ALLFETT®

LUBRICATION SYSTEMS


# Instructions manual
# Parts and diagrams

**Prepared for :** Labrie Environmental Group
**Manual number :** Reference manual
**Equipment :** Labrie Side Loader arm
*9 POINTS*

V.1507.01

# Identification Sheet

## Parts used on installation

### Pump and accessories

| Part No | Description | |
|---|---|---|
| AG15.45.12.S | ALL-1 pump, 4.5L 12V DC standard EC, with piston Ø6 | x |
| BG10.65.01.00 | Mounting plate for pump (Standard) | x |
| BG10.50.45.00 | Teflon Low level grease indicator monobloc 4.5L | x |

### Hoses

| Part No | Description | |
|---|---|---|
| EG15.14.00.ME | Protective loom (1/4'') | x |
| EG05.06.00.PI | Pre-filled high pressure hose (6mm) | x |

### Fittings

| Part No | Description | |
|---|---|---|
| DG30.RG.00.035 | Bolt for progressive distributor fixation M5x35mm | x |
| DG10.MB.00.06 | Monobloc progressive divider valve MBS-6 | x |
| DG40.MB.CV.00 | Check valve for MBS progressive monobloc distributor | x |
| DG40.MB.PG.00 | Plug for MBS monobloc progressive distributor | x |
| EG45.00.18.HP | High pressure grease nipple | x |
| EG92.03.18.18 | Brass tee M x F x F 1/8'' NPT | x |
| EG63.03.M10.M10 | Square elbow 90° M x F (M10) | x |
| EG75.03.18.M10 | Extension coupling 18mm M (M10) x F (M10) | x |
| EG68.M10.06.00 | Swivel coupling 90° M10 x 6mm double compression | x |
| RE-LI246002-1 | Lincoln Swivel Adapter | x |
| RE-LI246002-2 | Lincoln hose stud for swivel Adapter | x |

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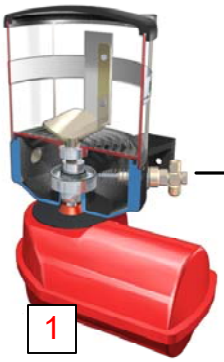
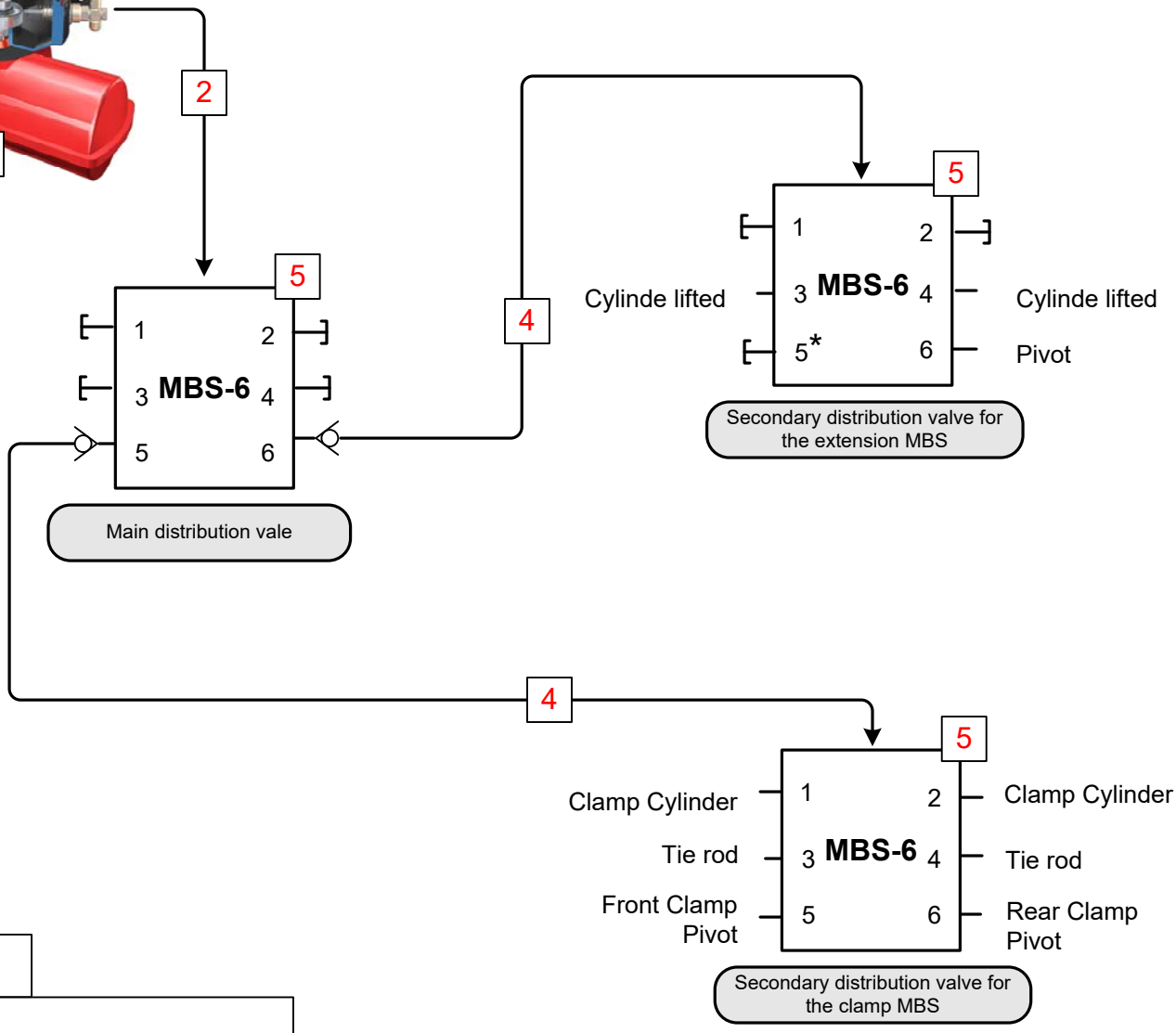
labrie
environmental group






## Legend

1 - Pump
2 – Main line
3 – Main distribution valve
4 – Secondary line
5 – Secondary distribution valve

Output with a plug, this double the output value
Output with a bridge, resulting in redistributed lubricant to another output

* "Port pin" removed inside the valve

HP: High pressure hose
P: Polyamide tubing

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LUBRICATION SYSTEMS

| | | | |
|---|---|---|---|
| Make: Labrie | | Drawing: Lubrication points | |
| Modal: 9 Points | | Operationg code: 2 min / 120 min | |
| Serial number: N/D | | Operating symbol: | |
| Installed by: Groupe Alltech | Done By: | Saša Katić | 2019-05-13 |
| Client: Labrie Environmental | Revised by: | | |


Motor 12 or 24 vdc

Low level

Ground (-)

Power On/Off with starter key 12 or 24 VDC (+)

Fusible 5 Amp.

BK

WH

#1

WH

GN

BK

RD

BK

RD

#4

Electric pressure switch gauge

3900

PSI

#2

Integrated controller

Lumière jaune lorsque le contrôleur est en attente

Lumière verte lorsque la pompe est en marche

Lumière rouge pour indiqué un problème

S1 – Electric standard and blocking connection

S2 – Alarm light connection

S3 – Low level connection

| Abreviation | Description |
|---|---|
| BK | Black |
| RD | Red |
| WH | White |
| GN | Green |
| BU | Blue |
| BR | Brown |

| Wire type | | |
|---|---|---|
| # | Type | Fonction |
| #1 | 18-2 | Power |
| #2 | 18-4 | Low level |
| #3 | 18-2 | Pump motor |
| #4 | 22-2 | Electric pressure switch gauge |

Alarm light

BK

WH — S1-1 = 12 or 24VDC (+)

BK — S1-2 = Ground (-)

S2 = Working

GN — S2-2 = Alarm signal

S2-1 = Waiting

GN — S3-1 = Low level signal

RD — S3-2 = Low level (+)

BK — S3 = Low level (-)

WH — S1 = Blocking signal

ALLFETT LUBRICATION SYSTEMS

| | | |
|---|---|---|
| Electric plan 12 or 24 VDC | Drawing # | 001 |
| Low level indicator & Noshock electric pressure switch | Date: | 2015-11-18 |
| | Done by: | Rod |

# GLOSSARY

**Centralized automatic lubrication system:**
Pump which feeds a great number of friction points with lubricant through a system made of tubes, electronic card or PLC and progressive valves.

**Connections and fittings:**
For the plastic and steel hoses, the connections hold the hoses in place. The fitting makes it possible to connect two hoses and/or parts which have different characteristics.

**Calibration:**
Amount of provided lubricant at a lubrication point metered by a progressive valve during a lubrication cycle.

**Consistence:**
See Penetration.

**Electric pressure switch indicator:**
An electronic switch is engages by a device when a predetermined pressure is reach. Hydraulic information is thus converted into electric information.

**Electronic card:**
Electronic unit that controls and check upon the system different functions, it also show running state and problems when they occur.

**Filling gun:**
Filling tool with cartridge used to fill the reservoir through a filling nozzle.

**Filling nozzle:**
Coupling used to fill-up the pump of lubricant with a filling gun.

**Low level grease indicator:**
An electronic device (sensor) warns you when the lubricant level is low. (The grease level in the reservoir is lower than the tip of the sensor).

**Lubrication cycle:**
Period between the beginning of a lubrication cycle and the beginning of another.

**Lubrication period:**
Time needed by the pump to do a lubrication cycle, according to the electronic card.

**Lubrication point:**
Physical point where the force of friction applied is point effective.

**Main line**:
Tube connected between the pump and the main progressive valves.

**NLGI grade:**
See penetration.

**Non-return valve:**
A mechanical device allows the lubricant flow in a direction only, while blocking the flow in the opposite direction.

**Penetration:**
The consistency of a lubricant is indicated by a number. It represents the penetration depth of a cone in the grease measured at +25°C according to standards' NLGI. The index of consistency of the lubricants is based on ranks NLGI. (**N**ational **L**ubricating **G**rease **I**nstitute). Here are some of the popular values
NLGI grease: 000, 00, 0
NLGI grease: 1, 2, 3

**Pilot light:**
Light activated by an electronic sensor which verify the system condition.

**Progressive valve:**
A valve provides the metered lubricant to the lubrication point in a progressive order.

**Progressive system:**
A centralized lubrication system consisted of one or many progressive valve.

**Pulse counter:**
A system is monitoring the piston displacement in a progressive valve (when necessary). This allows monitoring the whole system.

**Pump:**
Manual or electrical device used to push lubricant using a pump element mounted on the said device.

**Standing period:**
Waiting period between two lubrication cycles pre-selected on the electronic card.

**Relief valve (safety valve):**
Device mounted on the pump element which limits the pressure in the system. The valve opens when the pre-selected pressure is exceeded.

**Secondary line:**
Tube connected between the progressive valves and the lubrications points.

# RECOMMENDED GREASE

After analyzing the **working** conditions of our automatic greasing system, here are the recommendations concerning the choice of the grease to use.

- Oil basis: Viscosity at 40ºC between 100 and 220 CST
- Thickener: lithium or calcium sulfonate type
- Additive: Extreme Pressure
- NLGI grade: 1 and 2 *(for colder regions, use EP-1 grease from October to April and EP-2 grease from April to October.)*

**Non desirable elements:**

- A high base oil viscosity will slow down the mobility of the product in cold weather.
- Certain thickener like barium, clays, etc.
- Solid additives like graphite, molly 5% and copper when the concentration exceeds 3 microns.

**Here is a list of accepted greases for the ALLFETT systems.**

- **Esso Epic EP**
- **Esso Unirex EP**
- **Shell Gadus S2 V220**
- **Shell Gadus S3** ***V220***
- **Texaco Multifak EP**
- **Ultramar Ultra Lithium EP**
- **Prolab GS-1000**
- **Prolab AF-400**
- **Sinto 250 EP**
- **Texas Refinery 880**
- **Hipertech APG-0 & 1**
- **Hipertech SG-2**
- **Irving Lubex EP**

ATTENTION! Mixing different types of grease may damage your system. That's why for all other non-listed greases, please confirm with your **ALLFETT** distributor if it is acceptable or not at the risk of a void warranty if you use non-accepted grease.

# GREASES COMPATIBILITY CHART

| | Sulfonate | Lithium | Lithium Complex | Aluminium Complex | Calcium Complex | Barium | Sodium | Bentone | Silica Gel | Polyurea |
|---|---|---|---|---|---|---|---|---|---|---|
| Sulfonate | | FC | FC | NC | FC | SC | NC | NC | SC | SC |
| Lithium | FC | | FC | NC | FC | SC | NC | NC | FC | SC |
| Lithium Complex | FC | FC | | NC | FC | SC | NC | NC | FC | SC |
| Aluminium Complex | NC | NC | NC | | NC | NC | SC | NC | FC | NC |
| Calcium Complex | FC | FC | FC | NC | | SC | NC | NC | NC | SC |
| Barium | SC | SC | SC | NC | SC | | NC | NC | FC | NC |
| Sodium | NC | NC | NC | SC | NC | NC | | NC | NC | NC |
| Bentone | NC | NC | NC | NC | NC | NC | NC | | FC | NC |
| Silica Gel | SC | FC | FC | FC | NC | FC | NC | FC | | NC |
| Polyurea | SC | SC | SC | NC | SC | NC | NC | NC | NC | |

LEGEND :

**FC** : FULLY COMPATIBLE

**SC** : SOMEWHAT COMPATIBLE - MIXTURE SOFTENS, BUT REMAINS GREASE LIKE

**NC** : NOT COMPATIBLE - MIXTURE SOFTENS SEVERELY AND DO NOT REMAIN GREASE LIKE

## 2.3 Grease replacement procedures

### 2.3.1 Important precautions

When purging of the system is necessary, there are some precautionary measures that should be taken to minimize the risk of potential incompatibility reactions.

- First, make sure that the pump allows excess lubricant. If not, it's important to purge the maximum grease from the system.

- Verify that the equipment is operating properly and that there aren't any incompatible accessories, like a gasket for example, which could react when in contact with the new lubricant.

- Check that the lubricated equipment can accept full-fill lubrication. This procedure should not be applied to equipment designed to operate with limited grease quantities because excessive operating temperature may occur.

### 2.3.2 Procedures to bleed your system

- Clean the pump so there is no more of the old grease and, therefore, no possible chemical reactions.

- While the hoses are plugged, slowly pump in the new grease until the excess grease being purged from the system changes in consistency or color.

- Repeat the previous step for each distribution blocs and connected hoses. Each distribution bloc has a greasing nipple to help you.

- Temporarily increase the grease volume at least during the next two lubrications. The increased grease flow will help move out any remaining old grease and will provide sealing while overly soft grease may still be in the system.

- After one week, inspect the system to make sure there is no chemical reactivity.

- You must pay attention to any unusual change (power consumption, amperage draw, lubrication frequency, vibration, etc.).

### 2.3.3 Conclusion and additional information

For greases more than for oils, the measured characteristics are often vague and provide only fragmentary and insufficient indications to define the applications to the mechanisms. That's why test benches for greases were created, but only a full-scale test can provide manufacturers and users the true value about a type of grease. However, general indications are available to make it easier:

- The recommended viscosity for greases use for centralized lubrication system is between 100 to 200 cSt à 40°C.

- Sodium and calcium based grease has a good water resistance. They can be use until 120°C and at high speed revolution.

- Lithium based greases are the most commonly used. They represent approximately 70% of all commercialised grease. It has a dropping point at 175°C and can reach 195°C with lithium soap 12hydroxy stearic acid.

- Greases with calcium, aluminum or lithium based, with bentonite or cellulose structures, or with polyurea thickeners, can support high temperatures (165 à 230 °C).

# INSPECTION LIST FOR AUTOMATIC LUBRICATION SYSTEM

Equipment: _____ Serial number: _____ Unit: _____

| **CONTROL CARD** | Ok |
|---|---|
| The control card is working normally | ☐ |
| The fuse is in good condition | ☐ |
| The lubrication cycle is working normally — Lubrication code: ____ | ☐ |
| Electric connections are connected on the main switch | ☐ |
| The "additional cycle" button is working | ☐ |

| **PUMP** | |
|---|---|
| The bolts for the plate are tightened | ☐ |
| Electric connections are ok, the pump is receiving power | ☐ |
| The motor compartment is dry | ☐ |
| The reservoir is in good condition | ☐ |
| The mixing spoon is rotating clockwise at 15 RPM | ☐ |
| Lubricant level is full | ☐ |
| The low level warning light is off | ☐ |
| The defective lubrication system warning light is off | ☐ |
| The pressure switch open at 280 bars | ☐ |
| The pump element pressure is normal — Pressure: _____ | ☐ |

| **HOSE** | |
|---|---|
| The hose between the pump and the main distribution valve is in good condition | ☐ |
| The hoses between the main distribution valve and all the secondary valves are in good condition | ☐ |
| The hoses between all the secondary distribution valves and the lubrication points are in good condition | ☐ |
| All nylon cable ties and hose clamps are in good condition | ☐ |
| Hoses have enough space (they won't be crushed when the machine is in movement) | ☐ |

| **DISTRIBUTION VALVE** | |
|---|---|
| Fittings and distribution valves don't leak | ☐ |
| All the distribution valves are working manually | ☐ |
| The distribution bolts are tightened | ☐ |

| **GREASE TYPE** | |
|---|---|
| Grease used is conform to **ALLFETT** recommendations (Consult our recommended grease list) | ☐ |

Grade: _____ Viscosity: _____

**Other comments and/or observation**

_____

_____

_____

Date: _____ Signature: _____

# TROUBLESHOOTING

## A. PROBLEMS SEEN ON THE PUMP

| PROBLEMS | CAUSES | WHAT TO DO |
|---|---|---|
| Low level red light is on. | The reservoir is empty. | Fill the reservoir[1]. |
| | The control card fuse is burn. | Change the fuse. |
| | The pump wire is cut. | Replace or repair the wire[2]. |
| | There are air bubbles in the grease. | Fill the reservoir by the filling cover. |
| | The motor of the pump is defective. | Make sure the motor has power. If yes; motor is defective. Change it. |
| | Low level sensor is defective. | Repair or change[3] the low level sensor. |
| Defective red light is on and/or grease is released by the relief valve. | One hose is crushed. | Check all the hoses conditions. Replace. |
| | One lubrication point is jammed. | Disconnect the hose at the lubrication point, check and manually pump the point to unblock it[4]. |
| | One distribution valve is jammed (Cold temperature, grease too thick, contaminant in the grease). | Unbolt the distribution valve[5] and washed it with diesel. Make sure it is dry before re-assembled. Verify that your lubricant is recommended[6]. |
| The pump isn't working. | The system is in stand-by period. | Wait for the next lubrication cycle or press the « additional cycle » button to activate lubrication. |
| | There are defective electric connections. | Make sure that the connections aren't cut or disconnect. Repair or replace. |
| | The pump motor is defective or broken. | Make sure the motor has power. If yes; motor is defective. Change it. |
| No lubricant is released by the pump element. | The reservoir is empty. | Fill the reservoir. An empty pump may require a bleeding[7] in order to remove the air. |
| | There is air in the pump element. | Bleed[8] your system. |
| | The pump element generates no pressure. | Change the pump element[9]. |
| Grease is leaking by the pump body and/or between reservoir modular glasses. | O-rings between the reservoir modular glasses are defective or the rods (4) of the pump aren't tightened. | Change the o-ring or tight the bolts (4) of the pump. |

[1] To know how to fill the reservoir, consult the section 2 of this manual.
[2] To view the electric schematic, consult the section 1 of this manual.
[3] To know how to change the low level sensor, consult the section 5 of this manual.
[4] To know how to find a blocked lubrication point, consult the second 5 of this manual.
[5] To know how to assemble a distribution valve, consult the section 5 of this manual.
[6] For more information about the recommended greases, consult the section 2 of this manual.
[7] To know how to bleed your system, consult the section 2 of this manual.
[8] Idem 7.
[9] To know how to change a pump element, consult the section 5 of this manual.

