

## SHIFTER ROK 2025

### IDENTIFICATION SHEET

This Identification Sheet reproduces descriptions, illustrations and dimensions of the **SHIFTER 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.  
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## SHIFTER ROK 2025

TECHNICAL INFORMATION AND CHARACTERISTICS	
ORIGINAL BORE	53,90 mm
MAX ALLOWED BORE	54,08 mm
STROKE	54,5 mm +/- 0,2 mm
ORIGINAL DISPLACEMENT	124,360 cc
MAXIMUM DISPLACEMENT	126 cc
CONROD C-TO-C DISTANCE	110 mm +/- 0,2 mm
WEIGHT OF CONROD	130 g +/- 2 g
CYLINDER DEVELOPEMENT AND DISTRIBUTION	
EXHAUST PORT	197° MAX
BOOSTER	182° MAX
MAIN TRANSFER	130° MAX
SECONDARY TRANSFER	130° MAX
<u>Check of the Distribution as described in the <b>ROK CUP USA Technical Regulations 2025.</b></u>	

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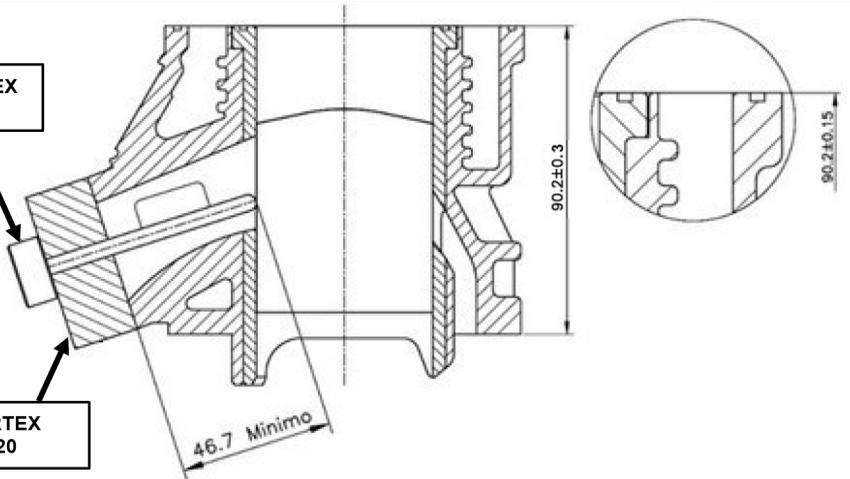
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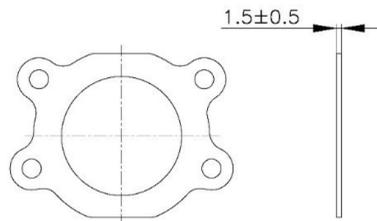
## CYLINDER SECTION

DIMA num. 8004 FORNITA DA VORTEX  
OEM CONTROL GAUGE no. 8004

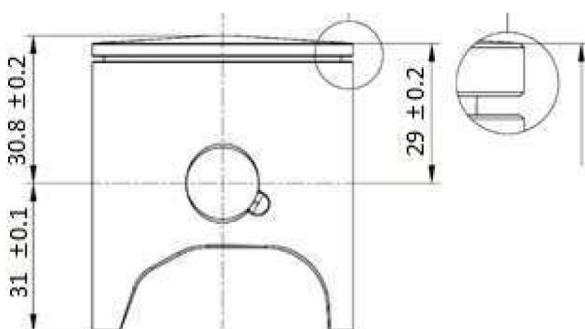
DIMA num. 0428730020 FORNITA DA VORTEX  
OEM CONTROL GAUGE no. 0428730020



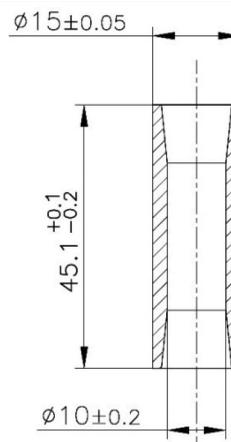
## EXHAUST GASKET



## PISTON - PISTON PIN



Weight  
120g +/- 5g



Weight  
30g Min

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### 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 2



