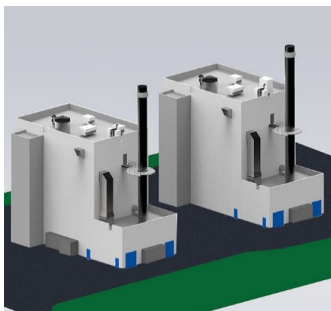


Reference plants
for the use of
Liquid and Gaseous Fuels including Residues



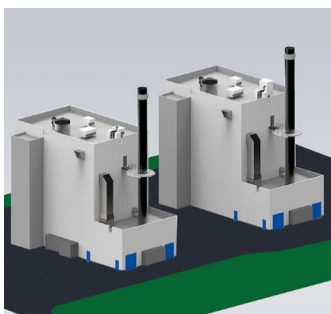
Extraction from the Total List of Reference

Gas Power Plant, Steam + Power 3+4, Gelsenkirchen, Germany
STEAG GmbH



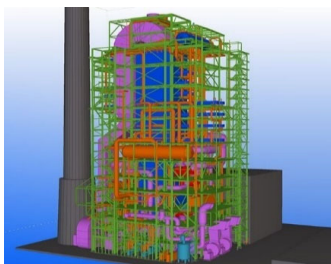
Rated thermal input	:	2 x	96	MW
Steam capacity	:	2 x	120	t/h
Steam pressure	:		107	bar
Steam temperature	:		430	°C
Fuel	:			Production residues (g)
Scope	:			Boiler Island
Year of commissioning	:			2024

Gas Power Plant, Steam + Power 1+2, Gelsenkirchen, Germany
STEAG GmbH



Rated thermal input	:	2 x	122	MW
Steam capacity	:	2 x	140	t/h
Steam pressure	:		145	bar
Steam temperature	:		545	°C
Fuel	:			Production residues (g)
Scope	:			Boiler Island
Year of commissioning	:			2024

CCP Plant Ineos Cologne, Germany
INEOS Köln GmbH



Rated thermal input	:		300	MW
Steam capacity	:	HP	240	t/h
		RH	260	t/h
Steam pressure	:	HP	108	bar (a)
		RH	32	bar (a)
Steam temperature	:	HP	530	°C
		RH	510	°C
Fuel	:			Production residues (f), production residues (g), excess gas
Scope	:			Boiler Island
Year of commissioning	:			2024

CCP Plant Hoechst, Frankfurt am Main, Germany
Infraserv GmbH Co. Höchst KG



Gas turbine	:	GE 6F.03
Gas turbine output	:	2 x 88,7 MW _{el}
Steam capacity	:	2 x 200 t/h
Steam pressure	:	123,2 bar
Steam temperature	:	520 °C
Flying take-over	:	yes
Auxiliary fuel	:	Natural gas, production residues (gaseous)
Scope	:	Boiler Island
Year of commissioning	:	2023

CCP Plant Marl VII, Germany
Siemens Gas and Power



Gas turbine	:	SGT-800
Gas turbine output	:	55 MW _{el}
Steam capacity	:	HP 226 LP 14,4 t/h
Steam pressure	:	HP 80 LP 5,12 bar
Steam temperature	:	HP 500 LP 150 °C
Flying take-over	:	no
Auxiliary fuel	:	Natural gas, production residues (gaseous)
Scope	:	Boiler Island
Year of commissioning	:	2022

CCP Plant Marl VI, Germany
Siemens Gas and Power



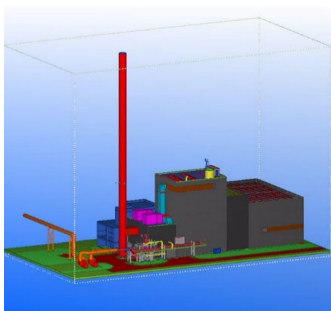
Gas turbine	:		SGT-800
Gas turbine output	:	2 x	55 MWel
Steam capacity	:	2 x HP	226
	:	2 x LP	14,4 t/h
Steam pressure	:	HP	80
	:	LP	5,12 bar
Steam temperature	:	HP	500
	:	LP	150 °C
Flying take-over	:		no
Auxiliary fuel	:	Natural gas, production residues (gaseous)	
Scope	:	Boiler Island	
Year of commissioning	:	2022	

