

FICHE D'HOMOLOGATION / HOMOLOGATION FORM

041-EM-51



COMMISSION
INTERNATIONALE
DE KARTING - FIA



MOTEUR / ENGINE MINI

Constructeur / <i>Manufacturer</i>	TM Racing Spa
Marque / <i>Make</i>	TM Racing
Modèle / <i>Model</i>	Mini 2
Catégorie / <i>Categorie</i>	Group 3
Durée de l'homologation / <i>Validity of the Homologation</i>	2 ans / 2 years
Nombre de pages / <i>Number of pages</i>	14
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 complet côté pignon / <i>Photo of the complete engine drive side</i>	Photo du moteur complet côté opposé / <i>Photo of the complete 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 / <i>Cylinder</i>		
Volume du cylindre / <i>Cylinder volume</i>	59.85 cm³	< 60 cm³
Alésage d'origine / <i>Original bore</i>	41.89 mm	--
Alésage théorique maximum / <i>Maximum theoretical bore</i>	< 42.10 mm	
Course / <i>Stroke</i>	43.0 mm	±0.1 mm
Nombre de lumières d'admission / <i>Number of intake ports</i>	1	--
Largeur des lumières d'admission* / <i>Width of intake ports*</i>	26.0 mm	+0.1/-0.2 mm
Nombre de conduits/lumières de transfert, cylindre/carter / <i>Number of transfer ports/ducts, cylinder/sump</i>	2	--
Largeur des lumières de transfert* / <i>Width of transfer ports*</i>	25.4 mm	+0.4/-0.2 mm
Nombre de lumières d'échappement / <i>Number of exhaust ports</i>	1	--
Largeur des lumières d'échappement* / <i>Width of exhaust ports*</i>	28.0 mm	+0.1/-0.2 mm
Forme de la chambre de combustion / <i>Shape of combustion chamber</i>	Gabarit / Template CIK	
Vilebrequin / <i>Crankshaft</i>		
Poids du vilebrequin complet, sans piston / <i>Weight of crankshaft complete, without piston</i>	1228 gr	±3 % total
Dimensions des paliers / <i>Dimensions of bearings</i>	20 x47 x 14	en/in mm
Type des paliers / <i>Type of bearings</i>	Roulement à billes / <i>Ball bearing</i>	
Bielle / <i>Conrod</i>		
Longueur (entre-axe) de la bielle / <i>Length between the axes of the conrod</i>	88.0 mm	±0.1 mm
Diamètre de la tête de bielle / <i>Diameter of big end</i>	24 mm	±0.05 mm
Diamètre du pied de bielle / <i>Diameter of small end</i>	16 mm	±0.05 mm
Poids de la bielle / <i>Weight of conrod</i>	53.1 gr	minimum
Piston / <i>Piston</i>		
Nombre de segments du piston / <i>Number of piston rings</i>	1	--
Poids du piston, segments du piston inclus / <i>Weight of the piston including piston rings</i>	58.6 gr	±10 % total
Taille de l'axe de piston / <i>Size of gudgeon pin</i>	35 x 12 mm	±0.8 mm
Poids de l'axe de piston / <i>Weight of gudgeon pin</i>	15.8 gr	±10 % total

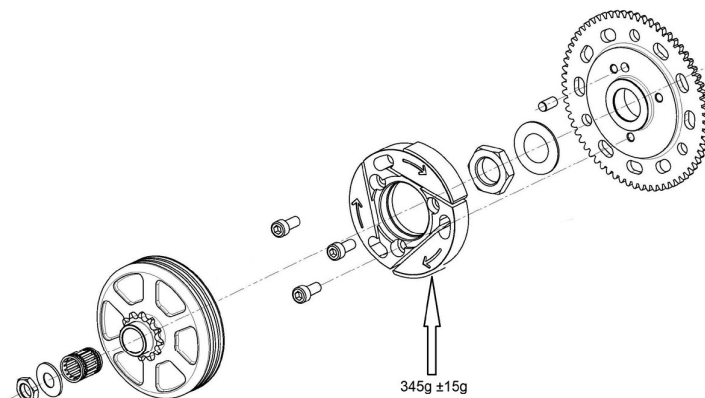
* Toutes les dimensions peuvent être vérifiées à l'aide du gabarit du constructeur / All dimensions can be checked using the manufacturer's template

B	Angles d'ouverture / Opening angles		
	Lumière d'admission / Intake port	144.0°	+0 / -2°
	Lumière de transfert / Transfer port	114.5°	+0 / -2°
	Lumière d'échappement / Exhaust port	156.0°	+0 / -2°

C	Matériau / Material	
	Culasse / Cylinder head	Aluminium-silicon alloy
	Cylindre / Cylinder	Aluminium-silicon alloy
	Carter / Sump	Aluminium-silicon alloy
	Vilebrequin / Crankshaft	Nickel chromium molybdenum alloy
	Bielle / Connecting rod	Nickel chromium molybdenum alloy
	Piston / Piston	Aluminium alloy

D	Embrayage / Clutch		
	Poids de l'embrayage assemblé / Weight of the clutch assembly	800 gr	minimum
	Dimensions de l'embrayage / Dimensions of the clutch	selon dessin technique n°26 / according to technical drawing no. 26	
	Poids de l'embrayage / Weight of the clutch	345 gr	±15 gr
	Diamètre interne de la cloche d'embrayage / Internal diameter of clutch bell	85.00 mm	maximum

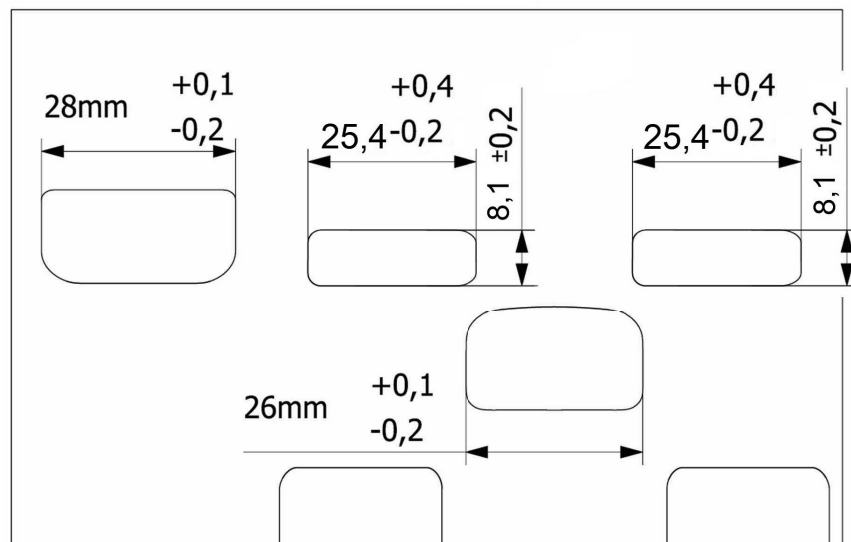
Dessin de l'embrayage assemblé / Drawing of the clutch assembly



