

FICHE D'HOMOLOGATION / HOMOLOGATION FORM





012-EZ-01



COMMISSION INTERNATIONALE DE KARTING - FIA



MOTEUR / ENGINE KZ

Constructeur / <i>Manufacturer</i>	OTK KART GROUP S.R.L.
Marque / <i>Make</i>	VORTEX
Modèle / <i>Model</i>	VTZ
Catégorie / <i>Categorie</i>	Group 2
Durée de l'homologation / <i>Validity of the Homologation</i>	3 ans / 3 years
Nombre de pages / <i>Number of pages</i>	10
La présente Fiche d'Homologation reproduit descriptions, illustrations et dimensions du moteur au moment de l'homologation CIK-FIA.	<i>This Homologation Form reproduces descriptions, illustrations and dimensions of the engine at the moment of the CIK-FIA homologation.</i>
	
Photo du moteur côté pignon / <i>Photo of engine drive side</i>	Photo du moteur côté opposé / <i>Photo of engine opposite side</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**A** **Caractéristiques / Characteristics**

Le nombre de décimales doit être de 2 ou en accord avec la tolérance appliquée. / The number of decimal places must be 2 or comply with the relevant tolerance.		Tolérances et remarques / Tolerances & remarks	
Cylindre / Cylinder			
Volume du cylindre / Cylinder volume	124.63 cm³	< 125 cm ³	
Alésage d'origine / Original bore	54.01 mm	--	
Alésage théorique maximum / Maximum theoretical bore	54.09 mm	--	
Course / Stroke	54.40 mm	--	
Nombre de lumières d'admission / Number of intake ports	1	--	
Nombre de lumières de transfert, cylindre/carter / Number of transfer ports, cylinder/sump	5 / 3	--	
Nombre de lumières d'échappement / Number of exhaust ports	3	--	
Forme de la chambre de combustion / Shape of combustion chamber	SPHERICAL DOME & SQUISH BAND		
Vilebrequin / Crankshaft			
Poids du vilebrequin complet, sans piston / Weight of crankshaft complete, without piston	2162.0 gr.	Minimum	
Bielle / Conrod			
Longueur (entre-axe) de la bielle / Length between the axes of the conrod	115.0 mm	±0.1 mm	
Poids de la bielle / Weight of conrod	113.4 gr.	minimum	
Piston / Piston			
Poids du piston, segments du piston inclus / Weight of the piston including piston rings	111.6 gr.	Minimum	
Poids de l'axe de piston / Weight of gudgeon pin	27.0 gr.	minimum	

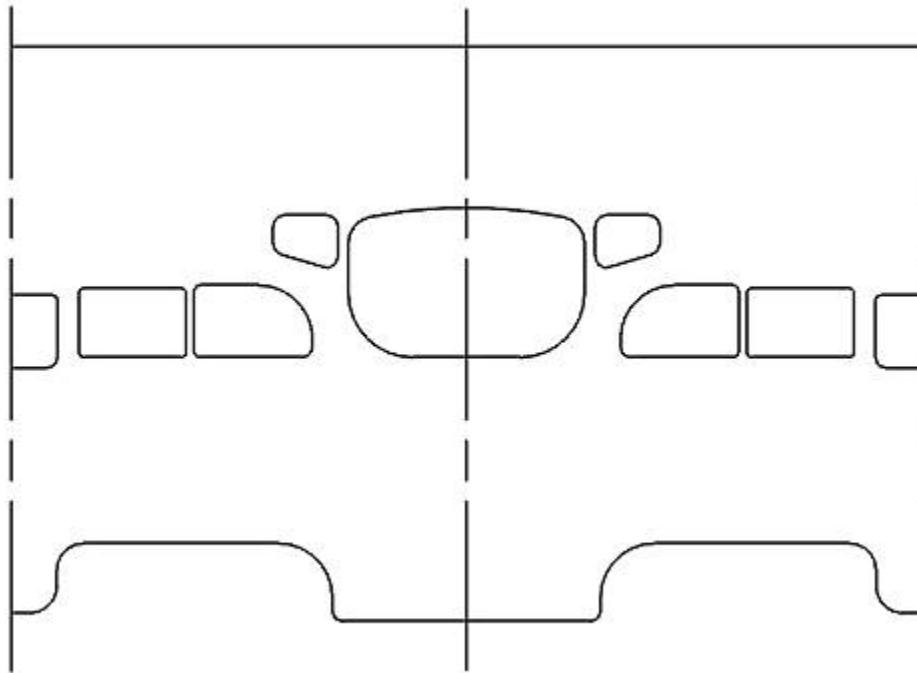
B	Angles d'ouverture / Opening angles	
Lumière d'échappement / Exhaust port	selon les règlements/ according to the regulations	

