







ENGINE			
Manufacturer	St George Kart Centre Wholesale Pty Ltd	Category	
Make	PRD	Homologation Period	FROM 2020
Model, Type	FIREBALL	Pages	14
<p><i>This homologation sheet reproduces description, illustrations and dimensions of the engine at the time of the KNSW Homologation. All motors must be manufactured within these dimensions</i></p>			
ENGINE PHOTO - DRIVE SIDE		ENGINE PHOTO - OPPOSITE SIDE	
			
SIGNATURE AND STAMP OF APPLICANT		SIGNATURE AND STAMP OF KNSW	

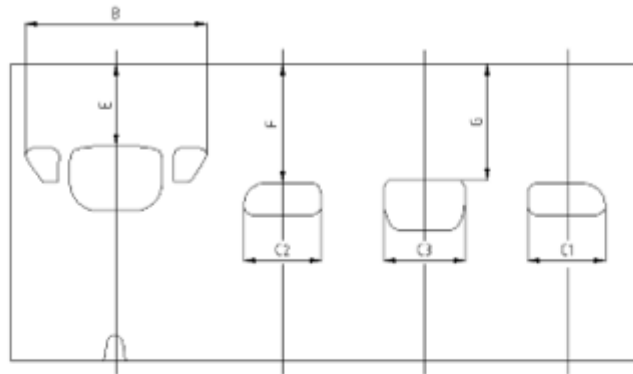
PHOTO OF THE ENGINE FROM THE BACK	PHOTO OF THE ENGINE FROM THE FRONT
	
PHOTO OF THE ENGINE FROM ABOVE	PHOTO OF THE ENGINE FROM BELOW
	

<b>TECHNICAL INFORMATION</b>			
<b><u>A - Characteristics</u></b>		<b><u>C - Materials</u></b>	
Cylinder volume	123.15	Cylinder wall	IRON
Original Bore	53.90mm	Cylinder	ALLOY
Theoretical max. bore	54.40mm	<b>Cylinder head</b>	ALLOY
Stroke	54mm	Crankcase / sump	ALLOY
Cooling system	Water	<b>Connecting rod</b>	IRON
Air admission system	Reed		
<b><u>N</u></b> ° of carburation systems	1	<b><u>D - Tolerances</u></b>	
<b><u>N</u></b> ° of transfer ports in the cylinder	3	Opening angles	= / - 3 degrees
<b><u>N</u></b> ° of exhaust ports	3	Combustion chamber volume [+/- 0.5cc]	Min 10cc
Shape of combustion chamber	Spherical		
Volume of the combustion chamber	10cc MIN	Stroke	+ / - 0.1
Length between of the axis of connecting rod	102mm	Length between axis of connecting rod	= / - 0.1
Ignition make	PRD		
Ignition model	EASYSTART		

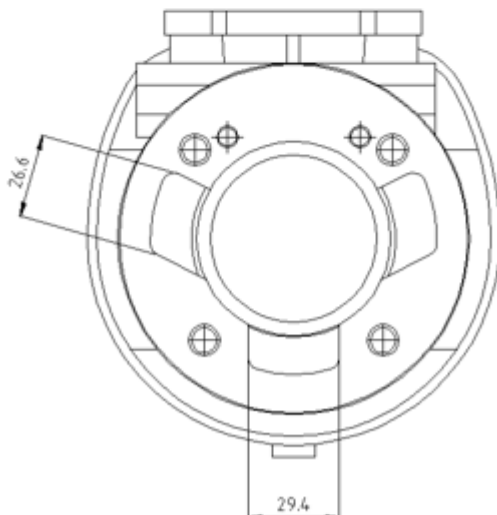
TECHNICAL INFORMATION		
<b><i>E – piston</i></b>		DIAGRAM OF PISTON
<b><u>N</u>° of piston rings</b>	ONE	
<b>Overall length</b>	62.8 + / - 0.2	
<b><i>E – Piston Pin</i></b>		PISTON PIN
<b>material</b>	IRON	
<b>Length</b>	44 -0.2	
<b>Inside diameter</b>	10 +/- 0.1	
<b>Outside diameter</b>	14	

