Homologation N°

032-EZ-01

FICHE D´HOMOLOGATION / *HOMOLOGATION FORM*

COMMISSION INTERNATIONALE DE KARTING - FIA

MOTEUR / *ENGINE* KZ

Constructeur / *Manufacturer*	ASPA S.R.L.
Marque / *Make*	**MODENA ENGINES**
Modèle / *Model*	**KK3**
Catégorie / Categorie	Group 2
Durée de l'homologation / *Validity of the Homologation*	3 ans / *3 years*
Nombre de pages / *Number of pages*	10
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.*
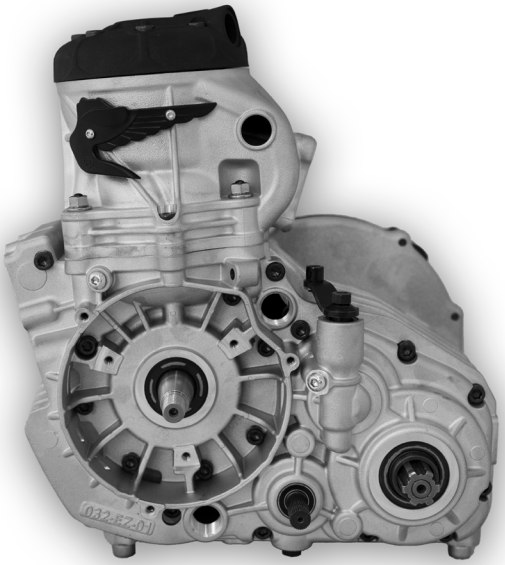	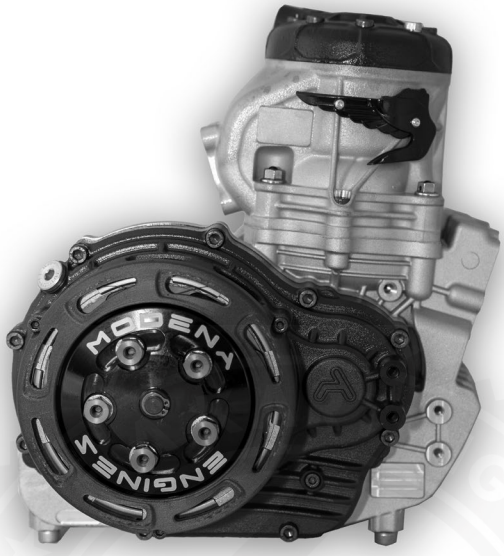
Photo du moteur côté pignon / *Photo of engine drive side*	Photo du moteur côté opposé / *Photo of engine opposite side*
Signature et tampon de l'ASN / *Signature and stamp of the ASN*	Signature et tampon de la CIK-FIA / *Signature and stamp of the CIK-FIA*

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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*	**124.66 cm³**	< 125 cm³
Alésage d'origine / *Original bore*	**54 mm**	--
Alésage théorique maximum / *Maximum theoretical bore*	**54.07 mm**	--
Course / *Stroke*	**54.43 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*	spheric with variable radius+squish	
Vilebrequin / *Crankshaft*		
Poids du vilebrequin complet, sans piston / *Weight of crankshaft complete, without piston*	**2250 gr.**	minimum
Bielle / *Conrod*		
Longueur (entre-axe) de la bielle / *Length between the axes of the conrod*	**110.2 mm**	±0.1 mm
Poids de la bielle / *Weight of conrod*	**105 gr.**	minimum
Piston / *Piston*		
Poids du piston, segments du piston inclus / *Weight of the piston including piston rings*	**110 gr.**	minimum
Poids de l'axe de piston / *Weight of gudgeon pin*	**25 gr.**	minimum

B — Angles d'ouverture / *Opening angles*

Lumière d'échappement / *Exhaust port*	selon les reglements/ *according to the regulations*

