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CERTUSS

STEAM GENERATOR

UMX U1500MX – U2000MX

[FACTSHEET]

UMX

> UMX PERFORMANCE

The UMX on-demand steam generator is completely newly developed and is designed for use with NG or LPG or both (dual gas). The system is ready for operation just 3 to 5 minutes after start-up and allows for continuous modulation between 20% and 100% output. NOx emissions remain well below the required regulations. With its high efficiency, environmental compatibility, and user-friendly operation, the UMX sets new standards in its class.

> UMX FEATURES

In the new UMX model series, features that were previously optional are now included as standard. Components such as the water pump, sliding gate valve, hot water filter, gas filter and steam separator are fully integrated and pre-installed – making the CERTUSS UMX ready for immediate use. An integrated maintenance chain block hoist, a practical access ladder, and improved service access ensure greater safety and efficiency during maintenance work. The 7-inch display enables convenient operation control – also via connection to a central building management system. Thanks to the innovative One View Control, the device status remains visible at all times – even remotely.



UMX WILL FEATURE AND INCLUDE:

- _ Fastest start-up < 5 minutes
- _ Full modulation 20% – 100%
- _ NG or LPG or dual gas (NG/LPG)
- _ NOx emissions well below required standards
- _ 7-inch display (HMI)
- _ Water pump
- _ Sliding gate valve
- _ Hot water filter
- _ Gas filter
- _ Steam separator
- _ Chain block hoist and ladder for maintenance

CAPACITIES

Model UMX		1500	1800	2000
Steam output	kg/h	1500	1800	2000
Heat output*	kW	984	1181	1312
Firing rate				
(max. / 100 %)	kW	1091	1309	1454
(min. / 20 %)	kW	218	262	291
Modulation	%	20 – 100 % (1.5)		

