neoTower®
cogeneration unit

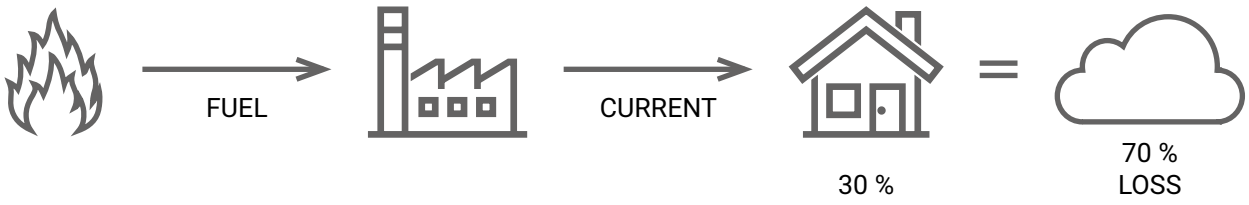
CHP systems for decentralized energy solutions
from 2,0 to 50,0 kW electrical output

GHP HELLAS
AIR CONDITIONING WITH NATURAL GAS

REDUCE ENERGY COSTS - SPARE THE ENVIRONMENT

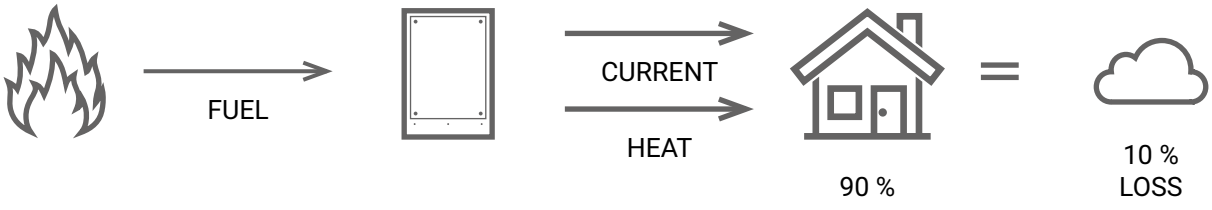
Central Energy Supply

In conventional power production, up to 70 % of the energy from central power plants is lost due to transfer and heat loss.



Local Energy Supply

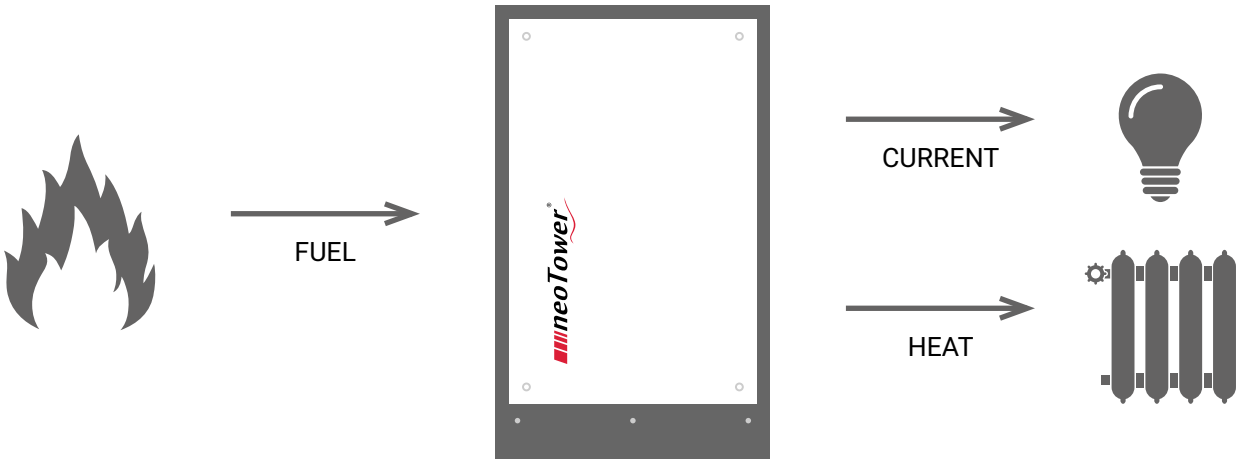
Losses are minimised with cogeneration units such as the neoTower®.



This is how a Cogeneration unit works

A combustion engine powers a high-performance generator which produces electricity. The waste heat of the engine created in the process is used to heat your hot water.

So you produce your energy where it is needed: In your property!



THE COGENERATION UNIT

- Output modulation up to 50 %
- Standardised condensing technology
- Natural gas or liquefied gas operation
- Hydrogen admixture suitable up to 40 %
- Compatibility with cascading
- Blackout start option
- 2 year warranty

EFFICIENT

You save money with the simultaneous production of electricity and heat. The more operating hours your neoTower® operates per year, the more money you have in your wallet. Short amortisation times and low maintenance costs are additional indicators of a sound investment.

ENVIRONMENTALLY-FRIENDLY

With the neoTower®, you reduce not only CO_2 emissions but also spare valuable primary energy with highly efficient use. In addition, transfer losses are minimised due to short transport routes, because you only produce the energy where it is needed: in the location of consumption.

INDEPENDENCE

With the neoTower®, you gain independence from rising energy costs. Since heat and valuable electricity are produced at the same time, you gain a measure of independence from the National Grid.

The neoTower® is quiet, durable, efficient and compact. Intelligently designed, soundly insulated and the very low engine speed assure whisper-quiet operation and maximise service life. Therefore, neoTower® cogeneration units are also well-suited for properties with higher demands on comfort, such as hotels or nursing homes. A degree of efficiency of up to 109.5 % is a testament to maximum efficiency. With the compact design and optional dismantled delivery, the neoTower® can be used in nearly any location.

Intuitive operation
The neoTower® is easy to operate. You can change settings and have current consumption and production values displayed as required.

Charging station
Make the first step: Use the neoTower® as an electric charging station for e-bikes and electric vehicles. You can also charge other rechargeable electrical devices with the neoTower®.

Remote monitoring
Every neoTower® can be connected to the Internet through the mobile router provided, including a SIM card (valid for 24 months), or by Ethernet. This gives you worldwide access to the CHP round the clock. Every unit is monitored by RMB/ENERGIE GmbH in real time, so that remote maintenance can be performed.

Long maintenance intervals
With a constant low speed, the neoTower® minimises the operational wear of the parts. The result is very long maintenance intervals.

POWER MODULATION

The setting of the neoTower® can be either power or heat optimized.
It can adapt its output to the current demand of your property.
In this way, only what is currently needed is produced.