C	Matériau / Material	
Culasse / Cylinder head	ALUMINIUM ALLOY	
Cylindre / Cylinder	ALUMINIUM ALLOY	
Matériau de la paroi du cylindre / Cylinder wall material	ALUMINIUM with NIKASIL	
Carter / Sump	ALUMINIUM ALLOY	
Vilebrequin / Crankshaft	STEEL	
Bielle / Connecting rod	STEEL	
Piston / Piston	ALUMINIUM ALLOY	

D

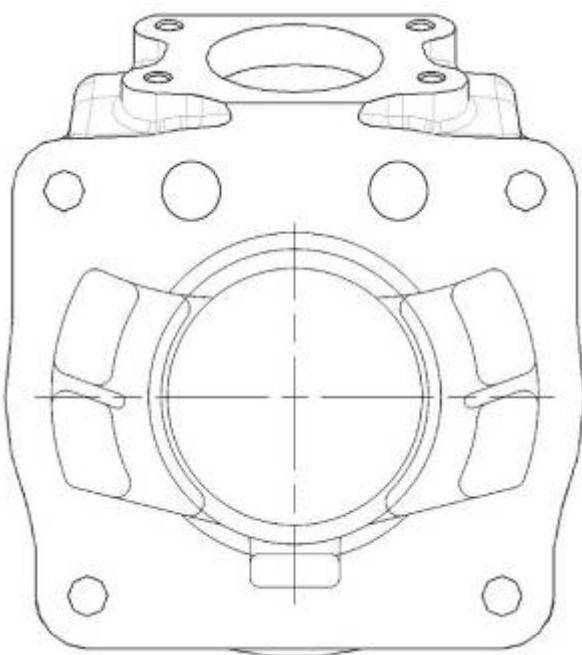
Photos, dessins et graphiques / Photos, drawings and graphs**1. Cylindre / Cylinder**

Dessin du développement du cylindre / Drawing of the cylinder development

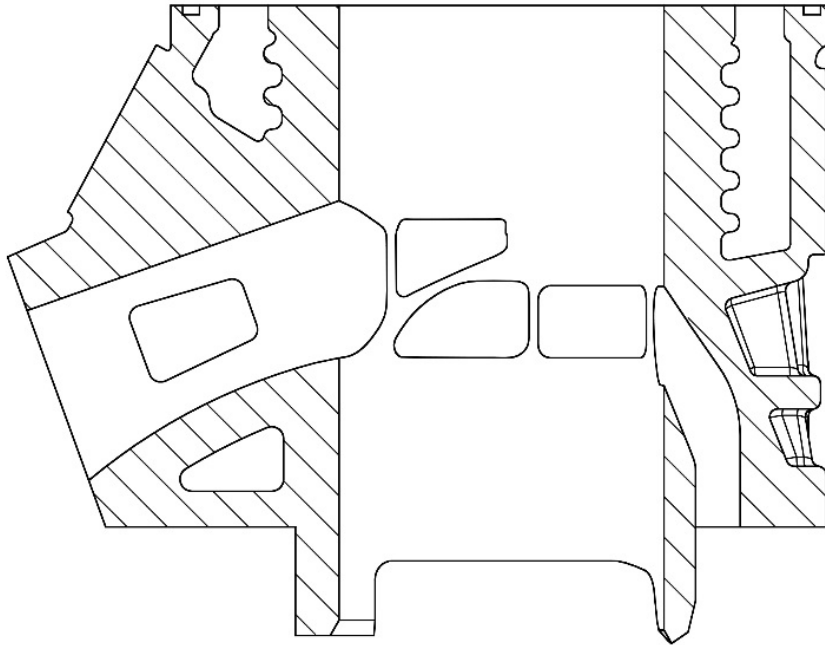


Dessin du pied du cylindre / Drawing of the cylinder base

Photo du pied du cylindre / Photo of the cylinder base



Vue en coupe verticale du cylindre complet (sans dimensions) /
Vertical cross section view of the complete cylinder (without dimensions)



