



MOKI ENGINES

Instructions and Information

The MOKI story

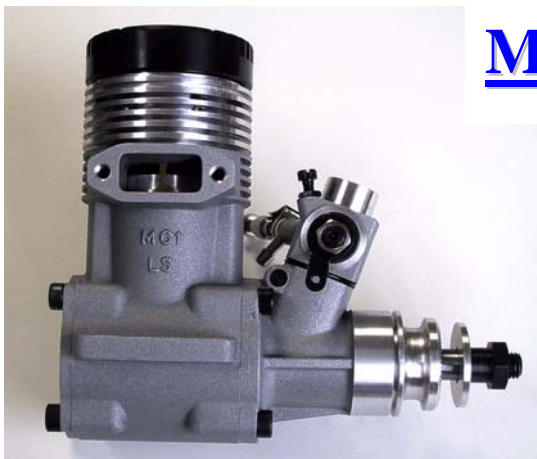
MOKI was 45 years old this year. In 1957, the MOKI plant was established by the Ministry of Defense for the development of model engines for the Hungarian modeling sport. The purpose was developing and producing themes and models for the training of young modelers as well as flying models and engines for special military aims. The name MOKI comes also from this purpose – the name stands for Model Testing Institute. MOKI continues to produce engines from the original location at the Budaörs airport.



Until 1989, airplane, car and boat racing engines, of very high quality and power, were made only for Hungarian competitors. MOKI engines were completely unavailable in the foreign markets. However, these conditions allowed for the exacting development work that was needed.

During the last 45 years, we acquired considerable experience and practice in the production and development of competition engines. After the political and economic changes of Hungary in 1989, the plant did continue production. However, our production is now focused on the requests of the open market with our preference of serving the demands of modelers in need of the larger size engines.

The main characteristics of the MOKI engines are: reliability, excellent quality, excellent power for a long time and the classical elegant form. Independent testing (USA, Germany, Italy, Australia) has certified these attributes as well as the many successes achieved in competitions. Our goal is to preserve these values in the future.



Moki .61 Long Stroke (10cc)

The MOKI .61 (10 cc) Long Stroke engine is currently available in limited numbers only. ABC piston / cylinder, standard fuel system. Very high quality construction.

Moki 135 Glow (22.6 cc)



displacement (ccm)	22,6
bore (mm)	31,5
stroke (mm)	29
R.P.M.	13,000
power (kW/HP)	2,86/3,9
weight (g)	855

Moki 185 Glow (29.8 cc)



displacement (ccm)	29,8
bore (mm)	35
stroke (mm)	31
R.P.M.	12,000
power (kW/HP)	3,0/4,1
weight (g)	1

Moki 210 Glow (34.6 cc)



displacement (ccm)	34,6
bore (mm)	36
stroke (mm)	34
R.P.M.	10,000
power (kW/HP)	3,3/4,5
weight (g)	1

Moki 360 Twin Glow (58 cc)



displacement (ccm)	2x29,
bore (mm)	35
stroke (mm)	31
R.P.M.	11,00
power (kW/HP)	5,7/7,8
weight (g)	2270

Operating your engine

BREAK-IN RECOMMENDATIONS

All MOKI engines have hard chrome cylinders and therefore require extended break-in periods. The minimum time is 30 minutes, with best results at 1 hour or more. Make sure that you do not run the engine with a lean mixture for the first 15-20 minutes. After that, you can lean it out briefly and see if it will hold the setting without sagging. When the engine will hold a lean setting without slowing, it can be considered to be broken-in.

The running in of model engines should take place on a block or test stand. If a stand is not available, the testing can be done in the model, however you must ensure the model is firmly held in place.

The model engine should be fixed strongly and securely to the test stand or installed into the model.

The usual break in period of the engine is a minimum of 30 minutes, during which time the adequate cooling of the engine should be provided. (After every 5 to 10 minutes of running stop the engine and allow to cool before starting again)

It is absolutely necessary that during the first 15 to 20 minutes of running the engine, that it have a rich fuel mixture. The fuel mixture should be so rich that the engine should reach about 50 to 60% of its maximum number of revolution at full throttle.