E4T DOW Terneuzen, The Netherlands
E.ON Power Plants Belgium bv



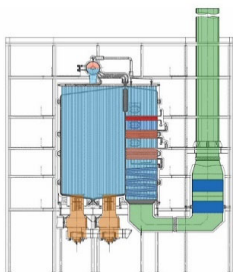
Thermal input	:	300	MW
Steam capacity	:	350	t/h
Steam pressure	:	36	bar
Steam temperature	:	350	°C
Fuel	:	Off-Gas, natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	2019	

Przyjazn II, Dabrowa Górnicza, Poland
Energoinstal SA



Rated thermal input	:	183	MW
Steam capacity	:	250	t/h
Steam pressure	:	122	bar
Steam temperature	:	542	°C
Fuel	:	COG	
Scope	:	Boiler Island	
Year of commissioning	:	2015	

**Industrial Power Plant Block 7, Eisenhüttenstadt, Germany
Vulkan Energiewirtschaft Oderbrücke GmbH (VEO)**



Rated thermal input	:	148	MW
Steam capacity	:	180	t/h
Steam pressure	:	121	bar
Steam temperature	:	540	°C
Fuel	:	Natural gas, BFG	
Scope	:	Boiler Island	
Year of commissioning	:	2013	

Process Steam Boiler Plant for a Chemical Company in NRW, Germany



Thermal input	:	121	MW
Steam capacity	:	150	t/h
Steam pressure	:	112	bar
Steam temperature	:	520	°C
Fuel	:	Natural gas, production residues (g)	
Supply	:	Boiler Island	
Year of commissioning	:	2012	

**Rheinland Refinery B7, Wesseling, Germany
Shell Deutschland Oil GmbH**



Rated thermal input	:	168	MW
Steam capacity	:	200	t/h
Steam pressure	:	112	bar
Steam temperature	:	520	°C
Fuel	:	Heavy oil, production residues (g), production residues (f)	
Scope	:	Boiler Island	
Year of commissioning	:	2012	

M5000 - MHTL Trinidad, Point Lisas, Caribbean
PROMAN Gesellschaft für Projektmanagement mbH



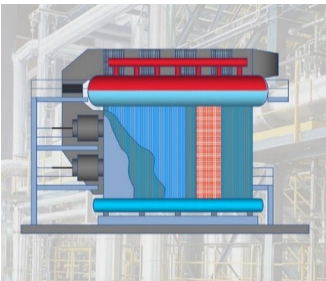
Thermal input	:	114	MW
Steam capacity	:	147,5	t/h
Steam pressure	:	29,5	bar
Steam temperature	:	341	°C
Fuel	:	Natural gas, fusel oil	
Supply	:	Boiler Island	
Year of commissioning	:	2011	

Power Plant Salzgitter, Germany
Salzgitter Flachstahl GmbH



Rated thermal input	:	2 x	298	MW
Steam capacity	:	2 x HP	340	t/h
		2 x RH	320	t/h
Steam pressure	:	HP	168	bar
		RH	45	bar
Steam temperature	:	HP	568	°C
		RH	563	°C
Fuel	:	Natural gas, light fuel oil, coke oven gas, mixed gas (BFG/converter gas)		
Scope	:	Boiler Island		
Year of commissioning	:	2010		

Przyjazn, Dabrowa Górnicza, Poland
Energoinstal SA



Rated thermal input	:	80	MW
Steam capacity	:	95	t/h
Steam pressure	:	45,3	bar
Steam temperature	:	445	°C
Fuel	:	COG and excess gas	
Scope	:	Boiler Island	
Year of commissioning	:	2007	

CCP Plant Varel B8, Varel, Germany
Papier- und Kartonfabrik Varel GmbH & Co. KG



Thermal input	:	53	MW
Steam capacity	:	90	t/h
Steam pressure	:	90	bar
Steam temperature	:	480	°C
Fuel	:	Natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	2007	

