

Atlas Copco

Oil-injected rotary screw compressors



GX 7, GX 11

Instruction book

Atlas Copco

Atlas Copco

Oil-injected rotary screw compressors

GX 7, GX 11

Instruction book

Copyright notice

Any unauthorized use or copying of the contents or any part thereof is prohibited.

This applies in particular to trademarks, model denominations, part numbers and drawings.

This instruction book meets the requirements for instructions specified by the machinery directive 98/37/EC and is valid for CE as well as non-CE labelled machines.

2008 - 07

No. 2920 7054 01

Replaces No. 2920 7054 00

www.atlascopco.com



Table of contents

1	Safety precautions.....	5
1.1	SAFETY ICONS.....	5
1.2	SAFETY PRECAUTIONS DURING INSTALLATION.....	5
1.3	SAFETY PRECAUTIONS DURING OPERATION.....	7
1.4	SAFETY PRECAUTIONS DURING MAINTENANCE OR REPAIR.....	8
2	General description.....	10
2.1	INTRODUCTION.....	10
2.2	AIR FLOW.....	12
2.3	OIL SYSTEM.....	14
2.4	COOLING SYSTEM.....	15
2.5	REGULATING SYSTEM.....	16
2.6	CONTROL PANEL	18
2.7	PROTECTION OF COMPRESSOR.....	20
2.8	AIR DRYER.....	22
3	Installation.....	23
3.1	INSTALLATION PROPOSAL.....	23
3.2	DIMENSION DRAWINGS.....	26
3.3	ELECTRIC CABLE SIZE.....	32
3.4	ELECTRICAL CONNECTIONS	32
3.5	ELECTRICAL DIAGRAMS.....	38
3.6	PICTOGRAPHS.....	40
4	Operating instructions.....	41
4.1	INITIAL START-UP.....	41
4.2	STARTING.....	44
4.3	STOPPING.....	46

4.4	TAKING OUT OF OPERATION.....	48
5	Maintenance.....	50
5.1	PREVENTIVE MAINTENANCE SCHEDULE.....	50
5.2	DRIVE MOTOR	51
5.3	OIL SPECIFICATIONS.....	51
5.4	OIL, FILTER AND SEPARATOR CHANGE	52
5.5	PDX/DDX FILTER CHANGE.....	53
5.6	STORAGE AFTER INSTALLATION.....	54
5.7	SERVICE KITS.....	54
6	Adjustments and servicing procedures.....	55
6.1	AIR FILTER.....	55
6.2	COOLERS.....	56
6.3	SAFETY VALVE	56
6.4	UNLOAD/STOP PRESSURE SWITCH	58
6.5	BELT SET EXCHANGE AND TENSIONING	59
7	Problem solving.....	61
7.1	PROBLEM SOLVING.....	61
8	Technical data.....	65
8.1	READINGS ON CONTROL PANEL.....	65
8.2	SETTINGS FOR OVERLOAD RELAY AND FUSES.....	66
8.3	REFERENCE CONDITIONS AND LIMITATIONS.....	66
8.4	COMPRESSOR DATA.....	67
9	Instructions for use of air receiver.....	71
9.1	INSTRUCTIONS FOR USE.....	71
10	PED.....	72

10.1	PRESSURE EQUIPMENT DIRECTIVES.....	72
------	------------------------------------	----

1 Safety precautions

1.1 Safety icons

Explanation

	Danger for life
	Warning
	Important note

1.2 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.
---	---

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 authorised, trained, specialised 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 depressurise the compressor. In addition, the power isolating switch must be opened and locked.
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.

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 minimise 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. Pipework 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 pipework 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.

1.3 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.

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 authorised, trained, specialised 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 depressurise the compressor. In addition, the power isolating switch must be opened and locked.
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.

Precautions during operation

1. 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.
2. 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.
3. Never operate the machine when there is a possibility of taking in flammable or toxic fumes, vapours or particles.
4. Never operate the machine below or in excess of its limit ratings.
5. 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.
6. People staying in environments or rooms where the sound pressure level reaches or exceeds 90 dB(A) shall wear ear protectors.
7. 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
8. 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.

9. Do not remove any of, or tamper with, the sound-damping material.
10. 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.
---	--

1.4 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.
---	--

General precautions

1. The operator must employ safe working practices and observe all related local 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 authorised, trained, specialised 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 local 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 depressurise the compressor. In addition, the power isolating switch must be opened and locked.
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.

Precautions during maintenance or repair

1. Always wear safety glasses.
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.
22. Protect hands to avoid injury from hot machine parts, e.g. during draining of oil.



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

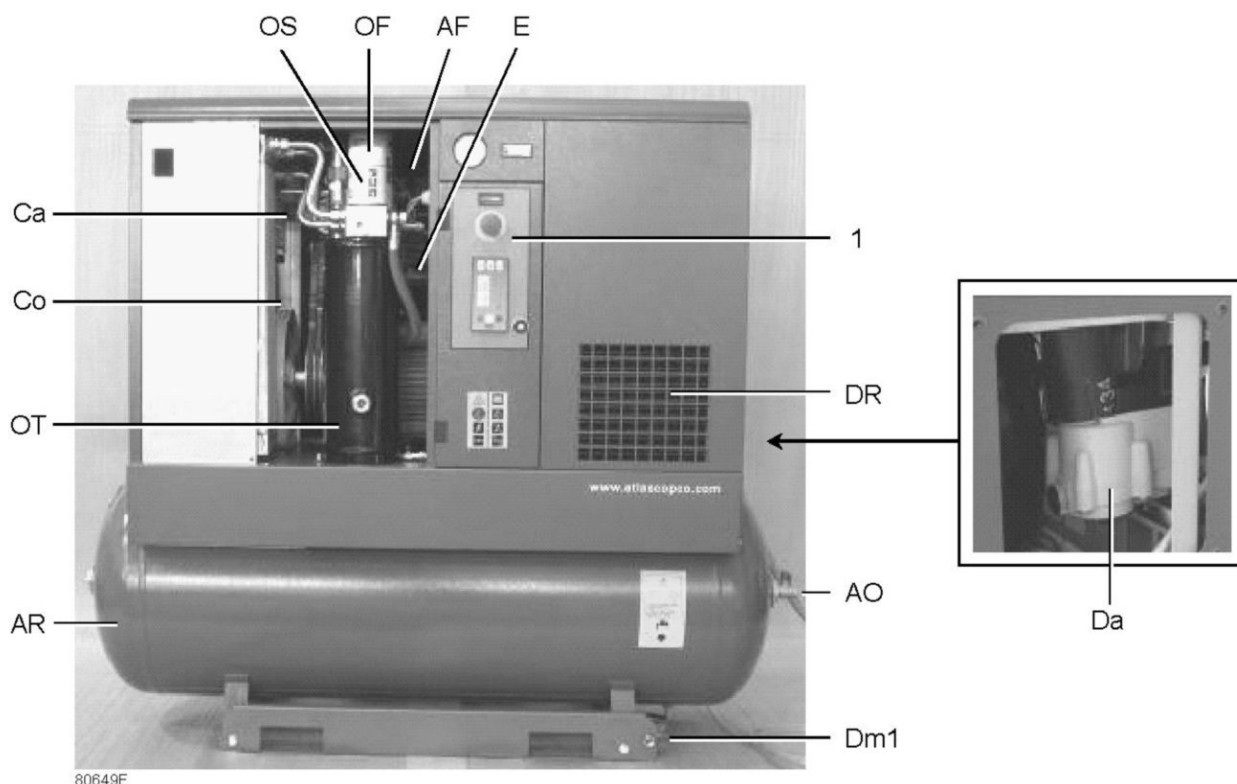
GX 7 and GX 11 are single-stage, oil-injected screw compressors.

The compressor is air-cooled and belt-driven by an electric motor. The compressor is enclosed in sound-insulated bodywork. An easy-to-operate control panel (1) 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.

Floor-mounted model

The compressor is installed directly on the floor.

Tank-mounted model



Front view, GX 7 and GX 11 Full-Feature

GX 7 and GX 11 are mounted on a large air receiver (AR) of 270 l (71.28 US gal / 59.40 Imp gal / 9.45 cu.ft) or an optional air receiver of 500 l (132 US gal / 110 Imp gal / 17.50 cu.ft).

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

GX Full-feature

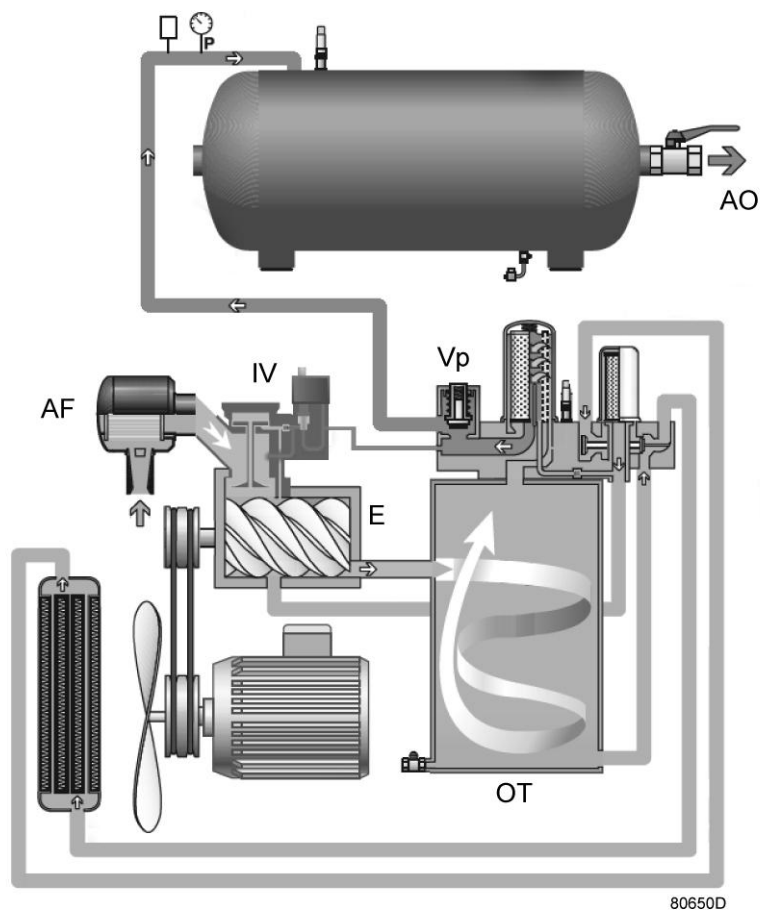
An air cooler (Ca) and an air dryer (DR) are integrated into the bodywork. A condensate drain system is provided including a valve for automatic draining during operation (Da) and a manual drain valve (Dm1).

GX Pack

The compressor is not fitted with an air cooler, air dryer and condensate drain system as standard.

2.2 Air flow

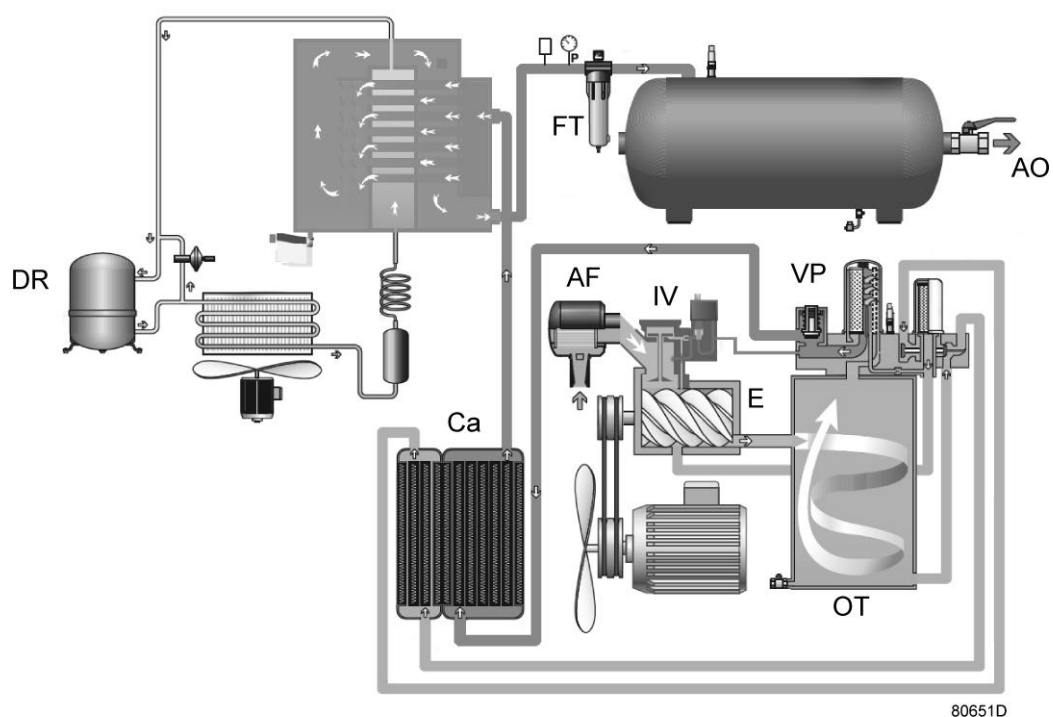
Flow diagram



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

Air flow (Pack version):

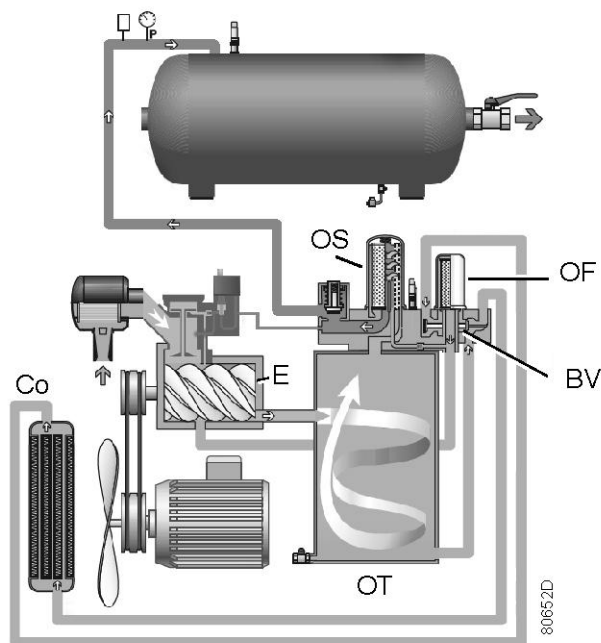
Air drawn through filter (AF) and open inlet valve (IV) into compressor element (E) is compressed. Compressed air and oil flow into oil separator/tank (OT). The air is discharged via minimum pressure valve (Vp) towards the air outlet (AO).



