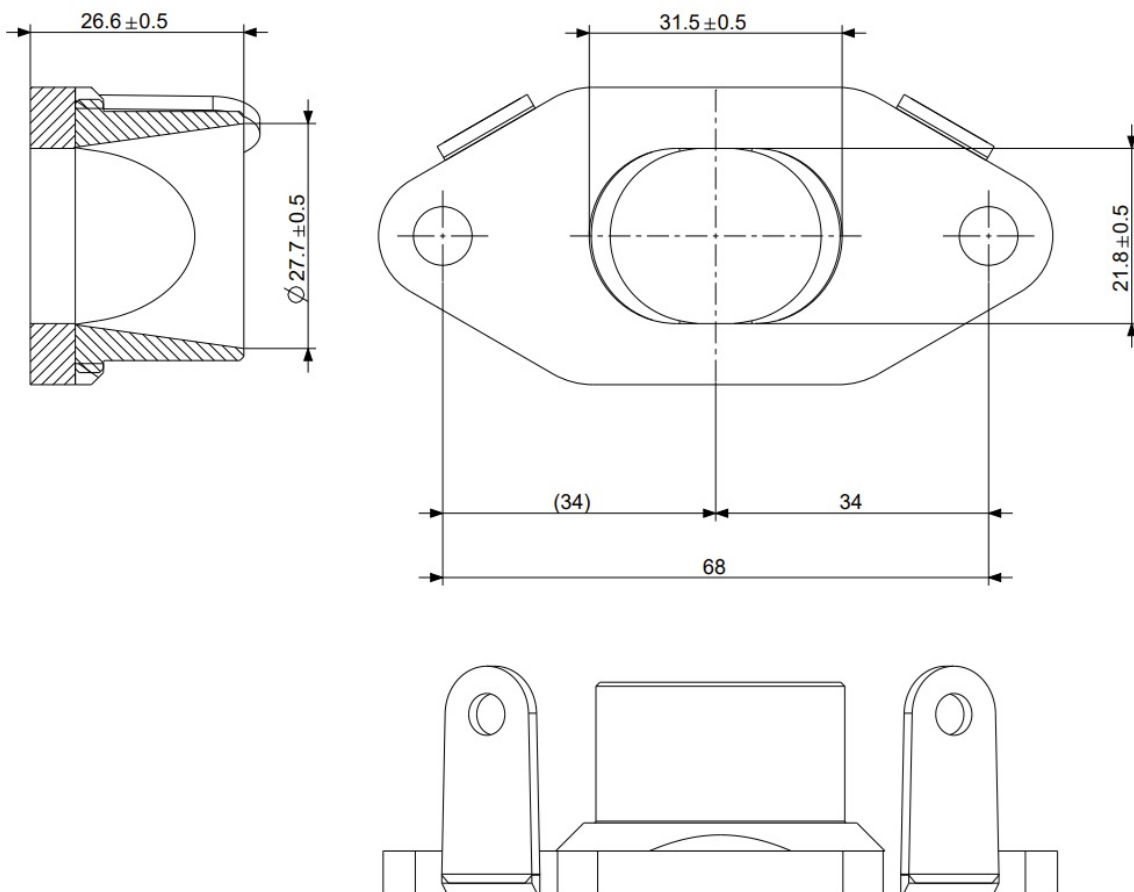
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MINI ROK 2025