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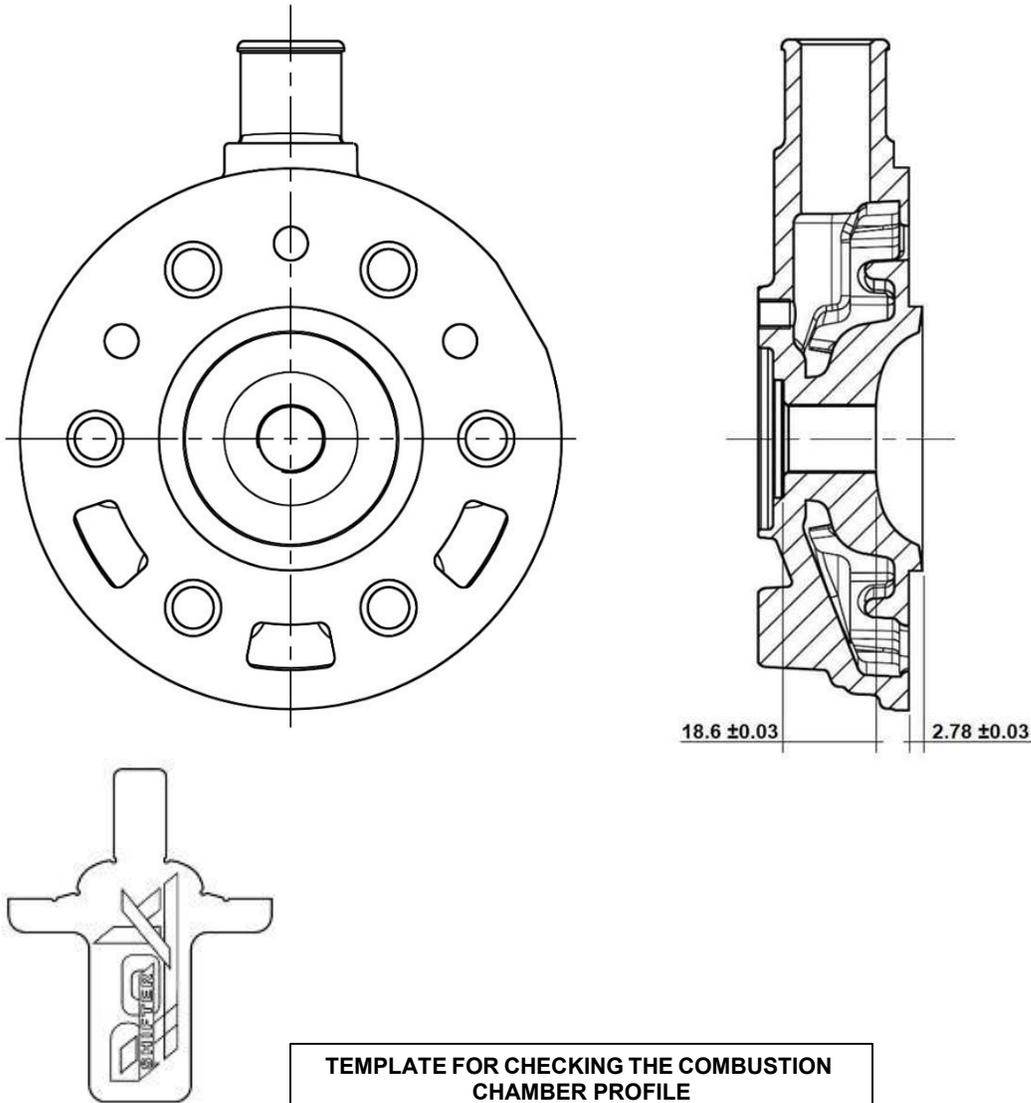
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### CYLINDERHEAD AND COMBUSTION CHAMBER

Combustion Chamber Volume: measured as described in the **ROK CUP USA Technical Regulation 2025**.

**SQUISH : 1,15 mm MIN.**



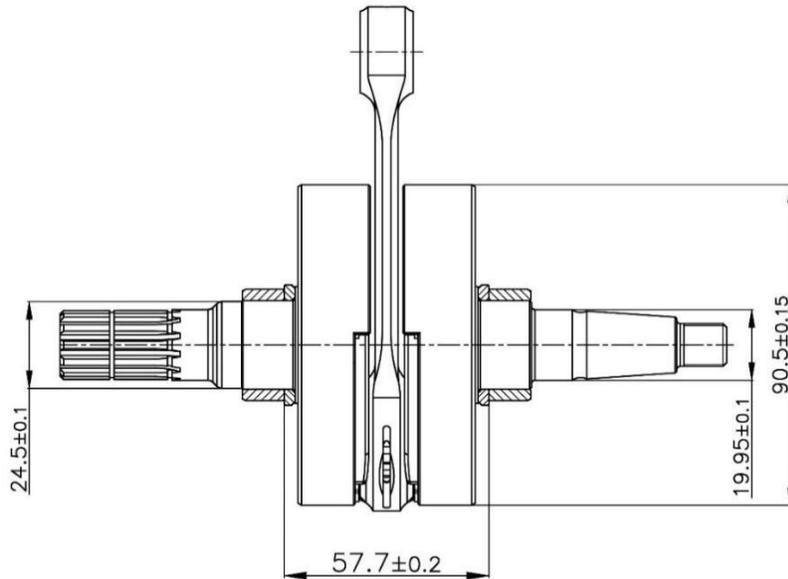
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### CRANKSHAFT – CONROD - CRANKSHAFT COUPLING AXIS PICTURE AND MARKING OF CRANKSHAFT



Weight  
2.250g ±10g



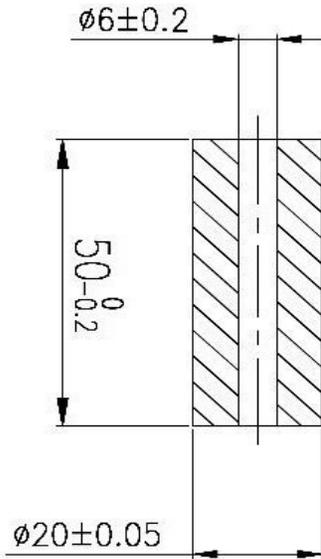
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### CRANK PIN AND CONROD PICTURE