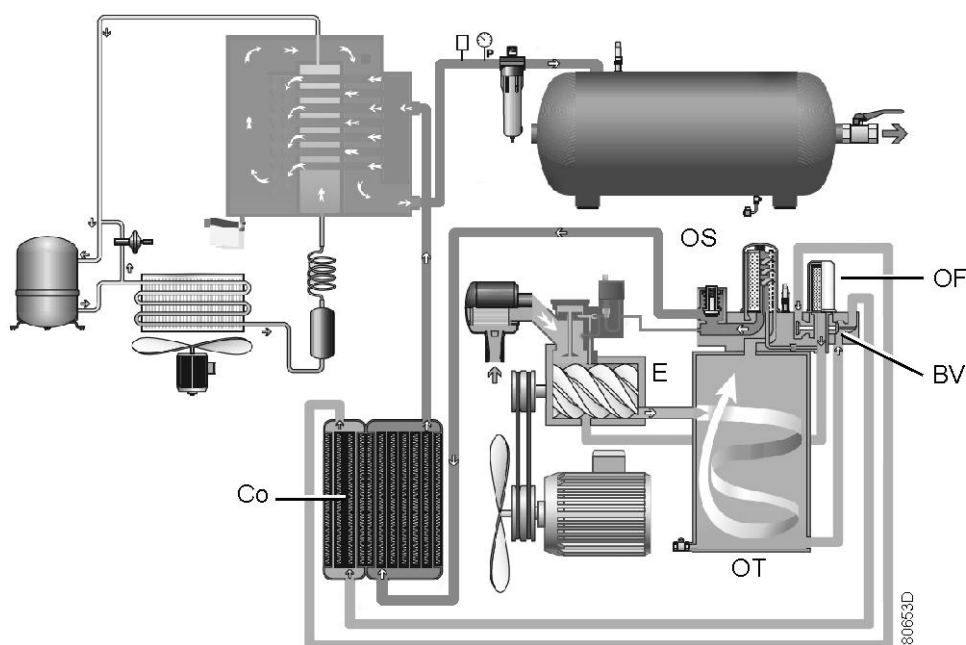
Air flow, GX 7 and GX 11 Full-Feature (tank-mounted)

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



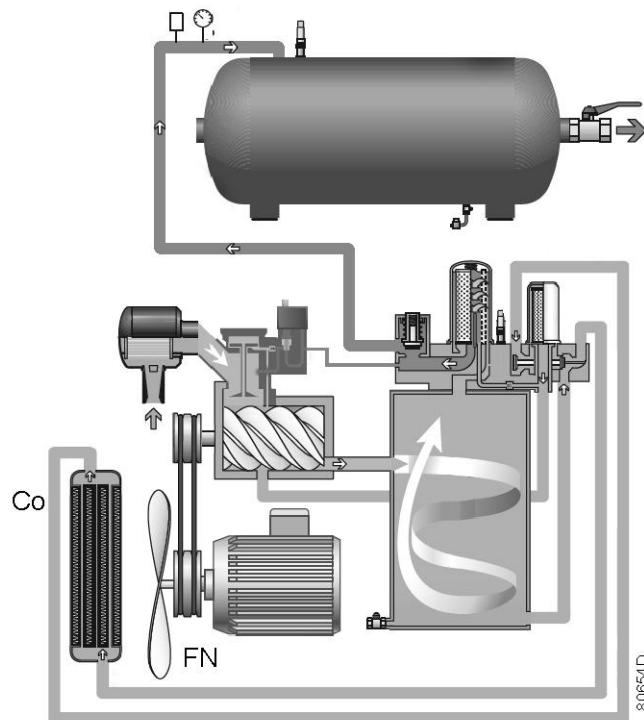
GX 7 and GX 11 Full-Feature

Air pressure forces the oil from oil separator/tank (OT) through oil cooler (Co) and filter (OF) to compressor element (E) and the lubrication points. In oil separator/tank (OT), most of the oil is removed centrifugally; the rest is removed by 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

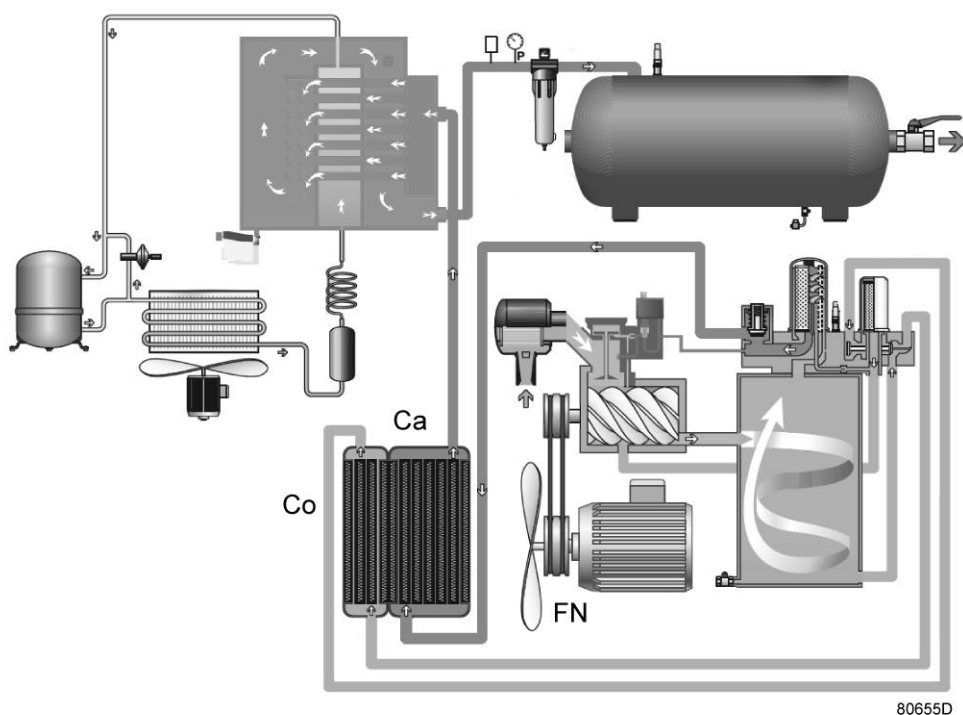
Cooling system



GX 7 and GX 11 Pack

The cooling system of the Pack version comprises oil cooler (Co). A fan (FN), mounted directly onto the motor shaft, generates the cooling air in order to cool the oil.

An air cooler (Ca) is available as option.

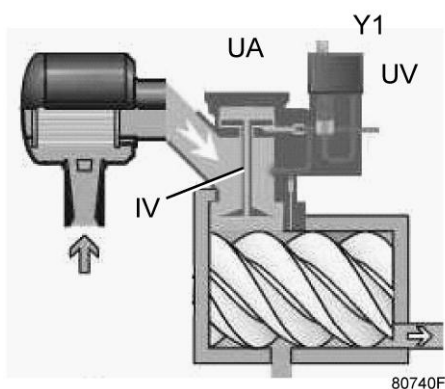


GX 7 and GX 11 Full-Feature

The cooling system of the Full Feature version comprises oil cooler (Co) and air cooler (Ca). A fan (FN), mounted directly onto the motor shaft, generates the cooling air in order to cool the oil and the compressed air.

2.5 Regulating system

Main components



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 [Protection of 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 maximum limit, the solenoid valve is energised allowing control air to flow to the unloader: the inlet valve opens completely and the unloading valve closes completely. The compressor will run fully loaded (100% output).

Unloading

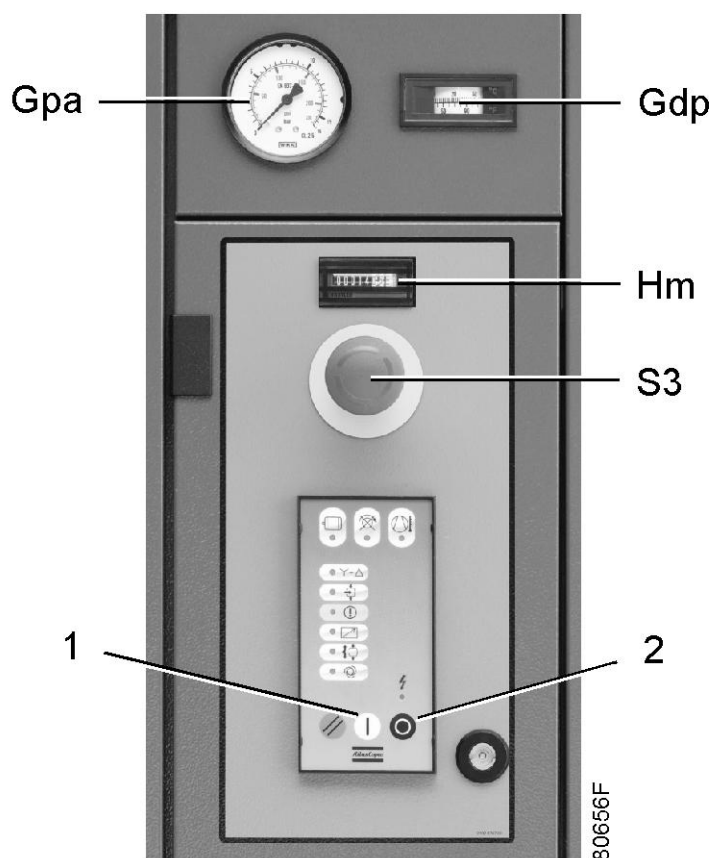
If the working pressure reaches the maximum limit, the solenoid valve is de-energised venting the control air: the inlet valve closes completely and the unloading valve opens completely. The compressor will run fully unloaded (0% output).

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:

- When 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 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.
--	---

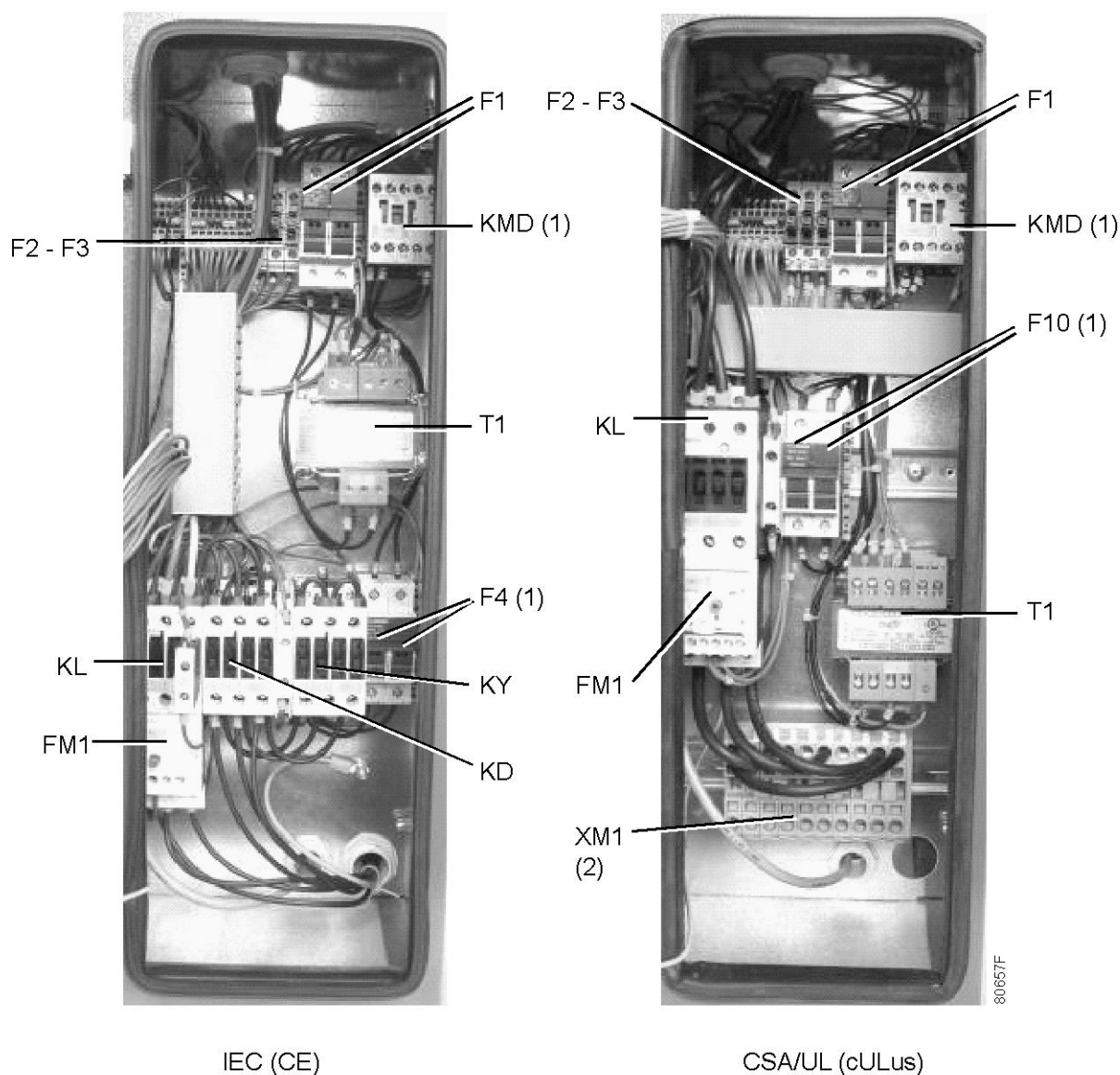
Operation of the central control unit

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.
---	---

2.7 Protection of compressor



IEC (CE)

CSA/UL (cULus)

