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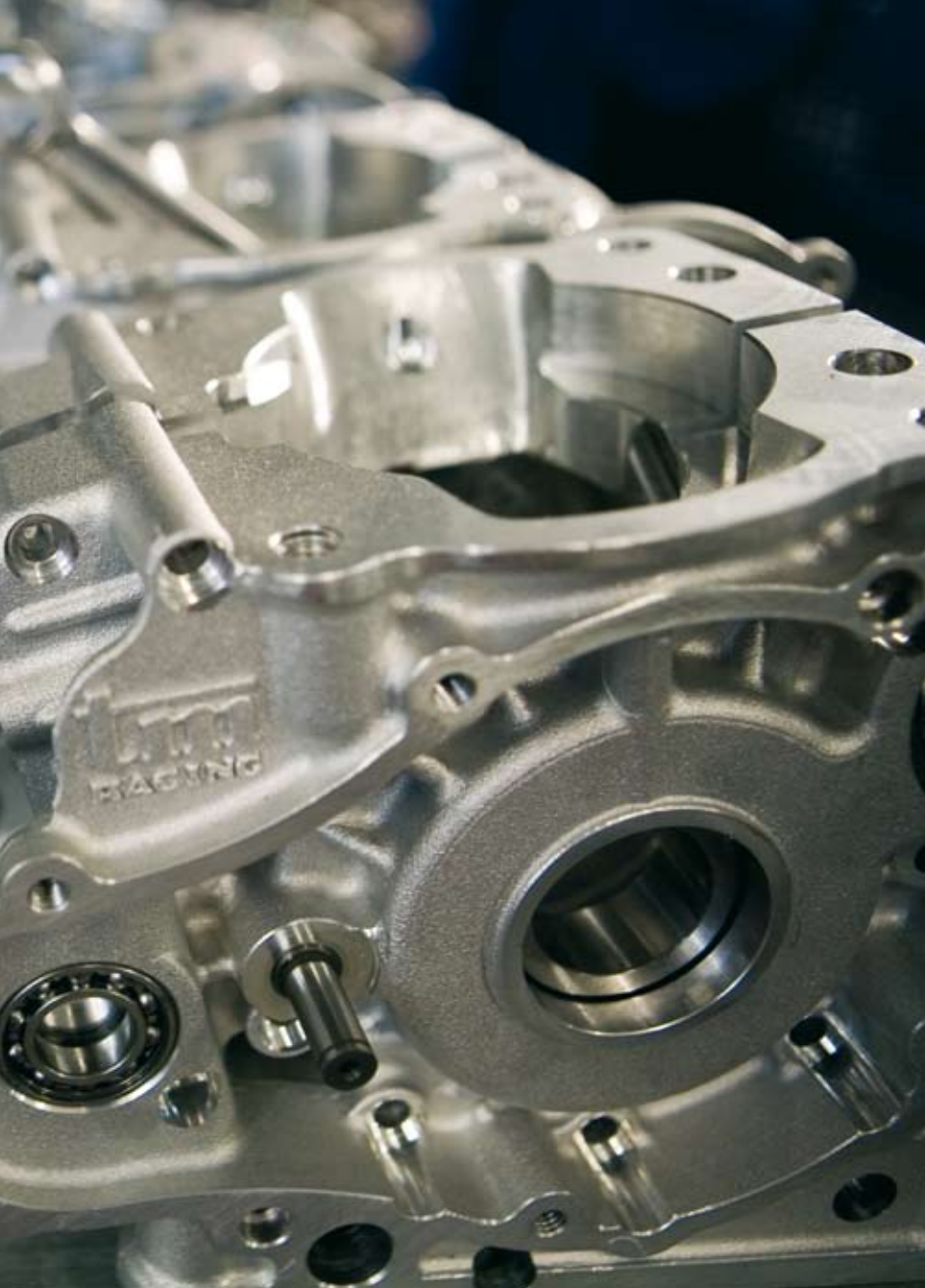
Survivors

