



# FICHE D'HOMOLOGATION HOMOLOGATION FORM

## COMMISSION INTERNATIONALE DE KARTING - FIA



### MOTEUR / ENGINE KZ

Constructeur	Manufacturer	TM RACING SPA
Marque	Make	<b>TM RACING</b>
Modèle	Model	<b>KZ-R1</b>
Type d'admission	Inlet type	REED VALVE
Durée de l'homologation	Validity of the homologation	3 ans / 3 years
Nombre de pages	Number of pages	9

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.

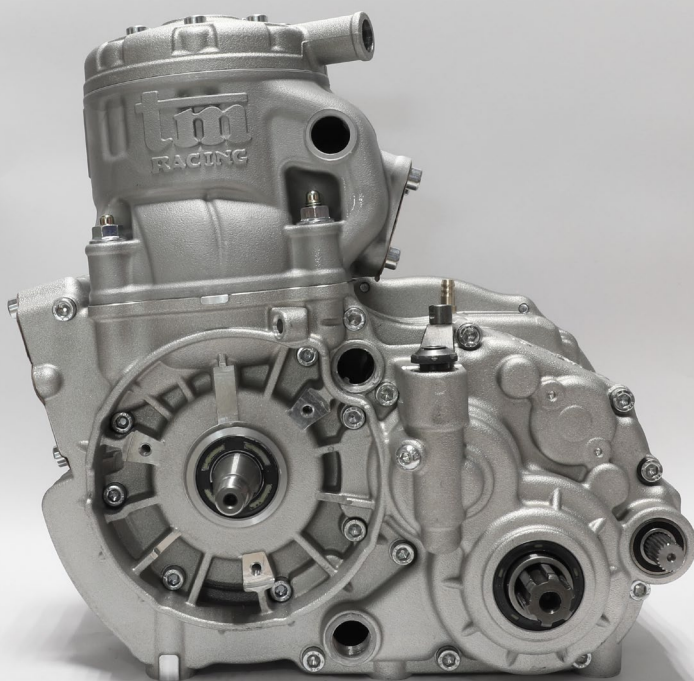


PHOTO DU MOTEUR CÔTÉ PIGNON /  
PHOTO OF DRIVE SIDE OF ENGINE

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**



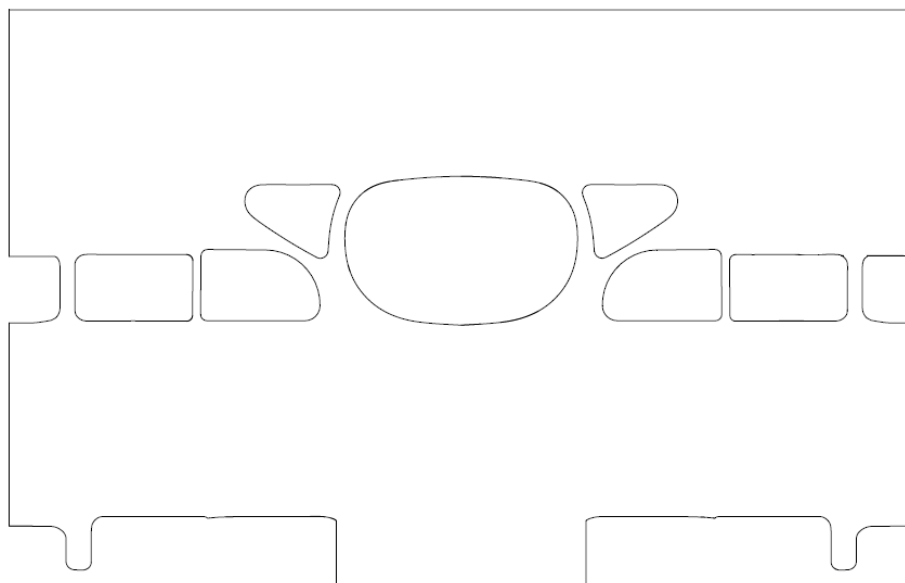
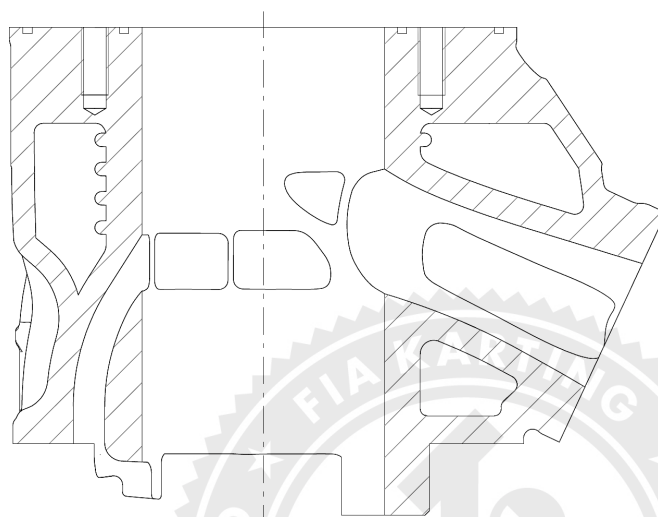
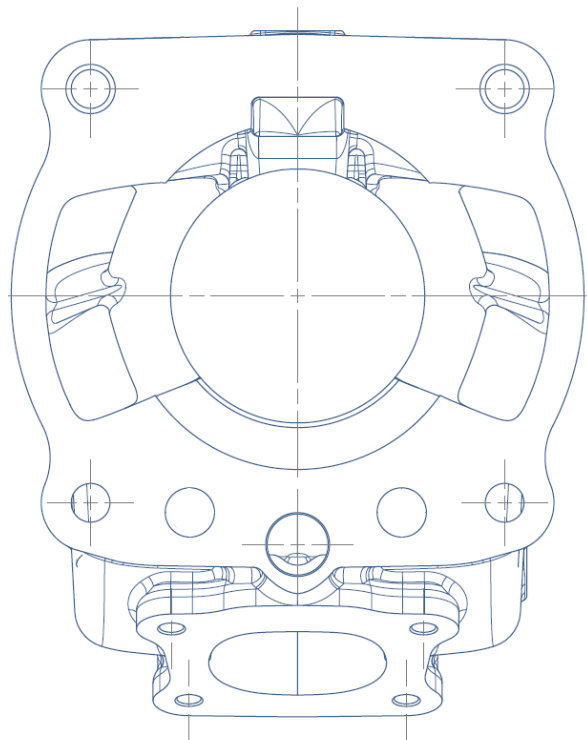
INFORMATIONS TECHNIQUES		TECHNICAL INFORMATION	
A	CARACTÉRISTIQUES	A	CHARACTERISTICS
			Tolérances
Volume du cylindre	Volume of cylinder	<b>124.66 cm<sup>3</sup></b>	< 125cm <sup>3</sup>
Alésage d'origine	Original Bore	<b>54 mm</b>	
Alésage théorique maximum	Theoretical maximum bore	<b>54.07 mm</b>	
Course	Stroke	<b>54.43 mm</b>	
Système de refroidissement	Cooling system	<b>Water</b>	
Nombre de systèmes de carburation	Number of carburation systems	<b>1</b>	
Nombre de canaux de transfert, cylindre/carter	Number of transfer ducts, cylinder/sump	<b>5/3</b>	
Nombre de lumières / canaux d'échappement	Number of exhaust ports / ducts	<b>3</b>	
Forme de la chambre de combustion	Shape of the combustion chamber	<b>SPHERIC WITH VARIABLE RADIUS+SQUISH</b>	
Matériau de la paroi du cylindre	Cylinder wall material	<b>ALUMINIUM ALLOY+NICASIL</b>	
Longueur (entre-axe) de la bielle	Length between the axes of the connecting rod	<b>109,8 mm</b>	±0.1mm
Nombre de segments de piston	Number of piston rings	<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	of the exhaust	selon les règlements	according to the regulations

C	MATÉRIAU	C	MATERIAL
Cylindre	Cylinder		ALUMINIUM ALLOY+NICASIL
Culasse	Cylinder head		ALUMINIUM ALLOY
Carter	Sump		ALUMINIUM ALLOY
Bielle	Connecting rod		STEEL

