

ALLFETT®

CENTRAL LUBRICATION SYSTEMS & EQUIPMENT



ALL-6 Replaceable Cartridge Type
ELECTRICAL GREASE PUMPS

INSTRUCTION AND USER MANUAL

VERSION 3.0 - 06.2018

INTRODUCTION

All industrial machinery, equipments and vehicles are working under abrasive operating conditions. The wear between frictional parts become the most highest level at these conditions. Machinery expose bad weather, dust, dirt, rain, snow and heavy weight in most cases. Consequently unwanted breakdowns occur and by that way productivity loss is inevitable.

Using automatic lubrication system only increase your profitability. ALLFETT completely take over the work load spend on lubrication with a system which is bringing together a pump, control unit, distributors, tubes and couplings. Lubrication work is done by ALLFETT centralized lubrication systems in efficient time of machinery or vehicle which is while operating.

Lubrication is important for all frictional parts but using correct lubrication system and method only protect parts from wearing for a long time. Feeding lubrication points with correct dosage of lubricant at certain intervals while machinery is operating, provides lubricant film in place longer between parts. By ALLFETT lubrication systems life time of parts on your machinery and vehicles will be increased.

ABOUT MANUFACTURER

With over 25 years experience of manufacturing Centralized Lubrication Systems ALLFETT is able to provide a wide professional approach to select the correct Centralized Lubrication System for industry and heavy machinery.

A highly accurate manufacturing process is involved in producing Centralized Lubrication Systems in order that systems meet the very tight quality procedures and state of the art processes are employed. ALLFETT is among the few companies whose products meet the exact technical and quality standards for a correct central lubrication. We present our high quality and advanced product design concept to our worldwide costumers through our strong brand.

ALLFETT creates new opportunities and innovative solutions. As a result of the satisfaction of our customers with our good quality lubrication systems we are continuing in growing in the local and international market and became one of the successful companies in the field.

WARNINGS

Symbols and words shown below are meant to warn a particular risk to persons, material assets, or the environment. Please carefully read this manual before installing. Failure to follow the instructions and safety precautions in this manual could result in serious injury or property damage.

**Caution****Notice****Electricity****Prohibition**

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PRODUCT DESCRIPTION

ALL- 6 series are piston type electrical grease pumps designed to be used with small machinery and equipments. Replaceable grease cartridge is used as a reservoir. 350 gram and 675 gram capacity cartridges eliminates any kind of problem related on filling and also makes this process easier.

Electrical connections of the pump can easily be done by electrical socket placed onto motor cover. DC type motor voltages can be selected from 12 or 24 Volts. This pump can also be used with ALLFETT electronic control cards if necessary.

In case the pump is installed so that operator cannot see the level of grease, the ALLFETT low level sensor can be used to follow the level of grease in cartridges.

GENERAL SPECIFICATIONS

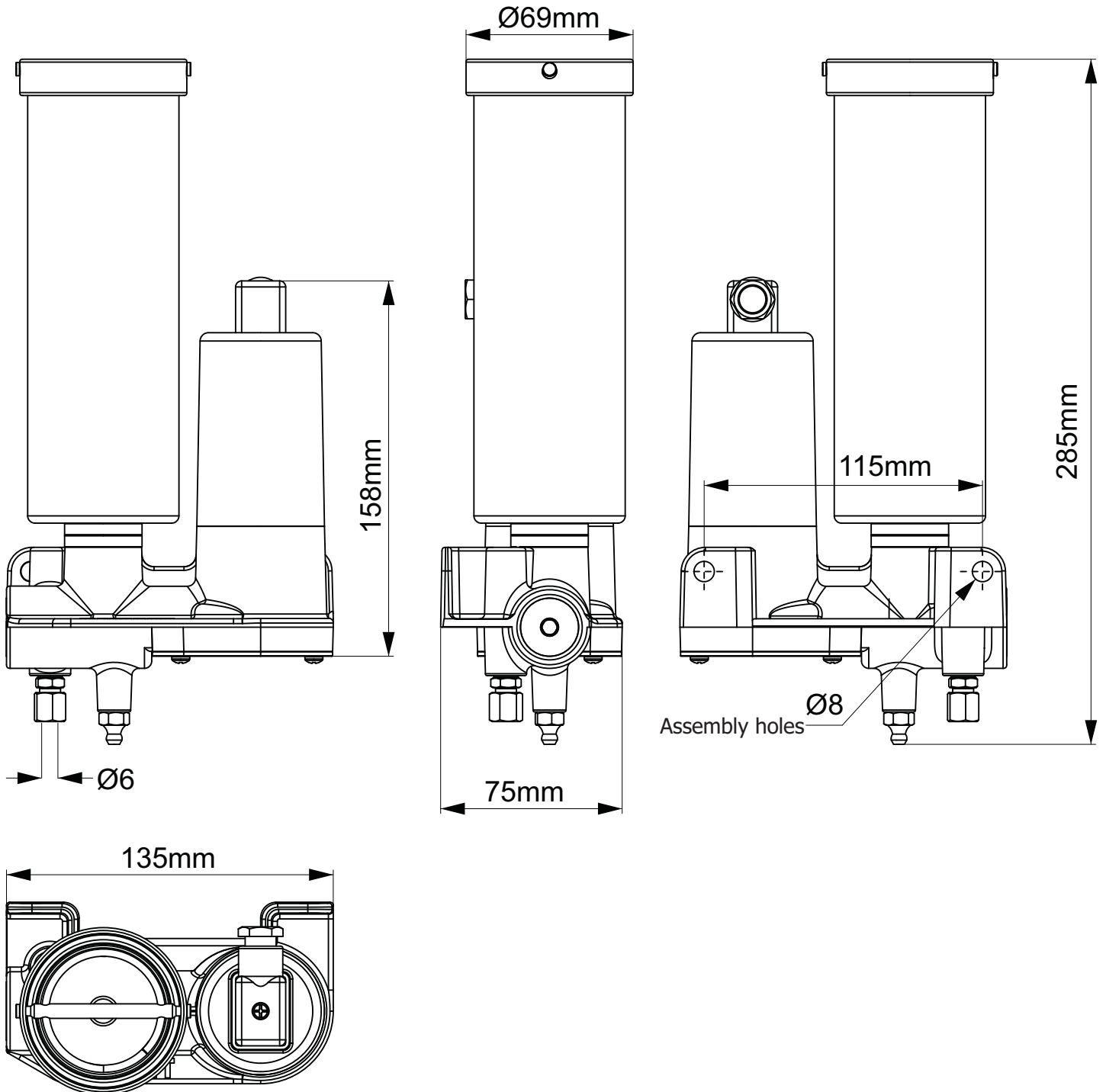
Motor type	: 12 - 24 V DC
Working pressure	: 150 bar.
Max. pressure	: 220 bar.
Motor protection class	: IP 54
Displacement	: 4,5 cm ³ / minute
Grease type	: NLGI 00 (-30°C) - (-10°C) NLGI 0 (-10°C) - (0°C) NLGI 1 (0°C) - (10°C) NLGI 2 (10°C) - (30°C)
Working temperature	: -25°C +80°C
Cartridge capacities	: 350 gram - 675 gram
Outlet coupling	: M10x1 - Ø6mm