FOR EVERY PROPERTY - ALWAYS ECONOMICAL

neoTower® LIVING 2.0 - 4.0
Already suitable for
private homes.

neoTower® 5.0 - 9.5
For an annual heat requirement
starting from approx.:
45.000 - 90.000 kWh

neoTower® 11.0 - 20.0
For an annual heat requirement
starting from approx.:
100.000 - 180.000 kWh

neoTower® 25.0 - 30.0
For an annual heat requirement
starting from approx.:
220.000 - 250.000 kWh

neoTower® 50.0
For an annual heat requirement
starting from approx.:
320.000 - 400.000 kWh

Hospitals

Factories

Banks

Hotels

Residential areas

Shopping centres

Schools

Private homes

Swimming pools

Workshops

Nursing homes

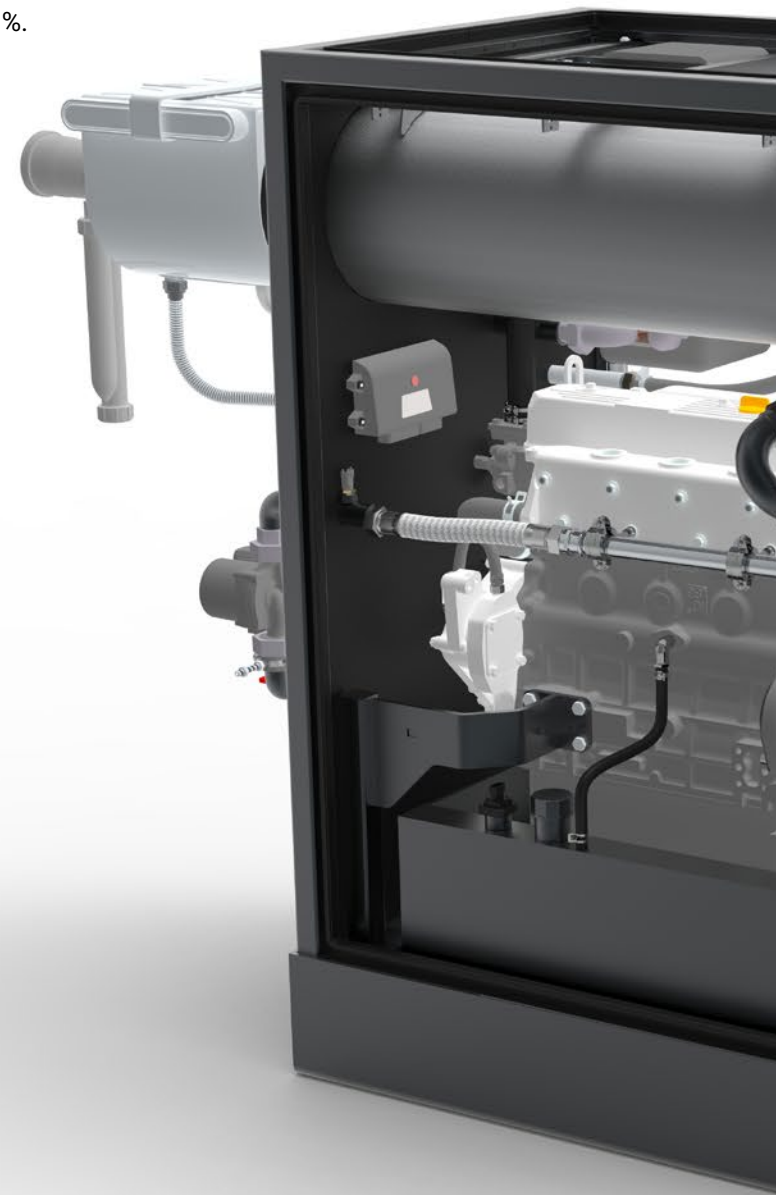
Agriculture

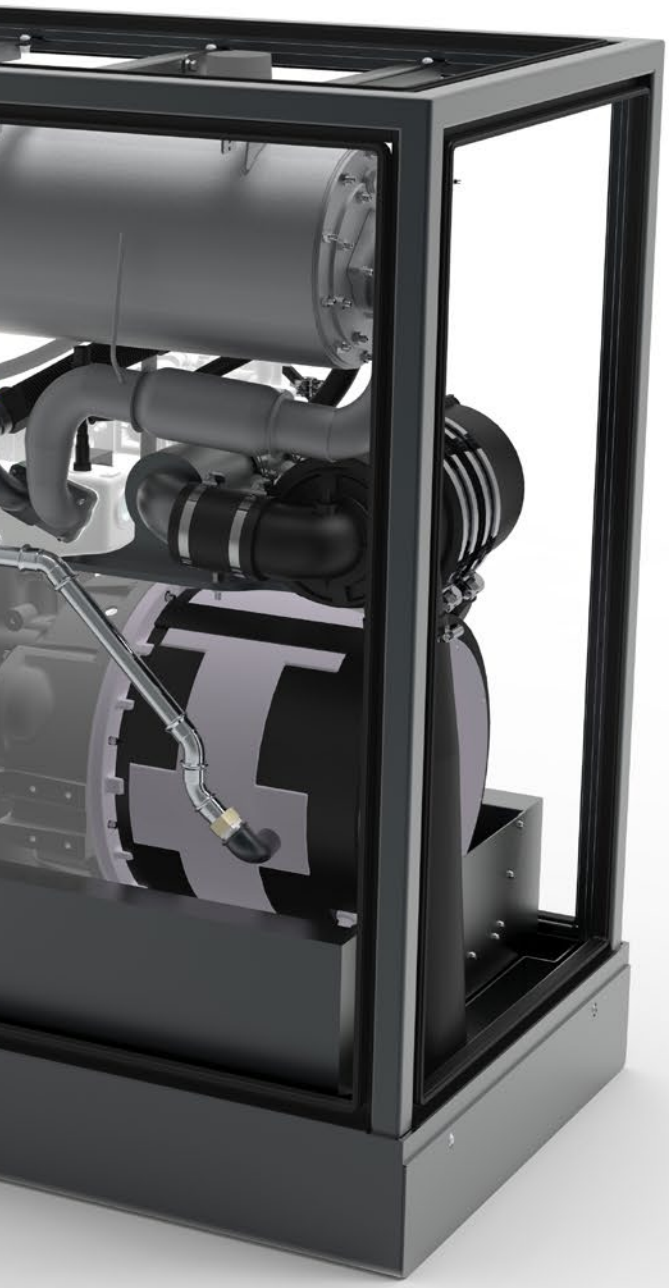
SMART AND INNOVATIV

STANDARDISED CONDENSING TECHNOLOGY
With the standardised integrated condensing technology, the neoTower® cogeneration units achieve energy efficiency levels of up to 109.5 %.

FLEXIBLE SWITCHING OPTION
With the bi-fuel accessory, it can be freely decided at any time which fuel the neoTower® is to run on.

DURABLE INDUSTRIAL COMPONENTS
Three- and four-cylinder industrial engines from YANMAR, Toyota and MAN. Thanks to their durability, these industrial gas engines are ideally suited for use in cogeneration units.
In combination with highperformance generators from Emod and Marelli, the components are the heart of every neoTower®.



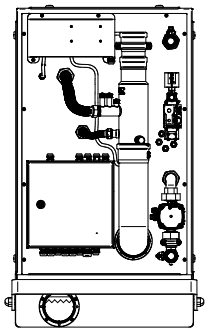


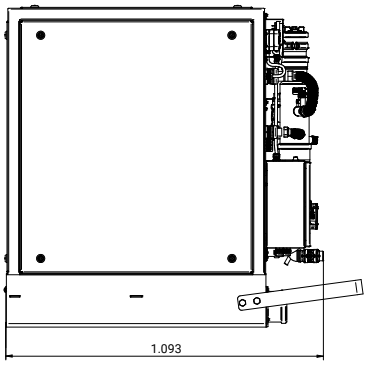
BLACKOUT-START
In the event of a power failure, the neoTower® is operated in grid backup mode for an unlimited period of time. The cogeneration unit is now able to start independently by means of the electricity storage unit and ensure the energy demand.

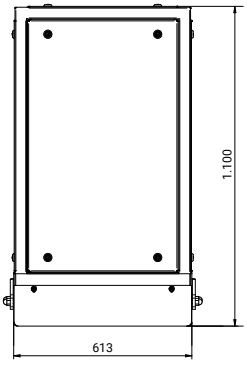
PRETTY SMART
The RMB/REPORT documents all current and past production values and presents them in a clear arrangement. This allows worldwide access to all relevant data in real-time. At the same time, the parameters can also be customised and the unit can be controlled remotely.