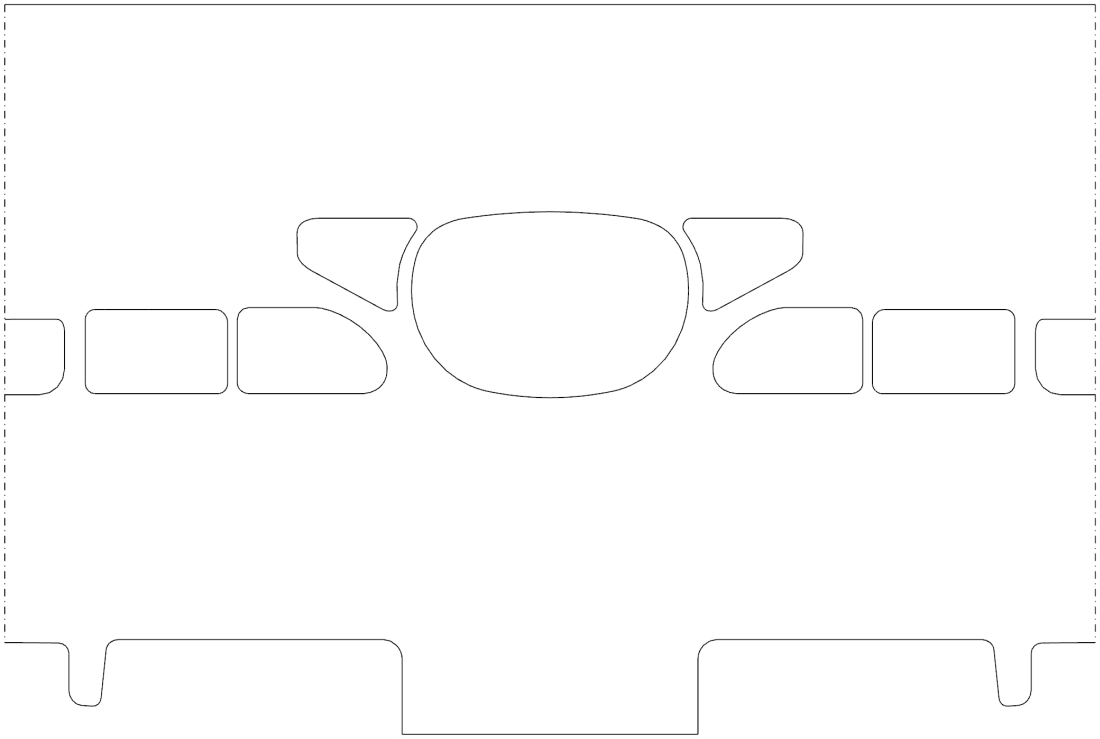
C — Matériau / *Material*

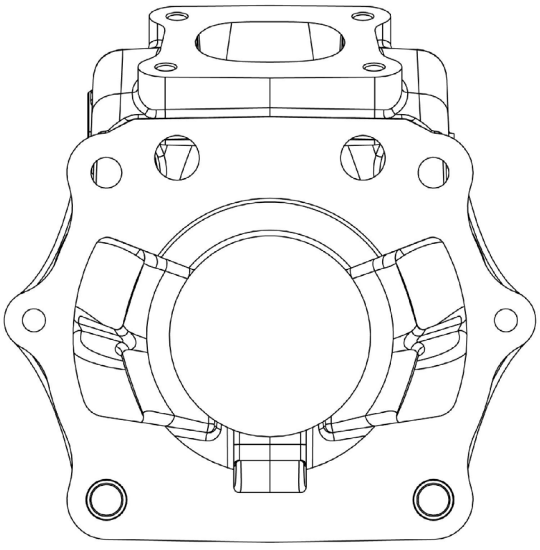
Culasse / *Cylinder head*	ALUMINIUM ALLOY+COPPER
Cylindre / *Cylinder*	ALUMINIUM ALLOY
Matériau de la paroi du cylindre / *Cylinder wall material*	NICASIL
Carter / *Sump*	ALUMINIUM ALLOY
Vilebrequin / *Crankshaft*	STEEL - magnetic
Bielle / *Connecting rod*	STEEL - magnetic
Piston / *Piston*	ALUMINIUM