EXHAUST MANIFOLD



ATTENTION

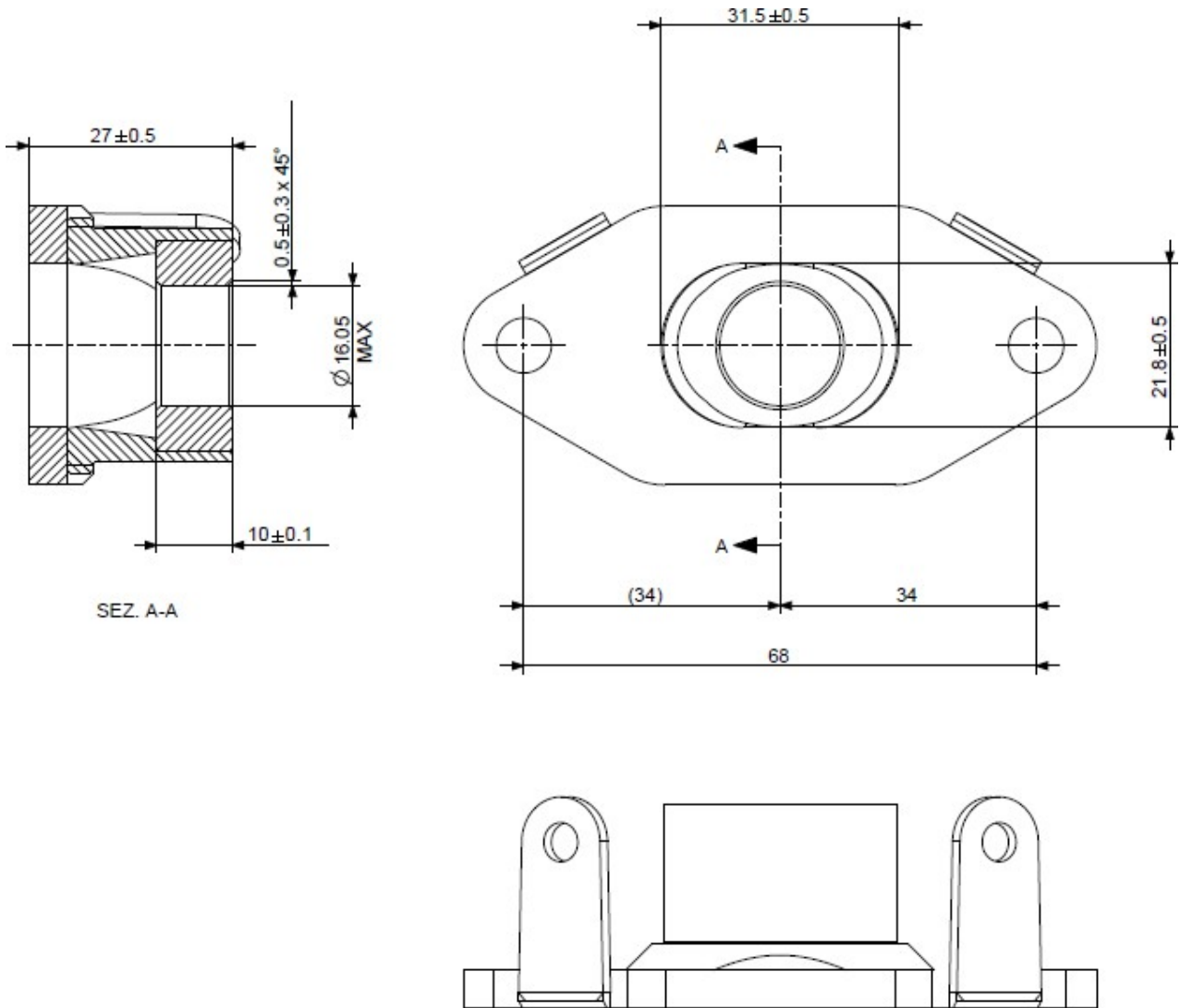
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MINI ROK 2025

DIMENSIONS OF THE EXHAUST MANIFOLD (RESTRICTED TYPE) Cadet 9



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MINI ROK 2025

CARBURETTOR DELL'ORTO PHBG 18 BS SPECIFICATIONS

Note: Please note that there have been NO changes to the carburettor specifications. This document is used to clarify the standard homologated carburettor and jets.

No machining or drilling of jets is allowed on the carburettor and its internal parts. The carburettor must remain standard as supplied by the Vortex Mini Rok Importer.

The importer also has the right to supply competitors with new jets should it be required.

This is a working document and will be updated as and when required. The responsibility is on the competitor to check that the carburettor meets the required specification.