E

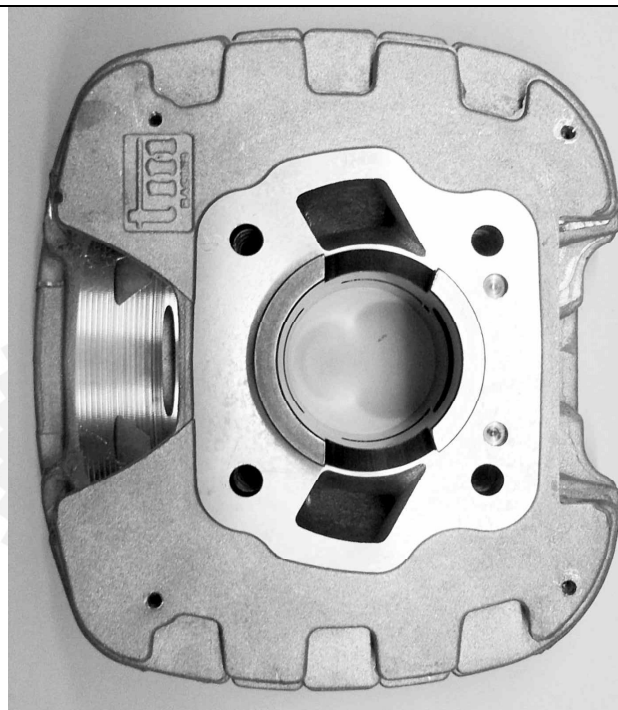
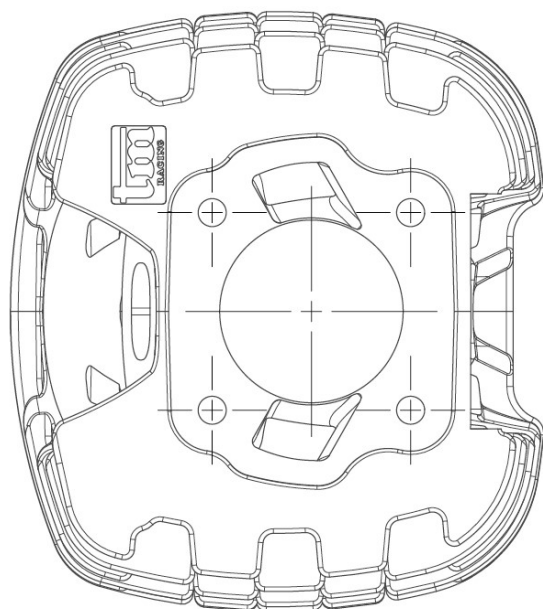
Photos, dessins et graphiques / *Photos, drawings and graphs***1. Cylindre / Cylinder**

**Dessin du développement du cylindre (avec dimensions) /
Drawing of the cylinder development (with dimensions)**

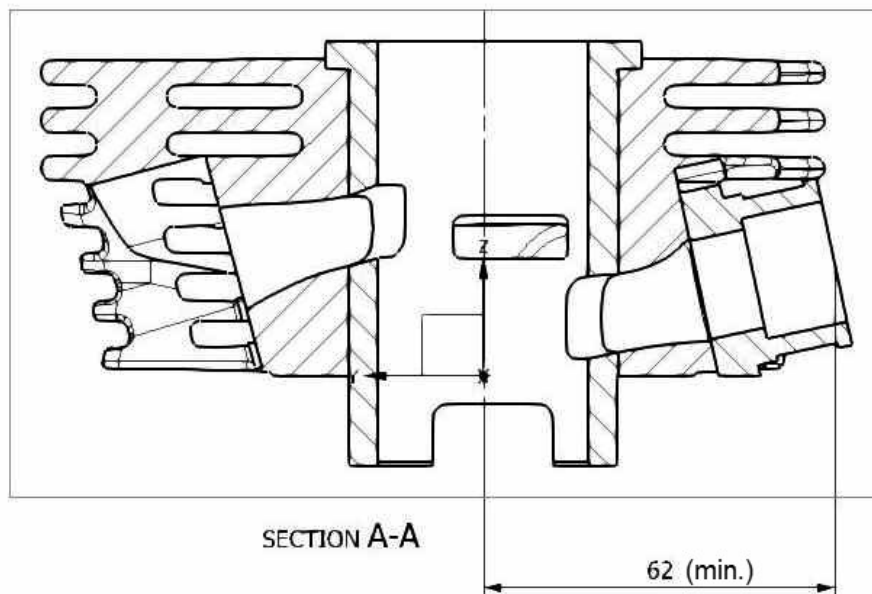


**Dessin du pied du cylindre /
Drawing of the cylinder base**

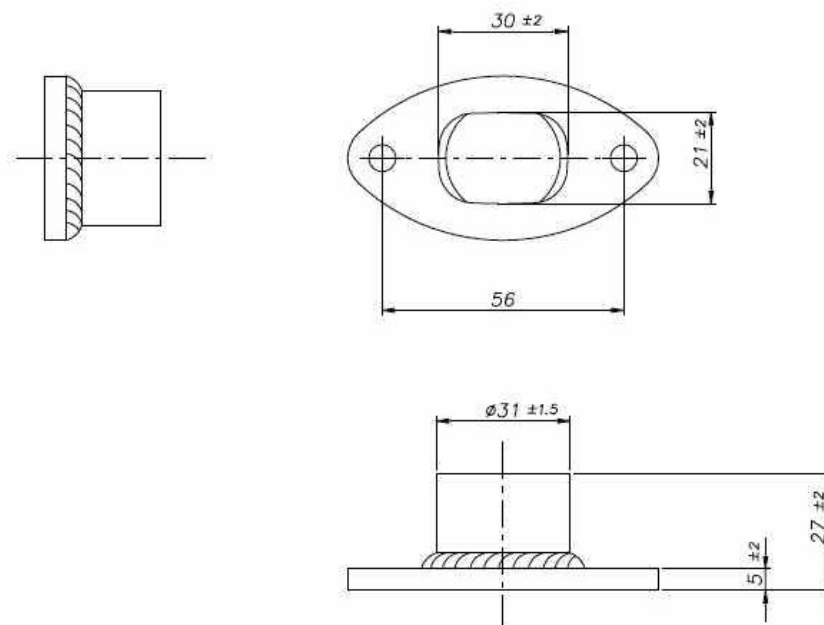
Photo du pied du cylindre / Photo of the cylinder base



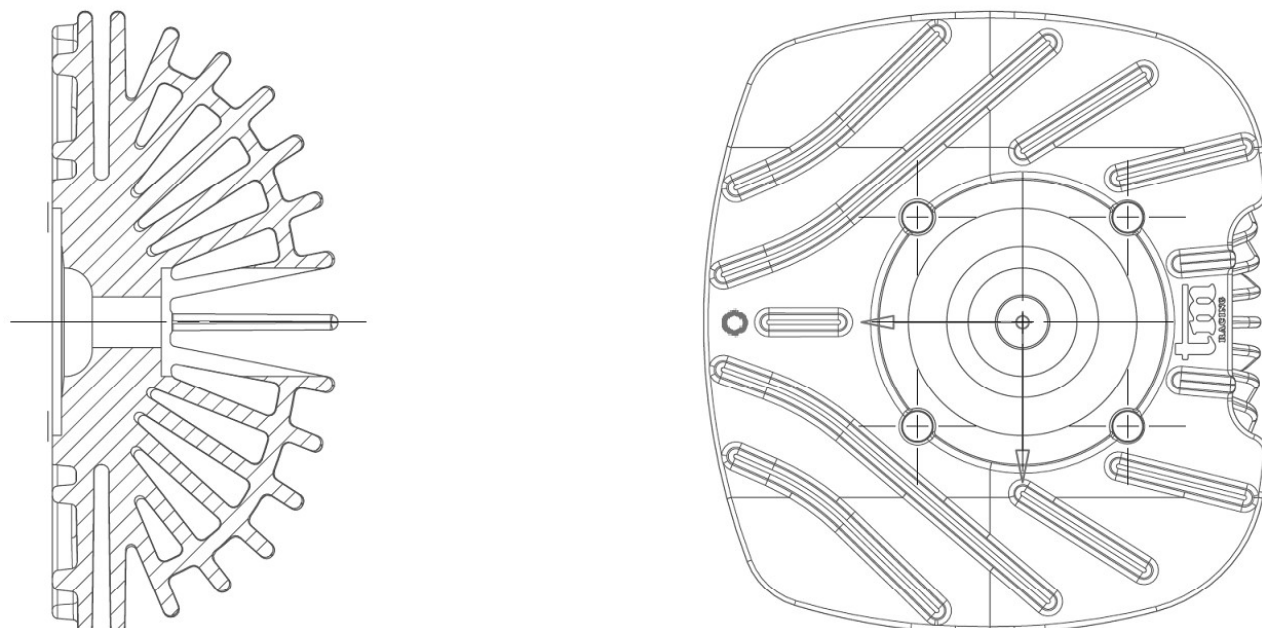
Vue en coupe verticale du cylindre complet
(avec distance minimale de la surface d'appui du carburateur par rapport à l'axe du cylindre) /
Vertical cross section view of the complete cylinder
(with minimum distance of the carburettor support surface to cylinder axis)