*according to 100 °C feed water temperature and 1,0 Mpa (10 bar) steam pressure

STEAM PRESSURE RATING

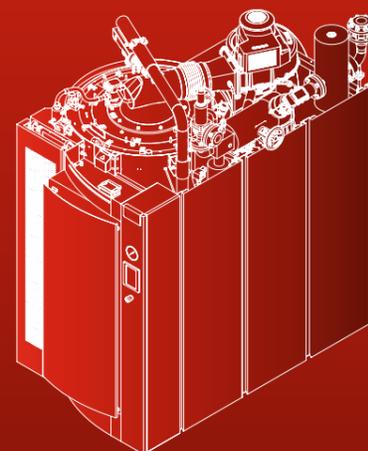
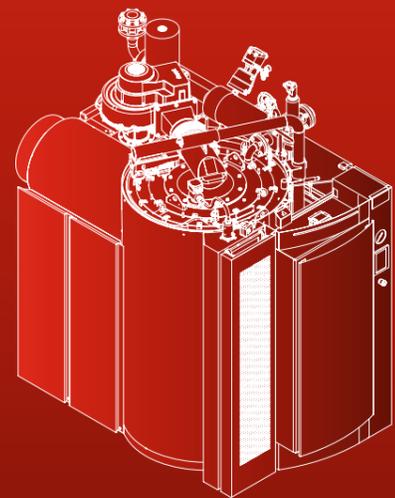
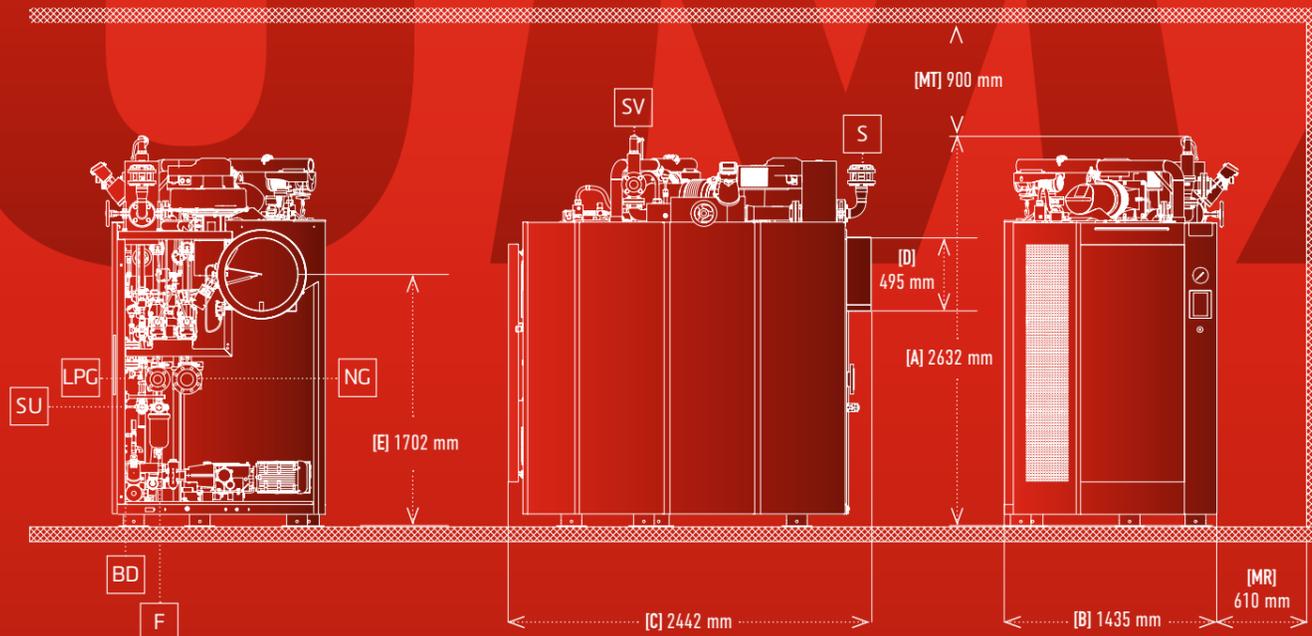
Model UMX		1500	1800	2000
Max. permissible overpressure	MPa	1.0 – 3.2		
	bar	10 – 32		
Max. operating pressure	MPa	0.6 / 0.8 – 2.9		
	bar	6 / 8 – 29		
Min. operating pressure	MPa	0.6		
	bar	6		

EFFICIENCIES

Model UMX		1500	1800	2000
Fuel-to-Steam-Efficiency	%	> 91 %		



UMX



- A Height
- B Width
- C Depth
- D Flue Gas Pipe Ø
- E Flue Gas Center
- S Steam
- F Feedwater
- SU Start Up
- BD Blowdown
- SV Safety Valve
- NG Natural Gas Train
- LPG LP Gas Train
- MR Maintenance Right
- MF Maintenance Front
- MT Maintenance Top

DIMENSIONS

Model UMX	1500	1800	2000
Height (A)	mm	2632	
Width (B)	mm	1435	
Depth (C)	mm	2442	
Flue gas pipe Ø (D)	mm	500	
Flue gas center (E)	mm	1702	
Footprint	m ²	3,5	
Dry weight	kg	2400	
Operating weight	kg	2625	

CONNECTIONS

Model UMX	1500	1800	2000
Steam (S)	DN	65	
Feedwater (F)	DN	1 1/4"	
Start Up (SU)	DN	1"	
Blowdown (BD)	DN	25	
Safety Valve (Inlet x Outlet) (SV)	DN	32 x 50	
Natural Gas Train (NG)	DN	80	
LP Gas Train (LPG)	DN	50	
Compressed Air	DN	1/4"	
Condensate line (steam separator)	DN	1/2"	
Drip line	DN	1/2"	
Chimney draught	kPa	0,005 – 0,025	

MAINTENANCE AREA

Model UMX	1500	1800	2000
Right* (MR)	mm	610	
Front* (MF)	mm	610	
Left**	mm	0	
Back**	mm	0	
Top (MT)	mm	900	
Footprint including maintenance area	m ²	6,3	