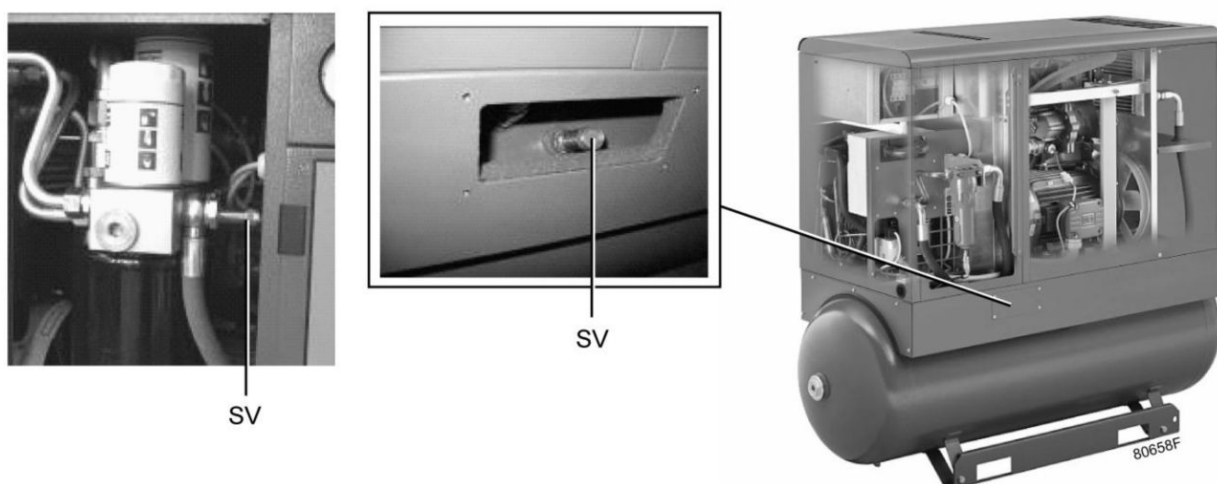
Electric cubicle

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

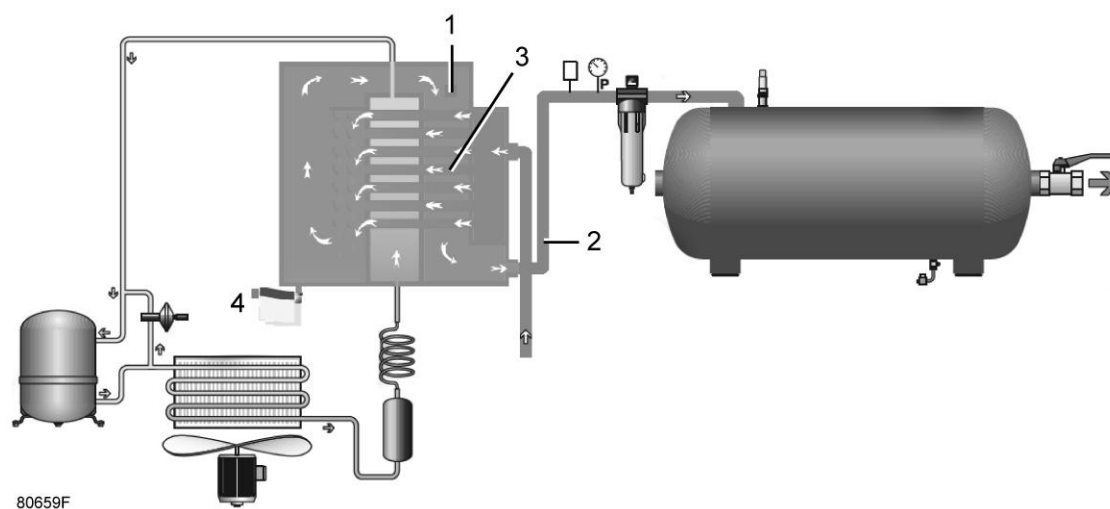
Ref.	Designation
KL	Line contactor
KY	Star contactor
KD	Delta contactor
T1	Transformer
KMD	Dryer relay (only on FF versions - see (1) on figure)
XM1	Connection terminals (only available on multi-voltage versions - see (2) on figure)



Safety valve on the compressor and on the vessel

Reference	Designation	Function
TSH See also the Electrical diagrams section	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.

2.8 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

Important



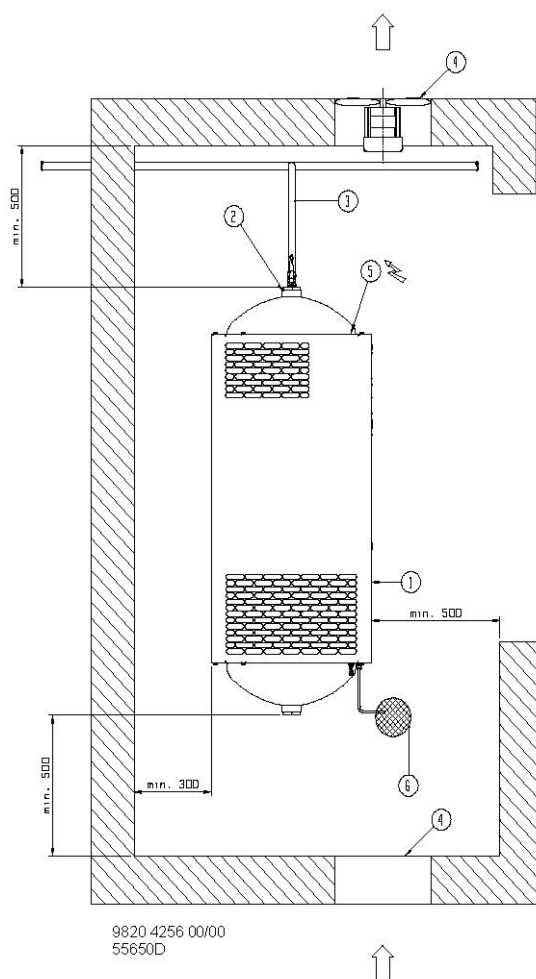
80660F

Transport by a pallet truck



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

Proposal



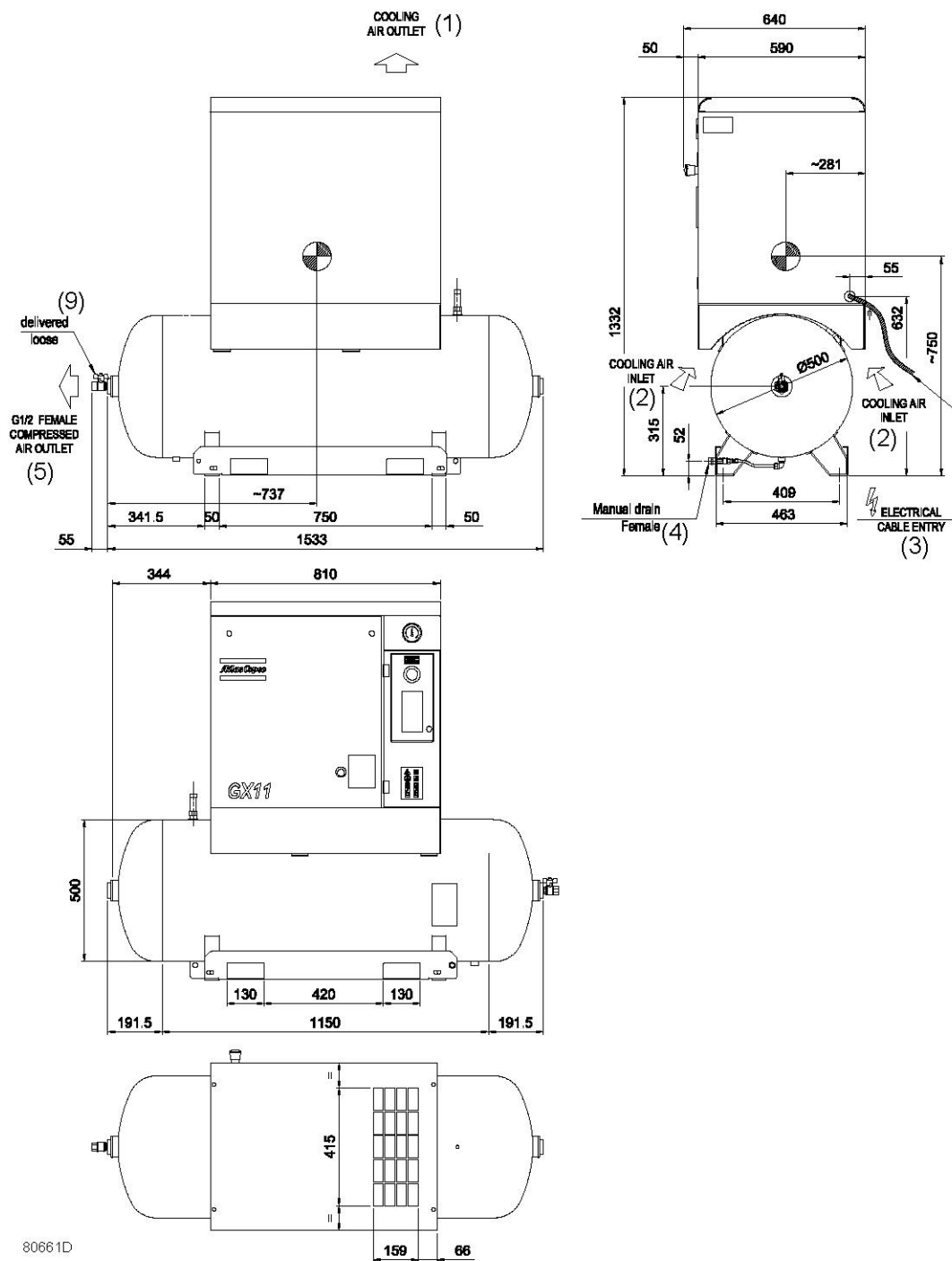
Installation proposal, GX 7 and GX 11

	Action
1	Install the rubber pads (delivered loose with the compressor) to the compressor supports. 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 500 mm (19.5 in).
2	Position of the compressed air outlet valve. Close the valve. Connect the air net to the valve.
3	The pressure drop over the delivery pipe can be calculated from the following formula: $dp = (L \times 450 \times Q_c^{1.85}) / (d^5 \times P)$ • dp=pressure drop (recommended maximum = 0.1 bar / 1.5 psi) • L=length of delivery pipe in m • d=inner diameter of the delivery pipe in mm • P=absolute pressure at the compressor outlet in bar(a) • Q_c=free air delivery of the compressor in l/s

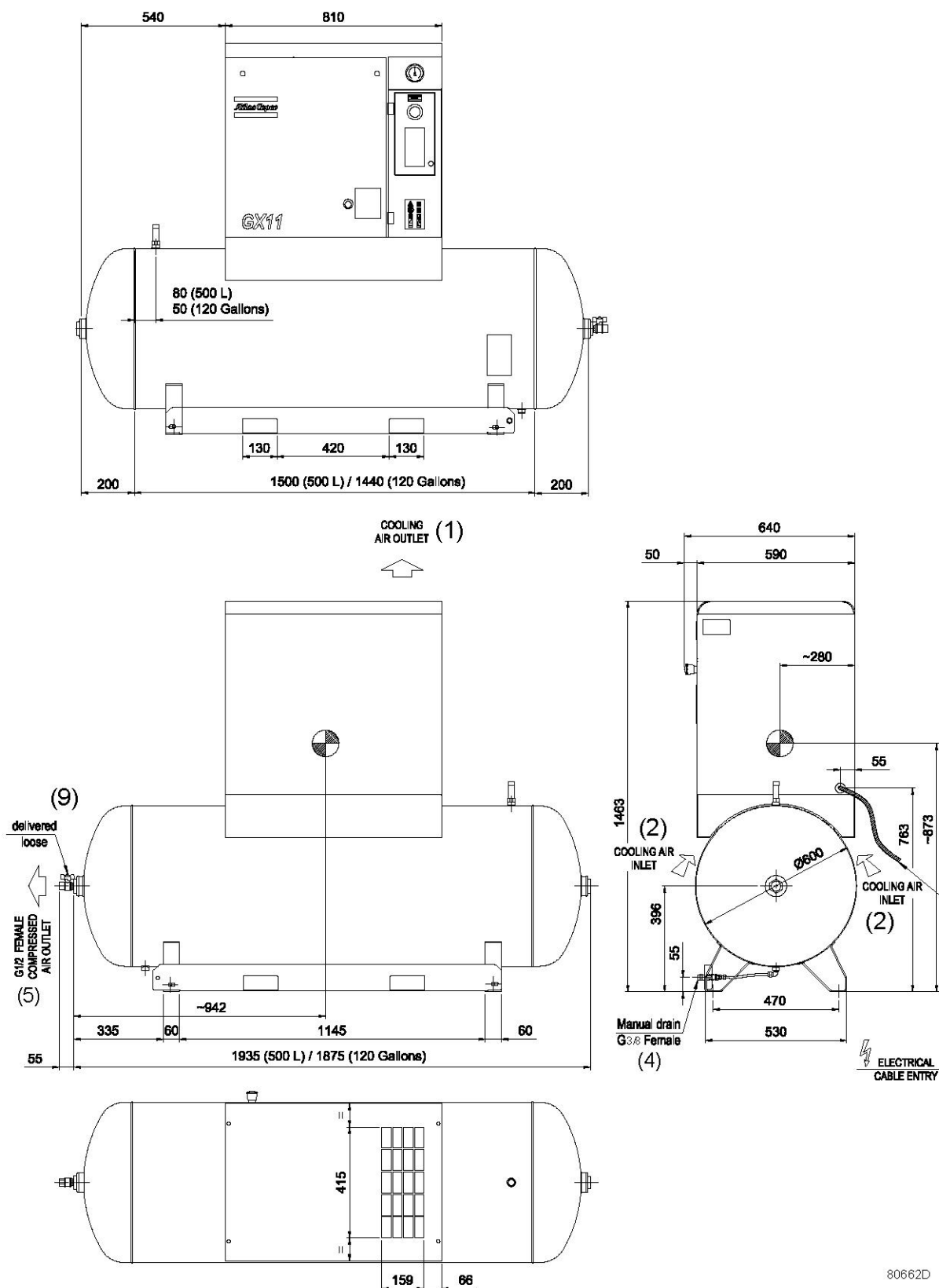
	Action
4	Ventilation: the inlet grids and ventilation fan should be installed in such a way that any recirculation of cooling air to the compressor or dryer is avoided. The air velocity to the grids must be limited to 5 m/s (200 in/s). The required ventilation capacity to limit the temperature of the compressor room can be calculated from the following formula: $Q_v = 0.92 N / dT$ • Q_v=required ventilation capacity in m³/s • N=nominal motor power of compressor in kW • dT=temperature increase in compressor room
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