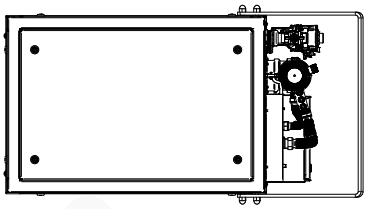
CHARGING-BUTTON
From the neoTower® directly into the car: With the electric vehicle charging button, electromobility is optimized economically and ecologically.
Use the neoTower® as a charging station for e-bikes, e-scooters and any other electric vehicle.

neoTower® LIVING 2.0, 3.3, 4.0





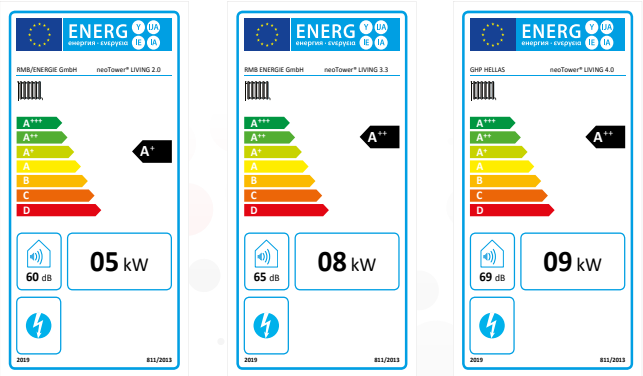




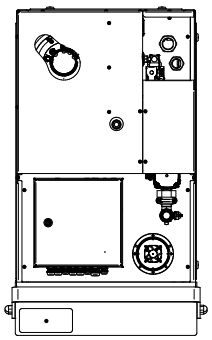
TECHNICAL DATA

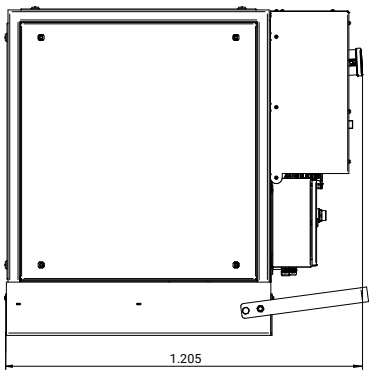
neoTower® LIVING	2.0	3.3	4.0
Rated output - electrical[1] [kWel]	2,0	3,3	4,0
Rated output - thermal[2] [kWth]	5,2	8,2	8,8
Power modulation - electrical [kWel]	1,1 - 2,0	2,0 - 3,3	2,0 - 4,0
Power modulation - thermal [kWth]	3,8 - 5,2	5,9 - 8,2	5,9 - 8,8
f Primary energy factor[3]	0,445	0,378	0,302
ErP energy efficiency label[4]	A+	A++	A++
Maintenance interval [op. hrs]	15.000	13.000	13.000
	EFFICIENCY RATIOS		
Electrical efficiency ratio el [%]	27,8	29,5	31,8
Thermal efficiency ratio th [%]	72,3	73,0	69,8
Total efficiency ratio total [%]	100,1	102,5	101,6
	HEAT EXTRACTION		
Flow temperature ± 5 [°C]	75	75	75
Return flow temperature ± 5 [°C]	25 - 65	25 - 65	25 - 65
	ELECTRICAL ENERGY GENERATION		
Nominal voltage [V]	400	400	400
Frequency [Hz]	50	50	50
	MOTOR		
Motor manufacturer	YANMAR	YANMAR	YANMAR
Number of cylinders	3	3	3
Displacement [l]	0,7	0,7	0,7
Air-fuel ratio λ	1,6	1,6	1,6
Fuel	Natural gas / Biomethane Liquefied gas / BioLPG	Natural gas / Biomethane Liquefied gas / BioLPG	Natural gas / Biomethane Liquefied gas / BioLPG
	GENERATORS		
Generator type	asynchronous	asynchronous	asynchronous
Speed [rpm]	1.020	1.540	1.540
	DIMENSIONS & WEIGHT		
Dimensions of module L x W x H [mm]	1.093 x 613 x 1.100	1.093 x 613 x 1.100	1.093 x 613 x 1.100
Weight approx. [kg]	425	425	425

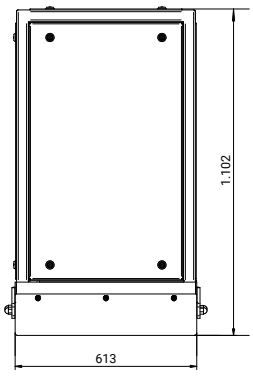
[1] Performance data in accordance with ISO 3046/I-2002, tolerance 5 %
[2] Thermal performance data tolerance 8 %
[3] fpe current = 2.8 displacement mix per DIN V 18599, DIN V 4701-10, EnEV 2014 valid from 01/01/2016
[4] in accordance with EU Regulation 811/2013; 813/2013

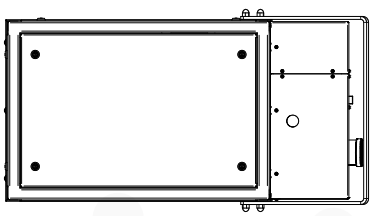


neoTower® 5.0, 7.2





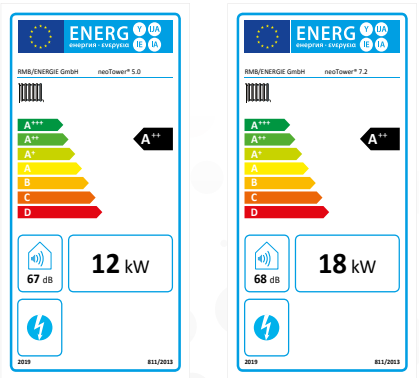




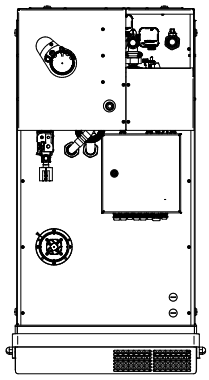
TECHNICAL DATA

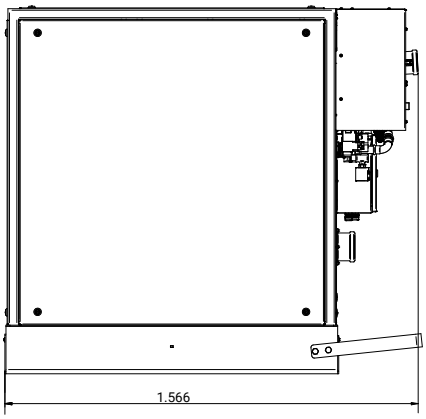
neoTower®	5.0	7.2
Rated output - electrical[1] [kWel]	5,0	7,2
Rated output - thermal[2] [kWth]	12,0	18,1
Power modulation - electrical [kWel]	2,9 - 5,0	3,9 - 7,2
Power modulation - thermal [kWth]	9,2 - 12,0	12,7 - 18,1
f Primary energy factor[3]	0,286	0,290
ErP energy efficiency label[4]	A++	A++
Maintenance interval [op. hrs]	15.000	13.000
	EFFICIENCY RATIOS	
Electrical efficiency ratio el [%]	31,6	31,2
Thermal efficiency ratio th [%]	75,7	78,3
Total efficiency ratio total [%]	107,3	109,5
	HEAT EXTRACTION	
Flow temperature ± 5 [°C]	80	80
Return flow temperature ± 5 [°C]	25 - 65	25 - 65
	ELECTRICAL ENERGY GENERATION	
Nominal voltage [V]	400	400
Frequency [Hz]	50	50
	MOTOR	
Motor manufacturer	Toyota	Toyota
Number of cylinders	3	3
Displacement [l]	1,0	1,0
Air-fuel ratio λ	1,6	1,0
Fuel	Natural gas / Biomethane Liquefied gas / BioLPG	Natural gas / Biomethane Liquefied gas / BioLPG
	GENERATORS	
Generator type	asynchronous	asynchronous
Speed [rpm]	1.550	1.550
	DIMENSIONS & WEIGHT	
Dimensions of module L x W x H [mm]	1.205 x 613 x 1.102	1.205 x 613 x 1.102
Weight approx. [kg]	444	444