## B. PROBLEMS SEEN ON THE DISTRIBUTION VALVE / LUBRICATION POINT

| PROBLEMS | CAUSES | WHAT TO DO |
|---|---|---|
| No lubricant is administered from the distribution valve. | One hose is crushed. | Check all the hoses conditions. Repair. |
| | One lubrication point is jammed. | Disconnect the hose at the lubrication point, check and manually pump the point to unblock it [10]. |
| | One distribution valve is jammed (Cold temperature, grease too thick, contaminant in the grease). | Unbolt the distribution valve[11] and washed it with diesel. Make sure it is dry before re-assembled. Verify that your lubricant is recommended[12]. |
| | The lubrication valve isn't correctly assembled. | Reassemble[13] the distribution valve to comply with ALLFETT standard. Contact your distributor for more information. |
| ALL the lubrication points are dry. | The pump element generates no pressure. | Change the pump element[14]. |
| | The lubricant used isn't recommended for your system or for the season (temperature). | Bleed[15] your system and replace your grease by an approved one[16]. |
| | Lubrication cycle isn't adjusted to the equipment needs or customers expectations. | Adjust the lubrication code[17] of your control card. Contact your distributor to get a recommended cycle. |
| There is too much/not enough lubricant at ONE lubrication point. | The calibration isn't adjusted to the equipment needs or customers expectations. | Contact your distributor for a recalibration. |
| Lubricant is released between sections. | One lubrication point or a distribution valve is jammed. | Disconnect the hose at the lubrication point. Manually pump the lubrication point and the distribution valve to unblock it [18]. |
| | O-rings or Teflon gaskets between sections are defective. | Unbolt the distribution valve [19] and replace the defective o-rings or Teflon gaskets. |
| | The lubrication valve isn't correctly assembled. | Reassemble [20] the distribution valve to comply with ALLFETT standard. Contact your distributor for more information. |

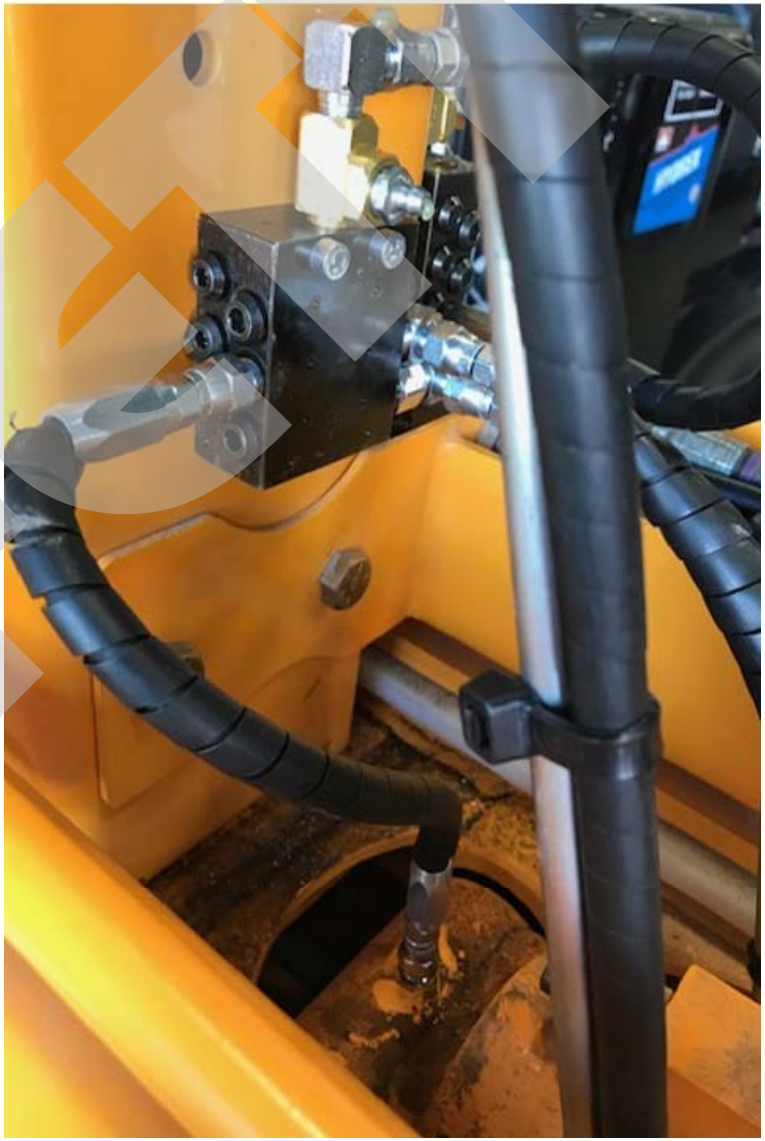
[10] Idem 6.
[11] Idem 4.
[12] Idem 5.
[13] Idem 4.
[14] Idem 9.
[15] Idem 7.
[16] Idem 1.
[17] To know how to program your control card, consult the section 5 of this manual.
[18] Idem 6.
[19] Idem 4.
[20] Idem 4.

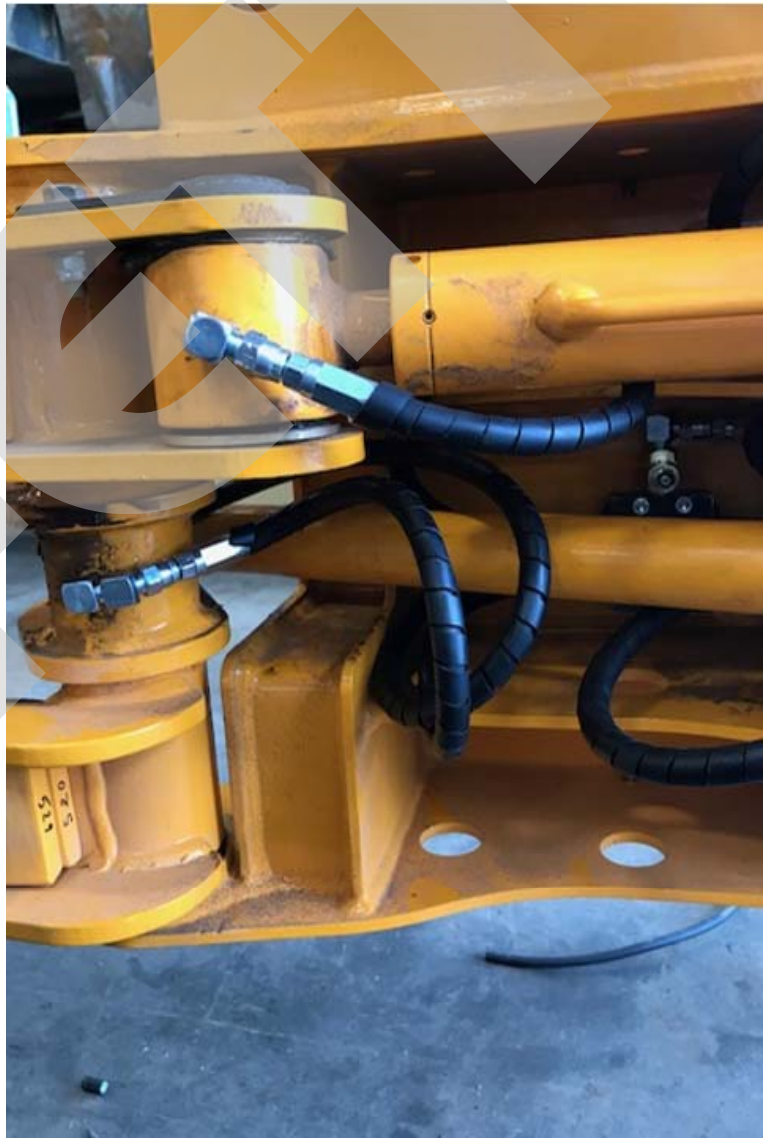
## C. PROBLEMS SEEN ON THE CONTROL CARD

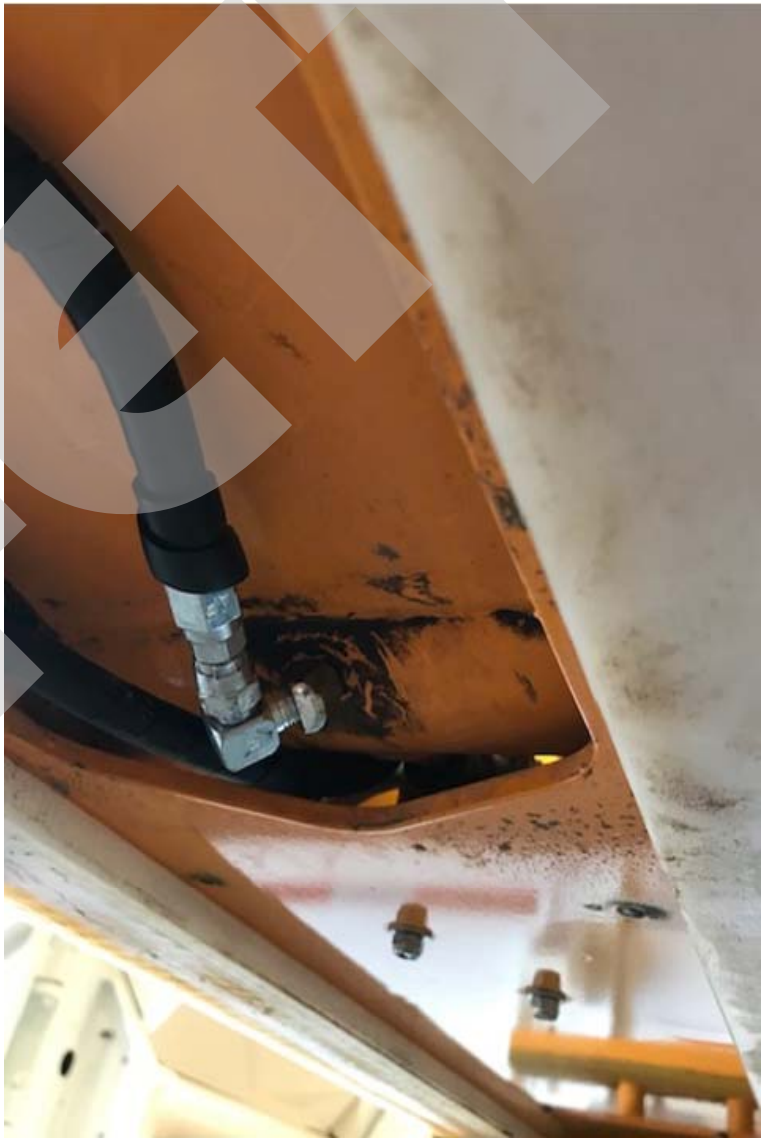
| PROBLEMS | CAUSES | WHAT TO DO |
|---|---|---|
| Red light is on. | The fuse is burned. | Change the fuse. |
| | The motor electric connections and/or wires are cut or unplugged. | Check all the electric wirings and repair those defective[21]. |
| | The low level sensor is defective. | Temporarily disconnect it to make the system work until you change the sensor. Change the low level sensor[22]. |
| | The motor of the pump is defective. | Make sure the motor has power. If yes; motor is defective. Change it. |
| There is no power on the control card. | The power and ground wires are cut or unplugged. | Check all the electric wirings and repair those defective. |
| | The main power fuse is burned. | Change the fuse. |
| There is power in the output of the control card but no lights are on. | There is radio frequency interference. | Make sure there is a RF (Radio Frequency) choke near the control card. If not, install a RF (Radio Frequency) choke[23]. If yes, contact your distributor. |

[21] Idem 3
[22] Idem 2
[23] To know how to install a RF choke, consult the section 5 of this manual.


Max. LEVEL
ALLFETT
AUTOMATIC LUBRICATION SYSTEMS & EQUIPMENT
ALL-1 ELECTRICAL
GREASE PUMP 4.5 Liters
24 V DC
220 V AC
380 V AC
2015
2016
2017
2018
ALL MOTORS TURN CLOCKWISE
Min. LEVEL







# ALL-1EC NAD ALL-10EC PUMP
# INTEGRATED CONTROL CARD
# 12-24 V / DC

# USER GUIDE


**ALLTECH GROUP – AUTHORIZED SUPPLIER OF ALLFETT PRODUCT'S**
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## WORKING PRINCIPAL

The ALL-1 and ALL-10 pumps are powered by an electric motor with an eccentric cam. Their working principles are the same. At each motor rotation, the spring of the pump element (s) is (are) compressed in order to obtain the required pressure. At the same time, inside the reservoir the mixing spoon is activated to mix and push the grease downward. This prevents grease separation and softens it when cold temperatures occur. The body of the pump is designed to receive up to six (6) pump elements. This allows you to adjust it to supply the right amount of lubricant to each point. The pump must be fed by a suitable energy source with the correct voltage.

The installation of an automatic lubrication system assures a continuous lubrication at fixed intervals to all greasing points, especially those hard to reach. The system is active while the equipment is in operation and all the points are in movement. The ALL-1 pump is recommended for medium to large size machinery that requires a regular amount of grease. The ALL-10 pump is recommended for large size machinery that requires a large amount of grease.

## PUMP COMPONENT

1. Reservoir :
   Container made of transparent polycarbonate intended to receive the lubricant. Since January 2010, the reservoirs are only available in monoblock version. Four sizes are available; 1.4L, 3.3L, 6L and 14L.

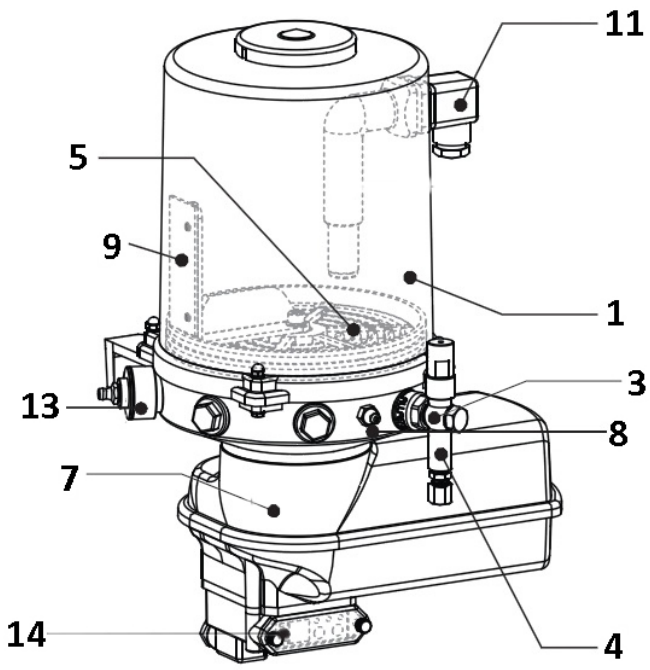
2. Cover (optional):
   Waterproof plastic plug installed on the top of the reservoir. It prevents grease contamination. An adaptor can be added to facilitate grease filling (option not shown on picture).

3. Pump element :
   Main part of the system installed on the pump body. It transfer grease from the pump to the distribution valves.

4. Relief valve:
   Mechanical device installed on the pump element. It prevents pressure excess by limiting it at 290 bars. The valve opens if pressure is exceeded.

5. Filter :
   Perforated porous plastic which block air before it reach the pump element.

6. Eccentric cam:
   Bearing which activate the pump element at each pump rotation.




7. Motor :
   Powered by a 12 or 24 volts electric source, the motor activate the system. The motor casing is made of plastic.

8. Pump body :
   Light pump structure made of aluminium.

9. Mixing spoon :
   Interne spatula intended to mix and push the grease downward. This prevents grease separation and softens it when cold temperatures occur.

10. Electric pressure switch :
    Sensor installed on the security valve that sends a signal to the operator when excessive pressure is detected (more than 270 bars).

11. Low level grease indicator (optional):
    A probe installed in the pump reservoir that sends a signal to the operator when the grease level is low.

12. Filling nozzle (optional) :
    Permanently installed on the pump, the filling nozzle is used with the grease filling gun to fill the pump reservoir.

13. Quick coupler for pump filling (optional) :
    Permanently installed on the pump it is used with an electric transfer pump to fill the pump reservoir.

14. Integrated control card :
    It is used to operate and monitor the **ALLFETT** system by managing the working and stand-by periods. It allows you to visualize these errors (blocking, low level, fuses, motor) on the LCD screen.

## TECHNICAL SPECIFICATIONS

| CARACTERISTICS | ALL-1EC mini | ALL-1EC | ALL-10EC |
|---|---|---|---|
| Power source | 12 or 24 VDC | | |
| Maximum pressure | 300 bars | | |
| Protection class | IP54 | | |
| Recommended lubricant | Grease NLGI 0-1-2[1] | | |
| Pump element | 1 to 6 | | |
| Pump element capacity | 2.5 – 3 $cm^3$/min. | | |
| Working temperature | -25°C to +80°C | | |
| Reservoir capacity (litre) | 1,5 | 3,3 | 6 |

[1] Consult section 2 of this manual for more information about recommended greases.

**Figure 1 : Pump (top view)**

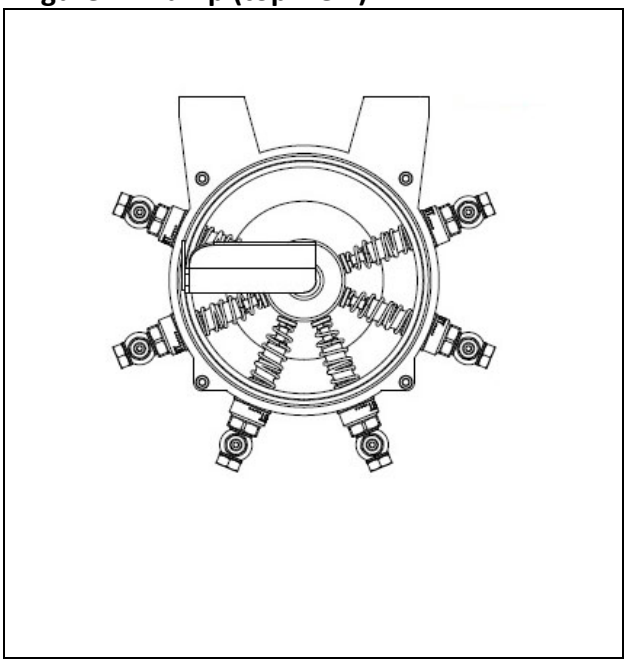


**Figure 2: Pump element and pressure switch**

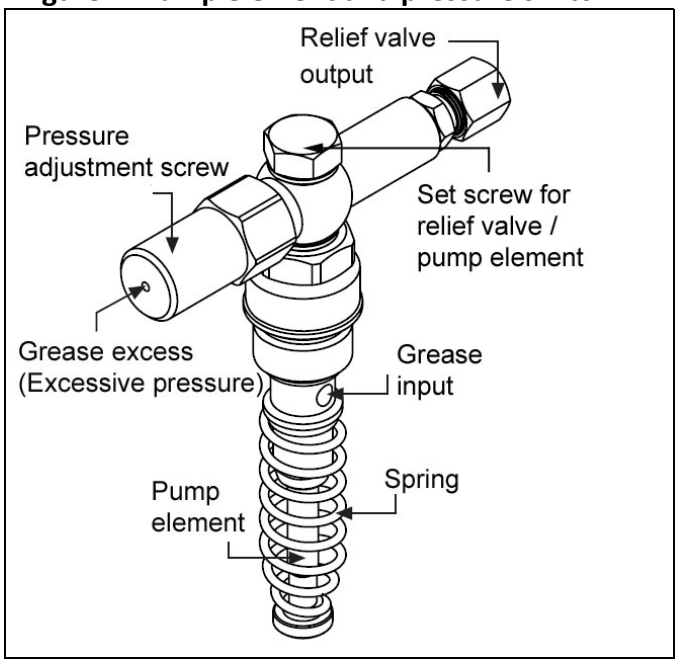
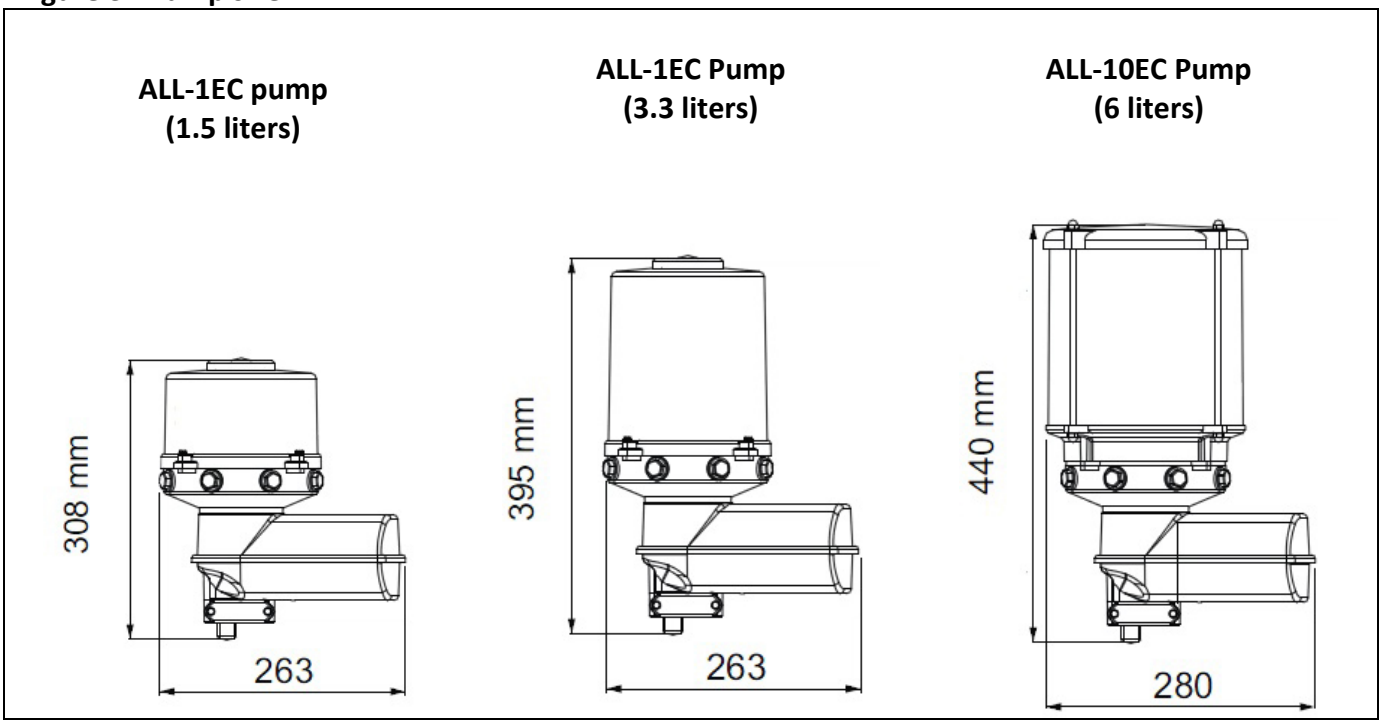



**Figure 3 : Pump size**



## COMPONENTS MODIFICATIONS

SAFETY MESURES

- Keep your working area clean.
- Always wear gloves when you work with lubricant.
- Make sure that the electric source is disconnected when you work with electric components.