**Carburettor Specifications for all Karting Australia 60cc Mini Rok classes.
CARBURETTOR DELL'ORTO PHBG 18BS**

Measuring of Components:

- **Some components will be measured with the aid of a vernier.**
- **Measurement of Diameters applicable to the entire document:**
- **Diameters of jets / holes will be measured using GO / NO GO gauges.**
- **Special Tools / Drill bits will be used to measure some holes and used as GO / NO GO gauges. These gauges can be verified with use of a 0-25mm micrometre.**
- **"GO" Gauge will be required to slide into the required hole.**
- **"NO GO" Gauges must not be able to slide into the required hole.**
- **Should a part be found to be out of specification, it will be impounded for further measurement if required.**

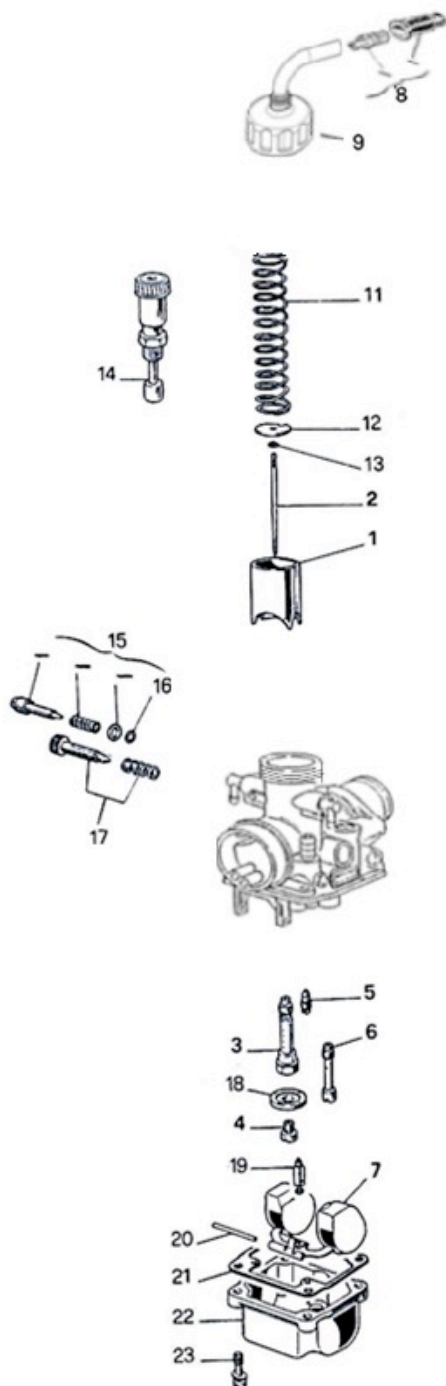
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MINI ROK 2025

CARBURETTOR DELL'ORTO PHBG 18 BS AND COMPONENTS



COMPONENTS

- 1- GAS VALVE 40X64 (4.0)
- 2- CONICAL NEEDLE W23
- 3- SPRAY NOZZLE AN266
- 4- JET MAIN. Range **92 - 97**
- 5- JET PILOT. 50
- 6- STARTING JET 60
- 7- FLOAT 4 gr.
- 8- TUBE 90° KIT
- 9- CHAMBER MIXTURE COVER KIT
- 10- CHAMBER MIXTURE COVER GASKET
- 11- GAS VALVE SPRING
- 12- CONICAL NEEDLE FASTENER FIX PLATE
- 13- CONICAL NEEDLE FASTENER
- 14- STARTING DEVICE
- 15- ADJUSTMENT MINIMUM SCREW KIT
- 16- ADJUSTMENT MINIMUM SCREW GASKET
- 17- ADJUSTMENT GAS VALVE SCREW KIT
- 18- SURGE PLATE (**Compulsory**)
- 19- GAS NEEDLE CLOSING
- 20- FLOAT PEG
- 21- FLOAT CHAMBER GASKET
- 22- FLOAT CHAMBER
- 23- FLOAT CHAMBER FIXING SCREW

The aim of the exploded drawings is to identify the principles, the functioning and the whole mechanical unit.

