

# USA SUPER SHIFTER 175CC



Number of piston rings

Big end conrod bearing diam.

Crankshaft bearing diam.

PVL ignition

FEATURES			
Cylinder volume	174.46 cm <sup>3</sup> (Max 176.6 cm <sup>3</sup> )		
Bore	63.90 mm		
Max. theoretical bore	64.26 mm		
Stroke	54.40 mm		
Distance between conrod centers	115 mm		
Cooling system	Water		
Inlet system	Reed valve		
Cylinder / crankcase transfers n°	5/3		
Inlet / exhaust ports number	5/3		
Combustion chamber shape	Spherical		
Small end conrod bearing diam.	15x19x20		

1

D. Ø22

25x52x15 (2Pc.)

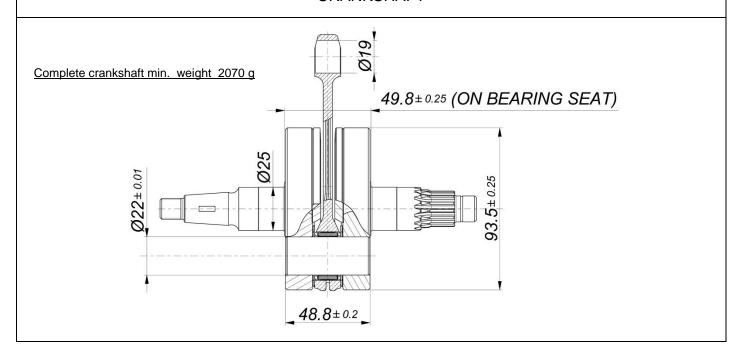
15x35x11 (1Pc.)

Analogic

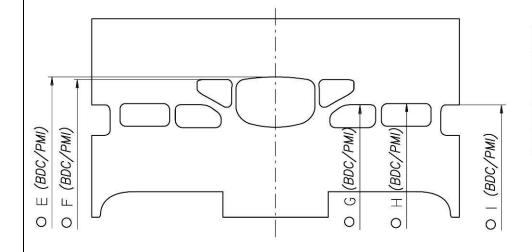
"458"

DESCRIPTION OF THE MA	ATERIAL	PISTON	
Conrod material	Steel		
Crankshaft material	Steel	29 ±0.1	
Gearbox shafts material	Steel	612	
Gears material	Steel	52	
Starter ring material	Steel or Aluminum	Piston min. weight (ring incl.) 155 g	
Head material	Aluminum	DISTANCE BETWEEN CONROD CENTERS	
Cylinder material	Aluminum	15± 0.2	
Liner material	Iron		
Crankcase material	Aluminum	115±0.1	
Piston material	Aluminum		
Piston rings material	Iron		
Exhaust muffler material	Sheet-steel	15±0.2 Min. Weight 120 g	
CRANKSHAFT			

#### CRANKSHAFT



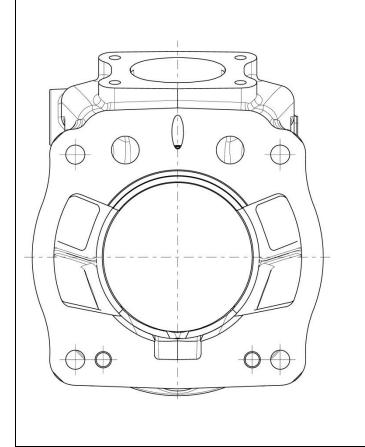
#### CYLINDER DEVELOPMENT



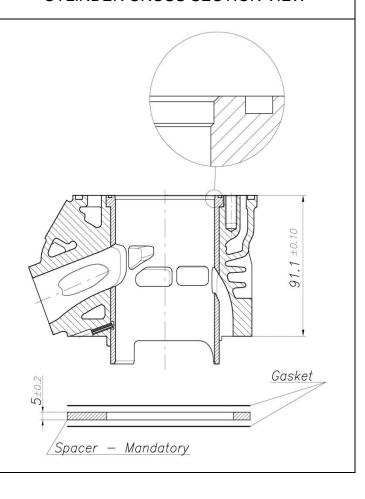
Е	195° ± 2°
F	189° ± 2°
G	122.5° ± 2°
Н	125.5° ± 2°
Ĩ	121° ± 3°

