

IDENTIFICATION SHEET

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



VLR / VLR-JUNIOR ROK 2025



TECHNICAL INFORMATION AND CHARACTERISTICS

ORIGINAL BORE	42,20 mm +/-0,2mm
MAX ALLOWED BORE	48,53 mm
STROKE	54mm +/- 0,2 mm
ORIGINAL DISPLACEMENT	100 cc
CONROD C-TO-C DISTANCE	102mm +/- 0,2 mm
WEIGHT OF CONROD	127g +/- 2g
SPROCKET	Z10-Z11-Z12

CYLINDER DEVELOPMENT AND DISTRIBUTION

EXHAUST PORT	169° MAX
BOOSTER	167° MAX
MAIN TRANSFER	123,5° ± 2°
SECONDARY TRANSFER	132° MAX

Check of the distribution as described in the **ROK CUP USA 2025 Technical Regulation**.

Measurement must be made with engine head mantled (studs tightening torque: 1.8 kgm).

ATTENTION

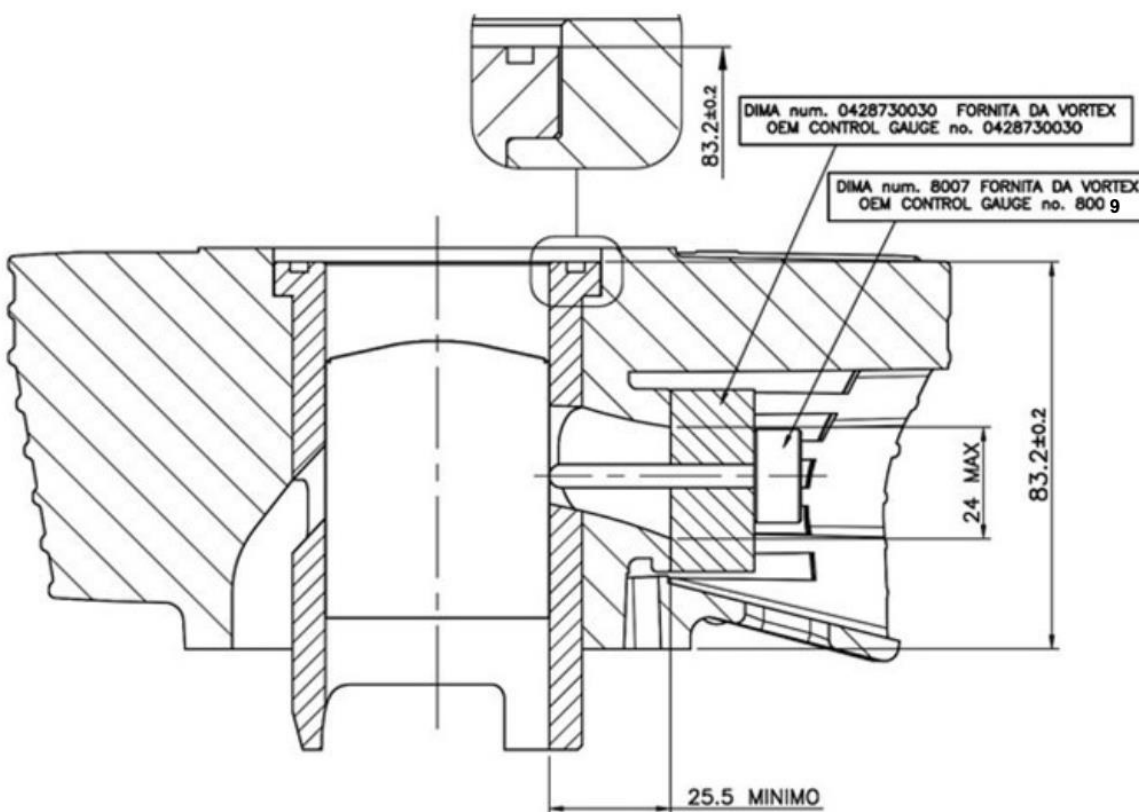
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CYLINDER SECTION

MINIMUM DISTANCE OF THE EXHAUST MANIFOLD PLAN FROM THE CYLINDER AXLE



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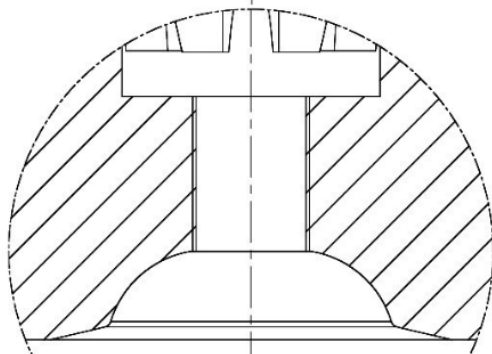
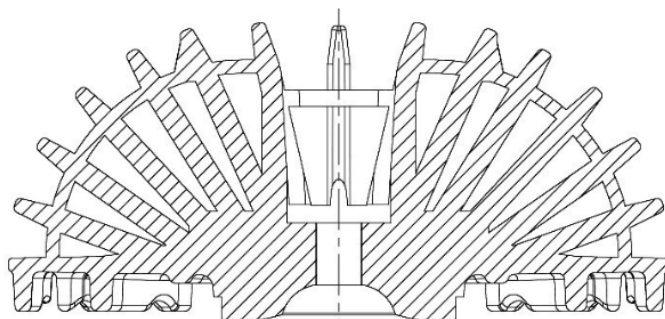
DRAWING OF CYLINDERHEAD AND COMBUSTION CHAMBER

VOLUME OF COMBUSTION CHAMBER

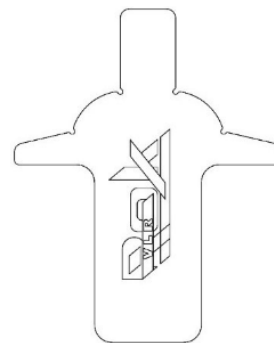
8,60 cc MIN. With FIA INSERT

Volume of combustion chamber, as described in the **ROK CUP USA Technical Regulation 2025**.

