

# FICHE D'HOMOLOGATION HOMOLOGATION FORM



COMMISSION INTERNATIONALE  
DE KARTING - FIA



## MOTEUR / ENGINE KZ

Constructeur	<i>Manufacturer</i>	OTK KART GROUP S.R.L.
Marque	<i>Make</i>	<b>VORTEX</b>
Modèle	<i>Model</i>	<b>RTZ</b>
Type d'admission	<i>Inlet type</i>	REED VALVE
Durée de l'homologation	<i>Validity of the homologation</i>	3 ans / 3 years
Nombre de pages	<i>Number of pages</i>	<b>9</b>

La présente Fiche d'Homologation reproduit descriptions, illustrations et dimensions du moteur au moment de l'homologation CIK-FIA.

*This Homologation Form reproduces descriptions, illustrations and dimensions of the engine at the moment of the CIK-FIA homologation.*



PHOTO DU MOTEUR CÔTÉ PIGNON /  
PHOTO OF DRIVE SIDE OF ENGINE

PHOTO DU MOTEUR CÔTÉ OPPOSÉ /  
PHOTO OF OPPOSITE SIDE OF ENGINE

Signature et tampon de l'ASN /  
Signature and stamp of the ASN

Signature et tampon de la CIK-FIA /  
Signature and stamp of the CIK-FIA

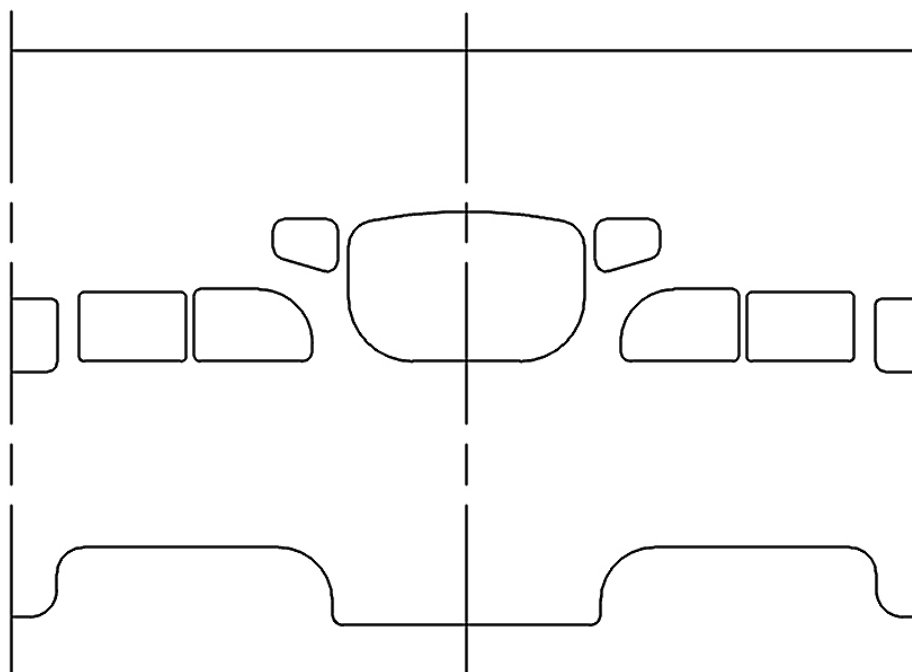
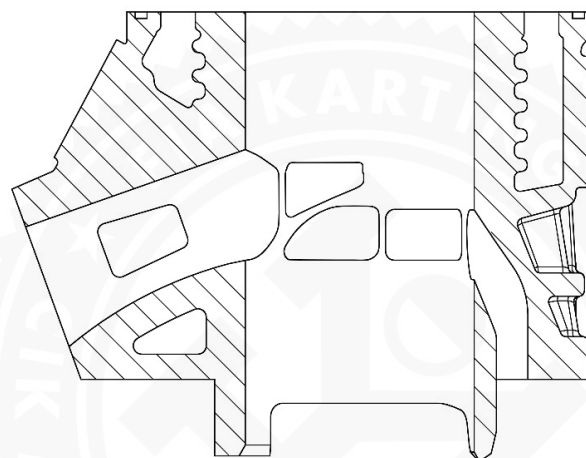
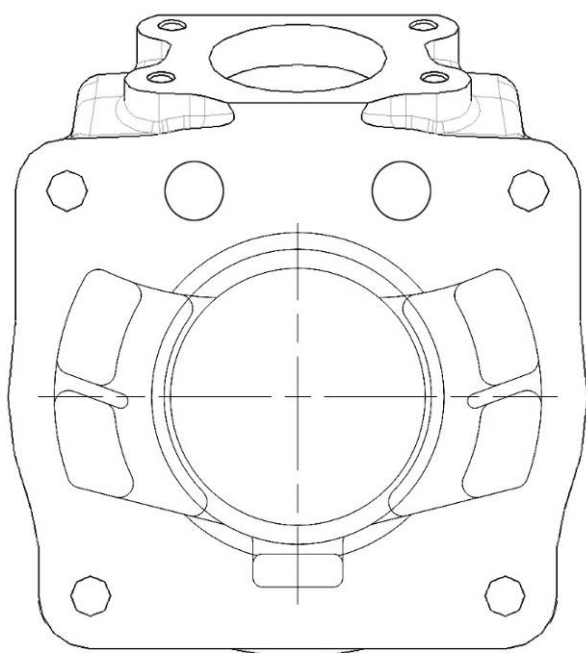


