친환경 콘덴싱보일러 (옵션 : 인버터 · 저녹스 · 저탄소)

ECO-FRIENDLY CONDENSING BOILER (Option : Inverter, Low NOx, Low CO 2)

특징

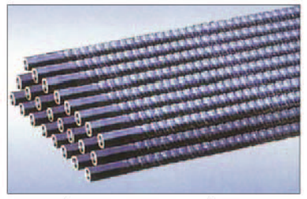
- 보일러효율 101.5%(진발열량기준) 실현
- O2 트리밍(2009년 특허 장치 기본탑재(연소효율 극대화)
- 고효율 인버터 적용으로 급격한 부하변동 능동대처
  (초절전 저CO2, 저NOx, : 40~50% 저감효과)
- 강력한 히트파이프식 공기예열기 장착(열효율 증대)
- 에너지절약형 콘덴싱 에코노마이저 실치(CO2 저감효과)
- 환경오염 극소화(응결수 중화처리 배출)
- 인버터, 저탄소, 저녹스 기능(옵션)
- 고효율 보일러(열효율 100% 이상)입니다.
- 합리적 연소실 구조로 안전 설계되었습니다.
- 배기열 40~50% 회수 가능합니다.
- 보유수량이 충분하여 부하변동에 대응이 빠릅니다.
- 히트 파이프 배기열 회수장치 및 압입 등풍장치가 부착되어 있습니다.
- 주요부품의 보수, 관리가 용이합니다.

FEATURES

- Boiler efficiency 101.5% (based on the net calorific value) achieved
- O2 trimming (patented in 2009) device as a standard feature (combustion efficiency maximized)
- Active handling of sudden load changes by applying a high-efficiency inverter (ultra power saving, 40~50% reduction in CO 2 and NOx)
- Equipped with a strong heat pipe type air preheater(heat efficiency maximized)
- Equipped with an energy saving condensing economizer (CO 2 reduction)
- Minimizing pollution(condensate water released after being neutralized)
- Inverter, Low-CO 2, Low-NOx features (Optional)
- High-efficiency boiler (thermal efficiency above 100%)
- Safe design with logical research facility structure.
- Able to recover exhaust heat up to 40 to 50%.
- Able to respond to sufficient output for retained water, as well as load changes.
- Equipped with a heat pipe exhaust heat recovery device, as well as a forced draught ventilator.
- Easy maintenance of major parts.

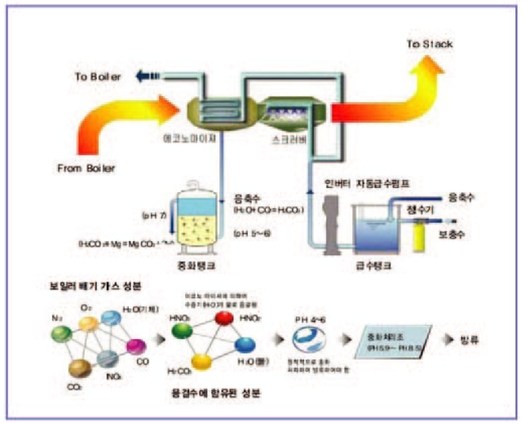
〈조달청우수제품〉
인버터 콘덴싱보일러

〈고효율인증서〉



〈스파이럴 튜브〉 보일러용 연관

〈송풍기, 급수펌프〉 고효율 인버터



■콘덴싱 중화장치

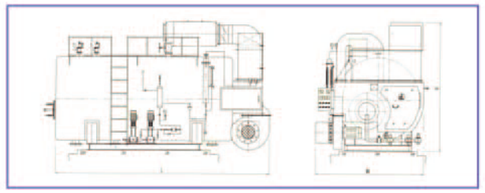
에코노마이저에서 발생하고 응축수를 PH3.5~4.5 알루미나 카본과 반응시켜 PH7 정도 증가되어 외부로 배출됩니다

- $H_2O+CO_2 = H_2CO_3$ (탄산수)

■Neutralization Equipment

The condensate PH3.5~4.5 which is formed in the economizer is discharged as neutral water PH7 to outside after reaction with alumina carbon.

