

ENERGIN® CHP

Combined Heat and Power units



ENERGIN® CHP units produce heat and electrical power at the same time. The heat recovery is from engine jacket water, exhaust, lube oil and the first stage of mixture cooling.

The gas engines of the M-Series of R Schmitt Enertec are the base of the ENERGIN® CHP units in the range of 100-500 kW electrical power. The engines are specially designed and manufactured by us for the operation with the following fuels: Natural gas, biogas, LPG, woodgas and special gases. As an option they can be equipped with an absorption chiller for cooling. With the additionally sound enclosure, that is mounted the common frame, the sound level can be reduced to less than 70 dB(A). CHP are easy to install and save on space because all major components are mounted on the common frame and are ready piped and cabled.

	ENERGIN® type	Engine type	Electrical power	Electrical efficiency	Thermal power	Overall efficiency
natural gas	M06 CHP G100	M06-GN0W22	100 kW	34,6 %	166 kW	92,0 %
	M06 CHP G122	M06-GN0W22	122 kW	35,1 %	198 kW	92,0 %
	M08 CHP G151	M08-GN0W22	151 kW	36,0 %	235 kW	92,1 %
	M06 CHP G173	M06-GTIW22	173 kW	35,8 %	264 kW	90,5 %
	M06 CHP G185	M06-GT2W22	185 kW	36,5 %	260 kW	87,8 %
	M06 CHP G205	M06-GT2D22	205 kW	37,5 %	266 kW	86,1 %
	M08 CHP G220	M08-GTIW22	220 kW	37,3 %	314 kW	90,5 %
	M08 CHP G233	M08-GT2W22	233 kW	37,7 %	309 kW	87,7 %
	M08 CHP G260	M08-GT2D22	260 kW	37,8 %	332 kW	86,0 %
	M12 CHP G334	M12-GTIW22	334 kW	36,6 %	496 kW	90,9 %
	M12 CHP G350	M12-GT2W22	350 kW	38,1 %	458 kW	87,9 %
	M12 CHP G400	M12-GT2D22	400 kW	38,5 %	498 kW	86,4 %
biogas	M12 CHP G500	M12-GM2D21	500 kW	39,5 %	587 kW	85,8 %
	M06 CHP B115	M06-BT0W21	115 kW	37,0 %	153 kW	86,2 %
	M06 CHP B173	M06-BTIW22	173 kW	37,2 %	227 kW	86,0 %
	M06 CHP B205	M06-BT2D22	205 kW	38,8 %	227 kW	81,8 %
	M08 CHP B233	M08-BT2W22	233 kW	38,1 %	278 kW	83,5 %
	M08 CHP B260	M08-BT2D22	260 kW	41,6 %	251 kW	81,8 %
	M12 CHP B350	M12-BT2W22	350 kW	38,9 %	405 kW	83,9 %
	M12 CHP B400	M12-BT2D22	400 kW	40,2 %	418 kW	82,2 %
	M12 CHP B500	M12-BM2D21	500 kW	41,2 %	493 kW	81,7 %
	M08 CHP H166	M08-HT2D22	166 kW	33,1 %	255 kW	84,0 %
	M12 CHP H250	M12-HT2D22	250 kW	33,5 %	376 kW	83,9 %

Engine specification				
Bore	[mm]	128 [in line engines]	130 [V-engines]	
Stroke	[mm]	155 [in line engines]	142 [V-engines]	
Speed	[U/min]	1.500		
Mean piston speed	[m/s]	7,75 [in line engines]	7,1 [V-engine]	
Applicable gas types	G = natural gas B = biogas H = woodgas and other low calorific gases P = propane and other high calorific gases			
Aspiration	N = natural T = turbocharged M = turbocharged with Miller Cycle			
Mixture cooling	0 = none I = internal 2 = double stage internal / external			
Exhaust manifolds	W= watercooled D = dry, insulated			
ENERGIN® type	M06	M08	M12	
No. of cylinders / configuration	6 in line	8 in V90°	12 in V90°	
capacity	[ltr.]	12,0	15,1	22,6


CHP Basic scope of supply

Four stroke gas engine coupled with double bearing alternator, mounted on common frame	●
Sound attenuating enclosure with air ventilation mounted on common frame with engine and generator	○
Heat recovery from engine jacket water, exhaust, lube oil and 1 st stage intercooler.	●
Cooling the exhaust temperature to 120°C with natural gas and 180°C with biogas applications	
Remote radiator for 2 nd stage mixture cooling	○
Remote radiator for jacket water, lubrication oil, 1 st stage intercooler and exhaust heat	○
ENERSCREEN® control system with touchpanel for engine, generator and auxiliaries set mounted in switchboard.	●
With synchronizing and generator protection functions	
Generator circuit breaker set mounted in switchboard	●
Electric pre-lubrication pump with change over valve to use the pump for oil drainage and oil change	●
Set mounted lube oil make up tank with automatic level control on the engine oil pan for automatic compensation of the oil consumption	●
Exhaust primary silencer set mounted in common frame	●
Exhaust secondary silencer for higher noise protection in loose supply	○

○ as an option ● included



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