OPTION 1



OPTION 2



OPTION 3



Weight  
 $111g \pm 1g$



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DETAIL PHOTO OF THE CRANKSHAFT OIL SEAL POSITION



PICTURES OF CRANKCASE SIDE WALLS



**ATTENTION**

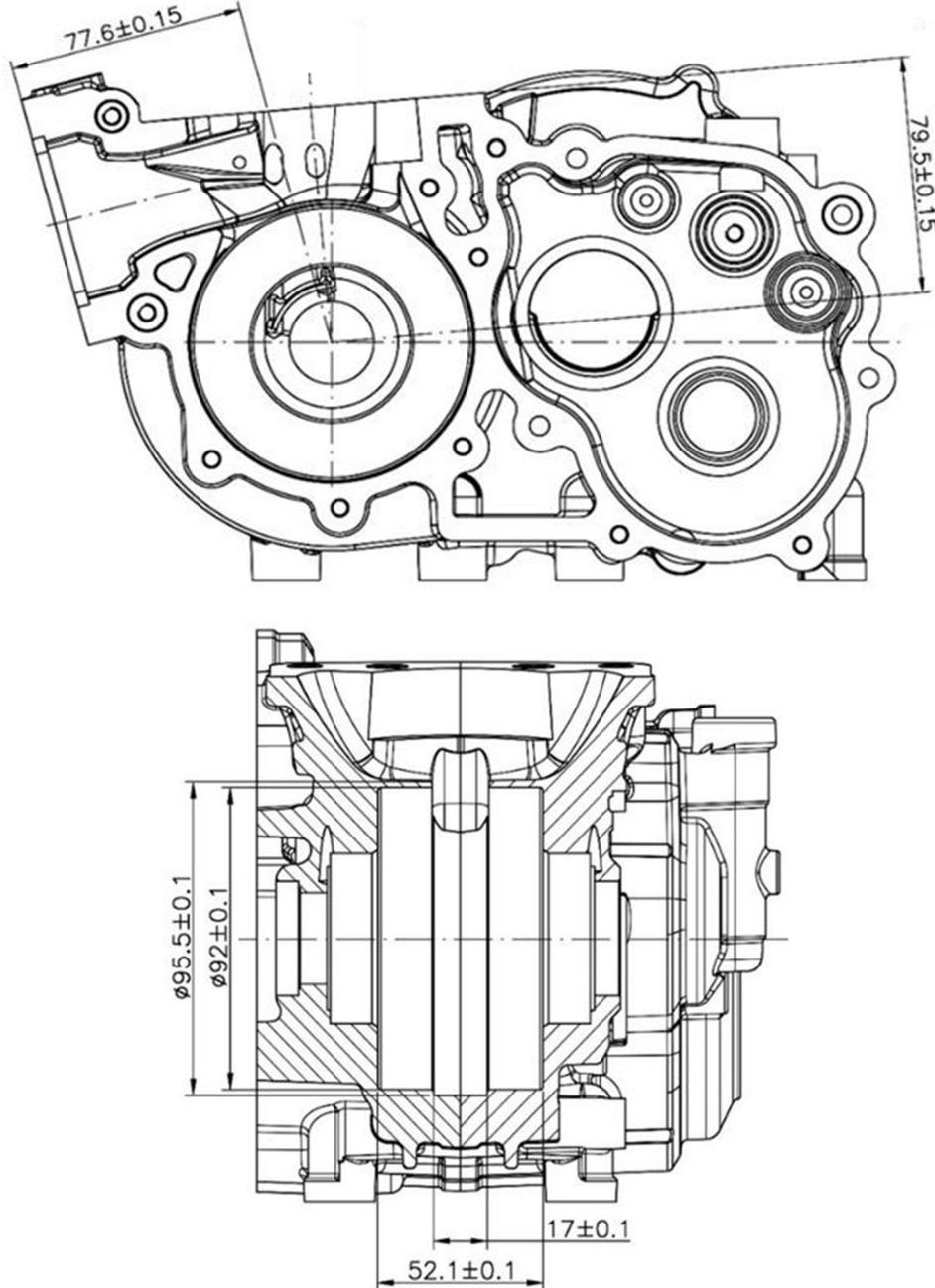
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### CRANKCASE



#### ATTENTION

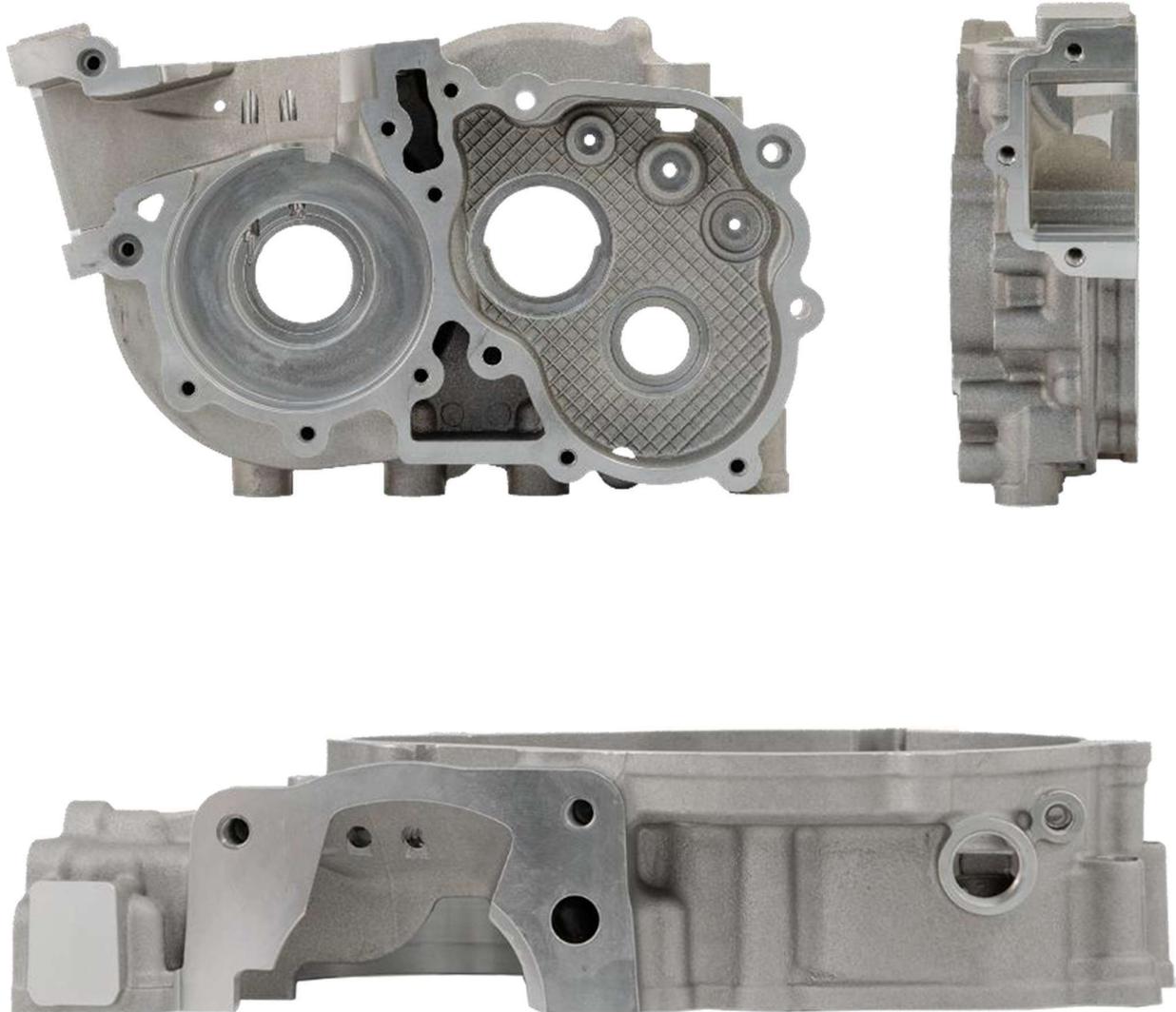
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### VIEW OF THE CRANKCASE CLUTCH SIDE