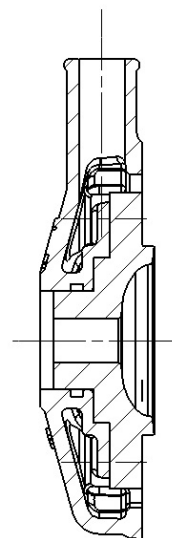
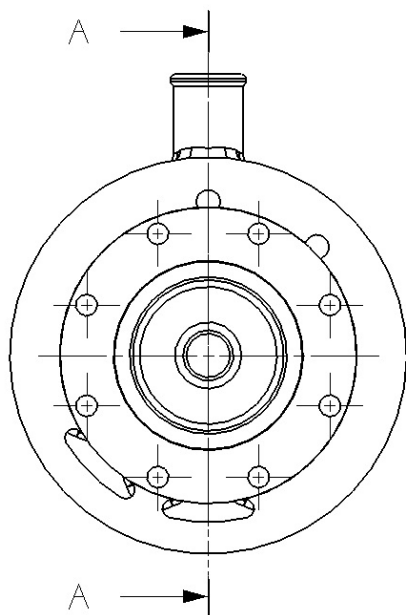
DESSIN DU DÉVELOPPEMENT DU CYLINDRE

DRAWING OF THE CYLINDER DEVELOPMENT

DESSIN DU PIED DU  
CYLINDREDRAWING OF THE  
CYLINDER BASEVUE EN SECTION DU  
CYLINDRESECTION VIEW OF  
CYLINDER

DESSIN DE LA CULASSE ET DE LA CHAMBRE  
DE COMBUSTION

DRAWING OF THE CYLINDER HEAD AND OF  
THE COMBUSTION CHAMBER



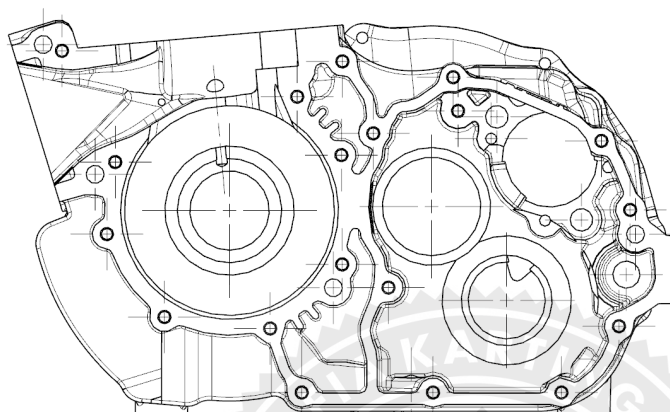
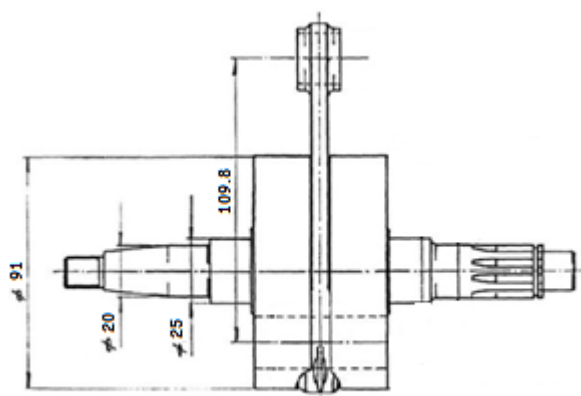
SECTION A - A