Dessin du collecteur d'échappement (dimensions principales avec tolérances) /
Drawing of exhaust manifold (main dimensions with tolerances)

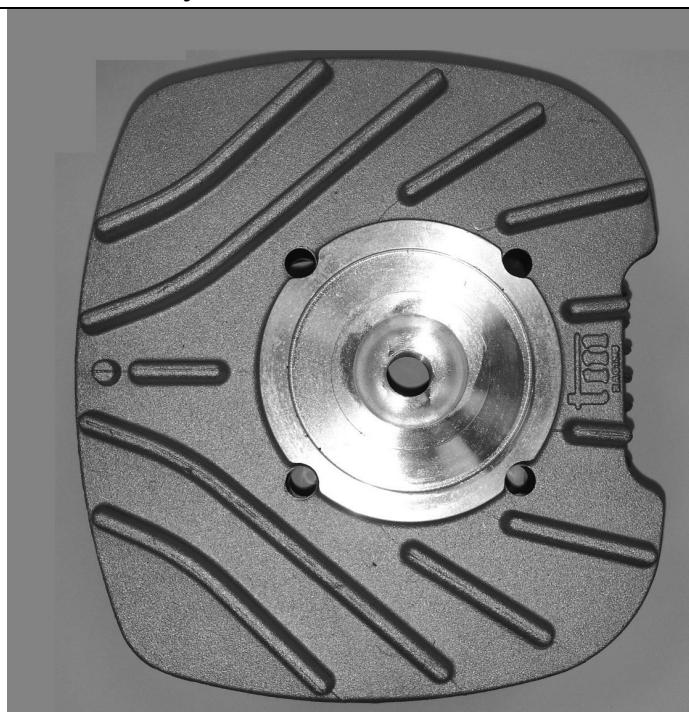


**Dessin de la culasse et de la chambre de combustion (sans dimensions) /
Drawing of the cylinder head and the combustion chamber (without dimensions)**



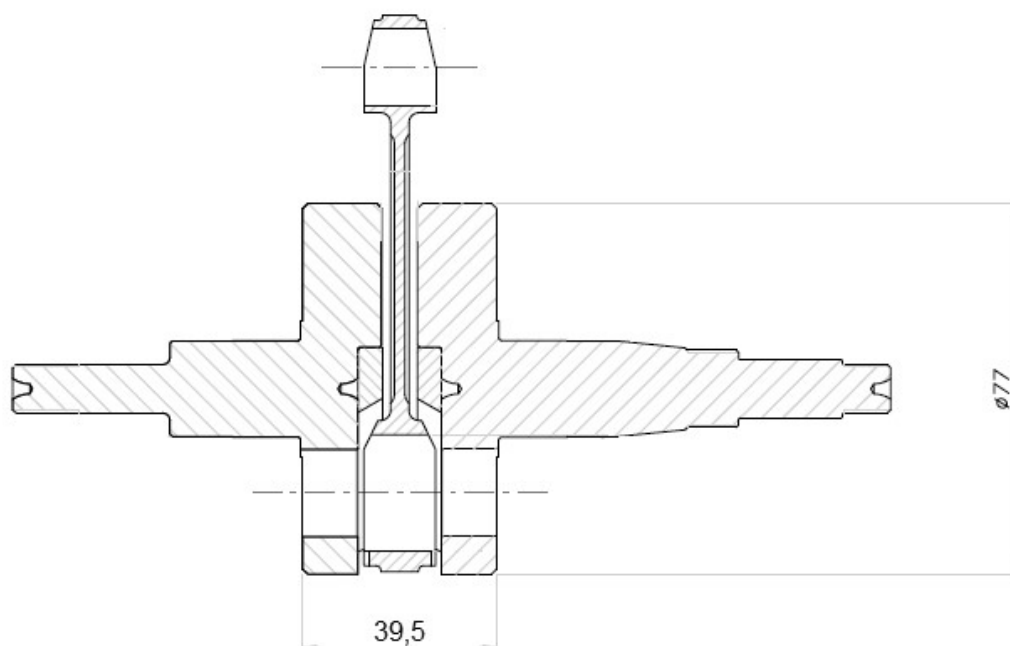
SQUISH MINIMUM = 0.635mm (measured with 1.6mm solder)

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



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

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



Photos de demi-vilebrequins (une avec contrepoids en plastique, une sans) /
Photos of crankshaft halves (one with plastic counterweight, one without)



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

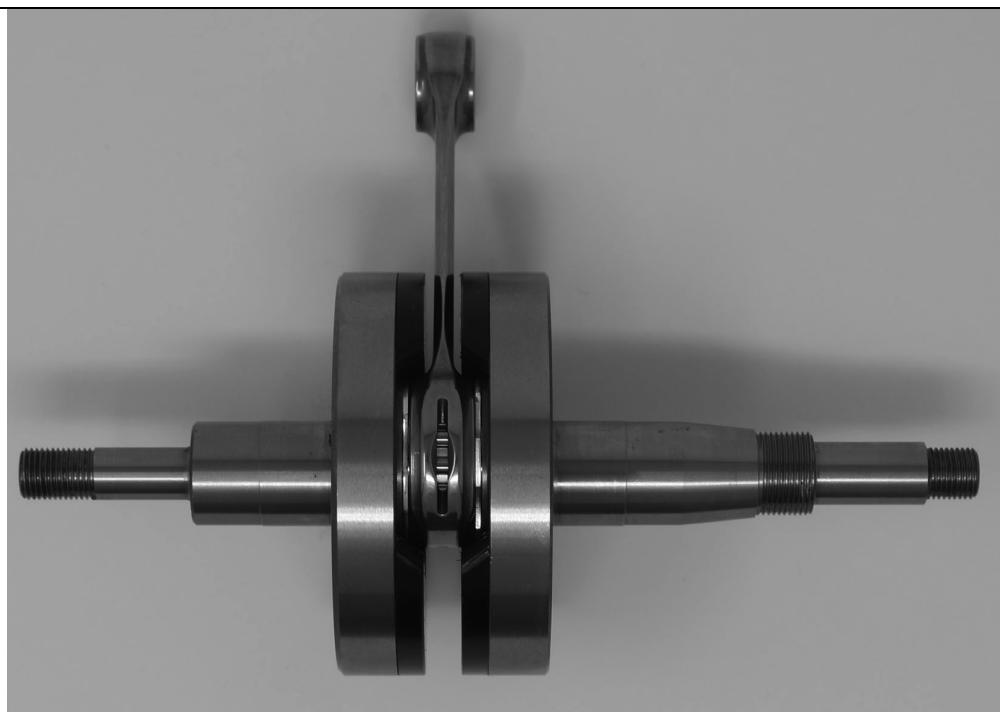


Photo de la bielle droite / Photo of the conrod right



Photo de la bielle gauche / Photo of the conrod left



**Dessin du piston (dimensions principales sans tolérances et gabarit) /
Drawing of the piston (main dimensions without tolerances and template)**