DRAWING OF CYLINDER DEVELOPMENT

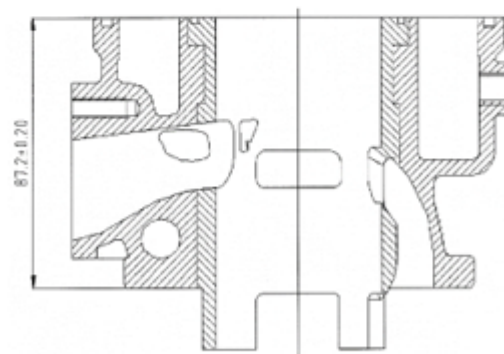
Chord reading	
B	65.3mm +0.10
C1=C2	26mm +0.10
C3	29.4mm +0.10
Angular reading by inserting a 0.2mm gauge	
E	174 deg max
F	125 deg +2 / -2 deg
G	128 deg +2 / -2deg



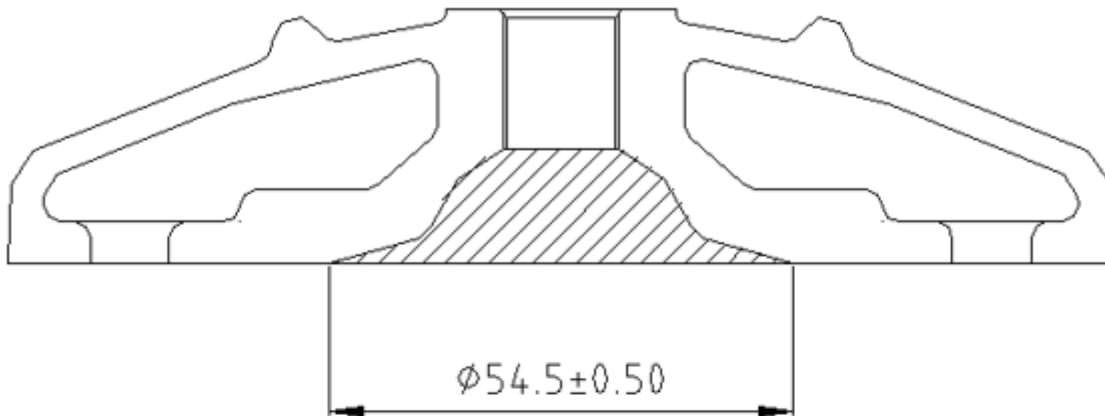
DRAWING OF THE BASE OF THE CYLINDER



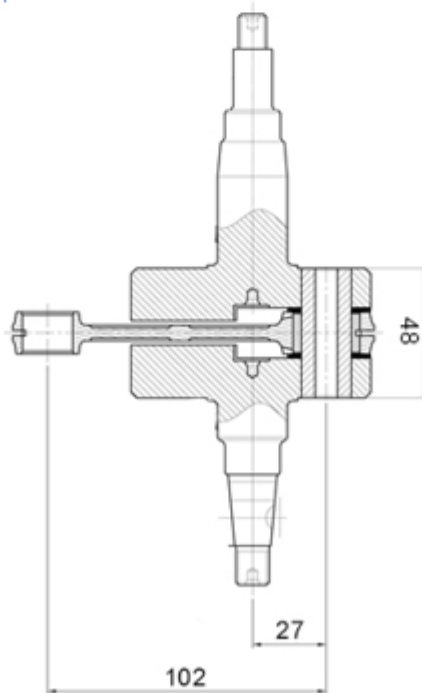
DRAWING OF CYLINDER SECTION