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### VIEW OF THE CRANKCASE IGNITION SIDE



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## SHIFTER ROK 2025

GEARBOX			
PRIMARY COUPLING			<u>Z17/67</u>
GEARBOX RATIOS			
Gear	Primary shaft	Secondary shaft	Reading of values obtained after three engine revs
1 <sup>ère</sup> /1 <sup>st</sup>	<u>13</u>	<u>33</u>	<u>108.2° ± 3°</u>
2 <sup>e</sup> /2 <sup>nd</sup>	<u>16</u>	<u>29</u>	<u>151.2° ± 3°</u>
3 <sup>e</sup> /3 <sup>rd</sup>	<u>16</u>	<u>24</u>	<u>183.1° ± 3°</u>
4 <sup>e</sup> /4 <sup>th</sup>	<u>18</u>	<u>22</u>	<u>224.2° ± 3°</u>
5 <sup>e</sup> /5 <sup>th</sup>	<u>22</u>	<u>23</u>	<u>262.1° ± 3°</u>
6 <sup>e</sup> /6 <sup>th</sup>	<u>27</u>	<u>25</u>	<u>296.0° ± 3°</u>
<b>ON DECISION OF THE STEWARDS, IT WILL BE AUTHORISED TO INTERCHANGE ENTRANTS' IGNITION SYSTEMS FOR THE SYSTEMS SUPPLIED BY THE ORGANISERS (SAME HOMOLOGATED MODELS)</b>			

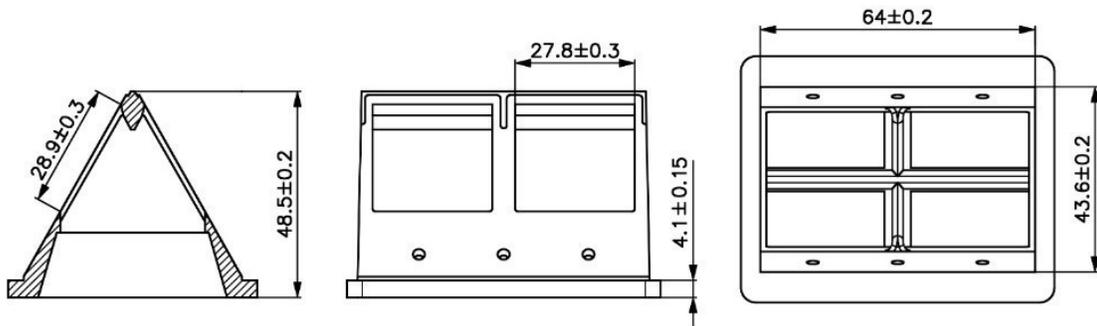
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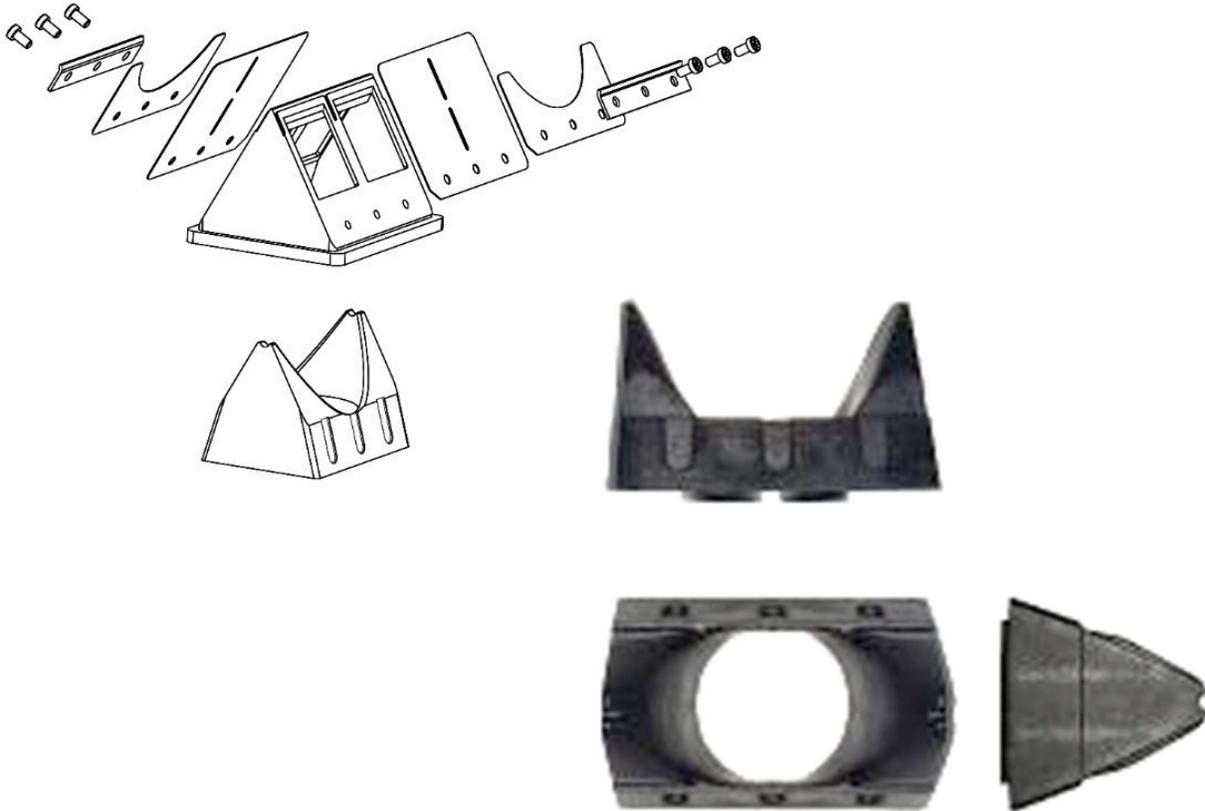
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### DRAWING OF REED BLOCK