For running in and operation, only fuel of good (commercial) quality should be used. Fuel of uncertain origin may damage the engine.

For the running in period, a fuel of the following composition is recommended: 20% lubricant Comprising – 15% Cool Power Blue Oil, plus 5% Cool Power Castor oil (eg. Fun Power Pre-mix) +80% methanol fuel for the break in period. Following the running in, Cool Power synthetic Blue oil – straight or with some Castor oil for a total of 18 % - 20% lubricant may be used . 5 to 10% nitromethane should also be added after the run in period.

It is important that you use the correct size and pitch of propeller on your MOKI engine. See the following table and get the recommendation of the prop manufacturer, or ask your model dealer. If your engine is over a .40 size, use only wood ,fiberglass or carbon propellers - not plastic. Be sure to tighten the prop nut securely and never try to start a MOKI engine by hand.

Engine Displacement ccm		Suggested dimensions of the propeller *
Cu.in	Ccm	
135	22,5	16 x 6 16 x 8
180	30	18 x 8 20 x 6
210	35	18 x 8 20 x 7

The size of the propeller also depends on the type of the model and on the application.

Safety

The operation of model engines requires experience and practical knowledge. If you do not have the required knowledge, contact an experienced flying club for assistance.

SAFETY TIPS

- Keep small children and anyone who might be hurt when running your engine a good distance away.
- Be sure that your engine is properly mounted in its test stand or airplane so that it cannot vibrate loose.
- It must be made certain that the propeller is adequately fixed!
- Do not use a cracked, broken or repaired propeller! (For model engines with a cylinder capacity of more than 6,5 ccm, the use of propellers made of wood, fiberglass or carbon is recommended)
- Keep your face and body away from the path of the prop as you start and run your engine.
- The engine should be started by means of a starter! Keep your hands away from the prop as much as possible.
- To stop your engine, cut off the fuel supply or adjust the throttle to close off the air supply.
- Never throw anything into a running engine to stop it.
- Never alter, repair, bend or shave a prop.
- We recommend that you use safety glasses when starting or running your engine.
- Do not run your engine in an area containing loose gravel or sand. Do not operate the engine in a dusty or sandy environment. This can seriously damage the engine and void the warranty
- Avoid loose clothing that could become caught in the prop.
- Make certain that the glow plug wire is out of the way of the prop.
- Keep all of your engine fuel in a safe place, away from any danger of sparks or excessive heat.
- The fuel of model engines is potentially hazardous to your health and is flammable. Adequate storage must be provided!
- During the operation of the model engine smoking as well as the use of open flame are prohibited! Do not smoke while working on or running the engine or while handling with fuel.