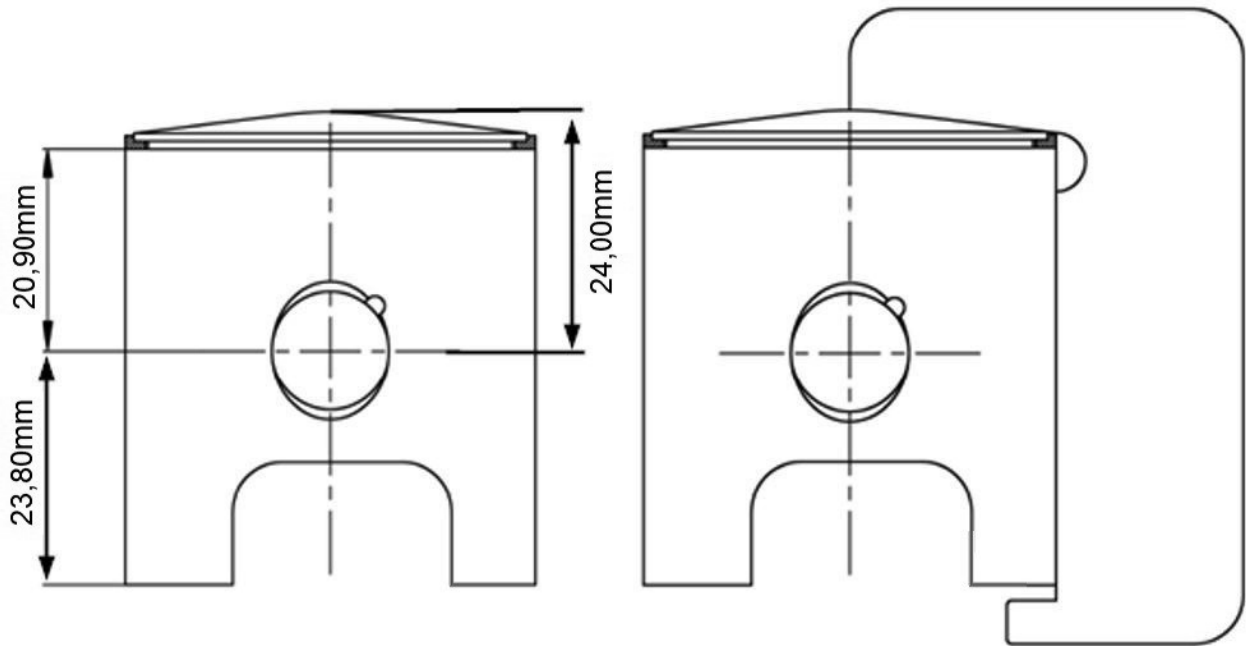


Photo du piston (de l'avant, de côté et d'en haut) / Photo of the piston (front, side and top)



