

## Data sheet CAHS D-TORNADO



General Data \ model	07/3100	08/2900	10/2700	13/2300
Recoverable thermal output <sup>1</sup>	499 - 876 kW			
Fuel consumption (Hu=10,0 kW/Nm <sup>3</sup> )	77,6 Nm <sup>3</sup> /h			
Power requirement (kW)	7,0 kW			
BUS-System	Modbus TCP			
Remote maintenanceTCP/IP	Yes			
<b>Engine</b>				
Type	V12			
Engine displacement	25,78 L			
Engine Type	Naturally aspirated			
Brennstoffeinsatz <sup>2</sup>	776 kW			
RPM, min <sup>-1</sup>	1800			
ISO standard power (mech.) <sup>2</sup>	300 kW			
Engine cooling water heat quantity	239 kW			
Exhaust gas heat capacity 110 °C	187 kW			
Efficiency Thermal <sup>2</sup>	54,9 %			
Efficiency Combined (el. + th.) <sup>2</sup>	93,6 %			
Engine oil	semi-synthetic			
Lubrication oil consumption	120 g/Bh			
Filling capacity lubricant (max.)	90 + 150 L			
<b>Compressor</b>				
Manufacturer	Atlas Copco			
Heat recovery compressor	260 kW			
RPM, min <sup>-1</sup>	2330	2200	2060	1760
outlet pressure, barg <sup>3</sup>	7	8,5	10	13
Free air delivery (FAD), m <sup>3</sup> /min <sup>3</sup>	51,5	48,4	45,2	38,4
Modulation / power control	60 - 100 %			
compressed air connection	DN 125 PN 16			

<b>Gas supply</b>	
Gas train	nach DIN
Interface Gas	DN 50 (2")
Gas flow pressure	22 - 100 mbar
<b>Air supply</b>	
Combustion air mass flow	952 kg/h
Air temperature	25 °C
<b>Exhaust</b>	
Interface Exhaust	DN 200
TA-Luft	yes
Exhaust temperature	639 °C
Condensate mass flow	108 kg/h
Max. permissible back pressure	< 15 mbar
flow rate, dry	817 Nm <sup>3</sup> /h
mass flow, wet	1008 kg/h
<b>Hydraulic integration</b>	
Interface inlet/outlet	DN 80 PN 16
Norm in-/outlet temperatur	70 / 90 °C
Standard flow rate	36 m <sup>3</sup> /h
heating water pressure	2,5 bar (ü)
<b>Dimensions / Weight</b>	
Dimensions (lxwxh), mm	4000x1500x2100
Weight Module (w/o operating fluids)	4100 kg
Dimensions housing (LxBxH), mm	4250x1700x2200
Weight housing	830 kg
Dimensions cabinet (LxBxH), mm	800x300x1200
Weight cabinet	120 kg
Recommended concrete strength	C20/25
Payload, qk	3,5 kN/m <sup>2</sup>

<sup>1</sup> with a tolerance of ±7%; <sup>2</sup> acc. to ISO 3046-1; <sup>3</sup> acc. to ISO 1217, Anh. D.

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Noise emissions (incl. standard silencer)	
- Unit 1 m / 10 m	75 / 65 dB(A)
- Exhaust gas stack 10 m	67 dB(A)
Exh. emissions with catalytic converter	
NO <sub>x</sub>	≤ 250 mg/Nm <sup>3</sup>
CO	≤ 250 mg/Nm <sup>3</sup>
HCHO	≤ 5 mg/Nm <sup>3</sup>
Protection class	
- Unit	IP 23
- Unit with housing	IP 53
- Control cabinet	IP 55
Options	
Housing	yes
Additional silencer	yes
Emergency cooler	yes
Gas warning system	yes
Knock control	yes
Gross calorific value	yes
additional lubrication oil tank	yes
LTE / UMTS-modul	yes
BUS-converter	yes
heat meter (calibrated)	yes
Neutralisation plant	yes
Compressed air flow meter	yes
Containerised solution	yes
Remote control	yes
Catalyst technology for oil-free air	yes
Directly heated adsorption dryers	yes
Master Control readynes	yes
Contribution, installation, commisioning	yes

Subject to technical changes