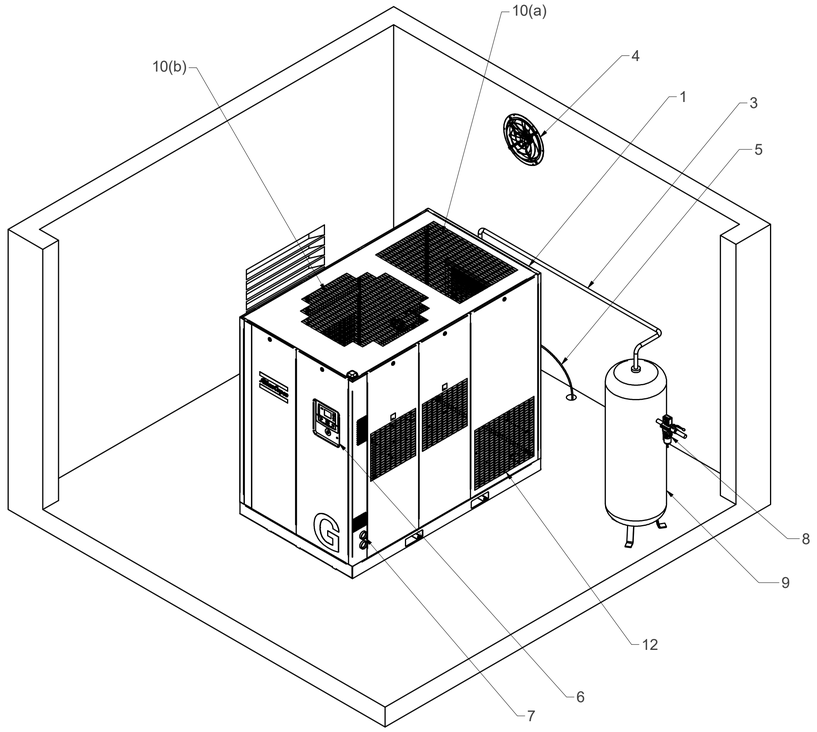
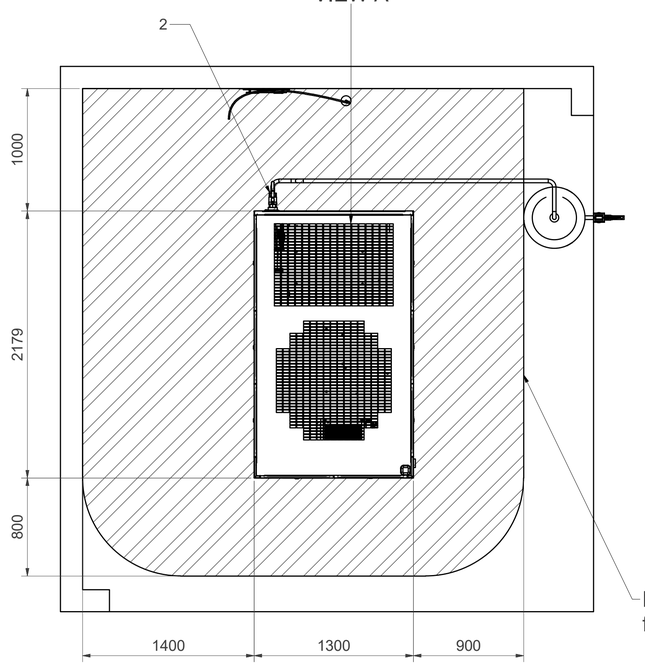
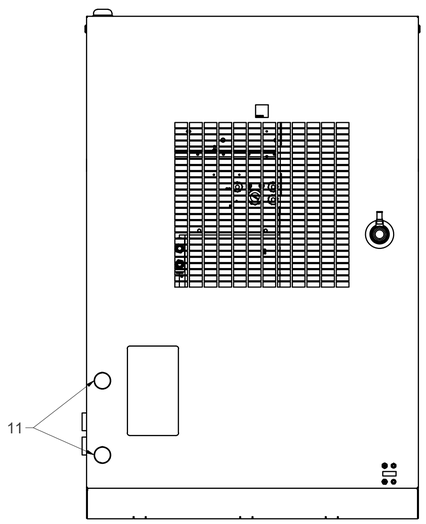


VIEW A



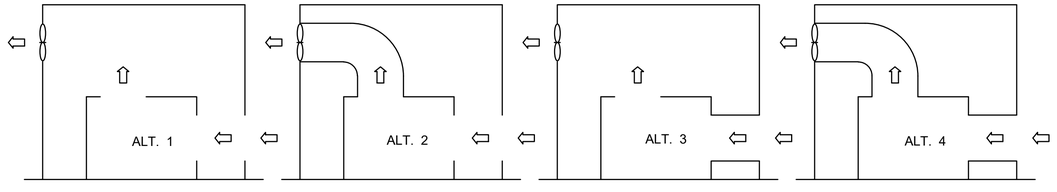
VIEW A (Compressor only)



Notes :
- All pipes should be installed STRESS FREE to the compressor unit.
- For more information concerning air nets, cooling systems, etc refer to the compressor installation manual.