O ANGULAR READING BY INSERTING A 0.2x5mm GAUGE

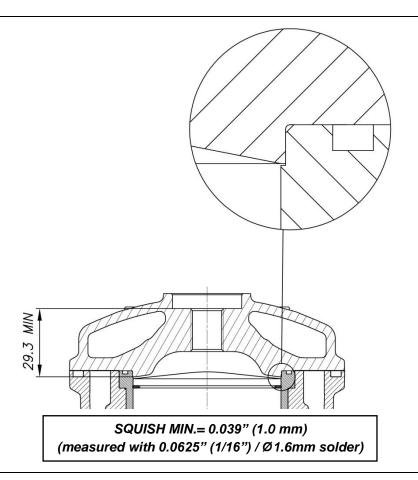
#### CYLINDER BASE VIEW



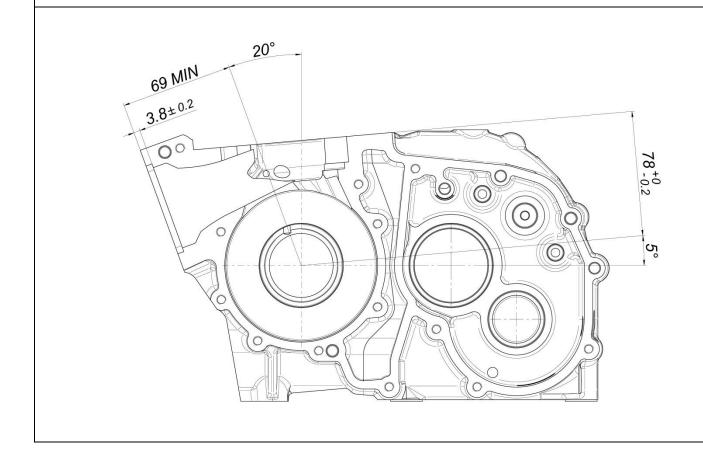
#### CYLINDER CROSS SECTION VIEW



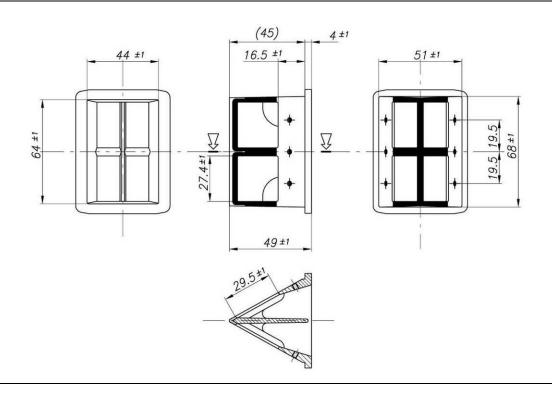
# COMBUSTION CHAMBER VIEW



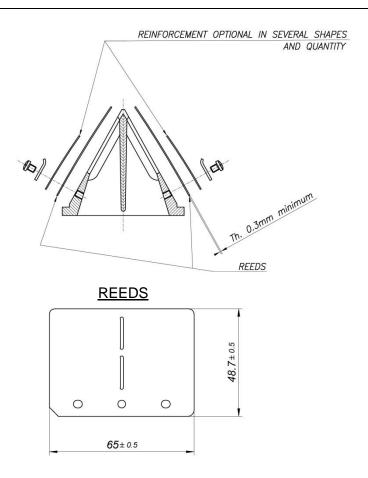
#### CRANKCASE INSIDE VIEW



#### **REED VALVE**

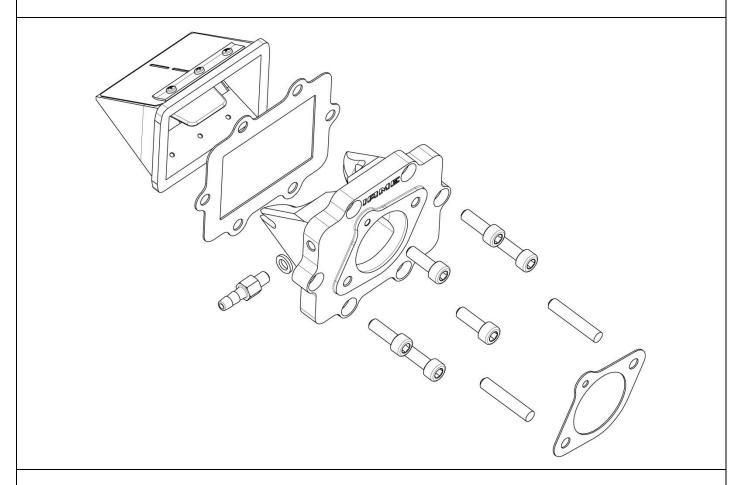


# ASSEMBLY OF REED VALVE

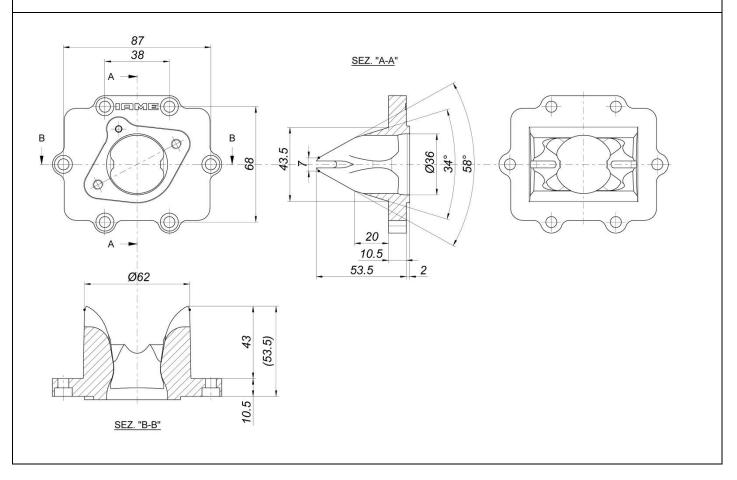


ONLY GENUINE "IAME" CARBON FIBER REEDS ARE PERMITTED