D	Photos, dessins et graphiques / *Photos, drawings and graphs*

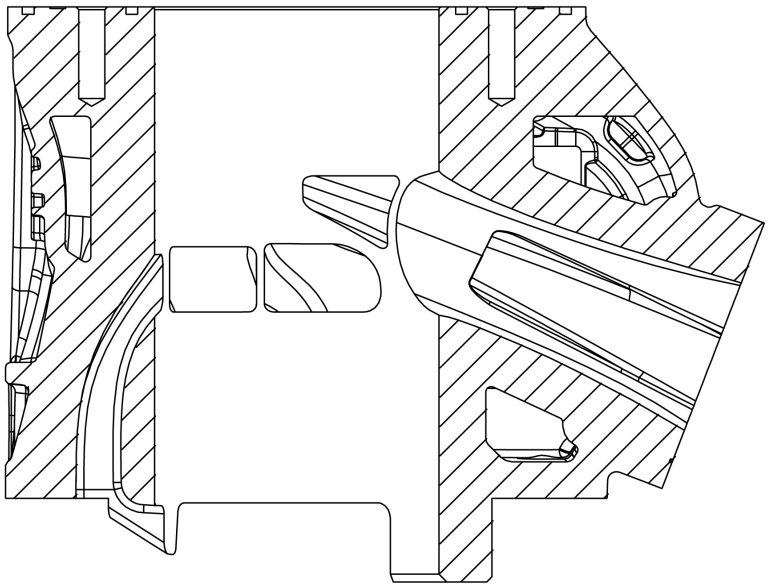
1. Cylindre / *Cylinder*

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

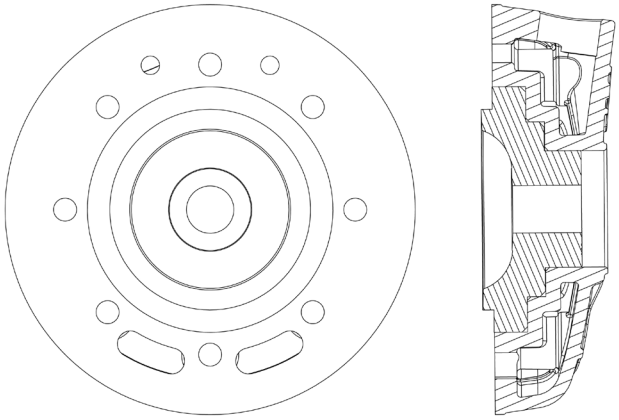


Photo de la culasse et de la chambre de combustion /
Photo of the cylinder head and the combustion chamber

