

Technical Data: Toyota 1 KS & 4 Y CHP Application

Engine Type	1 KS	4 Y
Intermittend Power mech.	NG 10 KW	22 KW
Intermittend Power mech.	LPG 11 KW	24 KW
Cont. Power mech.	NG 8 KW	18 KW
Cont. Power mech.	LPG 9 KW	20 KW
Torque max.	75,2Nm@24001/min 149 Nm@1800 1/min	
Torque min.	60,7Nm@8001/min 136 Nm@800 1/min	
Type of construction	in line	in line
Cylinder	3	4
Volume	953 cm ³	2.237 cm ³
Bore / Stroke	72 mm / 78 mm	91 mm / 86 mm
Compression Ratio	12	10,5
Aspiration	natural	natural
Cooling type	water cooled	water cooled
Performance Data		
Thermal Power	8 - 18 KW	17 - 39 KW
Power consumption (gas)	20 - 30 KW	50 - 62 KW
Electrical efficiency	28%	32%
Thermal efficiency	64%	63%
Installation Data		
Flywheelhousing	SAE 5	SAE 4
Flywheel		SAE 10
Teeth gear ring	133	133
Direction on rotation looking towards flywheel	left	left
Lube oil filling oil pan	15 L	12 L
Lube oil temperature max.	95°C	95°C
Lube oil temperature min.	60°C	60°C
Coolant water filling	1,2 L	4,8 L
Coolant pressure max.	2 bar	2 bar
Coolant flow	20 L/min	50 - 55 L/min
Coolant water Temperature in Operation	84 - 88 °C	84 - 88 °C
Coolant water temperature max.	100°C	100°C
Coolant water delta T (in - out)	< 10°C	< 10°C
Intake air vacuum pressure max.	- 50 mbar	- 50 mbar
Intake air temperature	20 - 40°C	20 - 40°C
Intake air volume		
Ambient Temperature max.	20 - 60°C	20 - 60°C
Exhaust back pressure max.	75 mbar	65 mbar
Exhaust gas volume		
Firing order	1 - 2 - 3	1 - 3 - 4 - 2
Engine length	488 mm	611 mm
Engine width	402 mm	590 mm
Engine height	651 mm	764 mm
Engine weight, dry	73,5 kg	122 kg