# **EXPLODED DRAWING - INLET SYSTEM**



#### REED VALVE COVER - INLET SYSTEM



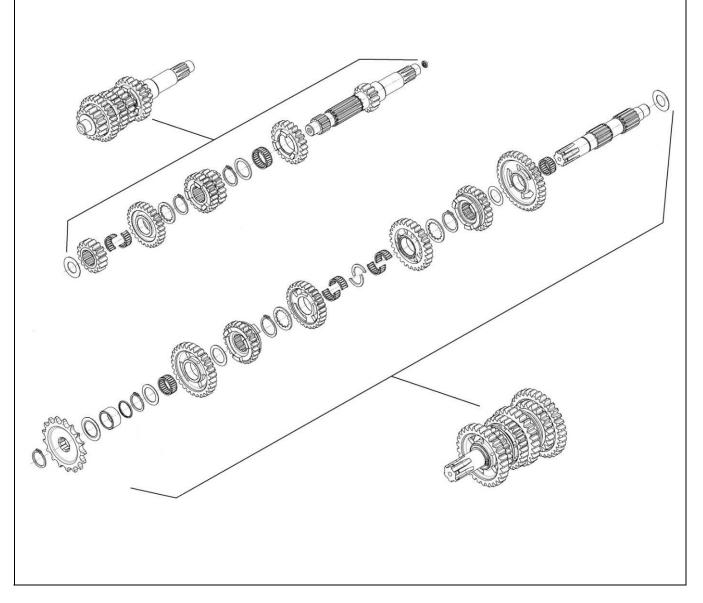
# **GEARBOX**

# Primary coupling - 19/75

#### Gearbox ratios

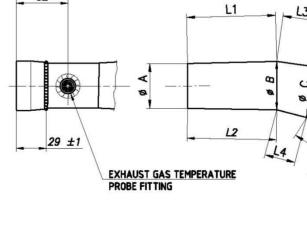
Gear	Primary shaft	Secondary shaft	Reading of values obtained after three engine revs
1 <sup>st</sup> / 1 <sup>ère</sup>	<u>13</u>	33	<u>107.78°</u>
2 <sup>nd</sup> / 2 <sup>e</sup>	<u>16</u>	<u>29</u>	150.95°
3 <sup>rd</sup> / 3 <sup>e</sup>	<u>18</u>	<u>27</u>	182.40°
4 <sup>th</sup> / 4 <sup>e</sup>	22	27	222.93°
5 <sup>th</sup> / 5 <sup>e</sup>	22	23	261.70°
6 <sup>th</sup> / 6 <sup>e</sup>	27	25	295.49°