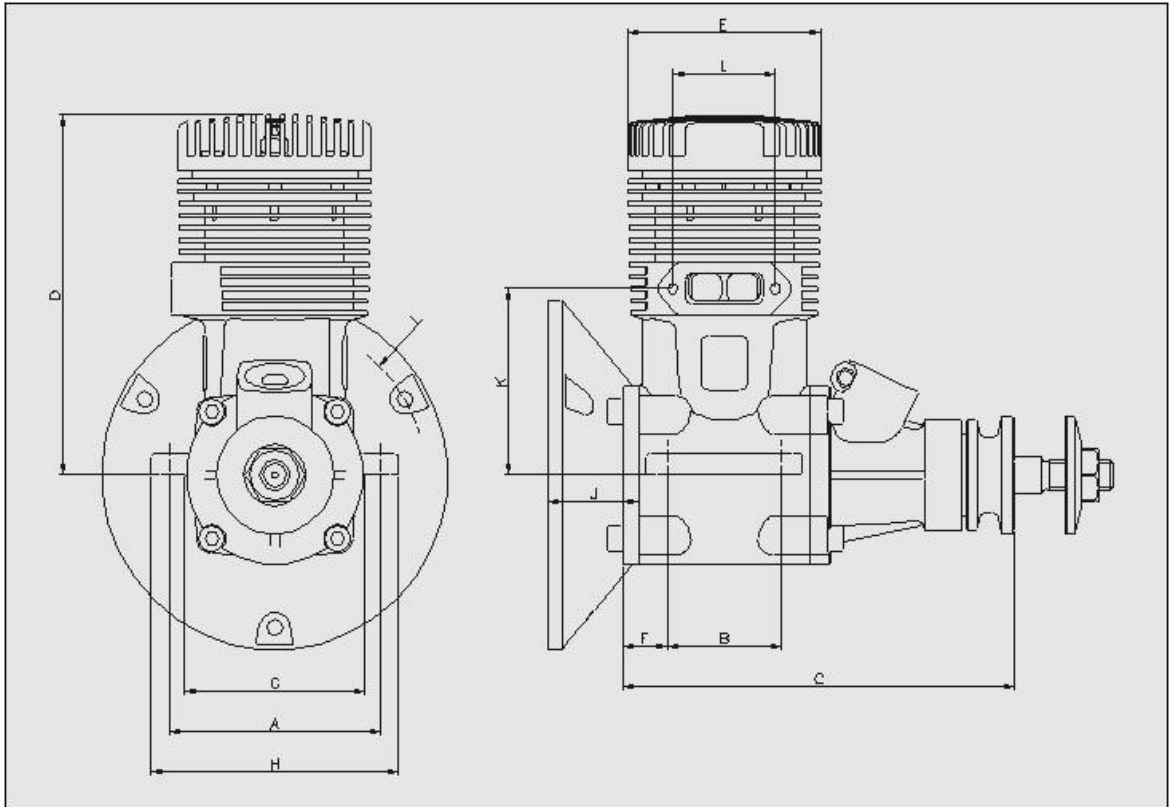
- Never run your engine in an enclosed place (garage, basement, etc.) Carbon monoxide is deadly! Model engines develop considerable heat. Do not touch any part of your engine until it has cooled.
- The model engine should be operated only in an environment, where it will not disturb others. Please use a silencer!

DIMENSIONS OF MOKI ENGINES

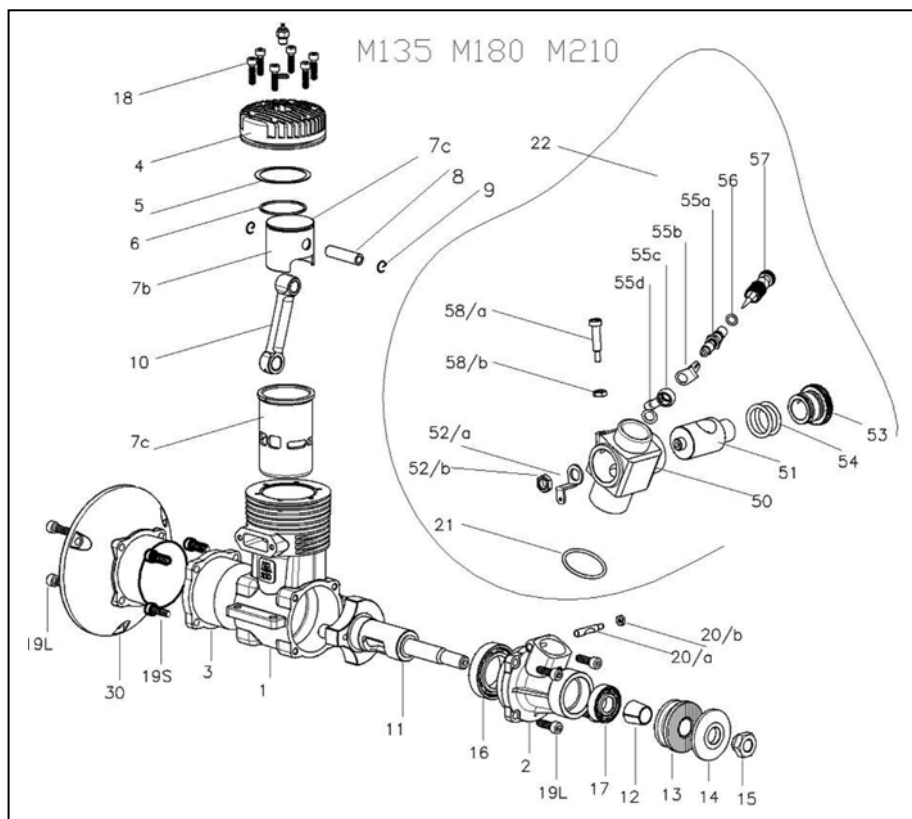
	A	B	C	D	E	F	G	H	I	J	K	L
M 135	60	35	112	102	57	9	51	71	85	22,5	54	40
M 180	68	36	126	112	62	10	56	80	100	32	56	34
M 210	70	38	127	118	64	11	60	82	100	30	61	34
M 360	68	36	195	112	62	-	56	80	-	-	56	34

