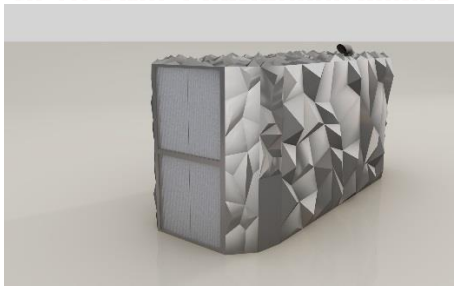
femto

C.H.P. ready to use - Civil Application

Technical data: from 1,6 KWe to 10 KWe Continuous power duty C.O.P; 220/400 V, 50 Hz



Design						
Comb. air temperature / rel. Humidity:	°C / %	25 / 60				
Altitude S.L.M. :	mt.	100				
Operating Temperature Range :	°C	5 to 35				
NO_X Emission (tolerance - 8%):	mg/Nm³ @ 5% O²	1000	3 Way Dry Catalist			80
CO^2 Emission (tolerance - 8%):	mg/Nm³ @ 5% O²	1000	3 Way Dry Catalist			80
Fuel Gas Data						
Methane number:	[-]	80,00				
Lower calorific value:	KWh/Nm³	10,17				
Standard gas:	Natural Gas MN=	80,00				
Gas density:	Kg/Nm³	0,79				
C.H.P. Data						
Modello/Model entalpica		*GEZF2-NG*	*GEZF4-NG*	*GEZF8-NG*	*GEZF10-NG*	*GEZF12-NG*
Motore/engine entalpica		*EEZF2-NG*	*EEZF4-NG*	*EEZF8-NG*	*EEZF10-NG*	*EEZF12-NG*
Alternatore/ generator		Meccalte/Leroy Somer / Marelli				
Temperatura di progetto / Operating temperature range	°C	From 0 to 35				
Classificazione dell'area / Area Classification		Sicura / Safe				
Potenza / Power (C.O.P.) (ISO8528 e ISO3046) at generator terminal at power factor 0,8	**KVA**	**2,0**	**4,0**	**8,0**	**10,0**	**12,5**
Potenza / Power (C.O.P.) (ISO8528 e ISO3046) at generator terminal at power factor 1,0 :	KVA	1,6	3,2	6,4	8,0	10,0
Sovraccarico/ Overload		non ammesso / not allowed				
Power factor:		0,8				
Frequenza / Frequency	Hz	50				
Velocità /Speed	rpm	3000/1500				
Tensione (trifase) / Voltage	V	220/400				
Variazione tensione da 0% a pieno carico in cond. statiche p.f. 0,8	%	+/- 1,5%				
Variazione della frequenza da 0% a pieno carico in cond. statiche:	%	+/- 1,5%				
Peso totale (+/-10%) – Preliminare / Weight	Kg	350	400	450	500	700
Dimensioni generali del gruppo in container (+/-10%) Preliminary general overall dimensions (+/-10%)	mm	1200 h x 1200 w x 1200			1500 h x 1200 w x 2000 l	
Noise level	dB(A)	55 @ 7 mt				
Energy Balance						
Potenza Elettrica / Electrical Power	**KWe**	**1,6**	**3,2**	**6,4**	**8,0**	**9,6**
Potenza Termica acqua motore /J/W Thermal Power	KWt	1,3	2,6	5,2	6,5	7,8
Potenza Termica Intercooler / Intercooler Thermal Power		n.a.				
Potenza Termica Olio motore / Lube Oil Thermal Power		Incorporato nel sistema acqua motore				
Potenza Termica gas di scarico raffreddati a 120°C	KWt	2,7	5,4	10,8	13,5	16,2
Potenza termica irraggiata / Total Radiation heat	KWt	0,39	0,78	1,56	1,95	2,34
Potenza Termica Totale (escluso Intecooler) /	**KWt/**	**4,0**	**8,0**	**16,0**	**20**	**24,0**