1. REPLACEMENT OF A PUMP ELEMENT

- Remove the old pump element (make sure that the spring and the rod are not stuck inside).
- Make sure that the new pump element is clean (inside and outside).
- Insert it inside the body of the pump; the mixing spoon must be in front of the pump element output.
- Once inserted, tighten the pump element with a wrench until it sits on the pump body. WARNING, do not over tighten the pump element because it could crack the pump body.

2. REPLACEMENT OF A RELIEF VALVE

The security valve is adjusted beforehand by a certified **ALLFETT** technician. It must be adjusted to 290 bars.

- Remove the old relief valve.
- On the new valve, install a sealing metal washer on the relief set screw.
- Insert the set screw in the relief valve.
- Once done, install a second sealing metal washer. This washer will sit on the pump element head.
- Screw the relief valve with a wrench until it sits on the pump element head. WARNING, do not over tighten the relief because it could crack the pump body. NOTE: If there is grease leaking, gradually tighten the relief set screw.

3. REPLACEMENT OF THE COVER (REGULAR OR FILLING COVER)

- Unscrew the four pump rods to gain access to the cover.
- Remove the cover and replace it by the new one.
- Once in place, reinstall the four pump rods. WARNING, do not over tighten the rods because it could crack the pump body.

4. REPLACEMENT OF A RESERVOIR MODULAR GLASS

- Unscrew the four pump rods to gain access to the modular glass (es).
- Once the cover is removed, bleed the pump until the damage modular glass isn't submerge in grease anymore.
- Remove the modular glass.
- When replaced, if there are modular glasses, it's important to verify that the o-ring is placed correctly in order to prevent leaking between modular glasses.
- Once in place, put back the reservoir modular glass (es), the cover and the four pump rods. WARNING, do not over tighten the rods because it could crack the pump body.

5. REPLACEMENT OF THE A LOW LEVEL SENSOR (OPTIONAL)

- Disconnect the low level sensor connector by removing the screw.
- Unscrew the four pumps rods to gain access to the modular glass (es).
- Once the cover is removed, bleed the pump until the low level sensor isn't submerge in grease anymore.
- Remove the low level sensor modular glass.
- When replaced, if there are modular glasses, it's important to verify that the o-ring is placed correctly in order to prevent leaking between modular glasses.
- Once in place, put back the reservoir modular glass (es), the cover and the four pump rods. WARNING, do not over tighten the rods because it could crack the pump body.
- Reconnect the low level sensor connector with the help of the central screw.

6. REPLACEMENT OF A PRESSURE SWITH (OPTIONAL)

- Remove the old pressure switch.
- Verify that the new pressure switch and the fittings are clean.
- Screw the new pressure switch. Do not forget to cover the threads in nylon in order to prevent leaking.
- Fallow the electric scheme provided in the service manual (section 1) to complete the wiring.

7. REPLACEMENT OF A FILLING ADAPTOR (FILLING NOZZLE/QUICK COUPLE)

- Remove the old adaptor.
- Verify that the new adaptor is clean before installing it (inside/outside).
- Insert the adaptor in the pump body.
- Once inserted, tighten the adaptor with a wrench until it sits on the pump body. WARNING, do not over tighten the adaptor because it could crack the pump body.

## MAINTENANCE

**DIRT IS A KILLER – KEEP YOUR SYSTEM CLEAN!!!**

1. FILLING THE PUMP

   - Fill the pump reservoir with the filler gun (if the pump has this option).
   - Fill the reservoir through the high pressure grease nipple.
   - Fill the pump by the screw-on type cover (if the pump has this option).

   IMPORTANT: Before filling the reservoir, make sure all the adaptors are clean to avoid contamination of the grease.

   A pump which was emptied may require a bleeding in order to remove air.

2. BLEED A SYSTEM

   Please consult the second section of the manual to know how to bleed your system.

3. RECOMMENDED GREASES

   For more information about recommended greases, please consult the second section of the manual.

ALLFETT®
LUBRICATION SYSTEMS

# EC CONTROL CARD

# USER GUIDE


**ALLTECH GROUP – AUTHORIZED SUPPLIER OF ALLFETT PRODUCT'S**
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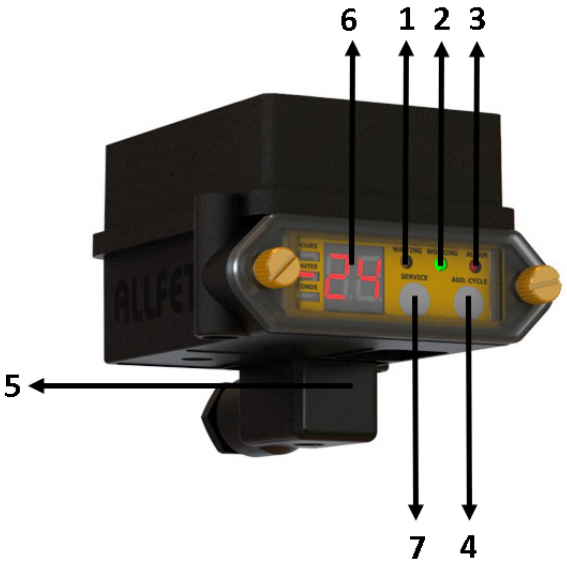
## WORKING PRINCIPLE

The electronic control card is an essential element of a centralized lubrication system. It is used to operate and monitor the **ALLFETT** system by managing the working and stand-by periods. This allows you to adjust it to supply the right amount of lubricant to each point. The working and stand-by periods can be easily adjusted.

The EC Control card is working with a 10-30 VDC power source. It is connected on the power of the equipment, so it works only when the equipment is running. In case of a power breakdown, the electric card will remain at its previous programmed position. Also, it warns you if a problem or malfunction occurs in your system to prevent costly reparation on the equipment. It is possible to visualize these errors (blocking, low level, fuses, motor) on the LCD screen. The electronic card is protected to prevent tampering or re-programming attempts via a password.

## CONTROL CARD COMPONENT




1. Control card light indicator:
   The yellow light is on when the system is on stand-by.

2. Pump light indicator :
   The green light is on when the lubrication cycle is in progress; the pump is turning.

3. Warning light indicator :
   The red light is on when the system is defective.

4. « Additional cycle » button:
   Button used to activate the lubrication cycle when the system is in stand-by.

5. The card connections :
   Electrical connections of the card.

6. LCD screen:
   Permits to visualize the cards information (greasing time, stop time, problems etc.).

7. Service button:
   Button which serves to do the programming.

8. Fuse (internal):
   Internal electrical component on the control card. It protects against overcurrent.

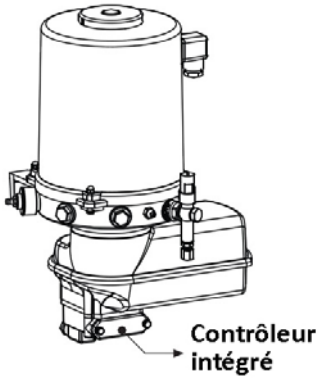
9. Radio frequency choke
   Radio frequency choke (Snap-On Ferrite 43) installed near the control card to prevent radio interference.

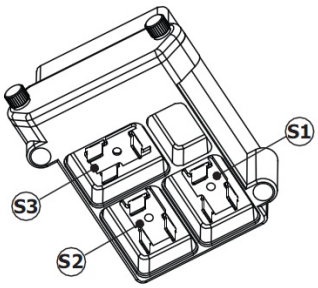
## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Voltage | 10-30V |
| Amperage | 4A |
| Monitored control | Timer |
| Working period | Between 1 second et 60 minutes |
| Stand-by period | Between 1 second et 100 hours |
| Language | English or Turk |

## CARD CONNECTIONS

The electrical connections are located under the controller box as shown below.




**S1 – Electric standard and blocking connection**

12 – 24 V DC (-) — 2 | 1 — 12 – 24 V DC (+)

**S2 - Alarm light connection**

Green light

Red light — 2 | 1 — Yellow light

**S3 – Low level connection**

Low level (-)

Low level (+) — 2 | 1 — Low level signal

WARNING! The connection of the «ground» ( ⏚ ) in the S1 socket provides the pressure sensor signal during the operation. During the shutdown period, the same connection gives the ADDITIONAL CYCLE signal.

## DEFINITION AND INFORMATION

Green light on: The values displayed on the screen are relative to the working period.

## ALARM CODE

| | |
|---|---|
|  | **A1 : Low level alarm :**<br>Displayed when the reservoir is empty. |
|  | **A2: Pressure alarm :**<br>Displayed if the adjusted pressure is reached. |
|  | **A3: Motor alarm :**<br>Displayed if the motor connecting cable or just the engine is defective. |
|  | **A4: Fuse alarm :**<br>Displayed if the fuse is defective. |

## COMPONENTS MODIFICATION

SAFETY MESURES

- Keep your working area clean.
- Always wear gloves when you work with lubricant.
- Make sure that the electric source is disconnected when you work with electric components.

1. PROGRAM YOUR CARD

To perform a programming change, use the buttons "SERVICE" and "CYCLE ADDITIONAL".

- Press on the service button twice to access the programming mode. Once in programming mode, the first digit on the display and the green light will flash. The working time will first be defined.
- Press the "ADDITIONAL CYCLE" button to change the flashing digit. Press the button "ADDITIONAL CYCLE" again until the selected time is displayed. Press the "SERVICE" button to save.
- After recording the first digit, the second digit will start flashing. Press the "ADDITIONAL CYCLE" button to change the flashing digit. Press the button "ADDITIONAL CYCLE" again until the selected time is displayed. Press the "SERVICE" button to save.
- After recording the second number, the time unit will start flashing. Press the button "ADDITIONAL CYCLE" to change the time unit. Press the button "ADDITIONAL CYCLE" again until the unit chosen is the right one. Press the "SERVICE" button to save.
  The working time is now registered and programmed.

- Following the registration of the time unit, the first number on the screen and the yellow light will flash. The waiting time can now be set.
- Press the "ADDITIONAL CYCLE" button to change the flashing digit. Press the button "ADDITIONAL CYCLE" again until the selected time is displayed. Press the "SERVICE" button to save.
- After recording the first digit, the second digit will start flashing. Press the "ADDITIONAL CYCLE" button to change the flashing digit. Press the button "ADDITIONAL CYCLE" again until the selected time is displayed. Press the "SERVICE" button to save.
- After recording the second number, the time unit will start flashing. Press the button "ADDITIONAL CYCLE" to change the time unit. Press the button "ADDITIONAL CYCLE" again until the unit chosen is the right one. Press the "SERVICE" button to save.
  The waiting time is now registered and programmed.

  The programming of the EC control card is now complete. The control card will activate the pump, starting with the waiting time.

2. ACTIVATE AN ADDITIONAL CYCLE

- Press the « additional cycle » button and the selected cycle will be activated.

3. REPLACE THE FUSE

- Remove the defective fuse and replace it by a new one.
- Press the « additional cycle » button to make sure that your change is successful.

4. INSTALL A RF (RADIO FREQUENCY) CHOKE

- Make sure to put the RF choke as near as you can of the control card.
- Pass each wire twice (double loop) around the RF choke.
- Make sure the RF choke is closed.
- Install the control card as far as you can of the radio frequency system.

5. To repair an error on the control card (blocking, low level, etc.)

- Perform the necessary repairs according to the error displayed;
    - Change the low level sensor, blocking sensor, fuses or motor.
- Press on the « additional cycle » button to reset the card in function.

## MAINTENANCE

Keep the control card in a dry environment.

# PROGRESSIVE MONOBLOC MBS
# DISTRIBUTION VALVES

# USER GUIDE

**ALLTECH GROUP – AUTHORIZED SUPPLIER OF ALLFETT PRODUCT'S**
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## DESCRIPTION

The progressive distribution valve administers grease to all other valves and/or lubrication points of the system. This distributor type is designed in monobloc structure with smaller size. Distributor block has a unique pilot control system divides the amount of grease coming from the pump equally between all lubrication lines on equipment.

Distributor block can be fed directly from pump or another progressive distributor connected to pump outlet. Specially designed outlet couplings should be used with monobloc type progressive distributors. This coupling helps any distributor outlet to be blocked.

The progressive distribution valves MBS have a manual greasing nipple that allows you to manually grease the system. It's also allowing you to test the valves in case of system failure.

## DISTRIBUTION VALVE COMPONENT

1. M10x1 Straight coupling
   Location by which the grease enters the distribution valve. Normally supplied with a Square T + grease nipple that serves as manual greasing point used in case of system failure. (not shown in the picture)

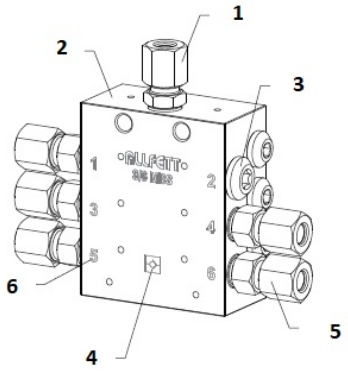
2. Distributor body :
   One-piece distribution valve: 6-8-10-12-14-16-18-20 outlets.

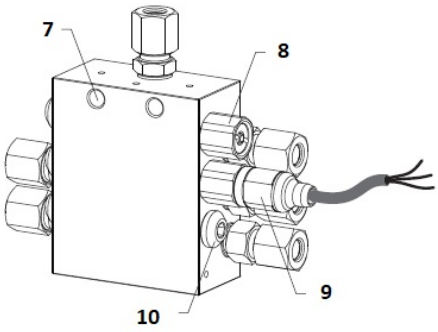
3. Locking screw (plug):
   Stopper inserted in a central element output to block it. By blocking an outlet, the next outlet receive double amount of grease.

4. Cross-Port marking

5. M10x1 monobloc type outlet coupling
   (Standard or check valve type):
   Mechanical device that allows lubricant flow in one direction only and blocks the other direction. Standard fittings are used on the outlets that lead to grease points. Check valves are used on all outlets lead to another monobloc distribution valve.

6. Outlet marking




7. Assembly holes
   Facilitates the attachment of the distributor.

8. Visual indicator (Optional)

9. Digital indicator (NpN or PnP) (Optional)

10. Piston screws

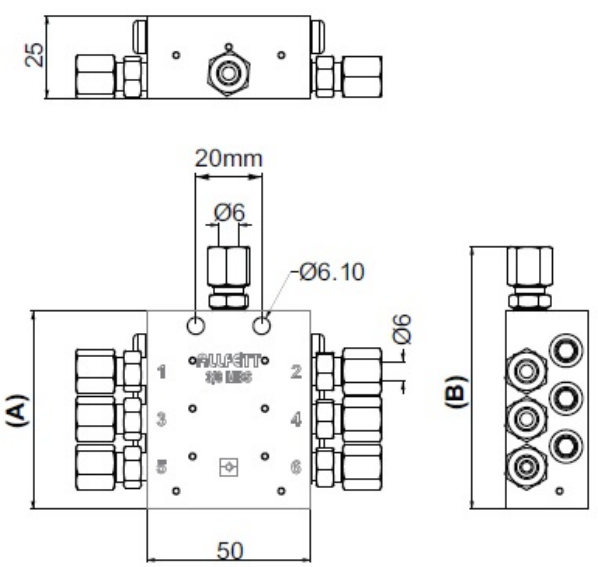
## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Operating pressure | Max : 400 Bars<br>Min : 6 Bars |
| Maximum hose length | Main line: 5 m.<br>Secondary line : 2 m. |
| Recommended lubricant | Grease NLGI 0-1-2[1] |
| Working temperature | -40°C to +80°C |
| Dosage available | Ø6mm - 0.113cc |

**Distance between distributor block and lubrication points must be 2m long. If necessary, check valve must be used on distributor outlets for distance between 2m and 5m.**

## DIMENSION (mm)

FIGURE - 1



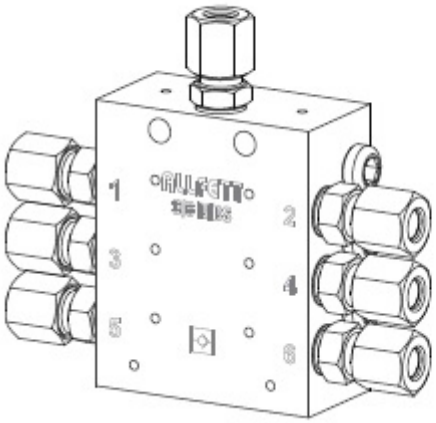

| | (A) | (B) |
|---|---|---|
| 6 outlets | 60 | 80 |
| 8 outlets | 74.5 | 94.5 |
| 10 outlets | 89 | 109 |
| 12 outlets | 103.5 | 123.5 |
| 14 outlets | 118 | 138 |
| 16 outlets | 132.5 | 152.5 |
| 18 outlets | 147 | 167 |
| 20 outlets | 161.5 | 181.5 |

[1]For more information concerning recommended grease, consult the section 2 of this manual.

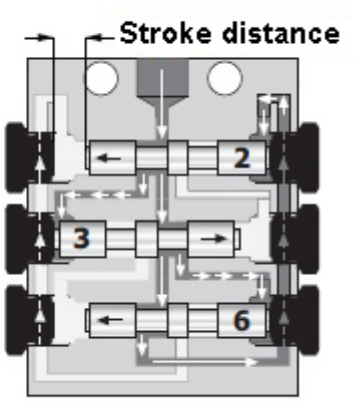
## WORKING PRINCIPLE

When electrical grease pump started to operate by electronic control unit; Pilot pistons inside distributor block are moved by grease delivered from pump. Lubrication point connected to an outlet is lubricated when a piston moves up to a stroke distance. At the same time, this movement of piston lets grease to next piston to be moved. This movement of pistons repeated in sequence as long as pump operates and depends of the distributor outlet counts.

**Distributor outlets**




**Pilot pistons**




Distributor block mainly used by connecting directly to a pump element outlet. When necessary, distributor block can be connected to another distributor outlet. By this way, dosage differences needed for lubrication points can be provided.

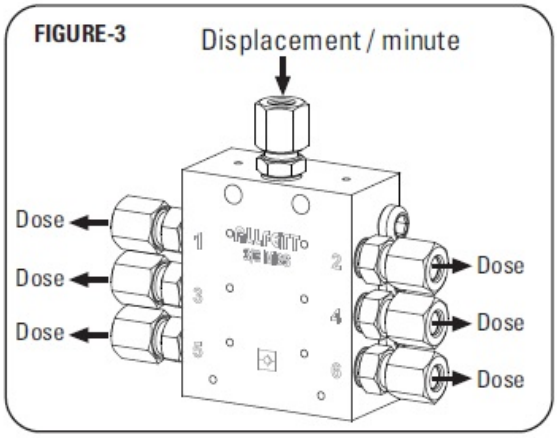
If any lubrication point is blocked and can't get any grease, pilot piston connected to this outlet stops and blocks grease to move next piston. After this blockage, grease exits from pump elements security valve. It can be seen that single or more lubrication points are blocked.

Lubrication system operation can be monitored by visual or digital indicators connected to distributor block.

**ATTENTION!**
**Special type outlet couplings must be used with monobloc distributors. Locking an outlet for getting more dosage from another outlet can only be done by using this type of couplings.**

## DOSE ADJUSTMENT INFORMATION

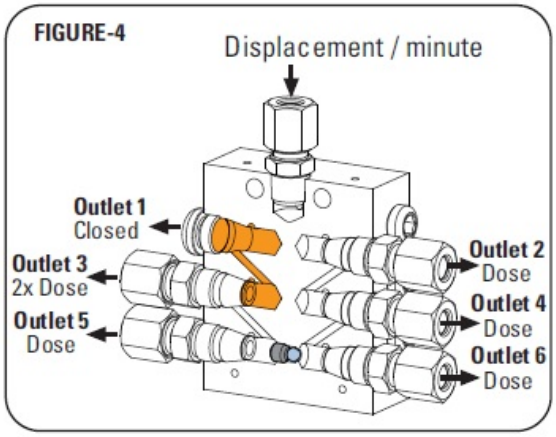
Monobloc distributors divide the grease delivered from pump with equal dosages. One or more outlets can be closed to get more grease from next bottom outlet. The method which is named blinding is described in following segments. Please follow the steps which is appropriate for your needs. Blinding is explained on 6 outlet distributor. Method can be applied on a distributor with more outlets.




