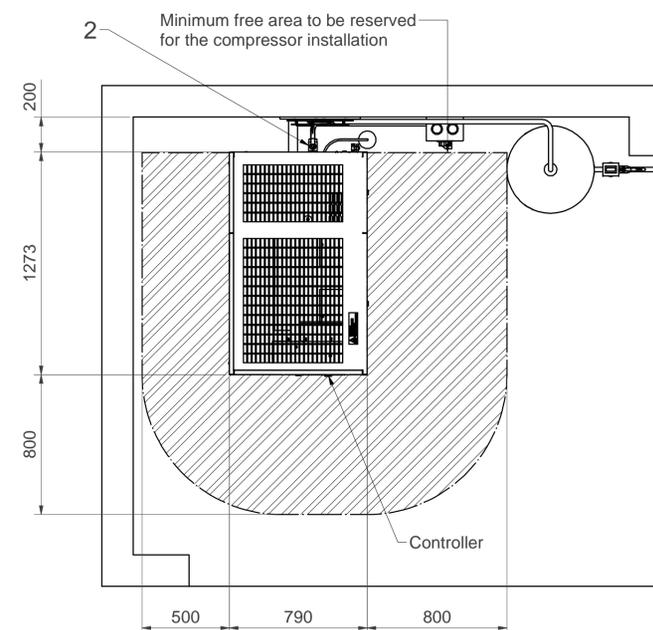
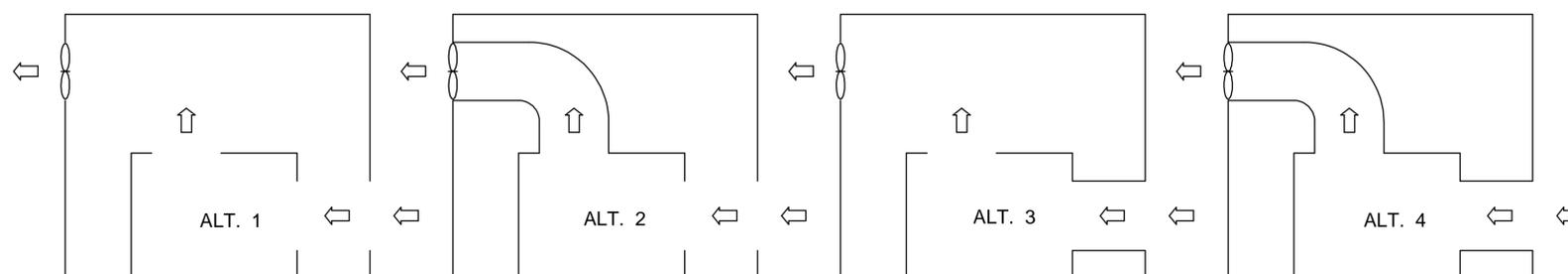


## MAIN COMPONENTS

- Compressor unit : The unit should be installed on a level floor capable of taking the weight of the compressor.
- Compressed air outlet valve.
- Delivery pipe :  
The max . total pipe length can be calculated from  $L = \frac{\Delta P \times d^5 \times P}{450 \times Q_c^{1.85}}$   
L = Length of the pipe (m)  
 $\Delta P$  = 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)
- 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/ dryer is avoided. The air velocity to the grid(s) has to be limited to 5m/s. The maximum air temperature at compressor intake opening is 46 °C, min 0 °C.  
Alternative 1 and 3 :  
The required ventilation to limit compressor room temperature can be calculated from :  
 $Q_v = 1.06 N / \Delta T$   
Qv = Required cooling air flow (m³/s)  
N = Nominal motor power (kW)  
 $\Delta T$  = Temperature increase in the compressor room. ( °C)  
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. When the compressor is provided with dryer (Full Feature), the required cooling air flow is ;  
$$Q_v = \frac{(1.16N + 0.6)}{\Delta T}$$
  
The ducting of the cooling air outlet of the dryer ("10a") should be separated of the ducting for the cooling air outlet of AIR/OIL coolers ("10b").  
The max. pressure drop over additional AIR/OIL coolers ("10b") ducting should be limited to 15 Pa for standard fans.
- Drain pipes to drain collector must not dip into the water. For draining of pure condensate water, install an oil / water separator. Consult Atlas Copco.
- Control cubicle with monitoring panel.
- Power supply cable to be sized and installed by a qualified electrician. In case of IT network, consult Atlas Copco.  
To preserve the protection degree of the electric cubicle and to protect its components from dust from the environment, it is absolutely necessary to use a proper cable gland when connecting the supply cable to the compressor.
- 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 PD filter may be installed downstream the DD filter (particle removal down to 0.01 micron and max. oil carry over of 0.01ppm)  
Should oil vapours and odours be undesirable, a QD active carbon filter should be installed after the PD 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.
- Air receiver: 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.



## VENTILATION PROPOSALS



## 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.
- For dimensions and air flow directions refer to the AIB dimension drawings.

|   |                  |                      |                       |                |            |
|---|------------------|----------------------|-----------------------|----------------|------------|
| Tolerances, if not indicated, according to: |                  |                      |                       |                |            |
| ATLAS COPCO STANDARD CLASS                  |                  |                      |                       |                |            |
| Name  | DIMENS. INSTALL. | GA18-37VSD+ FF+TRAFO | Confidentiality Class | acc. to 1102 K |            |
| Material                                    | NOT APPLICABLE   |                      | 3                     |                |            |
| Treatment                                   | Not Applicable   |                      | INV                   |                |            |
| Scale                                       | 1:20             | Family               | A1                    | Compare        |            |
| Drawn by                                    | AIR15275         | Blank nr.            |                       | Replaces       |            |
| Version Drwg                                | 00.15            | Blank wt             | 0 Kg                  | Fin. wt.       | 254,116 Kg |
| Designation                                 | 9820720181       |                      | STATUS                | Ed.            | Version 3D |
| Des checked.                                | Prod checked.    | Approved.            | Date                  | 2013-01-17     |            |
| 9820720181                                  |                  |                      | 9820720181            |                |            |

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|    |          |               |             |
|----|----------|---------------|-------------|
| 00 |          | 2013-05-24    |             |
| Ed | Position | Modified from | Intr./Appd. |

|                 |                |
|-----------------|----------------|
| 9820720181      | 00.09          |
| Parent 3D model | Ed. Version 3D |

A  
B  
C  
D  
E  
F  
G