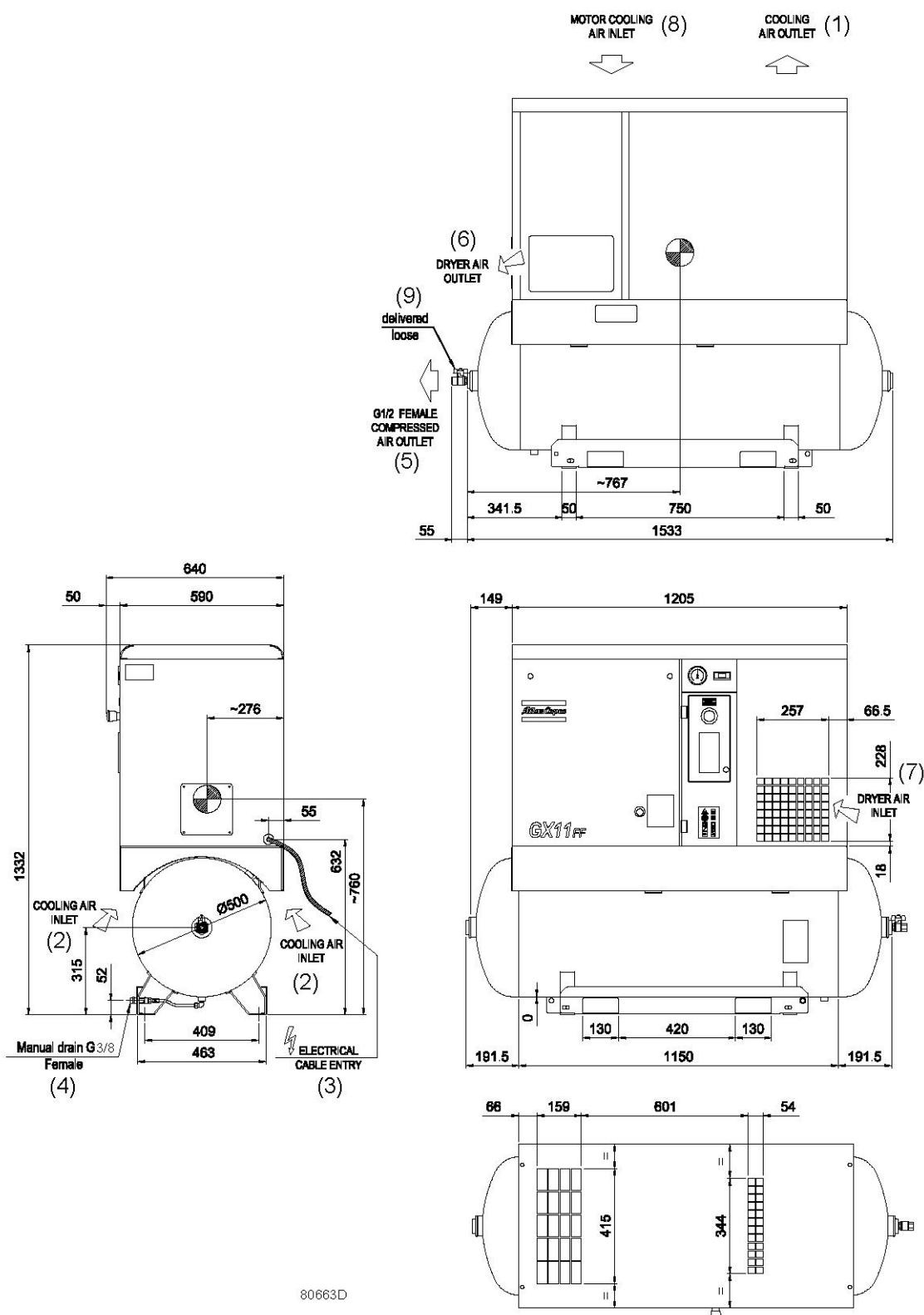
Dimension drawings, GX 7 and GX 11



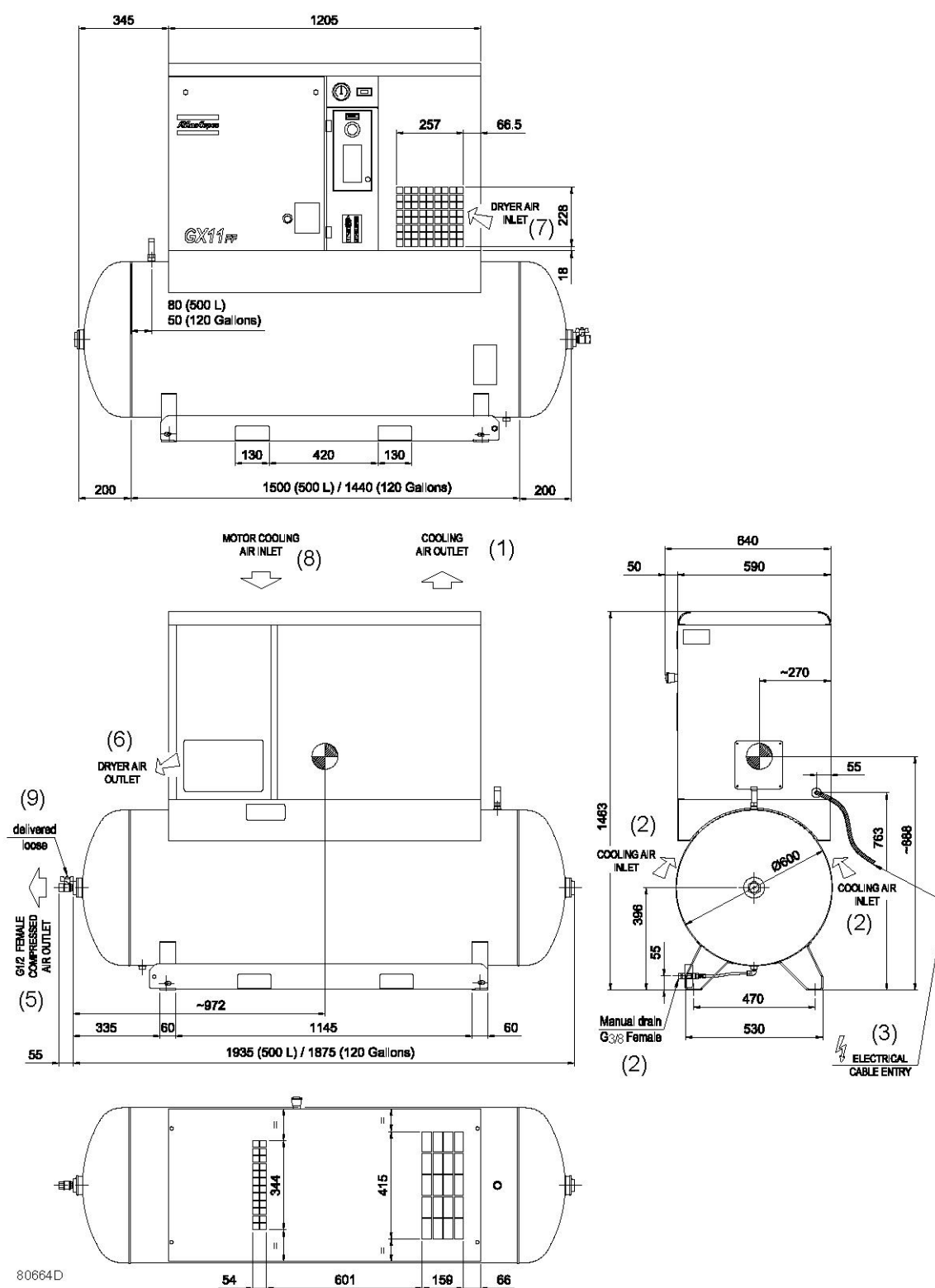
GX 7 and GX 11 Tank-mounted (270 l), Pack



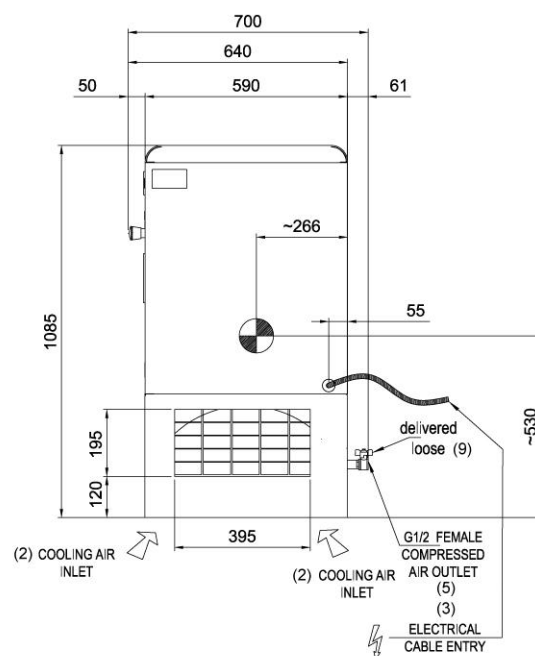
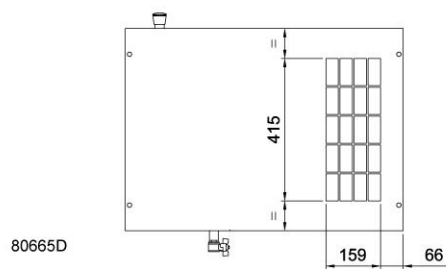
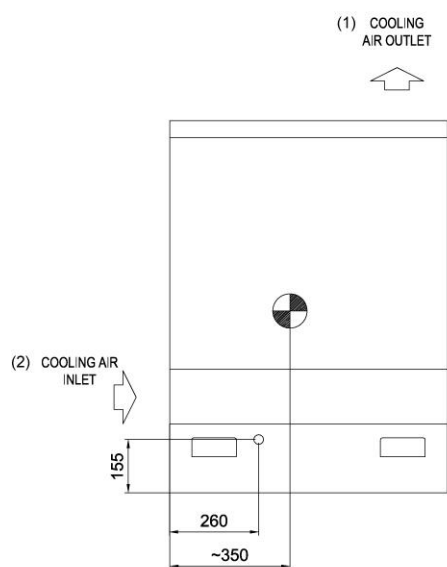
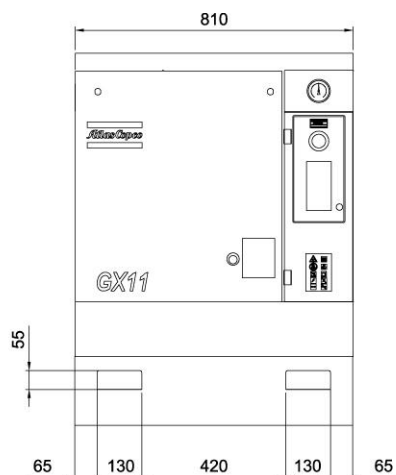
GX 7 and GX 11 Tank-mounted (500 l, optional), Pack



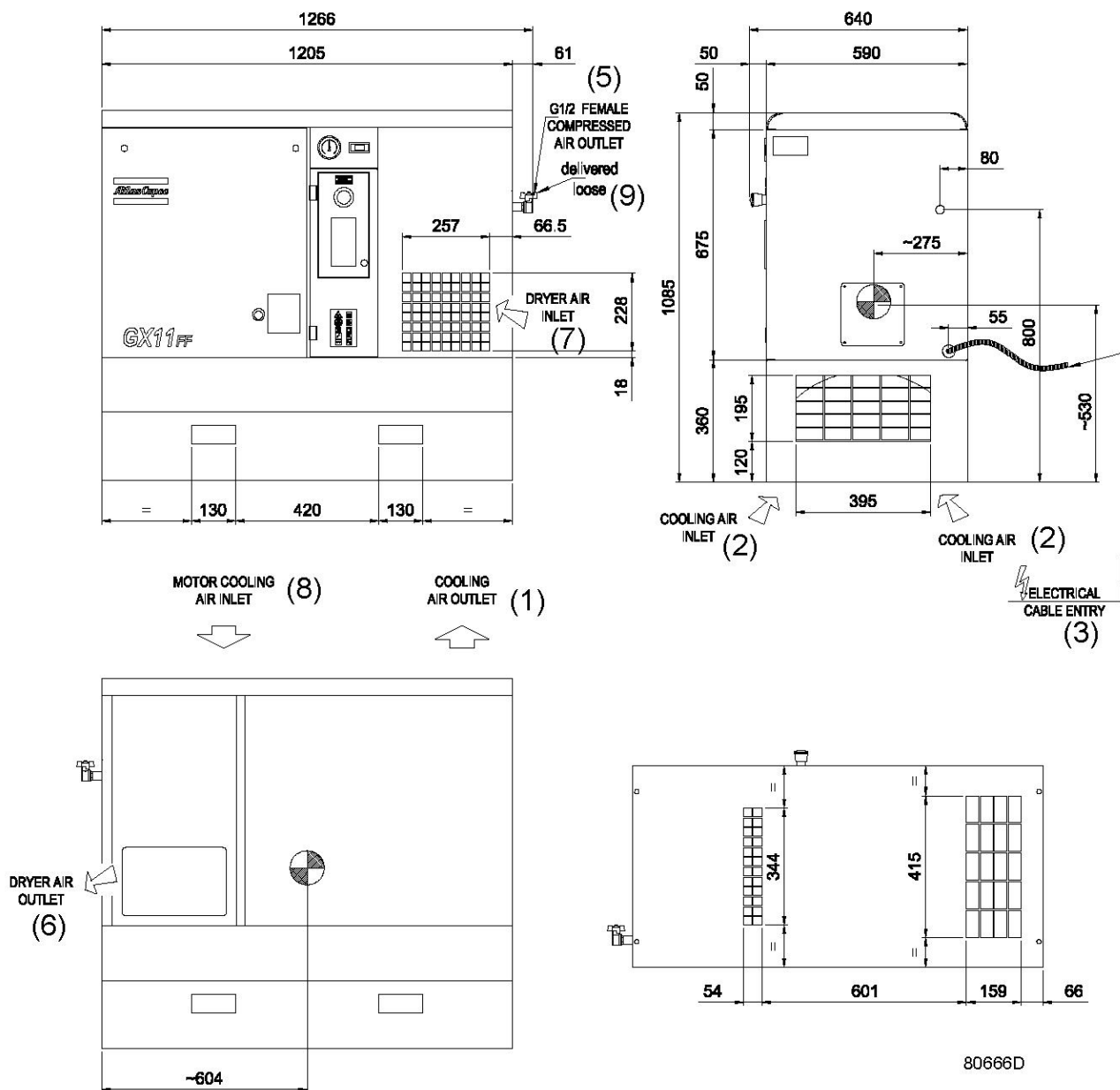
GX 7 and GX 11 Tank-mounted (270 l), Full-Feature



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 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.