ATTENTION

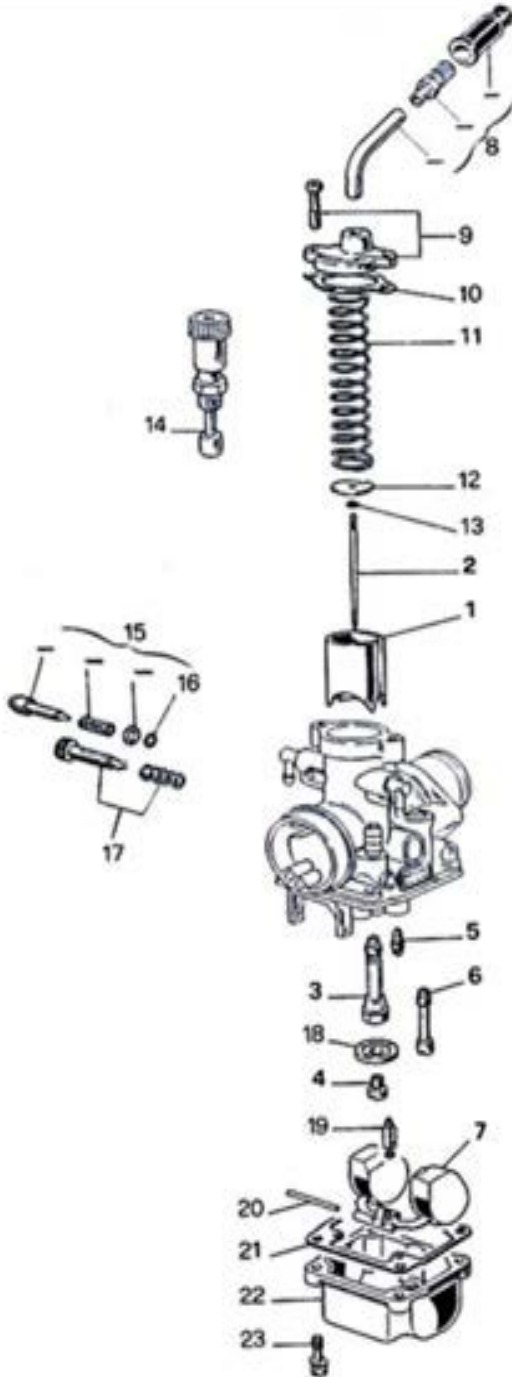
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MINI ROK 2025

CARBURETTOR DELL'ORTO PHBG 18 BS AND COMPONENTS



COMPONENTS

- 24- GAS VALVE 40X64 (4.0)
- 25- CONICAL NEEDLE W23
- 26- SPRAY NOZZLE AN266
- 27- JET MAIN. Range **92 - 97**
- 28- JET PILOT. 50
- 29- STARTING JET 60
- 30- FLOAT 4 gr.
- 31- TUBE 90° KIT
- 32- CHAMBER MIXTURE COVER KIT
- 33- CHAMBER MIXTURE COVER GASKET
- 34- GAS VALVE SPRING
- 35- CONICAL NEEDLE FASTENER FIX PLATE
- 36- CONICAL NEEDLE FASTENER
- 37- STARTING DEVICE
- 38- ADJUSTMENT MINIMUM SCREW KIT
- 39- ADJUSTMENT MINIMUM SCREW GASKET
- 40- ADJUSTMENT GAS VALVE SCREW KIT
- 41- SURGE PLATE (**Compulsory**)
- 42- GAS NEEDLE CLOSING
- 43- FLOAT PEG
- 44- FLOAT CHAMBER GASKET
- 45- FLOAT CHAMBER
- 46- FLOAT CHAMBER FIXING SCREW

The aim of the exploded drawings is to identify the principles, the functioning and the whole mechanical unit.

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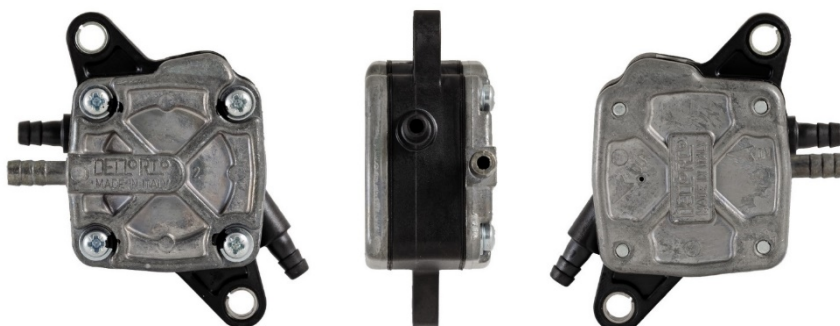
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MINI ROK 2025