DESSIN DU  
VILEBREQUIN

DRAWING OF THE  
CRANKSHAFT

DESSIN INTÉRIEUR  
DU CARTER

DRAWING OF THE  
INSIDE OF SUMP





**041-EZ-75**

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

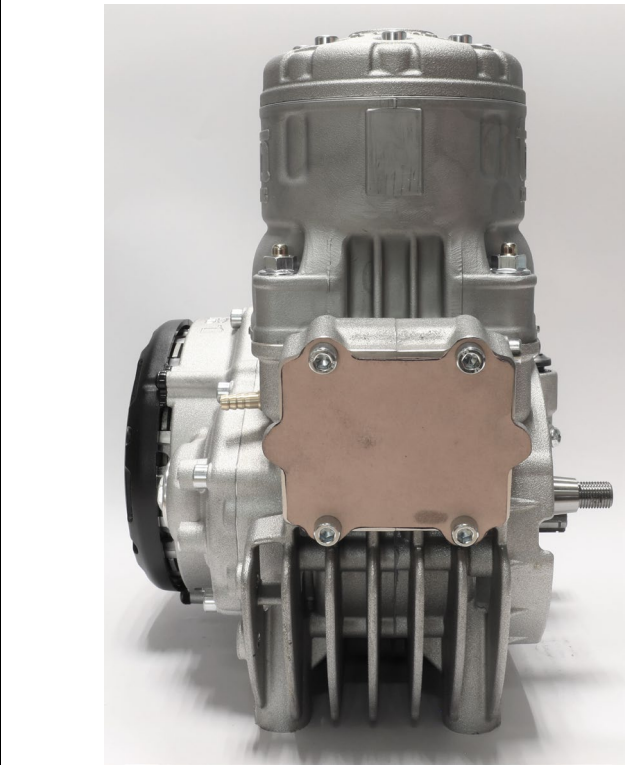
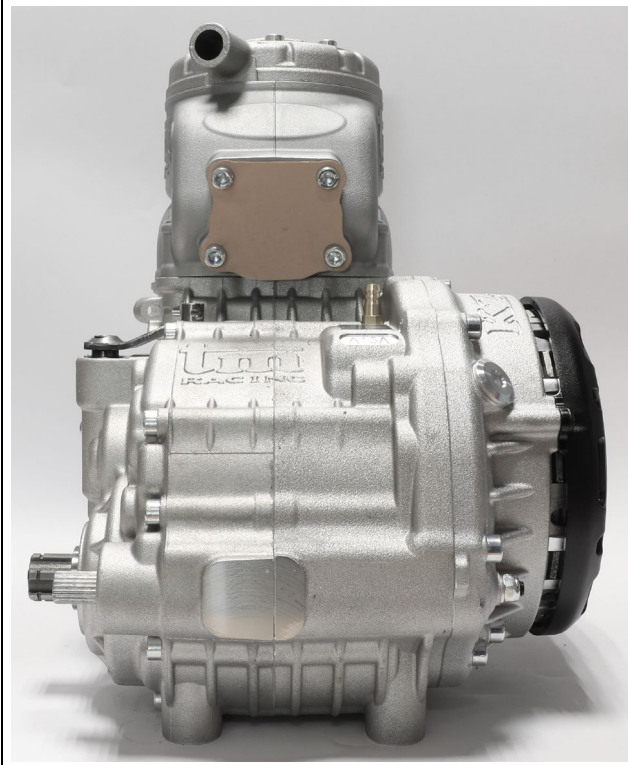