MO 3000 - Methanol Plant, Sohar, Sultanate of Oman
MAN Ferrostaal AG



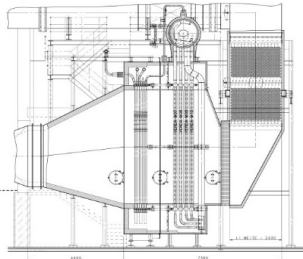
Thermal input	:	2 x	43	MW
Steam capacity	:	2 x	50	t/h
Steam pressure	:	2 x	31	bar
Steam temperature	:	2 x	352	°C
Fuel	:	Natural gas, fusel oil		
Supply	:	Boiler Island		
Year of commissioning	:	2007		

DK6 Combined Power Plant Dunkirk, France
ENGIE Thermique France



Gas turbine	:	Alstom-GT 13 E		
Gas turbine output	:	2 x	160	MW _{el}
Steam capacity per each boiler	:	HP	535	t/h
	:	RH	530	t/h
Thermal output LP-part	:	LP	50	MW
Steam pressure	:	HP	144	bar
	:	RH	32	bar
Steam temperature	:	HP	566	°C
	:	RH	566	°C
Flying take-over	:	yes		
Auxiliary fuel	:	Natural gas, blast furnace gas, coke gas		
Scope	:	Boiler Island		
Year of commissioning	:	2004		

CCP Plant Ludwigshafen, Germany
ThyssenKrupp Xervon Energy GmbH



Rated thermal input	:	15,35	MW
Steam capacity	:	11,15	t/h
Steam pressure	:	17	bar
Saturated steam temperature	:	208	°C
Fuel	:	Natural gas, liquid residues on alcohol basis	
Scope	:	Boiler Island	
Year of commissioning	:	2004	

MHTL Trinidad, Point Lisas, Caribbean
PROMAN Gesellschaft für Projektmanagement mbH



Thermal input	:	115	MW
Steam capacity	:	147,5	t/h
Steam pressure	:	28,5	bar
Steam temperature	:	341	°C
Fuel	:	Natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	2004	

Process Steam Boiler Plant Tecen, Turkmenistan
Thyssen Krupp Industrials Solution AG (formerly Krupp Uhde)



Thermal input	:	130	MW
Steam capacity	:	145	t/h
Steam pressure	:	45	bar
Steam temperature	:	395	°C
Fuel	:	Natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	2004	

CHP Plant Lausward, Düsseldorf, Germany
Stadtwerke Düsseldorf AG



Thermal input	:	3 x	65	MW
Steam capacity	:	3 x	60	t/h
Steam pressure	:	3 x	8	bar
Steam temperature	:	3 x	140 / 70	°C
Fuel	:	Fuel oil, natural gas		
Supply	:	Boiler Island		
Year of commissioning	:	2001 - 2003		

Waste Incineration Plant Sisseln, Switzerland
DSM AG (formerly Roche AG)



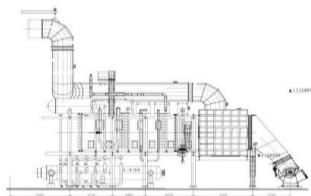
Rated thermal input	:	16,8	MW
Steam capacity	:	20	t/h
Steam pressure	:	39	bar
Steam temperature	:	360	°C
Fuel	:	Liquid production residues, waste gas, natural gas	
Scope	:	Boiler Island	
Year of commissioning	:	2003	

CCP Plant Gendorf, Burgkirchen, Germany
Infraserv Bayernwerk Gendorf GmbH



Gas turbine	:	SGT-800	
Gas turbine output	:	43	MW _{el}
Steam capacity	:	130	t/h
Steam pressure	:	71	bar
Steam temperature	:	510	°C
Flying take-over	:	yes	
Auxiliary fuel	:	Natural gas, Hydrogen	
Scope	:	Boiler Island	
Year of commissioning	:	2002	

