

TECHNICAL DATA - ENGINE 250/300/380 SX / MXC / EXC 2001 (only USA)

Engine	250 SX	250 EXC, MXC	300 EXC, MXC	380 SX	380 EXC, MXC
Design	Liquid-cooled single-cylinder two-stroke engine with KTM Twin Valve Control exhaust system and KTM Torque Chamber				
Piston displacement	249 ccm		297 ccm	368 ccm	
Bore / stroke	66.4 / 72 mm (2.62 / 2.84 in)		72 / 73 mm (2.84 / 2.88 in)	78 / 77 mm (3 / 2.98 in)	
Fuel	unleaded SUPER fuel, research octane no 95, mixed with high-grade two stroke oil (Shell Advance Racing X)				
Oil / gasolin 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		forged 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	2.0 mm (0.07 in) (17 °) BTDC			2.2 mm (0.09 in) (17 °) BTDC	
Spark plug	NGK BR 8 ECM				
Electrode gap	0.6 mm (0.024 in)				
Dimension "Z" <small>(height of the control flap)</small>	49,5 mm (1.95 in)		46 mm (1.7 in)	50.5 mm (1.99 in)	
TVC start open	5000/min		5900/min	5200/min	
TVC fully open	7000/min		7750/min	7200/min	
Primary drive	straight cut spur gears, primary ratio 25:72			straight cut spur gears, primary ratio 26:72	
Clutch	multiple disc clutch in oil bath, hydraulic operated (Shell HF-E15)				
Transmission	5 speed, claw actuated				
Gear ratio		EXC	MXC	EXC	MXC
1 st Gear	15:29	15:29	15:29	15:29	15:29
2 nd Gear	17:27	18:26	17:27	18:26	18:26
3 rd Gear	19:25	19:22	19:25	19:22	19:24
4 th Gear	21:23	21:20	21:23	21:20	21:23
5 th Gear	23:21	23:18	23:21	23:18	23:21
Gear lubrication	0.8 l engine oil 20W-40 (Shell Advance VSX4)				
Available chain sprockets	13t / 14t / 15t for chain 5/8 x 1/4"				
Coolant	1.3 litres, 40% anti freeze, 60% water, at least -25 °C (-13 °F)				
Ignition system	KOKUSAN 2K-4	KOKUSAN 2K-2		KOKUSAN 2K-3	KOKUSAN 2K-3
Generator output	no generator	12V 40W		no generator	12V 110W
Carburetor	flat-slide carburetor, carburetor setting see table 3				
Air-filter	wet foam type air filter insert				

TIGHTENING TORQUES - ENGINE		
Flange bolts - cylinder-head	M 8	35 Nm (25 ft.lb)
Nuts-cylinder base	M 10	35 Nm (25 ft.lb)
Flywheel collar nut	M 12x1	60 Nm (44 ft.lb)
Nut for primary sprocket (LH thread)	M 18x1.5	Loctite 243 150 Nm (110 ft.lb)
Nut for inner clutch hub	M 18x1.5	Loctite 243 100 Nm (74 ft.lb)
Crankcase and cover bolts	M 6	8 Nm (6 ft.lb)
Swingarm pivot	M 14	100 Nm (74 ft.lb)
Flat head screw release plate kickstarter	M 6x16	Loctite 648 19 Nm (14 ft.lb)
Other screws	M 6	10 Nm (7 ft.lb)
	M 8	25 Nm (19 ft.lb)
	M 10	45 Nm (33 ft.lb)

TOLERANCES AND FITTING CLEARANCES	
Piston fitting clearance	0.05 mm (250) 0.06 mm (300) 0.08 mm (380)
Piston ring end gap	0.3–0.4 mm
Connecting rod bearing - radial clearance	0.021–0.032 mm
Transmission shafts end float	0.1–0.2 mm
Clutch springs - length	Ø 2.5 new = 43 mm, minimum length = 42 mm

GASKET THICKNESSES	
Crankcase	0.5 mm
Clutch cover	0.5 mm
Cylinder bottom gasket	as required
Available cylinder bottom gaskets	0.2/0.4/0.5/0.75 mm
Cylinder-head gasket	O-rings