INFORMATIONS TECHNIQUES		TECHNICAL INFORMATION	
A	CARACTÉRISTIQUES	A	CHARACTERISTICS
			Tolérances
Volume du cylindre	<i>Volume of cylinder</i>	<b>124.63 cm<sup>3</sup></b>	<b>&lt; 125cm<sup>3</sup></b>
Alésage d'origine	<i>Original Bore</i>	<b>54.01 mm</b>	
Alésage théorique maximum	<i>Theoretical maximum bore</i>	<b>54.04 mm</b>	
Course	<i>Stroke</i>	<b>54.40 mm</b>	
Système de refroidissement	<i>Cooling system</i>	<b>WATER COOLED</b>	
Nombre de systèmes de carburation	<i>Number of carburation systems</i>	<b>1</b>	
Nombre de canaux de transfert, cylindre/carter	<i>Number of transfer ducts, cylinder/sump</i>	<b>5 / 3</b>	
Nombre de lumières / canaux d'échappement	<i>Number of exhaust ports / ducts</i>	<b>3</b>	
Forme de la chambre de combustion	<i>Shape of the combustion chamber</i>	<b>SPHERICAL DOME W/ SQUISH BAND</b>	
Matériau de la paroi du cylindre	<i>Cylinder wall material</i>	<b>ALUMINIUM W/ NIKASIL</b>	
Longueur (entre-axe) de la bielle	<i>Length between the axes of the connecting rod</i>	<b>115 mm</b>	±0.1mm
Nombre de segments de piston	<i>Number of piston rings</i>	<b>1</b>	
Modifications autorisées selon le Règlement Technique. Seules les dimensions et cotes qui ne peuvent pas être modifiées doivent figurer sur la Fiche d'Homologation.			
Modification allowed according to the Technical Regulations. Only the dimensions and readings which may not be changed must be mentioned on the Homologation Form.			

B	ANGLES D'OUVERTURE	B	OPENING ANGLES
de l'échappement	<i>of the exhaust</i>	selon les règlements	according to the regulations

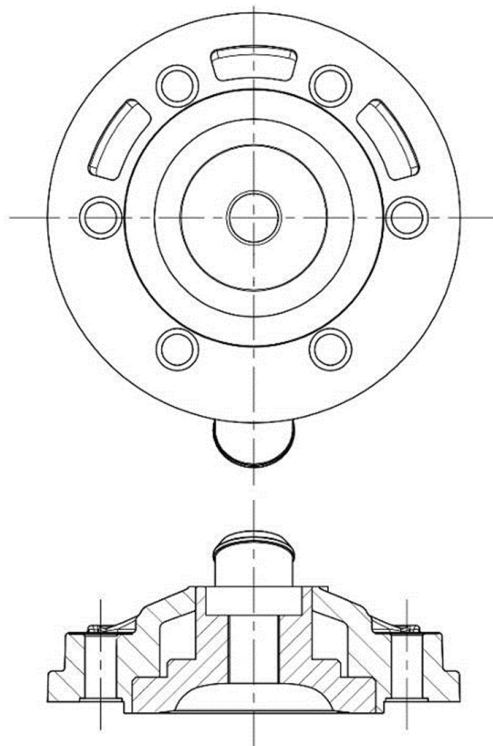
C	MATÉRIAU	C	MATERIAL
Cylindre	<i>Cylinder</i>		ALUMINIUM ALLOY
Culasse	<i>Cylinder head</i>		ALUMINIUM ALLOY
Carter	<i>Sump</i>		ALUMINIUM ALLOY
Bielle	<i>Connecting rod</i>		STEEL

DESSIN DU DÉVELOPPEMENT DU CYLINDRE

*DRAWING OF THE CYLINDER DEVELOPMENT*DESSIN DU PIED DU  
CYLINDRE*DRAWING OF THE  
CYLINDER BASE*VUE EN SECTION DU  
CYLINDRE*SECTION VIEW OF  
CYLINDER*

DESSIN DE LA CULASSE ET DE LA CHAMBRE  
DE COMBUSTION

*DRAWING OF THE CYLINDER HEAD AND OF  
THE COMBUSTION CHAMBER*



DESSIN DU  
VILEBREQUIN

*DRAWING OF THE  
CRANKSHAFT*

DESSIN INTÉRIEUR  
DU CARTER

*DRAWING OF THE  
INSIDE OF SUMP*

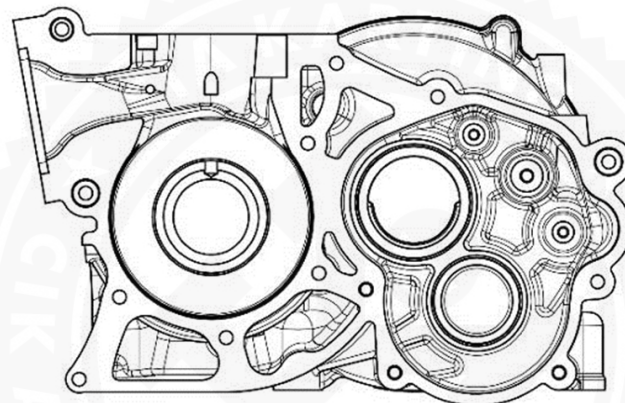
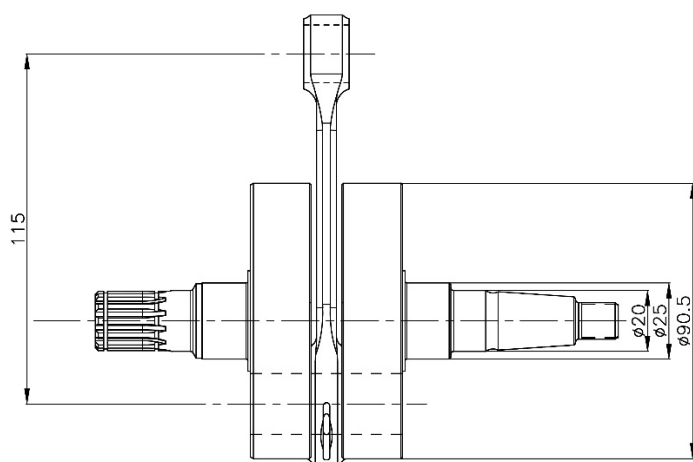






