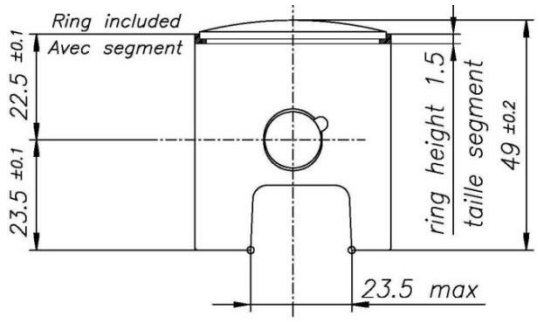
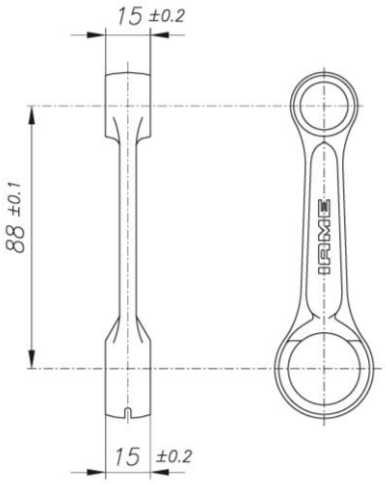
WATERSWIFT 60cc - TaG

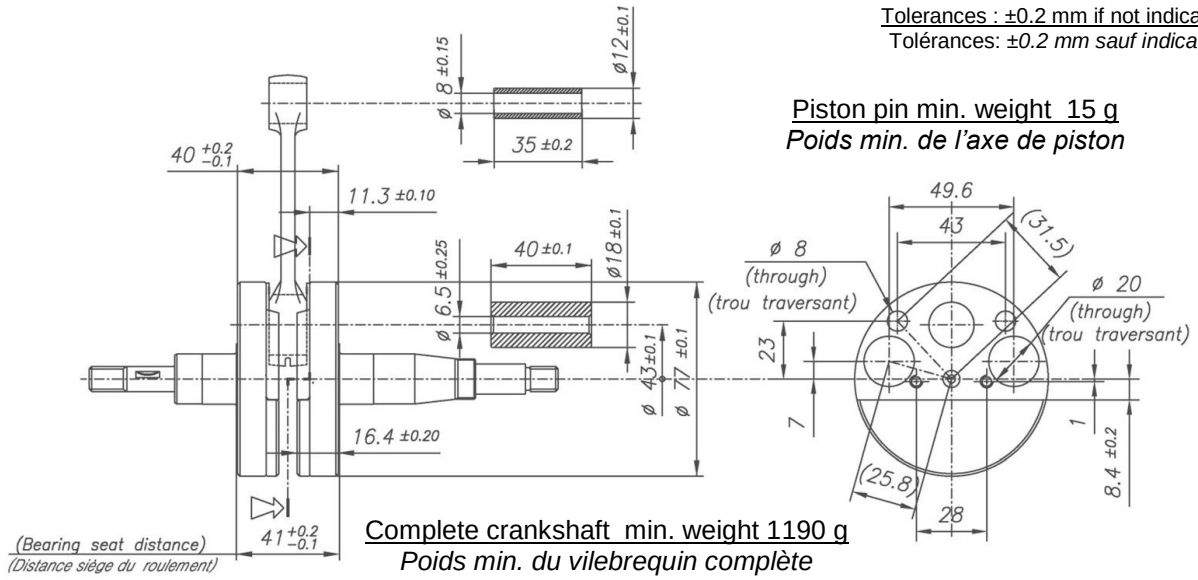
FEATURES - *CARACTERISTIQUES*	
Cylinder volume *Volume du cylindre*	59.17 cm³ (60.00 cm³ max)
Bore *Alésage*	41.81 mm
Max. theoretical bore *Alésage théorétique max.*	42.10 mm
Stroke *Course*	43mm
Cooling system *Système de refroidissement*	Water *Eau*
Inlet system *Système d'admission*	Piston valve *Jupe de piston*
Number of carbs *Nombre de carburateurs*	1

Tillotson Carburettor *Carburateur Tillotson*	HW-31A	Cylinder / crankcase transfers n° *N° de canaux cylindre / carter*	2
Number of piston rings *Nombre de segments*	1	Inlet / exhaust ports number *N° lumières admiss / échapp.*	1 / 1
Big end conrod bearing diam. *Diamètre palier tête de bielle*	18x24x15	Combustion chamber shape Forme chambre de combustion	Spherical *Spherique*
Crankshaft ball-bearing diam. *Diamètre palier du vilebrequin*	20x47x14	Selettra ignition (adjustable) *Allumage Selettra (réglable)*	2 poles *2 pôles*
Small end conr. bearing diam. *Diamètre palier pied de bielle*	12x16x16	Distance between Conrod centres *Longueur (entre axe) de la bielle*	88 mm

DESCRIPTION OF THE MATERIAL *DESCRIPTION DES MATERIAUX*		PISTON
Conrod material *Matériel de la bielle*	Steel *Acier*	
Crankshaft material *Matériel du vilebrequin*	Steel *Acier*	
Head Material *Matériel de la culasse*	Aluminium	
Cylinder Material *Matérial du culindre*	Aluminium	Min. Weight Piston included ring = 60 g *Poids Min. Piston avec segment = 60 g*
Liner material *Matériel de la chemise*	Cast Iron *Fonte*	DISTANCE BETWEEN CONROD CENTERS *ENTRE AXE DE LA BIELLE*
Crankcase material *Matériel du carter*	Aluminium	
Piston material *Matériel du piston*	Aluminium	
Piston rings material *Matériel des segments*	Cast Iron *Fonte*	
Exhaust muffler material *Matériel du pot d'échappment*	Sheet-steel *Tôle acier*	
Ball-bearings *Roulements*	6204 type	Min. Weight 80 g *Poids min.*

CRANKSHAFT - *VILEBREQUIN*

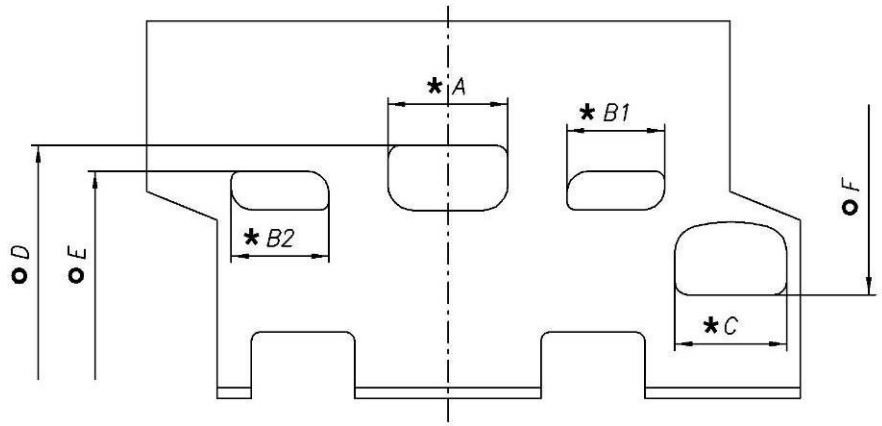
Tolerances : ±0.2 mm if not indicated otherwise
Tolérances: *±0.2 mm sauf indication contraire*



Piston pin min. weight 15 g
Poids min. de l'axe de piston

Complete crankshaft min. weight 1190 g
Poids min. du vilebrequin complète

CYLINDER DEVELOPMENT – *DEVELOPPEMENT DU CYLINDRE*



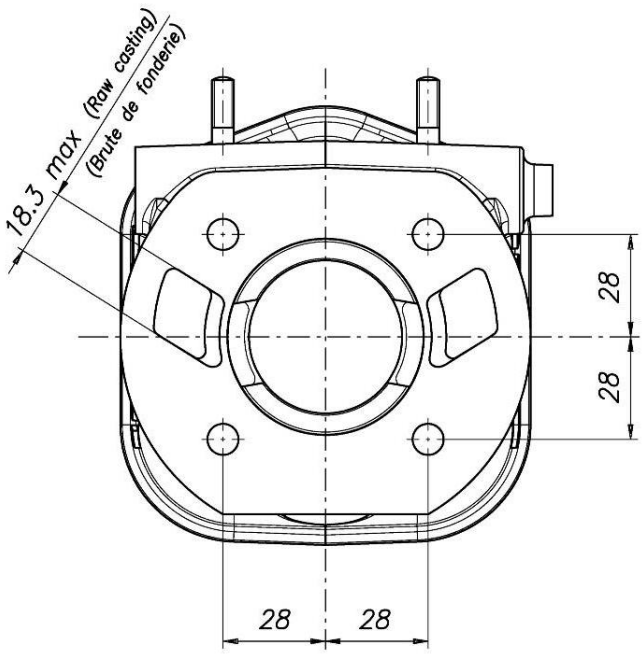
A	28±0.2 mm
B1 = B2	21.8±0.2 mm
C	26±0.2 mm
D	157° max
E	116° ±2°
F	145° max

CHORDAL READING - *LECTURE CORDALE*

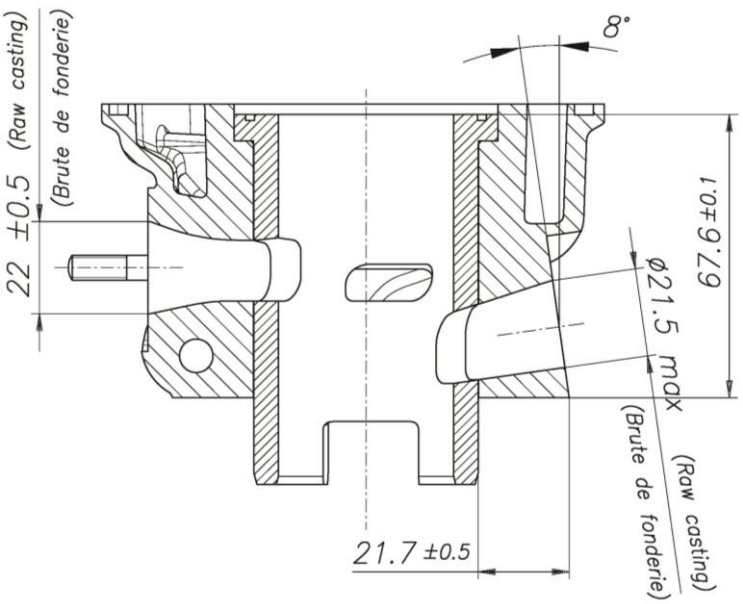
ANGULAR READING BY INSERT A 0.2 mm x 5 mm GAUGE -

LECTURE ANGULAIRE PAR INSERTION D'UNE CALE DE 0.2 mm x 5 mm

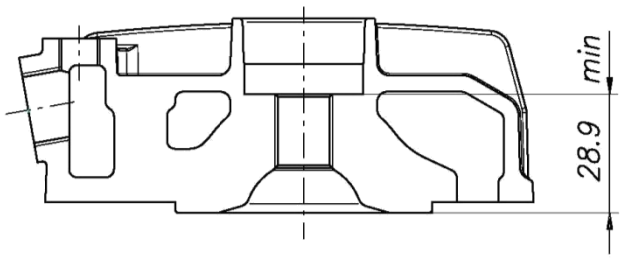
CYLINDER BASE VIEW
VUE DE LA BASE DU CYLINDRE

