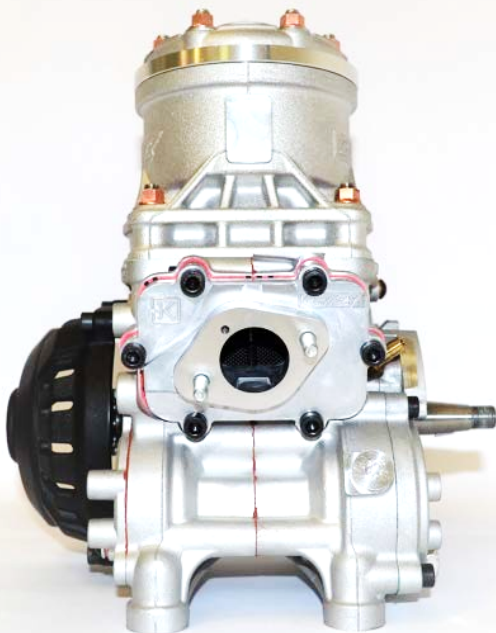


IDENTIFICATION SHEET

This Identification Sheet reproduces descriptions, illustrations and dimensions of the **ROK DVS-J**



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.

**UNIQUE "AU" SERIAL NUMBER SAMPLE FOR COMPLIANCE WITH KA HOMOLOGATION
DVS-J**



No deviation from the manufacturers 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 engine serial number for example 5AU0001 will comply with Australian Homologation.

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 previously conceived.

Furthermore, this includes any addition and /or removal of material and /or parts from the engine set- up package unless provided by this regulation. No ceramic bearings or component coatings.

ATTENTION	<i><u>ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.</u></i> <i>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.</i>
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DVS-J 2025



TECHNICAL INFORMATION AND CHARACTERISTICS

ORIGINAL BORE	54,12 mm
MAX ALLOWED BORE	54,29 mm
STROKE	54 +/- 0,2 mm
ORIGINAL DISPLACEMENT	124,176 cc
CONROD C-TO-C DISTANCE	102 +/- 0,2 mm
WEIGHT OF CONROD	128g +/- 2g
WEIGHT OF COUNTERWEIGHTS	212g +/- 10g

CYLINDER DEVELOPMENT AND DISTRIBUTION

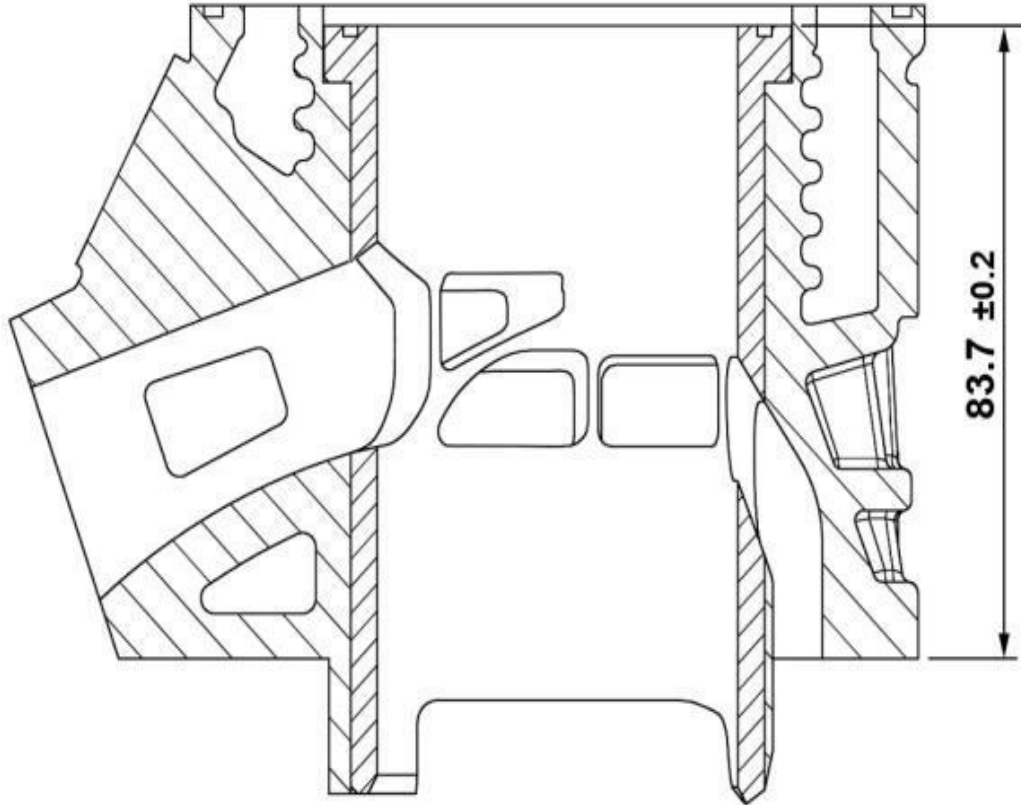
EXHAUST PORT	170° MAX
BOOSTER	170° MAX
MAIN TRANSFER	130° MAX
SECONDARY TRANSFER	126° MAX

ATTENTION

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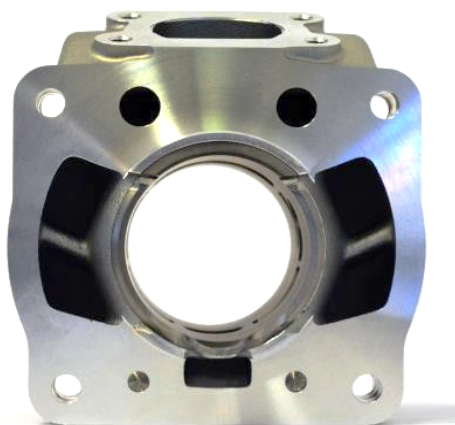
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CYLINDER SECTION