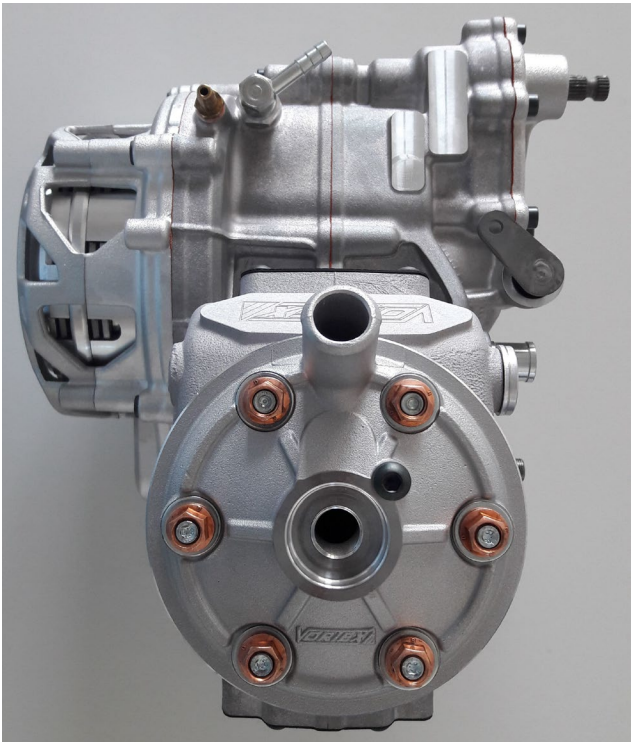
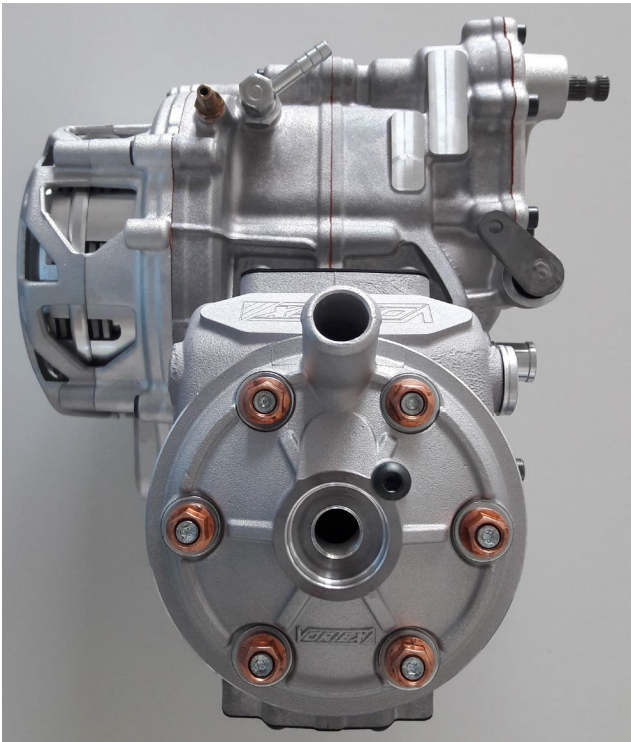