SQUISH THICKNESS : 1mm MIN



VORTEX TEMPLATE FOR
COMBUSTION CHAMBER
PROFILE CONTROL



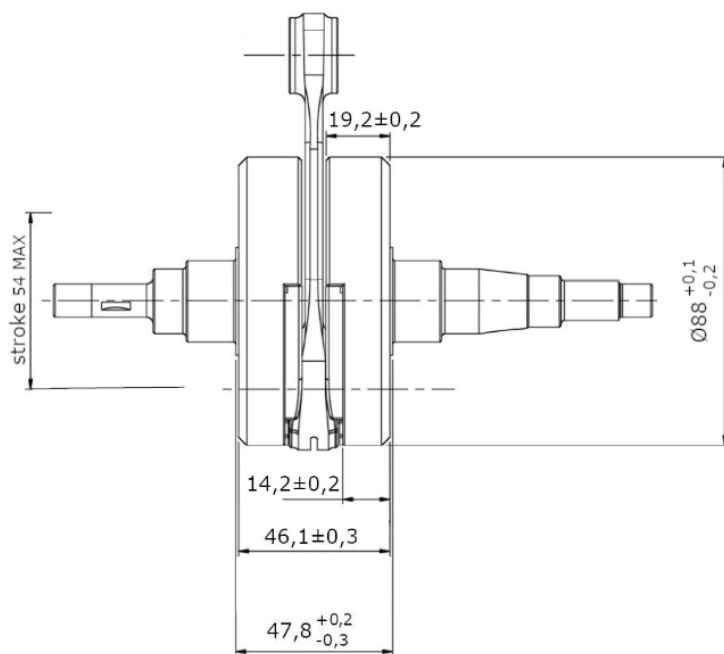
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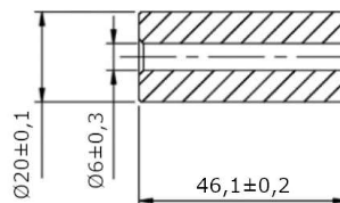
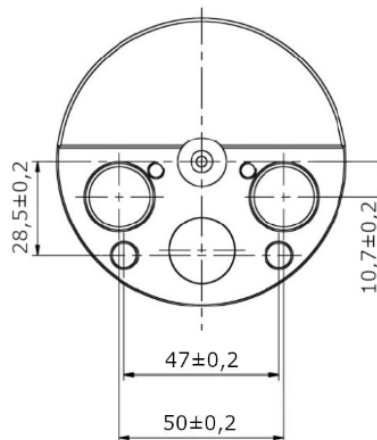
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CRANKSHAFT AND CRANKPIN



Peso – Weight – Poid
1.870g +/- 10g



Peso – Weight – Poid
102g +/- 2g

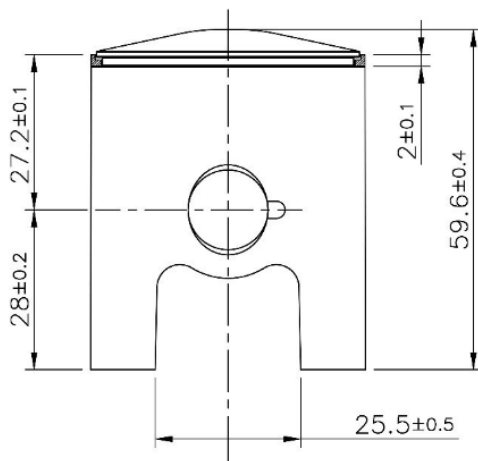
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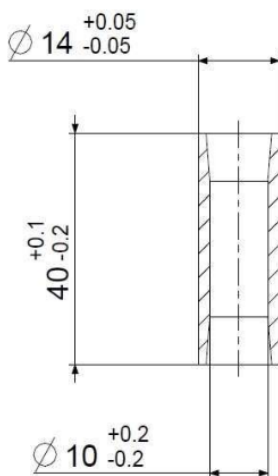
PISTON



WEIGHT
97gr +/- 5 gr

MEDIDA MINIMA DE LA FALDA
DEL PISTON AL FILO DE LA
CABEZA DEL PISTON: 55.85 MM

PISTON PIN



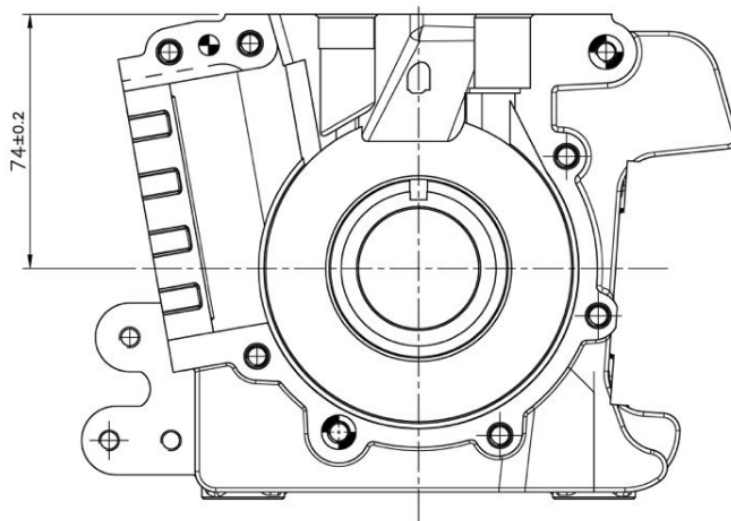
WEIGHT
21gr Min.