ONLY ALLOWED SETTING

	COD. VORTEX	COD. DELLORTO
Throttle Valve Slide 40	W947540-764	947540
Mixture needle W23	W959523	959523
Atomizer / Emulsion tube (MINI ROK) AN266	W9511266	09511266-28
Main Jet Range 92 to 97	W148697	0148697-02
Starter jet 60	W148850	0148850-02
Idle diffuser jet 50	W950160	0950160-02

DELL'ORTO FUEL PUMP



COD: 11023

IT IS ALLOWED ONLY THE USE OF THE OUTLET FUEL PIPE.
IT IS FORBIDDEN THE USE OF THE RETURN FUEL PIPE TO THE FUEL TANK.
IT IS ALLOWED TO MOUNT ONLY N° 1 (ONE) FUEL FILTER BETWEEN TANK AND FUEL PUMP.

CONNECTOR FIXING FILTER-CARBURETTOR IN PLASTIC MATERIAL



ATTENTION

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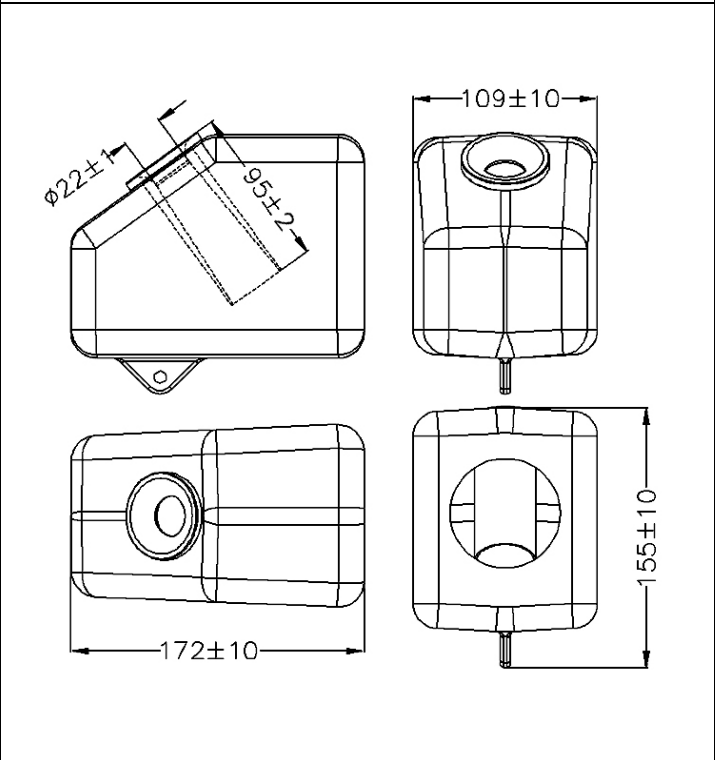
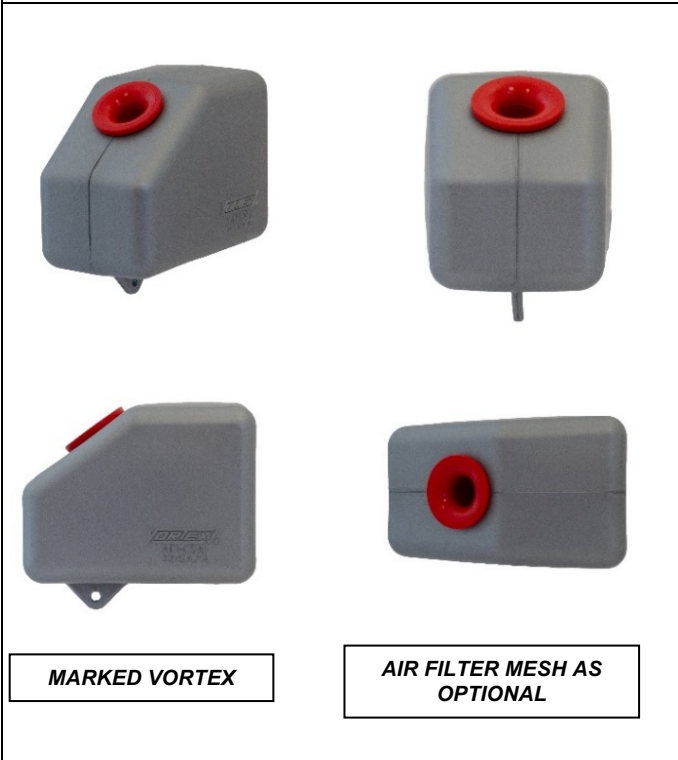
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MINI ROK 2025