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

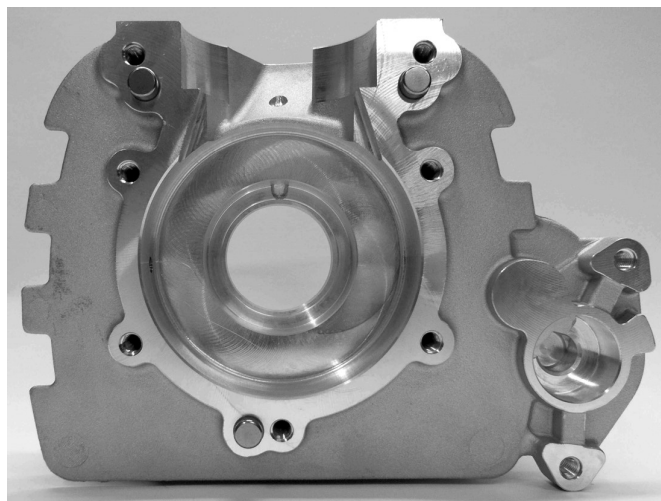


**Photo de l'intérieur du carter gauche /
Photo of the inside of the left crankcase**



**Photo de l'extérieur du carter droit /
Photo of the outside of the right crankcase**

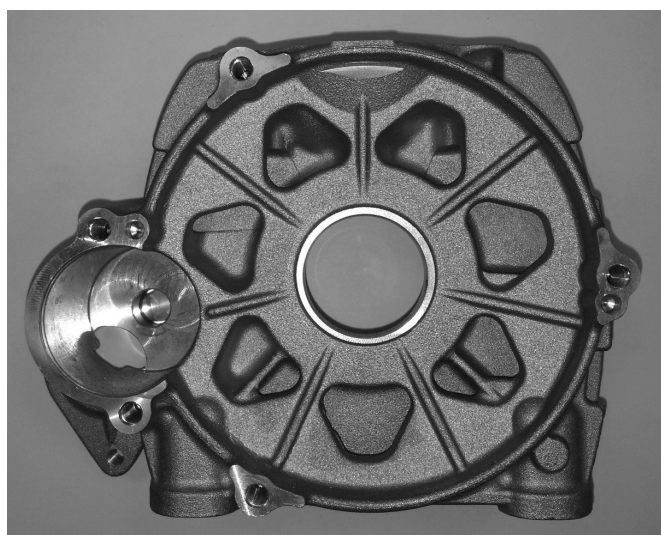


**Photo de l'extérieur du carter gauche /
Photo of the outside of the left crankcase**

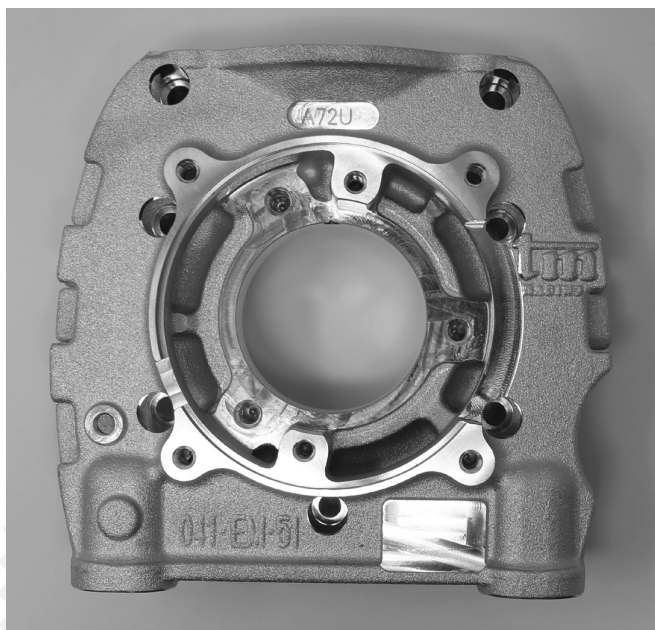


**Photo du moteur côté pignon /
Photo of engine drive side**

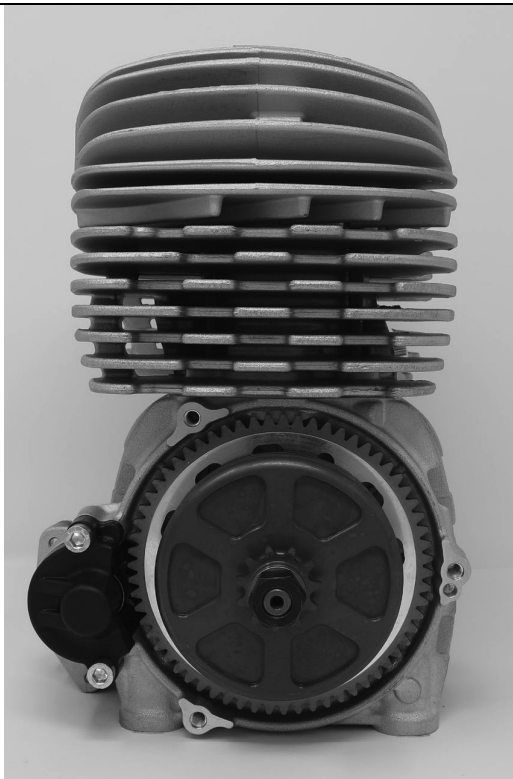


**Photo du moteur côté opposé /
Photo of engine opposite side**



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

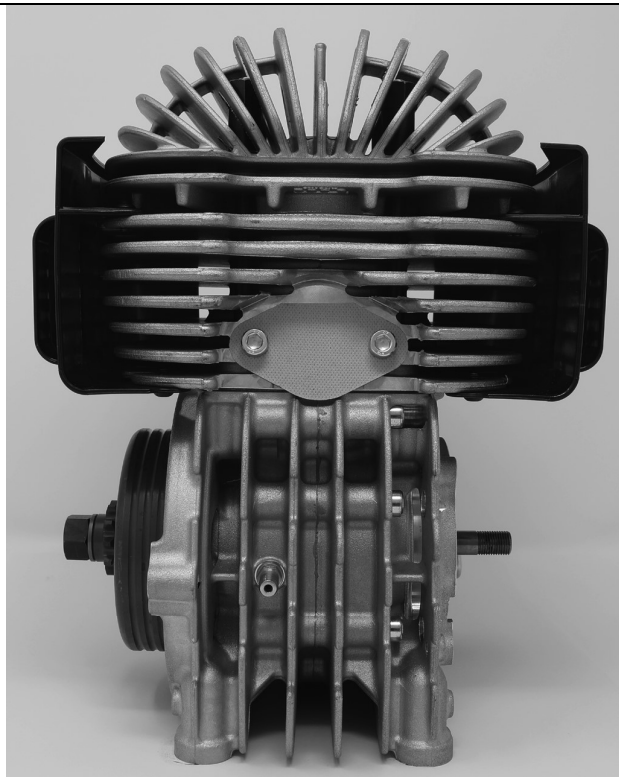


**Photo du moteur complet vu de l'arrière /
Photo of the complete engine rear side**

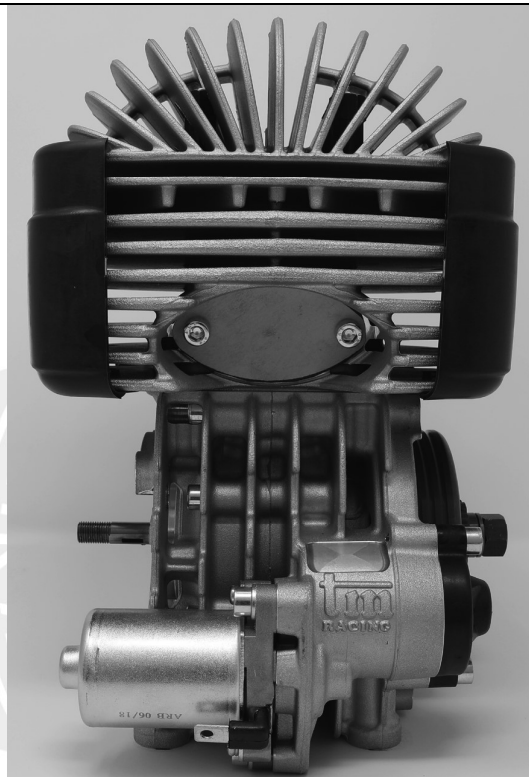


**Photo du moteur complet vu du haut /
Photo of the complete engine taken from above**

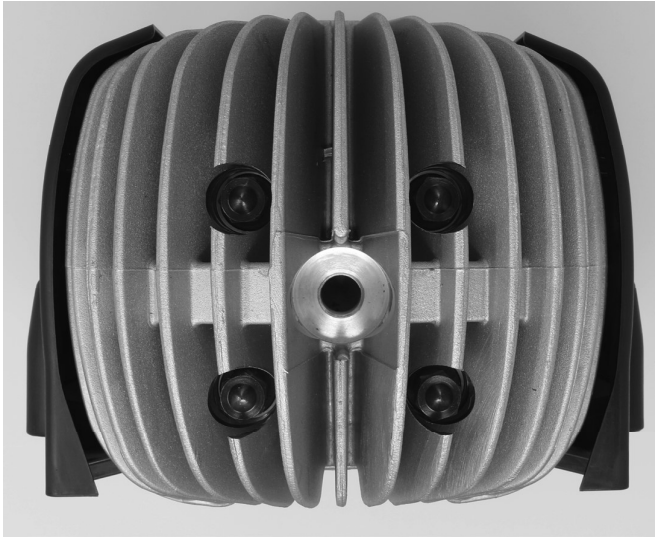


**Photo du moteur complet vu du dessous /
Photo of the complete engine taken from below**

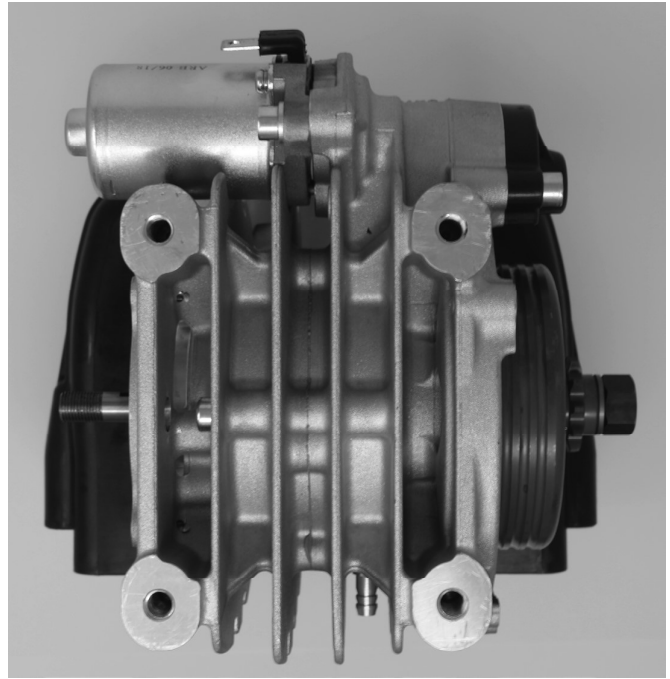


**Photo des pièces plastiques du cylindre /
Photo of the cylinder plastic parts**