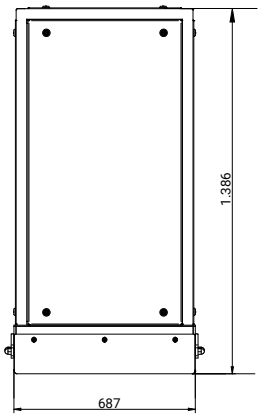
[1] Performance data in accordance with ISO 3046/I-2002, tolerance 5 %
[2] Thermal performance data tolerance 8 %
[3] fpe current = 2.8 displacement mix per DIN V 18599, DIN V 4701-10, EnEV 2014 valid from 01/01/2016
[4] in accordance with EU Regulation 811/2013; 813/2013

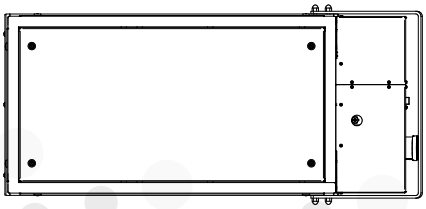


neoTower® 9.5, 12.5 Natural gas / Biomethane





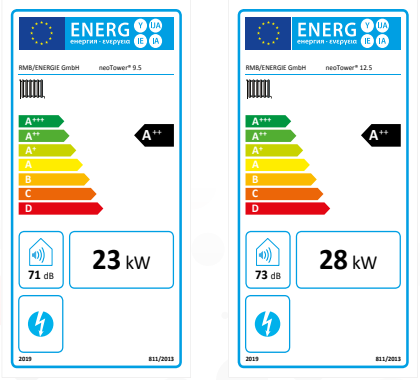




TECHNICAL DATA

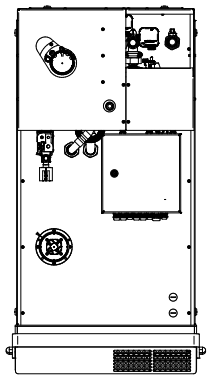
neoTower®	9.5	12.5
Rated output - electrical[1] [kWel]	9,5	12,5
Rated output - thermal[2] [kWth]	22,7	27,6
Power modulation - electrical [kWel]	5,0 - 9,5	6,0 - 12,5
Power modulation - thermal [kWth]	12,0 - 22,7	13,3 - 27,6
f Primary energy factor[3]	0,282	0,220
ErP energy efficiency label[4]	A++	A++
Maintenance interval [op. hrs]	13.000	13.000
	EFFICIENCY RATIOS	
Electrical efficiency ratio el [%]	31,7	33,5
Thermal efficiency ratio th [%]	75,6	73,9
Total efficiency ratio total [%]	107,3	107,4
	HEAT EXTRACTION	
Flow temperature ± 5 [°C]	80	80
Return flow temperature ± 5 [°C]	25 - 65	25 - 65
	ELECTRICAL ENERGY GENERATION	
Nominal voltage [V]	400	400
Frequency [Hz]	50	50
	MOTOR	
Motor manufacturer	YANMAR	YANMAR
Number of cylinders	3	3
Displacement [l]	1,7	1,7
Air-fuel ratio λ	1,0	1,0
	GENERATORS	
Generator type	asynchronous	asynchronous
Speed [rpm]	1.540	1.540
	DIMENSIONS & WEIGHT	
Dimensions of module L x W x H [mm]	1.566 x 687 x 1.386	1.566 x 687 x 1.386
Weight approx. [kg]	818	818

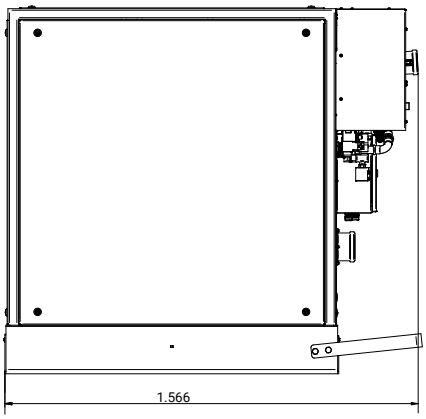
[1] Performance data in accordance with ISO 3046/I-2002, tolerance 5 %
[2] Thermal performance data tolerance 8 %
[3] fpe current = 2.8 displacement mix per DIN V 18599, DIN V 4701-10, EnEV 2014 valid from 01/01/2016
[4] in accordance with EU Regulation 811/2013; 813/2013

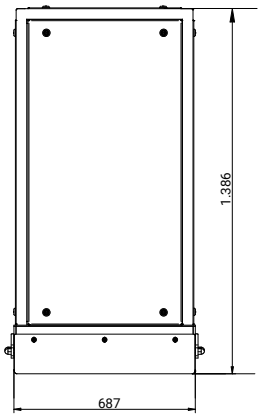


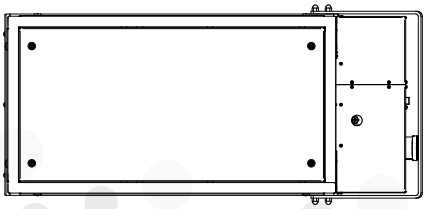
neoTower® 9.5, 12.5 Liquefied gas / BioLPG

NEW!