PICTURE OF CYLINDER BASE

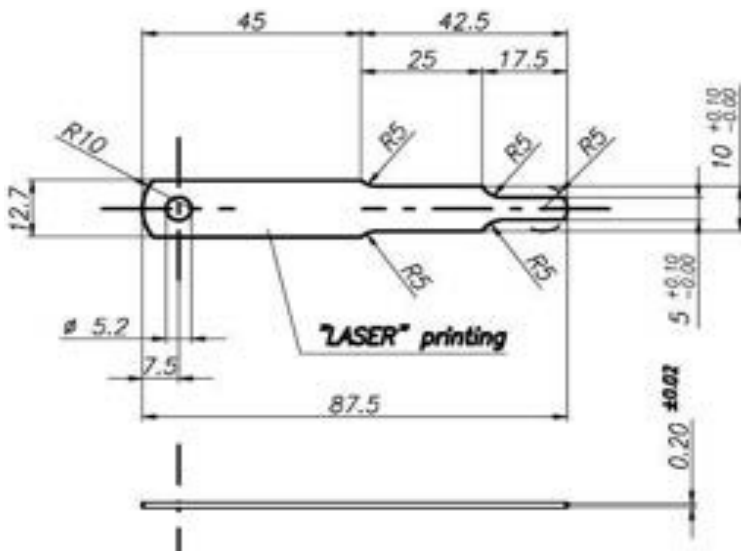
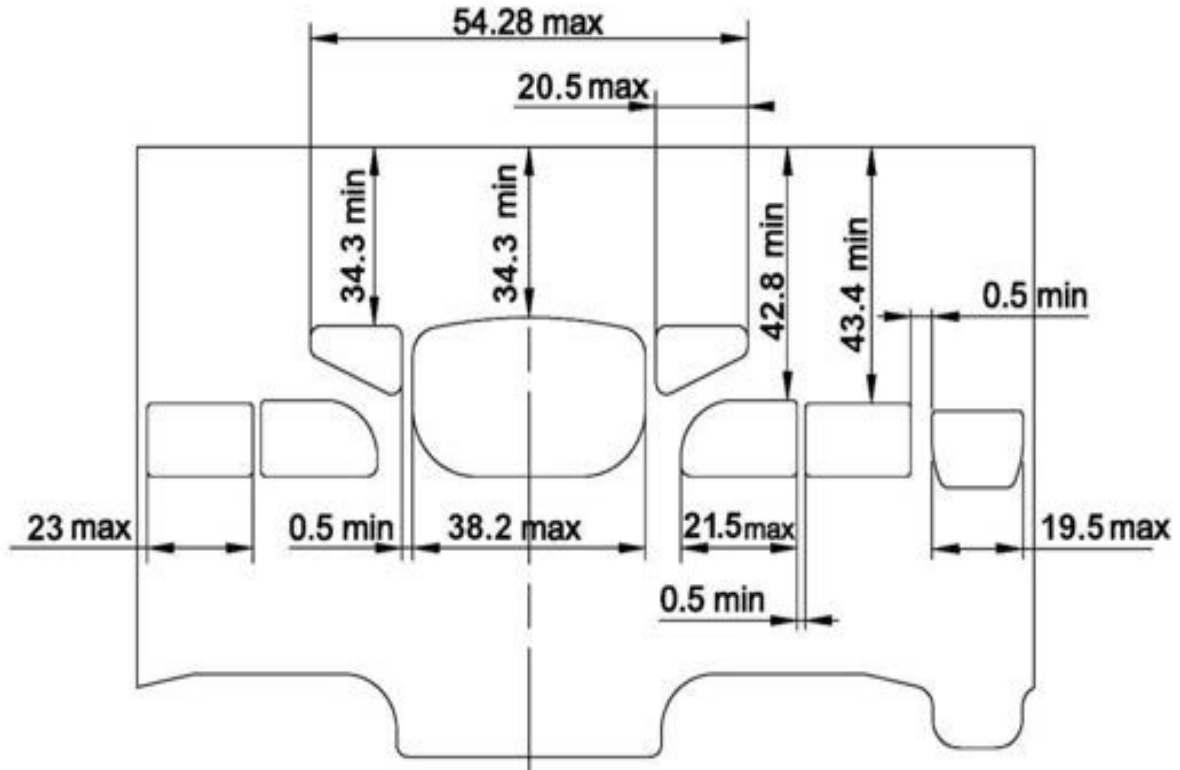
PICTURE OF EXHAUST DUCT



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DRAWING OF THE CYLINDER DEVELOPMENT DVS-J



The exhaust angular reading must be measured with a 0,20 mm thick and 5 mm wide wedge. (see drawing beside).

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PROCEDURE USED TO MEASURE the Transfer and Exhaust Port Durations

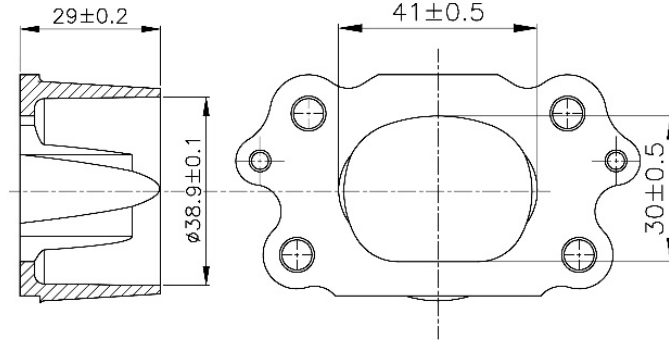
- A. Disassemble the spark plug (verify the height of 18,5mm)**
- B. Disassemble the cylinder head in order to verify the projection of the spark plug inside the combustion chamber.**
- C. Set up degree wheel with minimum of 200 mm diameter. (or digital rotary angle decoder)**
- D. The measuring will be done with a 0.20mm gauge as per the drawing on previous page When placing the gauge into the port the gauge is not to be bent**
- E. It must be inserted at 45° degrees on the wall, you should be able to move it forward and backward during this operation, it must not give the sensation that it is somehow blocked.**
- F. Once the piston has made contact, no pressure must be applied to the crankshaft to block the forward and backward movement of the gauge. The feeling should be the same as when “setting a tappet on a four stroke engine’. Not on any account the wedge to be placed in a horizontal or vertical position.**

ATTENTION

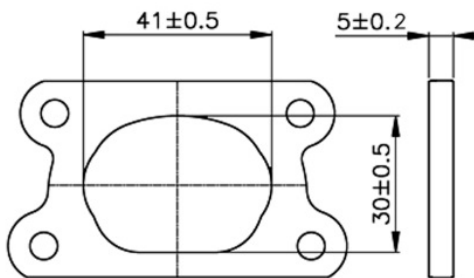
ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.

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EXHAUST MANIFOLD

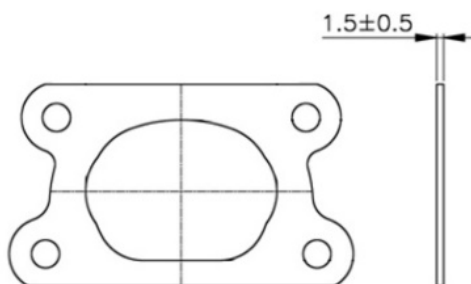


EXHAUST MANIFOLD SPACER



OPTIONAL: MAX N° 4

EXHAUST GASKET



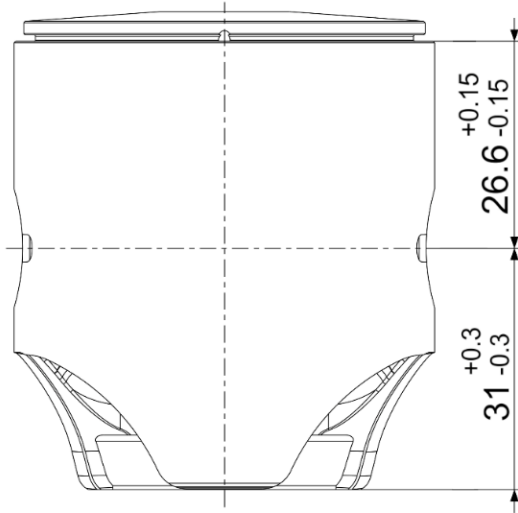
OPTIONAL: MAX N° 5

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PISTON



**- Weight -
122g +/-5g**

PICTURE AND MARKING OF THE PISTON

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

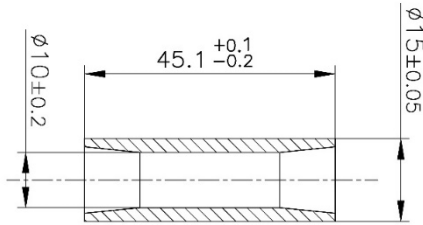
Mandatory to have the number of the Mold cast as shown in the picture.



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PISTON PIN



Weight
30g Min.