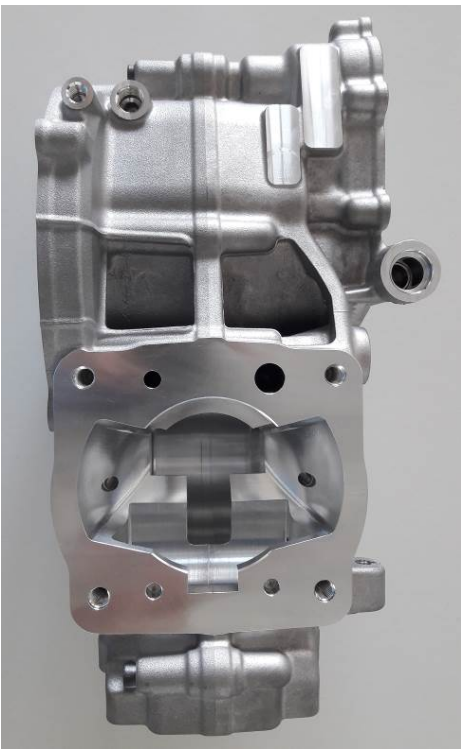

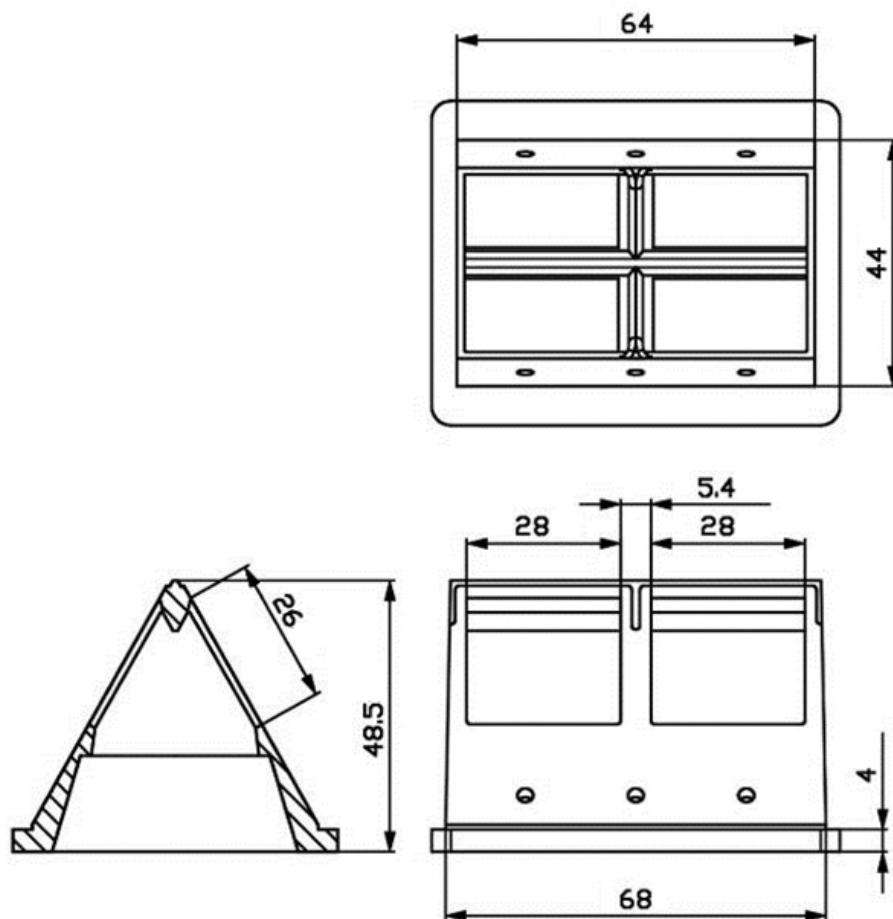
PHOTO DE L'ARRIÈRE DU MOTEUR	PHOTO OF THE BACK OF THE ENGINE	PHOTO DE L'AVANT DU MOTEUR	PHOTO OF THE FRONT OF ENGINE
			
PHOTO DU MOTEUR PARTIE SUPÉRIEURE	PHOTO OF THE ENGINE TAKEN FROM ABOVE	PHOTO DU MOTEUR PARTIE INFÉRIEURE	PHOTO OF THE ENGINE TAKEN FROM BELOW
			

PHOTO DU PIED DU CYLINDRE	PHOTO OF THE BASE OF THE CYLINDER	PHOTO DE LA CHAMBRE DE COMBUSTION	PHOTO OF COMBUSTION CHAMBER
			
PHOTO DU CARTER ( CÔTÉ JOINT )	PHOTO OF THE SUMP ( GASKET FACE )	PHOTO D'UNE PARTIE INTÉRIEURE DU CARTER	PHOTO OF AN INTERNAL PART OF THE SUMP
			

