

Technical Data "Engines up to 1981 ", Table 2



Name up to 1971 Name from 1972 / from 1980		E	D	G	LD	LE	LES	LJ	LJS	J	JS	GS	LGS	CS	LCS	KV	BV	B		
		(E40)	(D40)	(G40)	(D20)	(E20)	(E10)	(J20)	(J10)	(J40)	(J30)	(G30)	(G10)							
Characteristics	Cooling system	Water			Air						Water			Air						
	Number of cylinder	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1		
	Configuration	horizontal						vertical		horizontal	vertical	horizontal	vertical		vertical					
	Bore	mm	75	90	105	95	75	80				105		90	95	75	85	90		
	total displacement	cm ³	442	765	1125	850	442	503				1125		1530	1700	335	465	522		
	Stroke	mm																		
	max. Output ref. Din 6270, "B"	kW PS	4,4 6,0	7,35 10	10,3 14,0	7,35 10	4,4 6,0	5,14 7,0				10,3 14,0		13,2 18,0		4,4 6,0	7,35 10			
	max. Speed	min ⁻¹	2000		1800		2000						1800		1600		3000			
	Oilump capacity	ltr	1	1,8	2	1,8	1	1,5	1	1,5	1	1,5	2,8	2,8	4	4	1,4	2	2	
	Timing	Valves	Intake opens	mm bef. TDC																
		Exhaust closes	mm aft. TDC																	
End of delivery		1500 min-1	mm bef. TDC																	
		1800	+/- 1 mm																	
		2000																		
		2500																		
		2800																		
Begin of delivery		1500 min-1	mm bef. TDC																	
		1800	+/- 1 mm																	
		2000																		
	2500																			
	2800																			
	3000																			
Nozzle opening pressure	bar																			
Valve clearance (Intake + Exhaust)	mm	0,3			0,1						0,3			0,1		0,3		0,1		
Repair figures	Intake valve	protrudes	mm																	
		in recess	mm	0,8 - 1,0			1,0-1,2		0,9 - 1,0				1,3-1,5		0,8 - 1,0					
	Ventil - Auslaß	protrudes	mm																	
		inrecess	mm	0,8 - 1,0			1,0-1,2		0,9 - 1,0				1,0-1,2		0,8 - 1,0					
	Piston	protrudes	mm																	
		inrecess	mm																	
	Gap measurement	mm	0,65-1,05	1,05-1,65	1,25-1,7	0,7-1,2	0,45 - 0,85				1,2-1,7		0,7-1,2	1,05-1,65	0,7-1,2	0,55-0,85	0,45 - 0,7			
	Ring end gap	mm	0,3-1,8	0,25-1,5	0,35 - 2,0		0,3 - 1,8			0,25 - 1,5			0,35 - 2,0		0,25-1,5	0,35-2,0	0,3-1,8	0,25 - 1,5		
	Compression ratio		1:20	1:22	1:18	1:20			1:21			1:18		1:22	1:20					
	Crankshaft end play	mm	0,1 - 0,3																	
Tightening torque	Cylinderhead	tightening torque	mpk Nm	8,0 78	10,0 98	10,0 98	6,5-7,0 64-68	5,5-6,0 54-59	5,5-6,0 54-59	5,5-6,0 54-59	5,5-6,0 54-59	8,0 78	8,0 78	10,0 98	10,0 98	10,0 98	6,5 64	4,5 44	5,0 49	5,5 54
		Rocker bracket	tightening torque	mpk Nm	8,0 78															
	Main bearing plate	tightening torque	mpk Nm	3,0 29																
		Connecting rod	tightening torque	mpk Nm	6,5 64	12,0 117	12,0 117	12,0 117	6,5 64	6,5 64	6,5 64	6,5 64	6,5 64	6,5 64	12,0 117	12,0 117	12,0 117	12,0 117	6,5 64	6,5 64
	Injector clamp	tightening torque	mpk Nm	3,0 29																
		Delivery valve	tightening torque	mpk Nm	3,5 - 4,0 34 - 39															
	High pressure connection	tightening torque	mpk Nm	2,0 - 3,0 19 - 29																
		Flywheel nut		Lock flywheelnut with hammer and drive wrench																

* cold engine, valve seat 45°