

Atlas Copco

Oil-injected rotary screw compressors



GX 7, GX 11

Instruction book

Atlas Copco

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Oil-injected rotary screw compressors

GX 7, GX 11

From following serial No. onwards: CAI 275 524

Instruction book

Original instructions

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This instruction book is valid for CE as well as non-CE labelled machines. It meets the requirements for instructions specified by the applicable European directives as identified in the Declaration of Conformity.

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
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1 Safety precautions

1.1 Safety icons

Explanation


	Danger for life
	Warning
	Important note

1.2 Safety precautions, general

General precautions

1. The operator must employ safe working practices and observe all related work safety requirements and regulations.
2. If any of the following statements does not comply with the applicable legislation, the stricter of the two shall apply.
3. Installation, operation, maintenance and repair work must only be performed by authorized, trained, specialized personnel.
4. The compressor is not considered capable of producing air of breathing quality. For air of breathing quality, the compressed air must be adequately purified according to the applicable legislation and standards.
5. Before any maintenance, repair work, adjustment or any other non-routine checks, stop the compressor, press the emergency stop button, switch off the voltage and depressurize the compressor. In addition, the power isolating switch must be opened and locked.
On units powered by a frequency converter, wait six minutes before starting any electrical repair.
6. Never play with compressed air. Do not apply the air to your skin or direct an air stream at people. Never use the air to clean dirt from your clothes. When using the air to clean equipment, do so with extreme caution and wear eye protection.
7. The owner is responsible for maintaining the unit in safe operating condition. Parts and accessories shall be replaced if unsuitable for safe operation.
8. It is not allowed to walk or stand on the roof of the unit.

1.3 Safety precautions during installation

	All responsibility for any damage or injury resulting from neglecting these precautions, or non observance of the normal caution and care required for installation, operation, maintenance and repair, even if not expressly stated, will be disclaimed by the manufacturer.
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Precautions during installation

1. The machine must only be lifted using suitable equipment in accordance with the applicable safety regulations. Loose or pivoting parts must be securely fastened before lifting. It is strictly forbidden to dwell or stay in the risk zone under a lifted load. Lifting acceleration and deceleration must be kept within safe limits. Wear a safety helmet when working in the area of overhead or lifting equipment.
2. Place the machine where the ambient air is as cool and clean as possible. If necessary, install a suction duct. Never obstruct the air inlet. Care must be taken to minimize the entry of moisture at the inlet air.
3. Any blanking flanges, plugs, caps and desiccant bags must be removed before connecting the pipes.
4. Air hoses must be of correct size and suitable for the working pressure. Never use frayed, damaged or worn hoses. Distribution pipes and connections must be of the correct size and suitable for the working pressure.
5. The aspirated air must be free of flammable fumes, vapours and particles, e.g. paint solvents, that can lead to internal fire or explosion.
6. Arrange the air intake so that loose clothing worn by people cannot be sucked in.
7. Ensure that the discharge pipe from the compressor to the aftercooler or air net is free to expand under heat and that it is not in contact with or close to flammable materials.
8. No external force may be exerted on the air outlet valve; the connected pipe must be free of strain.
9. If remote control is installed, the machine must bear a clear sign stating: DANGER: This machine is remotely controlled and may start without warning.
The operator has to make sure that the machine is stopped and that the isolating switch is open and locked before any maintenance or repair. As a further safeguard, persons switching on remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the start equipment.
10. Air-cooled machines must be installed in such a way that an adequate flow of cooling air is available and that the exhausted air does not recirculate to the compressor air inlet or cooling air inlet.
11. The electrical connections must correspond to the applicable codes. The machines must be earthed and protected against short circuits by fuses in all phases. A lockable power isolating switch must be installed near the compressor.
12. On machines with automatic start/stop system or if the automatic restart function after voltage failure is activated, a sign stating "This machine may start without warning" must be affixed near the instrument panel.
13. In multiple compressor systems, manual valves must be installed to isolate each compressor. Non-return valves (check valves) must not be relied upon for isolating pressure systems.
14. Never remove or tamper with the safety devices, guards or insulation fitted on the machine. Every pressure vessel or auxiliary installed outside the machine to contain air above atmospheric pressure must be protected by a pressure relieving device or devices as required.
15. Piping or other parts with a temperature in excess of 80°C (176°F) and which may be accidentally touched by personnel in normal operation must be guarded or insulated. Other high temperature piping must be clearly marked.
16. For water-cooled machines, the cooling water system installed outside the machine has to be protected by a safety device with set pressure according to the maximum cooling water inlet pressure.
17. If the ground is not level or can be subject to variable inclination, consult the manufacturer.



Also consult following safety precautions: [Safety precautions during operation](#) and [Safety precautions during maintenance](#).

These precautions apply to machinery processing or consuming air or inert gas. Processing of any other gas requires additional safety precautions typical to the application which are not included herein.

Some precautions are general and cover several machine types and equipment; hence some statements may not apply to your machine.

1.4 Safety precautions during operation



All responsibility for any damage or injury resulting from neglecting these precautions, or non observance of the normal caution and care required for installation, operation, maintenance and repair, even if not expressly stated, will be disclaimed by the manufacturer.

Precautions during operation

1. Never touch any piping or components of the compressor during operation.
2. Use only the correct type and size of hose end fittings and connections. When blowing through a hose or air line, ensure that the open end is held securely. A free end will whip and may cause injury. Make sure that a hose is fully depressurized before disconnecting it.
3. Persons switching on remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the remote start equipment.
4. Never operate the machine when there is a possibility of taking in flammable or toxic fumes, vapors or particles.
5. Never operate the machine below or in excess of its limit ratings.
6. Keep all bodywork doors shut during operation. The doors may be opened for short periods only, e.g. to carry out routine checks. Wear ear protectors when opening a door.
On compressors without bodywork, wear ear protection in the vicinity of the machine.
7. People staying in environments or rooms where the sound pressure level reaches or exceeds 80 dB(A) shall wear ear protectors.
8. Periodically check that:
 - All guards are in place and securely fastened
 - All hoses and/or pipes inside the machine are in good condition, secure and not rubbing
 - There are no leaks
 - All fasteners are tight
 - All electrical leads are secure and in good order
 - Safety valves and other pressure relief devices are not obstructed by dirt or paint
 - Air outlet valve and air net, i.e. pipes, couplings, manifolds, valves, hoses, etc. are in good repair, free of wear or abuse
9. If warm cooling air from compressors is used in air heating systems, e.g. to warm up a workroom, take precautions against air pollution and possible contamination of the breathing air.
10. Do not remove any of, or tamper with, the sound-damping material.
11. Never remove or tamper with the safety devices, guards or insulations fitted on the machine. Every pressure vessel or auxiliary installed outside the machine to contain air above atmospheric pressure shall be protected by a pressure relieving device or devices as required.



Also consult following safety precautions: [Safety precautions during installation](#) and [Safety precautions during maintenance](#).

These precautions apply to machinery processing or consuming air or inert gas. Processing of any other gas requires additional safety precautions typical to the application which are not included herein.

Some precautions are general and cover several machine types and equipment; hence some statements may not apply to your machine.

1.5 Safety precautions during maintenance or repair



All responsibility for any damage or injury resulting from neglecting these precautions, or non observance of the normal caution and care required for installation, operation, maintenance and repair, even if not expressly stated, will be disclaimed by the manufacturer.

Precautions during maintenance or repair

1. Always use the correct safety equipment (such as safety glasses, gloves, safety shoes, etc.).
2. Use only the correct tools for maintenance and repair work.
3. Use only genuine spare parts.
4. All maintenance work shall only be undertaken when the machine has cooled down.
5. A warning sign bearing a legend such as "Work in progress; do not start" shall be attached to the starting equipment.
6. Persons switching on remotely controlled machines shall take adequate precautions to ensure that there is no one checking or working on the machine. To this end, a suitable notice shall be affixed to the remote start equipment.
7. Close the compressor air outlet valve before connecting or disconnecting a pipe.
8. Before removing any pressurized component, effectively isolate the machine from all sources of pressure and relieve the entire system of pressure.
9. Never use flammable solvents or carbon tetrachloride for cleaning parts. Take safety precautions against toxic vapours of cleaning liquids.
10. Scrupulously observe cleanliness during maintenance and repair. Keep dirt away by covering the parts and exposed openings with a clean cloth, paper or tape.
11. Never weld or perform any operation involving heat near the oil system. Oil tanks must be completely purged, e.g. by steam cleaning, before carrying out such operations. Never weld on, or in any way modify, pressure vessels.
12. Whenever there is an indication or any suspicion that an internal part of a machine is overheated, the machine shall be stopped but no inspection covers shall be opened before sufficient cooling time has elapsed; this to avoid the risk of spontaneous ignition of the oil vapour when air is admitted.
13. Never use a light source with open flame for inspecting the interior of a machine, pressure vessel, etc.
14. Make sure that no tools, loose parts or rags are left in or on the machine.
15. All regulating and safety devices shall be maintained with due care to ensure that they function properly. They may not be put out of action.
16. Before clearing the machine for use after maintenance or overhaul, check that operating pressures, temperatures and time settings are correct. Check that all control and shut-down devices are fitted and that they function correctly. If removed, check that the coupling guard of the compressor drive shaft has been reinstalled.
17. Every time the separator element is renewed, examine the discharge pipe and the inside of the oil separator vessel for carbon deposits; if excessive, the deposits should be removed.
18. Protect the motor, air filter, electrical and regulating components, etc. to prevent moisture from entering them, e.g. when steam cleaning.
19. Make sure that all sound-damping material and vibration dampers, e.g. damping material on the bodywork and in the air inlet and outlet systems of the compressor, is in good condition. If damaged, replace it by genuine material from the manufacturer to prevent the sound pressure level from increasing.
20. Never use caustic solvents which can damage materials of the air net, e.g. polycarbonate bowls.
21. **The following safety precautions are stressed when handling refrigerant:**
 - Never inhale refrigerant vapours. Check that the working area is adequately ventilated; if required, use breathing protection.

- Always wear special gloves. In case of refrigerant contact with the skin, rinse the skin with water. If liquid refrigerant contacts the skin through clothing, never tear off or remove the latter; flush abundantly with fresh water over the clothing until all refrigerant is flushed away; then seek medical first aid.



Also consult following safety precautions: [Safety precautions during installation](#) and [Safety precautions during operation](#).

These precautions apply to machinery processing or consuming air or inert gas. Processing of any other gas requires additional safety precautions typical to the application which are not included herein.

Some precautions are general and cover several machine types and equipment; hence some statements may not apply to your machine.

2 General description

2.1 Introduction

Introduction

GX 7 and GX 11 are air-cooled, single-stage, oil-injected screw compressors, driven by an electric motor.

The compressors are belt driven.

The compressors are enclosed in sound-insulating bodywork.

An easy-to-operate control panel is provided, including the start/stop switch and the emergency stop button. A cabinet housing the regulator, pressure switch and motor starter is integrated into the bodywork.

Pack versions have no air cooler, air dryer or condensate drain system.

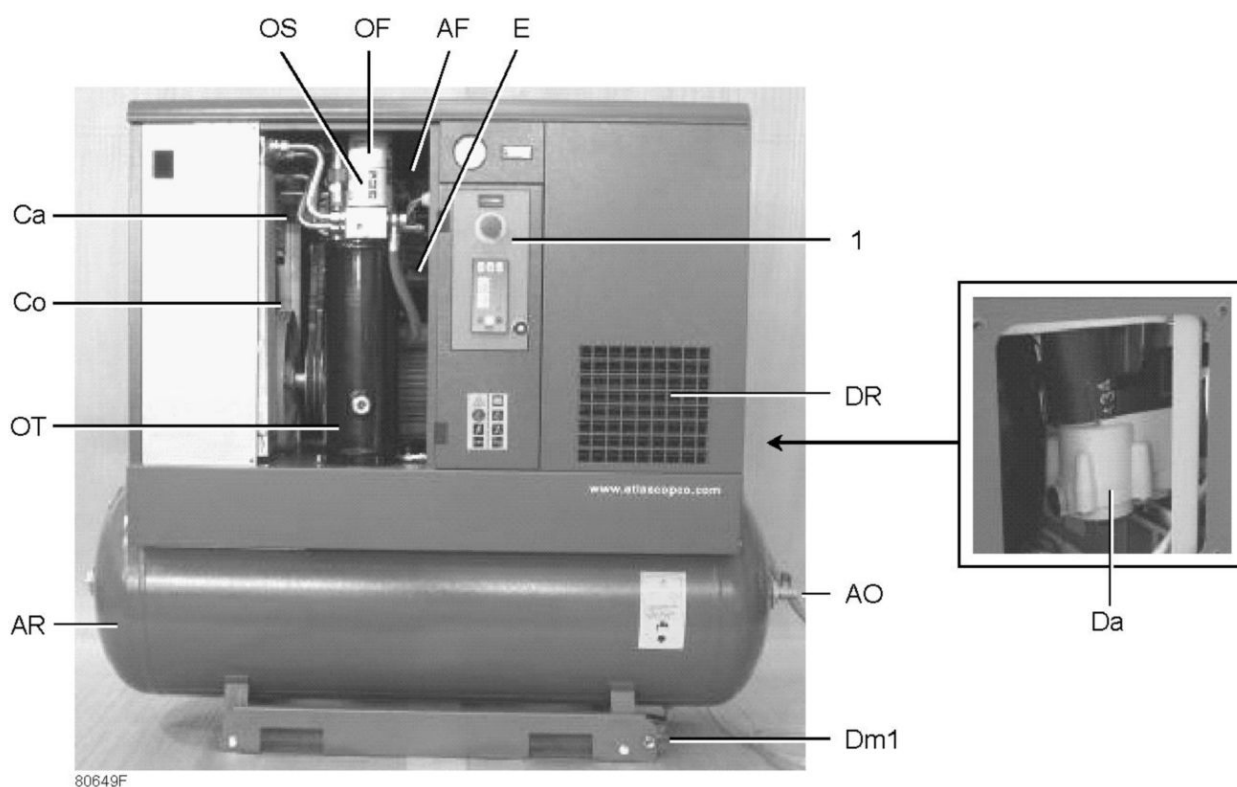
Full-Feature versions are equipped with an air cooler and an air dryer with an automatic condensate draining device.

Floor-mounted model

The compressor is installed directly on the floor.

Tank-mounted model

GX 7 and GX 11 Tank-mounted are supplied with an air receiver of 270 l (71.28 US gal / 59.40 Imp gal / 9.45 cu.ft) or 500 l (132 US gal / 110 Imp gal / 17.50 cu.ft).

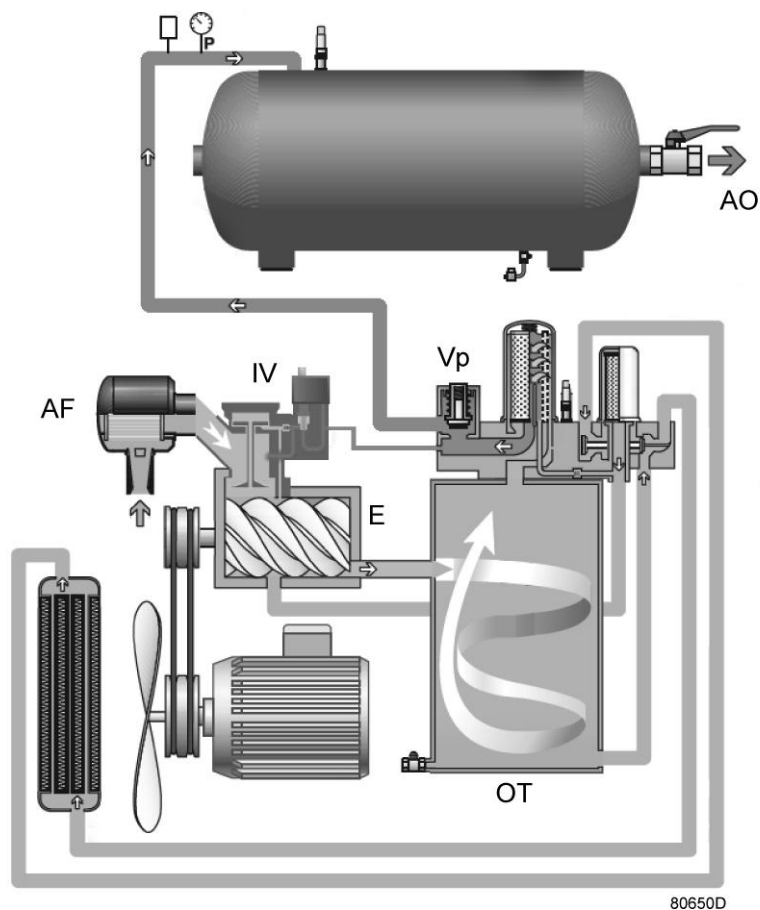


Front view, GX 7 and GX 11 Full-Feature tank-mounted

Ref.	Name
1	Control panel
AF	Air filter
AO	Air outlet
AR	Air receiver
Ca	Air cooler
Co	Oil cooler
Da	Automatic drain
Dm1	Manual condensate drain
DR	Dryer
E	Compressor element
OF	Oil filter
OS	Oil separator
OT	Oil separator tank

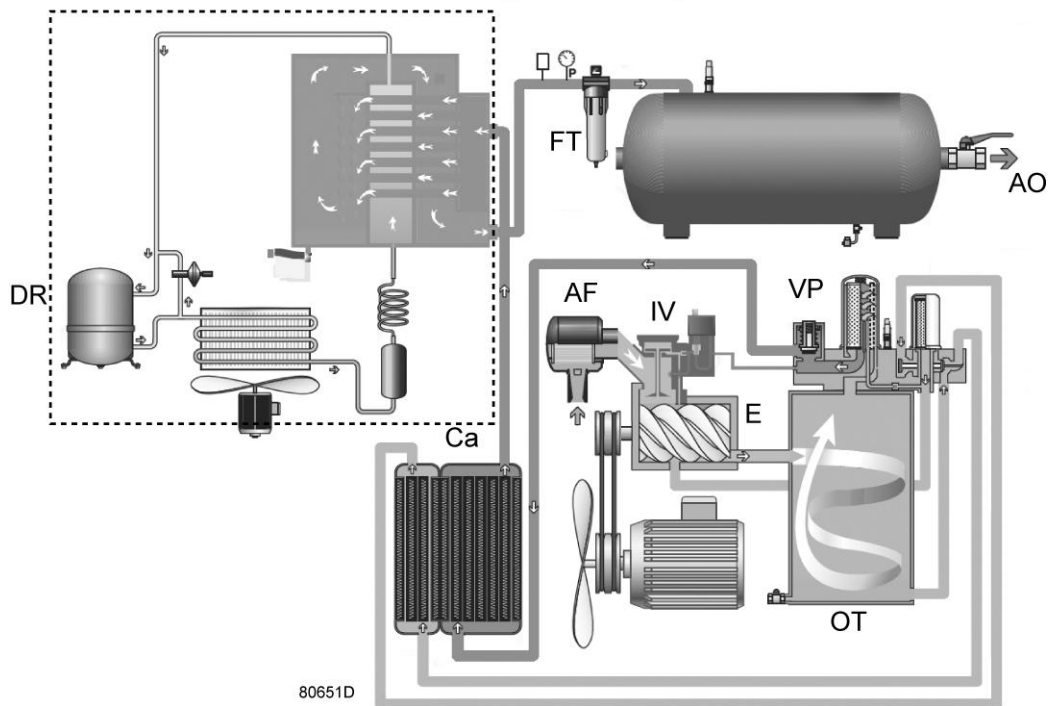
2.2 Air flow

Pack



Air flow, GX 7 and GX 11 Tank-mounted Pack

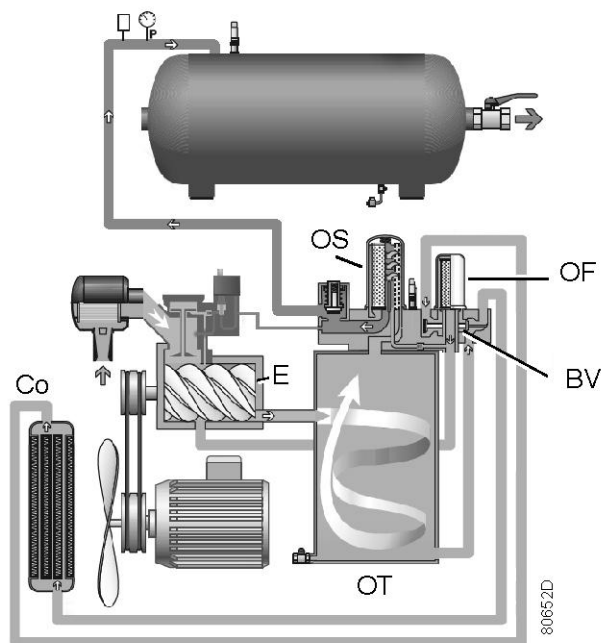
Air drawn through filter (AF) and open inlet valve (IV) into compressor element (E) is compressed. Compressed air and oil flow into oil separator/tank (OT). The air is discharged via minimum pressure valve (Vp) towards the air outlet (AO).