# EXPLODED DRAWING OF THE GEARS, MAINSHAFT AND SECONDARY SHAFT



# EXHAUST VIEW, PHOTO, MARKING AND DIMENSIONS



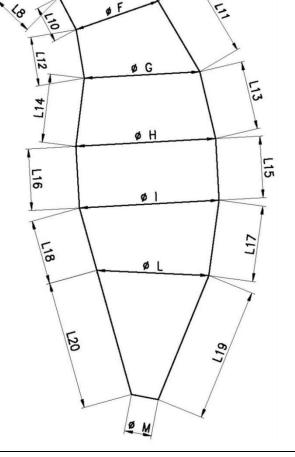


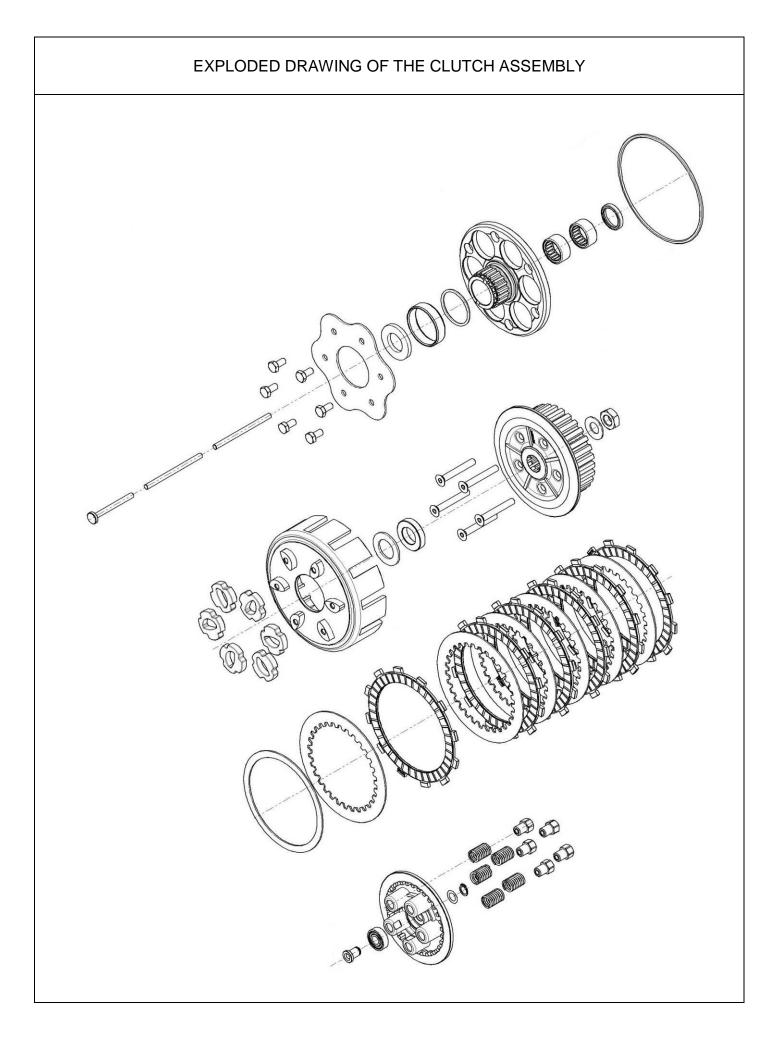
Part	D. MIN.	D. MAX	L. MIN.	L. MAX.
1	ØA 42.6	ØB 48	L2 95	L1 103
2	ØB 48	ØC 53	L4 44	L3 56
3	ØC 53	ØD 65.3	L6 45	L5 60
4	ØD 65.3	ØE 79	L8 41.5	L7 60
5	ØE 79	ØF 95	L10 42	L9 60
6	ØF 95	ØG 112	L12 39	L11 53
7	ØG 112	ØH 137	L14 51	L13 74
8	ØH 137	ØI 137	L16 65	L15 65
9	ØL 88.6	ØI 137	L18 84	L17 101
10	ØM 26	ØL 88.6	L20 115	L19 115