**Photo du protège-chaîne et du couvercle d'allumage /
Photo of the chain guard and ignition cover**



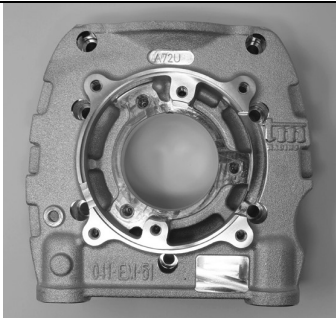
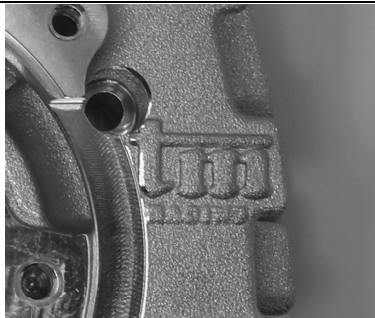
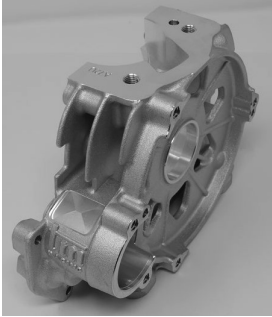
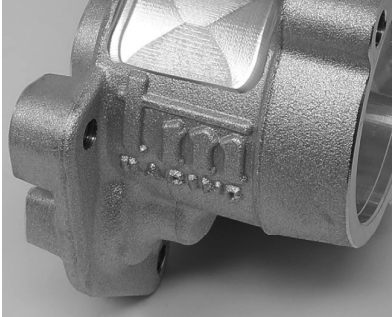
F

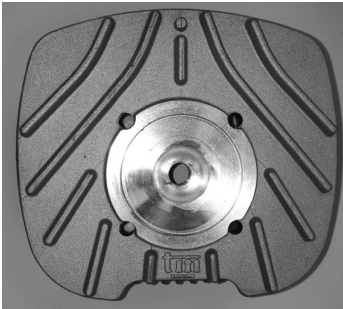
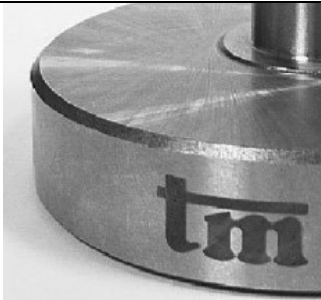
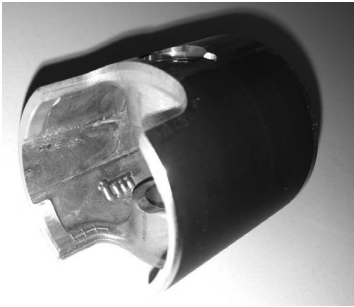
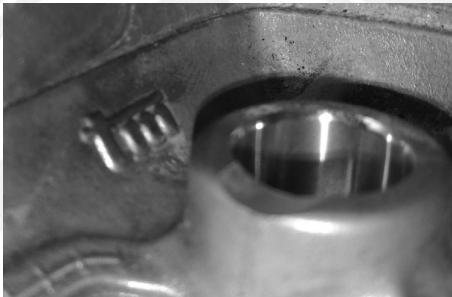
Marquage des pièces principales / Main parts marking

Pour chaque pièce, photo d'ensemble avec le marquage et photo avec zoom sur le marquage /
For each part, overall photo with marking and zoomed photo of marking

1. Fonderies des carters droit et gauche
2. Cylindre
3. Culasse
4. Chemise en fonte
5. Demi-vilebrequins
6. Bielle
7. Piston

1. Castings of LH & RH crankcases
2. Cylinder
3. Cylinder head
4. Cast iron liner
5. Half-crankshafts
6. Conrod
7. Piston

Pièces N° / Parts no.	Photo d'ensemble / Overall picture		Zoom	
1				
1				
2				

3		
4		
5		
6		
7		

SUPPLEMENTAL UPDATED OUTSIDE OF OFFICAL HOMOLOGATION ABOVE WHEN IT DOES NOT LIST THESE DIMENSIONS

EXHAUST MUFFLER VIEW AND DIMENSIONS

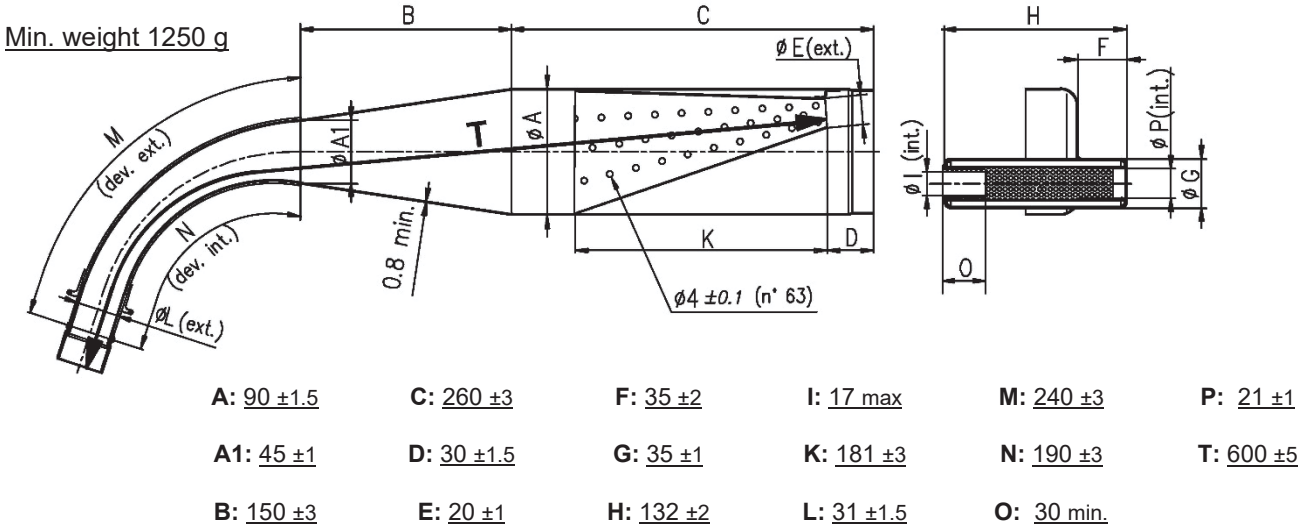
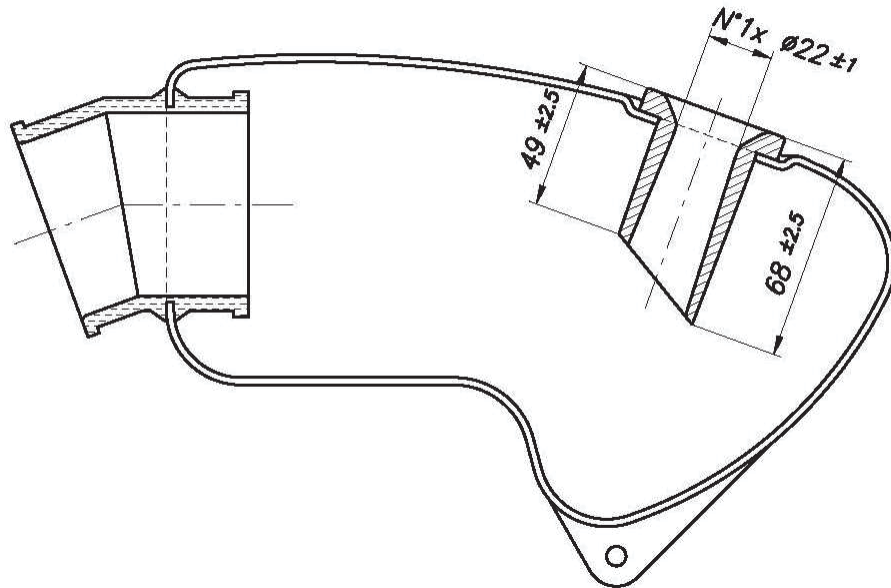