### DRAWING OF REED VALVE COVER



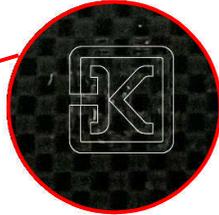
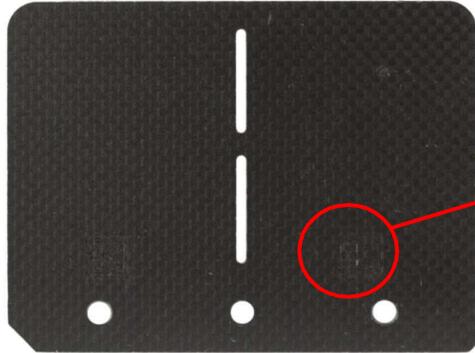
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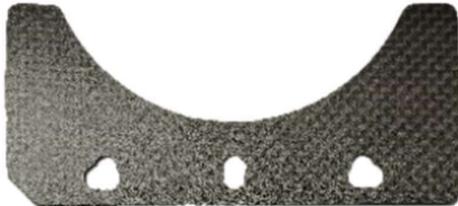
### PICTURES AND MARKING OF THE REEDS AND STOPPERS



**REED PETALS MINIMUM THICKNESS**

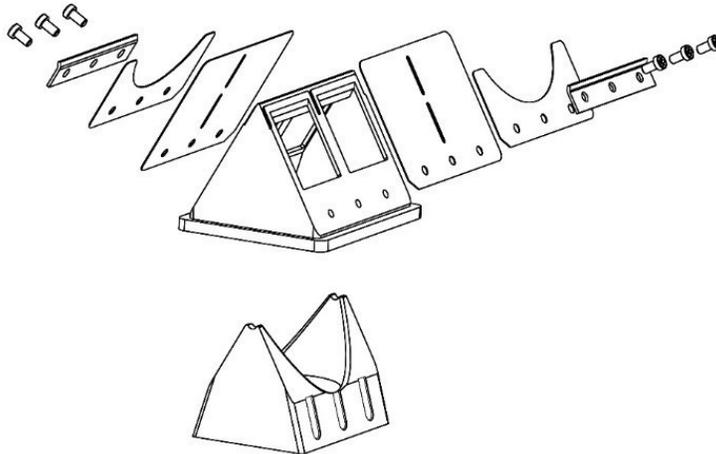
**0.31 mm**

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



**REINFORCEMENT (STOPPER) MINIMUM THICKNESS**

**0.24mm**



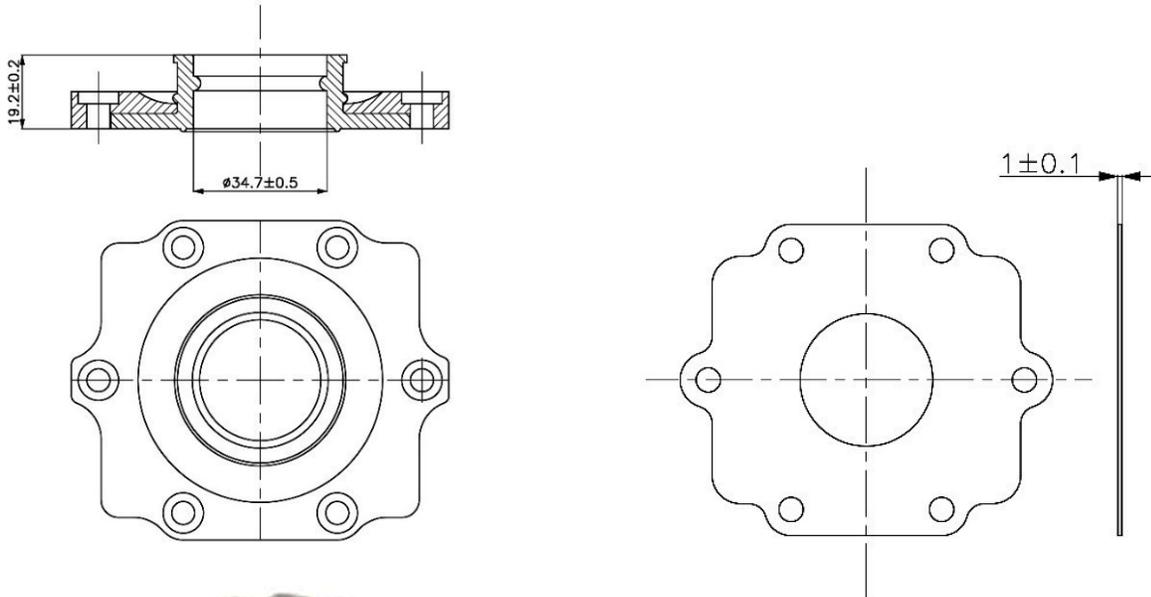
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### DRAWING OF REED BLOCK COVER AND GASKET