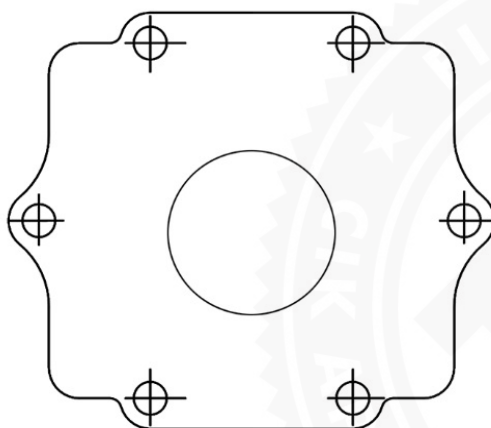
## DESSIN DE LA BOÎTE À CLAPETS

## DRAWING OF REED VALVE

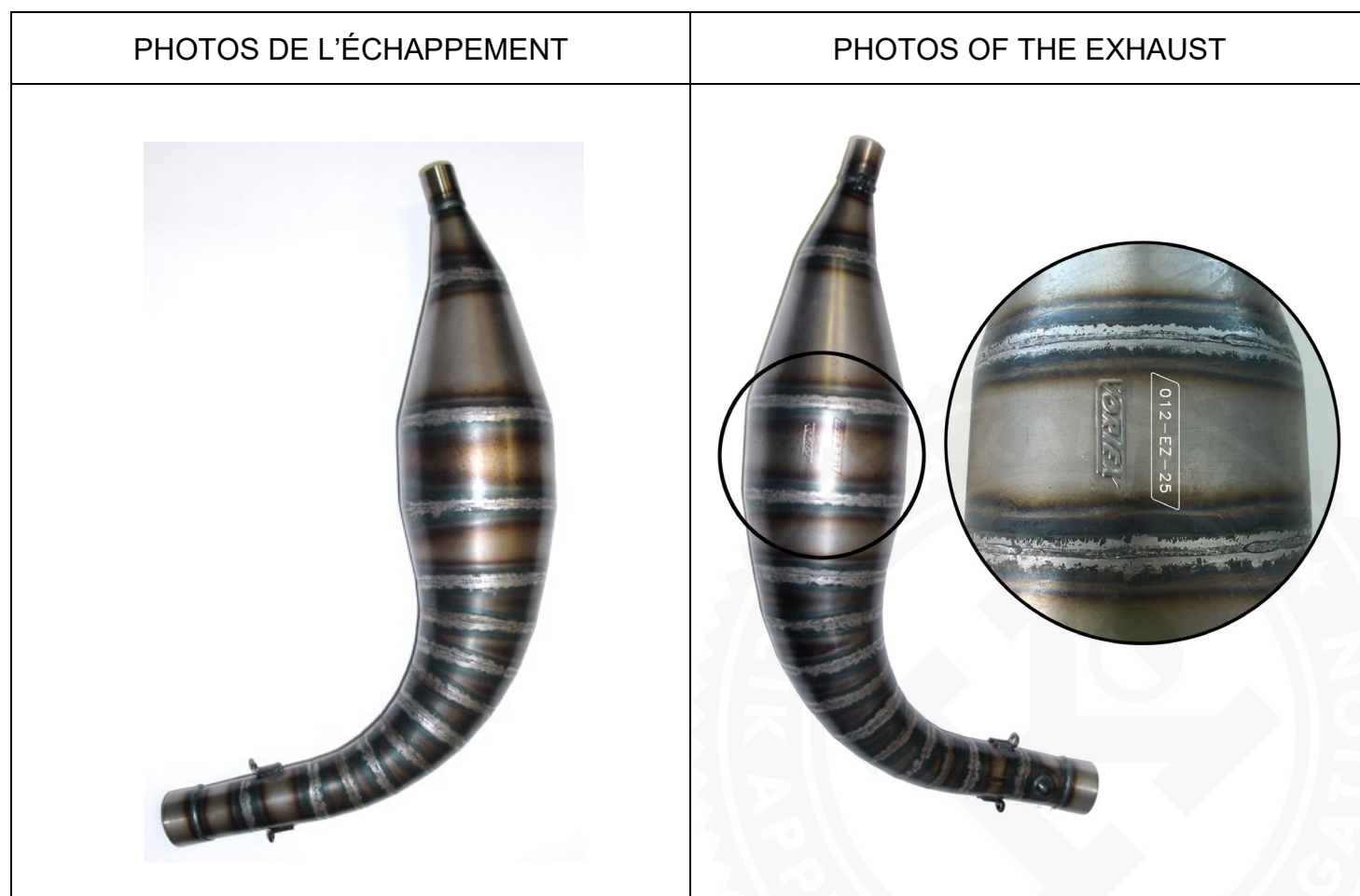


## DESSIN DU COUVERCLE DE LA BOÎTE À CLAPETS

## DRAWING OF REED VALVE COVER



BOÎTE DE VITESSES		GEARBOX	
Couple primaire		<i>Primary coupling</i>	<b>19 / 75</b>
Rapports de boîte de vitesses		<i>Gearbox ratios</i>	
Vitesse	Arbre primaire	Arbre secondaire	Relevé des valeurs obtenues après trois tours moteur
<i>Gear</i>	<i>Primary shaft</i>	<i>Secondary shaft</i>	<i>Reading of values obtained after three engine revs</i>
1 <sup>ère</sup> /1 <sup>st</sup>	<b>13</b>	<b>33</b>	<b>107.8°</b>
2 <sup>e</sup> /2 <sup>nd</sup>	<b>16</b>	<b>29</b>	<b>151.0°</b>
3 <sup>e</sup> /3 <sup>rd</sup>	<b>16</b>	<b>24</b>	<b>182.4°</b>
4 <sup>e</sup> /4 <sup>th</sup>	<b>18</b>	<b>22</b>	<b>223.9°</b>
5 <sup>e</sup> /5 <sup>th</sup>	<b>22</b>	<b>23</b>	<b>261.7°</b>
6 <sup>e</sup> /6 <sup>th</sup>	<b>27</b>	<b>25</b>	<b>295.5°</b>