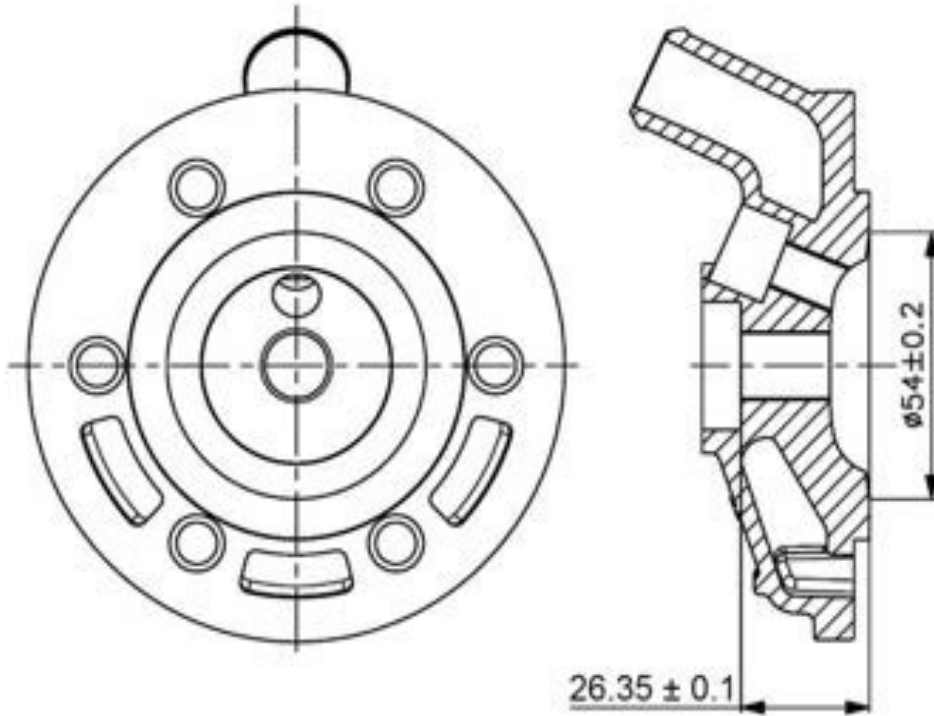
ATTENTION

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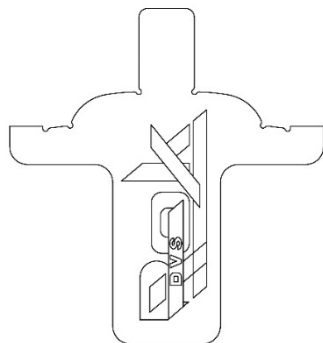
Neither engines nor accessories can be modified. By this we mean any shape, content or function changes which may differ from what originally produced (manufactured and assembled). Furthermore, this includes any addition and /or removal of material. All dimensions in the technical drawings are in mm.

CYLINDER HEAD AND COMBUSTION CHAMBER

SQUISH THICKNESS – SQUISH: 0,8 mm MIN.



DECOMPRESSION VALVE WITH THE ORIGINAL WASHER, IS THE ONLY ONE ALLOWED.



TEMPLATE FOR CHECKING THE PROFILE OF COMBUSTION CHAMBER



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DVS-J 2025

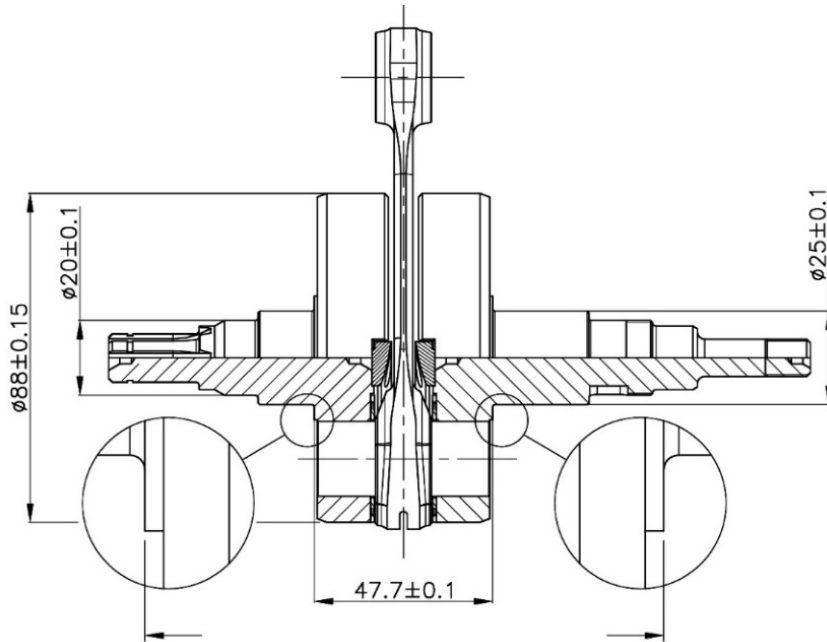


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CRANKSHAFT



**- Weight -
1975g ± 10g**

PICTURE OF CRANKSHAFT

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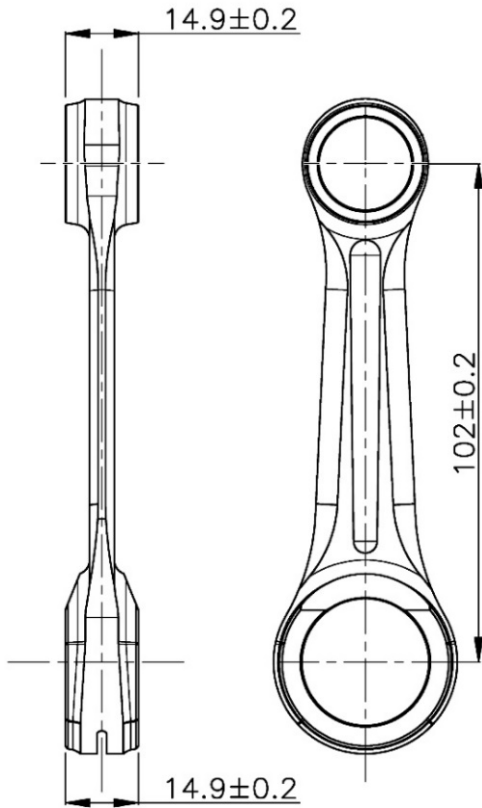


