

Doc.: 08A05269\_e **Combined Heat & Power (CHP) with split - Standard Sizes and typical performances**

Combined Heat & Power (CHP) with split - Standard Sizes and typical performances *								
		TURBODEN 4 CHP	TURBODEN 6 CHP	TURBODEN 7 CHP	TURBODEN 10 CHP	TURBODEN 14 CHP	TURBODEN 18 CHP	TURBODEN 22 CHP
		"split"	"split"	"split"	"split"	"split"	"split"	"split"
<b>INPUT - Thermal oil</b>								
Nominal temperature "HT" loop (in/out)	°C	310/250	310/250	310/250	310/250	310/250	312/252	312/252
Thermal power input "HT" loop	kW	2100	2965	3485	4690	6130	8935	10975
Nominal temperature "LT" loop (in/out)	°C	250/130	250/130	250/130	250/130	250/130	252/132	252/132
Thermal power input "LT" loop	kW	200	275	330	450	585	855	1045
Overall thermal input	kW	2300	3240	3815	5140	6715	9790	12020
<b>OUTPUT - Hot water</b>								
Hot water temperature (in/out)	°C	60/80	60/80	60/80	60/80	60/80	60/90	60/90
Thermal power to the cooling water circuit	kW	1844	2600	3060	4100	5350	7850	9630
<b>PERFORMANCES</b>								
Gross active electric power	kW	424	617	727	1001	1317	1862	2282
Gross electric efficiency		0,184	0,19	0,191	0,194	0,196	0,19	0,189
Captive power consumption	kW	24	30	38	51	62	87	107
Net active electric power	kW	400	587	689	950	1255	1775	2175
Net electric efficiency		0,174	0,181	0,181	0,184	0,186	0,181	0,181
Electrical generator		<i>asynchronous</i>	<i>asynchronous</i>	<i>asynchronous</i>	<i>asynchronous</i>	<i>asynchronous</i>	<i>asynchronous</i>	<i>asynchronous</i>
		<i>triphas, L.V. 400V</i>	<i>triphas, L.V. 400V</i>	<i>triphas, L.V. 400V</i>	<i>triphas, L.V. 400V</i>	<i>triphas, L.V. 400V</i>	<i>triphas, L.V. 660V</i>	<i>triphas, L.V. 660V</i>
Plant size		Single Skid	Single Skid	Single Skid	Single Skid	Multiple Skid	Multiple Skid	Multiple Skid
Biomass consumption**	Kg/h	1005	1416	1667	2247	2935	4279	5254

\* The Turboden split system allows maximising electric power production for a given biomass consumption.

\*\*Assuming a low heat value of biomass = 2,6 kWh/kg and boiler efficiency = 0,88 . The thermal oil boiler is not included in the Turboden scope of supply.