DRAWING OF THE COMBUSTION CHAMBER AND CYLINDERHEAD



DRAWING OF THE  
 CRANKSHAFT



DRAWING OF THE INTERIOR  
 OF THE SUMP

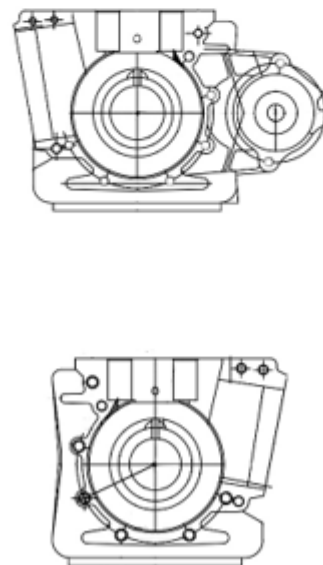




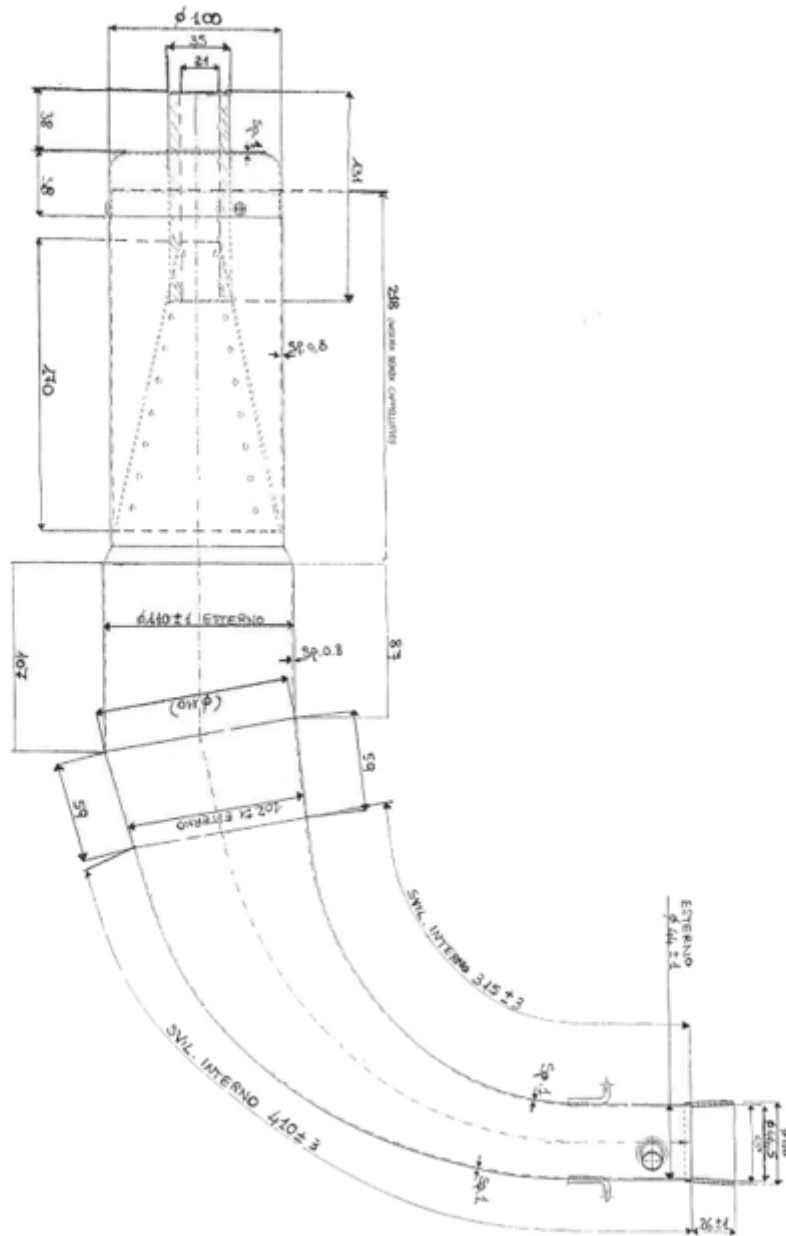


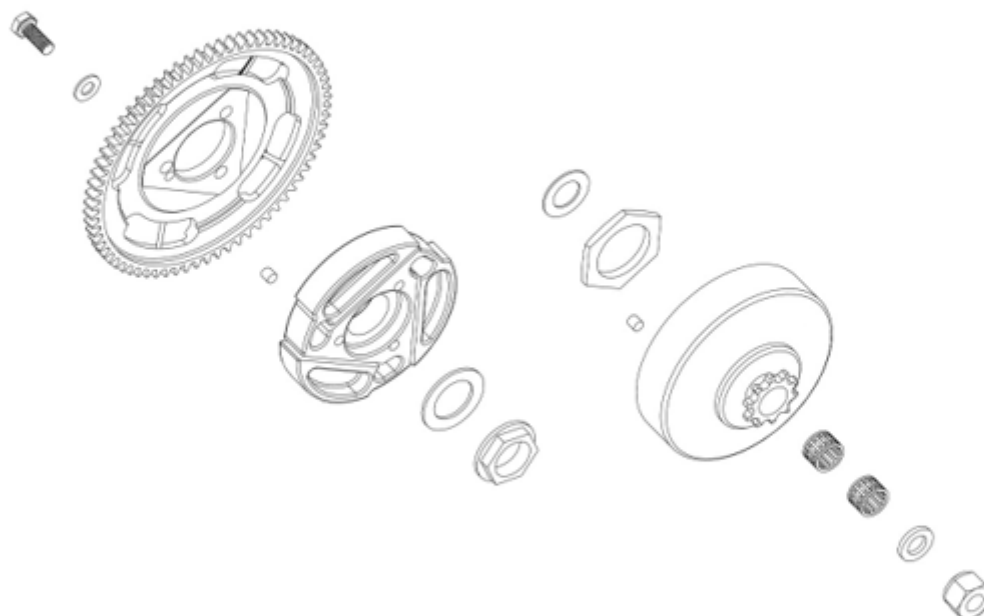
PHOTO OF THE BASE OF THE CYLINDER	PHOTO OF THE COMBUSTION CHAMBER
	
PHOTO OF CRANKCASE – GASKET FACE	PHOTO OF CRANKCASE – INTERIOR (HORIZONTAL VIEW)
	