ALL-6 pums are manufactured only lubrication purpose. It is not convenient to run these pumps more than 2 hours continuously.

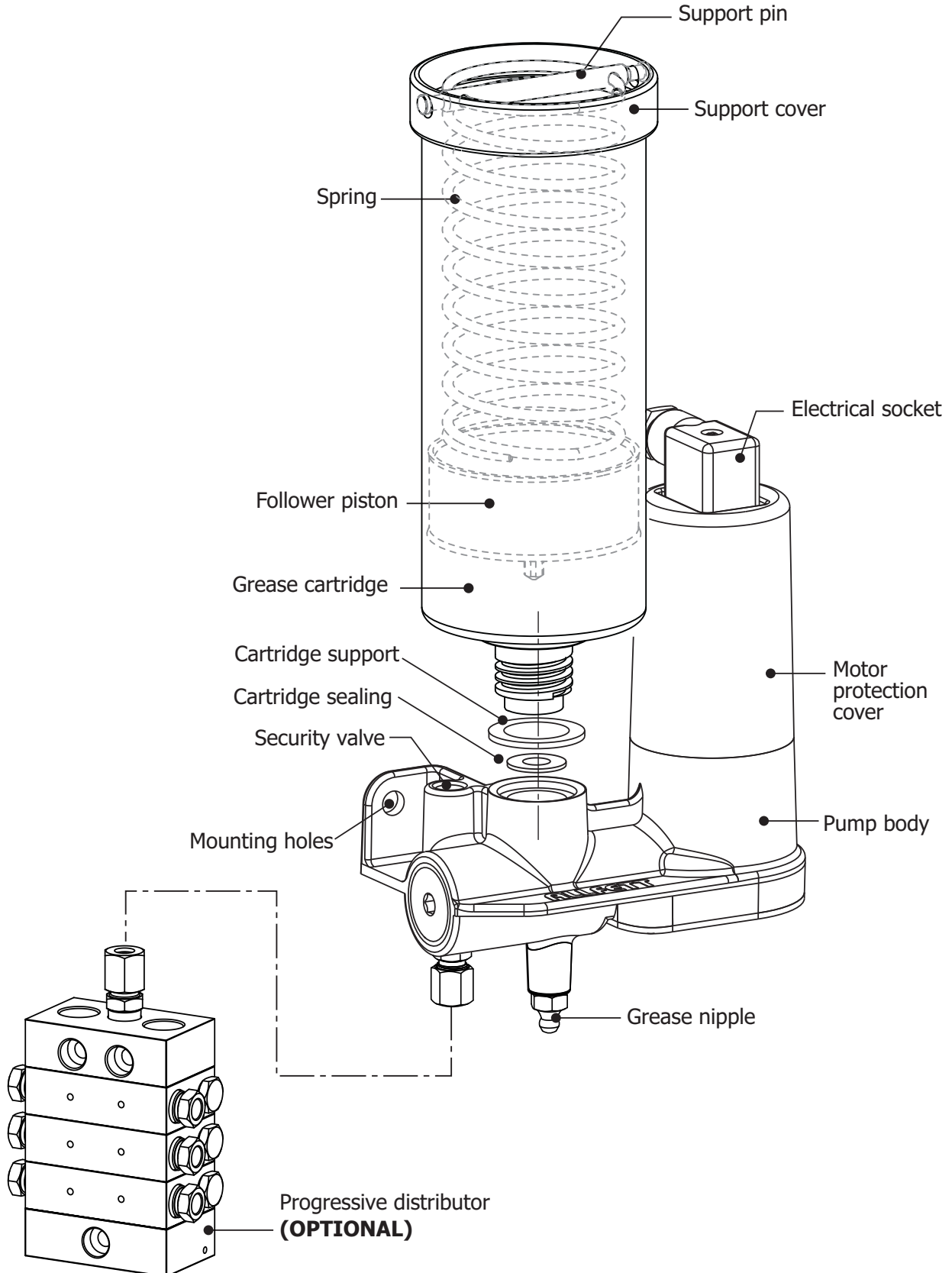
GENERAL DIMENSIONS

Technical drawings below represents the ALL-6 pump. Dimension unit is milimeter.



PRODUCT COMPONENTS

Technical drawings below represents the ALL-6 pump standard and optional model. Optional components described seperately.



FUNCTIONAL DESCRIPTION

Appropriate electrical energy (12 or 24 V DC) is connected to system ;

Electrical motor start to operate.

Spring returned pump element piston vacuums the lubricant inside reservoir. Rotational movement of the eccentric pushes pump element piston so that the lubricant vacuomed before is sended to pump element outlet with high pressure. Working pressure can be adjusted on security valve.

The lubricant coming out from pump elements ;

Displacement volume of the pump element(s) can be connected to single lubrication point. However displacement volume can also be divided by progressive distributor to feed multiple lubrication points.

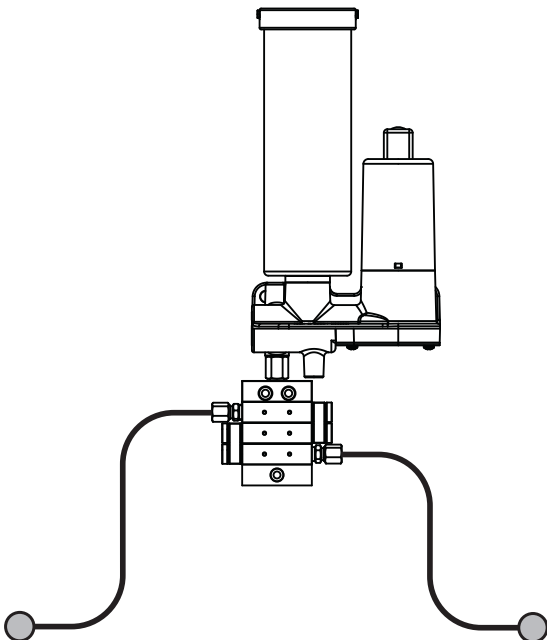
Optional system control units ;