Full-Feature

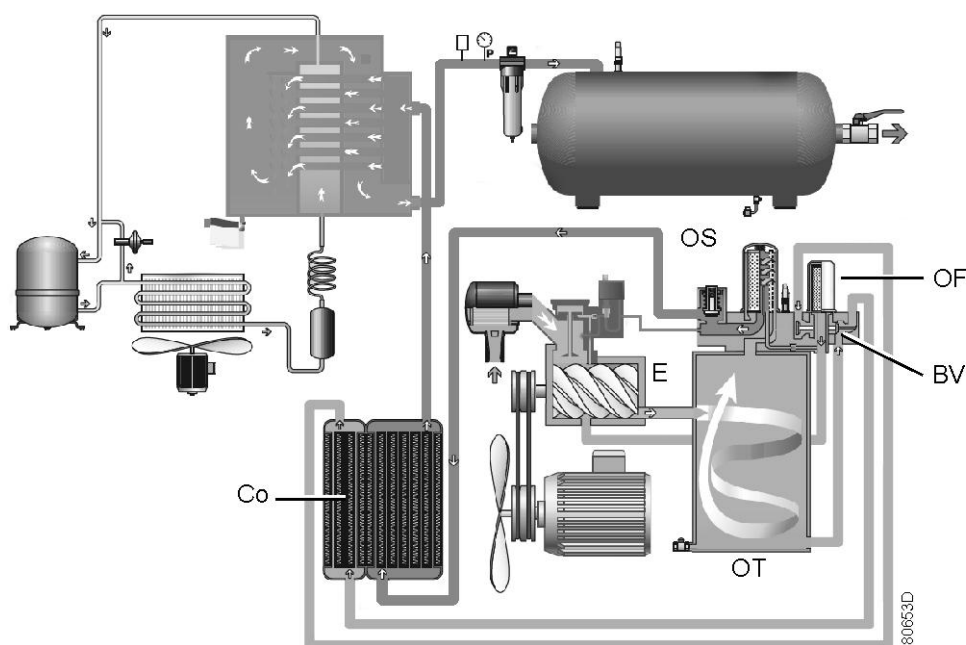
Air flow, GX 7 and GX 11 Full-Feature (tank-mounted)

Air drawn through filter (AF) and open inlet valve (IV) into compressor element (E) is compressed. Compressed air and oil flow into oil separator/tank (OT). The air is discharged via minimum pressure valve (Vp), air cooler (Ca) and air dryer (DR) towards the air outlet (AO).

2.3 Oil system



GX 7 and GX 11 Pack

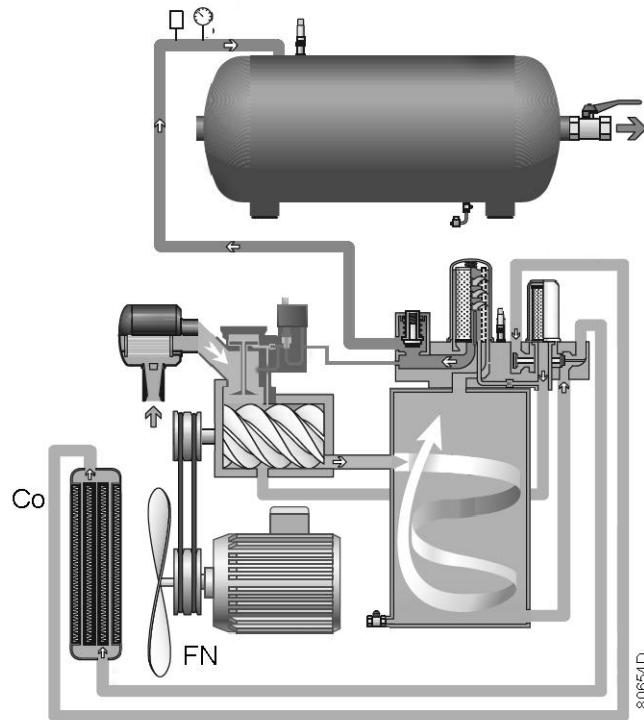


GX 7 and GX 11 Full-Feature

Air pressure forces the oil from oil separator/tank (OT) through oil separator (OS) to compressor element (E). In oil separator/tank (OT), most of the oil is removed centrifugally. The remaining oil is removed by oil separator (OS).

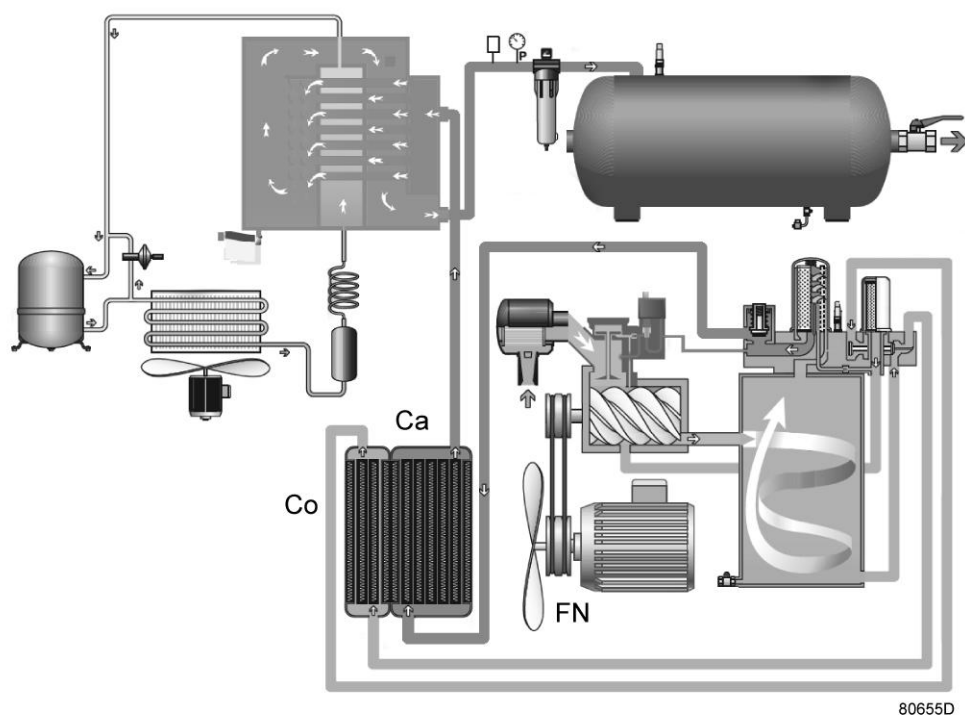
The oil system is fitted with a by-pass valve (BV). When the oil temperature is below the set-point of the valve, the by-pass valve shuts off the oil supply from oil cooler. The by-pass valve starts opening the supply from cooler (Co) when the oil temperature exceeds the setting of the valve. The setting of the by-pass valve depends on the model. See the section [Compressor data](#).

2.4 Cooling system



GX 7 and GX 11 Pack

The cooling system of the Pack version comprises oil cooler (Co) and fan (FN). The fan, mounted directly onto the motor shaft, generates the cooling air in order to cool the oil and the internal parts of the compressor. An air cooler (Ca) is available as option.

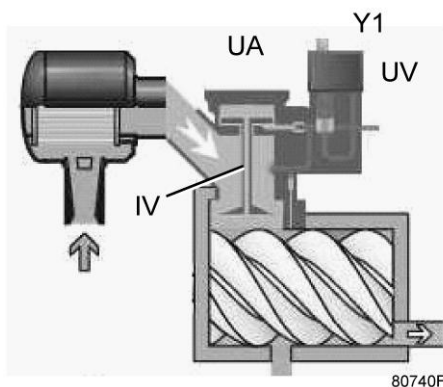


GX 7 and GX 11 Full-Feature

The cooling system of the Full Feature version comprises oil cooler (Co), air cooler (Ca) and fan (FN).

The dryer (DR) of Full-Feature versions has a separate cooling fan and an automatic condensate drain (see also section [Air dryer](#)).

2.5 Regulating system



Detail view of unloader assembly (UA)

The main components of the regulating system are:

- Pressure switch, which opens and closes at preset pressure limits. See also section [Protection of the compressor](#).
- Unloader (UA), including inlet valve (IV) and unloading valve (UV).

- Loading solenoid valve (Y1).
- The Elektronikon 001 regulator

Loading

As long as the working pressure is below the preset maximum, the solenoid valve is energised, allowing control air to the unloader: the inlet valve opens completely and the unloading valve closes completely. The compressor will run fully loaded (100% output).

Unloading

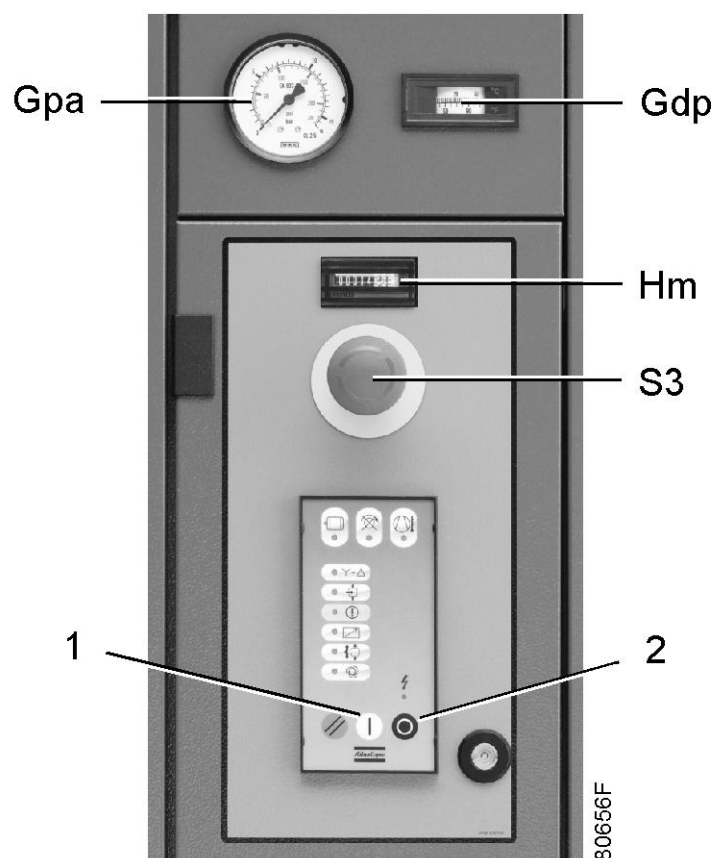
When the working pressure reaches the maximum limit, the solenoid valve is de-energised, venting the control air: the inlet valve closes completely and the unloading valve opens completely. The compressor will run unloaded (0% output).

The GX 7 and GX 11 is equipped with the Elektronikon 001, an intelligent controller that will stop the compressor after a variable period of unloaded operation using following algorithm:

- If the unloading pressure is reached after the first start and if there is no air consumption, the compressor will run unloaded during 2 minutes and then stop.
- If there is a pressure request within the first 2 minutes after being stopped, the controller is expecting a higher air consumption: the next time the unit will stop after 5 minutes of unloaded operation.
- If there is no pressure request earlier than 2 minutes after being stopped, the controller is expecting a lower air consumption: the next time again it stops after 2 minutes of unloaded operation.
- If the compressor is stopped manually, it stops after 2 minutes of unloaded operation.

The compressor will automatically restart when the net pressure drops to the minimum limit.








2.6 Control panel




Control panel GX 7 and GX 11

Symbol	Description
	RESET button. Pressing the button cancels the stored alarm indication. When pressing the button during more than 3 seconds, the central control unit is tested: all the LEDs must be on.
	START button. Pressing the button switches on the compressor. The motor starts 25 seconds after the button is pushed.
	STOP button. Pressing the button starts the compressor switch-off phase: the compressor runs idle during 120 seconds (2 minutes) before stopping.

Symbol	LED flashing	LED on
	The motor overload (FM1) has switched off the motor. The NC contact of FM1 is open.	The NC contact of motor overload (FM1) is closed again, but the fault is not yet reset.
	Not applicable	Not applicable


Symbol	LED flashing	LED on
	The oil temperature switch (TSH) has switched off the motor. The NC contact is open.	The NC contact of the oil temperature switch is closed again, but the fault is not yet reset.
Υ - Δ	On star/delta started compressors, during start-up (transitory: star contactor energized)	-
	-	Compressor running loaded
	General alarm	-
	Not enabled	Not enabled
	Compressor running unloaded (idle) before stopping	-
	Compressor ready to start - (Stand-by)	Compressor operating
	-	Main power on

	To start up again after a protection has been triggered (alarm): press the RESET button, followed by the START button (1). The motor will start after a delay of 25 seconds.	
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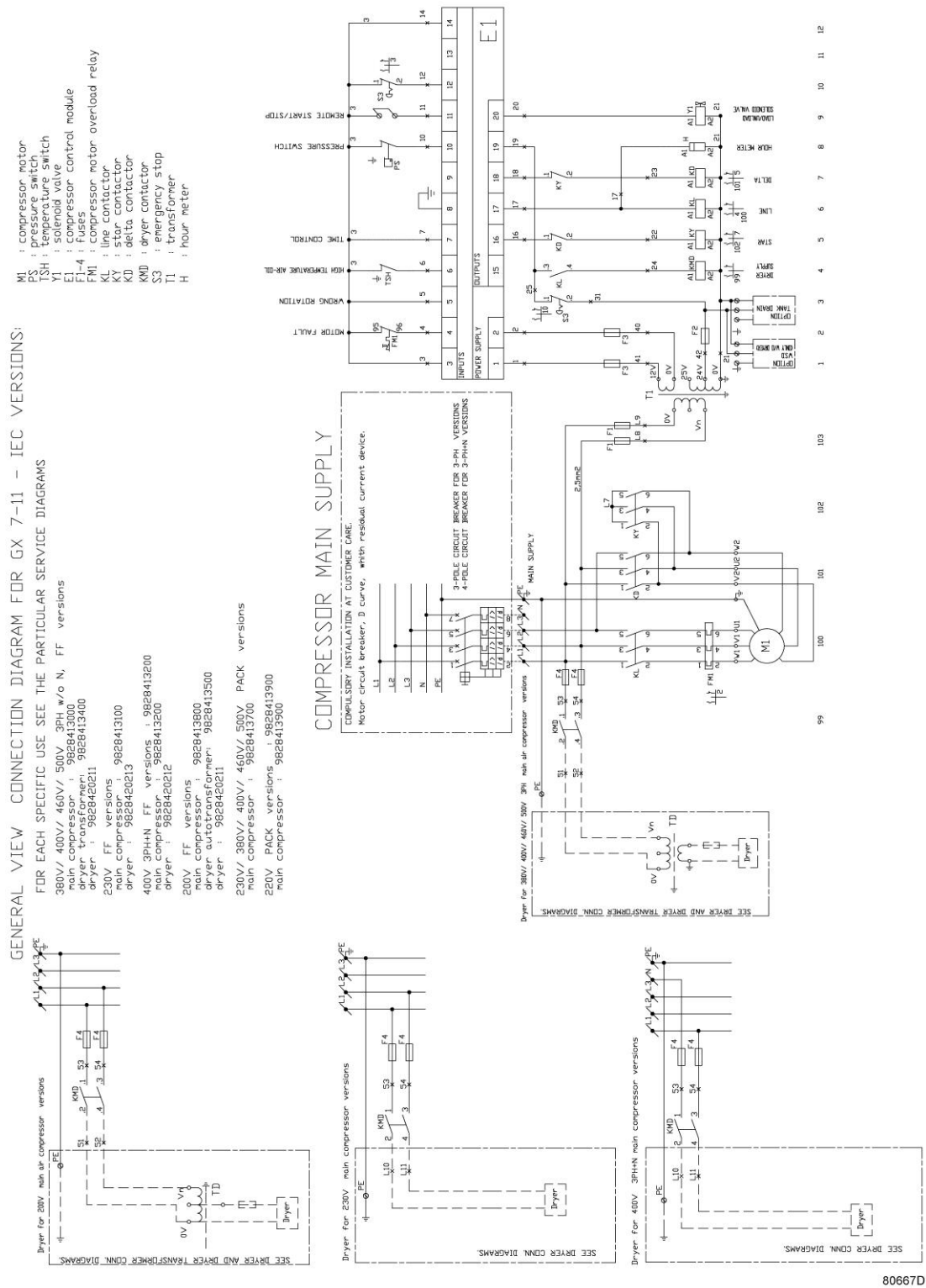
Operation of the central control unit

The central control unit is programmed for energy saving. It will automatically start and stop the compressor, depending on the need for compressed air. Before switching off, the compressor will run idle (unloaded). The idling period decreases when the air consumption decreases, thus reducing idle running to a minimum. See also [Regulating system](#).

Reference	Designation	Function
1 2	Start button Stop button	To start or stop the compressor. After the stop command, the compressor will run unloaded for a period of 120 seconds and then stop.
Hm	Hour meter	Indicates the total running time.
Gdp	Dew point gauge	Indicates the dew point temperature. Not installed on Pack versions
Gpa	Working pressure	The white pointer indicates the actual working pressure. The red one indicates the maximum limit.
S3	Emergency stop button	To stop the compressor immediately; only to be used in the event of an emergency. Must be unlocked before starting by pulling it out.