BASIC CARBURETOR SETTING					
	250 SX	250 MXC, EXC	300 MXC, EXC	380 SX, MXC, EXC	
TABLE 3	Carburetor	Keihin PWK 38 AG PJ	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG
	Carburetor setting number	010300	030300	050300	070300
	Main jet	172 (170,175)	178 (175,180)	175 (172,178)	170 (168,172)
	Idling jet	48 (45,50)	45 (48)	45 (48)	45 (48)
	Starting jet	85	85	85	85
	Jet needle	NOZ E (NOZ F)	NOZ G (NOZ H)	NOZ H (NOZ I)	NOZ G (NOZ I/NOZ H)
	Needle position from top	III	IV	III	III
	Throttle valve	7	6,5	6,5	6,5
	Air adjustment screw open	1,5	1,5	1,5	1,5
	Performance restrictor	–	–	–	–
	Power jet jet	55	–	–	–

TECHNICAL DATA - ENGINE 250/300/380 SX / EXC 2001 (all models out of USA)

Engine	250 SX	250 EXC	300 EXC	380 SX	380 EXC
Design	Liquid-cooled single-cylinder two-stroke engine with KTM Twin Valve Control exhaust system and KTM Torque Chamber				
Piston displacement	249 ccm		297 ccm	368 ccm	
Bore / stroke	66.4 / 72 mm (2.62 / 2.84 in)		72 / 73 mm (2.84 / 2.88 in)	78 / 77 mm (3 / 2.98 in)	
Fuel	unleaded SUPER fuel, research octane no 95, mixed with high-grade two stroke oil (Shell Advance Racing X)				
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		forged piston	cast piston	
Piston ring	one plain compression ring	two plain compression rings			
Dimension "X" <small>(upper edge piston - upper edge cylinder)</small>	0 + 0.1 mm (0 + 0.004 in)				
Ignition timing	2.0 mm (0.07 in) (17 °) BTDC			2.2 mm (0.08 in) (17 °) BTDC	
Spark plug	NGK BR 8 ECM				
Electrode gap	0.6 mm (0.024 in)				
Dimension "Z" <small>(height of the control flap)</small>	49,5 mm (1.94 in)		46 mm (1.7 in)	50.5 mm (1.99 in)	
TVC start open	5000/min		5900/min	5200/min	
TVC fully open	7000/min		7750/min	7200/min	
Primary drive	straight cut spur gears, primary ratio 25:72			straight cut spur gears, primary ratio 26:72	
Clutch	multiple disc clutch in oil bath, hydraulic operated (Shell HF-E15)				
Transmission	5 speed, claw actuated				
Gear ratio					
1 st Gear	15:29			15:29	15:29
2 nd Gear	17:27			18:26	18:26
3 rd Gear	19:25			19:22	19:22
4 th Gear	21:23			21:20	21:20
5 th Gear	23:21			23:18	23:18
Gear lubrication	0,8 l engine oil 20W-40 (Shell Advance VSX4)				
available chain sprockets	13t / 14t / 15t for chain $\frac{5}{8} \times \frac{1}{4}$ "				
Coolant	1.3 litres, 40% anti freeze, 60% water, at least -25 °C (-13 °F)				
Ignition system	KOKUSAN 2K-4	KOKUSAN 2K-3		KOKUSAN 2K-3	KOKUSAN 2K-3
Generator output	no generator	12V 110W		no generator	12V 110W
Carburetor	flat-slide carburetor, carburetor setting see table 3				
Air-filter	wet foam type air filter insert				

TOLERANCES AND FITTING CLEARANCES	
Piston fitting clearance	0.05 mm (250) 0.06 mm (300) 0.08 mm (380)
Piston ring end gap	0.3–0.4 mm
Connecting rod bearing - radial clearance	0.021–0.032 mm
Transmission shafts end float	0.1–0.2 mm
Clutch springs - length	Ø 2.5 new = 43 mm, minimum length = 42 mm

GASKET THICKNESSES	
Crankcase	0.5 mm
Clutch cover	0.5 mm
Cylinder bottom gasket	as required
Available cylinder bottom gaskets	0.2/0.4/0.5/0.75 mm
Cylinder-head gasket	O-rings