Lubrication system and its components can be controlled and monitored with integrated electronic control cards. Digital sensores and also pressure switches where placed on system components send information to control card.

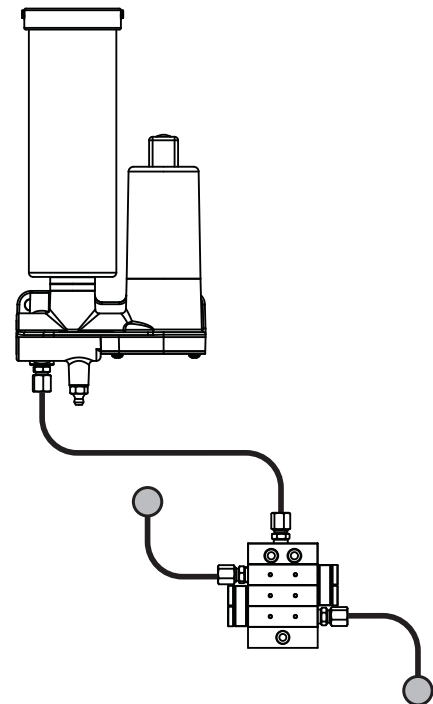


Distributors and control cards are offered optionally. While ordering a pump, other components have to be ordered separately according to their properties.

Distributor can be mounted directly to pump outlet.



Standard distributor usage



Unauthorized modifications to the units and the use of unauthorzied spare parts and aids prohibited also disqualify the warranty.

LUBRICANT INFORMATION

Lubricant specifications can be used with ALL-1 pumps are described below. Before filling reservoir please read carefully these informations.



Lubricant will be used in the system must certainly be clean and any foreign materials must not enter while filling.



ALL-1 pumps are designed to use with in centralized lubrication systems only. It is not suitable to use ALL-1 pump for lubricant tranfering or circulation purpose.



To remind that lubricants has content which may hazardous to environment. It is important that the county specific regulations and laws on the use and disposal of lubricants must be observed.