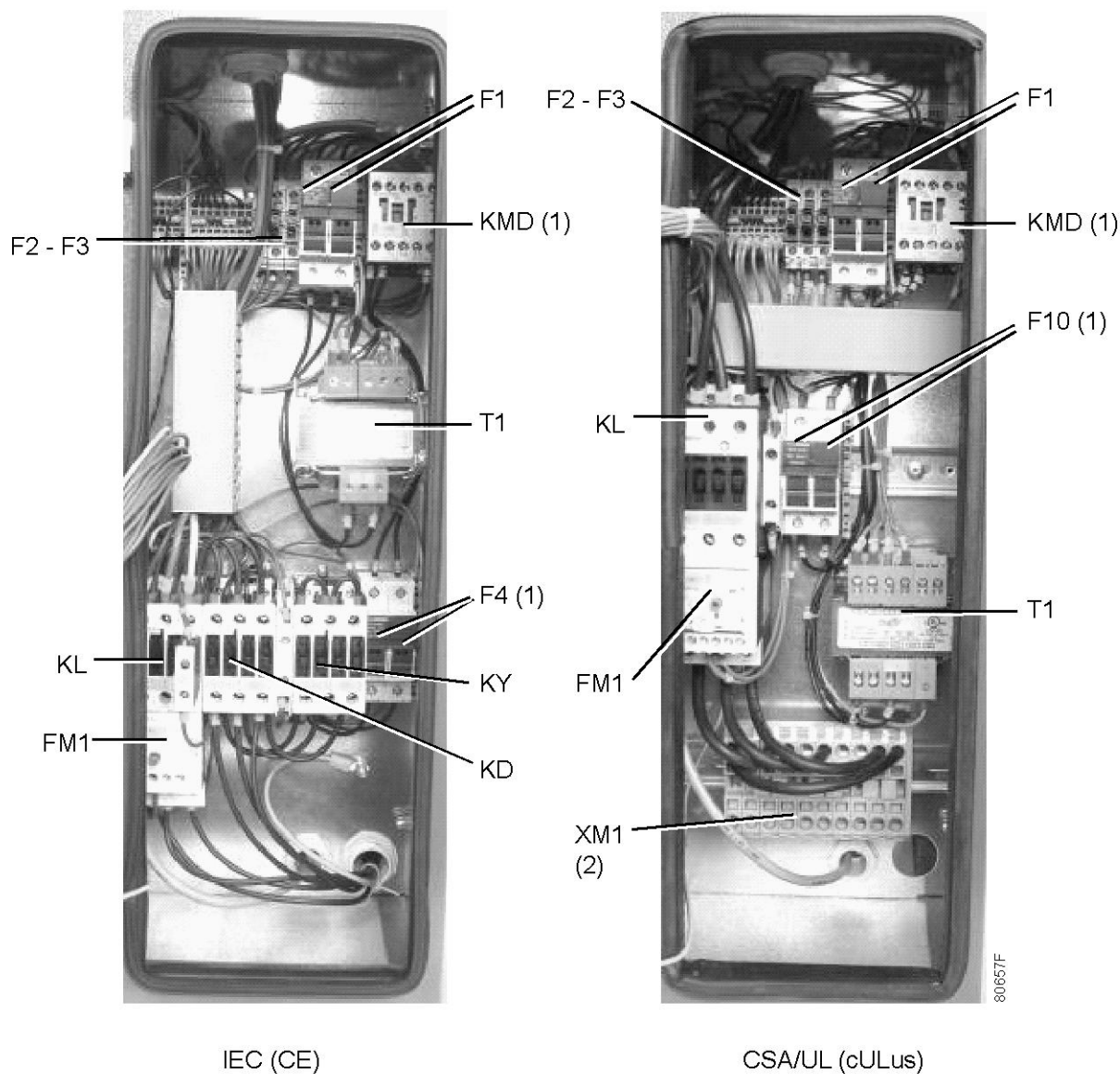
		GX 7	GX 11
Frequency (Hz)	Voltage (V)	Cable size	Cable size
IEC		(mm ²)	(mm ²)
50	200	16 (6 XLPE or EPR)	25 (16 XLPE or EPR)
50	230	10	16 (10 XLPE or EPR)
50	400	4	6
50	500	4	6
60	440/460	4	6
60	380	4	6
CSA/UL		AWG	AWG
60	200	6	6
60	208-230 / 460	8-8 / 10	6-6 / 8
60	575	12	10

3.4 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:

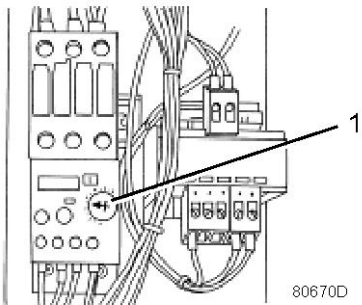


80669F

1. Required 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.

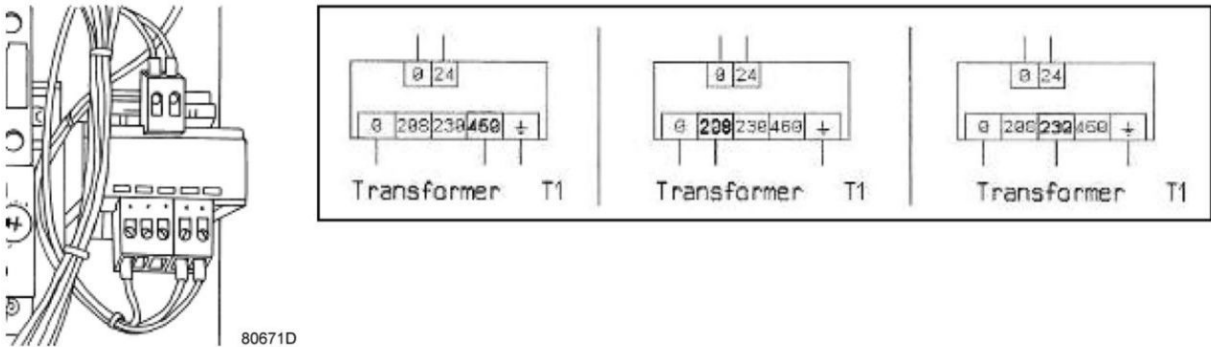
To adjust the motor overload (FM1) setting, simply rotate the adjustment screw (1) on the front of the overload relay to the required setting (see table below).



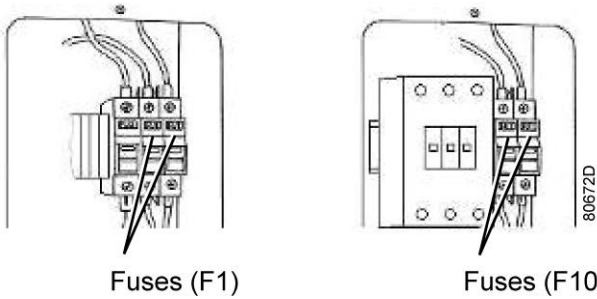
Adjustment screw of the motor overload

motor overload (FM1) settings	7,5 kW 10 hp	11 kW 15 hp
208V	36.3	48
230V (standard factory setting)	34.4	45
460V	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 an. Use the 2 A fuses for 208-230 V and the 1 A fuses for 460 V, supplied with the compressor.

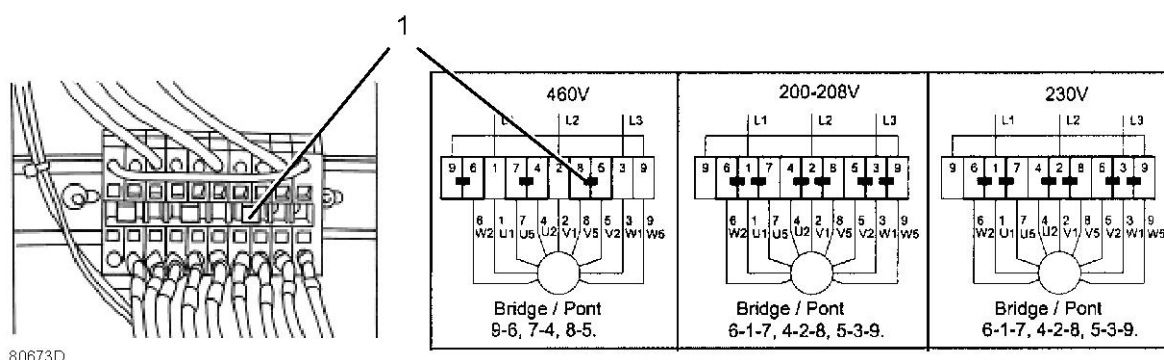


Fuses	fuse rating V	208 V	230 V	460 V	Class
F1	600 V AC	2 A	2 A	1 A	UL class JDYX or JDYX2 10,3 x 38mm

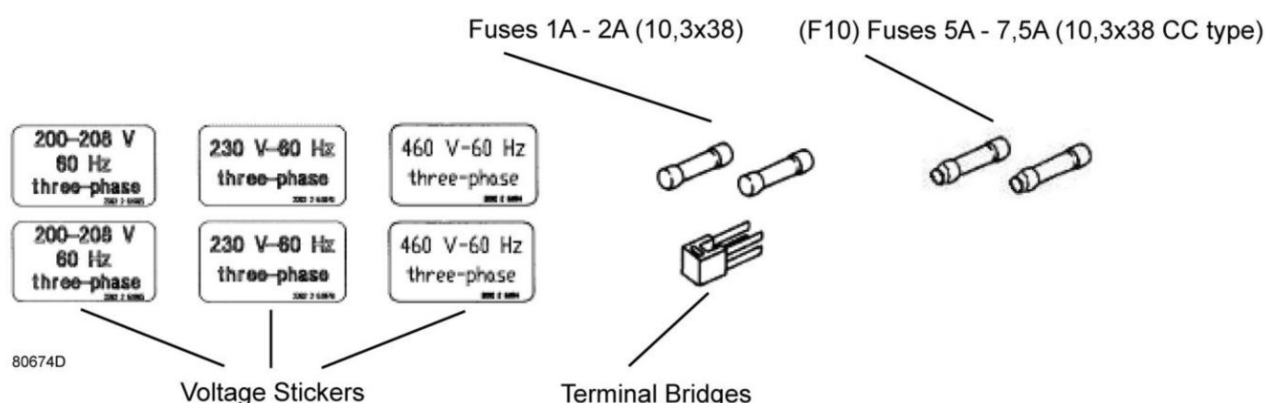
Fuses	fuse rating V	208 V	230 V	460 V	Class
F1	600 V AC	2 A	2 A	1 A	UL class JDYX or JDYX2 10,3 x 38mm
F2	250 V AC	3 A	3 A	3 A	UL class JDYX or JDYX2 5 x 20 mm
F3	250 V AC	1 A	1 A	1 A	UL class JDYX or JDYX2 5 x 20 mm
F3	250 V AC	1 A	1 A	1 A	UL class JDYX or JDYX2 5 x 20 mm
F10	600 V AC	7,5 A	7,5 A	5 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 460V) 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.



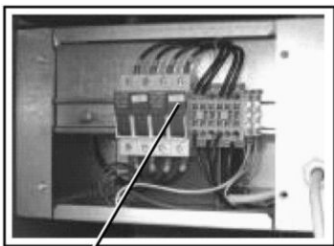
Locate the yellow voltage labels provided with the compressor. Replace the existing label with the appropriate voltage label (200-208 V, 230V or 460V).



Voltage labels for GX 7 and GX 11

2. 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 to be used for a supply voltage of 208 - 230 V.



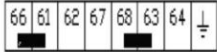
(F11) Fuse 7,5A (10,3x38 CC type)



STANDARD SETTING

208-230V SETTING

Bridges between terminals 66-61 and 68-63



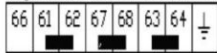
TO THE DRYER

Don't mount fuse F11



460V SETTING

Bridges between terminals 61-62, 63-64 and 67-68.



TO THE DRYER

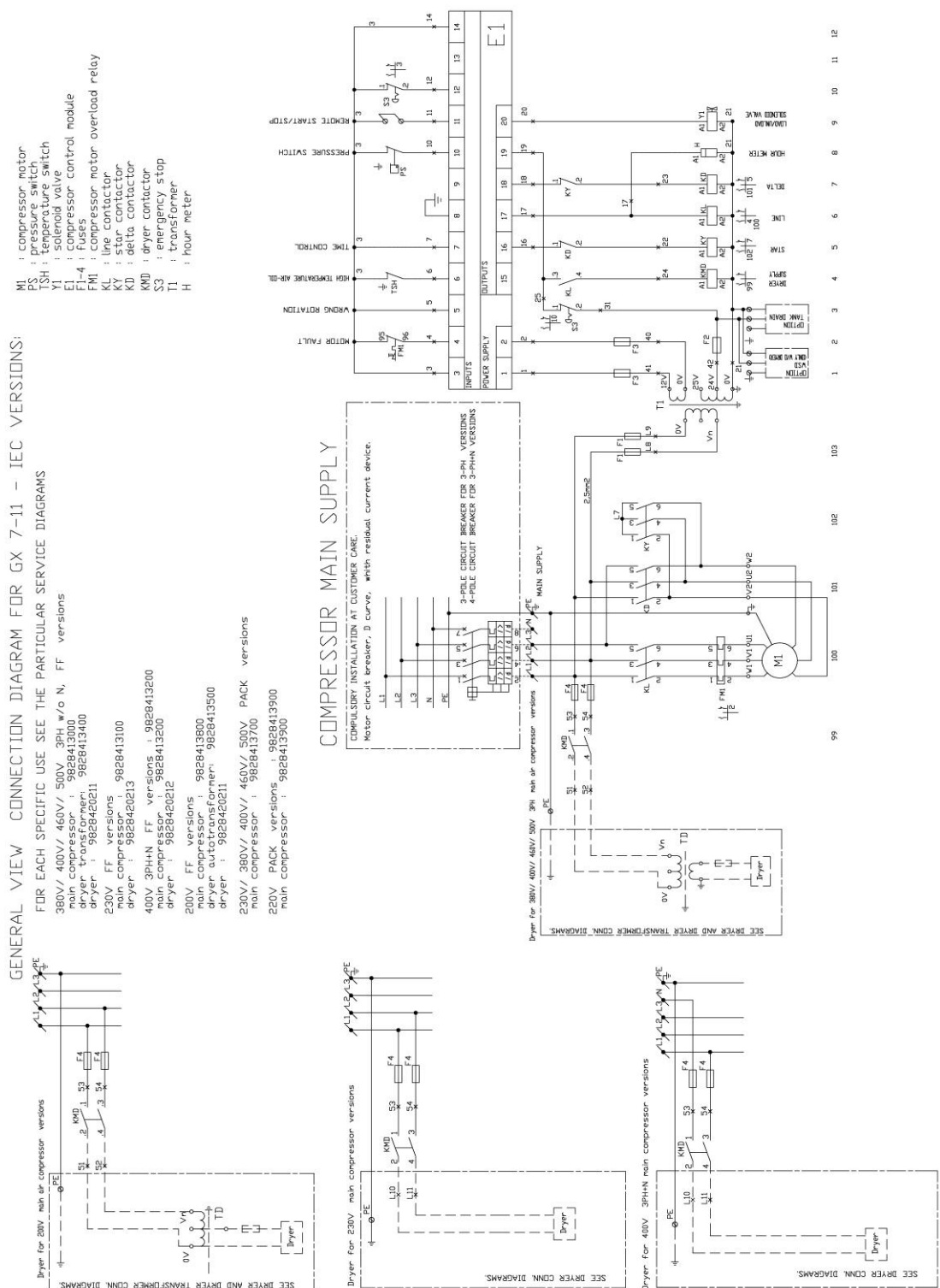
Mount fuse F11



80675F

Fuses	V (AC/DC)	208V	230V	460V	Class
F11	600 V AC	/	/	7,5 A	UL guide JDDZ class CC type FNQ-R 10,3 x 38 mm