PHOTO DU MOTEUR  
PARTIE SUPÉRIEURE

PHOTO OF THE  
ENGINE TAKEN  
FROM ABOVE

PHOTO DU MOTEUR  
PARTIE INFÉRIEURE

PHOTO OF THE  
ENGINE TAKEN  
FROM BELOW

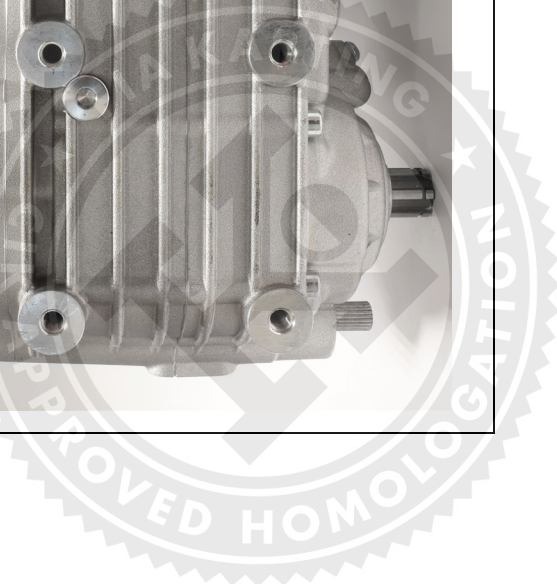
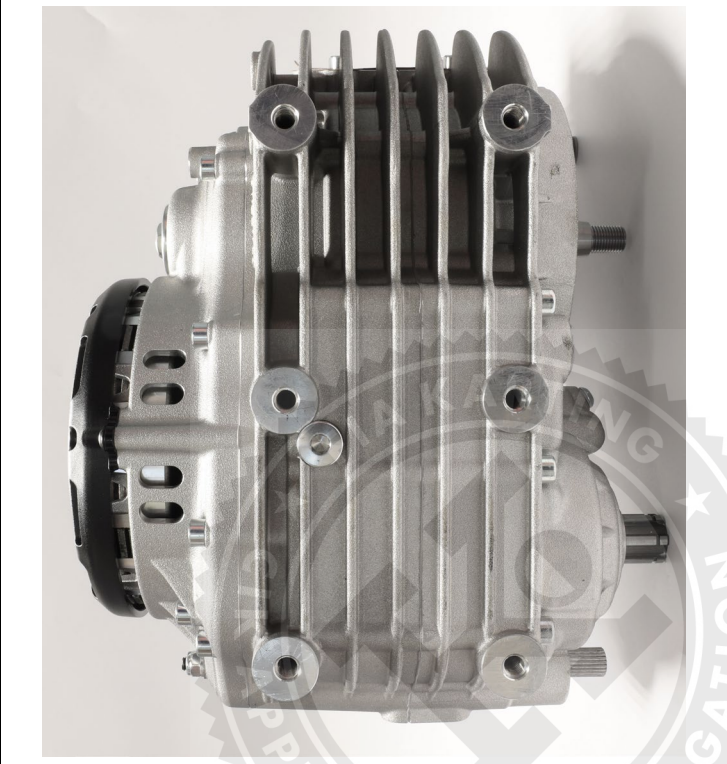
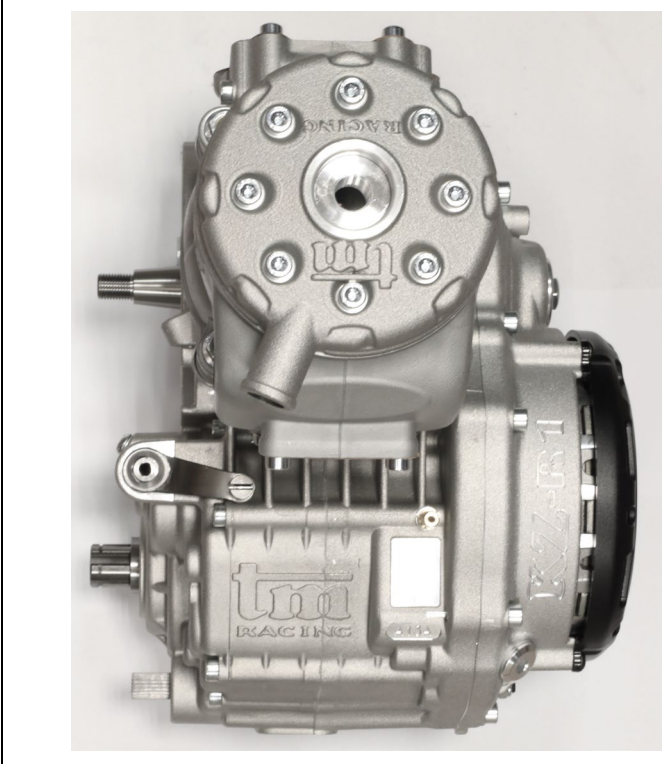
