

TECHNICAL SPECS

Potenza Continua – Available continuous power – Puissance du generator	27Hp @ 50Hz 20kW _p @ 50Hz
Rumorosità (G.E. silenziato) – Sound level (silenced gen set) – Niveau sonore (G.E. silencieux)	67 dB(A) 7m
Max Continuous Operation	24 h
CE – certified	Yes
Consumo – Consumption – Consommation @ 100%	1,2 kg/kWh
Start up Time – Start Up Time – Alternateur	15 min.
Cogenerazione – CHP combined Heat Power – production combinée de chaleur et d'électricité	Disponibile-available disponible
Dimensioni – Dimensions – dimensions	H.3.00mxL.1.80mxW.1,87m 1'200kg

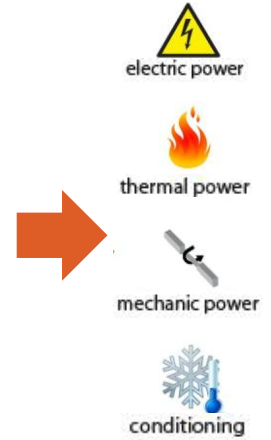
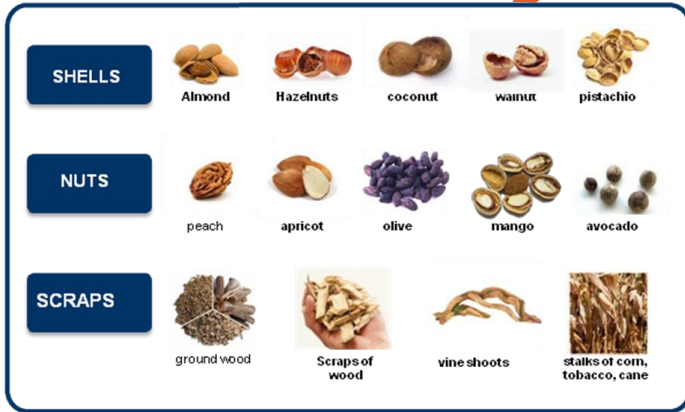


The MCHP cogenerator CMD 20 kWp is a device able to generate electrical and thermal power through a process of thermochemical decomposition or molecular dissociation of organic materials (biomasses), obtained at high temperatures in oxygen debt (pyrogasification).

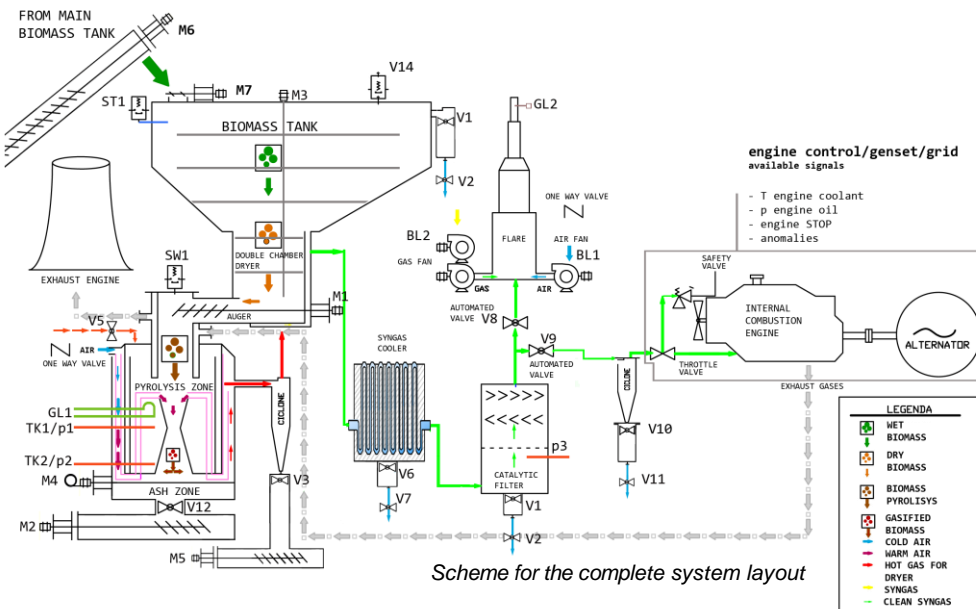
Generally by heating the biomasses and organic materials (around 900°C) the pyrogasification can start, such a process produces a mixture of fuel gas (syngas), which undergoes a process of cooling, filtering and cleaning before reaching the engine. At the end of the process, the produced fuel consists largely of methane and it is ready to be used for the operation of an ICE (internal combustion engine) connected to the alternator. In this system has been employed the strong Vortec 3.0L I-4 GM engine, engaging an alternator (Mecc Alte ECP-028), capable of producing 20 kWh using the gas produced from 22 kg of biomass. Simultaneously, the thermal energy that produces microcogenerator, recovered, may be used for hot water, warm environments etc.

BIOMASSES FEATURES

taglia - size - dimensions	1,50 – 3,00 cm (G10-G30)
grado di umidità - humidity - degré d'humidité	15 – 25%
biomassa testata - tested biomasses – biomasse testé	Scraps of wood, vines's waste, pruning branches, shells of coconuts, walnuts, hazelnuts, chestnuts, almonds, hazelnut oil, apricot, peach, tobacco stalks, corn, canes.



ENERGETIC PARAMETERS		
7.500	hrs/year	working hours of the micro-CHP
24 kg	hrs/day	Biomass consumption
biomass consumption [kg]		
1	hrs/day	24.0 kg/hr
7.500	hrs/year	180.000 kg/yr
Electric Energy Production		
1	hrs/day	20 kWh
7.500	hrs/year	150.000 kWh
Thermal Energy Production		
40	kWh/t	Minimum thermal power produced every hour
63	kWh/t	Maximum thermal power produced every hour
400.000	kWh/t/year	Total thermal energy per year



Versatile and adaptable system given by the electronic control of the device. Fully automatic control process of enslavement biomass and ash discharge. Possibility of installation in 'clusters' for the generation of 40kWp, 60kWp, 80kWp, 100kWp

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