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INTERIOR VIEW OF THE CRANKCASE AND ASSEMBLY WIEV



CRANKSHAFT BEARINGS

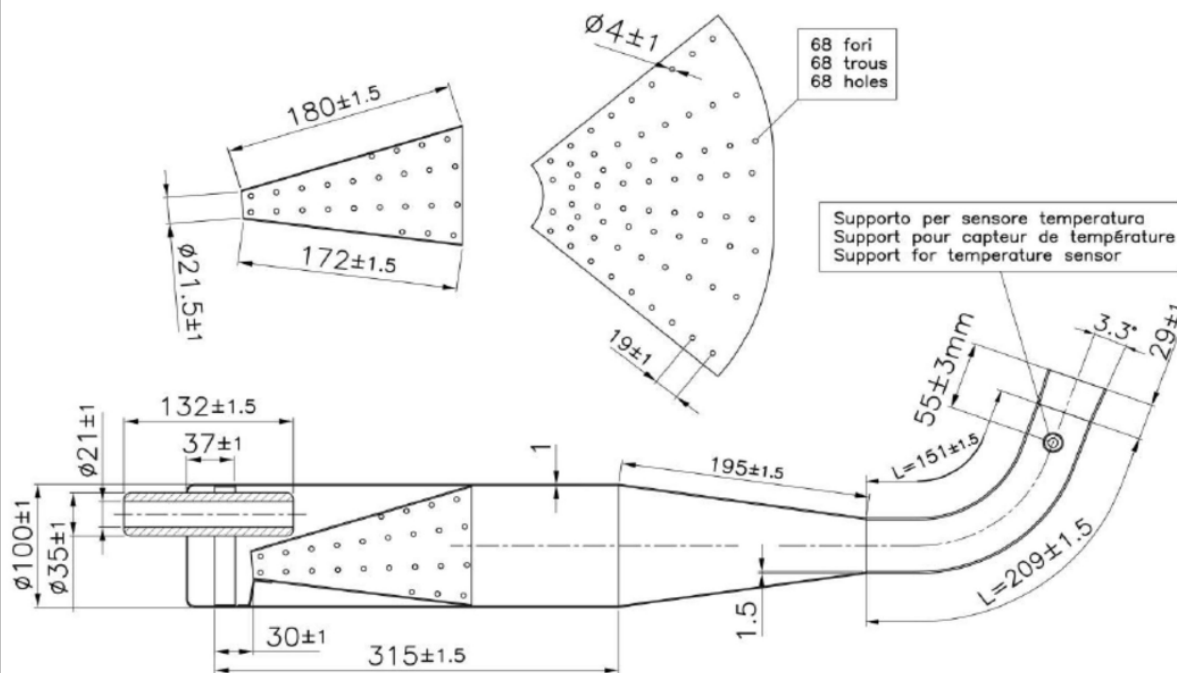
TYPE	DIMENSION	CHARACTERISTICS
Free brand 6205.C4	25x52x15mm	Steel Balls 9

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EXHAUST MUFFLER



EXHAUST WEIGHT
1990 gr +/- 5%

The end parts of the silencer must have two soldered pairs of lugs (one pair at the top and one pair at the bottom) to allow for fixing of seals by the Organizer so that the silencer may be opening during the competition.

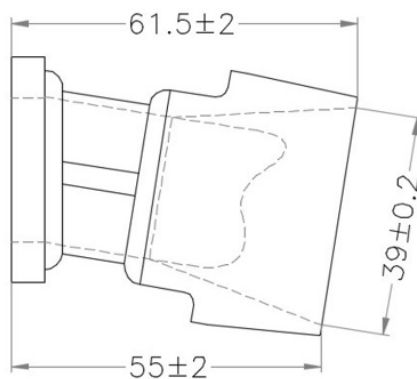
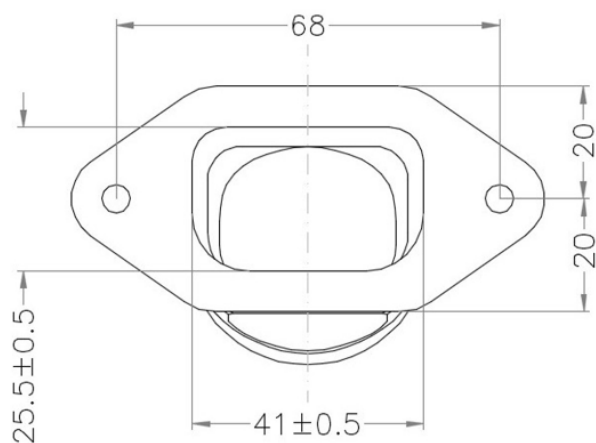
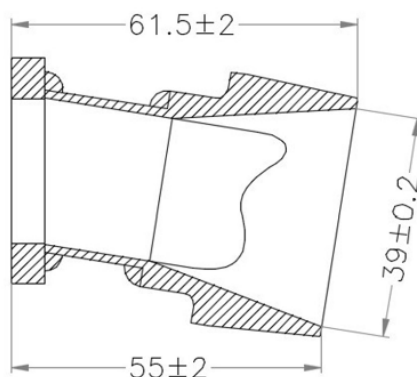
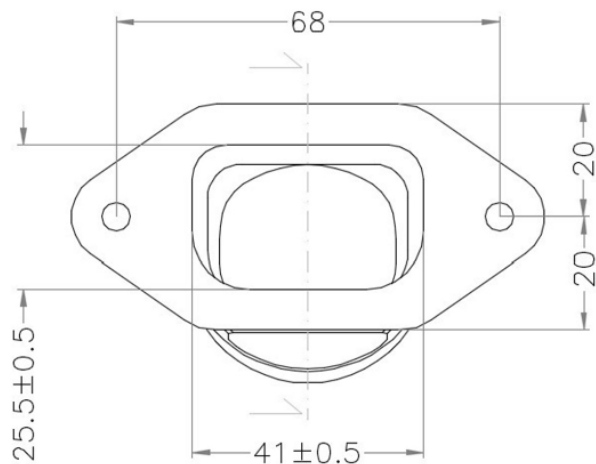
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EXHAUST MANIFOLD



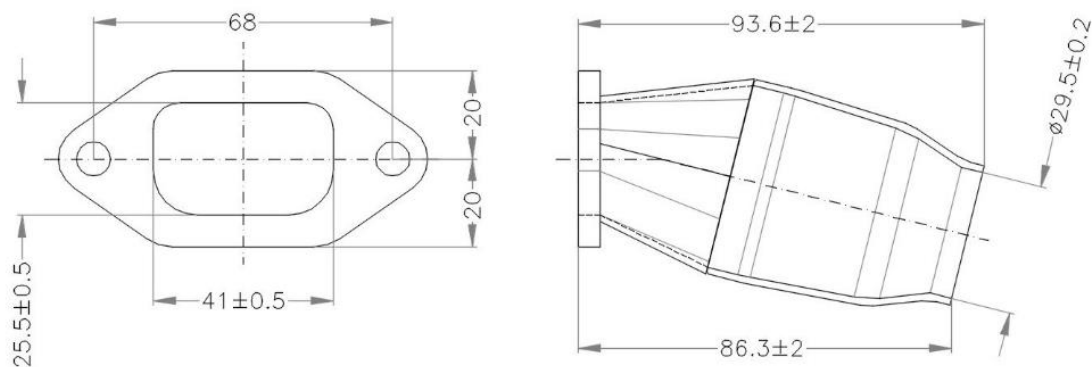
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EXHAUST MANIFOLD VLR JUNIOR