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

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

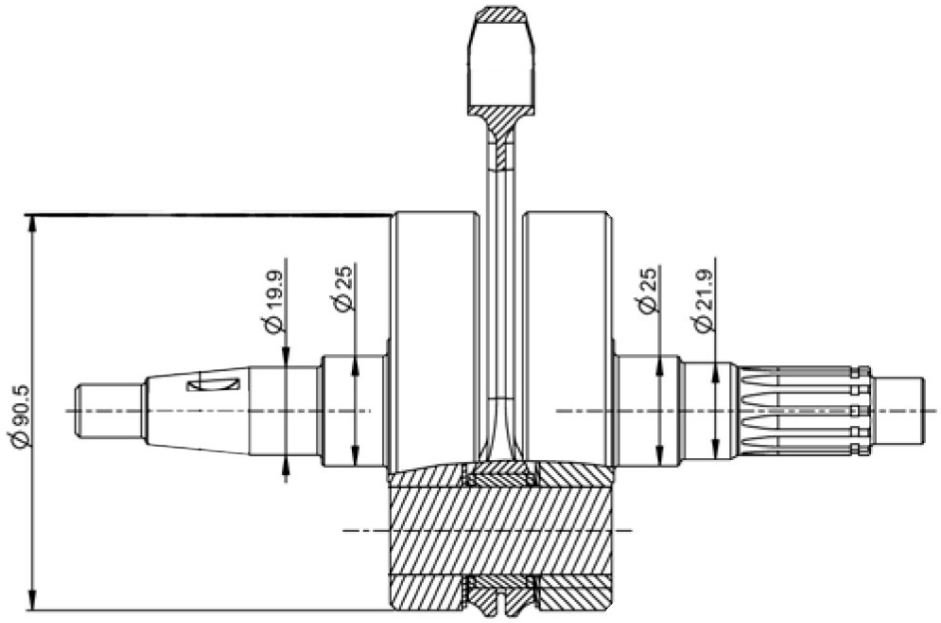


Photo du vilebrequin et de la bielle /
Photo of the crankshaft and conrod

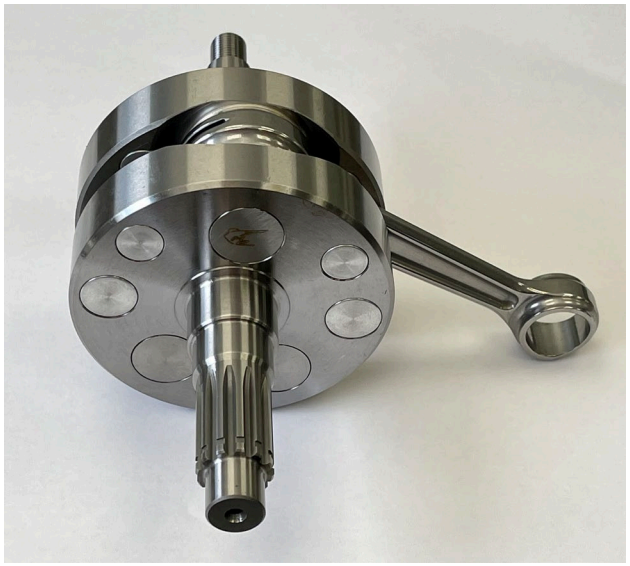


Photo de la bielle/ *Photo of the conrod*