Dessin de la culasse et de la chambre de combustion /
Drawing of the cylinder head and combustion chamber

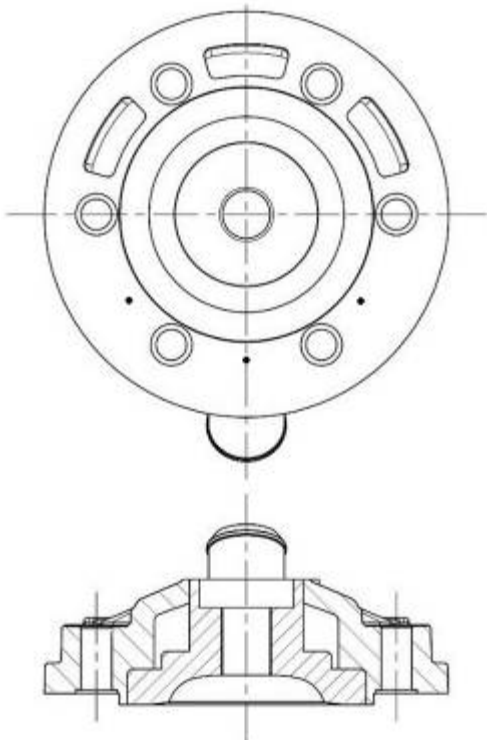


Photo de la culasse et de la chambre de combustion /
Photo of the cylinder head and the combustion chamber



2. Vilebrequin, bielle et carter / Crankshaft, conrod and crankcase

Dessin du vilebrequin complet (dimensions sans tolérances) /
Drawing of the complete crankshaft (dimensions without tolerances)