Lubricant type - GREASE

NLGI classes can be used with ALL-1 pumps are described below. Because of the flow characteristics of grease the NLGI class range should be changed at different weather conditions and also temperature differencies.

for **NLGI 00** grease recomended working temperature is between -30°C and -10°C

for **NLGI 0** grease recomended working temperature is between -10°C and 0°C

for **NLGI 1** grease recomended working temperature is between 0°C and 10°C

for **NLGI 2** grease recomended working temperature is between 10°C and 30°C



Keep in mind that the substances of any lubricant are harmful to environment. Their transport and storage require that special safety measures be taken.



Only LITHIUM based and EP additive liquid greases must be used with in system.

It is important that the grease will be used must resistant to high pressure. Make sure the liquid grease you are using is EP additive.



**Do not use rubber based grease in system.
Do not use grease types with graphite in system.**

LUBRICATION INFORMATION

Grease penetration properties is variable at different environment temperatures. The environmental temperature around lubrication lines must be considered for choosing the correct grease. Grease properties should be appropriate that environmental temperatures. Changing NLGI classes at different temperatures is important to correct lubrication. If necessary, high temperature resistant lubricants should be used in some cases.



It should not be forgotten that the grease penetration properties is variable at different environment temperatures.

PRESSURE LOSE CHART

Loosing pressure in lubrication lines depends on differend variables. The most important variables are pump displacement, environmental temperatures, tube diameter and NLGI class. Each variable must be considered for correct lubrication.

The chart below represents the approximate pressure loose in tube which 1 meter long. Results are varies according to pump element displacement volume created by single or multiple pump elements. Result values are defined in bar.

Tube diameter	NLGI class	Pump element displacement 5 cm ³ / minute				
		-10°C	0°C	10°C	20°C	30°C
Ø6 x 1 (Ø4mm)	NLGI 0	6,6	3,48	1,92	1,08	0,66
	NLGI 1	11	5,8	3,2	1,8	1,1
	NLGI 2	17,6	9,28	5,12	2,88	1,76
Ø8 x 1 (Ø6mm)	NLGI 0	3,48	1,8	0,96	0,54	0,33
	NLGI 1	5,8	3	1,6	0,9	0,55
	NLGI 2	9,28	4,8	2,56	1,44	0,88
Ø10 x 1 (Ø8mm)	NLGI 0	1,8	0,9	0,48	0,264	0,156
	NLGI 1	3	1,5	0,8	0,44	0,26
	NLGI 2	4,8	2,4	1,28	0,704	0,416
Ø12 x 1 (Ø10mm)	NLGI 0	1,2	0,54	0,3	0,156	0,09
	NLGI 1	2	0,9	0,5	0,26	0,16
	NLGI 2	3,2	1,44	0,8	0,42	0,26
R 1/2 (Ø15,75mm)	NLGI 0	0,54	0,24	0,12	-	-
	NLGI 1	0,9	0,4	0,2	-	-
	NLGI 2	1,44	0,64	0,32	-	-
R 3/4 (Ø21,25mm)	NLGI 0					
	NLGI 1					
	NLGI 2					
R 1 (Ø27mm)	NLGI 0					
	NLGI 1					
	NLGI 2					

CARTRIDGE REPLACEMENT INSTRUCTIONS

Cartridge replacing steps are explained by sections below. The most important point about replacing the cartridge is, there must not be air gaps inside of cartridge place (Figure-6) on pump body. After old cartridge removed, little amount grease remaining inside old cartridge should be used to fill cartridge place.

REPLACEMENT STEPS

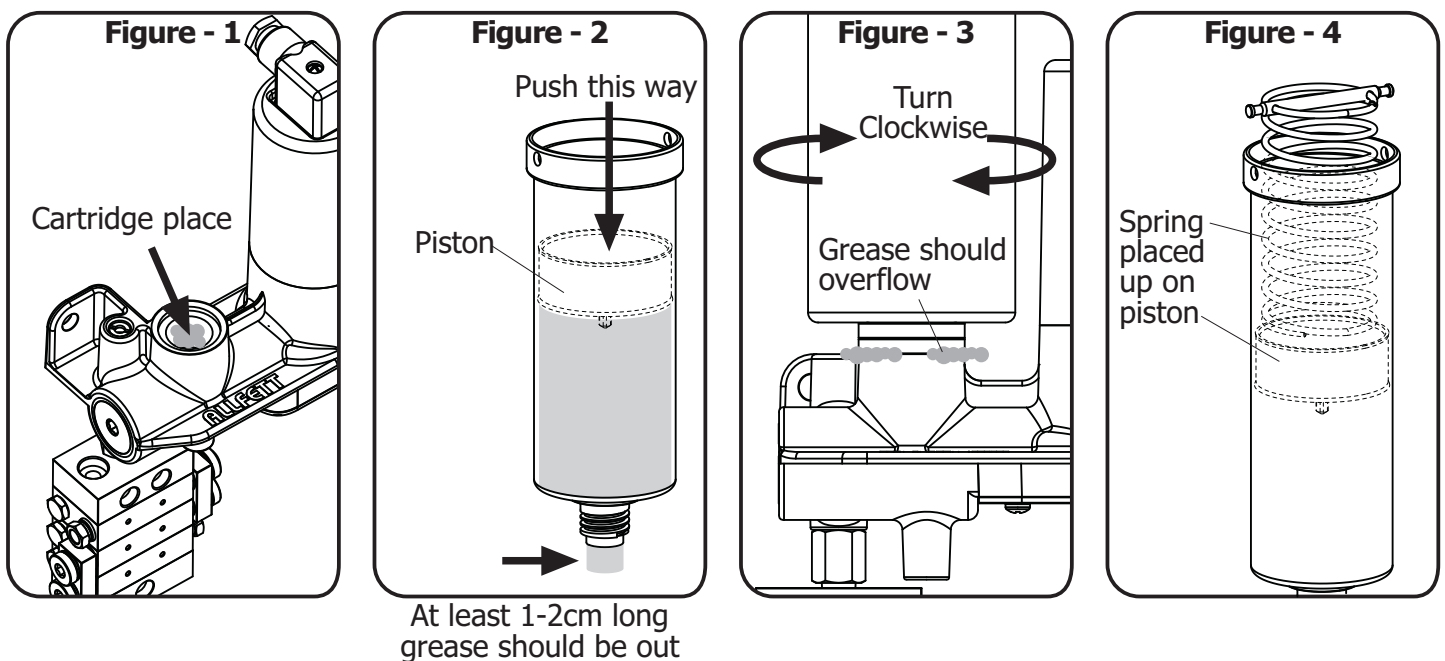
1. Remove old cartridge from the pump by screwing counter clockwise.
2. After old cartridge removed, little amount grease remaining inside old cartridge should be used to fill cartridge place (**Figure - 1**).