TECHNICAL DATA OF MOKI ENGINES

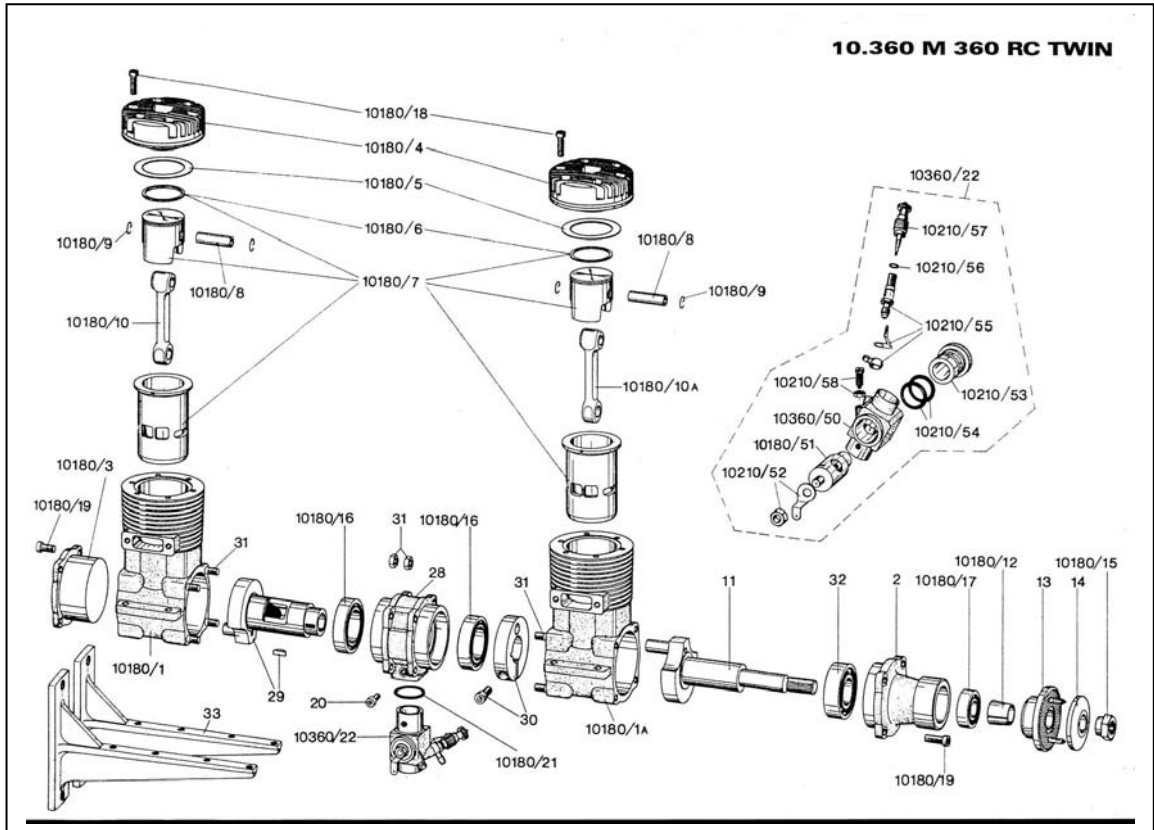
	displace- ment ccm	bore mm	stroke mm	R.P.M.	power kW/HP	weight gramm
M 135	22,6	31,5	29	13,000	2,86/3,9	855
M 180	29,8	35	31	12,000	3,0/4,1	1170
M 210	34,6	36	34	10,000	3,3/4,5	1275
M 360	2x29,82	35	31	11,000	5,7/7,8	2270