YPF Methanol Plant, Plaza Huincul, Argentina
Air Liquide (formerly Lurgi Öl Gas Chemie GmbH)



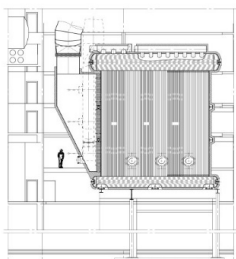
Process heat generator	:	Reformer
Energy source	:	Waste gas
Thermal input	:	67,3 MW _{th}
Gas inlet temperature	:	980 °C
Gas outlet temperature	:	130 °C
Medium flows	:	Process gas, steam, fuel gas, air
Scope	:	Boiler Island
Year of commissioning	:	2000

Power Plant Dollbergen, Germany
Avista Oil Deutschland GmbH (formerly Mineral-Oel Raffinerie Dollbergen GmbH)



Rated thermal input	:	11,5 MW
Steam capacity	:	12,3 t/h
Steam pressure	:	16 bar
Saturated steam temperature	:	201 °C
Fuel	:	Heavy fuel oil, waste waters
Scope	:	Boiler Island
Year of commissioning	:	1999

CHP Plant Wolfsburg, Germany
VW Kraftwerk GmbH



Thermal input	:	135 MW
Design pressure	:	25 bar
Flow temperature	:	145 °C
Return temperature	:	70-90 °C
Fuel	:	Natural gas, fuel oil
Supply	:	Boiler Island
Year of commissioning	:	1999

CHP Plant Anlima, Dhaka, Bangladesh
M/S Anlima Textile Ltd.



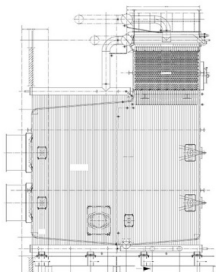
Thermal input	:	16	MW
Steam capacity	:	18,7	t/h
Steam pressure	:	45	bar
Steam temperature	:	450	°C
Fuel	:	Fuel oil, natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1999	

EPZ AMER 9, Geertruidenberg, The Netherlands
Air Liquide Global E&C Solutions Germany (formerly Lurgi Umwelt)



Thermal input	:	17,5	MW
Steam capacity	:	27,1	t/h
Steam pressure	:	58	bar
Steam temperature	:	320	°C
Fuel	:	Fuel oil, natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1999	

CHP Plant Marienehe, Rostock, Germany
Stadtwerke Rostock AG



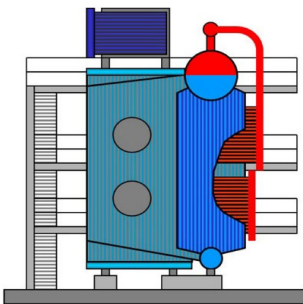
Thermal input	:	60	MW
Steam capacity	:	60	t/h
Steam pressure	:	16	bar
Steam temperature	:	135/85	°C
Fuel	:	Fuel oil, natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1999	

CCP Plant, Erfurt-East, Germany
SWE Stadtwerke Erfurt GmbH



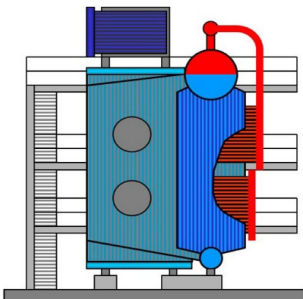
Thermal input	:	2 x	65	MW
Design pressure	:		25	bar
Flow temperature	:		130	°C
Return temperature	:		70	°C
Fuel	:	Fuel oil, natural gas		
Supply	:	Boiler Island		
Year of commissioning	:	1999		

Ammonium Nitrate Plant Panna 3, Mejilones, Chile
Thyssen Krupp Industrials Solution AG (formerly Krupp Uhde)



Thermal input	:	39,5	MW
Steam capacity	:	50	t/h
Design pressure	:	30	bar
Steam temperature	:	350	°C
Fuel	:	Fuel oil	
Supply	:	Boiler Island	
Year of commissioning	:	1998	

