

ONE PIECE BIOGAS CHILLER / DRYER GC 100-35-5

GENERAL DATA

Gas flow	100	[Nm ³ /h]
Inlet temperature	35	[°C]
Outlet temperature	5	[°C]
Max operating temperature	70	[°C]
Relative humidity at inlet	100	[%]
Relative humidity at outlet (before reheater)	100	[%]
Pressure loss (+3 mbar at demister)	6	[mbar]
Operating pressure	0	[bar(g)]
min. operating pressure	5	[mbar(g)]
max. operating pressure	0,5	[bar(g)]
Required cooling power	3,6	[kW]
Condensate removal	4	[kg/h]

COOLING MACHINE

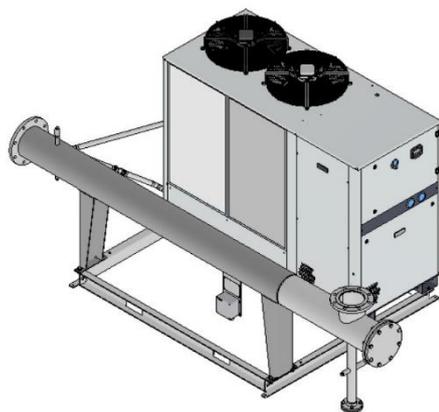
Installed cooling power	5,2	[kW]
At ambient temperature	35	[°C]
Inlet temperature cooling circuit	5	[°C]
Outlet temperature cooling circuit	1	[°C]
Cooling media	R-410A	
Rated power consumption including pump and fan	1,7	[kW]
max. current consumption	7	[A]
max. starting current	39	[A]
Power supply	3~440V 60Hz	
Cold brine buffer storage	25	[ltr.]
Sound pressure level in 10 m distance (+/- 2 dB(A))	30	[dB(A)]

INSTALLATION & CONNECTIONS

Installation site	Outside installation; No ex-zone	
max. installation altitude	500	m.a.s.l.
min. ambient temperature	-20	[°C]
max. ambient temperature	42	[°C]
Max. operating temperature gas side	70	[°C]
Inlet connection:	100/16	[DN/PN]
Outlet connection	80/16	[DN/PN]
Condensate drain	R2"	

DIMENSIONS

Length	3600	[mm]
Width	1500	[mm]
Height	1300	[mm]
Transport weight	600	[kg]
Operation weight	800	[kg]



SCOPE OF SUPPLY:

GAS COOLER

Designed as one-way shell-and-tube heat exchanger

Process gas inside of the tubes; cooling water in the shell

- All parts in contact with the process gas made of stainless steel 316Ti or 316L;
heat exchanger shell made of steel

- Designed with gas outlet chamber outlet connection radial; inspection opening axial

- Official acceptance according to PED 2014/68/EU in accordance with AD-Merkblätter and factory pressure test

AIR-COOLED LIQUID CHILLER (EUROVENT certified)

Air-cooled chiller for outdoor installation

- Fully hermetic scroll-type compressor in low-noise design

- Liquefier register made of copper tubes with continuous surface-corrugated aluminium fins

- PID microprocessor control with temperature control and equipment protection function

- Cold water circuit with pump, buffer storage tank, flow controller and safety valve

BASE FRAME FOR GAS DEHUMIDIFIER

For design as compact unit, ready for connection

- Hot dip galvanized steel beam base frame

- Including piping between gas cooler and liquid chiller

INSULATION OF THE GAS COOLER

- Insulation with galvanized sheet-metal jacket

- Resistant to steam diffusion

- Suitable for outdoor installation

- Removable insulation at openings

DEMISTER

- Up to 99 % removal of condensate drops

- Completely made of stainless-steel alloy

SYPHON FOR CONDENSATE REMOVAL

Gas leakage is prevented by water seal at the condensate outlet. Further professional condensate drain on site is necessary.