**STANDARD DOSAGE**

As shown on FIGURE-3, all outlets of a single distributor block divide the grease delivered from pump with equal dosages.

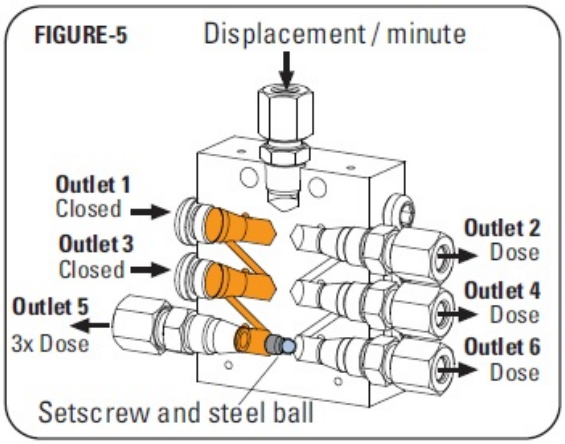
Standard dosage amount of a piston is 0.113cc per stroke.




**DOSE AMOUNT WHEN SINGLE OUTLET IS CLOSED.**

If single outlet is closed with locking screw, grease amount of blinded outlet will be added to next bottom outlet. As shown in FIGURE-4, amount of grease sent on outlet 3 is doubled.

Any of the outlets where left or right side of the distributor block can be used for blinding.

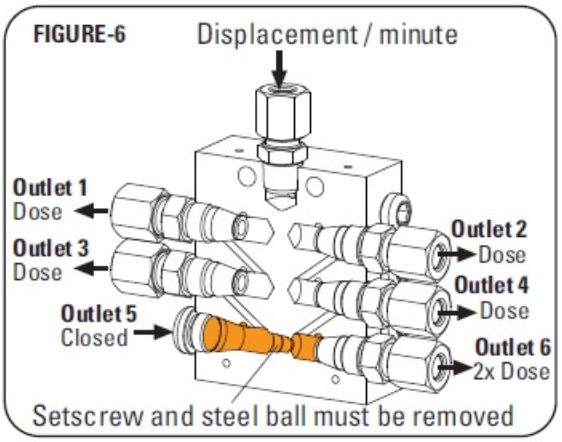



**DOSE AMOUNT WHEN MULTIPLE OUTLETS ARE CLOSED**

If multiple outlets are closed at single side of a block, grease amount of closed outlets will be added to next bottom outlet which is not closed. As shown on FIGURE-5, grease amount from outlet 1 and 3 is added to outlet 5.

Any amount of outlets can be closed on a single side of distributor block.

**ATTENTION!**
**There is a steel ball and set screw (Figure-5) inside undermost outlets. This steel ball and setscrew must be removed if blinding needs to be done across these outlets.**



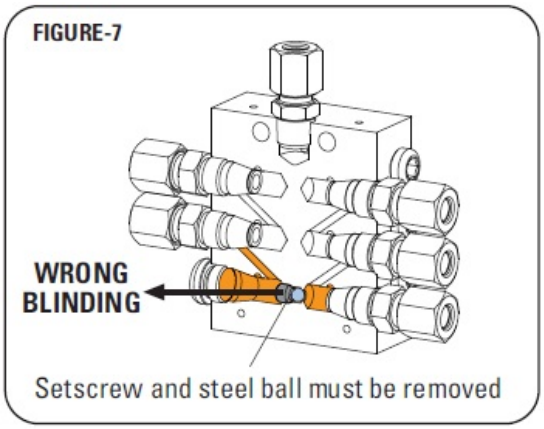

**CLOSING ONLY UNDERMOST OUTLETS**

If one of the undermost outlets will be closed, setscrew and steel ball (Figure- 5) inside outlet must be removed. This way grease can cross to other side of distributor block.

Only undermost outlets can let grease to cross side by side (Figure-6)

**ATTENTION!**
**Pistons inside monobloc type distributors are produced in standard diameter (0.113). These pistons can be specially produced at different diameters for dose adjustment at different rates. Please contact us for optional producing possibility.**

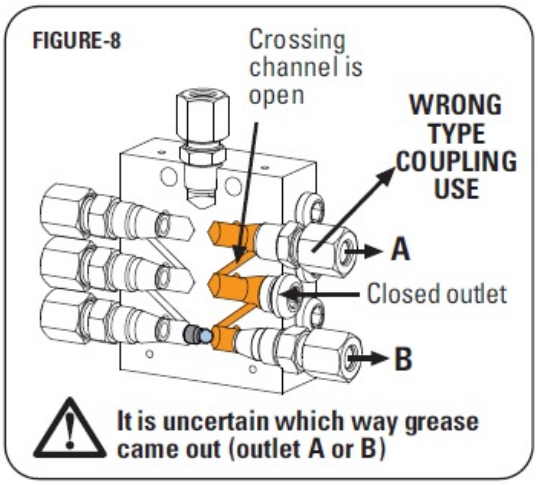
**WRONG WAY TO CLOSING OUTLETS**




WRONG BLINDING

Setscrew and steel ball must be removed when undermost outlets blinding. If not, distributor block stalled and don't send grease to lubrication points.

When this happens, grease comes out from security valve of pump element which is connected to distributor.




USING WRONG TYPE COUPLING

Special outlet coupling must be used on monobloc type distributor. This coupling helps for blinding outlets. For this reason using any other type of coupling cause fault.

When a different type coupling is used, crossing channels will not completely be closed (as shown in the FIGURE-8), so grease will choose a path that it finds easy.

**ATTENTION! As shown on FIGURE-8, middle outlet on right side is closed and wrong type coupling is placed on upper outlet. Only one outlet is closed on right side of distributor However, it is not possible to determine from which outlet grease will come out. Distributor continues to operate but one of the lubrication points can't be lubricated.**

## COMPONENT MODIFICATION

SAFETY MESURE

- Keep your working area clean.
- Always wear gloves when you work with grease.
- Make sure that the electric source is disconnected when you work with electric components.

1. CONNECT A HIGH PRESSURE HOSE

- Cut the hose with a 90 degrees angle.
- Screw the socket counter clockwise. Once done, make a circle with the hose or turn it up around your hand in order to prevent it to twist. Screw the hose with a 12mm wrench until it is tightened (the socket must sits on the hose).
- Fix the socket with a 12mm wrench and screw in the adaptor clockwise with a 10mm wrench. Make sure that the adaptor and the socket are tightened.
- **To connect in a distribution valve:** First, install the cap screw on the adaptor and then the DOUBLE side ring. Insert the adaptor in the distribution valve until your reach the bottom of the central element output. Screw it. End with an additional turn, do not over tighten.
- **To connect in a fitting:** Connect the adaptor in the fitting (the fitting includes a SINGLE side ring and a nut). End with an additional turn, do not over tighten.

2. CONNECT A POLYAMIDE HOSE

- Cut the hose with a 90 degrees angle.
- **To connect in a distribution valve:** First, install the cap screw on the hose and then the DOUBLE side ring. Insert the hose in the distribution valve until your reach the bottom of the central element output. Screw it. End with an additional turn, do not over tighten.
- **To connect in a fitting:** Connect the hose in the fitting (the fitting includes a SINGLE side ring and a nut). End with an additional turn, do not over tighten.

## MAINTENANCE

NOTE: During the original installation, the distribution valves are covered with a “protective liquid” that prevent corrosion.

1. IDENTIFICATION OF A BLOCKED POINT/DISTRIBUTION VALVE

- Make sure that the agitator is submerged by the lubricant inside the pump reservoir.
- Remove the hose on the main distribution valve (hose between the pump and the main valve). Press the “additional cycle” button on the control card to start the system. Verify that the lubricant is released by the hose removed. If yes, go to the next step. If not, check the hose, it could be jammed or crushed.
- Remove the hose on the main distribution valve. Manually pump the distribution valve with a filling gun. If it’s hard to pump, remove a secondary hose. Pump again. If it’s still hard to pump, remove another secondary hose (leave the first hose removed). Pump a third time. Repeat those steps for each hose.
- Diagnostic :
    - If, after all the hoses are removed, it’s still hard to pump, the distribution valve is blocked. Dissembled it and wash it with diesel.
    - If, at one time, it becomes easy to pump, it means that the point linked is blocked (verify hose condition). If the hose goes to another distribution valve, repeat previous steps.

PROGRESSIVE LUBRICATION SYSTEMS

# ALLFETT®

# PARTS LIST & ACCESSORIES

**Updated: September 2019**

Alltech Group

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# PROGRESSIVE LUBRICATION SYSTEM

## *Parts list*

The **ALLFETT** progressive lubrication system offers a maximal performance and flexibility. It is a versatile system thus very easily personalized. There modular system and the multiple choices of pumps offer a variety of configurations which adapt to all applications;

| | | |
|---|---|---|
| Off road | Harbour | Forestry |
| On road | Agriculture | Airport |
| Mining | Industrial | Paving. |

The Alltech Group proposes centralized lubrication system to keep an eye on your investment **in reducing maintenance costs** on your fleet, by **increasing the lifespan of parts** along with **permitting to save on time, lubricant and considerable maintenance costs.**

## Advantages

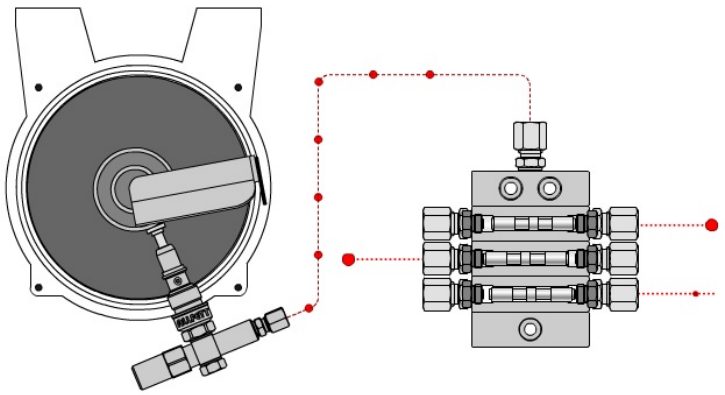
**Longer lasting components are the top advantages**. The potential savings through the increase lifespan of the components and an increase of productivity along with a more efficient consumption of grease will insure you a return on investment.

- Permits to **save significantly on grease up to 50%** compared to greasing manually.
- Each point receives a **precise amount of lubricant** corresponding to the manufacturer's recommendations.
- Maximize performance in **eliminating lost time** due to shut down for maintenance and repair.
- **Reduces maintenance costs** and repair costs.
- **Insures a complete lubrication** of the machine whatever.
- **Increases the life span of the parts** linked to the system compared to a manual lubrication.
- **Increases the resale value** of the equipment

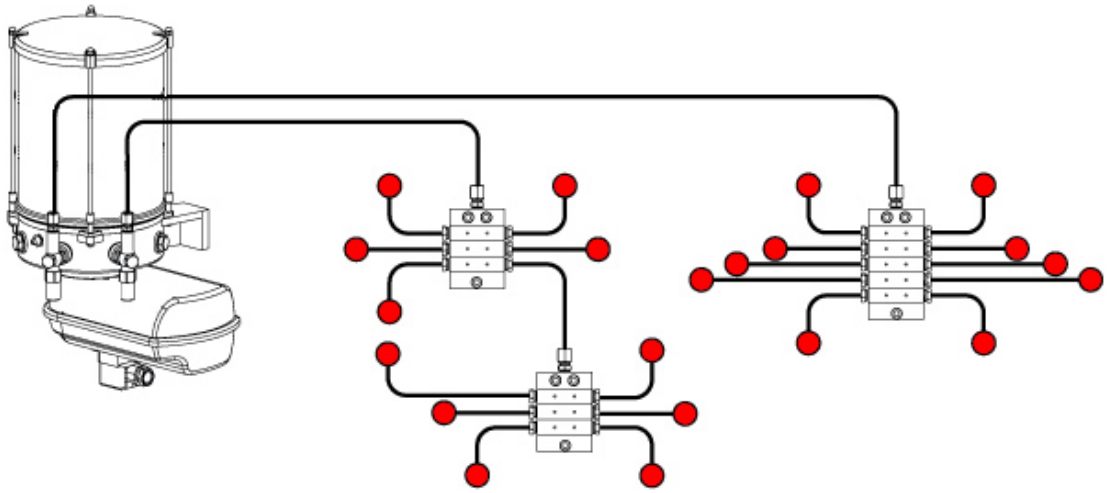
## Working principle

Their working principles are the same. At each motor rotation, the spring of the pump element (s) is (are) compressed in order to obtain the required pressure.

At the same time, inside the reservoir the mixing spoon is activated (clockwise) to mix and push the grease downward. This prevents grease separation and softens it when cold temperatures occur.



The progressive distribution valve function is to distribute grease to the other valves and points of lubrication. In each section, there is a valve that is used to start the lubricant. This is successively pushed to one side to another by the lubricant in a manner to which starts progressively towards the exits, one after another.



The amount of lubrication supplied by the pump is divided in the progressive valve and distributed to the lubrication points depending on the value of the section which supplies it. The amount delivered (cc) and the duration of the cycle from the pump determines the total amount sent to the lubrication points.

## Each equipment is different

Many factors are important when choosing an automatic lubrication system; the area being used, the work environment the option of the system, etc. The Alltech Group is conscious of this reality and **purposes a personalized system adapted to your needs**.

**Each system is pre-calibrated** in order to distribute the ideal grease to each point. Each machine has their customized calibration in order to meet the lubrication chart. The system **is adapted to all types of machines**.

Grease is the key element to your lubrication system. The choice of grease type is particularly important for the proper function of the system and will have direct impact on its efficiency.

## Recommended grease

After analyzing the **working** conditions of our automatic greasing system, here are the recommendations concerning the choice of the grease to use.

- Oil basis: Viscosity at 40ºC between 100 and 220 CST
- Thickener: lithium or calcium sulfonate type
- Additive: Extreme Pressure
- NLGI grade: 1 and 2 *(for colder regions, use EP-1 grease from October to April and EP-2 grease from April to October.)*

**Non desirable elements:**

- A high base oil viscosity will slow down the mobility of the product in cold weather.
- Certain thickener like barium, clays, etc.
- Solid additives like graphite, molly 5% and copper when the concentration exceeds 3 microns.

**Here is a list of accepted greases for the ALLFETT systems.**

- **Esso Epic EP**
- **Esso Unirex EP**
- **Shell Gadus S2 V220**
- **Shell Gadus S3 V220**
- **Texaco Multifak EP**
- **Ultramar Ultra Lithium EP**
- **Prolab GS-1000**
- **Sinto 250 EP**
- **Texas Refinery 880**
- **Hipertech APG-0 & 1**
- **Hipertech SG-2**
- **Irving Lubex EP**
- **Prolab GSA-6000**
- **Prolab AF-400**
- **Prolab Moly 125**
- **Prolab Moly 32-2**
- **Prolab Mily 32-0**

ATTENTION! Mixing different types of grease may damage your system. That's why for all other non-listed greases, please confirm with your **ALLFETT** distributor if it is acceptable or not at the risk of a void warranty if you use non-accepted grease.

# ELECTRIC PUMPS
## *VDC Series*

### *DESCRIPTION*

Progressive VDC pumps are powered by an electric motor with an eccentric cam. At each motor rotation, the spring of the pump element (s) is (are) compressed in order to obtain the required pressure.

| *TECHNICAL SPECIFICATIONS* | *ALL-1 mini* | *ALL-1* | *ALL-10* | |
|---|---|---|---|---|
| *Power source* | *12 or 24 VDC* | | | |
| *Maximum pressure* | *400 bars** | | | |
| *Protection class* | *IP54* | | | |
| *Recommended lubricant* | *Grease NLGI 0-1-2*** | | | |
| *Pump element* | *1 to 6* | | | |
| *Pump element capacity* | *2.5 cm³/min.* | | | |
| *Working temperature* | *-25°C to +80°C* | | | |
| *Reservoir capacity (liter)* | *1.5* | *4.5* | *6* | *14* |

** Factory adjustment: 290 bars*

*** The grease used must meet certain criteria, consult the section on recommended grease of this parts list.*

### *UTILISATION*

VDC Series pump insures a continuous lubrication at a regular intervals the greasing points and the special points which have difficult access. It works while the machines engine is running along when all points are in movement.

| | |
|---|---|
| **ALL-1 mini :** | Ideal for small size machines which require a small amount of grease. |
| **ALL-1 :** | Ideal for small to medium size machines which require a regular amount of grease. |
| **ALL-10 :** | Ideal for large size machines which require a large amount of grease. |

### *PARTS NUMBER*

| # Parts | Model | Size (liters) | Voltage | Unit | # Group |
|---|---|---|---|---|---|
| AG10.15.12.S6 | ALL-1 mini | 1.5 | 12 VDC | ea. | 1 |
| AG10.15.24.S6 | ALL-1 mini | 1.5 | 24 VDC | ea. | 1 |
| AG10.45.12.S6 | ALL-1 | 4.5 | 12 VDC | ea. | 1 |
| AG10.45.24.S6 | ALL-1 | 4.5 | 24 VDC | ea. | 1 |
| AG10.06.12.S6 | ALL-10 | 6 | 12 VDC | ea. | 1 |
| AG10.06.24.S6 | ALL-10 | 6 | 24 VDC | ea. | 1 |
| AG10.14A.12.S6 | ALL-10 | 14 | 12 VDC | ea. | 1 |
| AG10.14A.24.S6 | ALL-10 | 14 | 24 VDC | ea. | 1 |

*NOTE: 10 meters of electric wires (ET10.02.18.01) & a piston with safety valve (BG10.40.06.01) are included with all VDC Standard pump.*

*For other configurations (with EC control card, cover, etc.). Consult the respective sections of each pump model.*

# VDC ELECTRIC PUMPS
## *ALL-1 mini (1,5 liters)*

| *TECHNICAL SPECIFICATIONS* | *ALL-1 mini* |
|---|---|
| *Power source* | *12 or 24 VDC* |
| *Maximum pressure* | *400 bars** |
| *Protection class* | *IP54* |
| *Recommended lubricant* | *Grease NLGI 0-1-2*** |
| *Pump element* | *1 to 6* |
| *Pump element capacity* | *2.5 cm³/min.* |
| *Working temperature* | *-25°C to +80°C* |
| *Reservoir capacity (liter)* | *1.5* |

** Factory adjustment: 290 bars*

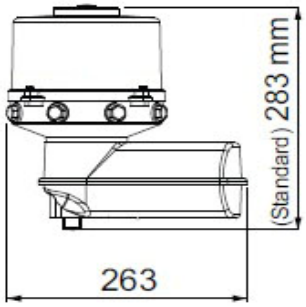
*** The grease used must meet certain criteria, consult the section on recommended grease of this parts list.*

| # Parts | Model | Size (liters) | Voltage | Unit | # Group |
|---|---|---|---|---|---|
| AG10.15.12.S6 | Standard, piston Ø6 | 1.5 | 12 VDC | ea. | 1 |
| AG15.15.12.S6 | Standard, piston Ø6, EC control card | 1.5 | | ea. | 1 |
| AG10.15.12.F6 | Cover*, piston Ø6 | 1.5 | | ea. | 1 |
| AG15.15.12.F6 | Cover*, piston Ø6, EC control card | 1.5 | | ea. | 1 |
| AG10.15.24.S6 | Standard, piston Ø6 | 1.5 | 24 VDC | ea. | 1 |
| AG15.15.24.S6 | Standard, piston Ø6,EC control card | 1.5 | | ea. | 1 |
| AG10.15.24.F6 | Cover*, piston Ø6 | 1.5 | | ea. | 1 |
| AG15.15.24.F6 | Cover*, piston Ø6, EC control card | 1.5 | | ea. | 1 |

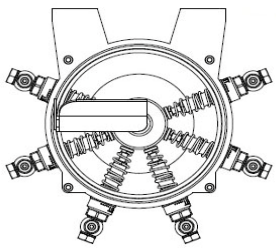
*NOTE: The ALL-1 pump (1.5 liters) includes 10 meters of electrical wires (ET10.02.18.01M) & a piston with safety valve (BG10.40.06.01).*