INLET SILENCER

MODEL, TYPE

MINI



RUBBER FIXING CONNECTOR FILTER



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MINI ROK 2025

Vortex OEM intake silencer with ADDITIONAL (mandatory) Vortex AU foam filter in either Black, Red or Yellow which must be fitted in all events. (See pictures). Foam filter must be free of damage, tears and modification



THE ONLY ALLOWABLE MODIFICATION IS THE DRILLING OF AN 8mm (MAXIMUM) DRAIN HOLE, POSITIONED AT THE FRONT CENTRE LINE OF LOWEST POINT OF THE INTAKE SILENCER BOX



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MINI ROK 2025

FRONT SPROCKET AND CLUTCH COVER



Clutch cover may be modified only as stated herein:

Only on the underside, in a manner not to breach the first vent slot as pictured.

Clutch cover may be modified to accept the external starter. A maximum diameter hole 30mm is permitted.

Top and Side view must remain unmodified in its shape.

Rationale: Improved chain clearance when using larger rear axle sprockets.

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MINI ROK 2025

PICTURES OF SELETTRA IGNITION Selettra Coil Part W410/MR



***Stator mounting ring must be Vortex OEM. All mounting bolts must be in original condition. The Coil must be mounted on the Vortex OEM mounting bracket.
Selettra Coil Part W410/MR***

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MINI ROK 2025

PERMITTED SPARK PLUG CAPS



Code PVL 401 222
Part W420/2
Code Selettra
w7002246000100

SPARK PLUG



Spark plug must be standard NGK B9EG or NGK B10EG and have the original washer fitted when no head temperature sensor is in use.

Shank length with washer 18.5mm maximum, or 19mm maximum without washer. No machining permitted.

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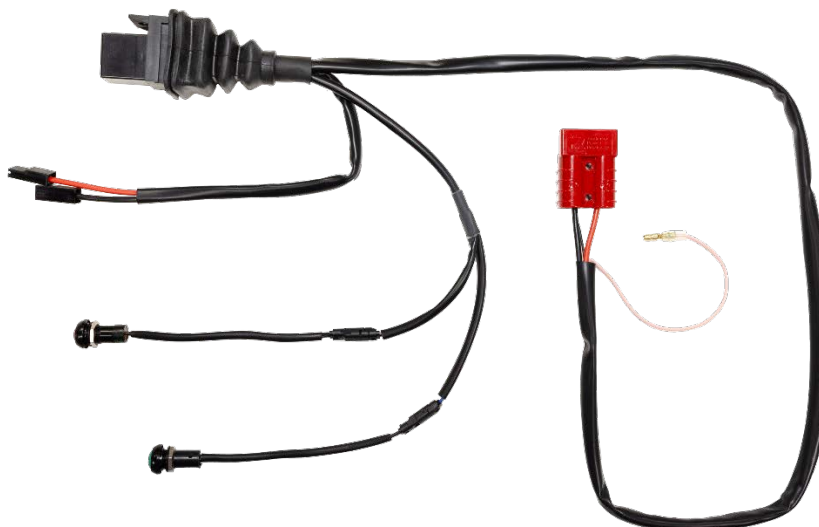
MINI ROK 2025

STARTER WIRING

OPTION 1



OPTION 2



ONLY Vortex OEM wiring loom, connectors and must be used.
Start/stop buttons are non-tech items (must be of the same basic type as OEM)
Engines shall be mandatory switched on and off by means of onboard starting system.
Technical steward members shall check the on-off onboard system anytime.
No wiring loom repairs are permitted, except:
The HT lead may be shorted as a repair. HT led must not have a join.
The loom wire connectors to the coil may be replaced/repaired with like for like components.