PHOTO OF EXHAUST PIPE



INLET SILENCER

(CSAI OMOLOGATION N° 01/SA/14)



FICHE D'HOMOLOGATION / HOMOLOGATION FORM

005-SI-19



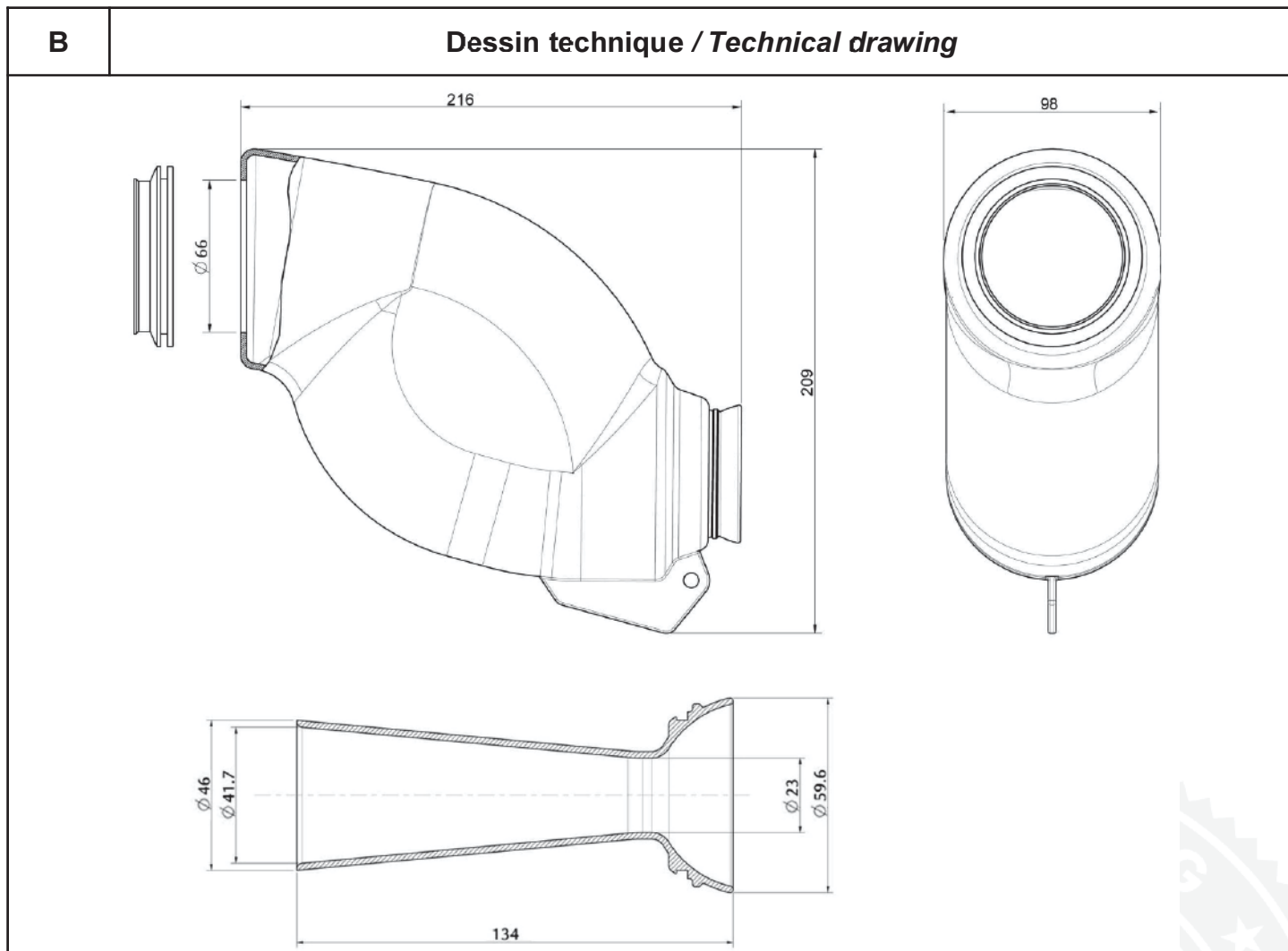
COMMISSION
INTERNATIONALE
DE KARTING - FIA



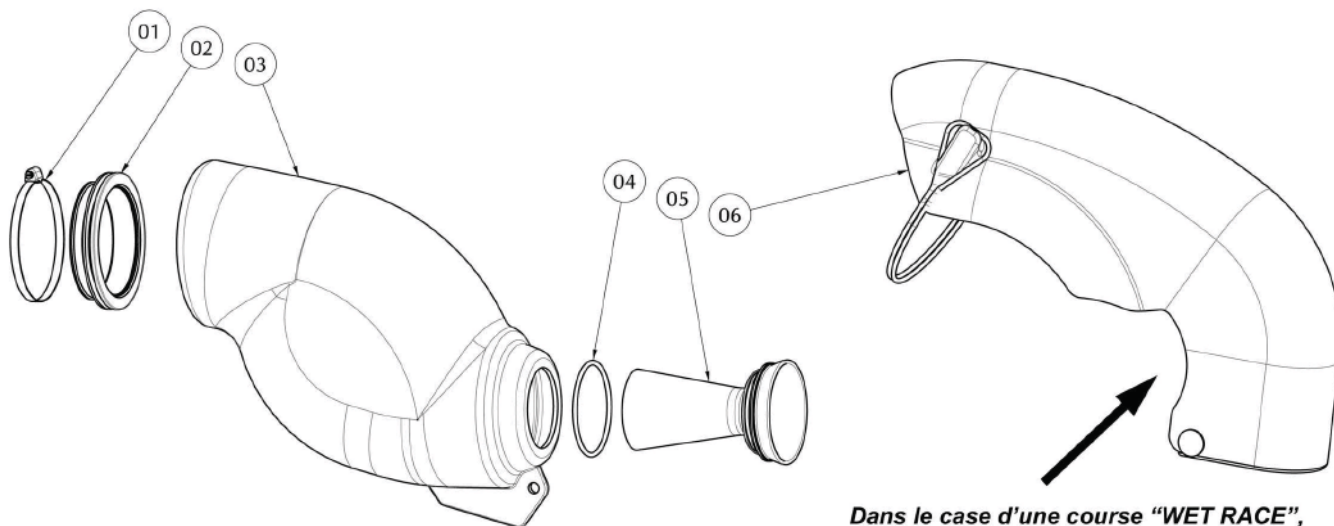
SILENCIEUX D'ASPIRATION / INTAKE SILENCER MINI

Constructeur / Manufacturer	Righetti Ridolfi Spa
Marque / Make	Righetti Ridolfi
Modèle / Model	Alien
Catégorie / Category	Group 3
Durée de l'homologation / Validity of the Homologation	2 ans / 2 years
Nombre de pages / Number of pages	3
La présente Fiche d'Homologation reproduit descriptions, illustrations et dimensions du silencieux d'aspiration au moment de l'homologation CIK-FIA.	<i>This Homologation Form reproduces descriptions, illustrations and dimensions of the intake silencer at the moment of the CIK-FIA homologation.</i>
	
Photo de l'avant / Photo of the front	Photo de côté / Photo of the 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
	

A	Descriptions techniques / <i>Technical descriptions</i>		
	Volume / <i>Volume</i>	1890 cm ³	max. 2000 cm ³
	Matériau / <i>Material</i>	PP	
	Ouvertures d'admission d'air / <i>Air intake openings</i>	1	
	Longueur du conduit d'admission / <i>Length of the inlet duct</i>	134 mm	min. 90 mm
	Diamètre de conduit d'admission / <i>Diameter of inlet duct</i>	23 mm	max. 23 mm