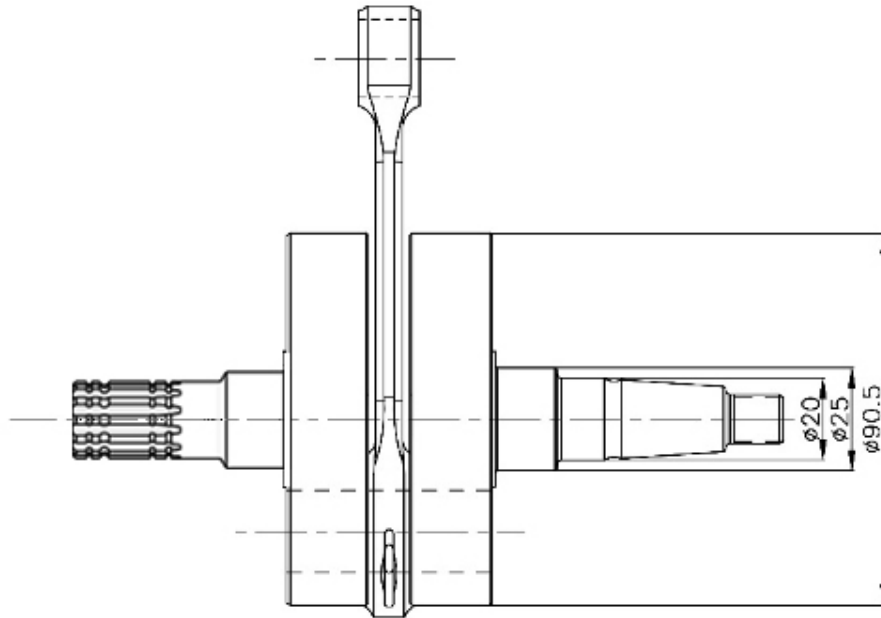


Photo du vilebrequin et de la bielle /
Photo of the crankshaft and conrod

Photo de la bielle / Photo of the conrod

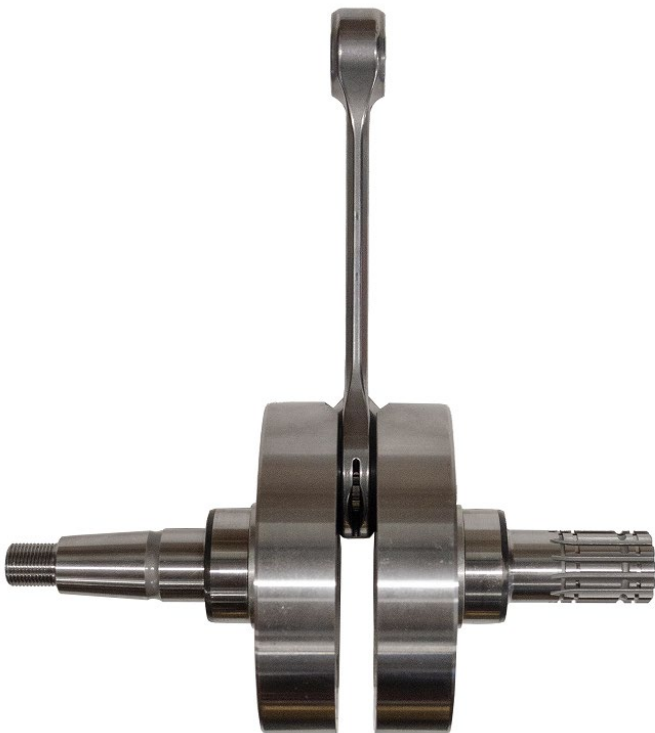


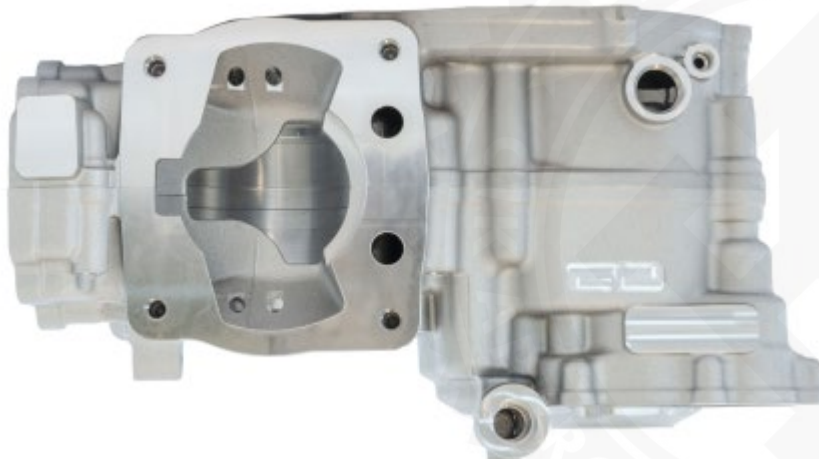
Photo de l'intérieur du carter droit /
Photo of the inside of the right crankcase



Photo de l'intérieur du carter gauche /
Photo of the inside of the left crankcase

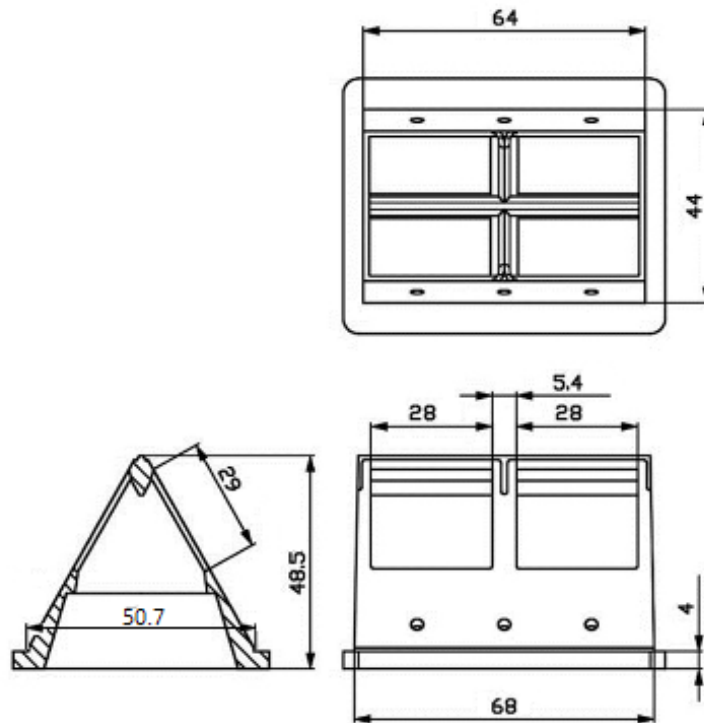


Photo du carter (coté joint) /
Photo of the sump (gasket face)