** Included perforated glass (BG10.25.18.F0), but the filler cap must be added separately (BG10.38.F0.00).*

### *SIZES*




*Top view*

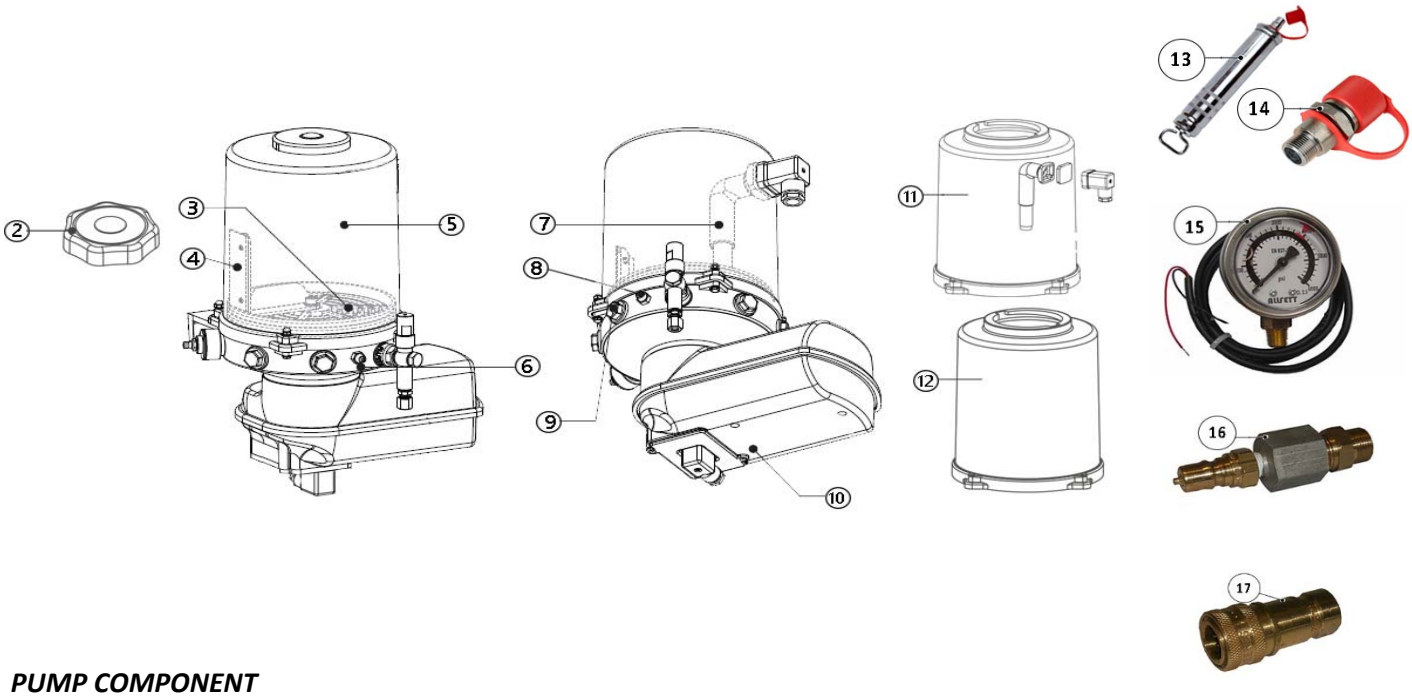


### *PUMP ELEMENT & CHECK VALVE*

| # Parts | Description | Unit | # Group |
|---|---|---|---|
| BG10.41.06.01 | Pump element body only Ø6 - Gold series | ea. | 25 |
| BG10.40.06.01 | Pump element with check valve Ø6 - Gold series | ea. | 25 |
| BG10.42.06.00 | Safety valve (relief valve) | ea. | 25 |
| BG10.43.06.00 | Spring for pump element | ea. | 25 |

# VDC ELECTRIC PUMPS

## *ALL-1 mini (1,5 liters)*




### *PUMP COMPONENT*

| # Picture | # Parts | Description | Unit | # Group |
|---|---|---|---|---|
| 2 | BG10.38.F0.00 | Lid only for filling cover without key (optional) | ea. | 25 |
| 3 | BG10.15.00.A1 | Filter only for monoblock pump | ea. | 25 |
| 4 | BG10.20.M1.00 | Spatula (agitator) | ea. | 25 |
| 5 | BG10.25.15.00 | Glass for 1.5 liters pump | ea. | 25 |
| 6 | BG10.10.06.A1 | Pump body (Aluminium) | ea. | 25 |
| 7 | BG10.50.15.00 | Teflon Low level grease indicator (optional)<br>(Including regular 1,5L reservoir) | ea. | 27 |
| 8 | EG45.00.18.HP | High pressure grease nipple M10x1 | ea. | 100 |
| 9 | BG10.13.PL.00 | Plug for pump body | ea. | 100 |
| 10 | BG10.06.00.A1 | Electric motor cover | ea. | 25 |
| 11 | BG10.50.15.F0 | Teflon Low level grease indicator 1,5L (optional)<br>(Including perforated glass - filling cover) | ea. | 27 |
| 12 | BG10.25.15.F0 | 1,5 liters perforated glass<br>for lockable cover | ea. | 25 |
| | BG10.05.12.00 | Motor 12V DC | ea. | 25 |
| | BG10.05.24.00 | Motor 24V DC | ea. | 25 |
| 13 | BG10.61.PI.00 | Filler gun (optional) | ea. | 27 |
| 14 | BG10.60.00.M20 | Filling nozzle (optional) | ea. | 27 |
| 15 | BG10.45.MA.00 | Noshok electric pressure switch with gauge<br>(optional) | ea. | 27 |
| 16 | BG10.62.K1.14 | Quick coupler kit for pump filling male<br>(optional)* | ea. | 26 |
| 17 | BG10.62.K2.14 | Quick coupler kit for pump filling female<br>(optional)* | ea. | 26 |

** Quick coupler included rubber cap.*

# VDC ELECTRIC PUMPS

## *ALL-1 (4,5 liters)*

| *TECHNICAL SPECIFICATIONS* | *ALL-1* |
|---|---|
| *Power source* | *12 or 24 VDC* |
| *Maximum pressure* | *400 bars** |
| *Protection class* | *IP54* |
| *Recommended lubricant* | *Grease NLGI 0-1-2*** |
| *Pump element* | *1 to 6* |
| *Pump element capacity* | *2.5 cm³/min.* |
| *Working temperature* | *-25°C to +80°C* |
| *Reservoir capacity (liter)* | *4.5* |

** Factory adjustment: 290 bars*

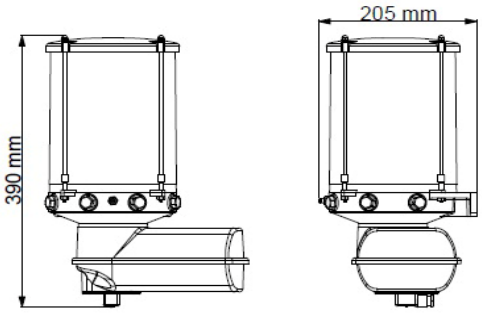
*** The grease used must meet certain criteria, consult the section on recommended grease of this parts list.*

| # Parts | Model | Size (liters) | Voltage | Unit | # Group |
|---|---|---|---|---|---|
| AG10.45.12.S6 | Standard, piston Ø6 | 4.5 | 12 VDC | ea. | 1 |
| AG15.45.12.S6 | Standard, piston Ø6, EC control card | 4.5 | | ea. | 1 |
| AG10.45.12.F6 | Cover*, piston Ø6 | 4.5 | | ea. | 1 |
| AG15.45.12.F6 | Cover*, piston Ø6, EC control card | 4.5 | | ea. | 1 |
| AG10.45.24.S6 | Standard, piston Ø6 | 4.5 | 24 VDC | ea. | 1 |
| AG15.45.24.S6 | Standard, piston Ø6, EC control card | 4.5 | | ea. | 1 |
| AG10.45.24.F6 | Cover*, piston Ø6 | 4.5 | | ea. | 1 |
| AG15.45.24.F6 | Cover*, piston Ø6, EC control card | 4.5 | | ea. | 1 |

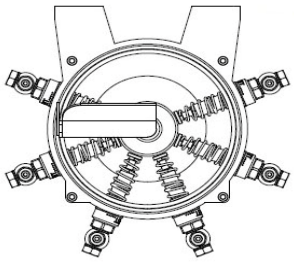
*NOTE: The ALL-1 pump (4.5 liters) includes 10 meters of electrical wires (ET10.02.18.01M) & a piston with safety valve (BG10.40.06.01).*

**Including the filling cover base, the cap must be chose separately (BG10.38.F0.00)*

### *SIZES*

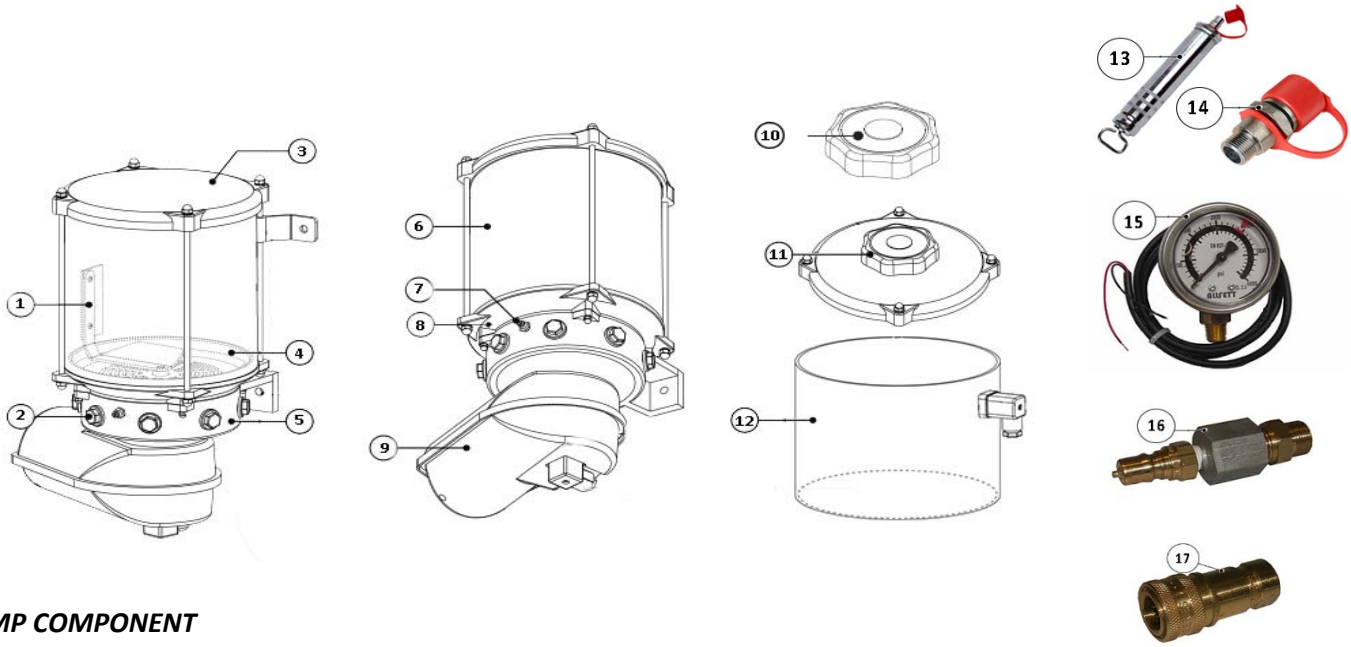



*Top view*



### *PUMP ELEMENT & CHECK VALVE*

| # Parts | Description | Unit | # Group |
|---|---|---|---|
| BG10.41.06.01 | Pump element body only Ø6 - Gold series | ea. | 25 |
| BG10.40.06.01 | Pump element with check valve Ø6 - Gold series | ea. | 25 |
| BG10.42.06.00 | Safety valve (relief valve) | ea. | 25 |
| BG10.43.06.00 | Spring for pump element | ea. | 25 |




***PUMP COMPONENT***

| # Picture | # Parts | Description | Unit | # Group |
|---|---|---|---|---|
| 1 | BG10.20.00.02 | Spatula (agitator) | ea. | 25 |
| 2 | BG10.13.PL.00 | Plug for pump body | ea. | 100 |
| 3 | BG10.35.ST.00 | Standard pump cover (monoblock) | ea. | 25 |
| 4 | BG10.15.00.A1 | Filter only for monoblock pump | ea. | 25 |
| 5 | BG10.10.06.A1 | Pump body for pump (Aluminium) | ea. | 25 |
| 6 | BG10.25.45.00 | Monoblock reservoir glass 4.5 liters | ea. | 25 |
| 7 | EG45.00.18.HP | High pressure grease nipple M10x1 | ea. | 100 |
| 9 | BG10.06.00.A1 | Electric motor cover | ea. | 25 |
| | BG10.05.12.00 | Motor 12V DC | ea. | 25 |
| | BG10.05.24.00 | Motor 24V DC | ea. | 25 |
| 10 | BG10.38.F0.00 | LID only for filling cover (option) | ea. | 25 |
| 11 | BG10.36.F0.00 | Filling cover - monoblock pump without key (optional) | ea. | 25 |
| 12 | BG10.50.45.00 | Low level grease indicator monoblock (optional) (Includindg reservoir) | ea. | 27 |
| 13 | BG10.61.PI.00 | Filler gun (optional) | ea. | 27 |
| 14 | BG10.60.00.M20 | Filling nozzle (optional) | ea. | 27 |
| 15 | BG10.45.MA.00 | Noshok electric pressure switch with gauge (optional) | ea. | 27 |
| 16 | BG10.62.K1.14 | Quick coupler kit for pump filling male (optional)* | ea. | 26 |
| 17 | BG10.62.K2.14 | Quick coupler kit for pump filling female (optional)* | ea. | 26 |

** Quick coupler included rubber cap.*

# VDC ELECTRIC PUMPS
## *ALL-10 (6 liters)*


| *TECHNICAL SPECIFICATIONS* | *ALL-10* |
|---|---|
| *Power source* | *12 or 24 VDC* |
| *Maximum pressure* | *400 bars** |
| *Protection class* | *IP54* |
| *Recommended lubricant* | *Grease NLGI 0-1-2*** |
| *Pump element* | *1 to 6* |
| *Pump element capacity* | *2.5 cm³/min..* |
| *Working temperature* | *-25°C to +80°C* |
| *Reservoir capacity (liter)* | *6* |

** Factory adjustment: 290 bars*

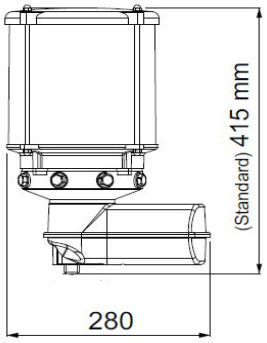
*** The grease used must meet certain criteria, consult the section on recommended grease of this parts list.*

| # Parts | Model | Size (liters) | Voltage | Unit | # Group |
|---|---|---|---|---|---|
| AG10.06.12.S6 | Standard, piston Ø6 | 6 | 12 VDC | ea. | 1 |
| AG15.06.12.S6 | Standard, piston Ø6, EC control card | 6 | | ea. | 1 |
| AG10.06.12.F6 | Cover*, piston Ø6 | 6 | | ea. | 1 |
| AG15.06.12.F6 | Cover*, piston Ø6, EC control card | 6 | | ea. | 1 |
| AG10.06.24.S6 | Standard, piston Ø6 | 6 | 24 VDC | ea. | 1 |
| AG15.06.24.S6 | Standard, piston Ø6, EC control card | 6 | | ea. | 1 |
| AG10.06.24.F6 | Cover*, piston Ø6 | 6 | | ea. | 1 |
| AG15.06.24.F6 | Cover*, piston Ø6, EC control card | 6 | | ea. | 1 |

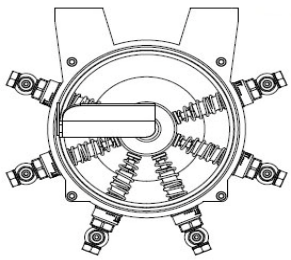
*NOTE: The ALL-1 pump (6 liters) includes 10 meters of electrical wires (ET10.02.18.01M) & a piston with safety valve (BG10.40.06.01).*

**Including the filling cover base, the cap must be chose separately (BG10.38.F0.00)*

### *SIZES*

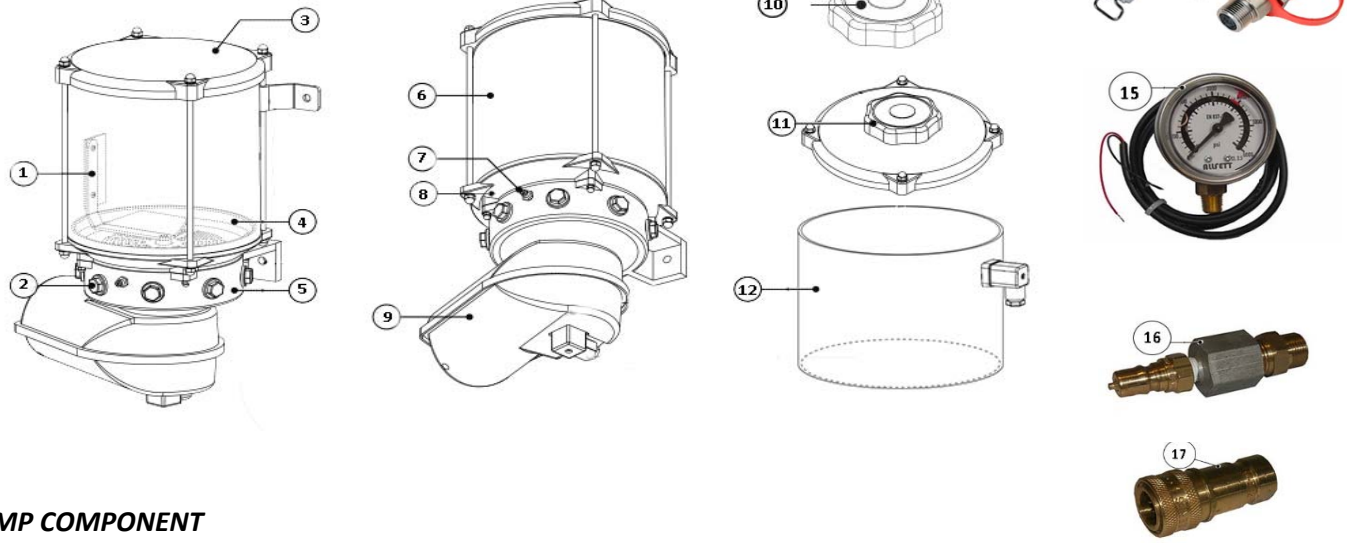



*Top view*



### *PUMP ELEMENT & CHECK VALVE*

| # Parts | Description | Unit | # Group |
|---|---|---|---|
| BG10.41.06.01 | Pump element body only Ø6 - Gold series | ea. | 25 |
| BG10.40.06.01 | Pump element with check valve Ø6 - Gold series | ea. | 25 |
| BG10.42.06.00 | Safety valve (relief valve) | ea. | 25 |
| BG10.43.06.00 | Spring for pump element | ea. | 25 |




### *PUMP COMPONENT*

| # Picture | # Parts | Description | Unit | # Group |
|---|---|---|---|---|
| 1 | BG10.20.00.02 | Spatula (agitator) | ea. | 25 |
| 2 | BG10.13.PL.00 | Plug for pump body | ea. | 100 |
| 3 | BG10.35.ST.00 | Standard pump cover (monoblock) | ea. | 25 |
| 4 | BG10.15.00.A1 | Filter only for monoblock pump | ea. | 25 |
| 5 | BG10.10.06.A1 | Pump body for pump (Aluminium) | ea. | 25 |
| 6 | BG10.25.45.00 | Monoblock reservoir glass 4.5 liters | ea. | 25 |
| 7 | EG45.00.18.HP | High pressure grease nipple M10x1 | ea. | 100 |
| 8 | BG10.13.SP.A1 | Aluminium adaptor | ea. | 25 |
| 9 | BG10.06.00.A1 | Electric motor cover | ea. | 25 |
| | BG10.05.12.00 | Motor 12V DC | ea. | 25 |
| | BG10.05.24.00 | Motor 24V DC | ea. | 25 |
| 10 | BG10.38.F0.00 | LID only for filling cover (option) | ea. | 25 |
| 11 | BG10.36.F0.00 | Filling cover - monoblock pump without key (optional) | ea. | 25 |
| 12 | BG10.50.45.00 | Low level grease indicator monoblock (optional) (Includindg reservoir) | ea. | 27 |
| 13 | BG10.61.PI.00 | Filler gun (optional) | ea. | 27 |
| 14 | BG10.60.00.M20 | Filling nozzle (optional) | ea. | 27 |
| 15 | BG10.45.MA.00 | Noshok electric pressure switch with gauge (optional) | ea. | 27 |
| 16 | BG10.62.K1.14 | Quick coupler kit for pump filling male (optional)* | ea. | 26 |
| 17 | BG10.62.K2.14 | Quick coupler kit for pump filling female (optional)* | ea. | 26 |

** Quick coupler included rubber cap.*

# VDC ELECTRIC PUMPS
## *ALL-10 (14 liters)*

| *TECHNICAL SPECIFICATIONS* | *ALL-10* |
|---|---|
| *Power source* | *12 or 24 VDC* |
| *Maximum pressure* | *400 bars** |
| *Protection class* | *IP54* |
| *Recommended lubricant* | *Grease NLGI 0-1-2*** |
| *Pump element* | *1 to 6* |
| *Pump element capacity* | *2.5 cm³/min.* |
| *Working temperature* | *-25°C to +80°C* |
| *Reservoir capacity (liter)* | *14* |