C

Dessin technique explosé / Exploded technical drawing

*Dans le case d'une course "WET RACE",
le choix du kit de couverture
homologue sera laissé a
l'appréciation du conducteur.*

*In the case of a "WET RACE" the choice
of the homologated cover kit will be left
to the appreciation of the driver.*

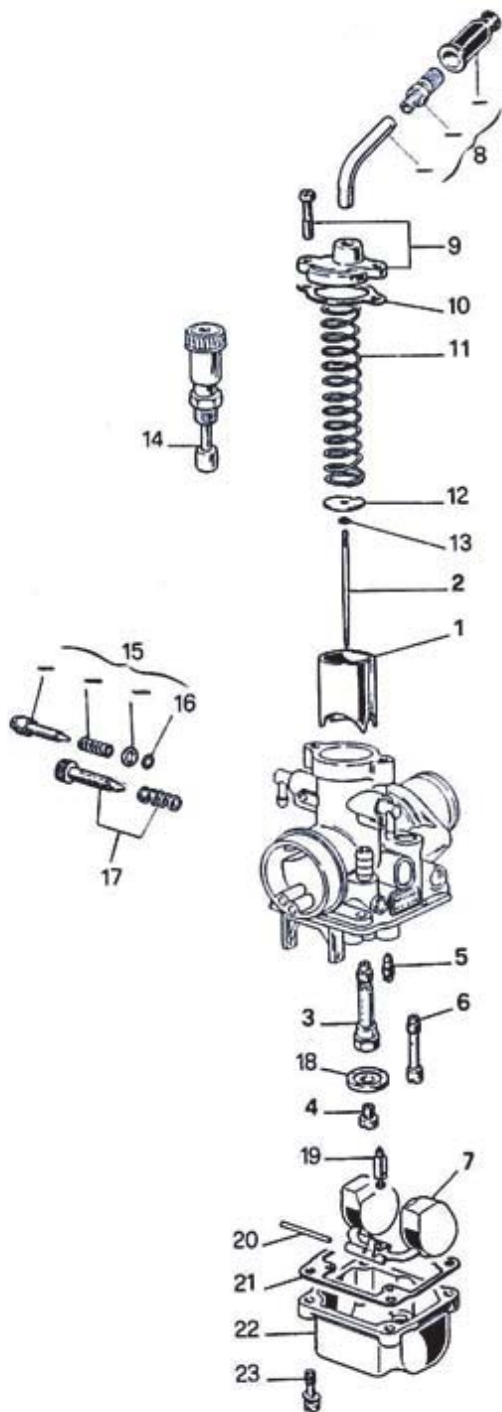
N°	Désignation / Designation	Référence catalogue / Catalogue reference number
01	Collier de serrage / Clamp	KE089
02	Manchon a caoutchouc / Rubber bush	KE105
03	Boîtes à air / Airbox	ZZKE100
04	O-ring / O-ring	KE104
05	Orifice d'admission d'air / Air intake duct	KE106
06	Couverture pluie / Rain cover	KE108

D

**Photo du marquage et numéro d'homologation /
Photo of marking and homologation number**


Le marquage et le numéro d'homologation doivent rester clairement visibles en permanence. /
The marking and the homologation number must remain clearly visible permanently.

CARBURATORE DELL'ORTO PHBG 18 BS E COMPONENTI
CARBURETTOR DELL'ORTO PHBG 18 BS AND COMPONENTS
CARBURATEUR DELL'ORTO PHBG 18 BS ET COMPONENTS



COMPONENTI

- 1- VALVOLA GAS 40X64
- 2- SPILLO CONICO W 23
- 3- POLVERIZZATORE AN 266
- 4- GETTO MASSIMO
- 5- GETTO MINIMO 50
- 6- GETTO AVVIAMENTO 60
- 7- GALLEGGIANTE gr.4
- 8- KIT TUBETTO 90°
- 9- KIT COPERCHIO CAMERA MISCELA
- 10- GUARNIZIONE COPERCHIO CAMERA MISCELA
- 11- MOLLA RICHIAMO VALVOLA GAS
- 12- PIASTRINA RITEGNO FERMAGLIO SPILLO CONICO
- 13- FERMAGLIO SPILLO CONICO
- 14- DISPOSITIVO AVVIAMENTO
- 15- KIT VITE REGOLAZIONE MISCELA MINIMO
- 16- GUARNIZIONE VITE REGOLAZIONE MISCELA MINIMO
- 17- KIT VITE REGOLAZIONE VALVOLA GAS
- 18- FONDELLO
- 19- SPILLO CHIUSURA BENZINA
- 20- PERNO GALLEGGIANTE
- 21- GUARNIZIONE VASCHETTA
- 22- VASCHETTA
- 23- VITE FISSAGGIO VASCHETTA

COMPONENTS

- 1- GAS VALVE 40X64
- 2- CONICAL NEEDLE W23
- 3- SPRAY NOZZLE AN266
- 4- JET MAX.
- 5- JET MIN. 50
- 6- STARTING JET 60
- 7- FLOAT 4 gr.
- 8- TUBE 90° KIT
- 9- CHAMBER MIXTURE COVER KIT
- 10- CHAMBER MIXTURE COVER GASKET
- 11- GAS VALVE SPRING
- 12- CONICAL NEEDLE FASTENER FIX PLATE
- 13- CONICAL NEEDLE FASTENER
- 14- STARTING DEVICE
- 15- ADJUSTMENT MINIMUM SCREW KIT
- 16- ADJUSTMENT MINIMUM SCREW GASKET
- 17- ADJUSTMENT GAS VALVE SCREW KIT
- 18- BOTTOM
- 19- GAS NEEDLE CLOSING
- 20- FLOAT PEG
- 21- FLOAT CHAMBER GASKET
- 22- FLOAT CHAMBER
- 23- FLOAT CHAMBER FIXING SCREW

**UNICA TARATURA CONSENTITA
ONLY ALLOWED SETTING**

Valvola gas 40 – gas valve 40

Spillo conico W23 – mixture needle W23

Polverizzatore AV262 – spray nozzle AN266 or AV262

Getto max – high speed - LIBERO - FREE - OPEN

Getto minimo – idle jet 60

Getto emulsionatore 60 – idle jet 60

**POMPA BENZINA DELL'ORTO
DELL'ORTO FUEL PUMP**

cod. 11023

E' PROIBITO MONTARE QUALSIASI TIPO DI RUBINETTO, RACCORDO CALBRATO O ALTRO DISPOSITIVO TRA ALIMENTAZIONE E RITORNO/RECUPERO, SUI TUBI DEL CARBURANTE.

E' PERTANTO AMMESSO L'IMPIEGO DEI SOLI TUBI.

E' CONSENTITO MONTARE SOLTANTO (N°1) UN FILTRO CARBURANTE TRA SERBATOIO E POMPA CARBURANTE.

IT IS FORBIDDEN TO EMPLOY ANY OTHER KIND OF SPIGOT, JUNCTION, OR SIMILAR DEVICES BETWEEN THE SUPPLY AND THE RETRN/COLLECTION, ON THE FUEL PIPES.

IT IS ADMITTED TO EMPLOY PIPES, ONLY.

IT IS ALLOWED TO MOUNT ONLY N° 1 (ONE) FUEL FILTER BETWEEN TANK AND FUEL PUMP.

APPROVED SELETTA IGNITION
REV LIMITER 14000 RPM

