

TECHNICAL DATA – ENGINE 250/300 SX, MXC, EXC 2004

Engine	250 SX	250 EXC	300 MXC/EXC
Design	Liquid-cooled single-cylinder two-stroke engine with KTM Twin Valve Control exhaust system and KTM Torque Chamber		
Piston displacement	249 ccm		293,15 ccm
Bore / stroke	66,4 / 72 mm (2.62 / 2.84 in)		72 / 72 mm (2.84 / 2.84 in)
Fuel	unleaded fuel with at least RON 95 (USA = Premium RON 91), mixed with high grade two stroke oil (Motorex Cross Power 2T)		
Oil / gasoline ratio	1:40 – 1:60 when using high grade, two- stroke oil. When in doubt, please contact your importer or use 1:40 mix ratio to be on the safe side		
Crankshaft bearing	1 deep-groove ball bearing / 1 cylinder roller bearing		
Connecting rod bearing	needle bearing		
Piston pin bearing	needle bearing		
Piston	cast piston		
Piston ring	one plain compression rings	two plain compression rings	
Dimension "X" <small>(upper edge piston - upper edge cylinder)</small>	0 + 0,1 mm (0 + 0.004 in)		
Ignition timing	1,9 mm vor OT		
Spark plug	NGK BR 8 ECM	NGK BR 7 ES	
Electrode gap	0,60 mm		
Dimension "Z" <small>(height of the control flap)</small>	48,5 mm (1.9 in) - 0,2 mm (0,008 in)		
TVC start open	5200/min		
TVC fully open	7000/min (red additional spring), 7500/min (yellow additional spring)		
Primary drive	straight cut spur gears, primary ratio 26:72		
Clutch	multiple disc clutch in oil bath, hydraulically operated (Motorex Kupplungs- Fluid 75)		
Transmission	5 speed, claw actuated		
Gear ratio		250,300 EXC	300 MXC
1 st gear	14:28	14:30	14:28
2 nd gear	16:26	17:26	16:26
3 rd gear	18:24	19:23	18:24
4 th gear	21:24	20:20	21:24
5 th gear	22:21	29:23	22:21
Gear lubrication	0,7 l engine oil (Motorex Topspeed 4T 15W50)		
available chain sprockets	13Z / 14Z / 15Z for chain $\frac{5}{8} \times \frac{1}{4}$ "		
Coolant	1.3 liters, 40% antifreeze, 60% water, at least -25 °C (-13 °F)		
Ignition system	KOKUSAN 2K-3	KOKUSAN 2K-3	
Generator output	-	12V 110W	
Ignition system USA (MXC)	KOKUSAN 2K-2		
Generator output	12V 40W		
Carburetor	flat-slide carburetor, carburetor setting see table		
Air- filter	wet foam type air filter insert		

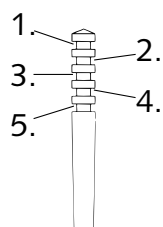
TIGHTENING TORQUES		
Flange bolts - cylinder-head	M 8	35 Nm
Nuts-cylinder base	M 10	35 Nm
Flywheel collar nut	M 12x1	60 Nm
Nut for primary sprocket (LH thread)	M 18x1.5	Loctite 243 + 150 Nm
Nut for inner clutch hub	M 18x1.5	Loctite 243 + 100 Nm
Crankcase and cover bolts	M 6	8 Nm
Swingarm pivot	M 16x1.5	100 Nm
Flat head screw release plate kickstarter	M 6x16	Loctite 648 + 19 Nm
Other screws	M 6	10 Nm
	M 8	25 Nm
	M 10	45 Nm

BASIC CARBURETOR SETTING			
	250SX	250 EXC USA 300 MXC, EXC USA	250/300 EXC-EU 250/300 EXC-AUS
Carburetor	Keihin PWK 38 S AG	Keihin PWK 36 S AG	Keihin PWK 36 S AG
Carburetor setting number	180303	191102	171102
Main jet	165 (162,168)	160 (162)	160 (162)
Idling jet	40 (38)	35	35
Starting jet	85	85	85
Jet needle	NOZG (NOZH/NOZF)	N3EH (N3EW)	N3CJ (N3EW/N3EH)
Needle position from top	IV	III	I
Slide	6,5	7	7
Air adjustment screw open	1	1	3,5
Performance restrictor	-	-	-
Power jet nozzle	-	-	-