** Factory adjustment: 290 bars*

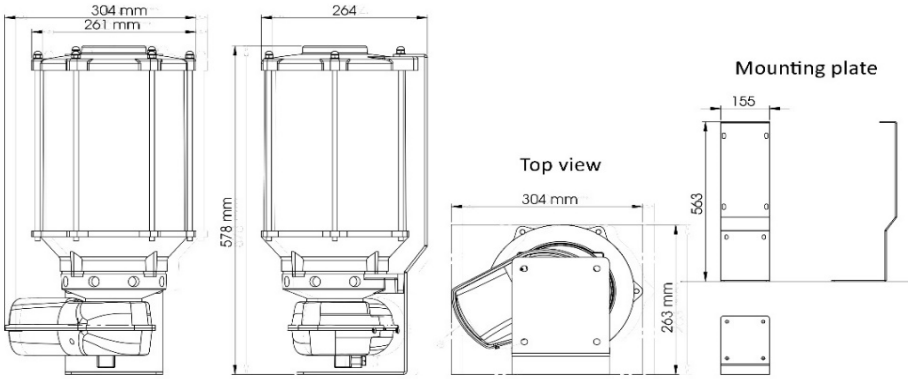
** *The grease used must meet certain criteria, consult the section on recommended grease of this parts list.*

| # Parts | Model | Size (liters) | Voltage | Unit | # Group |
|---|---|---|---|---|---|
| AG10.14A.12.S6 | Standard, piston Ø6 | 14 | 12 VDC | ea. | 1 |
| AG15.14A.12.S6 | Standard, piston Ø6, EC control card | 14 | | ea. | 1 |
| AG10.14A.12.F6 | Cover*, piston Ø6 | 14 | | ea. | 1 |
| AG15.14A.12.F6 | Cover*, piston Ø6, EC control card | 14 | | ea. | 1 |
| AG10.14A.24.S6 | Standard, piston Ø6 | 14 | 24 VDC | ea. | 1 |
| AG15.14A.24.S6 | Standard, piston Ø6, EC control card | 14 | | ea. | 1 |
| AG10.14A.24.F6 | Cover*, piston Ø6 | 14 | | ea. | 1 |
| AG15.14A.24.F6 | Cover*, piston Ø6, EC control card | 14 | | ea. | 1 |

*NOTE: The ALL-1 pump (14 liters) includes 10 meters of electrical wires (ET10.02.18.01M) & a piston with safety valve (BG10.40.06.01) & a Mounting plate (BG10.65.02.01).*

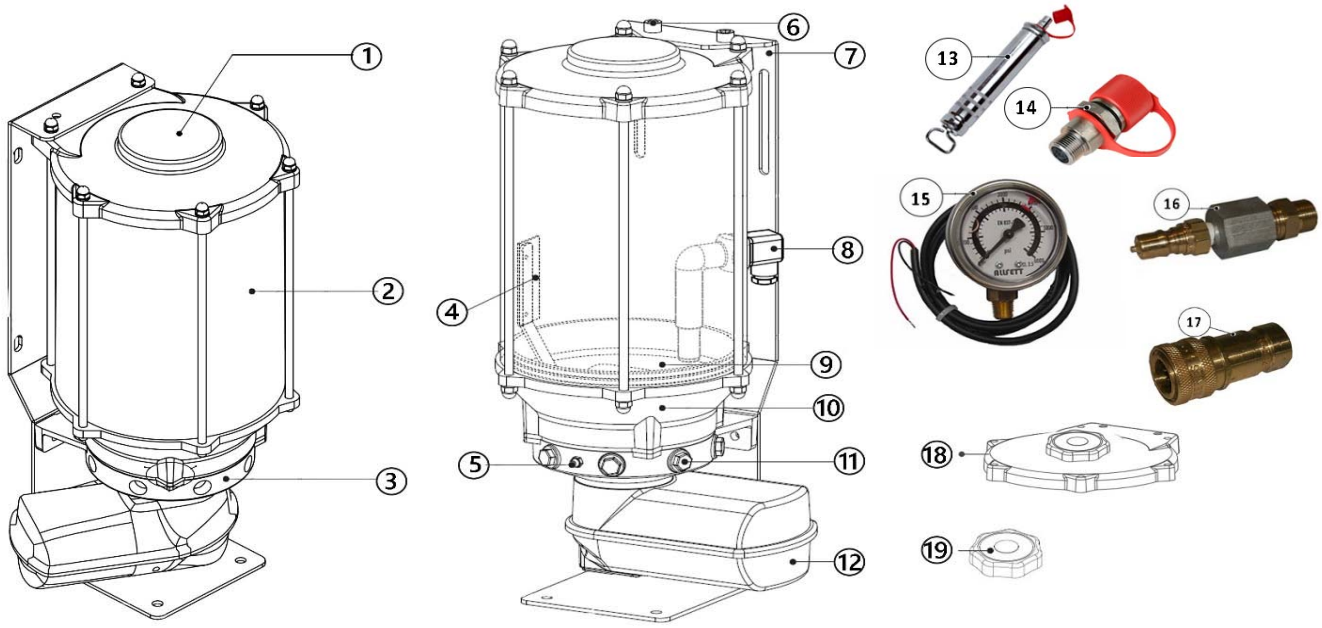
**Including the filling cover base, the cap must be chose separately (BG10.38.F0.00)*

### *DIMENSIONS*




### *PUMP ELEMENT & CHECK VALVE*

| # Parts | Description | Unit | # Group |
|---|---|---|---|
| BG10.41.06.01 | Pump element body only Ø6 - Gold series | ea. | 25 |
| BG10.40.06.01 | Pump element with check valve Ø6 - Gold series | ea. | 25 |
| BG10.42.06.00 | Safety valve (relief valve) | ea. | 25 |
| BG10.43.06.00 | Spring for pump element | ea. | 25 |




***PUMP COMPONENT***

| # Picture | # Parts | Description | Unit | # Group |
|---|---|---|---|---|
| 1 | BG10.35.ST.01 | Standard pump cover (monoblock) | ea. | 25 |
| 2 | BG10.25.14.00 | Monoblock reservoir glass 14L | ea. | 25 |
| 3 | BG10.10.06.A1 | Pump body for pump (6 outlets) | ea. | 25 |
| 4 | BG10.20.00.01 | Spatula (agitator) | ea. | 25 |
| 5 | EG45.00.18.HP | High pressure grease nipple M10x1 | ea. | 100 |
| 6 | XBG10.33.B8.25 | Bolt for mounting plate (M8 x 25mm) | ea. | 100 |
| 7 | BG10.65.02.01 | Mounting plate for pump (Large) | ea. | 100 |
| 8 | BG10.50.14.00 | Low level grease indicator monoblock (optional) (Includindg reservoir) | ea. | 27 |
| 9 | BG10.15.00.A1 | Filter only for monoblock pump | ea. | 25 |
| 10 | BG10.13.SP.A1 | Reservoir expansion spacer for ALL-10 | ea. | 25 |
| 11 | BG10.13.PL.00 | Plug for pump body | ea. | 100 |
| 12 | BG10.06.00.A1 | Electric motor cover | ea. | 25 |
| | BG10.05.12.00 | Motor 12V DC | ea. | 25 |
| | BG10.05.24.00 | Motor 24V DC | ea. | 25 |
| 13 | BG10.61.PI.00 | Filler gun (optional) | ea. | 27 |
| 14 | BG10.60.00.M20 | Filling nozzle (optional) | ea. | 27 |
| 15 | BG10.45.MA.00 | Noshok electric pressure switch with gauge (optional) | ea. | 27 |
| 16 | BG10.62.K1.14 | Quick coupler kit for pump filling male (optional)* | ea. | 26 |
| 17 | BG10.62.K2.14 | Quick coupler kit for pump filling female (optional)* | ea. | 26 |
| 18 | BG10.36.F0.01 | Filling cover - monoblock pump without key (optional) | ea. | 25 |
| 19 | BG10.38.F0.00 | Filling cover - monoblock pump with key (optional) | ea. | 25 |

** Les kits d'attache rapide incluent un capuchon de caoutchouc*

# CONTROL CARDS

## *DESCRIPTION*

The electronic control cards is used to operate and monitor the automatic lubrication system by managing the working and stand-by periods. This allows you to adjust it to supply the right amount of lubricant to each point. The working period, number of pulse and stand-by periods can be easily adjusted with the lubrication chart.

| *TECHNICAL SPECIFICATIONS* | *EK-9* | *EC control card* |
|---|---|---|
| *Voltage* | *10-30V* | |
| *Protection class* | *IP40* | *IP65* |
| *Working temperature* | *-25°C to 80°C* | *-40°C to 80°C* |
| *Amperage* | *3A* | *3A* |
| *Monitored control* | *Pulse and Timer* | *Timer* |
| *Working period* | *Between 1 sec. and 60 min. OR Between 1 pulses and 99 pulses** | *Between 1 sec and 99hrs* |
| *Stand-by period* | *Between 1 sec and 99hrs* | *Between 1 sec and 99hrs* |

** Since 2019, the EK-9 control card can operate in pulsation and minutes.*

## *APPLICATION*

The electronic control cards is used to operate and monitor the automatic lubrication system They are compatibles with all **ALLFETT** VDC progressive pumps.

| | |
|---|---|
| **EK-9 :** | Used on progressive system (Cards used by default with all systems since 2013.) when it is POSSIBLE to install it sheltered from bad weather. |
| **EC:** | Used on progressive systems when it is IMPOSSIBLE to install the control card sheltered from the weather. (Ex: The equipment doesn't have a cab). |

## *PARTS NUMBER*

| # Parts | Modal | Unit | Group |
|---|---|---|---|
| CG10.EX.09.00 | EK-9 | ea. | 50 |
| CG10.EX.10.IN | EC (integrated control card) | ea. | 50 |

*NOTE: All electronic control cards includes a RF (radio frequency) choke snap-on ferrite (CG15.FE.00.43).*

# CONTROL CARDS

## *EK-9*

The electronic control cards is used to operate and monitor the automatic lubrication system by managing the working and stand-by periods. This allows you to adjust it to supply the right amount of lubricant to each point. The working and stand-by periods can be easily adjusted with the lubrication chart.

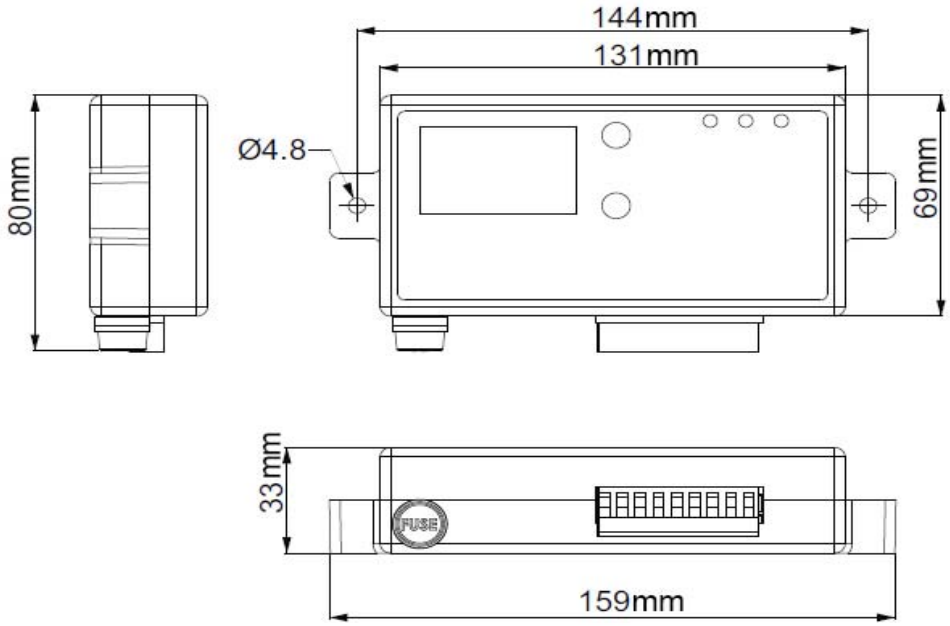

| *TECHNICAL SPECIFICATIONS* | *EK-9* |
|---|---|
| *Voltage* | *10-30V* |
| *Protection class* | *IP40* |
| *Working temperature* | *-25°C to 80°C* |
| *Amperage* | *3A* |
| *Monitored control* | *Pulse and timer* |
| *Working period* | *Between 1 sec. and 60 min. OR*<br>*Between 1 pulses and 99 pulses** |
| *Stand-by period* | *Between 1 sec and 99hrs* |

** Since 2019, the EK-9 control card can operate in pulsations and minutes.*

| # Parts | Modal | Unit | Group |
|---|---|---|---|
| CG10.EX.09.00 | EK-9 | ea. | 50 |

*NOTE: The EK-9 control card includes a RF (radio frequency) choke snap-on ferrite (CG15.FE.00.43).*

### *SIZES*




### *CONTROL CARD COMPONENT*

| # picture | # Parts | Description | Unit | # Group |
|---|---|---|---|---|
| 1 | CG15.FU.00.03 | 3 amps fuse | ea. | 50 |
| 2 | CG15.FE.00.43 | RF (radio frequency) choke snap-on ferrite 43 | ea. | 100 |

# CONTROL CARDS
## *EC control card (integrated)*

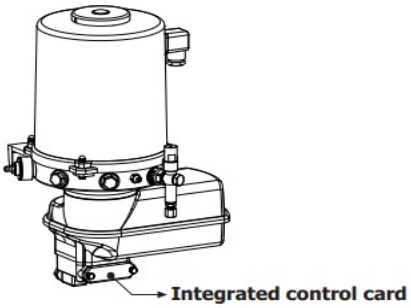
The electronic control cards is used to operate and monitor the automatic lubrication system by managing the working and stand-by periods. This allows you to adjust it to supply the right amount of lubricant to each point. The working and stand-by periods can be easily adjusted with the lubrication chart.

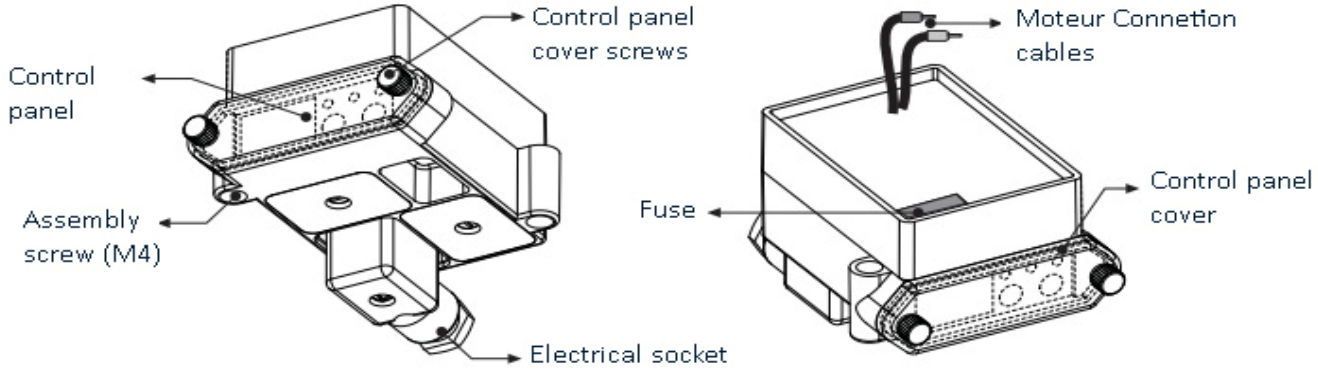
| *TECHNICAL SPECIFICATIONS* | *EC (Integrated)* |
|---|---|
| *Voltage* | *10-30V* |
| *Protection class* | *IP65* |
| *Working temperature* | *-40°C to 80°C* |
| *Amperage* | *3A* |
| *Monitored control* | *Timer* |
| *Working period* | *Between 1 sec and 99hrs* |
| *Stand-by period* | *Between 1 sec and 99hrs* |

| # Parts | Modal | Unit | Group |
|---|---|---|---|
| CG10.IN.00.00 | EC (integrated) | ea. | 50 |

*NOTE: The EC control card includes a RF (radio frequency) choke snap-on ferrite (CG15.FE.00.43).*

### *CONTROL CARD COMPONENT*




| # picture | # Parts | Description | Unit | # Group |
|---|---|---|---|---|
| 1 | CG15.FU.00.03 | 3 amps fuse | ea. | 50 |
| 2 | CG15.FE.00.43 | RF (radio frequency) choke snap-on ferrite 43 | ea. | 100 |

# DISTRIBUTION VALVES

## *DESCRIPTION*

The progressive distribution valve administers grease to all other valves and/or lubrication points of the system. The amount of lubricant (cc) released to one point can differ from one another. The values of the central elements are selected according to the equipment needs and its working environment. The valve consists in modules that can be assembled into numerous configurations.

| *TECHNICAL SPECIFICATIONS* | *Progressive* | *LD Progressive* | *Progressive Monobloc* |
|---|---|---|---|
| *Dosage available by section* | *0,050cc*<br>*0,078cc*<br>*0,113cc* | *0,060cc*<br>*0,100cc*<br>*0,140cc*<br>*0,190cc*<br>*0,250cc* | *0.113cc* |
| *Working pressure* | *Maximum: 400 bars*<br>*Minimum: 7.5 bars* | | |
| *Lubrication point (s) per valve* | *Maximum: 18*<br>*Minimum: 2* | | *Maximum: 20*<br>*Minimum: 2* |
| *Working temperature* | *-25°C to +80°C* | *-40°C to +80°C* | |
| *Inlet / Outlet connection* | *M10x1* | | |
| *Recommended lubricant* | *Grease NLGI 0-1-2** | | |
| *Material* | *Galvanized steel* | | |

** The grease used must meet certain criteria, consult the section on recommended grease of this parts list.*

## *UTILISATION*

Each distribution valve is pre-calibrated in order to distribute the ideal grease to each point (according to the lubrication chart of the equipment).

| | |
|---|---|
| **Progressive:** | Recommended for small to medium size machines which require a regular amount of grease. |
| **LD Progressive:** | Recommended for large size machines which require a large amount of grease. They can supply grease to stations that are at an impressive distance. |
| **Progressive Monobloc:** | Used on machinery whose lubrication points require a similar amount of grease. |

## *PARTS NUMBER*

| PROGRESSIVE | LD PROGRESSIVE | PROGRESSIVE MONOBLOC | Description | Unit | Group |
|---|---|---|---|---|---|
| # Parts | # Parts | # Parts | # section / # outlet | | |
| DG10.RG.03.06 | DG10.LD.03.06 | DG10.MB.00.06 | 3/6 | ea. | 75 |
| DG10.RG.04.08 | DG10.LD.04.08 | DG10.MB.00.08 | 4/8 | ea. | 75 |
| DG10.RG.05.10 | DG10.LD.05.10 | DG10.MB.00.10 | 5/10 | ea. | 75 |
| DG10.RG.06.12 | DG10.LD.06.12 | DG10.MB.00.12 | 6/12 | ea. | 75 |
| DG10.RG.07.14 | DG10.LD.07.14 | DG10.MB.00.14 | 7/14 | ea. | 75 |
| DG10.RG.08.16 | DG10.LD.08.16 | DG10.MB.00.16 | 8/16 | ea. | 75 |
| DG10.RG.09.18 | DG10.LD.09.18 | DG10.MB.00.18 | 9/18 | ea. | 75 |
| | | DG10.MB.00.20 | 10/20 | ea. | 75 |

*The progressive distribution valves have a manual greasing nipple that allows you to manually grease the system. It's also allowing you to test the valves in case of system failure.*
*The number of section does not include the starting element, or the end element.*

The progressive distribution valve administers grease to all other valves and/or lubrication points of the system. The amount of lubricant (cc) released to one point can differ from one another. The values of the central elements are selected according to the equipment needs and its working environment. The valve consists in modules that can be assembled into numerous configurations.

| ***TECHNICAL SPECIFICATIONS*** | ***Progressive Valve*** |
|---|---|
| *Dosage available by section* | *0,050cc*<br>*0,078cc*<br>*0,113cc* |
| *Working pressure* | *Maximum: 400 bars*<br>*Minimum: 7.5 bars* |
| *Lubrication point (s) per valve* | *Maximum: 18*<br>*Minimum: 2* |
| *Working temperature* | *-25°C to +80°C* |
| *Inlet / Outlet connection* | *M10x1* |
| *Recommended lubricant* | *Graisse NLGI 0-1-2** |
| *Material* | *Galvanized steel* |

** The grease used must meet certain criteria, consult the section on recommended grease of this parts list.*

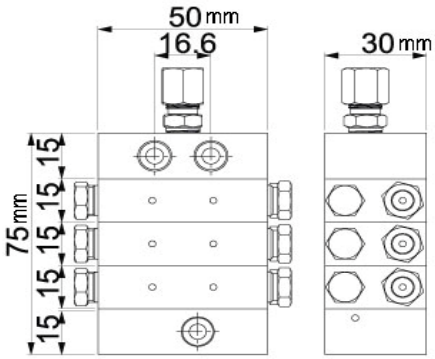
| # Parts | Description (# section / # outlet) | Unit | # Group |
|---|---|---|---|
| DG10.RG.03.06 | 3/6 | ea. | 75 |
| DG10.RG.04.08 | 4/8 | ea. | 75 |
| DG10.RG.05.10 | 5/10 | ea. | 75 |
| DG10.RG.06.12 | 6/12 | ea. | 75 |
| DG10.RG.07.14 | 7/14 | ea. | 75 |
| DG10.RG.08.16 | 8/16 | ea. | 75 |
| DG10.RG.09.18 | 9/18 | ea. | 75 |