Moki Engine Parts – 135-180-210



Moki Engine Parts – 360



MOKI ENGINES SPARE PARTS LIST				
	M 135	M 180	M 210	M 360
Crankcase	M135- 1	M180-1	M210- 1	M180-1
Crankcase, front				M180-1A
Shaft support	M135- 2	M180-2	M210- 2	M360-2
Rear cover	M135- 3	M180-3	M210- 3	M180-3
Cylinder head RC	M135- 4	M180-4	M210- 4	M180-4
Cylinder head gasket	M135- 5	M180-5	M210- 5	M180-5
Piston ring	M135- 6	M180-6	M210- 6	M180-6
Cylinder-Piston RC	M135- 7	M180-7	M210- 7	M180-7
Wrist pin	M135- 8	M180-8	M210- 8	M180-8
Wrist pin clips (2)	M135- 9	M180-9	M210- 9	M180-9
Conrod	M135-10	M180-10	M210-10	M180-10
Conrod for front crankcase				M180-10A
Cranksaft	M135-11	M180-11	M210-11	M360-11
Cone	M135-12	M180-12	M210-12	M180-12
Propeller housing RC	M135-13	M180-13	M210-13	M360-13
Propeller washer	M135-14	M180-14	M210-14	M360-14
Propeller nut	M135-15	M180-15	M210-15	M180-15
Rear ball bearing	M135-16	M210-16	M210-16	M180-16
Front ball bearing	M135-17	M210-17	M210-17	M210-17
Head screw set	M135-18	M180-18	M210-18	M180-18
Cover screw set	M135-19	M180-19	M210-19	M180-19
Carburettor lock screw (2)	M135-20	M180-20	M210-20	M360-20
"O"-ring for carburettor	M135-21	M180-21	M210-21	M180-21
RC carburettor complete	M135-22	M180-22	M210-22	M360-22
Valve support				M360-28
Rear rotor				M360-29
Disc + screw				M360-30
Screw set for valve support				M360-31
Rear ball bearing				M360-32
Engine mount	M135-30	M180-30	M210-30	M360-33
Carburettor housing	M135-50	M180-50	M210-50	M360-50
Throttle	M135-51	M180-51	M210-51	M180-51
Throttle lever	M051-52	M051-52	M051-52	M051-52
Idle adj. barrel	M135-53	M210-53	M210-53	M210-53
"O"-ring set for idle adj.	M135-54	M210-54	M210-54	M210-54
Spray bar set RC	M135-55	M210-55	M210-55	M210-55
"O"-ring for needle valve	M135-56	M135-56	M135-56	M135-56
Needle valve RC	M135-57	M210-57	M210-57	M210-57
Throttle screw	M135-58	M210-58	M210-58	M210-58

Distributed in Australia By :-



Performance Hobbies

135 Shannon Ave Geelong West VIC 3218 Ph 03 52224201 Fax 03 52231257

International Phone 61 352 224201 Fax 61 352 231257

E Mail ; sales@tates.com.au Web ; www.tates.com.au ABN 80007437523