DRAWING OF SILENCER AND COMPONENTS

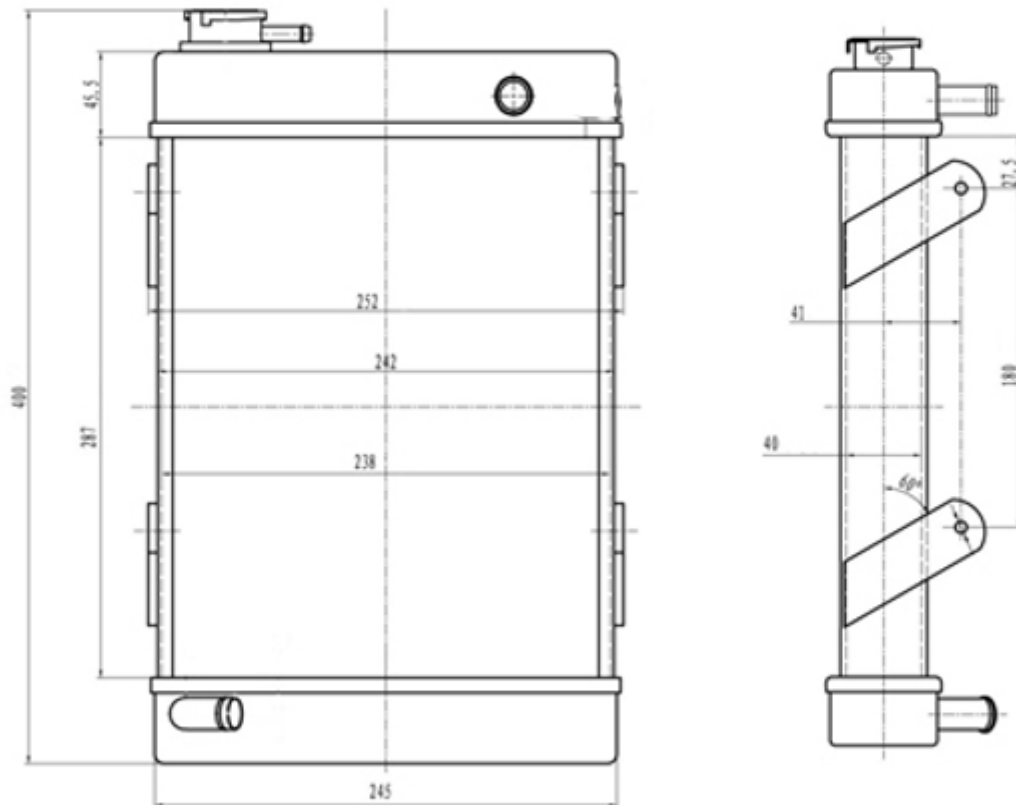




CLUTCH DESCRIPTION AND SKETCH OF PARTS

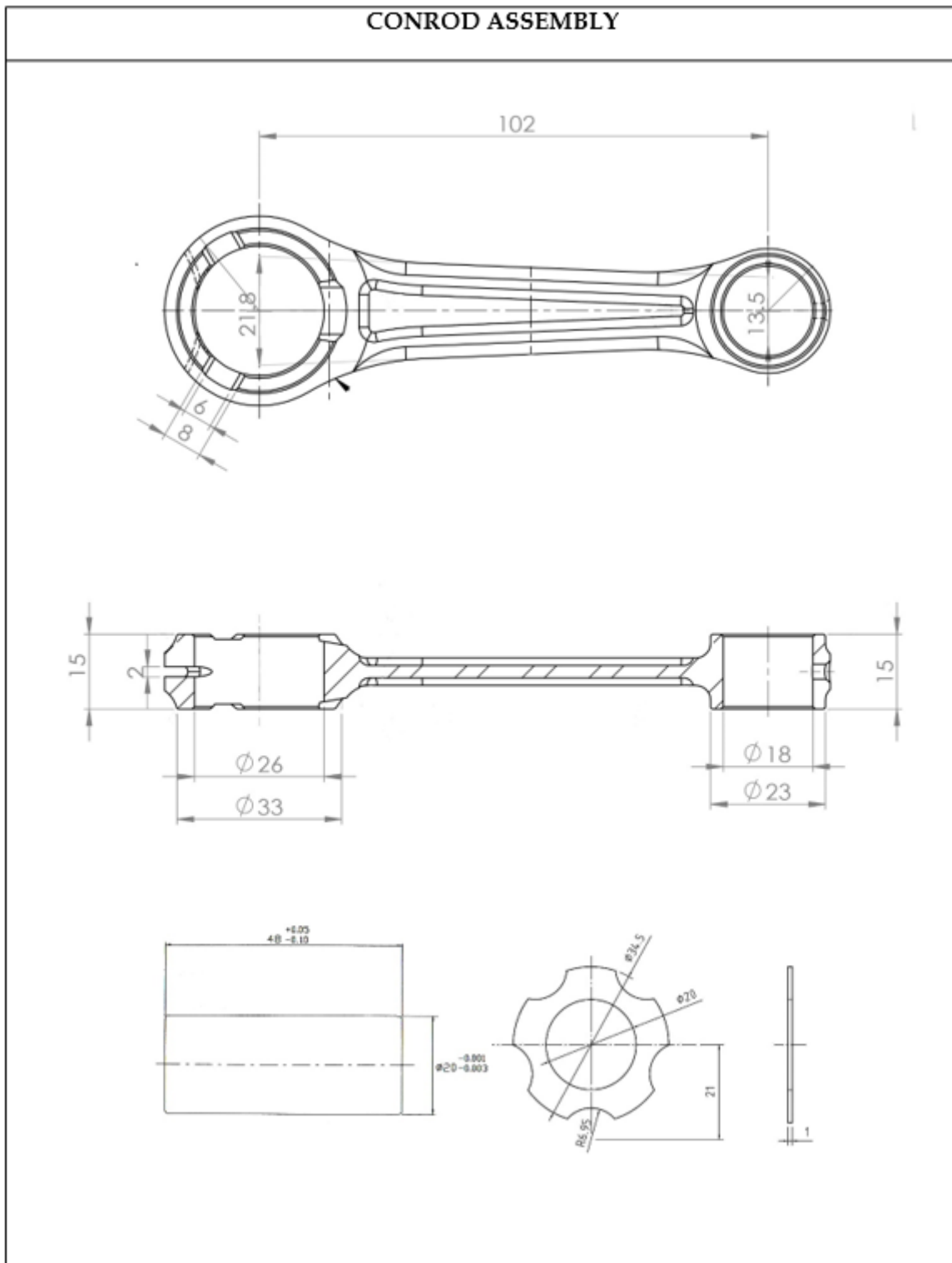