VERGASERREGULIERUNG CARBURETOR SETTING **KTM 250, 300 MXC/EXC EUR/USA 2004 KEIHIN PWK S36 AG**

MEERESHÖHE ALTITUDE	TEMPERATUR →		-20°C bis -7°C -2°F to 20°F	-6°C bis 5°C 19°F to 41°F	6°C bis 15°C 42°F to 60°F	16°C bis 24°C 61°F to 78°F	25°C bis 38°C 79°F to 98°F	37°C bis 49°C 99°F to 120°F
	3000 m 10000 ft ↑ 2301 m 7501 ft	LSCHR LD NADEL POS HD	AS IJ NEEDLE POS MJ	1 35 N3EH 3 160	1 35 N3EH 2 160	1 35 N3EW 2 158	1,5 35 N3EW 2 155	2 35 N3EW 1 155
2300 m 7500 ft ↑ 1501 m 5001 ft	LSCHR LD NADEL POS HD	AS IJ NEEDLE POS MJ	1 35 N3EH 3 162	1 35 N3EH 3 160	1 35 N3EH 2 160	1 35 N3EW 2 158	1,5 35 N3EW 2 155	2 35 N3EW 1 155
1500 m 5000 ft ↑ 751 m 2501 ft	LSCHR LD NADEL POS HD	AS IJ NEEDLE POS MJ	1 35 N3EG 4 162	1 35 N3EH 3 162	1 35 N3EH 3 160	1 35 N3EH 2 160	1 35 N3EW 2 158	1,5 35 N3EW 2 155
750 m 2500 ft ↑ 301 m 1001 ft	LSCHR LD NADEL POS HD	AS IJ NEEDLE POS MJ	1 38 N3EG 5 165	1 35 N3EG 4 162	1 35 N3EH 3 162	1 35 N3EH 3 160	1 35 N3EH 2 160	1 35 N3EW 2 158
300 m 1000 ft ↑ Meeresniveau Sea level	LSCHR LD NADEL POS HD	AS IJ NEEDLE POS MJ	1 40 N3EG 5 168	1 38 N3EG 5 165	1 35 N3EG 4 162	1 35 N3EH 3 162	1 35 N3EH 3 160	1 35 N3EW 2 160

LSCHR = Luftregulierschraube offen
 LD = Leerlaufdüse
 POS = Clip Position von oben
 HD = Hauptdüse
Schieber= 7 mit Ausschnitt
Zerstäuber= 7,45 mit Ausschnitt



AS = Air screw open from fully-seated
 IJ = Idling jet
 POS = Clip position from top
 MJ = Main jet
Slide = 7
Atomizer= 7,45

NICHT FÜR STRASSEN BETRIEB

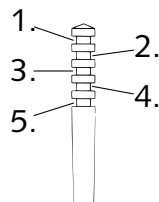
Kraftstoff: Euro-Super bleifrei ROZ 95
NOT FOR HIGHWAY USE
 Fuel: Euro-Super unleaded ROZ 95

VERGASERREGULIERUNG **KTM 250 SX EUR/USA 2004 KEIHIN PWK S38 AG**

CARBURETOR SETTING

MEERESHÖHE ALTITUDE	TEMPERATUR →		-20°C bis -7°C	-6°C bis 5°C	6°C bis 15°C	16°C bis 24°C	25°C bis 38°C	37°C bis 49°C
			-2°F to 20°F	19°F to 41°F	42°F to 60°F	61°F to 78°F	79°F to 98°F	99°F to 120°F
3000 m 10000 ft ↑ 2301 m 7501 ft	LSCHR	AS	1	1	1	1,5	2	
	LD	IJ	40	40	40	38	35	
	NADEL	NEEDLE	NOZG	NOZG	NOZH	NOZH	NOZH	
	POS	POS	4	3	3	2	1	
	HD	MJ	165	165	162	160	158	
2300 m 7500 ft ↑ 1501 m 5001 ft	LSCHR	AS	1	1	1	1	1,5	2
	LD	IJ	40	40	40	40	38	35
	NADEL	NEEDLE	NOZG	NOZG	NOZG	NOZH	NOZH	NOZH
	POS	POS	4	4	3	3	2	1
	HD	MJ	168	165	165	162	160	158
1500 m 5000 ft ↑ 751 m 2501 ft	LSCHR	AS	1	1	1	1	1	1,5
	LD	IJ	40	40	40	40	40	38
	NADEL	NEEDLE	NOZF	NOZG	NOZG	NOZG	NOZH	NOZH
	POS	POS	4	4	4	3	3	2
	HD	MJ	170	168	165	165	162	160
750 m 2500 ft ↑ 301 m 1001 ft	LSCHR	AS	1	1	1	1	1	1
	LD	IJ	42	40	40	40	40	40
	NADEL	NEEDLE	NOZF	NOZF	NOZG	NOZG	NOZG	NOZH
	POS	POS	5	4	4	4	3	3
	HD	MJ	172	170	168	165	165	162
300 m 1000 ft ↑ Meeresniveau Sea level	LSCHR	AS	1	1	1	1	1	1
	LD	IJ	45	42	40	40	40	40
	NADEL	NEEDLE	NOZF	NOZF	NOZF	NOZG	NOZG	NOZG
	POS	POS	5	5	4	4	4	3
	HD	MJ	175	172	170	168	165	165

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