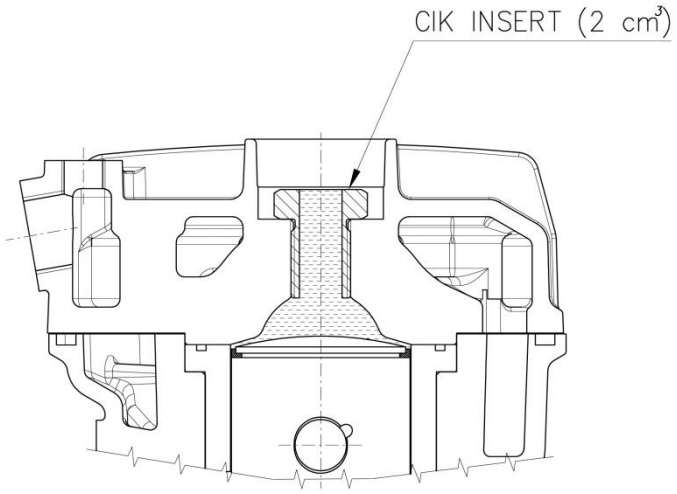


CYLINDER SECTION VIEW
VUE EN SECTION DU CYLINDRE

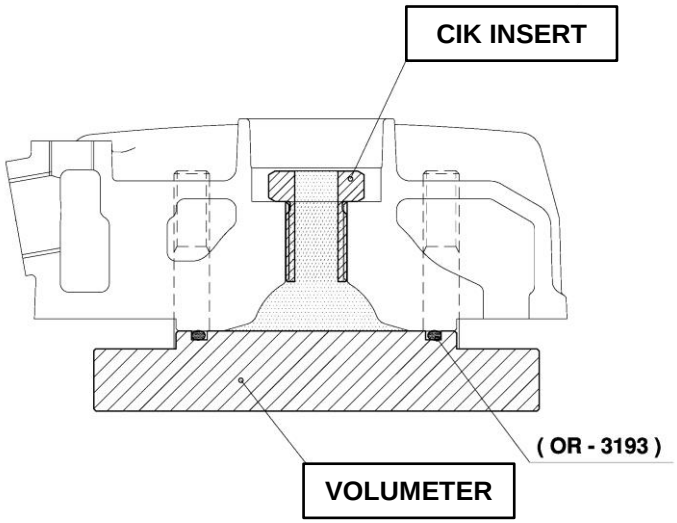


COMBUSTION CHAMBER VIEW
VUE DE LA CHAMBRE DE COMBUSTION





COMBUSTION CHAMBER VOLUME = 6.5 cm³ min.
VOLUME CHAMBRE COMBUSTION

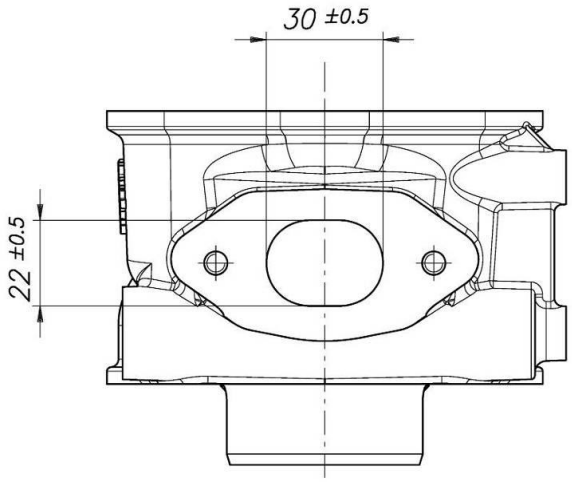


SQUISH MIN. = 0.75 mm

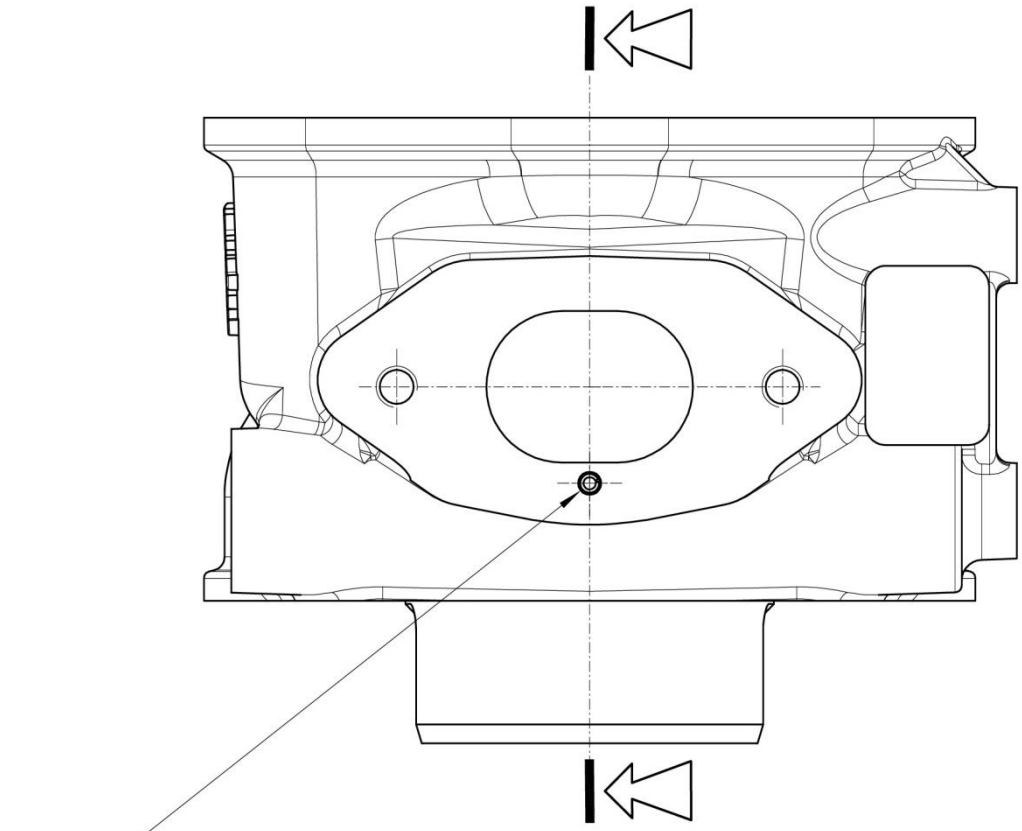
measured with Ø1.5mm TIN
mesurée avec de l'étain Ø1.5mm

MIN. TOT. VOLUME OF CHAMBER IN THE CYLINDER HEAD = 7,4 cm³
VOLUME MIN. CHAMBRE DE COMBUSTION DANS LA CULASSE

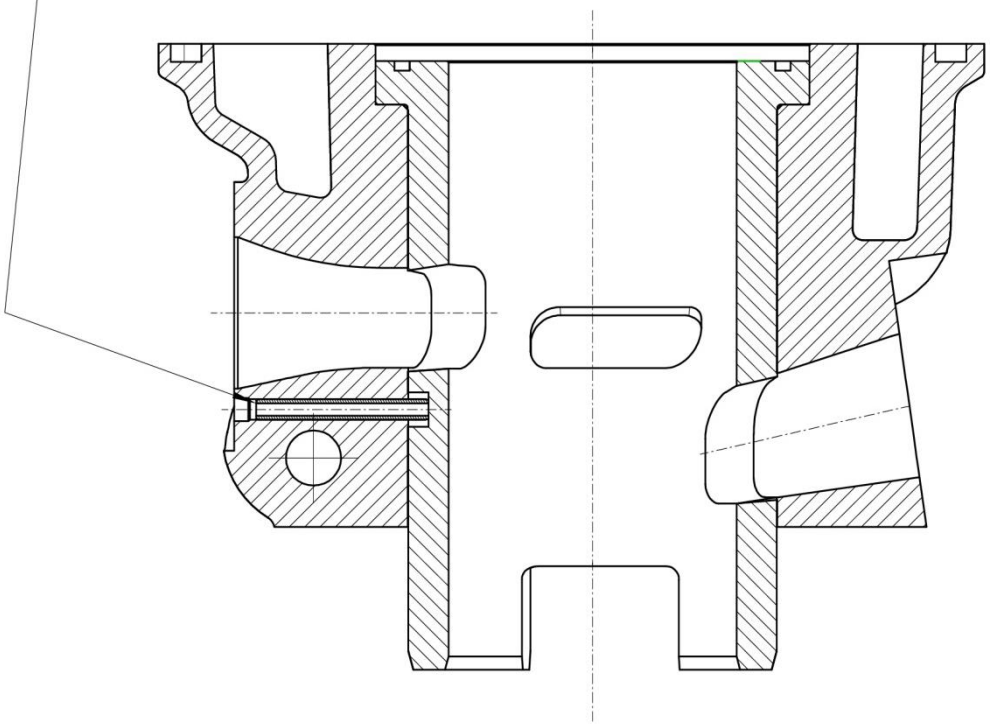
REAR VIEW AND DIMENSION
ARRIERE VUE ET DIMENSION



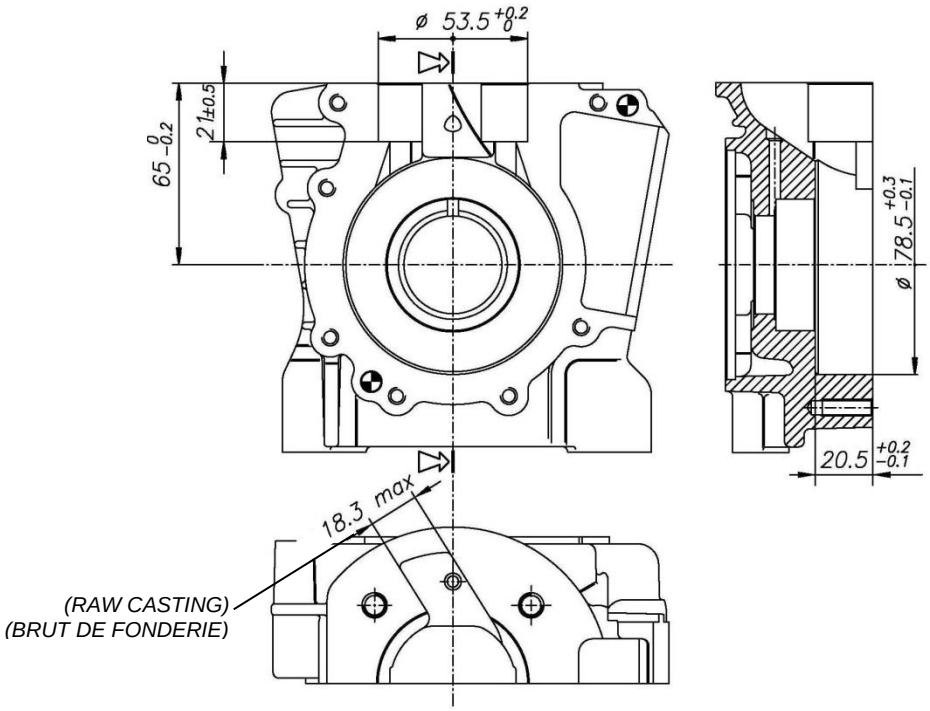
ALTERNATIVE CYLINDER VIEWS AND SECTION (WITH SPRING PIN)
VUE ET SECTION DU CYLINDRE ALTERNATIVE (AVEC GOUPILLE ÉLASTIQUE)