RADIATOR DESCRIPTION AND SKETCH OF PARTS



*REED INTAKE ASSEMBLY*

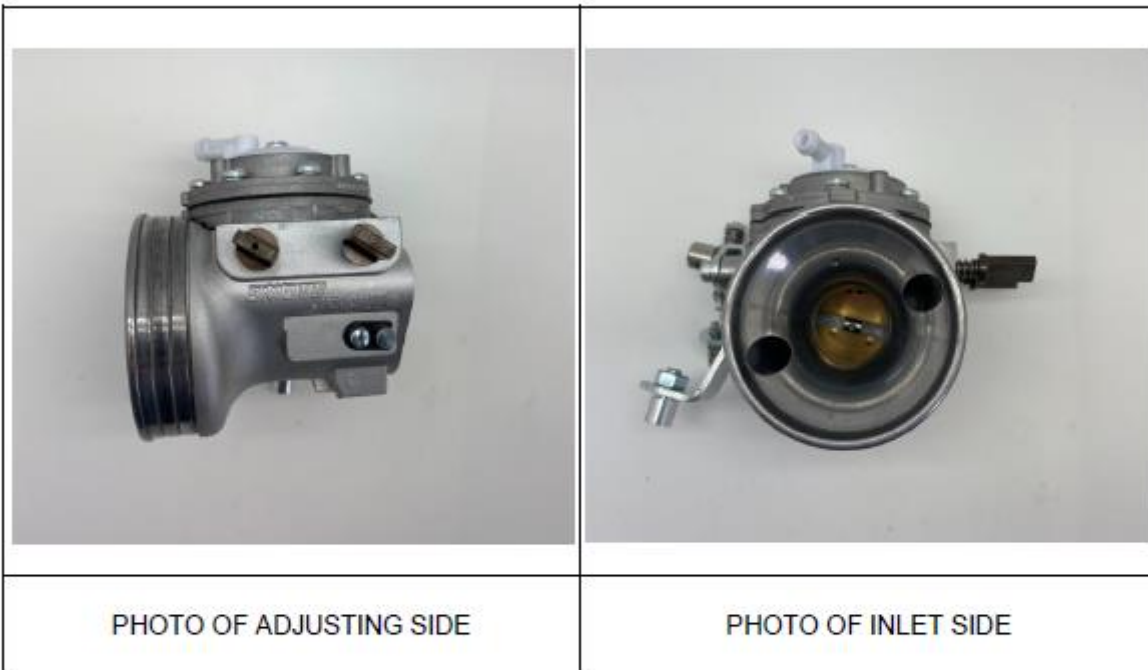




IGNITION



## CARBURETTOR Tillotson