PICTURES AND MARKING OF MANIFOLD

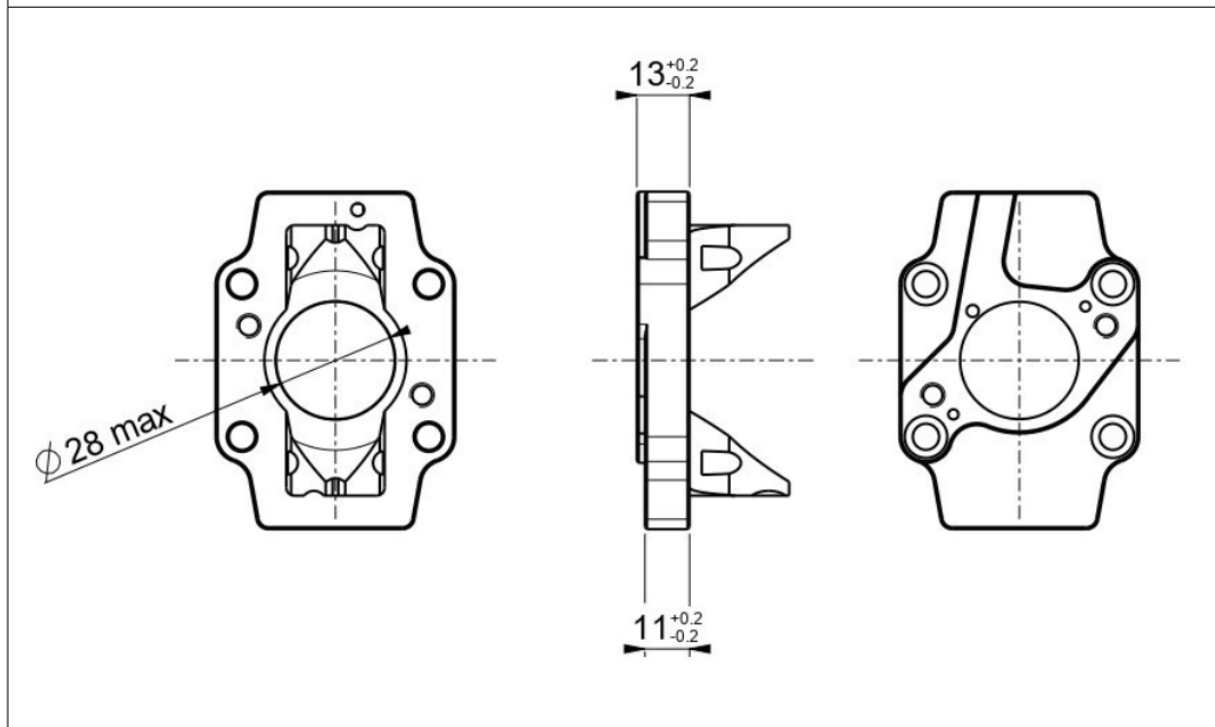


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DRAWING OF REED VALVE COVER



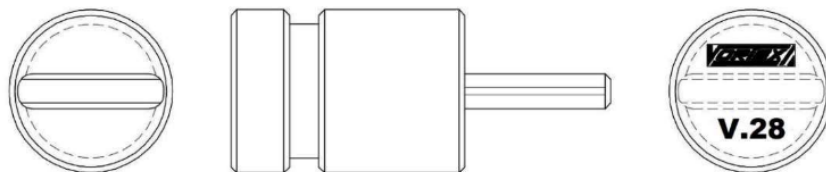
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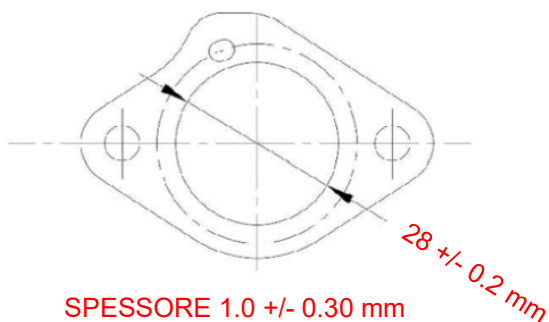
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DISEGNO DIMA DI CONTROLLO DEL CONVOGLIATORE
DRAWING OF THE CONTROL GEUGE OF THE REED VALVE COVER
DESSIN DU GABARIT POUR LA VERIFICATION DU COUVERCLE DE LA BOÎTE À CLAPETS



DISEGNO TECNICO GUARNIZIONE TRA CRBURATORE E MOTORE
TECHNICAL DRAWING GASKET BETWEEN CARBURETTOR AND ENGINE
DESSIN TECHNIQUE JOINT ENTRE CARBURATEUR ET MOTEUR