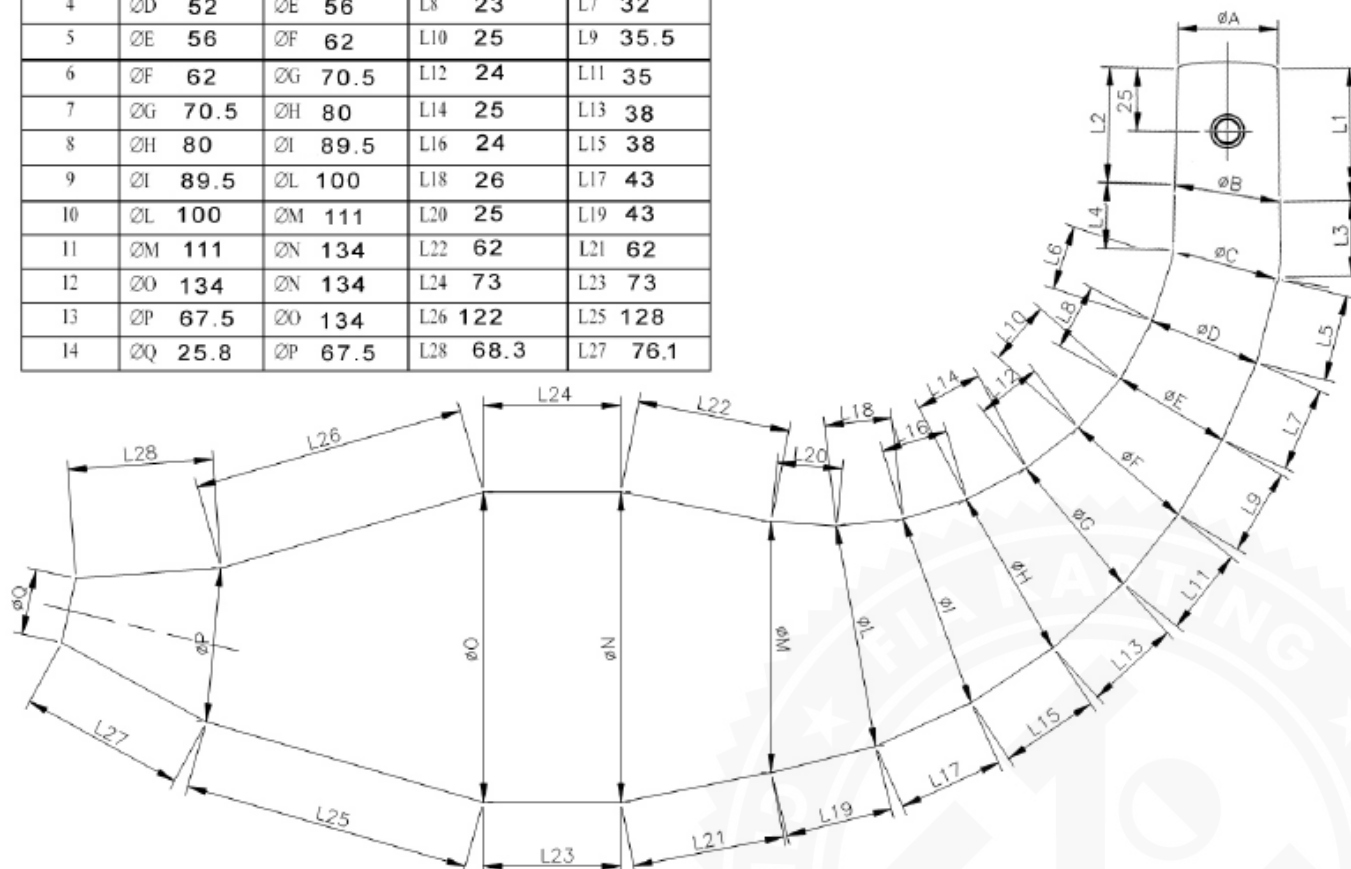




DESCRIPTIONS TECHNIQUES		TECHNICAL DESCRIPTIONS	
Poids en gr		Weight in gr	<b>1113</b>
Volume in cm <sup>3</sup>		Volume in cc	<b>4017</b>
			Minimum
			+/-5 %

DESSINS TECHNIQUES	TECHNICAL DRAWINGS
Contenant toutes les informations permettant de construire cet échappement.	Including all the information necessary to build this exhaust.

Partiel/Part	D. MIN.	D. MAX.	L. INT.	L. EST.
1	∅A 44.5	∅B 47	L2 46	L1 46.3
2	∅B 47	∅C 50	L4 57.3	L3 57.6
3	∅C 50	∅D 52	L6 24.5	L5 33.5
4	∅D 52	∅E 56	L8 23	L7 32
5	∅E 56	∅F 62	L10 25	L9 35.5
6	∅F 62	∅G 70.5	L12 24	L11 35
7	∅G 70.5	∅H 80	L14 25	L13 38
8	∅H 80	∅I 89.5	L16 24	L15 38
9	∅I 89.5	∅L 100	L18 26	L17 43
10	∅L 100	∅M 111	L20 25	L19 43
11	∅M 111	∅N 134	L22 62	L21 62