*Note: Each distribution valve has a distinct calibration according to the lubrication chart of the equipment that needs to be lubricate.*

*The progressive distribution valves have a manual greasing nipple that allows you to manually grease the system. It's also allowing you to test the valves in case of system failure.*

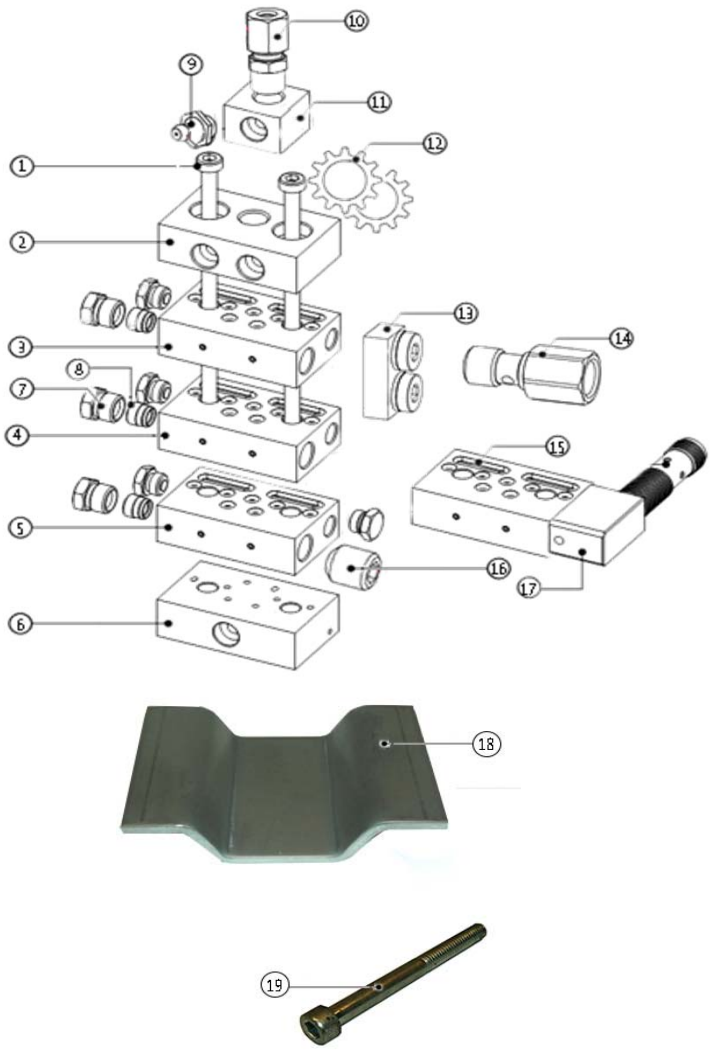
*The number of section does not include the starting element, or the end element.*

***SIZES***



***PROGRESSIVE DISTRIBUTION VALVE COMPONENT***

*Note: Each distribution valve has a distinct calibration according to the lubrication chart of the equipment that needs to be lubricate.*

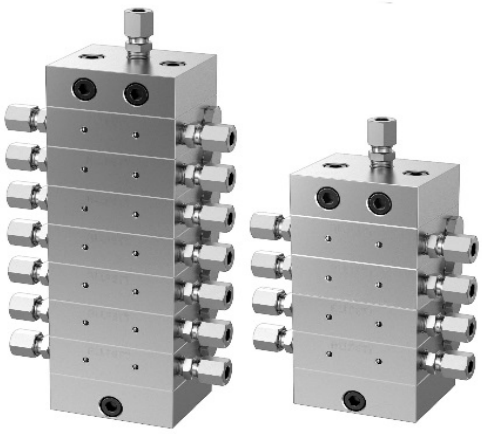



| # picture | # Parts | Description | Unit | Group |
|---|---|---|---|---|
| 1 | DG30.RG.03.070 | Bolt M6x70mm (3/6) | ea. | 75 |
| | DG30.RG.04.090 | Bolt M6x90mm (4/8) | ea. | 75 |
| | DG30.RG.05.100 | Bolt M6x100mm (5/10) | ea. | 75 |
| | DG30.RG.06.120 | Bolt M6x120mm (6/12) | ea. | 75 |
| | DG30.RG.07.130 | Bolt M6x130mm (7/14) | ea. | 75 |
| | DG30.RG.08.150 | Bolt M6x150mm (8/16) | ea. | 75 |
| | DG30.RG.09.160 | Bolt M6x160mm (9/18) | ea. | 75 |
| 2 | DG20.RG.000.ST | Starting element | ea. | 75 |
| 3 | DG20.RG.050.CT | Central element (50) | ea. | 75 |
| 4 | DG20.RG.078.CT | Central element (78) | ea. | 75 |
| 5 | DG20.RG.113.CT | Central element (113) | ea. | 75 |
| 6 | DG20.RG.000.EN | End element | ea. | 75 |
| 7 | EG35.00.06.00 | Cap screw 6mm | ea. | 100 |
| 8 | EG30.DB.06.00 | Double sided compr. ring 6mm | ea. | 100 |
| 9 | EG45.00.18.HP | High pressure grease nipple M10 | ea. | 100 |
| 10 | EG70.M10.06.L2 | Straight fitting M10 x 6mm LL compression | ea. | 100 |
| 11 | EG92.03.18.18 | Brass tee M x F x F 1/8'' NPT | ea. | 100 |
| 12 | DG40.00.ST.00 | Star washer M6 | ea. | 75 |
| 13 | DG40.RG.BD.00 | Complete steel bridge | ea. | 75 |
| 14 | DG40.00.CV.00 | Check valve | ea. | 100 |
| 15 | DG40.00.OR.02 | O'ring 2 x 5 x 1.5 | ea. | 75 |
| | DG40.00.OR.06 | O'ring 6 x 9 x 1.5 | ea. | 75 |
| | DG40.00.OR.07 | O'ring 7.10 x 10.30 x 1.6 | ea. | 75 |
| | DG40.00.OR.11 | O'ring 11.10 x 14.30 x 1.6 | ea. | 75 |
| 16 | DG40.00.PG.00 | Plug M10 | ea. | 100 |
| 17 | DG20.RG.113.CTPL | Central element with cycle switch | ea. | 75 |
| 18 | DG40.00.SD.00 | Bracket for progressive distributor | ea. | 100 |
| 19 | DG30.RG.00.035 | Bolt for fixation M5x35mm | ea. | 75 |

# DISTRIBUTION VALVES

## *LD progressive valve*

The progressive distribution valve administers grease to all other valves and/or lubrication points of the system. The amount of lubricant (cc) released to one point can differ from one another. The values of the central elements are selected according to the equipment needs and its working environment. The valve consists in modules that can be assembled into numerous configurations.



| *TECHNICAL SPECIFICATIONS* | *LD progressive valve* |
|---|---|
| *Dosage available per section* | *0,060cc*<br>*0,100cc*<br>*0,140cc*<br>*0,190cc*<br>*0,250cc* |
| *Working pressure* | *Maximum: 400 bars*<br>*Minimum: 25 bars* |
| *Lubrication point (s) per valve* | *Maximum: 18*<br>*Minimum: 2* |
| *Working temperature* | *-40°C to +80°C* |
| *Inlet / Outlet connection* | *M10x1* |
| *Recommended lubricant* | *Grease NLGI 0-1-2** |
| *Material* | *Galvanized steel* |

** The grease used must meet certain criteria, consult the section on recommended grease of this parts list.*

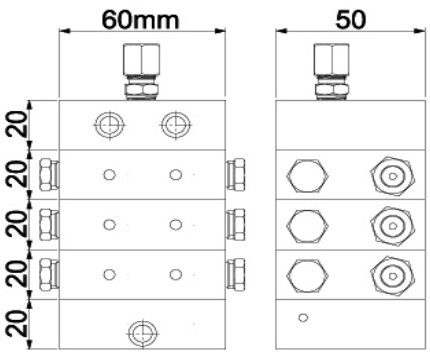
| # Parts | Description (# section / # outlet) | Unit | # Group |
|---|---|---|---|
| DG10.LD.03.06 | 3/6 | ea. | 75 |
| DG10.LD.04.08 | 4/8 | ea. | 75 |
| DG10.LD.05.10 | 5/10 | ea. | 75 |
| DG10.LD.06.12 | 6/12 | ea. | 75 |
| DG10.LD.07.14 | 7/14 | ea. | 75 |
| DG10.LD.08.16 | 8/16 | ea. | 75 |
| DG10.LD.09.18 | 9/18 | ea. | 75 |

*Note: Each distribution valve has a distinct calibration according to the lubrication chart of the equipment that needs to be lubricate.*

*The progressive distribution valves have a manual greasing nipple that allows you to manually grease the system. It's also allowing you to test the valves in case of system failure.*

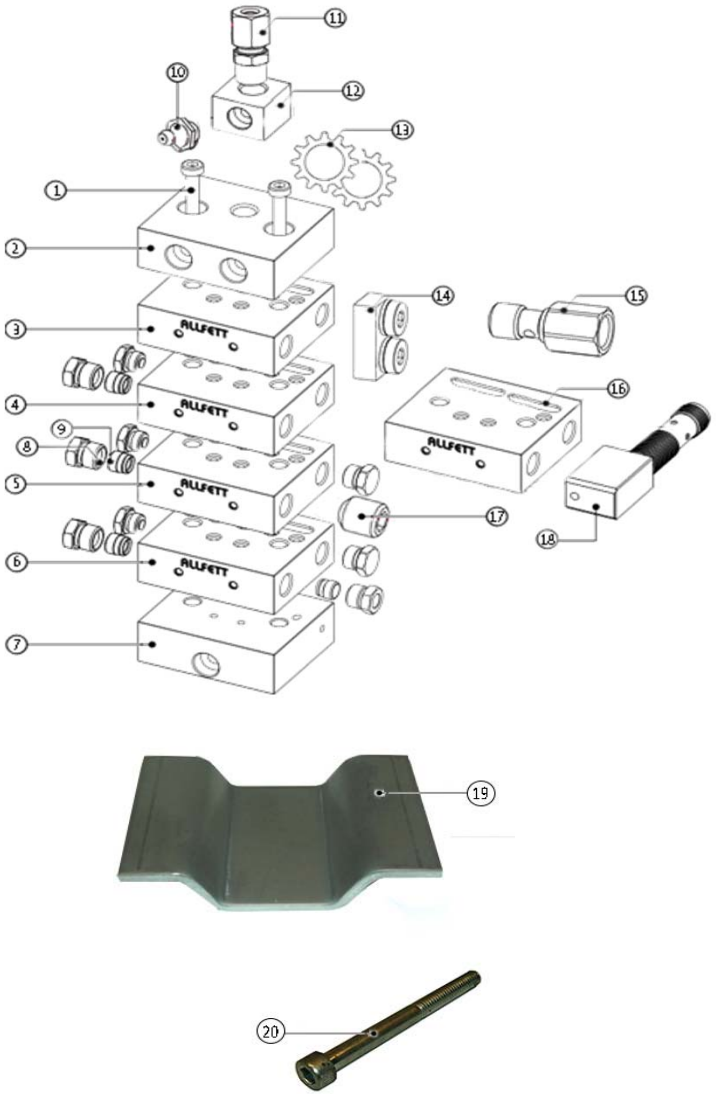
*The number of section does not include the starting element, or the end element.*

***SIZES***



***LD PROGRESSIVE DISTRIBUTION VALVE COMPONENT***

*Note: Each distribution valve has a distinct calibration according to the lubrication chart of the equipment that needs to be lubricate.*




| # picture | # parts | Description | unit | Group |
|---|---|---|---|---|
| 1 | DG30.LD.03.090 | Bolt LD M6x90mm (3/6) | ea. | 75 |
| | DG30.LD.04.110 | Bolt LD M6x110mm (4/8) | ea. | 75 |
| | DG30.LD.05.130 | Bolt LD M6x130mm (5/10) | ea. | 75 |
| | DG30.LD.06.150 | Bolt LD M6x150mm (6/12) | ea. | 75 |
| | DG30.LD.07.170 | Bolt LD M6x170mm (7/14) | ea. | 75 |
| | DG30.LD.08.190 | Bolt LD M6x190mm (8/16) | ea. | 75 |
| | DG30.LD.09.210 | Bolt LD M6x210mm (9/18) | ea. | 75 |
| 2 | DG20.LD.000.ST | Starting element LD | ea. | 75 |
| 3 | DG20.LD.060.CT | Central element (60) LD | ea. | 75 |
| 4 | DG20.LD.100.CT | Central element (100) LD | ea. | 75 |
| 5 | DG20.LD.140.CT | Central element (140) LD | ea. | 75 |
| | DG20.LD.190.CT | Central element (190) LD | ea. | 75 |
| 6 | DG20.LD.250.CT | Central element (201) LD | ea. | 75 |
| 7 | DG20.LD.000.EN | End element LD | ea. | 75 |
| 8 | EG35.00.06.00 | Cap screw 6mm | ea. | 100 |
| 9 | EG30.DB.06.00 | Double sided compr. ring 6mm | ea. | 100 |
| 10 | EG45.00.18.HP | High pressure grease nipple M10 | ea. | 100 |
| 11 | EG70.M10.06.L2 | Straight fitting M10 x 6mm LL compression | ea. | 100 |
| 12 | EG92.03.18.18 | Brass tee M x F x F 1/8'' NPT | ea. | 100 |
| 13 | DG40.00.ST.00 | Star washer M6 | ea. | 75 |
| 14 | DG40.LD.BD.00 | Complete steel bridge LD | ea. | 75 |
| 15 | DG40.00.CV.00 | Check valve | ea. | 100 |
| 16 | DG40.00.OR.02 | O'ring 2 x 5 x 1.5 | ea. | 75 |
| | DG40.00.OR.06 | O'ring 6 x 9 x 1.5 | ea. | 75 |
| | DG40.00.OR.07 | O'ring 7.10 x 10.30 x 1.6 | ea. | 75 |
| | DG40.00.OR.11 | O'ring 11.10 x 14.30 x 1.6 | ea. | 75 |
| 17 | DG40.00.PG.00 | Plug M10 | ea. | 100 |
| 18 | DG20.LD.140.CTPL | Central element LD with cycle switch | ea. | 75 |
| 19 | DG40.00.SD.00 | Bracket for progressive distributor | ea. | 100 |
| 20 | DG30.LD.00.055 | Bolt for LD fixation M6x55mm | ea. | 75 |

# MONOBLOC DISTRIBUTION VALVE

The progressive distribution valve administers grease to all other valves and/or lubrication points of the system. It is possible to block an outlet with a plug to double or multiply the quantity of grease delivered.

| ***TECHNICAL SPECIFICATIONS*** | ***Monobloc valve*** |
|---|---|
| *Dosage available per section* | *0.2cm3/outlet* |
| *Working pressure* | *Maximum: 400 bars*<br>*Minimum: 7,5 bars* |
| *Lubrication point (s) per valve* | *Maximum: 20*<br>*Minimum: 2* |
| *Working temperature* | *-40°C to +80°C* |
| *Inlet / Outlet connection* | *M10x1* |
| *Recommended lubricant* | *Grease NLGI 0-1-2** |
| *Material* | *Galvanized steel* |

** The grease used must meet certain criteria, consult the section on recommended grease of this parts list.*

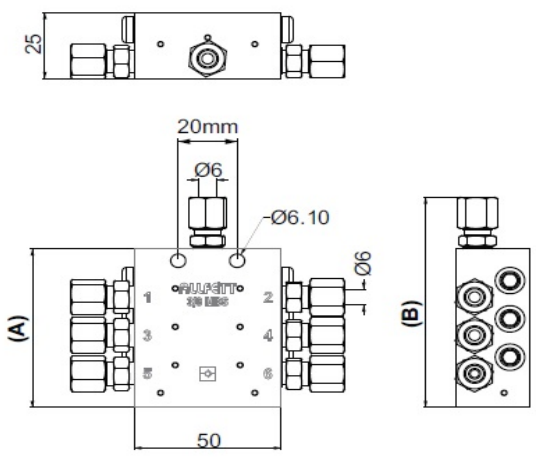
| # Parts | Description (# section / # outlet) | Unit | # Group |
|---|---|---|---|
| DG10.MB.00.06 | 3/6 | ea. | 75 |
| DG10.MB.00.08 | 4/8 | ea. | 75 |
| DG10.MB.00.10 | 5/10 | ea. | 75 |
| DG10.MB.00.12 | 6/12 | ea. | 75 |
| DG10.MB.00.14 | 7/14 | ea. | 75 |
| DG10.MB.00.16 | 8/16 | ea. | 75 |
| DG10.MB.00.18 | 9/18 | ea. | 75 |
| DG10.MB.00.20 | 10/20 | ea. | 75 |

*The progressive distribution valves have a manual greasing nipple that allows you to manually grease the system. It's also allowing you to test the valves in case of system failure.*

### *SIZES (mm)*

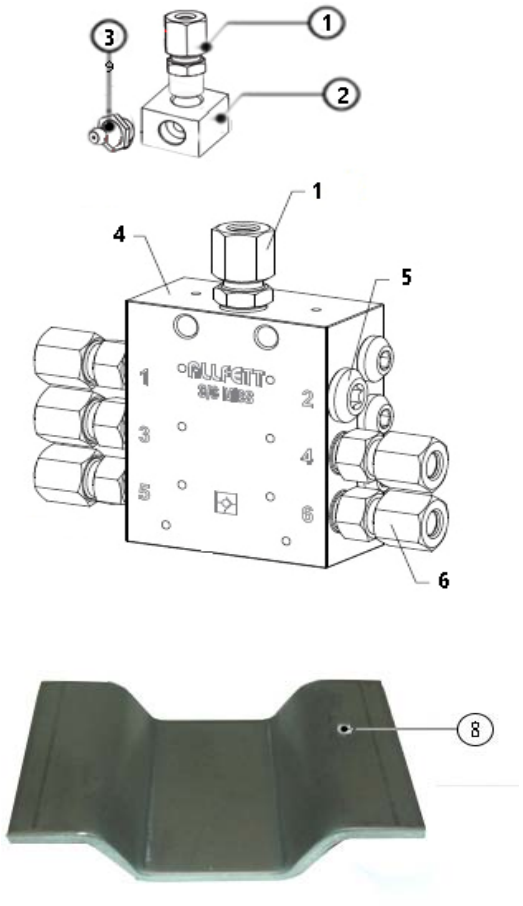
| Distributeur | (A) | (B) |
|---|---|---|
| DG10.MB.00.06 | 60 | 80 |
| DG10.MB.00.08 | 74.5 | 94.5 |
| DG10.MB.00.10 | 89 | 109 |
| DG10.MB.00.12 | 103.5 | 123.5 |
| DG10.MB.00.14 | 118 | 138 |
| DG10.MB.00.16 | 132.5 | 152.5 |
| DG10.MB.00.18 | 147 | 167 |
| DG10.MB.00.20 | 161.5 | 181.5 |

FIGURE - 1



***MONOBLOC PROGRESSIVE DISTRIBUTION VALVE COMPONENT***

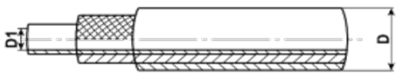
*Note: Each distribution valve has a distinct calibration according to the lubrication chart of the equipment that needs to be lubricate.*




| # picture | # parts | Description | unit | Group |
|---|---|---|---|---|
| 1 | EG70.M10.06.L2 | Straight fitting M10 x 6mm LL compression | ea. | 100 |
| 2 | EG92.03.18.18 | Brass tee M x F x F 1/8'' NPT | ea. | 100 |
| 3 | EG45.00.18.HP | High pressure grease nipple | ea. | 100 |
| 4 | DG10.MB.00.06 | Distributor MBS-6 | ea. | 75 |
| | DG10.MB.00.08 | Distributor MBS-8 | ea. | 75 |
| | DG10.MB.00.10 | Distributor MBS-10 | ea. | 75 |
| | DG10.MB.00.12 | Distributor MBS-12 | ea. | 75 |
| | DG10.MB.00.14 | Distributor MBS-14 | ea. | 75 |
| | DG10.MB.00.16 | Distributor MBS-16 | ea. | 75 |
| | DG10.MB.00.18 | Distributor MBS-18 | ea. | 75 |
| | DG10.MB.00.20 | Distributor MBS-20 | ea. | 75 |
| 5 | DG40.MB.PG.00 | MBS Plug | ea. | 75 |
| | DG40.MB.PG.01 | MBS Plug (back) | ea. | 75 |
| 6* | DG40.MB.CV.00 | MBS Check valve | ea. | 75 |
| | DG40.MB.CV.01 | MBS Straight coupling standard | ea. | 75 |
| | DG40.MB.PL.00 | Pulse counter NPN for MBS Valve | ea. | 75 |
| | DG40.MB.PL.01 | Pulse counter PNP for MBS Valve | ea. | 75 |
| | DG40.MB.PL.03 | MBS mechanical indicator Ø3 | ea. | 75 |
| | DG40.MB.PL.04 | MBS mechanical indicator Ø4 | ea. | 75 |

** The check valve is used on the main distribution valves (grease line to another valve)*
*while the straight coupling is used on the secondary distribution valves (grease line to a grease point)*