13. Make sure the air intake of the compressor is always clean and no water droplets are present. Maximum acceptable relative humidity per ambient temperature
    100% RH 35°C (95°F)
    70% RH 40°C (104°F)
    30% RH 46°C (115°F)

VENTILATION PROPOSALS



MAIN COMPONENTS

1. Compressor unit : The unit should be installed on a level floor capable of taking the weight of the compressor.
2. Compressed air outlet valve.
3. Delivery pipe :
   The max . total pipe length can be calculated from $L = \frac{\Delta P \times d^5 \times P}{450 \times Qc^{1.85}}$
   L = Length of the pipe (m)
   ΔP = Max. allowable pressure drop (recommended 0.1 bar (1.5psi))
   d = Inner diameter of the pipe (mm)
   P = Absolute pressure at compressor outlet (bar)
   Qc = Free air delivery of the compressor (l/s)
4. Ventilation :
   The inlet grid(s) and ventilation fan should be installed in such a way that any recirculation of cooling air to the inlet grating of the compressor is avoided.
   The air velocity to the grid(s) has to be limited to 5 m/s. The maximum air temperature at compressor intake opening is 46 °C, min 0 °C.
   Alternative 1 and 3 :
   The required ventilation to limit the compressor room temperature can be calculated from :

   $$Qv = \frac{(1.06N + 1.2D)}{\Delta T}$$

   Qv = Required cooling air flow (m³/s)
   N = Nominal motor power (kW)
   ΔT = Temperature increase in the compressor room. (°C)
   D = Electric power dryer.
   Alternative 2 and 4 :
   The fan capacity should match the compressor - fan capacity at a pressure head equal to the pressure drop caused by cooling air ducts.
   The ducting for the air outlet of the dryer (10a) should be separated from the ducting for the cooling air outlet of AIR/OIL coolers and cooling air outlet of the compressor compartement.
   (10b) Max. allowable pressure drop in ducting before or after the compressor = 30 Pa
5. Drain pipes to drain collector must not dip into the water. For draining of pure condensate water, install an oil / water seperator. Consult Atlas Copco.
   Drain pipes of different compressors may not be interconnected before the (atmospheric) collector. Interconnecting drain pipes of different compressors can damage the electronic drains of the compressor.
6. Control cubicle with monitoring panel.
7. Power supply cable to be installed by a qualified electrician. For the right cable size, see Atlas Copco technical data. In case of IT network, consult Atlas Copco.
   To preserve the ingress protection rating of the electric cubicle, it is absolutely necessary to use a proper cable gland when connecting the supply cable to the compressor.
8. Filter type DD for general purpose filtration (particle removal down to 1 micron with a maximum oil carry over of 0.5 ppm).
   A high efficiency UD+ filter may be installed instead of DD filter (particle removal down to 0.01 micron and max. oil carry over of 0.01ppm)
   Should oil vapours and odeurs be undesirable, a QD active carbon filter should be installed after the UD+ filter.
   It is recommended to install by-pass pipes over each filter together with ball valves in order to isolate the filters during service operations, without interrupting the compressed air delivery.
9. The air receiver (optional) should be installed in a frost-free room on a solid, level floor.
   For normal air consumption, the volume of the air net (receiver and piping) can be calculated as follows:
   $$V=(0.25 \times Qc \times P1 \times To)/(fmax \times \Delta P \times T1)$$
   V = Volume of the air net in l.
   Qc = Free air delivery of the compressor in l/s
   P1 = Compressor air inlet pressure in bar absolute
   fmax = Cycle frequency=1 cycle/30s
   ΔP =Punload - Pload in bar
   T1 = Compressor air inlet temperature in K
   T0 = Air receiver temperature K
   A safety valve need to be foreseen on the air receiver.

10a. Cooling air outlet grating of dryer.
10b. Cooling air outlet grating of AIR/OIL coolers.
11. Provision for energy recovery system.
12. Cooling air inlet grating of dryer.

Ed	Position	Modified from	-	Date	Intr./Appd.
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Tolerances, if not indicated, according to:					
ATLAS COPCO STANDARD CLASS					
Name	INSTALLATION PROPOSAL		GA75-100 VSD+	Confidentiality Class acc. to 1102 K	Internal
Material	Not Applicable				
Treatment	Not Applicable				INV
Atlas Copco	Scale 1 : 25	Family	Compare	Drawing owner	
	Drawn by INEmamar	Blank nr.	Replaces		API
STATUS	Drawing format A1	Blank wt 0 Kg	Fini wt. N/A	Designation	Sheet 1 / 1
9820300222	Des. checked.	Prod checked.	Approved.	Date 24/07/2017	9820300222
Parent 3D model	Ed . Version 3D	Approved Internal			