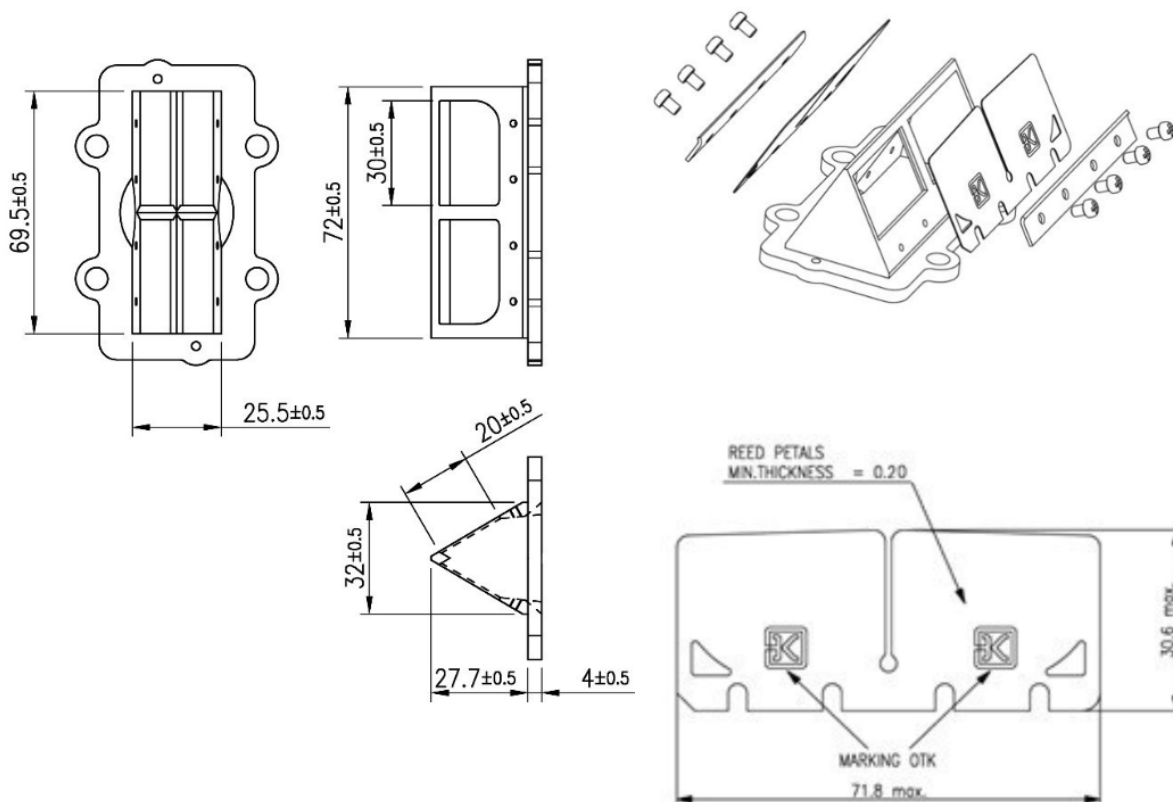


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DRAWING OF REED BLOCK AND REED VALVE



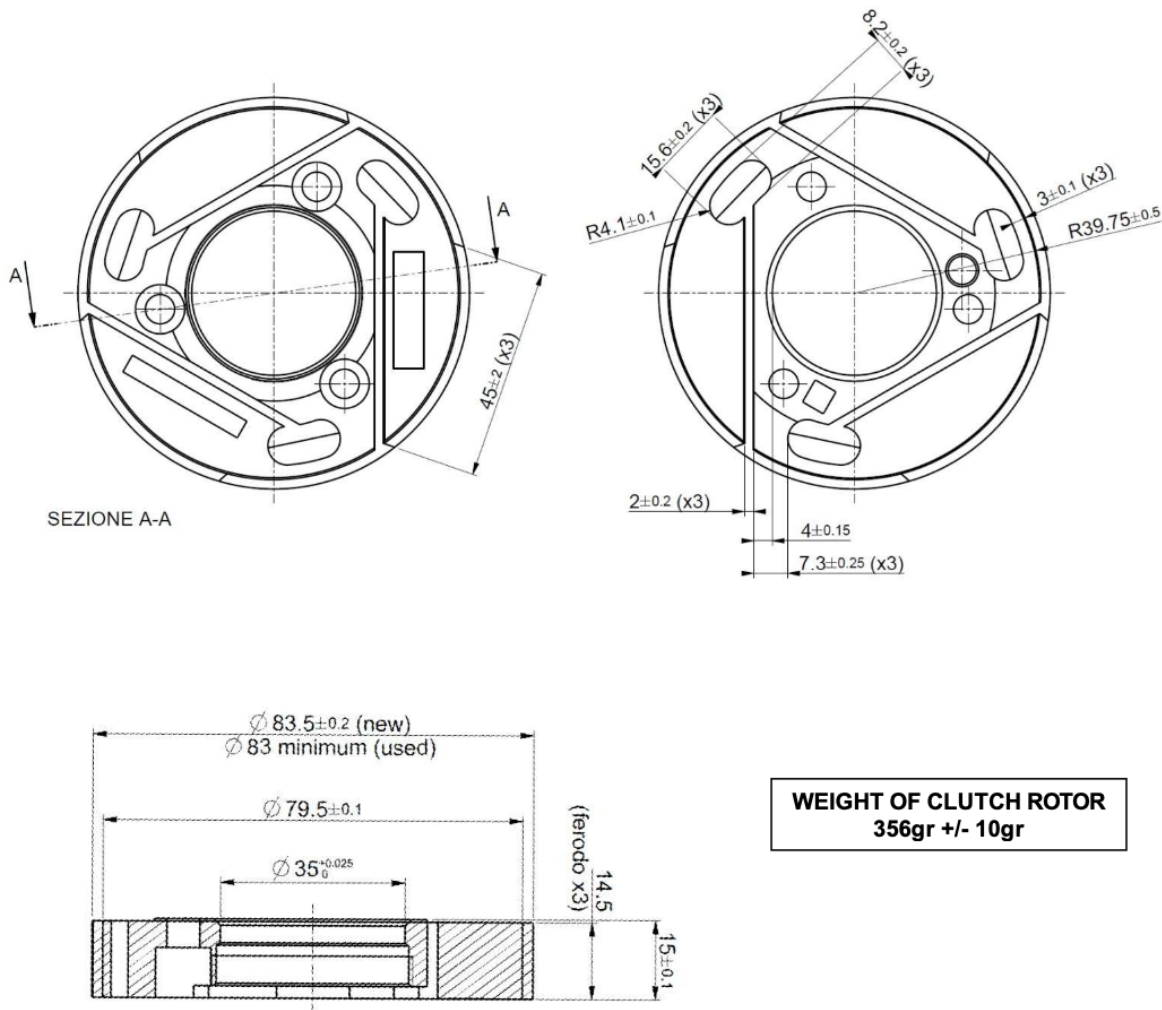
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CLUTCH ROTOR



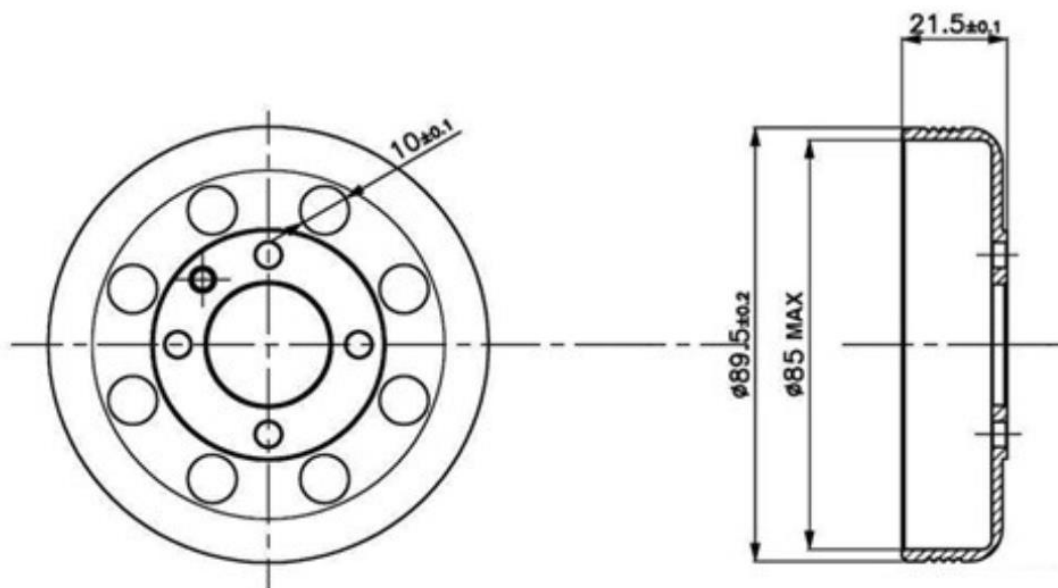
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CLUTCH HOUSING