HW-35A



Manufacturer	TILLOTSON LTD.
Make	TILLOTSON
Model	HW-35A

SECTION VIEW

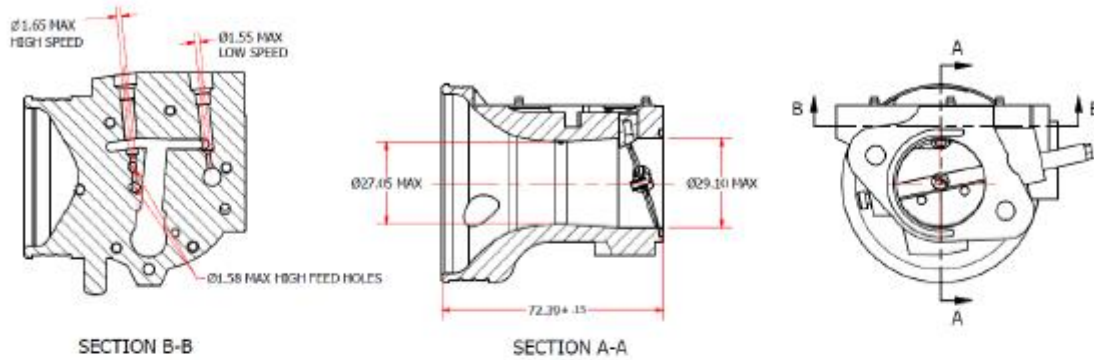
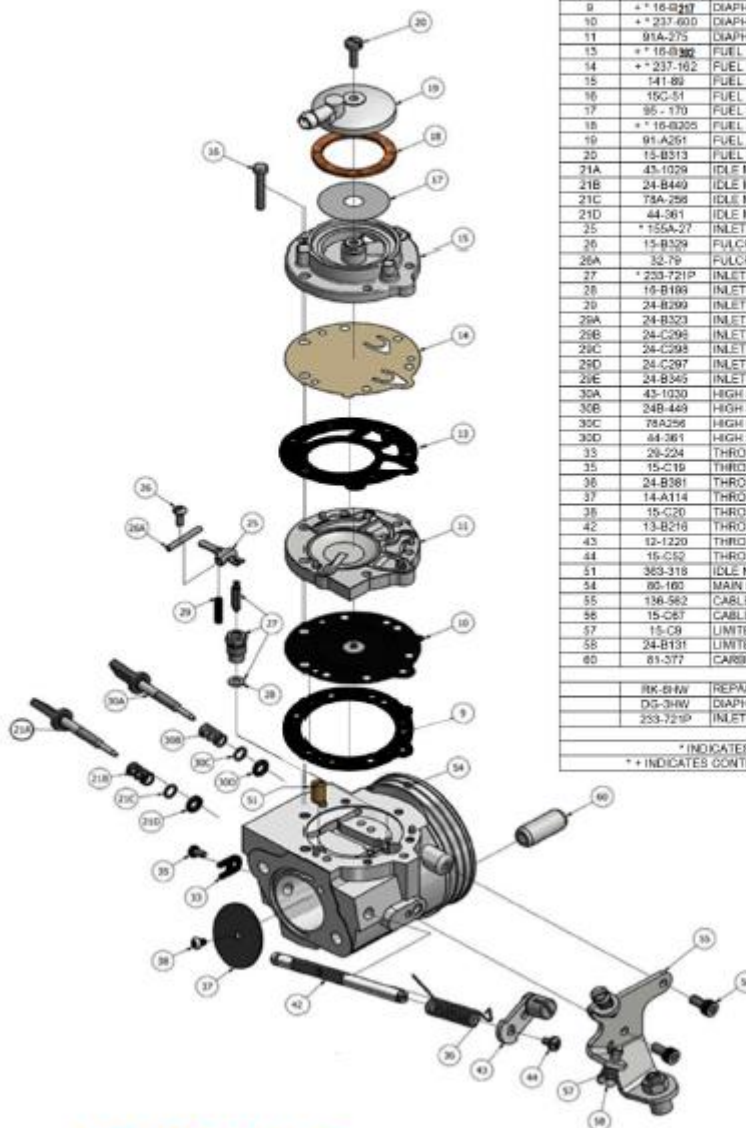


PHOTO OF BORE SIDE



**CARBURETTOR DESCRIPTION AND SKETCH OF PARTS**

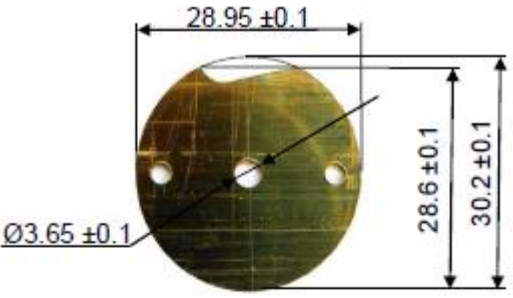
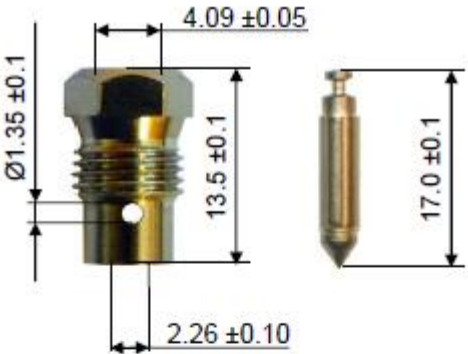