GREASE MUST BE CLEAN WHILE ADDING TO CARTRIDGE PLACE

" New cartridge will be installed without spring support. "

3. Piston inside new cartridge should be pushed by a long tool (such as hammer) until 1 or 2 centimeters long grease out from cartridge outlet (**Figure - 2**).
4. New cartridge should be installed to pump body with grease on the outlet.
5. Put new cartridge to cartridge place on pump then rotate clockwise until gets completely tight. Cartridge thread must rotate properly and cartridge must stay vertical while rotating. Grease should overflow between cartridge and pump body as seen in **Figure - 3**.
6. Spring support should be added on piston inside cartridge as shown on **Figure - 4**.

Please follow the instructions on next page to install spring support system.

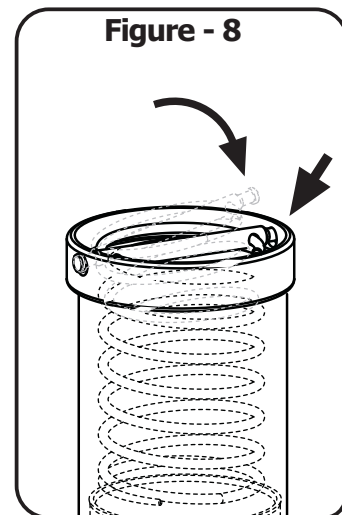
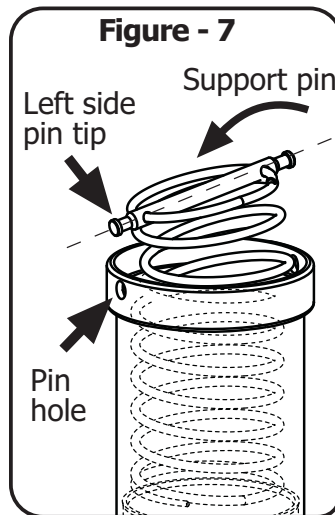
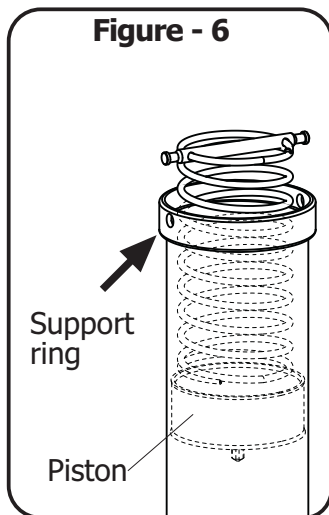


SPRING SUPPORT INSTALLING INSTRUCTIONS

Spring support will be installed after the grease cartridge has been installed properly on the pump. Please make sure that the cartridge is properly installed first. Cartridge should stand vertical on the pump and not sloped at any angle. The seals located in the neck of the cartridge must be crushed for 1 or 2 millimeters.

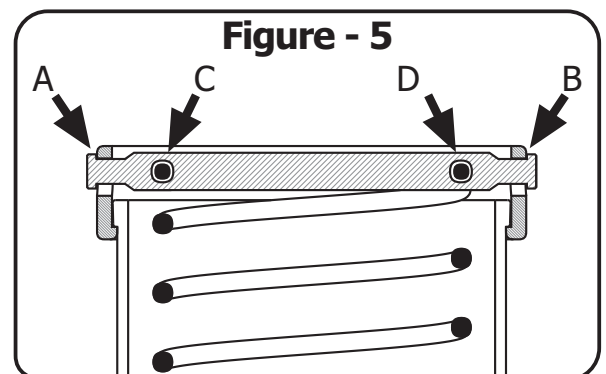
INSTALLING STEPS

1. Place the spring support on the piston in cartridge as shown in **Figure - 6**.
Make sure that the support ring must be placed at top of the cartridge.
2. Left side tip of support pin must be placed to pin hole as shown on **Figure - 7**
3. Right side tip of support pin must be placed to pin hole as shown on **Figure - 8**



Make sure that the slots of support pin properly located to pin hole of support ring as shown in **Figure - 5** marked with letter **A** and **B**.

