Performance data - Wärtsilä liquid fuel gensets at 50 Hz

Engine			9L20	W12V32	W16V32	W18V32	W20V32	12V46	18V46
Frequency		Hz	50	50	50	50	50	50	50
Electric power		kW	1539	5327	7124	8032	8924	11349	17076
Heat rate [1]		kJ/kWh	8627	7986	7961	7944	7818	7692	7669
Electrical efficiency [1]		%	41,7	45,1	45,2	45,3	46,0	46,8	46,9
High temperature cooling water circuit [2]		°C	84/91	82/96	82/96	82/96	80/96	81/91	81/91
High temperature cooling water circuit, energy	± 10%	kW	378	1573	2072	2300	2994	3098	4650
- High temperature charge air cooler, water [2]		°C		89/96	89/96	89/96	87/96	84/91	84/91
- High temperature charge air cooler, energy	± 10%	kW		845	1102	1209	1597	1992	2990
- Jacket cooling water [2]		°C	84/91	82/89	82/89	82/89	80/87	81/84	81/84
- Jacket cooling, energy	± 10%	kW	378	728	970	1091	1397	1106	1660
Low temperature cooling water circuit [2]		°C	35/48	35/46	35/46	35/46	35/46	35/47	35/48
Low temperature cooling water circuit, energy	± 10%	kW	815	1263	1688	1899	2118	2519	3797
- Lubricating oil [2]		°C	63/74	63/74	63/74	63/74	63/74	63/78	63/77
- Lubricating oil, energy	± 10%	kW	245	640	853	960	1083	1473	2210
- Low temperature charge air cooler, water [2]		°C	35/44	35/40	35/40	35/40	35/41	35/40	35/41
- Low temperature charge air cooler, energy	± 10%	kW	570	623	835	939	1035	1046	1587
Charge air flow	± 5%	kg/s	3,5	10,9	14,5	16,3	17,0	19,7	29,5
Exhaust gas flow	± 5%	kg/s	3,6	11,2	14,9	16,8	17,5	20,3	30,5
Exhaust gas temperature	± 10°C	°C	305	348	348	348	346	374	374
Exhaust gas heat	± 10%	kW	991	3846	5094	5762	5729	7845	11806
Heat losses by radiation	± 15%	kW	149	398	564	617	584	651	864

Note:
Heat and mass balances are dependent of ambient conditions and plant application. Above given figures are for guidance only and calculated at ISO 3046-1 standard reference conditions; 25°C ambient temperature. 100 kPa total barometric pressure. 30% relative humidity. Charge air coolant temperature according to tabulated data. LHV 42700 kJ/kg.

[1] Heat rate and electrical efficiency at generator terminals, including engine-driven pumps, Tolerance 5%. Power factor 0,8.
[2] inlet / outlet temperatures ± 2°C

Performance data - Wärtsilä liquid fuel gensets at 60 Hz

Engine			9L20	W12V32	W16V32	W18V32	W20V32	12V46	18V46
Frequency		Hz	60	60	60	60	60	60	60
Electric power		kW	1454	5211	6970	7841	8730	11349	17076
Heat rate [1]		kJ/kWh	8584	7901	7877	7877	7818	7692	7669
Electrical efficiency [1]		%	41,9	45,6	45,7	45,7	46,0	46,8	46,9
High temperature cooling water circuit [2]		°C	84/91	83/96	83/96	83/96	80/96	81/91	81/91
High temperature cooling water circuit, energy	± 10%	kW	352	1506	1984	2196	2916	3125	4692
- High temperature charge air cooler, water [2]		°C		89/96	89/96	89/96	88/96	84/91	84/91
- High temperature charge air cooler, energy	± 10%	kW		807	1052	1149	1536	2019	3032
- Jacket cooling water [2]		°C	84/91	83/89	83/89	83/89	80/88	81/84	81/84
- Jacket cooling, energy	± 10%	kW	352	699	932	1047	1380	1106	1660
Low temperature cooling water circuit [2]		°C	35/48	35/46	35/45	35/46	35/46	35/47	35/48
Low temperature cooling water circuit, energy	± 10%	kW	760	1212	1619	1817	2056	2534	3820
- Lubricating oil [2]		°C	63/74	63/74	63/74	63/74	63/74	63/78	63/77
- Lubricating oil, energy	± 10%	kW	220	620	826	929	1067	1473	2210
- Low temperature charge air cooler, water [2]		°C	35/44	35/40	35/40	35/40	35/40	35/40	35/41
- Low temperature charge air cooler, energy	± 10%	kW	540	592	793	888	989	1061	1610
Charge air flow	± 5%	kg/s	3,3	10,3	13,7	15,4	16,2	20,0	30
Exhaust gas flow	± 5%	kg/s	3,4	10,6	14,1	15,8	16,7	20,6	30,9
Exhaust gas temperature	± 10°C	°C	305	350	350	350	351	369	369
Exhaust gas heat	± 10%	kW	928	3687	4865	5541	5635	7803	11741
Heat losses by radiation	± 15%	kW	145	394	574	617	570	651	864

Note:
Heat and mass balances are dependent of ambient conditions and plant application. Above given figures are for guidance only and calculated at ISO 3046-1 standard reference conditions; 25°C ambient temperature. 100 kPa total barometric pressure. 30% relative humidity. Charge air coolant temperature according to tabulated data. LHV 42700 kJ/kg.

[1] Heat rate and electrical efficiency at generator terminals, including engine-driven pumps, Tolerance 5%. Power factor 0,8.
[2] inlet / outlet temperatures ± 2°C
at 100% load. ISO conditions and LHV. Tolerance 5 %. Power factor 0,8.