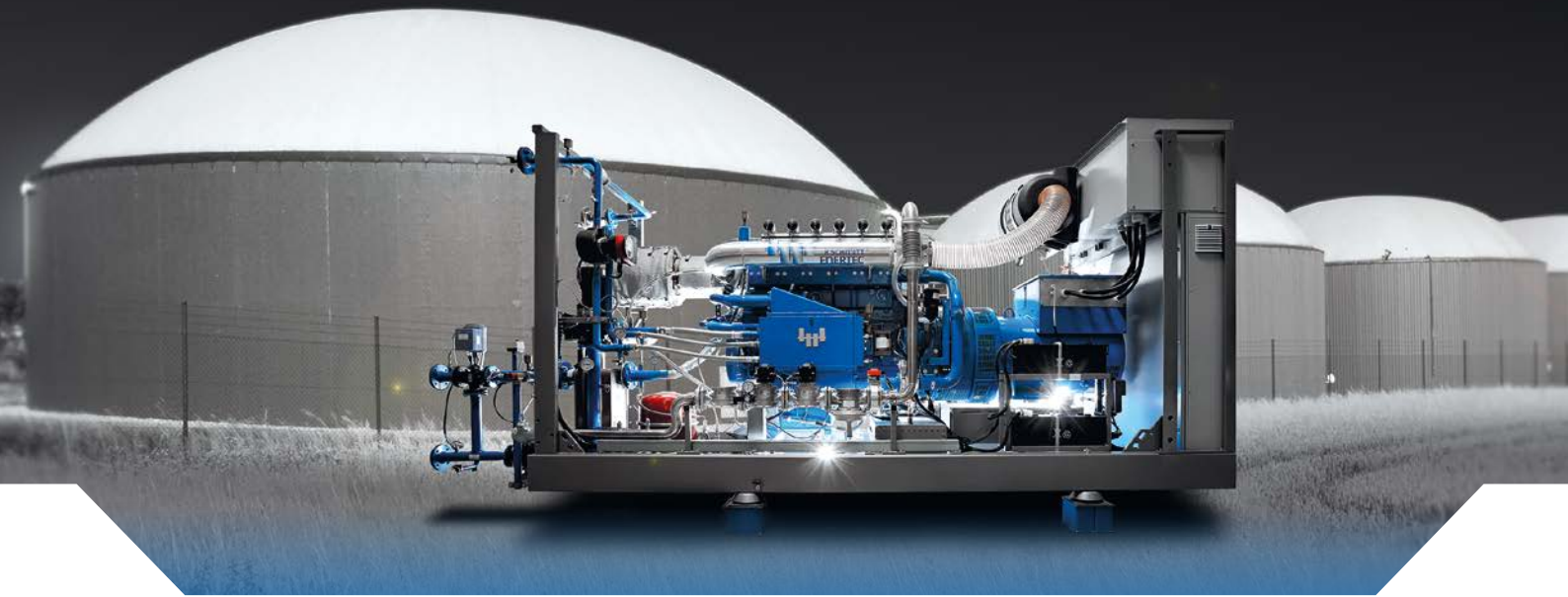


# ENERGIN® GEN+ | Generation 4x

## Generators Sets with Heat Recovery



Our ENERGIN® GEN+ units are compact cogeneration plants with heat recovery from the jacket water. The innovative design allows an easy and space-saving installation. All major components like gas engine generator unit, heat exchanger, circulation pumps and control cabinet are factory mounted on a common frame.

The gas engines of the in-house M-series are the core of our units in the electrical power range of 115 - 500 kW. The engines are specially developed and manufactured by us for the use with different gases. In addition to natural gas and biogas, the engines can also run with LPG, wood gas and other special gases. For the latest engine generation, we rely on the modern 4-valve technology to provide even higher efficiency.

With an optional sound attenuating enclosure, that is mounted on the base frame, the sound pressure level can be reduced to less than 70 dB(A) in 1 m distance. For customers with steam requirements, the ENERGIN® GEN+ can also be supplied in conjunction with a steam boiler.

For higher heat demands we recommend our ENERGIN® CHP units with additional heat recovery from the exhaust gas of the engine.