Mechanical gear class engines follow traditions



Compared the remarkable evolution (or revolution) with the direct drive KF engines, we have the respect of tradition, natural balanced development of protagonists of a class with several positive aspects, like the number of drivers attracted by an engine which is now perhaps the simplest one available on the market. To make a match for the KF, the technical regulations have practically just changed the denomination of the Super ICC and ICC classes to KZ1 and KZ2, which stand apart only for tyre compound available at the end of the week's racing. So, many will be happy to see the fixed spark advance ignition confirmed and not having to have anything to do with starter units, countershafts and exhaust valves that have become common to KF engines. There is one section of karting that seems to be surviving the imposed changes that have come from the governing body, and still have

the old taste. In this scene we find some of the manufacturers that we already know, who haven't given birth to new brands, and no new businesses have been set up in this field either. This time too, manufacturers are of Italian origin, all except for the Czech Vm Motors. Work carried out by designers has been aimed towards a very fine accurate job of refining and improving, or towards a natural adapting to a technical target for a more traditional class, or because the evolution of this sort of engine is now reaching a peak, which is also slowed down by a slow diffusion, due to the fact that such engine are now only seen in the 125cc motorcycling racing classes, while on dirt tracks and endurance it has almost been entirely taken over by the 250 4-stroke, even if many still prefer the 2-stroke for its undisputed simpleness. Most of the engines presented derive, in looks especially, from their predecessors made for the 1004-2009 homologation.



CRS P1

The factory in Montecchio, Puglia, which has always stood out for its craftsmanship now present the CRS P1, a natural successor of the S1. In looks it is very similar, while some changes have been made inside, timing diagram is different and expansion design so as to get a more fluid response on accelerating. Always looking to overall improvement on track, gear ratios have been revised, 2nd and 3rd gear now shorter. Continuing in the drive section, there's a dry multi-disc clutch that goes from 6 to 5 lined discs. The P1 has a round upper part with a clear head cover line seeing that to take apart all you have to do is take out 3 grub nuts housed on the

outskirts. In the front part there is the reed pack characterised by 2 single flap reeds made of carbon fibre, layout is horizontal. On the left hand side there's a curved cooling circuit sleeve that connects the base to cylinder base.

Maxter MXV

Maxter too has decided on improvements and specific operations carried out especially to improve engine breathing. The main difference lies in the reed pack, now vertical, no longer horizontal, and important changes have been made to gear selector. It is stronger and engages accurately. Then there's the version with the horizontal pack, now denominated MXO, but

CRS P1	
Manufacturer	CRS S.r.l.
Model	P1
Homologation	2007-2015 52/M/15
Induction	Single flap reed (1 per disc) carbon fibre
Cooling	Liquid
Diameter x Stroke – mm	56,00x50,60
Displacement – cm ³	124,62
Connecting Rod (length) – mm	108
Piston (N. of segments/Seg height/pin Ø mm)	Vertex, 1-1-16
Piston/cylinder allowance - 1/100 mm	5,5-6,5
Clutch	Dry, 5 lined discs + 4 steel
Gears	6 ratios
Ignition	PvI
Spark plug	Ngk B10EG
Mixture - %	4, Shell Advance X
Miscela (tipo o marca olio) - %	4 con olio sintetico 100%
Silenziatore	Elto
Cost (VAT included) (state with which accessories)	Euro 3.840,00 Muffler, silencer, plate, brackets, carburettor, petrol pump