## HIGH PRESSURE HOSE




| # parts | D | D1 | unit | Group |
|---|---|---|---|---|
| EG05.06.00.ME* | 8.6 | 4 | m. | 100 |
| EG05.08.00.ME** | 11.3 | 6.3 | m. | 100 |

** Compatible with 6mm fittings*

*** Compatible with 8mm fittings*

- *Hose is always pre-filled with grease (NLGI class 2)*
- *Roll = 50 m.*
- *Working pressure: 600-840 bars*

*NOTE: A socket and socket adapter are required to connect the hoses*

## POLYAMIDE HOSE


| # parts | D | S | unit | Group |
|---|---|---|---|---|
| EG06.06.00.ME* | 6mm | 1.5 | m. | 100 |

** Compatible with 6mm fittings*

- *Hose is always pre-filled with grease*
- *Roll = 100 m.*
- *Working pressure: 1291PSI / 9MPA / 89 bars*

## GALVANIZED STEEL TUBING

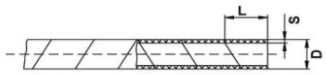

| # parts | D | unit | Group |
|---|---|---|---|
| EG07.06.01.PI* | 6mm | ft. | 100 |
| EG07.08.01.ME** | 8mm | m. | 100 |

** Compatible with 6mm fittings*

*** Compatible with 8mm fittings*

- *Hose is always empty*
- *1 rod = 10 ft*
- *Sold only in 5 or 10 foot rods*

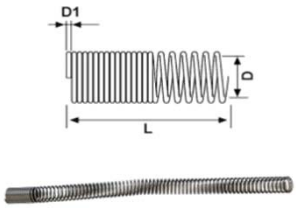
## PROTECTIVE PLASTIC LOOM




| # Parts | D | D1 | S | unit | Group |
|---|---|---|---|---|---|
| EG15.14.00.ME | 10 | 11 | 1.5 | m. | 100 |

- *Loom 1 bag = 50 m.*

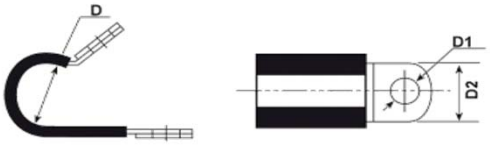
## PROTECTIVE LOOM (SPRING)




| # Parts | D | D1 | L | unit | Group |
|---|---|---|---|---|---|
| EG16.00.00.PI | | | 5 ft. | ft. | 100 |

- *Minimum order: 1 rod = 5 ft.*

## STANDARD PIPE CLAMPS




| # Parts | D (mm) | D1 | D2 | unit | Group |
|---|---|---|---|---|---|
| EG20.RG.M5.06 | 6 | 5.3 | 12 | ea. | 100 |
| EG20.RG.M6.09 | 9 | 5.3 | 12 | ea. | 100 |
| EG20.RG.M6.12 | 12 | 5.3 | 12 | ea. | 100 |
| EG20.RG.M6.18 | 18 | 5.3 | 12 | ea. | 100 |
| EG20.RG.M6.22 | 22 | 5.3 | 12 | ea. | 100 |
| EG20.RG.M6.25 | 25 | 5.3 | 12 | ea. | 100 |
| EG20.RG.M6.29 | 29 | 5.3 | 12 | ea. | 100 |
| EG20.RG.M6.30 | 30 | 5.3 | 12 | ea. | 100 |

- *D1: Compatible with bolt M5*
- *Bag of 20 clamps according to the diameter (#6, #10, #12)*
- *Bag of 10 clamps according to the diameter (#18, #22, #25, #30)*
- *Clamp material: Galvanized steel*
- *Caoutchouc: EPDM*

## PIPE CLAMP BOLT

| # Parts | Length | Diam. | unit | Group |
|---|---|---|---|---|
| EG20.BL.M5.12 | 12mm | M5 | ea. | 100 |
| EG20.BL.M5.16 | 16mm | M5 | ea. | 100 |

- *Material: Galvanized steel*

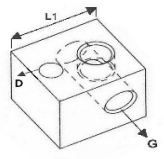
## STRONG PIPE CLAMPS

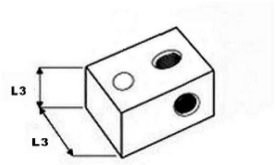
| # Parts | Size / number | unit | Group |
|---|---|---|---|
| EG20.CT.12.00 | CAT 1/2" | ea. | 100 |
| EG20.CT.34.00 | CAT 3/4" | ea. | 100 |
| EG20.CT.58.00 | CAT 5/8" | ea. | 100 |
| EG20.CT.01.00 | CAT 1" | ea. | 100 |

- *Material: Galvanized steel*
- *Mounting hole diameter: 3/8 "*

| # Parts | Size / number | unit | Group |
|---|---|---|---|
| EG20.MC.086.091 | Maxi clamp 086-091 | ea. | 100 |
| EG20.MC.092.097 | Maxi clamp 092-097 | ea. | 100 |
| EG20.MC.098.103 | Maxi clamp 098-103 | ea. | 100 |
| EG20.MC.104.112 | Maxi clamp 104-112 | ea. | 100 |
| EG20.MC.140.148 | Maxi clamp 140-148 | ea. | 100 |
| EG20.MC.149.161 | Maxi clamp 149-161 | ea. | 100 |
| EG20.MC.162.174 | Maxi clamp 162-174 | ea. | 100 |

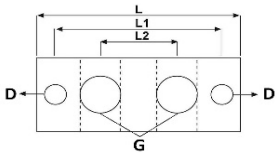
## JUNCTION BLOCK

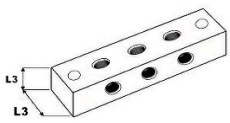


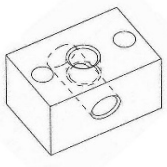




| # Parts | Connection | G | L | L1 | L3 | D | unit | Group |
|---|---|---|---|---|---|---|---|---|
| EG25.00.M10.01 | 1 | M10x1 | 30 | | 25 | | ea. | 100 |

- *1 fixing hole*
- *Material: Galvanized steel*



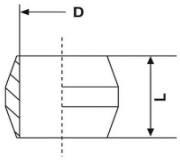



| # Parts | Connection | G | L | L1 | L3 | D | unit | Group |
|---|---|---|---|---|---|---|---|---|
| EG25.00.M10.02 | 2 | M10x2 | 60 | 50 | 25 | 6.5 | ea. | 100 |
| EG25.00.M10.03 | 3 | M10x3 | 84 | 74 | 25 | 6.5 | ea. | 100 |
| EG25.00.M10.04 | 4 | M10x4 | 106 | 96 | 25 | 6.5 | ea. | 100 |
| EG25.00.M10.05 | 5 | M10x5 | 128 | 118 | 25 | 6.5 | ea. | 100 |
| EG25.00.M10.06 | 6 | M10x6 | 150 | 140 | 25 | 6.5 | ea. | 100 |
| EG25.00.M10.08 | 8 | M10x8 | 194 | 184 | 25 | 6.5 | ea. | 100 |

- *2 fixing holes*
- *Material: Galvanized steel*

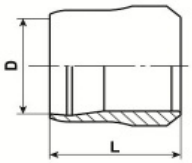
## *DOUBLE SIDED COMPRESSION RING*




| # Parts | D | L | unit | Group |
|---|---|---|---|---|
| EG30.DB.06.00 | 6mm | 7 | ea. | 100 |

- *Material: Brass*

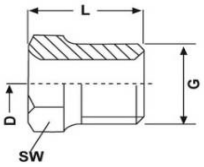
## *SINGLE SIDED COMPRESSION RING*




| # Parts | D | L | unit | Group |
|---|---|---|---|---|
| EG30.SP.06.L2 | 6mm LL | 7 | ea. | 100 |
| EG30.SP.08.L1 | 8mm L | 9.48 | ea. | 100 |
| EG30.SP.08.L2 | 8mm LL | 7.35 | ea. | 100 |

- *Material: Galvanized steel*

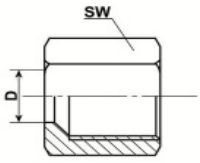
## *CAP SCREW*




| # Parts | G | D | SW- L | unit | Group |
|---|---|---|---|---|---|
| EG35.00.06.00 | M10 | 6mm LL | 10-14 | ea. | 100 |

- *Material: Galvanized steel*

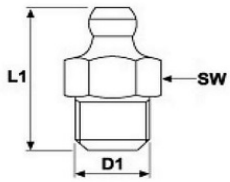
## *NUT*




| # Parts | D | SW | unit | Group |
|---|---|---|---|---|
| EG40.00.06.L2 | 6mm LL | 12 | ea. | 100 |
| EG40.00.08.L2 | 8mm LL | 14 | ea. | 100 |

- *Material: Galvanized steel*

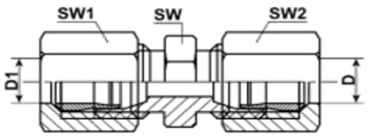
## *HIGH PRESSURE GREASE NIPPLE*




| # Parts | D1 | L | SW | unit | Group |
|---|---|---|---|---|---|
| EG45.00.18.HP | M10 | 20.7 | 11 | ea. | 100 |

- *Material: Galvanized steel*

## *COMPRESSION UNION*




| # Parts | D | D1 | SW | SW1 | SW2 | unit | Group |
|---|---|---|---|---|---|---|---|
| EG50.00.06.L2 | 6mm LL | 6mm LL | 11 | 12 | 12 | ea. | 100 |
| EG50.00.08.L2 | 8mm LL | 8mm LL | 12 | 14 | 14 | ea. | 100 |

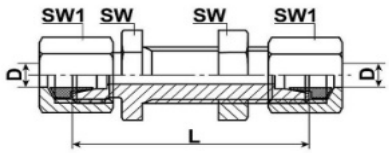
• *Material: Galvanized steel*

## *UNION*

| # Parts | D | d | unit | Group |
|---|---|---|---|---|
| EG53.02.18.18 | F (1/8'') | F (1/8'') | ea. | 100 |
| EG53.03.14.14 | F (1/4'') | M (1/4'') | ea. | 100 |
| XEG53.02.14.14 | F (1/4'') | F (1/4'') | ea. | 100 |
| XEG53.01.14.14 | M (1/4'') | M (1/4'') | ea. | 100 |
| XEG53.01.14.12 | M (1/4'') | M (1/2'') | ea. | 100 |
| XEG53.01.14.38 | M (1/4'') | M (3/8'') | ea. | 100 |
| XEG53.01.38.12 | M (3/8'') | M (1/2'') | ea. | 100 |

• *Material: Galvanized steel*

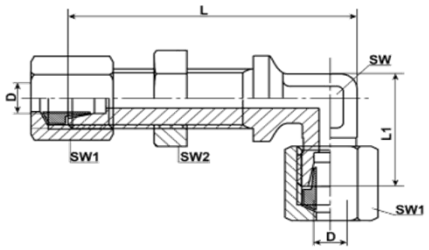
## *UNION (Bulkhead)*




| # Parts | D | D1 | SW | SW1 | L | unit | Group |
|---|---|---|---|---|---|---|---|
| XEG55.00.06.L1 | 6mm L | 6mm L | 17 | 14 | 48 | ea. | 100 |
| XEG55.00.08.L1 | 8mm L | 8mm L | 19 | 17 | 49 | ea. | 100 |

• *Material: Galvanized steel*

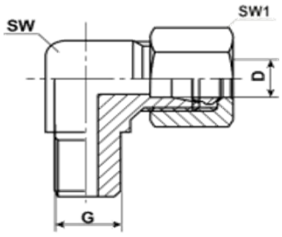
## *UNION 90° (Bulkhead)*




| # Parts | D | SW | SW1 | SW2 | L | L1 | unit | Group |
|---|---|---|---|---|---|---|---|---|
| XEG55.90.06.L1 | 6mm L | 12 | 14 | 17 | 48 | 19 | ea. | 100 |

• *Material: Galvanized steel*

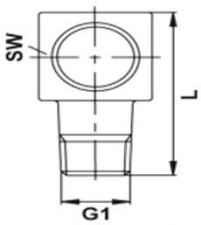
## *COMPRESSION ELBOW*

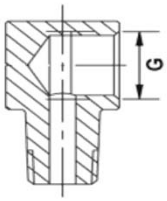



| # Parts | D | G | SW | SW1 | Series | unit | Group |
|---|---|---|---|---|---|---|---|
| EG60.M6.06.L2 | 6mm LL | M6 | 11 | 12 | LL | ea. | 100 |
| EG60.M8.06.L2 | 6mm LL | M8 | 11 | 12 | LL | ea. | 100 |
| EG60.M10.06.L2 | 6mm LL | M10 | 11 | 12 | LL | ea. | 100 |
| EG60.M10.08.L2 | 8mm LL | M10 | 12 | 14 | LL | ea. | 100 |

• *Material: Galvanized steel*

## *ELBOW 90°*

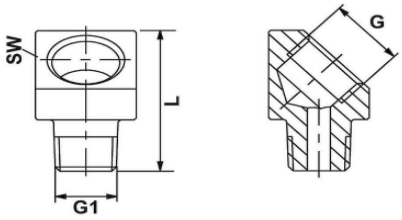



| # Parts | G | G1 | L | SW | unit | Group |
|---|---|---|---|---|---|---|
| EG63.03.M8.M8 | F (M8) | M (M8) | 23 | 12 | ea. | 100 |
| EG63.03.M6.M10 | F (M10) | M (M6) | 23 | 13 | ea. | 100 |
| EG63.03.M10.M8 | F (M8) | M (M10) | 23 | 12 | ea. | 100 |
| EG63.03.M8.M10 | F (M10) | M (M8) | 23 | 13 | ea. | 100 |
| EG63.03.M10.M10 | F (M10) | M (M10) | 23 | 13 | ea. | 100 |

• *Material: Galvanized steel*

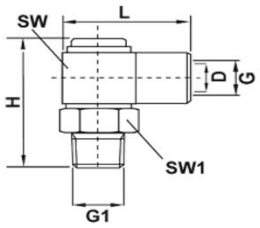
## *ELBOW 45°*




| # Parts | G | G1 | L | SW | unit | Group |
|---|---|---|---|---|---|---|
| EG64.03.M8.M8 | F (M8) | M (M8) | 23 | 13 | ea. | 100 |
| EG64.03.M10.M8 | F (M8) | M (M10) | 23 | 13 | ea. | 100 |
| EG64.03.M10.M10 | F (M10) | M (M10) | 23 | 13 | ea. | 100 |

• *Material: Galvanized steel*

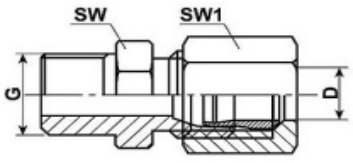
## *SWIVEL COUPLING 90°*




| # Parts | D | G | G1 | SW - SW1 | H | L | unit | Group |
|---|---|---|---|---|---|---|---|---|
| EG68.M6.06.00 | 6mm | M10 | M6 | 15-14 | 30 | 29 | ea. | 100 |
| EG68.M8.06.00 | 6mm | M10 | M8 | 15-14 | 30 | 29 | ea. | 100 |
| EG68.M10.06.00 | 6mm | M10 | M10 | 15-14 | 30 | 29 | ea. | 100 |

• *Material: Galvanized steel*

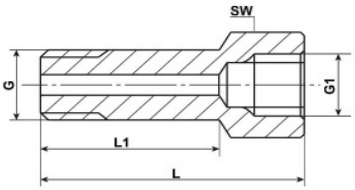
## *COMPRESSION STRAIGHT FITTING*




| # Parts | D | G | SW | SW1 | Series | unit | Group |
|---|---|---|---|---|---|---|---|
| EG70.M6.06.L2 | 6mm | M6 | 11 | 12 | LL | ea. | 100 |
| EG70.M8.06.L2 | 6mm | M8 | 11 | 12 | LL | ea. | 100 |
| EG70.M10.06.L2 | 6mm | M10 | 11 | 12 | LL | ea. | 100 |
| EG70.M10.08.L2 | 8mm | M10 | 14 | 14 | LL | ea. | 100 |

• *Material: Galvanized steel*

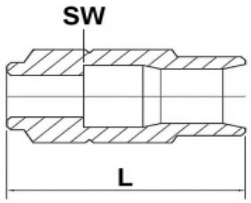
## *EXTENSION COUPLING*




| # Parts | G | G1 | L | L1 | SW | unit | Group |
|---|---|---|---|---|---|---|---|
| EG75.03.18.M8 | M (M8) | F (M10) | 18mm | | | ea. | 100 |
| EG75.03.18.M6 | M (M6) | F (M10) | 18mm | | | ea. | 100 |
| EG75.03.18.M10 | M (M10) | F (M10) | 18mm | 7 | 13 | ea. | 100 |
| EG75.03.35.M10 | M (M10) | F (M10) | 35mm | 24 | 13 | ea. | 100 |
| EG75.03.50.M10 | M (M10) | F (M10) | 50mm | 39 | 13 | ea. | 100 |
| EG75.03.75.M10 | M (M10) | F (M10) | 75mm | | | ea. | 100 |

*• Material: Galvanized steel*

## *SOCKET*



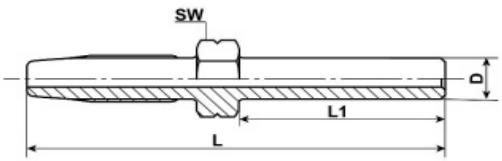

| # Parts | D | L | SW | unit | Group |
|---|---|---|---|---|---|
| EG80.00.06.00 | 6mm* | 28 | 12 | ea. | 100 |
| EG80.00.08.00 | 8mm** | 35.8 | 17 | ea. | 100 |

** Compatible with 6mm compression fittings*

*** Compatible with 8mm compression fittings*

*• Material: Galvanized steel*

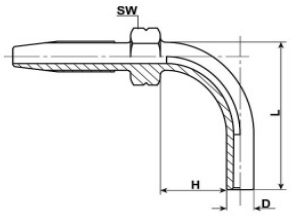
## *STRAIGHT ADAPTOR FOR SOCKET*




| # Parts | Description | Hose | D | L | L1 | SW | Unit | Group |
|---|---|---|---|---|---|---|---|---|
| EG85.00.06.00 | Short | 4.1 x 8.75 | 6mm | 61 | 30 | 10 | ea. | 100 |
| EG85.00.08.00 | Long | 6.35 x 11.3 | 8mm | 65.5 | 22 | 12 | ea. | 100 |
| EG86.00.08.06 | Reducer | 6.35 x 11.3 | 6mm | 65.5 | 22 | 12 | ea. | 100 |

*• Material: Galvanized steel*

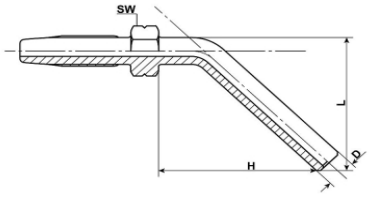
## *90° ADAPTOR FOR SOCKET*




| # Parts | Description | Boyaux | D | H | L | SW | Unit | Group |
|---|---|---|---|---|---|---|---|---|
| EG85.90.06.00 | Short | 4.1 x 8.75 | 6mm | 17 | 28 | 10 | ea. | 100 |
| EG85.90.06.01 | Long | 4.1 x 8.75 | 6mm | 28 | 53 | 10 | ea. | 100 |
| EG85.90.08.00 | Short | 6.35 x 11.3 | 8mm | 23 | 36 | 12 | ea. | 100 |
| EG86.90.08.06 | Reducer 6mm | 6.35 x 11.3 | 6mm | 22 | 45 | 12 | ea. | 100 |

• *Material: Galvanized steel*

## *45° ADAPTOR FOR SOCKET*




| # Parts | Description | Hose | D | H | L | SW | Unit | Group |
|---|---|---|---|---|---|---|---|---|
| EG85.45.06.00 | Short | 4.1 x 8.75 | 6 | 24 | 15 | 10 | ea. | 100 |

• *Material: Galvanized steel*

## *TEE*

| # Parts | 1 | 2 | 3 | unit | Group |
|---|---|---|---|---|---|
| EG92.03.18.18 | M (1/8'' NPT) | F (1/8'' NPT) | F (1/8'' NPT) | ea. | 100 |
| EG92.02.18.18 | F (1/8'' NPT) | F (1/8'' NPT) | F (1/8'' NPT) | ea. | 100 |

• *Material: Brass*

## *REDUCER*

| # Parts | 1 | 2 | unit | Group |
|---|---|---|---|---|
| XEG90.02.14.18 | F (1/4'') NPT | F (1/8'') NPT | ea. | 100 |
| EG90.03.14.18 | M (1/4'') NPT | F (1/8'') NPT | ea. | 100 |
| XEG90.03.18.14 | M (1/8'') NPT | F (1/4'') NPT | ea. | 100 |

*• Material: Galvanized steel*

## *REPAIR KIT*

*Each repair kit is custom made to the equipment to be lubricated. The code simply specifies the size (the case used).*
*Contact your sales representative for a customized repair kit.*

| # Parts | Description | unit | Group |
|---|---|---|---|
| EGKT.01.00.00 | Standard repair kit (Plastic box) | ea. | 100 |
| EGKT.02.00.00 | Big repair kit (metal box) | ea. | 100 |