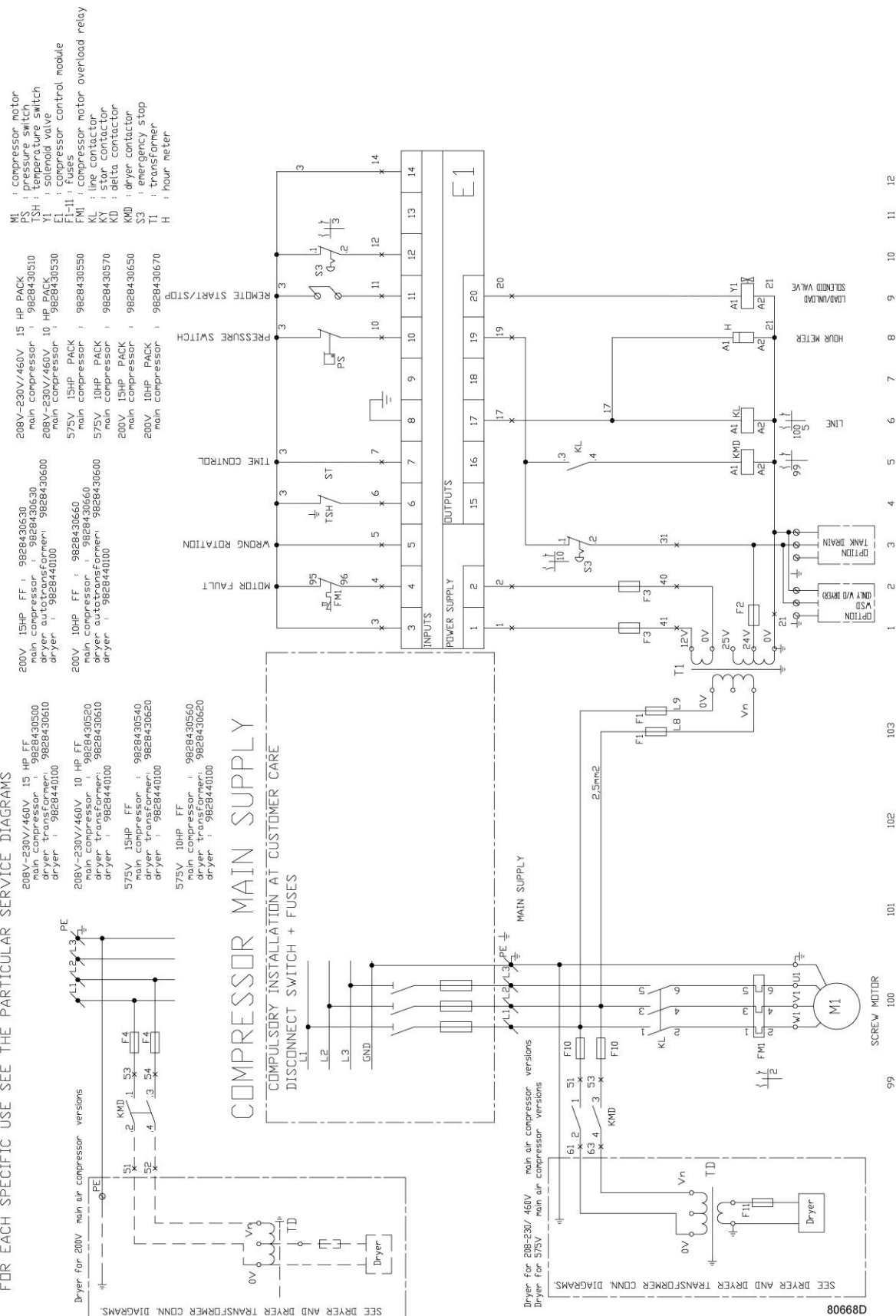
	Only use emergency stop button (S3) in the event of an emergency.
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2.7 Electrical diagrams



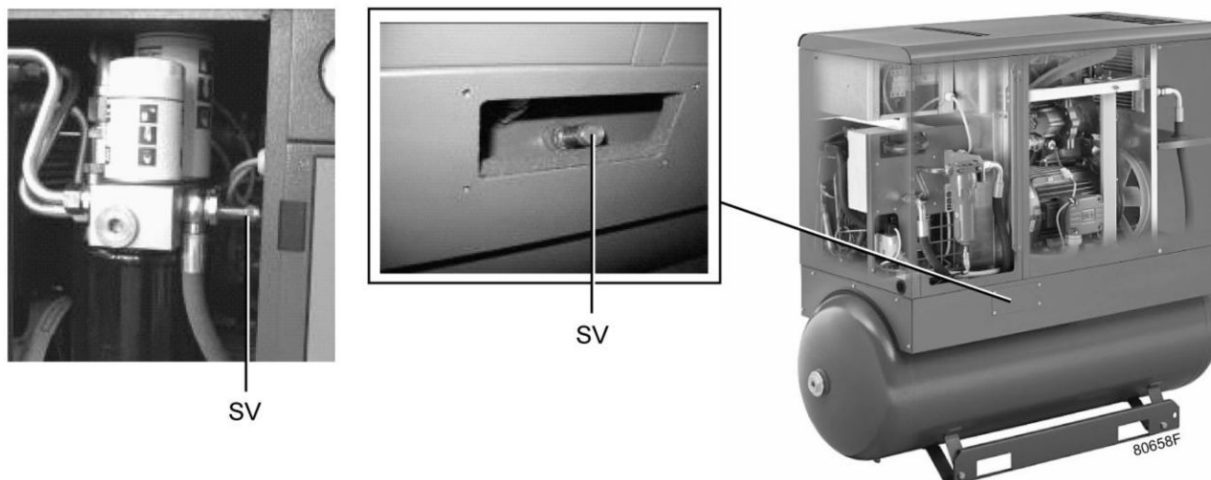
Electrical diagram, GX 7 and GX 11 IEC

GENERAL VIEW CONNECTION DIAGRAM FOR CULUS VERSIONS:
FOR EACH SPECIFIC USE SEE THE PARTICULAR SERVICE DIAGRAMS



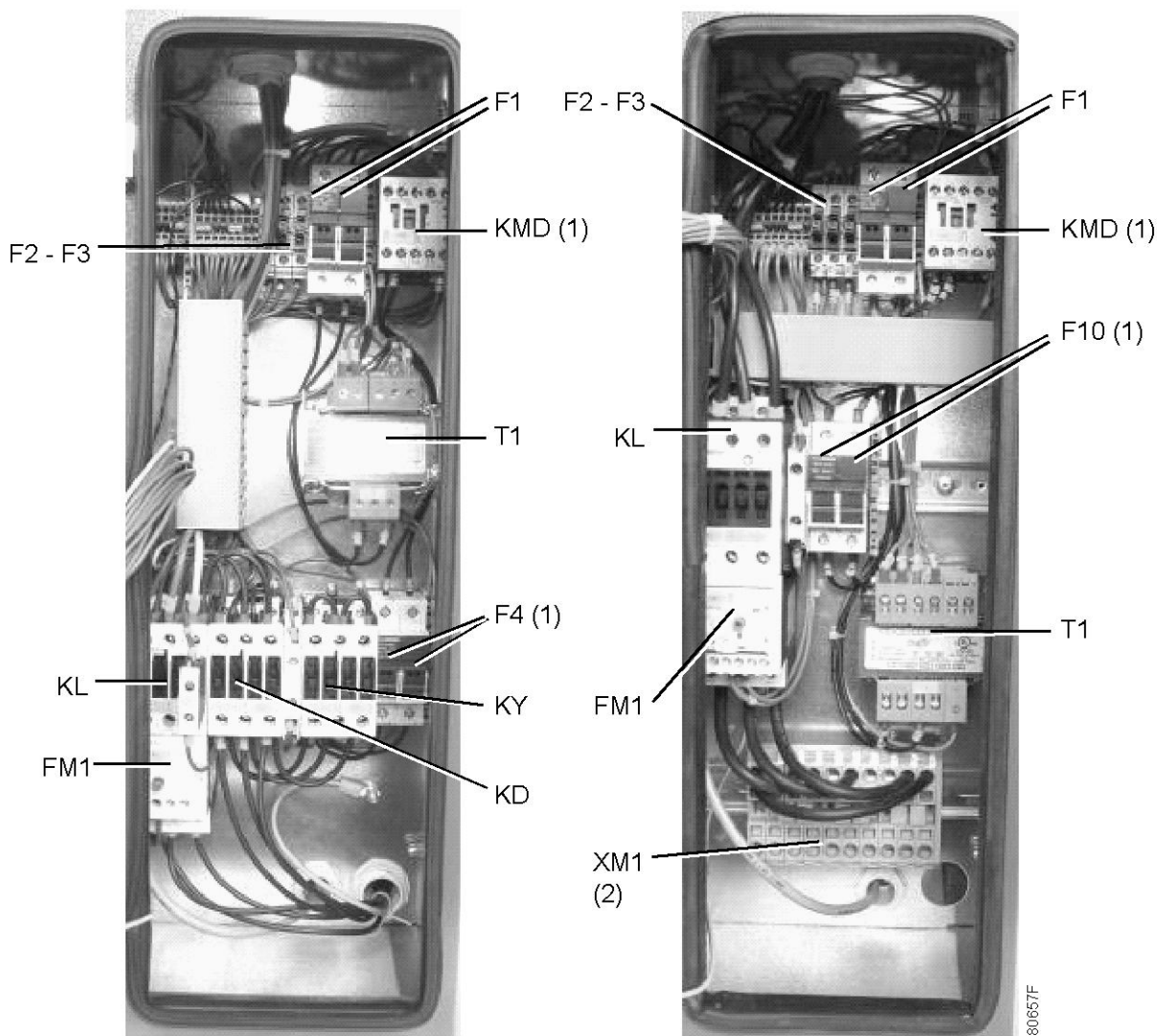
Electrical diagram, GX 7 and GX 11 CSA/UL

2.8 Protection of compressor



Safety valve on the compressor and on the vessel

Reference	Designation	Function
TSH See also section Electrical diagrams	Temperature shut-down switch	To shut down the compressor if the temperature at the outlet of the compressor element is too high.
SV	Safety valve	To protect the air outlet system if the outlet pressure exceeds the opening pressure of the valve.



IEC (CE)

CSA/UL (cULus)

Electric cubicle

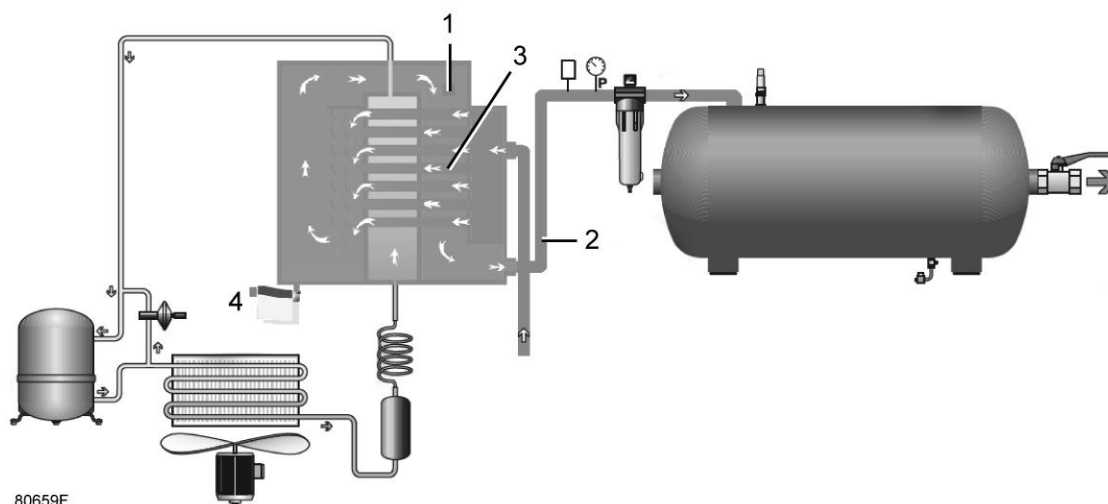
Legend

Ref.	Designation
(1)	only on Full Feature versions
(2)	only on multi-voltage versions

Ref.	Designation
F1-2-3-4-10	Fuses (F10 only on Full Feature units - see (1) on figure)
FM1	Motor overload relay
KL	Line contactor
KY	Star contactor
KD	Delta contactor

Ref.	Designation
T1	Transformer
KMD	Dryer relay (only on FF versions - see (1) on figure)
XM1	Connection terminals (only available on multi-voltage versions - see (2) on figure)

2.9 Air dryer



Air Dryer

Wet compressed air enters the dryer and is further cooled by the outgoing, dried air (2). Moisture in the incoming air condenses. The air then flows through heat exchanger (1) where refrigerant evaporates, withdrawing heat from the air. The cold air then flows through condensate trap (4) which separates condensate from the air. The condensate is automatically drained. The cold, dried air then flows through heat exchanger (3), where it is warmed up by the incoming air.

3 Installation

3.1 Installation proposal

Outdoor/altitude operation

If the compressor is installed outdoors or if the ambient temperature can be below 0°C (32°F), precautions must be taken. In this case, and also if operating at high altitude, consult Atlas Copco.

Moving/lifting



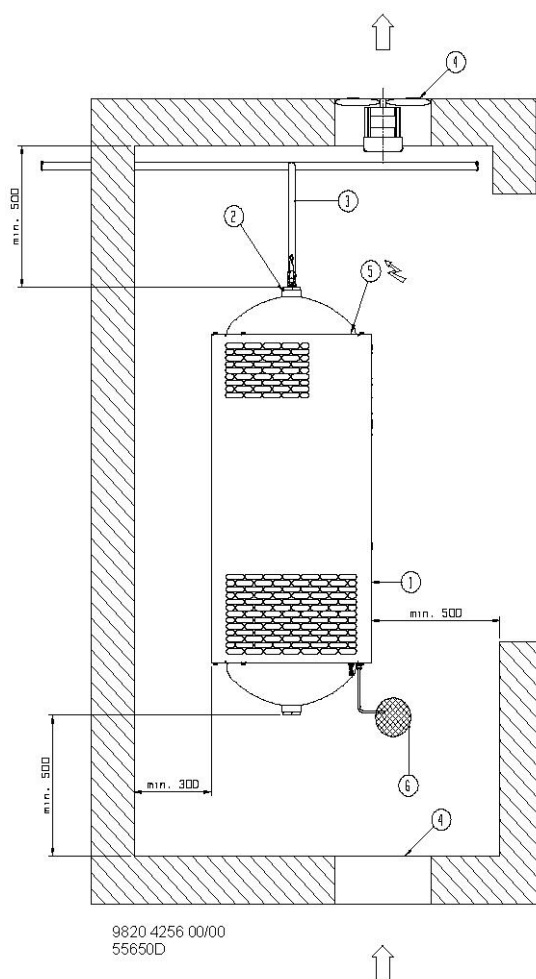
80660F

Transport by a pallet truck



For transport with a fork truck, use the openings in the frame.
Move the compressor gently.

Proposal



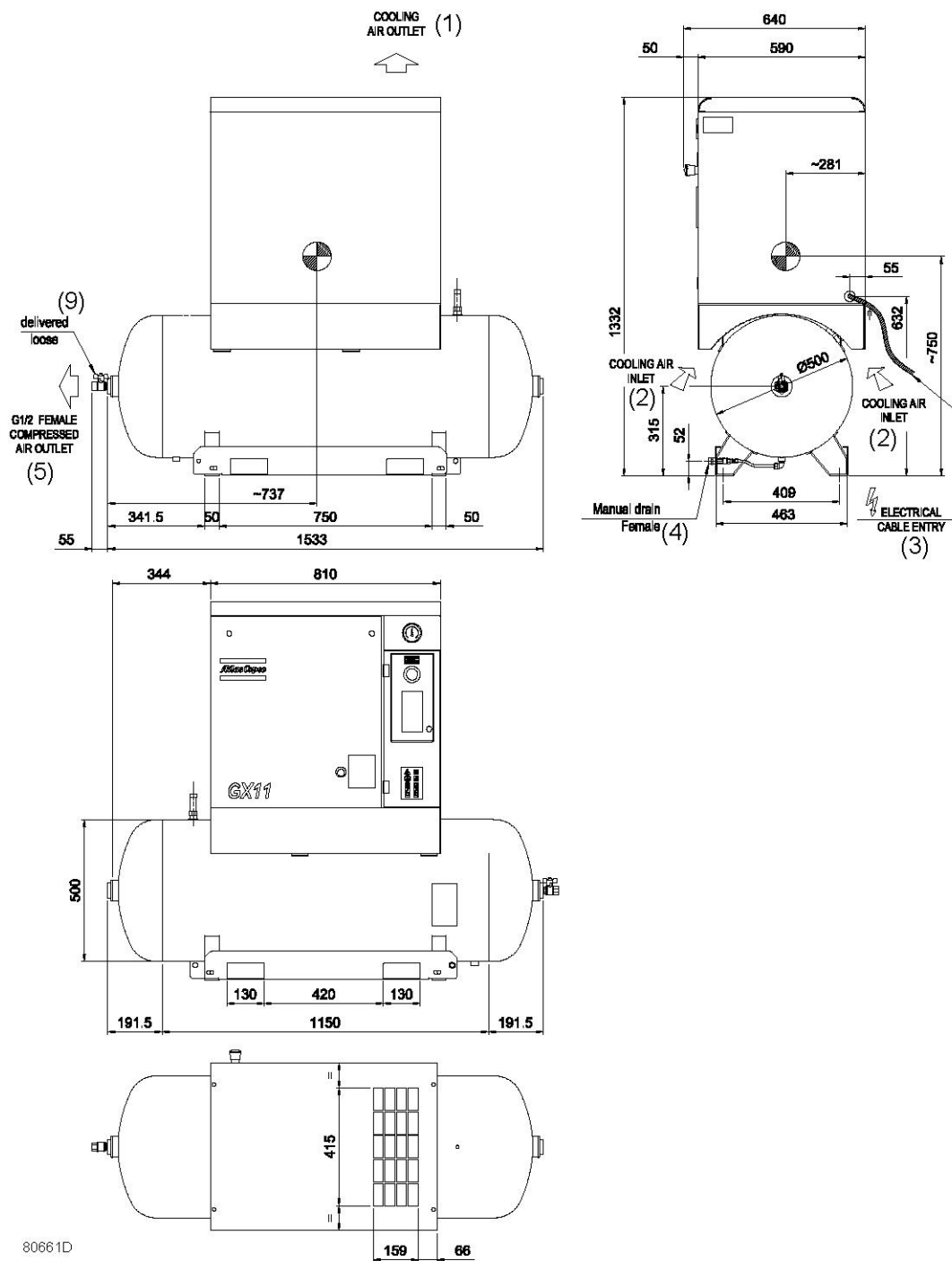
Installation proposal, GX 7 and GX 11

Ref.	Action
1	<p>Install the compressor on a solid, level floor suitable for taking its weight. The recommended minimum distance between the top of the unit and the ceiling is 900 mm (35.1 in). The air receiver must not be bolted to the floor. For tank-mounted units, the minimum distance between the wall and the back of the compressor is 300 mm (19.5 in).</p>
2	<p>Position of the compressed air outlet valve. Close the valve. Connect the air net to the valve.</p>
3	<p>The pressure drop over the air delivery pipe can be calculated as follows: $\Delta p = (L \times 450 \times Q_c^{1.85}) / (d^5 \times P)$, with d = Inner diameter of the pipe in mm Δp = Pressure drop in bar (recommended maximum: 0.1 bar (1.5 psi)) L = Length of the pipe in m P = Absolute pressure at the compressor outlet in bar Q_c = Free air delivery of the compressor in l/s</p>