SPRING PIN
GOUPILLE ELASTIQUE

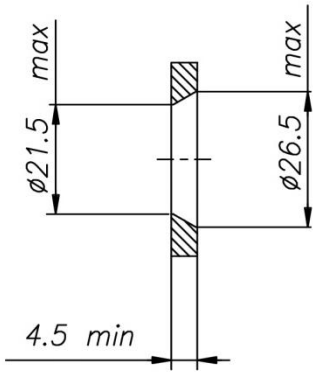


CRANKCASE INSIDE VIEW
VUE A' L'INTERIEUR DU CARTER

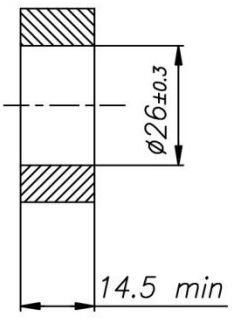


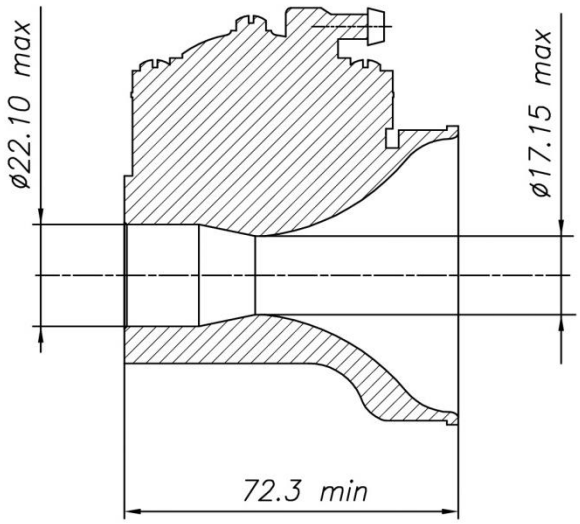
VENTURI CARB. DIMENSIONS and THERMAL SPACERS
CARBURATEUR ET SONS ENTRETOISES

Q.tv: 1

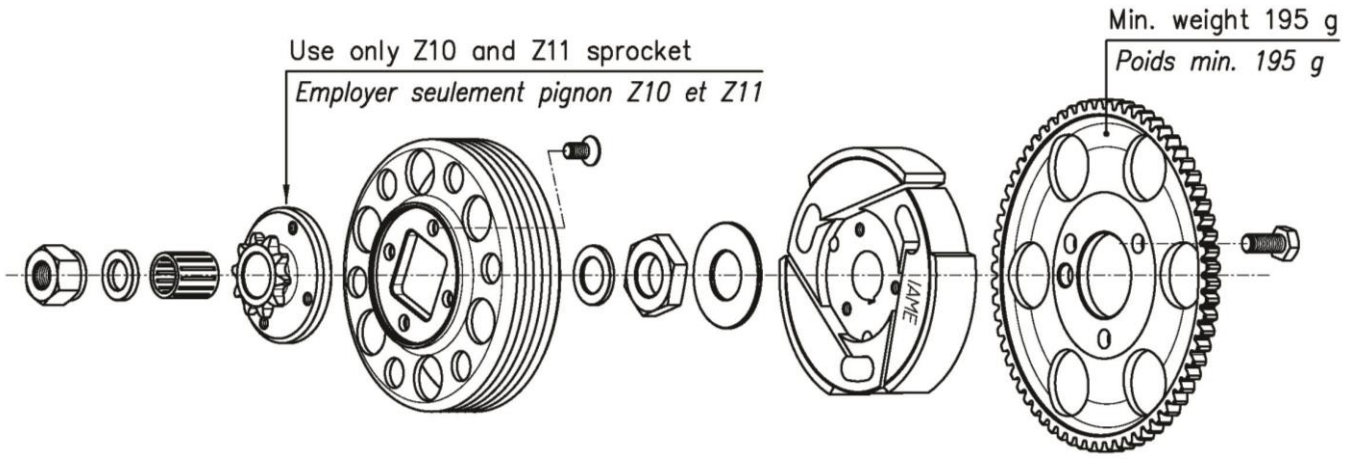


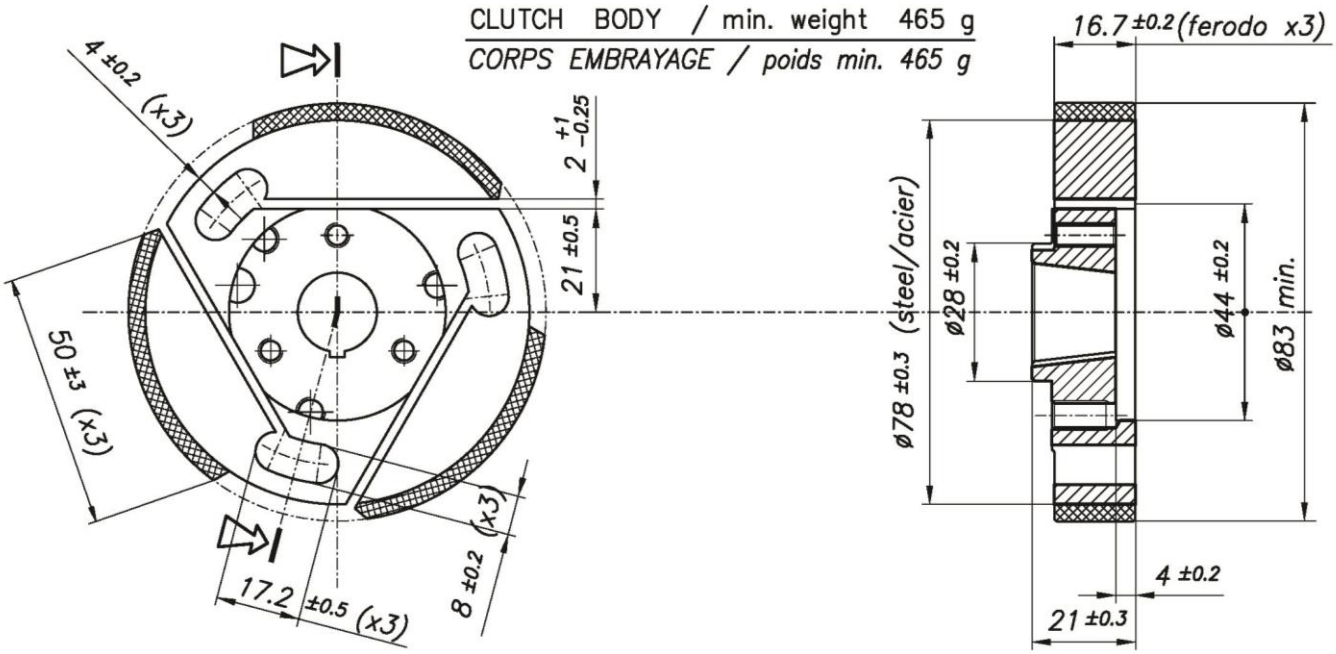
Q.tv: 1

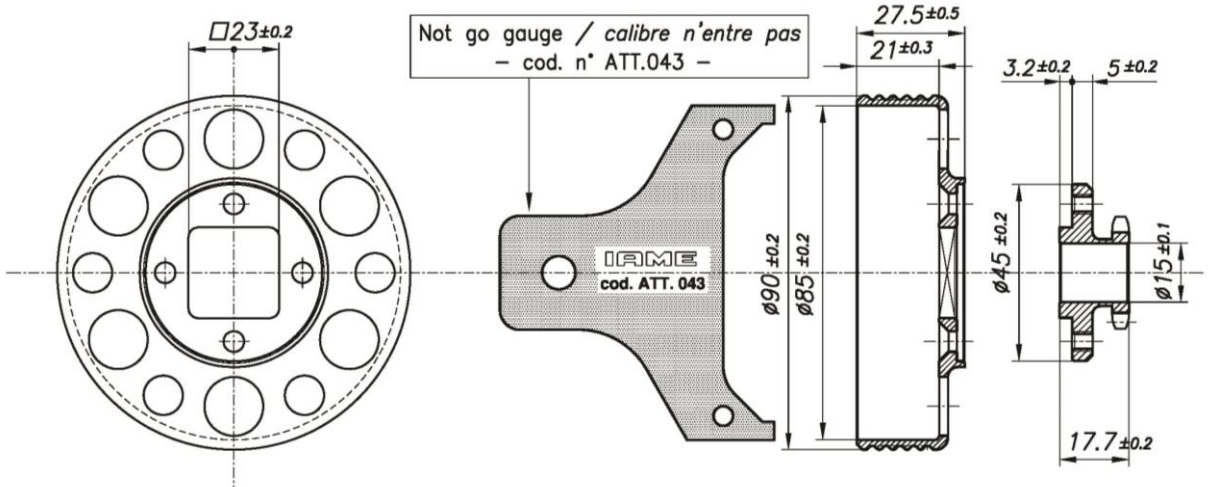




TILLOTSON MOD. HW-31A



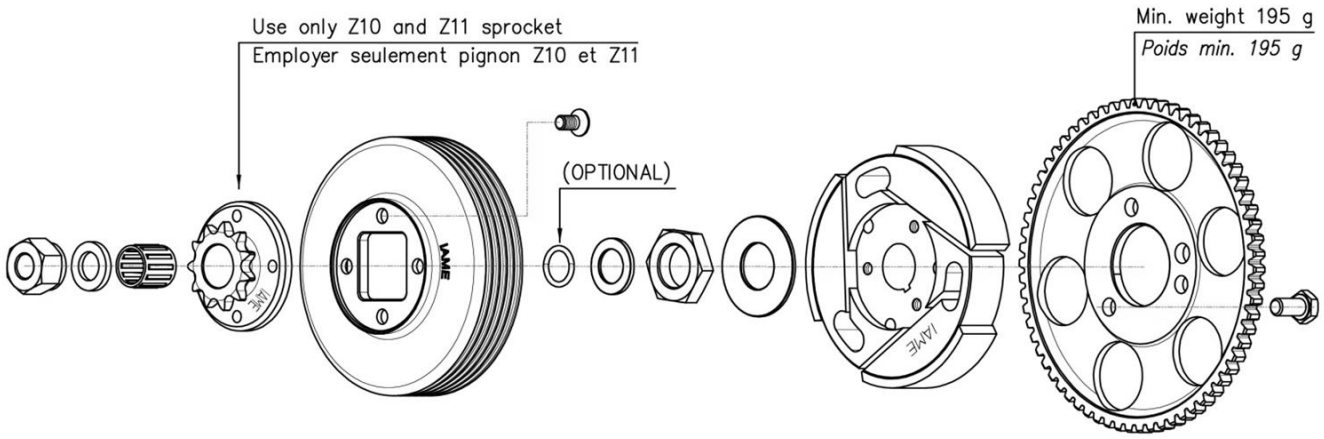




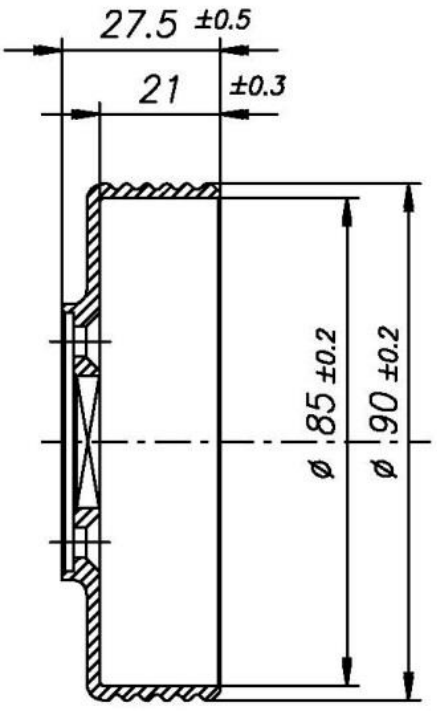
CLUTCH DRUM / min. weight 173 g
CLOCHE D'EMBRAYAGE / poids min. 173 g