CRANK PIN AND CONROD

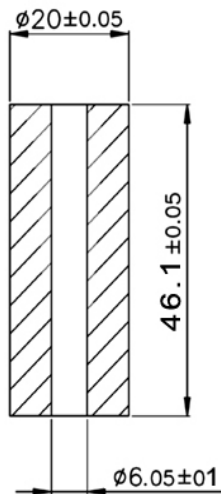
ATTENTION

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WEIGHT
124 ±5gr

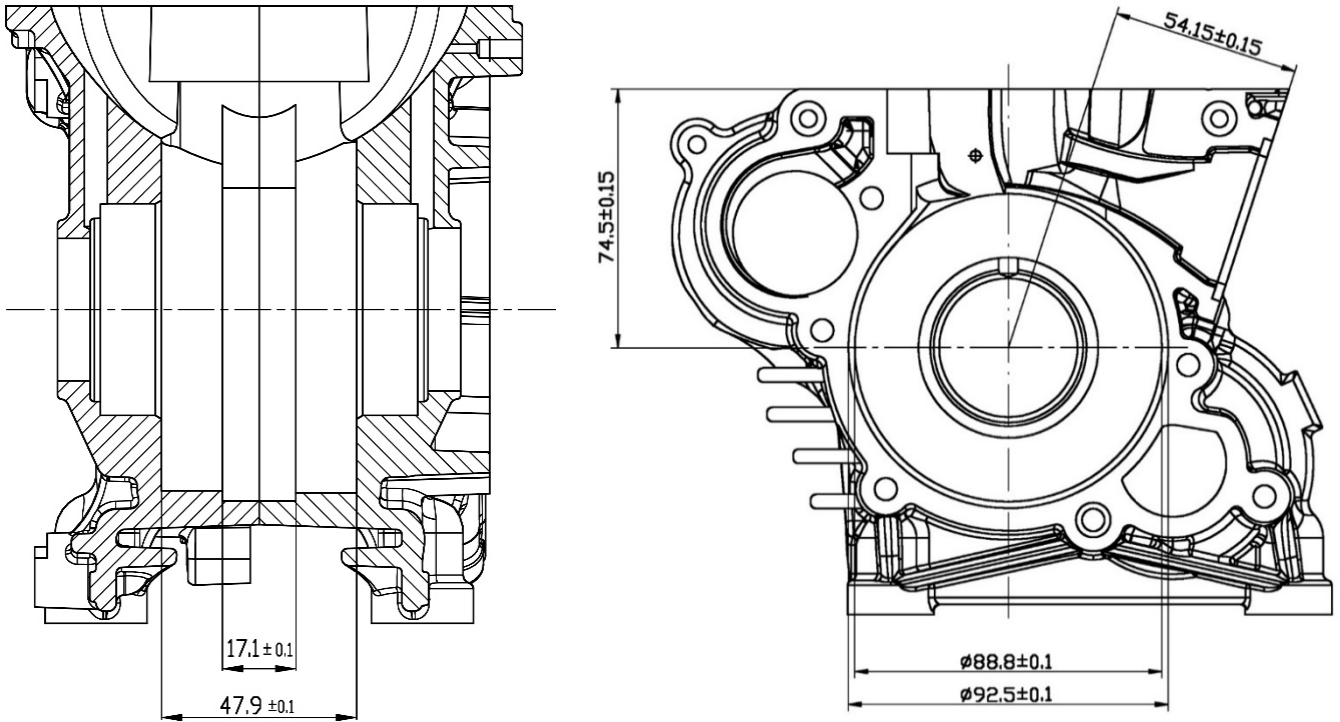


WEIGHT
103 ±1gr

CRANKCASE

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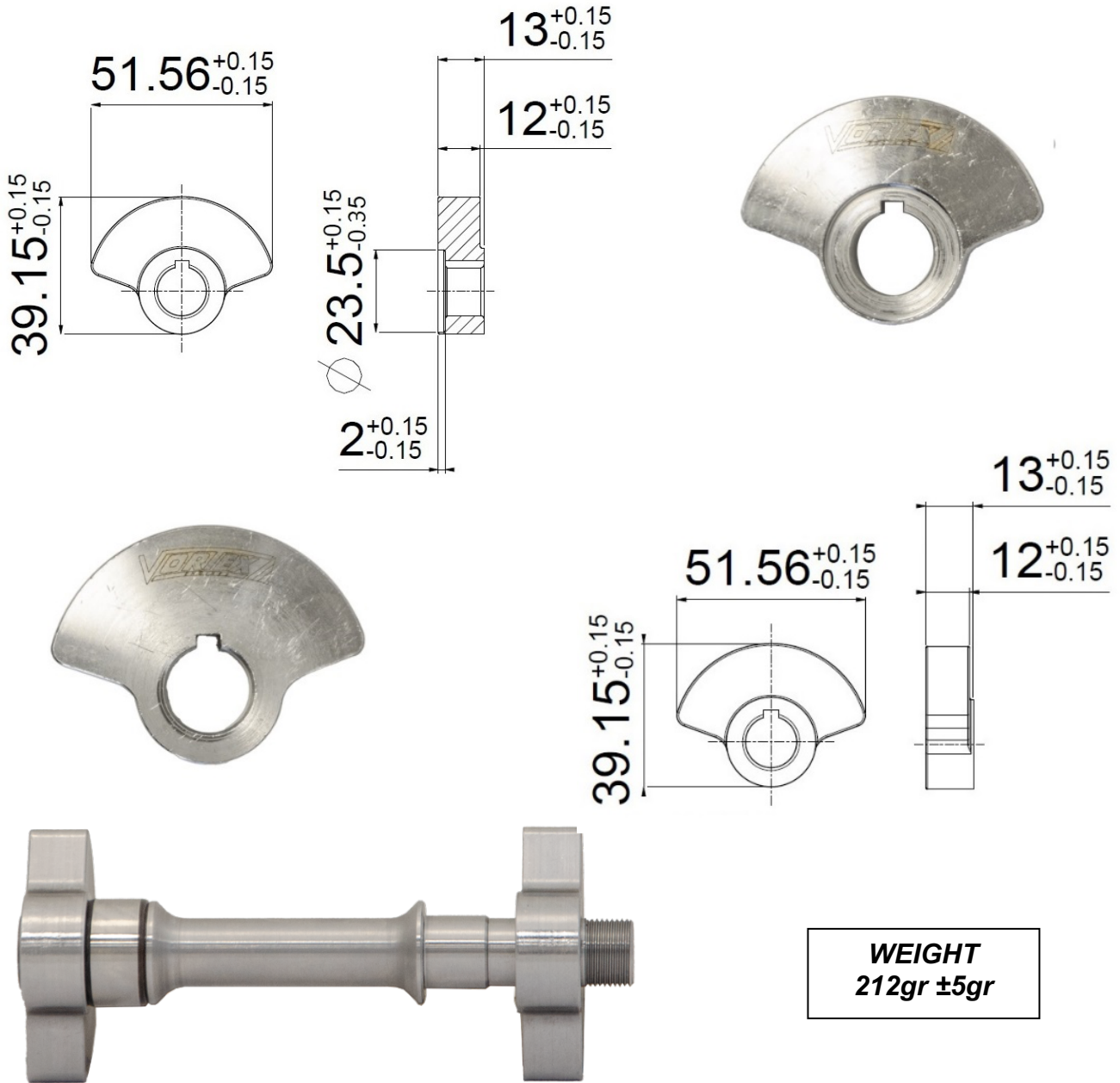
DETAIL PHOTO OF THE CRANKSHAFT OIL SEAL POSITION



BALANCE SHAFT

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ANY OPERATING STATUS OF THE SYSTEM (FAILURE, BREAKAGE, WEAR, ETC.), SUCH AS TO DETERMINE AN INCORRECT DRIVING OF THE BALANCE SHAFT, MUST BE CONSIDERED NOT IN RULE.