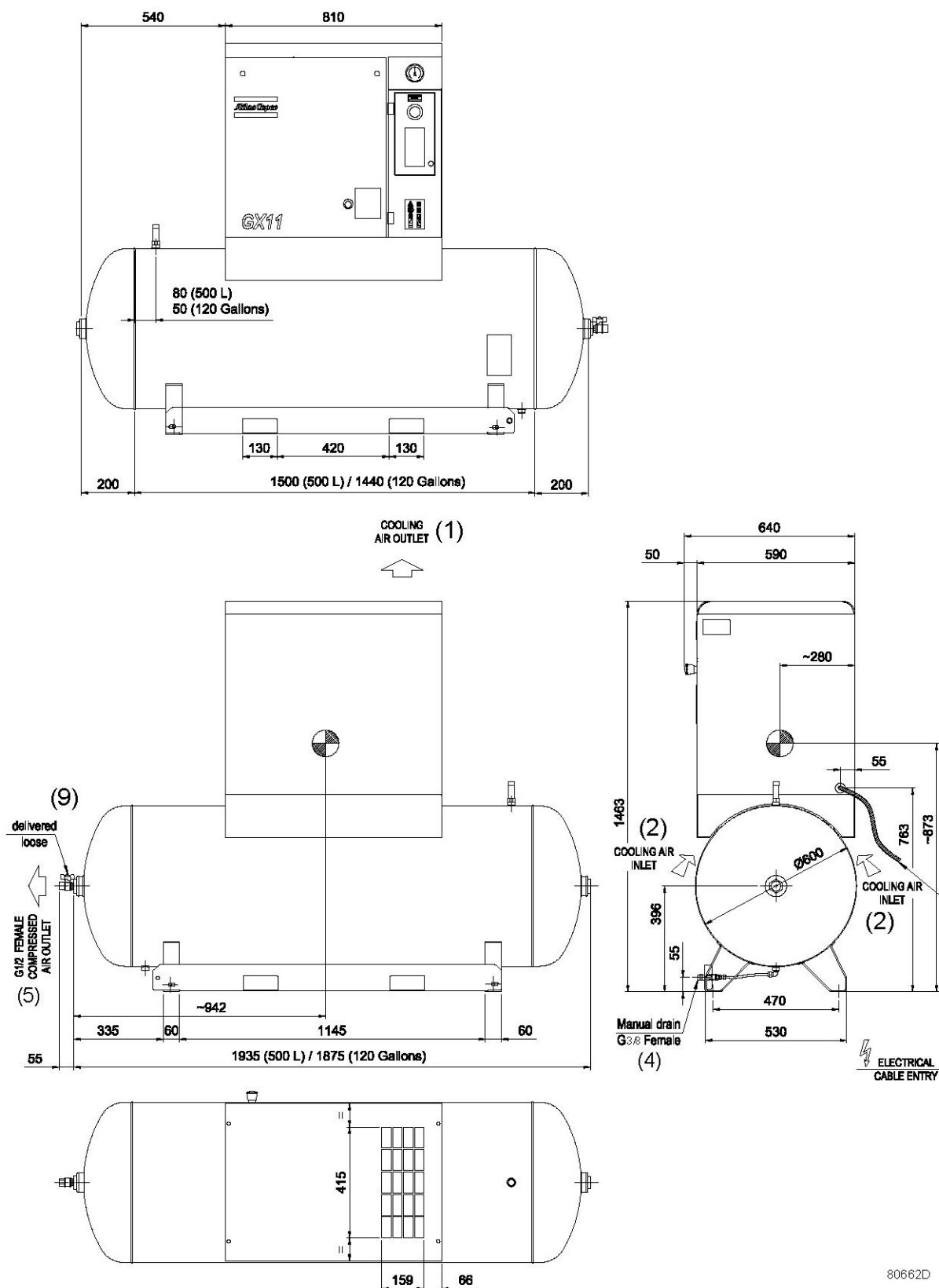
Ref.	Action
4	<p>Ventilation: the inlet grids and ventilation fan should be installed in such a way that any recirculation of cooling air to the compressor or dryer is avoided.</p> <p>The air velocity to the grids must be limited to 5 m/s (200 in/s).</p> <p>The required ventilation capacity to limit the temperature of the compressor room can be calculated from the following formula:</p> $Q_v = 0.92 N / \Delta T$ <p>Q_v = Required ventilation capacity in m³/s N = Shaft input of compressor in kW ΔT = Temperature increase in the compressor room in °C</p>
5	Position of the mains cable entry.
6	The drain pipes to the drain collector must not dip into the water of the drain collector.

3.2 Dimension drawings

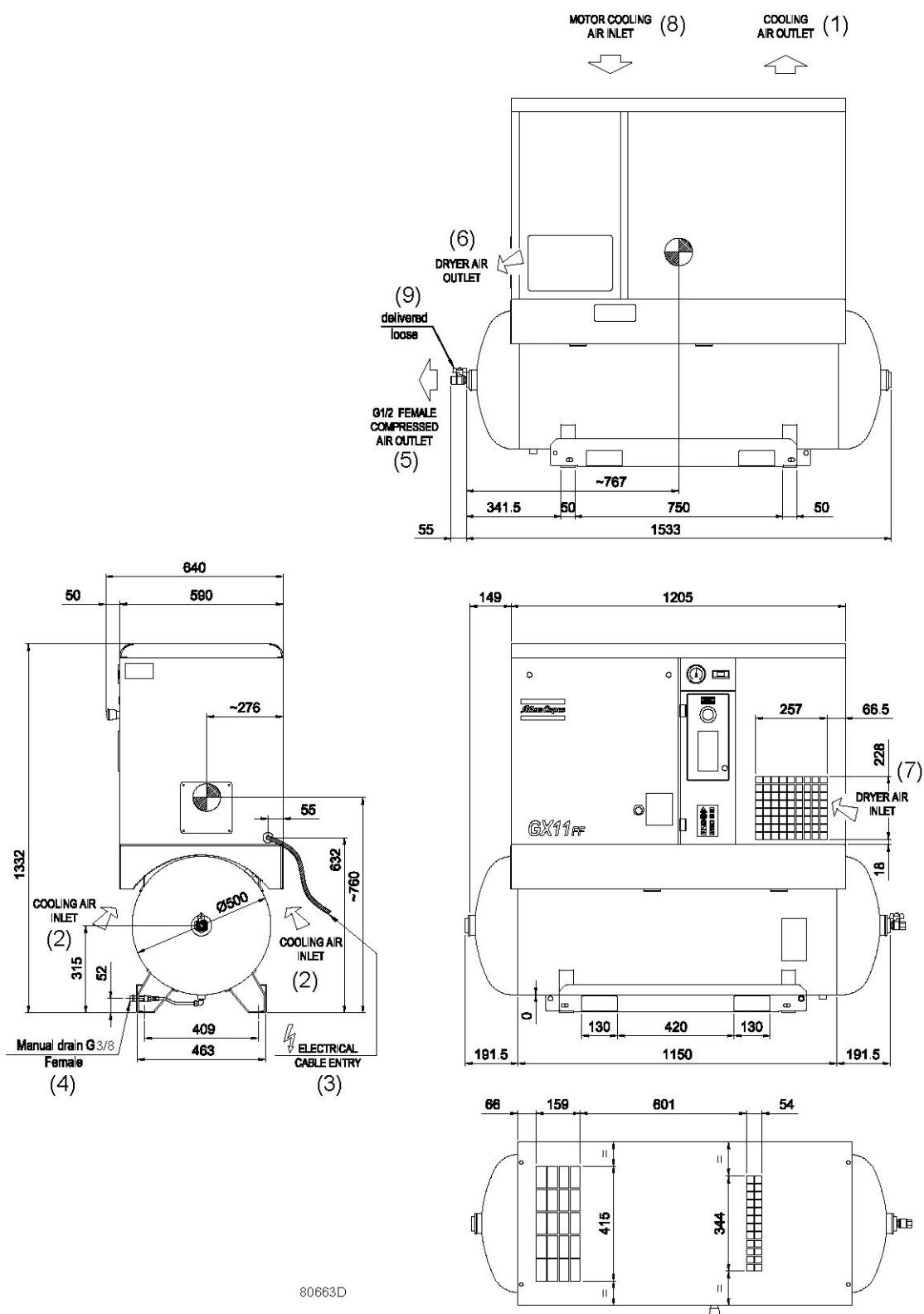
Dimension drawings, GX 7 and GX 11



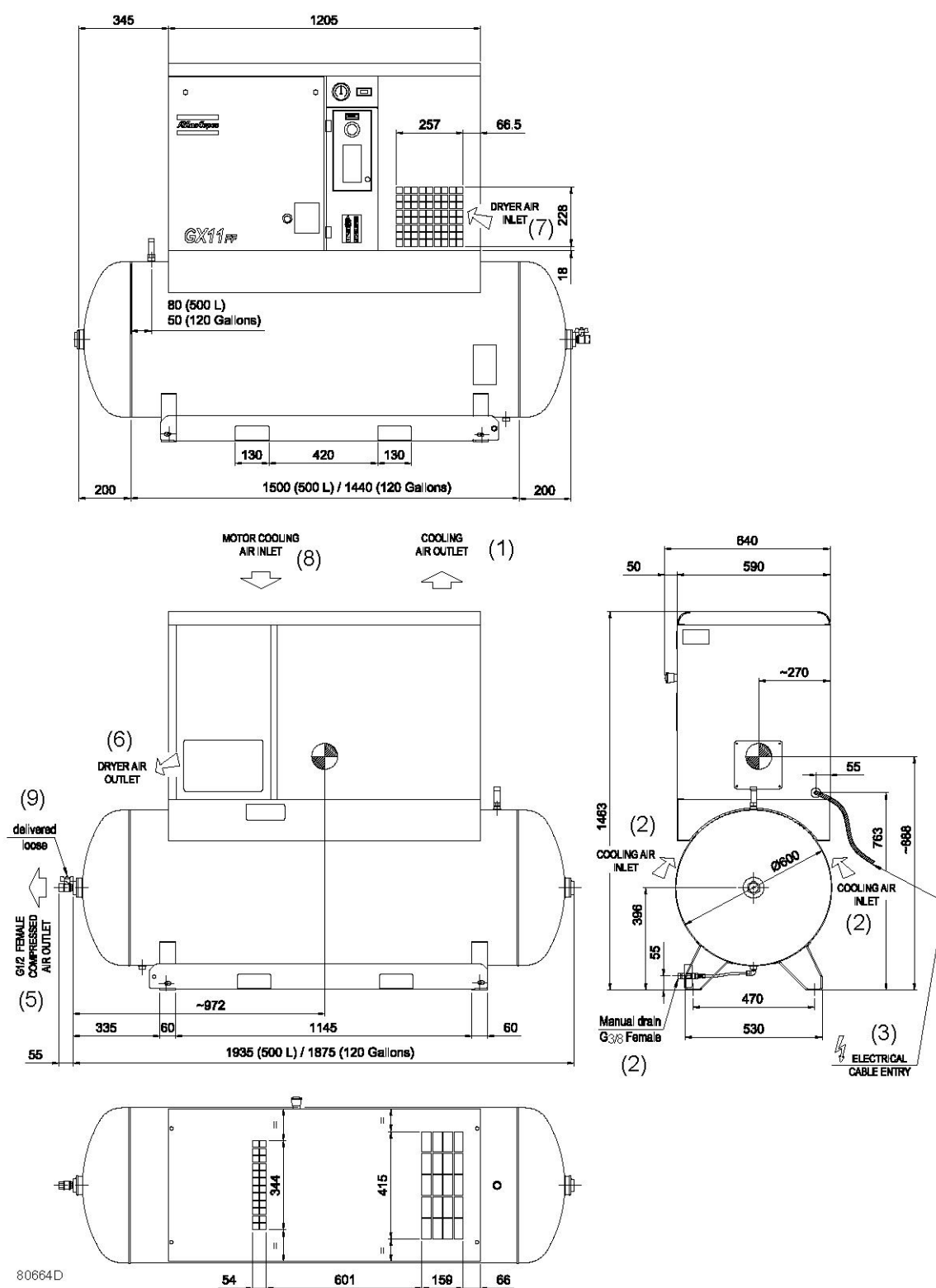
GX 7 and GX 11 Tank-mounted (270 l), Pack



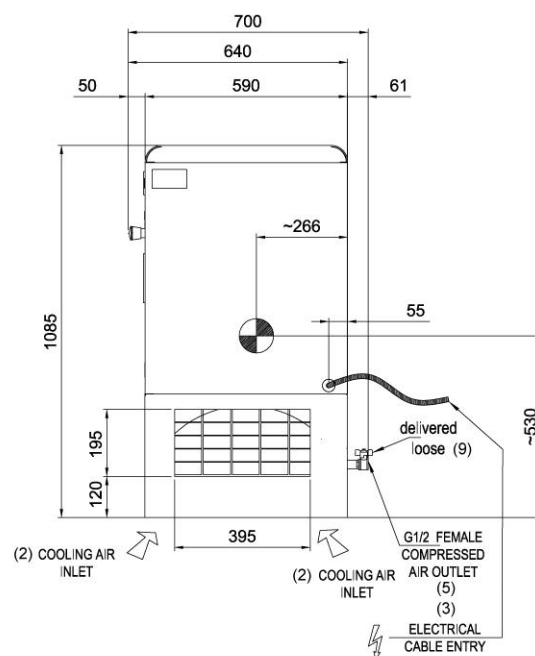
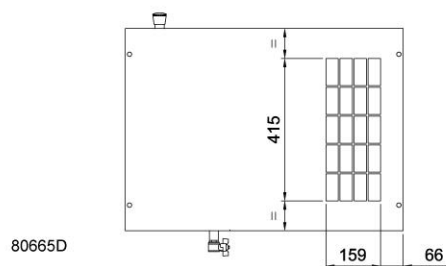
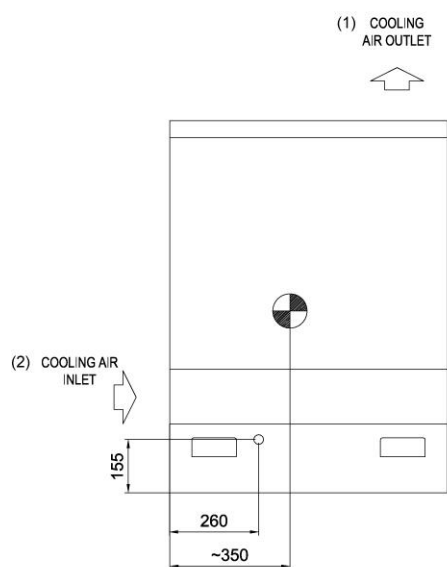
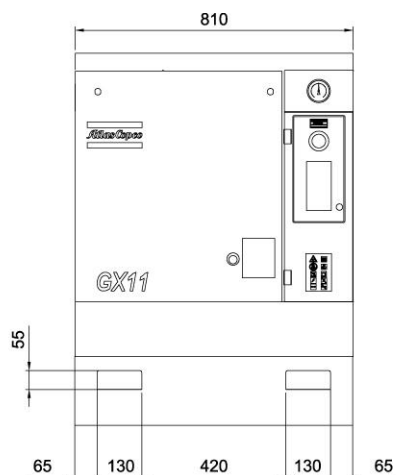
GX 7 and GX 11 Tank-mounted (500 l, optional), Pack



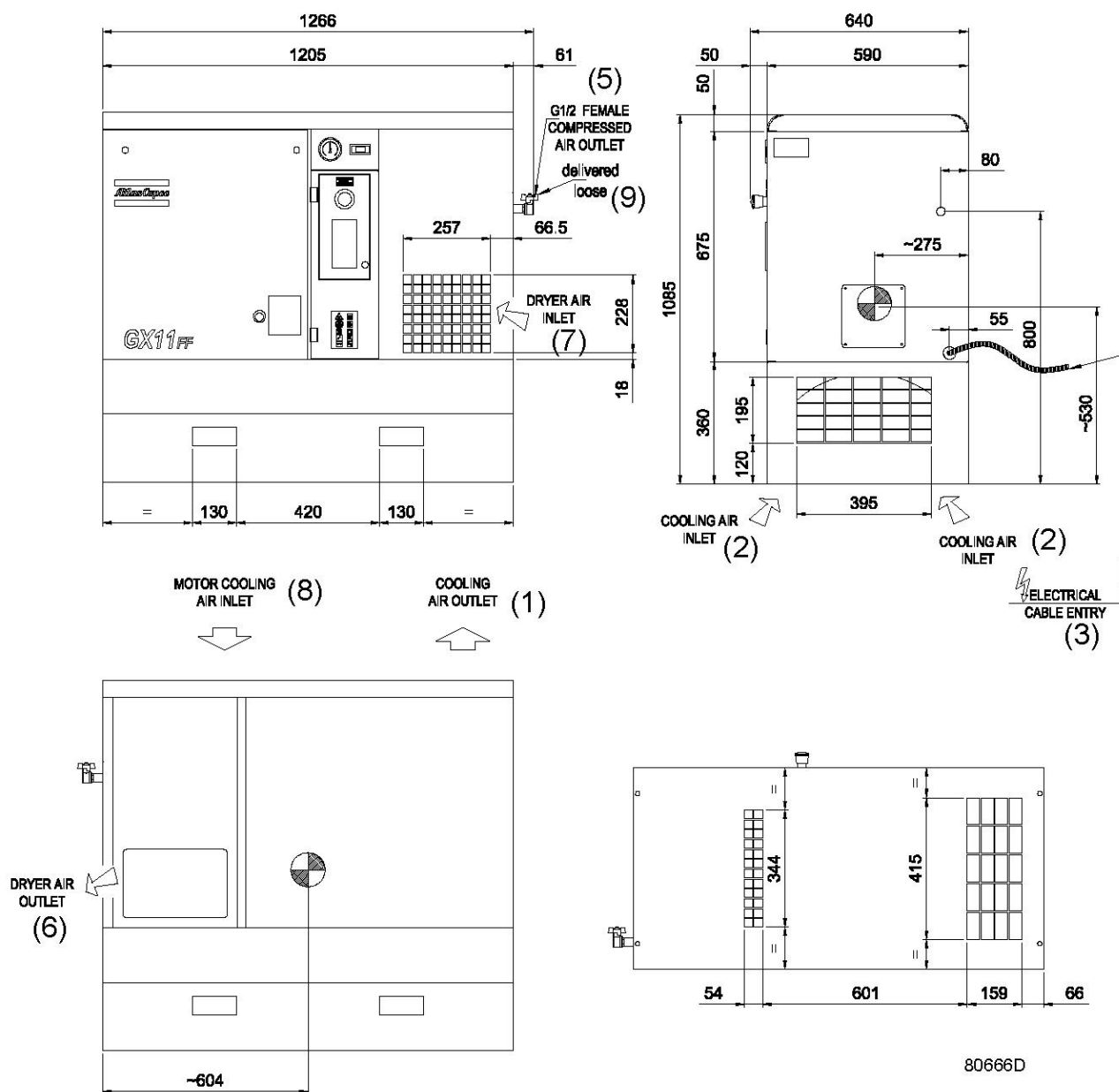
GX 7 and GX 11 Tank-mounted (270 l), Full-Feature