PICTURE OF REED BLOCK COVER AND GASKET

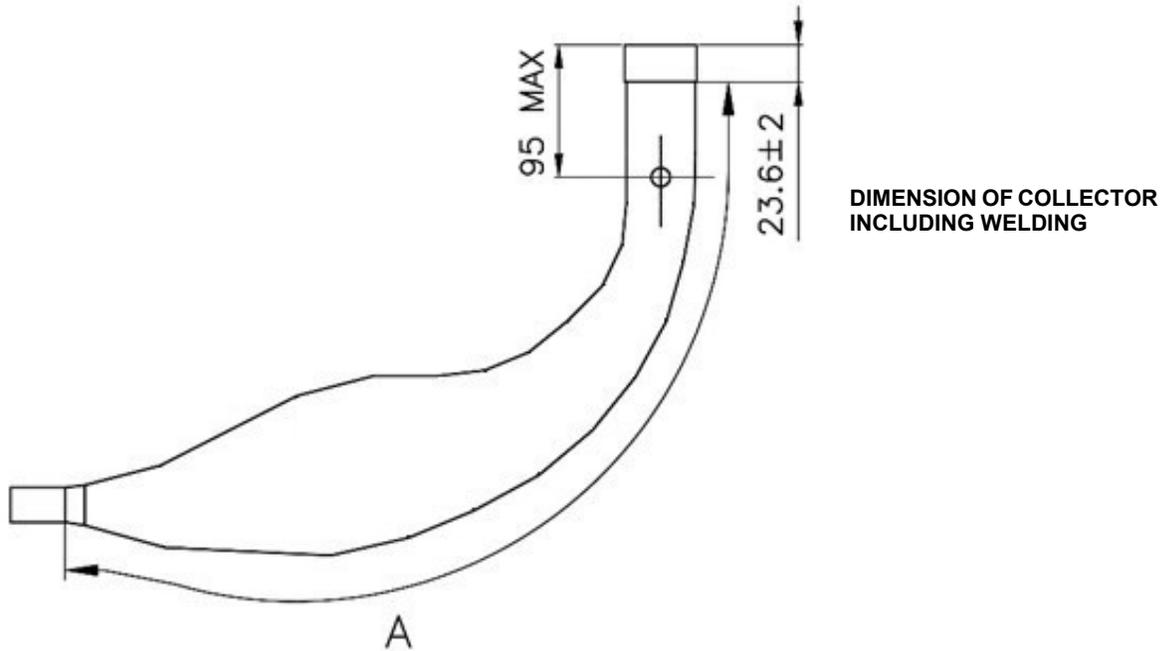
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## SHIFTER ROK 2025

### EXHAUST MUFFLER



#### EXTERNAL CHORD READING

**A=765 mm +/- 5mm**

#### WEIGHT

**1.505 g. ± 5%**

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### PHOTO AND MARKING OF THE EXHAUST



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

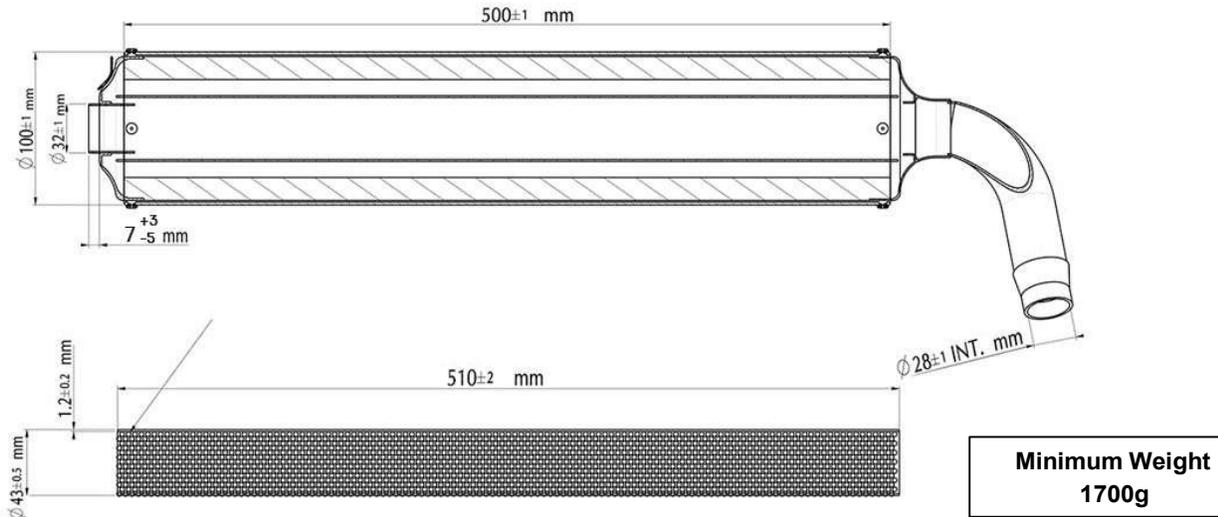
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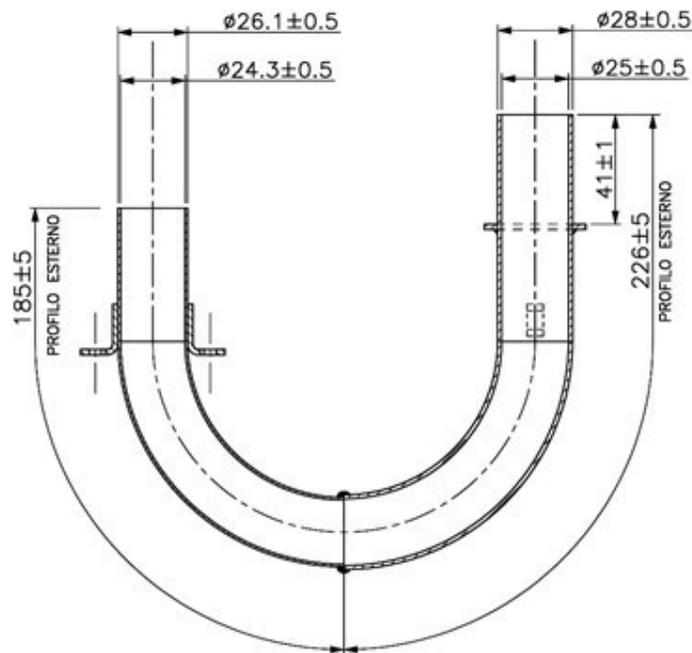
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## SHIFTER ROK 2025