ITEM	PART NO.	DESCRIPTION	QTY
9	* 16-B317	DIAPHRAGM GASKET (ORANGE)	1
10	* 237-600	DIAPHRAGM	1
11	91A-275	DIAPHRAGM COVER	1
13	* 16-B310	FUEL PUMP GASKET (ORANGE)	1
14	* 237-162	FUEL PUMP DIAPHRAGM	1
15	141-89	FUEL PUMP BODY	1
16	16G-51	FUEL PUMP BODY SCREW	6
17	95 - 170	FUEL STRAINER SCREEN	1
18	* 16-B205	FUEL STRAINER COVER GASKET	1
19	91 A261	FUEL STRAINER COVER	1
20	15-B313	FUEL STRAINER COVER RETAINING SCREW	1
21A	43-1029	IDLE MIXTURE SCREW	1
21B	24-B449	IDLE MIXTURE SCREW SPRING	1
21C	79A-256	IDLE MIXTURE SCREW WASHER	1
21D	44-561	IDLE MIXTURE SCREW PACKING	1
25	* 125A-27	INLET CONTROL LEVER	1
26	15-B329	FULCRUM LEVER SCREW	1
26A	32-79	FULCRUM LEVER PIN	1
27	* 233-721P	INLET NEEDLE & SEAT SET	1
28	16-B189	INLET SEAT GASKET	1
29	24-B299	INLET TENSION SPRING (STD 37 grams)	1
29A	24-B323	INLET TENSION SPRING (26 grams)	1
29B	24-C296	INLET TENSION SPRING (31 grams)	1
29C	24-C298	INLET TENSION SPRING (42 grams)	1
29D	24-C297	INLET TENSION SPRING (48 grams)	1
29E	24-B345	INLET TENSION SPRING (48 grams)	1
30A	43-1020	HIGH SPEED MIXTURE SCREW	1
30B	24B-449	HIGH SPEED MIXTURE SCREW SPRING	1
30C	79A256	HIGH SPEED MIXTURE SCREW WASHER	1
30D	44-561	HIGH SPEED MIXTURE SCREW PACKING	1
33	20-224	THROTTLE SHAFT CLIP	1
35	15-C19	THROTTLE SHAFT CLIP RETAINING SCREW	1
36	24-B381	THROTTLE RETURN SPRING	1
37	14-A114	THROTTLE SHUTTER	1
38	15-C20	THROTTLE SHUTTER SCREW	1
42	13-B216	THROTTLE SHAFT	1
43	12-1220	THROTTLE LEVER ASSEMBLY	1
44	15-C12	THROTTLE LEVER RETAINING SCREW	1
51	363-318	IDLE NOZZLE	1
54	65-162	MAIN PLUG	2
55	136-562	CABLE BRACKET	1
56	15-C87	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-6W		REPAIR KIT	
DG-3W		DIAPHRAGM & GASKET (STANDARD)	
233-721P		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



PARTS OF CARBURETTOR	
<p>REF.9 - P. N°16-B217 DIAPHRAGM GASKET</p>  <p>Thickness = <math>0.5 \pm 0.1</math> mm</p>	<p>REF.13 - P. N° 16-B392 PUMP DIAPHRAGM GASKET</p>  <p>Thickness = <math>0.8 \pm 0.1</math> mm</p>
<p>REF.10 - P. N°237-600 DIAPHRAGM</p>  <p>Thickness = <math>0.13 \pm 0.07</math> mm</p>	<p>REF.14 - P. N°237-162 PUMP DIAPHRAGM</p>  <p>Thickness = <math>0.10 \pm 0.063</math> mm</p>
<p>REF.11 - P. N° 91-A275 DIAPHRAGM COVER</p>  <p>Thickness = <math>6.75 \pm 0.15</math> mm</p>	<p>REF.15 - P. N° 141-89 PUMP COVER</p>  <p>Thickness = <math>12.5 \pm 0.15</math> mm</p>

<p>REF.37 - P. N° 14-A114 THROTTLE SHUTTER</p>  <p>Thickness = 0.81 ± 0.1 mm</p>	<p>REF.27 - P. N° 233-721P SEAT + NEEDLE</p> 
<p>REF.30A - P. N° 43-1030 NEEDLE HIGH SPEED</p> 	<p>REF.21A - P. N° 43-1029 NEEDLE LOW SPEED</p> 