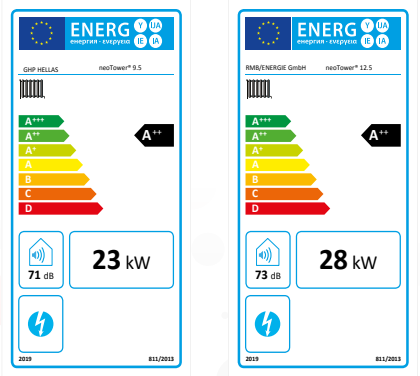




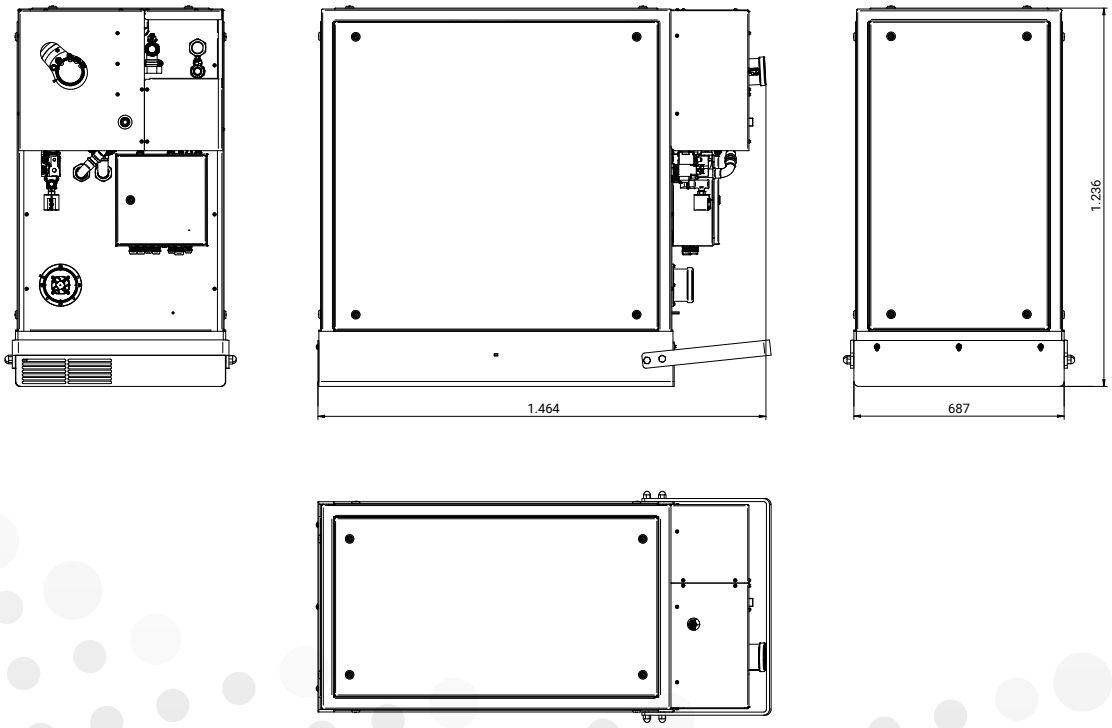
TECHNICAL DATA

neoTower®	9.5	12.5
Rated output - electrical[1] [kWel]	9,5	12,5
Rated output - thermal[2] [kWth]	23,1	28,6
Power modulation - electrical [kWel]	5,0 - 9,5	6,0 - 12,5
Power modulation - thermal [kWth]	16,1 - 23,1	18,1 - 28,6
f Primary energy factor[3]	0,410	0,373
ErP energy efficiency label[4]	A++	A++
Maintenance interval [op. hrs]	13.000	13.000
	EFFICIENCY RATIOS	
Electrical efficiency ratio el [%]	29,0	30,1
Thermal efficiency ratio th [%]	70,4	68,9
Total efficiency ratio total [%]	99,4	99,0
	HEAT EXTRACTION	
Flow temperature ± 5 [°C]	80	80
Return flow temperature ± 5 [°C]	25 - 65	25 - 65
	ELECTRICAL ENERGY GENERATION	
Nominal voltage [V]	400	400
Frequency [Hz]	50	50
	MOTOR	
Motor manufacturer	YANMAR	YANMAR
Number of cylinders	3	3
Displacement [l]	1,7	1,7
Air-fuel ratio λ	1,0	1,0
	GENERATORS	
Generator type	asynchronous	asynchronous
Speed [rpm]	1.540	1.540
	DIMENSIONS & WEIGHT	
Dimensions of module L x W x H [mm]	1.566 x 687 x 1.386	1.566 x 687 x 1.386
Weight approx. [kg]	818	818

[1] Performance data in accordance with ISO 3046/I-2002, tolerance 5 %
[2] Thermal performance data tolerance 8 %
[3] fpe current = 2.8 displacement mix per DIN V 18599, DIN V 4701-10, EnEV 2014 valid from 01/01/2016
[4] in accordance with EU Regulation 811/2013; 813/2013



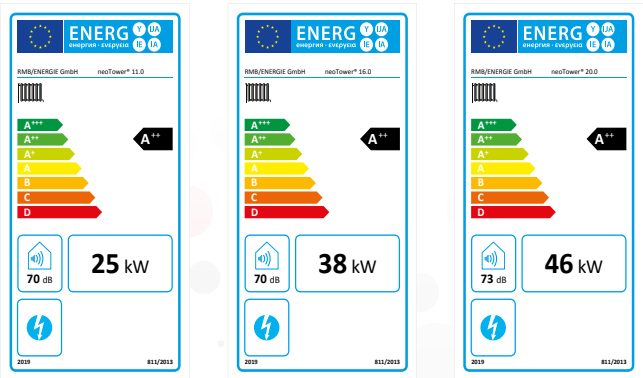
neoTower® 11.0, 16.0, 20.0



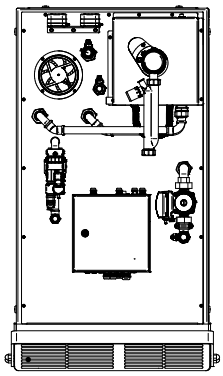
TECHNICAL DATA

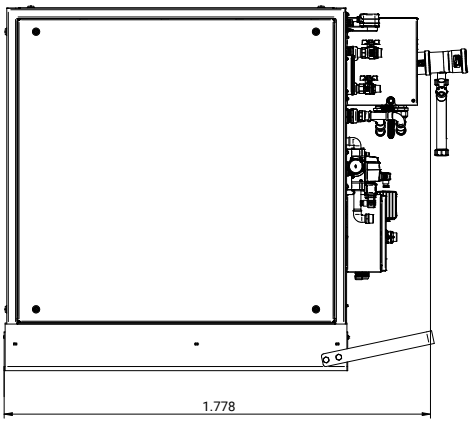
neoTower®	11.0	16.0	20.0
Rated output - electrical[1] [kWel]	11,0	16,0	20,0
Rated output - thermal[2] [kWth]	25,3	37,9	45,8
Power modulation - electrical [kWel]	7,5 - 11,0	9,5 - 16,0	10,7 - 20,0
Power modulation - thermal [kWth]	20,6 - 25,3	26,4 - 37,9	29,1 - 45,8
f Primary energy factor[3]	0,279	0,266	0,224
ErP energy efficiency label[4]	A++	A++	A++
Maintenance interval [op. hrs]	10.000	6.000	6.000
	EFFICIENCY RATIOS		
Electrical efficiency ratio el [%]	32,0	32,1	33,2
Thermal efficiency ratio th [%]	73,5	75,9	76,0
Total efficiency ratio total [%]	105,5	108,0	109,2
	HEAT EXTRACTION		
Flow temperature ± 5 [°C]	80	80	80
Return flow temperature ± 5 [°C]	25 - 65	25 - 65	25 - 65
	ELECTRICAL ENERGY GENERATION		
Nominal voltage [V]	400	400	400
Frequency [Hz]	50	50	50
	MOTOR		
Motor manufacturer	Toyota	Toyota	Toyota
Number of cylinders	4	4	4
Displacement [l]	2,2	2,2	2,2
Air-fuel ratio λ	1,6	1,0	1,0
Fuel	Natural gas / Biomethane Liquefied gas / BioLPG	Natural gas / Biomethane Liquefied gas / BioLPG	Natural gas / Biomethane Liquefied gas / BioLPG
	GENERATORS		
Generator type	asynchronous	asynchronous	asynchronous
Speed [rpm]	1.540	1.540	1.540
	DIMENSIONS & WEIGHT		
Dimensions of module L x W x H [mm]	1.464 x 687 x 1.236	1.464 x 687 x 1.236	1.464 x 687 x 1.236
Weight approx. [kg]	719	719	719