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

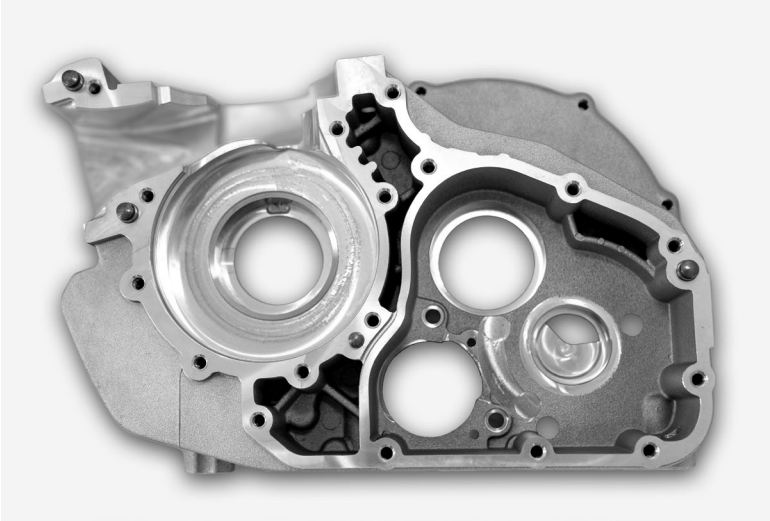


Photo de l'intérieur du carter gauche /
Photo of the inside of the left crankcase

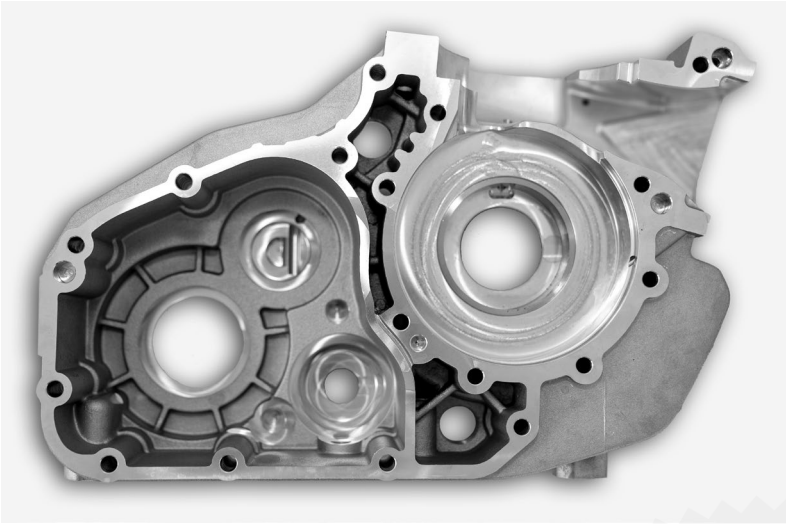
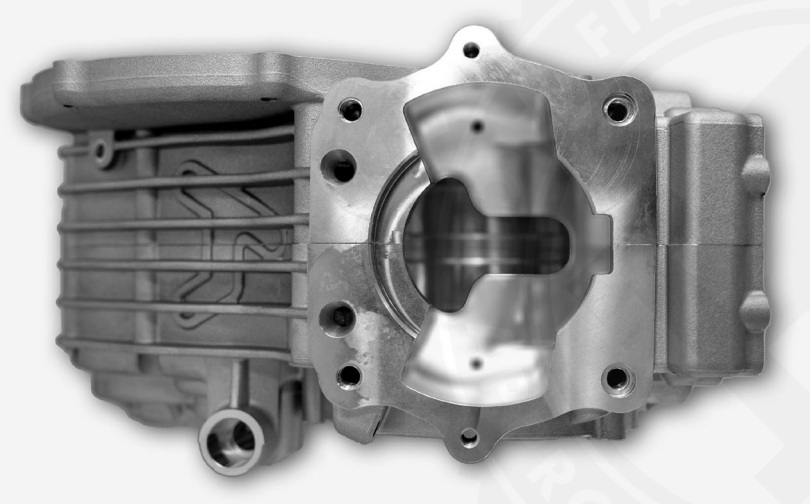
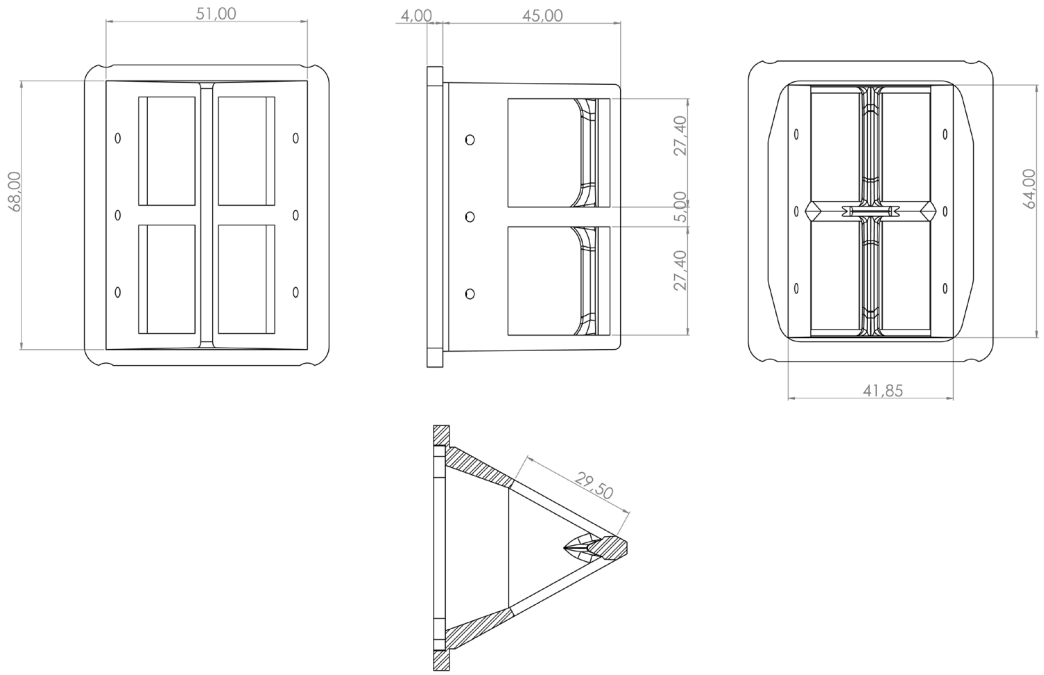