GX 7 and GX 11 Tank-mounted (500 l, optional), Full-Feature



GX 7 and GX 11 Floor-mounted , Pack



GX 7 and GX 11 Floor-mounted , Full-Feature

Ref.	Name
1	Cooling air outlet
2	Cooling air inlet
3	Location of supply cable entry
4	Manual drain (G 3/8 female)
5	Compressed air outlet (G 1/2 female)
6	Dryer air outlet
7	Dryer air inlet
8	Motor cooling air inlet

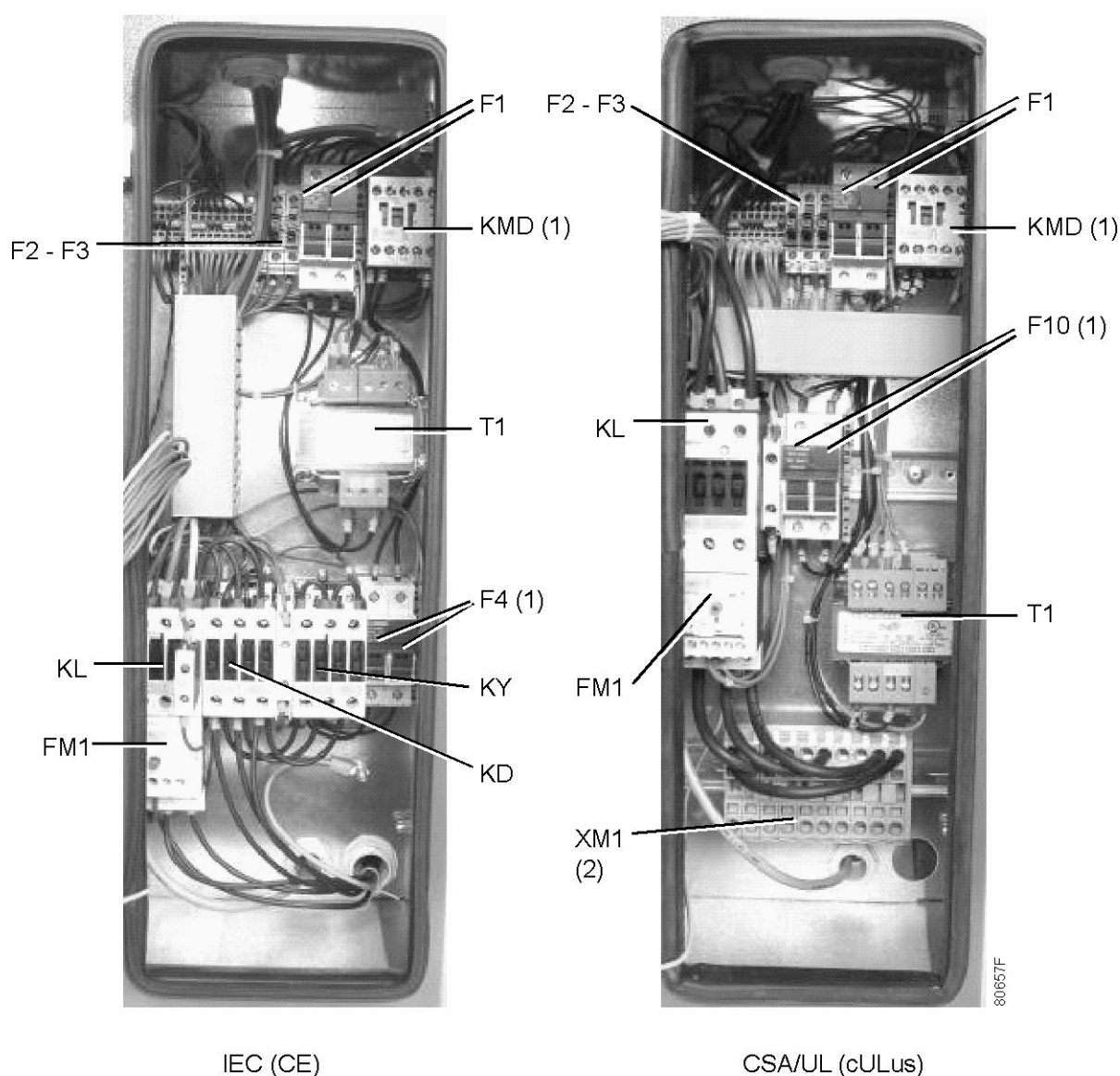
Ref.	Name
9	Outlet valve (delivered loose)

3.3 Electrical connections



Always disconnect the power supply before working on the electrical circuit!

General instructions



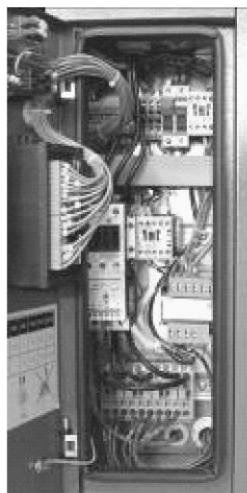
Electrical connection, GX 7 and GX 11

Step	Action
1	Install an isolating switch near the compressor.
2	Check the fuses and the setting of overload relay. See Settings for overload relay and fuses .
3	If fitted, check transformers for correct connection.
4	Connect the power supply cables to terminals L1, L2 and L3 (1X0) and the neutral conductor (if applicable) to terminal (N). Connect the earth conductor.

Specific instructions for GX 7 and GX 11 with 208 V / 230 V / 460 V cubicle

The standard voltage configuration for the compressor is mentioned on the data plate of the machine. When the compressors leave the factory, the units are connected for 230 V / 3 phase.

To modify the wiring for an operating voltage of 208 V or 460 V, both compressor main cubicle and transformer dryer cubicle should be rewired as described below:

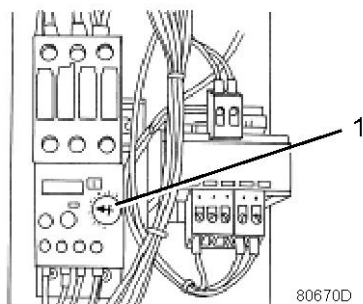


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A. Modifications in the compressor cubicle:

Step	Action
1	Adjust the motor overload (FM1) setting.
2	Rewire the control transformer (T1)
3	Replace the control fuses (F1) with the 10.3 x 38mm 1 A or 2 A fuses provided (see further).
4	Modify the motor terminal bridge configuration in the main cubicle for the desired voltage.
5	Replace the voltage sticker by the appropriate voltage sticker provided.
6	On FF units, replace the power fuses (F10 in the main cubicle, F11 in the power transformer cubicle) with the CC type 5 A, respectively 7,5 A fuses provided.
7	Modify the power transformer terminal bridge configuration in the transformer cubicle for the desired voltage.

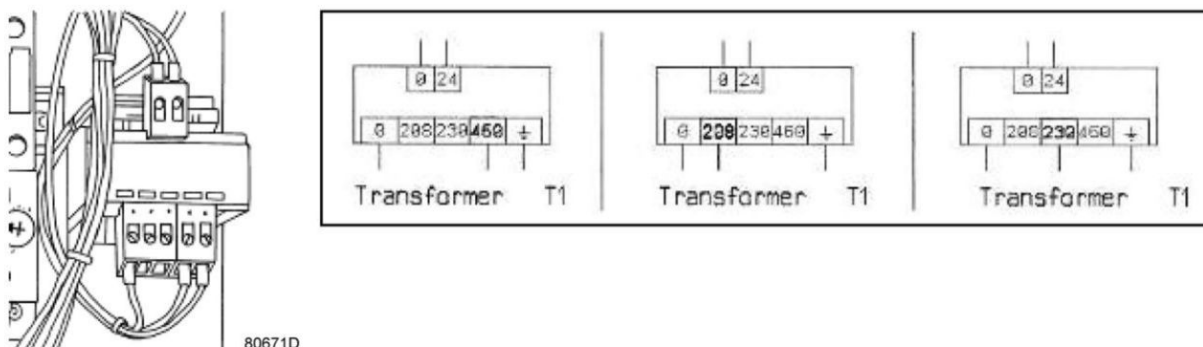
To adjust the motor overload (FM1) setting, simply rotate the adjustment screw (1) on the front of the overload relay to the required setting (see table below).



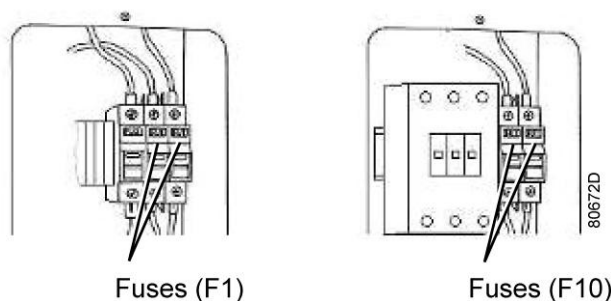
Adjustment screw of the motor overload

Motor overload (FM1) settings	7,5 kW 10 hp	11 kW 15 hp
208 V	36.3	48
230 V (standard factory setting)	34.4	45
460 V	16.9	22.5

To rewire the control transformer (T1), move the wire of the transformer to the terminal marked with the desired voltage (208 V, 230 V or 460 V).



Replace the two fuses marked F1 by opening the fuse holder. Use the 2 A fuses for 208 and 230 V and the 1 A fuses for 460 V. The fuses are supplied with the compressor.

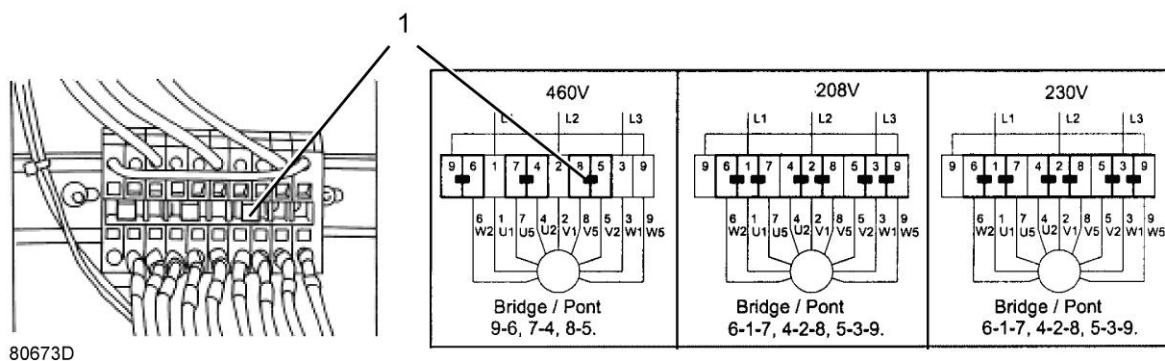


Fuses	fuse rating V	208 V	230 V	460 V	Class
F1	600 V AC	2 A	2 A	1 A	UL class JDYX or JDYX2 10.3 x 38mm

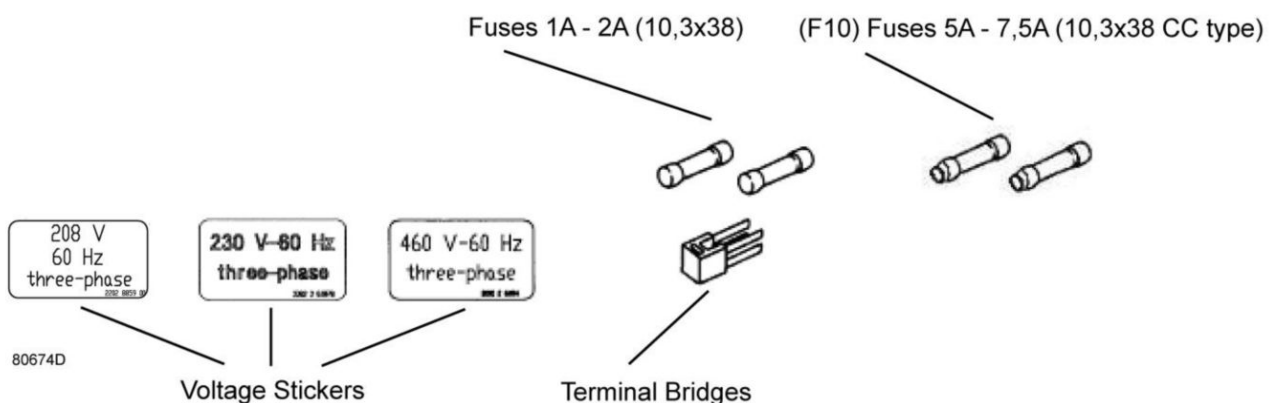
Fuses	fuse rating V	208 V	230 V	460 V	Class
F1	600 V AC	2 A	2 A	1 A	UL class JDYX or JDYX2 10.3 x 38mm
F2	250 V AC	3 A	3 A	3 A	UL class JDYX or JDYX2 5 x 20 mm
F3	250 V AC	1 A	1 A	1 A	UL class JDYX or JDYX2 5 x 20 mm
F3	250 V AC	1 A	1 A	1 A	UL class JDYX or JDYX2 5 x 20 mm
F10	600 V AC	7,5 A	7,5 A	5 A	UL guide JDDZ class CC type FNQ-R 10.3 x 38 mm
F10	600 V AC	7,5 A	7,5 A	5 A	UL guide JDDZ class CC type FNQ-R 10.3 x 38 mm

Note: fuses F10 are only applicable to FF units. See also [Electric diagrams](#).

To modify the terminal bridge configuration to the motor, configure the terminal bridges for the desired voltage (208 V, 230 V or 460 V) according to the diagram below. The terminal bridges (1) can be easily removed using a pair of pliers. Additional terminal bridges are provided with the compressor. The connections for 230 V are the factory standard.



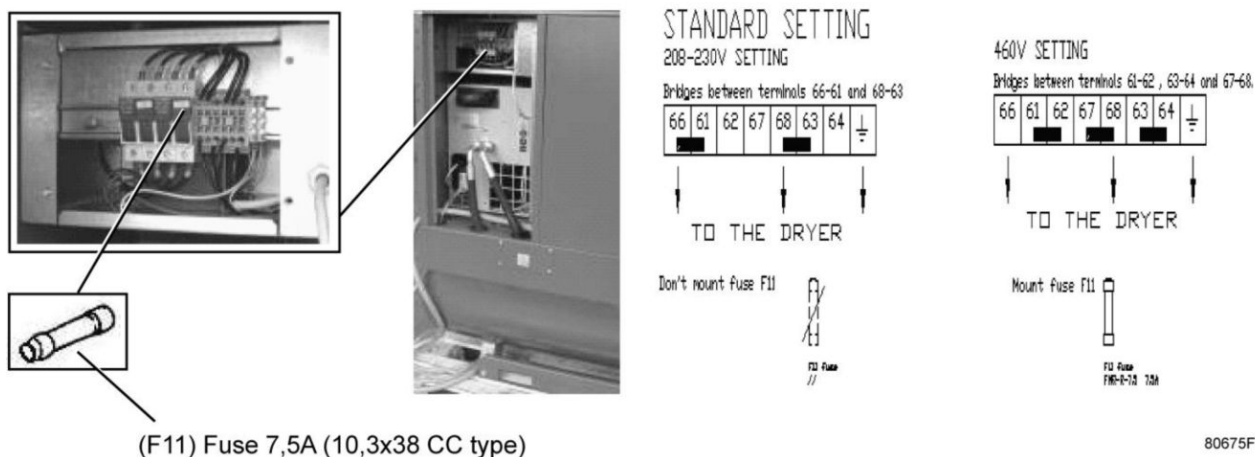
Locate the yellow voltage labels provided with the compressor. Replace the existing label with the appropriate voltage label (208 V, 230 V or 460 V).



Voltage labels for GX 7 and GX 11

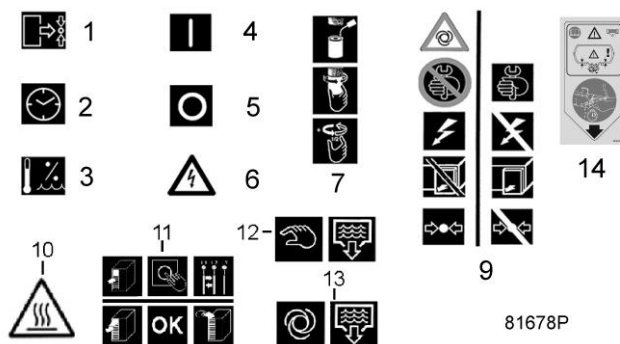
B. Dryer transformer cubicle modifications

Remove the rear panel and the transformer box rear cover. Use fuses F11 only for a supply voltage of 460 V. F11 is not used for a supply voltage of 208 or 230 V.



Fuses	V	208V	230V	460V	Class
F11	600 V AC	-	-	7,5 A	UL guide JDDZ class CC type FNQ-R 10.3 x 38 mm

3.4 Pictographs



Ref.	Description
1	Working pressure
2	Hour meter
3	Dew-point temperature
4	Start
5	Stop
6	Warning: voltage
7	Lightly oil gasket of oil filter, screw filter on and tighten by hand
9	Warning: switch off voltage and depressurise compressor before carrying out maintenance work
10	Warning: hot parts

Ref.	Description
11	Lock all doors of the bodywork and push the start button. <ul style="list-style-type: none">• If the sheet is pulled downwards: Stop the compressor immediately and switch off the voltage.• Reverse two incoming electric lines. Repeat the previous step.• If the sheet is blown away the motor rotation direction is correct.
12	Manual condensate drain
13	Automatic condensate drain
14	Purge the air receiver daily

4 Operating instructions

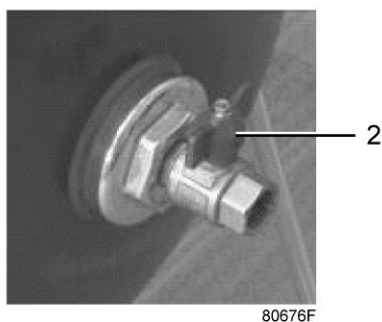
4.1 Initial start-up

Safety



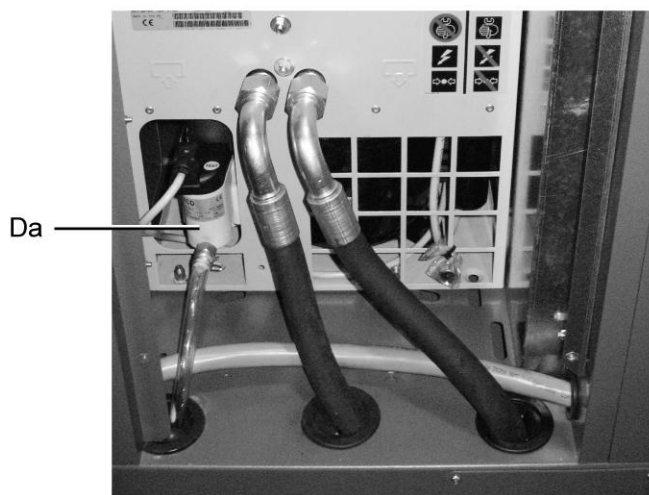
The operator must apply all relevant [Safety precautions](#).