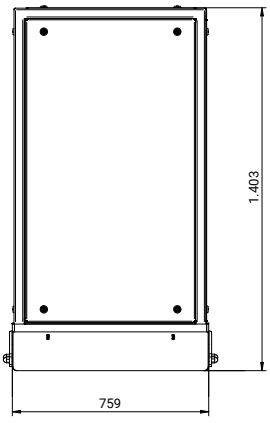
[1] Performance data in accordance with ISO 3046/I-2002, tolerance 5 %
[2] Thermal performance data tolerance 8 %
[3] fpe current = 2.8 displacement mix per DIN V 18599, DIN V 4701-10, EnEV 2014 valid from 01/01/2016
[4] in accordance with EU Regulation 811/2013; 813/2013

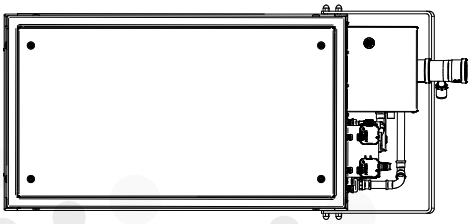


neoTower® 25.0, 30.0 Natural gas / Biomethane





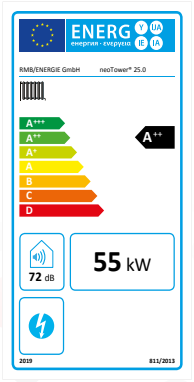


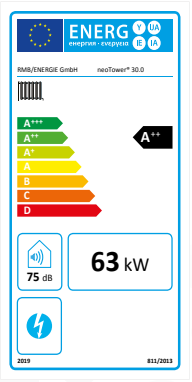


TECHNICAL DATA

neoTower®	25.0	30.0
Rated output - electrical[1] [kWel]	25,0	30,0
Rated output - thermal[2] [kWth]	54,9	63,1
Power modulation - electrical [kWel]	12,5 - 25,0	15,0 - 30,0
Power modulation - thermal [kWth]	34,8 - 54,9	40,9 - 63,1
f Primary energy factor[3]	0,266	0,229
ErP energy efficiency label[4]	A++	A++
Maintenance interval [op. hrs]	8.000	8.000
	EFFICIENCY RATIOS	
Electrical efficiency ratio el [%]	32,5	33,5
Thermal efficiency ratio th [%]	71,4	70,5
Total efficiency ratio total [%]	103,9	104,0
	HEAT EXTRACTION	
Flow temperature ± 5 [°C]	80	80
Return flow temperature ± 5 [°C]	25 - 65	25 - 65
	ELECTRICAL ENERGY GENERATION	
Nominal voltage [V]	400	400
Frequency [Hz]	50	50
	MOTOR	
Motor manufacturer	YANMAR	YANMAR
Number of cylinders	4	4
Displacement [l]	3,3	3,3
Air-fuel ratio λ	1,0	1,0
	GENERATORS	
Generator type	asynchronous	asynchronous
Speed [rpm]	1.530	1.530
	DIMENSIONS & WEIGHT	
Dimensions of module L x W x H [mm]	1.778 x 759 x 1.403	1.778 x 759 x 1.403
Weight approx. [kg]	1.038	1.038

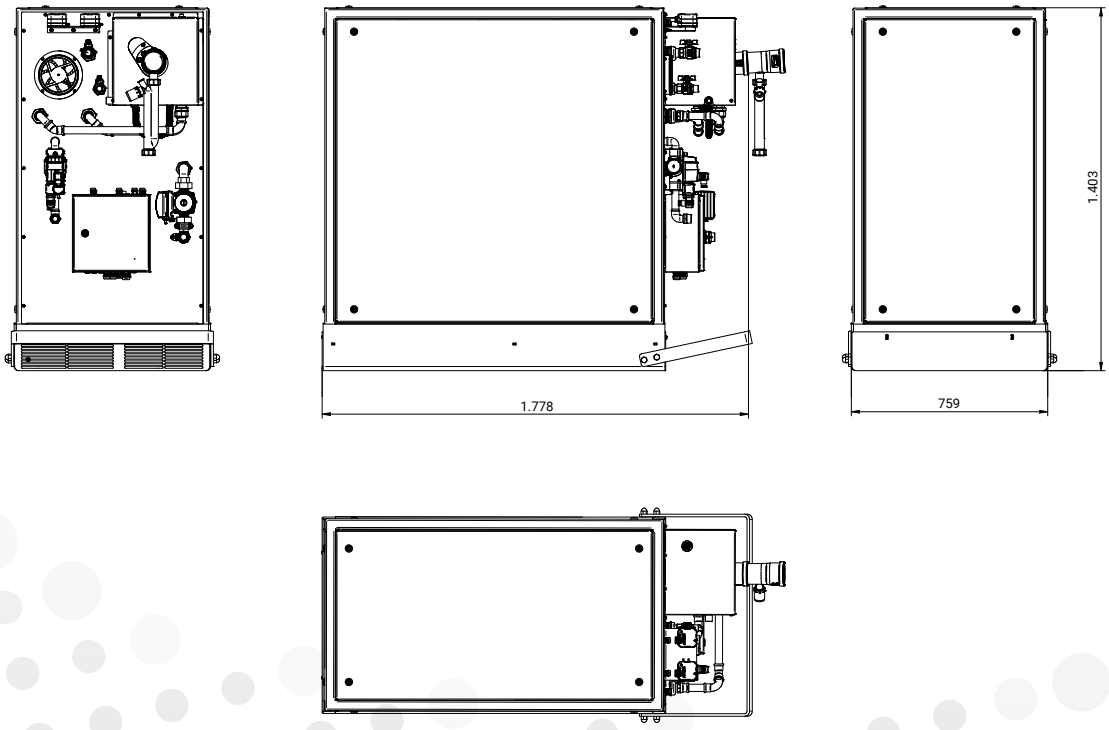
[1] Performance data in accordance with ISO 3046/I-2002, tolerance 5 %
[2] Thermal performance data tolerance 8 %
[3] fpe current = 2.8 displacement mix per DIN V 18599, DIN V 4701-10, EnEV 2014 valid from 01/01/2016
[4] in accordance with EU Regulation 811/2013; 813/2013





neoTower® 25.0, 30.0 Liquefied gas / BioLPG

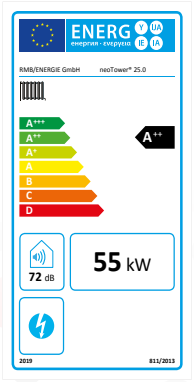
NEW!