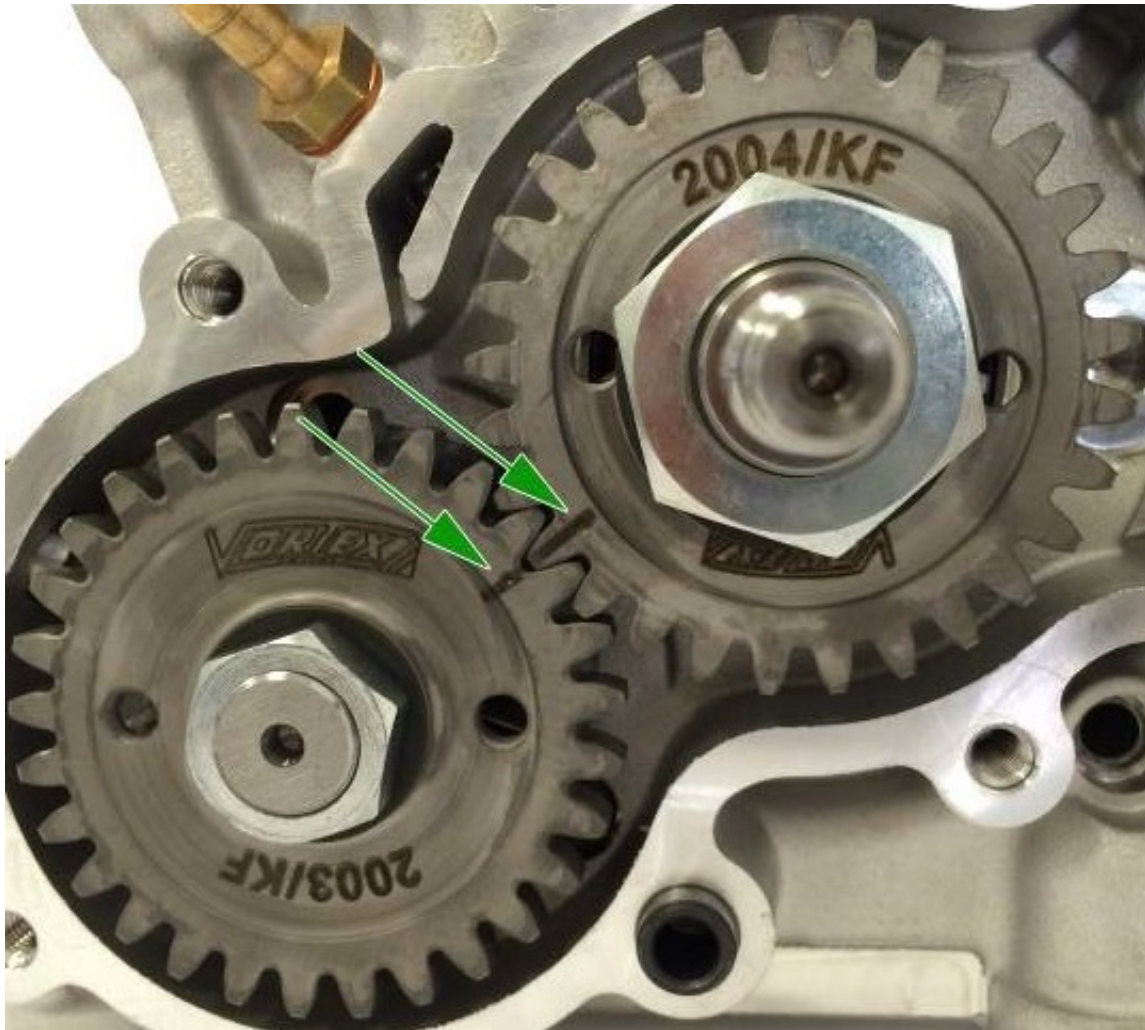
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BALANCER SHAFT PHASING

IN THE DRAWING BELOW, WE SHOW YOU IN DETAIL THE ORIGINAL POSITION (TO BE RESPECTED) OF THE BALANCER SHAFT PHASING. AS THE TIMING SHOULD BE REGULAR THE NOTCHES OF THE GEARS AND THE BALANCER SHAFT SHOULD CORRESPOND WHEN THE PISTON IS AT THE DEAD UPPER POINT. AS SHOWED ON THE DRAWING.



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PVL IGNITION DVS-J



OPTION 1

As per part of the Karting Australia Technical Regulations, on decision of the stewards and/or the technical officer, KA will be authorised to interchange entrants' ignition systems for the systems supplied by the organisers (same homologated models).

No wiring loom repairs 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/earth may be replaced/repared with like for like components.**
- **Stator mounting ring must be PVL OTK OEM.**
- **JNR Timing spec- see Page 28**
- **A thumb operated stop button (momentary action) must be used mounted to the steering wheel spoke.**

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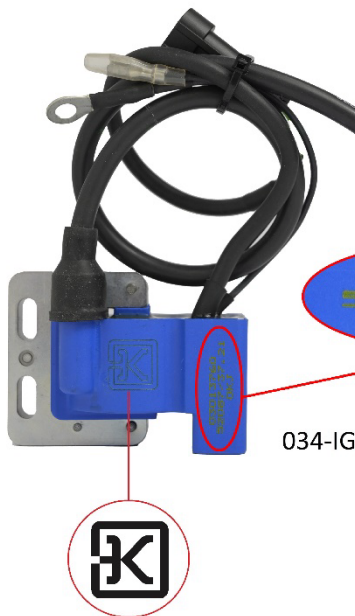
SELETTA IGNITION DVS-J

OPTION 2



034-IG-19
034-IG-20

034-IG-19
034-IG-20
034-IG-30



03013760
52087/37.21
OKJ

034-IG-20



selettra
Made in Italy
034-IG-20

SPARK PLUG



SPARK PLUG:

- Only spark plugs approved by Karting Australia for use in the Vortex DVSJ engine will be permitted, B9EG and B10EG NGK
- Spark plug must be approved and have the original washer fitted.
- Shank length 18.5mm maximum. No machining permitted.

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DVS-J JNR PVL Ignition Timing Marks

VORTEX DVS JNR IGNITION TIMING - Maximum permissible timing of 3.1mm
Remove spark plug. Insert dial gauge into spark plug thread and screw in tightly.

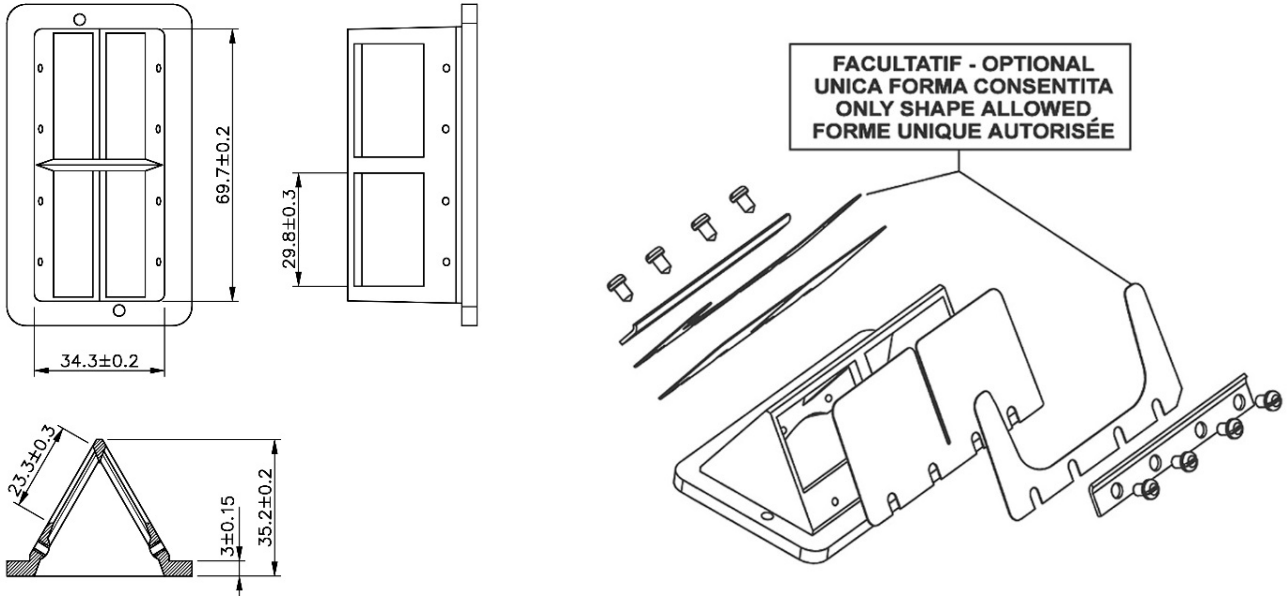
- **Rotate engine past TDC and set gauge to read 0 at true TDC.**
- **Slowly rotate engine until the marks align, must not exceed the maximum of 3.1mm.**