CHP Plant SOPC, Suez, Egypt
SOPC



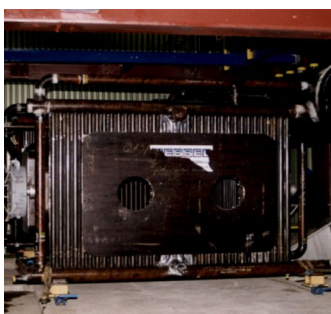
Thermal input	:	42,6	MW
Steam capacity	:	50	t/h
Steam pressure	:	16	bar
Steam temperature	:	320	°C
Fuel	:	Heavy oil, gas	
Supply	:	Boiler Island	
Year of commissioning	:	1998	

PCK Schwedt, Schwedt, Germany
PCK Raffinerie GmbH



Thermal input	:	16	MW
Steam capacity	:	21,4	t/h
Steam pressure	:	36	bar
Steam temperature	:	270	°C
Fuel	:	Natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1998	

MHKW Göppingen, Germany
Veba Kraftwerke Ruhr AG



Thermal input	:	10	MW
Steam capacity	:	15	t/h
Steam pressure	:	39	bar
Steam temperature	:	256	°C
Fuel	:	Fuel oil, natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1998	

CCP Plant Varel B6, Varel, Germany
Papier- und Kartonfabrik Varel GmbH & Co. KG



Thermal input	:	53	MW
Steam capacity	:	65	t/h
Steam pressure	:	64	bar
Steam temperature	:	460	°C
Fuel	:	Natural gas, gas turbine exhaust gas	
Supply	:	Boiler Island	
Year of commissioning	:	1998	

Mitte CHP Plant, Berlin, Germany
Vattenfall Europe Berlin (formerly BEWAG)



Thermal input	:	126	MW
Steam capacity	:	2 x 120	t/h
Steam pressure	:	2 x 9	bar
Steam temperature	:	2 x 125-135/75	°C
Fuel	:	Fuel oil, natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1997	

CCP Plant Dotternhausen, Germany
Holcim (Süddeutschland) GmbH (formerly Rohrbach Zement GmbH & Co. KG)



Thermal input	:	27	MW
Steam capacity	:	11,6	t/h
Steam pressure	:	58	bar
Steam temperature	:	500	°C
Fuel	:	Waste heat from cement furnace	
Supply	:	Boiler Island	
Year of commissioning	:	1997	

Industrial Power Plant Block 4, Eisenhüttenstadt, Germany
Vulkan Energiewirtschaft Oderbrücke GmbH (VEO)



Rated thermal input	:	107	MW
Steam capacity	:	120	t/h
Steam pressure	:	120	bar
Steam temperature	:	540	°C
Fuel	:	Coke oven gas, natural gas	
Scope	:	Boiler Island	
Year of commissioning	:	1997	

**SVZ Schwarze Pumpe, Brandenburg, Germany
LEAG (formerly Schwarze Pumpe GmbH)**



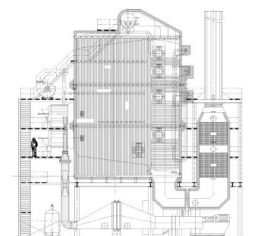
Gas turbine	:	GE-Frame 6
Gas turbine output	:	40 MW _{el}
Steam capacity	:	182 t/h
Steam pressure	:	96 bar (g)
Steam temperature	:	525 °C
Flying take-over	:	yes
Auxiliary fuel	:	Light fuel oil, synthetic gas, natural gas, production residues (gaseous)
Scope	:	Boiler Island
Year of commissioning	:	1997

**Waste Disposal Plant SVZ Schwarze Pumpe, Brandenburg, Germany
LEAG (formerly Schwarze Pumpe GmbH)**



Rated thermal input	:	46 MW
Steam capacity	:	55 t/h
Steam pressure	:	127 bar
Steam temperature	:	530 °C
Fuel	:	Natural gas, rest gas, synthetic gas, fuel oil
Scope	:	Boiler Island
Year of commissioning	:	1997