**WEIGHT OF CLUTCH
HOUSING**
177gr +/- 5gr

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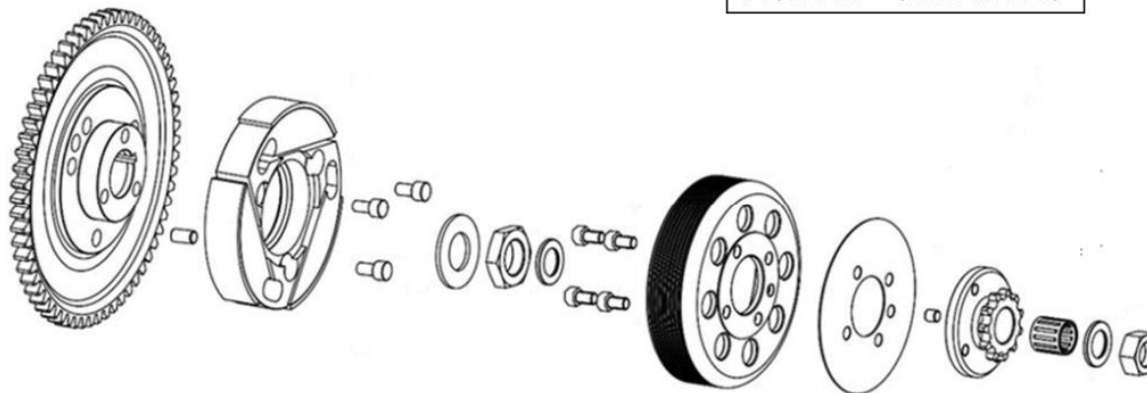
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COMPL. CLUTCH ROTOR WITH STARTING GEAR

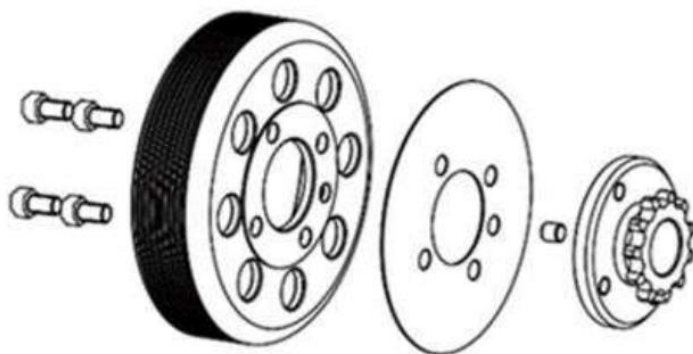
Z10-Z11-Z12 – CHAIN TYPE 219



PARTS QUANTITY: 20

WEIGHT OF THE COMPLETE CLUTCH WITH STARTING GEAR AND PROTECTION: 830g MIN.

ENGAGEMENT SPEED (MAXIMUM) CAN BE VERIFIED IN EVERY MOMENT OF THE EVENT: 4000 RPM



PARTS QUANTITY: 8

WEIGHT OF THE CLUTCH HOUSING WITH SPROCKET: 264g MIN.

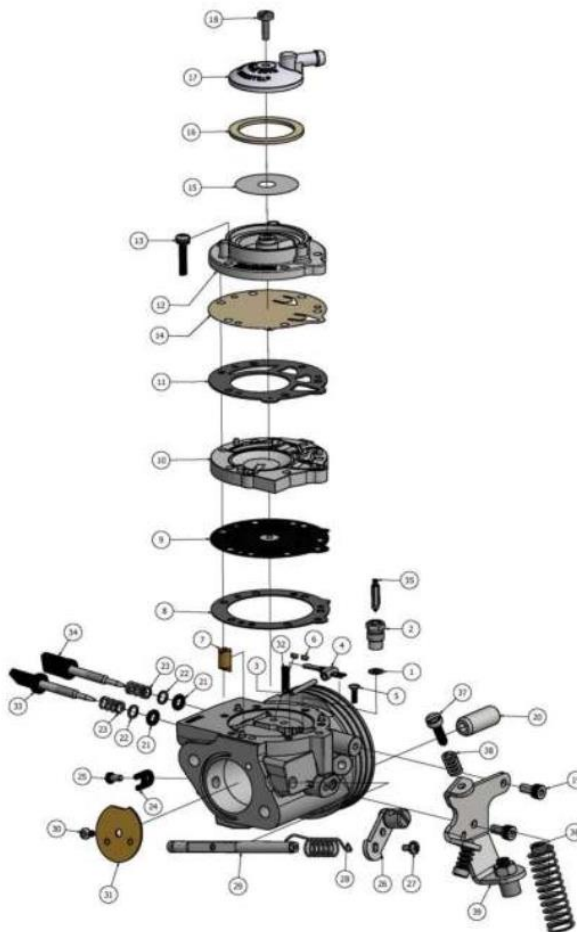
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CARBURETTOR AND COMPONENTS