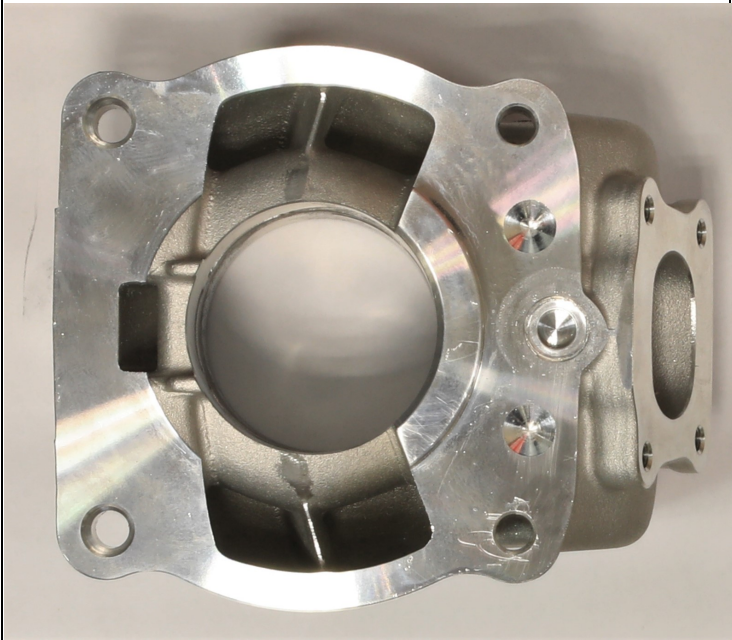
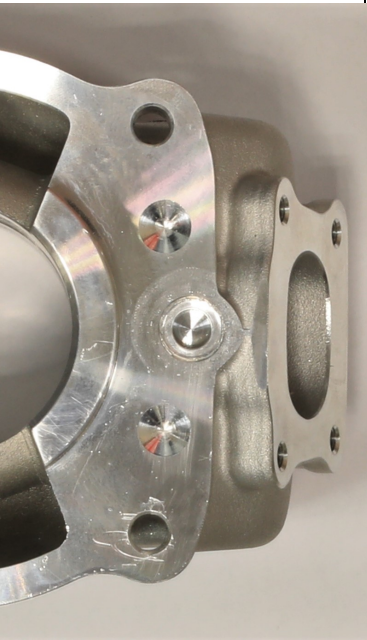
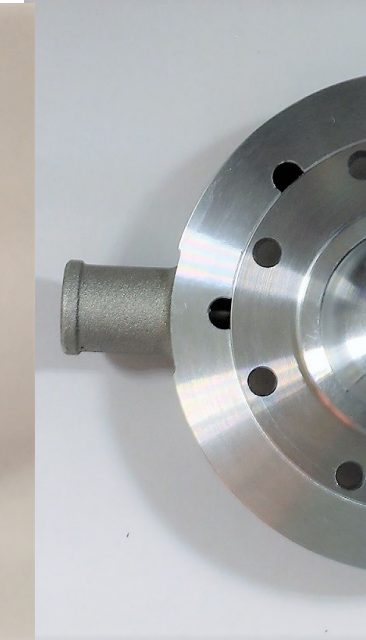
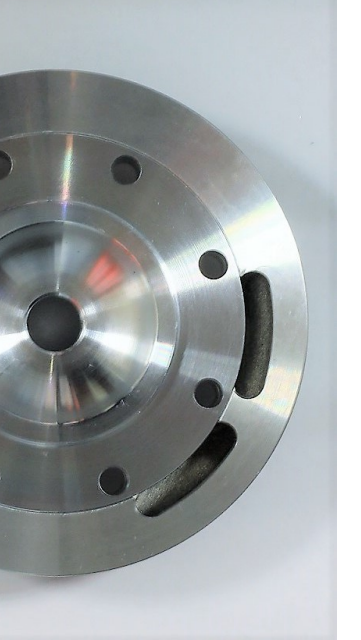
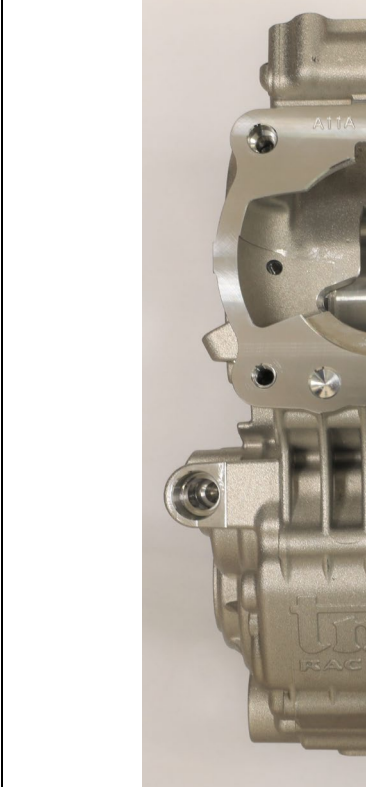
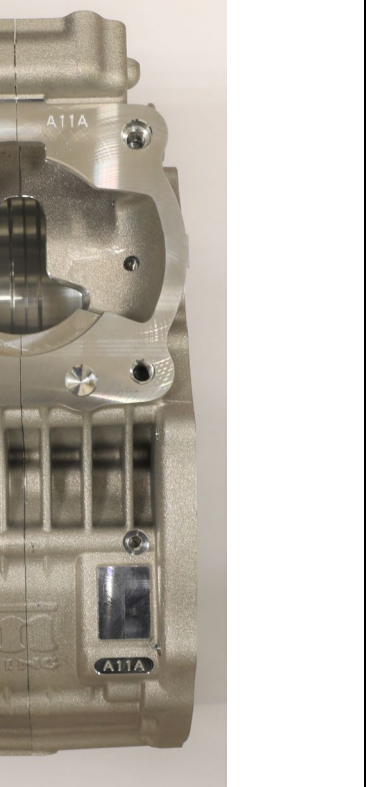