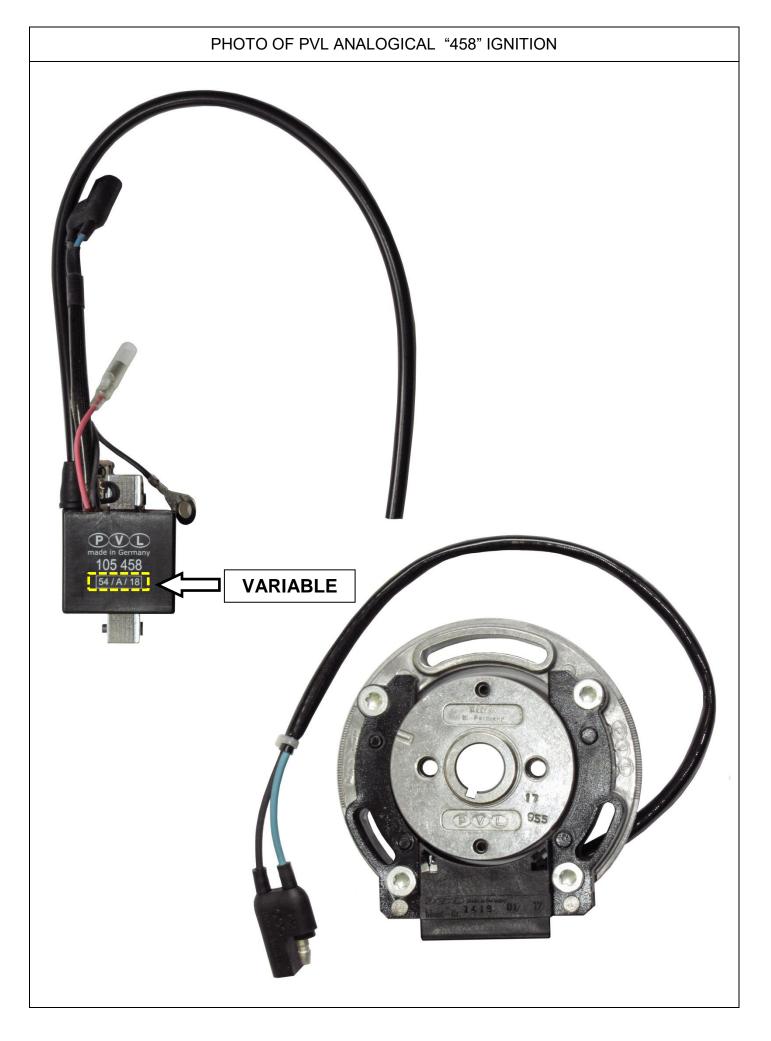
Min. weight 1.09 Kg

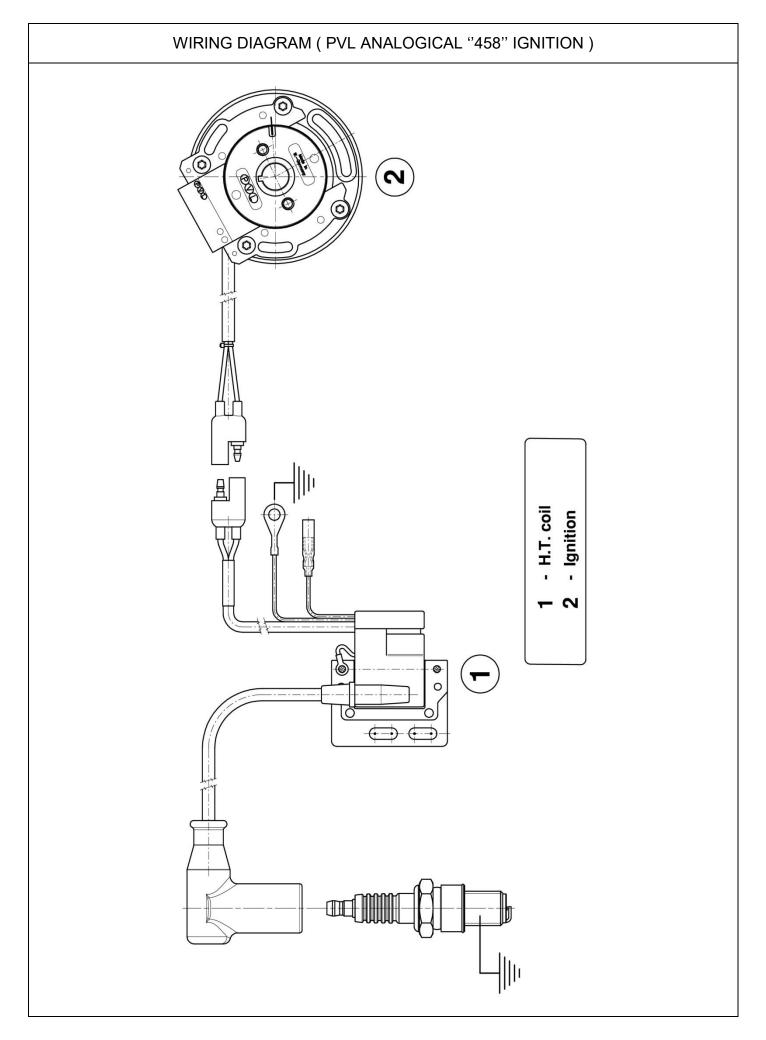
Thickness 0.8 mm ±0.08

Volume= 4120 cm<sup>3</sup> ±5%

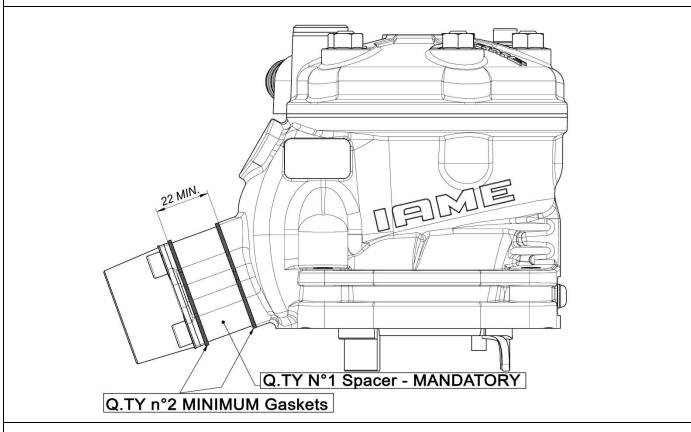




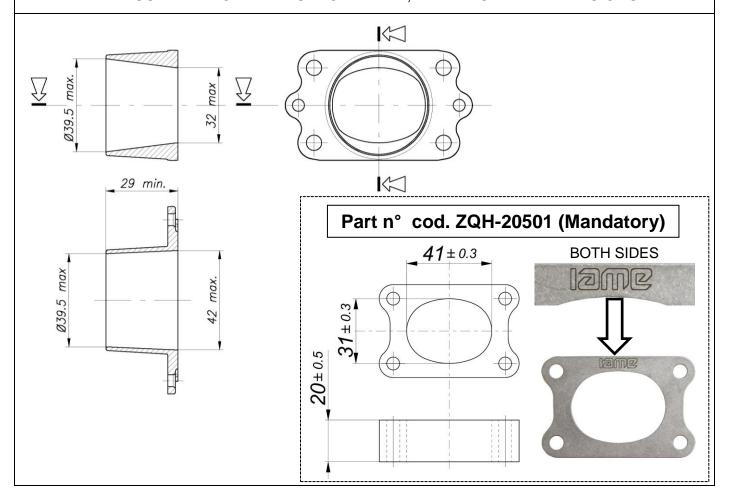