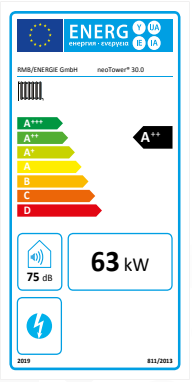


TECHNICAL DATA

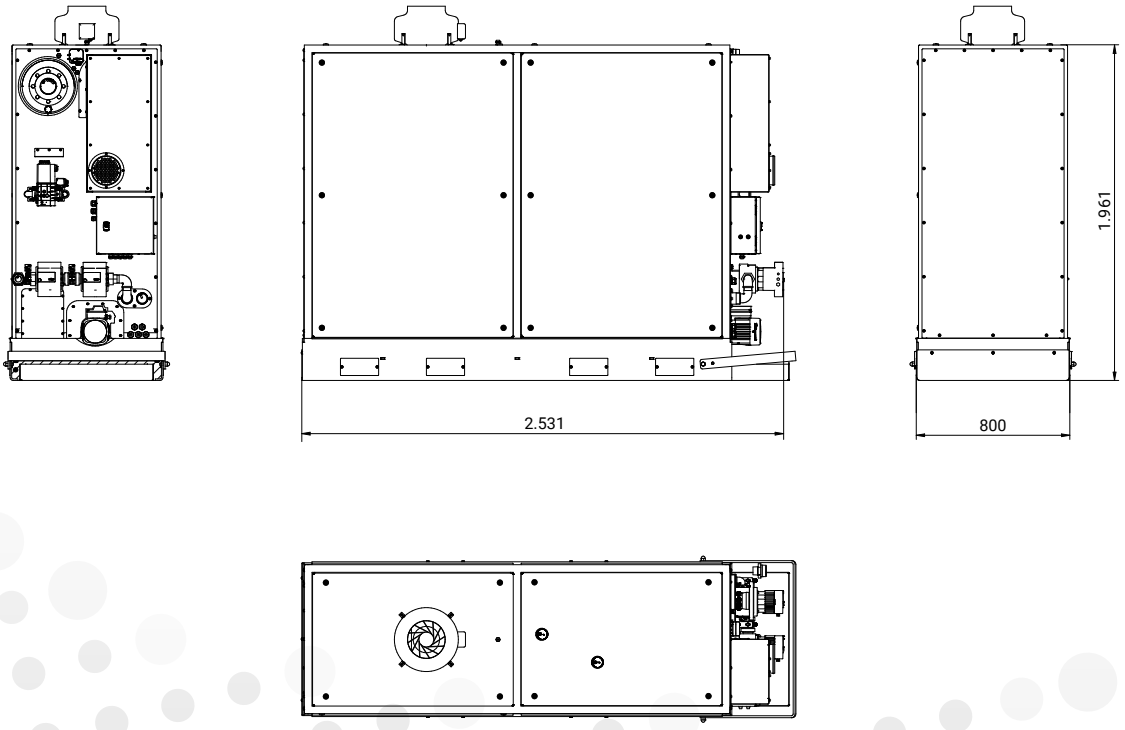
neoTower®	25.0	30.0
Rated output - electrical[1] [kWel]	25,0	30,0
Rated output - thermal[2] [kWth]	51,8	57,8
Power modulation - electrical [kWel]	12,5 - 25,0	15,0 - 30,0
Power modulation - thermal [kWth]	35,7 - 51,8	40,0 - 57,8
f Primary energy factor[3]	0,353	0,366
ErP energy efficiency label[4]	A++	A++
Maintenance interval [op. hrs]	8.000	8.000
	EFFICIENCY RATIOS	
Electrical efficiency ratio el [%]	31,1	31,4
Thermal efficiency ratio th [%]	64,6	60,5
Total efficiency ratio total [%]	95,7	91,8
	HEAT EXTRACTION	
Flow temperature ± 5 [°C]	80	80
Return flow temperature ± 5 [°C]	25 - 65	25 - 65
	ELECTRICAL ENERGY GENERATION	
Nominal voltage [V]	400	400
Frequency [Hz]	50	50
	MOTOR	
Motor manufacturer	YANMAR	YANMAR
Number of cylinders	4	4
Displacement [l]	3,3	3,3
Air-fuel ratio λ	1,0	1,0
	GENERATORS	
Generator type	asynchronous	asynchronous
Speed [rpm]	1.530	1.530
	DIMENSIONS & WEIGHT	
Dimensions of module L x W x H [mm]	1.778 x 759 x 1.403	1.778 x 759 x 1.403
Weight approx. [kg]	1.038	1.038

[1] Performance data in accordance with ISO 3046/I-2002, tolerance 5 %
[2] Thermal performance data tolerance 8 %
[3] fpe current = 2.8 displacement mix per DIN V 18599, DIN V 4701-10, EnEV 2014 valid from 01/01/2016
[4] in accordance with EU Regulation 811/2013; 813/2013





neoTower® 50.0 Natural gas / Biomethane



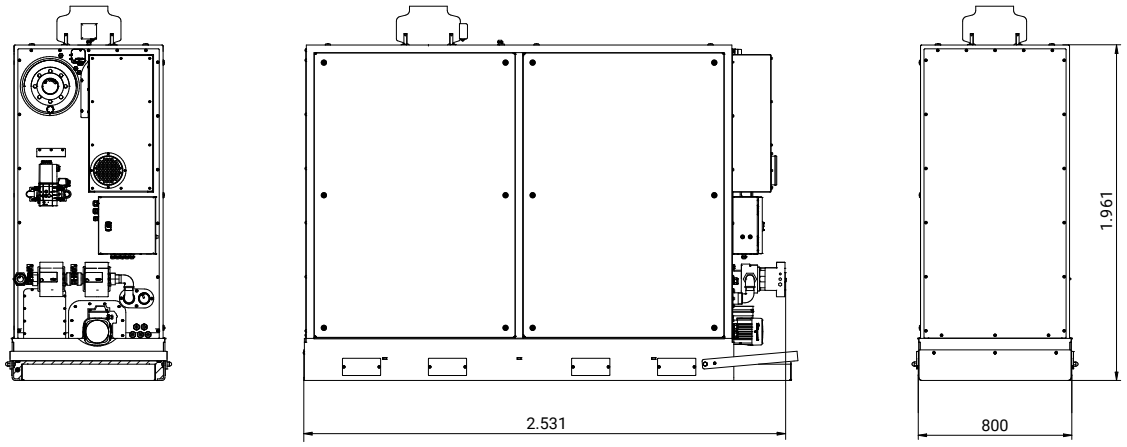
TECHNICAL DATA

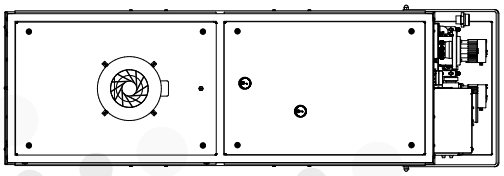
neoTower®	50.0 Standard	50.0 High temperture	50.0 Calorific value
Rated output - electrical[1] [kWel]	50,0	50,0	50,0
Rated output - thermal[2] [kWth]	85,0	80,0	100,0
Power modulation - electrical [kWel]	25,0 - 50,0	25,0 - 50,0	25,0 - 50,0
Power modulation - thermal [kWth]	52,6 - 85,0	49,5 - 80,0	60,2 - 100,0
f Primary energy factor[3]	0,203	0,216	0,172
ErP energy efficiency label[4]		n/a	
Maintenance interval [op. hrs]	3.000	3.000	3.000
		EFFICIENCY RATIOS	
Electrical efficiency ratio el [%]	35,0	35,0	35,0
Thermal efficiency ratio th [%]	59,4	55,9	69,9
Total efficiency ratio total [%]	94,4	90,9	104,9
		HEAT EXTRACTION	
Flow temperature ± 5 [°C]	80	93	80
Return flow temperature ± 5 [°C]	25 - 65	83	25 - 65
		ELECTRICAL ENERGY GENERATION	
Nominal voltage [V]	400	400	400
Frequency [Hz]	50	50	50
		MOTOR	
Motor manufacturer	MAN	MAN	MAN
Number of cylinders	4	4	4
Displacement [l]	4,6	4,6	4,6
Air-fuel ratio λ	1,0	1,0	1,0
		GENERATORS	
Generator type	synchronous	synchronous	synchronous
Speed [rpm]	1.500	1.500	1.500
		DIMENSIONS & WEIGHT	
Dimensions of module L x W x H [mm]	2.532 x 800 x 1.961	2.532 x 800 x 1.961	2.532 x 800 x 1.961
Weight approx. [kg]	2.250	2.250	2.250

[1] Performance data in accordance with ISO 3046/I-2002, tolerance 5 %
[2] Thermal performance data tolerance 8 %
[3] fpe current = 2.8 displacement mix per DIN V 18599, DIN V 4701-10, EnEV 2014 valid from 01/01/2016
[4] in accordance with EU Regulation 811/2013; 813/2013

neoTower® 50.0 Liquefied gas / BioLPG

NEW!