Make sure that the spring is properly located to holes on support pin as shown in **Figure - 5** marked with letter **C** and **D**.



Cartridge installation is completed. Pump is ready for lubrication periods.

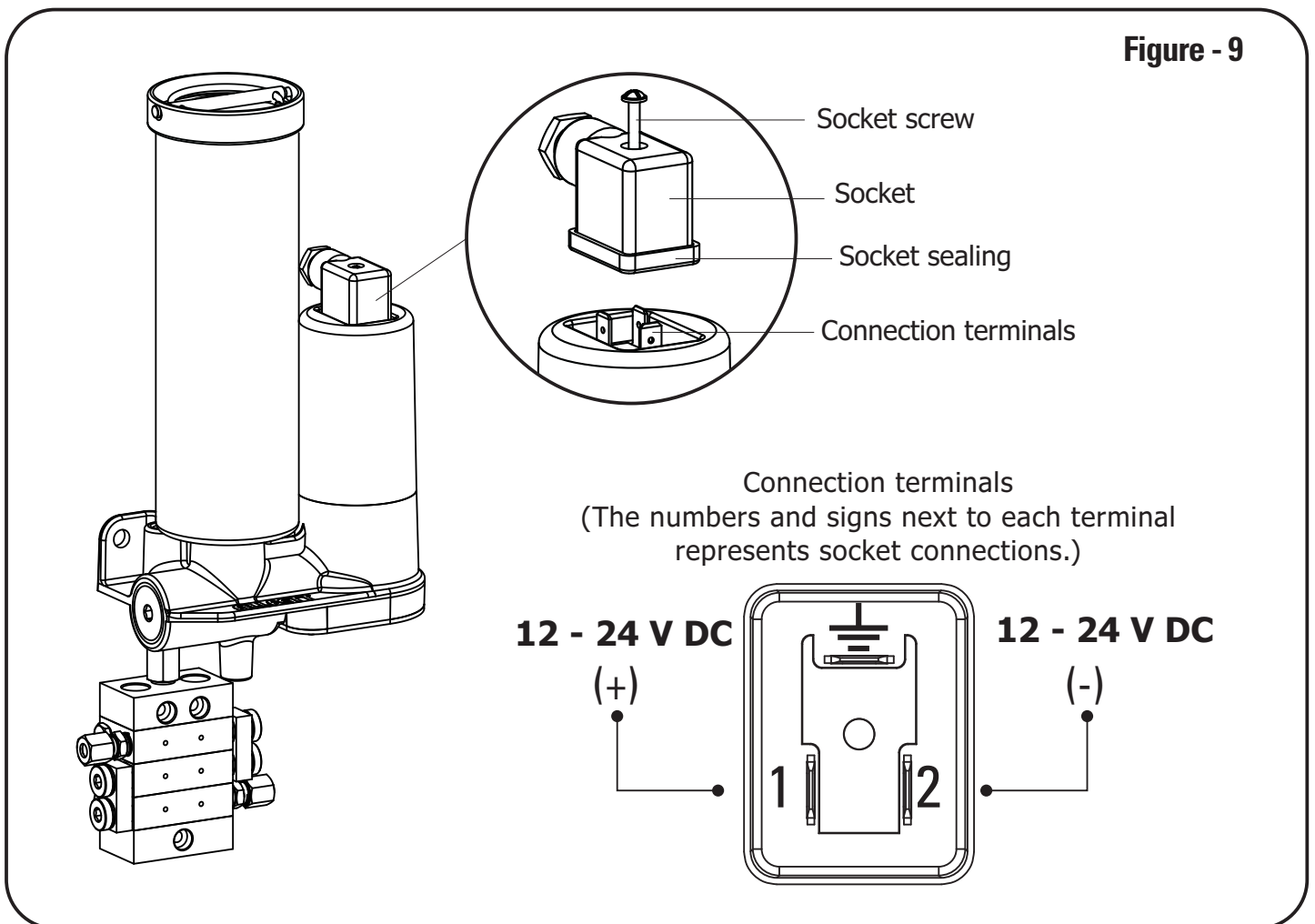
PUMP ELECTRICAL CONNECTIONS

ALL-6 pump electrical connections must be done in accordance with the diagram shown below. Electrical connections will be done using the socket on the pump motor cover.

The following diagram represents the connection terminals on the motor cover of the pump. Electrical connection cables must be made on the socket according to these terminals.



Electrical cables of the pump must be connected to compressor's control unit. Do not connect pump directly to electrical energy.



After the socket connection is done, it must be fixed in place with the socket screw. It is not advisable to tighten the screw with excessive force during fixing. It is enough to tighten the screw until it snaps into place.