DRIVE SPROCKET / min. weight 68 g
PIGNON / poids min. 68 g

DESCRIPTION OF THE CLUTCH ALTERNATIVE
DESCRIPTION DE L'EMBRAYAGE ALTERNATIVE

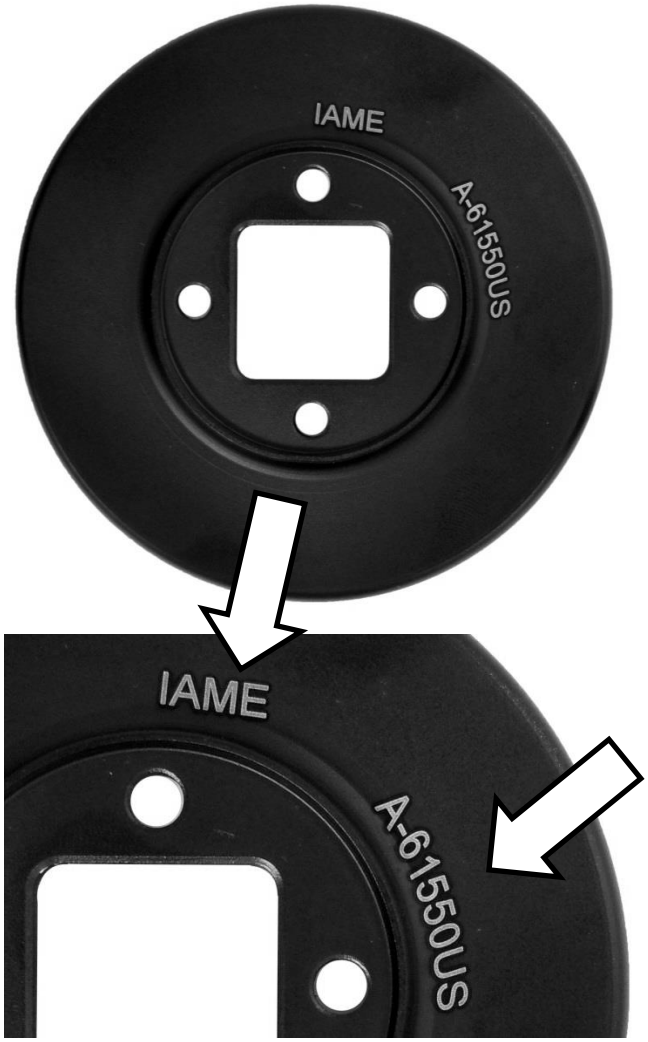


ALTERNATIVE CLUTCH DRUM DRAWING
DESSIN DE LA CLOCHE D'EMBRAYAGE ALTERNATIVE



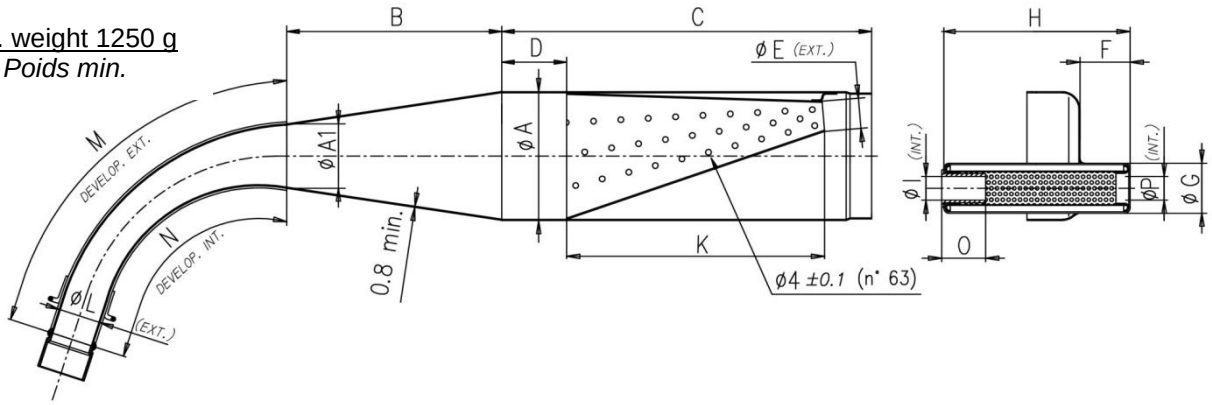
Min. weight 175 g
Poids min. 175 g

ALTERNATIVE CLUTCH DRUM IDENTIFICATION MARKING
MARQUAGE D'IDENTIFICATION DE LA CALOTTE D'EMBRAYAGE ALTERNATIVE



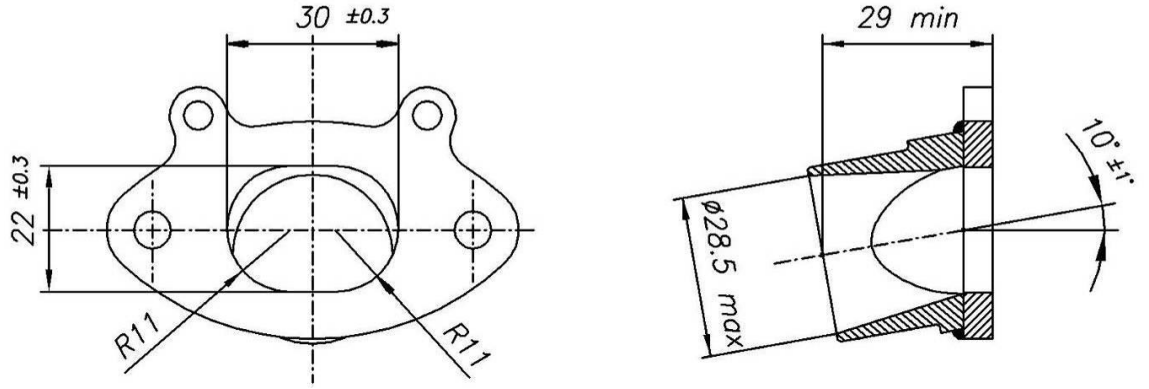
EXHAUST MUFFLER VIEW AND DIMENSIONS
VUE ET DIMENSIONS DU SILENCIEUX D'ECHAPPEMENT

Min. weight 1250 g
Poids min.

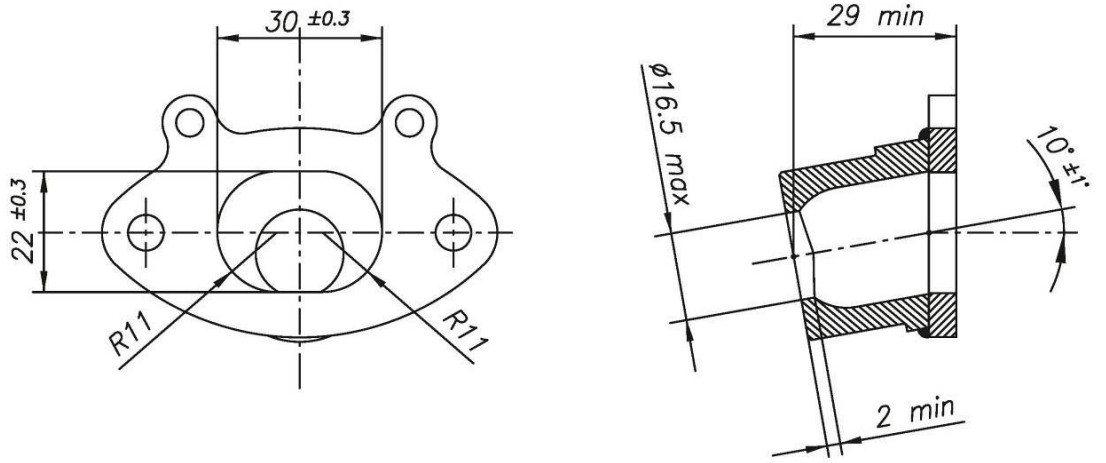


A:	90 ±1.5	C:	260 ±3	F:	35 ±2	I:	17 max.	M:	240 ±3	P:	21 ±1
A1:	45 ±1	D:	47 ±5	G:	35 ±1	K:	181 ±3	N:	190 ±3		
B:	150 ±3	E:	20 ±1	H:	132 ±2	L:	31 ±1.5	O:	30 min.		