TIGHTENING TORQUES		
Flange bolts - cylinder-head	M 8	35 Nm (25 ft.lb)
Nuts-cylinder base	M 10	35 Nm (25 ft.lb)
Flywheel collar nut	M 12x1	60 Nm (44 ft.lb)
Nut for primary sprocket (LH thread)	M 18x1.5	Loctite 243 150 Nm (110 ft.lb)
Nut for inner clutch hub	M 18x1.5	Loctite 243 100 Nm (74 ft.lb)
Crankcase and cover bolts	M 6	8 Nm (6 ft.lb)
Swingarm pivot	M 14	100 Nm (74 ft.lb)
Flat head screw release plate kickstarter	M 6x16	Loctite 648 19 Nm (14 ft.lb)
Other screws	M 6	10 Nm (7 ft.lb)
	M 8	25 Nm (19 ft.lb)
	M 10	45 Nm (33 ft.lb)

BASIC CARBURETOR SETTING								
TABLE 4		250 SX	380 SX	250/300 EXC throttled	250 EXC AUS throttled	300 EXC AUS throttled	380 EXC throttled	
	Carburetor	Keihin PWK 38 AG PJ	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG
	Carburetor setting number	010300	070300	020300	040300	060300	080300	
	Main jet	172 (170,175)	170 (168,172)	175 (172,178,180)	178 (175,180)	175 (172,178)	170 (168,172)	
	Idling jet	48 (45,50)	45 (48)	35	45 (48)	45 (48)	45 (48)	
	Starting jet	85	85	85	85	85	85	
	Jet needle	NOZ E (NOZ F)	NOZ G (NOZ I/NOZ H)	R 1475 J	NOZ G (NOZ H)	NOZ H (NOZ I)	NOZ G (NOZ I/NOZ H)	
	Needle position from top	III	III	III	IV	III	III	
	Throttle valve	7	6,5	6,5	6,5	6,5	6,5	
	Air adjustment screw open	1,5	1,5	1,5	1,5	1,5	1,5	
Performance restrictor	–	–	slide stop 34mm	slide stop 34mm	slide stop 34mm	slide stop 36mm		
Power jet jet	55	–	–	–	–	–		

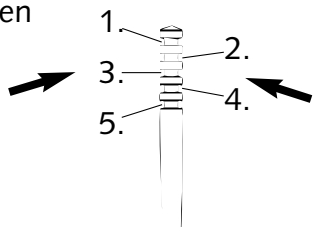
VERGASERREGULIERUNG
CARBURETOR SETTING

KTM 250 SX EUR/USA 2001

KEIHIN PWK 38AG PJ

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	AS	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4
	LD	IJ	48	45	45	42	42	40
	NADEL	NEEDLE	NOZD	NOZE	NOZE	NOZF	NOZG	NOZH
	POS	POS	3	3	2	2	1	1
	HD	MJ	170	168	165	161628	160	160
2300 m 7500 ft ↑ 1501 m 5001 ft	LSCHR	AS	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
	LD	IJ	50	48	45	45	45	42
	NADEL	NEEDLE	NOZD	NOZD	NOZE	NOZE	NOZF	NOZG
	POS	POS	3	3	2	2	2	2
	HD	MJ	172	170	168	165	162	160
1500 m 5000 ft ↑ 751 m 2501 ft	LSCHR	AS	1	1 1/4	1 1/2	1 3/4	2	2 1/4
	LD	IJ	50	48	48	48	48	45
	NADEL	NEEDLE	NOZD	NOZD	NOZE	NOZE	NOZF	NOZF
	POS	POS	4	3	3	2	2	2
	HD	MJ	175	172	170	168	165	162
750 m 2500 ft ↑ 301 m 1001 ft	LSCHR	AS	3/4	1	1 1/4	1 1/2	1 3/4	2
	LD	IJ	52	50	48	48	48	45
	NADEL	NEEDLE	NOZC	NOZD	NOZE	NOZE	NOZE	NOZF
	POS	POS	4	4	3	3	3	2
	HD	MJ	178	175	172	170	168	165
300 m 1000 ft ↑ Meeresniveau Sea level	LSCHR	AS	1/2	3/4	1	1 1/4	1 1/2	1 3/4
	LD	IJ	52	50	48	48	48	45
	NADEL	NEEDLE	NOZC	NOZC	NOZD	NOZD	NOZE	NOZE
	POS	POS	5	4	3	3	3	2
	HD	MJ	180	178	180	172	170	168

LSCHR = Luftregulierschraube offen
LD = Leerlaufdüse
POS = Clip Position von oben
HD = Hauptdüse
Schieber = 7