TECHNICAL DATA

neoTower®	50.0 Standard	50.0 High temperture	50.0 Calorific value
Rated output - electrical[1] [kWel]	50,0	50,0	50,0
Rated output - thermal[2] [kWth]	85,0	77,3	95,3
Power modulation - electrical [kWel]	25,0 - 50,0	25,0 - 50,0	25,0 - 50,0
Power modulation - thermal [kWth]	55,1 - 87,0	52,7 - 77,3	61,4 - 95,3
f Primary energy factor[3]	0,276	0,216	0,304
ErP energy efficiency label[4]		n/a	
Maintenance interval [op. hrs]	3.000	3.000	3.000
		EFFICIENCY RATIOS	
Electrical efficiency ratio el [%]	33,5	32,9	32,6
Thermal efficiency ratio th [%]	58,4	50,9	62,0
Total efficiency ratio total [%]	91,9	83,9	94,6
		HEAT EXTRACTION	
Flow temperature ± 5 [°C]	80	93	80
Return flow temperature ± 5 [°C]	25 - 65	83	25 - 65
		ELECTRICAL ENERGY GENERATION	
Nominal voltage [V]	400	400	400
Frequency [Hz]	50	50	50
		MOTOR	
Motor manufacturer	MAN	MAN	MAN
Number of cylinders	4	4	4
Displacement [l]	4,6	4,6	4,6
Air-fuel ratio λ	1,0	1,0	1,0
		GENERATORS	
Generator type	synchronous	synchronous	synchronous
Speed [rpm]	1.500	1.500	1.500
		DIMENSIONS & WEIGHT	
Dimensions of module L x W x H [mm]	2.531 x 800 x 1.961	2.532 x 800 x 1.961	2.532 x 800 x 1.961
Weight approx. [kg]	2.250	2.250	2.250

[1] Performance data in accordance with ISO 3046/I-2002, tolerance 5 %
[2] Thermal performance data tolerance 8 %
[3] fpe current = 2.8 displacement mix per DIN V 18599, DIN V 4701-10, EnEV 2014 valid from 01/01/2016
[4] in accordance with EU Regulation 811/2013; 813/2013

CHP TECHNOLOGY MEETS DEMANDING CLIMATE CONTROL REQUIREMENTS

CHALLENGE:

Whether it's a taxi, a driver training car, or a military vehicle: Vinyl application to all types of vehicles and installation of special technical equipment are used in many fields. The vehicle vinyl application is done by hand and requires special finesse.

Working the vinyl — especially the behaviour of the vinyl adhesive — requires exactly the right ambient conditions. Ideally, in spacious production halls, the temperature is 23°C — plus or minus 2°C — at any given time. As part of a comprehensive redesign of the air conditioning, a cogeneration unit was installed and has proven itself across the board.

SOLUTION:

To ecologically decrease the summer rise in temperatures, the hall's roof had already been covered with dirt and planted with vegetation. However, this measure proved inadequate for reducing the registered summer heat. This called for use of a neoTower®.

The neoTower® delivers up to 20 kW electrically and 46 kW thermally, and its output can be modulated across a wide range. Its warmth doesn't just heat the hall on cool days, but when necessary assists with two peak load boilers. When necessary, the heat energy can also be sent to an absorption cooling system. This, in turn, is connected to cooling ceilings and the cooling register of the ventilation system. In this way, the neoTower® keeps production conditions constant even on days when the sun is intense.

(Foto: INTAX)

CONCLUSION:

Use of BHKW technology has proven especially appropriate at industrial companies like INTAX, among others, due to their high internal power consumption. Optimal system dimensioning is crucial to amortization, which can be reached in as little as four years. The narrowly graduated range of offerings for the efficient neoTower® in the electric power range up to 50 kW allows a customed solution here. Initial assessments from practical use confirm the system planner's predictions. In addition to neoTower's high quality, the decision was also based on a high quality service delivery schedule from the RMB/ENERGIE technical specialists.

OVERVIEW:

Customer:	INTAX Innovative Fahrzeuglösungen GmbH
Application:	Factories
Place:	Oldenburg
Cogenerations unit:	neoTower® 20.0
Gas type:	Natural gas
Rated output - electrical:	20,0 kW
Rated output - thermal:	45,8 kW

POWER AND HEAT WITH CHP TECHNOLOGY IN RESIDENTIAL BUILDING

CHALLENGE :

Innovative energy concepts allow builders to combine sustainability and economy in a special way. The starting point is often a cogeneration unit, which delivers not only heat, but also electricity, allowing a high level of independence from external providers — thus creating more room for new usage and recycling models.

GEWOBA, in Emden, Germany, provides a prime example of this approach. The municipal housing corporation developed a new residential development within a stock of existing multi-family buildings by erecting a new apartment building for assisted living, six single-family homes, and four residential buildings 4, 8 and 12 storeys high. These buildings are connected to each other by a local heating network facilitated by our cogeneration unit.

SOLUTION:

The neoTower® was installed in a separate standalone heating station. The system delivers up to 63 kW of heat, so it can effortlessly cover the basic needs of all the buildings in the new development. The heat is fed into a 3,000-litre storage tank to prevent cycling as much as possible. Peak loads are covered by an additional condensing boiler.

With its 30 kilowatts, the neoTower® gives priority to the tenants' internal electrical needs, and then overproduction is fed into the public power grid. At the same time, the system can be modulated across a broad range to optimise its level of effectiveness. Thanks to seamless remote monitoring, the operating parameters can be analysed and optimised directly from our plant, making it much easier to plan maintenance intervals.

CONCLUSION:

With neoTower®, GEWOBA, as builder and administrator, can create a usage model that also benefits the tenants. They have the freedom to choose their energy provider, but most prefer to get their electricity from their landlord — at considerably more favourable prices than on the consumer market. GEWOBA, in turn, gets more pence per kilowatt hour than would be possible based on a feed-in rate. In addition, there is no usage fee, which would otherwise be part of the feed-in rate. And finally, sale of their own electricity represents a positive financial opportunity. This gives both sides a clear advantage in generating electricity in their own development.

OVERVIEW:

Customer:	GEWOBA Emden
Application:	Residential building
Place:	Emden
Cogenerations unit:	neoTower® 30.0
Gas type:	Natural gas
Rated output - electrical:	30,0 kW
Rated output - thermal:	63,1 kW

CERTIFICATES AND PARTNERSHIPS

Our goal: To offer you maximum safety and to reduce energy costs through reliable systems technology. To give you the best certainty of planning and maximum efficiency, we place special value on the quality and reliability of our neoTower® cogeneration unit.

There's a reason we have multiple certifications worldwide and belong to the industry's leading associations:

Reliable quality management in accordance with DIN EN ISO 9001 ensures consistently high product and service quality.

DVGW test mark and DVGW quality marks stand for optimal PROTECTION in the gas and water compartment.

The reliable, clean and flexible generation of electricity and heat from CHP systems is called "blue energy" designated.

Our products are SVGW-certified and meet the safety requirements in Switzerland.

GHP HELLAS
AIR CONDITIONING WITH NATURAL GAS

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