TILLOTSON CARBURATOR HW 38A



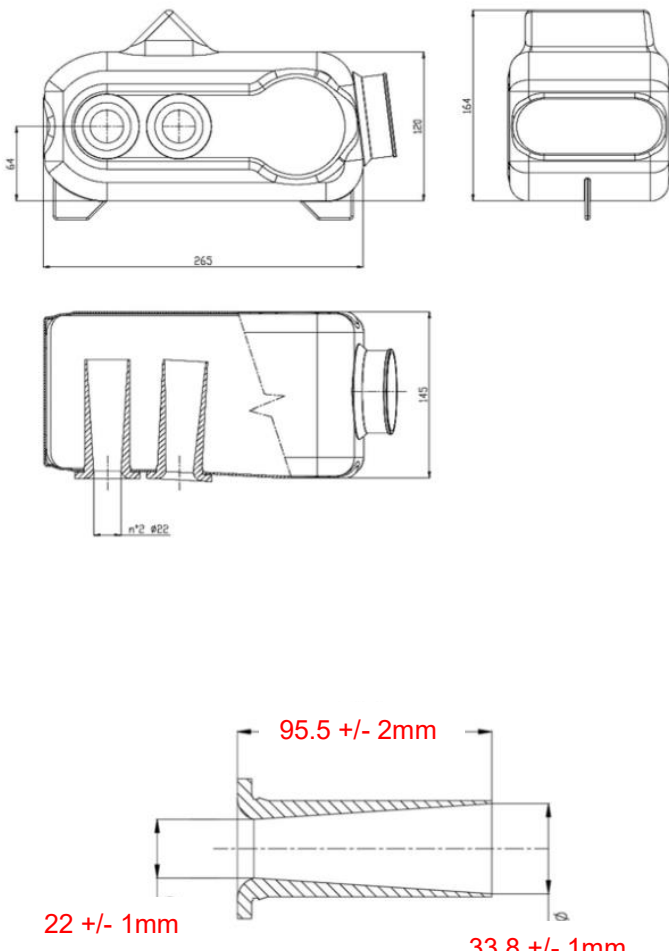
ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	1	* INLET SEAT GASKET	17	1	FUEL STRAINER COVER	33	1	8-32 UNC ADJUSTMENT SCREW ASSEMBLY
2	1	* INLET SEAT	18	1	5-40 UNC SCREW	34	1	8-32 UNC ADJUSTMENT SCREW ASSEMBLY
3	1	FULCRUM LEVER PIN	19	2	M4 X 0,7 SOCKET CAP SCREW	35	1	+ INLET NEEDLE
4	1	+ INLET CONTROL LEVER	20	2	CARBURETTOR MOUNTING NUT	36	1	CABLE RETURN SPRING
5	1	FULCRUM PIN SCREW	21	2	ADJUSTMENT SCREW O-RING	37	2	LIMITER SCREW
6	2	BRASS PLUG	22	2	ADJUSTMENT SCREW WASHER	38	2	SPEED CREW SPRING
7	1	IDLE NOZZLE	23	2	ADJUSTMENT SCREW SPRING	39	1	CABLE BRACKET
8	1	* DIAPHRAGM GASKET	24	1	THROTTLE SHAFT CLIP			
9	1	* DIAPHRAGM ASSEMBLY	25	1	4-40 UNC SCREW			
10	1	FUEL PUMP BODY	26	1	THROTTLE LEVER ASSEMBLY			
11	1	* FUEL PUMP GASKET	27	1	4-40 UNC SCREW			
12	1	FUEL PUMP BODY	28	1	THROTTLE RETURN SPRING			
13	6	6 - 32 UNC SCREW WITH LOCK WASHER	29	1	THROTTLE SHAFT			
14	1	* FUEL PUMP DIAPHRAGM	30	1	4-40 UNC SCREW			
15	1	FUEL STRAINER SCREEN	31	1	THROTTLE SHUTTER			
16	1	* FUEL STRAINER COVER GASKET	32	1	INLET TENSION SPRING 37g			

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INLET SILENCER	
MODEL TYPE	ARROW FOR VLR
	

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AIR FILTER RUBBER SLEEVE

OPTION 1



OPTION 2



RUBBER BUSH CAN BE CUT ON ONE SIDE. AIR FILTER BRAND/SIZE IS OPEN.

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PICTURES OF SELETTRA IGNITION



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.

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STARTER WIRING

OPTION 1



OPTIONAL BUTTON COVER

OPTION 2



OPTIONAL BUTTON COVER

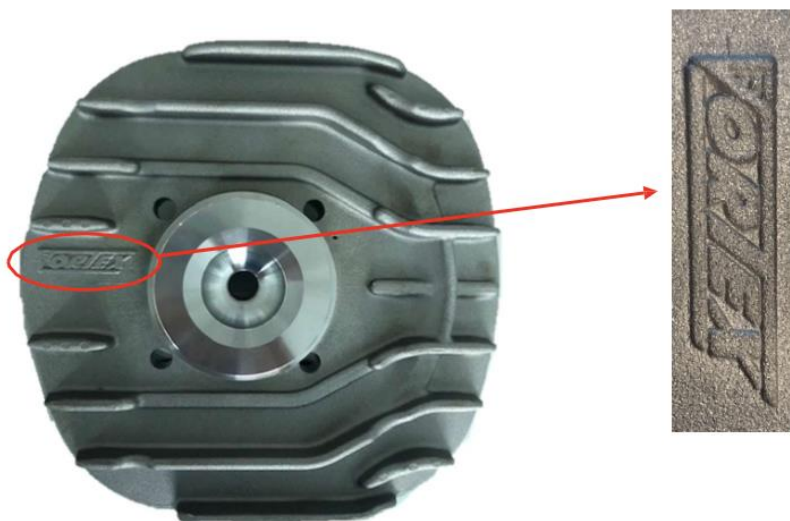
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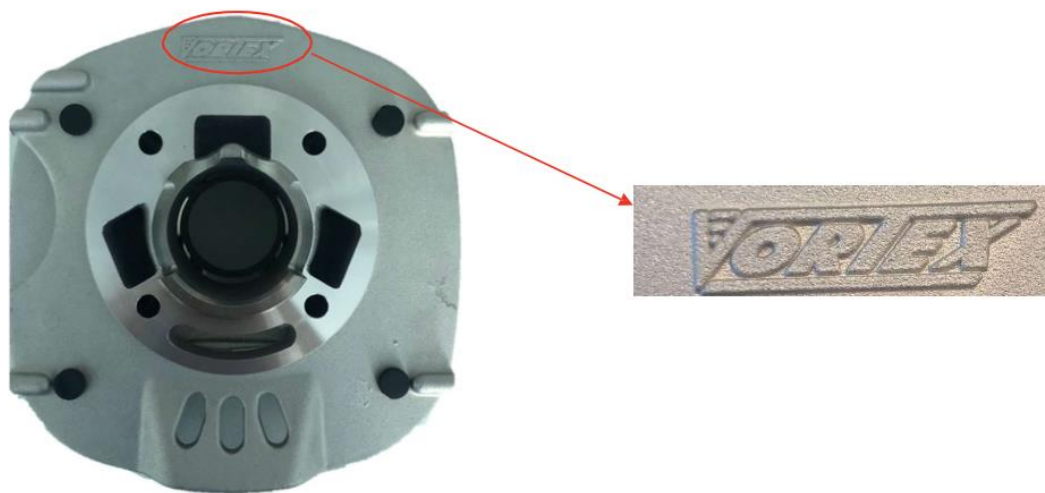
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MARKING OF THE CYLINDERHEAD AND COMBUSTION CHAMBER