Photo du carter (coté joint) /
Photo of the sump (gasket face)

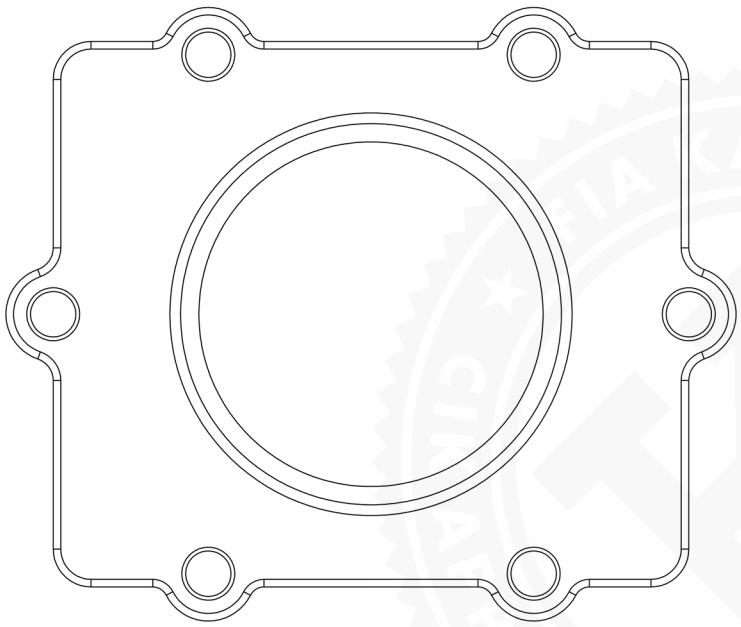


3. Boite à clapets / *Reed valve box*

Dessin de la boite à clapets (dimensions sans tolérances) /
Drawing of the reed 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*