#### MINIMUM DISTANCE BETWEEN EXHAUST MANIFOLD AND CYLINDER



#### EXHAUST MANIFOLD AND SPACER VIEW, MARKING AND DIMENSIONS



#### PHOTO CONROD IDENTIFICATION

#### CYLINDER HEAD PHOTO IDENTIFICATION

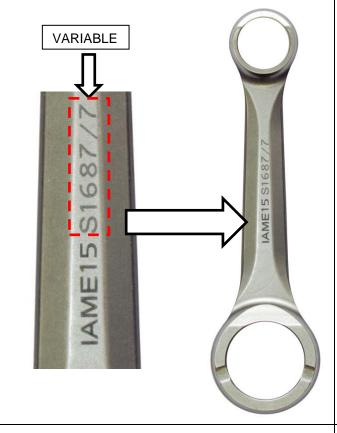
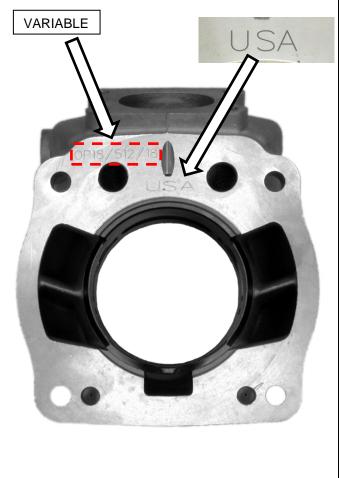