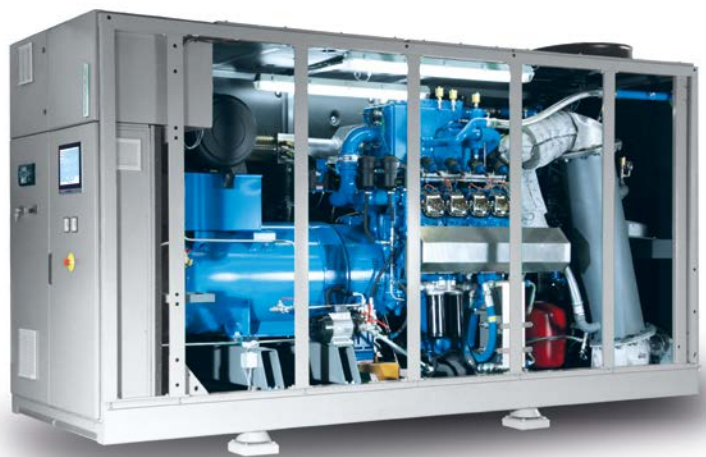
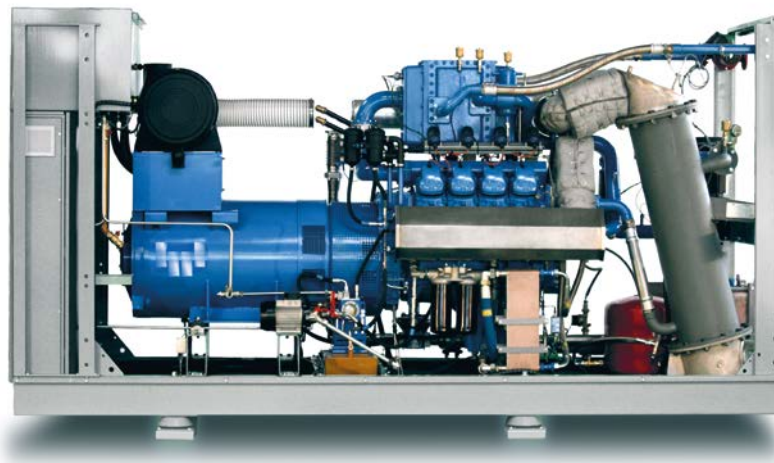
	ENERGIN® type	Engine type	Electrical power	Electrical efficiency	Thermal power	Overall efficiency
natural gas	M06 GEN+ G140	M06-GT0D41	140 kW	38,6 %	111 kW	69,2 %
	M06 GEN+ G200	M06-GTID41	200 kW	41,0 %	131 kW	67,8 %
	M06 GEN+ G250	M06-GT2D41	250 kW	41,8 %	128 kW	63,2 %
	M08 GEN+ G260	M08-GTID41	260 kW	41,0 %	173 kW	68,3 %
	M08 GEN+ G333	M08-GT2D41	333 kW	41,9 %	174 kW	63,8 %
	M12 GEN+ G400	M12-GTID41	400 kW	41,1 %	264 kW	68,2 %
	M12 GEN+ G500	M12-GT2D41	500 kW	42,1 %	255 kW	63,6 %
biogas	M06 GEN+ B140	M06-BT0D41	140 kW	39,3 %	98 kW	66,8 %
	M06 GEN+ B200	M06-BTID41	200 kW	41,8 %	120 kW	66,9 %
	M06 GEN+ B250	M06-BT2D41	250 kW	42,6 %	120 kW	63,0 %
	M08 GEN+ B260	M08-BTID41	260 kW	41,7 %	159 kW	67,2 %
	M08 GEN+ B333	M08-BT2D41	333 kW	42,6 %	162 kW	63,3 %
	M12 GEN+ B400	M12-BTID41	400 kW	41,9 %	241 kW	67,1 %
	M12 GEN+ B500	M12-BT2D41	500 kW	42,7 %	241 kW	63,3 %
LPG	M06 GEN+ P115	M06-PT0D41	115 kW	30,7 %	148 kW	70,2 %
	M06 GEN+ P173	M06-PTID41	173 kW	34,9 %	171 kW	69,4 %
	M06 GEN+ P205	M06-PT2D41	205 kW	35,8 %	174 kW	66,2 %
	M08 GEN+ P233	M08-PTID41	233 kW	35,0 %	233 kW	70,0 %
	M08 GEN+ P260	M08-PT2D41	260 kW	35,9 %	224 kW	66,8 %
	M12 GEN+ P350	M12-PTID41	350 kW	35,1 %	348 kW	70,0 %
	M12 GEN+ P450	M12-PT2D41	450 kW	36,0 %	376 kW	66,1 %
woodgas	M06 GEN+ H122	M06-HT2D41	122 kW	34,8 %	102 kW	63,9 %
	M08 GEN+ H166	M08-HT2D41	166 kW	34,9 %	140 kW	64,3 %
	M12 GEN+ H250	M12-HT2D41	250 kW	35,0 %	208 kW	64,1 %

Engine specification			
Bore	[mm]	130	
Stroke	[mm]	142	
Speed	[min <sup>-1</sup> ]	1.500	
Mean piston speed	[m/s]	7,1	
Applicable gas types	G = natural gas B = biogas P = propane and other high calorific gases H = woodgas and other low calorific gases		
Aspiration	T = turbocharged		
Mixture cooling	0 = none I = internal 2 = double stage internal / external		
Exhaust manifolds	D = dry, insulated		
ENERGIN® type	M06	M08	M12
No. of cylinders / configuration	6 in V90°	8 in V90°	12 in V90°
Displacement [dm <sup>3</sup> ]	11,3	15,1	22,6



## GEN+ Basic scope of supply

4-stroke gas engine coupled with double bearing alternator, mounted on common frame	●
Sound attenuating enclosure with air ventilation, mounted on common frame	○
Heat recovery from jacket water, lube oil and if applicable 1 <sup>st</sup> stage mixture cooling	●
Remote radiator for 2 <sup>nd</sup> stage (if applicable)	○
Remote radiator for jacket water, lube oil and if applicable 1 <sup>st</sup> stage mixture cooling	○
ENERSCREEN® control system with 12" touch panel for engine, alternator and auxiliaries, set mounted in switchboard, with synchronizing and alternator protection functions	●
Generator circuit breaker, set mounted in switchboard	●
Lube oil system designed for long oil change intervals	●
Electric pre-lubrication pump with changeover valve	●
Exhaust silencer in single or two-stage design, supplied loose	○

● included    ○ as an option



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