- Material in stainless steel 316 Ti or 316 L

- Operation -20 to +20 mbar

GLYCOL

- Water / glycol – mixture (34 Vol.-%)

- First filling

OPTIONS:

1 pc. Heat exchanger for reheating the gas to reduce the rel. humidity

€ on request

1 pc. Siphon monitoring

€ on request

1 pc. Condensate removal via condensate collecting tank with pump

€ on request

1 pc. Trace heating

€ on request

1 pc. Temperature control for reheater

€ on request

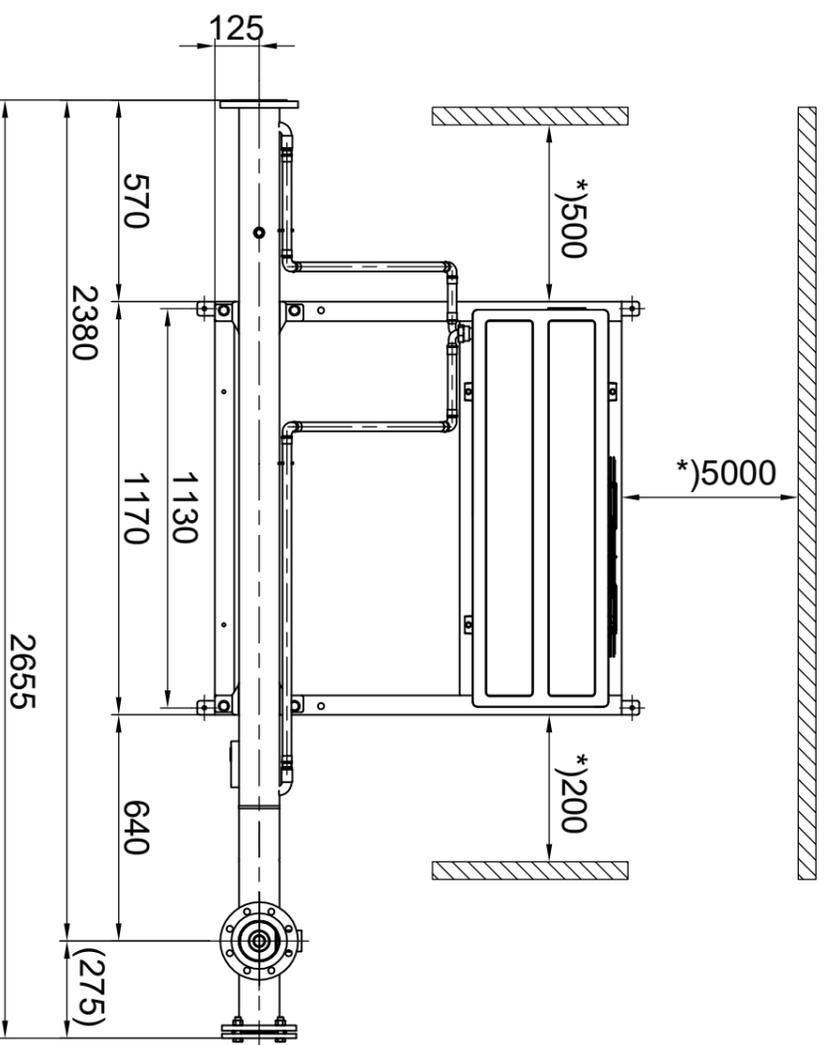
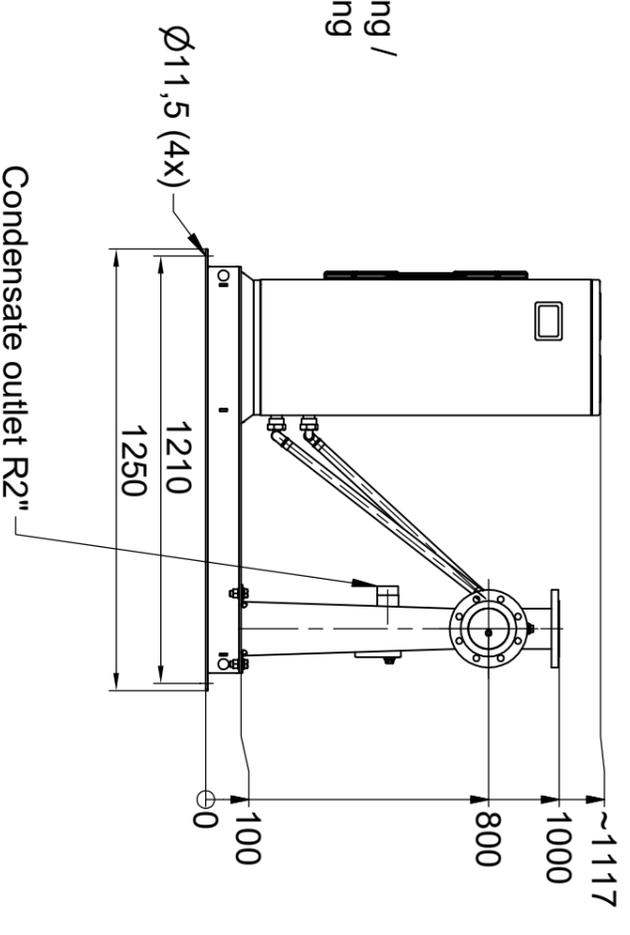
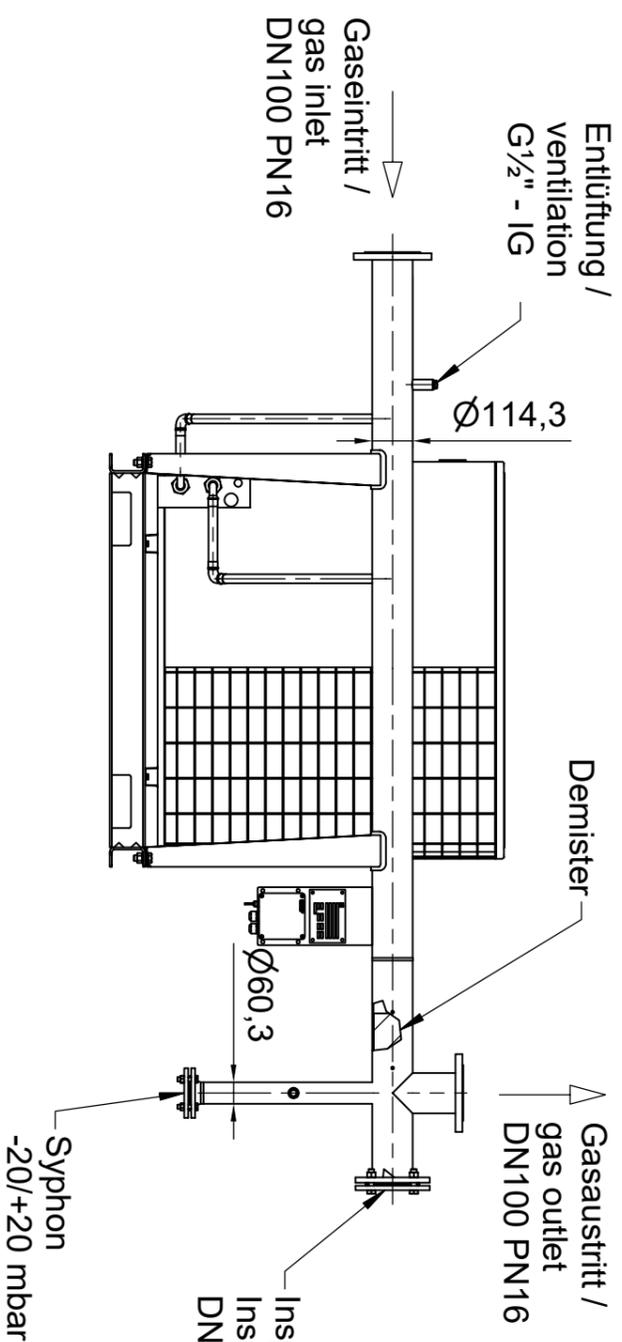
Transport to site

€ on request

Supervision for installation / start up on site (on request) – excl. flight, hotel, extra charges, etc

€ 1450 -- / d

RECOMMENDED



Liefertermin:

E									
D									
C									
B									
A									

Index / Änderung / Revision	Form und Lage toleranzen DIN ISO 1101 / Geometrical tolerances DIN ISO 1101	Obertolerenzen DIN ISO 1302 / Surface specification DIN ISO 1302	Name / Name	Datum / Date
Allgemeintoleranz ISO 2768 - m / General tolerance ISO 2768 - m				

ZORRG
BIOGAS

gezeichnet / designed	geprüft / checked	Freigabe / released	Obertolerenzen / Surface	Objekttyp / Type
Datum / Date	05.12.2022		Masse / Mass	Maßstab / Scale
Name / Name	Lukas Dich			

Projekt / Project	Projekt Nr. / Project No.	Ersetzt durch / replaced by:	Maße / Dimensions
Bezeichnung 1,2 / Title 1,2		Ersatz für / replacement for:	mm
GC 100-35-10		Ident-Nr. / Identity Number	Revision / Revision
			A3

*) Mindestabstand Kühler / minimum distance chiller

Darstellung ohne Isolierung / Display without insulation