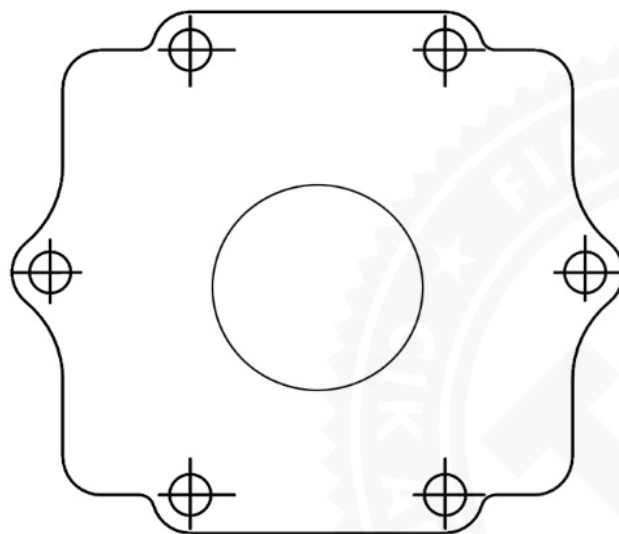


3. Boite à clapets / Reed valve box

Dessin de la boite à clapets (dimensions sans tolérances) /
Drawing of the reed valve box (dimensions without tolerances)



Dessin de la couvercle de la boite à clapets / Drawing of the reed valve box cover



4. Moteur / Engine

Photo du moteur complet de l'avant /
Photo of the complete engine front side



Photo du moteur complet de l'arrière /
Photo of the complete engine rear side



Photo du moteur complet vu du haut /
Photo of the complete engine seen from above



Photo du moteur complet vu du dessous /
Photo of the complete engine seen from below



5. Boite de vitesses / Gearbox

Couple primaire / Primary coupling

17 / 67

Vitesse / Gear	Arbre primaire / Primary shaft	Arbre secondaire / Secondary shaft	Relevé des valeurs obtenues après trois tours moteur / Reading of values obtained after three engines revs
1ère / 1 st	13	33	108.2°
2e / 2 nd	16	29	151.2°
3e / 3 rd	16	24	183.1°
4e / 4 th	18	22	224.2°
5e / 5 th	22	23	262.1°
6e / 6 th	27	25	296.0°

6.Échappement / Exhaust

Photo de l'échappement vu du haut /
Photo of the exhaust seen from abovePhoto de l'échappement vu du dessous /
Photo of the exhaust seen from below

Descriptions technique / Technical descriptionsPoids en gramm / *Weight in gramm***1113 gr.**