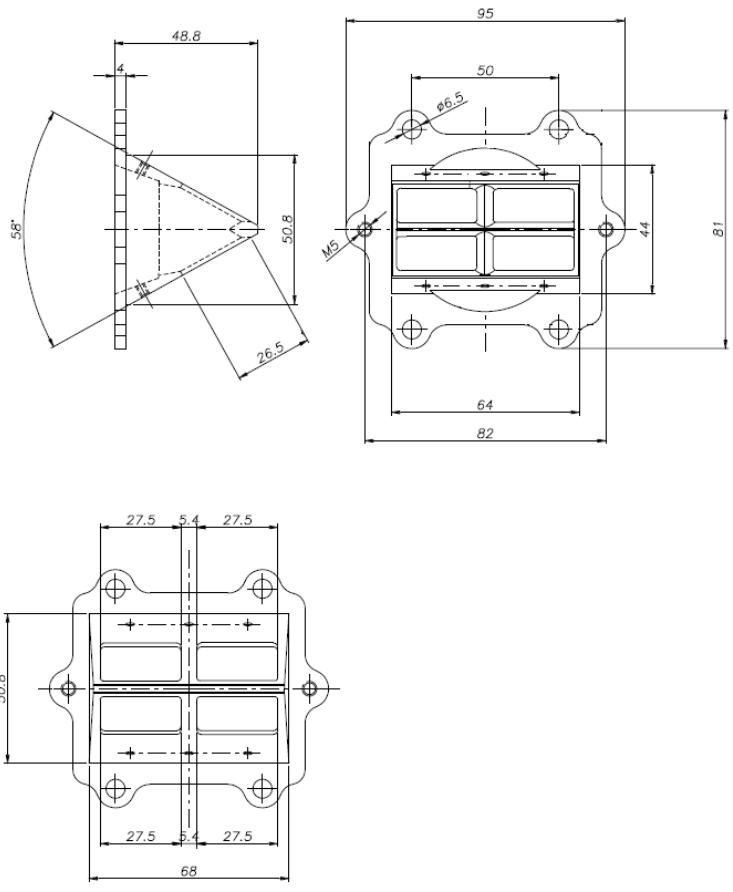


PHOTO DU PIED DU CYLINDRE	PHOTO OF THE BASE OF THE CYLINDER	PHOTO DE LA CHAMBRE DE COMBUSTION	PHOTO OF COMBUSTION CHAMBER
			
PHOTO DU CARTER ( CÔTÉ JOINT )	PHOTO OF THE SUMP ( GASKET FACE )	PHOTO D'UNE PARTIE INTÉRIEURE DU CARTER	PHOTO OF AN INTERNAL PART OF THE SUMP
			



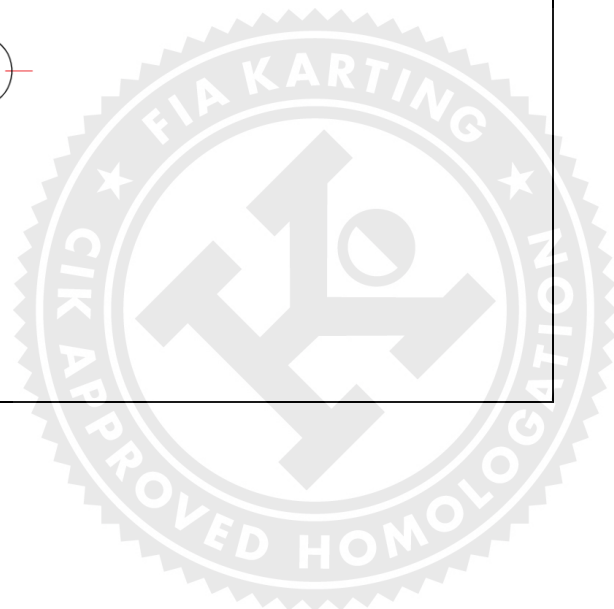
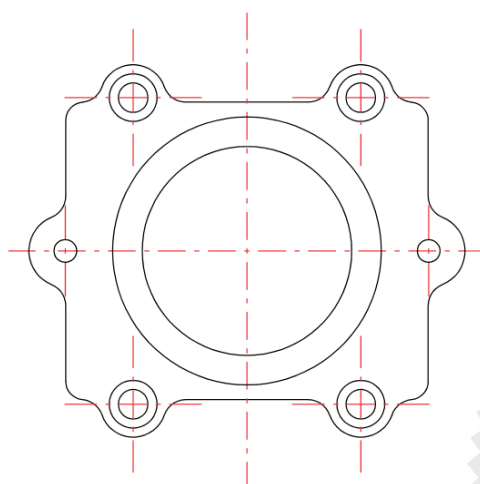
DESSIN DE LA BOÎTE À CLAPETS