* Local requirements can vary and need to be considered

**Steam generator can be placed on the left side and the back directly to the wall

COMBUSTION SPECIFICATIONS

Model UMX		1500	1800	2000
Natural Gas				
Fuel volume flow				
(max. / 100 %)	Nm ³ /h	109.1	130.9	145.4
(min. / 20 %)	Nm ³ /h	21.8	26.2	29.1
Gas flow pressure (min. / max)	mbar	30 / 100		
Combustion air volume flow*				
(max. / 100 %)	Nm ³ /h	1374	1649	1832
(min. / 20 %)	Nm ³ /h	275	330	366
Flue gas volume flow (dry)*				
(max. / 100 %)	Nm ³ /h	1264	1517	1685
(min. / 20 %)	Nm ³ /h	253	303	337
Flue gas mass flow*				
(max. / 100 %)	Nm ³ /h	1264	1517	1685
(min. / 20 %)	Nm ³ /h	253	303	337
Liquefied Petroleum Gas (Propane)				
Fuel volume flow				
(max. / 100 %)	Nm ³ /h	42.3	50.7	56.4
(min. / 20 %)	Nm ³ /h	8.5	10.1	11.3
Gas pressure (min. / max)	mbar	50		
Combustion air volume flow*				
(max. / 100 %)	Nm ³ /h	1281	1537	1707
(min. / 20 %)	Nm ³ /h	256	307	341
Flue gas volume flow (dry)*				
(max. / 100 %)	Nm ³ /h	1196	1435	1594
(min. / 20 %)	Nm ³ /h	239	287	319
Flue gas mass flow*				
(max. / 100 %)	kg/s	0.4821	0.5784	0.6425
(min. / 20 %)	kg/s	0.0964	0.1157	0.1285

*based on 4.5% O₂

CATEGORIES

Model UMX		1500	1800	2000
Category according to BetrSichV		III	IV	IV
Category according to PED		IV		
Volume steam pressure system	ltr.	225		
Max. permissible overpressure	bar	10 – 13	16 – 20	25 – 32
Pressure-liter product	ltr.bar	2250.0 – 2925.0	3600.0 – 4500.0	5625.0 – 7200.0

ELECTRICAL REQUIREMENTS

Model UMX		1500	1800	2000
Voltage	V	380 · 400 · 415 · 440 · 460 · 480		
Frequency	Hz	50 · 60		
Electrical connection load	kVA	-		
Short-Circuit Current Rating	kA	5		
Protection class fan		IP54		
Protection class cooling unit		IP34		

EMISSIONS

Model UMX		1500	1800	2000
NOx Natural Gas*	ppm	25 (4.5%)	13 (5.5%)	6 (6.5%)
			2 (7.5%)	
NOx LPG (Propane)	ppm	40 (5.5%)	13 (6.5%)	8 (7.5%)

*corrected to 3% O₂

PRESSURE VESSEL

Model UMX		1500	1800	2000
Material		P235GH		
Water content	l	225.0		
Heating surface	m ²	30.7		

STANDARD

- _Integrated PLC with 7-inch display (HMI)
- _Short heat-up time (fastest start-up < 5 minutes)
- _Thermotimat PLUS (extended automatic mode)
- _Valve Proving System (VPS)
- _Water pump
- _Energy-saving variable speed combustion air fan
- _Pre-Heating of combustion air (no insulation needed)
- _Fully modulating 5:1 turndown burner
- _High pressure limiter
- _Steam- and exhaust temperature limiter
- _Combustion air intake filter
- _Gas filter
- _Water filter
- _Steam separator
- _Chain block hoist and ladder for maintenance
- _PPE anchor point
- _One View Control

OPTIONS

- _Dual Gas (NG or LPG)
- _Equipment for external combustion air inlet
- _Second water pump
- _Second safety valve
- _Cabinet cooling unit
- _Remote service and online report and maintenance options
- _Customer gateways-protocols: Modbus TCP, Modbus RTU, Profibus DP, Profinet IO, Ethernet IP, EtherCat, BACnetIP, BACnetMSTP, OPC UA, MQTT
- _Signal interface: digital/analog

APPROVALS

- _PED 2014/68/EU
- _EN 676
- _EN 12952
- _EN 50156-1