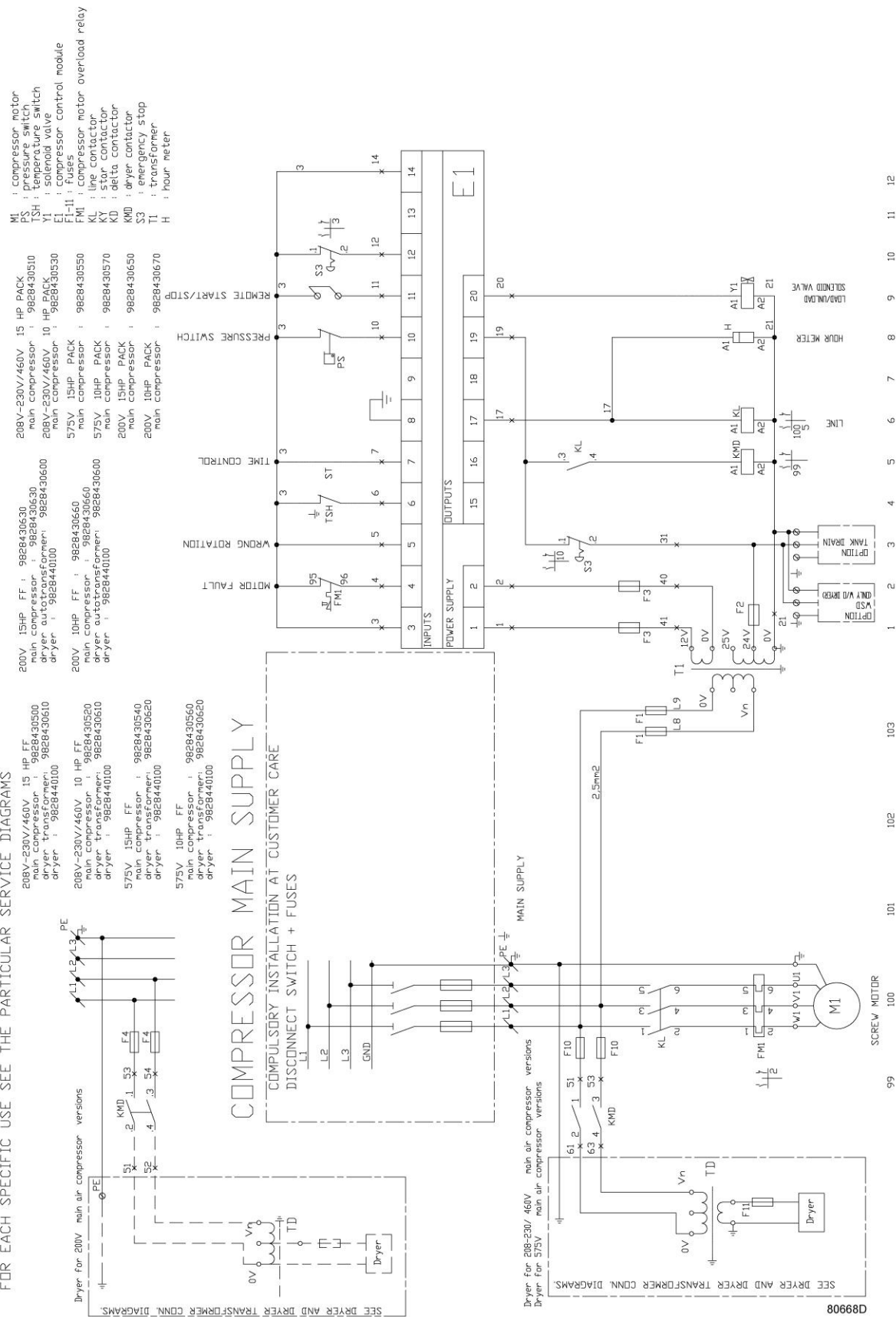
3.5 Electrical diagrams



80667D

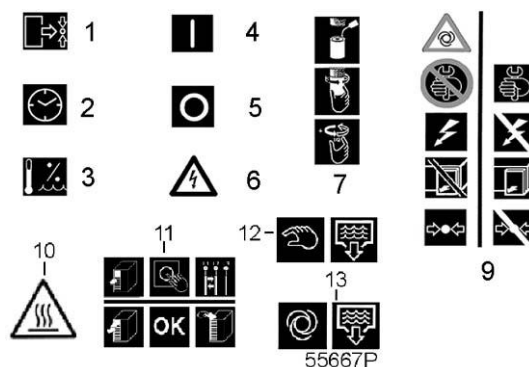
Electrical diagram, GX 7 and GX 11 IEC

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

3.6 Pictographs



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
11	Lock all doors of the bodywork and push the start button. • 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

4 Operating instructions

4.1 Initial start-up

Safety

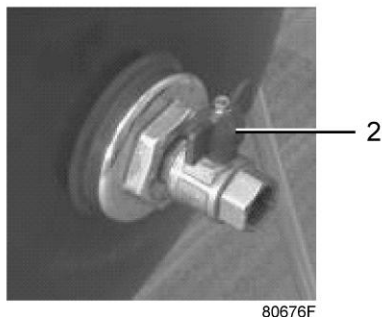


The operator must apply all relevant [Safety precautions](#).

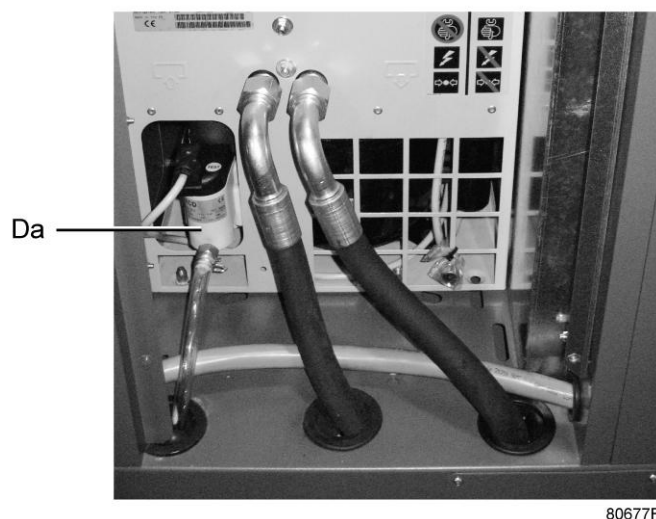
Moving

To safely move a Tank-mounted model, see [Installation](#).

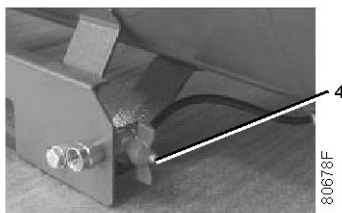
General preparation



Air outlet valve



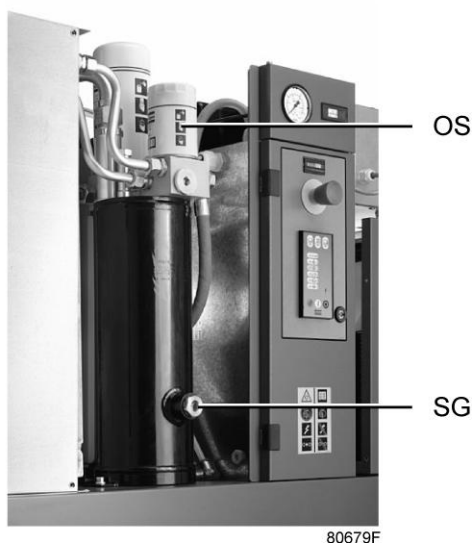
Condensate drain, GX 7 up to GX 11



Condensate drain valve, GX 7 and GX 11

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.

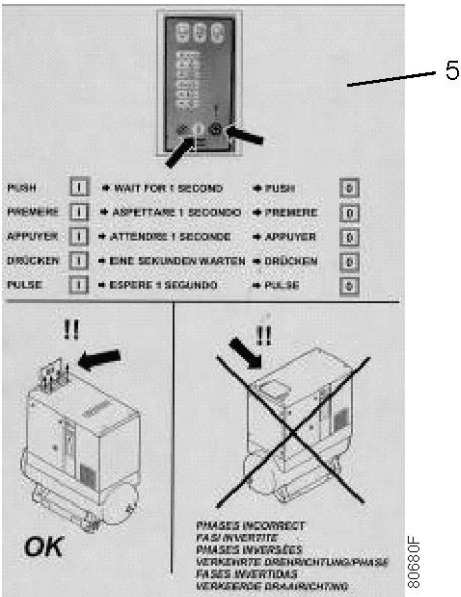
Oil system



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.

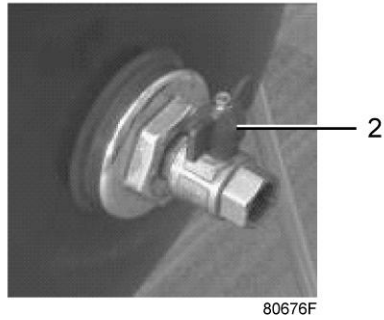
Start-up



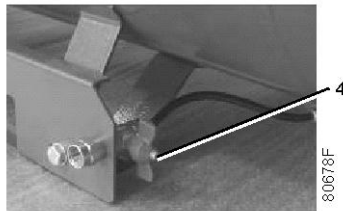
Label on the top

Step	Action
1	Affix sheet (5) explaining the procedure for checking the motor rotation direction to the cooling air outlet of the compressor (consult Dimension drawings). Switch on the voltage. Start the compressor and stop it immediately. 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). If the rotation direction is incorrect, switch off the voltage, open the isolating switch and reverse two incoming electric lines.
2	Start and run the compressor for a few minutes. Check that the compressor operates normally.

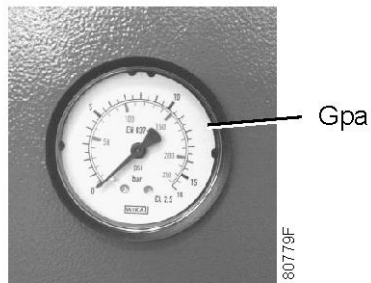
4.2 Starting



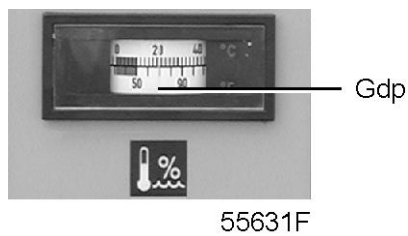
Air outlet valve



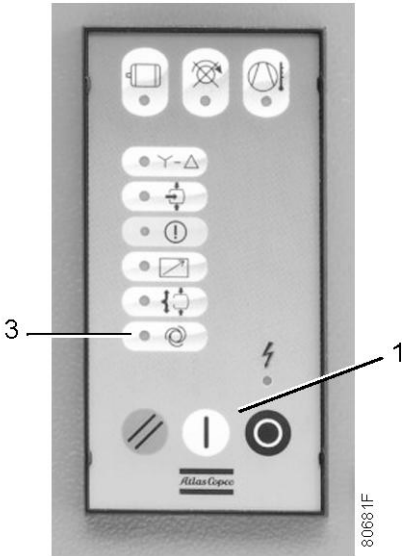
Condensate drain valve, GX 7 and GX 11



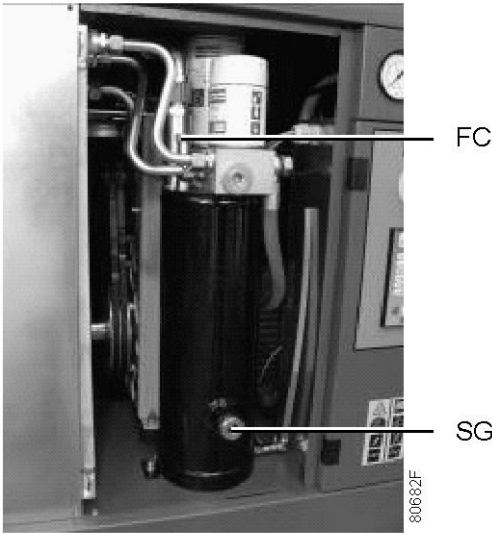
Pressure gauge



Dew-point temperature gauge



Control panel GX 7 up to GX 11



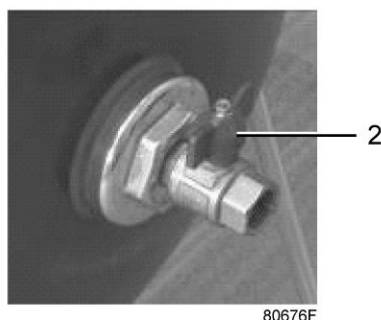
Position of oil sight glass and filler plug on GX 7 and GX 11

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.