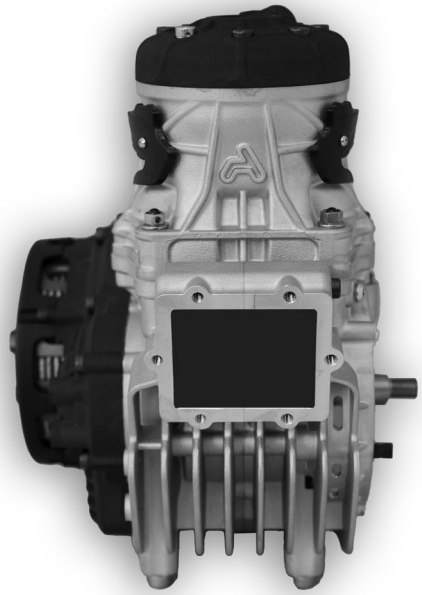
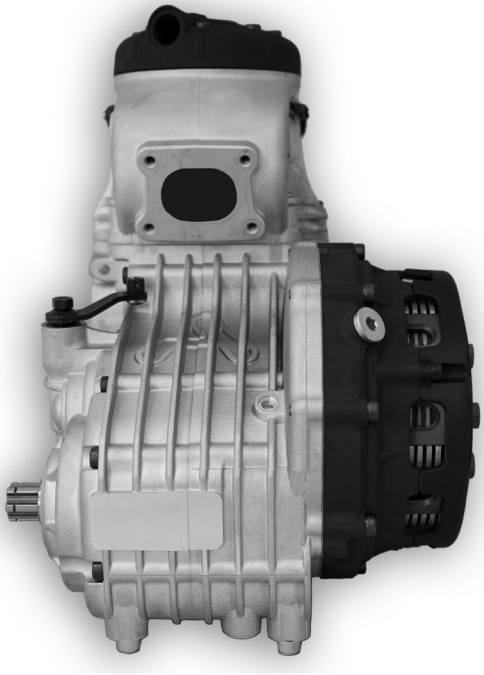
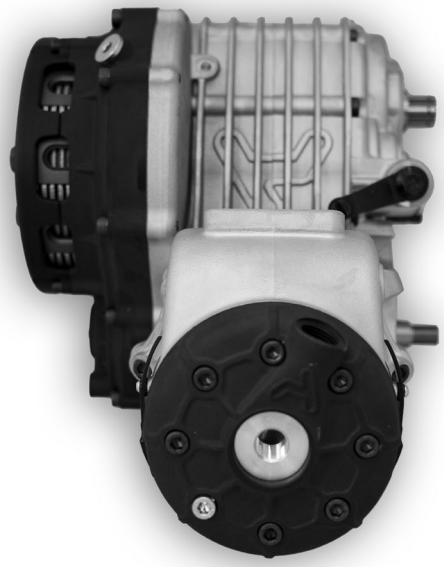
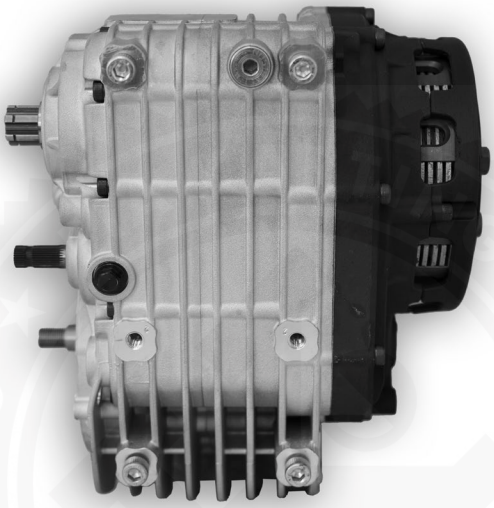

	

Photo du moteur complet vu du haut / *Photo of the complete engine seen from above*	Photo du moteur complet vu du dessous / *Photo of the complete engine seen from below*
	

5. Boite de vitesses /*Gearbox*			
Couple primaire / *Primary coupling*		**19 / 75**	
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*
1ére / *1st*	**13**	**33**	**107.8°**
2e / *2nd*	**16**	**29**	**151°**
3e / *3rd*	**18**	**27**	**182.4°**
4e / *4th*	**22**	**27**	**222.9°**
5e / *5th*	**22**	**23**	**261.7°**
6e / *6th*	**27**	**25**	**295.5°**

6.Échappement / *Exhaust*	
Photo de l'échappement vu du haut / *Photo of the exhaust seen from above*	Photo de l'échappement vu du dessous / *Photo of the exhaust seen from below*
	

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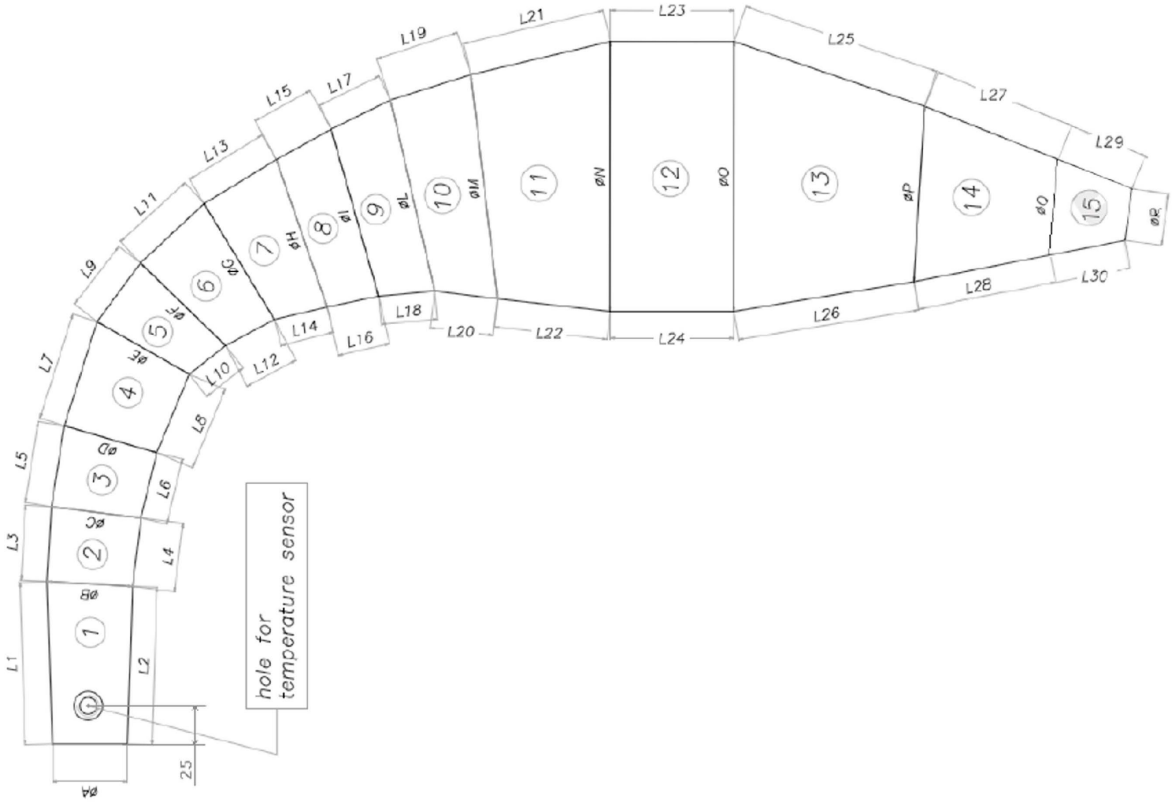
Descriptions technique / *Technical descriptions*		
Poids en gramm / *Weight in gramm*	**1132 gr.**	minimum
Volume in cm³ / *Volume in cm³*	**3995 cm³**	±5%