- $H_2O+CO_2 = H_2CO_3$ (Carbonated Water)



■SPECIFICATIONS (STEAM)

Item		Model	DL-ZEC 1000	DL-ZEC 1500	DL-ZEC 2000	DL-ZEC 2500	DL-ZEC 3000	DL-ZEC 3500	DL-ZEC 4000	DL-ZEC 4500	DL-ZEC 5000	DL-ZEC 6000	DL-ZEC 7000	DL-ZEC 8000	DL-ZEC 10000	DL-ZEC 12000	DL-ZEC 15000	DL-ZEC 20000
	Actual Evaporation	kg/hr	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	6,000	7,000	8,000	10,000	12,000	15,000	20,000
Boiler Body	Max. Working Pressure	kg/cm²	7, 10, 12, 14, 16(Option)															
	Heat Efficiency	%	98~100															
	Heating Surface	㎡	16	21	27	35	40	51	58	65	72	82	95	108	133	162	202	265
Operation Weight		Ton	5.6	6.6	7.8	8.8	40.1	11.6	13.3	14.8	16.5	18.8	21.1	23	28.6	31.5	38	41.3
Fuel Consumption	Natural Gas	㎥/hr	66.9	100.3	133.8	167.3	200.7	234.2	267.6	301.1	334.6	401.5	468.4	535.3	669.2	803.4	1003.8	1338.4
	Diesel	L/hr	57.0	85.5	114.0	142.5	171.0	199.5	228.0	256.5	285.0	342.0	399.0	456.0	570.0	684.0	855.0	1140.0
Combustion Control Type			Proportion control(비례제어)															
Burner			Blast Type															
Air Pre-Heater			Heat - Pipe - Type															
Economizer			Spiral Type Heat Exchanger															
F.D Fan	Capacity	㎥/min	18	27	35	43	52	62	70	79	88	100	120	135	180	210	250	270
	Static Pressure	mmAq	450	450	500	500	500	520	520	520	520	520	520	520	520	600	600	740
	Power Consumption	HP	5	5	7.5	10	10	15	15	20	20	20	25	30	40	50	60	100
Fed W.Pump	Power Consumption	HP	1.5	3	3	4	4	4	505	5.5	5.5	7.5	7.5	7.5	15	15	15	20
Connection Diameter	Gas Inlet	A(DN)	40	40	40	50	50	50	50	50	65	65	65	65	100	100	150	150
	Main Steam(Steam Boiler)	A(DN)	65	80	80	80	100	100	100	125	125	125	150	150	200	200	200	250
	Hot Water Supply&Return	A(DN)	40	40	50	40	40	40	50	50	50	50	50	50	50	50	65	65
	Drain	A(DN)	40	40	40	40	40	40	50	50	50	50	50	50	50	50	50	50
Dimension	Width (W)	mm	1,860	1,865	2,005	2,235	2,305	2,330	2,415	2,455	2,530	2,830	2,930	3,095	3,670	3,800	4,060	5,340
	Length (L)	mm	3,295	3,585	3,865	4,125	4,290	4,760	6,025	5,220	5,520	5,600	5,740	5,890	6,365	6,745	7,100	8,240
	Height (H)	mm	2,290	2,335	2,535	2,770	2,830	3,030	3,035	3,260	3,390	3,550	3,615	3,825	3,935	4,120	4,650	5,615
Installation Outline	Exhaust Gas Outlet	mm	300x435	435x500	435x500	435x635	445x635	470x760	470x760	515x760	515x760	690x800	745x850	790x900	650x955	870x1,150	1,200x1,140	1,450x1,290
	Chimney	mmØ	400	450	480	500	550	600	650	680	700	750	800	850	930	1,020	1,130	1,250

Based on:
Steam Pressure : 10kg/cm2
Feed water Temperature: 100°C
N.C.V (NG):8,775 Kcal/m³
N.C.V (Diesel):10,300 Kcal/l
Boiler Efficiency:96%

· Specifications and Data as above are subject to change without prior notice, due to performance improvements.