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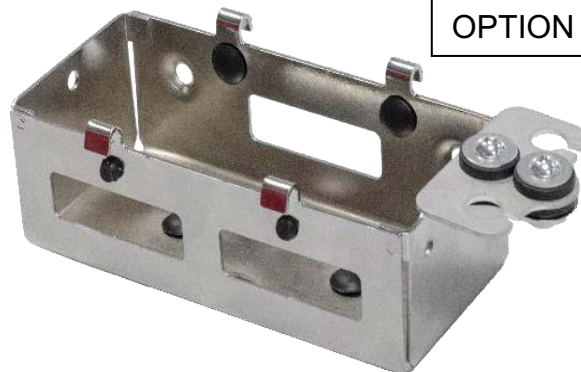
MINI ROK 2025

BATTERY AND BATTERY CRADLE

OPTION 1



OPTION 2



NEW Start and Stop
Bottom support

Battery can be either the factory supplied lead acid type, or an alternative lightweight Lithium Ion Battery.

It must be mounted within the Vortex OEM battery cradle, on the left side of the chassis, within easy reach of the driver. (Start/stop buttons bracket end facing towards front of kart).

Extra padding material is permitted.

Additional holes are permitted in the base of the battery cradle to enable a second chassis mount to be fitted.

Engines shall be mandatory switched on and off by means of onboard starting system. Technical Inspectors may check the on-off onboard system anytime.

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MINI ROK 2025

Appendix A to Vortex Mini ROK Homologation Documents

OEM means: Original Engine Manufacturer (Vortex) or an organisation that makes component parts used by and supplied by Vortex for exclusive use in the Vortex Mini Rok Engine.

The following notes are additional to the details contained in these Homologation documents for the Vortex Mini Rok engine (the “**Engine**”) and are to be read in conjunction with the specifications and details contained therein. They form part of the Homologation documents for the Engine.

The Engine must always be used and be presented in strict conformity with the specifications detailed in the homologation documents. Unless otherwise expressly permitted by Karting Australia, only Vortex OEM parts that have been manufactured and/or supplied by Vortex for the Engine are permitted to be used in the Engine at any time.

Neither the Engine nor any of its ancillary components may be modified other than in accordance with the Rules and these homologation documents. Any removal, addition or polishing of material is strictly forbidden. Sandblasting, glass bead blasting, vapor blasting, wet blasting, liquid honing, peening, acid etching, spark eroding and/or any other method of metal removal or displacement is strictly forbidden.

The use of thermal barrier coatings/ceramic coatings on or in the Engine/Engine components and on or in exhaust components is prohibited.

The use of anti-friction coatings on or in the Engine/Engine components other than OEM pistons is prohibited.

UNLESS IN THE KARTING AUSTRALIA RULES AND/OR THESE HOMOLOGATION DOCUMENTS IT SAYS THAT YOU CAN DO SOMETHING, THEN YOU CANNOT DO IT.

A Squish Gap

1. The Cylinder Head Squish clearance shall be a minimum of 0.8mm as per the homologation documents.
2. Shall be measured using 2.0mm solder wire (tin).

B Carburettor

1. Carburettor throttle cannot be actuated by electro-mechanical means.
2. Breather tube is required. The breather tube may be 2 pieces but must be joined.

C Exhaust

1. Only one (1) exhaust temperature gauge probe maybe fitted

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MINI ROK 2025

2. Only one (1) exhaust gasket is permitted to be fitted

D *Non-Technical Items*

1. Unless otherwise specified, non-tech items are to be of the same specification as the original item.
2. No alteration from the original manufacturer's specifications is permitted to fit a non-tech item.
3. Anderson plug housing is a non-tech item. (Different colour Anderson plugs are permitted as replacement components.)
4. Stickers' that may be removed when requested by the technical inspector are allowed on the engine or induction silencer.
5. Engraving, stamping a name, stickering or marking an engine to allow you to identify your engine is permitted. Any such engraving, stamping, stickering or marking must not partially or wholly obscure the essential homologation identification markings on the Engine and its ancillary components.

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