DRAWING OF REED VALVE



DESSIN DU COUVERCLE DE LA BOÎTE À CLAPETS

DRAWING OF REED VALVE COVER



BOÎTE DE VITESSES		GEARBOX	
Couple primaire		Primary coupling	18 / 71
Rapports de boîte de vitesses		Gearbox ratios	
Vitesse	Arbre primaire	Arbre secondaire	Relevé des valeurs obtenues après trois tours moteur
Gear	Primary shaft	Secondary shaft	Reading of values obtained after three engine revs
1 <sup>ère</sup> /1 <sup>st</sup>	13	33	107,8°
2 <sup>e</sup> /2 <sup>nd</sup>	16	29	151,0°
3 <sup>e</sup> /3 <sup>rd</sup>	18	27	182,4°
4 <sup>e</sup> /4 <sup>th</sup>	22	27	222,9°
5 <sup>e</sup> /5 <sup>th</sup>	22	23	261,7°
6 <sup>e</sup> /6 <sup>th</sup>	27	25	295,5°

## PHOTOS DE L'ÉCHAPPEMENT

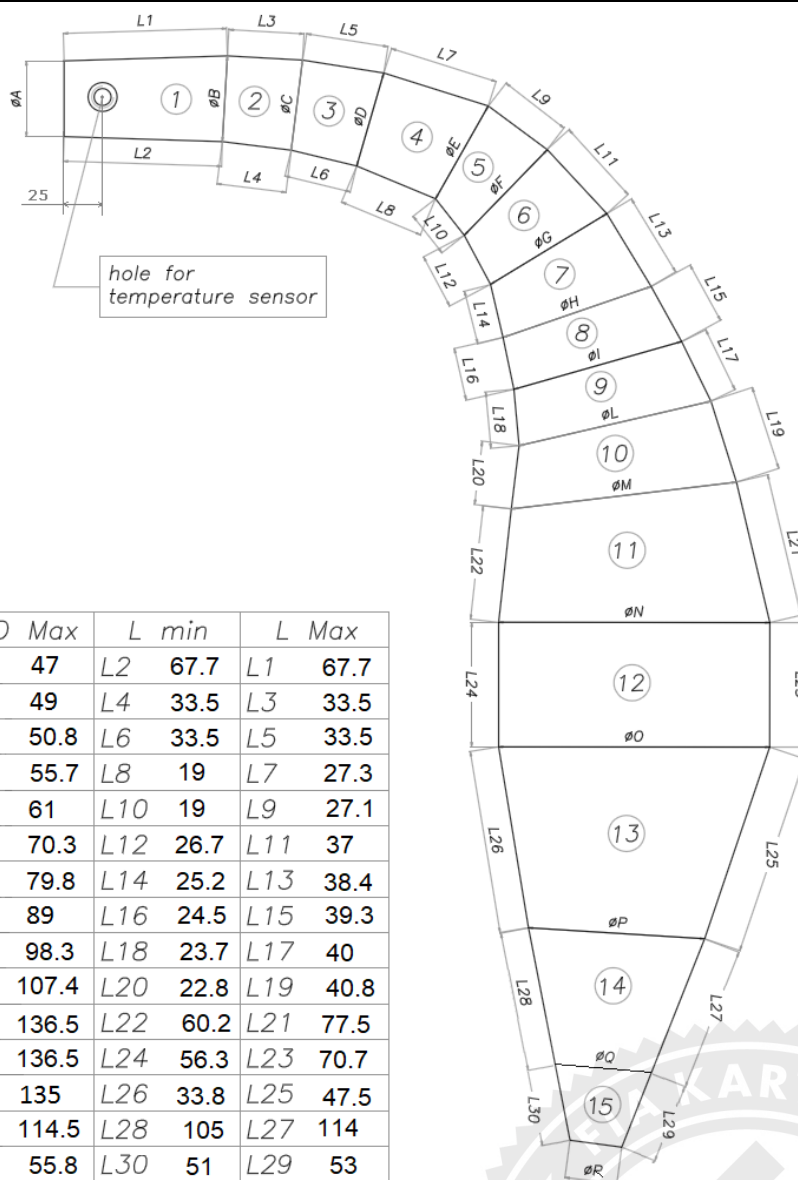
## PHOTOS OF THE EXHAUST





DESCRIPTIONS TECHNIQUES		TECHNICAL DESCRIPTIONS	
Poids en gr	Weight in gr	<b>1132g</b>	Minimum
Volume in cm <sup>3</sup>	Volume in cc	<b>4022cm<sup>3</sup></b>	+/-5 %

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



PARTE	$D$ 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