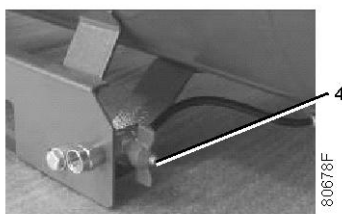
Step	Action
	The maximum number of motor starts must be limited to 20 per hour. It is strongly recommended to operate the compressor with a load factor of more than 10% to avoid condensate in the oil.
5	Regularly check the oil level. 10 to 15 minutes after stopping, the sight-glass (SG) should be between 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 running.

	During normal operation, the oil level should be at approximately half of the sightglass. 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.
---	---

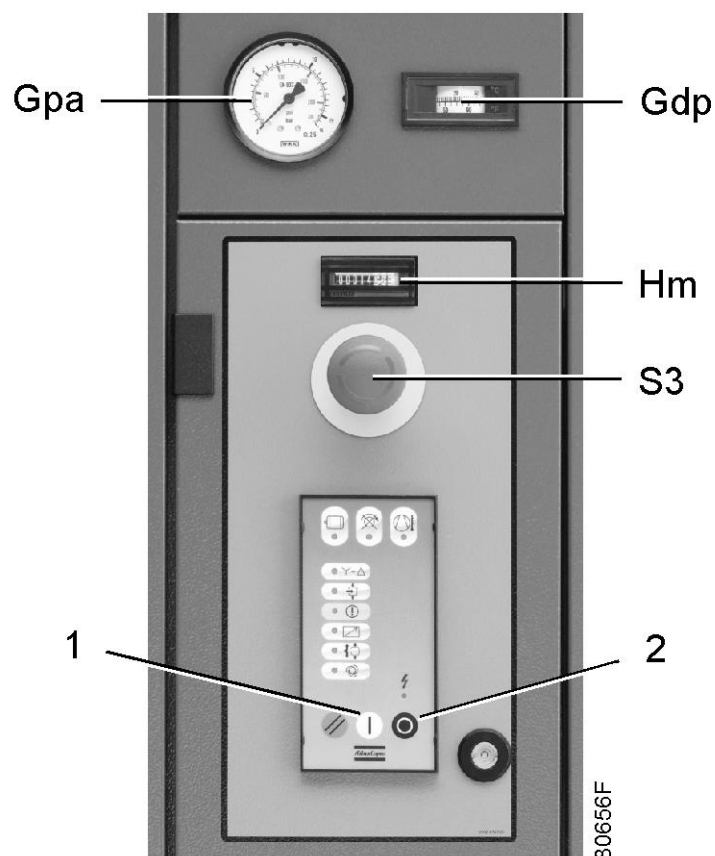
4.3 Stopping



Air outlet valve



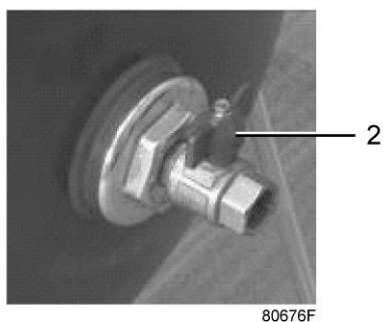
Condensate drain valve, Tank-mounted GX 7 and GX 11



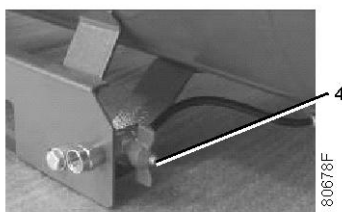
Control panel GX 7 up to GX 11

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 the Control panel section. 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 PDX filter (if installed) remains under pressure. If maintenance or repair work is necessary, consult the Problem solving section for all relevant safety precautions.

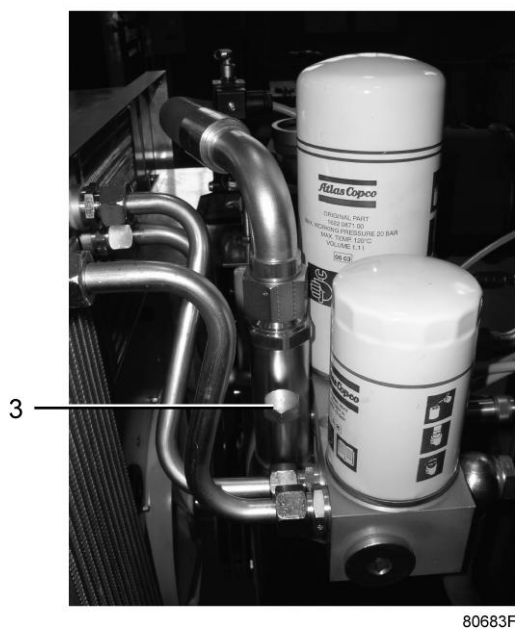
4.4 Taking out of operation



Air outlet valve



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



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).
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 air outlet valve 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 [Problem solving](#).

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	Running hours	Operation
Daily	--	Check the oil level before starting. Drain the condensate after stopping. For tank-mounted units, also drain the air vessel by means of the manual drain valve (4), see Stopping .
3-Monthly	--	Check for possible leaks.
"	1000	Inspect the oil cooler, clean if necessary.
"	1000	For Full-Feature versions: inspect the condenser of the dryer; clean if necessary.
"	1000	Inspect the air filter.
"	--	Inspect the condensate trap, clean the filter DA (for location of DA, see Introduction).
"	--	For compressors with PDX filter: check the service indicator, replace the filter if necessary.
--	1000	Check the tension and the condition of the belts. Adjust, if necessary.

Period	Running hours	Operation
Yearly	--	Have the safety valve tested.
"	--	Have the operation of sensors, electrical interlockings and components checked.
"	--	Have the temperature shut-down switch tested.
"	4000	Replace the air filter.
"	4000	Replace the oil filter.
"	4000	Replace the oil separator.
"	4000	For compressors with PDX filter, replace the filter.
"	4000	If Atlas Copco Roto-Inject Fluid is used, change the oil.
"	8000	If Atlas Copco Roto-Xtend Duty Fluid is used (indicated by a specific label on the oil vessel), change the oil.
"	--	Clean the compressor.

5.2 Drive motor

Description

The motor bearings are greased for life.

5.3 Oil specifications



Never mix oils of different brands or types.

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.

Atlas Copco Roto-Inject Fluid

Atlas Copco Roto-Inject Fluid is special oil for oil-injected scroll and screw compressors which 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)(see [Service kits](#)).

Atlas Copco Roto-Xtend Duty Fluid

Atlas Copco Roto-Xtend Duty Fluid is a high-quality synthetic lubricant for oil-injected scroll and screw compressors which keeps the compressor in excellent condition. Roto-Xtend Duty Fluid can be used for compressors operating at ambient temperatures between 0°C (32°F) and 40°C (104°F)(see [Service kits](#)).

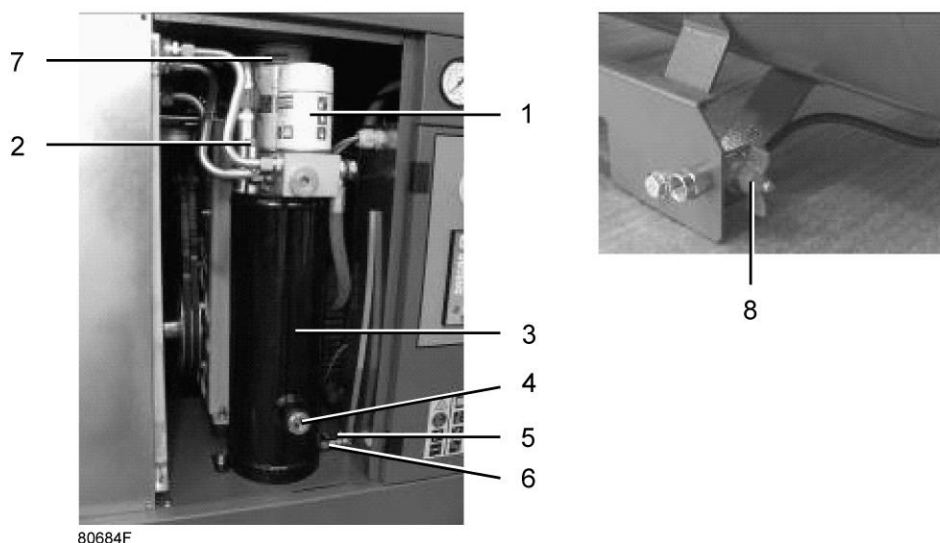
5.4 Oil, filter and separator change

Important



Never mix oils of different brands or types.
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

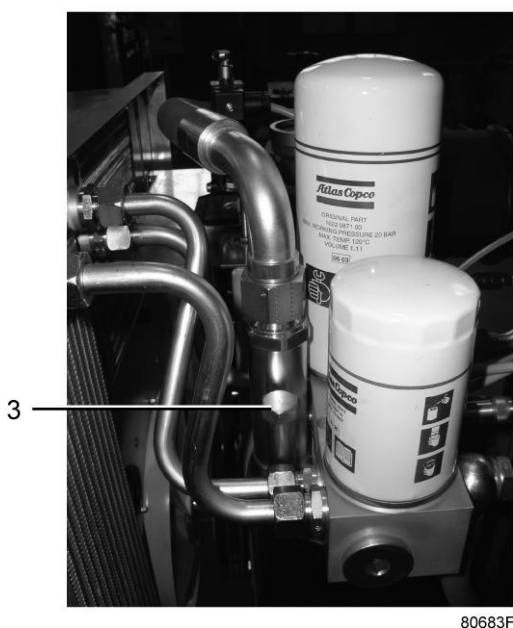


Step	Action
1	Run the compressor until warm. Stop the compressor, close the air outlet valve and switch off the voltage. See Stopping .
2	Depressurise the compressor by unscrewing filler plug (2) one turn to permit any pressure in the system to escape. Remove the plug after the system is depressurised.
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.

Step	Action
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.

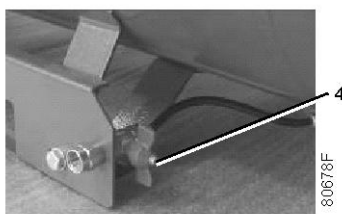
5.5 PDX/DDX filter change

Oil filler plug



GX 7 and GX 11

Drain valve, air receiver



GX 7 and GX 11

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 Stopping. If the compressor is fitted onto an air receiver, depressurise the air receiver by opening condensate drain valve (4). On floor-moured units, depressurise the filter by loosening its drain valve.
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 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

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.

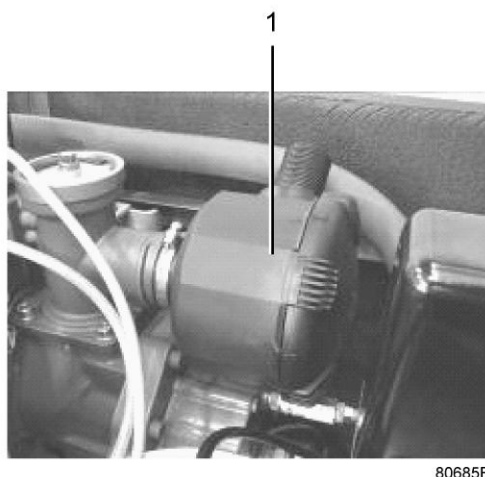
Also a full range of extensively tested lubricants, suitable for your specific needs is available to keep the compressor in excellent condition.

Consult the Spare Parts List for part numbers.

6 Adjustments and servicing procedures

6.1 Air filter

Changing the air filter

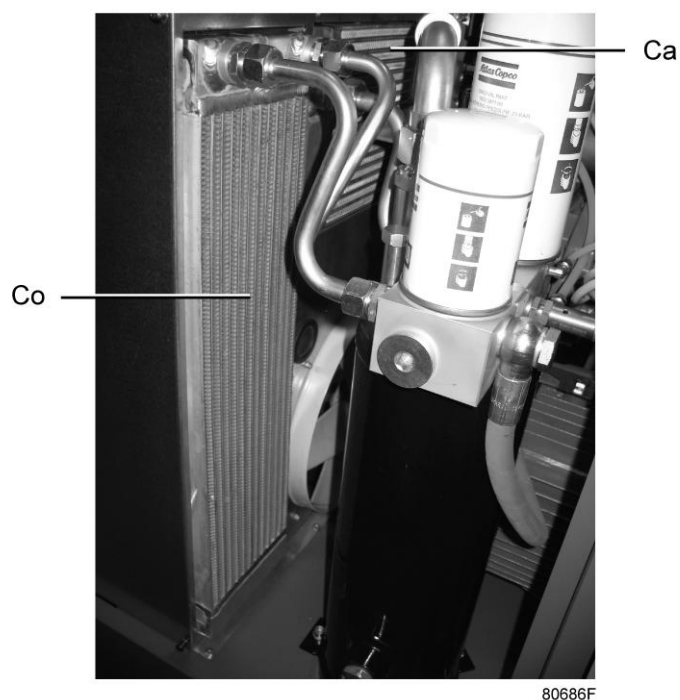


Position of air filter for GX 7 and GX 11

Air filter change on GX 7 up to GX 11

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.