EXHAUST MANIFOLD
RACCORD D'ÉCHAPPEMENT



EXHAUST MANIFOLD RESTRICTED
RACCORD AVEC RECSTRICTEUR D'ÉCHAPPEMENT



INLET SILENCER – *SILENCIEUX D'ASPIRATION*

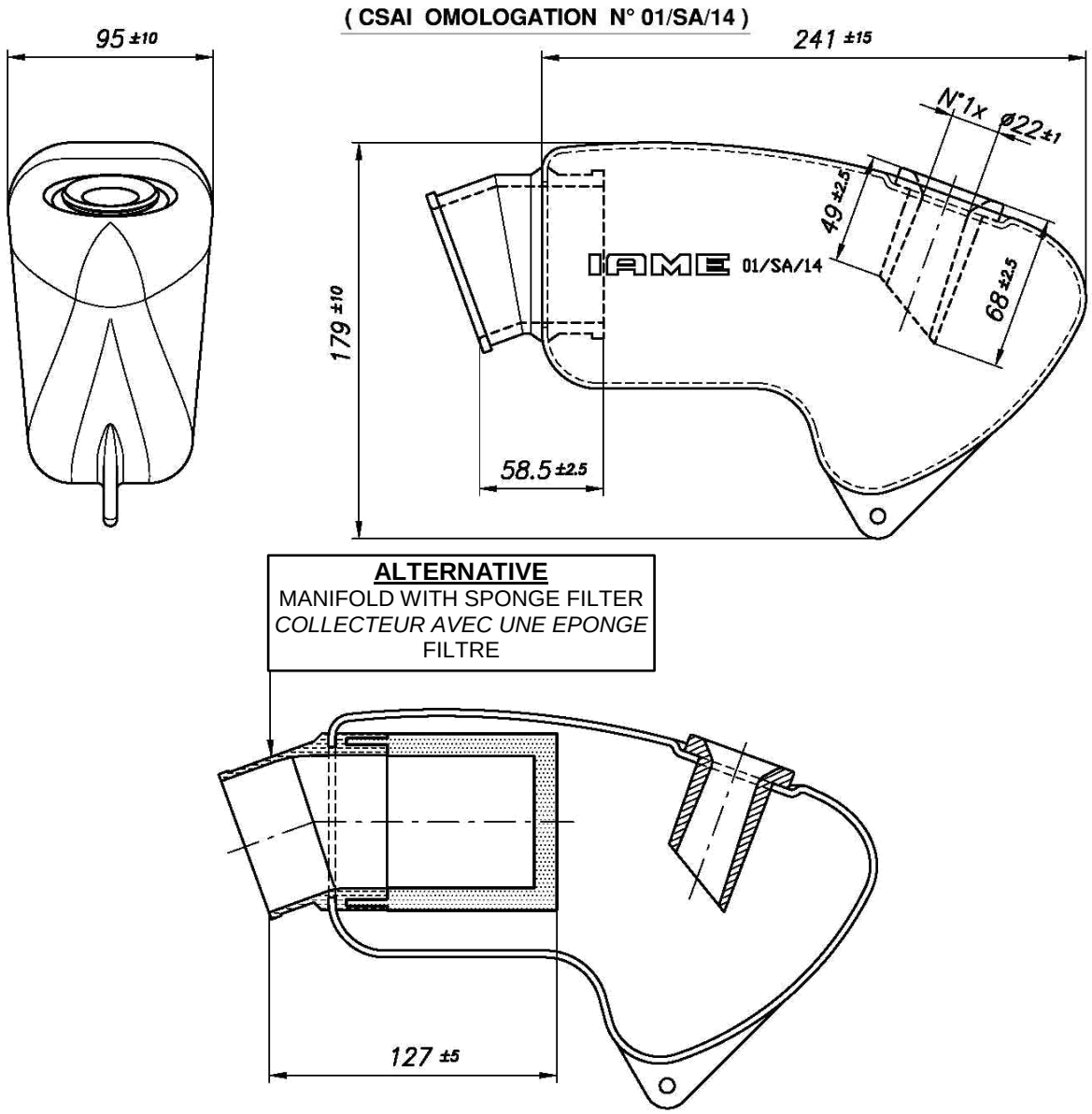
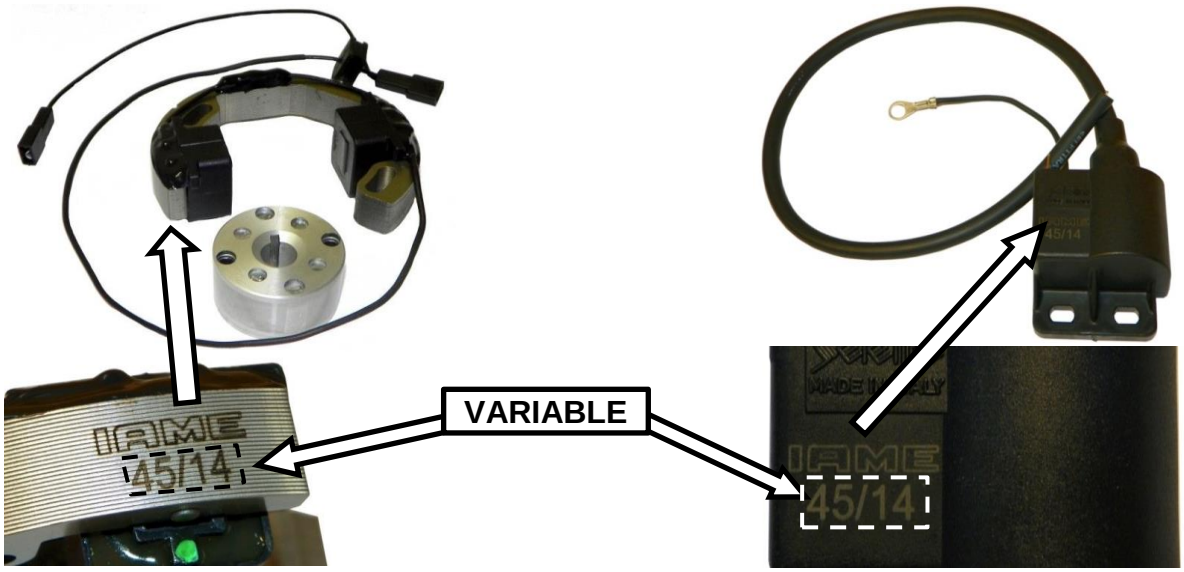
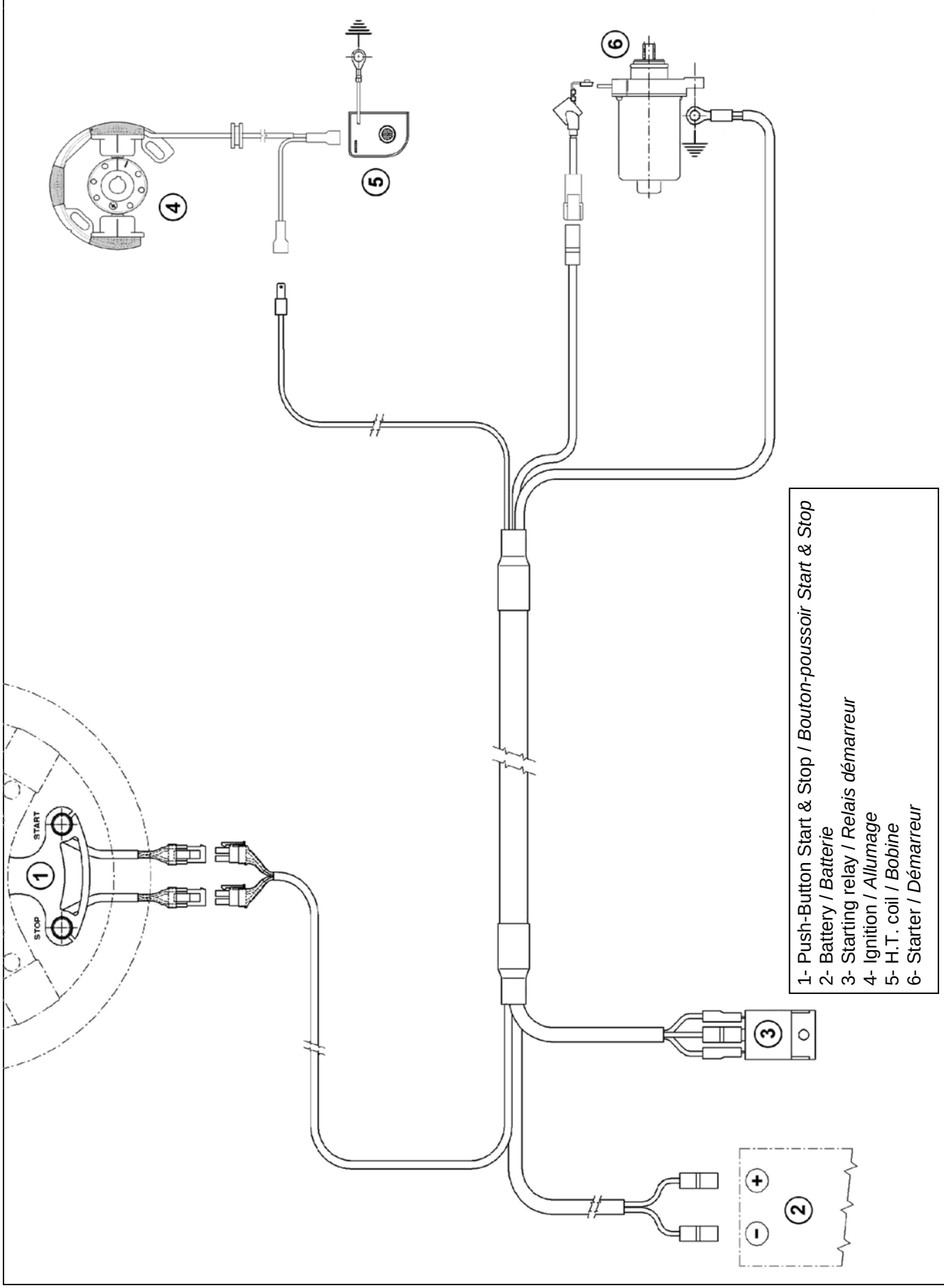


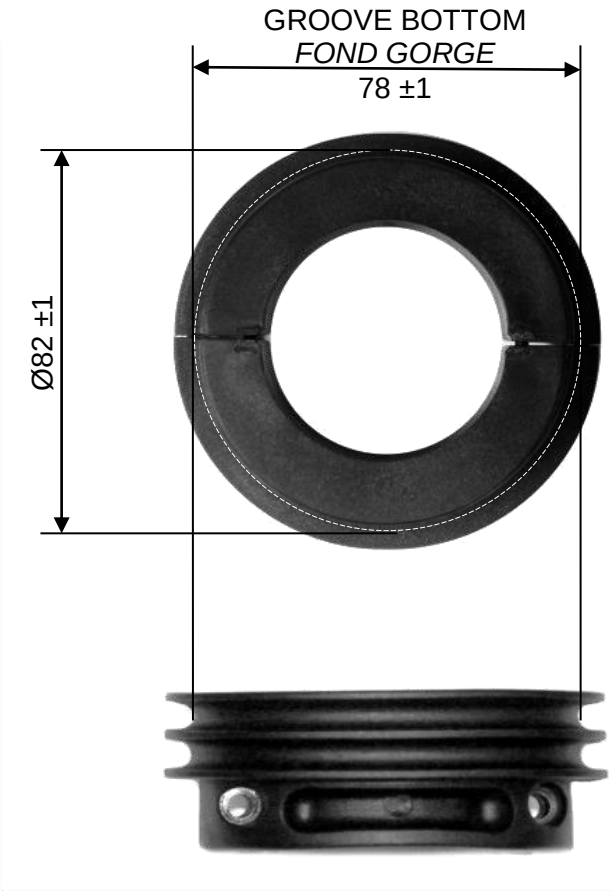
PHOTO IGNITION / PHOTO H.T. COIL (SELETTRA ANALOGUE 2 POLES)
PHOTO ALLUMAGE / PHOTO BOBINE (SELETTRA ANALOGIQUE 2 POLES)



WIRING DIAGRAM
SCHEMA CIRCUIT ELECTRIQUE

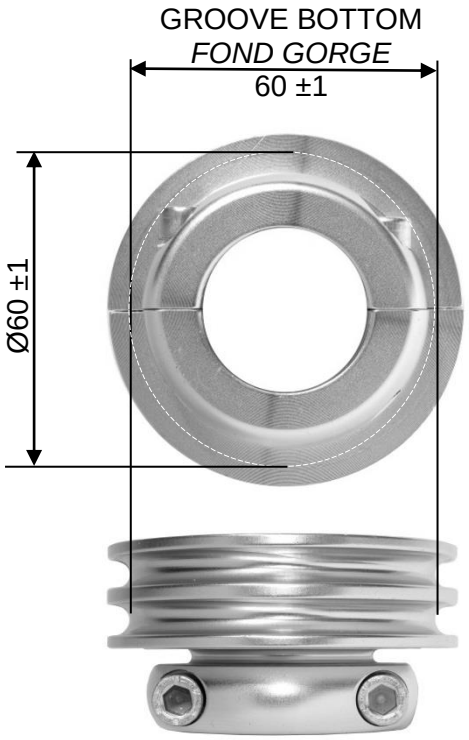


PULLEY ALTERNATIVE – ALTERNATIVE DU POULIE



PLASTIC

ALTERNATIVE



ALUMINUM

RADIATOR AND ITS SUPPORTS
RADIATEUR ET SES SUITIEN

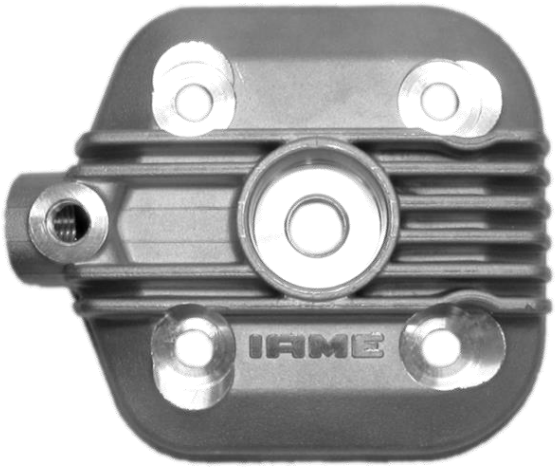
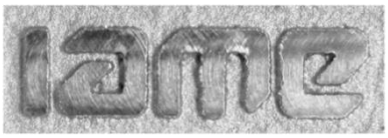
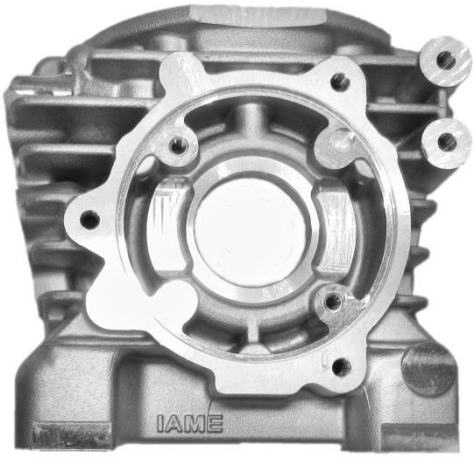
PAINTED AND NOT PAINTED / *PEINT ET PAS PEINT*