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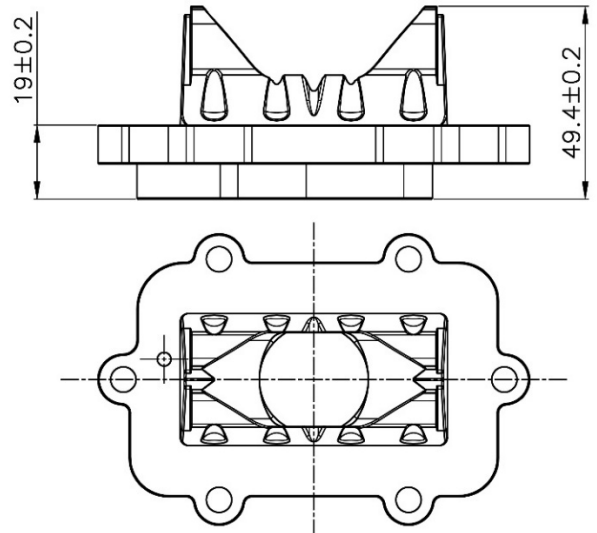
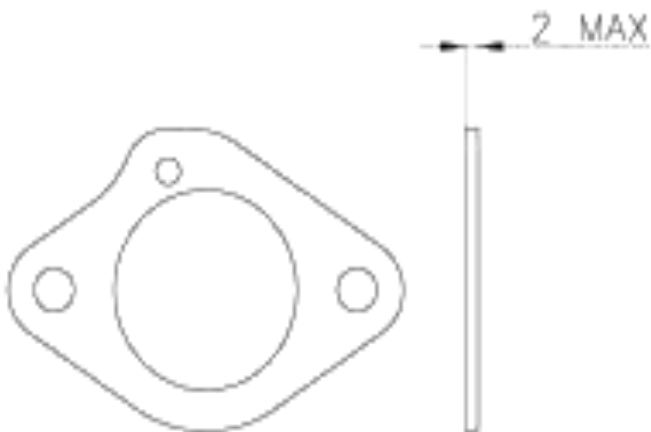
REED BLOCK AND CONVEYOR DVS-J



IT'S ALLOWED TO ADD ONLY ONE IN TOTAL REINFORCEMENT (STIFFENER) ON THE PETALS for DVS-J AS SHOWN ON THE DRAWING

REED BLOCK AND CONVEYOR

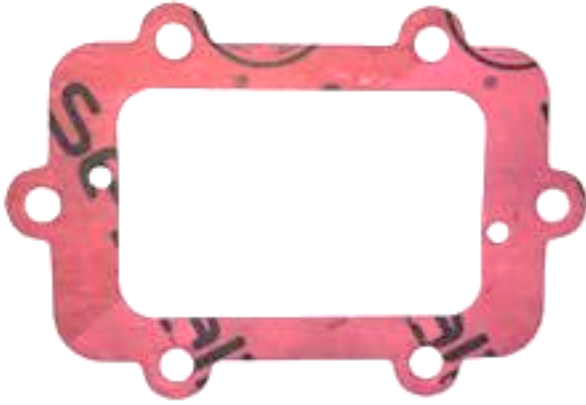
REED VALVE COVER



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REED BLOCK GASKET



**REED BLOCK GASKET
MINIMUM THICKNESS:
0.5mm**

DVS-J AIR FILTER

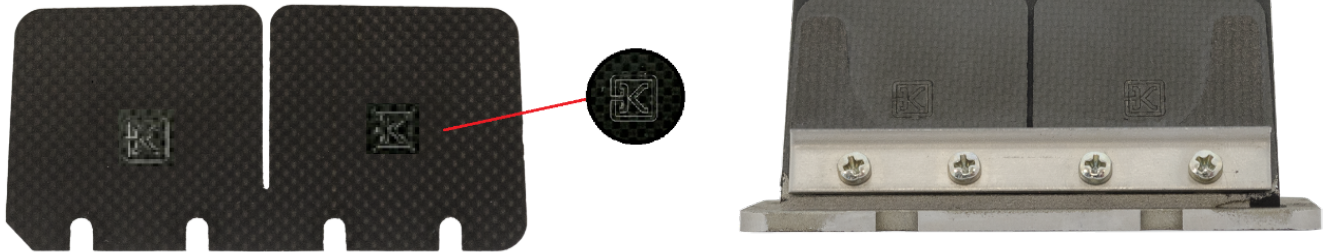


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PICTURES AMD MARKING OF THE REEDS

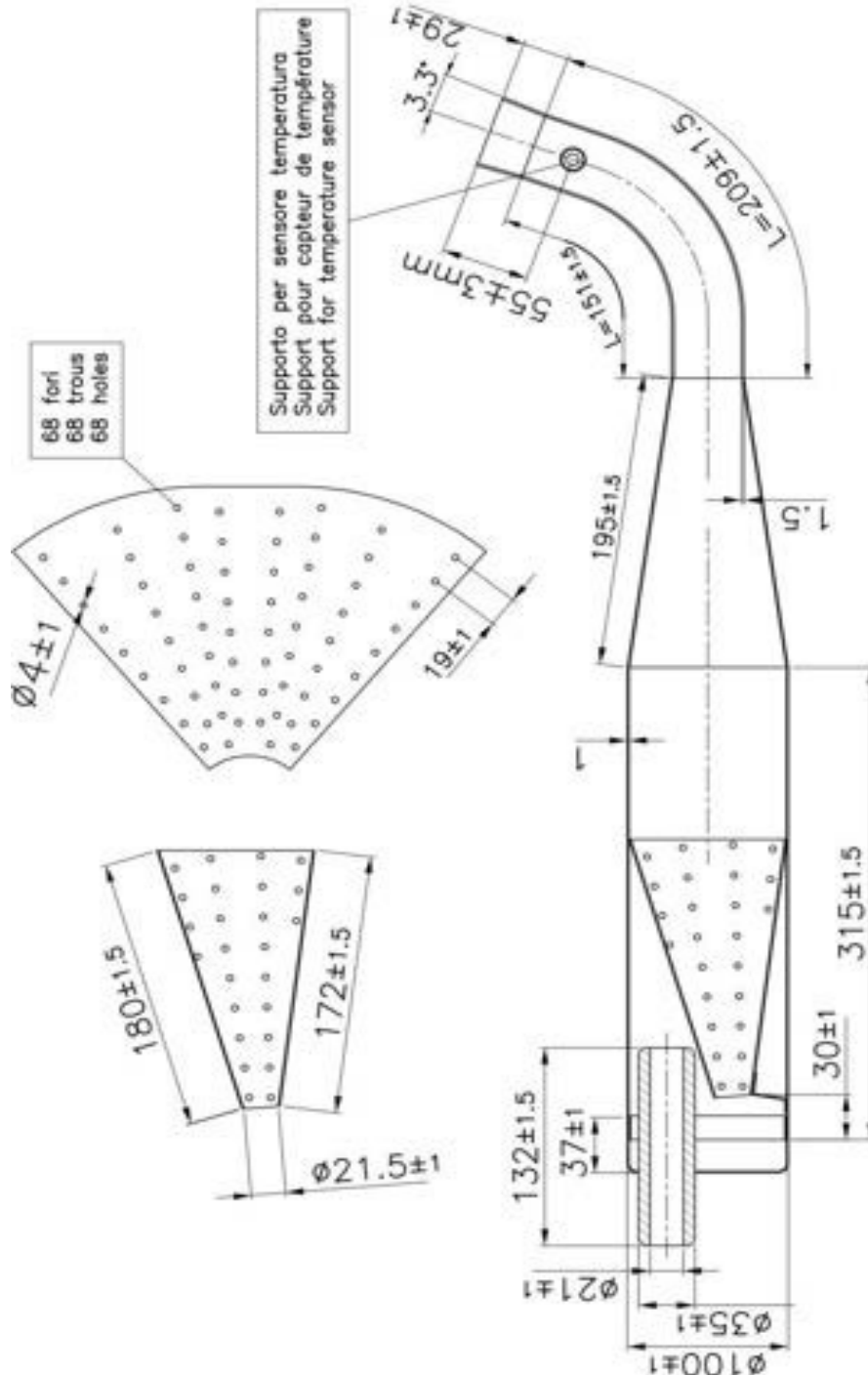


REED PETALS MINIMUM THICKNESS	0.23mm
REINFORCEMENT (STOPPER) MINIMUM THICKNESS	0.22mm

CARBON FIBER REED PETALS MUST BE BOTH, MANDATORY, ORIGINAL AND BRANDED OTK AS SHOWN IN THE PICTURE.