MARKING OF CYLINDER BASE

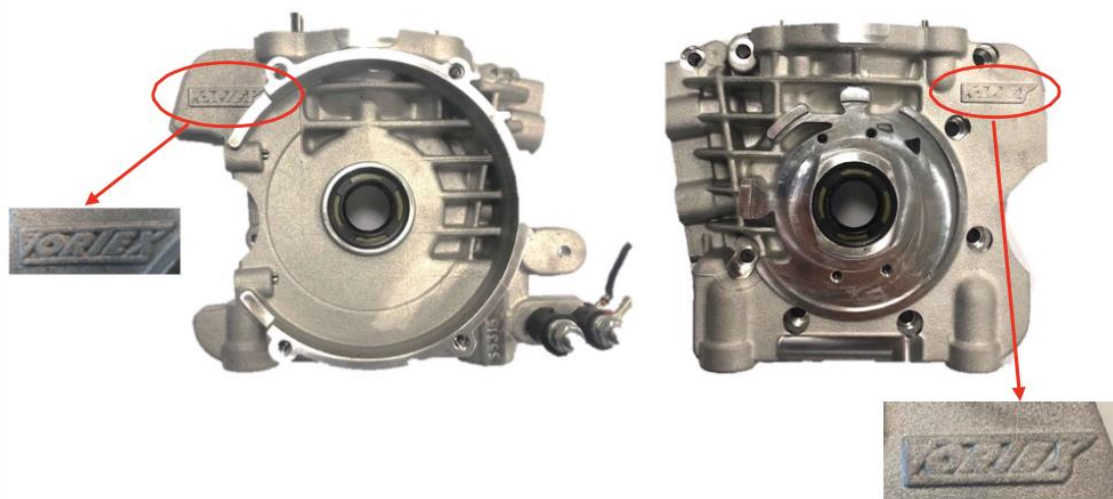


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MARKING OF THE CRANKCASE



MARKING OF CRANKSHAFT

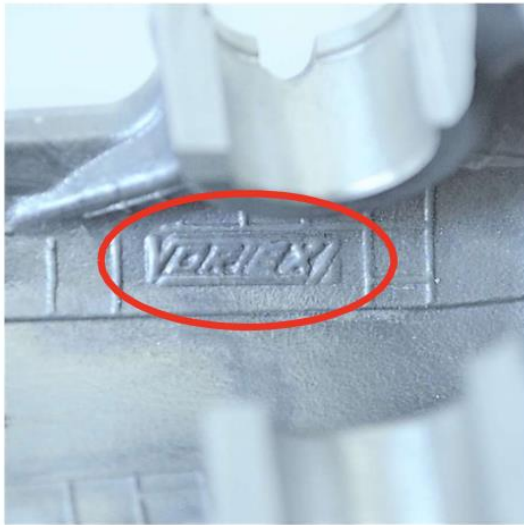


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PICTURE OF THE PISTON	MARKING OF THE CONROD
	
MARKING OF THE PISTON	
Mandatory to have the brand VORTEX cast piston as shown in the picture.	
	

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PHOTO AND MARKING OF THE EXHAUST



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PICTURES AND MARKING OF REED VALVE COVER



PICTURES AND MARKING OF PIGNION AND CLUTCH DRUM

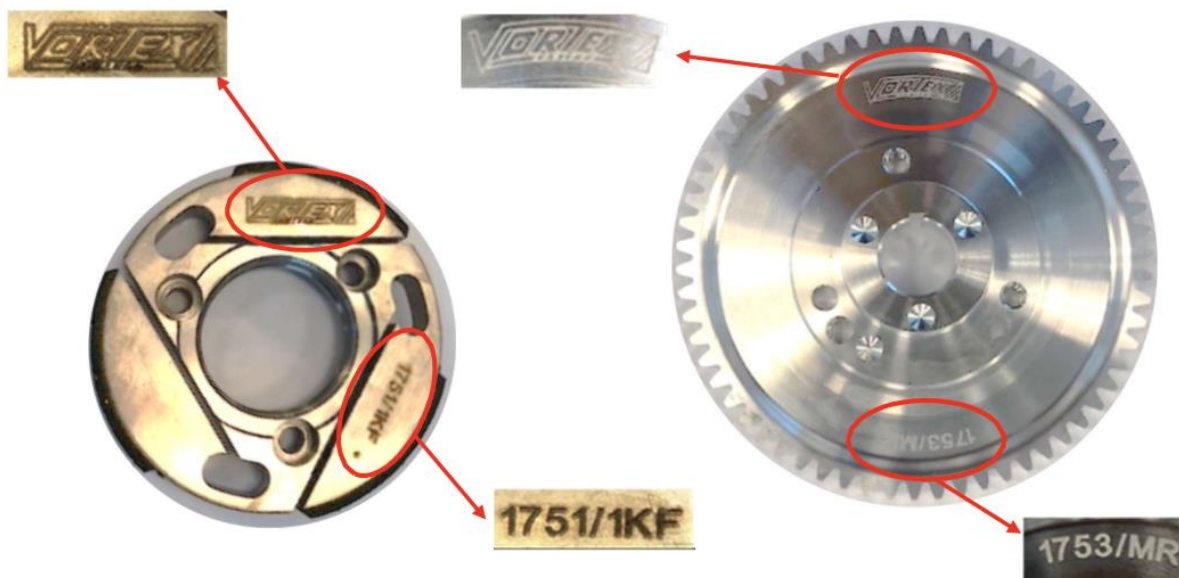


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PICTURES AND MARKING OF CLUTCH BODY AND STARTER WHEELS



REED PETALS



CARBON FIBER REED PETALS MUST BE BOTH, MANDATORY, ORIGINAL AND BRANDED OTK AS SHOWN IN THE PICTURE, MINIMUM THICKNESS 0,20mm.

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