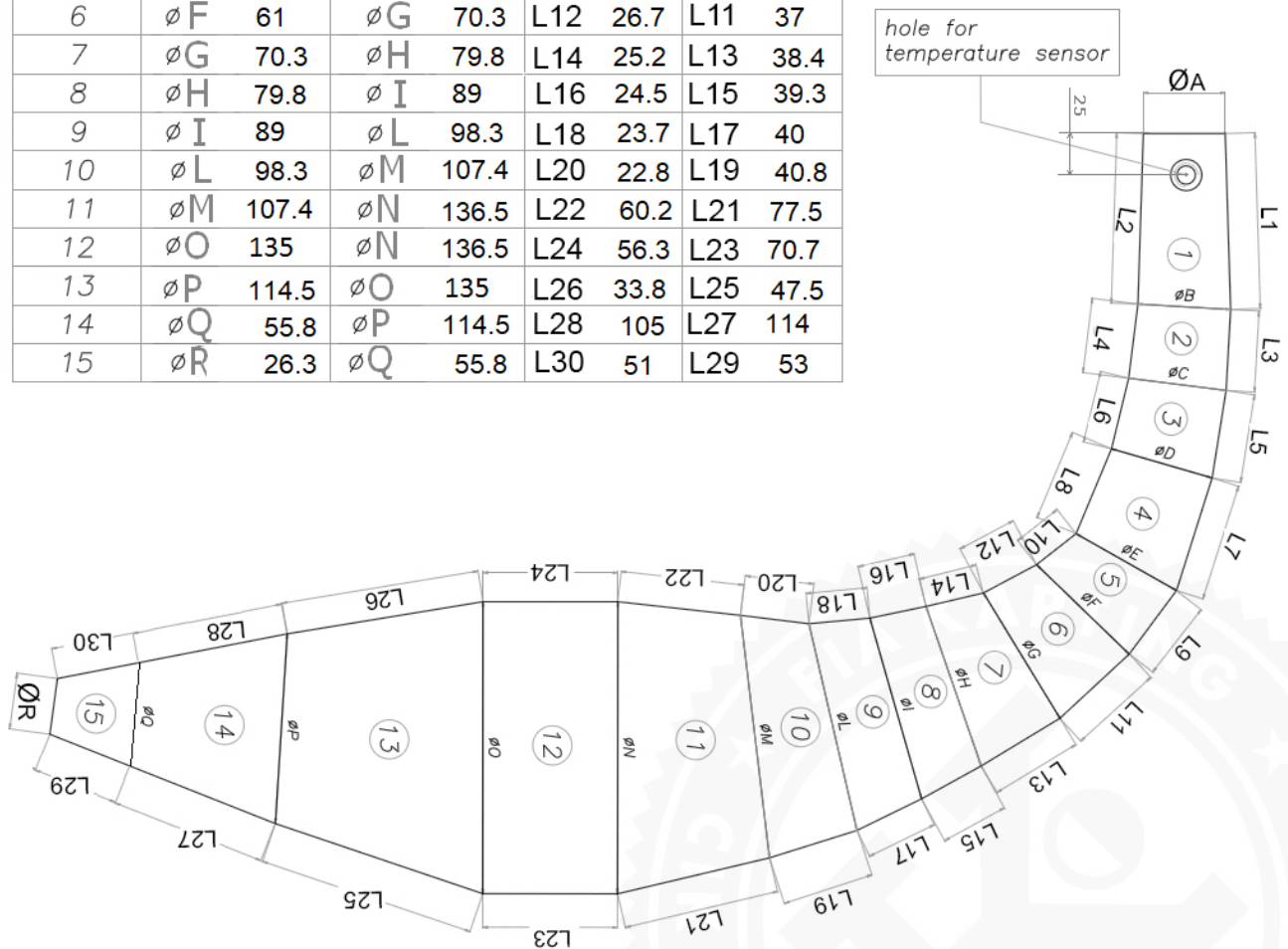
minimum

Volume in cm³ / *Volume in cm³***3930 cm³**

±5%

Dessin de l'échappement (dimensions sans tolérances) /
Drawing of the exhaust (dimensions without tolerances)

PARTE		D min		D Max		L min		L Max
1	∅A	44.5	∅B	47	L2	67.7	L1	67.7
2	∅B	47	∅C	49	L4	33.5	L3	33.5
3	∅C	49	∅D	50.8	L6	33.5	L5	33.5
4	∅D	50.8	∅E	55.7	L8	19	L7	27.3
5	∅E	55.7	∅F	61	L10	19	L9	27.1
6	∅F	61	∅G	70.3	L12	26.7	L11	37
7	∅G	70.3	∅H	79.8	L14	25.2	L13	38.4
8	∅H	79.8	∅I	89	L16	24.5	L15	39.3
9	∅I	89	∅L	98.3	L18	23.7	L17	40
10	∅L	98.3	∅M	107.4	L20	22.8	L19	40.8
11	∅M	107.4	∅N	136.5	L22	60.2	L21	77.5
12	∅O	135	∅N	136.5	L24	56.3	L23	70.7
13	∅P	114.5	∅O	135	L26	33.8	L25	47.5
14	∅Q	55.8	∅P	114.5	L28	105	L27	114
15	∅R	26.3	∅Q	55.8	L30	51	L29	53



Contenant toutes les informations permettant de construire cet échappement. /
Including all the informations necessary to build this exhaust.