ATTENTION	<p><u>ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.</u> <i>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.</i></p>
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EXHAUST MUFFLER



WEIGHT
1985gr Min.

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PHOTO AND MARKING OF THE EXHAUST



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

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DVS-J 2025



CARBURETTOR AND COMPONENTS IBEA ROK DVS-J 2 JET

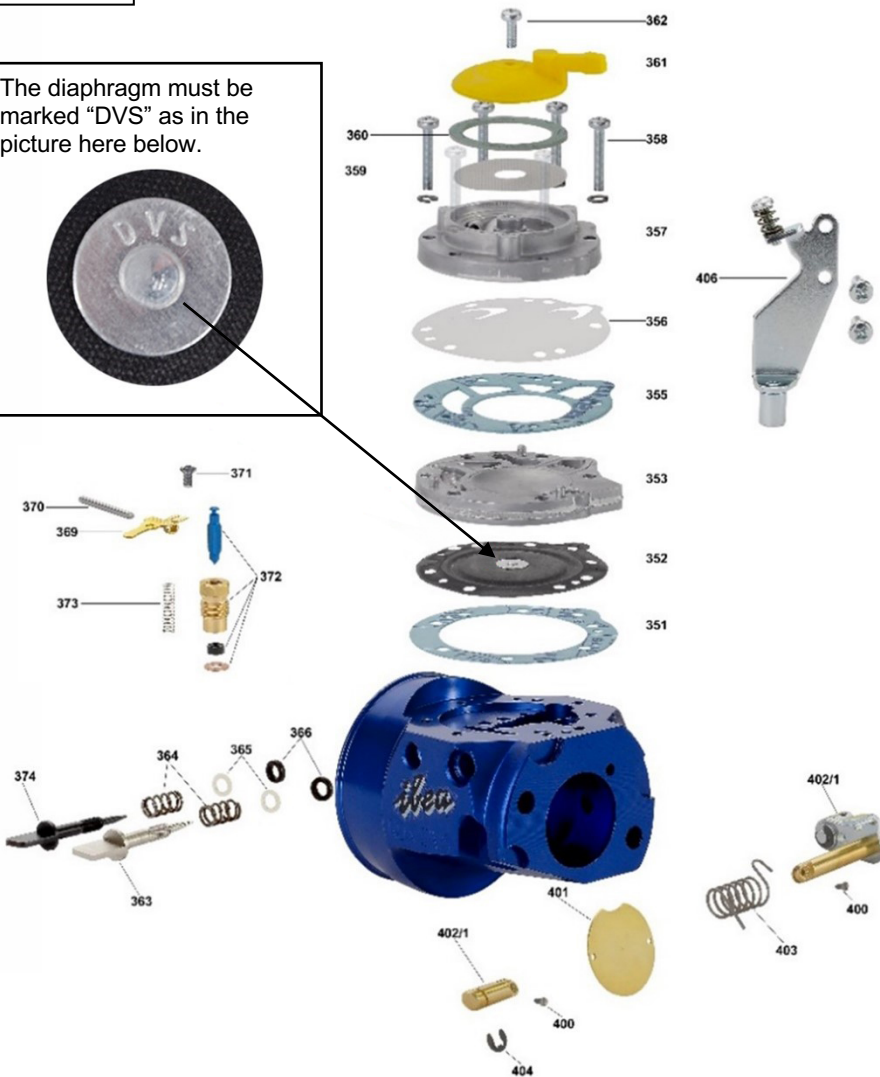
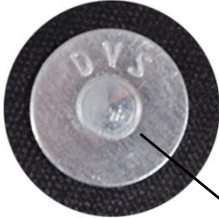
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OPTION 1

The diaphragm must be marked "DVS" as in the picture here below.



THE CARBURETTOR ADJUSTMENTS ARE ALLOWED ONLY EMPLOYING ORIGINAL IBEA ROK DVS PARTS

THE CARBURETTOR ADJUSTMENTS ARE ALLOWED ONLY EMPLOYING ORIGINAL IBEA ROK DVS PARTS:

- Low 1.4mm (diameter max)
- High 1.5mm (diameter max)
- Venturi taper 28mm (diameter max) checked with IBEA DVS template
- Venturi 24mm (diameter max)

SPARE PARTS

351 – Diaphragm gasket
352 – Diaphragm
353 – Diaphragm cover
355 – Fuel pump gasket
356 – Fuel pump diaphragm
357 – Fuel pump body
358 – Fuel pump screw
359 – Fuel strainer screen
360 – Fuel strainer cover gasket
361 – Fuel strainer cover
362 – Fuel strainer cover screw
363 – Idle mixture screw L.
364 – Idle mixture screw spring
365 – Idle mixture screw washer
366 – Idle mixture screw packing
369 – Inlet control lever
370 – Inlet control lever fulcrum
371 – Inlet control lever screw
372 – Inlet needle
373 – Inlet tension spring
374 – High speed mixture screw H
400 – Screw for butterfly
401 – Shutter
402/1-Special shaft whit shutter
403 – Spring for shaft
404 – Shaft clip
406 – Support for cable
407 – Special nut M6
408 – Kit membrane
409 – Complete kit

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CARBURETTOR IBEA ROK DVS-J 2 JET

OPTION 1



DIMA CONTROLLO CARBURATORE
CARBURETTOR CHEKING TEMPLATE
GABARIT POUR LA VERIFICATION DU PROFIL
DU CARBURATEUR



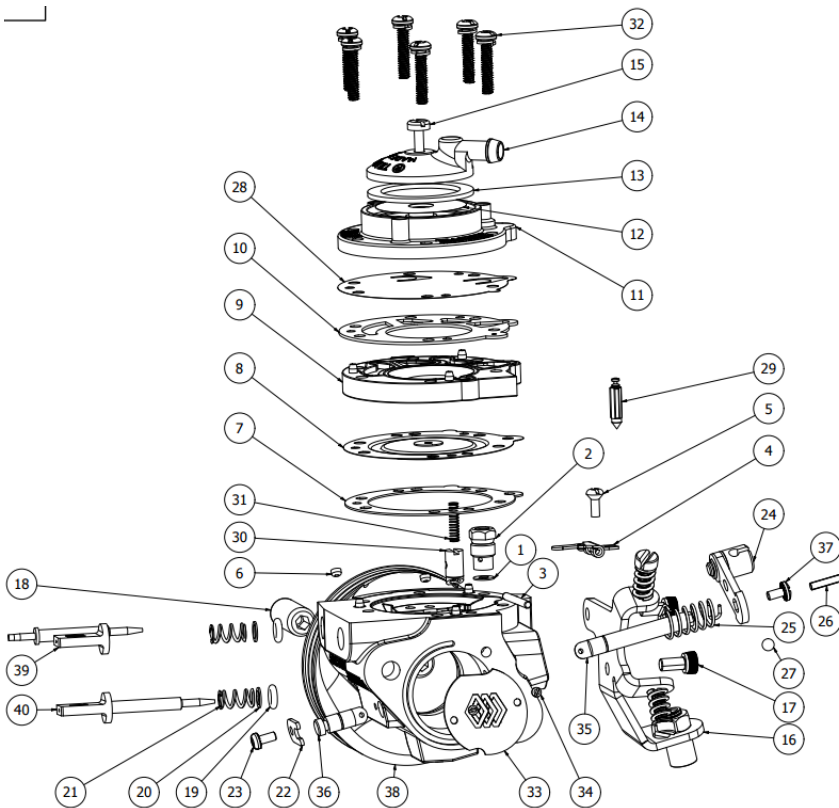
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CARBURETTOR AND COMPONENTS TILLOTSON ROK DVS-J