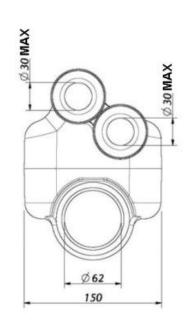
PHOTO OF CYLINDER FROM ABOVE

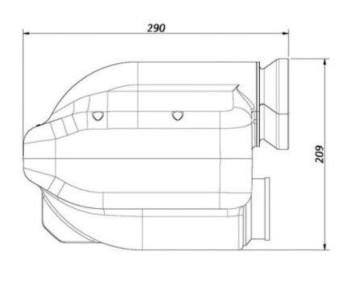
PHOTO OF CYLINDER BASE



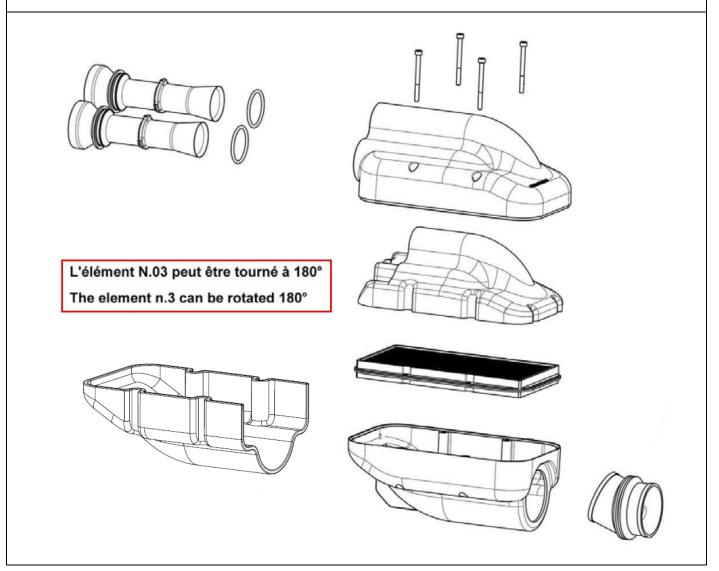


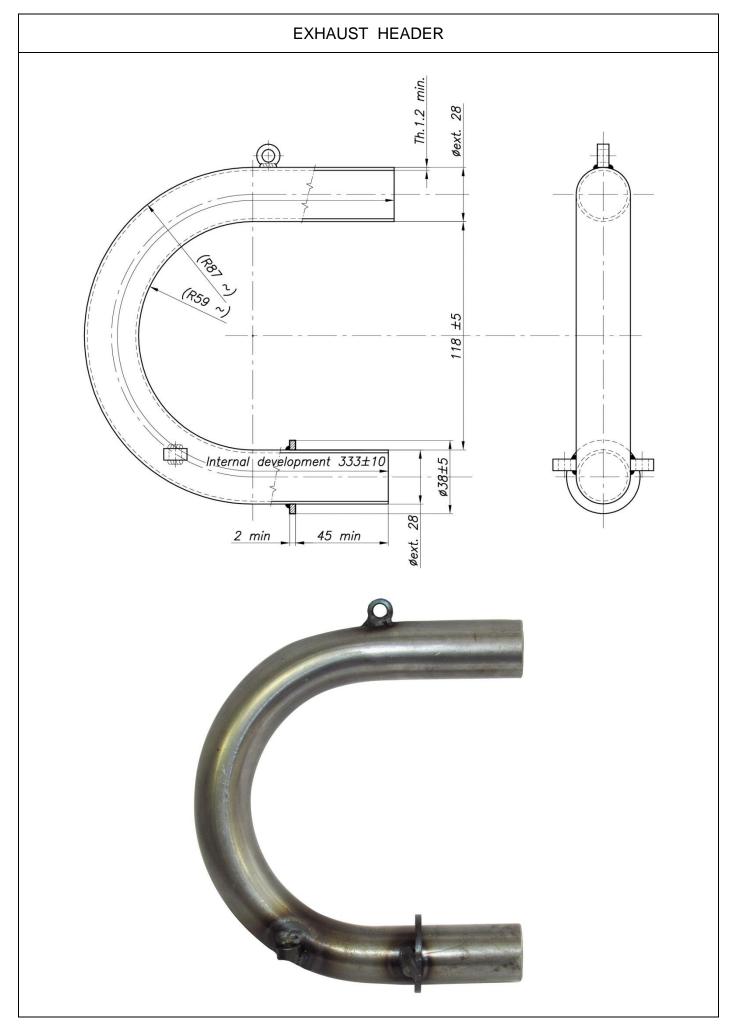
# DRAWING OF AIR BOX - Righetti Ridolfi NOX D.30