12	∅O 134	∅N 134	L24 73	L23 73
13	∅P 67.5	∅O 134	L26 122	L25 128
14	∅Q 25.8	∅P 67.5	L28 68.3	L27 76.1



COMPLÉMENT À LA FICHE D'HOMOLOGATION /  
SUPPLEMENT TO THE HOMOLOGATION FORM

Homologation N°

012-EZ-25  
SUP



COMMISSION  
INTERNATIONALE  
DE KARTING - FIA



MOTEUR / ENGINE  
KZ

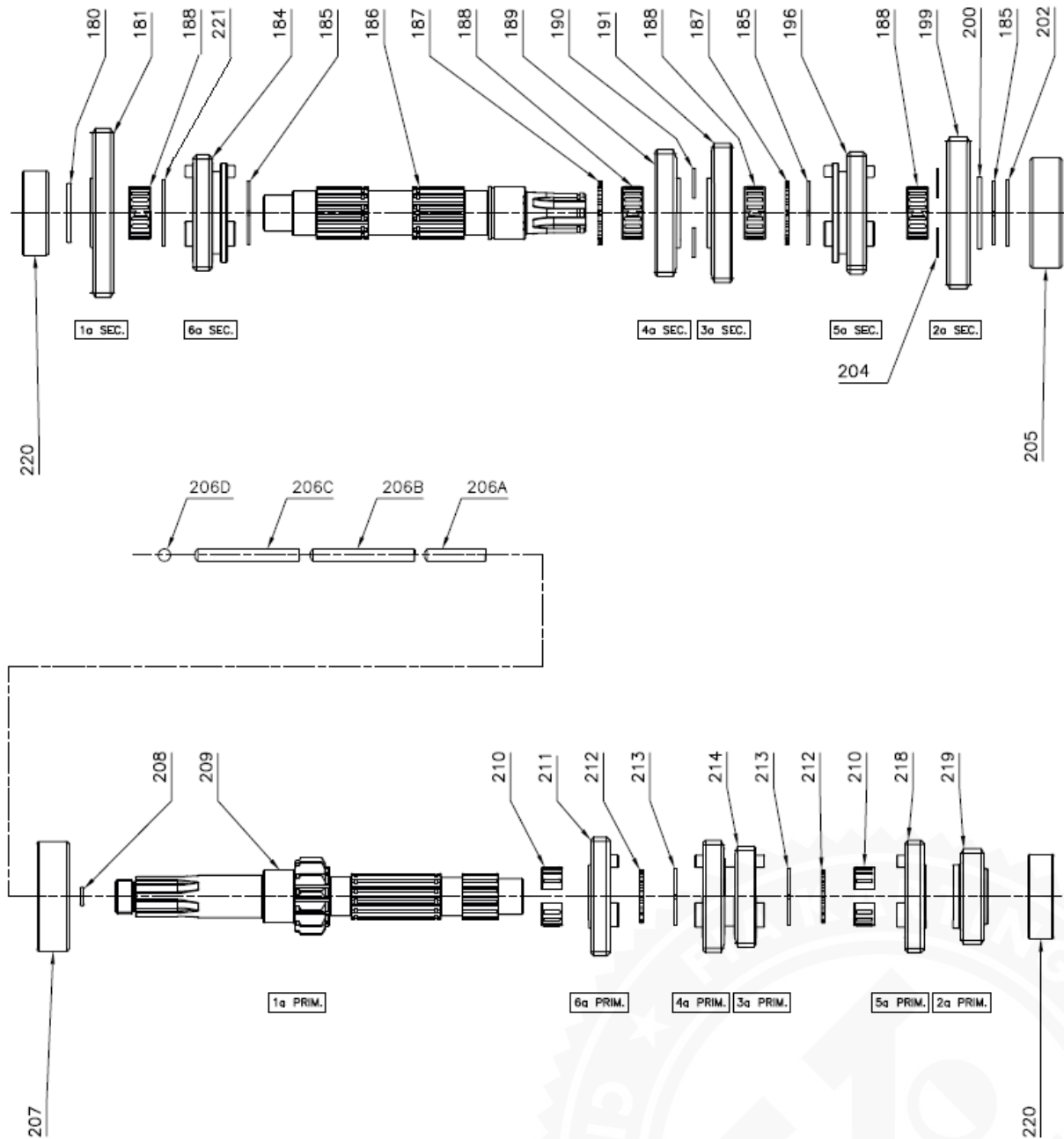
Constructeur / <i>Manufacturer</i>	OTK KART GROUP S.R.L.
Marque / <i>Make</i>	<b>VORTEX</b>
Modèle / <i>Model</i>	<b>RTZ</b>
Catégorie / <i>Category</i>	Group 1 & 2
Nombre de pages / <i>Number of pages</i>	5
Le présent Complément reproduit descriptions, illustrations et dimensions de la ou des pièces demandées par la CIK-FIA.	<i>This Supplement reproduces descriptions, illustrations and dimensions of the part(s) requested by the CIK-FIA.</i>