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



Partie/Part	D. MIN.		*D.MAX*		L. MIN.		L. MAX.	
1	ØA	44.5	ØB	47	L2	67.7	L1	67.7
2	ØB	47	ØC	49	L4	33.5	L3	33.5
3	ØC	49	ØD	50.8	L6	33.5	L5	33.5
4	ØD	50.8	ØE	55.7	L8	19	L7	27.3
5	ØE	55.7	ØF	61	L10	19	L9	27.1
6	ØF	61	ØG	70.3	L12	26.7	L11	37
7	ØG	70.3	ØH	79.8	L14	25.2	L13	38.4
8	ØH	79.8	ØI	89	L16	24.5	L15	39.3
9	ØI	89	ØL	98.3	L18	23.7	L17	40
10	ØL	98.3	ØM	107.4	L20	22.8	L19	40.8
11	ØM	107.4	ØN	136.5	L22	60.2	L21	77.5
12	ØO	135	ØN	136.5	L24	56.3	L23	70.7
13	ØP	114.5	ØO	135	L26	33.8	L25	47.5
14	ØQ	55.8	ØP	114.5	L28	105	L27	114
15	ØR	26.3	ØQ	55.8	L30	51	L29	53

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

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SUP

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

COMMISSION INTERNATIONALE DE KARTING - FIA

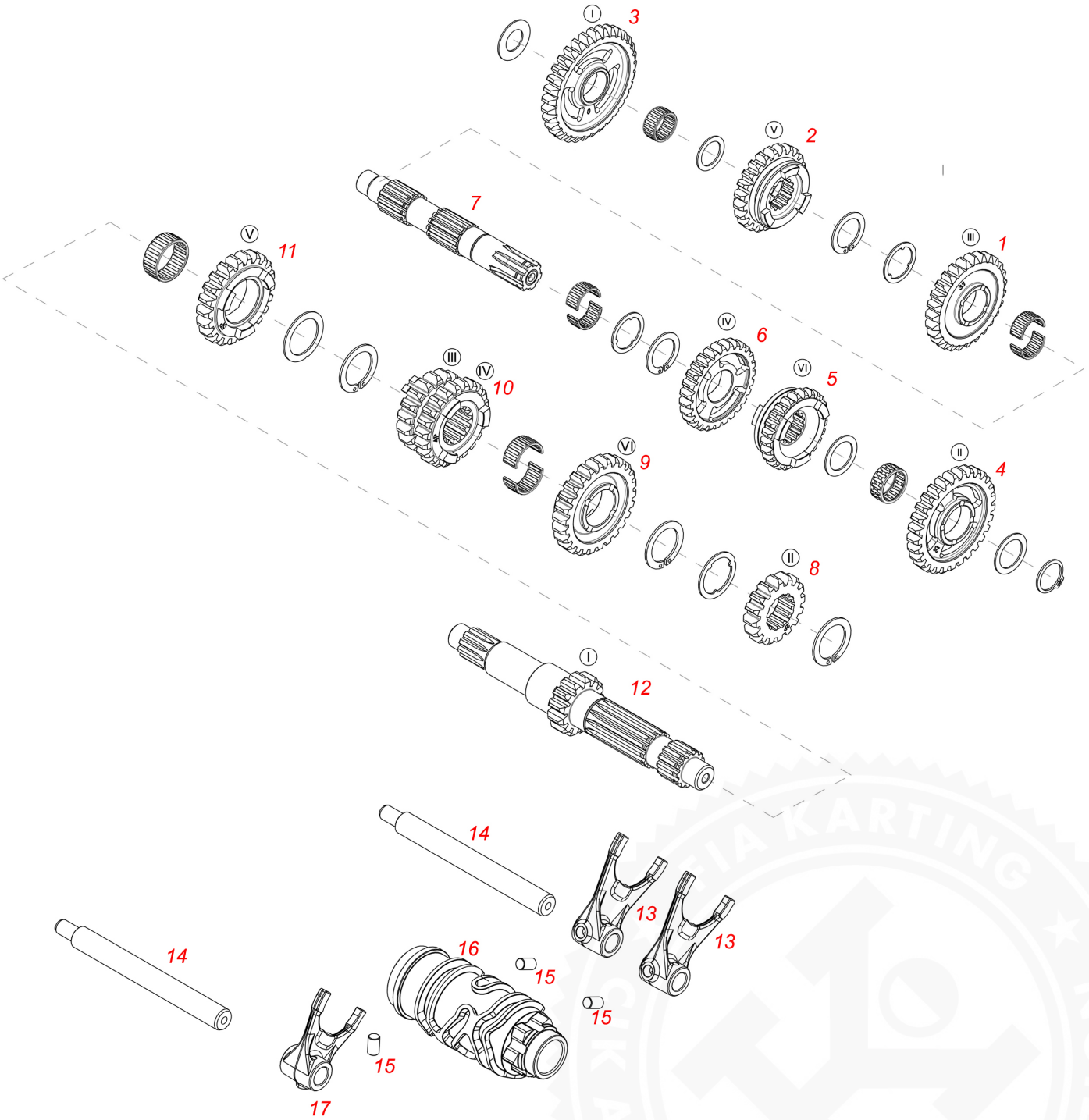
MOTEUR / *ENGINE*
KZ

Constructeur / *Manufacturer*	ASPA srl
Marque / *Make*	**MODENAENGINES**
Modèle / *Model*	**KK3**
Catégorie / *Category*	Groupe 2 / *Group 2*
Nombre de pages / *Number of pages*	3
Le présent Complément reproduit descriptions, illustrations et dimensions de la ou des pièces demandées par la CIK-FIA.	*This Supplement reproduces descriptions, illustrations and dimensions of the part(s) requested by the CIK-FIA.*

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*
Via Solferino 32 - 00185 Roma (RM)	

INFORMATIONS TECHNIQUES / *TECHNICAL INFORMATION*

B	Pièces de la boîte de vitesses / *Gearbox parts*



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

PARTS LIST	DESCRIPTION	AMOUNT OF EACH PART
1	INGRANAGGIO TERZA ALBERO SECONDARIO Z 27 / THIRD GEAR OUTPUT SHAFT Z 27	1
2	INGRANAGGIO QUINTA ALBERO SECONDARIO Z 23/FIFTH GEAR OUTPUT SHAFT Z 23	1
3	INGRANAGGIO PRIMA ALBERO SECONDARIO Z 33/FIRST GEAR OUTPUT SHAFT Z 23	1
4	INGRANAGGIO SECONDA ALBERO SECONDARIO Z 29/SECOND GEAR OUTPUT SHAFT Z 29	1
5	INGRANAGGIO SESTA ALBERO SECONDARIO Z 25/SIXTH GEAR OUTPUT SHAFT Z 25	1
6	INGRANAGGIO QUARTA ALBERO SECONDARIO Z 27/FOURTH GEAR OUTPUT SHAFT Z 27	1
7	ALBERO SECONDARIO / OUTPUT SHAFT	1
8	INGRANAGGIO SECONDA ALBERO PRIMARIO Z 16 / THIRD/FOURTH GEAR INPUT SHAFT Z 16	1
9	INGRANAGGIO SESTA ALBERO PRIMARIO Z 27 / SIXTH GEAR INPUT SHAFT Z 27	1
10	INGRANAGGIO TERZA / QUARTA ALBERO PRIMARIO Z 18 ; Z 22 / THIRD/FOURTH GEAR INPUT SHAFT Z 18;Z 22	1
11	INGRANAGGIO QUINTA ALBERO PRIMARIO Z 22 / FIFTH GEAR INPUT SHAFT Z 22	1
12	ALBERO PRIMARIO Z13 / INPUT SHAFT Z13	1
13	FORCHETTA 1/3 E 4/2 FORK 1/3 AND 4/2	2
14	ASTA FORCHETTE / FORK ROD	2
15	RULLO / ROLLER	3
16	DESMODROMICO / SHIFT DRUM	1
17	FORCHETTA 5/6 / FORK 5/6	1