EXHAUST IDENTIFICATION MARKING
MARQUAGE D'IDENTIFICATION ECHAPPEMENT

PHOTO IDENTIFICATION OF CONROD – TYPES ALTERNATIVE
PHOTO D' IDENTIFICATION DE LA BIELLE – TYPES ALTERNATIFS

TYPE 1

TYPE 2

PARTICULARS WITH ALTERNATIVE NEW LOGO “IAME” *PARTICULARITÉS AVEC UN NOUVEAU LOGO ALTERNATIF “IAME”*	
CYLINDER HEAD *CULASSE*	CYLINDER *CILINDRE*
 **NEW / *NOUVEAU* LOGO** 	 **NEW / *NOUVEAU* LOGO** 
SEMICARTER TRANSMISSION SIDE *SEMICARTER CÔTÉ PIGNON*	SEMICARTER IGNITION SIDE *SEMICARTER CÔTÉ ALLUMAGE*
 **NEW / *NOUVEAU* LOGO** 	 **NEW / *NOUVEAU* LOGO** 

PARTICULARS WITH ALTERNATIVE NEW LOGO “IAME” *PARTICULARITÉS AVEC UN NOUVEAU LOGO ALTERNATIF “IAME”*	
IGNITION COVER *COUVERCLE DU ALLUMAGE*	CLUTCH COVER *COUVERCLE D'EMBRAYAGE*
 **NEW / *NOUVEAU* LOGO** 	 **NEW / *NOUVEAU* LOGO** 
INLET SILENCER *SILENCIEUX D’ASPIRATION*	*EXHAUST* *ECHAPPEMENT*
 **NEW / *NOUVEAU* LOGO** 	 **NEW / *NOUVEAU* LOGO** 

THE OTHERS COMPONENTS OF ENGINE THAT ARE MARKED (LASER OR PUNCHING) UNTIL TODAY WITH LOGO OR WRITTEN "IAME"

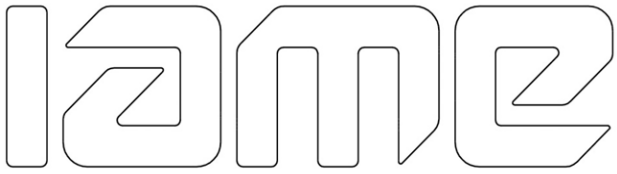
LES AUTRES COMPOSANTS DU MOTEUR AVEC MARQUAGE (LASER OU POINÇONNEUSE) AUJOURD'HUI AVEC LE LOGO OU ÉCRIT «IAME»

or

IAME

NOW COULD BE MARKED WITH NEW LOGO "IAME"

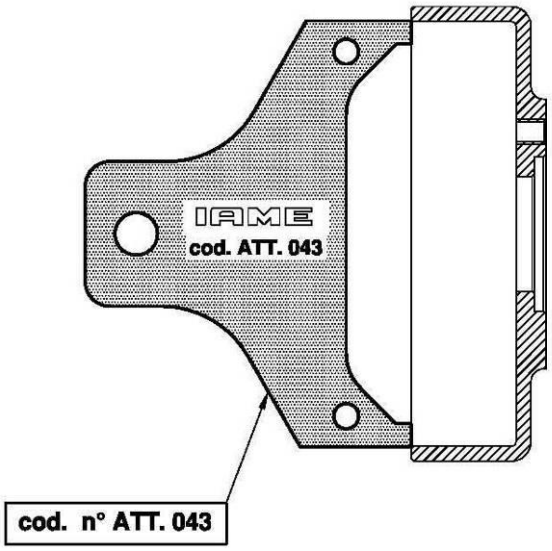
MAINTENANT POURRAIT EST MARQUAGE AVEC UN NOUVEAU LOGO "IAME"