Signature et tampon de l'ASN / <i>Signature and stamp of the ASN</i>	Signature et tampon de la CIK-FIA / <i>Signature and stamp of the CIK-FIA</i>

## INFORMATIONS TECHNIQUES / TECHNICAL INFORMATION

B

## Pièces de la boîte de vitesses / Gearbox parts

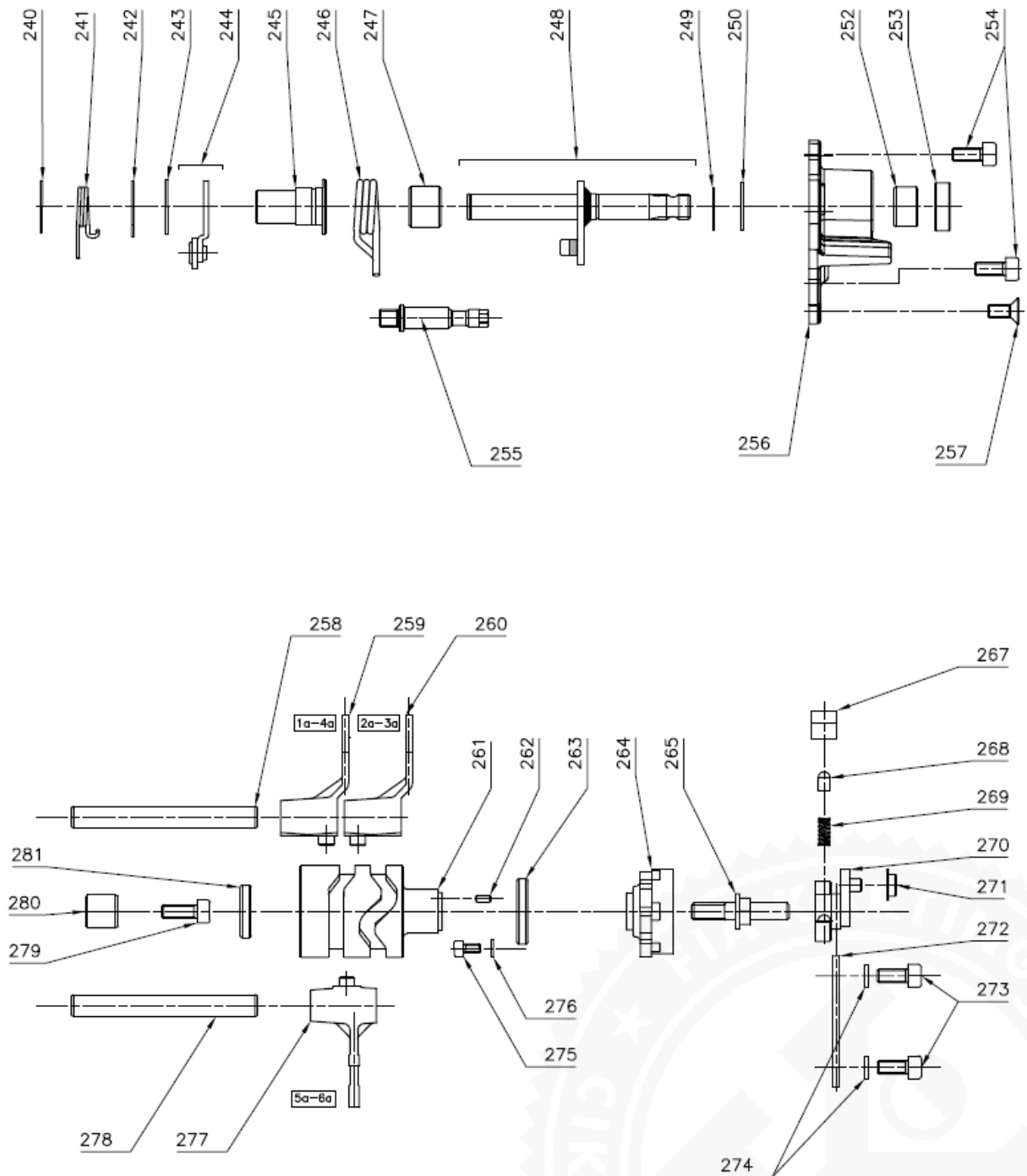


**B****Liste des pièces de la boîte de vitesses / Gearbox parts list**

Rif.	Descrizione	Description	N°
180	Ralla rasamento cuscinetto	Bearing washer	1
181	Ingranaggio 1 <sup>A</sup> albero secondario	Gear 1 <sup>TH</sup> countershaft	1
184	Ingranaggio 6 <sup>A</sup> albero secondario	Gear 6 <sup>TH</sup> countershaft	1
185	Anello seeger esterno	Seeger external	3
186	Albero secondario	Countershaft	1
187	Ralla brocciata albero secondario	Secondary broached washer	2
188	Gabbia	Cage	4
189	Ingranaggio 4 <sup>A</sup> albero secondario	Gear 4 <sup>TH</sup> countershaft	1
190	Ralla spaccata	Split washer	1
191	Ingranaggio 3 <sup>A</sup> albero secondario	Gear 3 <sup>TH</sup> countershaft	1
196	Ingranaggio 5 <sup>A</sup> albero secondario	Gear 5 <sup>TH</sup> countershaft	1
199	Ingranaggio 2 <sup>A</sup> albero secondario	Gear 2 <sup>TH</sup> countershaft	1
200	Ralla spallam. Cambio	Gearbox washer	1
202	Ralla cambio	Gearbox washer	1
204	Ralla spaccata	Split washer	1
205	Cuscinetto banco	Insert crankcase	1
206A	Asta alza frizione	Clutch lifter rod	1
206B	Asta alza frizione	Clutch lifter rod	1
206C	Asta alza frizione	Clutch lifter rod	1
206D	Sfera	Ball	1
207	Cuscinetto	Insert	1
208	O-ring fungo spingidisco	Clutch lifter o-ring	1
209	Albero primario	Mainshaft	1
210	Gabbia spaccata	Split cage	2
211	Ingranaggio 6 <sup>A</sup> albero primario	Gear 6 <sup>TH</sup> mainshaft	1
212	Ralla brocciata albero primario	Broached washer primary shaft	2
213	Anello seeger esterno	Seeger external	2
214	Ingranaggio 3 <sup>A</sup> /4 <sup>A</sup> albero primario	Gear 3 <sup>TH</sup> /4 <sup>TH</sup> mainshaft	1
218	Ingranaggio 5 <sup>A</sup> albero primario	Gear 5 <sup>TH</sup> mainshaft	1
219	Ingranaggio 2 <sup>A</sup> albero primario	Gear 2 <sup>TH</sup> mainshaft	1
220	Cuscinetto	Insert	2
221	Ralla spallam. Cambio	Gearbox washer	1

B

## Pièces de la boîte de vitesses / Gearbox parts



**B** **Liste des pièces de la boîte de vitesses / Gearbox parts list**

Rif.	Descrizione	Description	N°
240	Rondella elastica posizionate	Locating spring washer	1
241	Molla posizionate marce	Locating spring	1
242	Seeger	Seeger	1
243	Ralla boccola preselettore	Pawl bush washer	1
244	Leva posizionate marce completa	Complete locating lever	1
245	Boccola per posizionate marce	Locating bush	1
246	Molla preselettore	Preselector spring	1
247	Distanziale molla preselettore	Preselector spring spacer	1
248	Perno preselettore cambio completo	Complete gearbox preselector pin	1
249	Anello seeger	Seeger	1
250	Ralla perno preselettore	Preselector pin washer	1
252	Astuccio a rullini	Roller case	1
253	Paraolio preselettore	Preselector oil seal	1
254	Vite	Screw	3
255	Fermo molla preselettore rinforzato	Reinforced preselector spring stop reinforced	1
256	Coperchio preselett.cambio	Gearbox preselector cover	1
257	Vite	Screw	2
258	Asta forchette	Shifter forks pin	1
259	Forcella 1ª e 4ª marcia	1st and 4th speed shifter fork	1
260	Forcella 2ª e 3ª marcia	2nd and 3rd speed shifter fork	1
261	Albero desmodromico	Shift cam	1
262	Rullo desmodromico	Roller cam	1
263	Cuscinetto desmo	Insert cam	1
264	Stella selettore	Preselector cam	1
265	Perno stella selettore	Preselector cam pin	1
267	Cricchetto	Preselector ratchet driving dog	2
268	Puntalino cricchetti	Driving dogs spring cap	2
269	Molla cricchetti	Driving dogs spring	2
270	Selettore porta cricchetti	Preselector ratchet wheel	1
271	Ruotina preselettore	Preselector crank wheel	1
272	Piastrina cricchetti	Driving dogs retain plate	1
273	Vite	Screw	2
274	Rondella piana	Flat washer	2
275	Vite	Screw	1
276	Rondella piana	Flat washer	1
277	Forcella 5ª e 6ª velocità	5th and 6th speed shifter fork	1
278	Asta forchette	Shifter forks pin	1
279	Vite	Screw	1
280	Boccola porta cuscinetto desmo	Shift cam bearing support	1
281	Cuscinetto desmo	Insert cam	1