General preparation



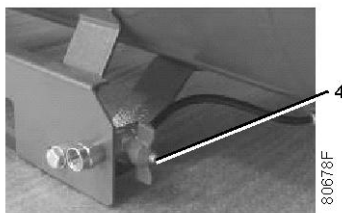
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Air outlet valve on air receiver



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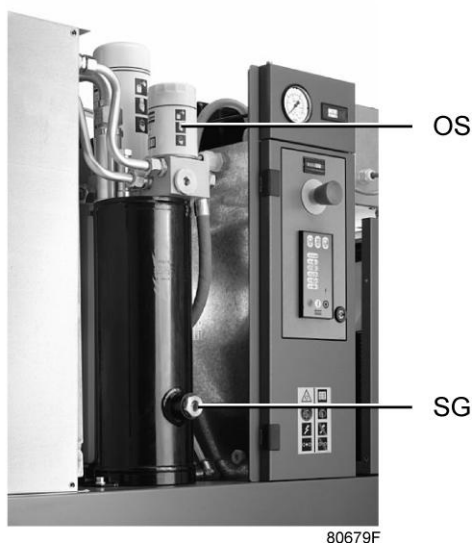
Condensate drain, GX 7 up to GX 11



Condensate drain valve on air receiver

Step	Action
1	Consult the installation instructions (see Installation).
2	Check that the electrical connections correspond to the local codes. The installation must be earthed and protected against short circuits by fuses in all phases. An isolating switch must be installed near the compressor.
3	Fit outlet valve (2), close it and connect the air net to the valve. Connect condensate drain valve (Dm) and automatic drain outlet (Da) to a drain collector. Close the valve. Connect condensate drain valve (4) of the air receiver to a drain collector. Close the valve.

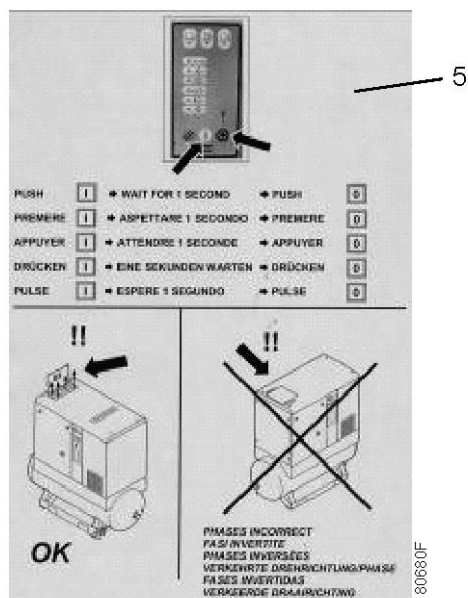
Oil system



Oil level sight-glass, GX 7 and GX 11

Step	Action
	Check the oil level. The oil level sight-glass (SG) should be between 1/4 and 3/4 full.

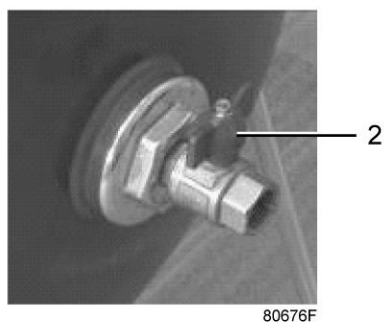
Start-up



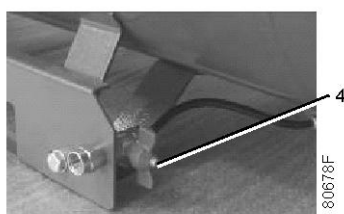
Label on the top

Step	Action
1	<p>Affix sheet (5) explaining the procedure for checking the motor rotation direction to the cooling air outlet of the compressor (consult Dimension drawings).</p> <p>Switch on the voltage. Start the compressor and stop it immediately.</p> <p>Check the rotation direction of the motor using sheet (5). If the motor rotation direction is correct, the label on the top grating will be blown upwards. If the sheet remains in place, the rotation direction is incorrect (see the pictographs on the label).</p> <p>If the rotation direction is incorrect, switch off the voltage, open the isolating switch and reverse two incoming electric lines.</p>
2	<p>Start and run the compressor for a few minutes. Check that the compressor operates normally.</p>

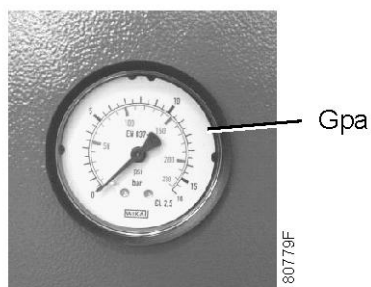
4.2 Starting



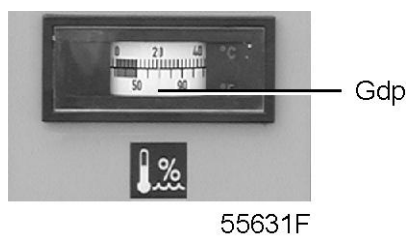
Air outlet valve



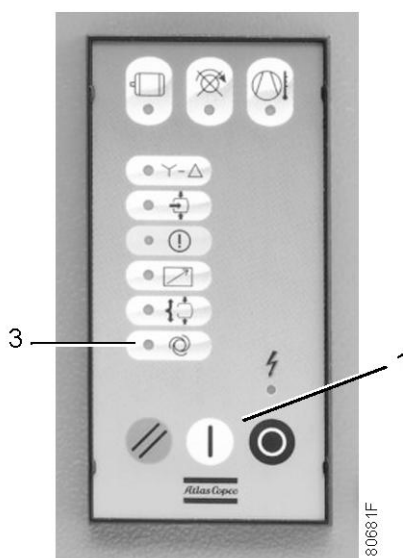
Condensate drain valve on air receiver



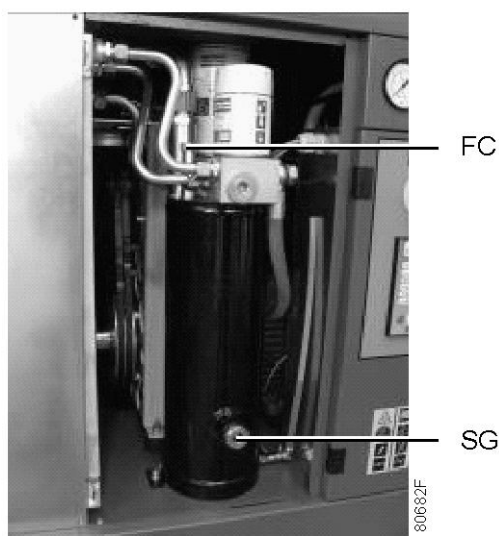
Pressure gauge



Dew point temperature gauge





Control panel



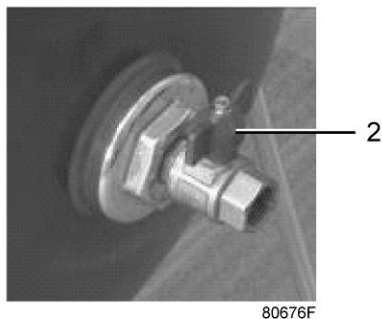
Position of oil sight glass and filler plug

Step	Action
1	Before starting, the oil level sight-glass (SG) should be between 1/4 and 3/4 full.
2	Switch on the voltage.
3	Open air outlet valve (2).
4	Push the start button (1). The motor starts running after 25 seconds and automatic operation LED (3) alights. On compressors with a star-delta starter, the drive motor switches over from star to delta 10 seconds after starting.

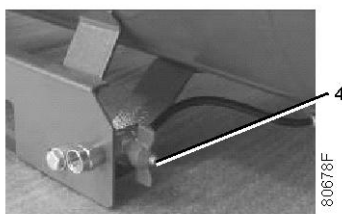
Step	Action
	The maximum number of motor starts must be limited to 20 per hour. It is strongly recommended to operate the compressor with a load factor of more than 10% to avoid condensate in the oil.
5	Regularly check the oil level. 10 to 15 minutes after stopping, the sight-glass (SG) should be between 1/4 and 3/4 full. If the oil level is too low, stop the compressor, depressurise the oil system by unscrewing oil filler plug (FC) one turn and wait a few minutes. Remove the plug and top up the oil, until the sight-glass is 3/4 full. Do not overfill. Fit and tighten plug (FC).
6	When automatic operation LED (3) is lit, the regulator is automatically controlling the compressor, i.e. loading, unloading, stopping of the motors and restarting.
7	Regularly check the working pressure (Gpa) and the dew point gauge (Gdp) (FF units).
8	Regularly check that condensate is drained (Da) during operation.

	During normal operation, the oil level should be at approximately half of the sight-glass. Under certain conditions it is possible that only foam is visible. In that case, the oil level can only be checked after stopping, following the described procedure. Always stop the compressor as explained in Stopping . Never use the emergency stop button for normal stopping.
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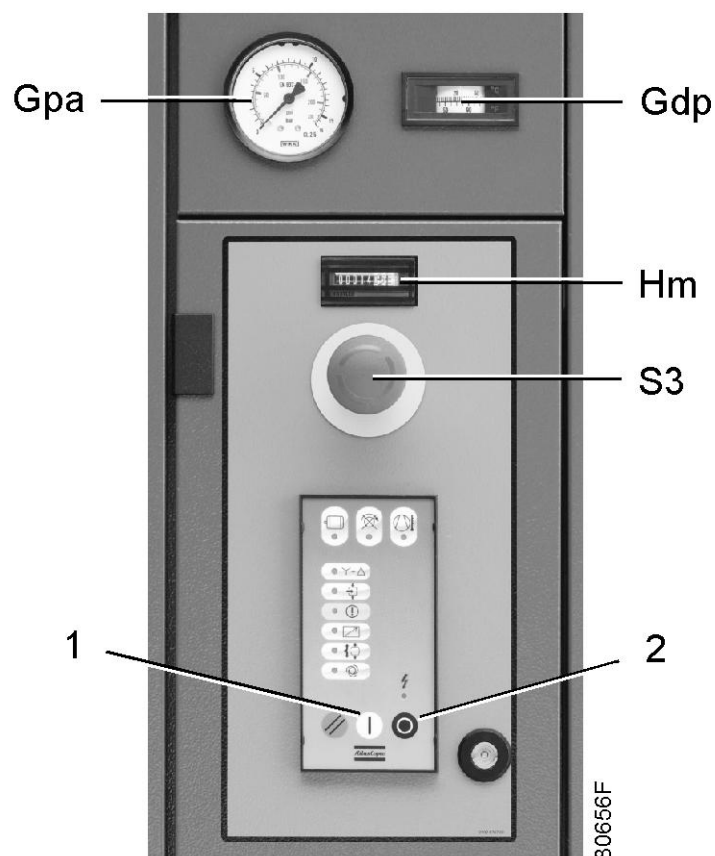
4.3 Stopping





Air outlet valve



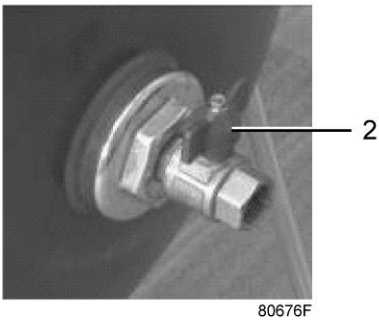
Condensate drain valve on air receiver



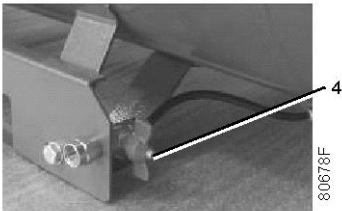
Control panel

Step	Action
1	Push the stop button (2) on the control panel. The compressor will switch to unloaded operation and stops after 120 seconds. The automatic operation LED goes out. To stop the compressor immediately in the event of an emergency, press button (S3). See section Control panel . After remedying the fault, unlock the button by pulling it out.
	Only use emergency stop button in the event of an emergency. Avoid using the button for normal stopping of the compressor.
2	Close air outlet valve (2) and switch off the voltage to the compressor.
3	Open condensate drain valve (Dm) for a few seconds to drain any condensate and then close the valve. Open condensate drain valve (4) of the air receiver for a few seconds to drain any condensate and then close the valve.
	The air dryer and the air receiver remain under pressure. The integrated filter (if installed) remains pressurised. If maintenance or repair work is necessary, consult the Problem solving section for all relevant safety precautions.

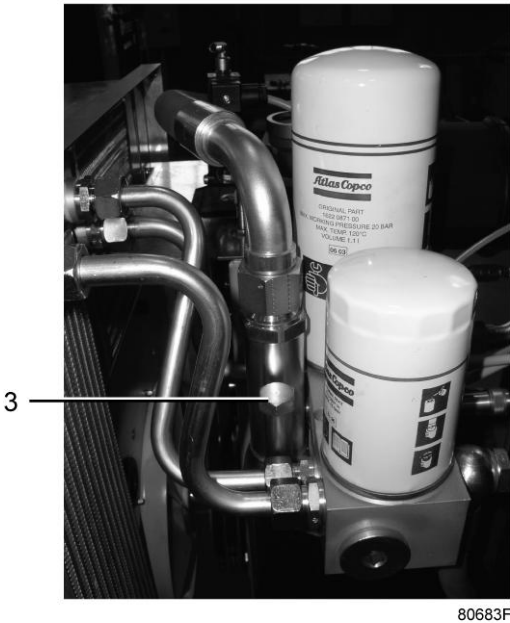
4.4 Taking out of operation



Air outlet valve (Tank mounted units)



Condensate drain valve on air receiver



Oil filler plug, GX 7 and GX 11

This procedure should be carried out at the end of the compressor’s service life.

Step	Action
1	Stop the compressor and close the air outlet valve (2).

Step	Action
2	Switch off the voltage and disconnect the compressor from the mains.
3	Depressurise the compressor by opening plug (3) one turn. Open condensate drain valve (Dm). Open condensate drain valve (4) of the air receiver.
4	Shut off and depressurise the part of the air net which is connected to the outlet valve. Disconnect the compressor from the air net.
5	Drain the oil and condensate circuits.
6	Disconnect the compressor condensate outlet and valve from the condensate net.

5 Maintenance

5.1 Preventive maintenance schedule

Warning



Before carrying out any maintenance, repair work or adjustments, proceed as follows:

- Stop the compressor.
- Switch off the voltage and open the isolating switch.
- Close the air outlet valve and open the manual condensate drain valves.
- Depressurise the compressor.

For detailed instructions, see the next sections.

The operator must apply all relevant [Safety precautions](#).

Warranty-Product Liability

Use only authorised parts. Any damage or malfunction caused by the use of unauthorised parts is not covered by Warranty or Product Liability.

General

When servicing, replace all removed gaskets, O-rings and washers.

Intervals

Carry out maintenance at the interval which comes first. The local Atlas Copco Customer Centre may overrule the maintenance schedule, especially the service intervals, depending on the environmental and working conditions of the compressor.

The "longer interval" checks must also include the "shorter interval" checks.

Preventive maintenance schedule for GX 7 and GX 11

Period (1)	Running hours (1)	Operation
Daily	--	Check the oil level. After stopping, drain the condensate from the air receiver by means of the manual drain valve (4), see section Stopping .
3-monthly	--	Inspect the operation of the condensate trap: clean filter DA (for location of DA, see Introduction).
3-monthly	--	For compressors with PDX filter: check the service indicator; replace the filter if necessary.
"	500 (2)	Inspect the air filter. Clean if necessary.
"	1000	Check the tension and the condition of the belts. Adjust if necessary.
"	1000 (2)	Inspect the oil cooler; clean if necessary.
"	"	Inspect the air cooler; clean if necessary.

Period (1)	Running hours (1)	Operation
"	"	For Full-Feature versions: inspect the condenser of the dryer; clean if necessary.
Yearly	2000 (3)	If Roto-Inject Fluid is used, change the oil and the oil filter.
"	4000 (2)	Replace the air filter.
"	4000 (2)	Replace the oil separator.
"	4000	For compressors with PDX filter, replace the filter.
"	4000 (3)	If Atlas Copco Roto-Xtend Duty Fluid is used, change the oil and the oil filter.
"	--	Have the safety valve tested.
"	"	Have the operation of sensors, electrical interlockings and components checked.
"	"	Have the temperature shut-down switch tested.

(1): whichever comes first.

(2): more frequently in a dusty environment

(3): The indicated oil exchange intervals are valid for standard operating conditions (see section [Reference conditions and limitations](#)) and nominal operating pressure (see section [Compressor data](#)). Exposure of the compressor to external pollutants or operation at high humidity combined with low duty cycles may require a shorter oil exchange interval. Contact Atlas Copco if in doubt.

Important



- Always consult Atlas Copco if a service timer setting has to be changed.
- For the change interval of oil and oil filter in extreme conditions, consult your Atlas Copco Customer Centre.
- Any leakage should be attended to immediately. Damaged hoses or flexible joints must be replaced.

5.2 Drive motor

Description

The motor bearings are greased for life.

5.3 Oil specifications



Never mix oils of different brands or types as they may not be compatible and the oil mix will have inferior properties. A label, indicating the type of oil filled ex-factory, is stuck on the air receiver/oil tank.

It is strongly recommended to use Atlas Copco lubricants. See [Preventive maintenance schedule](#) for recommended oil change intervals.

For part numbers, consult the Spare Parts List.

Roto-Inject Fluid

Atlas Copco's Roto-Inject Fluid is a specially developed lubricant for use in single stage oil-injected screw compressors. Its specific composition keeps the compressor in excellent condition. Roto-Inject Fluid can be used for compressors operating at ambient temperatures between 0 °C (32 °F) and 40 °C (104 °F). If the compressor is regularly operating in ambient temperatures between 40 °C and 46 °C (115 °F), oil lifetime is reduced significantly. In such case it is recommended to use Roto-Xtend Duty Fluid.

Roto-Xtend Duty Fluid

Atlas Copco's Roto-Xtend Duty Fluid is a high quality synthetic lubricant for oil-injected screw compressors which keeps the compressor in excellent condition. Because of its excellent oxidation stability, Roto-Xtend Duty Fluid can be used for compressors operating at ambient temperatures between 0 °C (32 °F) and 46 °C (115 °F).