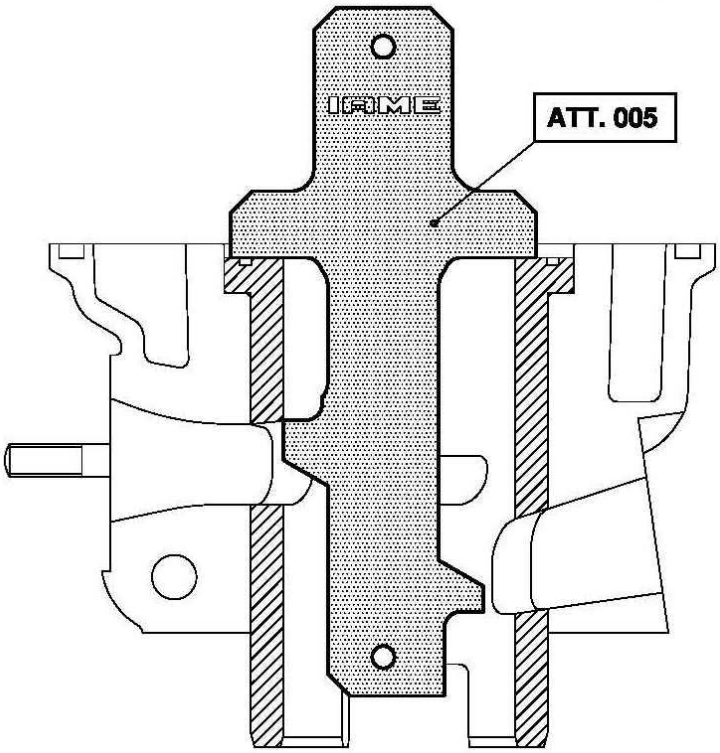


or

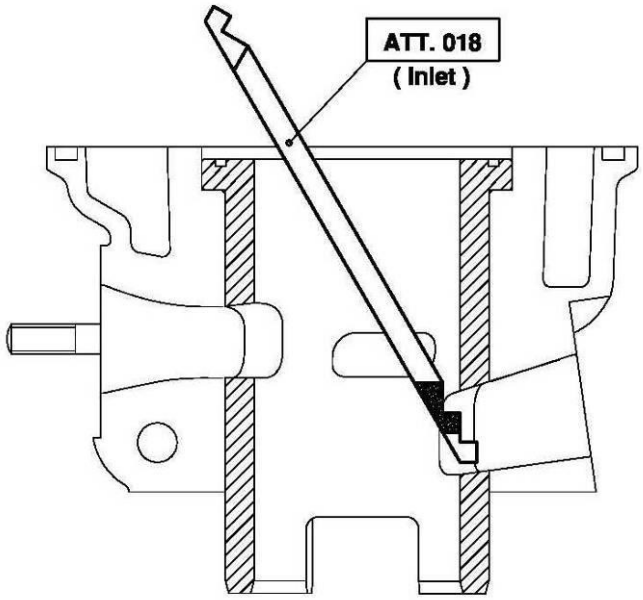
or

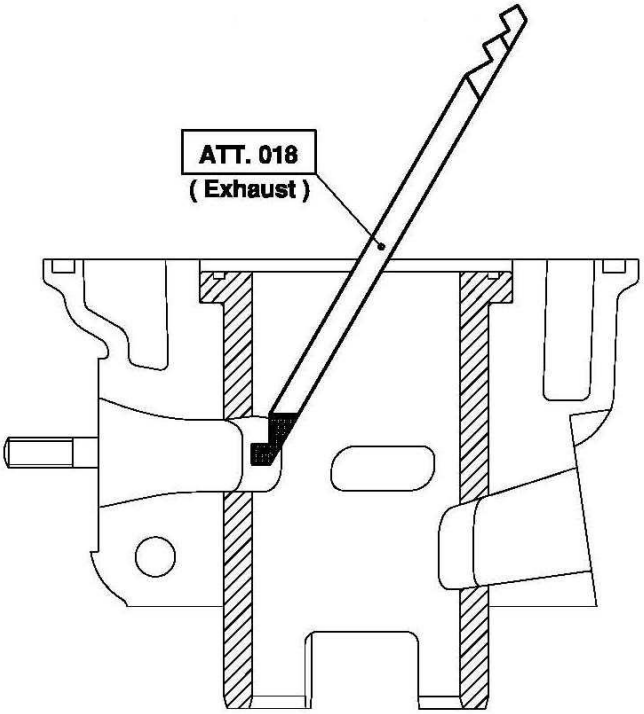
NO GO GAUGES
OUTILS N'ENTRE PAS DANS

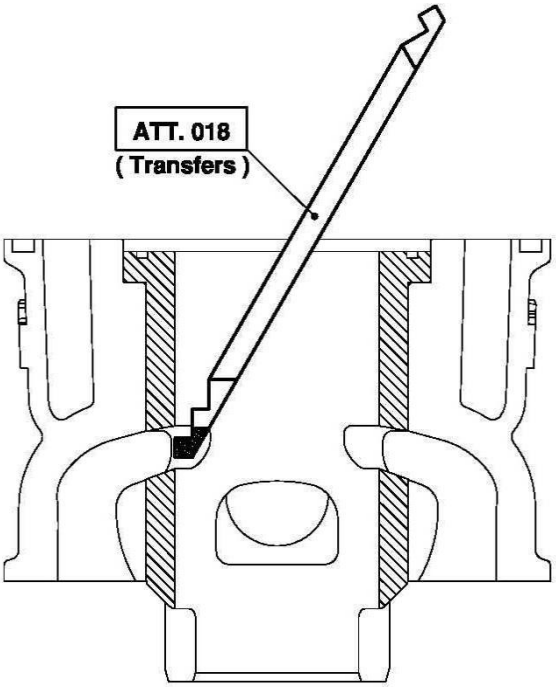




NO GO GAUGES
OUTILS N'ENTRE PAS DANS

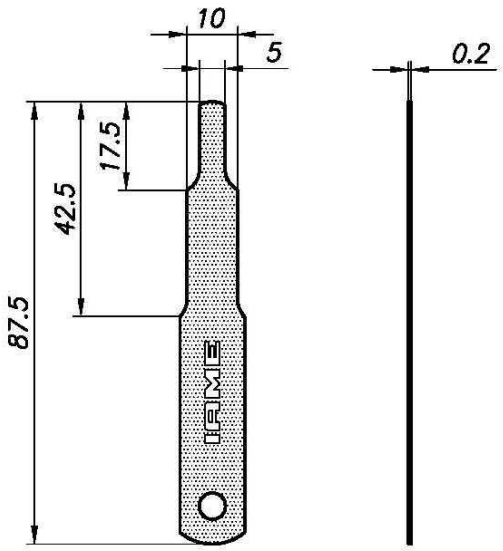


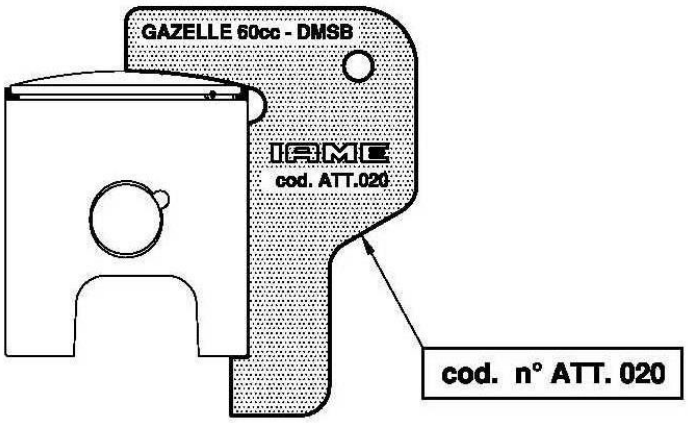


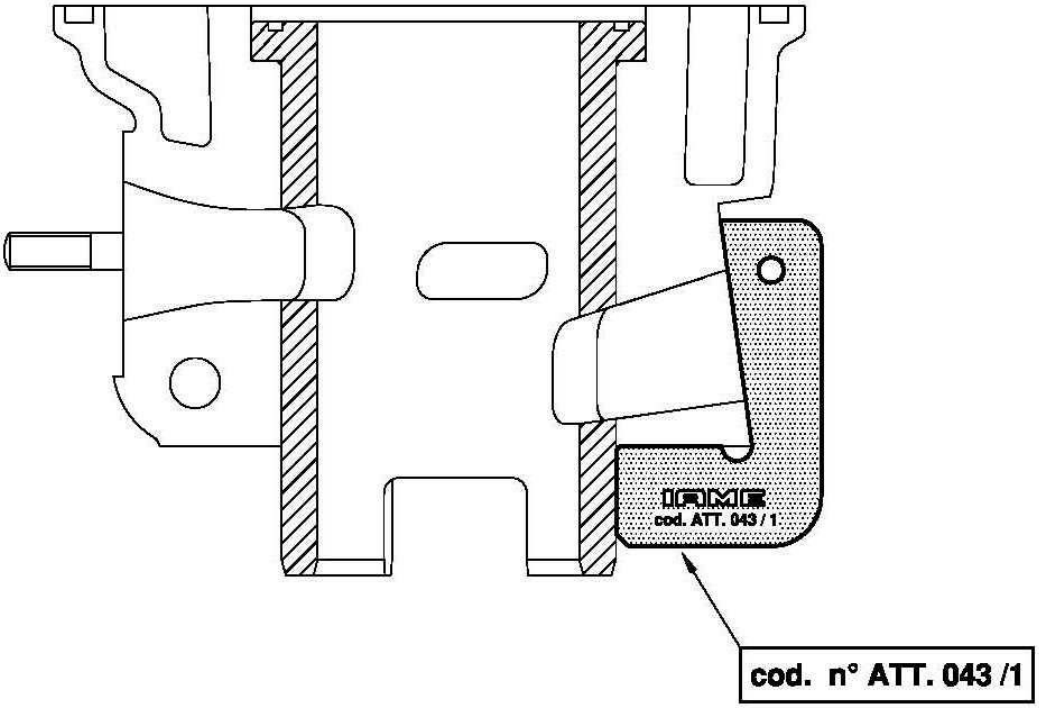


CONTROL GAUGES
OUTILS DE CONTROLL

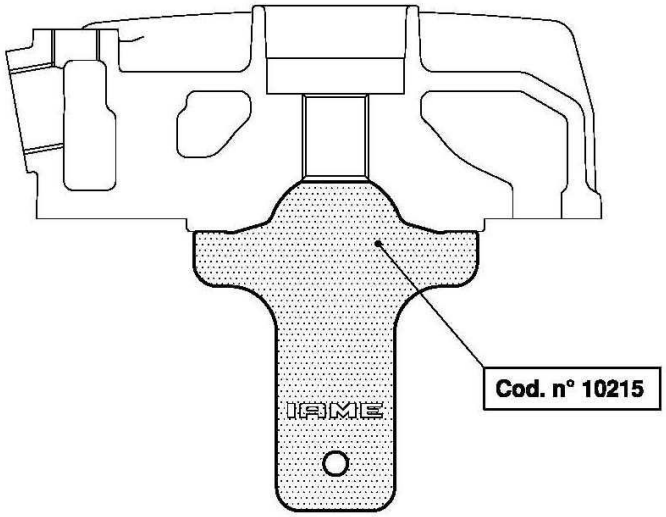
TOOL IAME Cod. 10194

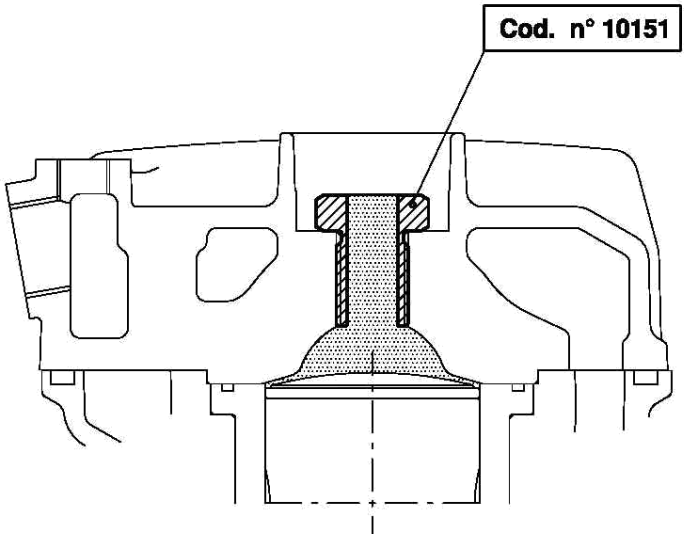


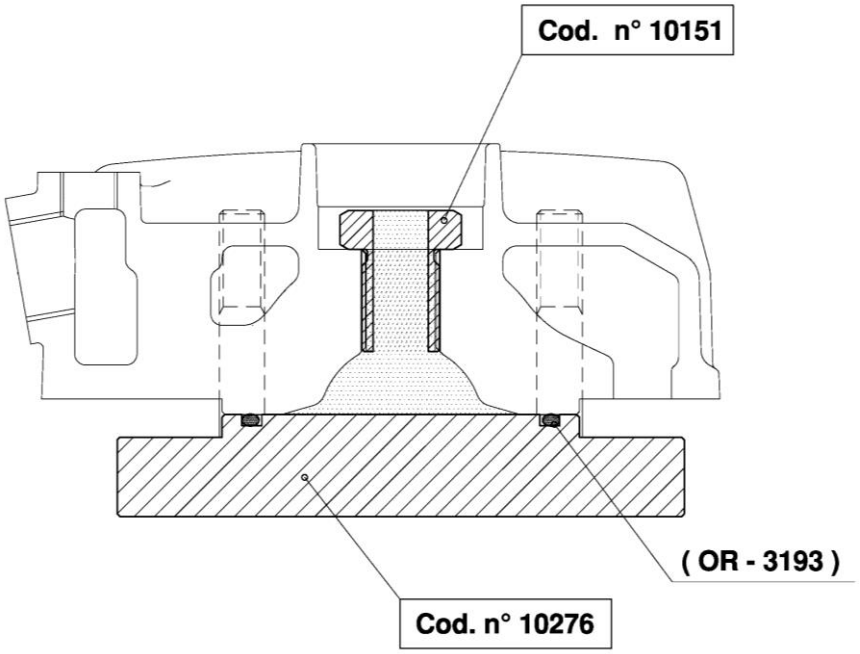




CONTROL GAUGES
OUTILS DE CONTROLL







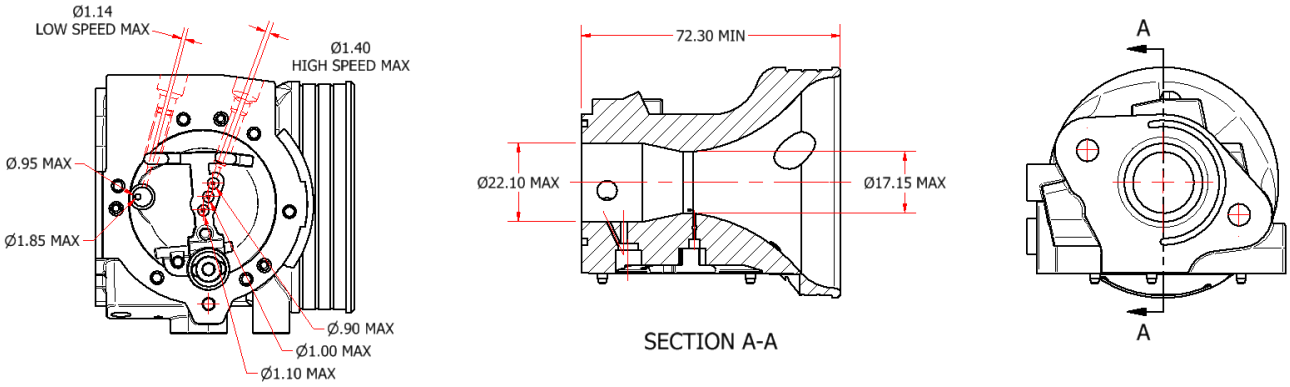
CARBURETTOR

Tillotson HW-31A

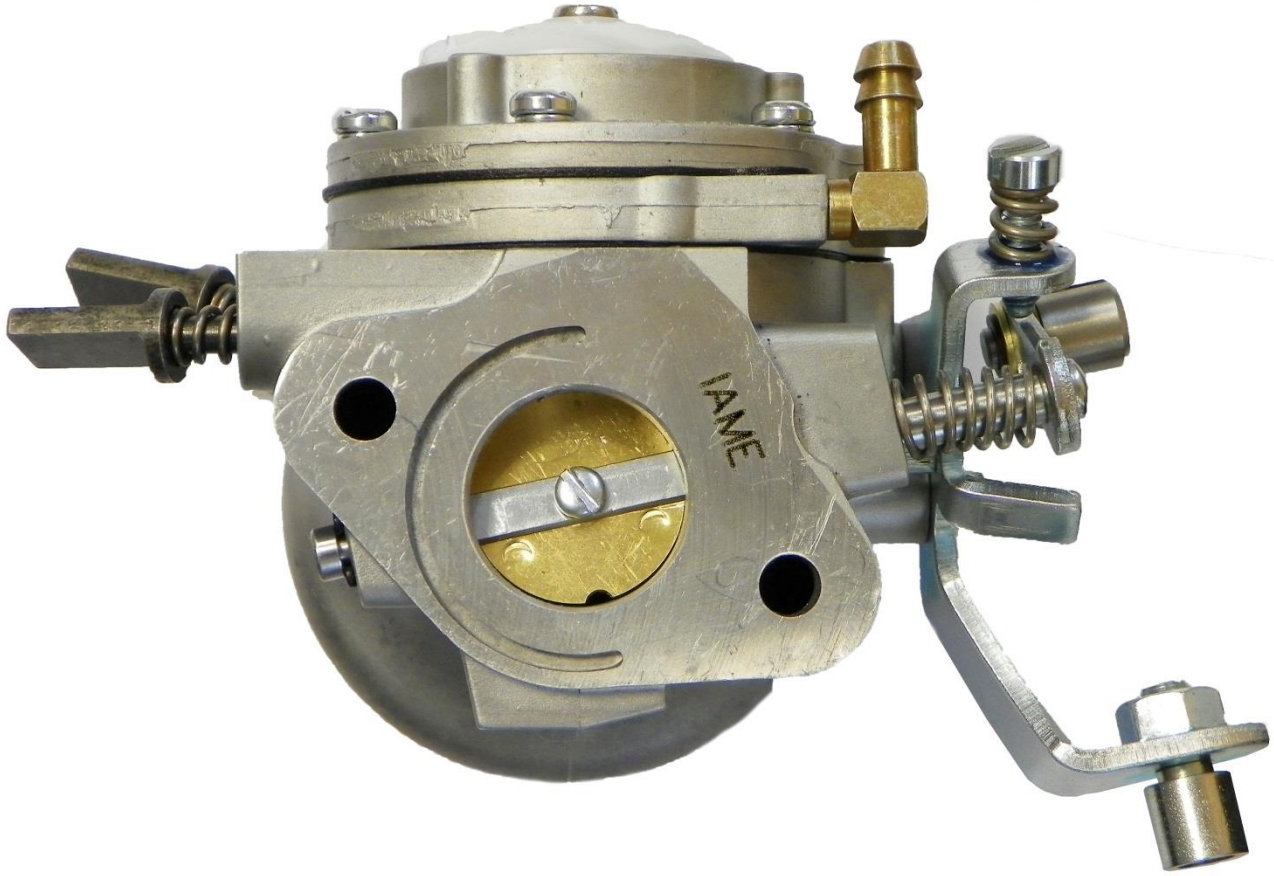
	
PHOTO OF ADJUSTING SIDE	PHOTO OF INLET SIDE

Manufacturer	**TILLOTSON LTD.**
Make	**TILLOTSON**
Model	**HW-31A**

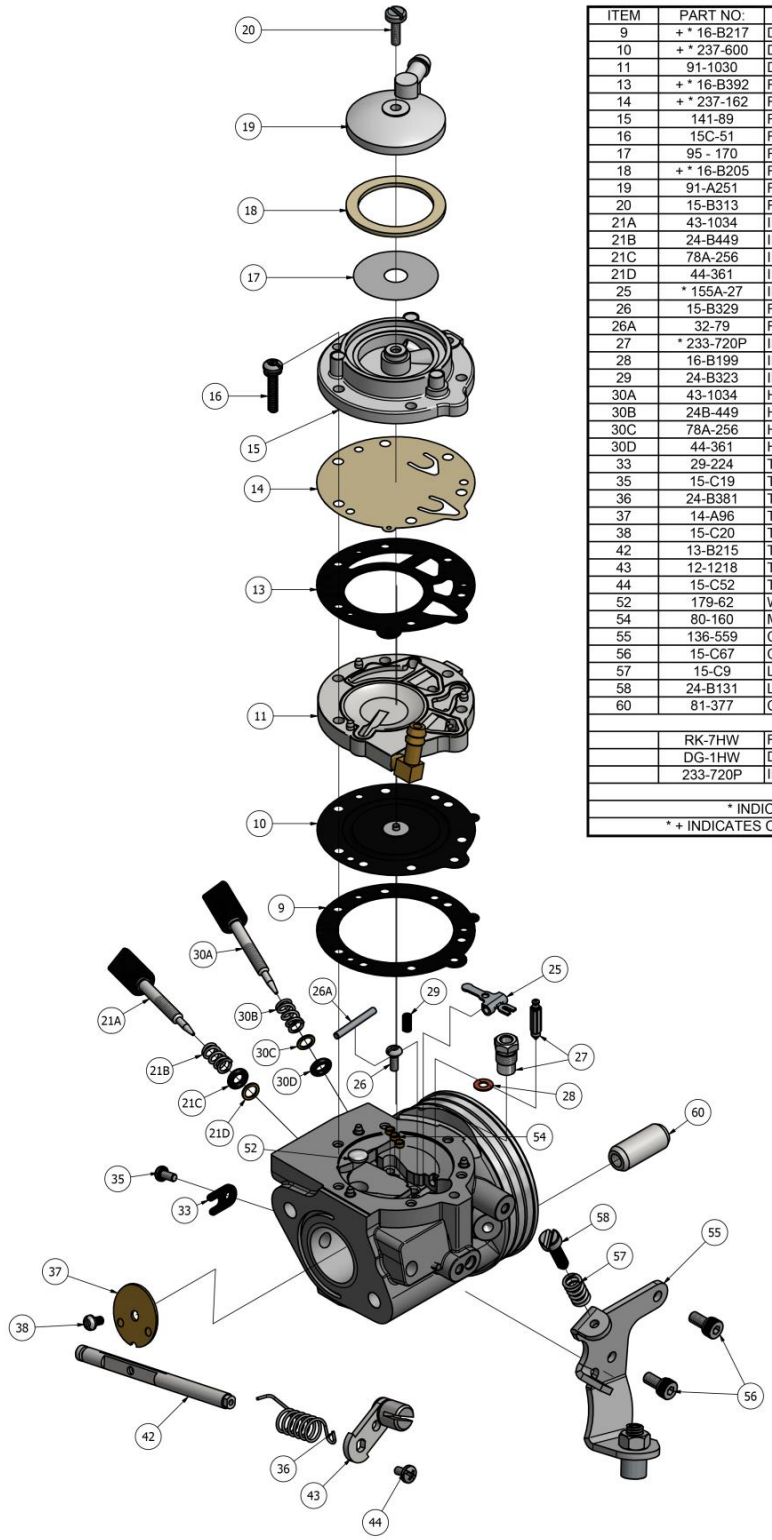
SECTION VIEW



"IAME" MARKING



HW-31A



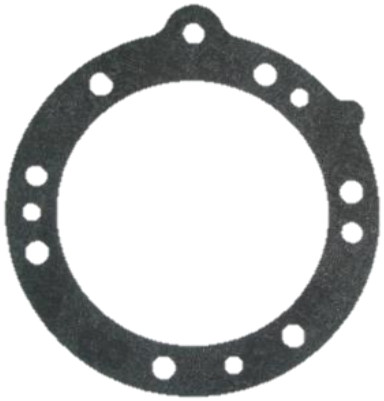
ITEM	PART NO:	DESCRIPTION	QTY
9	+ * 16-B217	DIAPHRAGM GASKET	1
10	+ * 237-600	DIAPHRAGM	1
11	91-1030	DIAPHRAGM COVER	1
13	+ * 16-B392	FUEL PUMP GASKET	1
14	+ * 237-162	FUEL PUMP DIAPHRAGM	1
15	141-89	FUEL PUMP BODY	1
16	15C-51	FUEL PUMP BODY SCREW	6
17	95 - 170	FUEL STRAINER SCREEN	1
18	+ * 16-B205	FUEL STRAINER COVER GASKET	1
19	91-A251	FUEL STRAINER COVER	1
20	15-B313	FUEL STRAINER COVER RETAINING SCREW	1
21A	43-1034	IDLE MIXTURE SCREW	1
21B	24-B449	IDLE MIXTURE SCREW SPRING	1
21C	78A-256	IDLE MIXTURE SCREW WASHER	1
21D	44-361	IDLE MIXTURE SCREW PACKING	1
25	* 155A-27	INLET CONTROL LEVER	1
26	15-B329	FULCRUM LEVER SCREW	1
26A	32-79	FULCRUM LEVER PIN	1
27	* 233-720P	INLET NEEDLE & SEAT SET	1
28	16-B199	INLET SEAT GASKET	1
29	24-B323	INLET TENSION SPRING	1
30A	43-1034	HIGH SPEED MIXTURE SCREW	1