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

Homologation N°

012-EZ-01
SUP



COMMISSION
INTERNATIONALE
DE KARTING - FIA



MOTEUR / ENGINE
KZ

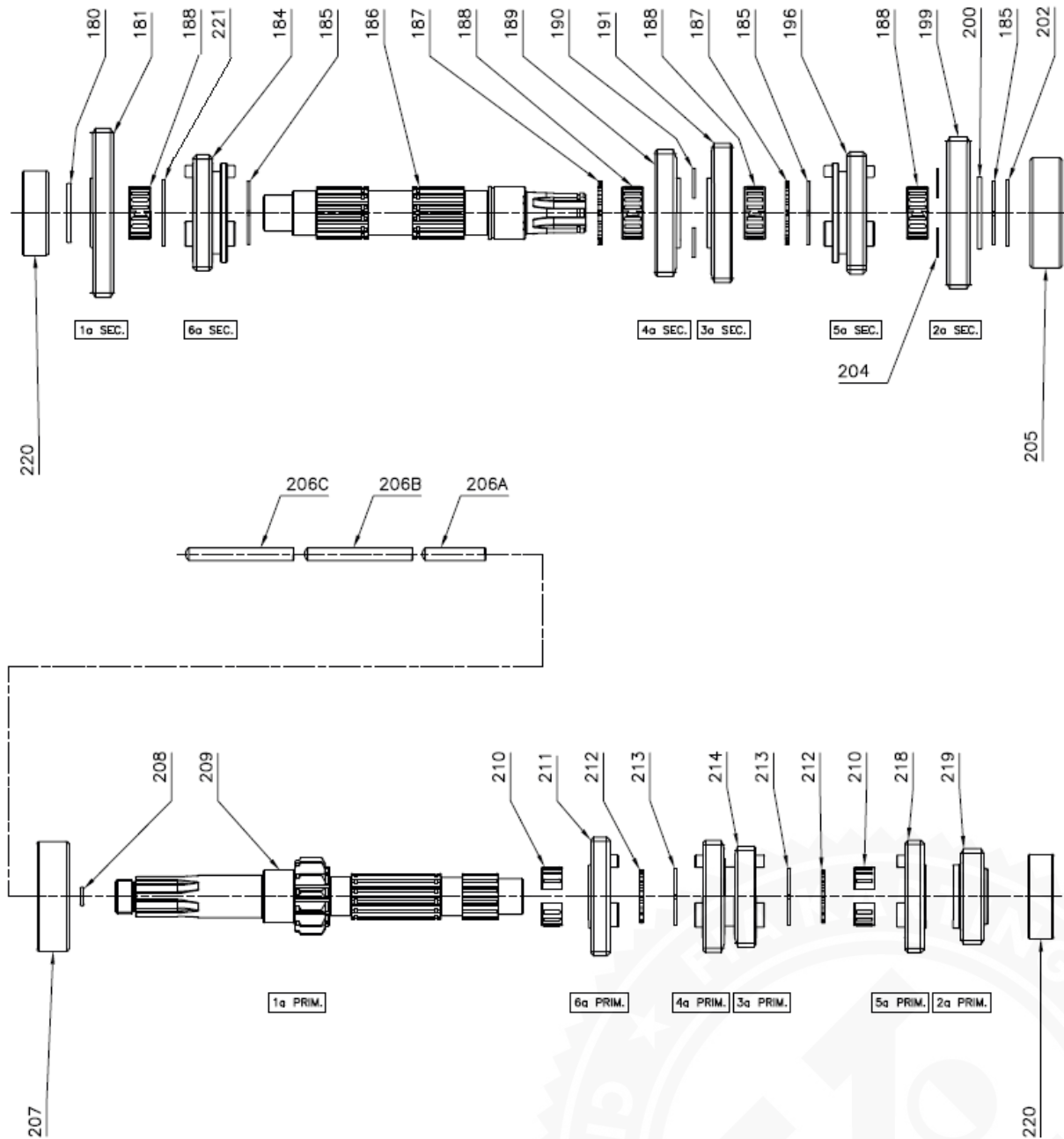
Constructeur / <i>Manufacturer</i>	OTK KART GROUP S.R.L.
Marque / <i>Make</i>	VORTEX
Modèle / <i>Model</i>	VTZ
Catégorie / <i>Category</i>	Group 1 & 2
Nombre de pages / <i>Number of pages</i>	5
Le présent Complément reproduit descriptions, illustrations et dimensions de la ou des pièces demandées par 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