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

NICHT FÜR STRASSEN BETRIEB

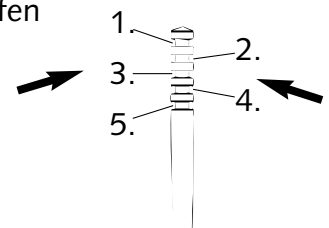
Kraftstoff: Euro-Super bleifrei ROZ 95
NOT FOR HIGHWAY USE
Fuel: Euro-Super unleaded ROZ 95

VERGASERREGULIERUNG **KTM 250 MXC/EXC EUR/USA 2001 KEIHIN PWK 38 AG**

CARBURETOR SETTING

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	AS	1 3/4	1 3/4	1 3/4	2	2 1/2	1 3/4
	LD	IJ	42	42	42	40	40	40
	NADEL	NEEDLE	NOZH	NOZH	NOZH	NOZI	NOZI	NOZI
	POS	POS	3	3	2	2	2	1
	HD	MJ	178	175	172	170	170	168
2300 m 7500 ft ↑ 1501 m 5001 ft	LSCHR	AS	1 1/4	1 1/2	1 3/4	1 3/4	2	2
	LD	IJ	45	45	42	42	42	42
	NADEL	NEEDLE	NOZG	NOZG	NOZH	NOZH	NOZI	NOZI
	POS	POS	3	3	2	2	2	2
	HD	MJ	180	178	175	172	170	168
1500 m 5000 ft ↑ 751 m 2501 ft	LSCHR	AS	1 1/4	1 1/2	1 1/2	1 3/4	1 3/4	2
	LD	IJ	48	48	45	45	45	42
	NADEL	NEEDLE	NOZG	NOZG	NOZG	NOZH	NOZI	NOZI
	POS	POS	4	3	3	3	2	2
	HD	MJ	182	180	178	175	172	170
750 m 2500 ft ↑ 301 m 1001 ft	LSCHR	AS	1 1/4	1 1/4	1 1/4	1 1/2	1 3/4	1 3/4
	LD	IJ	48	48	48	45	45	45
	NADEL	NEEDLE	NOZF	NOZF	NOZG	NOZG	NOZH	NOZH
	POS	POS	5	4	4	3	3	2
	HD	MJ	185	182	180	178	175	172
300 m 1000 ft ↑ Meeresniveau Sea level	LSCHR	AS	1	1 1/4	1 1/2	1 1/4	1 1/2	1 3/4
	LD	IJ	52	50	48	48	45	45
	NADEL	NEEDLE	NOZE	NOZF	NOZG	NOZG	NOZH	NOZH
	POS	POS	5	5	4	3	3	2
	HD	MJ	188	185	182	180	178	175

LSCHR = Luftregulierschraube offen
 LD = Leerlaufdüse
 POS = Clip Position von oben
 HD = Hauptdüse
 Schieber = 6,5



AS = Air screw open from fully-seated
 IJ = Idling jet
 POS = Clip position from top
 MJ = Main jet
 Slide = 6,5

NICHT FÜR STRASSEN BETRIEB

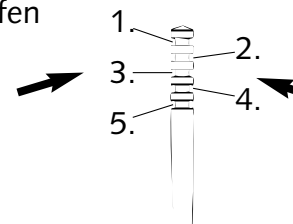
Kraftstoff: Euro-Super bleifrei ROZ 95
 NOT FOR HIGHWAY USE
 Fuel: Euro-Super unleaded ROZ 95