If 24 V DC (+) and (-) terminals are not connected correctly during onnection, the motor will run noisy after started. Connections should be checked.

MAINTENANCE INSTRUCTIONS

1. PUMP IS NOT OPERATING.

a. Electrical cables of pump may loose or broken ;

Check the electrical cables for proper connection.

b. Connected electricity may not be DC voltage ;

Connect proper electricity to pump described on the label.

c. If transformer is used to convert voltage AC to DC ;



Use minimum 5A current transformer.

d. If Pump is connected to ALLFETT electronic control unit ;

Control unit may be on the waiting period. Wait until working period starts.

When necessary, press to additional cycle button on control card operates system for single period.

2. PUMP IS OPERATING BUT NOT SENDING GREASE ;

a. Grease inside cartridge may empty ;

Replace cartridge with new one by following the steps on PAGE 9 and 10.

b. Grease may not be appropriate ;

Replace cartridge with appropriate grease. Read PAGE 8 to understand which type of grease is appropriate.

c. Pump may taken air inside ;

Instructions explained on page 9 should be read and operated carefully. There must not be air gaps inside of cartridge place on pump body. After completing cartridge instructions follow the steps below.

- Disassemble outlet hoses from distributor block.
- Run the pump.
- See grease coming from distributor outlets.
- Reassemble the hoses to distributor.



Unauthorized modifications to the units and the use of unauthorized spare parts and aids prohibited also disqualify the warranty.

MAINTENANCE INSTRUCTIONS

3. GREASE IS NOT COMING OUT FROM DISTRIBUTOR.

a. Fittings on lubrication lines and distributor may be loose ;

Check all fittings on lines and distributor block. If fittings are loose there should be grease leakage. Tighten all loose fittings.

b. Lubrication lines between distributor block and lubrication lines may be crushed, damaged or blocked ;

● If the tube remains crushed by an object, cross section of tube become narrow and may not allow grease passage. In this case the grease release is visible via security valve. Check the hoses for crushing. Replace the hoses if necessary.

● Tube or lubrication point may be blocked inside by dirt. In this case the grease release is visible via security valve. Check the hoses and lubrication points for blockage. Replace the hoses if necessary.

● If the tubes are broken grease will not reach to the lubrication points. Grease leaks from places where broken.

c. System components may be installed by crew without ALLFETT authorization ;

If distance between pump, distributor and lubrication lines are too long, grease release is visible via security valve. Contact with ALLFETT service for further consulting.

4. PUMP SENDING TOO MUCH GREASE.

a. Pump may be controlled by PLC unit ;

Decrease the working time period by programming PLC unit.

b. Pump may be controlled by ALLFETT electronic control unit ;

Refer to the user manual for the control unit used on system. Contact with ALLFETT service if necessary.

TECHNICAL SERVICE

ALLFETT MEKANİK VE ELEKTRONİK SİSTEMLER SAN. VE TİC. LTD. ŞTİ.
Yeni Eyüp Bulvarı, Topçular Caddesi, Set Üstü, No:1 Demirkapı-Rami / İstanbul
Telefon: 0 212 501 32 01 (PBX) www.allfett.net
Fax : 0 212 501 33 37 info@allfett.net

RULES TO COMPLY WHILE USING AND WARRANTY CONDITIONS

- 1.** Damages occur while additional transports after delivering the goods from ALLFETT to the customer **DISQUALIFIES THE WARRANTY.**
- 2.** Pumps are produced to lubrication purpose only and are not convenient to work more than 2 hours continuously. Working under maximum pressure more than 2 hours will harm the system. Damages occur from this reason **DISQUALIFIES THE WARRANTY.**
- 3.** Washing of the pump with pressured water causes damage. Any damage occur from this reason **DISQUALIFIES THE WARRANTY.**
- 4.** Pump reservoir is made of semi-transparent material to see grease level. Painting any part of the pump is not recommended. Any painted parts **DISQUALIFY THE WARRANTY.**
- 5.** Pumps have an electric driven motor. Electrical lines must be connected properly as described in PAGE 8 and applied only by qualified and instructed personel.
- 6.** All electrical connections and lines must be checked regularly for damage and to ensure that they are firmly in place.
- 7.** Damages coming from voltage fluctuation, wrong electricity installation, connecting wrong voltage to product **DISQUALIFIES THE WARRANTY.**
- 8.** Keeping an uncovered cable(s) during system assembly may cause fatal damages where high voltage is transformed to low voltage. Lines must be connected properly to prevent personal injury and damage to property.
- 9.** Transformer is necessary if there is no " 24 V DC " electrical source. Use minimum 5A current transformer.
- 10.** Only proper NLGI class lubricants must be used with in system. NLGI class must be changed according to weather conditions. Use NLGI 0 for cold weather, increase the NLGI class up to 3 towards hot weathers.
- 11.** Only LITHIUM based and EP additive lubricants must be used with in system.
- 12.** Rubber based lubricant types must not be used in the system. Damages or faults occur from this reason **DISQUALIFIES THE WARRANTY.**
- 13.** Lubricant will be used in the system must certainly be clean and any foreign materials must not enter while changing cartridge.
- 14.** Plastic follower piston of cartridge must not be removed due to filling purpose. Grease cartridge must not be filled by removing follower piston.
- 15.** Any foreign materials, dirt or small particules while changing grease cartridge lead to system units failing and possibly property damage to equipments. Damages or faults occur from this reason **DISQUALIFIES THE WARRANTY.**