OPTION 2



SPARE PARTS

1 – Copper gasket, inlet seat
3 – Fulcrum lever pin
4 – Inlet valve control lever
5 – Fulcrum lever screw
6 – Brass plug
7 – Metering gasket
8 – Metering diaphragm
9 – Fuel pump body
10 – Pump gasket
11 – Fuel pump body
12 – Fuel strainer screen
13 – Strainer gasket
14 – Strainer cover
15 – Cover screw
16 – Cable bracket assembly
17 – M4 socket cap screw
18 – Carburettor mounting nut
19 – Adjustment screw O-ring
20 – Adjustment screw washer
21 – Adjustment screw spring
22 – Throttle shaft clip
23 – Screw
24 – Throttle lever assembly
25 – Spring for shaft
26 – Pin
27 – Brass sphere
28 – Fuel pump diaphragm
29 – Inlet needle
30 – Idle nozzle
31 – Inlet tension spring
32 – Screw
33 – Throttle shutter
34 – Screw
35 – Split throttle shaft long
36 – Split throttle shaft short
37 – Screw
38 – HW machined body
39 – Adjustment screw H (High jet)
40 – Adjustment screw L (Low jet)

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DVS-J 2025



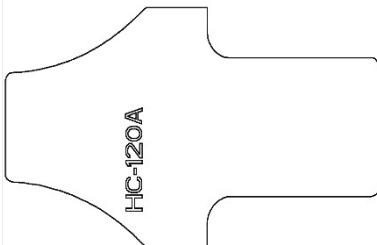
**CARBURETTOR TILLOTSON ROK DVS-J
HC-120A 432 022**

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OPTION 2



TILLOTSON CARBURETTOR
CHECKING TEMPLATE

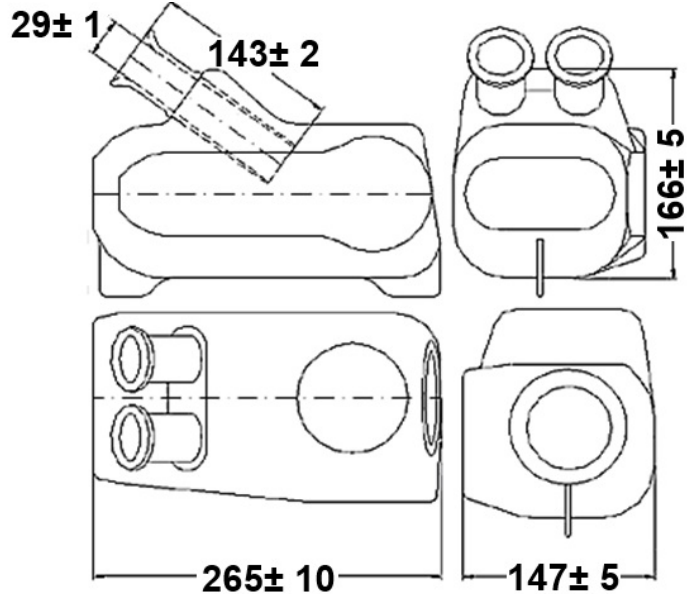
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INLET SILENCER

MODEL, TYPE

ARROW



AIR FILTER MESH AS OPTIONAL

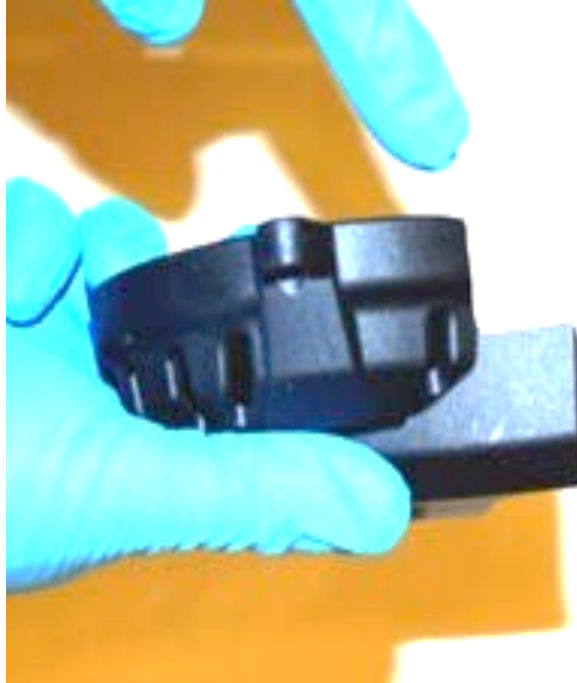
RUBBER BUSH CAN BE CUT ON ONE SIDE.
Drain hole is permitted underneath air box no larger than 8mm drill



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.

FRONT SPROCKET COVER



It is permitted on the bottom side of the cover to shorten as per sample, not breaching the first vent hole to allow greater chain clearance.

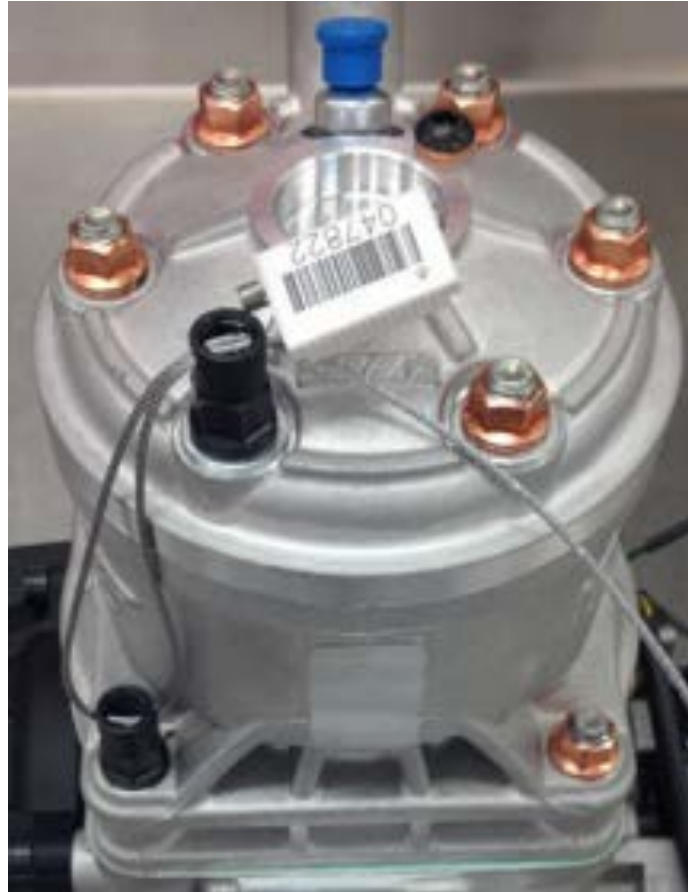
If desired, a hole of 32mm is permitted to allow remote starter to access crankshaft.

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POSITION OF SEALING NUTS



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