**Power Plant Böhlen, Germany
Dow Olefinverbund GmbH (formerly Sächsische Olefinwerke AG)**



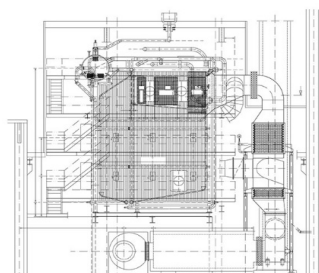
Thermal input	:	80 MW
Steam capacity	:	90 t/h
Steam pressure	:	92 bar
Steam temperature	:	522 °C
Fuel	:	Natural gas, pyrolysis oil, rest gas
Supply	:	Boiler Island
Year of commissioning	:	1996

CHP Plant Linden, Hannover, Germany
Stadtwerke Hannover AG



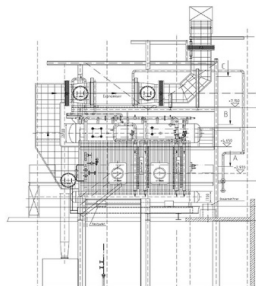
Thermal input	:	155	MW
Design pressure	:	16	bar
Flow temperature	:	140	°C
Return temperature	:	50-70	°C
Fuel	:	Natural gas, fuel oil	
Supply	:	Boiler Island	
Year of commissioning	:	1996	

Europa Carton, Hoya, Germany
AF-Consult Switzerland AG (formely Colenco AG)



Thermal input	:	37,5	MW
Steam capacity	:	45	t/h
Steam pressure	:	64	bar
Steam temperature	:	450	°C
Fuel	:	Natural gas, gas turbine exhaust gas	
Supply	:	Boiler Island	
Year of commissioning	:	1996	

Airport Tempelhof, Berlin, Germany
Flughafengesellschaft Berlin-Tempelhof



Thermal input	:	21	MW
Steam capacity	:	25	t/h
Steam pressure	:	37	bar
Steam temperature	:	425	°C
Fuel	:	Fuel oil, natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1996	

Power Plant Flingern, Düsseldorf, Germany
Stadtwerke Düsseldorf AG



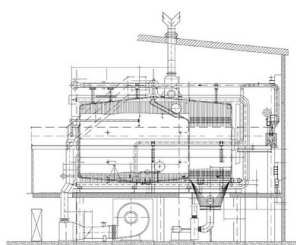
Thermal input	:	52	MW
Steam capacity	:	50	t/h
Steam pressure	:	16	bar
Steam temperature	:	130/70	°C
Fuel	:	Natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1996	

Power Plant Dormagen, Germany
INEOS Manufacturing Deutschland GmbH (formerly Erdölchemie EC GmbH)



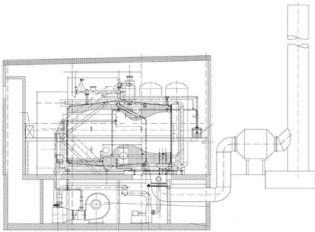
Rated thermal input	:	29	MW
Steam capacity	:	45	t/h
Design pressure	:	68	bar
Steam temperature	:	340	°C
Fuel	:	ACN-Rest gases, crack agent oils, ACN-polymer liquids	
Scope	:	Boiler Island	
Year of commissioning	:	1996	

Heating Plant Bohrhügel, Suhl / Zella-Mehlis, Germany
Stadtwerke Suhl / Zella-Mehlis



Thermal input	:	30	MW
Steam capacity	:	2 x 30	t/h
Steam pressure	:	2 x 23	bar
Steam temperature	:	2 x 150/80	°C
Fuel	:	Fuel oil, natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1995	

Heating Plant Gräfenleite, Suhl / Zella-Mehlis, Germany
Stadtwerke Suhl / Zella-Mehlis



Thermal input	:	25	MW
Steam capacity	:	25	t/h
Steam pressure	:	23	bar
Steam temperature	:	160/80	°C
Fuel	:	Natural gas	
Supply	:	Boiler Island	
Year of commissioning	:	1994	