■SPECIFICATIONS (HOT WATER)

Item		Model	DL-WZCE 1000	DL-WZCE 1200	DL-WZCE 1500	DL-WZCE 2000	DL-WZCE 2500	DL-WZCE 3000	DL-WZCE 3500	DL-WZCE 4000	DL-WZCE 4500	DL-WZCE 5000	DL-WZCE 5500	DL-WZCE 6000	DL-WZCE 6500	DL-WZCE 7000	DL-WZCE 8000	DL-WZCE 10000	DL-WZCE 13000
	Calorific Value	Gcal/hr	1	1.2	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8	10	13
Boiler Body	Max. Working Pressure	kg/cm²	7, 10, 12, 14, 16(Option)																
	Heat Efficiency	%	96~100																
	Heating Surface	㎡	22	27	35	40	58	72	82	95	95	107	107	133	133	164	164	215	269
Operation Weight		Ton	7	8.4	9.4	10.7	14.3	17.9	20.3	23.4	23.4	24.9	24.9	31.1	31.1	34.5	34.5	50	65
Fuel Consumption(LNG)		Nm³/hr	106	128	160.2	213.6	267.1	320.5	373.9	427.3	480.8	534.2	587.6	610	694.5	747.9	854.7	1068.4	1389
Combustion Control Type			High - low-off(3 Position)			Proportion control(비례제어)													
Burner			Blast Type																
Air Pre-Heater			Heat - Pipe - Type																
Economizer			Spiral Type Heat Exchanger																
F.D Fan	Capacity	㎥/min	27	35	43	52	70	88	100	120	120	135	135	180	180	210	210	280	364
	Static Pressure	mmAq	450	500	500	500	520	520	520	520	520	520	520	520	520	600	600	650	700
	Power Consumption	HP	5	7.5	10	10	15	20	20	25	25	30	30	40	40	50	50	75	100
Connection Diameter	Gas Inlet	A(DN)	40	40	40	50	50	50	65	65	65	65	65	80	80	80	80	80/150	150
	Hot Water Supply&Return	A(DN)	80	100	100	100	125	125	150	150	150	200	200	200	200	200	200	250	250
	Drain	A(DN)	40	40	40	40	50	50	50	50	50	50	50	50	50	50	50	50	65
Dimension	Width (W)	mm	1,865	2,005	2,235	2,305	2,415	2,530	2,830	2,930	2,930	3,095	3,095	3,670	3,670	3,800	3,800	4,480	5,340
	Length (L)	mm	3,585	3,865	4,125	4,290	5,025	5,520	5,600	5,740	5,740	5,890	5,890	6,365	3,935	6,745	6,745	7,530	8,240
	Height (H)	mm	2,335	2,535	2,770	2,830	3,035	3,390	3,550	3,615	3,615	3,825	3,825	3,935	4,025	4,120	4,120	4,580	5,615
Installation Outline	Exhaust Gas Outlet	mm	435x500	435x500	435x635	435x635	470x760	515x760	690x800	745x850	745x850	790x900	790x900	650x955	650x955	870x1,150	870x1,150	850x1,200	950x1,335
	Chimney	mm	450	480	500	550	650	700	750	800	800	850	850	930	930	1,020	1,020	1,130	1,250

· 가스공급 압력은 중간압2000~4000 mmAq을 기준으로 하였습니다.
· 실제 보일러 효율 측정시는 계측 오차로서 ±2% 허용차가 날 수 있습니다.
· LNG의 저발열량은 9550 kcal/Nm³ 기준입니다.
· 상기 외형 및 사양표는 성능개선을 위하여 예고 없이 변경될 수 있습니다.
· 콘덴싱 스팀 보일러 급수온도 20℃ 기준
· 콘덴싱 중온수 보일러 공급 및 리턴온도: A.T 40℃ 기준
· 실제 보일러 효율, 계측오차, 연료 소모량은 현장조건에 의해 달라질 수 있습니다.

· The gas supply pressure was based on the medium pressure 2000-4000 mmAq.
· There may be a permissible error of ±2% of less
· The low heating value of LNG is bassed on 9550kcal/N m³.
· Specifications and Data as above are subject to change without prior notice, due to performance improvements.