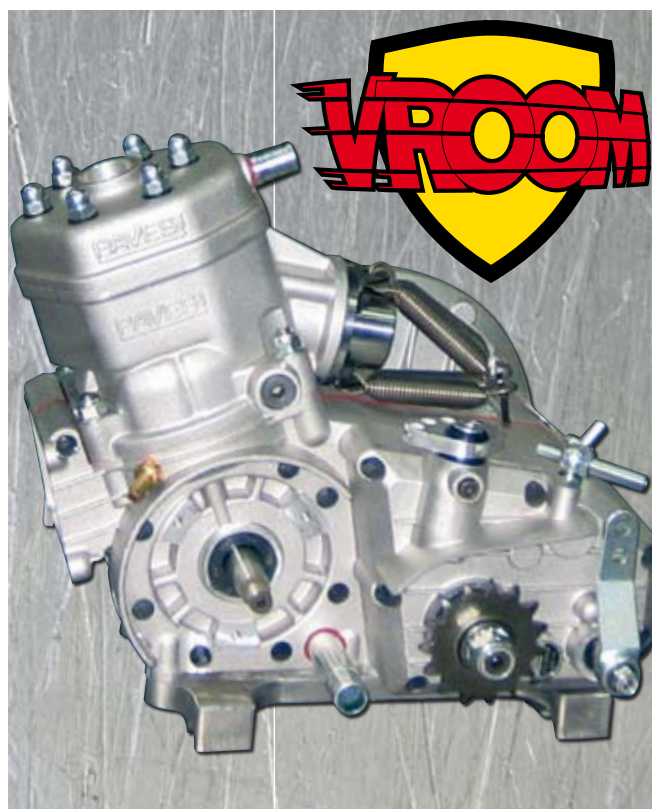


MAXTER MXV	
Manufacturer	Maxter S.r.l.
Model	MXV
Homologation	2007-2015 45/M/15
Induction	Reeds, 6 carbon flaps
Cooling	Liquid
Diameter x Stroke – mm	54,00 x 54,45
Displacement - cm ³	124,77
Connecting rod (length) – mm	110
Piston (N. segments/seg. height/pin Ø) mm	1-1-15
Piston/cylinder allowance - 1/100 mm	6-7
Clutch	Dry, 5 lined discs + 5 ducts
Gears	6 ratios, 400 cm ³
Ignition	Pvl
Spark plug	Ngk B10EGV
Mixture - %	4 Elf HTX 909
Cost (VAT included) (state with which accessories)	Not available

which was homologated for 2004-2009. In this case too, appearance is basically the same. The thermal part, which comes out of a very clean base, is roundish and in the front part there's an interesting innovation, vertical reed pack. The clutch has an external plate, which is anodised in black, like the head cover.

Pavesi 25° Evolution

Looking at it, you don't see any difference compared to the Pavesi 25° from which it derives. A lot has been done inside though. It has been refined looking to improved balance between



PAVESI 25° EVOLUTION	
Manufacturer	Pavesi motori
Model	25° Evolution
Homologation	2007-2015 23/M/15
Induction	Reed
Cooling	Liquid
Diameter x Stroke – mm	54,00x54,35
Displacement - cm ³	124,47
Conrod (length) – mm	110
Piston (N. of segments/seg. height/pin Ø) - mm	1-1-15
Piston/cylinder allowance - 1/100 mm	6
Clutch	In oil bath, 16 discs, 180 cm cm ³
Gears	6 m, 220 cm ³
Ignition	Homologated
Spark plug	Bosch W07CS
Mixture - %	5
Cost (VAT included) (state which accessories)	Not available

running performance and reliability. That's why the driving shaft is balanced differently, however maintaining the same mass, in order to get improved acceleration and corner exit pull. The five different gears have a different ratio, there's a 6th gear that is now a bit shorter. Different design for the muffler, which manages to maintain a full delivery even at maximum revs.

SGM G.A.207

As for the others, there are few differences, but it has been modified inside. Therefore the driving shaft is heavier, and balanced with a

**SGM G.A.207**

Manufacturer	Severi Racing Kart & C.
Model	G.A. 207
Homologation	2007-2015 36/M/15
Induction	6 carbon fibre reeds
Cooling	Liquid
Diameter x Stroke – mm	54,00x54,40
Displacement - cm ³	124,58
Conrod (length) - mm	113
Piston (N. of segments/seg. Height./pin Ø) - mm	1-1-15
Piston/cylinder allowance - 1/100 mm	5 min
Clutch	Dry, 6 lined discs and 5 ergal or steel
Gears	6 ratios
Ignition	Pvl
Spark plug	Ngk B10EG
Mixture - %	4, Erf 976
Cost (VAT included) (state with which accessories)	Euro 4.678,80 Dell'Orto VSH30 carburettor, muffler with carbon joint and silencer

tungsten insert so as to get better acceleration. Head and cylinder, including ducts and ports are all new. On request, you can get tear-protectors on the clutch, minimum difference in cost. This is a manufacturing difference that gives better than average results; official retailers get a better chance of dealing with their respective customers, but then you mustn't forget that it is a product made for racing.