### SILENCER AND COMPONENTS



### SILENCER-MUTTLER BENT PIPE



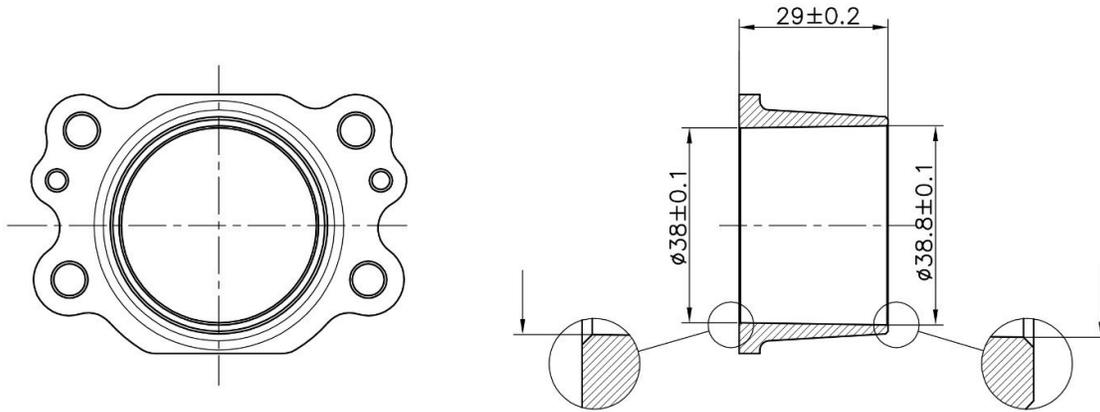
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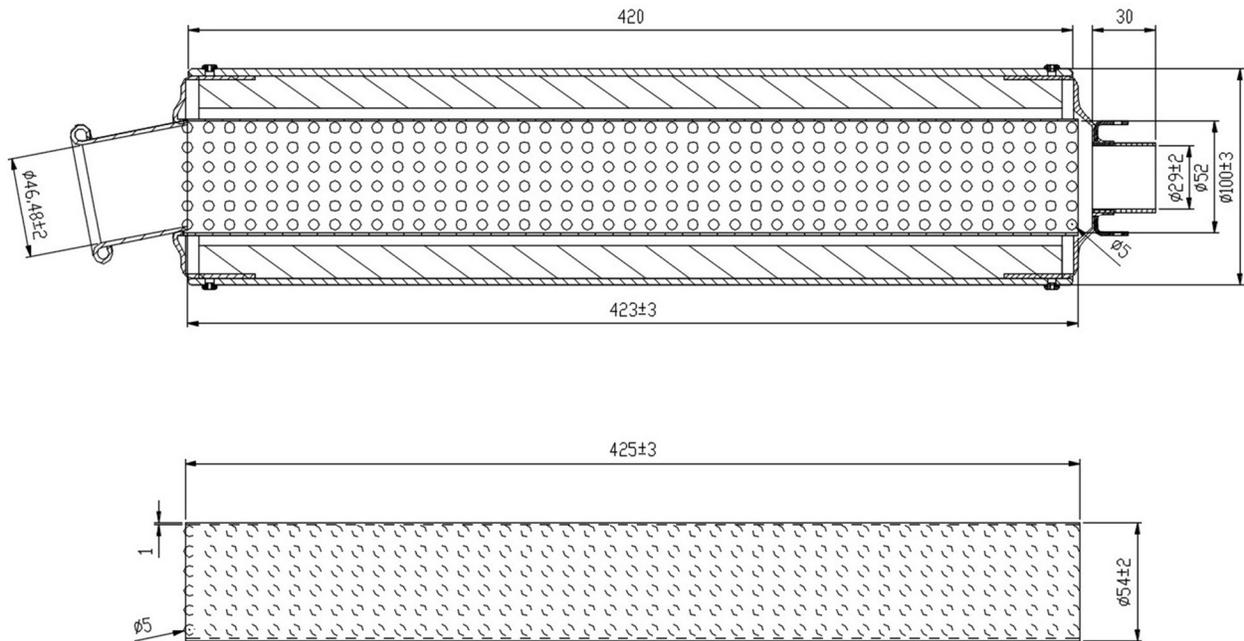
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## SHIFTER ROK 2025