RULES TO COMPLY WHILE USING AND WARRANTY CONDITIONS

- 16.** If the pump works without lubricant, pump elements will send air to the points instead of grease. Because of that any points connected to pump will not get any lubricant. Damages on pump and on the system coming from that reason **DISQUALIFIES THE WARRANTY**.
- 17.** Disassembling or loosing any part while pump working is prohibited. Any damage coming from this reason **DISQUALIFIES THE WARRANTY**. Also any personal injury occur from this reason ALLFETT does not accept responsibility.
- 18.** Another goal of Centralized Lubrication Systems is to protect environment. So it is adviced to fill grease to the systems by mobile or hand pumps.
- 19.** Unauthorized modifications to the units and the use of unauthorized spare parts and aids prohobited and **DISQUALIFIES THE WARRANTY**. Only maintenance may apply descibed in PAGE 14 - 15. ALLFETT Technical Service must be informed to any other possible troubles and necessary procedures must be performed.
- 20.** ALLFETT Mekanik ve Elektronik Sistemler SAN. TIC. LTD. STI and ALLFETT Pazarlama ve Dis Ticaret LTD. STI. does not accept responsibility for damages described in items above on equipments which ALLFETT systems are installed.

PRODUCT ORDER INFORMATION



Product name

ALL- 6 pompa - 12 V DC - NLGI 2
ALL- 6 pompa - 24 V DC - NLGI 2

Ordering number

10 12 06 A5
10 24 06 A5

Grease cartridge - 675 Gr. - Empty
Grease cartridge - 350 Gr. - Empty
Grease cartridge - 675 Gr. - NLGI 2
Grease cartridge - 350 Gr. - NLGI 2

GR 00 01 BE
GR 00 02 BE
GR 67 50 02
GR 35 00 02

SALES

ALLFETT PAZARLAMA VE DIŐ TİCARET LTD. ŐTİ.

Yeni Eyüp Bulvarı, Topçular Caddesi, Set Üstü, No:1 Demirkapı-Rami / İstanbul
Telefon : 0 212 501 32 01 (PBX) www.allfett.net
Fax : 0 212 501 33 37 info@allfett.net

WARRANTY

Utilisation of this warranty certificate has been permitted by The Republic of Turkey, The Ministry of Industrial and Commerce, The general Administration of Protection of Consumer Right and Competition, in accordance with the law numbered 4077 .

PRODUCER COMPANY

NAME : ALLFETT Mekanik ve Elektronik Sistemler
San. ve Tic. Ltd. Şti.
CENTRAL ADDRESS : Yeni Eyup Bulvari, Topcular Cad. Set Ustu, No:1 Demirkapı-
Rami / İstanbul
TELEPHONE : 0212 501 32 01 (PBX)
FAX : 0212 501 33 37

AUTHORISED PERSON

SIGNATURE - STAMP : :

PRODUCT

TYPE : Elektrikli gres pompası
BRAND : ALLFETT
MODEL : ALL-6
SERIAL NUMBER :
DELIVERY DATE / PLACE :
WARRANTY : 2 YIL
REPAIR TIME : 30 days

SALER COMPANY

NAME :
CENTRAL ADDRESS :
TELEPHONE :
FAX :
BILL DATE / NUMBER :

WARRANTY CONDITIONS

1. The warranty period is two years from the date of delivery.
2. The product including all its components is under the warranty of our company.
3. In case of defects within the warranty period the period spent in repairing is added to the warranty period. The repairing period is maximum 30 days. This period starts from the date of delivery of the product to the services centers or to the seller, the agency the representative, the importer or the manufacturer of the product respectively, in case there are service centers.
4. In case the product has material, workmanship or manufacturing defects, the product will be repaired free of charge and expenses of any sort including labor, the value of the parts replaced or any our charges.
5. The product will be replaced free of charge;
 - If the product permanently disfunctions due to repeating the same defect more than four times within the warranty period
 - If the maximum period for repairing is exceeded.
 - If it is determined that the defect cannot be repaired by report written by the service, or in the absence of service centers, by the seller, agency, representative, importer or manufacturer of the product respectively.
6. The present warranty does not cover damages resulting from importer handling by deviating from the instructions in the manual.
7. General administration of protection of consumer rights and competition in the ministry of industry and commerce may be applied for problems concerning the warranty certificate.

DANGEROUS OR HARMFUL CONDITIONS TO ENVIRONMENTAL AND HUMAN HEALTH DURING USE

All ALLFETT systems are producing according to relevant provisions of security regulations. There is no risk for environmental and human health during use.

TRANSPORT AND STORAGE

There are no restrictions on transportation by land, air and sea. In general, products should be stored in a dry and dust-free environment. The storage temperatures are between -10°C and +40°C.

All products are packed with paper based support material to reduce damage. Upon receiving the package please check the items for possible damage.



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