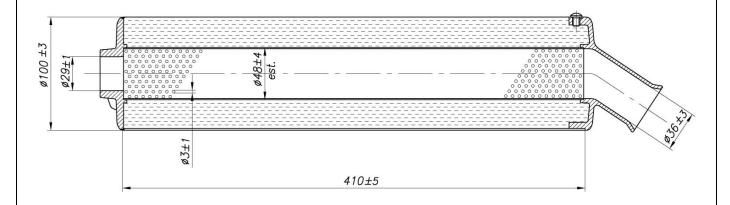
EXPLODED VIEW OF AIR BOX - Righetti Ridolfi NOX D.30





# ELTO SILENCER HOMOLOGATION NUMBER

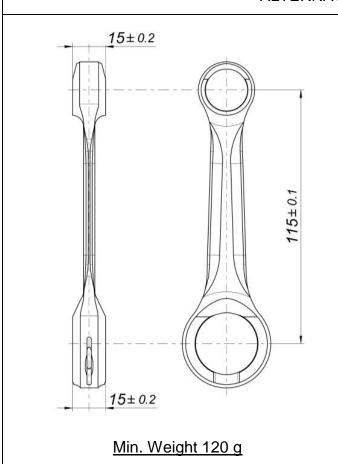


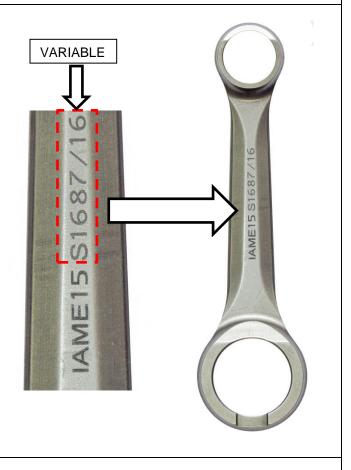




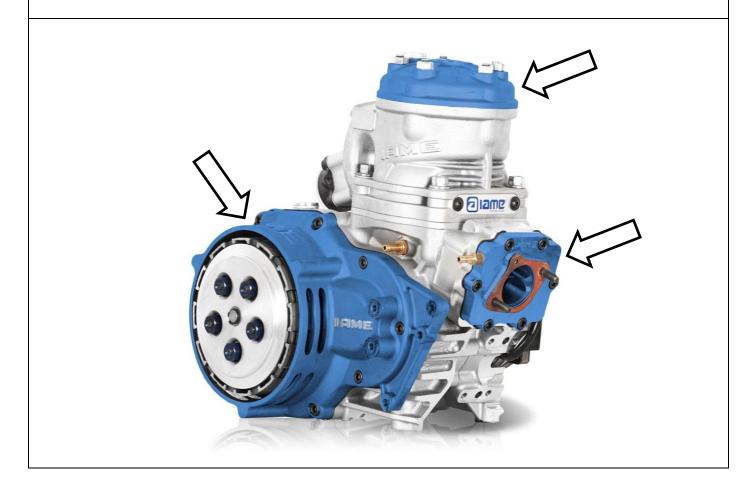
"Elto Racing" Hom. 104 1697 / 13 SS

# ALTERNATIVE CONROD





# ALTERNATIVE COLOURS OF ENGINE COMPONENTS



#### PARTICULARS WITH ALTERNATIVE NEW LOGO "IAME"

#### CYLINDER HEAD

#### **CYLINDER**



**NEW LOGO** 



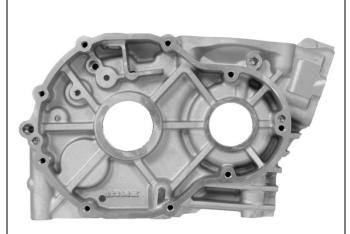
**NEW LOGO** 



SEMICARTER TRANSMISSION SIDE



SEMICARTER IGNITION SIDE



**NEW LOGO** 



**NEW LOGO** 



# PARTICULARS WITH ALTERNATIVE NEW LOGO "IAME" **EXHAUST** SHIFT CONTROL LEVER **NEW LOGO NEW LOGO** SELECTOR COVER **COVER CLUCH SIDE NEW LOGO NEW LOGO**

PARTICULARS WITH ALTERNATIVE NEW LOGO "IAME"

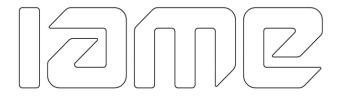
# THE OTHERS COMPONENTS OF ENGINE THAT ARE MARKED (LASER OR PUNCHING) UNTIL TODAY WITH LOGO OR WRITTEN "IAME"



<u>or</u>

# **IAME**

# **NOW COULD BE MARKED WITH NEW LOGO "IAME"**



<u>or</u>



<u>or</u>