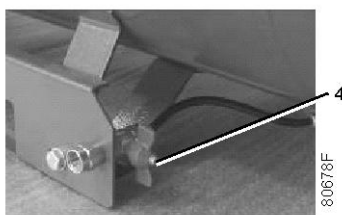
6.2 Coolers



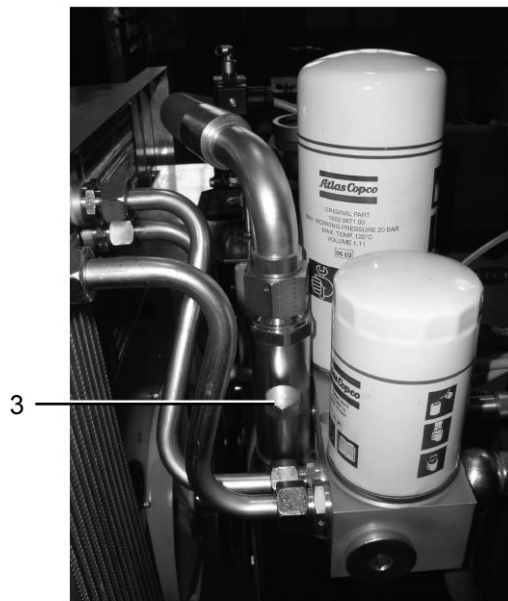
GX 7 and GX 11

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



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



80683F

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 [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

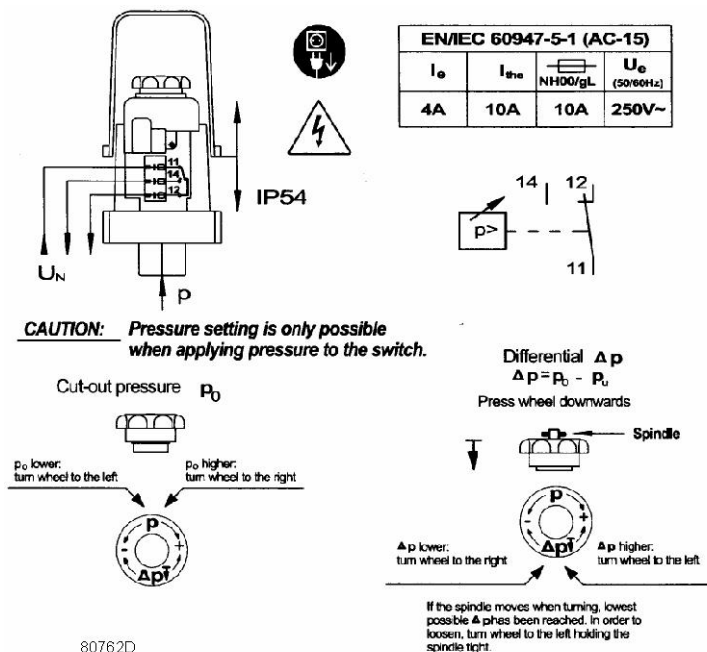
The switch allows the operator to select the unloading/stopping pressure (see [Regulating system](#)).



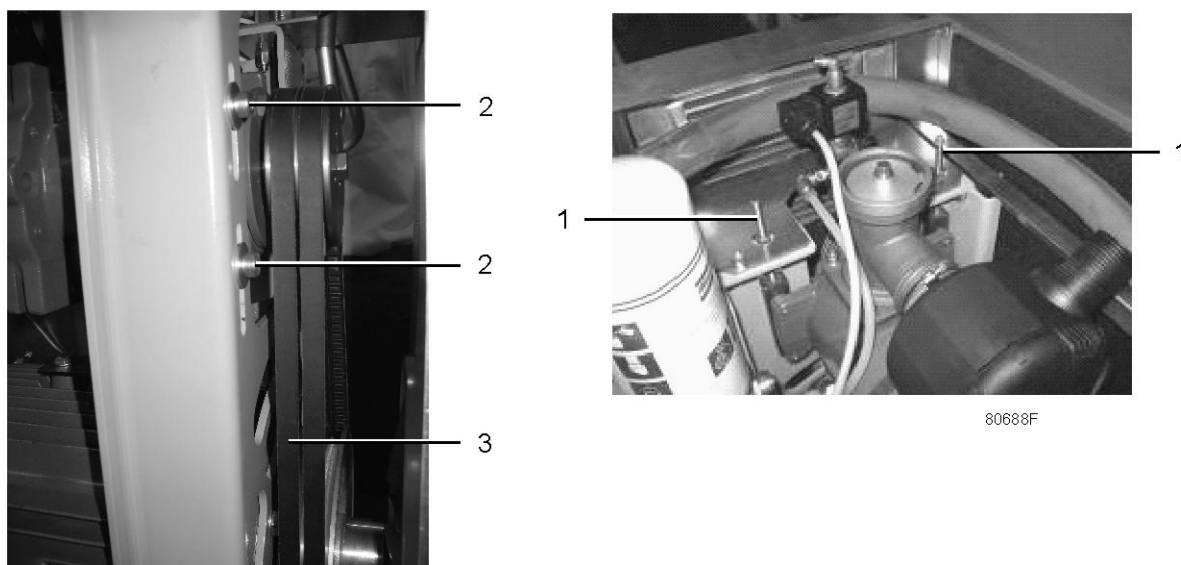
Adjustment can only be carried out when the pressure switch is pressurised.

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

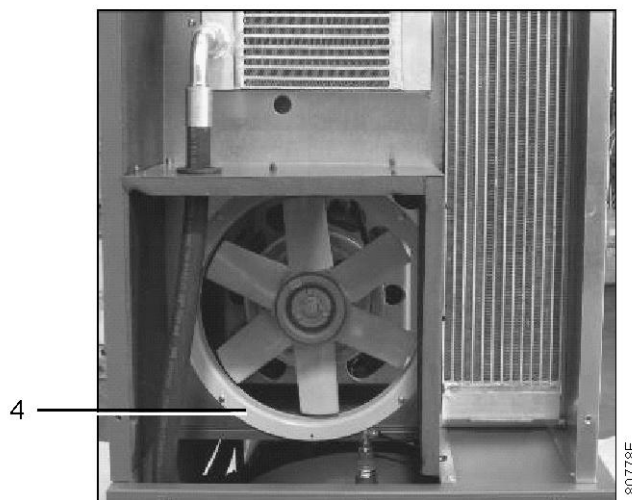
Step	Action
1	Stop the compressor, close the air outlet valve and switch off the voltage
2	Remove the front door and the internal panel.
3	The tension is correct when a force of between 20 N (4.5 lbf) and 25 N (5.63 lbf) applied at the midpoint of the belts causes a deflection of 5 mm (0.2 in).
4	Refit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

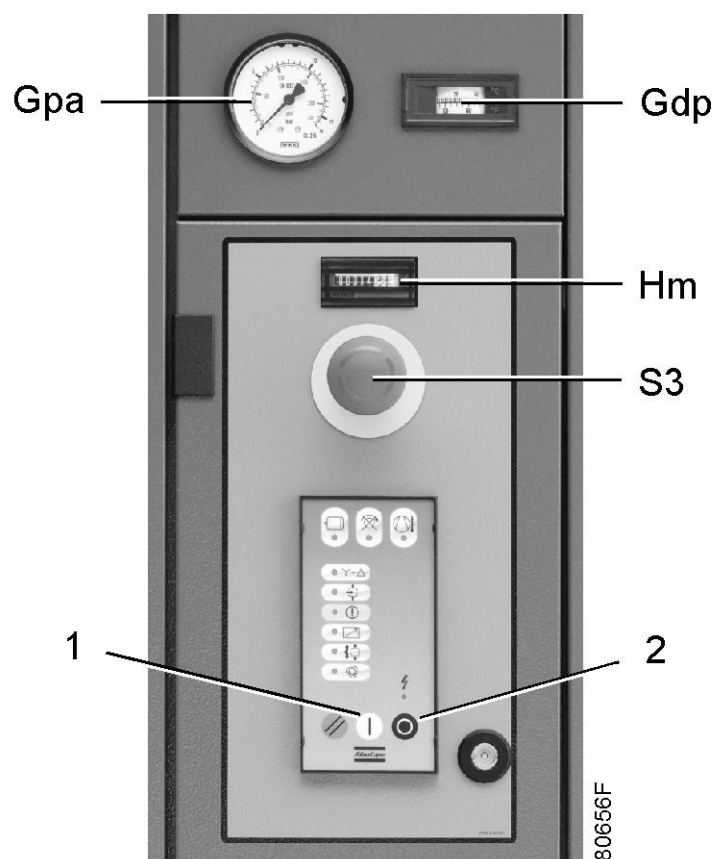


Step	Action
	The belts (3) must be replaced as a set, even if only one of the belts is worn. Only use genuine Atlas Copco belts.
1	Stop the compressor, close the air outlet valve and switch off the voltage.
2	Remove the front door, the internal panel, the top cover, the pulley protection and the left 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

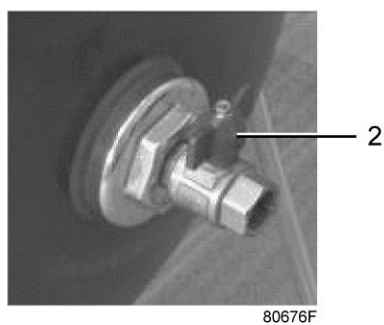
7.1 Problem solving

Start/stop switch



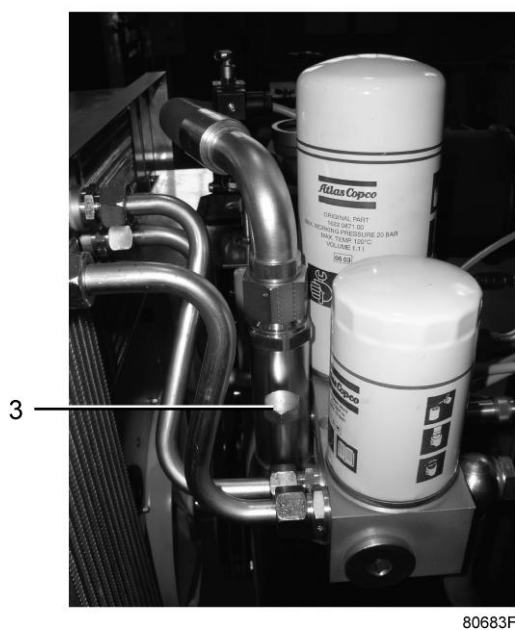
GX 7 and GX 11

Air outlet valve



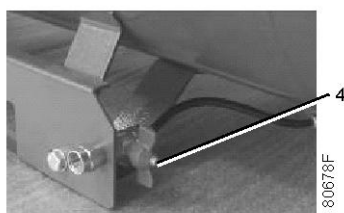
GX 7 and GX 11

Oil filler plug



GX 7 and GX 11

Drain valve, air receiver



GX 7 and GX 11

Attention

	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.
	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).
	The air outlet valve (2) can be locked during maintenance or repair as follows: • 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](#).

For GX 7 and GX 11

	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
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

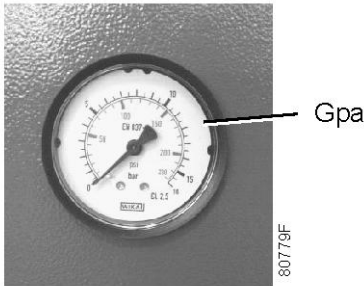
	Condition	Fault	Remedy
		Oil level too low	Check and correct as necessary
		Cooler clogged	Clean cooler
		Temperature switch malfunctioning	Have switch tested
		Compressor element (E) out of order	Consult Atlas Copco

GX 7 up to GX 11 with air cooler

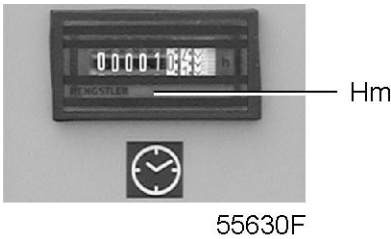
	Condition	Fault	Remedy
1	Condensate is not discharged during loading	Discharge flexible clogged	Check and correct as necessary
		Float valve malfunctioning	Remove float valve assembly, clean or replace as necessary

8 Technical data

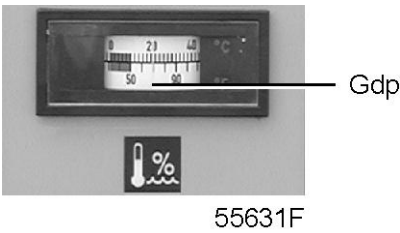
8.1 Readings on control panel



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 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
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

8.3 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

8.4 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

Compressor type		GX7	GX11	GX7	GX11	GX7	GX11
• 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
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
Oil capacity	Imp gal	0.65	0.7	0.65	0.7	0.65	0.7
Oil capacity	cu.ft	0.1	0.11	0.1	0.11	0.1	0.11
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

Compressor type		GX7	GX11	GX7	GX11
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
Oil capacity	Imp gal	0.65	0.7	0.65	0.7
Oil capacity	cu.ft	0.1	0.11	0.1	0.11
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

Compressor type		GX7	GX11	GX7	GX11
• 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
Oil capacity	Imp gal	0.65	0.7	0.65	0.7
Oil capacity	cu.ft	0.1	0.11	0.1	0.11
Sound pressure level (according to ISO 2151 (2004))	dB(A)	67	68	67	68

9 Instructions for use of air receiver

9.1 Instructions for use

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 compressed air/oil separator 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	There is no intrinsic need for service inspection of the vessel when used within the design limits for its intended application.
6	Corrosion must be prevented under the conditions of use. Condensation may accumulate inside the tank and this 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 by opening of the manual drain valve is necessary.

10 PED

10.1 Pressure equipment directives

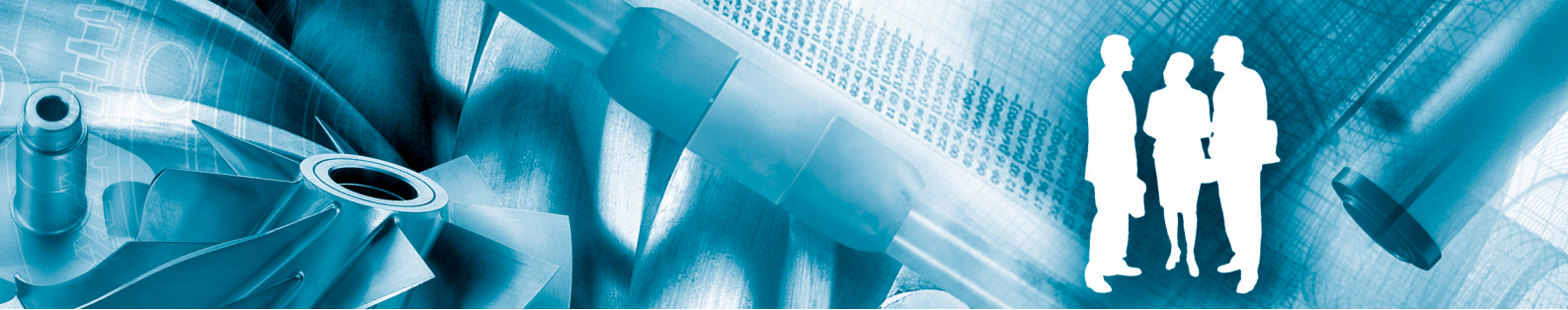
Components subject to 97/23/EC Pressure Equipment Directive

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

Compressor type	Part number	Description	PED Class
GX7 and GX11	2200 9507 74	Safety valve	IV
	2200 9507 75	Safety valve	IV
	0830 1009 71	Safety valve	IV
	0830 1009 72	Safety valve	IV

Overall rating

The compressors conform to PED smaller than category II.



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.