5.4 Oil, filter and separator change

Important

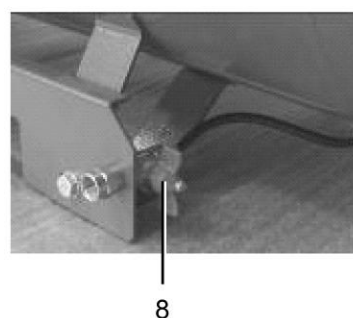
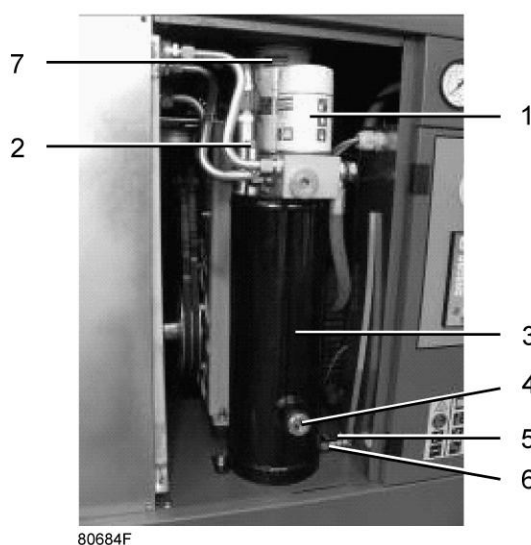


Never mix oils of different brands or types. A label, indicating the type of oil filled ex-factory, is stuck on the air receiver/oil tank.

Always drain the compressor oil at all drain points. Used oil left in the compressor can shorten the lifetime of the new oil.

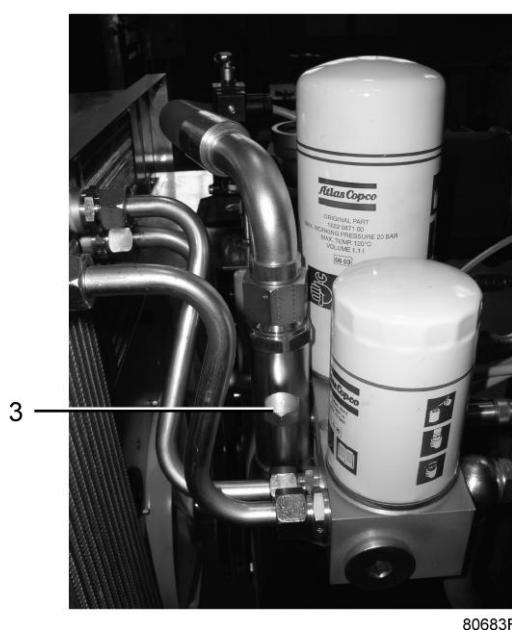
If the compressor is exposed to external pollutants, is being used at high temperatures (oil temperature above 90 °C / 194 °F) or is being used under severe conditions, it is advisable to change the oil more frequently. Consult Atlas Copco.

Location of oil filter and separator



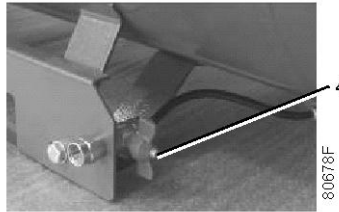
Step	Action
1	Run the compressor until warm. Stop the compressor, close the air outlet valve and switch off the voltage. See Stopping .
2	Depressurise the compressor by unscrewing filler plug (2) one turn to permit any pressure in the system to escape. Remove the plug after the system is depressurised.
3	Depressurise the air receiver by opening drain valve (8).
4	Remove plug (5), drain the oil by opening drain valve (6). Close the valve and refit the plug after draining. Deliver the drained oil to the local oil collection service.
5	Remove oil filter (7) and separator (1). Clean the seats on the manifold.
6	Oil the gaskets of the new filter and separator and screw them into place. Tighten firmly by hand.
7	Fill oil separator/tank (3) with oil until the level reaches the middle of sight-glass (4). Ensure no dirt gets into the system.
8	Refit and tighten filler plug (2).
9	Close drain valve (8) of the air receiver.
10	Run the compressor for a few minutes.
11	Stop the compressor and wait a few minutes to allow the oil to settle.
12	Check the oil level. Add oil if necessary. If the oil level is too low, depressurise the system by unscrewing filler plug (2) one turn to permit any pressure in the system to escape. Depressurise the air receiver by opening drain valve (8).
13	Add oil as necessary. The sight-glass should be 3/4 full. Retighten plug (2) and close drain valve (8) of the air receiver.

5.5 PDX/DDX filter change (option)



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Oil filler plug



Drain valve, air receiver

Step	Action
1	Stop the compressor, close the air outlet valve, switch off the voltage and depressurise by unscrewing oil filler plug (3) one turn to permit any pressure in the system to escape. See section Stopping .. On floor-mounted units, depressurise the filter by opening its drain valve. If the compressor is fitted onto an air receiver, depressurise the air receiver by opening condensate drain valve (4).
2	Unscrew the filter bowl. A whistling noise will warn you if the bowl is not fully depressurised. If this occurs, the bowl should be screwed back and the venting should be repeated.
3	Remove and discard the filter element.
4	Clean the bowl and replace its O-ring.
5	Fit the new filter element.
6	Refit the filter bowl.
7	Tighten oil filler plug (3).
8	Close condensate drain valve (4).

5.6 Storage after installation

If the compressor is stored without running from time to time, consult Atlas Copco as protective measures may be necessary.

5.7 Service kits

Service kits

For overhauling and for preventive maintenance, a wide range of service kits is available. Service kits comprise all parts required for servicing the component and offer the benefits of genuine Atlas Copco parts while keeping the maintenance budget low.

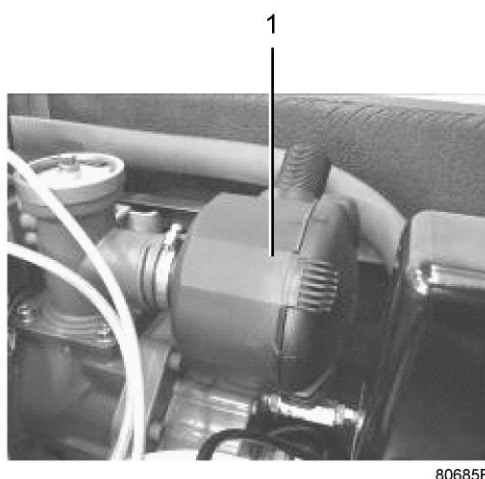
Also a full range of extensively tested lubricants, suitable for your specific needs is available to keep the compressor in excellent condition.

Consult the Spare Parts List for part numbers.

6 Adjustments and servicing procedures

6.1 Air filter

Changing the air filter



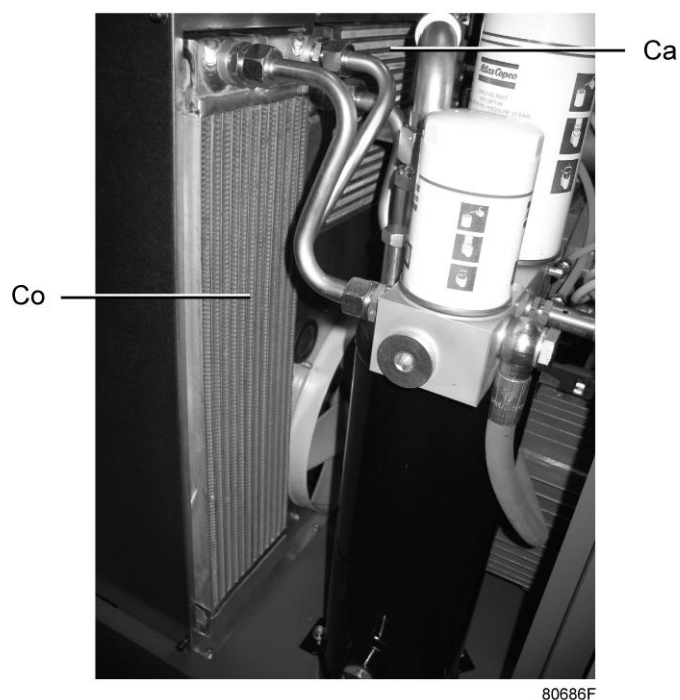
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Air filter

Procedure:

Step	Action
1	Stop the compressor, close the air outlet valve and switch off the voltage.
2	Remove the front panel and the top panel of the compressor housing.
3	Unscrew the filter cover (1) and remove the filter element. Discard the air filter element.
4	Fit the new element and screw on the filter cover.
5	Refit the top and front panels.

6.2 Coolers

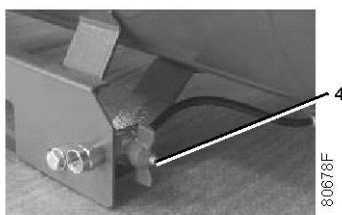


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GX 7 and GX 11

Step	Action
1	Keep oil cooler (Co) clean to maintain the cooling efficiency. For versions with air cooler: also keep cooler (Ca) clean to maintain the cooling efficiency.
2	Stop the compressor, close the air outlet valve and switch off the voltage. Remove any dirt from the oil cooler (Co) with a fibre brush. For versions with air cooler: also remove any dirt from the air cooler (Ca). Never use a wire brush or metal objects. Then clean using an air jet.

6.3 Safety valve



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Condensate drain valve, Tank-mounted GX 7 and GX 11



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Filler plug, GX 7 and GX 11

Testing

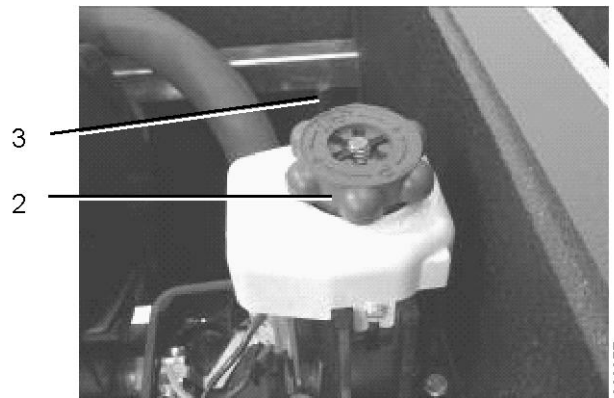
The valve can be tested on a separate compressed air line.

Before removing the safety valve, stop the compressor (see section [Stopping](#)), close the air outlet valve, switch off the voltage, open drain valves (4) (tank-mounted units) and the manual drain valve (5) (if fitted - on floor-mounted units) and unscrew filler plug (3) one turn to permit any pressure in the system to escape.



If the valve does not open at the set pressure stamped on the valve, replace the valve. No adjustments are allowed. Never run the compressor without a safety valve.

6.4 Unload/stop pressure switch



Pressure switch, GX 7 up to GX 11

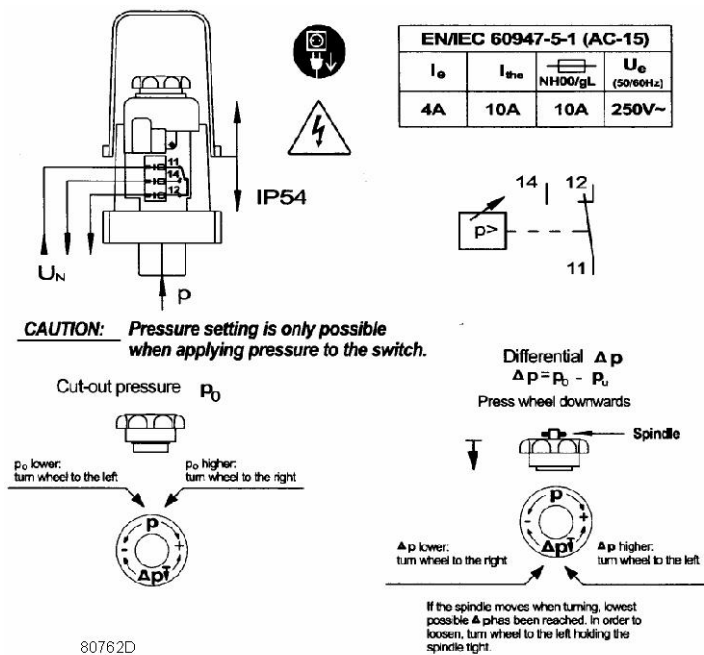
The switch allows the operator to select the unloading/stopping pressure (see [Regulating system](#)).



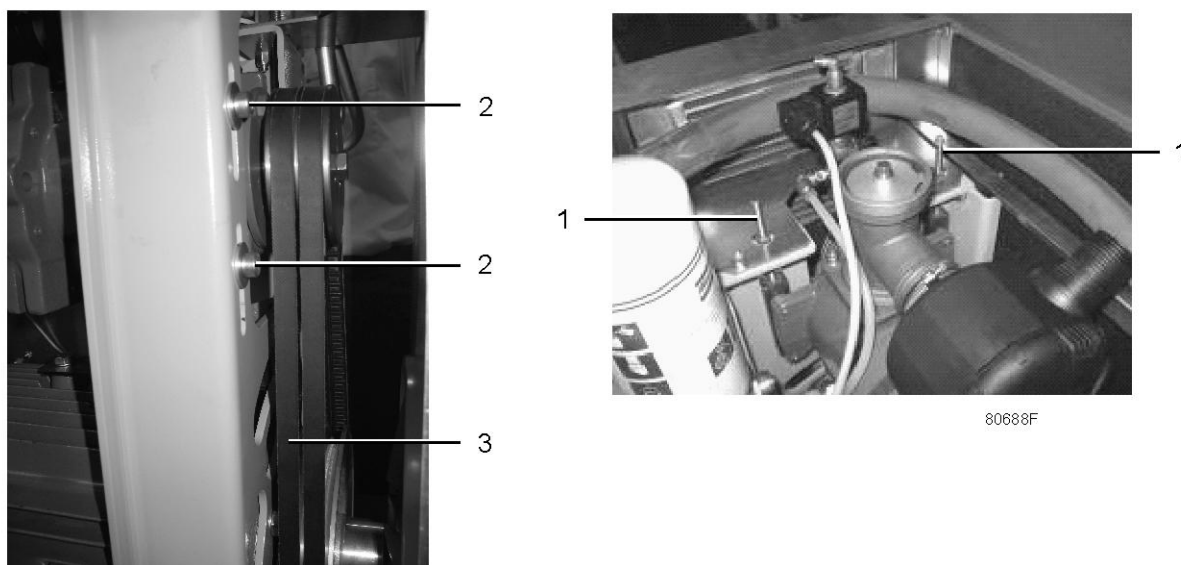
Adjustment can only be carried out when the pressure switch is pressurised.

The loading/starting pressure is controlled by adjusting knob (2). Remove blocking device (3) and turn the knob clockwise to raise the pressure, anti-clockwise to lower it. See also below drawing.

The pressure difference between unloading and loading is adjusted by means of the same knob. Push down the knob and turn it clockwise to reduce the pressure difference, counter-clockwise to increase it.



6.5 Belt set exchange and tensioning



GX 7 and GX 11



Read the warning in the [Preventive maintenance schedule](#) section.

Checking the belt tension on GX 7 and GX 11

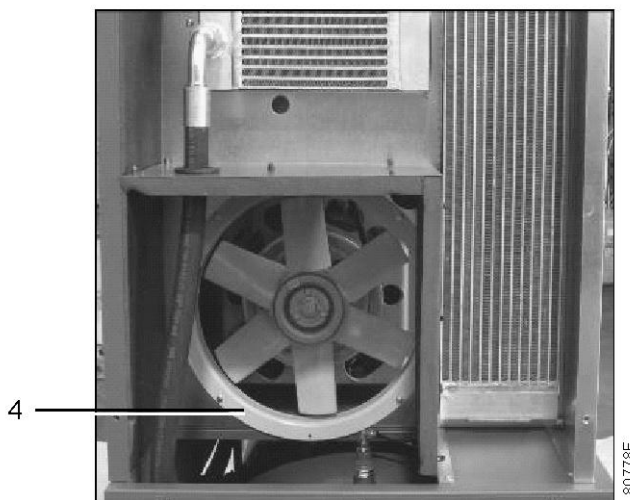
Step	Action
1	Stop the compressor, close the air outlet valve and switch off the voltage
2	Remove the front door and the internal panel.
3	The tension is correct when a force of between 20 N (4.5 lbf) and 25 N (5.63 lbf) applied at the midpoint of the belts causes a deflection of 5 mm (0.2 in).
4	Refit the bodywork panels.


Adjusting the tension of the drive belts for GX 7 and GX 11

Step	Action
1	Stop the compressor, close the air outlet valve and switch off the voltage.
2	Remove the front door, the internal panel, the top cover and the pulley protection.
3	Loosen the 4 bolts (2) by one turn.
4	Adjust the belt tension by turning tensioning nut (1).
5	The tension is correct when a force of between 20 N (4.5 lbf) and 25 N (5.63 lbf) applied at the midpoint of the belts causes a deflection of 5 mm (0.2 in).
6	Retighten bolts (2).

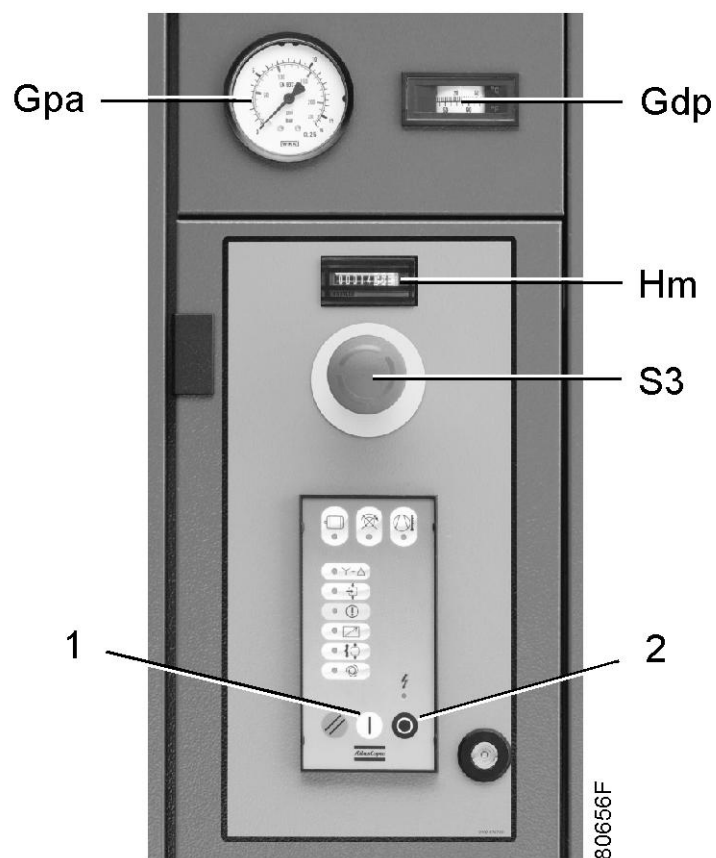
Step	Action
7	Refit the bodywork panels.

Replacing the drive belts for GX 7 and GX 11

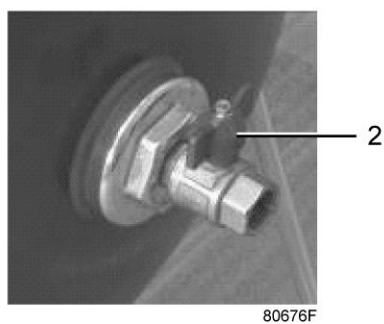


Step	Action
	The belts (3) must be replaced as a set, even if only one of the belts is worn. Only use genuine Atlas Copco belts.
1	Stop the compressor, close the air outlet valve and switch off the voltage.
2	Remove the front door, the internal panel, the top cover, the pulley protection and the left side panel.
3	Loosen the 4 bolts (2) by one turn.
4	Release the belt tension by loosening tensioning nut (1).
5	Remove the fan duct (4). Remove the belts.
6	Install the new belts.
7	Tension belts (3) as described above.
8	Re-assemble the fan duct (4), the pulley protection and the internal protection panel.
9	Re-assemble left side and top panel cover.
10	Check the belt tension after 50 running hours.