30B	24B-449	HIGH SPEED MIXTURE SCREW SPRING	1
30C	78A-256	HIGH SPEED MIXTURE SCREW WASHER	1
30D	44-361	HIGH SPEED MIXTURE SCREW PACKING	1
33	29-224	THROTTLE SHAFT CLIP	1
35	15-C19	THROTTLE SHAFT CLIP RETAINING SCREW	1
36	24-B381	THROTTLE RETURN SPRING	1
37	14-A96	THROTTLE SHUTTER	1
38	15-C20	THROTTLE SHUTTER SCREW	1
42	13-B215	THROTTLE SHAFT	1
43	12-1218	THROTTLE LEVER ASSEMBLY	1
44	15-C52	THROTTLE LEVER RETAINING SCREW	1
52	179-62	WELCH PLUG	1
54	80-160	MAIN PLUG	3
55	136-559	CABLE BRAKET	1
56	15-C67	CABLE BRACKET RETAINING SCREW	2
57	15-C9	LIMITER SCREW	2
58	24-B131	LIMITER SPRING	2
60	81-377	CARBURETTOR MOUNTING NUT	2
	RK-7HW	REPAIR KIT	
	DG-1HW	DIAPHRAGM & GASKET (STANDARD)	
	233-720P	INLET NEEDLE & SEAT SET	
* INDICATES CONTENTS OF REPAIR KIT			
* + INDICATES CONTENTS OF DIAPHRAGM & GASKET SET			

Tillotson RACING
Clash Industrial Estate - Tralee - Ireland
www.tillotson-racing,com

IAME

PARTS OF CARBURETTOR

REF.9 - P. N°16-B217
DIAPHRAGM GASKET

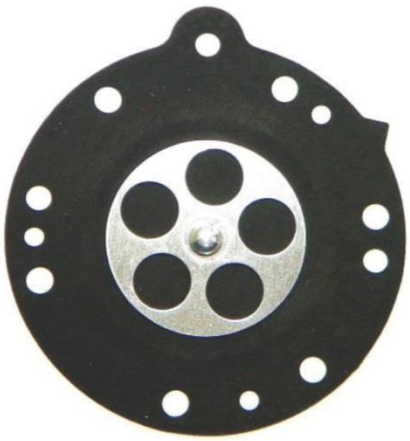


Thickness = 0.5 ±0.1 mm

PUMP DIAPHRAGM GASKET
REF.13 - P. N° 16-B392

Thickness = 0.8 ±0.1 mm

REF.10 - P. N°237-600
DIAPHRAGM



Thickness = 0.13 ±0.07 mm

REF.14 - P. N°237-162
PUMP DIAPHRAGM

Thickness = 0.10 ±0.063 mm

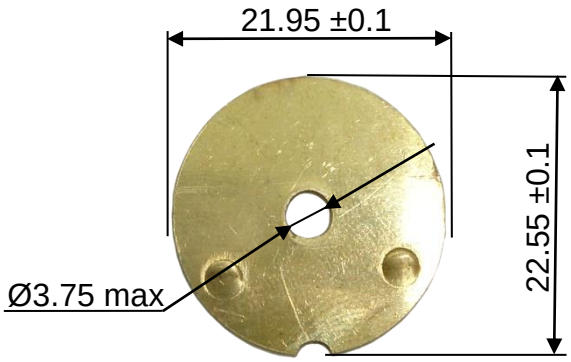
REF.11 - P. N° 91-1031
DIAPHRAGM COVER

Thickness = 6.75 ±0.15 mm

REF.15 - P. N° 141-89
PUMP COVER

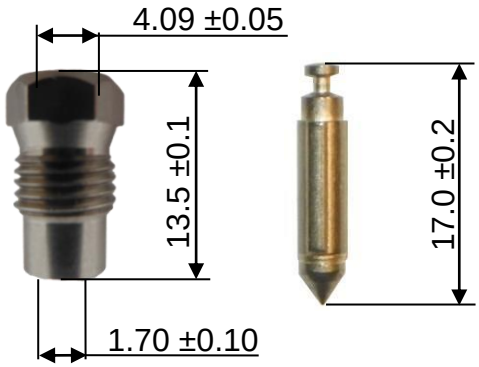
Thickness = 12.5 ±0.15 mm

REF.37 - P. N° 14-A96
THROTTLE SHUTTER

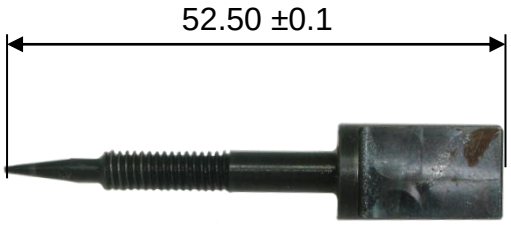


Thickness = 0.81 ±0.1 mm

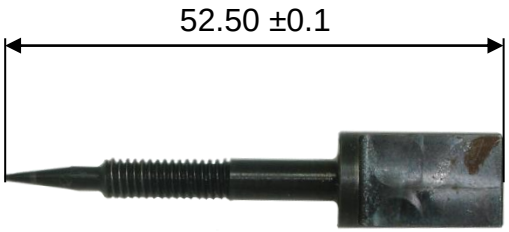
REF.27 - P. N° 233-720P
SEAT + NEEDLE



REF.21A - P. N° 43-1034
NEEDLE LOW SPEED



REF.30A - P. N° 43-1034
NEEDLE HIGH SPEED



NEEDLE FUEL ALTERNATIVE

REF.27 - P. N° 233-720P