TM K9C

Backed by a long series of success, this is very



probably the factory to beat in the KF classes, first with the KV, then with the K9. And in honour of the tradition mentioned at the start, there's the K9C. Special attention has been given to fluid mechanics, for which the induction duct is tilted upward more immediately after the reed pack so as to shorten the flow of fluid drawn in towards the transfer. Innovated transfer ducts too, especially that of the TT and exhaust, whose end has an oval in section for a certain tract before the port, and profile and tilt is different too. There's an absolutely new cylinder. To get a



TM K9C	
Manufacturer	Tm Racing
Model	K9C
Homologation	2007-2015 39/M/09
Induction	Reed
Cooling	Liquid
Diameter x Stroke – mm	54,00x54,40
Displacement - cm ³	124,52
Conrod (length) – mm	109,8
Piston (N. of segments/segment height/ pin Ø) - mm	1-1-15
Piston/Cylinder allowance - 1/100 mm	7-8
Clutch	Dry 9 discs 5 lined + 4 steel
Gears	6 m, oil quality 0,500 I 10W
Ignition	Pvl
Spark plug	Bosch W07CS
Mixture - %	4, Bel Ray
Cost (VAT included) (state with which accessories)	Euro 3.300,00 Engine muffler bracket with silencer, Dell'Orto carburettor VHSH30 spark plug

complete job done, the muffler is different too; the cones in the end part are different. Gears and crank mechanism have remained the same. On request, you can have different degrees of preparation concerning driving shaft, timing case, reeds, ...

VM M 02/B

Perhaps not so well known in Italy, but VM is a successful trademark abroad, known for its reliability and performance. It started out in 1993 with Vladimir Vacha. The 125 m 02-B is the third



VM M 02/B	
Manufacturer	Vm Motor
Model	125 M 02/B
Homologation	2007-2015 53/M/15
Induction	Reed
Cooling	Liquid
Diameter x Corsa – mm	53,99x54,50
Displacement - cm ³	124,77
Conrod (length) - mm	110
Piston (N. of segments/seg. height/pin Ø) - mm	1-1-15
Piston/cylinder allowance - 1/100 mm	5 min
Clutch	Dry lined discs and 5 or steel
Gears	6-7
Ignition	Pvl
Spark plug	Ngk B10EG o Brisk L10S
Mixture- %	3,5, Elf HTX 976
Cost (VAT included) (state which accessories)	Not available

model made and takes over from the previous 125 o 2. It maintains the same gears, while the cylinder has been changed and also the transfers, The driving shaft is different too just like overall weight. All the changes applied have resulted in improved delivery power.

The line of the 02-B is compact and at the same time elegant, based on the flow of the casing, perhaps a bit robust in the rear part. On the right hand side, according to the most common design, you have a dry multi-disc clutch.

The characteristic sizes are standard, with dia-



Vortex RVX	
Manufacturer	Vortex
Model	RVX
Homologation	2007-2015 21/M/15
Induction	Reed
Cooling	Liquid
Diameter x Stroke – mm	54,00x54,50
Displacement - cm3	124,81
Conrod (length) - mm	110
Piston (N. segments/seg. height/pin Ø - mm)	1
Piston/cylinder allowance 1/100 mm	8,5
Clutch	A secco, 5 + 6 guarniti
Gears	6
Ignition	Pvl 105 458.05
Spark plug	Ngk B10EG
Mixture - %	3, ELF 909
Cost (VAT included) (state which accessories)	Euro 3.960,00 complete with Dell'Orto VHS30 carburettor, homologated muffler, petrol pump and engine support plate

meter and stroke measuring 53.99x54.50 while the conrod is 110 mm and ignition is Pvl.

Vortex RVX

The main innovation lies in the tilt of the thermal group, now almost vertical in order to improve fluid load drawn in. For this same reason, the base is nearly completely new, more compact and lighter. The reed pack is fully developed and the new thermals, together with a careful study of cooling liquid flow, according to Vortex experts, have improved overall yield. Details



are fine finished. Clutch cap is lighter and closer fitting so as to protect the mechanical parts, the clutch cable is easier to reach for adjusting, suction pressure intake from left to right hand side of the casing to install petrol pump on appropriate brackets. Airflow passage has also been improved thanks to a new opening under the reed pack.