### EXHAUST MANIFOLD



### SILENCER AND COMPONENTS



**Minimum Weight  
1550g**

### ATTENTION

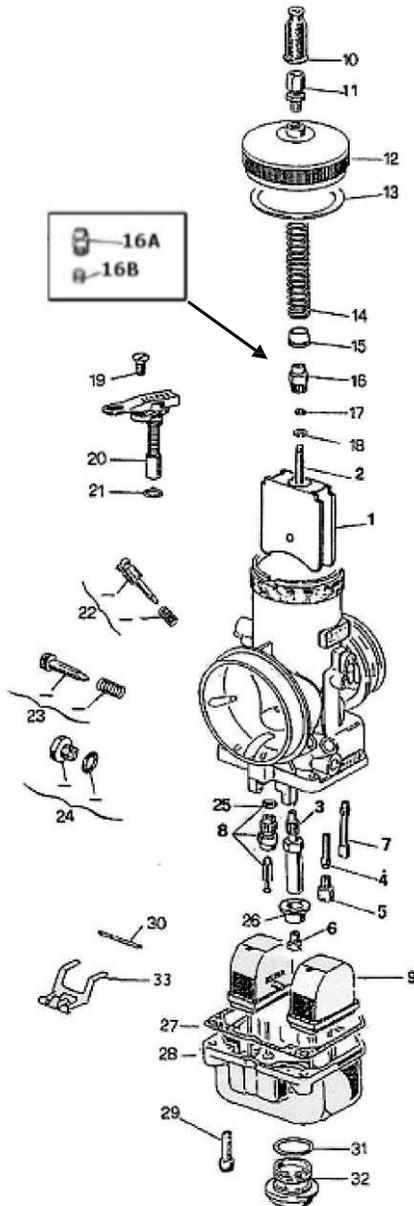
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# SHIFTER ROK 2025

## CARBURETTOR AND COMPONENTS

### DELL'ORTO VHSH 30



- |                                    |                              |
|------------------------------------|------------------------------|
| 1. GUILLOTINE                      | THROTTLE VALVE               |
| 2. AIGUILLE                        | MIXTURE NEEDLE               |
| 3. PULVERISATEUR                   | SPARY NOZZLE                 |
| 4. EMULSEUR MINIMUM                | IDLE DIFFUSER                |
| 5. GICLEUR MINIMUM                 | IDLE JET                     |
| 6. GICLEUR MAXIMUM                 | HIGH SPEED JET               |
| 7. GICLEUR DEMARRAGE               | STARTER JET                  |
| 8. POINTEAU                        | NEEDLE VALVE                 |
| 9. FLOTTEUR 4 gr. x 2              | FLOATER 4 gr. x 2            |
| 10. MANCHON                        | CAP                          |
| 11. VIS DE TENSION                 | WIRE SCREW                   |
| 12. COUVERCLE DU CORPS             | BODY COVER                   |
| 13. JOINT COUVERCLE DE CHAMBRE     | COVER GASKET                 |
| 14. RESSORT DE RAPPEL GUILLOTINE   | THROTTLE VALVE RETURN SPRING |
| 15. ASSIETTE GUIJDE RESSORT        | SPRING GUIDE PLATE           |
| 16. NIPPO VALVE GAZ 16A e 16B      | MIXTURE VALVE NIPPLE         |
| 17. RONDELLE                       | WASHER                       |
| 18. ARRET DE L'AIGUILLE            | MIXTURE NEEDLE STOP          |
| 19. VIS DU DISPOSITIF DE DEMARRAGE | STARTER FIXING SCREW         |
| 20. DISPOSITIF DE DEMARRAGE        | CHOKE                        |
| 21. JOINT DISPOSITIF DEMARRAGE     | STARTER GASKET               |
| 22. KIT VIS DE REGLAGE DE L'AIR    | KIT AIR ADJUSTMENT SCREW     |
| 23. KIT VIS DE REGLAGE GUILLOTINE  | KIT MIXTURE VALVE ADJUSTMENT |
| 24. BOUCHON FILTRE A ESSENCE       | FUEL FILTER PLUG             |
| 25. JOINT DU POINTEAU              | NEEDLE VALVE GASKET          |
| 26. ASSIETTE                       | PLATE                        |
| 27. JOINT DE LA CUVE               | FLOAT VALVE GASKET           |
| 28. CUVE                           | FLOAT CHAMBER                |
| 29. VIS FIXAGE DE LA CUVE          | FLOAT CHAMBER SCREW          |
| 30. AXE                            | PIN                          |
| 31. JOINT DU BOUCHON DE CUVE       | FLOAT CHAMBER PLUG GASKET    |
| 32. BOUCHON DE LA CUVE             | FLOAT CHAMBER PLUG           |
| 33. BALANCIER                      | FLOAT LEVER                  |

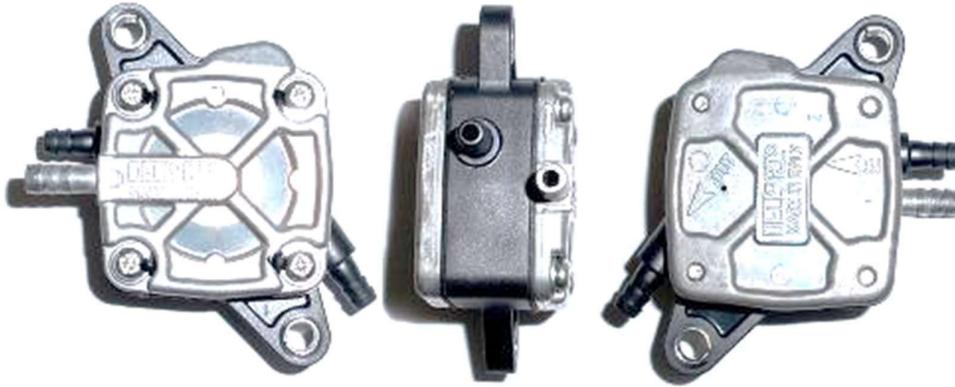
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### DELL'ORTO FUEL PUMP



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.

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INLET SILENCER	
MODEL TYPE	ARROW
<p>AIR FILTER MESH AS OPTIONAL</p>	

RUBBER BUSH CAN BE CUT ON ONE SIDE.

### RAIN PROTECTION INLET SILENCER

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### PICTURES OF RAIN PROTECTION



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### IGNITION PVL

#### OPTION 1



105 458 036-IG-27



105 458 54/A/18

### IGNITION SELETTA 034-IG-14

#### OPTION 2



USE OF SOLELY OEM MARKED COIL, STATOR AND ROTOR WILL BE ALLOWED, AS MENTIONED IN THE ABOVE PICTURES.

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