7 Problem solving



Control panel



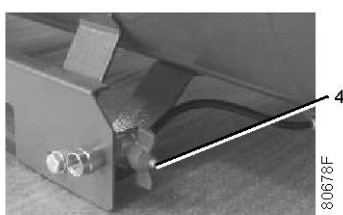
Air outlet valve



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Oil filler plug


Drain valve, air receiver



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GX 7 and GX 11

Attention

	<p>Use only authorised parts. Any damage or malfunction caused by the use of unauthorised parts is not covered by Warranty or Product Liability. Apply all relevant Safety precautions during maintenance or repair.</p>
	<p>Before carrying out any maintenance or repair work on the compressor: push the stop button (2). Wait until the compressor has stopped and switch off the voltage. See the Stopping section. Open the isolating switch to prevent an accidental start. Close air outlet valve (2) and depressurise the compressor by opening the oil filler plug (3) one turn. Open manual condensate drain valves (4 and/or 5).</p>
	<p>The air outlet valve (2) can be locked during maintenance or repair as follows:</p> <ul style="list-style-type: none"> • Close the valve. • Remove the screw fixing the handle • Remove the handle. • Fit the screw.

Faults and remedies

For all references given hereafter, see [Air flow diagram](#), [Initial start-up](#) or [Regulating system](#).

	Condition	Fault	Remedy
1	Compressor starts running, but does not load after a delay time	Solenoid valve (Y1) out of order	Replace valve
		Inlet valve (IV) stuck in closed position	Have valve checked
		Leak in control air flexibles	Replace leaking flexible
		Minimum pressure valve (Vp) leaking (when net is depressurised)	Have valve checked
		Timer out of order	Replace timer
2	Compressor air output or pressure below normal	Air consumption exceeds air output of compressor	Check equipment connected
		Choked air inlet filter element (AF)	Replace filter element
		Solenoid valve (Y1) malfunctioning	Replace valve
		Leak in control air flexibles	Replace leaking flexible
		Inlet valve (IV) does not fully open	Have valve checked
		Oil separator (OS) clogged	Replace separator element
		Safety valves leaking	Replace valves

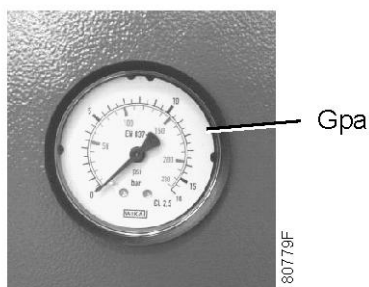
	Condition	Fault	Remedy
3	Air outlet temperature above normal	Insufficient cooling air or cooling air temperature too high	Check for cooling air restriction or improve ventilation of compressor room. Avoid recirculation of cooling air. If installed, check capacity of compressor room fan
		Oil level too low	Check and correct as necessary
		Cooler clogged	Clean cooler
		Temperature switch malfunctioning	Have switch tested
		Compressor element (E) out of order	Consult Atlas Copco

GX 7 up to GX 11 with air cooler

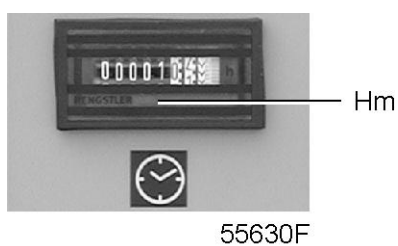
	Condition	Fault	Remedy
1	Condensate is not discharged during loading	Discharge flexible clogged	Check and correct as necessary
		Float valve malfunctioning	Remove float valve assembly, clean or replace as necessary

8 Technical data

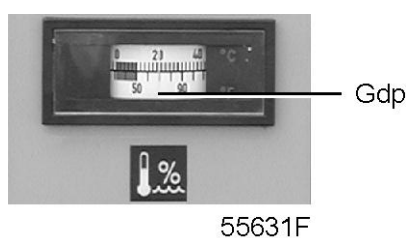
8.1 Readings on control panel



Pressure gauge GX 7 up to GX 11



Hourmeter



Dewpoint indicator



The readings mentioned below are valid under the reference conditions (see [Reference conditions and limitations](#)).

Ref.	Name
Gpa	Air outlet pressure Reading: Modulates between preset unloading/stopping pressure and loading pressure
Gdp	Dew-point temperature Reading: approx. 5°C (41°F) at 20°C (68°F) ambient temperature
Hm	Hour meter Reading: Total running time

8.2 Electric cable size

Attention



Local regulations remain applicable if they are stricter than the values proposed below. The voltage drop must not exceed 5 % of the nominal voltage. It may be necessary to use cables of a larger size than those stated to comply with this requirement.

		GX 7	GX 11
Frequency (Hz)	Voltage (V)	Cable size	Cable size
IEC			
50	200	16 mm ² (6 mm ² XLPE or EPR)	25 mm ² (16 mm ² XLPE or EPR)
50	230	10 mm ²	16 mm ² (10 mm ² XLPE or EPR)
50	400	4 mm ²	6 mm ²
50	500	4 mm ²	6 mm ²
60	440/460	4 mm ²	6 mm ²
60	380	4 mm ²	6 mm ²
CSA/UL			
60	200	AWG6	AWG6
60	208-230 / 460	AWG8-8 / AWG10	AWG6-6 / AWG8
60	575	AWG12	AWG10

8.3 Settings for overload relay and fuses

GX 7 and GX 11

Frequency (Hz)	Voltage (V)	GX 7		GX 11	
IEC	Star-delta	Overload relay FM1 (A)	Disc. switch + motor circuit breaker (curve D) + residual current device	Overload relay FM1 (A)	Disc. switch + motor circuit breaker (curve D) + residual current device
50	200	20.5	50	29.5	63

Frequency (Hz)	Voltage (V)	GX 7		GX 11	
50	230	18	40	25.5	50
50	400	11	25	15	32
50	500	9	25	12	32
60	380	12	25	15.7	32
60	440/460	10	25	13.5	32
CSA/UL	DOL	Overload relay FM1 (A)	Main fuses (A) (class J or RK) + Disc. switch size $\geq 1,25 \times \text{FLA}$, see conn. diagram.	Overload relay FM1 (A)	Main fuses (A) (class J or RK) + Disc. switch size $\geq 1,25 \times \text{FLA}$, see conn. diagram.
60	200	40	60	55	70
60	208-230/460	36.3-34.4/16.9	50-45 / 25	48-45 / 22.5	70 - 70 / 35
60	575	14	20	18.5	25

8.4 Reference conditions and limitations

Reference conditions

Air inlet pressure (absolute)	bar	1
Air inlet pressure (absolute)	psi	14.5
Air inlet temperature	°C	20
Air inlet temperature	°F	68
Relative humidity	%	0
Working pressure	bar(e)	See Compressor data
Working pressure	psi	See Compressor data

Limitations

Maximum working pressure	bar(e)	See Compressor data
Maximum working pressure	psig	See Compressor data
Minimum working pressure	bar(e)	4
Minimum working pressure	psig	58
Maximum air inlet temperature	°C	46
Maximum air inlet temperature	°F	115
Minimum ambient temperature	°C	0
Minimum ambient temperature	°F	32

8.5 Compressor data

50 Hz 7.5-13 bar (under reference conditions)

Compressor type		GX7	GX11	GX7	GX11	GX7	GX11
Frequency	Hz	50	50	50	50	50	50
Maximum (unloading) pressure, Pack	bar(e)	7.5	7.5	10	10	13	13
Maximum (unloading) pressure, Pack	psig	109	109	145	145	189	189
Maximum (unloading) pressure, Full-Feature	bar(e)	7.25	7.25	9.75	9.75	12.75	12.75
Maximum (unloading) pressure, Full-Feature	psig	105	105	141	141	185	185
Nominal working pressure	bar(e)	7	7	9.5	9.5	12.5	12.5
Nominal working pressure	psig	102	102	138	138	181	181
Set-point, thermostatic valve	°C	75	75	75	75	75	75
Set-point, thermostatic valve	°F	167	167	167	167	167	167
Temperature of air leaving outlet valve (approx.), Pack							
• Tank-mounted	°C	38	43	38	43	38	43
• Tank-mounted	°F	100	109	100	109	100	109
• Floor-mounted	°C	61.5	65	61.5	65	61.5	65
• Floor-mounted	°F	143	149	143	149	143	149
Temperature of air leaving outlet valve (approx.), Full-Feature	°C	25	26	25	26	25	26
Temperature of air leaving outlet valve (approx.), Full-Feature	°F	77	79	77	79	77	79
Nominal motor power rating	kW	7.5	11	7.5	11	7.5	11
Nominal motor power rating	hp	10	15	10	15	10	15

Compressor type		GX7	GX11	GX7	GX11	GX7	GX11
Dryer power consumption at full load, Full Feature units	kW	0.36	0.36	0.36	0.36	0.36	0.36
Dryer power consumption at full load, Full Feature units	hp	0.48	0.48	0.48	0.48	0.48	0.48
Oil capacity	l	3	3.2	3	3.2	3	3.2
Oil capacity	US gal	0.8	0.84	0.8	0.84	0.8	0.84
Sound pressure level (according to ISO 2151 (2004))	dB(A)	65	67	65	67	65	67

60 Hz 100-125 psi (under reference conditions)

Compressor type		GX7	GX11	GX7	GX11
Frequency	Hz	60	60	60	60
Maximum (unloading) pressure, Pack	bar(e)	7.4	7.4	9.1	9.1
Maximum (unloading) pressure, Pack	psig	107	107	132	132
Maximum (unloading) pressure, Full-Feature	bar(e)	7.15	7.15	8.85	8.85
Maximum (unloading) pressure, Full-Feature	psig	103.7	103.7	128	128
Nominal working pressure	bar(e)	6.9	6.9	8.6	8.6
Nominal working pressure	psig	100	100	125	125
Set-point, thermostatic valve	°C	75	75	75	75
Set-point, thermostatic valve	°F	167	167	167	167
Temperature of air leaving outlet valve (approx.), Pack					
• Tank-mounted	°C	38	43	38	43
• Tank-mounted	°F	100	109	100	109
• Floor-mounted	°C	60	66	60	66
• Floor-mounted	°F	140	151	140	151
Temperature of air leaving outlet valve (approx.), Full-Feature	°C	23	25	23	25
Temperature of air leaving outlet valve (approx.), Full-Feature	°F	73	77	73	77
Nominal motor power rating	kW	7.5	11	7.5	11
Nominal motor power rating	hp	10	15	10	15
Dryer power consumption at full load, Full Feature units	kW	0.44	0.44	0.44	0.44

Compressor type		GX7	GX11	GX7	GX11
Dryer power consumption at full load, Full Feature units	hp	0.59	0.59	0.59	0.59
Oil capacity	l	3	3.2	3	3.2
Oil capacity	US gal	0.8	0.84	0.8	0.84
Sound pressure level (according to ISO 2151 (2004))	dB(A)	67	68	67	68

60 Hz 150-175 psi (under reference conditions)

Compressor type		GX7	GX11	GX7	GX11
Frequency	Hz	60	60	60	60
Maximum (unloading) pressure, Pack	bar(e)	10.8	10.8	12.5	12.5
Maximum (unloading) pressure, Pack	psig	157	157	181	181
Maximum (unloading) pressure, Full-Feature	bar(e)	10.55	10.55	12.25	12.25
Maximum (unloading) pressure, Full-Feature	psig	153	153	178	178
Nominal working pressure	bar(e)	10.3	10.3	12	12
Nominal working pressure	psig	149	149	174	174
Set-point, thermostatic valve	°C	75	75	75	75
Set-point, thermostatic valve	°F	167	167	167	167
Temperature of air leaving outlet valve (approx.), Pack					
• Tank-mounted	°C	38	43	38	43
• Tank-mounted	°F	100	109	100	109
• Floor-mounted	°C	60	66	60	66
• Floor-mounted	°F	140	151	140	151
Temperature of air leaving outlet valve (approx.), Full-Feature	°C	23	25	23	25
Temperature of air leaving outlet valve (approx.), Full-Feature	°F	73	77	73	77
Nominal motor power rating	kW	7.5	11	7.5	11
Nominal motor power rating	hp	10	15	10	15
Dryer power consumption at full load, Full Feature units	kW	0.44	0.44	0.44	0.44
Dryer power consumption at full load, Full Feature units	hp	0.59	0.59	0.59	0.59
Oil capacity	l	3	3.2	3	3.2
Oil capacity	US gal	0.8	0.84	0.8	0.84
Sound pressure level (according to ISO 2151 (2004))	dB(A)	67	68	67	68

9 Instructions for use

Oil separator vessel

1	This vessel can contain pressurised air; this can be potentially dangerous if the equipment is misused.
2	This vessel must only be used as a compressed air/oil separator tank and must be operated within the limits specified on the data plate.
3	No alterations must be made to this vessel by welding, drilling or other mechanical methods without the written permission of the manufacturer.
4	The pressure and temperature of this vessel must be clearly indicated.
5	The safety valve must correspond with pressure surges of 1.1 times the maximum allowable operating pressure. It should guarantee that the pressure will not permanently exceed the maximum allowable operating pressure of the vessel.
6	Use only oil as specified by the manufacturer.
7	There is no intrinsic need for service inspection of the oil separator vessel when used within the design limits for its intended application. Nevertheless, in case of misuse of the units (very low oil temperature or long interval of shut down) a certain amount of condensate can gather in the oil separator vessel which must be properly drained. To do so, disconnect the unit from the power line, wait till it is cooled down and depressurised and drain the water by the oil drain valve, positioned at the bottom side of the oil separator vessel. Local legislation may require an internal inspection.

Air receiver (on tank-mounted units)

1	Corrosion must be prevented: depending on the conditions of use, condensate may accumulate inside the tank and must be drained every day. This may be done manually by opening the drain valve, or by means of the automatic drain, if fitted to the tank. Nevertheless, a weekly check of correct functioning of the automatic valve is needed. This has to be done by opening the manual drain valve and check for condensate. Verify that no rust obstructions affect the drain system.
2	Periodical service inspection of the air receiver is needed, as internal corrosion can reduce the steel wall thickness with the consequent risk of bursting. Local rules need to be respected, if applicable. The use of the air receiver is forbidden once the wall thickness reaches the minimum value as indicated in the service manual of the air receiver (part of the documentation delivered with the unit).
3	Lifetime of the air receiver mainly depends on the working environment. Avoid installing the compressor in a dirty and corrosive environment, as this can reduce the vessel lifetime dramatically.
4	Do not anchor the vessel or attached components directly to the ground or fixed structures. Fit the pressure vessel with vibration dampers to avoid possible fatigue failure caused by vibration of the vessel during use.
5	Use the vessel within the pressure and temperature limits stated on the nameplate and the testing report.
6	No alterations must be made to this vessel by welding, drilling or other mechanical methods.

10 Guidelines for inspection

Guidelines

On the Declaration of Conformity / Declaration by the Manufacturer, the harmonised and/or other standards that have been used for the design are shown and/or referred to.

The Declaration of Conformity / Declaration by the Manufacturer is part of the documentation that is supplied with this compressor.

Local legal requirements and/or use outside the limits and/or conditions as specified by the manufacturer may require other inspection periods as mentioned below.

11 Pressure equipment directives

Components subject to 97/23/EC Pressure Equipment Directive

Components subject to 97/23/EC Pressure Equipment Directive greater than or equal to category II:
safety valves.

See the spare parts book for part numbers.

Overall rating

The compressors conform to PED smaller than category II.

12 Declaration of conformity

EC DECLARATION OF CONFORMITY

- (1)
 We,, declare under our sole responsibility, that the product
 Machine name
 Machine type
 Serial number
- Which falls under the provisions of article 12.2 of the EC Directive 2006/42/EC on the approximation of the laws of the Member States relating to machinery, is in conformity with the relevant Essential Health and Safety Requirements of this directive.

The machinery complies also with the requirements of the following directives and their amendments as indicated.

Directive on the approximation of laws of the Member States relating to		Harmonized and/or Technical Standards used	Att' mnt
a.	Pressure equipment	97/23/EC	
b.	Machinery safety	2006/42/EC EN ISO 12100 – 1 EN ISO 12100 – 2 EN 1012 – 1	
c.	Simple pressure vessel	2009/105/EC	
d.	Electromagnetic compatibility	2004/108/EC EN 61000-6-2 EN 61000-6-4	
e.	Low voltage equipment	2006/95/EC EN 60034 EN 60204-1 EN 60439	
f.	Outdoor noise emission	2000/14/EC	
g.	Equipment and protective systems in potentially explosive atmospheres	94/9/EC	
h.	Medical devices General	93/42/EEC EN ISO 13845 EN ISO 14971 EN 737-3	
i.			

The harmonized and the technical standards used are identified in the attachments hereafter

(Product company) is authorized to compile the technical file.

	Conformity of the specification to the directives	Conformity of the product to the specification and by implication to the directives
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Issued by	Product engineering	Manufacturing
-----------	---------------------	---------------

Name

Signature

Date

81679D

Typical example of a Declaration of Conformity document

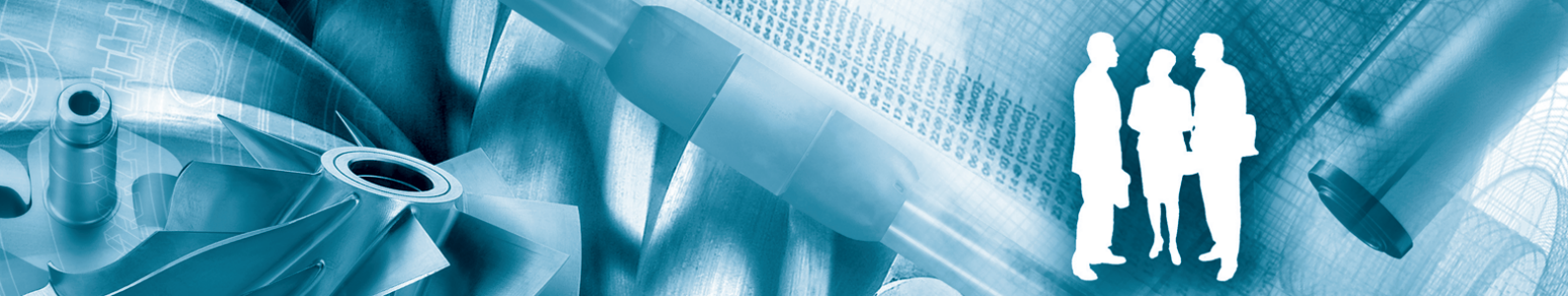
(1): Contact address:

Atlas Copco Airpower n.v.

P.O. Box 100

B-2610 Wilrijk (Antwerp)

Belgium



In order to be First in Mind—First in Choice® for all your quality compressed air needs, Atlas Copco delivers the products and services that help to increase your business' efficiency and profitability.

Atlas Copco's pursuit of innovation never ceases, driven by our need for reliability and efficiency. Always working with you, we are committed to providing you the customized quality air solution that is the driving force behind your business.