VERGASERREGULIERUNG
CARBURETOR SETTING

KTM 300 MXC/EXC EUR/USA 2001 KEIHIN PWK 38 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	AS	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4
	LD	IJ	45	42	40	40	40	38
	NADEL	NEEDLE	NOZH	NOZH	NOZH	NOZI	NOZI	NOZI
	POS	POS	3	3	2	2	2	1
	HD	MJ	175	172	170	168	165	162
2300 m 7500 ft ↑ 1501 m 5001 ft	LSCHR	AS	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
	LD	IJ	48	45	42	42	42	40
	NADEL	NEEDLE	NOZG	NOZH	NOZH	NOZI	NOZI	NOZI
	POS	POS	3	3	2	2	2	2
	HD	MJ	178	175	172	170	168	165
1500 m 5000 ft ↑ 751 m 2501 ft	LSCHR	AS	1	1 1/4	1 1/2	1 3/4	2	2 1/4
	LD	IJ	48	45	45	45	45	42
	NADEL	NEEDLE	NOZG	NOZG	NOZH	NOZH	NOZH	NOZI
	POS	POS	4	3	3	3	2	2
	HD	MJ	180	178	175	172	170	168
750 m 2500 ft ↑ 301 m 1001 ft	LSCHR	AS	3/4	1	1 1/4	1 1/2	1 3/4	2
	LD	IJ	50	48	45	45	45	42
	NADEL	NEEDLE	NOZG	NOZG	NOZH	NOZH	NOZI	NOZI
	POS	POS	5	4	4	3	3	2
	HD	MJ	182	180	178	175	172	170
300 m 1000 ft ↑ Meeresniveau Sea level	LSCHR	AS	1/2	3/4	1	1 1/4	1 1/2	1 3/4
	LD	IJ	50	48	45	45	42	42
	NADEL	NEEDLE	NOZF	NOZG	NOZG	NOZH	NOZH	NOZI
	POS	POS	5	5	4	3	3	2
	HD	MJ	185	182	180	172	170	168

LSCHR = Luftregulierschraube offen
LD = Leerlaufdüse
POS = Clip Position von oben
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Schieber = 6,5



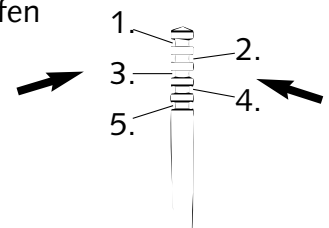
AS = Air screw open from fully-seated
IJ = Idling jet
POS = Clip position from top
MJ = Main jet
Slide = 6,5

NICHT FÜR STRASSEN BETRIEB
Kraftstoff: Euro-Super bleifrei ROZ 95
NOT FOR HIGHWAY USE
Fuel: Euro-Super unleaded ROZ 95

VERGASERREGULIERUNG CARBURETOR SETTING **KTM 380 SX/MXC/EXC EUR/USA 2001 KEIHIN PWK 38 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	AS	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4
	LD	IJ	45	45	40	40	40	38
	NADEL	NEEDLE	NOZH	NOZH	NOZH	NOZI	NOZI	NOZI
	POS	POS	3	3	2	2	2	1
	HD	MJ	170	168	165	162	160	158
2300 m 7500 ft ↑ 1501 m 5001 ft	LSCHR	AS	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
	LD	IJ	48	45	42	42	42	40
	NADEL	NEEDLE	NOZG	NOZG	NOZH	NOZH	NOZI	NOZI
	POS	POS	3	3	2	2	2	2
	HD	MJ	172	170	168	165	162	160
1500 m 5000 ft ↑ 751 m 2501 ft	LSCHR	AS	1	1 1/4	1 1/2	1 3/4	2	2 1/4
	LD	IJ	48	45	45	45	45	42
	NADEL	NEEDLE	NOZG	NOZG	NOZG	NOZH	NOZI	NOZI
	POS	POS	4	3	3	3	2	2
	HD	MJ	175	172	170	168	165	162
750 m 2500 ft ↑ 301 m 1001 ft	LSCHR	AS	3/4	1	1 1/4	1 1/2	1 3/4	2
	LD	IJ	50	48	45	45	45	42
	NADEL	NEEDLE	NOZF	NOZF	NOZG	NOZG	NOZH	NOZH
	POS	POS	5	4	4	3	2	2
	HD	MJ	178	175	172	170	168	165
300 m 1000 ft ↑ Meeresniveau Sea level	LSCHR	AS	1/2	3/4	1	1 1/4	1 1/2	1 3/4
	LD	IJ	50	48	45	45	42	42
	NADEL	NEEDLE	NOZE	NOZF	NOZG	NOZG	NOZH	NOZH
	POS	POS	5	5	4	3	3	2
	HD	MJ	170	172	175	172	170	168

LSCHR = Luftregulierschraube offen
 LD = Leerlaufdüse
 POS = Clip Position von oben
 HD = Hauptdüse
 Schieber = 6,5



AS = Air screw open from fully-seated
 IJ = Idling jet
 POS = Clip position from top
 MJ = Main jet
 Slide = 6,5

NICHT FÜR STRASSEN BETRIEB

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