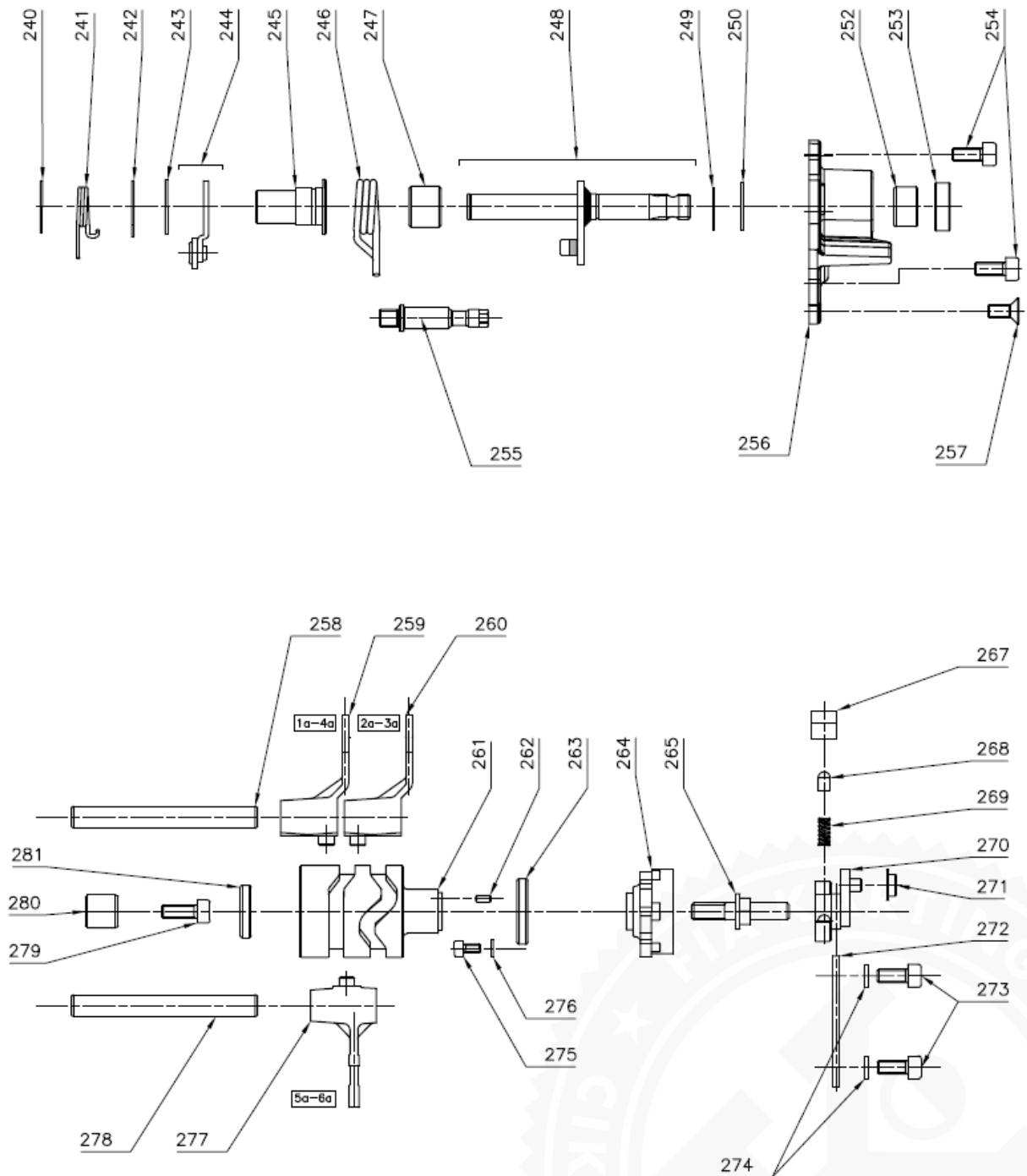


B **Liste des pièces de la boîte de vitesses / Gearbox parts list**

Rif.	Descrizione	Description	N°
180	Ralla rasamento cuscinetto	Bearing washer	1
181	Ingranaggio 1 ^A albero secondario	Gear 1 TH countershaft	1
184	Ingranaggio 6 ^A albero secondario	Gear 6 TH 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 ^A albero secondario	Gear 4 TH countershaft	1
190	Ralla spaccata	Split washer	1
191	Ingranaggio 3 ^A albero secondario	Gear 3 TH countershaft	1
196	Ingranaggio 5 ^A albero secondario	Gear 5 TH countershaft	1
199	Ingranaggio 2 ^A albero secondario	Gear 2 TH 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
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 ^A albero primario	Gear 6 TH mainshaft	1
212	Ralla brocciata albero primario	Broached washer primary shaft	2
213	Anello seeger esterno	Seeger external	2
214	Ingranaggio 3 ^A /4 ^A albero primario	Gear 3 TH /4 TH mainshaft	1
218	Ingranaggio 5 ^A albero primario	Gear 5 TH mainshaft	1
219	Ingranaggio 2 ^A albero primario	Gear 2 TH 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 posizionatore	Locating spring washer	1
241	Molla posizionatore marce	Locating spring	1
242	Seeger	Seeger	1
243	Ralla boccola preselettore	Pawl bush washer	1
244	Leva posizionatore marce completa	Complete locating lever	1
245	Boccola per posizionatore 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