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Total Thermal Power	**Kcal**	**3.440**	**6.880**	**13.760**	**17.200**	**20.640**
Potenza Frigorifera / Cold Power	KWf/ Kcal	2,8/ 2.408	5,6/ 4.816	11,2/ 9.632	14/ 12.040	16,8/ 14448
Energia introdotta / Fuel Consuption	**KW**	**6,4**	**12,8**	**25,6**	**32**	**38,4**
Energia introdotta / Fuel Consuption	**m3/h**	**0,7**	**1,3**	**2.5**	**3,5**	**4,0**
Rendimento Totale (el. + term.) / Total Efficency	**%**	**87,5**	**87,5**	**87,5**	**87,5**	**87,5**
Rendimento Elettrico / Electrical Efficency	%	25,0	25,0	25,0	25,0	25,0
Rendimento Termico acqua motore / Thermal Efficency	%	20,3	20,3	20,3	20,3	20,3
Rendimento Termico gas di scarico/ Thermal Efficency	%	42,2	42,2	42,2	42,2	42,2
System Parameters						
Portata acqua motore / Jachet Water Volume Flow	m3/h	0,3	0,6	0,8	1,0	1,0
Portata olio lubrificante / Lube Oil volume Flow	m3/h	Incorporato nel sistema acqua motore / integrate with J/W				
Portata acqua Intercooler / Intercooler Volume flow	m3/h	N.A.				
Glycol content engine jacket water / intercooler	% Vol.	35				
Water volume engine jacket / intercooler	dm^3	1/0	1,5/0	2/0	3/0	4/0
Water pressure loss engine jacket water / intercooler:	Bar	0,2/0,15	0,3/0,2	0,4/0,3	0,5/0,4	0,6/0,5
Temp. esercizio acqua motore / j/w Temperature	°C	80/85				
Temp. esercizio Olio / Lube oil Temperature	°C	Incorporato nel sistema acqua motore / integrate with J/W				
Temp. esercizio intercooler / Intercooler temperature	°C	N.A.				
Temp. esercizio Freddo / Cold Power Oper. Temp. Range	°C	7/12				
Temp. Gas di scarico / Exhaust Gas temperature	°C	600	600	600	600	600
Portata gas di scarico / Exhaust Gas Volume Flow	Kg/h	17,18	34,36	68,72	85,9	103,08
Portata aria di combustion / Combustion air volume Flow	Kg/h	3,0				
Ventilation air flow(comb. air incl.) with ΔT = 15K	Kg/h	500	500	800	800	800
Exhaust back pressure from / to	mBar	30/50				
Maximum pressure loss in front of air cleaner	mBar	5				
Zero-pressure gas control unit selectable from / to	mBar	10/100				
Pre-pressure gas control unit selectable from / to	Bar	0,5/10				
Lube oil content engine / external lube oil tank	dm^3	3/30	6/30	9/30	12/50	15/50
Starter battery 12/24V, capacity required	Ah	10	10	15	20	20
Starter motor	kWe/[VDC	0,5/12	0,5/12	0,5/12	1/24	1/24
Engine data / Dati Motore						
N° Cilindri / Configurazione / Configuration / Number of cylinders:		1 wankel	2 wankel	3 wankel	5 wankel	6 wankel
Alesaggio x Corsa / Bore and Stroke	mm	N.A.				
Cilindrata /Displacement	dm^3	0,5	0,6	0,8	1,0	1,2
Air Ratio	λ	1				
Rotazione / rotation		Antioraria lato volano / A.C.W.				
Rapporto di compressione : compression ratio		13 : 1				
Velocità media del pistone / Mean Piston speed	m/s	6,3				
Pressione Media Effettiva / P.M.E.	MPa	1,72 MPa	1,79 MPa	1,93 MPa	18,6 Bar	18,1 Bar
Combustibile / Fueled by	-	Gas Metano				

Noise level Octave band

Frequency band f [Hz]	25	31,5	40	50	63	80	100	125	160	200	250	315	400	500	**630**
Air-borne noise [4] LW ,Terz [dB(lin)]	84	85	90	93	106	101	114	102	103	112	108	111	106	105	**103**
Exhaust noise [5] LW ,Octave [dB(lin)]	-		119				129			135			**130**		
Frequency band f [Hz]	800	1k	1.25	1.6	2k	2.5	3.15	4k	5k	6.3	8k	10k	LWA [dB(A	**S [m^2]**	
Air-borne noise [4] LW ,Terz [dB(lin)]	102	103	103	102	103	103	102	105	106	109	105	103	117	**83**	
Exhaust noise [5] LW ,Octave [dB(lin)]	**128**			**129**			**123**			**116**			**134**	**15,2**	

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